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DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT

REPORT ON  
THE BRANTAS RIVER BASIN DEVELOPMENT PLAN  
(DATA BOOK)

MAY 1973  
SS02

OVERSEAS TECHNICAL COOPERATION AGENCY  
GOVERNMENT OF JAPAN

国際協力事業団		
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# 1. Population Estimate in Coastal River Basin

Administrative Districts	Area in Brantas River Basin		Population in Brantas River Basin		Population Density in Brantas River Basin (1971)	Population Ratio (1971)	Population Density in Brantas River Basin (1971)	Population Ratio (1971)	Average Annual Increase in Population 1951-1971 (%)
	Administrative Area (1971)	Area (km <sup>2</sup> )	Population in Administrative Area (1971)	Population in Brantas River Basin (1971)					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Urban</b>									
1. Surabaya	274	70	1,154,929	1,567,175	90	1,043,345	1,410,453	5,455	7,372
2. Mojokerto	7	100	51,732	59,967	100	51,732	59,967	7,135	3,271
3. Kediri	63	100	153,913	130,423	100	153,913	130,423	2,377	2,342
4. Blitar	16	100	62,972	67,732	100	62,972	67,732	3,863	4,152
5. Malang	69	100	341,452	414,886	100	341,452	414,886	4,946	6,010
Sub-total/Mean			247			1,663,420	2,113,515	4,794	5,142
<b>Rural</b>									
6. Surabaya	1,137	18	509,113	607,172	20	101,824	121,434	458	593
7. Sidoarjo	592	100	541,492	667,649	100	541,051	667,649	915	1,129
8. Mojokerto	836	91	494,492	595,226	95	420,318	505,942	533	665
9. Jombang	1,160	100	686,362	811,681	100	686,362	811,681	592	700
10. Madiun	1,034	27	509,428	583,012	10	50,943	53,301	295	332
11. Kediri	963	100	918,036	1,081,915	100	918,036	1,081,915	933	1,123
12. Ponorogo	1,311	1	699,865	737,760	0	-	-	-	-
13. Nganjuk	1,183	100	675,906	744,734	100	675,906	744,734	572	655
14. Blitar	1,669	91	839,952	950,276	95	797,954	902,762	526	595
15. Tulungagung	1,055	93	675,349	759,825	95	641,532	721,834	654	735
16. Trenggalek	1,205	75	433,957	521,425	95	416,914	495,334	451	548
17. Malang	3,407	80	1,474,106	1,754,501	85	1,352,990	1,481,326	433	515
18. Pasuruan	1,315	20	729,367	863,762	30	218,810	260,629	832	991
Sub-total/Mean			11,494			6,722,690	7,891,591	535	637
Total			11,841			8,386,110	10,027,077	708	847

Data Source: (A) & (C): "Java Timur Dalam Angka 1970" Jawa Timur. Sensus dan Statistik Propinsi Jawa Timur. "Almanak INDONESIA 1968"  
Biro Pusat Statistik, Jakarta.

(B): "Rentjana Penggunaan Tanah Hilir Daerah Aliran Kali Brantas.-  
Inspeksi Landuse Jawa Timur, Malang

(B): Sensus Penduduk Sep. 25, 1971  
Sensus Dan Statistik Propinsi Jawa Timur  
Figures except East Java are based on rough estimate of  
Population Census Sept., 1971 by B.P.S. Jawa-r.

## 2. Monthly Rainfall at 52 Rain Gauges

The compiled herein is the monthly rainfall of 52 raingauges calculated from the records during the 1951-1971 period. The location map of 52 gauges is as shown in Fig.2-1.





*** NO 1 BATU ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	193.	258.	268.	366.	147.	74.	42.	15.	0.	45.	78.	282.	1788.
1951	379.	288.	188.	15.	9.	84.	29.	4.	0.	0.	13.	275.	1284.
1952	296.	319.	433.	97.	39.	0.	0.	5.	3.	82.	499.	489.	2262.
1953	227.	210.	159.	161.	183.	11.	20.	0.	0.	0.	107.	355.	1433.
1954	384.	229.	201.	210.	70.	44.	11.	67.	34.	128.	481.	343.	2202.
1955	207.	204.	210.	76.	109.	62.	218.	19.	21.	60.	320.	288.	1794.
1956	280.	232.	161.	97.	38.	80.	46.	37.	7.	114.	170.	248.	1510.
1957	250.	291.	490.	103.	49.	2.	137.	24.	10.	25.	66.	321.	1768.
1958	189.	245.	306.	308.	39.	81.	68.	41.	34.	28.	105.	506.	1942.
1959	397.	316.	238.	107.	118.	53.	9.	0.	0.	87.	167.	417.	1909.
1960	453.	299.	301.	145.	157.	68.	2.	4.	4.	55.	152.	268.	1908.
1961	395.	255.	206.	185.	114.	0.	0.	0.	0.	0.	119.	398.	1672.
1962	548.	446.	167.	186.	17.	80.	10.	50.	0.	27.	212.	380.	2073.
1963	486.	257.	292.	175.	0.	0.	0.	0.	11.	19.	13.	235.	1488.
1964	28.	77.	300.	19.	152.	37.	0.	21.	72.	275.	296.	159.	1436.
1965	371.	264.	207.	136.	32.	11.	0.	0.	0.	16.	31.	190.	1258.
1966	358.	257.	315.	110.	92.	0.	0.	0.	0.	80.	150.	220.	1582.
1967	326.	200.	136.	119.	4.	0.	0.	0.	3.	53.	114.	496.	1451.
1968	190.	246.	243.	85.	215.	150.	186.	35.	13.	64.	234.	247.	1908.
1969	250.	296.	349.	37.	58.	10.	3.	0.	9.	73.	131.	311.	1567.
1970	258.	268.	366.	147.	74.	42.	15.	0.	45.	78.	282.	173.	1748.
1971	375.	357.	199.	73.	164.	17.	0.	1.	8.	116.	201.	253.	1766.
MEAN	311.	264.	263.	134.	85.	39.	36.	15.	12.	65.	179.	312.	1715.

*** NO 2 SINGOSARI ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	307.	147.	110.	275.	168.	106.	90.	0.	0.	0.	0.	35.	1238.
1951	429.	299.	137.	58.	203.	103.	66.	114.	0.	14.	146.	304.	1873.
1952	319.	357.	169.	42.	145.	28.	0.	33.	66.	82.	513.	266.	2020.
1953	333.	169.	161.	148.	184.	19.	59.	0.	0.	54.	101.	327.	1555.
1954	396.	234.	264.	234.	279.	94.	26.	129.	91.	65.	260.	258.	2350.
1955	251.	208.	193.	70.	94.	173.	229.	30.	102.	213.	456.	233.	2252.
1956	285.	196.	175.	163.	65.	108.	10.	140.	36.	87.	291.	316.	1872.
1957	348.	429.	564.	126.	81.	60.	230.	22.	0.	0.	233.	375.	2468.
1958	261.	292.	238.	202.	33.	110.	43.	63.	21.	76.	213.	551.	2109.
1959	372.	247.	246.	146.	271.	127.	8.	5.	0.	77.	170.	525.	2194.
1960	369.	464.	309.	314.	151.	92.	96.	11.	29.	132.	433.	377.	2727.
1961	412.	280.	217.	238.	142.	0.	0.	0.	0.	0.	154.	433.	1876.
1962	650.	416.	187.	250.	116.	126.	52.	117.	8.	79.	337.	933.	3271.
1963	267.	215.	201.	79.	14.	14.	0.	0.	13.	0.	52.	245.	1100.
1964	119.	114.	282.	131.	96.	23.	5.	47.	21.	218.	146.	77.	1279.
1965	166.	194.	219.	39.	22.	0.	0.	0.	1.	28.	29.	364.	1048.
1966	191.	286.	398.	138.	64.	33.	0.	0.	0.	90.	129.	254.	1543.
1967	139.	135.	158.	180.	9.	0.	0.	0.	0.	0.	189.	293.	1083.
1968	260.	285.	227.	139.	111.	163.	14.	117.	53.	118.	221.	238.	1946.
1969	291.	188.	367.	54.	129.	5.	0.	0.	0.	34.	176.	165.	1409.
1970	147.	110.	275.	168.	106.	90.	0.	0.	0.	0.	35.	265.	1196.
1971	398.	71.	131.	150.	150.	0.	9.	15.	9.	15.	187.	404.	1539.
MEAN	305.	243.	235.	152.	120.	67.	43.	38.	20.	64.	203.	326.	1816.

*** NO 3 KAJUTANGAN ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	252.	147.	105.	240.	108.	64.	53.	41.	0.	43.	82.	108.	1243.
1951	485.	326.	152.	84.	98.	176.	14.	25.	8.	107.	89.	529.	2093.
1952	512.	317.	724.	40.	104.	28.	0.	8.	22.	143.	486.	266.	2650.
1953	272.	234.	256.	273.	172.	2.	71.	0.	0.	2.	141.	364.	1787.
1954	447.	430.	171.	251.	241.	102.	8.	94.	39.	120.	417.	346.	2716.
1955	427.	183.	212.	59.	95.	171.	112.	31.	56.	66.	284.	216.	1912.
1956	244.	203.	170.	60.	22.	75.	66.	51.	0.	205.	337.	343.	1776.
1957	169.	168.	525.	127.	63.	4.	130.	30.	10.	4.	90.	411.	1731.
1958	329.	255.	190.	251.	105.	114.	91.	70.	70.	7.	111.	318.	1911.
1959	420.	243.	265.	80.	245.	53.	8.	0.	0.	104.	224.	419.	2067.
1960	197.	581.	194.	193.	69.	106.	47.	0.	0.	46.	290.	57.	1786.
1961	437.	305.	243.	175.	131.	0.	0.	0.	0.	0.	155.	411.	1857.
1962	693.	284.	280.	262.	0.	33.	14.	117.	12.	76.	117.	627.	2515.
1963	383.	377.	217.	65.	0.	3.	0.	0.	0.	0.	38.	309.	1392.
1964	127.	170.	286.	238.	125.	85.	0.	27.	47.	347.	284.	220.	1956.
1965	192.	212.	248.	238.	58.	0.	0.	0.	0.	2.	146.	383.	1479.
1966	305.	309.	351.	142.	99.	57.	0.	10.	2.	115.	149.	240.	1779.
1967	293.	271.	254.	201.	59.	0.	0.	0.	0.	6.	290.	412.	1766.
1968	201.	309.	416.	110.	117.	223.	239.	22.	47.	16.	158.	214.	2072.
1969	328.	351.	474.	68.	23.	21.	9.	0.	7.	34.	150.	294.	1759.
1970	147.	105.	240.	108.	64.	53.	41.	0.	43.	82.	119.	1110.	1110.
1971	373.	206.	259.	38.	322.	136.	0.	25.	60.	215.	238.	417.	2289.
MEAN	329.	272.	283.	150.	105.	68.	41.	25.	20.	79.	199.	322.	1894.

*** NO 4 MAGIR ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	118.	99.	378.	271.	243.	165.	40.	0.	0.	25.	56.	311.	1706.
1951	373.	261.	195.	65.	47.	119.	0.	14.	6.	0.	15.	464.	1549.
1952	560.	317.	612.	118.	78.	0.	0.	36.	17.	100.	424.	317.	2577.
1953	170.	187.	413.	341.	100.	0.	91.	0.	0.	0.	131.	511.	1934.
1954	481.	476.	298.	325.	209.	34.	30.	166.	6.	105.	508.	518.	3131.
1955	351.	192.	271.	234.	136.	185.	319.	0.	04.	146.	323.	270.	2486.
1956	250.	302.	198.	150.	45.	136.	105.	37.	0.	131.	254.	342.	1950.
1957	280.	278.	481.	162.	73.	9.	70.	21.	12.	0.	0.	358.	1843.
1958	246.	347.	195.	236.	148.	44.	188.	36.	24.	27.	57.	418.	1966.
1959	350.	381.	286.	104.	232.	17.	0.	0.	0.	40.	243.	298.	1958.
1960	140.	320.	245.	177.	52.	72.	69.	0.	0.	46.	199.	178.	1546.
1961	409.	286.	232.	234.	147.	0.	0.	0.	0.	0.	132.	439.	1880.
1962	570.	139.	378.	165.	50.	56.	16.	0.	0.	95.	233.	504.	2205.
1963	287.	277.	456.	121.	0.	0.	0.	0.	0.	0.	73.	429.	1672.
1964	165.	192.	290.	174.	82.	57.	0.	0.	12.	266.	190.	188.	1616.
1965	156.	260.	208.	150.	69.	0.	0.	0.	0.	0.	135.	347.	1525.
1966	295.	444.	336.	71.	91.	0.	0.	0.	0.	149.	84.	348.	1825.
1967	222.	436.	27.	27.	0.	0.	0.	0.	0.	0.	388.	592.	1752.
1968	343.	299.	296.	295.	205.	275.	142.	22.	11.	31.	49.	347.	2315.
1969	305.	308.	472.	153.	15.	26.	0.	0.	0.	15.	124.	370.	1782.
1970	99.	378.	271.	243.	165.	40.	0.	0.	25.	56.	311.	297.	1585.
1971	664.	230.	485.	27.	402.	0.	0.	0.	31.	180.	537.	430.	2981.
MEAN	310.	291.	323.	175.	118.	56.	49.	15.	11.	64.	208.	383.	2004.

*** NO 5 JABUNG ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	421.	400.	214.	244.	212.	125.	41.	17.	0.	41.	71.	298.	2086.
1951	173.	149.	114.	16.	103.	122.	8.	34.	24.	17.	131.	483.	1364.
1952	210.	200.	533.	21.	103.	14.	0.	24.	32.	83.	581.	114.	1915.
1953	310.	213.	234.	167.	239.	6.	143.	0.	0.	0.	247.	297.	1850.
1954	404.	349.	189.	297.	261.	81.	42.	108.	54.	171.	416.	296.	2668.
1955	275.	252.	150.	174.	113.	147.	224.	70.	102.	95.	499.	231.	2337.
1956	323.	222.	40.	74.	34.	216.	142.	178.	9.	80.	142.	268.	1758.
1957	192.	267.	525.	110.	73.	34.	131.	12.	0.	63.	221.	385.	2013.
1958	270.	253.	427.	129.	121.	26.	71.	39.	41.	24.	47.	453.	1900.
1959	298.	170.	144.	46.	474.	94.	36.	0.	0.	50.	292.	390.	1984.
1960	146.	405.	286.	214.	203.	56.	41.	0.	0.	44.	292.	234.	1930.
1961	403.	295.	177.	203.	123.	0.	0.	0.	0.	0.	135.	362.	1698.
1962	397.	298.	202.	234.	23.	30.	39.	150.	0.	55.	342.	509.	2284.
1963	415.	419.	159.	174.	13.	7.	0.	0.	0.	4.	61.	452.	1708.
1964	226.	162.	165.	104.	165.	66.	0.	0.	68.	375.	195.	202.	1720.
1965	217.	176.	256.	94.	9.	0.	0.	0.	0.	0.	53.	511.	1320.
1966	229.	548.	380.	141.	115.	66.	0.	0.	0.	81.	93.	294.	1869.
1967	249.	220.	213.	107.	34.	0.	0.	0.	0.	6.	82.	373.	1286.
1968	359.	228.	404.	115.	252.	220.	298.	37.	0.	98.	146.	399.	2564.
1969	311.	327.	517.	134.	75.	4.	7.	0.	0.	88.	193.	332.	1990.
1970	400.	214.	248.	212.	123.	41.	17.	0.	41.	71.	298.	252.	1917.
1971	526.	297.	266.	93.	397.	184.	0.	0.	0.	183.	344.	525.	2735.
MEAN	307.	276.	283.	142.	142.	71.	56.	30.	16.	74.	224.	348.	1950.

*** NO 6 TUMPANG ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	357.	378.	195.	304.	266.	125.	41.	32.	0.	54.	74.	300.	2131.
1951	443.	337.	70.	37.	40.	83.	29.	10.	36.	44.	110.	398.	1637.
1952	394.	494.	440.	31.	138.	0.	0.	11.	12.	140.	525.	391.	2576.
1953	280.	259.	424.	337.	331.	0.	132.	0.	0.	0.	93.	283.	2139.
1954	560.	358.	267.	184.	175.	76.	12.	29.	39.	97.	455.	430.	2686.
1955	240.	420.	243.	284.	157.	63.	243.	88.	148.	132.	368.	512.	2921.
1956	350.	299.	166.	54.	20.	119.	142.	108.	41.	151.	243.	341.	1938.
1957	365.	414.	366.	175.	97.	6.	152.	38.	0.	0.	88.	513.	2156.
1958	246.	355.	414.	277.	237.	56.	46.	48.	86.	23.	102.	487.	2374.
1959	268.	128.	341.	44.	255.	77.	8.	2.	0.	113.	199.	583.	2058.
1960	265.	539.	420.	237.	360.	70.	16.	1.	13.	95.	284.	271.	2571.
1961	473.	294.	225.	25.	146.	0.	0.	0.	0.	0.	173.	468.	2029.
1962	598.	199.	364.	201.	148.	26.	30.	35.	0.	46.	261.	412.	2322.
1963	379.	384.	278.	61.	34.	9.	0.	0.	2.	46.	22.	401.	1566.
1964	289.	191.	285.	147.	93.	112.	0.	14.	5.	443.	188.	290.	1977.
1965	217.	194.	158.	156.	66.	0.	0.	0.	0.	0.	173.	373.	1337.
1966	570.	476.	382.	186.	128.	41.	0.	33.	0.	154.	279.	384.	2635.
1967	485.	411.	273.	161.	89.	0.	0.	0.	0.	8.	172.	606.	2105.
1968	461.	274.	448.	165.	266.	330.	205.	14.	20.	42.	208.	242.	2675.
1969	434.	487.	529.	206.	46.	51.	0.	0.	37.	85.	95.	196.	2162.
1970	378.	195.	369.	265.	125.	41.	32.	0.	54.	74.	300.	269.	2043.
1971	430.	195.	270.	17.	191.	64.	3.	17.	25.	193.	215.	373.	1993.
MEAN	386.	331.	298.	172.	155.	63.	50.	22.	24.	88.	208.	388.	2183.

*** NO 7 PONDOKUSUMPO ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	432.	409.	401.	336.	187.	111.	92.	14.	0.	22.	65.	253.	2322.
1951	508.	405.	443.	87.	22.	27.	41.	4.	12.	0.	162.	437.	1840.
1952	740.	451.	411.	54.	55.	0.	0.	7.	5.	187.	512.	224.	2570.
1953	301.	168.	280.	316.	131.	0.	54.	0.	0.	0.	138.	304.	1692.
1954	589.	209.	236.	201.	148.	75.	81.	95.	50.	115.	427.	465.	2693.
1955	202.	469.	338.	258.	170.	64.	329.	69.	105.	126.	352.	220.	2704.
1956	368.	297.	212.	7.	72.	87.	78.	85.	59.	73.	193.	414.	2013.
1957	411.	488.	314.	184.	86.	28.	146.	25.	0.	0.	118.	523.	2322.
1958	285.	410.	342.	280.	84.	74.	85.	52.	54.	9.	119.	541.	2365.
1959	375.	201.	363.	14.	125.	19.	7.	0.	0.	40.	110.	612.	2001.
1960	287.	301.	325.	30.	316.	44.	16.	9.	0.	77.	164.	351.	2196.
1961	402.	330.	317.	22.	100.	0.	0.	0.	0.	0.	237.	338.	1948.
1962	589.	296.	310.	24.	74.	74.	27.	29.	0.	50.	378.	453.	2473.
1963	1093.	425.	194.	7.	39.	2.	0.	0.	0.	0.	33.	392.	2256.
1964	294.	200.	234.	112.	37.	110.	0.	0.	0.	434.	187.	310.	1918.
1965	221.	337.	251.	124.	93.	0.	0.	0.	0.	0.	141.	430.	1584.
1966	382.	369.	385.	16.	80.	70.	0.	0.	0.	112.	267.	511.	2339.
1967	263.	305.	192.	80.	47.	0.	0.	0.	0.	0.	69.	154.	1118.
1968	325.	323.	354.	19.	242.	262.	178.	16.	0.	24.	144.	395.	2536.
1969	499.	396.	720.	17.	54.	37.	0.	0.	0.	75.	103.	286.	2349.
1970	409.	401.	336.	187.	111.	02.	14.	0.	22.	65.	253.	251.	2141.
1971	498.	384.	336.	71.	156.	93.	10.	5.	12.	178.	331.	555.	2549.
MEAN	431.	341.	321.	176.	110.	56.	53.	19.	15.	71.	207.	383.	2179.

*** NO 8 TANGKIL ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	482.	282.	384.	157.	163.	53.	22.	0.	103.	58.	319.	2028.
1951	457.	515.	340.	33.	77.	241.	5.	20.	0.	28.	142.	690.	2538.
1952	551.	709.	650.	110.	169.	0.	0.	2.	48.	177.	675.	456.	3553.
1953	289.	269.	253.	301.	241.	14.	71.	0.	23.	0.	149.	463.	2074.
1954	525.	455.	278.	406.	324.	79.	143.	98.	79.	255.	646.	612.	3650.
1955	530.	301.	257.	360.	125.	112.	981.	100.	57.	223.	470.	231.	3147.
1956	276.	127.	162.	169.	141.	182.	117.	122.	30.	100.	129.	199.	1754.
1957	473.	271.	528.	80.	195.	0.	210.	25.	5.	35.	77.	282.	2181.
1958	392.	328.	242.	291.	143.	54.	94.	62.	34.	92.	153.	418.	2353.
1959	337.	341.	500.	131.	210.	81.	23.	0.	46.	26.	203.	598.	2506.
1960	196.	337.	380.	323.	169.	78.	23.	0.	8.	59.	497.	252.	2222.
1961	482.	342.	257.	227.	176.	0.	0.	0.	0.	0.	60.	377.	1927.
1962	526.	212.	378.	422.	89.	22.	15.	41.	0.	174.	23.	545.	2497.
1963	397.	350.	443.	28.	45.	77.	0.	0.	0.	0.	44.	362.	2006.
1964	350.	154.	463.	2.	115.	281.	0.	0.	11.	493.	278.	364.	2537.
1965	277.	322.	273.	223.	124.	0.	0.	0.	18.	0.	214.	393.	1834.
1966	266.	334.	190.	101.	118.	0.	0.	2.	5.	45.	276.	337.	1676.
1967	318.	526.	346.	84.	0.	0.	0.	0.	0.	2.	46.	324.	1646.
1968	277.	160.	373.	180.	306.	237.	190.	123.	8.	111.	406.	312.	2683.
1969	420.	247.	558.	227.	28.	40.	21.	0.	46.	78.	197.	339.	2199.
1970	482.	282.	389.	157.	163.	53.	22.	0.	103.	58.	319.	292.	2320.
1971	416.	223.	456.	8.	220.	174.	3.	0.	5.	178.	308.	373.	2388.
MEAN	343.	331.	354.	21.	152.	80.	62.	28.	24.	104.	245.	398.	2376.

*** NO 9 HAMBIT ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	403.	292.	161.	142.	284.	50.	181.	0.	53.	79.	161.	1766.
1951	464.	624.	116.	56.	227.	372.	73.	408.	4.	0.	26.	674.	3244.
1952	576.	537.	370.	61.	119.	57.	0.	35.	591.	303.	404.	824.	3889.
1953	271.	271.	278.	334.	427.	0.	28.	4.	0.	23.	67.	178.	1881.
1954	83.	729.	783.	1120.	370.	681.	176.	55.	14.	126.	384.	317.	4799.
1955	164.	210.	263.	192.	103.	216.	207.	197.	25.	356.	405.	339.	2949.
1956	326.	189.	53.	95.	88.	52.	248.	180.	5.	71.	175.	268.	1750.
1957	310.	272.	372.	33.	41.	1.	328.	31.	5.	0.	71.	286.	1750.
1958	111.	26.	320.	7.	222.	190.	111.	114.	76.	156.	65.	491.	1960.
1959	235.	275.	300.	84.	108.	86.	60.	0.	0.	7.	98.	560.	1875.
1960	335.	189.	239.	204.	163.	116.	46.	8.	14.	79.	213.	230.	1837.
1961	471.	286.	271.	277.	172.	0.	0.	0.	0.	0.	133.	396.	1956.
1962	326.	220.	520.	36.	0.	85.	0.	0.	0.	71.	240.	417.	2194.
1963	174.	235.	459.	10.	0.	0.	0.	0.	0.	0.	15.	194.	1157.
1964	184.	206.	358.	82.	197.	182.	0.	0.	0.	364.	136.	154.	2553.
1965	307.	305.	89.	13.	54.	0.	0.	0.	0.	0.	110.	263.	1246.
1966	256.	318.	370.	203.	24.	126.	0.	0.	20.	86.	340.	383.	2053.
1967	392.	213.	70.	85.	42.	0.	0.	0.	0.	153.	65.	512.	1538.
1968	285.	204.	302.	39.	310.	223.	258.	55.	6.	177.	281.	541.	3038.
1969	281.	122.	313.	194.	62.	42.	10.	0.	0.	54.	59.	293.	1430.
1970	483.	252.	161.	142.	284.	50.	181.	0.	53.	79.	161.	271.	2037.
1971	216.	155.	343.	7.	87.	44.	6.	0.	16.	48.	22.	390.	1399.
MEAN	292.	293.	297.	235.	147.	123.	95.	58.	36.	106.	162.	370.	2216.

\*\*\* NO 10 GONDANGLEGI \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	659.	426.	456.	405.	278.	98.	47.	0.	44.	148.	362.	2923.
1951	248.	301.	164.	114.	95.	97.	46.	22.	23.	0.	60.	282.	1452.
1952	230.	406.	255.	24.	25.	14.	0.	80.	3.	84.	388.	306.	1815.
1953	139.	131.	217.	146.	224.	39.	35.	2.	0.	10.	129.	254.	1326.
1954	297.	213.	270.	146.	267.	96.	6.	89.	105.	165.	366.	447.	2449.
1955	290.	402.	176.	312.	145.	213.	339.	34.	33.	261.	347.	303.	2855.
1956	248.	127.	126.	17.	97.	198.	179.	110.	25.	77.	155.	365.	1724.
1957	329.	276.	476.	115.	38.	2.	385.	17.	0.	29.	148.	302.	1967.
1958	265.	205.	329.	406.	175.	109.	165.	12.	48.	86.	139.	497.	2450.
1959	233.	515.	341.	181.	239.	109.	35.	0.	0.	0.	133.	690.	2476.
1960	306.	176.	330.	214.	240.	80.	3.	6.	0.	28.	122.	204.	1709.
1961	368.	267.	245.	237.	142.	0.	0.	0.	0.	0.	148.	450.	1847.
1962	374.	188.	197.	185.	111.	21.	17.	32.	0.	114.	138.	554.	1931.
1963	291.	398.	248.	99.	0.	0.	0.	0.	0.	0.	17.	221.	1294.
1964	120.	176.	507.	239.	111.	55.	4.	0.	111.	449.	214.	256.	2322.
1965	323.	279.	207.	129.	39.	0.	25.	0.	2.	0.	210.	271.	1488.
1966	392.	268.	248.	297.	27.	0.	0.	0.	2.	144.	244.	609.	2231.
1967	313.	238.	171.	306.	4.	0.	0.	0.	0.	54.	142.	462.	1689.
1968	381.	159.	500.	311.	499.	408.	261.	150.	19.	213.	340.	609.	3930.
1969	587.	222.	696.	369.	111.	33.	0.	0.	0.	55.	173.	367.	2553.
1970	659.	426.	456.	405.	278.	98.	47.	0.	44.	148.	362.	440.	3363.
1971	223.	173.	388.	36.	156.	100.	2.	0.	0.	233.	101.	44.	1450.
MEAN	315.	282.	325.	215.	156.	89.	73.	27.	19.	100.	188.	374.	2111.

\*\*\* NO 11 KEPANJEN \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	375.	221.	92.	95.	102.	36.	15.	0.	0.	79.	179.	1194.
1951	253.	323.	149.	122.	13.	112.	24.	7.	19.	0.	28.	237.	1287.
1952	219.	219.	358.	74.	40.	5.	0.	36.	15.	198.	428.	205.	1802.
1953	210.	171.	203.	189.	310.	0.	38.	4.	7.	6.	164.	343.	1645.
1954	320.	228.	157.	192.	245.	74.	12.	131.	46.	284.	548.	553.	2790.
1955	330.	336.	281.	135.	200.	109.	487.	122.	32.	111.	381.	363.	2887.
1956	365.	211.	110.	74.	161.	99.	256.	144.	3.	106.	153.	622.	2303.
1957	220.	221.	526.	95.	42.	4.	454.	19.	0.	5.	156.	366.	2108.
1958	237.	356.	243.	251.	151.	130.	93.	22.	14.	94.	194.	489.	2324.
1959	254.	387.	418.	160.	284.	125.	0.	0.	77.	18.	190.	555.	2468.
1960	204.	151.	506.	180.	230.	72.	59.	13.	3.	26.	457.	393.	2288.
1961	428.	261.	219.	280.	131.	0.	0.	0.	0.	0.	167.	506.	1999.
1962	350.	225.	227.	435.	85.	64.	35.	19.	0.	140.	205.	537.	2322.
1963	242.	252.	480.	122.	0.	0.	0.	0.	0.	0.	65.	241.	1402.
1964	116.	141.	466.	120.	37.	120.	0.	12.	54.	467.	188.	328.	2049.
1965	481.	307.	270.	106.	53.	0.	0.	0.	7.	0.	469.	214.	1857.
1966	332.	324.	361.	302.	16.	45.	0.	7.	0.	78.	131.	524.	2120.
1967	310.	242.	146.	175.	0.	0.	0.	0.	0.	15.	140.	354.	1380.
1968	395.	138.	419.	206.	332.	236.	157.	22.	55.	114.	314.	342.	2721.
1969	341.	117.	372.	172.	42.	124.	0.	0.	0.	32.	30.	333.	1563.
1970	375.	221.	92.	95.	102.	36.	15.	0.	0.	79.	179.	429.	1923.
1971	226.	180.	295.	4.	713.	90.	15.	0.	15.	193.	295.	220.	1784.
MEAN	296.	245.	296.	165.	126.	70.	76.	26.	16.	89.	226.	374.	2030.

\*\*\* NO 12 KESAMBEN \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	600.	270.	264.	195.	144.	57.	20.	0.	94.	106.	271.	2046.
1951	214.	546.	142.	155.	26.	97.	5.	1.	18.	37.	12.	531.	1784.
1952	437.	457.	449.	209.	80.	3.	1.	13.	6.	100.	319.	531.	2605.
1953	173.	287.	244.	232.	279.	11.	31.	2.	0.	16.	172.	280.	1727.
1954	556.	305.	224.	269.	257.	24.	18.	221.	90.	149.	613.	673.	3399.
1955	262.	359.	258.	39.	263.	115.	366.	186.	182.	150.	750.	328.	3597.
1956	241.	155.	105.	58.	146.	78.	218.	174.	65.	40.	140.	470.	1890.
1957	196.	344.	310.	104.	24.	2.	410.	12.	0.	0.	177.	459.	2038.
1958	190.	344.	318.	181.	143.	104.	57.	28.	11.	112.	433.	431.	2251.
1959	324.	233.	472.	106.	258.	71.	4.	0.	29.	7.	214.	496.	2208.
1960	256.	189.	345.	311.	302.	116.	30.	5.	13.	25.	299.	203.	2143.
1961	430.	162.	110.	227.	135.	0.	0.	0.	0.	0.	116.	442.	1617.
1962	334.	280.	202.	214.	48.	74.	4.	17.	0.	119.	98.	514.	1902.
1963	395.	204.	349.	57.	0.	4.	0.	0.	0.	15.	188.	174.	1426.
1964	204.	155.	347.	164.	226.	59.	0.	55.	64.	451.	200.	70.	2015.
1965	466.	255.	190.	129.	79.	0.	0.	0.	0.	0.	183.	131.	1433.
1966	231.	412.	449.	234.	46.	58.	0.	7.	5.	171.	364.	746.	2773.
1967	460.	181.	317.	224.	30.	0.	0.	0.	0.	9.	141.	486.	1853.
1968	362.	275.	444.	336.	355.	217.	146.	53.	17.	190.	314.	462.	3181.
1969	383.	208.	310.	175.	41.	53.	1.	12.	41.	105.	80.	305.	1714.
1970	600.	270.	269.	195.	164.	57.	20.	0.	94.	106.	271.	361.	2407.
1971	236.	310.	272.	63.	128.	25.	17.	0.	84.	488.	298.	427.	2372.
MEAN	331.	297.	298.	195.	147.	61.	63.	37.	34.	108.	245.	400.	2206.

\*\*\* NO 13 BIPO-0 \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	257.	336.	217.	173.	208.	234.	72.	45.	0.	16.	86.	280.	1904.
1951	168.	451.	218.	46.	3.	84.	10.	0.	7.	0.	18.	254.	1259.
1952	402.	339.	309.	80.	124.	0.	1.	22.	13.	100.	336.	244.	1970.
1953	141.	246.	221.	110.	313.	9.	6.	0.	0.	8.	77.	132.	1263.
1954	568.	212.	167.	283.	277.	40.	23.	78.	40.	59.	433.	617.	2797.
1955	221.	277.	173.	276.	163.	202.	339.	120.	83.	201.	772.	280.	3107.
1956	283.	163.	144.	83.	130.	92.	168.	134.	32.	91.	142.	365.	1787.
1957	296.	306.	207.	75.	29.	13.	296.	35.	0.	0.	77.	278.	1612.
1958	92.	306.	153.	98.	134.	39.	58.	41.	7.	30.	171.	338.	1467.
1959	453.	154.	340.	50.	82.	66.	15.	0.	16.	0.	120.	408.	1710.
1960	232.	190.	274.	172.	191.	26.	23.	6.	69.	0.	110.	333.	1626.
1961	368.	313.	213.	193.	90.	0.	0.	0.	0.	0.	23.	254.	1454.
1962	306.	283.	213.	75.	108.	18.	0.	14.	0.	43.	64.	517.	1641.
1963	327.	101.	414.	66.	10.	0.	0.	0.	0.	5.	6.	271.	1200.
1964	187.	148.	406.	217.	49.	36.	0.	20.	44.	589.	338.	86.	2100.
1965	537.	282.	533.	121.	14.	14.	0.	0.	0.	0.	174.	256.	1931.
1966	350.	370.	450.	132.	13.	68.	0.	2.	0.	13.	307.	805.	2510.
1967	424.	280.	302.	137.	15.	0.	0.	0.	0.	12.	94.	427.	1686.
1968	494.	278.	278.	264.	291.	182.	190.	5.	30.	105.	192.	528.	2837.
1969	209.	181.	201.	210.	35.	48.	0.	0.	17.	47.	119.	227.	1294.
1970	336.	217.	173.	208.	234.	72.	45.	0.	16.	86.	280.	329.	1976.
1971	265.	297.	244.	124.	209.	78.	0.	0.	71.	227.	265.	373.	2153.
MEAN	314.	260.	266.	145.	124.	60.	57.	24.	20.	72.	100.	344.	1877.

\*\*\* NO 14 DOKU \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	495.	203.	270.	267.	255.	68.	23.	0.	107.	138.	366.	2192.
1951	209.	245.	140.	114.	22.	107.	4.	22.	29.	31.	42.	531.	1541.
1952	589.	687.	617.	96.	245.	0.	3.	61.	52.	218.	534.	533.	3635.
1953	125.	252.	479.	365.	352.	0.	72.	4.	0.	10.	416.	519.	2494.
1954	443.	353.	289.	222.	303.	93.	26.	242.	109.	140.	913.	628.	3765.
1955	310.	310.	394.	386.	172.	151.	509.	262.	92.	172.	694.	351.	3763.
1956	315.	265.	146.	218.	227.	152.	277.	274.	57.	251.	311.	516.	3009.
1957	320.	263.	388.	23.	104.	12.	410.	33.	36.	0.	227.	231.	2047.
1958	335.	263.	344.	198.	34.	72.	272.	65.	35.	174.	309.	552.	2653.
1959	430.	342.	341.	184.	409.	76.	26.	11.	124.	76.	343.	461.	2857.
1960	510.	338.	338.	277.	216.	93.	40.	26.	10.	132.	468.	247.	2690.
1961	483.	298.	244.	323.	213.	0.	0.	0.	0.	0.	216.	506.	2283.
1962	496.	290.	285.	452.	68.	46.	46.	13.	0.	149.	329.	765.	2941.
1963	304.	222.	508.	236.	11.	4.	0.	0.	0.	26.	164.	372.	1847.
1964	202.	230.	412.	347.	204.	123.	0.	14.	78.	513.	215.	278.	2620.
1965	372.	282.	199.	113.	122.	0.	0.	0.	0.	5.	168.	413.	1674.
1966	293.	469.	420.	409.	98.	155.	0.	5.	4.	140.	288.	674.	2955.
1967	383.	321.	276.	198.	86.	0.	0.	0.	0.	36.	170.	537.	1959.
1968	361.	346.	668.	261.	306.	367.	301.	93.	27.	173.	395.	507.	3805.
1969	403.	249.	413.	372.	76.	43.	0.	12.	47.	67.	332.	456.	2472.
1970	495.	203.	270.	267.	255.	68.	23.	0.	107.	138.	366.	492.	2684.
1971	192.	280.	406.	86.	165.	57.	4.	0.	116.	423.	454.	532.	2715.
MEAN	360.	319.	353.	246.	180.	85.	95.	53.	42.	136.	336.	476.	2686.

\*\*\* NO 15 SEMEN \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	553.	118.	291.	394.	176.	198.	0.	0.	83.	205.	245.	2263.
1951	386.	511.	217.	217.	63.	149.	66.	21.	42.	24.	72.	821.	2584.
1952	694.	736.	512.	87.	235.	22.	8.	21.	93.	175.	540.	821.	3939.
1953	226.	314.	602.	174.	405.	17.	96.	8.	0.	0.	605.	709.	3156.
1954	677.	546.	400.	257.	345.	163.	34.	201.	115.	288.	604.	763.	4483.
1955	489.	546.	374.	414.	217.	340.	275.	132.	182.	354.	945.	571.	5139.
1956	443.	344.	49.	278.	117.	289.	370.	184.	139.	480.	562.	492.	3797.
1957	302.	421.	727.	257.	161.	0.	211.	0.	0.	23.	263.	384.	2749.
1958	328.	421.	374.	460.	164.	81.	247.	89.	83.	260.	520.	608.	3635.
1959	453.	367.	451.	139.	382.	12.	22.	0.	51.	144.	211.	679.	2911.
1960	690.	300.	458.	456.	319.	124.	26.	38.	11.	0.	778.	290.	3490.
1961	367.	249.	67.	362.	138.	0.	0.	0.	0.	17.	415.	401.	2016.
1962	600.	175.	277.	500.	357.	9.	0.	0.	0.	36.	176.	456.	2586.
1963	120.	80.	328.	413.	0.	0.	0.	0.	0.	15.	138.	683.	1777.
1964	123.	431.	301.	412.	291.	37.	0.	0.	304.	852.	219.	264.	3254.
1965	332.	220.	56.	46.	232.	15.	0.	0.	0.	0.	121.	288.	1307.
1966	480.	368.	574.	574.	74.	0.	0.	33.	0.	128.	306.	295.	2812.
1967	311.	320.	152.	250.	0.	0.	0.	0.	0.	108.	367.	384.	1892.
1968	214.	81.	363.	326.	189.	193.	272.	42.	142.	264.	486.	422.	2988.
1969	502.	257.	539.	117.	0.	21.	0.	0.	16.	36.	169.	611.	2268.
1970	553.	118.	291.	394.	176.	198.	0.	0.	83.	205.	245.	9.	2272.
1971	326.	402.	322.	134.	182.	0.	0.	7.	36.	474.	462.	527.	2872.
MEAN	409.	353.	350.	297.	202.	84.	97.	35.	59.	180.	382.	488.	2949.

*** NO 16 WLINGI ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	217.	311.	216.	176.	207.	219.	89.	30.	0.	181.	106.	410.	2162.
1951	268.	424.	175.	187.	52.	122.	66.	20.	49.	23.	77.	579.	2042.
1952	482.	611.	412.	72.	194.	18.	8.	20.	108.	167.	576.	579.	3247.
1953	297.	242.	541.	256.	327.	3.	31.	2.	5.	18.	224.	397.	2343.
1954	326.	257.	236.	276.	217.	72.	41.	155.	194.	124.	703.	649.	3252.
1955	202.	312.	202.	356.	134.	208.	323.	175.	237.	188.	725.	320.	3384.
1956	310.	126.	148.	181.	166.	181.	209.	201.	63.	252.	313.	445.	2595.
1957	191.	248.	404.	86.	100.	7.	423.	39.	0.	16.	197.	363.	2076.
1958	201.	248.	269.	340.	56.	59.	241.	35.	23.	127.	282.	440.	2321.
1959	473.	428.	411.	170.	472.	126.	33.	0.	60.	82.	273.	404.	2934.
1960	379.	227.	226.	564.	295.	113.	16.	28.	4.	66.	402.	214.	2539.
1961	284.	224.	331.	257.	107.	0.	0.	0.	0.	26.	211.	506.	1941.
1962	480.	270.	329.	277.	56.	74.	48.	9.	0.	99.	369.	568.	2574.
1963	281.	284.	343.	225.	23.	0.	0.	0.	0.	21.	114.	243.	1534.
1964	111.	182.	381.	358.	132.	147.	0.	8.	45.	575.	161.	293.	2393.
1965	398.	460.	202.	209.	144.	24.	2.	0.	0.	21.	302.	283.	2041.
1966	297.	525.	682.	363.	58.	131.	0.	17.	0.	64.	452.	774.	3363.
1967	441.	201.	270.	147.	60.	0.	0.	0.	0.	26.	152.	434.	1726.
1968	342.	282.	254.	253.	196.	275.	301.	18.	111.	229.	302.	387.	2950.
1969	407.	173.	236.	137.	75.	36.	12.	57.	59.	243.	373.	241.	1951.
1970	311.	216.	176.	207.	219.	89.	30.	0.	181.	106.	410.	457.	2402.
1971	203.	237.	343.	113.	153.	79.	23.	0.	161.	389.	429.	226.	2356.
MEAN	314.	293.	309.	236.	157.	90.	86.	37.	59.	136.	123.	419.	2460.

*** NO 17 LNDUJO ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	369.	381.	304.	183.	137.	34.	39.	0.	65.	0.	184.	1701.
1951	153.	282.	122.	12.	16.	93.	20.	0.	13.	6.	12.	438.	1167.
1952	390.	774.	259.	97.	112.	16.	9.	3.	0.	171.	421.	431.	2683.
1953	101.	216.	277.	50.	226.	8.	4.	1.	0.	3.	119.	191.	1196.
1954	232.	210.	104.	257.	168.	79.	6.	64.	17.	12.	330.	255.	1734.
1955	365.	259.	414.	143.	249.	212.	239.	95.	33.	178.	722.	495.	3404.
1956	564.	203.	123.	174.	213.	46.	176.	130.	5.	90.	102.	479.	2305.
1957	236.	406.	246.	76.	24.	5.	317.	24.	10.	24.	159.	253.	1780.
1958	203.	408.	243.	118.	42.	34.	68.	26.	22.	93.	135.	386.	1778.
1959	429.	179.	376.	116.	102.	88.	4.	1.	102.	12.	81.	452.	1942.
1960	295.	267.	216.	68.	534.	56.	51.	15.	3.	50.	271.	255.	2081.
1961	313.	289.	210.	119.	117.	0.	0.	0.	0.	0.	55.	365.	1468.
1962	430.	342.	264.	175.	89.	35.	1.	0.	0.	34.	92.	534.	2004.
1963	686.	351.	491.	186.	4.	3.	0.	0.	0.	6.	22.	246.	1995.
1964	68.	203.	321.	159.	148.	76.	0.	2.	38.	474.	111.	295.	1895.
1965	263.	424.	221.	66.	26.	2.	0.	0.	0.	0.	150.	185.	1339.
1966	228.	465.	314.	141.	53.	70.	0.	2.	22.	30.	258.	580.	2183.
1967	405.	247.	196.	71.	10.	0.	0.	0.	0.	0.	9.	257.	1155.
1968	149.	124.	290.	47.	260.	252.	67.	0.	0.	130.	246.	372.	1937.
1969	250.	226.	349.	274.	151.	0.	0.	0.	0.	173.	203.	233.	1364.
1970	369.	381.	309.	183.	137.	34.	39.	0.	65.	0.	184.	399.	2100.
1971	285.	588.	394.	160.	52.	69.	0.	0.	8.	230.	275.	179.	2240.
MEAN	305.	328.	277.	137.	133.	60.	47.	18.	16.	81.	180.	339.	1917.

*** NO 18 GARIH ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	435.	253.	259.	224.	346.	57.	2.	0.	74.	146.	169.	1961.
1951	33.	501.	220.	41.	146.	144.	38.	38.	70.	36.	67.	576.	1910.
1952	557.	556.	496.	101.	91.	10.	1.	100.	30.	114.	358.	576.	2990.
1953	183.	329.	382.	247.	412.	10.	9.	2.	0.	14.	182.	321.	2041.
1954	362.	145.	346.	330.	181.	21.	5.	99.	61.	121.	668.	387.	2716.
1955	162.	243.	160.	152.	154.	118.	217.	131.	120.	183.	526.	378.	2544.
1956	254.	144.	109.	154.	141.	182.	143.	110.	78.	95.	226.	453.	2094.
1957	305.	220.	307.	135.	64.	0.	379.	84.	0.	0.	158.	258.	1910.
1958	266.	220.	289.	234.	80.	82.	164.	35.	58.	115.	333.	304.	2182.
1959	297.	423.	346.	69.	229.	185.	21.	0.	5.	8.	192.	388.	2163.
1960	290.	261.	279.	161.	595.	97.	58.	31.	0.	90.	291.	201.	2354.
1961	225.	154.	257.	303.	147.	2.	34.	0.	0.	0.	74.	607.	1805.
1962	276.	267.	431.	263.	32.	91.	2.	40.	7.	199.	139.	730.	2477.
1963	472.	116.	109.	201.	0.	1.	0.	0.	0.	5.	49.	164.	1117.
1964	185.	137.	417.	237.	129.	87.	0.	19.	33.	428.	125.	197.	1994.
1965	311.	323.	254.	146.	87.	11.	0.	0.	0.	4.	168.	247.	1551.
1966	352.	425.	438.	425.	70.	150.	0.	9.	1.	79.	302.	564.	2815.
1967	372.	282.	223.	259.	26.	0.	0.	0.	1.	20.	49.	259.	1491.
1968	419.	506.	757.	555.	355.	346.	235.	11.	10.	42.	97.	269.	3602.
1969	261.	191.	235.	203.	7.	26.	4.	0.	13.	54.	135.	442.	1571.
1970	435.	253.	255.	224.	346.	57.	2.	0.	74.	146.	169.	264.	2245.
1971	244.	554.	413.	186.	219.	113.	27.	0.	57.	279.	366.	226.	2684.
MEAN	296.	304.	314.	222.	170.	95.	63.	32.	26.	96.	219.	364.	2203.

*** NO 19 HADAK ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	623.	407.	533.	410.	290.	183.	60.	0.	95.	204.	562.	3367.
1951	426.	596.	274.	62.	177.	175.	23.	11.	38.	17.	56.	544.	2399.
1952	726.	661.	618.	152.	111.	12.	1.	19.	16.	54.	170.	544.	3084.
1953	205.	329.	604.	208.	363.	15.	51.	2.	0.	0.	435.	432.	2644.
1954	510.	338.	184.	172.	290.	60.	0.	128.	229.	327.	942.	600.	3780.
1955	328.	221.	262.	435.	136.	281.	378.	233.	221.	747.	597.	465.	4252.
1956	376.	277.	134.	134.	303.	305.	135.	208.	39.	214.	553.	522.	3199.
1957	397.	329.	631.	729.	135.	21.	238.	81.	20.	22.	137.	524.	3266.
1958	456.	329.	322.	320.	171.	99.	167.	269.	108.	439.	357.	559.	3616.
1959	378.	540.	634.	433.	306.	239.	123.	0.	42.	106.	232.	444.	3477.
1960	628.	196.	368.	365.	412.	43.	0.	76.	0.	87.	718.	232.	3125.
1961	292.	247.	528.	295.	77.	99.	0.	0.	0.	60.	241.	630.	2376.
1962	388.	264.	755.	508.	297.	99.	46.	83.	0.	159.	457.	677.	3733.
1963	420.	455.	271.	259.	96.	0.	0.	0.	0.	52.	466.	416.	2435.
1964	351.	374.	462.	345.	369.	195.	0.	113.	211.	746.	243.	231.	3642.
1965	472.	416.	295.	365.	179.	5.	0.	0.	0.	36.	259.	652.	2679.
1966	389.	497.	520.	437.	39.	149.	11.	9.	41.	287.	206.	345.	2930.
1967	311.	274.	220.	520.	143.	0.	0.	0.	1.	6.	509.	508.	2495.
1968	123.	246.	414.	327.	306.	324.	543.	99.	19.	453.	476.	463.	3788.
1969	353.	233.	663.	373.	83.	29.	6.	13.	28.	147.	547.	283.	2758.
1970	623.	407.	533.	410.	290.	183.	60.	0.	95.	204.	562.	382.	3749.
1971	369.	223.	249.	166.	282.	88.	56.	0.	159.	586.	401.	386.	2895.
MEAN	403.	367.	424.	346.	226.	119.	90.	64.	58.	221.	399.	473.	3158.

*** NO 20 BLITAR ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	364.	181.	386.	394.	180.	0.	0.	0.	39.	76.	251.	1873.
1951	143.	310.	132.	50.	169.	225.	84.	0.	22.	6.	5.	370.	1506.
1952	442.	810.	301.	124.	173.	18.	12.	3.	0.	217.	448.	413.	2960.
1953	129.	234.	389.	107.	362.	28.	8.	3.	0.	9.	126.	292.	1607.
1954	380.	186.	210.	297.	175.	77.	3.	86.	57.	79.	465.	379.	2394.
1955	163.	219.	163.	262.	171.	100.	234.	117.	108.	159.	457.	291.	2444.
1956	279.	140.	129.	106.	88.	103.	159.	113.	84.	96.	92.	412.	1801.
1957	247.	250.	275.	137.	30.	0.	317.	33.	0.	4.	157.	221.	1671.
1958	197.	250.	340.	239.	102.	50.	104.	9.	21.	49.	201.	297.	1859.
1959	302.	276.	345.	92.	172.	151.	16.	0.	22.	5.	140.	382.	1903.
1960	442.	232.	302.	162.	432.	77.	85.	10.	0.	113.	238.	155.	2248.
1961	269.	256.	270.	170.	60.	6.	12.	0.	0.	5.	48.	435.	1531.
1962	426.	199.	237.	224.	49.	88.	13.	21.	0.	141.	226.	291.	1913.
1963	311.	271.	255.	270.	0.	1.	0.	0.	0.	5.	5.	159.	1223.
1964	131.	182.	318.	215.	264.	130.	0.	4.	45.	409.	135.	163.	1996.
1965	376.	380.	184.	91.	41.	0.	0.	0.	0.	0.	150.	175.	1397.
1966	258.	361.	417.	398.	50.	81.	0.	4.	6.	81.	403.	505.	2562.
1967	335.	377.	271.	129.	33.	0.	0.	0.	0.	26.	34.	193.	1398.
1968	339.	254.	306.	298.	171.	112.	155.	0.	58.	106.	224.	381.	2400.
1969	210.	166.	126.	244.	72.	31.	0.	0.	53.	24.	129.	277.	1328.
1970	364.	181.	388.	394.	180.	0.	0.	0.	39.	76.	251.	296.	2169.
1971	137.	416.	310.	126.	199.	96.	48.	0.	11.	240.	281.	141.	2007.
MEAN	279.	287.	262.	203.	154.	71.	57.	18.	24.	86.	195.	294.	1920.

*** NO 21 KADEMANGAN ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	359.	264.	320.	284.	110.	0.	15.	0.	39.	63.	259.	1713.
1951	148.	392.	226.	13.	46.	99.	7.	0.	150.	0.	16.	373.	1470.
1952	321.	798.	257.	110.	121.	20.	10.	2.	0.	156.	324.	375.	2494.
1953	206.	200.	404.	208.	219.	6.	0.	0.	0.	1.	68.	133.	1445.
1954	354.	236.	210.	384.	164.	27.	17.	58.	0.	16.	259.	326.	2050.
1955	229.	220.	266.	385.	168.	212.	178.	20.	45.	164.	410.	285.	2585.
1956	286.	182.	177.	100.	39.	29.	171.	97.	5.	73.	110.	348.	1567.
1957	176.	271.	306.	33.	32.	20.	312.	28.	0.	9.	134.	308.	1629.
1958	116.	271.	352.	137.	102.	29.	44.	11.	29.	37.	64.	379.	1521.
1959	340.	234.	345.	111.	136.	62.	32.	0.	0.	0.	114.	585.	1959.
1960	244.	392.	171.	94.	346.	38.	9.	5.	0.	96.	171.	268.	1836.
1961	229.	160.	153.	171.	125.	0.	0.	0.	0.	0.	15.	260.	1113.
1962	155.	368.	213.	384.	155.	41.	4.	31.	0.	156.	118.	390.	2038.
1963	445.	218.	268.	100.	2.	0.	0.	0.	0.	0.	78.	105.	1236.
1964	74.	160.	271.	192.	97.	0.	0.	0.	68.	492.	154.	453.	1961.
1965	277.	541.	314.	159.	17.	0.	0.	0.	0.	0.	28.	181.	1517.
1966	231.	307.	535.	94.	0.	75.	0.	0.	0.	17.	277.	393.	1929.
1967	369.	251.	313.	146.	80.	0.	0.	0.	0.	0.	75.	528.	1712.
1968	351.	228.	377.	218.	286.	127.	49.	0.	0.	69.	215.	331.	2251.
1969	137.	171.	279.	264.	57.	41.	0.	0.	0.	0.	92.	280.	1321.
1970	264.	264.	320.	284.	110.	0.	15.	0.	39.	63.	259.	229.	1847.
1971	365.	626.	466.	207.	109.	114.	4.	0.	30.	124.	285.	175.	2505.
MEAN	253.	311.	292.	187.	123.	48.	39.	12.	17.	69.	149.	317.	1809.



*** NO 22 SRENGAT ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	146.	292.	383.	303.	405.	246.	10.	0.	0.	34.	51.	329.	2199.
1951	270.	474.	263.	133.	53.	144.	74.	0.	2.	42.	59.	500.	2014.
1952	311.	563.	556.	152.	213.	18.	10.	0.	0.	172.	528.	500.	3003.
1953	158.	435.	424.	101.	190.	2.	3.	1.	0.	3.	91.	165.	1573.
1954	478.	338.	288.	152.	354.	72.	2.	63.	22.	78.	370.	194.	2361.
1955	338.	189.	197.	137.	145.	135.	178.	96.	116.	73.	345.	333.	2282.
1956	167.	261.	173.	86.	101.	178.	206.	228.	54.	50.	118.	304.	1934.
1957	142.	387.	343.	7.	11.	9.	190.	34.	0.	2.	167.	384.	1727.
1958	268.	367.	277.	104.	85.	24.	100.	8.	15.	18.	52.	309.	1627.
1959	395.	250.	402.	74.	173.	99.	13.	0.	0.	13.	267.	458.	2099.
1960	361.	212.	255.	95.	311.	66.	61.	3.	0.	16.	192.	221.	1795.
1961	281.	166.	245.	157.	77.	0.	0.	0.	0.	0.	34.	231.	1191.
1962	495.	211.	216.	261.	75.	55.	40.	0.	0.	141.	69.	325.	1890.
1963	466.	171.	248.	104.	57.	57.	0.	0.	0.	0.	10.	44.	1159.
1964	211.	149.	332.	84.	121.	47.	0.	0.	77.	316.	72.	131.	1542.
1965	232.	345.	187.	62.	57.	0.	0.	0.	0.	0.	84.	187.	1154.
1966	290.	258.	380.	253.	0.	0.	0.	0.	0.	0.	241.	518.	1940.
1967	424.	481.	295.	175.	0.	0.	0.	0.	0.	0.	17.	120.	1502.
1968	294.	311.	298.	167.	314.	150.	286.	13.	9.	105.	145.	408.	2500.
1969	397.	200.	228.	343.	147.	14.	0.	1.	13.	27.	89.	163.	1622.
1970	292.	383.	303.	403.	246.	10.	0.	0.	34.	51.	329.	247.	2300.
1971	161.	392.	242.	15.	133.	112.	2.	0.	12.	170.	276.	133.	1648.
MEAN	299.	310.	297.	156.	146.	63.	53.	20.	16.	60.	164.	282.	1866.

*** NO 23 GANDEKAN ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	470.	355.	435.	695.	205.	2.	0.	0.	26.	30.	225.	2443.
1951	95.	107.	64.	74.	37.	34.	19.	0.	0.	0.	19.	206.	655.
1952	279.	237.	266.	67.	69.	0.	0.	0.	0.	79.	215.	206.	1418.
1953	71.	234.	320.	214.	64.	0.	0.	0.	0.	0.	84.	171.	1163.
1954	250.	264.	145.	187.	254.	20.	2.	66.	6.	22.	382.	235.	1783.
1955	342.	190.	171.	204.	42.	117.	159.	39.	28.	82.	311.	159.	1809.
1956	127.	196.	156.	7.	28.	60.	146.	153.	10.	29.	144.	255.	1376.
1957	188.	278.	424.	9.	5.	2.	224.	20.	0.	0.	82.	327.	1559.
1958	168.	278.	246.	234.	77.	20.	71.	16.	3.	22.	46.	359.	1562.
1959	421.	106.	351.	81.	104.	98.	0.	0.	0.	720.	249.	347.	2477.
1960	394.	220.	412.	143.	353.	12.	41.	14.	2.	16.	193.	125.	1925.
1961	216.	214.	165.	156.	149.	0.	0.	0.	0.	0.	0.	264.	1170.
1962	423.	405.	193.	322.	139.	73.	22.	0.	0.	121.	170.	253.	2121.
1963	384.	250.	251.	84.	9.	41.	0.	0.	0.	0.	8.	125.	1192.
1964	201.	234.	495.	183.	5.	85.	0.	0.	59.	613.	113.	258.	2242.
1965	753.	293.	183.	270.	196.	0.	0.	0.	0.	10.	55.	359.	2119.
1966	878.	490.	440.	280.	60.	5.	0.	0.	0.	42.	180.	1045.	3470.
1967	845.	405.	605.	385.	0.	0.	0.	0.	0.	0.	0.	420.	2660.
1968	680.	550.	1225.	645.	735.	365.	150.	3.	0.	175.	330.	1165.	6018.
1969	580.	425.	280.	820.	116.	75.	0.	0.	0.	20.	280.	175.	2771.
1970	470.	355.	435.	695.	205.	2.	0.	0.	20.	30.	225.	209.	2652.
1971	261.	369.	366.	0.	243.	52.	2.	0.	14.	125.	243.	150.	1831.
MEAN	383.	297.	345.	253.	163.	57.	38.	14.	7.	99.	151.	320.	2094.

*** NO 24 TULUNGAGUNG ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	419.	135.	244.	262.	61.	60.	4.	0.	28.	9.	226.	1448.
1951	106.	252.	110.	44.	28.	229.	32.	0.	1.	0.	39.	198.	1044.
1952	260.	389.	497.	106.	192.	34.	2.	0.	5.	109.	271.	155.	2020.
1953	116.	307.	331.	168.	72.	3.	4.	3.	0.	0.	44.	139.	1187.
1954	358.	276.	168.	242.	386.	8.	0.	43.	8.	91.	248.	247.	2023.
1955	373.	131.	212.	279.	64.	142.	246.	39.	33.	193.	204.	252.	2168.
1956	198.	151.	117.	135.	64.	91.	155.	103.	0.	40.	82.	264.	1400.
1957	130.	255.	213.	54.	0.	0.	356.	59.	0.	0.	98.	211.	1376.
1958	187.	266.	311.	184.	100.	14.	67.	9.	7.	21.	46.	261.	1477.
1959	519.	287.	288.	53.	143.	135.	29.	0.	0.	0.	82.	350.	1884.
1960	300.	164.	342.	106.	328.	4.	12.	3.	5.	14.	253.	89.	1610.
1961	274.	152.	89.	165.	136.	0.	0.	0.	0.	0.	8.	213.	1037.
1962	440.	368.	265.	263.	85.	27.	17.	0.	2.	141.	170.	316.	2094.
1963	469.	278.	379.	24.	9.	27.	0.	0.	0.	3.	9.	76.	1279.
1964	53.	725.	658.	65.	165.	85.	0.	0.	105.	368.	114.	97.	2468.
1965	358.	186.	149.	63.	47.	0.	0.	0.	0.	0.	7.	158.	970.
1966	321.	242.	271.	212.	29.	0.	0.	0.	0.	19.	119.	314.	1527.
1967	260.	293.	142.	178.	4.	0.	0.	0.	0.	25.	4.	148.	1100.
1968	190.	130.	354.	209.	349.	230.	142.	21.	0.	47.	105.	347.	2080.
1969	240.	248.	163.	184.	63.	14.	0.	0.	0.	99.	52.	253.	1321.
1970	419.	135.	244.	262.	61.	60.	4.	0.	28.	9.	226.	133.	1581.
1971	164.	200.	276.	116.	283.	38.	0.	0.	21.	108.	210.	207.	1644.
MEAN	275.	264.	260.	153.	130.	55.	51.	13.	10.	60.	109.	211.	1585.



