



TO THE MAYOR AND COUNCILLORS OF THE MACKENZIE DISTRICT COUNCIL

Membership of the Asset and Services Committee:

Cr James Leslie (Chairman)
Claire Barlow (Mayor)
Cr Noel Jackson
Cr Evan Williams
Cr Russell Armstrong
Cr Murray Cox
Cr Graham Smith

*Notice is given of the Meeting of the Asset and Services
Committee to be held on Thursday, July 23, 2015, following The
Council Extraordinary meeting at 9.30am*

VENUE: Council Chambers, Fairlie.

BUSINESS: As per agenda attached

WAYNE BARNETT
CHIEF EXECUTIVE OFFICER



ASSET AND SERVICES COMMITTEE

Agenda for Thursday, July 23, 2015

APOLOGIES

DECLARATIONS OF INTEREST

MINUTES:

Confirm and adopt as a correct record the minutes of the Asset and Services Committee meeting held on April 28, 2015, including those matters taken in public excluded.

PUBLIC EXCLUDED:

Resolve that the public, be excluded from the following part of the proceedings of this meeting namely:

1. MID SOUTH CANTERBURY ROAD MAINTENANCE CONTRACT COLLABORATION

General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
Mid-South Canterbury Road Maintenance Contract Collaboration	Enable commercial negotiations	48(1)(a)(i)

This resolution is made in reliance on Section 48(1)(a)(i) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act, which would be prejudiced by the holding of the whole or the relevant part of the proceedings of the meeting in public are as follows: *Mid-South Canterbury Road Maintenance Contract Collaboration (7)(2)(i)*

REPORTS:

1. Asset Manager's Report (attached)

MACKENZIE DISTRICT COUNCIL

MINUTES OF A MEETING OF THE ASSET AND SERVICES COMMITTEE HELD IN THE COUNCIL CHAMBERS, FAIRLIE, ON TUESDAY, APRIL 28, 2015, AT 9.37AM

PRESENT:

Cr James Leslie (Chairman)
Mayor Claire Barlow
Cr Graham Smith
Cr Murray Cox
Cr Russell Armstrong
Cr Noel Jackson
Cr Evan Williams arrived (9.49am)

IN ATTENDANCE:

Bernie Haar (Asset Manager)
Suzy Ratahi (Roading Manager)
Geoff Horler (Utilities Manager)
Julie Jongen (Committee Clerk)
Angie Taylor (Arrived 9.45am)
Pat Deavoll (Timaru Herald arrived at 10.05)

APOLOGIES:

Apologies were received for lateness from Evan Williams.
Apology received from Wayne Barnett.

DECLARATIONS OF INTEREST:

There were no declarations of interest.

MINUTES:

Resolved that the minutes of the meeting of the Asset and Services Committee held on March 17, 2015, including those parts taken in public excluded, be confirmed as an accurate record.

Russell Armstrong/Graham Smith

Graham Smith enquired about previous minutes re "dump station" and wondered where the conversation ended. He has spoken to a few truckies and a dump station is urgently needed within the district.

Suzy Ratahi added that we weren't going to jump on board until further enquiries were made re costs of contributing and if we contribute we would require a dump station within the district. Graham Smith stated there is evidence a station is needed and this matter will need to stay on the agenda.

Russell Armstrong asked about the car park painting to which Suzy Ratahi confirmed she has spoken to the contractors and due to the rain they were held up, it should be done this week. Suzy will chase them up again. Russell Armstrong feels it is now a health and safety issue and he will email Suzy with their concerns and she will bring these issues up with Fulton Hogan.

REPORTS:

ASSET MANAGERS MONTHLY REPORT – MARCH/APRIL 2015:

The purpose of this report was to update the Asset and Services Committee on the progress on various projects and also the normal operation of the department for the past month. The following matters were included in the discussion of this report:

Resolved that the report be received.

Graham Smith/Russell Armstrong

Bernie Haar added that following writing the report he has had a conversation with Murray Petrie and everything is going to plan. The 11th or 18th of May is planned for the cut over of water and during this time there will be no water, it will be done at night, the equipment is on site, the concrete pad is being poured and Angie is doing signs.

Roading – Suzy Ratahi spoke on this. Lillybank Road is a big issue this year as there is no budget to do this road. 2004 was the last time this road blew away and was repaired. Graham Smith asked if we can put some metal on these roads as they are small areas, Suzy stated they would be unsubsidised. Suzy will come back with costings to get these areas done and bring back to next meeting being 7th May. This will need to be discussed in the finance meeting and would like this on the 7th May meeting agenda. Suzy will send the report to Graham Smith and he will bring to the council meeting on the 7th.

