



**Irrigation Infrastructure Renewal
Projections - 2013/14 to 2046/47**
Report - Mary River Tariff Group

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1. Introduction

Seqwater owns and operates the following seven irrigation schemes:

- ▶ Central Lockyer WSS;
- ▶ Lower Lockyer WSS;
- ▶ Logan River WSS;
- ▶ Mary River WSS;
- ▶ Cedar Pocket WSS;
- ▶ Warrill Valley WSS; and
- ▶ Central-Brisbane WSS.

Seqwater also owns and operates a distribution system, the Morton Vale Pipeline.

There are nine tariff groups associated with these schemes.

To assist with the determination of price paths, a forecast of future renewal expenditure is required at the individual tariff group level.

The renewal projections have been developed, in accordance with the scope and methodology separately documented in the Methodology report. The projections have been developed in separate reports, one for each tariff group.

This report outlines the projections for the Mary River Tariff group. It should be read in conjunction with the Methodology report.

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2. Asset Information

2.1 Irrigation Infrastructure

A summary of Seqwater's irrigation infrastructure facilities and assets is provided in **Table 1** below.

Table 1 Summary of Irrigation Infrastructure

WSS Scheme	Tariff Group	Dams	Weirs	Off-Stream Storage	Other Key Assets
Mary River	Mary River	Borumba Dam	Imbil Weir	NA	Yabba Creek, Flowmeters

A schematic drawing of the scheme is provided in Appendix A.

2.2 Relevant Asset Information

The following existing information was reviewed and where relevant, utilised to develop the renewal projections:

- ▶ Sun Water Static Asset data.
- ▶ Annual, 5 Year and Comprehensive Dam Safety Reviews and Assessments
- ▶ Dams Weirs Valuations 2010
- ▶ Draft WSS 20 Year Programme of Work 2008/09 – 2028/29
- ▶ 2011 Site Safety Assessments
- ▶ Extracts from Financial Asset Register
- ▶ 2009 Asset Valuation – Cardnos
- ▶ 2010 Asset Valuation – Dams & Weirs – Cardnos
- ▶ Borumba Dam Facilities Asset Management Plan (FAMP) 2012

3. Projections

3.1 Summary

A summary of the renewal and refurbishment projections for the period 2013/14 – 2046/47 is provided in Table 3.

Further details are provided in Appendix B.

It should be noted that all values are in \$2012-13.

3.2 Significant Projects

A list of projects that come under one of the following categories are outlined in Table 2 below:

- ▶ Scheduled between 2013/14 and 2016/17 financial years and having a project value greater than the average project value for that period; and
- ▶ A project that has an impact on the annuity of greater than 10%.

Table 2 Significant Projects

Asset	Description of Work	Timing of Work	Project Value	Signif.*
Borumba Dam - embankment	Sealing of concrete face joints below water surface	2013/14	\$230k	IA, HAV
Borumba Dam - spillway	Concrete repairs	2014/15	\$100k	HAV
Borumba Dam – cone valves	Painting and replacement of seals	2016/17	\$100k	HAV

Notes: *Significance: HAV – Higher than Average Value (for period from 2013/14 to 2016/17) IA – Project has an impact on the annuity of greater than 10% (refer Section 3.3 for commentary)

Table 3 Summary of Renewal Projections

Parent Asset	Expenditure Forecast Each Year (\$k)																
	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Borumba Dam	230	270	30	100	-	-	-	-	-	-	-	-	-	-	-	-	-
Mary Valley Regulated Stream	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gauging Stations	-	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-
Yabba Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Flowmeters	-	-	-	-	-	-	-	-	-	-	-	-	28	28	28	28	28
Total	230	270	30	100	0	0	0	0	0	70	0	0	28	28	28	28	28

Parent Asset	Expenditure Forecast Each Year (\$k)																
	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46	2046/47
Borumba Dam	-	-	-	-	111	64	-	-	-	-	-	119	-	-	431	-	-
Mary Valley Regulated Stream	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gauging Stations	-	-	70	-	-	-	-	-	-	-	-	-	70	-	-	-	-
Yabba Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Flowmeters	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
Total	28	28	98	28	139	92	28	28	28	28	28	147	98	28	459	28	28

3.3 Additional Commentary

The following projects, that have a higher than average project value, have been identified as being required as a result of condition and criticality assessment completed as part of the FAMP development process:

- ▶ Repairs to concrete on Borumba Dam spillway as assessed in FAMP.
- ▶ Painting and resealing Borumba Dam cone valves as assessed in FAMP.

