



SUB-REGIONAL THREE WATERS STRATEGY

*(a strategy to guide the management of wastewater,
stormwater and water supply)*

HAMILTON CITY COUNCIL, WAIPA DISTRICT COUNCIL
AND WAIKATO DISTRICT COUNCIL - **SEPTEMBER 2012**



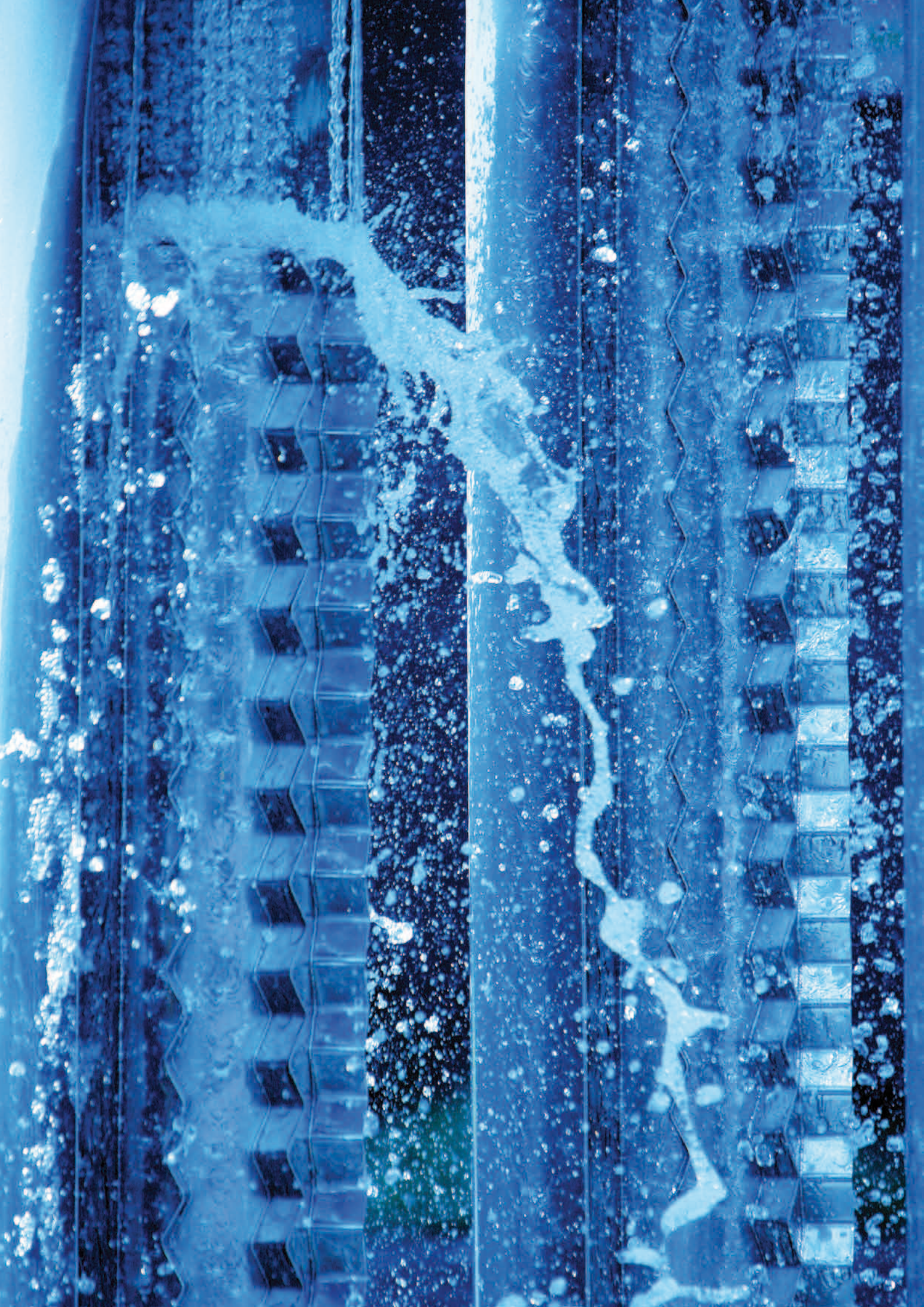
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1. BACKGROUND

1.1 In 2009 Hamilton City Council, Waikato Regional Council, Waipa and Waikato District Councils and Tāngata Whenua (the 'Future Proof partners') developed the sub-regional growth strategy and implementation plan known as 'Future Proof'. The Future Proof strategy has a 50-year horizon and covers the majority of the administrative areas of the three territorial authorities and the associated area of Waikato Regional Council. Another key organisation involved in the development and implementation of Future Proof is the New Zealand Transport Agency (NZTA).

1.2 Future Proof addresses each of the Three Waters (Water Supply, Wastewater and Stormwater) independently rather than holistically. Since the issue of the Future Proof strategy, the Future Proof partners concluded that it would be beneficial to integrate the Three Waters.

1.3 The Future Proof Three Waters Working Group (Hamilton City Council, Waikato Regional Council, Waipa and Waikato District Councils and Tāngata Whenua) Terms of Reference (April 2010) notes that:

"The Future Proof partners have decided that it would be beneficial to have a working group which not only covers water supply but also wastewater and stormwater as there is a strong relationship between all three."

1.4 The Future Proof partners have been working together and exploring aspects of Three Waters management for a number of years and, in the context of Future Proof, have recognised that there are a number of issues regarding Three Waters that require action beyond the scope of Future Proofs growth focus.

1.5 Within the Future Proof context the term 'partner councils' refers to Waikato Regional Council, Waikato District Council, Waipa District Council and Hamilton City Council. Whilst the Sub-regional Three Waters Strategy refers to the Three Waters Strategy Partner Councils 'TWS Partner Councils' which includes Hamilton City Council, Waikato District Council and Waipa District Council.







