

QUARTERLY 3 WATERS INFRASTRUCTURE FUNDING UPDATE

Q1: to 31 MARCH 2021



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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 \$135.3 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 to be complete by March 2022.

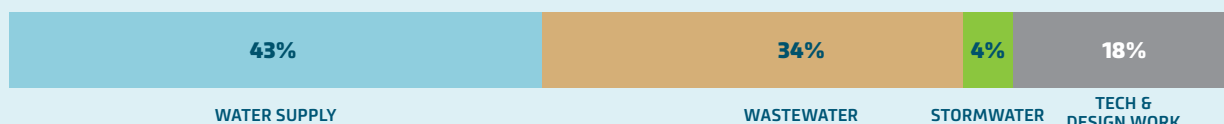
Nationally 43% is to be spent on water supply, 34% on

wastewater, 4% on stormwater and 18% on projects common to all three such as management systems.

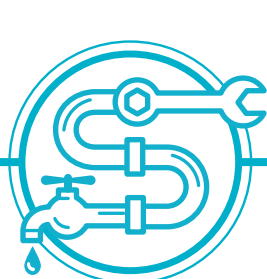
The programme is made up of 461 discrete projects or programmes of work from the Far North to the deep South and west as far as the Chatham Islands.

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.

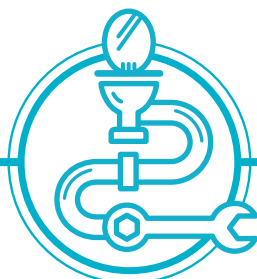
TOTAL COMBINED SPEND BY INFRASTRUCTURE TYPE



NATIONAL MAJOR INFRASTRUCTURE PROJECTED



280km
DRINKING WATER PIPE UPGRADES



139km
WASTE WATER PIPE UPGRADES



243
DRINKING WATER TREATMENT PLANT (WTP) UPGRADES



419
WASTE WATER TREATMENT PLANT (WWTP) UPGRADES

OVERALL FUNDING 3 WATER INFRASTRUCTURE



GOVERNMENT FUNDING
\$523m



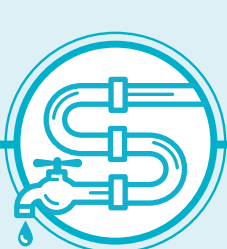
CO-FUNDING
\$135m



TOTAL FUNDING
\$658m

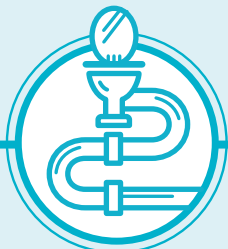
PROGRESS TO DATE

MAJOR INFRASTRUCTURE TYPES



49km

drinking water pipes
18% of projected



6.9km

wastewater pipes
5% of projected



2

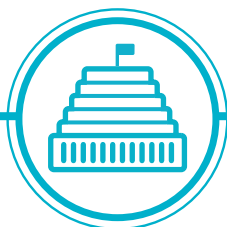
2 WTP upgrades
1% of projected



36

WWTP upgrades
9% of projected

FUNDING



\$58.8m

Government spend
11.2% of projected



\$12.3m

Co-funded spend
9% of projected



\$71.1m

Total spend
11% of projected

WORKERS (Full Time Equivalent)



**PROGRESS TO
PROJECTED: 867**
45% of target



**PROJECTED:
1,925**



**END OF QUARTER:
745**



**GROWTH SINCE
START: 867**

ASSET TOTAL FUNDED¹



\$32.8m

Drinking water
46% of projected



\$20.2m

Waste water
28% of projected



\$2.5m

Stormwater
4% of projected



\$15.6m

Tech and Design Work
22% 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 2021, 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 (\$2.72M)

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 744 sewer pipes had been checked



Sewer Line Rapid Assessment Tool (SL-Rat) in action in Taupō CBD.

and by April 2021, this had increased to 3,238 pipes. The project is now 76% complete.

The CCTV project (Project 4, \$250K) used a video camera to inspect wastewater pipes and was completed in February 2021 when over 20km 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, in an effort 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.

3 DRINKING WATER PROJECTS (\$4.2M)



Valve installation for water network renewals.

Engineers have been engaged to undertake drinking water improvements (Project 3, \$1.92M) 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).



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

The Water Network Renewals project (project 8, \$1.76M) has successfully upgraded 3,200m of pipe network to date (25% 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 being discharged 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 35% complete as at April 2021.

