Meeting Minutes

Date: Monday, 22 October 2018

Time: 10:00 am

Location: St George Office Boardroom, Mallawa Irrigation

Attendees John Kelly, SunWater Area Operations Manager, Goondiwindi
Andre Retief, SunWater Senior Project Manager, Brisbane (by Phone)
Rohan Thorogood, General Manager, Mallawa Irrigation, St George
Bill Kadel, SunWater Storage Supervisor, Beardmore Dam
Glen Rogan, Irrigator Advisory Committee (IAC) Chair
Scott Armstrong, IAC Committee Member
Bill Knights, IAC Committee Member
Rob Jakins, IAC Committee Member
Luke Stower, IAC Committee Member
David Moon, IAC Committee Member

Apologies: Chad Prescott, Hamish McIntyre

Chair: Glen Rogan **Minutes:** John Kelly

Item No.	Item	Presenter
1.	Welcome and Introductions	Chair
2.	Apologies	Chair
3.	Review of previous minutes	All
4.	Business arising from previous minutes	All
5.	Water Storage Update	John Kelly
6.	2018 Research & Extension program update	John Kelly
7.	Thuraggi Channel Update	Andre Retief
8.	Budget position – Review scheme expenditure reports	John Kelly
9.	5yr R&E program review	John Kelly
10.	Jack Taylor Weir – Low Level valves	John Kelly
11.	General Business	All

Agenda Item 1 – Welcome and Introductions

The Chair opened the meeting at 10am and welcomed the IAC members and thanked them for their time to attend the meeting.

Agenda Item 2 – Apologies

Chad Prescott and Hamish McIntyre

Agenda Item 3 – Review of Previous Minutes

The minutes from the previous meeting were reviewed and agreed were a true and accurate record of discussions.

Agenda Item 4 – Business Arising from Previous Minutes

1. With a view to better manage available water when storage levels are low it was discussed that additional reconciliations (every fortnight) should be undertaken when the low levels pumps are installed at Beardmore Dam. This occurs when the dam is at approximately 15,000ML (approx. EL 201.8m). Additional reconciliations should also be undertaken during peak demand periods.
2. In December 2017 there was a high positive reconciliation of approximately 7,500ML which was unexpected by customers and caused issues in relation to decision making around water availability. SunWater undertook to investigate the positive reconciliation and advise the reasons for it occurring.

   Post Meeting Note: SunWater has investigated the December 2017 reconciliation and can advise as follows. In December 2017 a positive reconciliation of 7,510.36ML was applied to water accounts. In analysing the data (see attachment to the minutes) it is noted that both Moolabah and Buckinbah Weirs were being operated above Full Supply Level (FSL) for part of the time, which has contributed to the positive reconciliation.

   Any volumes of water kept above FSL are not counted as part of the Total Conceptual Storage Volume. What happens in this case, is that the Total Conceptual Storage Volume does not decrease as much as the Total Water Account Volume, which includes estimated evaporation and seepage losses and water usage. Conservative estimates for monthly evaporation and storage losses (applied as per the ROL) ensure that the majority of reconciliations are positive.

   Since the Total Water Account Volume is based on estimates of storage losses and transmission efficiencies, there is always the potential for a difference in the Conceptual Storage Volume and the Total Water Account Volume. In the case of the December 2017 reconciliation, the Total Conceptual Storage Volume was 35,569.905 ML, however the Total Water Account Volume was only showing as 28,059.273 ML, resulting in a reconciliation of 7,510.630 ML.
3. The make up of the IAC was discussed given the linkages with Mallawa Irrigation and the existing Mallawa Board. It was agreed that the IAC would consist of the Mallawa Board members as representation of the channel customers. SunWater advised this was acceptable provided river customers remained duly represented.

Agenda Item 5 – Water Storage Update

SunWater advised that Beardmore Dam was currently at 48% (approx. 39,216ML) and that a small inflow was occurring at the moment (approx. 1800ML/d). Any inflows received into Department of Natural Resources, Mines & Energy's ES&D account are currently being used to payback allocation holders from the 10% reduction in allocation during the March event.

Agenda Item 6 – 2018 R&E Program Update

SunWater provided an update on the current R&E program. A detailed list of projects, expenditure to date and status are shown as an attachment to the minutes.

Agenda Item 7 - Thuraggi Channel Update

SunWater provided an update on the Thuraggi outlet seepage reduction project. The presentation provided is attached to the minutes. The IAC sort clarification on the proposed 40m extension of the conduit and in particular were keen to ensure that such an increase would not have any impact on the peak flowrate from the dam into the channel. SunWater confirmed that the losses through the extended conduit are minimal and there would be no reduction in the peak flowrate.

SunWater advised the IAC that it would be sending follow up communications with customers on the project (to follow the communication previously sent in July 2018) to ensure customers were aware of the projects' progress and more importantly SunWater will be requesting customers to take any remaining balance of allocation water into on farm storage with a view to having the dam down to 5% prior to the start of construction in mid-January 2019.

The IAC requested SunWater reflect the peak flow rate (water harvesting release of 1700ML/d) through Thuraggi Channel in the dam's Operations & Maintenance Manual to ensure consistency of dam operations. SunWater advised that these flowrates are possible however they do have an impact on the channel in terms of erosion which requires rectification work at the end of the event.