Noel Jackson then mentioned about speed restrictions and whether these can be done. Murray Cox asked if they would be enforced if signs were there but there are no resources for this. Bernie Haar said he could put "temporary road works" signs.

Graham Smith made a complaint about there being no finance meetings or reports since January. He requested there be a report at the next meeting.

Graham Smith asked if NZTA are funding better percentages to other councils than what we have being assigned and asked if a conversation could be had with NZTA to ask why we were cut back on funding. Suzy Ratahi confirmed she would like to know this as well and that they would try to get some answers.

Meeting was adjourned at 10.10am for official councillor photos to be taken and morning tea.

Meeting recommenced at 10.31am

Utilities – Geoff Horler spoke to his report. There may need to be an increase in future budgets for toby water replacements, there are a few getting quite tired now. Preference is to move them to the boundary of the properties.

Water restrictions have being eased but not lifted yet. Ecan are still keeping an eye on Council re their water restrictions and usage. It is a continual monitoring process.

Manuka Terrace Water Supply Survey had quite a low response.

Solid waste – Angie Taylor spoke to her report.

Murray Cox asked if they can look at the layout and placement of the bins to try and ensure that trucks avoid the main area. Bernie Haar agreed with this and will have a workshop to discuss this matter.

James Leslie mentioned about the damage that the rubbish trucks cause during their collections in cul de sacs and whether the bins can be placed in a better place to avoid less damage to the roads. Angie stated she will have a conversation with the contractors.

Graham Smith congratulated Angie on the work and her reports. He asked why there are the spikes in the graphs and Angie replied it would depend on how many collections in that period and what holidays were in that period. Claire Barlow mentioned it may have spiked with the rowing regatta.

James Leslie asked if a bottle bin could be placed at the gate of the recovery park and Bernie replied that he will have a conversation with ESL.

COMPOST PROJECT REPORT:

The Council has a responsibility to promote waste education and reduction in accordance with the Council's Waste Management and Minimisation Plan and the Waste Minimisation Act 2008. Organic waste is responsible for 30-40% of waste from kerbside collection. An effective way to reduce organic waste going to landfill is with home composting systems. It is proposed to provide subsidies on two types of home composting systems to encourage residents to compost their organic waste.

Bokashi systems seem to be successful and are being used by Graham Smith and Claire Barlow at home and both congratulated Angie on her work and that this has being talked about for at least 18 months so it is good to see this being put forward.

Claire Barlow also asked about the nappy packs. Angie replied the first lot sold out and are now on to the second batch, this seems to have being very successful. This would be funded from the waste levy.

Resolved

1. That the report be received.

Claire Barlow/Russell Armstrong

2. That the Council agrees to fund the proposed compost project using waste levy funding provided by the Ministry for the Environment.

Claire Barlow/Graham Smith

ENVIROSCHOOLS PROJECT:

Waste education is key to driving improved waste minimisation and recycling, an integral aim of the Council's Waste Management and Minimisation Plan.

Enviroschools is an action based education programme with a goal to instill environmental values in school children. Education at a school level has the flow on effect of sparking change in family values and practices. It is proposed that funding is provided to set up the Enviroschools programme in the Mackenzie District.

This would be funded from the waste levy and is part of a national process. This would use the full amount of the waste levy which is \$12,000.00.

Russell Armstrong agreed it is worth a try.

Resolved

1. That the report be received.

Claire Barlow/Murray Cox

2. That the Council agrees to support the Enviroschools project in the Mackenzie District.

Russell Armstrong/Murray Cox

**THERE BEING NO FURTHER BUSINESS THE
CHAIRMAN DECLARED THE MEETING CLOSED AT 11.01am**

CHAIRMAN: _____

DATE: _____

MACKENZIE DISTRICT COUNCIL

REPORT TO: ASSETS AND SERVICES COMMITTEE

FROM: ASSET MANAGER

SUBJECT: ASSET MANAGER'S MONTHLY REPORT

MEETING DATE: 23rd JULY 2015

REF: WAS 1/1

ENDORSED BY: CHIEF EXECUTIVE OFFICER

REASON FOR REPORT

To update the Assets and Services Committee on the progress on various projects and also the normal operation of the department for the past month.

RECOMMENDATION:

1. That the report be received.

SUZY RATAHI
ACTING ASSET MANAGER

WAYNE BARNETT
CHIEF EXECUTIVE OFFICER

ASSET MANAGEMENT

PROJECT PROGRESS

Twizel- Proposed upgrade to meet DWS

The table below sets out the work progress and decisions required.

