

Schedule 2: Auckland Stormwater NDC Strategic Objectives, Outcomes and Six yearly targets

ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
ISSUE 1: ASSETS			
<p>11 The ability of the stormwater network to cost effectively meet the needs of current and future generations and achieve and maintain healthy receiving environments, is dependent on the design, quality, maintenance and renewal of built assets and their interaction with private networks and natural systems.</p>	<p>Safe Communities: Risk to our communities, including people, property and infrastructure is reduced - ensure that risk to people and property is managed to levels that have been established in consultation with the community, and reduce existing flood risk where it is above these levels.</p> <p>Healthy and Connected Waterways that provide for te mauri o te wai: Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.</p>	<p>O1.1 Manage existing public stormwater assets to meet agreed levels of service.</p> <p>O1.2 Manage erosion effects caused by discharges from the public stormwater infrastructure.</p> <p>O1.3 Improve existing assets by taking the opportunities from redevelopment where they arise.</p>	<p><u>Council Stormwater Infrastructure Performance Standards (all DC)</u></p> <ul style="list-style-type: none"> a) Survey 95% of critical assets every 5 years (AMP) b) Grade 4 critical assets will be repaired or renewed within 5 years (2015 - 2045 AMP) c) Grade 5 highly critical assets will be repaired or renewed within 24 months of identification (AMP) d) Number of blockages in the stormwater network per 100km will be less than 20 per annum (AMP) e) The number of complaints received about the performance of the stormwater network per 1000 properties connected to Auckland Council's stormwater network will be less than 3 per 1000 (LTP) f) Stormwater manholes that pop open in flood events are made safe within two hours: 100% (LTP) <p><u>Identified Reviews and Management Improvements for Managing the Council's stormwater infrastructure (all DC)</u></p> <ul style="list-style-type: none"> g) Review vesting processes to ensure that assets from proposed development meet the requirements of AUP, NDC and Stormwater Code of Practice - measured by annual audit of a sample of vested assets. Process improvements as identified through the audit h) Implement identified stormwater asset management improvement measures (ongoing Business as Usual (BAU)) i) Complete asset and risk assessment of public coastal (completed) and stream outfalls (WA programme) - 2017/18 watercourse assessments completed (Figure 9.5)

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			<p>j) Complete condition and risk assessments of large public stormwater dams (completed by 2023)</p> <p>k) Ongoing review of criticality strategies and assessments for all asset types. Renewal strategy has been completed; critical flood risk asset monitoring strategy in place. Improvements implemented as identified (BAU)</p> <p>l) Review complaints to identify potential issues and renewals (BAU, three yearly reporting of summary statistics from issues register)</p> <p>Note: Progress reporting on AMP targets will be undertaken via the Stormwater AMP</p> <p><u>Collaboration with Stakeholders</u></p> <p>m) Regularly engage with other infrastructure providers on collaborative redevelopment opportunities (Co)</p> <p>n) Implementation and review of the Stormwater Code of Practice and Bylaw (IC)</p>
ISSUE 2: GROWTH			
<p>I2 The way the region grows and develops, and our ability to address existing adverse effects, will determine the quality and health of our freshwater and marine environment.</p>	<p>Support Growth: Growth through water sensitive development and provision of quality stormwater infrastructure is enabled - new and re-developed areas are supported by effective stormwater management and good quality infrastructure and development is undertaken in a way that meets the needs of our communities and maintains and enhances natural water systems.</p>	<p>O2.1 Align stormwater infrastructure planning and provision to development and intensification priorities.</p> <p>O2.2 Integrate water sensitive design into new and major re-development. This can include promoting source control, at source treatment, bioretention, detention and attenuation, and protection</p>	<p><u>Council Stormwater Infrastructure Performance Standards (all DC)</u></p> <p>a) Input into stormwater management plans, including those prepared by developers, in response to all high priority growth areas during structure planning and consenting processes</p> <p>b) 95% of formal enquires to stormwater development are responded to within 5 working days (AMP)</p> <p>c) At least 95% of annual capital works programme to enable growth is delivered (AMP)</p> <p>d) >\$100,000 of other Council departments or CCOs growth projects are supported by the HW capital investment each year (AMP)</p>

