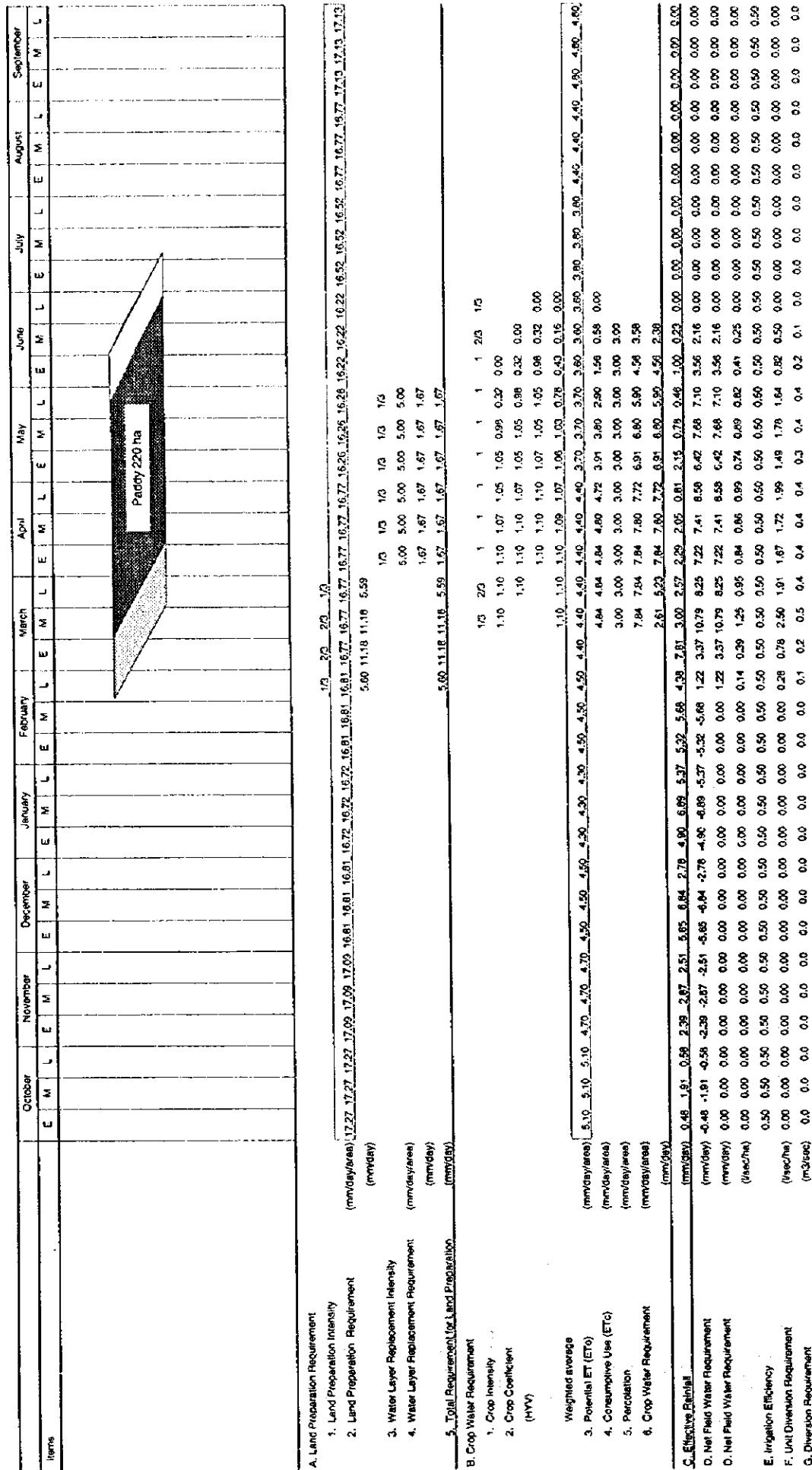


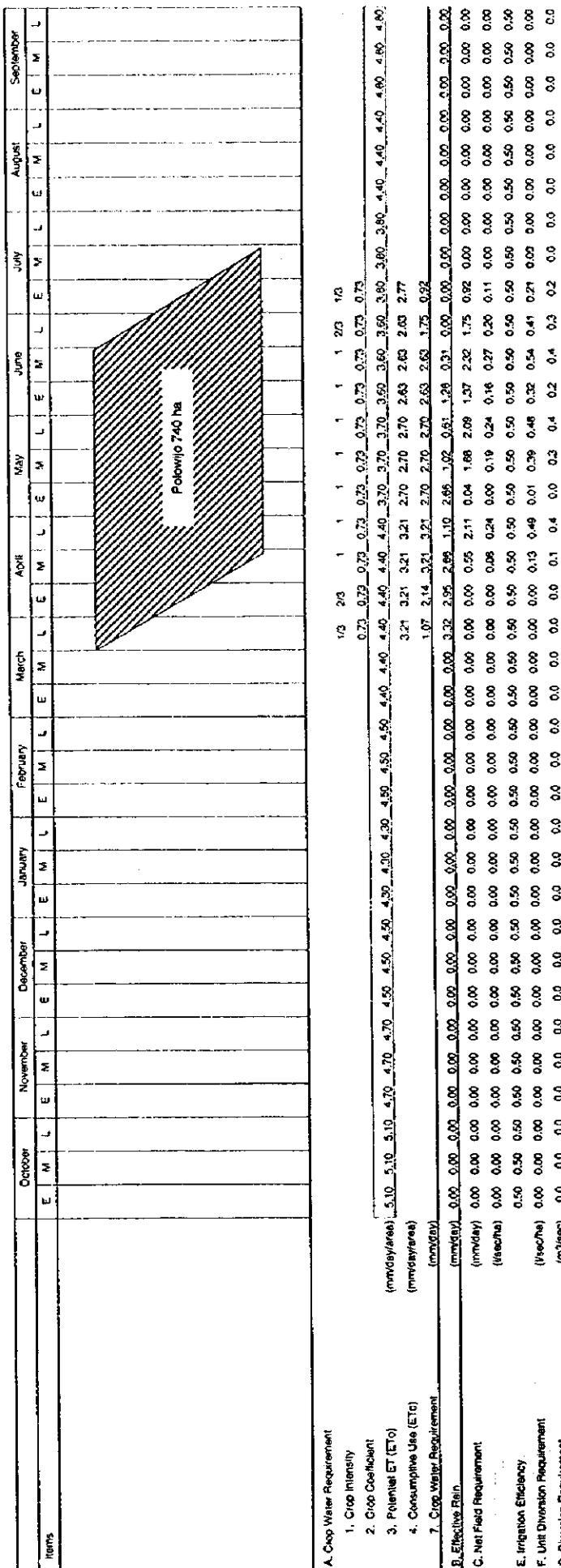
Future Water Requirement for Dry Season Paddy 220ha (Jatimerek-Bunder) Case 1



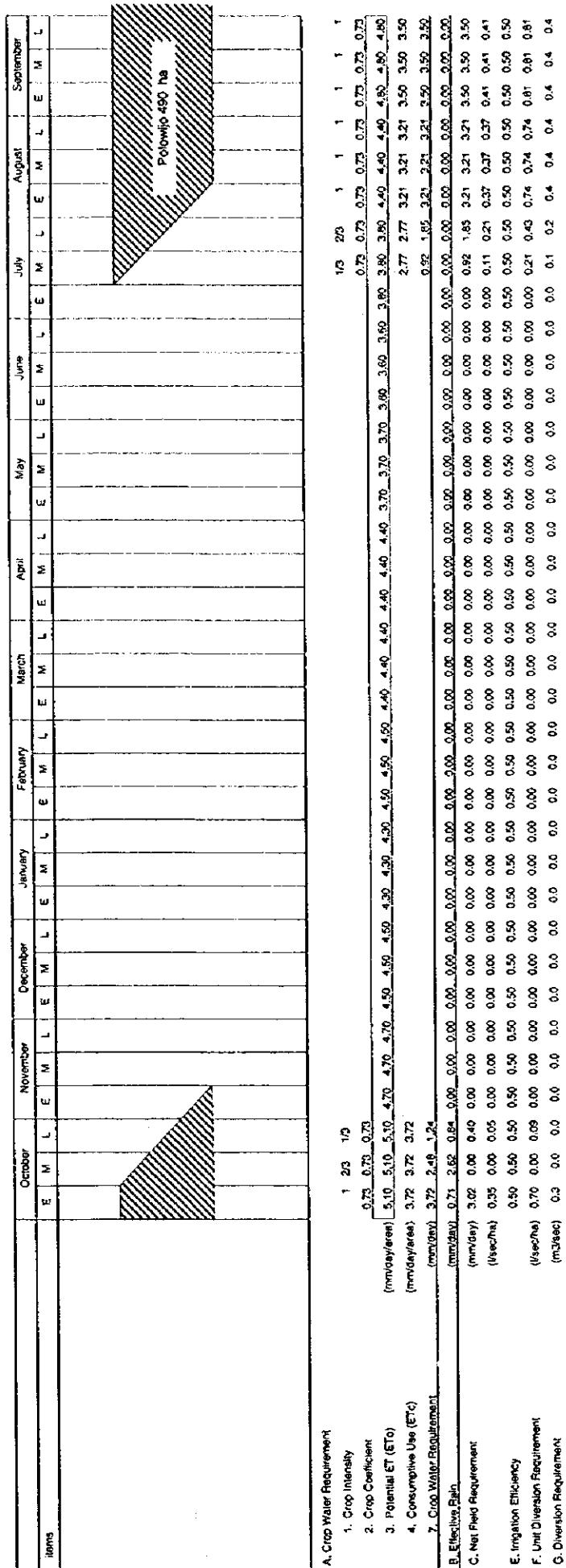
**Future Water Requirement for Polowijo 20ha (Jatimerek-Bunder) Case 1**

Month	October			November			December			January			February			March			April			May			June			July			August			September		
	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L			
Home																																				
Potowijo 20 ha																																				
A. Crop Water Requirement																																				
1. Crop Intensity	1/3	2/3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
2. Crop Coefficient	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73					
3. Potential ET (ET <sub>0</sub> ) (mm/day/area)	5.10	5.10	5.10	4.70	4.70	4.70	4.50	4.50	4.50	4.30	4.30	4.30	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.10	4.10	4.10	4.00	4.00	4.00	4.00	4.00	4.00	4.00					
4. Consumptive Use (ET <sub>c</sub> ) (mm/day)	3.49	3.29	3.29	3.29	3.29	3.29	3.14	3.14	3.14	3.14	3.14	3.14	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21					
7. Crop Water Requirement (mm/day)	1.14	2.19	3.29	3.29	3.29	3.29	3.14	3.14	3.14	3.14	3.14	3.14	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07					
B. Effective Rain	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
C. Net Field Requirement (mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
D. Net Field Requirement (mm/day/area)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
E. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50					
F. Unit Diversion Requirement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
G. Diversions Required	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					

## Future Water Requirement for Polowijo 740ha (Jatimerek-Bunder)



Future Water Requirements for Polowijo 490ha (Jatimierek-Bunder) Case 1

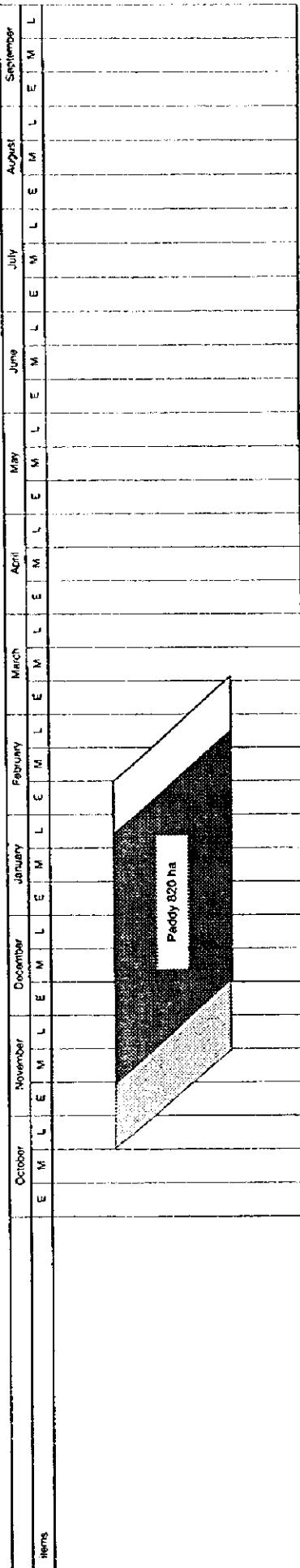


## Future Water Requirement for Sugarcane 500ha (Jatimerek-Bunder) Case 1

Items	September												August																															
	October				November				December				January				February				March				April				May				June				July				August			
	E	M	L	E	M	L	E	M	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E
Sugarcane 500 ha																																												
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Menturus Rubber Dam Diversion Requirements (Case 1)

**Future Water Requirement for Rainy Season Paddy 820ha (Menturus Rubber Dam) Case 1**



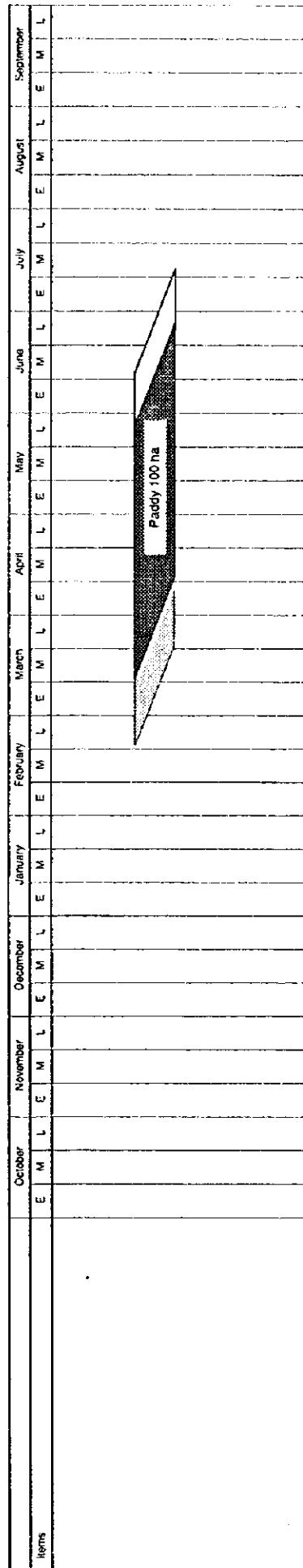
**A. Land Preparation Requirement:**

Items	October	November	December	January	February	March	April	May	June	July	August	September
	E	M	L	E	M	L	E	M	L	E	M	L
1. Land Preparation Intensity	17.27	17.22	17.27	17.09	17.09	16.61	16.51	16.01	16.72	16.72	15.81	16.81
2. Land Preparation Requirement (mm/day/area)	5.76	11.39	11.39	5.70	5.76	11.39	11.39	5.70	5.76	11.39	11.39	5.70
3. Water Layer Replacement Intensity												
4. Water Layer Replacement Requirement (mm/day)												
5. Total Requirement for Land Preparation (mm/day)	0.00	0.00	0.00	5.76	11.39	11.39	5.70	11.39	11.39	5.70	11.39	11.39

