VERSION 7 – Jan 2017

Sub-regional Three Waters Action Plan

Hamilton City Council, Waikato District Council and Waipa District Council

Sub-regional Three Waters Action Plan

CONTENTS

APPENDICES

1 Introduction

1.1 Purpose of this Sub-regional Three Waters Action Plan

The purpose of this Three Waters Action Plan ("the Action Plan") is to implement the *Sub-regional Three Waters Strategy* ("the Strategy") in order to realise the Strategy's vision, which is:

> *"The delivery of integrated, sustainable and well managed Three Waters services for the sub-region which ensures the cultural, social and economic needs of the community are met and the quality of the Waikato River is improved".*

The "three waters" are drinking water, stormwater and wastewater.

1.2 Context

1.2.1 Introduction

The Action Plan sets out how the Strategy will be implemented. The Strategy establishes a framework for collaboratively addressing the issues facing the three waters in the sub-region. These include growth issues identified in the *Future Proof Growth Strategy and Implementation Plan* ("the Future Proof Strategy") and the Regional Policy Statement and operational issues arising from the City and District Councils' statutory obligations in relation to the management of the three waters. The relationships of the Action Plan to the Strategy, Future Proof and other Council Strategies and key drivers are illustrated in Figure 1.

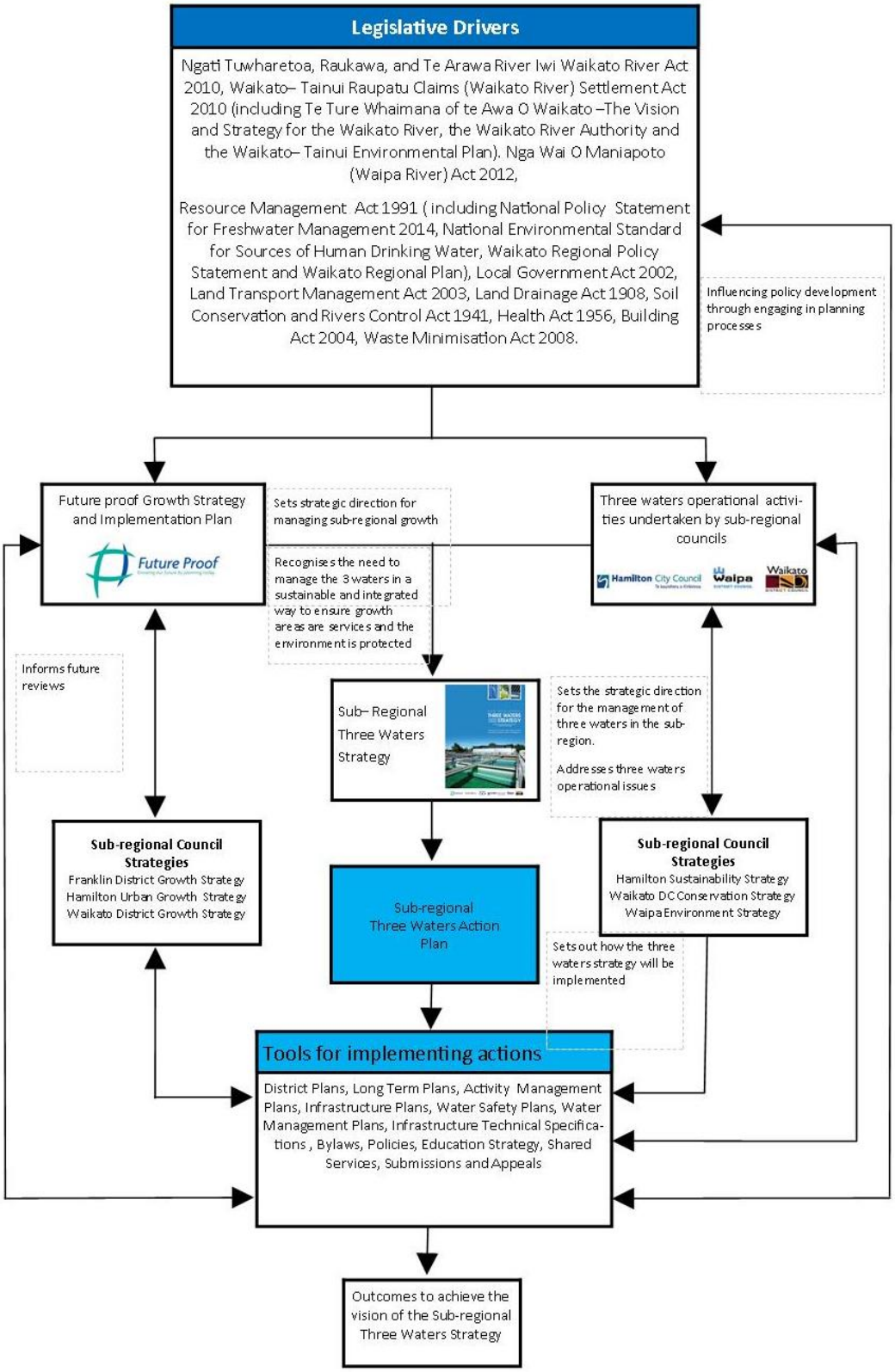

Figure 1: Relationships of the Sub-regional Three Waters Action Plan to the Future Proof Strategy and other key drivers

1.2.2 Sub-regional Three Waters Strategy

In 2010, Future Proof partners developed the Sub-regional Three Waters Strategy to address the three waters issues and actions identified in the Future Proof Strategy. In developing the Strategy, it was recognised that it would be beneficial to manage the three waters in an integrated manner as opposed to the Future Proof Strategy approach of addressing the three waters independently.

The intention of the Strategy was to establish an overall framework for sub-regional collaboration to address the issues facing the three waters in the sub-region including both growth related and operational issues. The Strategy identified:

- Nine strategic issues that were seen to be of most significance to the three waters sub-regionally;
- Outcomes or goals to be achieved that would indicate the issues had been adequately addressed; and;
- Responses that would need to be undertaken to achieve the goals.

The partner Councils formally adopted the Strategy in 2012.

The Strategy also included a proposal to collaborate on the preparation of this Action Plan to address the issues outlined in the Strategy.

1.3 Abbreviations Used

AMP	Activity Management Plan
DC	District Council
HCC	Hamilton City Council
HUGS	Hamilton Urban Growth Strategy
ICMP	Integrated Catchment Management Plan
LGA	Local Government Act 2002
LTP	Long Term Plan
NA	Not applicable
PHRMPs	Public Health Risk Management Plans (Wastewater and Stormwater)
RMA	Resource Management Act 1991
WLASS	Waikato Local Authority Shared Services
WMP	Water Management Plan
WRMUG	Waikato River Municipal Users Group
WSP	Water Safety Plan (Potable water)

2 Action Plan

2.1 Introduction

Hamilton City, Waikato District and Waipa District Councils plan and manage growth of their communities in accordance with the Future Proof Strategy. They provide three waters infrastructure and services, while protecting public health and managing the effects of growth on the environment. As pressures placed on water increase through population increase and more intensive use of land increases, so does the pressures placed on services and infrastructure. The Councils are required to provide these services and infrastructure in an efficient, integrated and sustainable way. This Action Plan sets out how the Strategy will be implemented so as to satisfy these requirements.

2.2 Preparation of the Action Plan

This Action Plan was developed primarily by the three sub-regional councils with the assistance of tāngata whenua and Waikato Regional Council, through the collaborative Future Proof partnership. The methodology used to develop this Action Plan is outlined in Appendix A.

2.3 Action Plan Principles

The following over-arching principles guided the development of the Action Plan and will also guide its implementation:

1. **Te Ture Whaimana o te Awa o Waikato (The Vision and Strategy for the Waikato River)[1] and Waikato Tainui Environmental Plan - Tai Tumu, Tai Pari, Tai Ao.**

2. **Involving iwi and hapū, and identifying and reflecting tāngata whenua values, aspirations and interests, in three waters management.**

   This includes:
   - When involving tāngata whenua in three waters management, having regard to existing arrangements between Councils and tāngata whenua (for example, Joint Management Agreements and Memoranda of Understanding); and
   - When necessary to help deliver on the Strategy and Action Plan, developing additional engagement processes between Councils and tāngata whenua (for example, joint wānanga/workshops).

