

Taupō District Council

Water Strategy Implementation Plan

March 2019

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1. Introduction

1.1 Overview

The Water Strategy Implementation Plan (“the Plan”) is a companion document to Taupō District Councils (Councils) Water Strategy (“the Strategy”). The purpose of the Plan is to act as an implementation document in order to deliver the Strategy’s required outcomes.

The agreed outcomes of the Strategy are:

1. We ensure the protection of public health;
2. We use water responsibly;
3. We support the Communities Growth aspirations;
4. We ensure that our water supply system is financially sustainable.

1.2 Purpose of the Implementation Plan

The Plan sets out how the Strategy is to be implemented, both in the short and long term. The Strategy itself establishes a framework for collaboratively addressing the key issues facing the management of drinking water within the district. These issues include growth and the Regional Policy Statement, alongside operational matters arising from the Councils’ statutory obligations in relation to the management of the three waters.

The relationships of the Plan to the Strategy and other Council Strategies and key drivers is illustrated in Figure 1 below, alongside how it relates to Regional and National Plans and Policies, which is shown in Figure 2.

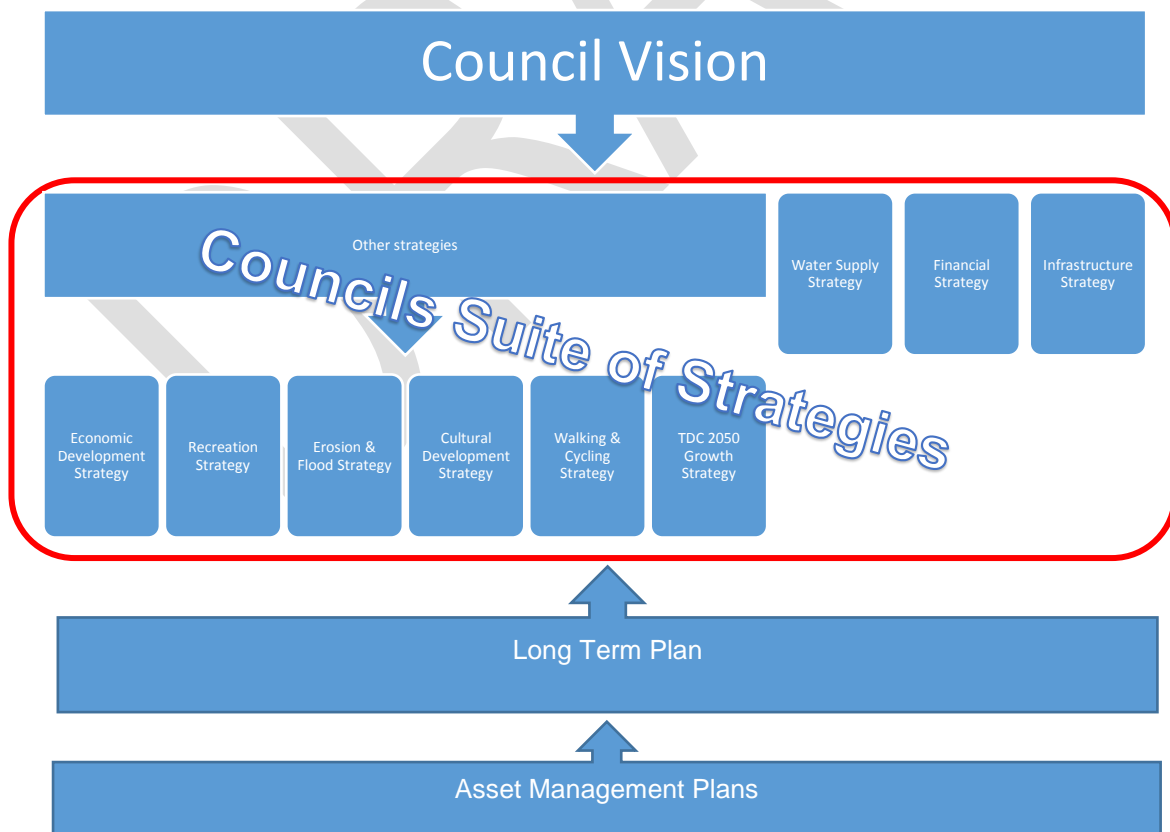


Figure 1: Councils Strategic Framework

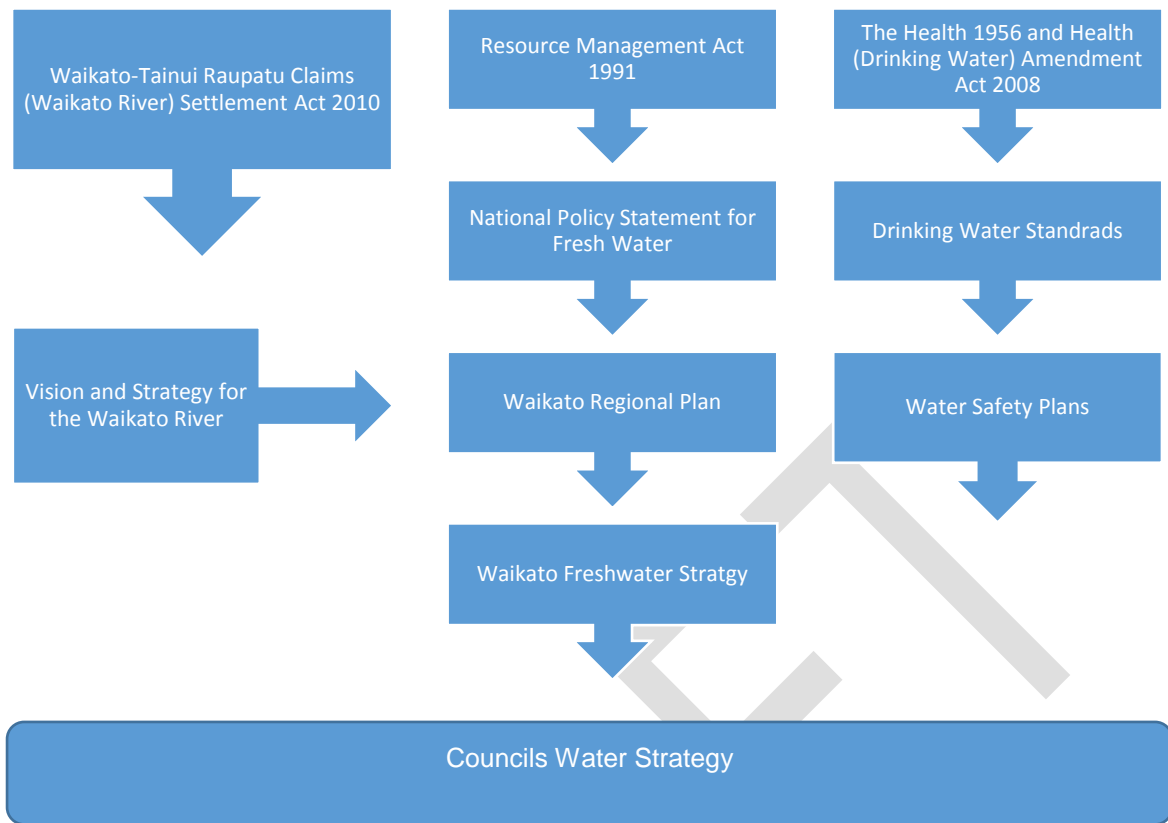


Figure 2: Regional and National Plans and Policies

2. The Implementation Plan

2.1 Overview of the Plan

Under the Local Government Act, Council is required to provide water services and infrastructure in an efficient, integrated and sustainable way. The Plan sets out how the Strategy will be implemented so as to satisfy these requirements.

