Appendix 1: Action for healthy waterways detailed policies and recommendations for drafting the NPS-FM, NES, and Section 360 regulations

Policies

Stop further loss of natural wetlands and streams

The NES will impose consenting requirements and conditions on activities such as reclamation and diversions that lead to the loss of rivers and streams, and activities such as vegetation clearance, earthworks and changes to water levels that lead to the loss of natural wetlands (including coastal wetlands).

For wetlands, there are provisions to allow for some activities that have negative effects, for example in relation to significant infrastructure or flood control, and for streams it is possible to obtain a consent for reclamation. Both are conditional on whether applicants can demonstrate they have first avoided significant adverse effects, and minimised loss and degradation, and offset any unavoidable loss

Policies in the new NPS-FM will direct the above consenting decisions through clearly laying out expectations around the effects management hierarchy, and they will require regional planning to avoid further loss of these habitats and maintain their condition into the future. Additional requirements include identifying natural inland wetlands larger than 500m², monitoring their health, and promoting restoration.

The IAP, advisory groups, and most submitters supported the objectives of these proposals and provided substantive feedback on technical policy issues. Changes made following consultation include:

- separation of policies on wetland loss and condition management
- amendments to definitions to improve clarity
- clarification of expectations around wetland mapping and monitoring, and
- technical changes to enable restoration more effectively, to remove constructed wetlands from the policy, and to ensure the regulations do not affect unintended activities.

For streams, we have not made substantive changes to policy intent because submissions and the IAP were broadly supportive of the proposals as consulted. However, we have made some technical changes to the proposals to support implementation, reduce risk of litigation, and reduce the risk of unintended consequences.

Recommendations

- 26. **note** that reclamation, drainage, diversions, and piping lead to the loss of natural wetland (including coastal wetlands) and river and stream habitats
- 27. **note** that less than 10% of historical wetlands remain and that urban streams provide critical habitat and are the main waterbodies that many New Zealanders interact with

National environmental standards for wetlands and streams

- 28. **note** that sections 43 and 43A of the RMA enable standards to be made (known as NES), that prescribe technical standards, methods and requirements for activities carried out under the RMA
- 29. **agree** to progress restrictions on activities leading to the loss of natural inland and coastal wetlands, rivers and streams, while promoting restoration, by imposing the following consenting requirements and conditions:
 - 29.1. for wetlands, and their surrounding vicinity, vegetation clearance, earthworks (including for drainage), and changes to water levels are:
 - 29.1.1. permitted if the effects will be no more than minor, and are for the purpose of restoration, cultural purposes (including scientific and research), sustainable harvest of sphagnum moss or maintaining existing structures, and is in accordance with a wetland management plan
 - 29.1.2. restricted discretionary if effects of any of the above purposes will be more than minor, or for the purpose of creating new essential structures for restoration, or existing flood control or soil conservation programmes
 - 29.1.3. discretionary if for the purpose of new nationally or nominated regionally significant infrastructure; or flood control or soil conservation programmes; applicants must demonstrate they have followed the assessment process set out in the new NPS-FM (described below), and
 - 29.1.4. otherwise they are non-complying (or prohibited in the case of drainage); applicants must demonstrate they have followed the assessment process set out in the new NPS-FM (described below)
 - 29.2. for rivers and streams, reclamation of the bed is discretionary and applicants must demonstrate they have followed the assessment process set out in the new NPS-FM (described below)
- 30. **note** that to ensure no duplication, where these regulations overlap with the National Environmental Standards for Plantation Forestry, the National Environment Standards for Freshwater rules will not apply

New policies in the proposed new NPS-FM for wetlands and streams

- 31. **note** that section 45A of the RMA enables National Policy Statements to be made that specify objectives, policies and other matters and methods relevant to achieving the purpose of the RMA
- 32. **agree** that the new NPS-FM direct regional councils to:
 - 32.1. avoid further loss of natural inland wetland extent, and at least maintain the condition and values of remaining natural inland wetlands

- 32.1.1. Allow for leniency for significant infrastructure where it is proven to be necessary, provides an essential public service, is approved by councils, and the works cannot reasonably avoid impacts on the wetland, and
- 32.1.2. Clarify that policies do not apply to sustainable customary cultural harvest, temporary and reversible effects from restoration activities; or sustainable harvest of sphagnum moss within currently harvested wetlands
- 32.2. map and maintain an inventory of natural inland wetlands with area greater than 500 m² (except for those in the conservation estate) and undertake a monitoring programme to satisfy wetland policies are being achieved
- 32.3. use a wetland identification and delineation protocol in cases of uncertainty or dispute about the existence or extent of a natural inland wetland
- 32.4. provide for and encourage restoration of natural inland wetlands to improve their condition and values
- 32.5. at least maintain the extent and values of rivers and streams
- 32.6. assess consent applications required via the NES for wetlands, rivers and streams in accordance with the following process:
 - 32.6.1. applicants must demonstrate that they have exhausted all options to avoid the loss extent, condition or values before mitigation, offsetting or compensation are considered
 - 32.6.2. the activity only occurs where it is necessary to fulfil a functional need, and is minimised as far as practicable
 - 32.6.3. applicants must demonstrate the steps they have taken to avoid loss of extent, condition or values, and
 - 32.6.4. the effects management hierarchy will then apply (as defined in the new NPS-FM). In relation to offsetting:
 - 32.6.4.1. offsetting must replace all loss of extent, condition or values, and consider cumulative effects and the potential values (not just current values), and
 - 32.6.4.2. offsetting must achieve a no net loss, and preferably a net gain

Preserving connectivity of fish habitat

Habitat connectivity and its importance to overall ecosystem health, especially for fish is not adequately recognised and safeguarded through the current NPS-FM. About one-third of New Zealand's indigenous freshwater fish species need access to the sea, and both indigenous and sports fish require access between and within habitats to complete their life cycles and maintain population viability.

The loss of habitat connectivity has contributed to the decline of indigenous fish species, with approximately 76% of all assessed species now classified as threatened or at risk of extinction.

Unless provided for by infrastructure design and maintenance, structures such as culverts, dams and tide gates can delay or prevent fish movement and stop them from accessing critical habitats.

The NES rules will permit construction of weirs and culverts provided they meet design requirements, discourage use of flap gates, and require any person constructing in-stream structures to provide councils with information related to the structure's ability to provide for fish passage.

The new NPS-FM will require councils to gain information on current in-stream structures and establish a work programme to address barriers to fish migration where it is needed.

National environmental standards for connectivity of fish habitat

- 33. **note** that 76% of New Zealand's indigenous fish species are classified as threatened or at risk of extinction
- 34. note that the provision of suitable fish passage by in-stream structures is essential to preserve the connectivity of fish habitats and therefore the abundance, distribution, and diversity of species
- 35. **agree** to regulations in the NES that:
 - 35.1. permit the construction of new weirs and culverts that meet minimum design standards based on the New Zealand Fish Passage Guidelines (which are otherwise discretionary activities requiring consents), provided the structure's ability to provide for fish passage to the same degree over its life is monitored
 - 35.2. make constructing passive flap gates a non-complying activity that requires a consent
 - 35.3. impose requirements to monitor whether structures continue to provide for fish passage to the same degree over the life of any consented structure
 - 35.4. require all persons constructing weirs, culverts, flap gates (whether passive or not), dams and fords to supply regional councils with information on their physical characteristics and design in relation to fish passage, and

The IAP was broadly supportive of these policies, though they and submitters raised technical issues. In response, the proposal has been modified to enable councils to:

- Set rules on structure remediation
- Manage customary weirs locally with iwi so that their effects on the environment can continue to be managed on a regional basis
- Require monitoring and maintenance of structures' provision of fish passage over their lifetime, and
- Clarify how councils should engage with statutory fisheries managers regarding fish habitat and population management.

