1. **Scope of Submission**

1.1 This submission covers all aspects of the “Action for Freshwater” package, including:

- The proposed new National Policy Statement for Freshwater Management;
- The proposed new National Environmental Standards for Freshwater;
- The proposed draft Stock Exclusion Section 360 Regulations;
- The “Action for healthy waterways” discussion document on national direction for our essential freshwater and the questions included as part of that package.

Collectively, these documents from hereon are referred to as “the Package”.

2. **Introduction**

2.1 Auckland/Waikato Fish and Game Council (AWFG) thanks the Ministry for the Environment and the Ministry for Primary Industries for the opportunity to submit on the Package.

2.2 This submission is made in full support and endorsement of Fish and Game New Zealand’s submission. This submission supplements the Fish and Game New Zealand submission by providing detail on the way the proposals will impact and direct freshwater management in the AWFG region. The focus is on matters which are pertinent to the management of habitat for sports fish and gamebirds in the AWFG region.

2.3 AWFG supports a large, dense and highly urbanised population who access wilderness and outdoor sports throughout the surrounding regions. In addition to serving an increasing population, the AWFG region faces severe ecological challenges which are magnified by compounding pressures on ever-shrinking resource. For example:

- Wetlands face multiple pressures, agricultural (contamination, drainage, conversion to pasture), residential and industrial growth (development over wetland areas, stormwater, wastewater, fragmentation through expansion of transport networks), flood protection priorities (extreme contamination), and increasing human populations, which converge to result in continually degrading and shrinking wetland ecosystems.

- The effects of climate change will exacerbate other negative effects in the AWFG region as in-stream temperatures continue to rise. AWFG manages some of New Zealand’s northern most trout fisheries. Summer habitats are often at the cusp of 19 degrees, the point at which trout can no longer inhabit. This situation is created and exacerbated by the loss of riparian shading vegetation. Threshold temperatures are also increasingly reached for other freshwater organisms. As habitat becomes increasingly thermally restricted, the impacts on populations of other forms of degradation in remaining pockets of viable habitat become more pronounced.

2.4 AWFG has a particular focus on its wetland ecosystems which support a high quality gamebird sport, and the highest density of gamebird hunting licence holders in the country. This is because of the
coverage of wetlands in the region which are valuable habitat for the gamebird resource (an estimated 44% of the North Island’s remaining wetland habitats are within the Waikato Region).  

2.5 Wetlands in the AWFG Region include the unique Köpuatai peat dome, the Whangamarino Wetland, described as ‘the most important freshwater wildlife habitat in New Zealand’ in its 1989 Ramsar application, and the coastal wetlands at the Firth of Thames. All are internationally recognised under the Ramsar Convention and are ecologically important. AWFG has been recognised as one of the most significant forces effecting conservation initiatives in the Whangamarino. Additionally, and significantly, there are smaller wetland remnants and networks across the region. The peat wetlands and lakes of the mid-Waikato, the estuarine wetlands of the Waikato Delta and Waihou, wetland remnants of the Hauraki Plains and the riverine wetlands linked to the Whangamarino Complex provide excellent gamebird habitat and significant cultural and recreational resource for hunters.

2.6 This submission is separated into different topics of relevance to AWFG. Specific submission points are summarised under each topic in bullet points, with explanation, reasoning and matters for consideration below.

3. Concepts and direction:

• The intent and direction of the package is strongly supported.
• Wetland measures must be urgent and effective; retain the compulsory Policy to avoid wetland loss and the requirements to measure and monitor as essential first steps.

3.1 Freshwater ecosystems in the AWFG Region have been allowed to become severely degraded, and close management is required to contain increasing and ongoing pressures. Ecosystem heath should be a bottom line, and rivers and lakes should be safe for swimming and other forms of contact recreation. Very clear, time constrained targets and goals which link to actions on land are essential to achieve improvement and restoration of ecosystem health. The effort is now long overdue.

