Healthy Waters Stormwater Network Discharge Consent 6-Yearly Review Summary

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Introduction

Auckland Council's Healthy Waters department is responsible for the management of the public stormwater system. The management of stormwater and its effects on the environment contributes to Auckland Council's strategic goals.

The Regionwide Stormwater Network Discharge Consent (NDC) is a key tool in managing and integrating land uses, stormwater discharges and the region's built and natural water assets. The NDC authorises the diversion and discharge of stormwater from the current and future public stormwater network in the urban area.

To account for the complexity of urban stormwater, the NDC outlines objectives, outcomes and targets (as per Schedule 2) for each of the following urban issues: assets, growth, flooding, stream, coastal and groundwater health, effects on the wastewater network and collaborative outcomes.

An important element of the NDC is a review process to report on performance and to ensure the consent remains relevant over its lifetime, as the management of a complex drainage network such as that in Auckland is not static, but a process that evolves over time as understanding and technology changes.

A three-year review cycle is established with the timing of the reviews intended to precede and inform council's long-term plan, alternating between the "**triennial review**" which includes a series of updates with some performance analysis and the "**6-yearly review"** which includes detailed consideration of the performance of the network and is an opportunity to reconsider the overall approach to the best practicable options for managing stormwater as a result.

The first two reviews are out of sync with the long-term cycle due to the timing of the start of the consent and the need for the cycle to align with council's long-term planning cycle. The first triennial review was completed in 2021. The first 6-yearly review is required to be submitted for certification by 30 September 2022. The reviews will then alternate every three years.

This report documents the key findings of the first NDC 6-yearly review. The report focuses on performance against the six-year targets in achieving the NDC outcomes as well as the matters outlined in Conditions 25-32 of the NDC which include state of the environment monitoring and modelling results and consideration of policy and legislation changes. The findings of the report incorporate feedback from engagement undertaken with mana whenua, stakeholders and communities.

Performance overview

Healthy Waters is tracking well across the targets set out in the NDC and overall is making progress towards achieving the outcomes and objectives. However, areas of improvement have been identified and several of the targets need to be amended. The review report discusses the performance for each issue in more detail as well as identifying gaps and future changes which may be required.

Due to the nature of the stormwater system being an open network, it is important to acknowledge that the performance of the NDC is affected by third parties upstream and downstream of network discharge. Therefore, the targets in Schedule 2 extend beyond the piped network as well as in some cases beyond the direct control of Healthy Waters.