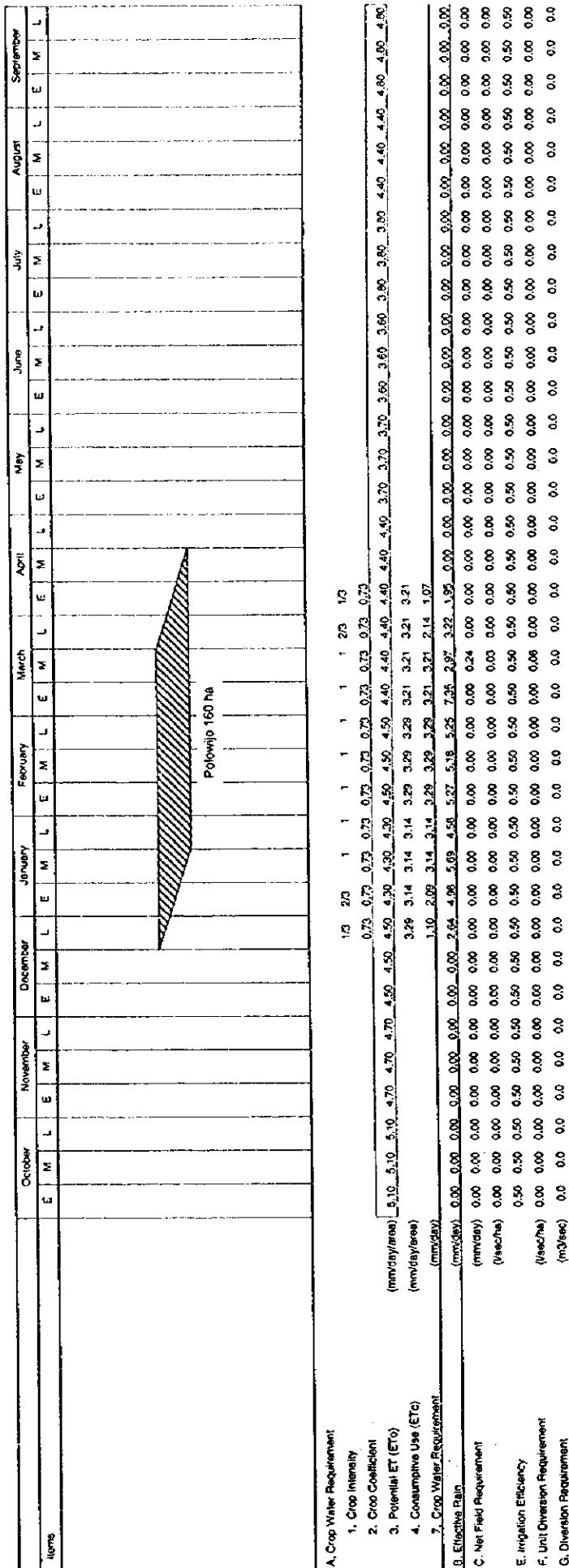
**B. Crop Water Requirement:**

1. Crop Intensity	1/3	2/3	1	1	1	1	1	1	2/3	1/3		
2. Crop Coefficient (K <sub>c</sub> )	1.10	1.10	1.10	1.07	1.05	1.05	0.98	0.92	0.90			
3. Potential ET (ET <sub>P</sub> ) (mm/day/area)	5.17	5.17	4.95	4.91	4.83	4.54	4.41	3.27	1.95	0.72	0.00	
4. Consumptive Use (ET <sub>C</sub> ) (mm/day/area)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
5. Percolation (mm/day/area)	8.17	8.17	7.95	7.91	7.63	7.54	7.41	6.37	4.95	3.72		
6. Crop Water Requirement (mm/day)	2.22	5.45	7.05	7.91	7.63	7.54	7.41	6.37	4.95	3.72		
7. Weighted average (mm/day/area)	5.10	5.10	5.10	4.70	4.70	4.50	4.50	4.30	4.30	4.50	4.50	4.40
8. Effective Rainfall (mm/day)	0.40	1.10	0.57	1.31	2.03	1.80	4.76	4.33	2.89	3.95	4.56	3.63
9. Net Field Water Requirement (mm/day)	0.00	0.00	5.18	10.08	12.02	9.34	4.86	5.25	7.50	5.26	4.52	4.40
10. Irrigation Efficiency (%)	0.00	0.00	0.60	1.17	1.39	1.08	0.56	0.61	0.87	0.61	0.32	0.51
11. Unit Dose Rate Requirement (m³/sec)	0.00	0.00	1.20	2.33	2.16	1.12	1.21	1.74	1.22	1.05	1.02	0.16
12. Dose Rate Requirement (m³/sec)	0.0	0.0	1.0	1.9	2.3	1.8	0.9	1.0	1.4	0.9	0.6	0.1

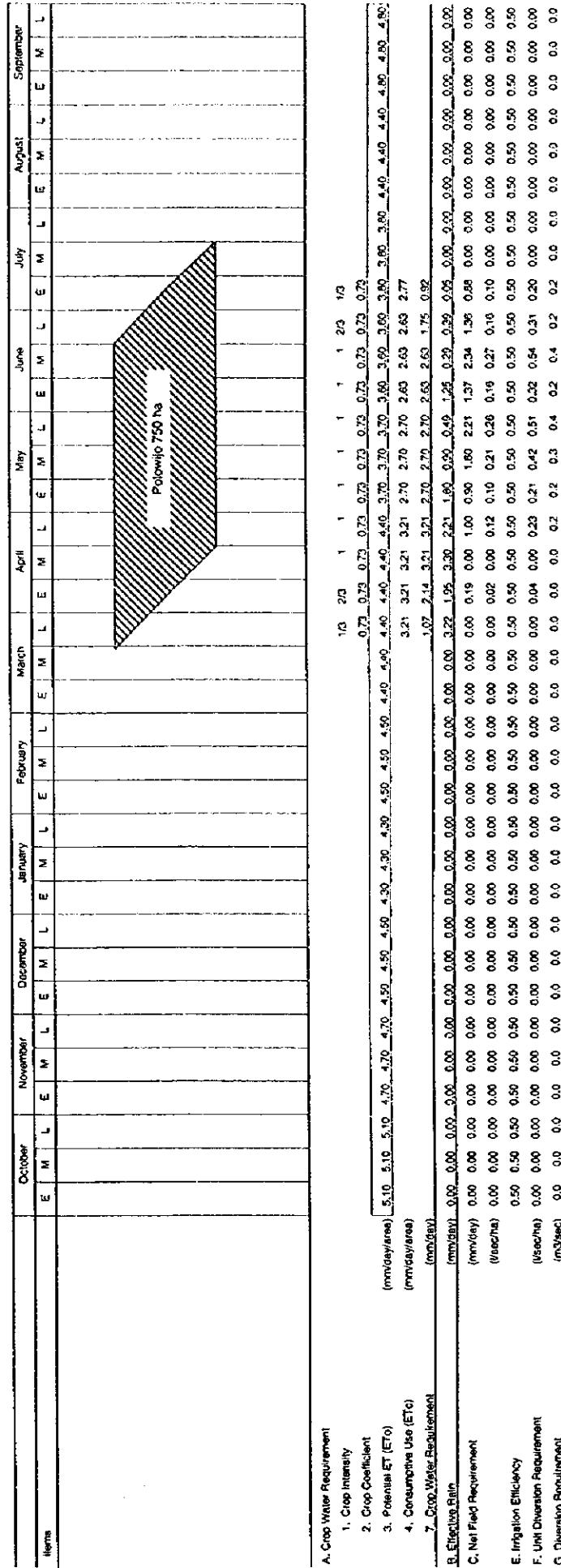
## **Future Water Requirement for Dry Season Paddy 100ha (Menturus Rubber Dam) Case 1**



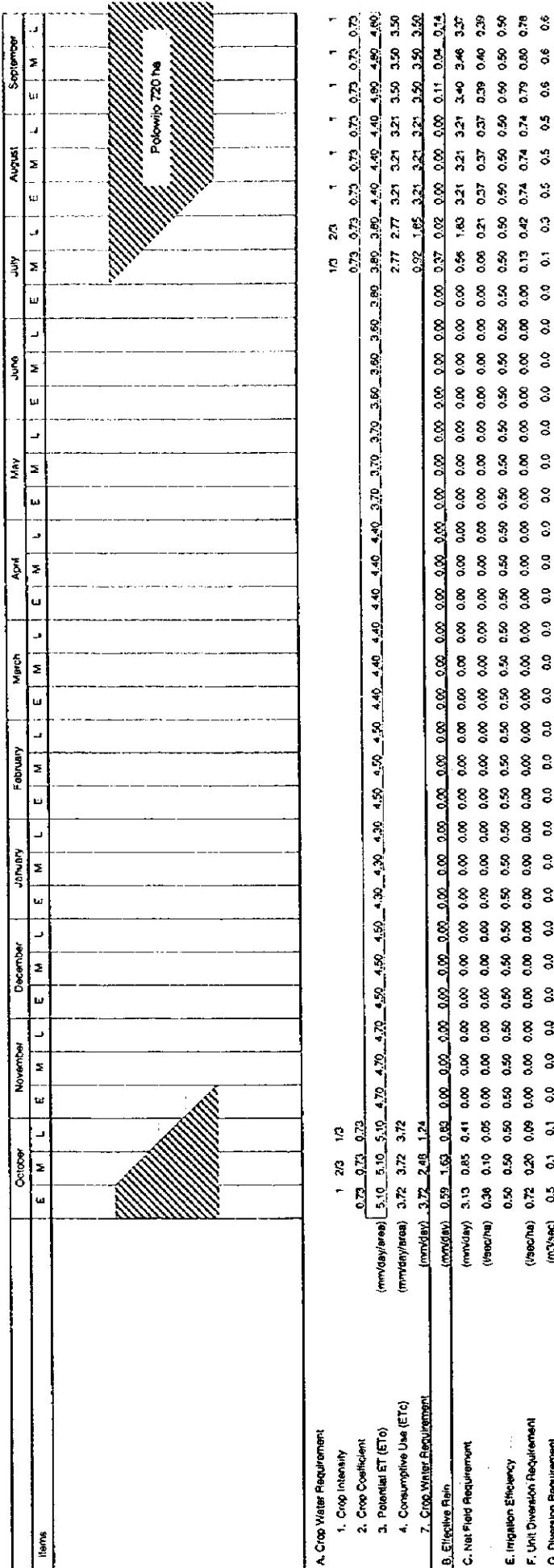
Future Water Requirement for Polowijo 160ha (Menturus Rubber Dam) Case 1