35.5. exempt customary weirs from these standards

New policies in the proposed NPS-FM for fish habitat and passage

- 36. **agree** that the new NPS-FM direct regional councils to:
 - 36.1. monitor the abundance, diversity and passage of desired fish species
 - 36.2. identify and work towards target outcomes for fish abundance, diversity and passage of desired species over time
 - 36.3. collect, maintain, and publish records of new and existing instream structures and assess their likely impacts on fish passage and river connectivity
 - 36.4. have regard to principles of good fish passage design when considering consent applications, and
 - 36.5. engage with statutory fisheries managers regarding fish habitat and population management, including for threatened species

Stock exclusion from waterways

The policy generally requires exclusion of dairy and beef cattle, deer, and pigs from waterways – lakes, wetlands, and rivers and streams with bank-full channels greater than one metre wide. It also requires ungrazed setbacks of at least three metres from margins of waterways, and it controls stock crossing of streams. The policy applies in lowland areas (less than 10 degrees slope) to these stock types and waterways.

In hill country (greater than 10 degrees slope), dairy cattle and pigs must be excluded from these same waterbodies. In the hill country, deer and beef cattle must be excluded from streams and lakes if they are grazing on fodder crops, pasture that has been irrigated in the last year, or break-feeding. They must also be excluded from specific hill country wetlands that are in existing district or regional plans, and those that are identified in relation to NPS-FM values (such as mahinga kai or threatened species).

The regulations include an exemptions regime that is narrowly defined and explicit to ease council implementation and remove 'nonsense' outcomes. They also include infringement fees of \$2,000 per offence, a timeframe for phasing in the regulations depending on stock type, activity, and area. Regional rules may be more stringent than the regulations.

Stock exclusion proposals were highly contentious during consultation, and we have made numerous refinements to address the issues raised. In particular:

- We are no longer requiring permanent fences that do not comply with the setback distance to be moved as early as 2025
- The setback is now a minimum three metres rather than an average five metres, and
- Hill country exclusion requirements have been reduced for beef cattle and deer but will be dealt with in FW-FPs.

In relation to the setbacks components described above, FW-FPs may be more stringent than national rules.

The IAP supported these policies, though they wanted to extend exclusion requirements in the hill country where stocking rates are high, and they also recommended that FW-FPs should replace the regulations over time, both of which we have not recommended.

Practicality and ease of implementation are critical for these regulations. They failed to progress in 2017 because of anticipated difficulties in compliance, monitoring, and enforcement, and so we have opted not to use actual stocking rates in the regulation. Likewise, we expect FW-FPs to address stock exclusion in the hill where appropriate, and small streams less than 1m wide and drains. Therefore, we consider these regulations as national backstops to deliver the Government's freshwater objectives.

These regulations will be costly, especially to the sheep and beef sector. Officials anticipate that about 32,000km of streams will require fencing and setbacks in the lowland area at an anticipated

- 37. **note** that livestock entering water bodies contaminate the water directly, and damage the banks of the water body. This is particularly serious with heavy livestock (cattle and deer) and pigs
- 38. note that section 360(1)(hn) and 360(1)(ho) of the RMA enable regulations to be made to regulate stock exclusion and prescribe infringement offences for the contravention of those regulations
- 39. note that the Select Committee has reported back on the RM Bill and has recommended that section 360(1)(hn) of the RMA be amended to make it clear that regulations can exclude stock from the margins of a waterbody as well as the waterbody itself
- 40. **note** that section 360(1)(hq) enables regulations to specify that regional councils may have more stringent stock exclusion rules in their plans
- 41. **note** that section 360(1)(bb) enables stock exclusion regulations to prescribe requirements for infringement offences, and to specify infringement fees of up to \$2,000 for each infringement offence, or up to \$100 per stock unit found in breach of the regulations
- 42. **note** that in accordance with consultation feedback the policy for these regulations has been altered so that it does not apply to any low-intensity beef and deer in the hill-country
- 43. **agree** to regulate the exclusion of dairy and beef cattle, pigs and deer from wetlands, lakes and rivers with a bed greater than or equal to one metre wide under section 360(1)(hn) of the RMΔ
- 44. **agree** that the regulation will apply to grazing dairy cattle and pigs on all terrain, intensive stock activities on all terrain, and beef cattle and deer on low slope land only (intensive stock activities are land anywhere used for fodder-cropping, breakfeeding, or grazing on irrigated pasture of dairy and beef cattle and deer, see recommendation 50 below)
- 45. **agree** that exclusion includes any effective means of preventing access to a water body or set back margin

Who the regulations apply to

46. **agree** that the regulations will apply to the person that owns or controls the dairy and beef cattle, deer and pigs subject to the exclusions in recommendation 47 below (for the avoidance of doubt, feral animals are not covered by the regulations)

Who the regulations do not apply to

- 47. **agree** that the regulations will not apply to:
 - 47.1. any area of land where stock exclusion is impractical due to the physical characteristics of the land, and

cost of \$61 million per annum amortised over a 25-year period. However, as these policies will provide significant environmental benefits, including for swimmability of rivers and improvements in water clarity due to erosion reductions, we consider these costs are justified.

47.2. any area of land where stock are effectively excluded from water bodies because of natural, physical or technological barriers

What the regulations require

- 48. **agree** that the regulations will:
 - 48.1. require a minimum setback of three metres from the bed of waterbodies where stock must be excluded, except where an existing permanent fence or existing riparian planting in place at the time the regulation is made effectively excludes stock despite being less than a three metre setback, and
 - 48.2. prohibit dairy and beef cattle and pigs from crossing specified waterbodies more than twice per month unless they cross by way of a dedicated culvert or bridge

When the regulations will apply

- 49. **agree** that the regulations will apply as follows from:
 - 49.1. 1 July 2023 for excluding dairy cattle and pigs from lakes and rivers
 - 49.2. 1 July 2025 for excluding dairy support cattle, beef cattle and deer from lakes and rivers
 - 49.3. 1 July 2023 for excluding all cattle, pigs and deer from wetlands identified in a regional or district plan that is notified or operative when the regulation is gazetted
 - 49.4. 1 July 2025 for excluding all cattle, pigs and deer from wetlands identified in a regional plan in accordance with the compulsory values to give effect to the new NPS-FM, and
 - 49.5. 1 July 2023 for excluding all cattle and deer from rivers and lakes on land where those stock are feeding on fodder crops, or break feeding, or where pasture has been irrigated in the previous 12 months

Where the regulations apply

- 50. **agree** that the regulations will require stock exclusion:
 - 50.1. nationwide for lakes and rivers more than one metre wide on any land anywhere used for the fodder-cropping, breakfeeding, or grazing on irrigated pasture of dairy and beef cattle and deer
 - 50.2. nationwide for lakes and rivers more than one metre wide in low-slope land areas used for grazing (where land is less than or equal to 10 degrees across the land parcel or area of land parcel used for grazing) of dairy and beef cattle, pigs and deer
 - 50.3. nationwide for lakes and rivers more than one metre wide on hill country (where land is more than 10 degrees across the land parcel) land used for grazing dairy cattle and pigs
 - 50.4. nationwide for wetlands that are identified in regional or district plans that are notified or operative at the time this regulation is made, and
 - 50.5. nationwide for wetlands identified in any future regional plan that implements the new NPS-FM, within 12 months of notification of that plan

Relationship to regional plan rules and FW-FPs

- 51. **agree** that regional plans can contain more stringent rules in terms of stock type, moving existing permanent fences, setback distances, application to land slope and waterbodies, and timing of effect
- 52. **note** that it is intended for FW-FPs, as and when they are established to be able to contain more stringent requirements than the s360 regulations in terms of stock type, moving existing permanent fences, setback distances, and application to land slope and waterbody type
- 53. **agree** that, when developing FW-FP regulations/standards dealing with whether permanent fences that do not currently

provide for a reasonable setback should be moved, FW-FPs give priority to fences that are particularly close to waterways, for example they are currently set back less than a minimum 2 metre average, especially if at any point the setback is less than 1 metre

Offences and penalties

- 54. **agree** to prescribe infringement offences for breaching each of the requirements in the regulations to exclude stock from waterways
- 55. **agree** to set the infringement fee for breaches of the regulations at \$2,000 or up to \$100 per stock unit found in breach of the regulations

Controls on feedlots and stockholding areas

Feedlots and intensive stock holding areas pose high environmental risks if not managed under good farming practice. As these have increased in extent on farms in recent years – regional councils have not adequately regulated them.

