

Independent Pricing and Regulatory Tribunal



Provision of Advice on Recommended Capital
and Operating Expenditure for the 2006 Bulk
Water Price Review of State Water Corporation
and the Department of Natural Resources

Final Report for State Water Corporation

May 2006

Halcrow
Halcrow Pacific Pty Ltd



McLennan Magasanik Associates Pty Ltd

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Executive Summary

Introduction

The Independent Pricing and Regulatory Tribunal (IPART) are currently undertaking a review of the bulk water charges set for the regulated businesses of State Water Corporation (SWC) and the Department of Natural Resources (DNR) for up to a four year period commencing 1 July 2006 (the price control period).

Halcrow Pacific Pty Ltd (Halcrow), in association with our sub consultants McLennan Magasanik Associates (MMA), was engaged by IPART to provide advice to the Tribunal. Our advice will assist the Tribunal in determining the appropriate levels of capital and operating expenditure for SWC and DNR over the price control period.

This report outlines the results of our assessment of the appropriate levels of capital and operating expenditure for State Water Corporation.

Scope and Objectives

The scope of our review was to undertake a review of the final report prepared by PB Associates and identify any issues arising from this report, for example, where recommendations on appropriate levels of expenditure could not be made due to a lack of information. This process involved identifying any data gaps, and then seeking to fill these data gaps in consultation with IPART and SWC.

We were also requested to consult with and review the comments provided by key stakeholders in the review process. As part of this we undertook consultation with the New South Wales Irrigators Council and Murray Irrigation Limited and reviewed submissions made by these organisations as part of IPART's review period.

On the basis of our review of the PB Associates reports, our consultations with IPART and SWC, our consultation with the key stakeholders, and our own experience, we have submitted our opinion on the appropriate levels of capital and operating expenditure for SWC.

Key Issues for SWC

The key issues we identified for SWC were:

- Some additional responsibilities have been placed on SWC under the National Water Initiative (NWI).
- SWC have developed and are currently implementing a major dam safety program. This program is a response to recent changes to dam safety regulations made by the NSW Dam Safety Committee.
- SWC have ramped up their major periodic maintenance program from historically lower levels.
- SWC have recently had an increase in operating expenditure due to the transition of the organisation from a state government business unit to a State Owned Corporation.
- SWC continues to have a major role in the delivery of works for the Murray Darling Basin Commission (MDBC) and the Dumaresq Barwon Border Rivers Commission (DBBRC)
- SWC assumed responsibility for the Fish River Water Supply Scheme on 1 January 2005. We have essentially considered the Fish River scheme as another valley run by SWC and incorporated the proposed expenditure for this scheme similar to the proposed expenditure for the valleys. Where the Fish River scheme is specifically excluded from expenditure this is made clear in our notes.

Recommended Operating Expenditure

Our review of SWC has led us to recommend different levels of operating expenditure than that recommended in the PB Associates report. Our recommendations are outlined in **Table 1** below and the process we used to develop our recommendations is explained in the following paragraphs.

Table 1 Recommended Operating Expenditure for SWC from 2006/07 to 2009/10

| | 2005/06 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/2011 |
|---|---------|---------------|---------------|---------------|---------------|---------------|
| State Water Proposed Opex | 36,625 | 36,816 | 36,816 | 35,708 | 34,641 | 33,602 |
| Recommended Baseline Opex | 32,016 | 32,183 | 32,351 | 32,519 | 32,689 | 32,859 |
| Add major preventative maintenance increase | | 192 | 192 | 192 | 192 | 192 |
| Less 25% Overhead allocation | | 8,094 | 8,136 | 8,178 | 8,220 | 8,263 |
| Adjusted Baseline Opex | | 24,281 | 24,407 | 24,533 | 24,661 | 24,788 |
| Add overhead allocation (20% in 2006/07 and 15% thereafter) | | 6,070 | 4,307 | 4,329 | 4,352 | 4,374 |
| Less 3% efficiency | | | 861 | 1,727 | 2,598 | 3,473 |
| Recommended Opex (inc FRWS) | | 30,351 | 27,852 | 27,135 | 26,415 | 25,690 |
| | | -6,465 | -8,964 | -8,573 | -8,226 | -7,912 |
| | | -18% | -24% | -24% | -24% | -24% |
| Recommended Opex (inc FRWS, MDBC, DBBRC) | | 40,312 | 38,099 | 37,346 | 36,626 | 35,901 |

Our process for determining the appropriate levels of operating expenditure for SWC followed the steps outlined in the points following:

- To develop our baseline operating expenditure, we identified the average actual operating expenditure for SWC over the period prior to SWC's corporatisation, that is, 2002/03 to 2003/04.
- We have then reviewed each of the changes in operating expenditure from this 2002/04 average to 2004/05 and then to 2005/06. We generally allowed increases in expenditure where SWC provided appropriate justification and disallowed increases where the justification was insufficient or was not provided. Any decreases in expenditure were included as proposed by SWC. Detail on this process has been included in the Appendices for this report.
- This process was done to account for SWC's increased responsibilities as discussed previously.
- This process led to the development of the Recommended Baseline Opex shown in Table 1 above.
- We then considered the proposed changes in operating expenditure from 2005/06 to 2006/07 and generally allowed increases again where these were adequately justified by SWC.
- We have only allowed an increase in the Major Preventative Maintenance program as this was the only increase proposed and justified by SWC.

- We have also allowed a 0.5% increase in the baseline operating expenditure each year to account for growth in the SWC business.
- Our assessment of SWC's proposed operating expenditure revealed that SWC has applied overheads at an average level of approximately 25% on the total operating expenditure.
- Our experience and our benchmarking of comparable water businesses leads us to believe that this level is too high and we have proposed a more appropriate level of overheads to be set at 15%. We have suggested a staged transition and have allowed a level of 20% in 2006/07 and then a level of 15% from 2007/08 onwards.
- SWC included an efficiency level of 3% in their submission and we believe that this is a suitable level in the initial stages of SWC's development. We have applied this proposed efficiency to our recommended operating expenditure.
- This process results in recommended operating expenditure levels as shown in Table 1 under Recommended Opex (inc FRWS). These figures can be directly compared to the State Water Proposed Opex figures in **Table 1**.
- We have also added back in the operating expenditure for MDBC and DBBRC which are pass through costs.

Recommended Capital Expenditure

Our review of SWC has led us to recommend different levels of capital expenditure than that recommended in the PB Associates report. Our recommendations are outlined in **Table 2** and **Table 3** below and the process we used to develop our recommendations is explained in the paragraphs following.

Table 2 Recommended Capital Expenditure for SWC from 2006/07 to 2009/10
 - Scenario 1a – General reduction across all valleys

| | 2006/07 | 2007/08 | 2008/09 | 2009/10 | TOTAL |
|--------------------------------|---------|---------|---------|---------|----------------|
| SWC Proposed Capex | 50,827 | 71,238 | 62,718 | 59,991 | 244,774 |
| Recommended Capex (Scenario 1) | 40,426 | 55,281 | 52,948 | 51,878 | 200,533 |
| Difference | -10,401 | -15,957 | -9,770 | -8,113 | -44,241 |
| | -20% | -22% | -16% | -14% | -18% |

**Table 3 Recommended Capital Expenditure for SWC from 2006/07 to 2009-10 -
 Scenario 4 - Specific Valley-by-Valley Reductions**

| | 2006/07 | 2007/08 | 2008/09 | 2009/10 | TOTAL |
|--------------------------------|---------|---------|---------|---------|----------------|
| SWC Proposed Capex | 50,827 | 71,238 | 62,718 | 59,991 | 244,774 |
| Recommended Capex (Scenario 4) | 40,640 | 54,311 | 50,114 | 52,153 | 197,219 |
| Difference | -10,187 | -16,927 | -12,604 | -7,838 | -47,555 |
| | -20% | -24% | -20% | -13% | -19% |

We have provided two options for the Tribunal to consider, the first where we have applied a general reduction equally across all the valleys and the second option where we have applied specific reductions to particular valleys.

Our recommendation to the Tribunal is that the Scenario 4 option as shown in **Table 3** be applied as this method provides a more robust method of applying the proposed reductions and does not affect the proposed expenditure in those valleys which have not been underachieving with regards to their proposed capital expenditure budgets.

Scenario 1a

Our process for determining the appropriate levels of capital expenditure for SWC under Scenario 1a followed the steps outlined in the following points:

- We reviewed SWC's performance in achieving their total proposed capital expenditure budgets over the period from 2002/03 to 2004/05 and found that, on average, SWC could only achieve about 65% of their total proposed capital expenditure budget.
- We consider this performance to be fairly low and we believe that this historical performance will affect the ability of SWC to meet their proposed capital expenditure budgets in the future.
- Based on this historical performance we have proposed a reduction in future capital budgets starting at a value of about 35%.
- We recognise however that SWC have made commitments to improving their performance and as such we proposed to decrease the percentage reduction we apply to each years budget, that is, we are applying a reduction of approximately 35% to the proposed capital expenditure in 2006/07, a reduction of about 30% to the proposed expenditure in 2007/08, a reduction of about 20% in 2008/09 and a reduction of about 17% to the proposed capital expenditure budget in 2009/10.
- It is important to note that we are not removing capital expenditure from SWC's total capital expenditure budget, we are merely deferring capital expenditure over a longer period than the price control period.

- The actual effect of our recommendations over the price control period does result in a reduction in capital expenditure within the price control period however the quantum of this reduction is re-applied to the years after 2009/10.
- This process has resulted in the recommended levels of capital expenditure shown in **Table 2**.

Scenario 4

Our process for determining the appropriate levels of capital expenditure for SWC under Scenario 4 followed the steps outlined in the following points:

- In Scenario 1a, we reviewed SWC's performance in achieving their total proposed capital expenditure budgets over the period from 2002/03 to 2004/05 and found that, on average, SWC could only achieve about 65% of their total proposed capital expenditure budget.
- However, for Scenario 4 we have looked specifically at SWC's performance in achieving their proposed capital expenditure budgets on a valley-by-valley basis. That is, we have identified the proposed budgets for each valley and identified the performance, that is, the actual expenditure, for each valley over the period from 2002/03 to 2004/05.
- Our analysis revealed that the average performance of the individual valleys varied widely. The actual expenditure in one valley was more than three times the proposed expenditure. In another valley, the actual expenditure was less than a quarter of the proposed expenditure.
- For this scenario we have only applied a reduction to those valleys that have under performed, that is, where their average actual expenditure was less than their average proposed expenditure for the period from 2002/03 to 2004/05. The percentage reduction applied was the calculated percentage performance over this period.
- We again recognise that SWC has made a commitment to improving its performance and we propose to adjust the percentage reduction applied to each relevant valley. We have allowed a 5% change in the percentage reduction applied each year, for example, the percentage reduction applied to the proposed capital expenditure for the Macquarie valley in 2006/07 was 29%, the reduction applied to the proposed expenditure in 2007/08 was 24%, while the reduction applied in 2008/09 was 19%, and so on.
- This process has resulted in the recommended levels of capital expenditure shown in **Table 3**.

1 Introduction

1.1 *Background*

The Independent Pricing and Regulatory Tribunal (IPART) are responsible for determining the maximum prices that can be charged for the provision of bulk water in New South Wales (NSW). The two main suppliers of bulk water related services in NSW are State Water Corporation (SWC) and the regulated water resource management group within the Department of Natural Resources (DNR).

In its previous full determination, IPART set the maximum bulk water prices for the period from 1 October 2001 to 30 June 2004. IPART then set prices for the period from 1 July 2004 to 30 June 2005 by allowing a CPI increase on the prices from the previous review. This was done as the period covered by the review coincided with a period of major structural change for SWC related to its separation from the Department of Land and Water Conservation (DLWC) and subsequent corporatisation.

IPART then undertook a review of SWC and DNR for the purposes of setting new bulk water prices for the period commencing from 1 July 2005, however, the review process encountered some significant problems. This included the major structural change resulting from the corporatisation of SWC, a much delayed submission from DNR (then the Department of Infrastructure, Planning and Natural Resources or DIPNR) and a general lack of robust information available to IPART's consultant for the review.

IPART concluded that there was insufficient time available to undertake a comprehensive review and consultation period and consequently resolved to again set prices for only a single year from 1 July 2005 to 30 June 2006. IPART and again applied the consumer price index (CPI) to the prices set in the 2001 determination to calculate the maximum charges to apply for this single year period.

IPART are now undertaking a review of the bulk water charges set for SWC and DNR with the intention to set the maximum bulk water related prices for a period of up to four years commencing from 1 July 2006 (the price control period). IPART engaged consultants PB Associates to review the capital and operating expenditure for SWC and DNR, however, there were again a number of problems encountered.