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		<p>and enhancement of streams.</p> <p>Q2.3 Enable effective land use and stormwater management planning and co-operation between developers and infrastructure providers.</p> <p>Q2.4 Establish clear standards and processes for the planning, and development of good quality public stormwater infrastructure, particularly in terms of minimising operational and renewal costs, as well as minimising community, environmental and cultural effects.</p> <p><u>Q2.5</u> Develop a coordinated process for management of stormwater approvals including NDC approvals, Stormwater Bylaw, AUP and Engineering Plan Approvals.</p> <p>Q2.6 Develop, in conjunction with industry, a practice note or engineering guideline for stormwater management requirements in a Brownfield development.</p>	<p><u>Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure</u></p> <p>e) Provide updated guidance on the criteria for assets to be vested to Council and connections following approval of the NDC within one year of the granting of consent (DC)</p> <p>f) Facilitate stream rehabilitation through identification of opportunities for offsetting through growth (initial list of offsetting projects completed, ongoing update as new opportunities arise) (IC)</p> <p><u>Collaboration with Stakeholders</u></p> <p>g) Assist in the implementation of stormwater management/land use requirements under the AUP, including advocating for water sensitive design in new growth / major intensification areas (IC)</p> <p>h) Implementation and review of the Stormwater Code of Practice and Bylaw (IC)</p> <p>i) Assist in development and implementation of guidance on Water Sensitive Design; including Guideline GD04 (IC)</p>

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ISSUE 3: FLOODING			
<p>13 A large number of buildings (residential and commercial) and critical infrastructure are at risk of flooding and the problem will increase if past land use and development practices continue.</p>	<p>Safe Communities: Risk to our communities, including people, property and infrastructure is reduced - ensure that risk to people and property is managed to levels that have been established in consultation with the community, and reduce existing flood risk where it is above these levels.</p>	<p>O3.1 Avoid the increase of existing flooding or creation of new flooding of habitable floors as a result of urban development and intensification.</p> <p>O3.2 Reduce existing flood risk by taking the opportunities from redevelopment where they arise.</p> <p>O3.3 Manage existing flood risk to meet levels of service agreed to keep people and property safe from significant harm from flooding, and minimise disruption to critical social and physical infrastructure connections across the city.</p> <p>O3.4 Improved community understanding of, and resilience to, flood hazards.</p>	<p><u>Council Stormwater Infrastructure Performance Standard (all DC)</u></p> <p>a) Council flood hazard GIS layer is maintained so that it is current and publicly available; reviewed on a two-yearly basis</p> <p>b) The number of flooding events and the associated number of habitable floors affected: less than 1 per 1000 properties in Auckland per annum (LTP)</p> <p>c) Proportion of habitable floors protected from flooding in a 1 in 10-year storm: > 99% (AMP)</p> <p>d) Total habitable floors protected from flooding in a 1 in 100-year storm: > 97.5% (AMP)</p> <p>e) Median response time to attend a flooding event, measured from the time that Auckland Council receives notification to the time that service personnel reach site: < 2 hours (LTP)</p> <p>f) Major flood protection and control structures are maintained, repaired and renewed to a safe operating standard (AMP – mandatory national measure - however there are no such structures in Auckland)</p> <p><u>Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure</u></p> <p>g) Provide updated guidance on the criteria for assets to be vested to Council following approval of the NDC (as above, within one year of the granting of consent) (DC)</p> <p>h) Flood resilience strategies are in place for habitable floors that are found to be unfeasible to protect from flooding within 10 years: >50% (IC) (AMP)</p> <p><u>Collaboration with stakeholders-</u></p> <p>i) Work with Civil Defence in identifying areas of flooding that pose a risk to life, as well as to critical infrastructure (Co)</p>

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			j) Assist in the implementation of stormwater management/land use requirements under Unitary Plan, including protection of floodplains and overland flowpaths to prevent flooding from new development (IC) k) Implementation and review of the Stormwater Code of Practice and Bylaw (IC) l) Assist in development and implementation of guidance on Water Sensitive Design, including Guideline GD04 (IC) m) Regularly engage with Local Boards regarding local flooding issues (Co) n) Regularly engage with other infrastructure providers on redevelopment opportunities and identification of critical infrastructure (Co)
ISSUE 4: STREAM HEALTH			
14 Urbanisation and poor stormwater management adversely affects Auckland's urban streams and can cause a loss of aquatic habitat and biodiversity, resulting in biological degradation and impacts on ecological functioning of streams, on the community and on the mauri of freshwater and Maori customary uses of freshwater resources.	Healthy and Connected Waterways that provide for te mauri o te wai: Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	O4.1 Maintain, operate and develop Council's current and future public stormwater network to minimise and reduce adverse effects on streams, groundwater and coastal systems. O4.2 Enhance urban streams and waterways by working collaboratively with key stakeholders such as mana whenua, Local Boards, community groups and the development community to take opportunities where they arise. O4.3 Areas of significant indigenous biodiversity value in terrestrial, freshwater, and	<u>Council Stormwater Infrastructure Performance Standards</u> a) Number of fish passage barriers mitigated: average 10 per year (DC) b) The ratio of the length of watercourse consented to be physically improved versus physically degraded in each year (kms Improved ÷ kms Degraded) 3 or more (LTP). (IC, Co, In) <u>Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure</u> c) Complete asset and risk assessment of public coastal (completed) and stream outfalls (WA programme) - 2017/18 watercourse assessments completed (Figure 9.5) (DC) d) Complete a case study assessment of possible interventions on private streams, taking into account amongst other things ownership, liability and access issues within three years (DC) e) Implement Healthy Waters' Green Infrastructure Policy for Healthy Waters' capital works projects (ongoing BAU) (DC)