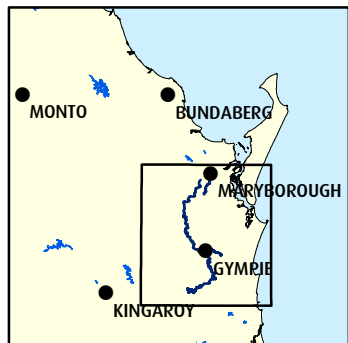
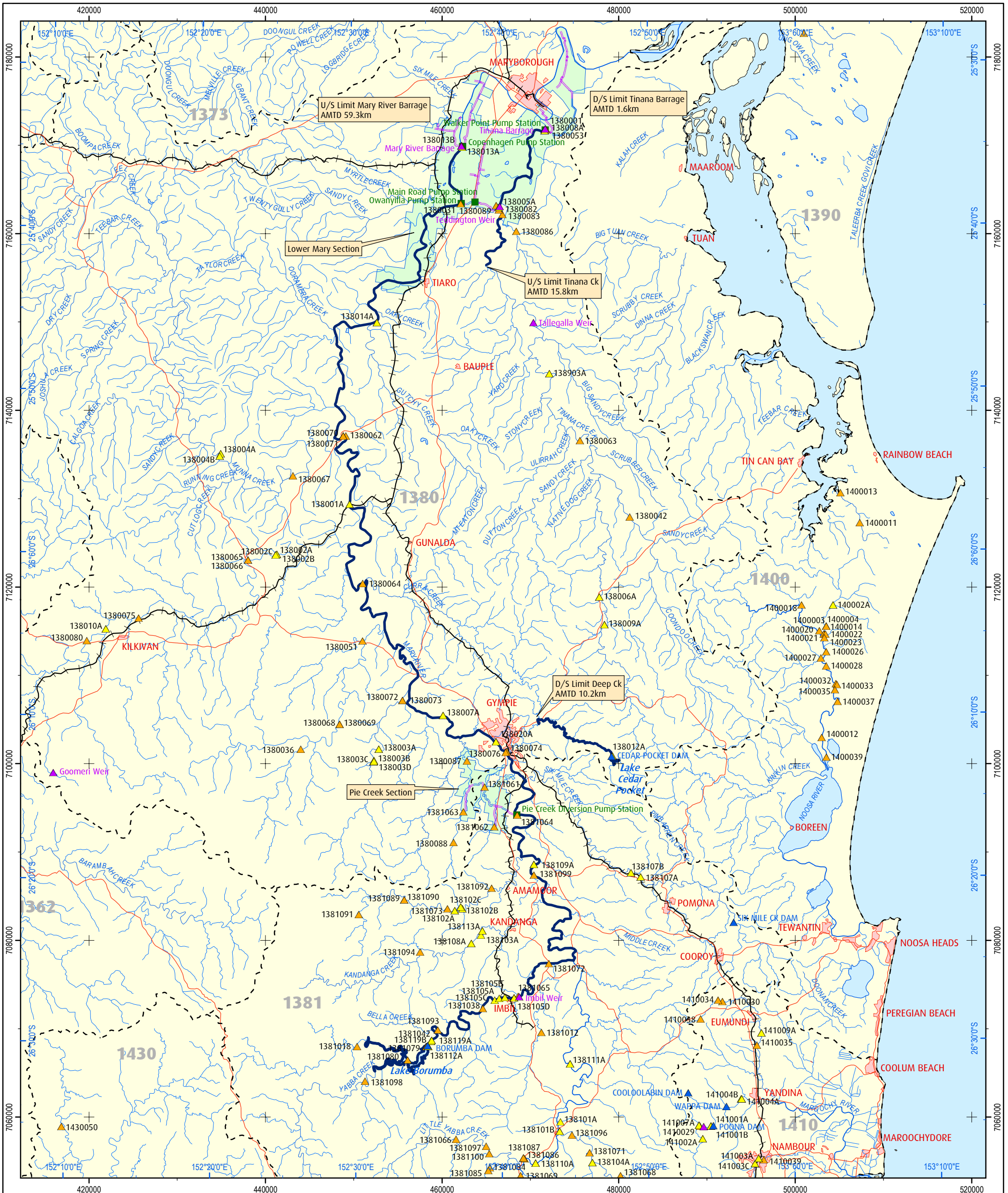
Commentary on other projects that have an impact on the annuity of greater than 10% is provided as follows:

- ▶ Sealing of concrete sections joints on upstream face of Borumba Dam below water surface as assessed in FAMP.

For the forecasted renewal expenditure between 2013/14 and 2016/17, values were compared with Sunwater's renewals projections which were the basis of the SunWater irrigation prices for 2006/07 to 2010/11. When excluding the water meter upgrade costs which will be excluded from the annuity, it was noted the total value of Seqwater's renewal forecast was approximately 190% of Sunwaters. The difference is believed to be primarily due to:

- ▶ Seqwater projections being based on more up-to-date information.
- ▶ Seqwater projections included significant expenditure on repair and refurbishment of Borumba Dam between 2013/14 and 2016/17 as assessed in FAMP.

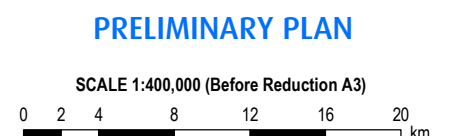
Appendix A
Water Supply Scheme Schematic



LEGEND	
	Dam
	Weir
	Stream Gauging Station
	Water Quality Station
	Pump Station
	Water Supply Scheme
	Channel
	Pipeline
	Sub-Basin Boundary
	Major Roads
	Railway
	Gully
	Creek
	River
	Channel System WSS
	Urban Area

NOTES
1. Stream Gauging and Water Quality Stations shown do not necessarily belong to SunWater.

