

**THE FEASIBILITY STUDY
ON
THE AGUAN VALLEY AGRICULTURAL
DEVELOPMENT PROJECT
(SABA-OLANCHITO AREA)**

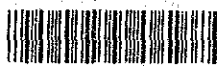
**FINAL REPORT
VOLUME 3 - APPENDICES**

JUNE 1985

**JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)**

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**THE REPUBLIC OF HONDURAS
NATIONAL AGRARIAN INSTITUTE**

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DEVELOPMENT PROJECT
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FINAL REPORT

VOLUME II - APPENDICES

JUNE 1985

**JAPAN INTERNATIONAL COOPERATION AGENCY
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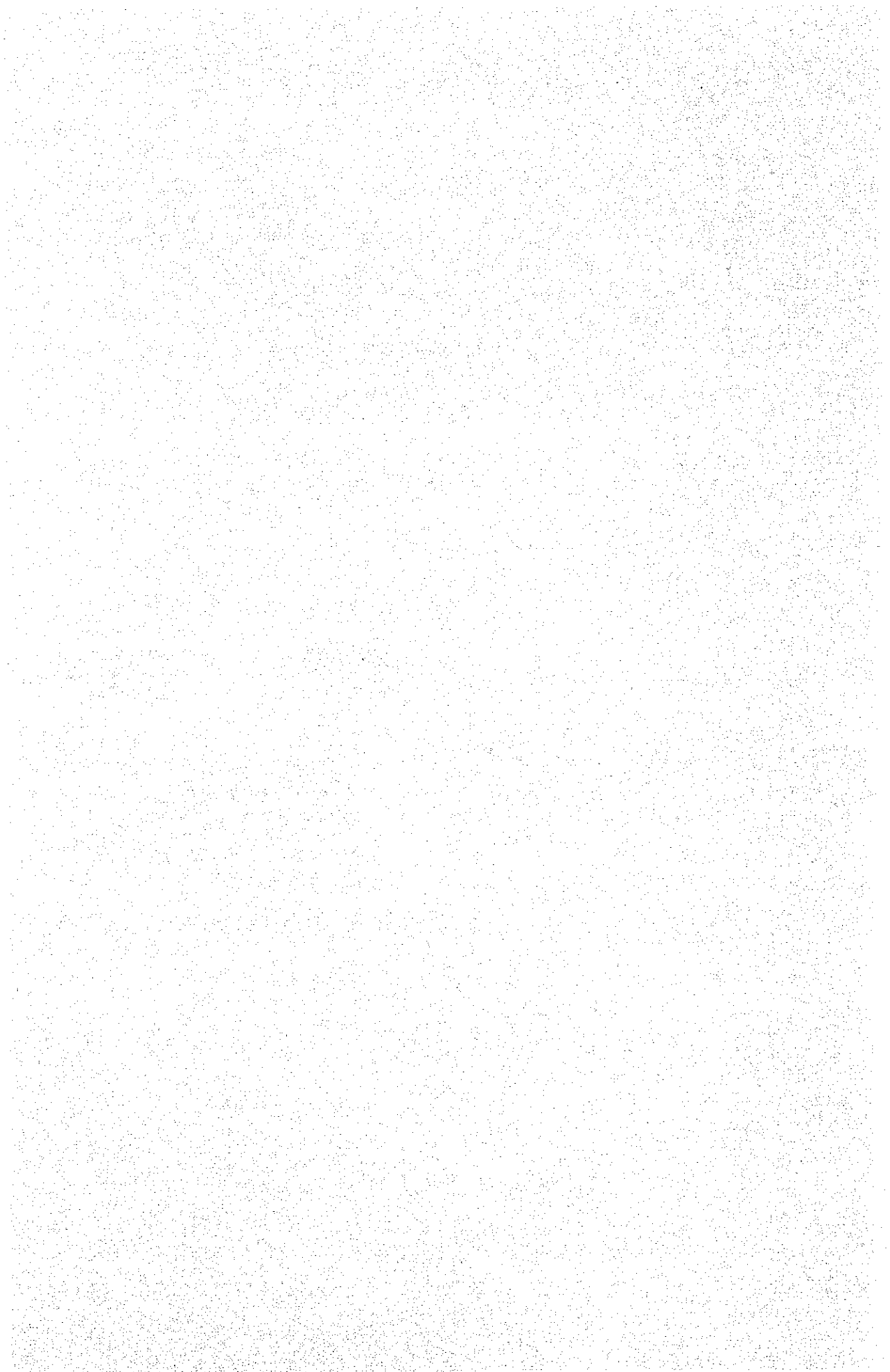
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APPENDIX A: BACKGROUND



I. THE LOWER AGUAN PROJECT

1. General Feature of the Project

1.1 First Stage of the Project

The first stage of the Project was financed partially according with the Loan Agreement with IDB at the amount of US\$ 7.7 million, which was granted based on the farmer's settlement program for 3,000 families.

The Project was originally planned to organize a producing unit in small exploitation by individual farmers with farm size varying between 10 ha and 16 ha, but it was decided later to change the orientation for the adjudication of land to organization of cooperative members.

The actual period of this stage covers from 1970 to 1977 and at the end of 1977 seventy nine cooperatives with 2,988 members (had settled) , and total planted area of crops accumulated up to this year had reached 2,850 ha for oil palm, 130 ha for citrus and 9,038 ha for basic grains. Total investment amount was US\$ 6.25 million for the fund from IDB and US\$ 10.8 million for the local fund.

1.2 Second Stage of the Project

The approval of loan for the Second Stage of the Project was made in January, 1977 at the amount of US\$ 40 million. The total amount of local fund was prepared to US\$11.5 million. At the termination of the Project, the total investments of IDB and local portion were US\$ 31.6 million and 14.1 million, respectively.

The target for the settlement of 3,200 families during this stage was not fulfilled with the result of only 1,710 families' settlement. The duration of the Project is extended from September, 1977 to August, 1983 and during this stage, 7,630 ha of oil palm, 1,668 ha of citrus and 29,170 ha of basic grains were planted.

The principal investment components made during this period are as follows:

Category	Amount	%
(in thousand US\$)		
Supervision and Administration	7,412	16.2
Studies and Designs	972	2.1
Production and Credit	11,049	24.1
Trunk Highway (Saba - Olanchito)	8,825	16.1
Access and In-farm Road	4,295	9.4
Machineries and Equipments	2,017	4.4
Land Reclamation	3,229	7.1
Social Infrastructures	1,624	3.5

2. The Actual Situation of the Project

The actual situation of the cooperatives in the Lower Aguan Project is summarized in the attached table. As is explained in this table, the cultivated area among five sectors was only 51.8% of the total allotted area and furthermore, the planted area for such agricultural products as oil palm, citrus and basic grains had reached no more than 43% of them.

INA, the organization responsible for the execution of the Project, is working now to prepare the document of the application for the finance by IDB for the third stage of the Project. The fundamental purposes of the third stage development are to continue the implementation of the Project, and to incorporate the establishment of the new crops which will permit the generation of the elevated incomes and, as a result, the elevation of the living standards of the farmers.

The objectives of this development are specified as follows:

- (1) To consolidate the families settled in the previous stages of the Project and to settle anew approximately 915 families.
- (2) To diversify the production activity with the introduction of non-traditional new crops and to generate the production to supply the raw materials to the export oriented Agro-industry.
- (3) to consolidate the transport infrastructure so as to accelerate the rational production of the new crops.
- (4) To consolidate physical facilities and social services in order to improve farmers welfare, education and living standards.

In the third stage of the Project, the following crops are recommended for planning in the area.

a. Grapefruits	972 ha
b. Oranges	785 ha
c. Pineapple	408 ha
d. Papaya	300 ha
e. Cassava	820 ha
f. Toro	540 ha
g. Basic Grains	6,150 ha

The main investments are to be directed to the following items:

Item	(In thousand US\$)
a. Pavement of the Saba - Corocito Highway	12,150
b. Access and In-farm Roads	5,450
c. Agro-industry (7 plants)	5,460
d. Social Infrastructures	8,400
e. Production and Credit	15,460
f. Others	12,840

The total investment amount is expected to be US\$ 59,760 thousand, but IDB has rejected this application of loan and INA is negotiating the revision of the plan.

Lower Aguan Project, Stages I & II

Sector	Cooperative	Members Actual (Initial)	Area Adjudicated (ha) (A)	Area Cultivated (ha)					Uncultivated Area (C)	Cultivable Area (D) = (B) + (C)	Non-cultivable Area (E) = (A) - (D)
				Oil Palm	Citrus	Basic Grains	Others	Pasture			
I (Tocoa-Saba)	23	1,041 (824)	10,759	3,391	772	1,499	907	-	3,286	9,855	904
II (Tocoa-Corocito)	19	1,065 (607)	13,244	3,770	148	1,454	869	-	6,195	12,436	808
III (Left bank of Aguan River)	24	1,099 (1,099)	16,561	3,304	-	2,160	749	4,123	500	10,836	5,725
IV (Isleta)	18	728 (510)	9,623	-	96	970	120	1,020	6,825	9,031	592
V (Saba-Rio Jahuana)	16	765 (454)	6,945	-	-	1,899	2,330	-	2,219	6,448	497
Total	100	4,698 (3,494)	57,132	10,465	1,016	7,982	4,975	5,143	19,025	48,606	8,526

Source: Institute Nacional Agrario, Informe Final Prestano BID 479 SF/HO .II Flapa. Proyecto Bajo Aguan

Table A-1 Population of Honduras

Year	Total	Rural	Urban
<u>Census</u>			
1950	1,369		
1961	1,885		
1974	2,657		
<u>Estimates (mid-year)</u>			
1975	3,093	2,097	996
1980	3,691	2,367	1,324
1981	3,821	2,421	1,400
1982	3,955	2,475	1,480
1983	4,092	2,529	1,563
<u>Projections</u>			
1985	4,372	2,635	1,737
1990	5,106	2,893	2,213
1995	5,903	n.a	n.a
2000	6,733	3,124	3,609
2005	7,592	n.a	n.a
<u>Growth rates (% p.a.)</u>			
1950-74	2.8		
1975-80	3.6	2.4	5.9
1980-85	3.4	2.2	5.6
1985-90	3.2	1.9	5.0
1990-95	2.9	0.8	5.0
1995-2000	2.7		
2000-2005	2.4		

- Source: i) Anuario Estadístico 1980, Dirección General de Estadística y Censos, September 1982.
- ii) Desarrollo Regional - Plan Nacional de Desarrollo 1979-1983, CONSUPLANE.
- iii) Honduras: An Inquiry into Rural Population, Small Farmers and Agrarian Reform, World Bank, January 1983.

Table A-2 GDP. (industry-wise) (nominal)

(million dollar)

INDUSTRY	1981	1982	1983
Agriculture, Forestry and Fishery	657	691	725
Mining and Quarrying	51	53	56
Manufacturing	372	410	439
Construction	129	135	141
Electricity, Gas and Water Supply	59	61	64
Transport, Store and Communication	182	198	210
Commerce	299	323	344
Banking, Insurance and Real Estate	115	126	134
Housing	161	175	189
Public Service, Defence	112	128	138
Services	211	225	238
Nominal GDP (rate of increase from the previous year)	2,346 (7.5)	2,522 (6.1)	2,676 (6.3)
Real GDP (1966=100) (rate of increase from the previous year)	1,045 (1.2)	1,026 (Δ1.8)	1,019 (Δ0.7)

Table A-3 Balance of Payment

(million dollar)

	1981	1982	1983
1. Trade Balance	Δ 330.2	Δ 258.3	Δ 212.4
A. Export	903.2	783.5	815.2
• Goods (FOB)	783.8	676.5	704.1
• Service	119.4	107.0	111.1
B. Import	1,232.4	1,041.8	1,027.5
• Goods (FOB)	898.6	680.7	731.0
• Service	334.8	361.1	296.5
2. Transfer	27.5	30.0	44.5
3. Current Account	Δ 302.7	Δ 228.3	Δ 167.9
4. Capital Account (Net)	227.9	127.1	150.9
A. Long Term	214.2	164.5	155.1
B. Short Term	13.7	Δ 37.5	Δ 4.2
5. Errors, and Omissions	2.5	8.7	-
6. Overall Balance	Δ 72.4	Δ 92.5	Δ 17.0

Table A-4 Public Finance

Unit: in million dollars

	1981	1982	1983
Current Revenue (realized)	613.0	658.4	698.4
tax sources	362.5	374.1	371.5
non-tax & others	250.5	284.3	326.9
Current Expenditure (realized)	559.4	622.3	675.3
Current Balance	53.6	36.1	23.1
Capital Expenditure	391.7	520.0	536.1
Investment	237.5	273.1	344.3
Loan Repayment	101.3(25.8%)	136.5(26.3%)	150.2(28.0%)
Others	52.9	110.4	41.6
Fiscal Balance	Δ 338.1	483.9	Δ 513.0
Capital Financing	338.1	483.9	513.0
Internal Loan	164.9	242.2	263.7
Foreign Loan	201.0	233.5	207.0
Others	Δ 27.8	8.2	42.3

Table A-5 Consumer Price Index (1978=100)

	1981	1982	1983	rate of inflation	
				1982	1983
Overall Consumer Price Index	144.8	158.4	172.5	9.4	8.9
Foodstuffs	139.9	149.3	157.2	6.7	5.3
Housing	146.1	155.7	177.5	6.6	14.0
Clothes	166.9	200.1	218.7	19.9	9.3
Medical care	144.3	160.9	176.7	11.5	9.8
Wage	137.5	157.8	172.6	14.8	9.4
Bevarage, Tobacco	157.4	188.5	200.4	19.8	6.3
Fare	139.4	149.5	156.3	7.2	4.5
Culture & Amusement	138.7	157.5	170.2	13.6	8.1

* The rate of inflation in 1981 is 9.4.