3.2 Wetlands face the greatest threat, and loss continues despite current provisions in Regional Policy Statements to the effect that there should be no further loss. The Waikato Regional Policy Statement contains an intended environmental result that: There is no reduction in extent or condition of wetlands, with some wetlands exhibiting physical, chemical, hydrological or biological improvements. Despite this, AWFG has seen continued incremental loss of wetlands at a rate it estimates is in the order of 10 times the rate of re-creation of wetlands. A compulsory and definitive Objective or Policy for all Regions is needed to stop this loss.

3.3 The true extent of wetland loss is unknown, and for this reason the focus in the Package on measuring and monitoring wetlands is strongly supported. Most of the wetland loss occurring is not easy to recognise. Most often, small pockets, particularly of ephemeral wetlands, are methodically drained and converted to pasture. However, recent more obvious wetland losses in the Waikato Region include conversion of parts of the internationally significant Kopuatai peat dome (this change in

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3 Ibid.
4 WRPS, 15.4.5(h).
landuse also increases the rate of subsidence and oxidation of the peat soil. A visual depiction of this loss is shown at Appendix 1.

**Te Mana o te Wai (Proposed NPS; Discussion Document, Q9, Q10, Q11):**

- Support the concept.
- Seek amendment that regulations prescribe time limits for the ‘vision’.
- Seek amendment that the ‘vision’ has a clear regulatory function within the NPS framework.
- Seek amendment that the status of the Te Mana o te Wai priorities is clear.

3.4 AWFG supports the Te Mana o te Wai hierarchy of obligations, however is concerned that the proposal does not provide time-bound limits for when a ‘vision’ is to be expected to be enjoyed. The current proposal risks the health of the water falling behind as a priority while making slow progress towards a long-term goal. In the Waikato, the ‘vision and strategy’ has been set to restore the Waikato River to a healthy state. Without time-bound expectations, the collaborative process has extrapolated that this should occur over 80 years, to mitigate economic impacts. This is three generations, and would not achieve the goal set out in the discussion document of a generation.

3.5 It is not clear in what context the priorities should be adopted. It is not clear what the status of the ‘long term vision’ is and how it would be expected to inform management, or the requirements to set environmental outcomes. This makes it difficult for Councils to apply. In the Waikato, the application of the statutory ‘vision’ in the context of Regional planning has been subject to legal debate.

**Ki ʻuta ki tāi (Proposed NPS; Discussion Document, Q11):**

- Support the intent of the concept and that it is referenced in Te Mana o te Wai.
- Seek amendment to include detail which clarifies how the concept works in practice.

3.6 AWFG supports the concept of ki ʻuta ki tāi but considers that amendment would assist to achieve its purpose. The concept should be clarified so that it explicitly recognises that water and contaminants flow down through all receiving ecosystems below their source in a catchment.

3.7 Small waterbodies entering large waterbodies may be diluted (for example, Lake Taupō releases a large volume of clean water diluting tributaries flowing into the Waikato River). Nutrients are cycled in ecosystems and do not go away, though they may be present in different forms. The current definition “holistic and integrated approach” is vague, and at times has been interpreted to mean that catchments can be managed from a specific particularly sensitive point in the lower catchment, which will meet the needs of all upstream environments. This ignores the way nutrients may have been cycled upstream, or the differing requirements of upstream ecosystems. Clearly, there should be management of sensitive points by accounting for their entire upstream catchment, however the hydrology of the catchment should also determine all other appropriate points for management from the top down.

4. **Timing (Proposed NPS; Proposed NES; Proposed s360 Regulations; Discussion Document, Q1, Q2, Q17, Q42, Q51, Q78)**

- Support the goal to have Council Plans operational within 5 years.
- Recognise the need for a streamlined hearing process to achieve this, but strongly seek that hearings panels comprise experts in freshwater ecology.
- Seek amendment so regulations state the latest date for achieving long-term targets.
• Seek amendment the NPS prescribes time limits for the ‘vision’ (see above under Te Mana o te Wai).
• Support the regulations (NES, s360 Regs.) implementing actions from 2020 onwards (including for all of the most stringent options).