Item	Outcome
1) Twizel Reservoir Liner Replacement. Will be included in the 2015-25 LTP for consideration. The liner is likely to be replaced in 2015-16.	Liner Report received. Included in the LTP for 2015-18
2) Twizel Water – Screens. Camera inspection of No. 2 bore has been carried out. Opus have thoughts on way forward. As the generator has been sized to run the bore pumps a new cable will need to be run from the WTP building down to the bore pumps. OPUS to prepare a report covering the What, Where, How and cost.	Pump No 2 has been installed bore. Draw down testing to be undertaken to re-develop the well. This will give an indication how well the screen/well is performing. Results will give an indication of required upgrade procedure for Bore No.1. Offer of service signed for report on power cable install.
3) Twizel Water Supply, Water Safety Plan (PHRMP). Supply now compliant with the Health Act. The water testing procedures are now to be sorted out so that the water will be compliant with DWSNZ. Geoff to discuss with the DWA.	Completed A testing date program has been submitted to DWA and accepted. Is now in place.
4) Twizel The Drive Pressure Improvements Opus to decide best way of achieving the outcome. Splitting the pump purchase from the construction / installation.	The Twizel reticulation modelling report will give the pump station operating characteristics. Completed. Tender for pumps sent out one accepted. Tender for pump shed sent out.

<p>5)Twizel - Information for Reticulation Modelling.</p> <p>Bernie to recheck zone maps to confirm “on-demand” and “restricted” for the Residential 4 zone in question. Murray can the contact Jeff McLean again to undertake the modelling.</p> <p>Modelling is also to consider: Larger Retic. pipe required from the reservoir to the take off point for the new trunk main to the west. Mackenzie Drive has 2 x 150mm dia. pipes. Could replace one with a larger pipe and run a rider main (fusion welded) inside the other, with cross links in places and valves at streets off.</p>	<p>Completed</p> <p>This work to be completed shortly The modelling is critical as pipe sizing confirmation is required for the Year 1 of the AC pipe replacement programme. In addition to the pipe sizing questions to the left there are other sizing questions such as;</p> <ul style="list-style-type: none"> • Mt Cook Street – 150mm pipe the right size or replace with different size? • Pipe to Meridian location – 150 AC at present; replace with 63mm because of lower demand?
<p>6)Twizel Booster Pumps</p> <p>When flow demands are confirmed (Item 6 above and Item 15 below) then contract documents preparation for supply can be started.</p> <p>Preliminary layouts for the stages of acceptable. Detailed design layouts for installation of booster pumps and treatment equipment can commence.</p> <p>Issues identified during preliminary design require short reports to be submitted for consideration: Best chemical type for chlorination. Protozoa testing versus Cartridge Filtration for higher log credit requirement.</p>	<p>Tenders considered and accepted</p> <p>Tenders considered and accepted</p> <p>Cryptosporidium testing is underway.</p>
<p>7) Pipe Condition Survey</p> <p>When results from the most recent samples have been received Bernie and Geoff will travel to Opus CHCH office – looking for interpretation of the data across the whole network.</p> <p>This will then lead to the required replacement programme and a report</p>	<p>All samples have been tested and the results supplied confirms the need to start the replacement programme in 2015 and continue for the next 20 years, spending \$200,000 to \$250,000 per annum.</p>

<p>prepared. A presentation will then be made to the council and Community Board.</p> <p>MDC will be looking to Opus to provide guidance with replacement options – relining/pipe cracking/etc.</p> <p>Preparation of contract documents, etc will also be required in the longer term.</p>	<p>Opus is preparing a report on the findings for both the Council and the community Board's information. Completed.</p> <p>Over time the options to replace, refurbish or reline will have to be considered.</p> <p>Included in 2015-25 LTP</p>
<p>8) SCADA Upgrade</p> <p>Meeting earlier in the day (11th) with Judy Blakemore (TDC). Sharing of some resources could be possible. Memorandum of Understanding between TDC/MDC needs to be prepared.</p> <p>Geoff to manage project for MDC. MP to keep in touch re space requirements, etc.</p>	<p>Geoff is working on this so that the first site can be installed in Twizel as part of the upgrade. A Memorandum of Understanding between TDC/MDC has been prepared and is subject to review prior to the parties executing the document. Completed</p>
<p>9) Manuka Tce Water Supply</p> <p>Opus to proceed with this work.</p>	<p>Consultation completed. Public meeting to be arranged</p>
<p>10) Tekapo WTP chlorination/UV compliance.</p> <p>Keith Turner and Geoff to meet to discuss non-compliance (paperwork)?</p>	<p>All compliance matters sorted out.</p>
<p>11) Fairlie Water Supply – New source.</p> <p>All piping and turbidimeter installed. Electrician to wire up turbidimeter and testing can start.</p> <p>Cello data logger will be downloaded once a month.</p>	<p>Installation complete and data being recorded.</p>
<p>12) Fairlie Reticulation Renewals</p> <p>Aerial maps supplied showing required work. Opus to provide offer of service for design, MSQA(?) and estimate.</p>	<p>Tenders considered and accepted.</p> <p>Work completed</p>

Twizel Oxidation Ponds

Ground survey is complete. Hydrogeological model is underway following discussions with Ecan.

