Utilities Assets Overview



- Water Hydrants 2470
- Water Treatment Plants 1
- Water Pump Stations 9
- Water Valves 1615



Water Mains – 1740 (250km)

Dam Weirs – 1

Water Reservoirs – 15



- Water Reuse Access Points 7
- Water Reuse Pump Stations 3
- Water Reuse Valves 163
 - Water Reuse Mains 91 (26km)



- Water Reuse Filling Stations 4
 - Irrigation Systems 20

Sewer Treatment Plants – 4 Sewer Pump Stations – 87 Sewer Rising Mains – 164 (73km) Sewer Rising Main Valves – 214 Sewer Gravity Mains – 5187 (195km) Sewer Gravity Main Valves - 3 Sewer Gravity Manholes – 3991 SEWER Vacuum Sewer Mains – 174 (7km) Vacuum Sewer Valves – 20 Vacuum Sewer Pods – 84 Pressure Sewer Mains – 602 (11km) Pressure Sewer Boundary Kits – 252 Buildings – 29 Shelters - 9

Data Collection, Preparation and Calculation

Consequence of Failure

- Environmental Impact
- Customer Load / Capacity
- Customer Type
- Regulatory
- BSC Reputation





Component Criticality

- Health & Safety
- Functional Significance
- Impact of Failure
- Redundancy
- Spare Parts Availability
- Lead Time of Repair
- Historical Failure





Predictive modelling of Utilities Assets

2022 - MAINTAIN - Budget to maintain + 2.5% Inflation

- Optimise available funding to extend asset life and improve levels of service.
- Apply condition based life cycle degradation profiles to accurately model future asset conditions.
- Produce prioritised long term capital work and financial plans.
- Drive capital investment in regards to agreed levels of service.



2022 - MAINTAIN - Budget to maintain + 2.5% Inflation Service State by Year

Asset Name	Unique Asset ID	0	1	2	3	4	5	6	7	8	9	10	11	12
SPS1002 Raftons Road Behind	(Rising Main)													
5&7 Palm Tree Crs	SPS1002 Raftons Road Behind 5&7 Palm Tree Crs Covers and Frames and Grills (Valve Pit)	4.00	0.00	0.00	1.00	1.00	2.00	2.00	2.00	2.00	3.00	3.00	3.00	0.00
	SPS1002 Raftons Road Behind 5&7 Palm Tree Crs Covers and Frames and Grills (Wet Well)	4.00	0.00	0.00	1.00	1.00	2.00	2.00	2.00	3.00	3.00	3.00	3.00	3.00
	SPS1002 Raftons Road Behind 5&7 Palm Tree Crs Guide Rails and Brackets and Lifting Chains	2.00	2.00	2.00	3.00	3.00	3.00	3.00	3.00	4.00	4.00	4.00	4.00	4.00
	SPS1002 Raftons Road Behind 5&7 Palm Tree Crs Instrumentation	4.00	4.00	5.00	0.00	0.00	1.00	1.00	2.00	2.00	3.00	3.00	3.00	4.00

Predictive Modelling – Compare budgeting scenarios

Predictor

• Create scenarios to clearly demonstrate the impact of increased, static or decreased funding to ultimately make better informed decisions.



Simulation
2022 - CURRENT - Current budgets + 2.5% Inflation
2022 - IMPROVE - \$1.2m p.a + 2.5% Inflation
2022 - MAINTAIN - Budget to maintain + 2....

Service	State Service Criteria OSI	\sim		
			YE	•
Year	2022 - CURRENT - Current budgets + 2.5% Inflation	2022 - IMPROVE - \$1.2m p.a + 2.5% Inflation	2022 - MAINTAIN - Budget to maintain + 2.5% Inflation	
19	პ./ხ	1.94	2.17	
20	3.80	1.95	2.20	
21	3.91	1.97	2.22	
22	3.99	1.95	2.24	
23	4.06	4.06 1.97		
24	4.11	1.93	2.23	
25	4.18	1.94	2.23	



Simulation

Output: 0 0022 - CURRENT - Current budgets + 2.5% Inflation - 2022 - IMPROVE - \$1.2m p.a + 2.5% Inflation - 2022 - MAINTAIN - Budget to maintain + 2.5% Inflation

Budget and Cost Allocation by Simulation									
Simulation	Budget	Treatment Cost	Maintenance Cost	Operational Cost	User Cost	Total Annual Cost	Surplus		
2022 - CURRENT - Current budgets + 2.5% Inflation	\$176,493.00	\$175,787.50	\$1,063,591.74	\$376,644.45	\$0.00	\$1,616,023.69	\$705.50		
2022 - IMPROVE - \$1.2m p.a + 2.5% Inflation	\$1,200,000.00	\$1,199,762.50	\$917,513.02	\$376,644.45	\$0.00	\$2,493,919.97	\$237.50		
2022 - MAINTAIN - Budget to maintain + 2.5% Inflation	\$1,040,000.00	\$1,039,862.50	\$936,649.97	\$376,644.45	\$0.00	\$2,353,156.92	\$137.50		

Total Backlog								
Year	2022 - CURRENT - Current budgets + 2.5% Inflation	2022 - IMPROVE - \$1.2m p.a + 2.5% Inflation	2022 - MAINTAIN - Budget to maintain + 2.5% Inflation					
0	\$2,645,525.00	\$2,645,525.00	\$2,645,525.00					
1	\$2,469,737.50	\$1,445,762.50	\$1,605,662.50					
2	\$2,718,492.19	\$497,996.25	\$827,892.50					
3	\$2,802,069.41	\$0.00	\$259,530.64					
4	\$2,909,650.78	\$0.00	\$0.00					
5	\$3,284,478.04	\$451,431.88	\$564,572.70					
6	\$4,074,582.82	\$18,555.09	\$333,991.70					
7	\$5,372,859.61	\$0.00	\$298,360.12					
8	\$5,569,319.64	\$308,255.93	\$1,068,539.34					
9	\$6,752,602.08	\$433,355.45	\$1,425,577.08					
10	\$7,504,495.64	\$332,821.98	\$1,434,974.77					
11	\$9,208,224.16	\$860,728.85	\$2,068,504.62					
12	\$10,752,386.15	\$1,172,743.05	\$2,746,262.98					
13	\$11,665,649.72	\$736,124.90	\$2,616,413.96					
14	\$12,631,279.47	\$33,911.37	\$2,054,463.94					
15	\$13,385,171.65	\$0.00	\$1,607,610.96					
16	\$13,725,738.97	\$786,787.98	\$2,072,369.85					
17	¢15 200 001 10	\$701 466 02	\$2.052.902.41					

DIGITAL Asset Management Plan (DAMP)

What does a long term Asset Management Plan (AMP) set to achieve for Council:

- Identifies asset quantities and current conditions.
- Gives consideration to the whole of life costs of the asset.
- Identifies existing levels of service and any potential gaps which may exist.
- Provides information on current and future Capital Work programs.
- Identifies the level of service that will be delivered by the asset and how the service will be monitored.
- Identifies funding needs on a short term and long term basis.
- Provides guidance to develop programs to optimise the asset value and minimise funding commitments.
- Provides the basis for long-term financial planning for assets under the custodianship of council.
- Provides an improvement plan to follow.



Advantages of a Digital Asset Management Plan (DAMP):

- Data continually updated as it comes to hand (paper-based version are out of date as soon as they are adopted)
- Predictor modelling directly feeds into DAMP.
- Graphical Map based outputs.
- User friendly dashboards that show all of Utilities assets at a glance.
- Easily updated and enhanced.