These problems primarily related to a perceived lack of quality information available from SWC and DNR and the subsequent reluctance of PB Associates to give IPART firm recommendations on the appropriate levels of capital and operating expenditure. As a result, the Tribunal was not sufficiently confident to make a determination on prices and decided to seek further advice on the process.

Halcrow Pacific Pty Ltd (Halcrow), in association with our subconsultants McLennan Magasanik Associates (MMA), were then engaged to provide further advice to the Tribunal on the levels of capital and operating expenditure for SWC and DNR over the price control period.

This report outlines the results of our assessment for State Water Corporation.

1.2

Scope and Objectives

We undertook this assignment in four distinct stages:

- (i) A review of the final report prepared by PB Associates.
- (ii) Consultation with SWC to seek any further information available.
- (iii) Consultation with key stakeholders to discuss their submissions to IPART during the community/stakeholder consultation period.
- (iv) Development of our recommended capital and operating expenditure levels for SWC.

The first stage of our work was to undertake a review of the final report prepared by PB Associates and identify any issues arising from that report, for example, where recommendations on appropriate levels of expenditure could not be made due to a perceived lack of information. We identified a number of issues arising from the PB Associates reports and we have summarised these issues in **Section 2** of this report. The list of issues was submitted to SWC to identify any further information that could be obtained.

The second stage of our work involved consulting with SWC to determine if any of the issues arising from our review of the PB Associates report could be resolved. We submitted a list of questions to SWC (refer **Appendix C**) and then met with SWC on 5 April 2006 to discuss the issues. Our consultation with SWC resulted in a number of outstanding issues being resolved and we have incorporated the responses received from SWC into **Section 2**.

For the third stage of our work, we were requested by IPART to consult with and review the comments provided by key stakeholders. As part of this we consulted with representatives of the NSW Irrigators Council and Murray Irrigation Limited and we reviewed the submissions made by these organisations as part of IPART's community/stakeholder consultation process. We met with the NSW Irrigators Council on 31 March 2006 and with Murray Irrigation Limited on 7 April 2006. The views expressed by these two key stakeholders are outlined in their respective submissions to the process. The views were also consistent in a number of areas with our initial opinions and were taken into account when forming our recommendations on the appropriate levels of capital and operating expenditure.

For the fourth and final stage of our work, we considered all the previous stages of this project, that is, our review of the PB Associates reports, our consultation with IPART and SWC, our consultation with the key stakeholders, and our own experience in forming our recommendations in respect to the appropriate levels of capital and operating expenditure for SWC.

2 Issues Arising from PB Associates Report

2.1 *Identification of Issues*

The first stage of our assignment was to undertake a review of the report “Review of Asset Planning and Capital and Operating Expenditure of State Water Corporation” prepared by PB Associates (10 March 2006) and to identify the key issues arising from this report. The issues we identified are listed in the first column of **Table 4**. For each issue identified, a reference to the relevant section (including page and paragraph numbers) of the PB Associates report was provided together with a summary of the identified issue.

2.2 *Response to Identified Issues*

The second stage of our assignment was to consult with SWC in order to resolve or clarify the identified issues, where this was possible. A summary of the pertinent points arising from SWC’s response to each identified issue is presented in the second column of **Table 4**.

Where appropriate, we have provided further comments and/or recommendations in respect to the identified issues and these are identified by the bold type text in the second column of **Table 4**.

Prior to our consultation with SWC we submitted a list of questions related to the issues we had identified and a copy of this list has been included in **Appendix C**.

Table 4 Issues Arising from PB Associates Report

| Issue Arising from PB Associates Report | SWC Response / Halcrow Comments & Recommendations |
|--|--|
| Comments on Section 2 – Business Drivers | |
| <p>1. Section 2.1, page 19, paragraph 6 – PB Associates was unable to determine the links between expenditure and critical success factors and other identified obligations.</p> | <p>SWC has provided a list and a description of all the activities they undertake and have linked these activities to the critical success factors. Costs for individual activities can be determined from the listed product codes.</p> |
| <p>2. Section 2.1, page 21, paragraph 2 – Evidence of SWC undertaking ‘willingness to pay’ negotiations or the outcomes of such negotiations was not provided to PB Associates. Section 2.4, page 23, paragraph 3 – SWC did not provide details of customer consultation on service levels.</p> | <p>SWC has Customer Service Committees (CSC) in place in all valleys. Business plans have been developed to facilitate all levels of service. The development of SWC’s Integrated Financial Management System (IFMS) is to enable SWC to support such discussions. Each of the eight CSCs meet quarterly.</p> |
| <p>3. Section 2.3, page 23, paragraph 5 - SWC has not provided historical or current performance levels against targets and PB Associates was unable to establish whether any additional expenditure is justified with respect to achieving required performance standards.</p> | <p>Given that SWC has only been in existence for less than two years and their initial Operating Licence will only have been in operation for one year as at 24 June 2006, SWC have indicated that they will report on agreed performance standards at that time.</p> |
| Comments on Section 3 – Business Planning and Procedures | |
| <p>4. Section 3.4, page 28, paragraph 2 - SWC to provide details on whether any progress has been made to address the issues raised by the MJA-Cardno 2005 review, e.g. inconsistencies in the use of product codes, etc.</p> | <p>SWC has indicated that:</p> <ul style="list-style-type: none"> • All jobs and data in its new IFMS have been reviewed and refinements are being progressively made. • All branch managers and senior asset staff have been briefed on the MJA-Cardno review and the issues arising. |

| Issue Arising from PB Associates Report | SWC Response / Halcrow Comments & Recommendations |
|--|---|
| | <ul style="list-style-type: none"> • A new code book has been developed and distributed to all staff. Information is continually updated and communicated. • A review of the takeup of the new systems will be performed shortly to identify any inconsistencies and to improve its understanding within SWC. • Further refinements are expected to include the separation of corporate overheads from programs to more explicitly identify the cost nature. |
| <p>5. Section 3.6, page 29, paragraph 3&4 - SWC to provide details on how the Project Delivery System will deal with projects under \$500K (PB Associates reported that projects over \$500K appear to be dealt with using the life cycle management (LCM) process).</p> | <p>SWC has advised that the Project Delivery System (PDS) deals with all projects including those under \$500,000. Work has also commenced on further developing the PDS into a Project Management System.</p> <p>SWC also provided sample project plans for our review and we are satisfied that the system appears to be robust.</p> |
| <p>6. Section 3.6, page 29, paragraph 8 - SWC to clarify which process was used to select capital projects included in their submission to IPART.</p> | <p>SWC advised that the project selection process is as follows:</p> <ul style="list-style-type: none"> • Project identified in accordance with TAMP. • Senior managers regularly review and update project estimates and requirements and updates are captured within SWC's Explain financial reporting system. • Projects and work programs are discussed during CSC meetings. • Budgets are provided to and approved by the Board. |

| Issue Arising from PB Associates Report | SWC Response / Halcrow Comments & Recommendations |
|---|---|
| <p>7. Section 3.7, page 29, paragraph 1 - SWC to provide details of staff number forecasts for period 2007/08 to 2009/10 or explain why these were not provided.</p> <p>Section 3.7, page 30 paragraph 4 - SWC to provide explanation of how staff levels can increase with static then declining operating expenditure levels.</p> | <p>SWC advised that staff numbers were projected to 2006/07 only. The corporatisation of SWC from a Government department requires that staff numbers should be maintained within the first three years of operation. This period is expected to expire 30 June 2007. After this date SWC indicated that they would review resourcing requirements and expect to gain efficiencies as a result.</p> |
| <p>8. Section 3.8, page 30, paragraph 2 - SWC to provide clarification on whether the proposed 4% salary increases in 2006 and 2007 are included in the operating expenditure.</p> | <p>SWC has advised that the 4% salary increase for 2005/06 has been included in the submission, however, further 4% increases in subsequent years have not been included. The 4% increase in subsequent years will be absorbed by CPI increases and expected efficiency gains.</p> |
| <p>9. Section 3.9, page 31, paragraph 1 & 3 - SWC to provide details of how proposed 3% efficiency in operating expenditure will be achieved.</p> | <p>SWC advised that while no specific efficiency plans have been developed, it is expected that outsourcing, natural attrition and vacancy management will provide some efficiency gains in resourcing after the expiry of the initial three year period after corporatisation (refer Item 7. above).</p> |
| <p>10. Section 3.11, page 32, paragraph 4 - SWC to clarify whether the revised capitalisation policy introduced in 2004 has been used for this submission.</p> | <p>SWC advised that the policy was not used for the current submission, however, they have provided details of the policy.</p> <p>Potential impacts relate to the definition of capital and operating expenditure with SWC advising that some capital will be expended.</p> |
| <p>11. Section 3.12, page 33, paragraph 4 - SWC to provide details of asset management approaches used for non-major works projects.</p> | <p>SWC advised that all projects are managed using TAMP. The same approach is taken for all projects with the level of detail varying depending on the size, risk and value of the project.</p> |

| Issue Arising from PB Associates Report | SWC Response / Halcrow Comments & Recommendations |
|--|---|
| Comments on Section 4 – Historical Expenditure | |
| <p>12. Section 4.1.1, page 35-41 - SWC to provide details of major increases in 2005/06 budget versus historical capital expenditure (total is 52% higher than historical average and 88% higher than 2004/05 expenditure) (changes in expenditure range from -46% to +451% of the historical average and -14% to +294% of the 2004/05 expenditure across the valleys).</p> <p>SWC to provide details / breakdown of 2004/05 and 2005/06 capital expenditure by product.</p> <p>SWC to provide explanation for why performance in achieving actual capital expenditure vs budget was only 67% on average and was approximately 50% in 2004/05.</p> | <p>SWC have advised that the historical expenditure has been affected by the corporatisation process and the financial arrangements that applied prior to and during this process.</p> <p>We are unconvinced that these reasons sufficiently explain SWCs underperformance against budget. We would expect if financial constraints were impacting on their activity that the actual expenditure would be very close to the ‘constrained’ budget. This is not the case and may indicate that SWC has some difficulty in meeting its capital program. We are of the opinion that this performance standard is likely to influence our recommendations for future capital expenditure.</p> |
| <p>13. Section 4.2, pages 42-51 - SWC to explain what financial constraints it was operating under prior to 2004/05 that restricted it from carrying out the desired level of maintenance. How has this constraint been lifted for 2005/06?</p> | <p>SWC advised that pre-Jul 03 it operated under budget constrained by DLWC to ensure that expenditure did not exceed expected revenue. Pre-July 2004 SWC operated under the Ministry of Energy and Utilities (MEU) in extreme drought conditions and SWC was required to operate within set revenue levels because of MEU funding constraints. Post-July 2004 SWC has operated a self imposed budget constraint to ease into the corporate operating framework.</p> |
| <p>14. Section 4.2, page 48, Table 4-11 - SWC to provide details on the historical levels of corporate / shared costs. What is the budgeted and forecast level of these costs? On what basis has corporate / shared cost been allocated to the valley and products? What proportion of these costs is allocated to regulated vs unregulated products (if any)?</p> | <p>SWC have advised that overhead/corporate costs have been allocated to all operating costs, including non-regulated costs, on a dollar-per-dollar of salary basis and are incorporated into the costs of programs/activities. This is not a satisfactory basis of allocation and SWC has advised that the new IFMS is expected to more accurately allocate these costs on a cost driver/usage basis.</p> |

| Issue Arising from PB Associates Report | SWC Response / Halcrow Comments & Recommendations |
|---|---|
| <p>Comments on Section 5 – Forecast Expenditure</p> | |
| <p>15. Section 5.1, pages 52 on - SWC to provide details on project delivery systems and project management teams to look after capital program.</p> | <p>SWC has provided a Project Register detailing project plans, contract descriptions and procurement information. The Project Register provides details of the SWC Project Director and Project Manager and also indicates where an external consultant has been engaged. The Project Register does not provide details on other SWC project management staff who will be responsible for actual project delivery and contract management.</p> <p>We would expect to see details of FTEs allocated to the projects to demonstrate sufficient resource allocation and engender confidence in the process and their ability to deliver the project.</p> |
| <p>16. Section 5.1.4, page 57, paragraph 2 - SWC to provide details of life cycle optimization for major periodic maintenance projects.</p> | <p>SWC illustrated the process of optimising maintenance for dam safety related works, however it is not clear whether the process applies to other works.</p> <p>Regardless, we note that SWC has robust project risk and priority assessment programs in place for dam safety related works and we would assume that these programs are equally applicable to other major items such as major periodic maintenance.</p> |
| <p>17. Section 5.1.5, page 57&58 - SWC to provide details on how work related to fishways is audited for timeliness and budget monitoring and for continual improvement of works.</p> | <p>SWC has advised that fishways are only considered when Section 218 of the Fisheries Act applies. SWC has interpreted the trigger for the application of this section to occur when changes to the flow regime is likely as a result of planned works. Both SWC and NSW Fisheries actively manage the application of this section and SWC has a process in place for notifying NSW Fisheries prior to undertaking works that may trigger this section.</p> |

