

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

TANK – DRAFT IMPLEMENTATION PLAN

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Contents

TANK – DRAFT IMPLEMENTATION PLAN	1
Action 1: CATCHMENT COLLECTIVES & INDUSTRY PROGRAMMES.....	3
Action 2: REDUCE SEDIMENTATION & MANAGE EROSION RISK	5
Action 3: REDUCE NUTRIENT CONTAMINATION OF FRESHWATER.....	6
Action 4: RIPARIAN MANAGEMENT & STOCK EXCLUSION	7
Action 5: IMPROVE FRESHWATER/ESTUARINE WETLAND & LAKE MANAGEMENT	9
Action 6: REDUCE THE IMPACT OF STORMWATER/WASTEWATER DISCHARGES	10
Action 7: IMPROVE WATER ALLOCATION/USE EFFICIENCY	12
Action 8: INCREASE ECOSYSTEM HEALTH AND BIODIVERSITY.....	14
Action 9: ONGOING COMMUNICATION, COMMITMENT & INVOLVEMENT.....	15
Action 10: INVESTIGATIONS AND MONITORING	16

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

Action 1: CATCHMENT COLLECTIVES & INDUSTRY PROGRAMMES

	Policy	TASK DESCRIPTION	LEAD AGENCIES	PARTNERS	MEASURED BY	TIMEFRAME
1	1, 17, 23, 24, 25, 26	Help landowners establish sub-catchment boundaries for land owner collectives, and identify properties and contact details for collectives Identify where farm plans and catchment plans are to be prepared	Industry Groups Farmer Reference groups Federated Farmers	HBRC – Land Management, IT, Land Science, Environmental Science Beef and Lamb Dairy NZ/Fonterra Ravensdown Hort NZ Mana whenua groups Fish and Game NZ Winegrowers	Development of sub-catchment maps Identify where farm plans applicable	12 months from notification of the Plan in priority catchments
2	24	Templates for operating and managing the catchment collectives to be developed	HBRC – Policy and Land Management	Farmer reference groups Industry Groups Service providers Mana Whenua groups	Templates available	Mid 2020
3	23, 24, 26	Catchment collective plans developed and approved and any relevant industry programmes are aligned with Schedule 30 requirements.	Catchment collectives HBRC – Catchment Management Industry groups	Industry Groups Independent Facilitators/Assessors	Plans for priority catchments approved	Industry/collective programme or farm plan in priority 1 catchment 3 years from operative date
4	24	Catchment collective and Industry Group reporting and recording of information, including: <ul style="list-style-type: none"> Information management systems in place (GIS), held by Council, with multi-party access provided Monitoring programmes 	HBRC – Team Leader, Data; FEMP Project Coordinator HBRC Science	NCC, HDC Catchment collectives Service providers Industry Groups	Information management system to be developed by HBRC by end 2019. Information being recorded	Industry/collective programme or farm plan in priority 1 catchment 3 years from operative date
5	34	Annual meetings ¹ with the Implementation Partners to provide regular progress reports about implementation actions, any relevant SOE information, and reporting on any implementation issues arising and alternative solutions, including adoption of continuous improvements as they arise.	HBRC – Implementation Team, Policy, Science, Catchment Management	Implementation Partners	Annual meetings of implementation partners	Annually

¹ Note the more regular meetings may occur, particularly during the establishment phase of the implementation plan, however this is set as a minimum requirement.

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

6	23, 24, 26, 35	<p>Continue to hold and develop a list of 'Approved Providers' for nutrient budgets and FEPs include information about service providers capable of delivering but not limited to:</p> <ul style="list-style-type: none"> • Independent Facilitation • Catchment plan development • Information recording and reporting • Auditing 	HBRC – Catchment Management, FEMP Project Coordinator,	Industry Groups	List produced and updated annually	Within 18 months of notification of the Plan Change
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TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

