

Table A5-5 Summary of Water Balance at the New Lengkong Dam (Saving Water)

DEMAND = 2020

YEAR = 1982

Unit : m<sup>3</sup>/s

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	
						Head = c - d Else d - c				h - i	-j + k + l	-k + g + i	-j + k		-n + o	If o > p = 0 Else p - o			
January	1st	52.26	8.69	8.50	4.49	4.01	29.41	7.36	3.52	2.82	89.20	18.86	70.34	476.80	406.46	20.00	0.00	90.34	
	2nd	59.09	10.10	8.50	5.33	3.17	29.41	7.36	3.52	2.82	95.19	20.27	74.92	584.48	509.57	20.00	0.00	94.92	
	3rd	54.91	7.99	8.50	5.30	3.20	29.41	7.36	3.52	2.82	88.03	18.17	69.86	568.24	498.37	20.00	0.00	89.86	
February	1st	41.31	6.54	8.50	3.67	4.82	29.41	7.36	3.51	2.81	79.05	16.71	62.35	664.95	602.60	20.00	0.00	82.35	
	2nd	38.45	6.89	8.50	2.83	5.66	29.41	7.36	3.51	2.81	77.04	17.06	59.98	575.38	515.40	20.00	0.00	79.98	
	3rd	23.40	3.66	8.50	1.93	6.56	29.41	7.36	3.51	2.81	62.89	13.82	49.06	472.93	423.87	20.00	0.00	69.06	
March	1st	16.22	3.19	8.50	1.09	7.40	29.41	7.36	3.52	2.82	56.56	13.37	43.19	556.17	512.98	20.00	0.00	63.19	
	2nd	14.96	1.91	8.50	1.63	6.87	29.41	7.36	3.52	2.82	54.76	12.09	42.68	569.85	527.17	20.00	0.00	62.68	
	3rd	15.04	2.79	8.50	0.79	7.71	29.41	7.36	3.52	2.82	56.68	12.97	43.71	335.46	291.75	20.00	0.00	63.71	
April	1st	33.96	6.04	8.50	2.86	5.64	29.41	7.36	3.52	2.82	72.53	16.21	56.31	345.65	289.33	20.00	0.00	76.31	
	2nd	28.40	4.50	8.50	2.27	6.22	29.41	7.36	3.52	2.82	67.56	14.67	52.89	294.46	241.57	20.00	0.00	72.89	
	3rd	44.47	8.41	8.50	3.11	5.38	29.41	7.36	3.52	2.82	82.78	18.59	64.20	300.54	236.34	20.00	0.00	84.20	
May	1st	53.28	9.03	8.50	4.63	3.87	29.41	7.36	3.84	3.07	90.40	19.46	70.94	158.40	87.46	20.00	0.00	90.94	
	2nd	60.42	9.62	8.50	6.64	1.85	29.41	7.36	3.84	3.07	95.52	20.04	75.48	98.94	23.46	20.00	0.00	95.48	
	3rd	56.89	9.04	8.50	6.00	2.50	29.41	7.36	3.84	3.07	92.64	19.47	73.17	87.39	14.22	20.00	-5.78	93.17	
June	1st	51.54	9.27	8.50	4.60	3.90	29.41	7.36	5.71	4.56	90.55	21.19	69.36	81.12	11.76	20.00	-3.24	89.36	
	2nd	54.83	9.17	8.50	6.17	2.33	29.41	7.36	5.71	4.56	92.27	21.09	71.18	71.93	0.80	20.00	-19.20	91.18	
	3rd	58.02	9.29	8.50	6.25	2.24	29.41	7.36	5.71	4.56	95.38	21.21	74.17	63.74	-10.43	20.00	-30.43	94.17	
July	1st	53.96	9.36	8.50	5.24	3.25	29.41	7.36	5.88	4.70	92.50	21.42	71.08	59.02	-12.06	20.00	-32.06	91.08	
	2nd	48.49	8.37	8.50	4.82	3.67	29.41	7.36	5.88	4.70	87.45	20.43	67.02	54.56	-12.46	20.00	-32.46	87.02	
	3rd	43.04	7.27	8.50	4.60	3.90	29.41	7.36	5.88	4.70	82.23	19.33	62.90	50.28	-12.62	20.00	-32.62	82.90	
August	1st	38.00	7.01	8.50	3.22	5.27	29.41	7.36	5.88	4.70	78.55	19.07	59.48	52.92	-6.57	20.00	-26.57	79.48	
	2nd	33.90	5.96	8.50	3.14	5.36	29.41	7.36	5.88	4.70	74.55	18.02	56.52	40.82	-15.70	20.00	-35.70	76.52	
	3rd	34.60	6.91	8.50	2.10	6.39	29.41	7.36	5.88	4.70	76.28	18.97	57.31	43.48	-13.83	20.00	-33.83	77.31	
September	1st	38.89	7.18	8.50	2.75	5.75	29.41	7.36	5.80	4.64	79.84	19.18	60.67	40.27	-20.40	20.00	-40.40	80.67	
	2nd	42.64	8.13	8.50	2.94	5.55	29.41	7.36	5.80	4.64	83.40	20.13	63.27	38.96	-24.31	20.00	-44.31	83.27	
	3rd	40.00	7.29	8.50	2.97	5.52	29.41	7.36	5.80	4.64	80.73	19.29	61.44	34.61	-26.83	20.00	-46.83	81.44	
October	1st	38.92	7.42	8.50	2.78	5.72	29.41	7.36	5.87	4.70	79.92	19.47	60.45	38.08	-22.37	20.00	-42.37	80.45	
	2nd	24.23	3.79	8.50	2.21	6.28	29.41	7.36	5.87	4.70	65.82	15.84	49.97	33.03	-16.94	20.00	-36.94	69.97	
	3rd	24.27	3.51	8.50	2.92	5.58	29.41	7.36	5.87	4.70	65.13	15.56	49.57	35.44	-14.13	20.00	-34.13	69.57	
November	1st	26.42	3.56	8.50	2.64	5.86	29.41	7.36	4.73	3.78	66.42	14.69	51.73	29.84	-21.89	20.00	-41.89	71.73	
	2nd	25.82	4.10	8.50	1.96	6.53	29.41	7.36	4.73	3.78	66.49	15.24	51.25	37.43	-13.82	20.00	-33.82	71.25	
	3rd	34.43	7.30	8.50	0.95	7.54	29.41	7.36	4.73	3.78	76.11	18.43	57.68	39.22	-18.46	20.00	-38.46	77.68	
December	1st	40.48	9.24	8.50	1.57	6.93	29.41	7.36	3.60	2.88	80.42	19.48	60.94	76.43	15.49	20.00	-4.51	80.94	
	2nd	57.28	9.59	8.50	4.35	4.15	29.41	7.36	3.60	2.88	94.44	19.83	74.61	177.53	102.92	20.00	0.00	94.61	
	3rd	61.22	10.82	8.50	4.51	3.98	29.41	7.36	3.60	2.88	98.21	21.06	77.15	290.50	213.35	20.00	0.00	97.15	
Total (million m <sup>3</sup> )		1286.09	222.39	268.65	110.33	158.32	930.01	232.65	146.00	116.80	2520.41	571.83	1948.58	6542.79	4594.21	632.45	-545.36	2581.03	
Total in the drought season (million m <sup>3</sup> )		623.98	109.42	134.32	54.63	79.69	465.01	116.32	89.28	71.42	1257.96	297.17	960.79	741.05	-219.74	316.22	-535.96	1277.02	
													Total from July to November (million m <sup>3</sup> ):		553.71			-535.96	1039.67

Annual total deficit : -545.36 million m<sup>3</sup>

: Drought season

Table A5-5 Summary of Water Balance at the New Lengkong Dam  
(No Saving)

DEMAND = 2020 YEAR = 1982

Unit : m<sup>3</sup>/s

		Intigero	Return	Water	Beatas	Net	Total	Return	Industrial	Return	Total	Total	Net	Neutral	Surplus	Required	Net	Total												
		Water	Flow	Demand	Delta	Water	Domestic	Flow	Water	Flow	Demand	Utilizable	Total	Flow	Flow	Maintenance	Flow	Flow	Demand											
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q												
						If d < e - Else d - e											If p > 0 - Else 0													
January	1st	57.30	9.57	8.50	4.80	3.70	29.41	7.36	9.59	7.67	99.99	24.59	75.40	476.80	401.40	20.00	0.00	95.40												
	2nd	64.70	11.12	8.50	5.70	2.80	29.41	7.36	9.59	7.67	106.49	26.15	80.35	584.48	504.13	20.00	0.00	100.35												
	3rd	56.80	8.80	8.50	5.67	2.83	29.41	7.36	9.59	7.67	98.62	23.83	74.79	568.24	493.41	20.00	0.00	94.79												
February	1st	45.30	7.20	8.50	3.93	4.57	29.41	7.36	9.57	7.65	88.84	22.21	66.63	664.95	598.32	20.00	0.00	86.63												
	2nd	42.20	7.59	8.50	3.03	5.47	29.41	7.36	9.57	7.65	86.64	22.60	64.04	575.38	511.33	20.00	0.00	84.04												
	3rd	25.70	4.03	8.50	2.07	6.43	29.41	7.36	9.57	7.65	71.10	19.04	52.06	472.93	420.87	20.00	0.00	72.06												
March	1st	17.80	3.51	8.50	1.17	7.33	29.41	7.36	9.60	7.68	64.13	18.55	45.58	556.17	510.59	20.00	0.00	65.58												
	2nd	16.40	2.11	8.50	1.74	6.76	29.41	7.36	9.60	7.68	62.16	17.14	45.02	569.85	524.83	20.00	0.00	65.02												
	3rd	17.70	3.08	8.50	0.84	7.66	29.41	7.36	9.60	7.68	64.35	18.11	46.25	335.46	289.21	20.00	0.00	66.25												
April	1st	37.20	6.65	8.50	3.06	5.44	29.41	7.36	9.60	7.68	81.64	21.68	59.96	345.65	285.68	20.00	0.00	79.96												
	2nd	31.20	4.95	8.50	2.43	6.07	29.41	7.36	9.60	7.68	76.27	19.99	56.28	294.46	238.18	20.00	0.00	76.28												
	3rd	48.80	9.26	8.50	3.33	5.17	29.41	7.36	9.60	7.68	92.97	24.29	68.68	300.54	231.86	20.00	0.00	88.68												
May	1st	58.40	9.94	8.50	4.95	3.55	29.41	7.36	10.37	8.29	101.72	25.59	76.13	158.40	82.27	20.00	0.00	96.13												
	2nd	66.00	10.59	8.50	7.11	1.39	29.41	7.36	10.37	8.29	107.16	26.24	80.93	98.94	18.01	20.00	-1.99	100.93												
	3rd	62.20	9.95	8.50	6.42	2.08	29.41	7.36	10.37	8.29	104.05	25.60	78.45	87.39	8.94	20.00	-11.06	98.45												
June	1st	56.40	10.21	8.50	4.92	3.58	29.41	7.36	14.93	11.95	104.32	29.51	74.81	81.12	6.31	20.00	-13.69	94.81												
	2nd	59.80	10.09	8.50	6.60	1.90	29.41	7.36	14.93	11.95	106.04	29.39	76.64	71.98	-4.67	20.00	-24.67	96.64												
	3rd	63.40	10.23	8.50	6.69	1.81	29.41	7.36	14.93	11.95	109.55	29.53	80.02	63.74	-16.28	20.00	-36.28	100.02												
July	1st	59.00	10.30	8.50	5.61	2.89	29.41	7.36	15.36	12.29	106.65	29.94	76.71	59.02	-17.69	20.00	-37.69	96.71												
	2nd	53.00	9.21	8.50	5.16	3.34	29.41	7.36	15.36	12.29	101.10	28.86	72.25	54.56	-17.69	20.00	-37.69	92.25												
	3rd	47.00	8.00	8.50	4.92	3.58	29.41	7.36	15.36	12.29	95.34	27.64	67.70	50.28	-17.42	20.00	-37.42	87.70												
August	1st	41.60	7.72	8.50	3.45	5.05	29.41	7.36	15.35	12.28	91.40	27.35	64.05	52.92	-11.13	20.00	-31.13	84.05												
	2nd	37.10	6.57	8.50	3.36	5.14	29.41	7.36	15.35	12.28	86.99	26.20	60.79	40.82	-19.97	20.00	-39.97	80.79												
	3rd	38.00	7.61	8.50	2.25	6.25	29.41	7.36	15.35	12.28	89.00	27.24	61.76	43.48	-18.28	20.00	-38.28	81.76												
September	1st	42.70	7.91	8.50	2.94	5.56	29.41	7.36	15.16	12.12	92.82	27.39	65.43	40.27	-25.17	20.00	-45.17	85.43												
	2nd	46.80	8.95	8.50	3.15	5.35	29.41	7.36	15.16	12.12	96.71	28.44	68.27	38.96	-29.32	20.00	-49.32	88.27												
	3rd	43.90	8.03	8.50	3.18	5.32	29.41	7.36	15.16	12.12	93.78	27.51	66.27	34.61	-31.66	20.00	-51.66	86.27												
October	1st	42.70	8.17	8.50	2.97	5.53	29.41	7.36	15.34	12.27	92.97	27.79	65.18	38.08	-27.10	20.00	-47.10	85.18												
	2nd	26.60	4.17	8.50	2.37	6.13	29.41	7.36	15.34	12.27	77.47	23.80	53.68	33.03	-20.65	20.00	-40.65	73.68												
	3rd	26.50	3.86	8.50	3.12	5.38	29.41	7.36	15.34	12.27	76.62	23.49	53.14	35.44	-17.70	20.00	-37.70	73.14												
November	1st	29.00	3.92	8.50	2.82	5.68	29.41	7.36	12.54	10.03	76.62	21.30	55.32	29.84	-25.48	20.00	-45.48	75.32												
	2nd	28.40	4.51	8.50	2.10	6.40	29.41	7.36	12.54	10.03	76.74	21.90	54.84	37.43	-17.41	20.00	-37.41	74.84												
	3rd	38.00	8.03	8.50	1.02	7.48	29.41	7.36	12.54	10.03	87.42	25.42	62.00	39.22	-22.78	20.00	-42.78	82.00												
December	1st	44.50	10.17	8.50	1.68	6.82	29.41	7.36	9.78	7.83	90.51	25.36	65.15	76.43	11.27	20.00	-8.73	85.15												
	2nd	62.90	10.56	8.50	4.65	3.85	29.41	7.36	9.78	7.83	105.94	25.74	80.20	177.53	97.33	20.00	0.00	100.20												
	3rd	67.20	11.92	8.50	4.83	3.67	29.41	7.36	9.78	7.83	110.06	27.10	82.96	290.50	207.54	20.00	0.00	102.96												
Total (million m <sup>3</sup> )		1409.33	244.85	268.65	118.06	150.59	930.01	232.65	388.00	310.40	2877.94	787.89	2090.05	6542.79	4452.74	632.45	-629.26	2722.49												
Total in the drought season (million m <sup>3</sup> )		683.47	120.46	134.32	58.46	75.87	465.01	116.32	233.80	187.04	1458.14	423.82	1034.32	741.05	-293.26	316.22	-609.48	1350.54												
														Total from July to November (million m <sup>3</sup> ) :		553.71														

Annual total deficit : -629.26 million m<sup>3</sup>

: Drought season

Table A5-5 Summary of Water Balance at the New Lengkong Dam (Saving Water)

DEMAND = 2020

YEAR = 1977

Unit : m<sup>3</sup>/s

		Irrigation Water Demand	Return Flow from Irrigation Area Upstream of Mujkeno	Water Demand in the Fishpond	Primas Delta Irrigation Water Return Flow	Net Water Demand in the Fishpond	Total Domestic Water Demand	Return Flow from Domestic Water Upstream of Mujkeno	Industrial Water Demand	Return Flow from Industrial Water	Total Demand without Maintenance Flow	Total Unusable Return Flow except for Fishpond	Net Total Demand without Maintenance Flow	Natural Flow at the S.L. Dam	Surplus (Deficit) without Maintenance Flow	Required Maintenance Flow	Net Deficit	Total Demand including Maintenance Flow
		a	b	c	d	e If e > d - c = 0 Else d - c	f	g	h	i	j = h + i	k = b + g	l = j - k	m	n = m - l	o	p If p > 0 = 0 Else p	q
January	1st	52.26	8.69	8.50	4.49	4.01	29.41	7.36	3.52	2.82	89.20	18.86	70.34	258.34	188.00	20.00	0.00	90.34
	2nd	59.07	10.10	8.50	5.33	3.17	29.41	7.36	3.52	2.82	95.19	20.27	74.92	248.04	173.12	20.00	0.00	94.92
	3rd	51.91	7.99	8.50	5.30	3.20	29.41	7.36	3.52	2.82	88.03	18.17	69.86	458.07	388.20	20.00	0.00	89.86
February	1st	41.31	6.54	8.50	3.67	4.82	29.41	7.36	3.51	2.81	79.05	16.71	62.35	397.80	335.45	20.00	0.00	82.35
	2nd	38.45	6.89	8.50	2.83	5.66	29.41	7.36	3.51	2.81	77.04	17.06	59.98	358.23	328.25	20.00	0.00	79.98
	3rd	23.40	3.66	8.50	1.93	6.56	29.41	7.36	3.51	2.81	62.89	13.82	49.06	404.65	355.58	20.00	0.00	69.06
March	1st	16.22	3.19	8.50	1.09	7.40	29.41	7.36	3.52	2.82	56.56	13.37	43.19	461.41	418.22	20.00	0.00	63.19
	2nd	14.95	1.91	8.50	1.63	6.87	29.41	7.36	3.52	2.82	54.76	12.09	42.68	550.96	508.28	20.00	0.00	62.68
	3rd	16.04	2.79	8.50	0.79	7.71	29.41	7.36	3.52	2.82	56.68	12.97	43.71	592.30	548.59	20.00	0.00	63.71
April	1st	33.96	6.04	8.50	2.86	5.64	29.41	7.36	3.52	2.82	72.53	16.21	56.31	477.03	420.71	20.00	0.00	76.31
	2nd	28.40	4.50	8.50	2.27	6.22	29.41	7.36	3.52	2.82	67.56	14.67	52.89	306.98	254.09	20.00	0.00	72.89
	3rd	44.47	8.41	8.50	3.11	5.38	29.41	7.36	3.52	2.82	82.78	18.59	64.20	259.72	195.52	20.00	0.00	84.20
May	1st	53.28	9.03	8.50	4.63	3.87	29.41	7.36	3.84	3.07	90.40	19.45	70.94	137.36	66.42	20.00	0.00	90.94
	2nd	60.42	9.62	8.50	6.64	1.85	29.41	7.36	3.84	3.07	95.52	20.04	75.48	101.26	25.78	20.00	0.00	95.48
	3rd	56.89	9.04	8.50	6.00	2.50	29.41	7.36	3.84	3.07	92.64	19.47	73.17	84.81	11.63	20.00	-8.37	93.17
June	1st	51.54	9.27	8.50	4.60	3.90	29.41	7.36	5.71	4.56	90.55	21.19	69.36	128.55	59.19	20.00	0.00	89.36
	2nd	54.83	9.17	8.50	6.17	2.33	29.41	7.36	5.71	4.56	92.27	21.09	71.18	139.28	68.10	20.00	0.00	91.18
	3rd	58.02	9.29	8.50	6.25	2.24	29.41	7.36	5.71	4.56	95.38	21.21	74.17	130.58	56.41	20.00	0.00	94.17
July	1st	53.96	9.36	8.50	5.24	3.25	29.41	7.36	5.88	4.70	92.50	21.42	71.08	60.98	-10.11	20.00	-30.11	91.08
	2nd	48.49	8.37	8.50	4.82	3.67	29.41	7.36	5.88	4.70	87.45	20.43	67.02	42.10	-24.92	20.00	-44.92	87.02
	3rd	43.04	7.27	8.50	4.60	3.90	29.41	7.36	5.88	4.70	82.23	19.33	62.90	50.06	-12.84	20.00	-32.84	82.90
August	1st	38.00	7.01	8.50	3.22	5.27	29.41	7.36	5.88	4.70	78.55	19.07	59.48	40.92	-18.56	20.00	-38.56	79.48
	2nd	33.90	5.96	8.50	3.14	5.36	29.41	7.36	5.88	4.70	74.55	18.02	56.52	35.53	-21.00	20.00	-41.00	76.52
	3rd	34.60	6.91	8.50	2.10	6.39	29.41	7.36	5.88	4.70	76.28	18.97	57.31	34.08	-23.23	20.00	-43.23	77.31
September	1st	38.89	7.18	8.50	2.75	5.75	29.41	7.36	5.80	4.64	79.84	19.18	60.67	34.08	-26.59	20.00	-46.59	80.67
	2nd	42.64	8.13	8.50	2.94	5.55	29.41	7.36	5.80	4.64	83.40	20.13	63.27	30.84	-32.43	20.00	-52.43	83.27
	3rd	40.00	7.29	8.50	2.97	5.52	29.41	7.36	5.80	4.64	80.73	19.29	61.44	23.71	-37.74	20.00	-57.74	81.44
October	1st	38.92	7.42	8.50	2.78	5.72	29.41	7.36	5.87	4.70	79.92	19.47	60.45	21.03	-39.42	20.00	-59.42	80.45
	2nd	24.25	3.79	8.50	2.21	6.28	29.41	7.36	5.87	4.70	65.82	15.84	49.97	17.67	-32.31	20.00	-52.31	69.97
	3rd	24.27	3.51	8.50	2.92	5.58	29.41	7.36	5.87	4.70	65.13	15.56	49.57	25.24	-24.33	20.00	-44.33	69.57
November	1st	26.42	3.56	8.50	2.64	5.86	29.41	7.36	4.73	3.78	66.42	14.69	51.73	23.37	-28.36	20.00	-48.36	71.73
	2nd	25.82	4.10	8.50	1.96	6.53	29.41	7.36	4.73	3.78	66.49	15.24	51.25	36.00	-15.26	20.00	-35.26	71.25
	3rd	34.43	7.30	8.50	0.95	7.54	29.41	7.36	4.73	3.78	76.11	18.43	57.68	62.87	5.20	20.00	-14.80	77.68
December	1st	40.48	9.24	8.50	1.57	6.93	29.41	7.36	3.60	2.88	80.42	19.48	60.94	120.35	59.41	20.00	0.00	80.94
	2nd	57.28	9.59	8.50	4.35	4.15	29.41	7.36	3.60	2.88	94.44	19.83	74.61	136.94	62.32	20.00	0.00	94.61
	3rd	61.22	10.82	8.50	4.51	3.98	29.41	7.36	3.60	2.88	98.21	21.06	77.15	288.78	211.63	20.00	0.00	97.15
Total (million m <sup>3</sup> )		1286.05	222.39	268.65	110.33	158.32	930.01	232.65	146.00	116.80	2520.41	571.83	1948.58	5808.44	3659.87	632.45	-572.95	2581.03
Total in the drought season (million m <sup>3</sup> )		623.98	109.42	134.32	54.63	79.69	465.01	116.32	89.28	71.42	1257.96	297.17	960.79	818.90	-141.90	316.22	-565.00	1277.02
Total from July to November (million m <sup>3</sup> ) :															474.68		-565.00	1039.67

Annual total deficit : -572.95 million m<sup>3</sup>

☐ : Drought season

Table A5-5 Summary of Water Balance at the New Lengkong Dam (No Saving)

DEMAND = 2020 YEAR = 1977

Unit : m<sup>3</sup>/s

		Irrigation Water Demand	Returns Flow from Irrigation Area Upstream of Mojekeri	Water Demand in the Fishpond	Bramas Delta Irrigation Water Return Flow	Net Water Demand in the Fishpond	Total Domestic Water Demand	Return Flow from Domestic Water Upstream of Mojekeri	Industrial Water Demand	Return Flow from Industrial Water	Total Demand without Maintenance Flow	Total Utilizable Returns Flow except for Fishpond	Net Total Demand without Maintenance Flow	Natural Flow at the N.L. Dam	Surplus Deficit without Maintenance Flow	Required Maintenance Flow	Net Deficit	Total Demand including Maintenance Flow					
		a	b	c	d	e If c > d = c - d Else if d > c	f	g	h	i	j = a + h - i	k = b + g - j	l = j - k	m	n = m - l	o	p If n > 0 = 0 Else if p < n = -n	q = l + o					
January	1st	57.30	9.57	8.50	4.80	3.70	29.41	7.36	9.59	7.67	99.99	24.59	75.40	258.34	182.94	20.00	0.00	95.40					
	2nd	64.70	11.12	8.50	5.70	2.80	29.41	7.36	9.59	7.67	106.49	26.15	80.35	243.04	167.69	20.00	0.00	100.35					
	3rd	56.80	8.80	8.50	5.67	2.83	29.41	7.36	9.59	7.67	98.62	23.83	74.79	458.07	383.27	20.00	0.00	94.79					
February	1st	45.30	7.20	8.50	3.93	4.57	29.41	7.36	9.57	7.65	83.84	22.21	66.63	397.80	331.17	20.00	0.00	86.63					
	2nd	42.20	7.59	8.50	3.03	5.47	29.41	7.36	9.57	7.65	86.64	22.60	64.04	388.23	324.18	20.00	0.00	84.04					
	3rd	25.70	4.03	8.50	2.07	6.43	29.41	7.36	9.57	7.65	71.10	19.04	52.06	401.65	352.58	20.00	0.00	72.06					
March	1st	17.80	3.51	8.50	1.17	7.33	29.41	7.36	9.60	7.68	64.13	18.55	45.58	461.41	415.83	20.00	0.00	65.58					
	2nd	16.40	2.11	8.50	1.74	6.76	29.41	7.36	9.60	7.68	62.16	17.14	45.02	550.96	505.93	20.00	0.00	65.02					
	3rd	17.70	3.08	8.50	0.84	7.66	29.41	7.36	9.60	7.68	64.36	18.11	46.25	592.30	546.05	20.00	0.00	66.25					
April	1st	37.20	6.65	8.50	3.06	5.44	29.41	7.36	9.60	7.68	81.64	21.68	59.96	477.03	417.07	20.00	0.00	79.96					
	2nd	31.20	4.95	8.50	2.43	6.07	29.41	7.36	9.60	7.68	76.27	19.99	56.28	306.98	250.70	20.00	0.00	76.28					
	3rd	48.80	9.26	8.50	3.33	5.17	29.41	7.36	9.60	7.68	92.97	24.29	68.68	259.72	191.04	20.00	0.00	88.68					
May	1st	58.40	9.94	8.50	4.95	3.55	29.41	7.36	10.37	8.29	101.72	25.59	76.13	137.36	61.23	20.00	0.00	96.13					
	2nd	66.00	10.59	8.50	7.11	1.39	29.41	7.36	10.37	8.29	107.16	26.24	80.93	101.26	20.33	20.00	0.00	100.93					
	3rd	62.20	9.95	8.50	6.42	2.08	29.41	7.36	10.37	8.29	104.05	25.60	78.45	84.81	6.35	20.00	-13.65	98.45					
June	1st	56.40	10.21	8.50	4.92	3.58	29.41	7.36	14.93	11.93	104.32	29.51	74.81	128.55	53.74	20.00	0.00	94.81					
	2nd	59.80	10.09	8.50	6.60	1.90	29.41	7.36	14.93	11.93	106.04	29.39	76.64	139.28	62.63	20.00	0.00	96.64					
	3rd	63.40	10.23	8.50	6.69	1.81	29.41	7.36	14.93	11.93	109.55	29.53	80.02	130.58	50.56	20.00	0.00	100.02					
July	1st	59.00	10.30	8.50	5.61	2.89	29.41	7.36	15.36	12.29	106.65	29.94	76.71	60.98	-15.73	20.00	-35.73	95.71					
	2nd	53.00	9.21	8.50	5.16	3.34	29.41	7.36	15.36	12.29	101.10	28.86	72.25	42.10	-30.14	20.00	-50.14	92.25					
	3rd	47.00	8.00	8.50	4.92	3.58	29.41	7.36	15.36	12.29	95.34	27.64	67.70	50.06	-17.64	20.00	-37.64	87.70					
August	1st	41.60	7.72	8.50	3.45	5.05	29.41	7.36	15.35	12.28	91.40	27.35	64.05	40.92	-23.13	20.00	-43.13	84.05					
	2nd	37.10	6.57	8.50	3.36	5.14	29.41	7.36	15.35	12.28	86.99	26.20	60.79	35.53	-25.27	20.00	-45.27	80.79					
	3rd	38.00	7.61	8.50	2.25	6.25	29.41	7.36	15.35	12.28	89.00	27.24	61.76	34.08	-27.68	20.00	-47.68	81.76					
September	1st	42.70	7.91	8.50	2.94	5.56	29.41	7.36	15.16	12.12	92.82	27.39	65.43	34.08	-31.35	20.00	-51.35	85.43					
	2nd	46.80	8.95	8.50	3.15	5.35	29.41	7.36	15.16	12.12	96.71	28.44	68.27	30.84	-37.44	20.00	-57.44	88.27					
	3rd	43.90	8.03	8.50	3.18	5.32	29.41	7.36	15.16	12.12	93.78	27.51	66.27	23.71	-42.56	20.00	-62.56	86.27					
October	1st	42.70	8.17	8.50	2.97	5.53	29.41	7.36	15.34	12.27	92.97	27.79	65.18	21.03	-44.15	20.00	-64.15	85.18					
	2nd	26.60	4.17	8.50	2.37	6.13	29.41	7.36	15.34	12.27	77.47	23.80	53.68	17.67	-36.01	20.00	-56.01	73.68					
	3rd	26.50	3.86	8.50	3.12	5.38	29.41	7.36	15.34	12.27	76.62	23.49	53.14	25.24	-27.90	20.00	-47.90	73.14					
November	1st	29.00	3.92	8.50	2.82	5.68	29.41	7.36	12.54	10.03	76.62	21.30	55.32	23.37	-31.95	20.00	-51.95	75.32					
	2nd	28.40	4.51	8.50	2.10	6.40	29.41	7.36	12.54	10.03	76.74	21.90	54.84	36.00	-18.84	20.00	-38.84	74.84					
	3rd	38.00	8.03	8.50	1.02	7.48	29.41	7.36	12.54	10.03	87.42	25.42	62.00	62.87	0.87	20.00	-19.13	82.00					
December	1st	44.50	10.17	8.50	1.68	6.82	29.41	7.36	9.78	7.83	90.51	25.36	65.15	120.35	55.20	20.00	0.00	85.15					
	2nd	62.90	10.56	8.50	4.65	3.85	29.41	7.36	9.78	7.83	105.94	25.74	80.20	136.94	56.74	20.00	0.00	100.20					
	3rd	67.20	11.92	8.50	4.83	3.67	29.41	7.36	9.78	7.83	110.06	27.10	82.96	288.78	205.83	20.00	0.00	102.96					
Total (million m <sup>3</sup> )		1409.33	244.85	268.65	113.06	150.59	930.01	232.65	388.00	310.40	2877.94	787.89	2090.05	5808.44	3718.40	632.45	-637.00	2722.49					
Total in the drought season (million m <sup>3</sup> )		683.47	120.46	134.32	58.46	75.87	465.01	116.32	233.80	187.04	1458.14	423.82	1034.32	818.90	-215.42	316.22	-624.03	1350.54					
														Total from July to November (million m <sup>3</sup> ):		474.68				-624.03		1098.71	