4.1 The intent of the tight timeframes is strongly supported and is essential if the Package is to make meaningful progress. The use of urgency, interim measures, and a streamlined appeal process is consistent with the principles of environmental management of acting fast, early and adapting to details. The proposals will not stop further degradation in all places in 5 years (particularly not in wetlands and lakes) but makes an important first step by stopping the greatest threats (particularly further intensification).

4.2 AWFG is concerned that the trajectory and pace of change is still for Council discretion. In AWFG experience, this is a huge point of contention within communities, and it is also how the economic considerations will ultimately drive the process. The Government needs to set time limits for achieving the long-term outcomes, within the regulations (3.9 (5) ‘Timeframes for achieving the target attribute states’).

5. Exceptions

The use of exceptions (Proposed NPS, Proposed NES, Proposed 360 Regulations, Discussion document Q1, Q2, Q3, Q19, Q77, Q79):

• Remove all exceptions (detailed below).

5.1 The goals of the proposal (halting degradation and reaching a healthy state within a generation) will not be achieved in waterbodies excepted from the Package. When all exceptions are considered, the proportion of water bodies which will not achieve the goals is vast, and considerably more than minor. Applying the exceptions, the benefits of the Package will not be accessible to many New Zealanders.

Hydro-electricity Schemes (Proposed NPS, Proposed NES, Discussion Document Q1, Q2, Q3, Q19):

• Amend the Proposed NPS so that it does not include exceptions for hydroelectricity generation (delete NPS 3.22).
• Amend the Proposed NES so that hydroelectricity generation activities are subject to the same requirements as other activities affecting wetlands. Specifically, discretionary water take activities for hydro-schemes (16(1)(b)) should be subject to the requirements in 16(3) which apply to other discretionary takes.

5.2 The Discussion Document states that the exception for hydroelectric schemes is intended to balance New Zealand’s freshwater health needs against climate change obligations. The implication for AWFG is that it’s biggest catchment (the Waikato River), and one of its most pristine and valued fisheries (the upper Whanganui) are exempt, in addition to other smaller schemes across the region. AWFG raises the following concerns with this approach:

a) It is not clear that this is consistent with the requirements of the RMA to exempt Councils from safeguarding freshwater ecosystems in certain areas.

b) By excluding large sections of the region from the benefits, it is inequitable for communities and industries.
c) Alternative forms of renewable energy generation exist which do not harm waterways. The exception is not strictly required to meet climate change obligations.

d) If the Package is intended to consider climate change obligations, it should be re-focussed to include actions which provide dual benefits, rather than creating exceptions. Restoring and re-wetting wetlands, especially peat wetlands, has dual benefits of protecting freshwater and assimilating (rather than emitting) carbon, particularly from otherwise oxidising peat soils.

e) Hydroelectricity schemes may fundamentally alter the ecosystems of catchments, but this does not mean that these ecosystems should not be held to the appropriate requirements based on their characteristics. A dammed river may now exhibit characteristics of a lake (eg, Waikato River lakes). This does not mean that it should be excluded from meeting the appropriate lake-based health standards. Experts in freshwater ecology can recommend the appropriate standards to apply.

f) Hydroelectric schemes are already prioritised as regionally and nationally significant infrastructure and receive privileges over other interests within RPSs, Plans and under this Package.

g) The exception is inconsistent with Te Mana o te Wai which should be applied universally.

h) Exempting all impacts of hydroelectric facilities removes the incentive for improvement in practices, this exception will lock in current poor practices. For example, the Western diversion of the Tongariro power scheme takes entire streams leaving no flow for most of the year and discharges dirty water into the Whanganui during the summer. Neither are necessary to run or maintain the scheme and could be easily mitigated, but would be locked in with this proposal.

5.3 Under the NES, there is no reason why hydro-electric generation should not be subject to the requirements of assessment and monitoring that restoration projects are subject to. The subsection 16 regulations as drafted enable Hydroelectric uses but inhibit restoration of wetlands. Hydroelectric generation activities should require ecological and hydrological assessment, and monitoring conditions to gain consents affecting wetlands.

