Crown Infrastructure Partners

Hanga Ngātahi • Building Together

Te Tari Taiwhenua Internal Affairs

QUARTERLY 3 WATERS INFRASTRUCTURE FUNDING UPDATE

to 30 JUNE 2021

CONTENTS

Cover: Morrinsville Water Treatment Plant
Pipe Laying using mole plough technique on Mt Alexander, Glendhu in the Hurunui District

3 WATERS INFRASTRUCTURE INVESTMENT OVERVIEW

THE 3 WATERS STIMULUS INVESTMENT IS AN INITIATIVE BY THE GOVERNMENT TO STIMULATE RECOVERY AND HELP REFORM UNDER PRESSURE WATER SERVICES TO A MORE SUSTAINABLE FOOTING.

The Government is funding $523.1 million to 67 local authorities to invest in the improvement of drinking water, wastewater treatment network renewals, and storm water networks. A number of local authorities have contributed additional funding totalling $131 million. The Government's funding priorities are for investment into drinking water and wastewater infrastructure first, and then storm water.

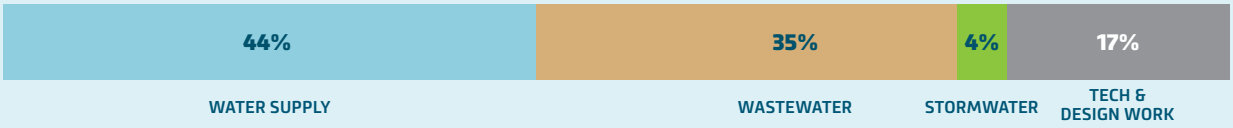
Each local authority has selected the 3 Waters infrastructure investment most needed in their areas and is managing the delivery of the programme.

Nationally 44% is to be spent on water supply, 35% on wastewater, 4% on stormwater and 17% on projects common to all three such as management systems.

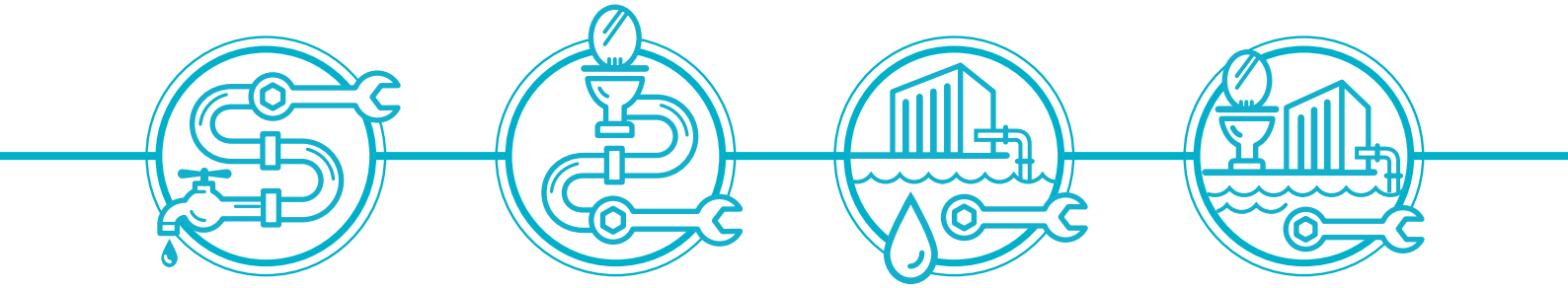
The programme is made up of 461 discrete projects or programmes of work from the Far North to the deep South and west as far as the Chatham Islands.

The Department of Internal Affairs (DIA) has appointed Crown Infrastructure Partners (CIP) to monitor the delivery of the infrastructure investment, identify any opportunities for economies of scale, monitor potential regional or national shortages and assist where problems arise. CIP provides quarterly reports to DIA and recommends funding claims by local authorities to DIA.

