

St Lukes Environmental Protection Society Inc (STEPS)

SUBMISSION - CLEAN WATER CONSULTATION 2017

To: Clean Water Consultation 2017
Ministry for the Environment
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By email: watercomments@submissions.mfe.govt.nz

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INTRODUCTION

1. STEPS is an advocate for fresh water policy and standards, and has submitted on fresh water several times over the past 10 years. We have established a spring fed wetland, and perform regular water quality monitoring with Waicare. While the focus of our work is on the health of the community and the environment of Meola Creek in Auckland, we take a keen interest in both urban and rural water quality in New Zealand.
2. STEPS welcomes the opportunity to comment on the consultation document *Clean Water 2017* (CW 2017).
 - STEPS recommendations with respect to specified aspects of the Clean Water report are highlighted and boxed within sections of this submission.
 - STEPS requests the opportunity to be heard with respect to this submission.

SUBMISSION

According to the message from the Ministers there are five key components of this plan. These are presented as numbered sections below with associated recommendations.

Overarching comments

STEPS is pleased to see the Government taking this step but in our view it does not go far enough to achieving the Government's and community's vision for clean water.

The Clean Water package CW 2017 has not fulfilled our expectations of a well-founded approach based on the Land and Water Forum (LWF) recommendations. Government gave LWF a mandate.

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P 1

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LWF recommendations are based on robust science and collaborative process by key stakeholders and experts, including Ministry for Environment (MfE). OECD EPR NZ 2017 pointed out that speed of NPSFM implementation is critical, and noted the importance of collaboration¹. LWF collaborative process was a major achievement, which Government could again utilize to form the basis for future collaborative fresh water management². Instead LWF is breaking down as four groups including Forest and Bird, and Fish and Game have withdrawn³.

- For limits-based water management NZ needs clear, directive policy at a national level.
- LWF's recommendations should be the basis for this policy and its implementation.
- National policy and practice must cover urban situations, which seem largely omitted from the clean water package. Yet according to OECD EPR NZ "With 86% of the population living in cities and towns, New Zealand is one of the most urbanised countries in the OECD."
- For clean water to be a reality, the issue of resources for Local Government must be addressed.
- Throughout this submission we have considered some urban 'clean water' issues. While we focus on Auckland as the largest city and our home base, we note that urban runoff issues are visible in some of our most valuable fresh water bodies – viz Lake Wakatipu, and that recent events in Havelock North show the fragility of smaller 'urban' water supplies.⁴ We urge the Government to work with Local Governments to provide access to long term sustainable funding to address infrastructure requirements of urban water issues.

Background

- The NPSFM introduced a water management system based on environmental bottom lines; on limits/targets that must be respected or realised.
- Water quality in New Zealand is steadily declining and the slower our response, the more difficult that decline will be to halt and to reverse.⁵ The decline in water quality has been rated the country's number one environmental problem in several public opinion surveys.⁶
- There is in NZ a rural economic conflict over water. The conflict is between primary producers who extract water from streams and aquifers, and pour waste and nutrients on to the land catchments on the one hand; and money derived from tourism on the other hand. Visitors and New Zealanders expect water contact recreation to be both available and safe, and water to be of high quality. In STEPS' view CW 2017 has attempted to draw some lines in this regard. We

1 OECD EPR NZ Executive summary Water Resources Management p166 http://www.keepeek.com/Digital-Asset-Management/oecd/environment/oecd-environmental-performance-reviews-new-zealand-2017/water-resources-management_9789264268203-11-en#.WP0etNKGPIU

2 OECD EPR NZ Executive summary p 16 http://www.keepeek.com/Digital-Asset-Management/oecd/environment/oecd-environmental-performance-reviews-new-zealand-2017/executive-summary_9789264268203-6-en#.WP0cr9KGPIU

3 <http://www.stuff.co.nz/environment/90292326/questions-over-governments-water-forum-as-fourth-group-leaves>

4 <http://www.radionz.co.nz/news/national/323594/tests-reveal-source-of-havelock-north-water-contamination>

⁵ Chief Science Advisor New Zealand's fresh waters: Values, state, trends and human impacts (2017) ... in some cases it may take over 100 years to reach the desired outcomes because of the residence time of existing high nutrient levels in the water ...Even where restoration has occurred, this is generally not to the original state, nor can it be...

⁶ OECD Environmental Performance Review New Zealand (EPR NZ) 2017, (ref Hughey et al p 23).

