

AIR PUTIH  
STATION NO. 4231103

Year	1	2	3	4	5	6	7	8	9	10	11	12
1970	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1971	12.00	34.00	23.00	54.00	162.00	203.00	193.00	272.00	260.00	578.00	457.00	989.00
1972	23.00	33.00	40.00	25.00	192.00	189.00	195.00	195.00	176.00	596.00	192.00	1081.00
1973	43.00	65.00	176.00	125.00	122.00	152.00	147.00	197.00	374.00	186.00	324.00	1324.00
1974	57.00	34.00	126.00	290.00	220.00	337.00	274.00	396.00	301.00	201.00	401.00	1009.00
1975	16.00	52.00	166.00	99.00	260.00	180.00	254.00	374.00	339.00	517.00	612.00	4224.00
1976	155.00	231.00	39.00	120.00	325.00	130.00	216.00	385.00	302.00	421.00	753.00	3123.00
1977	155.00	292.00	69.00	200.00	235.00	130.00	376.00	376.00	358.00	370.00	271.00	503.00
1978	113.00	140.00	140.00	368.00	241.00	179.00	125.00	198.00	350.00	306.00	1552.00	256.00
1979												
1980												

STN. TELEK TAHAN  
STATION NO. 4324001

Year	1	2	3	4	5	6	7	8	9	10	11	12
1970	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1971	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1972	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1973	15.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1974	27.00	146.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1975	48.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1976	103.00	146.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1977	190.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1978												
1979												
1980												

KG. PAGI  
STATION NO. 4424112

	1	2	3	4	5	6	7	8	9	10	11	12
1970	0.00	0.00	0.00	0.00	0.00	0.00	71.20	125.70	130.80	247.40	325.90	300.50
1971	497.30	172.50	156.70	109.70	209.20	98.20	71.90	220.90	255.80	132.00	103.10	0.00
1972	22.80	50.90	17.80	181.20	43.70	50.10	47.50	4.00	92.70	76.90	181.30	370.60
1973	60.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1974	39.00	206.50	0.00	240.30	112.50	107.30	163.30	206.20	184.00	229.90	286.00	217.20
1975	27.00	73.50	110.50	232.00	271.50	158.50	158.00	99.00	177.00	105.00	630.00	261.00
1976	133.00	76.00	46.50	158.50	217.50	187.50	170.50	190.00	108.00	354.50	118.50	448.50
1977	114.50	130.00	43.50	0.00	117.50	197.00	247.50	292.00	196.50	290.00	196.50	158.50
1978	193.00	172.00	91.00	271.50	212.00	199.00	104.00	110.00	194.00	353.50	441.00	235.00
1979			72.00	149.50	279.00	203.00	297.50	354.50	495.00	569.50	221.00	135.50
1980												

STATION NO. 4525111

	1	2	3	4	5	6	7	8	9	10	11	12
1970	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1971	35.00	57.90	0.40	0.20	0.00	0.00	0.00	191.20	0.10	0.30	165.10	0.00
1972	102.80	251.90	163.30	235.60	54.60	158.10	154.70	144.20	138.10	228.30	167.80	778.70
1973	258.30	260.30	141.70	236.80	190.70	166.50	144.70	260.90	155.40	227.50	270.50	549.00
1974	228.10	10.70	146.90	193.20	215.10	145.00	167.80	149.80	150.80	256.40	201.60	156.40
1975	321.50	102.70	59.90	238.20	385.30	128.50	129.80	311.70	219.30	302.20	476.60	322.60
1976	195.50	192.70	77.80	22.00	182.30	172.40	118.90	501.80	105.30	173.20	135.40	1289.10
1977			121.40	197.60	141.50	130.60	180.50	293.90	269.70	272.00	135.70	2189.50
1978				168.60	123.50	123.60	135.60	224.50		286.20	211.80	165.50
1979												
1980												

STATION NO. 4529071

Year	1	2	3	4	5	6	7	8	9	10	11	12	
1970	0-00	0-00	0-60	0-30	0-00	0-50	6-30	53-80	138-40	463-00	0-00	0-00	0-00
1971	285-30	92-90	514-10	19-80	0-20	0-50	6-50	53-20	138-70	475-80	380-50	591-30	
1972	0-00	13-90	103-10	23-50	15-20	1-00	15-40	169-40	201-40	375-80	0-00	0-00	
1973	0-00	0-50	172-20	273-50	170-30	16-90	15-40	169-80	223-40	423-50	0-80	623-30	
1974	7-60	430-50	179-20	121-40	134-30	221-10	141-60	132-40	229-40	472-50	512-80	391-70	
1975	206-50	203-50	140-50	190-60	111-50	229-50	141-50	118-00	115-50	134-50	315-50	138-00	
1976	12-50	158-50	141-50	103-00	176-00	108-00	194-50	90-00	115-50	122-30	195-50	304-00	
1977	448-00	128-50	64-00	0-00	121-00	14-60	142-00	368-00	114-50	141-00	207-00	166-00	
1978	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	
1979	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	
1980	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	

STATION NO. 4923001

Year	1	2	3	4	5	6	7	8	9	10	11	12
1970	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
1971	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
1972	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
1973	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
1974	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
1975	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
1976	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
1977	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
1978	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
1979	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
1980	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00



Daily Rainfall Table

(Unit: mm) 1972

Day	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1			3.0						31.6			
2									24.1			
3											14.7	
4												
5									3.6			
6									24.1			
7									27.9			
8										55.9		
9												14.7
10												28.7
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
<b>Total</b>	22.9	113.4	14.7	65.4	3.4	77.5	55.9	285.8	190.5		122.1	368.3
<b>Mean</b>	0.7	3.9	0.5	2.2	0.1	2.6	1.8	9.2	6.3		4.1	11.9
<b>Max.</b>	10.2	50.8	6.4	16.3	1.0	30.5	30.5	62.2	31.8		31.2	64.3
<b>Min.</b>												