Council Plans and manages the growth of their communities in accordance with various statutory and non-statutory Planning documents. Council is required to provide water infrastructure and services, while protecting public health and managing the effects of growth on the environment. As pressures placed on water supply increase through population growth and more intensive land use, so does the pressures placed on Council as the provider of these services and associated infrastructure.

The 2016 Havelock North drinking water contamination event and subsequent Enquiry highlighted the risks with Public Water Supply and Council is committed to implementing the 6 Key Principles of Water Supply Management recommended by the enquiry, as set out below and articulated in the following statement issued by the inquiry:

“The Inquiry recommends that the six fundamental principles of drinking water safety be recorded and promulgated to the industry and used to inform all recommended reforms, as well as the operation of the entire drinking water system”¹

¹Report of the Havelock North Drinking Water Inquiry - Stage 2

The Six Principles of Water Supply – Havelock North Enquiry

Principle 1: A high standard of care must be embraced

Principle 2: Protection of source water is of paramount importance

Principle 3: Maintain multiple barriers against contamination

Principle 4: Change precedes contamination

Principle 5: Suppliers must own the safety of drinking water

Principle 6: Apply a preventive risk management approach

Figure 3: Principles of Water Supply

Alongside this, and where possible given the statutory obligations outlined above, Council also has a strong desire to work in collaboration with iwi partners, key stakeholders and the community to deliver the outcomes sought from the strategy.

To do this, Council will also apply the following principles to the Plans' actions:

- Council will be cognisant of the agreements and relationships with Iwi and ensure these are taken into account when determining and implementing actions;
- Council will ensure that reviews of its Plans, policies and bylaws will take the Strategy's vision and goals into account when being completed;
- Council will ensure that decisions made in relation to water management are informed by knowledge and best practice; and
- Council will work with other utility and service providers to Plan and deliver services and infrastructure in a collaborative and efficient way.

2.2 Implementation Actions

2.2.1 Background

The Strategy defined four key strategic outcomes Council wishes to deliver in relation to its statutory obligations related to water supply. These are:



Figure 4: Water Strategy Outcomes

Through the process of developing the Strategy, the four outcomes that Council wished to achieve were taken through an iterative process to identify the goals and responses necessary to achieve those outcomes. An example of how the Outcomes, Goals and Responses aligned is shown in figure 5 below, with the full suite shown in Table 1 of this document.

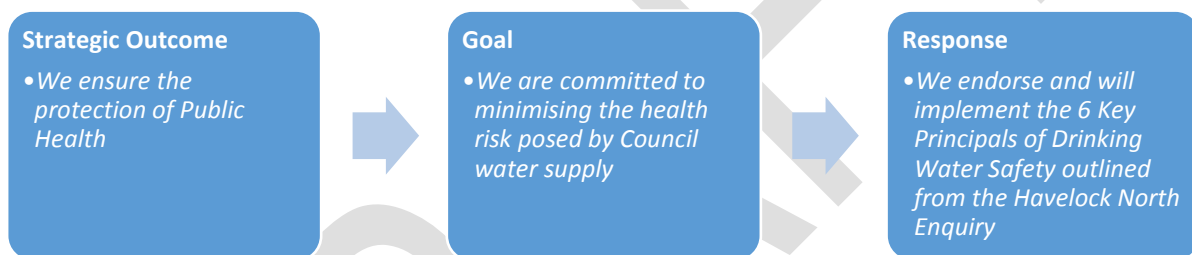


Figure 5: Example Response Determination Process

2.2.2 Determining Implementation Actions

This Plan looks to take the Strategy outputs (the list of responses) and further analyse them with a focus on aligning them with existing works contained within Councils Long Term Plan (LTP) and operational or Business as Usual (BAU) activities. This way, Council can gain a better understanding of its activities, their alignment with strategic responses and therefore alignment with the strategy itself. This enables a discussion to occur that tests whether or not an activity or project should occur, or continue, if there is no direct alignment with an endorsed response.