Table A-6 Labor Force and Employment Estimates - 1981 and 1983

Sector	1981		1983	
	(1,000)	%	(1,000)	%
A. Agriculture	661	58.8	699	57.7
B. Non-agricultural activities	463	41.2	512	42.3
Total labor force	1,124	100.0	1,211	100.0
Population	3,821		4,092	
Economically active Percentage	29.4%		29.6%	

Source: CONSUPLANE

Table A-7 Production of Principal Agricultural Crops

(Unit: 1,000 tonnes)

Crop	Year							
	1975	1976	1977	1978	1979	1980	1981	1982
Bananas	786	1,082	1,220	1,238	1,449	1,425	1,336	1,405
Coffee	51	50	48	64	75	72	73	72
Beans	47	43	43	44	44	45	51	49
Rice	22	23	20	24	27	29	32	34
Cotton	15	9	20	32	21	25	21	18
Sugar Cane	1,557	1,645	1,953	2,092	2,555	2,865	2,880	3,052
Tobacco	5	6	7	7	7	7	7	7
Maize	343	378	332	346	373	388	418	404
African Palm	51	49	57	65	70	72	89	95
Plantain	83	95	94	92	140	145	151	153

Source: Depto. de Estudios Económicos, Banco Central

Table A-8 Cultivated Area of Principal Agricultural Crops

Crops	1980		1981		1982	
	(1,000 Has)	%	(1,000 Has)	%	(1,000 Has)	%
Bananas	30	4.5	28	4.1	31	4.5
Coffee	119	17.9	122	18.0	123	18.0
Beans	68	10.2	76	11.2	74	10.9
Rice	20	3.0	21	3.1	23	3.4
Cotton	11	1.7	9	1.3	8	1.2
Sugar Cane	45	6.8	47	6.9	48	7.0
Tobacco	10	1.5	10	1.5	10	1.5
Maize	339	51.0	340	50.1	340	50.0
African Palm	14	2.1	15	2.2	15	2.2
Plantain	9	1.4	10	1.5	10	1.5
Total	665	100.1	678	99.9	682	100.2

Source: Depto. de Estudios Económicos, Banco Central

Table A-9 Supply of Grains

	1976	1977	1978	1979	1980	1981
Production (1) (1,000 tonnes)	479	513	619	424	492	589
Import (2) (1,000 tonnes)	2	19	50	7	52	20
Export (3) (1,000 tonnes)	17	1	0	0	0	0
Supply (1,000 tonnes) (1)+(2)+(3)	464	531	669	431	544	609
Population million persons	2.98	3.06	3.14	3.23	3.32	3.41
Amount of Supply /Person (kg)	156	174	213	133	164	179

Source: Ministry of Natural Resources

Table A-10 Land Tenure by Farm Size

(Unit: %)

Farm Size	Private Property	Rented (Share- cropping)	Rented (cash)	Other
Less than 1 hectare	25	14	33	28
1-2 ha	40	8	30	22
2-3 ha	50	5	15	30
3-5 ha	65	3	10	22
5-20 ha	85	1	5	9
20-35 ha	98	-	-	2

Source: Ministry of Natural Resources, CONSUPIANE, and USAID, Compilación de los Estudios Básicos del Diagnóstico del Sector Agrícola, 1978.

Table A-11 Labor Utilization Per Farm Size
(in man-days per farmer per year)

Farm Size (ha)	Work in Farm	Work Outside Farm	Total	% Outside Farm	% [*] of Available Man-days
0 - 2	73	85	158	54	69
2 - 3	109	66	175	38	76
3 - 5	140	46	186	25	81
5 - 10	185	32	217	15	94
10 - 20	196	27	223	12	97
20 - 35	222	5	227	2	99

* Assuming that available man-days are about 230 per year.

Source: ATAC Survey (Revised), INVEST.

Table A-12 Honduras - Agrarian Reform "Concentration" Projects, December 1978

Name of Project	Department	Number of Groups	Number of Members	Land Allotment		Cult. per Member	Proportion Cultivable
				Total	Hectares		
Bajo Aguan	Atlantida	81	4,762	47,485	47,485	10.0	100
La Masica	Atlantida	61	1,080	7,266	6,475	6.0	89
Puerto Arturo	Atlantida	28	526	4,223	3,459	6.6	82
Tabaco	Cortes	19	667	2,214	1,580	2.4	71
Guaymas	Cortes	53	1,546	6,523	5,746	3.7	88
San Manuel	Cortes	31	938	5,705	5,379	5.7	94
San Bernardo	Cholulteca	82	2,222	11,830	8,769	4.0	74
Ola-Monjaras	Cholulteca	27	508	2,736	2,396	4.7	88
Jamastran	El Paraiso	9	181	1,943	1,598	8.8	82
TOTALS		391	12,430	89,925	82,887	6.7	92

Source: INA "Resumen de datos Generales del Sector Reformado, December 1978." No breakdown available of 1979 total of 12,652 members in 403 groups on 92,838 has.

Table A-13 Honduras - Area and Production Targets for Specific Crops in Reform Sector, 1980

Crop	Reform Sector		Percent of Total Sector	
	Area (1000 has)	Production (1000 M.T.)	Area %	Production %
Maize	47.3	81.2	15	30
Rice	4.0	10.9	24	41
Beans	4.5	5.3	7	12
Sorghum	1.0	1.4	2	3
All basic grains	56.8	98.8	12	20
Sesame	1.9	1.5	n.a.	n.a.
Cotton	3.3	5.3	27	21
Yuca and Potatoes	0.5	2.8	n.a.	4
Tobacco	0.3	0.7	5	8
Sugar cane	1.3	87.5	2.6	30.3
Banana ¹	2.0	95.0	10	7
Plantain	1.0	855.0	n.a.	1
Citrus	1.4	2.8	n.a.	5
African Palm	2.9	29.6	39	46
Cashew	2.5	-	100	-
Coffee and Cacao	1.1	-	1	-
Total Crops	75.0	-	-	-

1 Including Isletas production.

Sources: INA Plan Operativo y Presupuesto 1980, Table 3, and Central Bank.

APPENDIX B: CLIMATE AND HYDROLOGY

I. TANK MODEL

(1) Outline

The concept for the series storage model is that the discharge basin is replaced by a vessel having several runoff holes on sides, as shown in Fig. B-I-1, and is generally called the tank model. Rain is poured into the vessel of a tank model on top and the second vessel takes the water from the bottom hole of the first tank, and so on. Part of water in the vessel flows out from side and the remainder flows out from the bottom and pours in to the next vessel. Total sum of flow from the side of each vessel would be the discharge of a river. This model can be considered equivalent to the structure in the aquifer of a discharge basin shown in Fig. B-I-2.

Rain successively percolates into the ground and the outflow of water from the aquifer eventually forms discharge of a river. Outflow of water from sides of the vessels in Fig. B-I-1 equals the outflow of water from each aquifer in Fig. B-I-2. Water from the bottom hole of a vessel to the next vessel is equal to the water movement in the upper aquifer to lower aquifer. Tank models in Fig. B-I-1 should be made so that the lower tanks have narrower holes, so that it becomes harder for the water to move to the next vessel. From Fig. B-I-2, one may realize that the velocity of flow decreases as water moves to the lower aquifer, in which the retention of water becomes more stable.

Tank model precisely reproduces the difference of runoff caused by the type of rainfall. For example, longer rainfall makes flood even if the rainfall intensity is weak, and the past experience has also shown that the rainfall intensity is an important factor for the flood. When the intensity is large, the rainfall can become a flood even if the total rainfall is small.

In the tank model, the water level in the first tank gradually increases when the duration of rainfall is long enough to exceed the percolating capacity. Hole size in the first tank being large in size, a considerable amount of water flows out by the ascension of water level to form a flood. The first tank has larger holes for outflow and percolation and sends corresponding amount of water to the lower tanks, the runoff hydrograph will have a longer tail. If, on the other hand, the rainfall concentrates in a short period of time, it will cause a flood on the first vessel even if the total rainfall is small because there is no time allowed for percolation.

Since the lower tanks do not have much water decrease will be fast and the flood ends sooner. As explained above, the flood is determined by the delicate combination of the total rainfall and the intensity of rainfall, as has been well expressed by tank model. When tanks are arranged in 3 to 4 stages, the first stage is considered equal to the surface runoff, the second stage, surface seepage runoff and 3rd and 4th tank are the groundwater runoff.

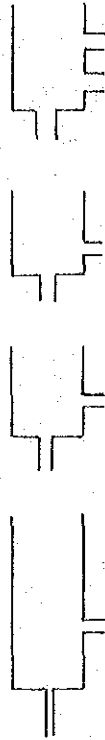


Fig. B-I-1 Series Storage Model

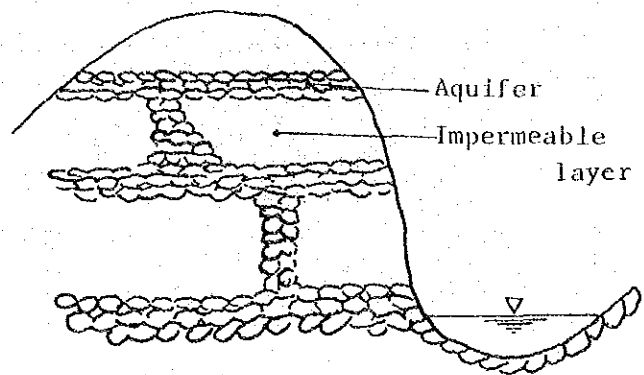


Fig. B-I-2 Runoff Mechanism

Runoff hydrograph is a combination of various runoff of water. Flood consists of surface runoff, interflow and underground water runoff. The way of attenuation is not the same through all the components. The above tank model, incorporating various components, may be well designed to express the physical nature of the phenomena.

Tank model, although commonly used for flood and low-water analysis, is not applied in the same way. For flood, 2nd and 3rd stages, and for low-water, 3rd and 4th stages are used. In tank model used for flood analysis, the first stage covers the component of 1-6 hours of half-reduced period, the 2nd stage from 6 to 24 hours and the 3rd stage covers 1-2 days of the component.

For tank model used for daily discharge analysis, the half-reduced period of the first stage is 1-2 days, the 2nd stage about one week, the 3rd stage about one month and the 4th stage is used to cover the runoff component of about one year.

(2) Calculation of runoff rate and amount of percolation of tank

Fig. B-1-3 shows one of the tank models. A promise is set with the tank model that the runoff rate of each hole is the reset of the co-efficient determined for each runoff and percolating holes multiplied by water storage height located in the upper level of such holes. Height of storage, runoff rate and amount of percolation are all represented by mm unit.

For example, when water is poured in a certain time and the height of storage reaches 50 mm level;

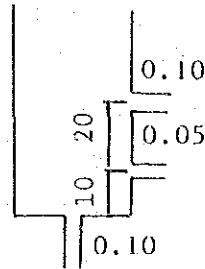


Fig. B-1-3 Tank

Runoff rate is

$$(50-30) \times 0.10 + (50-10) \times 0.05 = 4 \text{ (mm)}$$

Amount of percolation is

$$50 \times 0.10 = 5 \text{ (mm)}$$

When the height of storage is 20 mm;

$$\text{Runoff rate will be } 0 + (20-10) \times 0.05 = 0.5 \text{ (mm)}$$

$$\text{Amount of percolation will be } 20 \times 0.10 = 2 \text{ (mm)}$$

Runoff rate, amount of percolation and evapo-transpiration obtained from the height of storage will be the remainder of the next initial time of the tank. Add the amount of percolation of the upper tank, or if the tank is in the uppermost stage, add the amount of rainfall to be ready for calculation of time for the next tank. Repeat the process for the number of tanks and add the figures obtained for the sum total of water from each hole. This will be the runoff rate of such time.

(3) Features and problems of tank model method

Features are summarized as follows:

1. The initial loss and its loss discharge which may vary accounting to the rainfall are automatically contained in the model.
2. Type of runoff, whether its size is large or small, is automatically switched. (the model has a nonlinear structure)
3. Structure automatically switches the runoff rate accounting to the size of flood.

4. runoff at each stage of the tank shows gradual-decrease curve peculiar to each stage and the runoff rate can be expressed accordingly in several runoff component sum.
5. Time lag is automatically given when water passes each tank.
6. Can be used for both flood and low-water runoff.
7. Addition, subtraction and multiplication are applicable in the calculation.
8. Major defect of the method is that the determination of each constant in the model requires repeated trial and error using rainfall and runoff data.
9. Once the structure of tank model is determined, the discharge derived from calculation meets the measured value.
10. Effect in the narrow portion of the channel cannot be expressed.
11. It is sometimes better to add a tank which gives a change of the channel storage effect in addition to only the storage effect.

(4) Series Tank Model for Upper Aguan

The series tank model for the Upper Aguan is shown in Fig. B-19.

Coefficients of this model were determined by using actual rainfall data at Olanchito and river flow at pte. Saba.

The correlation coefficient of average fine-day runoff between the actual river flow data and the synthesized data from this model was 0.91.

The synthesized runoff data at Pte. Saba for eight years (1973-80) is shown in Fig. B-20 thru B-23.