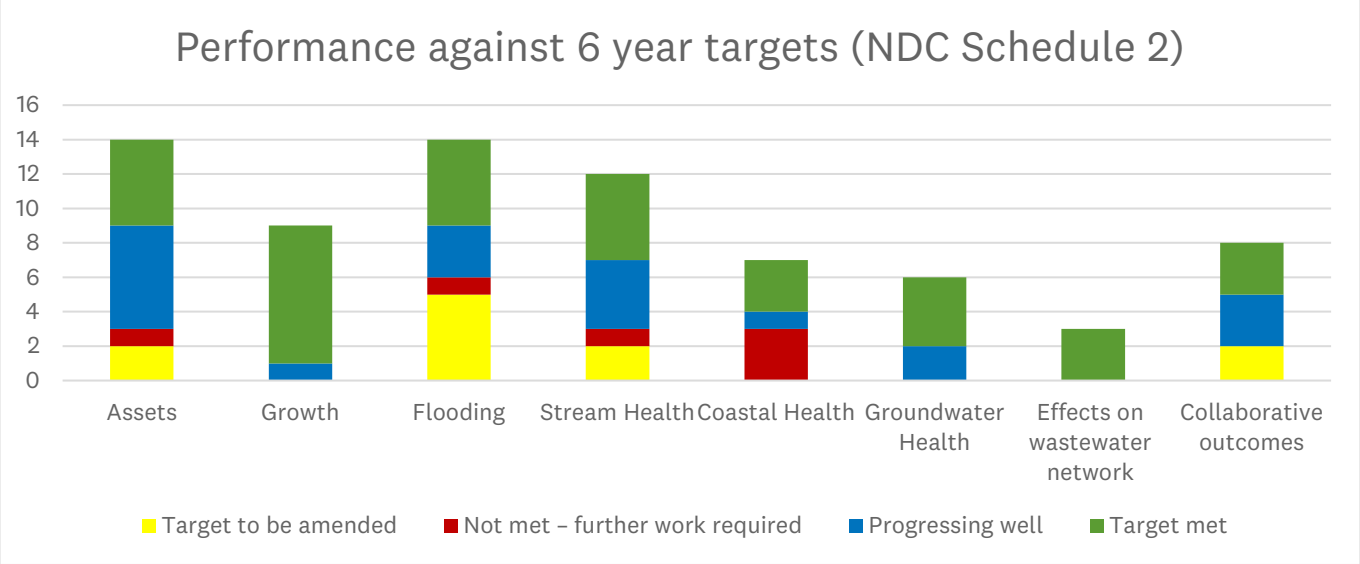

Figure 1. Overall Performance against the 6-year targets set out in Schedule 2 of the NDC.

Detailed overview of issues

Growth

Growth including new greenfield development and redevelopment in existing urban areas is the issue where the Network Discharge Consent has resulted in the most change in processes and requirements. It is also the area where the majority of people interact with the NDC, both internally and externally to Healthy Waters.

Healthy Waters is meeting the targets for this issue including review of Stormwater Management Plans (SMPs), response to enquiries and capital spend. However, there are still many challenges for the implementation of water sensitive design and achieving good quality stormwater assets as directed through the supporting growth objective.

Schedule 4 of the NDC "*Requirements for changes to be authorised under the Auckland Stormwater Network Discharge Consent*" sets out the connection requirements for development where the discharge of stormwater will be to the public network and which will vest assets to Healthy Waters. The requirements in Schedule 4 include preparation of SMPs and specific stormwater management.

As of 1 September 2022, 198 SMPs have been received for review and 93 have been approved.

Awakeri Wetlands has facilitated the development of thousands of houses in Takanini

SMPs received are not regularly proposing a water sensitive design approach, and there is a heavy reliance on alternative mitigation described as a best practicable option but which is not always clearly justified or documented. This is a pattern occurring across both brownfield and greenfield development. Improvements are needed to the SMP review and approval process, including providing improved guidance information in order to reduce differences in interpretation of the connection requirements between applicants and Healthy Waters and to clarify the expectations of the information needed.

There are significant challenges identified with managing stormwater in brownfield areas. In order to manage the cumulative effects of multiple and increasing small scale development and to meet possible future targets which come from implementation of the National Policy Statement for Freshwater Management (NPS-FM), Healthy Waters will need to review the overall approach to managing stormwater runoff in brownfields areas. The review will need to consider and balance the benefits of at source mitigation, the extent of opportunities from redevelopment with scale and distribution of that redevelopment and available opportunities for catchment or sub-catchment scale targeted improvements through publicly funded and communal projects.

Flooding

Flood hazard is influenced by a range of factors including land use, capacity of primary network and the secondary stormwater system of overland flow paths and floodplains. These hazards will be exacerbated by climate change, resulting in more extreme storms, changing rainfall patterns and sea-level rise. At the same time, Tāmaki Makaurau is experiencing unprecedented demand for urban growth, with pressure to develop in areas where flooding and other hazards already exist.

Improving Auckland's storm-readiness and proactively preparing for changes in rainfall will therefore be critical for reducing risk and exposure to climate change effects. The management of and response to flooding relies on a range of organisations, including across council departments, as well as within central government organisations and the private sector.