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support the Government's efforts to address some of the crucial rural water issues raised in the OECD's 2017 review of NZ's environmental performance (EPR NZ) and other analyses.⁷

- We note there is also a rural urban conflict. In NZ cities water extraction is less of an issue, but developers, industries and public bodies discharge sediment, human waste, heavy metals and other contaminants directly into the waterways.
- In Auckland these discharges are reaching a crisis point where the public no longer has confidence in Auckland Council's will or ability to manage the swimmability of city beaches, let alone water quality in the creeks into which Auckland Council itself pours raw sewage and heavy metals on an almost daily basis in some cases.
- We note from OECD's 2017 review (EPR NZ)⁸: "**Challenges:** local governments lacking national guidance in many environmental policy areas and struggling with insufficient resources".

Urban Water - Auckland Case Study

CW 2017's definitions of rivers exclude many water bodies where within living memory people could safely wade and collect and eat watercress and kai; viz Meola Creek in the 1970s. Further the natural geography of Auckland means a predominance of creeks and beaches (more than lakes and large rivers), and people expect to be able to swim without their most popular swimming beaches containing dangers such as norovirus (see Appendix A, Coup Clark and Sharman). Children swim regularly at the waterfall in Oakley Creek, and even swim during flood events in Meola Creek despite pollution warnings and the very real health risk there. In our view Auckland tax payers deserve better than this.

The State of the Gulf report notes the impact of sedimentation on the health and resilience of the Hauraki Gulf's ecosystems. STEPS expects that any Government standards on either Freshwater or Clean Water should address the health of the most populous part of NZ where one-third of our population lives and where the scale of the water pollution problem is reaching a crisis point.

Auckland water pollution clearly conflicts with Auckland's waste reduction and green-city aspirations. Meola Reef, Maungawhau, Owairaka-Mt Albert and Three Kings mark the corners of Meola's diamond shaped catchment, the largest on the Auckland isthmus.

Sadly, Meola Creek has the worst overflows in Auckland. Polluted water and detritus from Meola Creek and other city creeks affect Pt Chevalier Beach, Meola Reef Reserve, Coxs Bay, Herne Bay, St Marys Bay, Westhaven, Viaduct area, Hobson Bay and Judges Bay where much of Auckland's prime real estate is located.

⁷ OECD: <http://www.oecd.org/newzealand/environmental-pressures-rising-in-new-zealand.htm>

Growth in intensive dairy production has increased the level of nitrogen in soil, surface water and groundwater. The nitrogen balance (the difference between nutrients entering and leaving the system) **increased more than in any other OECD country from 2000 to 2010**

⁸ OECD EPR NZ 2017 p3

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16,000 Auckland households are on combined sewers, issuing an average annual 2.2 million cubic meters discharge⁹ Meola Creek alone receives about 1.3 million¹⁰ cubic meters or 520 Olympic Swimming pools (OSPs) annually of raw sewage and stormwater runoff containing zinc, copper, heavy metals and pathogens. (See photos at <http://www.meolacreek.org.nz/2017/03/16/meola-in-flood-11-12-march-2017/> .)

The Watercare sewerage project “Central interceptor” (CI) is often touted as an answer to stormwater problems. Indeed some Councillors and Auckland Council ‘Healthy Waters’ stormwater team claim the CI as a ‘stormwater project’ which it clearly is not. Watercare now claim that CI will remove only 80 % of sewage overflows. It will not eliminate sewage or stormwater overflows on Meola Creek.

More significantly the Chief Executive of Watercare Services¹¹ says: “Watercare's proposed Central Interceptor is being provided to enable growth in the central and southern areas of Auckland and also provides an interim solution to stormwater issues, providing time for **Auckland Council to construct adequate stormwater infrastructure to service the area**. Continued reliance on the wastewater system for the collection and treatment of stormwater is not sustainable for a growing and liveable city.”

There appears to be a disconnect between Watercare and Auckland Council, as there is no evidence of a stormwater strategy for combined sewer areas on the isthmus. Budgets for stormwater have been cut many times over the past 10+ years, both before and after the set-up of Auckland Council. Water pollution is a buried problem which is now surfacing all over the city.

Under the new Auckland Unitary Plan we expect things to worsen, at least for Meola Creek and community. Meola has existing large stormwater overflows with no stormwater system in parts of the catchment, while in other places there are combined sewers which regularly overflow after only an hour’s rainfall. Auckland Council however saw no problem with housing intensification in this catchment, despite there being no stated plan or budget for stormwater infrastructure. As a result of intensification (more impermeable surfaces, more people and more cars) residents expect to see more road runoff containing more heavy metals, more stormwater polluted with sewage, and more sediment flowing into streams, reserves, properties and Waitemata Harbour.

“Ko au te awa. Ko te awa ko au.”