2. THREE WATERS CONTEXT

GENERAL CONTEXT

2.1 The term “Three Waters” as used in a municipal sense and in this strategy, is often generically referred to as the “Urban Waters”. A definition commonly adopted for the Three Waters (that is the Urban Waters) is as follows:

“The combined water supply, wastewater, and stormwater networks that deliver water to residential, commercial, industrial and other users within an urban area including uses of water and sources of sinks of wastewater and stormwater, their interaction with the natural water systems and management of the wastewater and stormwater generated within that same area”
- (COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION AUSTRALIA).

2.2 This definition brings in the interaction and integration of the Three (Urban) Waters. The above definition has then been further developed to bring in the dimension of sustainability in terms of sustainable Three (Urban) Water systems. A definition of sustainable Three Urban Water systems that has been developed and adopted internationally is:

“Three Urban water systems that are designed and managed to meet the needs of the present without compromising the ability of future generations to meet their own needs, while maintaining their ecological, environmental and hydrological integrity” - (ASCE/UNESCO, 1998).

2.3 While there are a number of issues that arise from managing the Three Waters it is also important to recognise that successfully implemented Three Waters infrastructure has significant economic, social, environmental and cultural benefits.

FUTURE PROOF CONTEXT

2.4 Future Proof recognises the increasing need to manage the Three Waters in a sustainable and integrated way to ensure availability of services to growth areas and protection of the environment for future generations.

2.5 The two definitions set out above in the general context section, appropriately set the scene for the development of a Waikato Sub-regional Three Waters Strategy.



3. SCOPE OF THE SUB-REGIONAL THREE WATER STRATEGY



3.1 Building on the direction of Future Proof, this Strategy sets a strategic focus and direction on critical Three Waters issues for the sub-region. The sub-region is defined as the jurisdictional areas of Hamilton City Council, Waikato District Council and Waipa District Council (the 'TWS Partner Councils').

3.2 It is noted that the subject area is greater than the current Future Proof boundaries as agreed by the project participants. This area is defined by the map contained in figure 3.1.

3.3 With regards to timeframe, the TWS Partner Councils have agreed to the need for a Three Waters Strategy that aligns with Future Proof. In this regard, this Strategy looks towards year 2062. It has been agreed by the TWS Partner Councils that this strategy

needs to address operational issues as well as Future Proof growth issues, with the vision and the goals being reviewed as and when required.

3.4 The sub-region contains a large rural area and accordingly there are a number of small community water, wastewater and stormwater systems that are owned and operated by the TWS Partner Councils. This Strategy accordingly includes all Council water, wastewater and stormwater services and infrastructure along with the Council owned and operated land drainage schemes.

3.5 The framework for preparing a Sub-regional Three Waters Strategy and its connection with general-specific implementation plans is illustrated in Figure 3.2.

LEFT: FIGURE 3.1: MAP HIGHLIGHTING THE AREA COVERED BY THE SUB-REGIONAL THREE WATERS STRATEGY

BELOW: FIGURE 3.2: FRAMEWORK FOR THE DEVELOPMENT OF A THREE WATERS STRATEGY



4. PURPOSE OF THE STRATEGY

4.1 The purpose of this Strategy is to set a long term strategic vision for Three Waters in the sub-region. It is clearly evident that a Sub-regional Three Waters Strategy that identifies key strategic issues for water

management and actions addressing those issues is a necessary first step in delivering integrated Three Waters management.

4.2 A strategic overview at this level will provide a shared platform for acknowledging

common issues across jurisdictional boundaries and establishing actions to address these in an integrated way.

5. 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.





6. KEY DRIVERS FOR THIS THREE WATERS STRATEGY

6.1 There are a wide range of drivers that support and underpin the preparation of this Sub-regional Three Waters Strategy. A list of such drivers is provided in Appendix A, however it should be noted that this list is by no means exhaustive, but indicative of the vast range of relevant drivers. The number of drivers alone provides an indication of why this Strategy is so important to the management of Three Waters in the sub-region. It is acknowledged that as future relevant Acts, Bills, Settlements (including JMA's), Plans (including Iwi Management Plans) and Strategies are developed, these could also become relevant drivers for this strategy. As such documents are developed they will be considered alongside (or trigger) a future review of this Strategy.

6.2 The following is a brief summary (in no particular order) of those drivers considered the most pertinent to this Strategy.

NATIONAL DRIVERS

6.3 RESOURCE MANAGEMENT ACT 1991

6.3.1 The purpose of this Act is to promote the sustainable management of natural and physical resources.

6.3.2 The Resource Management Act is New Zealand's primary legislation for environmental management and thus any Three Waters Strategy should be consistent with the purpose and principles of this Act.

6.4 LOCAL GOVERNMENT ACT 2002

6.4.1 This Act promotes the accountability of local authorities to their communities. It provides for local authorities to play a broad role in taking a sustainable development approach.

6.4.2 The LGA requires local authorities to identify all reasonably practicable options and consider the benefits and costs of each option in terms of the present and future social, economic, environmental and cultural wellbeing of their communities.

6.5 HEALTH (DRINKING WATER) AMENDMENT ACT 2007

6.5.1 Section 69A:

"The purpose of this Act is to protect the health and safety of people and communities by promoting adequate supplies of safe and wholesome drinking water from all drinking-water supplies".

6.6 NATIONAL POLICY STATEMENT FOR FRESHWATER MANAGEMENT 2011

6.6.1 The National Policy Statement for Freshwater Management sets out objectives and policies that direct local government to manage water in an integrated and sustainable way, whilst providing for economic growth within set water quantity and quality limits.

