

<<< MASTER PROGRAM for 08-05(Leap Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE													YEAR : 1959/60	[WATER LEVEL (m)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL		
1	0.91	0.91	0.91	5.18	4.48	5.00	5.00	2.99	2.38	2.13	1.95	1.74			
2	0.91	0.91	0.91	4.85	4.79	4.88	4.57	2.96	2.38	2.10	1.95	1.74			
3	0.91	0.91	0.91	4.39	4.75	4.85	4.27	2.90	2.38	2.10	1.95	1.74			
4	0.91	0.91	0.91	4.05	4.42	4.85	4.08	2.87	2.35	2.10	1.92	1.71			
5	0.91	0.91	0.91	3.69	4.18	4.88	3.99	2.87	2.35	2.10	1.92	1.68			
6	0.91	0.91	0.91	4.18	4.08	4.69	3.93	2.83	2.35	2.07	1.92	1.68			
7	0.91	0.91	0.91	4.63	3.90	4.39	3.87	2.83	2.35	2.07	1.89	1.68			
8	0.91	0.91	0.91	4.48	3.60	4.45	3.78	2.83	2.32	2.07	1.89	1.68			
9	0.91	0.91	0.91	4.08	3.60	4.48	3.72	2.83	2.32	2.07	1.89	1.68			
10	0.91	0.91	0.91	3.72	3.66	4.69	3.69	2.77	2.32	2.07	1.89	1.68			
11	0.91	0.94	0.91	3.81	3.81	6.16	3.60	2.74	2.29	2.07	1.89	1.65			
12	0.91	0.94	0.94	3.66	4.69	6.52	3.51	2.71	2.29	2.07	1.86	1.65			
13	0.91	0.94	0.94	3.44	4.94	6.46	3.44	2.68	2.29	2.04	1.86	1.55			
14	0.91	0.94	0.94	3.17	4.79	6.37	3.44	2.65	2.26	2.04	1.83	1.65			
15	0.91	0.94	0.85	2.90	4.63	6.28	3.44	2.65	2.26	2.04	1.83	1.65			
16	0.91	0.94	0.85	2.71	4.60	6.64	3.44	2.65	2.23	2.04	1.83	1.62			
17	0.91	0.91	0.85	2.59	4.57	6.80	3.38	2.62	2.23	2.01	1.83	1.62			
18	0.91	0.91	0.82	2.50	4.54	6.55	3.35	2.59	2.23	2.01	1.80	1.62			
19	0.91	0.91	0.75	2.41	4.48	6.49	3.35	2.56	2.23	2.01	1.80	1.62			
20	0.91	0.91	1.07	2.35	4.45	6.46	3.35	2.56	2.19	1.98	1.80	1.62			
21	0.91	0.91	2.38	2.29	4.57	6.58	3.35	2.53	2.19	1.98	1.80	1.58			
22	0.91	0.91	4.30	2.26	4.69	6.55	3.32	2.53	2.19	1.98	1.80	1.58			
23	0.91	0.91	4.30	2.32	4.79	6.55	3.25	2.50	2.16	1.98	1.77	1.58			
24	0.91	0.91	4.27	2.38	4.97	6.58	3.20	2.50	2.16	1.95	1.77	1.58			
25	0.91	0.91	4.36	2.47	5.06	6.37	3.14	2.47	2.16	1.95	1.77	1.58			
26	0.91	0.91	4.45	2.56	5.06	6.13	3.14	2.47	2.16	1.95	1.77	1.55			
27	0.91	0.91	4.36	2.87	5.21	6.00	3.08	2.44	2.16	1.95	1.77	1.55			
28	0.91	0.91	4.30	3.20	5.24	5.85	3.02	2.44	2.16	1.95	1.74	1.55			
29	0.91	0.91	4.33	3.93	5.15	5.73	3.02	2.44	2.13	1.95	1.74	1.55			
30	0.91	0.91	4.88	4.36		5.55	2.99	2.41	2.13	1.95	1.74	1.52			
31	0.91		5.49	4.57		5.33		2.41		1.95	1.74				
MEAN	0.91	0.92	2.11	3.42	4.54	5.78	3.56	2.65	2.25	2.03	1.83	1.63	2.63		
MAX.	0.91	0.94	5.49	5.18	5.24	6.80	5.00	2.99	2.38	2.13	1.95	1.74	6.80		
MIN.	0.91	0.91	0.76	2.26	3.60	4.39	2.99	2.41	2.13	1.95	1.74	1.52	0.76		

*QM*	ST.: 5-940 LUANGWA BRIDGE													YEAR : 1959/60	[DISCHARGE (m3/s)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL		
1	0.5	0.5	0.5	1050.4	727.5	960.5	960.5	236.8	113.6	76.9	54.0	32.4			
2	0.5	0.5	0.5	888.6	860.6	902.7	766.3	229.6	113.6	72.8	54.0	32.4			
3	0.5	0.5	0.5	689.7	846.8	888.6	641.0	215.5	113.6	72.8	54.0	32.4			
4	0.5	0.5	0.5	559.9	702.2	888.6	571.2	208.6	108.7	72.8	50.6	29.8			
5	0.5	0.5	0.5	433.7	605.6	902.7	537.8	208.6	108.7	72.8	50.6	27.3			
6	0.5	0.5	0.5	605.6	571.2	819.5	516.1	201.8	108.7	68.8	50.6	27.3			
7	0.5	0.5	0.5	792.7	505.4	689.7	494.8	201.8	108.7	68.8	47.3	27.3			
8	0.5	0.5	0.5	727.5	404.7	714.8	463.8	201.8	103.8	68.8	47.3	27.3			
9	0.5	0.5	0.5	571.2	404.7	727.5	443.6	201.8	103.8	68.8	47.3	27.3			
10	0.5	0.5	0.5	443.6	423.9	819.5	433.7	188.6	103.8	68.8	47.3	27.3			
11	0.5	0.2	0.5	474.0	474.0	1598.0	404.7	182.2	99.0	68.8	47.3	24.9			
12	0.5	0.2	0.2	423.9	819.5	1832.8	376.6	175.8	99.0	68.8	44.1	24.9			
13	0.5	0.2	0.2	358.5	931.4	1792.6	358.5	169.6	99.0	65.0	44.1	24.9			
14	0.5	0.2	0.2	282.5	860.6	1733.0	358.5	163.5	94.4	65.0	41.0	24.9			
15	0.5	0.2	1.3	215.5	792.7	1674.5	358.5	163.5	94.4	65.0	41.0	24.9			
16	0.5	0.2	1.3	175.8	779.4	1914.7	358.5	163.5	89.8	65.0	41.0	22.6			
17	0.5	0.5	1.3	151.7	766.3	2019.5	340.8	157.5	89.8	61.2	41.0	22.6			
18	0.5	0.5	1.9	134.7	753.2	1853.1	332.2	151.7	89.8	61.2	38.1	22.6			
19	0.5	0.5	3.5	118.7	727.5	1812.6	332.2	145.9	89.8	61.2	38.1	22.6			
20	0.5	0.5	0.2	108.7	714.8	1792.6	332.2	145.9	85.4	57.6	38.1	22.6			
21	0.5	0.5	113.6	99.0	766.3	1873.5	332.2	140.2	85.4	57.6	38.1	20.4			
22	0.5	0.5	653.0	94.4	819.5	1853.1	323.6	140.2	85.4	57.6	38.1	20.4			
23	0.5	0.5	653.0	103.8	860.6	1853.1	306.8	134.7	81.1	57.6	35.2	20.4			
24	0.5	0.5	641.0	113.6	945.9	1873.5	290.5	134.7	81.1	54.0	35.2	20.4			
25	0.5	0.5	677.4	129.3	990.0	1733.0	274.6	129.3	81.1	54.0	35.2	20.4			
26	0.5	0.5	714.8	145.9	990.0	1579.1	274.6	129.3	81.1	54.0	35.2	18.3			
27	0.5	0.5	677.4	208.6	1065.8	1504.9	259.1	123.9	81.1	54.0	35.2	18.3			
28	0.5	0.5	653.0	290.5	1081.3	1414.6	244.1	123.9	81.1	54.0	32.4	18.3			
29	0.5	0.5	665.1	516.1	1035.1	1344.3	244.1	123.9	76.9	54.0	32.4	18.3			
30	0.5	0.5	902.7	677.4		1242.3	236.8	118.7	76.9	54.0	32.4	15.3			
31	0.5		1209.2	766.3		1128.4		118.7		54.0	32.4				
MEAN	0.5	0.4	244.4	398.4	766.4	1410.9	405.6	165.5	94.3	63.1	41.9	24.0	300.6		
MAX.	0.5	0.5	1209.2	1050.4	1081.3	2019.5	960.5	236.8	113.6	76.9	54.0	32.4	2019.5		
MIN.	0.5	0.2	0.2	94.4	404.7	689.7	236.8	118.7	76.9	54.0	32.4	16.3	0.2		

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[Flow Regime (m3/s)]:

Q(95day): 404.7      Q(185day): 85.4      Q(275day): 22.6      Q(355day): 0.5

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1960/61	[WATER LEVEL (m)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	1.52	1.34	1.65	3.20	4.88	5.79	5.70	3.60	2.71	2.41	2.19	1.92		
2	1.52	1.34	1.65	3.57	5.12	5.64	5.79	3.57	2.68	2.41	2.19	1.93		
3	1.52	1.34	1.58	3.93	5.09	5.46	5.49	3.51	2.68	2.41	2.16	1.99		
4	1.52	1.31	1.52	3.99	4.66	5.39	5.46	3.47	2.65	2.38	2.16	1.98		
5	1.49	1.31	1.49	4.05	4.85	6.40	5.64	3.41	2.65	2.38	2.16	1.95		
6	1.49	1.31	1.49	3.84	4.75	6.22	5.33	3.38	2.62	2.38	2.16	2.01		
7	1.46	1.31	1.45	4.45	4.82	6.31	5.00	3.35	2.62	2.38	2.16	2.00		
8	1.46	1.34	1.43	4.15	4.88	6.52	4.82	3.32	2.59	2.38	2.13	1.98		
9	1.46	1.34	1.43	3.87	4.79	6.62	4.75	3.29	2.59	2.35	2.13	1.95		
10	1.46	1.34	1.43	3.90	4.79	6.98	4.66	3.26	2.59	2.35	2.13	1.95		
11	1.43	1.34	1.43	3.87	4.85	7.01	4.54	3.23	2.56	2.35	2.10	1.92		
12	1.43	1.34	1.43	4.15	4.79	7.32	4.48	3.17	2.56	2.35	2.10	1.92		
13	1.43	1.34	1.43	3.90	4.33	7.04	4.39	3.14	2.53	2.32	2.10	1.92		
14	1.43	1.34	1.43	3.63	4.08	7.04	4.30	3.14	2.53	2.32	2.10	1.92		
15	1.43	1.34	1.58	3.96	4.48	7.47	4.15	3.11	2.53	2.32	2.10	1.89		
16	1.40	1.43	1.55	4.72	4.51	7.96	4.05	3.08	2.53	2.32	2.07	1.89		
17	1.40	1.43	1.62	4.94	4.88	7.04	3.96	3.05	2.50	2.32	2.07	1.89		
18	1.40	1.37	2.56	4.66	5.91	6.58	3.93	3.02	2.50	2.29	2.07	1.92		
19	1.40	1.37	2.13	5.09	6.28	6.49	3.93	2.99	2.50	2.29	2.07	1.89		
20	1.40	1.37	1.89	4.63	6.52	6.61	3.93	2.96	2.47	2.29	2.16	1.86		
21	1.43	1.34	1.86	4.36	6.52	6.40	3.94	2.93	2.47	2.29	2.19	1.85		
22	1.43	1.34	2.68	3.99	6.58	6.55	3.75	2.93	2.47	2.29	2.07	1.83		
23	1.46	1.37	2.56	3.69	7.01	6.95	3.69	2.90	2.47	2.29	2.04	1.83		
24	1.43	1.40	2.19	3.84	6.89	6.89	3.69	2.87	2.47	2.26	2.04	1.83		
25	1.43	1.43	2.13	3.87	6.52	6.52	3.69	2.83	2.47	2.26	2.04	1.83		
26	1.40	1.46	2.10	4.11	6.34	6.34	3.72	2.80	2.47	2.26	2.04	1.80		
27	1.40	2.07	2.07	3.84	6.37	6.34	3.66	2.80	2.44	2.23	2.04	1.80		
28	1.37	1.71	1.98	4.85	6.04	6.16	3.60	2.77	2.44	2.23	2.04	1.80		
29	1.37	1.62	2.32	5.00	6.13	6.13	3.60	2.74	2.44	2.23	2.01	1.77		
30	1.37	1.65	2.74	5.46	5.88	5.88	3.60	2.71	2.44	2.23	2.01	1.77		
31	1.34		3.02	5.09		5.76		2.71		2.19	2.01			
MEAN	1.44	1.41	1.87	4.21	5.41	6.51	4.37	3.10	2.54	2.31	2.10	1.90	3.68	
MAX.	1.52	2.07	3.02	5.46	7.01	7.96	5.79	3.60	2.71	2.41	2.19	2.07	7.96	
MIN.	1.34	1.31	1.43	3.20	4.08	5.39	3.60	2.71	2.44	2.19	2.01	1.77	1.31	

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1960/61	[DISCHARGE (m3/sec)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	16.3	6.9	24.9	290.5	902.7	1379.2	1327.0	404.7	175.8	118.7	85.4	57.6		
2	16.3	6.9	24.9	395.2	1020.0	1292.8	1379.2	395.2	169.6	118.7	85.4	57.6		
3	16.3	6.9	20.4	516.1	1004.9	1192.8	1209.2	376.6	169.6	118.7	81.1	57.6		
4	16.3	5.7	16.3	537.8	906.0	1160.4	1192.8	367.5	163.5	113.6	81.1	57.6		
5	14.5	5.7	14.5	559.9	888.6	1752.7	1292.8	349.6	163.5	113.6	81.1	54.0		
6	14.5	5.7	14.5	484.3	845.8	1636.0	1128.4	340.8	157.5	113.6	81.1	61.2		
7	12.7	5.7	12.7	714.8	874.5	1693.9	960.5	332.2	157.5	113.6	81.1	68.8		
8	12.7	6.9	11.1	594.0	902.7	1832.8	874.5	323.6	151.7	113.6	76.9	57.6		
9	12.7	6.9	11.1	494.8	860.6	1935.4	846.8	315.1	151.7	108.7	76.9	54.0		
10	12.7	6.9	11.1	505.4	860.6	2149.0	806.0	306.8	151.7	108.7	76.9	54.0		
11	11.1	6.9	11.1	494.8	888.6	2171.0	753.2	298.6	145.9	108.7	72.8	50.6		
12	11.1	6.9	11.1	594.0	860.6	2396.9	727.5	282.5	145.9	108.7	72.8	50.6		
13	11.1	6.9	11.1	505.4	665.1	2193.1	689.7	274.6	140.2	103.8	72.8	50.6		
14	11.1	6.9	11.1	414.2	571.2	2193.1	653.0	274.6	140.2	103.8	72.8	50.6		
15	11.1	6.9	20.4	526.9	727.5	2514.0	594.0	266.8	140.2	103.8	72.8	47.3		
16	9.6	11.1	18.3	833.1	740.3	2907.6	559.9	259.1	140.2	103.8	68.8	47.3		
17	9.6	11.1	22.6	931.4	902.7	2193.1	526.9	251.6	134.7	103.8	68.8	47.3		
18	9.6	8.2	145.9	806.0	1450.3	1873.5	516.1	244.1	134.7	99.0	68.8	50.6		
19	9.6	8.2	76.9	1004.9	1674.5	1812.6	516.1	236.8	134.7	99.0	68.8	47.3		
20	9.6	8.2	47.3	792.7	1832.8	1894.1	516.1	229.6	129.3	99.0	81.1	44.1		
21	11.1	6.9	44.1	677.4	1832.8	1752.7	484.3	222.5	129.3	99.0	85.4	44.1		
22	11.1	6.9	169.6	537.8	1873.5	1853.1	453.6	222.5	129.3	99.0	68.8	41.0		
23	12.7	8.2	145.9	433.7	2171.0	2127.2	433.7	215.5	129.3	99.0	65.0	41.0		
24	11.1	9.6	85.4	484.3	2093.8	2083.8	433.7	208.6	129.3	94.4	65.0	41.0		
25	11.1	11.1	76.9	494.8	1832.8	1832.8	433.7	201.8	129.3	94.4	65.0	41.0		
26	9.6	12.7	72.8	582.5	1713.4	1713.4	443.6	195.2	129.3	94.4	65.0	38.1		
27	9.6	68.8	68.8	484.3	1733.0	1713.4	423.9	195.2	129.3	89.8	65.0	38.1		
28	8.2	29.8	57.6	888.6	1523.3	1598.0	404.7	188.6	123.9	89.8	65.0	38.1		
29	8.2	22.6	103.8	960.5		1579.1	404.7	182.2	123.9	89.8	61.2	35.2		
30	8.2	24.9	182.2	1192.8		1432.4	404.7	175.8	123.9	89.8	61.2	35.2		
31	6.9		244.1	1004.9		1361.7		175.8		85.4	61.2			
MEAN	11.5	11.6	57.7	636.7	1215.9	1845.9	713.0	268.2	142.3	103.2	72.7	40.6	423.0	
MAX.	16.3	68.8	244.1	1192.8	2171.0	2907.6	1379.2	404.7	175.8	118.7	85.4	68.8	2907.6	
MIN.	6.9	5.7	11.1	290.5	571.2	1160.4	404.7	175.8	123.9	85.4	61.2	35.2	5.7	

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$   
 [ Flow Regime (m3/s) ]:  
 Q(95day): 516.1      Q(185day): 123.9      Q(275day): 47.3      Q(355day): 6.9

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1951/62	[WATER LEVEL (m)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	1.74	1.69	2.41	5.73	10.36	8.39	8.44	4.94	3.35	2.90	2.50	2.20		
2	1.74	1.65	2.32	5.61	8.90	8.20	8.14	4.94	3.35	2.77	2.50	2.23		
3	1.74	1.65	2.16	5.55	9.11	7.83	8.20	4.75	3.32	2.77	2.50	2.23		
4	1.74	1.65	2.13	5.85	9.24	7.80	8.02	4.72	3.32	2.74	2.50	2.23		
5	1.74	1.65	2.10	6.61	8.96	7.83	7.38	4.57	3.29	2.74	2.50	2.23		
6	1.71	1.65	2.10	6.71	8.93	7.86	7.10	4.43	3.41	2.74	2.47	2.23		
7	1.71	1.65	2.23	7.22	9.27	7.86	6.98	4.24	3.29	2.74	2.47	2.23		
8	1.71	1.68	2.35	6.92	9.48	7.68	6.74	4.33	3.23	2.74	2.47	2.19		
9	1.68	1.68	2.35	6.92	9.20	7.44	6.64	4.15	3.20	2.74	2.44	2.19		
10	1.68	1.71	2.74	7.22	8.63	7.25	6.49	4.08	3.35	2.71	2.44	2.19		
11	1.68	1.83	2.74	7.65	9.75	7.04	6.16	4.08	3.20	2.71	2.44	2.19		
12	1.68	1.95	2.74	7.96	8.53	7.19	6.25	4.05	3.14	2.71	2.44	2.19		
13	1.68	1.92	2.74	8.11	8.66	7.32	6.04	3.96	3.11	2.71	2.41	2.19		
14	1.68	1.95	2.99	8.44	8.56	7.35	6.07	3.87	3.11	2.71	2.41	2.16		
15	1.68	2.04	3.69	8.23	8.20	7.32	6.07	3.99	3.20	2.71	2.41	2.16		
16	1.68	2.13	3.96	7.96	8.17	7.04	6.10	3.81	3.14	2.71	2.38	2.16		
17	1.68	2.13	4.75	8.11	8.72	7.28	6.13	3.75	3.05	2.68	2.38	2.13		
18	1.68	2.04	6.22	8.56	8.90	8.41	5.88	3.78	3.02	2.68	2.35	2.13		
19	1.68	2.13	6.04	8.78	8.69	9.54	5.61	3.78	2.99	2.68	2.35	2.13		
20	1.65	2.50	5.73	8.50	9.05	9.66	5.39	3.90	2.96	2.68	2.35	2.13		
21	1.65	2.44	5.39	8.47	9.24	9.39	5.24	3.69	2.99	2.65	2.32	2.13		
22	1.65	2.47	5.46	8.38	9.75	8.50	5.12	3.63	2.96	2.65	2.32	2.10		
23	1.65	2.50	5.64	8.32	9.42	8.50	5.18	3.60	2.93	2.62	2.32	2.10		
24	1.65	2.59	5.43	8.32	8.69	8.87	5.06	3.57	2.93	2.52	2.32	2.10		
25	1.65	2.44	5.52	7.89	8.78	8.32	4.94	3.69	2.90	2.59	2.29	2.10		
26	1.62	2.38	5.98	7.77	8.63	8.05	4.91	3.54	2.87	2.59	2.29	2.07		
27	1.62	2.62	5.58	8.17	8.78	8.20	4.88	3.51	2.83	2.56	2.26	2.07		
28	1.62	2.96	5.58	8.66	8.69	8.63	4.85	3.51	2.83	2.56	2.26	2.04		
29	1.62	2.65	5.70	9.24		8.53	4.75	3.57	2.80	2.55	2.26	2.04		
30	1.62	2.47	6.46	9.72		8.93	4.79	3.57	2.77	2.53	2.26	2.04		
31	1.65		5.88	10.24		8.44		3.41		2.53	2.26			
MEAN	1.67	2.09	4.10	7.80	8.97	8.09	6.12	3.98	3.09	2.68	2.38	2.15	4.40	
MAX.	1.74	2.96	6.46	10.24	10.36	9.66	8.44	4.94	3.41	2.80	2.50	2.23	10.36	
MIN.	1.62	1.65	2.10	5.55	8.17	7.04	4.75	3.41	2.77	2.53	2.26	2.04	1.62	

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1951/62	[DISCHARGE (m3/sec)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	32.4	27.3	118.7	1344.3	5270.6	3275.5	3329.9	931.4	332.2	195.2	134.7	89.8		
2	32.4	24.9	103.8	1275.9	3751.7	3115.2	3062.6	931.4	332.2	188.6	134.7	89.8		
3	32.4	24.9	81.1	1242.3	3957.2	2806.6	3115.2	846.8	323.6	188.6	134.7	89.8		
4	32.4	24.9	76.9	1414.5	4077.0	2781.6	2958.9	833.1	323.6	182.2	134.7	89.8		
5	32.4	24.9	72.8	1894.1	3909.8	2806.6	2443.4	765.3	315.1	182.2	134.7	89.8		
6	29.8	24.9	72.9	1956.3	3780.7	2831.7	2237.6	727.5	349.6	182.2	129.3	89.8		
7	29.8	24.9	89.8	2327.9	4107.3	2831.7	2149.0	629.1	315.1	182.2	129.3	89.8		
8	29.8	27.3	108.7	2105.4	4322.1	2682.7	1977.3	665.1	298.6	182.2	129.3	85.4		
9	27.3	27.3	108.7	2105.4	4046.9	2490.4	1914.7	594.0	290.5	182.2	123.9	85.4		
10	27.3	29.8	182.2	2327.9	3495.6	2350.8	1812.6	571.2	332.2	175.8	123.9	85.4		
11	27.3	41.0	182.2	2658.3	4606.4	2193.1	1598.0	571.2	290.5	175.8	123.9	85.4		
12	27.3	54.0	182.2	2907.6	3412.2	2305.2	1655.2	559.9	274.6	175.8	123.9	85.4		
13	27.3	50.6	182.2	3036.5	3523.6	2396.9	1523.3	526.9	266.8	175.8	118.7	85.4		
14	27.3	54.0	236.8	3329.9	3439.9	2420.1	1541.8	494.8	266.8	175.8	118.7	81.1		
15	27.3	65.0	433.7	3141.6	3115.2	2396.9	1541.8	537.8	290.5	175.8	118.7	81.1		
16	27.3	76.9	526.9	2907.6	3088.8	2193.1	1560.4	474.0	274.6	175.8	113.6	81.1		
17	27.3	76.9	846.8	3036.5	3580.0	2373.8	1579.1	453.6	251.6	169.6	113.6	76.9		
18	27.3	65.0	1636.0	3439.9	3751.7	3302.6	1432.4	463.8	244.1	169.6	108.7	76.9		
19	27.3	76.9	1523.3	3636.8	3551.7	4384.5	1275.9	453.8	236.8	169.6	108.7	76.9		
20	24.9	134.7	1344.3	3384.7	3897.9	4510.6	1160.4	505.4	229.6	169.6	108.7	76.9		
21	24.9	123.9	1160.4	3357.2	4077.0	4229.4	1081.3	433.7	236.8	163.5	103.8	76.9		
22	24.9	129.3	1192.8	3275.5	4606.4	3384.7	1020.0	414.2	229.6	163.5	103.8	72.8		
23	24.9	134.7	1292.8	3221.6	4260.2	3384.7	1050.4	404.7	222.5	157.5	103.8	72.8		
24	24.9	151.7	1176.5	3221.6	3551.7	3722.8	990.0	395.2	222.5	157.5	103.8	72.8		
25	24.9	123.9	1225.7	2856.9	3636.8	3221.6	931.4	433.7	215.5	151.7	99.0	72.8		
26	22.6	113.6	1432.4	2756.7	3495.6	2984.6	917.0	385.9	208.6	151.7	99.0	68.8		
27	22.6	157.5	1259.0	3088.8	3636.8	3115.2	902.7	376.6	201.8	145.9	94.4	68.8		
28	22.6	229.6	1259.0	3523.6	3551.7	3495.6	888.6	376.6	201.8	145.9	94.4	65.0		
29	22.6	163.5	1327.0	4077.0		3412.2	846.8	395.2	195.2	145.9	94.4	65.0		
30	22.6	129.3	1792.6	4574.4		3780.7	860.6	395.2	188.6	140.2	94.4	65.0		
31	24.9		1432.4	5134.1		3329.9		349.6		140.2	94.4			
MEAN	27.1	80.4	731.0	2856.8	3835.8	3048.7	1645.3	545.4	265.4	169.0	114.6	79.8	1100.8	
MAX.	32.4	229.6	1792.6	5134.1	5270.6	4510.6	3329.9	931.4	349.6	195.2	134.7	89.8	5270.6	
MIN.	22.6	24.9	72.8	1242.3	3088.8	2193.1	846.8	349.6	188.6	140.2	94.4	65.0	22.6	

[Discharge Rating Curve]:  $Q=66.157*(H-1.003)^2$

[Flow Regime (m3/s)]:

Q(95day): 1894.1      Q(185day): 251.6      Q(275day): 99.0      Q(355day): 24.9

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1962/63											[WATER LEVEL (m)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	2.01	1.80	2.32	7.19	5.94	7.16	7.74	4.45	3.29	2.96	2.65	2.38	
2	2.01	1.77	2.50	6.77	6.61	7.22	7.50	4.36	3.29	2.96	2.55	2.38	
3	2.01	1.77	2.53	6.68	7.13	7.44	7.32	4.27	3.26	2.93	2.65	2.38	
4	1.98	1.77	2.62	6.74	7.83	7.35	7.25	4.21	3.26	2.93	2.62	2.38	
5	1.98	1.74	2.83	7.41	7.99	7.35	7.04	4.11	3.26	2.93	2.62	2.38	
6	1.98	1.74	3.23	7.35	7.22	6.95	6.68	4.05	3.23	2.90	2.62	2.35	
7	1.98	1.74	3.23	6.92	6.71	7.13	6.16	4.02	3.23	2.90	2.59	2.35	
8	1.98	1.74	3.60	6.77	6.49	7.35	5.88	3.99	3.20	2.90	2.59	2.35	
9	1.95	1.74	3.84	6.37	6.31	7.16	5.58	3.96	3.20	2.90	2.59	2.32	
10	1.95	1.80	4.08	6.22	6.22	7.62	5.30	3.93	3.17	2.87	2.59	2.32	
11	1.95	1.86	4.27	6.04	6.13	8.69	5.18	3.90	3.17	2.87	2.56	2.32	
12	1.92	1.86	4.15	5.82	6.34	9.17	5.15	3.87	3.17	2.87	2.56	2.29	
13	1.92	1.89	4.33	5.43	6.61	8.20	5.09	3.84	3.14	2.83	2.56	2.29	
14	1.92	1.95	4.11	5.24	7.22	8.02	4.97	3.78	3.14	2.83	2.53	2.26	
15	1.92	2.01	4.27	5.46	7.25	7.86	4.88	3.75	3.11	2.83	2.53	2.26	
16	1.89	2.10	4.30	5.91	8.17	7.77	4.82	3.72	3.11	2.80	2.53	2.26	
17	1.89	1.92	4.15	5.82	8.75	8.50	4.79	3.69	3.08	2.80	2.50	2.23	
18	1.89	2.04	3.90	5.97	8.99	9.36	4.72	3.66	3.08	2.80	2.50	2.23	
19	1.89	2.07	3.90	5.88	8.87	8.93	4.72	3.63	3.08	2.80	2.50	2.19	
20	1.89	2.16	3.87	5.76	8.63	9.08	4.75	3.60	3.08	2.77	2.50	2.19	
21	1.86	2.16	3.81	5.76	8.44	9.75	4.85	3.57	3.08	2.77	2.47	2.19	
22	1.86	2.16	4.63	5.79	8.47	9.48	4.94	3.54	3.05	2.74	2.47	2.16	
23	1.86	2.16	5.61	5.82	9.08	8.96	5.00	3.51	3.05	2.74	2.47	2.16	
24	1.83	2.15	5.64	5.82	8.75	9.81	5.00	3.47	3.02	2.71	2.47	2.16	
25	1.83	2.16	5.18	5.82	8.08	8.53	4.97	3.47	3.02	2.71	2.44	2.16	
26	1.83	2.16	5.73	5.64	7.69	8.38	4.91	3.44	3.02	2.71	2.44	2.16	
27	1.83	2.29	6.07	5.36	7.59	8.29	4.75	3.41	2.99	2.68	2.44	2.13	
28	1.83	2.26	5.82	5.27	7.47	8.17	4.69	3.38	2.99	2.68	2.41	2.10	
29	1.80	2.38	5.61	5.21		7.89	4.60	3.38	2.99	2.68	2.41	2.10	
30	1.80	2.29	5.64	5.39		7.65	4.51	3.35	2.96	2.68	2.41	2.10	
31	1.80		6.55	5.55		7.59		3.32		2.65	2.38		
MEAN	1.90	1.99	4.27	6.04	7.54	8.12	5.46	3.76	3.12	2.81	2.52	2.25	4.13
MAX.	2.01	2.38	6.55	7.41	9.08	9.75	7.74	4.45	3.29	2.96	2.65	2.38	9.75
MIN.	1.80	1.74	2.32	5.21	5.94	6.95	4.51	3.32	2.96	2.65	2.38	2.10	1.74

*QM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1962/63											[DISCHARGE (m3/sec)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	61.2	38.1	103.8	2305.2	1468.4	2282.5	2731.9	714.8	315.1	229.6	163.5	113.6	
2	61.2	35.2	134.7	1998.3	1894.1	2327.9	2537.8	677.4	315.1	229.6	163.5	113.6	
3	61.2	35.2	140.2	1935.4	2260.0	2490.4	2396.9	641.0	306.8	222.5	163.5	113.6	
4	57.6	35.2	157.5	1977.3	2806.6	2420.1	2350.8	617.3	306.8	222.5	157.5	113.6	
5	57.6	32.4	201.8	2466.8	2933.2	2420.1	2193.1	582.5	306.8	222.5	157.5	113.6	
6	57.6	32.4	298.6	2420.1	2327.9	2127.2	1935.4	559.9	298.6	215.5	157.5	108.7	
7	57.6	32.4	298.6	2105.4	1956.3	2260.0	1598.0	548.8	298.6	215.5	151.7	108.7	
8	57.6	32.4	404.7	1998.3	1812.6	2420.1	1432.4	537.8	290.5	215.5	151.7	108.7	
9	54.0	32.4	484.3	1733.0	1693.9	2282.5	1259.0	526.9	290.5	215.5	151.7	103.8	
10	54.0	38.1	571.2	1636.0	1636.0	2634.0	1112.6	516.1	282.5	208.6	151.7	103.8	
11	54.0	44.1	641.0	1523.3	1579.1	3551.7	1050.4	505.4	282.5	208.6	145.9	103.8	
12	50.6	44.1	594.0	1396.8	1713.4	4016.9	1035.1	494.8	282.5	208.6	145.9	99.0	
13	50.6	47.3	665.1	1176.5	1894.1	3115.2	1004.9	484.3	274.6	201.8	145.9	99.0	
14	50.6	54.0	582.5	1081.3	2327.9	2958.9	945.9	463.8	274.6	201.8	140.2	94.4	
15	50.6	61.2	641.0	1192.8	2350.8	2831.7	902.7	453.6	266.8	201.8	140.2	94.4	
16	47.3	72.8	653.0	1450.3	3088.8	2756.7	874.5	443.6	266.8	195.2	140.2	94.4	
17	47.3	50.6	594.0	1396.8	3608.3	3384.7	860.6	433.7	259.1	195.2	134.7	89.8	
18	47.3	65.0	505.4	1486.6	3839.1	4198.7	833.1	423.9	259.1	195.2	134.7	89.8	
19	47.3	68.8	505.4	1432.4	3722.8	3780.7	833.1	414.2	259.1	195.2	134.7	85.4	
20	47.3	81.1	494.8	1361.7	3495.6	3927.5	846.8	404.7	259.1	188.6	134.7	85.4	
21	44.1	81.1	474.0	1361.7	3329.9	4606.4	888.6	395.2	259.1	188.6	129.3	85.4	
22	44.1	81.1	792.7	1379.2	3357.2	4322.1	931.4	385.9	251.6	182.2	129.3	81.1	
23	44.1	81.1	1275.9	1396.8	3927.5	3809.8	960.5	376.6	251.6	182.2	129.3	81.1	
24	41.0	81.1	1292.8	1396.8	3608.3	3665.3	960.5	367.5	244.1	175.8	129.3	81.1	
25	41.0	81.1	1050.4	1396.8	3010.5	3412.2	945.9	367.5	244.1	175.8	129.3	81.1	
26	41.0	81.1	1344.3	1292.8	2682.7	3275.5	917.0	358.5	244.1	175.8	123.9	81.1	
27	41.0	99.0	1541.8	1144.3	2609.7	3194.8	846.8	349.6	236.8	169.6	123.9	76.9	
28	41.0	94.4	1396.8	1096.9	2514.0	3088.8	819.5	340.8	236.8	169.6	118.7	72.8	
29	38.1	113.6	1275.9	1065.8		2856.9	779.4	340.8	236.8	169.6	118.7	72.8	
30	38.1	99.0	1292.8	1160.4		2659.3	740.3	332.2	229.6	169.6	118.7	72.8	
31	38.1		1853.1	1242.3		2609.7		323.6		163.5	113.6		
MEAN	49.2	60.9	718.1	1548.7	2623.2	3086.7	1250.8	464.0	271.0	197.1	139.5	94.1	885.9
MAX.	61.2	113.6	1853.1	2466.8	3927.5	4606.4	2731.9	714.8	315.1	229.6	163.5	113.6	4606.4
MIN.	38.1	32.4	103.8	1065.8	1468.4	2127.2	740.3	323.6	229.6	163.5	113.6	72.8	32.4

[Discharge Rating Curve]: Q=60.157\*(H-1.003)<sup>2</sup>

[Flow Regime (m3/s)]:

Q(95day): 1292.8      Q(185day): 290.5      Q(275day): 113.6      Q(355day): 38.1

<<< MASTER PROGRAM for DB-05(Leap Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1963/64	[WATER LEVEL (m)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	2.10	1.98	3.05	5.82	8.26	5.91	4.82	3.23	2.71	2.47	2.32	2.13		
2	2.10	1.98	3.08	5.18	8.50	5.85	4.63	3.20	2.71	2.44	2.32	2.13		
3	2.10	1.95	3.11	5.30	8.44	5.79	4.51	3.17	2.68	2.44	2.29	2.10		
4	2.10	1.92	3.75	5.39	8.29	5.73	4.39	3.17	2.68	2.44	2.29	2.10		
5	2.10	1.92	3.17	5.18	9.30	5.67	4.27	3.14	2.68	2.44	2.29	2.10		
6	2.10	1.92	3.23	4.85	9.75	5.52	4.18	3.11	2.68	2.41	2.29	2.10		
7	2.07	1.92	3.26	4.82	9.60	5.27	4.08	3.08	2.65	2.41	2.29	2.10		
8	2.07	1.98	3.26	5.24	8.87	5.09	3.99	3.08	2.65	2.41	2.29	2.07		
9	2.07	1.98	3.41	6.22	7.99	5.00	3.90	3.05	2.65	2.41	2.29	2.07		
10	2.04	2.04	3.47	5.79	8.14	4.91	3.81	3.05	2.62	2.38	2.29	2.10		
11	2.04	2.07	3.47	5.79	8.17	4.82	3.78	3.02	2.62	2.41	2.29	2.10		
12	2.01	2.10	3.63	5.97	8.38	4.75	3.72	2.99	2.62	2.41	2.29	2.07		
13	2.01	2.56	3.60	5.91	8.39	4.72	3.66	2.99	2.62	2.41	2.29	2.07		
14	2.01	2.32	3.47	7.32	8.38	4.82	3.66	2.96	2.59	2.41	2.26	2.07		
15	1.98	2.41	3.29	7.01	8.69	4.97	3.63	2.93	2.59	2.41	2.26	2.07		
16	1.98	2.38	3.14	6.83	8.63	5.21	3.80	2.93	2.59	2.41	2.26	2.07		
17	1.98	2.29	3.02	7.32	8.50	5.33	3.57	2.90	2.56	2.38	2.26	2.07		
18	1.95	2.23	2.99	7.10	8.50	5.36	3.54	2.87	2.56	2.41	2.26	2.04		
19	1.95	2.29	2.96	6.86	8.02	5.39	3.51	2.87	2.56	2.38	2.23	2.04		
20	1.95	2.65	2.93	6.71	7.71	5.39	3.47	2.83	2.56	2.38	2.23	2.04		
21	1.95	2.62	2.93	6.46	7.74	5.39	3.51	2.83	2.53	2.38	2.23	2.04		
22	1.95	2.62	2.96	6.43	7.44	5.39	3.54	2.80	2.53	2.38	2.23	2.04		
23	1.95	2.53	3.14	6.74	7.25	5.27	3.57	2.80	2.53	2.39	2.19	2.01		
24	1.95	2.47	3.84	7.10	7.28	5.09	3.47	2.77	2.53	2.35	2.19	2.01		
25	1.95	2.44	3.11	6.89	7.16	4.94	3.41	2.74	2.53	2.35	2.15	2.01		
26	1.95	2.53	3.11	6.92	7.10	4.97	3.44	2.74	2.50	2.35	2.15	2.01		
27	1.95	2.65	3.75	7.10	6.71	5.09	3.41	2.71	2.50	2.32	2.16	2.01		
28	1.95	2.87	3.51	7.50	6.31	5.15	3.35	2.74	2.50	2.32	2.15	2.01		
29	1.95	3.08	3.72	8.11	6.04	5.18	3.32	2.71	2.47	2.32	2.16	1.98		
30	1.98	3.14	3.96	8.35		5.15	3.26	2.71	2.47	2.32	2.15	1.98		
31	2.01		4.39	8.29		4.97		2.71		2.32	2.13			
MEAN	2.01	2.33	3.34	6.47	8.05	5.23	3.77	2.93	2.59	2.39	2.24	2.06	3.80	
MAX.	2.10	3.14	4.39	8.35	9.75	5.91	4.82	3.23	2.71	2.47	2.32	2.13	9.75	
MIN.	1.95	1.92	2.93	4.82	6.04	4.72	3.26	2.71	2.47	2.32	2.13	1.98	1.92	

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1963/64	[DISCHARGE (m3/s)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	72.8	57.6	251.6	1396.8	3168.2	1450.3	874.5	293.6	175.8	129.3	103.8	76.9		
2	72.8	57.6	259.1	1050.4	3384.7	1414.6	792.7	290.5	175.8	123.9	103.8	76.9		
3	72.8	54.0	266.8	1112.6	3329.9	1379.2	740.3	282.5	169.6	123.9	99.0	72.8		
4	72.8	50.6	453.6	1160.4	3194.8	1344.3	689.7	282.5	169.6	123.9	99.0	72.8		
5	72.8	50.6	282.5	1050.4	4137.6	1309.9	641.0	274.6	169.6	123.9	99.0	72.8		
6	72.8	50.6	298.6	888.6	4606.4	1225.7	605.6	266.8	169.6	118.7	99.0	72.8		
7	68.8	50.6	306.8	874.5	4447.3	1096.9	571.2	259.1	163.5	118.7	99.0	72.8		
8	68.8	57.6	306.8	1031.3	3722.8	1004.9	537.8	259.1	163.5	118.7	99.0	68.8		
9	68.8	57.6	349.6	1636.0	2933.2	960.5	505.4	251.6	163.5	118.7	99.0	68.8		
10	65.0	65.0	367.5	1379.2	3062.6	917.0	474.0	251.6	157.5	113.6	99.0	72.8		
11	65.0	68.8	367.5	1379.2	3088.8	874.5	463.8	244.1	157.5	118.7	99.0	72.8		
12	61.2	72.8	414.2	1486.6	3275.5	846.8	443.6	236.8	157.5	118.7	99.0	68.8		
13	61.2	145.9	404.7	1450.3	3275.5	833.1	423.9	236.8	157.5	118.7	99.0	68.8		
14	61.2	103.8	367.5	2396.9	3275.5	874.5	423.9	229.6	151.7	118.7	94.4	68.8		
15	57.6	118.7	315.1	2171.0	3551.7	945.9	414.2	222.5	151.7	118.7	94.4	68.8		
16	57.6	113.6	274.6	2040.8	3495.6	1065.8	404.7	222.5	151.7	118.7	94.4	68.8		
17	57.6	99.0	244.1	2396.9	3384.7	1128.4	395.2	215.5	145.9	113.6	94.4	68.8		
18	54.0	89.8	236.8	2237.6	3384.7	1144.3	385.9	208.6	145.9	118.7	94.4	65.0		
19	54.0	99.0	229.6	2062.2	2958.9	1160.4	376.6	208.6	145.9	113.6	89.8	65.0		
20	54.0	163.5	222.5	1956.3	2707.3	1160.4	367.5	201.8	145.9	113.6	89.8	65.0		
21	54.0	157.5	222.5	1792.6	2731.9	1160.4	376.6	201.8	140.2	113.6	89.8	65.0		
22	54.0	157.5	229.6	1772.6	2490.4	1160.4	385.9	195.2	140.2	113.6	89.8	65.0		
23	54.0	134.7	274.6	1977.3	2350.8	1096.9	395.2	195.2	140.2	113.6	85.4	61.2		
24	54.0	129.3	484.3	2237.6	2373.8	1004.9	367.5	188.6	140.2	108.7	85.4	61.2		
25	54.0	123.9	266.8	2083.8	2282.5	931.4	349.6	182.2	140.2	108.7	85.4	61.2		
26	54.0	140.2	266.8	2105.4	2237.6	945.9	358.5	182.2	134.7	108.7	81.1	61.2		
27	54.0	163.5	453.6	2237.6	1956.3	1004.9	349.6	175.8	134.7	103.8	81.1	61.2		
28	54.0	208.6	376.6	2537.8	1693.9	1035.1	332.2	182.2	134.7	103.8	81.1	61.2		
29	54.0	259.1	443.6	3036.5	1523.3	1050.4	323.6	175.8	129.3	103.8	81.1	57.6		
30	57.6	274.6	526.9	3248.5		1035.1	306.8	175.8	129.3	103.8	81.1	57.6		
31	61.2		689.7	3194.8		945.9		175.8		103.8	76.9			
MEAN	61.2	112.5	337.2	1852.7	3035.4	1080.9	459.2	225.0	151.8	115.2	92.5	67.4	625.0	
MAX.	72.8	274.6	689.7	3248.5	4506.4	1450.3	874.5	298.6	175.8	129.3	103.8	76.9	4606.4	
MIN.	54.0	50.6	222.5	874.5	1523.3	833.1	306.8	175.8	129.3	103.8	76.9	57.6	50.6	

