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Report to Utility Services Committee
from Murray Kennedy, Strategy and Asset Manager

Wholesale Water : Capital Works Projects Half Year Review

1. Purpose

To provide information to the Committee about capital work projects for the 2001/02 financial year and obtain approval for a number of variations.

2. Background

Capital works to the value of \$3,905,000 have been approved for the 2001/02 year. As advised in the Chief Financial Officer's report No 02.17 to the policy and Finance (P&F) Committee on 14 February, the wholesale water supply capital works budget will be underspent for the year.

At the time the annual budget was prepared, some projects were included based on limited information. Then, as design work progresses, firmer estimates are prepared. Some works may cost slightly more or less than originally thought. Likewise, market contract conditions can result in variances between the firm estimates and actual construction cost.

Also, there may be cases where detailed investigations show the project cannot be justified or the project can be deferred for a period of time.

The P&F Committee was requested to approve three additional projects to the value of \$215,000.

Detailed below is a more comprehensive review of the capital projects. A review is usually undertaken by the Utility Services Committee once the half year financial results are known.

3. Project Review

3.1 Source Projects

Expenditure on works associated with water collection is forecast to be **\$113,000** against a budget of **\$140,000**. Costs associated with investigating and planning the upgrading of the Kaitoke and Orongorongo Intakes have been less than budgeted. Additional expenditure is needed to complete the upgrading of the Waterloo Wells. A vehicle crossing of the Orongorongo River is also being investigated.

3.2 Treatment Projects

Expenditure on works associated with water treatment is forecast to be **\$754,964** against a budget of **\$795,000**. Savings have been made on the following projects:

- Wainuiomata Lime System Modification. A detailed investigation of this project revealed that the cost would be considerably more than the amount budgeted and could not be justified. Improvements at a much reduced scale are proposed, giving a forecast saving of \$105,000.
- Replacement Control Equipment for Te Marua. The purchase last year of refurbished replacement components has put Te Marua in a good position regarding replacement of old control equipment modules and the purchase of spare modules. A saving of \$25,000 in the funding budgeted for this year is therefore expected.
- Waterloo Noise and Vibration Reduction. \$200,000 is budgeted for this project, but progress has been slower than expected. A series of incremental improvements is being made, with the success of each being tested before proceeding with the next item. The full project budget of \$230,000 may therefore not be expended. Expenditure this year of \$135,000 is forecast, with at least some of the balance to be rebudgeted into 2002/2003, depending on the success of improvement works. Saving \$65,000.

Projects requiring additional funding are as follows:

- The Gear Island Gas Chlorination Plant. This project is expected to cost \$78,000 more than budgeted (\$77,000 in this financial year). The complexities of the installation and the difficulty of installing new equipment in an old and fully operational plant were not adequately allowed for in preparing the budget.
- Wainuiomata Roding Reseals. The scope of this work has been increased, by bringing forward some resealing originally programmed for 2002-2003. This will lead to a more efficient contract, reducing the overall site establishment and administrative costs. Additional cost \$17,500.

3.3 Pipeline Projects

Expenditure on works associated with pipelines is forecast to be **\$1,132,583** against a budget of **\$1,530,000**. The main areas of savings, are:

- Refurbishment of the Orongorongo Main between Randwick and Korokoro. Very competitive tendering has resulted in an estimated saving of \$190,000.
- Replacement of the Pinehaven Branch Main. Detailed investigations, including testing a number of pipe samples, has indicated that this main is in much better condition than anticipated, and does not yet require replacement. Saving \$227,000.

3.4 Pumping Stations and Reservoirs

Expenditure on works associated with the pump stations and reservoirs is forecast to be **\$305,000** against a budget of **\$430,000**. The bulk of this saving (\$113,000) has come from deferring construction of the Ascot Park Pump Station. Improvements to the operation of the network mean that this pump station is not required, at least in the immediate future.

3.5 Monitoring and Control Projects

Expenditure on projects associated with Monitoring and Control is forecast to be **\$284,500** against a budget of **\$510,000**. The main areas of saving are:

- Deferral of Stage 2 of the Optimiser project pending completion of the hydraulic system model and a detailed analysis of its potential benefits. Saving \$50,000.
- Simplification of the proposed Data Warehouse and the use of much cheaper software has provided a projected saving of \$243,000.
- Installation of new meters – Installation of new meters is now complete, well within the overall project budget. Projected savings this year \$32,500.

A new project is proposed in this area. A review of the Sustainable Yield Model (SYM) has shown that a major upgrade rather than minor adjustments is warranted, and capital expenditure of \$100,000 to undertake this work is proposed.

3.6 Miscellaneous Projects

Expenditure on miscellaneous minor work and seismic protection work is forecast to be \$446,197 against a budget of \$500,000.

3.7 Summary

Summary of projected savings by asset type.

Category	Budget	Forecast	Variance
Source Projects	\$140,000	\$113,000	-19%
Treatment Projects	\$795,000	\$754,964	-2.5%
Pipeline Projects	\$1,530,000	\$1,132,583	-26%
Pump Stations and Reservoirs	\$430,000	\$305,000	-29%
Monitoring and Control Projects	\$510,000	\$284,500	-44%
Miscellaneous Projects	\$500,000	\$441,197	-11%
Total	\$3,905,000	\$3,031,244	-22%

Breakdown of how projected savings are to be achieved.

Savings through projects not proceeding	\$340,000
Saving through reduced project scope	\$235,000
Direct cost savings	\$530,500
Savings through projects being deferred or delayed	\$194,000
Total projected savings	\$1,299,500

Details are shown on attachment 1

Breakdown of Additional Costs.

New projects	\$231,000
Increased project scope	\$82,500
Projects where increased costs are expected	\$77,000
Costs of completing 2000/2001 projects	\$34,000
Total expected additional costs.	\$424,500

Details are shown on attachment 1.

4. Discussion

New projects to the value of \$215,000 are expected to have been considered by the P&F Committee by the time this report is considered by the Utility Services Committee.

One additional new project is investigating an Orongorongo river crossing (\$16,000). Detailed investigations have increased the scope of some projects. The largest of these is the Johnsonville pumping station, where the cost has increased from \$160,000 to \$215,000. The scope of the work is more extensive than first thought. The inclusion of variable speed drives (\$80,000) will mean that the new pumps will operate more efficiently, saving money and energy. Pumping stations are generally refurbished every 25-30 years. Johnsonville pumping station is now 29 years old.

Additional funding is required for the Gear Island chlorination plant for reasons explained in section 3.2.

A total of \$34,000 (approximately 1% of the budget) is required for the completion of 2000/01 projects. This is essentially a timing issue. The need to rebudget funds was not apparent when the 2001/02 capital works programme was finalised.

5. Recommendations

It is recommended that the Committee:

- (1) notes that some capital projects for the 2001/02 year will not proceed, will be modified in scope, or will cost less than originally estimated.*
- (2) approves new projects of \$16,000, increased project scope of \$82,500, cost increases of \$77,000 and \$34,000 for projects not completed in the 2000/01 year.*
- (3) notes that the net savings after the increases and decreases is estimated at \$875,000.*

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