MAP INFORMATION
Black ticks indicate 20,000m intervals of the Universal Transverse Mercator Grid, Zone 56 (Mapping Grid of Australia), Australian National Spheroid.
Blue ticks indicate Latitude and Longitudinal at 10 minute intervals.
Coordinate System: Geocentric Datum of Australia, Transverse Mercator projection.



**MARY RIVER WATER SUPPLY SCHEME
SYSTEM LAYOUT
AUGUST 2002**



Prepared	IDH	Checked	Approved
Revision	Date	Remarks	
Drawing Number	A3-???????		

Appendix B

Renewal Projections

Parent Asset	Asset Details		Renewal Details		Expenditure Forecast Each Year (\$k)																	
	Asset Description	Works Description	Comments	Costing Source	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	
Borumba Dam	Cables & Cableways	Replace	-	Static Asset Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Control	Replace	-	Static Asset Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Switchboard	Replace	-	Static Asset Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Boundary Fencing	Replace	-	DW Val 2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Domestic Fencing	Replace	-	DW Val 2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Internal Fencing	Replace	-	DW Val 2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Water Tight Doors	Replace	-	Static Asset Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Ladder, Handrails & Platforms	Replace	-	Static Asset Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Pipe Works	Replace	-	Static Asset Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Trashracks	Replace	-	Static Asset Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Water Level Recorder	Replace	-	DW Val 2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Embankment	Refurbish	Concrete face joints to be sealed below water level.	FAMP/DCE	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Control Structure	Refurbish	Minor concrete repairs, concrete aggregate need to be repaired.	FAMP	-	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Spillway	Refurbish	Minor concrete repairs, concrete aggregate need to be repaired	FAMP/DCE	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Discharge Channel	Refurbish	Creek to be deepened to allow water to flow away and not back up around the cone valve.	FAMP	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Water Level Recorder	Refurbish	Tail water connection to telemetry	FAMP	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Telemetry	Refurbish	Upgrade required	FAMP	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Valve House	Refurbish	Upgrade required	FAMP	-	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Borumba Dam	Outlet Valve	Refurbish	Cone valve to be painted and seal replaced.	FAMP/DCE	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gauging Stations	Gauging Stations-Mary River	Replace	-	Workshop - 31 Jan 2012	-	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	
Water Flowmeters	Water Meter	Replace	Replace batch of 9 meters every year	Est	-	-	-	-	-	-	-	-	-	-	-	28	28	28	28	28	28	
Total					230	270	30	100	0	0	0	0	0	70	0	0	28	28	28	28	28	28

Parent Asset	Asset Details		Renewal Details		Expenditure Forecast Each Year (\$k)																
	Asset Description	Works Description	Comments	Costing Source	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46	2046/47
Borumba Dam	Cables & Cableways	Replace	-	Static Asset Data	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-	-	-
Borumba Dam	Control	Replace	-	Static Asset Data	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-
Borumba Dam	Switchboard	Replace	-	Static Asset Data	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-
Borumba Dam	Boundary Fencing	Replace	-	DW Val 2010	-	-	-	-	-	-	-	-	-	-	83	-	-	-	-	-	-
Borumba Dam	Domestic Fencing	Replace	-	DW Val 2010	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-	-	-
Borumba Dam	Internal Fencing	Replace	-	DW Val 2010	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-
Borumba Dam	Water Tight Doors	Replace	-	Static Asset Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	-	-
Borumba Dam	Ladder, Handrails & Platforms	Replace	-	Static Asset Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	112	-	-
Borumba Dam	Pipe Works	Replace	-	Static Asset Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	281	-	-
Borumba Dam	Trashracks	Replace	-	Static Asset Data	-	-	-	-	111	-	-	-	-	-	-	-	-	-	-	-	-
Borumba Dam	Water Level Recorder	Replace	-	DW Val 2010	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-
Borumba Dam	Embankment	Refurbish	Concrete face joints to be sealed below water level.	FAMP/DCE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Borumba Dam	Control Structure	Refurbish	Minor concrete repairs, concrete aggregate need to be repaired.	FAMP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Borumba Dam	Spillway	Refurbish	Minor concrete repairs, concrete aggregate need to be repaired	FAMP/DCE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Borumba Dam	Discharge Channel	Refurbish	Creek to be deepened to allow water to flow away and not back up around the cone valve.	FAMP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Borumba Dam	Water Level Recorder	Refurbish	Tail water connection to telemetry	FAMP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Borumba Dam	Telemetry	Refurbish	Upgrade required	FAMP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Borumba Dam	Valve House	Refurbish	Upgrade required	FAMP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Borumba Dam	Outlet Valve	Refurbish	Cone valve to be painted and seal replaced.	FAMP/DCE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gauging Stations	Gauging Stations-Mary River	Replace	-	Workshop - 31 Jan 2012	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-
Water Flowmeters	Water Meter	Replace	Replace batch of 9 meters every year	Est	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
Total					28	28	98	28	139	92	28	28	28	28	28	147	98	28	459	28	28