2.25 – Freshwater - section 32 evaluation for the Proposed Auckland Unitary Plan

1 Overview and Purpose

1.1 Subject Matter of this Section

Auckland's freshwater resources include lakes, rivers, streams, wetlands and groundwater aquifers. Their values include natural character, landscape, biodiversity, amenity, recreation, navigation, access, and stock, domestic and municipal water supply. They also provide an essential link between the land and the sea, including natural processes to regulate runoff during storms, receive and filter contaminants, and allow fish to reach spawning areas and upstream habitats.

This section addresses the significant policy changes in the Proposed Auckland Unitary Plan (the Unitary Plan) regarding the management of freshwater resources in terms of water quality and quantity, specifically changes that have been made in order to implement the National Policy Statement for Freshwater Management 2011.

1.2 Resource Management Issue to be Addressed

Loss of freshwater resources and degradation of their values is a significant issue facing Auckland. Their quality is highly variable, reflecting the different land use types in a catchment. They have been affected by many activities, including piping and infilling of streams, drainage of wetlands, loss of riparian vegetation, discharges of contaminants, sediment runoff, abstraction of water, increased catchment imperviousness and trampling of stream beds by stock.

The National Policy Statement for Freshwater Management (NPSFM), which came into effect on 1 July 2011, sets out objectives and policies that direct local government to manage water in an integrated and sustainable way, while providing for economic growth within set water quantity and quality limits. It requires councils to set objectives, freshwater quality limits and environmental flows / levels for all bodies of freshwater to give effect to the objectives in the NPSFM.

There are short term and long term directions in the NPSFM that the Unitary Plan must implement. Every regional council is to implement the policy as promptly as is reasonable in the circumstances. Where it is impracticable to complete implementation of a policy fully by 31 December 2014, the council may implement it by a programme of defined time-limited stages which must be fully implemented by 31 December 2030.

The New Zealand Coastal Policy Statement 2010 (NZCPS) also contains objectives and policies relevant to the management of freshwater resources, e.g. reducing contaminant and sediment loadings in stormwater at source, through contaminant treatment and by controls on land use activities.

This section focuses on the changes that have been made to provisions related to freshwater quality and quantity in order to implement the NPSFM.

1.3 Significance of this Subject

The Auckland Regional Plan: Air, Land and Water (RP:ALW) is the main legacy plan relevant to the NPSFM. However it does not fully give effect to the NPSFM and considerable new research and analysis is required to set limits and targets, including:

- determining agreed values for freshwater;
- setting water quality and quantity limits and targets;
- developing methods and tools to enable the limits and targets to be met; and
- developing policy to ensure the integrated management of freshwater, land use and development within catchments.

The proposed changes, along with the programme for future work that has been developed, will help the proposed Unitary Plan to give effect to the NPSFM, which is a statutory requirement, and improve the environmental outcomes for freshwater resources in Auckland.

1.4 Auckland Plan

The Auckland Plan identifies that land and water resources are under pressure as development and growth occur in the region. As Auckland continues to develop, further pressure will be placed on these resources, and managing them will become even more critical.

The Auckland Plan gives clear direction to protect and restore ecosystems (Directive 7.5); to establish freshwater values and aspirations with communities and make freshwater an identifying feature of Auckland (Directive 7.8); set limits for minimum water quality and for maximum water take, to support iwi, community, and water users' aspirations (Directive 7.9); and to manage land to support the values of water bodies by protecting them where they are high and reviving them where they are degraded (Directive 7.10). Collectively, these directives indicate a lower tolerance of environmental degradation than has previously been the case in Auckland.

The Auckland Plan gives effect to the NPSFM.

1.5 Current Objectives, Policies, Rules and Methods

The RP:ALW is the most relevant planning document currently. In terms of water quantity, the approaches taken by the objectives, policies, rules and other methods in the RP:ALW include:

- identifying various Management Areas in order to recognise their high values. The framework protects remaining areas of high value, and guiding development towards resources and locations where it is most compatible with existing users (e.g. High Use Stream and High Use Aquifer management areas)
- encouraging groundwater use in preference to taking water from rivers and streams (subject to groundwater availability) and encouraging the taking and storing of water off-stream in winter for use in summer
- providing for the setting of minimum flows in high-use rivers and streams (however minimum flows for such rivers and streams are not specified within the plan)
- setting aquifer levels and water availability in high-use aquifers
- encouraging conservation and efficient use of water and use of alternative sources such as wastewater re-use and rainfall capture
- rules that limit the quantities that can be taken as permitted or controlled activities, especially during the summer period, in order to manage the potential cumulative effects of these activities
- integrated catchment management through the concurrent expiry or review of consents to take, use and dam surface water or discharge contaminants to surface water in a specific catchment or water body.

In terms of water quality, the RP:ALW requires dischargers to implement the 'best practicable option' (BPO) to avoid, remedy or mitigate adverse effects of contaminants on various stream types and management areas, rather than setting receiving environment standards or limits, which is required by the NPSFM. It also has no clear statement of freshwater interests and values and no freshwater objectives. Therefore a different approach is required in the Unitary Plan to meet the requirements of the NPSFM.