[Discharge Rating Curve]: Q=60.157\*(H-1.003)^2

[Flow Regime (m3/s)]:

Q(95day): 689.7      Q(185day): 175.8      Q(275day): 94.4      Q(355day): 54.0

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1964/65											[WATER LEVEL (m)]	
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	1.98	1.83	2.04	3.78	6.22	6.40	5.09	3.41	2.90	2.62	2.44	2.26		
2	1.98	1.80	2.04	4.54	6.43	6.10	5.03	3.38	2.90	2.59	2.44	2.26		
3	1.98	1.80	2.01	4.82	5.79	5.89	5.82	3.35	2.87	2.59	2.44	2.23		
4	1.98	1.80	2.10	4.75	5.49	5.52	5.61	3.32	2.87	2.59	2.41	2.23		
5	1.95	1.80	2.13	5.12	5.30	5.30	5.46	3.29	2.87	2.59	2.41	2.23		
6	1.95	1.80	2.32	5.15	5.58	5.43	5.30	3.26	2.87	2.56	2.41	2.23		
7	1.95	1.80	2.38	5.49	6.10	5.58	5.12	3.23	2.87	2.56	2.41	2.23		
8	1.95	1.80	2.32	6.22	6.19	6.19	4.91	3.23	2.83	2.56	2.41	2.23		
9	1.95	1.77	2.26	6.43	6.46	6.37	4.69	3.20	2.83	2.56	2.41	2.23		
10	1.95	1.77	2.19	6.28	6.49	7.01	4.57	3.17	2.93	2.56	2.38	2.23		
11	1.95	1.77	2.19	5.73	6.25	7.19	4.48	3.14	2.83	2.56	2.38	2.23		
12	1.95	1.74	2.16	5.67	6.68	7.04	4.40	3.14	2.83	2.56	2.38	2.23		
13	1.92	1.74	2.16	5.52	6.80	6.83	4.36	3.14	2.80	2.53	2.38	2.19		
14	1.92	1.74	2.10	5.33	7.10	6.55	4.30	3.08	2.80	2.53	2.35	2.19		
15	1.92	1.77	2.16	5.91	6.98	6.19	4.24	3.08	2.80	2.53	2.35	2.19		
16	1.92	1.74	2.16	7.19	7.89	5.79	4.18	3.05	2.80	2.53	2.35	2.19		
17	1.92	1.74	2.13	7.13	8.60	5.61	4.11	3.05	2.77	2.53	2.35	2.19		
18	1.92	1.74	2.13	7.07	8.53	5.39	4.08	3.05	2.77	2.53	2.32	2.16		
19	1.92	1.74	2.13	6.58	8.17	5.30	4.02	3.02	2.77	2.53	2.32	2.16		
20	1.89	1.74	2.07	6.58	8.20	5.21	3.99	3.02	2.74	2.53	2.32	2.13		
21	1.89	1.71	2.07	7.28	8.69	5.18	3.96	2.99	2.71	2.53	2.32	2.13		
22	1.89	1.74	2.13	7.41	8.99	5.12	3.90	2.99	2.71	2.50	2.32	2.13		
23	1.89	1.71	2.10	6.74	8.35	5.09	3.87	2.96	2.71	2.50	2.29	2.10		
24	1.86	1.74	2.41	6.34	7.99	5.06	3.84	2.96	2.68	2.50	2.29	2.10		
25	1.86	1.80	2.71	5.82	7.86	5.03	3.78	2.96	2.68	2.50	2.29	2.10		
26	1.86	2.04	3.96	5.58	7.38	5.00	3.69	2.96	2.68	2.50	2.29	2.07		
27	1.86	2.23	3.54	5.27	6.92	5.00	3.63	2.93	2.65	2.47	2.29	2.07		
28	1.83	2.07	3.29	4.94	6.61	4.75	3.57	2.93	2.65	2.47	2.26	2.07		
29	1.83	2.01	3.26	4.91		4.72	3.51	2.93	2.62	2.47	2.26	2.04		
30	1.83	2.07	3.17	5.36		4.82	3.47	2.93	2.62	2.47	2.26	2.04		
31	1.83		3.20	6.04		4.94		2.93		2.47	2.26			
MEAN	1.91	1.82	2.42	5.84	7.07	5.66	4.37	3.10	2.78	2.53	2.34	2.17	3.48	
MAX.	1.98	2.23	3.96	7.41	8.99	7.19	5.82	3.41	2.90	2.62	2.44	2.26	8.99	
MIN.	1.83	1.71	2.01	3.78	5.30	4.72	3.47	2.93	2.62	2.47	2.25	2.04	1.71	

*QM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1964/65											[DISCHARGE (m3/sec)]	
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	57.6	41.0	65.0	463.8	1636.0	1752.7	1004.9	349.6	215.5	157.5	123.9	94.4		
2	57.6	38.1	65.0	753.2	1772.6	1560.4	975.2	340.8	215.5	151.7	123.9	94.4		
3	57.6	38.1	61.2	874.5	1379.2	1432.4	1396.8	332.2	208.6	151.7	123.9	89.8		
4	57.6	38.1	72.8	846.8	1209.2	1225.7	1275.9	323.6	208.6	151.7	118.7	89.8		
5	54.0	38.1	76.9	1020.0	1112.6	1112.6	1192.8	315.1	208.6	151.7	118.7	89.8		
6	54.0	38.1	103.8	1035.1	1259.0	1176.5	1112.6	306.8	208.6	145.9	118.7	89.8		
7	54.0	38.1	113.5	1209.2	1560.4	1259.0	1020.0	298.6	208.6	145.9	118.7	89.8		
8	54.0	38.1	103.8	1636.0	1616.9	1616.9	917.0	298.6	201.8	145.9	118.7	89.8		
9	54.0	35.2	94.4	1772.6	1792.6	1733.0	819.5	290.5	201.8	145.9	118.7	89.8		
10	54.0	35.2	85.4	1674.5	1812.6	2171.0	766.3	282.5	201.8	145.9	113.6	89.8		
11	54.0	35.2	85.4	1344.3	1655.2	2305.2	727.5	274.6	201.8	145.9	113.6	89.8		
12	54.0	32.4	81.1	1309.9	1935.4	2193.1	696.0	274.6	201.8	145.9	113.6	89.8		
13	50.6	32.4	81.1	1225.7	2019.5	2040.8	677.4	274.6	195.2	140.2	113.6	85.4		
14	50.6	32.4	72.8	1128.4	2237.6	1853.1	653.0	259.1	195.2	140.2	108.7	85.4		
15	50.6	35.2	81.1	1450.3	2149.0	1616.9	629.1	259.1	195.2	140.2	108.7	85.4		
16	50.6	32.4	81.1	2305.2	2856.9	1379.2	605.6	251.6	195.2	140.2	108.7	85.4		
17	50.6	32.4	76.9	2260.0	3467.7	1275.9	582.5	251.6	188.6	140.2	108.7	85.4		
18	50.6	32.4	76.9	2215.3	3412.2	1160.4	571.2	251.6	188.6	140.2	103.8	81.1		
19	50.6	32.4	76.9	1873.5	3088.8	1112.6	548.8	244.1	188.6	140.2	103.8	81.1		
20	47.3	32.4	68.8	1873.5	3115.2	1065.8	537.8	244.1	182.2	140.2	103.8	76.9		
21	47.3	29.8	68.8	2373.8	3551.7	1050.4	526.9	236.8	175.8	140.2	103.8	76.9		
22	47.3	32.4	76.9	2466.8	3939.1	1020.0	505.4	236.8	175.8	134.7	103.8	76.9		
23	47.3	29.8	72.8	1977.3	3248.5	1004.9	494.8	229.6	175.8	134.7	99.0	72.8		
24	44.1	32.4	118.7	1713.4	2933.2	990.0	484.3	229.6	169.6	134.7	99.0	72.8		
25	44.1	38.1	175.8	1396.8	2831.7	975.2	463.8	229.6	169.6	134.7	99.0	72.8		
26	44.1	65.0	526.9	1259.0	2443.4	960.5	433.7	229.6	169.6	134.7	99.0	68.8		
27	44.1	89.8	385.9	1096.9	2105.4	960.5	414.2	222.5	163.5	129.3	99.0	68.8		
28	41.0	68.8	315.1	931.4	1894.1	846.8	395.2	222.5	163.5	129.3	94.4	68.8		
29	41.0	61.2	306.8	917.0		833.1	376.6	222.5	157.5	129.3	94.4	65.0		
30	41.0	68.8	282.5	1144.3		874.5	367.5	222.5	157.5	129.3	94.4	65.0		
31	41.0		290.5	1523.3		931.4		222.5		129.3	94.4			
MEAN	49.9	40.8	136.9	1453.9	2283.4	1338.4	705.7	265.4	189.7	140.9	108.5	82.1	555.6	
MAX.	57.6	89.8	526.9	2466.8	3839.1	2305.2	1396.8	340.6	215.5	157.5	123.9	94.4	3839.1	
MIN.	41.0	29.8	61.2	463.8	1112.6	833.1	367.5	222.5	157.5	129.3	94.4	65.0	29.8	

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^{1.2}$

[Flow Regime (m<sup>3</sup>/s)]:

Q(95day): 846.8      Q(185day): 163.5      Q(275day): 85.4      Q(355day): 32.4

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1965/66	[WATER LEVEL (m)]
N=	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	2.04	1.89	1.95	3.17	3.32	8.84	3.38	2.65		2.10	1.92	1.71		
2	2.04	1.86	1.92	3.26	3.84	9.36	3.35	2.65		2.10	1.89	1.68		
3	2.04	1.83	1.92	3.29	3.47	7.59	3.29	2.62		2.10	1.89	1.68		
4	2.04	1.80	1.98	3.32	3.35	7.13	3.29	2.62		2.10	1.89	1.68		
5	2.04	1.80	1.98	3.29	3.35	6.68	3.35	2.59		2.07	1.89	1.65		
6	2.04	1.83	2.07	3.54	3.51	6.83	3.38	2.56		2.07	1.86	1.65		
7	2.04	1.95	2.23	4.05	3.44	6.55	3.38	2.56		2.07	1.86	1.65		
8	2.04	1.92	2.29	4.24	5.67	6.46	3.35	2.56		2.07	1.86	1.65		
9	2.04	1.95	2.23	4.33	4.82	5.70	3.32	2.53		2.07	1.86	1.65		
10	2.04	2.01	2.23	4.08	4.60	5.27	3.29	2.53		2.07	1.86	1.62		
11	2.04	2.01	2.23	4.05	4.33	5.03	3.23	2.50		2.07	1.86	1.62		
12	2.04	2.10	2.56	3.96	4.24	5.67	3.20	2.50	2.23	2.07	1.86	1.62		
13	2.01	2.07	2.68	3.96	4.36	5.27	3.17	2.50	2.23	2.04	1.83	1.62		
14	2.01	2.10	2.65	3.81	4.69	5.33	3.17	2.59	2.19	2.04	1.83	1.59		
15	2.01	2.07	2.65	4.24	4.79	5.12	3.14	2.68	2.19	2.04	1.83	1.59		
16	1.98	2.07	2.68	3.99	4.60	4.91	3.08	2.62	2.16	2.04	1.80	1.58		
17	1.98	2.07	2.68	4.05	4.53	4.69	2.99	2.56	2.16	2.01	1.80	1.58		
18	1.98	2.13	2.74	4.60	4.48	4.48	2.96	2.56	2.13	2.01	1.80	1.58		
19	1.98	2.10	2.74	4.08	4.66	4.39	2.93	2.50	2.13	2.01	1.80	1.58		
20	1.98	2.01	2.71	3.72	5.33	4.30	2.93	2.47	2.13	2.01	1.80	1.58		
21	1.98	1.98	2.68	3.51	6.46	4.30	2.90	2.47	2.13	1.98	1.77	1.58		
22	1.98	1.95	2.62	3.57	6.80	4.27	2.87	2.44	2.13	1.98	1.77	1.58		
23	1.98	1.95	2.62	3.72	6.43	4.15	2.83	2.44	2.13	1.98	1.77	1.58		
24	1.98	1.92	2.59	3.69	6.80	3.87	2.80	2.41	2.13	1.98	1.77	1.55		
25	2.01	1.92	2.62	3.54	7.65	3.78	2.80	2.41	2.13	1.95	1.77	1.55		
26	2.01	1.89	2.80	3.51	7.59	3.75	2.80		2.13	1.95	1.77	1.55		
27	2.01	1.89	3.14	3.35	7.47	3.72	2.77		2.13	1.95	1.74	1.55		
28	1.98	1.89	3.47	3.26	7.99	3.60	2.74		2.10	1.92	1.74	1.55		
29	1.98	1.89	3.51	3.23		3.54	2.71		2.10	1.92	1.71	1.55		
30	1.98	1.95	3.20	3.38		3.47	2.68		2.10	1.92	1.71	1.55		
31	1.95		3.11	3.41		3.41				1.92	1.71			
MEAN	2.01	1.96	2.56	3.72	5.10	5.21	3.07	2.54	2.15	2.02	1.81	1.61	2.83	
MAX.	2.04	2.13	3.51	4.50	7.99	9.36	3.38	2.68	2.23	2.10	1.92	1.71	9.36	
MIN.	1.95	1.80	1.92	3.17	3.32	3.41	2.68	2.41	2.10	1.92	1.71	1.55	1.55	

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1965/66	[DISCHARGE (m3/sec)]
N=	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	65.0	47.3	54.0	282.5	323.6	3694.0	340.8	163.5	159.7	72.8	50.6	29.8		
2	65.0	44.1	50.6	306.8	484.3	4198.7	332.2	163.5	156.4	72.8	47.3	27.3		
3	65.0	41.0	50.6	315.1	367.5	2609.7	315.1	157.5	153.2	72.8	47.3	27.3		
4	65.0	38.1	57.6	323.6	332.2	2260.0	315.1	157.5	151.3	72.8	47.3	27.3		
5	65.0	39.1	57.6	315.1	332.2	1935.4	332.2	151.7	146.8	68.8	47.3	24.9		
6	65.0	41.0	68.8	385.9	376.6	2040.8	340.8	145.9	144.3	68.8	44.1	24.9		
7	65.0	54.0	89.8	559.9	358.5	1853.1	340.8	145.9	141.7	68.8	44.1	24.9		
8	65.0	50.6	99.0	629.1	1309.9	1792.6	332.2	145.9	139.8	68.8	44.1	24.9		
9	65.0	54.0	89.8	665.1	874.5	1327.0	323.6	140.2	136.7	68.8	44.1	24.9		
10	65.0	61.2	89.8	571.2	779.4	1096.9	315.1	140.2	135.5	68.8	44.1	22.6		
11	65.0	61.2	89.8	559.9	665.1	975.2	298.6	134.7	134.3	68.8	44.1	22.6		
12	65.0	72.8	145.9	526.9	629.1	1309.9	290.5	134.7	89.8	68.8	44.1	22.6		
13	61.2	68.8	169.6	526.9	677.4	1096.9	282.5	134.7	89.8	65.0	41.0	22.6		
14	61.2	72.8	163.5	474.0	819.5	1128.4	282.5	151.7	85.4	65.0	41.0	20.4		
15	61.2	68.8	163.5	629.1	860.6	1020.0	274.6	169.6	85.4	65.0	41.0	20.4		
16	57.6	68.8	169.6	537.8	779.4	917.0	259.1	157.5	81.1	65.0	38.1	20.4		
17	57.6	68.8	169.6	559.9	792.7	819.5	236.8	145.9	81.1	61.2	38.1	20.4		
18	57.6	76.9	182.2	779.4	727.5	727.5	229.6	145.9	76.9	61.2	38.1	20.4		
19	57.6	72.8	182.2	571.2	806.0	689.7	222.5	134.7	76.9	61.2	38.1	20.4		
20	57.6	61.2	175.8	443.6	1128.4	653.0	222.5	129.3	76.9	61.2	38.1	20.4		
21	57.6	57.6	169.6	376.6	1792.6	653.0	215.5	129.3	76.9	57.6	35.2	20.4		
22	57.6	54.0	157.5	395.2	2019.5	641.0	208.6	123.9	76.9	57.6	35.2	20.4		
23	57.6	54.0	157.5	443.6	1772.6	594.0	201.8	123.9	76.9	57.6	35.2	20.4		
24	57.6	50.6	151.7	433.7	2019.5	494.8	195.2	118.7	76.9	57.6	35.2	18.3		
25	61.2	50.6	157.5	385.9	2658.3	463.8	195.2	118.7	76.9	54.0	35.2	18.3		
26	61.2	47.3	195.2	376.6	2609.7	453.6	195.2	182.4	76.9	54.0	35.2	18.3		
27	61.2	47.3	274.6	332.2	2514.0	443.6	188.6	177.6	76.9	54.0	32.4	18.3		
28	57.6	47.3	367.5	306.8	2933.2	404.7	182.2	172.9	72.8	50.6	32.4	18.3		
29	57.6	47.3	376.6	298.6		385.9	175.8	170.2	72.8	50.6	29.8	18.3		
30	57.6	54.0	290.5	340.8		367.5	169.6	166.2	72.8	50.6	29.8	18.3		
31	54.0		266.8	349.6		349.6		162.9		50.6	29.8			
MEAN	61.0	55.8	157.6	451.7	1133.7	1206.3	260.5	148.3	103.3	62.6	39.6	21.9	303.9	
MAX.	65.0	76.9	376.6	779.4	2933.2	4198.7	340.8	182.4	159.7	72.8	50.6	29.8	4198.7	
MIN.	54.0	38.1	50.6	282.5	323.6	349.6	169.6	118.7	72.8	50.6	29.8	18.3	18.3	

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[ Flow Regime (m3/s) ]:

Q(95day): 315.1      Q(185day): 89.8      Q(275day): 57.6      Q(355day): 20.4

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1966/67												[WATER LEVEL (m)]											
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL																						
1	1.55	1.46	1.51	2.89	4.29	6.75	6.55	3.81	2.79	2.55	2.37	2.21																								
2	1.54	1.45	1.56	2.95	4.61	6.53	6.73	3.70	2.78	2.54	2.37	2.21																								
3	1.54	1.44	1.56	2.84	4.41	5.89	6.61	3.64	2.76	2.52	2.35	2.24																								
4	1.54	1.44	1.58	3.07	4.82	5.93	6.16	3.60	2.75	2.51	2.35	2.20																								
5	1.54	1.43	1.53	3.90	4.44	5.68	5.90	3.54	2.75	2.50	2.34	2.20																								
6	1.53	1.43	1.53	4.08	4.50	5.23	5.65	3.47	2.74	2.49	2.34	2.20																								
7	1.52	1.43	1.54	4.27	4.63	5.02	5.39	3.40	2.73	2.48	2.34	2.20																								
8	1.51	1.42	1.53	4.82	4.26	4.84	5.29	3.36	2.71	2.47	2.33	2.18																								
9	1.51	1.42	1.53	4.07	4.03	4.63	5.04	3.33	2.69	2.46	2.33	2.17																								
10	1.51	1.43	1.52	3.78	3.75	4.36	4.69	3.28	2.67	2.45	2.33	2.15																								
11	1.51	1.49	1.55	3.83	4.00	4.23	4.43	3.25	2.67	2.45	2.32	2.14																								
12	1.51	1.47	1.58	4.04	3.72	4.50	4.26	3.23	2.64	2.45	2.32	2.13																								
13	1.51	1.47	1.64	3.85	3.64	4.72	4.17	3.20	2.64	2.45	2.31	2.12																								
14	1.51	1.45	1.69	3.58	3.58	4.74	4.14	3.17	2.62	2.44	2.31	2.12																								
15	1.50	1.44	1.84	3.40	3.42	4.88	4.07	3.12	2.62	2.44	2.30	2.11																								
16	1.50	1.44	2.13	3.32	3.62	5.43	4.15	3.08	2.61	2.44	2.30	2.11																								
17	1.48	1.43	2.40	3.78	3.57	6.54	4.25	3.05	2.60	2.43	2.29	2.12																								
18	1.48	1.43	2.48	3.45	3.80	6.57	4.29	3.02	2.59	2.43	2.29	2.12																								
19	1.48	1.43	3.64	3.42	3.65	7.22	4.37	3.00	2.59	2.42	2.28	2.11																								
20	1.46	1.43	3.44	3.41	3.56	7.25	4.45	2.98	2.60	2.42	2.27	2.10																								
21	1.46	1.49	3.56	3.69	4.24	7.19	4.47	2.95	2.60	2.41	2.26	2.09																								
22	1.47	1.48	4.31	3.92	4.86	7.16	4.32	2.93	2.58	2.41	2.26	2.08																								
23	1.47	1.48	3.97	4.33	5.57	7.17	4.23	2.92	2.53	2.40	2.26	2.08																								
24	1.47	1.48	4.02	4.46	5.86	6.64	4.21	2.90	2.57	2.38	2.25	2.08																								
25	1.47	1.47	3.85	4.25	6.10	6.13	4.43	2.88	2.57	2.38	2.25	2.08																								
26	1.47	1.47	3.66	4.43	6.21	5.58	4.39	2.87	2.56	2.38	2.24	2.07																								
27	1.46	1.48	3.53	4.26	5.96	5.31	4.29	2.85	2.56	2.38	2.24	2.07																								
28	1.46	1.55	3.31	5.50	6.34	5.13	4.13	2.84	2.55	2.38	2.23	2.05																								
29	1.46	1.55	2.97	5.47		5.06	4.06	2.83	2.55	2.39	2.22	2.05																								
30	1.47	1.52	3.00	5.10		5.15	3.91	2.82	2.55	2.38	2.21	2.06																								
31	1.46		2.83	4.42		5.53		2.81		2.38	2.21																									
MEAN	1.50	1.46	2.48	3.95	4.48	5.71	4.77	3.16	2.64	2.44	2.29	2.14	3.08																							
MAX.	1.55	1.55	4.31	5.50	6.34	7.25	6.73	3.81	2.79	2.55	2.37	2.37	7.25																							
MIN.	1.46	1.42	1.51	2.84	3.42	4.23	3.91	2.81	2.55	2.38	2.21	2.05	1.42																							

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1966/67												[WATER LEVEL (m)]											
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL																						
1	17.7	12.4	15.8	213.4	651.8	1989.9	1849.1	473.0	192.5	143.6	112.6	87.2																								
2	17.5	12.1	18.9	228.9	783.4	1838.9	1971.0	438.6	190.6	141.9	111.6	87.6																								
3	17.5	11.7	18.9	203.2	698.5	1437.8	1887.9	418.1	186.7	139.1	110.6	92.5																								
4	17.5	11.4	20.2	257.6	877.3	1457.6	1599.9	405.6	183.5	136.9	109.6	85.8																								
5	17.1	11.1	16.5	506.4	711.0	1316.7	1444.9	386.8	182.8	134.7	108.2	86.7																								
6	16.7	11.1	16.9	570.0	737.7	1076.6	1301.3	364.8	181.5	132.5	107.7	86.3																								
7	16.1	10.9	17.1	643.4	791.3	972.2	1155.6	347.0	179.0	130.9	107.2	85.8																								
8	15.8	10.6	16.7	878.7	637.4	385.8	1104.7	333.9	175.2	128.7	106.7	83.7																								
9	15.6	10.6	16.5	565.5	552.1	790.0	979.6	325.3	170.9	127.7	106.2	81.5																								
10	15.4	10.9	16.3	463.8	452.6	679.9	819.5	311.8	167.2	126.6	105.2	79.4																								
11	15.4	14.1	17.9	482.3	540.0	625.5	708.5	302.7	166.6	126.1	104.8	77.3																								
12	15.6	13.2	20.4	553.2	442.6	737.7	636.2	298.6	161.7	126.1	104.3	76.1																								
13	15.6	12.9	24.2	486.4	419.1	831.7	602.1	290.5	161.7	125.5	102.8	74.8																								
14	15.4	11.9	28.3	400.9	399.0	838.6	592.8	281.7	158.1	125.0	102.3	74.4																								
15	15.0	11.4	42.6	347.0	352.3	905.6	566.7	269.9	157.5	124.5	101.4	74.0																								
16	14.8	11.3	76.1	322.7	412.3	1178.2	595.1	259.1	155.8	123.4	100.4	73.6																								
17	13.9	10.9	116.7	462.7	396.2	1843.0	632.6	252.3	154.0	122.9	100.0	74.4																								
18	13.6	10.9	131.4	360.3	471.9	1865.4	650.6	245.6	151.1	122.4	99.0	74.9																								
19	13.4	10.9	418.1	352.3	422.0	2323.4	681.1	239.7	151.7	121.3	97.6	74.0																								
20	12.7	13.9	355.8	348.7	393.3	2343.9	714.8	235.3	154.0	120.9	96.2	72.8																								
21	12.6	14.1	392.4	434.7	630.2	2300.7	721.1	227.4	152.8	119.8	95.8	71.2																								
22	12.9	13.6	657.8	512.8	892.8	2280.3	660.3	223.9	150.5	119.3	94.8	70.0																								
23	13.2	13.9	530.1	665.1	1252.3	2287.1	625.5	221.1	149.3	117.7	94.4	70.4																								
24	13.2	13.6	547.7	717.3	1421.7	1908.5	617.3	217.6	147.6	114.7	93.5	69.6																								
25	13.2	12.9	486.4	633.8	1564.1	1582.9	708.5	212.0	147.6	114.7	93.0	69.2																								
26	13.1	12.9	424.9	704.7	1632.2	1260.7	688.5	209.3	145.3	114.1	92.5	68.4																								
27	12.6	13.9	384.9	637.4	1479.3	1115.7	651.8	205.2	145.3	114.7	91.6	111.6																								
28	12.6	18.1	320.2	1219.1	1711.4	1023.0	589.4	202.5	144.2	114.7	90.7	66.9																								
29	12.4	17.9	233.2	1201.0		988.5	563.3	199.8	144.2	115.2	89.4	66.1																								
30	13.1	16.1	239.7	1010.9		1035.1	509.6	197.8	144.2	114.7	88.1	66.9																								
31	12.6		200.5	702.2		1232.3		196.5		113.6	87.2																									
MEAN	14.6	12.7	187.8	551.2	775.9	1385.6	894.3	293.7	161.8	124.3	100.2	77.8	378.6																							
MAX.	17.7	18.1	657.8	1219.1	1711.4	2343.9	1971.0	473.0	192.5	143.6	112.6	111.6	2343.9																							
MIN.	12.4	10.6	15.8	203.2	352.3	625.5	509.6	196.5	144.2	113.6	87.2	66.1	10.6																							

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[Flow Regime (m<sup>3</sup>/s)]:

Q(95day): 530.1      Q(185day): 151.1      Q(275day): 74.4      Q(355day): 11.4



<<< MASTER PROGRAM for 08-05(Leap Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1967/68	[WATER LEVEL (m)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	2.05	1.96	2.10	3.93	4.83	4.62	4.11		2.72	2.60	2.48	2.24		
2	2.06	1.98	2.17	3.97	4.36	4.74	3.99		2.72	2.60	2.46	2.23		
3	2.06	1.96	2.19	3.73	4.23	4.92	3.90		2.71	2.60	2.45	2.23		
4	2.05	1.98	2.24	3.72	4.22	5.13	3.82		2.71	2.59	2.44	2.22		
5	2.04	1.99	2.22	3.67	4.22	5.28	3.75		2.71	2.59	2.43	2.21		
6	2.03	2.02	2.29	3.42	4.00	5.28	3.70		2.69	2.58	2.41	2.22		
7	2.02	2.02	2.55	3.29	3.88	5.29	3.68		2.70	2.58	2.41	2.22		
8	2.01	2.07	2.68	3.16	3.92	5.28	3.65		2.69	2.58	2.39	2.22		
9	2.01	2.07	2.83	3.02	3.96	4.99	3.63		2.69	2.58	2.39	2.22		
10	2.02	2.06	2.91	2.93	3.93	6.55	3.59		2.73	2.56	2.37	2.21		
11	2.01	2.05	3.26	2.86	5.15	6.08	3.51		2.72	2.55	2.37	2.19		
12	2.01	2.04	4.14	2.86	5.84	6.84	3.46		2.72	2.55	2.37	2.19		
13	2.00	2.03	4.15	2.92	6.14	6.46	3.43		2.71	2.54	2.37	2.18		
14	2.00	2.02	3.93	2.96	7.37	7.23	3.40		2.71	2.52	2.36	2.18		
15	1.99	2.00	3.53	3.47	6.61	7.06	3.40		2.70	2.50	2.35	2.17		
16	1.99	2.00	3.35	3.41	6.59	6.84	3.44		2.69	2.49	2.33	2.16		
17	1.98	1.99	3.20	3.73	6.68	6.70	3.42		2.69	2.49	2.33	2.15		
18	1.98	2.00	3.08	4.33	6.69	6.61	3.48		2.68	2.48	2.33	2.15		
19	1.97	2.03	2.94	5.21	6.43	6.58	3.59		2.68	2.47	2.33	2.15		
20	1.97	2.03	2.83	5.52	5.87	6.48	3.46		2.67	2.47	2.32	2.16		
21	1.96	2.02	2.75	5.57	5.48	6.31	3.90		2.66	2.46	2.31	2.16		
22	1.96	2.01	2.65	5.55	5.13	6.11	4.24		2.65	2.45	2.31	2.15		
23	1.96	2.01	2.61	5.40	4.97	5.94	3.79		2.64	2.45	2.30	2.15		
24	1.95	2.01	2.62	5.07	4.84	5.60	3.64		2.63	2.45	2.30	2.14		
25	1.94	1.99	2.69	5.12	4.65	5.16	3.54		2.63	2.46	2.29	2.13		
26	1.94	1.98	2.36	5.36	4.65	4.84	3.58		2.62	2.48	2.28	2.13		
27	1.94	1.98	3.07	5.24	4.71	4.64	3.53		2.62	2.48	2.27	2.13		
28	1.94	1.99	3.35	5.18	4.67	4.54	3.45		2.61	2.48	2.27	2.43		
29	1.95	2.01	3.41	5.63	4.65	4.46	3.46		2.60	2.48	2.26	2.12		
30	1.94	2.02	3.96	5.43		4.34	3.43		2.60	2.48	2.26	2.12		
31	1.95		3.78	5.09		4.22				2.48	2.24			
MEAN	1.99	2.01	2.98	4.22	5.13	5.65	3.63		2.68	2.52	2.35	2.19	3.21	
MAX.	2.06	2.07	4.15	5.63	7.37	7.23	4.24		2.73	2.60	2.48	2.43	7.37	
MIN.	1.94	1.96	2.10	2.86	3.88	4.22	3.40		2.60	2.45	2.24	2.12	1.94	

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1967/68	[DISCHARGE (m3/s)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	66.5	55.4	72.0	517.1	880.1	786.0	580.2	385.6	177.7	153.4	130.9	91.6		
2	66.9	57.2	81.5	529.0	679.9	839.9	536.7	371.2	176.5	153.4	128.2	90.7		
3	66.9	55.4	84.5	448.6	626.7	924.2	503.3	353.4	175.8	153.4	125.5	90.7		
4	56.1	57.2	91.6	445.6	622.0	1024.5	476.1	340.4	175.2	152.2	123.9	89.4		
5	65.0	58.3	89.4	427.8	620.8	1098.4	453.6	327.5	174.6	152.2	121.8	87.6		
6	63.4	62.3	99.0	352.3	538.9	1101.6	438.6	314.8	172.1	150.5	119.8	88.9		
7	62.7	62.3	144.2	316.0	496.9	1103.1	430.8	303.1	172.7	150.5	118.7	88.9		
8	61.6	68.4	168.4	280.1	512.8	1101.6	421.0	294.1	172.1	149.9	115.7	88.5		
9	60.8	68.8	200.5	244.1	525.8	957.5	414.2	284.4	170.9	149.3	115.2	88.5		
10	61.9	66.9	218.3	222.5	513.9	1849.1	401.8	274.0	179.6	146.5	112.6	87.6		
11	61.6	66.5	306.0	207.9	1036.6	1552.9	378.5	265.3	178.4	144.2	112.6	84.5		
12	60.5	64.2	591.7	206.6	1405.7	2051.5	362.1	256.0	176.5	143.6	112.1	84.1		
13	59.7	63.1	596.3	221.8	1590.4	1792.6	353.2	249.8	175.8	141.4	111.6	83.2		
14	59.4	61.9	516.1	230.3	2438.7	2334.8	347.0	243.7	174.6	138.0	110.1	82.8		
15	59.0	60.1	384.0	367.5	1894.1	2204.2	345.2	236.9	172.7	135.2	108.7	81.5		
16	58.3	59.4	331.3	349.6	1877.6	2049.4	355.8	230.9	172.1	133.6	105.7	80.2		
17	57.9	58.6	290.5	446.6	1935.4	1950.0	352.3	225.7	170.9	132.5	105.7	79.8		
18	57.6	59.4	258.4	667.6	1945.8	1887.9	369.3	219.1	169.6	130.9	106.7	79.4		
19	56.5	63.1	226.7	1064.2	1774.6	1869.4	402.8	213.3	168.4	130.3	106.7	79.4		
20	55.8	63.4	201.8	1229.0	1427.0	1806.6	363.9	209.7	166.6	128.7	103.8	81.1		
21	55.4	62.7	182.8	1254.0	1205.9	1693.9	504.3	205.4	166.0	127.7	102.8	80.2		
22	55.1	61.6	163.5	1242.3	1024.5	1571.6	629.1	201.9	163.5	126.6	102.3	79.4		
23	54.7	60.8	154.6	1165.2	944.4	1464.8	468.9	196.9	161.7	126.6	101.4	79.0		
24	54.4	60.5	156.4	997.4	887.2	1272.5	417.1	194.8	159.9	127.1	100.4	78.3		
25	53.3	59.0	172.1	1018.5	800.7	1038.2	385.9	191.3	158.7	128.2	99.0	76.9		
26	53.0	57.6	206.6	1141.1	799.3	885.8	398.0	187.9	157.5	130.9	98.6	76.5		
27	53.0	57.9	256.9	1079.7	826.3	796.7	383.1	186.5	156.4	132.0	97.2	76.9		
28	53.3	59.0	331.3	1051.9	807.4	750.6	350.4	184.4	155.2	132.0	96.7	122.9		
29	54.4	61.6	349.6	1289.4	798.0	717.3	362.1	183.1	154.0	132.0	95.3	75.2		
30	53.3	62.7	524.7	1178.2		668.8	354.9	181.0	154.0	132.0	94.4	74.8		
31	54.4		464.8	1004.9		620.8		177.0		131.4	92.5			
MEAN	58.8	61.2	255.3	683.8	1084.0	1347.3	418.3	248.0	168.7	138.6	108.9	84.3	386.5	
MAX.	66.9	68.8	596.3	1289.4	2438.7	2334.8	629.1	385.6	179.6	153.4	130.9	122.9	2438.7	
MIN.	53.0	55.4	72.0	206.6	496.9	620.8	345.2	177.0	154.0	126.6	92.5	74.8	53.0	

[Discharge Rating Curve]: Q=60.157\*(H-1.003)^2

[Flow Regime (m3/s)]:

Q(95day): 427.8      Q(185day): 172.1      Q(275day): 90.7      Q(355day): 55.4

<<< MASTER PROGRAM for 08-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1968/69	[WATER LEVEL (m)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1		2.12	2.00	2.40	3.71	7.00	6.58	6.35		3.30	2.91	2.60		
2		2.11	1.99	2.47	4.37	7.23	6.43	6.22		3.29	2.89	2.60		
3		2.13	1.99	2.95	4.00	7.47	6.25	6.04		3.30	2.88	2.59		
4		2.12	1.99	3.17	3.34	7.82	6.18	6.08		3.33	2.87	2.58		
5		2.09	2.01	2.78	3.61	7.15	6.14	6.16		3.28	2.86	2.57		
6		2.09	2.01	2.10	3.54	6.03	6.27	5.99		3.23	2.86	2.56		
7		2.09	2.01	3.62	4.01	6.10	6.56	6.28		3.21	2.85	2.55		
8		2.09	1.99	3.29	3.83	6.36	6.65	6.29	4.12	3.19	2.83	2.55		
9		2.09	1.99	2.12	3.61	6.26	6.59	6.41	4.06	3.17	2.82	2.54		
10		2.08	1.97	3.13	3.48	6.11	6.56	6.32	3.97	3.16	2.80	2.53		
11		2.08	1.96	3.51	3.52	6.61	6.54	6.10	3.88	3.17	2.78	2.52		
12		2.07	2.02	4.47	3.52	6.42	6.59	6.16	3.86	3.21	2.77	2.51		
13		2.08	2.10	3.06	3.64	6.41	6.54	6.18	3.86	3.16	2.75	2.49		
14		2.06	2.06	4.70	4.29	6.35	6.52	6.20	3.85	3.12	2.75	2.48		
15		2.06	2.06	4.05	3.64	6.14	6.20	6.16	3.81	3.09	2.74	2.47		
16		2.06	2.04	2.78	5.92	6.12	6.23	6.04	3.73	3.09	2.73	2.45		
17		2.06	2.05	2.63	5.85	6.90	6.41	5.76	3.71	3.06	2.72	2.47		
18		2.07	2.10	2.15	5.63	6.92	6.37	5.55	3.69	3.05	2.71	2.44		
19		2.05	2.08	2.40	5.47	6.57	7.02		3.69	3.04	2.73	2.42		
20		2.04	2.10	2.12	5.64	6.53	7.01		3.67	3.02	2.69	2.42		
21		2.04	2.16	2.33	5.47	6.36	6.78		3.65	3.01	2.68	2.41		
22		2.03	2.12	2.00	5.52	5.92	6.61	5.21	3.56	2.99	2.67	2.40		
23		2.03	2.12	1.91	5.45	5.89	6.78	5.05	3.51	2.98	2.66	2.40		
24		2.03	2.12	1.92	5.95	5.92	6.68	5.01	3.49	2.97	2.65	2.39		
25		2.03	2.11	1.79	5.69	6.42	6.51	4.93	3.50	2.96	2.65			
26		2.02	2.12	1.47	5.55	7.46	6.72	4.71	3.50	2.97	2.64			
27		2.01	2.19	1.65	5.85	7.08	5.94	4.57	3.48	2.96	2.63			
28		2.01	2.12	1.87	5.68	6.63	5.99	4.60	3.44	2.94	2.62			
29		2.00	2.19	2.28	5.67		6.07		3.39	2.93	2.62			
30		1.99	2.40	2.32	5.99		6.50		3.35	2.92	2.61			
31		1.99		3.26	6.73		6.64		3.32		2.61			
MEAN		2.06	2.07	2.67	4.78	6.58	6.48	5.78	3.67	3.10	2.74	2.50		3.84
MAX.		2.13	2.40	4.70	6.73	7.82	7.02	6.41	4.12	3.33	2.91	2.60		7.82
MIN.		1.99	1.96	1.47	3.34	5.89	5.94	4.57	3.32	2.92	2.61	2.39		1.47