Action 2: REDUCE SEDIMENTATION & MANAGE EROSION RISK

	Policy	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
7	17, 20	Council to prepare farm scale information about sediment loss risk to assist in making decisions about mitigation measures using tools such as SedNet, LUC, and LUCI. Note: Identification of high erosion risk is identified within the Priority Catchments within Schedule 28	HBRC – Land Science	HBRC – Data Beef and Lamb Dairy NZ/Fonterra Ravensdown Hort NZ groups	All catchment collectives and industry programmes have GIS based information/maps to identify risk/priority areas/LUC info etc.	Ongoing (as work proceeds in priority catchments)
8	20	Landowner assistance programmes continued; <ul style="list-style-type: none"> Planting materials available for soil conservation work Information about appropriate mitigation measures according to sediment loss risk Funding to support planting programmes. 	HBRC – Catchment Management, Biosecurity – Biodiversity (advisory role)		Plant material available each year Annual Plan funding Readily available information about mitigation measures Reporting on TANK sites identified through the Ecosystem Prioritisation project	Ongoing
9	17, 20	Ensure best practice information available to landowners/managers in relation to reducing erosion risk and sediment losses (relevant also for nutrient management in action 3.11)	HBRC – Catchment Management Industry Groups		Availability of information to landowners Good practice direction in GAPS and industry programmes	Ongoing
10	35	Regularly review the uptake of physical improvements/mitigation measures within the catchments to manage erosion risk, in particular within those catchments identified as high erosion risk	HBRC	Catchment collectives Landowners	Short term- increase in total planting and other mitigation measures for erosion management. Long-term ² reduction in sedimentation of rivers/tributaries and receiving environment	Annual review over the plan lifetime.

² Long-term in this instance is envisaged to extend beyond the timeframe of this plan iteration and to continue into future plan iterations.

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

Action 3: REDUCE NUTRIENT CONTAMINATION OF FRESHWATER

	Policy	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
11	19	Preparation of and application of nutrient management plans by high N and P loss risk land uses, using tools such as Overseer,. Schedule 28 will identify where these activities are a priority.	All Industry Groups Catchment collectives	HBRC – Environmental Science, Land Science, FEMP Project Coordinator	Farms with nutrient management plans	Industry/collective programme or farm plan in priority 1 catchment 3 years from operative date
12	18	Gather and record data about current land use practices, processes and mitigation measures to reduce contamination, especially in relation to high risk activities e.g. use of tile drains	HBRC – Catchment Management, Science. Catchment collectives Industry Groups		A robust database of information within each of the priority catchments	Industry/collective programme or farm plan in priority 1 catchment 3 years from operative date
13	18	Ensure best practice information is available to landowners/managers in relation to reducing nutrient losses (relevant also for sediment management in action 2.9)	Industry Groups	HBRC – Land Management	Availability of information to landowners Inclusion of good practice direction in GAPS and industry programmes	Ongoing
14	18	Information gathering and data management of nutrient loss to monitor the effectiveness of the nutrient management plans and to enable the development of nutrient loads and limits if required.	HBRC – Environmental Information	Industry Groups Consents Compliance	Annual review	Commence 2020 – on going
15	18	Review the monitoring results to determine whether there have positive trends, and where there have not determine whether alternative measures are available and appropriate to address nutrient contamination freshwater	HBRC Science	Tāngata whenua Implementation partners	Annual review	Ongoing

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

Action 4: RIPARIAN MANAGEMENT & STOCK EXCLUSION						
	Policy	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
16	22	Stock including cattle, deer & pigs excluded from rivers, lakes and wetlands in flat/rolling country as priority, and also where bank erosion is identified as a significant and/or long term problem to water quality. This includes the exclusion of sheep unless required as a management tool to promote riparian plant growth and a form pest control.	Beef and Lamb Federated Farmers Catchment collectives	HBRC Compliance All Stock-owners adjoining river	Length of waterway with stock exclusion, and type of situation protected (i.e. erodible bank, flat country)	2023
17	35	Undertake an annual audit of the total expanse of riparian margins which have been fenced and or planted to exclude stock from the river, lake or wetland. Initial assessment required	HBRC Catchment Management Landowners Catchment Collectives Land management		Increased annual amount of waterways where stock are excluded or margins planted.	Annual review for the lifetime of the plan
18	13	Funding available for riparian planting: <ul style="list-style-type: none"> as part of Karamū /Plains riparian shading programme, for wider catchment ecosystem health and erosion control Link with existing Te Karamū Strategy and asset management plan for Heretaunga Plains flooding and drainage scheme	HBRC –Biosecurity – Biodiversity (advisory) Land management, Water Quality/Ecology Asset management	Industry Groups Catchment Collectives	Quantum of grants provided each year	Ongoing
19	11 -13	Riparian planting benefits promoted and information on useful riparian planting solutions produced: <ul style="list-style-type: none"> for Karamū /Plains in relation to drainage and flooding objectives; About indigenous local seed sourcing, in conjunction with stock exclusion, fencing, setbacks within urban developments including though workshops and community planting programmes and education initiatives. Link with existing Te Karamu Strategy and asset management plan for Heretaunga Plains flooding and drainage scheme	HBRC – Biosecurity - Biodiversity, Open Spaces Catchment Management Asset management Marcoms	Biodiversity Guardians of HB DOC Fish & Game Mana whenua groups	Good planting information and support widely available	early 2020
20	11, 12, 20	Undertake riparian planting with mana whenua groups/hapu/marae other community groups and schools	Iwi/hapu/marae/community groups/schools	HBRC – Open Spaces, Catchment Management, EnviroSchools Department of Conservation	Number of planting events per year, number of trees/plants planted	Ongoing – reporting annually