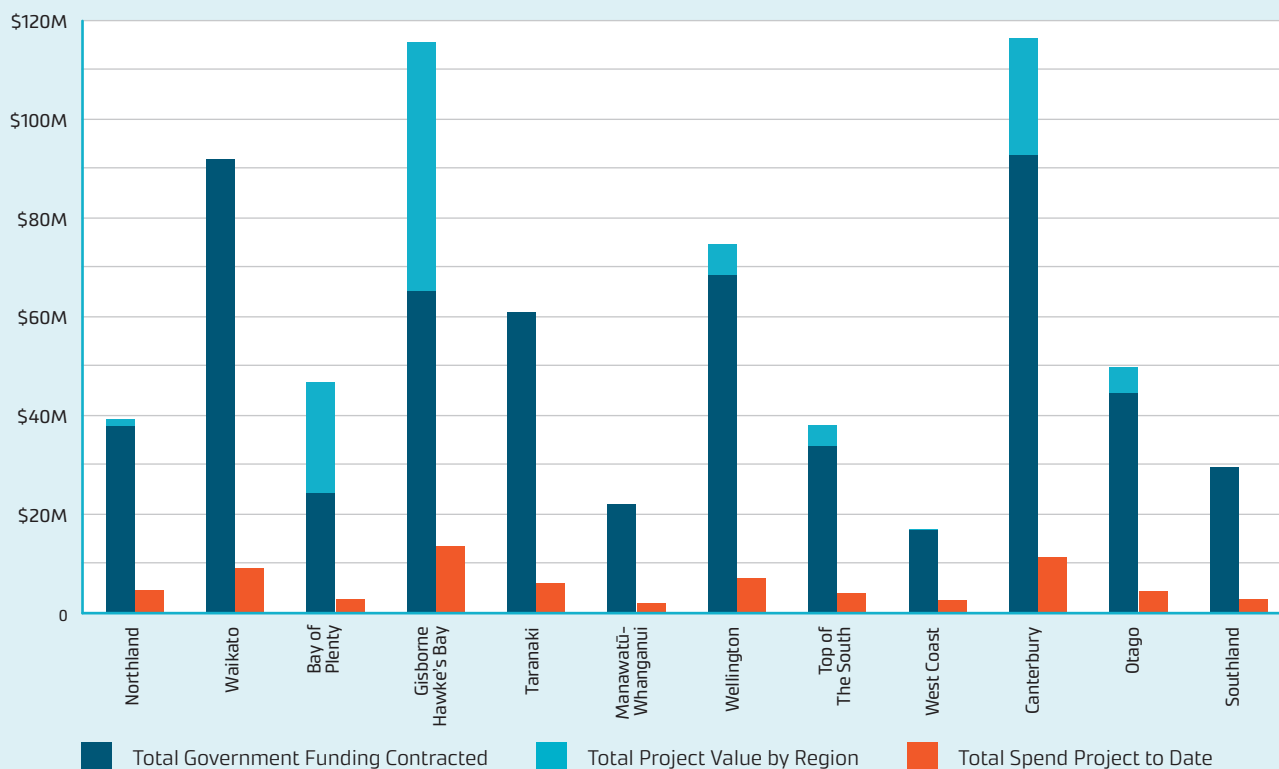
As at 30 April 2021, Taupō has completed 56% of their programme and invested \$3.83M (46%) of the \$8.32M allocated.



Water Operations Manager reviewing SCADA screens at the Treatment Plant.