**Plantation Forestry (Proposed NPS, Proposed NES, Discussion Document Q1, Q2, Q79)**

- Amend Part 1, 2(3) placeholder stating NESPF prevails over wetlands so that it states that ‘The provisions in this document prevail over NESPF wetland rules’.
- Amend the regulations in the Package to clarify that where more stringent, they apply to forestry activities.

5.4 Forestry is a significant land use in the upland components of fisheries in the AWFG region. These are important thermal retreats but are threatened by sediment inputs and loss of riparian vegetation.

5.5 Small and medium sized wetlands in upland areas are ecologically important but entirely unprotected from forestry activities. Without adequate protection, wetlands affected by forestry will continue to be lost and degraded.
5.6 There is recognition that NESPF does not deal adequately with fine sediment, setbacks or wetlands to protect freshwater ecosystem health; for this reason, the standards in the Package should prevail to achieve goals within 5 years and a generation. This should be at least as an interim measure while the Plantation Forestry standards are updated.

Geographic application (Proposed NES, Discussion Document Q1, Q2, Q3, Q77)

- Delete the restriction of geographic application in subpart 2 (ss 31) of the Proposed NES.

5.7 AWFG considers that Subpart 2 should apply to all FMUs. It should be a Regional Council’s responsibility to assess whether components of Subpart 2 are already in effect.

5.8 Subsection 31 raises debate as to whether the current NPSFM has been ‘fully implemented’ in an FMU. Councils implement the NPS according to their Progressive Implementation Programmes (PIP); in the case of the Waikato Region, this programme has a “catchall” as a final step which allows Council to address “any matters that are outstanding”. However, prior to the catchall taking effect, the PIP implements the NPSFM on a catchment-by-catchment basis, starting with the Waikato River FMUs. Resultingly, it is unclear whether the Waikato River plan change (PC1) will cover all matters for implementation, or whether there will be matters outstanding. There has been debate at hearing as to what is required to be covered in PC1 by virtue of the PIP. Further, the current NPS nitrogen ecosystem health standards far too low, and there is no guarantee the implementation measures adopted by Councils are sufficient or reliable interim steps to halt degradation in the next 5 years.

6. Wetlands and Estuaries

Aims and direction for wetlands (Proposed NPS; Proposed NES; Discussion Document Q1, Q2, Q3, Q6, Q20, Q25, Q41)

- Support the intent and steps proposed to protect wetlands, but more needs to be done (as outlined in the comment under point 3 above).
- Amend to include additional objectives, policies and regulations relating to wetlands, including to manage contaminant inputs so that they do not degrade wetland health, and to increase wetland extent to at least 1991 levels or 10% of original cover, which ever is greater.
- Amend NPS NOF to include the following wetland health attributes in Appendix 2A: Wetland Extent and Wetland Condition Index (as per recommendation 14 c. STAG Report to MfE, 2019) and Estuarine Trophic Index.  
- Include forestry activities so that the wetland protection rules in the Package prevail over the NESPF.
- Allow Councils to create a less stringent pathway for restoration efforts, and release funds to cover consenting costs for restoration projects.

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6.1 AWFG strongly supports the measures in the Package which put a focus on wetlands. The mapping and monitoring requirements, Policy, and new rules applying to wetlands are long overdue, with New Zealand wetlands ecosystems now in a precarious state.

6.2 However, the measures do not go far enough. Wetlands in the AWFG region now cover a tiny fraction of their original land area; remaining pockets wetlands are small, fragmented and threatened as described in the introduction. Because of the extent of this degradation, there should be an objective and policy to increase wetland extent and quality to at least 1991 levels, or to 10% of original cover, which ever is greater. This reflects their cover when Regional Councils were tasked with their obligations under the RMA, and an appropriate bottom line threshold. Increases in wetland extent are also required to reverse declines in freshwater ecosystem health, because of the important services wetlands provide in purifying water.