| Issue Arising from PB Associates Report | SWC Response / Halcrow Comments & Recommendations |
|--|---|
| <p>18. Section 5.1.6, page 59 paragraph 6 - SWC to provide further details on proposed expenditure and timing for cold water pollution works.</p> | <p>SWC have provided some details on the legislative requirements regarding cold water pollution.</p> <p>This information does not include specific timing for works and it appears that SWC's preference for undertaking works is to combine CWP works with dam safety related works in order to gain the benefits associated with undertaking works concurrently.</p> |
| <p>19. PBA's review of historical capital expenditure indicated that SWCs average performance in actual expenditure versus budget was 67% between 2002/03 and 2004/05 and that the performance in 2004/05 was only 55%.</p> | <p>PBA recommended a delivery reduction of 20% on the capital program, however, our opinion is that, based on immediate past performance, this adjustment is somewhat generous. We would suggest that SWC has not provided evidence of increases in its project delivery capacity by, for example, showing increases in project management resources (internal staff or external project management consultancies).</p> <p>We would recommend a delivery adjustment that better reflects the historical actual versus budget performance and as such we propose to use a sliding scale delivery adjustment starting at 35% in 2006/07 and reducing in 5% (nominal) increments to 20% in 2009/10 (refer Section 3.3)</p> |
| <p>20. Section 5.2.2, page 70, paragraph 7 - SWC has a 0% efficiency target until 2007/08 and then a 3% target thereafter. What measures does SWC have implement to reach the 3% target and why are there no improvements targeted before 2007/08?</p> | <p>SWC has advised that the startup costs for SWCs new systems and processes are budgeted until 2007/08. From this date onwards, efficiency savings are targeted at 3% per year. In the interim period, no efficiency targets have been set as SWC do not envisage any potential for efficiency gains during this initial period (see also Item 7 for further details)</p> |

| Issue Arising from PB Associates Report | SWC Response / Halcrow Comments & Recommendations |
|--|---|
| <p>21. Section 5.2.2, page 73, paragraph 6 - PB Associates reported that TAMP 2004 included a goal to undertake a 2005 customer service survey defining agreed levels of service for stakeholders in each valley. SWC to provide details on whether this has been undertaken and what were the results. How were these issues factored into the operating expenditure forecasts?</p> | <p>SWC advised that they have not undertaken a survey and have explained that with recent corporatisation related governance issues and IPART submissions they have not been able to allocate resources to undertake this task.</p> |
| <p>22. Section 5, Table 5-9, page 72 – SWC was asked to provide detailed actual operating expenditure for 2005/06 to date.</p> | <p>SWC indicated that Opex levels for 2005/06 were forecast to be at \$36M including Fish River Water Supply Scheme (FRWSS), before the implementation of the SWC's new capitalisation policy. Current year expenditure (including FRWSS) up to the end of January 06 is \$21.1M (before adjustments for the new capitalisation policy). SWCs projected Opex to the end of the year is \$36M (prior to any adjustments for the new capitalisation policy).</p> <p>The information provided appears to suggest that SWC will meet their 2005/06 operating expenditure budget, however, details on how the \$21.1 million to January 2006 was allocated to the various valleys and product codes were not provided. Our projections are thus based on the allocations provided in Appendix 10 of Volume 2 of SWCs Bulk Water Pricing submission to IPART (September 2005).</p> |
| <p>23. Section 5, Table 5-9, page 72 – SWC indicated that the proposed opex increases from 2005/06 and 2006/07 in its submission are the result of the relaxation of funding constraints.</p> | <p>The relaxation of funding constraints is not a valid reason to increase operating expenditure in itself. SWC has already included significant increases in operating expenditure from 2003/04 to 2004/05 and from 2004/05 to 2005/06 (approx \$20.3 million to approx \$25 million to approx \$33 million excluding MDBC & DBBRC contributions).</p> |

| Issue Arising from PB Associates Report | SWC Response / Halcrow Comments & Recommendations |
|---|--|
| | <p>We are of the opinion that adequate justification has generally not been provided for these increases and we are proposing to recommend a reduction in the allowable operating expenditure.</p> |
| <p>24. SWC uses a dollar-per-dollar of salary overhead allocation approach. Evidence from SWC’s response to the PBA report indicates that overhead allocation amounts to some 30% of total operating expenditure for the specific example of MPM.</p> | <p>The overhead allocation methodology currently used is unsatisfactory, however, we commend SWC’s current investigation to review the allocation methodology such that it is based on appropriate cost drivers rather than salaries.</p> <p>The 30% overhead allocation to MPM is excessive and we would assume that a similar level of overheads is applied to all other items. We recommend that this allocation be reduced to reflect comparable levels of allocation used by similar water businesses.</p> <p>In its 2005 determination on metropolitan water agency prices, IPART allowed Sydney Water’s corporate costs to amount to 18.6% of its total operating expenses over the 2005/06 to 2008/09 regulatory period while Hunter Water’s corporate costs amounted to 23.5% of its total operating expenses over the same period. In January 2005, Victoria’s Essential Services Commission (ESC) published studies conducted by PB Associates on Victoria’s metropolitan Water Businesses which recommended average corporate cost allocations of around 13% of total operating expenses for the three metropolitan businesses. In November 2004, Barwon Water, in Victoria, provided data in its Water Plan to the ESC that indicated that its corporate costs amount to approximately 20% of its operating expenses.</p> |

| Issue Arising from PB Associates Report | SWC Response / Halcrow Comments & Recommendations |
|---|--|
| | <p>In 2005 during the review of Victoria's rural water businesses by the ESC, Southern Rural Water estimated that some 15% of its operating expenditure were corporate costs while Goulburn-Murray Water estimated that approximately 8% of its operating expenditure were corporate costs. These figures suggest that the SWC's allocation of corporate costs is significantly higher than comparable water businesses.</p> <p>On the basis of the greater similarity between SWC and the Victorian Rural Water businesses, we would recommend setting the overhead factor to 15% applied to total operating expenditure. However, some additional allowance may be given due to the recent corporatisation and the overhead costs associated with this period of change and as such we propose to set the overhead factor to 20% for 2006/07 only.</p> |

3 Recommended Expenditure

3.1 General

The final stage of our work is to consider our review of the PB Associates reports, our consultations with IPART and SWC, our consultation with the key stakeholders, and our own experience, in order to develop our opinion in respect to the appropriate levels of capital and operating expenditure for SWC.

3.2 Recommended Operating Expenditure

Our review of SWC has led us to recommend different levels of operating expenditure than that recommended in the PB Associates report. Our recommendations are outlined in **Table 5** and the process we used to develop our recommendations is explained in the following paragraphs.

Table 5 Recommended Operating Expenditure for SWC from 2006/07 to 2009/10

| Calculation of Baseline Operating Expenditure | Proposed Operating Expenditure ('000 \$2005/06) | | | | | |
|---|---|---------------|---|---------------|---------------|---------------|
| | 2005/06 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/2011 |
| State Water Proposed Opex | 36,625 | 36,816 | 36,816 | 35,708 | 34,641 | 33,602 |
| Recommended Baseline Opex increase | 32,016 | 32,183 | 32,351 | 32,519 | 32,689 | 32,859 |
| Less 25% Overhead allocation | | 192 | 192 | 192 | 192 | 192 |
| Adjusted Baseline Opex | | 8,094 | 8,136 | 8,178 | 8,220 | 8,263 |
| Add overhead allocation (20% in 2006/07 and 15% thereafter) | | 24,281 | 24,407 | 24,533 | 24,661 | 24,788 |
| Less 3% efficiency | | 6,070 | 4,307 | 4,329 | 4,352 | 4,374 |
| Recommended Opex (inc FRWS) | | 30,351 | 27,852 | 27,135 | 26,415 | 25,690 |
| Diff. Recommended to Proposed | | -6,465 | -8,964 | -8,573 | -8,226 | -7,912 |
| % Diff. Recommended to Proposed | | -18% | -24% | -24% | -24% | -24% |
| Recommended Opex (inc FRWS, MDBRC, DBBRC) | | 40,312 | 38,099 | 37,346 | 36,626 | 35,901 |
| Calculation check | | 40,312 | 38,101 | 37,347 | 36,627 | 35,902 |
| Historical Opex Growth | SWC Opex | % Change | | | | |
| 2002/03 | 22,466 | | | | | |
| 2003/04 | 20,320 | -9.6% | Possible spending restrictions under Ministry of Energy & Utilities control | | | |
| 2004/05 | 27,847 | 37.0% | Major increase includes new FRWS responsibility | | | |
| 2005/06 | 36,625 | 31.5% | Major increases in most items including FRWS | | | |
| 2006/07 | 36,816 | 0.5% | We have assumed that the underlying costs increase by this rate (0.5%) each year in real terms due to business growth. | | | |
| 2007/08 | 36,816 | 0.0% | SWC proposed efficiency reductions commence | | | |
| 2008/09 | 35,708 | -3.0% | | | | |
| 2009/10 | 34,641 | -3.0% | | | | |
| 2010/11 | 33,602 | -3.0% | | | | |

Notes: State Water Proposed Opex and Recommended Baseline Opex include costs for FRWS

The first step in developing an appropriate level of operating expenditure is to develop a baseline operating expenditure level. To do this we identified the average actual operating expenditure for SWC over the period from 2002/03 to 2003/04. We were of the opinion that this period represented a relatively stable period in SWC's operating history and the average expenditure would not be greatly affected by the significant structural changes associated with the corporatisation process.

We have then reviewed each of the changes in operating expenditure from this average to 2004/05 and then to 2005/06. We generally allowed increases in expenditure where SWC provided appropriate justification and disallowed increases where the justification was insufficient or was not provided. Any decreases in expenditure were included as proposed by SWC. **Table 6** shows the process of assessing the step changes in operating expenditure each year.

Table 6 Development of the 2005/06 Baseline Operating Expenditure Level

| Breakdown of Operating Expenditure by Product | | SWC Actual and Proposed Operating Expenditure ('000) (\$2005/06) | | | | | Comp. 2006/07 to 02/03-03/04 Ave | |
|---|---|--|---------------|-----------------------------|---------------|-----------------|---|------------|
| Code | Product Description | 2002/03 | 2003/04 | 2004/05 | 2005/06 | 2006/07 | Difference | % Diff |
| 1120 | Customer Support | 334 | 238 | 241 | 703 | 702 | 416 | 175% |
| 2120 | Hydrometric Monitoring | 2,232 | 2,236 | 3,365 | 4,047 | 4,047 | 1,813 | 81% |
| 2130 | Water Quality Monitoring | 191 | 173 | 0 | 1,430 | 1,429 | 1,247 | 721% |
| 2150 | River Operations | 3,964 | 3,025 | 4,010 | 4,900 | 4,897 | 1,402 | 46% |
| 3130 | Dam Safety Compliance O&M | 2,129 | 2,036 | 2,581 | 3,635 | 3,634 | 1,551 | 76% |
| 3140 | Preventive Maintenance | 7,107 | 7,473 | 9,839 | 12,975 | 13,167 | 5,877 | 79% |
| 5220 | Billing & Receipts | 364 | 397 | 312 | 169 | 169 | -211 | -53% |
| 5250 | Insurance | 3,266 | 1,656 | 1,376 | 1,290 | 1,290 | -1,171 | -71% |
| 2180 | Metering | 2,879 | 3,086 | 3,461 | 3,860 | 3,857 | 874 | 28% |
| | | 22,466 | 20,320 | 25,186 | 33,009 | 33,191 | 12,871 | 63% |
| | Baseline Opex - ave of 02/03 and 03/04 | 21,393 | | New Responsibilities | | Comments | | |
| | Customer Support | | | 3 | 125 | | Reduction - allow 1 EFT + 25% overheads | |
| | Hydrometric Monitoring | | | 1,129 | 682 | | No change - additional monitoring under NWI | |
| | Water Quality Monitoring | | | -173 | 500 | | Reduction - allow 4 EFT + 25% overheads | |
| | River Operations | | | 46 | 375 | | Reduction - allow 3 EFT + 25% overheads | |
| | Dam Safety Compliance O&M | | | 545 | 258 | | Reduction - allow step increase due to regulations in 2005/06 then 10% increase | |
| | Preventive Maintenance | | | 2,366 | 3,136 | | No change - previously underfunded | |
| | Billing & Receipts | | | -85 | -143 | | No change | |
| | Insurance | | | -280 | -86 | | No change | |
| | Metering | | | 375 | 399 | | No change - additional monitoring under NWI | |
| | Fish River Water Supply Scheme | | | 1,450 | 0 | | Reduction - allow 04/05 increase only | |
| | | | | 26,770 | 32,016 | | <-- Recommended baseline Opex | |

Note: New responsibilities justified from Table 1 page 5 in SWC's Response to PBA report document dated 06 April 2006.
 EFT costed at \$100K per EFT. Add 25% overheads to EFT costs to compare with existing SWC expenditure

This process shown in **Table 6** led to the development of the Recommended Baseline Opex used in **Table 5** above.

