



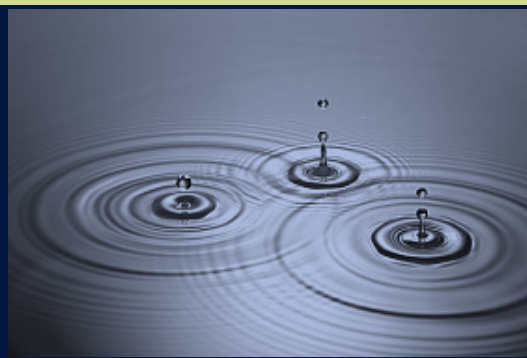
# Melbourne Water Special Drainage Areas 2012-13 Price Review

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Final Report

Essential Services Commission

31 May 2012



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## 1. Executive Summary

A review has been undertaken of the actual and proposed capital and operating expenditure for three Special Drainage Areas, namely the Tidal Waterways, Quiet Lakes, and the Koo Wee Rup Longwarry Flood Protection District.

The summary recommendations of the review are presented in the following points below with further detail presented in the following chapters of this report.

### Overall

A high level review of capital and operating expenditure for the Special Drainage Areas has been undertaken. The review identified a number of recommendations, as summarised below, including adjustments to capital and operating expenditure.

### Tidal Waterways

- It is recommended that the proposed 2012/13 capital expenditure for the Dredging program be reduced by \$2,000,000 with this amount to be deferred to 2013/14. The recommended expenditure for 2012/13 will therefore be \$500,000, which will be inclusive of any deferment of expenditure resulting from any adjustment to the latest 2011/12 forecast actual expenditure. This may require some of the proposed expenditure in 2012/13 to be further deferred to 2013/14.

**Table 1 Proposed and Recommended Capital Expenditure for Tidal Waterways 2012/13**

Tidal Waterways Capital Expenditure (\$)	2012/13 Proposed	2012/13 Recommended	Variance
Retaining Wall Replacement	0	0	0
Jetty Replacement	3,360,297	3,360,297	0
Dredging as part of jetty replacement	2,500,000	500,000	-2,000,000
Foreshore works (minor capital)	192,100	192,100	0
<b>Total Expenditure</b>	<b>6,052,397</b>	<b>4,052,397</b>	<b>-2,000,000</b>

- It is recommended that the adjustments presented in Table 2 below are made to the Tidal Waterways proposed operating expenditure for 2012/13.

**Table 2 Proposed and Recommended Operating Expenditure Tidal Waterways 2012/13**

Tidal Waterways Operating Expenditure (\$)	2012/13 Proposed	2012/13 Recommended
Tidal gate operation and maintenance	49,000	49,000
General maintenance	240,000	220,000
Newsletter	17,526	8,500
Jetty Maintenance	25,000	20,000
Maintenance contract	27,000	27,000
Maintenance coordinator	70,968	70,968
Civil works and asset monitoring	40,000	40,000
<b>Total Expenditure</b>	<b>469,494</b>	<b>435,468</b>

### Jetty Replacement Program

- It is recommended that Melbourne Water continues their current consultation process and ensures that residents affected by delays in the program are fully informed and are provided with realistic timeframes for replacement of their jetties.

### Quiet Lakes

- It is recommended that proposed expenditure for Silt Removal be reduced to \$26,000 to reflect the expectation, based on 2011/12 expenditure, that silt disposal costs will be lower than expected.

**Table 3 Proposed and Recommended Capital Expenditure for Quiet Lakes in 2012/13**

Quiet Lakes Capital Expenditure (\$)	2012/13 Proposed	2012/13 Recommended	Variance
Macrophytes	18,309	18,309	-
Bore Pump	0	0	-
Civil Works	30,480	30,480	-
Silt Removal	41,000	26,000	-15,000
SolarBee	65,646	65,646	-
<b>Total Expenditure</b>	<b>155,435</b>	<b>155,435</b>	<b>140,435</b>

### Koo Wee Rup Longwarry

- No specific recommendations required

## 2. Introduction

### 2.1 Background

The Essential Services Commission (the Commission) is reviewing Melbourne Water's 2012-13 pricing submission for Special Drainage Areas consisting of:

- Patterson Lakes Tidal Waterways;
- Patterson Lakes Quiet Lakes; and
- Koo Wee Rup – Longwarry Flood Protection District.

The Commission has engaged Strategic Economics Consulting Group to assist in undertaking particular components of this review.

### 2.2 Scope of works

The scope of this review is to advise the Commission on whether Melbourne Water's actual and proposed expenditure, in relation to the Special Drainage Areas, in the pricing submission is appropriate and efficient.

In providing this advice, the following was taken into account:

- obligations on Melbourne Water,
- past trends in expenditure,
- whether forecast expenditure is reasonable compared with typical industry rates, and
- factors such as input costs, growth and productivity improvement.

In particular, the review should cover a high-level review of capital and operating expenditure in each of Special Drainage Areas with a focus on capital expenditure in Quiet Lakes, and the impact of delays in jetty related works to planned capital expenditure in the Tidal Waterways.

