

STAFF REPORT

TO: Chairman and Members, Engineering Services Committee

FROM: Jeff Cuthbertson

REFERENCE: S302

DATE: 13 January 2005

SUBJECT: Wastewater Treatment Facilities Upgrades

PURPOSE

The purpose of this report is to inform the Committee of the state of Council's wastewater treatment facilities and the proposed upgrade needed to comply with present and future consent conditions. It is intended that this discussion will form part of an introduction workshop to be held as the final agenda item of the Engineering Services Committee meeting.

COMMENTS

This report is produced as an overview to each of Council's wastewater treatment facilities. Each facility has its particular limitations and shortfalls.

With the exception of the St Arnaud wastewater treatment facility, all other schemes need some capital improvements.

Summary of Wastewater Treatment Facilities

Motueka

Situation

The Motueka facility has consent until 2008/2009, however the disposal system is blocked and the treated effluent is overflowing in an uncontrolled manner into an area adjacent to the existing disposal beds. Also, the treatment system needs upgrading to meet future load requirements and to address the seasonal odour issues that arise every summer. We consider it likely that an air discharge consent will need to be obtained when existing consent comes up for renewal. In the short term we are focussing on firstly rectifying the disposal issue by constructing new beds and rehabilitating the existing beds, and secondly, on upgrading the aeration capacity. Longer term, the plan is to further upgrade the plant to produce an effluent that is more suited to disposal to land. Council is proactively consulting iwi to ensure the short and long term upgrades meet as much as practicable the Council's needs, without compromising iwi cultural concerns.

Budget Issues

The budgets in the 2004/2005 financial year anticipated some upgrades, however on more detailed consideration and in the light of the ongoing poor performance of the disposal system, a more significant upgrade is now considered necessary. This is to ensure the quality of the effluent is suitable for disposal to land.

(Budget summary to be provided).

Takaka

Situation

The Takaka area is facing significant growth and the facility needs to be upgraded to meet projected loads. An upgrade concept had been developed and a subsidy has been applied for. However, the plant resource consent conditions are not well suited to the plant or the environmental issues that need to be addressed. Therefore in order to get the subsidy and to ensure that the plant has a record of compliance leading into the next consent renewal, we propose to vary the consent conditions and upgrade the plant. We are currently undertaking some environmental assessments to support the consent variation. We are then planning to upgrade the plant to meet the modified consent conditions. This is likely to be toward autumn 2005.

Aside from the upgrade, one of the ponds needs to be de-sludged. This is a significant undertaking that has not been forecast. It will require removal of sludge from the pond, treatment (de-watering) and then disposal.

Budget Issues

Some elements of the upgrade have been anticipated in the financial plans, but not all. The required upgrade will exceed the existing budget. This has not been fully quantified at this stage as the full extent of work can only be defined once the consent variation has been agreed. A successful subsidy will offset the cost escalation to some degree.

(Budget summary to be provided).

Upper Takaka

Situation

A new resource consent has been applied for and we are awaiting the awarding of this. We understand there are no issues that will stop the award, however we have yet to see the consent. The wetland area needs to be cleaned out and replanted. It is proposed to organise this with the Takaka pond de-sludge operation.

Tapawera

Situation

The resource consent for Tapawera expired some time ago. In preparing for a renewal, it was identified that the sub-soil disposal field was not operating effectively and this needed to be addressed prior to a consent renewal. We have concluded that a new disposal field is required. A preliminary design has been completed on this and subsequent environmental investigations have been undertaken to support a new consent application. We are now consulting affected parties prior to lodging consent applications and concluding the environmental studies. We are expecting a consent award in February/March 2005. After that we will be looking to construct the new disposal beds.

Budget Implications

The disposal system upgrade is included within the financial plans for Tapawera, as shown below. However there is a risk that the environmental studies may show that a disinfection stage is needed between the pond and disposal bed. If this is found to be needed then the budget will need to be increased.

(Budget summary to be provided).

Murchison

Situation

The Murchison plan is exceeding the resource consent disposal volume condition of consent. This indicates a high level of inflow and infiltration in the reticulation. Further, the pond is experiencing some performance problems that threaten the disposal fields. It is apparent now that the Murchison camp ground will soon be connected to the Murchison plant. This will increase peak loads and flows, therefore the need to upgrade the plant is increased. An upgrade concept has been developed and we are now preparing a proposal to implement the necessary upgrade. This will require a variation to the existing resource consent.

Budget Implications

The works forecast for Murchison were planned to occur in 2005/2006 and 2006/2007 and it did not anticipate the addition of the camp to the system. With the addition of the camp, the plant upgrade needs to be brought forward and the scale of the upgrade increased.

	2004/2005 \$	2005/2006 \$	2006/2007 \$	Total \$
Existing budget provisions for wastewater treatment plant upgrades		155,000	76,500	231,500
Anticipated upgrade costs	100,000	400,000		500,000

St Arnaud

Situation

The present wetland will need to have some of the wetland plants removed so as to provide open areas of free water.

Budget Implications

This work is proposed to be undertaken using maintenance funding.

Collingwood

Situation

The plant has been upgraded to meet the new conditions imposed by the renewed consent. Over and above these works we are working to install an UV disinfection system on the plant effluent and modifications to the plant to screen influent and increase treatment capacity.

Budget Implications

(Budget summary to be provided).

Proposed Workshop Discussion

It is proposed that this report will form part of a general discussion on wastewater treatment facilities upgrading throughout the district.

Issues that also need to be discussed or at least drawn to the attention of the Engineering Services Committee are:

1. Septic tank disposal
2. Sludge removal from treatment facilities
3. Stock truck effluent disposal – liquid waste and solids disposal
4. Trade Waste Discharge Bylaw
5. Truck/car wash disposal rules
6. Subdivisional/drainage connection rules
7. Creation of operation and maintenance plans for each scheme.
8. Compile a database of all testing/compliance issues

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