New disposal design now completed.

Process of gaining a Resource Consent for the new disposal system is underway. BECA and MDC are having meeting with affected stakeholders.

Long Term Plan

Staff have continued to work hard, alongside Council, to develop the Long Term plan. As this draws to a close it would seem appropriate to update the total hours spent by the asset management team on developing the 30 year infrastructure strategy, the AMPs and work associated with developing the LTP has exceeded 1400 hours.

ROADING

General Maintenance

A significant District Wide Snowfall event occurred on Thursday the 18th of June, with approximately 300-600mm of snow falling. As this was such a wide scale event NZTA have approved emergency fund assistance, both for the initial clearance, and for repair works that will need to be undertaken 2015/16 financial year. Snow was cleared as per our snow clearance guidelines, but various tweaks were identified to allow for a more efficient targeted clearance. Communication on the day of the event was limited due to the nature of the event, snow quickly accumulated resulting in Council office closures to ensure staff could make their way safely home. Critical Care services were opened that afternoon and the commercial areas in each town were targeted next. A full copy of the updated snow clearance procedures is available on request.

Frost heave is starting to occur early this season, with areas on Lilybank Road, Braemar Road and Manuka Terrace starting to fail. Areas worst affected are being identified to target funds to address these access issues. Staff will continue to work with road users and heavy transport companies to reduce risk of failure and access issues during the fragile periods.



Manuka Terrace



Market Place, Twizel



Pioneer Drive, Tekapo



Lochaber Road

Bridge Replacements and Minor Improvements

Construction of the Long Gully, Pioneer Park and Oldfields Road bridges were completed on the 17th of June.

Minor Improvements targeted for this financial year are as follows;

O'Neill's Road Traction Seal with SH8

Lake Tekapo School Active Warning Signs

Stoneleigh Road Site Benching

Whiteman Road Site Benching

Lilybank Road Curve Re-alignment

Lily Bank Road Traction seal joining existing seals RP2050-2300m



Oldfields Road Replacement

Environmental Maintenance

To the end of financial year spend in environmental maintenance is \$166,327 this is tracking higher than expected mainly due to various flushing/bleeding issues on our sealed roads. It also includes mowing, vegetation spraying, and winter snow clearance/ice gritting activities.

Collaboration Update

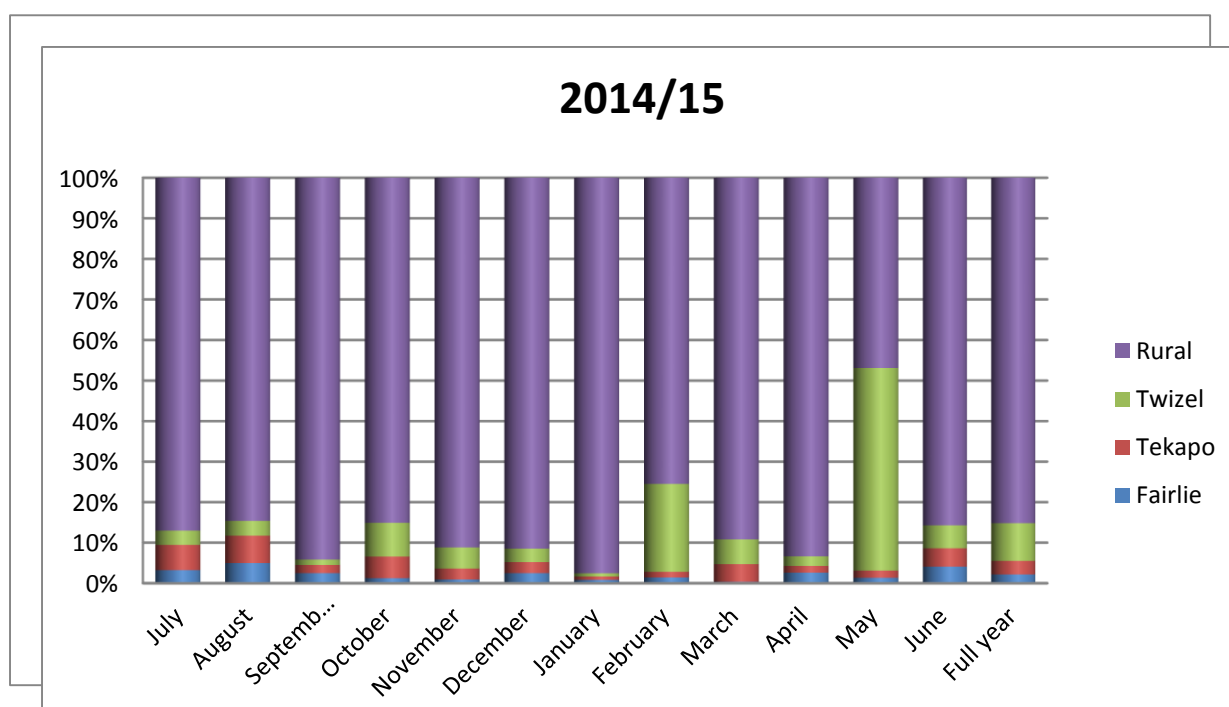
The contract document is now 99% complete with feedback from contractors expected at the time of writing this report. Staff have found this a very worthwhile project to be involved in, as it has prompted much discussion around various management practices, and contractor performance. The contract is to be advertised for tender the week ending 7th of August, for a contract start date of 1 December. Total MDC cost to date for collaboration and benchmarking \$28,748.29