*** NO 25 BAYOLANGU ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	189.	173.	262.	211.	205.	20.	0.	0.	13.	34.	111.	1218.
1951	139.	332.	108.	45.	0.	0.	0.	0.	33.	0.	24.	157.	836.
1952	290.	304.	279.	44.	167.	0.	0.	0.	0.	58.	312.	81.	1535.
1953	65.	124.	152.	57.	95.	8.	8.	0.	0.	46.	58.	162.	775.
1954	219.	297.	148.	318.	303.	37.	18.	59.	7.	43.	282.	381.	2108.
1955	132.	111.	228.	150.	101.	90.	200.	26.	32.	150.	206.	207.	1833.
1956	162.	272.	134.	35.	62.	41.	167.	138.	12.	55.	118.	295.	1491.
1957	85.	365.	355.	32.	20.	0.	388.	37.	5.	0.	75.	306.	1668.
1958	222.	356.	314.	177.	41.	17.	5.	10.	3.	65.	151.	400.	1761.
1959	441.	165.	253.	136.	67.	118.	5.	0.	0.	0.	86.	212.	1483.
1960	245.	176.	207.	103.	320.	24.	11.	6.	6.	44.	146.	104.	1392.
1961	284.	182.	134.	208.	138.	0.	0.	0.	0.	0.	9.	223.	1170.
1962	404.	202.	144.	178.	53.	44.	12.	15.	0.	56.	140.	354.	1596.
1963	415.	369.	315.	44.	11.	4.	0.	0.	0.	0.	4.	93.	1265.
1964	167.	139.	314.	101.	121.	33.	0.	32.	141.	511.	121.	100.	1785.
1965	432.	134.	194.	101.	24.	0.	0.	0.	0.	0.	25.	128.	1038.
1966	439.	320.	359.	191.	44.	19.	0.	0.	0.	49.	194.	369.	1934.
1967	219.	251.	84.	42.	0.	0.	0.	0.	0.	0.	30.	97.	723.
1968	221.	150.	157.	78.	299.	148.	132.	0.	27.	2.	92.	212.	1518.
1969	85.	160.	77.	162.	25.	0.	0.	0.	0.	25.	41.	154.	729.
1970	189.	173.	282.	211.	205.	20.	0.	0.	13.	34.	111.	248.	1466.
1971	235.	213.	252.	78.	280.	37.	5.	0.	21.	181.	308.	177.	1787.
MEAN	242.	227.	211.	123.	118.	38.	44.	15.	14.	61.	117.	208.	1414.

*** NO 26 CAMPURDARAT ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	224.	212.	216.	64.	219.	147.	35.	0.	0.	36.	0.	100.	1258.
1951	134.	330.	119.	48.	36.	152.	4.	13.	78.	0.	36.	220.	1168.
1952	262.	150.	330.	22.	153.	5.	1.	0.	58.	124.	367.	109.	1581.
1953	118.	241.	210.	94.	83.	14.	0.	9.	0.	0.	53.	136.	963.
1954	270.	162.	137.	203.	210.	63.	34.	63.	29.	30.	235.	207.	1643.
1955	116.	127.	175.	171.	98.	218.	410.	4.	17.	265.	244.	161.	2006.
1956	110.	280.	68.	36.	42.	45.	152.	101.	10.	44.	106.	206.	1200.
1957	50.	370.	238.	17.	0.	0.	502.	6.	0.	0.	79.	273.	1535.
1958	160.	269.	340.	37.	144.	50.	88.	28.	0.	54.	171.	268.	1902.
1959	258.	227.	318.	84.	57.	136.	75.	4.	14.	18.	79.	218.	1495.
1960	328.	299.	164.	151.	250.	35.	30.	4.	27.	29.	167.	153.	1637.
1961	233.	232.	158.	133.	55.	0.	0.	0.	0.	0.	11.	183.	1005.
1962	393.	233.	158.	267.	96.	36.	12.	10.	0.	64.	110.	351.	1730.
1963	367.	323.	376.	147.	0.	19.	0.	0.	0.	3.	5.	131.	1373.
1964	125.	124.	420.	56.	116.	67.	6.	40.	143.	737.	185.	66.	2085.
1965	283.	153.	271.	57.	10.	0.	0.	0.	0.	8.	71.	117.	979.
1966	365.	293.	257.	107.	100.	77.	0.	4.	20.	79.	148.	393.	1843.
1967	302.	190.	83.	187.	0.	0.	0.	0.	0.	0.	25.	130.	977.
1968	215.	189.	125.	187.	424.	321.	74.	0.	60.	32.	42.	86.	1755.
1969	107.	109.	168.	77.	24.	19.	0.	0.	0.	2.	108.	94.	703.
1970	212.	216.	69.	219.	147.	39.	0.	0.	36.	0.	100.	238.	1272.
1971	204.	286.	326.	7.	229.	14.	0.	0.	0.	196.	212.	106.	1573.
MEAN	220.	228.	214.	104.	114.	66.	65.	13.	22.	78.	119.	179.	1427.

*** NO 27 BESUKI ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	124.	110.	141.	151.	329.	260.	74.	15.	0.	58.	21.	260.	1549.
1951	172.	244.	114.	75.	68.	294.	42.	54.	119.	14.	22.	211.	1454.
1952	526.	223.	240.	81.	136.	0.	15.	6.	247.	527.	576.	190.	2784.
1953	94.	231.	144.	170.	201.	0.	7.	24.	6.	36.	141.	153.	1247.
1954	442.	266.	275.	160.	317.	100.	57.	184.	76.	75.	308.	170.	2438.
1955	227.	129.	132.	294.	301.	320.	953.	227.	151.	618.	349.	160.	3868.
1956	194.	343.	67.	44.	85.	68.	312.	35.	57.	152.	107.	302.	1756.
1957	76.	373.	166.	74.	0.	16.	796.	12.	7.	26.	76.	118.	1745.
1958	138.	431.	176.	294.	100.	164.	59.	93.	23.	124.	138.	165.	1909.
1959	635.	145.	341.	179.	219.	230.	119.	3.	20.	77.	118.	176.	2262.
1960	358.	211.	317.	199.	366.	62.	28.	55.	21.	65.	249.	184.	2155.
1961	261.	302.	144.	130.	175.	0.	0.	0.	0.	0.	7.	65.	1109.
1962	362.	215.	264.	454.	72.	42.	16.	16.	0.	138.	372.	462.	2413.
1963	903.	224.	318.	62.	0.	37.	0.	0.	0.	0.	6.	268.	1870.
1964	62.	59.	241.	163.	238.	40.	20.	97.	249.	1029.	117.	64.	2455.
1965	334.	126.	224.	62.	44.	0.	0.	0.	33.	52.	192.	158.	1215.
1966	284.	247.	277.	203.	68.	28.	0.	3.	92.	157.	165.	193.	1737.
1967	283.	202.	73.	8.	0.	0.	0.	2.	0.	14.	114.	258.	1026.
1968	181.	161.	128.	100.	399.	395.	437.	60.	153.	185.	215.	313.	2727.
1969	108.	158.	275.	184.	23.	25.	0.	0.	38.	22.	341.	110.	1289.
1970	110.	141.	151.	324.	266.	74.	15.	0.	58.	21.	260.	339.	1764.
1971	597.	250.	249.	87.	196.	40.	0.	0.	29.	309.	286.	322.	2371.
MEAN	296.	218.	208.	164.	163.	102.	134.	40.	63.	169.	192.	211.	1959.

*** NO 28 KAMPAR ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	262.	347.	254.	478.	397.	221.	56.	0.	168.	77.	347.	2576.
1951	248.	428.	244.	206.	0.	49.	63.	42.	147.	42.	17.	210.	1735.
1952	481.	209.	195.	85.	70.	40.	13.	21.	106.	232.	278.	290.	1981.
1953	92.	323.	449.	254.	370.	15.	9.	28.	11.	11.	170.	90.	1827.
1954	326.	222.	144.	197.	456.	175.	111.	230.	94.	155.	385.	302.	2807.
1955	208.	152.	219.	200.	127.	254.	1046.	129.	195.	347.	398.	156.	3436.
1956	276.	389.	106.	67.	126.	91.	259.	175.	35.	114.	141.	268.	2047.
1957	149.	393.	428.	132.	23.	23.	648.	22.	0.	3.	31.	213.	2065.
1958	134.	321.	444.	344.	221.	187.	132.	249.	31.	254.	143.	355.	2815.
1959	374.	165.	437.	135.	359.	275.	262.	4.	13.	90.	131.	374.	2839.
1960	441.	420.	449.	174.	387.	63.	71.	54.	44.	91.	122.	280.	2521.
1961	315.	278.	157.	275.	261.	5.	5.	0.	1.	1.	32.	240.	1570.
1962	387.	369.	292.	328.	64.	334.	71.	97.	3.	155.	181.	403.	2680.
1963	527.	236.	372.	366.	13.	109.	0.	0.	0.	54.	10.	157.	1796.
1964	164.	100.	666.	255.	390.	132.	34.	131.	312.	590.	160.	81.	2955.
1965	487.	208.	280.	74.	77.	11.	38.	0.	39.	16.	162.	213.	1610.
1966	397.	311.	353.	344.	141.	55.	0.	12.	111.	229.	280.	392.	2585.
1967	410.	248.	234.	193.	11.	12.	0.	0.	0.	0.	150.	140.	1403.
1968	283.	178.	214.	204.	323.	333.	566.	186.	193.	191.	338.	349.	3358.
1969	405.	279.	263.	573.	42.	44.	51.	37.	0.	50.	163.	144.	1991.
1970	262.	347.	253.	475.	397.	221.	56.	0.	138.	77.	347.	408.	2984.
1971	115.	430.	538.	14.	365.	224.	57.	0.	113.	548.	237.	211.	2861.
MEAN	309.	285.	316.	235.	214.	139.	169.	67.	73.	154.	180.	248.	2365.

*** NO 29 DJATI KAHANGAN ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	386.	344.	217.	263.	285.	61.	30.	8.	102.	43.	159.	1898.
1951	235.	299.	162.	74.	22.	132.	10.	34.	114.	0.	14.	252.	1353.
1952	384.	176.	298.	47.	10.	8.	3.	8.	61.	224.	361.	133.	1709.
1953	138.	269.	304.	197.	198.	28.	0.	16.	0.	6.	85.	222.	1463.
1954	390.	202.	180.	105.	221.	131.	34.	116.	9.	43.	324.	279.	2030.
1955	145.	81.	249.	100.	92.	74.	517.	87.	64.	191.	254.	81.	1935.
1956	119.	249.	199.	67.	153.	25.	215.	55.	26.	89.	64.	308.	1659.
1957	195.	435.	249.	82.	30.	3.	344.	47.	0.	0.	102.	256.	1790.
1958	186.	297.	297.	95.	49.	151.	126.	124.	0.	163.	154.	315.	1961.
1959	341.	297.	311.	136.	246.	216.	124.	3.	37.	34.	73.	357.	2175.
1960	307.	263.	253.	224.	306.	48.	22.	11.	16.	64.	180.	147.	1851.
1961	219.	245.	178.	165.	125.	0.	0.	0.	0.	0.	25.	72.	1029.
1962	264.	312.	233.	314.	85.	154.	32.	45.	0.	94.	53.	364.	1950.
1963	418.	167.	259.	189.	1.	26.	0.	0.	0.	25.	4.	128.	1217.
1964	132.	103.	313.	272.	274.	114.	19.	28.	151.	189.	97.	111.	1803.
1965	233.	212.	307.	27.	43.	0.	0.	0.	0.	14.	67.	182.	1084.
1966	255.	305.	268.	351.	76.	43.	0.	0.	31.	146.	200.	463.	2138.
1967	346.	327.	141.	81.	12.	0.	0.	0.	0.	2.	77.	297.	1283.
1968	240.	270.	453.	251.	390.	186.	326.	126.	80.	132.	180.	299.	2891.
1969	270.	220.	356.	254.	67.	25.	35.	4.	26.	36.	66.	175.	1531.
1970	386.	344.	217.	263.	285.	61.	30.	8.	102.	43.	159.	405.	2303.
1971	173.	241.	504.	65.	309.	90.	0.	21.	43.	303.	179.	224.	2158.
MEAN	256.	259.	278.	161.	148.	82.	86.	35.	35.	86.	123.	242.	1777.

*** NO 30 HENDUNGAN ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	518.	502.	217.	322.	447.	42.	0.	0.	128.	108.	459.	2743.
1951	327.	274.	253.	185.	23.	369.	74.	280.	49.	28.	30.	441.	2809.
1952	335.	195.	314.	132.	0.	0.	23.	26.	188.	278.	756.	245.	2472.
1953	365.	234.	379.	242.	305.	25.	4.	21.	0.	17.	322.	470.	2379.
1954	372.	303.	226.	334.	342.	237.	81.	170.	113.	164.	889.	267.	3503.
1955	578.	330.	220.	482.	256.	316.	519.	338.	274.	229.	374.	134.	4000.
1956	342.	168.	127.	494.	346.	295.	359.	150.	80.	209.	261.	403.	3233.
1957	342.	277.	355.	337.	104.	27.	731.	50.	0.	15.	238.	565.	3041.
1958	274.	342.	532.	438.	214.	219.	184.	176.	31.	196.	370.	1003.	3979.
1959	558.	380.	734.	277.	428.	211.	317.	4.	122.	134.	346.	513.	4024.
1960	441.	402.	376.	376.	366.	259.	88.	68.	38.	145.	592.	196.	3347.
1961	476.	164.	315.	274.	180.	0.	13.	0.	0.	0.	171.	334.	1927.
1962	375.	249.	455.	445.	203.	215.	221.	150.	0.	235.	295.	389.	3232.
1963	325.	255.	441.	343.	40.	0.	0.	0.	0.	52.	90.	305.	1891.
1964	240.	324.	451.	564.	352.	187.	0.	27.	179.	455.	138.	279.	3201.
1965	375.	289.	195.	160.	54.	0.	0.	0.	0.	0.	175.	457.	1655.
1966	362.	328.	341.	429.	56.	0.	0.	0.	0.	56.	424.	555.	2508.
1967	396.	181.	243.	178.	0.	0.	0.	0.	0.	50.	143.	552.	1743.
1968	379.	301.	886.	236.	362.	99.	559.	76.	81.	196.	299.	450.	3844.
1969	452.	244.	519.	272.	0.	10.	0.	48.	0.	0.	245.	0.	2016.
1970	518.	502.	217.	322.	447.	42.	0.	0.	128.	108.	459.	344.	3087.
1971	265.	426.	482.	0.	499.	87.	44.	0.	271.	592.	189.	524.	3381.
MEAN	362.	302.	347.	307.	223.	138.	148.	71.	70.	149.	314.	413.	2894.

*** NO 31 JAEJAN ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	459.	369.	370.	346.	286.	160.	61.	0.	98.	71.	408.	2630.
1951	419.	324.	288.	179.	23.	358.	61.	198.	53.	24.	28.	554.	2509.
1952	429.	231.	357.	127.	0.	0.	19.	20.	198.	236.	704.	308.	2629.
1953	468.	277.	431.	326.	448.	18.	2.	27.	0.	0.	168.	466.	2631.
1954	482.	419.	453.	507.	339.	215.	67.	96.	59.	165.	681.	302.	3785.
1955	514.	253.	467.	406.	324.	417.	719.	96.	77.	457.	196.	258.	4206.
1956	331.	227.	300.	161.	443.	155.	241.	228.	44.	253.	432.	508.	3323.
1957	629.	228.	931.	274.	225.	46.	519.	47.	2.	55.	256.	835.	4047.
1958	457.	496.	449.	466.	262.	29.	164.	168.	44.	248.	334.	981.	4100.
1959	484.	453.	467.	102.	550.	131.	106.	0.	60.	52.	322.	758.	3485.
1960	459.	261.	423.	244.	408.	72.	5.	0.	17.	75.	421.	317.	2722.
1961	280.	272.	384.	212.	146.	0.	0.	0.	0.	41.	70.	369.	1769.
1962	509.	381.	574.	376.	104.	63.	75.	14.	3.	208.	218.	612.	3134.
1963	481.	621.	429.	415.	33.	42.	0.	0.	0.	9.	16.	114.	2160.
1964	233.	280.	406.	281.	494.	152.	13.	7.	392.	831.	387.	285.	3760.
1965	398.	434.	229.	207.	53.	11.	5.	0.	0.	7.	233.	512.	2089.
1966	585.	312.	676.	436.	152.	68.	0.	11.	23.	286.	285.	745.	3576.
1967	318.	404.	293.	246.	12.	0.	0.	0.	2.	17.	92.	443.	1827.
1968	213.	115.	417.	197.	329.	100.	361.	213.	2.	109.	375.	372.	2803.
1969	518.	249.	174.	263.	0.	93.	0.	0.	47.	37.	101.	519.	2001.
1970	459.	369.	370.	346.	288.	160.	61.	0.	98.	71.	408.	351.	2981.
1971	425.	374.	708.	440.	413.	54.	0.	0.	25.	205.	179.	389.	3212.
MEAN	433.	339.	437.	294.	245.	112.	117.	54.	52.	156.	272.	473.	2988.

*** NO 32 BHSUKI ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	600.	410.	541.	260.	273.	87.	16.	0.	46.	31.	407.	2671.
1951	455.	377.	313.	208.	74.	262.	64.	197.	86.	22.	73.	663.	2794.
1952	429.	475.	491.	117.	124.	25.	16.	65.	139.	245.	942.	656.	3686.
1953	378.	166.	443.	433.	454.	56.	69.	57.	13.	7.	99.	481.	2656.
1954	562.	556.	486.	202.	389.	191.	63.	212.	95.	254.	696.	381.	4287.
1955	580.	225.	520.	307.	288.	395.	780.	110.	79.	354.	300.	481.	4419.
1956	264.	380.	200.	177.	253.	277.	218.	261.	82.	215.	394.	415.	3136.
1957	682.	302.	750.	256.	101.	116.	610.	78.	15.	57.	207.	609.	3787.
1958	679.	679.	717.	561.	359.	110.	224.	207.	52.	298.	299.	673.	4858.
1959	471.	653.	719.	334.	391.	164.	204.	11.	103.	50.	155.	1036.	4296.
1960	709.	454.	715.	483.	383.	74.	64.	66.	44.	115.	484.	522.	4113.
1961	253.	258.	317.	385.	290.	29.	6.	0.	0.	23.	132.	378.	2067.
1962	596.	700.	477.	294.	41.	417.	66.	11.	0.	190.	206.	507.	3465.
1963	679.	363.	734.	304.	82.	20.	0.	0.	0.	0.	70.	177.	2434.
1964	586.	536.	435.	363.	447.	110.	0.	283.	572.	987.	688.	239.	5246.
1965	409.	314.	216.	376.	120.	0.	29.	0.	0.	0.	40.	379.	1883.
1966	154.	294.	472.	336.	95.	18.	0.	0.	22.	18.	181.	649.	2239.
1967	536.	568.	222.	284.	10.	0.	0.	0.	0.	4.	51.	298.	1924.
1968	246.	373.	535.	243.	316.	292.	179.	37.	36.	74.	270.	497.	3098.
1969	439.	570.	519.	300.	0.	25.	0.	0.	7.	10.	121.	450.	2441.
1970	600.	410.	541.	260.	273.	87.	16.	0.	46.	31.	407.	836.	3507.
1971	597.	250.	253.	87.	196.	46.	0.	0.	29.	309.	286.	322.	2375.
MEAN	491.	432.	475.	314.	225.	136.	123.	73.	65.	149.	274.	503.	3272.

*** NO 33 KANDAT ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	440.	118.	349.	424.	236.	44.	0.	0.	78.	69.	194.	1949.
1951	304.	239.	285.	64.	62.	171.	8.	0.	15.	8.	7.	346.	1463.
1952	281.	297.	275.	64.	126.	23.	5.	19.	29.	165.	147.	273.	1704.
1953	168.	330.	353.	80.	221.	0.	27.	0.	52.	0.	88.	183.	1452.
1954	381.	323.	171.	200.	244.	135.	0.	149.	48.	95.	370.	139.	2261.
1955	341.	182.	237.	145.	116.	96.	260.	157.	126.	140.	214.	346.	2400.
1956	209.	278.	145.	144.	198.	186.	103.	83.	75.	64.	194.	288.	2009.
1957	258.	187.	362.	137.	77.	0.	166.	27.	0.	37.	118.	224.	1593.
1958	149.	380.	301.	216.	150.	84.	65.	88.	32.	63.	157.	418.	2083.
1959	414.	242.	335.	94.	146.	36.	105.	0.	17.	0.	158.	291.	1840.
1960	284.	238.	477.	114.	310.	53.	56.	0.	0.	36.	256.	221.	2047.
1961	143.	146.	317.	124.	51.	34.	8.	0.	0.	11.	85.	297.	1216.
1962	250.	229.	353.	292.	133.	39.	39.	2.	0.	84.	132.	381.	1914.
1963	309.	104.	382.	185.	62.	0.	0.	0.	0.	0.	72.	113.	1231.
1964	120.	137.	330.	127.	306.	35.	0.	16.	14.	112.	77.	123.	1401.
1965	152.	244.	198.	7.	53.	0.	13.	0.	0.	0.	91.	182.	991.
1966	258.	377.	276.	267.	0.	15.	0.	0.	0.	46.	69.	257.	1565.
1967	145.	94.	126.	76.	0.	0.	0.	0.	0.	69.	13.	188.	711.
1968	445.	325.	665.	114.	284.	143.	130.	36.	0.	118.	258.	525.	3043.
1969	373.	323.	414.	184.	0.	36.	8.	0.	15.	63.	82.	387.	1895.
1970	440.	118.	349.	424.	236.	44.	0.	0.	78.	69.	194.	265.	2214.
1971	229.	196.	173.	64.	291.	27.	5.	0.	0.	162.	223.	171.	1545.
MEAN	270.	247.	249.	165.	158.	63.	47.	25.	23.	65.	140.	262.	1742.

*** NO 34 WATHS ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	174.	342.	264.	425.	203.	244.	31.	14.	0.	27.	45.	228.	1997.
1951	348.	281.	386.	87.	75.	249.	14.	4.	5.	40.	82.	278.	1549.
1952	226.	388.	487.	102.	160.	12.	0.	31.	81.	246.	245.	156.	2134.
1953	326.	248.	409.	241.	187.	3.	50.	0.	1.	0.	177.	188.	1830.
1954	378.	450.	249.	304.	276.	141.	10.	89.	39.	82.	416.	298.	2782.
1955	225.	163.	259.	394.	144.	139.	228.	146.	132.	149.	350.	310.	2639.
1956	112.	323.	210.	163.	226.	187.	136.	106.	18.	56.	276.	334.	2097.
1957	226.	147.	687.	240.	200.	5.	222.	48.	0.	31.	90.	138.	2034.
1958	207.	382.	445.	271.	161.	92.	169.	60.	22.	96.	175.	281.	2361.
1959	345.	436.	465.	296.	294.	97.	79.	0.	63.	46.	173.	338.	2584.
1960	291.	348.	200.	210.	337.	41.	39.	34.	0.	33.	251.	134.	1918.
1961	164.	360.	441.	185.	74.	5.	0.	0.	0.	38.	96.	340.	1743.
1962	278.	134.	327.	44.	142.	51.	26.	18.	13.	63.	155.	296.	1943.
1963	330.	304.	361.	99.	71.	35.	0.	0.	0.	30.	85.	184.	1499.
1964	135.	155.	391.	125.	392.	120.	0.	28.	43.	232.	86.	178.	1885.
1965	257.	203.	210.	235.	102.	3.	15.	0.	0.	0.	112.	212.	1349.
1966	217.	334.	448.	343.	121.	27.	0.	0.	16.	220.	32.	256.	2014.
1967	592.	227.	32.	387.	17.	0.	0.	0.	0.	0.	28.	295.	1578.
1968	414.	230.	579.	235.	179.	204.	140.	35.	53.	192.	171.	292.	2724.
1969	124.	112.	476.	369.	0.	26.	8.	0.	28.	60.	125.	190.	1518.
1970	342.	264.	425.	264.	244.	31.	14.	0.	27.	45.	228.	311.	2134.
1971	348.	284.	229.	110.	234.	40.	100.	0.	61.	359.	362.	168.	2243.
MEAN	275.	278.	367.	249.	175.	80.	58.	28.	27.	93.	164.	246.	2039.

*** NO 35 KEDIRI ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	392.	170.	350.	235.	83.	19.	0.	0.	0.	18.	190.	1457.
1951	288.	404.	158.	117.	20.	121.	120.	0.	3.	78.	27.	271.	1583.
1952	441.	339.	492.	144.	104.	0.	1.	35.	24.	83.	281.	246.	2190.
1953	305.	238.	364.	283.	169.	10.	8.	0.	2.	0.	41.	414.	1833.
1954	257.	458.	219.	266.	100.	32.	9.	136.	34.	52.	285.	284.	2132.
1955	316.	147.	360.	229.	116.	153.	215.	25.	47.	94.	382.	216.	2291.
1956	218.	292.	116.	147.	248.	89.	187.	129.	22.	37.	110.	261.	1826.
1957	324.	252.	474.	150.	199.	4.	156.	94.	0.	0.	85.	226.	1964.
1958	178.	305.	170.	363.	115.	35.	19.	9.	0.	32.	120.	381.	1727.
1959	424.	214.	385.	242.	218.	148.	65.	0.	10.	12.	73.	427.	2216.
1960	413.	531.	444.	172.	273.	0.	0.	0.	0.	0.	168.	129.	2130.
1961	192.	143.	389.	282.	186.	7.	0.	0.	0.	0.	110.	185.	1414.
1962	432.	180.	274.	229.	66.	0.	2.	9.	0.	0.	151.	218.	1522.
1963	444.	375.	378.	141.	8.	0.	0.	0.	0.	0.	15.	206.	1567.
1964	222.	144.	368.	195.	136.	5.	0.	0.	40.	205.	172.	209.	1696.
1965	264.	237.	274.	87.	76.	15.	0.	0.	0.	0.	3.	88.	994.
1966	225.	456.	398.	126.	13.	0.	0.	0.	0.	13.	166.	290.	1687.
1967	293.	270.	87.	187.	0.	0.	0.	0.	0.	60.	40.	285.	1222.
1968	184.	337.	278.	272.	203.	266.	144.	2.	4.	26.	100.	78.	1896.
1969	508.	344.	210.	323.	0.	10.	13.	0.	0.	25.	165.	165.	1763.
1970	372.	199.	374.	230.	83.	19.	0.	0.	0.	18.	190.	355.	1840.
1971	326.	427.	313.	104.	379.	39.	5.	0.	0.	175.	177.	210.	2159.
MEAN	315.	304.	297.	210.	133.	46.	44.	20.	8.	47.	130.	243.	1793.

*** NO 36 P.G.MENANG ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	350.	178.	392.	258.	196.	9.	10.	0.	38.	141.	268.	1842.
1951	271.	360.	239.	44.	67.	446.	52.	0.	73.	55.	87.	369.	2083.
1952	281.	237.	498.	149.	128.	11.	6.	8.	3.	71.	211.	315.	1918.
1953	187.	176.	243.	143.	165.	1.	9.	0.	3.	0.	110.	235.	1372.
1954	322.	271.	117.	266.	215.	30.	77.	91.	49.	106.	501.	315.	2362.
1955	281.	138.	535.	251.	218.	92.	200.	48.	54.	100.	153.	240.	2310.
1956	217.	264.	39.	37.	199.	119.	84.	108.	54.	67.	143.	355.	1886.
1957	332.	172.	517.	152.	140.	42.	148.	90.	0.	6.	37.	197.	1833.
1958	147.	236.	229.	210.	42.	142.	142.	135.	0.	131.	50.	485.	1957.
1959	401.	245.	401.	310.	176.	112.	32.	0.	10.	7.	43.	513.	2276.
1960	378.	375.	451.	260.	326.	69.	37.	37.	8.	4.	152.	298.	2294.
1961	284.	277.	238.	227.	154.	19.	0.	0.	0.	9.	79.	249.	1536.
1962	383.	150.	357.	254.	22.	4.	47.	23.	0.	15.	255.	240.	1754.
1963	296.	352.	416.	193.	62.	0.	0.	0.	0.	23.	16.	368.	1726.
1964	119.	184.	332.	179.	218.	45.	0.	15.	29.	207.	214.	258.	1800.
1965	214.	178.	198.	164.	68.	31.	25.	0.	0.	22.	35.	315.	1255.
1966	267.	309.	479.	286.	69.	17.	0.	0.	15.	0.	60.	400.	1899.
1967	447.	422.	239.	237.	55.	0.	0.	0.	0.	44.	56.	347.	1849.
1968	208.	364.	343.	164.	92.	153.	246.	17.	35.	56.	290.	224.	2191.
1969	478.	218.	222.	362.	0.	10.	15.	0.	0.	31.	173.	176.	1685.
1970	350.	176.	392.	255.	198.	0.	10.	0.	38.	141.	268.	398.	2240.
1971	449.	424.	110.	164.	384.	148.	60.	0.	0.	320.	100.	148.	2306.
MEAN	296.	267.	308.	215.	148.	77.	55.	26.	16.	66.	144.	305.	1918.

\*\*\* NO 37 JATI \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	426.	355.	340.	108.	154.	8.	0.	0.	16.	0.	90.	1497.
1951	286.	226.	98.	8.	5.	106.	15.	0.	5.	12.	10.	157.	928.
1952	168.	257.	445.	9.	72.	0.	0.	2.	0.	58.	211.	330.	1631.
1953	220.	290.	144.	266.	143.	0.	7.	0.	0.	0.	48.	382.	1516.
1954	309.	222.	159.	240.	113.	40.	15.	88.	5.	36.	288.	301.	1810.
1955	204.	182.	279.	188.	241.	129.	95.	4.	0.	119.	131.	135.	1713.
1956	216.	257.	140.	91.	130.	175.	50.	37.	0.	102.	138.	303.	1645.
1957	322.	217.	250.	189.	47.	0.	72.	48.	0.	0.	14.	118.	1197.
1958	90.	234.	428.	295.	120.	7.	53.	39.	0.	50.	60.	276.	1652.
1959	320.	381.	260.	279.	178.	46.	2.	0.	0.	4.	96.	263.	1829.
1960	347.	219.	247.	217.	121.	5.	21.	0.	1.	20.	182.	179.	1559.
1961	158.	191.	178.	214.	106.	0.	2.	0.	0.	0.	5.	227.	1031.
1962	377.	303.	184.	163.	12.	14.	0.	4.	0.	17.	221.	230.	1525.
1963	145.	278.	178.	132.	19.	4.	0.	0.	0.	0.	20.	125.	901.
1964	160.	229.	375.	99.	56.	92.	29.	0.	36.	80.	133.	351.	1640.
1965	205.	124.	85.	61.	2.	0.	0.	0.	0.	0.	50.	194.	721.
1966	265.	201.	272.	96.	42.	4.	0.	0.	0.	68.	150.	410.	1510.
1967	330.	188.	193.	171.	0.	0.	0.	0.	0.	0.	70.	222.	1124.
1968	134.	210.	596.	250.	139.	75.	138.	10.	0.	0.	166.	268.	1986.
1969	181.	332.	218.	296.	24.	37.	0.	0.	0.	12.	13.	187.	1300.
1970	426.	355.	340.	108.	154.	0.	0.	0.	16.	0.	90.	209.	1700.
1971	315.	331.	179.	119.	182.	72.	0.	0.	0.	186.	159.	163.	1708.
MEAN	247.	257.	252.	175.	92.	44.	23.	11.	3.	36.	101.	233.	1459.

\*\*\* NO 38 SAWAHAN \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	264.	283.	466.	381.	427.	316.	41.	0.	0.	42.	5.	220.	2445.
1951	465.	331.	254.	219.	15.	56.	32.	4.	28.	0.	5.	411.	1822.
1952	279.	345.	424.	43.	150.	0.	0.	0.	2.	99.	405.	423.	2070.
1953	276.	391.	297.	361.	321.	16.	15.	0.	0.	0.	77.	328.	2084.
1954	474.	298.	302.	222.	323.	66.	47.	45.	0.	37.	383.	166.	2363.
1955	419.	312.	500.	302.	249.	160.	188.	20.	5.	37.	119.	299.	2616.
1956	281.	329.	195.	104.	85.	384.	77.	65.	0.	107.	131.	364.	2121.
1957	360.	344.	517.	203.	41.	9.	111.	36.	0.	0.	75.	339.	2035.
1958	342.	585.	570.	334.	301.	11.	88.	31.	7.	85.	143.	636.	3133.
1959	506.	679.	341.	201.	171.	108.	69.	0.	0.	3.	85.	456.	2621.
1960	648.	604.	452.	366.	311.	3.	26.	0.	10.	4.	228.	302.	2954.
1961	329.	241.	314.	371.	201.	20.	0.	0.	0.	0.	24.	159.	1659.
1962	677.	578.	361.	405.	192.	6.	6.	25.	0.	25.	217.	597.	3041.
1963	644.	512.	448.	207.	14.	28.	0.	0.	0.	0.	26.	212.	2086.
1964	216.	289.	492.	476.	103.	73.	0.	0.	45.	310.	391.	179.	2564.
1965	344.	219.	297.	121.	6.	0.	0.	0.	0.	0.	95.	304.	1386.
1966	561.	345.	544.	333.	42.	66.	0.	0.	0.	59.	62.	487.	2486.
1967	527.	606.	256.	270.	43.	0.	0.	0.	0.	0.	49.	354.	2105.
1968	365.	217.	729.	306.	405.	252.	176.	7.	0.	0.	288.	256.	3001.
1969	770.	459.	425.	476.	35.	5.	0.	0.	0.	0.	44.	236.	2452.
1970	283.	466.	381.	427.	316.	41.	0.	0.	42.	5.	220.	307.	2488.
1971	398.	611.	463.	276.	196.	156.	0.	0.	0.	193.	266.	477.	3042.
MEAN	426.	411.	410.	291.	180.	81.	40.	11.	6.	46.	147.	341.	2390.

\*\*\* NO 39 NGAIJUK \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	206.	271.	542.	228.	108.	9.	0.	0.	0.	7.	173.	1494.
1951	375.	337.	111.	71.	12.	85.	8.	4.	0.	4.	36.	230.	1233.
1952	266.	302.	43.	71.	101.	5.	0.	9.	3.	105.	198.	371.	1834.
1953	316.	378.	187.	322.	222.	6.	26.	0.	0.	0.	98.	244.	1801.
1954	270.	293.	270.	149.	133.	113.	56.	64.	9.	82.	306.	298.	2048.
1955	207.	223.	251.	233.	227.	85.	165.	23.	18.	140.	129.	168.	1889.
1956	273.	223.	145.	17.	114.	102.	50.	36.	0.	98.	122.	238.	1414.
1957	369.	203.	275.	57.	53.	6.	110.	55.	0.	0.	42.	249.	1363.
1958	159.	264.	402.	365.	217.	17.	48.	39.	14.	95.	81.	318.	2019.
1959	415.	669.	253.	237.	430.	23.	19.	0.	0.	0.	141.	323.	2510.
1960	231.	224.	347.	275.	156.	3.	21.	0.	3.	15.	236.	116.	1669.
1961	181.	373.	145.	297.	121.	0.	5.	0.	0.	0.	47.	347.	1496.
1962	357.	232.	268.	175.	14.	34.	0.	10.	0.	5.	240.	166.	1501.
1963	140.	303.	374.	239.	133.	0.	0.	0.	0.	0.	72.	273.	1434.
1964	131.	181.	476.	116.	147.	107.	0.	0.	32.	102.	142.	239.	1625.
1965	109.	42.	7.	135.	21.	0.	0.	0.	0.	0.	54.	216.	664.
1966	175.	281.	177.	91.	24.	71.	0.	0.	0.	69.	97.	362.	1346.
1967	261.	319.	242.	294.	12.	0.	0.	0.	0.	0.	56.	389.	1583.
1968	160.	125.	445.	185.	193.	52.	155.	22.	4.	0.	192.	130.	1663.
1969	275.	279.	141.	138.	15.	0.	0.	0.	0.	52.	60.	250.	1245.
1970	206.	221.	542.	225.	108.	4.	0.	0.	0.	7.	173.	176.	1670.
1971	273.	331.	209.	171.	254.	91.	1.	0.	3.	168.	131.	184.	1743.
MEAN	241.	273.	270.	197.	134.	42.	32.	12.	4.	43.	119.	248.	1607.

\*\*\* NO 40 KERTOSONO \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	223.	371.	413.	200.	174.	58.	32.	27.	0.	30.	29.	110.	1673.
1951	290.	307.	137.	51.	4.	59.	53.	11.	3.	10.	7.	727.	1659.
1952	237.	334.	464.	136.	91.	3.	0.	61.	75.	56.	171.	215.	1865.
1953	411.	293.	195.	195.	211.	0.	65.	0.	0.	0.	70.	347.	1787.
1954	311.	208.	77.	177.	141.	57.	106.	114.	4.	155.	207.	413.	1970.
1955	345.	362.	405.	357.	105.	111.	121.	68.	0.	56.	208.	183.	2321.
1956	252.	276.	239.	59.	119.	200.	134.	59.	0.	98.	223.	293.	1951.
1957	235.	242.	389.	27.	80.	0.	91.	65.	4.	1.	66.	426.	1621.
1958	117.	327.	408.	261.	250.	32.	35.	42.	40.	49.	78.	321.	1960.
1959	498.	409.	202.	174.	149.	14.	63.	0.	0.	35.	84.	390.	2023.
1960	375.	306.	505.	366.	247.	31.	0.	20.	0.	26.	81.	52.	1959.
1961	277.	338.	129.	211.	206.	12.	2.	0.	0.	0.	124.	79.	1378.
1962	267.	211.	104.	421.	23.	222.	33.	23.	0.	17.	190.	316.	1847.
1963	87.	334.	448.	251.	35.	5.	0.	0.	0.	1.	21.	250.	1432.
1964	161.	178.	582.	128.	232.	83.	15.	0.	7.	159.	41.	170.	1756.
1965	252.	248.	200.	81.	25.	24.	1.	0.	0.	0.	86.	287.	1203.
1966	174.	367.	320.	167.	58.	10.	0.	0.	0.	154.	111.	250.	1611.
1967	274.	276.	134.	100.	2.	0.	0.	0.	4.	5.	55.	315.	1165.
1968	181.	321.	371.	115.	112.	149.	122.	22.	66.	39.	51.	188.	1738.
1969	299.	292.	378.	109.	32.	0.	13.	0.	0.	14.	84.	189.	1410.
1970	371.	413.	206.	174.	58.	32.	27.	0.	30.	29.	110.	239.	1689.
1971	303.	333.	251.	147.	236.	162.	5.	8.	40.	110.	163.	314.	2067.
MEAN	269.	307.	299.	178.	118.	56.	42.	24.	12.	47.	103.	276.	1731.

\*\*\* NO 41 PAKE \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	110.	278.	201.	364.	174.	30.	17.	13.	0.	17.	38.	308.	1440.
1951	246.	433.	186.	36.	22.	251.	18.	6.	59.	24.	47.	282.	1610.
1952	270.	283.	218.	73.	120.	35.	0.	32.	52.	151.	323.	490.	2047.
1953	230.	264.	308.	387.	263.	3.	43.	0.	8.	1.	99.	260.	1866.
1954	486.	335.	75.	279.	215.	46.	27.	110.	23.	122.	371.	232.	2317.
1955	260.	165.	524.	304.	127.	206.	393.	5.	61.	72.	302.	215.	2594.
1956	183.	316.	118.	114.	161.	134.	60.	200.	7.	102.	124.	233.	1752.
1957	316.	270.	426.	221.	73.	1.	65.	74.	34.	32.	115.	150.	1777.
1958	157.	296.	258.	293.	157.	138.	137.	38.	18.	95.	123.	441.	2151.
1959	402.	282.	307.	89.	332.	92.	75.	9.	9.	15.	98.	430.	2136.
1960	315.	593.	452.	103.	431.	51.	36.	51.	75.	32.	238.	189.	2526.
1961	293.	143.	173.	124.	130.	25.	0.	0.	0.	79.	190.	400.	1517.
1962	759.	247.	170.	357.	13.	44.	15.	30.	7.	92.	128.	171.	2034.
1963	298.	450.	422.	173.	4.	20.	0.	0.	0.	47.	6.	150.	1570.
1964	169.	121.	471.	149.	111.	81.	7.	15.	29.	239.	133.	113.	1637.
1965	285.	278.	173.	59.	141.	0.	0.	0.	20.	33.	33.	220.	1241.
1966	166.	556.	292.	100.	102.	75.	0.	0.	0.	58.	99.	360.	1808.
1967	304.	420.	114.	159.	8.	0.	0.	0.	2.	10.	96.	273.	1382.
1968	200.	567.	317.	201.	134.	160.	180.	18.	172.	12.	199.	207.	2313.
1969	236.	267.	328.	191.	49.	1.	37.	0.	0.	88.	41.	185.	1403.
1970	278.	201.	364.	174.	30.	17.	13.	0.	17.	36.	308.	211.	1651.
1971	463.	516.	362.	112.	387.	54.	24.	2.	7.	165.	265.	244.	2601.
MEAN	301.	326.	285.	184.	145.	67.	51.	27.	27.	64.	152.	261.	1902.

\*\*\* NO 42 SIMAN \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	207.	242.	339.	249.	95.	88.	88.	19.	48.	146.	335.	273.	2129.
1951	271.	474.	263.	39.	23.	264.	19.	7.	61.	27.	56.	297.	1741.
1952	297.	310.	238.	79.	127.	37.	0.	36.	54.	173.	386.	517.	2253.
1953	253.	284.	346.	415.	278.	3.	45.	0.	7.	1.	118.	274.	2014.
1954	620.	341.	191.	281.	244.	54.	19.	19.	39.	210.	405.	287.	2710.
1955	300.	189.	251.	152.	104.	127.	355.	8.	20.	95.	365.	339.	2295.
1956	290.	390.	94.	156.	144.	181.	63.	155.	68.	111.	184.	235.	2071.
1957	190.	274.	593.	181.	125.	12.	77.	34.	2.	33.	122.	212.	1855.
1958	201.	278.	314.	217.	130.	163.	137.	26.	21.	165.	78.	375.	2104.
1959	610.	425.	494.	120.	304.	104.	71.	0.	64.	11.	136.	478.	2817.
1960	338.	425.	268.	255.	206.	32.	87.	6.	31.	38.	251.	128.	2063.
1961	327.	157.	168.	134.	137.	27.	0.	0.	0.	91.	179.	422.	1662.
1962	483.	454.	153.	494.	28.	86.	45.	24.	7.	73.	125.	285.	2259.
1963	608.	488.	248.	111.	88.	25.	0.	0.	0.	8.	20.	308.	1904.
1964	199.	191.	551.	84.	193.	56.	49.	39.	28.	466.	170.	179.	2210.
1965	309.	181.	316.	84.	26.	0.	0.	0.	0.	19.	139.	232.	1306.
1966	242.	247.	583.	93.	209.	36.	0.	0.	7.	167.	123.	303.	2010.
1967	446.	503.	147.	249.	37.	0.	0.	0.	16.	18.	50.	92.	1547.
1968	249.	503.	453.	176.	239.	84.	212.	64.	1.	105.	166.	276.	2529.
1969	183.	250.	359.	123.	47.	7.	12.	0.	0.	50.	100.	163.	1294.
1970	346.	207.	301.	124.	209.	24.	18.	4.	24.	9.	94.	208.	1568.
1971	489.	508.	420.	134.	138.	130.	52.	2.	19.	349.	276.	335.	2857.
MEAN	339.	333.	320.	180.	142.	70.	61.	20.	24.	108.	176.	283.	2054.

*** NO 43 SEKAR ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	386.	525.	427.	189.	187.	86.	7.	0.	30.	109.	351.	2297.
1951	353.	476.	305.	117.	11.	100.	94.	0.	21.	22.	216.	429.	2144.
1952	358.	469.	414.	122.	50.	0.	0.	26.	4.	115.	541.	348.	2445.
1953	330.	360.	623.	291.	351.	10.	21.	0.	17.	0.	312.	280.	2595.
1954	696.	295.	398.	349.	163.	31.	16.	74.	73.	128.	338.	526.	3087.
1955	565.	352.	397.	284.	130.	111.	227.	33.	93.	132.	446.	341.	3111.
1956	426.	650.	304.	217.	124.	113.	66.	144.	18.	160.	364.	397.	2983.
1957	518.	544.	548.	182.	206.	2.	153.	16.	15.	42.	245.	543.	3014.
1958	392.	313.	446.	326.	273.	118.	167.	38.	12.	183.	160.	518.	2946.
1959	698.	452.	434.	305.	324.	95.	73.	25.	10.	55.	227.	750.	3448.
1960	571.	610.	286.	455.	282.	73.	26.	40.	0.	15.	364.	296.	2968.
1961	769.	289.	252.	227.	155.	0.	2.	0.	27.	50.	281.	349.	2401.
1962	773.	564.	386.	643.	38.	151.	45.	51.	8.	88.	227.	489.	3463.
1963	713.	371.	446.	81.	24.	3.	0.	0.	0.	135.	94.	335.	2204.
1964	218.	268.	397.	291.	249.	94.	30.	17.	45.	331.	216.	229.	2385.
1965	461.	328.	429.	162.	28.	18.	2.	0.	0.	19.	89.	232.	1764.
1966	475.	465.	675.	125.	155.	33.	21.	5.	0.	88.	350.	385.	2777.
1967	738.	604.	252.	221.	158.	0.	0.	0.	0.	6.	170.	610.	2759.
1968	392.	417.	398.	329.	200.	191.	183.	30.	19.	49.	329.	382.	2919.
1969	346.	384.	353.	195.	42.	13.	7.	0.	9.	111.	252.	187.	1899.
1970	386.	525.	427.	189.	187.	86.	7.	0.	30.	109.	351.	389.	2686.
1971	607.	607.	413.	177.	323.	89.	30.	64.	2.	181.	416.	636.	3545.
MEAN	513.	442.	414.	266.	166.	67.	57.	26.	18.	93.	277.	409.	2740.

*** NO 44 PIJON ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	213.	294.	241.	199.	51.	103.	69.	34.	79.	154.	300.	373.	2110.
1951	296.	392.	171.	48.	21.	82.	67.	22.	124.	35.	56.	314.	1628.
1952	456.	523.	254.	114.	114.	13.	0.	29.	54.	96.	425.	355.	2433.
1953	172.	257.	210.	131.	133.	13.	26.	0.	2.	17.	111.	466.	1538.
1954	556.	242.	268.	270.	145.	54.	51.	111.	46.	185.	516.	363.	2747.
1955	226.	376.	342.	184.	151.	125.	273.	43.	6.	176.	344.	240.	2486.
1956	303.	404.	166.	104.	131.	146.	48.	65.	84.	176.	163.	250.	2040.
1957	221.	453.	466.	137.	76.	5.	227.	18.	0.	0.	160.	314.	2077.
1958	200.	257.	296.	174.	56.	47.	131.	39.	4.	39.	108.	492.	1843.
1959	493.	316.	245.	246.	129.	21.	44.	7.	2.	45.	210.	272.	2030.
1960	358.	596.	342.	236.	229.	86.	4.	3.	2.	59.	292.	270.	2479.
1961	452.	271.	240.	165.	101.	21.	16.	0.	16.	23.	159.	318.	1786.
1962	653.	599.	232.	402.	53.	54.	56.	89.	21.	114.	264.	469.	3000.
1963	713.	407.	599.	94.	8.	2.	0.	0.	0.	105.	65.	214.	2007.
1964	213.	293.	420.	179.	209.	111.	8.	32.	158.	415.	231.	201.	2490.
1965	431.	314.	275.	127.	72.	20.	3.	0.	0.	14.	49.	348.	1653.
1966	205.	401.	315.	109.	118.	43.	16.	22.	0.	143.	320.	240.	1932.
1967	412.	262.	234.	109.	6.	0.	0.	0.	0.	15.	151.	464.	1653.
1968	379.	429.	354.	182.	177.	143.	223.	64.	39.	121.	303.	364.	2778.
1969	298.	129.	173.	91.	39.	19.	15.	0.	22.	76.	165.	240.	1336.
1970	295.	405.	429.	157.	164.	31.	37.	2.	48.	122.	415.	226.	2331.
1971	506.	500.	329.	183.	212.	110.	10.	30.	6.	278.	181.	435.	2780.
MEAN	366.	372.	291.	166.	109.	57.	60.	28.	32.	109.	227.	326.	2144.

*** NO 45 KANDANGAN ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	191.	140.	263.	220.	59.	129.	0.	44.	0.	19.	15.	113.	1193.
1951	251.	441.	184.	40.	22.	247.	16.	7.	46.	22.	59.	297.	1632.
1952	275.	288.	216.	79.	120.	35.	0.	34.	41.	139.	407.	317.	2151.
1953	234.	264.	305.	421.	263.	3.	37.	0.	5.	1.	125.	274.	1932.
1954	495.	311.	18.	126.	103.	82.	4.	105.	65.	109.	401.	337.	2186.
1955	277.	240.	137.	40.	87.	194.	238.	23.	30.	75.	346.	302.	1989.
1956	330.	232.	140.	84.	102.	264.	90.	49.	18.	101.	113.	424.	1947.
1957	321.	361.	414.	85.	36.	0.	151.	95.	33.	10.	127.	259.	1894.
1958	222.	295.	224.	343.	26.	120.	45.	84.	16.	76.	59.	512.	2022.
1959	410.	288.	304.	92.	332.	91.	65.	10.	7.	14.	123.	440.	2176.
1960	227.	487.	272.	137.	205.	54.	5.	1.	11.	5.	111.	36.	1550.
1961	363.	146.	171.	136.	130.	25.	16.	0.	0.	73.	189.	422.	1611.
1962	428.	410.	158.	274.	30.	104.	8.	53.	26.	81.	244.	289.	2105.
1963	218.	306.	243.	36.	18.	39.	0.	0.	0.	34.	25.	207.	1125.
1964	200.	211.	402.	115.	24.	59.	2.	15.	42.	363.	111.	128.	1672.
1965	241.	190.	238.	57.	50.	0.	28.	28.	0.	11.	34.	324.	1201.
1966	107.	242.	433.	45.	20.	77.	0.	0.	0.	446.	124.	277.	1773.
1967	307.	476.	195.	250.	0.	0.	0.	0.	0.	27.	4.	125.	1384.
1968	213.	513.	445.	153.	19.	81.	168.	15.	18.	47.	130.	271.	2073.
1969	206.	545.	338.	61.	16.	0.	0.	0.	0.	7.	105.	169.	1447.
1970	140.	263.	220.	59.	129.	0.	44.	0.	19.	15.	113.	248.	1250.
1971	437.	437.	330.	85.	285.	38.	15.	0.	5.	156.	62.	184.	2038.
MEAN	274.	323.	257.	134.	94.	75.	42.	26.	17.	83.	138.	280.	1743.

*** NO 46 JONHANG ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	176.	210.	445.	185.	18.	0.	5.	0.	0.	0.	101.	1140.
1951	572.	358.	151.	81.	7.	44.	63.	47.	30.	12.	60.	593.	2048.
1952	302.	380.	478.	114.	91.	0.	0.	27.	19.	55.	357.	292.	2115.
1953	425.	229.	125.	230.	253.	0.	135.	0.	0.	0.	82.	346.	1831.
1954	310.	280.	117.	211.	135.	49.	30.	31.	0.	177.	251.	370.	1981.
1955	351.	301.	339.	180.	136.	22.	167.	18.	5.	82.	138.	336.	2075.
1956	201.	345.	177.	110.	103.	119.	34.	55.	78.	32.	111.	179.	1544.
1957	201.	223.	319.	64.	18.	0.	105.	38.	0.	0.	70.	330.	1380.
1958	220.	309.	411.	180.	166.	59.	90.	20.	0.	61.	3.	295.	1820.
1959	418.	404.	281.	93.	241.	39.	28.	0.	0.	35.	100.	358.	1997.
1960	305.	319.	274.	195.	208.	2.	14.	0.	0.	8.	165.	90.	1580.
1961	199.	372.	117.	80.	77.	13.	0.	5.	0.	0.	37.	67.	969.
1962	405.	247.	284.	449.	12.	73.	67.	9.	0.	104.	119.	388.	2157.
1963	142.	303.	538.	149.	76.	0.	0.	0.	0.	31.	13.	241.	1493.
1964	193.	244.	450.	81.	84.	154.	47.	12.	100.	158.	149.	138.	1810.
1965	204.	393.	125.	132.	10.	0.	0.	0.	0.	0.	5.	348.	1217.
1966	275.	459.	308.	89.	20.	58.	0.	0.	0.	131.	262.	318.	1920.
1967	322.	309.	110.	105.	18.	0.	0.	0.	0.	5.	10.	366.	1245.
1968	269.	320.	317.	144.	158.	126.	244.	52.	29.	21.	161.	148.	1989.
1969	271.	421.	334.	34.	50.	25.	0.	0.	0.	0.	23.	135.	1293.
1970	170.	210.	445.	185.	18.	0.	5.	0.	0.	0.	101.	181.	1321.
1971	395.	395.	233.	122.	328.	92.	0.	0.	0.	59.	80.	282.	1986.
MEAN	293.	319.	281.	158.	109.	41.	47.	16.	12.	44.	105.	268.	1703.

*** NO 47 HLIMBING ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	381.	251.	282.	110.	69.	7.	67.	0.	48.	25.	69.	1309.
1951	-10.	341.	222.	89.	6.	119.	0.	61.	18.	8.	53.	552.	1469.
1952	336.	368.	494.	41.	118.	13.	2.	40.	0.	73.	354.	429.	2274.
1953	402.	332.	118.	312.	222.	0.	55.	0.	0.	0.	47.	253.	1741.
1954	329.	132.	104.	143.	129.	35.	28.	18.	0.	26.	295.	242.	1480.
1955	203.	255.	386.	150.	58.	91.	374.	11.	6.	81.	172.	192.	1979.
1956	294.	254.	171.	40.	168.	170.	10.	26.	23.	64.	108.	179.	1463.
1957	301.	276.	265.	115.	88.	0.	114.	41.	0.	15.	100.	229.	1543.
1958	260.	232.	271.	204.	56.	33.	56.	36.	17.	50.	24.	220.	1464.
1959	284.	203.	143.	93.	271.	16.	42.	0.	0.	31.	70.	563.	1766.
1960	406.	336.	375.	170.	229.	13.	17.	12.	2.	31.	72.	151.	1816.
1961	276.	273.	79.	201.	194.	14.	8.	0.	0.	3.	52.	239.	1339.
1962	451.	175.	144.	430.	0.	80.	9.	53.	0.	17.	94.	224.	1725.
1963	290.	367.	400.	115.	86.	10.	0.	0.	0.	5.	18.	221.	1512.
1964	89.	163.	328.	105.	151.	111.	10.	28.	28.	129.	119.	176.	1437.
1965	147.	180.	59.	43.	21.	34.	0.	0.	0.	0.	22.	214.	720.
1966	256.	368.	225.	91.	35.	17.	35.	0.	0.	206.	60.	347.	1640.
1967	769.	435.	148.	170.	12.	0.	0.	0.	5.	10.	33.	164.	1754.
1968	213.	401.	225.	115.	250.	170.	251.	48.	12.	29.	226.	124.	2023.
1969	199.	323.	474.	115.	10.	0.	7.	0.	0.	0.	20.	119.	1267.
1970	381.	251.	282.	110.	69.	7.	67.	0.	48.	25.	69.	380.	1689.
1971	411.	538.	297.	50.	182.	21.	0.	0.	23.	140.	103.	219.	1998.
MEAN	315.	299.	250.	140.	112.	45.	50.	20.	9.	45.	97.	250.	1674.

*** NO 48 KABUH ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	520.	269.	427.	131.	75.	0.	0.	0.	0.	117.	214.	1753.
1951	271.	296.	278.	52.	28.	114.	11.	44.	15.	47.	47.	269.	1422.
1952	341.	263.	395.	85.	132.	11.	24.	0.	4.	85.	424.	394.	2158.
1953	184.	162.	241.	400.	179.	0.	194.	0.	0.	0.	235.	403.	2006.
1954	299.	457.	372.	359.	240.	190.	78.	30.	0.	186.	369.	502.	3090.
1955	492.	194.	526.	222.	83.	36.	240.	45.	0.	99.	284.	247.	2468.
1956	117.	287.	185.	140.	96.	274.	30.	143.	50.	171.	445.	525.	2466.
1957	616.	285.	645.	90.	58.	24.	118.	37.	10.	0.	286.	372.	2549.
1958	394.	405.	633.	270.	158.	65.	198.	68.	0.	51.	73.	515.	2830.
1959	463.	631.	588.	224.	329.	165.	42.	0.	19.	0.	88.	417.	2966.
1960	360.	527.	496.	350.	0.	0.	0.	0.	0.	0.	190.	335.	2258.
1961	319.	238.	290.	152.	114.	11.	0.	0.	0.	0.	65.	279.	1468.
1962	492.	385.	359.	417.	67.	67.	28.	41.	0.	26.	165.	293.	2340.
1963	224.	321.	410.	242.	47.	19.	0.	0.	0.	0.	8.	415.	1686.
1964	352.	216.	462.	122.	157.	120.	103.	0.	4.	332.	293.	124.	2305.
1965	205.	209.	251.	185.	2.	48.	0.	0.	0.	0.	35.	328.	1267.
1966	530.	456.	404.	111.	47.	55.	0.	0.	0.	152.	106.	88.	1948.
1967	354.	196.	172.	262.	0.	0.	0.	0.	0.	3.	36.	404.	1429.
1968	274.	428.	565.	268.	321.	298.	197.	0.	0.	0.	295.	161.	2807.
1969	338.	313.	429.	54.	178.	0.	0.	0.	0.	0.	55.	356.	1723.
1970	520.	269.	427.	131.	75.	0.	0.	0.	0.	117.	214.	163.	1916.
1971	641.	339.	320.	180.	537.	202.	0.	0.	0.	195.	251.	520.	3194.
MEAN	371.	336.	395.	217.	135.	81.	57.	19.	5.	67.	186.	333.	2205.



*** NO 49 TAPEN ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	-10.	382.	567.	481.	105.	46.	6.	15.	0.	0.	0.	213.	1755.
1951	285.	406.	151.	116.	7.	98.	9.	90.	4.	16.	6.	321.	1519.
1952	360.	333.	346.	46.	41.	8.	10.	22.	4.	107.	269.	321.	1867.
1953	356.	352.	50.	244.	173.	0.	63.	0.	0.	0.	169.	248.	1655.
1954	283.	304.	212.	234.	117.	170.	56.	43.	0.	74.	252.	326.	2031.
1955	218.	287.	416.	250.	117.	120.	239.	30.	2.	119.	249.	100.	2153.
1956	192.	302.	143.	104.	69.	245.	2.	24.	54.	68.	299.	314.	1816.
1957	391.	242.	553.	95.	42.	124.	85.	47.	4.	0.	203.	432.	2218.
1958	372.	512.	269.	223.	104.	76.	91.	28.	0.	118.	30.	489.	2312.
1959	302.	306.	440.	147.	214.	82.	18.	0.	0.	20.	143.	313.	1975.
1960	273.	302.	247.	224.	0.	0.	0.	0.	0.	0.	174.	287.	1507.
1961	176.	190.	11.	135.	56.	0.	0.	0.	0.	0.	80.	191.	909.
1962	479.	235.	343.	331.	17.	67.	22.	10.	0.	35.	180.	278.	1997.
1963	193.	199.	324.	165.	33.	36.	0.	0.	0.	0.	7.	208.	1165.
1964	319.	12.	377.	32.	192.	74.	55.	0.	5.	287.	318.	155.	1826.
1965	422.	206.	254.	123.	14.	0.	0.	0.	0.	0.	18.	429.	1466.
1966	262.	302.	261.	189.	71.	82.	0.	0.	0.	209.	97.	189.	1582.
1967	450.	300.	137.	182.	5.	0.	0.	0.	0.	0.	140.	444.	1658.
1968	248.	296.	409.	114.	252.	130.	209.	105.	110.	124.	304.	191.	2492.
1969	342.	443.	234.	11.	84.	52.	0.	0.	0.	8.	99.	259.	1531.
1970	382.	507.	481.	105.	46.	6.	15.	0.	0.	0.	213.	381.	2136.
1971	381.	405.	417.	122.	540.	217.	0.	0.	0.	69.	227.	328.	2706.
MEAN	318.	310.	302.	163.	105.	72.	40.	19.	8.	57.	158.	292.	1834.

*** NO 50 MOJOAGUNG ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	166.	300.	215.	347.	46.	106.	0.	35.	0.	3.	0.	117.	1335.
1951	610.	353.	274.	87.	0.	0.	0.	0.	0.	0.	50.	606.	1986.
1952	332.	381.	610.	40.	79.	19.	1.	43.	7.	107.	371.	472.	2462.
1953	397.	344.	131.	306.	149.	0.	35.	0.	0.	0.	49.	278.	1689.
1954	383.	116.	147.	178.	97.	49.	21.	90.	15.	105.	226.	165.	1592.
1955	350.	309.	372.	251.	99.	38.	150.	30.	45.	72.	241.	263.	2220.
1956	251.	262.	138.	88.	21.	144.	12.	46.	68.	142.	118.	261.	1551.
1957	260.	262.	416.	116.	29.	23.	29.	44.	0.	0.	81.	282.	1542.
1958	324.	175.	286.	116.	50.	80.	47.	1.	17.	84.	29.	413.	1616.
1959	512.	477.	215.	111.	122.	12.	28.	0.	10.	11.	61.	439.	1998.
1960	265.	341.	288.	197.	145.	3.	0.	0.	51.	0.	223.	110.	1623.
1961	281.	492.	297.	126.	61.	18.	0.	0.	16.	23.	76.	191.	1583.
1962	378.	506.	363.	264.	12.	99.	0.	25.	0.	42.	108.	352.	2117.
1963	322.	589.	611.	105.	52.	0.	0.	0.	0.	0.	5.	274.	1958.
1964	260.	174.	451.	95.	123.	23.	14.	0.	24.	181.	323.	193.	1861.
1965	403.	349.	214.	145.	71.	0.	0.	0.	0.	0.	67.	227.	1476.
1966	156.	344.	424.	94.	59.	72.	0.	0.	0.	45.	145.	313.	1652.
1967	438.	374.	214.	175.	8.	0.	0.	0.	0.	0.	75.	406.	1690.
1968	210.	697.	341.	243.	78.	109.	134.	100.	6.	98.	12.	148.	2176.
1969	384.	400.	170.	64.	89.	0.	0.	0.	0.	6.	35.	121.	1269.
1970	300.	215.	347.	46.	106.	0.	35.	0.	3.	0.	117.	168.	1337.
1971	451.	322.	226.	199.	198.	129.	0.	0.	0.	147.	171.	241.	2080.
MEAN	338.	354.	305.	154.	77.	42.	23.	19.	12.	48.	118.	275.	1764.

