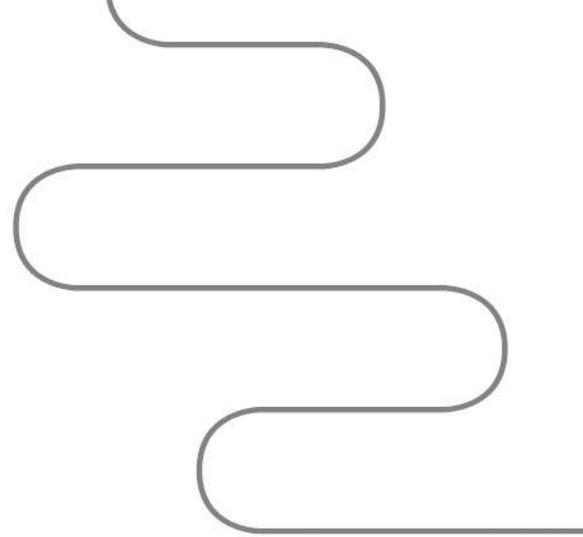


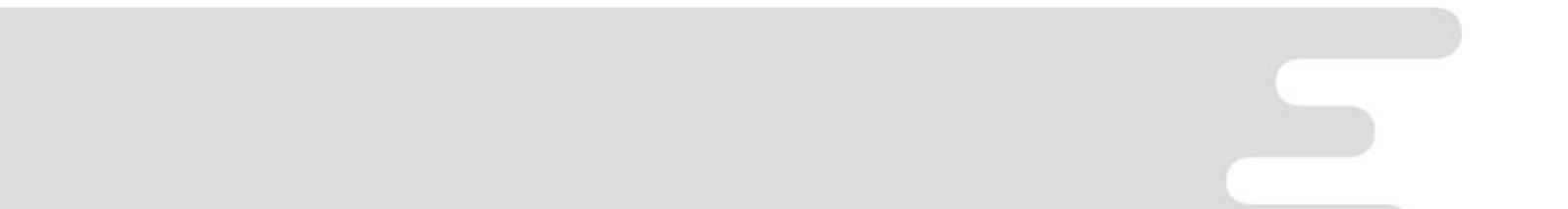


Australian Government



River Murray Operations Expenditure since 2001-02

2014



River Murray Operations activities include the construction, operation, maintenance and renewal of River Murray infrastructure assets (dams, weirs, barrages, salt interception schemes, river bank restoration and other management works, environmental works and the hydrometric network), and the operation of these assets to deliver states' water shares and environmental outcomes in the River Murray system.

River Murray Operations encompass the head office functions of the Murray-Darling Basin Authority (MDBA) and the functions of the three State Constructing Authorities (Goulburn-Murray Water, State Water (NSW) and SA Water), as well as the activities of outsourced contractors.

MDBA directs river operations in the Murray system and provides oversight of the whole program to ensure a consistent standard of asset maintenance and risk management across the program, most of which is delivered by the State Constructing Authorities.

The costs of River Murray Operations can be split into two categories:

- Investigations and Construction (I&C) costs – the cost to investigate the need for new assets or for asset renewal or upgrade and (if it is agreed to proceed) undertaking the design, approvals and construction of the works. These activities are generally awarded (by the State Constructing Authorities) to private contractors through a competitive tender process.
- Operation and Maintenance (O & M) costs – the cost to operate the assets and maintain them to achieve their design life.

Since a dedicated 'water business' was formed in the former Murray-Darling Basin Commission in the late 1990s, the River Murray Operations program has progressively matured to reflect emerging and contemporary practice as demonstrated through the establishment of, and agreement to:

- MDBA Corporate Plan
- Asset Agreement
- Memorandums of Understanding with SCAs
- Asset Management Plan
- Objectives and Outcomes for river operations in the River Murray System, and the associated Specific Objectives and Outcomes
- Emergency Action Plan
- asset register
- land and easements register
- portfolio risk assessment for major storages
- business cases for major projects
- completion and handover reports for all capital works projects.

These documents and registers variously guide, approve, direct, manage, or record expenditure on the River Murray Operations program and the value of its assets.