NZTA Approved Funding Levels

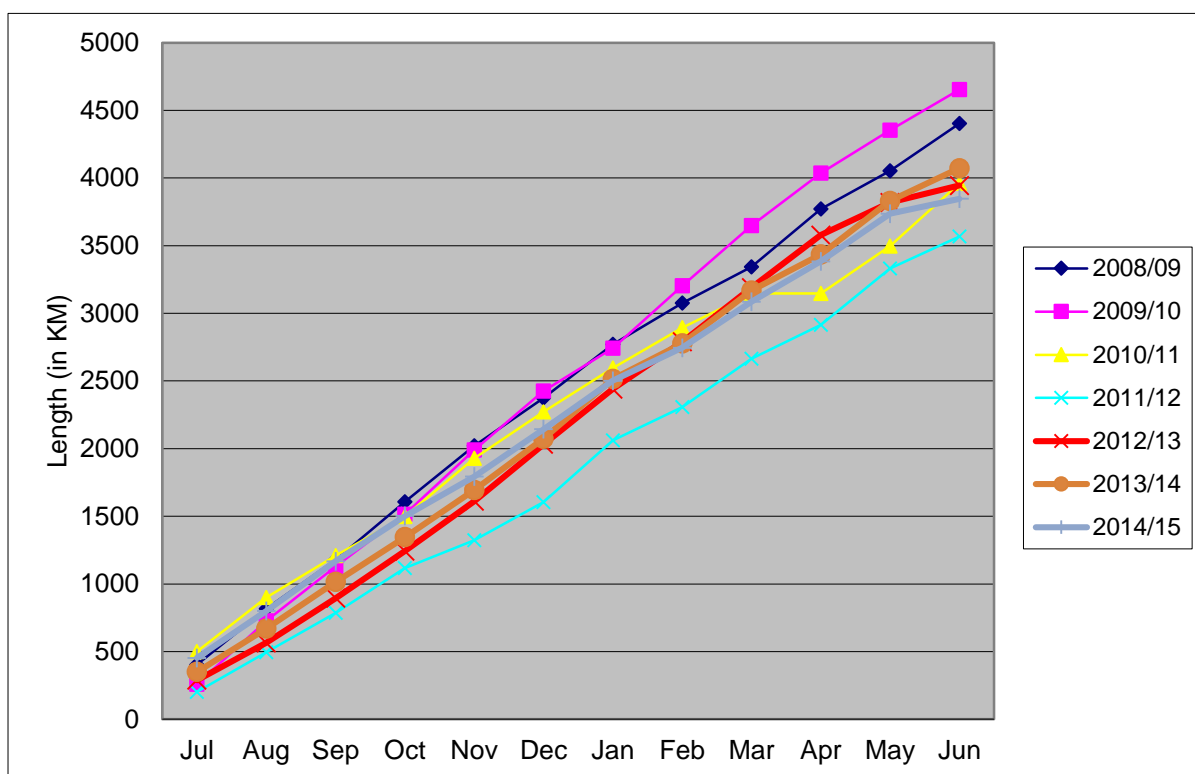
Mackenzie District Council Staff put forward a compelling case for a 36% increase in funding (on 2012 levels) to NZTA for the 2015-18 NLTP, based on sound practitioner knowledge of the network, and extensive data collection and modelling. NZTA Board have endorsed investment in our roading programme at 10% above the 2012 levels. This really is only a 7.75% increase as the 2.25% administration allocation paid to all Roading Authorities on top of their total approved programme has also been cut.