Bethells Beach during the August 2021 flood

Healthy Waters plays a key role, most notably through flood hazard identification and risk assessment, supporting community awareness and resilience, advocating for flood resilience during development, maintaining and upgrading stormwater assets, as well as supporting emergency event response. Healthy Waters has made good progress in all these functions. However, it is noted this work is challenging as the management of flood risk is heavily influenced by activities outside of the scope of the NDC. Achieving the outcome requires a whole of council effort, particularly with regards to land use decisions. Furthermore, responsibilities and tools to manage this risk are currently under review as result of widespread central government reform, as well as from council-led reviews of the AUP and other council strategic documents.

In this time of increased urban growth as well as legislative change, Healthy Waters will therefore continue to advocate for the avoidance of flood hazard in new development, as well as the reduction of flood hazard in existing development. The review and update of NDC flooding targets will also be required as reforms progress.

Assets

Overall, the management of existing constructed assets has not changed since the granting of the NDC. However, learnings from the management of these assets since consent granting, together with budget constraints as a result of Covid-19, have identified that some of the current NDC targets related to assets are no longer relevant and should be reviewed.

In addition, while the focus of asset management was on pipes at the time of the granting of the consent, inspections of other asset types have been significantly progressed, particularly with respect to dams and ponds. The 2015 Condition Monitoring Framework, together with the 2016 Renewal Strategy will need to be reviewed to assess whether asset types are adequately ranked against one another, weighing both safety and environmental outcomes.

Stream, coastal and groundwater health - evaluating the health of Auckland's urban waterways

A consistent pattern of water quality across all contaminants and all places is not apparent in Freshwater Management Tool (FWMT) accounting or State of the Environment (SoE) reporting. Reasons for this include differences in legacy land use, new development, and differences in the receiving environment. However, both FWMT and SoE evidence demonstrate degradation of water quality across the urban areas in the Auckland region for ecosystem and human health contaminants (e.g., nutrients, faecal indicator bacteria, heavy metals, sediment).

At the time of granting the NDC, the targets set under Schedule 2 acknowledged further work was needed to determine specific action plans for improved ecosystem health. Consequently, requirements were set for the NDC to deliver a water quality accounting framework (Freshwater Management Tool – FWMT) and baseline information on the existing condition of waterways (Watercourse Assessment Reporting - WAR).

Both FWMT and WAR workstreams are progressing well:

- With respect to Watercourse Assessments, over 100 of the region's 233 stormwater catchments have been assessed (mostly in urban and future urban areas).
- Regarding the FWMT development, the 'baseline state' is complete (modelled, peer-reviewed, reported). Currently developing the 'options assessment' (due to be completed in FY22/23) which will identify strategic actions required to maintain or improve water quality that are feasible and least-cost across catchments.
- Like any other model, the FWMT requires ongoing field sampling and targeted monitoring for continuous improvement (e.g., independent validation, version changes). It is also acknowledged that a targeted sampling monitoring programme needs to be developed to assess effects of stormwater discharges as well as intervention effectiveness.

Te Auaunga, Mt Roskill stream naturalisation

Additional programmes are being developed including urban contaminant reduction and stream erosion modelling which is a region-wide bank stability erosion model to identify high erosion risk stream reaches, and which forms part of a wider Geomorphically Effective Management Solutions (GEMS) programme.

Overall Healthy Waters is meeting the targets associated with stream, coastal and groundwater health related to collaboration. Programmes are in place to collaborate with third parties, as this is a vital component of improving water quality and ecosystem health outcomes. Targets in relation to fish passage remediation and some of the operational activities (e.g., contaminants removed from catchpits) have not been met over the last years due to Covid-19 related budget reductions for these programmes.

Effects on the wastewater network

The targets related to wastewater are being met. Targets refer to identifying infiltration issues and solutions to reduce overflows in collaboration with Watercare, which have been funded through the Water Quality Target Rate. The strategy for investigation and management of cross contamination has been developed by the Safe Networks Programme. Healthy Waters works closely with Watercare to reduce wastewater overflows and to separate joint stormwater and wastewater networks where possible.