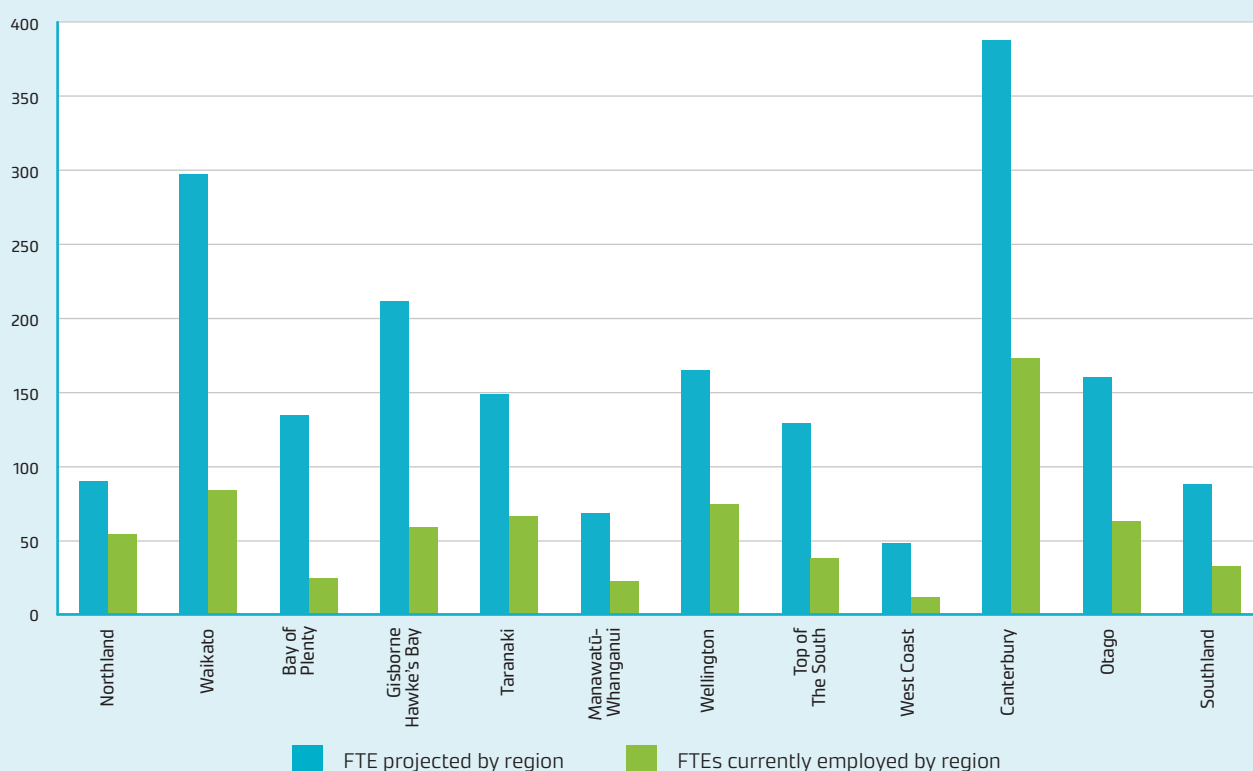
REGIONAL SUMMARY

TOTAL GOVERNMENT FUNDING CONTRACTED AND TOTAL PROJECT VALUE



Total project value is deemed on the same basis therefore 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



ASSET TYPE

In Progress
New water
source added

In Progress
WT Plant
upgrades

5,976m
Potable water
mains/pipes
upgraded

1m
Wastewater
pipes
upgraded

1
WWTP
upgrades



FUNDING

\$3.8m
Government spend
to date

\$0.9m
Co-funded
spend to date

\$4.6m
Total project
spend to date

\$39.4m
Total projected
spend to date



LOCAL FTE*

Progress
to projected:
63.7
71% to projected

Projected:
90

Employment
end of Quarter:
53.9

Growth
since start:
63.7



Kaikohe Monument Hill Deep Bore site

* FTE refers to number of jobs that are equivalent to full time employment.



WAIKATO



ASSET TYPE

1,510m
Wastewater
pipes
upgraded

In Progress
Sludge
removal from
ponds

2,298m
Potable water
mains / pipes
upgraded

In Progress
Water meters
installed

60
SCADA



FUNDING

\$9.2m
Government
spend to date

\$0.0m
Co-funded
spend to date

\$9.2m
Total
spend to date

\$72.7m
Total projected
spend to date



LOCAL FTE*

Progress
to projected:
102.9
35% to projected

Projected:
296.9

Employment
end of Quarter:
83.7

Growth
since start:
102.9



Taupo New SCADA installation at Hatepe

* FTE refers to number of jobs that are equivalent to full time employment.



BAY OF PLENTY



ASSET TYPE

In Progress
Wastewater
pipes
upgraded

In Progress
WWTP
upgrades

In Progress
WTP
upgrades

420m
Stormwater
pipes
upgraded

6,199m
Potable water
mains / pipes
upgraded



FUNDING

\$2.4m
Government
spend to date

\$0.4m
Co-funded
spend to date

\$2.8m
Total
spend to date

\$47.0m
Total projected
spend to date



LOCAL FTE*

Progress
to projected:
28.1
21% to projected

Projected:
134

Employment
end of Quarter:
24

Growth
since start:
28.1



Omokoroa Storm Water Bund

* FTE refers to number of jobs that are equivalent to full time employment.