6.7 WAIKATO RIVER ACTS AND WAIPA RIVER BILL

6.7.1 The overarching purpose of the river legislation is to restore and protect the health and wellbeing of the respective rivers for future generations. The Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010 gave effect to the 2009 deed of settlement in respect of the Raupatu claims of Waikato-Tainui over the Waikato River. The Ngati Tuwharetoa, Raukawa and Te Arawa River Iwi Waikato River Act 2010 (Upper Waikato River Act) gave effect to 2009 deeds of co-management over the Waikato River.

6.7.2 Section 13(4) of the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010 and section 14(4) of the Ngati Tuwharetoa, Raukawa and Te Arawa River Iwi Waikato River Act 2010 states:

"Every local authority must

- a) **Review its regional or district plan to see whether it gives effect to the Vision and Strategy; and**
- b) **If the regional or district plan does not give effect to the Vision and Strategy, initiate an amendment to it to ensure that it does so, using the process in Schedule 1 of the Resource Management Act 1991".**

6.7.3 In addition, Section 22 of the Nga Wai o Maniapoto (Waipa River) Bill outlines a process to undertake similar reviews.

6.8 VISION AND STRATEGY FOR THE WAIKATO RIVER, TE TURE WHAIMANA O TE AWA O WAIKATO

6.8.1 The Vision for the Waikato River is:

"Our Vision is for a future where a healthy Waikato River sustains abundant life and prosperous communities who, in turn, are all responsible for restoring and protecting the health and wellbeing of the Waikato River, and all it embraces, for generations to come".

6.8.2 The above Vision is supported by a series of objectives and strategies. The Vision and Strategy prevails over any inconsistent provision in a national policy statement, is deemed into the regional policy statement and must be given effect to by district and regional plans. It is also the aim of this Strategy to give effect to the Vision and Strategy for the Waikato River.

6.9 NATIONAL ENVIRONMENTAL STANDARD FOR SOURCES OF HUMAN DRINKING WATER

6.9.1 The purpose of the NES is to reduce the risk of contamination of drinking-water sources by requiring regional councils to consider the effects of certain activities on drinking-water sources when:

- Granting water permits or discharge permits (regulations 7 and 8).
- Including or amending rules in a regional plan in relation to permitted activities (regulation 10).

6.10 AUCKLAND GOVERNANCE AMENDMENT ACT

6.10.1 As of 1st November 2010, Franklin District Council ceased to exist and a large proportion of the former Franklin District (and approximately 14,500 residents) now falls under the jurisdiction of Waikato District Council.

6.10.2 The Auckland Governance Amendment Act has implications on a Three Waters Strategy in so far as it affects growth projections for the sub-region and increases the relevant geographic area.

REGIONAL DRIVERS

6.11 PROPOSED WAIKATO REGIONAL POLICY STATEMENT (RPS)

Objective 3.11: Built Environment

“Development of the built environment (including transport and other infrastructure) and associated land use occurs in an integrated, sustainable and planned manner which provides for positive environmental, social, cultural and economic outcomes, including by:

- a) Promoting positive indigenous biodiversity outcomes;
- b) Integrating land use and infrastructure planning;
- c) Recognising the value and long-term benefits of regionally significant transport and energy corridors;
- d) Protecting access to identified mineral resources;
- e) Minimising land use conflicts, including minimising potential for reverse sensitivity with existing land uses; and
- f) Anticipating and responding to changing land use pressures outside the Waikato region which may impact on the built environment within the region”.

6.11.1 The RPS provides policy direction for managing discharges to and extraction of water.

6.11.2 As per Section 104(b)(v) of the RMA, when considering any applications for resource consent, territorial authorities are obliged to have regard to any relevant provisions of a Regional Policy Statement or proposed Regional Policy Statement. In this regard, the Waikato Regional Policy Statement (and the proposed RPS) are integral to decision making and should thus be taken into consideration when preparing a Three Waters Strategy to ensure consistency.

SUB-REGIONAL AND LOCAL DRIVERS

6.12 FUTURE PROOF GROWTH STRATEGY AND IMPLEMENTATION PLAN 2009

6.12.1 The Future Proof Strategy and Plan vision is:

“In 2061 the sub-region:

- Has a diverse and vibrant metropolitan centre strongly tied to distinctive, thriving towns and rural communities;
- Is the place of choice for those looking for opportunities to live, work, invest and visit;
- Is the place where natural environments, landscapes and heritage are protected and a healthy Waikato River is at the heart of the region’s identity;
- Has productive partnerships within its communities, including tāngata whenua;
- Has affordable and sustainable infrastructure;
- Has sustainable resource use”.

6.12.2 This Strategy also describes specific issues and identifies key approaches to Three Waters.

As well as providing direction in terms of predicted growth of the sub-region, the Future Proof Strategy and Plan also provides guiding principles that need to be considered in the development of a Three Waters Strategy.

6.13 HAMILTON URBAN GROWTH STRATEGY

6.13.1 The Hamilton Urban Growth Strategy sets a vision for the growth of Hamilton City from a population of 140,000 people to around 225,000 by 2041. The Hamilton Urban Growth Strategy identifies a number of approaches to ensure that the predicted growth of the City is appropriately managed.

6.14 WAIIPA 2050

6.14.1 The Waipa 2050 growth strategy is a plan to manage the growth of the Waipa District. The overall aim of the Strategy is to take an integrated approach to managing growth. The main actions of this Strategy are to:

- Recognise, protect and enhance the features of Waipa that make the district a special place.
- Set a pattern for the future growth of settlements.
- Integrate growth with infrastructure provision for a more cost effective approach to development.

6.15 WAIKATO DISTRICT GROWTH STRATEGY

6.15.1 This Waikato District Growth Strategy seeks to recognise the district’s existing strengths, its critical resources and its relationship to the Auckland Region and Hamilton City within the context of Future Proof.