We propose defining these activities in regulation and setting minimum requirements and consenting thresholds for them. All feedlots will require a resource consent. For other stock-holding areas, farmers will only need a resource consent when they do not meet minimum requirements. These regulations will only apply to cattle above certain sizes and weights.

Following consultation, and on the recommendation of submitters, the IAP, and advisory groups, we have made a number of changes to the proposals in order to clarify what types of farm infrastructure and stock are subject to the controls and avoid unintentional impacts.

Officials estimate that a maximum of 30 feedlots will require consents. Also, some proportion of existing dairy and beef cattle infrastructure, such as the 3,700 existing dairy stand-off pads and other feedpads but not wintering barns, would need consents depending on whether they meet specifications for permitted activity status.

 note that feedlots and intensive stock holding areas pose environmental risks through contaminant and effluent runoff and other discharges if not managed appropriately

National environmental standards for feedlots and stock-holding areas

- 57. **agree** to standards in an NES to define feedlots and stockholding areas and set minimum requirements to:
 - 57.1. manage the permeability of the base area so that it is sealed to a minimum permeability standard of 10⁻⁹ metres per second
 - 57.2. collect, store and dispose of effluent in accordance with regional council regulations or a current discharge permit, and
 - 57.3. be situated at least 50 metres away from waterbodies, water abstraction bores, drainage ditches, and coastal marine areas
- 58. **agree** that use of land for a stock-holding area is a permitted activity provided that it meets the above minimum standards
- 59. **agree in principle** that use of land for a stock holding area will be allowed provided that it occurs in accordance with a FW-FP regime that adequately addresses the risks of the activity, as and when the regime is established in law and operational
- 60. **agree** that the use of land for a stock holding area will require a discretionary resource consent if it does not meet the conditions for being permitted or allowed described above
- 61. **agree** that standards for feedlots and stock-holding areas only apply to cattle older than four months and above 120 kilograms
- 62. **agree** to require all feedlots to obtain resource consents and comply with the above minimum standards
- 63. **agree** that use of land for a feedlot is a discretionary activity requiring a resource consent
- 64. **agree** that the definition of a stock-holding area will include feedpads, winter pads, standoff pads, and loafing pads, but it does not include wintering barns, sacrifice paddocks, or areas used for animal husbandry purposes such as stockyards, milking sheds, or woolsheds
- 65. agree that standards for feedlots will apply from the time the standards come into effect and that standards for stock-holding areas will apply from winter 2021
- 66. **note** that these proposals will require consents for approximately 30 existing feedlots and other dairy and beef cattle infrastructure depending on whether it meets specifications for permitted activity status
- 67. **note** that the intensive winter grazing of forage crops poses severe environmental risks in relation to soil erosion and sediment and contaminant runoff

National environmental standards for winter grazing

68. **agree** to standards in an NES to set size, slope, and setback thresholds for intensive winter grazing on forage crops, with a

Controls on intensive winter grazing

The policies on intensive winter grazing of forage crops have thresholds for consenting based on land slope and area in cropping. Also, they have minimum consenting standards related to rapid resowing of land, minimum setbacks from waterways, and pugging extent.

We consulted on a range of consenting thresholds and practice standards in the options provided in the discussion document. IAP recommendations and submissions led us to reconsider and remove some of the practice standards, especially related to grazing management, because they would be difficult to enforce. We have opted for a mix of thresholds reflecting the inherent environmental risk of the activity, especially in relation to erosion runoff.

This practice is most prominent in Southland, Canterbury, and Otago, and so the consenting impacts and resultant environmental benefits, in terms of improved controls on risky activities, will be most relevant in these regions.

Nationally, in winter 2018 there were about 1,250 properties with winter cropping in steeper land (seven degrees slope and above). In Southland, Canterbury, and Hawke's Bay in 2018, about 850 properties had winter grazing on more than 50 hectares.

It is expected farmers will adjust their practices to lower-risk activities so fewer consents than this will be required.

Interim restrictions on major agricultural intensification

Intensification refers to increases of agricultural inputs such as fertiliser, higher stocking rates, or irrigation. To stop degradation of waterways, we propose to restrict further intensification of certain land uses until councils implement the new NPS-FM. This would occur by requiring a resource consent to be obtained in order to:

- carry out more than 10 hectares of land-use change to dairy farming
- carry out more than 10 hectares of land-use change from woody vegetation or plantation forestry to pastoral farming
- expand irrigation by more than 10 hectares on dairy farms
- expand area of intensive winter grazing on forage crops above a historical baseline, and
- expand area of dairy support above a historical baseline.

The interim intensification regulations will apply to a Freshwater Management Unit (FMU) until either:

- a notified freshwater plan complying with the new NPS-FM, or
- 31 December 2024, which is when it is expected all freshwater plans will be notified (triggered via a 'sunset' clause).

A council can grant a resource consent for intensification if it is satisfied the activity is consistent with the new NPS-FM objective to maintain or improve freshwater, and does not lead to over allocation as defined by the NPS-FM.

The IAP recommended a similar approach, but recommended regulating expansion of commercial vegetable production and did not recommend a sunset clause. Since consultation, the proposals have been refined significantly to improve their workability, improve targeting of higher risk activities, and mitigate the risk of the interim rules applying longer than anticipated. They provide additional flexibility for horticulture and for catchment-level offsetting.

restricted discretionary resource consent required for any activities that don't meet any of these thresholds:

- 68.1. average slope of paddock: 10 degrees or less
- 68.2. size of activity: either less than 50 hectares or 10% of the property, whichever is the larger (for example, on a property of 600 hectares, the activity threshold is 60 hectares, whereas on a property of 300 hectares, the threshold is 50 hectares), and
- 68.3. setback from bed of waterbodies: a minimum of five metres;
- 69. **agree** to include a practice standard for soil pugging in the above thresholds this standard would require pugging to be no deeper than 20cm and cover less than 50% of the paddock
- 70. **agree** to include a practice standard to require that bare ground in paddocks subject to winter grazing must be re-sown as soon as practicable, but in any event no later than within one month
- 71. **agree** that use of land for intensive winter grazing of livestock on forage crops is a permitted activity provided that the above size, slope, and setback thresholds are met
- 72. **agree in principle** that use of land for intensive winter grazing of livestock on forage crops will be allowed provided that it occurs in accordance with a FW-FP regime that adequately address the risks of the activity, as and when the regime is established in law and operational
- 73. **agree** that use of land for intensive winter grazing of livestock on forage crops requires a restricted discretionary resource consent if it does not meet the conditions for being permitted or allowed described above
- 74. **agree** that these regulations will apply from winter 2021
- 75. **note** that nationally these regulations will increase consenting requirements where farmers do not change practices to comply with permitted activity standards. In winter 2018, at least 850 properties would have required consents in relation to the threshold area
- 76. **note** that agricultural intensification can have significant impacts on freshwater and freshwater bodies through increased fertiliser use, stocking rates, and irrigation
- note that restrictions on intensification are necessary to prevent further degradation until new regional plans implementing the new NPS-FM 2020 are in place
- 78. **note** that section 360(2) of the RMA specifies that any regulations may apply generally or may apply or be applied from time to time by the Minister for the Environment by notice in the Gazette, within any specified district or region of any local authority or within any specified part of New Zealand