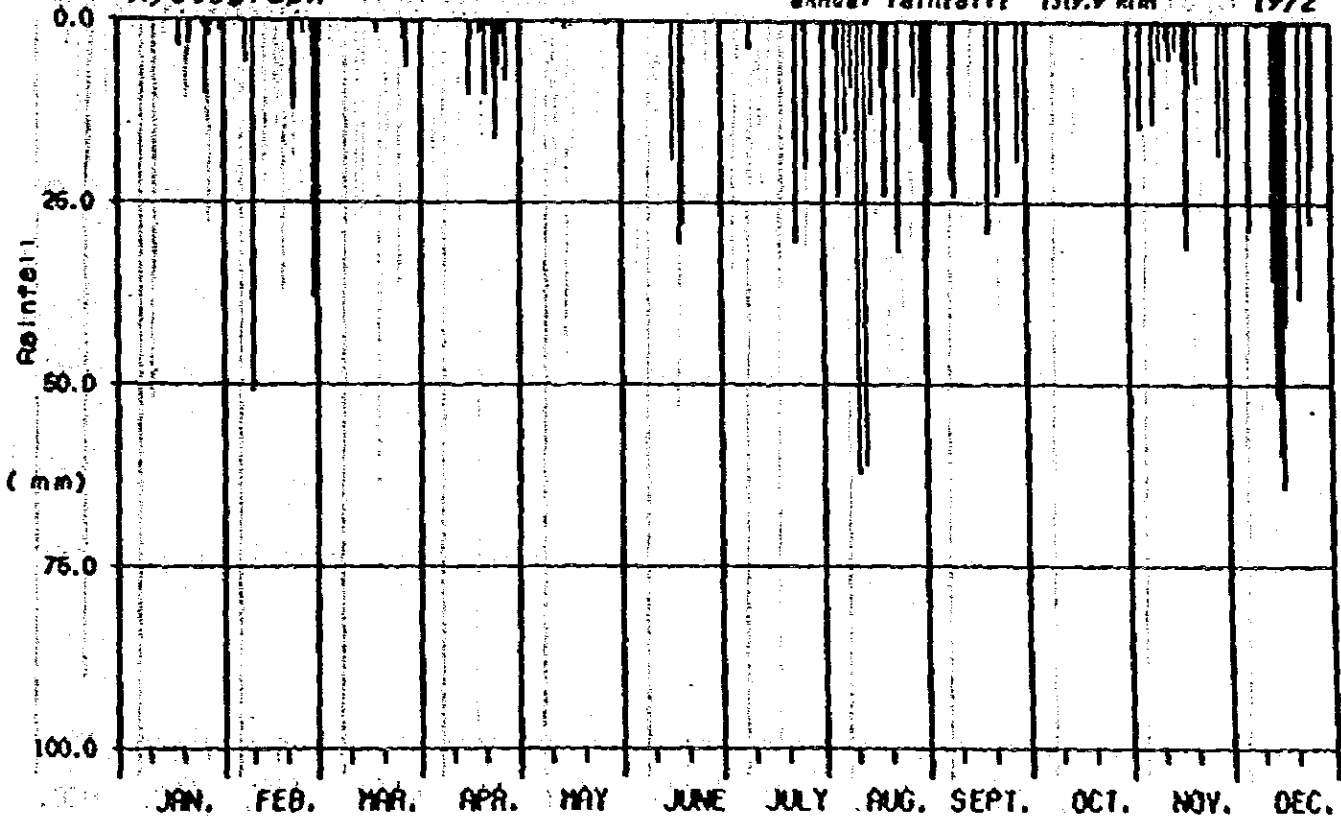
Max.  
64.3

Mean  
3.6

Total  
1319.9

Hystograph

Annual Rainfall: 1319.9 mm 1972



Daily Rainfall Table

(Unit: mm) 1973

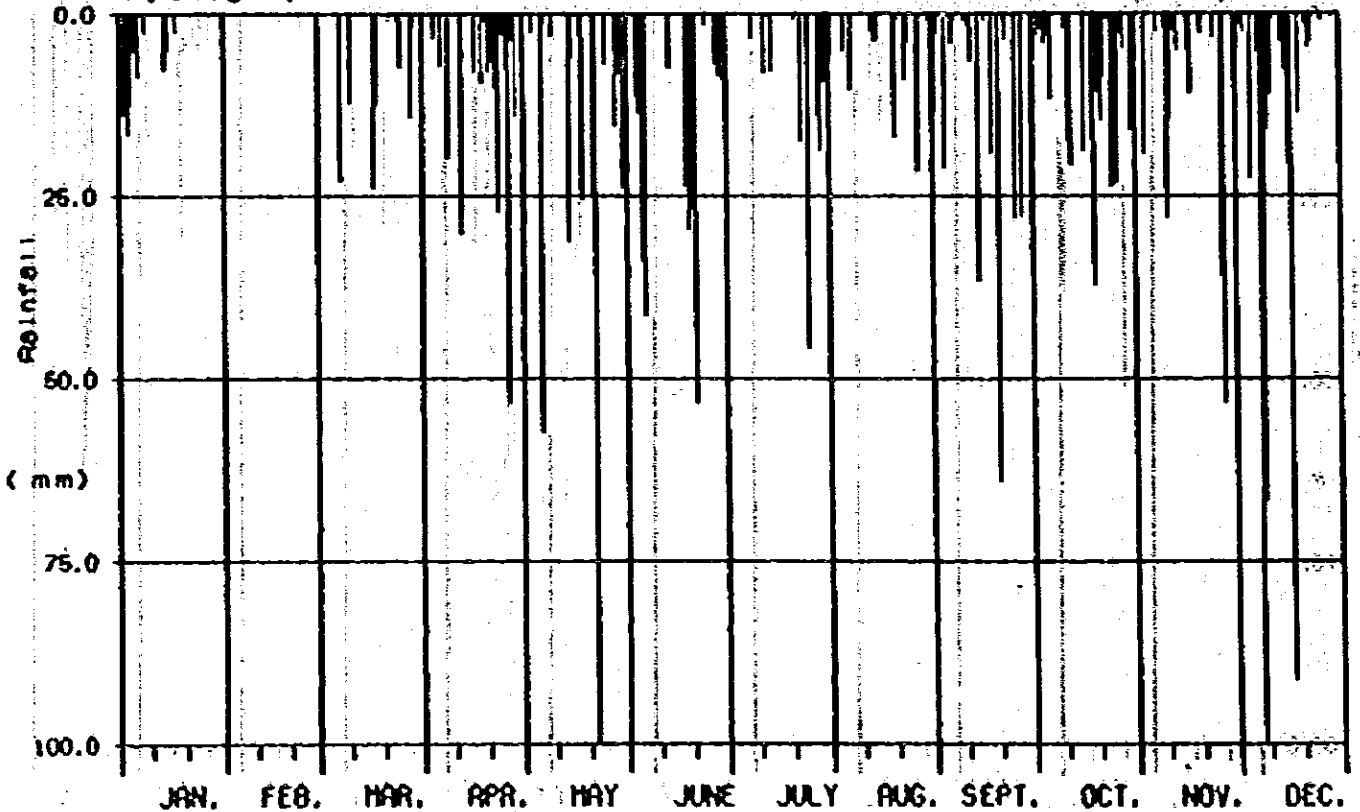
day	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1								5.8	13.5			4.8
2	14.0								2.8			1.5
3	16.5											2.5
4	12.7											
5	5.1			3.3	2.5	11.2			21.1		19.3	
6	(48.3)			(3.3)	(2.5)	(34.0)			(0.5)		(0.5)	22.6
7	8.6			7.1	57.4	58.9			(10.9)	(37.9)	(12.4)	(19.8)
8					1.3	41.4				4.1		
9	2.5		22.9	19.6			3.3	10.4	1.0		2.5	5.3
10					3.0						2.0	103.1
11			12.2						1.0	2.0	27.9	68.8
12	(11.1)		(35.1)	(26.7)	(61.7)	(41.4)	(3.3)	(10.4)	(6.1)	(13.7)	(32.4)	(191.2)
13				30.0					1.8	17.5	14.5	10.9
14							8.1		6.6	20.8	2.5	0.8
15	7.6				31.2	7.6	7.9	2.5	38.6		5.1	0.3
16	(12.7)			(30.0)	(37.3)	(7.6)	(16.0)	(3.6)				(7.6)
17				7.9				9.9	(45.0)	(38.0)	(22.1)	(23.4)
18	2.5		23.9	9.4	3.0				1.0	18.8	5.1	20.6
19			12.7	7.9	25.4	23.6					10.9	91.2
20				1.0		29.7			19.1	17.3		0.3
21	(2.5)			7.9		26.7			0.3	37.1		13.7
22				6.6		53.3	1.0		64.0	10.7		2.8
23			1.0	10.4	122.4				(16.8)	(84.4)	(83.9)	(125.8)
24			3.0	27.2					0.8	14.7		1.5
25			1.0	7.2		1.5	17.5		3.6	8.6		4.4
26			7.4	7.6	6.9				0.3	0.8	0.3	3.8
27			(9.4)	(54.8)	(151.2)	(54.8)	(45.7)	(14.0)	(27.9)	(23.6)	(13.6)	(9.9)
28				53.3			(64.2)		(31.8)	(71.3)	(35.8)	(1.0)
29				3.6		6.9				2.8	35.3	
30			14.2	14.0	15.5	8.6	14.0	21.6	27.7	4.8		
31	6.4		2.0	10.9	8.1	9.1	18.8	0.8	0.8		9.7	0.5
Total	81.0		97.3	222.8	331.6	267.3	141.4	97.8	269.0	271.4	195.5	383.2
Mean	2.6		3.1	7.4	10.7	8.9	4.6	3.2	8.9	8.8	6.5	12.4
Max.	16.5		23.9	53.3	122.4	53.3	45.7	21.6	64.0	37.1	53.3	103.1
Min.												

