



**OPERATING COST  
BUDGET ESTIMATE**

**Client:** Gladstone Regional Council  
**Attention:** Farayi Kaisa

**Project:** BITS Clubs & Dennis Park Sports Complex - Detailed Design Irrigation System  
**Description:** Concept Design - Operating Cost Estimates - Summary all sites (new systems)

Date: 2/08/2021  
 By: SJ  
 Client Ref #: 182-21  
 Contact Ph : 07 4975 8466  
 HP Ref #: 15888  
 Stage: CONCEPT  
 Rev: 0

Item	Description	Unit	Qty	Rate	Amount
<b>BITS CLUBS &amp; DENNIS PARK SPORTS COMPLEX - SUMMARY ALL SITES</b>					
1.0	BITS Sports fields (Option 1 or 2)	item	1	\$14,010.00	\$ 14,010.00
2.0	BITS Golf course (Option 1 or 2)	item	1	\$22,350.00	\$ 22,350.00
3.0	Dennis Park Sports fields (Option 1.1 or 1.2)	item	1	\$14,208.00	\$ 14,208.00
	Rates above include allowances for; power cost,				
	GRC operator labour to routine monitor weekly,				
	and quarterly seasonal maintenance checks.				
	Refer individual OM estimate sheets for more details.				
	Draft budget estimates for concept design are subject				
	to review in detailed design & final selection options.				
<b>Total, excluding GST</b>					<b>\$ 50,568.00</b>
GST payable					\$ 5,056.80
<b>Total, including GST</b>					<b>\$ 55,624.80</b>

**Notes:**

A	At concept stage Option 1 & 2 will not vary significantly in OM costs for BITS Sports or Golf course
B	At concept stage Option 1.1 & 1.2 will not vary significantly in OM costs for Dennis Park Sports, but Opt 2 costs would.
C	For concept design and performance data refer dwgs # 15888-100 to 103 (A) BITS Sports,
	# 15888-200 to 212 & 1588-220 to 223 (A) BITS Golf, & #1588-300-303 (A) Dennis Park Sports

**Exclusions, Options, Clarifications, unless otherwise noted:**

i	Recycle water is supplied at no cost to clubs by GRC
ii	Potable water cost is excluded, clubs are responsible for potable water where applicable
iii	Excludes repairs or spare parts, unlikely to be significant costs in 1st 5 years unless damages (assumes all new systems)
iv	No allowance for depreciation, design life for key components varies 10 years to 50 years

Signed:

Scott Johnstone, Principal Consultant



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Client: Gladstone Regional Council  
 Contact: Farayi Kaisa  
 Project: BITS SPORTS FIELDS  
 Project #: HP Ref: 15888  
 Total Irrigated Area(Ha) 3.790