## **Future Water Requirement for Polowilo 750ha (Menturus Rubber Dam)**



## Future Water Requirement for Polowijo 720ha (Menturus Rubber Dam) Case 1

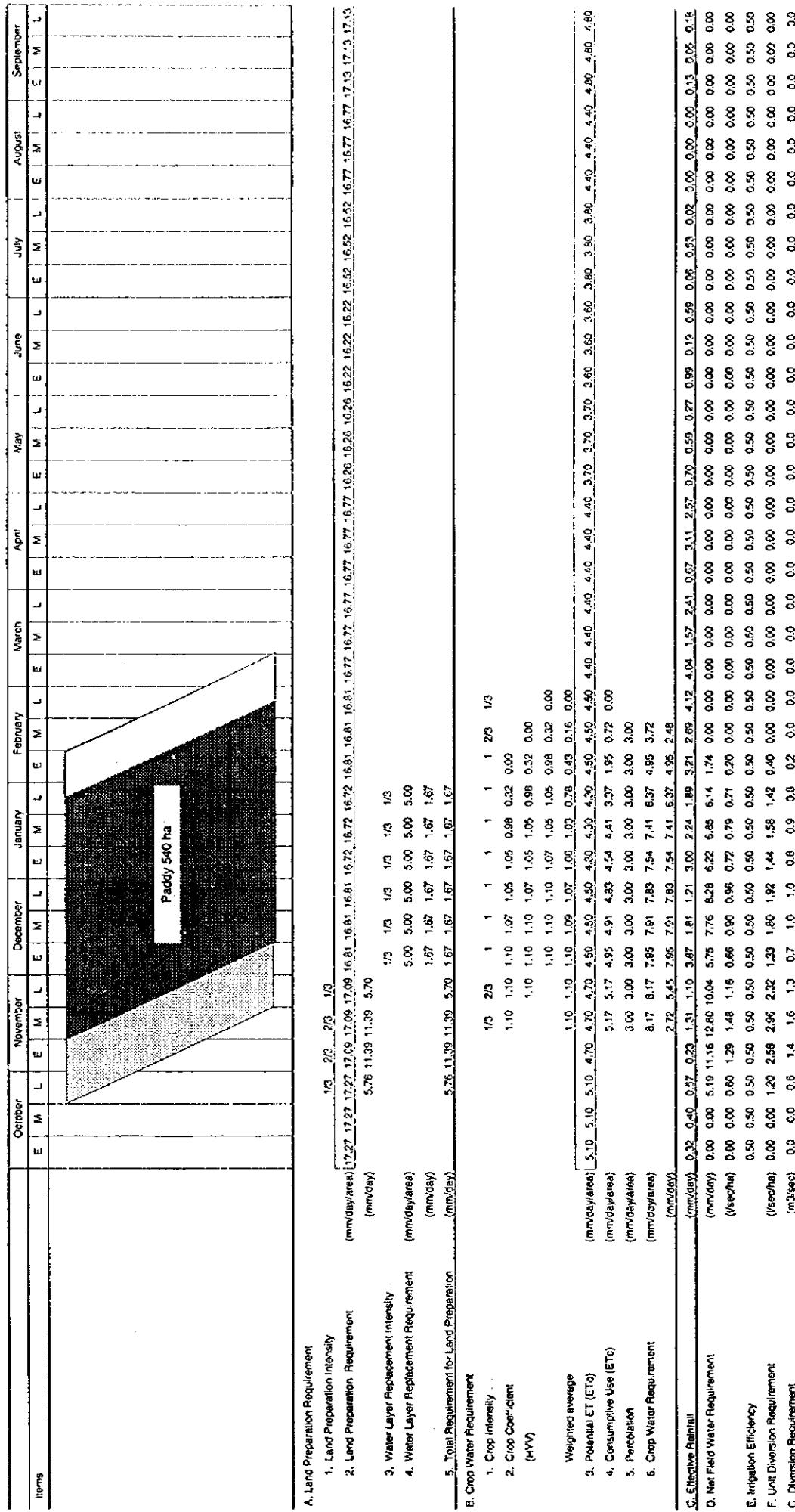


Future Water Requirement for Sugarcane 2380ha (Menturus Rubber Dam) Case 1

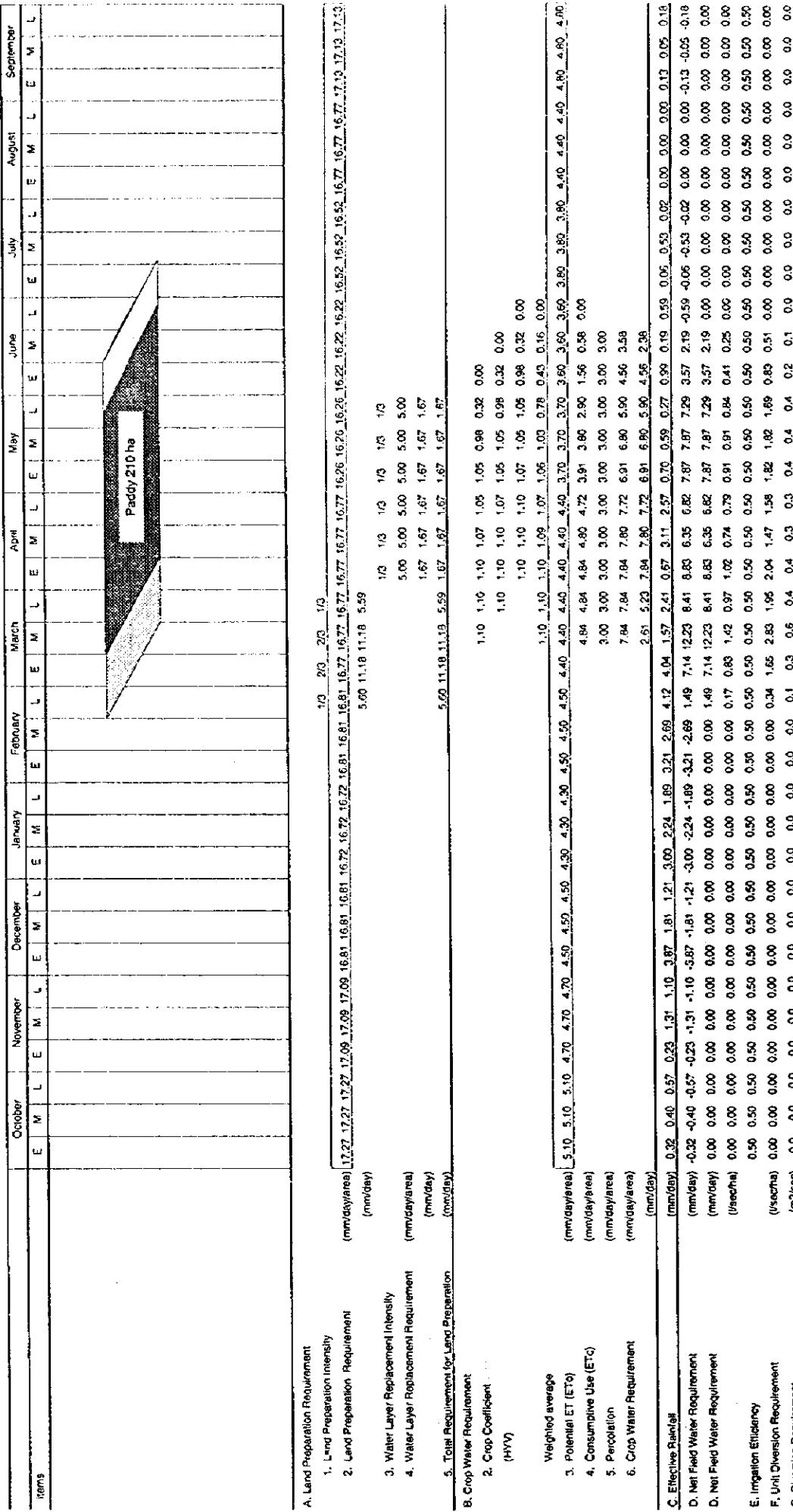
Items	September											
	O	Oct	N	Nov	D	Dec	J	Jan	F	M	A	May
E	M	L	E	M	L	E	M	L	E	M	L	
Sugarcane 2380 ha												
1. Crop Intensity	1	1	1	1	1	1	1	1	1	1	1	1
2. Crop Coefficient	0.99	0.99	0.94	0.89	0.85	0.84	0.82	0.80	0.79	0.77	0.76	0.75
(mm/day/year)	5.19	5.10	5.10	4.70	4.70	4.59	4.59	4.50	4.50	4.50	4.50	4.50
3. Potential ET (ET <sub>0</sub> )	5.03	5.05	5.05	5.00	4.42	4.18	4.00	3.78	3.69	3.60	3.40	3.10
4. Consumptive Use (ET <sub>c</sub> )	5.05	5.05	5.00	4.42	4.18	4.00	3.78	3.69	3.60	3.40	3.10	2.75
5. Crop Water Requirement (mm/day)	0.65	0.79	0.91	1.32	2.94	2.32	8.22	5.89	2.71	5.08	5.75	4.64
B. Effective Rain	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
C. Net Field Requirement (mm/day)	4.40	3.26	4.08	2.50	1.24	1.48	0.00	0.00	0.00	0.00	0.00	0.00
(sec/ha)	0.51	0.30	0.47	0.29	0.14	0.17	0.00	0.00	0.00	0.00	0.00	0.00
D. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
E. Unit Diversion Requirement (sec/ha)	1.02	0.75	0.95	0.58	0.29	0.34	0.00	0.00	0.21	0.00	0.00	0.00
F. Diversion Requirement (m <sup>3</sup> /sec)	2.4	1.8	2.2	1.4	0.7	0.8	0.0	0.0	0.5	0.0	0.0	0.0

## Jatikulon Diversion Requirements (Case 1)

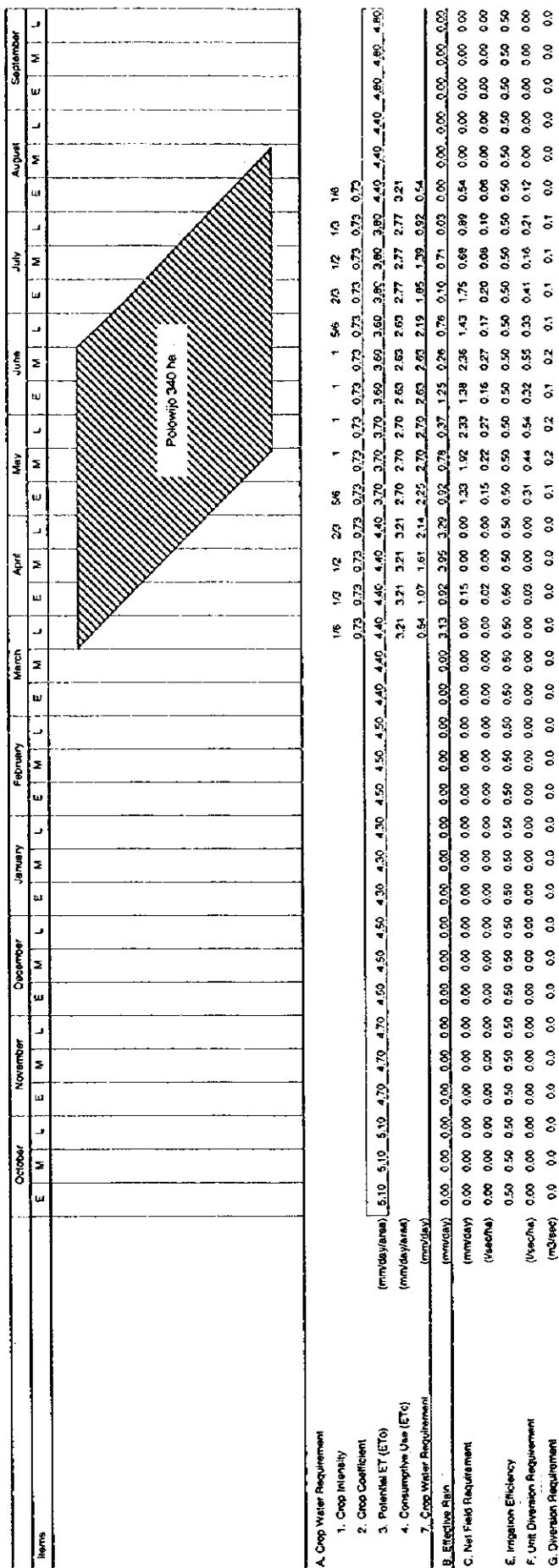
**Future Water Requirement for Rainy Season Paddy 540ha (Jatikulon) Case 1**



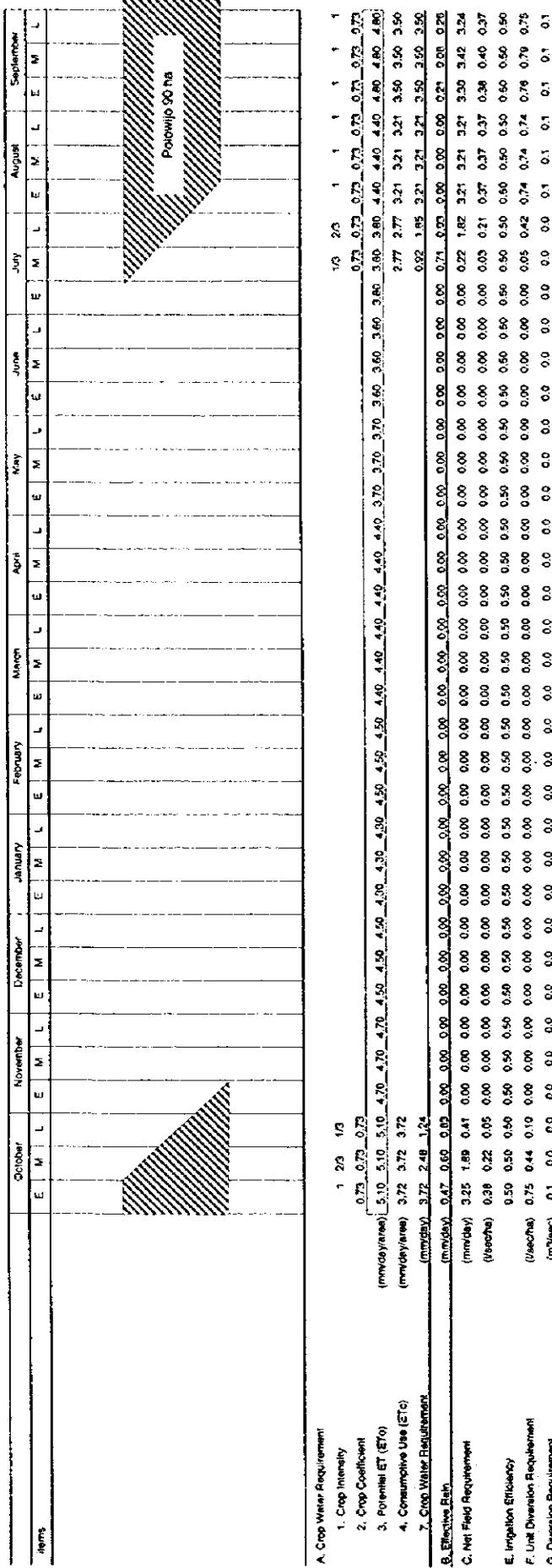
Future Water Requirement for Dry Season Paddy 210ha (Jatikulon) Case 1



Future Water Requirement for Polawijo 340ha (Jatikulon) Case 1



Future Water Requirement for Pоловија 90ha (Jatikulon) Case 1



**Future Water Requirement for Sugarcane 30ha (Jatikulan) Case 1**

Month	October			November			December			January			February			March			April			May			June			July			August				
	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L					
	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day	mm/day					
Sugarcane 30 ha	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
1. Crop Intensity	0.99	0.99	0.94	0.69	0.85	0.84	0.82	0.80	0.79	0.77	0.76	0.75	0.74	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73					
2. Crop Coefficient	(mm/day)	5.10	5.10	5.10	4.70	4.70	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50				
3. Potential ET (ET <sub>0</sub> )	(mm/day)	6.05	5.95	5.90	4.42	4.18	4.00	3.76	3.66	3.60	3.40	3.31	3.27	3.18	3.03	2.99	2.91	2.81	2.71	2.61	2.51	2.41	2.31	2.21	2.11	2.01	1.91	1.81	1.71	1.61	1.51				
4. Consumptive Use (ET <sub>c</sub> )	(mm/day)	5.05	5.05	5.00	4.42	4.16	4.00	3.72	3.59	3.60	3.40	3.31	3.27	3.26	3.23	3.23	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21				
5. Crop Water Requirement	(mm/day)	0.57	0.59	0.61	0.37	1.03	1.58	5.15	2.49	1.69	3.91	2.94	2.50	4.05	3.42	5.10	5.11	2.06	3.13	0.93	3.95	3.31	0.94	0.81	0.39	1.32	0.29	0.91	0.19	0.77	0.94	0.00	0.23	0.09	0.29
6. Effective Rain	(mm/day)	4.53	4.59	4.05	2.29	2.42	0.00	1.20	1.91	0.00	0.37	0.77	0.00	0.00	0.00	1.14	0.69	2.39	0.00	1.95	2.26	2.83	1.85	2.56	2.50	2.43	2.84	3.61	4.27	4.31	4.36	4.53	4.66	4.69	
C. Net Field Requirement	(mm/day)	0.52	0.51	0.47	0.27	0.28	0.00	0.14	0.22	0.00	0.04	0.09	0.00	0.00	0.00	0.13	0.01	0.27	0.00	0.23	0.26	0.33	0.21	0.34	0.40	0.33	0.42	0.49	0.50	0.50	0.57	0.54	0.52		
E. Irrigation Efficiency	(%)	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50			
F. Unit Diversion Requirement	(m <sup>3</sup> /sec)	1.05	1.02	0.95	0.94	0.53	0.56	0.00	0.38	0.44	0.00	0.09	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
G. Diversions Required	(m <sup>3</sup> /sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

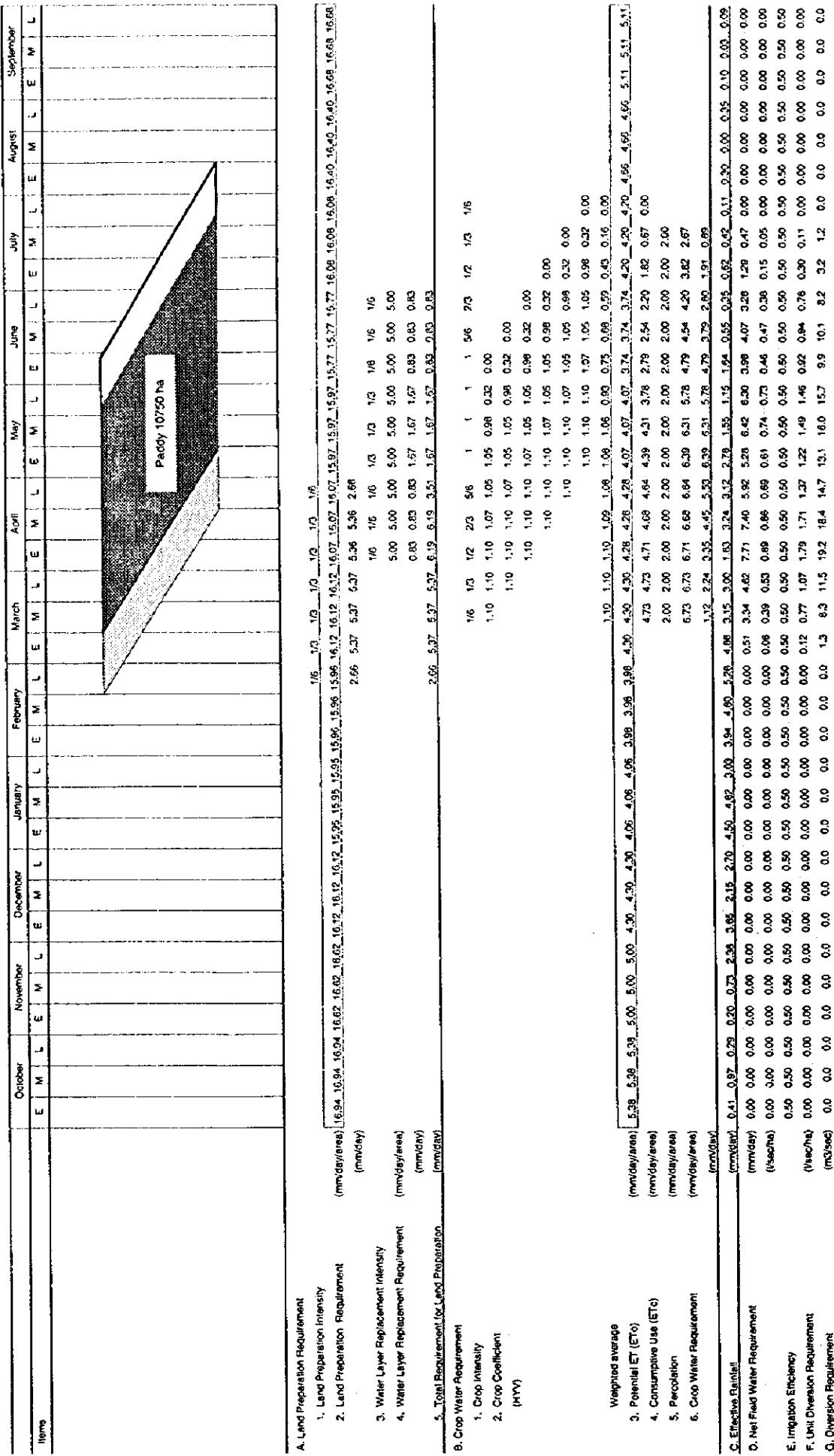
**Delta Brantas Diversion Requirements (Case 1)**