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1968/69	[DISCHARGE (m3/sec)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1		74.4	59.4	117.2	441.6	2162.2	1869.4	1721.2	710.0	317.7	219.0	154.0	173.6	
2		73.2	58.6	129.8	683.6	2332.5	1774.6	1637.9	685.0	313.5	214.8	152.8	170.2	
3		76.5	59.0	228.2	541.1	2514.0	1659.0	1525.1	660.0	317.7	212.0	151.1	164.9	
4		74.8	58.3	281.7	327.9	2794.0	1615.0	1551.1	635.0	324.5	210.8	149.3	162.3	
5		71.6	60.5	189.3	407.5	2273.5	1590.4	1599.9	610.0	311.0	207.9	147.6	157.7	
6		71.2	60.8	72.8	385.9	1519.6	1668.7	1497.5	605.0	298.6	207.2	146.5	154.5	
7		70.8	60.5	412.3	542.2	1560.4	1857.2	1678.3	599.0	292.1	204.5	144.8	148.7	
8		70.8	58.3	314.3	480.2	1729.1	1920.9	1684.2	585.9	287.3	201.1	143.1	143.0	
9		70.8	58.3	75.2	408.5	1660.9	1877.6	1760.7	563.3	283.3	197.8	142.5	139.2	
10		70.4	56.1	273.0	368.4	1567.9	1859.2	1697.8	527.9	279.3	193.2	140.8	134.3	
11		70.0	55.4	376.6	382.2	1889.9	1847.0	1562.3	498.0	281.7	189.9	138.6	131.2	
12		68.8	62.7	725.0	380.3	1766.6	1875.6	1599.9	489.6	293.7	187.3	135.8	126.9	
13		69.2	72.0	255.3	417.1	1756.7	1847.0	1613.1	490.6	280.1	184.1	133.1	123.3	
14		67.3	66.9	820.9	649.4	1721.2	1828.8	1624.5	487.5	282.8	182.8	132.0	119.7	
15		67.3	67.3	559.9	418.1	1586.6	1622.6	1598.0	473.0	261.4	181.5	128.7	116.7	
16		66.9	65.0	190.6	1453.9	1577.2	1643.7	1527.0	447.6	263.0	179.6	126.6	115.0	
17		66.9	66.5	159.3	1414.6	2090.3	1756.7	1360.0	440.6	254.6	177.7	129.3	110.9	
18		68.0	72.4	79.8	1287.7	2107.6	1731.0	1242.3	432.7	251.6	175.2	123.4	109.7	
19		65.3	70.0	118.2	1197.7	1863.3	2179.8	1183.3	433.7	248.6	179.6	121.3	109.7	
20		65.0	72.0	75.2	1296.2	1838.9	2168.8	1124.3	426.8	244.1	171.5	120.3	108.0	
21		64.6	81.1	105.7	1197.7	1729.1	2011.0	1065.3	420.0	241.2	169.6	119.8	103.9	
22		63.4	74.4	60.1	1225.7	1453.9	1894.1	1065.8	393.3	238.3	167.2	118.2	101.1	
23		63.4	74.4	49.3	1191.2	1439.6	2008.9	987.0	379.4	234.6	165.4	116.7	99.4	
24		63.1	74.8	50.9	1472.0	1455.7	1937.5	966.3	371.2	232.5	163.5	115.7	98.8	
25		63.1	74.0	37.5	1321.9	1764.6	1824.7	929.9	373.9	231.0	162.3	115.5	96.6	
26		62.7	74.4	13.1	1242.3	2504.6	1968.9	826.3	373.9	232.5	160.5	115.7	93.8	
27		61.6	85.0	24.9	1412.8	2224.2	1464.8	763.7	369.3	229.6	159.3	115.7	91.6	
28		61.2	74.8	45.1	1318.4	1906.4	1497.5	776.8	358.5	226.0	158.1	115.7	89.9	
29		59.4	84.5	98.1	1311.6		1541.8	745.0	343.5	222.5	157.5	115.7	87.2	
30		58.6	116.7	104.3	1495.7		1820.7	735.0	330.4	221.1	155.8	115.7	87.2	
31		58.6		306.0	1971.0		1914.7		321.9		155.2	115.7	87.2	
MEAN		67.1	69.1	204.8	924.0	1885.4	1809.0	1321.6	478.6	266.0	182.3	146.9	122.3	614.7
MAX.		76.5	116.7	820.9	1971.0	2794.0	2179.8	1760.7	710.0	324.5	219.0	195.5	173.6	2794.0
MIN.		58.6	55.4	13.1	327.9	1439.6	1464.8	735.0	321.9	221.1	155.2	115.7	87.2	13.1

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[Flow Regime (m3/s)]:

Q(95day): 1124.3      Q(185day): 232.5      Q(275day): 116.7      Q(355day): 58.3

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1969/70	[WATER LEVEL (m)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	2.09	1.96	1.86	6.04	5.88	4.71	4.28	3.26	2.72	2.52	2.33	2.19		
2	2.07	1.98	1.84	5.54	6.22	4.65	4.19	3.22	2.71	2.51	2.33	2.19		
3	2.05	1.99	1.82	5.13	6.86	4.59	4.14	3.20	2.70	2.50	2.32	2.18		
4	2.04	2.00	1.88	5.02	7.76	4.53	4.11	3.18	2.69	2.49	2.32	2.18		
5	2.03	2.02	1.97	4.98	8.11	4.45	4.08	3.15	2.68	2.49	2.32	2.18		
6	2.03	2.07	2.03	5.07	7.91	4.33	4.05	3.13	2.67	2.47	2.32	2.17		
7	2.02	2.10	2.08	5.05	8.07	4.26	3.95	3.10	2.66	2.46	2.31	2.17		
8	2.00	2.06	2.18	5.13	8.26	4.59	3.86	3.08	2.65	2.45	2.30	2.17		
9	1.98	2.03	2.41	5.16	7.84	4.68	3.78	3.08	2.64	2.45	2.29	2.16		
10	1.97	2.00	2.43	5.10	7.61	4.79	3.72	2.77	2.64	2.44	2.29	2.16		
11	1.96	1.98	2.37	5.06	7.57	4.44	3.68	3.02	2.64	2.44	2.27	2.16		
12	1.96	1.97	2.33	4.83	7.37	4.23	3.65	3.00	2.63	2.44	2.26	2.16		
13	1.94	1.95	2.35	4.51	7.31	4.47	3.62	2.99	2.62	2.43	2.26	2.15		
14	1.94	1.94	2.50	4.26	7.05	4.67	3.59	2.97	2.62	2.42	2.25	2.15		
15	1.94	1.94	2.85	4.01	6.73	4.74	3.58	2.94	2.61	2.41	2.25	2.14		
16	1.93	1.93	2.88	3.85	6.62	4.72	3.57	2.92	2.60	2.41	2.24	2.14		
17	1.92	1.94	3.50	3.72	6.67	4.96	3.54	2.90	2.59	2.40	2.24	2.14		
18	1.91	1.94	4.00	3.64	6.68	5.34	3.51	2.89	2.58	2.40	2.24	2.13		
19	1.90	1.93	3.64	4.05	6.48	5.36	3.53	2.88	2.58	2.39	2.23	2.13		
20	1.90	1.92	3.75	4.26	6.15	5.22	3.69	2.86	2.58	2.39	2.23	2.13		
21	1.88	1.91	3.90	4.99	5.93	5.18	3.57	2.85	2.58	2.39	2.23	2.12		
22	1.87	1.91	3.66	5.68	5.72	5.33	3.63	2.84	2.57	2.39	2.22	2.12		
23	1.86	1.91	4.88	5.35	5.46	5.37	3.60	2.82	2.57	2.37	2.22	2.12		
24	1.85	1.88	4.63	5.11	5.34	5.34	3.54	2.80	2.56	2.37	2.22	2.12		
25	1.83	1.87	4.95	5.44	5.27	5.32	3.60	2.80	2.56	2.37	2.22	2.12		
26	1.83	1.85	6.31	5.71	5.17	5.33	3.54	2.78	2.56	2.36	2.21	2.12		
27	1.83	1.83	6.34	5.91	5.06	5.31	3.44	2.77	2.55	2.35	2.21	2.12		
28	1.85	1.84	5.87	6.18	4.87	5.19	3.37	2.75	2.54	2.35	2.20	2.12		
29	1.87	1.84	6.08	6.00		4.94	3.34	2.44	2.54	2.34	2.20	2.11		
30	1.89	1.83	6.17	5.74		4.68	3.30	2.74	2.53	2.34	2.19	2.11		
31	1.93		6.54	5.59		4.47		2.73		2.33	2.19			
MEAN	1.94	1.94	3.55	5.04	6.64	4.85	3.70	2.93	2.61	2.41	2.26	2.15	3.31	
MAX.	2.09	2.10	6.54	6.18	8.26	5.37	4.28	3.26	2.72	2.52	2.33	2.19	8.26	
MIN.	1.83	1.83	1.82	3.64	4.87	4.23	3.30	2.44	2.53	2.33	2.19	2.11	1.82	

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1969/70	[DISCHARGE (m3/sec)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	70.8	55.1	43.8	1527.0	1432.4	827.7	645.8	306.8	178.4	139.1	105.7	84.5		
2	68.8	57.2	42.6	1235.7	1639.8	802.0	610.2	297.0	175.2	135.8	105.7	84.1		
3	66.5	59.0	39.8	1026.0	2062.2	774.1	590.5	290.5	174.0	134.1	104.8	83.2		
4	65.0	60.1	46.7	972.2	2749.2	748.1	579.1	284.1	171.5	133.6	104.8	82.8		
5	63.4	62.3	49.6	950.2	3039.1	714.8	570.0	276.9	169.0	132.5	104.8	83.2		
6	63.1	68.0	63.1	997.4	2869.5	667.6	559.9	272.2	166.6	129.8	104.3	82.0		
7	62.0	72.8	70.0	985.5	3000.1	638.6	523.6	263.7	165.4	127.1	102.3	81.5		
8	60.1	66.9	83.2	1026.0	3168.2	775.5	490.6	260.7	163.5	126.1	101.4	81.5		
9	57.9	63.1	118.7	1039.7	2811.6	812.8	463.8	258.4	161.7	125.5	99.5	81.1		
10	56.1	60.1	121.8	1009.4	2624.3	863.4	442.6	188.6	160.5	124.5	99.0	80.2		
11	55.4	57.2	111.6	990.0	2592.9	712.3	430.8	244.9	160.5	124.5	97.2	80.2		
12	54.7	56.1	105.2	880.1	2441.1	627.9	422.0	240.5	158.7	123.9	95.8	80.2		
13	53.3	54.4	108.7	739.0	2394.6	721.1	411.4	236.8	158.1	122.4	94.8	79.4		
14	53.0	52.3	135.2	638.6	2199.7	807.4	403.7	231.7	156.9	120.8	93.9	79.0		
15	52.3	52.7	205.9	543.3	1975.2	839.9	398.0	226.7	155.2	119.3	93.5	78.1		
16	51.3	51.6	212.7	486.4	1896.1	829.0	396.2	221.1	153.4	118.7	92.5	78.1		
17	50.3	52.7	373.9	444.6	1929.2	943.0	388.7	216.2	151.1	117.2	92.1	78.1		
18	49.3	52.3	540.0	419.1	1941.7	1133.2	376.6	213.4	150.5	117.2	92.1	76.9		
19	48.3	51.3	419.1	558.8	1802.6	1141.1	384.9	211.3	149.9	115.7	90.3	76.9		
20	48.0	50.3	452.6	636.2	1592.3	1068.9	435.7	207.9	149.3	115.7	90.3	76.5		
21	46.7	48.9	504.3	956.1	1463.0	1047.3	396.2	204.5	149.3	115.7	90.3	75.7		
22	44.7	49.3	425.9	1316.7	1340.9	1128.4	415.2	202.5	147.6	115.2	88.9	75.7		
23	43.8	48.9	902.7	1136.4	1194.5	1147.5	404.7	198.5	147.0	112.1	88.9	75.7		
24	43.2	46.3	792.7	1012.4	1130.0	1133.2	387.7	195.2	145.9	111.6	88.9	74.4		
25	41.6	44.7	935.7	1184.7	1093.7	1118.9	405.6	193.2	145.9	111.6	88.9	74.4		
26	41.3	43.5	1695.8	1333.9	1044.3	1128.4	385.9	189.9	145.9	110.1	87.6	74.4		
27	40.7	41.6	1715.3	1448.5	991.5	1114.1	355.8	187.3	144.2	109.2	87.2	74.4		
28	42.9	42.2	1423.5	1613.1	898.5	1055.0	338.2	184.1	142.5	108.7	86.3	74.4		
29	45.1	41.9	1552.9	1503.0		934.3	327.9	125.0	141.4	108.2	85.8	74.0		
30	47.0	41.0	1603.6	1349.5		812.8	317.7	181.5	139.7	107.2	85.4	74.0		
31	52.0		1847.0	1267.4		725.0		180.3		105.7	85.4			
MEAN	52.9	53.5	540.1	1007.3	1975.6	896.5	442.0	225.5	156.0	120.0	94.5	78.5	461.0	
MAX.	70.8	72.8	1847.0	1613.1	3168.2	1147.5	645.8	306.8	178.4	139.1	105.7	84.5	3168.2	
MIN.	40.7	41.0	39.8	419.1	898.5	627.9	317.7	125.0	139.7	105.7	85.4	74.0	39.8	

[Discharge Rating Curve]: Q=60.157\*(H-1.003)^2

[Flow Regime (m3/s)]:

Q(95day): 627.9      Q(185day): 150.5      Q(275day): 81.5      Q(355day): 43.2

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1970/71											[WATER LEVEL (m)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	2.10	2.01	3.26	4.80	8.21	8.32	4.81	3.89	2.98	2.65	2.50	2.28		
2	2.10	2.00	3.68	4.73	7.82	8.29	4.83	3.83	2.97	2.64	2.49	2.28		
3	2.10	1.99	4.26	4.54	8.15	8.52	4.86	3.66	2.95	2.63	2.49	2.27		
4	2.10	1.98	3.70	5.02	7.89	8.30	4.81	3.60	2.93	2.62	2.48	2.27		
5	2.10	1.98	4.21	6.11	7.76	7.99	4.75	3.54	2.92	2.62	2.47	2.26		
6	2.12	1.98	4.47	6.61	7.64	7.90	4.68	3.51	2.91	2.62	2.47	2.26		
7	2.15	1.98	4.48	6.42	7.42	7.37	4.61	3.47	2.90	2.61	2.47	2.26		
8	2.13	1.99	4.46	6.50	7.13	6.90	4.54	3.43	2.88	2.60	2.47	2.25		
9	2.12	1.99	5.22	6.74	6.99	6.52	4.44	3.41	2.87	2.60	2.46	2.24		
10	2.11	2.00	5.50	7.07	6.91	6.29	4.36	3.38	2.87	2.59	2.46	2.24		
11	2.10	2.02	4.78	7.56	7.01	6.26	4.29	3.34	2.86	2.59	2.45	2.24		
12	2.08	2.04	4.72	7.34	7.11	6.51	4.21	3.32	2.85	2.59	2.40	2.24		
13	2.08	2.07	4.82	7.21	7.05	6.51	4.14	3.29	2.84	2.59	2.40	2.24		
14	2.07	2.13	4.90	6.53	7.03	6.50	4.08	3.27	2.83	2.58	2.39	2.23		
15	2.06	2.08	5.34	5.84	7.13	6.43	4.08	3.24	2.82	2.58	2.38	2.23		
16	2.05	2.07	5.81	5.50	7.98	6.71	4.10	3.22	2.81	2.58	2.37	2.23		
17	2.05	2.07	5.25	5.34	7.83	7.03	4.05	3.22	2.80	2.57	2.36	2.22		
18	2.04	2.06	5.49	5.00	8.04	7.28	4.02	3.20	2.80	2.56	2.35	2.22		
19	2.03	2.07	5.89	5.00	8.55	7.34	3.99	3.18	2.80	2.55	2.34	2.21		
20	2.02	2.07	6.15	5.04	9.03	7.29	4.00	3.18	2.78	2.55	2.33	2.20		
21	2.02	2.08	5.88	5.05	9.20	7.20	4.02	3.18	2.77	2.54	2.33	2.19		
22	2.01	2.09	5.42	5.39	8.99	6.91	4.00	3.17	2.76	2.54	2.32	2.18		
23	2.01	2.08	4.98	5.84	9.08	6.61	4.00	3.15	2.75	2.53	2.32	2.18		
24	2.01	2.07	5.19	6.86	9.10	6.23	4.00	3.16	2.73	2.53	2.32	2.18		
25	2.01	2.07	5.12	6.88	9.28	5.83	4.04	3.10	2.71	2.53	2.31	2.16		
26	2.01	2.09	5.05	7.46	9.06	5.11	4.00	3.05	2.70	2.52	2.31	2.15		
27	2.01	2.20	4.94	7.74	8.88	5.18	3.94	3.06	2.69	2.52	2.30	2.13		
28	2.01	2.58	4.82	6.96	8.57	4.96	3.93	3.05	2.68	2.51	2.30	2.12		
29	2.01	2.76	4.77	6.85		4.89	3.93	3.02	2.67	2.51	2.29	2.12		
30	2.01	3.03	4.73	6.81		4.86	3.90	3.01	2.66	2.51	2.29	2.12		
31	2.01		4.84	7.08		4.85		2.99		2.50	2.29			
MEAN	2.06	2.12	4.91	6.19	8.03	6.67	4.25	3.29	2.82	2.57	2.38	2.21	3.94	
MAX.	2.15	3.03	6.15	7.74	9.28	8.52	4.86	3.89	2.98	2.65	2.50	2.28	9.28	
MIN.	2.01	1.98	3.26	4.54	6.91	4.85	3.90	2.99	2.66	2.50	2.29	2.12	1.98	

*QM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1970/71											[WATER LEVEL (m)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	72.8	60.5	307.6	867.6	3128.4	3218.9	873.1	501.1	234.6	162.3	134.7	98.1		
2	72.4	59.4	430.8	837.2	2794.0	3197.5	881.6	481.2	232.5	161.7	133.1	97.6		
3	72.4	58.3	636.2	753.2	3075.7	3395.7	895.6	423.9	228.2	159.9	132.5	96.7		
4	72.4	57.6	437.7	972.2	2851.8	3205.5	871.8	406.6	223.2	158.1	132.0	96.2		
5	72.4	57.6	619.6	1571.6	2746.8	2935.8	846.8	388.7	221.1	157.5	130.3	95.3		
6	75.2	57.6	721.1	1889.9	2651.0	2861.9	814.1	376.6	218.3	156.9	129.8	94.8		
7	79.4	57.9	726.2	1762.7	2476.2	2441.1	780.7	366.6	215.5	155.2	129.3	94.4		
8	76.5	58.3	719.9	1814.6	2260.0	2092.4	751.9	354.9	212.7	154.0	128.7	93.5		
9	74.4	58.6	1067.3	1977.3	2153.4	1828.8	712.3	347.9	210.6	153.4	127.1	92.5		
10	73.6	60.1	1214.1	2210.8	2098.9	1680.3	678.6	339.1	209.3	152.2	127.1	92.5		
11	72.4	61.9	857.8	2583.2	2168.8	1664.8	648.2	329.6	207.2	151.7	125.5	92.5		
12	70.4	65.0	829.0	2417.8	2244.3	1824.7	619.6	321.9	205.2	151.7	118.2	92.5		
13	69.6	68.8	874.5	2314.3	2201.9	1824.7	590.5	315.1	203.2	151.7	117.7	92.1		
14	68.4	76.9	912.7	1840.9	2182.0	1820.7	571.2	308.5	201.8	150.5	115.7	91.2		
15	67.3	70.4	1133.2	1405.7	2255.5	1772.6	568.9	301.0	199.1	150.5	113.6	89.8		
16	66.5	68.8	1389.8	1219.1	2928.1	1962.6	578.0	297.0	197.1	148.8	112.1	89.8		
17	65.7	68.8	1082.8	1133.2	2801.5	2188.7	558.8	297.0	195.2	148.2	111.1	89.4		
18	64.2	67.7	1212.5	960.5	2979.5	2373.8	547.7	291.3	193.8	145.9	109.2	88.9		
19	63.1	68.0	1436.0	960.5	3426.0	2413.1	537.8	285.7	193.2	144.2	107.7	87.2		
20	62.7	68.4	1594.2	978.1	3874.3	2376.1	540.0	285.7	189.9	143.1	106.7	86.3		
21	62.3	69.6	1428.8	984.0	4040.9	2309.7	546.6	285.7	188.0	142.5	105.7	85.0		
22	61.6	70.8	1173.3	1158.8	3839.1	2098.9	540.0	281.7	186.0	141.9	104.3	83.7		
23	61.6	70.0	953.1	1409.2	3924.5	1892.0	540.0	276.1	183.5	140.8	104.3	83.2		
24	61.2	68.0	1056.5	2062.2	3945.3	1641.7	538.9	279.3	179.0	140.8	104.3	82.8		
25	60.5	68.8	1021.5	2079.5	4125.5	1403.9	553.2	265.3	175.8	139.7	102.8	81.1		
26	60.5	71.2	985.5	2504.6	3909.7	1015.4	541.1	253.1	174.0	139.1	102.3	79.4		
27	60.5	86.3	934.3	2734.4	3731.5	1047.3	519.3	255.3	172.1	138.0	101.4	76.9		
28	60.5	150.5	874.5	2131.5	3445.4	941.5	517.1	251.6	169.0	137.5	100.4	75.7		
29	60.5	184.7	852.3	2058.0		907.0	513.9	245.6	167.2	137.5	99.0	75.2		
30	60.5	247.1	837.2	2025.9		894.2	505.4	241.2	164.7	135.8	99.0	74.8		
31	60.5		885.8	2224.2		888.6		238.3		134.7	99.0			
MEAN	67.2	78.6	942.1	1672.3	3009.3	2003.9	639.4	319.1	198.4	147.9	115.0	88.3	760.8	
MAX.	79.4	247.1	1594.2	2734.4	4125.5	3395.7	895.6	501.1	234.6	162.3	134.7	98.1	4125.5	
MIN.	60.5	57.6	307.6	753.2	2098.9	888.6	505.4	238.3	164.7	134.7	99.0	74.8	57.6	

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[Flow Regime (m<sup>3</sup>/s)]:

Q(95day): 960.5      Q(185day): 232.5      Q(275day): 99.0      Q(355day): 60.5

<<< MASTER PROGRAM for DB-05(Leap Year):Daily River W/L & Discharge >>>

\*HM\* ST.: 5-940 LUANGWA BRIDGE

YEAR : 1971/72

[WATER LEVEL (m)]

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	2.12	2.03	2.16	3.61	4.83	5.88	4.12	3.52	2.85	2.59	2.46	2.33	
2	2.11	2.03	2.15	3.64	4.96	5.80	4.17	3.52	2.84	2.58	2.44	2.32	
3	2.11	2.02	2.28	3.64	5.31	6.39	4.27	3.57	2.82	2.57	2.44	2.32	
4	2.10	2.02	2.20	3.62	4.93	6.00	4.33	3.54	2.80	2.58	2.43	2.31	
5	2.09	2.02	2.29	4.04	4.72	5.77	4.40	3.46	2.80	2.57	2.43	2.33	
6	2.09	2.02	2.19	4.02	4.58	6.07	4.41	3.37	2.79	2.57	2.41	2.33	
7	2.08	2.02	2.22	4.01	4.33	5.90	4.54	3.37	2.77	2.57	2.40	2.30	
8	2.08	2.02	2.21	3.95	4.38	5.78	4.06	3.40	2.77	2.58	2.40	2.30	
9	2.08	2.02	2.23	4.17	4.13	5.54	4.12	3.31	2.76	2.57	2.39	2.29	
10	2.07	2.02	2.25	4.36	3.99	6.05	3.98	3.29	2.75	2.56	2.39	2.29	
11	2.07	2.03	2.27	4.36	3.72	6.24	3.81	3.26	2.74	2.55	2.40	2.29	
12	2.06	2.02	2.33	4.32	3.79	6.02	3.78	3.21	2.76	2.55	2.40	2.29	
13	2.06	2.02	2.37	4.90	3.72	6.04	3.73	3.16	2.73	2.54	2.40	2.29	
14	2.06	2.02	2.38	5.39	3.66	5.83	3.75	3.13	2.73	2.53	2.40	2.28	
15	2.05	2.05	2.41	5.10	3.61	5.44	3.73	3.09	2.72	2.51	2.40	2.28	
16	2.05	2.05	2.46	4.90	3.51	5.20	3.69	3.08	2.71	2.51	2.40	2.27	
17	2.04	2.10	2.44	5.57	3.49	4.97	3.80	3.08	2.70	2.51	2.40	2.27	
18	2.05	2.16	2.64	5.80	3.51	4.72	3.77	3.04	2.69	2.51	2.40	2.28	
19	2.05	2.25	3.05	5.26	3.63	4.68	3.76	3.02	2.69	2.50	2.39	2.26	
20	2.05	2.57	3.08	5.25	3.77	4.52	3.68	3.01	2.70	2.50	2.39	2.27	
21	2.05	2.69	3.22	5.25	3.90	4.37	3.64	3.00	2.69	2.49	2.38	2.25	
22	2.05	2.45	3.69	5.35	4.15	4.26	3.71	2.98	2.68	2.48	2.37	2.24	
23	2.04	2.39	4.47	5.07	4.40	4.26	4.26	2.97	2.67	2.47	2.37	2.24	
24	2.05	2.35	3.97	4.73	4.55	4.32	4.06	2.95	2.66	2.48	2.37	2.24	
25	2.05	2.32	3.48	4.64	4.61	4.29	3.87	2.94	2.65	2.47	2.37	2.23	
26	2.04	2.29	3.35	4.55	4.76	4.84	3.73	2.93	2.64	2.47	2.36	2.23	
27	2.04	2.29	3.20	4.51	4.65	4.80	3.61	2.92	2.63	2.46	2.35	2.23	
28	2.04	2.25	4.27	4.42	5.10	4.38	3.56	2.91	2.62	2.44	2.34	2.22	
29	2.04	2.19	3.37	4.41	5.68	4.30	3.55	2.89	2.60	2.45	2.33	2.22	
30	2.03	2.17	4.29	5.05		4.33	3.50	2.87	2.58	2.46	2.33	2.21	
31	2.03		3.89	4.83		4.16		2.86		2.46	2.33		
MEAN	2.06	2.16	2.87	4.60	4.29	5.20	3.91	3.15	2.72	2.52	2.39	2.27	3.18
MAX.	2.12	2.69	4.47	5.80	5.68	6.39	4.54	3.57	2.85	2.58	2.46	2.33	6.39
MIN.	2.03	2.02	2.15	3.61	3.49	4.16	3.50	2.86	2.58	2.44	2.33	2.21	2.02

\*QM\* ST.: 5-940 LUANGWA BRIDGE

YEAR : 1971/72

[DISCHARGE (m3/s)]

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	74.4	63.4	80.2	410.4	880.1	1430.6	583.7	382.2	204.5	148.8	127.1	105.7	
2	74.0	63.1	79.4	417.1	941.5	1384.5	602.1	381.2	203.2	148.8	125.0	104.8	
3	73.2	62.3	98.1	417.1	1117.3	1744.8	641.0	396.2	198.5	147.0	123.9	104.3	
4	72.8	62.3	86.7	413.3	928.5	1499.4	666.4	386.8	195.2	150.5	122.9	103.3	
5	71.6	62.3	100.0	553.2	831.7	1365.2	694.7	363.9	193.8	147.0	121.8	106.2	
6	70.8	62.3	84.5	547.7	770.2	1547.3	699.7	338.2	191.9	147.0	119.9	105.7	
7	70.0	62.3	88.9	544.4	666.4	1444.9	754.5	337.4	188.6	148.2	118.2	101.4	
8	70.0	62.3	87.2	522.5	686.0	1370.4	563.3	344.3	188.0	149.3	117.2	100.9	
9	69.6	61.9	90.3	604.4	587.1	1235.7	583.7	320.2	185.4	147.0	115.7	100.0	
10	68.8	62.7	93.5	677.4	536.7	1530.7	534.5	313.5	184.1	145.3	116.2	99.0	
11	68.4	63.1	96.2	677.4	443.6	1651.3	474.0	305.2	182.2	144.2	116.7	100.0	
12	67.7	62.7	106.7	660.3	466.8	1512.2	462.7	292.9	185.4	143.6	118.2	100.0	
13	66.9	62.3	113.1	911.3	444.6	1525.1	446.6	280.9	179.0	141.9	118.2	100.0	
14	66.9	61.9	114.7	1160.4	423.9	1403.9	454.6	273.0	179.0	140.8	118.2	98.6	
15	66.5	65.3	119.8	1007.9	409.4	1184.7	446.6	262.2	177.1	137.5	116.7	97.6	
16	65.3	65.3	128.2	914.1	378.5	1061.1	432.7	259.9	175.8	136.3	117.2	97.2	
17	65.0	72.4	123.9	1257.4	373.0	944.4	471.9	258.4	174.0	135.8	117.7	96.2	
18	65.3	81.1	161.7	1382.7	377.6	829.0	460.7	250.8	172.1	135.8	117.2	97.6	
19	66.5	93.5	253.1	1092.2	416.2	814.1	457.7	245.6	171.5	134.7	116.2	95.8	
20	66.5	147.6	258.4	1085.9	460.7	745.5	429.8	242.7	174.0	134.1	115.7	96.7	
21	66.5	172.1	297.0	1082.8	504.3	681.1	419.1	239.0	172.1	132.5	113.6	93.5	
22	65.7	126.1	435.7	1136.4	594.0	636.2	440.6	236.1	168.4	131.4	112.6	92.5	
23	65.0	115.2	721.1	993.0	696.0	639.8	639.8	232.5	167.2	129.8	112.6	92.1	
24	66.5	109.2	531.2	837.2	757.1	661.5	562.2	228.2	165.4	130.9	112.6	91.6	
25	65.7	104.3	370.2	795.3	783.4	649.4	494.8	226.0	163.5	130.3	112.1	90.7	
26	65.0	100.0	332.2	758.4	849.6	884.4	446.6	223.9	161.7	128.7	110.6	89.7	
27	64.6	99.0	290.5	740.3	800.7	869.0	410.4	221.8	159.9	128.2	109.2	89.8	
28	64.2	93.0	643.4	703.5	1010.9	687.3	394.3	218.3	158.1	123.9	108.2	88.5	
29	64.2	85.0	338.2	697.2	1313.3	654.2	389.6	214.1	154.0	126.6	106.7	88.9	
30	63.4	82.4	649.4	987.0		663.9	373.9	210.6	150.5	127.1	106.2	87.6	
31	63.4		501.1	880.1		599.8		207.9		127.7	105.7		
MEAN	67.6	82.9	241.1	802.2	670.7	1092.0	514.4	280.4	177.5	138.1	115.8	97.2	356.5
MAX.	74.4	172.1	721.1	1382.7	1313.3	1744.8	754.5	396.2	204.5	150.5	127.1	106.2	1744.8
MIN.	63.4	61.9	79.4	410.4	373.0	599.8	373.9	207.9	150.5	123.9	105.7	87.6	61.9

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^{2.2}$

[Flow Regime (m3/s)]:

Q(95day): 494.8      Q(185day): 172.1      Q(275day): 104.3      Q(355day): 63.1

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE													YEAR : 1972/73	[WATER LEVEL (m)]
N=	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	2.20	2.15	2.11	3.20	4.03	6.33	4.51	3.42	2.87	2.65	2.43	2.30			
2	2.19	2.13	2.11	3.18	3.82	6.88	4.45	3.39	2.84	2.64	2.42	2.29			
3	2.18	2.13	2.10	3.12	4.00	6.66	4.20	3.39	2.83	2.63	2.41	2.28			
4	2.18	2.12	2.11	2.97	4.17	6.64	4.12	3.39	2.81	2.62	2.41	2.27			
5	2.17	2.12	2.11	2.88	3.78	6.44	4.14	3.39	2.79	2.60	2.40	2.27			
6	2.18	2.12	2.12	2.79	3.54	5.99	4.19	3.38	2.80	2.58	2.40	2.26			
7	2.17	2.12	2.13	2.83	3.54	5.68	4.11	3.35	2.82	2.57	2.39	2.25			
8	2.18	2.12	2.14	2.86	3.57	5.35	4.01	3.32	2.82	2.55	2.39	2.24			
9	2.17	2.12	2.24	2.89	3.49	5.15	3.97	3.28	2.81	2.55	2.39	2.23			
10	2.17	2.12	2.33	3.41	3.41	4.83	3.92	3.26	2.80	2.54	2.38	2.21			
11	2.16	2.13	2.32	3.18	3.72	4.74	3.86	3.25	2.79	2.49	2.38	2.21			
12	2.16	2.16	2.28	3.73	4.04	5.05	3.79	3.22	2.77	2.52	2.37	2.20			
13	2.16	2.22	2.26	4.08	4.77	5.14	3.74	3.20	2.76	2.52	2.36	2.17			
14	2.16	2.27	2.25	3.74	4.27	5.19	3.71	3.18	2.74	2.51	2.35	2.15			
15	2.16	2.32	2.25	3.99	4.23	5.09	3.79	3.16	2.74	2.51	2.35	2.14			
16	2.15	2.25	2.29	3.90	4.03	5.15	4.10	3.15	2.73	2.51	2.33	2.14			
17	2.15	2.21	2.31	3.81	4.33	5.02	4.57	3.13	2.72	2.51	2.33	2.12			
18	2.14	2.18	2.33	3.75	3.72	4.82	4.51	3.11	2.71	2.50	2.31	2.12			
19	2.14	2.18	2.46	3.76	3.58	4.77	4.39	3.10	2.72	2.50	2.31	2.11			
20	2.14	2.17	2.31	3.61	3.89	4.59	4.35	3.08	2.71	2.49	2.31	2.11			
21	2.14	2.16	2.32	3.51	4.32	4.42	4.19	3.06	2.71	2.48	2.33	2.11			
22	2.14	2.15	2.36	3.39	6.43	4.30	4.00	3.04	2.70	2.48	2.33	2.40			
23	2.14	2.15	2.53	3.22	5.45	4.43	3.89	3.01	2.70	2.48	2.39	2.11			
24	2.13	2.13	2.56	3.07	6.15	4.50	3.78	3.00	2.70	2.48	2.39	2.11			
25	2.16	2.13	2.68	3.05	5.99	4.68	3.69	2.97	2.70	2.47	2.38	2.10			
26	2.15	2.13	2.80	3.27	6.58	5.00	3.61	2.95	2.69	2.47	2.37	2.08			
27	2.15	2.12	3.44	3.32	6.44	4.90	3.52	2.93	2.69	2.46	2.35	2.07			
28	2.15	2.15	3.39	3.11	6.31	5.21	3.51	2.92	2.67	2.46	2.34	2.06			
29	2.14	2.12	3.27	3.26		5.24	3.46	2.90	2.67	2.45	2.33	2.05			
30	2.14	2.12	3.31	3.62		5.00	3.44	2.89	2.66	2.45	2.32	2.05			
31	2.14		3.24	4.17		4.74		2.88		2.43	2.31				
MEAN	2.16	2.16	2.47	3.37	4.49	5.22	3.98	3.15	2.75	2.52	2.36	2.17	3.06		
MAX.	2.20	2.32	3.44	4.17	6.58	6.88	4.57	3.42	2.87	2.65	2.43	2.40	6.88		
MIN.	2.13	2.12	2.10	2.79	3.41	4.30	3.44	2.88	2.66	2.43	2.31	2.05	2.05		

*QM*	ST.: 5-940 LUANGWA BRIDGE													YEAR : 1972/73	[DISCHARGE (m3/sec)]
N=	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	86.3	79.0	73.2	290.5	549.9	1707.5	740.3	351.4	208.6	162.3	122.4	101.4			
2	85.0	76.5	73.2	284.9	478.1	2077.3	714.8	343.5	203.8	160.5	120.8	100.0			
3	83.7	76.5	72.8	269.9	540.0	1923.0	614.9	343.5	201.1	158.7	119.9	98.1			
4	82.8	75.2	73.2	231.7	602.1	1914.7	583.7	343.5	195.8	156.9	119.9	97.2			
5	82.0	74.8	74.0	212.0	463.8	1780.6	591.7	341.7	192.5	154.0	118.2	97.2			
6	82.8	75.2	74.4	192.5	386.8	1495.7	610.2	340.8	193.2	149.9	116.7	94.8			
7	82.4	74.8	76.5	200.5	387.7	1315.0	581.4	331.3	199.1	147.0	116.2	93.0			
8	83.7	74.8	77.7	207.2	395.2	1137.9	545.5	323.6	198.5	144.8	115.7	92.1			
9	82.4	75.2	92.5	199.8	371.2	1035.1	529.0	312.6	195.8	143.1	115.7	90.7			
10	81.5	74.4	106.7	349.6	347.9	881.6	512.8	306.0	194.5	141.9	114.7	87.2			
11	81.1	76.1	104.3	285.7	445.6	838.6	490.6	303.5	192.5	133.6	113.6	87.2			
12	80.2	80.2	98.1	447.6	553.2	985.5	468.9	295.3	188.0	139.1	112.6	85.8			
13	80.2	89.4	94.4	570.0	852.3	1029.0	450.6	291.3	184.7	138.6	111.1	82.0			
14	81.1	96.7	93.9	450.6	641.0	1056.5	440.6	284.9	180.9	137.5	109.6	79.0			
15	81.1	104.8	93.5	537.8	627.9	1006.4	468.9	280.9	181.5	137.5	108.7	77.7			
16	79.8	93.9	99.0	504.3	551.0	1032.1	578.0	276.1	179.0	137.5	106.7	77.3			
17	79.0	87.6	102.8	473.0	667.6	969.3	766.3	272.2	177.1	136.3	105.7	75.2			
18	77.7	83.7	106.7	454.6	445.6	875.9	740.3	267.6	175.2	135.2	103.3	74.4			
19	77.3	82.8	128.2	456.7	400.9	852.3	689.7	265.3	177.1	134.1	102.8	74.0			
20	77.7	82.4	102.3	408.5	502.2	772.8	673.7	259.1	175.8	133.1	102.8	74.0			
21	77.7	81.1	104.8	378.5	662.7	703.5	611.4	254.6	175.2	132.0	105.2	73.2			
22	77.7	79.4	110.6	342.6	1768.6	653.0	540.0	248.6	174.0	132.0	105.7	118.2			
23	77.3	78.6	140.2	294.5	1191.2	707.2	501.1	243.4	174.0	131.4	115.2	74.0			
24	76.5	76.9	145.3	256.9	1596.1	737.7	463.8	240.5	172.7	130.9	115.7	73.2			
25	80.2	76.1	168.4	251.6	1495.7	814.1	432.7	232.5	172.7	129.8	113.6	72.0			
26	79.8	76.9	195.2	310.1	1873.5	960.5	407.5	227.4	172.1	128.7	111.6	69.6			
27	79.0	74.8	358.5	323.6	1778.6	914.1	381.2	223.9	170.2	127.7	109.6	68.4			
28	78.6	79.0	343.5	267.6	1691.9	1065.8	379.4	221.8	167.8	127.7	107.7	67.3			
29	77.7	75.7	309.3	306.0		1078.1	363.9	216.9	166.6	126.6	105.7	66.5			
30	77.3	74.4	320.2	411.4		961.9	356.7	214.1	165.4	125.5	104.8	65.3			
31	77.7		301.0	602.1		841.3		211.3		122.9	102.8				
MEAN	80.2	80.2	139.2	347.5	795.3	1100.8	541.0	279.6	183.5	138.6	111.4	82.9	320.6		
MAX.	86.3	104.8	358.5	602.1	1873.5	2077.3	766.3	351.4	208.6	162.3	122.4	118.2	2077.3		
MIN.	76.5	74.4	72.8	192.5	347.9	653.0	356.7	211.3	165.4	122.9	102.8	65.3	65.3		

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[Flow Regime (m3/s)]:

Q(95day): 381.2      Q(185day): 168.4      Q(275day): 93.5      Q(355day): 73.2

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1973/74	[WATER LEVEL (m)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	2.04	1.94	1.94	4.15	7.56	9.38	7.02	4.25	3.56	2.82	2.54	2.21		
2	2.03	1.96	2.13	3.69	7.87	8.85	7.73	4.24	3.51	2.81	2.53	2.20		
3	2.03	1.94	2.04	3.79	8.09	8.37	7.86	4.22	3.45	2.80	2.52	2.18		
4	2.02	1.93	2.42	3.93	8.45	7.92	7.38	4.23	3.35	2.79	2.51	2.16		
5	2.01	1.94	2.32	4.68	8.23	7.94	9.94	4.17	3.32	2.79	2.50	2.15		
6	2.01	1.94	2.32	5.24	7.12	9.81	11.04	4.02	3.28	2.78	2.49	2.13		
7	2.01	1.98	2.33	5.01	6.93	10.04	9.27	3.98	3.26	2.77	2.48	2.12		
8	2.00	1.96	2.33	5.04	6.51	10.55	8.70	3.99	3.22	2.76	2.47	2.12		
9	2.00	1.95	2.26	5.08	6.99	10.42	8.28	3.93	3.20	2.75	2.46	2.11		
10	1.99	2.15	2.48	5.06	7.04	10.63	7.72	3.89	3.17	2.74	2.44	2.11		
11	1.99	2.10	2.65	5.22	7.79	9.74	7.17	3.99	3.15	2.73	2.43	2.10		
12	1.99	2.08	2.77	5.94	8.24	9.36	7.09	4.03	3.12	2.72	2.42	2.09		
13	1.99	2.08	2.83	6.21	8.15	9.01	6.24	4.08	3.11	2.71	2.41	2.08		
14	1.99	2.08	2.89	5.93	8.14	8.64	5.91	4.17	3.09	2.70	2.40	2.07		
15	1.98	2.06	2.80	5.65	7.75	8.32	5.74	4.12	3.05	2.69	2.40	2.06		
16	1.98	2.08	2.72	5.54	7.42	7.28	5.62	4.12	3.03	2.69	2.38	2.05		
17	1.98	2.08	2.95	5.42	7.64	6.94	5.47	4.04	3.01	2.68	2.38	2.05		
18	1.97	2.08	3.28	5.18	7.04	6.53	5.32	4.03	2.98	2.67	2.37	2.03		
19	1.96	2.05	3.97	5.20	7.17	6.49	5.18	4.26	2.97	2.66	2.36	2.02		
20	2.00	2.02	3.87	5.61	7.36	6.16	5.02	4.40	2.95	2.65	2.34	2.01		
21	2.02	1.99	3.63	5.07	7.20	6.36	4.91	4.32	2.93	2.64	2.33	2.00		
22	2.01	1.97	3.48	5.03	7.72	7.11	4.75	4.21	2.92	2.63	2.32	1.98		
23	2.00	1.96	3.33	5.22	8.32	6.85	4.64	4.15	2.91	2.62	2.31	1.98		
24	1.98	1.94	3.39	5.45	9.51	6.31	4.59	4.06	2.90	2.61	2.30	1.97		
25	1.97	2.00	3.58	5.11	8.89	5.88	4.55	4.00	2.88	2.60	2.29	1.96		
26	1.96	2.02	3.68	5.23	9.28	5.66	4.50	3.90	2.87	2.59	2.28	1.96		
27	1.95	2.00	4.22	5.79	9.13	5.56	4.43	3.84	2.86	2.58	2.27	1.95		
28	1.96	1.96	4.28	6.27	8.67	5.18	4.45	3.78	2.84	2.58	2.26	1.94		
29	1.94	1.93	3.97	5.50		5.07	4.41	3.73	2.84	2.57	2.24	1.94		
30	1.98	1.94	4.58	6.31		5.84	4.29	3.67	2.83	2.56	2.23	1.94		
31	1.94		4.15	6.82		5.97		3.62		2.55	2.23			
MEAN	1.99	2.00	3.08	5.27	7.86	7.68	6.31	4.05	3.09	2.69	2.38	2.06	4.01	
MAX.	2.04	2.15	4.58	6.82	9.51	10.63	11.04	4.40	3.56	2.82	2.54	2.21	11.04	
MIN.	1.94	1.93	1.94	3.69	6.51	5.07	4.29	3.62	2.83	2.55	2.23	1.94	1.93	