## ANNUAL IRRIGATION OPERATING COSTS

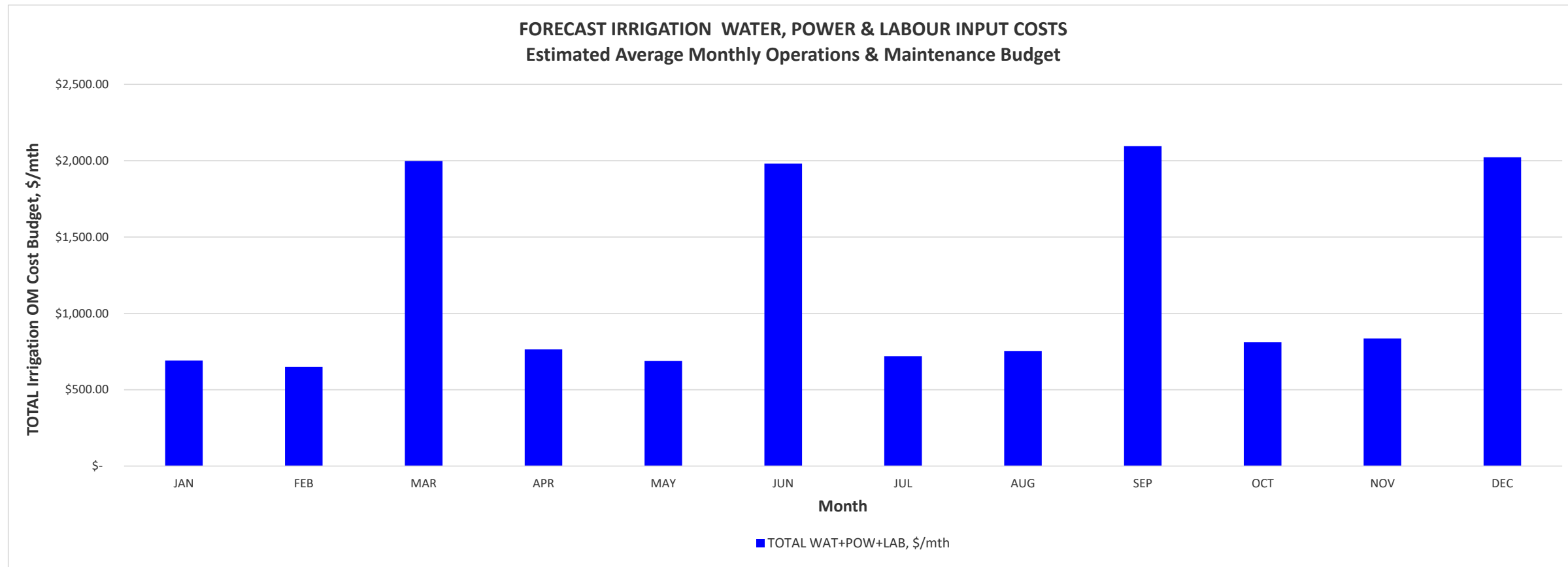


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Weather data, ave rainfall & evaporation:  
 BOM Str/Ref: Gladstone Radar 039123

Date: 3/08/2021  
 By: S. Johnstone  
 DD-OM Sheet 3

### BITS SPORTS FIELDS - SOCCER & AFL-CRICKET



MONTHLY WATER USE AVERAGES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Irrigation water budget, kL/mth*	1189	639	1530	2141	1152	1306	1559	1998	2792	2740	3056	1852	21952
MONTHLY COST ESTIMATES													
Water Use Cost, \$/mth	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Service Cost, \$/qtr	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Power Cost (pump), \$ mth	\$ 91.57	\$ 49.24	\$ 117.80	\$ 164.84	\$ 88.68	\$ 100.59	\$ 120.01	\$ 153.82	\$ 214.95	\$ 210.99	\$ 235.28	\$ 142.57	\$ 1,690.32
Operator labour cost, \$/mth	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 7,200.00
Maintenance cost, \$/mth #	\$ -	\$ -	\$ 1,280.00	\$ -	\$ -	\$ 1,280.00	\$ -	\$ -	\$ 1,280.00	\$ -	\$ -	\$ 1,280.00	\$ 5,120.00
<b>TOTAL WAT+POW+LAB, \$/mth</b>	<b>\$ 691.57</b>	<b>\$ 649.24</b>	<b>\$ 1,997.80</b>	<b>\$ 764.84</b>	<b>\$ 688.68</b>	<b>\$ 1,980.59</b>	<b>\$ 720.01</b>	<b>\$ 753.82</b>	<b>\$ 2,094.95</b>	<b>\$ 810.99</b>	<b>\$ 835.28</b>	<b>\$ 2,022.57</b>	<b>\$ 14,010.32</b>

#### Costs based on:

Recycled Water, \$/kL	\$ -	excludes potable water & services fees
Operator labour (grounds), \$/hr	\$ 50.00	allowance 12 hrs/mth to monitor by GRC OM staff, minor adjustments

Power (pump), \$/kWh	\$ 0.28	Origin Energy rate for Basis Business in QLD, equates to \$0.077/kL on pump efficiency
Maintenance labour (trade), \$/hr	\$ 80.00	Allowance 16 hrs/qtr for trade technician to complete quarterly seasonal service & adjustments # Excludes depreciation, repairs or spare parts, unlikely to be significant costs in first 5 years unless damages