National environmental standards restricting agricultural intensification

- 79. agree to standards in an NES to restrict further land use intensification by setting a discretionary activity status for the following activities:
 - 79.1. land use change of more than 10 hectares (total since date of gazettal) from any form of farming to dairy farming
 - 79.2. land use change of more than 10 hectares (total since date of gazettal) from woody vegetation or forestry to any form of pastoral farming
 - 79.3. increases in irrigated pasture for dairy farming above 10 hectares (total since date of gazettal)
 - 79.4. increases in area in winter forage cropping above the annual highest amount in 2014/15 2018/19
 - 79.5. increases in dairy support activities above the highest annual amount in 2014/15 2018/19
- 80. **agree** that the following will be permitted activities:

Officials estimate that these proposals will likely have a low 80.1. land use change of 10 hectares or less (total since date of consenting burden. They identified 244 instances of intensification gazettal) from any form of farming to dairy farming that would have triggered the requirement in the 2012-2016 period. 80.2. land use change of 10 hectares or less (total since date of gazettal) from woody vegetation or forestry to any form of pastoral farming 80.3. increases in irrigated pasture of 10 hectares or less (total since date of gazettal) for dairy farming 80.4. dairy support activities below the highest annual amount in 2014/15 - 2018/19agree that resource consents for a discretionary intensification 81. activity can only be issued if the council is satisfied the activity is consistent with the new NPS-FM objective to maintain or improve freshwater, and does not lead to over allocation as defined by the NPS-FM 82. agree that resource consents granted for the activities listed in recommendation 79 will expire on 31 December 2030, or any earlier date specified in the resource consent 83. agree that restrictions on intensification will apply to a freshwater management unit until either: 83.1. the relevant regional council whose jurisdiction covers the freshwater management unit has notified a freshwater plan for the area that fully complies with the new NPS-FM, or 83.2. a sunset clause date of 31 December 2024 84. note that officials expect these proposals to have a low consenting burden based on information on intensification in the 2012-2016 period Managing excessive nitrogen discharges through a cap on 85. note that many catchments will require reductions in nitrogen fertiliser application loads to meet the current and new NPS-FM bottom-lines and that in the near-term, significant gains can be made by addressing excessive application of fertiliser, which contributes The detail of this policy is described in the body of the Cabinet paper to high nitrogen discharges in paragraphs 65-71 and is not repeated here. 86. note that synthetic nitrogen fertiliser meets the definition of a contaminant under the RMA and can therefore be regulated in an NES under section 43(1)(a)(i) 87. agree to regulations in an NES to set a national synthetic nitrogen-fertiliser cap of 190kg N/ha/year for all pastoral farms in New Zealand by: 87.1. making the application of more than 190kg N/ha/year as synthetic nitrogen fertiliser a non-complying activity for dairy, dairy-support, sheep, beef, and deer farms, and 87.2. requiring dairy farmers to report annually to councils the weight of nitrogen applied per hectare as synthetic nitrogen fertiliser to enable compliance monitoring 88. agree that the regulations will apply from 1 July 2021 note that the fertiliser reporting requirement described in 89. recommendation 87.2 will be incorporated in FW-FPs as and when they are rolled out note that it is likely that few non-dairy farmers will be affected 90. by the cap due to the higher levels of nitrogen fertiliser used in dairy farming compared with other pastoral farm types 91. note that in the future, the Government may consider expanding the synthetic fertiliser reporting requirement described above to intensive beef farms 92. note that the review of nitrogen management policies described in recommendation 164 will include a review of the fertiliser cap and whether it needs to be adjusted 93. note that as well as a fertiliser cap, it is intended to address excessive nitrogen discharges by prioritising the roll-out of FW-FPs to highly nitrogen-impacted catchments – those within the top 10% of in-stream nitrate levels – when the FW-FP regime

is in place. They will not replace the cap, but will ensure usage

Amend planning processes so regional freshwater planning instruments will be developed more quickly

Cabinet agreed to amend the RMA to provide for a new freshwater planning process to expedite plan making, and agreed that councils will be required to notify regional planning documents to implement the new NPS-FM by 31 December 2023 and make final decisions by 31 December 2025 [CAB-19-MIN-0037.01 refers]. The Select Committee has reported back on the RM Bill and a second reading is expected to follow after parliament resumes.

The IAP and most stakeholders are supportive of the new planning process for freshwater. Local government and iwi however, have consistently emphasised the challenges they will face to meet the requirement to notify freshwater plans by 31 December 2023.

We agree that a risk to the freshwater planning process achieving its aims lies in the capacity of councils, iwi and the community to engage within the stipulated timeframe. Consequently, we recommend extending the notification of plan changes from 31 December 2023, to no later than 31 December 2024.

That will give councils and communities, including iwi, an additional 12 months to meet the requisite plan notification timeframe. Councils will make final decisions by 2026, or 2027 at the latest if they extend any part of the post-notification process as is currently enabled by the RM Bill. This change will also avoid regional and unitary councils having to make final decisions on freshwater plans during the local government election period in 2025.

If Cabinet agrees to this change, we intend to make an amendment through an SOP to the RM Bill.

Enable development of mandatory and enforceable freshwater modules of farm plans in the future

Freshwater modules of Farm Plans (FW-FPs) document the actions farmers and growers will take to reduce risks and mitigate impacts their businesses have on freshwater environments. They enable risk-based, tailored mitigations for a farm based on its unique environmental context, which can be much more flexible than traditional resource management regulations.

The NES as proposed for consultation included provisions related to businesses that must have an FW-FP, the content of FW-FPs; and certification and auditing of FW-FPs. There was strong support for mandatory FW-FPs from the IAP, KWM and the regional sector whereas the FLG and many environmental groups were concerned that the approach would not deliver needed long-term environmental outcomes, with farm plans replacing more specific regulatory standards.

We have not made substantive changes in policy intent since consultation, though the policy mechanism and timeframes for delivery of FW-FPs has changed significantly. We originally proposed to deliver FW-FPs through the NES clauses. However, it is now clear that a legislative amendment to the RMA is required to make the actions in FW-FPs enforceable.

For this reason, we intend to remove the FW-FP clauses from the revised NES and enable the development of the new FW-FP regime through separate regulations. In July 2019, Cabinet delegated policy approval to the Minister of Agriculture and the Minister for the Environment to amend the RMA to make FW-FPs mandatory and enforceable, and to issue drafting instructions [CAB-19-MIN-0337.1 refers].

Officials developed a Supplementary Order Paper (SOP) to the RM Bill to enable the development and implementation of a robust and enforceable FW-FP regime through a future regulatory development process under the RMA. This SOP is attached as Appendix 2.