To facilitate this process occurring, Water Service staff undertook an alignment exercise which brought all of the projects, actions and activities together in one view. The outputs of this exercise are shown in Table 1, below. Added to the information is timing and funding data, whether or not the project was operational in nature and a high level risk assessment.

2.3 Risk Evaluation and Mitigation

As part of the development of the Plan a Risk Assessment has been undertaken and levels of risk for each project and action determined. The risk analysis reflects prevailing best practice and aligns with the New Zealand Standards, AS/NZS ISO 31000:2009.

Understanding the risk associated with each of the projects is considered a critical part of the implementation process as it enables a prioritisation of projects and actions to occur. This risk management and assessment process has been undertaken in two steps.

Step 1

For **all projects**, an initial risk assessment was completed. This outcome of the initial risk assessment is shown in Table 1 below.

Step 2

For **operational projects** a full risk assessment was undertaken on all identified projects. This was due to the project only having been identified through this process and therefore not having had the rigour of both identification through the Asset Planning and LTP process..

Operational projects and the associated Risk Assessment processes are shown in Table 2, below.

2.4 Implementation Priorities

Following this exercise, Council now has a full set of actions that are required to be undertaken to deliver on the Outcomes of the Strategy. With a risk assessment having been completed, there is now a priority listing of actions that require attention to ensure that risk to the water supply is managed and the outcomes of the Strategy achieved.

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Table 1: Full Project and Activity Assessment

Outcomes	Goals	Responses	Projects and Activities	LTP Funded	Timing	Funding	Risk	Owner
1: We Ensure the Protection of Public Health	We are committed to minimising the health risk posed by Council water supply	We will comply with Drinking Water Standards of New Zealand	1. Acacia Bay water DWSNZ Upgrade	✓	2018-21	\$4.5M	High	Water Asset Manager
			2. Kinloch water DWSNZ Upgrade	✓	2018-23	\$7.39M	High	Water Asset Manager
			3. Omori water pre-treatment	✓	2018-20	\$0.3M	Medium	Water Asset Manager
			4. Tirohanga water intake structure improvements	✓	2018-19	\$75k	Medium	Operations Manager
		We endorse and will implement the 6 Fundamental Principles of Drinking Water Safety outlined from the Havelock North Enquiry	5. Develop a Fundamental Principles of Drinking Water Safety education and training plan, for all those involved in supplying drinking water	x	Prioritised in Table 2	Operational	Medium	Water Asset Manager
		We will accelerate, were possible, the Long Term Plan projects related to protection of Public Health	6. Undertake a District wide water risk analysis	x	Prioritised in Table 2	Operational	High	Water Asset Manager
	We will strive to ensure the continuity of supply of high quality potable water at all times	We will plan and manage for risks and ensure resilience within our water supply systems	7. Burst control valves Tamatea, Tauhara and Titoki reservoirs	✓	2018-19	\$0.225M	Medium	Water Asset Manager
			8. Kinloch water security of supply	✓	2018-19	\$2.2M	High	Water Asset Manager
			9. River Road additional storage tank	✓	2018-19	\$20k	Medium	Water Asset Manager
	2: We use water responsibly	We will reduce overall water use within the district	We will educate and actively encourage a water conservation culture within the District	10. Develop a Water Conservation and Education Plan for District	x	Prioritised in Table 2	Operational	Low
We will develop a programme of works to reduce residential water demand to a level of 260 litres per person per day by 2028 ²			11. Prepare a water loss strategy for the District to enable forward planning, budgeting and prioritisation of future works programmes to reduce overall water demand	x	Prioritised in Table 2	Operational	High	Water Asset Manager
			12. Water reticulation network renewals	✓ ✓ ✓	2018-19 2019-20 2020-21	\$2M \$2M \$2M	Medium	Water Asset Manager
We will minimise the impact on the environment related to undertaking water supply activities		We will minimise the volume of water taken from water sources for water supply activities	13. Prepare a water loss strategy for the District to enable forward planning, budgeting and prioritisation of future works programmes to reduce overall water demand	x	Prioritised in Table 2	Operational	High	Water Asset Manager
		We will manage the discharges back into the environment from water supply activities to minimise effects	14. Complete a discharge consent stocktake	x	Prioritised in Table 2	Operational	Low	Water Asset Manager
3: We will support the Communities Growth aspirations	We will understand the districts population trends and dynamics	We will understand the Districts peak visitor numbers and how that impacts on water supply demand	15. Develop a Council Population projection model to understand transient (events etc.) and holiday population impacts	x	Prioritised in Table 2	Operational	Medium	Planning Manager