Agenda Item 8 – Budget – Review of Expenditure Reports

SunWater provided an expenditure report for the scheme up to the end of the first quarter (30 Sept 2018). This report is provided as an attachment to the minutes. Routine operations are well under budget while over expenditure in preventative maintenance is offset by under expenditure in corrective maintenance, (SunWater noted that there may be some administrative errors in posting of costs between preventative and corrective works) however overall operating expenses remain below budget whilst revenue too remains slightly below budget.

Agenda Item 9 – 5yr R&E Program Review

SunWater provided the 5yr R&E program for review. Comments from the IAC included:

1. The cost estimate for the construction of exclusion fencing to keep kangaroos of abutments of the dam and prevent erosion seems high. SunWater to review costs.
2. The project in 2021 to refurbish the gauging station at Warroo may not be required as it was only replaced 3 years ago. SunWater to confer with hydrographers.
3. Cost estimates for the 20 year dam safety review and the comprehensive risk assessment in 2022 and 2023 respectively, need to be realistic as they seem excessive. SunWater to review in light of more recent costs for these works at other dams.

Post Meeting Note: The 20 year Dam Safety review at Glenlyon Dam undertaken in 2017/2018 cost $296,269. As such the $350k budget figure for this work in 2022 seems reasonable.

Agenda Item 10 – Jack Taylor Weir Low Level outlet valves

SunWater raised the long term options for the low level release valves at Jack Taylor Weir. See photos attached to the minutes showing their current condition. These valves, whilst not used very often, have been used in the past to supply customers immediately downstream of the weir during prolonged dry periods when the water level in the weir is below the crest level. The valves have a combined release rate of approx. 250ML/d. One option is to completely decommission the valves (concrete encase). The IAC agreed that the valves are required and decommissioning was not an option. SunWater advised a study had been done in 2011 in which it was recommended that the valves be replaced with butterfly valves and hydraulically actuated from the deck above the weir. The cost estimates at the time were significant (approx. $400k which included installed screens upstream). SunWater advised that there was a project in this financial year looking at decommissioning options however based on the IAC's advice the scope of this work would now be amended to look at replacing the valves when the opportunity arises.

Agenda Item 11 – General Business

At the previous meeting in which water pricing was discussed SunWater undertook to provide the IAC with the R&E program out to 2053. SunWater advised it will send this out to the IAC members.

Post Meeting Note: The R&E program out to 2053 was emailed to the IAC on 3 January 2019.