3. **Collaboration**

   The sub-regional councils (Hamilton City Council, Waikato District Council and Waipa District Council) and other Future Proof partners work collaboratively to achieve the Strategy's vision and goals. When implementing the Action Plan, the collaboration will include:
   - Fostering sharing within the sub-region of resources, knowledge, experiences, best practice, tools and methods that could help achieve the Strategy's vision and goals;
   - Identifying opportunities to jointly deliver services so as to realise efficiencies;

[1] Under section 8 of Nga Wai o Maniapoto (Waipa River) Act 2012, the Vision and Strategy for the Waikato River is extended to include the Upper Waipa River and activities in its catchment affecting the Upper Waipa River.

- Working together to ensure that reviews of Council plans, policies and bylaws take the Strategy's vision and goals into account;
- To ensure decisions are informed by knowledge and best practice;
- Working with other utility and service providers to plan and deliver services and infrastructure in a collaborative and efficient way.

4. Efficiency

The sub-regional councils and other Future Proof partners work collaboratively to achieve long term efficiencies for their Councils and communities.

5. Knowledge and best practice

The sub-regional councils ensure that their decisions are informed by knowledge and best practice.

2.4 The Actions

This Action Plan comprises eleven specific actions, which are summarised in section 2.5. More detailed information about each action is provided in Appendices B through L including:

- The Strategy's vision, which the action is intended to help realise;
- An explanation of the problems or opportunities the action is intended to address;
- A description of the action;
- Objectives from the Sub-regional Three Waters Strategy, which the action is intended to help achieve;

2.5 Action Plan Summary

Action	Appendix (See Note 1)	Cost Implications	Priority (See Note 2)	Focus	Proposed Implementation Tools	Timing or completion dates	Strategic issue addressed (See Note 3)								
							1.Health	2. Growth	3. Climate	4. Knowledge	5.Sustainable	6. Integration	7. Allocation	8. Iwi (See Note 4)	9. Environment
Table 1: Actions Future Proof and the sub-regional councils (See Note 5) will lead															
1 Develop and implement a 30-year Sub-regional Three Waters **Infrastructure Plan** that identifies integrated, efficient and sustainable infrastructure and water availability that will meet existing and future planned growth demands.	B	Funded (in part)	Low	Growth	RPS, local growth strategies, District Plans, LTP	2019/20	✓	✓			✓		✓		✓
Table 2: Actions the sub-regional councils will lead															
2 Develop and implement a Sub-regional **Water Management Plan**	C	Funded	High	Growth & Operations	Sub-regional collaboration	2014/15		✓		✓	✓	✓	✓		✓
3 Each council develops computational **models** that reflect the spatial and operational nature of the three water systems and provide for sound decision-making in both the operational and growth contexts	D	Funded (in part)	High	Growth & Operations	Sub-regional collaboration	Ongoing		✓	✓			✓	✓		
4 Develop and implement a sub-regional approach to **risk management for public health** for three waters activities.	E	Funded (in part)	Medium	Operations	PHRMPs, WSPs	2019/20	✓		✓						✓
5 Develop Sub-regional **Infrastructure Technical Specifications** for three waters infrastructure.	F	Funded (WLASS)	Medium	Operations	District Plan	2016/17	✓		✓		✓	✓	✓		✓
6 Develop and implement a Sub-regional Three Waters **Education Strategy**.	G	Funded (in part)	Medium	Operations	Sub-regional collaboration		✓			✓		✓	✓	✓	✓
7 Use **Integrated Catchment Management Plans** and Water Impact Assessments to help achieve integrated and cost effective management of landuse and the three waters.	H	Funded (HCC only)	Low	Growth & Operations	LTP, District Plans	Ongoing	✓	✓			✓	✓			✓
8 Develop sub-regional **optimised decision-making processes** for three waters management and apply them when assessing technology (including new and green technology), infrastructure, processes and programmes of work.	I	Unfunded	Low	Operations	AMPs, sub-regional collaboration	Ongoing		✓			✓	✓	✓		
9 Use **asset management systems** to manage consistently infrastructure provision, maintenance and renewal.	J	Funded (in part)	Low	Operations	AMPs, sub-regional collaboration	Ongoing					✓				
Table 3: On-going Actions Future Proof and the sub-regional councils will lead															
10 Engage in central, regional and local government **policy** development and review **and planning processes** to promote achievement of the Strategy's vision and goals.	K	Funded	Medium	Growth & Operations	Submissions, RMA & LGA processes	Ongoing	✓	✓	✓		✓	✓	✓	✓	✓
11 Understand the effects of **climate change** and the implications of these effects for infrastructure planning and operations.	L	Funded (in part)	Medium	Growth & Operations	ITS	Ongoing			✓						

Note 1: Detailed information about each action is provided in the Appendix listed in this column.
Note 2: Refer to section 2.6 for an explanation of the priorities.
Note 3: Further information about the link between the Actions and the Strategic Issues is provided in Table 4.
Note 4: An overarching principle of the Action Plan iwi will be involved in Action Plan implementation – see Section 2.3.
Note 5: Hamilton City Council, Waikato District Council and Waipa District Council.

2.6 Action Priorities

Tables 2, 3 and 4 identify three categories of priority for the actions: high, medium and low. These reflect the perceived urgency for the actions as at December 2015. The following should be noted with respect to these priorities:

- Priorities could change over time; and
- It is not intended that all actions in the Action Plan will be implemented simultaneously. It is not intended, for example, to complete a high priority action before a lower priority one is begun.

2.7 Links between the Actions and the Strategy

The strategic issues, goals and responses in the Strategy are reproduced in Table 4 below together with the specific actions included in this Action Plan to implement the responses, achieve the goals and address the issues.

Table 4: The Sub-regional Three Waters Strategy's issues goals and responses and the actions included in the Action Plan to address them

Sub-regional Three Waters Strategy[2]				Action Plan	
Issue		**Goal**	**High level "response" identified by the Strategy**	**Specific Action**	
1	**Health:** Ensuring the protection and improvement of public health and safety, and providing appropriate water sanitary services and hazard management practices	Proactively protect, promote and improve public health and safety	Proactively review and implement Water Safety Plans and Public Health Risk Management Plans.	4	Risk management for public health
			Proactively prepare and disseminate to their communities consistent and user friendly information on water supply, safe sanitation, household plumbing matters etc.	6	Educational Strategy
			Plan and where necessary, implement emergency procedures in respect to Three Waters services that are coordinated and make best use of the joint resources of all three Councils.	4	Risk management for public health
			Address the need for wastewater reticulation and community treatment or other solutions where onsite wastewater systems are creating inappropriate adverse effects on public health.	1 4 7	Infrastructure Plans Risk management for public health ICMPs
			Explore ways of improving the monitoring and management of on-site wastewater systems in large un-serviced communities.	4	Risk management for public health
			Ensure that their respective District Plan, Development manuals, design codes, emergency preparedness plans and other planning and management tools sufficiently address and respond to the potential of flood hazards to both people and property.	4 5 10	Risk management for public health Infrastructure Technical Specifications Policy and planning processes
2	**Growth:** Meeting future anticipated and planned for growth demands	1. Provide for the water needs for the sub-region for the next 30 years in an efficient and sustainable manner. 2. Ensure an understanding of and the provision for changing future needs, demands and issues within the sub-region	Have regard to and align with the direction and implementation of Future Proof Growth Strategy and Implementation Plan.	1 2 10	Infrastructure Plan Sub-regional WMP Policy and planning processes
			Ensure that the potential implications and effects of growth pressures on the Three Waters are appropriately understood and that Three Waters management decisions are informed by accurate and relevant information.	1 2 3 8	Infrastructure Plan Water conservation Model Optimised decision-making processes
			Ensure that growth and infrastructure planning are appropriately integrated and that the respective District Plans (and other management tools): • Have appropriate and consistent methods of ensuring that development occurs cognisant with infrastructure. • Are flexible enough to adapt to unforeseen influences, changing markets and changing growth pressures.	1 7 10	Infrastructure Plan ICMPs Policy and planning processes
3	**Climate:** Planning for and adapting to climate change	Promote an understanding of and ensure appropriate planning for the effects of climate change	Ensure that Three Waters infrastructure and resource use decisions are informed by and respond to the potential effects of climate change.	11	Climate Change
			Ensure that their respective District Plans, Infrastructure Technical Specifications, design codes, emergency preparedness plans and other planning and management tools sufficiently address and respond to the potential effects of climate change.	3 4 5 10	Model Risk management for public health Infrastructure Technical Specifications Policy and planning processes

[2] The text in these columns is reproduced from the Strategy.