Annual total deficit : -637.00 million m<sup>3</sup>

: Drought season

Table A5-5 Summary of Water Balance at the New Lengkong Dam (No Saving)

DEMAND = 2020

YEAR = 1987

Unit: m<sup>3</sup>/s

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
						Use of d-e			-h+i	-j+k	-l+m	-n+o	-p+q						
January	1st	57.30	9.57	8.50	4.80	3.70	29.41	7.36	9.59	7.67	99.99	24.59	75.40	624.00	548.60	20.00	0.00	95.40	
	2nd	64.70	11.17	8.50	5.70	2.80	29.41	7.36	9.59	7.67	106.49	26.15	80.35	298.14	217.79	20.00	0.00	100.35	
	3rd	56.80	8.80	8.50	5.67	2.83	29.41	7.36	9.59	7.67	98.62	23.83	74.79	495.43	420.69	20.00	0.00	94.79	
February	1st	45.30	7.20	8.50	3.93	4.57	29.41	7.36	9.57	7.65	88.84	22.21	66.63	492.84	426.21	20.00	0.00	86.63	
	2nd	42.20	7.59	8.50	3.03	5.47	29.41	7.36	9.57	7.65	86.64	22.60	64.04	775.27	711.23	20.00	0.00	84.04	
	3rd	25.70	4.03	8.50	2.07	6.43	29.41	7.36	9.57	7.65	71.10	19.04	52.06	653.65	601.58	20.00	0.00	72.06	
March	1st	17.80	3.51	8.50	1.17	7.33	29.41	7.36	9.60	7.68	64.13	18.55	45.58	563.22	517.64	20.00	0.00	65.58	
	2nd	16.40	2.11	8.50	1.74	6.76	29.41	7.36	9.60	7.68	62.16	17.14	45.02	376.57	331.55	20.00	0.00	65.02	
	3rd	17.70	3.08	8.50	0.84	7.66	29.41	7.36	9.60	7.68	64.36	18.11	46.25	351.34	305.09	20.00	0.00	66.25	
April	1st	37.20	6.65	8.50	3.06	5.44	29.41	7.36	9.60	7.68	81.64	21.68	59.96	202.79	142.82	20.00	0.00	79.96	
	2nd	31.20	4.95	8.50	2.43	6.07	29.41	7.36	9.60	7.68	76.27	19.99	56.28	162.12	105.84	20.00	0.00	76.28	
	3rd	48.80	9.26	8.50	3.33	5.17	29.41	7.36	9.60	7.68	92.97	24.29	68.68	163.03	94.35	20.00	0.00	88.68	
May	1st	58.40	9.94	8.50	4.93	3.55	29.41	7.36	10.37	8.29	101.72	25.59	76.13	157.28	81.15	20.00	0.00	96.13	
	2nd	66.00	10.59	8.50	7.11	1.39	29.41	7.36	10.37	8.29	107.16	26.24	80.93	127.29	46.36	20.00	0.00	100.93	
	3rd	62.20	9.95	8.50	6.42	2.08	29.41	7.36	10.37	8.29	104.05	25.60	78.45	87.82	9.37	20.00	-10.63	98.45	
June	1st	56.40	10.21	8.50	4.92	3.58	29.41	7.36	14.93	11.95	104.32	29.51	74.81	100.46	25.65	20.00	0.00	94.81	
	2nd	59.80	10.09	8.50	6.60	1.90	29.41	7.36	14.93	11.95	106.04	29.39	76.64	79.01	2.36	20.00	-17.64	96.64	
	3rd	63.40	10.23	8.50	6.69	1.81	29.41	7.36	14.93	11.95	109.55	29.53	80.02	72.38	-7.64	20.00	-27.64	100.02	
July	1st	59.00	10.30	8.50	5.61	2.89	29.41	7.36	15.36	12.29	106.65	29.94	76.71	60.69	-16.02	20.00	-36.02	96.71	
	2nd	53.00	9.21	8.50	5.16	3.34	29.41	7.36	15.36	12.29	101.10	28.86	72.25	66.46	-5.79	20.00	-25.79	92.25	
	3rd	47.00	8.00	8.50	4.92	3.58	29.41	7.36	15.36	12.29	95.34	27.64	67.70	51.86	-15.84	20.00	-35.84	87.70	
August	1st	41.60	7.22	8.50	3.45	5.05	29.41	7.36	15.35	12.28	91.40	27.35	64.05	58.53	-5.52	20.00	-25.52	84.05	
	2nd	37.10	6.57	8.50	3.36	5.14	29.41	7.36	15.35	12.28	86.99	26.20	60.79	44.58	-16.22	20.00	-36.22	80.79	
	3rd	38.00	7.61	8.50	2.25	6.25	29.41	7.36	15.35	12.28	89.00	27.24	61.76	54.25	-7.52	20.00	-27.52	81.76	
September	1st	42.70	7.91	8.50	2.94	5.56	29.41	7.36	15.16	12.12	92.82	27.39	65.43	39.34	-26.09	20.00	-46.09	85.43	
	2nd	46.80	8.95	8.50	3.15	5.35	29.41	7.36	15.16	12.12	96.71	28.44	68.27	36.13	-32.15	20.00	-52.15	88.27	
	3rd	43.90	8.03	8.50	3.18	5.32	29.41	7.36	15.16	12.12	93.78	27.51	66.27	39.28	-26.99	20.00	-46.99	86.27	
October	1st	42.70	8.17	8.50	2.97	5.53	29.41	7.36	15.34	12.27	92.97	27.79	65.18	29.71	-35.47	20.00	-55.47	85.18	
	2nd	26.60	4.17	8.50	2.37	6.13	29.41	7.36	15.34	12.27	77.47	23.80	53.68	36.74	-16.93	20.00	-36.93	73.68	
	3rd	26.50	3.86	8.50	3.12	5.38	29.41	7.36	15.34	12.27	76.62	23.49	53.14	33.88	-19.25	20.00	-39.25	73.14	
November	1st	29.00	3.92	8.50	2.82	5.68	29.41	7.36	12.54	10.03	76.62	21.30	55.32	23.41	-31.90	20.00	-51.90	75.32	
	2nd	28.40	4.51	8.50	2.10	6.40	29.41	7.36	12.54	10.03	76.74	21.90	54.84	30.07	-24.77	20.00	-44.77	74.84	
	3rd	38.00	8.03	8.50	1.02	7.45	29.41	7.36	12.54	10.03	87.42	25.42	62.00	160.77	98.77	20.00	0.00	82.00	
December	1st	44.50	10.17	8.50	1.68	6.82	29.41	7.36	9.78	7.83	90.51	25.36	65.15	355.58	290.43	20.00	0.00	85.15	
	2nd	62.90	10.56	8.50	4.65	3.85	29.41	7.36	9.78	7.83	105.94	25.74	80.20	485.64	405.45	20.00	0.00	100.20	
	3rd	67.20	11.92	8.50	4.83	3.67	29.41	7.36	9.78	7.83	110.06	27.10	82.96	296.14	213.18	20.00	0.00	102.96	
Total (million m <sup>3</sup> )		1409.33	244.85	268.65	118.06	150.59	930.01	232.65	388.00	310.40	2877.94	787.89	2090.05	6702.47	4612.42	632.45	-542.32	2722.40	
Total in the drought season (million m <sup>3</sup> )		683.47	120.46	134.32	58.46	75.87	465.01	116.32	233.80	187.04	1458.14	423.82	1034.32	891.25	-143.06	316.22	-532.22	1350.54	
Total from July to November (million m <sup>3</sup> ):														673.65			-532.22	1098.71	

Annual total deficit : 542.32 million m<sup>3</sup>

: Drought season

Table A5-5 Summary of Water Balance at the New Lengkong Dam (Saving Water)

DEMAND = 2020 YEAR = 1987

Unit : m<sup>3</sup>s

		Irrigation	Return	Water	Brakas	Net	Total	Return	Industrial	Return	Total	Total	Net	Natural	Surplus	Required	Net	Total					
		Demand	Flow	Demand	Delta	Water	Domestic	Flow	Water	Demand	Flow	Demand	Utilizable	Total	Flow	Deficit	Maintenance	Deficit	Demand				
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q					
						If c > e, f = d - e				h - i	j - k + l	k - l + j	l - j + k		n - m		if p > 0, Else p = 0	q - r					
January	1st	52.26	8.69	8.50	4.49	4.01	29.41	7.36	3.52	2.82	89.20	18.86	70.34	624.00	553.66	20.00	0.00	90.34					
	2nd	59.09	10.10	8.50	5.33	3.17	29.41	7.36	3.52	2.82	95.19	20.27	74.92	298.14	223.23	20.00	0.00	94.92					
	3rd	51.91	7.99	8.50	5.30	3.20	29.41	7.36	3.52	2.82	88.03	18.17	69.86	495.48	425.62	20.00	0.00	89.86					
February	1st	41.31	6.54	8.50	3.67	4.82	29.41	7.36	3.51	2.81	79.05	16.71	62.35	492.84	430.49	20.00	0.00	82.35					
	2nd	38.45	6.89	8.50	2.83	5.66	29.41	7.36	3.51	2.81	77.04	17.06	59.98	775.27	715.29	20.00	0.00	79.98					
	3rd	23.40	3.66	8.50	1.93	6.56	29.41	7.36	3.51	2.81	62.89	13.82	49.06	653.65	604.58	20.00	0.00	69.06					
March	1st	16.22	3.19	8.50	1.09	7.40	29.41	7.36	3.52	2.82	56.56	13.37	43.19	563.22	520.03	20.00	0.00	63.19					
	2nd	14.96	1.91	8.50	1.63	6.87	29.41	7.36	3.52	2.82	54.76	12.09	42.68	376.57	333.89	20.00	0.00	62.68					
	3rd	16.04	2.79	8.50	0.79	7.71	29.41	7.36	3.52	2.82	56.68	12.97	43.71	351.34	307.63	20.00	0.00	63.71					
April	1st	33.96	6.04	8.50	2.86	5.64	29.41	7.36	3.52	2.82	72.53	16.21	56.31	202.79	146.47	20.00	0.00	76.31					
	2nd	28.40	4.50	8.50	2.27	6.22	29.41	7.36	3.52	2.82	67.56	14.67	52.89	162.12	109.23	20.00	0.00	72.89					
	3rd	44.47	8.41	8.50	3.11	5.38	29.41	7.36	3.52	2.82	82.78	18.59	64.20	163.03	98.83	20.00	0.00	84.20					
May	1st	53.28	9.03	8.50	4.63	3.87	29.41	7.36	3.84	3.07	90.40	19.46	70.94	157.28	86.34	20.00	0.00	90.94					
	2nd	60.42	9.62	8.50	6.64	1.85	29.41	7.36	3.84	3.07	95.52	20.04	75.48	127.29	51.81	20.00	0.00	95.48					
	3rd	56.89	9.04	8.50	6.00	2.50	29.41	7.36	3.84	3.07	92.64	19.47	73.17	87.82	14.65	20.00	-5.35	93.17					
June	1st	51.54	9.27	8.50	4.60	3.90	29.41	7.36	5.71	4.56	90.55	21.19	69.36	100.46	31.11	20.00	0.00	89.36					
	2nd	54.83	9.17	8.50	6.17	2.33	29.41	7.36	5.71	4.56	92.27	21.09	71.18	79.01	7.83	20.00	-12.17	91.18					
	3rd	58.02	9.29	8.50	6.25	2.24	29.41	7.36	5.71	4.56	95.38	21.21	74.17	72.33	-1.79	20.00	-21.79	94.17					
July	1st	53.96	9.36	8.50	5.24	3.25	29.41	7.36	5.88	4.70	92.50	21.42	71.08	60.69	-10.39	20.00	-30.39	91.08					
	2nd	48.49	8.37	8.50	4.82	3.67	29.41	7.36	5.88	4.70	87.45	20.43	67.02	66.46	-0.56	20.00	-20.56	87.02					
	3rd	43.04	7.27	8.50	4.60	3.90	29.41	7.36	5.88	4.70	82.23	19.33	62.90	51.86	-11.04	20.00	-31.04	82.90					
August	1st	38.00	7.01	8.50	3.22	5.27	29.41	7.36	5.88	4.70	78.55	19.07	59.48	58.53	-0.96	20.00	-20.96	79.48					
	2nd	33.90	5.96	8.50	3.14	5.36	29.41	7.36	5.88	4.70	74.55	18.02	56.52	44.58	-11.95	20.00	-31.95	76.52					
	3rd	34.60	6.91	8.50	2.10	6.39	29.41	7.36	5.88	4.70	76.28	18.97	57.31	54.25	-3.06	20.00	-23.06	77.31					
September	1st	38.89	7.18	8.50	2.75	5.75	29.41	7.36	5.80	4.64	79.84	19.18	60.67	39.34	-21.33	20.00	-41.33	80.67					
	2nd	42.64	8.13	8.50	2.94	5.55	29.41	7.36	5.80	4.64	83.40	20.13	63.27	36.13	-27.14	20.00	-47.14	83.27					
	3rd	40.00	7.29	8.50	2.97	5.52	29.41	7.36	5.80	4.64	80.73	19.29	61.44	39.28	-22.16	20.00	-42.16	81.44					
October	1st	38.92	7.42	8.50	2.78	5.72	29.41	7.36	5.87	4.70	79.92	19.47	60.45	29.71	-30.74	20.00	-50.74	80.45					
	2nd	24.25	3.79	8.50	2.21	6.28	29.41	7.36	5.87	4.70	65.82	15.84	49.97	36.74	-13.23	20.00	-33.23	69.97					
	3rd	24.27	3.51	8.50	2.92	5.58	29.41	7.36	5.87	4.70	65.13	15.56	49.57	33.88	-15.69	20.00	-35.69	69.57					
November	1st	26.42	3.56	8.50	2.64	5.86	29.41	7.36	4.73	3.78	66.42	14.69	51.73	23.41	-28.32	20.00	-48.32	71.73					
	2nd	25.82	4.10	8.50	1.96	6.53	29.41	7.36	4.73	3.78	66.49	15.24	51.25	30.07	-21.18	20.00	-41.18	71.25					
	3rd	34.43	7.30	8.50	0.95	7.54	29.41	7.36	4.73	3.78	76.11	18.43	57.68	160.77	103.09	20.00	0.00	77.68					
December	1st	40.48	9.24	8.50	1.57	6.93	29.41	7.36	3.60	2.88	80.42	19.48	60.94	355.58	294.65	20.00	0.00	80.94					
	2nd	57.28	9.59	8.50	4.35	4.15	29.41	7.36	3.60	2.88	94.44	19.83	74.61	485.64	411.03	20.00	0.00	94.61					
	3rd	61.22	10.82	8.50	4.51	3.98	29.41	7.36	3.60	2.88	98.21	21.06	77.15	296.14	218.99	20.00	0.00	97.15					
Total (million m <sup>3</sup> )		1266.08	222.39	268.65	110.33	158.32	930.01	232.65	146.00	116.80	2520.41	571.83	1948.58	6702.47	4753.89	632.45	-472.23	2583.03					
Total in the drought season (million m <sup>3</sup> )		623.98	109.42	134.32	54.63	79.69	465.01	116.32	89.28	71.42	1257.96	297.17	960.79	891.25	-69.54	316.22	-467.15	1277.02					
														Total from July to November (million m <sup>3</sup> ):		673.65				-467.15		1039.67	

Annual total deficit : -472.23 million m<sup>3</sup>

: Drought season

Table A5-5 Summary of Water Balance at the New Leugkong Dam (Saving Water)

DEMAND = 2020 YEAR = 1980

Unit : m<sup>3</sup>/s

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t
		Irri- gation Water Demand	Re- turn Flow from Irriga- tion Area Up- stream of Majolan	Water Demand on the Fishpond	Excess Delta Irriga- tion Water Return Flow	Net Water Demand in the Fishpond Else if d < e	Total Doma- sic Water Demand	Return Flow from Doma- sic Water Up- stream of Majolan	Industrial Water Demand	Return Flow from Farm Industrial Water	Total Demand without Majolan Flow	Total Un- usable Return Flow except for Fishpond	Net Total Demand without Majolan Flow	Natural Flow at the N.L. Dam	Surplus Deficit without Majolan Flow	Required Main- tenance flow	Net Deficit Else if p > o	Total Demand including Main- tenance Flow			
January	1st	52.26	8.69	8.50	4.49	4.01	29.41	7.36	3.52	2.82	89.20	18.86	70.34	335.39	265.06	20.00	0.00	90.34			
	2nd	59.09	10.10	8.50	5.33	3.17	29.41	7.36	3.52	2.82	95.19	20.27	74.92	454.96	350.05	20.00	0.00	94.92			
	3rd	51.91	7.99	8.50	5.30	3.20	29.41	7.36	3.52	2.82	88.03	18.17	69.86	534.28	464.41	20.00	0.00	89.86			
February	1st	41.31	6.54	8.50	3.67	4.82	29.41	7.36	3.51	2.81	79.05	16.71	62.35	379.10	316.75	20.00	0.00	82.35			
	2nd	38.45	6.89	8.50	2.83	5.66	29.41	7.36	3.51	2.81	77.04	17.06	59.98	463.69	403.70	20.00	0.00	79.98			
	3rd	23.40	3.66	8.50	1.93	6.56	29.41	7.36	3.51	2.81	62.89	13.82	49.06	579.98	530.91	20.00	0.00	69.06			
March	1st	16.22	3.19	8.50	1.09	7.40	29.41	7.36	3.52	2.82	56.56	13.37	43.19	389.14	345.95	20.00	0.00	63.19			
	2nd	14.96	1.91	8.50	1.63	6.87	29.41	7.36	3.52	2.82	54.76	12.09	42.68	331.57	288.89	20.00	0.00	62.68			
	3rd	16.04	2.79	8.50	0.79	7.71	29.41	7.36	3.52	2.82	56.68	12.97	43.71	271.59	227.83	20.00	0.00	63.71			
April	1st	33.96	6.04	8.50	2.86	5.64	29.41	7.36	3.52	2.82	72.53	16.21	56.31	267.22	210.91	20.00	0.00	76.31			
	2nd	28.40	4.50	8.50	2.27	6.22	29.41	7.36	3.52	2.82	67.56	14.67	52.89	422.32	369.43	20.00	0.00	72.89			
	3rd	44.47	8.41	8.50	3.11	5.38	29.41	7.36	3.52	2.82	82.78	18.59	64.20	383.16	318.96	20.00	0.00	84.20			
May	1st	53.28	9.03	8.50	4.63	3.87	29.41	7.36	3.84	3.07	90.40	19.46	70.94	266.21	195.27	20.00	0.00	90.94			
	2nd	60.42	9.62	8.50	6.64	1.85	29.41	7.36	3.84	3.07	95.52	20.04	75.48	107.61	32.13	20.00	0.00	95.48			
	3rd	56.89	9.04	8.50	6.00	2.50	29.41	7.36	3.84	3.07	92.64	19.47	73.17	92.85	19.68	20.00	-0.32	93.17			
June	1st	51.54	9.27	8.50	4.60	3.90	29.41	7.36	5.71	4.56	90.55	21.19	69.36	85.56	16.21	20.00	-3.79	89.36			
	2nd	54.83	9.17	8.50	6.17	2.33	29.41	7.36	5.71	4.56	92.27	21.09	71.18	62.63	-8.55	20.00	-28.55	91.18			
	3rd	58.02	9.29	8.50	6.25	2.24	29.41	7.36	5.71	4.56	95.38	21.21	74.17	61.90	-12.27	20.00	-32.27	94.17			
July	1st	53.96	9.36	8.50	5.24	3.25	29.41	7.36	5.88	4.70	92.50	21.42	71.08	48.85	-22.23	20.00	-42.23	91.08			
	2nd	48.49	8.37	8.50	4.82	3.67	29.41	7.36	5.88	4.70	87.45	20.43	67.02	45.02	-21.99	20.00	-41.99	87.02			
	3rd	43.04	7.27	8.50	4.60	3.90	29.41	7.36	5.88	4.70	82.23	19.33	62.90	35.17	-27.74	20.00	-47.74	82.90			
August	1st	38.00	7.01	8.50	3.22	5.27	29.41	7.36	5.88	4.70	78.55	19.07	59.48	69.71	10.23	20.00	-9.77	79.48			
	2nd	33.90	5.96	8.50	3.14	5.36	29.41	7.36	5.88	4.70	74.55	18.02	56.52	47.23	-9.29	20.00	-29.29	76.52			
	3rd	34.60	6.91	8.50	2.10	6.39	29.41	7.36	5.88	4.70	76.28	18.97	57.31	30.55	-26.76	20.00	-46.76	77.31			
September	1st	38.89	7.18	8.50	2.75	5.75	29.41	7.36	5.80	4.64	79.84	19.18	60.67	34.75	-25.92	20.00	-45.92	80.67			
	2nd	42.64	8.13	8.50	2.94	5.55	29.41	7.36	5.80	4.64	83.40	20.13	63.27	28.27	-35.00	20.00	-55.00	83.27			
	3rd	40.00	7.29	8.50	2.97	5.52	29.41	7.36	5.80	4.64	80.73	19.29	61.44	25.62	-35.82	20.00	-55.82	81.44			
October	1st	38.92	7.42	8.50	2.78	5.72	29.41	7.36	5.87	4.70	79.92	19.47	60.45	30.77	-29.68	20.00	-49.68	80.45			
	2nd	24.25	3.79	8.50	2.21	6.28	29.41	7.36	5.87	4.70	65.82	15.84	49.97	48.91	-1.07	20.00	-21.07	69.97			
	3rd	24.27	3.51	8.50	2.92	5.58	29.41	7.36	5.87	4.70	65.13	15.56	49.57	44.03	-5.54	20.00	-25.54	69.57			
November	1st	26.42	3.56	8.50	2.64	5.86	29.41	7.36	4.73	3.78	66.42	14.69	51.73	44.30	-7.43	20.00	-27.43	71.73			
	2nd	25.82	4.10	8.50	1.96	6.53	29.41	7.36	4.73	3.78	66.49	15.24	51.25	81.37	30.12	20.00	0.00	71.25			
	3rd	34.43	7.30	8.50	0.95	7.54	29.41	7.36	4.73	3.78	76.11	18.43	57.68	312.77	255.09	20.00	0.00	77.68			
December	1st	40.43	9.24	8.50	1.57	6.93	29.41	7.36	3.60	2.88	80.42	19.48	60.94	522.36	461.42	20.00	0.00	80.94			
	2nd	57.28	9.59	8.50	4.35	4.15	29.41	7.36	3.60	2.88	94.44	19.83	74.61	280.10	205.48	20.00	0.00	94.61			
	3rd	61.22	10.82	8.50	4.51	3.98	29.41	7.36	3.60	2.88	98.21	21.06	77.15	384.97	307.82	20.00	0.00	97.15			
<b>Total</b>							29.41														
<b>Total (million m<sup>3</sup>)</b>		1286.08	222.39	268.65	110.33	158.32	930.01	232.65	146.00	116.80	2520.41	571.83	1948.58	6640.06	4691.48	632.45	-496.97	2581.03			
<b>Total in the drought season (million m<sup>3</sup>)</b>		623.93	109.42	134.32	54.63	79.69	465.01	116.32	89.28	71.42	1257.96	297.17	960.79	992.21	31.42	316.22	-496.67	1277.02			
														<b>Total from July to November (million m<sup>3</sup>) :</b>		810.69		-496.67		1039.67	

Annual total deficit : -496.97 million m<sup>3</sup>

: Drought season

Table A5-5 Summary of Water Balance at the New Lengkong Dam (No Saving)