Water Account Reconciliation - December 2017

	From Orion								From SAP									
									Buckinbah			Moolabah		JTW		Beardmore Dam	
Date	Con SV	Total Water Acc vol	Rec	change vol	tot rel vol	evap and seep	total inflow	tot dis loss vol	El	Vol	Vol rel	El	Vol	El	Vol	El	Vol
1/12/2017	63574.058	63577.405	-3.347	-493.45	339.17	237.32677	83.04677	47.6	198.25	4759	96	201.54	2856	193.16	7847	205.88	54134
2/12/2017	63426.916	62408.967	1017.949	-147.142	982.17	236.038318	1071.066318	30.2	198.34	4930	78	201.4	2690	193.4	8480	205.82	53094
3/12/2017	63506.72	61328.525	2178.195	79.804	836.17	234.631082	1150.605082	21	198.44	5120	52	201.17	2437	193.77	9523	205.77	52227
4/12/2017	63506.732			0.012	77.17	234.289697	311.471697	15.2	198.43	5101	100	201.19	2459	193.86	9789	205.76	52054
5/12/2017	63240.436			-266.296	325.17	233.542529	292.416529	24.8	198.37	4987	123	201.28	2558	193.84	9729	205.74	51722
6/12/2017	62593.585			-646.851	352.17	231.425484	0	30.2	198.3	4854	118	201.31	2591	193.78	9552	205.72	51406
7/12/2017	61961.315			-632.27	393.17	229.271803	0	38.4	198.23	4721	168	201.29	2569	193.73	9408	205.7	51089
8/12/2017	61309.3			-652.015	470.17	226.866624	45.021624	45.8	198.22	4702	204	201.31	2591	193.72	9379	205.66	50455
9/12/2017	60660.838			-648.462	495.17	224.473932	71.181932	50.8	198.25	4759	258	201.31	2591	193.7	9322	205.62	49821
10/12/2017	60208.45			-452.388	549.17	222.786406	319.568406	61.6	198.24	4740	296	201.29	2569	193.69	9293	205.59	49346
11/12/2017	59531.679	57842.541	1689.138	-676.771	571.17	220.225394	114.624394	66	198.22	4702	384	201.28	2558	193.68	9264	205.56	48871
12/12/2017	58875.266	55175.414	3699.852	-656.413	650.17	217.723723	211.480723	81.8	198.28	4816	406	201.33	2613	193.68	9264	205.5	47920
13/12/2017	58007.445			-867.821	765.17	214.502645	111.851645	86	198.37	4987	432	201.38	2668	193.65	9178	205.44	47053
14/12/2017	57162.628			-844.817	734.17	211.45711	100.81011	104.6	198.42	5082	505	201.42	2712	193.7	9322	205.37	46042
15/12/2017	56166.831			-995.797	655.17	207.848102	0	114	198.45	5120	459	201.45	2745	193.7	9322	205.3	45031
16/12/2017	55534.666			-632.165	584.17	205.523626	157.528626	99.8	198.38	5006	632	201.48	2778	193.7	9322	205.26	44453
17/12/2017	54687.686	51037.17	3650.516	-846.98	774.17	202.54837	129.73837	137.8	198.26	4778	602	201.49	2789	193.66	9207	205.23	44044
18/12/2017	53726.321			-961.365	726.17	199.314494	0	128.2	198.23	4721	653	201.47	2767	193.63	9120	205.17	43249
19/12/2017	52820.104			-906.217	843.801579	196.086089	133.670668	141.2	198.36	4968	929	201.4	2690	193.59	9006	205.08	42058
20/12/2017	51533.95	47915.852	3618.098	-1286.154	1107.801579	191.80267	13.450249	194	198.46	5120	740	201.38	2668	193.54	8868	204.97	40634
21/12/2017	49437.277	45993.575	3443.702	-2096.673	1683.801579	185.122327	0	154	198.47	5120	762	201.48	2778	193.27	8135	204.86	39296
22/12/2017	47766.732			-1670.545	1771.17	179.925382	280.550382	160	198.49	5120	742	201.44	2734	193.08	7644	204.76	38079
23/12/2017	46174.533	42444.588	3729.945	-1592.199	1635.17	174.658982	217.629982	158.8	198.5	5120	717	201.44	2734	193.04	7542	204.63	36613
24/12/2017	45015.944			-1158.589	1306.17	170.431291	318.012291	158.6	198.48	5120	512	201.45	2745	193.17	7873	204.49	35053
25/12/2017	44379.009			-636.935	727.17	167.864191	258.099191	115	198.47	5120	346	201.35	2635	193.41	8508	204.38	33915
26/12/2017	44013.095			-365.914	378.17	166.500403	178.756403	74.2	198.48	5120	478	201.35	2635	193.47	8674	204.33	33397
27/12/2017	43573.486			-439.609	504.17	165.054881	229.615881	100.6	198.43	5101	613	201.36	2646	193.46	8646	204.29	32983
28/12/2017	42800.596			-772.89	691.801579	162.45713	81.368709	127.6	198.38	5006	620	201.3	2580	193.44	8591	204.23	32379
29/12/2017	41951.467	36635.792	5315.675	-849.129	728.801579	159.557933	39.230512	125.2	198.37	4987	631	201.29	2569	193.42	8535	204.15	31615
30/12/2017	41243.797	35982.111	5261.686	-707.67	733.801579	157.281547	183.413126	126.2	198.38	5006	512	201.32	2602	193.4	8480	204.07	30852
31/12/2017	40338.132			-905.665	589.801579	154.462226	0	107.2	198.42	5082	598	201.33	2613	193.38	8427	203.97	29919
1/01/2018	39616.489			-721.643	675.801579	142.907002	97.065581	124.4	198.45	5120	624	201.33	2613	193.35	8347	203.9	29300
2/01/2018	38672.633			-943.856	649.17	140.350901	0	129.6	198.45	5120	723	201.34	2624	193.33	8294	203.79	28328
3/01/2018	37598.659			-1073.974	748.17	137.463163	0	149.4	198.46	5120	627	201.33	2613	193.3	8215	203.68	27398
4/01/2018	36460.321			-1138.338	760.380526	134.436034	0	135	198.54	5120	528	201.39	2679	193.27	8135	203.55	26327
5/01/2018	35569.905	28059.275	7510.63	-890.416	663.380526	132.179626	0	115.6	198.54	5120	582	201.46	2756	193.18	7898	203.46	25607
							Total	6201.275201									

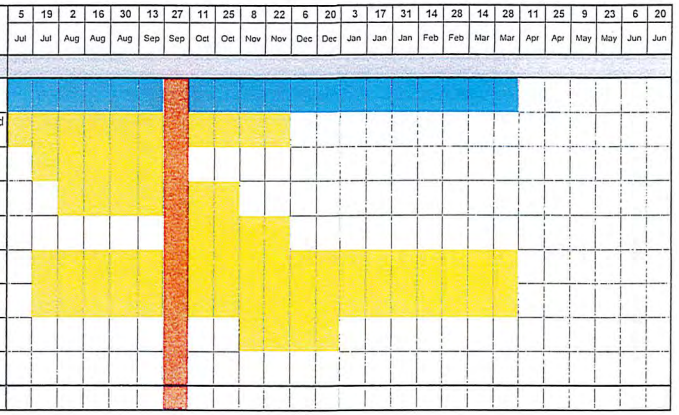
Can see reconciliation volume increasing throughout the month

Total inflows are the difference between the change in conceptual storage volume and the total volume released plus the evaporation and seepage. These inflows were not passed onto customers during daily reconcilations as they were not true inflows based on inflow derivation spreadsheet - see Beardmore Dam Log sheet

Max vol shown only goes to 5120 ML. Releases being made, but volume not decreasing.