			Work together to develop and implement other methods (statutory and non-statutory) for managing the potential effects of climate change.	10	Policy and planning processes
Sub-regional Three Waters Strategy				**Action Plan**	
Issue		**Goal**	**High level "response" identified by the Strategy**	**Specific Action**	
4	**Knowledge:** Ensuring that decisions relating to the Three Waters are underpinned by best practice, research and knowledge	Ensure that decisions relating to the Three Waters are underpinned by best practice, research and knowledge	Ensure that decision making is informed by best practice, research and knowledge and that information used to inform the decision making process is: • Reliable and consistently updated and reviewed. • Made an integral part of the strategic and collaborative processes that underpin Three Waters decision making. • Disseminated in an accessible form to relevant stakeholders both within and outside of the Three Councils.	8	Optimised decision-making processes
			In addition, making information available to the public is a key element of any collaborative process. Distributing information in an accessible form to stakeholders will encourage engagement.	6 2	Education Strategy Water conservation
5	**Sustainable:** Ensuring quality, efficient and sustainable infrastructure	• Promote the sustainable and economic use and delivery of Three Waters resources and services. • Ensure the efficient utilisation of existing resources	Work together to develop and implement comprehensive planning tools (such as Water Management and Activity/ Asset Management Plans) that ensure a sound understanding of current infrastructure and future needs.	1 2 7 9	Infrastructure Plan Sub-regional WMP ICMPs Asset management systems
			Explore and implement opportunities for shared services and other methodologies to deliver efficient and sustainable infrastructure to the community such as opportunities presented by changing technology. For example: • The potential for energy efficient technology and low energy solutions. • Maximise current system efficiencies. • The potential benefits of adopting green infrastructure and low impact design solutions.	5 8 9 10	Infrastructure Technical Specifications Optimised decision-making processes Asset management systems Policy and planning processes
6	**Integration:** The need for integration of: • Relevant Council functions • Inter Council departments • The Three Waters • Land use and water planning and management	Co-operatively manage and plan for Three Waters in the sub-region	Develop shared methods to ensure alignment and communication across and between Councils and Council departments to: • Achieve integrated management and regulation of Three Waters resources and infrastructure. • Ensure land use planning, growth planning and Three Waters planning processes are appropriately integrated and coordinated. • Deliver cost effective and collective solutions to three Waters management.	2 3 5 6 7 8 10	Sub-regional WMP Model Infrastructure Technical Specifications Education Strategy ICMPs Optimised decision-making processes Policy and planning processes
			Develop integrated approaches to the provision and operation of Three Waters services, including those associated with individual households, businesses and industries that: Efficiently use water. Produce less wastewater. Manage stormwater in a way that reduces adverse environmental effects and efficiently uses the water resource.		

Sub-regional Three Waters Strategy				Action Plan	
Issue		**Goal**	**High level "response" identified by the Strategy**	**Specific Action**	
7	**Allocation:** The availability and allocation of water	1. Provide for the water needs for the sub-region in an efficient and sustainable manner. 2. Promote the sustainable use of resources.	Ensure proactive and coordinated involvement in regional water allocation processes and ensure that any decisions are informed and supported by appropriate research and data and that the capacity of their respective water allocation is known.	2 10	Sub-regional WMP Policy and planning processes
			Explore where future water needs can be sourced and identify what relationships will be required to enable the most cost efficient and effective utilisation of resources and whether the current approach to water allocation is appropriate.	2 3 10	Sub-regional WMP Model Policy and planning processes
			Acknowledge and reflect the growing understanding of water as a precious resource and ensure efficient and effective use and environmental protection and enhancement is at the forefront of consideration and decision making.	1 2 3 5 8 10	Infrastructure Plan Sub-regional WMP Model Infrastructure Technical Specification Optimised decision-making processes Policy and planning processes
			Ensure that current and future potable water needs are considered in a collaborative manner (including responses to water shortages and droughts). The Three Councils will explore how they can/should align on consenting issues and will ensure that objectives, policies, rules and methods are in place to reflect a collaborative approach.	2 10	Sub-regional WMP Policy and planning processes
			Explore ways and mechanisms (statutory and non-statutory) of improving the efficiency of water takes and use (e.g. integrated water approaches, technology, pricing, metering, legislation and education).	1 2 3 5 6 8 10	Infrastructure Plan Sub-regional WMP Model Infrastructure Technical Specification Education Strategy Optimised decision-making processes Policy and planning processes
8	**Iwi:** Ensuring that iwi and hapū are involved in the management of Three Waters and Tāngata Whenua values, aspirations and interests are identified and reflected	3. Promote the recognition of cultural values. 4. Give effect to the Te Ture Whaimana o Te Awa o Waikato, The Vision and Strategy for the Waikato River	Ensure that cultural values around water are understood and incorporated into decision-making.	6 10	Education Strategy Policy and planning processes
			Ensure that there is a sufficient and common understanding of the implications and requirements of the River Acts and Bill.		
			Ensure a common understanding of who/how to engage with iwi and hapū and that there are consistent and well understood (both within and outside of Council) processes and protocols in place for engaging with iwi and hapū on Three Waters issues.		

Sub-regional Three Waters Strategy				Action Plan	
Issue		**Goal**	**High level "response" identified by the Strategy**	**Specific Action**	
9	**Environment:** Ensuring protection and where possible the enhancement of the natural environment	Promote the restoration and protection of the health and wellbeing of our waterways and their catchments	Advocate at a national, regional and local level for appropriate (or if applicable changes to) water quality rules and regulations.	10	Policy and planning processes
			Ensure that there is a sufficient and common understanding of the implications and requirements of the River Acts and Bill and also the Vision And Strategy for the Waikato River (please refer to the National Drivers section 6.1.5 and 6.1.4)	6	Education Strategy
			Ensure that their respective tools (e.g. District Plan, Infrastructure Technical Specifications, Technical Standards etc.) achieve appropriate and consistent environmental outcomes.	2 5 6 10	Water Conservation and Demand Infrastructure Technical Specifications Education Strategy Policy and planning processes
			Address the need for wastewater reticulation and community treatment or other solutions where onsite wastewater systems are creating inappropriate adverse effects on the environment.	1 4 7 10	Infrastructure Plan Risk management for public health ICMPs Policy and planning processes
			Explore opportunities to implement a catchment based approach to stormwater management.	7	ICMPs

3 Action Plan Implementation

3.1 Oversight

3.1.1 Future Proof Water Policy Group

A Future Proof Water Policy Group has been formed. The purpose of this group includes overseeing the progress of the Sub- Regional Three Waters Strategy. The group held its first meeting on 7 October 2015 where the Terms of Reference for the group were confirmed. Members of the group include the following:

- Chairperson/Facilitator of the Group;
- Two to three representatives from each member council, where at least one representative is to be a Future Proof Technical Implementation Group member also;
- Two tāngata whenua representatives;
- The Future Proof Implementation Advisor;
- The Future Proof Coordinator;
- Others as co-opted from time to time in order to provide advice to the Group.

The group will meet monthly and report to Future Proof as and when required.

3.1.2 Sub-regional Waters Group

The Sub-regional Waters Group ("Working Group") was established under a Memorandum of Understanding ("MoU") signed by the Chief Executives of Hamilton City Council, Waikato District Council and Waipa District Council in August 2011. The MoU defines the relationship and intentions of the parties, established a Governance Committee, allows for the establishment of joint projects, identifies the parties' responsibilities and sets out how the costs of running the Working Group and resultant Shared Service initiatives will be funded.

The Working Group was established to address by way of Shared Service initiatives the operational aspects of integrating the three waters that are identified in the Strategy. The MoU established the following vision for the Working Group:

> *"Our vision is to deliver integrated, sustainable and well managed Three Waters services (both in terms of resources and infrastructure) for the Waikato Sub-Region which ensures the protection, and where possible, the enhancement of public health and sensitive receiving environments today and into the future"* (s.5.1).