The expected outputs of the review are:

- Draft summary – preliminary views on expenditure and identification of any further work required;
- Melbourne Water comments – on the draft summary report; and
- Final report – final view and recommendations on expenditure.

### 2.3 Approach to review

Our approach can be summarised in the following five steps:

1. Review available data – includes Melbourne Water's submission to the Commission, the previous submission made to the Commission in mid 2011 related to the Special Drainage Areas and its accompanying report, prepared by SECG, for the Commission.
2. Conducted interviews with Melbourne Water – to explore, in more detail, the proposed capital and operating expenditure, and a historical look, that is, the actual expenditure. These interviews sought to identify the basis and drivers for the proposed expenditure, the comparison of planned and actual expenditure, and the reasons and justification for any project delays.

3. Assess and analyse the data – the analysis sought to ensure that the basis for the proposed capital and operating expenditure is consistent with the principles outlined in the scope of works. Historical expenditure was assessed to determine whether works originally proposed have been completed, deferred or cancelled. Proposed expenditure was specifically assessed for efficiency and the levels of precept area customer support.
4. Prepared a draft summary report (this report) – outlining the preliminary findings of the review process and identifying whether any additional work or investigation is required. The draft report will be submitted to the Commission and to Melbourne Water for comment.
5. Prepare a final report – incorporating, where relevant, the comments received on the draft report, and undertaking any additional analysis required, a final report will be prepared for submission to the Commission. This report will outline the final view on the proposed and historical expenditure and revenue figures and will provide any recommendations relevant to the findings.

## 2.4 Data Sources

Figures quoted for 2011/12 and 2012/13 have been sourced from the most recent submission by Melbourne Water<sup>1</sup>. The 2011/12 Plan numbers are the planned and approved figures from Melbourne Water's 2011/12 submission to the ESC. The 2011/12 H1 Actual numbers are the actual expenditure from 1 July 2011 to 31 December 2011, and the 2011/12 Forecast are the forecasts of the total actual expenditures to the end of the financial year, inclusive of H1 expenditures already known. Some updated forecasts were provided for the Tidal Waterways capital expenditure identifying reforecast expenditure as at May 2012. These updated forecasts are individually identified in Table 4.

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<sup>1</sup> Melbourne Water, 2012/13 Price Review for Melbourne Water's Special Drainage Areas, April 2012.

### 3. Results of Analysis

#### 3.1 Tidal Waterways

##### 3.1.1 Capital Expenditure

###### Actual Capital Expenditure

Actual capital expenditure in the Tidal Waterways for 2011/12 is presented in Table 4 below.

**Table 4 Planned, Actual and Forecast Capital Expenditure for Tidal Waterways 2011/12**

Tidal Waterways Capital Expenditure (\$)	2011/12 Plan	2011/12 H1 Actual	2011/12 Forecast	2011/12 Updated Forecast (May 2012)	Variance (with Updated Forecast, May 2012)	Comments
Retaining Wall Replacement	0	0	50,000	50,000	50,000	Covers investigation works
Jetty Replacement	2,942,496	763,823	2,740,000	2,585,268	-357,228	Program running behind schedule
Dredging as part of jetty replacement	1,627,896	45,000	500,000	250,000	-1,377,896	Delay in project roll out
Foreshore work	418,100	76,000	120,000	120,000	-298,100	Consultation underway on access points and works depots
<b>Total Expenditure</b>	<b>4,988,492</b>	<b>884,823</b>	<b>3,410,000</b>	<b>3,005,268</b>	<b>-1,983,224</b>	

More detailed comments on the reasons for variance between planned and forecast expenditure for each item are presented below:

- Forecast expenditure on retaining wall replacement covers investigation works to identify priority works, complete analysis and design of replacement embankment options, and assessment of residents' requests to create beach areas.
- Expenditure for the Jetty Replacement program reflects the delays in the project resulting from planning approval processes including residents' agreement on designs and the Council permit approval process. It appears that the original program and expenditure profiling did not accurately reflect the actual timeframes required. Further information, including the most recent forecast expenditure, on the Jetty Replacement program is presented in section 3.1.2 below.
- Expenditure on the dredging program reflects delays to the project resulting from the need for detailed investigation works for the environmental approvals process and the identification and engagement of a suitable consultant to investigate available options. The forecast 2011/12 annual expenditure of \$500,000 could potentially be overstated given the most recent Dredging program provided.

The program (dated May 2012) indicated that works likely to be completed by end of June 2012 included predominantly lakebed sediment sampling, analysis and some investigation works. An update to forecast expenditure provided by Melbourne Water in May 2012 indicates that the expected work completed will total only \$250,000. One of the reasons for this further reduction in forecast expenditure is that while works are underway, billing for the works is not expected until the next financial year, 2012/13. The significant increase in forecast expenditure from the H1 actual of \$45,000 to the updated full year forecast of \$250,000 is most likely a result of the nature of work performed; that is, various consultancy projects which were likely not billed or paid until the second half of the year.