Coloured cells are where the EL is > FSL

Functional Location	Functional Location Description	Description	18/19 Budget ($)	Actuals	Left to spend (overspent)	Status	Comments
IBS - St George Water Supply							
BAL-BAR-BMD-OWK-001	OUTLET WORKS - IRRIGATION	Install a Filter Zone between Thuraggi Inlet and Outlet - Beardmore Dam	1,338,648.00	$ 43,613.00	1,295,035.00	05-WIP	
BAL-BAR-BMD-SFC-REC	RECREATION AREA FACILITIES	Beardmore Dam : Upgrade Recreation Facilities - (as per new SW guidelines)	56,893.00	$ 708.00	56,185.00	05-WIP	Received 1 quote and a 2nd quote to be obtained by the end of 30/10/2018.
BAL-BAR-BMD-OWK-001-ILS-GTE-001	ARMCO GATE-N/E	Beardmore Dam : Replace Rotork on N/E Armco Gate - Irrigation Outlet	19,704.00	$ -	19,704.00	05-WIP	
BAL-BALO	BALONNE RIVER	Replace River Meters - St George (as per 2015 Strategy)	12,902.00	$ -	12,902.00	03-RELEASED	Work completed 11/10/2018. Project to be closed after being good receipted
BAL-BAR-JTW-OWS	OUTLET WORKS	Jack Taylor Weir: Study Options for Concrete/Infill both Open Redundant Valve Boxes - (precaution to potential	18,426.00	$ 2,978.00	15,448.00	04-SCOPING	JK has adviced that it would be predent to keep the release option. As a result 50% of the option
BAL-BAR-BMD-SPW-CRG-STR	CRANE STRUCTURE	Beardmore Dam: -Inspect Cranes - 3rd Party	66,930.00	$ 3,815.00	63,115.00	04-SCOPING	Quote received and PO to be raised by 11/10/2018.
BAL-BAR-BMD-SPW-STS-SPA	SPILLWAY APRON	Beardmore Dam: Repair Concrete on Spillway, Causeway & Downstream Face - (Dam Safety 5 Yearly Report 2017)	55,037.00	$ 3,256.00	51,781.00	04-SCOPING	RFQ completed and released to the market with a closing date of 19/10/2018.
BAL-BAR-BMD-SPW-GTE	SPILLWAY GATES	Beardmore Dam: Apply Pressure Penetrating Lubricant to Wire Ropes - Spillway Gates - (2017 Dam Safety Rec 6.2.10)	16,822.00	$ 472.00	16,350.00	04-SCOPING	RFQ released and quote to be provided by 12/10/2018.
BAL	ST GEORGE SUPPLY	Unplanned Capital Replacements - IBS - St George Supply (Contingency - only to be accessed with CEO approval)	11,988.00	$ -	11,988.00	03-RELEASED	
		Sub - Total	$ 1,597,350.00	$ 54,842.00	1,542,508.00		



Thuraggi Outlet Channel

Seepage Reduction Project

Execution Stage

Project Objective

To reduce the seepage through the left embankment of Beardmore Dam at and adjacent to the Thuraggi Outlet to ensure an acceptable factor of safety is maintained for embankment stability

Project Needs Analysis
(Why are we undertaking the Project?)

If seepage is allowed to continue with consequent loss of material near the channel bed the stability of the embankment becomes compromised.

Recent Project Background

Comprehensive Risk Assessment (final revision) delivered Jan 2018

- The critical potential failure mode is backward erosion piping through the foundation of the embankment.
- Evidence for an active backward erosion piping process below the structure
- Thuraggi outlet structure plots within the unacceptable risk region of the ANCOLD limit of tolerability for existing dams

Project Scope Determination

Detailed Options Analysis (final revision) delivered April '18

- Option 1 - Extend outlet culvert downstream
- Option 2 - Construct upstream clay blanket
- Option 3 - Construct sheet piling cut off
- Option 4 - Do nothing

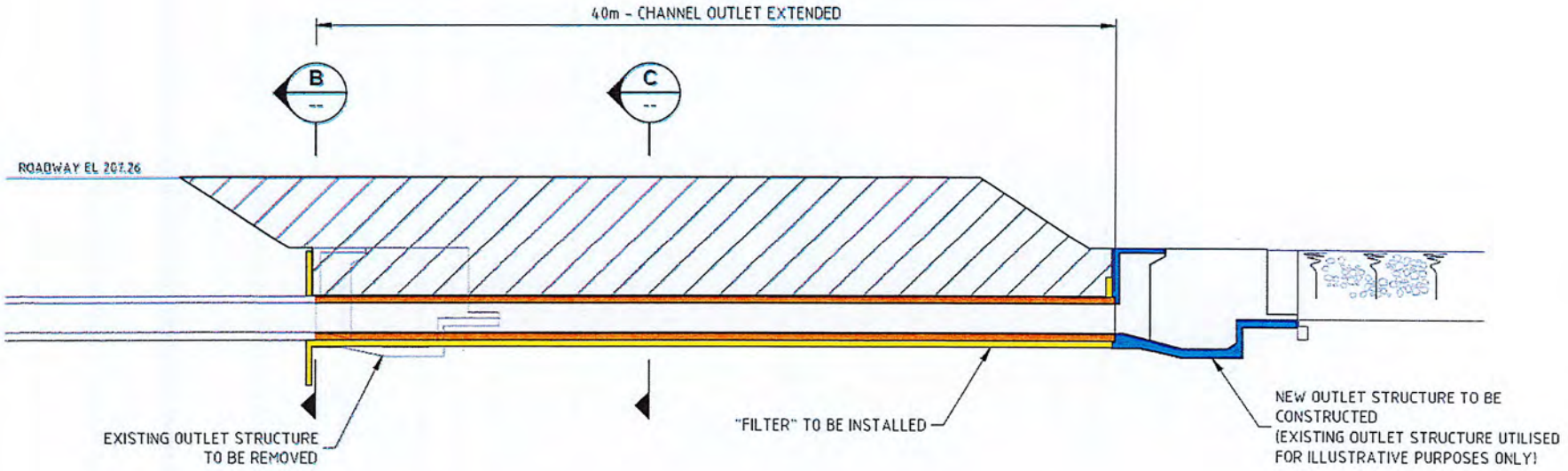
Recommended Option – Option 1.