Trends in operation and maintenance costs

Operation and Maintenance costs have increased in a consistent and gradual pattern over the period, as shown in Figure 1.

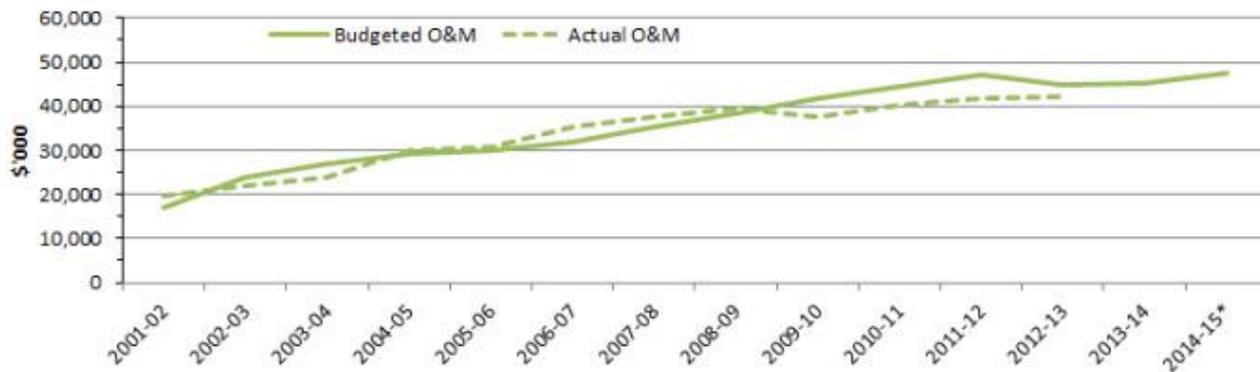


Figure 1: Comparison of budgeted and actual RMO expenditure on operations and maintenance

From 2001 to about 2006, the rate of increase in these costs exceeded the rate of general inflation. The increase was partly attributable to the implementation of new programs to address some of the unacceptable impacts of water storage and delivery on river banks and adjacent lands. These included:

- river improvement programs in the Mitta Mitta
- Upper Murray and Hume to Yarrawonga reaches
- land and on-water management plans at Lake Hume and Lake Mulwala
- cultural heritage and land management at Lake Victoria.

In addition, the Salt Interception Scheme at Waikerie was expanded in 2002; the scheme at Buronga was rebuilt to improve effectiveness; and the Barr Creek drainage disposal scheme was brought into the joint program. Also during this period, significant planned maintenance was undertaken on Bethanga Bridge, prior to this asset being handed over to the NSW Roads Transport Authority.

From 2006 to 2013, the rate of increase in operation and maintenance costs slowed to be about the same as the rate of general inflation (which averaged just under 3% for the period). At the same time, the costs to provide the following new (or expanded) services were absorbed:

- the operation and maintenance of new assets
 - Salt Interception Schemes were commissioned as follows: Bookpurnong in 2006; Pyramid Creek in 2007; Loxton progressively to 2010; Waikerie expanded again in 2010; Pike Phase 1 in 2011; Murtho in 2014. Construction of the Upper Darling scheme was completed in 2011-12 but no O&M costs have been incurred by the MDBA to date (but are expected to be incurred in 2014-15)
 - most of The Living Murray environmental works were completed in the years 2012 to 2014, however, some activities such as pumping of

environmental water onto the Chowilla floodplain commenced as early as 2004

- a 'whole of systems' operations review (from 2008 to 2013) and subsequently an ongoing 'continuous improvement program' for river operations
- annual independent reviews of river operations commenced in 2010
- increasing expectations of river operations over time as both the complexity and level of co-ordination required to achieve environmental outcomes has increased. This has been particularly the case since 2011, as use of environmental water has significantly increased.

Trends in investigation and construction costs

Figure 2 illustrates the variation in River Murray Operations investigation and construction costs. Since 2001, efforts were made to smooth these expenses from year to year, noting that building costs have generally been increasing at a faster rate than salaries or the Consumer Price Index.