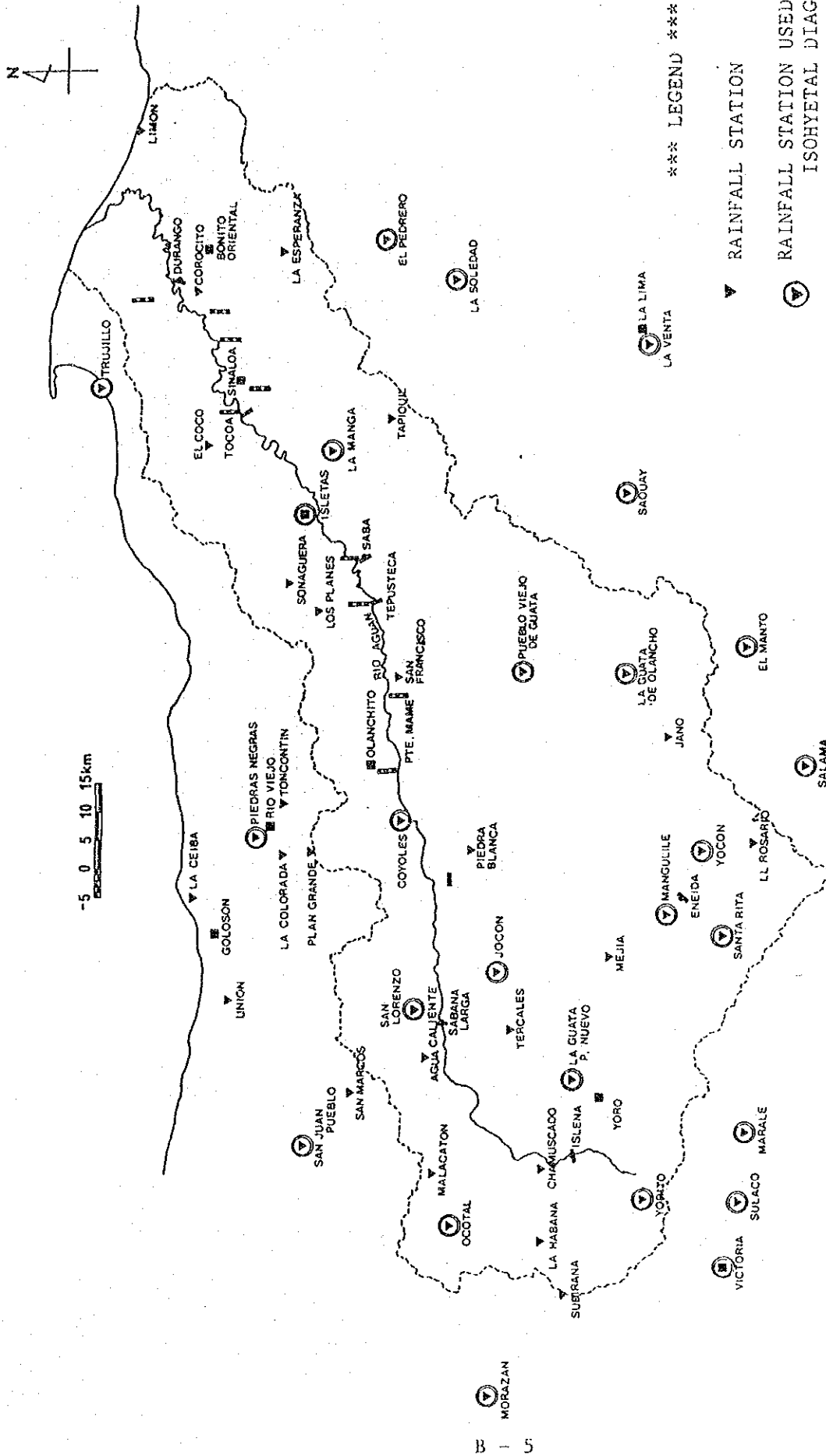


Fig. B-1 HYDROMETEOROLOGICAL STATIONS IN THE AGUAN RIVER BASIN

SOURCE : THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN

NOTE: STATION LOCATIONS ARE APPROXIMATE

*** LEGEND ***

▽ RAINFALL STATION

△ RAINFALL STATION USED FOR ISOHYETAL DIAGRAMS

■ HYDROMETEOROLOGICAL STATION

■ MAX WATER LEVEL INDICATOR

■ WATER LEVEL OBSERVATION POINT (STAFF GAUGE)