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1973/74	[DISCHARGE (m3/sec)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	64.2	53.0	52.7	595.1	2588.1	4217.1	2177.6	632.6	394.3	199.1	141.9	87.3		
2	63.4	55.1	76.9	434.7	2839.2	3708.4	2722.0	630.2	377.6	197.1	140.2	85.8		
3	63.1	52.7	64.6	468.9	3018.3	3264.7	2826.6	624.3	359.4	193.8	138.6	83.7		
4	62.3	51.6	121.3	517.1	3338.1	2882.2	2443.4	625.5	332.2	192.5	136.3	80.2		
5	61.6	52.3	104.8	814.1	3141.6	2897.5	4804.2	603.2	322.7	191.9	134.7	78.6		
6	61.6	53.0	104.3	1078.1	2251.0	4670.8	6060.1	546.6	312.6	189.3	133.1	76.5		
7	60.5	57.6	106.7	964.9	2111.9	4909.7	4107.3	534.5	306.0	187.3	130.9	75.2		
8	60.1	54.7	105.2	981.1	1826.8	5485.5	3560.2	535.6	297.0	185.4	129.3	74.4		
9	59.7	53.7	95.8	1001.9	2155.6	5339.4	3184.2	513.9	290.5	183.5	127.1	74.0		
10	59.0	79.8	131.4	988.5	2195.3	5576.9	2717.1	500.1	282.5	181.5	125.0	73.2		
11	58.6	72.8	162.3	1071.9	2769.1	4596.8	2284.8	537.8	276.1	179.6	122.9	72.4		
12	58.3	69.6	187.3	1464.8	3149.6	4201.7	2230.9	552.1	269.9	177.7	121.3	70.8		
13	58.3	69.6	199.8	1628.4	3073.1	3853.7	1647.5	567.8	266.0	175.8	119.8	69.6		
14	58.3	69.2	213.4	1459.4	3060.0	3512.4	1448.5	603.2	261.4	174.0	118.2	68.8		
15	57.9	67.3	195.2	1301.3	2739.3	3224.3	1349.5	583.7	253.1	172.1	116.7	67.7		
16	57.2	69.2	177.7	1240.6	2476.2	2369.2	1284.3	584.8	247.8	170.2	114.7	66.5		
17	56.8	69.2	227.4	1174.9	2648.5	2122.8	1202.6	555.5	241.9	168.4	113.6	65.3		
18	56.1	69.2	311.8	1047.3	2190.9	1840.9	1123.6	549.9	236.1	166.6	112.1	63.8		
19	55.1	65.7	531.2	1061.1	2289.3	1812.6	1047.3	637.4	231.7	164.7	110.1	62.7		
20	59.4	62.3	494.8	1274.2	2429.4	1598.0	970.7	694.7	228.2	162.9	108.2	61.2		
21	62.3	58.6	414.2	995.9	2309.7	1729.1	917.0	660.3	223.2	161.1	106.2	60.1		
22	60.8	56.5	369.3	976.6	2712.2	2246.5	845.4	617.3	221.1	159.3	104.3	57.9		
23	59.4	55.1	327.0	1071.9	3224.3	2053.7	796.7	594.0	219.7	157.5	102.8	57.2		
24	57.2	53.3	343.5	1189.6	4350.1	1691.9	772.8	563.3	216.9	155.8	101.4	56.1		
25	56.1	60.1	398.0	1015.4	3743.0	1428.8	758.4	541.1	212.0	154.0	99.0	55.1		
26	54.7	62.7	430.8	1073.5	4119.4	1306.4	736.5	506.4	209.3	152.2	97.6	55.1		
27	54.4	60.1	624.3	1379.2	3969.1	1250.7	708.5	483.3	206.6	150.5	96.7	54.0		
28	55.1	55.4	644.6	1668.7	3532.0	1048.9	713.5	464.8	203.2	148.8	94.8	53.0		
29	53.0	51.3	529.0	1217.4		993.0	698.5	446.6	202.5	147.0	92.5	53.3		
30	57.9	52.7	770.2	1695.8		1409.2	648.2	428.8	201.1	145.3	91.2	52.7		
31	52.3		595.1	2032.3		1486.6		411.4		143.6	89.8			
MEAN	58.5	60.4	293.9	1125.3	2866.1	2862.2	1892.9	559.0	263.4	170.6	115.2	67.1	847.9	
MAX.	64.2	79.8	770.2	2032.3	4350.1	5576.9	6060.1	694.7	394.3	199.1	141.9	87.3	6060.1	
MIN.	52.3	51.3	52.7	434.7	1826.8	993.0	648.2	411.4	201.1	143.6	89.8	52.7	51.3	

[Discharge Rating Curve]: Q=60.157\*(H-1.003)^2

[Flow Regime (m3/s)]:

Q(95day): 1047.3      Q(185day): 228.2      Q(275day): 80.2      Q(355day): 53.0

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE													YEAR : 1974/75	[WATER LEVEL (m)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	1.94			0.76	4.34	4.47	6.17	5.50	4.39	3.19	1.59	1.28	1.09		
2	1.93			1.01	4.13	4.35	6.07	5.22	4.20	3.18	1.58	1.28	1.08		
3	1.92			0.90	4.16	4.84	6.14	5.01	4.10	3.16	1.58	1.27	1.07		
4	1.92			0.90	4.38	4.81	6.55	4.80	4.06	3.16	1.57	1.27	1.06		
5				0.83	4.88	4.74	6.58	4.67	4.01	3.15	1.56	1.26	1.05		
6				0.80	5.52	4.51	7.18	4.56	3.96	3.14	1.55	1.26	1.04		
7				0.73	5.66	4.19	7.02	4.90	3.91	3.13	1.55	1.26	1.03		
8				0.78	5.32	4.01	6.39	4.97	3.87	3.13	1.54	1.25	1.01		
9				2.54	4.97	4.14	6.25	5.26	3.81	3.12	1.54	1.25	1.00		
10				1.52	4.54	4.33	6.24	5.18	3.75	3.12	1.53	1.25	0.99		
11				2.28	4.47	4.33	6.59	5.31	3.69	3.04	1.51	1.25	0.99		
12				3.78	4.42	4.37	7.04	5.37	3.65	2.97	1.49	1.24	0.98		
13				3.94	4.41	4.46	7.59	5.29	3.61	2.99	1.47	1.24	0.98		
14		0.38		4.30	5.14	4.94	8.50	5.23	3.57	2.81	1.44	1.24	0.97		
15		0.36		4.19	6.03	5.57	8.35	5.08	3.53	2.74	1.43	1.23	0.96		
16		0.34		4.09	5.22	5.70	8.42	4.86	3.48	2.66	1.42	1.23	0.96		
17		0.37		3.90	5.32	5.33	8.33	4.68	3.44	2.58	1.41	1.22	0.96		
18		0.39		4.08	5.34	6.07	8.25	4.52	3.40	2.51	1.39	1.21	0.95		
19		0.38		3.87	5.04	6.28	7.81	4.43	3.39	2.43	1.37	1.20	0.94		
20		0.38		3.85	5.29	5.77	7.81	4.36	3.39	2.36	1.36	1.19	0.94		
21		0.41		3.87	5.47	5.37	7.62	4.26	3.37	2.28	1.35	1.18	0.92		
22		0.41		3.79	5.82	5.25	7.02	4.18	3.36	2.20	1.35	1.17	0.91		
23		0.48		3.86	6.12	5.47	6.62	4.15	3.35	2.13	1.34	1.16	0.90		
24		0.50		3.89	6.03	5.42	6.40	4.15	3.33	2.05	1.34	1.16	0.88		
25		0.88		3.88	6.00	5.33	6.19	4.12	3.31	1.98	1.33	0.84	0.86		
26		0.76		3.97	5.96	5.46	6.34	4.21	3.28	1.90	1.33	1.14	0.85		
27		0.82		4.42	5.62	5.12	6.35	4.41	3.26	1.82	1.32	1.13	0.84		
28		0.72		4.54	5.15	6.15	6.28	4.23	3.25	1.75	1.31	1.12	0.84		
29		0.73		3.72	5.06		6.09	4.12	3.23	1.67	1.30	1.12	0.83		
30		0.71		4.62	4.95		5.85	4.33	3.22	1.59	1.30	1.11	0.82		
31				4.63	4.71		5.68		3.20		1.29	1.09			
MEAN	1.92	0.53	3.04	5.15	5.03	6.89	4.71	3.59	2.59	1.43	1.20	0.96	3.28		
MAX.	1.94	0.88	4.63	6.12	6.28	8.50	5.50	4.39	3.19	1.59	1.28	1.09	8.50		
MIN.	1.92	0.34	0.73	4.13	4.01	5.68	4.12	3.20	1.59	1.29	0.84	0.82	0.34		

*QM*	ST.: 5-940 LUANGWA BRIDGE													YEAR : 1974/75	[DISCHARGE (m3/sec)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	52.3	4.5	3.6	568.8	722.4	1603.6	1219.1	688.5	288.1	20.6	4.5	0.4			
2	51.3	4.5	0.0	588.2	674.9	1545.5	1071.9	614.9	284.9	20.2	4.5	0.3			
3	50.6	4.3	0.7	600.9	885.8	1590.4	967.8	576.8	280.9	19.7	4.3	0.3			
4	50.3	4.2	0.7	687.3	873.1	1849.1	869.0	562.2	279.3	19.3	4.2	0.2			
5	7.3	4.0	1.9	905.6	841.3	1869.4	810.1	542.2	276.9	18.7	4.0	0.1			
6	7.3	3.9	2.5	1229.0	741.6	2296.1	762.3	525.8	274.6	18.3	3.9	0.1			
7	7.0	3.8	4.4	1306.4	610.2	2175.4	915.6	509.6	273.0	18.1	3.8	0.0			
8	6.2	3.8	3.1	1122.1	543.3	1742.9	945.9	494.8	272.2	17.5	3.8	0.0			
9	5.0	3.8	142.5	947.3	592.8	1657.1	1089.0	474.0	270.7	17.1	3.8	0.0			
10	4.2	3.8	15.9	753.2	665.1	1651.3	1048.9	452.6	269.1	16.5	3.8	0.0			
11	3.8	3.8	97.6	722.4	667.6	1875.6	1114.1	434.7	250.1	15.6	3.6	0.0			
12	3.1	3.8	463.8	702.2	681.1	2190.9	1149.1	420.0	231.7	14.3	3.5	0.0			
13	1.9	3.8	519.3	698.5	718.6	2612.2	1107.8	407.5	214.1	13.2	3.5	0.0			
14	0.4	23.0	653.0	1027.5	931.4	3384.7	1076.6	395.2	197.1	11.7	3.3	0.1			
15	0.4	25.1	610.2	1521.4	1254.0	3248.5	998.9	383.1	180.9	10.9	3.2	0.1			
16	0.4	26.6	572.3	1070.4	1325.3	3310.8	892.8	368.4	165.4	10.5	3.0	0.1			
17	0.4	24.2	504.3	1122.1	1125.2	3229.7	812.8	357.6	150.5	9.7	2.8	0.1			
18	0.4	22.8	571.2	1131.6	1545.5	3160.2	744.2	347.0	136.3	8.9	2.6	0.1			
19	0.4	23.0	494.8	982.6	1676.4	2784.1	707.2	343.5	122.9	8.0	2.4	0.2			
20	0.4	23.0	487.5	1107.8	1365.2	2789.0	676.2	341.7	110.1	7.8	2.1	0.3			
21	0.4	21.5	494.8	1201.0	1149.1	2631.5	636.2	337.4	98.1	7.4	1.8	0.4			
22	0.4	21.3	468.9	1396.8	1084.4	2179.8	607.9	333.9	86.7	7.1	1.7	0.5			
23	0.4	16.5	489.6	1577.2	1201.0	1898.2	597.4	331.3	76.1	6.9	1.6	0.6			
24	0.4	15.2	500.1	1521.4	1171.7	1754.7	596.3	325.3	66.1	6.8	1.4	0.9			
25	0.4	0.9	499.0	1499.4	1126.8	1616.9	584.8	319.4	56.8	6.5	1.5	1.2			
26	0.4	3.5	527.9	1479.3	1196.1	1711.4	617.3	312.6	48.3	6.3	1.1	1.4			
27	0.4	1.9	701.0	1280.9	1018.5	1721.2	699.7	307.6	40.4	5.9	1.0	1.5			
28	0.4	4.7	750.6	1036.6	1594.2	1672.5	627.9	303.5	33.3	5.6	0.9	1.7			
29	0.4	4.4	444.5	991.5		1554.8	583.7	299.4	26.8	5.3	0.8	1.8			
30	0.4	5.3	788.7	938.6		1414.6	665.1	294.5	21.0	5.1	0.6	2.1			
31	0.4		791.3	827.7		1313.3		291.3		4.8	0.5				
MEAN	8.3	10.5	374.4	1053.1	999.4	2130.2	839.9	409.6	169.4	11.8	2.7	0.5	499.4		
MAX.	52.3	26.6	791.3	1577.2	1676.4	3384.7	1219.1	688.5	288.1	20.6	4.5	2.1	3384.7		
MIN.	0.4	0.9	0.0	588.2	543.3	1313.3	583.7	291.3	21.0	4.8	0.5	0.0	0.0		

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^{2.2}$

[Flow Regime (m3/s)]:

Q(95day): 741.6      Q(185day): 197.1      Q(275day): 3.8      Q(355day): 0.1



<<< MASTER PROGRAM for DB-05(Leap Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1975/76	[WATER LEVEL (m)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	0.81	0.75	0.81	4.01	4.75	7.09	8.23	5.15	3.79	3.30	1.47	1.27		
2	0.81	0.74	0.81	3.68	5.07	6.58	7.81	5.18	3.76	3.28	1.47	1.26		
3	0.81	0.74	0.82	3.48	5.20	6.42	7.08	4.99	3.74	3.26	1.46	1.25		
4	0.80	0.75	0.86	3.53	5.17	6.82	6.61	4.84	3.72	3.25	1.45	1.24		
5	0.80	0.74	0.85	3.95	5.19	7.34	6.44	4.72	3.71	3.23	1.44	1.23		
6	0.81	0.73	0.87	3.69	5.07	6.91	6.50	4.65	3.68	3.22	1.42	1.22		
7	0.82	0.72	0.94	4.63	4.81	8.37	7.25	4.66	3.65	3.20	1.41	1.21		
8	0.82	0.72	1.03	4.75	4.83	9.10	8.01	4.62	3.63	3.18	1.40	1.19		
9	0.82	0.71	1.02	4.35	4.97	8.57	7.95	4.69	3.59	3.17	1.39	1.19		
10	0.83	0.71	1.07	4.47	4.79	8.95	7.96	4.64	3.58	3.15	1.38	1.17		
11	0.82	0.70	1.48	4.97	4.90	9.14	8.67	4.66	3.57	3.13	1.37	1.16		
12	0.82	0.70	1.57	4.97	5.23	9.35	8.77	4.56	3.55	2.44	1.36	1.15		
13	0.82	0.69	3.76	5.58	5.91	9.36	8.60	4.51	3.52	1.74	1.35	1.15		
14	0.82	0.69	2.40	6.53	6.41	8.79	8.42	4.66	3.50	1.73	1.34	1.14		
15	0.81	0.69	2.45	6.41	6.51	8.37	8.12	4.53	3.47	1.72	1.34	1.13		
16	0.80	0.69	1.69	6.28	6.14	8.40	7.69	4.34	3.47	1.71	1.33	1.12		
17	0.80	0.68	3.60	3.69	6.82	8.27	7.13	4.27	3.47	1.69	1.32	1.11		
18	0.79	0.69	5.16	6.19	7.23	8.69	6.64	4.24	3.44	1.67	1.32	1.09		
19	0.79	0.70	4.16	5.83	7.68	8.37	6.19	4.20	3.42	1.66	1.32	1.07		
20	0.78	0.69	4.36	5.85	8.19	8.19	5.91	4.17	3.40	1.65	1.31	1.05		
21	0.77	0.70	3.88	5.63	9.17	7.67	5.87	4.13	3.39	1.64	1.31	1.04		
22	0.76	0.69	4.07	6.09	8.31	8.06	5.80	4.07	3.37	1.63	1.30	1.03		
23	0.75	0.67	4.47	5.99	8.66	8.08	5.80	4.04	3.33	1.62	1.31	1.02		
24	0.74	0.67	3.92	5.60	8.67	8.10	5.62	4.00	3.32	1.62	1.30	1.02		
25	0.74	0.67	3.81	5.26	8.58	8.10	5.59	3.96	3.32	1.60	1.30	1.01		
26	0.74	0.66	3.68	5.00	8.63	10.25	5.50	3.93	3.35	1.59	1.29	1.00		
27	0.74	0.67	3.93	4.79	8.44	9.05	5.76	3.90	3.34	1.57	1.30	1.00		
28	0.76	0.70	3.81	4.54	8.00	8.96	6.00	3.89	3.32	1.54	1.29	0.98		
29	0.77	0.77	3.83	4.58	7.65	9.64	5.60	3.86	3.31	1.51	1.28	0.98		
30	0.77	0.88	3.97	4.72		9.47	5.28	3.83	3.31	1.50	1.27	0.97		
31	0.75		3.99	4.82		8.39		3.82		1.48	1.27			
MEAN	0.79	0.71	2.68	4.96	6.59	8.35	6.89	4.38	3.50	2.22	1.35	1.12	3.62	
MAX.	0.83	0.88	5.16	6.53	9.17	10.25	8.77	5.18	3.79	3.30	1.47	1.27	10.25	
MIN.	0.74	0.66	0.81	3.48	4.75	6.42	5.28	3.82	3.31	1.48	1.27	0.97	0.66	

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1975/76	[DISCHARGE (m3/s)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	2.2	3.9	2.3	543.3	845.4	2228.7	3139.0	1035.1	465.8	317.7	13.2	4.3		
2	2.3	4.0	2.3	430.9	995.9	1869.4	2784.1	1047.3	456.7	312.6	12.9	3.9		
3	2.3	4.1	2.0	369.3	1058.1	1762.7	2224.2	956.1	449.6	307.6	12.4	3.8		
4	2.4	3.9	1.3	384.0	1042.7	2032.3	1894.1	884.4	445.6	303.5	11.9	3.5		
5	2.4	4.1	1.3	521.4	1053.5	2415.4	1778.6	830.4	439.6	297.8	11.3	3.2		
6	2.3	4.5	1.0	433.7	997.4	2096.7	1816.7	800.7	429.8	294.5	10.6	2.7		
7	2.1	4.9	0.2	792.7	873.1	3264.7	2350.8	803.4	422.0	289.7	9.7	2.6		
8	2.1	4.7	0.0	846.8	881.6	3939.3	2953.7	787.3	416.2	284.1	9.4	2.2		
9	2.0	5.1	0.0	674.9	947.3	3445.4	2900.0	818.2	403.7	281.7	9.0	2.0		
10	1.9	5.3	0.3	722.4	860.6	3798.2	2912.7	795.3	399.9	276.1	8.6	1.7		
11	1.9	5.4	13.9	948.8	915.6	3987.0	3537.6	804.7	396.2	273.0	8.2	1.6		
12	2.0	5.5	19.1	944.4	1075.0	4186.4	3628.2	762.3	389.6	123.9	7.8	1.3		
13	2.1	5.7	456.7	1260.7	1448.5	4201.7	3473.3	740.3	380.3	33.0	7.4	1.2		
14	2.1	5.7	116.7	1834.8	1756.7	3645.3	3310.8	803.4	373.9	31.6	6.9	1.1		
15	2.3	6.1	126.6	1756.7	1822.7	3264.7	3049.6	748.1	367.5	30.8	6.8	0.9		
16	2.5	5.8	28.0	1672.5	1584.8	3291.8	2687.6	670.0	366.6	29.8	6.3	0.8		
17	2.6	6.2	406.6	433.7	2036.6	3173.5	2257.8	643.4	367.5	28.5	6.0	0.6		
18	2.7	6.1	1038.2	1620.7	2334.8	3557.4	1908.5	629.1	358.5	27.0	6.2	0.5		
19	2.7	5.5	600.9	1403.9	2685.2	3267.4	1618.8	616.1	352.3	25.8	6.0	0.3		
20	3.0	5.9	679.9	1414.6	3109.9	3104.6	1450.3	603.2	347.0	24.9	5.8	0.2		
21	3.3	5.4	496.9	1287.7	4007.9	2677.8	1427.0	589.4	341.7	24.6	5.7	0.1		
22	3.6	5.7	565.5	1556.7	3210.9	2997.6	1384.5	565.5	336.5	23.9	5.5	0.0		
23	3.9	6.6	725.0	1495.7	3523.6	3015.7	1384.5	553.2	327.0	23.2	5.6	0.0		
24	4.0	6.6	510.7	1269.1	3540.5	3031.3	1282.6	541.1	321.9	22.6	5.5	0.0		
25	4.1	6.6	473.0	1089.0	3453.8	3033.9	1265.8	526.9	321.9	21.2	5.3	0.0		
26	4.1	7.0	429.8	960.5	3504.0	5144.3	1214.1	515.0	330.4	20.6	4.9	0.0		
27	4.0	6.6	517.1	862.0	3324.4	3897.9	1360.0	503.3	328.7	19.1	5.3	0.0		
28	3.6	5.6	473.0	754.5	2946.0	3806.9	1503.0	500.1	321.9	17.1	4.8	0.0		
29	3.4	3.3	480.2	771.5	2655.8	4488.4	1269.1	491.7	321.1	15.8	4.5	0.0		
30	3.4	0.9	531.2	833.1		4315.9	1101.6	480.2	319.4	14.8	4.3	0.1		
31	3.9		537.8	874.5		3278.2		477.1		13.9	4.4			
MEAN	2.8	5.2	298.0	992.4	2017.0	3297.4	2162.3	694.3	376.6	122.9	7.5	1.3	827.1	
MAX.	4.1	7.0	1038.2	1834.8	4007.9	5144.3	3628.2	1047.3	465.8	317.7	13.2	4.3	5144.3	
MIN.	1.9	0.9	0.0	369.3	845.4	1762.7	1101.6	477.1	319.4	13.0	4.3	0.0	0.0	

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[Flow Regime (m3/s)]:

Q(95day): 1042.7      Q(185day): 366.6      Q(275day): 5.4      Q(355day): 0.1

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1976/77											[WATER LEVEL (m)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	0.96	0.80	0.69	4.30	5.22	7.75	5.34		1.65	1.37	2.41	2.19	
2	0.94	0.79	0.69	3.99	5.06	8.00	4.97		1.64	1.36	2.40	2.17	
3	0.94	0.78	0.67	3.58	5.27	8.04	4.85		1.64	1.35	2.39	2.17	
4	0.92	0.77	0.66	3.58	5.37	8.07	4.75		1.62	1.34	2.38	2.16	
5	0.91	0.76	0.65		5.43	8.41	4.69		1.60	1.34	2.37	2.17	
6	0.90	0.75	0.65		5.56	8.19	4.64		1.58	1.32	2.37	2.17	
7	0.89	0.75	0.64	3.67	5.48	7.79	4.71		1.58	1.31	2.36	2.18	
8	0.88	0.77	0.70	3.80	5.69	7.49	4.84		1.57	1.31	2.35	2.18	
9	0.87	0.79	0.75	4.46	5.54	7.28	4.65		1.57	1.30	2.33	2.18	
10	0.87	0.78	0.81	4.67	5.58	7.09	4.71		1.55	1.30	2.33	2.19	
11	0.86	0.79	1.31	4.92	5.46	6.83	4.69		1.54	1.28	2.32	2.19	
12	0.86	0.80	1.50	4.73	5.16	6.62	4.62		1.53	1.27	2.31	2.17	
13	0.85	0.81	1.69	4.51	5.22	6.44	4.70		1.51	2.09	2.30	2.16	
14	0.86	0.81	1.69	4.20	5.35	6.40	4.78		1.50	2.49	2.30	2.15	
15	0.86	0.78	1.58		5.75	6.22	4.82		1.49	2.49	2.30	2.15	
16	0.85	0.78	2.38		5.02	6.51	4.72		1.48	2.47	2.29	2.15	
17	0.84	0.78	1.50		4.84	7.46	4.49		1.48	2.47	2.29	2.14	
18	1.26	0.79	1.43		4.85	6.90	4.36		1.46	2.46	2.29	2.14	
19	0.88	0.83	1.42	5.70	4.86	6.78	4.24		1.46	2.46	2.29	2.13	
20	0.86	0.86	1.34	6.30	4.82	6.56			1.45	2.46	2.28	2.13	
21	0.86	0.84	1.31	5.75	4.75	6.36			1.45	2.45	2.28	2.12	
22	0.89	0.81	1.47	7.23	4.67	6.32			1.45	2.45	2.28	2.12	
23	0.89	0.78	2.57	5.49	4.71	6.26			1.45	2.44	2.27	2.11	
24	0.89	0.75	4.33	5.35	4.70	6.19			1.43	2.44	2.26	2.10	
25	0.89	0.75	4.33	5.12	4.91	5.67			1.42	2.43	2.25	2.09	
26	0.86	0.76	5.01	5.57	5.15	5.36			1.41	2.43	2.24	2.08	
27	0.84	0.74	4.97	5.52	5.47	5.21		1.71	1.40	2.43	2.24	2.07	
28	0.85	0.72		5.22	6.72	5.12		1.72	1.40	2.44	2.23	2.06	
29	0.83	0.72	3.86	5.52		5.15		1.70	1.39	2.44	2.22	2.06	
30	0.83		3.85	5.57		5.25		1.67	1.38	2.43	2.21	2.05	
31	0.82		4.17	5.45		5.38		1.66		2.43	2.19		
MEAN	0.89	0.78	1.95	4.97	5.24	6.68	4.71	1.69	1.50	2.00	2.30	2.14	2.90
MAX.	1.26	0.86	5.01	7.23	6.72	8.41	5.34	1.72	1.65	2.49	2.41	2.19	8.41
MIN.	0.82	0.72	0.64	3.58	4.67	5.12	4.24	1.66	1.38	1.27	2.19	2.05	0.64

*QM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1976/77											[DISCHARGE (m3/sec)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	0.1	2.5	5.9	653.0	1071.9	2741.8	1133.2	893.6	25.1	8.2	119.3	84.1	
2	0.2	2.7	6.1	537.8	991.5	2948.6	944.4	873.9	24.6	7.8	117.2	82.4	
3	0.3	2.9	6.6	399.9	1095.3	2982.0	888.6	846.7	24.2	7.4	116.2	81.5	
4	0.4	3.2	7.0	399.9	1145.9	3002.7	844.1	826.3	23.0	7.0	113.6	81.1	
5	0.5	3.7	7.5	402.0	1178.2	3297.2	816.8	809.8	21.7	6.8	112.1	81.5	
6	0.6	3.9	7.7	411.0	1249.0	3109.9	794.0	788.6	20.4	6.0	111.6	82.4	
7	0.7	3.8	7.8	427.8	1205.9	2771.6	826.3	772.5	20.2	5.6	110.6	82.8	
8	0.9	3.4	5.6	471.9	1321.9	2528.3	884.4	756.5	19.5	5.6	108.7	82.8	
9	1.0	2.8	3.9	718.6	1235.7	2366.9	800.7	731.1	19.3	5.4	106.7	83.7	
10	1.1	3.0	2.2	808.7	1260.7	2228.7	827.7	710.8	18.1	5.1	105.7	84.1	
11	1.2	2.7	5.7	924.2	1194.5	2040.8	818.2	691.9	17.5	4.6	104.3	84.1	
12	1.2	2.5	15.0	834.5	1041.2	1900.2	787.3	673.3	16.7	4.3	102.8	82.0	
13	1.5	2.2	28.8	740.3	1070.4	1778.6	823.6	652.5	15.4	70.8	101.9	80.2	
14	1.2	2.2	28.0	616.1	1136.4	1750.8	859.2	626.5	14.8	133.6	101.4	79.4	
15	1.2	3.0	20.2	793.3	1354.7	1636.0	877.3	612.0	14.1	133.1	100.4	79.0	
16	1.5	2.9	114.1	970.6	969.3	1822.7	833.1	607.6	13.6	130.3	100.0	79.0	
17	1.6	3.1	14.7	1147.8	887.2	2511.7	732.6	595.4	13.4	128.7	99.0	78.1	
18	3.9	2.7	10.8	1325.1	888.6	2092.4	676.2	579.1	12.7	127.7	99.0	77.7	
19	0.9	1.8	10.5	1325.3	897.1	2008.9	630.2	565.1	12.4	127.1	99.0	76.9	
20	1.2	1.2	7.0	1690.0	877.3	1855.2	1215.5	543.8	12.2	127.1	98.6	76.1	
21	1.2	1.6	5.7	1356.5	842.7	1723.2	1180.8	526.0	12.1	126.1	98.6	75.7	
22	0.7	2.2	13.1	2334.8	808.7	1703.6	1151.0	521.9	12.1	125.5	97.6	74.8	
23	0.7	3.0	148.2	1209.2	826.3	1676.4	1120.1	508.5	11.9	123.9	96.2	73.6	
24	0.7	3.8	665.1	1134.8	822.2	1616.9	1086.7	496.3	11.1	125.0	94.8	72.4	
25	0.7	3.7	663.9	1020.0	917.0	1309.9	1059.5	481.2	10.3	122.9	93.9	71.2	
26	1.2	3.6	966.3	1254.0	1032.1	1141.1	1031.2	467.3	9.7	122.9	92.5	69.2	
27	1.6	4.1	945.9	1225.7	1199.4	1065.8	1001.8	30.1	9.6	121.8	91.6	68.8	
28	1.4	4.7	665.0	1071.9	1964.7	1020.0	974.2	30.6	9.3	123.9	89.8	67.7	
29	1.8	4.9	490.6	1227.4		1035.1	948.3	29.3	9.0	123.9	88.5	66.9	
30	1.9	60.5	486.4	1255.7		1085.9	920.1	27.0	8.6	122.9	87.2	65.3	
31	2.1		603.2	1191.2		1154.0		26.1		121.8	85.4		
MEAN	1.1	4.9	192.5	963.8	1088.8	1997.0	916.2	558.1	15.4	77.8	101.4	77.5	497.4
MAX.	3.9	60.5	966.3	2334.8	1964.7	3297.2	1215.5	893.6	25.1	133.6	119.3	84.1	3297.2
MIN.	0.1	1.2	2.2	399.9	808.7	1020.0	630.2	26.1	8.6	4.3	85.4	65.3	0.1

[Discharge Rating Curve]: Q=60.157\*(H-1.003)^2

[Flow Regime (m3/s)]:

Q(95day): 844.1      Q(185day): 104.3      Q(275day): 10.3      Q(355day): 0.7

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM* ST.: 5-940 LUANGWA BRIDGE													YEAR : 1977/78		[WATER LEVEL (m)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL			
1	2.05	1.95	2.04	6.35	8.92	8.10		4.81	3.33	2.83	2.45	1.96				
2	2.06	1.95	2.22	6.36	9.89	8.48		4.72	3.32	2.80	2.43	1.94				
3	2.05	1.94	2.23	6.36	10.70	8.61		4.61	3.28	2.80	2.42	1.92				
4	2.04	1.93	2.41	6.18	11.04			4.51	3.25	2.79	2.41	1.90				
5	2.04	1.92	2.48	5.52	10.49			4.40	3.23	2.78	2.43	1.90				
6	2.03	1.92	2.45	5.18	9.87	9.77		4.25	3.20	2.77	2.43	1.90				
7	2.03	1.91	3.11	5.07	9.95			4.18	3.17	2.77	2.41	1.89				
8	2.02	1.91	2.97	5.49	9.39			4.07	3.13	2.80	2.36	1.89				
9	2.02	1.90	2.80	5.82	8.83	8.94		4.02	3.11	3.01	2.34	1.89				
10	2.01	1.91	2.78	6.20	8.36	8.89		4.01	3.08	3.02	2.32	1.89				
11	2.01	1.90	2.83	5.91	7.95			4.13	3.10	2.83	2.27	1.87				
12	2.00	1.90	2.94	5.87	7.58		6.06	4.08	3.26	2.76	2.29	1.87				
13	1.98	1.90	3.25	6.05	7.30	9.91	5.97	4.02	3.29	2.73	2.27	1.85				
14	1.67	1.89	3.33	5.71	7.02	9.92	5.92	3.93	3.12	2.70	2.25	1.84				
15	1.97	1.90	3.26	6.05	6.92	10.07	5.75	3.72	3.11	2.69	2.24	1.82				
16	1.97	1.91	3.00	6.77	7.23	10.07	5.66	3.65	3.04	2.67	2.23	1.81				
17	1.97	1.90	2.94	5.90	7.10	10.02	5.64	3.65	3.01	2.65	2.22	1.81				
18	1.96	1.90	3.32	6.47	7.42	10.07	5.89	3.63	3.01	2.62	2.20	1.79				
19	1.95	1.88	3.17	7.43	7.48	10.38	6.37	3.59	3.00	2.63	2.17	1.78				
20	1.94	1.87	3.07	7.43	7.33	10.83	6.37	3.79	3.19	2.62	2.15	1.77				
21	1.94	1.87	2.92	7.02	7.37	10.88	6.78	3.79	3.21	2.60	2.13	1.76				
22	1.93	1.88	3.07	7.02	7.07		6.46	3.79	3.00	2.58	2.12	1.74				
23	1.92	1.90	3.04	7.23	6.94		6.29	3.52	2.95	2.57	2.10	1.73				
24	1.93	1.89	3.19	7.08	7.03		6.16	3.47	2.92	2.56	2.08	1.72				
25	1.93	1.89	3.48	7.21	7.36		5.92	3.43	2.92	2.55	2.06	1.71				
26	1.94	1.90	3.80	7.00	7.52		5.57	3.40	2.89	2.54	2.04	1.69				
27	1.95	1.91	4.25	7.14	7.70	12.15	5.36	3.38	2.86	2.54	2.03	1.69				
28	1.95	2.16	4.12	7.22	7.99	11.71	5.31	3.44	2.87	2.53	2.01	1.67				
29	1.94	2.19	4.08	7.48		11.02	5.20	3.61	2.87	2.50	2.02	1.66				
30	1.94	2.17	4.64	7.80		10.29	4.94	3.65	2.85	2.49	2.00	1.66				
31	1.95		5.08	8.23				3.47		2.47	1.98					
MEAN	1.97	1.93	3.17	6.53	8.21	10.01	5.87	3.89	3.09	2.68	2.22	1.81	4.01			
MAX.	2.06	2.19	5.08	8.23	11.04	12.15	6.78	4.81	3.33	3.02	2.45	1.96	12.15			
MIN.	1.67	1.87	2.04	5.07	6.92	8.10	4.94	3.38	2.85	2.47	1.98	1.66	1.66			

*QM* ST.: 5-940 LUANGWA BRIDGE													YEAR : 1977/78		[DISCHARGE (m3/sec)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL			
1	66.5	54.0	64.6	1721.2	3772.0	3028.7	3866.2	873.1	324.5	200.5	126.1	55.4				
2	67.7	54.0	88.5	1725.1	4748.7	3362.7	3633.4	830.4	321.9	195.2	122.4	53.3				
3	65.3	53.0	91.2	1723.2	5658.5	3478.8	3400.5	782.1	312.6	193.8	120.8	50.9				
4	64.6	51.3	119.8	1615.0	6060.1	4053.8	3167.7	740.3	303.5	191.9	119.3	48.6				
5	64.2	50.9	132.0	1229.0	5415.7	4628.8	2934.9	694.7	298.6	189.3	121.8	48.3				
6	63.8	50.6	126.1	1050.4	4732.4	4628.9	2702.1	635.0	291.3	188.0	122.4	48.3				
7	63.1	49.9	267.6	997.4	4817.3	4209.4	2469.3	607.9	283.3	183.6	119.3	47.6				
8	62.3	49.3	232.5	1210.9	4232.4	3789.9	2236.5	566.7	272.2	193.2	110.1	47.0				
9	62.3	48.3	195.2	1398.6	3685.4	3789.4	2003.6	546.6	266.8	241.2	107.2	46.7				
10	61.2	48.9	189.3	1622.6	3259.3	3743.0	1770.8	544.4	259.9	244.9	103.8	47.0				
11	60.5	48.8	201.1	1448.5	2910.2	4255.5	1538.0	587.1	264.5	199.8	96.7	45.7				
12	59.7	48.3	226.0	1423.5	2602.5	4768.0	1538.1	568.9	307.6	186.7	99.0	44.7				
13	57.6	48.0	303.5	1530.7	2383.0	4768.2	1484.8	546.6	314.3	179.0	96.2	43.2				
14	26.5	47.6	327.0	1330.5	2179.8	4784.6	1453.9	513.9	270.7	174.0	93.9	41.9				
15	56.1	48.0	306.0	1530.7	2105.4	4942.9	1354.7	443.6	266.8	170.2	92.1	39.8				
16	56.1	49.6	239.7	2002.6	2330.2	4942.9	1306.4	422.0	250.1	166.6	91.2	39.5				
17	56.1	48.3	224.6	1441.4	2237.6	4896.4	1294.5	422.0	241.9	163.5	88.9	38.9				
18	55.1	48.0	323.6	1798.6	2473.9	4946.2	1436.0	414.2	241.9	158.1	86.3	37.5				
19	54.0	46.7	283.3	2483.3	2525.9	5294.6	1733.0	402.8	240.5	159.9	82.4	36.3				
20	53.0	45.7	257.6	2485.7	2408.5	5805.2	1731.0	462.7	287.3	156.9	79.4	35.8				
21	52.3	45.4	220.4	2175.4	2441.1	5866.6	2004.7	468.9	292.9	154.0	76.9	34.4				
22	51.3	46.3	256.9	2179.8	2217.5	6189.0	1790.6	468.9	239.7	149.9	74.4	33.0				
23	50.6	48.0	250.8	2334.8	2118.4	6511.4	1682.2	380.3	227.4	147.6	72.0	31.6				
24	52.0	47.3	286.5	2224.2	2184.2	6833.8	1598.0	366.6	221.8	145.3	70.4	31.1				
25	52.0	47.3	368.4	2316.6	2429.4	7156.2	1452.1	354.1	221.1	143.1	67.7	29.8				
26	52.7	48.3	469.9	2166.6	2552.1	7478.6	1254.0	344.3	214.8	141.9	64.6	28.8				
27	54.4	49.6	632.6	2264.5	2699.9	7478.0	1141.1	339.1	212.7	141.4	63.1	28.0				
28	54.4	81.1	583.7	2323.4	2938.3	6900.9	1117.3	355.8	210.6	140.2	61.6	27.0				
29	53.0	85.4	567.8	2525.9		6030.7	1061.1	410.4	209.3	135.2	62.3	26.1				
30	53.3	81.5	795.3	2776.6		5188.5	934.3	422.0	205.2	132.5	60.1	25.6				
31	54.4		1001.9	3139.0		4099.0		366.6		128.7	57.9					
MEAN	56.6	52.3	310.7	1877.3	3218.6	5092.0	1903.0	512.3	262.5	171.0	90.7	39.7	1121.3			
MAX.	67.7	85.4	1001.9	3139.0	6060.1	7478.6	3866.2	873.1	324.5	244.9	126.1	55.4	7478.6			
MIN.	26.5	45.4	64.6	997.4	2105.4	3028.7	934.3	339.1	205.2	128.7	57.9	25.6	25.6			

[Discharge Rating Curve]: Q=60.157\*(H-1.003)^2

[Flow Regime (m3/s)]:

Q(95day): 1598.0      Q(185day): 250.8      Q(275day): 64.6      Q(355day): 34.4

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1978/79		[WATER LEVEL (m)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	1.65	1.63	1.92	6.63	4.42	6.86	7.02	4.82							
2	1.65	1.57	1.90	6.61	4.43	7.01	7.04	4.81							
3	1.63	1.54	1.76	6.30	4.36	6.95	6.83	4.78							
4	1.62	1.53	1.76	7.34	4.23	6.80	6.71	4.72							
5	1.61	1.58	1.79	8.03	4.06	7.03	6.62	4.63							
6	1.29	1.59	1.89	7.30	4.33	6.88	6.51	4.47							
7	1.58	1.56	1.85	6.89	5.16	7.11	6.36	4.33							
8	1.57	1.54	2.01	6.65	5.11	7.64	6.16	4.26							
9	1.56	1.52	2.24	5.88	5.37	7.36	5.82	4.21							
10	1.55	1.50	2.65	5.36	5.33	7.55	5.82	4.17							
11	1.54	1.49	3.08	4.97	5.40	7.26	5.31	4.11							
12	1.53	1.47	3.33	4.43	5.48	6.98	5.28								
13	1.52	1.47	3.79	4.26	5.56	7.15	5.36								
14	1.51	1.46	4.13	4.07	5.48	7.34	5.49								
15	1.51	1.50	4.83	4.10	5.43	7.41	5.51								
16	1.49	1.51	6.52	4.29	5.29	7.28	5.61								
17	1.48	1.53	6.19	4.11	5.38	7.51	5.68								
18	1.47	1.56	6.11	3.99	5.28	8.24	5.81								
19	1.47	1.59	6.57	3.70	5.15	8.13	5.69								
20	1.51	1.69	6.48	3.53	5.19	8.08	5.73								
21	1.56	1.71	6.51	3.55	5.19	8.03	5.80								
22	1.58	1.68	6.02	3.56	5.05	7.77	5.56								
23	1.59	1.63	5.87	3.67	5.02	7.53	5.28								
24	1.60	1.61	5.03	4.22	5.14	7.23	5.11								
25	1.58	1.58	6.12	4.78	5.37	7.13	4.93								
26	1.56	1.68	6.74	4.49	6.26	6.82	4.83								
27	1.56	1.74	7.06	4.07	7.10	7.24	4.82								
28	1.58	1.76	7.11	4.03	7.24	6.94	4.76								
29	1.60	1.75	7.40	4.07		7.10	4.78								
30	1.61	1.76	6.71	4.03		7.07	4.79								
31	1.70		6.59	4.33		7.13									
MEAN	1.56	1.59	4.61	4.94	5.24	7.31	5.70	4.48						4.42	
MAX.	1.70	1.76	7.40	8.03	7.24	8.24	7.04	4.82						8.24	
MIN.	1.29	1.46	1.76	3.53	4.06	6.80	4.76	4.11						1.29	