DEMAND = 2020

YEAR = 1980

Unit : m<sup>3</sup>/s

		Irrigation Water Demand	Return Flow from Irrigation Area Upstream of Mopkeng	Water Demand in the Fishpond	Brantas Delta Irrigation - Water Return Flow	Net Water Demand in the Fishpond	Total Domestic Water Demand	Return Flow from Domestic Water Upstream of Mopkeng	Industrial Water Demand	Return Flow from Industrial Water	Total Demand without Maintenance Flow	Total Unusable Return Flow except for Fishpond	Net Total Demand without Maintenance Flow	Natural Flow at the N.L. Dam	Surplus/Deficit without Maintenance Flow	Required Maintenance Flow	Net Deficit	Total Demand including Maintenance Flow					
		a	b	c	d	e If c > d = c- Else if d < c	f	g	h	i =h*0.8	j =a+c+i+h	k =b+g+i	l =j-k	m	n =m-l	o	p If n > p = 0 Else = p-n	q =o+p					
January	1st	57.30	9.57	8.50	4.60	3.70	29.41	7.36	9.59	7.67	99.99	24.59	75.40	335.39	259.99	20.00	0.00	95.40					
	2nd	64.70	11.12	8.50	5.70	2.80	29.41	7.36	9.59	7.67	106.49	26.15	80.35	454.96	374.61	20.00	0.00	100.35					
	3rd	56.80	8.80	8.50	5.67	2.83	29.41	7.36	9.59	7.67	98.62	23.83	74.79	534.28	459.48	20.00	0.00	94.79					
February	1st	45.30	7.20	8.50	3.93	4.57	29.41	7.36	9.57	7.65	88.84	22.21	66.63	379.10	312.47	20.00	0.00	86.63					
	2nd	42.20	7.59	8.50	3.03	5.47	29.41	7.36	9.57	7.65	86.64	22.60	64.04	463.69	399.64	20.00	0.00	84.04					
	3rd	25.70	4.03	8.50	2.07	6.43	29.41	7.36	9.57	7.65	71.10	19.04	52.06	579.98	527.91	20.00	0.00	72.06					
March	1st	17.80	3.51	8.50	1.17	7.33	29.41	7.36	9.60	7.68	64.13	18.55	45.58	359.14	343.56	20.00	0.00	65.58					
	2nd	16.40	2.11	8.50	1.74	6.76	29.41	7.36	9.60	7.68	62.16	17.14	45.02	331.57	285.55	20.00	0.00	65.02					
	3rd	17.70	3.08	8.50	0.84	7.66	29.41	7.36	9.60	7.68	64.36	18.11	46.25	271.59	225.35	20.00	0.00	66.25					
April	1st	37.20	6.65	8.50	3.06	5.44	29.41	7.36	9.60	7.68	81.64	21.68	59.96	267.22	207.26	20.00	0.00	79.96					
	2nd	31.20	4.95	8.50	2.43	6.07	29.41	7.36	9.60	7.68	76.27	19.99	56.28	422.32	366.04	20.00	0.00	76.28					
	3rd	48.80	9.26	8.50	3.33	5.17	29.41	7.36	9.60	7.68	92.97	24.29	68.68	383.16	314.48	20.00	0.00	88.68					
May	1st	58.40	9.94	8.50	4.95	3.55	29.41	7.36	10.37	8.29	101.72	25.59	76.13	266.21	190.08	20.00	0.00	96.13					
	2nd	66.00	10.59	8.50	7.11	1.39	29.41	7.36	10.37	8.29	107.16	26.24	80.93	107.61	26.68	20.00	0.00	100.93					
	3rd	62.20	9.95	8.50	6.42	2.08	29.41	7.36	10.37	8.29	104.05	25.60	78.45	92.85	14.40	20.00	-5.60	98.45					
June	1st	56.40	10.21	8.50	4.92	3.58	29.41	7.36	14.93	11.95	104.32	29.51	74.81	85.56	10.76	20.00	-9.24	94.81					
	2nd	59.80	10.09	8.50	6.60	1.90	29.41	7.36	14.93	11.95	106.04	29.39	76.64	62.63	-14.02	20.00	-34.02	96.64					
	3rd	63.40	10.23	8.50	6.69	1.81	29.41	7.36	14.93	11.95	109.55	29.53	80.02	61.90	-18.12	20.00	-38.12	100.02					
July	1st	59.00	10.30	8.50	5.61	2.89	29.41	7.36	15.36	12.29	106.65	29.94	76.71	48.85	-27.86	20.00	-47.86	96.71					
	2nd	53.00	9.21	8.50	5.16	3.34	29.41	7.36	15.36	12.29	101.10	28.86	72.25	45.02	-27.22	20.00	-47.22	92.25					
	3rd	47.00	8.00	8.50	4.92	3.58	29.41	7.36	15.36	12.29	95.34	27.64	67.70	35.17	-32.54	20.00	-52.54	87.70					
August	1st	41.60	7.72	8.50	3.45	5.05	29.41	7.36	15.35	12.28	91.40	27.35	64.05	69.71	5.66	20.00	-14.34	84.05					
	2nd	37.10	6.57	8.50	3.36	5.14	29.41	7.36	15.35	12.28	86.99	26.20	60.79	47.23	-13.56	20.00	-33.56	80.79					
	3rd	38.00	7.61	8.50	2.25	6.25	29.41	7.36	15.35	12.28	89.00	27.24	61.76	30.55	-31.21	20.00	-51.21	81.76					
September	1st	42.70	7.91	8.50	2.94	5.56	29.41	7.36	15.16	12.12	92.82	27.39	65.43	34.75	-30.68	20.00	-50.68	85.43					
	2nd	46.80	8.95	8.50	3.15	5.35	29.41	7.36	15.16	12.12	96.71	28.44	68.27	28.27	-40.01	20.00	-60.01	88.27					
	3rd	43.90	8.03	8.50	3.18	5.32	29.41	7.36	15.16	12.12	93.78	27.51	66.27	25.62	-40.65	20.00	-60.65	86.27					
October	1st	42.70	8.17	8.50	2.97	5.53	29.41	7.36	15.34	12.27	92.97	27.79	65.18	30.77	-34.41	20.00	-54.41	85.18					
	2nd	26.60	4.17	8.50	2.37	6.13	29.41	7.36	15.34	12.27	77.47	23.80	53.68	48.91	-4.77	20.00	-24.77	73.68					
	3rd	26.50	3.86	8.50	3.12	5.38	29.41	7.36	15.34	12.27	76.62	23.49	53.14	44.03	-9.11	20.00	-29.11	73.14					
November	1st	29.00	3.92	8.50	2.82	5.68	29.41	7.36	12.54	10.03	76.62	21.30	55.32	44.30	-11.02	20.00	-31.02	75.32					
	2nd	28.40	4.51	8.50	2.10	6.40	29.41	7.36	12.54	10.03	76.74	21.90	54.84	81.37	26.53	20.00	0.00	74.84					
	3rd	38.00	8.03	8.50	1.02	7.48	29.41	7.36	12.54	10.03	87.42	25.42	62.00	312.77	250.76	20.00	0.00	82.00					
December	1st	44.50	10.17	8.50	1.68	6.82	29.41	7.36	9.78	7.83	90.51	25.36	65.15	522.36	457.20	20.00	0.00	85.15					
	2nd	62.90	10.56	8.50	4.65	3.85	29.41	7.36	9.78	7.83	105.94	25.74	80.20	280.10	199.90	20.00	0.00	100.20					
	3rd	67.20	11.92	8.50	4.83	3.67	29.41	7.36	9.78	7.83	110.06	27.10	82.96	384.97	302.01	20.00	0.00	102.96					
Total (million m <sup>3</sup> )		1409.33	244.85	268.65	118.06	150.59	930.01	232.65	388.00	310.40	2877.94	787.89	2090.05	6640.06	4550.01	632.45	-568.68	2722.49					
Total in the drought season (million m <sup>3</sup> )		683.47	120.46	134.32	58.46	75.87	465.01	116.32	233.80	187.04	1458.14	423.82	1034.32	992.21	-42.11	316.22	-563.35	1350.54					
														Total from July to November (million m <sup>3</sup> ):		810.69				-563.35		1098.71	

Annual total deficit : -568.68 million m<sup>3</sup>

: Drought season



Table A5-5 Summary of Water Balance at the New Lengkong Dam (Saving Water)

DEMAND = 2020 YEAR = 1994

Unit : m<sup>3</sup>/s

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	
						Head Loss Flow d-d-c											If a > p = 0 Else d - p - c		
January	1st	52.26	8.69	8.50	4.49	4.01	29.41	7.36	3.52	2.82	89.20	18.86	70.34	200.47	130.13	20.00	0.00	90.34	
	2nd	59.09	10.10	8.50	5.33	3.17	29.41	7.36	3.52	2.82	95.19	20.27	74.92	478.80	403.89	20.00	0.00	94.92	
	3rd	51.91	7.99	8.50	5.30	3.20	29.41	7.36	3.52	2.82	88.03	18.17	69.86	413.41	343.54	20.00	0.00	89.86	
February	1st	41.31	6.54	8.50	3.67	4.82	29.41	7.36	3.51	2.81	79.05	16.71	62.35	510.02	447.67	20.00	0.00	82.35	
	2nd	38.45	6.89	8.50	2.83	5.66	29.41	7.36	3.51	2.81	77.04	17.06	59.98	508.64	448.66	20.00	0.00	79.98	
	3rd	23.40	3.66	8.50	1.93	6.56	29.41	7.36	3.51	2.81	62.89	13.82	49.06	445.51	396.44	20.00	0.00	69.06	
March	1st	16.22	3.19	8.50	1.09	7.40	29.41	7.36	3.52	2.82	55.56	13.37	43.19	687.16	643.97	20.00	0.00	63.19	
	2nd	14.96	1.91	8.50	1.63	6.87	29.41	7.36	3.52	2.82	54.76	12.09	42.68	578.56	535.88	20.00	0.00	62.68	
	3rd	16.04	2.79	8.50	0.79	7.71	29.41	7.36	3.52	2.82	56.68	12.97	43.71	739.81	696.09	20.00	0.00	63.71	
April	1st	33.96	6.04	8.50	2.86	5.64	29.41	7.36	3.52	2.82	72.53	16.21	56.31	399.73	343.41	20.00	0.00	76.31	
	2nd	28.40	4.50	8.50	2.27	6.22	29.41	7.36	3.52	2.82	67.56	14.67	52.89	380.76	327.87	20.00	0.00	72.89	
	3rd	44.47	8.41	8.50	3.11	5.38	29.41	7.36	3.52	2.82	82.78	18.59	64.20	319.65	255.45	20.00	0.00	84.20	
May	1st	53.28	9.03	8.50	4.63	3.87	29.41	7.36	3.84	3.07	90.40	19.46	70.94	207.35	136.41	20.00	0.00	90.94	
	2nd	60.42	9.62	8.50	6.64	1.85	29.41	7.36	3.84	3.07	95.52	20.04	75.48	161.72	86.24	20.00	0.00	95.48	
	3rd	56.89	9.04	8.50	6.00	2.50	29.41	7.36	3.84	3.07	92.64	19.47	73.17	114.67	41.50	20.00	0.00	93.17	
June	1st	51.54	9.27	8.50	4.60	3.90	29.41	7.36	5.71	4.56	90.55	21.19	69.36	105.78	36.42	20.00	0.00	89.36	
	2nd	54.83	9.17	8.50	6.17	2.33	29.41	7.36	5.71	4.56	92.27	21.09	71.18	98.18	27.00	20.00	0.00	91.18	
	3rd	58.02	9.29	8.50	6.25	2.24	29.41	7.36	5.71	4.56	95.38	21.21	74.17	90.93	16.76	20.00	-3.24	94.17	
July	1st	53.96	9.36	8.50	5.24	3.25	29.41	7.36	5.88	4.70	92.50	21.42	71.08	76.59	5.50	20.00	-14.50	91.08	
	2nd	48.49	8.37	8.50	4.82	3.67	29.41	7.36	5.88	4.70	87.45	20.43	67.02	70.53	3.51	20.00	-16.49	87.02	
	3rd	43.04	7.27	8.50	4.60	3.90	29.41	7.36	5.88	4.70	82.23	19.33	62.90	61.53	4.63	20.00	-15.37	82.90	
August	1st	38.00	7.01	8.50	3.22	5.27	29.41	7.36	5.88	4.70	78.55	19.07	59.48	67.06	7.58	20.00	-12.42	79.48	
	2nd	33.90	5.96	8.50	3.14	5.36	29.41	7.36	5.88	4.70	74.55	18.02	56.52	58.39	1.87	20.00	-18.13	76.52	
	3rd	34.60	6.91	8.50	2.10	6.39	29.41	7.36	5.88	4.70	76.28	18.97	57.31	56.04	-1.27	20.00	-21.27	77.31	
September	1st	38.89	7.18	8.50	2.75	5.75	29.41	7.36	5.80	4.64	79.84	19.18	60.67	50.02	-10.65	20.00	-30.65	80.67	
	2nd	42.64	8.13	8.50	2.94	5.55	29.41	7.36	5.80	4.64	83.40	20.13	63.27	47.36	-15.90	20.00	-35.90	83.27	
	3rd	40.00	7.29	8.50	2.97	5.52	29.41	7.36	5.80	4.64	80.73	19.29	61.44	51.41	-10.04	20.00	-30.04	81.44	
October	1st	38.92	7.42	8.50	2.78	5.72	29.41	7.36	5.87	4.70	79.92	19.47	60.45	41.34	-19.11	20.00	-39.11	80.45	
	2nd	24.25	3.79	8.50	2.21	6.28	29.41	7.36	5.87	4.70	65.82	15.84	49.97	54.03	4.06	20.00	-15.94	69.97	
	3rd	24.27	3.51	8.50	2.92	5.58	29.41	7.36	5.87	4.70	65.13	15.56	49.57	49.69	0.12	20.00	-19.88	69.57	
November	1st	26.42	3.56	8.50	2.64	5.86	29.41	7.36	4.73	3.78	66.42	14.69	51.73	55.02	3.30	20.00	-16.70	71.73	
	2nd	25.82	4.10	8.50	1.96	6.53	29.41	7.36	4.73	3.78	66.49	15.24	51.25	62.18	10.93	20.00	-9.07	71.25	
	3rd	34.43	7.30	8.50	0.95	7.54	29.41	7.36	4.73	3.78	76.11	18.43	57.68	77.18	19.50	20.00	-0.50	77.68	
December	1st	40.48	9.24	8.50	1.57	6.93	29.41	7.36	3.60	2.88	80.42	19.48	60.94	141.98	81.04	20.00	0.00	80.94	
	2nd	57.28	9.59	8.50	4.35	4.15	29.41	7.36	3.60	2.88	94.44	19.83	74.61	170.35	95.73	20.00	0.00	94.61	
	3rd	61.22	10.82	8.50	4.51	3.98	29.41	7.36	3.60	2.88	98.21	21.06	77.15	68.83	-8.32	20.00	-28.32	97.15	
Total (million m <sup>3</sup> )		1286.08	222.39	268.65	110.33	158.32	930.01	232.65	146.00	116.80	2520.41	571.83	1948.58	6750.53	4801.95	632.45	-290.33	2581.03	
Total in the drought season (million m <sup>3</sup> )		623.98	109.42	134.32	54.63	79.69	465.01	116.32	89.28	71.42	1257.96	297.17	960.79	1033.85	73.03	316.22	-263.41	1277.02	
													Total from July to November (million m <sup>3</sup> ) :		779.06			-263.41	1039.67

Annual total deficit : -290.33 million m<sup>3</sup>

: Drought season

**Table A5-5 Summary of Water Balance at the New Lengkong Dam  
(No Saving)**

DEMAND = 2020      YEAR = 1994

Unit : m<sup>3</sup>/s

		Irrigation Water Demand	Return Flow from Irrigation Area Upstream of Mopleno	Water Demand in the Fishpond	Brantas Delta Irrigation Water Return Flow	Net Water Demand in the Fishpond	Total Domestic Water Demand	Return Flow from Domestic Water Upstream of Mopleno	Industrial Water Demand	Return Flow from Industrial Water	Total Demand without Maintenance Flow	Total Calculable Return Flow except for Fishpond	Net Total Demand without Maintenance Flow	Natural Flow at the N.L. Dam	Surplus Deficit without Maintenance Flow	Required Maintenance Flow	Net Deficit	Total Demand including Maintenance Flow													
		a	b	c	d	e (f+d-e) Else if d > e	f	g	h	i h-o	j a+b+c+d	k b+g+i	l j-k	m	n m-l	o	p If n > 0 Else if p < 0	q a-i+o													
January	1st	57.30	9.57	8.50	4.80	3.70	29.41	7.36	9.59	7.67	99.99	24.59	75.40	200.47	125.07	20.00	0.00	95.40													
	2nd	64.70	11.12	8.50	5.70	2.80	29.41	7.36	9.59	7.67	106.49	26.15	80.35	478.80	398.45	20.00	0.00	100.35													
	3rd	56.80	8.80	8.50	5.67	2.83	29.41	7.36	9.59	7.67	98.62	23.83	74.79	413.41	338.62	20.00	0.00	94.79													
February	1st	45.30	7.20	8.50	3.93	4.57	29.41	7.36	9.57	7.65	88.84	22.21	66.63	510.02	443.39	20.00	0.00	86.63													
	2nd	42.20	7.59	8.50	3.03	5.47	29.41	7.36	9.57	7.65	86.64	22.60	64.04	508.64	444.59	20.00	0.00	84.04													
	3rd	25.70	4.03	8.50	2.07	6.43	29.41	7.36	9.57	7.65	71.10	19.04	52.06	445.51	393.44	20.00	0.00	72.06													
March	1st	17.80	3.51	8.50	1.17	7.33	29.41	7.36	9.60	7.68	64.13	18.55	45.58	687.16	641.58	20.00	0.00	65.58													
	2nd	16.40	2.11	8.50	1.74	6.76	29.41	7.36	9.60	7.68	62.16	17.14	45.02	578.56	533.53	20.00	0.00	65.02													
	3rd	17.70	3.08	8.50	0.84	7.66	29.41	7.36	9.60	7.68	64.36	18.11	46.25	739.81	693.56	20.00	0.00	66.25													
April	1st	37.20	6.65	8.50	3.06	5.44	29.41	7.36	9.60	7.68	81.64	21.68	59.96	399.73	339.76	20.00	0.00	79.96													
	2nd	31.20	4.95	8.50	2.43	6.07	29.41	7.36	9.60	7.68	76.27	19.99	56.28	350.76	324.47	20.00	0.00	76.28													
	3rd	48.80	9.26	8.50	3.33	5.17	29.41	7.36	9.60	7.68	92.97	24.29	68.68	319.65	250.97	20.00	0.00	88.68													
May	1st	58.40	9.94	8.50	4.95	3.55	29.41	7.36	10.37	8.29	101.72	25.59	76.13	207.35	131.22	20.00	0.00	96.13													
	2nd	66.00	10.59	8.50	7.11	1.39	29.41	7.36	10.37	8.29	107.16	26.24	80.93	161.72	80.79	20.00	0.00	100.93													
	3rd	62.20	9.95	8.50	6.42	2.08	29.41	7.36	10.37	8.29	104.05	25.60	78.45	114.67	36.22	20.00	0.00	98.45													
June	1st	56.40	10.21	8.50	4.92	3.58	29.41	7.36	14.93	11.95	104.32	29.51	74.81	105.78	30.97	20.00	0.00	94.81													
	2nd	59.80	10.09	8.50	6.60	1.90	29.41	7.36	14.93	11.95	106.04	29.39	76.64	98.18	21.54	20.00	0.00	96.64													
	3rd	63.40	10.23	8.50	6.69	1.81	29.41	7.36	14.93	11.95	109.55	29.53	80.02	90.93	10.91	20.00	-9.09	100.02													
July	1st	59.00	10.30	8.50	5.61	2.89	29.41	7.36	15.36	12.29	106.65	29.94	76.71	76.59	-0.12	20.00	-20.12	96.71													
	2nd	53.00	9.21	8.50	5.16	3.34	29.41	7.36	15.36	12.29	101.10	28.86	72.25	70.53	-1.71	20.00	-21.71	92.25													
	3rd	47.00	8.00	8.50	4.92	3.58	29.41	7.36	15.36	12.29	95.34	27.64	67.70	67.53	-0.15	20.00	-20.15	87.70													
August	1st	41.60	7.72	8.50	3.45	5.05	29.41	7.36	15.35	12.28	91.40	27.35	64.05	67.06	3.01	20.00	-16.99	84.05													
	2nd	37.10	6.57	8.50	3.36	5.14	29.41	7.36	15.35	12.28	86.99	26.20	60.79	58.39	-2.40	20.00	-22.40	80.79													
	3rd	38.00	7.61	8.50	2.25	6.25	29.41	7.36	15.35	12.28	89.00	27.24	61.76	56.04	-5.72	20.00	-25.72	81.76													
September	1st	42.70	7.91	8.50	2.94	5.56	29.41	7.36	15.16	12.12	92.82	27.39	65.43	50.02	-15.41	20.00	-35.41	85.43													
	2nd	46.80	8.95	8.50	3.15	5.35	29.41	7.36	15.16	12.12	96.71	28.44	68.27	47.36	-20.91	20.00	-40.91	88.27													
	3rd	43.90	8.03	8.50	3.18	5.32	29.41	7.36	15.16	12.12	93.78	27.51	66.27	51.41	-14.86	20.00	-34.86	86.27													
October	1st	42.70	8.17	8.50	2.97	5.53	29.41	7.36	15.34	12.27	92.97	27.79	65.18	41.34	-23.84	20.00	-43.84	85.18													
	2nd	26.60	4.17	8.50	2.37	6.13	29.41	7.36	15.34	12.27	77.47	23.80	53.68	54.03	0.36	20.00	-19.64	73.68													
	3rd	26.50	3.86	8.50	3.12	5.38	29.41	7.36	15.34	12.27	76.62	23.49	53.14	49.69	-3.45	20.00	-23.45	73.14													
November	1st	29.00	3.92	8.50	2.82	5.68	29.41	7.36	12.54	10.03	76.62	21.30	55.32	55.02	-0.29	20.00	-20.29	75.32													
	2nd	28.40	4.51	8.50	2.10	6.40	29.41	7.36	12.54	10.03	76.74	21.90	54.84	62.18	7.34	20.00	-12.66	74.84													
	3rd	38.00	8.03	8.50	1.02	7.48	29.41	7.36	12.54	10.03	87.42	25.42	62.00	77.18	15.17	20.00	-4.83	82.00													
December	1st	44.50	10.17	8.50	1.68	6.82	29.41	7.36	9.78	7.83	90.51	25.36	65.15	141.98	76.83	20.00	0.00	85.15													
	2nd	62.90	10.56	8.50	4.65	3.85	29.41	7.36	9.78	7.83	105.94	25.74	80.20	170.35	90.15	20.00	0.00	100.20													
	3rd	67.20	11.92	8.50	4.83	3.67	29.41	7.36	9.78	7.83	110.06	27.10	82.96	68.83	-14.13	20.00	-34.13	102.96													
Total (million m <sup>3</sup> )		1409.33	244.85	268.65	118.06	150.59	930.01	232.65	388.00	310.40	2877.94	787.89	2090.05	6750.53	4660.48	632.45	-359.93	2722.49													
Total in the drought season (million m <sup>3</sup> )		683.47	120.46	134.32	58.46	75.87	465.01	116.32	233.80	187.04	1458.14	423.82	1034.32	1033.85	-0.47	316.22	-327.50	1350.54													
														Total from July to November (million m <sup>3</sup> ) :		779.06															

Annual total deficit : -359.93 million m<sup>3</sup>

☐ : Drought season

Table A5-5 Summary of Water Balance at the New Lengkong Dam (Saving Water)

DEMAND = 2020

YEAR = 1991

Unit : m<sup>3</sup>/s

		Irrigation Water Demand	Return Flow from Irrigation Area Upstream of Moplen	Water Demand in the Fishpond	Brantas Delta Irrigation Water Return Flow	Net Water Demand in the Fishpond	Total Domestic Water Demand	Return Flow from Domestic Water Upstream of Moplen	Industrial Water Demand	Return Flow from Industrial Water	Total Demand without Maintenance Flow	Total Unusable Return Flow except for Fishpond	Net Total Demand without Maintenance Flow	Normal Flow at the NL Dam	Surplus (Deficit) without Maintenance Flow	Required Maintenance Flow	Net Deficit	Total Demand including Maintenance Flow													
		a	b	c	d	e If e > c Else d - c	f	g	h	i	j = h - i	k = j - b + g	l = j - k	m	n = m - l	o	p If o > 0 Else 0 - o	q = o + p													
January	1st	52.26	8.69	8.50	4.49	4.01	29.41	7.36	3.52	2.82	89.20	18.86	70.34	294.54	224.20	20.00	0.00	90.34													
	2nd	59.09	10.10	8.50	5.33	3.17	29.41	7.36	3.52	2.82	95.19	20.27	74.92	475.54	400.62	20.00	0.00	94.92													
	3rd	51.91	7.99	8.50	5.30	3.20	29.41	7.36	3.52	2.82	88.03	18.17	69.86	478.23	403.37	20.00	0.00	89.86													
February	1st	41.31	6.51	8.50	3.67	4.82	29.41	7.36	3.51	2.81	79.05	16.71	62.35	429.79	367.44	20.00	0.00	82.35													
	2nd	38.45	6.89	8.50	2.83	5.66	29.41	7.36	3.51	2.81	77.04	17.06	59.98	451.22	421.24	20.00	0.00	79.98													
	3rd	23.40	3.66	8.50	1.93	6.56	29.41	7.36	3.51	2.81	62.89	13.82	49.06	385.29	336.23	20.00	0.00	69.06													
March	1st	16.22	3.19	8.50	1.09	7.40	29.41	7.36	3.52	2.82	56.56	13.37	43.19	389.76	346.57	20.00	0.00	63.19													
	2nd	14.96	1.91	8.50	1.63	6.87	29.41	7.36	3.52	2.82	54.76	12.09	42.68	308.60	265.92	20.00	0.00	62.68													
	3rd	16.04	2.79	8.50	0.79	7.71	29.41	7.36	3.52	2.82	56.68	12.97	43.71	205.28	161.57	20.00	0.00	63.71													
April	1st	33.96	6.04	8.50	2.86	5.64	29.41	7.36	3.52	2.82	72.53	16.21	56.31	378.82	322.51	20.00	0.00	76.31													
	2nd	28.40	4.50	8.50	2.27	6.22	29.41	7.36	3.52	2.82	67.56	14.67	52.89	406.06	353.18	20.00	0.00	72.89													
	3rd	44.47	8.41	8.50	3.11	5.38	29.41	7.36	3.52	2.82	82.78	18.59	64.20	466.18	401.98	20.00	0.00	84.20													
May	1st	53.28	9.03	8.50	4.63	3.87	29.41	7.36	3.84	3.07	90.40	19.46	70.94	243.30	172.36	20.00	0.00	90.94													
	2nd	60.42	9.62	8.50	6.64	1.85	29.41	7.36	3.84	3.07	95.52	20.04	75.48	138.82	63.34	20.00	0.00	95.48													
	3rd	56.89	9.04	8.50	6.00	2.50	29.41	7.36	3.84	3.07	92.64	19.47	73.17	126.10	52.93	20.00	0.00	93.17													
June	1st	51.54	9.27	8.50	4.60	3.90	29.41	7.36	5.71	4.56	90.55	21.19	69.36	88.85	19.50	20.00	-0.50	89.36													
	2nd	54.83	9.17	8.50	6.17	2.33	29.41	7.36	5.71	4.56	92.27	21.09	71.18	86.84	15.66	20.00	-4.34	91.18													
	3rd	58.02	9.29	8.50	6.25	2.24	29.41	7.36	5.71	4.56	95.38	21.21	74.17	76.65	2.50	20.00	-17.50	94.17													
July	1st	53.96	9.36	8.50	5.24	3.25	29.41	7.36	5.88	4.70	92.50	21.42	71.08	75.61	4.53	20.00	-15.47	91.08													
	2nd	48.49	8.37	8.50	4.82	3.67	29.41	7.36	5.88	4.70	87.45	20.43	67.02	70.89	3.88	20.00	-16.12	87.02													
	3rd	43.04	7.27	8.50	4.60	3.90	29.41	7.36	5.88	4.70	82.23	19.33	62.90	66.70	3.80	20.00	-16.20	82.90													
August	1st	38.00	7.01	8.50	3.22	5.27	29.41	7.36	5.88	4.70	78.55	19.07	59.48	64.43	4.95	20.00	-15.05	79.48													
	2nd	33.90	5.96	8.50	3.14	5.36	29.41	7.36	5.88	4.70	74.55	18.02	56.52	59.11	2.59	20.00	-17.41	76.52													
	3rd	34.60	6.91	8.50	2.10	6.39	29.41	7.36	5.88	4.70	76.28	18.97	57.31	53.74	-3.57	20.00	-23.57	77.31													
September	1st	38.89	7.18	8.50	2.75	5.75	29.41	7.36	5.80	4.64	79.84	19.18	60.67	51.52	-9.14	20.00	-29.14	80.67													
	2nd	42.64	8.13	8.50	2.94	5.55	29.41	7.36	5.80	4.64	83.40	20.13	63.27	54.70	-8.57	20.00	-28.57	83.27													
	3rd	40.00	7.29	8.50	2.97	5.52	29.41	7.36	5.80	4.64	80.73	19.29	61.44	50.09	-11.35	20.00	-31.35	81.44													
October	1st	38.92	7.42	8.50	2.78	5.72	29.41	7.36	5.87	4.70	79.92	19.47	60.45	70.15	9.70	20.00	-10.30	80.45													
	2nd	24.25	3.79	8.50	2.21	6.28	29.41	7.36	5.87	4.70	65.82	15.84	49.97	42.62	-7.35	20.00	-27.35	69.97													
	3rd	24.27	3.51	8.50	2.92	5.58	29.41	7.36	5.87	4.70	65.13	15.56	49.57	39.92	-9.65	20.00	-29.65	69.57													
November	1st	26.42	3.56	8.50	2.64	5.86	29.41	7.36	4.73	3.78	66.42	14.69	51.73	44.84	-6.89	20.00	-26.89	71.73													
	2nd	25.82	4.10	8.50	1.96	6.53	29.41	7.36	4.73	3.78	66.49	15.24	51.25	73.42	22.17	20.00	0.00	71.25													
	3rd	34.43	7.30	8.50	0.95	7.54	29.41	7.36	4.73	3.78	76.11	18.43	57.68	133.48	75.80	20.00	0.00	77.68													
December	1st	40.48	9.24	8.50	1.57	6.93	29.41	7.36	3.60	2.88	80.42	19.48	60.94	279.06	218.12	20.00	0.00	80.94													
	2nd	57.28	9.59	8.50	4.35	4.15	29.41	7.36	3.60	2.88	94.44	19.83	74.61	137.32	62.70	20.00	0.00	94.61													
	3rd	61.22	10.82	8.50	4.51	3.98	29.41	7.36	3.60	2.88	98.21	21.06	77.15	251.11	173.95	20.00	0.00	97.15													
Total (million m <sup>3</sup> )		1286.08	222.39	268.65	110.33	158.32	930.04	232.65	146.00	116.80	2520.41	571.83	1948.58	6188.12	4239.54	632.45	-273.35	2581.03													
Total in the drought season (million m <sup>3</sup> )		623.98	109.42	134.32	54.63	79.69	465.01	116.32	89.28	71.42	1257.96	297.17	960.79	1053.75	92.96	316.22	-273.35	1277.02													
Total from July to November (million m <sup>3</sup> ) :														635.72																	