■ AUTOMATIC WATER LEVEL RECORDER

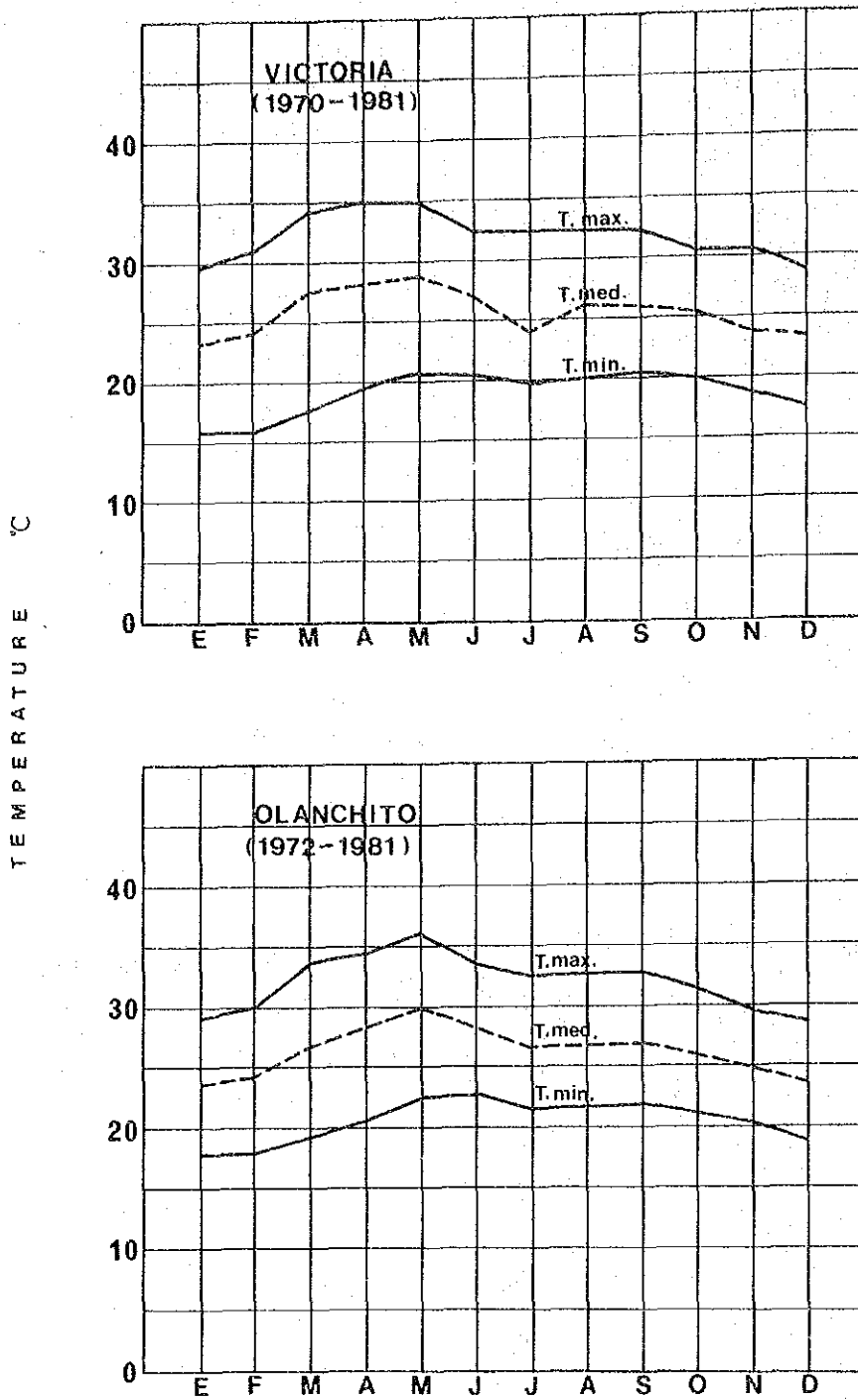


Fig. B-2 MEAN MONTHLY TEMPERATURE FOR UPPER AGUAN

SOURCE: THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN

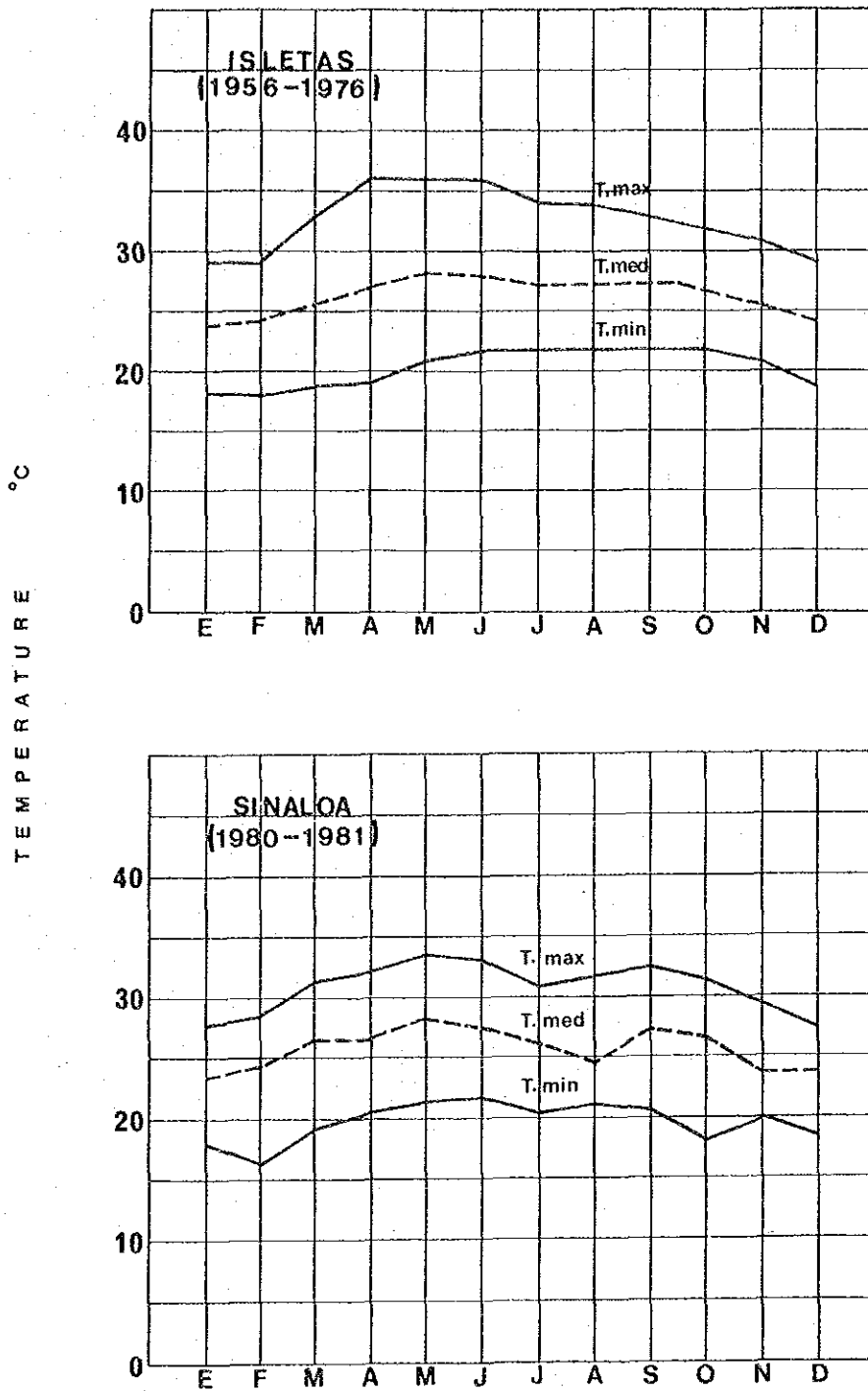


Fig. B-3 MEAN MONTHLY TEMPERATURE FOR LOWER AGUAN

SOURCE: THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN

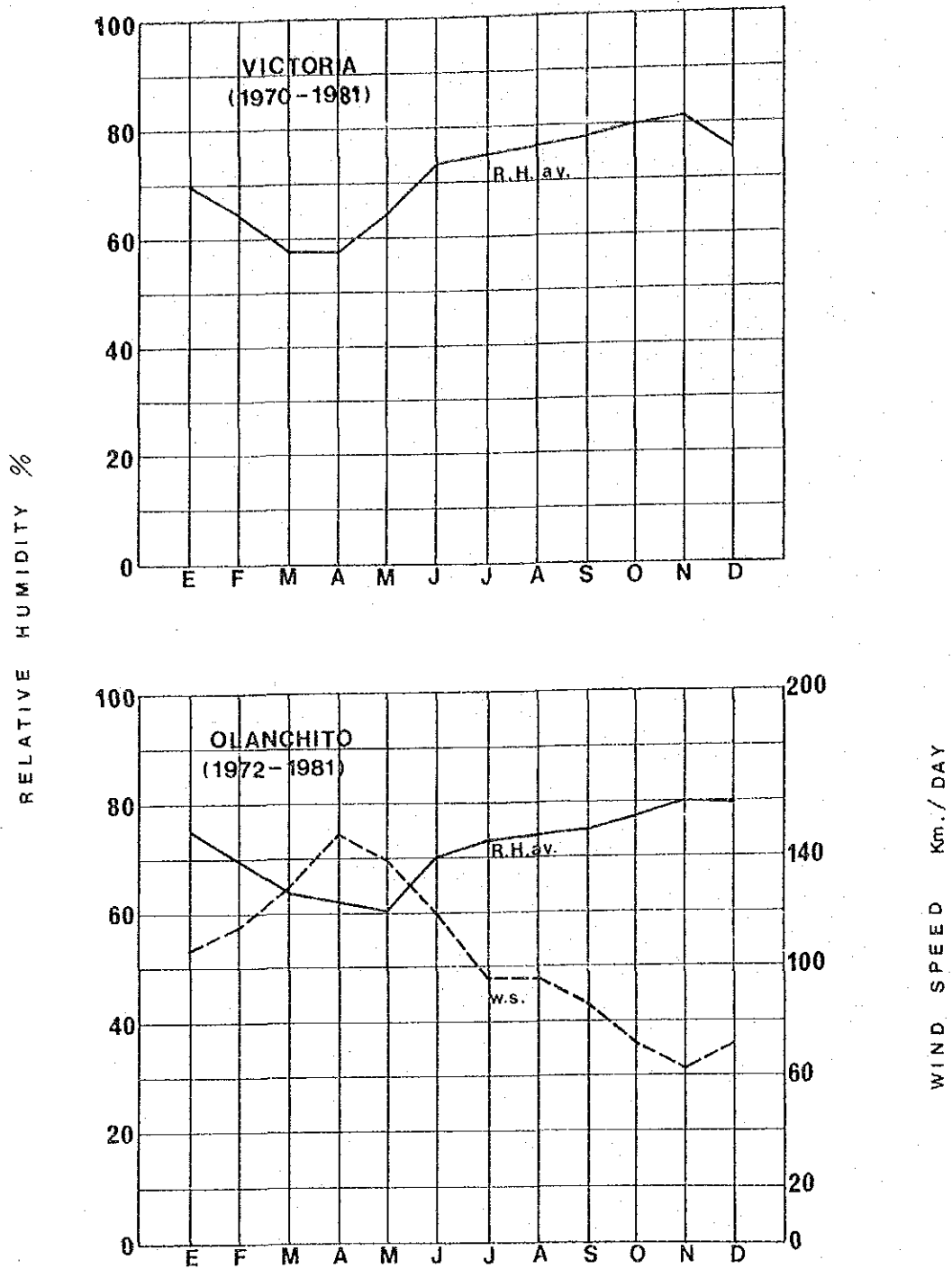


Fig. B-4 MEAN MONTHLY RELATIVE HUMIDITY AND WIND SPEED FOR UPPER AGUAN
 SOURCE: THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN

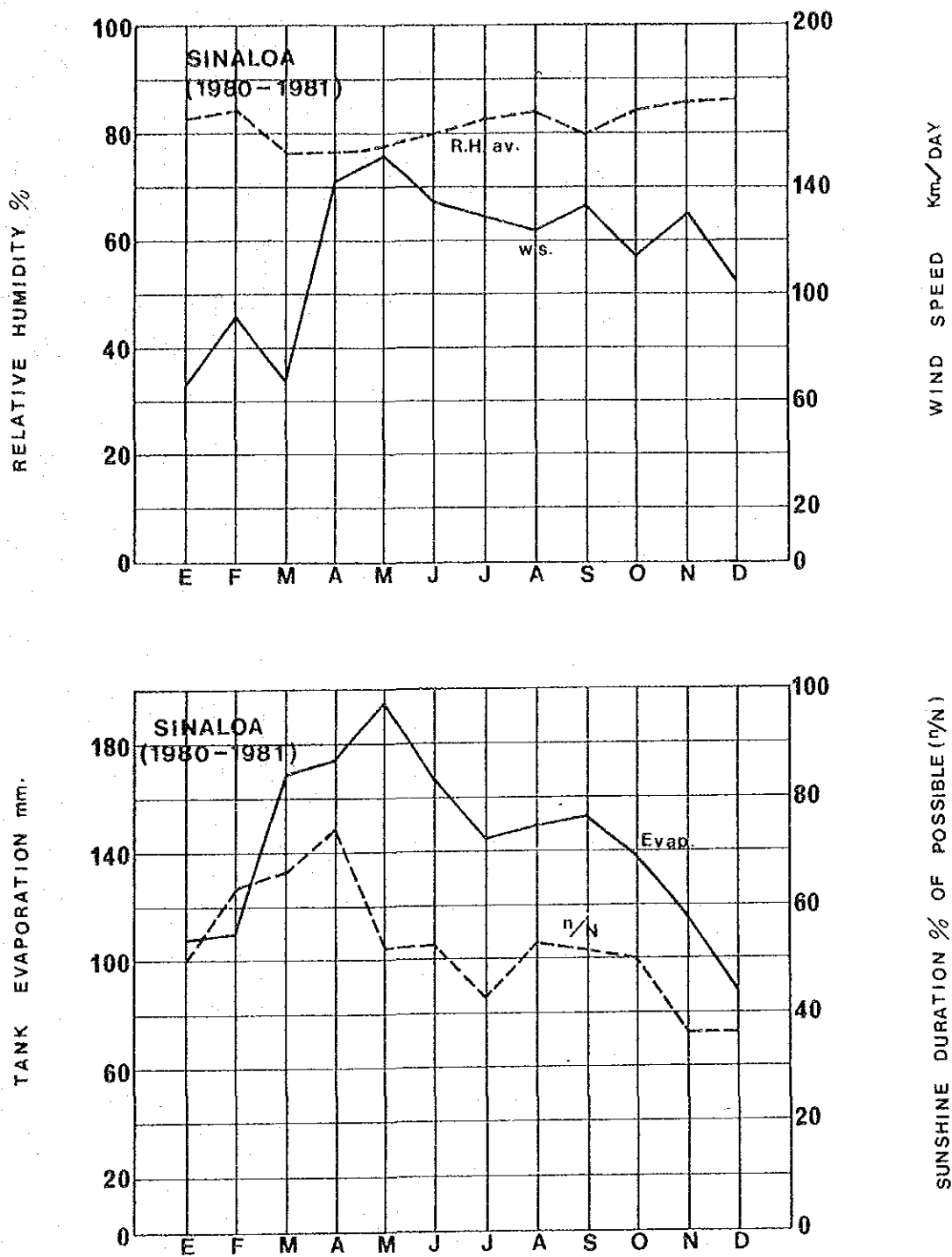


Fig. B-5 MEAN MONTHLY RELATIVE HUMIDITY, WIND SPEED AND SUNSHINE DURATION FOR LOWER AGUAN

SOURCE: THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN

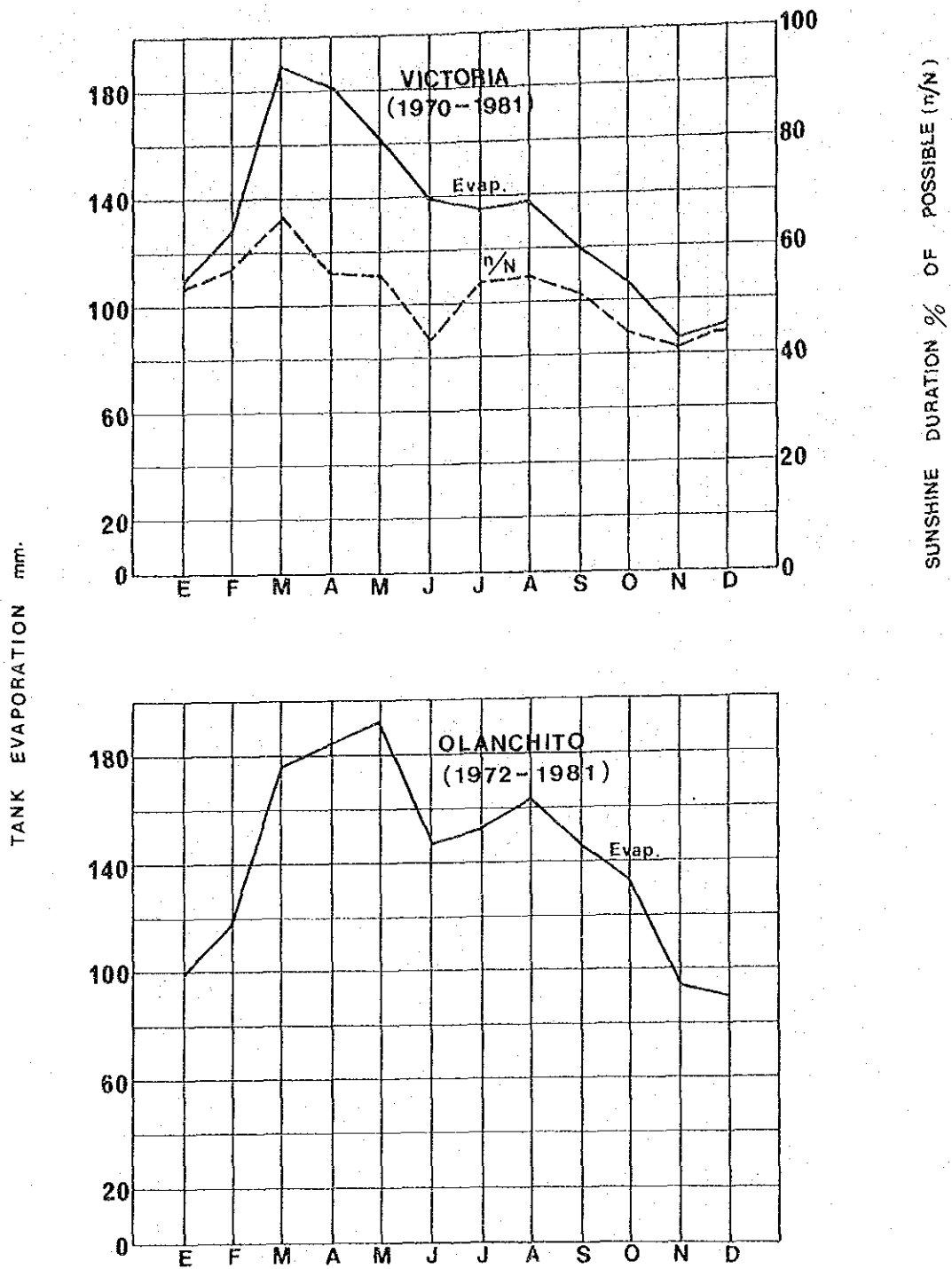
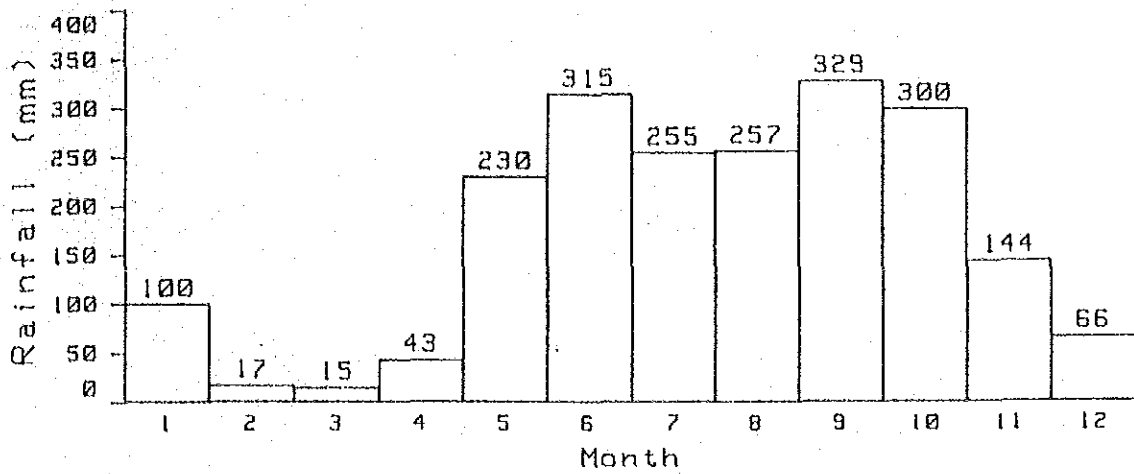
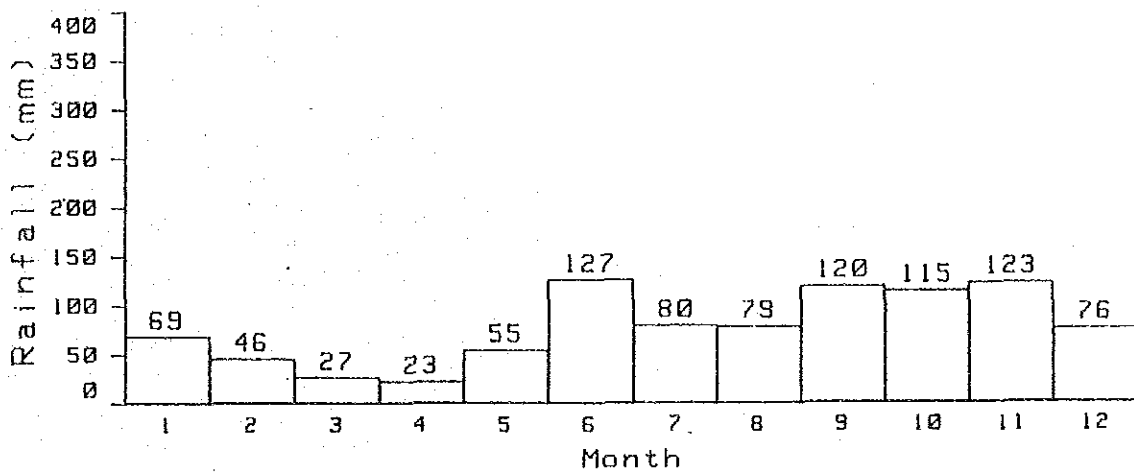