	October			November			December			January			February			March			April			May			June			July			August			September			
	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L				
<b>Rainy Season Paddy 14/20ha</b>																																					
A. Net Field Water Requirement (l/sec/ha)	0.00	0.00	0.29	0.62	0.70	0.66	0.69	0.96	0.74	0.41	0.39	0.51	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
B. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50			
C. Unit Diversion Requirement	0.00	0.00	0.59	1.24	1.40	1.31	1.37	1.97	1.47	0.82	0.77	1.02	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
D. Diversion Requirement (m³/sec)	0.0	0.0	0.3	17.5	19.8	18.5	19.4	27.9	20.6	11.6	10.9	14.4	8.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
<b>Dry Season Paddy 10750ha</b>																																					
A. Net Field Water Requirement (l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
B. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50			
C. Unit Diversion Requirement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
D. Diversion Requirement (m³/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Polowijo 840ha</b>																																					
A. Net Field Water Requirement (l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
B. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50			
C. Unit Diversion Requirement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
D. Diversion Requirement (m³/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Polowijo 2220ha</b>																																					
A. Net Field Water Requirement (l/sec/ha)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
B. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50			
C. Unit Diversion Requirement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
D. Diversion Requirement (m³/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Polowijo 3790ha</b>																																					
A. Net Field Water Requirement (l/sec/ha)	0.31	0.14	0.18	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
B. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50			
C. Unit Diversion Requirement	0.61	0.28	0.35	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
D. Diversion Requirement (m³/sec)	2.3	1.1	1.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Sugarcane 6550ha</b>																																					
A. Net Field Water Requirement (l/sec/ha)	0.54	0.44	0.55	0.51	0.39	0.11	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
B. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50			
C. Unit Diversion Requirement	1.07	0.88	1.11	1.01	0.78	0.21	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
D. Diversion Requirement (m³/sec)	7.0	5.7	7.2	6.6	5.1	1.4	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total Diversion Requirement</b> (m³/sec)	9.3	6.5	16.8	24.9	19.9	19.4	28.9	20.8	11.6	10.9	14.4	6.1	0.0	1.3	8.3	11.5	20.3	18.4	14.7	13.1	18.3	19.4	12.0	15.1	13.8	8.6	7.5	7.7	8.1	9.7	9.6	10.5	10.8	10.6			

**Future Water Requirement for Rainy Season Paddy 14120ha (Delta Brantas) Case 1**

Items	October		November		December		January		February		March		April		May		June		July		August		September		
	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E
<b>A. Land Preparation Requirement</b>																									
1. Land Preparation Intensity	1.6	1.7	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
2. Land Preparation Requirement	(mm/day/area)	15.04	16.04	16.94	16.62	16.62	16.62	16.12	16.12	15.95	15.95	15.95	15.95	15.95	15.95	15.95	15.95	15.95	15.95	15.95	15.95	15.95	15.95	15.95	
3. Water Layer Replacement Intensity	(mm/day)	2.62	5.54	5.54	5.54	5.54	5.37	5.37	2.69	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	
4. Water Layer Replacement Requirement	(mm/day/area)	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	
5. Total Requirement for Land Preparation	(mm/day)	2.62	5.54	5.54	5.54	5.54	5.37	5.37	2.69	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	
<b>B. Crop Water Requirement</b>																									
1. Crop Intensity	1.6	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2. Crop Coefficient	(HYD)	1.10	1.10	1.07	1.07	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
3. Potential ET (ET <sub>C</sub> )	(mm/day/area)	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	
4. Consumptive Use (ET <sub>C</sub> )	(mm/day)	5.50	5.50	4.73	4.73	4.66	4.38	4.30	3.77	2.97	2.71	2.34	1.86	0.59	0.00										
5. Percolation	(mm/day/area)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
6. Crop Water Requirement	(mm/day)	2.50	2.50	3.37	4.47	5.55	6.30	6.30	5.77	4.71	3.92	2.99	1.93	0.90											
<b>C. Effective Rainfall</b>																									
D. Net Field Water Requirement	(mm/day)	0.41	0.37	0.29	0.20	0.13	0.26	0.35	0.45	0.62	0.70	0.76	0.83	0.90	0.96	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
E. Irrigation Efficiency	(%)	0.00	0.00	2.34	5.34	5.66	5.90	5.93	6.37	3.55	3.34	4.40	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
F. Unit Diversion Requirement	(m³/sec)	0.00	0.00	0.59	1.24	1.40	1.31	1.37	1.97	1.47	0.82	0.77	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
G. Diversions Required	(m³/sec)	0.0	0.0	0.3	1.75	1.98	1.85	1.94	2.79	2.08	1.16	1.09	14.4	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

**Future Water Requirement for Dry Season Paddy 10750ha (Delta Brantas) Case 1**

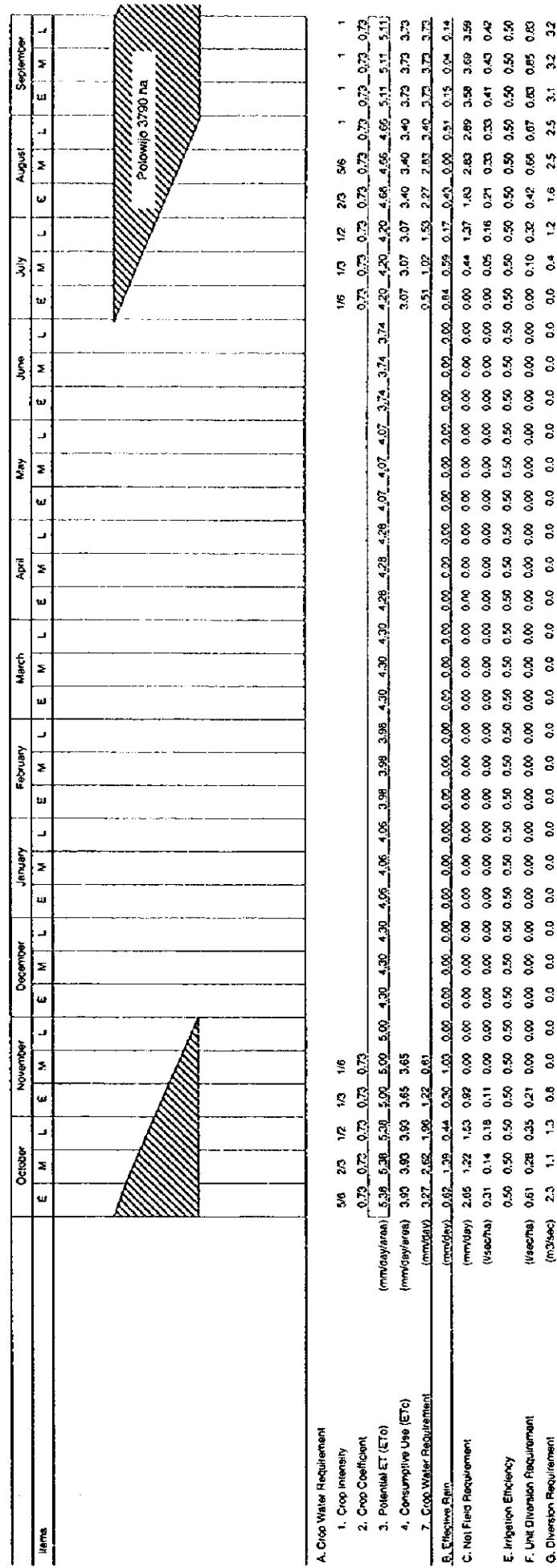


Future Water Requirement for Polowijo 840ha (Delta Brantas) Case 1

**Future Water Requirement for Poto wij o 6530ha (Delta Brantas) Case 1**

Items	October		November		December		January		February		March		April		May		June		July		August		September	
	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Crop Water Requirement:																								
1. Crop Intensity																								
2. Crop Coefficient																								
3. Potential ET (ET <sub>0</sub> )																								
4. Consumptive Use (ET <sub>c</sub> )																								
5. Effective Rainfall																								
6. Net Field Requirement (mm/day)																								
7. Crop Water Requirement (mm/day)																								
B. Irrigation Efficiency																								
C. Net Dike Requirement (mm/day)																								
D. Unit Dike Requirement (mm/day)																								
E. Irrigation Requirement (mm/day)																								
F. Unit Dike Requirement (mm/day)																								
G. Dike Requirement (m³/sec)																								
Potowijo 2320 ha																								

**Future Water Requirement for Polowijo 3790ha (Delta Brantas) Case 1**



**Future Water Requirement for Sugarcane 6530ha (Delta Brantas) Case 1**

Items	October			November			December			January			February			March			April			May			June			July			August		
	E	M	L	E	N	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L			
<b>Sugarcane 6530 Ha</b>																																	
<b>A. Crop Water Requirement:</b>																																	
1. Crop Intensity	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
2. Crop Coefficient	0.99	0.99	0.98	0.94	0.89	0.85	0.84	0.82	0.80	0.79	0.77	0.76	0.75	0.74	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73			
3. Potential ET (ET <sub>0</sub> )	5.36	5.36	5.36	5.00	5.00	4.90	4.30	4.30	4.30	4.06	4.06	4.06	3.98	3.98	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20		
4. Consumptive Use (ET <sub>c</sub> )	5.33	5.33	5.33	5.27	4.70	4.45	4.25	3.61	3.53	3.44	3.21	3.13	3.09	2.99	2.95	2.91	3.14	3.14	3.14	3.12	3.12	3.17	3.17	3.38	3.54	3.54	3.44	3.44	3.44	3.44	3.44	3.44	
5. Crop Water Requirement	5.35	5.35	5.35	5.27	4.70	4.45	4.25	3.61	3.53	3.44	3.21	3.13	3.09	2.99	2.95	2.91	3.14	3.14	3.14	3.12	3.12	3.17	3.17	3.39	3.54	3.54	3.44	3.44	3.44	3.44	3.44	3.44	
6. Effective Rain	0.69	1.53	0.46	0.33	1.10	3.32	4.60	2.88	3.55	3.81	4.25	3.81	3.81	3.81	4.00	3.76	3.26	3.04	4.00	3.82	2.37	4.07	3.94	3.66	2.09	1.59	2.19	0.77	0.50	0.21	0.64	0.18	0.47
7. Net Field Requirement	4.64	3.79	4.79	4.37	3.35	0.92	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	
C. Net Field Requirement	0.54	0.44	0.55	0.51	0.39	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
D. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
E. Unit Diversion Requirement	1.07	0.89	1.11	1.01	0.78	0.21	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
F. Diversion Requirement	7.0	5.7	7.2	6.8	5.1	1.4	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G. Diversion Requirement																																	

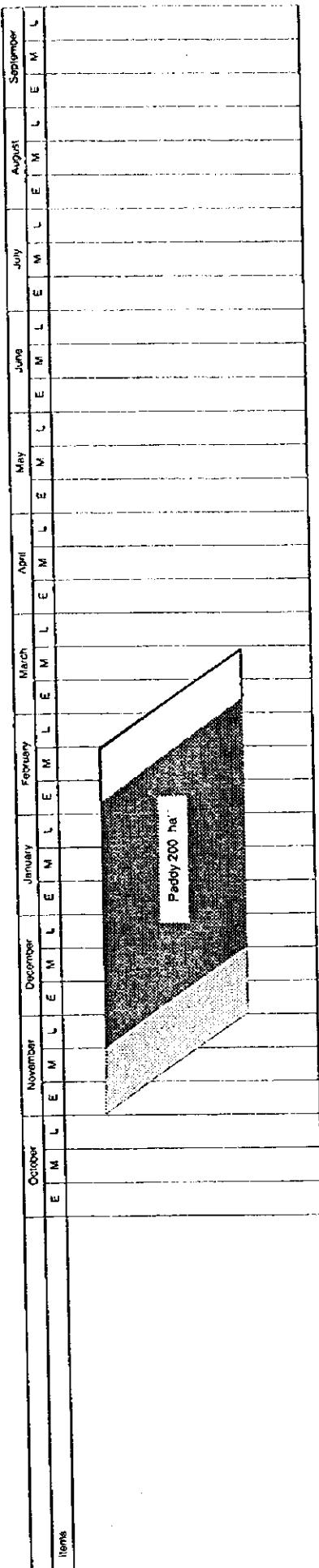
**Future Water Demand by Areas (Case 2)**