Annual total deficit : -273.35 million m<sup>3</sup>

: Drought season

**Table A5-5 Summary of Water Balance at the New Lengkong Dam  
(No Saving)**

DEMAND = 2020      YEAR = 1991

Unit: m<sup>3</sup>/s

		Irrigation Water Demand	Return Flow from Irrigation Area Upstream of Mojken	Water Demand in the Fishpond	Bypass Delta Irrigation Water Return Flow	Net Water Demand in the Fishpond	Total Domestic Water Demand	Return Flow from Domestic Water Upstream of Mojken	Industrial Water Demand	Return Flow from Industrial Water	Total Demand without Maintenance Flow	Total Utilizable Return Flow except for Fishpond	Net Total Demand without Maintenance Flow	Natural Flow at the N.L. Dam	Surplus Deficit without Maintenance Flow	Required Maintenance Flow	Net Deficit	Total Demand including Maintenance Flow													
																			a	b	c	d	e f = d - c E = e - d	f	g	h	i j = h - g	k	l m = l - k	n o = l - m	p q = o - p R = q - p - c
January	1st	57.30	9.57	8.50	4.80	3.70	29.41	7.36	9.59	7.67	99.99	24.59	75.40	294.54	219.14	20.00	0.00	95.40													
	2nd	64.70	11.12	8.50	5.70	2.80	29.41	7.36	9.59	7.67	106.49	26.15	80.35	475.54	395.19	20.00	0.00	100.35													
	3rd	56.80	8.80	8.50	5.67	2.83	29.41	7.36	9.59	7.67	93.62	23.83	74.79	478.23	403.44	20.00	0.00	94.79													
February	1st	45.30	7.20	8.50	3.93	4.57	29.41	7.36	9.57	7.65	83.84	22.21	66.63	429.79	363.16	20.00	0.00	86.63													
	2nd	42.20	7.59	8.50	3.03	5.47	29.41	7.36	9.57	7.65	86.64	22.60	64.04	481.22	417.17	20.00	0.00	84.04													
	3rd	25.70	4.03	8.50	2.07	6.43	29.41	7.36	9.57	7.65	71.10	19.04	52.06	383.29	333.23	20.00	0.00	72.06													
March	1st	17.80	3.51	8.50	1.17	7.33	29.41	7.36	9.60	7.68	64.13	18.55	45.58	389.76	344.18	20.00	0.00	65.58													
	2nd	16.40	2.11	8.50	1.74	6.76	29.41	7.36	9.60	7.68	62.16	17.14	45.02	308.60	263.58	20.00	0.00	65.02													
	3rd	17.70	3.08	8.50	0.84	7.66	29.41	7.36	9.60	7.68	64.36	18.11	46.25	205.28	159.03	20.00	0.00	66.25													
April	1st	37.20	6.65	8.50	3.06	5.44	29.41	7.36	9.60	7.68	81.64	21.68	59.96	378.82	318.86	20.00	0.00	79.96													
	2nd	31.20	4.95	8.50	2.43	6.07	29.41	7.36	9.60	7.68	76.27	19.99	56.28	406.06	349.78	20.00	0.00	76.28													
	3rd	43.80	9.26	8.50	3.33	5.17	29.41	7.36	9.60	7.68	92.97	24.29	68.68	466.18	397.50	20.00	0.00	88.68													
May	1st	58.40	9.94	8.50	4.95	3.55	29.41	7.36	10.37	8.29	101.72	25.59	76.13	243.30	167.17	20.00	0.00	96.13													
	2nd	66.00	10.59	8.50	7.11	1.39	29.41	7.36	10.37	8.29	107.16	26.24	80.93	138.82	57.89	20.00	0.00	100.93													
	3rd	62.20	9.95	8.50	6.42	2.08	29.41	7.36	10.37	8.29	104.05	25.60	78.45	126.10	47.65	20.00	0.00	98.45													
June	1st	56.40	10.21	8.50	4.92	3.58	29.41	7.36	14.93	11.95	104.32	29.51	74.81	88.86	14.05	20.00	-5.95	94.81													
	2nd	59.80	10.09	8.50	6.60	1.90	29.41	7.36	14.93	11.95	106.04	29.39	76.64	86.84	10.19	20.00	-9.81	96.64													
	3rd	63.40	10.23	8.50	6.69	1.81	29.41	7.36	14.93	11.95	109.55	29.53	80.02	76.66	-3.35	20.00	-23.35	100.02													
July	1st	59.00	10.30	8.50	5.61	2.89	29.41	7.36	15.36	12.29	106.65	29.94	76.71	75.61	-1.10	20.00	-21.10	96.71													
	2nd	53.00	9.21	8.50	5.16	3.34	29.41	7.36	15.36	12.29	101.10	28.86	72.25	70.89	-1.35	20.00	-21.35	92.25													
	3rd	47.00	8.00	8.50	4.92	3.58	29.41	7.36	15.36	12.29	95.34	27.64	67.70	66.70	-1.00	20.00	-21.00	87.70													
August	1st	41.60	7.72	8.50	3.45	5.05	29.41	7.36	15.35	12.28	91.40	27.35	64.05	64.43	0.38	20.00	-19.62	84.05													
	2nd	37.10	6.57	8.50	3.36	5.14	29.41	7.36	15.35	12.28	86.99	26.20	60.79	59.11	-1.68	20.00	-21.68	80.79													
	3rd	38.00	7.61	8.50	2.25	6.25	29.41	7.36	15.35	12.28	89.00	27.24	61.76	53.74	-8.02	20.00	-28.02	81.76													
September	1st	42.70	7.91	8.50	2.94	5.56	29.41	7.36	15.16	12.12	92.82	27.39	65.43	51.52	-13.91	20.00	-33.91	85.43													
	2nd	46.80	8.95	8.50	3.15	5.35	29.41	7.36	15.16	12.12	96.71	28.44	68.27	54.70	-13.58	20.00	-33.58	88.27													
	3rd	43.90	8.03	8.50	3.18	5.32	29.41	7.36	15.16	12.12	93.78	27.51	66.27	50.09	-16.18	20.00	-36.18	86.27													
October	1st	42.70	8.17	8.50	2.97	5.53	29.41	7.36	15.34	12.27	92.97	27.79	65.18	70.15	4.97	20.00	-15.03	85.18													
	2nd	26.60	4.17	8.50	2.37	6.13	29.41	7.36	15.34	12.27	77.47	23.80	53.68	42.62	-11.05	20.00	-31.05	73.68													
	3rd	26.50	3.86	8.50	3.12	5.38	29.41	7.36	15.34	12.27	76.62	23.49	53.14	39.92	-13.21	20.00	-33.21	73.14													
November	1st	29.00	3.92	8.50	2.82	5.68	29.41	7.36	12.54	10.03	76.62	21.30	55.32	44.34	-10.48	20.00	-30.48	75.32													
	2nd	28.40	4.51	8.50	2.10	6.40	29.41	7.36	12.54	10.03	76.74	21.90	54.84	73.42	18.58	20.00	-1.42	74.84													
	3rd	38.00	8.03	8.50	1.02	7.48	29.41	7.36	12.54	10.03	87.42	25.42	62.00	133.48	71.47	20.00	0.00	82.00													
December	1st	44.50	10.17	8.50	1.68	6.82	29.41	7.36	9.78	7.83	90.51	25.36	65.15	279.06	213.91	20.00	0.00	85.15													
	2nd	62.90	10.56	8.50	4.65	3.85	29.41	7.36	9.78	7.83	105.94	25.74	80.20	137.32	57.12	20.00	0.00	100.20													
	3rd	67.20	11.92	8.50	4.83	3.67	29.41	7.36	9.78	7.83	110.06	27.10	82.96	251.11	168.15	20.00	0.00	102.96													
Total (million m <sup>3</sup> )		1409.33	244.85	268.65	118.06	150.59	930.01	232.65	388.00	310.40	2877.94	787.89	2090.05	6188.12	4098.07	632.45	-341.26	2722.49													
Total in the drought season (million m <sup>3</sup> )		683.47	120.46	134.32	58.46	75.87	465.01	116.32	233.80	187.04	1458.14	423.82	1034.32	1053.75	19.44	316.22	-341.26	1350.54													
														Total from July to November (million m <sup>3</sup> ):		835.72														-341.26	1098.71

Annual total deficit: -341.26 million m<sup>3</sup>

: Drought season

**Table A5-5 Summary of Water Balance at the New Lengkong Dam  
(Saving Water)**

DEMAND = 2020      YEAR = 1988

Unit : m<sup>3</sup>/s

		irrigation	Return	Water	Brackish	Net	Total	Return	Industrial	Return	Total	Total	Net	Natural	Surplus	Required	Net	Total		
		Demand	Flow	Demand	Water	Water	Demand	Flow	Demand	Flow	Demand	Utilizable	Total	Demand	Flow	Deficit	Deficit	Demand	Demand	
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q		
						If deficit											If p > 0 Else p = 0			
January	1st	52.26	8.69	8.50	4.49	4.01	29.41	7.36	3.52	2.82	89.20	18.86	70.34	171.31	100.97	20.00	0.00	90.34		
	2nd	59.09	10.10	8.50	5.33	3.17	29.41	7.36	3.52	2.82	95.19	20.27	74.92	306.06	231.14	20.00	0.00	94.92		
	3rd	51.91	7.99	8.50	5.30	3.20	29.41	7.36	3.52	2.82	88.03	18.17	69.86	773.63	703.76	20.00	0.00	89.86		
February	1st	41.31	6.54	8.50	3.67	4.82	29.41	7.36	3.51	2.81	79.05	16.71	62.35	552.25	459.90	20.00	0.00	82.35		
	2nd	38.45	6.89	8.50	2.83	5.66	29.41	7.36	3.51	2.81	77.04	17.06	59.98	352.81	292.83	20.00	0.00	79.98		
	3rd	23.40	3.66	8.50	1.93	6.56	29.41	7.36	3.51	2.81	62.89	13.82	49.06	252.69	203.62	20.00	0.00	69.06		
March	1st	16.22	3.18	8.50	1.09	7.40	29.41	7.36	3.52	2.82	56.56	13.37	43.19	287.02	243.83	20.00	0.00	63.19		
	2nd	14.96	1.91	8.50	1.63	6.87	29.41	7.36	3.52	2.82	54.76	12.09	42.68	457.48	414.81	20.00	0.00	62.68		
	3rd	16.04	2.79	8.50	0.79	7.71	29.41	7.36	3.52	2.82	56.68	12.97	43.71	391.04	347.33	20.00	0.00	63.71		
April	1st	33.96	6.01	8.50	2.86	5.64	29.41	7.36	3.52	2.82	72.53	16.21	56.31	282.33	226.02	20.00	0.00	76.31		
	2nd	28.40	4.50	8.50	2.27	6.22	29.41	7.36	3.52	2.82	67.56	14.67	52.89	198.58	145.70	20.00	0.00	72.89		
	3rd	44.47	8.41	8.50	3.11	5.38	29.41	7.36	3.52	2.82	82.78	18.59	64.20	175.09	110.89	20.00	0.00	84.20		
May	1st	53.28	9.03	8.50	4.63	3.87	29.41	7.36	3.84	3.07	90.40	19.46	70.94	268.79	197.85	20.00	0.00	90.94		
	2nd	60.42	9.62	8.50	6.64	1.85	29.41	7.36	3.84	3.07	95.52	20.04	75.48	271.12	195.65	20.00	0.00	95.48		
	3rd	56.89	9.04	8.50	6.00	2.50	29.41	7.36	3.84	3.07	92.64	19.47	73.17	187.16	113.99	20.00	0.00	93.17		
June	1st	51.54	9.27	8.50	4.60	3.90	29.41	7.36	5.71	4.56	90.55	21.19	69.36	138.98	69.63	20.00	0.00	89.36		
	2nd	54.83	9.17	8.50	6.17	2.33	29.41	7.36	5.71	4.56	92.27	21.09	71.18	129.63	58.45	20.00	0.00	91.18		
	3rd	58.02	9.29	8.50	6.25	2.24	29.41	7.36	5.71	4.56	95.38	21.21	74.17	90.18	16.61	20.00	-3.99	94.17		
July	1st	53.96	9.36	8.50	5.24	3.25	29.41	7.36	5.88	4.70	92.50	21.42	71.08	69.22	-1.86	20.00	-21.86	91.08		
	2nd	48.49	8.37	8.50	4.82	3.67	29.41	7.36	5.88	4.70	87.45	20.43	67.02	70.93	3.91	20.00	-16.09	87.02		
	3rd	43.04	7.27	8.50	4.60	3.90	29.41	7.36	5.88	4.70	82.23	19.33	62.90	62.77	-0.13	20.00	-20.13	82.90		
August	1st	38.00	7.01	8.50	3.22	5.27	29.41	7.36	5.88	4.70	78.55	19.07	59.48	86.90	27.42	20.00	0.00	79.48		
	2nd	33.90	5.96	8.50	3.14	5.36	29.41	7.36	5.88	4.70	74.55	18.02	56.52	52.05	-4.48	20.00	-24.48	76.52		
	3rd	34.60	6.91	8.50	2.10	6.39	29.41	7.36	5.88	4.70	76.28	18.97	57.31	45.13	-12.18	20.00	-32.18	77.31		
September	1st	38.89	7.18	8.50	2.75	5.75	29.41	7.36	5.80	4.64	79.84	19.18	60.67	42.19	-18.47	20.00	-38.47	80.67		
	2nd	42.64	8.13	8.50	2.94	5.55	29.41	7.36	5.80	4.64	83.40	20.13	63.27	37.93	-25.34	20.00	-45.34	83.27		
	3rd	40.00	7.29	8.50	2.97	5.52	29.41	7.36	5.80	4.64	80.73	19.29	61.44	34.20	-27.24	20.00	-47.24	81.44		
October	1st	38.92	7.42	8.50	2.78	5.72	29.41	7.36	5.87	4.70	79.92	19.47	60.45	33.09	-27.36	20.00	-47.36	80.45		
	2nd	24.25	3.79	8.50	2.21	6.28	29.41	7.36	5.87	4.70	65.82	15.84	49.97	57.06	7.09	20.00	-12.91	69.97		
	3rd	24.27	3.51	8.50	2.92	5.58	29.41	7.36	5.87	4.70	65.13	15.56	49.57	62.06	12.49	20.00	-7.51	69.57		
November	1st	26.42	3.56	8.50	2.64	5.86	29.41	7.36	4.73	3.78	66.42	14.69	51.73	71.74	20.02	20.00	0.00	71.73		
	2nd	25.82	4.10	8.50	1.96	6.53	29.41	7.36	4.73	3.78	66.49	15.24	51.25	312.11	260.85	20.00	0.00	71.25		
	3rd	34.43	7.30	8.50	0.95	7.54	29.41	7.36	4.73	3.78	76.11	18.43	57.68	186.80	129.12	20.00	0.00	77.68		
December	1st	40.48	9.24	8.50	1.57	6.93	29.41	7.36	3.60	2.88	80.42	19.48	60.94	239.22	178.29	20.00	0.00	80.94		
	2nd	57.28	9.59	8.50	4.35	4.15	29.41	7.36	3.60	2.88	94.44	19.83	74.61	144.02	69.41	20.00	0.00	94.61		
	3rd	61.22	10.82	8.50	4.51	3.98	29.41	7.36	3.60	2.88	98.21	21.06	77.15	211.21	134.06	20.00	0.00	97.15		
Total (million m <sup>3</sup> )		1286.08	222.39	268.65	110.33	158.32	930.01	232.65	146.00	116.80	2520.41	571.83	1948.58	6266.45	4317.87	632.45	-279.54	2581.03		
Total in the drought season (million m <sup>3</sup> )		623.98	109.42	134.32	54.63	79.69	465.01	116.32	89.28	71.42	1257.96	297.17	960.79	1382.38	421.59	316.22	-279.54	1277.02		
														Total from July to November (million m <sup>3</sup> ):		1072.38			-279.54	1039.67

Annual total deficit : -279.54 million m<sup>3</sup>

: Drought season

Table A5-5 Summary of Water Balance at the New Lengkong Dam (No Saving)

DEMAND = 2020 YEAR = 1988

Unit : m<sup>3</sup>/s

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		a	b	c	d	e If e < c Else d - c	f	g	h	i -b + c	j -a + c + f + h	k -b + g + i	l -j + k	m	n -m + l	o	p If o > 0 Else d - p + c	q	r
		irrigation demand	return flow from irrigation area upstream of Mojekene	water demand in the fishpond	brandy delta irrigation water return flow	net water demand in the fishpond	total domestic water demand	return flow from domestic water upstream of Mojekene	industrial water demand	return flow from industrial water	total demand without municipal flow	total unusable return flow except for fishpond	net total demand without municipal flow	natural flow at the N.L. Dam	surplus deficit without municipal flow	required municipal flow	net deficit	total demand including municipal flow	
January	1st	57.30	9.57	8.50	4.80	3.70	29.41	7.36	9.59	7.67	99.99	24.59	75.40	171.31	95.91	20.00	0.00	95.40	
	2nd	64.70	11.12	8.50	5.70	2.80	29.41	7.36	9.59	7.67	106.49	26.15	80.35	306.06	225.71	20.00	0.00	100.35	
	3rd	56.80	8.80	8.50	5.67	2.83	29.41	7.36	9.59	7.67	98.62	23.83	74.79	773.63	698.83	20.00	0.00	94.79	
February	1st	45.30	7.20	8.50	3.93	4.57	29.41	7.36	9.57	7.65	88.84	22.21	66.63	552.25	485.62	20.00	0.00	86.63	
	2nd	42.20	7.59	8.50	3.03	5.47	29.41	7.36	9.57	7.65	86.64	22.60	64.04	352.81	288.77	20.00	0.00	84.04	
	3rd	25.70	4.03	8.50	2.07	6.43	29.41	7.36	9.57	7.65	71.10	19.04	52.06	252.69	200.62	20.00	0.00	72.06	
March	1st	17.80	3.51	8.50	1.17	7.33	29.41	7.36	9.60	7.68	64.13	18.55	45.58	287.02	241.44	20.00	0.00	65.58	
	2nd	16.40	2.11	8.50	1.74	6.76	29.41	7.36	9.60	7.68	62.16	17.14	45.02	457.48	412.46	20.00	0.00	65.02	
	3rd	17.70	3.08	8.50	0.84	7.66	29.41	7.36	9.60	7.68	64.36	18.11	46.25	391.04	344.79	20.00	0.00	66.25	
April	1st	37.20	6.65	8.50	3.06	5.44	29.41	7.36	9.60	7.68	81.64	21.68	59.96	282.33	222.37	20.00	0.00	79.96	
	2nd	31.20	4.95	8.50	2.43	6.07	29.41	7.36	9.60	7.68	76.27	19.99	56.28	198.58	142.30	20.00	0.00	76.28	
	3rd	48.80	9.26	8.50	3.33	5.17	29.41	7.36	9.60	7.68	92.97	24.29	68.68	175.09	106.41	20.00	0.00	88.68	
May	1st	58.40	9.94	8.50	4.95	3.55	29.41	7.36	10.37	8.29	101.72	25.59	76.13	268.79	192.67	20.00	0.00	96.13	
	2nd	66.00	10.59	8.50	7.11	1.39	29.41	7.36	10.37	8.29	107.16	26.24	80.93	271.12	190.20	20.00	0.00	100.93	
	3rd	62.20	9.95	8.50	6.42	2.08	29.41	7.36	10.37	8.29	104.05	25.60	78.45	187.16	108.71	20.00	0.00	98.45	
June	1st	56.40	10.21	8.50	4.92	3.58	29.41	7.36	14.93	11.95	104.32	29.51	74.81	138.98	64.17	20.00	0.00	94.81	
	2nd	59.80	10.09	8.50	6.60	1.90	29.41	7.36	14.93	11.95	106.04	29.39	76.64	129.63	52.99	20.00	0.00	96.64	
	3rd	63.40	10.23	8.50	6.69	1.81	29.41	7.36	14.93	11.95	109.55	29.53	80.02	90.18	10.16	20.00	-9.84	100.02	
July	1st	59.00	10.30	8.50	5.61	2.89	29.41	7.36	15.36	12.29	106.65	29.94	76.71	69.22	-7.49	20.00	-27.49	96.71	
	2nd	53.00	9.21	8.50	5.16	3.34	29.41	7.36	15.36	12.29	101.10	28.86	72.25	70.93	-1.32	20.00	-21.32	92.25	
	3rd	47.00	8.00	8.50	4.92	3.58	29.41	7.36	15.36	12.29	95.34	27.64	67.70	62.77	-4.93	20.00	-24.93	87.70	
August	1st	41.60	7.72	8.50	3.45	5.05	29.41	7.36	15.35	12.28	91.40	27.35	64.05	86.90	22.85	20.00	0.00	84.05	
	2nd	37.10	6.57	8.50	3.36	5.14	29.41	7.36	15.35	12.28	86.99	26.20	60.79	52.05	-8.75	20.00	-28.75	80.79	
	3rd	38.00	7.61	8.50	2.25	6.25	29.41	7.36	15.35	12.28	89.00	27.24	61.76	45.13	-16.63	20.00	-36.63	81.76	
September	1st	42.70	7.91	8.50	2.94	5.56	29.41	7.36	15.16	12.12	92.82	27.39	65.43	42.19	-23.24	20.00	-43.24	85.43	
	2nd	46.80	8.95	8.50	3.15	5.35	29.41	7.36	15.16	12.12	96.71	28.44	68.27	37.93	-30.34	20.00	-50.34	88.27	
	3rd	43.90	8.03	8.50	3.18	5.32	29.41	7.36	15.16	12.12	93.78	27.51	66.27	34.20	-32.07	20.00	-52.07	86.27	
October	1st	42.70	8.17	8.50	2.97	5.53	29.41	7.36	15.34	12.27	92.97	27.79	65.18	33.02	-32.09	20.00	-52.09	85.18	
	2nd	26.60	4.17	8.50	2.37	6.13	29.41	7.36	15.34	12.27	77.47	23.80	53.68	57.06	3.39	20.00	-16.61	73.68	
	3rd	26.50	3.86	8.50	3.12	5.38	29.41	7.36	15.34	12.27	76.62	23.49	53.14	62.06	8.93	20.00	-11.07	73.14	
November	1st	29.00	3.92	8.50	2.82	5.68	29.41	7.36	12.54	10.03	76.62	21.30	55.32	71.74	16.43	20.00	-3.57	75.32	
	2nd	28.40	4.51	8.50	2.10	6.40	29.41	7.36	12.54	10.03	76.74	21.90	54.84	312.11	257.27	20.00	0.00	74.84	
	3rd	38.00	8.03	8.50	1.02	7.48	29.41	7.36	12.54	10.03	87.42	25.42	62.00	186.80	124.80	20.00	0.00	82.00	
December	1st	44.50	10.17	8.50	1.68	6.82	29.41	7.36	9.78	7.83	90.51	25.36	65.15	239.22	174.07	20.00	0.00	85.15	
	2nd	62.90	10.56	8.50	4.65	3.85	29.41	7.36	9.78	7.83	105.94	25.74	80.20	144.02	63.83	20.00	0.00	100.20	
	3rd	67.20	11.92	8.50	4.83	3.67	29.41	7.36	9.78	7.83	110.06	27.10	82.96	211.21	128.26	20.00	0.00	102.96	
Total (million m <sup>3</sup> )		1409.33	244.85	268.65	118.06	150.59	930.01	232.65	388.00	310.40	2877.94	787.89	2090.05	6266.45	4176.41	632.45	-332.83	2722.49	
Total in the drought season (million m <sup>3</sup> )		683.47	120.46	134.32	58.46	75.87	465.01	116.32	233.80	187.04	1458.14	423.82	1034.32	1382.38	348.07	316.22	-332.83	1350.54	
														Total from July to November (million m <sup>3</sup> ) :		1072.38		-332.83	1093.71

