

# STAFF REPORT

**TO:** Chairman and Members, Engineering Services Committee

**FROM:** Utilities Asset Manager, Jeff Cuthbertson

**REFERENCE:**

**DATE:** 23 January 2006

**SUBJECT:** Utilities Management Report

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## 6.5 UTILITIES ASSET MANAGEMENT

### 6.5.1 Capital Works Projects

The following capital projects have been tendered and are under construction or are about to be tendered or constructed:

- a) Richmond Trunk Sewer main – construction has commenced.
- b) Sunbelt, Motupipi and Hiawatha pumping stations and pumping main construction – budget \$1,840,000 – construction has commenced.
- c) Wensley Road Watermain Replacement – budget \$630,000 – construction has commenced.
- d) Dovedale Rural Water Supply – watermain upgrading – budget \$150,000.
- e) Murchison Pipeline Renewals – budget \$25,000. This work has been undertaken.
- f) Murchison WWTP Upgrade – budget \$200,000. This work is out to public tender. Tenders close on 16 November 2005.
- g) Motueka WWTP improvements – budget \$400,000. The mechanical plant and desludging of the aeration pond is complete.
- h) Mapua – Upgrading of existing 750 mm diameter pipework in Aranui Road – budget \$224,000. This work is complete.
- i) Borck's Creek widening (lower end). Council has now received resource consent and the work is due to start.
- j) Motueka Northern diversion – budget \$303,700. Negotiations have taken place with a developer for the work to be carried out as part of a total subdivision proposal. Services have been realigned and drainage work has commenced

Work has proceeded in obtaining resource consents for the following works:

- a) Takaka Wastewater Treatment Plant Upgrade;
- b) Murchison Wastewater Treatment Plant Upgrade;
- c) Jefferies Stream Upgrading Work.

Investigation work has progressed on:

- a) Brightwater Water Reservoir (additional reservoir);
- b) Murchison Water Reservoir (additional storage);
- c) Wakefield Trunk Main and Bore Field Investigations, and Water Reservoir;
- d) Collingwood – Beach Road/Gibbs Road Stormwater Upgrading;
- e) Bird Street stormwater investigation is being undertaken by Opus Consultants;
- f) Collingwood Sewerage – New Aerators and Mechanical Screen;
- f) Kaiteriteri – Upgrading Lodders Lane Sewerage Pumping Main.

### **6.5.2 Motueka Wastewater Treatment Plant Upgrade**

The work involved with the upgrading of the aeration lagoon and the installation of the screen to capture incoming debris, has now been completed.

The work involved:

- Cleaning out the sludge from the aeration lagoon;
- Replacement of four new aerators;
- Installation of a new 3mm wide steep screen; and
- Upgrade of the electrical shed and whole electrical system.

Since the work was completed, odours from the plant have greatly reduced. The screen removes approximately 2m<sup>3</sup> of debris from the waste water per week.

### **6.5.3 Collingwood Wastewater Treatment Plant**

The installation of the ultra-violet (UV) disinfection unit is proceeding.

Once installed, effluent being discharged into the adjacent water way will have almost 10% of all microbiological pollutants removed.

### **6.5.4 Murchison Wastewater Treatment Plant**

Tenders have now closed for the upgrading of the Wastewater plant. Whitakers Contracting from New Plymouth have been given “preferred Contractor Status”. Until Council has received the new Resource Consent for the upgrade work, all work relating to the construction will not be undertaken. Work in relation to the removal of sludge from the pond is to proceed in due course as it does not relate to the required Resource Consent.

It is expected that work will commence at the earliest, in late March/early April.

### **6.5.5 Richmond Trunk Sewer Upgrade**

Work on this project began in December and pipework has been laid in Bateup Road and continues adjacent to Jubilee Park to connect new pipework from Hunt Street via Waverley Street. This also involves crossing the State Highway at off peak times to avoid traffic delays. The open trench work across Three Brothers Roundabout was successfully carried out over two nights between 9pm and 6am.

The contractor commences the next stage of work in Beach Road, which is one of the more challenging phases involving deep, wide open trenching in a tidal estuarine environment. The contractor is progressing well and is on schedule.

### **6.5.6 Takaka Sewerage Upgrade**

This contract was awarded to Ching Contracting Ltd in November 2005 and the work was expected to commence in December with a break over the Christmas period. However, a delay in the start date resulted due to extended land purchase negotiations. The physical works have now commenced around the Waitapu pumpstation, and also for the new Sunbelt pumpstation. The excavation for the new Sunbelt pumpstation proved difficult with hard rock encountered at shallower depths than revealed by investigation drilling logs. The contractor had to utilise controlled blasting techniques to achieve required depths for the pumpstation and is now back on schedule.