⁹ See Appendix B Watercare CI AEE

¹⁰ Watercare figure

¹¹ Watercare Asset Management Plan 2016 to 2036 p3 Foreword [See <https://www.watercare.co.nz/SiteCollectionDocuments/AllPDFs/Watercare-Asset-Management-Plan-2016-2036.pdf>].

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Key Points

STEPS submission focusses on the following

- The degree to which the proposed changes to the National Policy for freshwater management address NZ water quality requirements for either recreation, human health or ecological health, particularly in urban areas.
- Whether the 'swimmability' of rivers and lakes can be separated from the swimmability of beaches on our coastline and smaller creeks given that: fresh water bodies are **connected** through lakes and underlying aquifers; rivers have tributaries; most rivers meet the ocean at the coast. If it cannot then "90% swimmability" is misleading and inaccurate.
- The rationale for regulating stock which cause *problems with water quality, erosion and sediment, particularly in terms of health risk*, while Auckland Council and CCOs are permitted to pour human effluent into the creeks and rivers of our largest city into the indefinite future.
- Whether the 'bottom line' freshwater NPSFM (National Policy Statement for Freshwater Management) truly requires all Regional Councils to set and abide by freshwater standards for all freshwater bodies in their region. It appears that CW 2017 shows little interest in, or responsibility for, the water which is the foundation for the health and well-being of one third of the population of NZ in Auckland, or in fact the 86% of New Zealanders who are urbanised.
- We need more clarity and direction, especially in relation to:
 - Definitions of fresh water bodies
 - Actionable bottom lines for both ecology and health
 - Definitions for "primary contact recreation" to replace notions of "swimmability"
 - Attributes, measures and standards for fresh water bodies including urban areas¹²All should be based on LWF.

1 A new target that 90% of our rivers and lakes are swimmable by 2040.

CW 2017 P 11 says '*Swimmable definition*' is excellent, good and fair categories, that is, where it meets the guideline value more than 80% of the time (comparable with European standards).

The terminology such as references to "swimming", "swimmable", "suitable for immersion" (in the NPSFM amended version) are confusing and need to be consistently aligned with the LWF definition of "primary contact recreation".

CW 2017 p43 says "**Large rivers and lakes**" means, ..., rivers that are fourth order or above, and lakes larger than 1.5 kilometers in perimeter on average.

This definition of large rivers and lakes in CW 2017 only considers main rivers, i.e. an estimated 45,000 kilometres of the country's 425,000 km of waterways are included¹³. This is 10.5% ; and then only 80% of the time... so how does this become 90%?

¹² <http://www.mfe.govt.nz/publications/environmental-reporting/our-fresh-water-2017> and http://m.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11846084 26 April 2017

¹³ <http://www.stuff.co.nz/nelson-mail/news/90106971/Freshwater-monitoring-dips-with-Clean-Water-Package> " it only considered main stem rivers, with 45,000 kilometres of the country's 425,000 km of waterways included" 9 March 2017

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The large river definition proposed by MfE is weighted by geography – so some regions have many large rivers and Auckland possibly has the least, with the map showing a small number of disconnected rivers. Even relatively large rivers like the Whau and Tamaki do not meet the definition for swimmability. Further most of the waterways in the "National Rivers and Lakes" map (CW P15) are in alpine catchments far away from urban areas and dairy farming; the ambitious "90% swimmable" target sounds hollow when the number of people and the frequency of swimming in the Southern Alps are considered.

CW 2017 P9 shows 50 % of Auckland rivers have poor swimmability – the lowest in NZ. Yet according to the 2013 Census Auckland Region has 33.4 % of New Zealand's population. Why do the chosen 'swimmability' criteria address fewer swimming locations in Auckland than any other province mapped, when there are arguably as many people swimming for a longer period each year in Auckland as there are in the rest of the country?

Primary contact recreation targets should be set for **all regions**. Some Auckland rivers must be suitable for primary contact as well as those in Canterbury, since most children in Auckland do not go to South Island rivers for swimming on a daily or even annual basis. The children who swim regularly at the waterfall in Oakley Creek and should be covered by NPSFM Standards.

We believe the measures chosen (E.coli in rivers and toxic algae in lakes) need strengthening through a range of different measures, including measures to reduce nutrient levels. Efforts need to be focused on addressing those contaminants that are a problem in a particular water body; for some water bodies it will be nitrates and phosphates¹⁴, for others turbidity or E.coli. Finally the new primary contact *E.coli* attribute table should apply to all waterbodies.