² Calculated in line with the method presented in the Water NZ annual National Performance Review

		We will develop a method for understanding the need to service currently un-serviced communities within the district	16. Prepare a community connection Plan that lists all communities throughout the District and the current Plan to service or otherwise each of these.	x	Prioritised Table 2	in	Operational	Low	Water Asset Manager
			17. Agree a method to calculate headwork's contributions for new connections outside development areas.	x	Prioritised Table 2	in	Operational	Low	Water Asset Manager
			18. Reticulation of 5 Mile bay	✓	2019-21		\$0.5M	Medium	Water Asset Manager
		We will understand future industrial growth aspirations and ensure future water demand can be met, where appropriate	19. Document the industrial growth aspirations for the District	x	Prioritised Table 2	in	Operational	Medium	Planning Manager
	We provide sufficient water to support future growth aspirations	We will develop a water demand profile using future growth projections that determines the 50 year water supply requirements for the district	20. Determine an overall water use profile for the District	x	Prioritised Table 2	in	Operational	Medium	Water Asset Manager
		We will ensure our infrastructure is capable of achieving the water supply requirements of the district.	21. Taupō water treatment Plant capacity upgrade to 30 MLD	✓	2018-19		\$1,750M	High	Water Asset Manager
			22. Prepare hydraulic models of each of our water supply networks starting with: - Taupō - Kinloch	✓ ✓	2018-19 2018-19		\$114K \$42K	High	Water Asset Manager
			23. Tauhara Ridge Falling Main to WEL	✓	2019-21		\$0.76M	Medium	Water Asset Manager
		We will ensure the volume of water required to meet our demand profiles is consented, and surrender excess volumes, if appropriate	24. Complete Rainbow Point consent review with a view to converting consent to emergency use only, and surrendering excess volume currently tied up	x	2018-19		Operational	Low	Water Asset Manager
4: We will ensure the water system is managed in a financially prudent manner	We will ensure that robust forward Planning is in place	We will have in place an asset management Plan and practises that achieve Intermediate Status ³ by 2022	25. External review of Asset Management Plan	x	2018-19		Operational	Medium	Infrastructure Manager
			26. Prepare Asset Management Plan including implementation of improvements from external review	x	2018-21		Operational	Medium	Water Asset Manager
		We will ensure that Asset Condition data is collected, stored and utilised in line with best practise	27. Input water treatment assets into Council Asset Management System Assetfinda	x	Prioritised Table 2	in	Operational	Low	Manager Asset Information
		We will ensure that the Implementation Plan is reviewed annually and updated every three years	28. Review Implementation Plan	x	2020		Operational	Low	Water Asset Manager
			29. Update Implementation Plan	x	2021		Operational	Low	Water Asset Manager
	We will ensure that the cost of water is equitable	We will ensure that the cost of water is in line with the average cost of like organisations benchmarked through the Water New Zealand Annual process, or suitable alternate	30. Participate in annual Water NZ Benchmarking exercise and report on cost comparisons	x	2019-20		Operational	Low	Water Asset Manager
	We will ensure that there is price equality across the district	We will have completed a review of the future options for charging for our water supplies and implement the changes as part of the 2021-31 LTP.	31. Undertake a Charging review and report back to Council on preferred option	x	2018-19		Operational	Low	Water Asset Manager
32. Consult and implement preferred option as part of LTP process			x	2020-21		Operational	Low	Water Asset Manager	