Max.  
122.4

Mean  
6.5  
Total  
2357.3

Hyetograph

annual rainfall: 2357.3 mm 1973



Daily Rainfall Table

(Unit: mm) 1974

day	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1				13.0			2.5	2.5	7.6	1.5	16.0	10.4
2				3.0	26.4			6.6	6.6	6.6	19.1	
3		0.3		2.5	7.1			55.4	14.5	5.1	21.1	7.6
4		43.4		21.1	1.5	16.5			14.0			
5		28.4		39.6	28.4	16.5	10.4	4.1	1.0			
6		72.1		28.4	61.4	35.1	12.9	68.6	37.1	13.2	56.2	18.0
7			1.8	1.0	7.1				1.5			
8			6.6		1.0				13.0			
9		2.5	1.0	27.4					3.6	5.6	21.6	
10		3.3		15.0		7.6	9.9		2.0		7.1	
11		5.8	9.4	71.8	8.1	42.7	9.9		20.1	5.6	21.1	49.8
12	0.3			10.4	8.9	20.1			17.5			
13	0.3			1.5	22.1	3.0			3.6			
14	2.0	2.3		10.4	2.0		26.4				15.5	
15	0.3	4.8		22.3	3.6		24.4	3.0	14.0	19.1	9.9	2.0
16	2.9	7.1		35.6		23.1	50.8	3.6	1.0	19.1	25.4	59.8
17	0.3							8.6	36.1	4.6		61.9
18		2.3		34.5	8.4					8.9	24.4	70.4
19		18.8		4.6						7.1		1.5
20	2.0			127.5		1.0			1.0	2.0	20.1	2.0
21	0.3					1.5			25.9		2.5	
22	2.6	21.1		166.6	8.4	2.5			26.9	22.6	47.0	73.9
23					18.0			51.6		2.0	58.4	9.4
24		6.6	0.8	13.5		8.9					21.6	
25		3.6			10.4	4.1		15.5	49.5		26.9	1.0
26		24.1	1.5	6.6	14.0		27.4		1.0	13.0	1.0	
27		1.0			6.1		2.5	47.0		1.5	7.6	
28		35.6	2.3	20.1	48.5	15.0	29.9	114.1	50.5	16.5	115.5	10.4
29			1.0	24.4	1.0						7.9	
30	13.2			7.9		1.0						10.4
31	4.6	3.6	1.0	3.6		2.5	4.6	22.6	1.0	4.1	35.1	2.0
	4.3		10.7			7.1	23.1		13.0			2.0
			0.8				1.0					7.6
	22.1	3.6	13.5	35.9	1.0	15.7	28.7	22.6	14.0	4.1	43.0	22.0
Total	27.6	145.3	25.2	356.3	164.0	115.5	132.2	211.9	184.7	81.1	336.9	165.2
Max.	0.9	5.2	0.8	11.9	5.3	3.8	4.3	6.8	6.2	2.6	11.2	6.0
Min.	13.2	43.4	10.7	127.5	26.4	35.1	27.4	55.4	49.5	19.1	58.4	70.4

Max.  
127.5

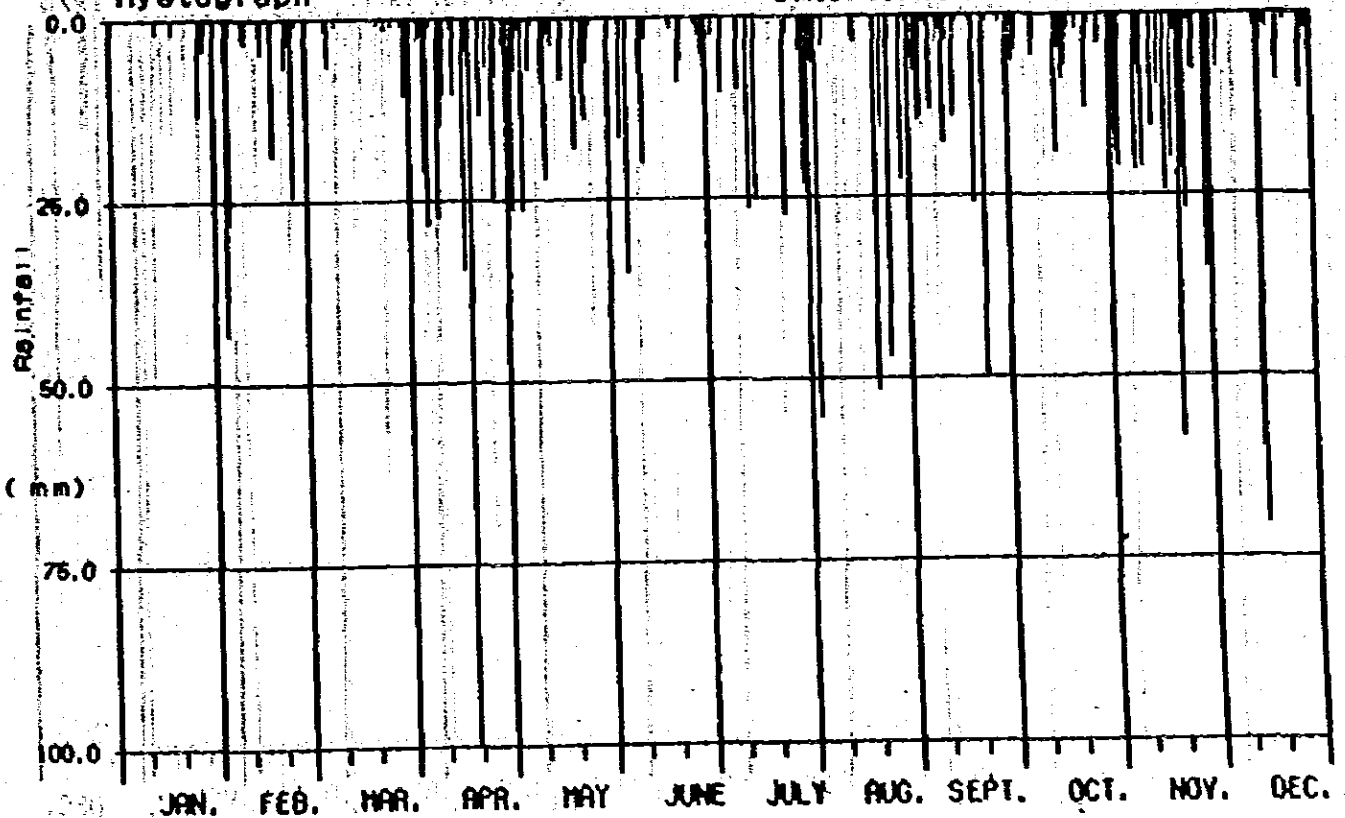
Mean  
5.4

Total  
1966.9

Hyetograph

annual rainfall: 1966.9 mm

1974



Daily Rainfall Table

(UNIT: mm) 1975

Day	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1	10.0	7.5			11.0				2.0		1.0	
2	3.0	13.0							2.5			
3	18.5	6.5			9.0				20.5			
4		3.0	8.5	15.5	2.5			8.5	1.0		2.0	2.5
5	1.5	7.0		9.5		2.5			1.5		1.0	22.0
6	31.0	37.0	9.5	25.0	22.5	2.5		8.5	35.0		4.0	24.5
7	46.5		1.0		27.0	15.5					83.5	8.5
8			5.0	2.0	3.5						94.0	1.0
9							1.5		33.5		12.5	10.5
10	18.0		8.0		25.5				2.5			10.5
11	28.0	1.0	5.5	14.5	15.5		30.5	35.5	20.0		7.0	30.0
12	92.5	1.0	19.5	16.5	71.5	15.5	32.0	35.5	61.0		197.0	37.5
13	12.0	1.0			24.0				4.0	12.5	32.0	2.5
14	2.0		1.5	2.5	3.0					3.0	1.5	
15	9.0	3.0		4.5	3.0					1.5		14.5
16	10.5				16.0		13.5		7.5	31.5	8.0	14.0
17	33.5	4.0	1.5	9.5	46.0		55.5	8.0	11.5	53.0	41.5	68.5
18		13.5	2.5	24.5	28.5	6.5			62.0		23.5	14.5
19	1.0			15.5	57.0						2.0	
20	2.0		3.0	22.5		2.0	21.0	1.0	2.5		15.5	
21	15.5	10.0	20.5	15.0						8.5	1.5	24.5
22	18.5	23.5	26.0	77.5	90.5	8.5	35.5	1.0	64.5	34.0	17.0	2.5
23	5.0				3.5		13.5				4.0	2.5
24	1.5				6.5						15.5	2.5
25	5.0	13.0	2.5	1.5					18.0		5.0	5.0
26	1.5	88.0	1.5	70.5							11.5	5.0
27	2.5	6.0							28.5	19.5	49.5	6.5
28	15.5	107.0	4.0	72.0	10.0		13.5		46.5	19.5	85.5	73.1
29		23.0					20.0		1.0	1.0	2.5	3.5
30		28.5		48.5	7.5		4.5	23.5	3.5	6.0	13.0	
31							3.0	16.5			67.0	
31	5.0		7.5		11.5		2.0	24.5			3.5	10.5
Total	196.0	223.9	68.0	249.1	259.6	26.5	168.0	131.0	223.6	125.0	431.6	224.8
Mean	6.3	8.0	2.2	8.3	8.4	0.9	5.4	4.2	7.5	4.0	14.4	7.2
Max.	46.5	88.0	20.5	70.5	57.0	15.5	42.0	35.5	62.0	31.5	94.0	59.0
Min.												