1. STEPS recommends that for "swimmability" of our rivers and lakes:

- 1.1 Replace various references to "swimming", "swimmable", "suitable for immersion" (in the NPSFM amended version) with the LWF definition of "primary contact recreation".
- 1.2 MfE primary contact recreation targets should be set for every region.
- 1.3 Primary contact recreation criteria should be set for urban and other popular beaches including an acknowledgement that Councils have a mandatory obligation to fix their stormwater problems where this affects the quality of beaches.
- 1.4 Measures need to take account of nutrients, particularly phosphate and nitrate.
- 1.5 MfE recognise the interconnected nature of water bodies and redraft the definitions and targets accordingly.

2 New maps and information on the current water quality for swimming.

CW 2017 notes that the Land, Air, Water Aotearoa (LAWA) site exists ("LAWA currently presents information on fresh water and beach water quality, freshwater quantity and air quality") and the

¹⁴ <http://www.mfe.govt.nz/publications/environmental-reporting/our-fresh-water-2017>

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Ministry for Environment (MfE) is listed as a partner on the LAWA site. OECD EPR NZ noted LAWA as an important development and suggested tables to compare regions and hotspots and identify hotspots for action.

When we consulted it, the LAWA swimming site appeared to be lacking weekly data for Auckland, though most locations had a status¹⁵. It is very unlikely that having an alternative site will improve data availability. Instead two sites are likely to confuse the NZ public who are trying to follow current advice to check web sites prior to considering taking a swim.

In addition we query how frequently these web sites are required to be updated? For example – annually is unlikely to be sufficient in our view.

2. STEPS recommends that for information on current water quality :

- 2.1 MfE chooses one single website for water quality, or alternatively pays for the infrastructure to ensure that whichever site is consulted, the two sources are in sync and water quality measures are transparent to the public.
- 2.2 MfE requires Councils to provide up to date data for primary contact recreation on the chosen site.
- 2.3 MfE extends the LAWA site to compare catchments and regions as per OECD recommendations

3 Changes to the National Policy Statement for Freshwater Management (NPSFM) including water quality requirements for recreation, limiting nutrients and for ecological health.

A new official report states that urban rivers¹⁶ have 22 times the E.coli, 18 times the nitrogen and 3 times the phosphorous of rivers in native forest. It notes that 31% of freshwater plants, 72% of native fish and 34% of native invertebrates are at risk of extinction. This is not acceptable and can only be stabilized by a policy which addresses all fresh water issues. The Nationally Endangered aquatic moss *Fissidens berteroi* is present in Meola Creek. Neither children nor aquatic plants heed the dangers of urban water; the health and ecological bottom lines must apply to urban fresh water as well as rural.

STEPS supports an NPSFM which regulates water quality. In particular we support the recommendations of Land and Water Forum (<http://www.landandwater.org.nz/Site/Progress.aspx>)

We also note that under the RMA it is an offence to discharge pollution into a stream. We have outlined above that Auckland fresh water (and beach water) quality is in practice not regulated. So what is the meaning of 'bottom line'?

¹⁵ <https://www.lawa.org.nz/explore-data/auckland-region/swimming/>

¹⁶ <http://www.mfe.govt.nz/publications/environmental-reporting/our-fresh-water-2017> and http://m.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11846084 26 April 2017

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Here is the proposed definition of bottom line: CW 2017 3.6 p 20 : *We propose to amend Policy CA3 to clarify that regional councils can only set freshwater objectives below national bottom lines for attributes that are currently below national bottom lines and only in the physical area where the infrastructure contributes to the degraded water quality. We also propose to amend Policy CA3 to make clear that councils can only set freshwater objectives below national bottom lines if it is reasonably necessary for the continued operation of the infrastructure.*

Preamble P A4 There are two compulsory values – ecosystem health and human health – and national bottom lines have been set for these values.

P A20 “For the purpose of CA3(b)(i) benefits provided by listed infrastructure means the positive effects of the infrastructure on the well-being of the community and can include, but are not limited to, renewable electricity generation, employment and economic well-being.

This wording does not appear to consider sewer and stormwater outfalls as infrastructure which is ‘reasonably necessary’. Even pristine Lake Wakatipu receives stormwater from Queenstown and according to NZFSS President¹⁷, “Runoff from roads roofs lawns and building projects ... can stimulate algal blooms and contribute pathogens to water...”. Appendix 3 is not populated so it is impossible to tell what is intended.

How does a combined sewer system (as in Auckland) which pours human waste and heavy metals into the Harbour provide for the well being of the community? Is pouring out sewage on a daily basis ‘reasonably necessary?’ Once again, has this provision even considered urban runoff? While STEPS fully supports Auckland’s combined sewers NOT being listed in Appendix 3, we see no Government or Auckland Council plan or intention to remedy the situation by building stormwater infrastructure. (See 4 below for comments on funding).