TOTAL COMBINED SPEND BY INFRASTRUCTURE TYPE



NATIONAL MAJOR INFRASTRUCTURE PROJECTED



260km
DRINKING WATER PIPE UPGRADES

157km
WASTE WATER PIPE UPGRADES

318
DRINKING WATER TREATMENT PLANT (WTP) UPGRADES

419
WASTE WATER TREATMENT PLANT (WWTP) UPGRADES

OVERALL FUNDING 3 WATER INFRASTRUCTURE

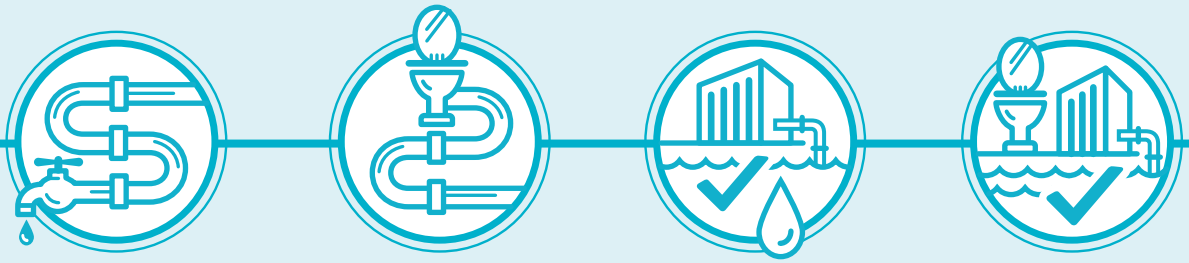
GOVERNMENT FUNDING
$523m

CO-FUNDING
$131m

TOTAL FUNDING
$654m

PROGRESS TO DATE

MAJOR INFRASTRUCTURE TYPES



123km
drinking water pipes
47% of projected

34km
wastewater pipes
22% of projected

12
WTP upgrades
4% of projected

60
WWTP upgrades
14% of projected

FUNDING

$145.9m
Government spend
83% of projected

$29.3m
Co-funded spend
17% of projected

$175.2m
Total spend
100% of projected

WORKERS (Full Time Equivalent)

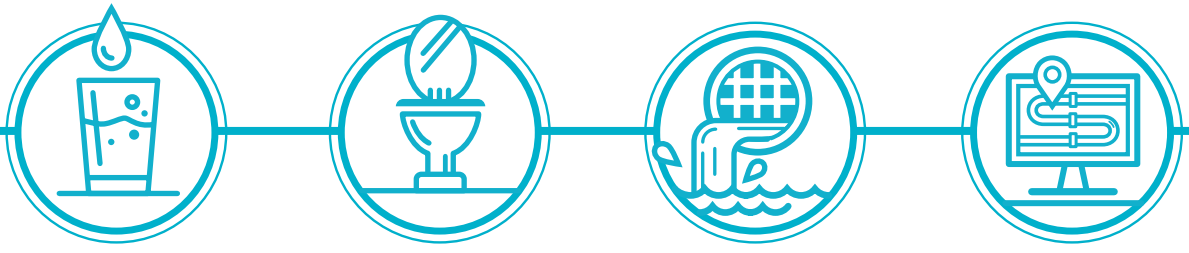
PROGRESS TO PROJECTED: 1,446
75% of target

PROJECTED: 1,925

END OF QUARTER: 1,367

GROWTH IN QUARTER: 1,446

INFRASTRUCTURE TYPE TOTAL FUNDED[1]



$81.4m
Drinking water
29% of projected

$53.7m
Waste water
23% of projected

$6.6m
Stormwater
25% of projected

$33.5m
Tech and Design Work
30% of projected

1 Includes Government and co-funding

Council contractor prepares for directional drilling of water mains prior to installation.