6.15.2 The Waikato District Growth Strategy provides direction in terms of the predicted growth of Waikato District.

6.16 FRANKLIN DISTRICT GROWTH STRATEGY

6.16.1 The Strategy identifies sufficient land to accommodate a projected population of 109,000 people by 2051. Future growth will be accommodated through infill and redevelopment of existing urban areas, Greenfield development and rural living.

6.16.2 The Franklin District Growth Strategy provides direction in terms of the predicted growth of Franklin District. This document became relevant with the amendment to the Auckland Governance boundaries introduced through the Auckland Governance Amendment Act.

6.17 HAMILTON ENVIRONMENTAL SUSTAINABILITY STRATEGY

6.17.1 The Hamilton Environmental Sustainability Strategy broadly seeks to:

- Develop new ways of thinking about and addressing the complex issues surrounding urban sustainability.
- Recognise that personal choices have impacts within and beyond the city and make a contribution on a local, regional, national and international scale.

6.18 WAIIPA ENVIRONMENT STRATEGY

6.18.1 The purpose of the Waipa Environment Strategy is to provide a pathway along which the Council in partnership with Tāngata Whenua, collaboration with communities, organisations, industry and statutory agencies, can travel to enhance the environment and achieve the outcomes expressed by the communities of Waipa.



7. STRATEGIC ISSUES

7.1 Once a Vision was developed, consideration was given to identifying the key issues regarding the Three Waters faced by the TWS Partner Councils and how this could influence the achievement of the Vision.

7.2 Through a workshop exercise with the TWS Partner Councils, well over 100 issues were identified, far too many to appropriately discuss in a strategic document. Two key aspects of the range of issues are considered to be the nature of the three Councils involved (both rural and city) and the significance of the Waikato River. However, as noted from the review of key drivers, it is clear that even without these two aspects, there exists an extensive range of significant issues associated with the Three Waters in this sub-region.

7.3 In response to the vast number of issues that emerged, an exercise was undertaken post workshop to group issues together whilst carefully ensuring none were lost. From this process nine strategic issues emerged, of which all of the initial issues could be considered a sub-category of. For example “providing infrastructure to service growth” and “ensuring water resources are available to service growth” falls under the strategic issue “meeting future anticipated and planned for growth demands”.

7.4 The following is a list of the 9 Strategic Issues:

1. Ensuring the protection and improvement of public health and safety, and providing appropriate water sanitary services and hazard management practices.
2. Meeting future anticipated and planned for growth demands.
3. Planning for and adapting to climate change.
4. Ensuring that decisions relating to the Three Waters are underpinned by best practice, research and knowledge.
5. Ensuring quality, efficient and sustainable infrastructure.
6. The need for integration of:
 - a) Relevant Council functions
 - b) Inter Council departments
 - c) The Three Waters
 - d) Land use and water planning and management
7. The availability and allocation of water.

8. Ensuring that iwi and hapū are involved in the management of Three Waters and Tāngata Whenua values, aspirations and interests are identified and reflected.

9. Ensuring protection and where possible the enhancement of the natural environment.

7.5 It should be emphasised that the issues that are encompassed in each of these identified key strategic issues should not be considered independent of each other, but rather as a series of interrelated issues and opportunities.

7.6 The discussion below and in section 8 briefly outlines each of these identified key strategic issues in the following way:

- Elaborates on the context of the strategic issues.
- Highlights why it is a key strategic issue.
- Sets out the actions required to address the strategic issue.

ISSUE 1: ENSURING THE PROTECTION AND IMPROVEMENT OF PUBLIC HEALTH AND SAFETY, AND PROVIDING APPROPRIATE WATER SANITARY SERVICES AND HAZARD MANAGEMENT PRACTICES

Public health protection is, first and foremost, the fundamental requirement of quality fresh water within the sub-region and safe sanitation in urban areas. Appropriate stormwater facilities are also part of public health protection and enhancement.

Under the Health Act, Local Government Act and other legislation, territorial authorities are required to ensure that they:

“... improve, promote and protect public health within its district.”

(HEALTH ACT, SECTION 23)

Appropriately managing risks from some water associated hazards such as flooding and erosion are another key function of local authorities under the Local Government Act.

WHY IS IT A KEY STRATEGIC ISSUE?

The Three Councils have a responsibility to ensure public health and safety needs are

proactively met through the agreed level of service provided through the Three Water infrastructure systems.

This obligation constitutes:

- Meeting the statutory requirements in respect of water supply quality.
- Achieving the outputs required under the Water Supply Risk Management Plans.
- Ensuring wastewater systems are appropriately operated and resource consents complied with, in respect to public health and protection.
- Reducing risks to public safety by use of appropriately located, sized and designed Three Waters infrastructure.

Not meeting these obligations means not meeting the requirements of the Health Act and other relevant legislation.

ISSUE 2: MEETING FUTURE ANTICIPATED AND PLANNED FOR GROWTH DEMANDS

The Future Proof Growth Strategy and Implementation Plan projects that the population of the sub-region will nearly double over the next 50 years, from 223,000 to 437,000 people. Further growth pressures within the sub-region have arisen from the Auckland Governance Review which has realigned the territorial boundary of Waikato District. This will place increasing pressure on Three Waters resources and services.

There is also a need to consider the most efficient and cost effective means of servicing growth areas taking into account future development rates as they react with shifts in national and international market forces.

WHY IS IT A KEY STRATEGIC ISSUE?

The growth of the sub-region will lead to additional pressure on existing infrastructure and resources as well as the need for new infrastructure and resources to meet growing demand. The supply of water is not only a crucial lifeline for the population it is a key resource in driving the sub-region's economy.

To ensure the growth of the sub-region occurs in an appropriate manner, it is important that growth is matched by the timely, integrated

and efficient provision of Three Waters infrastructure and resources. As such,

- Growth should not be allowed to occur if the necessary infrastructure and/or resources are not available to service it.
- The provision of infrastructure and resources should be well planned to ensure that growth can occur when demands dictate.