Further, we note that the following two LWF recommendation relating to storm water and one relating to flooding have not yet been progressed.

20	A "Water sensitive urban design" process must be adopted in the building and upgrading of stormwater and roading infrastructure and residential urban development (and redevelopment).
21	Where wastewater systems overflow into stormwater or directly into waterbodies, in either a controlled (designed) or uncontrolled manner, local authorities should be required to report publicly on: -the maximum acceptable frequencies that are set through consent conditions or plan rules, and the actual number of overflows -planning and progress towards phasing out overflows -how overflows will be managed to achieve objectives and limits.
53	The government should investigate the role of greater national direction in flood management, and whether additional extension services are required.

¹⁷ Local councils and water scientists are fighting a race against time to protect Lake Wakatipu and Lake Wanaka's pristine waters from urban runoff. 20 April 2017
<http://www.radionz.co.nz/national/programmes/morningreport/audio/201840926/southern-lakes-need-protection-from-urban-development> New Zealand Freshwater Sciences Society (NZFSS) President: Dr Marc Shallenberg “Runoff from roads, roofs, lawns and building projects all ends up at some point in water bodies. It can contain heavy metals, car engine oil, E.coli from dog faeces, paint residue, and loose sediment draining off building developments during a storm... It could stimulate algal blooms and contribute pathogens to water... “

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Without national direction it is highly unlikely that Councils will undertake proactive projects to deal with flood mitigation, and the implications of more extreme weather events and sea level rise on our rivers and stormwater/ sewage infrastructure.

We want to see these included in the NPSFM, with further guidance and requirements for councils on both educating the public in stormwater management, and putting in place incentives to reduce stormwater volumes.

Further, after watching 10 years of inaction on Auckland stormwater at both Government and Auckland Council level, we have done some research on US, UK and Canada which also had combined systems with overflow issues. All of these countries have in the 1990's and early 2000's created Government owned and funded Agencies with coercive powers. In those countries it is unlawful to discharge untreated sewage and the Agencies have coercive powers to force Local Authorities to invest in overflow reduction/elimination infrastructure¹⁸. They also help educate the industry and the public - eg by publishing "Drainage Strategy" examples based on best practice¹⁹.

Following these proven examples we recommend that the regulatory stormwater function should be independent of the stormwater service provider (both are currently Auckland Council responsibilities).

Fish and Game and Sir Geoffrey Palmer QC also state the changes will undermine the Resource Management Act²⁰. We cannot support changes to the RMA such as the caveat proposed in Objective B1.

Overarching goal - the preamble to the NPSFM sets an overarching goal that 90% of rivers and lakes will be swimmable by 2040 and an interim goal of 80% to be swimmable by 2030. This is undermined by 2 issues:

- The rivers and lakes to which this goal will apply have not been defined. It is not clear whether only large rivers and lakes will be relevant or a broader group.
- It is not clear how this goal is intended to be worked into existing plan processes/plans recently amended to give effect to the NPSFM 2014.

Attributes and Measures - the NPSFM does not reflect the full range of attributes that need to be managed. The most important missing parameters are:

Sediment.
Copper.
Zinc.

¹⁸ <http://www.ofwat.gov.uk/about-us/our-duties/> UK regulator

¹⁹ http://www.ofwat.gov.uk/wp-content/uploads/2013/05/rpt_com201305drainagestrategy.pdf

²⁰ <http://www.radionz.co.nz/national/programmes/ninetonoon/audio/201841688/new-water-guidelines-labelled-sneaky-backdoor-attack> Fish and Game

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Sediment is one of our biggest water quality issues²¹ but it is not explicitly addressed in the NPSFM or the NOF (National Objectives Framework); dissolved oxygen and PH should also be considered.

Policy CB1 requires regional councils to monitor macroinvertebrate communities. We support this but the requirement is not sufficiently directive. LWF's recommendations are based on advice from an independent science panel that MCI is scientifically robust and fit for purpose.

Economics of water – there are at least five mentions of “economic well-being” and many more of “economic opportunities” in the clean water document and in various NPSFM Policies. Surprisingly there is no mention of “Natural Capital Accounting (NCA)²² which provides a basis for valuing natural capital assets and the ecosystem services they provide by quantifying the costs and benefits of resource management decisions. OECD states that NCA aligns with a catchment scale approach and demonstrates that investing in ecosystems services and natural capital such as forests, floodplains, and wetlands can generate multiple benefits. One Auckland example would be how much investment Watercare Services should make in the Waitakeres, Hunuas and Waikato River in order to secure Auckland's water supply. Recent damage in the Hunuas reminded New Zealanders of the economic implications to manufacturing and service businesses that a possible “boil notice” could cause when ecosystem services fail.²³ Traditional “human” economic well-being does not take this into account. Unless we invest in maintaining “ecosystem services” they will be depleted and fail us just like Auckland's sewers. This scale of failure would be catastrophic economically in the short and longer term to Auckland and to NZ.