Irrigation efficiency = 50%

Year	Month	Intake Name (m <sup>3</sup> /sec)												TOTAL
		Brantas Atas	Brantas Bawah	Molak	Lodogaung	Mrican Kanan	Warujayeng	Brantas -Kertosono	Jatimierek-Bunder	Mentenus	Jatikalon	Delta Brantas		
Oct.	E	0.7	0.4	0.0	6.3	11.6	9.9	0.1	0.8	2.9	0.1	9.9	42.7	26.6
	M	0.6	0.4	0.4	5.4	7.4	1.9	0.0	0.4	2.1	0.1	7.9	10.4	
Nov	E	0.1	0.0	0.9	3.6	4.9	3.1	0.1	0.8	2.8	0.1	9.4	29.0	26.5
	M	0.3	0.6	0.7	7.3	5.0	4.1	0.1	0.1	1.8	0.1	7.0	28.4	
Dec	E	0.3	1.0	1.6	8.3	10.8	8.2	0.8	1.0	1.8	0.6	3.4	38.0	44.5
	M	0.3	1.2	2.6	4.7	12.7	12.6	1.1	1.6	1.2	0.9	5.6	62.9	
Jan	E	0.2	1.9	4.1	12.3	11.4	11.3	0.7	2.1	1.8	1.5	15.5	67.2	67.2
	M	0.2	1.3	2.4	11.7	14.6	14.5	0.5	2.4	2.3	1.2	16.1	57.3	
Feb	E	0.2	0.7	2.3	9.9	10.9	13.9	0.3	1.3	1.0	0.8	16.0	64.7	56.8
	M	0.3	1.5	3.4	8.9	14.4	14.2	0.5	0.7	0.9	0.9	19.0	45.3	
Mar	E	0.2	0.9	1.1	8.8	10.9	12.3	0.5	1.2	1.1	0.9	18.9	42.2	42.2
	M	0.2	1.0	2.3	8.5	10.3	6.7	0.2	1.2	1.0	0.8	13.1	25.7	
Apr	E	0.0	0.3	2.7	6.9	11.2	7.9	0.2	1.1	1.0	0.8	10.1	37.1	37.1
	M	0.0	0.0	1.3	5.6	6.7	3.6	0.0	1.1	0.0	0.5	6.9	17.8	
May	E	0.0	0.0	0.0	2.4	5.8	5.6	0.0	0.0	0.0	0.1	3.9	16.3	16.3
	M	0.2	0.3	0.1	4.0	1.5	4.0	0.1	0.9	0.2	0.1	5.8	48.7	
Jun	E	0.4	0.5	1.4	5.1	3.3	3.2	0.3	0.2	0.1	0.2	2.8	17.5	58.4
	M	0.2	0.3	1.8	5.0	5.2	11.9	0.6	0.5	0.9	0.5	10.2	66.0	
Jul	E	0.2	0.2	2.8	7.0	7.0	4.3	0.3	0.7	0.3	0.5	8.1	31.4	62.2
	M	0.4	0.4	3.4	7.4	11.8	12.0	0.3	0.7	0.8	0.4	11.1	56.4	
Aug	E	0.2	0.2	3.1	9.6	13.5	13.5	0.4	0.3	0.7	0.4	16.5	59.8	63.6
	M	0.7	0.7	3.6	7.6	13.3	13.1	0.5	0.9	1.5	0.4	23.7	22.3	
Sep	E	0.8	0.8	2.1	6.3	13.9	13.2	0.4	0.8	1.2	0.5	21.4	37.0	44.5
	M	0.9	0.9	3.0	4.1	12.7	12.1	0.4	1.1	2.1	0.6	22.0	47.1	
Oct.	E	0.7	0.6	3.2	7.6	14.4	10.7	0.3	1.3	2.1	0.4	11.5	41.7	43.9
	M	0.6	0.5	4.0	8.2	12.8	11.0	0.4	1.0	1.8	0.5	11.2	53.3	
Nov	E	0.8	0.8	2.1	6.3	13.9	13.2	0.4	0.8	1.2	0.5	7.5	37.8	42.7
	M	0.5	0.6	2.2	5.5	13.5	10.2	0.2	1.0	2.1	0.3	7.0	46.8	
Dec	E	0.7	0.5	1.7	4.3	11.7	8.5	0.2	0.7	2.2	0.2	16.4	47.1	47.1
	M	0.7	0.6	0.9	4.8	11.6	8.1	0.1	0.7	2.5	0.2	11.5	41.7	
Jan	E	0.7	0.6	1.5	4.5	8.3	6.8	0.1	0.6	2.5	0.1	11.2	37.0	43.9
	M	0.8	0.6	1.6	5.8	10.6	7.4	0.1	0.7	2.7	0.1	7.5	42.7	
Feb	E	0.9	0.6	1.9	7.4	10.4	7.5	0.1	0.9	3.1	0.1	9.8	46.8	46.8
	M	0.9	0.6	1.9	7.3	11.1	10.2	0.1	0.9	3.2	0.1	10.5	43.9	
Mar	E	0.8	0.6	1.9	7.4	10.3	8.0	0.1	1.0	3.1	0.1	10.6	43.9	43.9
	M	0.9	0.6	2.0	6.8	10.2	8.9	0.3	0.9	1.6	0.4	12.4	44.5	
<b>AVERAGE</b>		0.4	0.6	2.0	6.8	14.6	14.5	1.1	2.4	3.2	1.5	23.7	67.2	
<b>MAX.</b>		0.9	1.9	4.1	12.3	14.6	14.5	1.1	2.4	3.2	1.5	23.7	67.2	

Brantas Atlas Diversions Requirements (Case 2)

**Future Water Requirement for Rainy Season Paddy 200ha (Brantas Atas) Case 2**

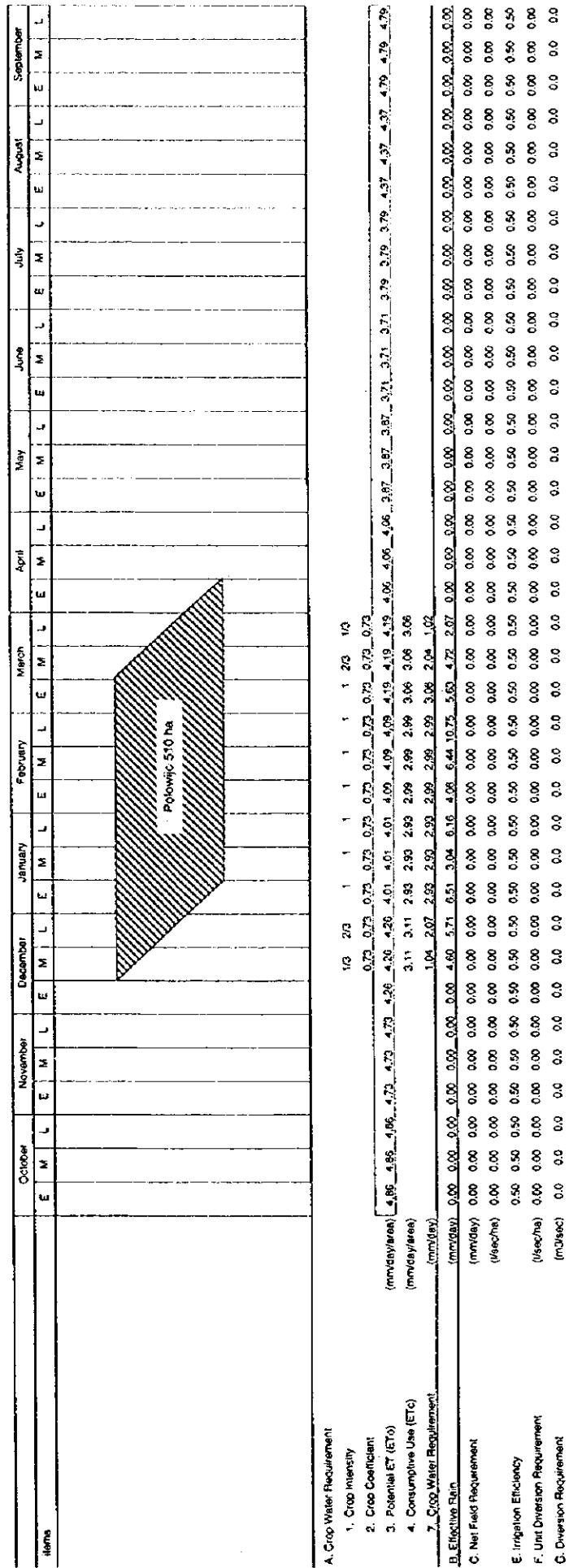


1. Land Preparation Requirement	(mm/day/area)	17.09	17.99	17.99	16.96	16.88	16.84	16.64	16.62	16.52	16.62	16.62	16.60	16.66	16.56	16.55	16.55	16.55	16.49	16.49	16.29	16.29	16.49	16.49	16.90	16.90	17.11	17.11						
2. Land Preparation Requirement	(mm/day)	5.65	1.31	11.31	5.55																													
3. Water Layer Replacement Intensity	(mm/day/area)	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3						
4. Water Layer Replacement Requirement	(mm/day)	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00						
5. Total Requirement (or Land Preparation)	(mm/day)	5.65	1.31	11.31	5.55	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67					
B. Crop Water Requirement		1/3	2/3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
1. Crop Intensity		1.10	1.10	1.10	1.07	1.05	1.05	0.98	0.92	0.00																								
2. Crop Coefficient		1.10	1.10	1.10	1.07	1.05	1.05	0.98	0.92	0.00																								
3. Potential ET (ET <sub>0</sub> )		5.20	4.69	4.69	4.64	4.64	4.30	4.24	4.12	3.20	1.77	0.65	0.00																					
4. Consumptive Use (ET <sub>c</sub> )		5.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00					
5. Precipitation		6.20	7.69	7.69	7.64	7.30	7.24	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12				
6. Crop Water Requirement		2.73	3.12	3.69	3.64	3.70	3.24	3.21	3.27	3.21	4.52	3.70	3.70	3.26	3.10	2.58	2.51	2.33	2.26	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	
C. Effective Rainfall		0.49	0.51	1.06	3.50	3.65	3.82	4.55	3.66	4.00	3.38	2.41	5.07	2.21	5.37	9.21	4.52	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	
D. Net Field Water Requirement		0.00	0.00	0.00	2.16	7.26	10.22	6.12	5.69	4.71	3.59	6.49	3.71	4.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
E. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50		
F. Unit Diversion Requirement		0.00	0.00	0.00	0.50	1.68	2.37	1.42	1.02	1.09	0.83	1.50	0.86	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
G. Diversions Requirement		0.0	0.0	0.0	0.1	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

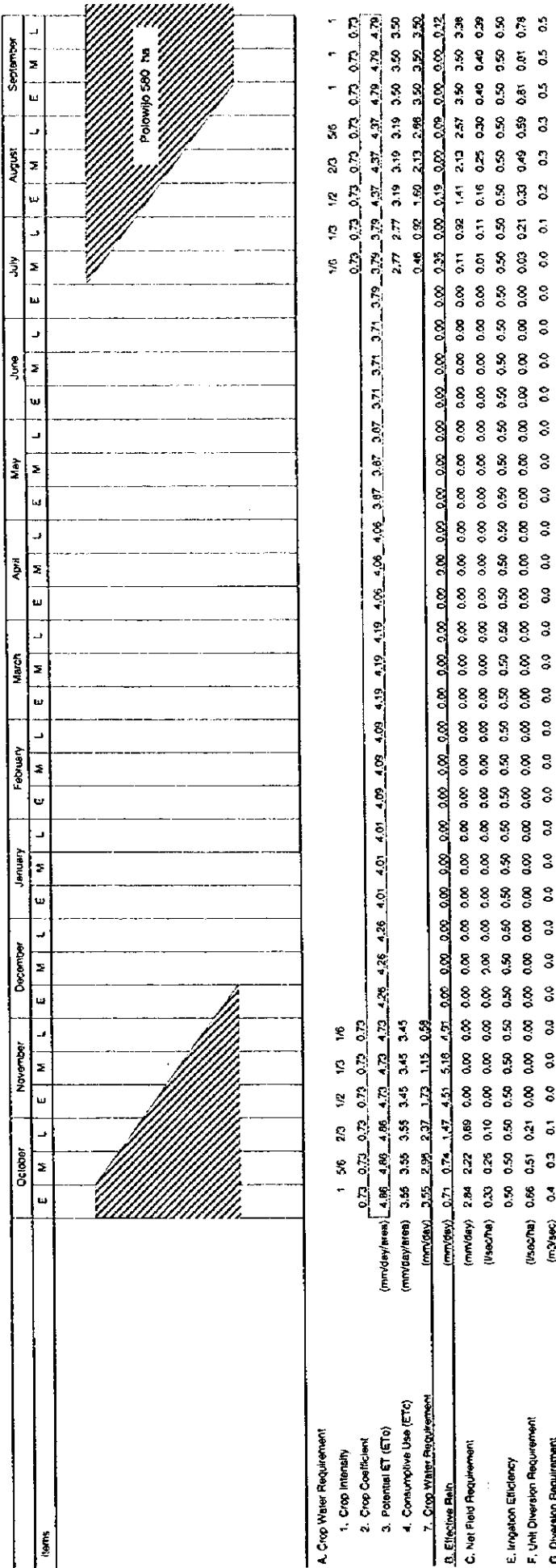
**Future Water Requirement for Dry Season Paddy 120ha (Brantas Atas) Case 2**

Item	October	November	December	January	February	March	April	May	June	July	August	September
	E	M	L	E	M	L	E	M	L	E	M	L
<b>A. Land Preparation Requirement</b>												
1. Land Preparation Intensity												
2. Land Preparation Requirement	(mm/day/year)	17.99	17.99	15.96	15.96	15.94	15.94	16.84	16.84	16.52	16.52	16.52
3. Water Layer Replacement Intensity	(mm/day/year)											
4. Water Layer Replacement Requirement	(mm/day/year)											
<b>5. Total Requirement for Land Preparation</b>	(mm/day)											
<b>B. Crop Water Requirement</b>												
1. Crop Intensity												
2. Crop Coefficient												
3. Potential ET (ET <sub>0</sub> )	(mm/day/year)	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96
4. Consumptive Use (ETC)	(mm/day/year)											
5. Percolation	(mm/day/year)											
6. Crop Water Requirement	(mm/day)											
<b>C. Effective Rainfall</b>	(mm/day)	0.49	0.51	1.05	3.50	4.05	2.82	4.55	3.06	4.00	5.36	2.41
D. Net Field Water Requirement	(mm/day)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.32	12.06
E. Irrigation Efficiency	(second)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Unit Diverion Requirement	(m³/sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G. Diversions Required	(m³/sec)											

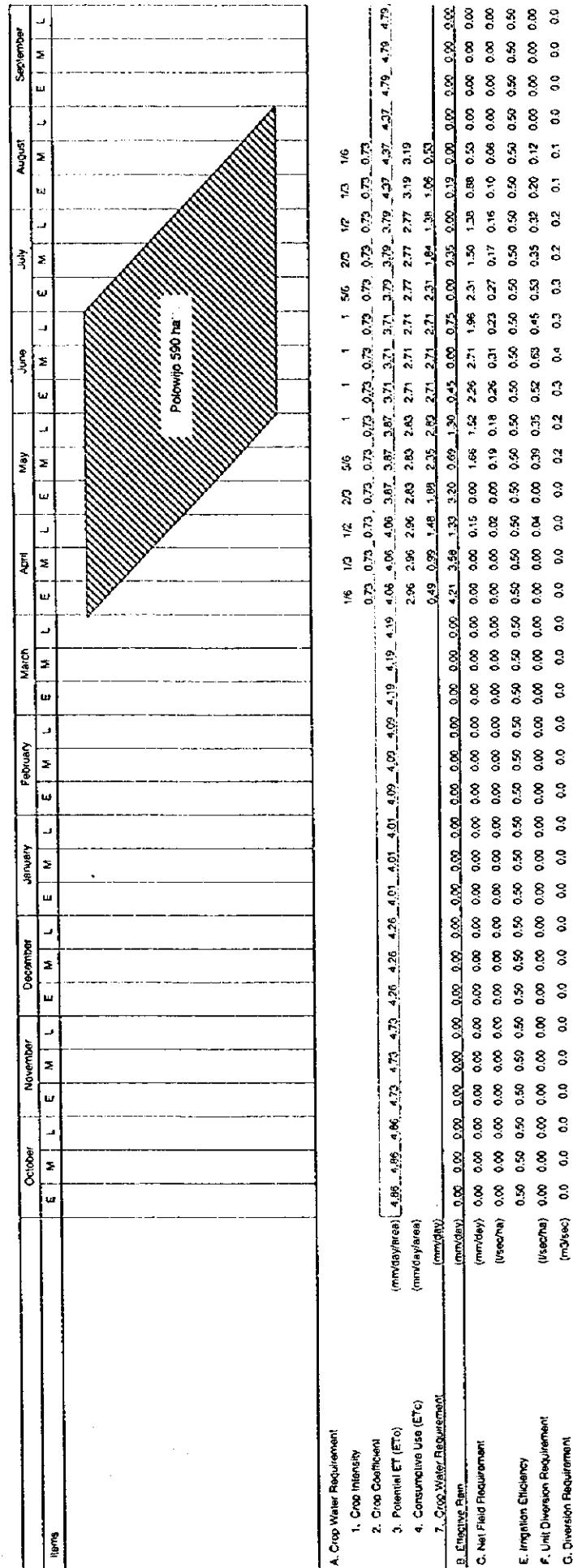
**Future Water Requirement for Polowijo 510ha (Brantas Atlas) Case 2**