The objectives of Shared Service initiatives are to deliver the following general outcomes together with project specific objectives agreed by the Governance Committee:

- Economies of scale;
- Strategic capacity (that is, pooling knowledge, expertise and infrastructure to allow a more strategic approach and potential for the identification and delivery of new opportunities);
- Operational excellence;
- Improved service delivery;
- Outcomes that are culturally appropriate; and
- Outcomes that protect and enhance the Council's relationship with the environment and community.

As at December 2015, three approved Shared Service, and three approved Mayoral Forum initiatives were underway as shown within the table below. The Future Proof Water Policy Group shall continue to engage and align with the Shared Services Governance Committee.

Shared Services	Mayoral Forum
Sub-regional trade waste management	Regional Infrastructure Technical Specifications
Sub-regional sampling and analysis of 3 waters and closed landfills	Asset Management – Asset Valuation Benchmarking
Sub-Regional water conservation and education	CCO options study

3.1.3 Ngā Karu Atua o te Waka

Ngā Karu Atua of te Waka is the tāngata whenua reference group that was established to provide input to the development and implementation of the Future Proof Strategy.

3.1.4 Tainui Waka Alliance

Tainui Waka Alliance refers to an association of five iwi authorities that descend from the Tainui Waka, namely, the Hauraki Maori Trust Board, Maniapoto Maori Trust Board, Raukawa Trust Board, Kawerau-a-maki and Waikato-Tainui (including Waikato-Tainui Te Kauhanganui Incorporated, Waikato Raupatu River Trust, Waikato Raupatu Lands Trust and Tainui Group Holdings).

3.2 Tools for Implementing the Actions

As indicated in Figure 1, the Action Plan will be implemented using a variety of mechanisms, including:

- District Plans;
- Long Term Plans (providing for routine day-to-day operations and special projects);
- Activity Management Plans;
- Bylaws;
- Policies;
- Submissions and appeals;
- Shared Services;
- Infrastructure Technical Specifications;
- Infrastructure Plans;
- Water Safety Plans;
- Integrated Catchment Management Plans;
- A Sub-regional Three Waters Education Strategy; and
- A Sub-regional Water Management Plan.

3.3 Funding

The sub-regional councils already undertake many of the actions in this Action Plan as part of normal business. However, some of the actions are not normal business, are unfunded and will require additional funding in order to progress.

In the period 2013 to 2015, the sub-regional councils will continue to deliver those actions for which funding is already provided for within their existing 2015 -2025 LTPs.

Also during this period, they will scope any additional funding needed to support the actions and request this funding through the process of preparing their 2018-2028 LTPs.

3.4 Monitoring and Reporting

The Future Proof Water Policy Group overseeing the Action Plan implementation will monitor and report progress to the Future Proof Technical Implementation Group. Joint three waters and transportation progress reports will be submitted six monthly using the standard traffic light reporting template to the Chief Executive Advisory Group.

Staff of the sub-regional councils will report progress to their councils using existing reporting arrangements.

3.5 Review

The Action Plan will be reviewed every three years. These reviews will be timed so as to inform the review of the sub-regional 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.

Date	Reviews / adoption / next steps
June 2013	Draft Action Plan
March 2016	Final draft action plan for adoption
2016	Plan Adopted
2019	First review

Appendix A Methodology

Introduction

This Action Plan was developed following the methodology set out in the Strategy. Key steps in this process were:

1. Strategic issue interpretation;
2. Developing draft actions;
3. Review of draft actions;
4. Action validation workshops; and
5. Draft action list.

Strategic issue interpretation

A series of workshops were held in December 2010 with staff of the three sub-regional councils, Waikato-Tainui representatives and Waikato Regional Council. These workshops considered the following questions about strategic issues identified in the Strategy:

- What does this issue mean to the council?
- What is the council currently doing about this issue?
- What future actions should the council take to address this issue?
- Are there any constraints to taking action?
- What connections/links does this issue have with current council projects, strategies etc?

The outputs from this workshop series were summarised in a discussion document dated February 2011.

Developing draft actions

A "Draft Issue Response and Action Table" (18 December, 2012) was developed and reviewed by the sub-regional councils' project team in late 2012.

Review of draft actions

A draft action table was developed and circulated to relevant staff of the sub-regional councils for review, including identifying:

- Any actions that were considered irrelevant or that could otherwise be deleted;
- Any additional actions that should be included; and
- Any required amendments to existing actions.

Council staff sent their responses back to the project consultants for consideration. All feedback, including comments, questions and recommendations, was amalgamated into a single draft action table.

Action validation workshops

Key staff of the three sub-regional councils participated in a series of facilitated workshops during January and February 2013 to develop some initial thoughts about actions that could potentially be undertaken to implement the Strategy.

Draft action list

The three council's project team refined the outputs from the workshop and produced a preliminary action list.

Iwi and Regional Council engagement

The sub-regional councils invited tāngata whenua and Waikato Regional Council to work with them to develop the Action Plan. Principles 1 and 2 in section 2.3 above were added as an outcome of two wānanga/workshops attended by tāngata whenua and staff of the sub-regional councils in February and March 2013 and the subsequent review of an early draft of the Action Plan by representatives of Tainui Waka Alliance and Ngā Karu Atua o te Waka. Waikato Regional Council provided written feedback on the preliminary action list, which was taken into account when the Action Plan was developed.

Action prioritisation

Key staff of the sub-regional councils and a representative of Ngā Karu Atua o te Waka prioritised the actions in the preliminary action list using the method of paired comparisons. This prioritisation mainly reflected an operational perspective, rather than a Future Proof growth perspective. The Future Proof Groups identified the development of an Infrastructure Plan and Water Conservation as its top priorities. Waikato-Tainui, on the other hand, identified these actions as its second and third priorities respectively behind the action, "Involving iwi and hapū, and identifying and reflecting tāngata whenua values, aspirations and interests, in three waters management". Waikato-Tainui's fourth priority is Integrated Catchment Management Plans. The Future Proof Groups determined the priorities that are presented in this Action Plan.

Preparation of the Action Plan Report

In 2013, staff of the sub-regional councils prepared drafts of this Action Plan report, which were reviewed by Future Proof's Technical Implementation Group, Joint Strategic Implementation Management Group and Chief Executives Advisory Group, and the Implementation Committee. In 2016, it was evident that the Draft Action Plan report required amendment prior to adoption. This work was then undertaken by representatives the Future Proof Water Policy Group, where feedback was called for and a workshop was held. Changes made to the draft Action Plan included;

- The updating the plan to reflect changes in legislation or Council processes that had occurred since its initial drafting;
- General clarification of plan aspects where considered necessary, in order to provide a more informative document;
- An improved reporting schedule. The reporting template is attached to this document. The template will use traffic lights to indicate status of agreed action points.

Adoption of the Action Plan

After endorsement of the Action Plan by Future Proof's Groups and Committee, the Action Plan was presented to the sub-regional Council's Chief Executives for adoption during July 2016. The feedback received was that the framework of the Waikato Regional Council 'Let's Talk Water' discussion should come through within the plan. The 'Let's talk Water' discussion document has informed the WRC Issues and Opportunities Paper, released 30 June 2016. The intention of this paper is to provide a platform from which to develop a region-wide freshwater management strategy. Reference to the context of the Issues and Opportunities Paper now sit within the Sept 2016 version of the Action Plan, where relevant (identified by ^).

Appendix B Action 1: Infrastructure Plan

The Vision

The delivery of integrated, sustainable and well managed three waters services for the sub-region which ensures the cultural, social and economic needs of the community are met and the quality of the Waikato River is improved.

Problems or Opportunities the Action will address

- It is unknown if the current Future Proof Strategy, which provides for a combination of infill, intensification and Greenfield development, and the resulting settlement pattern is optimal in relation to the viability and economics of three waters infrastructure provision.
- Infrastructure planning is fragmented and there are gaps in the provision of infrastructure in some growth areas.
- There are pressures to develop in areas where there is no wastewater infrastructure available to service the growth. This can possibly lead to ad hoc infrastructure investments that impact on current levels of service, lifecycle operational costs and resource consent and Regional Policy Statement compliance.
- There are opportunities for the sub-regional councils to share infrastructure, which could yield technical and financial efficiencies.
- The sub-regional councils hold resource consents for the taking and use of water and the discharge of treated wastewater. Three waters infrastructure and its operation and performance must comply with the conditions in these consents.
- Integration of the planning and management of land use and three waters infrastructure within Councils and across jurisdictional boundaries has the potential to improve the efficiency and effectiveness of three waters services.
- Availability of water to service the settlement pattern.