³ In accordance with NAMS Manual

Table 2: Operational Works

Project ID	Projects and Activities	Risk Definition	Risk Level	Risk Treatment Measures and Actions	Residual Risk Level	Estimated Funding Required	Prioritisation for Delivery			Comment
							2018/19	2019/20	2020/21	
5.	Develop a Fundamental Principles of Drinking Water Safety education and training plan, for all those involved in supplying drinking water	Council is committed to implementing the 6 Key Principles of Drinking Water Safety from the Havelock North Water enquiry. At this stage all those working in the water supply area may not have a high awareness of these principles nor how the current work practises and/or actions comply and align (or otherwise) with the principles. Current work practises that are not inline to the principals place Council at an elevated risk of causing health issues and compliance matters.	Medium	Develop a staff education and development plan to highlight the fundamental principles. Undertake a gap analysis in current operational processes. Determine a process for closing gaps and implement on a risk based approach.	Medium	\$ 15,000.00		✓		<ul style="list-style-type: none"> - Residual risk will reduce as training plan is delivered. - Funding available within training budgets.
6.	Undertake a District Wide Water Risk Analysis	Risks within the wider Water treatment and distribution activity are not well defined and understood. A more detailed risk assessment needs to be carried out to understand the areas of risk and ensure these are managed. The need for this work is supported by Principal 6 of the Havelock North Enquiry outcome, Apply a preventive risk management approach to management of Water Supplies	High	Undertake a full Risk Management assessment of Council's Water Treatment and Supply activities as a matter of urgency	High	\$ 50,000.00		✓		<ul style="list-style-type: none"> - Residual risk will not reduce until the assessment findings are implemented. - Funding requested in 2019/20 Annual Plan.
10.	Develop a Water Conservation and Education Plan for District	The level of awareness of the community, industry and businesses on the use of water and how precious and limited the resource is, is considered low. This heightens the risk of increasing and excessive water demand in the community. In turn this can lead to water shortages, heightened pressure from regional government, higher capital and operational expenditure, and limitations on development elsewhere in the catchment.	Low	Define the scope of a Water Education Plan and develop a Plan for roll out across the district. Work with other Local Authorities who have Plans in place and learn from their experiences. A well-structured and delivered Community Water Conservation and Education Plan will lift the awareness and support a culture change in the way water conservation is considered.	Low	\$ 25,000.00				<ul style="list-style-type: none"> - Action to be prioritised in year 1-3 of next LTP.
11, 13.	Prepare a water loss strategy for the District to enable forward planning, budgeting and prioritisation of future works programmes to reduce overall water demand	A 2017 study identified considerable levels of water loss across our Taupō and Turangi schemes. Without a clear strategy there is a risk that water losses increase over time and that our outcome is not achieved. The consequences of high water losses include the need for higher capacity plants and networks which increases capital and operational costs and rates, increased service disruption to customers, resulting environmental and social perception.	High	Development of a strategy which will feed into long term planning to ensure current levels of water loss are known and steps clearly identified for water loss management..	High	\$ 20,000.00	✓			<ul style="list-style-type: none"> - Residual risk will not reduce until the strategy is implemented. - Funding included within 2018/19 budget.
14.	Complete a discharge consent stocktake	Water Treatment activities discharge contaminates into the environment as a residual of the process (back wash water etc.). These process can contain significant contaminate loading (Alum sludge etc.). Reviewing these consents and current compliance with them is deemed an appropriate exercise to ensure Council is minimising the impact of its activities on the receiving environment.	Low	Review current consent compliance and ensure that all sites fully comply and address those that do not (if any)	Low	\$ 10,000.00			✓	<ul style="list-style-type: none"> - Funding to be requested in 2020/21 Annual Plan.
15.	Develop a Council Population projection model to understand transient (events etc.) and holiday population impacts	Council currently does not have a population model in place that accurately models the Districts population and takes into account the transient and holiday/tourism impacts on water usage. Without such a model, true water use and needs are difficult to determine and accurately plan for.	Medium	Develop a TDC Population Model that accurately predicts not just population growth, but also the impacts of events, holiday makers and tourism. Roll model out into water planning tools and related tasks	Low	\$ 50,000.00			✓	<ul style="list-style-type: none"> - Funding to be requested in 2020/21 Annual Plan. - Potential crossover with Infrastructure Strategy Actions
16.	Prepare a community connection Plan that lists all communities throughout the District and the current Plan to service or otherwise each of these.	Council has a number of un serviced rural communities. As growth and ratepayer expectations change, Council can be requested to provide servicing and connect these communities to a current supply network, or install a standalone network to provide servicing. To date this has been undertaken in an "Ad Hoc" fashion and not based on growth, risk or need.	Low	Develop a plan to determine the communities that require servicing and when and how this may occur. Also look to identify those communities that will not be connected to a supply nor have a Council supply in the medium (10 - 20 year) term and inform them of out puts.	Low	\$ 10,000.00				<ul style="list-style-type: none"> - Action to be prioritised in year 1-3 of next LTP.
17.	Agree a method to calculate headwork's contributions for new connections outside development areas.	New connections to Councils network are required to pay a Development Contribution set through the DC Policy and applied to growth areas. For connections outside of growth areas the policy does not apply. Without clear guidelines there is a risk of varied contributions, resulting over or under recovery of costs, and potential customer complaints.	Low	Develop cost models for those supplies not covered by DC Policy. Apply the costs through appropriate Council process and mechanism.	Low	\$ 10,000.00				<ul style="list-style-type: none"> - Action to be prioritised in year 1-3 of next LTP.
19.	Document the industrial growth aspirations for the District	Without an overall understanding of industrial growth aspirations there is a risk that the industrial growth needs will not be able to be met.	Medium	Document a plan for industrial growth in each area. Roll plan out into water planning tools and related tasks.	Low	\$ 10,000.00		✓		<ul style="list-style-type: none"> - Funding not yet confirmed.