Annual total deficit : 332.83 million m<sup>3</sup>

: Drought season

**Table A5-5 Summary of Water Balance at the New Lengkong Dam (Saving Water)**

DEMAND = 2020 YEAR = 1996

Unit : m<sup>3</sup>/s

		Infiltration Water Demand	Return Flow from Irrigation Area Upstream of Mojkren.	Water Demand in the Fishpond	Brantas Delta Irrigation Water Return Flow	Net Water Demand in the Fishpond	Total Domestic Water Demand	Return Flow from Domestic Water Upstream of Mojkren.	Industrial Water Demand	Return Flow from Industrial Water	Total Demand without Maintenance Flow	Total Utilizable Return Flow except for Fishpond	Net Total Demand without Maintenance Flow	Natural Flow at the N.L. Dam	Surplus Deficit without Maintenance Flow	Required Maintenance Flow	Net Deficit	Total Demand including Maintenance Flow													
		a	b	c	d	e If d > e - c Else d - e	f	g	h	i	j = a + e - f - h	k = b + g - i	l = j - k	m	n = l - m	o	p If o > p - o Else p - o	q = l + o													
January	1st	52.26	8.69	8.50	4.49	4.01	29.41	7.36	3.52	2.82	89.20	18.85	70.34	366.83	296.49	20.00	0.00	90.34													
	2nd	59.09	10.10	8.50	5.33	3.17	29.41	7.36	3.52	2.82	95.19	20.27	74.92	353.31	278.39	20.00	0.00	94.92													
	3rd	51.91	7.99	8.50	5.30	3.20	29.41	7.36	3.52	2.82	88.03	18.17	69.86	427.66	357.80	20.00	0.00	89.86													
February	1st	41.31	6.54	8.50	3.67	4.82	29.41	7.36	3.51	2.81	79.05	16.71	62.35	418.40	356.03	20.00	0.00	82.35													
	2nd	38.45	6.89	8.50	2.83	5.66	29.41	7.36	3.51	2.81	77.04	17.06	59.98	439.14	379.16	20.00	0.00	79.98													
	3rd	23.40	3.66	8.50	1.93	6.56	29.41	7.36	3.51	2.81	62.89	13.82	49.06	492.46	443.39	20.00	0.00	69.06													
March	1st	16.22	3.19	8.50	1.09	7.40	29.41	7.36	3.52	2.82	56.56	13.37	43.19	321.54	278.35	20.00	0.00	63.19													
	2nd	14.95	1.91	8.50	1.63	6.87	29.41	7.36	3.52	2.82	54.76	12.09	42.68	429.28	386.61	20.00	0.00	62.68													
	3rd	16.04	2.79	8.50	0.79	7.71	29.41	7.36	3.52	2.82	56.68	12.97	43.71	381.33	337.62	20.00	0.00	63.71													
April	1st	33.96	6.04	8.50	2.86	5.64	29.41	7.36	3.52	2.82	72.53	16.21	56.31	174.05	117.73	20.00	0.00	76.31													
	2nd	28.40	4.50	8.50	2.27	6.22	29.41	7.36	3.52	2.82	67.56	14.67	52.89	487.20	434.32	20.00	0.00	72.89													
	3rd	44.47	8.41	8.50	3.11	5.38	29.41	7.36	3.52	2.82	82.78	18.59	64.20	300.59	236.39	20.00	0.00	84.20													
May	1st	53.28	9.03	8.50	4.63	3.87	29.41	7.36	3.84	3.07	90.40	19.46	70.94	144.26	73.32	20.00	0.00	90.94													
	2nd	60.42	9.62	8.50	6.64	1.85	29.41	7.36	3.84	3.07	95.52	20.01	75.48	103.58	28.11	20.00	0.00	95.48													
	3rd	56.89	9.04	8.50	6.00	2.50	29.41	7.36	3.84	3.07	92.64	19.47	73.17	102.12	28.95	20.00	0.00	93.17													
June	1st	51.54	9.27	8.50	4.60	3.90	29.41	7.36	5.71	4.56	90.55	21.19	69.36	96.68	27.32	20.00	0.00	89.36													
	2nd	54.83	9.17	8.50	6.17	2.33	29.41	7.36	5.71	4.56	92.27	21.09	71.18	100.49	29.31	20.00	0.00	91.18													
	3rd	58.02	9.29	8.50	6.25	2.24	29.41	7.36	5.71	4.56	95.38	21.21	74.17	86.99	12.82	20.00	-7.18	94.17													
July	1st	53.96	9.36	8.50	5.24	3.25	29.41	7.36	5.88	4.70	92.50	21.42	71.08	84.57	13.40	20.00	-6.51	91.08													
	2nd	43.49	8.37	8.50	4.82	3.67	29.41	7.36	5.88	4.70	87.45	20.43	67.02	74.70	7.68	20.00	-12.32	87.02													
	3rd	43.04	7.27	8.50	4.00	3.90	29.41	7.36	5.88	4.70	82.23	19.33	62.90	66.59	3.69	20.00	-16.31	82.90													
August	1st	38.00	7.01	8.50	3.22	5.27	29.41	7.36	5.88	4.70	78.55	19.07	59.48	72.19	12.71	20.00	-7.29	79.48													
	2nd	33.90	5.96	8.50	3.14	5.36	29.41	7.36	5.88	4.70	74.55	18.02	56.52	118.26	61.74	20.00	0.00	76.52													
	3rd	34.60	6.91	8.50	2.10	6.39	29.41	7.36	5.88	4.70	76.28	18.97	57.31	67.78	10.47	20.00	-9.53	77.31													
September	1st	38.89	7.18	8.50	2.75	5.75	29.41	7.36	5.80	4.64	79.84	19.18	60.67	64.57	3.90	20.00	-16.10	80.67													
	2nd	42.64	8.13	8.50	2.94	5.55	29.41	7.36	5.80	4.64	83.40	20.13	63.27	54.28	-8.99	20.00	-28.99	83.27													
	3rd	40.00	7.29	8.50	2.97	5.52	29.41	7.36	5.80	4.64	80.73	19.29	61.44	56.75	-4.69	20.00	-24.69	81.44													
October	1st	38.92	7.42	8.50	2.78	5.72	29.41	7.36	5.87	4.70	79.92	19.47	60.45	75.27	14.82	20.00	-5.18	80.45													
	2nd	24.25	3.79	8.50	2.21	6.28	29.41	7.36	5.87	4.70	65.82	15.84	49.97	66.33	16.36	20.00	-3.64	69.97													
	3rd	24.27	3.51	8.50	2.92	5.58	29.41	7.36	5.87	4.70	65.13	15.56	49.57	131.15	81.58	20.00	0.00	69.57													
November	1st	26.42	3.56	8.50	2.64	5.86	29.41	7.36	4.73	3.78	66.42	14.69	51.73	165.99	114.26	20.00	0.00	71.73													
	2nd	25.82	4.10	8.50	1.96	6.53	29.41	7.36	4.73	3.78	66.49	15.24	51.25	233.38	182.13	20.00	0.00	71.25													
	3rd	34.43	7.30	8.50	0.95	7.54	29.41	7.36	4.73	3.78	76.11	18.43	57.68	206.52	148.84	20.00	0.00	77.68													
December	1st	40.43	9.24	8.50	1.57	6.93	29.41	7.36	3.60	2.88	80.42	19.48	60.94	284.60	223.66	20.00	0.00	80.94													
	2nd	57.28	9.59	8.50	4.35	4.15	29.41	7.36	3.60	2.88	94.44	19.83	74.61	447.74	373.13	20.00	0.00	94.61													
	3rd	61.22	10.82	8.50	4.51	3.98	29.41	7.36	3.60	2.88	98.21	21.06	77.15	135.40	58.25	20.00	0.00	97.15													
Total (million m <sup>3</sup> )		1286.08	222.39	268.65	110.33	158.32	930.01	232.65	146.00	116.80	2520.41	571.83	1948.58	6664.86	4716.28	632.45	-121.24	2581.03													
Total in the drought season (million m <sup>3</sup> )		623.95	109.42	134.32	54.63	79.69	465.01	116.32	89.28	71.42	1257.96	297.17	960.79	1597.57	636.78	316.22	-121.24	1277.02													
Total from July to November (million m <sup>3</sup> ) :														1352.06																	
Annual total deficit : -121.24 million m <sup>3</sup>																															

☐ : Drought season

**Table A5-5 Summary of Water Balance at the New Lengkong Dam  
(No Saving)**

DEMAND = 2020

YEAR = 1996

Unit : m<sup>3</sup>/s

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	
		Water Demand	Return Flow from Irrigation Area Upstream of Mujken	Water Demand in the Fishpond	Brantas Delta Irrigation Water Return Flow	Net Water Demand in the Fishpond <small>(if &lt; d-e, Else d-e)</small>	Total Domestic Water Demand	Return Flow from Domestic Water Upstream of Mujken	Industrial Water Demand	Return Flow from Industrial Water	Total Demand without Maintenance Flow	Total Utilizable Return Flow except for fishpond	Net Total Demand without Maintenance Flow	Natural Flow at the N.L. Dam	Surplus Deficit without Maintenance Flow	Required Maintenance Flow	Net Deficit <small>(if &lt; p-o, Else of p-o)</small>	Total Demand including Maintenance Flow	
January	1st	57.30	9.57	8.50	4.80	3.70	29.41	7.36	9.59	7.67	99.99	24.59	75.40	366.83	291.43	20.00	0.00	95.40	
	2nd	64.70	11.12	8.50	5.70	2.80	29.41	7.36	9.59	7.67	106.49	26.15	80.35	353.31	272.96	20.00	0.00	100.35	
	3rd	56.80	8.80	8.50	5.67	2.83	29.41	7.36	9.59	7.67	98.62	23.83	74.79	427.66	352.87	20.00	0.00	94.79	
February	1st	45.30	7.20	8.50	3.93	4.57	29.41	7.36	9.57	7.65	88.84	22.21	66.63	418.40	351.77	20.00	0.00	86.63	
	2nd	42.20	7.59	8.50	3.03	5.47	29.41	7.36	9.57	7.65	86.64	22.60	64.04	439.14	375.09	20.00	0.00	84.04	
	3rd	25.70	4.03	8.50	2.07	6.43	29.41	7.36	9.57	7.65	71.10	19.04	52.06	492.46	440.39	20.00	0.00	72.06	
March	1st	17.80	3.51	8.50	1.17	7.33	29.41	7.36	9.60	7.68	64.13	18.55	45.58	321.54	275.96	20.00	0.00	65.58	
	2nd	16.40	2.11	8.50	1.74	6.76	29.41	7.36	9.60	7.68	62.16	17.14	45.02	429.28	384.26	20.00	0.00	65.02	
	3rd	17.70	3.08	8.50	0.84	7.66	29.41	7.36	9.60	7.68	64.36	18.11	46.25	381.33	335.08	20.00	0.00	66.25	
April	1st	37.20	6.65	8.50	3.06	5.44	29.41	7.36	9.60	7.68	81.64	21.68	59.96	174.05	114.09	20.00	0.00	79.96	
	2nd	31.20	4.95	8.50	2.43	6.07	29.41	7.36	9.60	7.68	76.27	19.99	56.28	487.20	430.92	20.00	0.00	76.28	
	3rd	43.80	9.26	8.50	3.33	5.17	29.41	7.36	9.60	7.68	92.97	24.29	68.68	300.59	231.91	20.00	0.00	88.68	
May	1st	53.40	9.94	8.50	4.95	3.55	29.41	7.36	10.37	8.29	101.72	25.59	76.13	144.26	68.13	20.00	0.00	96.13	
	2nd	66.00	10.59	8.50	7.11	1.39	29.41	7.36	10.37	8.29	107.16	26.24	80.93	103.58	22.66	20.00	0.00	100.93	
	3rd	62.20	9.95	8.50	6.42	2.08	29.41	7.36	10.37	8.29	104.05	25.60	78.45	102.12	23.67	20.00	0.00	98.45	
June	1st	56.40	10.21	8.50	4.92	3.58	29.41	7.36	14.93	11.95	104.32	29.51	74.81	96.68	21.87	20.00	0.00	94.81	
	2nd	59.80	10.09	8.50	6.60	1.90	29.41	7.36	14.93	11.95	106.04	29.39	76.64	100.49	23.84	20.00	0.00	96.64	
	3rd	63.40	10.23	8.50	6.59	1.81	29.41	7.36	14.93	11.95	109.55	29.53	80.02	86.99	6.97	20.00	-13.03	100.02	
July	1st	59.00	10.30	8.50	5.61	2.89	29.41	7.36	15.36	12.29	106.65	29.94	76.71	84.57	7.86	20.00	-12.14	96.71	
	2nd	53.00	9.21	8.50	5.16	3.34	29.41	7.36	15.36	12.29	101.10	28.86	72.25	74.70	2.45	20.00	-17.55	92.25	
	3rd	47.00	8.00	8.50	4.92	3.58	29.41	7.36	15.36	12.29	95.34	27.64	67.70	66.59	-1.11	20.00	-21.11	87.70	
August	1st	41.60	7.72	8.50	3.45	5.05	29.41	7.36	15.35	12.28	91.40	27.35	64.05	72.19	8.14	20.00	-11.86	84.05	
	2nd	37.10	6.57	8.50	3.36	5.14	29.41	7.36	15.35	12.28	86.99	26.20	60.79	118.26	57.47	20.00	0.00	80.79	
	3rd	38.00	7.61	8.50	2.25	6.25	29.41	7.36	15.35	12.28	89.00	27.24	61.76	67.78	6.02	20.00	-13.98	81.76	
September	1st	42.70	7.91	8.50	2.94	5.56	29.41	7.36	15.16	12.12	92.82	27.39	65.43	64.57	-0.86	20.00	-20.86	85.43	
	2nd	46.80	8.95	8.50	3.15	5.35	29.41	7.36	15.16	12.12	96.71	28.44	68.27	54.28	-14.00	20.00	-34.00	88.27	
	3rd	43.90	8.03	8.50	3.18	5.32	29.41	7.36	15.16	12.12	93.78	27.51	66.27	56.75	-9.52	20.00	-29.52	86.27	
October	1st	42.70	8.17	8.50	2.97	5.53	29.41	7.36	15.34	12.27	92.97	27.79	65.18	75.27	10.09	20.00	-9.91	85.18	
	2nd	26.60	4.17	8.50	2.37	6.13	29.41	7.36	15.34	12.27	77.47	23.80	53.68	66.33	12.66	20.00	-7.34	73.68	
	3rd	26.50	3.86	8.50	3.12	5.38	29.41	7.36	15.34	12.27	76.62	23.49	53.14	131.15	78.01	20.00	0.00	73.14	
November	1st	29.00	3.92	8.50	2.82	5.68	29.41	7.36	12.54	10.03	76.62	21.30	55.32	165.99	110.67	20.00	0.00	75.32	
	2nd	28.40	4.51	8.50	2.10	6.40	29.41	7.36	12.54	10.03	76.74	21.90	54.84	233.38	178.54	20.00	0.00	74.84	
	3rd	38.00	8.03	8.50	1.02	7.48	29.41	7.36	12.54	10.03	87.42	25.42	62.00	206.52	144.52	20.00	0.00	82.00	
December	1st	44.50	10.17	8.50	1.68	6.82	29.41	7.36	9.78	7.83	90.51	25.36	65.15	284.60	219.48	20.00	0.00	85.15	
	2nd	62.90	10.56	8.50	4.65	3.85	29.41	7.36	9.78	7.83	105.94	25.74	80.20	447.74	367.55	20.00	0.00	100.20	
	3rd	67.20	11.92	8.50	4.83	3.67	29.41	7.36	9.78	7.83	110.06	27.10	82.96	135.40	52.44	20.00	0.00	102.96	
Total (million m <sup>3</sup> )		1409.33	244.85	268.65	118.06	150.59	930.01	232.65	388.00	310.40	2877.94	787.89	2090.05	6664.86	4574.81	632.45	-168.31	2722.49	
Total in the drought season (million m <sup>3</sup> )		683.47	120.46	134.32	58.46	75.87	465.01	116.32	233.80	187.04	1458.14	423.82	1034.32	1597.57	563.26	316.22	-168.31	1350.54	
													Total from July to November (million m <sup>3</sup> ):		1352.06			-168.31	1098.71

Annual total deficit : -168.31 million m<sup>3</sup>

Drought season



**Table A5-5 Summary of Water Balance at the New Lengkong Dam (No Saving)**

DEMAND = 2020 YEAR = 1979

Unit : m<sup>3</sup>/s

		Irrigation Water Demand	Return Flow from Irrigation Area Upstream of Moyken	Water Demand in the Fishpond	Branch Delta Irrigation Water Return Flow	Net Water Demanded in the Fishpond	Total Domestic Water Demand	Return Flow from Domestic Water Upstream of Moyken	Industrial Water Demand	Return Flow from Industrial Water	Total Demand without Maintenance Flow	Total Utilizable Return Flow except for Fishpond	Net Total Demand without Maintenance Flow	Natural Flow at the N.L. Dam	Surplus Deficit without Maintenance Flow	Required Maintenance Flow	Net Deficit	Total Demand including Maintenance Flow															
		a	b	c	d	e If c > d = c - d Else if d > c	f	g	h	i = h - g	j = a + c + f - b	k = b + g + i	l = j - k	m	n = m - l	o	p If n > 0 = n Else if p < 0 = -p	q = l + o															
January	1st	57.30	9.57	8.50	4.80	3.70	29.41	7.36	9.59	7.67	99.99	24.59	75.40	686.90	611.50	20.00	0.00	95.40															
	2nd	64.70	11.12	8.50	5.70	2.80	29.41	7.36	9.59	7.67	106.49	26.15	80.35	692.91	612.56	20.00	0.00	100.35															
	3rd	56.80	8.86	8.50	5.67	2.83	29.41	7.36	9.59	7.67	98.62	23.83	74.79	768.43	693.64	20.00	0.00	94.79															
February	1st	45.30	7.20	8.50	3.93	4.57	29.41	7.36	9.57	7.65	88.84	22.21	66.63	651.81	585.18	20.00	0.00	86.63															
	2nd	42.20	7.59	8.50	3.03	5.47	29.41	7.36	9.57	7.65	86.64	22.60	64.04	623.67	559.63	20.00	0.00	84.04															
	3rd	25.70	4.03	8.50	2.07	6.43	29.41	7.36	9.57	7.65	71.10	19.04	52.06	655.18	603.12	20.00	0.00	72.06															
March	1st	17.80	3.51	8.50	1.17	7.33	29.41	7.36	9.60	7.68	64.13	18.55	45.58	547.89	502.30	20.00	0.00	65.58															
	2nd	16.40	2.11	8.50	1.74	6.76	29.41	7.36	9.60	7.68	62.16	17.14	45.02	408.26	363.24	20.00	0.00	65.02															
	3rd	17.70	3.08	8.50	0.84	7.66	29.41	7.36	9.60	7.68	64.36	18.11	46.25	468.93	422.68	20.00	0.00	66.25															
April	1st	37.20	6.65	8.50	3.06	5.44	29.41	7.36	9.60	7.68	81.64	21.68	59.96	420.96	361.00	20.00	0.00	79.96															
	2nd	31.20	4.95	8.50	2.43	6.07	29.41	7.36	9.60	7.68	76.27	19.99	56.28	570.50	514.22	20.00	0.00	76.28															
	3rd	48.80	9.26	8.50	3.33	5.17	29.41	7.36	9.60	7.68	92.97	24.29	68.68	493.68	425.00	20.00	0.00	88.68															
May	1st	58.40	9.94	8.50	4.95	3.55	29.41	7.36	10.37	8.29	101.72	25.59	76.13	565.56	589.43	20.00	0.00	96.13															
	2nd	66.00	10.59	8.50	7.11	1.39	29.41	7.36	10.37	8.29	107.16	26.24	80.93	486.19	405.27	20.00	0.00	100.93															
	3rd	62.20	9.95	8.50	6.42	2.08	29.41	7.36	10.37	8.29	104.05	25.60	78.45	523.93	445.48	20.00	0.00	98.45															
June	1st	56.40	10.21	8.50	4.92	3.58	29.41	7.36	14.93	11.95	104.32	29.51	74.81	466.17	391.36	20.00	0.00	94.81															
	2nd	59.80	10.09	8.50	6.60	1.90	29.41	7.36	14.93	11.95	106.04	29.39	76.64	339.33	262.69	20.00	0.00	96.64															
	3rd	63.40	10.23	8.50	6.69	1.81	29.41	7.36	14.93	11.95	109.55	29.53	80.02	141.79	61.77	20.00	0.00	100.02															
July	1st	59.00	10.30	8.50	5.61	2.89	29.41	7.36	15.36	12.29	106.65	29.94	76.71	108.52	31.81	20.00	0.00	96.71															
	2nd	53.00	9.21	8.50	5.16	3.34	29.41	7.36	15.36	12.29	101.10	28.86	72.25	102.20	29.95	20.00	0.00	92.25															
	3rd	47.00	8.00	8.50	4.92	3.58	29.41	7.36	15.36	12.29	95.34	27.64	67.70	75.30	7.60	20.00	-12.40	87.70															
August	1st	41.60	7.72	8.50	3.45	5.05	29.41	7.36	15.35	12.28	91.40	27.35	64.05	97.77	33.72	20.00	0.00	84.05															
	2nd	37.10	6.57	8.50	3.36	5.14	29.41	7.36	15.35	12.28	86.99	26.20	60.79	79.21	18.42	20.00	-1.58	80.79															
	3rd	38.00	7.61	8.50	2.25	6.25	29.41	7.36	15.35	12.28	89.00	27.24	61.76	64.06	2.30	20.00	-17.70	81.76															
September	1st	42.70	7.91	8.50	2.94	5.56	29.41	7.36	15.16	12.12	92.82	27.39	65.43	46.53	-18.96	20.00	-38.96	85.43															
	2nd	46.80	8.95	8.50	3.15	5.35	29.41	7.36	15.16	12.12	96.71	28.44	68.27	46.44	-21.84	20.00	-41.84	88.27															
	3rd	43.90	8.03	8.50	3.18	5.32	29.41	7.36	15.16	12.12	93.78	27.51	66.27	40.12	-26.15	20.00	-46.15	86.27															
October	1st	42.70	8.17	8.50	2.97	5.53	29.41	7.36	15.34	12.27	92.97	27.79	65.18	43.58	-21.60	20.00	-41.60	85.18															
	2nd	26.60	4.17	8.50	2.37	6.13	29.41	7.36	15.34	12.27	77.47	23.80	53.68	44.68	-8.99	20.00	-28.99	73.68															
	3rd	26.50	3.86	8.50	3.12	5.38	29.41	7.36	15.34	12.27	76.62	23.49	53.14	61.34	8.21	20.00	-11.79	73.14															
November	1st	29.00	3.92	8.50	2.82	5.68	29.41	7.36	12.54	10.03	76.62	21.30	55.32	74.92	19.60	20.00	-0.40	75.32															
	2nd	28.40	4.51	8.50	2.10	6.40	29.41	7.36	12.54	10.03	76.74	21.90	54.84	71.40	16.56	20.00	-3.44	74.84															
	3rd	38.00	8.03	8.50	1.02	7.48	29.41	7.36	12.54	10.03	87.42	25.42	62.00	86.65	24.65	20.00	0.00	82.00															
December	1st	44.50	10.17	8.50	1.68	6.82	29.41	7.36	9.78	7.83	90.51	25.36	65.15	164.63	99.48	20.00	0.00	85.15															
	2nd	62.90	10.56	8.50	4.65	3.85	29.41	7.36	9.78	7.83	105.94	25.74	80.20	162.57	82.37	20.00	0.00	100.20															
	3rd	67.20	11.92	8.50	4.83	3.67	29.41	7.36	9.78	7.83	110.06	27.10	82.96	358.09	275.13	20.00	0.00	102.96															
Total (million m <sup>3</sup> )		1409.33	244.85	268.65	118.06	150.59	930.01	232.65	388.00	310.40	2877.94	787.89	2090.05	9941.70	7851.66	632.45	-215.12	2722.49															
Total in the drought season (million m <sup>3</sup> )		683.47	120.46	134.32	58.46	75.87	465.01	116.32	233.80	187.04	1458.14	423.82	1034.32	1736.72	702.40	316.22	-215.12	1350.54															
Total from July to November (million m <sup>3</sup> ):															918.26																		
Annual total deficit : -215.12 million m <sup>3</sup>																																	

☐ : Drought season

**Table A5-5 Summary of Water Balance at the New Lengkong Dam (Saving Water)**

DEMAND = 2020 YEAR = 1979

Unit : m<sup>3</sup>/s

		irrigation	Return	Water	Beant	Net	Total	Return	Industrial	Return	Total	Total	Net	Natural	Surplus	Required	Net	Total					
		Demand	Flow	Demand	Delta	Water	Domestic	Flow	Water	Flow	Ubrable	Ubrable	Total	Flow	Deficit	Maintenance	Deficit	Demand					
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q					
						(f-d-e-c)				(h-i)	(j-k-l)	(k-l-g)	(l-k)		(n-m)		(p-o)	(q-o)					
January	1st	52.26	8.69	8.50	4.49	4.01	29.41	7.36	3.52	2.82	89.20	18.86	70.34	686.90	616.56	20.00	0.00	90.34					
	2nd	59.09	10.10	8.50	5.33	3.17	29.41	7.36	3.52	2.82	95.19	20.27	74.92	692.91	617.99	20.00	0.00	94.92					
	3rd	54.91	7.99	8.50	5.30	3.20	29.41	7.36	3.52	2.82	88.03	18.17	69.86	768.43	698.57	20.00	0.00	89.86					
February	1st	41.31	6.54	8.50	3.67	4.82	29.41	7.36	3.51	2.81	79.05	16.71	62.35	651.81	589.46	20.00	0.00	82.35					
	2nd	38.45	6.89	8.50	2.83	5.66	29.41	7.36	3.51	2.81	77.04	17.06	59.98	623.67	563.69	20.00	0.00	79.98					
	3rd	23.40	3.66	8.50	1.93	6.56	29.41	7.36	3.51	2.81	62.89	13.82	49.06	655.18	606.12	20.00	0.00	69.06					
March	1st	16.22	3.19	8.50	1.09	7.40	29.41	7.36	3.52	2.82	56.56	13.37	43.19	547.89	504.70	20.00	0.00	63.19					
	2nd	14.96	1.91	8.50	1.63	6.87	29.41	7.36	3.52	2.82	54.76	12.09	42.68	408.26	365.58	20.00	0.00	62.68					
	3rd	16.04	2.79	8.50	0.79	7.71	29.41	7.36	3.52	2.82	56.68	12.97	43.71	468.93	425.21	20.00	0.00	63.71					
April	1st	33.96	6.04	8.50	2.86	5.64	29.41	7.36	3.52	2.82	72.53	16.21	56.31	420.96	364.65	20.00	0.00	76.31					
	2nd	28.40	4.50	8.50	2.27	6.22	29.41	7.36	3.52	2.82	67.56	14.67	52.89	570.50	517.61	20.00	0.00	72.89					
	3rd	44.47	8.41	8.50	3.11	5.38	29.41	7.36	3.52	2.82	82.78	18.59	64.20	493.68	429.48	20.00	0.00	84.20					
May	1st	53.28	9.03	8.50	4.63	3.87	29.41	7.36	3.84	3.07	90.40	19.46	70.94	665.56	594.62	20.00	0.00	90.94					
	2nd	60.42	9.62	8.50	6.64	1.85	29.41	7.36	3.84	3.07	95.52	20.04	75.48	486.19	410.72	20.00	0.00	95.48					
	3rd	56.89	9.04	8.50	6.00	2.50	29.41	7.36	3.84	3.07	92.64	19.47	73.17	523.93	450.76	20.00	0.00	93.17					
June	1st	51.54	9.27	8.50	4.60	3.90	29.41	7.36	5.71	4.56	90.55	21.19	69.36	466.17	396.81	20.00	0.00	89.36					
	2nd	54.83	9.17	8.50	6.17	2.33	29.41	7.36	5.71	4.56	92.27	21.09	71.18	339.33	268.15	20.00	0.00	91.18					
	3rd	58.02	9.29	8.50	6.25	2.24	29.41	7.36	5.71	4.56	95.38	21.21	74.17	141.79	67.62	20.00	0.00	94.17					
July	1st	53.96	9.36	8.50	5.24	3.25	29.41	7.36	5.83	4.70	92.50	21.42	71.08	108.52	37.43	20.00	0.00	91.08					
	2nd	48.49	8.37	8.50	4.82	3.67	29.41	7.36	5.83	4.70	87.45	20.43	67.02	102.20	35.18	20.00	0.00	87.02					
	3rd	43.04	7.27	8.50	4.60	3.90	29.41	7.36	5.83	4.70	82.23	19.33	62.90	75.30	12.40	20.00	-7.60	82.90					
August	1st	38.00	7.01	8.50	3.22	5.27	29.41	7.36	5.83	4.70	78.55	19.07	59.48	97.77	38.29	20.00	0.00	79.48					
	2nd	33.90	5.96	8.50	3.14	5.36	29.41	7.36	5.83	4.70	74.55	18.02	56.52	79.21	22.69	20.00	0.00	76.52					
	3rd	34.60	6.91	8.50	2.10	6.39	29.41	7.36	5.83	4.70	76.28	18.97	57.31	64.06	6.75	20.00	-13.25	77.31					
September	1st	38.89	7.18	8.50	2.75	5.75	29.41	7.36	5.80	4.64	79.84	19.18	60.67	46.53	-14.14	20.00	-34.14	80.67					
	2nd	42.64	8.13	8.50	2.94	5.55	29.41	7.36	5.80	4.64	83.40	20.13	63.27	46.44	-16.83	20.00	-36.83	83.27					
	3rd	40.00	7.29	8.50	2.97	5.52	29.41	7.36	5.80	4.64	80.73	19.29	61.44	40.12	-21.32	20.00	-41.32	81.44					
October	1st	38.92	7.42	8.50	2.78	5.72	29.41	7.36	5.87	4.70	79.92	19.47	60.45	43.58	-16.87	20.00	-36.87	80.45					
	2nd	24.25	3.79	8.50	2.21	6.28	29.41	7.36	5.87	4.70	65.82	15.84	49.97	44.68	-5.29	20.00	-25.29	69.97					
	3rd	24.27	3.51	8.50	2.92	5.58	29.41	7.36	5.87	4.70	65.13	15.56	49.57	61.34	11.77	20.00	-8.23	69.57					
November	1st	26.42	3.56	8.50	2.64	5.86	29.41	7.36	4.73	3.78	66.42	14.69	51.73	74.92	23.19	20.00	0.00	71.73					
	2nd	25.82	4.10	8.50	1.96	6.53	29.41	7.36	4.73	3.78	66.49	15.24	51.25	71.40	20.15	20.00	0.00	71.25					
	3rd	34.43	7.30	8.50	0.95	7.54	29.41	7.36	4.73	3.78	76.11	18.43	57.68	86.65	28.98	20.00	0.00	77.68					
December	1st	40.48	9.24	8.50	1.57	6.93	29.41	7.36	3.60	2.88	80.42	19.48	60.94	164.63	103.69	20.00	0.00	80.94					
	2nd	57.28	9.59	8.50	4.35	4.15	29.41	7.36	3.60	2.88	94.44	19.83	74.61	162.57	87.95	20.00	0.00	94.61					
	3rd	61.22	10.82	8.50	4.51	3.98	29.41	7.36	3.60	2.88	98.21	21.06	77.15	358.09	280.93	20.00	0.00	97.15					
Total (million m <sup>3</sup> )		1286.08	222.39	268.65	110.33	158.32	930.01	232.65	146.00	116.80	2520.41	571.83	1948.58	9941.70	7993.12	632.45	-178.36	2581.03					
Total in the drought season (million m <sup>3</sup> )		623.98	109.42	134.32	54.63	79.69	465.01	116.32	89.28	71.42	1257.96	297.17	960.79	1736.72	775.92	316.22	-178.36	1277.02					
														Total from July to November (million m <sup>3</sup> ) :		918.26				-178.36		1039.67	