6.3 In the AWFG region, valued wetland ecosystems are unlikely to see outcomes which reflect the goals of the Package. This is because the Package is focussed on reducing contaminant loss to ecosystem health thresholds set to protect only rivers and lakes. For example, sediment is retained indefinitely in wetlands, even when input at stable or reducing levels which protect upstream rivers. Because measures only mitigate contaminant losses to an extent in the next 5 years, wetland degradation is expected to continue. This is particularly true for wetlands affected by ongoing consented activities such as the Waikato/Waipā Flood Protection Scheme discharge to the Whangamarino Wetland.

6.4 AWFG considers that the Council management framework should link clearly to ecosystem health outcomes in wetlands, and for this reason seeks inclusion of wetland health attributes in NES Appendix 2A: Wetland Extent and Wetland Condition index (as per recommendation 14 c. STAG Report to MfE, 2019) and Estuary Trophic Index (based on Robertson, B.M, Stevens, L. et al. (2016) NZ Estuary Trophic Index Screening Tool 2. Determining Monitoring Indicators and Assessing Estuary Trophic State).

6.5 AWFG is supportive of the new rules for activities impacting wetlands, however considers consenting requirement for wetland restoration activities (particularly under NES 16) may inhibit small community or farm-scale projects with limited funds, which AWFG often provides expertise for. Often in these cases, the requirement for resource consent and the associated costs of a few hundred dollars would be sufficient to prevent the project taking place. While the controls are helpful to manage effects, the unintended dampening of restoration activities would be alleviated through funding to support these projects through the process, and a more lenient consenting pathway for restoration activities.

Wetlands in the Proposed NPS (Proposed NPS, Discussion Document Q29, Q41, Q76):

- Amend the definitions of **Constructed Wetland** and **Natural Wetland** to ensure that “constructed wetland” does not encompass restored or recreated wetlands which should be protected, and that “natural wetland” does not exclude ephemeral wetlands during the wet season. AWFG seeks that the proposed drafting in the Fish and Game New Zealand submission is adopted.
- Amend the definition of **Effects Management Hierarchy** so that it is consistent with the principles of offsetting, including measurability, permanence and no offsetting for certain ecosystems.
- Support 3.15(2).
- Amend 3.15(4) so that adverse effects are “avoided”.
- Ensure that wetland offsets are protected by the substantive provisions in 3.15.
- Amend the ‘**Information Note**’ at the end of 3.15 so that it does not include offsets or restoration as examples of “constructed wetlands”.

• Amend the NOF to include wetland health attributes in Appendix 2A: Wetland Extent and Wetland Condition Index (as per recommendation 14 c. STAG Report to MfE, 2019) and Estuary Trophic Index (as set out above).

6.6 In the AWFG region, extensive drainage and flood protection schemes have altered the hydrology in and surrounding historic wetland areas. Because of these factors, restoration of wetlands often requires artificial hydrological support and occurs on land which is not currently wetland (but historically was wetland). The definition of “constructed wetland” should be amended to ensure that wetlands restored or maintained by artificial means where wetlands were once historically present are not considered “constructed wetlands” and instead fall under the “natural wetland” definition. This ensures they are subject to the new provisions protecting “natural wetlands”. This would also be helpful because as drafted, it is also not clear over what time period the natural wetland should “already exist” for the purposes of the definition.

6.7 “Natural wetlands” should specifically include wetlands which are offsets or are restored for their inherent value as wetlands. This ensures these are managed in accordance with the principles of offsetting. For the same reason, the “Information Note” on wetlands should not suggest that restored wetlands or biodiversity offsets are “constructed wetlands” and therefore are not subject to the same protections as “natural wetlands”.

6.8 It is not clear how the effects management hierarchy would be of relevance when the requirement under 3.15(2) is clearly to “avoid” loss or degradation. The requirement in 3.15(4) should be to “avoid” effects on wetland ecosystems. In any case, the effects management hierarchy as drafted is not consistent with the principles of offsetting, including the principles of measurability, permanence and no further impact on identified rare and sensitive ecosystems.