Fig. B-6 MEAN MONTHLY EVAPORATION AND SUNSHINE DURATION FOR UPPER AGUAN

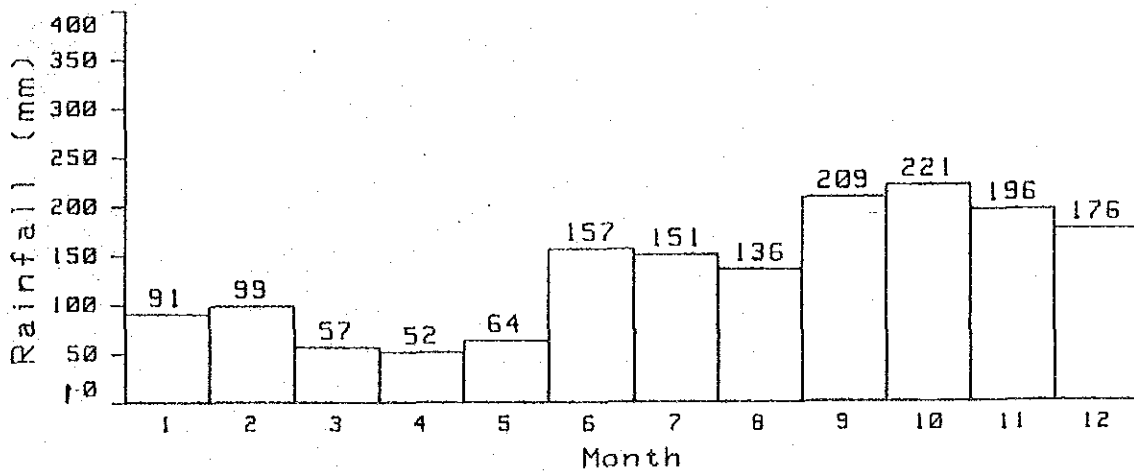
SOURCE: THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN



YOCON



COYOLLES



ISLETAS

Fig. B-7 MEAN MONTHLY RAINFALL AT SELECTED STATION

SOURCE: THE HYDRAURIC MASTER PLAN FOR THE AGUAN RIVER BASIN

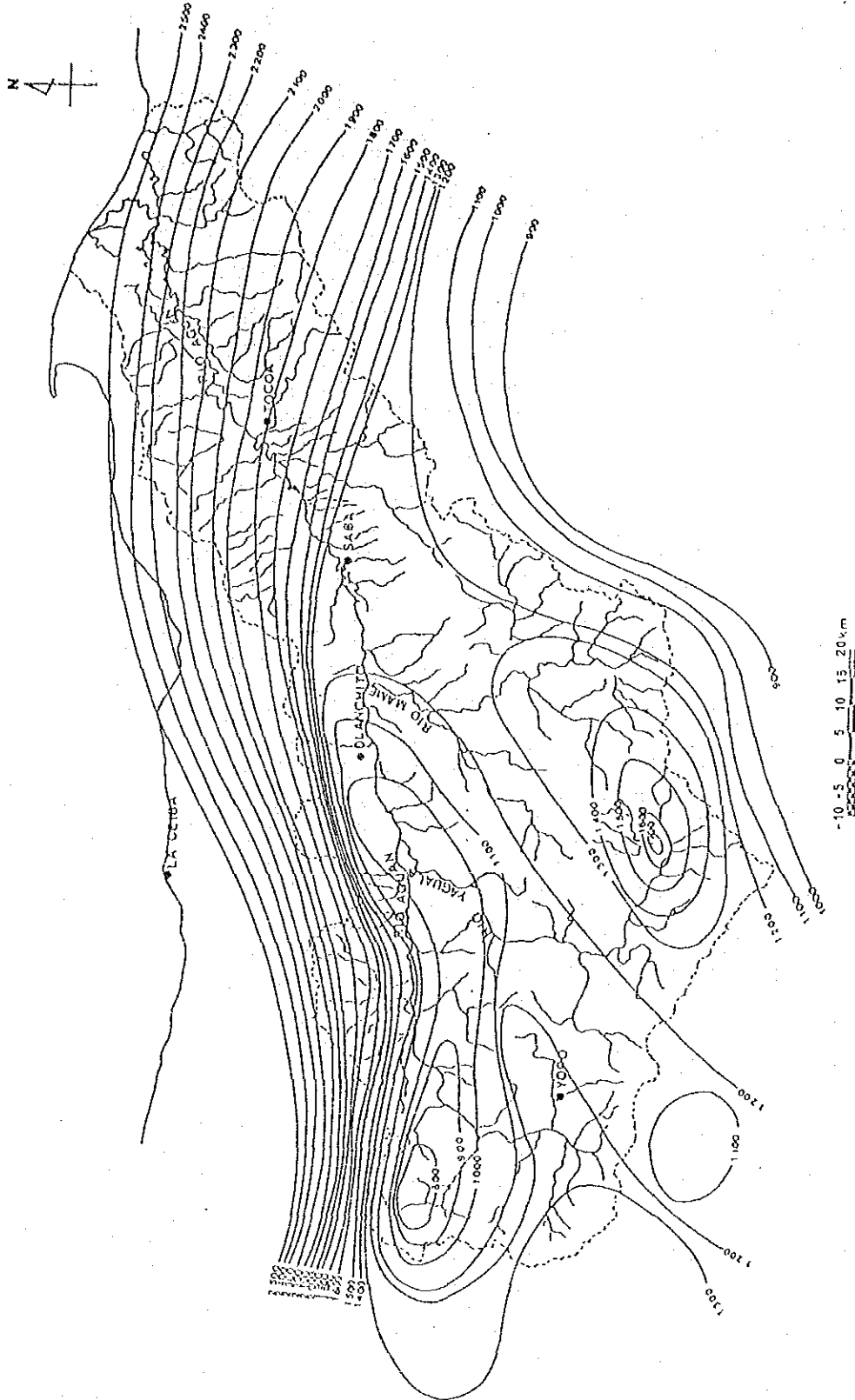


Fig. B-8 MEAN ANNUAL RAINFALL (mm) PERIOD (1973 - 1981)