- Estimated to reduce the annual probability of failure of the outlet structure to 1.6 x 10-6.
- The societal risk F-N plot for Option 1 plots more than two orders of magnitude below the limit of tolerability.

Project Scope Statement

Design and Construction of a Filter Zone and extended channel between Thuraggi Inlet and Outlet at Beardmore Dam.

Works include constructing an under filter, base slab and placing box culvert sections or similar for an additional distance of 40m downstream of the existing downstream headwall.



PROPOSED ARRANGEMENT

SECTION

Project Schedule

Activity	Delivery Date
Develop Project Delivery Model, Project Scope, Procurement Plan and Contract Conditions	15 Oct 2018
Obtain Project Approvals for Request for Offer (RFO) release	18 Oct 2018
Request for Offer release to market	19 Oct 2018
Site Visit	24 & 31 Oct 2018
RFO Closing	9 No. 2018
Evaluation Complete	14 Nov. 2018
Contract Negotiation and Award	20 Nov. 2018
Preliminary Design Complete	11 Dec. 2018
Detail Design Complete	11 Jan 2019
Construction Commence	15 Jan. 2019
Anticipated Construction Completion	12 March 2019

Project Constraints

Suitability of design

Project delivery model

Project Schedule

Window of opportunity for construction

- Storage level is required to be below (5%) for construction to commence.
- If water level raises above 15% construction must cease.
- Might require off-site storage of irrigation water.

Project cost

Key Decision Gates

The project constraints, importance of adequate design, narrow window of opportunity, storage level and overall cost are all key factors in project decision gates that have been introduced:

Decision Gate 1: Receipt of Tenders

Decision Gate 2: Preliminary Design

Decision Gate 3: Detail Design

Decision Gate 4: Construction readiness

Decision Gate 5: Weather events during construction

Project Cost

Total cost to FY 17/18:		$874,315
Total forecast cost for FY 18/19:		$1,338,648
	Design Cost: $304,648	
	Construction Cost: $1,034,000	
Total Forecast Project Cost:		$2,212,963

Operations Financial P&L Snapshot - September

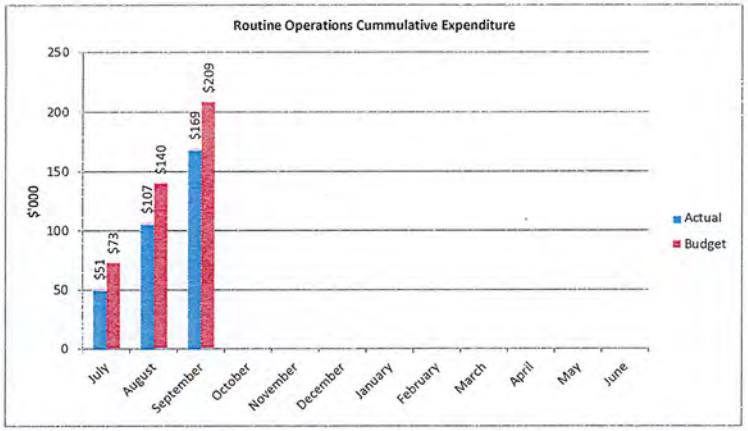
Mth-Yr: Sep-2018 | Bus Unit: South | Region: St George | Srv Ctrct: St George Supply

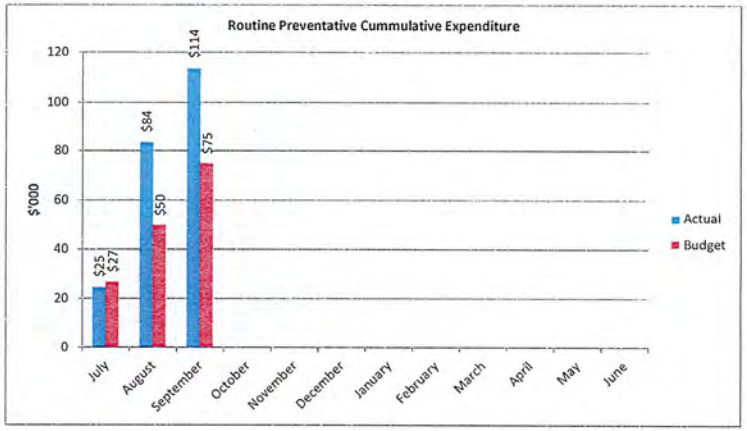
Financial P&L	Actual $'000s	Sep-18 Budget $'000s	Variance $'000s	Actual $'000s	YTD Budget $'000s	Variance $'000s	FY Forecast $'000s	FY Budget $'000s
Revenue								
External Contracts	0	0	0	0	0	0	0	0
Distribution	0	0	0	0	0	0	0	0
Bulk Water	141	169	(28)	427	507	(80)	1,964	2,044
Commercial Pipelines	0	0	0	0	0	0	0	0
Other Revenue	0	0	0	0	0	0	0	0
Operating Revenue	141	169	(28)	427	507	(80)	1,964	2,044
Expenses								
Salaries	0	0	0	0	0	0	0	0
Salaries O/T	0	0	0	0	0	0	0	0
Other Employee Costs	0	0	0	0	0	0	0	0
Contractors - Consultants	0	0	0	0	0	0	0	0
Contractors - Others	1	22	21	9	57	48	800	849
Electricity - Incl RC	0	1	0	1	2	1	5	6
Materials	1	7	6	2	19	17	111	128
Plant Equip & Vehicles	3	2	(2)	11	5	(6)	28	22
Capitalised Costs	0	(5)	(5)	0	(13)	(13)	(1,341)	(1,354)
Labour & OH Recovery	80	67	(13)	227	190	(37)	1,237	1,200
Service Charges	24	28	4	54	83	29	417	446
Depreciation	5	0	(5)	15	0	(15)	83	68
Other Expenses	10	13	4	35	40	5	168	174
Operating Expenses	125	134	10	354	384	30	1,510	1,539
Operating Profit	17	35	(18)	73	123	(50)	454	504