- Expenditure on the foreshore works has been significantly under the planned figure due to an ongoing consultation program with residents around access points and works depots. It is understood that delays might also be the result of Council land zoning restrictions. Melbourne Water has been undertaking investigations to rezone land to a public use zone to reduce access and site storage restrictions. The most recent update to forecast expenditure (May 2012) indicates that the current forecast expenditure remains on track.

The variance in actual capital expenditure for 2011/12 (including the most recent May 2012 update) currently represents almost 40 per cent of the total planned expenditure. While this variance is to be carried over into 2012/13, the impacts on residents from the delays will include the perception that works paid for through price rises are not being delivered to benefit the residents. At the same time such delays are in part a result of further consultation with ratepayers more directly affected by the works. Approximately 70 per cent of the deferred expenditure is attributed to the dredging program.

### Proposed Capital Expenditure

Proposed capital expenditure for 2012/13 is dominated by two items, as shown in Table 5 below.

**Table 5 Proposed Capital Expenditure for Tidal Waterways 2012/13**

Tidal Waterways Capital Expenditure (\$)	2012/13 Plan
Retaining Wall Replacement	0
Jetty Replacement	3,360,297
Dredging as part of jetty replacement	2,500,000
Foreshore works (minor capital)	192,100
<b>Total Expenditure</b>	<b>6,052,397</b>

Proposed expenditure for the Jetty Replacement program is discussed in section 3.1.3 while expenditure for the Dredging program is discussed in the paragraphs below.

The Dredging program is a parallel project to the Jetty Replacement program and involves the removal of sediment from underneath the new jetties and moorings to allow larger boats to use the new jetties. Whilst it is a parallel project, the dredging program is not reliant on, nor is it part of the critical path of, the Jetty Replacement program and neither programs is necessarily or directly affected by delays to the other program.



Melbourne Water provided a *Task Plan Investigations and Approvals Paterson Lakes Dredging* dated May 2012 which provided a specific timeline of activities required as part of the Dredging program. This program presented a timeline that was inconsistent with the proposed expenditure outlined in Table 5. The activities scheduled for 2012/13 included a survey, development of a 12D model and various investigations related to soils, water quality and environmental issues, through to approvals and development of the construction tender and tender award process. Specifically, construction works were scheduled to commence in August 2013.

The scheduled activities, whilst critical to the program, are not consistent with the proposed \$2.5 million allowance (which represents the peak of the expenditure profile and which is indicated to occur in 2013/14) and as a result it is recommended that \$2,000,000 of this allowance be deferred into 2013/14. The adjusted expenditure profile is presented in Table 7 and is more consistent with the Task Plan provided.

In the discussion on actual expenditure for 2011/12 (refer previous section), it was identified that a significant proportion of expenditure (40 per cent of planned) required deferral into 2012/13 due to delays in projects. The recommended expenditure for 2012/13 is an upper limit and any deferral of expenditure from 2011/12 would require an equivalent level of expenditure from 2012/13 to be further deferred into 2013/14 to maintain the recommended limit. This is explained further in Table 6 below, which shows the planned and recommended expenditure profiles to 2014/15.

**Table 6 Planned, Forecast and Recommended Capital Expenditure Profile for Tidal Waterways 2011/12 to 2014/15**

Program		2011/12	2012/13	2013/14	2014/15
<b>Retaining wall replacement</b>	Planned		-	1,225,000	1,225,000
	Forecast (May 12)	50,000	-	1,225,000	1,225,000
	Recommended	50,000	-	1,225,000	1,225,000
<b>Jetty Replacement</b>	Planned	2,942,496	3,360,297	1,680,148	-
	Forecast (May 12)	2,585,268	3,717,525	1,680,148	-
	Recommended	2,585,268	3,360,297	2,037,376	-
<b>Dredging</b>	Planned	1,627,896	2,500,000	1,899,730	-
	Forecast (May 12)	250,000	2,750,000	1,899,730	-
	Recommended	250,000	500,000	2,250,000	1,899,730
<b>Foreshore works</b>	Planned	418,000	192,100	192,100	192,100
	Forecast (May 12)	120,000	192,100	192,100	192,100
	Recommended	120,000	192,100	192,100	192,100

NB: Forecast (May 2012) figures for 2012/13 to 2014/15 assume any deferral from previous years is added to each year's expenditure in order.

Adjustments to expenditure that are related to delays in programs, however, do have an effect on residents, as works that were originally scheduled are delayed and residents are denied the opportunity to enjoy the completed works. In these situations, it is expected that Melbourne Water maintains regular contact with residents to specifically discuss the delays, their likely impacts and strategies to be employed to mitigate the delays. It is noted though, that the delays to the dredging program and Jetty Replacement program do not necessarily affect each other.

Proposed expenditure for the Foreshore works (minor capital) program is consistent with previous years and covers a range of minor works. Although it is a regular allowance rather than a specific collection of projects, the allowance is a significant reduction from the planned 2011/12 expenditure and is now consistent with the actual expected expenditure for 2011/12. It is assumed that the significant underspend from 2011/12 is spread out over the future years of the program.

### Summary on Capital Expenditure

Actual and proposed capital expenditure for the Tidal Waterways has been reviewed and an adjustment has been recommended to the proposed expenditure for the Dredging program.

