

OUR VISION

The mighty Waikato: Caring for our place, empowering our people.
Waikato mārohirohi: Manaaki whenua, whakamana tangata

OUR PURPOSE

Working together for a Waikato region that has a healthy environment, strong economy and vibrant communities.



Waikato Regional Council

Waihou-Piako Flood Protection Advisory Subcommittee Open Agenda

Date: Wednesday, 12 August, 2020

Time: 10:00 am

Location: Diprose Miller, 53-61 Whitaker St, Te Aroha

Members:

- Cr S Husband - Chair (Waikato Regional Council)
- Cr H Vercoe (Waikato Regional Council)
- Cr K Hodge (Waikato Regional Council)
- Cr J Thomas (Matamata-Piako District Council)
- Cr P Buckthought (Hauraki District Council)
- Mayor S Goudie (Thames Coromandel District Council)
- C Buchanan (Landowner targeted ratepayer)
- S Clarke (Landowner targeted ratepayer)
- Richard Cookson (Landowner targeted ratepayer)
- Robert Cookson (Landowner targeted ratepayer)
- S Edmeades (Landowner targeted ratepayer)
- R Hicks - Chair (Landowner targeted ratepayer)
- R Hunter (Landowner targeted ratepayer)
- A McGiven (Landowner targeted ratepayer)
- P Le Heron (ex Chair - Thames Valley Drainage Advisory Subcommittee)
- T Tangatatai (Department of Conservation)
- L Gardner (Iwi Representative - Ngaati Haua)
- D Taipari (Iwi Representative - Hauraki Māori Trust Board)

Alternates:

- Cr D Arnold (Alternate - Matamata-Piako District Council)
- Cr R Garrett (Alternate - Hauraki District Council)
- J Linstead (Alternate - Iwi Representative - Hauraki Māori Trust Board)

I hereby give notice that an ordinary Meeting of the Waihou-Piako Flood Protection Advisory Subcommittee will be held as detailed above.

VRJ Payne
Chief Executive Officer

1. Apologies

2. Confirmation of Agenda

3. Disclosures of Interest

Members are reminded of the need to be aware of maintaining a clear separation between personal interests and duties and their role as a member appointed to this Subcommittee. If any member has an interest that creates an actual, or could be perceived to create, a conflict in relation to any item on the agenda, it is recommended that this be disclosed.

4. Final Quarter Status Report

7

5. Topics for upcoming meetings

20

Flood Protection Advisory Subcommittees

- REPORTING TO:** River and Catchment Management Committee
- CONSTITUTION:** Chair, River and Catchment Management Committee
Waikato Regional Council Constituent Councillors geographically aligned to the respective scheme area
Targeted ratepayers, iwi, and stakeholders from the relevant scheme area(s), appointed by the River and Catchment Management Committee.
- Refer to membership schedule below.
- MEETING FREQUENCY:** Three meetings per calendar year, for each of:
- Waihou-Piako Flood Protection Advisory Subcommittee
Lower Waikato Flood Protection Advisory Subcommittee
- OBJECTIVE:** To provide advice and effective liaison between river and catchment ratepayers, iwi and stakeholders in relation to the operational performance of flood protection assets in the scheme area.
- QUORUM:** Chair or Deputy Chair of the subcommittee and two members of the subcommittee, with at least one being an elected member of Waikato Regional Council.

SCOPE OF ACTIVITY:

1. The Flood Protection Advisory Subcommittees each have an assigned geographical area of interest and their role is to provide local advice to the River and Catchment Management Committee and receive information pertaining to Council's catchment operational work programme. Specifically, to:
 - a. Provide input to river and catchment management activities and operations including the following:
 - Proposed annual work programmes and budgets for the (relevant) scheme
 - Flood protection scheme reviews, level of service reviews, and any other matters that will affect the operation, maintenance and renewal of scheme infrastructure
 - Priority areas for catchment management investment.
 - b. Assist Waikato Regional Council with dissemination of flood protection scheme information.

POWER TO ACT:

The subcommittee's power to act is limited to the following activities that support its advisory function:

1. To complete meeting related procedural matters.
2. To receive information on the progress of operational work programmes undertaken as part of the flood scheme asset maintenance and capital renewals.
3. To receive information on emerging issues affecting flood protection scheme performance.
4. To make recommendations as set out below.

The subcommittee has no other power to act.

POWER TO RECOMMEND:

1. To provide advice to the River and Catchment Management Committee in relation to the flood protection work programmes and asset management in support of the development of annual and long-term plans.
2. To provide advice to the River and Catchment Management Committee on any work programme adjustments, that may be necessary, in relation to the progress of operational work programmes undertaken as part of the flood scheme asset maintenance and capital renewals.
3. To provide advice to the River and Catchment Management Committee on any emerging issues affecting flood protection scheme performance, in order that the River and Catchment Management Committee may consider a response.