We have allowed a 0.5% increase in the baseline operating expenditure each year to account for general growth in the SWC business. It is noted that SWC's proposed operating expenditure is decreasing from 2007/08 onwards, however this reflects the proposed 3% efficiency gains.

We have then considered the proposed changes in operating expenditure from 2005/06 to 2006/07. Of the expenditure increases proposed, we have only allowed an increase in the Major Preventative Maintenance program as this was the only increase that was actually justified by SWC. In addition, we see the preventative maintenance program as an important part of ensuring that SWC's infrastructure is brought up to standard and appropriately maintained.

We then reviewed SWC's proposed operating expenditure to determine the level of overheads that were applied to the normal program. SWC have stated that their overheads are calculated based on salary dollars allocated to particular product codes. We were able to determine that SWC applied overheads at an average level of approximately 25% on the total operating expenditure using data from the file "17. State Water OPEX Summary for 2005-06 final.xls" as provided by SWC. The level of overheads was not applied in a consistent manner to each product code or activity. Our review of SWC's major preventative maintenance program indicated that the average overhead allocation was in the order of 35% of the proposed expenditure.

Our experience and our benchmarking of comparable water businesses leads us to believe that this level is too high for an efficient business and we have proposed a more appropriate level of overheads to be set at 15%. Details on how this figure was developed as outlined under Item 24 in **Table 4**. We have suggested a staged transition to lessen the potential impacts of reducing the overhead levels and have allowed a level of 20% in 2006/07 and then a level of 15% from 2007/08 onwards.

SWC included an efficiency level of 3% in their submission and we believe that this is a suitable level in the initial stages of SWC's development. This issue has been discussed under Items 7 and 9 in **Table 4**. We have applied this proposed efficiency to our recommended operating expenditure noting that this has a cumulative impact on the operating expenditure.

This process results in recommended operating expenditure levels as shown in **Table 5** under Recommended Opex (inc FRWS). These figures can be directly compared to the State Water Proposed Opex figures in **Table 5**. We have also added back in the operating expenditure for MDBC and DBBRC which are pass through costs.

We have allocated the recommended operating expenditure levels for each year to the valleys in response to IPART's desire to set prices on a valley-by-valley basis. We have distributed the recommended total operating expenditure to the valleys in the same proportions as SWC's proposed total operating expenditure was distributed. The detailed valley allocations are presented in **Appendix A**.

3.3

Recommended Capital Expenditure

3.3.1

General

Our review of SWC has led us to recommend different levels of capital expenditure than that recommended in the PB Associates report. Our recommendations and the processes we used to develop our recommendations are explained below.

We have investigated and reviewed five possible scenarios for setting an appropriate level of capital expenditure for SWC:

- (i) Scenario 1a - we have proposed deferment of capital expenditure based on the average historical performance in achieving proposed capital expenditure. The proposed expenditure deferment is applied to the total capital expenditure and is distributed equally across all the valleys.
- (ii) Scenario 1b – this scenario uses the proposed deferment of capital expenditure recommended in Scenario 1a, however, the deferment would be allocated to a set group of valleys rather than as a broad brush approach. This scenario accounts for the potential misallocation or misreporting of expenditure for individual valleys by not significantly relying on the actual expenditure data reported and as such is slightly different to that proposed in Scenario 4. The process for allocating the proposed deferment of capital expenditure is based on the size of the proposed expenditure for a valley.
- (iii) Scenario 2 – we have proposed a deferment of capital expenditure based on the historical trend of actual capital expenditure. The proposed expenditure deferment is applied to the total capital expenditure and is distributed equally across all the valleys. We do not believe that this scenario is the most suitable method of reviewing SWC's proposed capital expenditure. A simple trend line analysis cannot account for the variation in expenditure required each year (for example the dam safety projects) and is likely to be inaccurate over the long term unless there is a significant volume of suitably comparable historical data.
- (iv) Scenario 3 – we have proposed that the capital expenditure for the dam safety compliance program (which constitutes about 55% of the proposed capital expenditure) be considered separately from the “normal” program of works. This is potentially a feasible option if SWC decides to outsource the project management of these dam safety projects to the Department of Commerce or an external project management consultant, for example. Under this scenario, no reductions or deferment of capital expenditure would be recommended as the level of capital expenditure proposed is lower than the actual expenditure levels that have been achieved historically and on this basis we would expect SWC to achieve their budget. However, we do not believe that this scenario accurately reflects the historical

performance of SWC, that is, they are only able to achieve about 65% of their proposed capital expenditure. In addition, SWC have not provided any assurances that the dam safety program will be managed by specialist project management consultants.

- (v) Scenario 4 – this scenario is similar to scenario 1 in that we reviewed SWC’s performance in achieving proposed capital expenditure. However for this scenario we reviewed the performance on a valley-by-valley basis. We were able to extract proposed budgets and actual expenditure for each valley from the data provided as part of SWC’s submission. We have proposed deferrals of capital expenditure for individual valleys based on their own historical performance. We note that there are potential problems with the data used for this scenario primarily related to the robustness of the valley budgets and actual expenditure due to misallocation or misreporting of expenditure for individual valleys.

Our recommendation to the Tribunal is that the Scenario 4 option be applied as this method provides, in our opinion, the most robust methodology for applying the proposed expenditure deferrals and specifically does not affect the proposed expenditure in those valleys which have been achieving their proposed capital expenditure budgets. We note that there are some potential problems with the data used for this scenario, however, we still believe that this method is suitable as details of the potential misallocation of expenditure between valleys are not clear and have not yet been, or cannot yet be, substantiated due to difficulties in interrogating SWC’s legacy financial accounting systems.

The following sections briefly describe the process undertaken for Scenarios 1a, 1b and 4, the current preferred options.

3.3.2

Scenario 1a

Our process for determining the appropriate levels of capital expenditure for SWC under Scenario 1 followed the steps outlined in the following paragraphs.

We reviewed SWC’s performance in achieving their total proposed capital expenditure budgets over the period from 2002/03 to 2004/05 and found that, on average, SWC could only achieve about 65% of their total proposed capital expenditure budget. This average figure is confirmed by the preliminary performance results for the 2005/06 year which indicate that SWC will only achieve about 65% of their proposed expenditure.

We consider this performance to be fairly low and we believe that this historical performance will affect the ability of SWC to meet their proposed capital expenditure budgets in the future. In addition, SWC have not provided any clear

evidence that they are increasing resources in project management or asset management related areas, for example, in direct EFT increases.

Based on this historical performance we have proposed a deferral of future capital expenditure starting with a reduction of 35% of proposed expenditure in the 2006/07 year. The deferral of capital expenditure reflects our opinion that SWC can only achieve a certain proportion of their capital expenditure budget. We are not proposing that the total capital expenditure be reduced, merely that the expenditure is spread over a longer period. This has the effect, however, of reducing the capital expenditure occurring during the price control period.

We recognise, however, that SWC have made commitments to improving their performance and as such we proposed to adjust the percentage reduction we apply to each years budget, that is, we are applying nominal reductions of approximately 35% to the proposed capital expenditure in 2006/07, 30% in 2007/08, 20% in 2008/09 and 15% in 2009/10. The proposed reductions are not applied to MDBC and DBBRC related expenditure.

We have applied a smoothing process to ensure that the changes in capital expenditure proposed each year are not large step increases and to ensure that the total capital expenditure is not actually reduced in the long term, but is merely deferred. The resulting percentage reduction applied to the proposed expenditure in each year of the price control period is shown in **Table 7**.

**Table 7 Proposed Percentage Deferrals Applied to Capital Expenditure
- Scenario 1**

| Year | 2006/07 | 2007/08 | 2008/09 | 2009/10 |
|-----------|---------|---------|---------|---------|
| % Applied | 35.074% | 29.813% | 20.278% | 16.654% |

This process has resulted in the recommended levels of capital expenditure shown in **Table 8**. The percentage differences between the SWC proposed and our recommended expenditure are different from those shown in **Table 7** as the MDBC and DBBRC costs have been added back into the adjusted expenditure values unchanged. This has the effect of changing the percentage difference.

As outlined above, the proposed reductions were applied consistently across the proposed valley expenditure (excluding MDBC and DBBRC costs).

**Table 8 Recommended Capital Expenditure for SWC from 2006/07 to 2009/10
 - Scenario 1 – Percentage Reduction**

| | 2006/07 | 2007/08 | 2008/09 | 2009/10 | TOTAL |
|--------------------------------|---------|---------|---------|---------|----------------|
| SWC Proposed Capex | 50,827 | 71,238 | 62,718 | 59,991 | 244,774 |
| Recommended Capex (Scenario 1) | 40,426 | 55,281 | 52,948 | 51,878 | 200,533 |
| Difference | -10,401 | -15,957 | -9,770 | -8,113 | -44,241 |
| | -20% | -22% | -16% | -14% | -18% |

3.3.3

Scenario 1b

This scenario is an alternative distribution of the reductions proposed under Scenario 1a across the valleys.

This scenario involves distribution the proposed capital expenditure deferral to specific valleys based on the size of the proposed capital expenditure for the valleys. In general terms, it is thought that the valleys with the largest proposed capital expenditure budgets may have the most difficulty in achieving their budgets. This assumption is supported to an extent by the figures that are presented in **Table 10** in **Section 3.3.4** which show that some of the greatest underperformance in achieving proposed expenditure has been in the Namoi, Murrumbidgee and Murray valleys, which are also among the largest valleys by proposed capital expenditure.

This scenario applies the percentages shown in **Table 9** to the Gwydir, Namoi, Peel, Lachlan, Macquarie and Murrumbidgee valleys only to achieve the same recommended capital expenditure levels for Scenario 1 as presented in **Table 8**.

Table 9 Percentage Adjustments applied to Specific Valleys for Scenario 1b

| Year | 2006/07 | 2007/08 | 2008/09 | 2009/10 |
|-----------|---------|---------|---------|---------|
| % Applied | 47.765% | 33.027% | 22.466% | 17.848% |

The total reductions across the price path period remain as shown in Table 8.

3.3.4

Scenario 4

Our process for determining the appropriate levels of capital expenditure for SWC under Scenario 4 followed the steps outlined in the following paragraphs.

In Scenario 1a, we reviewed SWC's performance in achieving their total proposed capital expenditure budgets over the period from 2002/03 to 2004/05 and found that, on average, SWC could only achieve about 65% of their total proposed capital expenditure budget. However, for Scenario 4 we have looked specifically at SWC's performance in achieving their proposed capital expenditure budgets on a

valley-by-valley basis. That is, we have identified the proposed budgets for each valley and identified the performance, that is, the actual expenditure, for each valley over the period from 2002/03 to 2004/05.

The actual capital expenditure for each valley for the period from 2002/03 to 2004/05 was provided by SWC to PB Associates in the file “Historical Opex Capex from previous submission for PB.xls” however PB Associates noted that a breakdown of the 2004/05 and 2005/06 expenditure by product was not provided. We have requested and obtained a breakdown of the expenditure for these years including details of actual capital expenditure for 2005/06 up to February 2006, although the 2005/06 data was provided only by product code and not by valley.

The proposed capital expenditure budgets for the period from 2002/03 to 2004/05 were not provided in a usable form by SWC, that is, by product code and valley; however, we were able to extract this information from within the existing data originally provided to PB Associates. We used information contained within the file “21 Explan at 230805 allocating TAMP by annuity.xls” and then followed the same process SWC had followed to derive the proposed capital expenditure for the period from 2005/06 to 2010/11 as presented in SWC’s submission.

The total capital expenditure values we derived using this method are similar to the total budgets derived by PB Associates, however, we have been unable to identify the calculation method and the data used by PB Associates.

Using the actual expenditure provided by SWC and our derivation of the proposed expenditure, we have analysed SWC’s performance on a valley-by-valley basis. Our analysis revealed that the average performance of the individual valleys varied widely. The actual expenditure in one valley was more than three times the proposed expenditure. In another valley, the actual expenditure was less than a quarter of the proposed expenditure.

Table 10 below presents the proposed and actual capital expenditure for each valley over the period from 2002/03 to 2005/06. Data was not available on the actual expenditure in 2001/02.