6.9 The Package assumes the operation of the limits in the proposed NPS will achieve healthy wetlands, but does not include ecosystem health standards relating to wetland ecosystems. The proposal requires a link to attributes for setting goals and measuring wetland ecosystem health, so that progress can be tracked and adaptive management applied. AWFG seeks inclusion in Appendix 2A of the wetland ecosystem health indexes listed above.

Regional Council action on Wetlands and Estuaries (Discussion Document Q32, Q33)

• Apply all recommendations of the STAG recommendation 14, including bottom lines.
• Support a requirement for Councils to show continued reductions of deposited sediment in estuaries, with further measures implemented each year thereafter, but more is needed.
• Include a rule for Councils which links management approaches to an estuary deposited sediment attribute in the NPS (including thresholds and bottom lines).
• Include an ecosystem health index for Estuaries (including thresholds and bottom lines).  

6.10 As outlined above, the NPS needs to include a defined measure for the health and condition of wetlands. The STAG recommendation 14 to the Minister for the Environment is that the NPSFM includes Wetland Extent and the Wetland Condition Index and a bottom line require Councils to take action to improve the condition of all wetlands to at least 10.  AWFG supports this recommendation.

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Having measurable standards makes it clearer that Councils must take action to reach defined outcomes, and to assess the progress and effectiveness of action taken on land.

6.11 The Discussion Document questions whether for deposited sediment, there should be a rule that if, after a period (say five years), the amount of sediment being deposited in an estuary is not significantly reducing, the regional council must implement further measures each and every year, and what that rule should say. As with wetlands, it is not possible to manage for the health of an estuary without specific goals designed to reflect estuary ecosystem health. AWFG agrees that given the bad state of estuaries in the region, continued reductions in deposited sediment are essential, but without a defined goal there is no context of what reductions are being made, or ability to measure progress towards an outcome.

6.12 The rule proposed in Q33 should link to attribute tables in the NOF with bottom lines for deposited sediment and ecosystem health (Estuary Trophic Index) designed specifically for estuaries. This work has been done in Robertson, B.M, Stevens, L. et al. (2016) NZ Estuary Trophic Index Screening Tool 2. Determining Monitoring Indicators and Assessing Estuary Trophic State. Because of the short-term difficulty in removing sediments from an estuary, the appropriate management response will be sediment input reduction and leaving already deposited sediment to gradually flush out over the long-term. Any rule managing the outcomes in estuaries must link to all land uses in the entire upstream catchment which discharge sediment.

7. **Gamebird hunting (Proposed NPS, Discussion Document Q40):**

- Include “gamebird hunting” as a value under Appendix 1B, either as follows:

<table>
<thead>
<tr>
<th>Descriptions of other values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gamebird hunting - The freshwater management unit supports harvestable populations of gamebird species allowed to be caught and eaten.</td>
</tr>
</tbody>
</table>

For freshwater management units valued for gamebird hunting, provides sufficient hunting opportunities for people to engage in the sport, and the numbers of gamebirds would be sufficient and suitable for human consumption. In some areas, gamebird abundance and diversity would provide a range of species. Algal growth, water clarity and safety would be satisfactory for contact by hunters and dogs. Attributes will need to be specific to gamebird species, and the requirements of invertebrates as a food source for waterfowl in wetlands.

- Or, alternatively include “gamebird hunting”, as a component of a broader “Food Gathering” value in addition to the two “Mahinga Kai” and “Fishing” values.

- Specifically include in the “Human Contact” value “gamebird hunting” as a form of recreation where humans connect with the water.

7.1 Gamebird hunting is a valued freshwater sport which relies on wetland quality and quantity to support harvestable populations and to provide hunting opportunities. It should be recognised along with other activities (including food gathering activities) which rely on freshwater resources. If not included in the values, there is a risk the sport will be side-lined when considering other activities affecting wetland health. Gamebird hunting is very much a water contact sport and occurs during the gamebird hunting season in the colder months. This should be included in the “Human Contact” value.
8. **NPS NOF Attributes and Bottom Lines (Proposed NPS; Discussion Document Q21, Q30, Q32, Q33, Q34):**

- Support inclusion of proposed values, attributes and bottom lines. AWFG endorses the recommendations in the New Zealand Fish and Game submission.
- Amend to include additional Ecosystem Health attributes for wetlands and estuaries (as outlined above and in STAG’s recommendation 14) and for stream habitat including Habitat Quality Index and Riparian Vegetation (as recommended in the New Zealand Fish and Game submission and the Wellington Fish and Game submission).
- Amend so that Ecosystem Health attributes are included in Appendix 2A as per the recommendations in New Zealand Fish and Game submission.