Future Water Requirement for Polowijo 580ha (Brantes Atlas) Case 2



**Future Water Requirement for Polowijo 610ha (Brantas Atas) Case 2**



Future Water Requirement for Apple 3707a (Brantao Atas) Case 2

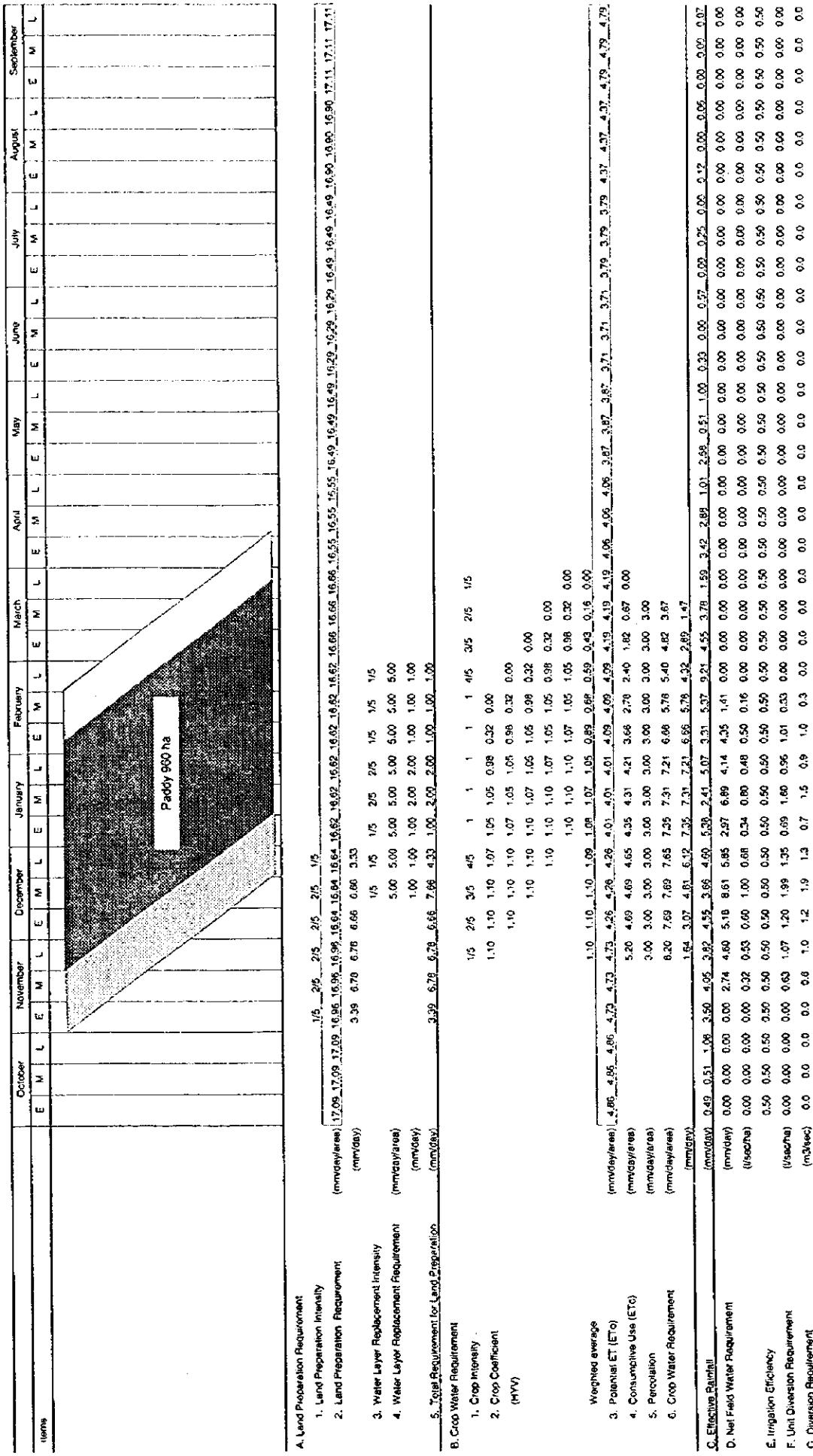
#### A. Crop Water Requirements

IR-86

Future Water Requirement for Citrus 10ha (Branlas Atas) Case 2

## **Brantas Bawah Diversion Requirements (Case 2)**

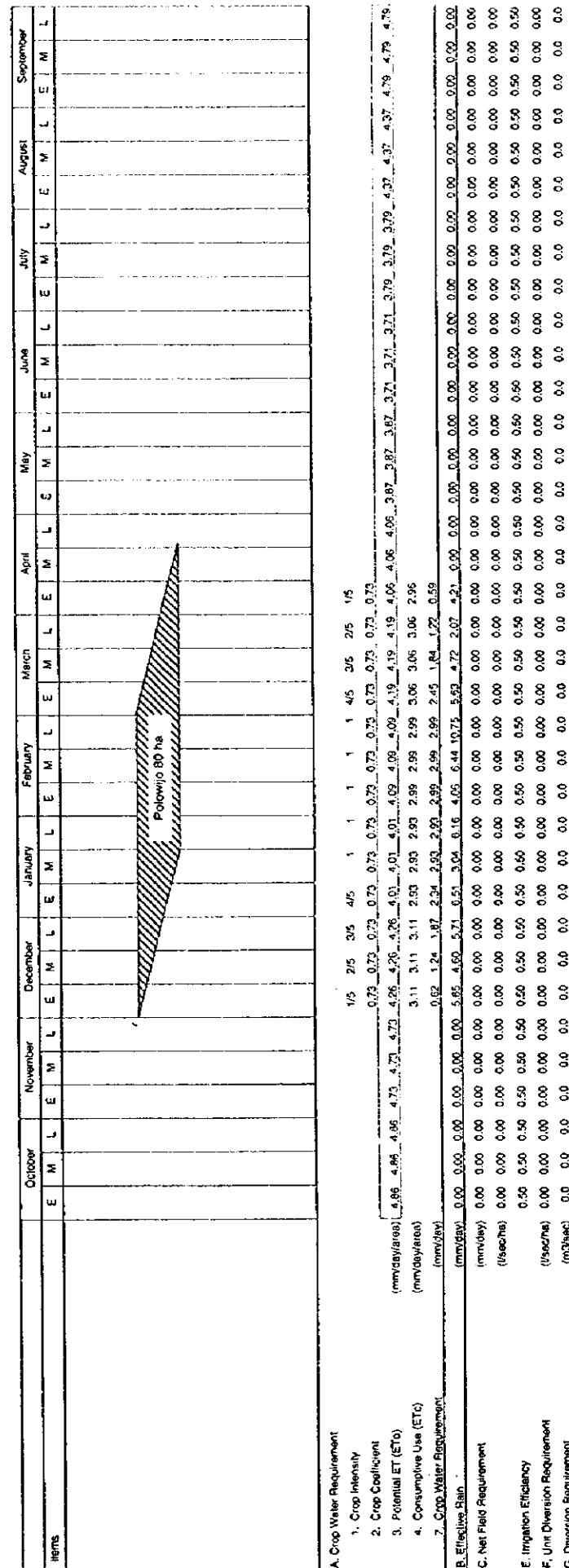
**Future Water Requirement for Rainy Season Paddy 960ha (Brantas Bawah) Case 2**



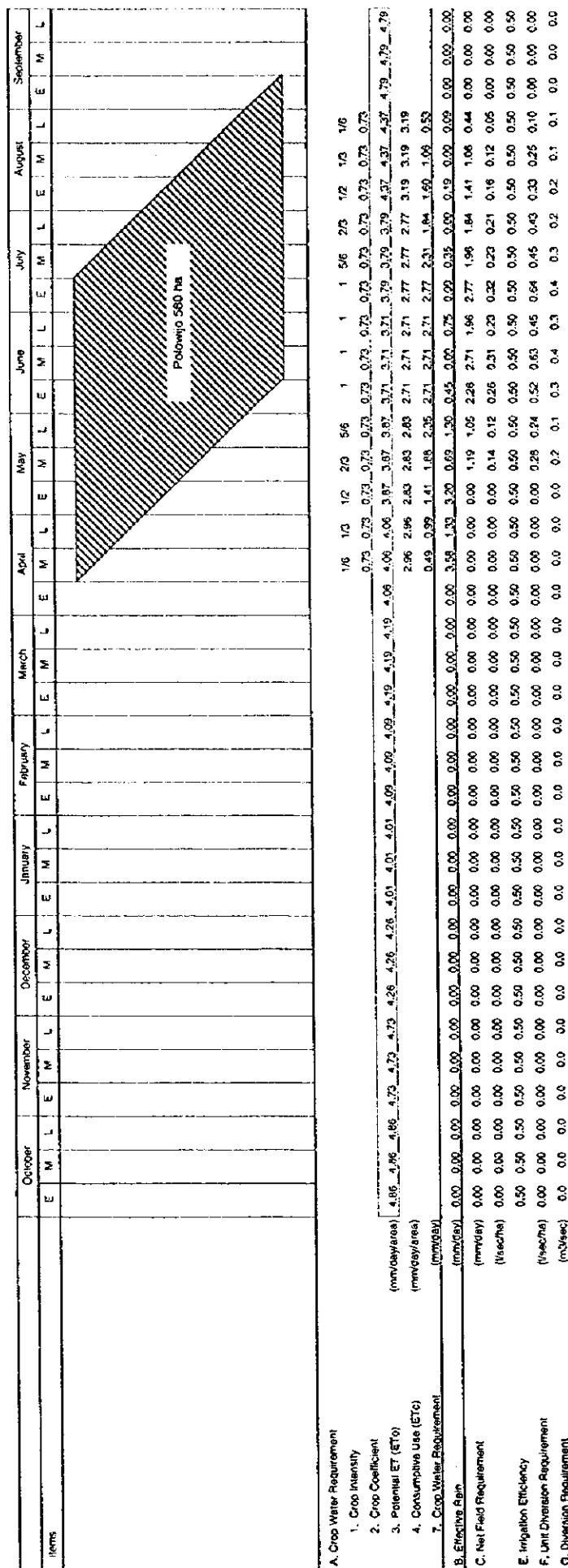
Future Water Requirement for Dry Season Paddy 160ha (Brantas Bawah) Case 2

Items	October		November		December		January		February		March		April		May		June		July		August		September			
	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L		
Paddy 160 ha																										
A. Land Preparation Requirement																										
1. Land Preparation Intensity	(mm/day/area)	12.99	17.99	17.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	17.11	17.11
2. Land Preparation Requirement	(mm/day)																									
3. Water Layer Replacement Intensity	(mm/day/area)																									
4. Water Layer Replacement Requirement	(mm/day)																									
5. Total Requirement for Land Preparation	(mm/day)																									
B. Crop Water Requirement																										
1. Crop Intensity	(mm/day)																									
2. Crop Coefficient	(HPPV)																									
3. Weighted average	(mm/day/area)																									
4. Potential ET (ET <sub>0</sub> )	(mm/day/area)	4.66	4.66	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73
5. Consumptive Use (ET <sub>c</sub> )	(mm/day/area)																									
6. Crop Water Requirement	(mm/day)																									
C. Effective Rainfall	(mm/day)																									
D. Net Field Water Requirement	(mm/day)																									
E. Irrigation Efficiency	(Water/ha)																									
F. Unit Diversion Requirement	(m <sup>3</sup> /sec)																									
G. Diversion Requirement	(m <sup>3</sup> /sec)																									

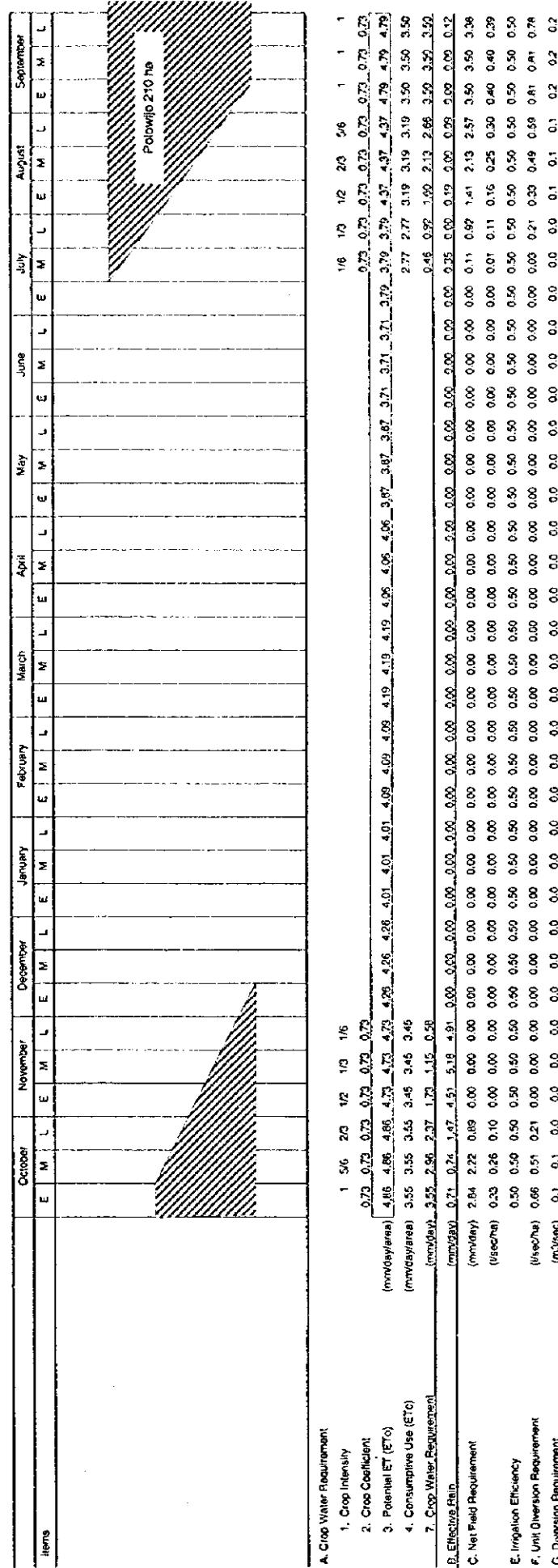
Future Water Requirement for Polowijo 80ha (Brantas Bawah) Case 2