- is at best practice for that farm, and any council set limits are being met
- 94. **note** that on 1 July 2019, Cabinet agreed to amend the RMA to provide for a new freshwater planning process and that regional and unitary councils will use this process to implement the new NPS-FM [CAB-19-MIN-0337.01 refers]
- 95. **note** that there is general support for the freshwater planning process, and that local government and iwi submitters have emphasised the challenges they will face to meet the requirement to notify freshwater plans by 31 December 2023
- 96. **rescind** Cabinet decision (paragraph 25) that required councils to notify regional planning documents to implement the NPS-FM by 31 December 2023 and make final decisions by 31 December 2025 [CAB-19-MIN-0037.01 refers]
- 97. **agree** that councils will be required to notify regional planning documents to implement the new NPS-FM by 31 December 2024
- 98. **note** that Cabinet agreed to allow a council and/or chair of a freshwater hearing panel to apply to the Chief Freshwater Commissioner to extend any timeframe during the two year freshwater planning process post-notification, up to a cumulative maximum extension of 12 months
- 99. **note** that councils will make final decisions on plans to implement the new NPS-FM by 31 December 2026 or 31 December 2027 at the latest
- 100. authorise the Minister for the Environment to instruct the Parliamentary Counsel Office to draft an amendment to the RM Bill requiring councils to notify regional planning documents to implement the new NPS-FM by 31 December 2024
- 101. agree to include this amendment in SOP to the RM Bill
- 102. **invite** the Minister for the Environment to submit the SOP directly to Cabinet for approval so that it can be introduced at the Committee of the whole House stage of the RM Bill
- 103. **note** that the SOP will implement the following policies:
 - 103.1. A new Part 6AAA in the RMA with the purpose of better controlling the adverse effects of farming on freshwater and freshwater ecosystems through the use of certified FW-FPs;
 - 103.2. Farmers must have a FW-FP if their farm includes the following land uses:
 - 103.2.1. land used for pastoral farming totalling 20 hectares or more;
 - 103.2.2. land used for arable farming totalling 20 hectares or more;
 - 103.2.3. land used for horticulture totalling five hectares or more;
 - 103.2.4. land used for an agricultural purpose prescribed in regulations; or
 - 103.2.5. any combination of the above land uses totalling 20 hectares or more;
 - 103.3. Farmers must prepare their FW-FP by identifying risks and setting actions that will achieve prescribed environmental outcomes and manage the adverse effects of their farming activities on freshwater and freshwater ecosystems;
 - 103.4. Farmers must have their FW-FP certified as appropriate for this purpose by an independent certifier;
 - 103.5. Farmers must operate their farm in accordance with the requirements of their FW-FP;

The SOP provides that farms over a prescribed size must have a FW-FP, and that farm operators must comply with four primary duties, namely:

- To prepare a FW-FP that manages the adverse effects of their farm on freshwater, in accordance with regulations
- To have the FW-FP certified by an independent certifier
- To operate the farm in accordance with the FW-FP
- To have the farm audited for compliance with the requirements of the FW-FP

Regional councils will be responsible for ensuring farmers comply with these primary duties.

The SOP will also empower the Minister for the Environment, in consultation with the Minister for Agriculture, to make regulations necessary to implement the FW-FP regime including:

- the content of FW-FPs,
- the certification regime, including timeframes to be complied with and fees to be paid,
- the auditing regime to assess compliance,
- the criteria for the appointment of certifiers and auditors,
- information that must be reported to, and kept by, regional councils.

Regulations will also be used to roll out the FW-FP over time in specified districts, regions or parts of New Zealand. This will allow the Government to focus on the areas of most need first.

Delivering FW-FPs through regulations provides flexibility to determine the most appropriate operational settings through further engagement with tangata whenua, industry representatives, the regional sector, and environmental organisations. Following passage of the RM Bill, officials will undertake this engagement over 12-18 months and then present proposals for FW-FP regulation to Cabinet.

While industry involvement in the setup of the FW-FP regulatory regime is desirable, this is not a non-regulatory partnership with industry, and the future FW-FP regime will incorporate strong regulatory oversight.

- 103.6. Farmers must arrange to be audited for compliance with their FW-FP by an independent auditor, who reports their findings to the relevant regional council;
- 103.7. Regional councils must ensure that farmers comply with the duties under this new Part 6AAA using their enforcement powers under the RMA, and may prescribe charges to recover the costs incurred in doing so;
- 103.8. Regional councils must keep records of farms required to have a FW-FP, and for each farm, the dates on which its FW-FP was last certified and audited:
- 103.9. A FW-FP may set an action or requirement even if it is not specified by a National Environmental Standard, National Planning Standard, any regulations, a designation, a rule in a plan, or a consent;
- 103.10. A FW-FP may set an action or requirement that is more strict than a condition, restriction, or requirement specified in a National Environmental Standard, a National Planning Standard, any regulations, a designation, a rule in a plan, or a consent, but the action or requirement cannot otherwise duplicate or conflict with anything in any of those instruments;
- 103.11. Compliance with a FW-FP may be specified as a condition of a standard or rule (including a permitted activity rule) or a resource consent;
- 103.12. The Minister for the Environment in consultation with the Minister of Agriculture will be empowered to apply the FW-FP regime to specified regions, districts, or parts of New Zealand through regulations;
- 103.13. The Minister for the Environment in consultation with the Minister of Agriculture will be empowered to make regulations to implement the FW-FP regime by:
 - 103.13.1. prescribing additional land uses that trigger the requirement to have a FW-FP;
 - 103.13.2. prescribing the content of FW-FPs, including requirements for identifying risks and managing adverse effects on freshwater and freshwater ecosystems;
 - 103.13.3. prescribing environmental outcomes that must be achieved on farm;
 - 103.13.4. prescribing timeframes, and other processes and requirements, that apply to the certification and auditing processes;
 - 103.13.5. prescribing fees that may be payable by farmers to certifiers and auditors;
 - 103.13.6. prescribing criteria that apply to the appointment of certifiers and auditors;
 - 103.13.7. prescribing requirements to provide regional councils with information, and regional councils to keep records; and
 - 103.13.8. providing for any other matter contemplated by, or necessary to give full effect to, the new Part 6AAA and its administration
- 103.14. Regulations made under this new Part may incorporate material by reference;
- 104. **note** that as a consequence of this SOP, the general freshwater farm plan provisions that were included in the proposed NES for freshwater will be removed
- 105. note that a regulation-making process will be required to establish the FW-FP regulatory regime following the enactment of the RM Bill

Move to real-time measuring and reporting data on water use

The Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 established requirements for measuring water use. Consented takes over five litres per second are required to have an appropriate, independently verified, measuring device and provide a continuous record of water use data to their regional council at least annually. This feeds into current and new NPS-FM requirements to account for all takes and sources of contaminants — a task that is critical to inform regional planning and setting limits.

Data quality and timeliness have proven to be problematic, reducing councils' ability to use the data effectively for planning or compliance, monitoring and enforcement. To address this, we propose to amend the regulations, making real-time reporting of water use to councils mandatory.

This would require water users with consent to take more than five litres per second to install a unit on their water meters to electronically record water use and then transmit this data to councils at high frequency.

Officials estimate that nationally these regulations would cause estimated total costs to water users of \$14.3 million annually and up to \$20 million on councils.

- 106. note that the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 were enacted to improve the data available to councils about water use in their jurisdictions
- 107. note that the regulations had staged implementation dates, with the last tranche of water users with water takes of 5 l/s or more being required to meter takes by 2016
- 108. note that the existing regulations only require measuring each day or week and only require reporting to councils annually. The infrequency of information flow to councils and the variety of meters in use has created significant issues with irregular and inconsistent data
- 109. **note** that better data is needed to support implementation of the Action for healthy waterways package
- 110. **note** that the technology is readily available for consent holders to meet more stringent measuring and reporting requirements
- 111. agree to amend the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 to increase the measuring and reporting frequencies to support councils' ability to use data effectively for planning, compliance, monitoring, and enforcement, and specifically
- 112. **agree** to require consent holders to measure their water use every 15 minutes
- 113. **agree** to require consent holders to provide electronic records to councils daily
- 114. **agree** to these new requirements being phased in as follows:
 - 114.1.holders of consents to take more than 20 l/s comply with these requirements two years after the regulations come into force
 - 114.2.holders of consents to take between 10 and 20 l/s must comply with these requirements four years after the regulations come into force, and
 - 114.3.holders of consents to take between five and 10 l/s must comply with these requirements six years after the regulations come into force
- 115. note that it is not proposed to amend regulation nine of the Measurement and Reporting of Water Takes Regulations 2010, which enables councils, at their discretion, to approve reporting on a weekly instead of daily basis. This will ensure that the regulations continue to provide flexibility where, for example, daily reporting would be unduly burdensome due to cost or technological constraints on water permit holders
- 116. note that national costs of compliance are estimated at \$14.3 million annually for water users and up to \$20 million on councils

Amend requirements for councils to maintain or improve freshwater

The new NPS-FM requires regional councils to set and work towards more specific outcomes for measures of ecosystem health and other values, and to at least maintain the current state of freshwater and ecosystems as at 2017.