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

				Fish & Game		
21	2	Continue Macrophyte growth control in lowland rivers (weed boat cutting and weed removal) ensuring this is programmed to avoid conflict with the native fish spawning season. Continue this as a management tool until other management outcomes take effect (e.g. shading).	HBRC – Environmental Science, Asset Management	Mana whenua groups	Number of weed boat events per year which avoid conflict with native fish spawning season.	Ongoing
22	35	Monitor the impact of the riparian programme on water quality and ecology. Review trends of water quality outcomes on habitat and ecosystems.	HBRC Science	DOC Mana whenua groups	Annual improvements to water quality, habitats and ecology.	Annual review ongoing for the lifetime of the plan

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

Action 5: IMPROVE FRESHWATER/ESTUARINE WETLAND & LAKE MANAGEMENT						
	Policy	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
23	15, 35	Continue to develop inventory of wetlands and prioritise in terms of their biodiversity value	HBRC – Land Science, , Biosecurity – Biodiversity,	Forest & Bird Fish and Game Biodiversity Guardians of HB	Information about location and state of existing wetlands	Ongoing
24	14, 15	Enhancing existing and identifying areas where protection, reinstatement and creation of additional wetlands can be supported and encouraged; ; <ul style="list-style-type: none"> as a tool for landowners to improve nutrient and sediment management for range of biodiversity values to improve ecosystem health to improve hydrological functioning for amenity and landscape 	HBRC – Land Science, Water Quality/Ecology, Catchment Management, Works Group & Open Spaces DOC Fish & Game Biodiversity Guardians Mana whenua groups	Industry Groups Landowners Biodiversity Guardians of HB	Restoration of 200ha existing wetland area created within 10 years 105ha additional wetland created within 10 years Long-term time frame of 10% increase by 2050.	Within 10 years from operative date
25	15	Funding available for wetland protection and improvements	HBRC	DOC Central Government Fish & Game Biodiversity Guardians/Trust Mana whenua groups	Quantum of wetland funding provided	On-going
26	15	Provide information about and improve capacity in; <ul style="list-style-type: none"> new wetland development and sustainable wetland management how to manage wetlands to improve cultural, ecological, recreational, food gathering opportunities and outcomes 	HBRC - Biosecurity- Biodiversity, Biodiversity Guardians Communications,	HBRC – Land Science, Catchment Management, Water Quality/Ecology DOC Fish & Game Mana whenua groups National Wetland Trust Biodiversity Guardians of HB	Development and dissemination of education material, workshops, social media, communications	Ongoing
28	35	Review and monitor wetland health and existence, and provide reports on the state of the wetlands to help assess the changes seen in the monitoring.	HBRC Science DOC	Mana whenua groups	Annual monitoring reports	Annual for the lifetime of the plan