- It is recommended that the proposed 2012/13 expenditure for the Dredging program be reduced by \$2,000,000 with this amount to be deferred to 2013/14. The recommended expenditure for 2012/13 will be \$500,000, which will be inclusive of any deferment of expenditure resulting from any reduction to the 2011/12 forecast actual expenditure. This may require some of the proposed expenditure in 2012/13 to be further deferred to 2013/14.

Table 7 below summarises the recommended outcome.

**Table 7 Proposed and Recommended Capital Expenditure for Tidal Waterways 2012/13**

Tidal Waterways Capital Expenditure (\$)	2012/13 Proposed	2012/13 Recommended	Variance
Retaining Wall Replacement	0	0	0
Jetty Replacement	3,360,297	3,360,297	0
Dredging as part of jetty replacement	2,500,000	500,000	-2,000,000
Foreshore works (minor capital)	192,100	192,100	0
<b>Total Expenditure</b>	<b>6,052,397</b>	<b>4,052,397</b>	<b>-2,000,000</b>

### 3.1.2 Operating Expenditure

#### Actual Operating Expenditure

Actual operating expenditure in the Tidal Waterways for 2011/12 is presented in Table 8 below.

**Table 8 Planned, Actual and Forecast Operating Expenditure for Tidal Waterways in 2011/12**

Tidal Waterways Operating Expenditure (\$)	2011/12 Plan	2011/12 H1 Actual	2011/12 Forecast	Variance	Comments
Tidal gate operation and maintenance	49,000	23,010	45,000	-4,000	Not all gates required full maintenance due to replacement program
General maintenance	250,000	106,621	240,000	-10,000	Reductions in maintenance due to minor capital works program

Tidal Waterways Operating Expenditure (\$)	2011/12 Plan	2011/12 H1 Actual	2011/12 Forecast	Variance	Comments
Newsletter	14,526	4,067	8,134	-6,392	Only one issue published and expected reduction in future issues
Jetty Maintenance	20,000	10,926	25,000	5,000	Ongoing works
Maintenance contract	45,000	5,052	32,550	-12,540	Reduction due to car and fuel items not being allocated to contract
Maintenance coordinator	70,968	35,484	70,968	0	
Civil works and asset monitoring	20,000	15,544	25,000	5,000	
<b>Total Expenditure</b>	<b>469,494</b>	<b>200,704</b>	<b>446,652</b>	<b>-22,842</b>	

Additional comments on the variances in planned and actual operating expenditure are presented below:

- Reductions in the tidal gate operation and maintenance expenditure would be expected to be ongoing given the replacement program.
- Reductions in general maintenance expenditure would also be expected to be ongoing given work undertaken in the minor capital works program.
- Forecast expenditure for the newsletter is on trend with actual expenditure in 2009/10 and 2010/11 and this trend should become the basis for forecast expenditure beyond 2011/12.
- Increases in Jetty Maintenance would be expected to be temporary only and would be expected to reduce in future years to reflect the progress of the jetty replacement program underway.

The variance in operating expenditure currently represents less than five per cent of the originally planned expenditure and not a result of delays to programs.

#### Proposed Operating Expenditure

Proposed operating expenditure for 2012/13 generally follows the planned expenditure in 2011/12 and is presented in Table 9 below.

**Table 9 Proposed Operating Expenditure for Tidal Waterways in 2012/13**

Tidal Waterways Operating Expenditure (\$)	2012/13 Plan
Tidal gate operation and maintenance	49,000
General maintenance	240,000
Newsletter	17,526
Jetty Maintenance	25,000
Maintenance contract	27,000
Maintenance coordinator	70,968
Civil works and asset monitoring	40,000
<b>Total Expenditure</b>	<b>469,494</b>

Some of the proposed expenditure, however, does not take into account trends in actual expenditure discussed in the previous section. These trends reflect reductions in operating expenditure due to capital works and trends in actual expenditure and are shown in Table 10 below.

**Table 10 Operating Expenditure Trends for Tidal Waterways 2009/10 to 2012/13**

Program	2009/10	2010/11	2011/12	2012/13
<b>Tidal Gate Operating and Maintenance</b>	60,366	49,040	45,000	49,000
<b>General Maintenance</b>	217,909	219,941	240,000	240,000
<b>Newsletter</b>	5,427	4,555	8,134	17,526
<b>Jetty Maintenance</b>	15,918	18,056	25,000	25,000
<b>Maintenance Contract</b>	48,817	34,188	32,550	27,000
<b>Maintenance Coordinator</b>	70,968	70,968	70,968	70,968
<b>Civil Works and Asset Monitoring</b>	-	-	25,000	40,000

Further comments on proposed expenditure are presented in the following points:

- Tidal gate operation and maintenance – expenditure has been reducing due to the Tidal Gate Replacement capital program, however an additional tidal gate has been installed and operations expenditure is expected to be maintained at \$49,000. This expenditure reflects operational requirements such as gate cleaning, inspections, silt removal, and other similar activities.
- General Maintenance – proposed expenditure should be reduced to \$220,000 to reflect trends in 2009/10 and 2010/11 actual expenditure and reduced maintenance due to minor capital works expenditure. Melbourne Water has further indicated that the proposed expenditure in 2013/14 is reducing to \$215,000 to reflect a reduction in works to maintain adequate depth around moorings. Given that a dredging program is in planning and jetties are already being replaced, it is considered reasonable that the proposed expenditure for 2012/13 be reduced to \$220,000 to reflect the historical and proposed future trends.
- Newsletter – proposed expenditure should be reduced to \$8,500, consistent with trends in actual expenditure and expected reductions in the number of newsletters produced. Future project specific communications can be incorporated into the project specific budgets.
- Jetty Maintenance – while the current Jetty Replacement capital program which should reduce the maintenance requirements, Melbourne Water is proposing to introduce an annual inspection process for all jetties and moorings. Overall, however, the inspection program for all jetties should cost less to operate than the previous maintenance works. The proposed expenditure should therefore be reduced to \$20,000.
- Maintenance contract – proposed expenditure reflects new contracts which exclude car and fuel expenses.

### Summary on Operating Expenditure

Actual and proposed operating expenditure for the Tidal Waterways has been reviewed and analysed and a number of adjustments are recommended for proposed expenditure in 2012/13.

- It is recommended that the adjustments suggested above and presented in Table 11 below are made to the Tidal Waterways proposed operating expenditure for 2012/13.

**Table 11 Proposed and Recommended Operating Expenditure Tidal Waterways 2012/13**

Tidal Waterways Operating Expenditure (\$)	2012/13 Proposed	2012/13 Recommended
Tidal gate operation and maintenance	49,000	49,000
General maintenance	240,000	220,000
Newsletter	17,526	8,500
Jetty Maintenance	25,000	20,000
Maintenance contract	27,000	27,000
Maintenance coordinator	70,968	70,968
Civil works and asset monitoring	40,000	40,000
<b>Total Expenditure</b>	<b>469,494</b>	<b>435,468</b>

### 3.1.3 Jetty Replacement program

Melbourne Water's Jetty Replacement Program involves the replacement of 268 existing jetties and moorings used by residents. The existing assets are reaching the end of their useful lives and a large proportion of the jetties are in poor condition.

#### Actual Capital Expenditure

Expenditure in 2011/12 for the Jetty Replacement program reflects the delays in the project resulting from planning approval processes including residents' agreement on designs and the Council permit approval process. There is a 21 week process from design of a jetty to the planning application submission and a further 25 week process from submission of planning application to commencement of construction. It appears that the original program and expenditure profiling did not accurately reflect the actual timeframes required.

Actual expenditure reported in the six months to the end of 2011 appears to predominantly cover design, investigation and consultation work rather than jetty replacement works. The Patterson Lakes Advisory Committee minutes of meeting for 16 November 2011 did not report any jetty replacements detailing only design and planning issues.

Forecast annual expenditure for 2011/12 includes a significant ramp up of construction work however updated forecast expenditure for 2011/12 provided by Melbourne Water indicates a further downgrade of expenditure (refer section 3.1.1) reflecting lower than expected productivity levels from the second crew of workers. Melbourne Water has indicated it is continuing to work with the contractors to improve construction rates. The Patterson Lakes Advisory Committee meeting minutes from 8 February 2012 identified that 40 jetties had been replaced, while the Tidal Lakes Community Bulletin from 17 April 2012 updated this figure to 53 jetties. This bulletin indicated that a second crew of workers had commenced on site to speed up the process.

The Tidal Lakes Community Bulletin from 17 April 2012 further indicated that 78 per cent of jetty designs had been submitted to leaseholders, 66 per cent of all planning permit applications had been submitted to Council for approval and that 49 per cent of all applications submitted to Council had been approved.

### **Proposed Capital Expenditure**

Forecast expenditure for 2012/13 indicated that approximately \$3.3 million is proposed with a further approximately \$1.7 million proposed for 2013/14 which would then represent the completion of the program. The forecast expenditure for 2012/13 would nominally increase due to the deferral of \$357,228 in expenditure from 2011/12; however it is expected that unless productivity from the current two crews of workers increases or Melbourne Water implements additional measures such as those suggested below, that the forecast expenditure of approximately \$3.3 million will remain. This will result in a deferral of \$357,228 from 2012/13 to 2013/14 – refer Table 6 for details.

Melbourne Water has indicated that the forecast expenditure is based on latest estimates of resident take up rates and maximum annual construction rates. Melbourne Water is investigating a number of options to recover previous delays (as discussed above) in the overall project including:

- Engage a full time stakeholder engagement and administrator resource to assist with planning process (already engaged).
- Review productivity levels of current crews and if required increase crew size.
- Extend working hours to Saturdays (subject to planning permit restrictions).
- Instruct contractor to engage a second crew to complete works (already engaged).
- Instruct current contractor to engage a third crew to complete works.
- Engage another contractor to assist with completing works.
- Review current productivity incentives.