MEMBERSHIP SCHEDULE

Lower Waikato Flood Protection Advisory Subcommittee:	Waihou-Piako Flood Protection Advisory Subcommittee:
The Chair – Chair of the River and Catchment Management Committee	The Chair – Chair of the River and Catchment Management Committee
Deputy Chair – As appointed by the subcommittee	Deputy Chair – As appointed by the subcommittee
Waikato Regional Council Constituents for the Lower Waikato zone	Waikato Regional Council Constituents for the Waihou Constituent area
Eight landowner targeted ratepayers which must include two land drainage targeted ratepayers from the Waikato Land Drainage Advisory Subcommittee area (Waikato drainage ratepayers). In the event that appointment of two Waikato drainage ratepayers is not possible, then the Waikato Land Drainage Advisory Subcommittee will be invited to nominate two of its members to also be members of the Lower Waikato Flood Protection Advisory Subcommittee following endorsement by the River and Catchment Management Committee.	Eight landowner targeted ratepayers, which must include: <ul style="list-style-type: none"> •Two Waihou scheme ratepayers •Two Piako scheme ratepayers, and •Two land drainage targeted ratepayers from the Thames Valley Land Drainage Advisory Subcommittee area (Thames Valley drainage ratepayers). In the event that appointment of two Thames Valley drainage ratepayers is not possible, then the Thames Valley Land Drainage Advisory Subcommittee will be invited to nominate two of its members to also be members of the Waihou-Piako Flood Protection Advisory Subcommittee following endorsement by the River and Catchment Management Committee.

One energy company representative (who may appoint one or more alternate)	Four Iwi representatives, one nominated by each of Hauraki Māori Trust Board, Raukawa, Ngāti Hinerangi and Ngāti Haua (who may each appoint one or more alternate)
One appointee from the Department of Conservation (who may appoint one or more alternate)	One appointee from the Dept of Conservation (who may appoint one or more alternate)
Four Iwi representatives nominated by Waikato-Tainui (who may each appoint one or more alternate)	One elected member from each of Hauraki District Council, Matamata Piako District Council, South Waikato District Council and Thames Coromandel District Council (who may each appoint one or more alternate)
One elected member Waikato District Council (who may appoint one or more alternate)	

APPOINTMENT AND TERM OF SERVICE

1. Members are appointed for a term commencing on 1 July following each Regional Council election and concluding on the completion of each triennium¹ (a period of approximately 28 months). Members may be reappointed for any number of subsequent terms. Landowner members are selected by Waikato Regional Council from expressions of interest. Candidates must meet the following criteria:
 - a. Be regional ratepayers within, or having a responsibility for, the geographical area represented by the Advisory Group.
 - b. Be willing to accept membership as a volunteer without compensation.
2. A candidate's special interests may be taken into account when selecting landowner members.
3. The Chair will be held by the Chair of the River and Catchment Management Committee. The Deputy Chair may be any other member and will be appointed by resolution of the Subcommittee in accordance with Standing Orders.
4. Members who do not complete their term of appointment may be replaced at the discretion of either Waikato Regional Council or the authority they represent.
5. Waikato Regional Council may review the membership of the Subcommittee at any time.
6. Territorial authority, agency and Iwi membership is determined by the appointing authority(ies)

MEETING FREQUENCY AND OPERATION

1. There are three meetings held per year.
2. Meetings are advised by public notice. Agendas for the meetings are be compiled by staff in consultation with the Chair, River and Catchment Management Committee.
3. Members may request items to be placed on the Agenda for future meetings provided these are within the scope of these Terms of Reference.
4. A quorum is described above.

CONFLICT OF INTEREST

1. Members must bring to the attention of the Chair any conflict of interest or potential conflict they may have with any item on the agenda. All relevant interests must be disclosed and kept up to date on a register of interests.
2. If a member is deemed to have a real or perceived conflict of interest in a matter that is being considered at a meeting, he/she will be excused from discussions, deliberations and voting on the issue.
3. Members must behave professionally during meetings and in accordance with the Waikato Regional Council Code of Conduct.

Advisory Note: being a landowner and scheme beneficiary does not constitute a conflict of interest.

CONFIDENTIALITY

1. During the course of the business of the Subcommittee, a member will, from time to time, be privy to confidential information. Any confidential information is protected and should not be disclosed until such time as it is released by Council.
2. The spokesperson for the Group is the Chair.
3. Except as otherwise allowed or required by law, the meetings are open to the public. Members may express their individual views on agenda matters. Members must avoid giving the impression that their individual views are necessarily those of Council.