Table 10 Proposed and Actual Capital Expenditure for SWC by Valley over the period from 2002/03 to 2005/06

| Historical and Actual Capital Expenditure - State Water - By Valley | | | | | | | | | | | | |
|---|---------------|---------------|-------------|---------------|---------------|-------------|---------------|---------------|-------------|---------------|---------------|-------------|
| Valley | Budget | Actual | Perf % | Budget | Actual | Perf % | Budget | Actual | Perf % | Budget | Actual | Perf % |
| | | 2002/03 | | 2003/04 | | | 2004/05 | | | 2005/06 | | |
| Border Rivers | 65 | 288 | 344% | 120 | 482 | 302% | 128 | 227 | 77% | 278 | 202 | -27% |
| Gwydir | 2,045 | 2,599 | 27% | 1,100 | 2,341 | 113% | 1,660 | 1,538 | -7% | 3,743 | 2,726 | -27% |
| Namoi | 2,466 | 4,051 | 64% | 10,082 | 2,642 | -74% | 2,750 | 1,940 | -29% | 3,964 | 2,887 | -27% |
| Peel | 274 | 657 | 140% | 1,307 | 1,664 | 27% | 1,904 | 1,490 | -85% | 1,543 | 1,124 | -27% |
| Macquarie | 6,273 | 1,283 | -80% | 4,264 | 6,971 | 63% | 4,103 | 2,195 | -46% | 1,881 | 1,370 | -27% |
| Lachlan | 2,964 | 2,369 | -20% | 2,141 | 2,278 | 6% | 2,465 | 2,051 | -17% | 3,945 | 2,873 | -27% |
| Murrumbidgee | 2,800 | 1,988 | -29% | 1,543 | 2,089 | 35% | 5,979 | 1,708 | -71% | 3,553 | 2,588 | -27% |
| Murray | 3,648 | 926 | -75% | 3,709 | 1,153 | -69% | 4,020 | 958 | -76% | 3,776 | 2,750 | -27% |
| North Coast | 64 | 276 | 329% | 150 | 98 | -35% | 222 | 344 | 55% | 553 | 403 | -27% |
| Hunter | 4,652 | 1,414 | -70% | 897 | 943 | 5% | 1,319 | 913 | -31% | 1,735 | 1,264 | -27% |
| South Coast | 32 | 15 | -54% | 118 | 42 | -65% | 91 | 146 | 61% | 373 | 272 | -27% |
| Sub total | 25,285 | 15,866 | -37% | 25,432 | 20,703 | -19% | 24,640 | 13,510 | -45% | 25,344 | 18,459 | -27% |

Notes:

1. Perf % column represents the percentage of the actual expenditure on the proposed expenditure. For example, the Perf % result for Border Rivers in 2002/03 means that the actual expenditure was 344% greater than the budget and the Perf % result for Gwydir in 2004/05 means that the actual expenditure was 7% less than the budget.
2. Actual 2005/06 expenditure was only provided as a total. The total was then distributed between the valleys in the same proportions as the budget for 2005/06. Using this method the performance for each valley is the same as the total, that is, -27%.

We recognise that there may be some potential problems with the robustness of the actual expenditure data used for this scenario. IPART's consultants for the 2004/05 review, MJA-Cardno, highlighted some potential problems with the misallocation or misreporting of actual capital expenditure between valleys.

It was thought that this related to situations where resources in one valley were undertaking or assisting with works in another valley but then may have been recording their costs to their home valley rather than the valley in which the work was being undertaken.

It is very unclear, however, as to the extent of this potential misallocation or misreporting of expenditure and how this then may affect the figures presented in **Table 10**. In the absence of any substantiation of these potential problems, we believe that the data we have used in our analysis was the best available to us at the time and given the time available to us to complete our review.

We have also analysed the average performance for each valley and this is presented in **Table 11** below.

Table 11 Average Performance of SWC by Valley - Actual Expenditure over Proposed Expenditure for the Period from 2002/03 to 2005/06

| Valley | Averages | | |
|---------------|-------------|-------------|-------------|
| | 02/03-03/04 | 02/03-04/05 | 02/03-05/06 |
| Border Rivers | 317% | 219% | 103% |
| Gwydir | 57% | 35% | 8% |
| Namoi | -47% | -44% | -40% |
| Peel | 47% | 9% | -2% |
| Macquarie | -22% | -29% | -28% |
| Lachlan | -9% | -12% | -17% |
| Murrumbidgee | -6% | -44% | -40% |
| Murray | -72% | -73% | -62% |
| North Coast | 74% | 65% | 13% |
| Hunter | -58% | -52% | -47% |
| South Coast | -62% | -16% | -23% |
| Total | -28% | -34% | -32% |

For this scenario we have only applied a percentage deferral to those valleys that have under performed, that is, where their average actual expenditure was less than their average proposed expenditure for the period from 2002/03 to 2004/05. We have decided not to use the performance figures including the 2005/06 year as the actual expenditure for 2005/06 has not been confirmed and has not been provided on a valley basis. The percentage applied to each valley was the calculated percentage performance over this period as presented in **Table 11**.

We again recognise that SWC has made a commitment to improving its performance and we propose to adjust the percentage applied to each relevant valley. We have allowed a 5% change in the percentage applied each year, for example, the percentage applied to the proposed capital expenditure for the Macquarie valley in 2006/07 was 29%, the percentage applied in 2007/08 was 24%, while the percentage applied in 2008/09 was 19%, and so on.

This process has resulted in the recommended levels of capital expenditure shown in **Table 12** below. The percentage differences between the SWC proposed and our recommended capital expenditure are different from those shown in **Table 11** since the MDBC and DBBRC costs were excluded from the base to which reductions were applied and have been added back into the adjusted capital expenditure values unchanged. This has the effect of changing the percentage difference.

**Table 12 Recommended Capital Expenditure for SWC from 2006/07 to 2009-10
 - Scenario 4 - Specific Valley-by-Valley Reductions**

| | 2006/07 | 2007/08 | 2008/09 | 2009/10 | TOTAL |
|---------------------------------|---------|---------|---------|---------|----------------|
| SWC Proposed Capex | 50,827 | 71,238 | 62,718 | 59,991 | 244,774 |
| Recommended Capex (Scenario 4a) | 40,640 | 54,311 | 50,114 | 52,153 | 197,219 |
| Difference | -10,187 | -16,927 | -12,604 | -7,838 | -47,555 |
| | -20% | -24% | -20% | -13% | -19% |

We have highlighted some potential problems with the data used in our analysis, however, we still believe that the methodology we have used is the best available and that given the potential problems are not yet fully confirmed or detailed, we would still recommend this option as the most robust assessment.

3.4

Summary of Recommended Expenditure

Our recommended levels of capital and operating expenditure for State Water Corporation are shown in **Table 13**, **Table 14** and **Table 15** below.

Table 13 Recommended Operating Expenditure for SWC from 2006/07 to 2009/10

| | 2006/07 | 2007/08 | 2008/09 | 2009/10 | TOTAL |
|--|---------------|---------------|---------------|---------------|----------------|
| State Water Proposed Opex | 36,816 | 36,816 | 35,708 | 34,641 | 143,981 |
| Recommended Opex (inc FRWS) | 30,351 | 27,852 | 27,135 | 26,415 | 111,754 |
| Diff. Recommended to Proposed | -6,465 | -8,964 | -8,573 | -8,226 | -32,227 |
| % Diff. Recommended to Proposed | -18% | -24% | -24% | -24% | -22% |
| Recommended Opex (inc FRWS, MDBC, DBBRC) | 40,312 | 38,099 | 37,346 | 36,626 | 152,384 |

**Table 14 Recommended Capital Expenditure for SWC from 2006/07 to 2009/10
 - Scenario 1a – Percentage Reduction**

| | 2006/07 | 2007/08 | 2008/09 | 2009/10 | TOTAL |
|--------------------------------|---------|---------|---------|---------|----------------|
| SWC Proposed Capex | 50,827 | 71,238 | 62,718 | 59,991 | 244,774 |
| Recommended Capex (Scenario 1) | 40,426 | 55,281 | 52,948 | 51,878 | 200,533 |
| Difference | -10,401 | -15,957 | -9,770 | -8,113 | -44,241 |
| | -20% | -22% | -16% | -14% | -18% |

**Table 15 Recommended Capital Expenditure for SWC from 2006/07 to 2009-10
 - Scenario 4 - Specific Valley-by-Valley Reductions**

| | 2006/07 | 2007/08 | 2008/09 | 2009/10 | TOTAL |
|---------------------------------|---------|---------|---------|---------|----------------|
| SWC Proposed Capex | 50,827 | 71,238 | 62,718 | 59,991 | 244,774 |
| Recommended Capex (Scenario 4a) | 40,640 | 54,311 | 50,114 | 52,153 | 197,219 |
| Difference | -10,187 | -16,927 | -12,604 | -7,838 | -47,555 |
| | -20% | -24% | -20% | -13% | -19% |

We recommend that the Tribunal consider the recommended capital expenditure from Scenario 4 as presented in **Table 15**.

Appendices

Appendix A Detailed Operating Expenditure Tables

RECOMMENDED OPERATING COSTS BY VALLEY FOR 2007 (real 05/06 \$'000)

| Product | Product Name | Grand Total | Border Rivers | Gwydir | Namoi | Peel | Macquarie | Lachlan | Murrumbidgee | Murray | North Coast | Hunter | South Coast | MDBC | DBBRC | Fish River |
|--------------|---------------------------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|-------------|--------------|------------|--------------|
| 1120 | Customer Support | 578.6 | 27.5 | 39.4 | 31.1 | 5.8 | 53.5 | 55.2 | 124.7 | 196.1 | 1.7 | 40.7 | 3.0 | 0.0 | 0.0 | 0.0 |
| 2120 | Hydrometric Monitoring | 4,887.0 | 124.9 | 401.6 | 428.4 | 107.1 | 481.9 | 552.4 | 845.1 | 89.0 | 23.2 | 246.4 | 36.1 | 1,332.0 | 219.0 | 0.0 |
| 2130 | Water Quality Monitoring | 1,220.2 | 105.1 | 112.6 | 174.9 | 116.5 | 79.8 | 92.6 | 203.8 | 14.4 | 43.0 | 192.1 | 43.4 | 0.0 | 42.0 | 0.0 |
| 2150 | River Operations | 6,197.7 | 270.9 | 390.8 | 449.6 | 144.5 | 424.6 | 512.4 | 949.6 | 402.6 | 67.8 | 324.8 | 99.0 | 2,011.0 | 150.0 | 0.0 |
| 3130 | Dam Safety Compliance O&M | 3,629.7 | 146.9 | 243.4 | 282.9 | 189.5 | 406.6 | 361.3 | 557.1 | 55.2 | 156.1 | 480.7 | 116.1 | 634.0 | 0.0 | 0.0 |
| 3140 | Preventative Maintenance | 14,485.7 | 483.3 | 1,236.4 | 1,449.2 | 373.0 | 1,404.6 | 1,486.4 | 1,897.3 | 622.4 | 310.2 | 1,273.2 | 318.6 | 3,490.0 | 141.0 | 0.0 |
| 5220 | Billing & Receipts | 139.4 | 6.3 | 12.6 | 15.5 | 11.0 | 17.6 | 16.1 | 23.1 | 23.3 | 2.5 | 8.8 | 2.5 | 0.0 | 0.0 | 0.0 |
| 5250 | Insurance | 1,063.8 | 36.9 | 122.1 | 101.1 | 34.3 | 171.3 | 128.4 | 226.8 | 14.7 | 36.9 | 175.4 | 16.1 | 0.0 | 0.0 | 0.0 |
| 2180 | Metering | 3,179.5 | 111.9 | 211.4 | 289.3 | 102.3 | 278.0 | 478.2 | 549.4 | 701.3 | 3.2 | 450.9 | 3.6 | 0.0 | 0.0 | 0.0 |
| 6140 | Salt Interception Schemes | 1,942.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1,942.0 | 0.0 | 0.0 |
| | Fish River | 2,988.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2,988.5 |
| TOTAL | | 40,312 | 1,314 | 2,770 | 3,222 | 1,084 | 3,318 | 3,683 | 5,377 | 2,119 | 645 | 3,193 | 638 | 9,409 | 552 | 2,988 |