ISSUE 3: PLANNING FOR AND ADAPTING TO CLIMATE CHANGE

Human activity is increasing the natural level of greenhouse gases in the atmosphere causing the planet to warm up and the climate to change. The effects of a warming planet and disrupted climate pattern are already becoming evident.

Climate scientists project that Waikato's temperature could be up to 3°C warmer over the next 70-100 years. This compares to a temperature increase in New Zealand during the last century of about 0.7°C. To put this in perspective, the 1997/98 summer, which many New Zealanders remember as particularly long, hot and dry, was only about 0.9°C above New Zealand's average for the 1990s (source: www.mfe.govt.nz). Waikato could also be up to 20% wetter with more varied rainfall patterns and flooding could become up to four times as frequent by 2070.

WHY IS IT A KEY STRATEGIC ISSUE?

The effects of climate change, and the response to it, presents a major national and global challenge. The cost of doing nothing about climate change could be high, impacting upon our environment, economy and society. Climate change impacts that are likely to have an effect on Three Waters and land drainage include:

- More frequent extreme weather events such as droughts and intense rainstorms.
- Higher temperatures.
- Rising sea levels for the coastal Waikato District.
- A change in rainfall patterns.
- Increased potential for natural hazards such as floods and landslips.

These potential changes and the associated potential adverse effects need to be

appropriately considered and responded to.

It is anticipated that these changes will (with regards to Three Waters management) primarily affect:

- Sources and quantity of water available for supply.
- Quality of water for supply.
- The behaviour of consumers (e.g. water demand).
- The function of wastewater collection, treatment and disposal.
- Stormwater systems and drainage networks as a consequence of higher rainfall intensities and increasing volumes.
- Flood management and hazard risk to infrastructure.

ISSUE 4: ENSURING THAT DECISIONS RELATING TO THE THREE WATERS ARE UNDERPINNED BY BEST PRACTICE, RESEARCH AND KNOWLEDGE.

Effective Three Waters management can only be achieved using best practice, research and knowledge underpinning the decision making process. If decisions are not underpinned by these, there is a risk that poor decisions will be made and that they will be costly (environmentally, financially, socially or culturally).

WHY IS IT A KEY STRATEGIC ISSUE?

As statutory authorities, and through legislation such as the Local Government Act 2002, the TWS Partner Councils have an obligation to ensure that:

- Good decisions are made (e.g. investment and policy direction).
- Stakeholders understand why decisions are made and are able to engage in the decision making process.

ISSUE 5: ENSURING QUALITY, EFFICIENT AND SUSTAINABLE INFRASTRUCTURE

Three Waters and land drainage infrastructure typically has a lifespan in excess of 50 years. Variations in demand

on the system over such large time periods are inherently difficult to predict, particularly when significant uncertainties surrounding climate change and population exist. There is also an increasing emphasis on managing the quality of wastewater and stormwater discharges to other water bodies.

WHY IS IT A KEY STRATEGIC ISSUE?

Within this uncertainty, an appropriate level of Three Waters service needs to be maintained. In this regard, a comprehensive understanding of the capacity and condition of the existing infrastructure and of potential future needs is a fundamental requirement. New infrastructure installations should be scaled to meet changing demand without compromising immediate performance.

The different levels of service, operation, governance and management between rural and urban areas need to be understood and implemented appropriately. In short, one size does not fit all.

ISSUE 6: THE NEED FOR INTEGRATION OF:

- A) RELEVANT COUNCIL FUNCTIONS;**
- B) INTER COUNCIL DEPARTMENTS;**
- C) THE THREE WATERS; AND**
- D) LAND USE AND WATER PLANNING AND MANAGEMENT**

Three Waters resources and infrastructure within the sub-region are primarily regulated by the Waikato Regional Council. However, land use is primarily managed at the district level through the Hamilton City District Plan, the Waikato District Plan, and the Waipa District Plan.

Land use affects the hydrological water cycle, thereby affecting the people and resources of a catchment. A catchment acts as a receiver, collector and conveyor of precipitation on land. Land uses affect these pathways by altering surface runoff and ground water infiltration, thereby changing the quantity and quality of water resources.

Indigenous vegetation such as native bush cover is usually the most benign of land uses with high infiltration and reduced runoff rates. The opposite of native bush cover are

1 P.60 and P. 61, Future Proof Growth Strategy and Implementation Plan (2009). The Plan highlights that the majority of the growth is concentrated in Hamilton City which will contain 67% of sub-regional growth by 2061. Approximately 21% of future growth has been allocated to the larger rural townships.



urbanised areas, where large surface areas are impermeable and pipe networks augment the natural channels. The impervious surfaces in urban areas reduce infiltration and can reduce the recharge of ground water. In addition urban runoff can lead to poor water quality.

The growth of urban areas and the concentration of population and industry in these areas are placing increasing demand on water resources. This is occurring at the same time as a significant increase in competing demands for water from other users such as the agricultural sector and the energy sector.

Land use planning is critical in managing various land uses in a catchment, thereby minimising conflicts and sustaining water quality and quantity for future generations. Land use and development and the management of the effects of these activities are all subject to the requirements of district plans prepared under the Resource Management Act 1991 ("RMA"). The location and form of development affects water quality, water demand and availability; infrastructure costs and needs; the health of catchments, biodiversity and amenity values.

Despite their integral nature, water and land use decisions are often disconnected, however there are a significant number of

statutory, strategic and policy drivers at national, regional, sub-regional and local levels that clearly support the integration of the management of water and land use and that identify district plans as key planning mechanisms to achieve this.

WHY IS IT A KEY STRATEGIC ISSUE?