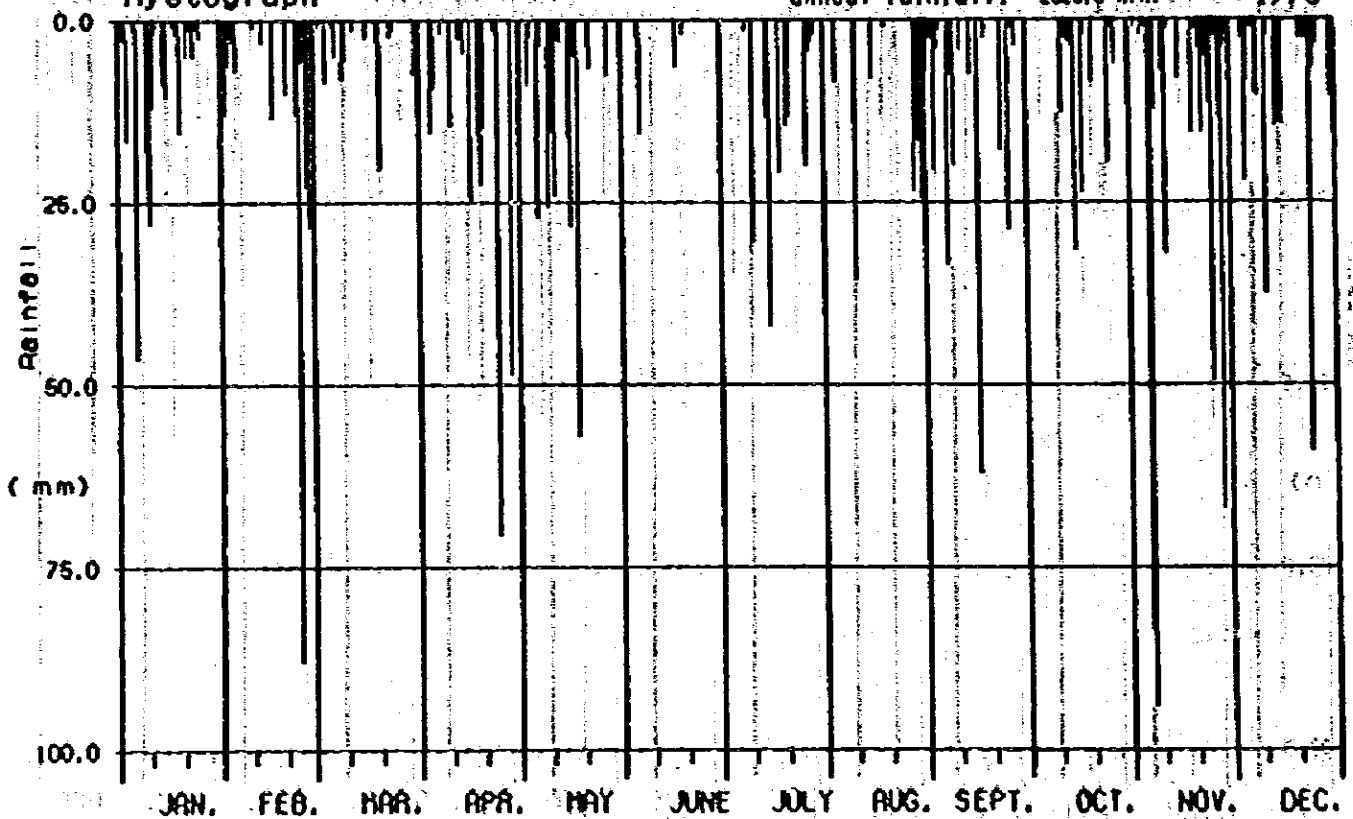
Max.  
94.0

Mean  
6.4

Total  
2325.0

Hyetograph

annual rainfall: 2325.0 mm 1975





Daily Rainfall Table

(Unit:mm) 1976

day	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1	2.5		5.1		5.1	12.7			199.4		109.2	
2	27.9		2.5		20.3	10.2			10.2			
3			7.6		38.1	96.5			127.0			
4	30.4		15.2		3.8	11.1				96.5	5.1	50.8
5		6.4			67.3	130.8			336.6	109.2	114.3	50.8
6			2.5		21.6	17.8				27.9	6.4	15.2
7					2.5			8.9		5.1	59.7	30.5
8			2.5			25.4		21.6		114.3		
9			11.4		24.1	73.7		8.9		5.1		
10		6.4	16.4		24.1	116.9		39.4		10.2		
11					2.5			3.8		16.5		
12					16.5			10.2		20.3		
13			59.7	47.0	16.5					6.4		
14										83.8		
15											5.1	
16											54.6	
17											59.7	
18												2.5
19												25.4
20		8.9										
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
Total	54.6	39.4	274.2	184.2	317.3	481.3	104.3	567.9	489.1	741.8	414.1	541.0
Max	1.8	1.4	8.8	6.1	10.2	16.0	3.4	18.3	16.3	23.9	13.8	17.5
Min	27.9	24.1	68.6	72.4	163.8	96.5	31.8	160.0	199.4	114.3	109.2	88.9