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

Action 6: REDUCE THE IMPACT OF STORMWATER/WASTEWATER DISCHARGES

	Policy	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
29	28	<p>Develop/maintain a programme for the creation and implementation of site management plans for ‘high risk’ activities in urban stormwater areas.</p> <p>Create a Site Management Plan template to assist in assessing risk consistently between TLA’s.</p> <p>Set-up monitoring and audit regime for risk sites</p>	NCC and HDC HBRC – Asset Management, Policy, Consents and Compliance	Industrial Sector	Template completion. Programme initiation and number of risk activities with site management plan	Template completed within 18 months of notification. Sites in priority areas with site plan by 2025 Develop audit programme.
29	30, 31	<p>Undertake an urban stormwater network stocktake and establish timetable for developing integrated stormwater management plans including through resource consent processes to include:</p> <ul style="list-style-type: none"> • Information gathering, • Preparation of catchment management strategies • Ranking of catchments in priority order • Implementation • Monitoring <p>Encourage/maintain MERI – Monitoring, Evaluation, Reporting and Improvement.</p>	HBRC – Asset Management, Consents/ Compliance, NCC and HDC	Property developers	Programme of work for each council. Links to LTP and annual plan funding	Programme to be adopted by 2020.
30	31	Establish a joint council education programme (for the purpose of educating the public), through collaboration between council staff (e.g. policy, engineers and communications), to develop programme topics, milestones, events etc. to deliver clear messages to the public how to enhance the quality of stormwater, and ultimately our river, estuary and coastal environments.	NCC, HDC, HBRC – Communications, Policy, Asset Management, Catchment Management	HBLASS DOC MfE HBRC - Biosecurity- Biodiversity	Greater community awareness of ways to improve stormwater quality, including reduction of contaminants within the receiving environments (Ahuriri and Waitangi Estuary and the coastal environment)	Implement within 18 months of notification of the Plan Change. Education programme to be ongoing.
31	28, 31	Carry out review of bylaws and engineering standards for stormwater network design and control of stormwater inputs to ensure consistency and alignment between councils.	HBRC – Consents, Asset Management, Policy, NCC, HDC		Bylaws and engineering standards are consistent and aligned	NCC Bylaw review 2019
32	28,30	Encourage and promote wetland protection, management, enhancement and creation and other opportunities for increasing stormwater infiltration where feasible within new urban and	NCC and HDC	HBRC – Policy (Statutory advocacy), Consents, Asset Management	Increased in the number of wetlands within urban and industrial environments	Ongoing

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

		industrial developments, roading realignment and construction and when installing and designing stormwater networks.				
33	35,28,	Encourage an adaptive management approach (including short, medium and long term actions) to form the basis of applications for discharge consent (larger-scale) that result in material improvements over time in stormwater quality entering our waterways including the Ahuriri and Waitangi estuaries.	NCC, HDC, consent applicants HBRC – Consents, Asset Management,		Receipt of an increased number of discharge consent applications which promote adaptive management	Ongoing
34	28, 31	Understand and continually review the capacity and flows in sewage networks and the impacts of stormwater inflow and groundwater infiltration, not excluding the impact on the Ahuriri and Waitangi estuaries as the downstream receiving environment. Develop solutions to reduce risks of water contamination by sewage.	NCC HDC	HBRC - Consents	Sewerage net capacity understood Solutions developed and implemented.	2018 onwards
35	9	Establish joint planning approach to management of existing and new on site wastewater systems. Identify where wastewater poses risks to groundwater and develop joint programmes for resolving groundwater contamination risks from on-site systems, especially those in the aquifer protection areas of the Heretaunga Plains	JWG Drinking Water - NCC, HDC, DHB, HBRC – Policy, Science, Catchment Management		Existing Joint Management Group for drinking water continues to operate	Ongoing
36	28	Investigate on-site stormwater storage options within new and existing buildings/developments, to ensure appropriate stormwater management e.g. timely release to the network; maintenance of the groundwater quality and quality of stormwater into the receiving environment.	NCC HDC	Developers	Quantum of expenditure on research and investigation.	Ongoing
37	31, 35	Monitor the urban streams and receiving environments to determine whether the concentration and loads of contaminants within stormwater and wastewater has reduced and resulting in improvements to water quality.	HBRC	NCC HDC	Improvements to the water quality of the urban streams and state of the receiving environments e.g. improvements to DO in urban streams, more fish species noted etc.	Ongoing

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

Action 7: IMPROVE WATER ALLOCATION/USE EFFICIENCY						
	Policy	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
38	47	Develop the IRRICALC water allocation model to provide consistent water demand calculations for range of crops in Hawkes Bay	HBRC – Environmental Science	Industry Groups Plant and Food/Aqualinc INZ	Accurate and consistent models for determining water demand are available	End 2019 ³
39	46	Continue to develop innovative, flexible and efficient water management systems that maximise water efficiency and water use including through web-based information management systems	HBRC – Environmental Information/IT Industry Groups Water users and irrigators Irrigation NZ		Alternative water management frameworks developed. Water use efficiency improves to 80% Web-based systems being available	Ongoing
40	39 Sch 36	Work with permit holders to <ul style="list-style-type: none"> establish Water User Collectives apply the Stream Depletion calculator to existing consents providing modelling and assessment support for the design options for stream flow maintenance . 	HBRC –hydrology consents, science and engineering Industry groups Permit holders in Heretaunga Plains	Mana whenua	Scheme designed and constructed. Stream flows maintained at specified levels.	On going
41	41	Investigate options for water storage and release to manage stream depletion effects in Ngaruroro R	HBRC Enviro science/info Consents Compliance Policy Asset Management	Needs substantial water user and iwi input in design, funding and management	Progress towards feasibility assessment and implementation if feasible	If feasible - within ten years
42	47	Continue to develop understanding, technology and uptake of efficient water use systems and technology including for ; <ul style="list-style-type: none"> irrigation efficiency urban water use efficiency industrial and commercial water use efficiency 	HBRC – Water management Consents Marcoms	INZ Industry Groups	Quantum of expenditure on efficiency programmes Water use is efficiency improves to 80% Measures of urban water use efficiency developed Water use efficiency meeting an Infrastructure Leakage Index of 4.	Ongoing