Land use decisions made at the district level potentially have implications on Three Waters resources and infrastructure. Without appropriate integration of decision-making this can potentially lead to adverse outcomes such as:

- Development delayed due to a lack of appropriate infrastructure.
- An unanticipated increase in pressure on resources and infrastructure.
- A development is approved that significantly impacts on the ability to achieve strategic outcomes.

The integration of water supply, wastewater and stormwater through infrastructure provision and planning and management procedures can lead to more efficient use and management of water and accordingly, the need to provide less infrastructure.

Integrated water, wastewater and stormwater management can be developed with the protection of ecological values as a key outcome. Integrated systems should therefore ensure the natural environment can assimilate waste without negative impact. The use of ecosystem services can assist in achieving appropriate outcomes.

For a Three Waters Sub-regional Strategy to be effective, it is critical that the management and regulation of Three Waters is sufficiently integrated both in terms of territorial and Regional authority decision making, and also in terms of interaction with land use planning to ensure efficiency and consistency.

Appropriate communication channels are needed between those involved in the planning of growth and those involved in setting the level of service, infrastructure provision and operation.

ISSUE 7: THE AVAILABILITY AND ALLOCATION OF WATER

Pressures from the demand for limited water resources in the sub-region are not new but they are building as population increases and land use intensifies.

In addition there is also an increasing



demand for water for community supplies, industry and stock water supplies from both within the sub-region and wider regional setting (source Proposed Variation 6 to the Waikato Regional Plan).

There are multiple uses for water which sometimes complement each other and sometimes conflict. As the pressures we place on water continue to grow through population increases and the more intensive use of land so do the pressures to have systems to achieve pre-determined outcomes and to implement management regimes for water and its associated land use which lets us optimise benefits across all of its uses and all of the services it performs.

The need to manage the use and allocation of water more efficiently is a key component of achieving cultural, social, environmental and economic needs of the community, and is reflected in recently proposed changes to the Regional Plan introduced through Variation 6.

WHY IS IT A KEY STRATEGIC ISSUE?

In recent times the method by which surface and ground water is allocated in the Waikato Region has come under increasing scrutiny and sometimes criticism from political, competing user, stakeholder and technical

perspectives. These increasing pressures on water resources raise issues of resource scarcity, the equity and fairness of allocation strategies and the efficient use of water. Water demand in the Waikato Region is close to exceeding the volume of water that is available for allocation in some catchments.

ISSUE 8: ENSURING THAT IWI AND HAPŪ ARE INVOLVED IN THE MANAGEMENT OF THREE WATERS AND TĀNGATA WHENUA VALUES, ASPIRATIONS AND INTERESTS ARE IDENTIFIED AND REFLECTED.

Some common tenets of the relationship between iwi and freshwater (wai Māori) are:

- The relationship between iwi and freshwater is an inalienable relationship founded in Whakapapa, that is recorded, celebrated and perpetuated across generations. The health and wellbeing of waterways is inextricably linked to the health and wellbeing of the people.
- Freshwater is recognised by iwi as a taonga of paramount importance.
- Individual Rivers are considered indivisible

entities across their entire catchment, from their source to the ocean.

- There is a general abhorrence to the mixing of waters, particularly the direct discharge of wastewater and stormwater to waterways without being preceded with treatment by land contact.
- Kaitiakitanga is the obligation of iwi to be responsible for the wellbeing of their respective environments. This obligation is inter-generational in nature. Kaitiakitanga has been given effect over the generations in many ways and differs amongst and between iwi and across differing circumstances.

WHY IS IT A KEY STRATEGIC ISSUE?

Water bodies are a key means to frame iwi identity. Tribal traditions are transmitted across generations by continuing customary practices with water bodies and visions for the future of iwi on the health and wellbeing of freshwater. The obligation to protect freshwater and to maintain and express the spiritual and ancestral relationship with water so as to leave a worthy inheritance for future generations is fundamental.

In addition to the above, effect will be given to the vision and strategy of the Waikato River and the River Acts and Bills, as outlined in the national drivers section.

ISSUE 9: ENSURING PROTECTION AND WHERE POSSIBLE THE ENHANCEMENT OF THE NATURAL ENVIRONMENT

The healthy functioning and safeguarding of the natural environment is crucial to people being able to provide for their wellbeing now and for the future. Landscapes, forests, and productive agricultural and horticultural land generate a significant part of the Sub-regions wealth. Careful stewardship of natural landscapes and resources is therefore important: both tourism and primary production sectors rely on New Zealand's 'clean and green' reputation internationally.

The importance of maintaining healthy habitats and ecosystems to protect and enhance indigenous biodiversity is a well accepted and established principle. This has resulted in an increase in biodiversity initiatives at all levels. However, generally speaking biodiversity within New Zealand continues to decline. The Waikato Region and this Sub-region are no exception. Halting this decline will be very important to maintaining quality of life, preserving cultural heritage, and ensuring a sustainable future of our lands and waters.

Restoration is, generally vastly more expensive than protection.

WHY IS IT A KEY STRATEGIC ISSUE?

The poorly managed abstraction of water can have significant adverse effects on the ecosystems of surface rivers and streams and the water quality of aquifers. Groundwater abstraction reduces water flow through the groundwater system down to the aquifers which in turn reduces flow into spring-fed streams. Increasing demand by people and communities to be able to use water in areas where demand exceeds, or is likely to exceed, supply reduces the range of foreseeable uses of that water. Modification of flow regimes through water takes, damming and diversion can adversely affect water bodies, particularly:

- In stream ecological/biological values.
- Recreational values.
- Potential uses of water resource.
- Water quality and quantity.