RECOMMENDED OPERATING COSTS BY VALLEY FOR 2008 (real 05/06 \$'000)

| Product | Product Name | Grand Total | Border Rivers | Gwydir | Namoi | Peel | Macquarie | Lachlan | Murrumbidgee | Murray | North Coast | Hunter | South Coast | MDBC | DBBRC | Fish River |
|--------------|---------------------------|---------------|---------------|--------------|--------------|------------|--------------|--------------|--------------|--------------|-------------|--------------|-------------|--------------|------------|--------------|
| 1120 | Customer Support | 530.9 | 25.2 | 36.2 | 28.5 | 5.3 | 49.1 | 50.6 | 114.4 | 180.0 | 1.6 | 37.4 | 2.7 | 0.0 | 0.0 | 0.0 |
| 2120 | Hydrometric Monitoring | 4,603.4 | 114.6 | 368.5 | 393.1 | 98.3 | 442.2 | 506.9 | 775.5 | 81.7 | 21.3 | 226.1 | 33.1 | 1,323.0 | 219.0 | 0.0 |
| 2130 | Water Quality Monitoring | 1,123.2 | 96.5 | 103.3 | 160.5 | 106.9 | 73.2 | 85.0 | 187.0 | 13.2 | 39.5 | 176.3 | 39.8 | 0.0 | 42.0 | 0.0 |
| 2150 | River Operations | 5,789.4 | 248.6 | 358.6 | 412.6 | 132.6 | 389.6 | 470.2 | 871.5 | 369.5 | 62.3 | 298.1 | 90.9 | 1,935.0 | 150.0 | 0.0 |
| 3130 | Dam Safety Compliance O&M | 3,402.1 | 134.8 | 223.3 | 259.6 | 173.9 | 373.1 | 331.5 | 511.2 | 50.6 | 143.3 | 441.1 | 106.5 | 653.0 | 0.0 | 0.0 |
| 3140 | Preventative Maintenance | 13,889.1 | 443.6 | 1,134.6 | 1,329.9 | 342.3 | 1,289.0 | 1,364.0 | 1,741.1 | 571.2 | 284.7 | 1,168.4 | 292.4 | 3,787.0 | 141.0 | 0.0 |
| 5220 | Billing & Receipts | 127.9 | 5.8 | 11.6 | 14.2 | 10.1 | 16.2 | 14.8 | 21.2 | 21.4 | 2.3 | 8.1 | 2.3 | 0.0 | 0.0 | 0.0 |
| 5250 | Insurance | 976.2 | 33.9 | 112.0 | 92.8 | 31.5 | 157.2 | 117.8 | 208.1 | 13.5 | 33.8 | 160.9 | 14.8 | 0.0 | 0.0 | 0.0 |
| 2180 | Metering | 2,917.7 | 102.7 | 194.0 | 265.5 | 93.9 | 255.1 | 438.9 | 504.2 | 643.6 | 3.0 | 413.7 | 3.3 | 0.0 | 0.0 | 0.0 |
| 6140 | Salt Interception Schemes | 1,999.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1,999.0 | 0.0 | 0.0 |
| | Fish River | 2,742.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2,742.4 |
| TOTAL | | 38,101 | 1,206 | 2,542 | 2,957 | 995 | 3,045 | 3,380 | 4,934 | 1,945 | 592 | 2,930 | 586 | 9,697 | 552 | 2,742 |

RECOMMENDED OPERATING COSTS BY VALLEY FOR 2009 (real 05/06 \$'000)

| Product | Product Name | Grand Total | Border Rivers | Gwydir | Namoi | Peel | Macquarie | Lachlan | Murrumbidgee | Murray | North Coast | Hunter | South Coast | MDBC | DBBRC | Fish River |
|--------------|---------------------------|---------------|---------------|--------------|--------------|------------|--------------|--------------|--------------|--------------|-------------|--------------|-------------|--------------|------------|--------------|
| 1120 | Customer Support | 517.3 | 24.5 | 35.2 | 27.8 | 5.2 | 47.8 | 49.3 | 111.4 | 175.3 | 1.5 | 36.4 | 2.7 | 0.0 | 0.0 | 0.0 |
| 2120 | Hydrometric Monitoring | 4,541.6 | 111.7 | 359.0 | 383.0 | 95.7 | 430.8 | 493.8 | 755.6 | 79.6 | 20.8 | 220.3 | 32.3 | 1,340.0 | 219.0 | 0.0 |
| 2130 | Water Quality Monitoring | 1,095.4 | 94.0 | 100.7 | 156.4 | 104.1 | 71.3 | 82.8 | 182.2 | 12.9 | 38.5 | 171.7 | 38.8 | 0.0 | 42.0 | 0.0 |
| 2150 | River Operations | 5,763.0 | 242.2 | 349.4 | 402.0 | 129.2 | 379.6 | 458.1 | 849.0 | 360.0 | 60.7 | 290.4 | 88.5 | 2,004.0 | 150.0 | 0.0 |
| 3130 | Dam Safety Compliance O&M | 3,309.3 | 131.3 | 217.6 | 253.0 | 169.5 | 363.5 | 323.0 | 498.0 | 49.3 | 139.6 | 429.8 | 103.8 | 631.0 | 0.0 | 0.0 |
| 3140 | Preventative Maintenance | 13,268.7 | 432.1 | 1,105.4 | 1,295.7 | 333.4 | 1,255.8 | 1,328.9 | 1,696.3 | 556.5 | 277.4 | 1,138.3 | 284.9 | 3,423.0 | 141.0 | 0.0 |
| 5220 | Billing & Receipts | 124.6 | 5.7 | 11.3 | 13.9 | 9.9 | 15.8 | 14.4 | 20.6 | 20.9 | 2.2 | 7.9 | 2.2 | 0.0 | 0.0 | 0.0 |
| 5250 | Insurance | 951.1 | 33.0 | 109.2 | 90.4 | 30.7 | 153.2 | 114.8 | 202.8 | 13.1 | 32.9 | 156.8 | 14.4 | 0.0 | 0.0 | 0.0 |
| 2180 | Metering | 2,842.6 | 100.0 | 189.0 | 258.6 | 91.5 | 248.5 | 427.6 | 491.2 | 627.0 | 2.9 | 403.1 | 3.2 | 0.0 | 0.0 | 0.0 |
| 6140 | Salt Interception Schemes | 2,262.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2,262.0 | 0.0 | 0.0 |
| | Fish River | 2,671.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2,671.8 |
| TOTAL | | 37,347 | 1,175 | 2,477 | 2,881 | 969 | 2,966 | 3,293 | 4,807 | 1,895 | 576 | 2,855 | 571 | 9,660 | 552 | 2,672 |

RECOMMENDED OPERATING COSTS BY VALLEY FOR 2010 (real 05/06 \$'000)

| Product | Product Name | Grand Total | Border Rivers | Gwydir | Namoi | Peel | Macquarie | Lachlan | Murrumbidgee | Murray | North Coast | Hunter | South Coast | MDBC | DBBRC | Fish River |
|--------------|---------------------------|---------------|---------------|--------------|--------------|------------|--------------|--------------|--------------|--------------|-------------|--------------|-------------|--------------|------------|--------------|
| 1120 | Customer Support | 503.5 | 23.9 | 34.3 | 27.0 | 5.0 | 46.6 | 48.0 | 108.5 | 170.7 | 1.5 | 35.4 | 2.6 | 0.0 | 0.0 | 0.0 |
| 2120 | Hydrometric Monitoring | 4,462.4 | 108.7 | 349.5 | 372.8 | 93.2 | 419.4 | 480.7 | 735.5 | 77.5 | 20.2 | 214.5 | 31.4 | 1,340.0 | 219.0 | 0.0 |
| 2130 | Water Quality Monitoring | 1,067.4 | 91.5 | 98.0 | 152.2 | 101.4 | 69.5 | 80.6 | 177.4 | 12.6 | 37.5 | 167.2 | 37.7 | 0.0 | 42.0 | 0.0 |
| 2150 | River Operations | 5,667.2 | 235.8 | 340.1 | 391.3 | 125.8 | 369.5 | 445.9 | 826.5 | 350.4 | 59.0 | 282.7 | 86.2 | 2,004.0 | 150.0 | 0.0 |
| 3130 | Dam Safety Compliance O&M | 3,238.2 | 127.9 | 211.8 | 246.2 | 164.9 | 353.9 | 314.4 | 484.8 | 48.0 | 135.9 | 418.4 | 101.0 | 631.0 | 0.0 | 0.0 |
| 3140 | Preventative Maintenance | 13,010.9 | 420.7 | 1,076.0 | 1,261.3 | 324.6 | 1,222.4 | 1,293.6 | 1,651.2 | 541.7 | 270.0 | 1,108.1 | 277.3 | 3,423.0 | 141.0 | 0.0 |
| 5220 | Billing & Receipts | 121.3 | 5.5 | 11.0 | 13.5 | 9.6 | 15.4 | 14.0 | 20.1 | 20.3 | 2.2 | 7.7 | 2.2 | 0.0 | 0.0 | 0.0 |
| 5250 | Insurance | 925.8 | 32.1 | 106.3 | 88.0 | 29.8 | 149.1 | 111.7 | 197.4 | 12.8 | 32.1 | 152.6 | 14.0 | 0.0 | 0.0 | 0.0 |
| 2180 | Metering | 2,767.1 | 97.4 | 184.0 | 251.8 | 89.0 | 241.9 | 416.2 | 478.1 | 610.4 | 2.8 | 392.4 | 3.2 | 0.0 | 0.0 | 0.0 |
| 6140 | Salt Interception Schemes | 2,262.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2,262.0 | 0.0 | 0.0 |
| | Fish River | 2,600.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2,600.9 |
| TOTAL | | 36,627 | 1,143 | 2,411 | 2,804 | 943 | 2,888 | 3,205 | 4,679 | 1,844 | 561 | 2,779 | 556 | 9,660 | 552 | 2,601 |

Appendix B Detailed Capital Expenditure Tables

B.1 Scenario 1a

HALCROW RECOMMENDED CAPITAL EXPENDITURE BY PRODUCT 2007 (real 05/06 \$'000)

| Product | Product name | IPART User Share | Total regulated | Border | Gwydir | Namoi | Peel | Lachlan | Macquarie | Murray | Murrumbidgee | North Coast | Hunter | South Coast | MDBC | DBBRC | Fish River |
|--------------|--|------------------|-----------------|--------------|---------------|---------------|--------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|----------------|--------------|---------------|
| 3110 | Asset Management Planning | 85% | 1642.6 | 48.7 | 233.7 | 240.2 | 51.9 | 116.9 | 153.9 | 412.3 | 282.4 | 16.9 | 77.9 | 7.8 | 0.0 | 0.0 | 0.0 |
| 3160 | Plant & Equipment | 85% | 218.8 | 0.0 | 0.0 | 0.0 | 0.0 | 93.5 | 125.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3520 | Dam Safety Compliance Capital Projects | 0% | 11726.3 | 0.0 | 629.8 | 4512.4 | 649.3 | 298.0 | 294.8 | 129.9 | 577.8 | 19.5 | 64.9 | 0.0 | 4500.0 | 50.0 | 0.0 |
| 3525 | Dam Safety Compliance Capital Projects | 25% | 230.5 | 0.0 | 0.0 | 230.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3530 | MPM Capital Projects | 85% | 10609.3 | 142.8 | 727.8 | 491.5 | 30.5 | 348.7 | 353.2 | 1196.6 | 780.4 | 230.5 | 488.2 | 46.1 | 5306.0 | 467.0 | 0.0 |
| 3540 | Structure Enhancement Capital Projects | 100% | 1224.5 | 0.0 | 77.9 | 272.7 | 13.0 | 60.4 | 45.4 | 50.6 | 277.9 | 149.3 | 149.3 | 77.9 | 0.0 | 50.0 | 0.0 |
| 4210 | OH&S Compliance System | 50% | 270.1 | 0.0 | 13.0 | 0.0 | 0.0 | 13.0 | 19.5 | 0.0 | 77.3 | 26.0 | 121.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6310 | Fishpassage Works | 0% | 7918.6 | 0.0 | 0.0 | 324.6 | 0.0 | 1298.5 | 0.0 | 35.7 | 259.7 | 0.0 | 0.0 | 0.0 | 6000.0 | 0.0 | 0.0 |
| 6320 | Cold Water Impact Mitigation Works | 50% | 162.3 | 0.0 | 19.5 | 16.2 | 0.0 | 61.7 | 45.4 | 0.0 | 19.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6340 | Salt Interception Schemes | 10% | 4800.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4800.0 | 0.0 | 0.0 |
| | Fish River | 100% | 1623.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1623.2 |
| TOTAL | | | 40426.2 | 191.5 | 1701.7 | 6088.1 | 744.7 | 2290.6 | 1037.5 | 1825.1 | 2275.0 | 442.1 | 901.8 | 131.8 | 20606.0 | 567.0 | 1623.2 |