1.6 Information and Analysis

As discussed below in Section 1.8, there was limited time available to develop an approach to fully implement the NPSFM in the Unitary Plan. Therefore a staged approach was developed based on the information and analysis detailed in Sections 3.0 and 5.1. Further information and analysis is to be undertaken over a seven-year time frame to further develop the approach to implementation of the NPSFM.

1.7 Consultation Undertaken

Consultation undertaken in development of the interim approach to implementation of the NPSFM has included reports to Council, workshops with stakeholders such as Watercare, non-governmental organisations and Northland Regional Council. Full details of consultation undertaken are provided in Section 5.2.

1.8 Decision-Making

Given the large amount of new work required to meet the requirements of the NPSFM, full implementation of limits and targets is impractical for the Unitary Plan notification date of September 2013 or the target date of 31 December 2014 as set out in the NPSFM. Therefore, a Major Policy Issues Meeting on 8 March 2012 adopted a staged approach:

Stage 1:

- Use surface water allocation limits (minimum flows and allocable volumes) for rivers and streams from recent Environment Court proceedings or the proposed National Environmental Standard for Ecological Flows and Water Levels (NESEFWL).
- Set Auckland-wide surface water quality and ecosystem health interim guidelines based on existing in-stream macroinvertebrate communities[1] at a policy level, rather than as standards in rules, to guide resource consent decision makers; and
- Use existing RP:ALW limits for groundwater allocation.

Stage 2:

- A seven-year implementation programme to refine catchment scale water quality and quantity limits to be introduced by later Unitary Plan changes.

1.9 Proposed Provisions

The approach to management of freshwater quality has changed from the RP:ALW to meet the requirements of the NPSFM, going from a BPO approach for discharges to instream water quality limits. This has been incorporated at the policy level rather than in the rules. The rules relating to quality have not changed significantly.

Likewise, incorporation of interim minimum flow and allocation guidelines, interim aquifer availability and interim groundwater levels is also at the policy level. The rules relating to

[1] Macroinvertebrates are invertebrates that can be seen with the naked eye. Many different types of macroinvertebrate live in freshwater ecosystems (e.g. snails and various types of fly larvae). Some types are more sensitive to ecosystem 'health' than others (e.g. where water quality is degraded some more sensitive species such as stonefly larvae will not occur). The Macroinvertebrate Community Index (MCI) applies a score to each type of macroinvertebrate found in a river or stream according to its sensitivity. These numbers can then be summed for all of the macroinvertebrates found in a section of river to obtain a score which indicates the river's health.

The use of MCI in setting freshwater objectives has been made feasible by work undertaken by the Department of Conservation (DOC), which predicts the MCI, in the absence of anthropogenic stressors, for every river reach contained in the River Environment Classification (REC). This prediction provides a reference point for each river reach, against which an objective can be set based on the values associated with the river (note that the REC has issues in representing Auckland rivers accurately, but consistent with the NPSFM, it represents the best available information).

taking, use and diversion of water and discharges have not changed significantly from the provisions contained within the RP:ALW, except that in the RP:ALW many of the provisions only applied to permanent rivers, however now they also apply to intermittent rivers and streams. Proposed changes in the control of activities affecting intermittent streams are considered in the section 32 evaluation - 2.27 – Intermittent streams and riparian margins.

1.10 Reference to other Evaluations

This section 32 report should be read in conjunction with the following evaluations:

- 2.8 Sustainable design
- 2.11 Biodiversity
- 2.18 Maori and natural resources
- 2.24 Urban stormwater
- 2.26 Flooding
- 2.27 Intermittent streams and riparian margins
- 2.29 Stock access
- 2.31 Earthworks

2 Objectives, Policies and Rules

2.1 Objectives – Freshwater

In the most part, the policies and rules related to the following objectives are to do with activities in, on or under the beds of lakes, wetlands, rivers and streams. However some of the objectives and policies are relevant to freshwater quality and quantity and are therefore described below. The rules, costs and benefits and information availability are not considered in this section. Refer to Section 32 evaluation 2.27 (Intermittent streams and riparian margins) for consideration of significant changes to those rules.

Regional Policy Statement (RPS) Objective - Chapter B, Section 6.3

1. The natural, social, economic and cultural values of freshwater and geothermal water resources are safeguarded when land, freshwater and geothermal water is used and developed.

Auckland-wide objectives – Chapter C, Section 5.14

1. Auckland's lakes, rivers, streams and wetlands with high natural values are protected from degradation and permanent loss.

2. Auckland's lakes, rivers, streams and wetlands are restored, maintained and enhanced.

3. Adverse effects on lakes, rivers, streams or wetlands that cannot be avoided, remedied or mitigated are offset in exceptional circumstances, where this will is better promote the purpose of the RMA.

These objectives provide a foundation for protecting the values of freshwater resources from the adverse effects of development. They send a clear message that Auckland's rivers, streams and wetlands are to be protected, restored, maintained and enhanced. Offsetting of adverse effects is provided for in exceptional circumstances.

The objectives give effect to Part 2 of the Resource Management Act 1991 (RMA) by providing for the sustainable management of freshwater resources (s.5(a) RMA) and by recognising and providing for the preservation of the natural character of wetlands and lakes and rivers from inappropriate subdivision, use and development (s.6(a) RMA). They also give effect to Objectives A1, B1, C1 and D1 of the NPSFM.