Further clarification of Mackenzie's approved funding level has been requested from NZTA. Staff prepare detailed analysis and modelling to support the funding requests, as is required by NZTA. It would seem reasonable that NZTA staff would study this information provided and produce detailed analysis of Mackenzie's request and supporting data. A letter requesting this information was sent to the Transport Agency on the 25th of June 2015. To date there has been no formal response.

Amaglamated Roading Budgets Graph Showing Percentage Share



Unsealed Road Grading (Cumulative)



UTILITIES

Budget Breakdown

FAIRLIE

Water:

End of May the Operation and Maintenance expenditure. Electricity cost \$2,034 is under budget. Contractors \$42,872 is under budget. Water quality monitoring \$4,486 is under budget.

Wastewater:

End of May the Operation and Maintenance expenditure. Electricity cost \$2,857 is under budget. Contractor \$19,598 is just over budget. Consent monitoring \$3,243 is under budget.

Storm water:

End of May the Operation and Maintenance expenditure. Contractor \$5,530 is on budget.

TEKAPO

Water:

End of May the Operation and Maintenance expenditure. Electricity is \$5,353 over budget due to not allowing enough for the UV plant and Lochinver booster pump. Contractor is \$41,751 under budget. Water quality monitoring is \$4,095 under budget.

Wastewater:

End of May the Operation and Maintenance expenditure. Electricity is \$14,843 under budget. Contractor \$43,978 over budget because there was a problem with one the pond and the Dissolved Oxygen levels were very low which created an odour problem which took

a number of days to fix using a diesel powered pump to move the pond water and inject oxygen into the pond. Consent monitoring \$1,632 is under budget.

Storm water:

End of May the Operation and Maintenance expenditure. Contractor \$7,169 is on budget. Consent monitoring \$975 is on budget.

TWIZEL

Water:

End of May the Operation and Maintenance expenditure. Contractor \$117,918 over budget due to the problem that happened over Christmas at the pump shed also the number of tobies that need to be repaired or moved has increased over the last year.

Electricity \$70,305 is under budget. Water quality monitoring \$6,086 is under budget.

During April we received an unexpected invoice for \$8903.24 from Environment Canterbury for processing the resource consent for the Twizel water take that was granted in 2010. As a considerable amount of time had passed the invoice was challenged and negotiated down to 50% of that sum. Unfortunately it does mean that the capital spend for the resource consent will be over spent by \$4,789.12 GST inc as due to the time delay no budget had been allowed for this in 2014/15.

Wastewater:

End of May the Operation and Maintenance expenditure. Contractor \$21,200 is on budget. Power \$1,681 is under budget. Consent monitoring \$5,821 is over budget.

Storm water:

End of May the Operation and Maintenance expenditure Contractor \$6,719 is over budget. Consent monitoring \$503 is under budget.

BURKES PASS

Water:

End of May the Operation and Maintenance expenditure. Contractor \$10,100 is over budget due to a number of issues this year at the intake. Water quality monitoring \$3,423 over budget as there has been an increase in the number of water sample that needed to be taken and wasn't allowed for in the budget.

Wastewater:

End of May the Operation and Maintenance expenditure. Contractor \$1,464 is on budget. Monitoring for consent \$1,609 is over budget.

General comments:

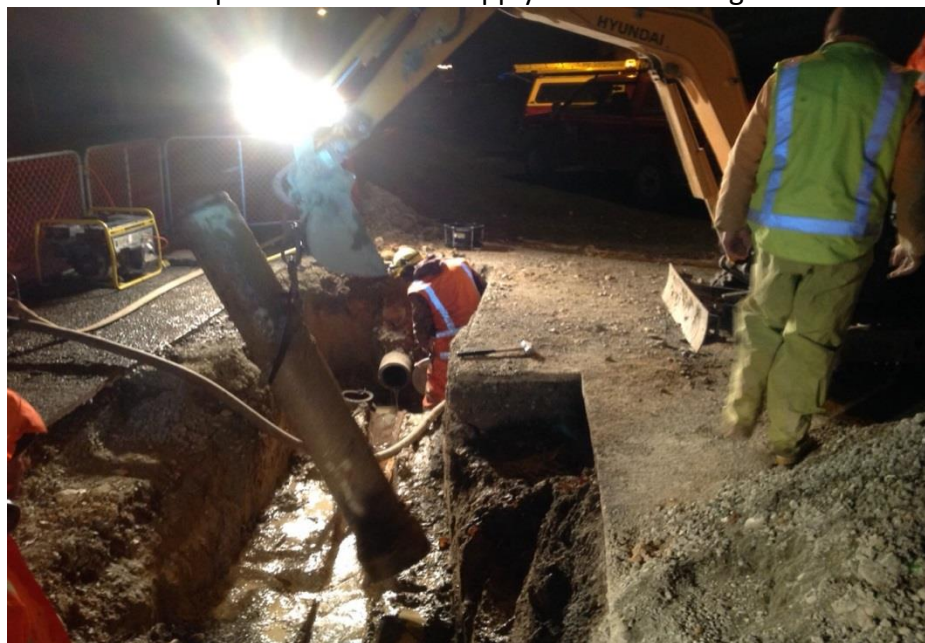
Though there is no need to apply water restrictions on Fairlie we still need to be mindful that the Opihi River is still not running that high. I have been attending the OEFRAG meeting for the last few months, it is this group that give recommendations to ECAN on the Water Shortage Direction for Opihi River and tributaries. There will be a review by this group on the drought, its effects and the response, this year. It is hoped that by carrying out this review, decisions that may need to make in an event like this will be more prudent and have a better outcome for all users.

ECAN are planning to review and update the Orari-Opihi- Pareora water zone regional plan in 2018.

On the night of the 25th May Fairlie township potable water was shut to install a major valve and fix a bad leak on the 200mm concrete pipe. By installing this valve will mean that in the future should there be another leak on the 200mm main on Mount Cook Rd there should be no need to shut the whole town off to repair it.

Just in the last week or so there have been two major leaks on the 150mm AC main from the intake one was just before Kimbel the other was near Three Spring Rd.

In the recent snow and cold spell all the schemes have been working well. With the power being off in in the treatment plants there was a need to put in small generators in to keep the treatment operational for the supply of safe drinking water.



Fairlie valve cut in

BECA are in the early stages of a proposed new disposal option for Tekapo Waste water plant.

South Island Rowing and Lake Ruataniwha Holiday Park have had to stop disposing of their sewerage to an unconsented pond. Both have been given permission to dispose on a temporally basis into the council reticulation via a manhole on Hooker Crs. They will be invoiced for the amount emptied into our reticulation. It is hoped that a more permeant solution will be in place before summer's busy time.

Progress is being made on the pump shed upgrade with phase one now complete and the new pumps now servicing the Township. To make the critical connection, the water supply to all of Twizel was shut down on the night of the 12th May to install a wye into the 300mm main just out from the pump shed. This process went very well with just a minor issue due to the original pipe being slightly oval. The water was back on by 4 am of the 13th. Whitestone put in a great effort to make this happen with little disruption to the community.

During the snow event the power to the Twizel plant was cut off and the new generator failed to start. We have been in contact with the supplier and they are working on finding out why this happened. Also for some reason the sensor that indicates when the reservoir is full failed. To fix this we have moved forward part of the upgrade to install new sensors.

BECA have been working on the Twizel waste water plant upgrade they are well into the design and planning stage, have also started to consent application process so this can be lodged with ECAN in the near future.



Twizel wye cut in



New pump set up in Twizel pump shed

SOLID WASTE

Solid Waste

Education projects

Compost

The home compost project has received a great response from residents. The project involves offering subsidies on two types of home composting systems; the Earthmaker, a traditional outdoor compost bin and Bokashi, an indoor bucket system. The project provided

for a maximum of 50 of each compost system, with all 50 Earthmakers and 10 Bokashi systems now allocated.

It is estimated that 30-40% of an average red wheelie bin in New Zealand consists of compostable material. Based on 35% compostable content of a 140 litre red wheelie bin, approximately 254kg will be diverted from landfill annually for each household that is now using a compost bin. 60 compost systems have been allocated through this project so far, which has the potential to save approximately 15.24 tonnes of waste to landfill per year. This also has a financial benefit through reduced disposal costs. The current estimated disposal charge for residual waste is \$94/tonne. Taking this into account, there is a potential saving of \$1,432 from the 60 compost bins per year.

Enviroschools

Enviroschools have started to contact local schools and have a meeting with the Fairlie Primary School and St Joseph's School in August. As the programme can only be introduced to a few schools each year due to resourcing, the initial focus will be on the Fairlie area. The programme will then roll out to schools in Tekapo and Twizel as part of a second phase.

Recycling sort line update

The new recycling sort line and hopper are scheduled to be installed at the Twizel Resource Recovery Park in mid August.