³ This is being built in to this financial years (2018-19) work programme but needs to be confirmed to bring this forward so that the model is available in advance of the May 2019 consent renewals

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

43	50	<p>Continue to develop understanding of urban water networks including through</p> <ul style="list-style-type: none"> • monitoring, measuring and reporting urban water use, • understanding current and future water supply and demand, and management options 	<p>HBRC NCC HDC</p>	<p>MfE</p>	<p>Water supply and demand management plans by TAs</p>	
44	9	<p>Establish a joint planning approach to management of risks to un-reticulated domestic water supplies. Identify where water supplies pose quality or quantity risks to communities and develop programmes for resolving issues, especially for communities in the margins of the Heretaunga Plains where groundwater levels pose a risk (also see item 35)</p>	<p>JWG Drinking Water - NCC, HDC, DHB, HBRC – Policy, Science, Land Management</p>	<p>Marae (mana whenua groups)</p>	<p>Joint management group established by end 2019</p>	<p>Ongoing</p>
45	14, 30, 46, 57	<p>Investigate alternative ways to retain water within the landscape (not limited to wetlands) e.g.</p> <ul style="list-style-type: none"> • Increasing organic matter and water holding capacity • Changing management of land subsurface drainage systems • Other options <p>Trial and Implementation of alternative options to improve water use efficiency.</p>	<p>Industry Groups Landowner Collectives</p>	<p>Universities/research organisations HBRC Science Asset management</p>	<p>Investment in research and investigation</p>	<p>Ongoing</p>

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

Action 8: INCREASE ECOSYSTEM HEALTH AND BIODIVERSITY

	Policy	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
46	11, 12, 13	Continue to work with landowners and mana whenua groups through annual asset management plans to improve fish spawning of both indigenous species and trout in areas identified as appropriate spawning sites.	Mana whenua groups Landowners HBRC Asset management	Fish & Game NCC HDC DOC	Increased fish spawning habitat	Ongoing
47	35	Identify location of existing pumps and fish barriers where they inhibit fish passage to and from Ahuriri & Waitangi Estuary in particular (but not limited to the estuaries). Work with pump operators and land owners to develop a programme for upgrading existing pumps and barriers or providing alternative solutions to enable fish passage.	HBRC – Water Quality/Ecology Landowners HBRC – asset management	Mana whenua groups DOC Fish & Game	Increased fish passage/movement.	Ongoing.
48	35	Monitor the health and number of fish species (native and trout) within the TANK Catchments. Review trends over the lifetime of the plan to determine whether mitigation measures to improve water quality have resulted in improvements to ecosystem health and biodiversity.	HBRC – Water Quality/Ecology	Mana whenua groups DOC Fish & Game	Increased numbers and improved health of fish species	Review annually for the lifetime of the plan

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

Action 9: ONGOING COMMUNICATION, COMMITMENT & INVOLVEMENT						
	Policy	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
49	33,35	Communicate progress to the wider community made toward meeting TANK Plan objectives	HBRC Communications Industry Groups Catchment Collectives		Fast facts progress	Ongoing
502		Regularly inform the public of community projects (such as riparian planting days) and identify ways in which they can be involved in organised events via website, Facebook, community newspapers etc.	HBRC – Communications, Land Management	Biodiversity Guardians of HB Mana whenua groups Community Groups	Number of people in attendance & number of events	Ongoing
513		Install river name signage throughout the catchments, this will provide people with a sense of place and ownership over the waterway and surrounding environment.	HBRC – Open Spaces, Works Group, Asset Management, NCC, HDC	Mana whenua groups Community Groups	Number of waterways ‘named’	Ongoing
524		Support riverside and estuary based activities which bring people to the waterways. E.g. HB Trail cycling events, Country 2 Coast, HB Marathon, Iron Māori etc.	HBRC – Transport Planning, Open Spaces, Communications, NCC, HDC, Tourism HB, Recreational Industries	HBRC - Biosecurity-Biodiversity	Number of events each year	Ongoing