**Future Water Requirement for Polorwijo 580ha (Brantas Bawah) Case 2**



**Future Water Requirement for Polowijo 210ha (Brantas Bawah) Case 2**

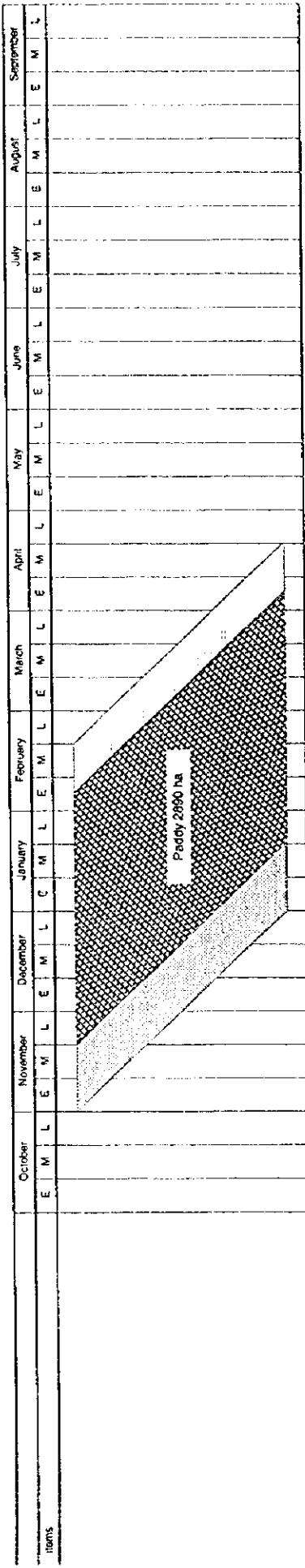


Future Water Requirement for Sugarcane 160ha (Brantas Bawah) Case 2

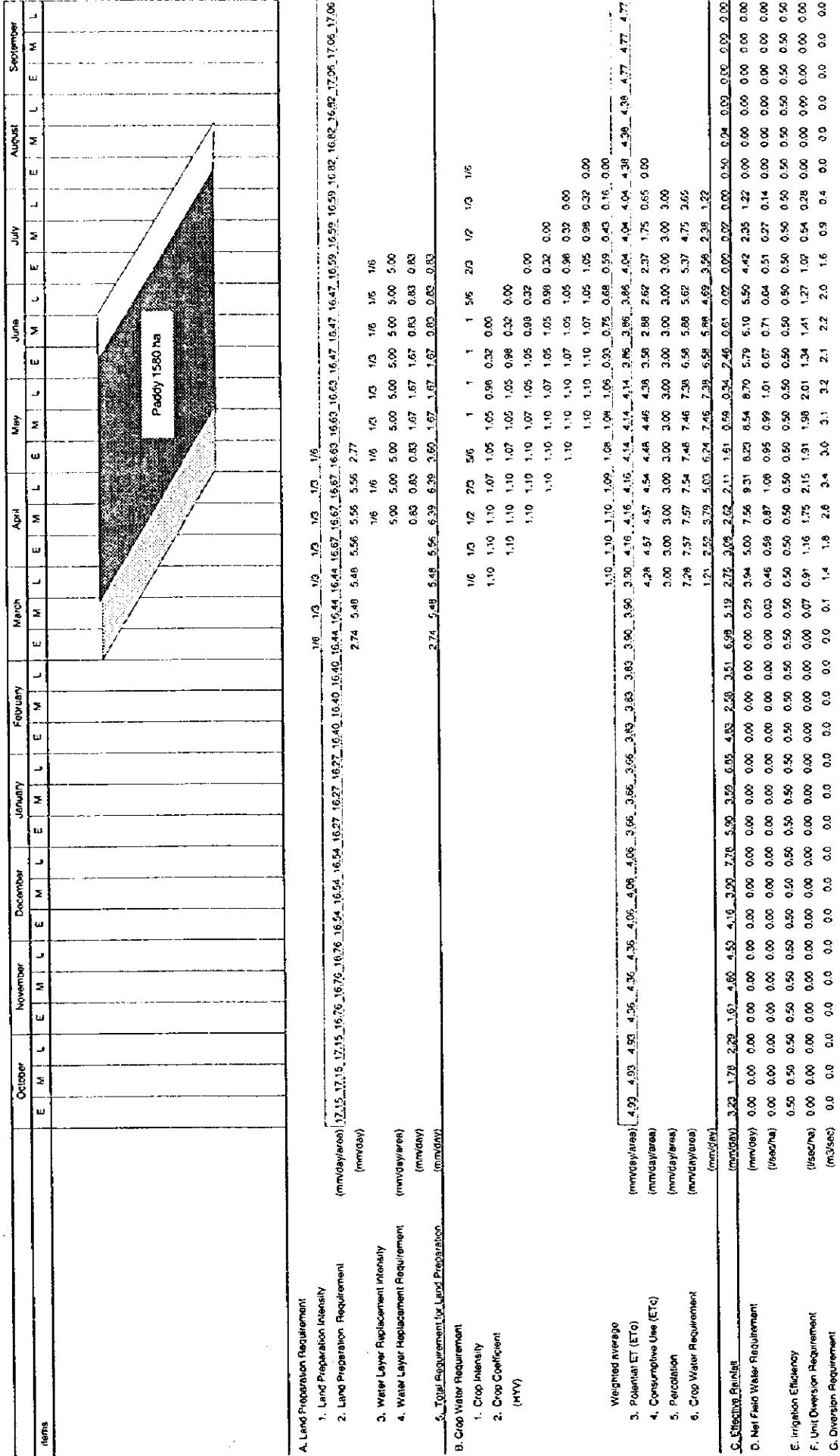
Items	October			November			December			January			February			March			April			May			June			July			August		
	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L			
Sugarcane 160 ha																																	
.																																	
A. Crop Water Requirement																																	
1. Crop Intensity	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
2. Crop Coefficient	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59			
3. Potential ET (ET <sub>0</sub> )	(mm/day/year)	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06		
4. Consumptive Use (ETc)	(mm/day/year)	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61		
7. Crop Water Requirement	(mm/day)	0.78	0.81	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62		
B. Effective Rain	(mm/day)	4.04	4.00	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
C. Net Field Requirement	(l/sec/ha)	0.47	0.46	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
D. Irrigation Efficiency		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50		
E. Unit Diversion Requirement	(l/sec/m)	0.93	0.93	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
F. Diversions Required	(m³/sec)	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Molek Diversion Requirements (Case 2)

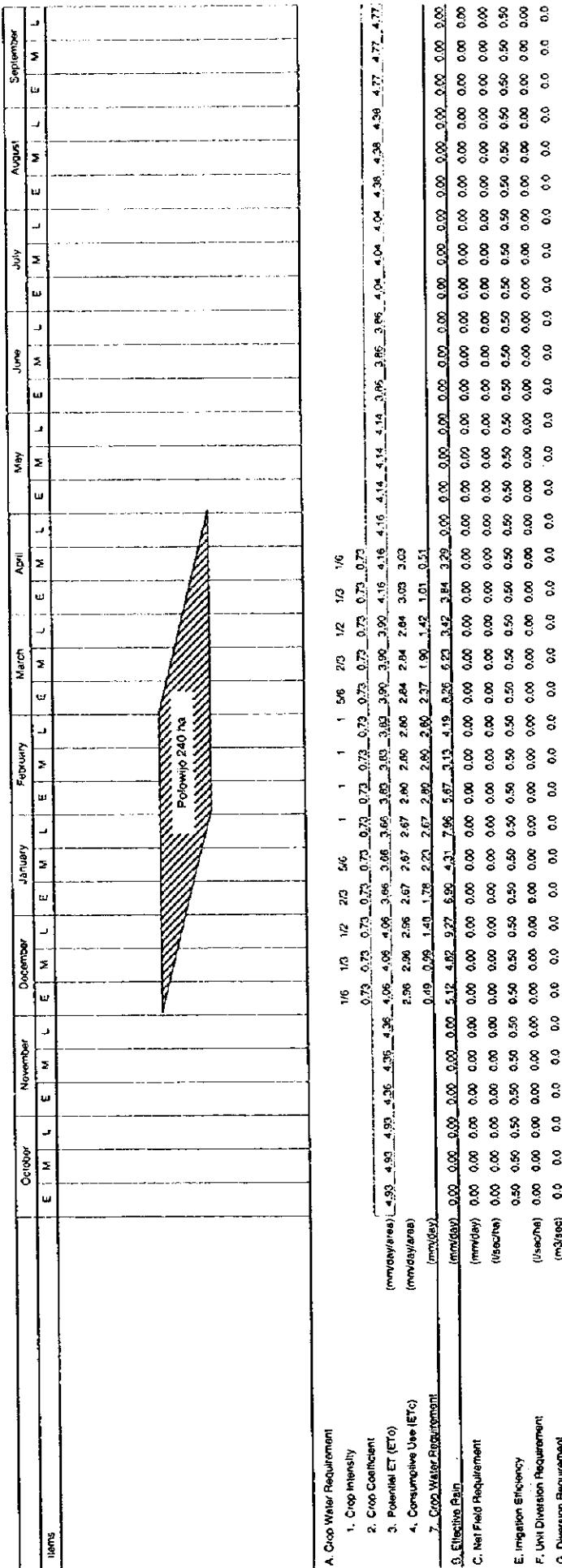
Future Water Requirement for Rainy Season Paddy 2890ha (Molek) Case 2



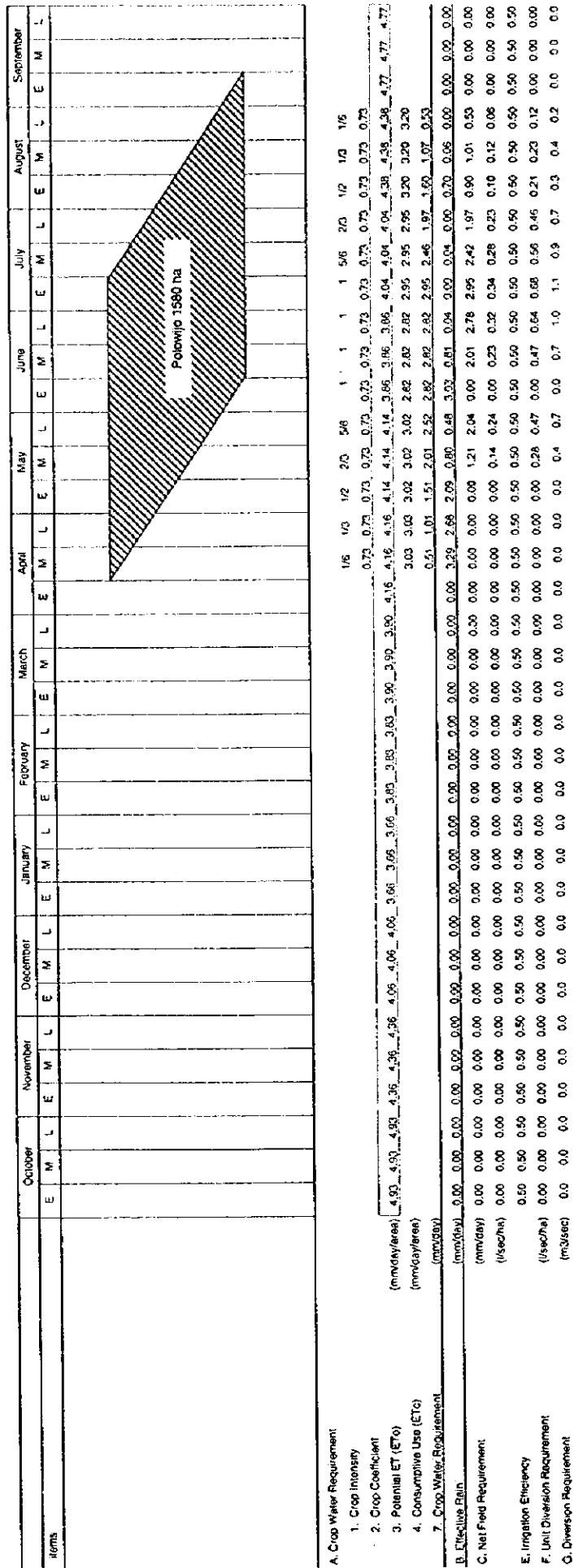
Future Water Requirement for Dry Season Paddy 1580ha (Molek) Case 2



## Future Water Requirement for Polawijo 240ha (Molek) 1 Month Later



**Future Water Requirement for Potowijo 1580ha (Molek) 1 Month Later**



Future Water Requirement for Polowijo 1930ha (Malek) Case 2

Future Water Requirement for Cotton 30ha (Molek) Case 2

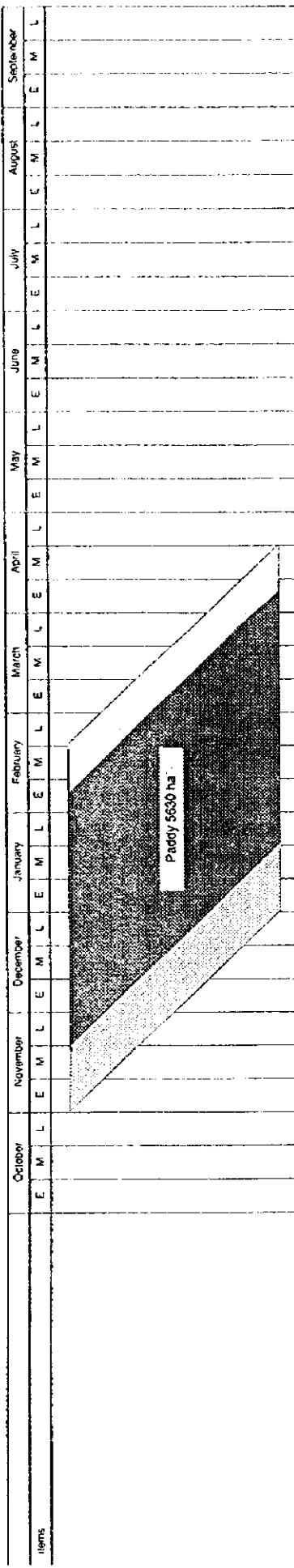
**Future Water Requirement for Sugarcane 240ha (Molek) Case 2**

Item#	October			November			December			January			February			March			April			May			June			July			August		
	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L			
Sugarcane 240 ha																																	
A. Crop Water Requirement																																	
1. Crop Intensity	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
2. Crop Coefficient	0.99	0.99	0.99	0.99	0.99	0.99	0.94	0.94	0.94	0.92	0.90	0.79	0.77	0.76	0.75	0.74	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73		
3. Potential ET (ET <sub>0</sub> )	4.93	4.93	4.93	4.93	4.93	4.93	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	
(mm/day/area)																																	
4. Consumptive Use (ETc)	4.88	4.88	4.88	4.88	4.88	4.88	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	
5. Crop Water Requirement	4.05	4.05	4.05	4.05	4.05	4.05	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	
(mm/day)																																	
6. Effective Rain	4.69	2.67	3.29	2.31	6.27	6.16	5.54	5.32	9.72	7.21	4.47	9.18	5.81	3.18	4.24	8.33	6.25	3.42	3.04	2.29	2.69	2.09	0.90	0.49	3.09	0.94	0.04	0.00	0.75	0.00	0.00		
(mm/day)																																	
C. Net Field Requirement	0.18	2.21	1.49	2.00	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
(l/sec/ha)	0.02	0.26	0.17	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
E. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50		
F. Unit Diversion Requirement	0.04	0.51	0.34	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
G. Diversion Requirement	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