A high level analysis of current jetty replacement rates reveals the following:

- 40 jetties were replaced up to the 8 February 2012 (Patterson Lakes Advisory Committee minutes of meeting 8 February 2012).
- 53 jetties were replaced up to the 30 March 2012 (Tidal Lakes Community Bulletin 17 April 2012).
- It is presumed that jetty replacement construction works commenced in December 2011 and as such over the four month period from December 2011 to March 2012 jetties were replaced at the average rate of 53 jetties over 4 months = 13 jetties per month. This figure is consistent with the increase from 8 February to 30 March 2012.
- Assuming this average construction rate, the number of jetties expected to be replaced by 30 June 2012 would be 92 (53 + (13 x 3)).
- Assuming a completion date of the program in mid 2013 (based on forecast expenditure), there are 268 – 92 = 176 jetties remaining to be constructed over 12 months (July 2012 to July 2013). This converts to an average rate of 14 jetties per month which is consistent with the historical average rate determined above.

While this reduction in expenditure affects the capital expenditure for the Tidal Waterways area, it does not necessarily affect the price path for residents. Melbourne Water has previously been approved a long term price increase based on achieving cost recovery from revenue in 2022/23.

This process requires Melbourne Water to subsidise any costs over and above what is recovered from revenue (that is, the precept charges). As such, variations in expenditure in between these years do not affect precept area charges, only the level of subsidy required of Melbourne Water.

### Summary of Capital Expenditure

Actual and proposed expenditure for the Jetty Replacement program has been reviewed and analysed and no specific adjustments for 2012/13 are recommended. Initial delays to the program were related to planning and approvals processes rather than construction works. The deferral of \$357,228 from 2011/12 to 2012/13 and an equivalent deferral of \$357,228 from 2012/13 to 2013/14 is noted and described in Table 6. Melbourne Water has demonstrated actions to mitigate the delays and introduced measures to recover time lost.

- It is recommended that Melbourne Water continues their current consultation process and ensures that residents affected by delays in the program are fully informed and are provided with realistic timeframes for replacement of their jetties.

## 3.2 Quiet Lakes

### 3.2.1 Capital Expenditure

#### Actual Capital Expenditure

Actual expenditure in the Quiet Lakes for 2011/12 is shown in Table 12 below:

**Table 12 Planned, Actual and Forecast Capital Expenditure for Quiet Lakes 2011/12**

Quiet Lakes Capital Expenditure (\$)	2011/12 Plan	2011/12 H1 Actual	2011/12 Forecast	Variance	Melbourne Water Comments
Macrophytes	18,309	0	8,000	-10,309	Planting area reduced in initial stages
Bore Pump	99,600	15,645	70,000	-29,600	Reduction in licence application
Civil Works	30,480	0	30,480	0	No works conducted in six months to Dec. 2011
Silt Removal	41,000	9,200	26,000	-15,000	Cost reduced due to low levels of contamination
SolarBee	65,646	0	0	-65,646	Awaiting review of trial installation in 2012/13
<b>Total Expenditure</b>	<b>255,035</b>	<b>24,845</b>	<b>134,480</b>	<b>-120,555</b>	

More detailed comments on the reasons for variance between planned and forecast expenditure for each item are presented below:

- Macrophyte expenditure is significantly reduced on planned expenditure due to both a reduced planting area and other issues including the need for removal of silt prior to planting. Residents have also identified concerns with replanting vegetation, in particular, the impact on recreation in the lakes.

- Bore Pump expenditure was low in the first half of the year due to extended consideration of the bore pump option and discussions and investigations around the license approval process. The expenditure to date has been used for pump testing and monitoring to identify the maximum sustainable yield from the system. The use of the bore pump to assist in managing water quality in the lakes is not specifically part of Melbourne Water's water quality management strategy, as defined by the Quiet Lakes Water Quality Management Plan.
- Civil Works were not conducted in the first half of the year but Melbourne Water expects to complete the planned works, including valve replacement, prior to the end of the year.
- Silt removal expenditure involved some removal of sediment from the lakes to assist with the macrophyte planting process. The reduction in expenditure was a result of lower levels of removal along with lower silt contamination levels which led to lower disposal costs.
- SolarBee expenditure has been delayed to assess the results of a trial of an existing Melbourne Water owned SolarBee. The original planned expenditure was allocated to purchase a SolarBee for the trial and subsequent use however this was not required.

The current variance in actual expenditure represents almost 50 per cent of the planned expenditure for 2011/12 with the majority resulting from delays to water quality related works. The delays have occurred due to discussion and consultation over the most appropriate approaches to managing water quality.

Most of the proposed capital expenditure for the Quiet Lakes is related to water quality and is supported by the recommendations of the Quiet Lakes Water Quality Management Plan prepared by DesignFlow consultants. The Plan recommends a number of approaches to managing water quality in the Quiet Lakes, and Melbourne Water is assessing a number of these approaches.

The residents of the Quiet Lakes, however, have focussed on a single option, the Bore Pump, as a means to improve water quality in the lakes. Whilst the Water Quality Management Plan did not consider the Bore Pump to be an efficient method of improving water quality, Melbourne Water, in consultation with the residents, has determined to investigate this option and potentially use it amongst the suite of approaches already underway.