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1978/79		[DISCHARGE (m3/sec)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	25.3	23.5	50.3	1906.4	701.0	2062.2	2175.4	877.3	1380.0	484.2	353.0	256.8			
2	24.9	19.5	48.0	1894.1	707.2	2173.2	2193.1	873.1	1370.3	478.8	349.9	251.5			
3	23.9	17.3	34.1	1690.0	678.6	2129.3	2043.0	857.8	1380.0	474.4	346.1	246.9			
4	22.8	16.7	34.1	2415.4	626.7	2023.8	1956.3	833.1	1501.8	467.3	343.0	244.9			
5	22.1	19.7	37.2	2971.7	561.0	2184.2	1900.2	792.7	1545.7	461.1	338.5	242.3			
6	4.9	21.0	47.6	2383.0	663.9	2079.5	1824.7	722.4	1605.9	455.9	335.5	238.5			
7	20.4	18.7	43.5	2083.8	1038.2	2246.5	1725.1	667.6	1573.1	450.6	330.2	235.9			
8	19.5	17.3	60.5	1916.8	1013.9	2646.1	1599.9	637.4	1491.7	447.2	328.0	232.7			
9	18.7	16.3	92.5	1430.6	1147.5	2434.1	1398.6	617.3	1332.0	442.0	325.0	230.8			
10	18.1	14.8	162.3	1144.3	1128.4	2576.0	1393.3	602.1	1252.3	438.6	321.3	226.4			
11	17.5	14.1	259.1	947.3	1163.6	2355.4	1117.3	581.4	1142.1	433.4	317.6	223.3			
12	16.9	13.2	327.0	708.5	1204.3	2146.8	1100.0	526.2	1066.6	430.9	313.2	220.2			
13	16.3	13.1	467.8	636.2	1249.0	2273.5	1139.5	483.9	1014.3	426.6	311.0	218.4			
14	15.8	12.7	588.2	566.7	1204.3	2415.4	1210.9	439.1	1010.1	423.3	308.1	214.1			
15	15.2	15.0	881.6	575.7	1179.8	2466.8	1220.7	387.4	996.3	419.1	307.4	212.2			
16	14.3	15.4	1828.8	650.6	1103.1	2369.2	1275.9	344.0	960.5	415.7	305.2	209.2			
17	13.9	16.7	1620.7	582.5	1154.0	2544.9	1315.0	325.6	926.8	414.0	304.5	206.8			
18	13.2	18.5	1568.8	535.6	1100.0	3152.2	1391.5	326.3	901.5	408.2	304.5	203.2			
19	12.9	21.0	1865.4	436.7	1032.1	3057.4	1320.2	322.4	881.8	406.6	298.8	201.4			
20	15.4	28.3	1804.6	384.0	1053.5	3013.1	1346.1	318.6	867.4	400.8	296.6	199.7			
21	18.5	30.3	1824.7	389.6	1055.0	2974.3	1382.7	315.6	859.6	398.3	292.4	196.7			
22	20.2	27.5	1512.2	392.4	984.0	2756.7	1249.0	312.6	916.1	394.3	291.7	194.4			
23	21.0	23.5	1423.5	427.8	972.2	2559.3	1100.0	309.3	1012.9	391.8	290.3	190.9			
24	21.2	22.1	1521.4	623.1	1030.6	2330.2	1013.9	306.5	1079.5	388.6	286.1	188.0			
25	19.7	19.7	1573.5	857.8	1147.5	2255.5	927.0	304.8	1091.0	384.5	285.4	184.0			
26	18.7	27.8	1979.4	730.1	1664.8	2032.3	883.0	306.4	1085.3	382.1	282.6	180.6			
27	18.5	32.4	2204.2	566.7	2235.4	2341.7	875.9	305.7	1121.6	375.7	278.4	178.4			
28	20.4	34.9	2246.5	549.9	2341.7	2118.4	850.9	305.6	1200.4	373.4	273.6	175.0			
29	21.2	33.3	2464.5	566.7		2237.6	857.8	302.8	1215.5	367.8	270.9	172.8			
30	22.1	34.9	1960.5	551.0		2213.1	864.8	302.1	1280.1	363.9	264.8	167.9			
31	29.0		1879.7	667.6		2257.8		302.4		358.4	260.8				
MEAN	18.8	21.3	1045.6	1038.1	1112.2	2400.9	1355.1	1009.6	1168.7	418.0	306.9	211.5	841.7		
MAX.	29.0	34.9	2464.5	2971.7	2341.7	3152.2	2193.1	1526.2	1605.9	484.2	353.0	256.8	3152.2		
MIN.	4.9	12.7	34.1	384.0	561.0	2023.8	850.9	581.4	859.6	358.4	260.8	167.9	4.9		

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[Flow Regime (m3/s)]:

Q(95day): 1249.0      Q(185day): 582.5      Q(275day): 223.3      Q(355day): 15.0

<<< MASTER PROGRAM for DB-05(Leap Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1979/80		[WATER LEVEL (m)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL			
1		2.07	2.57	4.08	5.33	5.23	5.91									
2		2.07	2.47		5.17	6.50	5.59									
3		2.07	2.65		5.38	6.59	5.35									
4		2.07			5.54	7.19	5.25									
5		2.06			6.31	7.12	5.22									
6		2.03			7.70	7.72	5.19									
7		2.02			7.50		5.15									
8		2.02			7.30		5.12									
9		2.03			6.71		5.06									
10		2.02		4.26	6.27		4.88									
11		2.02		4.10	6.05		4.76									
12		2.02		4.12	5.81		4.76									
13	2.08	2.02	4.92	4.21	5.62	8.89	5.11							2.25		
14	2.08	2.02		4.25	5.45	8.63	6.59							2.24		
15	2.08	2.04		4.39	4.92	8.25	8.34							2.23		
16	2.08	2.08	4.19	4.59	4.71	7.53	8.26							2.23		
17	2.08	2.09	4.28	4.46	4.53	7.30	8.72							2.22		
18	2.09	2.43	4.32	4.30	4.32	7.32	8.07							2.21		
19	2.09	2.16		4.26	4.13	7.14	8.74							2.21		
20	2.09	2.18		4.33		6.96	8.43							2.20		
21	2.11	2.18		4.29		6.76	8.40							2.19		
22	2.13	2.28		4.09		6.59	8.17							2.18		
23	2.15	2.29				6.33	7.56							2.16		
24	2.14	2.30				5.95	7.72							2.15		
25	2.16	2.31				5.74	7.02							2.15		
26	2.18	2.33			4.12	5.35	6.66							2.13		
27	2.18	2.43			5.32	5.11	6.25							2.14		
28	2.19	2.55			5.57	5.04	5.80							2.12		
29	2.19	2.58	4.09	4.09	5.74	5.14	5.36							2.12		
30	2.12	2.59	4.42	4.42		5.51								2.13		
31	2.10		4.11	5.41		5.72										
MEAN	2.12	2.18	3.80	4.33	5.63	6.62	6.46							2.18	4.32	
MAX.	2.19	2.59	4.92	5.41	7.70	8.89	8.74							2.25	8.89	
MIN.	2.08	2.02	2.47	4.08	4.12	5.04	4.76							2.12	2.02	

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1979/80		[DISCHARGE (m3/s)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL			
1	66.3	68.8	147.0	567.8	1125.2	1075.0	1446.7	1194.3	629.9	367.6	269.2	163.6				
2	66.3	68.8	129.8	576.4	1042.7	1816.7	1264.1	1168.9	591.1	364.0	265.3	160.3				
3	65.9	68.4	162.3	585.0	1154.0	1879.7	1137.9	1143.6	578.0	360.5	263.0	157.7				
4	65.5	68.0	247.0	593.7	1237.3	2305.2	1087.5	1109.9	571.5	356.1	260.6	155.1				
5	64.4	66.9	331.7	602.3	1695.8	2253.3	1071.9	1089.6	554.4	351.7	256.7	151.3				
6	60.9	63.4	416.3	610.9	2695.0	2717.1	1053.5	1063.8	540.7	346.4	251.3	148.7				
7	60.2	62.7	501.0	619.5	2535.4	2887.6	1035.1	1042.4	532.3	342.1	244.5	145.5				
8	59.8	62.3	585.7	628.2	2387.6	3058.1	1018.5	1022.7	519.8	337.8	240.7	142.4				
9	60.6	63.1	670.3	636.8	1962.6	3228.6	988.5	1000.4	512.6	333.5	237.7	138.6				
10	60.2	62.7	755.0	636.2	1666.7	3399.1	904.2	979.7	498.3	329.2	234.7	136.1				
11	59.8	62.3	839.7	578.0	1530.7	3569.6	848.2	960.5	488.2	324.9	232.4	133.6				
12	59.4	61.9	924.3	583.7	1391.5	3740.1	849.6	945.6	478.2	320.7	231.7	132.4				
13	70.4	62.3	924.2	619.6	1284.3	3740.1	1013.9	929.5	467.3	317.3	228.7	93.9				
14	70.0	62.7	734.0	632.6	1189.6	3495.6	1875.6	904.1	461.3	315.6	225.7	92.1				
15	70.0	64.2	889.0	691.0	924.2	3160.2	3237.8	879.1	458.4	314.8	220.6	90.3				
16	70.0	70.4	610.2	772.8	827.7	2561.7	3170.8	866.1	450.6	314.0	215.5	89.8				
17	70.0	70.8	647.0	718.6	749.3	2385.3	3582.8	853.2	441.9	312.3	213.3	88.9				
18	70.8	122.9	661.5	655.4	661.5	2396.9	3000.1	836.5	436.1	312.3	211.2	88.1				
19	71.0	80.2	652.8	636.2	588.2	2262.3	3599.8	820.0	429.4	308.9	206.9	87.2				
20	70.8	82.8	644.1	666.4	587.4	2131.5	3316.2	802.3	423.7	306.5	203.3	85.8				
21	73.2	82.8	636.4	649.4	586.6	1992.0	3291.8	783.6	415.2	304.0	199.8	85.0				
22	76.1	98.1	626.7	574.6	585.7	1879.7	3086.2	768.8	410.6	299.8	195.5	83.7				
23	79.0	100.0	618.0	620.0	584.9	1707.5	2588.1	752.9	407.8	297.4	192.0	81.1				
24	77.7	100.9	609.3	611.3	584.1	1470.2	2717.1	733.5	234.7	289.2	189.3	79.4				
25	81.1	102.8	600.7	602.7	583.2	1349.5	2177.6	719.1	397.6	287.6	185.1	78.6				
26	83.2	105.7	592.0	594.0	583.7	1137.9	1927.1	701.3	391.1	282.8	182.4	76.5				
27	83.7	122.9	583.3	585.3	1118.9	1015.4	1653.2	684.9	385.6	280.4	180.3	77.7				
28	85.0	144.8	574.6	576.6	1254.0	981.1	1384.5	666.3	379.3	277.2	175.6	75.2				
29	85.0	148.8	574.6	574.6	1349.5	1027.5	1144.3	646.8	373.9	274.8	168.9	75.2				
30	75.7	151.7	701.0	701.0		1220.7	1095.0	629.9	372.1	272.4	165.6	76.1				
31	72.8		581.4	1166.8		1335.7		610.9		271.6	164.9					
MEAN	70.5	85.1	579.7	640.9	1188.5	2231.6	1885.6	881.0	461.0	315.3	216.5	109.0	720.5			
MAX.	85.0	151.7	924.3	1166.8	2695.0	3740.1	3599.8	1194.3	629.9	367.6	269.2	163.6	3740.1			
MIN.	59.4	61.9	129.8	567.8	583.2	981.1	848.2	610.9	234.7	271.6	164.9	75.2	59.4			

[Discharge Rating Curve]: Q=60.157\*(H-1.003)<sup>2</sup>

[Flow Regime (m3/s)]:

Q(95day): 879.1      Q(185day): 512.6      Q(275day): 160.3      Q(355day): 62.7

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1980/81		[WATER LEVEL (m)]	
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL		
1	2.14	2.12	2.47	5.48	4.61	7.59	5.04	4.06	2.86	2.50	2.26	2.09				
2	2.13	2.09	3.03	5.36	4.60	7.49	4.94	4.27	2.82	2.48	2.25	2.08				
3	2.13	2.09	2.23	4.86	4.93	6.84	4.87	4.29	2.78	2.47	2.25	2.07				
4	2.14	2.08	2.12	4.98	5.20	6.76	4.70	4.20	2.76	2.46	2.24	2.06				
5	2.13	2.04	2.07	5.07	5.44	6.70	4.48	4.15	2.75	2.45	2.23	2.05				
6	2.12	2.04	2.06	4.90	5.47	7.96	4.33	4.02	2.73	2.44	2.23	2.05				
7	2.11	2.03	2.07	5.23	5.90	7.78	4.18	3.90	2.71	2.44	2.24	2.05				
8	2.10	2.01	2.15	5.19	5.95	7.70	4.05	3.78	2.70	2.44	2.25	2.05				
9	2.09	1.98	2.14	4.61	5.84	7.26	4.22	3.70	2.69	2.43	2.23	2.05				
10	2.08	1.98	2.09	4.26	6.12	7.11	4.22	3.65	2.67	2.42	2.23	2.05				
11	2.07	1.96	2.33	3.99	6.02	7.07	4.15	3.57	2.62	2.42	2.22	2.05				
12	2.06	1.95	2.85	4.09	5.82	7.40	4.04	3.31	2.66	2.41	2.22	2.04				
13	2.05	1.94	3.24	3.74	5.85	8.15	3.92	3.24	2.64	2.41	2.21	2.05				
14	2.05	1.92	3.88	3.70	6.21	8.05	3.65	3.18	2.62	2.44	2.19	2.05				
15	2.05	1.91	3.66	3.79	6.01	7.37	3.57	3.13	2.60	2.43	2.19	2.05				
16	2.04	1.95	3.38	3.86	6.04	7.09	3.47	3.10	2.60	2.43	2.18	2.04				
17	2.03	1.94	3.27	4.04	6.04	6.65	3.37	3.06	2.58	2.40	2.16	2.03				
18	2.01	1.94	3.46	4.34	6.57	6.33	3.35	3.01	2.58	2.38	2.16	2.03				
19	2.01	1.94	3.35	4.46	7.26	5.93	3.32	2.96	2.56	2.37	2.15	2.02				
20	2.01	2.01	3.34	5.15	7.75	5.64	3.30	2.90	2.55	2.34	2.15	2.01				
21	2.02	2.05	3.25	4.79	8.06	5.50	3.26	2.92	2.56	2.33	2.14	2.00				
22	2.02	2.06	3.30	4.90	9.32	5.30	3.25	2.90	2.55	2.32	2.14	2.00				
23	2.03	2.07	4.08	4.95	10.17	5.20	3.27	2.88	2.55	2.32	2.14	1.99				
24	2.02	1.98	4.11	5.41	10.22	5.21	3.24	2.87	2.54	2.31	2.13	1.98				
25	2.05	2.02	4.18	4.61	10.52	5.03	3.22	2.87	2.54	2.30	2.12	1.97				
26	2.35	2.04	4.20	4.56	9.83	5.06	3.31	2.85	2.53	2.29	2.11	1.96				
27	2.35	2.02	5.51	4.57	9.33	5.14	3.29	2.83	2.53	2.30	2.11	1.95				
28	2.25	2.08	6.31	4.43	8.31	5.16	3.39	2.83	2.52	2.28	2.11	1.95				
29	2.27	2.09	5.88	4.24		4.85	3.52	2.82	2.51	2.27	2.10	1.94				
30	2.18	2.07	5.64	4.22		4.72	3.61	2.82	2.50	2.27	2.10	1.94				
31	2.17		5.31	4.39		5.00		2.81		2.27	2.09					
MEAN	2.11	2.01	3.45	4.59	6.91	6.42	3.82	3.32	2.63	2.38	2.18	2.02	3.47			
MAX.	2.35	2.12	6.31	5.48	10.52	8.15	5.04	4.29	2.86	2.50	2.26	2.09	10.52			
MIN.	2.01	1.91	2.06	3.70	4.60	4.72	3.22	2.81	2.50	2.27	2.09	1.94	1.91			

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1980/81		[DISCHARGE (m3/sec)]	
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL		
1	77.3	75.2	130.3	1204.3	784.7	2612.2	981.1	561.0	207.2	134.1	94.8	70.8				
2	76.9	70.8	247.1	1139.5	776.8	2530.6	931.4	641.0	199.1	131.4	93.9	69.6				
3	76.5	70.8	91.2	892.8	928.5	2051.5	901.3	650.6	189.9	129.8	93.0	68.0				
4	77.7	69.2	75.2	951.7	1058.1	1996.2	822.2	616.1	184.7	128.2	92.1	67.7				
5	76.5	65.0	68.8	997.4	1184.7	1950.0	728.8	594.0	184.1	126.6	91.2	66.5				
6	75.7	64.2	67.7	911.3	1199.4	2915.3	665.1	547.7	179.6	124.5	90.3	65.7				
7	74.0	63.1	68.8	1075.0	1441.4	2764.1	606.7	506.4	175.2	123.9	92.1	65.3				
8	72.4	61.6	79.0	1055.0	1472.0	2699.9	558.8	462.7	172.7	123.4	93.0	65.3				
9	71.2	57.6	77.7	780.7	1407.4	2355.4	623.1	437.7	170.2	122.4	91.2	66.5				
10	69.2	56.8	71.2	639.8	1577.2	2246.5	622.0	421.0	167.8	120.8	90.7	66.5				
11	68.4	55.1	105.2	537.8	1515.9	2213.1	597.4	395.2	158.1	120.3	88.9	65.3				
12	67.7	54.0	204.5	572.3	1393.3	2462.1	554.3	321.1	164.7	119.3	88.5	65.0				
13	66.5	52.3	300.2	450.6	1412.8	3070.5	512.8	301.0	161.1	119.8	87.2	65.3				
14	65.7	50.3	499.0	438.6	1630.3	2987.2	422.9	284.9	157.5	123.9	85.4	65.3				
15	65.3	49.9	423.9	465.8	1506.7	2438.7	395.2	273.0	153.4	122.4	84.5	65.3				
16	64.2	54.0	339.1	492.7	1523.3	2226.4	364.8	263.7	153.4	122.4	82.8	64.2				
17	63.1	53.0	310.1	556.6	1525.1	1916.8	337.4	254.6	149.9	116.7	81.1	63.1				
18	61.6	53.0	362.1	670.0	1863.3	1707.5	330.4	241.9	148.8	113.6	81.1	63.1				
19	60.5	53.3	332.2	719.9	2355.4	1457.6	323.6	231.0	145.3	111.6	79.8	62.7				
20	61.6	60.8	327.9	1035.1	2739.3	1294.5	316.8	216.9	144.2	107.7	78.6	61.2				
21	62.3	66.5	303.5	860.6	2997.6	1214.1	307.6	220.4	145.3	105.7	78.1	59.7				
22	62.7	67.7	316.8	915.6	4162.0	1109.4	303.5	216.9	143.6	104.8	77.7	60.1				
23	63.1	68.8	567.8	937.2	5049.8	1058.1	308.5	212.7	143.1	104.3	77.3	58.6				
24	62.7	57.9	582.5	1168.5	5107.1	1062.7	301.0	210.6	141.9	102.8	76.5	57.9				
25	66.5	62.3	606.7	784.7	5454.1	973.7	296.1	210.0	141.4	101.4	75.2	55.8				
26	109.6	64.2	613.7	762.3	4690.2	990.0	319.4	204.5	140.8	99.5	74.0	55.1				
27	109.6	62.7	1224.1	765.0	4168.1	1027.5	314.3	201.8	140.2	100.4	74.0	53.7				
28	93.5	69.2	1691.9	708.5	3210.9	1039.7	343.5	201.1	139.1	97.6	73.2	53.7				
29	96.7	70.8	1428.8	629.1		891.4	381.2	199.1	135.8	96.2	72.0	53.0				
30	82.8	68.8	1294.5	624.3		829.0	408.5	197.8	135.2	96.2	72.0	52.3				
31	82.4		1117.3	691.0		961.9		197.1		96.2	70.8					
MEAN	73.7	61.6	449.3	788.2	2290.5	1840.4	496.0	338.5	159.1	114.5	83.3	62.4	553.0			
MAX.	109.6	75.2	1691.9	1204.3	5454.1	3070.5	981.1	650.6	207.2	134.1	94.8	70.8	5454.1			
MIN.	60.5	49.9	67.7	438.6	776.8	829.0	296.1	197.1	135.2	96.2	70.8	52.3	49.9			

[Discharge Rating Curve]: Q=60.157\*(H-1.003)^2

[Flow Regime (m3/s)]:

Q(95day): 629.1      Q(185day): 158.1      Q(275day): 75.2      Q(355day): 54.0

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1981/82	[WATER LEVEL (m)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	1.94	1.84	1.86	2.40	5.60	5.75	3.43	3.45	2.53	2.21	2.01	1.85		
2	1.94	1.82	1.82	2.51	5.49	5.62	3.38	3.33	2.50	2.20	2.00	1.85		
3	1.94	1.80	1.89	2.35	5.36	6.22	3.62	3.27	2.50	2.19	2.00	1.84		
4	1.94	1.80	1.87	3.12	5.02	6.44	3.58	3.40	2.47	2.18	1.99	1.84		
5	1.92	1.79	1.85	4.06	4.62	6.24	3.63	3.36	2.46	2.18	1.98	1.82		
6	1.92	1.78	1.86	3.49	4.30	5.89	3.53	3.21	2.45	2.17	1.97	1.83		
7	1.91	1.76	1.85	3.56	4.27	5.60	3.58	3.12	2.44	2.16	1.96	1.82		
8	1.91	1.76	1.85	3.63	7.49	5.36	3.49	3.12	2.44	2.16	1.96	1.82		
9	1.90	1.75	1.90	3.46	9.22	5.35	3.67	3.08	2.40	2.15	1.95	1.82		
10	1.89	1.74	2.00	3.94	7.46	5.17	3.74	3.02	2.39	2.15	1.95	1.82		
11	1.88	1.73	2.26	3.55	7.53	5.37	3.51	3.00	2.38	2.15	1.94	1.81		
12	1.87	1.73	2.22	3.51	6.66	5.34	3.38	2.99	2.37	2.15	1.94	1.82		
13	1.87	1.73	2.15	3.54	6.19	5.31	3.32	2.96	2.36	2.15	1.92	1.81		
14	1.86	1.72	2.08	3.61	7.21	5.27	3.30	2.94	2.33	2.14	1.92	1.80		
15	1.85	1.71	2.03	3.33	7.88	5.17	3.31	2.94	2.33	2.13	1.91	1.81		
16	1.84	1.72	1.98	3.23	8.04	5.08	3.28	2.99	2.32	2.13	1.91	1.80		
17	1.83	1.72	1.96	3.40	8.65	4.94	3.24	2.97	2.31	2.12	1.90	1.79		
18	1.82	1.71	1.94	3.63	7.96	4.83	3.21	2.95	2.30	2.11	1.90	1.78		
19	1.81	1.71	1.98	3.90	7.85	4.71	3.22	2.93	2.29	2.11	1.90	1.78		
20	1.81	1.70	1.98	4.53	7.52	4.46	3.20	2.87	2.27	2.11	1.90	1.78		
21	1.83	1.72	1.95	4.77	7.92	4.24	3.27	2.83	2.26	2.09	1.89	1.89		
22	1.83	1.72	1.94	4.91	7.99	4.20	3.25	2.80	2.27	2.09	1.88	1.88		
23	1.83	1.73	1.93	5.07	7.58	4.23	3.49	2.79	2.26	2.08	1.88	1.88		
24	1.81	1.72	1.91	5.96	7.76	3.99	3.51	2.76	2.26	2.07	1.88	1.88		
25	1.86	1.76	1.89	5.76	7.54	3.86	3.37	2.72	2.26	2.07	1.87	1.87		
26	1.99	1.80	1.87	5.55	6.81	3.76	3.36	2.69	2.25	2.06	1.87	1.71		
27	1.89	1.75	1.89	6.96	6.35	3.69	3.68	2.65	2.24	2.05	1.87	1.70		
28	1.87	1.77	1.88	6.67	6.20	3.63	3.93	2.63	2.23	2.04	1.86	1.69		
29	1.85	1.86	1.89	6.68		3.51	3.76	2.60	2.22	2.03	1.85	1.69		
30	1.84	1.83	1.87	6.70		3.42	3.59	2.57	2.20	2.03	1.85	1.69		
31	1.86		2.20	6.26		3.46		2.55		2.02	1.85			
MEAN	1.87	1.76	1.95	4.32	6.87	4.84	3.46	2.95	2.34	2.12	1.92	1.79	3.01	
MAX.	1.99	1.86	2.26	6.96	9.22	6.44	3.93	3.45	2.53	2.21	2.01	1.95	9.22	
MIN.	1.81	1.70	1.82	2.35	4.27	3.42	3.20	2.55	2.20	2.02	1.85	1.69	1.69	

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1981/82	[DISCHARGE (m3/sec)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	52.3	42.6	44.1	117.7	1270.8	1353.0	354.9	360.3	139.7	87.2	61.2	42.9		
2	52.3	40.1	40.4	137.5	1210.9	1280.9	340.8	325.3	135.2	86.3	59.4	42.9		
3	52.3	38.6	47.0	109.6	1142.7	1636.0	413.3	309.3	135.2	84.5	59.4	42.2		
4	52.3	37.8	45.4	269.9	971.9	1780.6	396.0	346.1	130.3	83.7	58.3	41.9		
5	50.9	37.2	42.9	563.3	787.3	1651.3	414.2	333.9	128.2	82.8	57.2	40.4		
6	50.3	36.3	43.8	371.2	654.2	1434.2	384.0	293.7	126.6	81.5	56.5	41.0		
7	49.9	34.9	43.2	392.4	642.2	1272.5	399.0	269.1	125.0	80.2	55.4	40.4		
8	49.3	34.1	42.9	416.2	2530.6	1144.3	372.1	270.7	123.4	80.2	54.7	40.4		
9	48.3	33.3	48.0	363.0	4061.9	1136.4	426.8	258.4	117.2	79.8	54.0	40.4		
10	47.6	32.4	59.7	519.3	2504.6	1042.7	451.6	244.9	116.2	79.8	53.7	39.8		
11	46.3	31.4	95.8	390.5	2559.3	1149.1	376.6	239.7	114.7	79.4	52.7	39.5		
12	45.4	31.9	88.5	378.5	1927.1	1133.2	340.0	238.3	112.1	79.8	52.3	39.8		
13	44.7	31.6	79.4	385.9	1618.8	1117.3	321.9	231.0	110.1	78.6	50.9	38.9		
14	43.8	30.8	70.4	409.4	2316.6	1096.9	317.7	224.6	106.7	77.3	50.6	38.6		
15	43.2	30.3	63.4	327.0	2844.3	1045.8	320.2	226.7	106.7	76.1	49.6	38.9		
16	42.6	30.8	57.9	299.4	2976.9	1000.4	312.6	236.8	103.8	76.1	49.9	37.8		
17	41.3	31.1	55.4	347.0	3518.0	932.8	301.9	233.9	102.8	75.2	48.3	36.9		
18	40.4	30.1	52.7	415.2	2912.7	880.1	292.1	228.9	100.9	74.0	48.3	36.3		
19	39.2	30.1	57.2	505.4	2824.1	824.9	294.5	223.2	99.0	73.2	48.3	36.6		
20	39.5	29.5	57.2	746.8	2556.9	717.3	289.7	208.6	97.2	73.2	48.0	36.3		
21	40.7	30.8	54.4	853.7	2877.1	630.2	310.1	201.8	95.8	71.6	47.3	36.3		
22	40.7	30.6	53.0	917.0	2938.3	616.1	304.3	193.2	96.2	70.8	46.7	36.3		
23	40.7	31.4	51.6	995.9	2600.1	625.5	373.0	191.9	95.3	70.4	46.7	36.3		
24	39.5	30.8	49.3	1477.5	2749.2	537.8	378.5	185.4	94.8	68.8	46.3	33.0		
25	44.1	34.6	47.0	1361.7	2571.2	490.6	338.2	177.1	94.4	68.4	45.7	33.0		
26	59.0	37.8	45.7	1244.0	2030.2	458.7	333.9	170.9	93.5	67.3	45.7	30.1		
27	47.6	33.5	47.6	2138.1	1717.3	435.7	429.8	164.1	92.5	65.7	44.7	29.5		
28	44.7	35.5	46.7	1933.3	1622.6	415.2	513.9	158.7	90.3	65.0	44.1	28.9		
29	43.2	44.1	47.6	1935.4		377.6	457.7	152.8	88.5	63.4	43.5	28.0		
30	42.2	40.7	45.4	1952.1		350.5	401.8	148.2	86.7	63.4	42.9	28.0		
31	44.4		86.3	1660.9		363.0		144.2		61.9	42.9			
MEAN	45.8	34.2	55.2	772.1	2176.4	933.2	365.4	232.0	108.6	75.0	50.5	37.1	395.5	
MAX.	59.0	44.1	95.8	2138.1	4061.9	1780.6	513.9	360.3	139.7	87.2	61.2	42.9	4061.9	
MIN.	39.2	29.5	40.4	109.6	642.2	350.5	289.7	144.2	86.7	61.9	42.9	28.0	28.0	

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[ Flow Regime (m3/s) ]:

Q(95day): 371.2      Q(185day): 86.3      Q(275day): 45.4      Q(355day): 30.8

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1982/83		[WATER LEVEL (m)]	
N=	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL		
1	1.69	1.70	2.39	3.32	5.22	4.48	3.57	2.86	2.33	2.15	1.96	1.85				
2	1.68	1.76	2.33	3.20	5.21	4.33	3.50	2.84	2.32	2.14	1.95	1.85				
3	1.68	1.77	2.47	3.12	4.91	4.11	3.44	2.83	2.30	2.13	1.95	1.86				
4	1.67	1.74	3.02	3.03	4.85	3.99	3.36	2.80	2.28	2.12	1.96	1.85				
5	1.67	1.75	2.97	2.94	4.98	3.86	3.31	2.76	2.27	2.12	1.95	1.85				
6	1.66	1.73	2.84	2.92	4.80	3.78	3.24	2.72	2.26	2.12	1.94	1.85				
7	1.66	1.68	2.82	2.94	4.77	3.78	3.26	2.70	2.26	2.11	1.95	1.84				
8	1.66	1.67	2.90	2.88	5.36	3.91	3.35	2.69	2.25	2.10	1.94	1.83				
9	1.66	1.68	2.97	2.94	5.38	4.01	3.48	2.67	2.26	2.10	1.93	1.82				
10	1.66	1.68	3.12	3.17	5.68	4.19	3.97	2.65	2.26	2.09	1.92	1.81				
11	1.65	1.67	3.36	2.98	5.59	4.65	4.04	2.63	2.25	2.09	1.92	1.81				
12	1.65	1.68	3.28	2.99	6.36	5.01	3.94	2.63	2.25	2.09	1.91	1.80				
13	1.65	1.67	3.31	3.21	5.77	6.19	3.85	2.61	2.24	2.09	1.91	1.80				
14	1.65	1.68	3.45	3.09	6.68	6.54	3.72	2.59	2.23	2.09	1.91	1.80				
15	1.64	1.70	3.63	3.01	7.67	5.92	3.54	2.57	2.22	2.09	1.91	1.80				
16	1.64	1.70	0.04	2.94	8.27	5.47	3.44	2.55	2.22	2.08	1.92	1.80				
17	1.64	1.69	3.72	2.97	10.18	5.00	3.36	2.54	2.21	2.08	1.91	1.80				
18	1.65	1.69	3.58	3.20	10.66	4.62	3.28	2.54	2.21	2.07	1.91	1.80				
19	1.65	1.71	3.45	3.34	9.59	4.37	3.25	2.52	2.20	2.05	1.90	1.79				
20	1.65	1.74	3.76	3.56	8.63	4.12	3.19	2.51	2.19	2.05	1.90	1.79				
21	1.66	1.74	3.98	3.77	8.27	4.02	3.15	2.49	2.18	2.05	1.90	1.79				
22	1.73	1.75	4.01	4.49	7.81	3.95	3.08	2.47	2.17	2.05	1.88	1.78				
23	1.72	1.76	3.75	4.88	7.04	3.93	3.03	2.46	2.17	2.03	1.87	1.78				
24	1.73	1.78	3.83	4.77	6.29	4.20	2.99	2.44	2.16	2.03	1.86	1.77				
25	1.73	1.80	3.71	5.22	5.68	4.20	2.96	2.43	2.15	2.03	1.86	1.77				
26	1.72	1.91	3.59	5.07	5.16	4.35	2.93	2.41	2.16	2.02	1.87	1.76				
27	1.69	1.92	3.57	5.26	4.86	4.24	3.05	2.40	2.16	2.01	1.85	1.75				
28	1.69	2.02	3.43	6.43	4.63	4.08	3.06	2.39	2.15	1.99	1.86	1.75				
29	1.68	2.51	3.31	5.99		3.91	2.90	2.37	2.15	1.98	1.86	1.75				
30	1.67	2.39	3.26	5.60		3.81	2.57	2.36	2.15	1.98	1.86	1.74				
31	1.67		3.31	5.32		3.69		2.35		1.98	1.85					
MEAN	1.67	1.79	3.20	3.82	6.44	4.41	3.33	2.57	2.22	2.07	1.91	1.80	2.91			
MAX.	1.73	2.51	4.01	6.43	10.66	6.54	4.04	2.86	2.33	2.15	1.96	1.86	10.66			
MIN.	1.64	1.67	0.04	2.88	4.63	3.69	2.57	2.35	2.15	1.98	1.85	1.74	0.04			

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1982/83		[DISCHARGE (m3/sec)]	
N=	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL		
1	28.0	29.0	115.7	322.7	1070.4	726.2	395.2	208.6	106.7	78.6	55.4	43.5				
2	27.3	34.1	106.2	289.7	1064.2	667.6	374.8	203.8	103.8	78.1	54.0	42.9				
3	27.3	35.2	128.7	269.1	917.0	581.4	355.8	200.5	101.4	75.5	53.7	44.1				
4	26.8	32.7	244.9	247.8	888.6	537.8	335.6	193.8	98.6	75.7	55.1	42.9				
5	26.5	33.5	233.2	225.3	950.2	492.7	319.4	186.0	97.2	75.2	54.0	42.9				
6	26.1	32.2	203.2	221.1	867.6	463.8	301.0	177.7	95.8	74.4	53.3	42.9				
7	26.3	27.8	197.8	226.0	853.7	463.8	306.8	174.0	94.8	73.6	54.4	42.2				
8	26.1	26.8	217.6	211.3	1141.1	508.6	332.2	172.1	93.9	72.4	53.0	40.7				
9	26.1	27.8	233.2	224.6	1150.7	543.3	370.2	166.6	95.8	72.0	52.0	40.1				
10	25.8	27.8	269.1	281.7	1315.0	610.2	531.2	162.9	94.8	71.6	50.6	39.5				
11	25.8	27.0	333.9	234.6	1267.4	799.3	553.2	159.9	93.9	71.6	50.3	39.2				
12	25.3	27.5	312.6	238.3	1725.1	964.9	520.4	158.7	93.5	71.2	49.3	38.6				
13	25.3	27.0	320.2	292.1	1366.9	1620.7	486.4	154.6	91.6	70.8	49.3	38.3				
14	25.3	27.8	360.3	263.0	1939.6	1845.0	443.6	152.2	89.8	71.2	49.9	38.1				
15	24.6	29.5	415.2	241.9	2677.8	1455.7	388.7	147.0	88.9	70.8	49.3	38.6				
16	24.4	29.0	56.0	226.7	3173.5	1197.7	355.8	143.6	88.9	70.4	50.3	38.6				
17	24.4	28.8	443.6	231.7	5070.0	963.4	333.9	142.5	88.1	69.6	49.3	38.3				
18	25.1	28.8	399.9	291.3	5605.2	786.0	311.0	141.4	87.2	68.4	49.3	37.8				
19	25.3	30.1	361.2	327.9	4431.6	682.3	303.5	138.6	86.3	66.5	48.0	37.2				
20	25.3	32.7	458.7	392.4	3501.2	585.9	288.9	136.3	84.5	65.7	48.3	36.9				
21	26.3	32.7	533.4	459.7	3173.5	546.6	276.9	133.6	83.2	65.7	48.0	37.2				
22	31.6	33.8	543.3	731.3	2789.0	522.5	260.7	130.3	82.4	65.3	46.7	36.6				
23	30.8	34.4	454.6	902.7	2190.9	516.1	247.8	128.2	82.4	63.8	45.7	36.3				
24	31.6	36.3	481.2	855.1	1680.3	613.7	237.5	125.0	80.7	63.8	44.4	35.8				
25	32.2	38.3	439.6	1070.4	1318.4	616.1	229.6	122.4	79.8	63.4	43.8	35.2				
26	30.8	49.3	401.8	997.4	1041.2	674.9	223.2	119.3	80.2	62.7	44.7	34.4				
27	28.5	50.6	397.1	1090.6	897.1	630.2	251.6	117.7	80.2	60.5	43.5	33.8				
28	28.0	61.9	353.2	1774.6	792.7	568.9	255.3	115.7	79.8	58.6	44.1	33.3				
29	27.3	135.8	321.1	1495.7		509.6	217.6	112.6	79.4	57.9	44.1	33.3				
30	27.0	115.2	306.0	1272.5		475.0	147.0	110.6	79.0	57.6	44.1	32.4				
31	26.5		321.1	1122.1		432.7		108.7		56.8	42.9					
MEAN	27.0	39.4	321.4	549.4	1959.3	729.1	331.8	149.8	89.4	68.4	49.1	38.4	352.2			
MAX.	32.2	135.8	543.3	1774.6	5605.2	1845.0	553.2	206.6	106.7	78.6	55.4	44.1	5605.2			
MIN.	24.4	26.8	56.0	211.3	792.7	432.7	147.0	108.7	79.0	56.8	42.9	32.4	24.4			

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[Flow Regime (m3/s)]:

Q(95day): 355.8      Q(185day): 103.8      Q(275day): 44.1      Q(355day): 25.8



<< MASTER PROGRAM for DB-05(Leap Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1983/84		[WATER LEVEL (m)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL			
1	1.73	1.62	1.60	4.37	3.72	6.08	3.97	3.01	2.57	2.32	2.15	1.97				
2	1.73	1.61	1.61	4.71	3.74	5.62	4.29	3.00	2.56	2.31	2.15	1.97				
3	1.71	1.61	1.61	5.18	4.00	5.54	4.67	2.99	2.56	2.31	2.14	1.96				
4	1.70	1.61	1.64	5.41	3.88	5.87	4.17	2.97	2.54	2.31	2.14	1.97				
5	1.70	1.59	1.64	5.31	4.21	5.90	3.98	2.96	2.51	2.30	2.12	1.95				
6	1.69	1.60	1.66	5.33	3.98	5.84	3.91	2.94	2.49	2.30	2.12	1.95				
7	1.69	1.59	1.69	5.32	4.66	5.84	3.85	2.92	2.49	2.30	2.11	1.95				
8	1.69	1.59	1.71	5.28	5.10	5.87	3.76	2.90	2.48	2.29	2.11	1.94				
9	1.68	1.58	1.77	5.27	5.29	5.73	3.74	2.88	2.47	2.29	2.10	1.93				
10	1.68	1.58	1.80	5.36	5.65	5.61	3.71	2.85	2.46	2.28	2.09	1.92				
11	1.67	1.58	1.87	5.65	5.66	5.52	3.67	2.83	2.45	2.28	2.09	1.92				
12	1.67	1.57	1.88	5.62	5.36	5.24	3.66	2.81	2.46	2.27	2.08	1.94				
13	1.67	1.58	1.90	5.75	5.07	4.97	3.62	2.77	2.45	2.26	2.07	1.91				
14	1.67	1.58	1.87	5.39	4.84	4.85	3.56	2.74	2.44	2.26	2.06	1.91				
15	1.67	1.58	1.86	5.11	4.63	4.63	3.54	2.72	2.43	2.26	2.05	1.90				
16	1.67	1.57	1.80	4.83	4.50	4.51	3.52	2.70	2.42	2.25	2.05	1.90				
17	1.67	1.57	1.77	4.69	4.92	4.47	3.42	2.69	2.40	2.25	2.05	1.89				
18	1.68	1.57	1.86	4.87	5.05	4.65	3.35	2.67	2.40	2.25	2.04	1.90				
19	1.68	1.60	2.01	4.91	4.89	4.97	3.33	2.66	2.39	2.24	2.03	1.90				
20	1.67	1.59	2.07	5.05	5.00	5.07	3.29	2.65	2.39	2.24	2.03	1.90				
21	1.67	1.59	2.12	4.96	5.22	5.04	3.28	2.65	2.39	2.23	2.02	1.90				
22	1.66	1.60	2.40	4.69	5.45	4.95	3.25	2.65	2.38	2.23	2.02	1.89				
23	1.66	1.60	2.55	4.59	5.44	4.89	3.21	2.64	2.37	2.21	2.01	1.88				
24	1.66	1.61	2.66	4.41	5.41	4.71	3.19	2.63	2.35	2.21	2.01	1.88				
25	1.66	1.60	2.86	4.34	5.69	4.59	3.17	2.63	2.35	2.20	2.00	1.87				
26	1.65	1.60	3.78	4.31	6.11	4.47	3.12	2.62	2.34	2.20	2.00	1.86				
27	1.64	1.58	4.46	4.29	6.51	4.24	3.10	2.62	2.34	2.19	2.00	1.85				
28	1.63	1.58	5.41	4.15	6.43	4.09	3.07	2.60	2.33	2.19	1.99	1.84				
29	1.63	1.58	5.11	3.92	6.36	4.06	3.06	2.59	2.33	2.19	1.98	1.84				
30	1.62	1.59	4.88	3.76		3.91	3.04	2.58	2.33	2.17	1.98	1.84				
31	1.62		4.61	3.74		3.90		2.58		2.17	1.97					
MEAN	1.67	1.59	2.47	4.86	5.06	5.02	3.55	2.76	2.43	2.25	2.06	1.91	2.96			
MAX.	1.73	1.62	5.41	5.75	6.51	6.08	4.67	3.01	2.57	2.32	2.15	1.97	6.51			
MIN.	1.62	1.57	1.60	3.74	3.72	3.90	3.04	2.58	2.33	2.17	1.97	1.84	1.57			