9. **NES and s360Regs. (Proposed NES; Proposed s 360 Regs.; Discussion Document Q51, Q52, Q54, Q58, Q76):**

- Apply the New Zealand Fish and Game recommendations on the s 360 Regulations, including for small streams.
- Seek that where options are proposed, the most stringent option be applied, including:
  - Interim controls on intensification;
  - Use of both caps on contaminant discharges and operating above good practice for vegetable growers;
  - Use of universal nitrogen fertiliser caps and targeted nitrogen loss caps set at 70th percentile and for lake catchments.
  - Use of nationally-set standards for winter grazing.
- Seek that industry self-regulation is never relied on, including for Commercial Vegetable Growers or Farm Planning; instead, use clear defined rules.
- Seek that where Farm Plans are used, they are of high quality with clear action points within timeframes to be delivered. That they quantify the amount of change expected to be achieved through the actions outlined and link through to the overall goals for the catchment. That there be a robust audit pathway to ensure accountability. AWFG supports New Zealand Fish and Game’s recommendations.
- Seek that the application of the term “critical source areas” in relation to Farm Plans is clarified to include sources in addition to landscape features.

9.1 The definition of critical source area in Part 3 of the Proposed NES covers landscape features and overland transport mechanisms. This may be appropriate for the application of subsections 28 and 30, which include methods for protection of these areas. The definition is incomplete for the purpose of subsection 38, which requires that FEPs must clearly show the location of critical source areas “for nutrient loss, soil loss or both”. The definition of critical source areas would not cover subsoil mechanisms (for nitrogen) or activities creating contaminant loss. For the purpose of Farm Plans, managing critical source areas should include consideration of source mechanisms as well as transport mechanisms. To address nutrient loss, consideration of subsoil transport is also essential. Any area where transport mechanisms and contaminant sources coincide should be considered a critical source area (CSA) in farm planning, while also controlling the particular landscape features listed in the definition.

10. **Drinking water, Stormwater and Wastewater (Discussion Document Q43, Q45, Q47, Q49):**

- AWFG supports the multi-barrier approach, but seeks that this approach include more focus on minimising domestic water takes and usage.
AWFG seeks that the “Risk Management Plan” include compulsory consideration of Avian Botulism risks on ponds and wetlands, including a management plan for these in consultation with the relevant Fish and Game authority.

10.1 There is no focus on regulating or managing domestic usage within limits. The Hunua Ranges supply a large amount of water for Auckland City domestic usage, affecting fisheries due to the remaining low flows in downstream environments. Standards should promote efficiency.

10.2 Using the risk management plan as a “one stop shop” will improve consistency across Wastewater Treatment Facilities and improve standards, however it is important to ensure that the plans include all relevant matters. This includes managing the risk of avian botulism on treatment ponds and wetlands, which attract large numbers of waterfowl including threatened species. Avian Botulism outbreaks can have huge impact on populations of these species. Fish and Game has special expertise and resources for managing these outbreaks and would be a beneficial party to include in planning.

Contact person

Personal details removed
Appendix 1

Satellite images showing wetland loss in the Waikato Region.

The satellite images below give a visual example of the type of wetland losses that have occurred in the Waikato Region in the recent past (2004-2017). This area is located at the eastern part of the Kopuatai Wetland, a Ramsar site of international significance.

Figure 1: Edge of Kopuatai peat dome 26/8/2004 showing the start of wetland clearance activity.
Figure 2: The same site 5/2/2017 showing conversion of bog area to pasture.