COMMUNICATION AND REPORTING

1. The line of communication between Waikato Regional Council staff and the Subcommittee members will be through the constituent councillor.
2. Issues or actions arising from Subcommittee meetings are responded to by the Chair, River and Catchment Management Committee.
3. All formal communication and information updates to members are circulated electronically.

TERMS OF REFERENCE REVIEW

1. Waikato Regional Council may review this Terms of Reference at any time if it considers circumstances or its community collaboration processes have changed.

¹ Trienniums normally commence in October and end in October 3 years (36 months) later.

ⁱ Trienniums normally commence in October and end in October 3 years (36 months) later.

Report to Waihou-Piako Flood Protection Advisory Subcommittee

Date: 28 July 2020

Author: Macaela Flanagan, Zone Manager Hauraki/Coromandel

Authoriser: Adam Munro, Section Manager Hauraki-Coromandel

Subject: **Final Quarter Status Report**

Section: A (Committee has delegated authority to make decision)

Purpose

1. The purpose of this report is to provide an update to the Waihou-Piako Flood Protection Advisory Subcommittee regarding the delivery of the work programme for flood protection, river management and catchment management activities in the Waihou-Piako Zone.
2. The following items are included in this report:
 - Financial overview
 - Operational programme delivery across the flood protection, river management and catchment management activities
 - Capital programme delivery
 - Specific programme/project updates.

Executive Summary

3. This report provides the subcommittee with an update regarding the Waihou-Piako Zone work programme for the 2019/20 financial year, across the flood protection, catchment management and river management activities. Overall, there was a high level of delivery across the programme, with some influences in phasing, including delivery impacted by the Covid-19 pandemic.
4. The Waihou Zone had an annual plan operational budget of \$8,178,418 across the above activities, with a revised budget of \$8,661,418 (which included forecast costs associated with the Kuaotiti forest harvest). Based on financial reporting to the end of June 2020 the operational budget was 110% spent and had a negative variance of \$831,040.
5. The Waihou Zone had an annual plan capital budget of \$2,395,985 and a revised budget of \$3,757,985 (which incorporates the approved carryover from the 2018/19 financial year). This was primarily related to the flood protection activity, which funds the renewal of existing flood protection assets and the establishment of new assets.
6. The Piako Zone had an annual plan operational budget of \$5,805,449 across the above activities, with a revised budget of \$6,241,949. Based on financial reporting to the end of June 2020 the operational budget was 94% spent and had a positive variance of \$391,839.
7. The Piako Zone had an annual plan capital budget of \$4,432,337 and a revised budget of \$8,897,337 (which incorporates the approved carryover from the 2018/19 financial year). This was

primarily related to the flood protection activity, which funds the renewal of existing flood protection assets and the establishment of new assets.

Staff Recommendation:

That the report Final Quarter Status Report (Waihou-Piako Flood Protection Subcommittee 13 August 2020) be received.

Operational Work Programme and Expenditure

Waihou

8. Table 1 provides an overview of actual operational and capital expenditure by activity area and expense type for the 2019/20 financial year (from 1 July 2019 to 30 June 2020).

	YTD Actual	YTD Budget (Revised)	Variance	FY Budget (Revised)	FY Budget Ann Plan	% Spent
MAINTENANCE						
Catchment Oversight	952,232	1,307,000	354,768	1,307,000	1,132,000	73%
Information and Advice	115,262	91,510	(23,752)	91,510	91,510	126%
Catchment Maintenance	1,959,029	598,837	(1,360,193)	598,837	323,837	327%
Catchment New Works	276,581	369,422	92,841	369,422	369,422	75%
River Management	1,580,161	1,919,117	338,956	1,919,117	1,755,117	82%
Flood Protection	4,583,226	4,316,717	(266,508)	4,316,717	4,374,717	106%
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	9,466,491	8,602,604	(863,887)	8,602,604	8,046,604	110%
Interest on reserve expense	25,967	58,814	32,847	58,814	131,814	44%
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TOTAL OPERATING EXP (OPEX)	9,492,458	8,661,418	(831,040)	8,661,418	8,178,418	110%
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CAPITAL						
Expenditure	1,316,652	3,757,985	2,441,333	3,757,985	2,395,985	35%

Table 1 – Waihou budget and expenditure by activity area (end of June 2020)

9. This section describes the progress of the Waihou operational work programme, which spans the following activities:
- Flood protection, which consists of the work programme to operate and maintain council's flood protection infrastructure (stopbanks, floodgates and pump stations).
 - River management, which consists of improvement to channel stability and capacity and ongoing maintenance including the removal of obstructions.
 - Catchment New Works and maintenance, which delivers and maintains restoration works which protect productive soil and sedimentation to waterways, improve water quality, and protect or enhance biodiversity. These works are delivered through erosion control and prevention, riparian protection through fencing and planting, lake and wetland protection and enhancement, bush fragment protection, and pest plant and animal control.