Point source discharges of wastewater and stormwater into water bodies can cause deterioration in water quality and the values for which the water body is being managed. In addition, the cumulative effects of non-point source discharges can have a significant adverse effect on the water quality of many water bodies particularly:

- Intensification of land use, without effective management practices, increases nutrients entering water bodies from diffuse sources, causing nuisance plant growth and poor water clarity.
- Unrestricted stock access to water bodies may cause nutrient enrichment and high suspended sediment loads in water bodies.
- Soil disturbance may cause high suspended sediment loads in water bodies.
- Taking and impounding of water can have cumulative effects and can reduce water quality and quantity.

New Zealand, as a whole, has made good progress in clearing up point source pollution over the last twenty years, but monitoring shows that our water quality is declining in many places, particularly in lowland water bodies. Declining water quality impacts on biodiversity, aquatic ecosystems and in stream uses. It can also affect human and animal health.

Often in the past, stormwater management occurred at a localised or site level, not fully recognising the needs of, and wider effects on, the entire catchment. Such an approach, contributed to issues such as stream and river quality, flooding and river bank stability.

Damage to surface water bodies and their margins (including caves) by land use activities, destruction of vegetation, discharges, bank erosion, pest species, channelisation structures, modification of flow regimes and changes in water or bed level can:

- Reduce or destroy in stream ecological values.
- Lead to an overall reduction in natural character of water bodies and their margins.







8. STRATEGIC GOALS AND RESPONSES

8.1 Once these strategic issues were identified and understood consideration was given to what outcome (or goal) would mean that the strategic issue had been adequately

addressed, and what actions (responses) should be undertaken to achieve the outcome. Table 1 on the next page provides details of the strategic issues, the goals set

to address these issues and the responses expected to achieve these goals.

STRATEGIC ISSUE	GOAL	RESPONSE
ISSUE 1: 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.	<ul style="list-style-type: none"> - Proactively review and implement Water Supply Risk Management Plans. - Proactively prepare and disseminate to their communities consistent and user friendly information on water supply, safe sanitation, household plumbing matters etc. - 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. - Address the need for wastewater reticulation and community treatment or other solutions where onsite wastewater systems are creating inappropriate adverse effects on public health. - Explore ways of improving the monitoring and management of on-site wastewater systems in large un-serviced communities. - 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.
ISSUE 2: Meeting future anticipated and planned for growth demands.	<ol style="list-style-type: none"> 1. Provide for the water needs of the sub-region for the next 50 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. 	<ul style="list-style-type: none"> - 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): <ul style="list-style-type: none"> • 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.
ISSUE 3: Planning for and adapting to climate change.	Promote an understanding of and ensure appropriate planning for the effects of climate change.	<ul style="list-style-type: none"> - 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.

STRATEGIC ISSUE	GOAL	RESPONSE
ISSUE 4: 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.	<ul style="list-style-type: none"> - Ensure that decision making is informed by best practice, research and knowledge and that information used to inform the decision making process is: <ul style="list-style-type: none"> • 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. <p>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.</p>
ISSUE 5: Ensuring quality, efficient and sustainable infrastructure.	<ul style="list-style-type: none"> - Promote the sustainable and economic use and delivery of Three Waters resources and services. - Ensure the efficient utilisation of existing assets. 	<ul style="list-style-type: none"> - Work together to develop and implement comprehensive planning tools (such as Water Conservation and Demand Management and 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: <ul style="list-style-type: none"> • 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.
<p>ISSUE 6: The need for integration of:</p> <ol style="list-style-type: none"> 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.	<ul style="list-style-type: none"> - Develop shared methods to ensure alignment and communication across and between Councils and Council departments to: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • Efficiently use water. • Produce less wastewater. • Manage stormwater in a way that reduces adverse environmental effects and efficiently uses the water resource.

STRATEGIC ISSUE	GOAL	RESPONSE
ISSUE 7: The availability and allocation of water.	<ol style="list-style-type: none"> 1. Provide for the water needs for the sub-region for the next 50 years in an efficient and sustainable manner. 2. Promote the sustainable use of resources. 	<ul style="list-style-type: none"> - 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. - 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. - 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 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. - 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).
ISSUE 8: Ensuring that iwi and hapū are involved in the management of Three Waters and Tāngata Whenua values, aspirations and interests are identified and reflected.	<ol style="list-style-type: none"> 1. Promote the recognition of cultural values. 2. Give effect to the Te Ture Whaimana o Te Awa o Waikato, The Vision and Strategy for the Waikato River. 	<ul style="list-style-type: none"> - 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 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.
ISSUE 9: 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.	<ul style="list-style-type: none"> - Advocate at a national, regional and local level for appropriate (or if applicable changes to) water quality rules and regulations. - 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) - Ensure that their respective tools (e.g. District Plan, Development Manual, Technical Standards etc.) achieve appropriate and consistent environmental outcomes. - Address the need for wastewater reticulation and community treatment or other solutions where onsite wastewater systems are creating inappropriate adverse effects on the environment. - Explore opportunities to implement a catchment based approach to stormwater management.



9. IMPLEMENTATION

9.1 To give effect to the vision, goals, strategic issues outlined in this strategy Hamilton City Council, Waipa District Council and Waikato District Council will need to ensure a number of key actions are put into place. These actions will need to ensure:

- Approaches and procedures embedded in existing and new council business processes including decision making are consistent with this strategy.
- Collaborative working to develop a Sub-regional Three Waters Action Plan and individual Council localised actions.
- Long Term Plans (LTPs) and Annual Plans, Activity Management Plans, Asset Management Plans, Public Health Risk Management Plans, and other policies and plans will need to be further developed and amended to incorporate the strategic framework and actions to ensure consistency across the sub-region.

9.2 While the overall approach of the strategic direction is not expected to significantly change during the Future Proof planning period and particularly during the ten year LTP cycles, particularly as far as the vision and goals are concerned, the actions and programmes implementing them will be dynamic if it is to achieve the pre-set goals and timing.