Collaborative outcomes

Collaborative outcomes reflect Healthy Waters' strategic direction and obligation to meaningful work together with mana whenua and maataawaka to improve the mauri of the region's waterways. It also recognises that because stormwater is an open system predominantly owned by others, Healthy Waters must work with the community and other infrastructure providers for improved outcomes.

The targets in relation to collaborative outcomes are being met or progressed over time. Some of the targets in relation to mana whenua participation need to be updated to reflect new ways of working.

As stormwater flows do not recognise property boundaries nor the ownership of stormwater networks, Healthy Waters must work closely with other local and central government agencies to achieve improved water outcomes. These agencies include Ports of Auckland, Auckland Council Closed Landfills Team, Kainga Ora, Watercare, Auckland Transport, Waka Kotahi, and Kiwirail.

Healthy Waters' mana whenua engagement strategy is implemented through regular engagement and a continuous improvement approach. This approach provides the feedback necessary from mana whenua to ensure the strategy addresses the key challenges experienced by the partners over the length of the consent. Healthy Waters is committed to a partnership approach with Te Tiriti partners and will continue to explore and co-design what the approaches may look like to mana whenua.

A refresh of the Mana Whenua Engagement Strategy is now needed to reflect new Healthy Waters programmes and approaches including the Te Taunga framework and the Māori Outcomes plan: *Kei Hea Te Kōmako* in order to continue to meet the principles set out in the strategy. Work is underway to address the matters identified by iwi during recent engagement through an ongoing collaborative partnership across the Healthy Waters work programme.

Other pressures and influences

Growth, urban intensification and climate change will increase pressures on the stormwater system and will affect the management of the stormwater network.

In addition, there is significant change coming to the water industry over the next three years and this will require Healthy Waters to review priorities and practices including those within the NDC. Changes include organisational transformation as a result of the Three Waters Reform, Resource Management Reform packages and changes to the Auckland Unitary Plan in order to implement several national policy statements.

There is particular risk with the Three Waters Reforms as the detail of the responsibilities of the new entity have not yet been defined, especially for stormwater. The successful implementation of the NDC relies on an integrated and holistic approach to managing stormwater which includes matters beyond the piped network and asset management however if the current scope of the Healthy Waters department is reduced when the new entity is formed, there is a risk to the ability to deliver and comply with the NDC. There are also opportunities that will come from the reforms including greater collaboration and efficiencies.

All of these pressures will force Healthy Waters to change working practices and spending priorities. There is also a current focus on implementing and incorporating te mauri o te wai into all aspects of Healthy Waters work and responding to climate change.

The objectives of the NDC will be used to influence, support and respond to all of these changes, and it is also likely that the changes will result in the need to update and revise the NDC, possibly significantly, once established.

Conclusion

This is the first comprehensive review of the network discharge consent (NDC) since it was granted in 2019. The review has considered each of the issues in Schedule 2 and looked at how the NDC is being implemented, the programmes in place and the challenges faced. The review has found that Healthy Waters is meeting the majority of the six year targets set out in Schedule 2 of the NDC and overall is making satisfactory progress towards achieving the NDC outcomes and objectives.

A key expected outcome of the review is the identification of changes to the NDC and of improvements to management processes. Given the significant changes upcoming over the next three years, now is not the time to be making major alterations to the conditions or schedules of the NDC. It is recommended that following the next triennial review in 2025 or the next 6-yearly review in 2028, changes to the NDC are undertaken to ensure alignment of NDC requirements with responses to the national reforms and the NPS-FM.

In the interim, recommended changes to the NDC are limited to updates to six year targets (by managers approval request) in order to reflect current programmes, retain consistency with strategic documents, provide clarity and refine wording.

The recommendations of the review focus on continuing to implement and improve programmes which are already in place, and on changes such as process improvements, additional work programmes and provision of further guidance in order to improve the implementation of the NDC. The full recommendations are in section 6.2.