TAUPŌ CASE STUDY
3 WATERS STIMULUS PROGRAMME

IN SEPTEMBER 2020, THE TAUPŌ DISTRICT COUNCIL SUBMITTED AN AMBITIOUS PROGRAMME OF WORKS TO IMPROVE THEIR 3 WATERS INFRASTRUCTURE WITH AN ESTIMATED COST OF $8.32 MILLION THAT THEY PROPOSED TO BE FUNDED FROM THE GOVERNMENT'S 3 WATERS STIMULUS PROGRAMME.

The projects included;

- Upgrade of six drinking water supply schemes to include disinfection treatment with ultra-violet light;
- New and upgraded water mains in the district, including the installation of zone flow meters;
- Wastewater network renewals and condition assessments, including infiltration and inflow studies to reduce sewer overflows;
- A major upgrade of Supervisory Control and Data Acquisition (SCADA) and telemetry systems, to improve the reliability and integrity of the data being obtained from remote water and wastewater facilities; and
- Installation of stormwater treatment devices to improve the quality of the storm run-off into Lake Taupō.

Successfully completing this programme requires skilled programme management and competent project managers. The General Manager, Operations and Delivery, Kevin Strongman appointed Pernille Fletcher to the Programme Management role at the outset and comprehensive project plans were developed at a very early stage. The programme was broken down into nine specific projects and each assigned to a dedicated project manager.

4 WASTEWATER PROJECTS ($2.72 M)

An early start was made on the wastewater overflow reduction project (Project 1, $533K) which included condition assessment of wastewater pipes using an acoustic technique for identifying potential defects, called SL-Rat or Sewer Line Rapid Assessment Tool. By January 2021, around 736 sewer pipes had been checked and by

Sewer Line Rapid Assessment Tool in action in Taupō CBD.

April 2021, this had increased to 1,030 pipes, with 2,639 manholes raised in the process.

The Closed-Circuit Television Video (CCTV) project (Project 4, $250K) used a video camera to inspect wastewater pipes and was 100% completed in February when over 20 kilometres of pipelines had been inspected. This also required the contractors to remove 190 tonnes of debris in order to allow the CCTV camera through the pipes.

A comprehensive infiltration and inflow study (Project 5, $176K) was completed in both Taupō and Turangi to identify the extent of ingress of stormwater into the wastewater network, to reduce the number of wet weather sewer overflows.

Finally, the wastewater relining project (Project 8, $1.76M) targets the relining of high-risk pipes in the Taupō and Turangi network. This project is well underway with 100% of the Taupō section complete and 18% of the Turangi sewer relining and repairs complete.

3 DRINKING WATER PROJECTS ($4.2M)

Valve installation for water network renewals.

Engineers have been engaged to undertake drinking water improvements (Project three, $1.9M) at six water treatment plants that are being upgraded across the District. These include Atiamuri, Whakamaru, Whareroa, River Road Waihaha and Tirohanga. The upgrades will provide a secondary barrier for disinfection using UV treatment, in addition to the residual disinfection currently in place.

Approximately 25 zone flow meters are in the process of being installed across the Taupō, Turangi and Mangakino water networks to better understand water loss across the District and reprioritise renewals based on that information (Project 6, $533K).

The Water Network Renewals project (project 8, $1.76M) has successfully upgraded over 4 kilometres of pipe network to

Installation of the Defender Unit as part of the Hawai Street Stormwater project.

date (85% complete) with ongoing work expected to reduce unplanned service interruptions across the water network.

STORMWATER PROJECT ($426K)

The project to install a “Downstream Defender” stormwater treatment device in Hawai St, close to the outfall to Lake Taupō, was completed in March 2021. The device, which creates a vortex effect to separate out pollutants from the incoming flow, reduces the amount of debris, suspended solids and floatables (such as oil and grease) that enter the receiving environment.

This was one of a number of these devices being installed in Taupō to improve the quality of the stormwater discharge. An average of three tonnes of debris is taken from each device each year. Across the District the prevents 24 tonnes of pollutants from making its way into Lake Taupō.