DEVELOPMENT OF THREE WATERS ACTION PLANS

9.3 The approach that is proposed by the TWS Partner Councils is to collaboratively work together to address the issues outlined in the Sub-regional Strategy, through identifying key areas that a Sub-regional Three Waters Action Plan can cover, and formulating key prioritised actions with specific timeframes. The issues that can not be covered sub-regionally will be clearly identified and form part of a localised action plan for individual councils. This will ensure alignment across the sub-region whilst also taking into consideration the diverse nature and role that urban and rural Councils play.

9.4 It is considered that this exploration should be based around answering the following questions:

- What does this issue mean to this Council?
- What is this Council currently doing about this issue?
- What future actions should this 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.?

9.5 In exploring these questions, each of the Councils should look to utilise staff knowledge and experience to define understanding of the relevance of the identified strategic issues for their respective areas.

9.6 Following on from the above process, the next steps in the development of a Sub-regional Three Waters Action Plan are to:

- Identify where alignment/opportunities for co-ordination between the three councils exists to identify what sub-regional actions can be developed and which issues need addressing in localised action plans.
- Develop a robust methodology (e.g. multi-criteria analysis) for evaluating the outcomes of further investigations.
- Evaluate the outcomes using an agreed evaluation methodology (e.g. multi-criteria analysis);
- Identify prioritised actions.
- Undertake (as applicable) required analysis of prioritised actions.
- Prepare a Sub-regional Three Waters Action Plan that details proposed actions for approval by each Council, with progress of the actions being reported back to the Future Proof Implementation Committee.
- Future Proof partners (which include tāngata whenua) work together in identified areas of alignment and opportunities for co-operation.

9.10 Each of the Councils will accordingly be able to address specific actions relevant to their district, yet at the same time, incorporate those common and integrated actions that come out of the strategic framework within a Sub-regional Three Waters Action Plan.

9.11 As the vision, goals and strategic issues emerging from the Sub-regional Three Waters Strategy are to be used by the TWS Partner Councils, then a significant amount of the issues should be addressed sub-regionally.

9.12 Although this is not an exhaustive list, current or proposed collaborative working is being investigating or implemented, these include:

- Aligning planning mechanisms such as investigating common and consistent approaches to codes of practices, water related bylaws, water demand and conservation, waste management and design practices across the sub-region.
- Sharing of operational resources through shared service agreements such as trade waste and sampling and analysis.
- Consistency in and cost effective use of community education material including the Smart Water Campaign.
- A Northern Water study has been undertaken.
- A Southern Wastewater Study is being investigated.



MONITORING AND REVIEW

9.13 Monitoring of progress against the action plans and measurement against the goals is fundamentally important to ensure not only that the goals and vision are being achieved, but that changing circumstances can be dynamically adapted to.

9.14 Following the above is therefore proposed that any action plans include a rigorous monitoring regime including the reporting of that monitoring to ensure future direction is confirmed and/or re-defined as may be appropriate.

9.15 THE THREE COUNCILS WILL:

1. Consider whether there is an overarching Future Proof implementation and monitoring procedure approach or template that Three Waters activities could be integrated into.
2. Consider how implementation and monitoring should proceed on:
 1. An integrated sub-regional basis.
 2. An individual council basis.
 3. Ensure that monitoring procedures are appropriate.



APPENDIX A

KEY DRIVERS – SUMMARY LIST

The following is a summary of key drivers considered pertinent in the development of a Sub-regional Three Waters Strategy. This list is by no means exhaustive, but intended to provide an indication of the broad range of reasons why this Strategy is critical to the future management of Three Waters in the sub-region.

GLOBAL DRIVERS:

- Agenda 21
- Climate Change and Climate Change adaption
- Global approaches to water management, scarcity
- Environmental and water quality protection and enhancement
- Sustainability and resource efficiency
- Water management and allocation
- Macro demographic trends

NATIONAL DRIVERS:

- Resource Management Act
- Local Government Act
- Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act
- Vision and Strategy for the Waikato River
- Ngati Tuwharetoa, Raukawa and Te Arawa River Iwi Waikato River Act
- Nga Wai o Maniapoto (Waipa River) Bill
- Auckland Governance Amendment Act
- Sustainable Water Programme of Action
- Health (Drinking Water) Amendment Act 2007
- National Policy Statement for Freshwater Management 2011
- New Zealand Coastal Policy Statement
- Proposed National Policy Statement on Indigenous Biodiversity
- Resource Management (Measurement and Reporting of Water Takes) Regulations
- Resource Management (National Environmental Standards for sources of human drinking water) Regulations
- National environmental standard on ecological flows and water levels
- ANZECC Water Quality Guidelines
- New Zealand Waste Strategy
- The Land and Water Forum

REGIONAL AND SUB-REGIONAL DRIVERS:

- Future Proof
- Regional Policy Statement
- Proposed Regional Policy Statement
- Proposed Regional Plan
- Proposed Variation 6 to the Proposed Regional Plan

LOCAL DRIVERS (PARTNERS):

- Waipa 2050
- Waikato District Growth Strategy
- Franklin District Growth Strategy
- Hamilton Urban Growth Strategy
- Hamilton Environmental Sustainability Strategy
- Hamilton City Scope
- Hamilton Creativity and Identity Strategy
- Waipa Environment Strategy
- Long Term Plans
- District Plans
- Development Manuals
- Water Management Plans
- Public Health Risk Management Plans
- Asset Management Plans
- Water and Sanitary Service Assessments
- Strategic Asset Registers
- Watershed Management Plans
- Drought Management Plans
- Bylaws
- Water conservation and demand management plans
- Resource Consents
- Waikato-Tainui's Whakatupuranga 2050
- Joint Management Agreements where in existence
- Others specific to individual Councils

APPENDIX B

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