Description of the Action

Develop and implement a 30-year Sub-regional Three Waters Infrastructure Plan that identifies integrated efficient and sustainable infrastructure and water availability that will meet existing and future planned growth demands.

It is envisioned the Sub-regional Three Waters Infrastructure Plan will:

- Form part of a larger Sub-regional Infrastructure Plan, which will cover, as a minimum, the core infrastructure provided under the Local Government Act that is needed to service the planned land use, that is, transportation and three waters infrastructure; and
- Be based on information that would be generated as an output of other actions in this Action Plan, in particular:
  - Action 3 (Model) will provide baseline data to enable Infrastructure Plans to be optimised; and
  - Action 11 (Climate Change) will provide the implications of the effects of climate change for three waters infrastructure planning.

This work will include:

- Identifying the future sub-regional need for water in 2021, 2041 and 2061 using water demand projections based on planned population and landuse;
- Assessing the adequacy of existing consented takes to satisfy future demand;
- Identifying sub-regional water allocation available;
- Determining whether greater control over the location of wet and dry industries should be provided for within the respective District Plans;
- Determining possible sub-regional options for supplementing the supply to meet future demand;
- Assessing the need for, and options to better integrate, the location, timing, staging and scale of land use development with planned and existing infrastructure capacity and investment to achieve sustainable long-term infrastructure headwork and reticulation outcomes; and
- Recognising matters of national significance.

It is envisioned the Infrastructure Plan will:

- Focus on opportunities for cross boundary services, potential for sharing of water allocations, timing of issues and consideration of un-serviced areas;
- Recognise the existing capacity. Level of service, RMA compliance and condition of three waters infrastructure;
- Be based on:
  - Commonly accepted, appropriate growth projections, planned landuse patterns and forecast development timelines; and
  - Consistent modelling parameters;
- Take into account:
  - Iwi, hapū and intergenerational matters;
  - The effects of climate change; and
  - The expected effectiveness of water conservation and demand management measures;
- Identify the works to implement water supply options;
- Identify opportunities for wastewater reticulation and community treatment or other solutions where existing on-site wastewater systems are creating inappropriate adverse effects on public health or the environment;
- Identify strategic infrastructure requirements to facilitate development in planned growth areas;
- Identify prerequisite infrastructure triggers for development in planned growth areas;
- Be sufficiently flexible (by means of reviews) to respond to unforeseen circumstances such as changing markets and growth pressures;
- Be endorsed by the three sub-regional Councils;
- Be a live document;
- Be consistent with HUGS, Waipa 2050, the Waikato District Growth Strategy and the Future Proof Strategy, and
- Inform:
  - AMPs;
  - Future Proof Strategy reviews, Regional Policy Statements, District Plans and other growth management tools;
  - Council decisions regarding proposals for unplanned developments or developments where the strategic infrastructure or capacity is not yet available; and
  - WMPs.

Relatively recent developments that have bearing on the development of a 30-year Sub-regional Three Waters Infrastructure Plan include:

- The Local Government Act 2002 Amendment Act 2014, which became law on August 2014, and;
- The study completed in May 2015 by Cranleigh (in partnership with Mott MacDonald and Martin Jenkins) on how each Council could manage water, wastewater and stormwater services across the sub-region.

The relevance of the above points when considering the preparation of a 30-year Sub-regional Three Waters Infrastructure Plan are:

- The Amendment Act introduced changes requiring Councils to prepare an infrastructure strategy for at least a 30 year period, and to incorporate this into long term plans. This longer term planning that has already occurred should better inform the preparation of the Infrastructure Plan, and
- An option investigated and reported upon by Cranleigh included forming a council owned Council Controlled Organisation (CCO). The CCO business case can be considered a preliminary version of an Infrastructure Plan, and could form the basis of an Infrastructure Plan.

Objectives

Sub-regional Three Waters Strategy

- Have regard to and align with the direction and implementation of Future Proof Growth Strategy and implementation plan.
- Ensure that the potential implications and effects of growth pressures on the three waters are appropriately understood and that three waters management decisions are informed by accurate and relevant information.
- Ensure that growth and infrastructure planning are appropriately integrated and that the respective district plans (and other management tools) have appropriate and consistent methods of ensuring that development occurs cognisant with infrastructure and are flexible enough to adapt to unforeseen influences, changing market and changing growth pressures.
- Explore where future water needs can be sourced and identify what relationships will be required to enable the most cost efficient and effective utilisation of resources and whether the current approach to water allocation is appropriate.
- Working together to develop and implement comprehensive planning tools that ensure a sound understanding of current infrastructure and future needs.
- Deliver cost effective and collective solutions to three waters management.
- Ensure proactive and co-ordinated involvement in regional water allocation processes and ensure that any decisions are informed and supported by appropriate research data and that the capacity of their respective water allocation is known.

Appendix C Action 2: Water Conservation and Demand Management

Vision

The delivery of integrated, sustainable and well managed three waters services for the sub-region which ensures the cultural, social and economic needs of the community are met and the quality of the Waikato River is improved.

Problems or Opportunities the Action will address

- The quantum of water available for future use is limited. Water is distributed unevenly within the region^, where water demand is managed differently across the sub-region as a whole.
- The climate is changing, and this is predicted to increase the demand for water and reduce its availability during summer. As freshwater becomes scarcer, its value will increase, and it can be expected that access will become more keenly contested^.
- There are potential opportunities to enhance infrastructure and planning instruments to further encourage water conservation.
- There are opportunities to avoid or postpone the need and cost for increasing the capacity of water supply and wastewater infrastructure, if water were used more efficiently.
- There are opportunities to educate and inform communities about water conservation issues and ways individuals can make a difference.

Description of the Action

Develop and implement a Sub-regional Water Management Plan.

It is envisioned this action will include developing and implementing mechanisms for ensuring the efficient use of and minimising water demand in both urban and rural areas, for example, technology, pricing, metering, legislation, communication and education. In June 2015, a Sub-regional Water Management Plan Strategic Overview was prepared for the three partner Councils.

Objectives

Three waters strategy

- Develop integrated approaches to the provision and operation of three waters services including those associated with individual households businesses and industries that effectively use water.
- Acknowledge and reflect the growing understanding of water as a precious resource and ensure efficient and effective use is at the forefront of consideration and decision-making.
- Explore ways and mechanisms (statutory and non-statutory) of improving the efficiency of water takes and use (e.g. integrated water approaches, technology, pricing, metering, legislation and education).

Appendix D Action 3: Models

Vision

The delivery of integrated, sustainable and well managed three waters services for the sub-region which ensures the cultural, social and economic needs of the community are met and the quality of the Waikato River is improved.

Problems or Opportunities the Action will address

- In order to determine infrastructure requirements to service growth, the current infrastructure's capacity, efficiency and level of service need to be understood.
- In order to identify flood hazards and manage flood risks the likelihood and consequence of flooding need to be understood.

Description of the Action

A consistent approach is used by councils in the development of computational models, where models:

i. reflect the spatial and operational nature of the three water systems and;
ii. provide for sound decision-making in both the operational and growth contexts.

It is envisioned the three waters models will:

1. Comprise:
   - Computational models that reflect the spatial and operational nature of the three waters; and
   - Associated diagrams and images that illustrate the integration of the three waters;
2. Have assumptions and limitations that are common to all three sub-regional councils and take into account the effects of climate change;
3. Use the same software platform (DHI products) so that model inputs and outputs are consistent and interchangeable between the three sub-regional councils; and
4. Be used to:
   - Understand operational efficiencies;
   - Enable Council engineers to respond quickly to queries related to significant development proposals;
   - Support the development of the Infrastructure Plan, ICMPs and Flood Hazard Maps;
   - Manage greenfield growth cells;
   - Identify areas that can be intensified with minimum capital investment;
   - Support goals to reduce water loss within the network and pump station overflows;
   - Help Council staff make robust decisions regarding growth and operational optimisation;
   - Promote understanding of the integration of three waters;
   - Identify opportunities for more efficient use of water and other resources;
   - Inform the Sub-regional Three Waters Infrastructure Plan and WMP and other three waters management documents; and
   - Inform the review of the Future Proof Strategy.