We also draw attention to a warning in the OECD EPR NZ²⁴: “it is unclear how the [NZ Government's] twin objectives of reducing environmental impacts and doubling primary exports in real terms will be achieved, and whether government assessed use of finite freshwater resources and impacts on freshwater quality before setting such objectives.” In our view this OECD advice demands a policy response.

3. STEPS recommends that for National Policy Statement for Freshwater Management:

- 3.1 Incorporate the goal of 90% of rivers and lakes to be suitable for primary contact recreation into the NPSFM provisions. This should apply to all rivers and lakes.
- 3.2 Populate Appendix 3 so that the public and Government can discuss what is intended here.
- 3.3 Separate the regulatory stormwater function so it is independent of the stormwater service provider (in Auckland or nationally), and can fine Councils who fail to build adequate infrastructure.

21 OECD EPR NZ Water resources management P158... the main water quality indicators of concern are nutrients (nitrogen and phosphorous), sediments and pathogens.

22 OECD EPR NZ Water Resources Management p176 http://www.keepeek.com/Digital-Asset-Management/oced/environment/oced-environmental-performance-reviews-new-zealand-2017/water-resources-management_9789264268203-11-en#.WP0etNKGPIU

23 http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11823425 Damage in Hunuas

24 OECD EPR NZ Water Resources Management p156

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- 3.4 Redraft the bottom line wording in such a way that Auckland can no longer avoid meeting the most basic RMA requirements.
- 3.5 MfE consult with Auckland Council on the intent and meaning of health and ecological bottom lines and how Auckland intends to meet them.
- 3.6 Include sediment attributes in the NOF and include policy direction on sediment management.
- 3.7 Include copper and zinc attributes in the NOF.
- 3.8 Incorporate MCI into the NPSFM as per the LWF's recommendations.
- 3.9 Incorporate policies on stormwater management in the NPSFM.
- 3.10 MfE strengthens NPSFM In areas such as:
 - setting water quality attributes for estuaries, intermittently closing and opening lakes, and lagoons and wetlands. These ecosystems are the receiving environments for cumulative discharges from rivers and are often areas of considerable conservation, biodiversity, cultural and recreational significance
 - setting water quality attributes for groundwater
 - wider applicability of the dissolved oxygen standard (not just point sources)
 - raising NZ NOF bottom lines from the equivalent of EU Water Framework Directive (WFD) "Moderate" to "Good" Ecological status.
- 3.11 Include Natural Capital accounting to ensure the long term economic well-being of the environment is considered, as a basis for the economic well-being of humans.
- 3.12 Clarify how this NPSFM relates to the RMA and ensure RMA is not undermined.
- 3.13 Provide direction on how to manage the two Government objectives of reducing environmental impacts and doubling primary industry exports.

4 Criteria for allocation of the \$100 million Freshwater Improvement Fund.

\$100 million is a start. However in CW 2017 Government has focused on funding improvement of catchments which are hundreds of kilometers away from its main population base (i.e. Auckland). Further, Government already invested four times as much (\$400 million²⁵) on irrigation in rural areas, and some of that irrigation has most likely caused catchments to tip such that "improvement" is needed²⁶. Given NZ's dependency on the natural capital of our rivers and catchments, and their currently deteriorating state, it is in our view highly unlikely that \$100 million will make a significant difference overall, and the remainder of the \$400 million for irrigation should be diverted to the Freshwater Improvement fund for riparian planting and other mitigation of damage done.

Wastewater and combined overflows can give rise to a number of adverse effects:

- Public health effects in areas with high public contact potential - for example stream reaches and bathing beaches affected by overflows
- Public health and amenity effects on local landowners
- Stream water quality and effects on ecosystems

²⁵ <https://www.beehive.govt.nz/sites/all/files/Irrigation%20Funding%20-%20Q&As.pdf> Irrigation funding

²⁶ <http://www.radionz.co.nz/national/programmes/morningreport/audio/201806880/crown-irrigation-company-defends-spend>

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- Cultural and social effects associated with the discharge of wastewater to the natural environment

What will be the economic impact e.g. on tourism when NZ's largest city is acknowledged as having second world status in this regard? Dairy farming and manufacturing were smaller than tourism in 2013, with dairying contributing 3.1% of GDP while tourism contributed 4.7%, with tourism spending rising to \$29.8 billion in 2015²⁷. Any impact on the Auckland economy is felt nation-wide.