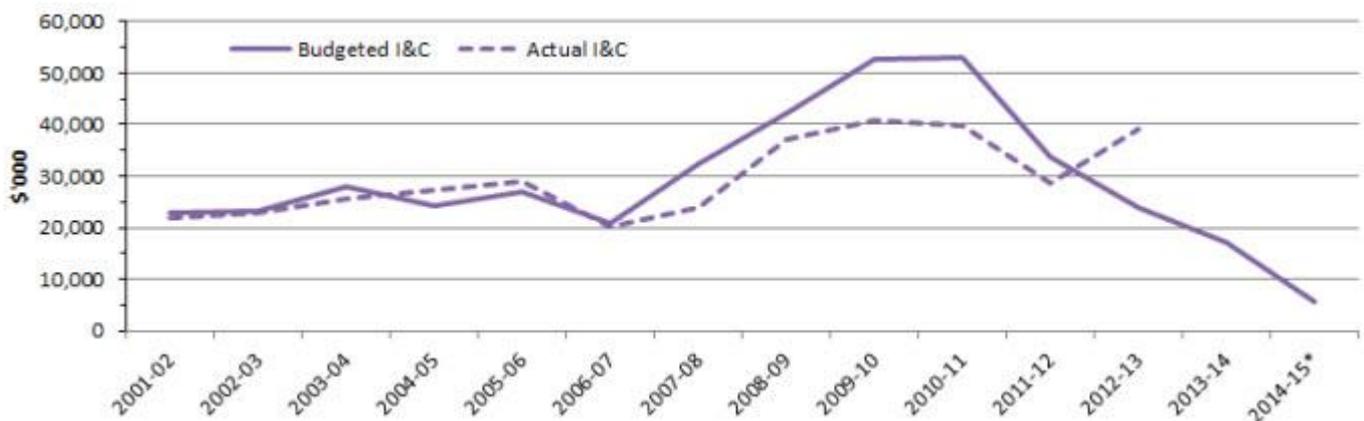


Figure 2 Comparison of Budgeted and Actual RMO Expenditure on Investigation and Construction

The investigation and construction program since 2001 has addressed areas of neglect and risk that had accrued in the preceding decades, particularly through the 1970s to mid-1990s. In the years since 2001, risks for the following areas have been significantly reduced:

- dam/asset safety
- workplace health and safety
- public liability
- cultural heritage
- riparian health
- land management
- public access and recreation facility management.

In addition, dredging occurred at the Murray Mouth from 2002 to 2010, to reduce the risk (at the time) of its closure.

As a result of funding pressure that emerged in 2005-06, a wind-down in project development occurred with a corresponding reduction in investigation and construction. Although the Australian Government injected \$500M in June 2006, it took two years before the wind-down



could be fully reversed, allowing for the recruitment of project staff by State Constructing Authorities, engagement of consultants, completion of designs, obtaining approvals, calling and awarding construction contracts and mobilising contractors.

In the subsequent period, effort focused on the construction of salt interception schemes, the navigable-pass upgrade program, progressive implementation of the priority recommendations set out in the portfolio risk assessment of dam safety, and bank stabilisation works from Hume to Yarrawonga. The Living Murray environmental works were also progressed during this time, however, investigation and construction of these works were separately funded and therefore their costs have not been included in this analysis.

The drop in investigation and construction expenditure in 2011-12 was mainly due to delays caused by flooding at navigable-pass projects, at the Murtho Salt Interception Scheme and at other minor works. In the worst case, navigable-pass construction at Lock 2 was delayed from August 2010 until December 2013.

The decreasing I&C budget since 2012-13 also reflects the impact of budget constraints, with some works being deferred as well as a reduction in activity as long term construction programs (such as the navigable-pass upgrades and Salt Interception Schemes) near completion.

Comparison of Budgeted and Actual Costs

Since 2001, total actual expenditure has generally been less than total budgeted expenditure. This was particularly the case when the floods between 2010 and 2012 delayed works (such as construction of the navigable-passes and salt interception schemes).

In recent years expenditure has exceeded budget. This has occurred due to expenditure of funds carried over as a result of under-spend in previous years (i.e. catching up on work delayed by flooding as described above).