20.	Determine an overall water use profile for the District	Water Allocation within the Waikato Catchment is a critical issue with much of the catchment over allocated. Council is under pressure to release Consented Water allocation through Regional Council Consent review processes. Without an overall understanding of the Districts Water Use profile, the risk is that water allocation surrendered may restrict future growth in both residential and industrial/commercial activities	Medium	Undertake a full and comprehensive 50 year Water use projection for Council. Use the information to engage with WRC to ensure future water allocation is secure and available when required	Low	\$ 25,000.00				<ul style="list-style-type: none"> - Risk is reduced through delivery of action. - Action is dependent on a number of other projects (11,13,15,16,19) and so will be prioritised in year 1-3 of next LTP.
24.	Complete Rainbow Point consent review with a view to converting consent to emergency use only, and surrendering excess volume currently tied up	Council holds a water take consent for the treatment site Rainbow Point in Taupō. The treatment plant has been retained as an emergency use only site and so there is the possibility to discuss surrendering the normal allocation for use elsewhere.	Low	Discuss concept with Waikato Regional Council and look to update consent status to reflect agreement.	Low	\$ 5,000.00	✓			<ul style="list-style-type: none"> - Project underway in current year - Costs funded in current year
25, 26.	External Review of AMP Prepare AMP including implementation of improvements from external review	Asset Management Plans are critical to not only meet legislative requirements but to feed into the Long Term Planning process and underpins the investment requirements for the district. Resourcing in this area is stretched and there is risks that this critical piece of work is not completed to the appropriate level resulting in a sub optimal outcome. The outcomes of a poorly drafted AMP will flow into multiple Council Planning instruments.	Medium	Develop a clear understand of the resource requirements for updating the Plan. Assign Council resources to the plan and understand how to back fill the other areas over the period of drafting	Medium	\$ Internal	✓	✓	✓	<ul style="list-style-type: none"> - External review has been completed. - AMP in development, internal costs only at this stage.
27.	Input water treatment assets into Council Asset Management System Assetfinda	Council has invested in the asset management system, Assetfinda. All network assets have been added to the system. Water treatment asset data is currently stored in spreadsheet registers. The addition of this data into Assetfinda will improve security of data, functionality, and improve asset management capabilities.	Low	Addition of all asset data from spreadsheets into the asset management system. To be completed by the Council Asset Information Team.	Low	\$ Internal	✓	✓		<ul style="list-style-type: none"> - Project is underway but is likely to carry over into the 2019/20 financial year
28.	Review implementation Plan	The Water Strategy Implementation Plan needs to be reviewed to keep it current	Low	Schedule and resource/fund the reviews for the Implementation Plan	Low	\$ Internal		✓		<ul style="list-style-type: none"> - First review after 1 year
29.	Update implementation Plan	The Implementation Plan needs to be updated tri annually	Low	Schedule and resource/fund the tri annual updates for the Implementation Plan	Low	\$ Internal		✓		<ul style="list-style-type: none"> - First update to follow 1 year review
30.	Participate in annual Water NZ Benchmarking exercise and report on cost comparisons	Council has been a partner in Water New Zealand's Benchmarking for some years and intends to continue to do so. There is a risk that the timeframe to collect and collate information may become excessive and therefore Council is no longer able to participate.	Low	Ensure that appropriate staff have time allocated to completing the data collection and reporting. Set up the operational data collection processes to reflect what the BMR process requires to simplify	Low	\$ Internal	✓	✓	✓	<ul style="list-style-type: none"> - Low resource requirement to complete. - Provides benchmark data
31, 32.	Undertake a Charging review and report back to Council on preferred option Consult and implement preferred option as part of LTP process	Council currently has targeted rating on its water supply schemes and would like to review the way it collects funds for this service. This may result in a change in the way funds are collected (targeted Rates, Water by Meter etc.). Reviewing the options does not ultimately trigger a review of pricing, therefore risk only realised if option to change progresses	Low	Undertake the pricing review for 2021/31 LTP process. Risk only realised when progress through that process and can be managed with other LTP projects	Low	\$ Internal		✓	✓	<ul style="list-style-type: none"> - Expected to only require internal input