#### Design parameters:

Plant/Soil Type:	Sports Turf, Loam
Comments:	High traffic, optimum growth

#### Key variable factors\*:

Scheduling Coefficient	1.15
Plant factor (optimum growth) ^	0.75

\* Efficiency, Environ & Plant factors may vary

#### Design Duty:

Flow, l/s	9.3
Head, m	70
Pmp+mtr eff %	64%

\* Refer IWMP for Water Use data



Client: Gladstone Regional Council  
 Contact: Farayi Kaisa  
 Project: BITS GOLF (13 HOLES)  
 Project #: HP Ref: 15888  
 Total Irrigated Area(Ha) 11.370

## ANNUAL IRRIGATION OPERATING COSTS

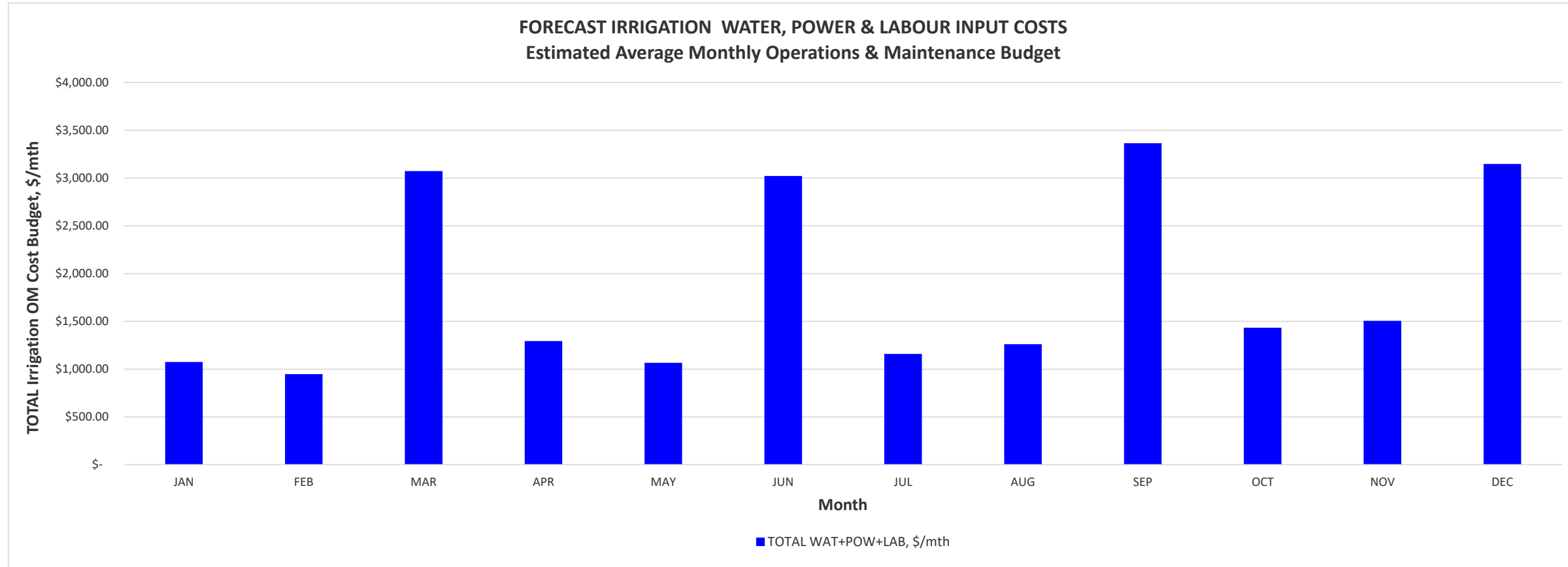


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### BITS GOLF COURSE - 13 HOLES