SCADA / TELEMETRY UPGRADE ($960K)

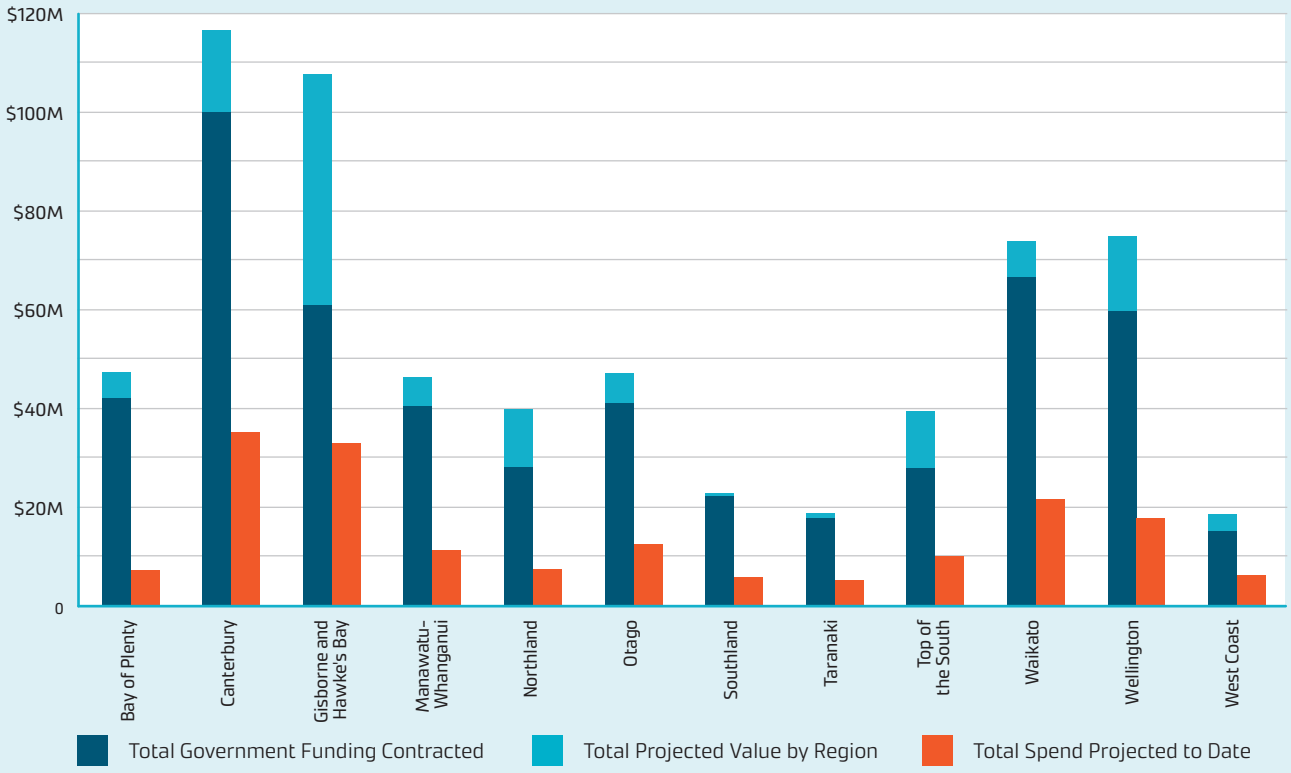
This upgrade will ensure that Taupō has a modern and reliable SCADA system to provide a high level of assurance that operating information, and mandatory Drinking Water compliance data, is accurately reported to both system operators and the regulator. The project is on track and 43% complete as at 30th June 2021.

As at 30 June 2021, Taupō has completed 60% of their programme and invested $4.85M (58%) of the $8.32M allocated. A total of $7M (84%) is committed and in progress with contractors and suppliers.

Water Operations Manager reviewing SCADA screens at the Treatment Plant.