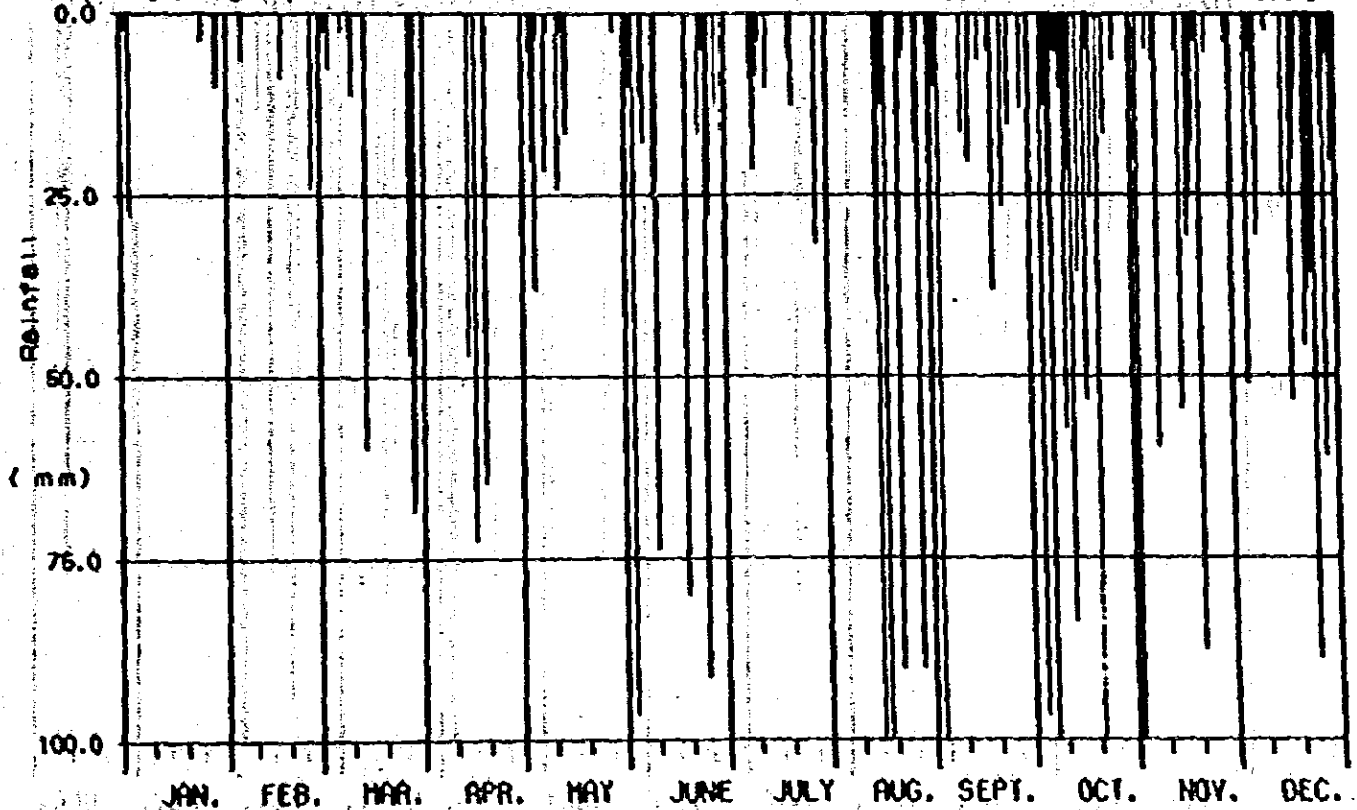
Max.  
199.4

Mean  
11.5

Total  
4209.2

Hyetograph

annual rainfall 4209.2 mm 1976



Daily Rainfall Table

(Unit: mm) 1977

Day	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1	14.0		68.6		67.3							60.8
2	3.8	26.7							12.7	25.4		68.4
3	2.5	6.4			3.8		12.7					76.2
4	14.0	5.1			11.4	50.8	48.3					25.4
5	34.3	38.2	68.0		82.5	50.8	61.0		12.7	25.0		60.8
6	39.4					76.2						25.4
7								12.7				43.2
8					11.4	63.5	15.2					
9							25.4					
10	39.0	29.2			29.2	25.4			45.7	68.4		1.3
11		29.2			40.0	165.1	40.0	12.7	45.7	12.7		
12		11.4								71.1		69.9
13												
14			31.8		6.4	43.2	12.7					
15					35.6	73.7	76.2		58.4	50.8		
16		11.0	31.8	7.6	25.4	43.2	12.7	76.2	58.4	25.4		1.3
17				7.6	67.4	160.1	101.0	76.2	58.4	170.2		1.3
18				38.1	78.7	25.4				38.1		
19					12.7			17.8	78.7			
20								20.3				1.3
21				38.1	91.0	45.7		50.8	50.8	25.4		25.4
22		17.8	3.8		71.1			68.9	129.5	63.5		26.7
23			3.8				2.5			76.2		63.5
24								25.4	17.8	68.6		76.2
25		12.7						7.6	25.4			25.4
26		30.5	7.6				2.5	25.4	50.8	12.7		43.2
27		5.1	12.7						157.5			208.3
28							2.5		25.4			1.3
29	8.9				44.5			99.1	6.4			
30							89.9	101.6	7.6			
31				30.5				94.0		177.8		
Total	82.6	114.4	120.7	76.2	326.4	447.1	297.1	497.9	336.5	868.7		589.1
Mean	2.7	4.1	3.9	2.5	10.5	14.9	9.6	16.1	11.2	28.0		18.4
Max.	39.4	29.2	68.6	38.1	78.7	76.2	89.9	101.6	78.7	177.8		76.2
Min.												