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

Action 10: INVESTIGATIONS AND MONITORING

	Policy	TASK DESCRIPTION	LEAD AGENCIES	PARTNERS	MEASURED BY	TIMEFRAME
53	18, 32	Develop an Investigation and Research Programme for the Ahuriri Estuary and Waitangi Estuary to better understand hydrology and water flows, contaminant inputs, estuary flows and function. Collect and collate data on sediment accumulation and algal growth, to include investigation/monitoring of sediment loads in the receiving environments and developing further understanding of its impact.	HBRC – Water Quality/Ecology, Marine and Coast, NCC Mana whenua groups/Mana Ahuriri Trust	DOC, DHB, Te Taiao Environmental Forum, Forest & Bird, Ahuriri Estuary Protection Society, Landcorp and HB Airport	Better understanding about estuary functioning	Ongoing
54	18	Undertake further research and investigation into: <ul style="list-style-type: none"> Nutrient pathways, concentrations and loads in rivers and coastal receiving environments Nutrient uptake and loss pathways Measures to reduce nutrient loss 	HBRC – Land Science, Water Quality/Ecology, Industry Groups	Industry groups Catchment collectives Sustainable Farming Fund MPI	Improved understanding about sources and pathways Improved understanding about mitigation measures	Ongoing
55	18	Develop mitigations or land management responses to address nutrient loss risks in tile drained land	HBRC – Land Management, Land Science, Water Quality/Ecology Industry groups/land owners (Heretaunga plains)	Catchment collectives	Development of management and mitigation measures	Commenced 2019 (SFF project managed by Agfirst)
56	35	Increase monitoring of different metrics that better capture overall Ecosystem Health –as directed by NPS FM 2020	HBRC – Environmental Information	Mana whenua groups, NIWA	Annual reporting SOE monitoring	Ongoing
57	33, 35	Develop protocols, make tools, guides and workshops available to landowners, marae/hapu and community groups to monitor water quality. Including developing clarity around the various levels of public monitoring available and the required outputs from each level (dependant on reason for undertaking monitoring) <ul style="list-style-type: none"> Citizen science/local scale monitoring Schools/education programmes Kaitiakitanga/Matauranga Māori On-Farm monitoring Higher level independent monitoring (similar to SOE) Develop templates for higher level monitoring, and provide support for all other levels of monitoring. .	HBRC –, Land Science, Environmental Science	HBRC, Beef + Lamb, Mana whenua groups Federated Farmers NIWA MPI	Water quality data is collected by catchment collectives, marae/hapu and community groups	Ongoing

TANK DRAFT IMPLEMENTATION PLAN

(Version 6 –October 2019)

58	33	Establish information management systems to collate and report on data collected by community groups and collectives	HBRC – Environmental Information	NIWA LAWA	Information gathered is valued and used	Ongoing
59		Undertake ongoing investigations to better understand the Heretaunga Aquifer. (includes proposed Skytem survey)	HBRC		Information gathered is valued and used in future plan development and decision making.	Ongoing
60	33, 35	Continue the development of the Matauranga Māori stocktake and development of Matauranga Māori monitoring programme to be aligned with SoE programme as necessary. Recognition of cultural memory.	HBRC – Environmental Science, policy (SIG, RMG) Mana whenua groups,	NCC HDC Biodiversity Guardians of HB	Matauranga Māori monitoring framework developed and implemented	Ongoing
61	2	Monitoring and recording gravel deposition within the bed of the Karamū	Mana whenua groups	HBRC	Provide an annual report to HBRC	Ongoing
62	44	Undertake further research and investigation into connectivity between groundwater and surface water abstraction on flows in the Paritua/Karewarewa Streams and their tributaries.	HBRC – Environmental Science Mana whenua groups	HBRC – Environmental Information, Consents, Communications, Catchment Mgmt. Land owners Permit holders DOC Forest & Bird	Better understanding about connection between groundwater and Paritua/Karewarewa Streams and identification of feasible remediation options	Investigation work commenced