3. IMPLEMENTATION PLAN DEPLOYMENT

3.1 Implementing and Funding

The process followed in developing this Plan has delivered a series of actions that Council needs to consider progressing with some urgency as they not only focus on delivery of the strategic outcomes, giving Council a better understanding of its assets and ability to support growth and development, but many are aimed at directly lowering Councils risk exposure in the water supply area. Given the level of scrutiny following the Havelock North contamination issue and the current focus from Central Government of Local Councils management of water supplies, it is considered prudent to move forward as rapidly as funding and risk appetite allows.

Whilst some of these actions are significant and have funding allocated to them to progress, the smaller, less expensive actions (such as understanding the Water Supply Risk profile) can in fact carry as much residual risk if not completed.

3.2 Monitoring and Reporting

The Plan's actions will be drawn from the tables, scheduled and implemented through Councils normal project approval and delivery mechanisms. Progress will be monitored and reported through to Project Sponsors and Steering Groups as appropriate.

3.3 Review

The Action Plan is intended to be reviewed every three years, however, it is recommended that the first review takes place in 2020 (12 months from adoption). This will ensure that the high risk actions have been addressed and also gives Council staff an opportunity to review the effectiveness of the Plan and supporting processes.

Three yearly reviews will be timed so as to inform the review of the council's LTPs. The table below illustrates the time line of the Action Plan, and indicates when the first review is anticipated to be undertaken.

First Review	Second Review	Third Review		
2020	2023			
2021/31 LTP	2024/34 LTP			