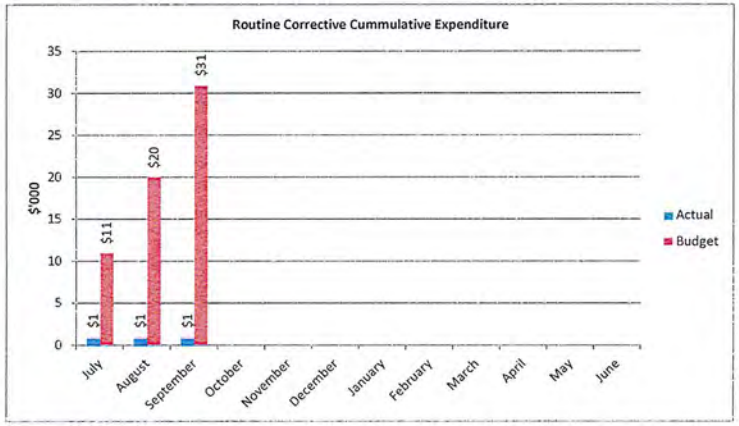
Key Indicators	Actual $'000s	Sep-18 Budget $'000s	Variance $'000s	Actual $'000s	YTD Budget $'000s	Variance $'000s	FY Forecast $'000s	FY Budget $'000s
Usage (ML)	1,364	5,487	(4,123)	4,989	16,460	(11,470)	66,579	78,049
Labour Billing Rate (%)	0	0	0	0	0	0	0	0
Labour Capacity (%)	0	0	0	0	0	0	0	0
Routine								
Operations	62	69	8	169	209	40	778	818
Preventative	30	24	(6)	114	75	(39)	327	288
Corrective	0	10	10	1	31	30	91	121
Other Routine	0	0	0	0	0	0	0	0
Total Routine (Excl. Electricity)	92	104	12	284	314	31	1,196	1,227
Electricity (Activity 08)	0	1	0	0	2	1	5	6
Non Routine								
Operations	0	0	0	0	0	0	0	10
Preventative	0	0	0	0	0	0	0	0
Corrective	0	0	0	0	0	0	0	0
R&E (Activity 04)	27	35	8	55	80	25	1,557	1,582
Other Non Routine	0	0	0	0	0	0	0	0
Total Non-Routine	27	35	8	55	80	25	1,567	1,592

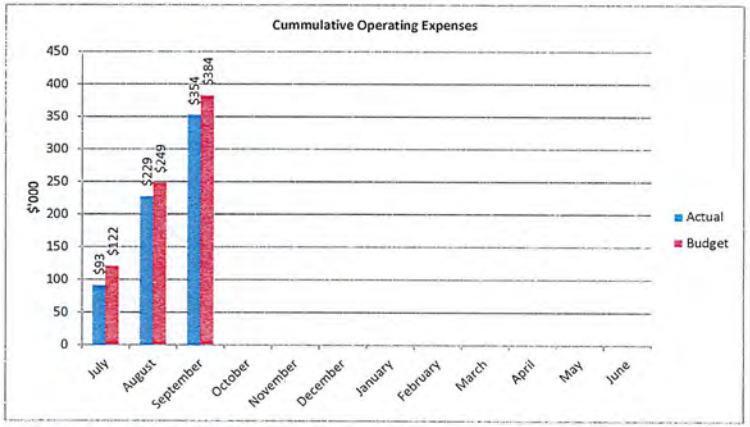
Unfavourable to Budget (>=5% of budget)

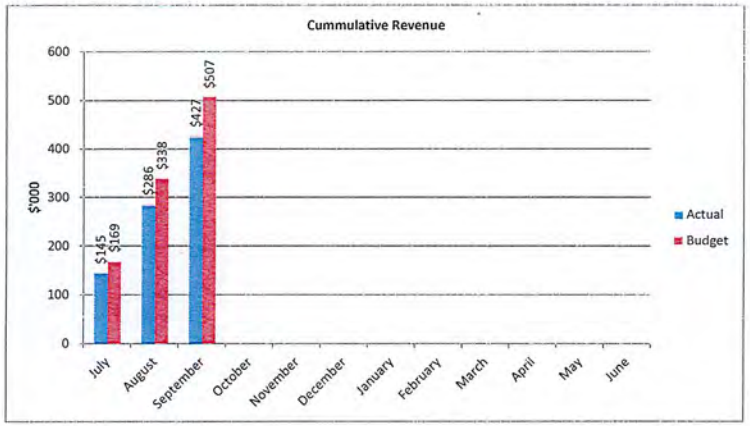
St George Bulk Supply Routine and Non-Routine Budget, Expenses, Revenue and Profit/Loss