Annual total deficit : -178.36 million m<sup>3</sup>

: Drought season

Table A5-5 Summary of Water Balance at the New Lengkong Dam (No Saving)

DEMAND = 2020

YEAR = 1995

Unit : m<sup>3</sup>/s

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18					
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r					
						If d > e - e Else if d < e											If o > p - o Else if p < o							
January	1st	57.30	9.57	8.50	4.80	3.70	29.41	7.36	9.59	7.67	99.99	24.59	75.40	211.96	136.56	20.00	0.00	95.40						
	2nd	64.70	11.12	8.50	5.70	2.80	29.41	7.36	9.59	7.67	106.49	26.15	80.35	313.00	232.65	20.00	0.00	100.35						
	3rd	56.80	8.80	8.50	5.67	2.83	29.41	7.36	9.59	7.67	98.62	23.83	74.79	440.10	365.31	20.00	0.00	94.79						
February	1st	45.30	7.20	8.50	3.93	4.57	29.41	7.36	9.57	7.65	88.84	22.21	66.63	602.31	535.68	20.00	0.00	86.63						
	2nd	42.20	7.59	8.50	3.03	5.47	29.41	7.36	9.57	7.65	86.64	22.60	64.04	520.12	456.07	20.00	0.00	84.04						
	3rd	25.70	4.03	8.50	2.07	6.43	29.41	7.36	9.57	7.65	71.10	19.04	52.06	503.34	451.28	20.00	0.00	72.06						
March	1st	17.80	3.51	8.50	1.17	7.33	29.41	7.36	9.60	7.68	64.13	18.55	45.58	476.27	430.69	20.00	0.00	65.58						
	2nd	16.40	2.11	8.50	1.74	6.76	29.41	7.36	9.60	7.68	62.16	17.14	45.02	673.60	628.58	20.00	0.00	65.02						
	3rd	17.70	3.08	8.50	0.84	7.66	29.41	7.36	9.60	7.68	64.36	18.11	46.25	607.84	561.59	20.00	0.00	66.25						
April	1st	37.20	6.65	8.50	3.06	5.44	29.41	7.36	9.60	7.68	81.64	21.68	59.96	600.91	540.95	20.00	0.00	79.96						
	2nd	31.20	4.95	8.50	2.43	6.07	29.41	7.36	9.60	7.68	76.27	19.99	56.28	353.69	297.41	20.00	0.00	76.28						
	3rd	48.80	9.26	8.50	3.33	5.17	29.41	7.36	9.60	7.68	92.97	24.29	68.68	218.56	149.88	20.00	0.00	88.68						
May	1st	58.40	9.94	8.50	4.95	3.55	29.41	7.36	10.37	8.29	101.72	25.59	76.13	247.90	171.78	20.00	0.00	96.13						
	2nd	66.00	10.59	8.50	7.11	1.39	29.41	7.36	10.37	8.29	107.16	26.24	80.93	181.21	100.29	20.00	0.00	100.93						
	3rd	62.20	9.95	8.50	6.42	2.08	29.41	7.36	10.37	8.29	104.05	25.60	78.45	117.41	38.96	20.00	0.00	93.45						
June	1st	56.40	10.21	8.50	4.92	3.58	29.41	7.36	14.93	11.95	104.32	29.51	74.81	131.19	56.38	20.00	0.00	94.81						
	2nd	59.80	10.09	8.50	6.60	1.90	29.41	7.36	14.93	11.95	106.04	29.39	76.64	209.70	133.05	20.00	0.00	96.64						
	3rd	63.40	10.23	8.50	6.69	1.81	29.41	7.36	14.93	11.95	109.55	29.53	80.02	262.46	182.44	20.00	0.00	100.02						
July	1st	59.00	10.30	8.50	5.61	2.89	29.41	7.36	15.36	12.29	106.65	29.94	76.71	136.36	59.65	20.00	0.00	96.71						
	2nd	53.00	9.21	8.50	5.16	3.34	29.41	7.36	15.36	12.29	101.10	28.86	72.25	118.67	46.43	20.00	0.00	92.25						
	3rd	47.00	8.00	8.50	4.92	3.58	29.41	7.36	15.36	12.29	95.34	27.64	67.70	95.15	27.45	20.00	0.00	87.70						
August	1st	41.60	7.72	8.50	3.45	5.05	29.41	7.36	15.35	12.28	91.40	27.35	64.05	76.82	12.77	20.00	-7.23	84.05						
	2nd	37.10	6.57	8.50	3.36	5.14	29.41	7.36	15.35	12.28	86.99	26.20	60.79	63.60	2.80	20.00	-17.20	80.79						
	3rd	38.00	7.61	8.50	2.25	6.25	29.41	7.36	15.35	12.28	89.00	27.24	61.76	62.39	0.63	20.00	-19.37	81.76						
September	1st	42.70	7.91	8.50	2.94	5.56	29.41	7.36	15.16	12.12	92.82	27.39	65.43	57.70	-7.73	20.00	-27.73	85.43						
	2nd	46.80	8.95	8.50	3.15	5.35	29.41	7.36	15.16	12.12	96.71	28.44	68.27	46.77	-21.50	20.00	-41.50	88.27						
	3rd	43.90	8.03	8.50	3.18	5.32	29.41	7.36	15.16	12.12	93.78	27.51	66.27	48.23	-18.04	20.00	-38.04	86.27						
October	1st	42.70	8.17	8.50	2.97	5.53	29.41	7.36	15.34	12.27	92.97	27.79	65.18	42.72	-22.46	20.00	-42.46	85.18						
	2nd	26.60	4.17	8.50	2.37	6.13	29.41	7.36	15.34	12.27	77.47	23.80	53.68	66.01	12.33	20.00	-7.67	73.68						
	3rd	26.50	3.86	8.50	3.12	5.38	29.41	7.36	15.34	12.27	76.62	23.49	53.14	89.60	36.46	20.00	0.00	73.14						
November	1st	29.00	3.92	8.50	2.82	5.68	29.41	7.36	12.54	10.03	76.62	21.30	55.32	87.48	32.16	20.00	0.00	75.32						
	2nd	28.40	4.51	8.50	2.10	6.40	29.41	7.36	12.54	10.03	76.74	21.90	54.84	245.56	190.72	20.00	0.00	74.84						
	3rd	38.00	8.03	8.50	1.02	7.48	29.41	7.36	12.54	10.03	87.42	25.42	62.00	459.15	397.14	20.00	0.00	82.00						
December	1st	44.50	10.17	8.50	1.68	6.82	29.41	7.36	9.78	7.83	90.51	25.36	65.15	507.57	442.41	20.00	0.00	85.15						
	2nd	62.90	10.56	8.50	4.65	3.85	29.41	7.36	9.78	7.83	105.94	25.74	80.20	367.21	287.01	20.00	0.00	100.20						
	3rd	67.20	11.92	8.50	4.83	3.67	29.41	7.36	9.78	7.83	110.06	27.10	82.96	202.26	119.30	20.00	0.00	102.96						
Total (million m <sup>3</sup> )		1409.33	244.85	268.65	118.06	150.59	930.01	232.65	388.00	310.40	2877.94	787.89	2090.05	8256.36	6166.31	632.45	-175.51	2722.49						
Total in the drought season (million m <sup>3</sup> )		683.47	120.46	134.32	58.46	75.87	465.01	116.32	233.80	187.04	1458.14	423.82	1034.32	2008.16	973.85	316.22	-175.51	1350.54						
														Total from July to November (million m <sup>3</sup> ) :		1486.87							-175.51	1098.71

Annual total deficit : -175.51 million m<sup>3</sup>

: Drought season

Table A5-5 Summary of Water Balance at the New Lengkong Dam (Saving Water)

DEMAND = 2020 YEAR = 1995

Unit : m<sup>3</sup>/s

		Irrigation	Return	Water	Brantas	Net	Total	Return	Industrial	Return	Total	Total	Net	Natural	Surplus	Required	Net	Total
		Water	Flow	Demand	Delta	Water	Domestic	Flow	Water	Flow	Demand	Utilizable	Total	Flow	Deficit	Maintenance	Deficit	Demand
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
						Else if d < e				else if i < h	else if j < k	else if l < m			else if n < o	else if p < q		
January	1st	52.26	8.69	8.50	4.49	4.01	29.41	7.36	3.52	2.82	89.20	18.85	70.34	211.96	141.62	20.00	0.00	90.34
	2nd	59.09	10.10	8.50	5.33	3.17	29.41	7.36	3.52	2.82	95.19	20.27	74.92	313.00	238.09	20.00	0.00	94.92
	3rd	51.91	7.99	8.50	5.30	3.20	29.41	7.36	3.52	2.82	88.03	18.17	69.86	440.10	370.23	20.00	0.00	89.86
February	1st	41.31	6.54	8.50	3.67	4.82	29.41	7.36	3.51	2.81	79.05	16.71	62.35	602.31	539.96	20.00	0.00	82.35
	2nd	38.45	6.89	8.50	2.83	5.66	29.41	7.36	3.51	2.81	77.04	17.06	59.98	520.12	460.14	20.00	0.00	79.98
	3rd	23.40	3.66	8.50	1.93	6.56	29.41	7.36	3.51	2.81	62.89	13.82	49.06	503.34	454.28	20.00	0.00	69.06
March	1st	16.22	3.19	8.50	1.09	7.40	29.41	7.36	3.52	2.82	56.56	13.37	43.19	476.27	433.08	20.00	0.00	63.19
	2nd	14.96	1.91	8.50	1.63	6.87	29.41	7.36	3.52	2.82	54.76	12.09	42.68	673.60	630.93	20.00	0.00	62.68
	3rd	16.04	2.79	8.50	0.79	7.71	29.41	7.36	3.52	2.82	56.68	12.97	43.71	607.84	564.13	20.00	0.00	63.71
April	1st	33.96	6.04	8.50	2.86	5.64	29.41	7.36	3.52	2.82	72.53	16.21	56.31	600.91	544.60	20.00	0.00	76.31
	2nd	28.40	4.50	8.50	2.27	6.22	29.41	7.36	3.52	2.82	67.56	14.67	52.89	353.69	300.81	20.00	0.00	72.89
	3rd	44.47	8.41	8.50	3.11	5.38	29.41	7.36	3.52	2.82	82.78	18.59	64.20	218.56	154.36	20.00	0.00	84.20
May	1st	53.28	9.03	8.50	4.63	3.87	29.41	7.36	3.84	3.07	90.40	19.46	70.94	247.90	176.97	20.00	0.00	90.94
	2nd	60.42	9.62	8.50	6.64	1.85	29.41	7.36	3.84	3.07	95.52	20.04	75.48	181.21	105.74	20.00	0.00	95.48
	3rd	56.89	9.04	8.50	6.00	2.50	29.41	7.36	3.84	3.07	92.64	19.47	73.17	117.41	44.24	20.00	0.00	93.17
June	1st	51.54	9.27	8.50	4.60	3.90	29.41	7.36	5.71	4.56	90.55	21.19	69.36	131.19	61.84	20.00	0.00	89.36
	2nd	54.83	9.17	8.50	6.17	2.33	29.41	7.36	5.71	4.56	92.27	21.09	71.18	209.70	138.52	20.00	0.00	91.18
	3rd	58.02	9.29	8.50	6.25	2.24	29.41	7.36	5.71	4.56	95.38	21.21	74.17	262.46	188.29	20.00	0.00	94.17
July	1st	53.96	9.36	8.50	5.24	3.25	29.41	7.36	5.88	4.70	92.50	21.42	71.08	136.36	65.27	20.00	0.00	91.08
	2nd	48.49	8.37	8.50	4.82	3.67	29.41	7.36	5.88	4.70	87.45	20.43	67.02	118.67	51.65	20.00	0.00	87.02
	3rd	43.04	7.27	8.50	4.60	3.90	29.41	7.36	5.88	4.70	82.23	19.33	62.90	95.15	32.25	20.00	0.00	82.90
August	1st	38.00	7.01	8.50	3.22	5.27	29.41	7.36	5.88	4.70	78.55	19.07	59.48	76.82	17.34	20.00	-2.66	79.48
	2nd	33.90	5.96	8.50	3.14	5.36	29.41	7.36	5.88	4.70	74.55	18.02	56.52	63.60	7.07	20.00	-12.93	76.52
	3rd	34.60	6.91	8.50	2.10	6.39	29.41	7.36	5.88	4.70	76.28	18.97	57.31	62.39	5.08	20.00	-14.92	77.31
September	1st	38.89	7.18	8.50	2.75	5.75	29.41	7.36	5.80	4.64	79.84	19.18	60.67	57.70	-2.97	20.00	-22.97	80.67
	2nd	42.64	8.13	8.50	2.94	5.55	29.41	7.36	5.80	4.64	83.40	20.13	63.27	46.77	-16.49	20.00	-36.49	83.27
	3rd	40.00	7.29	8.50	2.97	5.52	29.41	7.36	5.80	4.64	80.73	19.29	61.44	48.23	-13.21	20.00	-33.21	81.44
October	1st	38.92	7.42	8.50	2.78	5.72	29.41	7.36	5.87	4.70	79.92	19.47	60.45	42.72	-17.73	20.00	-37.73	80.45
	2nd	24.25	3.79	8.50	2.21	6.28	29.41	7.36	5.87	4.70	65.82	15.84	49.97	66.01	16.03	20.00	-3.97	69.97
	3rd	24.27	3.51	8.50	2.92	5.58	29.41	7.36	5.87	4.70	65.13	15.56	49.57	89.60	40.03	20.00	0.00	69.57
November	1st	26.42	3.56	8.50	2.64	5.86	29.41	7.36	4.73	3.78	66.42	14.69	51.73	87.48	35.75	20.00	0.00	71.73
	2nd	25.82	4.10	8.50	1.96	6.53	29.41	7.36	4.73	3.78	66.49	15.24	51.25	245.56	194.31	20.00	0.00	71.25
	3rd	34.43	7.30	8.50	0.95	7.54	29.41	7.36	4.73	3.78	76.11	18.43	57.68	459.15	401.47	20.00	0.00	77.68
December	1st	40.48	9.24	8.50	1.57	6.93	29.41	7.36	3.60	2.88	80.42	19.48	60.94	507.57	446.63	20.00	0.00	80.94
	2nd	57.28	9.59	8.50	4.35	4.15	29.41	7.36	3.60	2.88	94.44	19.83	74.61	367.21	292.59	20.00	0.00	94.61
	3rd	61.22	10.82	8.50	4.51	3.98	29.41	7.36	3.60	2.88	98.21	21.06	77.15	202.26	125.11	20.00	0.00	97.15
Total (million m <sup>3</sup> )		1286.08	222.39	268.65	110.33	158.32	930.01	232.65	146.00	116.80	2520.41	571.83	1948.58	8256.36	6307.78	632.45	-143.75	2581.03
Total in the drought season (million m <sup>3</sup> )		623.98	109.42	134.32	54.63	79.69	465.01	116.32	89.28	71.42	1257.96	297.17	960.79	2008.16	1047.37	316.22	-143.75	1277.02
Total from July to November (million m <sup>3</sup> ) :														1486.87			-143.75	1039.67

Annual total deficit : -143.75 million m<sup>3</sup>

: Drought season

Table A5-5 Summary of Water Balance at the New Lengkong Dam  
(No Saving)

DEMAND = 2020 YEAR = 1981

Unit : m<sup>3</sup>/s

		irrigation	Return	Water	Balance	Net	Total	Return	Industrial	Return	Total	Total	Net	Natural	Surplus	Required	Net	Total															
		Water Demand	Flow from Irrigation Area Upstream of Mojekren	Demand in the Fishpond	Delta Irrigation Water Return Flow	Water Demand in the Fishpond	Domestic Water Demand	Flow from Domestic Water Upstream of Mojekren	Water Demand	Flow from Industrial Water	Demand without Maintenance Flow	Utilizable Return Flow except for Fishpond	Total Demand without Maintenance Flow	Total Demand without Maintenance Flow	Flow at the N.L. Dam	Deficit without Maintenance Flow	Maintenance Flow	Deficit	Demand including Maintenance Flow														
		a	b	c	d	e <small>If c+d-e-c Else if d-e</small>	f	g	h	i <small>a+h</small>	j <small>a+c+f+h</small>	k <small>a+b+g+i</small>	l <small>a+j</small>	m	n <small>a-m-l</small>	o	p <small>If o&gt;p-o Else if p-o</small>	q	r														
January	1st	57.30	9.57	8.50	4.80	3.70	29.41	7.36	9.59	7.67	99.99	24.59	75.40	459.86	384.46	20.00	0.00	95.40															
	2nd	64.70	11.12	8.50	5.70	2.80	29.41	7.36	9.59	7.67	106.49	26.15	80.35	476.03	395.68	20.00	0.00	100.35															
	3rd	56.80	8.80	8.50	5.67	2.83	29.41	7.36	9.59	7.67	98.62	23.83	74.79	515.55	440.76	20.00	0.00	94.79															
February	1st	45.30	7.20	8.50	3.93	4.57	29.41	7.36	9.57	7.65	88.84	22.21	66.63	493.38	426.75	20.00	0.00	86.63															
	2nd	42.20	7.59	8.50	3.03	5.47	29.41	7.36	9.57	7.65	86.64	22.60	64.04	397.81	333.77	20.00	0.00	84.04															
	3rd	25.70	4.03	8.50	2.07	6.43	29.41	7.36	9.57	7.65	71.10	19.04	52.06	546.41	494.35	20.00	0.00	72.06															
March	1st	17.80	3.51	8.50	1.17	7.33	29.41	7.36	9.60	7.68	64.13	18.55	45.58	489.77	444.19	20.00	0.00	65.58															
	2nd	16.40	2.11	8.50	1.74	6.76	29.41	7.36	9.60	7.68	62.16	17.14	45.02	386.48	341.46	20.00	0.00	65.02															
	3rd	17.70	3.08	8.50	0.84	7.66	29.41	7.36	9.60	7.68	64.36	18.11	46.25	336.83	290.58	20.00	0.00	66.25															
April	1st	37.20	6.65	8.50	3.06	5.44	29.41	7.36	9.60	7.68	81.64	21.68	59.96	347.03	287.07	20.00	0.00	79.96															
	2nd	31.20	4.95	8.50	2.43	6.07	29.41	7.36	9.60	7.68	76.27	19.99	56.28	204.02	147.73	20.00	0.00	76.28															
	3rd	48.80	9.26	8.50	3.33	5.17	29.41	7.36	9.60	7.68	92.97	24.29	68.68	299.01	230.33	20.00	0.00	88.68															
May	1st	58.40	9.94	8.50	4.95	3.55	29.41	7.36	10.37	8.29	101.72	25.59	76.13	414.07	337.94	20.00	0.00	96.13															
	2nd	66.00	10.59	8.50	7.11	1.39	29.41	7.36	10.37	8.29	107.16	26.24	80.93	417.30	336.38	20.00	0.00	100.93															
	3rd	62.20	9.95	8.50	6.42	2.08	29.41	7.36	10.37	8.29	104.05	25.60	78.45	161.96	83.50	20.00	0.00	98.45															
June	1st	56.40	10.21	8.50	4.92	3.58	29.41	7.36	14.93	11.95	104.32	29.51	74.81	101.75	26.94	20.00	0.00	94.81															
	2nd	59.80	10.09	8.50	6.60	1.90	29.41	7.36	14.93	11.95	106.04	29.39	76.64	101.92	25.28	20.00	0.00	96.64															
	3rd	63.40	10.23	8.50	6.69	1.81	29.41	7.36	14.93	11.95	109.55	29.53	80.02	294.42	214.40	20.00	0.00	100.02															
July	1st	59.00	10.30	8.50	5.61	2.89	29.41	7.36	15.36	12.29	106.65	29.94	76.71	215.90	139.19	20.00	0.00	96.71															
	2nd	53.00	9.21	8.50	5.16	3.34	29.41	7.36	15.36	12.29	101.10	28.86	72.25	330.54	258.29	20.00	0.00	92.25															
	3rd	47.00	8.00	8.50	4.92	3.58	29.41	7.36	15.36	12.29	95.34	27.64	67.70	149.35	81.65	20.00	0.00	87.70															
August	1st	41.60	7.72	8.50	3.45	5.05	29.41	7.36	15.35	12.28	91.40	27.35	64.05	75.07	11.02	20.00	-8.98	84.05															
	2nd	37.10	6.57	8.50	3.36	5.14	29.41	7.36	15.35	12.28	86.99	26.20	60.79	60.29	-0.50	20.00	-20.50	80.79															
	3rd	38.00	7.61	8.50	2.25	6.25	29.41	7.36	15.35	12.28	89.00	27.24	61.76	71.84	10.08	20.00	-9.92	81.76															
September	1st	42.70	7.91	8.50	2.94	5.56	29.41	7.36	15.16	12.12	92.82	27.39	65.43	50.89	-14.54	20.00	-34.54	85.43															
	2nd	46.80	8.95	8.50	3.15	5.35	29.41	7.36	15.16	12.12	96.71	28.44	68.27	35.15	-33.12	20.00	-53.12	88.27															
	3rd	43.90	8.03	8.50	3.18	5.32	29.41	7.36	15.16	12.12	93.78	27.51	66.27	136.15	69.88	20.00	0.00	86.27															
October	1st	42.70	8.17	8.50	2.97	5.53	29.41	7.36	15.34	12.27	92.97	27.79	65.18	164.36	99.18	20.00	0.00	85.18															
	2nd	26.60	4.17	8.50	2.37	6.13	29.41	7.36	15.34	12.27	77.47	23.80	53.68	98.44	44.76	20.00	0.00	73.68															
	3rd	26.50	3.86	8.50	3.12	5.38	29.41	7.36	15.34	12.27	76.62	23.49	53.14	86.69	33.56	20.00	0.00	73.14															
November	1st	29.00	3.92	8.50	2.82	5.68	29.41	7.36	12.54	10.03	76.62	21.30	55.32	71.23	15.92	20.00	-4.08	75.32															
	2nd	28.40	4.51	8.50	2.10	6.40	29.41	7.36	12.54	10.03	76.74	21.90	54.84	219.70	164.85	20.00	0.00	74.84															
	3rd	38.00	8.03	8.50	1.02	7.48	29.41	7.36	12.54	10.03	87.42	25.42	62.00	387.05	325.05	20.00	0.00	82.00															
December	1st	44.50	10.17	8.50	1.68	6.82	29.41	7.36	9.78	7.83	90.51	25.36	65.15	402.59	337.44	20.00	0.00	85.15															
	2nd	62.90	10.56	8.50	4.65	3.85	29.41	7.36	9.78	7.83	105.94	25.74	80.20	470.16	389.97	20.00	0.00	100.20															
	3rd	67.20	11.92	8.50	4.83	3.67	29.41	7.36	9.78	7.83	110.06	27.10	82.96	316.93	233.97	20.00	0.00	102.96															
Total (million m <sup>3</sup> )		1409.33	244.85	268.65	118.06	150.59	930.01	232.65	388.00	310.40	2877.94	787.89	2090.05	8549.46	6439.41	632.45	-114.17	2722.49															
Total in the drought season (million m <sup>3</sup> )		683.47	120.46	134.32	58.46	75.87	465.01	116.32	233.80	187.04	1458.14	423.82	1034.32	2316.85	1282.53	316.22	-114.17	1350.54															
Total from July to November (million m <sup>3</sup> ) :														1886.50																			
Annual total deficit : -114.17 million m <sup>3</sup>																																	

☐ : Drought season

Table A5-5 Summary of Water Balance at the New Lengkong Dam (Saving Water)