*** NO 51 TAMPUNG ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	279.	658.	559.	386.	195.	202.	7.	54.	0.	13.	24.	95.	2472.
1951	610.	375.	198.	36.	15.	0.	0.	0.	0.	10.	20.	146.	1404.
1952	266.	278.	445.	44.	63.	0.	0.	16.	0.	70.	355.	321.	1858.
1953	289.	195.	160.	361.	141.	11.	41.	15.	0.	0.	15.	346.	1574.
1954	369.	268.	274.	253.	290.	123.	41.	38.	18.	149.	281.	227.	2331.
1955	467.	267.	351.	272.	105.	128.	289.	15.	0.	66.	252.	228.	2440.
1956	242.	352.	242.	21.	50.	226.	12.	30.	33.	136.	174.	381.	1954.
1957	219.	259.	345.	87.	3.	4.	99.	80.	0.	18.	137.	428.	1662.
1958	314.	381.	275.	107.	94.	38.	64.	6.	0.	35.	269.	312.	1835.
1959	388.	448.	154.	22.	171.	23.	30.	0.	0.	4.	81.	317.	1842.
1960	272.	515.	452.	38.	204.	0.	36.	0.	0.	3.	107.	268.	2239.
1961	486.	392.	279.	208.	60.	0.	0.	0.	0.	8.	53.	228.	1706.
1962	426.	369.	190.	29.	57.	26.	78.	0.	0.	46.	110.	376.	1970.
1963	349.	392.	315.	99.	14.	0.	0.	0.	0.	0.	6.	249.	1424.
1964	399.	108.	240.	109.	44.	85.	0.	0.	0.	240.	259.	113.	1597.
1965	510.	193.	145.	173.	43.	0.	0.	0.	0.	0.	39.	326.	1429.
1966	530.	466.	441.	123.	60.	8.	2.	0.	10.	130.	91.	577.	2438.
1967	933.	751.	406.	336.	0.	0.	0.	0.	0.	0.	15.	296.	2739.
1968	291.	616.	487.	122.	269.	153.	216.	87.	25.	24.	92.	288.	2670.
1969	404.	409.	195.	86.	40.	0.	0.	0.	0.	0.	87.	278.	1499.
1970	658.	559.	366.	195.	202.	7.	54.	0.	13.	24.	95.	231.	2424.
1971	538.	519.	364.	213.	176.	346.	0.	0.	0.	67.	155.	166.	2566.
MEAN	420.	399.	317.	187.	104.	63.	44.	15.	5.	47.	121.	282.	2003.

\*\*\* NO 52 MOJOKERTO \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1950	352.	339.	443.	481.	107.	235.	0.	20.	0.	0.	0.	200.	2177.
1951	297.	382.	153.	24.	18.	0.	0.	0.	0.	12.	15.	146.	1052.
1952	295.	204.	142.	137.	69.	12.	0.	8.	0.	56.	295.	741.	1959.
1953	408.	371.	225.	273.	93.	24.	67.	8.	0.	0.	96.	277.	1844.
1954	441.	214.	220.	184.	105.	50.	0.	42.	4.	44.	120.	242.	1699.
1955	152.	287.	381.	222.	109.	64.	139.	19.	0.	38.	299.	335.	2045.
1956	157.	235.	115.	84.	23.	143.	11.	37.	2.	34.	114.	329.	1324.
1957	280.	363.	413.	124.	32.	12.	54.	26.	14.	38.	119.	365.	1840.
1958	425.	426.	326.	162.	161.	20.	104.	12.	5.	130.	38.	541.	2350.
1959	644.	340.	444.	245.	241.	51.	67.	0.	13.	56.	30.	406.	2537.
1960	249.	344.	434.	213.	238.	7.	39.	0.	42.	43.	112.	297.	2018.
1961	174.	297.	225.	214.	88.	0.	0.	0.	0.	8.	12.	254.	1277.
1962	297.	361.	204.	152.	20.	12.	20.	0.	3.	18.	47.	368.	1505.
1963	214.	387.	548.	109.	17.	0.	0.	0.	0.	0.	4.	367.	1646.
1964	468.	252.	381.	40.	114.	87.	0.	0.	11.	351.	204.	158.	2066.
1965	461.	314.	319.	173.	0.	0.	5.	0.	0.	0.	9.	182.	1463.
1966	613.	643.	587.	320.	82.	12.	4.	0.	0.	21.	26.	113.	2421.
1967	225.	257.	187.	7.	0.	0.	0.	0.	0.	0.	131.	199.	999.
1968	299.	406.	258.	152.	199.	135.	132.	26.	6.	13.	133.	210.	1969.
1969	232.	289.	130.	61.	38.	0.	0.	0.	0.	0.	10.	183.	913.
1970	339.	443.	441.	107.	235.	0.	20.	0.	0.	0.	200.	108.	2023.
1971	508.	488.	249.	272.	322.	167.	0.	0.	0.	43.	254.	457.	2745.
MEAN	342.	347.	313.	171.	105.	49.	30.	9.	5.	42.	104.	299.	1815.

### 3. Basin-Mean Monthly Rainfall

The compiled herein is the basinmean monthly rainfall during 1951-1971 period calculated by the Tiessen Method for the catchment area of ten gauges and for sub-basins-II to VII. The gauges are Karangates, Pohgajih, Kaulon, Pakel, Tulungagung, Pakuncen, Jeli, Jongbiru Kertosono and Jabon. The sub-basins are as shown in Fig. 2-1.

\*\*\* BASIN MEAN RAINFALL KARANGKATES DAM SITE \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1951	382.3	395.0	160.3	65.2	80.9	138.2	34.2	70.1	12.6	12.4	77.9	428.6	1857.7
1952	440.7	402.9	426.8	64.0	84.9	13.5	0.	25.7	91.7	143.0	479.8	374.0	2547.0
1953	247.9	205.8	252.1	243.6	231.0	8.1	56.5	1.1	2.3	8.9	128.6	323.6	1709.5
1954	400.9	348.1	296.5	351.1	229.8	142.5	56.7	96.5	49.8	148.9	447.4	424.4	2992.2
1955	275.5	299.4	240.5	202.4	135.9	138.7	327.4	75.2	65.2	171.7	387.9	282.6	2602.4
1956	304.8	221.3	138.1	91.9	78.0	116.0	130.1	108.3	22.7	100.1	194.8	341.8	1847.9
1957	309.3	318.9	447.0	116.2	70.9	12.9	222.8	23.7	3.6	13.0	110.3	370.3	2018.9
1958	242.7	272.9	311.7	241.5	125.0	94.4	98.4	51.5	43.7	60.5	120.6	479.7	2142.6
1959	325.5	297.6	329.8	120.2	230.4	72.2	19.4	0.9	11.3	43.5	169.9	518.7	2138.8
1960	281.1	310.1	323.1	226.2	199.2	76.6	33.9	5.6	7.2	60.5	251.2	263.6	2040.3
1961	421.0	289.0	235.2	231.0	135.2	0.3	0.3	0.	0.3	0.4	149.4	406.0	1868.1
1962	494.7	277.0	289.5	268.6	61.2	40.3	21.5	44.8	1.5	81.7	239.1	513.2	2333.1
1963	444.3	319.4	319.3	121.8	12.7	8.0	0.	0.	2.3	6.6	38.2	301.9	1574.5
1964	174.7	164.8	340.6	214.7	111.8	102.6	0.9	10.5	37.8	381.5	208.7	226.4	1975.0
1965	286.3	273.8	208.1	134.8	57.6	1.9	2.5	0.	2.2	5.4	151.2	340.0	1463.8
1966	321.6	347.0	321.4	172.1	70.7	43.8	0.3	3.2	3.2	104.4	211.4	397.1	1996.2
1967	305.9	278.7	173.4	133.1	23.8	0.	0.	0.	0.4	35.2	135.7	404.1	1490.2
1968	316.2	241.7	361.5	214.3	269.6	243.4	194.5	54.9	18.7	97.9	241.1	378.2	2632.0
1969	369.4	265.0	486.1	166.5	59.0	36.0	4.3	0.1	7.6	58.3	123.8	296.0	1872.1
1970	359.3	282.4	289.7	192.4	154.3	60.4	40.7	0.	38.4	75.4	244.2	273.4	2010.6
1971	383.5	232.8	317.8	60.2	197.3	76.4	5.1	4.4	16.0	158.8	242.4	362.0	2056.7
MEAN	337.5	287.8	298.5	173.0	124.7	67.9	59.5	27.5	20.9	84.2	207.3	366.9	2055.7

\*\*\* BASIN MEAN RAINFALL PONGAJIH \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1951	373.2	388.3	160.4	68.8	76.5	136.3	32.8	65.9	13.1	12.2	74.4	423.3	1825.2
1952	435.6	400.5	429.5	66.0	86.2	12.7	0.1	26.9	86.9	146.4	478.1	370.1	2539.0
1953	243.0	205.3	256.0	244.6	235.7	7.5	56.3	1.2	2.4	8.7	134.0	329.9	1724.6
1954	399.5	344.3	290.2	341.7	231.8	137.5	53.9	101.7	50.6	153.6	461.9	435.2	3001.9
1955	279.1	300.4	244.8	204.1	139.5	138.2	337.7	80.5	64.9	169.0	394.0	287.0	2639.2
1956	307.0	222.3	137.6	94.1	84.3	116.2	138.2	112.6	22.5	103.6	195.9	357.2	1891.5
1957	305.4	313.5	449.2	113.8	70.3	12.5	265.2	23.7	4.2	12.3	114.6	367.4	2022.1
1958	244.3	277.0	310.7	240.9	124.5	95.0	102.4	50.4	42.1	64.0	127.4	481.0	2159.7
1959	325.0	302.3	334.5	123.0	211.3	73.9	18.6	1.0	16.2	43.0	165.0	517.2	2131.0
1960	281.3	304.0	331.4	226.9	199.8	76.8	35.4	6.2	7.0	60.0	263.8	287.8	2080.4
1961	422.4	287.8	234.5	235.3	136.8	0.3	0.2	0.	0.2	0.4	151.3	412.6	1881.8
1962	489.2	274.0	287.5	278.2	62.2	41.6	22.5	42.6	1.4	85.7	239.2	519.3	2343.4
1963	431.7	314.1	331.4	123.9	12.0	7.5	0.	0.	2.1	6.7	42.4	301.7	1573.5
1964	172.9	165.6	346.9	213.0	110.5	103.3	0.8	10.7	39.2	386.9	207.9	231.1	1988.8
1965	295.4	275.2	208.5	133.3	58.9	1.7	2.3	0.	2.3	5.1	164.6	337.6	1484.9
1966	321.2	349.6	325.6	181.6	69.1	45.7	0.2	3.4	3.1	104.5	208.9	408.3	2021.2
1967	307.1	279.3	172.9	135.3	23.9	0.	0.	0.	0.3	34.1	138.8	406.6	1498.3
1968	320.7	240.1	369.7	215.7	272.6	245.7	194.6	54.0	20.3	99.7	245.8	379.3	2658.2
1969	368.4	258.9	479.5	170.8	58.2	39.7	4.0	0.4	8.0	57.1	124.0	301.4	1870.4
1970	360.9	279.2	281.0	190.4	154.3	59.4	38.6	0.	38.2	76.7	244.6	280.5	2003.8
1971	375.4	231.8	320.0	59.6	198.9	75.8	5.4	4.1	18.2	166.4	251.5	360.4	2067.5
MEAN	336.1	286.4	300.1	174.3	124.6	68.0	60.9	27.9	21.1	85.5	210.9	370.2	2066.0

\*\*\* BASIN MEAN RAINFALL KAULON G.S. \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1951	349.6	394.7	164.5	76.7	68.1	131.1	30.5	56.9	14.5	13.6	67.9	433.1	1801.2
1952	445.2	420.6	432.6	74.2	97.6	11.5	0.5	27.1	78.7	145.8	484.0	387.9	2590.7
1953	230.6	215.0	272.0	240.2	249.7	7.4	33.9	1.5	2.1	8.9	150.1	333.4	1765.0
1954	420.2	339.6	284.8	329.1	239.4	126.3	49.2	112.9	56.2	150.4	487.7	468.3	3064.1
1955	281.2	307.0	248.3	227.4	148.8	145.6	349.5	95.1	75.1	173.7	452.5	297.7	2801.9
1956	307.4	220.7	136.3	101.7	96.1	118.6	153.3	124.3	28.6	112.9	203.6	372.0	1975.5
1957	300.1	314.8	434.6	110.9	69.8	11.7	252.7	23.7	4.9	11.1	123.5	361.9	2019.7
1958	239.7	263.8	305.7	235.0	122.4	91.1	108.8	30.2	39.5	73.2	153.8	477.0	2180.2
1959	339.6	296.0	345.2	122.1	219.7	72.5	18.3	1.3	22.1	43.0	161.5	511.6	2172.9
1960	296.2	294.9	332.8	236.3	208.7	77.7	34.4	7.8	10.3	57.2	277.2	267.5	2101.0
1961	420.2	283.1	226.1	238.3	137.1	0.3	0.2	0.	0.2	0.9	151.9	410.1	1888.4
1962	477.0	274.0	280.5	277.0	70.0	41.6	21.3	37.9	1.2	86.2	227.7	527.2	2321.6
1963	414.5	291.4	345.0	129.6	11.2	6.6	0.	0.	1.8	8.1	53.6	304.9	1566.7
1964	174.0	172.8	351.4	221.0	120.0	97.9	0.7	12.8	48.2	414.9	213.6	220.4	2047.7
1965	318.2	275.9	219.8	130.3	64.0	2.6	2.0	0.	1.9	4.7	165.9	328.1	1511.4
1966	320.4	354.8	350.3	199.0	66.7	51.1	0.2	4.3	3.0	104.1	226.9	451.6	2137.4
1967	323.7	277.4	167.1	143.4	26.0	0.	0.	0.	0.3	33.5	142.2	415.2	1548.8
1968	329.4	244.2	378.6	226.3	275.6	245.2	198.3	52.4	23.9	110.7	257.0	395.2	2736.8
1969	365.3	251.8	455.8	179.4	56.4	40.2	3.5	1.7	11.8	60.4	132.7	309.4	1888.4
1970	378.0	269.9	274.8	198.5	163.1	63.2	36.6	0.	44.1	83.2	252.2	290.3	2053.9
1971	355.4	245.3	319.1	66.2	194.2	71.6	5.6	3.7	28.6	200.0	267.6	372.1	2129.4
MEAN	337.4	287.3	302.2	179.2	128.8	67.3	62.8	29.2	23.7	90.3	221.8	377.8	2107.7

*** BASIN MEAN RAINFALL PAKEL ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1951	480.9	401.6	173.6	79.3	70.8	131.9	34.3	46.1	22.2	14.7	64.4	431.0	1970.8
1952	451.7	477.7	428.2	81.7	108.9	12.4	2.0	25.6	66.9	146.7	457.7	416.1	2674.6
1953	221.3	231.6	310.4	225.2	262.1	8.3	47.0	1.6	1.9	8.0	168.5	330.2	1816.1
1954	421.1	326.8	279.9	315.9	237.6	111.5	41.0	110.5	61.0	144.0	462.3	460.9	2972.5
1955	286.9	300.9	252.5	239.9	153.3	157.2	332.8	99.0	85.8	188.1	481.3	318.0	2895.7
1956	314.5	223.9	136.9	114.0	105.5	126.6	161.9	131.4	34.4	125.0	216.0	383.7	2073.8
1957	290.8	317.9	429.2	125.5	70.7	10.7	260.5	26.7	4.7	11.7	135.0	357.6	2041.0
1958	243.3	251.2	306.1	237.2	119.2	83.5	115.9	51.1	40.0	87.7	171.4	462.5	2209.1
1959	353.8	303.3	359.6	128.7	223.0	81.6	21.5	1.3	24.6	48.5	182.9	507.2	2236.0
1960	324.3	292.8	322.1	238.3	252.4	76.2	35.1	11.8	8.5	57.7	299.0	259.5	2177.2
1961	393.9	268.6	229.6	235.3	131.4	0.4	1.4	0.	0.5	4.0	148.9	410.1	1824.1
1962	464.1	276.6	292.1	291.8	85.3	46.8	40.7	34.3	1.5	93.2	219.9	517.6	2343.9
1963	415.6	280.2	335.2	146.3	13.2	7.0	0.	0.	1.4	10.4	64.3	294.4	1568.0
1964	169.6	185.9	351.5	227.1	135.3	94.5	0.9	16.4	60.0	441.2	199.7	229.8	2108.9
1965	324.5	300.1	220.7	132.8	71.2	3.7	1.6	0.	1.5	5.3	160.5	312.3	1534.4
1966	324.5	369.5	382.7	225.7	62.7	57.1	0.7	5.3	4.1	98.8	243.8	462.8	2237.7
1967	342.3	287.5	200.7	159.2	30.8	0.	0.	0.	0.3	30.9	140.8	401.1	1593.6
1968	321.7	249.3	386.3	239.5	274.8	239.8	203.5	45.1	27.6	122.3	261.5	396.4	2767.8
1969	355.0	243.2	427.3	197.5	60.0	36.8	3.3	2.9	13.5	65.6	149.3	309.7	1864.1
1970	383.0	274.4	286.9	225.2	173.0	64.5	31.9	0.	50.0	87.6	261.1	288.2	2125.8
1971	337.7	292.8	326.6	83.0	189.0	74.0	8.4	3.8	33.6	221.0	285.5	348.1	2203.5
MEAN	343.8	295.0	306.6	186.1	134.8	67.8	63.1	24.0	25.9	95.8	227.3	377.0	2154.2

*** BASIN MEAN RAINFALL TULINGAGUNG ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1951	210.7	300.3	171.6	103.8	26.0	160.0	31.0	62.2	80.5	11.6	24.0	204.6	1446.3
1952	364.9	236.4	294.3	73.2	79.7	10.8	8.0	10.3	86.2	213.2	418.2	188.0	1983.2
1953	153.8	246.6	307.3	190.7	203.8	15.8	4.7	15.1	2.3	12.5	126.8	214.0	1493.4
1954	343.8	246.9	190.7	219.4	300.5	116.0	47.3	124.8	43.8	82.1	402.0	270.2	2387.5
1955	254.4	154.9	220.0	231.3	143.4	194.8	538.6	117.1	105.7	257.4	299.2	158.4	2675.2
1956	196.0	261.6	135.1	125.6	136.3	92.5	228.3	114.4	32.5	102.9	136.0	322.1	1883.3
1957	181.7	355.1	334.3	108.7	32.6	11.7	498.5	33.7	1.4	7.0	106.9	307.4	1979.0
1958	199.2	327.7	349.8	228.9	124.6	117.9	104.9	106.8	13.8	135.0	170.6	423.7	2302.9
1959	424.3	246.4	397.2	147.4	231.6	185.4	134.5	2.7	35.8	110.0	146.8	357.2	2419.3
1960	359.5	291.6	314.8	204.7	335.0	71.9	39.4	28.6	21.8	71.4	246.6	167.9	2153.2
1961	284.0	226.5	186.0	195.6	154.7	1.1	2.6	0.	0.1	1.2	41.2	196.2	1289.2
1962	363.7	301.7	264.1	328.2	101.1	139.0	26.6	49.2	0.6	127.4	171.0	374.5	2277.5
1963	464.8	255.8	343.3	188.9	12.0	33.0	0.	0.	0.	20.7	21.0	163.0	1502.5
1964	159.4	191.6	420.0	240.6	237.3	100.5	11.6	49.4	181.9	526.8	143.6	144.8	2407.5
1965	378.7	212.1	243.1	101.0	57.5	2.0	5.7	0.	8.3	11.7	99.3	231.5	1350.9
1966	376.7	315.9	329.9	281.2	76.2	33.2	0.	2.5	33.3	112.8	231.6	463.4	2256.7
1967	381.0	270.9	197.9	155.9	6.7	1.6	0.	0.2	0.	10.3	83.9	278.9	1387.3
1968	292.0	245.9	430.0	233.5	394.7	241.1	319.7	74.8	80.7	125.7	199.4	377.2	3014.7
1969	290.4	231.6	283.0	311.4	43.1	26.5	14.8	12.5	10.3	26.1	150.8	177.6	1578.1
1970	334.0	305.9	234.6	334.6	274.1	69.7	17.5	1.8	77.0	46.6	244.0	327.8	2267.6
1971	250.7	315.8	409.9	52.6	307.8	84.3	14.5	4.8	71.1	322.1	226.4	250.6	2310.6
MEAN	296.3	263.9	288.4	193.2	156.1	81.4	99.0	38.6	42.2	111.2	175.7	269.5	2017.4

*** BASIN MEAN RAINFALL PAKUNJEN ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1951	221.1	300.7	177.3	107.1	26.3	174.2	32.0	69.0	76.4	12.0	25.1	282.0	1503.2
1952	365.6	242.9	305.6	77.6	79.2	11.1	8.5	10.9	90.4	211.3	433.8	197.5	2034.3
1953	172.2	249.6	316.1	199.6	215.4	15.8	5.0	19.7	2.1	11.4	126.2	228.0	1557.1
1954	353.7	258.4	207.2	237.9	306.1	118.7	47.0	121.2	43.9	88.5	415.1	272.1	2469.8
1955	275.4	160.3	237.3	243.4	152.3	207.2	541.1	113.1	101.4	267.4	290.3	169.7	2759.0
1956	204.2	257.0	144.4	128.3	152.3	97.5	226.5	121.7	32.5	110.3	158.1	331.4	1959.2
1957	209.4	344.1	367.6	117.5	43.1	14.1	495.8	35.7	1.5	9.9	115.9	336.6	2091.2
1958	217.3	338.0	357.0	243.7	133.4	100.4	107.9	107.9	15.6	130.0	176.8	452.0	2398.0
1959	431.0	262.6	400.1	143.3	248.1	180.4	140.0	2.5	36.6	102.5	154.7	385.1	2476.9
1960	366.0	285.1	325.0	205.7	339.2	69.7	36.8	26.4	21.1	70.0	258.5	176.5	2183.0
1961	283.1	226.9	195.1	197.0	154.7	1.2	2.4	0.	0.1	3.6	42.5	207.7	1314.3
1962	376.2	311.5	283.4	328.3	100.2	133.2	56.5	45.3	0.7	132.9	173.9	387.1	2329.2
1963	467.5	278.1	352.4	197.5	13.7	33.2	0.	0.	0.	19.3	20.7	157.4	1539.8
1964	163.5	216.7	427.9	238.2	251.2	103.0	11.2	47.2	194.5	542.5	160.8	151.9	2508.6
1965	379.2	224.7	352.0	108.0	57.3	2.4	5.6	0.	7.5	11.0	103.4	246.2	1384.3
1966	384.4	313.0	307.2	288.0	79.1	34.0	0.	2.7	31.6	118.8	230.5	475.9	2307.3
1967	375.4	261.0	162.3	6.9	1.4	0.	0.	0.2	0.1	11.1	81.5	284.1	1406.8
1968	283.7	235.0	306.6	388.8	233.2	315.0	80.6	73.2	121.7	206.8	376.7	2971.8	
1969	302.4	245.0	304.5	41.0	29.9	13.3	11.3	12.0	28.9	144.5	201.4	1600.4	
1970	345.9	364.0	332.2	267.9	74.3	19.5	1.6	76.3	46.7	254.0	326.8	2294.8	
1971	261.1	314.7	421.1	77.0	312.0	80.7	13.1	4.3	66.5	308.3	223.6	257.6	2340.0
MEAN	306.4	268.6	297.8	198.5	160.4	82.1	98.4	38.9	42.1	112.7	180.6	281.1	2068.0

*** BASIN MEAN RAINFALL JFLI ***												TOTAL	
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	
1951	349.7	368.6	173.3	88.2	57.3	145.7	33.4	52.7	37.8	13.5	50.6	400.4	1771.2
1952	425.3	405.6	393.1	80.1	101.6	12.2	4.1	20.7	73.9	166.4	449.0	352.3	2484.3
1953	204.6	237.0	311.9	216.2	246.8	10.6	34.4	6.0	1.8	8.8	157.2	300.4	1735.7
1954	398.4	307.3	257.0	290.1	260.8	113.9	42.3	114.0	55.4	127.4	469.0	403.7	2839.5
1955	283.5	257.0	246.3	241.7	152.5	173.9	398.0	103.4	90.9	213.2	425.2	274.3	2859.9
1956	279.5	229.5	137.3	119.0	118.6	118.4	184.3	128.5	34.1	122.1	197.6	367.5	2036.4
1957	262.9	323.2	410.7	122.7	61.0	11.6	332.8	29.6	3.6	11.0	128.3	348.8	2046.2
1958	234.2	306.3	321.0	241.0	122.1	90.6	113.4	68.5	33.1	103.3	175.1	458.6	2267.2
1959	375.0	289.5	371.6	130.1	230.2	111.6	53.8	1.4	28.4	67.8	173.4	468.8	2302.5
1960	338.8	285.2	324.8	226.5	279.7	74.4	35.5	16.2	12.4	60.9	288.9	232.6	2175.9
1961	354.8	254.5	216.0	224.3	138.5	0.5	1.5	0.	0.	3.4	116.0	347.8	1657.3
1962	434.9	283.8	287.6	300.1	92.7	71.6	30.9	36.6	1.0	104.7	204.6	474.9	2323.4
1963	424.9	275.9	336.9	164.5	13.1	15.2	0.	0.	1.0	11.4	50.5	254.0	1549.4
1964	164.9	199.4	376.1	229.3	170.4	96.0	3.7	23.2	103.0	475.9	167.5	205.5	2234.9
1965	341.3	275.2	221.8	124.2	68.8	3.2	2.8	0.	3.4	6.8	142.0	290.8	1480.2
1966	345.6	350.1	371.0	248.9	66.5	48.9	0.2	4.6	12.4	104.2	237.2	466.8	2256.4
1967	349.3	283.2	200.7	161.4	21.8	0.4	0.	0.1	0.2	26.0	122.9	362.0	1528.0
1968	307.6	241.0	299.5	237.2	311.7	238.3	237.5	55.8	42.2	123.4	244.9	392.2	2731.1
1969	340.2	241.2	381.7	231.0	54.2	34.7	6.2	5.4	12.8	53.8	146.6	280.4	1788.2
1970	373.6	278.3	272.7	261.4	200.6	68.3	27.6	0.5	58.3	75.0	256.8	294.9	2168.0
1971	313.1	299.2	359.3	81.2	227.4	75.8	9.8	3.2	43.5	246.6	266.0	319.0	2240.8
MEAN	328.7	285.3	298.5	191.4	142.7	72.2	73.9	31.9	30.9	101.2	213.8	347.4	2117.9

*** BASIN MEAN RAINFALL JONGBIRU ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1951	346.3	363.4	187.0	90.9	58.5	155.6	34.6	50.8	35.6	16.0	49.6	399.3	1787.6
1952	415.5	402.3	399.4	84.6	104.8	12.5	4.3	21.3	71.8	166.7	433.5	347.6	2464.3
1953	214.5	243.6	327.1	216.1	247.5	10.6	33.7	6.4	3.6	7.6	155.0	297.3	1763.0
1954	399.4	320.8	258.8	288.0	262.9	113.4	38.4	115.0	56.7	127.6	471.3	385.8	2838.1
1955	294.6	245.8	256.4	249.9	153.7	177.4	368.9	106.0	93.6	217.9	408.3	282.4	2874.9
1956	269.8	238.1	142.7	124.1	136.1	128.1	180.1	132.0	35.6	119.4	207.0	364.9	2078.0
1957	274.5	309.0	434.5	139.7	71.9	13.1	323.2	33.4	3.6	13.7	128.8	348.5	2093.9
1958	242.6	320.2	328.3	251.3	129.8	87.4	114.8	72.8	33.0	109.1	177.5	459.7	2326.5
1959	381.8	301.4	384.3	143.1	235.1	112.2	59.8	1.4	30.0	67.3	172.7	469.2	2358.3
1960	349.4	269.6	336.8	225.2	289.3	69.7	35.2	17.2	11.5	58.2	294.0	231.3	2207.4
1961	332.2	250.5	267.7	222.6	135.4	2.3	1.7	0.	0.	6.5	113.4	344.9	1447.2
1962	426.8	263.0	303.5	306.7	97.2	73.6	31.9	33.4	1.3	104.3	201.6	461.9	2325.2
1963	422.7	261.1	347.6	168.6	19.7	15.9	0.	0.	0.4	11.6	56.8	241.7	1566.6
1964	173.8	207.2	379.7	223.7	192.5	94.8	3.3	27.4	109.6	466.4	189.9	203.1	2271.4
1965	336.1	276.2	220.5	134.5	71.7	3.4	3.9	0.	2.8	6.5	135.9	289.7	1481.2
1966	340.4	352.4	379.7	257.7	65.4	46.5	0.3	4.2	12.3	106.5	221.2	458.0	2244.6
1967	354.0	284.1	196.1	176.3	21.6	0.4	0.	0.	0.3	26.1	116.2	351.5	1527.5
1968	309.5	247.9	418.6	236.1	307.2	234.1	238.9	54.9	38.4	127.3	245.3	394.9	2848.1
1969	344.0	247.9	381.9	244.7	49.5	34.5	6.1	4.8	13.6	54.0	148.9	283.1	1813.0
1970	383.7	276.5	293.4	272.6	204.3	67.7	25.9	0.4	57.2	73.3	262.1	304.2	2221.3
1971	316.2	298.5	344.7	88.8	236.2	71.9	12.8	3.3	40.5	238.2	255.1	300.6	2207.1
MEAN	329.9	287.6	312.3	197.4	147.2	72.6	73.0	32.6	31.0	101.2	211.6	343.8	2140.2

*** BASIN MEAN RAINFALL KERTOSONO ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1951	342.3	371.0	191.7	88.2	57.7	167.1	36.2	47.1	38.0	17.8	53.5	395.7	1806.3
1952	408.4	401.6	397.1	88.0	106.4	13.2	4.1	21.9	67.9	164.3	428.6	351.8	2452.7
1953	219.2	246.9	330.4	224.1	249.1	10.2	33.4	5.8	3.9	7.2	152.1	295.4	1777.7
1954	410.8	319.9	252.8	289.4	258.4	107.5	38.3	110.8	56.0	129.3	469.2	381.8	2824.1
1955	298.1	243.5	265.0	248.1	153.8	172.0	378.5	100.0	89.5	208.9	398.4	283.8	2842.6
1956	271.9	252.0	142.7	123.7	139.6	130.3	170.2	132.0	37.1	116.4	203.9	361.9	2081.9
1957	278.0	309.8	442.8	142.9	77.1	13.5	308.8	35.7	3.9	14.3	128.5	343.9	2099.2
1958	241.7	317.8	324.0	250.8	129.9	91.6	116.7	71.9	30.8	111.0	168.4	458.7	2318.3
1959	396.5	306.3	384.4	151.0	238.3	112.6	60.2	1.8	30.3	62.4	169.1	473.8	2393.7
1960	351.9	307.7	337.4	229.3	291.1	67.3	36.8	17.6	11.9	56.2	287.5	229.5	2224.2
1961	336.2	251.2	234.8	218.9	136.1	4.0	1.9	0.	0.6	10.5	115.7	346.6	1663.3
1962	436.9	292.0	302.8	319.1	90.0	74.6	33.4	33.8	1.9	102.5	203.0	451.2	2341.8
1963	432.7	246.4	351.6	164.6	24.4	15.7	0.	0.	0.7	14.7	54.9	245.3	1600.0
1964	176.7	200.0	365.4	218.9	194.5	94.4	5.2	27.6	102.9	454.7	189.8	204.0	2265.1
1965	336.1	276.5	224.2	135.0	69.1	4.2	4.4	0.1	2.6	7.6	161.9	200.2	1484.9
1966	334.1	355.0	379.7	249.4	71.2	46.8	0.8	3.9	12.0	108.4	218.4	452.5	2246.9
1967	369.1	313.1	196.0	181.7	25.1	0.3	0.	0.	0.7	25.2	111.2	347.6	1562.7
1968	309.5	247.9	418.6	235.1	296.4	226.4	233.4	53.6	37.2	122.6	244.5	386.5	2933.7
1969	341.5	252.2	374.8	244.3	48.5	32.6	6.7	4.4	13.1	54.2	149.7	272.5	1794.6
1970	386.7	274.7	303.4	266.4	203.7	63.1	25.3	0.5	54.6	72.8	260.5	308.7	2218.6
1971	320.0	311.0	365.7	92.4	243.2	74.2	15.1	3.2	37.6	228.9	246.6	290.0	2208.6
MEAN	336.2	295.2	315.3	198.2	147.7	72.5	71.9	32.0	30.2	99.5	208.8	341.5	2144.8

*** BASIN MEAN RAINFALL JARON ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1951	336.1	362.2	186.2	81.2	42.3	146.3	32.4	37.5	33.2	17.2	47.5	380.1	1702.2
1952	363.4	367.7	387.7	86.6	102.7	12.4	3.4	22.6	53.4	139.3	308.6	303.9	2291.7
1953	244.8	259.0	293.0	251.4	235.2	9.1	38.9	4.7	3.3	5.0	131.9	301.6	1777.8
1954	400.5	304.9	228.4	265.1	228.1	95.6	38.9	94.2	42.7	121.1	414.3	352.3	2591.1
1955	300.1	245.8	302.5	241.9	150.1	156.3	325.2	74.4	65.0	168.1	339.0	264.5	2632.9
1956	257.6	265.8	151.5	111.0	129.9	151.4	132.4	112.8	31.7	111.3	192.3	340.9	1988.6
1957	292.8	298.8	426.8	133.3	70.7	12.6	240.7	41.4	5.6	13.1	119.9	326.5	1982.2
1958	239.4	322.8	341.1	254.8	138.6	79.1	105.5	61.4	24.5	99.5	140.9	440.3	2247.9
1959	406.3	343.0	358.6	161.7	239.6	94.9	56.4	2.2	27.1	47.7	145.5	448.1	2326.1
1960	347.8	340.5	352.6	236.3	265.4	51.3	30.2	15.5	13.0	43.4	249.7	214.7	2160.4
1961	317.2	252.4	221.1	212.1	134.6	6.5	2.3	0.1	0.9	13.3	105.3	311.9	1577.7
1962	445.5	308.8	270.7	318.5	72.2	74.5	29.8	30.4	2.6	82.7	191.6	402.5	2233.8
1963	382.0	316.4	361.6	161.6	27.6	14.2	0.	0.	0.5	15.6	43.2	238.3	1561.0
1964	192.0	303.8	348.3	194.9	171.2	91.3	9.2	22.9	83.1	380.6	189.7	195.2	2132.2
1965	317.1	255.2	214.5	126.4	58.8	5.6	4.0	0.8	2.5	7.0	102.0	280.8	1374.7
1966	318.6	360.9	379.3	210.0	66.2	44.4	1.6	2.9	8.3	113.1	184.4	409.1	2098.8
1967	380.0	325.9	193.6	182.8	20.5	0.2	0.	0.	0.8	18.8	92.9	331.1	1546.6
1968	281.5	300.3	421.0	218.3	258.6	198.6	212.0	45.8	37.6	90.2	221.2	328.5	2613.6
1969	331.6	284.7	348.1	214.9	45.5	24.5	6.8	2.9	8.8	44.0	120.4	248.7	1680.9
1970	365.5	297.5	322.2	232.1	176.3	47.5	23.1	0.4	42.3	57.0	231.9	287.4	2083.2
1971	351.2	346.4	321.3	111.1	244.9	89.6	11.7	4.0	27.5	207.5	222.6	290.5	2228.3
MEAN	327.2	302.9	308.9	190.8	137.1	66.9	62.1	27.7	24.3	85.5	184.5	321.8	2039.6

*** BASIN MEAN RAINFALL														SUB-BASIN II (POHGAJIH-PAKEL)	***
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL		
1951	478.6	418.6	195.2	102.2	51.8	113.0	35.3	10.3	36.1	20.5	48.6	494.9	2005.1		
1952	473.1	579.4	429.1	108.0	146.3	10.7	4.6	23.6	31.4	138.5	413.1	491.6	2849.4		
1953	178.1	265.1	408.9	193.4	291.7	8.0	30.1	2.2	1.1	6.5	230.6	330.3	1966.0		
1954	460.7	301.6	260.6	257.9	255.5	61.0	17.8	126.6	78.2	127.3	546.7	467.9	2961.8		
1955	313.6	301.2	268.9	296.2	171.3	191.4	321.8	129.7	11.8	218.2	631.8	368.2	3332.1		
1956	319.1	236.5	138.9	148.8	143.9	147.7	203.1	169.5	54.0	162.5	257.3	421.1	2402.4		
1957	260.7	333.5	404.9	142.0	71.0	7.4	298.5	31.6	5.7	10.3	169.6	348.0	2083.2		
1958	244.6	320.9	292.4	229.4	106.9	61.0	141.2	53.2	34.5	129.5	243.5	434.5	2291.6		
1959	417.8	298.3	405.6	141.3	240.5	92.0	26.1	2.1	38.7	96.5	207.5	481.5	2447.9		
1960	403.1	273.7	314.5	260.7	341.2	72.9	32.2	22.1	11.3	46.1	363.8	243.8	2385.4		
1961	344.5	232.6	217.5	234.6	125.8	0.6	3.0	0.	1.3	10.4	145.4	395.8	1711.9		
1962	431.3	246.5	296.4	322.3	130.3	55.5	19.5	18.7	2.0	103.2	182.7	514.9	2377.3		
1963	397.8	219.7	346.4	179.0	17.1	9.2	0.	0.	0.	19.1	104.1	280.4	1572.8		
1964	171.9	228.5	374.2	240.2	168.1	77.7	1.3	19.2	100.9	548.3	184.2	225.3	2347.8		
1965	399.0	336.0	242.0	139.6	103.2	7.8	0.3	0.	0.	6.4	148.3	279.2	1661.8		
1966	363.1	416.7	484.0	300.4	53.1	72.6	1.8	9.0	5.5	89.8	295.4	889.1	2677.5		
1967	436.0	307.2	267.8	216.5	39.3	0.	0.	0.	0.1	23.8	145.6	398.9	1835.2		
1968	341.6	260.0	463.5	298.8	307.9	243.1	226.1	30.6	38.4	168.4	296.6	470.2	3172.6		
1969	356.9	229.3	336.7	274.4	66.8	33.0	2.3	7.5	20.7	82.8	204.9	317.1	1934.4		
1970	429.3	261.0	301.6	303.1	211.7	74.9	20.0	0.	71.2	106.1	294.9	297.8	2391.6		
1971	268.8	405.1	339.0	126.0	171.0	70.8	14.0	3.3	61.8	321.5	348.2	326.0	2455.5		
MEAN	350.6	313.0	323.4	215.4	153.1	67.2	66.6	31.4	33.9	116.1	260.1	389.4	2326.8		

*** BASIN MEAN RAINFALL SUB-BASIN IV (PAKEL-JONGHITHU) ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1951	329.2	335.8	200.1	105.3	65.4	208.8	40.9	40.7	23.4	28.8	44.8	393.1	1876.7
1952	362.6	384.2	432.9	108.7	122.2	13.9	5.6	25.0	60.7	168.4	351.6	322.7	2358.5
1953	267.5	279.1	407.9	216.3	251.5	10.8	29.8	8.7	13.1	0.9	143.3	280.4	1909.3
1954	405.1	352.1	207.9	276.9	274.2	111.0	17.7	120.3	63.0	128.8	484.4	290.3	2831.7
1955	353.9	186.1	310.5	293.3	159.6	196.0	340.3	119.9	107.7	242.6	318.1	325.4	2953.4
1956	218.1	283.9	171.9	151.4	229.8	179.7	158.0	150.4	43.9	105.3	257.0	351.6	2301.4
1957	337.1	233.9	568.9	230.2	129.7	21.2	272.9	54.0	3.7	28.0	131.9	347.2	2350.7
1958	287.5	394.8	367.8	306.7	170.3	70.5	122.6	95.6	32.9	139.6	190.0	465.9	2644.2
1959	413.2	365.1	451.7	212.7	261.7	115.1	91.6	1.1	38.5	64.5	169.3	471.3	2655.8
1960	405.1	313.9	409.8	217.8	340.8	44.8	33.8	22.6	6.5	44.1	320.5	224.6	2375.3
1961	212.4	229.6	353.6	213.6	118.6	12.1	2.3	0.	0.	23.1	99.6	330.3	1495.3
1962	383.9	279.6	387.8	342.0	120.5	84.5	37.4	16.2	3.1	102.3	166.0	393.9	2337.2
1963	411.4	309.1	393.9	190.1	55.0	19.6	0.	0.	0.	12.7	90.5	175.8	1658.3
1964	221.4	246.4	394.3	193.7	309.5	88.4	1.3	49.6	144.5	415.0	202.7	190.6	2464.1
1965	308.8	281.6	214.1	189.6	87.3	4.6	9.8	0.	0.	3.1	103.6	284.9	1489.4
1966	312.7	365.3	424.2	303.9	59.6	34.1	1.1	2.0	12.0	119.1	136.1	411.9	2184.0
1967	385.4	269.4	172.2	255.4	20.8	0.	0.	0.	0.3	26.8	80.2	296.1	1527.2
1968	320.1	265.5	521.6	230.4	282.9	212.0	214.8	51.4	18.5	147.9	246.9	409.5	2941.5
1969	364.3	284.3	383.1	317.8	24.8	33.6	5.8	1.3	17.8	54.9	161.5	297.6	1946.8
1970	437.2	267.4	403.7	331.8	224.3	63.8	16.6	0.	51.1	64.2	290.6	354.3	2405.0
1971	285.2	354.7	367.2	96.2	299.5	68.8	18.7	2.6	49.3	257.9	211.3	332.4	2193.8
MEAN	334.4	300.7	364.5	227.4	171.8	75.9	67.7	36.3	32.9	103.8	200.9	326.2	2242.6



\*\*\* BASIN MEAN RAINFALL SUB-BASIN V (JONGRIPIU-KENTUSONO) \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1951	299.6	423.9	233.5	66.7	35.7	264.4	46.6	6.9	52.2	34.5	92.4	363.0	1919.4
1952	312.0	330.9	379.3	110.8	111.4	18.2	1.8	25.2	27.3	121.4	348.3	395.2	2181.8
1953	260.2	261.3	361.3	287.5	248.8	3.9	34.4	0.	6.7	0.6	148.9	272.6	1886.2
1954	499.8	310.1	199.1	281.0	208.4	44.1	35.9	63.3	46.6	149.5	414.5	342.0	2594.3
1955	337.0	209.9	183.3	225.4	145.6	114.9	269.8	32.2	49.9	112.1	298.8	298.0	2476.9
1956	277.0	384.4	126.1	124.6	162.5	144.1	73.0	131.4	49.0	100.0	199.0	300.9	2072.0
1957	304.6	287.7	532.3	175.0	137.9	17.4	122.6	51.7	5.2	23.1	114.6	272.5	2044.6
1958	221.8	277.9	314.0	243.7	131.5	131.9	137.9	64.0	12.5	143.5	89.5	428.8	2197.0
1959	521.0	360.3	425.0	218.8	263.3	100.6	57.9	4.9	34.8	22.2	120.3	519.5	2648.6
1960	378.9	442.5	326.0	276.4	274.1	39.1	48.2	24.4	16.5	22.0	238.1	210.2	2296.4
1961	374.8	235.7	223.7	182.8	140.8	17.4	0.7	0.3	4.9	48.0	152.8	328.4	1710.7
1962	507.3	341.9	277.8	432.3	33.3	68.4	43.0	29.5	4.7	60.1	186.5	312.4	2297.2
1963	476.6	404.7	366.9	136.7	61.0	11.1	0.	0.	0.	39.8	39.3	310.5	1846.6
1964	176.4	202.7	435.3	161.3	205.9	70.1	24.7	25.3	40.1	328.2	186.0	206.5	2057.5
1965	300.7	228.9	273.0	129.7	49.4	13.5	8.0	0.	1.0	18.3	81.0	263.8	1367.3
1966	288.2	345.4	519.5	166.0	129.3	33.2	4.7	1.3	7.6	97.6	151.6	347.4	2092.0
1967	487.6	461.0	181.8	230.7	59.6	0.	0.	0.	5.6	22.5	79.6	301.7	1830.1
1968	263.1	419.9	390.5	203.6	178.2	141.6	218.6	39.4	26.5	75.9	236.8	265.1	2459.2
1969	314.2	273.2	319.2	217.8	30.0	10.5	12.4	0.2	3.0	54.7	148.0	172.1	1555.3
1970	345.9	261.5	369.8	188.5	178.2	38.8	14.1	1.4	28.6	70.9	216.1	305.5	2011.3
1971	445.7	460.7	284.0	133.1	321.8	99.5	39.4	2.3	10.0	145.7	165.2	190.6	2298.0
MEAN	352.0	329.7	329.6	199.6	147.9	65.5	56.8	24.0	20.6	80.3	176.5	305.1	2087.7

\*\*\* BASIN MEAN RAINFALL SUB-BASIN VI (WIDAS RIVER BASIN) \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1951	327.0	338.0	155.8	85.1	15.6	127.4	21.1	10.9	19.5	12.5	27.6	277.6	1424.1
1952	267.5	366.6	383.8	75.8	103.4	9.1	1.4	14.1	17.1	107.5	277.0	395.5	1958.9
1953	281.0	327.0	224.5	325.5	233.0	9.2	26.7	2.6	2.0	0.5	89.4	303.5	1824.8
1954	358.2	303.8	223.4	220.0	180.9	81.3	40.3	83.1	13.3	78.6	338.7	272.4	2194.0
1955	268.2	219.6	366.6	250.2	208.8	144.2	225.4	20.1	23.6	115.0	180.0	200.8	2222.5
1956	223.5	275.6	161.1	77.8	128.8	180.1	64.9	80.4	12.2	101.9	149.0	283.0	1738.3
1957	362.5	246.6	360.0	131.6	60.0	14.3	116.8	55.8	6.6	7.9	71.8	245.3	1679.2
1958	208.5	346.3	405.9	333.4	195.4	43.0	79.6	43.6	11.1	92.6	100.7	406.9	2267.0
1959	403.7	508.3	312.7	214.1	300.6	66.3	42.1	2.0	6.4	7.6	114.3	383.5	2361.6
1960	361.6	361.3	387.2	250.8	224.2	14.5	24.2	11.5	17.2	20.0	228.6	198.3	2099.4
1961	214.4	253.7	181.4	255.9	137.4	8.6	2.4	0.	0.	14.2	60.1	289.2	1417.3
1962	488.9	319.8	263.0	254.7	42.6	46.0	7.9	14.5	1.2	33.1	205.3	268.8	1945.8
1963	281.4	353.3	448.7	196.6	57.6	10.7	0.	0.	0.	8.0	20.4	203.4	1481.1
1964	190.0	201.0	428.4	182.0	131.5	88.9	10.3	14.8	54.7	205.3	212.1	225.5	1944.5
1965	231.0	153.6	153.6	113.3	40.8	0.6	1.4	0.	3.3	5.6	51.4	241.6	996.2
1966	256.8	328.4	296.2	144.0	49.1	52.7	0.	0.	1.0	69.5	108.5	390.1	1696.3
1967	354.5	361.5	197.1	229.2	12.9	0.	0.	0.	0.3	4.0	58.7	326.3	1544.5
1968	202.6	249.1	493.1	220.3	213.3	127.4	164.3	21.6	38.6	13.8	210.0	208.1	2162.6
1969	344.6	339.5	264.1	235.2	28.5	13.0	6.7	0.	0.3	36.5	53.0	227.0	1554.4
1970	307.9	306.5	437.1	219.2	138.8	18.5	3.8	0.	14.6	12.0	199.5	256.2	1914.1
1971	344.2	374.5	260.3	143.5	247.2	112.5	1.5	1.3	7.9	173.4	177.5	272.6	2116.4
MEAN	299.0	308.3	300.5	198.0	131.0	55.7	40.0	18.2	11.9	53.3	139.7	279.8	1835.4

\*\*\* BASIN MEAN RAINFALL SUB-BASIN VII (KERTOSONO-JABON) \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL
1951	324.5	351.3	179.0	65.4	15.0	118.3	24.1	21.1	27.8	17.0	33.1	345.1	1521.4
1952	278.5	304.7	154.5	80.6	97.5	13.3	2.2	24.3	26.3	97.7	321.1	398.6	1999.1
1953	288.5	271.9	215.3	307.7	210.4	6.6	22.8	2.6	2.3	0.8	88.9	309.5	1756.8
1954	396.1	276.0	176.4	228.7	179.4	68.0	34.9	65.6	16.2	115.0	310.6	281.9	2148.8
1955	299.2	238.0	463.2	219.4	134.3	121.3	266.3	22.0	16.3	85.4	232.4	239.6	2207.8
1956	224.8	247.6	152.0	96.6	110.4	192.8	54.6	83.9	31.0	96.9	167.3	285.7	1793.6
1957	292.9	266.6	419.8	125.6	59.6	14.7	101.4	47.9	7.2	12.8	106.0	279.0	1733.2
1958	237.9	331.2	354.9	238.5	144.1	66.2	41.4	35.7	11.4	83.8	62.8	894.5	2671.4
1959	430.1	391.1	322.8	165.0	228.8	67.7	49.4	1.8	13.2	18.0	96.1	397.1	2181.1
1960	341.9	400.0	359.0	238.7	210.9	19.7	26.3	10.0	17.9	21.2	178.7	186.8	2810.8
1961	268.1	237.4	184.4	179.2	124.3	13.4	1.9	0.4	0.9	24.7	84.0	245.6	1464.7
1962	460.2	340.7	219.5	335.3	37.3	70.4	27.0	21.3	3.2	49.8	150.9	309.1	2624.7
1963	317.1	368.0	265.6	146.9	36.6	12.9	0.	0.	0.	12.7	16.6	225.3	1505.7
1964	227.0	189.2	421.8	136.6	128.9	81.8	23.1	16.9	43.9	263.9	197.4	171.7	1902.2
1965	292.3	225.6	190.3	106.1	36.3	6.5	2.2	1.0	2.2	6.8	51.8	260.4	1169.3
1966	291.9	162.3	376.6	135.3	72.9	38.3	2.4	0.6	2.0	118.4	119.0	320.1	1839.8
1967	409.1	377.8	172.5	179.9	11.8	0.	0.	0.	2.6	7.1	53.8	265.4	1480.2
1968	231.4	382.9	410.3	181.9	196.7	141.6	177.4	37.4	36.5	38.3	173.1	218.9	2234.4
1969	299.4	335.7	300.0	153.3	44.6	11.1	7.3	0.	0.7	21.4	59.2	193.4	1426.1
1970	344.4	316.4	348.4	159.2	129.8	15.5	18.3	0.5	18.4	21.2	180.4	242.6	1775.5
1971	398.6	413.4	286.9	147.3	248.0	119.5	5.2	5.6	7.7	164.5	175.5	291.1	2263.3
MEAN	316.4	318.0	294.9	172.7	117.0	57.1	44.7	19.0	13.7	60.8	136.1	279.1	1830.0



#### 4. Monthly Mean Discharge at 18 Discharge Gauges

The compiled herein are the monthly mean discharge calculated based on the original data at 18 gauges during 1951-1971 period. The gauges are Karangates, Pohgajih, Kaulon, Pakel, Jeli, Jongbiru, Kertosono and Jabon on the Brantas River, Wadi, Bendo, Parit Raya, Tulungagung and Pakencen on the Ngrowo River, Selorejo on the Konto River, Widas on the Widas River, Mlirip and Parning on the Surabaya River and Kepajaran on the Porong River. The location map of the gauges is as shown in Fig. 2-1.

\*\*\* MONTHLY MEAN DISCHARGE AT KARANUKATES \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL	MEAN
1951	119.5	142.3	63.2	41.6	37.1	42.2	25.2	21.7	20.8	14.7	16.0	51.8	596.4	49.7
1952	87.3	120.7	124.1	53.8	38.9	25.0	18.2	21.7	15.0	28.1	68.0	97.3	658.1	54.8
1953	55.9	50.9	51.1	58.6	66.1	39.2	33.0	19.9	18.5	16.2	29.2	48.5	485.2	40.4
1954	88.3	76.6	58.0	55.0	61.9	50.6	32.1	35.3	23.0	31.8	106.2	138.9	753.5	62.8
1955	97.0	107.3	63.0	72.5	73.2	74.8	113.3	73.9	61.4	78.7	139.0	116.4	1092.7	91.1
1956	136.8	108.3	78.7	86.6	67.1	67.2	64.1	52.2	40.6	39.3	45.1	81.8	865.8	72.1
1957	69.7	95.4	158.8	89.4	65.0	42.6	77.8	52.2	37.3	34.3	40.2	68.1	830.8	69.2
1958	61.3	63.2	80.4	86.7	65.8	66.4	55.8	49.1	40.4	45.6	43.4	97.4	750.1	63.0
1959	85.4	103.6	100.3	78.3	71.8	62.7	49.2	42.3	43.9	36.9	47.4	99.7	821.5	68.5
1960	80.9	80.0	95.4	96.4	98.4	68.7	61.1	51.5	47.1	43.3	60.5	51.2	834.5	69.5
1961	107.4	71.2	52.0	56.0	58.1	45.3	43.5	38.5	30.4	30.8	41.2	62.4	637.2	53.1
1962	84.4	73.1	69.4	74.7	49.1	50.4	42.1	42.1	31.4	39.6	54.6	95.3	706.4	58.9
1963	84.4	100.9	110.7	80.3	56.8	52.2	45.4	47.1	43.0	39.1	42.4	65.9	788.4	64.0
1964	84.4	53.1	75.1	59.6	48.7	42.0	42.7	40.7	41.6	74.4	58.0	59.0	652.3	54.4
1965	93.9	110.8	87.7	77.2	65.1	57.0	54.5	44.0	38.4	38.5	40.2	77.8	785.3	65.4
1966	98.5	100.9	94.0	75.8	65.7	66.4	49.7	39.9	36.6	43.4	58.8	89.9	774.8	64.6
1967	148.0	130.1	87.3	79.4	56.6	53.3	48.1	44.1	39.5	39.4	44.4	115.5	844.1	73.7
1968	139.7	143.3	75.3	82.5	141.1	112.1	127.2	93.5	47.9	67.1	47.2	107.5	1162.4	96.5
1969	133.4	158.5	19.6	188.4	94.0	71.6	55.0	45.3	38.3	32.9	35.9	65.1	1155.1	94.6
1970	72.5	92.1	98.1	73.8	80.2	50.1	44.2	35.9	32.4	35.4	44.8	69.1	727.1	60.6
1971	103.6	129.7	134.6	81.6	99.6	76.8	48.2	39.6	43.2	69.4	87.5	109.1	1022.7	85.2
MEAN	94.3	100.5	94.3	78.1	69.5	58.0	53.8	44.3	38.7	41.8	54.8	82.3		67.4

\*\*\* MONTHLY MEAN DISCHARGE AT POMUJAHIM \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL	MEAN
1951	135.9	167.8	85.3	61.7	51.9	57.3	37.3	30.6	27.7	21.4	27.3	66.9	765.4	63.8
1952	105.7	140.6	153.4	75.2	52.3	38.4	27.4	23.5	22.3	34.1	69.0	74.1	838.6	69.9
1953	71.0	69.2	73.5	77.3	93.9	51.1	41.7	27.3	23.1	21.4	35.3	56.8	642.3	53.5
1954	97.1	94.5	75.9	81.5	69.7	68.9	44.9	46.5	32.1	39.5	118.7	161.2	953.3	79.4
1955	118.7	128.1	104.5	100.4	97.0	95.3	132.9	90.2	73.1	82.3	151.3	130.2	1304.4	108.7
1956	151.0	122.6	94.0	96.4	83.0	85.6	69.7	67.8	51.3	51.8	58.4	99.3	1042.3	86.9
1957	88.1	121.4	171.6	106.4	82.0	52.3	72.5	60.5	42.2	38.7	44.0	77.6	977.3	81.4
1958	69.6	63.4	102.7	108.7	81.5	77.1	70.7	57.4	45.1	50.4	53.2	118.2	918.3	76.5
1959	108.7	120.7	125.8	89.1	92.1	75.5	59.2	46.1	46.2	39.4	51.6	115.2	972.6	81.0
1960	98.6	103.6	121.7	114.3	122.2	79.3	70.3	56.5	50.5	46.4	70.6	60.1	992.4	82.7
1961	122.7	88.6	67.1	73.3	74.3	52.7	47.5	41.1	34.8	33.3	44.2	64.8	742.9	61.9
1962	104.1	90.9	87.8	93.9	64.5	60.0	49.5	47.7	36.0	42.1	63.1	114.7	859.5	71.6
1963	109.1	120.3	134.7	96.4	65.1	58.4	49.9	50.0	44.9	40.9	44.2	69.1	881.3	73.4
1964	98.4	62.0	91.6	77.5	74.5	62.5	47.5	42.5	45.2	107.7	89.8	80.7	843.3	70.3
1965	114.3	129.3	104.5	93.4	70.3	61.2	52.9	47.3	43.4	39.4	44.9	86.1	886.4	73.9
1966	88.2	124.0	139.5	117.3	91.3	74.2	58.8	46.5	43.9	52.4	71.0	132.7	1027.0	85.6
1967	162.1	139.2	103.1	90.4	67.4	58.2	51.0	46.2	42.1	41.4	48.7	125.2	984.6	82.0
1968	146.6	150.9	111.2	111.4	175.1	157.7	155.6	100.3	86.4	88.2	92.5	144.6	1499.9	125.0
1969	164.9	163.0	207.2	193.9	101.0	81.7	60.0	49.1	45.5	38.3	48.7	67.3	1219.9	101.7
1970	91.9	107.4	120.6	94.4	93.0	61.8	50.4	37.5	38.4	42.5	59.4	83.9	881.2	73.4
1971	122.1	142.1	147.2	92.3	106.4	85.3	56.5	42.2	45.4	74.1	95.8	123.9	1133.5	94.5
MEAN	110.4	117.4	115.6	97.6	87.3	75.1	63.4	50.4	42.4	48.4	66.5	97.7		80.8

\*\*\* MONTHLY MEAN DISCHARGE AT MAULON \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL	MEAN
1951	166.9	175.2	125.9	97.3	87.0	91.3	82.3	53.2	46.0	42.1	39.1	90.8	1077.3	89.8
1952	155.3	193.4	169.3	109.6	84.5	62.7	24.3	45.0	39.4	53.4	126.7	110.1	1205.7	100.5
1953	108.4	103.2	123.6	111.5	141.4	75.8	78.1	48.8	45.2	40.7	54.8	81.2	1012.7	84.4
1954	154.8	157.2	125.2	118.4	131.2	115.1	78.1	72.0	60.3	61.8	155.0	198.8	1427.7	119.0
1955	122.8	141.7	108.7	126.3	118.7	120.7	122.6	125.5	89.7	98.1	161.5	101.3	1467.1	122.3
1956	166.9	143.9	119.7	93.1	99.0	99.1	95.9	80.8	61.5	63.3	80.6	114.0	1217.8	101.5
1957	115.5	141.5	189.3	123.4	92.7	70.3	143.4	83.7	51.7	45.9	51.8	109.4	1218.9	101.6
1958	91.2	121.3	137.5	138.3	107.9	83.8	99.7	61.8	46.2	64.6	71.8	184.6	1191.7	99.3
1959	146.7	132.0	148.5	112.8	108.3	90.5	86.3	46.2	44.2	38.0	51.2	158.6	1143.3	95.3
1960	135.0	118.2	140.8	141.0	141.9	92.3	83.1	52.7	42.5	38.8	82.6	85.7	1154.8	96.2
1961	142.5	121.8	93.5	107.8	99.1	70.8	52.5	40.4	33.8	32.7	54.9	82.6	932.4	77.7
1962	130.2	123.8	111.9	118.9	88.4	71.8	61.4	67.9	60.6	58.0	93.2	114.8	1100.9	91.7
1963	122.2	121.3	143.0	149.5	90.0	87.3	63.5	54.4	52.9	57.7	61.9	102.5	1106.7	92.2
1964	104.8	117.7	150.4	121.9	144.9	124.5	87.1	73.3	72.5	172.0	144.3	118.7	1431.7	119.3
1965	156.1	154.5	117.3	103.0	57.3	56.7	46.6	38.9	34.0	31.9	39.9	71.7	909.9	75.8
1966	75.1	141.4	171.5	118.1	102.6	89.7	72.6	71.3	43.5	67.7	92.6	167.8	1213.3	101.8
1967	146.2	123.7	134.7	158.1	105.0	91.4	77.5	47.6	37.4	52.9	96.6	137.7	1206.8	100.7
1968	149.1	112.3	113.9	106.5	129.1	93.6	81.0	81.0	54.6	46.8	80.9	121.4	1077.3	107.7
1969	144.3	100.3	184.3	184.2	121.1	123.6	99.5	48.9	59.2	57.1	83.8	93.3	1239.4	103.3
1970	131.3	128.0	148.4	185.7	117.3	110.1	103.2	74.4	90.0	75.8	108.0	158.3	1408.4	117.4
1971	223.1	216.8	206.5	188.9	209.2	185.2	93.2	54.7	65.2	101.3	151.2	223.9	1910.2	159.0
MEAN	139.6	137.5	141.1	128.4	113.2	95.5	81.5	62.1	53.8	62.9	89.2	124.1		109.7