Objectives

Sub-regional Three Waters Strategy

- Ensure that their respective planning and management tools sufficiently address and respond to the potential of flood hazards to both people and property.
- Ensure that the potential implications and effects of growth pressures on the Three Waters are appropriately understood and that Three Waters management decisions are informed by accurate and relevant information.
- Ensure that decision making is informed by best practice, research and knowledge and that information used to inform the decision making process is:
  - Reliable and consistently updated and reviewed;
  - Made an integral part of the strategic and collaborative processes that underpin Three Waters decision making; and
  - Disseminated in an accessible form to relevant stakeholders both within and outside of the Three Councils.
- Work together to develop and implement comprehensive planning tools that ensure a sound understanding of current infrastructure and future needs.
- Manage stormwater in a way that reduces adverse environmental effects and efficiently uses the water resource.
- Explore where future water needs can be sourced and identify what relationships will be required to enable the most cost efficient and effective utilisation of resources and whether the current approach to water allocation is appropriate.

Appendix E Action 4: Public Health Risk Management

Vision

The delivery of integrated, sustainable and well managed three waters services for the sub-region which ensures the cultural, social and economic needs of the community are met and the quality of the Waikato River is improved.

Problems or Opportunities the Action will address

Inconsistent methods are used to determine, manage and mitigate public health risks associated with water, stormwater and wastewater systems, and this could compromise public health. Specifically:

- There are no PHRMPs for wastewater or stormwater;
- Climate change is expected to have adverse effects on public health risks[3]; and
- If on-site wastewater treatment systems are not managed effectively, public health could be adversely affected.

Description of the Action

Develop and implement a sub-regional approach to risk management for public health for three waters activities.

It is envisioned the Action will include the following[4]:

1. Developing sub-regional templates for WSPs for water supply, and PHRMPs for wastewater and stormwater, such templates will, where appropriate:
   - Take into account the effects of climate change;
   - Promote backflow prevention;
   - Identify appropriate levels of resilience for sub-regional infrastructure; and
   - Address public health risks arising from cross connections between stormwater and wastewater systems, wastewater pump station overflows, stormwater discharges and flooding resulting from blockages caused by litter;
2. Using the sub-regional template when undertaking future reviews of WSPs for water supply;
3. Developing PHRMPs for wastewater and stormwater for each sub-regional Council;
4. Developing and implementing a consistent sub-regional approach to flood risk management, which will include:
   - The management of flood hazard and public health risk;

[3] Potential risks to public health arising from climate change include: risks from water borne disease resulting from the flooding of homes or septic tanks and associated drainage fields, or the contamination of natural waterways by overflows from the wastewater network resulting from increased inflow and infiltration of stormwater into the wastewater network, drowning during flood events, and any adverse effects on public health resulting from water shortage.

[4] Education focused on avoiding or minimising risks to public health will be included in the Education Strategy to be developed under Action 6.

- Flood mapping (which is an output of Action 3); and
- Integrating flood risk management into council documents;

5. Assessing the need for and, if necessary, developing and implementing a sub-regional policy about the on-going management of on-site wastewater treatment plants, including:
   - Identifying:
     - The potential effects of on-site wastewater systems on public health;
     - Areas within the sub-region where the adverse effects of on-site wastewater systems are significant;
     - Roles and responsibilities for the management of on-site wastewater systems and their effects; and
     - Iwi perspectives of on-site wastewater systems; and
   - Investigating compliance monitoring options and other measures (for example, Warrants of Fitness and/or bylaws) to address on-site wastewater systems that are creating or could potentially create adverse effects; and
6. Developing sub-regional three waters emergency and contingency plans with involvement of emergency management groups (for example, Civil Defence and the Waikato Utilities Lifelines Working Group). These plans would address matters such as supplying water and mitigating public health risks during emergencies.

Objectives

Sub-regional Three Waters Strategy

- Proactively review and implement water safety plans.
- Explore ways of improving the monitoring and management of on-site wastewater systems in large un-serviced communities.
- Ensure that emergency preparedness plans and other planning and management tools sufficiently address and respond to the potential of flood hazards to both people and property.
- Plan and where necessary, implement emergency procedures in respect to Three Waters services that are coordinated and make best use of the joint resources of all three Councils.
- An integrated, sustainable approach to the three urban waters so that the use or discharge of one does not impact negatively on the others.
- Address the need for wastewater reticulation and community treatment or other solutions where onsite wastewater systems are creating inappropriate adverse effects on public health.

Appendix F Action 5: Infrastructure Technical Specifications

Vision

The delivery of integrated, sustainable and well managed three waters services for the sub-region which ensures the cultural, social and economic needs of the community are met and the quality of the Waikato River is improved.

Problems or Opportunities the Action will address

- Knowledge, technology and best infrastructure construction practice changes over time yielding opportunities for improved three waters infrastructure.
- It will be easier and less expensive to maintain three waters infrastructure if it is built in a consistent manner across the sub-region.
- Those designing and building three waters infrastructure need accessible guidance on how the infrastructure should be designed and built in order for it to be environmentally sustainable, efficient to operate and maintain, and consistent across the sub-region.

Description of the Action

Develop Sub-regional Infrastructure Technical Specifications for three waters infrastructure.

It is envisioned the Infrastructure Technical Specifications will:

- Take into account the effects of climate change;
- Ensure ease of operation and maintenance of infrastructure; and
- Allow innovation that satisfies the optimised decision-making processes (see Action 8 below).
- Become Regional Infrastructure Technical Specifications that will apply to Hamilton City and Hauraki, Matamata-Piako, Otorohanga, Waikato, Waipa and Waitomo District Councils.

Objectives

Sub-regional Three Waters Strategy

- Ensure that their respective development manuals, design codes, and other planning and management tools sufficiently address and respond to the potential of flood hazards to both people and property.
- Ensure that decision making is informed by best practice, research and knowledge and that information used to inform the decision making process is:
  - Reliable and consistently updated and reviewed.
  - Disseminated in an accessible form to relevant stakeholders both within and outside of the Three Councils.
- Develop shared methods to ensure alignment and communication across and between Councils and Council departments to:

- Achieve integrated management and regulation of Three Waters resources and infrastructure.
- Ensure land use planning, growth planning and Three Waters planning processes are appropriately integrated and coordinated.
- Deliver cost effective and collective solutions to Three Waters management.

Appendix G Action 6: Education Strategy

Vision

The delivery of integrated, sustainable and well managed three waters services for the sub-region which ensures the cultural, social and economic needs of the community are met and the quality of the Waikato River is improved.

Problems or Opportunities the Action will address

Inappropriate activities and inappropriate use of three waters infrastructure give rise to many of the problems experienced when managing three waters infrastructure and services. An effective Education Strategy has the potential to yield early benefits across the whole sub-region and improved service delivery and environmental and community outcomes. Such a strategy will educate the population about the appropriate use of three waters infrastructure. In addition, the education components of Action 2 (Water Conservation and Demand Management) will encourage efficient use of water and use of grey water. These education programmes will help maximise use of existing infrastructure capacity, postpone the need for increasing infrastructure capacity and release existing capacity to accommodate some of the planned future growth.

Description of the Action

Develop and implement a Sub-regional Three Waters Education Strategy.

It is envisioned the Education Strategy will:

1. Be developed in consultation with identified key stakeholders;
2. Aim to:
    - Reduce water use;
    - Reduce inappropriate contaminants in wastewater and stormwater;
    - Increase re-use of grey water and stormwater; and
    - Establish a good understanding of the following within and outside of the sub-regional Council:
        - Council policies and bylaws;
        - The Sub-regional Three Waters Strategy and Action Plan;
        - Three waters WSPs and PHRMPs;
        - WMPs;
        - The implications of the effects of climate change;
        - Individuals' and stakeholders' roles in public health;
        - Individuals' and stakeholders' financial and maintenance obligations regarding infrastructure;
        - Relevant regional plan and resource consent requirements;
    - Encourage individuals and stakeholders to operate in a manner that protects and/or enhances public health; and
    - Ensure that relevant council staff has appropriate awareness and understanding of the River Acts, co-management, any relevant Joint Management Agreements, relevant cultural values and processes for identifying, engaging and communicating with the appropriate tāngata whenua representatives.