10. Overall, the Waihou Zone had an annual plan operational budget of \$8,178,418 across the above activities, with a revised budget of \$8,661,418. The year-end operational budget was 110% spent and had a negative variance of \$831,040, including:

- Catchment Management: related to the costs associated with the Kuaioiti forest harvest
- Information and Advice: delayed cross-directorate improvement projects due to Covid and contractor availability.

Piako

11. Table 2 provides an overview of actual operational and capital expenditure by activity area and expense type for the 2019/20 financial year (from 1 July 2019 to 30 June 2020).

	YTD Actual	YTD Budget (Revised)	Variance	FY Budget (Revised)	FY Budget Ann Plan	% Spent
MAINTENANCE						
Catchment Oversight	738,030	876,929	138,899	876,929	745,429	84%
Information and Advice	288,028	154,607	(133,421)	154,607	87,607	186%
Catchment New Works	219,952	268,637	48,684	268,637	233,637	82%
River Management	451,168	520,448	69,280	520,448	520,448	87%
Flood Protection	3,951,008	4,056,982	105,974	4,056,982	3,853,982	97%
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	5,648,186	5,877,602	229,416	5,877,602	5,441,102	96%
Interest on reserve expense	201,924	364,348	162,424	364,348	364,348	55%
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TOTAL OPERATING EXP (OPEX)	5,850,110	6,241,949	391,839	6,241,949	5,805,449	94%
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CAPITAL						
Expenditure	2,255,921	8,897,337	6,641,416	8,897,337	4,432,337	25%

Table 2 – Piako budget and expenditure by activity area (end of June 2020)

12. This section describes the progress of the Piako operational work programme, which spans the following activities:

- Flood protection, which consists of the work programme to operate and maintain council's flood protection infrastructure (stopbanks, floodgates and pump stations).
- River management, which consists of improvement to channel stability and capacity and ongoing maintenance including the removal of obstructions.
- Catchment New Works and maintenance, which delivers and maintains restoration works which protect productive soil and sedimentation to waterways, improve water quality, and protect or enhance biodiversity. These works are delivered through erosion control and prevention, riparian protection through fencing and planting, lake and wetland protection and enhancement, bush fragment protection, and pest plant and animal control.

13. Overall, the Piako Zone had an annual plan operational budget of \$5,805,449 across the above activities, with a revised budget of \$6,241,949. Based on financial reporting to the end of June 2020 the operational budget was 94% spent and had a positive variance of \$391,839.

14. The overspend in Information and Advice is due to unbudgeted expenditure associated with legal fees and \$100,000 for the Muggeridge's project. This amount was funded through an agreed release from the Muggeridge's capital project to undertake approved activities once construction ceased. As there was no third quarter financial forecast, the ability to transfer the funds from the capital programme to the operational budget has not able to be realised (and therefore not reflected in the table above). This will be reviewed at the earliest opportunity (quarter 1 forecast).
15. Table 3 presents the various work programme targets relating to flood protection activity, and what was achieved for the 2019/20 financial year. In addition to the planned work, a range of unplanned tasks, are also undertaken, which arise as the financial year progresses.

Flood Protection				
Measure	Target	Results		
% of planned mandatory maintenance actions achieved	85%	Planned 2376	Completed 2126	% 89% (WP achieved)
% of stopbanks maintained to above designed flood height, as agreed with each zone	Urban: 93% Rural: 93%	Urban 91.71% (WP achieved)		Rural 93.19% (WP achieved)
% of flood recovery plans implemented after major events	50%	Achieved – 100% (1 incident in October 2019 – Waihou, requiring \$151k, for erosion reparation works across 4 sites)		

Table 3 – Flood Protection operational targets and performance (2019/20 financial year)

16. Table 4 presents the work programme targets and what was achieved for the 2019/20 financial year.

River Management				
Measure	Target	Results		
% of planned maintenance action achieved each year	85%	Total Planned 144	Completed 142	% 99% (WP achieved)
% of enquiries acknowledged within 2 working days	85%	<u>Enquiries (region-wide)</u>	<u>Number</u>	<u>% <3days</u>
		Blockage and Instability	13	92%
		River / streambank erosion	28	64%
		Vegetation Removal	25	80%
			61	82%
		Total		(not achieved)

Table 4 –River management operational targets and performance (2019/20 financial year)

17. The Catchment New Works work programme was delivered, including continued delivery of projects which target priority 1 and 2 areas, including the Ohinemuri, upper Piako, upper Topehaehae, Waitoa, Mangapiko, and Waiomou catchments.