*** MONTHLY MEAN DISCHARGE AT PAKEL ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL MEAN
1951	212.4	298.0	194.6	155.1	117.1	127.9	93.3	69.6	56.7	49.8	47.5	140.8	1560.8 130.1
1952	195.3	238.9	303.2	180.5	110.1	100.0	68.3	37.7	57.3	59.0	197.6	137.7	1703.6 142.0
1953	146.0	158.6	173.1	182.6	227.5	104.6	79.6	58.9	50.3	42.0	59.4	90.2	1868.1 114.1
1954	132.1	179.6	181.4	215.1	223.8	156.0	104.9	98.0	72.9	75.0	179.3	287.7	1904.4 158.7
1955	226.9	230.6	210.1	242.3	209.5	194.4	228.9	168.3	129.0	94.3	210.7	184.6	2829.6 194.1
1956	216.7	158.6	164.8	138.7	153.8	173.6	160.6	142.3	100.4	111.0	123.3	186.8	1870.8 155.9
1957	177.7	252.0	241.4	186.7	158.8	94.0	162.4	96.5	60.9	42.3	55.8	119.9	1647.9 127.3
1958	101.6	181.4	213.2	217.3	151.5	122.2	141.6	94.6	61.4	69.7	98.5	224.7	1677.7 138.8
1959	226.1	229.7	200.9	145.5	186.2	133.5	79.1	58.4	51.2	45.8	65.2	191.6	1672.2 128.4
1960	170.3	230.6	245.4	200.7	233.2	123.8	108.3	72.5	58.5	54.4	117.3	98.7	1703.9 142.0
1961	194.1	156.8	136.0	156.5	137.5	81.6	60.3	45.5	38.4	36.5	50.9	102.1	1196.2 99.7
1962	202.5	174.6	176.0	214.4	155.3	98.7	77.8	64.6	48.8	45.8	98.2	212.8	1568.9 130.8
1963	232.1	213.5	254.3	170.8	94.1	68.8	53.2	53.5	44.4	40.2	44.1	75.7	1354.7 112.9
1964	66.7	96.0	165.1	162.7	195.5	159.2	62.0	58.4	64.1	117.8	111.0	127.3	1387.8 112.6
1965	214.4	221.5	196.6	169.0	84.5	73.4	63.0	57.1	42.9	40.5	64.9	121.4	1348.4 112.4
1966	134.9	169.4	210.2	183.0	133.9	84.2	67.2	62.1	51.7	65.7	91.0	132.5	1385.3 115.4
1967	229.8	178.1	176.2	195.8	111.8	72.0	58.7	47.1	46.0	44.3	61.9	160.1	1379.8 115.0
1968	168.6	161.1	174.3	170.0	232.6	238.6	208.1	111.3	98.6	124.7	176.8	212.3	2077.0 178.1
1969	217.7	182.0	281.0	221.0	117.7	112.5	76.0	71.8	62.5	62.0	108.7	148.0	1683.4 138.6
1970	187.7	177.5	226.3	195.3	147.7	114.3	75.4	53.4	60.4	73.2	132.0	156.3	1599.0 128.2
1971	213.2	196.1	202.9	146.8	129.1	120.5	92.3	47.8	49.7	91.9	133.6	196.1	1610.0 134.2
MEAN	184.2	195.7	208.9	182.0	157.7	121.8	101.4	74.6	62.2	65.9	106.1	158.5	135.0

*** MONTHLY MEAN DISCHARGE AT JELI ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL MEAN
1951	301.6	365.7	277.9	171.0	117.7	189.4	114.4	80.6	76.7	56.4	59.2	178.5	1989.3 165.8
1952	331.0	449.2	504.9	241.9	141.0	109.8	72.4	65.3	59.3	84.1	342.2	268.5	2669.6 222.5
1953	190.0	251.0	229.9	225.3	271.4	115.8	90.8	57.6	45.4	39.2	61.8	117.0	1695.2 141.3
1954	218.9	240.6	199.5	224.3	306.5	195.6	121.9	108.7	85.1	74.8	353.8	401.4	2529.1 210.8
1955	307.5	320.3	349.6	362.0	285.2	249.0	447.0	292.8	193.7	218.0	473.8	777.6	3666.5 305.5
1956	372.7	286.6	243.0	181.3	211.4	215.9	212.6	177.2	114.8	126.0	153.9	348.4	2643.8 220.3
1957	255.8	338.0	376.0	284.4	184.0	102.6	343.8	137.7	76.1	57.2	66.7	130.1	2852.6 196.0
1958	146.4	268.1	304.0	296.3	195.5	145.5	188.8	130.8	77.1	109.1	147.9	293.5	2801.0 191.7
1959	450.8	438.9	448.8	244.5	297.5	220.1	120.1	63.1	68.7	54.4	95.1	308.5	2823.5 235.3
1960	308.0	293.3	356.6	267.9	344.0	183.4	134.5	88.1	65.2	57.2	158.3	145.9	2897.4 199.8
1961	294.6	240.1	202.8	206.7	192.3	92.1	77.1	51.6	40.7	41.4	62.5	126.7	1611.2 134.3
1962	286.8	258.8	242.0	328.7	209.4	106.9	90.5	76.4	50.4	60.5	192.0	350.6	2253.0 187.7
1963	432.4	349.0	522.5	321.0	139.8	85.0	68.1	54.4	45.6	46.4	55.0	112.0	2731.2 165.9
1964	102.5	122.8	297.3	302.2	-1.0	157.6	64.3	55.4	84.4	366.8	207.1	156.8	1917.4 174.3
1965	285.8	357.1	264.1	204.2	113.8	81.8	61.0	53.0	49.7	49.7	65.7	-1.0	1590.9 144.6
1966	171.8	235.0	383.5	344.2	174.9	126.2	75.0	68.2	55.4	80.1	100.7	257.3	2072.3 172.7
1967	244.5	-1.0	186.8	191.0	134.4	86.8	61.8	54.5	44.6	43.5	65.0	157.8	1270.7 115.5
1968	209.9	188.2	288.3	260.2	306.6	202.0	295.0	179.3	112.1	162.8	179.6	301.9	2785.9 232.2
1969	255.4	242.6	351.4	279.0	187.1	143.0	64.0	67.2	58.3	67.2	104.9	155.5	1990.8 165.9
1970	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	0.0
1971	276.7	306.2	298.8	184.4	226.9	182.1	106.1	65.7	70.2	141.6	165.5	231.0	2247.4 167.3
MEAN	271.4	291.6	310.7	257.7	212.3	154.5	140.6	96.4	73.7	96.9	155.5	227.2	190.0

*** MONTHLY MEAN DISCHARGE AT JONGBIRU ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL MEAN
1951	290.1	334.6	229.1	129.0	103.2	155.7	96.9	73.9	80.4	43.9	39.9	133.2	1709.9 142.5
1952	267.2	366.5	419.0	203.5	129.2	98.1	41.5	49.7	46.1	73.4	281.3	236.9	2210.4 184.7
1953	171.4	213.9	262.4	211.4	358.0	119.3	82.2	52.9	41.8	35.4	58.5	120.8	1702.8 142.1
1954	257.9	257.4	225.1	256.9	291.8	178.6	117.3	116.7	81.6	76.0	335.0	436.3	2610.8 217.5
1955	279.3	287.6	210.2	266.5	221.2	218.9	325.8	230.2	149.7	169.4	393.9	214.4	2967.1 247.8
1956	250.8	235.3	189.8	191.5	156.6	170.6	188.0	152.0	93.1	117.9	132.8	252.2	2093.6 174.3
1957	197.2	282.6	432.9	248.5	167.1	100.1	295.3	123.1	77.6	65.5	73.5	185.5	2688.9 189.1
1958	152.3	248.5	287.7	280.9	190.8	147.7	170.7	123.4	75.6	114.0	159.2	280.0	2210.6 184.2
1959	343.9	318.7	374.7	228.5	283.4	225.6	153.6	94.3	96.2	81.5	128.9	289.8	2621.1 218.4
1960	281.1	312.2	322.9	293.3	394.5	201.7	152.9	105.7	80.8	85.0	185.0	168.7	2592.8 216.1
1961	280.8	237.1	208.3	224.9	201.3	109.7	90.6	75.5	70.1	77.7	73.3	137.6	1786.9 148.9
1962	261.1	246.7	247.6	280.5	195.0	131.0	114.4	91.2	71.8	86.6	156.3	354.7	2240.9 186.7
1963	348.1	351.2	459.7	307.1	150.3	120.2	100.0	82.0	74.8	72.5	84.4	130.9	2287.2 190.4
1964	119.7	142.4	283.6	230.8	230.3	189.7	94.6	78.9	100.8	306.0	179.1	160.9	2066.3 172.8
1965	278.4	368.0	269.3	195.3	130.9	108.8	95.0	94.5	79.2	69.8	97.0	174.6	1862.8 163.6
1966	207.5	301.6	339.2	313.0	188.5	153.3	110.5	103.7	81.1	114.3	167.6	330.5	2410.8 200.9
1967	328.1	283.1	218.2	227.6	106.1	74.1	72.9	79.2	72.4	77.3	96.1	209.4	1844.8 158.7
1968	282.5	235.3	396.5	284.4	363.5	319.7	373.6	212.9	141.1	186.5	234.1	355.6	3335.7 278.0
1969	325.4	294.7	384.4	390.0	184.1	175.3	114.8	108.1	111.4	113.2	152.4	217.5	2271.3 214.3
1970	273.7	299.1	343.1	319.9	302.4	222.7	140.7	120.0	129.5	138.1	216.8	290.2	2791.2 238.6
1971	316.7	386.2	322.7	238.4	274.5	221.2	161.3	119.1	130.6	232.0	277.4	312.5	2827.4 248.8
MEAN	260.2	289.9	303.6	250.6	219.1	164.2	147.3	109.0	89.3	111.0	167.8	289.0	195.6

*** MONTHLY MEAN DISCHARGE AT KERTOSONO ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL MEAN
1951	323.9	424.6	289.5	148.6	109.9	157.1	106.1	74.7	51.3	34.9	35.8	136.5	1895.1 137.9
1952	284.4	447.1	510.8	231.1	134.5	117.7	48.9	27.9	34.1	57.7	295.5	223.5	2413.2 201.1
1953	209.6	263.2	319.3	272.0	377.0	116.6	65.3	52.9	36.1	32.8	53.9	102.4	1921.1 160.1
1954	289.8	286.5	227.1	246.6	299.4	193.2	125.9	125.9	89.8	61.9	337.3	479.4	2702.8 228.2
1955	334.4	345.7	295.3	304.9	261.1	241.5	390.2	270.4	177.0	186.0	424.9	258.8	3496.2 291.3
1956	325.0	311.6	238.0	163.1	185.4	217.9	234.2	164.4	114.7	129.6	162.6	380.8	2597.3 216.4
1957	252.1	301.1	487.4	308.1	225.8	117.5	338.3	191.8	93.3	67.7	87.0	270.6	2720.7 226.7
1958	180.0	294.5	302.6	293.7	210.6	154.7	148.9	122.5	82.7	120.3	160.6	294.3	2545.4 195.4
1959	447.0	385.5	455.5	523.7	392.0	350.9	227.5	137.7	96.8	63.5	91.7	297.0	3266.8 272.4
1960	363.0	213.5	352.4	293.9	399.3	210.4	199.3	117.6	84.8	70.3	200.8	168.1	2669.4 222.4
1961	292.4	269.5	266.1	261.5	212.7	130.1	108.6	82.0	60.8	52.9	58.8	132.1	1930.5 160.9
1962	292.3	301.1	289.2	371.9	288.8	152.1	111.6	69.4	50.5	61.3	168.0	359.8	2521.1 210.1
1963	444.5	425.8	501.6	341.8	201.8	122.6	100.5	89.4	67.2	77.8	82.2	136.6	2996.8 216.4
1964	181.0	213.5	415.3	350.6	309.4	299.0	150.6	105.8	121.4	384.4	301.4	382.2	3208.4 267.4
1965	552.4	693.4	475.8	362.0	184.2	167.5	125.5	102.0	96.1	85.0	143.4	274.9	3900.2 271.7
1966	315.9	441.2	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	357.1 378.5
1967	353.1	279.1	248.4	300.7	163.7	130.7	108.1	105.4	112.6	110.0	164.3	378.5	2457.6 204.8
1968	358.0	398.6	711.7	544.7	591.0	503.6	574.7	437.3	180.4	242.6	211.3	524.8	3345.7 245.5
1969	612.2	534.1	570.8	676.7	244.0	214.8	199.9	129.8	123.0	122.6	167.8	294.1	3869.8 322.5
1970	326.8	394.0	444.7	461.0	435.2	362.4	215.2	147.1	141.6	141.5	208.1	283.3	3580.9 295.7
1971	458.1	605.8	497.8	376.7	384.1	328.8	199.1	149.1	153.4	230.6	435.1	449.6	4268.2 355.7
MEAN	340.4	372.4	395.7	330.9	280.6	214.5	187.4	136.1	97.4	116.8	193.5	286.1	247.1

*** MONTHLY MEAN DISCHARGE AT JAHON ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL MEAN
1951	494.1	683.6	474.8	157.9	117.1	212.4	101.9	87.1	49.6	36.6	32.4	228.6	2654.1 221.2
1952	505.7	654.9	779.0	368.1	151.0	119.0	55.3	40.0	39.8	57.4	425.4	463.2	3655.7 304.6
1953	370.0	395.5	456.4	498.0	660.6	137.1	106.4	45.3	35.2	31.8	54.5	194.5	2987.3 248.9
1954	507.4	466.4	400.9	365.1	434.0	232.7	108.8	121.8	65.4	69.2	52.4	774.7	4079.1 339.9
1955	551.9	553.4	511.4	532.6	354.9	318.1	570.8	147.0	176.2	193.7	604.2	333.7	5055.9 421.3
1956	524.0	505.4	355.3	147.9	184.9	341.9	210.8	164.1	87.1	105.1	159.7	413.6	3163.7 265.3
1957	345.3	546.2	868.1	351.1	186.2	88.4	359.0	139.4	52.9	38.2	51.9	302.9	3328.9 277.4
1958	235.0	591.0	561.1	597.2	327.1	141.7	201.3	110.9	51.5	61.5	192.1	302.9	3425.9 285.5
1959	792.3	715.3	667.2	391.6	423.4	288.3	155.6	56.2	45.1	36.3	69.4	436.3	4056.8 338.1
1960	536.2	297.2	645.2	460.9	945.4	150.3	152.1	60.7	41.3	38.0	151.7	173.9	3232.6 269.4
1961	418.1	447.3	327.1	298.1	246.7	87.3	50.0	37.4	31.3	25.6	37.1	109.0	2108.8 175.7
1962	474.8	499.0	387.7	543.8	306.9	128.3	90.4	56.9	32.7	40.8	147.5	377.8	3087.6 257.3
1963	597.1	727.4	847.8	494.4	165.2	101.3	26.3	44.2	33.0	30.4	35.4	122.9	3251.8 271.0
1964	124.8	183.4	475.1	776.6	224.4	240.1	62.1	41.2	44.0	375.9	212.1	155.2	2419.9 211.7
1965	393.4	479.3	352.1	197.7	75.0	70.4	44.6	32.6	27.0	23.5	33.7	156.8	1868.1 157.2
1966	263.0	525.6	585.3	411.6	168.4	105.2	24.9	33.8	25.8	45.4	72.1	304.5	2595.8 216.3
1967	400.0	420.9	372.5	381.4	144.9	59.5	40.9	32.7	27.5	22.6	26.9	164.9	2154.7 179.6
1968	219.6	404.5	481.0	476.9	473.0	336.9	386.3	196.8	90.9	103.1	168.5	410.7	3446.5 320.5
1969	385.9	480.7	474.3	482.1	132.8	123.9	55.3	35.7	29.7	33.2	55.5	105.4	2390.5 196.2
1970	275.8	449.0	302.9	374.1	321.2	145.6	82.1	36.8	42.0	40.3	141.2	163.8	2375.0 197.9
1971	487.3	668.6	487.0	321.4	357.6	238.0	75.1	41.4	37.3	110.8	278.9	400.9	3504.5 292.0
MEAN	426.4	510.7	520.1	387.7	285.7	174.6	141.8	82.9	50.7	73.3	160.3	294.4	259.1

*** MONTHLY MEAN DISCHARGE AT MLIRIP ***													
YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL MEAN
1951	83.9	128.8	84.4	78.9	43.9	68.7	30.3	6.8	2.7	1.1	0.4	53.3	585.7 46.8
1952	97.2	122.2	111.7	63.6	25.7	28.3	4.6	2.7	3.4	14.9	42.1	51.6	568.0 47.3
1953	58.6	62.8	65.7	83.7	108.4	47.8	24.2	1.5	0.9	1.0	7.4	29.7	491.2 40.9
1954	79.6	81.7	79.5	74.1	68.2	43.2	28.2	11.3	8.1	7.3	83.9	123.0	708.1 58.0
1955	97.8	89.0	82.3	89.9	69.2	47.0	71.0	39.9	0.6	0.5	68.3	10.8	662.3 55.2
1956	66.8	67.9	65.6	34.1	34.8	64.4	26.9	34.4	32.0	1.8	12.7	59.5	500.7 41.7
1957	52.4	92.7	148.5	84.3	47.9	15.2	61.2	38.7	0.7	0.5	4.4	41.8	588.3 49.0
1958	30.2	79.4	99.9	110.4	83.2	35.0	3.0	1.0	1.0	0.7	0.8	46.4	490.8 40.9
1959	133.0	196.8	145.2	102.5	88.1	65.6	22.5	0.8	0.8	0.5	3.1	86.8	845.4 70.4
1960	109.9	114.1	130.9	114.4	124.8	63.1	21.2	0.8	0.5	0.4	7.9	12.0	700.0 58.3
1961	48.7	82.4	74.3	89.9	45.0	15.1	0.6	0.6	0.4	0.3	0.4	2.4	360.1 30.0
1962	92.2	113.5	77.1	79.9	48.1	22.8	10.7	0.9	0.7	3.9	18.3	40.1	503.2 41.9
1963	105.2	128.4	149.1	90.3	38.3	30.6	13.5	7.4	6.3	5.5	6.3	14.4	595.3 49.6
1964	12.7	12.8	64.8	36.5	16.3	47.0	20.7	9.3	9.5	87.4	51.0	23.1	413.1 34.4
1965	41.3	69.5	38.0	26.2	12.9	12.3	1.5	4.7	3.5	2.7	2.6	26.9	245.9 20.5
1966	26.3	63.4	74.9	33.8	17.7	13.9	10.4	1.6	2.1	4.5	18.1	38.8	309.5 25.8
1967	62.4	55.6	35.2	49.7	21.2	6.2	2.4	1.8	1.8	3.8	3.5	31.2	274.3 22.9
1968	39.6	56.0	65.8	80.2	40.0	24.4	38.5	20.4	9.2	16.9	12.6	42.3	445.9 37.2
1969	45.0	40.5	46.5	38.0	14.9	17.2	2.8	2.7	2.4	2.0	4.4	10.9	227.8 18.9
1970	34.2	65.8	57.7	29.8	27.9	19.4	2.5	0.5	-1.0	-1.0	-1.0	-1.0	237.8 29.7
1971	42.7	66.4	43.6	24.5	36.0	28.0	11.0	3.2	4.5	17.0	20.8	49.1	346.2 28.8
MEAN	84.7	85.2	83.9	67.3	48.2	33.9	20.0	9.9	4.5	8.6	18.7	39.7	40.7

\*\*\* MONTHLY MEAN DISCHARGE AT PERHINO \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL	MEAN
1951	145.0	190.0	128.0	94.0	55.5	87.9	39.1	12.1	5.5	3.0	2.1	77.2	838.8	69.9
1952	156.0	184.0	223.0	87.5	38.2	40.2	9.5	3.4	5.1	17.5	99.2	108.0	971.8	81.0
1953	93.2	98.9	106.0	126.0	159.0	56.9	33.2	3.8	1.4	1.5	11.3	62.9	754.1	62.8
1954	179.0	172.0	127.0	133.0	128.0	96.1	4.9	44.4	15.0	12.9	112.0	185.0	1209.3	100.8
1955	141.0	145.0	135.0	125.0	103.0	81.7	106.0	65.9	3.5	4.2	97.8	30.9	1039.0	86.6
1956	111.0	145.0	108.0	73.6	80.9	98.9	164.0	44.9	13.5	51.4	29.9	85.3	1004.4	83.7
1957	110.0	144.0	-1.0	117.0	60.9	26.3	78.8	52.3	4.1	2.6	12.0	81.1	689.1	62.6
1958	75.8	151.0	139.5	148.6	96.2	44.4	16.9	5.7	3.8	4.2	2.6	86.9	775.8	64.4
1959	215.8	214.4	208.8	126.4	128.4	91.9	33.3	9.1	7.3	6.7	25.4	124.5	1192.2	99.3
1960	155.4	178.2	192.6	178.6	185.7	80.3	33.8	7.0	5.9	5.0	20.8	33.2	1076.4	89.7
1961	83.9	133.1	94.7	82.2	66.5	22.6	5.9	4.3	3.4	2.6	5.4	38.6	547.6	45.6
1962	148.4	152.8	102.5	121.5	74.9	31.6	18.4	6.4	3.7	6.5	28.3	76.4	771.7	64.3
1963	141.1	169.2	214.8	120.6	52.8	31.5	17.2	10.1	9.3	7.6	8.7	38.9	826.8	68.9
1964	43.2	46.1	130.2	66.5	42.2	65.2	31.5	14.0	14.0	119.7	73.2	37.3	683.1	56.9
1965	62.9	127.6	74.1	48.2	23.9	23.9	9.9	9.1	6.7	5.6	7.5	44.9	444.3	37.0
1966	46.8	106.0	130.2	59.7	38.5	29.0	4.4	2.1	3.0	10.4	26.2	70.0	526.3	43.9
1967	107.7	99.9	83.1	81.4	36.7	18.0	11.2	7.4	4.4	5.8	5.7	76.9	513.2	42.8
1968	75.2	105.5	113.9	90.3	74.2	44.7	67.8	39.4	23.2	41.1	31.8	88.4	793.5	66.1
1969	90.7	82.5	74.8	64.8	31.2	36.6	9.6	0.5	5.5	6.4	18.3	29.4	452.3	37.7
1970	81.0	112.8	106.1	50.7	47.5	30.3	16.9	10.2	-1.0	-1.0	-1.0	-1.0	429.8	33.7
1971	68.2	106.8	87.0	70.2	68.0	51.4	24.6	8.4	10.5	35.1	45.7	82.4	680.8	55.1
MEAN	109.7	136.1	124.6	98.4	75.6	51.9	35.1	17.2	7.5	17.4	33.1	72.9		65.6

\*\*\* MONTHLY MEAN DISCHARGE AT KEPAJARAN \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL	MEAN
1951	347.5	479.5	319.5	36.2	10.9	81.8	11.7	5.4	1.1	0.6	0.5	112.7	1407.3	117.3
1952	349.5	470.5	406.6	244.3	70.3	33.1	0.7	0.4	0.4	10.6	328.8	350.0	2465.2	205.4
1953	237.8	257.2	322.6	404.4	512.5	34.4	27.0	1.7	1.5	0.4	4.9	103.0	1905.2	159.0
1954	361.5	345.3	262.2	283.3	305.9	128.7	21.5	46.5	5.3	7.6	357.6	516.1	2642.7	220.2
1955	361.4	390.0	371.4	395.7	207.2	210.2	441.0	266.4	120.4	134.4	484.0	259.7	3682.0	305.2
1956	397.8	383.5	226.9	58.9	86.0	213.4	117.4	68.3	25.7	51.4	68.2	294.0	1989.3	165.8
1957	220.8	350.2	657.9	152.7	76.4	10.5	235.1	37.6	1.7	0.7	2.5	191.4	1978.2	164.8
1958	150.8	457.1	404.2	413.4	196.8	51.6	132.0	44.2	1.5	26.6	75.2	281.4	2224.4	184.5
1959	598.4	492.5	457.8	139.7	275.6	156.7	41.7	0.9	0.4	0.5	24.7	287.5	2483.6	207.0
1960	361.5	409.0	444.7	326.5	353.6	17.9	39.8	1.7	0.4	0.5	88.7	93.3	2136.3	178.0
1961	300.4	292.4	174.2	174.2	133.7	7.6	0.7	0.5	0.5	0.3	0.7	28.2	1113.4	92.8
1962	317.0	313.5	251.7	382.7	175.2	33.6	12.1	4.9	0.5	4.2	75.2	281.5	1834.4	152.9
1963	394.4	502.7	594.9	325.2	60.7	18.3	6.4	0.2	0.3	0.3	0.3	69.4	1978.1	164.8
1964	57.6	130.1	334.3	165.3	139.9	124.1	0.7	0.3	0.4	213.9	107.5	72.8	1317.6	109.8
1965	286.4	341.3	268.1	189.7	10.6	20.9	1.1	0.8	0.5	0.5	0.6	74.1	1167.8	97.3
1966	169.4	397.4	438.4	306.7	79.1	20.5	1.0	0.4	0.4	4.3	14.0	200.2	1628.2	135.7
1967	329.9	289.4	267.9	277.8	74.8	3.2	0.3	0.3	0.3	0.3	0.3	72.9	1317.2	109.8
1968	114.6	291.9	451.9	412.7	164.7	256.2	27.6	114.9	23.9	35.6	65.5	299.7	2733.2	227.8
1969	273.4	368.6	152.7	372.8	56.3	46.5	0.5	0.6	0.4	0.5	47.1	30.7	1558.1	129.8
1970	172.4	312.7	400.2	268.3	237.3	59.5	9.0	0.4	-1.7	-1.7	-1.0	-1.0	1459.5	122.4
1971	366.9	528.9	364.7	247.1	254.4	150.6	9.8	1.9	1.4	48.1	172.9	281.4	2424.5	202.0
MEAN	293.6	372.4	371.8	265.1	175.5	80.1	65.8	28.2	9.4	27.7	47.3	194.0		177.0

\*\*\* MONTHLY MEAN DISCHARGE AT SELOMEDJO DAM \*\*\*

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL	MEAN
1951	12.3	16.6	12.6	9.8	6.8	8.0	6.4	4.4	5.1	4.7	6.3	10.9	103.9	8.7
1952	13.7	17.2	14.6	11.5	9.1	7.3	5.2	4.1	4.4	5.1	13.2	18.3	119.1	9.9
1953	11.6	13.9	15.9	12.9	11.5	7.7	6.5	4.8	4.6	6.3	7.2	11.5	111.2	9.3
1954	17.6	14.8	14.0	14.9	12.3	7.8	6.5	6.9	5.8	6.9	13.2	14.3	135.0	11.2
1955	14.3	16.3	15.9	13.5	10.5	9.4	11.2	7.0	5.9	7.3	13.2	11.6	136.1	11.3
1956	13.1	18.1	13.8	11.1	9.6	10.0	6.6	6.4	5.9	7.5	9.7	11.5	128.5	10.7
1957	9.8	15.8	27.5	14.2	11.0	8.8	10.3	8.3	6.4	5.9	16.0	11.9	146.3	12.2
1958	8.0	11.7	11.4	12.1	9.8	8.3	8.3	6.6	5.2	5.9	6.5	10.4	104.2	8.7
1959	22.1	22.6	25.6	14.0	11.7	9.6	8.5	6.9	5.4	4.7	5.7	12.3	149.1	12.4
1960	19.9	33.1	19.2	20.6	15.5	9.1	9.0	7.8	6.6	6.3	7.9	7.3	162.3	13.5
1961	14.9	10.3	11.8	7.8	10.3	8.3	7.3	6.5	5.5	5.2	5.7	5.8	98.8	8.2
1962	16.6	23.7	12.9	15.7	10.7	9.3	9.5	9.2	7.0	7.7	10.3	13.6	146.2	12.2
1963	27.4	25.0	17.8	13.6	10.6	9.4	9.1	7.6	6.7	6.6	6.6	7.0	148.3	12.4
1964	8.0	7.5	9.4	9.5	8.8	6.6	4.7	3.9	4.2	13.0	5.3	6.1	87.0	7.2
1965	15.7	14.9	18.3	10.0	7.5	6.8	6.0	5.2	3.6	3.1	3.3	6.0	100.4	8.4
1966	6.5	9.4	13.0	8.3	6.1	6.2	5.0	4.6	4.2	4.4	5.7	7.6	81.0	6.7
1967	14.4	17.2	9.3	7.7	6.5	4.8	4.3	3.8	4.3	4.4	4.8	18.9	100.4	8.4
1968	14.0	23.4	22.4	15.9	14.3	11.1	10.7	7.2	5.9	6.2	11.0	12.4	154.5	12.9
1969	12.4	13.6	12.6	10.7	7.4	6.0	5.0	3.9	3.7	4.9	7.7	8.7	96.8	8.1
1970	11.5	16.3	16.1	12.2	10.9	8.8	6.7	4.5	5.0	5.7	11.4	11.3	120.6	10.0
1971	13.4	29.8	17.8	12.9	11.1	9.2	8.5	6.7	6.9	9.7	10.0	14.7	146.7	12.2
MEAN	14.1	17.5	15.8	12.3	10.1	8.2	7.4	6.0	5.4	6.1	8.6	10.9		10.2

### Discharge at Bendo

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL	MEAN
1951	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	0.	0.
1952	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	0.	0.
1953	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	0.	0.
1954	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	0.	0.
1955	23.8	18.6	14.3	25.2	18.1	23.5	76.7	28.6	22.3	30.6	36.5	16.0	334.2	27.8
1956	28.1	26.4	15.9	13.4	22.2	19.6	32.6	15.5	8.8	14.4	11.3	39.9	248.1	20.7
1957	17.3	36.5	56.9	24.4	10.7	2.7	44.2	14.9	2.6	0.7	2.4	18.7	232.0	19.3
1958	11.6	16.3	22.5	26.5	15.6	8.8	37.8	21.7	5.1	16.0	23.0	33.5	237.9	19.8
1959	50.7	33.0	52.9	37.5	31.0	21.1	19.8	2.0	1.3	2.4	8.6	37.0	297.3	24.8
1960	32.8	39.0	42.4	35.3	62.7	9.9	15.5	21.0	8.8	4.6	13.2	9.5	292.7	24.4
1961	22.2	20.4	20.1	28.5	19.4	7.5	0.1	1.8	0.5	0.2	0.3	0.3	127.3	10.6
1962	17.9	27.4	23.0	30.7	32.1	9.9	4.9	3.4	0.4	3.6	16.5	11.3	181.5	15.1
1963	65.0	41.3	68.9	37.5	6.2	1.9	0.4	0.2	0.1	-1.0	-1.0	-1.0	221.5	24.6
1964	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	0.	0.
1965	-1.0	-1.0	-1.0	5.0	1.8	0.1	0.3	0.1	-1.0	-1.0	-1.0	17.7	25.0	4.2
1966	18.4	-1.0	20.3	20.3	-1.0	1.8	1.3	-1.0	-1.0	18.2	-1.0	-1.0	80.3	13.4
1967	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	0.	0.
1968	2.3	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	2.3	2.3
1969	-1.0	-1.0	29.4	40.9	10.9	1.3	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	82.5	20.6
1970	28.0	-1.0	37.7	51.5	58.9	26.7	-1.0	6.9	6.9	-1.0	-1.0	-1.0	216.6	30.9
TOTAL	318.1	258.9	404.3	376.7	289.6	134.8	239.1	116.5	54.8	90.7	111.8	183.9	2579.2	20.0
MEAN	26.5	28.8	33.7	29.0	24.1	10.4	21.7	10.6	5.5	10.1	14.0	20.4		

### Discharge at Parit Raya

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL	MEAN
1966	11.9	31.9	44.0	49.2	11.5	3.5	-	-	-	-	-	-	148.0	24.7
1967	-	-	-	-	-	-	-	-	-	-	-	3.7	3.7	3.7
1968	11.3	23.8	44.0	32.5	64.7	47.9	67.3	20.7	6.9	13.1	-	36.6	370.8	33.7
1969	26.7	38.2	48.7	5.8	3.9	17.5	-	-	-	-	2.3	7.1	149.2	18.7
TOTAL	49.9	92.9	136.7	83.5	80.1	68.9	67.3	20.7	6.9	13.1	2.3	47.4	671.7	
MEAN	16.6	31.0	45.6	27.8	26.7	23.0	67.3	20.7	6.9	13.1	2.3	15.8		25.8

### Discharge at Tulungagung

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL	MEAN
1951	65.2	83.6	83.0	21.4	10.0	53.3	19.9	11.7	9.5	4.4	2.6	27.2	392.4	32.7
1952	92.3	117.4	93.3	43.5	14.9	10.5	1.9	1.2	1.7	15.9	82.7	68.9	544.2	45.3
1953	31.5	63.7	64.9	48.7	73.8	16.4	4.5	1.8	0.9	0.4	4.4	14.7	325.7	27.1
1954	41.5	48.8	38.1	41.9	57.6	43.6	19.3	25.6	11.4	6.1	53.9	66.6	454.1	37.8
1955	49.0	38.1	30.5	46.6	34.8	33.4	80.3	66.0	32.9	38.7	77.6	27.6	555.5	46.3
1956	44.9	54.3	30.3	14.1	21.6	22.0	38.0	21.8	8.5	12.2	10.6	45.9	324.2	27.0
1957	21.9	49.1	71.6	40.2	8.1	2.7	41.7	24.1	3.3	1.2	0.9	19.9	284.7	23.7
1958	14.1	44.0	58.4	53.3	27.0	28.6	34.3	25.1	6.2	16.7	32.4	47.2	381.3	31.8
1959	78.4	71.0	75.9	34.2	52.6	51.1	28.4	5.3	2.7	1.9	7.6	40.5	449.6	37.5
1960	62.8	66.9	69.0	40.2	88.9	31.0	17.6	26.8	8.5	6.1	15.3	10.7	443.8	37.0
1961	40.4	41.3	44.4	47.9	35.1	5.8	2.2	1.2	0.5	0.4	0.5	4.7	219.4	18.3
1962	26.0	33.5	32.2	103.0	25.8	11.5	9.0	5.1	0.7	-1.0	27.4	44.4	318.6	29.0
1963	56.5	55.8	62.5	36.2	3.7	1.8	0.5	0.4	0.3	0.2	0.1	-1.0	218.0	19.8
1964	7.5	6.2	35.6	21.0	35.8	21.2	2.0	0.6	7.2	40.9	18.6	13.1	210.4	17.5
1965	37.5	-1.0	29.7	15.4	3.1	1.6	0.7	0.3	-1.0	-1.0	0.5	8.4	97.2	10.8
1966	18.2	-1.0	23.1	17.2	-1.0	2.0	0.8	0.5	0.9	2.9	9.7	33.4	108.7	10.9
1967	17.8	-1.0	11.2	16.3	5.4	0.9	0.6	0.5	0.4	0.3	1.6	8.2	63.2	5.7
1968	9.3	9.1	20.2	28.9	26.3	22.5	34.4	12.5	3.6	15.4	16.3	16.7	215.2	17.9
1969	21.4	10.0	14.5	29.7	4.5	3.0	1.1	0.6	0.7	0.7	6.0	0.3	97.5	8.1
1970	15.1	24.4	17.5	19.5	22.4	15.7	4.2	1.1	2.2	4.5	22.2	24.3	173.2	14.4
TOTAL	751.3	817.2	906.5	710.2	551.4	371.3	341.4	281.9	104.1	169.0	390.9	531.7	5876.9	25.3
MEAN	37.6	48.1	45.3	35.5	29.0	18.6	17.1	11.6	5.5	9.4	19.5	28.0		

### Discharge at Pakuncen

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL	MEAN
1951	59.9	84.8	57.3	36.4	18.6	47.8	22.9	24.3	20.2	10.5	6.3	41.0	433.0	36.1
1952	86.9	122.6	92.0	54.1	25.0	16.7	5.8	3.8	5.3	13.9	95.3	81.1	602.4	50.2
1953	46.9	81.5	95.3	55.1	74.2	33.3	10.1	6.9	5.6	5.4	6.7	18.9	439.9	36.7
1954	42.2	40.4	42.9	46.8	64.1	58.3	30.3	23.0	14.0	8.1	67.6	90.6	528.3	44.0
1955	71.3	57.6	48.3	77.4	54.9	55.7	173.9	76.3	50.2	59.8	130.7	46.8	902.9	75.2
1956	64.8	78.3	53.4	30.3	44.4	41.5	59.8	45.5	17.0	29.6	29.4	90.2	584.2	48.7
1957	55.8	84.1	117.8	69.8	19.2	9.3	122.6	38.2	12.5	8.5	11.1	41.5	593.4	49.4
1958	42.1	32.3	12.4	29.4	47.9	-1.0	34.3	72.9	79.2	79.0	37.7	27.4	494.6	41.0
1959	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	0.	0.
1960	90.8	89.4	103.2	59.7	108.5	42.7	24.8	5.2	1.8	1.6	21.9	16.8	566.4	47.2
1961	63.8	52.7	59.7	55.7	43.2	9.9	5.7	4.3	4.5	4.4	4.5	12.6	321.0	26.7
1962	42.9	55.7	46.9	63.9	42.7	23.3	12.0	12.2	5.2	15.8	39.8	68.2	433.6	36.1
1963	92.4	75.7	110.3	61.7	10.6	7.4	4.7	3.9	4.1	3.8	4.7	5.9	385.2	32.1
1964	5.7	3.7	17.1	84.3	27.6	23.5	13.3	23.9	58.9	37.8	46.9	29.9	372.4	31.0
1965	68.5	163.4	49.5	26.1	8.9	5.2	0.4	2.7	2.6	2.7	4.0	-1.0	337.6	30.7
1966	49.5	-1.0	63.7	67.0	-1.0	13.5	0.7	3.2	4.4	13.4	23.3	56.0	301.1	30.1
1967	40.9	7.5	24.8	27.4	15.4	5.3	3.7	3.1	3.1	2.3	3.7	13.5	151.3	12.6
1968	24.3	25.7	56.6	44.9	61.0	50.0	84.8	35.2	13.0	37.2	34.8	60.9	528.4	44.0
1969	51.6	37.2	54.4	54.9	14.2	13.9	50.4	5.6	4.5	6.4	17.6	27.6	344.7	28.7
1970	39.6	47.4	37.6	48.0	43.6	29.4	13.0	8.2	12.4	19.4	39.9	33.0	371.7	31.0
TOTAL	1039.9	1140.0	1145.2	992.9	724.0	486.8	697.2	399.0	318.5	360.5	626.5	761.9	8692.4	38.8
MEAN	54.7	63.3	60.3	52.3	40.2	27.0	36.7	21.0	16.8	19.0	33.0	42.3		

### Discharge at Wadi

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL	MEAN
1951	15.0	22.6	13.3	4.4	2.3	14.5	2.9	3.2	4.2	1.6	0.7	6.3	91.0	7.6
1952	19.8	15.2	23.7	9.2	4.7	2.4	0.9	0.4	0.6	2.0	22.1	12.9	116.9	9.7
1953	7.6	17.7	17.1	10.9	18.9	5.3	4.5	0.5	0.5	0.4	2.0	6.7	90.1	7.5
1954	21.6	19.2	10.7	12.4	17.3	16.2	7.9	12.5	2.7	1.7	35.8	32.4	190.4	15.9
1955	17.8	16.1	11.7	22.3	16.7	20.8	66.5	23.4	20.4	30.6	34.8	14.3	295.4	24.6
1956	25.8	25.0	12.5	12.0	20.3	19.3	31.3	14.4	7.6	12.8	10.0	36.4	227.4	18.9
1957	16.7	33.9	54.6	23.2	4.4	2.2	40.2	14.1	2.0	0.6	2.2	17.2	216.3	18.0
1958	10.2	15.2	19.8	24.9	13.1	7.5	32.0	20.0	4.6	15.6	21.5	31.8	216.2	18.0
1959	48.0	30.3	50.8	19.0	30.6	19.5	19.6	1.6	0.7	2.2	7.1	33.9	264.4	22.0
1960	30.7	36.3	37.6	25.3	55.5	11.2	14.3	9.0	8.3	7.3	8.4	8.1	252.0	21.0
1961	20.5	17.4	15.6	21.4	14.6	3.9	13.8	21.9	18.9	26.4	28.2	6.5	209.4	17.4
1962	2.7	0.8	0.2	0.1	2.4	2.8	2.4	2.6	0.2	0.5	10.6	22.9	48.2	4.0
1963	47.3	36.6	40.5	25.7	3.8	0.7	0.9	0.1	-1.0	-1.0	-1.0	-1.0	155.0	19.4
1964	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	0.	0.
1965	20.2	33.4	12.2	5.1	1.8	0.7	0.3	0.1	-1.0	-1.0	-1.0	21.3	95.1	10.6
1966	22.5	-1.0	26.7	26.4	-1.0	3.6	2.1	-1.0	2.1	22.0	-1.0	-1.0	105.4	15.1
1967	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	0.	0.
1968	5.5	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	5.5	5.5
1969	-1.0	-1.0	36.9	26.1	8.1	1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	72.1	18.0
1970	19.6	-1.0	24.8	39.5	41.2	21.4	-1.0	2.9	2.9	-1.0	-1.0	-1.0	152.3	21.6
TOTAL	351.5	319.9	408.7	308.6	260.7	153.0	237.2	126.7	75.7	126.8	183.4	250.7	2803.1	19.6
MEAN	20.7	22.8	24.0	18.2	16.3	9.0	13.8	8.4	5.4	9.8	15.3	19.3		

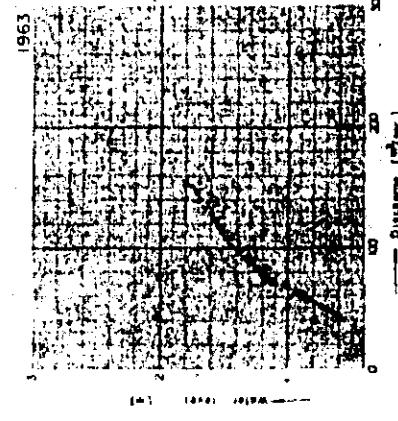
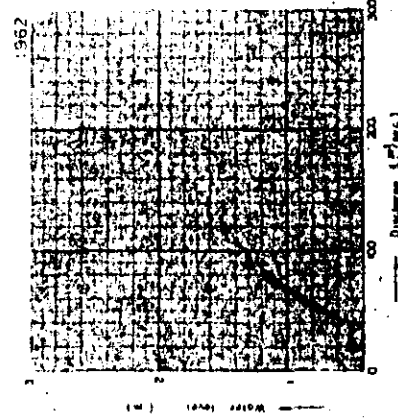
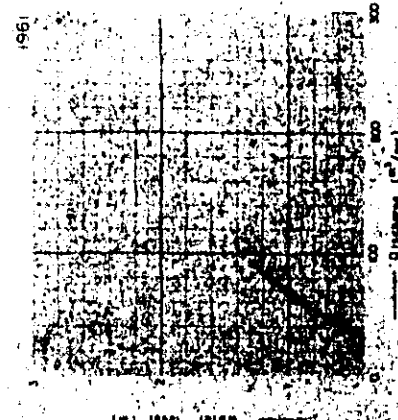
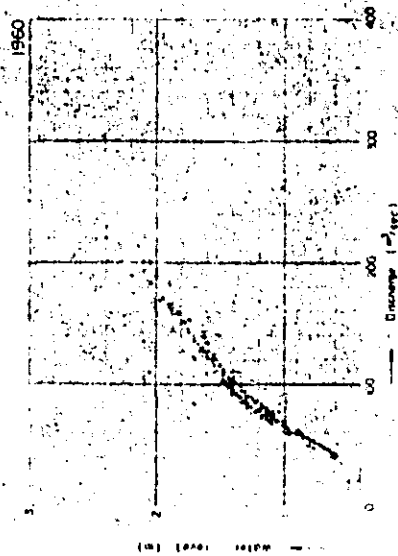
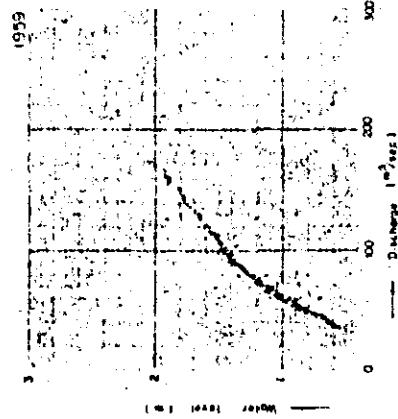
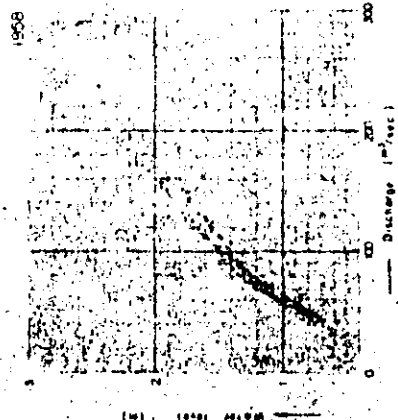
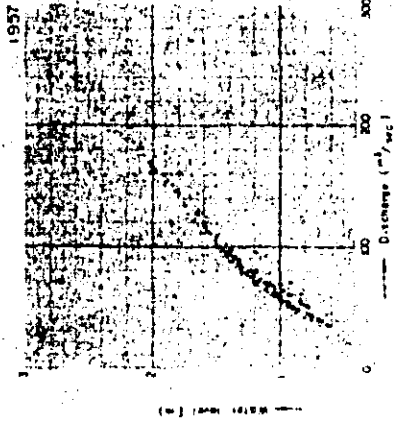
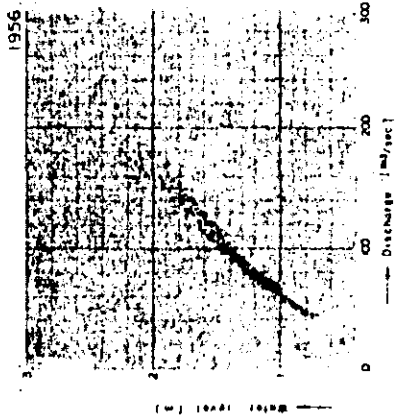
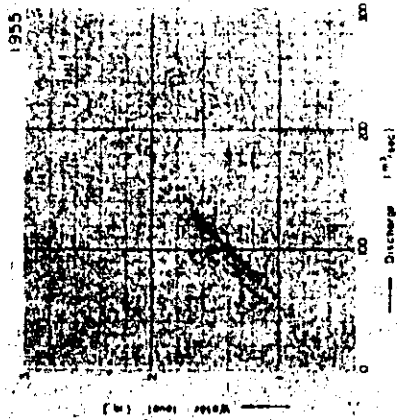
### Discharge at Widas

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	TOTAL	MEAN
1962	-	-	-	-	-	-	-	-	-	-	1.8	3.2	5.0	2.1
1963	7.4	6.5	9.3	6.1	1.8	1.2	0.7	0.6	0.6	0.5	0.5	2.7	37.9	3.2
1964	4.5	2.3	3.1	3.1	1.3	0.6	0.4	0.3	0.3	1.7	2.0	1.7	21.3	1.8
1965	6.0	7.6	2.2	2.0	0.5	0.4	0.3	0.5	0.2	0.3	-	-	20.0	2.0
TOTAL	17.9	16.4	14.6	11.2	3.6	2.2	1.4	1.4	1.1	2.5	4.3	7.6	84.2	
MEAN	6.0	5.5	4.9	3.7	1.2	0.7	0.5	0.5	0.4	0.8	1.4	2.5		2.3

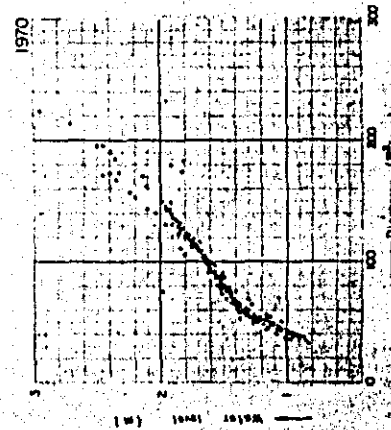
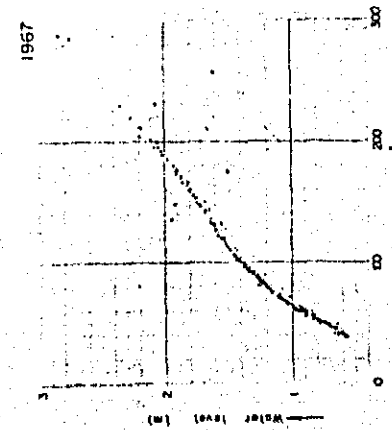
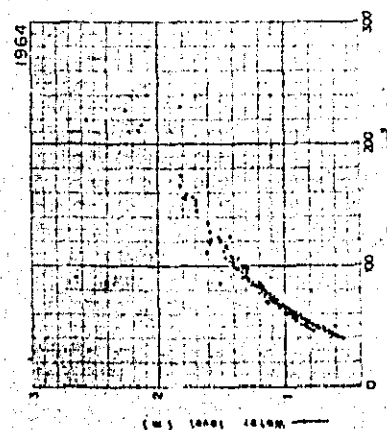
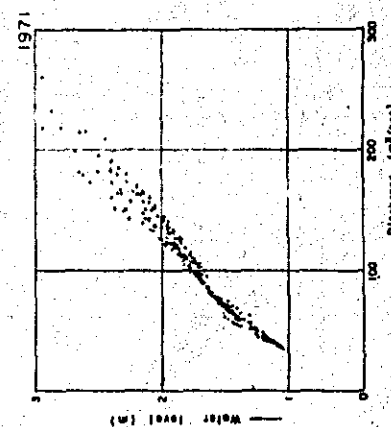
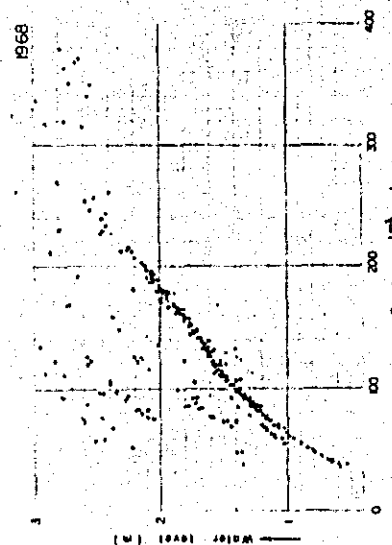
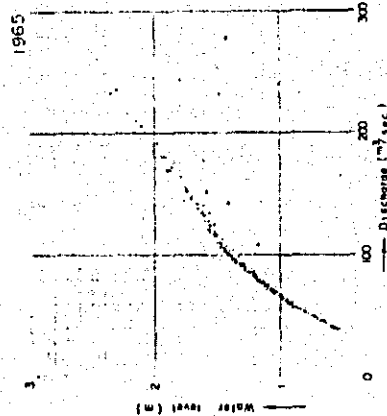
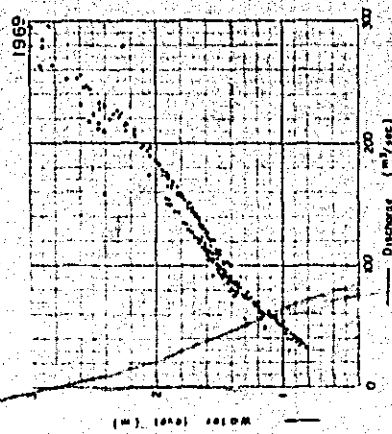
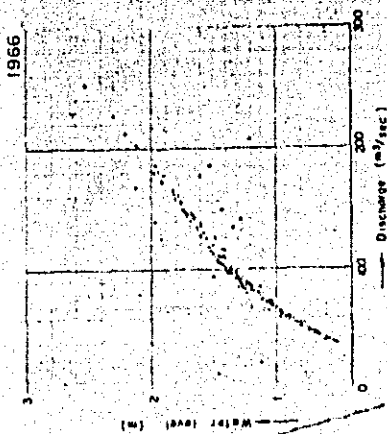
#### 5. Correlation of Daily Water Level and Discharge

The presented herein is the relationship between the water level and the discharge at seven discharge gauges obtained from the records during the 1951 - 1971 period. The gauges are Pohgajih, Kaulon, Pakel, Jeli, Jongbiru, Kertosono and Jabon.