### **Proposed Capital Expenditure**

Proposed expenditure in the Quiet Lakes for 2012/13 is shown in Table 13 below:

**Table 13 Proposed Capital Expenditure for Quiet Lakes 2012/13**

Quiet Lakes	2012/13
Capital Expenditure (\$)	Proposed
Macrophytes	18,309
Bore Pump	0
Civil Works	30,480
Silt Removal	41,000
SolarBee	65,646
<b>Total Expenditure</b>	<b>155,435</b>

More detailed comments on the proposed expenditure for each item are presented below:



- Macrophytes expenditure covers the proposed planting program, however it is unclear whether this program will continue. Significant discussions are ongoing with residents who are concerned about the impacts of this program including the future control of vegetation to prevent overgrowth. This program should be examined again in the next pricing review and a decision made as to whether ongoing capital expenditure is required.
- Further expenditure on the Bore Pump has been excluded until the results of a trial are completed. Additionally, a license is being sought and various environmental issues are being investigated.
- Civil Works expenditure is intended for a program of valve replacements for the drainage system in the Quiet Lakes.
- Silt removal expenditure covers further silt removal to support the macrophytes planting program trial. Planning work is also expected prior to a major program of silt removal in 2013/14 with over \$1.3 million in proposed expenditure. The proposed expenditure level of \$41,000 is similar to the planned expenditure for 2011/12; however the forecast actuals for 2011/12 identified a significant reduction due to lower levels of contamination leading to lower disposal costs. It is reasonable then to expect that the cost reduction in the actual expenditure for 2011/12 be reflected in the proposed 2012/13 expenditure (subject to clarification on whether the silt removed in 2012/13 is likely to be more contaminated). For this reason, it is recommended that the silt removal expenditure for 2012/13 be reduced to \$26,000.
- SolarBee expenditure involves the purchase of a SolarBee for installation on the Quiet Lakes. Similar expenditure is expected in future until a total of five SolarBees have been acquired.

As discussed previously, most of the current and proposed capital expenditure for the Quiet Lakes is related to water quality and is supported by the recommendations of the Quiet Lakes Water Quality Management Plan prepared by DesignFlow consultants. The proposed expenditure is highly dependent on the outcomes of trial programs currently underway and as such there is some degree of uncertainty over the specific levels of expenditure required.

#### Summary of Capital Expenditure

Actual and proposed capital expenditure for the Quiet Lakes has been identified and reviewed and there is some uncertainty over the proposed expenditure and one proposed reduction in the silt removal expenditure.

- It is recommended that proposed expenditure for Silt Removal be reduced to \$26,000 to reflect the expectation that silt disposal costs will be lower than expected.

**Table 14 Proposed and Recommended Capital Expenditure for Quiet Lakes in 2012/13**

Quiet Lakes Capital Expenditure (\$)	2012/13 Proposed	2012/13 Recommended	Variance
Macrophytes	18,309	18,309	-
Bore Pump	0	0	-
Civil Works	30,480	30,480	-
Silt Removal	41,000	26,000	-15,000
SolarBee	65,646	65,646	-
<b>Total Expenditure</b>	<b>155,435</b>	<b>155,435</b>	<b>140,435</b>

### 3.2.2 Operating Expenditure

#### Actual Operation Expenditure

Actual expenditure in the Quiet Lakes for 2011/12 is shown in Table 15 below:

**Table 15 Planned, Actual and Forecast Operating Expenditure for Quiet Lakes 2011/12**

Quiet Lakes Operating Expenditure (\$)	2011/12 Plan	2011/12 H1 Actual	2011/12 Forecast	Variance	Comments
General Maintenance	110,000	47,601	110,000	0	Sand retrieval works not completed
Newsletter	5,474	1,533	3,066	-2,408	Costs revised as only three newsletters forecast for year
Water Quality Testing	10,000	5,000	10,000	0	
Maintenance Coordinator	29,032	14,516	29,032	0	
Contract Management Fees	19,560	2,196	14,000	-5,560	Reduction due to car and fuel costs not charged to fees
Carp Removal	25,496	10,090	10,090	-15,406	Excessive aquatic plant growth in Lake Illawong and Lake Legana mean Melbourne Water was unable to net carp
Water Quality Actions	84,990	21,870	84,990	0	Water quality program still to be completed
<b>Total Expenditure</b>	<b>284,552</b>	<b>102,806</b>	<b>261,178</b>	<b>-23,374</b>	

More detailed comments on the reasons for variance between planned and forecast expenditure for each item are presented below:

- General maintenance expenditure is on trend with historical actual expenditure.
- Newsletter expenditure is above trend of historical actual expenditure but reflects expected works.
- Water Quality Testing expenditure is on trend with historical actual expenditure.
- Maintenance Coordinator expenditure is on trend with historical actual expenditure.
- Contract Management Fees are on trend with historical actual expenditure.
- Carp Removal expenditure is slightly higher than actual expenditure for 2010/11 however it is significantly lower than planned due to aquatic vegetation preventing carp nets being used.
- Water Quality actions expenditure is new for 2011/12. Expenditure in the period to December 2011 is only a quarter of the expected full year expenditure and a significant additional effort will be required to meet the forecast expenditure for the year.