MONTHLY WATER USE AVERAGES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Irrigation water budget, kL/mth*	3568	1918	4590	6422	3455	3919	4676	5993	8375	8220	9167	5555	65857
MONTHLY COST ESTIMATES													
Water Use Cost, \$/mth	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Service Cost, \$/qtr	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Power Cost (pump), \$ mth	\$ 274.71	\$ 147.71	\$ 353.40	\$ 494.52	\$ 266.05	\$ 301.76	\$ 360.02	\$ 461.45	\$ 644.85	\$ 632.96	\$ 705.83	\$ 427.71	\$ 5,070.97
Operator labour cost, \$/mth	\$ 800.00	\$ 800.00	\$ 800.00	\$ 800.00	\$ 800.00	\$ 800.00	\$ 800.00	\$ 800.00	\$ 800.00	\$ 800.00	\$ 800.00	\$ 800.00	\$ 9,600.00
Maintenance cost, \$/mth #	\$ -	\$ -	\$ 1,920.00	\$ -	\$ -	\$ 1,920.00	\$ -	\$ -	\$ 1,920.00	\$ -	\$ -	\$ 1,920.00	\$ 7,680.00
<b>TOTAL WAT+POW+LAB, \$/mth</b>	<b>\$ 1,074.71</b>	<b>\$ 947.71</b>	<b>\$ 3,073.40</b>	<b>\$ 1,294.52</b>	<b>\$ 1,066.05</b>	<b>\$ 3,021.76</b>	<b>\$ 1,160.02</b>	<b>\$ 1,261.45</b>	<b>\$ 3,364.85</b>	<b>\$ 1,432.96</b>	<b>\$ 1,505.83</b>	<b>\$ 3,147.71</b>	<b>\$ 22,350.97</b>

**Costs based on:**

Recycled Water, \$/kL	\$ -	excludes potable water & services fees
Operator labour (grounds), \$/hr	\$ 50.00	allowance 16 hrs/mth to monitor by GRC OM staff, minor adjustments

Power (pump), \$/kWh	\$ 0.28	Origin Energy rate for Basis Business in QLD, equates to \$0.077/kL on pump efficiency
Maintenance labour (trade), \$/hr	\$ 80.00	Allowance 24 hrs/qtr for trade technician to complete quarterly seasonal service & adjustments # Excludes depreciation, repairs or spare parts, unlikely to be significant costs in first 5 years unless damages

**Design parameters:**

Plant/Soil Type:	Sports Turf, Loam
Comments:	High traffic, optimum growth

\* Refer IWMP for Water Use data

**Key variable factors\*:**

Scheduling Coefficient	1.15
Plant factor (optimum growth) ^	0.75

\* Efficiency, Environ & Plant factors may vary

**Design Duty:**

Flow, l/s	20.2
Head, m	70
Pmp+mtr eff %	64%



Client: Gladstone Regional Council  
 Contact: Farayi Kaisa  
 Project: DENNIS PARK SPORTS  
 Project #: HP Ref: 15888  
 Total Irrigated Area(Ha) 4.235