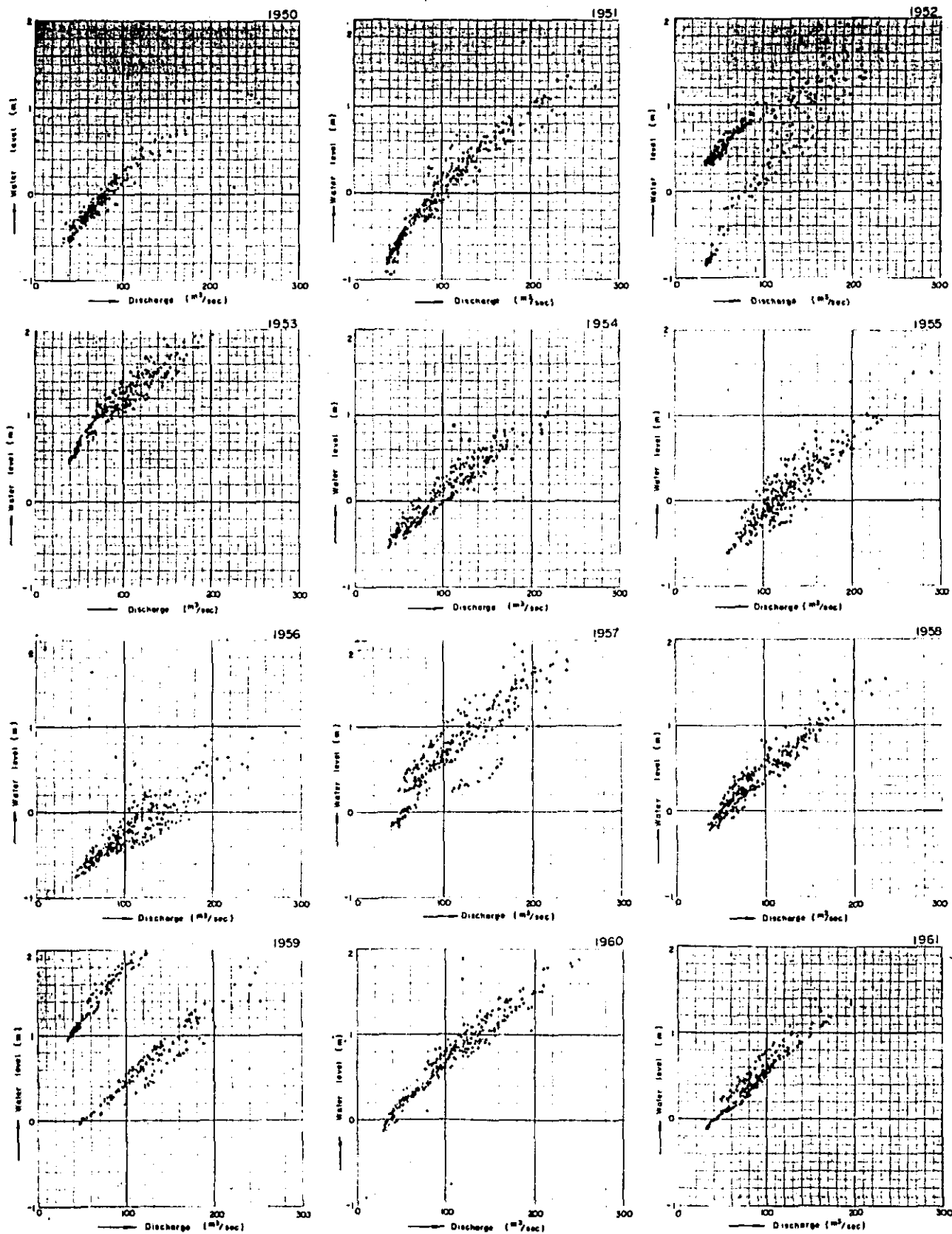




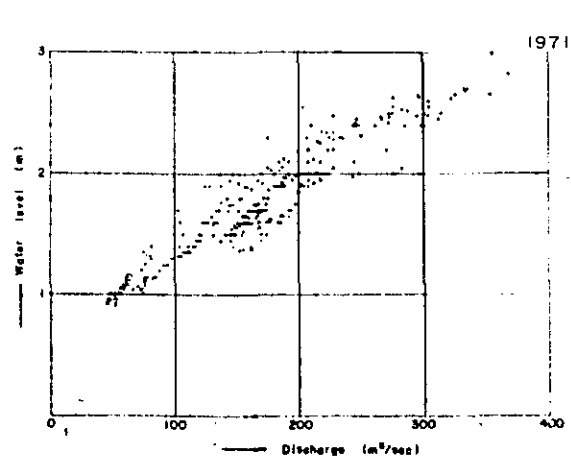
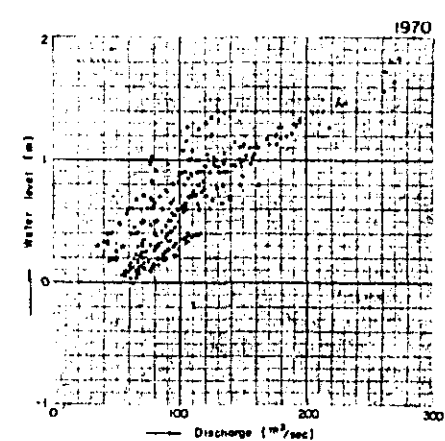
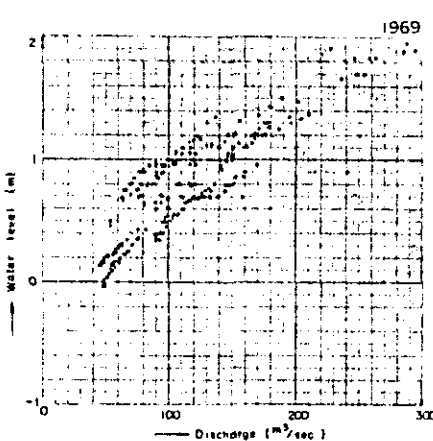
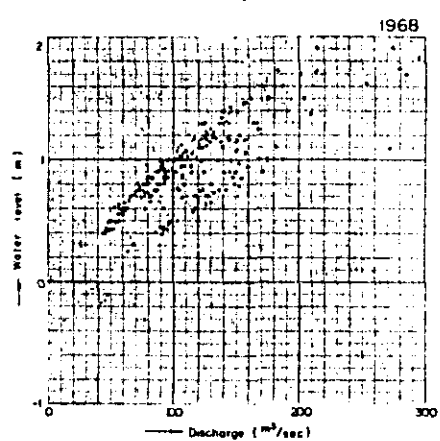
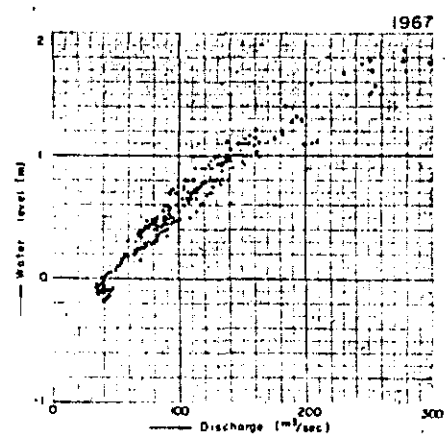
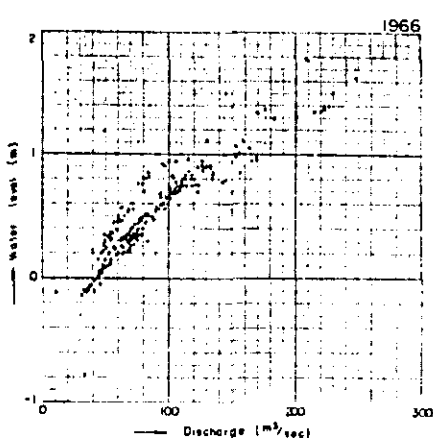
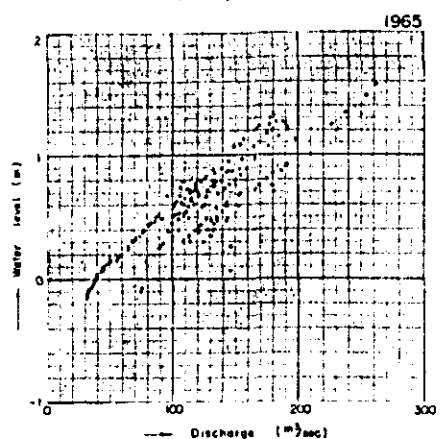
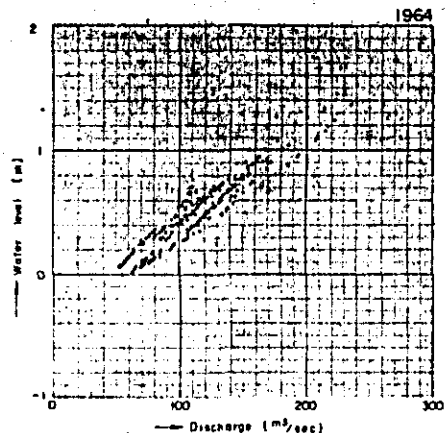
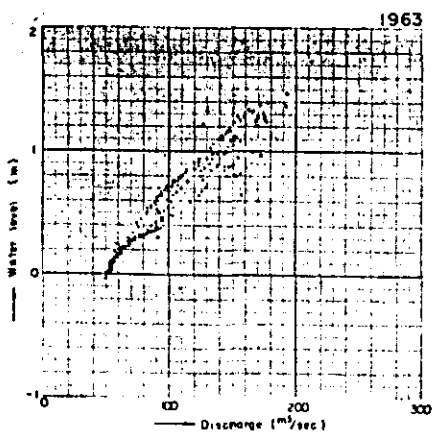
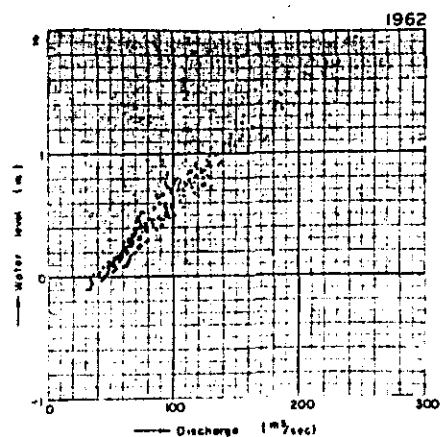
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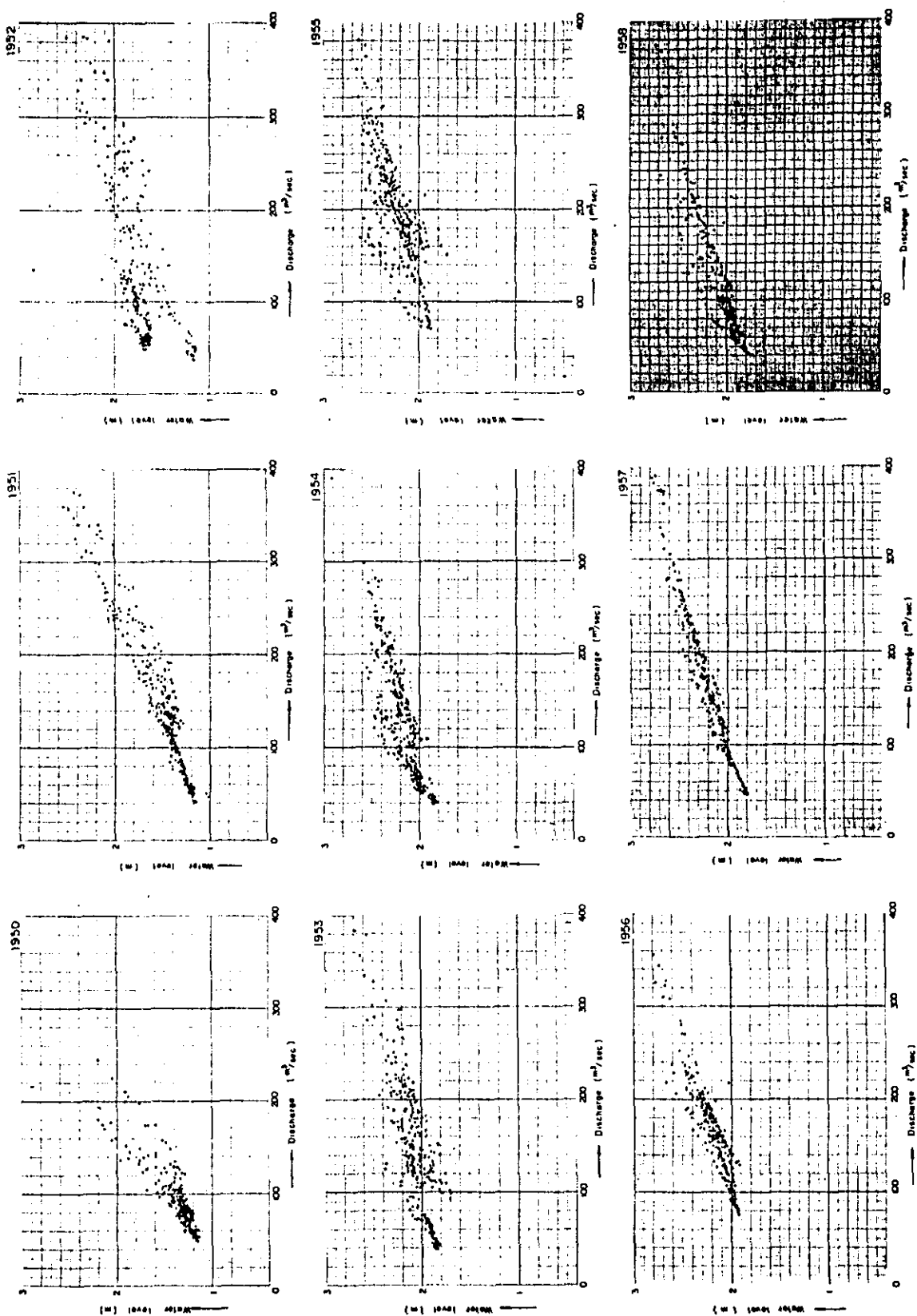
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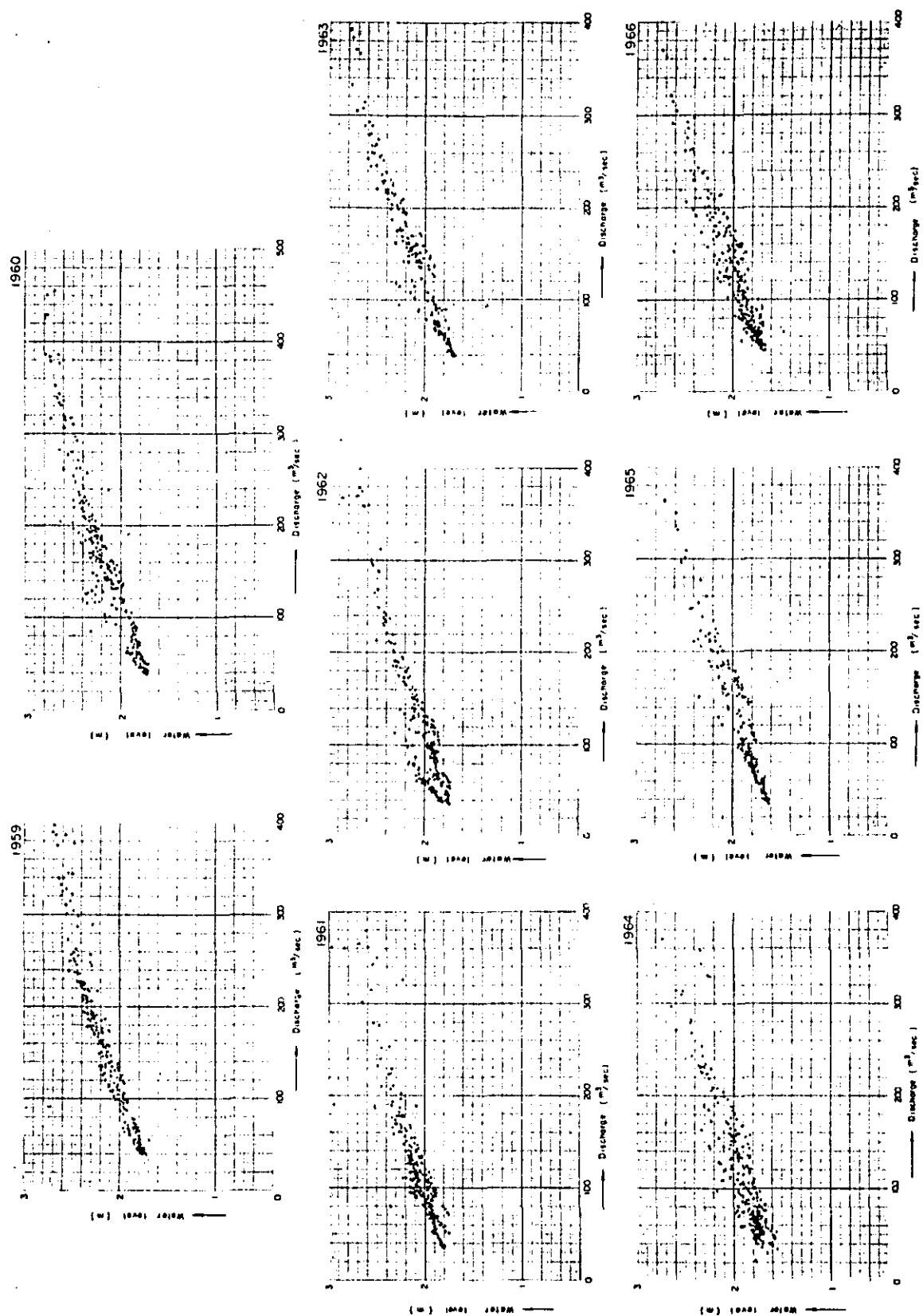
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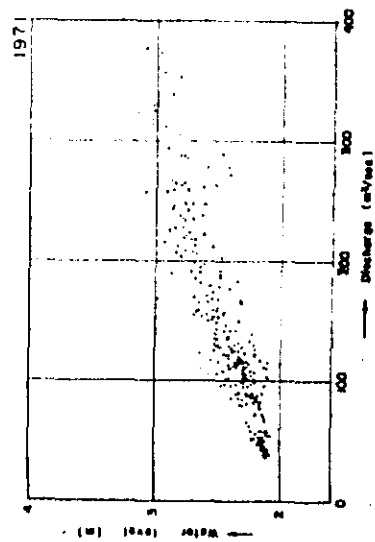
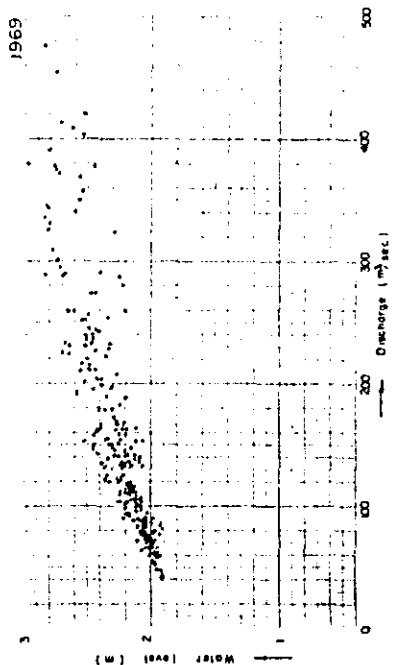
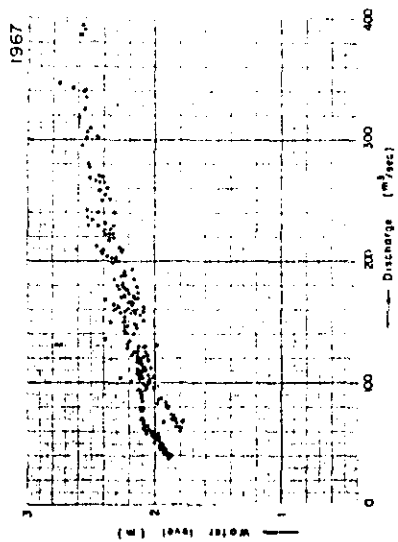
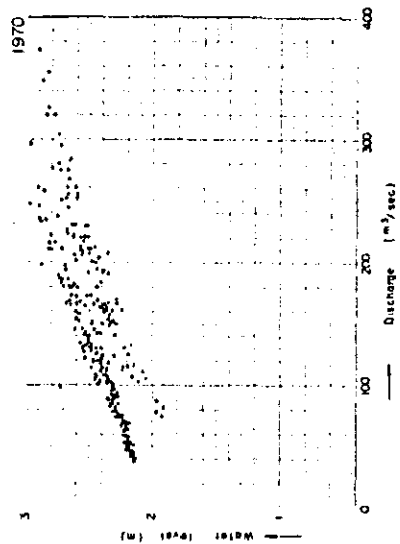
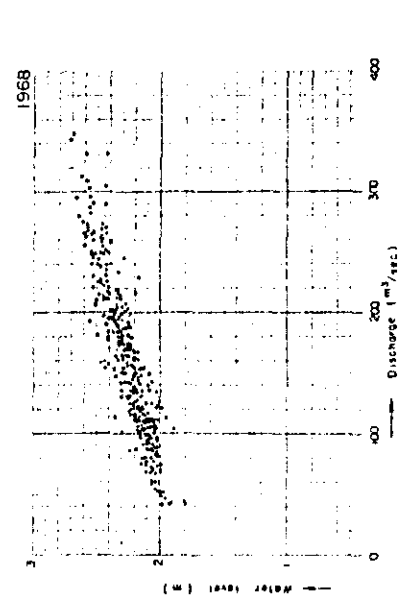
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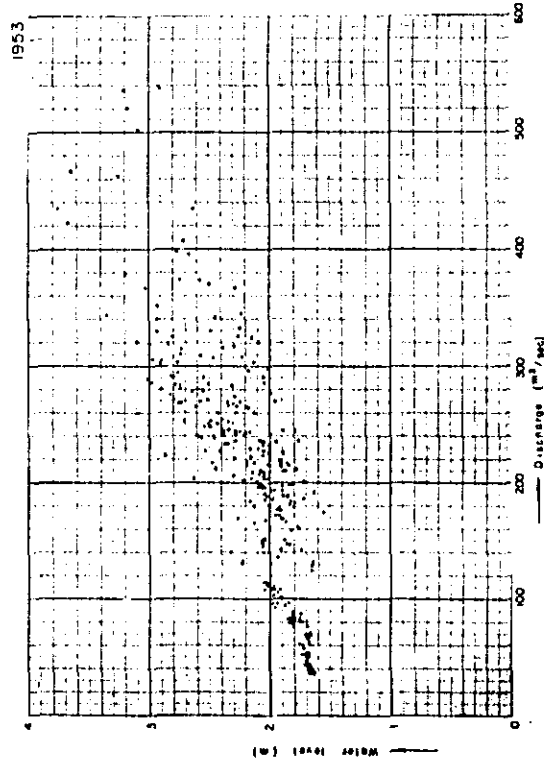
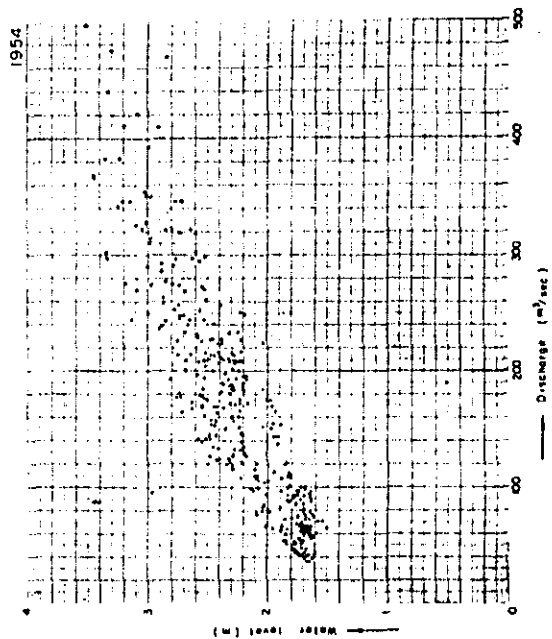
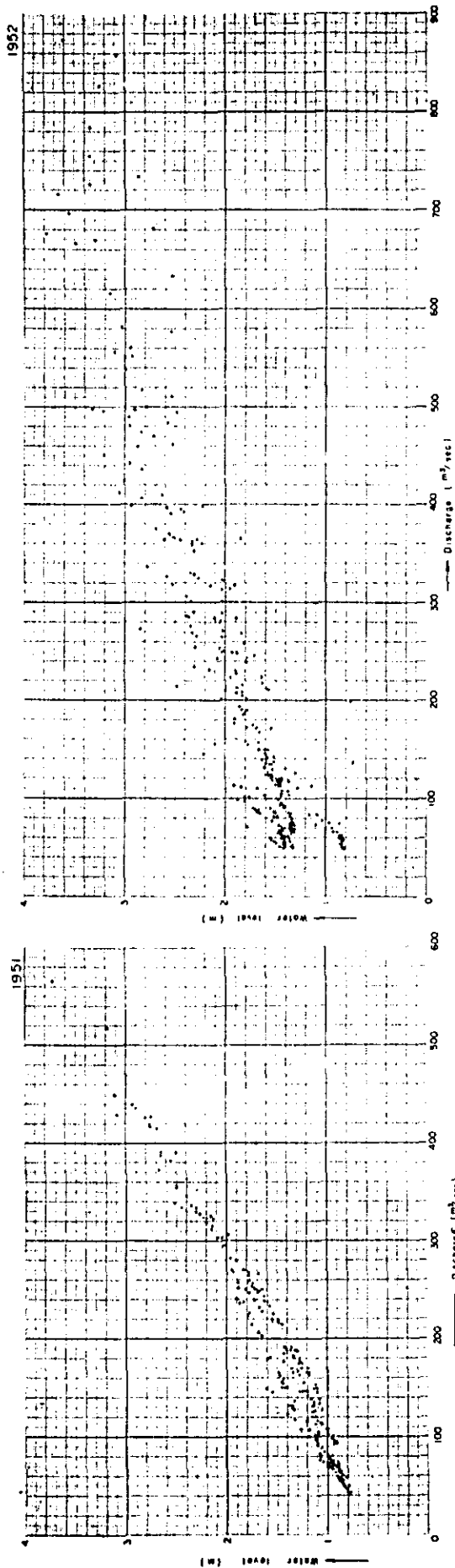
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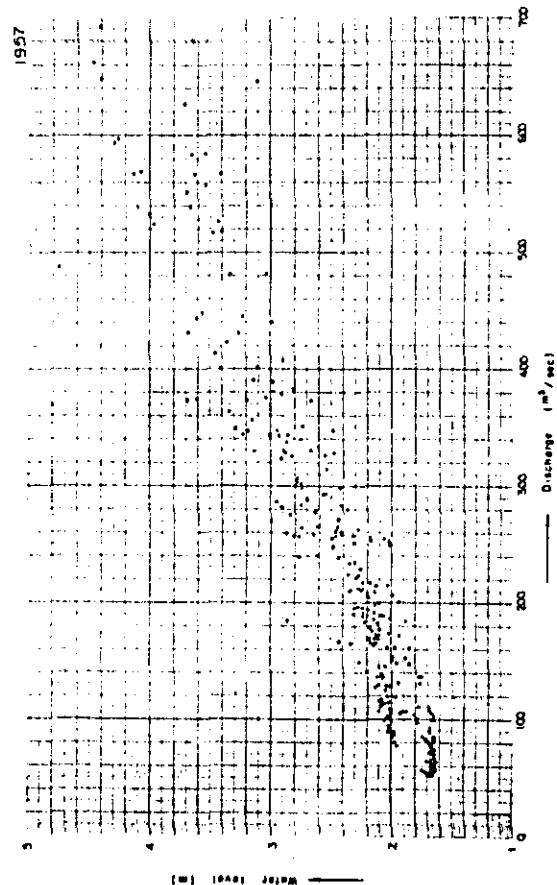
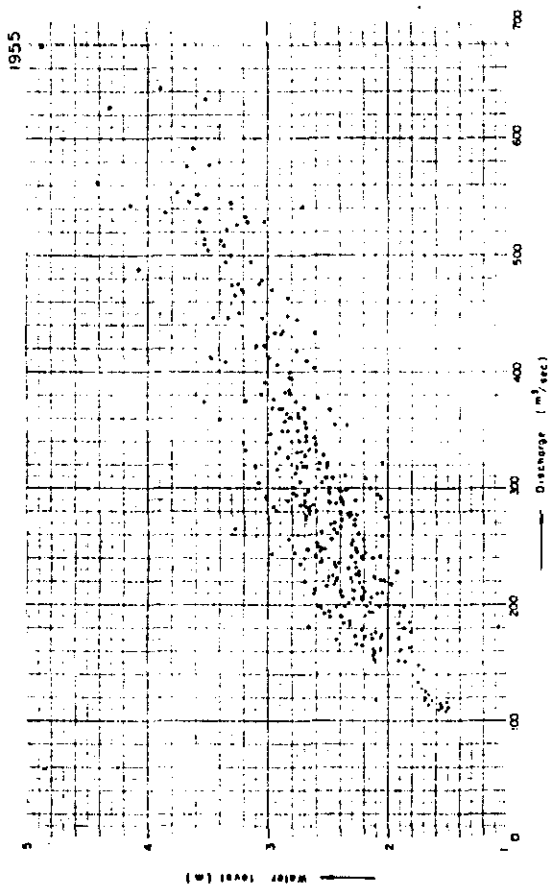
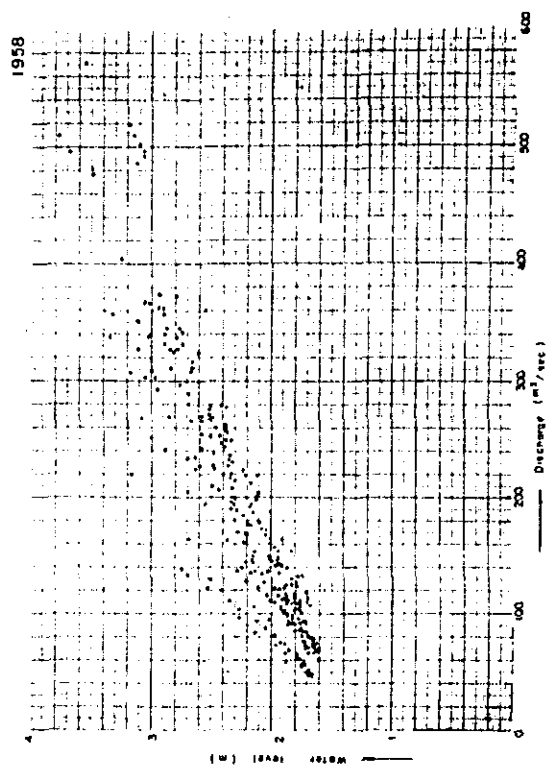
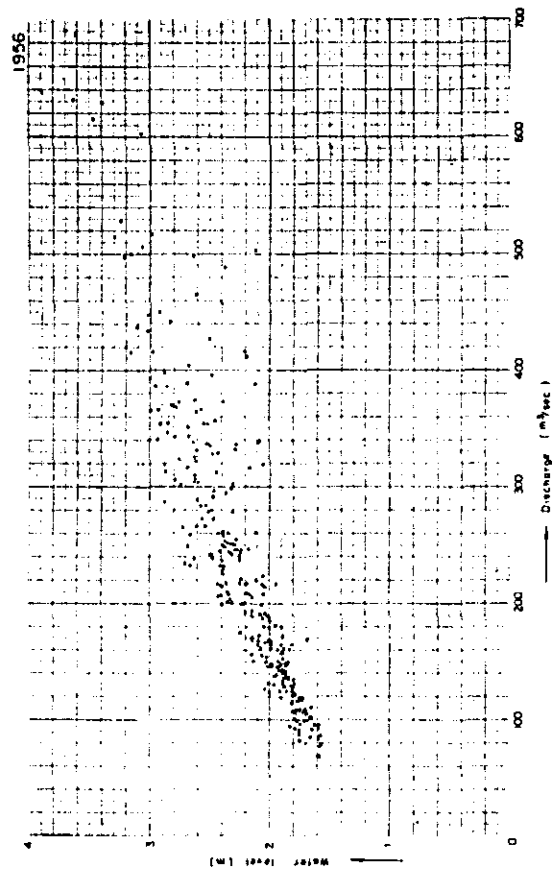


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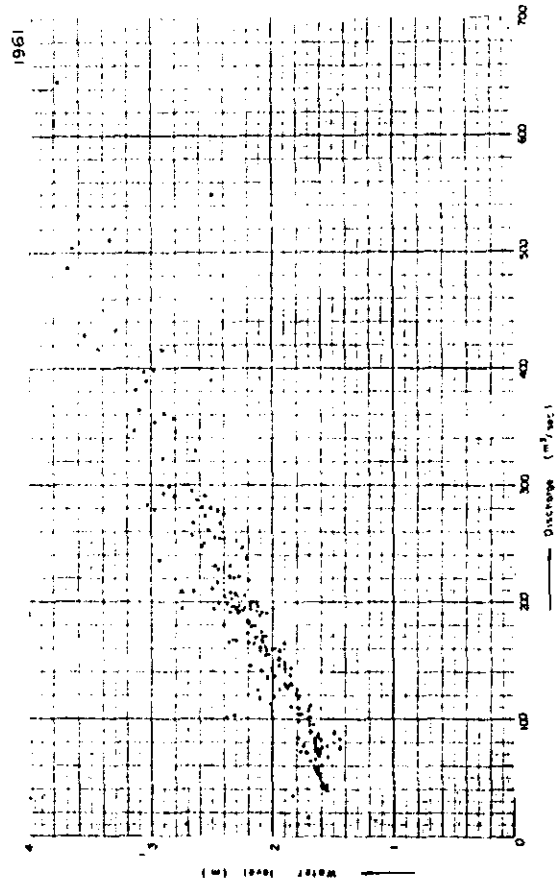
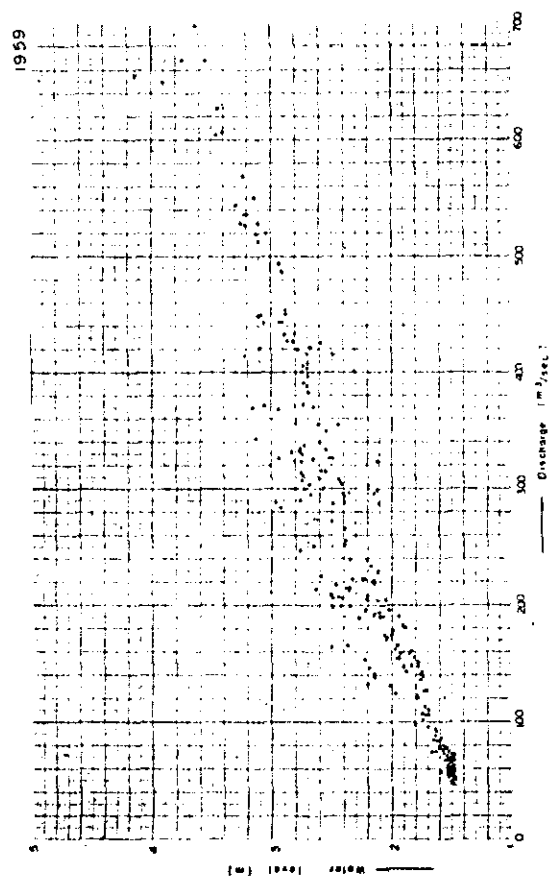
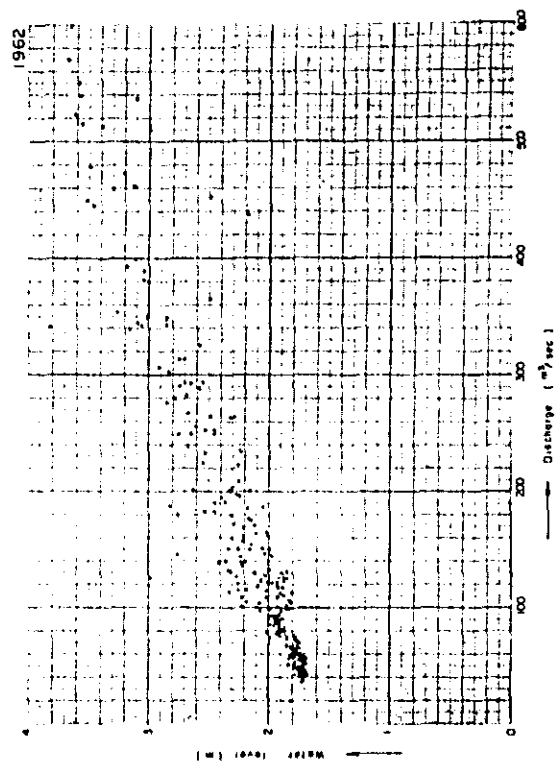
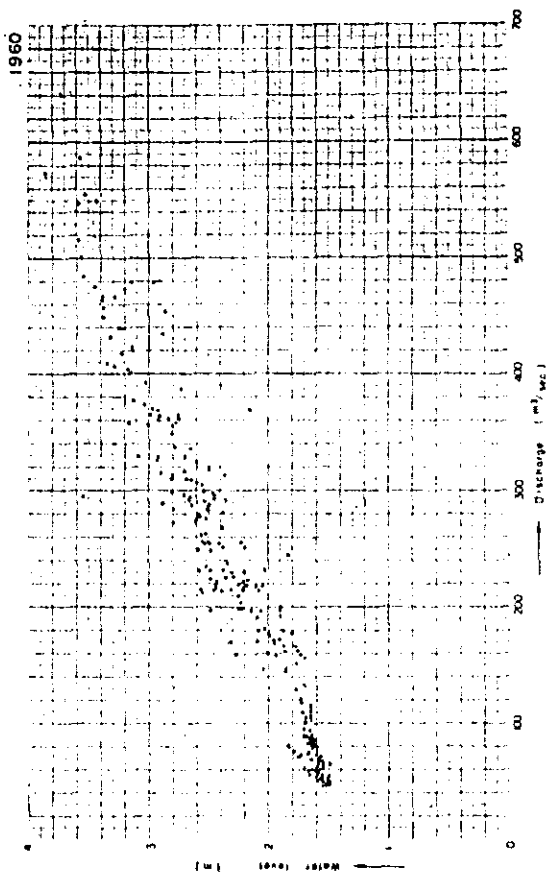


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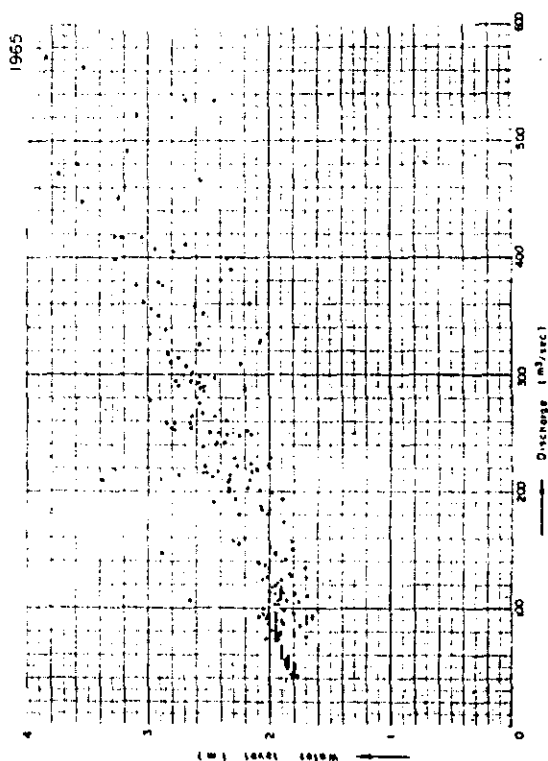
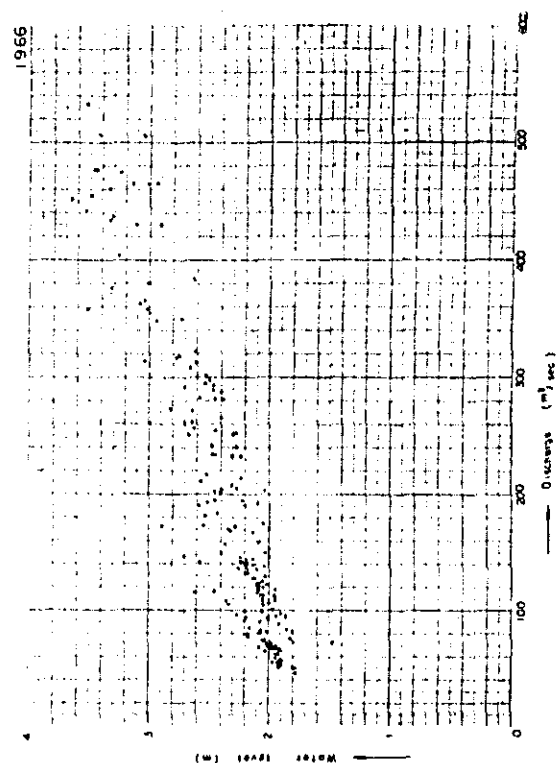
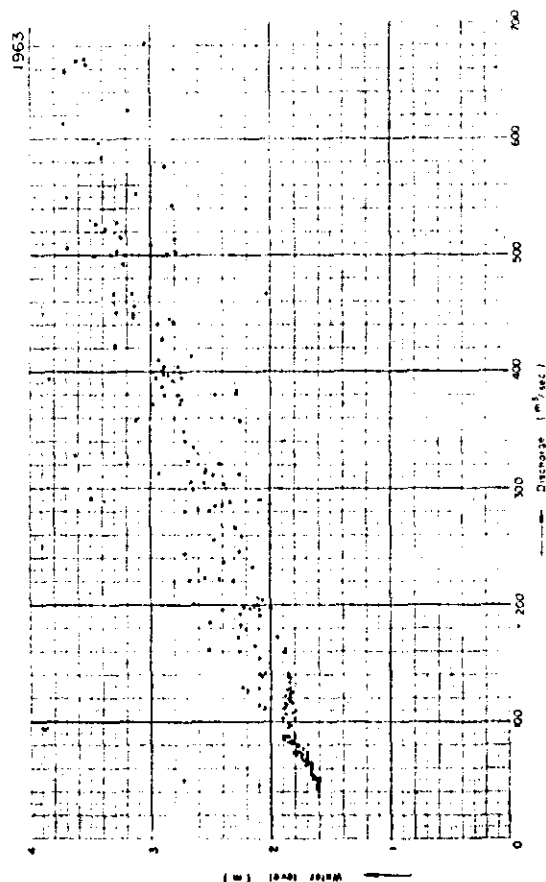
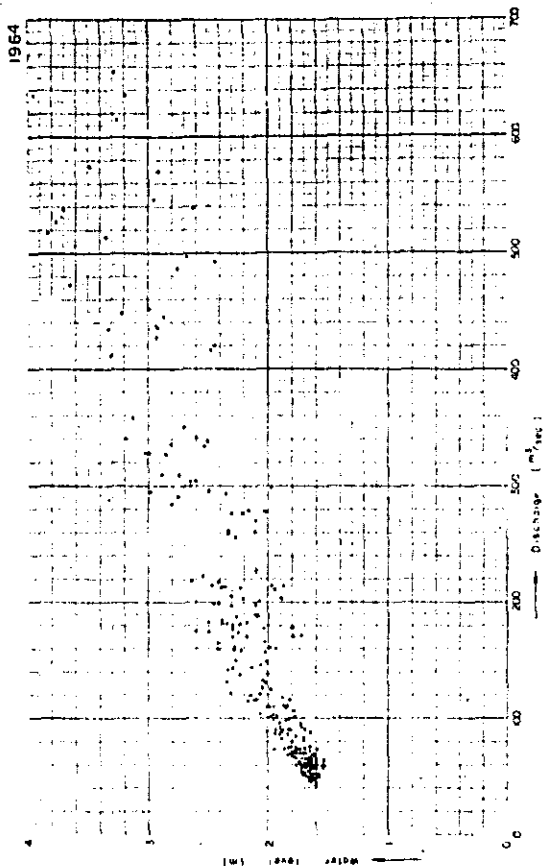




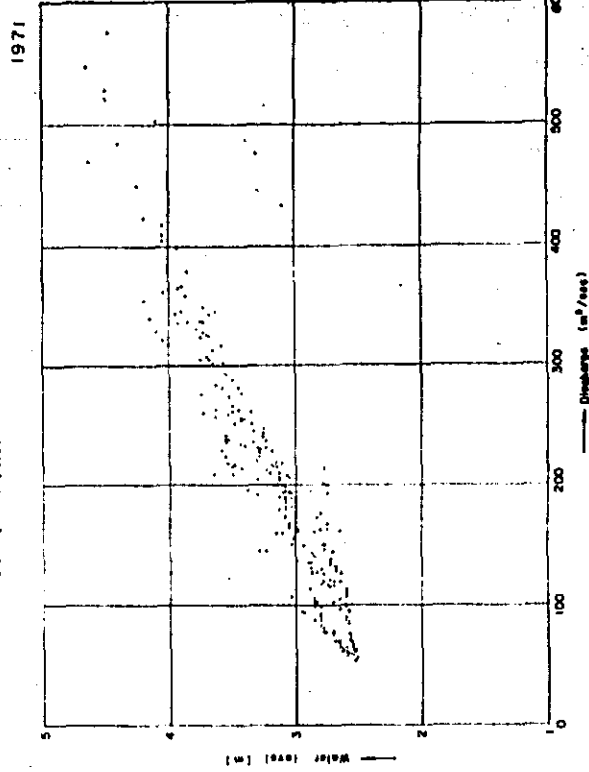
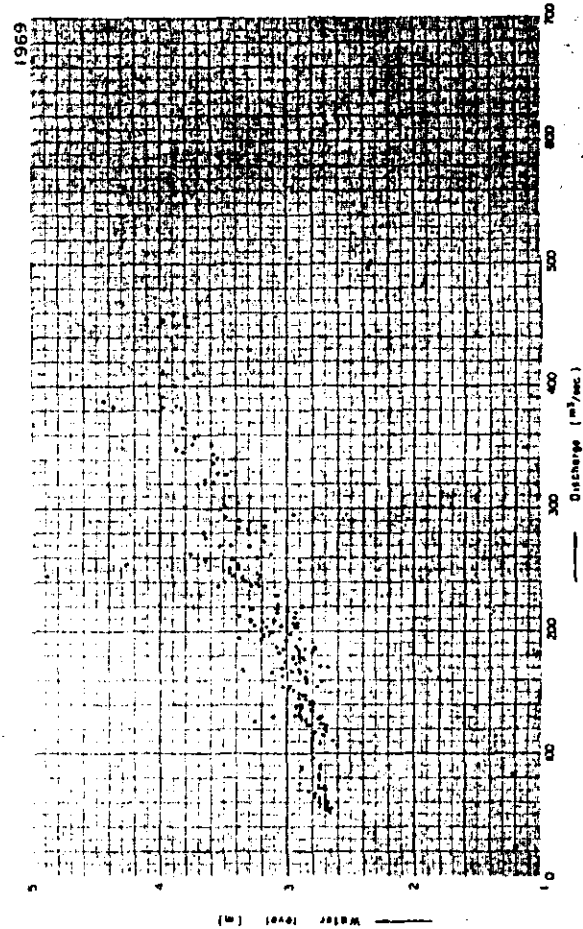
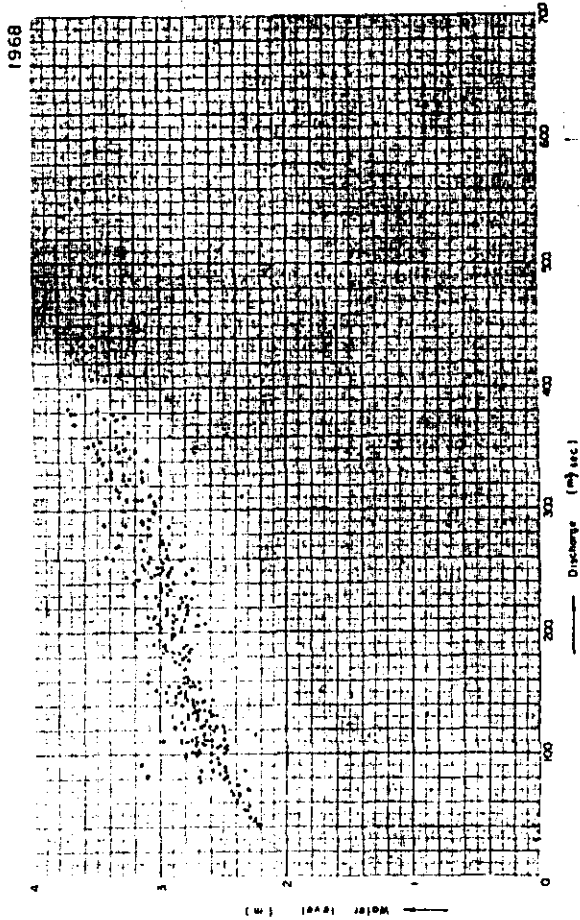
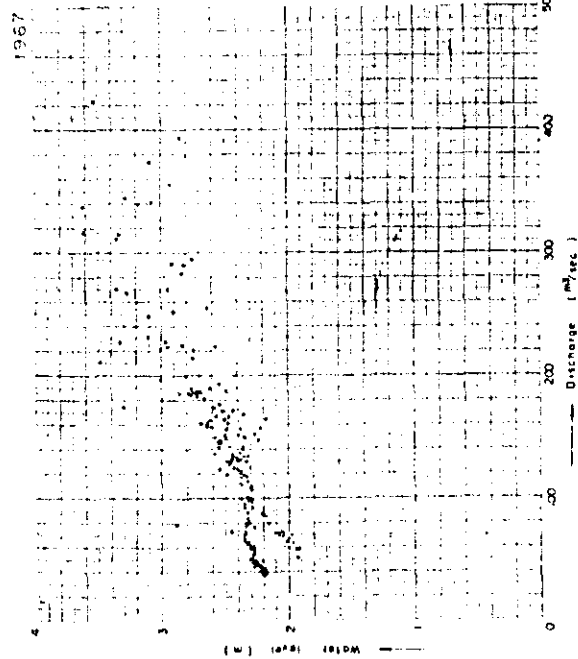
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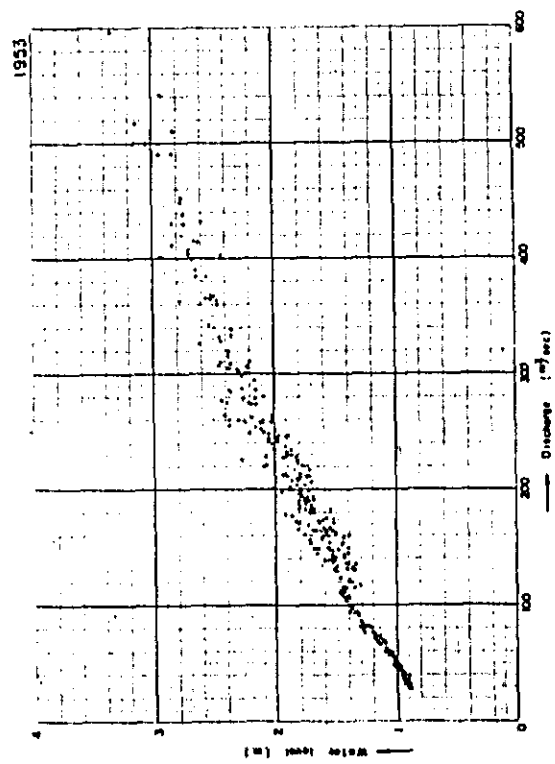
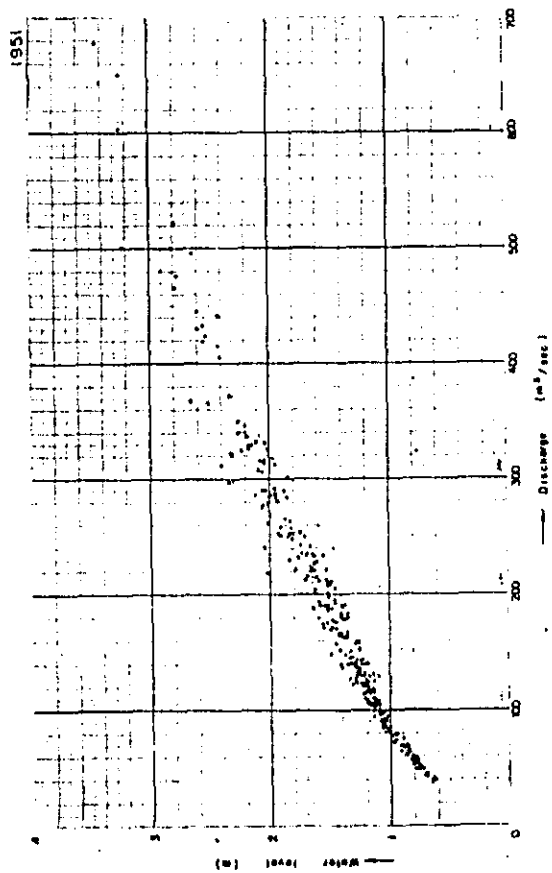
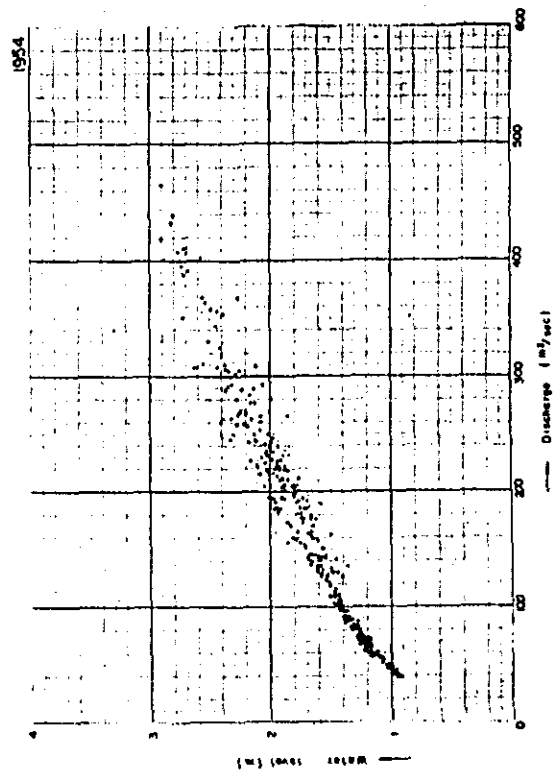
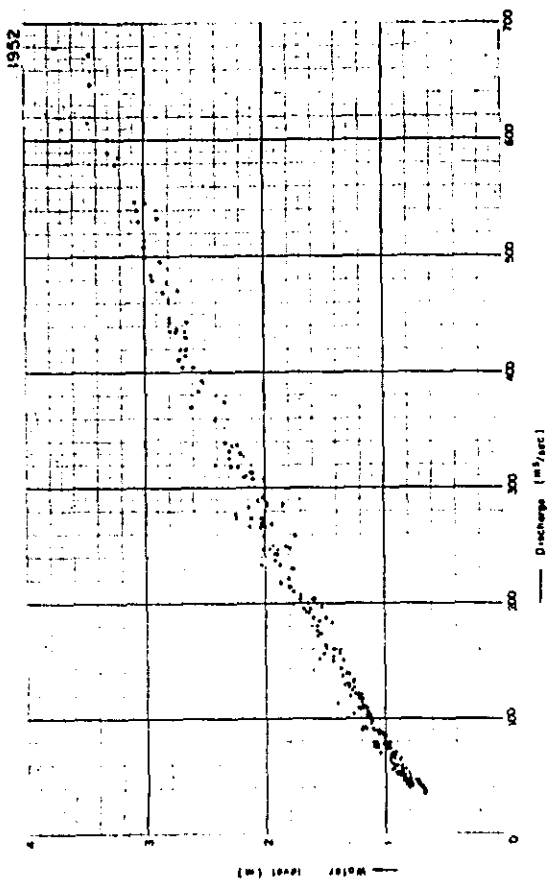
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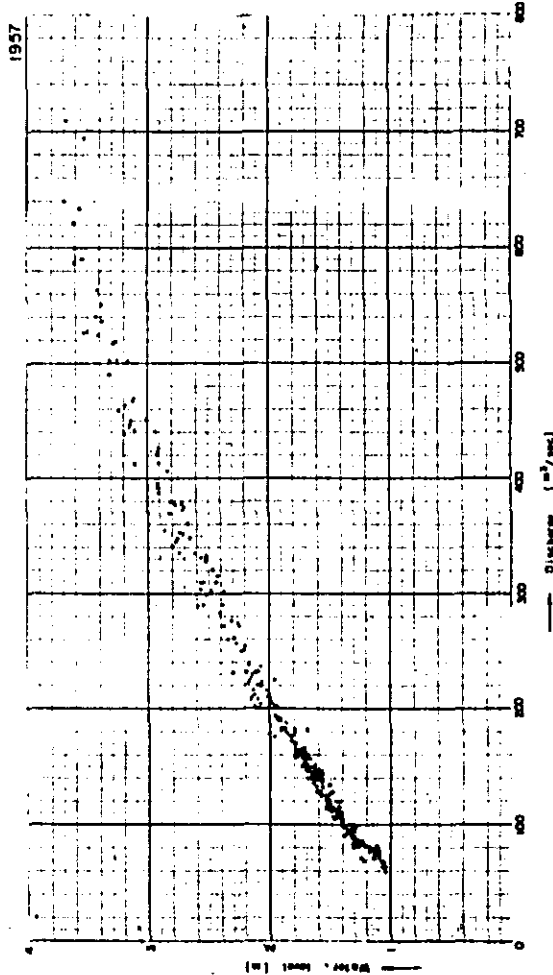
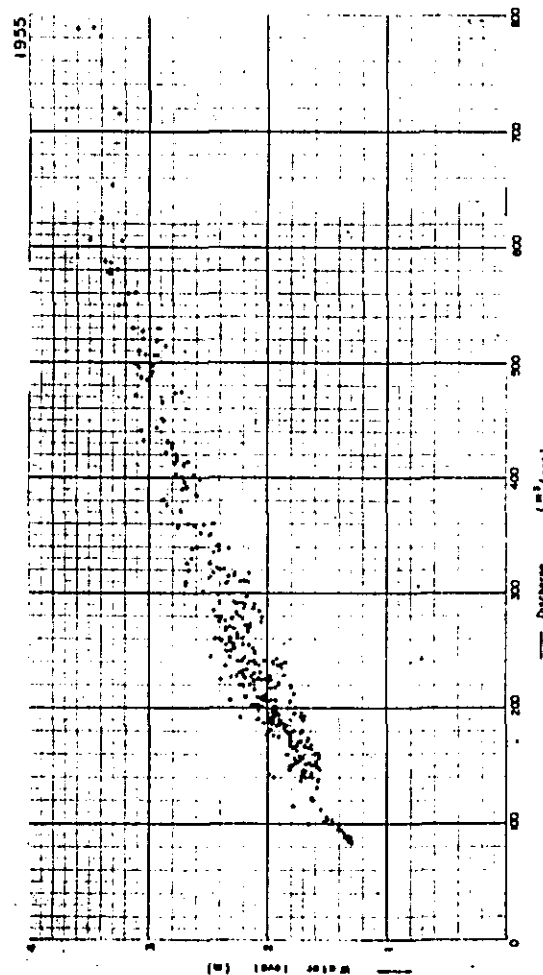
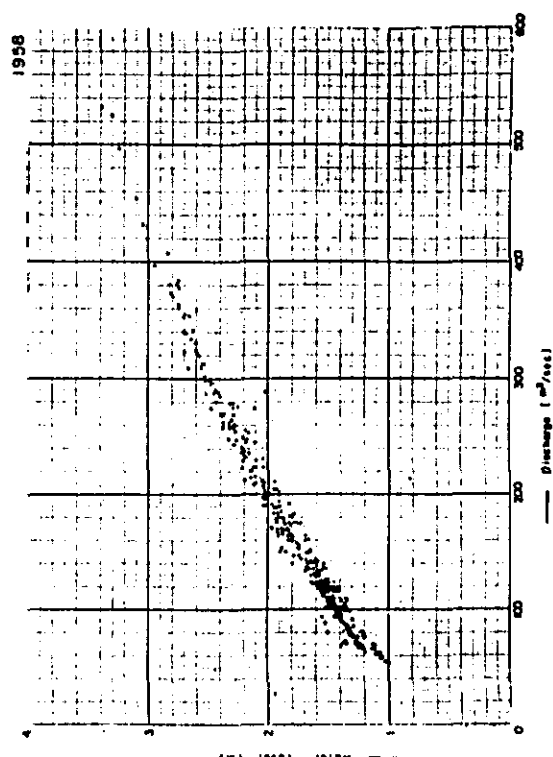
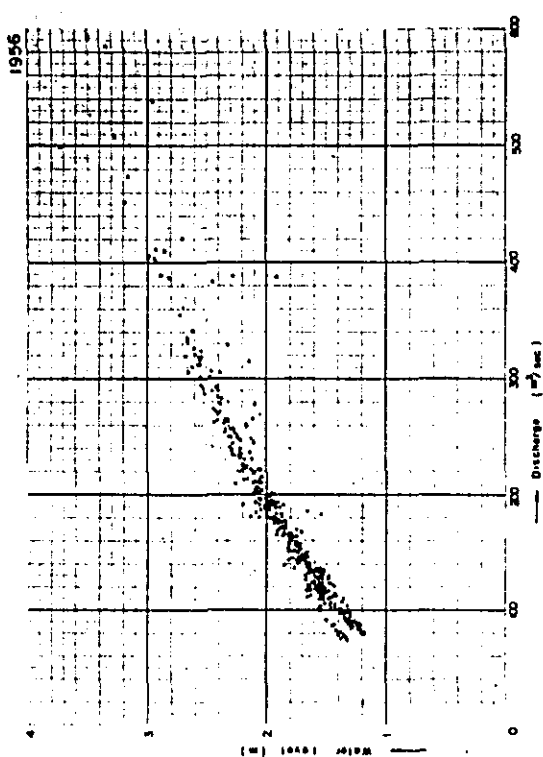
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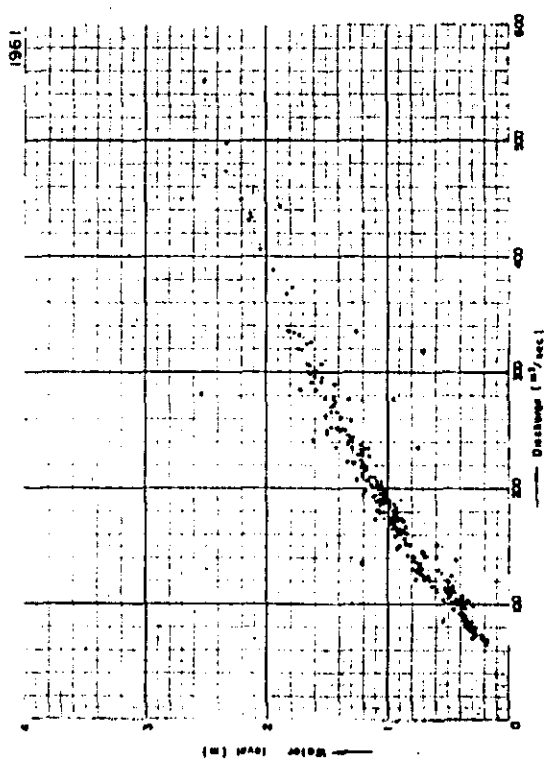
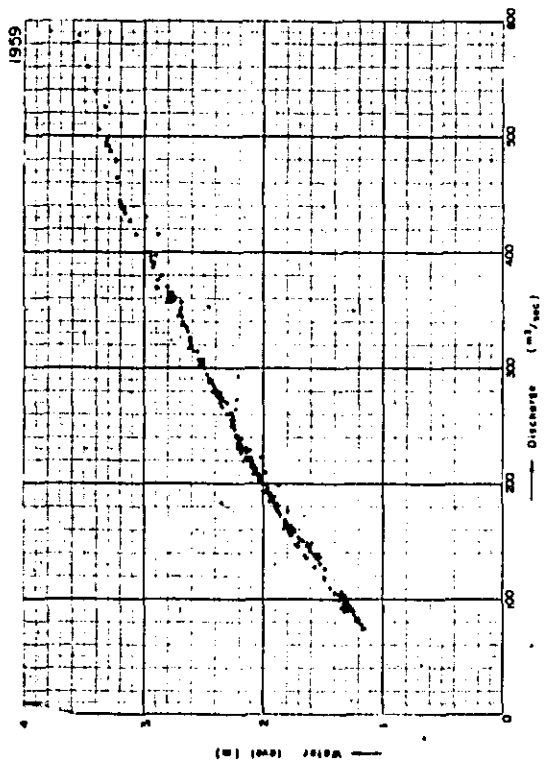
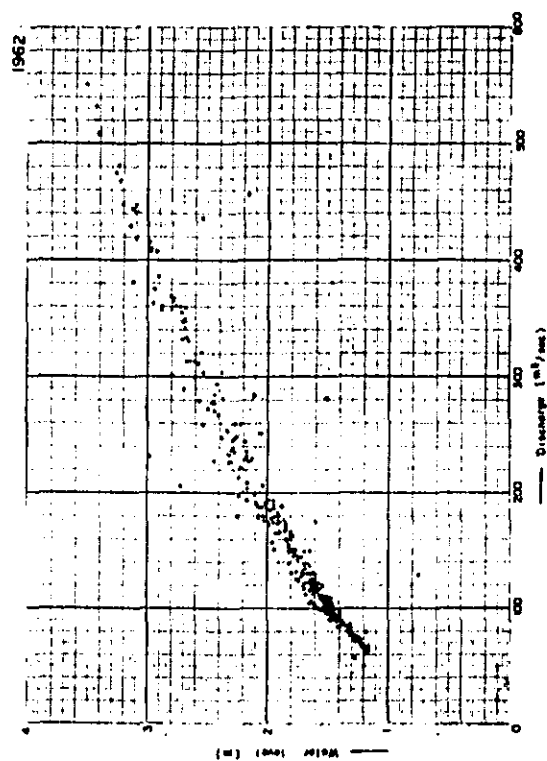
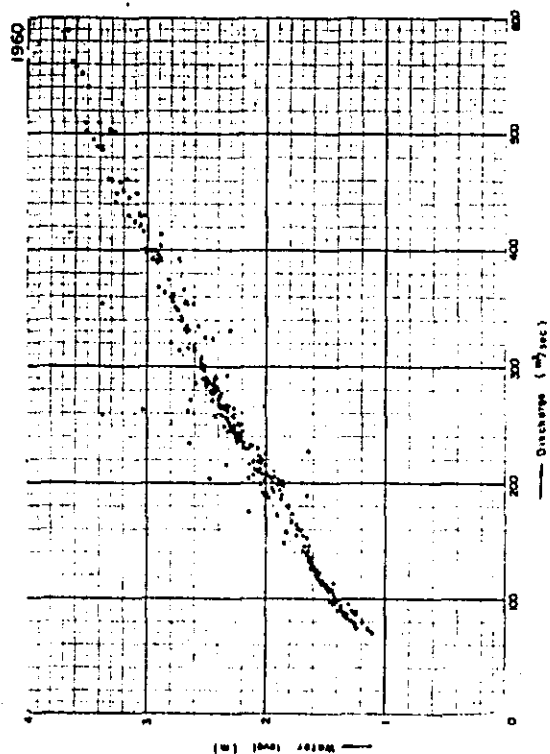
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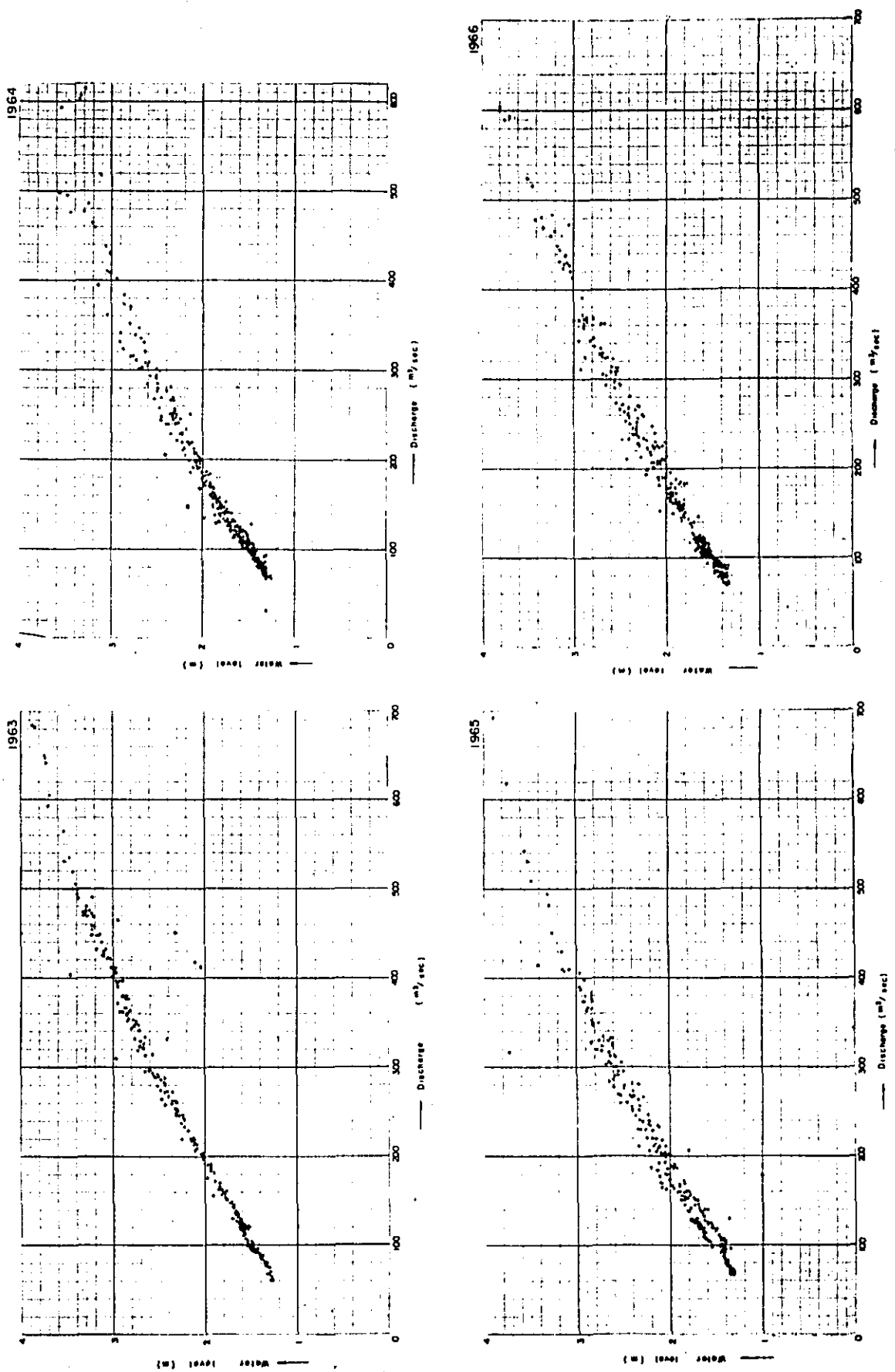
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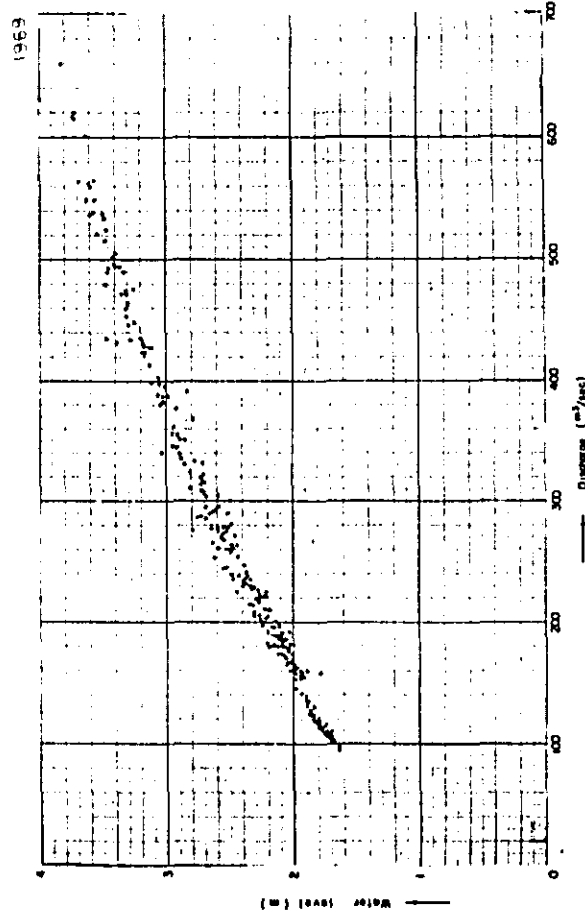
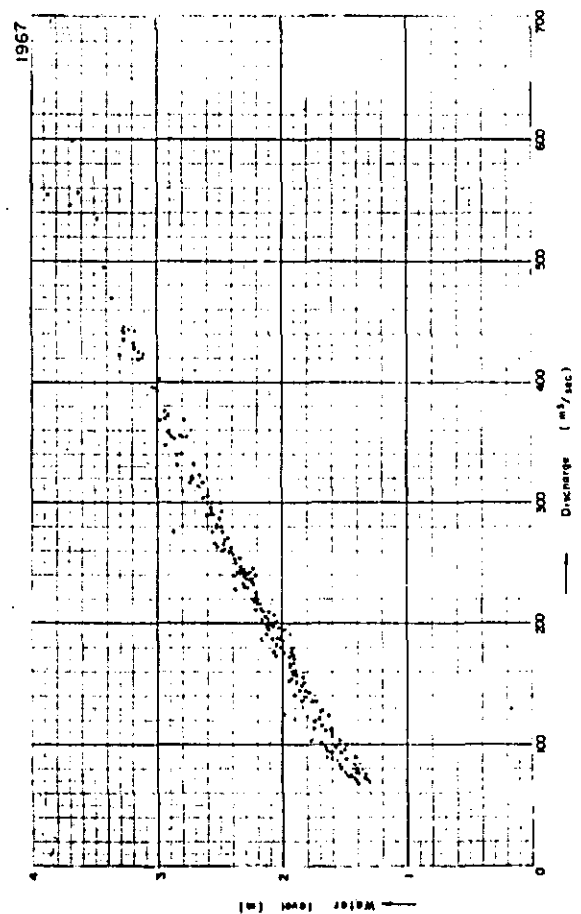
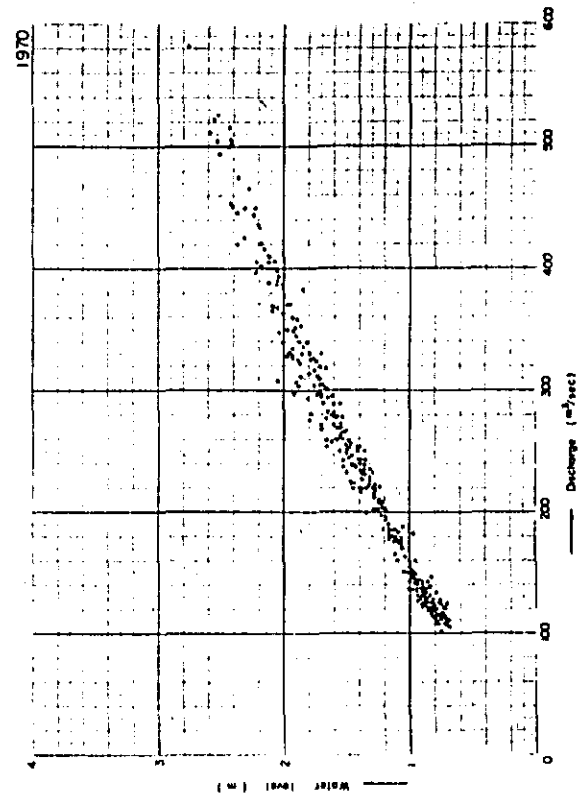
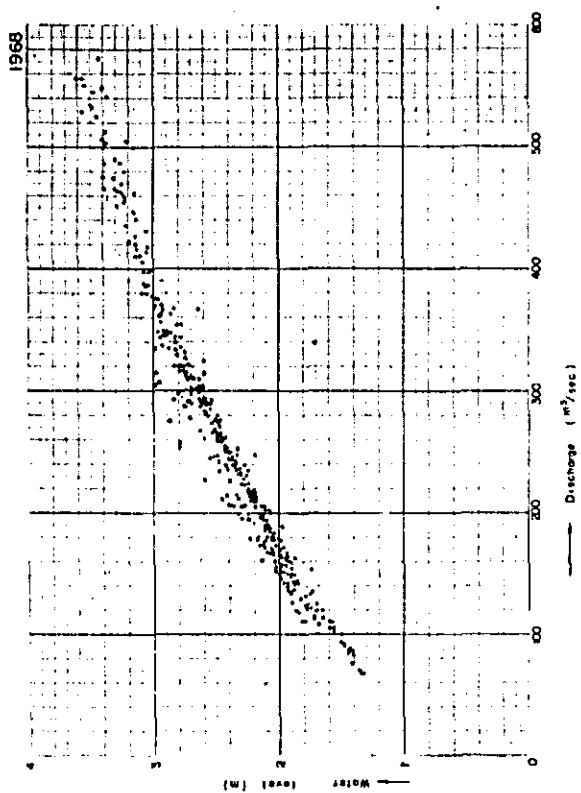