The RMA establishes that regional councils have control over the use of land for maintaining water quality and quantity in water bodies; control of the taking, use, damming, and diversion of water, and the control of the quantity, level, and flow of water in any water body; and the control of discharges of contaminants into or onto land, air, or water and discharges of water into water (s.30). It also states that regional councils must give effect to any national policy statement.

A framework of policies and rules will be used to manage land use, development and subdivision to achieve these objectives. The timeframe for achievement is ongoing. Success will be measured through monitoring of water quality and ecosystem health indicators, and state of the environment reporting.

2.1.1 Policies

The relevant policy in the RPS chapter states that the objective will be achieved through managing land use, development and subdivision to avoid permanent loss of freshwater systems and their margins, minimise erosion and modification of stream beds and banks, protect the elements that support rivers and streams such as headwaters and riparian margins, retain and enhance connectivity between land and freshwater resources, avoid permanent diversion of rivers and streams, manage stormwater flows, maintain navigation along rivers, maintain and enhance riparian vegetation in natural stream management areas and use opportunities provided by land use change and development to restore and enhance values.

In the Auckland wide chapter of the Unitary Plan, the general policies are the most relevant. They link to the overlays of stream, lake and wetland management areas and significant ecological areas. Any adverse effects of activities on them are to be avoided. Activities on lakes, rivers, streams or wetlands outside those overlays are to be avoided where practicable, or otherwise remedying or mitigating adverse effects. Where appropriate, restoring or enhancing the habitat is to be undertaken. This policy also provides detail on the requirements for offsetting of adverse effects. Adverse effects on the mauri of freshwater ecosystems and the special relationship of Mana Whenua with them is to be avoided or managed where it does occur.

2.2 Objectives – Freshwater Quality

The following objectives are proposed:

RPS objective, Chapter B, Section 6.3

2. The quality of freshwater and the natural and cultural values of freshwater systems are maintained and restored and enhanced where they have been degraded below levels necessary to safeguard life supporting capacity and meet community values.

Auckland wide objectives, Chapter C, Section 5.15.1.

1. Areas of high freshwater quality, ecosystem health, and areas of significant Mana Whenua values are protected from degradation.
2. Areas of degraded water quality and ecosystem health are protected from further degradation and they are restored and enhanced where practicable.
3. The water quality, life supporting capacity and ecosystems of the coastal marine area are protected from further degradation and enhanced where practicable.
4. Development is undertaken in a way that minimises adverse effects on freshwater and coastal marine ecosystems.
5. The mauri and the relationship of Mana Whenua with freshwater is recognised and provided for.
6. Mana Whenua values and interests, mātauranga and tikanga are reflected and accorded sufficient weight in water quality management processes and decision-making.

The objectives recognise the degraded nature of many of Auckland's freshwater resources and make it clear that freshwater quality is to be maintained and where appropriate improved. This contributes to the sustainable management purpose of the RMA by providing for the matters of national importance in s.6 relating to natural character of the coastal environment, lakes and rivers, ecological values and the relationship of Māori with natural resources. They relate to s.7 of the RMA, where particular regard must be had to maintaining and enhancing the quality of the environment and the intrinsic values of ecosystems. The objectives give effect to the NPSFM (objectives A1 and A2 in particular), Objective 1 and Policy 21 of the NZCPS and align with the direction of Hauraki Gulf Marine Park Act 2000 (HGMPA) and the strategic direction in the Auckland Plan which seeks to protect the high values of freshwater and coastal areas and enhance degraded areas.

The RMA establishes that regional councils have control over the use of land for maintaining water quality and quantity in water bodies; and the control of discharges of contaminants into or onto land, air, or water and discharges of water into water (s.30). Maintaining and enhancing the quality of freshwater in the region will require a comprehensive approach in the Unitary Plan supported by non- regulatory initiatives. The methods used will be a framework of policies and rules, together with non-regulatory tools (e.g. encouraging planting of riparian vegetation, improving stormwater management, catchment management planning, supporting community groups and pollution response).

The objectives are reasonable as they are consistent with the national direction in respect of freshwater quality and there are Auckland-wide benefits from avoiding further degradation of water quality and enhancing this where possible. Urban water quality is a major issue in Auckland and improved quality of Auckland's freshwater quality resources will have multiple social, cultural and economic benefits without imposing undue costs or requirements on land use and development.

The term 'where practicable' allows for assessment of the degree to which investment in enhancement will be an effective use of resources.

The goals outlined in the objectives are similar to the legacy approach. The main difference between these objectives and the equivalent objectives in the RP:ALW is that the RP:ALW implies that adverse effects on degraded natural and physical resources may be acceptable where they are minimised and cannot be avoided (Objective 5.3.1 RP:ALW). The NPSFM provides clear direction that quality of water must be maintained or improved, thereby necessitating a change to the previous RP:ALW objectives.

2.2.1 Policies

Policies related to the quality of freshwater are found in the RPS section of the Unitary Plan (Chapter B, 6.3.3 and 6.3.4) and in the Auckland wide policy section (Chapter C, 5.14, policies 1-5 and 5.15.1, policies 1 – 23).