18. Table 5 summarises the Catchment New Works outcomes for the Waihou-Piako Zone for the 2019/20 financial year.

Total fence length (m)	Streambank retired (m)	Number of plants	Poles	Total planting area	Retired area
19534	15,412	67,725	500	30.1ha	47.01ha

Table 5 – Waihou -Piako Zone Catchment New Works outcomes

Capital Work Programme and Expenditure

Waihou

19. The flood protection capital renewal work programme for the Waihou Zone consisted of the following planned projects:

- Parawai Road stopbank
- Kapukapu Dam
- Harris stopbank
- Kauaeranga River left spillway

20. The year-end capital financial position includes carry forwards for a range of initiatives that have been impacted by Covid-19.

21. In addition to the planned programme, pumps at Paeroa Main Drain and Mill Road stations were replaced prior to winter and are now in the commissioning period. In the future capital renewal programme, designs continued to be progressed for significant future renewals of the Kirikiri and Puriri schemes.

Piako

22. The Piako Zone had an annual plan capital budget of \$4,432,337 and a revised budget of \$8,897,337 (which incorporates the approved carryover from the 2018/19 financial year). This was primarily related to the flood protection activity, which funds the renewal of existing flood protection assets and the establishment of new assets.

2. The flood protection capital renewal work programme for the Piako Zone consisted of the following planned projects:

- Piako Stopbanks package 2

3. The final capital financial position includes carry forwards for a range of initiatives that have been impacted by Covid-19. These impacts include the missing of consent-specified or weather-related windows to complete the work, along with the interruption of supply chains. The largest variance is attributable to the Muggeridges project, of which \$4M has been carried over the 20/21 financial year.

23. In relation to the capital programme it is noted the floodgate programme budget allocation has been deferred; the zone had provided for a significant floodgate replacement project in the Lower Piako, however these works have been slowed to allow for the long term sustainability of the assets in this reach to be considered and an appropriate solution developed. In lieu of the completion of these projects, shorter-term solutions have been implemented to ensure the agreed level of service continues to be provided. We will have a clearer picture of renewal requirements to be reforecast as part of the programming for the 2021-31 Long Term Plan.

24. Table 6 provides a summary of the projects that currently make up the Waihou-Piako capital renewal programme. This includes projects that are in the initiation, planning and delivery phases.

Project name	Current state	Description
WAIHOU		
Kapukapu Detention Dam	Execute	Design of alterations/upgrade to inlet screen and primary spillway to mitigate risk of blockage highlighted in 2016 Dam Safety Report. Optioneering and design to tender ready information. Construction delayed by Covid but will resume next season. Materials have arrived.
Kauaeranga Spillway and Harris Left Stopbank Upgrade	Complete	Upgrades of SB and spillway completed prior to lockdown.
Kirikiri Bridge Upgrade - Stage 2	Execute	The Kirikiri Stage 2 design project will principally deliver an upgraded stopbank design to provide a flood protection standard of 2% AEP on the right bank and 10% AEP on the left bank taking account of the hydraulic changes created by the NZTA planned SH26 bridge upgrade and relocation of the sediment weir to the WRC ford further upstream. On track.
Mill Road Pump 2 - Replacement	Execute	During the July 2018 flood event the KSB pump in the Mill Rd No.2 pump station had a NLE bearing failure which resulted in extensive damage to the motor. The replacement is still in commissioning, and the electrical upgrade contracts are being finalised.
Paeroa Main Drain Pump 1 Replacement	Execute	Pump installed and functioning.
Parawai Road Right SB	Execute	Capital renewal upgrade of stopbank. Complete except for reseal.
Puriri and Matangiharara SBs Upgrade	Plan	Investigation and design work to prepare the Puriri scheme for construction plans, construction information (consents and access) and associated for tender documentation. Will need to be reviewed post Waihou Scheme Review.
Rolleston Street PS/FG - SCWID	Initiation	Rolleston Street PS/FG. Have confirmed change in catchment size and working with TCDC to progress project.
Electrical upgrades	Execute	Contracts underway to progress electrical upgrades at Mill Road and Paeroa Main Drain.