These policies will ensure regional councils cannot permit continued declines in freshwater and have clear direction on how they should demonstrate that it is being maintained or improved over time.

Changes since consultation are limited to specifying the date at which current state is assessed, and must be maintained from, and technical changes to address feedback from STAG, local government, and NIWA.

- 117. **note** that in 2017, the current NPS-FM was amended in order to provide more specific requirements to maintain or improve freshwater while ensuring there is some flexibility to allow for some additional resource use
- 118. note that a combination of policy direction and the definitions used means that regional councils can permit freshwater to decline within defined attribute bands (defined ranges), lock in any declines that occur prior to implementing the new NPS-FM, and it is still unclear how regional councils should demonstrate whether freshwater has been maintained over time
- 119. **agree** that the new NPS-FM will:
 - 119.1.require regional councils to set more specific desired outcomes for measures of ecosystem health and other values and to maintain or improve freshwater from its current state
 - 119.2.ensure the current state of freshwater is assessed as at 7 September 2017 (when the current NPS-FM took effect) or the date outcomes were set (whichever is earlier), rather than a future date that allows for ongoing declines, and

- 119.3.require regional councils to assess regularly and report on whether freshwater has been maintained, and specify matters that must be considered in addition to achievement of desired outcomes so as to ensure assessments are meaningful, including:
- 119.3.1. predicted or anticipated changes that are likely to affect freshwater
- 119.3.2. cumulative effects of changes across multiple attributes and locations
- 119.3.3. environmental pressures (such as water takes, sources of contaminants, or waterbody modification)
- 119.3.4. identification of deteriorating trends, and any known or likely causes
- 119.3.5. actions taken to implement the new NPS-FM, and
- 119.3.6. uncertainty associated with data, evidence and other information used
- 120. **note** that changes since consultation are limited to specifying the date at which current state is assessed (7 September 2017 instead of the date at which the new NPS-FM comes into force) and technical drafting changes to address feedback from the STAG, local government and NIWA (such as enabling the use of modelling, and additional direction on trend assessment procedures)

Preserve hydro-electricity flexibility and output to maintain security of supply

The detail of this policy is described in the body of the Cabinet paper in paragraphs 79-83 and is not repeated here.

- 121. **note** that since 2014 the current NPS-FM has included an exceptions mechanism that has not been used
- 122. note that the Government's priority is to protect the flexibility of most existing hydroelectricity generation, which is needed to achieve New Zealand's greenhouse gas emissions reductions targets and maintain security of electricity supply
- 123. note that consultation in 2019 proposed the six largest generation facilities be subject to exceptions in the new NPS-FM
- 124. **note** that consultation resulted in the majority of submissions opposed to this policy, and as a result:
 - 124.1.the Waikaremoana scheme has been omitted in recognition of its significantly lower generation capacity and the need to limit the scope of exceptions, and
 - 124.2.regional councils will be required, where practical, to set target attribute states that would improve the state of the degraded attributes, albeit not necessarily to the point of achieving the national bottom lines
- 125. **agree** that the new NPS-FM will enable regional councils to maintain attributes below national bottom lines if it is necessary to secure the benefits of the Waikato, Tongariro, Waitaki, Manapouri and Clutha hydroelectricity generation schemes (which collectively represent 86% of hydro-electricity generation capacity)
- 126. **note** that this exemption will not apply to new structures in the schemes or to other smaller hydro-electricity schemes

Other technical clarifications

The new NPS-FM will have clearer policy intent because it will:

- clarify what "limits" are, how they should be set and expressed within regional plans, and how to approach limit-setting when information is limited
- require councils to state the ecosystem health outcomes they seek through water flow regimes outlined in plans as well as set water take limits that are clearly related to achieving those outcomes
- clarify that territorial authorities have a role in integrated management of land and water by requiring them to have provisions in their district plans to manage the effects of land use for urban development on freshwater bodies and the receiving coastal marine environment, and

- note that the current NPS-FM contains requirements for councils to set limits on resource use
- 128. note that there have been longstanding issues with a lack of clarity in the definition and how it applies to other current NPS-FM requirements
- 129. agree that the new NPS-FM will:
 - 129.1. clarify what limits are, how they should be set and expressed within regional plans, and what to do if information is limited
 - 129.2.include specific direction about setting desired outcomes and limits on resource use for water quantity and environmental flows and levels to make existing requirements clearer

 restructure the NPS-FM to recognise the whole freshwater ecosystem rather than focusing only on water quality and quantity. This also fixes the NPS-FM's unclear structure (unnecessary repetition, redundant terminology and lack of clear directions to councils) that has resulted from extensive amendments over time.

The IAP did not provide recommendations on these policies. We have made technical changes as a result of consultation but no substantive shifts on policy intent.

- 129.3.clarify that territorial authorities have a role in supporting integrated management of land and water, and
- 129.4. restructure and clarify requirements within the current NPS-

Strengthen and clarify Te Mana o te Wai as the basis for the new NPS-FM

Te Mana o te Wai is a concept and framework about freshwater management from a Te Ao Māori perspective and it has been a part of the current NPS-FM since 2014 and particularly since 2017. It establishes a set of guiding principles and a hierarchy of obligations, and refers to the essential value of water, and the importance of sustaining the health and wellbeing of water before providing for essential human health needs, and then to other uses.

In 2019, the Government consulted on proposals to strengthen and clarify Te Mana o te Wai. We proposed to better incorporate it into the re-designed structure of a new NPS-FM and clarify what the concept means in practice. We also proposed to require regional councils to work with tangata whenua and communities to set a long-term vision that is informed by local aspirations for the waterbodies and by an understanding of the current pressures and history of the waterbodies. Regional councils would be required to then report on progress towards this long-term vision.

We have reframed Te Mana o te Wai as the fundamental concept underpinning the new NPS-FM. We have also clarified policy intent about how councils are to engage with tangata whenua and give effect to Te Mana o te Wai.

There is also an additional requirement for councils to investigate the use of engagement tools in the RMA (such as transfer of power and joint management agreements), and to publicly report on the reasons for decisions reached.

The IAP recommended removing a specific requirement for councils to develop a long-term vision for waterbodies and revise some of the directive content of the proposals. However, changes made to the policy since consultation will address issues the IAP raised, as will provision of implementation support to tangata whenua and councils.

Submissions expressed strong support for Te Mana o te Wai as a concept for freshwater management and a framework that councils would be required to give effect to. Some submitters requested clarification of policy intent and implementation.

KWM co-developed the Te Mana o te Wai proposals and broadly support them, including the changes that we are proposing to make as a result of consultation. However, KWM consider that the new NPS-FM should require stronger co-governance or transfer of power requirements. Submissions and feedback from iwi, hapū and Māori were overall in support of these proposals and shared the same view as KWM on matters of co-governance.

We acknowledge that further embedding the full scope of Te Mana o te Wai in the freshwater system is a longer-term issue that touches on governance arrangements and will require discussions between the Crown and iwi/hapū on roles and responsibilities for freshwater management.