## ANNUAL IRRIGATION OPERATING COSTS

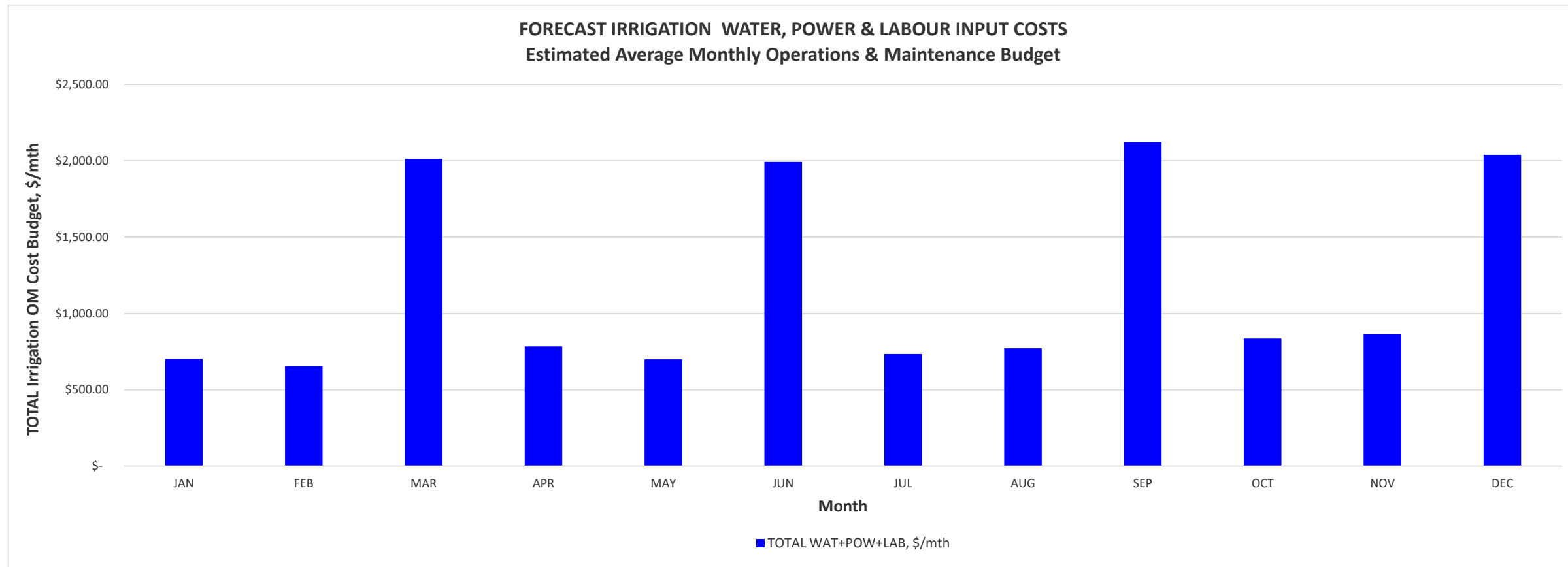


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### DENNIS PARK SPORTS - JUNIOR & SENIOR RUGBY LEAGUE



MONTHLY WATER USE AVERAGES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Irrigation water budget, kL/mth*	1329	715	1709	2392	1287	1460	1742	2232	3119	3062	3414	2069	24530
MONTHLY COST ESTIMATES													
Water Use Cost, \$/mth	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Service Cost, \$/qtr	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Power Cost (pump), \$ mth	\$ 102.32	\$ 55.02	\$ 131.63	\$ 184.20	\$ 99.10	\$ 112.40	\$ 134.10	\$ 171.88	\$ 240.19	\$ 235.76	\$ 262.90	\$ 159.31	\$ 1,888.79
Operator labour cost, \$/mth	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 7,200.00
Maintenance cost, \$/mth #	\$ -	\$ -	\$ 1,280.00	\$ -	\$ -	\$ 1,280.00	\$ -	\$ -	\$ 1,280.00	\$ -	\$ -	\$ 1,280.00	\$ 5,120.00
<b>TOTAL WAT+POW+LAB, \$/mth</b>	<b>\$ 702.32</b>	<b>\$ 655.02</b>	<b>\$ 2,011.63</b>	<b>\$ 784.20</b>	<b>\$ 699.10</b>	<b>\$ 1,992.40</b>	<b>\$ 734.10</b>	<b>\$ 771.88</b>	<b>\$ 2,120.19</b>	<b>\$ 835.76</b>	<b>\$ 862.90</b>	<b>\$ 2,039.31</b>	<b>\$ 14,208.79</b>

**Costs based on:**

Recycled Water, \$/kL	\$ -	excludes potable water & services fees
Operator labour (grounds), \$/hr	\$ 50.00	allowance 12 hrs/mth to monitor by GRC OM staff, minor adjustments

Power (pump), \$/kWh	\$ 0.28	Origin Energy rate for Basis Business in QLD, equates to \$0.077/kL on pump efficiency
Maintenance labour (trade), \$/hr	\$ 80.00	Allowance 16 hrs/qtr for trade technician to complete quarterly seasonal service & adjustments # Excludes depreciation, repairs or spare parts, unlikely to be significant costs in first 5 years unless damages

**Design parameters:**

Plant/Soil Type:	Sports Turf, Loam
Comments:	High traffic, optimum growth

**Key variable factors\*:**

Scheduling Coefficient	1.15
Plant factor (optimum growth) ^	0.75

\* Efficiency, Environ & Plant factors may vary

**Design Duty:**

Flow, l/s	9.8
Head, m	70
Pmp+mtr eff %	64%

\* Refer IWMP for Water Use data