REGIONAL SUMMARY

TOTAL GOVERNMENT FUNDING CONTRACTED AND TOTAL PROJECTED VALUE



Total projected value is deemed on the same basis therefor is total value of contracted projects

WORKER FTE PROJECTED AND PROGRESS TO PROJECTED

UPDATE BY REGION

Weld -string for the Waikouaiti Watermain replacement, East Otago, Dunedin City Council

NORTHLAND

Far North District Council
Te Kaunihera o Tai Tokerau ki te Raki

Kaipara te Oranganui
KAIPARA DISTRICT
Two Oceans Two Harbours

Whangarei District Council

INFRASTRUCTURE TYPE	**In Progress** New water source added	**1** WT Plant upgrades	**8.6km** Potable water mains/pipes upgraded	**In Progress** Wastewater pipes upgraded	**1** WWTP upgrades
FUNDING	**$6.7m** Government spend to date	**$0.9m** Co-funded spend to date	**$7.5m** Total project spend to date	**$39.9m** Total projected spend	
LOCAL WORKERS FTE*	Progress to projected: **62.8** 70% to projected	Growth since start: **62.8**	Projected: **90**	Employment end of Quarter: **32.1**	

Kaikohe Monument Hill Deep Bore site

* FTE refers to full time equivalent hours worked.

WAIKATO

Waikato District Council · Hamilton City Council Te kaunihera o Kirikiriroa · Otorohanga District Council (Otorohanga - where kiwis can fly) · Thames Coromandel District Council · Waipa District Council · Hauraki District Council · Great Lake Taupō · Waitomo District Council · South Waikato District Council · matamata piako district council

INFRASTRUCTURE TYPE

1.5km	In Progress	7.0km	1	36%
Wastewater pipes upgraded	Sludge removal from ponds	Potable water mains / pipes upgraded	Water meters installed	Strategy Study or report

FUNDING

$20.9m	$0.9m	$21.8m	$73.9m
Government spend to date	Co-funded spend to date	Total spend to date	Total projected spend

LOCAL WORKERS FTE*

Progress to projected:	Growth since start:	Projected:	Employment end of Quarter:
123	123	296.9	119.33
41% to projected			

Taupo New SCADA installation at Hatepe

* FTE refers to full time equivalent hours worked.

BAY OF PLENTY

Tauranga City
Ōpōtiki District Council
Taonga o te Whenua KAWERAU TREASURE OF THE LAND
Western Bay of Plenty District Council
ROTORUA LAKES COUNCIL Te kaunihera o ngā roto o Rotorua
WHAKATĀNE District Council Kia Whakatāne au i ahau

INFRASTRUCTURE TYPE	**1.0km** Wastewater pipes upgraded	**6** WWTP upgrades	**1** WTP upgrades	**0.4km** Stormwater pipes upgraded	**8.5km** Potable water mains / pipes upgraded
FUNDING	**$7.0m** Government spend to date	**$0.4m** Co-funded spend to date	**$7.4m** Total spend to date	**$47.5m** Total projected spend	
LOCAL WORKERS FTE*	Progress to projected: **45.5** 34% to projected	Growth since start: **45.5**	Projected: **134**	Employment end of Quarter: **45.4**	

Omokoroa Storm Water Bund

* FTE refers to full time equivalent hours worked.

GISBORNE & HAWKE'S BAY

HASTINGS DISTRICT COUNCIL
Te Kaunihera ā-Rohe o Heretaunga

NAPIER CITY COUNCIL
Te Kaunihera o Ahuriri

WAIROA DISTRICT COUNCIL

Te Kaunihera o Te Tairāwhiti
GISBORNE DISTRICT COUNCIL

CENTRAL HAWKE'S BAY DISTRICT COUNCIL

INFRASTRUCTURE TYPE	**In Progress** WWTP upgrades	**1.1km** Potable water mains / pipes upgraded	**5.1km** Wastewater pipes upgraded	**In Progress** WTP Upgrades
FUNDING	**$17.8m** Government spend to date	**$15.3m** Co-funded spend to date	**$33.1m** Total spend to date	**$107.6m** Total projected spend
LOCAL WORKERS FTE*	Progress to projected: **86.4** 41% to projected	Growth since start: **86.4**	Projected: **211**	Employment end of Quarter: **79.2**

Central Hawkes Bay New Wastewater Mains

Gisborne Wastewater Treatment Plant

* FTE refers to full time equivalent hours worked.