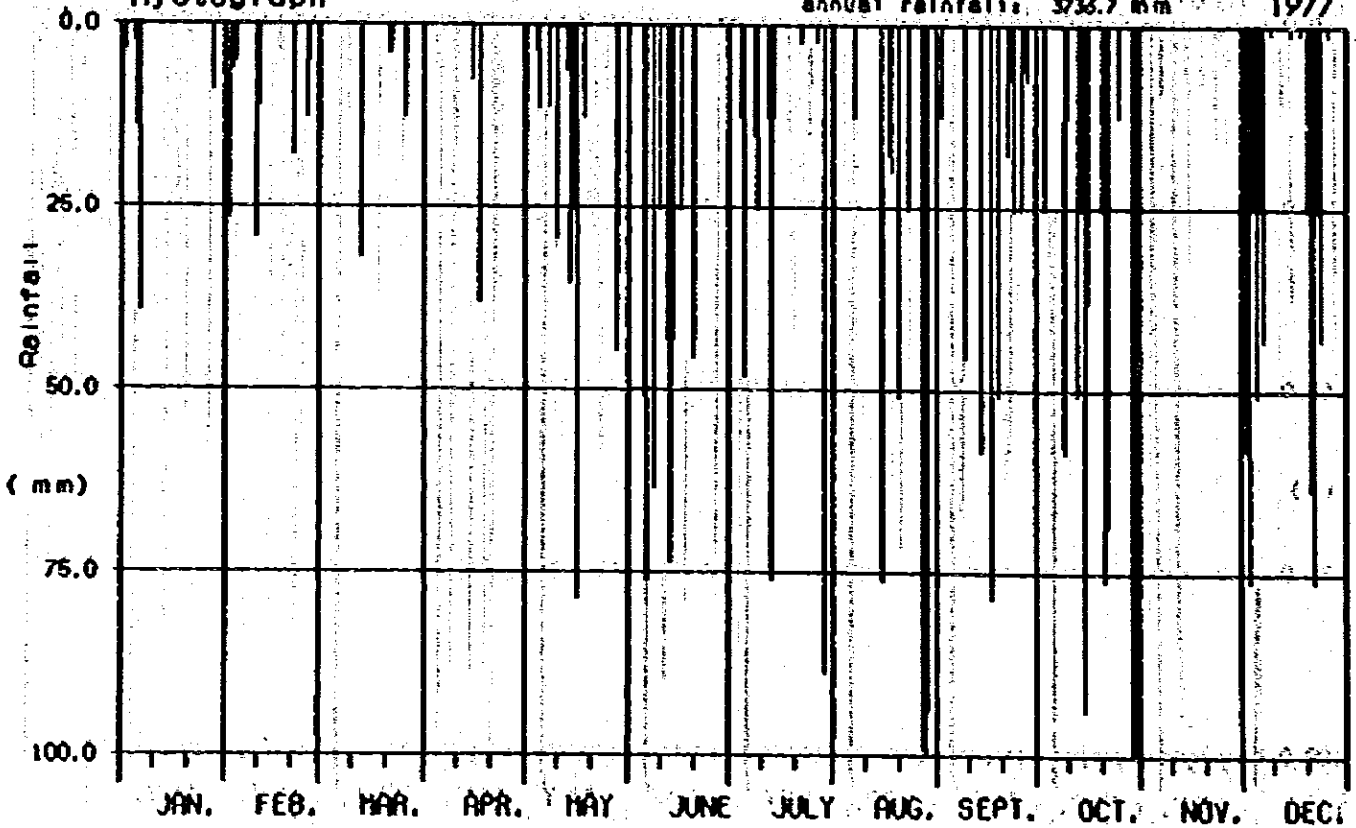
Max.  
177.8

Mean  
10.2

Total  
3735.7

Hyetograph

annual rainfall: 3735.7 mm 1977



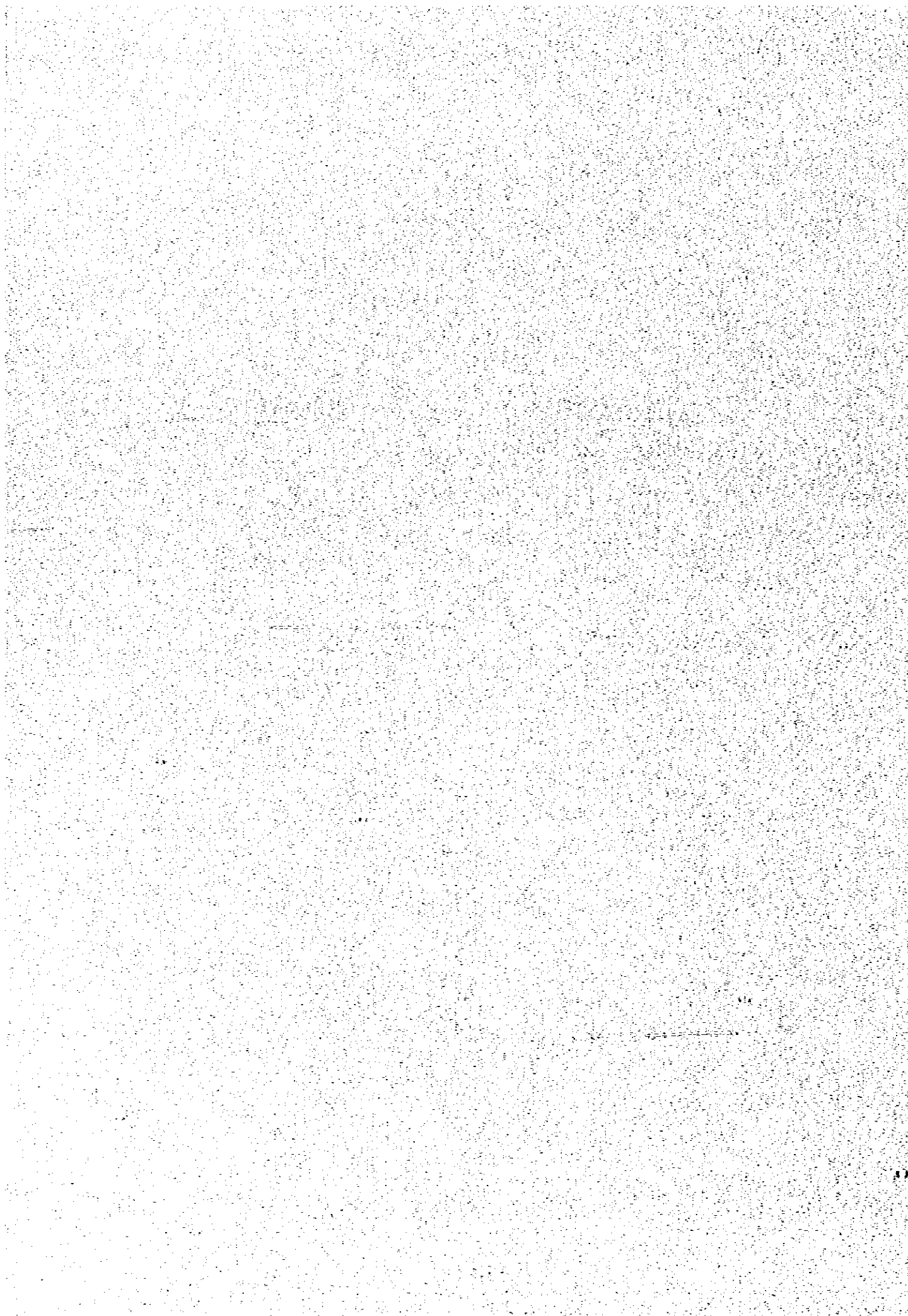
1972.12.14-12-20 (FLOOD) OBSERVATION

HOUR DAY	14	15	16	17	18	19	20
1	25.5	51.8	103.5	230.7	44.3	78.7	47.3
2	25.5	54.7	114.6	330.0	44.3	70.7	46.5
3	25.5	57.7	116.4	434.6	44.3	65.5	46.4
4	25.5	64.8	118.2	436.8	44.3	63.4	47.0
5	25.5	68.5	122.1	439.5	44.3	61.5	48.9
6	25.5	72.9	125.9	439.5	44.3	61.5	49.9
7	25.5	78.2	130.7	439.5	44.3	61.5	50.6
8	25.5	82.9	135.6	439.5	44.3	61.5	51.3
9	25.5	88.2	140.7	439.5	44.3	61.5	51.3
10	25.5	93.5	145.6	439.5	44.3	61.5	51.3
11	25.5	98.7	150.7	439.5	44.3	61.5	51.3
12	25.5	104.0	155.6	439.5	44.3	61.5	51.3
13	25.5	109.3	160.7	439.5	44.3	61.5	51.3
14	25.5	114.6	165.6	439.5	44.3	61.5	51.3
15	25.5	119.9	170.7	439.5	44.3	61.5	51.3
16	25.5	125.2	175.6	439.5	44.3	61.5	51.3
17	25.5	130.5	180.7	439.5	44.3	61.5	51.3
18	25.5	135.8	185.6	439.5	44.3	61.5	51.3
19	25.5	141.1	190.7	439.5	44.3	61.5	51.3
20	25.5	146.4	195.6	439.5	44.3	61.5	51.3



**Appendix J**

**Adjusted Rainfall for the Daily Runoff  
Model form Kamgsar**



RAINFALL 1961-1979 \*\*

(YEAR 1961)

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1	13.00	0.00	0.00	23.00	20.00	0.00	0.00	0.00	17.00	19.50	12.50	16.50
2	00.00	0.00	0.00	0.00	13.00	0.00	0.00	0.00	0.00	48.20	27.50	00.00
3	00.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00	4.00	00.00	00.00	00.00
4	16.00	0.00	0.00	18.00	11.00	0.00	0.00	0.00	11.00	11.20	00.00	17.80
5	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	13.00	00.00	00.00	00.00
6	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
7	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
8	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
9	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
10	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
11	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
12	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
13	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
14	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
15	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
16	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
17	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
18	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
19	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
20	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
21	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
22	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
23	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
24	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
25	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
26	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
27	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
28	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
29	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
30	00.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	00.00	00.00	00.00
TOTAL	264-	98-	107-	317-	186-	168-	97-	105-	260-	413-	170-	245-
											ANNUAL TOTAL	2432-

(YEAR 1962)

RAINFALL 1961-1979 \*\*

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
1	5.2	0.8	19.5	0.0	0.0	0.0	0.0	0.4	14.6	9.0	2.0	0.0	20.0
2	3.0	3.0	16.6	0.0	3.2	0.0	0.3	0.0	13.9	0.0	0.0	4.2	0.0
3	0.0	0.8	11.0	0.0	2.0	0.0	1.2	0.0	15.0	0.0	0.0	3.1	0.0
4	7.0	0.0	4.8	2.1	1.9	3.9	7.0	7.0	3.3	0.5	5.1	7.0	5.0
5	0.0	0.0	7.0	0.4	0.0	0.0	1.0	0.0	0.0	1.7	2.5	0.0	0.0
6	0.0	0.0	2.0	1.4	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0
7	0.0	0.0	2.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.3	2.6	2.8	3.3	2.0	2.5
9	0.0	0.0	0.0	0.6	2.4	0.0	0.0	0.5	1.0	1.0	0.2	0.4	0.0
10	0.0	0.0	0.0	0.4	1.1	2.2	1.6	1.8	3.0	2.3	0.0	0.0	0.0
11	1.3	2.0	0.0	1.1	1.7	1.4	1.0	1.4	0.5	2.3	0.3	0.0	0.0
12	5.5	1.0	0.0	0.4	1.7	0.0	0.8	3.0	0.0	1.0	1.0	0.0	0.0
13	2.2	5.0	0.0	0.7	2.0	0.0	0.0	0.0	0.0	1.2	1.7	0.0	0.0
14	3.6	0.0	0.0	0.4	0.2	0.0	0.0	0.0	0.0	2.1	1.5	0.0	0.0
15	8.5	7.0	6.7	0.0	1.0	1.9	0.0	6.0	0.0	1.7	3.0	0.0	0.0
16	0.0	0.0	1.7	0.0	0.0	0.0	0.3	0.5	0.0	1.7	1.0	0.0	0.0
17	0.0	0.0	4.3	0.0	0.0	0.0	0.0	1.8	0.0	2.0	0.0	0.0	0.0
18	0.0	4.0	1.4	0.0	0.0	3.1	0.0	3.0	0.0	2.0	2.0	0.0	0.0
19	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0
20	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0
21	0.0	2.0	1.4	1.0	0.0	0.0	0.0	0.0	0.0	3.0	2.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	1.1	29.3	2.2	17.4	0.0	52.8	0.5	3.3	16.8	2.7	81.9	12.3	30.3
TOTAL	219.	122.	164.	111.	124.	163.	95.	302.	172.	126.	301.	206.	2104.



DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	(YEAR 1963)
1	1.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.0
2	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
4	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
7	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
10	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
11	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
12	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
13	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
14	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
15	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
16	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
17	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
18	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
19	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
20	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
21	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
22	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
23	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
24	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
25	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
26	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
27	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
28	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
29	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
30	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
31	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
TOTAL	73.	94.	66.	42.	116.	92.	128.	111.	222.	201.	362.	341.	ANNUAL TOTAL 1851.