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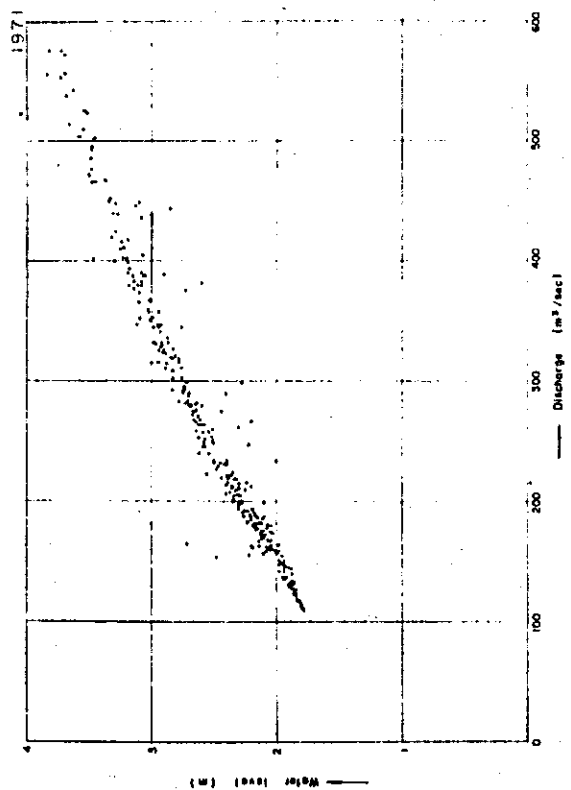
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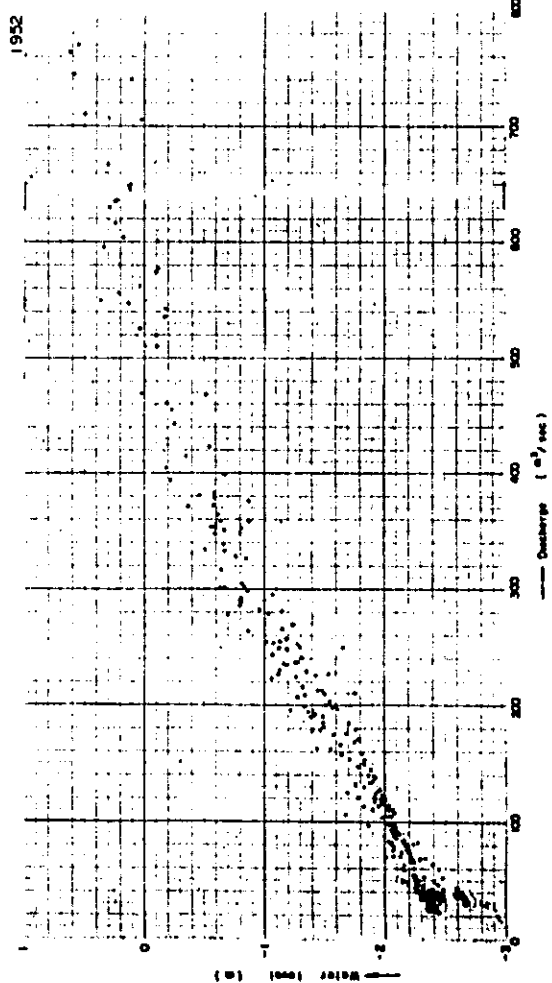
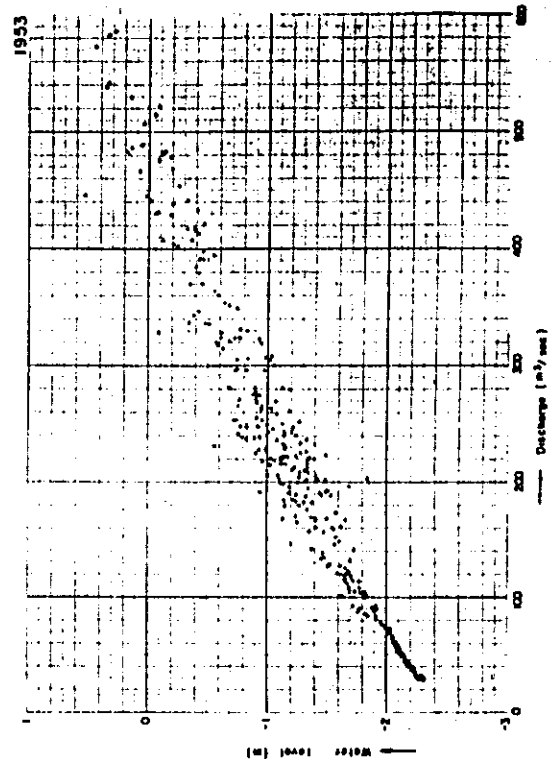
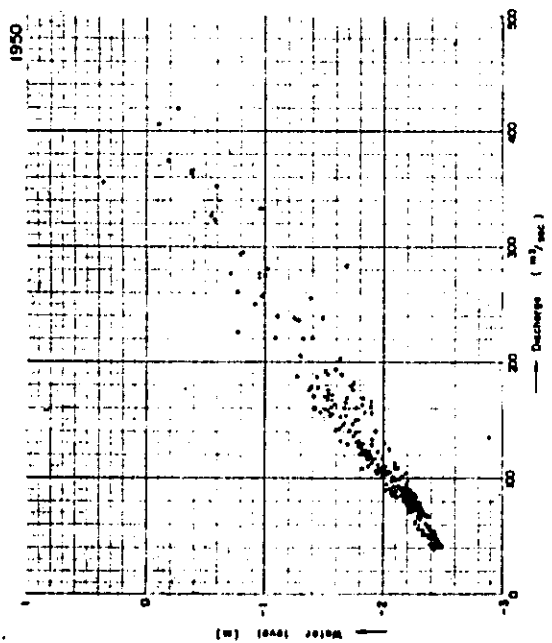
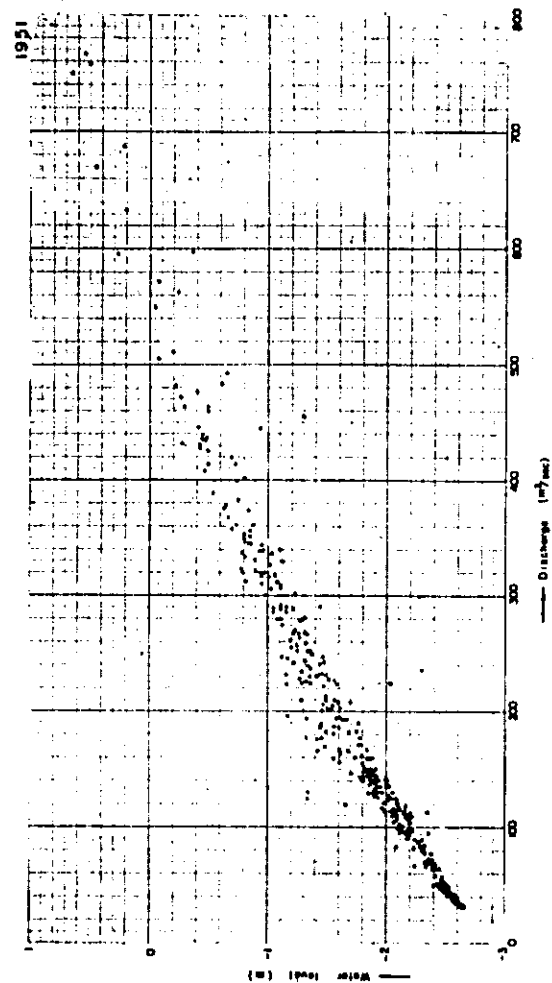




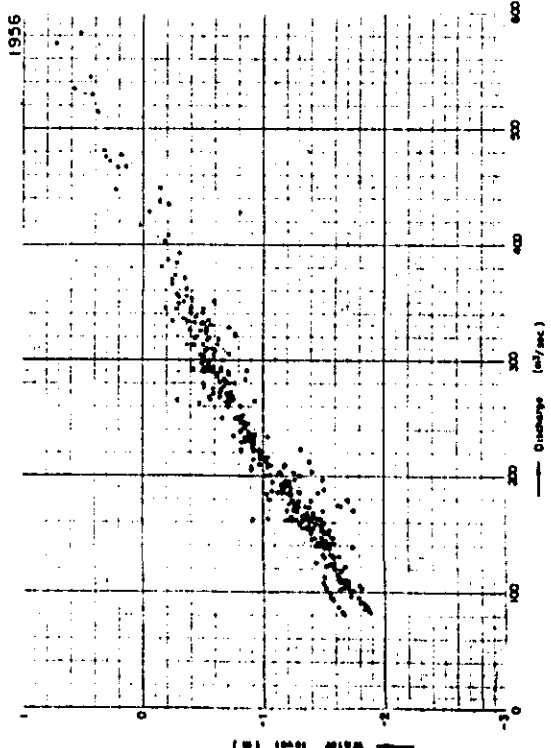
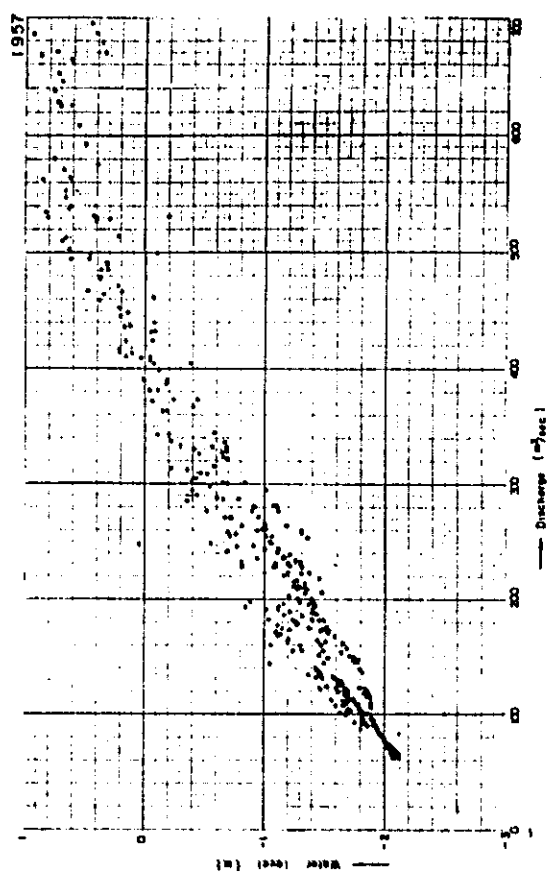
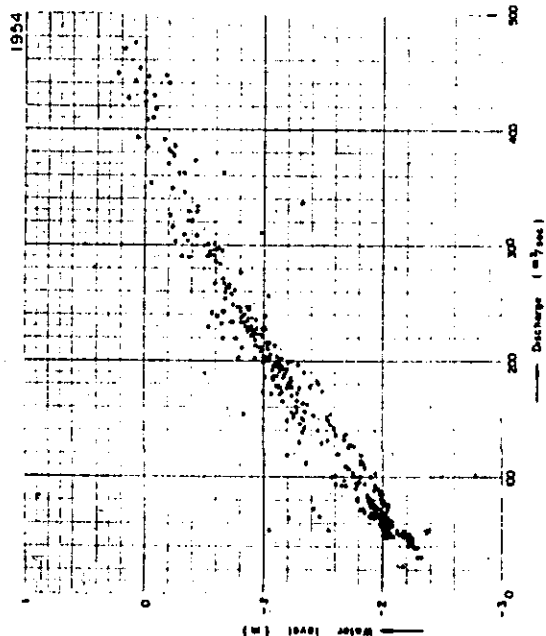
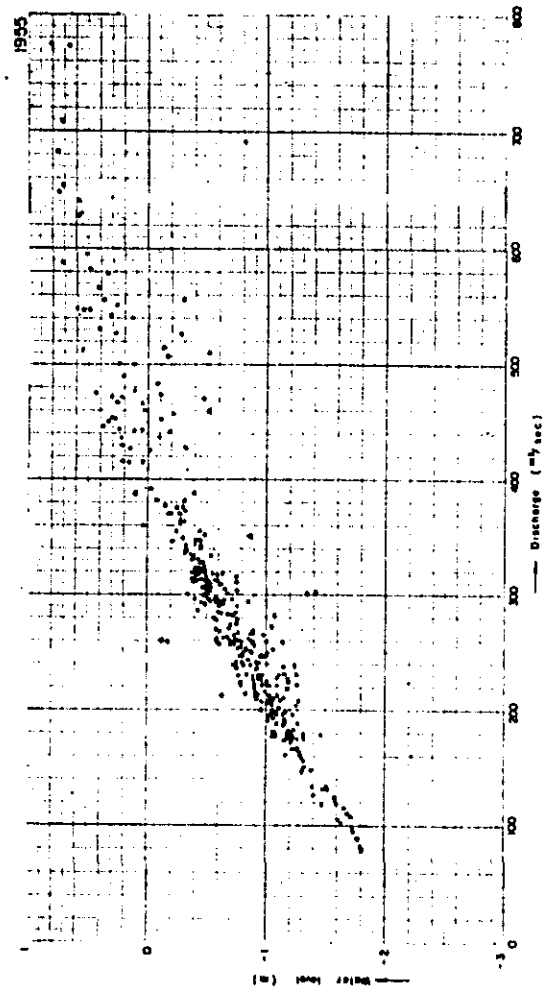
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# Jongbiru Gauging Station (6)

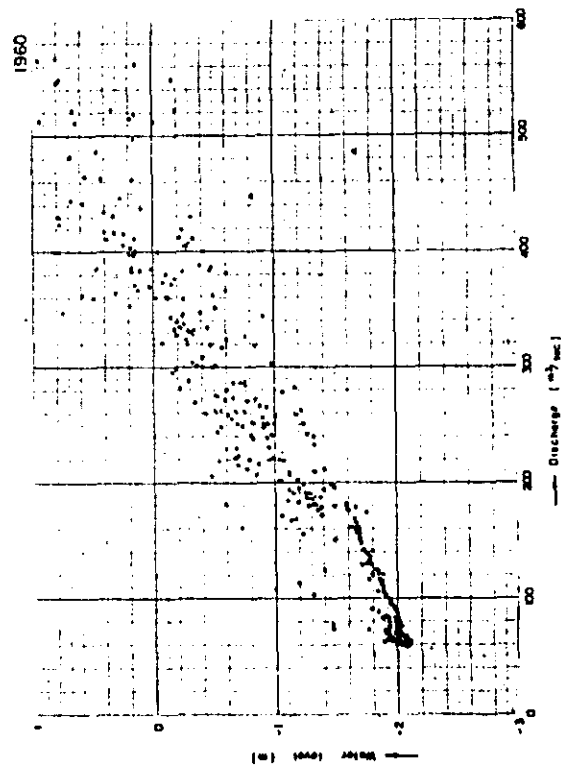
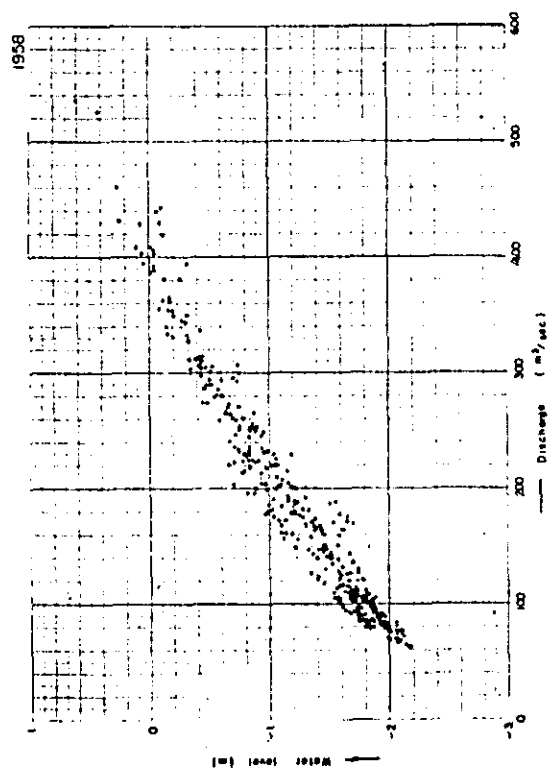
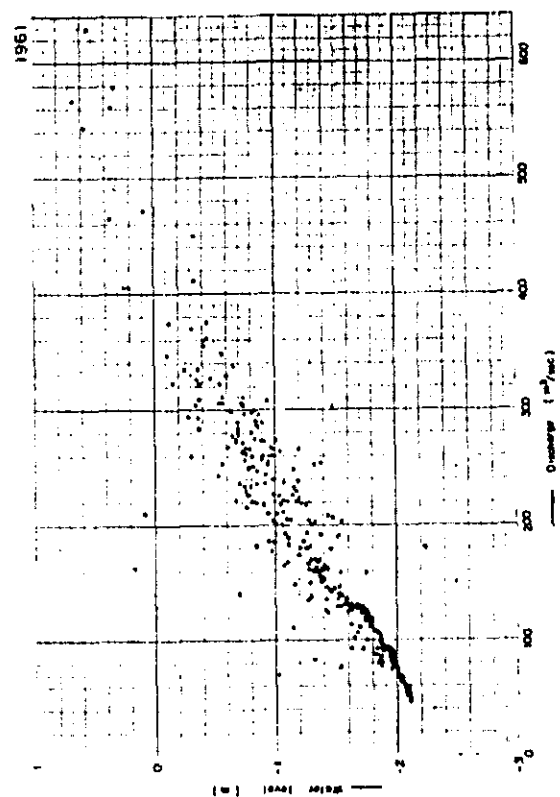
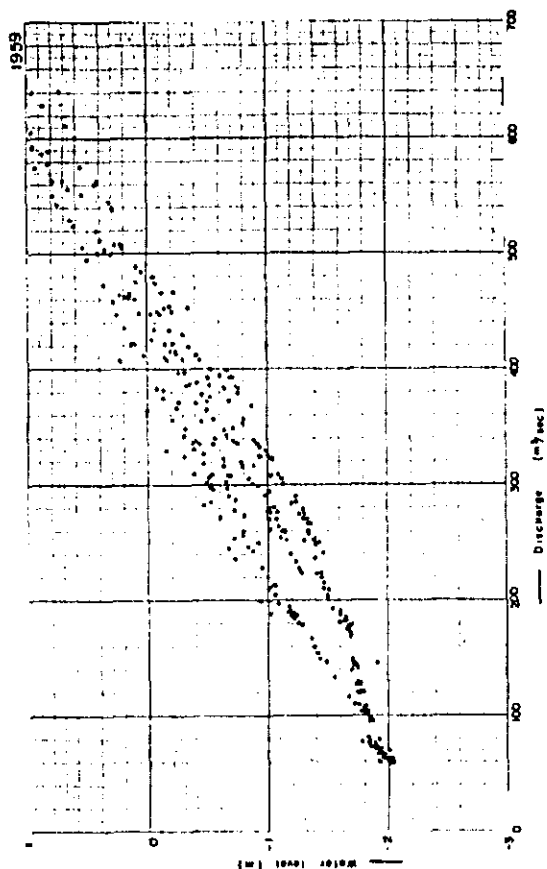




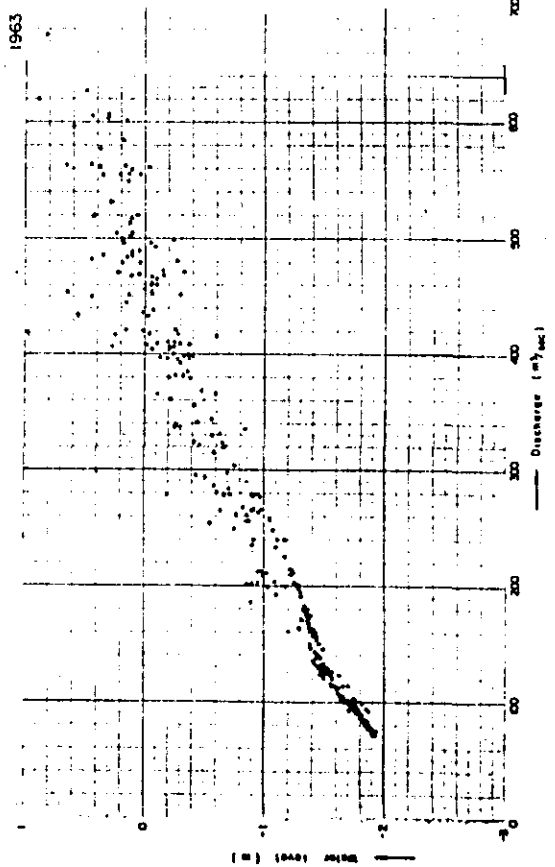
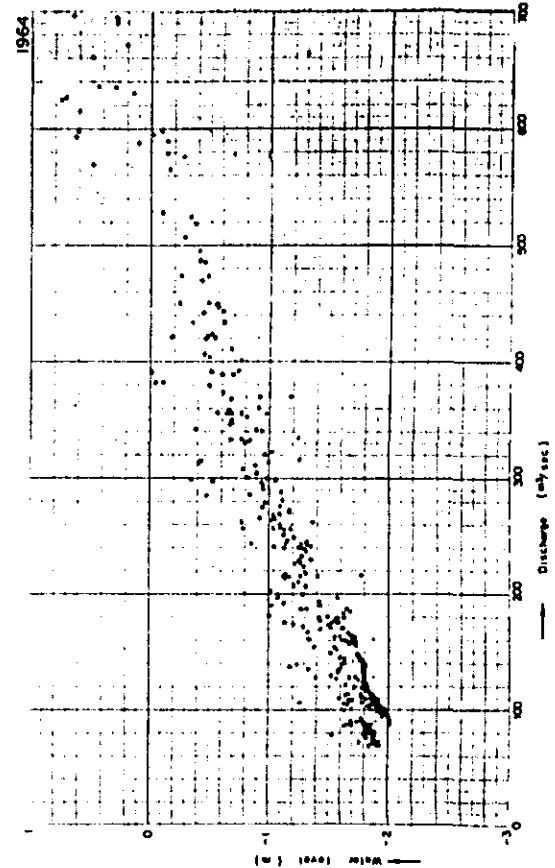
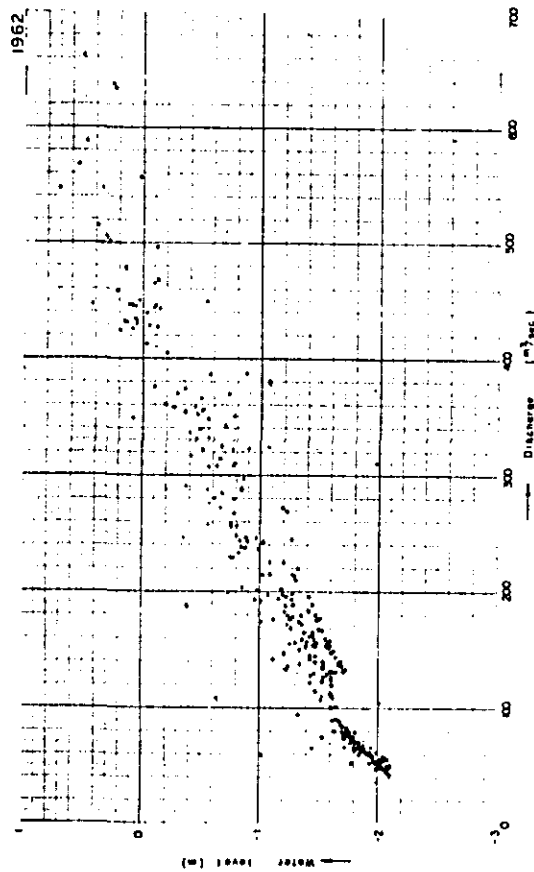
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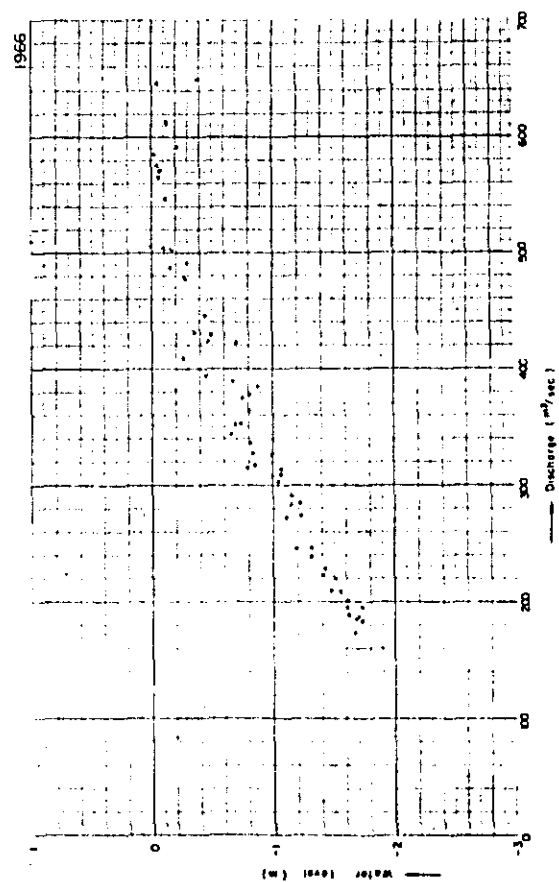
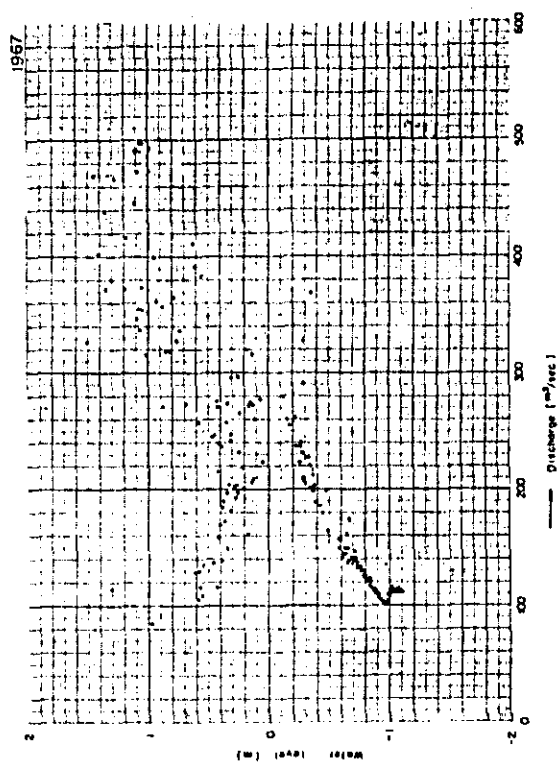
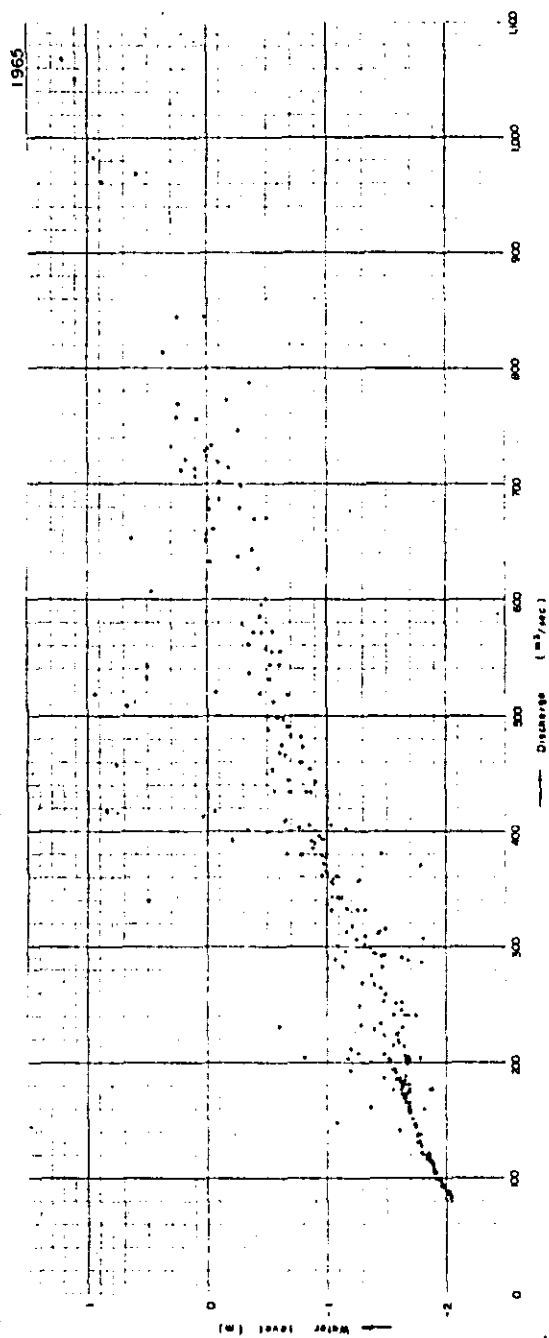
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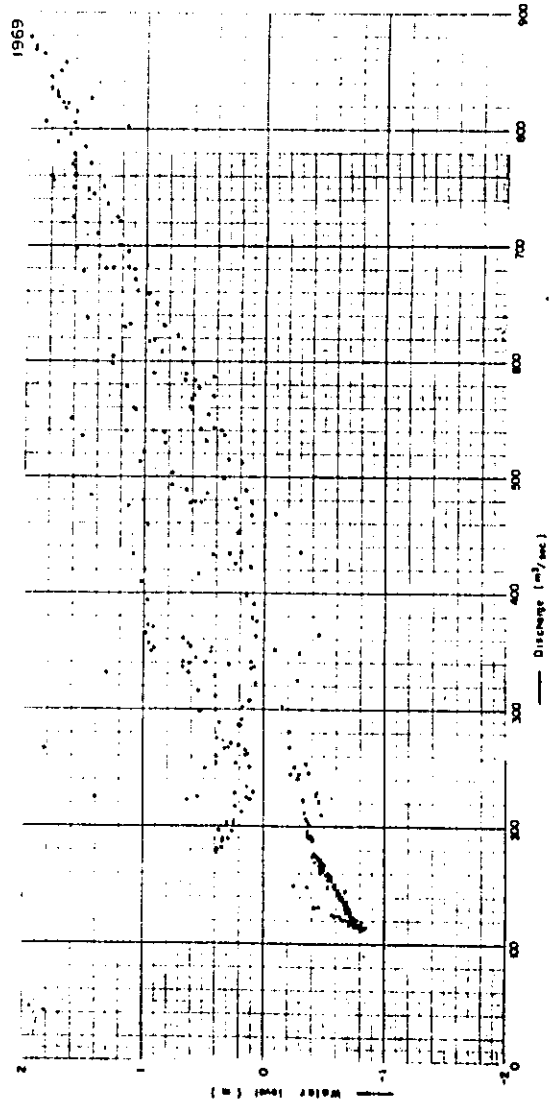
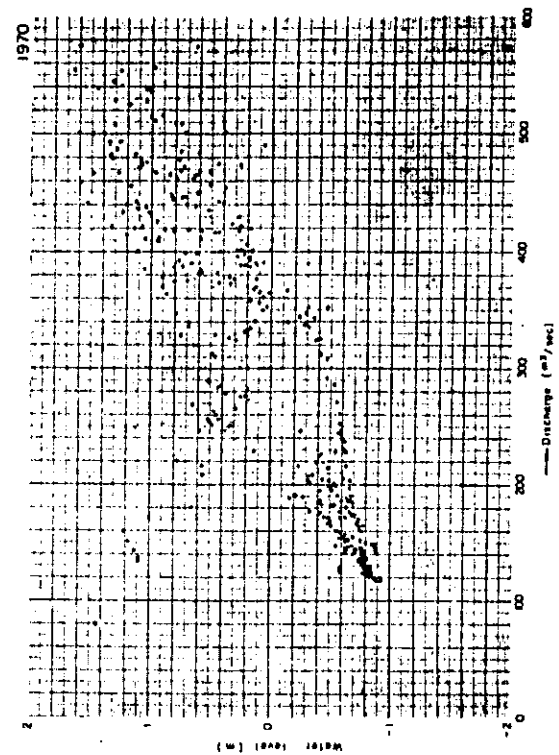
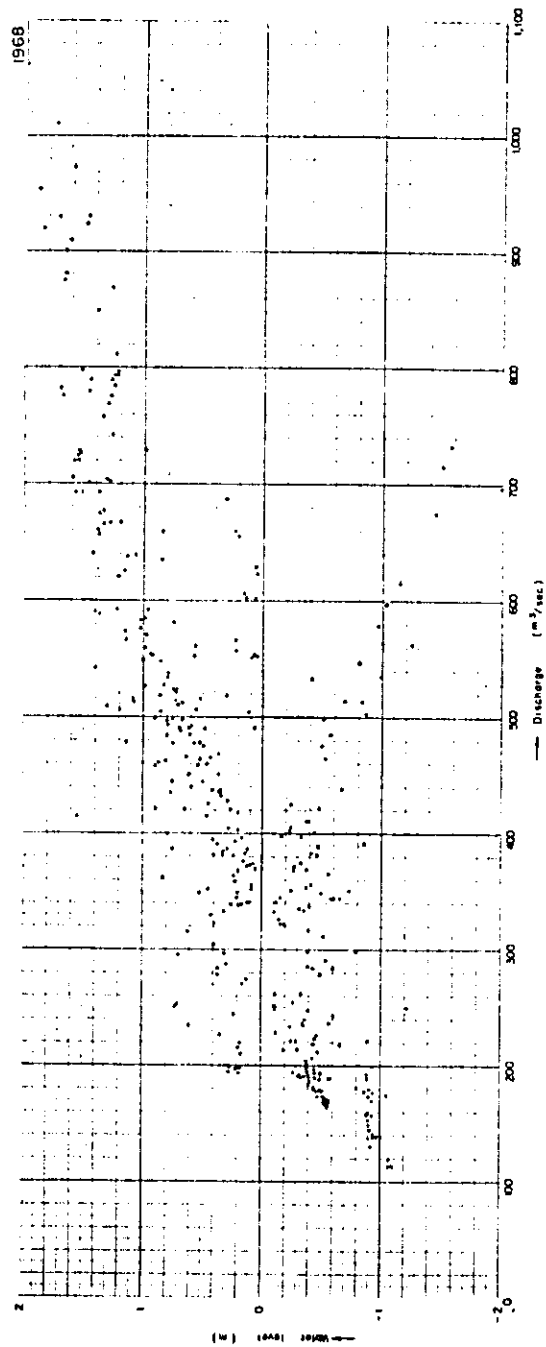
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Kertosono Gauging Station (4)

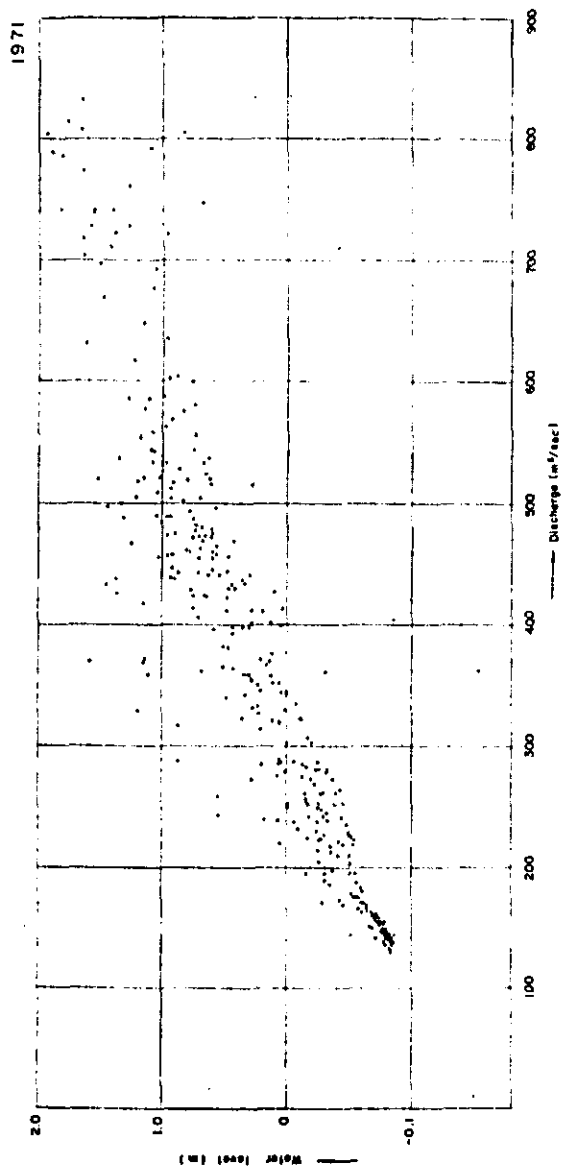


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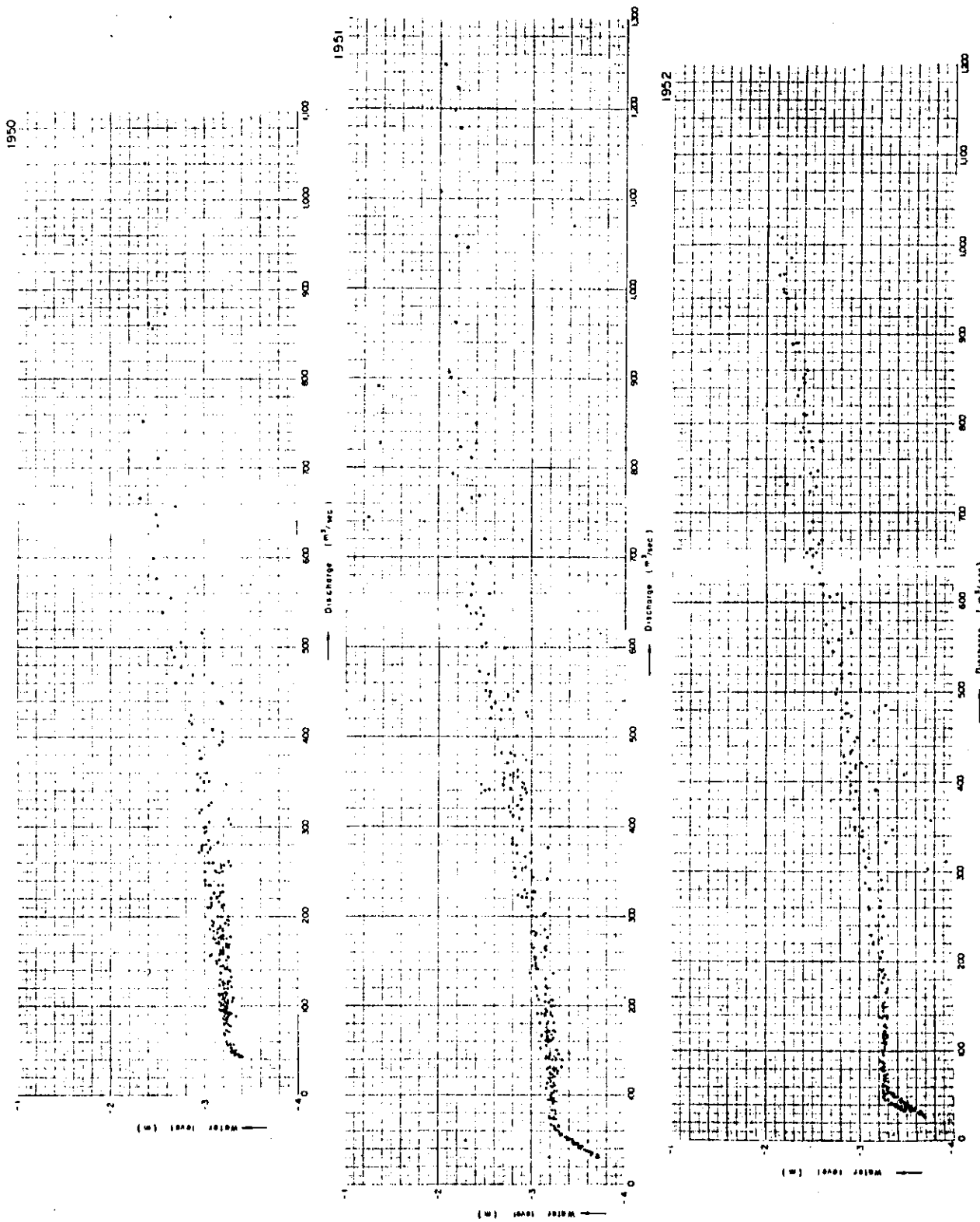


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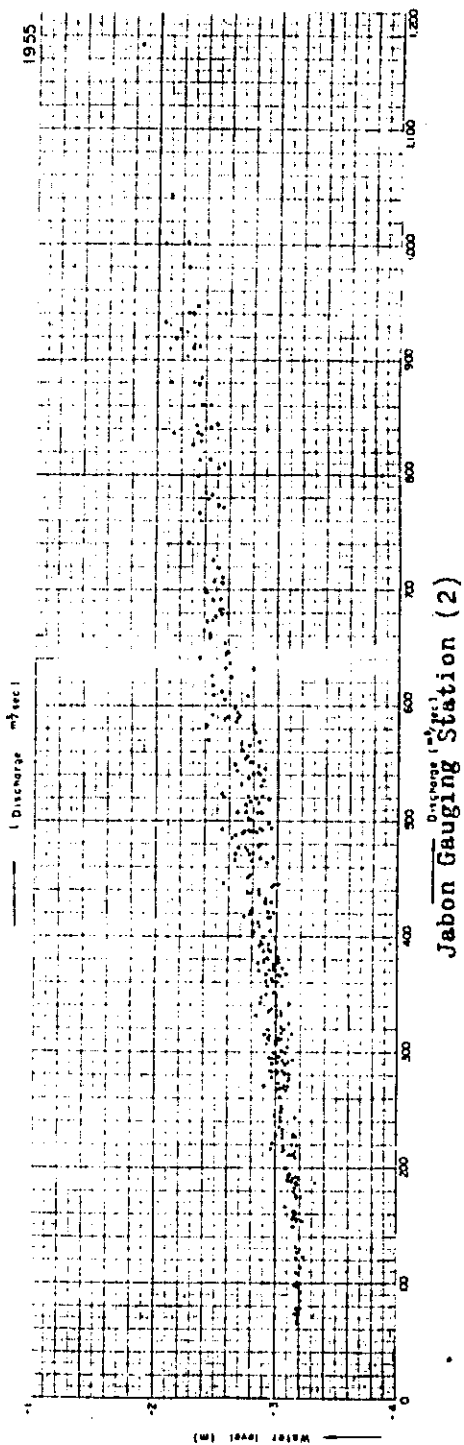
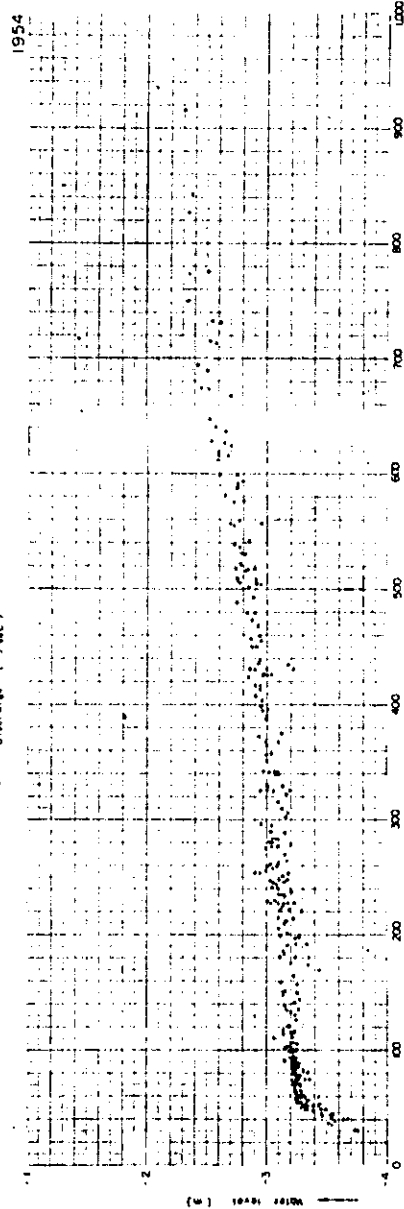
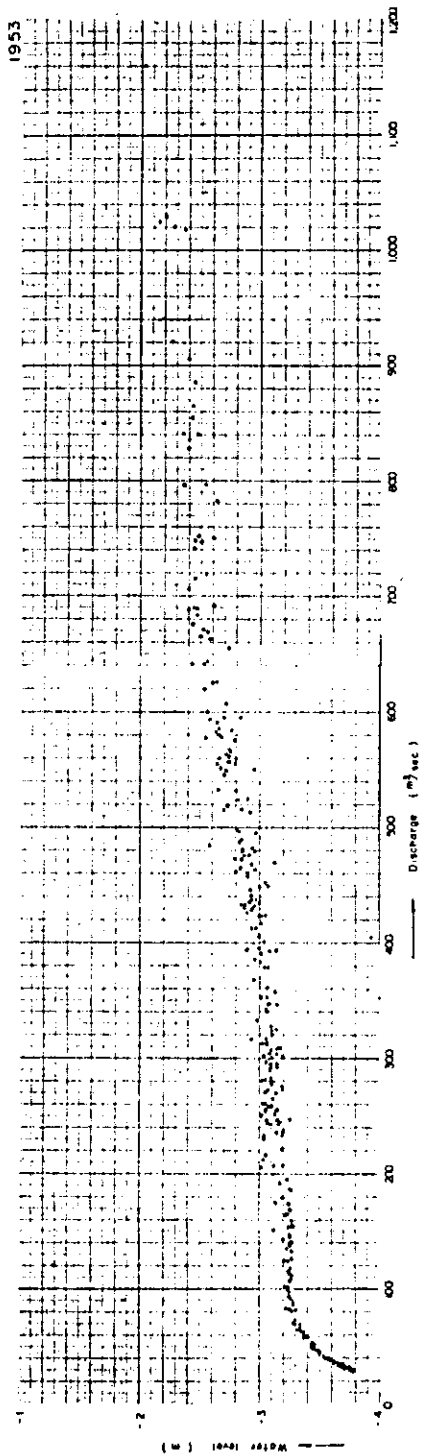




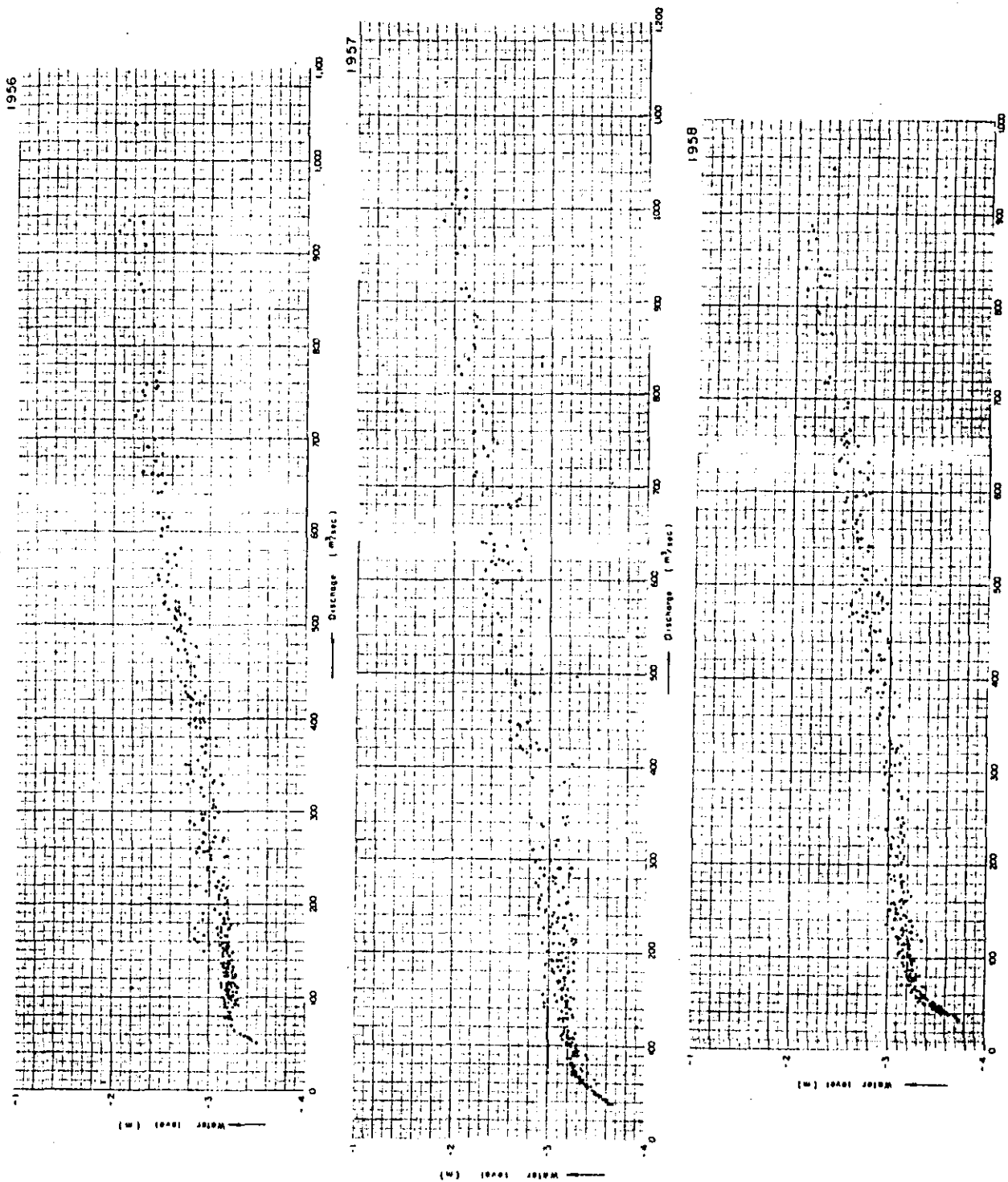
Kertosono Gauging Station (7)