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		coastal marine areas are protected from the adverse effects of subdivision, use and development.	<p>f) Incorporate the Mauri model¹ into Healthy Waters’ capital delivery project assessments - model developed, ongoing implementation for all significant projects (DC, Co)</p> <p>g) Develop a region wide decision support system to prioritise interventions for contaminant management purposes (part of Council’s implementation of the NPSFM) and implement projects to improve water quality outcomes where opportunities are identified (completed by 2021) (DC)</p> <p><i>Collaboration with stakeholders</i></p> <p>h) Work with internal and external stakeholders to identify potential collaboration projects for the enhancement of streams (Co)</p> <p>i) Facilitate stream rehabilitation through identification of opportunities for offsetting through growth (initial list of offsetting projects completed, ongoing update as new opportunities arise) (IC)</p> <p>j) Assess feasibility of Council-wide database on stream information (Co)</p> <p>k) Assist in the education and implementation of guidance on Water Sensitive Design; this includes protection of streams, provision of riparian buffers and protection of base flow and other stream enhancement measures (IC)</p> <p>l) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.</p>
ISSUE 5: COASTAL HEALTH			
15 Stormwater contaminants, sourced from urban land use, stream erosion and transport	Healthy and Connected Waterways that provide for te mauri o te wai: Stream, groundwater and coastal	As for O4.1 above	<i>Council Stormwater Infrastructure Performance Standards</i>

¹ The Mauri-model is a best practice tool that can be used to effectively measure and assess cultural impacts of stormwater operations and programmes as part of the project scoping, prioritisation and cost-benefit analysis process. See All Issues/Collaborative Outcomes below – this tool will be developed in conjunction with Mana Whenua

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<p>activities, accumulate in low energy marine environments (such as estuaries and enclosed harbours) and in some areas, occur at levels that adversely affect marine life, community and Maori cultural values, and once diminished, affects Maori customary uses of coastal resources.</p>	<p>water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.</p>	<p>As for O4.2 above</p> <p>As for O4.3 above</p>	<p>a) Volume of contaminants removed from the stormwater network via Auckland Councils maintenance and renewal programmes: 5,000 tons per annum for catchpits (AMP) (DC)</p> <p>b) Volume of contaminants removed from the stormwater network via Auckland Councils maintenance and renewal programmes: 10,000 tons per annum from de-silting ponds and wetlands (AMP) (DC)</p> <p><u>Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure</u></p> <p>c) Provide updated guidance on the criteria for assets to be vested to Council and connections following approval of the NDC within one year of the granting of consent (IC)</p> <p>d) As for Stream Health: Develop a region wide decision support system to prioritise interventions for contaminant management purposes (part of Council's implementation of the NPSFM) and implement projects to improve water quality outcomes where opportunities are identified (completed by 2021) (DC)</p> <p><u>Collaboration with stakeholders</u></p> <p>e) Work with mana whenua and other parties to identify areas of safe consumption of kaimoana/mahinga kai and other aspects of coastal health and values (NPSFM –part of watershed implementation plans) (Co)</p> <p>f) Assist in the education and implementation of guidance on Water Sensitive Design; this includes provisions in respect of at-source reduction and on-site treatment and management of contaminant generating areas (IC)</p> <p>g) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.</p>