The RPS policies guide how land use, development and other activities will be managed to avoid where practicable and otherwise minimise or reduce adverse effects on water quality, biodiversity values and Mana Whenua values.

The policies within Chapter C, Section 5.15.1, establish the interim guidelines for surface water quality and ecosystem health. They set to manage the effects of land use and development, taking of water and the discharge of water and contaminants to land and freshwater by using the Macroinvertebrate Community Index (MCI) as a measure of ecosystem health. This index is described above in a footnote to Section 1.8. Guideline values are provided for a variety of catchment types. If the MCI value currently meets or

exceeds the guideline value for the relevant catchment type, then discharges, land use or development and activities will be managed to maintain water quality, flows, stream channels and their margins. Where the values are not currently met, such activities will be managed to restore or enhance water quality, flows, stream channels, their margins and other freshwater values.

The efficiency and effectiveness of these policies is considered in the table below which details the consideration of alternatives.

The establishment of these interim guidelines meets in part the requirements of the NPSFM by setting freshwater objectives for water bodies. These objectives are relevant to both water quality, quantity and overall ecosystem health. This approach is consistent with the National Objectives framework contained in the recently released Freshwater Reform Paper (March 2013). This means that in due course there will be firm guidance by central government that invertebrates will be required to inform the ecological health of rivers and streams. There will be national 'bottom lines' that all water bodies must meet and invertebrates will be one of the measures used.

Policies 4.1 to 4.3 are required to be incorporated into the Unitary Plan by the NPSFM. They deal with the matter that the council must have regard to when considering any application for a discharge that may affect freshwater systems. They apply until a new framework of freshwater quality objectives and limits have been established and given effect to byway of variation or plan change into the Unitary Plan to give full effect to the National Policy Statement for Freshwater Management 2011 (see Policy 5). At that time they will be removed from the plan.

Policies 6 to 8 relate to the integrated management of land use, development, redevelopment, subdivision and discharges to protect freshwater systems and the integrated management of land development and water. The NPSFM requires the Auckland Council to improve integrated management of freshwater and the use and development of land by providing for integrated management in the Unitary Plan.

2.2.2 Rules

There is no specific rules section relating to freshwater quality. The newly developed approach to managing freshwater quality is established and applied through the policies as described above. Various sections of the Unitary Plan's Natural Resources rules section (Chapter H, Section 4) contain rules that are important in managing freshwater quality, such as the point and diffuse discharge of contaminants, management of stormwater, access to streams and river by stock and riparian vegetation. Where there have been significant changes in direction of the provisions from the legacy plans, these provisions are dealt with in the other relevant s32 evaluations.

2.2.3 Costs and Benefits of Proposed Policies and Rules

The policy framework has been developed to meet the requirements of the NPSFM, which is a statutory document. The MCI responds to a range of environment stressors, including both water quality and water quantity. It is not necessary to have separate objectives for water quality and quantity. If the limits are set at appropriate levels, it is probable that interim limits would result in a better outcome for rivers than the provisions of the RP:ALW which is based on BPO. It is a simple and effective approach and is consistent with the National Objectives framework contained in the recently released Freshwater Reform 2013 paper (Ministry for the Environment, 2013). This means that in due course there will be firm guidance by central government that invertebrates will be required to inform the ecological health of rivers and streams.

Better recognition of the relationship that Mana Whenua has with freshwater resources is also likely to improve environmental outcomes and have cultural and social benefits.

The approach is efficient and will place little extra burden on those applicants who have to do an Assessment of Environmental Effects (AEE) or consent monitoring, largely because invertebrate samples are collected for the vast majority of these already. Many of the rules that are relevant to freshwater quality are currently similar to the legacy plan so there is unlikely to be increased costs associated with them. For those that are significantly different (e.g. stormwater and stock access), refer to the relevant s32 evaluations provided in this report.

The proposed policies and rules are not expected to affect economic growth and employment.

2.2.4 Adequacy of Information and Risk of Not Acting

It is considered that there sufficient information on which to base the proposed policies and methods.

Council scientists are confident that the suggested Auckland-wide interim MCI guideline values are robust and defensible and a legal opinion (Appendix 3.25.1 - Sommerville, Jan 2012) indicates the use of biological indicators in setting freshwater objectives is consistent with the NPSFM.

If changes were not made to the policies and rules contained in the legacy planning documents, the Unitary Plan would not meet the requirements of the NPSFM.

2.3 Objectives – Freshwater quantity, allocation and use and the damming and diversion of water

RPS Objectives, Chapter B, Section 6.3

3. Freshwater and geothermal resources are managed and allocated to support their natural and cultural values and to make efficient use of available water for economic, social and cultural purposes.

4. The amount of freshwater used by Auckland is progressively reduced on a per head basis.

These objectives relate to the efficient use of freshwater, which is a requirement of the NPSFM (specifically Objective B3 and Policies B2, B3 and B4). Objective 3 also provides a foundation for policies and rules relating to managing the use of freshwater resources. Objective 4 provides a clear direction that water use should be reduced on a per head basis and therefore would assist in achieving sustainable management of freshwater resources.