TARANAKI

Te Kaunihera-ā-Rohe o Ngāmotu
New Plymouth District Council

Te Kaunihera ō Taranaki ki Te Tonga
South Taranaki District Council

TE KAUNIHERA Ā ROHE O WHAKAAHURANGI
STRATFORD DISTRICT COUNCIL

INFRASTRUCTURE TYPE	**5.7km** Drinking Water pipes upgraded	**1** Waste pump station upgrades	**In Progress** Stormwater pipes upgraded	**In Progress** Bore upgrades	**In Progress** WWTP upgrades
FUNDING	**$5.2m** Government spend to date	**$0.1m** Co-funded spend to date	**$5.3m** Total spend to date	**$19.0m** Total projected spend	
LOCAL WORKERS FTE*	Progress to projected: **39.9** 59% to projected	Growth since start: **39.9**	Projected: **68**	Employment end of Quarter: **39.9**	

Drill at Patea, South Taranaki D.C., new bore

Rama Road, South Taranaki D.C., Watermain

* FTE refers to full time equivalent hours worked.

MANAWATŪ-WHANGANUI

PALMY
WHANGANUI DISTRICT COUNCIL
Te Kaunihera a Rohe o Whanganui
RUAPEHU DISTRICT COUNCIL
Horowhenua DISTRICT COUNCIL
TARARUA DISTRICT COUNCIL
RANGITIKEI DISTRICT COUNCIL
Making this place home
MANAWATU DISTRICT COUNCIL

INFRASTRUCTURE TYPE	**6.5km** Wastewater pipes upgraded	**50** WWTP upgrades	**In Progress** WTP upgrades	**In Progress** Stormwater pipes upgraded	**3.1km** Drinking water pipes upgraded
FUNDING	**$11.2m** Government spend to date	**$0.3m** Co-funded spend to date	**$11.5m** Total spend to date	**$46.4m** Total projected spend	
LOCAL WORKERS FTE*	Progress to projected: **123.9** 83% to projected	Growth since start: **123.9**	Projected: **148.4**	Employment end of Quarter: **123.9**	

Palmerston North Waste Water Treatment Plant

Hikumutu Waste Water Treatment Plant upgrade, Ruapehu D.C.

* FTE refers to full time equivalent hours worked.

WELLINGTON

Absolutely Positively Wellington City Council ** Me Heke Ki Pōneke
Greater Wellington ** Te Pane Matua Taiao
Te Kaunihera o Te Awa Kairangi ki Uta Upper Hutt City Council **
Kāpiti Coast DISTRICT COUNCIL
SOUTH WAIRARAPA DISTRICT COUNCIL ** Kia Reretahi Tātau
HUTT CITY ** TE AWA KAIRANGI
MASTERTON DISTRICT COUNCIL
CARTERTON DISTRICT COUNCIL

INFRASTRUCTURE TYPE	**In Progress** WTP upgrades	**2km** Capital renewals	**9.2km** Asset condition assessments	**4.1km** Maintenance (all waters)	**10%** Data and technology projects
FUNDING	**$17.6m** Government spend to date	**$0.2m** Co-funded spend to date	**$17.9m** Total spend to date	**$74.9m** Total projected spend	
LOCAL WORKERS FTE*	Progress to projected: **141.6** 86% to projected	Growth since start: **141.6**	Projected: **164.7**	Employment end of Quarter: **119.3**	