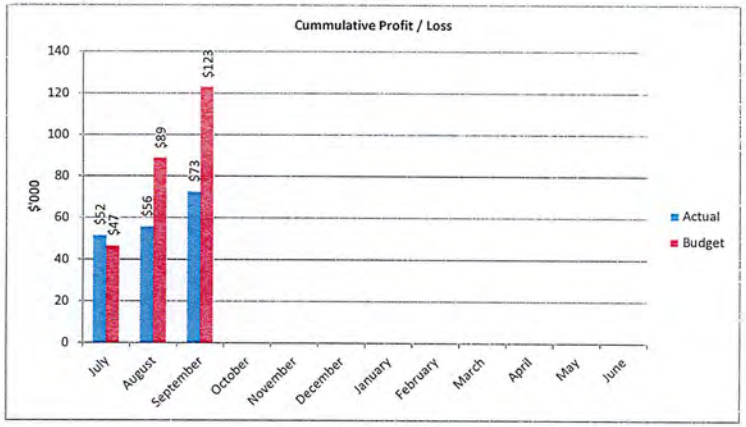












FY	Functional Location	Description	Cost	Comments
2020	BAL-BAR-BMD	16BAL12 - Beardmore Dam - Thuraggi Channel Repair (Contingency)	$ 300,000.00	
2020	BAL-BAR-BMD-OWK-002	Investigate: Ensure filling line has been properly decommissioned (Underwater work) - DS Rec 2017/Notes (Tier 1) NRMID HB#2342334	$ 13,026.00	Don't belive this has been decommissioned
2020	BAL-BALO	Replacement of St George River meters - 2015 IBS Strategy ($25,324/yr) (Tier 1)	$ 25,220.00	
2020	BAL-BAR-BMD-OWK-001-FMR-001	14SGA13 - Enhance: Design, construct and install Meter installation and meters to record flow in Thuraggi Channel	$ 177,133.00	Possibly be done in conjunction with thurragi outlet work in 18-19
		Supply and install 6km of exclusion fence to keep kangaroos of abutments and prevent erosion issues	$ 75,000.00	
			$ 590,379.00	
2021	BAL-BAR-BMD-SPW	Carry Out 10Y Inspection on Flood Gate Winch Mechanisms (pending 2019 Crane Audit outcomes) (Tier 1)	$ 29,167.00	
2021	BAL-BAR-BMD-SPW-CRG-STR	Study: Inspections - Carry Out Regulatory 10 Crane Certification (Field Engineers report pending) (Tier 1)	$ 28,135.00	
2021	BAL-BAR-BMD-SPW-GTE-GTV-002-HOI	Xray examination of winch ropes (5 year dam safety report) (Tier 2) (HB# 2342559 NRMIP)	$ 12,381.00	
2021	BAL-BAR-BMD-SPW-GTE-GTV-003-HOI	Xray examination of winch ropes (5 year dam safety report)(Tier 2) (HB# 2342559 NRMIP)	$ 12,381.00	
2021	BAL-BAR-BMD-SPW-GTE-GTV-012-HOI	Xray examination of winch ropes (5 year dam safety report) (Tier 2) (HB# 2342559 NRMIP)	$ 12,381.00	
2021	BAL-BALO	Replacement of St George River meters - 2015 IBS Strategy ($25,324/yr) (Tier 1)	$ 25,220.00	
2021	BAL-BAR-JTW-SPW-GTE-GTV-004-HOI	Xray examination of winch ropes (Tier 2) (HB# 2342559 NRMIP)	$ 12,381.00	
2021	BAL-BAR-JTW-SPW-GTE-GTV-007-HOI	Xray examination of winch ropes (Tier 2) (HB# 2342559 NRMIP)	$ 12,381.00	
2021	BAL-BAR-JTW-SPW-GTE-GTV-010-HOI	Xray examination of winch ropes (Tier 2) (HB# 2342559 NRMIP)	$ 12,381.00	
2021	BAL-BAR-JTW-SPW-GTE-GTV-013-HOI	Xray examination of winch ropes (Tier 2) (HB# 2342559 NRMIP)	$ 12,381.00	
2021	BAL-BAR-JTW-CRN	Study: 10 year crane inspection (pending outcome of Field Engineers audit in 2019) (Tier 1)	$ 20,984.00	
2021	BAL-BAR-GSN-422215A-LVL	Refurbish Gauging Station equipment - Warroo Stn # 422215A (Balonne River) (Tier 2)	$ 10,185.00	
		Replace 2 x 450 valves at JTW, hydraulically actuate and install fixed screens on inlets	$ 400,000.00	IAC advice required on replace or decommission
			$ 600,358.00	
2022	BAL-BAR-BMD	Study: 20yr Dam Safety Review (by 1 Dec 2022) (Tier 2)	$ 352,043.00	
2022	BAL-BAR-BMD-OWK-002-ILS-GTB	Refurbish: Full paint, and new seals (Tier 1)	$ 16,808.00	
2022	BAL-BAR-BMD-SPW-STS-SPA	Refurbish: Jet Blast 59 Foundation Drains in the Gallery every 5 years - Dam Safety requirement (Scope HB# 1165549 - 2012) (Tier 2)	$ 34,405.00	
2022	BAL-BALO	Replacement of St George River meters - 2015 IBS Strategy ($25,324/yr) (Tier 1)	$ 25,220.00	
2022	BAL-BAR-JTW	Study: WEIR PROGRAM - 5yr Dam Comprehensive Inspection; Gate operation; Outlet Works/ Conduit inspection (Tier 1)	$ 41,921.00	