HALCROW RECOMMENDED CAPITAL EXPENDITURE BY PRODUCT 2008 (real 05/06 \$'000)

| Product | Product name | IPART User Share | Total regulated | Border | Gwydir | Namoi | Peel | Lachlan | Macquarie | Murray | Murrumbidgee | North Coast | Hunter | South Coast | MDBC | DBBRC | Fish River |
|--------------|--|------------------|-----------------|-------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|-------------|----------------|--------------|---------------|
| 3110 | Asset Management Planning | 85% | 1536.4 | 15.4 | 223.2 | 229.5 | 49.1 | 111.6 | 146.7 | 393.7 | 269.5 | 16.1 | 74.4 | 7.0 | 0.0 | 0.0 | 0.0 |
| 3160 | Plant & Equipment | 85% | 172.0 | 0.0 | 0.0 | 0.0 | 0.0 | 103.2 | 68.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3520 | Dam Safety Compliance Capital Projects | 0% | 27189.3 | 0.0 | 526.4 | 16493.9 | 2456.5 | 280.7 | 372.0 | 0.0 | 5474.6 | 0.0 | 35.1 | 0.0 | 1500.0 | 50.0 | 0.0 |
| 3525 | Dam Safety Compliance Capital Projects | 25% | 350.9 | 0.0 | 0.0 | 350.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3530 | MPM Capital Projects | 85% | 8420.9 | 44.2 | 346.0 | 81.4 | 68.8 | 248.5 | 685.7 | 241.4 | 701.2 | 186.0 | 483.6 | 21.1 | 5261.0 | 52.0 | 0.0 |
| 3540 | Structure Enhancement Capital Projects | 100% | 2642.0 | 0.0 | 0.0 | 1087.9 | 0.0 | 595.2 | 129.8 | 245.7 | 252.7 | 119.3 | 119.3 | 42.1 | 0.0 | 50.0 | 0.0 |
| 4210 | OH&S Compliance System | 50% | 280.7 | 0.0 | 0.0 | 0.0 | 0.0 | 42.1 | 49.1 | 0.0 | 0.0 | 0.0 | 189.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6310 | Fishpassage Works | 0% | 8192.6 | 0.0 | 0.0 | 210.6 | 0.0 | 1754.7 | 0.0 | 157.2 | 70.2 | 0.0 | 0.0 | 0.0 | 6000.0 | 0.0 | 0.0 |
| 6320 | Cold Water Impact Mitigation Works | 50% | 431.7 | 0.0 | 35.1 | 0.0 | 0.0 | 238.6 | 129.8 | 0.0 | 28.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6340 | Salt Interception Schemes | 10% | 4800.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4800.0 | 0.0 | 0.0 |
| | Fish River | 100% | 1264.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1264.1 |
| TOTAL | | | 55280.6 | 59.7 | 1130.7 | 18454.3 | 2574.5 | 3374.6 | 1582.0 | 1038.1 | 6796.2 | 321.5 | 901.9 | 70.2 | 17561.0 | 152.0 | 1264.1 |

HALCROW RECOMMENDED CAPITAL EXPENDITURE BY PRODUCT 2009 (real 05/06 \$'000)

| Product | Product name | IPART User Share | Total regulated | Border | Gwydir | Namoi | Peel | Lachlan | Macquarie | Murray | Murrumbidgee | North Coast | Hunter | South Coast | MDBC | DBBRC | Fish River |
|--------------|---|------------------|-----------------|-------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|-------------|--------------|--------------|----------------|--------------|---------------|
| | 3110 Asset Management Planning | 85% | 1946.0 | 19.9 | 283.0 | 290.2 | 62.2 | 141.1 | 185.8 | 498.3 | 341.2 | 20.7 | 94.1 | 9.6 | 0.0 | 0.0 | 0.0 |
| | 3160 Plant & Equipment | 85% | 268.4 | 0.0 | 0.0 | 0.0 | 0.0 | 142.7 | 75.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 |
| | 3520 Dam Safety Compliance Capital Projects | 0% | 27617.1 | 0.0 | 956.7 | 16701.9 | 4703.6 | 1092.2 | 1124.1 | 0.0 | 2933.8 | 0.0 | 39.9 | 0.0 | 0.0 | 0.0 | 65.0 |
| | 3525 Dam Safety Compliance Capital Projects | 25% | 398.6 | 0.0 | 0.0 | 398.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 3530 MPM Capital Projects | 85% | 8465.0 | 26.3 | 236.0 | 173.8 | 12.0 | 367.5 | 135.5 | 1251.6 | 425.7 | 23.9 | 162.6 | 228.0 | 5372.0 | 50.0 | 0.0 |
| | 3540 Structure Enhancement Capital Projects | 100% | 2720.1 | 0.0 | 0.0 | 876.9 | 0.0 | 515.8 | 263.1 | 0.0 | 968.6 | 0.0 | 95.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 4210 OH&S Compliance System | 50% | 422.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 422.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 6310 Fishpassage Works | 0% | 6224.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 215.3 | 9.6 | 0.0 | 0.0 | 0.0 | 6000.0 | 0.0 | 0.0 |
| | 6320 Cold Water Impact Mitigation Works | 50% | 829.1 | 0.0 | 0.0 | 398.6 | 79.7 | 119.6 | 195.3 | 0.0 | 35.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 6340 Salt Interception Schemes | 10% | 3000.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3000.0 | 0.0 | 0.0 |
| | Fish River | 100% | 1056.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1056.3 |
| TOTAL | | | 52948.1 | 46.2 | 1475.7 | 18840.0 | 4857.5 | 2378.9 | 2402.0 | 1965.2 | 4714.8 | 44.6 | 392.2 | 237.6 | 14372.0 | 165.0 | 1056.3 |

HALCROW RECOMMENDED CAPITAL EXPENDITURE BY PRODUCT 2010 (real 05/06 \$'000)

| Product | Product name | IPART User Share | Total regulated | Border | Gwydir | Namoi | Peel | Lachlan | Macquarie | Murray | Murrumbidgee | North Coast | Hunter | South Coast | MDBC | DBBRC | Fish River |
|--------------|---|------------------|-----------------|-------------|---------------|----------------|---------------|---------------|---------------|--------------|--------------|-------------|--------------|-------------|----------------|--------------|---------------|
| | 3110 Asset Management Planning | 85% | 1824.4 | 18.3 | 265.0 | 272.5 | 58.3 | 132.5 | 174.2 | 467.6 | 320.0 | 19.2 | 88.3 | 8.3 | 0.0 | 0.0 | 0.0 |
| | 3160 Plant & Equipment | 85% | 210.9 | 0.0 | 0.0 | 0.0 | 0.0 | 114.2 | 96.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 3520 Dam Safety Compliance Capital Projects | 0% | 24649.6 | 0.0 | 4167.3 | 13485.4 | 4917.4 | 1462.7 | 466.7 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 |
| | 3525 Dam Safety Compliance Capital Projects | 25% | 433.4 | 0.0 | 0.0 | 433.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 3530 MPM Capital Projects | 85% | 7231.2 | 4.2 | 269.2 | 109.2 | 135.9 | 1030.2 | 996.0 | 45.8 | 430.9 | 12.5 | 218.4 | 5.0 | 3926.0 | 48.0 | 0.0 |
| | 3540 Structure Enhancement Capital Projects | 100% | 2773.7 | 0.0 | 0.0 | 0.0 | 0.0 | 873.5 | 1087.7 | 191.7 | 45.8 | 0.0 | 525.1 | 0.0 | 0.0 | 0.0 | 50.0 |
| | 4210 OH&S Compliance System | 50% | 8.3 | 0.0 | 0.0 | 8.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 6310 Fishpassage Works | 0% | 6000.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6000.0 | 0.0 | 0.0 |
| | 6320 Cold Water Impact Mitigation Works | 50% | 6434.3 | 0.0 | 0.0 | 2292.0 | 500.1 | 1929.5 | 1683.6 | 0.0 | 29.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 6340 Salt Interception Schemes | 10% | 1200.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1200.0 | 0.0 | 0.0 |
| | Fish River | 100% | 1111.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1111.8 |
| TOTAL | | | 51877.7 | 22.5 | 4701.5 | 16600.9 | 5611.7 | 5542.5 | 4504.9 | 705.1 | 926.0 | 31.7 | 831.8 | 13.3 | 11126.0 | 148.0 | 1111.8 |

B.2 Scenario 1b

HALCROW RECOMMENDED CAPITAL EXPENDITURE BY PRODUCT 2007 (real 05/06 \$'000)

| Product | Product name | IPART User Share | Total regulated | Border | Gwydir | Namoi | Peel | Lachlan | Macquarie | Murray | Murrumbidgee | North Coast | Hunter | South Coast | MDBC | DBBRC | Fish River |
|--------------|--|------------------|-----------------|--------------|---------------|---------------|--------------|---------------|--------------|---------------|---------------|--------------|---------------|--------------|----------------|--------------|---------------|
| 3110 | Asset Management Planning | 85% | 1736.1 | 75.0 | 188.0 | 193.3 | 41.8 | 94.0 | 123.8 | 635.0 | 227.2 | 26.0 | 120.0 | 12.0 | 0.0 | 0.0 | 0.0 |
| 3160 | Plant & Equipment | 85% | 176.0 | 0.0 | 0.0 | 0.0 | 0.0 | 75.2 | 100.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3520 | Dam Safety Compliance Capital Projects | 0% | 10481.2 | 0.0 | 506.7 | 3630.3 | 522.4 | 239.8 | 237.1 | 200.0 | 464.9 | 30.0 | 100.0 | 0.0 | 4500.0 | 50.0 | 0.0 |
| 3525 | Dam Safety Compliance Capital Projects | 25% | 185.4 | 0.0 | 0.0 | 185.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3530 | MPM Capital Projects | 85% | 11212.0 | 220.0 | 585.6 | 395.4 | 24.6 | 280.5 | 284.2 | 1843.0 | 627.9 | 355.0 | 752.0 | 71.0 | 5306.0 | 467.0 | 0.0 |
| 3540 | Structure Enhancement Capital Projects | 100% | 1309.2 | 0.0 | 62.7 | 219.4 | 10.4 | 48.6 | 36.6 | 78.0 | 223.6 | 230.0 | 230.0 | 120.0 | 0.0 | 50.0 | 0.0 |
| 4210 | OH&S Compliance System | 50% | 325.7 | 0.0 | 10.4 | 0.0 | 0.0 | 10.4 | 15.7 | 0.0 | 62.2 | 40.0 | 187.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6310 | Fishpassage Works | 0% | 7569.8 | 0.0 | 0.0 | 261.2 | 0.0 | 1044.7 | 0.0 | 55.0 | 208.9 | 0.0 | 0.0 | 0.0 | 6000.0 | 0.0 | 0.0 |
| 6320 | Cold Water Impact Mitigation Works | 50% | 130.6 | 0.0 | 15.7 | 13.1 | 0.0 | 49.6 | 36.6 | 0.0 | 15.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6340 | Salt Interception Schemes | 10% | 4800.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4800.0 | 0.0 | 0.0 |
| | Fish River | 100% | 2500.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2500.0 |
| TOTAL | | | 40426.2 | 295.0 | 1369.1 | 4898.1 | 599.1 | 1842.9 | 834.7 | 2811.0 | 1830.3 | 681.0 | 1389.0 | 203.0 | 20606.0 | 567.0 | 2500.0 |

HALCROW RECOMMENDED CAPITAL EXPENDITURE BY PRODUCT 2008 (real 05/06 \$'000)

| Product | Product name | IPART User Share | Total regulated | Border | Gwydir | Namoi | Peel | Lachlan | Macquarie | Murray | Murrumbidgee | North Coast | Hunter | South Coast | MDBC | DBBRC | Fish River |
|--------------|--|------------------|-----------------|-------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|--------------|---------------|--------------|----------------|--------------|---------------|
| 3110 | Asset Management Planning | 85% | 1704.5 | 22.0 | 213.0 | 219.0 | 46.9 | 106.5 | 140.0 | 561.0 | 257.2 | 23.0 | 106.0 | 10.0 | 0.0 | 0.0 | 0.0 |
| 3160 | Plant & Equipment | 85% | 164.1 | 0.0 | 0.0 | 0.0 | 0.0 | 98.5 | 65.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3520 | Dam Safety Compliance Capital Projects | 0% | 26031.9 | 0.0 | 502.3 | 15738.8 | 2344.1 | 267.9 | 355.0 | 0.0 | 5223.9 | 0.0 | 50.0 | 0.0 | 1500.0 | 50.0 | 0.0 |
| 3525 | Dam Safety Compliance Capital Projects | 25% | 334.9 | 0.0 | 0.0 | 334.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3530 | MPM Capital Projects | 85% | 8738.0 | 63.0 | 330.2 | 77.7 | 65.6 | 237.1 | 654.3 | 344.0 | 669.1 | 265.0 | 689.0 | 30.0 | 5261.0 | 52.0 | 0.0 |
| 3540 | Structure Enhancement Capital Projects | 100% | 2771.0 | 0.0 | 0.0 | 1038.1 | 0.0 | 567.9 | 123.9 | 350.0 | 241.1 | 170.0 | 170.0 | 60.0 | 0.0 | 50.0 | 0.0 |
| 4210 | OH&S Compliance System | 50% | 357.1 | 0.0 | 0.0 | 0.0 | 0.0 | 40.2 | 46.9 | 0.0 | 0.0 | 0.0 | 270.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6310 | Fishpassage Works | 0% | 8166.2 | 0.0 | 0.0 | 200.9 | 0.0 | 1674.3 | 0.0 | 224.0 | 67.0 | 0.0 | 0.0 | 0.0 | 6000.0 | 0.0 | 0.0 |
| 6320 | Cold Water Impact Mitigation Works | 50% | 411.9 | 0.0 | 33.5 | 0.0 | 0.0 | 227.7 | 123.9 | 0.0 | 26.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6340 | Salt Interception Schemes | 10% | 4800.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4800.0 | 0.0 | 0.0 |
| | Fish River | 100% | 1801.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1801.0 |
| TOTAL | | | 55280.6 | 85.0 | 1078.9 | 17609.3 | 2456.6 | 3220.1 | 1509.6 | 1479.0 | 6485.0 | 458.0 | 1285.0 | 100.0 | 17561.0 | 152.0 | 1801.0 |