## **6.6 WATER**

### **6.6.1 General**

The following pipe bursts have occurred recently:

- 200mm main Thorpe Street, Motueka, this occurs regularly and the section is under investigation for replacement.
- 200mm main Main Road Hope, this portion is also under consideration for replacement in 2006/07 financial year.
- 200mm main between Bests and Bells Islands, the long term future of this portion of network is under consideration.
- 100mm high pressure watermain at Oxford St/Wensley Rd, replacement of this section of pipe is imminent.

Other incidents include:

- An electrical fault at Riwaka Well causing low levels in Kaiteriteri reservoirs due to overheated electrical controls has been mitigated by the installation of fans and vents to reduce operating temperatures in the cabinet.
- Some positive test results have been received including Eighty Eight Valley, Motueka and Murchison with chlorination faults. Protocols were followed and successive clear samples obtained.
- The district wide power outage of 14 December disabled pumpstations temporarily, but no serious problems resulted.
- Various blockages occurred with protocols being followed and blockages cleared.

### **6.6.2 Wensley Road Water Main Upgrade**

After commencing this contract on site in December the contractor shut down the site over the Christmas-New Year period. The contractor is progressing steadily and has completed some difficult road crossings without disruptions. The contractor is currently working

between Surrey Road and Crescent Street and the contract is on schedule to be completed in March 2006.

### **6.6.3 Murchison Water Supply**

The upgrade of existing storage capacity is under investigation. Following a topographical survey of the existing reservoir site a proposed layout for extra storage tanks has been finalised, and this work is now programmed to be carried out by the maintenance contractor. A flow meter has also been installed at the reservoir.

The telemetry continued to experience communication failures in part due to overcast weather, a deep cycle battery has been installed to remedy this problem

### **6.6.4 Dovedale Rural Water Supply**

At present there is a moratorium on new water connections to the Dovedale Water Scheme. Although there has been extensive mains replacement over the past ten months to eliminate pipeline failures, leaking and water losses, it is not proposed to lift the moratorium.

This summer has illustrated a problem with the extraction of water for the Humphreys Creek gravity intake. For the last two months no water has been passing the intake structure within the creek. The scheme has been utilising in excess of 100% of the water availability at the intake. Thus any minor failure results in some consumers failing to get water.

In an endeavour to obtain additional water, staff, MWH and the Contractors have been reviewing the old abandoned pump intake located adjacent to Dovedale Road. This intake and the pumping system have not been used for many years. When it was disestablished the power was disconnected and the site not maintained. To reactivate the pumping intake, pipe scouring of the existing pipe work will be required, a new pump and electrical system will be required, plus the re-establishment of the power supply. Work at this time to have the new system installed is proceeding.

There is no guarantee that the two intakes combined will provide enough water if consumers were to use their full allocations. It is therefore not recommended to lift the moratorium on water connections.

During the dry period with high water use and reduced stream flows the system has struggled to keep up with demand and various breaks in the network have caused reservoir levels to drop temporarily. Further storage options are also being investigated to provide some contingency in the system.

### **6.6.5 88 Valley Rural Water Supply**

The 88 Valley scheme continues to operate well and is more than keeping up with demand. Minor works have been undertaken including regular maintenance of the intake.

### **6.6.6 Redwoods Rural Water Scheme**

Staff continue to investigate the option of relocating a reservoir to improve access for maintenance purposes. Plans are currently under review by LINZ for final approval. Some breaks in the dry period have meant that the system at times has been working hard to satisfy demand.

### **6.6.7 Golden Hills Road Pump Station**

Some operational issue continue to cause problems at the Golden Hills pumpstation. These included signals faults to pumps and some issues with levels sensors in higher level reservoirs. A communications failure caused problems at O'Connor's pumps also, which was remedied but is under investigation for a longer term solution.

### **6.6.8 Waimea Emergency Wells**

A second emergency bore has been installed upstream of Waimea well number 9. The pipework has also been installed and also links the first emergency bore to the existing pipe network supplied by the Waimea wells 5-9. The pipeline was installed promptly during the Christmas period.

### **6.6.9 Brightwater Reservoir**

Feasibility studies are underway to determine that a nominated site is an appropriate location for extra future reservoirs to increase the storage capacity for Brightwater water supply scheme. Detailed Geotechnical investigations are underway along with design of valving and connection requirements to link the proposed and existing reservoirs.

## **6.7 STORMWATER**

No significant events have occurred since the last report.

### **6.7.1 Reservoir Creek Dam**

Options and estimates are still being reviewed for this project and expected to be completed by the end of February.