## Lodgeagung Diversion Requirements (Case 2)

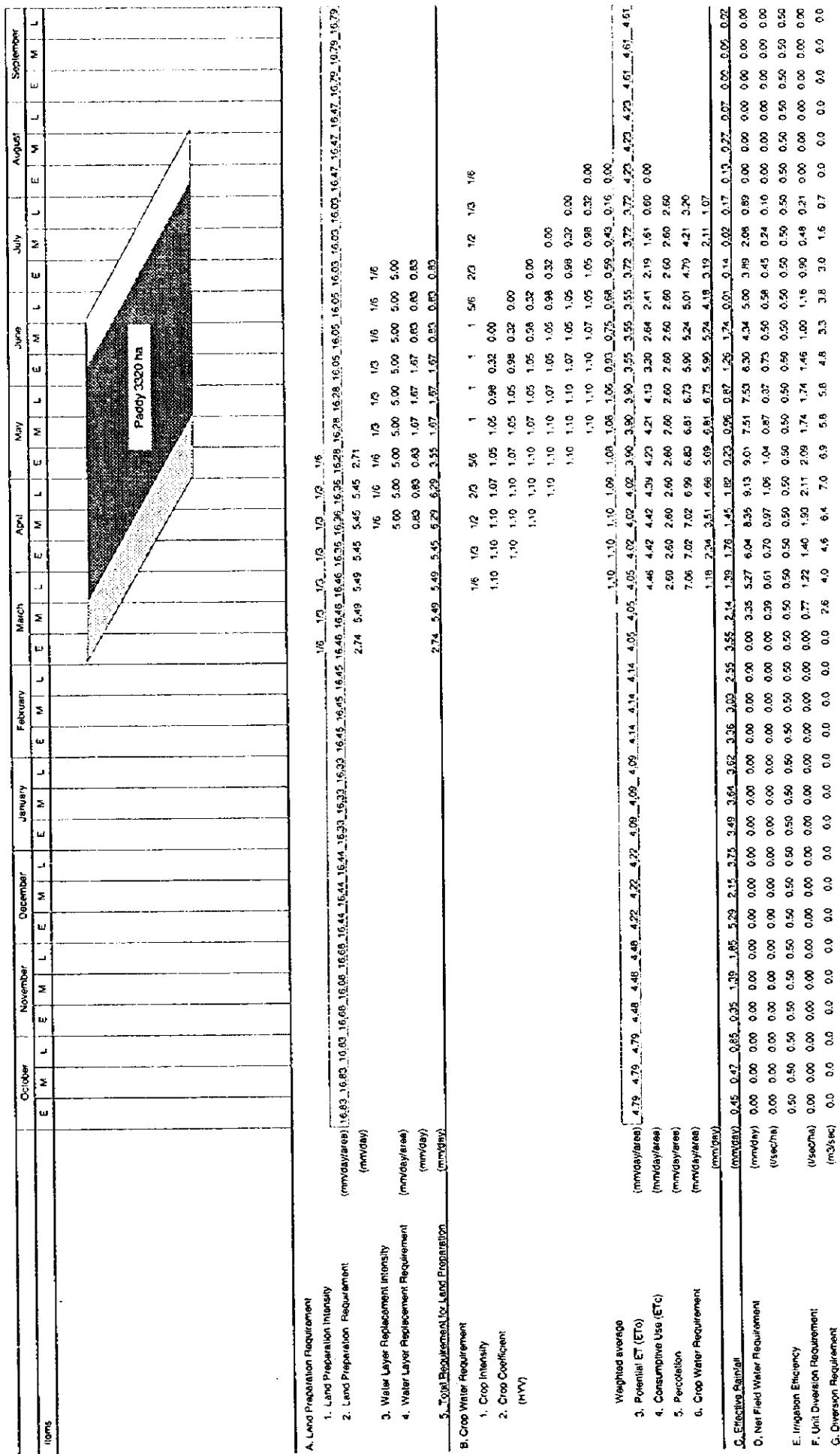
September																
August								September								
July				June				May				April				
E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	
<b>Rainy Season Paddy 5630ha</b>																
A. Net Field Water Requirement (l/second)	0.00	0.00	0.00	0.30	0.52	0.65	0.42	1.05	1.04	0.88	0.79	0.76	0.61	0.50	0.21	0.11
B. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	0.00	0.00	0.00	0.60	1.04	1.30	0.83	2.10	2.07	1.76	1.58	1.52	1.22	0.99	0.42	0.22
D. Diversion Requirement	0.0	0.0	0.0	3.4	5.9	7.3	4.7	11.8	11.7	9.9	8.9	8.8	8.5	6.9	5.6	2.4
<b>Dry Season Paddy 3320ha</b>																
A. Net Field Water Requirement (l/second)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Diversion Requirement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Potowijo 140ha</b>																
A. Net Field Water Requirement (l/second)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Diversion Requirement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Potowijo 3420ha</b>																
A. Net Field Water Requirement (l/second)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Diversion Requirement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Potowijo 6030ha</b>																
A. Net Field Water Requirement (l/second)	0.33	0.26	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	0.66	0.52	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Diversion Requirement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Fruit Tree 100ha</b>																
A. Net Field Water Requirement (l/second)	0.25	0.25	0.20	0.26	0.11	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	0.49	0.50	0.40	0.51	0.22	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Diversion Requirement	4.0	3.1	1.6	1.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Sugarcane 2510ha</b>																
A. Net Field Water Requirement (l/second)	0.47	0.46	0.40	0.45	0.28	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Irrigation Efficiency	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
C. Unit Diversion Requirement	2.3	2.3	2.0	2.3	1.4	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D. Diversion Requirement	6.3	5.4	3.6	7.4	7.3	8.3	4.7	12.3	11.7	9.9	8.9	8.8	8.5	6.9	5.0	2.4
<b>Total Diversion Requirement</b>																
	6.3	5.4	3.6	7.4	7.3	8.3	4.7	12.3	11.7	9.9	8.9	8.8	8.5	6.9	5.0	2.4

**Future Water Requirement for Rainy Season Paddy 5630ha (Lodoagung) Case 2**

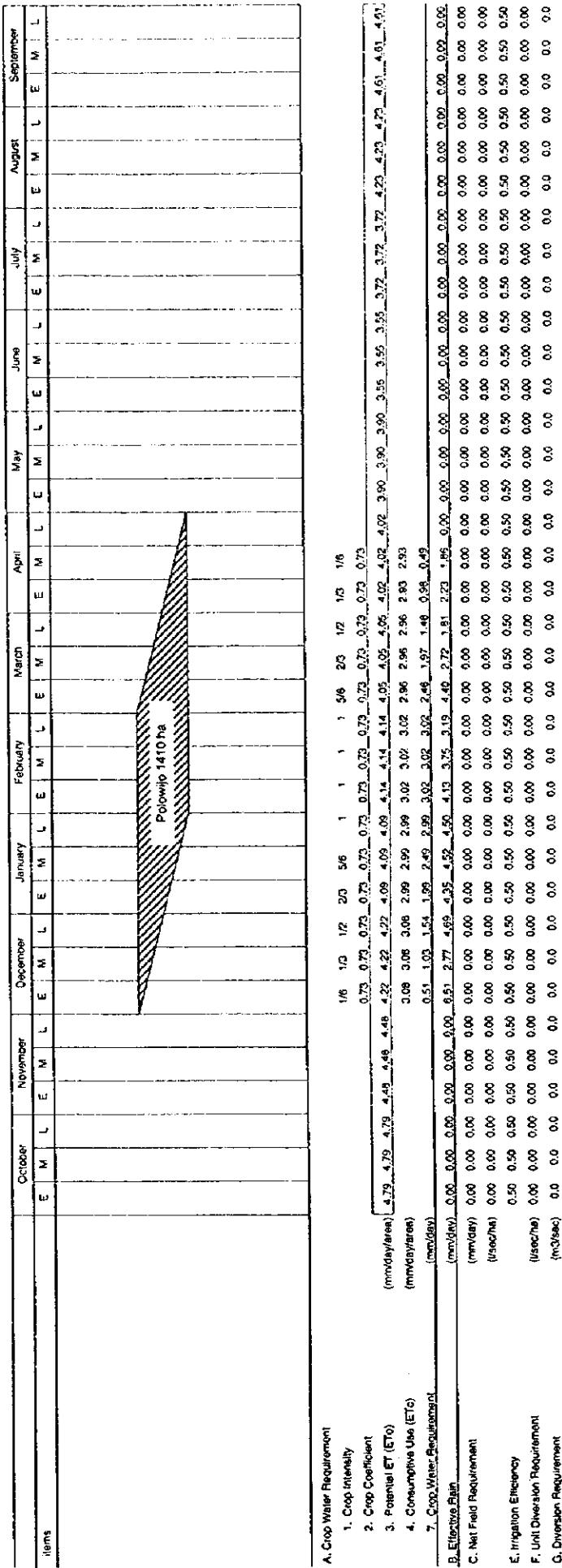


Items	October	November	December	January	February	March	April	May	June	July	August	September
	E	M	L	E	M	L	E	M	L	E	M	L
<b>A. Land Preparation Requirement</b>												
1. Land Preparation Intensity	10.00	16.00	18.00	17.68	17.98	17.61	17.51	17.50	17.43	17.43	17.42	17.42
2. Land Preparation Requirement (mm/day/site) (mm/day)	2.95	5.99	5.99	5.97	5.97	5.97	5.92	5.92	5.92	5.92	5.92	5.92
3. Water Layer Replacement Intensity	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
4. Water Layer Replacement Requirement (mm/day/site) (mm/day)	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
5. Total Requirement for Land Preparation (mm/day)	2.95	5.99	5.99	5.97	5.97	5.97	5.92	5.92	5.92	5.92	5.92	5.92
<b>B. Crop Water Requirement</b>												
1. Crop Intensity	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2. Crop Coefficient	1.10	1.10	1.10	1.07	1.05	1.05	0.98	0.92	0.90	0.87	0.84	0.81
3. Potential ET (ET <sub>0</sub> ) (mm/day/site)	4.79	4.79	4.79	4.48	4.48	4.22	4.22	4.08	4.09	4.14	4.14	4.14
4. Consumptive Use (ETC) (mm/day/site)	4.93	4.64	4.64	4.61	4.43	4.41	4.33	3.84	3.06	2.62	2.36	1.65
5. Percolation (mm/day/site)	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40
6. Crop Water Requirement (mm/day)	9.33	9.04	9.04	8.83	8.81	8.73	8.24	7.40	7.22	6.76	6.16	5.05
<b>C. Effective Emissivity</b>												
7. Irrigation Efficiency	0.45	0.47	0.45	0.35	1.79	1.55	1.29	2.15	3.75	3.64	3.62	3.26
8. Net Field Water Requirement (mm/day)	0.00	0.00	0.00	2.60	4.31	5.60	3.59	9.06	9.96	7.02	6.84	6.77
9. Water Demand (mm/day)	0.00	0.00	0.00	0.30	0.32	0.65	0.42	1.04	1.04	0.86	0.79	0.78
10. Unit Diversions Requirement (m <sup>3</sup> /sec)	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
11. Diversions Requirement (m <sup>3</sup> /sec)	0.0	0.0	0.0	0.60	1.04	1.30	0.83	2.10	2.07	1.76	1.58	1.52

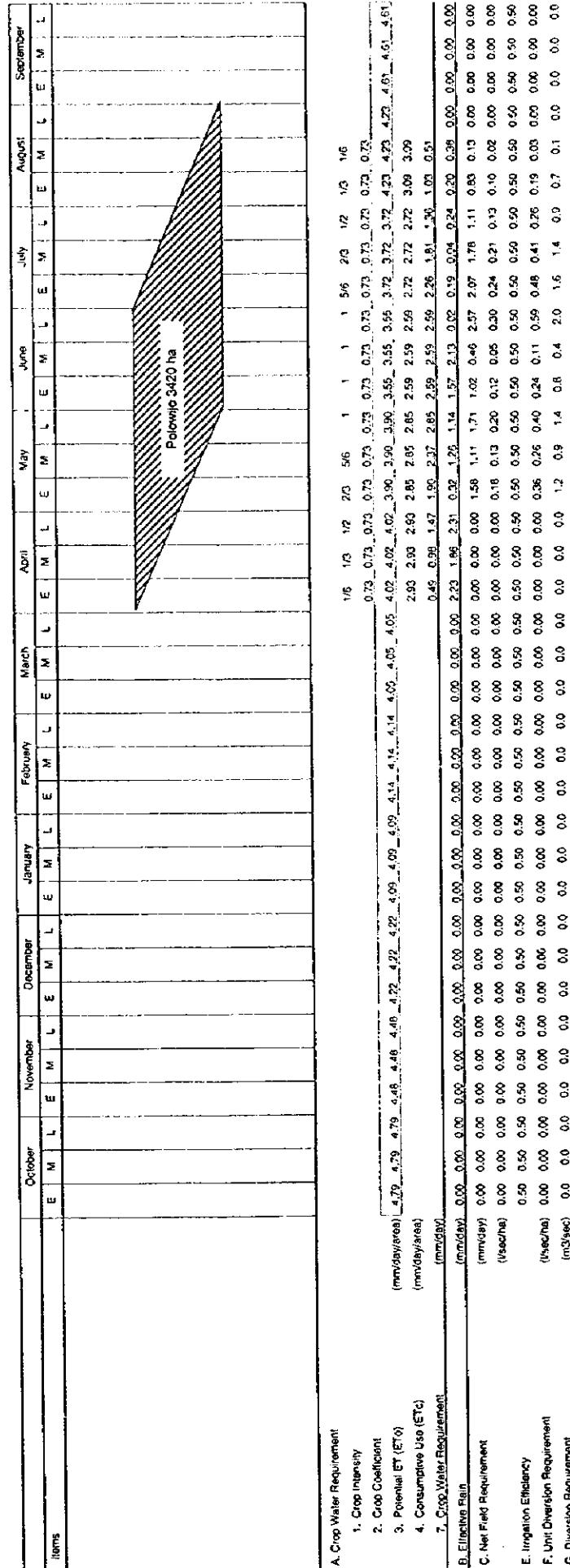
**Future Water Requirement for Dry Season Paddy 3320ha (Lodeogung) Case 2**



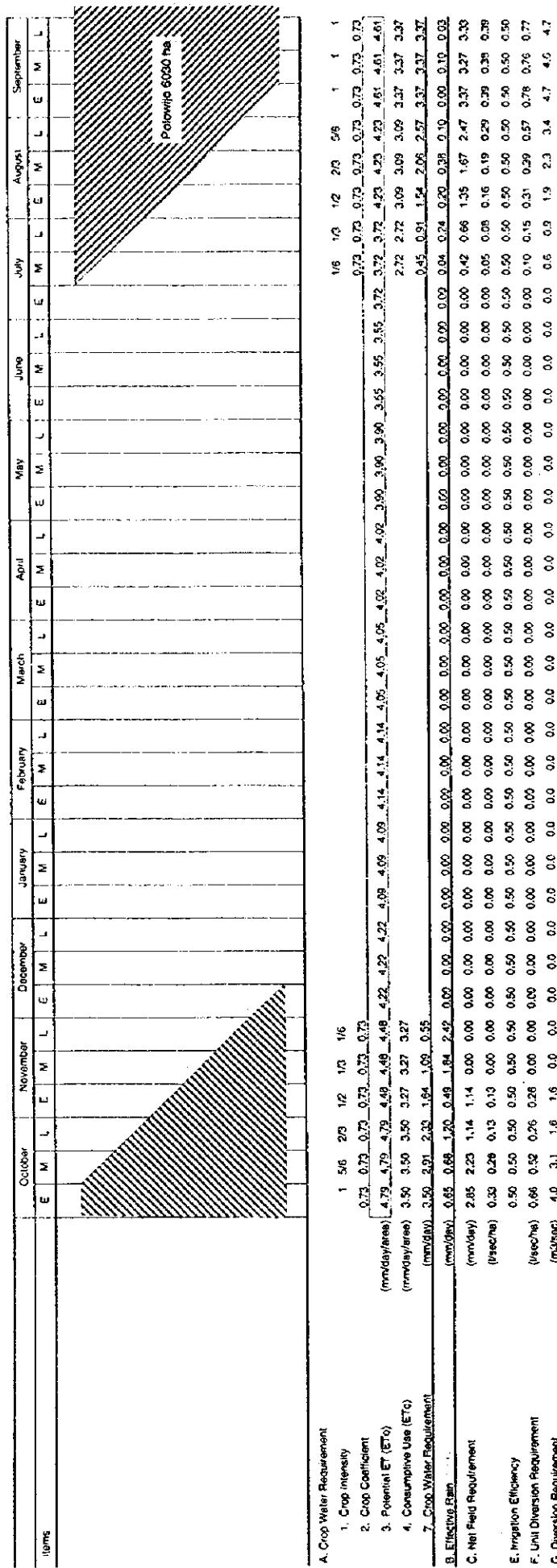
Future Water Requirements for Potomac 141048 (Lodgington) Case 2



Future Water Requirement for Polowijo 3420ha (Lodoagung) Case 2



Future Water Requirement for Pelowijo 6030ha (Lodoagung) Case 2



## Future Water Requirement for Fruit Tree 100ha (Lodoegung) Case 2