(YEAR 1964)

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
2	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
3	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
4	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
5	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
6	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
7	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
8	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
9	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
10	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
11	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
12	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
13	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
14	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
15	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
16	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
17	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
18	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
19	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
20	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
21	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
22	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
23	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
24	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
25	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
26	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
27	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
28	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
29	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
30	0000	0100	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
TOTAL	125-	210-	129-	200-	149-	201-	115-	98-	150-	262-	320-	220-
ANNUAL TOTAL												2231-

(YEAR 1965)

RAINFALL 1961-1979 \*\*

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
1	00	10	00	60	27	00	00	70	72	00	30	30	300
2	00	00	00	12	52	00	40	80	00	00	00	00	200
3	00	15	10	32	50	00	00	80	00	13	50	25	400
4	00	18	00	30	24	25	17	13	73	18	20	60	600
5	00	18	00	00	00	00	00	40	00	00	30	00	400
6	00	00	00	00	00	00	00	00	00	00	00	00	000
7	00	00	00	00	00	00	00	00	00	00	00	00	000
8	00	00	00	00	00	00	00	00	00	00	00	00	000
9	00	00	00	00	00	00	00	00	00	00	00	00	000
10	00	00	00	00	00	00	00	00	00	00	00	00	000
11	00	00	00	00	00	00	00	00	00	00	00	00	000
12	00	00	00	00	00	00	00	00	00	00	00	00	000
13	00	00	00	00	00	00	00	00	00	00	00	00	000
14	00	00	00	00	00	00	00	00	00	00	00	00	000
15	00	00	00	00	00	00	00	00	00	00	00	00	000
16	00	00	00	00	00	00	00	00	00	00	00	00	000
17	00	00	00	00	00	00	00	00	00	00	00	00	000
18	00	00	00	00	00	00	00	00	00	00	00	00	000
19	00	00	00	00	00	00	00	00	00	00	00	00	000
20	00	00	00	00	00	00	00	00	00	00	00	00	000
21	00	00	00	00	00	00	00	00	00	00	00	00	000
22	00	00	00	00	00	00	00	00	00	00	00	00	000
23	00	00	00	00	00	00	00	00	00	00	00	00	000
24	00	00	00	00	00	00	00	00	00	00	00	00	000
25	00	00	00	00	00	00	00	00	00	00	00	00	000
26	00	00	00	00	00	00	00	00	00	00	00	00	000
27	00	00	00	00	00	00	00	00	00	00	00	00	000
28	00	00	00	00	00	00	00	00	00	00	00	00	000
29	00	00	00	00	00	00	00	00	00	00	00	00	000
30	00	00	00	00	00	00	00	00	00	00	00	00	000
TOTAL	18-	81-	34-	186-	433-	58-	115-	156-	209-	340-	281-	269-	2181-

(YEAR 1966)

RAINFALL 1961-1979 \*\*

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DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	286.	93.	235.	200.	110.	104.	233.	143.	213.	251.	280.	169.
												ANNUAL TOTAL
												2317.

DAY	RAINFALL 1961-1979 **												(YEAR 1967)	
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL	ANNUAL TOTAL
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	220.	445.	205.	226.	211.	39.	113.	58.	245.	247.	479.	295.	2785.	

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	(YEAR 1968)
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	43	0	143	168	191	123	195	191	72	220	72	228	ANNUAL TOTAL 1646

DAY	RAINFALL 1961-1979 **												(YEAR 1969)	
	JAN-	FEB-	MAR-	APR-	MAY	JUNE	JULY	AUG-	SEPT-	OCT-	NOV-	DEC-	TOTAL	ANNUAL TOTAL
1	45	00	00	00	10	00	00	00	00	00	00	46	46	
2	20	00	00	10	21	00	00	00	00	00	00	00	34	
3	41	00	00	31	00	00	00	00	00	00	00	00	77	
4	13	00	00	10	45	00	00	00	00	00	00	00	89	
5	30	00	00	00	00	00	00	00	00	00	00	00	00	
6	00	00	00	00	00	00	00	00	00	00	00	00	00	
7	00	00	00	00	00	00	00	00	00	00	00	00	00	
8	00	00	00	00	00	00	00	00	00	00	00	00	00	
9	00	00	00	00	00	00	00	00	00	00	00	00	00	
10	00	00	00	00	00	00	00	00	00	00	00	00	00	
11	00	00	00	00	00	00	00	00	00	00	00	00	00	
12	00	00	00	00	00	00	00	00	00	00	00	00	00	
13	00	00	00	00	00	00	00	00	00	00	00	00	00	
14	00	00	00	00	00	00	00	00	00	00	00	00	00	
15	00	00	00	00	00	00	00	00	00	00	00	00	00	
16	00	00	00	00	00	00	00	00	00	00	00	00	00	
17	00	00	00	00	00	00	00	00	00	00	00	00	00	
18	00	00	00	00	00	00	00	00	00	00	00	00	00	
19	00	00	00	00	00	00	00	00	00	00	00	00	00	
20	00	00	00	00	00	00	00	00	00	00	00	00	00	
21	00	00	00	00	00	00	00	00	00	00	00	00	00	
22	00	00	00	00	00	00	00	00	00	00	00	00	00	
23	00	00	00	00	00	00	00	00	00	00	00	00	00	
24	00	00	00	00	00	00	00	00	00	00	00	00	00	
25	00	00	00	00	00	00	00	00	00	00	00	00	00	
26	00	00	00	00	00	00	00	00	00	00	00	00	00	
27	00	00	00	00	00	00	00	00	00	00	00	00	00	
28	00	00	00	00	00	00	00	00	00	00	00	00	00	
29	00	00	00	00	00	00	00	00	00	00	00	00	00	
30	00	00	00	00	00	00	00	00	00	00	00	00	00	
31	00	00	00	00	00	00	00	00	00	00	00	00	00	
TOTAL	128.	40.	79.	118.	229.	217.	155.	344.	75.	334.	213.	261.	2195.	

\*\* RAINFALL 1961-1979 \*\*

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	(YEAR 1970)
1	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	18-0
2	1-0	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	10-0
3	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
4	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
5	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
6	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
7	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
8	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
9	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
10	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
11	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
12	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
13	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
14	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
15	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
16	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
17	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
18	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
19	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
20	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
21	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
22	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
23	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
24	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
25	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
26	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
27	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
28	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
29	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
30	1-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
TOTAL	156-	47-	173-	229-	184-	144-	97-	135-	241-	378-	248-	526-	ANNUAL TOTAL 2559-



(YEAR 1971)

RAINFALL 1961-1979 \*\*

DAY	JAN-	FEB-	MAR-	APR-	MAY	JUNE	JULY	AUG-	SEPT-	OCT-	NOV-	DEC-
1	102	03	00	38	10	00	00	21	14	20	01	00
2	116	00	00	00	00	00	00	00	00	00	00	00
3	110	00	00	00	00	00	00	00	00	00	00	00
4	37	00	00	00	00	00	00	00	00	00	00	00
5	23	00	00	00	00	00	00	00	00	00	00	00
6	00	00	00	00	00	00	00	00	00	00	00	00
7	00	00	00	00	00	00	00	00	00	00	00	00
8	00	00	00	00	00	00	00	00	00	00	00	00
9	00	00	00	00	00	00	00	00	00	00	00	00
10	00	00	00	00	00	00	00	00	00	00	00	00
11	00	00	00	00	00	00	00	00	00	00	00	00
12	00	00	00	00	00	00	00	00	00	00	00	00
13	00	00	00	00	00	00	00	00	00	00	00	00
14	00	00	00	00	00	00	00	00	00	00	00	00
15	00	00	00	00	00	00	00	00	00	00	00	00
16	00	00	00	00	00	00	00	00	00	00	00	00
17	00	00	00	00	00	00	00	00	00	00	00	00
18	00	00	00	00	00	00	00	00	00	00	00	00
19	00	00	00	00	00	00	00	00	00	00	00	00
20	00	00	00	00	00	00	00	00	00	00	00	00
21	00	00	00	00	00	00	00	00	00	00	00	00
22	00	00	00	00	00	00	00	00	00	00	00	00
23	00	00	00	00	00	00	00	00	00	00	00	00
24	00	00	00	00	00	00	00	00	00	00	00	00
25	00	00	00	00	00	00	00	00	00	00	00	00
26	00	00	00	00	00	00	00	00	00	00	00	00
27	00	00	00	00	00	00	00	00	00	00	00	00
28	00	00	00	00	00	00	00	00	00	00	00	00
29	00	00	00	00	00	00	00	00	00	00	00	00
30	00	00	00	00	00	00	00	00	00	00	00	00
TOTAL	375-	115-	138-	56-	235-	100-	122-	319-	93-	204-	225-	677-
												ANNUAL TOTAL
												2661-