Given the huge rate of Auckland growth and the numbers of new migrants, it appears anomalous that the Government would turn away from the overt pollution of Auckland's creeks and beaches by the local body responsible for overseeing the state of fresh water (and also responsible for issuing RMA consents to pollute streams). In addition one wonders how long it will take new migrants and tourists to connect the image of 'clean green New Zealand' with the reality of sewage flowing in waterways, parks and even streets of Auckland.

From above we know that Central Interceptor will not solve the problems of water pollution in Auckland. Nor are stormwater detention tanks a solution according to Watercare CEO.²⁸ While this is expensive to solve, it is not difficult and we believe that Government should support Auckland Council to face their responsibilities for improving water quality and reduce health risks.

We note that Auckland Transport (AT) is partially funded by NZTA i.e. Central Government (12% Capital investment from NZ Transport Agency, ... 19% Operational co-investment from NZ Transport Agency). AT only deals with roads, though they are also responsible for 48% of stormwater runoff²⁹. Stormwater deals with all the sewage and pollutants from industry and roads, which pose a serious health risk.

If Government is truly committed to clean water in NZ, then we would expect similar financial backing for urban storm water infrastructure as for urban roads. Government infrastructure bonds would be a form of funding that could assist Auckland Council to meet the expectations of Aucklanders regarding clean water and clean beaches. There is no end in sight to water pollution in Auckland as yet.

4. STEPS recommends that for funding:

4.1 Freshwater Improvement Fund is supplemented by the amount remaining from Government's \$400 million irrigation fund.

4.2 Long-term Infrastructure funding for Auckland Council to enable the actual resources needed to clean up the stormwater problem using a managed approach over time and committing in 2017.

²⁷ <https://www.greens.org.nz/news/press-release/time-reassess-government-irrigation-spend>

²⁸ http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11787221 Detention tanks

²⁹ Figure from Watercare Services

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5 Details of new national stock exclusion regulations

5 p 25 We know that livestock in our waterways can lead to problems with water quality, erosion and sediment, particularly in terms of health risk. We've proposed new requirements to stop livestock from entering streams, rivers, lakes and wetlands.

STEPS supports stock exclusion and fencing to reduce pollution of waterways. Unfortunately, the effects of nitrate leaching into groundwater during and pre-dating the dairy boom will continue for many years. The proposed regulations place responsibility primarily on private land owners, which is appropriate given the ongoing intensification and industrialization of farmland. However, nothing in the regulations compels compliance and indeed there is considerable scope for land owners to evade responsibility: Those who find themselves "unable to meet the requirements can apply for permission to instead develop a stock exclusion plan with their regional council" (CW P25). The wording is broad and unspecific; the penalty of "up to \$2000" that non-compliant land owners "may" face is lenient, would be difficult and expensive to enforce, and leaves too much to the discretion of the particular regional council.

We note that while exclusion prevents stock from entering waterways, it does not prevent overland or subsurface flow of nutrients³⁰. STEPS believes Councils should be required to use a wider range of nutrient measures (including nitrate) in monitoring fresh water, and to fine land users who pollute the water.

We also note the statement above from p25 applies equally to urban stormwater in waterways. E.g. heavy metals, runoff from building sites and human waste also cause problems with water quality, erosion and sediment, particularly in terms of health risk. Any incident in Auckland is likely to impact the health of many more people than an incident in another province. The omission of stormwater appears to be a serious inconsistency. Why can Auckland Council pour raw sewage and heavy metals into streams and harbours whereas farmers cannot?

CW 2017 P29 – definition of water bodies:

- a. *waterways (rivers, streams and drains) that are permanently flowing, and where the active channel is over 1 metre wide at any point*
- b. *lakes as defined in the Resource Management Act (bodies of fresh water which are entirely or nearly surrounded by land)*
- c. *natural wetlands, as per the Resource Management Act definition*

We note that the definition of water bodies here is somewhat closer to the definition we might have expected for swimmability in point 1. Why the inconsistency?

³⁰ <http://www.stuff.co.nz/nelson-mail/news/90106971/Freshwater-monitoring-dips-with-Clean-Water-Package>

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5. STEPS recommends that for stock exclusion :

- 5.1 Definitions of water bodies are consistent in the NPSFM and for the purposes of primary contact recreation, stock exclusion etc
- 5.2 MfE ensure that the standards for the human and ecological health from livestock in this section also apply to discharges in urban situations.