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ISSUE 6: GROUNDWATER			
<p>16 Groundwater aquifers underlying urban areas can be adversely affected by land development and stormwater discharges to ground soakage.</p>	<p>Healthy and Connected Waterways that provide for te mauri o te wai: Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways</p>	<p>As for O4.1 above</p> <p>As for O4.2 above</p>	<p><u>Council Stormwater Infrastructure Performance Standards</u></p> <p>a) As for Managing Effects on Coastal Health, focusing on managing contaminants to aquifers</p> <p><u>Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure</u></p> <p>b) As for Managing Effects on Coastal Health, focusing on managing contaminants to aquifers</p> <p>c) Prepare guidance for soakage device design, including treatment requirements (TR2013/40 completed, ongoing implementation)</p> <p><u>Collaboration with stakeholders</u></p> <p>d) Assist in development and implementation of guidance on Water Sensitive Design; including recharge of high use aquifers, peat soils and stream baseflow (IC)</p> <p>e) Input into the implementation and review of the Stormwater Code of Practice and Bylaw (IC)</p> <p>f) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.</p>
ISSUE 7: EFFECTS ON WASTEWATER SYSTEM			
<p>17 In parts of Auckland, particularly where there is a combined stormwater-wastewater network, flood waters are contaminated with wastewater which can cause a public health risk, especially in areas with high contact</p>	<p>Healthy and Connected Waterways that provide for te mauri o te wai: Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of</p>	<p>As for O4.2 above</p>	<p><u>Collaboration with stakeholders (all Co)</u></p> <p>a) Develop a strategy for investigation and management of identified issues relating to cross contamination</p> <p>b) Collaborate with Watercare Services Ltd to identify the optimal solution to reduce overflows to the receiving environment for public and environmental health reasons for the central combined sewer area (Western Isthmus Water Quality Improvement Programme (WIWQIP))</p>

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recreation, and affects the Mauri of the waterbody and thereby has an effect on social and Maori cultural values.	Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways		c) Regularly engage with Watercare Services Ltd and Building Control to identify and assess inflow and infiltration issues and collaboratively design and implement infrastructure upgrades
ISSUE 8: COMMON TO ALL ISSUES			
	<p>Collaborative Outcomes:</p> <p>Stakeholders are engaged to achieve the best stormwater outcomes including for te mauri o te wai for present and future generations.</p>	<p>O8.1 Collaborate with Council departments and CCOs that have a key role in delivering positive stormwater outcomes.</p> <p>O8.2 Build constructive, working relationships with key stakeholders to achieve integrated stormwater solutions and cost effective outcomes.</p> <p>O8.3 Establish effective mechanisms for mana whenua to be appropriately engaged in stormwater management. This includes recognising and actively working to operationalise and integrate the relationship and cultural values mana whenua have with their waterways</p> <p>O8.4 Work with the stormwater industry to continue to</p>	<p><u>Council Stormwater Infrastructure Performance Standards (DC)</u></p> <p>a) Proportion of mana whenua that are satisfied with Auckland Council's engagement with iwi in relation to stormwater projects: 10/19 or more (LTP)</p> <p>b) Percentage of projects that contribute to Maori outcomes: at least 95% (AMP)</p> <p>c) >\$100,000 of other Council departments or CCOs growth projects are supported by the HW capital investment each year (AMP)</p> <p>d) Compliance with NDC – number of abatement notices, infringement notices, enforcement orders or successful prosecutions: 0 (zero) (AMP)</p> <p><u>Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure</u></p> <p>e) Take into account and be cognisant of current or future Iwi Management Plans (DC)</p> <p><u>Collaboration with stakeholders (Co)</u></p> <p>f) Develop and integrate, in partnership with mana whenua, best practice tools which can be used to effectively measure and assess cultural impacts of stormwater operations and programmes as part of the project scoping, prioritisation and cost-benefit analysis process (Mauri-model) - model developed, ongoing implementation for all significant projects</p>

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	<p>Prioritised Investment: Benefits from limited resources are maximised by targeting our priorities to achieve the best outcomes we can afford</p>	<p>identify, refine and communicate best practice and increase industry capacity, resources and knowledge.</p> <p>O8.5 Undertake regional prioritisation that targets investment in the right areas, as agreed within Council, with mana whenua and our community and in accordance with the Auckland Plan vision and statutory requirements.</p> <p>O8.6 Establish levels of service that are relevant and affordable.</p>	<p>g) Establish a draft process to operationalise and integrate the relationship and cultural values mana whenua have with their waterways. This includes annual reporting on mana whenua engagement efficacy in order to determine when engagement took place in a project, what the value of the input was, and how mana whenua feedback was (or was not) incorporated</p> <p>h) Regular engagement with iwi to assess implementation via the mana whenua hui</p>
	<p>Efficient Business: Robust systems, processes, practices and management are implemented to support delivery of stormwater services</p>	<p>O8.7 Undertake efficient and effective network operational, renewals and maintenance programmes.</p> <p>O8.8 Regionalise stormwater management through harmonisation of standards, contracts and business processes.</p> <p>O8.9 Provide fit for purpose information systems and business tools.</p>	<p><u>Council Stormwater Infrastructure Performance Standards (DC)</u></p> <p>As per AMP targets above.</p>

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		<p>O8.10 Undertake efficient and effective response to customers and incidents.</p> <p>O8.11 Rationalise network consents and compliance requirements.</p> <p>O8.12 Monitor and report performance.</p>	