DEMAND = 2020 YEAR = 1981

Unit : m<sup>3</sup>/s

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20																		
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t																		
		Irri- gation Water Demand	Return Flow from Irrigation Area Upstream of Mejokent	Water Demand in the Fishpond	Strains Delta Irrigation Water Return Flow	Net Water Demand in the Fishpond  <i>(f = c - d - e)</i>	Total Domestic Water Demand	Return Flow from Domestic Water Upstream of Mejokent	Industrial Water Demand	Return Flow from Industrial Water	Total Demand without Maintenance Flow  <i>(j = c + f + h)</i>	Total Utilizable Return Flow except for Fishpond  <i>(k = b + g + i)</i>	Net Total Demand without Maintenance Flow  <i>(l = j - k)</i>	Normal Flow at the N.L. Dam	Surplus /Deficit without Maintenance Flow  <i>(n = m - l)</i>	Required Maintenance Flow	Net Deficit  <i>(p = o - q)</i>	Total Demand including Maintenance Flow  <i>(r = l + o)</i>																					
January	1st	52.26	8.69	8.50	4.49	4.01	29.41	7.36	3.52	2.82	89.20	18.86	70.34	459.86	389.52	20.00	0.00	90.34																					
	2nd	59.09	10.10	8.50	5.33	3.17	29.41	7.36	3.52	2.82	95.19	20.27	74.92	476.03	401.11	20.00	0.00	94.92																					
	3rd	51.91	7.99	8.50	5.30	3.20	29.41	7.36	3.52	2.82	88.03	18.17	69.86	515.55	445.69	20.00	0.00	89.86																					
February	1st	41.31	6.54	8.50	3.67	4.82	29.41	7.36	3.51	2.81	79.05	16.71	62.35	493.38	431.03	20.00	0.00	82.35																					
	2nd	38.45	6.89	8.50	2.83	5.66	29.41	7.36	3.51	2.81	77.04	17.06	59.98	397.81	337.83	20.00	0.00	79.98																					
	3rd	23.40	3.66	8.50	1.93	6.56	29.41	7.36	3.51	2.81	62.89	13.82	49.06	546.41	497.35	20.00	0.00	69.06																					
March	1st	16.22	3.19	8.50	1.09	7.40	29.41	7.36	3.52	2.82	56.56	13.37	43.19	489.77	446.58	20.00	0.00	63.19																					
	2nd	14.96	1.91	8.50	1.63	6.87	29.41	7.36	3.52	2.82	54.76	12.09	42.68	386.48	343.80	20.00	0.00	62.68																					
	3rd	16.04	2.79	8.50	0.79	7.71	29.41	7.36	3.52	2.82	56.68	12.97	43.71	336.83	293.12	20.00	0.00	63.71																					
April	1st	33.96	6.04	8.50	2.86	5.64	29.41	7.36	3.52	2.82	72.53	16.21	56.31	347.03	290.21	20.00	0.00	76.31																					
	2nd	28.40	4.50	8.50	2.27	6.22	29.41	7.36	3.52	2.82	67.56	14.67	52.89	204.02	151.13	20.00	0.00	72.89																					
	3rd	44.47	8.41	8.50	3.11	5.38	29.41	7.36	3.52	2.82	82.78	18.59	64.20	299.01	234.81	20.00	0.00	84.20																					
May	1st	53.28	9.03	8.50	4.63	3.87	29.41	7.36	3.84	3.07	90.40	19.46	70.94	414.07	343.13	20.00	0.00	90.94																					
	2nd	60.42	9.62	8.50	6.64	1.85	29.41	7.36	3.84	3.07	95.52	20.04	75.48	417.30	341.83	20.00	0.00	95.48																					
	3rd	56.89	9.04	8.50	6.00	2.50	29.41	7.36	3.84	3.07	92.64	19.47	73.17	161.96	88.78	20.00	0.00	93.17																					
June	1st	51.54	9.27	8.50	4.60	3.90	29.41	7.36	5.71	4.56	90.55	21.19	69.36	101.75	32.39	20.00	0.00	89.36																					
	2nd	54.83	9.17	8.50	6.17	2.33	29.41	7.36	5.71	4.56	92.27	21.09	71.18	101.92	30.74	20.00	0.00	91.18																					
	3rd	58.02	9.29	8.50	6.25	2.24	29.41	7.36	5.71	4.56	95.38	21.21	74.17	294.42	220.25	20.00	0.00	94.17																					
July	1st	53.96	9.36	8.50	5.24	3.25	29.41	7.36	5.88	4.70	92.50	21.42	71.08	215.90	144.82	20.00	0.00	91.08																					
	2nd	48.49	8.37	8.50	4.82	3.67	29.41	7.36	5.88	4.70	87.45	20.43	67.02	330.54	263.52	20.00	0.00	87.02																					
	3rd	43.04	7.27	8.50	4.60	3.90	29.41	7.36	5.88	4.70	82.23	19.33	62.90	149.35	86.45	20.00	0.00	82.90																					
August	1st	38.00	7.01	8.50	3.22	5.27	29.41	7.36	5.88	4.70	78.55	19.07	59.48	75.07	15.59	20.00	-4.41	79.48																					
	2nd	33.90	5.96	8.50	3.14	5.36	29.41	7.36	5.88	4.70	74.55	18.02	56.52	60.29	3.77	20.00	-16.23	76.52																					
	3rd	34.60	6.91	8.50	2.10	6.39	29.41	7.36	5.88	4.70	76.28	18.97	57.31	71.84	14.53	20.00	-5.47	77.31																					
September	1st	38.89	7.18	8.50	2.75	5.75	29.41	7.36	5.80	4.64	79.84	19.18	60.67	50.89	-9.78	20.00	-29.78	80.67																					
	2nd	42.64	8.13	8.50	2.94	5.55	29.41	7.36	5.80	4.64	83.40	20.13	63.27	35.15	-28.12	20.00	-43.12	83.27																					
	3rd	40.00	7.29	8.50	2.97	5.52	29.41	7.36	5.80	4.64	80.73	19.29	61.44	136.15	74.70	20.00	0.00	81.44																					
October	1st	38.92	7.42	8.50	2.78	5.72	29.41	7.36	5.87	4.70	79.92	19.47	60.45	164.36	103.91	20.00	0.00	80.45																					
	2nd	24.25	3.79	8.50	2.21	6.28	29.41	7.36	5.87	4.70	65.82	15.84	49.97	93.44	48.46	20.00	0.00	69.97																					
	3rd	24.27	3.51	8.50	2.92	5.58	29.41	7.36	5.87	4.70	65.13	15.56	49.57	86.69	37.12	20.00	0.00	69.57																					
November	1st	26.42	3.56	8.50	2.64	5.86	29.41	7.36	4.73	3.78	66.42	14.69	51.73	71.23	19.51	20.00	-0.49	71.73																					
	2nd	25.82	4.10	8.50	1.96	6.53	29.41	7.36	4.73	3.78	66.49	15.24	51.25	219.70	168.44	20.00	0.00	71.25																					
	3rd	34.43	7.30	8.50	0.95	7.54	29.41	7.36	4.73	3.78	76.11	18.43	57.68	387.05	329.37	20.00	0.00	77.68																					
December	1st	40.48	9.24	8.50	1.57	6.93	29.41	7.36	3.60	2.88	80.42	19.48	60.94	402.59	341.66	20.00	0.00	80.94																					
	2nd	57.28	9.59	8.50	4.35	4.15	29.41	7.36	3.60	2.88	94.44	19.83	74.61	470.16	395.55	20.00	0.00	94.61																					
	3rd	61.22	10.82	8.50	4.51	3.98	29.41	7.36	3.60	2.88	98.21	21.06	77.15	316.93	239.78	20.00	0.00	97.15																					
Total (million m <sup>3</sup> )		1286.08	222.39	268.65	110.33	158.32	930.01	232.65	146.00	116.80	2520.41	571.83	1943.58	8549.46	6600.88	632.45	-90.76	2581.03																					
Total in the drought season (million m <sup>3</sup> )		623.98	109.42	134.32	54.63	79.69	465.01	116.32	89.28	71.42	1257.96	297.17	960.79	2316.85	1356.05	316.22	-90.76	1277.02																					
													1886.50																										
																	Total from July to November (million m <sup>3</sup> ) :		1886.50																				
Annual total deficit : -90.76 million m <sup>3</sup>																																							
☐ : Drought season																																							

Table A5-5 Summary of Water Balance at the New Lengkong Dam (Saving Water)

DEMAND = 2020 YEAR = 1978

Unit : m<sup>3</sup>/s

		Irrigation Water Demand	Return Flow from Irrigation Area Upstream of Mojokerto	Water Demand in the Fishpond	Francis Delta Irrigation Water Return Flow	Net Water Demand in the Fishpond e If c > d = c-1 Else if d < c	Total Domestic Water Demand	Return Flow from Domestic Water Upstream of Mojokerto	Industrial Water Demand	Return Flow from Industrial Water	Total Demand without Maintenance Flow	Total Utilizable Return Flow except for Fishpond	Net Total Demand without Maintenance Flow	Natural Flow at the N.L. Dam	Surplus /Deficit without Maintenance Flow	Required Maintenance Flow	Net Deficit p If a > p = 0 Else if p > a	Total Demand including Maintenance Flow			
																			a	b	c
January	1st	52.26	8.69	8.50	4.49	4.01	29.41	7.36	3.52	2.82	89.20	18.86	70.34	490.22	419.88	20.00	0.00	90.34			
	2nd	59.00	10.10	8.50	5.33	3.17	29.41	7.36	3.52	2.82	95.19	20.27	74.92	379.03	304.12	20.00	0.00	94.92			
	3rd	51.91	7.99	8.50	5.30	3.20	29.41	7.36	3.52	2.82	88.03	18.17	69.86	411.02	341.15	20.00	0.00	89.86			
February	1st	41.31	6.54	8.50	3.67	4.82	29.41	7.36	3.51	2.81	79.05	16.71	62.35	415.32	352.97	20.00	0.00	82.35			
	2nd	38.45	6.89	8.50	2.83	5.66	29.41	7.36	3.51	2.81	77.04	17.06	59.98	489.78	429.80	20.00	0.00	79.98			
	3rd	23.40	3.66	8.50	1.93	6.56	29.41	7.36	3.51	2.81	62.89	13.82	49.06	541.33	492.27	20.00	0.00	69.06			
March	1st	16.22	3.19	8.50	1.09	7.40	29.41	7.36	3.52	2.82	56.56	13.37	43.19	378.55	335.36	20.00	0.00	63.19			
	2nd	14.96	1.91	8.50	1.63	6.87	29.41	7.36	3.52	2.82	54.76	12.09	42.68	544.05	501.38	20.00	0.00	62.68			
	3rd	16.04	2.79	8.50	0.79	7.71	29.41	7.36	3.52	2.82	56.68	12.97	43.71	533.60	489.88	20.00	0.00	63.71			
April	1st	33.96	6.04	8.50	2.86	5.64	29.41	7.36	3.52	2.82	72.53	16.21	56.31	294.76	238.45	20.00	0.00	76.31			
	2nd	28.40	4.50	8.50	2.27	6.22	29.41	7.36	3.52	2.82	67.56	14.67	52.89	344.50	291.61	20.00	0.00	72.89			
	3rd	44.47	8.41	8.50	3.11	5.38	29.41	7.36	3.52	2.82	82.78	18.59	64.20	175.24	111.04	20.00	0.00	84.20			
May	1st	53.28	9.03	8.50	4.63	3.87	29.41	7.36	3.84	3.07	90.40	19.46	70.94	319.14	248.20	20.00	0.00	90.94			
	2nd	60.42	9.62	8.50	6.64	1.85	29.41	7.36	3.84	3.07	95.52	20.04	75.48	452.60	377.13	20.00	0.00	95.48			
	3rd	56.89	9.04	8.50	6.00	2.50	29.41	7.36	3.84	3.07	92.64	19.47	73.17	419.78	346.61	20.00	0.00	93.17			
June	1st	51.54	9.27	8.50	4.60	3.90	29.41	7.36	5.71	4.56	90.55	21.19	69.36	527.73	458.37	20.00	0.00	89.36			
	2nd	54.83	9.17	8.50	6.17	2.33	29.41	7.36	5.71	4.56	92.27	21.09	71.18	556.34	485.16	20.00	0.00	91.18			
	3rd	58.02	9.29	8.50	6.25	2.24	29.41	7.36	5.71	4.56	95.38	21.21	74.17	380.07	305.90	20.00	0.00	94.17			
July	1st	53.96	9.36	8.50	5.24	3.25	29.41	7.36	5.88	4.70	92.50	21.42	71.08	610.52	539.44	20.00	0.00	91.08			
	2nd	48.49	8.37	8.50	4.82	3.67	29.41	7.36	5.88	4.70	87.45	20.43	67.02	320.61	253.59	20.00	0.00	87.02			
	3rd	43.04	7.27	8.50	4.60	3.90	29.41	7.36	5.88	4.70	82.23	19.33	62.90	239.00	176.09	20.00	0.00	82.90			
August	1st	38.00	7.01	8.50	3.22	5.27	29.41	7.36	5.88	4.70	78.55	19.07	59.48	201.62	142.13	20.00	0.00	79.48			
	2nd	33.90	5.96	8.50	3.14	5.36	29.41	7.36	5.88	4.70	74.55	18.02	56.52	163.73	107.21	20.00	0.00	76.52			
	3rd	34.60	6.91	8.50	2.10	6.39	29.41	7.36	5.88	4.70	76.28	18.97	57.31	97.68	40.37	20.00	0.00	77.31			
September	1st	38.89	7.18	8.50	2.75	5.75	29.41	7.36	5.80	4.64	79.84	19.18	60.67	179.22	118.55	20.00	0.00	80.67			
	2nd	42.64	8.13	8.50	2.94	5.55	29.41	7.36	5.80	4.64	83.40	20.13	63.27	112.42	49.15	20.00	0.00	83.27			
	3rd	40.00	7.29	8.50	2.97	5.52	29.41	7.36	5.80	4.64	80.73	19.29	61.44	125.98	64.53	20.00	0.00	81.44			
October	1st	38.92	7.42	8.50	2.78	5.72	29.41	7.36	5.87	4.70	79.92	19.47	60.45	115.97	55.52	20.00	0.00	80.45			
	2nd	24.25	3.79	8.50	2.21	6.28	29.41	7.36	5.87	4.70	65.82	15.84	49.97	94.03	44.05	20.00	0.00	69.97			
	3rd	24.27	3.51	8.50	2.92	5.58	29.41	7.36	5.87	4.70	65.13	15.56	49.57	155.00	105.43	20.00	0.00	69.57			
November	1st	26.42	3.55	8.50	2.64	5.86	29.41	7.36	4.73	3.78	66.42	14.69	51.73	160.05	108.33	20.00	0.00	71.73			
	2nd	25.82	4.10	8.50	1.96	6.53	29.41	7.36	4.73	3.78	66.49	15.24	51.25	291.77	240.52	20.00	0.00	71.25			
	3rd	34.43	7.30	8.50	0.95	7.54	29.41	7.36	4.73	3.78	76.11	18.43	57.68	165.39	107.71	20.00	0.00	77.68			
December	1st	40.48	9.24	8.50	1.57	6.93	29.41	7.36	3.60	2.88	80.42	19.48	60.94	269.10	208.16	20.00	0.00	80.94			
	2nd	57.28	9.59	8.50	4.35	4.15	29.41	7.36	3.60	2.88	94.44	19.83	74.61	404.32	329.70	20.00	0.00	94.61			
	3rd	61.22	10.82	8.50	4.51	3.98	29.41	7.36	3.60	2.88	98.21	21.06	77.15	527.50	450.35	20.00	0.00	97.15			
Total (million m <sup>3</sup> )		1286.08	222.39	268.65	110.33	158.32	930.01	232.65	146.00	116.80	2520.41	571.83	1948.58	0429.51	8480.93	632.45	0.00	2581.03			
Total in the drought season (million m <sup>3</sup> )		623.98	109.42	134.32	54.63	79.69	465.01	116.32	89.28	71.42	1257.96	297.17	960.79	3927.99	2967.20	316.22	0.00	1277.02			
														Total from July to November (million m <sup>3</sup> ) :		2662.98		0.00		1039.67	

Annual total deficit : 0.00 million m<sup>3</sup>

☐ : Drought season

**Table A5-5 Summary of Water Balance at the New Lengkong Dam  
(No Saving)**

DEMAND = 2020

YEAR = 1978

Unit : m<sup>3</sup>/s

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Irri- gation Water Demand	Return Flow from Irrigation Area Upstream of Majekens	Water Demand in the Fishpond	Brantas Delta Irrigation Water Return Flow	Net Water Demand in the Fishpond	Total Domestic Water Demand	Return Flow from Domestic Water Upstream of Majekens	Industrial Water Demand	Return Flow from Industrial Water	Total Demand without Maintenance Flow	Total Utilizable Return Flow except for Fishpond	Net Total Demand without Maintenance Flow	Natural Flow at the N.L. Dam	Surplus Deficit without Maintenance Flow	Required Maintenance Flow	Net Deficit	Total Demand including Maintenance Flow
						Head loss Elsewhere											Head loss Elsewhere	
January	1st	57.30	9.57	8.50	4.80	3.70	29.41	7.36	9.59	7.67	99.99	24.59	75.40	490.22	414.82	20.00	0.00	95.40
	2nd	64.70	11.12	8.50	5.70	2.80	29.41	7.36	9.59	7.67	106.49	26.15	80.35	379.03	293.68	20.00	0.00	100.35
	3rd	56.80	8.80	8.50	5.67	2.83	29.41	7.36	9.59	7.67	98.62	23.83	74.79	411.02	336.22	20.00	0.00	94.79
February	1st	45.30	7.20	8.50	3.93	4.57	29.41	7.36	9.57	7.65	88.84	22.21	66.63	415.32	348.69	20.00	0.00	86.63
	2nd	42.20	7.59	8.50	3.03	5.47	29.41	7.36	9.57	7.65	86.64	22.60	64.04	489.78	425.75	20.00	0.00	84.04
	3rd	25.70	4.03	8.50	2.07	6.43	29.41	7.36	9.57	7.65	71.10	19.04	52.06	541.33	489.27	20.00	0.00	72.06
March	1st	17.80	3.51	8.50	1.17	7.33	29.41	7.36	9.60	7.68	64.13	18.55	45.58	378.55	332.97	20.00	0.00	65.58
	2nd	16.40	2.11	8.50	1.74	6.76	29.41	7.36	9.60	7.68	62.16	17.14	45.02	544.05	499.03	20.00	0.00	65.03
	3rd	17.70	3.08	8.50	0.84	7.66	29.41	7.36	9.60	7.68	64.36	18.11	46.25	533.60	487.38	20.00	0.00	66.25
April	1st	37.20	6.65	8.50	3.06	5.44	29.41	7.36	9.60	7.68	81.64	21.68	59.96	294.76	234.80	20.00	0.00	79.96
	2nd	31.20	4.95	8.50	2.43	6.07	29.41	7.36	9.60	7.68	76.27	19.99	56.28	344.50	288.21	20.00	0.00	76.28
	3rd	43.80	9.26	8.50	3.33	5.17	29.41	7.36	9.60	7.68	92.97	24.29	68.68	175.24	106.56	20.00	0.00	88.68
May	1st	53.40	9.94	8.50	4.95	3.55	29.41	7.36	10.37	8.29	101.72	25.59	76.13	319.14	243.02	20.00	0.00	96.13
	2nd	66.00	10.59	8.50	7.11	1.39	29.41	7.36	10.37	8.29	107.16	26.24	80.93	452.60	371.68	20.00	0.00	100.93
	3rd	62.20	9.95	8.50	6.42	2.08	29.41	7.36	10.37	8.29	104.05	25.60	78.45	419.78	341.33	20.00	0.00	98.45
June	1st	56.40	10.21	8.50	4.92	3.58	29.41	7.36	14.93	11.95	104.32	29.51	74.81	527.73	452.92	20.00	0.00	94.81
	2nd	59.80	10.09	8.50	6.60	1.90	29.41	7.36	14.93	11.95	106.04	29.39	76.64	556.34	479.70	20.00	0.00	96.64
	3rd	63.40	10.23	8.50	6.69	1.81	29.41	7.36	14.93	11.95	109.55	29.53	80.02	380.07	300.05	20.00	0.00	100.02
July	1st	59.00	10.30	8.50	5.61	2.89	29.41	7.36	15.36	12.29	106.65	29.94	76.71	610.52	533.81	20.00	0.00	96.71
	2nd	53.00	9.21	8.50	5.16	3.34	29.41	7.36	15.36	12.29	101.10	28.86	72.25	320.61	248.36	20.00	0.00	92.25
	3rd	47.00	8.00	8.50	4.92	3.58	29.41	7.36	15.36	12.29	95.34	27.64	67.70	239.00	171.29	20.00	0.00	87.70
August	1st	41.60	7.72	8.50	3.45	5.05	29.41	7.36	15.35	12.28	91.40	27.35	64.05	201.62	137.57	20.00	0.00	84.05
	2nd	37.10	6.57	8.50	3.36	5.14	29.41	7.36	15.35	12.28	86.99	26.20	60.79	163.73	102.94	20.00	0.00	80.79
	3rd	38.00	7.61	8.50	2.25	6.25	29.41	7.36	15.35	12.28	89.00	27.24	61.76	97.68	35.91	20.00	0.00	81.76
September	1st	42.70	7.91	8.50	2.94	5.56	29.41	7.36	15.16	12.12	92.82	27.39	65.43	179.22	113.79	20.00	0.00	85.43
	2nd	46.80	8.95	8.50	3.15	5.35	29.41	7.36	15.16	12.12	96.71	28.44	68.27	112.42	44.15	20.00	0.00	88.27
	3rd	43.90	8.03	8.50	3.18	5.32	29.41	7.36	15.16	12.12	93.78	27.51	66.27	125.98	59.71	20.00	0.00	86.27
October	1st	42.70	8.17	8.50	2.97	5.53	29.41	7.36	15.34	12.27	92.97	27.79	65.18	115.97	50.79	20.00	0.00	85.18
	2nd	26.60	4.17	8.50	2.37	6.13	29.41	7.36	15.34	12.27	77.47	23.80	53.68	94.03	40.35	20.00	0.00	73.68
	3rd	26.50	3.86	8.50	3.12	5.38	29.41	7.36	15.34	12.27	76.62	23.49	53.14	155.00	101.87	20.00	0.00	73.14
November	1st	29.00	3.92	8.50	2.82	5.68	29.41	7.36	12.54	10.03	76.62	21.30	55.32	160.05	104.74	20.00	0.00	75.32
	2nd	28.40	4.51	8.50	2.10	6.40	29.41	7.36	12.54	10.03	76.74	21.90	54.84	291.77	236.93	20.00	0.00	74.84
	3rd	38.00	8.03	8.50	1.02	7.48	29.41	7.36	12.54	10.03	87.42	25.42	62.00	165.39	103.39	20.00	0.00	82.00
December	1st	44.50	10.17	8.50	1.63	6.82	29.41	7.36	9.78	7.83	90.51	25.36	65.15	269.10	203.95	20.00	0.00	85.15
	2nd	62.90	10.56	8.50	4.65	3.85	29.41	7.36	9.78	7.83	105.94	25.74	80.20	404.32	324.12	20.00	0.00	100.20
	3rd	67.20	11.92	8.50	4.83	3.67	29.41	7.36	9.78	7.83	110.06	27.10	82.96	527.50	444.55	20.00	0.00	102.96
Total (million m <sup>3</sup> )		1409.33	244.85	268.65	118.06	150.59	930.01	232.65	388.00	310.40	2877.94	787.89	2090.05	10429.51	8339.46	632.45	0.00	2722.49
Total in the drought season (million m <sup>3</sup> )		683.47	120.46	134.32	58.46	75.87	465.01	116.32	233.80	187.04	1458.14	423.82	1034.32	3927.99	2893.68	316.22	0.00	1350.54
		Total from July to November (million m <sup>3</sup> ) :													2662.98	0.00	1093.71	

Annual total deficit : 0.00 million m<sup>3</sup>

: Drought season



Table A5-6 Summary of Water Deficit at the New Lengkong Dam(1/5)

DEMAND = 1996(Present Condition, No Maintenance Flow)

Unit : m<sup>3</sup>/s

		1982	1977	1987	1980	1991	1991	1988	1996	1979	1995	1981	1978	Min. Deficit	Max. Deficit
January	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	-0.62	0.00	0.00	-9.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-9.97
	3rd	-15.31	0.00	-6.67	-17.15	0.00	-2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-17.15
July	1st	-16.58	-14.63	-14.91	-26.75	0.00	0.00	-6.38	0.00	0.00	0.00	0.00	0.00	0.00	-26.75
	2nd	-14.00	-26.46	-2.10	-23.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-26.46
	3rd	-16.64	-16.87	-15.06	-31.76	0.00	-0.23	-4.16	-0.33	0.00	0.00	0.00	0.00	0.00	-31.76
August	1st	-13.73	-25.73	-8.12	0.00	0.00	-2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-25.73
	2nd	-21.64	-26.94	-17.89	-15.23	-4.07	-3.36	-10.42	0.00	0.00	0.00	-2.17	0.00	0.00	-26.94
	3rd	-12.83	-22.23	-2.07	-25.76	-0.27	-2.57	-11.18	0.00	0.00	0.00	0.00	0.00	0.00	-25.76
September	1st	-16.54	-22.73	-17.46	-22.05	-6.78	-5.28	-14.61	0.00	-10.27	0.00	-5.92	0.00	0.00	-22.73
	2nd	-17.98	-26.10	-20.81	-28.67	-9.57	-2.24	-19.01	-2.66	-10.50	-10.16	-21.79	0.00	0.00	-28.67
	3rd	-21.65	-32.56	-16.98	-30.64	-4.86	-6.17	-22.07	0.00	-16.14	-3.03	0.00	0.00	0.00	-32.56
October	1st	-18.60	-35.65	-26.97	-25.91	-15.34	0.00	-23.59	0.00	-13.10	-13.96	0.00	0.00	0.00	-35.65
	2nd	-9.36	-24.73	-5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-24.73
	3rd	-17.28	-27.48	-18.84	-8.69	-3.03	-12.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-27.48
November	1st	-24.19	-30.67	-30.62	-9.73	0.00	-9.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-30.67
	2nd	-14.95	-16.39	-22.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-22.31
	3rd	-15.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
December	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (million m <sup>3</sup> )		-235.14	-307.42	-198.78	-244.06	-38.25	-41.47	-97.58	-2.61	-43.22	-27.78	-25.81	0.00	0.00	-307.42
Total in the drought season (million m <sup>3</sup> )		-235.14	-307.42	-198.78	-244.06	-38.25	-41.47	-97.58	-2.61	-43.22	-27.78	-25.81	0.00	0.00	-307.42

: Drought season

Table A5-6 Summary of Water Deficit at the New Lengkong Dam(2/5)

DEMAND = 2010( No Water Saving Measure)

Unit : m<sup>3</sup>/s

		1982	1977	1987	1980	1994	1991	1988	1996	1979	1995	1981	1978	Min. Deficit	Max. Deficit
January	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	-8.44	-11.03	-8.01	-2.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-11.03
June	1st	-8.20	0.00	0.00	-3.75	0.00	-0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-8.20
	2nd	-21.57	0.00	-14.54	-30.92	0.00	-6.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-30.92
	3rd	-34.46	0.00	-25.82	-36.30	-7.27	-21.54	-8.03	-11.22	0.00	0.00	0.00	0.00	0.00	-36.30
July	1st	-35.17	-33.22	-33.50	45.34	-17.61	-18.58	-24.97	-9.62	0.00	0.00	0.00	0.00	0.00	-45.34
	2nd	-33.87	-46.33	-21.97	43.40	-17.90	-17.53	-17.50	-13.73	0.00	0.00	0.00	0.00	0.00	-46.33
	3rd	-34.62	-34.84	-33.04	49.74	-17.38	-18.20	-22.13	-18.31	-9.60	0.00	0.00	0.00	0.00	-49.74
August	1st	-28.80	-40.80	-23.19	-12.01	-14.66	-17.29	0.00	-9.53	0.00	-4.90	-6.65	0.00	0.00	-40.80
	2nd	-37.22	-42.51	-33.46	-30.80	-19.65	-18.93	-25.99	0.00	0.00	-14.44	-17.75	0.00	0.00	-42.51
	3rd	-33.00	-42.40	-22.23	-45.93	-20.44	-22.74	-31.35	-8.70	-12.42	-14.09	-4.64	0.00	0.00	-45.93
September	1st	-38.31	-44.50	-39.24	-43.83	-28.56	-27.05	-36.38	-14.01	-32.05	-20.88	-27.69	0.00	0.00	-44.50
	2nd	-41.54	-49.65	-44.37	-52.23	-33.13	-25.80	-42.56	-26.21	-34.06	-33.72	-45.34	0.00	0.00	-52.23
	3rd	-44.81	-55.71	-40.13	-53.80	-28.01	-29.32	-45.22	-22.66	-39.30	-31.19	0.00	0.00	0.00	-55.71
October	1st	-41.27	-58.32	-49.64	-48.58	-38.01	-9.20	46.26	-4.08	-35.77	-36.63	0.00	0.00	0.00	-58.32
	2nd	-34.17	-49.54	-30.46	-18.29	-13.17	-24.58	-10.14	-0.87	-22.52	-1.19	0.00	0.00	0.00	-49.54
	3rd	-34.43	-44.63	-35.98	-25.84	-20.18	-29.94	-7.81	0.00	-8.52	0.00	0.00	0.00	0.00	-44.63
November	1st	-42.13	-48.60	-48.56	-27.67	-16.94	-27.13	-0.22	0.00	0.00	0.00	-0.73	0.00	0.00	-48.60
	2nd	-34.20	-35.64	-41.56	0.00	-9.45	0.00	0.00	0.00	-0.23	0.00	0.00	0.00	0.00	-41.56
	3rd	-39.07	-15.41	0.00	0.00	-1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-39.07
December	1st	-3.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-3.40
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	-19.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-19.44
Total (million m <sup>3</sup> )		-552.72	-575.78	-450.07	-504.45	-285.67	-278.29	-280.53	-122.37	-170.66	-136.90	-89.21	0.00	0.00	-575.78
Total in the drought season (million m <sup>3</sup> )		-541.76	-565.30	-472.46	-501.61	-267.20	-278.29	-280.53	-122.37	-170.66	-136.90	-89.21	0.00	0.00	-565.30