- 130. note that Te Mana o Te Wai is a concept about freshwater management from a Te Ao Māori perspective and has been a part of the current NPS-FM since 2014 and particularly 2017
- 131. note that in 2019, the Government consulted on proposals to strengthen the role of Te Mana o te Wai in freshwater management, building on the work from 2017. We proposed to:
 - 131.1.clarify what Te Mana o te Wai means and reframe it in the new NPS-FM so that it more clearly underpins the whole framework for the regulation and clarifies the relationships between Te Mana o te Wai and other parts of the new NPS-FM
 - 131.2.re-design the structure of the new NPS-FM to give councils greater direction on Te Mana o te Wai and the outcomes that the Government expects, including by requiring regional councils to give effect to Te Mana o te Wai as it pertains to the new NPS-FM (including by applying the hierarchy of obligations)
 - 131.3. require councils to set a long-term vision (intergenerational) for freshwater that is informed by aspirations of tangata whenua and communities for what the waterbodies should look like in the future, an understanding of the current pressures on the waterbodies, and of their history, and
 - 131.4. require councils to report on progress towards the long-term vision.
- 132. **note** that the policy changes since consultation are to provide additional clarity on what Te Mana o te Wai requires in practice in response to feedback from submissions, which strongly supported Te Mana o te Wai as a concept for freshwater management and framework that councils would be required to give effect to
- 133. **agree** that the new NPS-FM will clarify and strengthen the role of Te Mana o te Wai as consulted on, with drafting changes to:
 - 133.1.address the IAP's concerns about directive language and resulting possible legal challenge
 - 133.2.require councils to actively involve tangata whenua in freshwater management, and in particular, in implementing the new NPS-FM through councils' processes for policy development and decision-making on the content of plans and policy statements pre-notification, including when setting environmental limits and identifying freshwater values
 - 133.3.further clarify how regional councils should involve tangata whenua when implementing these requirements, and
 - 133.4. clarify the role and scale of the long-term vision
- 134. **agree** to direct regional councils to actively investigate the use of tools in the RMA regarding decision-making and involvement of tangata whenua, and report on the reasons for not/adopting arrangements for tangata whenua involvement in planning
- 135. note changes since consultation have been co-developed with KWM, who broadly support the proposal but consider the new NPS-FM should require stronger co-governance and transfer of power requirements

note that the current NPS-FM provides inadequate recognition of values Māori hold for freshwater

Māori values in freshwater

We consulted on options to give greater recognition to values that Māori hold for freshwater. We propose to combine the two mahinga

kai values in the current NPS-FM ('kai are safe to harvest and eat' and 'kei te ora te mauri (the mauri of the place is intact)' and elevate them to the status of a compulsory value. This will require councils to work with and enable tangata whenua to implement the National Objectives Framework in relation to Māori values for their local context.

The IAP and advisory groups supported this approach. KWM also codeveloped these proposals and broadly support them, including the changes that we are proposing to make as a result of consultation. KWM emphasise that only tangata whenua can identify their freshwater values, and they need to be supported and resourced by regional councils to undertake this work in the same way that other freshwater experts are. Feedback from submitters was consistent with this view.

Broaden the focus of national direction and planning to manage all aspects of ecosystem health

The new NPS-FM amends definitions and policy direction to clarify and make explicit that all components of ecosystem health must be managed (not just water quality and quantity as well as human health, as in the current NPS-FM). Ecosystem health consists of the following components:

- Water quality (chemical, physical, and biological parameters of water)
- Water quantity (water flows and levels)
- Physical habitat (availability of habitat for plants and animals)
- Aquatic life (presence of animals, plants and algae), and
- Ecosystem functioning (interactions between aquatic plants and animals and the physical and chemical conditions of their environment)

These policies require councils to report on each of the five components, and overall ecosystem health, taking all relevant information into account and considering the habitat needs of threatened species.

The IAP did not provide recommendations on these policies and we have not changed them substantively following consultation.

- 137. **agree** that the new NPS-FM introduces a new compulsory value for mahinga kai, requiring regional councils to work with and enable tangata whenua to implement this in their local context and reflect the value they place on water
- 138. **note** that this approach is supported by the IAP and the advisory groups, and that KWM believe only tangata whenua can identify their own freshwater values, which needs to be supported and resourced by regional councils
- 139. **note** that the current NPS-FM focuses on the quality of freshwater itself rather than its physical habitat (including water levels and flows), the presence (or absence) of aquatic life, and the interaction between all these components
- 140. **note** that to encourage better planning by councils, a more holistic view of ecosystem health is required in the NPS-FM
- 141. **agree** that the new NPS-FM:
 - 141.1.amend existing definitions, including of ecosystem health, and policies to make it clear that all components of ecosystem health must be managed (not just water quality and quantity)
 - 141.2.require regional councils to report on overall ecosystem health, taking all relevant information into account, and
 - 141.3.require regional councils provide for a compulsory threatened species value

New and amended ecosystem health attributes

We have added new attributes with national bottom lines, and amended existing attributes, to ensure that councils measure and manage key aspects of ecosystem health.

The sections below and the body of the paper provide greater detail on the new attributes that are expected to have the greatest impacts: phosphorus, sediment, human health for recreation, and nitrogen.

Here we describe generally the new and amended attributes for freshwater animals and plants, water quality, and ecosystem functioning. Regional councils will have to monitor these ecosystem health attributes and, with their communities, set desired outcomes for them at or above bottom lines and work towards these outcomes over time.

However, it is important to distinguish between attributes that require limit-setting versus attributes that require action plans. In short, limit-setting attributes mandate pro-active and immediate rule-making by 2024 whereas action plan attributes establish adaptive management regimes and do not explicitly require rule-making by 2024. For action plan attributes, if outcomes are not met, or monitoring observes declines, regional councils must investigate the causes and describe through the non-statutory action plan how the council will respond.

This different approach is necessary to manage critical and complex aspects of ecosystem health for which a single stressor is rarely responsible for degradation. For example, macroinvertebrate communities may be declining due to water quality problems, highly localised habitat issues, or a combination of many different stressors.

Since consultation, there have been minimal substantial changes proposed to the new attributes, but numerous technical changes to reflect feedback from submitters and advisory groups. The most substantive changes include:

- 142. **note** that how regional councils measure and manage attributes will, in large part, determine whether they are successful at protecting ecosystem health
- 143. **note** that officials and STAG proposed new and amended attributes for physical habitat, aquatic life, ecosystem functioning, and water quality
- 144. **agree** that the new NPS-FM will introduce attributes with national bottom lines, and allow regional councils to work towards desired outcomes through non-statutory action plans (not necessarily limiting resource use), for measures of:
 - 144.1.macroinvertebrates
 - 144.2. submerged plants in lakes, and
 - 144.3. dissolved oxygen
- 145. **agree** that the new NPS-FM will introduce attributes without national bottom lines, and allow regional councils to work towards desired outcomes through non-statutory action plans (not necessarily limiting resource use), for measures of:
 - 145.1.fish species, and
 - 145.2.ecosystem metabolism

- Shifting dissolved reactive phosphorus from a limit-setting to an action plan attribute and removing the bottom lines, and
- Removing the bottom lines from the fish attribute

Overall, the IAP supported the incorporation of new attributes in the new NPS-FM, though it recommended changing some attributes from limit-setting to action-plan (including the DRP attribute) and recommended including two further tiers of attributes: attributes requiring monitoring only, and those that must be considered for use by councils. The STAG provided substantive inputs into these attributes.

In light of advisory groups' and submitters' support of the approach presented here, and to avoid further fragmentation of the NPS-FM objectives framework, we have opted to keep the approach presented here.

Phosphorus attribute

The detail of this policy is described in the body of the Cabinet paper in paragraphs 88-90 and is not repeated here.