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1983/84		[DISCHARGE (m3/s)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL			
1	32.2	22.8	21.2	681.1	443.6	1551.1	529.0	242.7	147.6	103.8	79.8	56.5				
2	31.4	22.3	21.9	824.9	449.6	1284.3	648.2	239.0	146.5	103.3	79.0	56.5				
3	30.1	22.1	21.9	1051.9	540.0	1237.3	808.7	237.5	145.3	102.3	77.3	55.4				
4	29.5	22.1	24.6	1168.5	499.0	1425.2	604.4	232.5	141.4	102.3	77.3	56.5				
5	29.0	21.0	24.6	1115.7	617.3	1441.4	532.3	230.3	137.5	101.4	75.7	54.4				
6	28.8	21.2	25.8	1126.8	534.5	1405.7	507.5	225.3	133.6	100.9	75.7	54.4				
7	28.3	20.8	28.3	1120.5	803.4	1407.4	487.5	221.8	133.1	100.4	74.0	54.4				
8	28.0	20.6	29.8	1101.6	1007.9	1423.5	458.7	217.6	131.4	100.0	73.2	52.7				
9	27.8	20.4	35.5	1093.7	1107.8	1342.6	450.6	212.7	129.8	100.0	72.4	51.6				
10	27.5	19.9	38.1	1139.5	1299.6	1279.2	440.6	205.2	128.2	98.6	71.6	50.6				
11	27.0	19.7	45.1	1297.9	1303.0	1229.0	427.8	200.5	127.7	98.6	70.8	50.6				
12	27.0	19.5	46.0	1280.9	1141.1	1079.7	425.9	195.8	128.2	96.7	69.2	53.3				
13	26.5	19.7	48.6	1353.0	995.9	945.9	411.4	187.3	126.1	95.8	68.0	49.6				
14	26.5	19.7	45.1	1157.2	884.4	888.6	393.3	181.5	123.4	95.3	66.9	49.6				
15	26.5	19.9	44.1	1015.4	792.7	792.7	385.9	178.4	121.8	94.8	66.5	48.6				
16	26.8	19.5	38.3	881.6	737.7	739.0	381.2	174.0	120.3	93.9	66.1	48.0				
17	26.8	19.3	35.8	819.5	922.7	725.0	350.5	170.9	118.2	93.5	65.3	47.0				
18	27.3	19.5	44.4	898.5	985.5	800.7	331.3	167.2	116.7	93.0	64.6	48.6				
19	27.3	21.5	61.2	919.9	908.4	945.9	327.0	166.0	116.2	92.1	63.4	48.6				
20	27.0	20.8	66.4	984.0	963.4	994.5	316.0	164.1	115.7	92.1	63.1	48.6				
21	26.8	20.6	74.4	940.0	1067.3	982.6	312.6	163.5	115.2	90.7	62.7	48.0				
22	26.3	21.2	116.7	818.2	1189.6	937.2	304.3	162.3	113.6	90.3	61.9	47.0				
23	26.3	21.5	144.8	772.8	1183.0	908.4	292.1	160.5	111.6	88.1	61.6	46.0				
24	26.1	22.1	165.4	699.7	1166.8	827.7	288.1	159.9	109.6	87.2	60.8	46.0				
25	25.6	21.7	207.2	670.0	1321.9	774.1	281.7	159.3	108.7	86.3	59.7	45.1				
26	25.1	21.5	463.8	656.6	1566.0	723.7	270.7	157.5	107.7	85.8	59.7	44.1				
27	24.6	20.4	717.3	651.8	1824.7	631.4	263.7	156.4	107.2	85.4	59.4	43.5				
28	23.9	20.4	1170.1	595.1	1768.6	572.3	256.9	153.4	106.7	84.5	58.3	42.6				
29	23.5	19.7	1013.9	510.7	1725.1	563.3	253.8	151.1	105.7	84.5	57.9	42.6				
30	23.2	20.8	902.7	458.7		507.5	248.6	149.9	105.2	82.4	57.2	42.6				
31	23.0		783.4	449.6		505.4		149.3		81.5	56.5					
MEAN	27.0	20.7	209.9	911.5	1025.9	995.9	399.7	186.2	122.7	93.7	67.0	49.4	340.9			
MAX.	32.2	22.8	1170.1	1353.0	1824.7	1551.1	809.7	242.7	147.6	103.8	79.8	56.5	1824.7			
MIN.	23.0	19.3	21.2	449.6	443.6	505.4	248.6	149.3	105.2	81.5	56.5	42.6	19.3			

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[Flow Regime (m3/s)]:

Q(95day): 507.5      Q(185day): 111.6      Q(275day): 48.6      Q(355day): 20.4

<<< MASTER PROGRAM for 08-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1984/85		[WATER LEVEL (m)]	
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL		
1	1.84	1.83	2.43	4.71	6.80	5.43	5.42	3.72	3.10	2.69	2.44	2.31				
2	1.84	1.82	2.35	4.36	7.77	6.19	5.16	3.67	3.09	2.67	2.44	2.31				
3	1.84	1.81	2.31	4.63	8.03	6.23	4.92	3.61	3.08	2.67	2.43	2.30				
4	1.85	1.80	2.27	4.87	10.19	6.12	4.85	3.58	3.07	2.68	2.43	2.29				
5	1.83	1.80	2.25	4.56	10.39	6.08	5.00	3.54	3.05	2.68	2.43	2.28				
6	1.84	1.80	2.29	4.39	9.67	6.14	5.12	3.51	3.04	2.68	2.43	2.26				
7	1.84	1.83	2.36	4.15	9.29	6.36	5.41	3.49	3.03	2.68	2.43	2.26				
8	1.83	1.83	2.33	4.74	9.88	6.79	5.59	3.47	3.01	2.67	2.42	2.24				
9	1.83	1.84	2.26	4.69	9.20	7.11	5.57	3.45	2.99	2.67	2.41	2.23				
10	1.81	1.85	2.85	4.43	8.85	6.71	5.81	3.43	2.98	2.65	2.41	2.23				
11	1.81	1.99	2.99	4.68	8.71	6.38	6.22	3.40	2.96	2.65	2.41	2.22				
12	1.81	2.03	2.84	5.12	8.34	6.11	6.16	3.37	2.94	2.63	2.41	2.22				
13	1.91	2.06	3.39	7.56	8.18	5.74	5.86	3.36	2.91	2.62	2.44	2.21				
14	1.90	2.08	3.83	8.32	9.56	5.42	5.70	3.34	2.89	2.60	2.42	2.20				
15	1.88	2.11	4.80	7.49	9.93	5.23	5.53	3.32	2.89	2.59	2.39	2.19				
16	1.87	2.19	4.12	6.49	9.26	5.04	5.25	3.18	2.87	2.58	2.39	2.19				
17	1.86	2.23	3.83	5.95	8.52	4.92	5.01	3.35	2.85	2.57	2.40	2.18				
18	1.85	2.08	4.48	5.48	8.09	4.80	4.87	3.37	2.84	2.56	2.40	2.16				
19	1.85	2.09	4.54	5.00	7.60	4.79	4.69	3.37	2.82	2.55	2.40	2.16				
20	1.85		4.77	4.77	7.21	4.72	4.54	3.35	2.80	2.54	2.39	2.16				
21	1.84		5.27	4.74	6.75	5.09	4.44	3.31	2.80	2.54	2.39	2.15				
22	1.87		6.37	4.80	6.32	5.35	4.39	3.29	2.78	2.53	2.38	2.14				
23	1.87		6.44	5.36	6.16	5.83	4.31	3.26	2.75	2.51	2.37	2.13				
24	1.87	2.60	6.16	4.97	6.08	6.06	4.22	3.25	2.73	2.50	2.36	2.13				
25	1.87	2.51	5.84	5.70	5.75	6.06	4.15	3.22	2.72	2.50	2.36	2.13				
26	1.87	2.43	5.74	6.93	5.42	6.21	4.11	3.21	2.72	2.49	2.35	2.13				
27	1.87	2.40	5.39	6.48	5.19	7.02	4.04	3.18	2.71	2.47	2.34	2.12				
28	1.87	2.51	5.19	6.42	5.06	6.54	3.95	3.16	2.70	2.46	2.33	2.12				
29	1.86	2.43	4.84	6.63		6.28	3.88	3.13	2.70	2.45	2.32	2.12				
30	1.85	2.48	4.58	7.34		5.91	3.79	3.12	2.70	2.45	2.32	2.12				
31	1.84		5.00	6.89		5.68		3.11		2.45	2.31					
MEAN	1.85	2.09	4.00	5.57	7.94	5.88	4.93	3.36	2.88	2.58	2.39	2.20	3.80			
MAX.	1.91	2.60	6.44	8.32	10.39	7.11	6.22	3.72	3.10	2.69	2.44	2.31	10.39			
MIN.	1.81	1.80	2.25	4.15	5.06	4.72	3.79	3.11	2.70	2.45	2.31	2.12	1.80			

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1984/85		[DISCHARGE (m3/sec)]	
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL		
1	42.2	41.0	122.4	824.9	2024.4	1178.2	1171.7	444.6	264.5	170.2	123.9	102.3				
2	42.6	39.8	109.6	679.9	2756.7	1618.8	1038.3	426.8	261.4	167.8	123.4	103.3				
3	41.9	38.9	103.3	792.1	2969.2	1645.6	924.2	409.4	258.4	167.2	122.9	101.4				
4	42.9	38.3	97.2	901.3	5073.3	1575.4	888.6	398.0	256.1	169.0	122.4	100.0				
5	41.6	38.1	93.9	759.7	5298.1	1551.1	963.4	387.0	252.3	169.0	121.8	98.1				
6	42.6	38.3	99.5	691.9	4523.3	1584.8	1020.0	378.5	250.8	169.0	121.8	95.8				
7	42.2	40.7	111.1	597.4	4134.6	1729.1	1168.5	373.0	246.4	168.4	121.8	94.4				
8	41.6	41.6	106.7	840.9	4735.7	2015.3	1265.8	365.7	241.9	167.8	120.8	92.4				
9	40.7	41.9	94.8	819.5	4043.9	2242.1	1255.7	360.3	237.5	167.2	119.8	90.7				
10	39.5	43.2	204.5	708.5	3705.5	1960.5	1388.0	354.9	235.3	164.1	119.8	91.2				
11	39.2	58.6	236.8	811.4	3568.6	1740.9	1639.8	347.0	231.0	162.3	119.3	89.4				
12	38.9	63.4	203.2	1018.5	3237.8	1566.0	1599.9	337.0	226.0	158.7	118.7	88.5				
13	48.9	66.9	343.5	2588.1	3102.0	1351.3	1419.9	333.0	219.7	156.9	123.9	87.2				
14	48.6	70.0	481.2	3223.8	4406.5	1171.7	1327.0	327.9	214.8	154.0	121.3	85.8				
15	46.7	74.0	866.2	2529.9	4791.1	1076.6	1230.7	321.9	213.4	151.7	115.7	85.0				
16	45.4	85.4	584.8	1809.4	4098.2	981.1	1085.9	284.1	209.3	149.3	116.2	84.1				
17	43.8	90.3	480.2	1474.9	3398.4	924.2	966.3	331.3	205.9	147.0	117.2	83.2				
18	42.9	70.0	726.2	1207.9	3020.9	867.6	899.9	337.4	202.5	145.3	118.2	81.1				
19	42.9	71.6	754.5	960.5	2617.0	862.0	816.8	338.2	199.1	143.6	116.7	80.7				
20	42.9	92.0	853.7	852.7	2321.1	833.1	754.5	332.2	195.2	142.5	116.2	81.1				
21	41.9	112.3	1095.3	841.3	1985.7	1003.4	711.0	321.1	193.2	141.9	115.2	78.6				
22	44.7	132.7	1733.0	869.5	1697.8	1137.9	688.5	314.3	190.6	140.2	114.7	78.1				
23	45.1	153.0	1778.6	1142.7	1598.0	1403.9	656.6	307.6	182.8	137.5	112.6	76.5				
24	45.7	153.4	1601.8	946.0	1552.9	1539.9	622.0	303.5	179.6	135.2	110.6	76.1				
25	45.7	135.8	1405.7	1326.7	1356.5	1538.1	597.4	297.0	177.7	134.1	110.1	76.5				
26	45.7	122.4	1349.5	2113.9	1171.7	1632.2	580.2	292.1	176.5	132.5	109.6	76.5				
27	45.1	117.2	1157.2	1806.6	1055.0	2179.8	553.2	285.7	175.2	129.8	107.2	75.2				
28	44.7	136.9	1055.0	1762.7	988.5	1845.0	521.4	279.3	173.3	127.7	106.2	74.4				
29	43.8	122.4	884.4	1907.9		1674.5	498.0	271.5	173.3	126.6	104.8	74.4				
30	42.9	132.0	771.5	2412.2		1448.5	466.8	269.1	173.3	126.1	103.8	74.4				
31	42.2		960.5	2088.1		1315.0		267.6		126.1	103.3					
MEAN	43.4	82.1	660.2	1332.6	3044.0	1457.8	957.3	335.4	213.9	150.0	116.1	85.9	691.4			
MAX.	48.9	153.4	1778.6	3223.8	5298.1	2242.1	1639.8	444.6	264.5	170.2	123.9	103.3	5298.1			
MIN.	38.9	38.1	93.9	597.4	988.5	833.1	466.8	267.6	173.3	126.1	103.3	74.4	38.1			

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[Flow Regime (m3/s)]:

Q(95day): 960.5      Q(185day): 214.8      Q(275day): 106.7      Q(355day): 41.0

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE													YEAR : 1985/86	[WATER LEVEL (m)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	2.11	1.99	2.45	8.57			7.33	5.90	5.02	3.54	3.10	2.90	2.60		
2	2.09	2.00	2.40	8.64			6.75	6.44	4.97	3.52	3.10	2.89	2.58		
3	2.09	2.01	2.44	8.31			6.31	6.85	4.88	3.50	3.09	2.88	2.57		
4	2.09	2.02	2.52	8.07			6.07	6.96	4.72	3.47	3.09	2.88	2.55		
5	2.08	2.03	2.46	8.05			6.28	6.99	4.65	3.44	3.08	2.87	2.54		
6	2.07	2.04	2.49	7.92			6.26	6.94	4.55	3.42	3.09	2.88	2.53		
7	2.06	2.05	2.50	7.94			6.51	6.99	4.45	3.40	3.09	2.87	2.53		
8	2.05	2.03	2.51	8.92			6.53	6.85	4.36	3.39	3.08	2.87	2.52		
9	2.05	2.02	2.73	9.56			7.14	6.64	4.28	3.42	3.07	2.85	2.51		
10	2.05	2.01	2.71	9.59			7.77	6.38	4.22	3.34	3.06	2.83	2.49		
11	2.06	2.03	3.14	9.69			7.17	5.90	4.17	3.33	3.05	2.83	2.48		
12	2.07	2.06	3.63	10.17			6.91	5.72	4.11	3.34	3.05	2.82	2.47		
13	2.08	2.08	3.57	10.10			6.95	5.43	4.06	3.33	3.06	2.82	2.47		
14	2.08	2.42	3.43	9.43			6.65	5.23	4.01	3.31	3.05	2.81	2.45		
15	2.06	2.38	3.38	9.53			6.32	5.09	3.98	3.29	3.04	2.81	2.45		
16	2.07	2.61	3.28	8.93			6.12	4.98	3.93	3.29	3.04	2.79	2.44		
17	2.05	2.45	3.49	8.49			6.14	4.86	3.88	3.27	3.03	2.77	2.42		
18	2.05	2.48	3.83	8.14			5.82	4.77	3.84	3.25	2.99	2.76	2.40		
19	2.04	2.42	3.83	7.94			5.77	4.99	3.80	3.24	3.00	2.75	2.41		
20	2.02	2.57	4.00	7.72			5.65	5.39	3.76	3.23	2.99	2.73	2.38		
21	2.02	2.68	4.01	7.66			5.59	6.12	3.72	3.22	2.98	2.73	2.39		
22	2.01	2.65	4.17	7.36			5.71	6.37	3.71	3.22	2.97	2.72	2.34		
23	2.01	2.58	4.05	7.55			6.04	6.52	3.69	3.20	2.96	2.70	2.33		
24	2.00	2.51	4.04	7.84			5.86	6.54	3.68	3.18	2.95	2.69	2.34		
25	2.00	2.45	3.99	8.00			6.36	6.18	3.68	3.18	2.94	2.69	2.33		
26	2.00	2.53	4.12	7.79			7.94	5.86	3.66	3.15	2.94	2.68	2.32		
27	1.99	2.58	3.99	7.83			8.37	5.69	3.63	3.15	2.93	2.66	2.31		
28	1.98	2.53	3.74	7.96			7.50	5.54	3.61	3.13	2.92	2.66	2.31		
29	1.98	2.60	3.72	7.77			6.87	5.43	3.61	3.13	2.91	2.64	2.30		
30	1.98	2.54	3.66				6.41	5.17	3.60	3.11	2.91	2.53	2.30		
31	1.98		3.94				6.11		3.56		2.90	2.60			
MEAN	2.04	2.31	3.36	8.46			6.56	5.96	4.06	3.30	3.01	2.77	2.44	4.00	
MAX.	2.11	2.63	4.17	10.17			8.37	6.99	5.02	3.54	3.10	2.90	2.60	10.17	
MIN.	1.98	1.99	2.40	7.36			5.59	4.77	3.56	3.11	2.90	2.60	2.30	1.95	

*QM*	ST.: 5-940 LUANGWA BRIDGE													YEAR : 1985/86	[DISCHARGE (m3/sec)]
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	73.2	59.0	126.1	3442.7	1910.6	2408.5	1443.1	969.3	386.8	265.3	215.5	153.4			
2	71.6	59.4	117.7	3506.8	2515.3	1989.9	1776.6	948.8	380.3	263.7	214.8	149.9			
3	70.8	60.5	123.9	3216.3	2827.7	1691.9	2053.7	905.6	375.7	263.0	212.7	147.0			
4	70.8	62.3	139.1	3000.1	3193.1	1545.5	2131.5	831.7	365.7	261.4	211.3	144.8			
5	69.6	63.1	128.2	2984.6	3364.5	1672.5	2153.4	800.7	358.5	260.7	208.6	141.4			
6	68.4	65.0	133.1	2882.2	3193.1	1660.9	2120.6	758.4	351.4	262.2	211.3	140.2			
7	67.3	65.3	134.1	2897.5	3060.3	1826.8	2155.6	716.1	346.1	262.2	209.3	140.8			
8	66.1	63.4	137.5	3769.1	3054.6	1836.9	2058.0	676.2	342.6	259.1	208.6	138.0			
9	66.1	62.3	179.0	4403.3	3040.3	2262.3	1914.7	645.8	350.5	256.9	204.5	136.3			
10	66.1	60.8	175.2	4434.7	3029.0	2756.7	1736.9	623.1	328.7	253.8	201.8	133.1			
11	66.9	63.4	275.4	4536.1	3026.1	2291.6	1444.9	604.4	327.0	252.3	199.8	131.4			
12	68.8	67.7	416.2	5053.2	3043.2	2098.9	1339.1	581.4	329.6	251.6	199.1	129.8			
13	70.4	69.2	395.2	4979.5	3083.2	2125.0	1179.8	563.3	326.2	254.6	199.1	128.7			
14	70.0	120.8	354.1	4269.4	3083.2	1916.8	1075.0	543.3	319.4	252.3	197.1	126.6			
15	67.3	114.1	340.8	4378.3	3068.9	1703.6	1004.9	532.3	315.1	250.1	195.8	126.1			
16	68.0	155.2	312.6	3780.7	3026.1	1575.4	950.2	517.1	314.3	248.6	192.5	123.4			
17	66.1	125.5	371.2	3370.9	2952.7	1584.8	895.6	496.9	308.5	247.1	188.6	120.8			
18	65.3	130.9	480.2	3062.6	2800.3	1396.8	853.7	483.3	303.5	236.8	186.7	117.2			
19	64.2	121.3	481.2	2897.5	2718.9	1365.2	956.1	469.9	300.2	239.7	184.1	118.7			
20	62.7	147.6	541.1	2712.2	2591.1	1301.3	1158.8	456.7	299.4	237.5	180.3	113.6			
21	62.7	169.6	543.3	2668.0	2458.6	1265.8	1577.2	444.6	297.0	234.6	179.0	115.2			
22	61.2	162.3	603.2	2429.4	2466.3	1332.2	1731.0	440.6	295.3	233.2	176.5	108.2			
23	61.6	149.3	557.7	2576.0	2512.7	1528.8	1832.8	435.7	289.7	230.3	174.0	106.7			
24	60.1	137.5	555.5	2811.6	2601.6	1421.7	1847.0	431.7	285.7	228.0	172.1	107.7			
25	60.1	126.6	536.7	2946.0	2673.3	1729.1	1615.0	429.8	284.1	226.0	171.5	106.7			
26	59.7	139.7	584.8	2769.1	2700.1	1894.9	1418.1	424.9	278.5	224.6	169.0	104.8			
27	58.3	150.5	535.6	2801.5	2630.7	3264.7	1323.6	415.2	277.7	223.2	166.0	102.3			
28	56.8	139.7	449.6	2907.6	2588.4	2540.2	1237.3	410.4	273.0	221.8	164.7	102.3			
29	57.6	152.8	442.6	2751.7		2068.7	1176.5	407.5	273.0	219.7	161.7	101.4			
30	56.8	142.5	425.9	2751.7		1758.7	1045.8	404.7	266.8	218.3	159.3	101.4			
31	57.6		520.4	2751.7		1569.7		392.4		216.2	154.0				
MEAN	64.9	106.9	358.6	3346.5	2829.1	1883.4	1506.9	573.0	318.3	243.7	189.3	123.9	951.6		
MAX.	73.2	169.6	603.2	5053.2	3364.5	3264.7	2155.6	969.3	386.8	265.3	215.5	153.4	5053.2		
MIN.	56.8	59.0	117.7	2429.4	1910.6	1265.8	853.7	392.4	266.8	216.2	154.0	101.4	56.8		

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[Flow Regime (m3/s)]:

Q(95day): 1575.4      Q(185day): 315.1      Q(275day): 147.6      Q(355day): 60.5

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1986/87		[WATER LEVEL (m)]	
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL		
1	2.29	2.30	2.51	3.81	6.47	6.47	6.22	4.33	3.28	2.86	2.65	2.54	2.37			
2	2.30	2.32	2.50	4.08	6.60	6.60	6.19	4.29	3.24	2.85	2.65	2.54	2.36			
3	2.28	2.34	2.46	4.10	6.47	6.12	4.41	3.22	2.84	2.64	2.54	2.36				
4	2.28	2.35	2.46	4.29	6.04	5.99	4.72	3.20	2.83	2.64	2.53	2.36				
5	2.27	2.37	2.44	4.54	5.73	5.79	4.83	3.18	2.80	2.60	2.51	2.36				
6	2.27	2.46	2.66	4.82	5.58	5.58	4.74	3.16	2.80	2.61	2.51	2.35				
7	2.26	2.45	2.66	4.77	5.62	5.38	4.61	3.14	2.80	2.62	2.51	2.34				
8	2.25	2.42	2.76	4.75	5.30	5.20	4.55	3.15	2.79	2.62	2.50	2.33				
9	2.23	2.38	4.23	5.29	5.09	4.85	4.45	3.14	2.78	2.60	2.50	2.33				
10	2.23	2.38	4.30	5.42	4.97	4.62	4.45	3.12	2.77	2.59	2.49	2.32				
11	2.23	2.39	4.75	5.25	5.16	4.44	4.19	3.12	2.76	2.58	2.49	2.31				
12	2.24	2.40	5.71	5.11	5.06	4.34	4.10	3.12	2.76	2.57	2.48	2.31				
13	2.27	2.40	6.06	5.06	4.97	4.37	4.04	3.11	2.74	2.56	2.47	2.31				
14	2.24	2.39	5.29	5.02	5.10	4.41	3.93	3.10	2.73	2.55	2.46	2.30				
15	2.31	2.39	5.67	4.92	5.26	4.54	3.90	3.08	2.72	2.55	2.45	2.30				
16	2.29	2.37	5.41	4.62	5.26	5.27	3.85	3.05	2.72	2.54	2.45	2.30				
17	2.29	2.35	5.40	4.47	5.19	5.51	3.77	3.04	2.71	2.54	2.44	2.29				
18	2.30	2.34	5.14	4.62	5.07	5.30	3.71	3.02	2.71	2.54	2.45	2.29				
19	2.30	2.33	4.97	5.07	5.17	5.00	3.69	3.01	2.70	2.55	2.44	2.28				
20	2.29	2.60	4.79	5.20	5.55	4.79	3.64	2.99	2.70	2.55	2.44	2.27				
21	2.27	2.58	4.46	5.87	5.44	4.58	3.64	2.97	2.69	2.54	2.43	2.26				
22	2.26	2.52	4.21	5.79	5.47	4.42	3.63	2.95	2.69	2.54	2.43	2.26				
23	2.27	2.46	4.16	5.86	5.37	4.21	3.59	2.94	2.68	2.54	2.42	2.25				
24	2.34	2.40	4.49	6.81	5.36	4.11	3.50	2.92	2.67	2.53	2.41	2.24				
25	2.33	2.37	4.84	6.71	5.42	4.01	3.46	2.90	2.67	2.53	2.41	2.24				
26	2.30	2.34	4.46	6.68	5.49	3.93	3.42	2.89	2.67	2.54	2.40	2.23				
27	2.37	2.33	4.09	6.74	6.04	3.88	3.40	2.88	2.67	2.55	2.40	2.23				
28	2.33	2.32	3.91	8.01	6.16	4.19	3.36	2.87	2.66	2.55	2.39	2.23				
29	2.34	2.28	3.81	7.69		4.45	3.33	2.87	2.66	2.55	2.38	2.22				
30	2.34	2.34	3.96	6.74		4.39	3.30	2.86	2.65	2.55	2.38	2.22				
31	2.32		3.90	6.32		4.39		2.86		2.55	2.37					
MEAN	2.29	2.39	4.14	5.43	5.51	4.85	3.96	3.04	2.74	2.57	2.46	2.29	3.46			
MAX.	2.37	2.60	6.06	8.01	6.60	6.22	4.83	3.28	2.86	2.65	2.54	2.37	8.01			
MIN.	2.23	2.28	2.44	3.81	4.97	3.88	3.30	2.86	2.65	2.53	2.37	2.22	2.22			

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1986/87		[DISCHARGE (m3/sec)]	
N	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL		
1	100.0	101.4	137.5	474.0	1796.6	1636.0	667.6	311.0	206.6	162.9	142.5	112.1				
2	100.4	103.8	135.2	567.8	1889.8	1618.8	651.8	301.9	204.5	162.3	141.9	111.1				
3	98.6	108.2	127.1	575.7	1798.6	1573.5	698.5	297.0	202.5	161.1	141.9	110.6				
4	98.1	109.6	127.1	650.6	1525.1	1493.9	831.7	289.7	200.5	160.5	140.2	110.1				
5	96.7	112.6	125.0	753.2	1342.6	1379.2	881.6	284.1	194.5	152.8	137.5	110.6				
6	96.2	127.7	164.7	877.3	1260.7	1259.0	841.3	279.3	195.2	154.6	136.3	109.6				
7	94.8	126.6	166.0	855.1	1282.6	1152.3	784.7	275.4	193.2	156.4	135.8	108.2				
8	93.5	121.3	186.0	846.8	1112.6	1059.6	758.4	276.9	191.2	157.5	135.2	106.7				
9	90.7	114.1	625.5	1104.7	1003.4	890.0	714.8	274.6	189.9	152.8	134.1	105.7				
10	90.7	113.6	655.4	1174.9	944.4	786.0	713.5	269.1	188.0	150.5	133.6	104.3				
11	90.7	115.2	846.8	1085.9	1038.2	711.0	611.4	269.1	186.0	149.3	132.5	103.9				
12	92.1	117.7	1332.2	1013.9	990.0	671.2	575.7	268.3	185.4	148.2	130.9	102.8				
13	96.7	117.7	1539.9	991.5	945.9	683.6	554.3	266.8	182.2	145.9	130.3	102.3				
14	92.4	115.7	1106.3	972.2	1010.9	697.2	517.1	265.3	180.3	144.2	128.2	101.4				
15	103.3	115.2	1311.6	924.2	1089.0	751.9	504.3	258.4	178.4	144.2	126.6	100.9				
16	100.0	113.1	1170.1	788.7	1090.6	1093.7	487.5	253.1	177.1	142.5	125.5	100.4				
17	100.0	109.2	1163.6	722.4	1056.5	1224.1	461.7	248.6	175.2	142.5	125.0	100.0				
18	101.4	107.2	1029.0	787.3	997.4	1111.0	440.6	244.1	175.2	142.5	125.1	99.0				
19	101.4	106.2	948.8	997.4	1042.7	963.4	435.7	241.2	173.3	143.6	125.0	98.1				
20	100.0	152.8	862.0	1061.1	1244.0	860.6	419.1	236.8	172.7	143.1	124.5	97.2				
21	96.7	149.3	717.3	1425.2	1186.3	787.6	417.1	233.2	171.5	141.9	122.9	95.3				
22	95.8	138.0	617.3	1375.7	1197.7	702.2	415.2	228.9	170.2	141.4	122.4	94.4				
23	96.7	127.1	600.9	1421.7	1149.1	618.4	401.8	224.6	168.4	141.9	120.8	93.0				
24	103.2	117.7	731.3	2028.0	1139.5	581.4	375.7	221.1	167.8	140.8	119.8	92.1				
25	106.7	113.1	885.8	1958.4	1171.7	545.5	363.0	216.2	167.2	140.8	118.7	91.6				
26	100.4	108.2	717.3	1935.4	1209.2	513.9	351.4	214.1	167.8	142.5	117.7	91.2				
27	111.6	106.7	574.6	1979.4	1528.8	499.0	344.3	212.0	167.2	144.2	116.7	90.3				
28	105.2	104.8	509.6	2953.7	1598.0	611.4	335.6	210.6	166.0	143.6	115.7	89.8				
29	107.2	98.6	474.0	2687.6		716.1	324.5	210.0	165.4	144.2	114.7	88.5				
30	107.7	107.2	526.9	1981.5		688.5	316.8	207.9	164.1	144.2	113.6	89.4				
31	103.8		505.4	1699.7		589.7		206.6		143.6	113.1					
MEAN	99.3	116.0	665.2	1247.5	1237.0	921.0	539.9	251.5	180.9	148.0	127.4	100.3	465.8			
MAX.	111.6	152.8	1539.9	2953.7	1883.8	1636.0	881.6	311.0	206.6	162.9	142.5	112.1	2953.7			
MIN.	90.7	98.6	125.0	474.0	944.4	499.0	316.8	206.6	164.1	140.8	113.1	88.5	88.5			

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$

[Flow Regime (m3/s)]:

Q(95day): 711.0      Q(185day): 186.0      Q(275day): 118.7      Q(355day): 92.1

<<< MASTER PROGRAM for DB-05(Leap Year):Daily River W/L & Discharge >>>

*HM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1987/88		[WATER LEVEL (m)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL			
1	2.23	2.12	2.12	2.60	6.51	6.14	6.39	3.35	2.83	2.55	2.32	2.19				
2	2.25	2.11	2.10	2.81	6.16	6.15	5.96	3.32	2.81	2.54	2.31	2.18				
3	2.26	2.12	2.11	3.08	5.72	6.14	5.68	3.32	2.80	2.54	2.30	2.17				
4	2.23	2.11	2.11	3.09	5.27	5.99	5.45	3.32	2.80	2.54	2.29	2.15				
5	2.21	2.10	2.24	2.95	4.94	5.79	5.29	3.32	2.78	2.55	2.28	2.15				
6	2.20	2.12	2.24	2.84	4.86	6.43	5.22	3.32	2.79	2.54	2.27	2.13				
7	2.21	2.12	2.43	2.70	5.39	6.23	5.15	3.30	2.79	2.54	2.27	2.13				
8	2.20	2.11	2.60	2.82	6.47	6.28	5.08	3.28	2.78	2.52	2.25	2.12				
9	2.20	2.12	2.53	3.78	6.09	6.42	4.93	3.27	2.78	2.50	2.24	2.12				
10	2.20	2.13	2.42	3.29	6.77	6.24	4.80	3.26	2.77	2.47	2.23	2.10				
11	2.21	2.12	2.58	3.17	7.41	6.20	4.66	3.25	2.76	2.45	2.24	2.09				
12	2.13	2.12	2.47	3.66	8.06	5.72	4.58	3.24	2.75	2.44	2.24	2.08				
13	2.22	2.12	2.55	3.38	7.68	5.49	4.45	3.20	2.73	2.44	2.24	2.07				
14	2.21	2.10	3.76	3.29	7.31	5.50	4.33	3.18	2.71	2.43	2.23	2.13				
15	2.20	2.10	3.83	3.59	8.58	5.45	4.19	3.15	2.70	2.42	2.23	2.13				
16	2.19	2.09	3.43	3.96	9.00	5.52	4.13	3.13	2.68	2.41	2.23	2.05				
17	2.19	2.08	3.63	4.60	9.95	6.27	4.08	3.04	2.66	2.40	2.23	2.05				
18	2.18	2.08	3.55	4.20	9.09	6.11	4.03	3.03	2.65	2.40	2.23	2.06				
19	2.18	2.08	3.77	4.00	9.48	6.68	3.97	3.02	2.63	2.40	2.23	2.13				
20	2.17	2.07	3.22	3.83	8.98	7.69	3.92	3.00	2.62	2.40	2.22	2.05				
21	2.16	2.07	3.22	3.82	8.86	7.77	3.85	2.97	2.62	2.40	2.23	2.05				
22	2.16	2.06	3.05	4.23	8.72	7.29	3.80	2.97	2.61	2.40	2.22	2.06				
23	2.16	2.07	2.78	5.09	7.71	9.00	3.78	2.95	2.61	2.46	2.22	2.05				
24	2.15	2.07	2.66	5.18	6.82	3.58	3.77	2.94	2.60	2.45	2.22	2.05				
25	2.14	2.06	2.62	5.34	7.91	6.80	3.76	2.93	2.59	2.40	2.27	2.06				
26	2.14	2.07	2.62	5.79	7.35	8.21	3.75	2.91	2.58	2.36	2.23	2.03				
27	2.14	2.08	2.56	5.90	6.76	7.80	3.60	2.90	2.58	2.35	2.21	2.03				
28	2.14	2.09	2.53	7.66	6.24	7.65	3.52	2.88	2.56	2.35	2.20	2.02				
29	2.13	2.10	2.51	7.93	6.14	7.51	3.47	2.87	2.56	2.34	2.19	2.00				
30	2.12	2.12	2.54	7.52		7.28	3.40	2.86	2.55	2.33	2.18	2.00				
31	2.12		2.59	7.25		6.88		2.85		2.33	2.19					
MEAN	2.18	2.10	2.75	4.30	7.25	6.52	4.43	3.11	2.69	2.44	2.24	2.09	3.50			
MAX.	2.26	2.13	3.83	7.93	9.95	9.00	6.39	3.35	2.83	2.55	2.32	2.19	9.95			
MIN.	2.12	2.06	2.10	2.60	4.86	3.58	3.40	2.85	2.55	2.33	2.18	2.00	2.00			

*QM*	ST.: 5-940 LUANGWA BRIDGE												YEAR : 1987/88		[DISCHARGE (m3/s)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL			
1	89.8	74.4	75.2	153.4	1822.7	1588.5	1748.8	330.4	199.8	143.1	103.8	84.1				
2	93.9	74.0	72.8	197.1	1601.8	1594.2	1477.5	322.7	197.1	142.5	102.3	83.2				
3	95.8	74.4	74.0	258.4	1340.9	1586.6	1315.0	322.7	195.2	141.9	100.4	82.0				
4	90.7	73.6	73.2	261.4	1096.9	1497.5	1189.6	322.7	193.8	142.5	99.5	79.8				
5	87.2	72.8	92.1	228.9	934.3	1377.5	1104.7	322.7	189.3	143.1	98.1	78.6				
6	86.7	74.4	92.1	203.8	892.8	1772.6	1068.9	321.9	191.2	142.7	97.2	76.9				
7	87.2	74.4	121.8	173.3	1157.2	1643.7	1032.1	318.5	192.5	141.4	96.2	76.5				
8	86.3	74.0	152.8	197.8	1796.6	1672.5	998.9	312.6	190.6	138.6	93.0	75.2				
9	85.8	75.2	139.7	462.7	1554.8	1762.7	925.6	310.1	189.9	134.7	91.6	74.4				
10	85.8	76.1	120.3	313.5	2002.6	1647.5	866.2	307.6	188.0	128.7	91.2	72.4				
11	87.6	75.7	149.9	282.5	2469.2	1624.5	804.7	305.2	186.0	126.6	92.1	70.8				
12	76.9	74.8	130.3	423.9	2992.4	1339.1	770.2	301.0	183.5	125.0	92.1	69.6				
13	88.5	74.4	143.6	340.8	2680.3	1212.5	716.1	291.3	179.0	125.0	91.6	68.4				
14	88.1	72.8	458.7	313.5	2392.3	1214.1	663.9	284.9	175.8	122.4	91.2	76.5				
15	86.7	72.0	481.2	402.8	3453.8	1189.6	611.4	276.1	172.7	120.3	90.7	76.1				
16	85.4	70.8	353.2	524.7	3844.9	1229.0	588.2	273.0	168.4	118.7	90.3	66.5				
17	85.0	70.4	416.2	776.8	4810.8	1668.7	568.9	250.8	165.4	117.2	91.2	66.5				
18	83.7	69.6	390.5	614.9	3930.4	1567.9	549.9	247.8	162.9	117.7	90.3	67.3				
19	82.8	69.2	460.7	538.9	4319.0	1937.5	529.0	244.9	158.7	117.2	90.3	76.5				
20	82.0	68.8	297.0	482.3	3830.3	2692.5	510.7	240.5	157.5	118.2	89.4	66.1				
21	81.1	68.4	295.3	476.1	3717.0	2756.7	486.4	232.5	156.9	117.7	89.8	66.5				
22	80.7	67.7	251.6	626.7	3585.6	2380.7	469.9	231.7	155.8	117.2	89.4	67.3				
23	80.2	68.0	189.3	1004.9	2702.3	3850.8	464.8	227.4	155.2	127.1	89.4	66.5				
24	79.4	68.0	166.0	1048.9	2034.4	400.9	459.7	224.6	153.4	126.6	88.9	65.3				
25	78.1	67.7	157.5	1133.2	2867.0	2021.6	456.7	222.5	152.2	116.7	96.2	66.9				
26	77.7	68.8	157.5	1379.2	2422.4	3120.5	452.6	218.3	149.9	111.1	90.7	63.8				
27	78.1	69.6	146.5	1441.4	1994.1	2776.6	404.7	216.2	148.8	109.6	87.2	63.1				
28	77.7	70.8	140.8	2668.0	1649.4	2660.7	380.3	212.7	146.5	108.7	85.8	61.9				
29	76.5	72.0	135.8	2887.3	1588.5	2544.9	365.7	210.6	145.3	108.2	84.5	60.1				
30	75.7	74.4	141.9	2556.9		2373.8	347.0	206.6	144.2	106.7	83.7	59.4				
31	74.8		151.7	2343.9		2075.1		205.2		105.7	84.5					
MEAN	83.7	71.9	200.9	797.3	2465.0	1896.2	744.3	268.3	171.5	124.6	92.0	70.9	575.4			
MAX.	95.8	76.1	481.2	2887.3	4810.8	3850.8	1748.8	330.4	199.8	143.1	103.8	84.1	4810.8			
MIN.	74.8	67.7	72.8	153.4	892.8	400.9	347.0	205.2	144.2	105.7	83.7	59.4	59.4			

[Discharge Rating Curve]:  $Q=60.157*(H-1.003)^2$   
 [Flow Regime (m3/s)]:  
 Q(95day): 482.3    Q(185day): 156.9    Q(275day): 87.2    Q(355day): 66.9

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1988/89											[WATER LEVEL (m)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	1.99	1.96	1.86	2.79	8.07	7.74	8.08	4.29	3.30	2.89	2.55	2.23		
2	1.98	1.97	1.88	2.94	8.03	6.93	8.22	4.26	3.28	2.88	2.54	2.23		
3	1.97	1.95	1.91	2.74	8.41	7.73		4.23	3.27	2.87	2.54	2.21		
4	1.97	1.94	1.97	3.13	8.88	6.86		4.20	3.26	2.86	2.54	2.19		
5	1.96	1.93	2.00	3.40	6.92	7.87		4.18	3.26	2.82	2.53	2.18		
6	1.95	1.92	2.44	3.38	8.21	7.22		4.17	3.25	2.81	2.52	2.17		
7	1.97	1.94	2.50	3.59	10.31	6.59		4.17	3.20	2.80	2.52	2.15		
8	1.95	1.94	2.41	3.62	10.62	6.40		4.14	3.18	2.77	2.52	2.13		
9	1.94	1.91	2.39	3.60	9.98	6.08		4.08	3.18	2.76	2.52	2.13		
10	1.93	1.91	2.18	3.65	10.40	7.01		4.03	3.15	2.74	2.52	2.12		
11	1.93	1.91	2.27	4.73	6.84	7.34		3.98	3.12	2.73	2.51	2.12		
12	1.93	1.89	2.31	4.50	8.15		6.60	3.92	3.12	2.72	2.51	2.12		
13	1.96	1.88	2.61	4.70	7.72	7.71	6.54	3.86	3.10	2.71	2.50	2.12		
14	1.92	1.91	2.54	5.20	7.26		6.40	3.82	3.08	2.69	2.49	2.11		
15	1.93	1.92	2.76	6.37	7.07		6.12	3.79	3.07	2.68	2.48	2.10		
16	1.93	2.07	2.61	6.35	6.70	7.30	5.88	3.74	3.06	2.68	2.47	2.09		
17	1.93	2.03	2.47	7.01	8.06	7.14	5.77	3.70	3.05	2.66	2.45	2.09		
18	1.94	2.03	2.37	7.04	8.69	6.76	5.87	3.66	3.04	2.65	2.44	2.08		
19	1.94	1.90	2.35	7.05	6.70	6.61	5.82	3.61	3.04	2.65	2.43	2.07		
20	1.94	1.89	2.37		8.71	6.10	5.93	3.42	3.03	2.64	2.41	2.06		
21	1.93	1.91	2.38	6.15	9.10	6.63	5.90	3.58	3.02	2.63	0.27	2.06		
22	1.93	1.91	3.00	6.06	8.29	6.80	5.75	3.54	3.01	2.62	2.38	2.06		
23	1.92	1.93	2.57	5.98	9.47	6.81	6.18	3.52	3.00	2.61	2.36	2.05		
24	1.91	1.93	2.51	5.55	9.09	7.03	5.41	3.49	2.98		2.33	1.42		
25	1.91	1.91	3.04	5.53	7.97	7.51	5.04	3.46	2.97		2.32	1.10		
26	1.91	1.89	2.97	5.51	7.92	8.43	4.83	3.43	2.96		2.30	1.09		
27	1.98	1.88	2.91	6.30	7.83	9.14	4.67	3.40	2.95		2.29	1.09		
28	1.98	1.87	2.87		7.73	8.86	4.60	3.38	2.94		2.28	1.08		
29	1.98	1.86	2.81	6.09		7.56	4.47	3.36	2.93		2.26	1.07		
30	1.98	1.86	2.64	6.58		8.18	4.37	3.33	2.91		2.26	1.07		
31	1.96		2.54	6.93		8.09		3.31			2.24			
MEAN	1.95	1.92	2.46	5.05	8.33	7.30	5.83	3.78	3.09	2.73	2.36	1.89	3.80	
MAX.	1.99	2.07	3.04	7.05	10.62	9.14	8.22	4.29	3.30	2.89	2.55	2.23	10.62	
MIN.	1.91	1.86	1.86	2.74	6.70	6.08	4.37	3.31	2.91	2.61	0.27	1.07	0.27	