			$ 470,397.00	
2023	BAL-BAR-BMD	Study: Comprehensive Risk Assessment (CRA) update - (June 2009 last Occurrence) (Tier 2)	$ 202,720.00	
2023	BAL-BAR-BMD	Study: 5yr Dam Comprehensive Inspection (by 1 Dec 2017)	$ 107,410.00	
2023	BAL-BAR-BMD-SPW-GTE-GTV-002-HOI	Refurbish Hoisting Mechanism - Beardmore Dam Gate 2 (Tier 2)	$ 14,280.00	
2023	BAL-BAR-BMD-SPW-GTE-GTV-003-HOI	Refurbish Hoisting Mechanism - Beardmore Dam Gate 3 (Tier 2)	$ 14,280.00	
2023	BAL-BAR-BMD-SPW-GTE-GTV-004-HOI	Refurbish Hoisting Mechanism - Beardmore Dam Gate 4 (Tier 2)	$ 14,280.00	
2023	BAL-BAR-BMD-SPW-GTE-GTV-005-HOI	Refurbish Hoisting Mechanism - Beardmore Dam Gate 5 (Tier 2)	$ 14,280.00	
2023	BAL-BAR-BMD-SPW-GTE-GTV-006-HOI	Refurbish Hoisting Mechanism - Beardmore Dam Gate 6 (Tier 2)	$ 14,280.00	
2023	BAL-BALO	Replacement of St George River meters - 2015 IBS Strategy ($25,324/yr) (Tier 1)	$ 25,220.00	
2023	BAL-BAR-JTW-SPW-GTE-GTV-004-HOI	Refurb of hoist mechanisms on gates (Tier 2)	$ 14,411.00	
2023	BAL-BAR-JTW-SPW-GTE-GTV-005-HOI	Refurb of hoist mechanisms on gates	$ 14,411.00	
2023	BAL-BAR-JTW-SPW-GTE-GTV-006-HOI	Refurb of hoist mechanisms on gates	$ 14,411.00	
2023	BAL-BAR-JTW-SPW-GTE-GTV-007-HOI	Refurb of hoist mechanisms on gates (Tier 2)	$ 14,411.00	
2023	BAL-BAR-JTW-SPW-GTE-GTV-010-HOI	Refurb of hoist mechanisms on gates (Tier 2)	$ 14,903.00	
			$ 479,297.00	
2024	BAL-BAR-BMD-SFC-RDD-001	Refurbish: Reseal / Maintain road that turns off to Sunwater Houses/Office (Tier 1)	$ 8,803.00	
2024	BAL-BAR-BMD-SPW-GTE-GTV-010-HOI	Refurbish Hoisting Mechanism - Beardmore Dam Gate 10 (Tier 2)	$ 14,280.00	
2024	BAL-BAR-BMD-SPW-GTE-GTV-011-HOI	Refurbish Hoisting Mechanism - Beardmore Dam Gate 11 (Tier 2)	$ 14,280.00	
2024	BAL-BAR-BMD-SPW-GTE-GTV-012-HOI	Refurbish Hoisting Mechanism - Beardmore Dam Gate 12 (Tier 2)	$ 14,280.00	
2024	BAL-BAR-BMD-EMB-EML-001	Refurbish: Import appropriate material and regrade the road, removing ruts on left bank. Refer notes - 2012 recommendation (Tier 1)	$ 8,078.00	
2024	BAL-BAR-BMD-EMB-EMR	Refurbishment: Periodic restocking of embankment materials / filling in scours / major regrassing and establishment (Tier 1)	$ 10,084.00	Why stockpile. Can't material been procured when required
2024	BAL-BALO	Replacement of St George River meters - 2015 IBS Strategy ($25,324/yr) (Tier 1)	$ 25,220.00	
2024	BAL-BAR-JTW-SPW-GTE-GTB	Refurbish: Replacement rubbers for the seals on the gate. Will only be carried out just before gate needed (Tier 1)	$ 10,522.00	If this is bulkhead gate then not required. Will never be used.
2024	BAL-BAR-JTW-SPW-GTE-GTV-001-HOI	Refurbish winch (Streategy always on Gate 1) (Tier 2)	$ 14,228.00	
2024	BAL-BAR-JTW-SPW-GTE-GTV-002-HOI	Refurbish winch (Tier 2)	$ 14,228.00	
2024	BAL-BAR-JTW-SPW-GTE-GTV-003-HOI	Refurb of hoist mechanisms on gates (Tier 2)	$ 14,411.00	
2024	BAL-BAR-BMD-EMB-EML-002	Refurbishment: Periodic restocking of embankment materials / filling in scours / major regrassing and establishment (Tier 1)	$ 10,084.00	Why stockpile. Can't material been procured when required
			$ 158,498.00	

New project added