GISBORNE & HAWKE'S BAY



NAPIER
CITY COUNCIL
Te Kaunihera o Ahuriri



WAIROA
DISTRICT COUNCIL



Te Kaunihera o Te Tairāwhiti
GISBORNE
DISTRICT COUNCIL



CENTRAL
HAWKE'S BAY
DISTRICT COUNCIL



ASSET TYPE

In Progress
WWTP
upgrades

425m
Potable water
mains / pipes
upgraded

600
Wastewater
pipes
upgraded

In Progress
WTP Upgrades



FUNDING

\$6.5m
Government
spend to date

\$7.0m
Co-funded
spend to date

\$13.6m
Total
spend to date

115.7m
Total projected
spend to date



LOCAL FTE*

Progress
to projected:
58.4
28% to projected

Projected:
211

Employment
end of Quarter:
58.4

Growth
since start:
58.4



Central Hawkes Bay New Wastewater Mains



Gisborne Wastewater Treatment Plant

* FTE refers to number of jobs that are equivalent to full time employment.



TARANAKI



Te Kaunihera-ā-Rohe o Ngāmotu

**New Plymouth
District Council**



Te Kaunihera o Taranaki ki Te Tonga
**South Taranaki
District Council**



TE KAUNIHERA Ā ROHE O
WHAKAAHURANGI
**STRATFORD
DISTRICT COUNCIL**



ASSET TYPE

2,080m

Drinking
Water pipes
upgraded

2

Waste pump
station upgrades

In Progress

Stormwater
pipes
upgraded

In Progress

Bore
upgrades

In Progress

WWTP
upgrades



FUNDING

\$2.2m

Government
spend to date

\$0.0m

Co-funded
spend to date

\$2.2m

Total
spend to date

\$18.6m

Total projected
spend to date



LOCAL FTE*

Progress
to projected:

22.1

33% to projected

Projected:

68

Employment
end of Quarter:

22.1

Growth
since start:

22.1



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



Rama Road, South Taranaki D.C., Watermain

* FTE refers to number of jobs that are equivalent to full time employment.



MANAWATŪ-WHANGANUI



ASSET TYPE

In Progress
Wastewater
pipes
upgraded

35
WWTP
upgrades

In Progress
WTP
upgrades

20
Stormwater
pipes
upgraded

721
Drinking
water pipes
upgraded



FUNDING

\$6.1m
Government
spend to date

\$0.0m
Co-funded
spend to date

\$6.1m
Total
spend to date

\$46.1m
Total projected
spend to date



LOCAL FTE*

Progress
to projected:
65.9
44% to projected

Projected:
148.4

Employment
end of Quarter:
65.9

Growth
since start:
65.9



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

* FTE refers to number of jobs that are equivalent to full time employment.



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
He Kaiti Whakamuri, He Tōtū Whakamuri

SOUTH WAIRARAPA
DISTRICT COUNCIL
Kia Rereahi Tātāu

HUTT CITY
TE AWA KAIRANGI

MASTERTON
DISTRICT COUNCIL
Te Kaitiaki o Te Awa Kairangi

CARTERTON
DISTRICT COUNCIL



ASSET TYPE

In Progress
WTP
upgrades

2km
Capital
renewals

365
Asset
condition
assessments

In Progress
Maintenance
(all waters)

In Progress
Leakage
management



FUNDING

\$6.8m
Government
spend to date

\$0.2m
Co-funded
spend to date

\$7.0m
Total
spend to date

\$74.9m
Total projected
spend to date



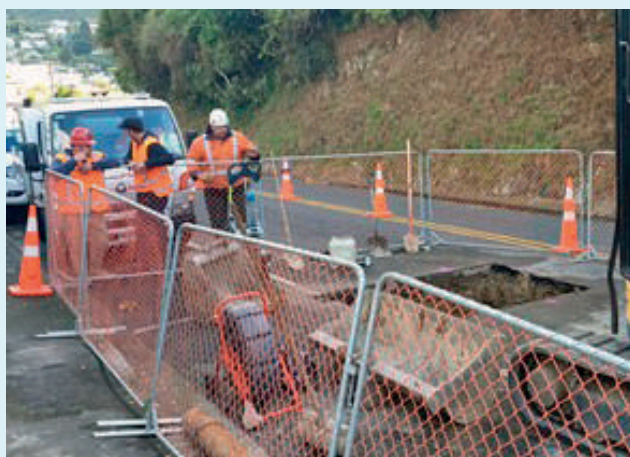
LOCAL FTE*

Progress
to projected:
74.3
45% to projected

Projected:
164.7

Employment
end of Quarter:
74.3

Growth
since start:
74.3



Sewer renewal Karori, Wellington City Council



Wellington Wastewater CCTV set up

* FTE refers to number of jobs that are equivalent to full time employment.