The current variance in actual expenditure represents less than ten per cent of the planned expenditure for 2011/12 however this reduction is not expected to affect residents. Melbourne Water is currently subsidising the difference between revenue and expenditure based on a long term price path to achieve cost recovery in 2022/23.

### Proposed Operating Expenditure

Proposed expenditure in the Quiet Lakes for 2012/13 is shown in Table 16 below:

**Table 16 Proposed Operating Expenditure for Quiet Lakes 2012/13**

Quiet Lakes Operating Expenditure (\$)	2012/13 Proposed
General Maintenance	101,000
Newsletter	6,474
Water Quality Testing	20,000
Fish Removal	12,500
Contract Management Fees	12,560
Maintenance Coordinator	29,032
Other water quality works	29,400
<b>Total Expenditure</b>	<b>210,966</b>

More detailed comments on the reasons for proposed expenditure for each item are presented below:

- General maintenance expenditure is on trend with historical actual expenditure.
- Newsletter expenditure is well above trend based on actual expenditure and based on the likely number of newsletters to be produced could probably be reduced to around \$2,500.
- Water quality testing expenditure is significantly greater than trend however Melbourne Water has increased the water quality sampling program responding to the increased focus on water quality within the Quiet Lakes.
- Fish removal expenditure is on trend based on actual expenditure.
- Contract Management Fees have been reducing significantly over the past few years due to the exclusion of car and fuel costs from the contract.
- Other water quality works expenditure is similar to actual expenditure for 2011/12.

Overall, proposed operating expenditure is above trend based on actual expenditure in 2009/10 and 2010/11 with the increases predominantly a result of water quality related works. In general these works are supported by the Quiet Lakes Water Quality Management Plan.

### Summary on Operating Expenditure

Actual and proposed operating expenditure for the Quiet Lakes has been identified and reviewed and while there is some uncertainty over the proposed expenditure, there is no reason at present to recommend any adjustments.

- No specific recommendations required

### 3.3 Koo Wee Rup

#### 3.3.1 Capital Expenditure

Melbourne Water is not proposing any capital expenditure in the Koo Wee Rup Longwarry Flood Protection District.

#### 3.3.2 Operating Expenditure

Planned and forecast expenditure for 2011/12 and proposed expenditure for 2012/13 are presented in Table 17 below.

There are some variations in the planned and forecast expenditure for both the precept drains and the carrier drains however this variation does not affect the customer's price. Melbourne Water has historically recovered greater revenue than expenditure for this area and has built up a "bank" of revenue. Melbourne Water and the region's customers agreed to forego a price reduction to reduce revenue and allow Melbourne Water to increase expenditure over a number of years until the "bank" of revenue was depleted. Melbourne Water, in turn, has implemented zero price growth (including CPI) for the region to assist in reducing the revenue "bank".

**Table 17 Planned, Forecast and Proposed Operating Expenditure for Koo Wee Rup Longwarry Flood Protection District 2011/12 and 2012/13**

Koo Wee Rup Longwarry District (\$)		2011/12 Plan	2011/12 Forecast	Variance	2012/13 Proposed
Precept Drains	Desilting	170,000	205,000	35,000	205,000
	Vegetation control	332,400	277,400	-55,000	277,400
	Erosion control	80,000	100,000	20,000	100,000
	General	40,000	45,000	5,000	45,000
Floodgate maintenance		65,000	70,000	5,000	70,000
Office maintenance / General repairs		25,000	15,000	-10,000	15,000
Management fees		106,000	106,000	0	106,000
<b>Sub total – Precept Drains</b>		<b>818,400</b>	<b>818,400</b>	<b>0</b>	<b>818,400</b>
Carrier Drains	Desilting	60,000	95,000	35,000	95,000
	Vegetation control	171,000	111,300	-59,700	111,300
	Erosion control	70,000	60,000	-10,000	60,000
	General	25,000	65,000	40,000	65,000
Office maintenance /General repairs		11,300	6,000	-5,300	6,000
Management fees		64,000	64,000	0	64,000
Sub total – Carrier Drains		401,300	401,300	0	401,300
<b>Carrier Drains – Precept half share</b>		<b>200,650</b>	<b>200,650</b>	<b>0</b>	<b>200,650</b>
<b>Total Expenditure</b>		<b>1,019,050</b>	<b>1,019,050</b>	<b>0</b>	<b>1,019,050</b>

### **Summary on Operating Expenditure**

Actual and proposed operating expenditure for the Koo Wee Rup Longwarry Flood Protection District has been identified and reviewed and while there plus and minus variances on specific projects in 2011/12, these tend to offset each other so there is zero overall variance in the proposed expenditure. The planned and forecast expenditure for 2011/12 and proposed expenditure for 2012/13 has been reviewed and there are no specific reasons to recommend any adjustments to the expenditure.

- No specific recommendations required