**Appendix K**

**Rainfall and Discharge Data Used for  
Flood Runoff Model**

100-100000

100-100000

100-100000

1972. Flood

Date Time	14 Dec.		15 Dec.		16 Dec.	
	Discharge (Penut)	Rainfall (kg. Merting)	Discharge (Penut)	Rainfall (kg. Merting)	Discharge (Penut)	Rainfall (kg. Merting)
1	25	1.5	57	3.0	749	9.4
2	25	1.5	59	3.0	762	8.9
3	25	1.5	63	3.0	766	2.5
4	25	1.5	66	3.0	762	12.4
5	25	1.5	72	4.0	732	4.1
6	25	1.5	94	4.0	690	11.7
7	25	1.5	107	4.0	647	11.7
8	26	1.5	127	4.0	613	11.7
9	26	1.5	140	3.5	592	2.8
10	26	1.5	151	3.5	558	4.1
11	27	1.5	161	3.5	605	2.3
12	27	1.5	172	3.5	630	5.3
13	28	1.5	186	3.0	668	10.9
14	28	1.5	212	3.0	715	4.6
15	29	1.5	237	3.0	779	2.5
16	30	1.5	270		834	3.6
17	31	1.5	311		898	4.8
18	33	1.5	362		949	1.3
19	34	1.5	426		996	0.5
20	37	1.5	490		1046	0.5
21	41	1.5	554		1096	0.5
22	46	1.5	622		1135	0.5
23	50	1.5	668		1173	9.0
24	54	1.5	711	6.3	1202	10.9

Note) Estimated from daily rainfall for dates of 14, 15, and 17 (13:00) - 18 (12:00)

1972 Flood

Date Time	17 Dec.		18 Dec.		19 Dec.	
	Discharge (Penut)	Rainfall (kg. Merting)	Discharge (Penut)	Rainfall (kg. Merting)	Discharge (Penut)	Rainfall (kg. Merting)
1	1231	6.6	1023	1.8	558	
2	1246	1.3	1014	1.8	541	
3	1255	1.0	1000	1.8	524	
4	1260		991	1.8	571	
5	1241		970	1.8	498	
6	1221		949	1.8	494	
7	1197		927	1.8	490	
8	1178		906	1.8	481	
9	1159		885	1.8	477	
10	1144		868	1.8	470	
11	1130		855	1.8	462	
12	1116		838	1.8	450	
13	1111	1.8	821		438	
14	1096	1.8	804		426	
15	1082	1.8	783		410	
16	1068	1.8	766		406	
17	1055	1.8	741		402	
18	1046	1.8	724		402	
19	1037	1.8	702		406	
20	1032	1.8	681		410	
21	1027	1.8	656		410	
22	1027	1.8	634		410	
23	1027	1.8	613		406	
24	1027	1.8	588		402	

1975 Flood

Date Time	24 Nov.		25 Nov.		26 Nov.	
	Discharge (Penut)	Rainfall (Kuala Tahan)	Discharge (Penut)	Rainfall (Kuala Tahan)	Discharge (Penut)	Rainfall (Kuala Tahan)
1	58	4.0	1323		365	
2	59	3.0	1397		344	
3	64	3.0	1483		330	
4	62	2.0	1559		315	
5	62	1.0	1603		301	
6	64	6.0	1614		292	
7	67	9.0	1592		283	
8	67	4.0	1526		270	
9	69	23.0	1462		261	
10	72	0.0	1376		252	
11	76	0.0	1260		248	
12	84	0.0	1155		239	
13	97	10.0	1051		235	
14	117	8.0	975		227	
15	160	9.0	855		222	
16	218	25.0	766		218	1.0
17	293	14.0	688		214	5.0
18	382	4.0	623		210	2.0
19	489	5.0	568		206	
20	651		521		206	
21	813		477		202	1.0
22	949		436		202	4.0
23	1085		413		198	
24	1202		393		198	

1975 Flood

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Date Time	27 Nov.		28 Nov.		29 Nov.	
	Discharge (Penut)	Rainfall (Kuala Tahan)	Discharge (Penut)	Rainfall	Discharge (Penut)	Rainfall
1	198	1.0	1025		1183	
2	198	1.0	1129	8.0	1138	
3	198		1222	6.0	1094	
4	198		1302	11.0	1051	
5	202		1344	6.0	1017	
6	206		1397	7.0	974	
7	210	7.0	1408	6.0	932	
8	218	14.0	1419	8.0	889	
9	222	2.0	1430	3.0	855	
10	230	2.0	1440	6.0	813	
11	239		1440	3.0	766	
12	248	1.0	1483	4.0	719	
13	252		1516		681	
14	256		1537		637	
15	261		1559		602	
16	265	1.0	1592		554	
17	274	1.0	1569		514	
18	292	1.0	1537		477	
19	320	8.0	1505		447	
20	370	14.0	1462		419	
21	471	3.0	1408		393	
22	609	3.0	1344		370	
23	750	6.0	1292		359	
24	898		1231		344	



1979 Flood

Date Time	23 Nov.			24 Nov.		
	Discharge (Penut)	Rainfall		Discharge (Penut)	Rainfall	
		(Kuala Tahan)	(Ulu. Tekai)		(Kuala Tahan)	(Ulu. Tekai)
1				62		
2				70		
3				76		
4				85		
5				92		
6				106		
7				120		
8				166		
9				211		
10				259		
11				306		
12				357		
13				408		
14				451		0.5
15				493		0.5
16				471		
17				448		
18				432		
19				416		
20				404		
21				391		
22				387		
23				383	1.0	
24				397	3.0	2.0

Ulu. Tekai : Applied to areas 1 - 3 of the flood runoff model.  
 Kuta Tahan : Applied to area 4 of the flood runoff model.

1979 Flood

Date Time	25 Nov.			26 Nov.		
	Discharge (Penut)	Rainfall		Discharge (Penut)	Rainfall	
		(Kuala Tahan)	(Ulu Tekai)		(Kuala Tahan)	(Ulu Tekai)
1	411	7.0	6.5	626		
2	426	1.5	3.0	635	1.0	1.0
3	440	2.0	1.5	644	2.0	1.0
4	472	3.0	2.5	652	2.0	1.0
5	503	2.0	2.5	660	1.0	1.0
6	474	3.5	3.5	664		
7	445	11.5	9.5	668		2.0
8	433	2.0	2.5	676		3.0
9	421	1.0	1.0	684		0.5
10	407	2.0	1.0	696		1.0
11	392	9.0	8.5	707		0.5
12	394	6.0		711		
13	396	2.0		714		
14	408		0.5	712		2.0
15	419		2.0	710	1.0	6.0
16	460		2.5	723	2.0	4.0
17	500	1.0		736		
18	527		1.0	764		1.0
19	554			792	4.0	0.5
20	555			835		0.5
21	556			878	1.0	1.5
22	581			925	1.0	0.5
23	605			971		3.0
24	616			1023		4.0

1979 Flood

Date Time	29 Nov.			30 Nov.		
	Discharge (Penut)	Rainfall		Discharge (Penut)	Rainfall	
		(Kuala Tahan)	(Ulu. Tekai)		(Kuala Tahan)	(Ulu. Tekai)
1	668	22.0	12.0	455		
2	652	18.0	21.0	448		
3	636	4.0	0.5	440		
4	644	4.5	4.5	434		
5	651	1.0	1.0	428		
6	640		0.5	422		
7	629		0.5	415	1.0	
8	619			408		
9	608	1.5		401		
10	600	1.0		396		
11	591	6.0		390		
12	563	1.0		385		
13	535			380		
14	550			375		
15	565		0.5	370		
16	558			366		
17	550			361		
18	543			356		
19	536		0.5	351		
20	508			341		
21	480	1.0		343		
22	474			342		
23	467			340		
24	461			355		

Date Time	27 Nov.			28 Nov.		
	Discharge (Penut)	Rainfall		Discharge (Penut)	Rainfall	
		(Kuala Tahan)	(Ulu, Tekai)		(Kuala Tahan)	(Ulu, Tekai)
1	1074		2.0	850	6.0	0.5
2	1167	4.0		851	2.0	
3	1260	9.0		851	2.0	0.5
4	1284	2.0	0.5	844	4.0	
5	1307		3.5	837	8.0	0.5
6	1316	1.0	3.5	832	2.0	
7	1325		1.5	827		
8	1310			823	7.0	
9	1294	2.0		819	7.0	
10	1301	2.0	0.5	814	2.0	
11	1308	2.0	1.5	809	1.0	
12	1253	5.0	3.5	804	1.0	
13	1198	1.0	6.0	798		
14	1167		2.0	793		0.5
15	1136	1.0	2.5	788		
16	1155		4.0	782	1.0	
17	1174	6.0	6.0	776		
18	1095	3.0	4.0	771	1.0	
19	1015		1.0	765	1.0	
20	986		5.0	767		
21	956		5.0	769		0.5
22	915	2.0	1.0	753		1.5
23	874	1.0	1.5	736		4.0
24	862	5.0		702	1.0	1.5







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