ASSET TYPE

In Progress

Drinking
water pipes
upgraded

1

Waste pump
station
upgrades

538m

Wastewater
pipes
upgraded

In Progress

WTP
upgrades

In Progress

WWTP
upgrades



FUNDING

\$3.4m

Government
spend to date

\$0.7m

Co-funded
spend to date

\$4.1m

Total
spend to date

\$38.3m

Total projected
spend to date



LOCAL FTE*

Progress
to projected:

37.4

29% to projected

Projected:

128.6

Employment
end of Quarter:

37.4

Growth
since start:

37.4



Wastewater storage tank upgrade, Nelson City Council



* FTE refers to number of jobs that are equivalent to full time employment.



WEST COAST



ASSET TYPE

300m
Drinking
water pipes
upgraded

In Progress
Treated
water storage

In Progress
Wastewater
pipe
inspections

In Progress
Wastewater
pipes
upgraded

In Progress
WTP
upgrades



FUNDING

\$1.7m
Government
spend to date

\$1.1m
Co-funded
spend to date

\$2.7m
Total
spend to date

\$17.0m
Total projected
spend to date



LOCAL FTE*

Progress
to projected:
16
33% to projected

Projected:
48

Employment
end of Quarter:
11.3

Growth
since start:
16



Westport trunk water main

* FTE refers to number of jobs that are equivalent to full time employment.



CANTERBURY

Christchurch
City Council



Waimate
District Council



WAIMAKARIRI
DISTRICT COUNCIL

TIMARU
DISTRICT COUNCIL

KAIKŌURA
DISTRICT COUNCIL

Ashburton
DISTRICT COUNCIL

HURUNUI
District Council



Selwyn
DISTRICT COUNCIL



ASSET TYPE

2,468m
Wastewater
pipes
upgraded

30,308m
Drinking
water pipes
upgraded

In Progress
WTP
upgrades

5
Waste pump
station
upgrades

2
Water meters
installed



FUNDING

\$9.3m
Government
spend to date

\$2.0m
Co-funded
spend to date

\$11.3m
Total
spend to date

\$116.7m
Total projected
spend to date



LOCAL FTE*

Progress
to projected:
172.7
46% to projected

Projected:
387.6

Employment
end of Quarter:
172.7

Growth
since start:
172.7



Stappletons Road Water Supply Pump Station for Christchurch City Council

* FTE refers to number of jobs that are equivalent to full time employment.



OTAGO



ASSET TYPE

501
Drinking
water pipes
upgraded

1
WTP
upgrades

In Progress
WWTP
upgrades

In Progress
Treated water
storage

1.3km
Wastewater
pipes
upgraded



FUNDING

\$4.5m
Government
spend to date

\$0.0m
Co-funded
spend to date

\$4.5m
Total
spend to date

\$49.9m
Total projected
spend to date



LOCAL FTE*

Progress
to projected:
62.9
39% to projected

Projected:
160

Employment
end of Quarter:
62.9

Growth
since start:
62.9



QLDC - Lining of Wastewater Mains



Dunedin CC - Waikouaiti

* FTE refers to number of jobs that are equivalent to full time employment.



SOUTHLAND



ASSET TYPE

650m

Drinking water pipes upgraded

500m

Wastewater pipes upgraded

In Progress
WWT Plant upgrades

200m

Wastewater pipe inspections

200m

Stormwater pipes upgraded



FUNDING

\$2.9m

Government spend to date

\$0.0m

Co-funded spend to date

\$2.9m

Total spend to date

\$22.3m

Total projected spend to date



LOCAL FTE*

Progress to projected:
32.1
37% to projected

Projected:
88

Employment end of Quarter:
32.1

Growth since start:
32.1



Southland DC – Waianiwa SW Renewal

* FTE refers to number of jobs that are equivalent to full time employment.

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 wastewater 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.