The objectives are consistent with Part 2 of the RMA, and in particular s.5 (sustainable management of resources) and s.7(b) and (f)).

The RMA in s.30 establishes that regional councils are responsible for the control of the taking and use of water, therefore the Auckland Council has the functions and powers to implement these objectives.

The RP:ALW and legacy RPS contain policies relating to efficient use of water resources, and promotion of efficient use, but did not have a similarly specific objective like objective 4.

Auckland wide objectives, Chapter C, Section 3.15.2

1. Water in surface rivers and groundwater aquifers is available for use while the aquatic values of water are maintained and sustainable yield is not exceeded.
2. Water resources meet current and future water needs.
3. Water resources available for use are managed and allocated in order of priority to maximise the life supporting capacity for people, animals, and economic development.
4. Water resources are managed and allocated to maximise the efficient use of available water.
5. Mana Whenua values are acknowledged in the allocation and use of water.

The objectives are consistent with Part 2 of the RMA, and in particular s.5 (sustainable management of resources) and s.7(b) and (f)). They are also consistent with Objectives B1, B2 and B3 of the NPSFM which relate to the sustainable management of water use.

The objectives provide the basis for prioritising the allocation of freshwater resources and ensuring resources are not over-allocated.

The RMA in s. 30 establishes that regional councils are responsible for the control of the taking and use of water. The council is required to implement the NPSFM which has objectives and policies requiring sustainable management of water resources, avoiding over-allocation, improving efficiency of allocation and use and establish freshwater objectives and set environmental flows and/or levels for all bodies of freshwater in its region. These objectives form the basis for a framework to manage water quantity.

The objectives are consistent with the objectives relating to water allocation in the RP:ALW and the legacy RPS.

2.3.1 Policies

The RPS policies relating to freshwater quantity (Chapter B, Section 6.3, policies 6 – 8) provide the basis for limits to be set around water allocation to protect freshwater systems, requiring spring flows, base flows, aquifer recharge and geothermal temperature and amenity. The efficient taking of groundwater rather than surface water is promoted and a basis for prioritisation of geothermal water, heat or energy allocation is provided.

The policies in Chapter C, Section 3.15.1 discussed above (establishing the interim freshwater MCI guidelines for rivers and streams) are also relevant to water quantity, allocation and use as the effects of these activities on ecosystem health is indicated by the MCI values.

The Auckland-wide rules specifically relating to freshwater and geothermal quantity, allocation, use, damming and diversion (Chapter C, Section 3.15.2) are divided into a number of sections which are discussed below.

Priority of water use

Freshwater allocation is to be managed within guidelines related to water availability and levels contained within the appendices, with highest priority given to domestic and municipal water supply and animal drinking water requirements.

Efficient use

Describes how the efficient use of freshwater and geothermal water is to be promoted. This includes reasonable and justified use, water management plans for municipal water supplies, implementation of best practice by industrial and irrigation supplies, maximum seasonal allocations for irrigation, consideration of water conservation, facilitating transfer of water permits and encouraging shared use and management of water.

Water allocation guidelines, availabilities and limits
The taking and use of surface water and groundwater is to be managed so that the minimum flow and availability guidelines and groundwater levels are not exceeded (these guideline values are in the most part carried over from the RP:ALW. Identifies that catchment specific limits for freshwater quantity will be developed with Mana Whenua and the community through consultation.

Take and use of water
Contains six policies that require:

- Proposals to take surface water to demonstrate it is within the guidelines, appropriate water levels will be maintained, no lawfully established take is adversely affected, intake structures designed appropriately, and there are options for water conservation measures when required;
- Proposals to take groundwater are to demonstrate it is within the availabilities and levels in the appendices, recharge to other aquifers is maintained, consolidation and surface subsidence is avoided, taking will avoid, remedy or mitigate adverse effects on surface water flows and terrestrial and freshwater ecosystems, it will not cause salt water intrusion or contamination, will not interfere with neighbouring bores, ;
- Where there are significant adverse effects, alternatives and mitigation measures (such as provision for fish passage, riparian planting) are to be considered;
- Various data to be collected when monitoring the effects of takes;
- Where water allocation exceeds or is close to exceeding the guidelines provided, no new consents to take water are to be granted and existing takes to be reviewed and reduced;
- Where takes do exceed the guidelines, the take is to be allowed when the river or stream flow is greater than the median flow subject to conditions.

National Policy Statement on Freshwater Management Policy B7 and direction
These policies, which specify matters the consent authority must have regard to when considering any application, are required to be included by the NPSFM. They apply until catchment specific investigations are completed and subsequent provisions to give effect to Policies B1 to B6 are incorporated to the Plan by way of variation. At that time they will be removed from the Plan.

Comprehensive reviews of consents
Resource consents to take, use or dam water or discharge contaminants shall have a duration and review dates specified to allow for comprehensive and integrated assessment if issues in a catchment or aquifer system.

Damming of surface water
The policies specify that:

- Off-stream damming is preferred;
- Damming of water in Natural Lake, Wetland and Natural Stream Management Areas should be avoided;
- Activities to dam rivers need to meet a number of requirements relating to fish passage, maintenance of downstream levels and flows, effects on other water uses, Mana Whenua values and interests, effects of dams on the environment.
- Regular monitoring and inspections are to be undertaken.