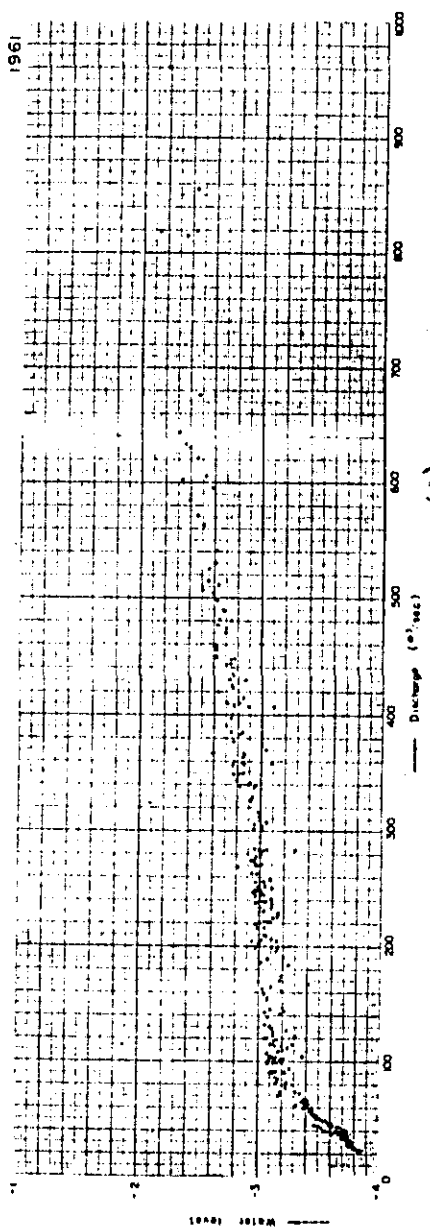
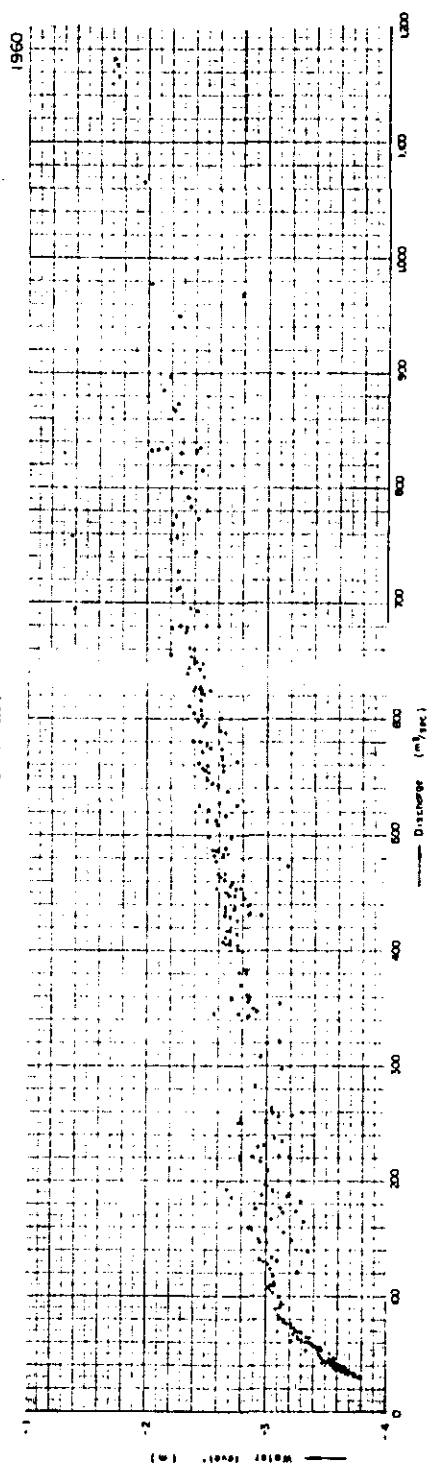
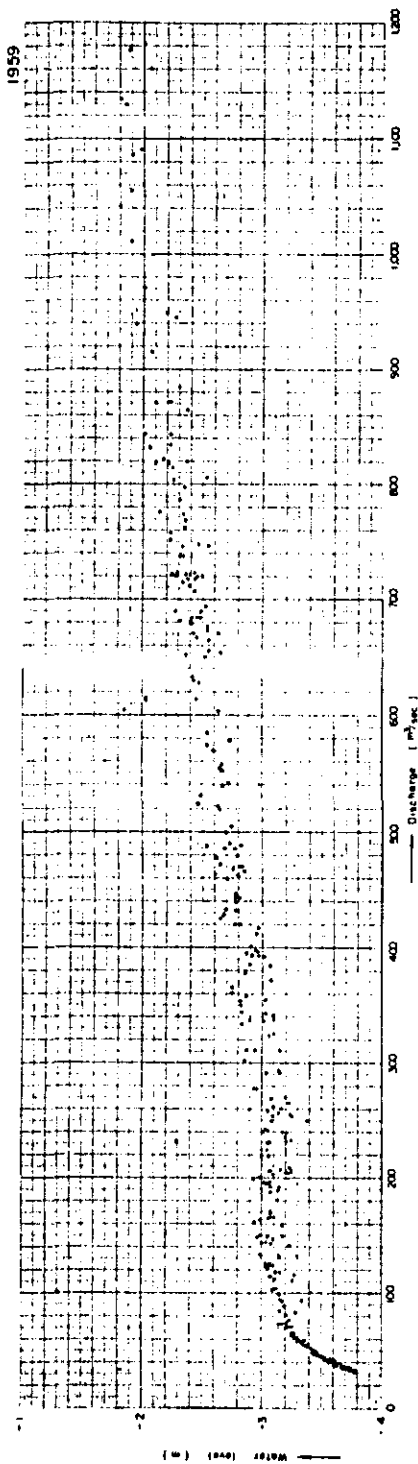
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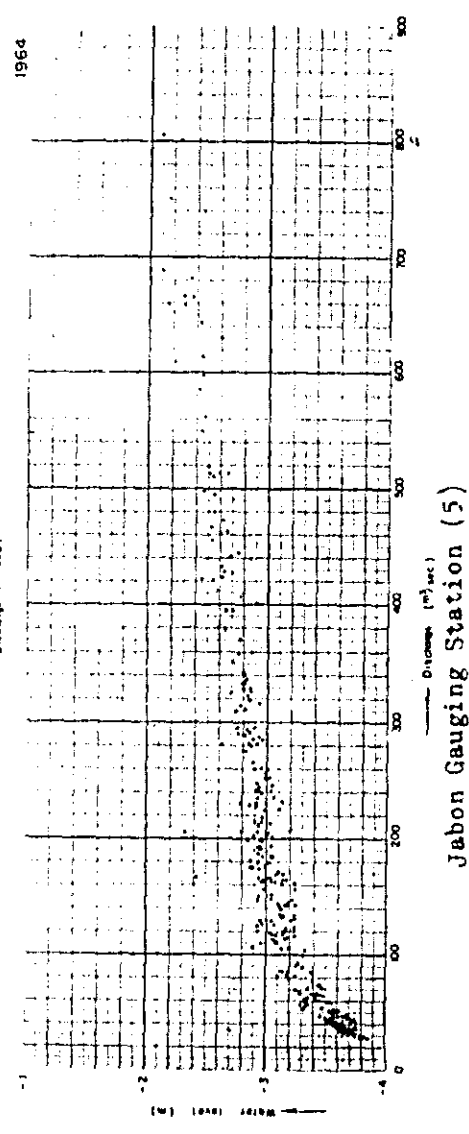
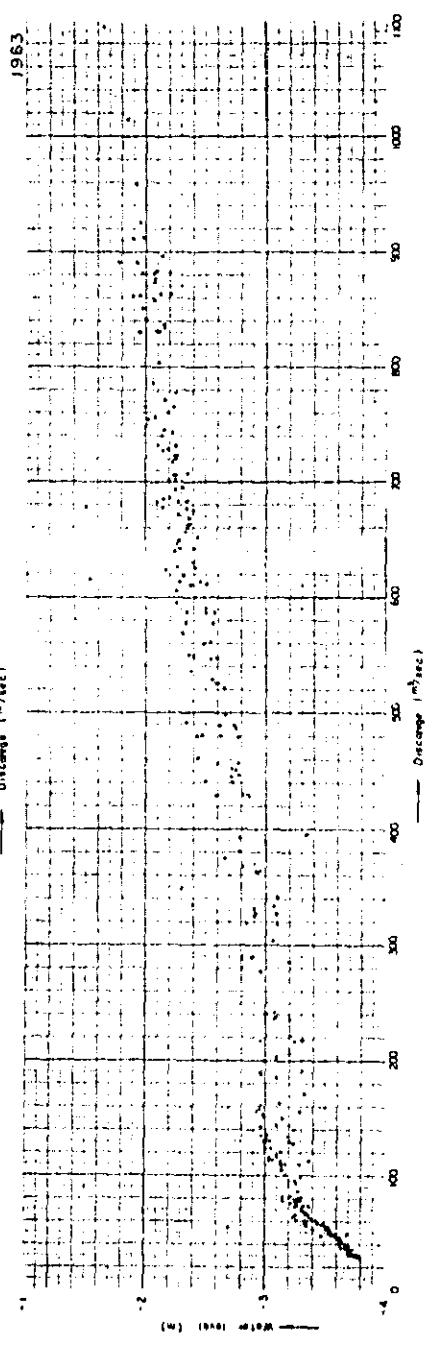
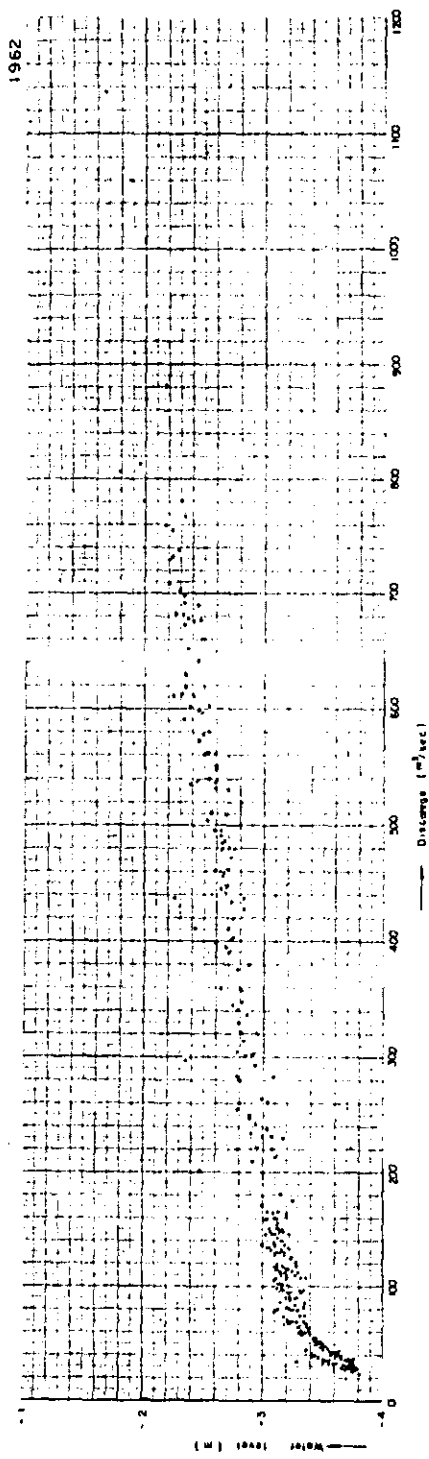
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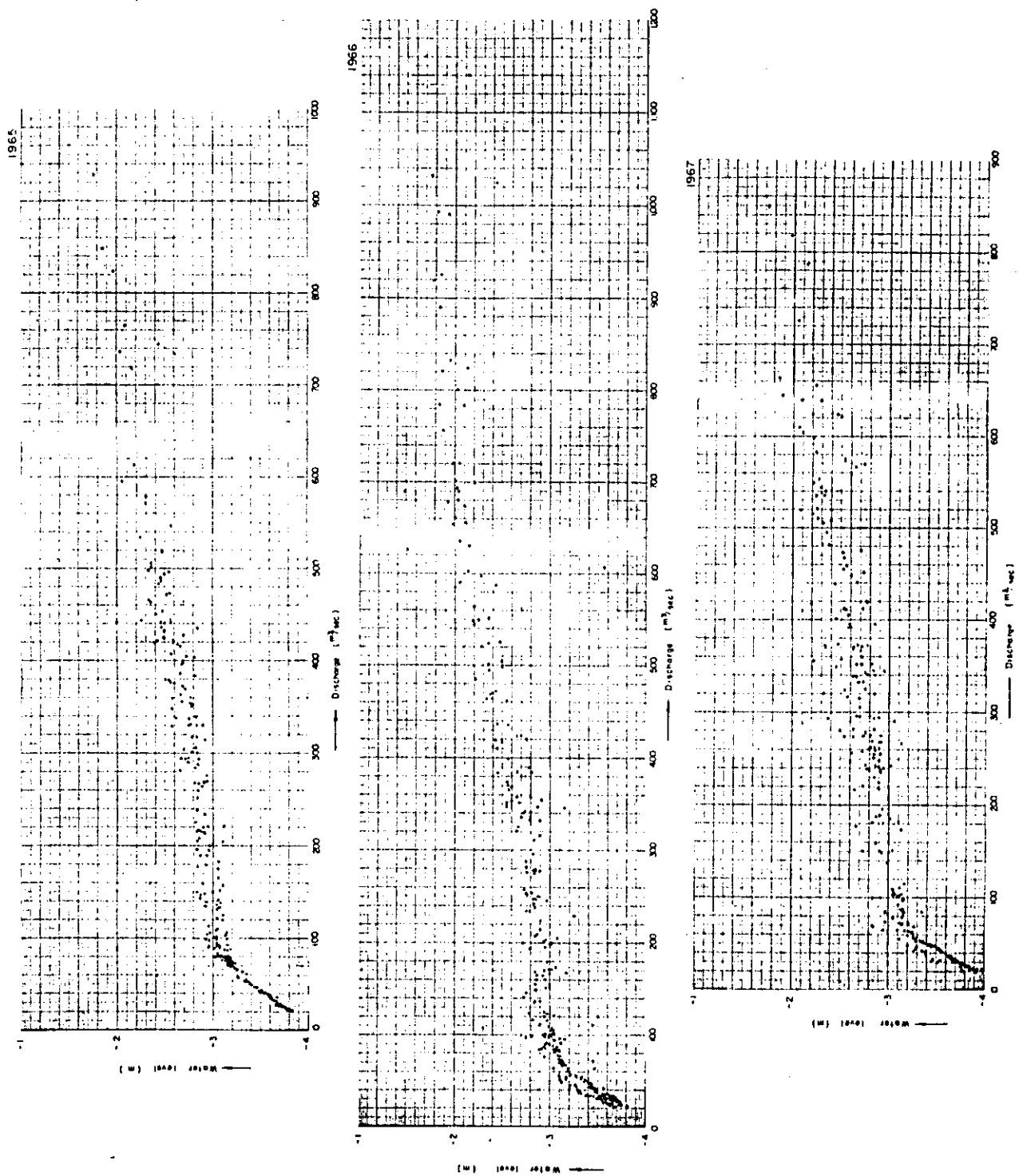
Jabon Gauging Station (3)



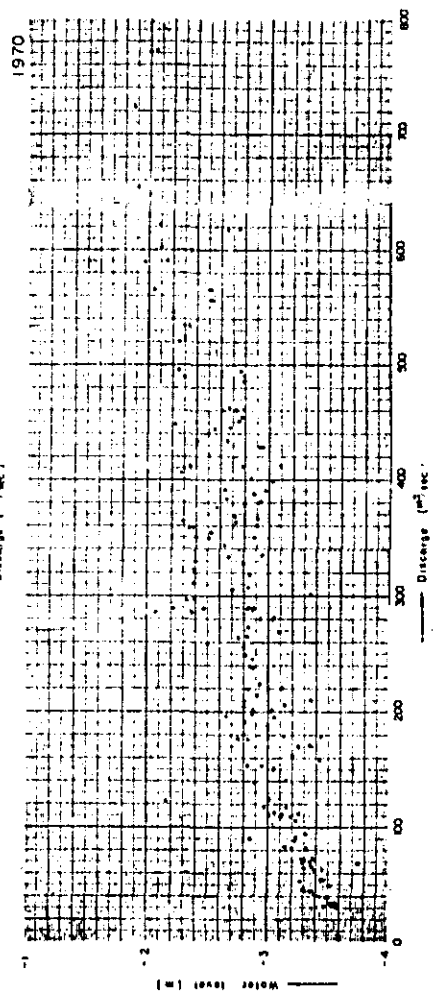
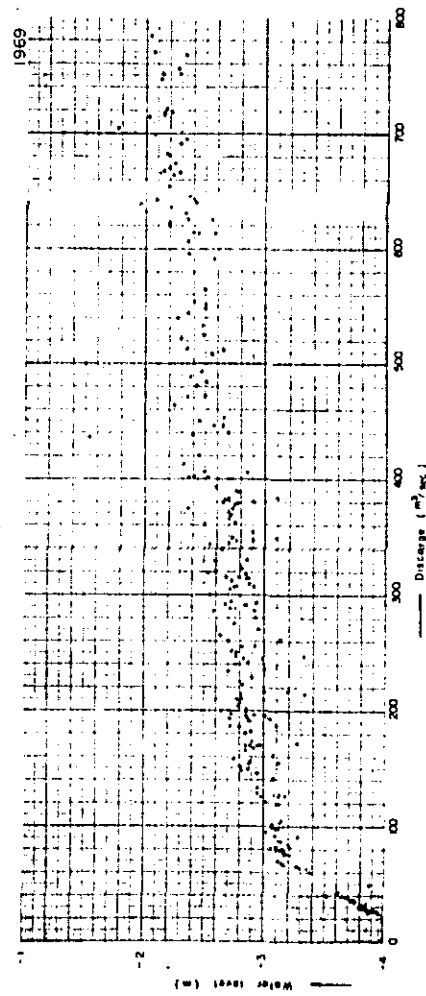
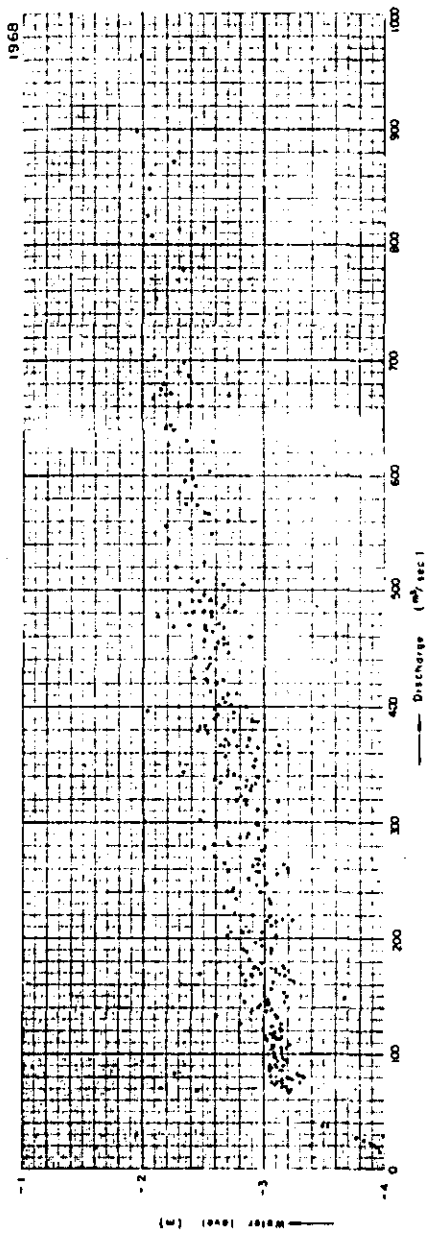
Jabon Gauging Station (4)



Jabon Gauging Station (5)

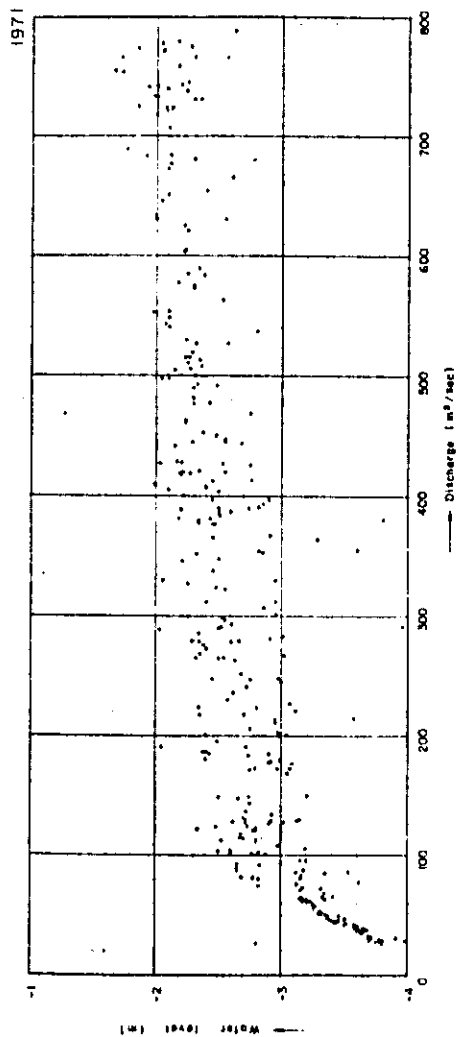


Jabon Gauging Station (6)



Jabon Gauging Station (7)





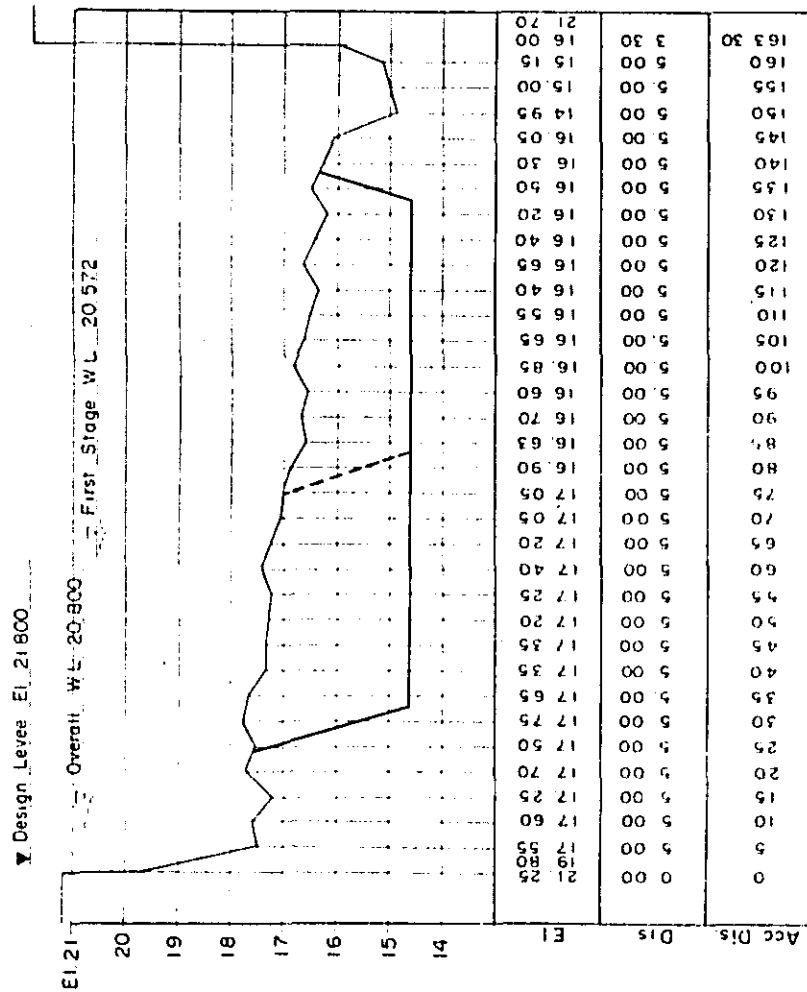
Jabon Gauging Station (8)

#### 6. River Cross Section of Brantas River

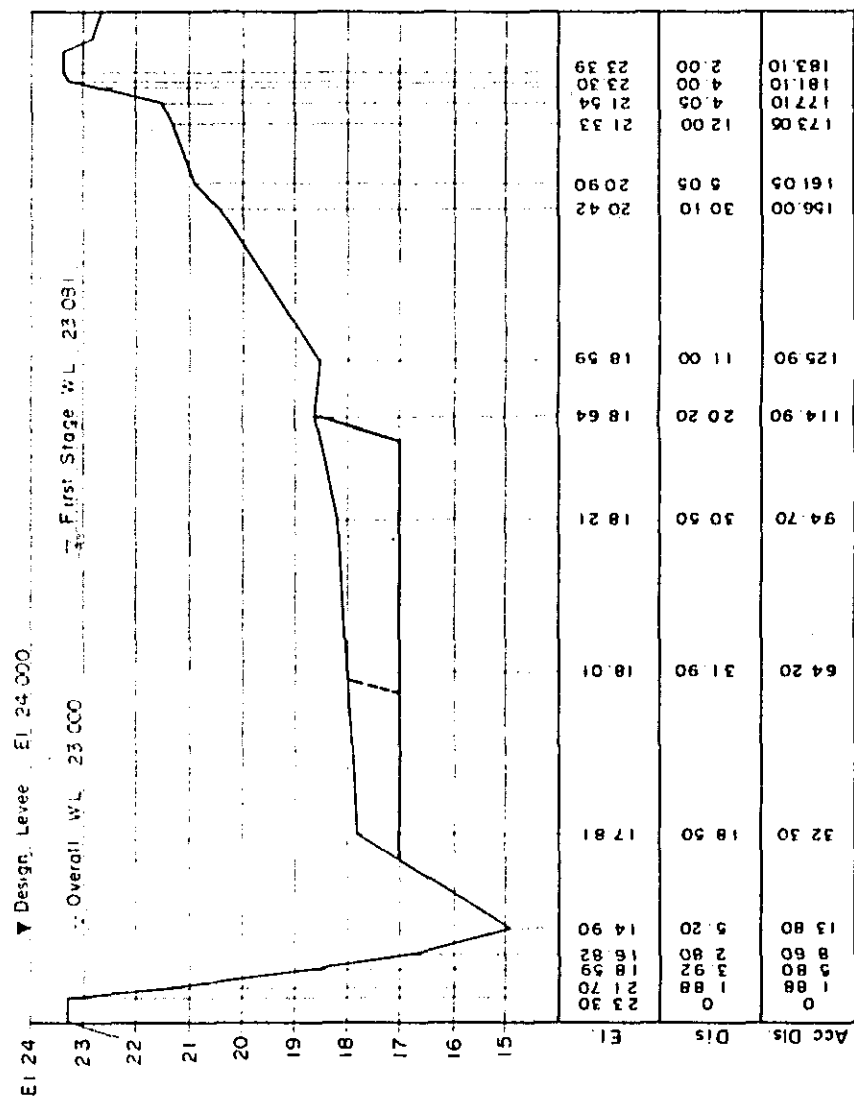
Compiled herein are the river cross sections surveyed in 1971 by the Government at an interval of five kilometers on the Brantas River stretch between the mouth of the Ngrowo River and Terusan gauge. The location of the river cross section is shown in Fig. I-6-16 in Chapter 6, PART-I, Supporting Report.

The design cross sections of low water channel for the first stage and the overall plans are as shown in the figure showing each river section. The thick line shows the design cross section of low water channel for the overall plan. The dashed line shows that of the first stage plan. The design flood water level and the design levee height for both plans are also shown in the figure.

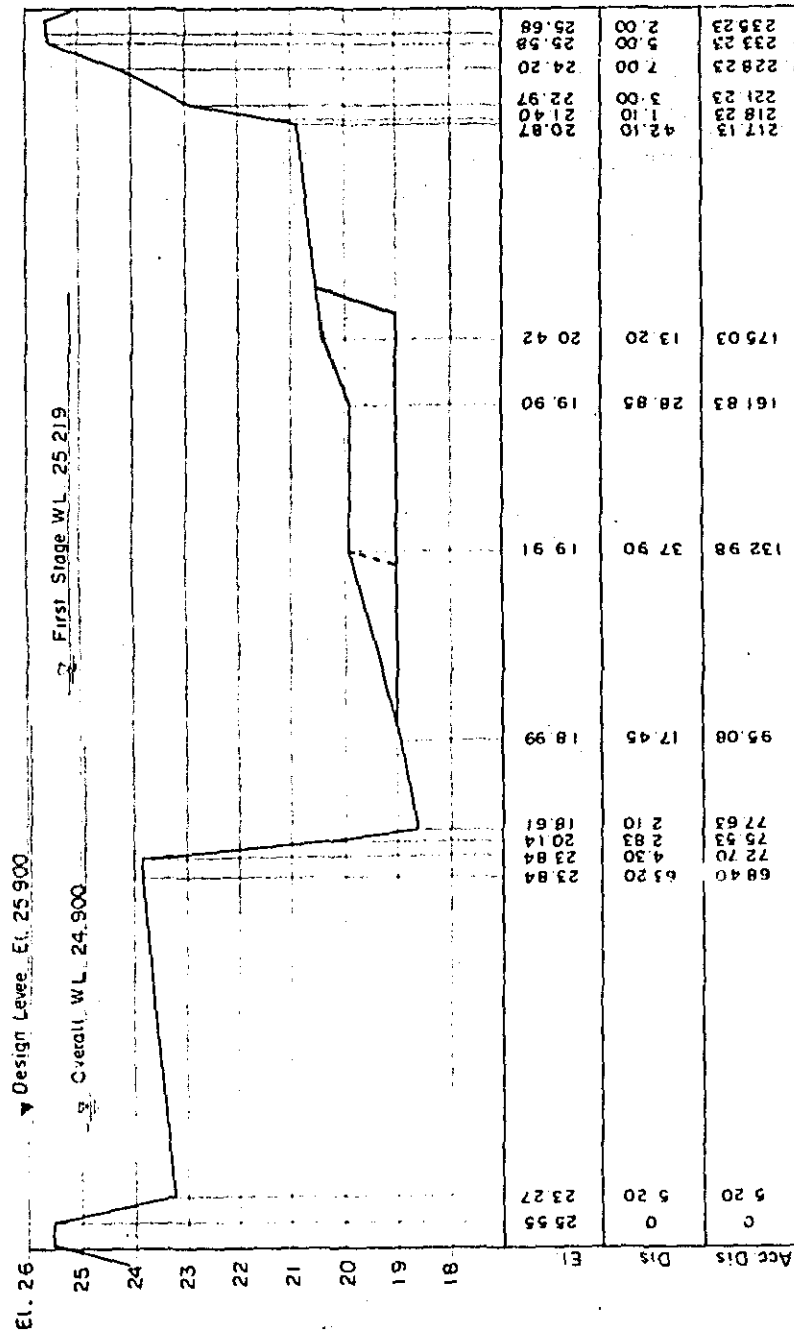
# Sec. 1



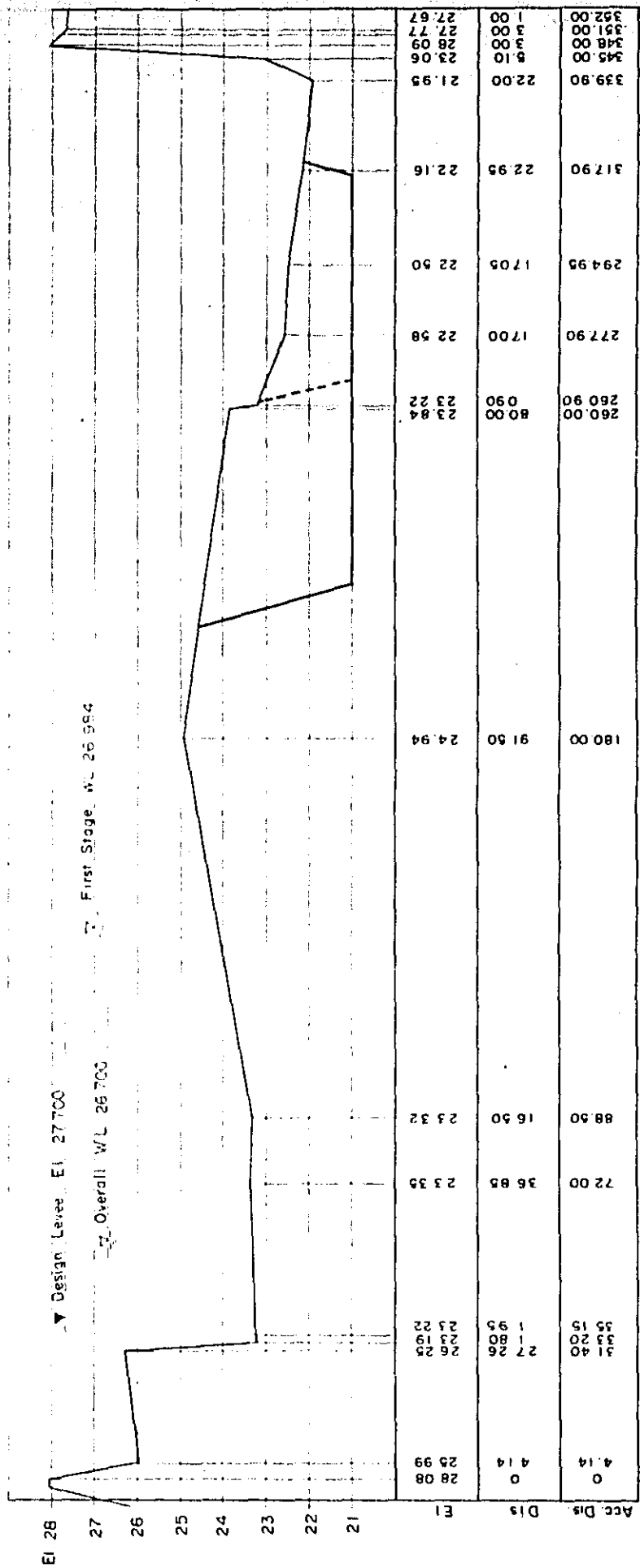
# Sec 2



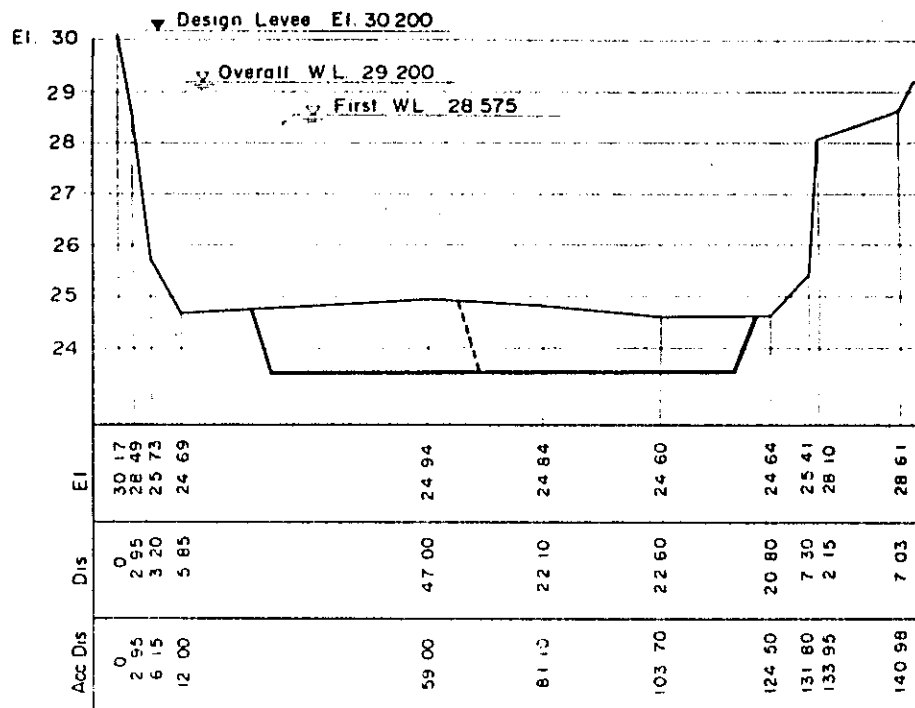
# Sec. 3



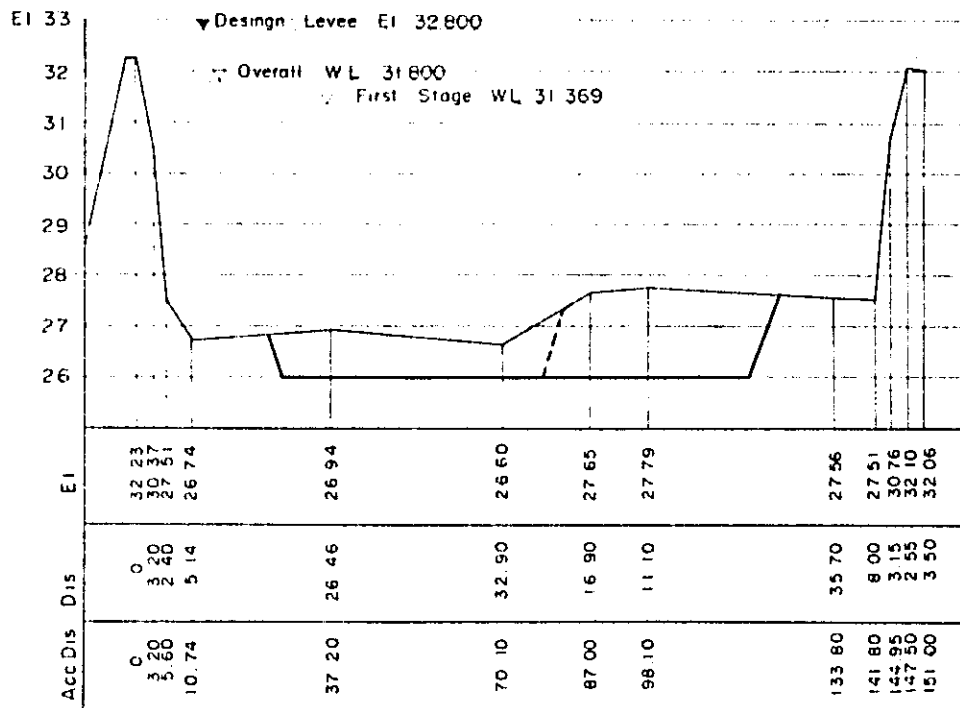
Sec 4



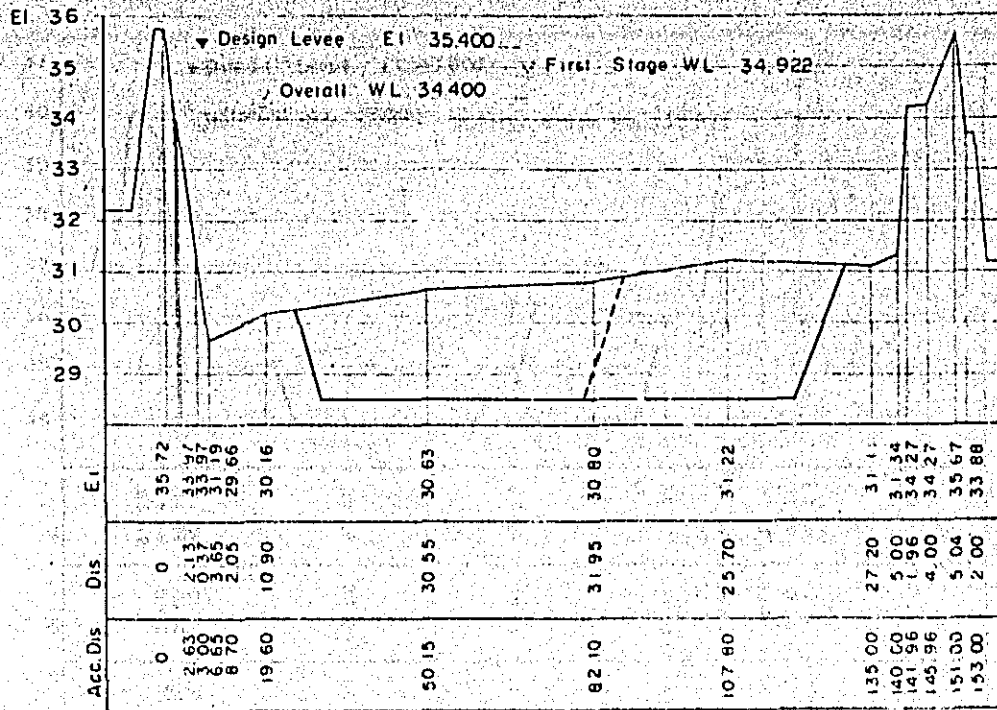
## Sec. 5



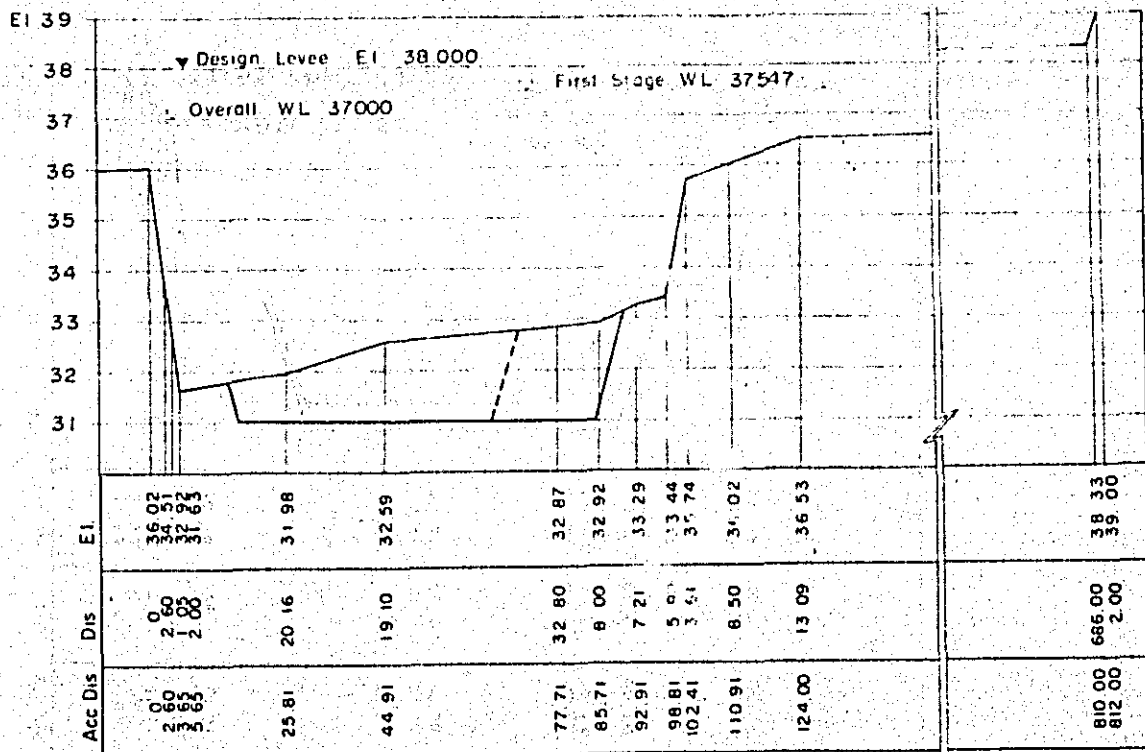
## Sec 6



# Sec. 7

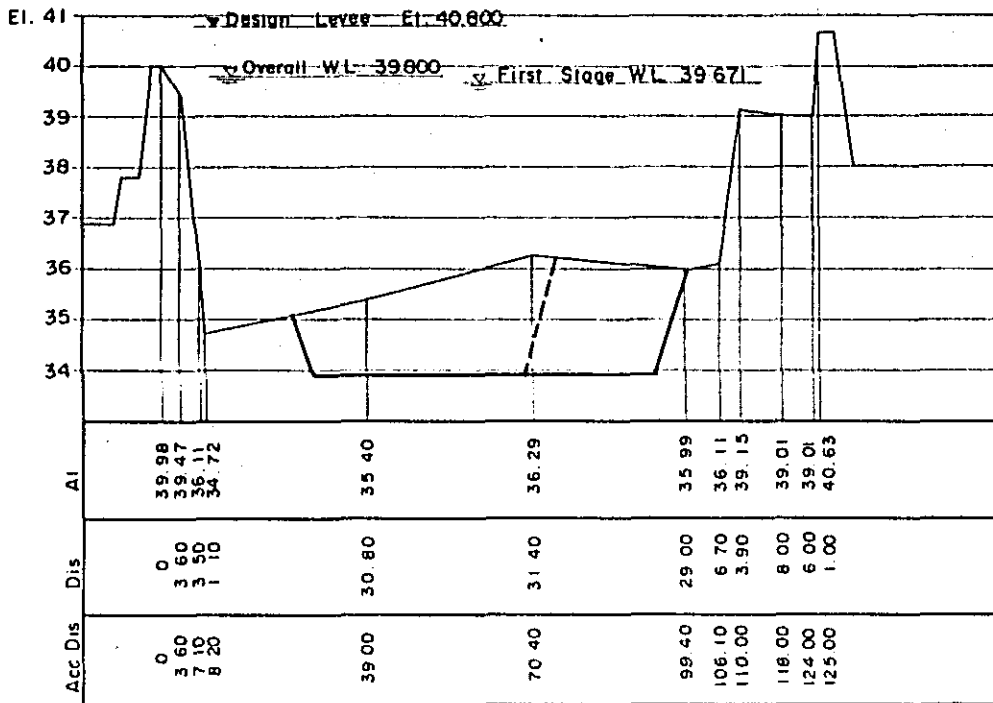


# Sec 8

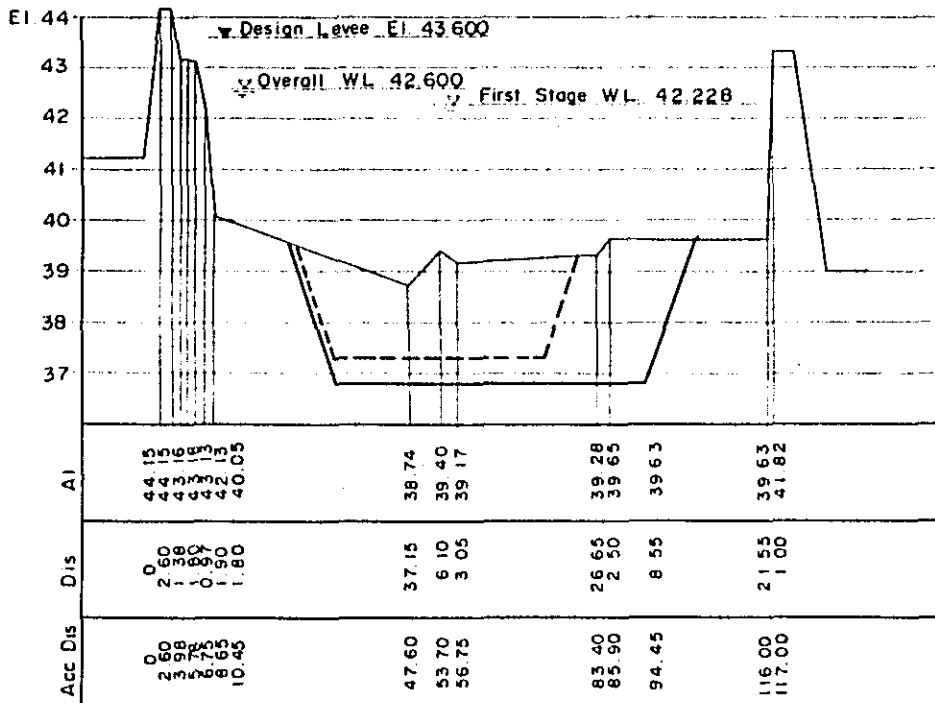




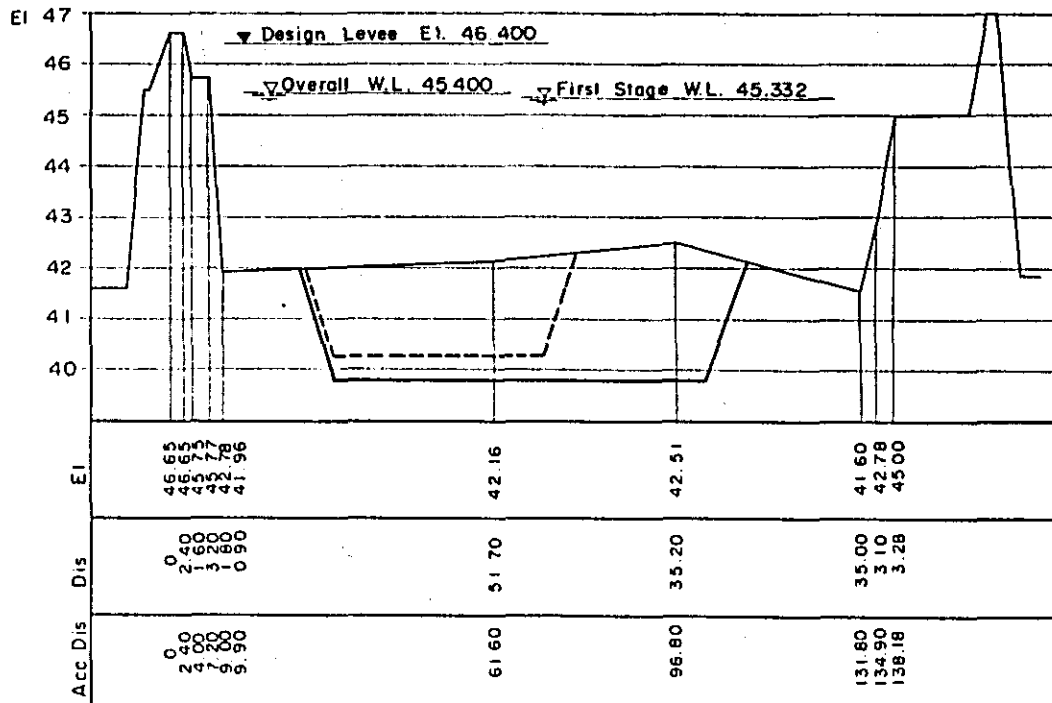
## Sec. 9



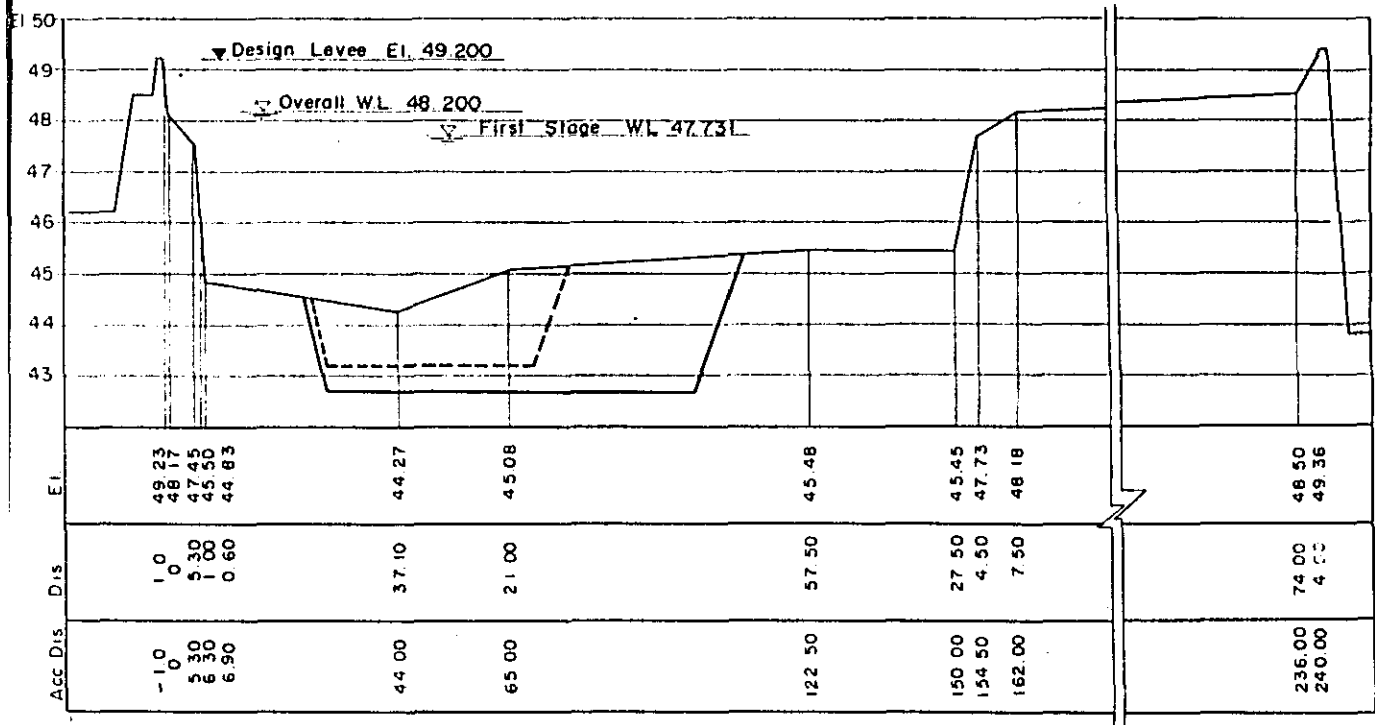
## Sec. 10



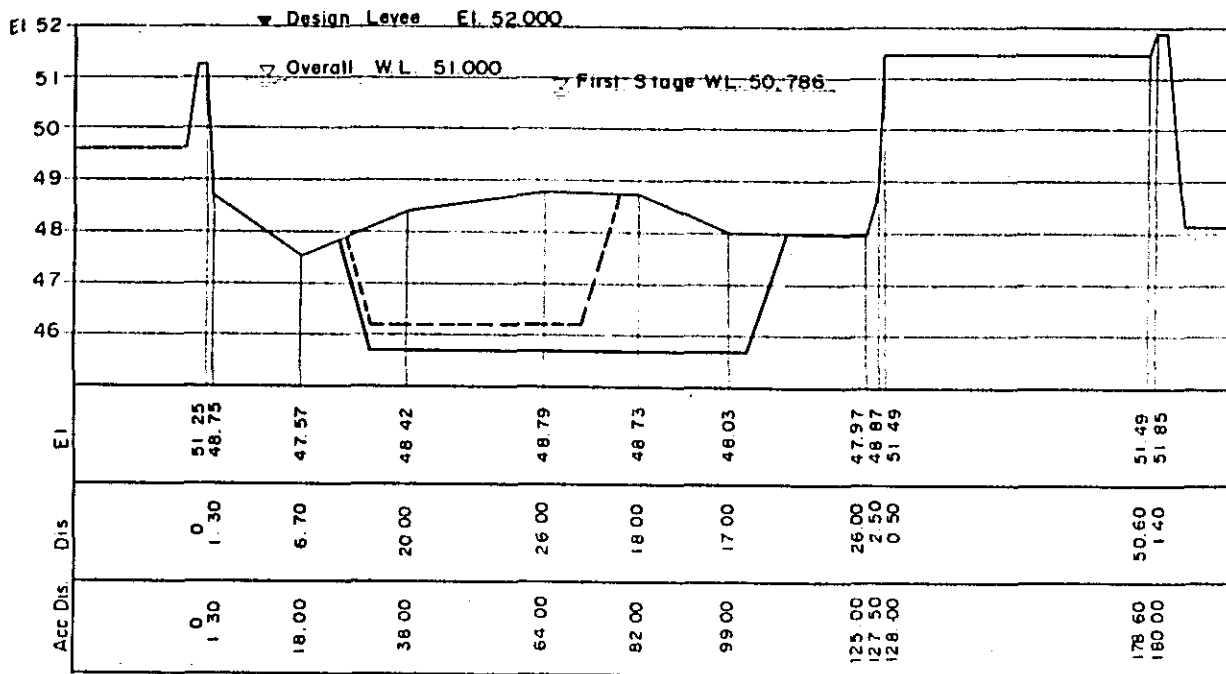
# Sec. 11



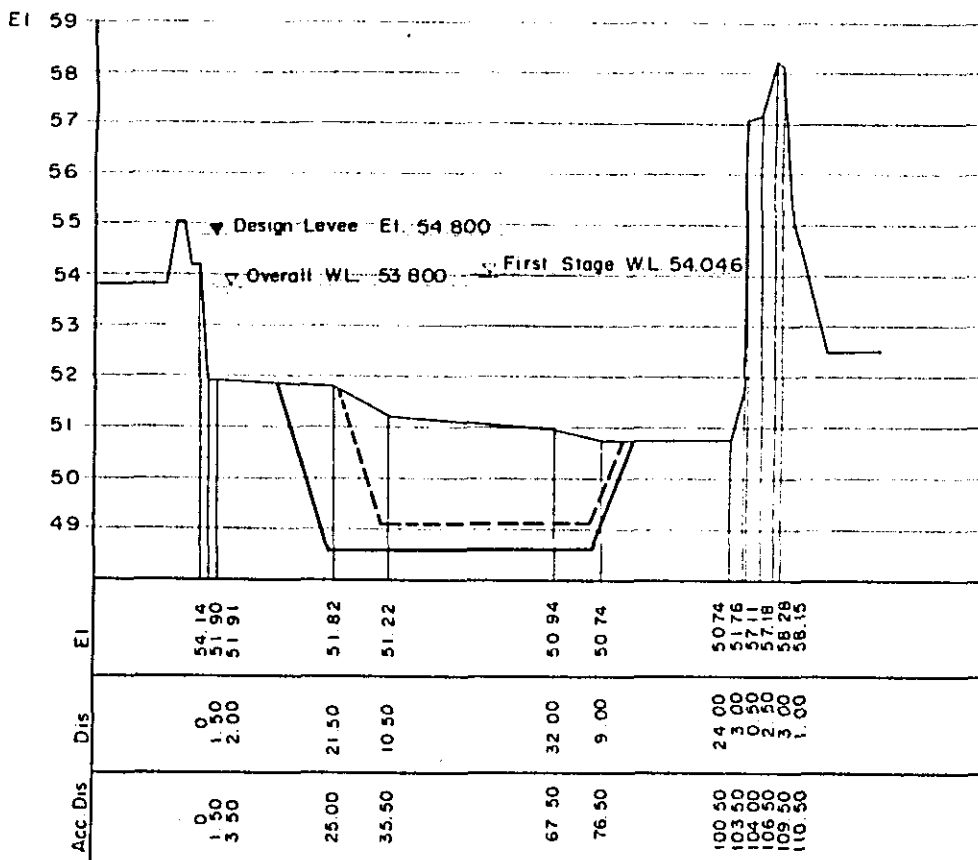
# Sec. 12



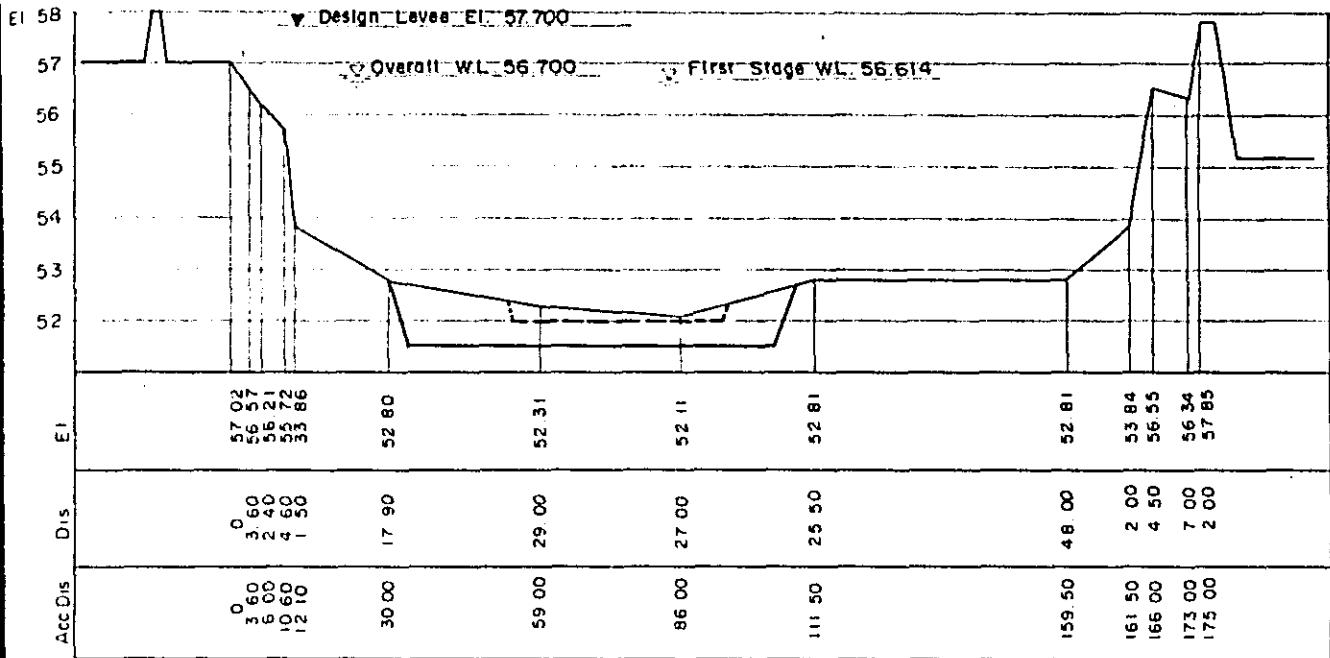
### Sec 13



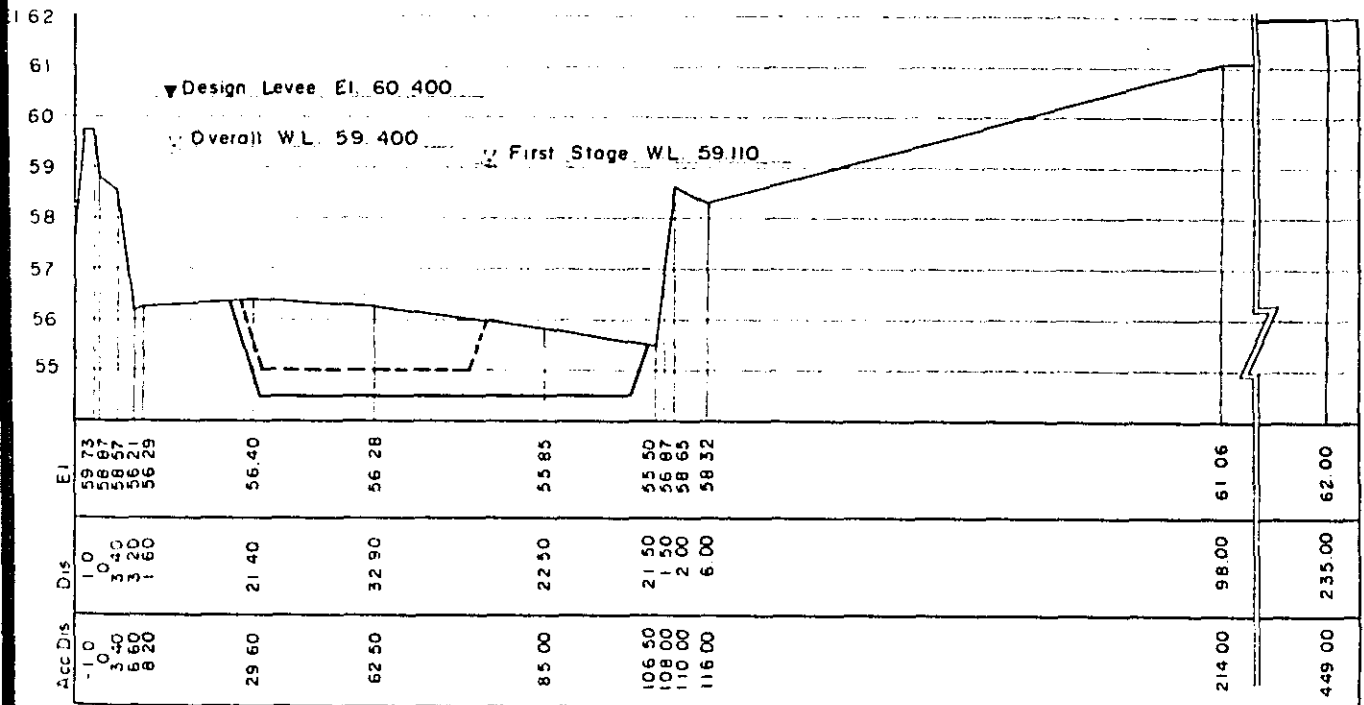
### Sec 14



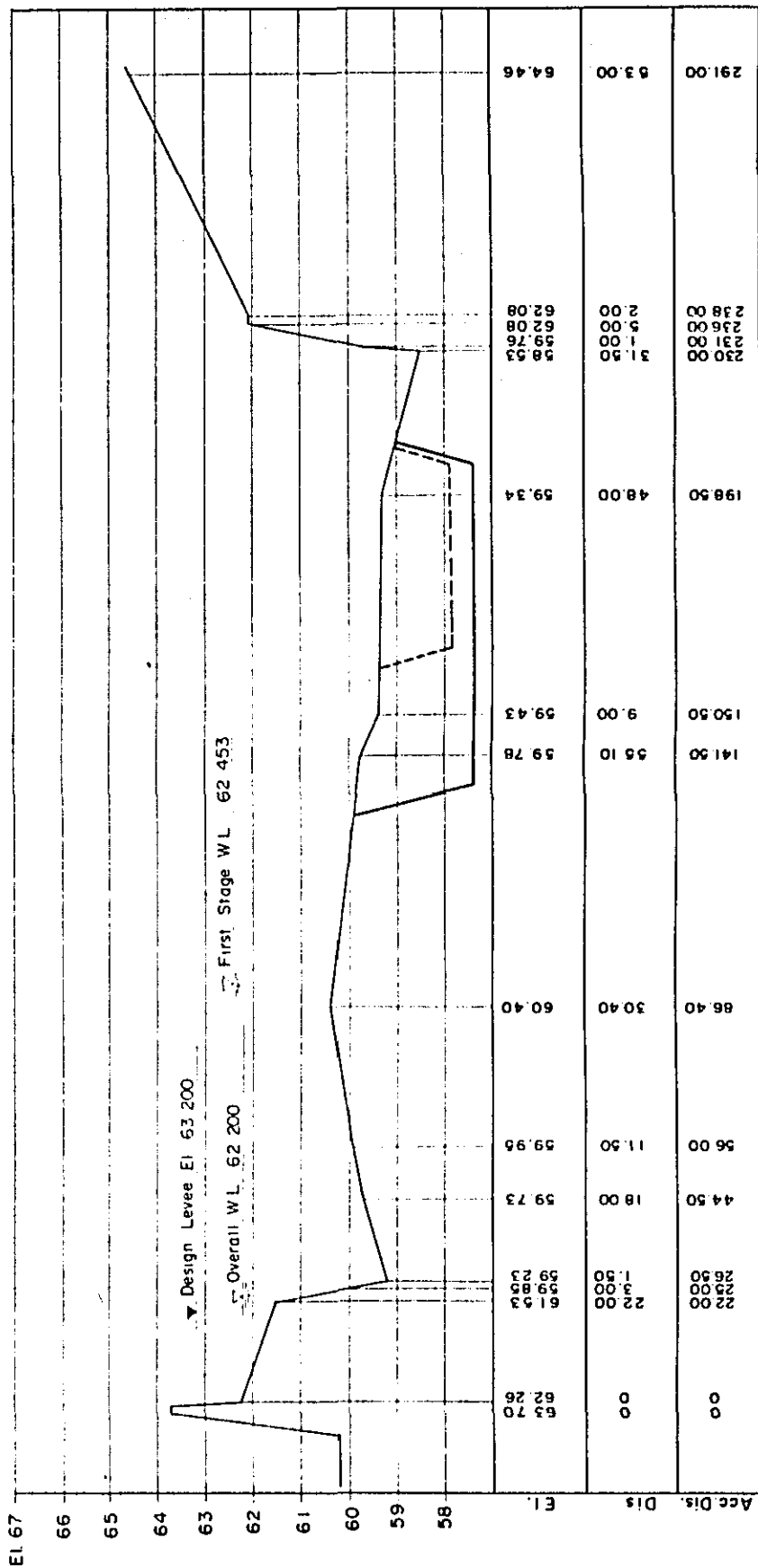
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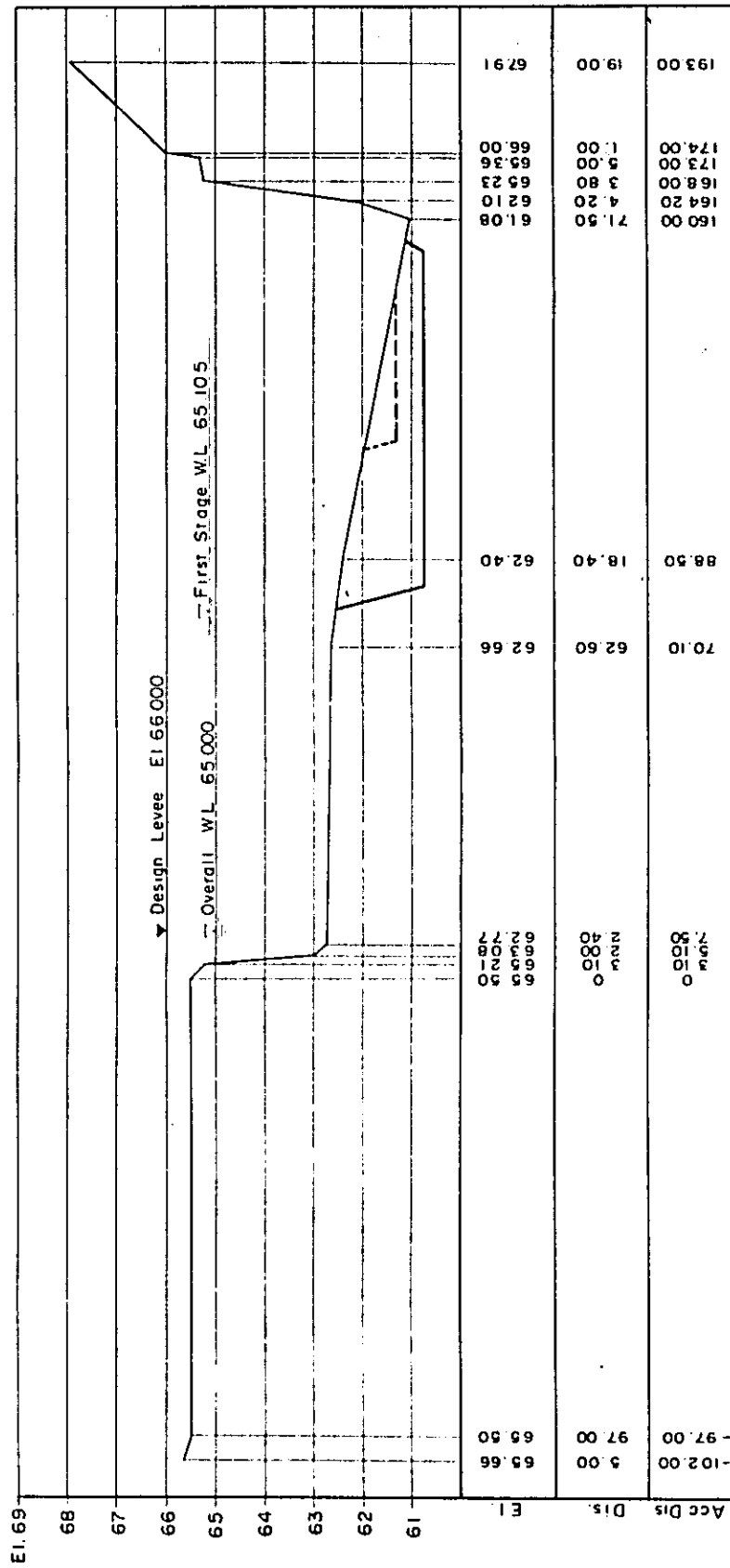
# Sec. 16