3. Include collaborative procedures for identifying, obtaining and sharing information about best practice three waters management, including using the University of Waikato, Wintec, other research bodies, and professional bodies; and
4. Include:
    - A programme for its implementation; and
    - Details of how its effectiveness will be monitored and assessed and the strategy reviewed.

Objectives

Sub-regional Three Waters Strategy

- Proactively prepare and disseminate to their communities consistent and user friendly information on water supply, safe sanitation, household plumbing matters etc.
- Explore ways and mechanisms (statutory and non-statutory) of improving the efficiency of water takes and use (e.g. integrated water approaches, technology, pricing, metering, legislation and education).
- Ensure that cultural values around water are understood and incorporated into decision-making.
- Ensure that Kaitiakitanga is reflected in decision-making. Guardianship will cover matters such as clean water groundwater recharge.
- Ensure a common understanding of who/how to engage with iwi and hapū and that there are consistent and well understood (both within and outside of Council) processes and protocols in place for engaging with iwi and hapū on Three Waters issues.
- Ensure that there is a sufficient and common understanding of the implications and requirements of the River Acts and also the Vision and Strategy for the Waikato River.

Appendix H Action 7: Integrated Catchment Management Plans

Vision

The delivery of integrated, sustainable and well managed three waters services for the sub-region which ensures the cultural, social and economic needs of the community are met and the quality of the Waikato River is improved.

Problems or Opportunities the Action will address

- The river Acts (see the "Legislative Drivers" in Figure 1) need to be taken into account when land in the sub-region is developed.
- Plans for development in a catchment must take into account existing constraints on three waters infrastructure networks (including, for example, topography, the existence of any flood prone areas, the availability of existing three waters services, and the land needed for water, wastewater and stormwater purposes) and the effects of the development on the three waters.
- The sub-regional councils hold comprehensive stormwater discharge consents. In order to comply with the conditions on these consents, the sub-regional councils need to prepare catchment management plans and impose standards and conditions on development.
- Integration of the planning and management of land use and three waters infrastructure within a city or district has the potential to improve the efficiency and effectiveness of three waters services and to provide better environmental outcomes (for example, by optimising the cost of three waters infrastructure provision and by identifying the most suitable water sensitive techniques[5] for specific sites and proposals).
- Sub-division, redevelopment, land filling and road works disturb soil and can result in soil erosion and sedimentation of waterways. Erosion and sedimentation can result in flooding, reduced water quality, damaged aquatic systems and degradation of riparian zones. Urban development increases the area of impervious surfaces, which increases the volume of stormwater runoff and affects groundwater recharge. This in turn can cause more frequent local flooding, erode streambeds and banks, and wash sediments and other contaminants into waterways. Urban development also results in the discharge of higher levels of contaminants to water bodies, which decreases their water quality. Development of three waters infrastructure can have similar adverse effects on the environment.
- Stormwater assets can sometimes provide landscape, ecological and recreational benefits.

[5] Water sensitive techniques are methods for conserving water and/or achieving other multiple environmental benefits. Examples of water sensitive techniques include water conservation techniques such as using rainwater tanks for replacing potable use (for example, for toilet flushing and landscape irrigation) and low-flow fixtures; on-site soakage to minimise stormwater discharge; grey-water reuse systems and low-flow fixtures to minimise wastewater volumes; and wetlands for treating stormwater and enhancing biodiversity.

Description of the Action

Use Integrated Catchment Management Plans and Water Impact Assessments to help achieve integrated and cost effective management of landuse and the three waters.

It is envisioned a Sub-regional Infrastructure Plan will set a framework for the development of the sub-region's main three waters and roading infrastructure. It is expected to be a high-level plan that will identify the major elements of roading and three waters infrastructure. The latter is expected to include, for example: treatment plants, reservoirs, bulk water mains, interceptor wastewater pipelines, pumping stations, stormwater interceptor pipelines and any major ponding areas or wetlands.

Integrated Catchment Management Plans, on the other hand, will set a framework for land development activities and three waters infrastructure at an individual catchment level. ICMPs will be a second tier of infrastructure planning below that of the Infrastructure Plan and will provide a finer level of detail. ICMPs will show the preferred infrastructure for a growth cell when fully developed and identify any flood hazard. Water Impact Assessments will address the effects of individual subdivisions or developments on the three waters within the context of any relevant Catchment Management Plan. Both ICMPs and Water Impact Assessments will take into account the effects of climate change.

ICMPs and Water Impact Assessments will manage the effects of existing and proposed development on three waters and the effects of three waters infrastructure and activities on the environment.

Objectives

Sub-regional Three Waters Strategy

- Ensure that growth and infrastructure planning are appropriately integrated and that the respective District Plans (and other management tools):
  - Have appropriate and consistent methods of ensuring that development occurs cognisant with infrastructure.
  - Are flexible enough to adapt to unforeseen influences, changing markets and changing growth pressures.
- Work together to develop and implement comprehensive planning tools that ensure a sound understanding of current infrastructure and future needs.
- Achieve integrated management and regulation of Three Waters resources and infrastructure.
- Ensure land use planning, growth planning and Three Waters planning processes are appropriately integrated and coordinated.
- Deliver cost effective and collective solutions to Three Waters management.
- Develop integrated approaches to the provision and operation of Three Waters services, including those associated with individual households, businesses and industries that:
  - Efficiently use water.
  - Produce less wastewater.
  - Manage stormwater in a way that reduces adverse environmental effects and efficiently uses the water resource.
- Explore opportunities to implement a catchment based approach to stormwater management.

Appendix I Action 8: Optimised Decision-making Processes

Vision

The delivery of integrated, sustainable and well managed three waters services for the sub-region which ensures the cultural, social and economic needs of the community are met and the quality of the Waikato River is improved.

Problems or Opportunities the Action will address

The way decisions are made about the type or timing of three waters infrastructure or services affects the outcomes achieved; adoption of explicit decision-making criteria will achieve more consistent decisions and desired outcomes.

Description of the Action

Each Council develops optimised decision-making processes for three waters management which are applied when assessing technology (including new and green technology), infrastructure, processes and programmes of capital work.

It is envisioned that this decision-making process will:

1. Consider (amongst other things):
    - Council statutory responsibilities;
    - Best practice research and knowledge;
    - Maximising the use of existing infrastructure;
    - Economies of scale;
    - The ability to stage infrastructure development;
    - Energy efficiency;
    - Resilience;
    - Effectiveness;
    - Efficiency;
    - Whole of life cost;
    - The integration of landuse and water planning;
    - Sustainability;
    - Natural means of treatment, such as wetlands;
    - Low impact design options;
    - Asset ownership and risk (including the impact integration has on asset management and ownership) to the Councils, public, and environment;
    - The potential for the infrastructure to contribute to climate change;
    - The effects of climate change on the infrastructure required;
    - Opportunities for shared services; and
    - Achieving appropriate and consistent environmental outcomes and maximising opportunities for environmental enhancement and other positive outcomes;
2. Be incorporated in relevant AMPs and the Sub-regional Technical Specifications; and

3. Be applied to the assessment of proposed renewals, maintenance and operation.

Objectives

Sub-regional Three Waters Strategy:

- Ensure that Three Waters management decisions are informed by accurate and relevant information.
- Ensure that Three Waters infrastructure and resource use decisions are informed by and respond to the potential effects of climate change.
- Ensure that decision making is informed by best practice, research and knowledge and that information used to inform the decision making process is:
  - Reliable and consistently updated and reviewed.
- Acknowledge and reflect the growing understanding of water as a precious resource and ensure efficient and effective use and environmental protection and enhancement is at the forefront of consideration and decision making.
- Ensure that cultural values around water are understood and incorporated into decision-making.
- Ensure that there is a sufficient and common understanding of the implications and requirements of the River Acts.
- Ensure a common understanding of who/how to engage with iwi and hapū and that there are consistent and well understood (both within and outside of Council) processes and protocols in place for engaging with iwi and hapū on Three Waters issues.