Surface water diversions
Activities to divert surface water are required to demonstrate the diversion will avoid significant adverse effects and remedy or mitigate other effects, including on existing takes,

buildings, structures, services, flood hazard risks, bank stability, places of historic heritage or of significance to Mana Whenua, people and communities.

Diversion of groundwater
Activities to divert groundwater must ensure that they meet a range of requirements relating to avoiding, remedying or mitigating effects historic heritage places and sites of significance to Mana Whenua, flooding, monitoring and mitigation.

Drilling holes and bores
Requirements for proposals to drill holes or bores, including prevention of contaminants entering an aquifer, cross-contamination between aquifers, leakage, effects on historic heritage places and sites of significance to Mana Whenua and disturbance of wetlands.

The policies are achievable through resource consent applications for activities that use or take water, reviews of existing consents, encouraging voluntary reductions in water allocations, water management plans prepared for municipal water supplies, encouraging the shared use and management of water, monitoring and enforcement. The interim freshwater MCI guidelines will help to improve the effectiveness of the provisions for rivers and streams by providing better guidance on the state of ecosystem health. The effectiveness and efficiency of the policies will be improved by the NPSFM implementation programme, which will develop improved freshwater objectives and water quantity limits for catchments.

2.3.2 Rules

The proposed rules are summarised in 1.9 above. Many of the rules and thresholds are similar to the RP:ALW rules. The main difference is that the rules now also apply to intermittent streams and rivers, previously they applied only to permanent rivers. As discussed in the Section 32 evaluation – 2.27 Intermittent streams and riparian margins, this is a result of recent scientific research that has highlighted the values of intermittent streams so they are now seen to be of similar value to permanent rivers and streams.

The rules should be effective because they have already been applied in the RP: ALW context and have been amended where appropriate to improve their effectiveness (e.g. by including intermittent streams). They should be efficient because the consent applicants and processing planners are already familiar with the thresholds and application.

2.3.3 Costs and Benefits of Proposed Policies and Rules

The main changes to the policies and rules compared to the RP:ALW are the incorporation of stream and river objectives in the form of the MCI guideline values in the policies and the move to treat intermittent streams similarly to permanent streams. Therefore the costs of the proposed rules will be similar in nature to the costs incurred under the RP:ALW rules, plus additional costs incurred through the changes.

The treatment of intermittent streams similarly to permanent means that more activities proposed in intermittent streams that previously did not require consent will now require consent or may not be acceptable at all. The benefit of this change is improved environmental outcomes and protection of an important ecosystem.

The inclusion of the in stream objectives is also likely to result in improved outcomes for the environment and better protection of streams and rivers. As macroinvertebrate samples are already often collected as part of the AEE process for consent applications affecting streams and rivers, this change may incur little extra costs to applicants.

Better recognition of the relationship that Mana Whenua has with freshwater resources is likely to improve environmental outcomes and have cultural and social benefits.

Another benefit of the proposed changes is that the Unitary Plan will be meeting the requirements of the NPSFM in the interim, before an improved catchment specific approach is developed.

The proposed changes are not expected to affect economic growth and employment.

There has not been any analysis that monetises the costs and benefits of the proposed rules. There are some limited figures on the cost of implementing the NPSFM provided in the assessment of alternatives in section 3.0 below.

2.3.4 Adequacy of Information and Risk of Not Acting

It is considered there is sufficient information on which to base the proposed policies and methods. The NPSFM requires many of the changes that have been made to the policy direction. A number of recent studies have highlighted the values of intermittent streams and their importance (refer s32 evaluation 2.27 – Intermittent streams riparian margins) and Council scientists are confident that the suggested Auckland-wide interim MCI guideline values are robust and defensible. A legal opinion (Appendix 3.25.1 - Sommerville, Jan 2012) indicates the use of biological indicators in setting freshwater objectives is consistent with the NPSFM.

3 Alternatives

The proposed preferred alternative is discussed in 2.0 above. The status quo alternative is outlined in 1.5 above.

Alternatives are:

1. Status Quo – Retain RP:ALW, Regional Plan: Farm Dairy Discharges and Regional Plan: Sediment Control activity based controls and BPO for storm water and wastewater discharges.
2. Preferred - Implementation of NPSFM through a two stage approach:

Stage 1:

- Use surface water allocation limits (minimum flows and allocable volumes) for rivers and streams from recent Environment Court proceedings (Pukekohe catchments) or the proposed NESEFWL (modified for Auckland conditions)
- Set Auckland-wide surface water quality and ecosystem health interim guidelines based on existing in-stream macroinvertebrate communities at a policy level, rather than as standards in rules, to act as guidance to resource consent decision makers, and
- Use existing RP:ALW limits for groundwater allocation.

Stage 2:

- A seven-year progressive implementation programme to develop catchment scale water quality limits to be introduced by later Unitary Plan changes.

The Auckland region is proposed to be divided into 7 to 14 water management zones, with the community interests and values and freshwater objectives and limits being defined in those zones through community and iwi consultation and scientific research throughout the period.

3. Implement NPSFM through a single stage approach over longer timeframe - Roll over existing RP:ALW provisions, do stage 2 above without stage 1. This option would leave the RP: ALW in place while the work programme outlined in stage 2 above is undertaken.