PIAKO		
Ngatea SB and Haywards FG, Paul Leonards FG, and repair slumps	Execute	Scoping underway. Including review of decommissioning of Haywards FG to remove risk from the recent failures along River Road.
Doug Leonards FG	Initiation	High level investigation done, and replacement HDPE pipe purchased. Due to Ngatea Stopbank stability issues in early 2018, the location of Doug Leonard FG has been flagged as high risk and requiring more geotechnical analysis before initiating earthworks. Replacement Project was put on hold, and investigation to explore option to close floodgate and redirect catchment highlighted for scoping. Awaiting info from HDC regarding internal drainage.
Lower Piako rationalisation (Factory Campbells)	Execute	This phase of the project is a key project control gate, to assess whether it is hydraulically feasible to reduce the number of floodgates from the current three to either one or two. Incorporating several assets in the Lower Piako.
Muggeridges project	Execute	Awaiting funding application outcomes.
Paul Leonards PS Johnstones PS barrel relines	Initiation	Project to reline Paul Leonard PS and Johnstones PS barrels. Ability to source the materials was delayed due to Covid.
Piako Package 2 SB Upgrade	Execute	Construction of stopbank capital renewal upgrades in the Piako zone for the following stopbanks: Hart Road Stream Left spillway, Hart Road Stream Right spillway, Maukoro Landing to Hart Rd Left spillway, Ohinekaua Stream Left spillway, Ohinekaua Stream Right spillway, Pouruiri Stream Right spillway, Boardmans SB, Boardmans SB (Waitoa), Boardmans to West Road Right SB. Delayed because of Covid, but expected to be finished early on in 20/21 season. We are working through the shutdown on the project budget, which may mean some reshaping and reseeding of banks.
Piako SB Scoping	Initiation	Working through the last of the initial scoping documents for 10 stopbanks / spillway stopbanks of the Piako River first emergency ponding zone.
Makoura Canal Right SB	Initiation	Scoping underway.
Electrical upgrades	Initiation	Contracts underway to progress electrical upgrades at Heale St and Ngatea
Johnstones FGs and PS	Initiation	Review of assets and catchment for rationalization and renewal.

Table 6 – Waihou-Piako Capital Programme Summary

25. In addition to the capital renewals programme, a capital land purchase was made for 17ha of land at the mouth of the Piako River. This land was purchased to allow for future savings regarding maintenance and potential rationalization of assets in the catchment.
26. Staff are currently scoping the 2020/21 capital work programme.

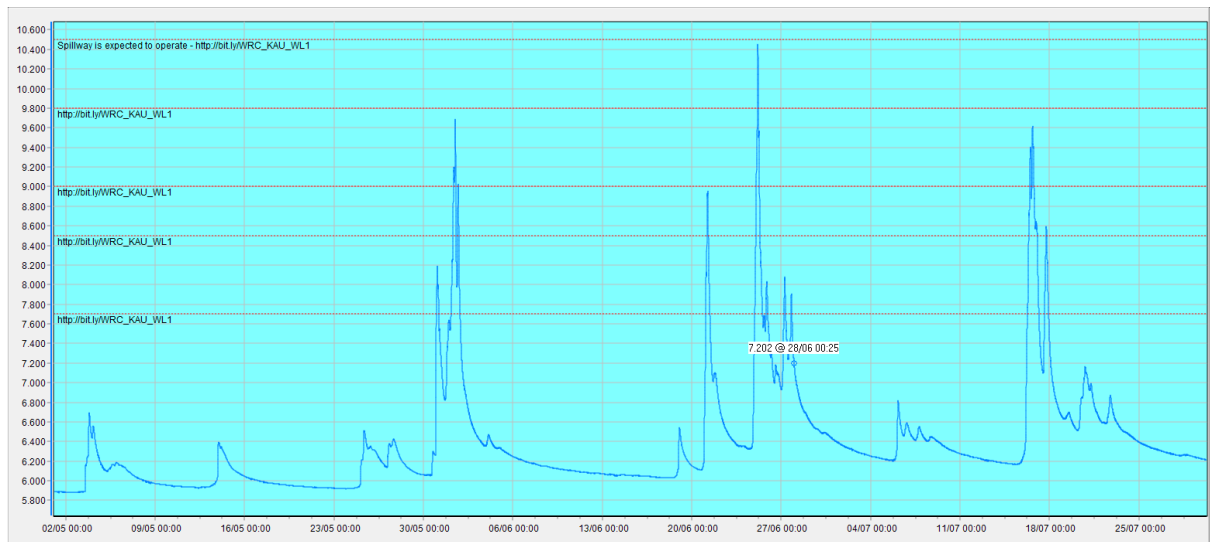
Flood Response Overview

- 27. Despite heavy rainfall events between 1 June and 16 July the Waihou-Piako Zone got off relatively lightly with no flood declarations. Despite the previous period being dominated by a drought and associated minimal flood pump operation, the scheme assets performed well with no significant service level issues being reported. The Kauaeranga River spillway in Thames and the newly installed flood gates on State Highway 26 in Paeroa (Ohinemuri River) were closely monitored, but while coming close to becoming operational, peak water levels did not require them to be activated. However, water did trickle over the spillway in Thames in two of the events but did not result in the closure of the state highway.
- 28. Work is ongoing with WRC, MetService, Local CDEM and NZTA to provide better rain forecasts and tools to enhance our understanding of the river systems and likely impacts, such as State highway closures.
- 29. Hauraki staff were out and about and still busy during these events, monitoring flood levels and assets, the majority of the incidents, were based on “Fly By” dumping rubbish in internal drains getting trapped in floodgates, as these events were the first time some floodgates operated for many months of drought and did note that a number of pumpstations have still not had much running time this season, as the rainfall was concentrated in specific areas as per graph below.
- 30. The heaviest rainfall fell on the eastern side of the Coromandel due to the orographic effect of the ranges. The more southern recorders and those across the plains received much lower totals (as per the table below). A formal situation report or flood declaration was not required, however a more informal email update was issued to stakeholders.