*QM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1988/89											[DISCHARGE (m3/sec)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	58.3	54.7	44.1	192.5	3000.1	2731.9	3015.7	651.8	316.8	214.8	144.2	90.7		
2	57.2	56.5	46.0	226.0	2969.2	2111.9	3136.3	637.4	312.6	212.0	142.5	89.8		
3	56.5	54.0	48.9	182.2	3299.9	2719.6	2997.3	625.5	310.1	210.0	142.5	88.1		
4	56.1	52.3	55.8	273.0	3734.3	2064.4	2858.3	614.9	306.8	207.2	141.9	85.4		
5	55.1	51.3	59.4	344.3	2103.2	2834.2	2719.3	606.7	305.2	199.1	140.2	83.2		
6	54.0	50.9	123.4	340.0	3125.7	2325.7	2580.3	604.4	303.5	196.5	139.1	82.0		
7	55.8	52.3	134.7	401.8	5212.4	1879.7	2441.3	603.2	289.7	194.5	138.0	79.0		
8	54.0	53.0	118.7	412.3	5566.4	1754.7	2302.3	592.8	285.7	188.0	138.6	76.9		
9	52.7	49.3	116.2	406.6	4850.2	1549.2	2163.3	568.9	284.9	184.7	138.0	76.1		
10	51.3	48.9	83.2	421.0	5311.8	2173.2	2024.3	552.1	276.1	181.5	138.6	75.2		
11	52.0	49.6	96.2	835.8	2049.4	2413.1	1885.3	533.4	270.7	179.0	136.9	74.8		
12	52.0	47.6	102.8	733.9	3070.5	2560.1	1885.8	510.7	268.3	177.1	136.3	74.4		
13	55.1	46.7	154.6	823.6	2717.1	2707.3	1843.0	491.7	263.7	174.6	134.7	74.4		
14	50.9	48.9	142.5	1059.6	2357.7	2600.6	1752.7	477.1	259.9	172.1	133.6	73.6		
15	52.0	50.3	184.7	1733.0	2210.8	2493.9	1575.4	465.8	257.6	169.6	131.4	72.0		
16	52.0	68.4	154.6	1721.2	1954.2	2387.6	1432.4	450.6	254.6	168.4	129.3	71.2		
17	51.6	63.8	129.8	2171.0	2997.6	2262.3	1366.9	438.6	253.1	166.0	126.6	71.2		
18	52.3	63.4	111.6	2195.3	3554.5	1996.2	1425.2	424.9	250.1	164.1	124.5	69.2		
19	53.3	48.6	109.2	2197.5	1954.2	1894.1	1396.8	410.4	249.3	163.5	121.8	68.0		
20	53.0	47.3	112.6	1897.0	3574.3	1560.4	1459.4	351.4	246.4	161.1	119.8	67.3		
21	51.6	49.9	113.6	1596.1	3945.3	1904.4	1441.4	399.9	244.9	158.7	118.7	66.9		
22	51.3	49.3	240.5	1538.1	3194.8	2021.6	1358.2	388.7	242.7	156.4	114.7	66.9		
23	50.3	51.3	147.6	1488.4	4309.7	2028.0	1611.2	381.2	239.7	155.2	110.6	65.7		
24	49.9	52.0	136.3	1245.6	3933.4	2182.0	1168.5	372.1	236.1	153.8	106.7	10.5		
25	49.3	49.6	249.3	1230.7	2923.0	2547.3	979.6	363.9	233.9	152.4	104.3	0.6		
26	48.9	47.3	232.5	1224.1	2879.7	3321.7	883.0	354.1	230.3	151.1	101.9	0.5		
27	57.2	46.0	218.3	1686.1	2806.6	3981.0	810.1	347.0	228.2	149.7	99.0	0.4		
28	57.9	44.7	208.5	1620.1	2724.5	3717.0	778.1	340.0	226.0	148.3	97.6	0.4		
29	57.2	44.1	195.8	1554.8		2668.0	721.1	333.0	223.2	146.9	95.8	0.3		
30	56.8	43.8	161.7	1873.5		3099.4	681.1	326.2	219.7	145.6	94.8	0.2		
31	55.1		142.5	2109.8		3023.5		321.1		144.2	92.5			
MEAN	53.6	51.2	134.7	1152.7	3297.5	2435.9	1756.5	469.0	263.0	172.5	120.9	58.5	813.5	
MAX.	58.3	68.4	249.3	2197.5	5566.4	3981.0	3136.3	651.8	316.8	214.8	144.2	90.7	5566.4	
MIN.	48.9	43.8	44.1	182.2	1954.2	1549.2	681.1	321.1	219.7	144.2	32.7	0.2	0.2	

[Discharge Rating Curve] : Q=60.157\*(H-1.003)^2

[Flow Regime (m3/s)] :

Q(95day): 1366.9      Q(185day): 212.0      Q(275day): 79.0      Q(355day): 44.1

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1989/90											[WATER LEVEL (m)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	1.06	0.95	2.19	6.78	8.31	7.14	7.46	6.36	2.89	2.69	2.44	2.23		
2	1.08	0.94	2.33	7.90	8.30	7.03	7.53	6.45	2.97	2.68	2.44	2.23		
3	1.09	0.94	2.35	9.40	8.28	6.95	7.71	6.48	2.85	2.67	2.44	2.22		
4	1.21	0.93	2.36	10.33	8.29	6.80	7.92	6.45	2.84	2.66	2.43	2.22		
5	1.23	0.92	2.24	10.03	8.26	6.69	7.87	6.40	2.83	2.65	2.44	2.21		
6	1.06	0.92	2.28	9.83	8.35	7.83	7.78	6.39	2.82	2.65	2.44	2.20		
7	1.06	0.91	2.85	10.20	8.38	12.36	7.75	6.39	2.82	2.64	2.43	2.19		
8	1.03	0.90	2.80	9.91	8.33	9.19	7.32	6.40	2.81	2.63	2.42	2.19		
9	1.02	0.89	2.79	9.88	8.32	12.22	7.17	6.38	2.80	2.62	2.38	2.18		
10	1.01	0.88	2.83	9.57	8.67	11.68	7.07	6.40	2.79	2.60	2.37	2.17		
11	1.01	0.88	3.05	9.34	8.70	11.34	7.03	6.46	2.78	2.60	2.35	2.17		
12	1.01	0.87	3.12	8.83	8.90	11.11	7.01	6.44	2.77	2.58	2.36	2.16		
13	1.00	0.88	7.14	8.76	9.10	10.88	7.02	6.38	2.76	2.58	2.39	2.16		
14	1.00	0.91	7.01	8.84	9.22	10.75	7.03	6.57	2.76	2.57	2.35	2.15		
15	1.00	0.91	6.50	8.97	9.41	10.64	6.94	6.67	2.75	2.56	2.34	2.15		
16	1.00	0.92	6.44	10.31	10.34	10.53	6.74	6.33	2.75	2.55	2.34	2.14		
17	0.99	0.93	6.35	10.39	9.93	10.43	6.68	3.10	2.74	2.54	2.34	2.12		
18	1.00	1.00	6.58	11.17	9.72	10.37	6.54	3.08	2.74	2.53	2.33	2.11		
19	0.99	0.98	6.76	10.55	10.05	10.34	6.61	3.07	2.73	2.52	2.33	2.11		
20	0.98	1.01	6.39	12.02	10.10	10.41	6.62	3.05	2.73	2.51	2.31	2.10		
21	0.98	2.08	6.31	11.91	9.88	10.38	6.66	3.04	2.73	2.50	2.29	2.10		
22	0.98	2.17	3.10	11.50	9.46	10.35	6.65	3.03	2.73	2.51	2.28	2.09		
23	0.97	2.13	5.04	11.96	9.40	10.35	6.64	3.01	2.72	2.49	2.27	2.08		
24	0.97	2.14	7.06	10.44	9.15	10.28	6.60	3.00	2.72	2.48	2.26	2.07		
25	0.97	2.19	6.78	11.20	8.68	10.21	6.54	2.99	2.72	2.47	2.25	2.05		
26	0.97	2.19	6.63	10.49	8.53	10.15	6.47	2.96	2.71	2.47	2.24	1.19		
27	0.97	2.18	6.45	9.83	6.28	9.35	6.39	2.95	2.71	2.47	2.23	1.19		
28	0.97	2.18	6.61	11.41	6.65	8.78	6.38	2.94	2.70	2.46	2.23	1.19		
29	0.97	2.17	6.68	9.16		7.60	6.37	2.94	2.69	2.46	2.22	1.18		
30	0.96	2.15	6.83	8.47		7.10	6.36	2.93	2.69	2.46	2.26	1.18		
31	0.96		6.70	8.32		7.03		2.91		2.45	2.24			
MEAN	1.02	1.34	4.92	9.93	8.82	9.56	6.97	4.77	2.77	2.56	2.34	1.99	4.73	
MAX.	1.23	2.19	7.14	12.02	10.34	12.36	7.92	6.67	2.89	2.69	2.44	2.23	12.36	
MIN.	0.96	0.87	2.19	6.78	6.28	6.69	6.36	2.91	2.69	2.45	2.22	1.13	0.87	

*QM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1989/90											[DISCHARGE (m3/sec)]	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL	
1	0.2	0.2	85.4	2005.8	3210.9	2282.3	2511.7	1729.1	213.4	170.2	125.0	91.2		
2	0.4	0.2	105.7	2859.4	3200.2	2184.2	2566.4	1792.6	208.6	169.0	124.5	89.8		
3	0.5	0.3	109.1	4241.7	3181.5	2125.0	2702.3	1804.6	205.9	167.2	123.4	89.4		
4	2.6	0.3	110.8	5232.9	3192.2	2021.6	2882.2	1785.6	203.2	165.4	122.9	88.5		
5	3.1	0.4	92.1	4906.4	3168.2	1943.8	2839.2	1752.7	200.5	162.9	124.5	87.2		
6	0.2	0.4	98.6	4690.2	3245.8	2801.5	2759.2	1748.3	199.1	162.3	123.4	86.3		
7	0.2	0.5	205.2	5093.6	3275.5	7754.5	2738.5	1748.8	197.8	160.5	121.8	85.0		
8	0.1	0.6	193.2	4774.8	3232.4	4031.9	2401.5	1754.7	197.1	158.7	120.9	84.1		
9	0.0	0.8	191.9	4735.7	3218.9	7568.3	2289.3	1740.9	194.5	157.5	114.7	83.7		
10	0.0	0.9	201.1	4415.9	3540.5	6861.6	2215.3	1750.8	191.2	153.4	112.1	81.9		
11	0.0	0.9	253.1	4180.3	3563.0	6426.2	2182.0	1792.6	189.9	152.8	110.1	81.9		
12	0.0	1.0	269.1	3685.4	3751.5	6145.1	2173.2	1778.6	188.0	150.5	110.6	80.5		
13	0.0	0.9	2262.3	3616.8	3944.0	5873.9	2179.8	1740.9	186.0	148.8	115.2	80.5		
14	0.0	0.5	2168.8	3696.9	4055.0	5719.1	2184.2	1967.4	184.7	147.0	109.2	79.0		
15	0.0	0.6	1818.7	3818.6	4247.8	5584.0	2120.4	1929.2	184.1	145.3	108.2	78.6		
16	0.0	0.4	1778.6	5212.4	5250.0	5457.5	1980.0	1709.5	182.8	144.2	107.7	77.3		
17	0.0	0.3	1719.3	5304.9	4791.1	5346.3	1938.8	264.5	182.2	141.9	107.7	74.4		
18	0.0	0.0	1869.4	6219.4	4568.0	5274.0	1912.6	259.9	181.5	140.2	105.7	73.6		
19	0.0	0.0	1992.0	5478.5	4919.6	5243.1	1887.9	256.1	180.3	139.1	105.2	73.2		
20	0.0	0.0	1746.8	7299.2	4982.8	5318.7	1900.2	252.3	179.6	136.9	102.3	72.8		
21	0.0	69.6	1691.9	7162.5	4742.2	5291.2	1923.0	248.6	179.0	135.2	99.5	72.0		
22	0.0	82.0	264.5	6624.8	4303.5	5260.3	1918.3	246.4	179.0	135.3	97.6	71.2		
23	0.1	76.5	979.6	7222.7	4241.7	5260.3	1912.6	242.7	178.4	132.5	96.2	69.6		
24	0.1	78.1	2208.6	5360.2	3992.9	5178.3	1885.8	239.7	177.7	131.4	94.4	68.0		
25	0.1	85.4	2011.0	6253.0	3548.9	5096.9	1845.0	235.3	176.5	129.8	93.5	66.1		
26	0.1	84.1	1902.3	5408.8	3409.5	5033.0	1798.6	231.0	175.8	128.7	92.1	2.1		
27	0.1	83.7	1784.6	4687.0	1678.3	4191.3	1748.8	228.2	175.2	129.7	91.2	2.1		
28	0.1	83.2	1889.9	6517.5	1918.8	3638.4	1736.9	226.0	174.0	128.2	89.8	2.0		
29	0.1	82.0	1937.5	4001.9		2618.1	1731.0	224.6	172.1	127.7	88.9	1.9		
30	0.1	79.4	2043.0	3357.2		2237.6	1723.2	222.5	170.2	127.1	94.8	1.9		
31	0.1		1950.0	3218.9		2188.7		219.0		126.6	92.1			
MEAN	0.3	27.1	1159.2	4880.1	3728.0	4578.6	2152.9	1032.7	186.9	145.4	107.3	66.5	1497.0	
MAX.	3.1	85.4	2262.3	7299.2	5250.0	7754.5	2882.2	1929.2	213.4	170.2	125.0	91.2	7754.5	
MIN.	0.0	0.0	85.4	2005.8	1678.3	1943.8	1723.2	219.0	170.2	126.6	88.9	1.9	0.0	

[Discharge Rating Curve]: Q=60.157\*(H-1.003)^2

[Flow Regime (m3/s)]:

Q(95day): 2188.7      Q(185day): 191.9      Q(275day): 89.4      Q(355day): 0.0

<<< MASTER PROGRAM for DB-05(Normal Year):Daily River W/L & Discharge >>>

*HM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1990/91											[WATER LEVEL (m)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	1.19	1.96	1.99	2.73	4.69	4.25	3.85	3.91	2.92	2.58	2.47	2.24	
2	1.30	1.96	1.97	2.74	4.69	4.28	3.94	3.78	2.90	2.57	2.47	2.23	
3	1.42	1.95	1.97	3.77	4.54	4.28	3.79	3.73	2.88	2.65	2.47	2.21	
4	1.53	1.93	1.98	3.34	4.56	4.24	3.72	3.65	2.87	2.54	2.46	2.20	
5	1.65	1.91	2.00	3.62	4.68	4.24	4.10	3.58	2.85	2.53	2.45	2.19	
6	1.76	1.90	2.02	4.42	4.59	4.26	4.59	3.49	2.84	2.52	2.45	2.18	
7	1.99	1.89	2.11	5.08	4.56	4.05	4.80	3.40	2.83	2.51	2.44	2.17	
8	2.00	1.88	2.06	5.51	4.70	4.01	4.91	3.35	2.82	2.51	2.44	2.16	
9	1.99	1.88	2.03	5.26	5.00	4.05	5.19	3.26	2.84	2.50	2.43	2.14	
10	1.98	1.87	2.05	4.67	5.86	4.02	5.31	3.22	2.80	2.49	2.42	2.13	
11	1.97	1.87	2.08	4.68	6.50	4.15	5.45	3.18	2.79	2.47	2.42	2.12	
12	1.97	1.87	2.01	5.66	6.54	4.27	5.58	3.14	2.78	2.47	2.41	2.11	
13	1.96	1.88	1.96	5.68	6.64	4.68	5.54	3.12	2.76	2.46	2.41	2.10	
14	1.95	1.88	1.97	5.82	6.97	4.96	5.42	3.12	2.76	2.45	2.40	2.09	
15	1.95	1.87	2.06	7.00	6.30	4.76	5.28	3.11	2.75	2.44	2.40	2.07	
16	1.94	1.87	2.10	6.23	6.46	4.69	5.16	3.10	2.74	2.44	2.38	2.06	
17	1.89	1.87	2.06	6.32	6.02	4.55	4.98	3.12	2.74	2.54	2.38	2.05	
18	1.87	1.88	2.04	5.61	5.73	4.49	4.67	3.12	2.73	2.53	2.38	2.04	
19	1.88	1.91	2.02	5.37	5.63	4.29	4.41	3.11	2.72	2.53	2.37	2.02	
20	1.91	1.89	2.06	5.12	5.50	4.13	4.24	3.10	2.71	2.53	2.36	2.00	
21	1.93	1.90	2.34	4.94	5.51	4.12	4.12	3.07	2.70	2.52	2.36	1.97	
22	1.94	1.90	2.20	4.91	5.25	4.00	4.09	3.05	2.69	2.44	2.34	1.95	
23	1.95	1.93	2.32	4.92	5.04	3.94	4.19	3.04	2.69	2.43	2.33	1.93	
24	1.95	1.95	2.18	4.97	4.75	3.80	4.24	3.03	2.67	2.42	2.31	1.91	
25	1.96	2.01	2.14	4.96	4.49	3.70	4.21	3.03	2.66	2.42	2.30	1.89	
26	1.93	2.04	2.12	4.94	4.22	3.62	4.27	3.02	2.66	2.41	2.29	1.86	
27	1.92	2.10	2.32	5.09	4.08	3.63	4.37	2.99	2.65	2.41	2.29	1.84	
28	1.93	2.10	2.44	5.31	4.07	3.68	4.36	2.96	2.62	2.40	2.28	1.82	
29	1.93	2.05	2.48	4.69		3.68	4.21	2.95	2.62	2.47	2.26	1.79	
30	1.93	2.01	2.44	4.78		3.71	4.03	2.94	2.59	2.46	2.26	1.77	
31	1.93		2.40	4.77		3.68		2.94		2.46	2.25		
MEAN	1.85	1.93	2.13	4.93	5.27	4.14	4.57	3.21	2.75	2.49	2.38	2.04	3.13
MAX.	2.00	2.10	2.48	7.00	6.97	4.96	5.58	3.91	2.92	2.65	2.47	2.24	7.00
MIN.	1.19	1.87	1.96	2.73	4.07	3.62	3.72	2.94	2.59	2.40	2.25	1.77	1.19

*QM* ST.: 5-940 LUANGWA BRIDGE		YEAR : 1990/91											[DISCHARGE (m3/sec)]
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
1	2.1	54.7	58.3	179.0	818.2	633.8	486.4	507.5	221.1	149.3	129.8	91.7	
2	5.5	54.7	56.5	182.2	816.8	647.0	520.4	463.8	216.9	147.6	130.3	90.0	
3	10.4	53.7	56.1	459.7	750.6	647.0	467.8	447.6	212.7	162.9	129.8	88.3	
4	16.9	51.6	57.9	329.6	761.0	630.2	442.6	422.0	208.6	142.5	127.7	86.6	
5	25.0	49.3	60.1	411.4	811.4	629.1	575.7	399.9	205.2	140.8	126.1	84.9	
6	34.6	48.3	61.9	703.5	774.1	639.8	772.8	373.0	203.8	139.1	126.1	83.2	
7	59.0	47.3	74.0	1001.9	762.3	557.7	867.6	344.3	201.1	137.5	124.5	81.6	
8	59.4	46.3	66.9	1220.7	823.6	544.4	917.0	332.2	198.5	136.3	123.4	80.0	
9	58.3	46.0	63.4	1090.6	961.9	557.7	1053.5	307.6	202.5	134.7	121.8	78.4	
10	57.2	45.7	65.7	808.7	1416.3	546.6	1117.3	295.3	193.2	132.5	120.8	76.8	
11	56.5	45.4	69.2	811.4	1818.7	596.3	1191.2	284.9	191.2	130.3	120.3	75.2	
12	55.8	45.7	61.6	1303.0	1845.0	641.0	1259.0	274.6	189.3	128.7	119.8	73.6	
13	54.7	46.3	55.4	1318.4	1914.7	814.1	1239.0	270.7	186.7	127.7	118.7	72.1	
14	54.4	46.0	55.8	1396.8	2142.5	943.0	1171.7	269.1	185.4	126.1	117.2	70.6	
15	54.0	44.7	66.9	2162.2	1688.0	849.6	1101.6	266.0	183.5	125.0	116.7	69.0	
16	52.3	44.7	72.0	1641.7	1792.6	818.2	1041.2	265.3	181.5	123.4	115.7	67.5	
17	47.0	45.4	66.9	1703.6	1515.9	757.1	950.2	269.1	180.9	141.9	114.7	66.1	
18	45.7	46.0	65.0	1274.2	1342.6	730.1	807.4	270.7	179.0	140.8	113.6	64.7	
19	46.7	49.3	62.7	1147.5	1286.0	649.4	698.5	266.0	177.1	140.2	112.1	61.9	
20	49.9	47.3	66.9	1020.0	1217.4	588.2	629.1	263.7	175.2	139.7	111.1	59.2	
21	51.3	48.3	108.2	934.3	1224.1	584.8	584.8	257.6	174.0	139.1	110.1	56.5	
22	52.7	48.3	85.8	919.9	1087.5	540.0	572.3	252.3	172.1	123.9	108.2	53.9	
23	54.4	52.0	104.8	921.3	978.1	518.2	612.6	250.1	170.2	122.9	106.2	51.4	
24	54.4	54.0	83.2	948.8	845.4	470.9	630.2	247.8	167.8	120.3	103.3	48.9	
25	55.4	61.2	77.7	940.0	730.1	436.7	617.3	247.1	166.0	120.8	101.4	46.5	
26	52.0	64.2	74.8	934.3	624.3	412.3	642.2	244.9	164.7	119.8	100.0	44.2	
27	50.9	72.8	103.8	1006.4	570.0	416.2	681.1	237.5	162.3	118.7	99.0	41.9	
28	51.3	72.4	123.9	1115.7	565.5	429.9	678.6	229.6	158.1	118.2	97.6	39.7	
29	51.3	65.3	130.9	816.8		431.7	619.6	228.9	156.9	129.8	95.8	37.5	
30	52.0	61.6	123.4	857.8		440.6	549.9	226.7	152.2	128.2	94.8	35.4	
31	52.0		117.2	855.1		431.7		224.6		128.2	93.5		
MEAN	45.9	52.0	77.3	981.2	1138.7	597.8	783.3	298.1	184.6	132.8	113.9	65.9	367.4
MAX.	59.4	72.8	130.9	2162.2	2142.5	943.0	1259.0	507.5	221.1	162.9	130.3	91.7	2162.2
MIN.	2.1	44.7	55.4	179.0	565.5	412.3	442.6	224.6	152.2	118.2	93.5	35.4	2.1

[Discharge Rating Curve]: Q=60.157\*(H-1.003)^2

[Flow Regime (m3/s)]:

Q(1day): 570.0      Q(185day): 142.5      Q(275day): 67.5      Q(355day): 44.2



CHAPTER - 3

HOURLY RIVER WATER LEVEL AND DISCHARGE

List of Stations Dealt in Study

No.	S T A T I O N S	Started Yr.	Disket No.	
			DB-06A	DB-06B
1	4-120 Mwambashi	1990/91		DB-06-01
2	4-130 Smith's Bridge	1990/91		DB-06-02
3	4-200 Mpatamato	1990/91		DB-06-03
4	4-941 Kaleya Dam Site	1990/91		DB-06-04
5	4-958 Uruaff Farm	1990/91		DB-06-05
6	5-030 Exchange Farm	1990/91		DB-06-06

[Note]

- (1) Stated Yr. : Year that water level recording started
- (2) Disket No. : Disket No. that files are compiled
- (3) DB-06A : File No. of HOURLY RIVER WATER LEVEL RECORD
- (4) DB-06B : File No. of HOURLY DISCHARGE RECORD



HOURLY RIVER WATER LEVEL ST.NO.4-120 MAMBASHI DEC./1990

[ WATER LEVEL m ]

HOURLY DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	0.76	0.77	0.83	0.81	0.80	0.79	0.79	1.05	0.83	0.83	0.83	0.92	0.81	0.82	0.84	0.94	1.01	1.06	1.09	1.08	1.04	1.00	0.98	0.94	0.95	1.01	0.95	2.14	1.58	1.45	1.47
2	0.76	0.77	0.83	0.81	0.80	0.79	0.79	1.01	0.83	0.83	0.83	0.91	0.81	0.82	0.84	0.94	1.02	1.05	1.09	1.07	1.04	0.99	0.98	0.94	0.98	1.01	0.95	2.18	1.68	1.45	1.47
3	0.76	0.77	0.83	0.81	0.80	0.79	0.79	0.97	0.83	0.83	0.84	0.90	0.81	0.83	0.85	0.94	1.02	1.05	1.09	1.07	1.04	0.99	0.98	0.94	0.97	1.02	0.95	2.30	1.64	1.44	1.46
4	0.76	0.78	0.83	0.81	0.80	0.78	0.79	0.94	0.82	0.83	0.84	0.87	0.81	0.83	0.85	0.94	1.02	1.07	1.09	1.06	1.04	0.99	0.98	0.94	0.96	1.02	0.95	1.93	1.59	1.43	1.45
5	0.75	0.79	0.83	0.81	0.79	0.78	0.79	0.91	0.82	0.83	0.84	0.85	0.81	0.83	0.85	0.95	1.02	1.07	1.09	1.06	1.04	0.99	0.98	0.94	0.96	1.01	0.95	1.82	1.55	1.43	1.44
6	0.76	0.79	0.83	0.81	0.80	0.78	0.79	0.90	0.82	0.83	0.83	0.84	0.81	0.83	0.86	0.95	1.02	1.08	1.09	1.05	1.04	0.99	0.97	0.94	0.97	1.00	0.95	1.70	1.53	1.43	1.44
7	0.76	0.79	0.82	0.81	0.80	0.78	0.79	0.88	0.82	0.83	0.83	0.84	0.81	0.83	0.86	0.95	1.02	1.08	1.09	1.05	1.03	0.99	0.97	0.94	0.98	1.00	0.95	1.52	1.51	1.43	1.43
8	0.76	0.80	0.82	0.81	0.80	0.79	0.79	0.88	0.82	0.83	0.83	0.83	0.81	0.83	0.87	0.95	1.03	1.08	1.09	1.05	1.03	0.99	0.97	0.94	0.99	0.99	0.95	1.55	1.50	1.43	1.43
9	0.76	0.80	0.82	0.81	0.80	0.79	0.79	0.88	0.82	0.82	0.83	0.83	0.81	0.83	0.87	0.97	1.03	1.09	1.09	1.05	1.03	0.99	0.97	0.94	1.01	0.98	0.95	1.51	1.51	1.43	1.42
10	0.76	0.80	0.82	0.81	0.79	0.79	0.78	0.88	0.83	0.82	0.82	0.83	0.84	0.82	0.87	0.97	1.03	1.09	1.09	1.05	1.02	0.99	0.97	0.94	1.03	0.98	0.95	1.46	1.52	1.44	1.42
11	0.77	0.80	0.82	0.81	0.79	0.79	0.78	0.88	0.83	0.82	0.82	0.82	0.82	0.82	0.88	0.98	1.03	1.10	1.09	1.05	1.02	0.99	0.97	0.94	1.05	0.98	0.95	1.41	1.53	1.44	1.42
12	0.77	0.81	0.82	0.81	0.79	0.79	0.78	0.88	0.83	0.82	0.82	0.83	0.82	0.82	0.89	0.99	1.03	1.10	1.10	1.05	1.01	0.99	0.96	0.94	1.05	0.97	0.95	1.38	1.53	1.45	1.43
13	0.77	0.81	0.81	0.80	0.79	0.79	0.78	0.88	0.83	0.82	0.82	0.83	0.82	0.82	0.90	0.99	1.04	1.11	1.10	1.04	1.01	1.00	0.96	0.94	1.05	0.97	0.95	1.35	1.53	1.46	1.41
14	0.77	0.81	0.82	0.80	0.79	0.79	0.78	0.88	0.83	0.82	0.82	0.83	0.82	0.82	0.90	1.00	1.04	1.11	1.10	1.04	1.01	1.00	0.96	0.95	1.05	0.97	0.95	1.33	1.53	1.47	1.41
15	0.77	0.82	0.82	0.80	0.79	0.79	0.78	0.87	0.83	0.82	0.81	0.83	0.81	0.82	0.90	1.00	1.04	1.11	1.10	1.05	1.01	0.99	0.96	0.95	1.04	0.97	0.95	1.32	1.52	1.48	1.43
16	0.77	0.82	0.83	0.80	0.79	0.79	0.78	0.87	0.83	0.82	0.81	0.83	0.81	0.82	0.91	1.00	1.04	1.11	1.10	1.05	1.00	0.99	0.96	0.96	1.02	0.97	0.95	1.30	1.52	1.49	1.40
17	0.77	0.82	0.83	0.80	0.79	0.79	0.78	0.87	0.83	0.82	0.81	0.83	0.81	0.82	0.91	1.01	1.04	1.11	1.09	1.04	1.00	0.99	0.96	0.96	1.01	0.97	0.95	1.29	1.51	1.51	1.40
18	0.77	0.82	0.83	0.80	0.79	0.79	0.78	0.86	0.83	0.84	0.81	0.82	0.81	0.82	0.92	1.01	1.05	1.11	1.09	1.04	1.00	0.99	0.95	0.95	1.01	0.96	0.96	1.29	1.51	1.51	1.40
19	0.77	0.82	0.83	0.80	0.79	0.79	0.78	0.85	0.83	0.83	0.81	0.82	0.81	0.83	0.92	1.01	1.04	1.11	1.09	1.03	1.00	0.99	0.95	0.96	1.01	0.96	0.97	1.31	1.51	1.53	1.40
20	0.76	0.82	0.83	0.80	0.79	0.79	0.78	0.84	0.83	0.83	0.80	0.82	0.81	0.83	0.92	1.01	1.05	1.10	1.09	1.03	0.99	0.99	0.95	0.96	1.01	0.96	1.01	1.39	1.51	1.53	1.40
21	0.76	0.82	0.82	0.80	0.79	0.79	0.78	0.84	0.83	0.83	0.80	0.82	0.81	0.83	0.93	1.01	1.05	1.10	1.09	1.03	0.99	0.98	0.95	0.96	1.01	0.96	1.10	1.48	1.50	1.52	1.40
22	0.76	0.83	0.82	0.79	0.79	0.79	0.85	0.84	0.83	0.83	0.81	0.81	0.81	0.83	0.93	1.01	1.05	1.10	1.08	1.03	0.99	0.98	0.94	0.96	1.01	0.96	1.21	1.55	1.48	1.51	1.41
23	0.76	0.83	0.81	0.79	0.79	0.79	0.84	0.83	0.83	0.83	0.82	0.81	0.82	0.83	0.93	1.01	1.05	1.09	1.08	1.03	0.99	0.98	0.94	0.95	1.01	0.95	1.43	1.61	1.48	1.50	1.40
24	0.76	0.83	0.81	0.80	0.79	0.79	1.05	0.83	0.83	0.83	0.90	0.81	0.82	0.84	0.94	1.01	1.05	1.09	1.08	1.04	0.99	0.98	0.94	0.95	1.01	0.95	1.76	1.66	1.47	1.48	1.40
MEAN	0.76	0.81	0.82	0.80	0.79	0.79	0.81	0.89	0.83	0.83	0.82	0.84	0.81	0.83	0.89	0.98	1.03	1.09	1.09	1.05	1.01	0.99	0.96	0.95	1.01	0.98	1.03	1.59	1.54	1.47	1.43
MAX.	0.77	0.83	0.83	0.81	0.80	0.79	1.05	1.05	0.83	0.84	0.90	0.92	0.84	0.84	0.94	1.01	1.05	1.11	1.10	1.08	1.04	1.00	0.98	0.96	1.05	1.02	1.76	2.30	1.68	1.53	1.72
MIN.	0.76	0.77	0.81	0.79	0.79	0.78	0.78	0.83	0.82	0.82	0.80	0.81	0.81	0.82	0.84	0.94	1.01	1.05	1.08	1.03	0.99	0.98	0.94	0.94	0.95	0.95	0.95	1.25	1.47	1.43	1.43

HOURLY RIVER DISCHARGE ST.NO.4-120 MAMBASHI DEC./1990

Applied Equation:  $Q = 1.989*(H-0.019)^2$  (H < 2.920 m)  
 $Q = 6.058*(H-1.262)^2$  (H >= 2.920 m)

[ DISCHARGE m<sup>3</sup>/s ]

HOURLY DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	1.1	1.1	1.3	1.2	1.2	1.2	2.1	1.3	1.3	1.3	1.6	1.3	1.3	1.3	1.7	2.0	2.1	2.3	2.2	2.1	1.9	1.8	1.7	1.7	2.0	1.7	9.0	5.5	4.1	4.2	
2	1.1	1.1	1.3	1.3	1.2	1.2	2.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3	1.7	2.0	2.1	2.3	2.2	2.1	1.9	1.8	1.7	1.8	2.0	1.7	9.3	5.5	4.1	4.2	
3	1.1	1.1	1.3	1.3	1.2	1.2	1.8	1.3	1.3	1.3	1.5	1.3	1.3	1.4	1.7	2.0	2.2	2.3	2.2	2.1	1.9	1.8	1.7	1.8	2.0	1.7	10.4	5.2	4.0	4.1	
4	1.1	1.2	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.3	1.3	1.4	1.7	2.0	2.2	2.3	2.2	2.1	1.9	1.8	1.7	1.8	2.0	1.7	7.3	4.9	4.0	4.1	
5	1.1	1.2	1.3	1.3	1.2	1.2	1.6	1.3	1.3	1.3	1.4	1.3	1.3	1.4	1.7	2.0	2.2	2.3	2.1	2.1	1.9	1.8	1.7	1.8	1.9	1.7	6.5	4.7	4.0	4.0	
6	1.1	1.2	1.3	1.3	1.2	1.2	1.5	1.3	1.3	1.3	1.4	1.3	1.3	1.4	1.7	2.0	2.2	2.3	2.1	2.1	1.9	1.8	1.7	1.8	1.9	1.7	5.6	4.6	4.0	4.0	
7	1.1	1.2	1.3	1.3	1.2	1.2	1.5	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.8	2.0	2.2	2.3	2.1	2.0	1.9	1.8	1.7	1.9	1.9	1.7	5.1	4.5	4.0	4.0	
8	1.1	1.2	1.3	1.2	1.2	1.2	1.5	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.8	2.0	2.2	2.3	2.1	2.0	1.9	1.8	1.7	1.9	1.9	1.7	4.7	4.4	4.0	3.9	
9	1.1	1.2	1.3	1.2	1.2	1.2	1.5	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.8	2.0	2.3	2.3	2.1	2.0	1.9	1.8	1.7	1.9	1.9	1.7	4.4	4.4	4.0	3.9	
10	1.1	1.2	1.3	1.2	1.2	1.2	1.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.5	1.8	2.0	2.3	2.3	2.1	2.0	1.9	1.8	1.7	1.9	1.7	4.1	4.5	4.0	3.9	
11	1.1	1.2	1.3	1.2	1.2	1.2	1.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.5	1.9	2.0	2.3	2.3	2.1	2.0	1.9	1.8	1.7	1.9	1.7	3.9	4.6	4.0	3.8	
12	1.1	1.2	1.3	1.2	1.2	1.2	1.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.5	1.9	2.0	2.3	2.3	2.1	2.0	1.9	1.8	1.7	1.9	1.7	3.7	4.6	4.1	3.9	
13	1.1	1.3	1.3	1.2	1.2	1.2	1.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.5	1.9	2.1	2.4	2.3	2.1	2.0	1.9	1.8	1.7	1.9	1.7	3.5	4.6	4.1	3.9	
14	1.1	1.3	1.3	1.2	1.2	1.2	1.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.5	1.9	2.1	2.4	2.3	2.1	1.9	1.8	1.7	1.9	1.7	3.4	4.5	4.2	3.8		
15	1.1	1.3	1.3	1.2	1.2	1.2	1.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.6	1.9															

HOURLY RIVER WATER LEVEL ST.NO.4-120 MAMBASHI JAN./1991

[ WATER LEVEL m ]

HOUR(DATE)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	1.40	1.45	1.42	1.42	1.62	1.84	1.64	1.76	1.76	1.77	2.02	1.89	1.94	2.07	2.25	2.41	2.30	2.30	2.21	2.11	2.08	2.19	2.05	1.92	1.90	2.20	2.58	2.87	3.52	4.39	3.79
2	1.41	1.45	1.42	1.43	1.61	1.82	1.63	1.76	1.75	1.77	2.02	1.90	1.95	2.06	2.10	2.40	2.29	2.33	2.20	2.11	2.07	2.18	2.05	1.92	1.90	2.19	2.80	2.94	3.53	4.59	3.77
3	1.41	1.45	1.42	1.47	1.61	1.81	1.62	1.77	1.76	1.78	2.02	1.92	1.95	2.06	2.27	2.39	2.29	2.34	2.20	2.11	2.07	2.18	2.04	1.92	1.90	2.19	2.92	2.97	3.54	4.22	3.76
4	1.41	1.44	1.42	1.54	1.60	1.80	1.62	1.77	1.76	1.78	2.03	1.94	1.95	2.05	2.29	2.39	2.29	2.33	2.21	2.10	2.07	2.17	2.04	1.92	1.91	2.20	2.97	3.01	3.55	4.16	3.74
5	1.41	1.44	1.42	1.56	1.60	1.79	1.62	1.77	1.76	1.78	2.03	1.94	2.06	2.05	2.32	2.38	2.29	2.33	2.22	2.10	2.07	2.16	2.03	1.92	1.98	2.21	2.97	3.07	3.57	4.13	3.73
6	1.42	1.44	1.42	1.58	1.63	1.79	1.62	1.77	1.76	1.79	2.03	1.93	2.09	2.06	2.36	2.37	2.29	2.33	2.22	2.10	2.07	2.15	2.02	1.92	2.07	2.22	2.95	3.13	3.58	4.11	3.71
7	1.42	1.44	1.42	1.58	1.64	1.77	1.62	1.77	1.76	1.79	2.03	1.92	2.12	2.07	2.41	2.36	2.29	2.34	2.21	2.10	2.13	2.15	2.02	1.92	2.10	2.25	2.92	3.20	3.60	4.11	3.70
8	1.42	1.44	1.42	1.60	1.67	1.66	1.63	1.77	1.76	1.79	2.03	1.91	2.15	2.08	2.45	2.36	2.29	2.33	2.21	2.10	2.15	2.14	2.01	1.92	2.15	2.26	2.88	3.35	3.61	4.10	3.68
9	1.42	1.44	1.42	1.61	1.76	1.76	1.64	1.77	1.76	1.79	2.03	1.95	2.15	2.09	2.41	2.36	2.29	2.33	2.20	2.10	2.17	2.14	2.01	1.92	2.24	2.28	2.83	3.43	3.62	4.08	3.67
10	1.43	1.43	1.42	1.61	1.87	1.75	1.66	1.77	1.76	1.80	1.96	1.97	2.15	2.09	2.61	2.35	2.28	2.33	2.20	2.10	2.27	2.13	2.00	1.92	2.29	2.30	2.80	3.45	3.63	4.05	3.66
11	1.43	1.43	1.42	1.61	1.91	1.73	1.66	1.77	1.76	1.80	1.89	1.98	2.15	2.10	2.64	2.35	2.28	2.31	2.19	2.10	2.36	2.13	1.99	1.91	2.31	2.33	2.76	3.47	3.64	4.04	3.73
12	1.43	1.43	1.42	1.60	1.94	1.73	1.67	1.77	1.76	1.80	1.95	1.98	2.15	2.11	2.65	2.34	2.28	2.30	2.19	2.10	2.09	2.12	1.99	1.91	2.31	2.36	2.73	3.47	3.65	4.02	3.64
13	1.43	1.43	1.42	1.60	1.99	1.71	1.69	1.77	1.76	1.80	1.88	1.97	2.14	2.12	2.64	2.34	2.28	2.29	2.18	2.10	2.09	2.12	1.98	1.91	2.34	2.39	2.71	3.46	3.65	4.01	3.62
14	1.44	1.43	1.42	1.60	2.01	1.70	1.71	1.77	1.76	1.80	1.88	1.98	2.15	2.12	2.61	2.33	2.27	2.28	2.18	2.10	2.09	2.12	1.97	1.91	2.38	2.40	2.69	3.44	3.67	3.99	3.61
15	1.44	1.42	1.42	1.61	2.02	1.69	1.73	1.77	1.76	1.80	1.88	1.95	2.20	2.13	2.59	2.33	2.26	2.27	2.17	2.10	2.36	2.11	1.96	1.91	2.40	2.42	2.67	3.42	3.70	3.97	3.60
16	1.44	1.42	1.42	1.62	2.02	1.68	1.75	1.77	1.76	1.81	1.88	1.94	2.22	2.14	2.59	2.33	2.26	2.26	2.16	2.10	2.34	2.10	1.96	1.91	2.40	2.43	2.67	3.41	3.73	3.95	3.59
17	1.44	1.42	1.42	1.63	2.00	1.66	1.75	1.76	1.76	1.81	1.87	1.94	2.22	2.14	2.56	2.32	2.26	2.26	2.15	2.09	2.32	2.10	1.95	1.90	2.39	2.43	2.67	3.40	3.77	3.93	3.58
18	1.44	1.42	1.41	1.64	1.98	1.65	1.76	1.76	1.76	1.81	1.87	1.93	2.21	2.15	2.53	2.32	2.26	2.25	2.15	2.09	2.31	2.09	1.94	1.90	2.35	2.43	2.67	3.41	3.81	3.91	3.57
19	1.45	1.42	1.41	1.64	1.95	1.64	1.76	1.76	1.76	1.82	1.87	1.93	2.19	2.16	2.51	2.31	2.25	2.25	2.14	2.09	2.29	2.09	1.94	1.90	2.41	2.43	2.69	3.44	3.83	3.90	3.56
20	1.45	1.42	1.41	1.64	1.93	1.64	1.76	1.76	1.76	1.82	1.87	1.93	2.16	2.16	2.48	2.31	2.25	2.24	2.13	2.09	2.27	2.08	1.93	1.90	2.29	2.42	2.72	3.44	4.04	3.88	3.55
21	1.45	1.42	1.41	1.63	1.91	1.64	1.75	1.76	1.76	1.82	1.86	1.94	2.14	2.19	2.46	2.30	2.29	2.23	2.19	2.08	2.26	2.08	1.93	1.90	2.26	2.46	2.76	3.46	4.65	3.65	3.54
22	1.45	1.42	1.41	1.63	1.88	1.65	1.75	1.76	1.77	1.82	1.87	1.94	2.12	2.21	2.45	2.30	2.28	2.23	2.12	2.08	2.24	2.07	1.92	1.90	2.25	2.48	2.80	3.48	4.72	3.84	3.54
23	1.45	1.42	1.41	1.62	1.87	1.65	1.75	1.76	1.77	1.83	1.87	1.94	2.09	2.23	2.44	2.30	2.28	2.22	2.12	2.08	2.23	2.07	1.92	1.90	2.23	2.49	2.83	3.50	4.61	3.82	3.53
24	1.45	1.42	1.41	1.62	1.85	1.65	1.76	1.76	1.77	1.83	1.87	1.94	2.09	2.24	2.42	2.30	2.27	2.21	2.12	2.08	2.21	2.06	1.92	1.90	2.21	2.56	2.85	3.51	4.50	3.80	3.52
MEAN	1.43	1.43	1.42	1.59	1.83	1.72	1.69	1.77	1.76	1.81	1.94	1.94	2.11	2.12	2.46	2.34	2.28	2.29	2.18	2.10	2.19	2.12	1.98	1.91	2.16	2.35	2.78	3.32	3.82	4.03	3.64
MAX.	1.45	1.45	1.42	1.64	2.02	1.84	1.76	1.77	1.77	2.12	2.03	1.98	2.22	2.24	2.85	2.41	2.30	2.34	2.22	2.11	2.36	2.19	2.05	1.92	2.40	2.56	2.97	3.51	4.72	4.59	3.79
MIN.	1.40	1.42	1.41	1.42	1.60	1.64	1.82	1.76	1.75	1.77	1.86	1.88	1.94	2.05	2.10	2.30	2.25	2.21	2.12	2.08	2.07	2.06	1.92	1.90	1.41	2.19	2.58	2.87	3.52	3.80	3.52