The table below discusses each alternative compared to the proposed alternative.

	Alternative 1 – Status quo	Alternative 2 – Staged approach (preferred)	Alternative 3 - Implement NPSFM through a single stage approach over longer timeframe
Appropriateness	This option is inappropriate as it does not meet the requirements of the NPSFM and does not support the objectives.	This option is considered to be the most appropriate of the three alternatives considered for implementation of the NPSFM.	This Alternative is more appropriate than Alternative 1, but not as appropriate as Alternative 2.
Effectiveness	The current framework contained within the RP:ALW does not fully give effect to the NPSFM. It has: • no clear statement of freshwater interests and values • no freshwater objectives • no water quality standards or limits • no minimum flows or abstraction limits for rivers • allocation limits for some aquifers. As the Auckland Council is required to give effect to the NPSFM under s. 55, 62, 67 and 75 of the RMA. There is no discretion in giving effect to the NPSFM.	• Council scientists are confident that the suggested Auckland-wide interim limits or targets are robust and defensible. • Biological measures such as the MCI are useful because if the biological objectives are being met, the other values for which the water body may be managed are also likely to be met e.g. a water body that meets a high biological objective is likely to be suitable for recreational activities, domestic water supply (subject to treatment), food production and harvesting and animal drinking water. • A legal opinion (Appendix 3.25.1, Sommerville, Jan 2012) indicates that the use of biological indicators in setting freshwater objectives and limits is consistent with the NPSFM. • Progress will be made towards implementation of the NPSFM in the first iteration of the Unitary Plan. • Refinement of the catchment scale water quality limits over a seven year time frame will ensure that full implementation of the NPSFM is achieved well within the final deadline of 31 December 2030.	This option would still result in the implementation of the NPSFM within the final deadline of 31 December 2030. However it will have better environmental outcomes by improving freshwater resource management in the interim before a more detailed framework has been developed.
Efficiency	The current framework does not meet the requirements of the NPSFM, so is therefore not efficient.	This alternative has the greatest benefits when compared to costs. Implementation of a two staged approach will likely result in a better outcome for freshwater resources than the provisions of the RP:ALW which is based on BPO. Better water management will ensure improved water efficiency in Auckland. It is expected to be more economically sound to prevent over allocation (both water quantity and quality) of resources in the first instance rather than retrospectively restore them. In some cases restoration may not be possible. If investments are made based on the unsustainable use of freshwater resources that investment can be significantly compromised. (Water Management Team, Auckland Council, July 2012) This approach is efficient and will place little extra burden on those applicants who have to do an Assessment of Environmental Effects (AEE) or consent monitoring, largely because invertebrate samples are collected for the vast majority of these already.	The benefits of this alternative are not as great as those for Alternative 2, so is less efficient.
Costs	The current planning framework does not meet the requirements of the NPSFM. If a new framework is not developed there would be costs related to: • non-compliance with a NPS; • the environment – the current framework for water quality relies on discharges implementing the BPO rather than meeting in-stream water quality objectives. It is likely that	Stage 1: The costs of developing this approach have been covered by existing staffing levels and by using the best available information (hence no additional information paid for). No further costs anticipated. Stage 2:	• The Unitary Plan would give very limited effect to the NPSFM over the intervening period • It would be environmentally sub-optimal as BPO would continue to be applied in the interim and the historical use of BPO has had mixed success in avoiding the degradation of Auckland water bodies and estuarine areas • It could give rise to public perceptions of council inaction

	Altern	Alternative 2 – Staged approach (preferred)	Alternative 3 - Implement NPSFM through a single stage approach over longer timeframe
	the receiving water quality would suffer to a greater extent under a BPO approach.	Funding of $1.7 million has been allocated to implement the NPSFM over the financial period 2012-2019 in the Long Term Plan.	Funding of $1.7 million has been allocated to implement the NPSFM over the financial period 2012-2019 in the Long Term Plan.
Benefits	This would be the least costly option in terms of implementation costs (at least in the short term), as the planning framework has already been developed for the previous planning documents.	Stage 1: • The NPSFM is given effect to by the Unitary Plan, at least in part until more detailed information is available. • The MCI responds to a range of environment stressors, including both water quality and water quantity. It is not necessary to have separate objectives for water quality and quantity. • If the limits are set at appropriate levels, it is probable that interim limits would result in a better outcome for rivers than the provisions of the RP:ALW which is based on BPO. • It is a simple and prescriptive approach. • This approach is consistent with the National Objectives framework contained in the recently released Freshwater Reform 2013 (Ministry for the Environment, 2013). This means that in due course there will be firm guidance by central government that invertebrates will be required to inform the ecological health of rivers and streams. There will be national 'bottom lines' that all water bodies must meet and invertebrates will be one of the measures used Stage 2: • Improved management of discrete and diffuse sources of water pollution by establishing community values for Auckland's freshwater bodies, setting of measurable and achievable freshwater objectives and setting water quality limits. • Land-use framework established to manage the effects of development in catchments with outstanding freshwater and coastal receiving environments. • The use and waste of water is minimised. • The community understands the true value of water. • All new developments and redevelopments apply low-impact and water sensitive design principles. • Wastewater discharges to land and water are adequately controlled to prevent adverse effects on the receiving environment. • Freshwater and coastal outcomes are met by providing integrated management within whole catchments. • Riparian planting is supported and enhanced. • The quality of outstanding water bodies is protected. • The significant values of wetlands are protected. • The quality of degraded water bodies is improved, including phasing out any over-allocation. • Any existing over-allocation for water quantity is phased out. • No future over-allocation for both quality and quantity occurs. • Management of freshwater reflects the values and interests of Mana Whenua.	Less cost associated with implementing stage 1 outlined above. The same benefits listed for stage 2 in Alternative Two above.
Risks	The risks of this option include:	This approach will substantially reduce risk associated with pollution	Reliance on a BPO approach to managing freshwater until the more detailed approach is developed means that it is likely that the