### **6.7.2 Ruby Bay Stormwater**

As reported to the Engineering Services Committee during its 10 November meeting, costings for options C&D have been included for in Councils LTCCP. The timing for this work is scheduled for year 1 (2006/07)

## **6.8 WASTEWATER**

### **6.8.1 General**

- The motel pump station pump #2 was replaced
- The Beach Road(Collingwood) pump #2 is being overhauled
- Extra odour control was installed prior to the peak Christmas period at Sunbelt Crescent Pumpstation
- The district wide power outage of 14 December disabled pumpstations temporarily, but no serious problems resulted

## **6.8.2 Cassidy Corner Sewer Pump Station**

Investigations are underway to improve drainage around the pump station. A section of stormwater pipework is likely to be required to be installed beneath the existing roadway to achieve this.

## **6.8.3 Illegal Drug Lab Risk Awareness Workshop**

Council have organised with the local Police, a workshop to raise awareness of the potentially fatal risks associated with private (illegal) drug laboratories, particularly for contract staff involved with the maintenance of sewers either on or downstream of these properties.

## **6.8.4 Tapawera Ponds**

The new aerator has been installed and is running well. Investigations continue into the installation of a paddle wheel aerator to improve the efficiency of the pond.

## **6.8.5 Trade Waste by-law**

The Tasman District Council Trade Waste Bylaw 2005 was adopted by Council on 14 December 2005, as recommended by the Engineering Services Committee. The bylaw is to be signed and sealed on 26 January 2006 and is due for implementation from 1 July 2006. The bylaw once signed will be placed on the TDC website.

## **6.8.6 New Zealand Drinking Water Standards**

We wish to inform the Engineering Services Committee that the Drinking Water Standards for New Zealand 2005 (DWSNZ2005) came into effect on 31 December 2005 replacing the Drinking Water Standards for New Zealand 2000 (DWSNZ2000).

The DWSNZ2005 contains comprehensive information for owners and operators to help manage both public and private drinking water supplies.

For more information please check out the website for the Ministry of Health – [www.moh.govt.nz](http://www.moh.govt.nz)

## **6.9 REFUSE**

### **6.9.1 Kaiteriteri Summer Extra Refuse/Recycling Service - Illegal Rubbish Report**

Generally there were no major refuse/recycling problems or issues that arose over the holiday period. We had our summer student in the field talking to residents and selling TDC refuse bags if required.

The following is a report of observations of the Kaiteriteri refuse situation by our summer student who monitored Kaiteriteri on three days over the Christmas /New Year period.

## 6.9.2 Illegal Refuse Report

On Friday 23<sup>rd</sup> December 2005, it was generally very good as there were only two incidents of note. The first was at a Stephens Bay Road property where the resident was still using the old yellow Sicon bags; the resident bought 5 TDC bags and said she would switch to these. The second was on Rowling Road where the resident had placed a large polystyrene container in the recycling bin the resident was apologetic and went out and put the refuse in a council bag. Overall, there weren't many bags of rubbish and recycling out as it was the first day of the new service.



On Wednesday 28<sup>th</sup> December 2005, there was only one incident on the corner of Rowling Road and Riwaka-Kaiteriteri Road where 5 black bags full of rubbish had been left at the end of the residents right of way. The bags had been pink-stickered by Streetsmart as being the wrong bags. I had a talk to one of the residents on the right of way and he said that this was a continuing problem and the residents up there were sick and tired of putting the illegally dumped rubbish into proper council bags. The residents had erected a small sign with a photocopy of the pamphlet that had been sent out with highlighting on the illegally placed bags info. I took the bags away to the Richmond RRC and had a quick search through them but found no address evident.



On Wednesday 4<sup>th</sup> January 2006, there were two small areas of loose dumped rubbish. One on the corner of Martin Farm Road and Riwaka-Kaiteriteri Road in the boat trailer storage area, where roughly two bags worth of rubbish was spread around a small area. The other was a box of mixed refuse that was left at the normal refuse drop off point next

to the entrance way to Honeymoon Bay. The box had obviously been left after the refuse pickup on Tuesday.



## **6.10 UTILITIES ASSET MANAGEMENT STAFF**

Solid Waste Project Engineer, Emma Manhart completes her contract role with Council on 10 February 2006. Emma has been with Council for a total of three years and in the last two years has been dedicated solely to work in the solid waste activity area. She has made a significant contribution in assisting Council with the waste management plan and through the transition stages of recycling and new solid waste contract services. We wish Emma all the best for her future career in engineering or other pursuits that she may turn her many talents to.

The Engineering Department has recently advertised a new vacancy for a full-time permanent position of Utilities Asset Engineer. I'm pleased to advise that we have appointed David Stephenson to the position. David will start work with Council on 7 February 2006. He is currently a Water Resources Engineer with Tonkin and Taylor in Nelson. David will work closely with Kim Arnold on the management of utilities assets and will report directly to Jeff Cuthbertson.

### **Recommendation**

**THAT the report be received.**

Jeff Cuthbertson  
**Utilities Manager**