Appendix J Action 9: Asset Management

Vision

The delivery of integrated, sustainable and well managed three waters services for the sub-region which ensures the cultural, social and economic needs of the community are met and the quality of the Waikato River is improved.

Problems or Opportunities the Action will address

Three waters infrastructure ages, and this can lead to a decline in its reliability or performance, an increase in the cost of keeping it functioning, and, ultimately, to its failure. Over its lifetime, the infrastructure may need to be maintained, rehabilitate, repaired, modified and/or replaced so that it continues to provide the desired level of service at an appropriate cost.

Computer-based asset management systems provide opportunities to organise and implement strategies that optimise the efficiency and cost effectiveness of asset management.

Description of the Action

Use asset management systems to manage consistently infrastructure provision, maintenance and renewal.

It is envisioned this action will:

- Take into account the effects of climate change; and
- Involve using asset management systems and processes to organise and implement strategies to manage consistently the entire life cycle of three waters infrastructure assets. The entire life cycle of assets includes their design, construction, commissioning, operation, maintenance, repair, modification, replacement, decommissioning and disposal; and
- Aim to provide agreed levels of service for present and future customers and optimise efficiency and cost effectiveness.

Objectives

Sub-regional Three Waters Strategy:

- Ensure that planning and management tools sufficiently address and respond to the potential effects of climate change.
- Work together to develop and implement comprehensive planning tools (such as Activity/ Asset Management Plans) that ensure a sound understanding of current infrastructure and future needs.
- Explore and implement opportunities for shared services and other methodologies to deliver efficient and sustainable infrastructure to the community such as opportunities presented by changing technology. For example:
  - The potential for energy efficient technology and low energy solutions.
  - Maximise current system efficiencies.
  - The potential benefits of adopting green infrastructure and low impact design solutions.

- Develop shared methods to ensure alignment and communication across and between Councils and Council departments to:
  - Achieve integrated management and regulation of Three Waters resources and infrastructure.
  - Deliver cost effective and collective solutions to Three Waters management.
- Develop integrated approaches to the provision and operation of Three Waters services, including those associated with individual households, businesses and industries that:
  - Efficiently use water.
  - Produce less wastewater.
  - Manage stormwater in a way that reduces adverse environmental effects and efficiently uses the water resource.
- Ensure that cultural values around water are understood and incorporated into decision-making.

Appendix K Action 10: Policy and planning processes

Vision

The delivery of integrated, sustainable and well managed three waters services for the sub-region which ensures the cultural, social and economic needs of the community are met and the quality of the Waikato River is improved.

Problems or Opportunities the Action will address

Central, regional and sub-regional government policy and planning processes have the potential to affect the extent to which the Vision is achieved. There are opportunities, for example, through submission and appeal processes, to influence the policy and planning processes of the various tiers of government so that they will help achieve the Vision.

A collaborative and consistent approach to three waters consenting has the potential to yield operational efficiencies.

Description of the Actions

Engage in central, regional and sub-regional local government policy development and review and planning processes to promote achievement of the Strategy's vision and goals.

It is envisioned the sub-regional councils will:

- Develop and review corporate and resource management policy relevant to implementation of the Strategy including that relating to: functions, roles, responsibilities, objectives, policies, bylaws, plans (including AMPs), strategies, management processes, existing forums (for example, Waikato River Municipal Users Group), approaches to landuse and water integration, shared services and infrastructure and services funding mechanisms. It is envisioned this will involve:
  - Taking into account the effects of climate change;
  - Developing sub-regional documents where practicable, or otherwise achieving sub-regional consistency in three waters management;
  - Identifying opportunities for shared services; and
  - Sharing review results with the other Councils in the sub-region; and
- Collaborate where appropriate regarding applications for three waters consents and promote more consistent consent conditions across the sub-region. For example, the sub-regional councils could consider applying for a sub-regional water take consent to allow for growth in the sub-region, or for comprehensive stormwater discharge consent.

Objectives

Sub-regional Three Waters Strategy:

- Plan and where necessary, implement emergency procedures in respect to Three Waters services that are coordinated and make best use of the joint resources of all three Councils.
- Develop shared methods to ensure alignment and communication across and between Councils and Council departments to:

  - Achieve integrated management and regulation of Three Waters resources and infrastructure.
  - Ensure land use planning, growth planning and Three Waters planning processes are appropriately integrated and coordinated.
  - Deliver cost effective and collective solutions to Three Waters management.
- The Three Councils will explore how they can/should align on consenting issues and will ensure that objectives, policies, rules and methods are in place to reflect a collaborative approach.
- Advocate at a national, regional and local level for appropriate (or if applicable changes to) water quality rules and regulations.
- Ensure that their respective tools (e.g. District Plan, Development Manual, Technical Standards etc.) achieve appropriate and consistent environmental outcomes.
- Explore and implement opportunities for shared services and other methodologies to deliver efficient and sustainable infrastructure to the community.

Appendix L Action 11: Climate Change

Vision

The delivery of integrated, sustainable and well managed three waters services for the sub-region which ensures the cultural, social and economic needs of the community are met and the quality of the Waikato River is improved.

Problems or Opportunities

Climate change is expected to cause sea level rise and increase the frequency and intensity of severe weather events in the future. This will create additional flows in stormwater systems, may affect stormwater outfalls (particularly coastal outfalls) and increase the potential for natural hazards such as flooding and landslide. Consequently, some infrastructure such as stormwater pipes, culverts and sea defences may become inadequate for the task for which they were designed. Some transport (and other infrastructure) corridors may become more frequently subject to flooding, landslide and erosion due to climate change.

Expected changes include more severe extremes with more frequent dryer (drought) conditions ^. Climate change might also exacerbate water allocation problems due to expected decreasing rainfall and increasing droughts in the Hamilton basin.

The location and form of any development must take into account present and future natural hazards in order to avoid and minimise risks to health, property and the environment. Climate change must be considered when taking a long-term view of urban development.

Description of the Action

Understand the effects of climate change and the implications of these effects for infrastructure planning and operations.

It is envisioned:

- An investigation will be undertaken to understand these climate changes effects, and this investigation will:
  - Identify the statutory responsibilities and roles of Central, Regional and local government with respect to responding to climate change, including opportunities for joint action;
  - Consider existing relevant research and work undertaken by bodies such as University of Waikato, Ministry for the Environment and Waikato Regional Council;
  - Identify climate change effects in the sub-region including particular sensitivities and related issues;
  - Assess risks to the sub-region associated with climate change, including to public health; and
  - Consider cross-regional issues; and
- Any responses to the effects of climate change on the three waters will be developed as part of, and/or incorporated into, the other actions.

Objectives

Sub-regional Three Waters Strategy

- Ensure that Three Waters infrastructure and resource use decisions are informed by and respond to the potential effects of climate change.
- Ensure that their respective District Plans, Development Manuals, design codes, emergency preparedness plans and other planning and management tools sufficiently address and respond to the potential effects of climate change.
- Work together to develop and implement other methods (statutory and non-statutory) for managing the potential effects of climate change.

Appendix M References

Future Proof. 2009. Growth Strategy and Implementation Plan.

Future Proof. 2011. The Future Proof Strategy and the Challenges of Growth Management: Future Proof briefing paper.

Future Proof. 2012. Sub Regional Three Waters Strategy.

Hamilton City Council. 2008. Hamilton City Council Drought Management Plan. Prepared by MWH.

Hamilton City Council. 2010. Hamilton Urban Growth Strategy.

Hamilton City Council. 2011. Three Waters Management Plan Discussion Document – Strategic Issues Workshop.

Hamilton City Council, Waipa District Council, Waikato District Council. 2011. Memorandum of Understanding: Sub-regional Waters Group.

New Zealand Asset Management Support. 2011. International Infrastructure Management Manual.

Waikato Regional Council. 2016. Waikato regional freshwater discussion: A framework for getting the best use allocation through time. Issues and Options.

Attachment 1: Report Card Template

Action	Requirement	Status and Progress	Approval if required	Recommendations

Key: Achieved Not Achieved, On- Track Not Achieved, Work Required