- 146. **note** that STAG proposed a new water quality attribute for dissolved reactive phosphorus (DRP) for inclusion in the NPS-FM
- 147. **note** that there is high natural variation in DRP in New Zealand rivers and therefore a single national bottom line is considered inappropriate at this time
- 148. **agree** that the new NPS-FM will introduce a DRP attribute without a national bottom line, and allow regional councils to work towards desired outcomes through non-statutory action plans (not necessarily limiting resource use)
- 149. **note** that the Ministry for the Environment will continue work to develop national bottom lines for DRP that account for natural variation between different river types, with a report back to the Minister for the Environment and the Minister of Agriculture within 12 months

Sediment attributes

The new NPS-FM includes a limit-setting attribute for suspended sediment and an action plan attribute for deposited sediment. Both have four bottom lines and bands that apply in specific areas. This is necessary to reflect natural variation in water clarity and deposited fine sediment cover of rivers across New Zealand.

Both attributes specify naturally occurring processes for which general exemptions of the new NPS-FM apply. For example, streams coming from glaciers are naturally unclear. Where these processes affect waterbodies, councils will not be required to set target states above bottom lines because that would be impossible to achieve. However, they will still be required to maintain or improve freshwater and ensure the provision of ecosystem health.

The deposited sediment attribute will not apply in naturally softbottomed streams. In those areas, the new NPS-FM will require freshwater habitat monitoring, and it details a process for councils to determine, on a priority basis, whether currently soft-bottomed streams are in that state due to human actions.

The IAP recommended that suspended sediment should be an action-plan attribute rather than a limit-setting attribute primarily due to uncertainties in how severe storms affect in-stream sediment. However, the advisory groups and most submitters supported its inclusion as a limit-setting attribute.

We have made significant modifications to the attributes since consultation to address the IAP's and submitters' concerns about the initial proposal:

- The timeframes and statistics of assessment for both attributes
- Simplification of both attributes' classification systems
- Changing the suspended sediment attribute's monitoring indicator and permitting councils to convert from turbidity (a proxy measure of suspended sediment) to visual clarity
- Adopting the deposited sediment monitoring requirement and processes for naturally soft-bottomed streams, and
- Amending bottom lines for both attributes due to changes in the monitoring indicator (for suspended sediment) and to incorporate updated information (for deposited sediment).

Officials' analysis shows that widespread improvements in land management, especially in the hill country, are adequate to meet the

- 150. **note** that sediment is widely viewed as one of the most prominent environmental stressors facing New Zealand's freshwater and estuarine environments and is a noted gap in the current NPS-FM
- 151. **agree** that the new NPS-FM will introduce two new attributes with national bottom lines for the following measures of sedimentation:
 - 151.1.suspended sediment as measured by visual clarity, or as converted from turbidity, which will require regional councils to limit resource use to achieve desired outcomes, and
 - 151.2.deposited sediment as measured by proportional coverage, which will allow regional councils to work towards desired outcomes through non-statutory action plans (not necessarily limiting resource use)
- 152. note that both sediment attributes account for natural variation between different river types through environmental classification systems and incorporate naturally occurring processes exceptions
- 153. **agree** that the new NPS-FM will introduce a monitoring requirement for freshwater habitat in naturally soft-bottomed streams, and introduce a related process that permits regional councils to assess, on a priority basis, whether streams are naturally soft-bottomed or would not have been soft-bottomed prior to the arrival of humans
- 154. note that officials estimate about 31% of monitored sites will require reductions in sediment load to meet the suspended sediment bottom lines

bottom lines and that land use change is not required. Likewise, the stock exclusion proposals will be sufficient to meet the bottom lines in some catchments.

A higher standard where and when people want to swim

We believe all New Zealanders should be able to swim in their local river without fear of getting sick. The additional action-plan attribute with a national bottom line for *E. coli*, which would apply to primary contact sites during the bathing season, will accomplish this.

Regional councils will still be required to improve freshwater everywhere in terms of *E. coli* and set desired outcomes and limit resource use through their regional plans to achieve that over time. But the bar would be higher in places where people want to swim during the bathing season.

In practice, this change would mean efforts to improve *E. coli* will be increased for swimming sites, for example, by improving upstream discharges of wastewater or reducing overland flows from pasture.

The IAP supported these policies, as did the advisory groups and most submitters, and we have not changed them significantly since consultation.

- 155. **note** that the current NPS-FM does not provide specific direction for councils related to *E. coli* attributes in relation to the swimming season and places where people want to swim
- 156. **agree** that the new NPS-FM will introduce a new attribute and national bottom line for *E. coli* that is applicable at swimming sites during the bathing season, and allow regional councils to work towards desired outcomes through non-statutory action plans (not necessarily limiting resource use)

Strengthened nitrogen attributes

The detail of this policy is described in the body of the Cabinet paper in paragraphs 94-111 and is not repeated here.

- 157. **note** that nitrogen policies in the current NPS-FM are insufficient to provide for ecosystem health, especially in soft-bottomed rivers that do not support the growth of periphyton (algae)
- 158. **agree** that the new NPS-FM will strengthen existing national bottom lines for the nitrate and ammonia toxicity attributes in order to protect 95% of species from toxic effects
- 159. note that the Government intends to reconsider the possibility of a DIN bottom line of 1mg/l (likely with exceptions) in 12 months time

Monitoring the effectiveness of the policy regime for nitrogen

- 160. note that to date, councils' implementation of the existing NPS-FM requirements related to nitrogen has been insufficient to halt the degradation of ecosystems
- 161. note that councils need to manage nitrogen and phosphorus explicitly when working towards desired outcomes and national bottom lines for other attributes such as macroinvertebrates
- 162. agree that the new NPS-FM will require regional councils to manage nitrogen and phosphorus as needed to achieve desired outcomes for other ecosystem health attributes, such as macroinvertebrates
- 163. agree to direct officials to collect and report information on annual usage of synthetic nitrogen fertiliser applied across New Zealand annually
- 164. agree that there will be a review by 2023 of nitrogen management settings; and that if by then there is not a material reduction in the use of synthetic nitrogen fertiliser across New Zealand, the review will include an assessment of whether further input controls on agriculture are needed
- 165. agree to strengthen the Ministry for the Environment's oversight unit to monitor implementation of nutrient management policies closely, and ensure regional council decision-making is robust and is held to account when it is not
- 166. **note** that officials will develop a budget bid to resource the above oversight unit

Preserving domestic vegetable growing capacity

- 167. **note** that after consultation on interim restrictions on the expansion of commercial vegetable production, it is recommended these do not go ahead
- 168. **note** that New Zealand food security for human health depends on domestic fresh vegetable production and that, following

- consultation, two areas of most concern have been identified in the Pukekohe and Lake Horowhenua areas because they:
- 168.1.are major supply areas for domestic fresh vegetable production
- 168.2. currently have nitrogen levels worse than bottom lines, and
- 168.3.are unlikely to be able to improve nitrogen to levels better than bottom lines without compromising fresh vegetable supply
- 169. **agree in principle** that the new NPS-FM:
 - 169.1.enables regional councils to maintain water quality attributes for ammonia and nitrate toxicity (rivers) and total nitrogen (lakes) below national bottom lines if it is necessary to preserve the viability of fresh vegetable production within specific areas of the Pukekohe and Lake Horowhenua catchments, and only to the extent that achieving bottom lines would require nitrogen reductions that significantly constrain fresh vegetable production, and
 - 169.2.despite the above, directs regional councils to improve freshwater affected by fresh vegetable growing, to the extent possible
- 170. **note** that further consultation with local iwi is necessary prior to making final decisions on these specific area provisions
- 171. **note** that officials are exploring multiple options that may be worked through with iwi to ensure that a vegetable growing exemption achieves the intent of the Actions for healthy waterways objectives
- 172. **delegate** authority to the Minister for the Environment and Minister of Agriculture to:
 - 172.1. make final decisions on this policy subsequent to engagement with iwi, and
 - 172.2.if the delegated Ministers choose to progress the policy following the consultation with iwi, approve maps of the specific areas where the above exception will apply through the NPS-FM drafting process, before seeking Cabinet agreement to gazette national direction in mid-2020.