6 Future work program

- *Good management practices (urban and rural)*
- *Allocation*
- *Our Land and Water National Science Challenge*

CW 2017 refers to the Our Land and Water component of the National Science Challenges but says nothing about added-value products or diversification into alternative land uses such as horticulture and forestry needed to reduce the primary sector's focus on dairying and its costs to fresh water quality.

6. STEPS recommends that the future work program includes:

- 6.1 Government revive and support the collaborative approach of the Land and Water Forum to help speed implementation of MPSFM bottom lines
- 6.2 Research on alternative land uses and added value products be carried out.
- 6.3 MfE ensures that good management practices do cover Auckland rivers and lakes, and that they are binding, including on Auckland Council who own and manage public streams in Auckland.
- 6.4 Government works with key urban areas to address funding shortfalls and to require Councils to meet legal standards.
- 6.5 Set up a stormwater regulator independent of stormwater service providers, at national or Auckland level.
- 6.6 Specifically, Government ensures the design and construction of stormwater infrastructure in Auckland for the benefit of human and ecological health.

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CONCLUSION

STEPS appreciates the opportunity to comment on the Consultation Document.

Regarding the scope and intent of CW 2017, it is clear that the impact of dairying on our rivers requires urgent Government attention. We note that OECD EPR NZ 2017 identified: *rising freshwater pollution and scarcity* in some regions as a challenge; and noted that 75% of water in New Zealand is used for irrigation. Some regions are approaching water allocation limits or have already surpassed them.

If the scope of CW 2017 is only to address the ecological health of fresh water across some large rural rivers nationwide then it has started to do that and STEPS supports CW 2017 with the modifications noted above.

However, if the intention was to address human health issues and bottom lines then CW 2017 has missed the mark, and significant change is required to address the urban issues raised in our submission.

- We support the call for an Independent Regulator for Stormwater by the Stop Auckland Sewage Overflows Coalition.
- We support the submission of EDS (Environmental Defence Society).
- This submission is supported by Friends of Maungawhau Inc. and Friends of Oakley Creek – Te Auaunga.
- We wish to be heard in support of our submission.

Yours sincerely

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Elizabeth Walker

Chair, St Lukes Environmental Protection Society Incorporated Inc (STEPS)

Date: 28th April 2017

Address for service: via our web site <http://www.meolacreek.org.nz/contact-us/>

Or see details provided in email to MfE

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APPENDIX A

CATCHMENT SCALE WATER QUALITY AND ECOLOGICAL MONITORING IN AUCKLAND'S MEOLA CREEK AND COASTAL ENVIRONMENT

Justine Coup, Morphum Environmental Ltd, Caleb Clarke, Morphum Environmental Ltd, Brian Sharman, Auckland Council (Water New Zealand Stormwater Conference 2012)

2.3.1 RESULTS

Baseline monitoring revealed that all freshwater sites were at risk of microbiological contamination for contact recreation, exceeding the 550 cfu/100mL contact recreation guideline level (MfE, 2003). During the baseline stream walk, a DWO was observed on two occasions, with E.coli levels of 1-3 million cfu/100mL, influencing downstream water quality. This was reported and the issue subsequently remedied.

None of the marine sites had E.coli or Enterococci levels of concern during baseline with all but two below detection levels. However, norovirus was detected at one Point Chevalier Beach sampling point during December baseline sampling, which is when the dry weather overflow inputs were present.

Zinc was present above the ANZECC guideline value for ecosystem protection for slightly to moderately disturbed aquatic or freshwater ecosystems for 50% of samples (ANZECC, 2000). Metals in biofilm were higher at the upstream site, with values up to 20 times Water New Zealand Stormwater Conference 2012 higher than sediment quality guidelines.

https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=865

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APPENDIX B

Watercare Services Ltd: Central Interceptor Main Project Works Resource Consent Applications and Assessment of Effects on the Environment. August 2012

There are some 122 active combined sewer overflow points on the wastewater network in the Central Interceptor catchment area, which currently discharge in the order of 2,200,000 m³ of diluted wastewater to the environment on an average annual basis. These overflows affect the natural values of Motions Creek, Meola Creek, Oakley Creek, Whau River, and the coastal waters around Point Chevalier and the Waterview Inlet, creating potential public health risks for recreational users, and reducing the environmental, amenity and cultural values of the waterbodies. With ongoing growth and development of the Auckland Isthmus this situation will continue to worsen if no improvements are made.

The Central Interceptor scheme has been designed to capture, store and convey for treatment wet weather overflows from the wastewater network in the Central Interceptor catchment. The main project works will provide **overflow reduction** at Watercare's largest network overflows.

<https://www.watercare.co.nz/Pages/Central-Interceptor-Resource-Consent-Documentation.aspx>