: Drought season

Table A5-6 Summary of Water Deficit at the New Lengkong Dam(3/5)

DEMAND = 2010(With Saving Water Measure)

Unit : m<sup>3</sup>/s

		1982	1977	1987	1980	1994	1991	1988	1996	1979	1995	1981	1978	Min. Deficit	Max. Deficit
January	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	-3.61	-6.19	-3.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-6.19
June	1st	-3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-3.63
	2nd	-16.77	0.00	-9.74	-26.12	0.00	-1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-26.12
	3rd	-29.39	0.00	-20.75	-31.23	-2.20	-16.47	-2.96	-6.15	0.00	0.00	0.00	0.00	0.00	-31.23
July	1st	-30.25	-28.29	-28.58	-40.41	-12.68	-13.65	-20.04	-4.70	0.00	0.00	0.00	0.00	0.00	-40.41
	2nd	-29.35	-41.81	-17.46	-38.89	-13.38	-13.02	-12.99	-9.22	0.00	0.00	0.00	0.00	0.00	-41.81
	3rd	-30.42	-30.64	-28.84	-45.53	-13.17	-14.00	-17.93	-14.11	-5.40	0.00	0.00	0.00	0.00	-45.53
August	1st	-24.73	-36.73	-19.12	-7.94	-10.59	-13.22	0.00	-5.46	0.00	-0.83	-2.58	0.00	0.00	-36.73
	2nd	-33.48	-38.77	-29.72	-27.06	-15.91	-15.19	-22.25	0.00	0.00	-10.70	-14.01	0.00	0.00	-38.77
	3rd	-29.44	-38.84	-18.67	-42.37	-16.88	-19.18	-27.79	-5.14	8.86	-10.53	-1.08	0.00	0.00	-42.37
September	1st	-34.68	-40.87	-35.61	-40.20	-24.93	-23.42	-32.75	-10.38	-28.42	-17.25	-24.06	0.00	0.00	-40.87
	2nd	-37.73	-45.85	-40.56	-48.42	-29.32	-21.99	-38.76	-22.41	-30.25	-29.91	-41.54	0.00	0.00	-48.42
	3rd	-41.09	-51.99	-36.42	-50.08	-24.29	-25.61	-41.50	-18.95	-35.58	-27.47	0.00	0.00	0.00	-51.99
October	1st	-37.48	-54.53	-45.85	-44.78	-34.22	-5.41	-42.46	-0.28	-31.98	-32.84	0.00	0.00	0.00	-54.53
	2nd	-31.36	-46.73	-27.65	-15.48	-10.36	-21.77	-7.33	0.00	-19.71	0.00	0.00	0.00	0.00	-46.73
	3rd	-31.55	-41.75	-33.11	-22.96	-17.30	-27.07	-4.93	0.00	-5.65	0.00	0.00	0.00	0.00	-41.75
November	1st	-39.23	-45.70	-45.66	-24.77	-14.05	-24.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-45.70
	2nd	-31.19	-32.62	-38.55	0.00	-6.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-38.55
	3rd	-35.21	-11.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-35.21
December	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	-15.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-15.15
Total (million m <sup>3</sup> )		-483.93	-522.39	-421.49	-446.99	-230.79	-226.52	-239.12	-85.29	-145.00	-112.83	-72.03	0.00	0.00	-522.39
Total in the drought season (million m <sup>3</sup> )		-480.50	-516.51	-418.47	-446.99	-216.40	-226.52	-239.12	-85.29	-145.00	-112.83	-72.03	0.00	0.00	-516.51

: Drought season

Table A5-6 Summary of Water Deficit at the New Lengkong Dam(4/5)

DEMAND = 2020( No Water Saving Measure)

Unit : m<sup>3</sup>/s

Year		1982	1977	1987	1980	1994	1991	1988	1996	1979	1995	1981	1978	Min. Deficit	Max. Deficit
January	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	-1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.99
	3rd	-11.06	-13.65	-10.63	-5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-13.65
June	1st	-13.69	0.00	0.00	-9.24	0.00	-5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-13.69
	2nd	-24.67	0.00	-17.64	-34.02	0.00	-9.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-34.02
	3rd	-36.28	0.00	-27.64	-38.12	-9.09	-23.35	-9.84	-13.03	0.00	0.00	0.00	0.00	0.00	-38.12
July	1st	-37.69	-35.73	-36.02	-47.86	-20.12	-21.10	-27.49	-12.14	0.00	0.00	0.00	0.00	0.00	-47.86
	2nd	-37.69	-50.14	-25.79	-47.22	-21.71	-21.35	-21.32	-17.55	0.00	0.00	0.00	0.00	0.00	-50.14
	3rd	-37.42	-37.64	-35.84	-52.54	-20.18	-21.00	-24.93	-21.11	-12.40	0.00	0.00	0.00	0.00	-52.54
August	1st	-31.13	-43.13	-25.52	-14.34	-16.99	-19.62	0.00	-11.86	0.00	-7.23	-8.98	0.00	0.00	-43.13
	2nd	-39.97	-45.27	-36.22	-33.56	-22.40	-21.68	-28.75	0.00	-1.58	-17.20	-20.50	0.00	0.00	-45.27
	3rd	-38.28	-47.68	-27.52	-51.21	-25.72	-28.02	-36.63	-13.98	-17.70	-19.37	-9.92	0.00	0.00	-51.21
September	1st	-45.17	-51.35	-46.09	-50.68	-35.41	-33.91	-43.24	-20.86	-38.90	-27.73	-34.54	0.00	0.00	-51.35
	2nd	-49.32	-57.44	-52.15	-60.01	-40.91	-33.58	-50.34	-34.00	-41.84	-41.50	-53.12	0.00	0.00	-60.01
	3rd	-51.66	-62.56	-46.99	-60.65	-34.86	-36.18	-52.07	-29.52	-46.15	-38.04	0.00	0.00	0.00	-62.56
October	1st	-47.10	-64.15	-55.47	-54.41	-43.84	-15.03	-52.09	-9.91	-41.60	-42.46	0.00	0.00	0.00	-64.15
	2nd	-40.65	-56.01	-36.93	-24.77	-19.64	-31.05	-16.61	-7.34	-28.99	-7.67	0.00	0.00	0.00	-56.01
	3rd	-37.70	-47.90	-39.25	-29.11	-23.45	-33.21	-11.07	0.00	-11.79	0.00	0.00	0.00	0.00	-47.90
November	1st	-45.48	-51.95	-51.90	-31.02	-20.29	-30.48	-3.57	0.00	-0.40	0.00	-4.08	0.00	0.00	-51.95
	2nd	-37.41	-38.84	-44.77	0.00	-12.66	-1.42	0.00	0.00	-3.44	0.00	0.00	0.00	0.00	-44.77
	3rd	-42.78	-19.13	0.00	0.00	-4.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-42.78
December	1st	-8.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-8.73
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	-34.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-34.13
Total (million m <sup>3</sup> )		-629.26	-637.0	-542.3	-568.7	-359.9	-341.3	-332.8	-168.3	-215.1	-175.5	-114.2	0.0	0.0	-637.0
Total in the drought season (million m <sup>3</sup> )		-609.48	-624.0	-532.2	-563.4	-327.5	-341.3	-332.8	-168.3	-215.1	-175.5	-114.2	0.0	0.0	-624.0

: Drought season

Table A5-6 Summary of Water Deficit at the New Lengkong Dam (5/5)

DEMAND = 2020(With Saving Water Measure)

Unit : m<sup>3</sup>/s

Year	1982	1977	1987	1980	1991	1991	1988	1996	1979	1995	1981	1978	Min. Deficit	Max. Deficit
January	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	-5.78	-8.37	-5.35	-0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-8.37
June	1st	-8.24	0.00	0.00	-3.79	0.00	-0.50	0.00	0.00	0.00	0.00	0.00	0.00	-8.24
	2nd	-19.20	0.00	-12.17	-28.55	0.00	-4.34	0.00	0.00	0.00	0.00	0.00	0.00	-28.55
	3rd	-30.43	0.00	-21.79	-32.27	-3.24	-17.50	-3.99	-7.18	0.00	0.00	0.00	0.00	-32.27
July	1st	-32.06	-30.11	-30.39	-42.23	-14.50	-15.47	-21.86	-6.51	0.00	0.00	0.00	0.00	-42.23
	2nd	-32.46	-44.92	-20.56	-41.99	-16.49	-16.12	-16.09	-12.32	0.00	0.00	0.00	0.00	-44.92
	3rd	-32.62	-32.84	-31.04	-47.74	-15.37	-16.20	-20.13	-16.31	-7.60	0.00	0.00	0.00	-47.74
August	1st	-26.57	-38.56	-20.96	-9.77	-12.42	-15.05	0.00	-7.29	0.00	-2.66	-4.41	0.00	-38.56
	2nd	-35.70	-41.00	-31.95	-29.29	-18.13	-17.41	-24.48	0.00	0.00	-12.93	-16.23	0.00	-41.00
	3rd	-33.83	-43.23	-23.06	-46.76	-21.27	-23.57	-32.18	-9.53	-13.25	-14.92	-5.47	0.00	-46.76
September	1st	-40.40	-46.59	-41.33	-45.92	-30.65	-29.14	-38.47	-16.10	-34.14	-22.97	-29.78	0.00	-46.59
	2nd	-44.31	-52.43	-47.14	-55.00	-35.90	-28.57	-45.34	-28.99	-36.83	-36.49	-48.12	0.00	-55.00
	3rd	-46.83	-57.74	-42.16	-55.82	-30.04	-31.35	-47.24	-24.69	-41.32	-33.21	0.00	0.00	-57.74
October	1st	-42.37	-59.42	-50.74	-49.68	-39.11	-10.30	-47.36	-5.18	-36.87	-37.73	0.00	0.00	-59.42
	2nd	-36.94	-52.31	-33.23	-21.07	-15.94	-27.35	-12.91	-3.64	-25.29	-3.97	0.00	0.00	-52.31
	3rd	-34.13	-44.33	-35.69	-25.54	-19.88	-29.65	-7.51	0.00	-8.23	0.00	0.00	0.00	-44.33
November	1st	-41.89	-48.36	-48.32	-27.43	-16.70	-26.89	0.00	0.00	0.00	0.00	-0.49	0.00	-48.36
	2nd	-33.82	-35.26	-41.18	0.00	-9.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-41.18
	3rd	-38.46	-14.80	0.00	0.00	-0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-38.46
December	1st	-4.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-4.51
	2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3rd	0.00	0.00	0.00	0.00	-28.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-28.32
Total (million m <sup>3</sup> )	-545.4	-572.9	-472.2	-497.0	-290.3	-273.3	-279.5	-121.2	-178.4	-143.7	-90.8	0.0	0.0	-572.9
Total in the drought season (million m <sup>3</sup> )	-536.0	-565.0	-457.1	-496.7	-263.4	-273.3	-279.5	-121.2	-178.4	-143.7	-90.8	0.0	0.0	-565.0

: Drought season

**Table A5-7 Water Balance Analysis Incorporating Possible Development (1/3)**

Demand : Present(1996)		(unit : million m <sup>3</sup> )																												
		1982	1977	1987	1980	1984	1991	1988	1996	1979	1995	1981	1978	1982	1977	1987	1980	1984	1991	1988	1996	1979	1995	1981	1978					
Water Saving	Maintenance Flow	Potential Flow(Annual)	6,542.8	5,808.4	6,702.5	6,640.1	6,750.5	6,188.1	6,266.5	6,664.9	9,941.7	8,256.4	10,429.5	741.1	818.9	891.3	992.2	1,033.9	1,053.8	1,382.4	1,597.6	1,736.7	2,008.2	2,316.9	3,928.0					
		(Drought Season)	741.1	818.9	891.3	992.2	1,033.9	1,053.8	1,382.4	1,597.6	1,736.7	2,008.2	2,316.9	3,928.0																
Demand Present	Water Saving	Expected Water Deficit during Drought Season																												
		No-Saving	Natural Flow(N.F.)	539.4	564.8	474.9	501.7	269.5	279.7	278.9	120.1	164.8	134.2	94.3	539.4	564.8	474.9	501.7	269.5	279.7	278.9	120.1	164.8	134.2	94.3	539.4	564.8	474.9	501.7	
			N.F.+Sutami(WL:272.5-260)	424.1	449.5	359.6	386.4	154.2	164.4	163.6	4.8	49.5	18.9	0.0	424.1	449.5	359.6	386.4	154.2	164.4	163.6	4.8	49.5	18.9	0.0	424.1	449.5	359.6	386.4	154.2
			N.F.+Sutami(WL:260-246)	366.3	391.7	301.8	328.5	96.4	106.6	105.8	0.0	0.0	0.0	0.0	366.3	391.7	301.8	328.5	96.4	106.6	105.8	0.0	0.0	0.0	0.0	0.0	366.3	391.7	301.8	328.5
		WITHOUT	Natural Flow(N.F.)	235.1	307.4	198.8	244.1	38.3	41.5	97.6	2.6	43.2	27.8	25.8	235.1	307.4	198.8	244.1	38.3	41.5	97.6	2.6	43.2	27.8	25.8	235.1	307.4	198.8	244.1	
			N.F.+Sutami(WL:272.5-260)	119.8	192.1	83.5	128.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.8	192.1	83.5	128.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.8	192.1	83.5	128.8
N.F.+Sutami(WL:260-246)	62.0		134.3	25.6	70.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.0	134.3	25.6	70.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.0	134.3	25.6	70.9		

Note : Figure in the above table shows water deficit against water demand for 2020 to be expected during 6 months of drought season by available water resources including natural flow of each year, reservoir storage and water savings.  
Zero (0) in a shaded column means no deficit.

Sutami means total capacity of Sutami and Lahor

Table A5-7 Water Balance Analysis Incorporating Possible Development (2/3)

Demand : 2010		1982	1977	1987	1980	1994	1991	1988	1996	1979	1995	1981	1978	
Potential Flow (Annual) (Drought Season)		1/20 20-yr drought	2/20 10-yr drought	3/20 6.7-yr drought	4/20 5-yr drought	5/20 4-yr drought	6/20 3.3-yr drought	8/20 2.5-yr drought	10/20 2-yr drought	12/20 1.7-yr drought	15/20 1.3-yr drought	19/20 1.05-yr drought	20/20 1-yr drought	
Demand 2010	Water Saving	6,542.8	5,808.4	6,702.5	6,640.1	6,750.5	6,188.1	6,266.5	6,664.9	9,041.7	8,256.4	8,549.5	10,429.5	
	No-Saving w/ Maainte Flow	741.1	818.9	891.3	992.2	1,033.9	1,053.8	1,382.4	1,597.6	1,736.7	2,008.2	2,316.9	3,928.0	
	Expected Water Deficit during Drought Season													
	Natural Flow (N.F.)	541.8	565.3	472.5	501.6	267.2	278.3	280.5	280.5	22.4	170.7	136.9	89.2	0.0
	(1) N.F.+Sutami (St. WL:272.5-260)	437.7	461.2	368.4	397.5	163.1	174.2	176.4	176.4	18.3	66.6	32.8	0.0	0.0
	(2) N.F.+Sutami (St. WL:260-246)	390.6	414.1	321.3	350.4	116.0	127.1	129.3	129.3	0.0	19.5	0.0	0.0	0.0
	(3) N.F.+St(260)+Worejo(Wj. Dam+Push-back Scheme)	313.0	316.5	243.7	272.8	38.4	40.5	40.5	40.5	0.0	0.0	0.0	0.0	0.0
	(4) N.F.+St(246)+Worejo(Wj. Dam+Push-back Scheme)	265.9	289.4	196.6	225.7	0.0	2.4	2.4	2.4	0.0	0.0	0.0	0.0	0.0
	(5) N.F.+St(260)+Wj + Umbulan	252.3	275.8	183.0	212.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(6) N.F.+St(246)+Wj + Umbulan	205.2	228.7	135.9	165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(7) N.F.+St(260)+Wj + Umbulan + Beng	105.3	128.8	36.0	65.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(8) N.F.+St(246)+Wj + Umbulan + Beng	58.2	81.7	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(9) N.F.+St(260)+Wj + Umbulan + Beng + Genteng I	35.3	58.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(10) N.F.+St(260)+Wj + Umbulan + Beng + Kedungwarak	51.3	74.8	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(11) N.F.+St(260)+Wj + Umbulan + Beng + Genteng I + Kedungwarak	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
(12) N.F.+St(246)+Wj + Umbulan + Beng + Genteng I	0.0	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
(13) N.F.+St(246)+Wj + Umbulan + Beng + Kedungwarak	4.2	27.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
(14) N.F.+St(246)+Wj + Umbulan + Beng + Genteng I + Kedungwarak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Demand 2010	Water Saving	480.5	516.5	418.5	447.0	216.4	226.5	239.1	85.3	145.0	112.8	72.0	0.0	
	No-Saving w/ Maainte Flow	376.4	412.4	314.4	342.9	112.3	122.4	135.0	0.0	40.9	8.7	0.0	0.0	
	Natural Flow (N.F.)	329.3	365.3	267.3	295.8	65.2	74.3	74.3	74.3	0.0	0.0	0.0	0.0	
	(1) N.F.+Sutami (St. WL:272.5-260)	251.7	287.7	189.7	218.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	(2) N.F.+Sutami (St. WL:260-246)	204.6	240.6	142.6	171.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	(3) N.F.+St(260)+Worejo(Wj. Dam+Push-back Scheme)	191.0	227.0	129.0	157.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	(4) N.F.+St(246)+Worejo(Wj. Dam+Push-back Scheme)	143.9	179.9	81.9	110.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	(5) N.F.+St(260)+Wj + Umbulan	44.0	80.0	0.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	(6) N.F.+St(246)+Wj + Umbulan + Beng	0.0	22.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	(7) N.F.+St(260)+Wj + Umbulan + Beng + Genteng I	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	(8) N.F.+St(260)+Wj + Umbulan + Beng + Kedungwarak	0.0	26.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	(9) N.F.+St(260)+Wj + Umbulan + Beng + Genteng I + Kedungwarak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	(10) N.F.+St(246)+Wj + Umbulan + Beng + Genteng I + Kedungwarak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	(11) N.F.+St(246)+Wj + Umbulan + Beng + Genteng I + Kedungwarak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
(12) N.F.+St(246)+Wj + Umbulan + Beng + Kedungwarak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
(13) N.F.+St(246)+Wj + Umbulan + Beng + Genteng I + Kedungwarak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
(14) N.F.+St(246)+Wj + Umbulan + Beng + Genteng I + Kedungwarak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Note : Figure in the above table shows water deficit against water demand for 2020 to be expected during 6 months of drought season by available water resources including natural flow of each year, reservoir storage and water savings.

Zero (0) in a shaded column means no deficit.  
Sutami means total capacity of Sutami and Lahor

Table AS-7 Water Balance Analysis Incorporating Possible Development (3/3)

Demand	Water Saving	Water Resources	Expected Water Deficit during Drought Season														1978	
			1982	1977	1987	1980	1994	1991	1988	1970	1970	1970	1970	1970	1970			
2020 Demand	No-Saving w/ Mainte Flow	Potential Flow(Annual) (Drought Season)	6,542.8	5,808.4	6,702.5	6,640.1	6,702.5	6,188.1	6,266.5	6,664.9	9,941.7	8,256.4	8,549.5	10,429.5				
		Natural Flow(N.F.)	609.5	624.0	532.2	563.4	327.5	341.3	332.8	168.3	215.1	175.5	14.2	0.0				
		(1) N.F.+Sutami(St. WL-272.5-260)	513.3	527.8	436.0	467.2	231.3	245.1	236.6	72.1	118.9	79.3	18.0	0.0				
		(2) N.F.+Sutami(St. WL-260-246)	475.9	488.4	396.6	427.8	191.9	205.7	197.2	32.7	79.5	39.9	0.0	0.0				
		(3) N.F.+S(260)+Wonorejo(Wj. Dam+Push-back Scheme)	388.6	403.1	311.3	342.5	106.6	120.4	111.9	0.0	0.0	0.0	0.0	0.0				
		(4) N.F.+S(246)+Wonorejo(Wj. Dam+Push-back Scheme)	349.2	363.7	271.9	303.1	67.2	81.0	72.5	0.0	0.0	0.0	0.0	0.0				
		(5) N.F.+S(260)+Wj + Umbulan	327.9	342.4	250.6	281.8	45.9	59.7	51.2	0.0	0.0	0.0	0.0	0.0				
		(6) N.F.+S(246)+Wj + Umbulan	288.5	303.0	211.2	242.4	6.5	20.3	11.8	0.0	0.0	0.0	0.0	0.0				
		(7) N.F.+S(260)+Wj + Umbulan + Beng	180.9	195.4	103.6	134.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
		(8) N.F.+S(246)+Wj + Umbulan + Beng	141.5	156.0	64.2	95.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
		(9) N.F.+S(260)+Wj + Umbulan + Beng + Genteng 1	110.9	125.4	33.6	64.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
		(10) N.F.+S(260)+Wj + Umbulan + Beng + Kedungwarak	126.9	141.4	49.6	80.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
		(11) N.F.+S(260)+Wj + Umbulan + Beng + Genteng 1 + Kedungwarak	56.9	71.4	0.0	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
		(12) N.F.+S(246)+Wj + Umbulan + Beng + Genteng 1	87.5	102.0	10.2	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
(13) N.F.+S(246)+Wj + Umbulan + Beng + Kedungwarak	17.5	32.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
(14) N.F.+S(246)+Wj + Umbulan + Beng + Genteng 1 + Kedungwarak	536.0	565.0	467.1	496.7	263.4	273.3	279.5	121.2	178.4	143.7	90.8	0.0						
2020 Demand	Saving w/ Mainte Flow	Natural Flow(N.F.)	419.8	468.81	370.9	400.5	167.2	177.1	183.3	25.0	82.2	47.5	0.0					
		(1) N.F.+Sutami(260)	400.4	429.4	331.5	361.1	127.8	137.7	143.9	0.0	42.8	8.1	0.0					
		(2) N.F.+Sutami(246)	315.1	344.1	246.2	275.8	42.5	52.4	58.6	0.0	0.0	0.0	0.0					
		(3) N.F.+S(260)+Wonorejo(Wj. Dam+Push-back Scheme)	275.7	304.7	208.8	236.4	3.1	13.0	19.2	0.0	0.0	0.0	0.0					
		(4) N.F.+S(260)+Wj + Umbulan	254.4	283.4	185.5	215.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
		(5) N.F.+S(260)+Wj + Umbulan	215.0	244.0	146.1	175.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
		(6) N.F.+S(246)+Wj + Umbulan	107.4	136.4	38.5	68.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
		(7) N.F.+S(260)+Wj + Umbulan + Beng	68.0	97.0	9.0	28.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
		(8) N.F.+S(246)+Wj + Umbulan + Beng	37.0	66.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
		(9) N.F.+S(260)+Wj + Umbulan + Beng + Genteng 1	53.4	82.4	0.0	14.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
		(10) N.F.+S(260)+Wj + Umbulan + Beng + Kedungwarak	0.0	12.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
		(11) N.F.+S(260)+Wj + Umbulan + Beng + Genteng 1 + Kedungwarak	0.0	27.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
		(12) N.F.+S(246)+Wj + Umbulan + Beng + Genteng 1	14.0	43.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
		(13) N.F.+S(246)+Wj + Umbulan + Beng + Kedungwarak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
(14) N.F.+S(246)+Wj + Umbulan + Beng + Genteng 1 + Kedungwarak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							

Note : Figure in the above table shows water deficit against water demand for 2020 to be expected during 6 months of drought season by available water resources including natural flow of each year, reservoir storage and water savings.  
Zero (0) in a shaded column means no deficit.  
Sutami means total capacity of Sutami and Lahor



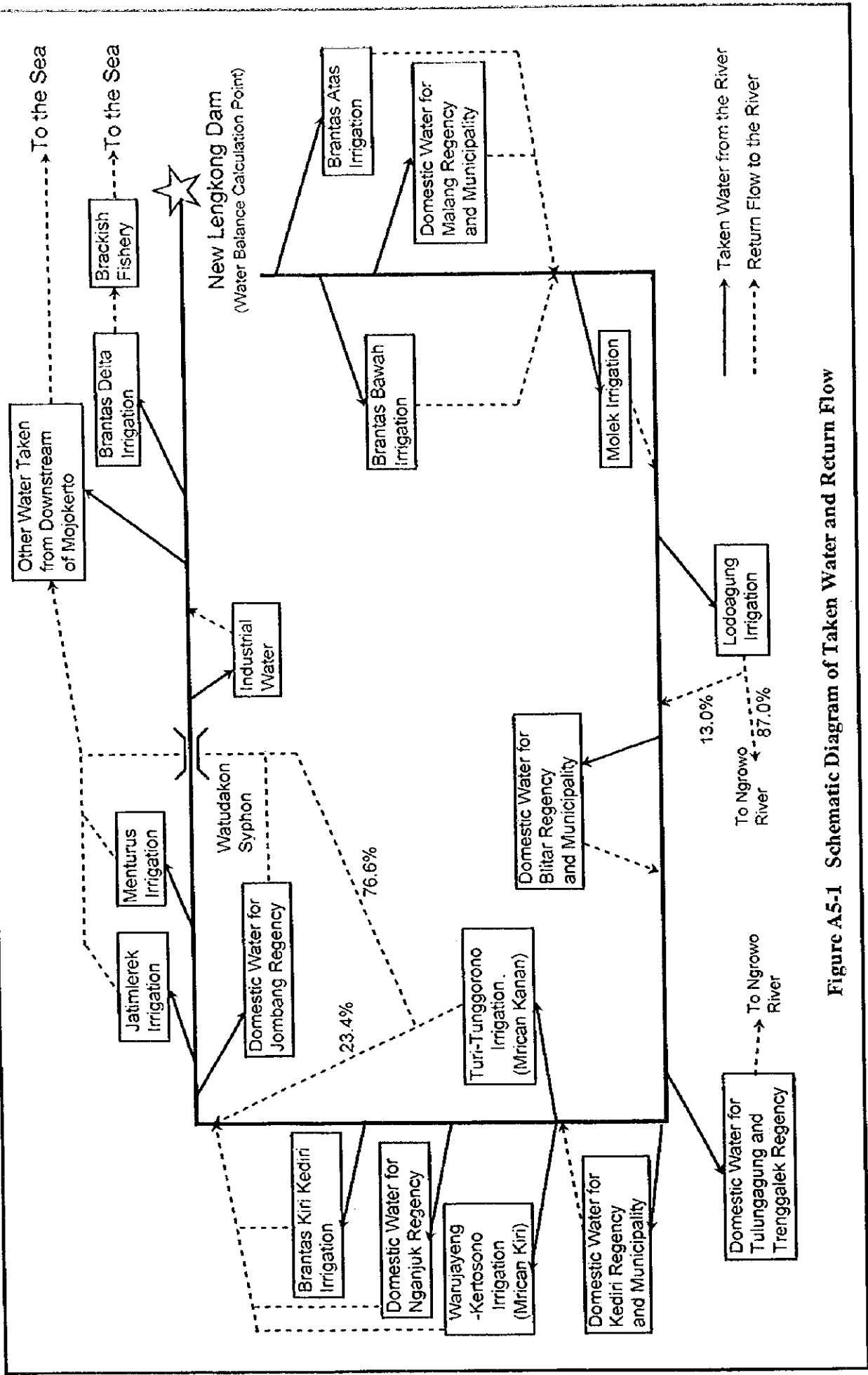


Figure A5-1 Schematic Diagram of Taken Water and Return Flow