SOURCE : THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN

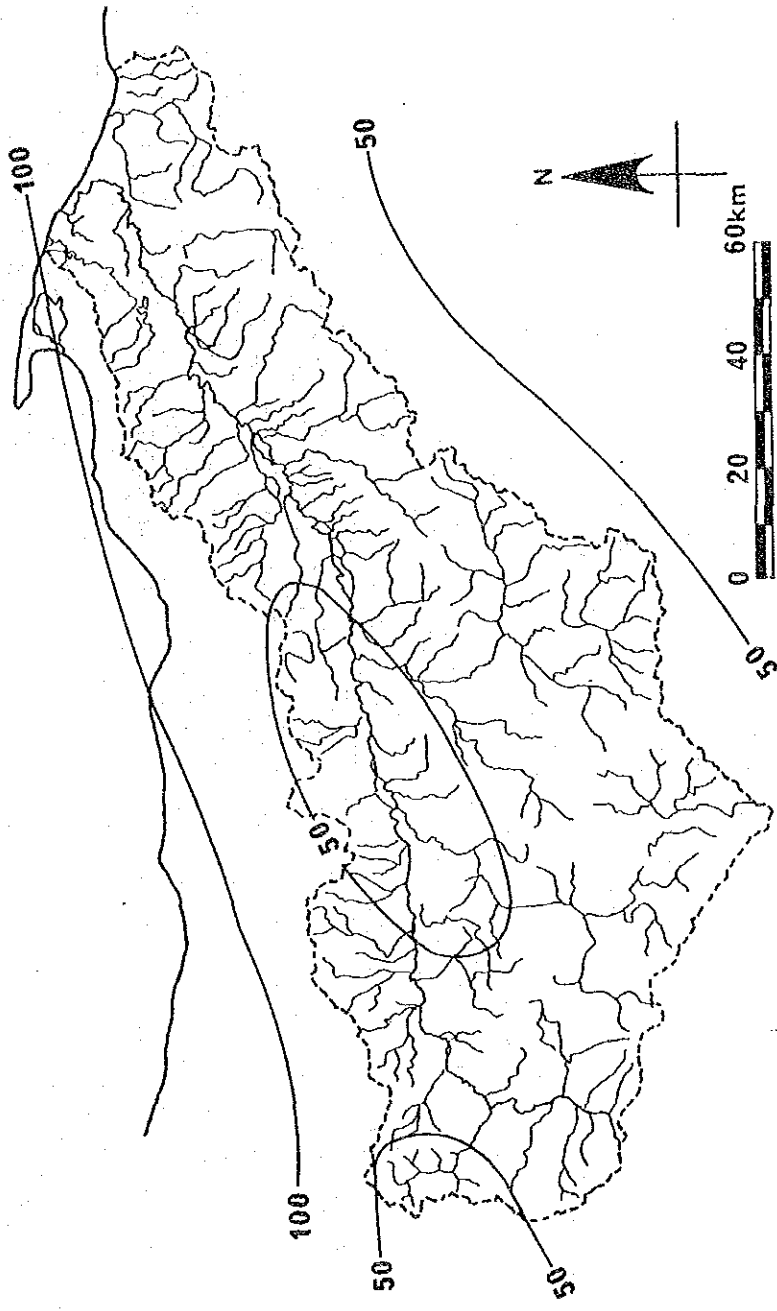


Fig. B-9-(1) MEAN RAINFALL mm PERIOD MARCH - MAY. 1973 - 1981

SOURCE : THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN

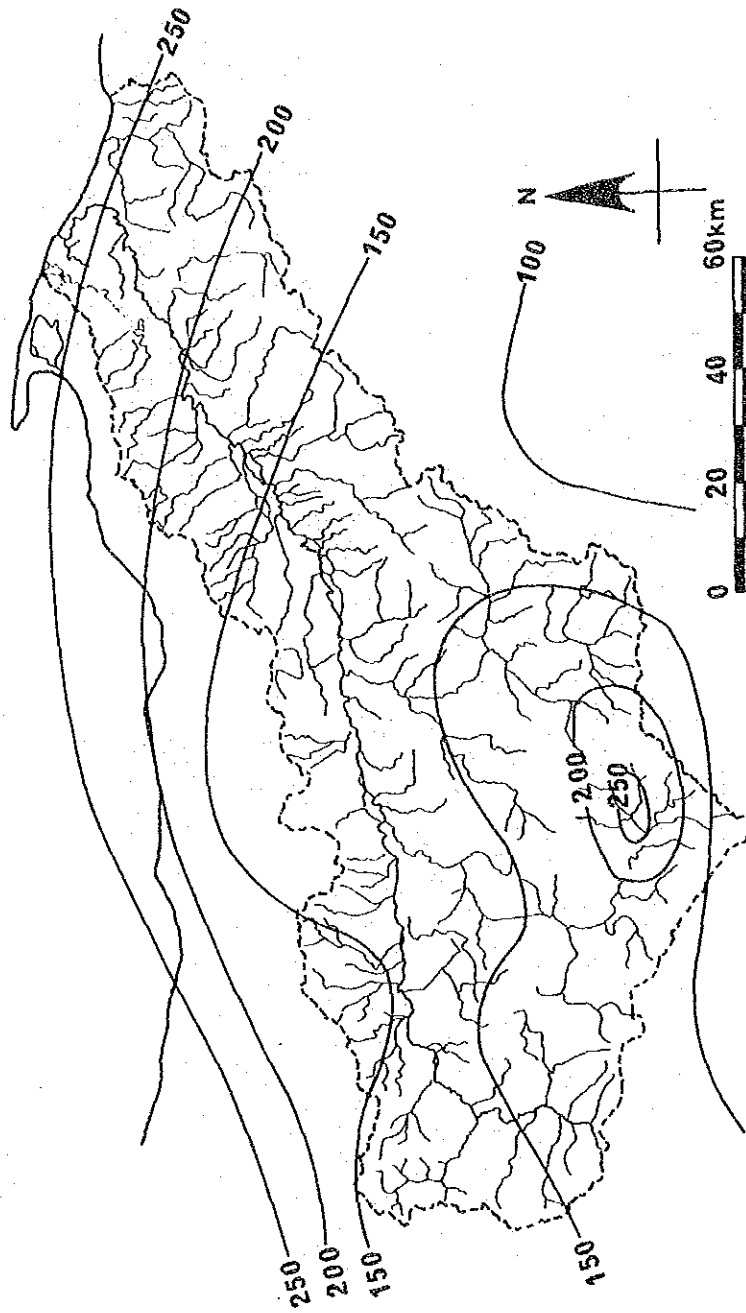


Fig. B-9-(2) MEAN RAINFALL mm PERIOD JUNE - AUGUST. 1973 - 1981

SOURCE: THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN

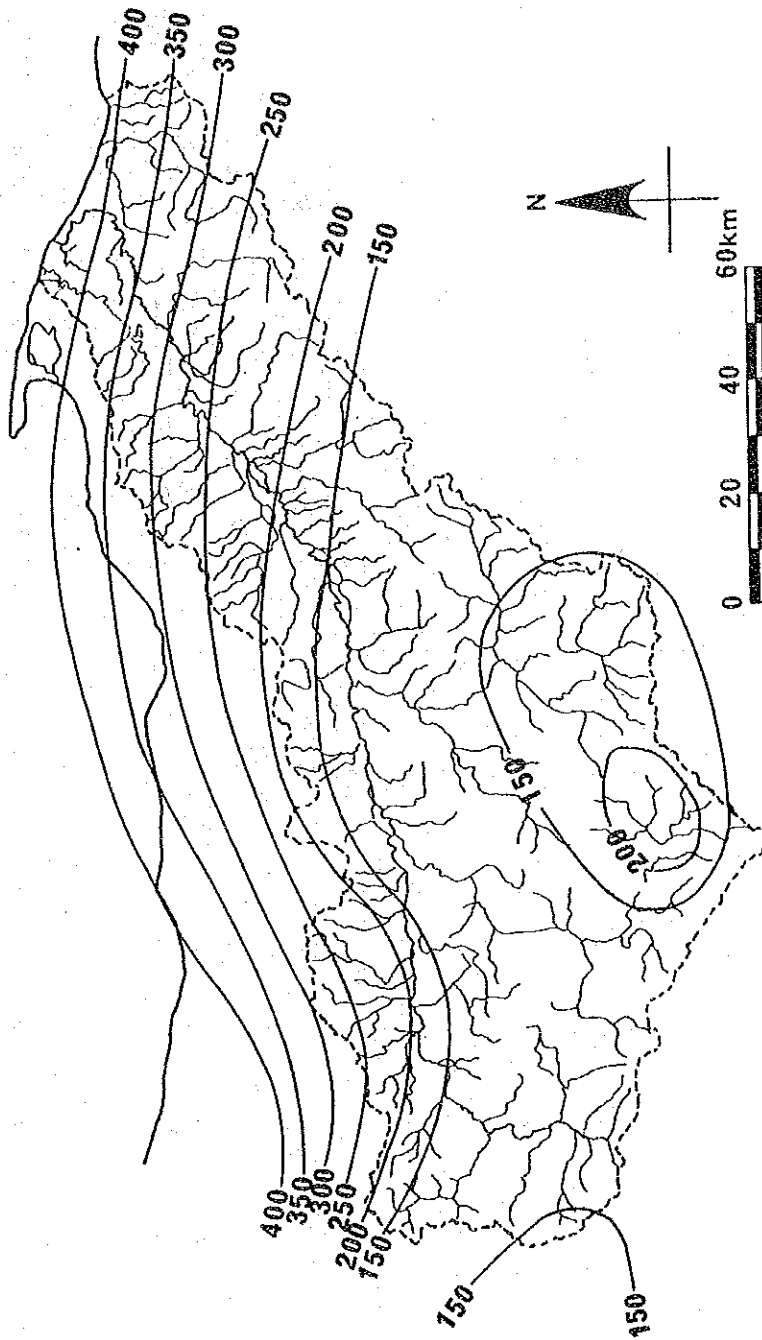


Fig. B-10-(1) MEAN RAINFALL mm PERIOD SEPTEMBER - NOVEMBER. 1973 - 1981
 SOURCE: THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN

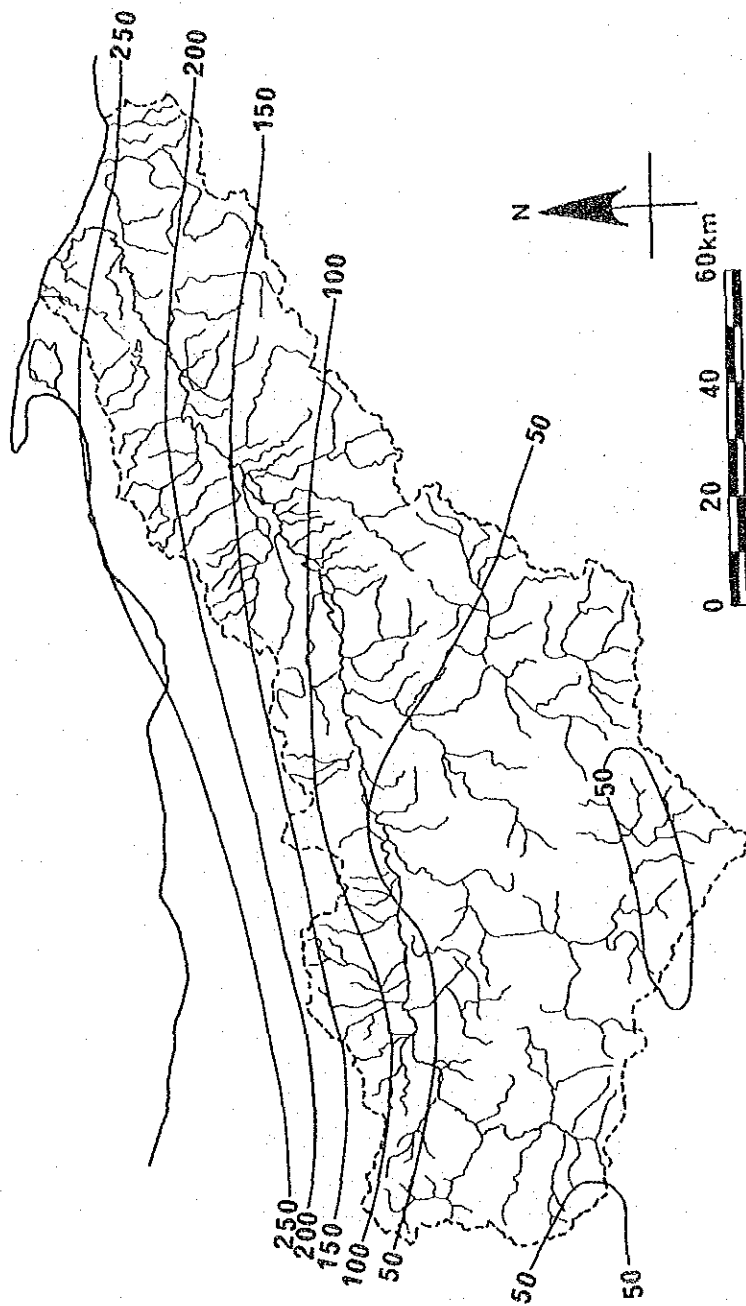


Fig. B-10-(2) MEAN RAINFALL mm PERIOD DECEMBER - FEBRUARY, 1973 - 1981
 SOURCE: THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN

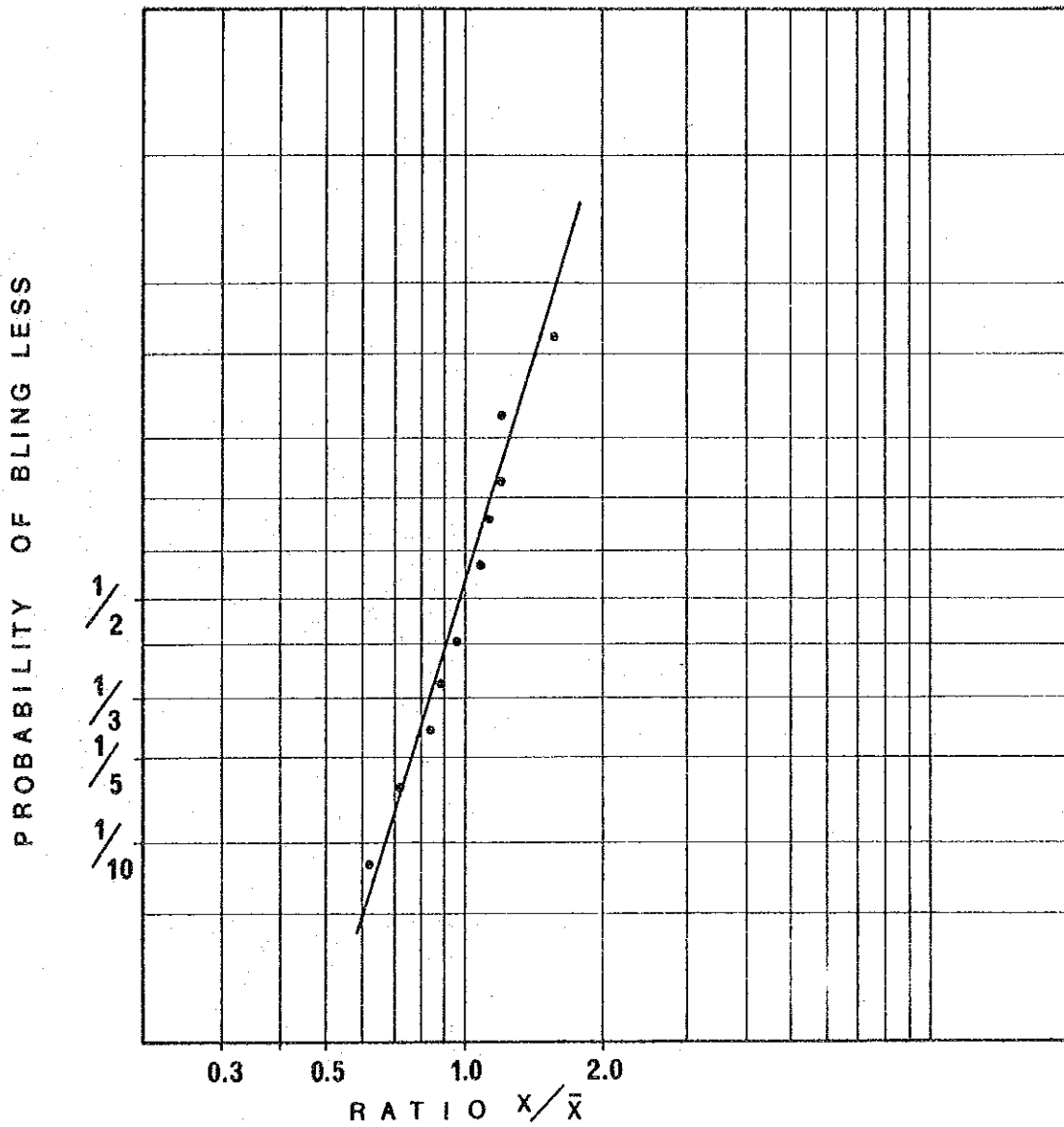


Fig. B-11 PROBABILITY OF ANNUAL RAINFALL AT OLANCHITO

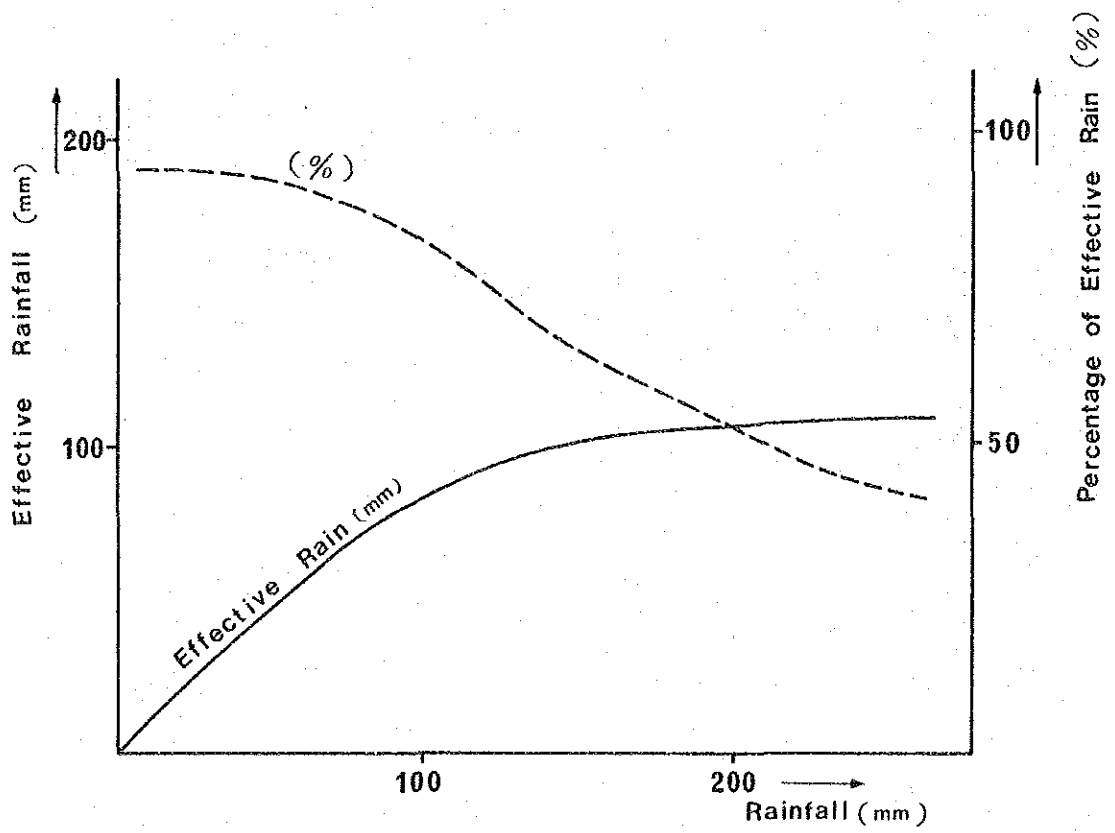


Fig B-12 EFFECTIVE RAINFALL

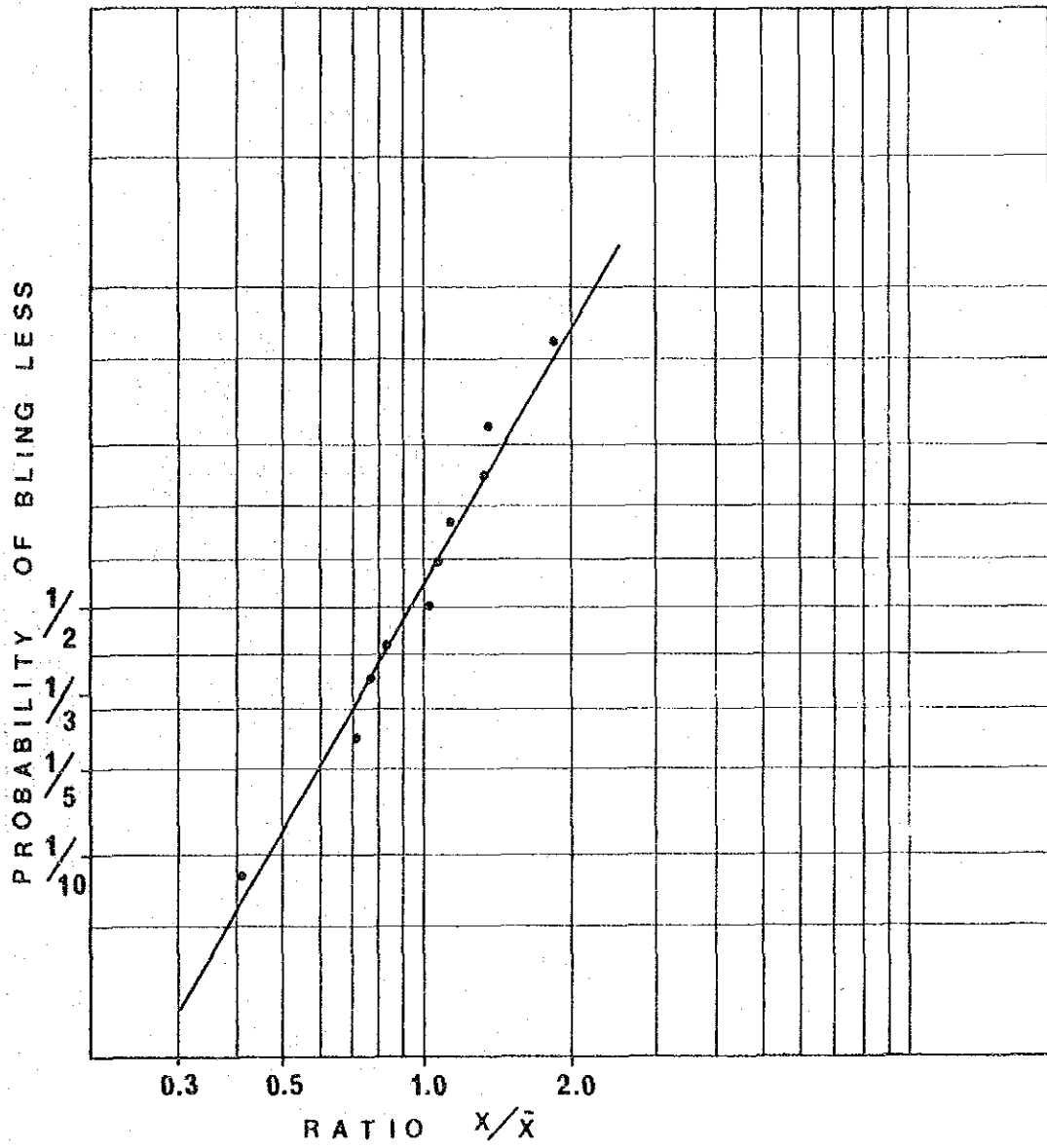


Fig. B-13 PROBABILITY OF MEAN ANNUAL RUNOFF AT PTE. SABA

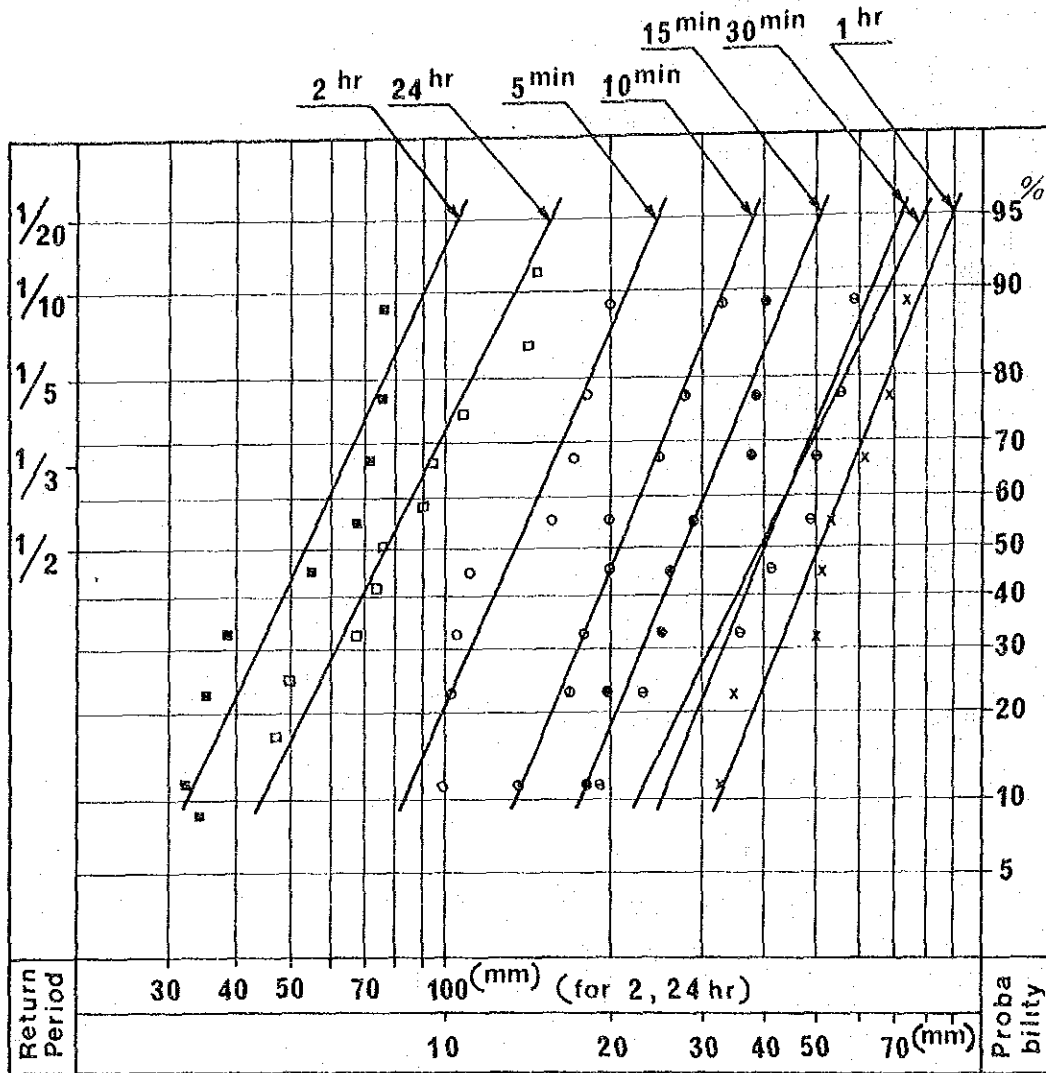


Fig. B-14 RAINFALL PROBABILITY FOR DIFFERENT DURATION

Fig. B-15 PATTERN of RAIN and FLOW
from 1980 MAY to 1981 APR

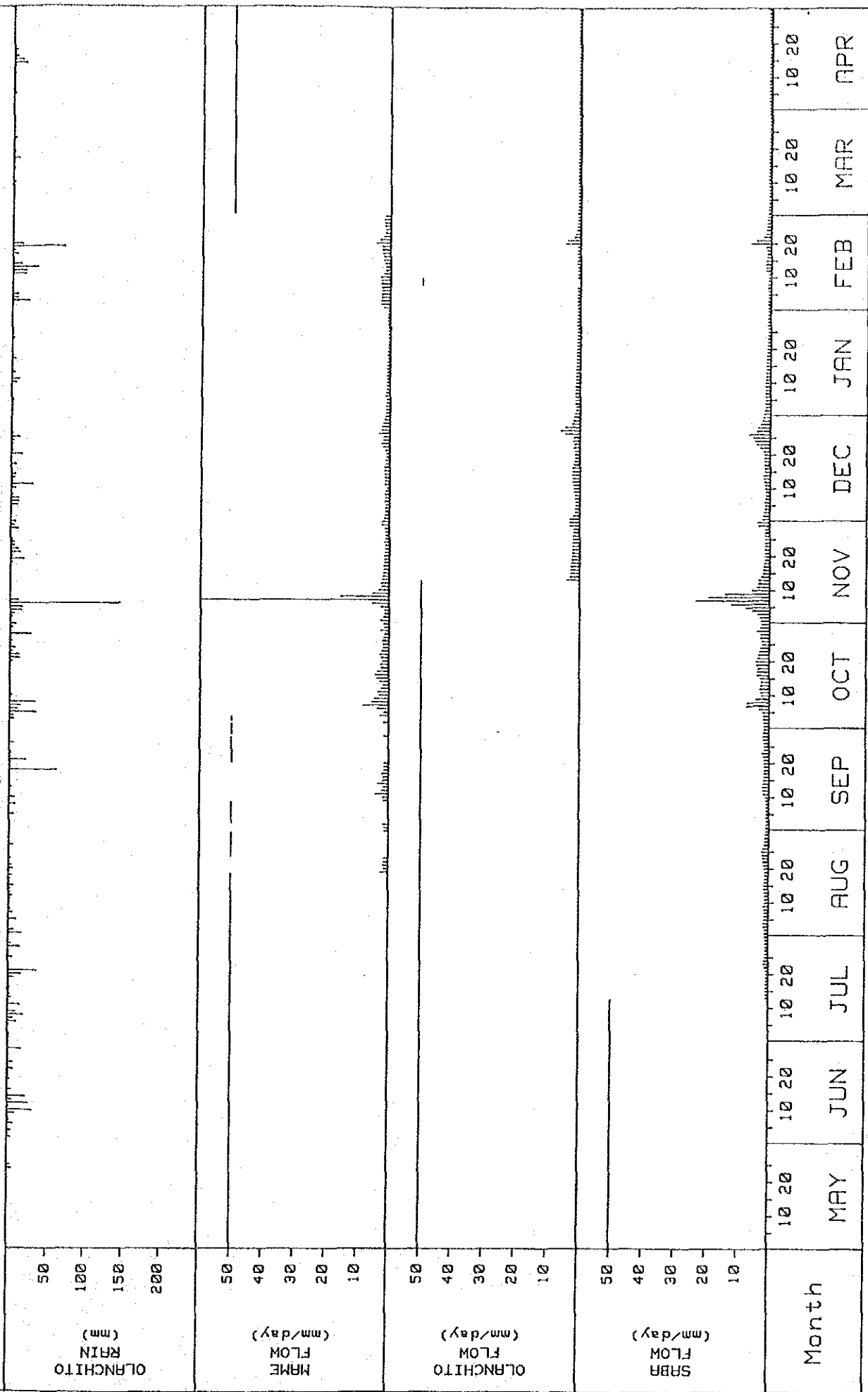


Fig. B-16 PATTERN of RAIN and FLOW
from 1981 MAY to 1982 APR