Rainfall Site	Event Totals (mm)*			
	1 June (Queen’s Birthday)	21-22 June	25-27 June	16-17 July
Pinnacles	555	150	555	600
Golden Cross (Karangahake)	265	100	295	235
Te Aroha	10	0	90	15
Apple Tree (Pipiroa)	40	65	85	20
Kaimai	0	36	141	45

**All data to be treated as provisional only.*

- 31. Staff are currently preparing a report which will analyse all events noted, including return periods. At this stage, the estimated return period for the event on 16-17 July for Pinnacles is a 20-year event (approximately 470mm rain fell in a 24-hour period). The Pinnacles rainfall totals in the period 1 January to 29 May (150 days) only 510mm was recorded, but for the following period 30 May to 30 July (61 days) 2060mm was recorded.
- 32. The Kauaeranga River hydrograph for the period 1 May to 30 July showing the four heavy rainfall events observed in that period.



Drought Response

33. A large-scale adverse event was declared for the Waikato in March 2020.
34. In the Piako River scheme over the summer months, several tidal floodgate outlets silt up due the lack of internal flow coming through the system. During this summer, this phenomenon occurred earlier and finished later than usual due to the severely dry conditions, and on the back of a relatively dry 2019.
35. As a result, record low water levels resulted in tuna (eels), and other aquatic species like koi carp and catfish, being 'trapped' in either the low points of drains, small pools/ponds and even in some natural streams as the water completely dried up. This situation also contributed to an avian botulism outbreak that started at a wastewater treatment plant and spread through the lower Piako System.
36. Council staff worked closely and quickly with key stakeholders in response to these events. The establishment of an inter-agency working group has been proposed to ensure operational protocols are in place to guide future responses, as well as agreeing and formalising recovery actions to minimise harm to bird life and fisheries as a result of our respective activities.

Other Projects

Pathways to the Sea

37. The Pathways to the Sea project is a Long-Term Plan funded project to develop a strategy and implementation plan and, importantly, undertake the trialling of various approaches to improving downstream fish passage across flood protection infrastructure.
38. Key progress to date is summarised as follows:
- The project progress has been impacted by both the extended summer drought and by the Covid-19 pandemic, with the completion date has been extended until December 2022.
 - A legislative review is underway and council are continuing to work with the Department of Conservation and the council's Resource Use Directorate to clarify how their rules and regulations apply to the regions' pump stations – many of which were installed prior to the current rules and policies coming into effect. There have been several recent changes to government legislation and policy that are relevant to this project. The Government has released its new National Policy Statement for Freshwater Management (2020) which

will require councils to set objectives for native fish populations, identify in-stream structures and establish a work programme to address barriers to fish migration. National environmental standards for freshwater management are still being drafted and are likely to include standards for fish passage.

- The drought hindered a field trial to investigate migrant tuna behaviour at a pump station where there is also a gravity outlet through which tuna can safely pass. The Steiner Pump Station near Tahuna, where the trial is being conducted, did not operate between November 2019 and early June 2020 due to low rainfall and water levels. The trial is to determine whether tuna would use the safe passage of the floodgate to get to the sea, rather than attempt migration via the pump intake. In January, the National Institute of Water and Atmospheric Research and staff tagged 287 feeder and 24 migrant tuna.

An early review of the PIT (passive integrated transponders) tracking system installed at the site showed 19 tagged tuna at the outlets of the Steiner Pump Station system, however, none left the catchment via the floodgate. The pumps first operated for a short period of time in early June due to rainfall, and nets were put in place at the outlet and monitored. Fourteen shortfin tuna, including one migrant, passed through the pump and all were killed but one.

This project has another year to run and will include further tagging of tuna in early 2021 along with the trial of an electrical barrier. We have learnt a lot from this year's trial and are therefore hopeful of getting some conclusive results next year.

Shovel Ready Projects

39. Waikato Regional Council has bid for more than \$160 million of funding in response to the Government's call for shovel ready projects to help with New Zealand's economic recovery from COVID-19.
40. The bids include funding for flood protection infrastructure and stock truck effluent disposal sites across the region and asked for \$83m to support more than 20 projects focused on protecting and enhancing water quality, biodiversity, soils, and coastal areas.
41. The Government has begun unveiling which projects it will support. Information about our successful projects will be put online as announcements are made. Successful projects for the Waihou-Piako Zone to date (as at 31 July) are Piako river green corridor and Upper Waiomou willow and poplar removal and habitat enhancement.