Sewer renewal Karori, Wellington City Council

Wellington Wastewater CCTV set up

* FTE refers to full time equivalent hours worked.
** Delivered through Wellington Water

TOP OF THE SOUTH

Nelson City Council Te Kaunihera o Whakatū

tasman district council | Te Kaunihera o te tai o Aorere

MARLBOROUGH DISTRICT COUNCIL

INFRASTRUCTURE TYPE	**0.8km** Drinking water pipes upgraded	**1** Waste pump station upgrades	**2.1km** Wastewater pipes upgraded	**In Progress** WTP upgrades	**In Progress** WWTP upgrades
FUNDING	**$8.5m** Government spend to date	**$1.8m** Co-funded spend to date	**$10.3m** Total spend to date	**$39.5m** Total projected spend	
LOCAL WORKERS FTE*	Progress to projected: **89.4** 70% to projected	Growth since start: **89.4**	Projected: **128.6**	Employment end of Quarter: **89.4**	

Wastewater storage tank upgrade, Nelson City Council

* FTE refers to full time equivalent hours worked.

WEST COAST

WESTLAND DISTRICT COUNCIL

MĀWHERA GREY DISTRICT COUNCIL

BULLER DISTRICT COUNCIL
Te Kaunihera O Kawatiri

INFRASTRUCTURE TYPE	**9.8km** Drinking water pipes upgraded	**In Progress** Treated water storage	**8.8km** Wastewater pipe inspections	**In Progress** Wastewater pipes upgraded	**In Progress** WTP upgrades
FUNDING	**$4.2m** Government spend to date	**$2.3m** Co-funded spend to date	**$6.5m** Total spend to date	**$18.6m** Total projected spend	
LOCAL WORKERS FTE*	Progress to projected: **90.0** 188% to projected	Growth since start: **90.0**	Projected: **48**	Employment end of Quarter: **89.9**	

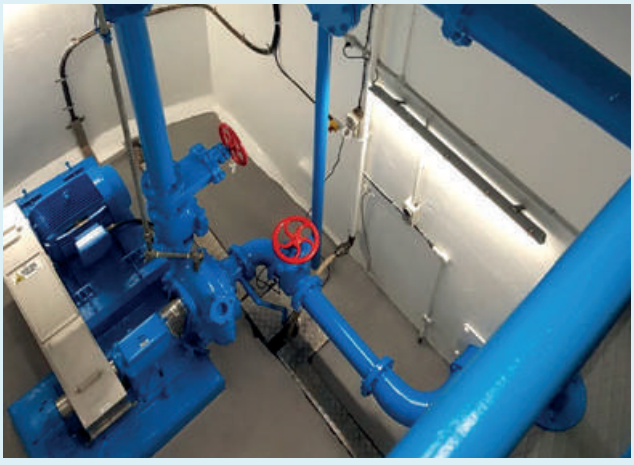
Westport trunk water main

* FTE refers to full time equivalent hours worked.

CANTERBURY

Christchurch City Council · Waimate District Council · Waimakariri District Council · Timaru District Council · Kaikōura District Council · Ashburton District Council · Hurunui District Council · Mackenzie District Council · Selwyn District Council

INFRASTRUCTURE TYPE	**15km** Wastewater pipes upgraded	**66.5km** Drinking water pipes upgraded	**1** WTP upgrades	**23** Waste pump station upgrades	**15** Water meters installed
FUNDING	**$29.8m** Government spend to date	**$5.4m** Co-funded spend to date	**$35.2m** Total spend to date	**$116.7m** Total projected spend	
LOCAL WORKERS FTE*	Progress to projected: **482.7** 125% to projected	Growth since start: **482.7**	Projected: **387.6**	Employment end of Quarter: **482.7**	



Stappletons Road Water Supply Pump Station for Christchurch City Council

* FTE refers to full time equivalent hours worked.