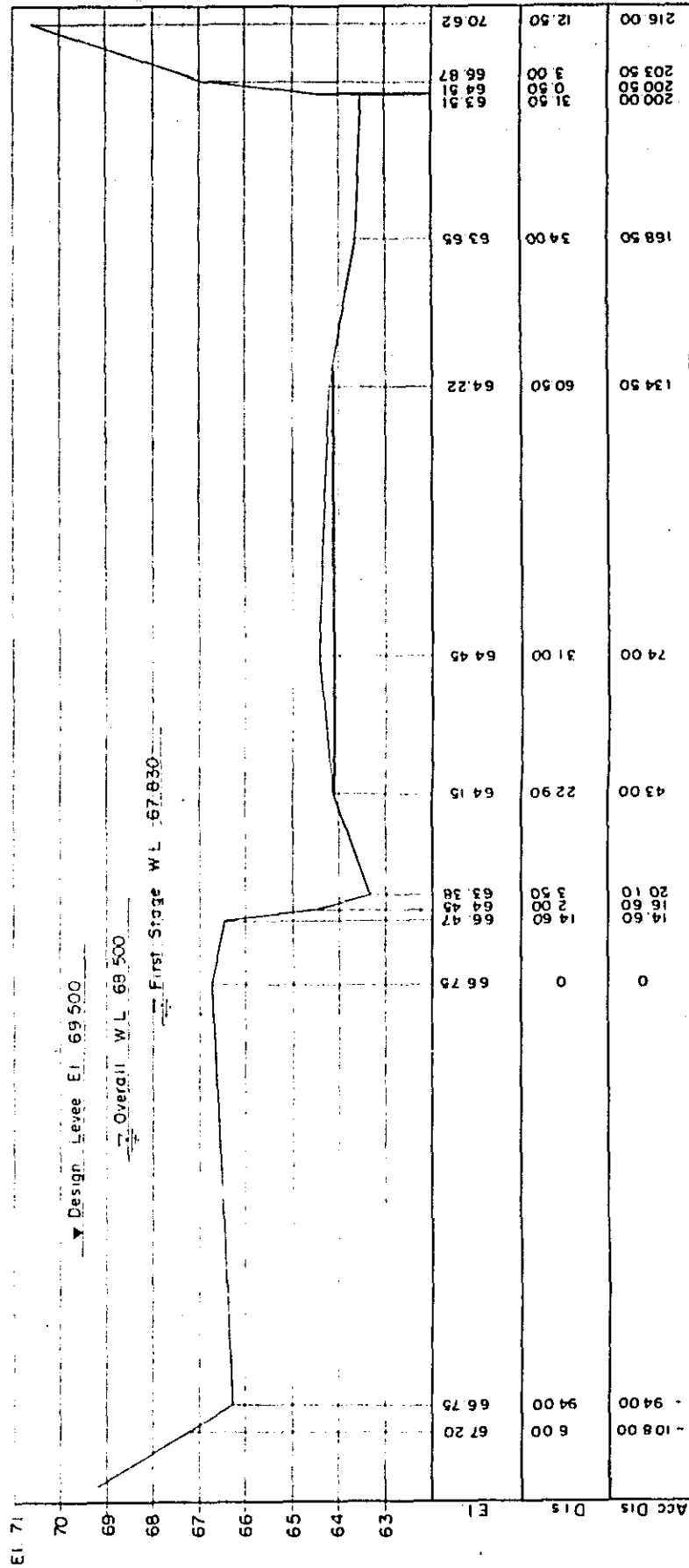
# Sec. 17



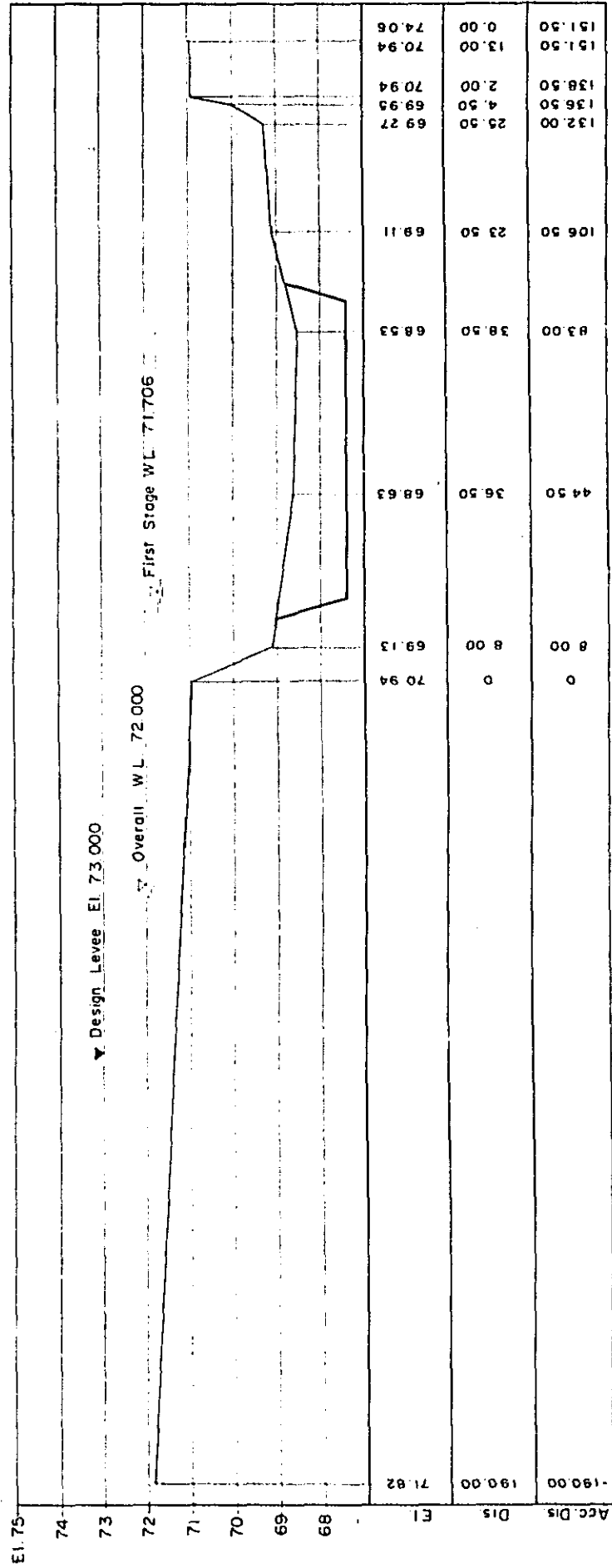
# Sec. 18



# Sec 19

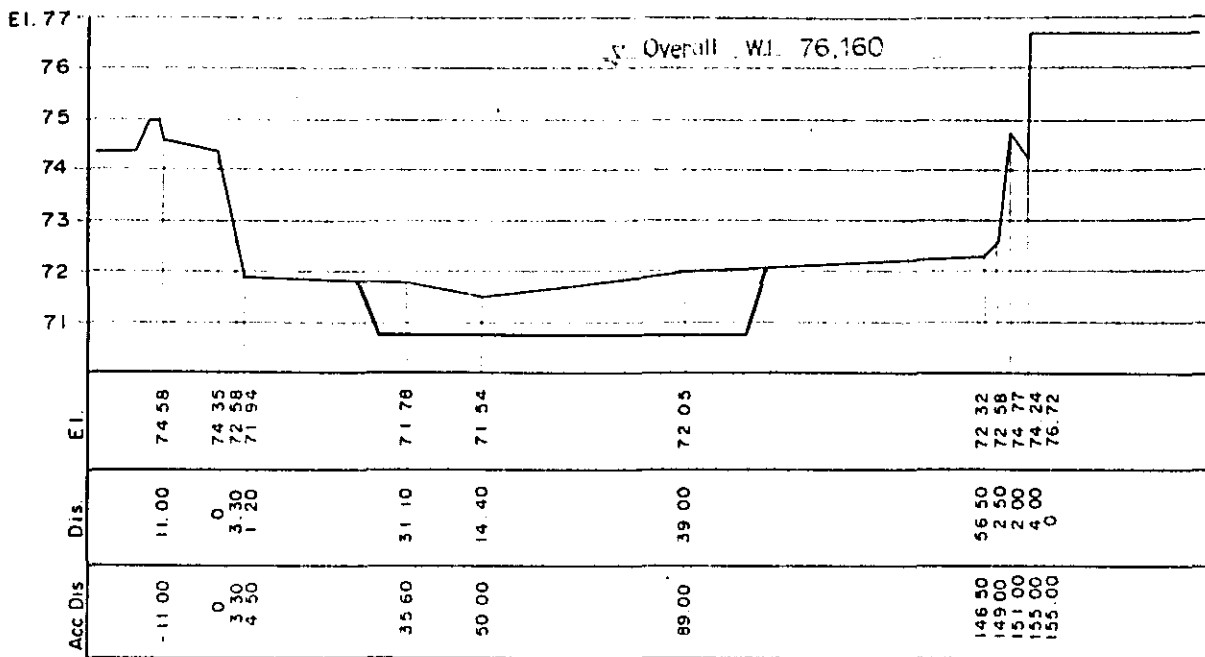


# Sec 20

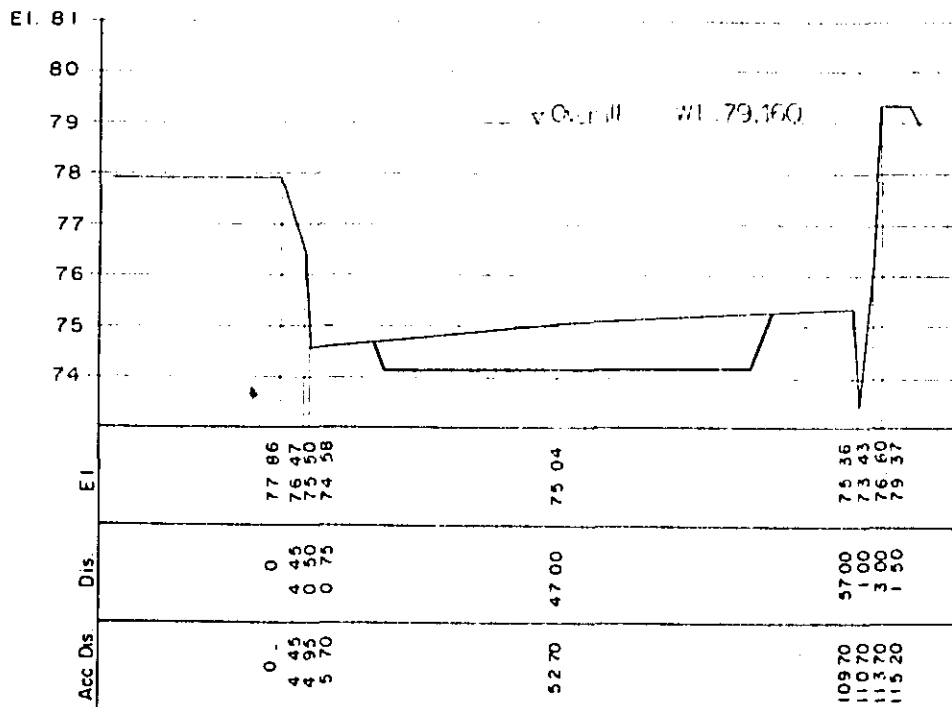




# Sec. 21



# Sec. 22



## 7. Stage-Discharge Curve of Each River Cross Sections

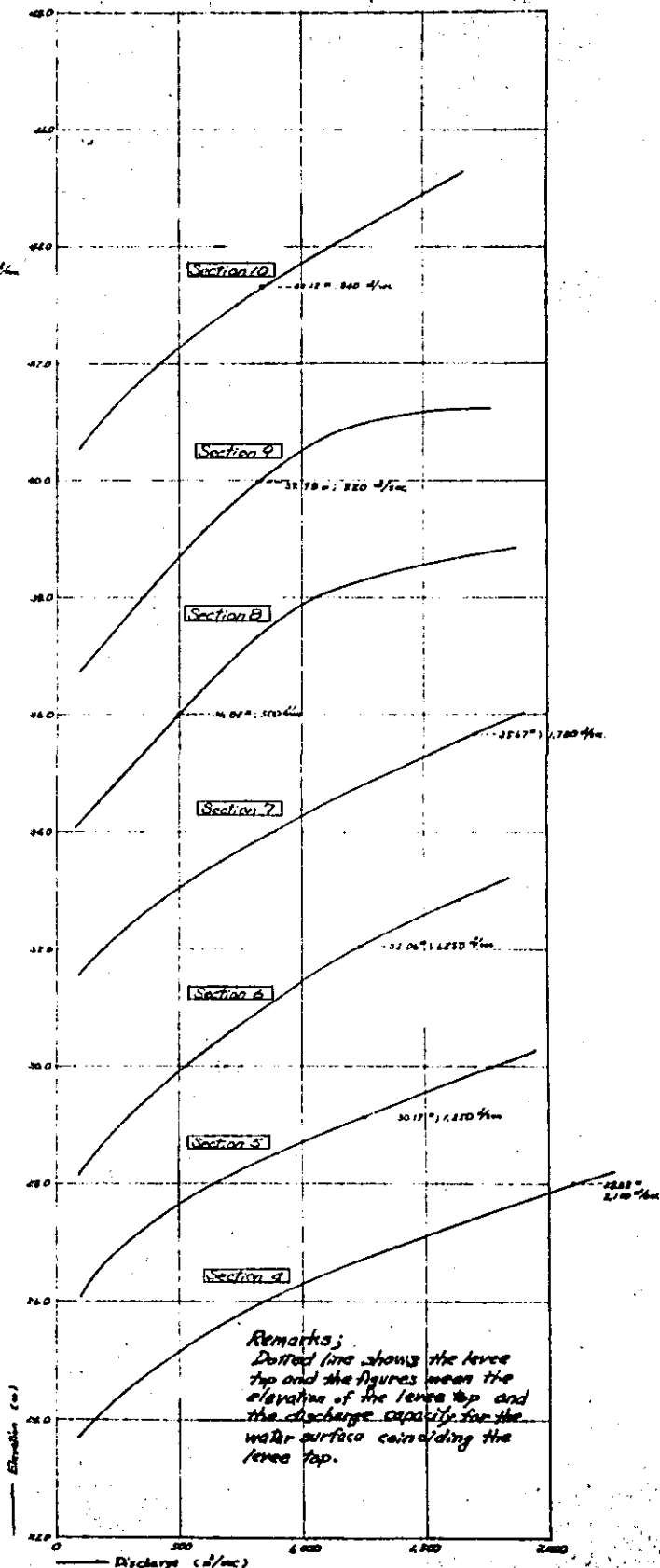
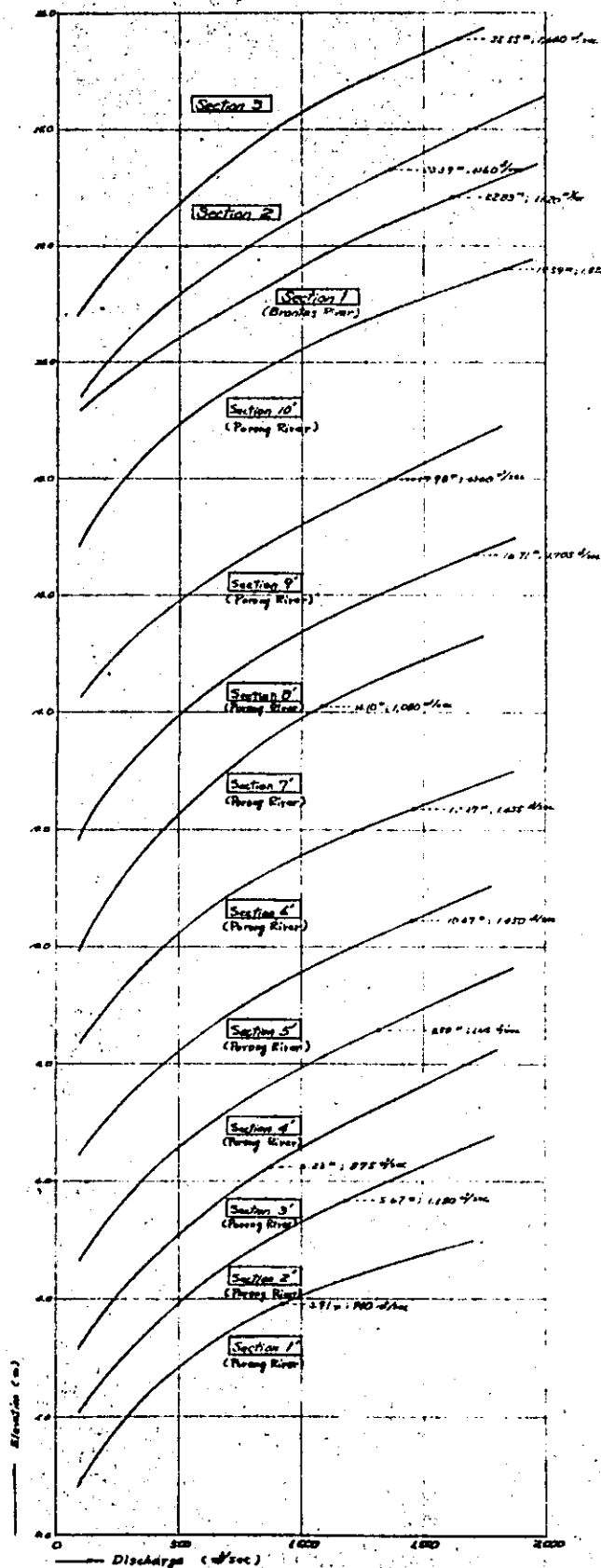
The compiled herein are stage-discharge curve showing the relation between the water level and the discharge in each river cross section as mentioned before. The stage-discharge curve is calculated by using the formula as follows.

$$-i + \frac{dH}{dx} + \frac{1.49^2}{2g} \times \frac{d}{dx} \left( \frac{1}{A^2} \right) + \frac{Q^2 n^2}{A^2 R^{4/3}} = 0$$

where:       $i$  ; Slope of water surface  
              $H$  ; Water depth (m)  
              $x$  ; River length between the estuary and the assigned cross section (m)  
              $Q$  ; Discharge (m<sup>3</sup>/sec)  
              $A$  ; Flow area for assigned discharge (m<sup>2</sup>)  
              $R$  ; Hydraulic mean depth (m)  
              $n$  ; Coefficient of roughness

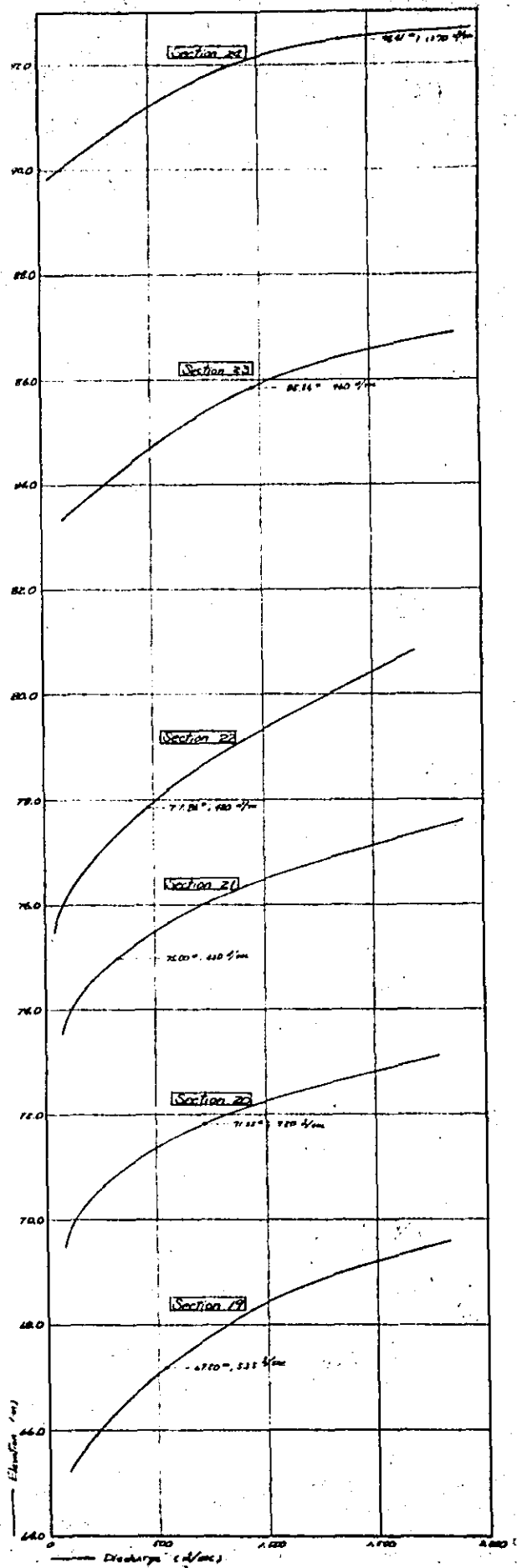
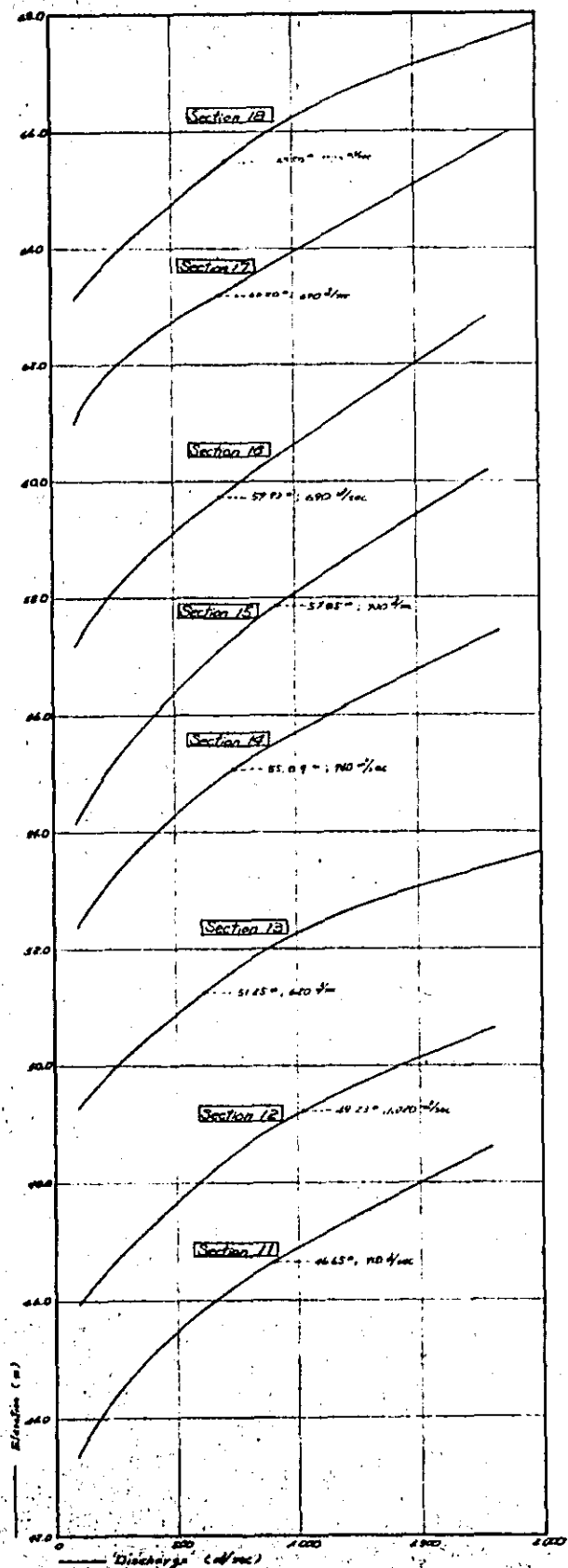
The discharges used are 100,500, 1,000 and 1,500 cubic meters per second respectively. The coefficient of roughness used is 0.025 in the Porong River and that in the Brantas River is as follows.

Section 1 - Section 9	$n = 0.030$
Section 10 - Section 16	$n = 0.032$
Section 17 - Section 24	$n = 0.035$



Remarks;  
Dotted line shows the levee  
top and the figures mean the  
elevation of the levee top and  
the discharge capacity for the  
water surface coinciding the  
levee top.

Relationship between Water Level and Discharge



Relationship between Water Level and Discharge

### 8. Stage-Discharge Curve at the Water Gauges on the Ngrowo Basin

The compiled herein are stage-discharge curves showing the relation between the water level and the discharge at 18 gauge sites on the Ngrowo River. The stage-discharge curves are calculated by using the Manning's formula as follow.

$$v = \frac{1}{n} i^{\frac{1}{2}} R^{\frac{2}{3}} \quad \text{-----} \quad (1)$$

$$Q = Av \quad \text{-----} \quad (2)$$

where :  $i$  Slope of water surface

$v$ ; Flow velocity (m/sec)

$A$ ; Flow area (m<sup>2</sup>)

$Q$ ; Discharge (m<sup>3</sup>/sec)

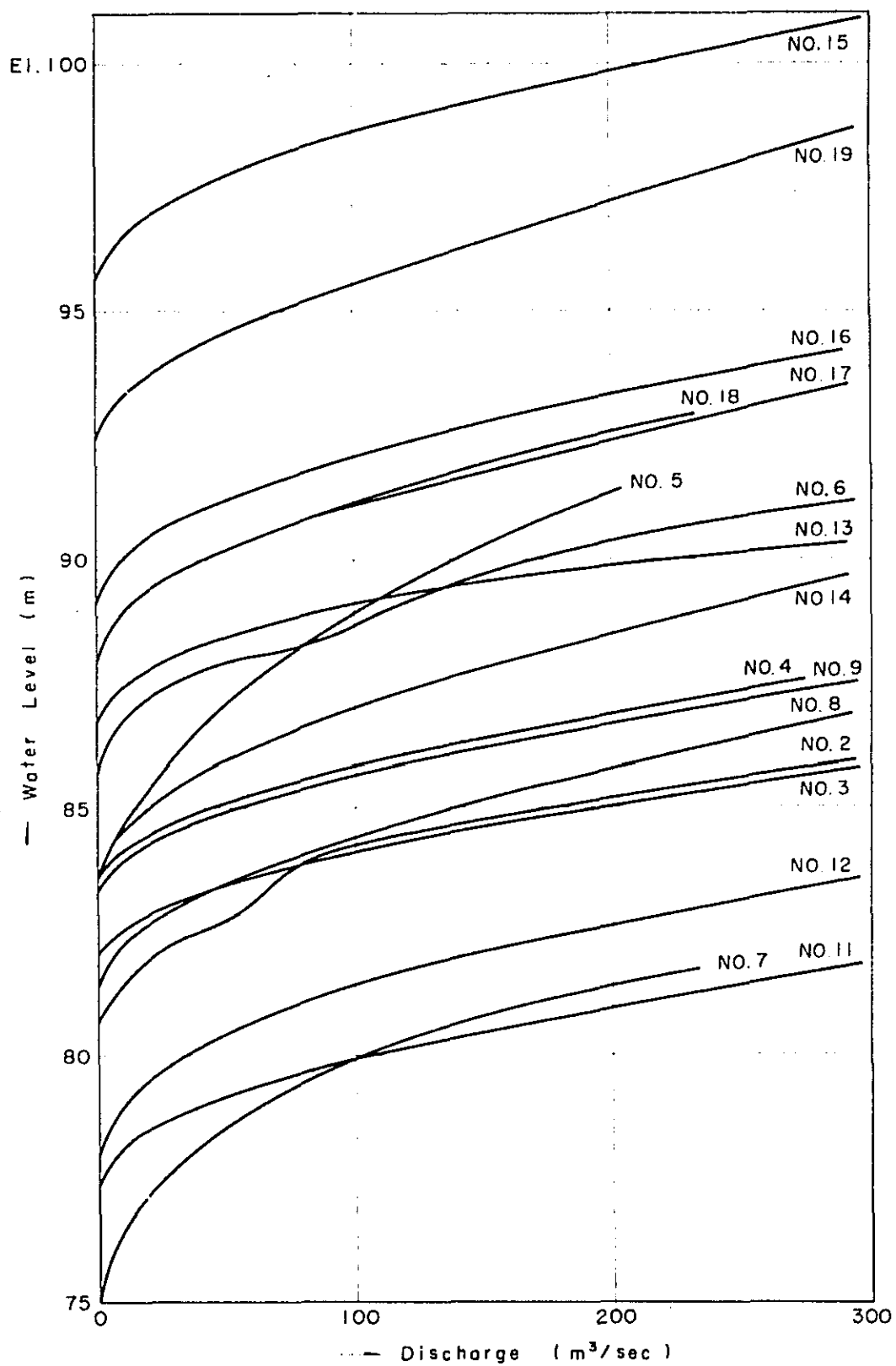
$R$ ; Hydraulic mean depth (m)

$n$ ; Coefficient of roughness

The water surface of each site is assumed to be the same as the river bed slope at the gauge. The water surface and the coefficient of roughness of each gauge site are listed as follows.

Gauge No.		River slope	Roughness coefficient
2	Bajul	0.0011	0.035
3	Babakan	0.0006	0.035
4	Klantur	0.0023	0.035
5	Wadu	0.0014	0.035
6	Song	0.0095	0.035
7	Tulungagurg	0.0001	0.030
8	Kalituri	0.0004	0.030
9	Boyalangu dam	0.0023	0.030
10	Campurdarat	0.00045	0.030

11	Kendal (Prit Raya)	0.00044	0.030
12	Kendal dam	0.00018	0.030
13	Keboireng	0.0068	0.035
14	Karangtuwo	0.001	0.035
15	Tawing	0.001	0.035
16	Bendo (Parit Raya)	0.0003	0.030
17	Bendo (Upper Ngasinan)	0.00045	0.030
18	Bendo (Lower Ngasinan)	0.00032	0.030
19	Gondang	0.0012	0.035



Relationship between Water Level and Discharge

#### 9. Cross Sections of Existing Irrigation Canal

The compiled herein are the cross sections of the existing irrigation canals surveyed in 1972 by this survey team. The survey areas are the Warujayeng-Kertosono, Turi-Tunggorono and Jatimlerek-Bunder irrigation area, respectively. The location of canal sections in the Warujayeng-Kertosono irrigation area is shown in Fig. 9-1, and that in the Turi-Tunggorono, Jatimlerek and Bunder irrigation areas is shown in Fig. 9-2.



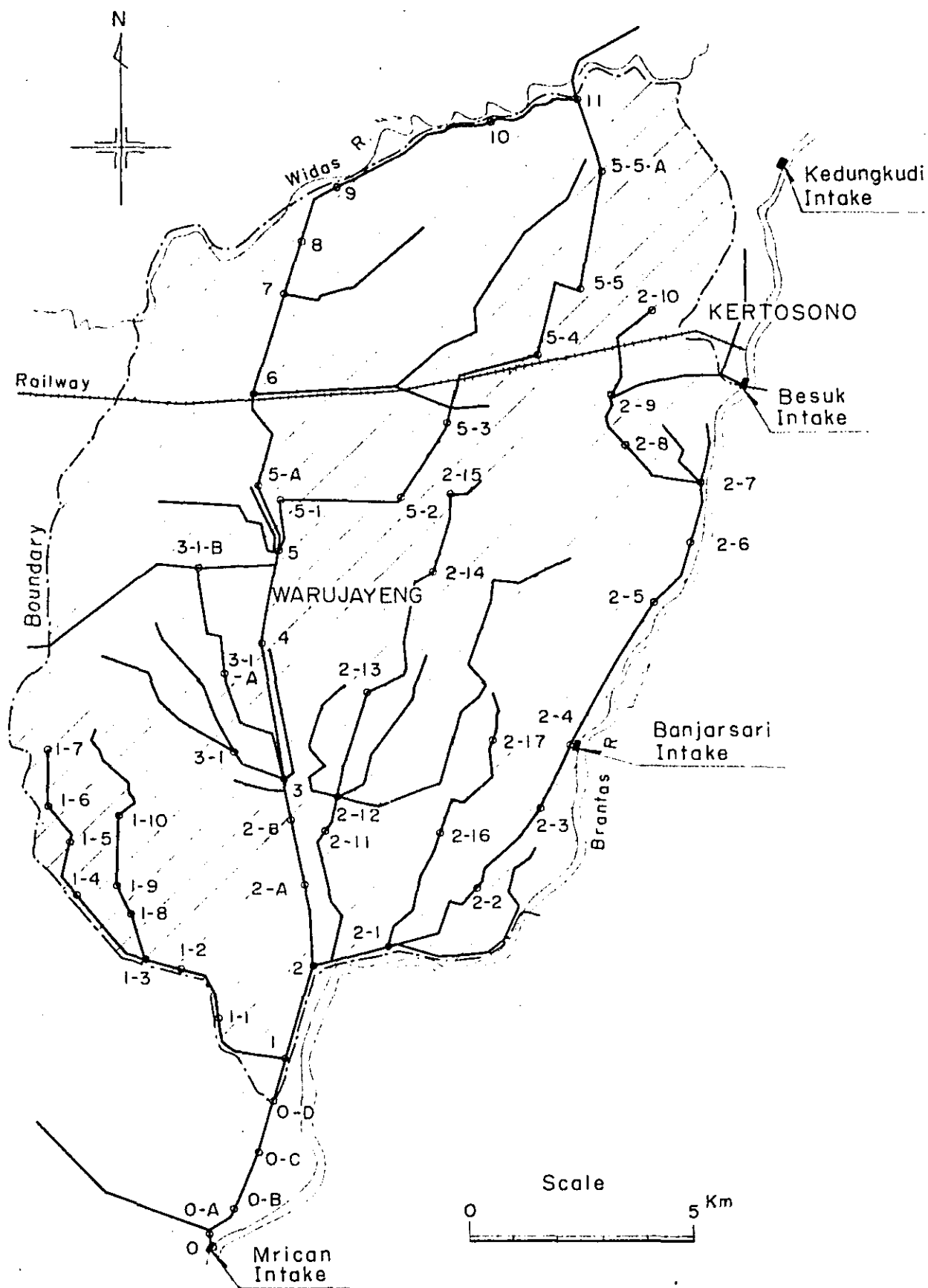
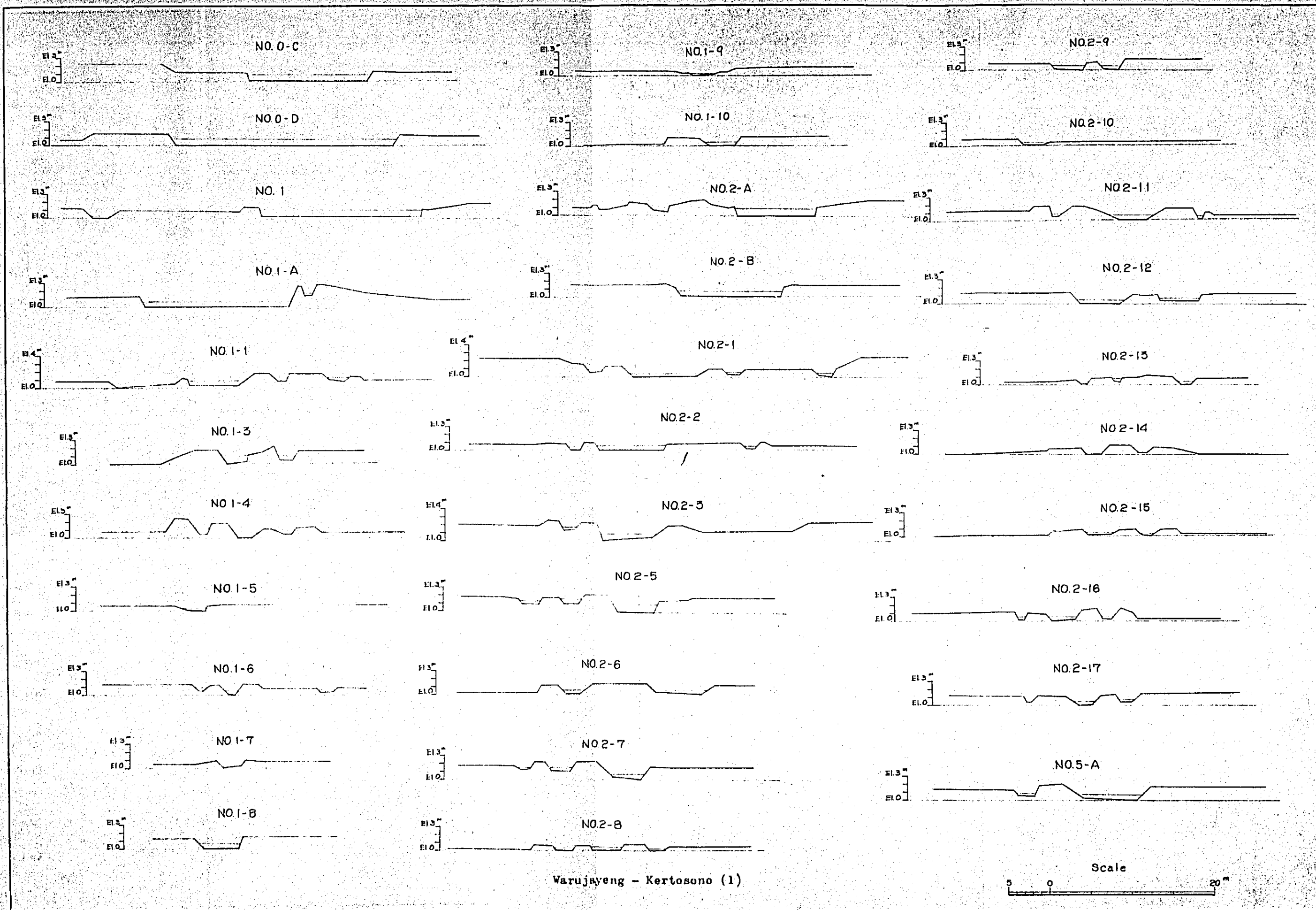
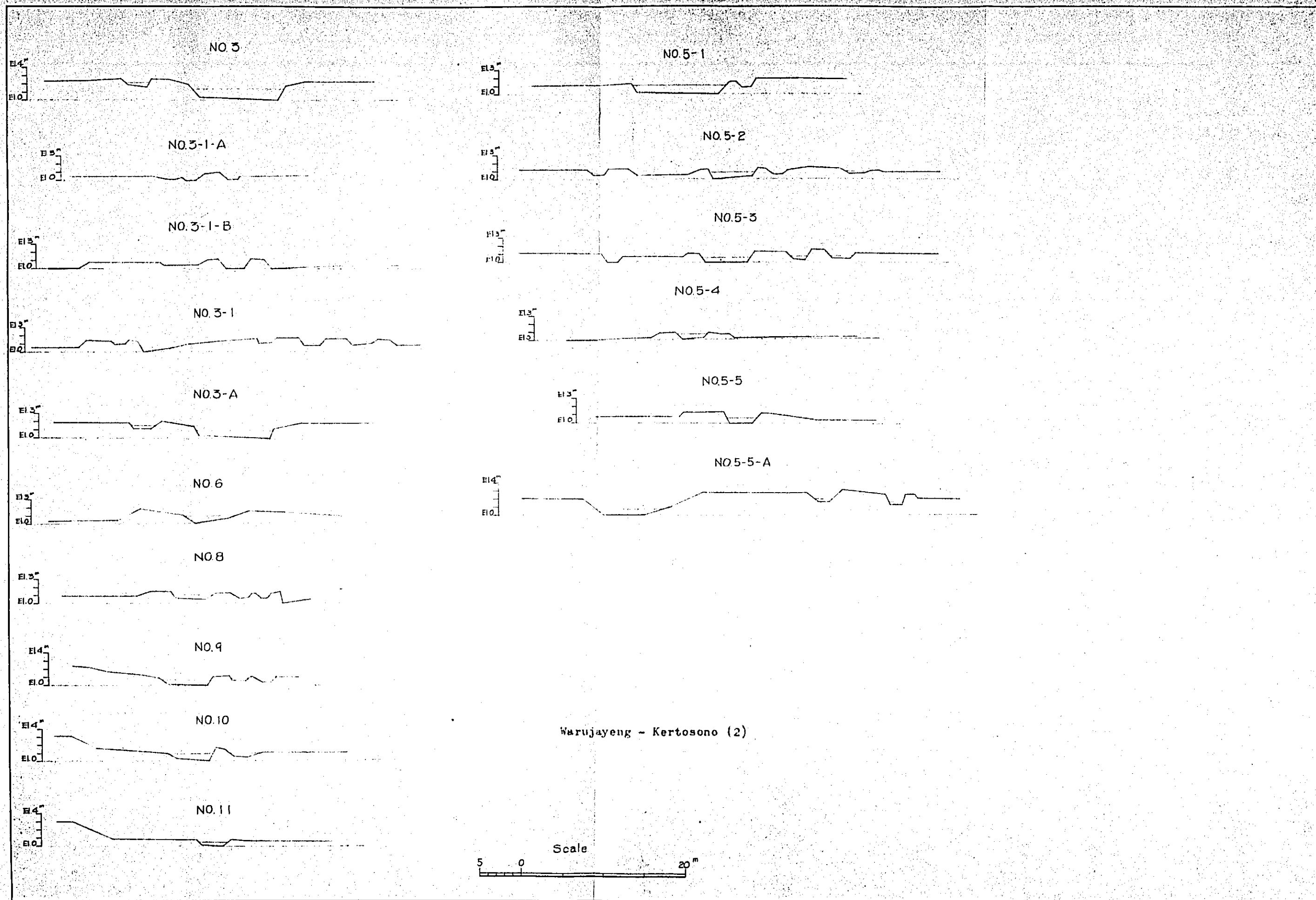


Fig.9-1 Location Map in Warujayeng-Kertosono System



Warujayeng - Kertosono (1)

Scale  
5 0 20m



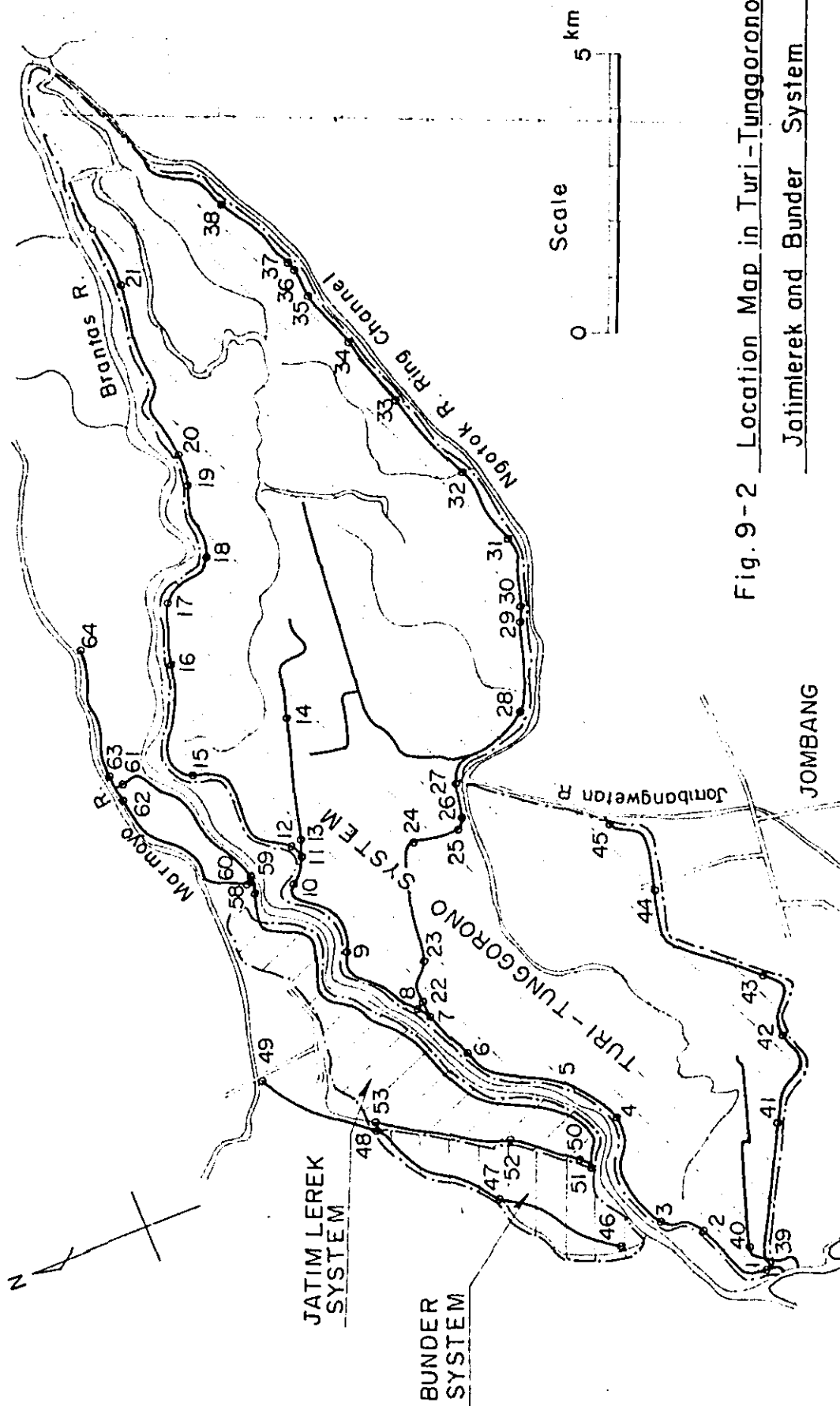
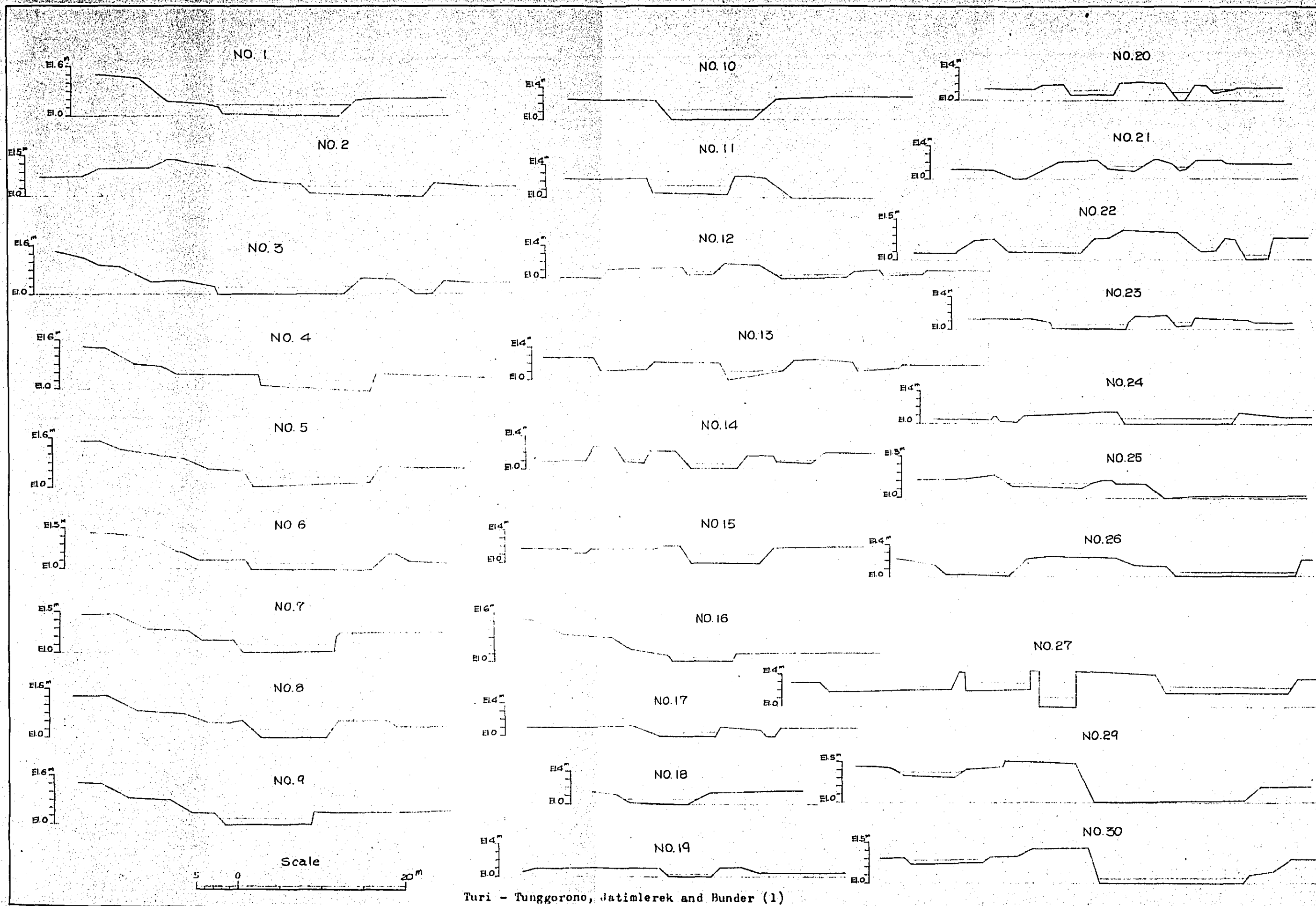
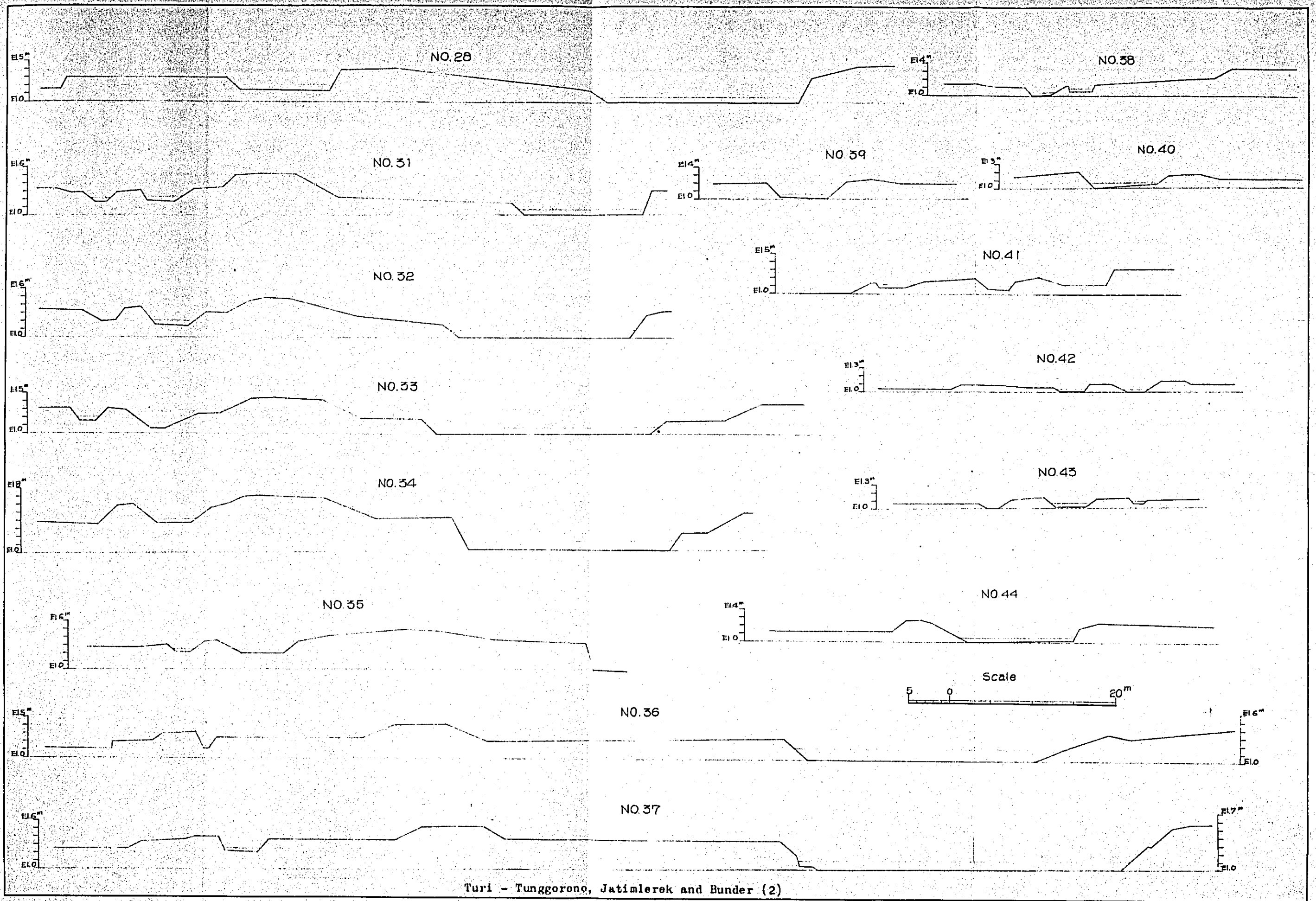


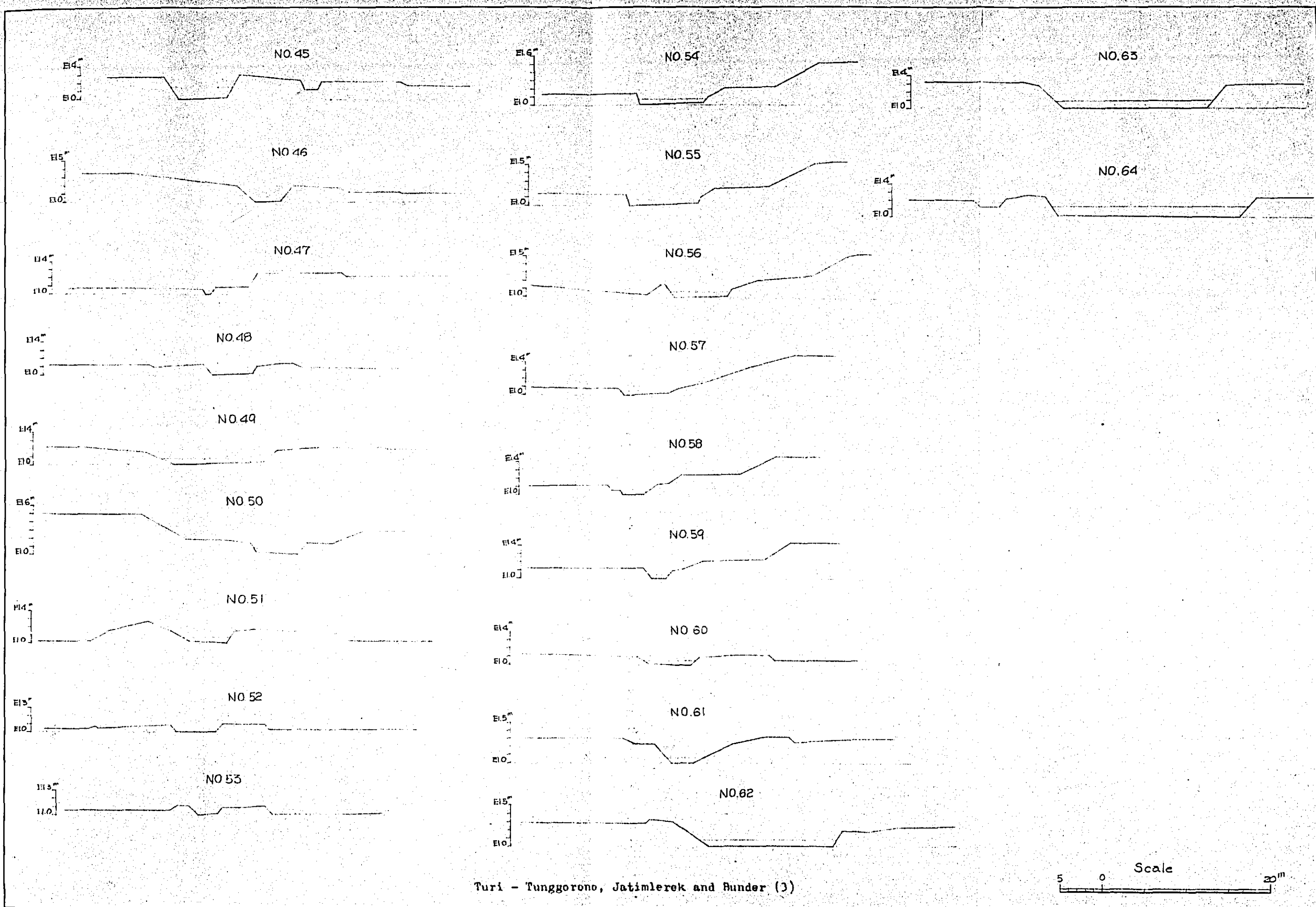
Fig. 9-2 Location Map in Turi-Tunggoro.  
Jatimlerek and Bunder System



Turi - Tunggorono, Jatimlerek and Bunder (1)



Turi - Tunggorono, Jatimlerek and Bunder (2)



Turi - Tunggorono, Jatimlerek and Bunder (3)