Albury waste services

Albury residents have been advised the Saturday morning collection point will no longer operate, and that residents will no longer be charged for this service from the start of the new rates year. This was a Council decision made last year. Residents within the Albury township, or able to bring their bins into the town area are able to join the main kerbside collection. Alternatively, residents are able to take their waste to the Fairlie Resource Recovery Park.

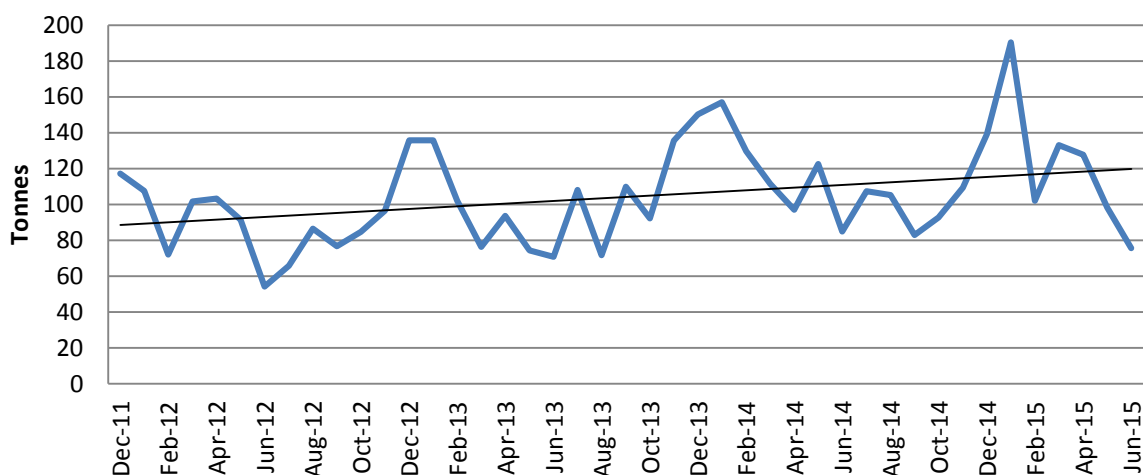
Kerbside collections

The kerbside collections have continued to run during the recent snow and cold period with only minor interruptions. One recycling run in Fairlie was interrupted due to snow, however this was completed the following week. Additionally, several collections were started late due to issues getting the truck running in the cold. EnviroWaste put a great deal of effort into keeping collections running and this has been recognised and appreciated by a number of residents.

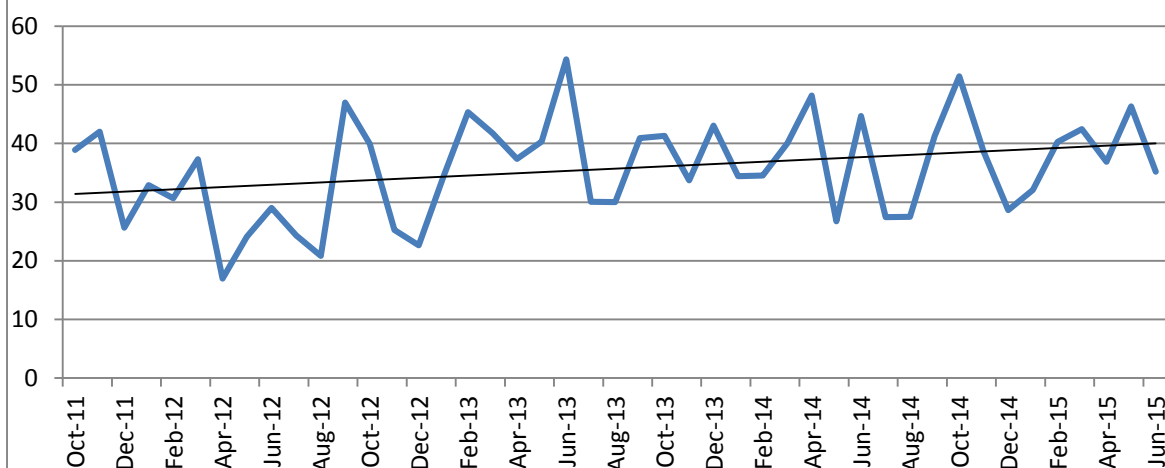
Photo: It took several hours to get the truck moving on this recycling collection day in Twizel following a -20°C night. Narrow road access due to snow and a daytime high of -10°C made the collection slow going, but both contractors and residents were keen to keep on recycling. This photo has been published in the WasteMINZ magazine and also on their facebook page, so the rest of the country can see how dedicated the Mackenzie is to recycling!



Waste carted to landfill from the Mackenzie District



Percentage of waste diverted from landfill



Percentage of recycling sent to landfill as residual waste