OTAGO

DUNEDIN CITY COUNCIL | kaunihera a-rohe o Ōtepoti

CENTRAL OTAGO DISTRICT COUNCIL

Clutha District Council

QUEENSTOWN LAKES DISTRICT COUNCIL

Waitaki DISTRICT COUNCIL

INFRASTRUCTURE TYPE	**9.5km** Drinking water pipes upgraded	**5** WTP upgrades	**1** WWTP upgrades	**In Progress** Treated water storage	**2.3km** Wastewater pipes upgraded
FUNDING	**$11m** Government spend to date	**$1.7m** Co-funded spend to date	**$12.7m** Total spend to date	**$47.2m** Total projected spend	
LOCAL WORKERS FTE*	Progress to projected: **106.1** 66% to projected	Growth since start: **106.1**	Projected: **160.0**	Employment end of Quarter: **106.1**	

QLDC - Lining of Wastewater Mains

Dunedin CC - Waikouaiti

* FTE refers to full time equivalent hours worked.

SOUTHLAND

Invercargill City Council

Southland District Council

Gore District Council

INFRASTRUCTURE TYPE	**2.7km** Drinking water pipes upgraded	**0.5km** Wastewater pipes upgraded	**1** WWT Plant upgrades	**1.8km** Wastewater pipe inspections	**0.5km** Stormwater pipes upgraded
FUNDING	**$5.9m** Government spend to date	**$0.0m** Co-funded spend to date	**$5.9m** Total spend to date	**$23.0m** Total projected spend	
LOCAL WORKERS FTE*	Progress to projected: **55** 63% to projected	Growth since start: **55**	Projected: **88**	Employment end of Quarter: **39.9**	

Southland DC – Waianiwa SW Renewal

* FTE refers to full time equivalent hours worked.

GLOSSARY

INFRASTRUCTURE TYPE

Drinking Water: Drinking water (sometimes also referred to as potable water) projects include improvements to any of the components that are used to convey water from the source, make it safe to drink and deliver it to customers. This includes treatment plants, reservoirs, pumps, pipes and instruments.

Wastewater: Wastewater projects include improvements to any of the components that collect sewage and industrial wastewater, treatment to remove harmful contaminants and return the water to the environment. It includes pipes (sewers), pumps, treatment plants, instruments, and outfalls.

Stormwater: Stormwater projects include improvements to the dams and pipes which convey rainwater safely to streams, rivers, and the sea.

SCADA: Supervisory, Control and Data Acquisition systems are electronic networks which enable remote control and monitoring of unmanned network facilities.

Bore: A drilled hole or excavation to provide access to ground water.

Raw Water: Water that is taken from the environment and treated to produce water safe for drinking.

Hydraulic Models: Hydraulic models are computer programmes which mimic the flow and pressure of water, wastewater and stormwater in piped networks.

Potable water: Potable water contains no disease causing organisms nor harmful chemicals and is safe to drink.

Treatment plant: A facility to treat raw water to make it safe for drinking, as per the requirements of the Drinking water Standards of New Zealand.

WTP: Water Treatment Plant. This is a facility/equipment that takes in raw water and treats it through a variety of means (filters, chemical dosing, ultra-violet light) so it is safe and fit for human consumption.

WWTP: Wastewater Treatment Plant. There are many different ways to treat wastewater. A waterwater treatment plant typically consists of a number of different processes (screening, biological processes and sometimes disinfection) to remove solids and treat effluent before it is piped to land, river or sea or used for irrigation use.

FTE Definitions:

Projected FTE is the number of estimated workers that would be supported by a particular project. Established during the planning and due diligence process.

Progress to Projected FTE is the equivalent number of full-time equivalent workers that were employed over the main construction phase of a project or programme of work. For example, in the early stages of a project or programme the number of workers (FTE) can be low, but rapidly increases as a project enters the main construction phase; this is the appropriate number to compare against the project projected.

Employment end of Quarter FTE is the actual number of FTE workers on site at that point in time.