HALCROW RECOMMENDED CAPITAL EXPENDITURE BY PRODUCT 2009 (real 05/06 \$'000)

| Product name | IPART User Share | Total regulated | Border | Gwydir | Namoi | Peel | Lachlan | Macquarie | Murray | Murrumbidgee | North Coast | Hunter | South Coast | MDBC | DBBRC | Fish River |
|---|------------------|-----------------|-------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|-------------|--------------|--------------|----------------|--------------|---------------|
| 3110 Asset Management Planning | 85% | 2073.7 | 25.0 | 275.2 | 282.2 | 60.5 | 137.2 | 180.7 | 625.0 | 331.8 | 26.0 | 118.0 | 12.0 | 0.0 | 0.0 | 0.0 |
| 3160 Plant & Equipment | 85% | 262.4 | 0.0 | 0.0 | 0.0 | 0.0 | 138.8 | 73.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 | 0.0 |
| 3520 Dam Safety Compliance Capital Projects | 0% | 26871.9 | 0.0 | 930.4 | 16243.3 | 4574.5 | 1062.2 | 1093.2 | 0.0 | 2853.2 | 0.0 | 50.0 | 0.0 | 0.0 | 65.0 | 0.0 |
| 3525 Dam Safety Compliance Capital Projects | 25% | 387.7 | 0.0 | 0.0 | 387.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3530 MPM Capital Projects | 85% | 8858.4 | 33.0 | 229.5 | 169.0 | 11.6 | 357.4 | 131.8 | 1570.0 | 414.0 | 30.0 | 204.0 | 286.0 | 5372.0 | 50.0 | 0.0 |
| 3540 Structure Enhancement Capital Projects | 100% | 2672.4 | 0.0 | 0.0 | 852.9 | 0.0 | 501.6 | 255.9 | 0.0 | 942.0 | 0.0 | 120.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4210 OH&S Compliance System | 50% | 410.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 410.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6310 Fishpassage Works | 0% | 6279.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 270.0 | 9.3 | 0.0 | 0.0 | 0.0 | 6000.0 | 0.0 | 0.0 |
| 6320 Cold Water Impact Mitigation Works | 50% | 806.4 | 0.0 | 0.0 | 387.7 | 77.5 | 116.3 | 190.0 | 0.0 | 34.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6340 Salt Interception Schemes | 10% | 3000.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3000.0 | 0.0 | 0.0 |
| Fish River | 100% | 1325.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1325.0 |
| TOTAL | | 52948.1 | 58.0 | 1435.1 | 18322.8 | 4724.1 | 2313.6 | 2336.1 | 2465.0 | 4585.3 | 56.0 | 492.0 | 298.0 | 14372.0 | 165.0 | 1325.0 |

HALCROW RECOMMENDED CAPITAL EXPENDITURE BY PRODUCT 2010 (real 05/06 \$'000)

| Product name | IPART User Share | Total regulated | Border | Gwydir | Namoi | Peel | Lachlan | Macquarie | Murray | Murrumbidgee | North Coast | Hunter | South Coast | MDBC | DBBRC | Fish River |
|---|------------------|-----------------|-------------|---------------|----------------|---------------|---------------|---------------|--------------|--------------|-------------|--------------|-------------|----------------|--------------|---------------|
| 3110 Asset Management Planning | 85% | 1927.2 | 22.0 | 261.2 | 268.6 | 57.5 | 130.6 | 171.7 | 561.0 | 315.5 | 23.0 | 106.0 | 10.0 | 0.0 | 0.0 | 0.0 |
| 3160 Plant & Equipment | 85% | 207.8 | 0.0 | 0.0 | 0.0 | 0.0 | 112.5 | 95.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3520 Dam Safety Compliance Capital Projects | 0% | 24297.2 | 0.0 | 4107.6 | 13292.2 | 4847.0 | 1441.8 | 460.1 | 0.0 | 98.6 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 | 0.0 |
| 3525 Dam Safety Compliance Capital Projects | 25% | 427.2 | 0.0 | 0.0 | 427.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3530 MPM Capital Projects | 85% | 7245.7 | 5.0 | 265.4 | 107.6 | 133.9 | 1015.4 | 981.7 | 55.0 | 424.7 | 15.0 | 262.0 | 6.0 | 3926.0 | 48.0 | 0.0 |
| 3540 Structure Enhancement Capital Projects | 100% | 2888.2 | 0.0 | 0.0 | 0.0 | 0.0 | 861.0 | 1072.1 | 230.0 | 45.2 | 0.0 | 630.0 | 0.0 | 0.0 | 50.0 | 0.0 |
| 4210 OH&S Compliance System | 50% | 8.2 | 0.0 | 0.0 | 8.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6310 Fishpassage Works | 0% | 6000.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6000.0 | 0.0 | 0.0 |
| 6320 Cold Water Impact Mitigation Works | 50% | 6342.1 | 0.0 | 0.0 | 2259.2 | 492.9 | 1901.8 | 1659.5 | 0.0 | 28.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6340 Salt Interception Schemes | 10% | 1200.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1200.0 | 0.0 | 0.0 |
| Fish River | 100% | 1334.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1334.0 |
| TOTAL | | 51877.7 | 27.0 | 4634.2 | 16363.0 | 5531.3 | 5463.1 | 4440.3 | 846.0 | 912.7 | 38.0 | 998.0 | 16.0 | 11126.0 | 148.0 | 1334.0 |

B.3

Scenario 4a

| Valley | 2006/07 | | 2007/08 | | 2008/09 | | 2009/10 | |
|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | Proposed | Recomm | Proposed | Recomm | Proposed | Recomm | Proposed | Recomm |
| Border Rivers | 295 | 295 | 85 | 85 | 58 | 58 | 27 | 27 |
| Gwydir | 2,621 | 2,621 | 1,611 | 1,611 | 1,851 | 1,851 | 5,641 | 5,641 |
| Namoi | 9,377 | 5,292 | 26,293 | 16,152 | 23,632 | 15,699 | 19,918 | 14,228 |
| Peel | 1,147 | 1,147 | 3,668 | 3,668 | 6,093 | 6,093 | 6,733 | 6,733 |
| Macquarie | 1,598 | 1,141 | 2,254 | 1,721 | 3,013 | 2,452 | 5,405 | 4,668 |
| Lachlan | 3,528 | 3,122 | 4,808 | 4,494 | 2,984 | 2,939 | 6,650 | 6,650 |
| Murrumbidgee | 3,504 | 1,964 | 9,683 | 5,911 | 5,914 | 3,906 | 1,110 | 789 |
| Murray | 2,811 | 750 | 1,479 | 469 | 2,465 | 904 | 846 | 353 |
| North Coast | 681 | 681 | 458 | 458 | 56 | 56 | 38 | 38 |
| Hunter | 1,389 | 661 | 1,285 | 676 | 492 | 283 | 998 | 625 |
| South Coast | 203 | 171 | 100 | 89 | 298 | 280 | 16 | 16 |
| Sub total | 27,154 | 17,844 | 51,724 | 35,334 | 46,856 | 34,521 | 47,382 | 39,767 |
| FRWS | 2,500 | 1,623 | 1,801 | 1,264 | 1,325 | 1,056 | 1,334 | 1,112 |
| MDBC | 20,606 | 20,606 | 17,561 | 17,561 | 14,372 | 14,372 | 11,126 | 11,126 |
| DBBRC | 567 | 567 | 152 | 152 | 165 | 165 | 148 | 148 |
| TOTAL | 50,827 | 40,640 | 71,238 | 54,311 | 62,718 | 50,114 | 59,991 | 52,153 |

Appendix C List of Questions for SWC

C.1 Business Drivers

- (a) State Water to provide details of how expenditure is related to critical success factors and other identified obligations
- (b) State Water to clarify whether “willingness to pay” negotiations have or will occur with its customers
- (c) State Water to provide details on historical or current performance levels against targets in Operating Licence / System Performance Standards
- (d) State Water to provide details of customer consultation on service levels

C.2 Business and Expenditure Planning Process

- (e) State Water to provide details on whether any progress has been made to address the issues raised by the MJA-Cardno 2005 review.
- (f) State Water to provide details on how the Project delivery System will deal with projects under \$500K (PB Associates report that projects over \$500K appear to be dealt with using the life cycle management (LCM) process)
- (g) State Water to clarify which process was used to select capital projects included in their submission to IPART
- (h) State Water to provide details of staff number forecasts for period 2007/08 to 2009/10 or explain why these were not provided
- (i) State Water to provide explanation of how staff levels can increase with static then declining operating expenditure levels
- (j) State Water to provide clarification on whether the proposed 4% salary increases in 2006 and 2007 are included in the operating expenditure
- (k) State Water to provide details of how proposed 3% efficiency in operating expenditure will be achieved
- (l) State Water to clarify whether the revised capitalisation policy introduced in 2004 has been used for this submission
- (m) State Water to provide details of asset management approaches used for non-major works projects

C.3 Historical Expenditure

- (n) State Water to provide details of major increases in 2005/06 budget versus historical capital expenditure (total is 52% higher than historical average and 88% higher than 2004/05 expenditure) (changes in expenditure range from -46% to +451% of the historical average and -14% to +294% of the 2004/05 expenditure)

- (o) State Water to provide details / breakdown of 2004/05 and 2005/06 capital expenditure by product
- (p) State Water to provide explanation for why performance in achieving actual capital expenditure vs budget was only 67% on average and was approximately 50% in 2004/05
- (q) State Water to explain what financial constraints it was operating under prior to 2004/05 that restricted it from carrying out the desired level of maintenance. How has this constraint been lifted for 2005/06?
- (r) State Water to explain the major increases in operating expenditure between 2004/05 and 2005/06 including:
 - (i) Border Rivers 85%
 - (ii) Gwydir 59%
 - (iii) Namoi 40%
 - (iv) Peel 76%
 - (v) Macquarie 34%
 - (vi) Lachlan 29%
 - (vii) Murrumbidgee 28%
 - (viii) Murray 22%
 - (ix) North Coast 22%
- (s) State Water to provide details on the historical levels of corporate / shared costs. What is the budgeted and forecast level of these costs? On what basis has corporate / shared cost been allocated to the valley and products? What proportion of these costs is allocated to regulated vs unregulated products?

C.4

Forecast Expenditure

- (t) State Water has a 0% efficiency target until 2007/08 and then a 3% target thereafter. What measures does State Water have implement to reach the 3% target and why are there no improvements targeted before 2007/08?
- (u) State Water to provide details on project delivery systems and project management teams to look after capital program
- (v) State Water to provide details of life cycle optimization for major periodic maintenance projects
- (w) State Water to provide details on how work related to fishways is audited for timeliness and budget monitoring and for continual improvement of works
- (x) State Water to provide further details on proposed expenditure and timing for cold water pollution works
- (y) State Water to provide additional details on other capex projects (\$78 million in expenditure)

- (z) PB Associates reported that TAMP 2004 included a goal to undertake a 2005 customer service survey defining agreed levels of service for stakeholders in each valley. State Water to provide details on whether this has been undertaken and what were the results. How were these issues factored into the operating expenditure forecasts?

C.5 *MDBC & DBBRC Costs*

- (aa) MDBC and DBBRC expenditures are passed through. State Water to explain how this process occurs and how revenues are received and accounted for in the submission.

C.6 *Fish River Costs*

- (bb) Fish River forecast expenditures for 2007/08 to 2009/10 have not been provided – State Water to provide details on works and timing.

C.7 *Comparison with 2004 IPART Submission*

- (cc) State Water to provide details on how the expenditure in the current submission can be \$30 million greater than that forecast in TAMP 2004



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