Piako Green Corridor

42. This project seeks to reconnect the Kopuatai wetland to the Firth of Thames, to have a continuous green corridor along the Piako River. There will also be riparian planting to increase biodiversity and shaded margins to drainage systems extending from Kopu Bridge, Waihou River, to Waitakaruru, Piako River, which will provide important shade to aquatic fish and insects.
43. This is a new project, but it builds on discussions with local iwi and long-term planning and existing programmes. There is potential for this project to be extended over time to add further environmental value in the form of constructed wetlands, e.g. to provide deeper water refuges for our native fish in harsh summer conditions.
44. Help with comp consent offset and will be reviewed against requirements to scheme.

45. We will be working closely with iwi as well as key stakeholders such as lessees, Department of Conservation, Hauraki District Council and Fish and Game.
46. Total funding received is \$2.825M with a total project cost of \$3.225M.



Photo 1 – Piako River 2020

Upper Waiomou willow and poplar removal and habitat enhancement

47. This project is about removing and managing overgrown willow and poplar trees along the upper Waiomou Stream, which are causing the banks to erode, and planting a native corridor instead. It also includes planting the tributaries Rapurapu and Tukutapere streams. The project builds upon work that has been carried out under the Upper Waihou Riparian Strategy since 2012. The native corridor will increase biodiversity habitat for both terrestrial and aquatic species, and connect with the 'Restore Nature, Connecting Communities' programme (Source to the Sea) for the Waihou River, which aims to establish ecological corridors from the Kaimai Mamaku Forest Park to the Firth of Thames.
48. The broader project has had a working group of stakeholders, including Raukawa Charitable Trust, Department of Conservation, Fish and Game, Federated Farmers, Matamata Piako and South Waikato district councils, and the landowners abounding the Waiomou Stream.
49. Total funding received is \$1.74M with a total project cost of \$2.064M.



Photo 2 – Upper Waiomou stream

Muggeridges Pump Station

50. The Muggeridges Pump Station project is awaiting the outcome of a Provincial Growth Fund application, as well as further government bids through the shovel-ready programme.

Grazing licence review 2020

51. The licensing of stopbank and spillway land ensures controlled management of Scheme Land and the protection of any flood control assets. The licence fees derived from grazing of the land contribute to the total costs of administration, management and maintenance of the land and the flood protection scheme. This income offsets the needs for rates in the respective zones.

52. Waihou-Piako grazing licences expired 31 May 2020. As a result of this a review was undertaken by staff, which made changes to the grazing licence agreements for the period 1 June 2020-31 May 2021. Vehicles and tractors are no longer allowed on non-metalled parts of the land during winter, all stock is excluded from the land during winter, and all stock must be kept away from waterways at all times to ensure the integrity of the flood scheme assets. The Waihou-Piako flood scheme switched from a five-year to a one-year licence arrangement which took effect from June 2020.

53. The changes are intended to ensure minimal damage, by excluding activities which compromise the assets at times when the soil has a high-water content. The stock exclusion clause does allow for some flexibility giving the licensee the option to contact council to discuss approval to graze the area if the weather during that time permits.

54. The River and Catchment Management Committee renewed the changes to the licence agreement conditions to ensure minimal damage to scheme land, while also approving the recommendation to freeze the current grazing fees, acknowledging the difficulties that farmers are facing as a result of the drought and the impacts of Covid-19.

Scheme Land Management Plan

55. Staff are in the initial phases of developing a consistent, collective, and strategic approach to the future management of scheme land across all zones, in the form of a Scheme Land Management

Plan. This will involve reviewing all background documents, including proposed and existing legislation, policy documents, grazing licence agreements and licensee compliance. ICM will seek council endorsement of the Scheme Land Management Plan. The outcomes of this will inform next year's decisions on grazing licences.

Conclusion

56. The Waihou-Piako Programme had a high level of delivery across the flood protection, river management and Catchment New Works programme. The phasing of the programme has been adjusted where necessary, particularly recognising the restrictions in the later part of the financial year due to the Covid-19 pandemic.

Report to Waihou-Piako Flood Protection Advisory Subcommittee

Date: 3 August 2020

Author: Macaela Flanagan, Zone Manager Hauraki/Coromandel

Authoriser: Greg Ryan, Acting Director Integrated Catchment Management

Subject: **Topics for upcoming meetings**

Section: A (Committee has delegated authority to make decision)

Purpose

1. To have a discussion and consider which topics/agenda items the Committee would like to include in upcoming Committee meetings, noting the scope of the Subcommittee as outlined in the approved Terms of Reference.

Staff Recommendation:

That the report Topics for upcoming meetings (Waihou-Piako Flood Protection Advisory Subcommittee 12 August 2020) be received.