HOURLY RIVER DISCHARGE ST.NO.4-120 MAMBASHI JAN./1991

Applied Equation:  $Q = 1.589H^{0.0193} \cdot 2 (H < 2.920 \text{ m})$   
 $Q = 6.058H^{1.262} \cdot 2 (H \geq 2.920 \text{ m})$

[ DISCHARGE m<sup>3</sup>/s ]

HOUR(DATE)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	3.8	4.1	3.9	3.9	5.1	6.6	5.2	6.0	6.0	6.1	7.9	6.9	7.4	8.3	9.9	11.4	10.3	10.4	9.5	8.7	8.4	9.4	8.2	7.2	7.1	9.5	13.0	16.2	30.8	59.0	38.7
2	3.8	4.1	3.9	4.0	5.0	6.5	5.1	6.1	6.0	6.1	8.0	7.0	7.4	8.3	8.6	11.3	10.3	10.7	9.5	8.7	8.4	9.3	8.2	7.2	7.1	9.4	15.4	17.0	31.1	67.0	38.2
3	3.8	4.1	3.9	4.2	5.0	6.4	5.1	6.1	6.0	6.1	8.0	7.2	7.4	8.3	10.1	11.2	10.3	10.7	9.5	8.7	8.4	9.1	8.1	7.2	7.1	9.4	16.7	17.1	31.5	52.8	37.7
4	3.9	4.0	3.9	4.6	5.0	6.3	5.1	6.1	6.0	6.2	8.0	7.4	7.4	8.2	10.2	11.1	10.3	10.7	9.5	8.6	8.4	9.2	8.1	7.2	7.1	9.5	17.6	18.5	31.7	50.9	37.3
5	3.9	4.0	3.9	4.7	5.0	6.3	5.1	6.1	6.0	6.2	8.0	7.4	8.3	8.2	10.5	11.1	10.3	10.6	9.6	8.6	8.3	9.1	8.0	7.2	7.7	9.5	17.7	19.8	32.2	49.8	36.8
6	3.9	4.0	3.9	4.9	5.2	6.2	5.1	6.1	6.0	6.2	8.0	7.3	8.6	8.3	10.9	11.0	10.2	10.6	9.6	8.6	8.4	9.1	8.0	7.2	8.4	9.6	17.3	21.2	32.6	49.3	36.4
7	3.9	4.0	3.9	4.9	5.2	6.1	5.1	6.1	6.0	6.2	8.0	7.2	8.8	8.3	11.4	10.9	10.2	10.7	9.6	8.6	8.9	9.0	7.9	7.2	8.6	9.9	16.7	22.8	33.2	49.3	35.9
8	3.9	4.0	3.9	5.0	5.4	6.1	5.2	6.1	6.0	6.2	8.0	7.1	9.0	8.4	11.8	10.9	10.2	10.7	9.5	8.6	9.0	9.0	7.9	7.2	9.0	10.0	18.3	26.5	33.5	48.7	35.5
9	3.9	4.0	3.9	5.0	6.0	6.0	5.2	6.1	6.0	6.3	8.0	7.4	9.1	8.5	11.4	10.9	10.2	10.6	9.5	8.6	9.2	8.9	7.8	7.2	9.8	10.2	15.8	28.4	33.8	48.0	35.1
10	3.9	4.0	3.9	5.0	6.8	5.9	5.3	6.1	6.0	6.3	7.5	7.6	9.1	8.6	13.3	10.8	10.2	10.6	9.5	8.6	10.1	8.9	7.9	7.2	10.3	10.4	15.4	29.1	34.1	47.2	34.8
11	3.9	4.0	3.9	5.0	7.1	5.9	5.4	6.1	6.0	6.3	7.0	7.7	9.1	8.6	13.7	10.8	10.2	10.4	9.4	8.6	10.9	8.8	7.7	7.1	10.4	10.6	15.0	29.7	34.2	46.6	36.9
12	4.0	4.0	3.9	5.0	7.4	5.8	5.4	6.1	6.0	6.3	7.4	7.6	9.0	8.7	13.8	10.7	10.2	10.3	9.4	8.6	8.5	8.8	7.7	7.1	10.4	10.9	14.7	29.6	34.4	46.2	34.3
13	4.0	3.9	3.9	5.0	7.7	5.7	5.5	6.1	6.0	6.3	6.9	7.6	9.0	8.8	13.6	10.7	10.1	10.2	9.3	8.6	8.6	8.8	7.6	7.1	10.8	11.1	14.4	29.2	34.7	45.6	33.7
14	4.0	3.9	3.9	5.0	7.9	5.6	5.7	6.1	6.0	6.3	6.9	7.5	9.2	8.8	13.4	10.6	1														

HOURLY RIVER WATER LEVEL ST.NO.4-120 MWMBASHI FEB./1991

[ WATER LEVEL m ]

HR	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
1		3.51	3.27	3.15	2.99	2.78	2.60	2.55	2.60	2.37	2.40	2.31	2.36	2.69	2.83	3.13	3.41	3.25	3.08	2.95	2.80	2.70	2.34	2.20	2.11	2.01	2.04	2.11	2.08							
2		3.50	3.27	3.14	2.98	2.77	2.59	2.55	2.59	2.36	2.41	2.31	2.40	2.71	2.83	3.15	3.41	3.24	3.07	2.94	2.79	2.69	2.33	2.20	2.10	2.01	2.03	2.08	2.08							
3		3.49	3.26	3.14	2.98	2.76	2.59	2.55	2.59	2.36	2.42	2.31	2.42	2.72	2.83	3.18	3.40	3.23	3.06	2.94	2.90	2.69	2.33	2.19	2.10	2.01	2.02	2.08	2.08							
4		3.49	3.26	3.13	2.97	2.75	2.59	2.55	2.59	2.35	2.42	2.31	2.44	2.74	2.85	3.19	3.40	3.22	3.06	2.93	2.79	2.68	2.32	2.19	2.10	2.02	2.02	2.08	2.08							
5		3.47	3.25	3.12	2.96	2.75	2.59	2.55	2.58	2.35	2.42	2.30	2.47	2.75	2.87	3.22	3.40	3.22	3.05	2.93	2.78	2.67	2.31	2.19	2.09	2.02	2.02	2.07	2.08							
6		3.47	3.24	3.12	2.95	2.74	2.59	2.55	2.53	2.34	2.42	2.30	2.50	2.76	2.90	3.24	3.39	3.21	3.05	2.92	2.78	2.69	2.31	2.19	2.09	2.02	2.01	2.07	2.08							
7		3.46	3.24	3.12	2.94	2.73	2.59	2.55	2.54	2.34	2.42	2.30	2.51	2.77	2.96	3.27	3.35	3.20	3.04	2.91	2.78	2.65	2.31	2.18	2.08	2.03	2.01	2.06	2.08							
8		3.44	3.23	3.11	2.94	2.72	2.59	2.55	2.54	2.34	2.42	2.30	2.54	2.78	2.99	3.29	3.38	3.20	3.04	2.90	2.77	2.65	2.30	2.18	2.08	2.03	2.01	2.05	2.08							
9		3.44	3.22	3.10	2.92	2.71	2.58	2.54	2.52	2.33	2.42	2.30	2.57	2.78	3.06	3.31	3.37	3.19	3.03	2.90	2.77	2.64	2.30	2.17	2.08	2.04	2.01	2.05	2.07							
10		3.43	3.22	3.10	2.92	2.71	2.58	2.54	2.57	2.33	2.41	2.30	2.59	2.79	3.10	3.33	3.36	3.18	3.03	2.89	2.77	2.63	2.29	2.17	2.07	2.04	2.01	2.04	2.07							
11		3.42	3.21	3.09	2.91	2.69	2.57	2.54	2.50	2.33	2.40	2.30	2.59	2.83	3.12	3.35	3.35	3.17	3.03	2.89	2.77	2.62	2.28	2.16	2.07	2.04	2.00	2.04	2.07							
12		3.41	3.21	3.08	2.90	2.69	2.57	2.53	2.48	2.32	2.39	2.30	2.80	2.83	3.12	3.37	3.35	3.17	3.02	2.87	2.76	2.62	2.27	2.16	2.07	2.05	2.00	2.04	2.07							
13		3.41	3.20	3.08	2.89	2.68	2.57	2.52	2.47	2.32	2.38	2.30	2.61	2.83	3.10	3.38	3.34	3.16	3.02	2.87	2.76	2.62	2.26	2.15	2.06	2.07	2.00	2.07	2.07							
14		3.40	3.20	3.07	2.88	2.67	2.55	2.51	2.46	2.31	2.37	2.30	2.62	2.83	3.09	3.39	3.33	3.15	3.01	2.86	2.76	2.61	2.25	2.15	2.06	2.09	2.00	2.08	2.07							
15		3.38	3.19	3.06	2.87	2.66	2.55	2.51	2.45	2.31	2.37	2.30	2.62	2.84	3.07	3.40	3.32	3.15	3.01	2.85	2.75	2.40	2.25	2.14	2.05	2.11	1.99	2.10	2.07							
16		3.35	3.19	3.06	2.86	2.65	2.55	2.52	2.44	2.31	2.36	2.30	2.62	2.84	3.06	3.41	3.31	3.14	3.00	2.84	2.75	2.40	2.25	2.14	2.05	2.11	1.99	2.09	2.07							
17		3.35	3.18	3.05	2.85	2.64	2.55	2.55	2.43	2.30	2.35	2.30	2.62	2.84	3.05	3.41	3.30	3.13	3.00	2.84	2.74	2.40	2.24	2.13	2.04	2.10	1.99	2.09	2.07							
18		3.32	3.18	3.04	2.84	2.63	2.55	2.57	2.42	2.30	2.34	2.30	2.62	2.84	3.05	3.42	3.30	3.12	2.99	2.83	2.74	2.38	2.23	2.13	2.04	2.09	1.99	2.09	2.07							
19		3.31	3.17	3.03	2.83	2.62	2.55	2.59	2.41	2.30	2.34	2.30	2.63	2.84	3.05	3.42	3.29	3.12	2.98	2.82	2.73	2.37	2.23	2.13	2.04	2.08	1.99	2.09	2.07							
20		3.31	3.17	3.03	2.83	2.62	2.55	2.59	2.40	2.30	2.33	2.31	2.63	2.84	3.05	3.42	3.28	3.11	2.98	2.82	2.73	2.37	2.22	2.12	2.03	2.07	2.02	2.08	2.07							
21		3.30	3.17	3.02	2.82	2.61	2.55	2.60	2.40	2.32	2.33	2.31	2.64	2.83	3.06	3.42	3.27	3.10	2.97	2.81	2.72	2.36	2.22	2.12	2.03	2.07	2.07	2.08	2.07							
22		3.29	3.15	3.01	2.80	2.61	2.55	2.61	2.39	2.34	2.33	2.31	2.65	2.83	3.07	3.42	3.27	3.11	2.97	2.81	2.72	2.36	2.22	2.12	2.02	2.05	2.13	2.08	2.07							
23		3.29	3.15	3.01	2.80	2.61	2.55	2.61	2.39	2.36	2.32	2.32	2.67	2.83	3.09	3.42	3.26	3.09	2.97	2.81	2.71	2.35	2.21	2.11	2.02	2.05	2.14	2.08	2.07							
24		3.28	3.15	3.00	2.79	2.60	2.55	2.61	2.37	2.39	2.32	2.34	2.68	2.83	3.11	3.42	3.25	3.08	2.96	2.80	2.70	2.34	2.21	2.11	2.02	2.04	2.13	2.08	2.07							
MEAN		3.40	3.21	3.08	2.89	2.68	2.57	2.56	2.49	2.33	2.38	2.31	2.57	2.80	3.01	3.33	3.34	3.16	2.99	2.87	2.76	2.52	2.27	2.16	2.06	2.05	2.03	2.07	2.07							
MAX.		3.51	3.27	3.15	2.99	2.78	2.60	2.61	2.60	2.39	2.42	2.34	2.68	2.84	3.12	3.42	3.41	3.25	3.08	2.95	2.90	2.70	2.34	2.20	2.11	2.11	2.14	2.11	2.08							
MIN.		3.28	3.15	3.00	2.79	2.60	2.55	2.51	2.37	2.30	2.32	2.30	2.36	2.69	2.83	3.13	3.25	3.08	2.44	2.80	2.70	2.34	2.21	2.11	2.02	2.01	1.99	2.04	2.07							

HOURLY RIVER DISCHARGE ST.NO.4-120 MWMBASHI FEB./1991 Applied Equation:

$Q = 1.989*(H-0.019)^2$  (H < 2.920 m)  
 $Q = 6.058*(H-1.262)^2$  (H >= 2.920 m)

[ DISCHARGE m<sup>3</sup>/s ]

HR	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
1		30.1	24.5	21.5	18.2	15.2	13.2	12.8	13.2	11.0	11.3	10.5	10.9	14.2	15.7	21.1	28.0	23.8	19.9	17.3	15.4	14.3	10.7	9.5	8.7	7.9	8.1	8.1	8.5							
2		30.4	24.4	21.4	18.0	15.1	13.2	12.8	13.2	10.9	11.4	10.4	11.3	14.4	15.7	21.6	27.9	23.7	19.8	17.1	15.3	14.2	10.6	9.5	8.6	7.9	8.0	8.5	8.5							
3		30.2	24.2	21.3	18.0	15.0	13.2	12.8	13.2	10.9	11.4	10.4	11.4	14.6	15.8	22.3	27.8	23.6	19.7	17.0	15.5	14.1	10.6	9.4	8.6	7.9	8.0	8.4	8.5							
4		30.0	24.1	21.1	17.6	14.9	13.2	12.8	13.2	10.8	11.5	10.4	11.6	14.7	15.9	22.6	27.7	23.3	19.6	16.9	15.2	14.0	10.6	9.4	8.6	7.9	8.0	8.4	8.5							
5		29.6	23.9	21.0	17.5	14.8	13.2	12.8	13.0	10.8	11.5	10.4	12.0	14.8	16.2	23.2	27.6	23.1	19.4	16.8	15.2	13.9	10.5	9.4	8.5	7.9	7.9	8.4	8.5							
6		29.4	23.8	20.9	17.3	14.7	13.2	12.8	12.5	10.8	11.5	10.4	12.2	14.9	16.6	23.8	27.4	23.0	19.3	16.7	15.2	14.2	10.5	9.3	8.5	8.0	7.9	8.3	8.4							
7		29.2	23.6	20.8	17.1	14.7	13.2	12.8	12.7	10.7	11.5	10.4	12.4	15.0	17.4	24.4	26.5	22.8	11.6	16.6	15.1	13.8	10.4	9.3	8.5	8.0	7.9	8.3	8.4							
8		28.8	23.5	20.7	17.0	14.5	13.1	12.7	12.6	10.7	11.5	10.4	12.6	15.2	18.1	25.0	27.1	22.8	19.1	16.6	15.1	13.7	10.4	9.3	8.5	8.1	7.9	8.2	8.4							
9		28.7	23.3	20.5	16.7	14.4	13.1	12.7	12.5	10.6	11.4	10.4	12.9	15.2	19.5	25.4	26.9	22.5	19.0	16.5	15.1	13.6	10.3	9.2	8.4	8.1	7.8	8.2	8.4							
10		28.4	23.3	20.4	16.7	14.4	13.1	12.6	12.9	10.6	11.4	10.4	13.2	15.3	20.5	26.0	26.7	22.3	18.9	16.4	15.1	13.6	10.3	9.2	8.4	8.1	7.8	8.1	8.4							
11		28.2	23.0	20.3	16.6	14.2	13.0	12.6	12.2	10.6	11.3	10.4	13.2	15.7	20.8	26.5	26.5	22.1	18.9	16.3	15.0	13.5	10.2	9.1	8.4	8.1	7.8	8.1	8.4							
12		28.0	23.0	20.1	16.5	14.2	12.9	12.5	12.1	10.6	11.2	10.4	13.3	15.7	20.8	26.9	26.3	22.1	18.7	16.2	15.0	13.4	10.1	9.1	8.3	8.2	7.8	8.1	8.4							
13		28.0	22.8	19.9																																

HR.(DATE)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
1	2.08	2.07	2.27	2.33	2.42	2.39	2.38	2.74	2.95	2.74	2.62	2.59	2.74	2.62	2.48	2.35	2.36	2.44	2.35	2.44	2.60	2.90	3.06	3.17	3.01	2.87	3.19	3.10	2.97	2.80	2.71	
2	2.08	2.08	2.28	2.33	2.42	2.39	2.39	2.76	2.96	2.73	2.62	2.59	2.74	2.60	2.47	2.35	2.36	2.44	2.34	2.44	2.80	2.90	3.08	3.16	3.00	2.87	3.21	3.10	2.97	2.80	2.70	
3	2.08	2.09	2.28	2.34	2.42	2.38	2.40	2.77	2.97	2.73	2.62	2.60	2.74	2.61	2.47	2.39	2.36	2.44	2.32	2.45	2.80	2.90	3.08	3.15	3.00	2.86	3.20	3.10	2.95	2.79	2.70	
4	2.08	2.10	2.30	2.35	2.43	2.38	2.42	2.80	2.97	2.72	2.61	2.61	2.74	2.61	2.45	2.33	2.37	2.44	2.30	2.47	2.61	2.91	3.09	3.15	2.99	2.85	3.19	3.10	2.95	2.79	2.70	
5	2.09	2.11	2.31	2.35	2.43	2.37	2.43	2.81	2.97	2.71	2.60	2.62	2.73	2.59	2.45	2.33	2.38	2.44	2.30	2.56	2.81	2.91	3.09	3.14	2.99	2.85	3.17	3.10	2.94	2.79	2.69	
6	2.08	2.11	2.32	2.36	2.43	2.37	2.45	2.82	2.97	2.70	2.60	2.62	2.73	2.59	2.44	2.34	2.38	2.44	2.30	2.61	2.81	2.93	3.10	3.14	2.98	2.84	3.14	3.10	2.93	2.75	2.59	
7	2.08	2.12	2.32	2.36	2.42	2.37	2.46	2.84	2.96	2.70	2.60	2.64	2.72	2.58	2.45	2.32	2.38	2.44	2.32	2.62	2.82	2.93	3.11	3.14	2.97	2.83	3.15	3.09	2.92	2.78	2.59	
8	2.08	2.19	2.33	2.37	2.42	2.37	2.47	2.85	2.95	2.69	2.60	2.65	2.71	2.58	2.44	2.29	2.37	2.44	2.36	2.68	2.82	2.94	3.11	3.13	2.96	2.82	3.11	3.09	2.92	2.78	2.68	
9	2.07	2.27	2.33	2.37	2.42	2.37	2.49	2.87	2.94	2.69	2.59	2.65	2.71	2.56	2.44	2.30	2.39	2.45	2.41	2.71	2.82	2.94	3.12	3.12	2.95	2.82	3.12	3.09	2.90	2.78	2.58	
10	2.07	2.31	2.34	2.37	2.42	2.36	2.51	2.87	2.93	2.68	2.59	2.67	2.70	2.55	2.44	2.30	2.39	2.45	2.41	2.74	2.83	2.94	3.12	3.12	2.94	2.81	3.08	3.08	2.88	2.77	2.68	
11	2.07	2.31	2.34	2.38	2.42	2.36	2.54	2.88	2.91	2.69	2.58	2.68	2.70	2.55	2.43	2.30	2.39	2.45	2.40	2.80	2.83	2.95	3.13	3.11	2.94	2.80	3.06	3.08	2.88	2.77	2.67	
12	2.07	2.31	2.34	2.38	2.42	2.36	2.55	2.89	2.91	2.67	2.58	2.68	2.70	2.55	2.42	2.30	2.40	2.45	2.40	2.93	2.83	2.96	3.14	3.11	2.93	2.80	3.05	3.08	2.87	2.76	2.67	
13	2.07	2.30	2.34	2.39	2.41	2.36	2.57	2.90	2.91	2.67	2.58	2.70	2.68	2.55	2.42	2.30	2.41	2.45	2.42	2.93	2.84	2.97	3.14	3.09	2.92	2.79	3.05	3.08	2.85	2.76	2.67	
14	2.07	2.27	2.34	2.39	2.41	2.36	2.50	2.90	2.90	2.66	2.57	2.71	2.68	2.53	2.41	2.32	2.41	2.46	2.44	2.91	2.84	2.97	3.14	3.09	2.91	2.78	3.05	3.07	2.85	2.76	2.67	
15	2.07	2.25	2.34	2.40	2.40	2.36	2.59	2.91	2.89	2.65	2.57	2.71	2.67	2.53	2.41	2.32	2.41	2.47	2.44	2.91	2.85	2.98	3.15	3.08	2.91	2.77	3.05	3.07	2.85	2.75	2.67	
16	2.07	2.25	2.34	2.40	2.41	2.36	2.61	2.91	2.88	2.65	2.57	2.73	2.67	2.52	2.39	2.33	2.42	2.47	2.45	2.90	2.85	2.99	3.15	3.09	2.90	2.76	3.05	3.06	2.84	2.75	2.67	
17	2.07	2.24	2.34	2.40	2.41	2.36	2.62	2.92	2.86	2.65	2.56	2.73	2.65	2.51	2.39	2.33	2.42	2.47	2.44	2.88	2.85	3.00	3.16	3.06	2.90	2.76	3.05	3.05	2.83	2.74	2.67	
18	2.07	2.24	2.34	2.41	2.41	2.36	2.64	2.93	2.84	2.64	2.56	2.73	2.65	2.51	2.39	2.34	2.42	2.47	2.42	2.87	2.85	3.00	3.16	3.06	2.89	2.78	3.06	3.04	2.83	2.74	2.67	
19	2.07	2.23	2.34	2.42	2.40	2.36	2.65	2.93	2.83	2.64	2.56	2.74	2.64	2.51	2.37	2.35	2.42	2.47	2.42	2.85	2.86	3.02	3.17	3.06	2.88	2.80	3.07	3.03	2.82	2.73	2.67	
20	2.07	2.24	2.34	2.42	2.40	2.37	2.67	2.94	2.82	2.64	2.56	2.74	2.64	2.50	2.38	2.35	2.42	2.47	2.42	2.81	2.83	2.97	3.03	3.17	3.05	2.88	2.94	3.09	3.03	2.82	2.73	2.67
21	2.07	2.24	2.34	2.42	2.40	2.37	2.68	2.94	2.80	2.63	2.57	2.74	2.64	2.50	2.36	2.35	2.42	2.38	2.41	2.82	2.87	3.03	3.17	3.04	2.89	3.00	3.09	3.01	2.81	2.72	2.67	
22	2.07	2.25	2.34	2.42	2.40	2.37	2.70	2.94	2.79	2.63	2.58	2.74	2.64	2.50	2.36	2.35	2.43	2.38	2.42	2.81	2.88	3.04	3.17	3.03	2.88	3.05	3.09	3.00	2.81	2.72	2.67	
23	2.07	2.25	2.34	2.42	2.40	2.37	2.71	2.94	2.77	2.63	2.58	2.74	2.63	2.49	2.35	2.36	2.43	2.37	2.42	2.81	2.88	3.05	3.17	3.03	2.87	3.08	3.09	3.00	2.81	2.72	2.67	
24	2.07	2.26	2.34	2.42	2.39	2.38	2.73	2.94	2.77	2.63	2.59	2.74	2.62	2.48	2.34	2.36	2.44	2.37	2.43	2.80	2.89	3.06	3.17	3.02	2.87	3.12	3.10	2.99	2.80	2.71	2.68	
MEAN	2.07	2.21	2.33	2.38	2.41	2.37	2.55	2.87	2.89	2.67	2.59	2.68	2.69	2.55	2.42	2.33	2.40	2.43	2.39	2.74	2.84	2.97	3.13	3.10	2.93	2.86	3.10	3.06	2.87	2.76	2.69	
MAX.	2.08	2.31	2.34	2.42	2.43	2.39	2.73	2.94	2.97	2.74	2.62	2.74	2.74	2.62	2.48	2.36	2.44	2.47	2.45	2.93	2.89	3.06	3.17	3.17	3.01	3.12	3.21	3.10	2.97	2.80	2.97	
MIN.	2.07	2.07	2.27	2.33	2.39	2.36	2.39	2.74	2.77	2.63	2.56	2.59	2.62	2.48	2.34	2.29	2.36	2.16	2.30	2.44	2.80	2.90	3.06	3.02	2.87	2.76	3.05	2.99	2.80	2.71	2.67	

$Q = 1.989(H-0.019)^2 (H < 2.920 \text{ m})$   
 $Q = 6.058(H-1.292)^2 (H \geq 2.920 \text{ m})$

HR.(DATE)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	8.5	8.4	10.1	10.7	11.5	11.2	11.1	14.8	17.3	14.8	13.5	13.2	14.8	13.5	12.1	10.8	10.9	11.6	10.8	11.6	15.4	16.5	19.7	22.0	18.5	18.1	22.4	20.5	17.7	15.4	14.4
2	8.5	8.5	10.1	10.7	11.5	11.1	11.2	14.9	17.5	14.7	13.4	13.2	14.8	13.3	11.9	10.8	10.9	11.6	10.7	11.6	15.4	16.5	19.9	21.8	18.3	16.1	23.0	20.5	17.6	15.3	14.3
3	8.5	8.5	10.2	10.7	11.5	11.1	11.3	15.1	17.6	14.6	13.4	13.3	14.8	13.3	11.9	10.6	10.9	11.6	10.5	11.8	15.4	16.8	20.0	21.7	18.3	16.1	22.8	20.4	17.4	15.3	14.3
4	8.5	8.6	10.4	10.8	11.5	11.1	11.4	15.3	17.6	14.5	13.3	13.3	14.7	13.3	11.8	10.6	11.0	11.6	10.3	11.9	15.5	16.6	20.2	21.6	18.2	16.0	22.4	20.5	17.2	15.3	14.3
5	8.5	8.7	10.4	10.8	11.5	11.0	11.6	15.5	17.6	14.4	13.3	13.5	14.6	13.2	11.8	10.6	11.1	11.6	10.4	12.8	15.5	16.7	20.3	21.4	18.0	15.9	22.1	20.4	17.0	15.3	14.2
6	8.4	8.7	10.5	10.9	11.5	11.0	11.8	15.6	17.6	14.3	13.2	13.5	14.6	13.2	11.6	10.8	11.1	11.6	10.4	13.3	15.5	16.8	20.4	21.4	17.9	15.8	21.4	20.4	16.8	15.2	14.2
7	8.4	8.7	10.6	10.9	11.5	11.0	11.9	15.9	17.4	14.3	13.2	13.6	14.5	13.0	11.8	10.5	11.1	11.6	10.5	13.5	15.6	16.8	20.6	21.3	17.7	15.7	21.7	20.3	16.7	15.2	14.1
8	8.4	8.4	10.6	10.9	11.5	11.0	12.0	16.0	17.3	14.2	13.2	13.8	14.4	13.0	11.6	10.2	11.0	11.7	10.9	14.1	15.6	17.0	20.7	21.1	17.5	15.6	20.7	20.3	16.7	15.2	14.1
9	8.4	10.1	10.6	11.0	11.5	11.0	12.1	16.1	17.0	14.1	13.2	13.8	14.4	12.8	11.6	10.3	11.2	11.8	11.4	14.4	15.6	17.1	20.9	21.0	17.3	15.6	21.0	20.2	16.5	15.1	14.1
10	8.4	10.5	10.7	11.0	11.5	10.9	12.3	16.2	16.8	14.1	13.1	13.9	14.3	12.8	11.6	10.4	11.2	11.8	11.4	14.8	15.7	17.1	21.0	20.9	17.1	15.5	20.0	20.1	16.3	15.1	14.1
11	8.4	10.5	10.7	11.1	11.4	10.9	12.6	16.3	16.7	14.1	13.1	14.1	14.3	12.7	11.6	10.3	11.2	11.8	11.3	16.5	15.7	17.3	21.1	20.7	17.0	15.4	19.7	20.0	16.3	15.0	14.0
12	8.4	10.4	10.7	11.1	11.4	10.9	12.7	16.4	16.6	14.0	13.0	14.1	14.3	12.7	11.5	10.4	11.3	11.8	11.3	16.8	15.8	17.4	21.3	20.6	16.8	15.3	19.3	20.0	16.1	15.0	14.0
13	8.4	10.3	10.7	11.1	11.4	10.9	12.9	16.5	16.6	13.9	13.0	14.3	14.1	12.7	11.4	10.4	11.4	11.8	1												

HOURLY RIVER WATER LEVEL ST.NO.4-120 MIYABASHI APR./1991

[ WATER LEVEL m ]

HR.(DATE)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	2.68	2.62	2.46	2.33	2.22	2.31	2.39	2.34	2.34	2.36	2.55	2.85	2.78	2.56	2.37	2.22	2.12	2.05	1.98	1.92	1.87	1.82	1.78	1.74	1.70	1.66	1.62	1.59	1.57	1.55	
2	2.68	2.61	2.45	2.32	2.22	2.32	2.39	2.34	2.34	2.36	2.56	2.86	2.76	2.55	2.36	2.21	2.12	2.05	1.98	1.92	1.87	1.82	1.78	1.74	1.70	1.66	1.62	1.59	1.57	1.55	
3	2.68	2.61	2.45	2.32	2.21	2.33	2.39	2.34	2.34	2.36	2.58	2.86	2.75	2.55	2.36	2.21	2.12	2.05	1.98	1.92	1.87	1.82	1.78	1.74	1.70	1.66	1.62	1.59	1.57	1.55	
4	2.68	2.60	2.44	2.32	2.21	2.33	2.39	2.34	2.34	2.36	2.59	2.86	2.74	2.54	2.35	2.21	2.11	2.05	1.98	1.92	1.87	1.82	1.78	1.73	1.70	1.65	1.62	1.59	1.57	1.55	
5	2.68	2.59	2.44	2.31	2.21	2.33	2.39	2.34	2.34	2.36	2.61	2.86	2.74	2.53	2.34	2.20	2.11	2.04	1.98	1.91	1.86	1.82	1.78	1.73	1.70	1.65	1.62	1.59	1.57	1.55	
6	2.68	2.59	2.43	2.31	2.21	2.33	2.39	2.34	2.35	2.37	2.62	2.86	2.73	2.52	2.33	2.20	2.11	2.04	1.97	1.91	1.86	1.82	1.77	1.73	1.69	1.65	1.62	1.59	1.57	1.55	
7	2.68	2.58	2.42	2.30	2.20	2.33	2.38	2.34	2.35	2.37	2.64	2.85	2.72	2.51	2.33	2.19	2.10	2.04	1.97	1.91	1.86	1.81	1.77	1.73	1.69	1.65	1.62	1.58	1.57	1.55	
8	2.68	2.58	2.42	2.30	2.20	2.34	2.38	2.34	2.35	2.37	2.67	2.85	2.71	2.51	2.33	2.19	2.10	2.04	2.27	1.91	1.85	1.81	1.77	1.73	1.69	1.65	1.62	1.58	1.57	1.54	
9	2.68	2.57	2.41	2.30	2.19	2.34	2.38	2.34	2.35	2.37	2.68	2.85	2.70	2.50	2.32	2.18	2.10	2.03	1.96	1.91	1.85	1.81	1.77	1.73	1.69	1.64	1.61	1.58	1.57	1.54	
10	2.68	2.56	2.41	2.29	2.19	2.34	2.38	2.34	2.35	2.38	2.70	2.85	2.70	2.49	2.31	2.18	2.10	2.03	1.96	1.91	1.85	1.81	1.77	1.72	1.69	1.64	1.61	1.58	1.57	1.54	
11	2.68	2.55	2.40	2.28	2.19	2.35	2.37	2.34	2.35	2.38	2.71	2.84	2.69	2.48	2.30	2.18	2.09	2.03	1.96	1.90	1.85	1.81	1.76	1.72	1.69	1.64	1.61	1.58	1.57	1.54	
12	2.68	2.55	2.39	2.27	2.19	2.35	2.37	2.34	2.35	2.38	2.73	2.84	2.69	2.47	2.30	2.17	2.09	2.03	1.95	1.90	1.84	1.80	1.76	1.72	1.69	1.63	1.61	1.58	1.57	1.54	
13	2.67	2.54	2.39	2.27	2.19	2.35	2.37	2.34	2.35	2.39	2.74	2.83	2.67	2.46	2.29	2.16	2.08	2.02	1.95	1.90	1.84	1.80	1.76	1.72	1.68	1.63	1.60	1.58	1.56	1.54	
14	2.67	2.53	2.38	2.26	2.18	2.36	2.36	2.34	2.35	2.39	2.76	2.83	2.66	2.45	2.27	2.16	2.08	2.02	1.95	1.89	1.84	1.80	1.76	1.72	1.70	1.63	1.60	1.57	1.56	1.54	
15	2.66	2.53	2.38	2.26	2.19	2.36	2.36	2.34	2.35	2.41	2.77	2.82	2.65	2.44	2.27	2.15	2.08	2.02	1.94	1.89	1.84	1.80	1.75	1.71	1.68	1.63	1.60	1.57	1.56	1.54	
16	2.65	2.52	2.37	2.26	2.19	2.37	2.36	2.34	2.35	2.42	2.80	2.82	2.64	2.44	2.26	2.15	2.08	2.01	1.94	1.89	1.84	1.80	1.75	1.71	1.68	1.63	1.60	1.57	1.56	1.54	
17	2.66	2.51	2.37	2.25	2.21	2.37	2.35	2.34	2.35	2.43	2.80	2.81	2.63	2.43	2.26	2.15	2.07	2.01	1.94	1.88	1.83	1.80	1.75	1.71	1.67	1.63	1.60	1.57	1.55	1.54	
18	2.65	2.50	2.36	2.25	2.23	2.37	2.35	2.34	2.35	2.44	2.81	2.81	2.62	2.42	2.25	2.15	2.07	2.01	1.94	1.88	1.83	1.79	1.75	1.71	1.67	1.63	1.60	1.57	1.55	1.53	
19	2.65	2.50	2.36	2.24	2.24	2.38	2.34	2.34	2.35	2.45	2.82	2.80	2.62	2.41	2.25	2.14	2.07	2.00	1.94	1.88	1.83	1.79	1.75	1.71	1.67	1.63	1.60	1.57	1.55	1.53	
20	2.64	2.49	2.35	2.24	2.26	2.38	2.34	2.34	2.35	2.47	2.83	2.80	2.61	2.40	2.24	2.14	2.06	2.00	1.93	1.87	1.83	1.79	1.75	1.71	1.65	1.63	1.60	1.57	1.55	1.53	
21	2.64	2.48	2.35	2.24	2.28	2.38	2.34	2.34	2.35	2.48	2.83	2.79	2.59	2.40	2.24	2.13	2.06	2.00	1.93	1.87	1.83	1.79	1.74	1.71	1.66	1.63	1.60	1.57	1.55	1.53	
22	2.63	2.48	2.34	2.23	2.28	2.39	2.34	2.34	2.35	2.50	2.84	2.78	2.59	2.39	2.23	2.13	2.06	1.99	1.93	1.87	1.83	1.78	1.74	1.70	1.66	1.63	1.60	1.57	1.55	1.53	
23	2.63	2.47	2.33	2.23	2.30	2.39	2.34	2.34	2.35	2.51	2.85	2.78	2.58	2.38	2.23	2.13	2.06	1.99	1.93	1.87	1.83	1.78	1.74	1.70	1.66	1.62	1.60	1.57	1.55	1.53	
24	2.62	2.47	2.33	2.23	2.30	2.39	2.34	2.34	2.35	2.53	2.85	2.78	2.57	2.37	2.22	2.12	2.05	1.99	1.92	1.87	1.82	1.78	1.74	1.70	1.66	1.62	1.60	1.57	1.55	1.53	
MEAN	2.66	2.54	2.39	2.27	2.22	2.35	2.37	2.34	2.35	2.41	2.72	2.83	2.67	2.47	2.29	2.17	2.09	2.02	1.97	1.90	1.85	1.80	1.76	1.71	1.68	1.64	1.61	1.58	1.56	1.54	
MAX.	2.68	2.62	2.46	2.33	2.30	2.39	2.39	2.34	2.35	2.53	2.85	2.86	2.76	2.56	2.37	2.22	2.12	2.05	2.21	1.92	1.87	1.82	1.78	1.74	1.70	1.65	1.62	1.59	1.57	1.55	
MIN.	2.62	2.47	2.33	2.23	2.18	2.31	2.34	2.34	2.34	2.36	2.55	2.78	2.57	2.37	2.22	2.12	2.05	1.99	1.92	1.87	1.82	1.78	1.74	1.38	1.66	1.62	1.60	1.57	1.55	1.53	

HOURLY RIVER DISCHARGE ST.NO.4-120 MIYABASHI APR./1991

Applied Equation:  $Q = 1.589(H-0.019)^2$  (H < 2.920 m)  
 $Q = 6.058(H-1.262)^2$  (H >= 2.920 m)

[ DISCHARGE m<sup>3</sup>/s ]

HR.(DATE)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	14.1	13.4	11.8	10.6	9.7	10.5	11.2	10.7	10.7	10.9	12.7	16.0	15.0	12.8	10.9	9.6	8.8	8.2	7.7	7.2	6.8	6.5	6.2	5.9	5.5	5.3	5.1	4.9	4.8	4.7	
2	14.1	13.4	11.8	10.6	9.6	10.5	11.2	10.7	10.7	10.9	12.8	16.0	14.9	12.8	10.9	9.6	8.8	8.2	7.7	7.2	6.8	6.5	6.2	5.9	5.6	5.3	5.1	4.9	4.8	4.7	
3	14.1	13.3	11.7	10.5	9.6	10.6	11.2	10.7	10.7	10.9	13.0	16.0	14.8	12.7	10.9	9.5	8.7	8.2	7.7	7.2	6.8	6.4	6.1	5.9	5.6	5.3	5.1	4.9	4.8	4.7	
4	14.1	13.2	11.6	10.5	9.5	10.6	11.2	10.7	10.7	10.9	13.2	16.0	14.8	12.6	10.8	9.5	8.7	8.2	7.6	7.2	6.8	6.4	6.1	5.9	5.6	5.3	5.1	4.9	4.8	4.7	
5	14.1	13.2	11.6	10.5	9.5	10.6	11.2	10.7	10.8	10.9	13.3	16.0	14.7	12.5	10.7	9.5	8.7	8.1	7.6	7.1	6.8	6.4	6.1	5.9	5.6	5.3	5.1	4.9	4.8	4.7	
6	14.1	13.2	11.6	10.4	9.5	10.7	11.1	10.7	10.8	10.9	13.5	16.0	14.6	12.4	10.6	9.4	8.7	8.1	7.6	7.1	6.7	6.4	6.1	5.9	5.6	5.3	5.1	4.9	4.8	4.6	
7	14.1	13.1	11.5	10.4	9.5	10.7	11.1	10.7	10.8	10.9	13.7	16.0	14.5	12.3	10.6	9.4	8.6	8.1	7.6	7.1	6.7	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.8	4.6	
8	14.1	13.0	11.5	10.3	9.5	10.7	11.1	10.7	10.8	11.0	13.9	15.9	14.4	12.3	10.6	9.3	8.6	8.1	10.1	7.1	6.7	6.4	6.1	5.8	5.6	5.3	5.1	4.9	4.8	4.6	
9	14.1	12.9	11.4	10.3	9.4	10.7	11.1	10.7	10.8	11.0	14.1	15.9	14.3	12.2	10.5	9.3	8.6	8.1	7.5	7.1	6.7	6.4	6.1	5.8	5.5	5.2	5.0	4.9	4.8	4.6	
10	14.1	12.8	11.4	10.2	9.4	10.8	11.1	10.7	10.8	11.1	14.3	15.9	14.3	12.1	10.5	9.3	8.6	8.0	7.5	7.1	6.7	6.4	6.1	5.8	5.5	5.2	5.0	4.9	4.8	4.6	
11	14.1	12.8	11.3	10.1	9.4	10.8	11.0	10.7	10.8	11.1	14.4	15.9	14.2	12.1	10.4	9.3	8.6	8.0	7.5	7.1	6.6	6.4	6.1	5.8	5.5	5.2	5.0	4.9	4.8	4.6	
12	14.0	12.7	11.2	10.1	9.4	10.8	11.0	10.7	10.8	11.1	14.6	15.8	14.1	11.9	10.3	9.2	8.5	8.0	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.2	5.0	4.8	4.8	4.6	
13	14.0	12.6	11.2	10.1	9.3	10.8	10.9	10.7	10.8	11.1	14.8	15.8	14.0	11.8	10.3	9.2	8.5	8.0	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.2	5.0	4.8	4.7	4.6	
14	13.9	12.5	11.1	10.0	9.3	10.9	10.9	10.7	10.8	11.2	14.9	15.7	13.9	11.8	10.1	9.1	8.5	8.0	7.4	7.0	6.6	6.3	6.0	5.7	5.6	5.2	5.0	4.8	4.7	4.6	
15	13.9	12.5	11.1	9.9	9.4	10.9	10.9	10.7	10.8	11.4	15.1	15.6	13.8	11.7	10.1	9.1	8.4	7.9	7.4	7											