	Alternative 1 – Status quo	Alternative 2 – Staged approach (preferred)	Alternative 3 - Implement NPSFM through a single stage approach over longer timeframe
	• non-compliance with a NPS • continued degradation of Auckland water bodies and estuarine areas • Could give rise to public perceptions of council inaction	or over allocation of scarce water resources.	receiving water quality would suffer to a greater extent in the intervening period rather than if the interim approach described in stage 1 above is used.

4 Conclusion

Based on the above assessment, alternative 2 (a staged approach) is the most appropriate, efficient and effective policy approach considered for implementation of the NPSFM. Consequently, it is recommended;

- the policy approach outlined in alternative 2 above be used to implement the NPSFM.
- the framework of objectives and policies assessed above be adopted in the Unitary Plan to provide the basis for management of freshwater resources in the Auckland region and the further development of the staged approach to implementation of the NPSFM.

5 Record of Development of Provisions

5.1 Information and Analysis

- Appendix 3.25.1 - How to Give Legal Effect in Regional Plans to the National Policy Statement for Freshwater Management 2011. Dr R J Somerville, 20 January 2012.

- Appendix 3.25.2 - Freshwater Objectives and Limits and Implementing the National Policy Statement for Freshwater Management 2011, Peter Winder, McGredy Winder & Co., January 2012.

- Appendix 3.25.3 - Concept Paper Freshwater Management NPS Implementation Project, First Work Plan. Water Management Team, Auckland Council, July 2012

- Appendix 3.25.4 - The Auckland Council's National Policy Statement for Freshwater Management Progressive Implementation Programme – detailed in a report to the Regional Developments and Operations Committee, 16 August 2012

- Appendix 3.25.5 – Draft Option Evaluation Paper for Natural Environment Workstream – National Policy Statement for Freshwater Management, June 2012 (note that this report remained in draft form because it became superseded by the outcomes matrix)

- Appendix 3.25.6 - Background Paper on the National Policy Statement Freshwater Management 2011, Memo to the Strategic Management Group, 12 July 2012

- National Policy Statement Freshwater Management 2011. Available: http://www.mfe.govt.nz/rma/central/nps/freshwater-management.html

- Ministry for the Environment, 2013. Freshwater reform 2013 and beyond. Wellington: Ministry for the Environment. Available: http://www.mfe.govt.nz/publications/water/freshwater-reform-2013/freshwater-reform-2013.pdf

5.2 Consultation Undertaken

Council:

The following reports were presented to the Environment and Sustainability Forum:

- Appendix 3.25.7 - National Policy Statement for Freshwater Management and the Implications for Auckland Council, 21 June 2011
- Appendix 3.25.8 - Implementing the National Policy Statement for Freshwater Management in Auckland, 29 May 2012

The following reports were presented to the Regional Developments and Operations Committee:

- Appendix 3.25.4- National Policy Statement for Freshwater Management Progressive Implementation Programme, 16 Aug 2012

Rural Advisory Panel:
20 April 2012 – water quality and NPSFM presentation

10 May 2013 – freshwater quality and quantity presentation

Stakeholder meetings:
19 July 2012 – Meeting with Northland Regional Council

Environmental Sector workshop, 8 March 2012: Included Environmental Defence Society, Friends of the Earth and other organisations.

20 July 2012 – meeting with the Rural Advisory Panel and non-governmental organisations regarding the options for meeting the requirements of the NPSFM.

Watercare Services Ltd (2011-2013) – several meetings on the NPSFM and freshwater management in general, discussion of options and Watercare's proposed feedback on the draft Unitary Plan.

Draft Unitary Plan feedback period (March – May 2013):
Release of the draft Unitary Plan in March 2013 enabled the proposed provisions related to freshwater quality and quantity to be reviewed by the relevant groups and the public. Feedback received on the draft provisions was assessed, and where appropriate, changes were made to the proposed provisions.

5.3 Decision-Making

- Major Policy Issues Meeting on the 8th of March 2012 resolved to undertake the preferred option as outlined above.
- The Political Working Party on 26 July 2012 resolved that freshwater objectives would be set at the Regional Policy Statement level of the Unitary Plan (called Tier 1). These freshwater objectives will be based on likely values including iwi, cultural and allocation values and will differentiate between urban and rural areas. The Political Working Party also agreed that interim limits and guidelines can also be established in the Unitary Plan.