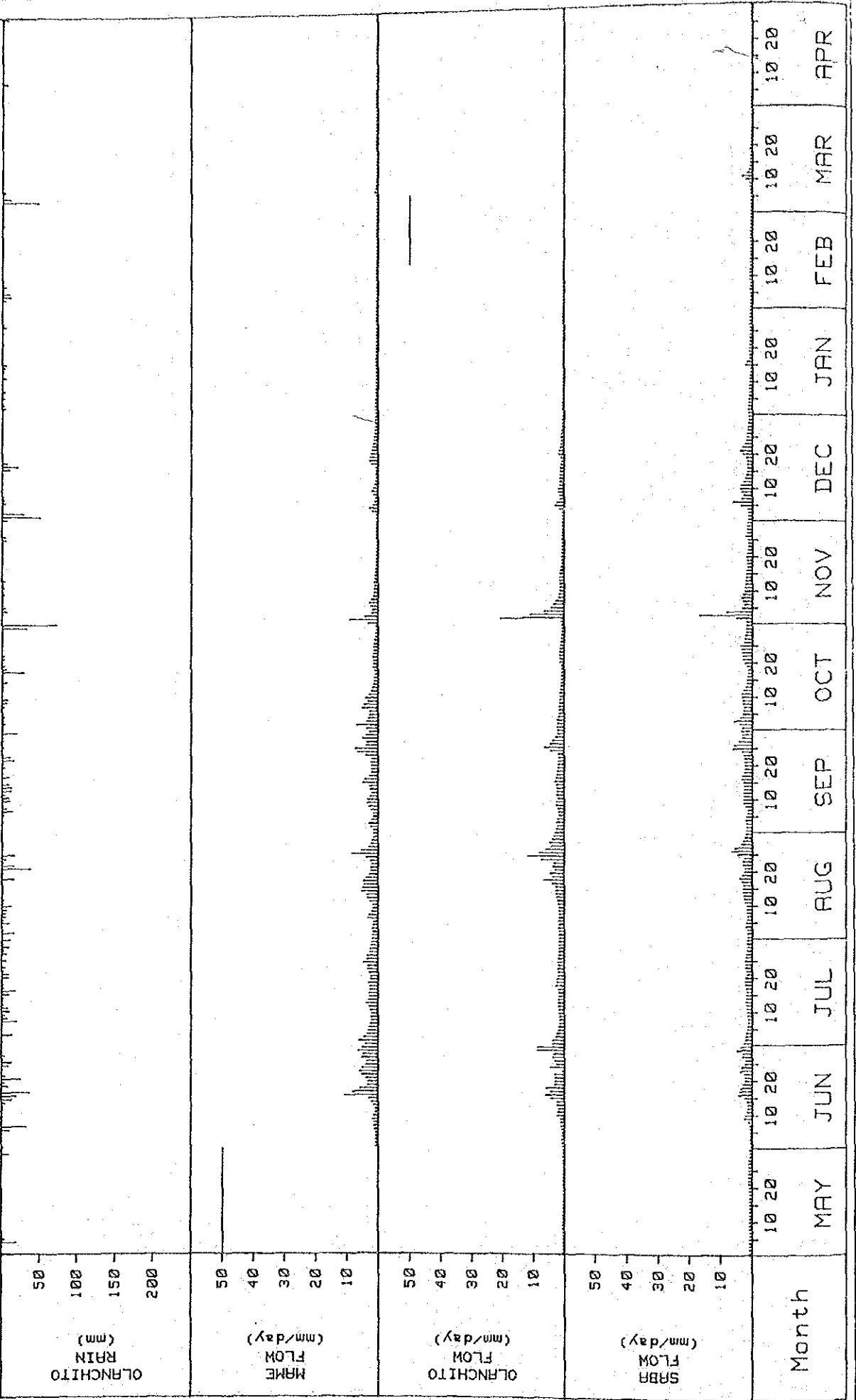


Fig. B-17 PATTERN of RAIN and FLOW
from 1982 MAY to 1983 APR

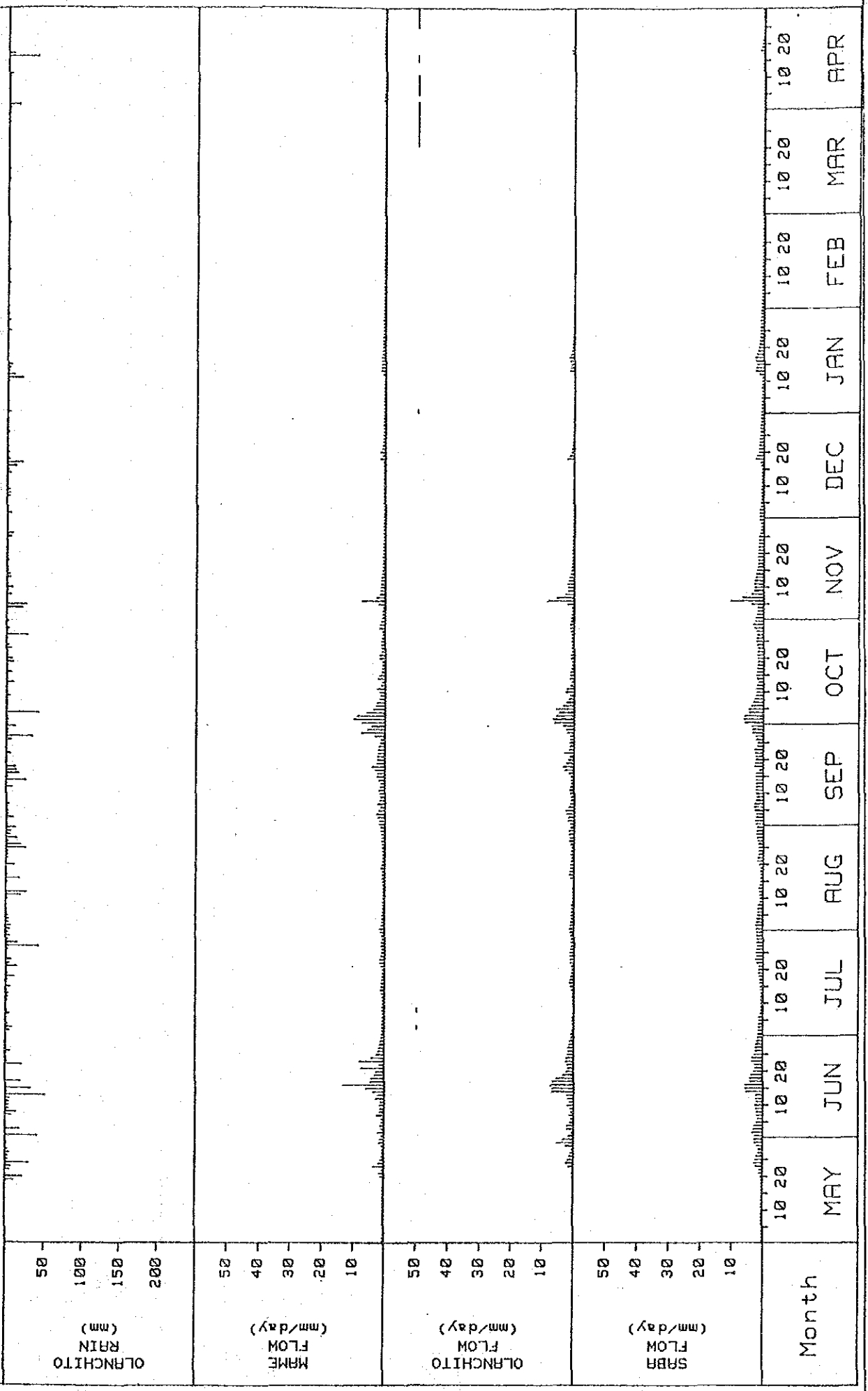
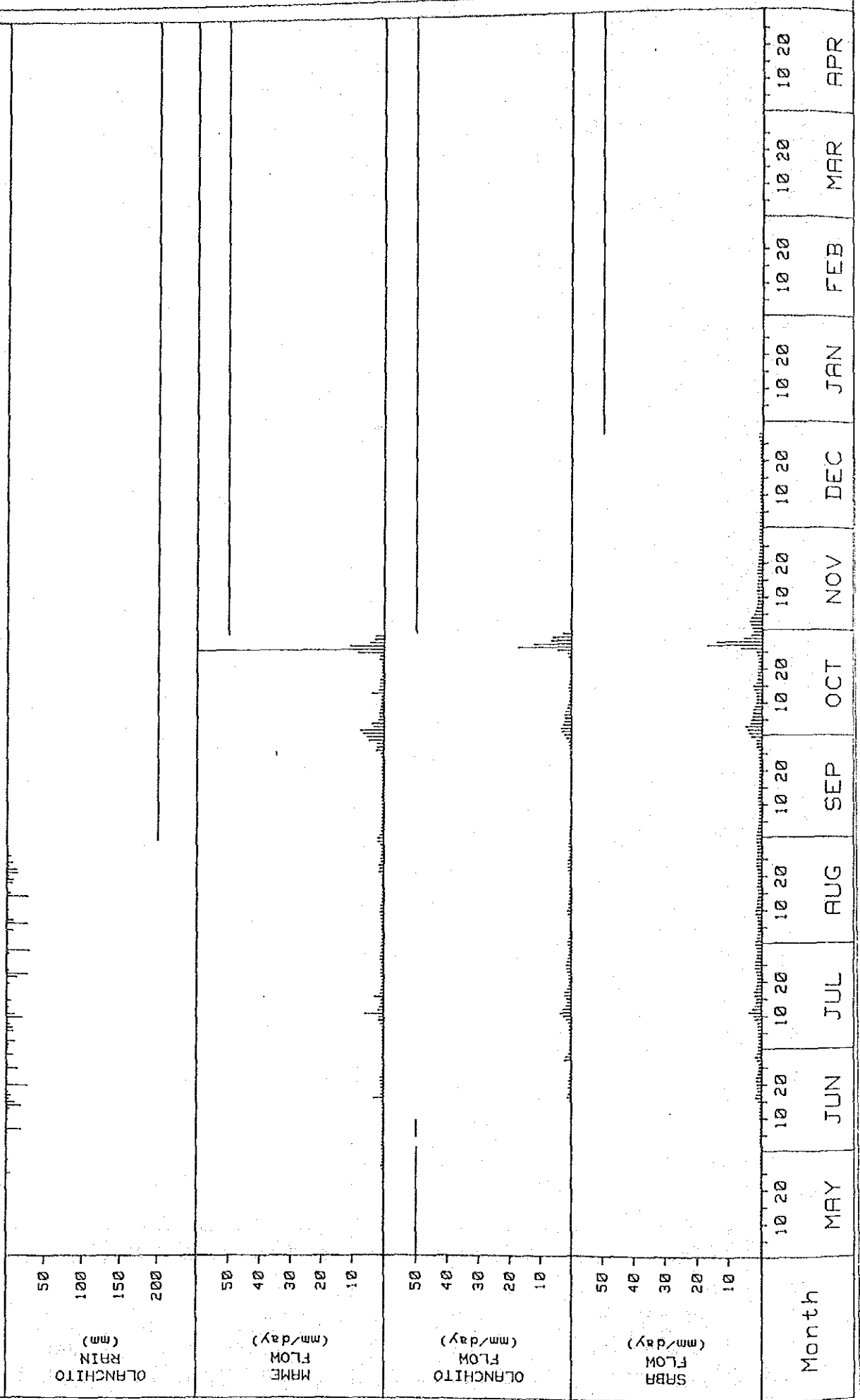


Fig. B-18 PATTERN of RAIN and FLOW
from 1983 MAY to 1984 APR



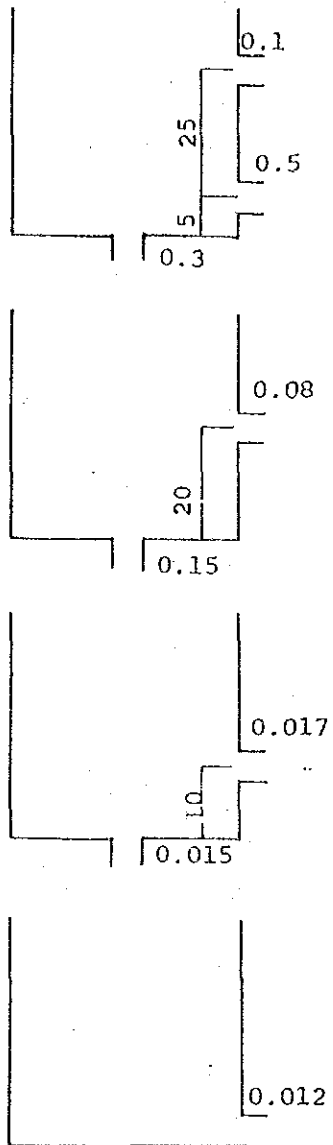


Fig. B-19. SERIES TANK MODEL FOR UPPER AGUAN

Fig. B-20 PATTERN of RAIN and RUNOFF
from 1972 MAY to 1974 APR

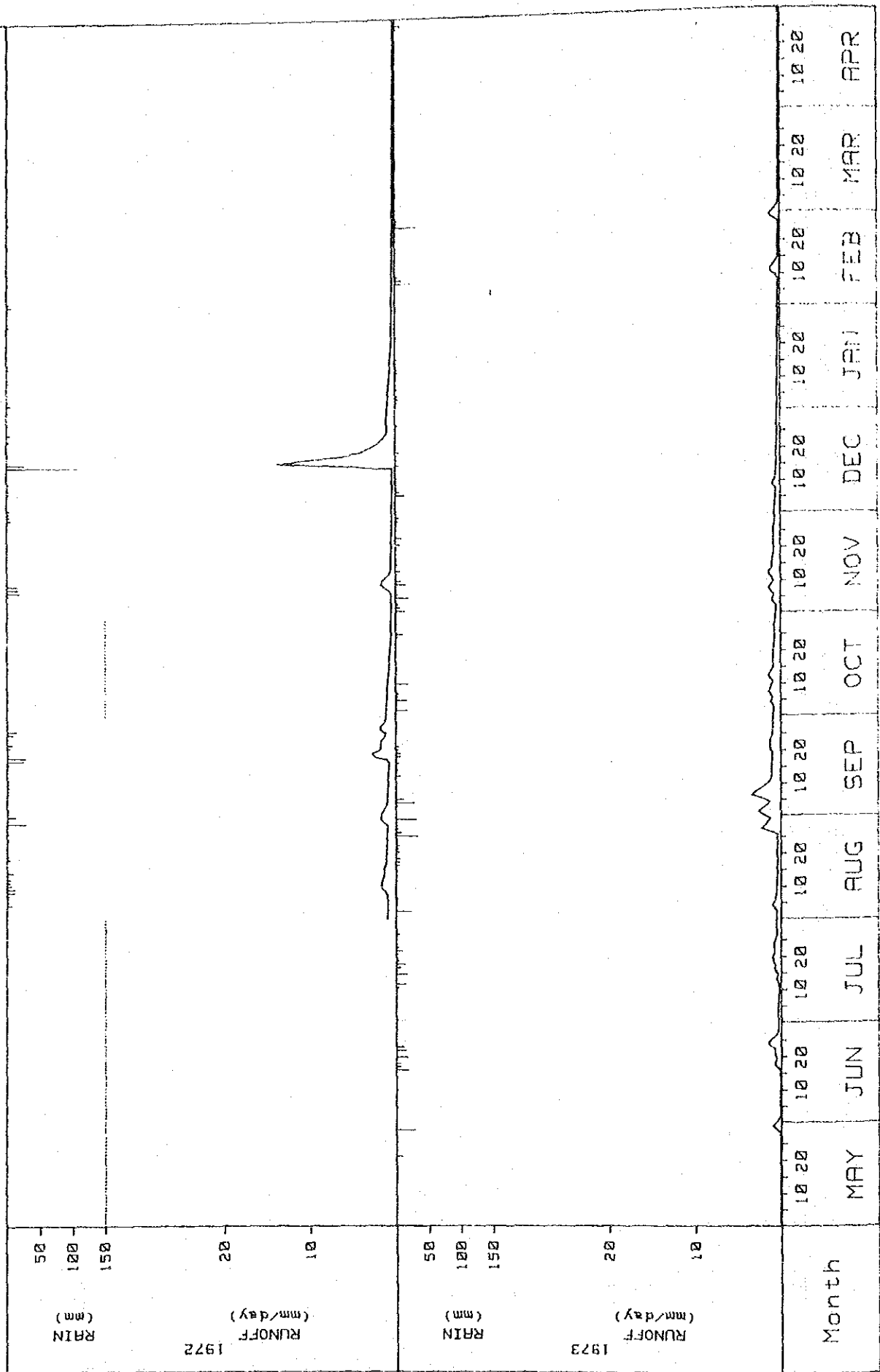


Fig. B-21 PATTERN of RAIN and RUNOFF from 1974 MAY to 1976 APR

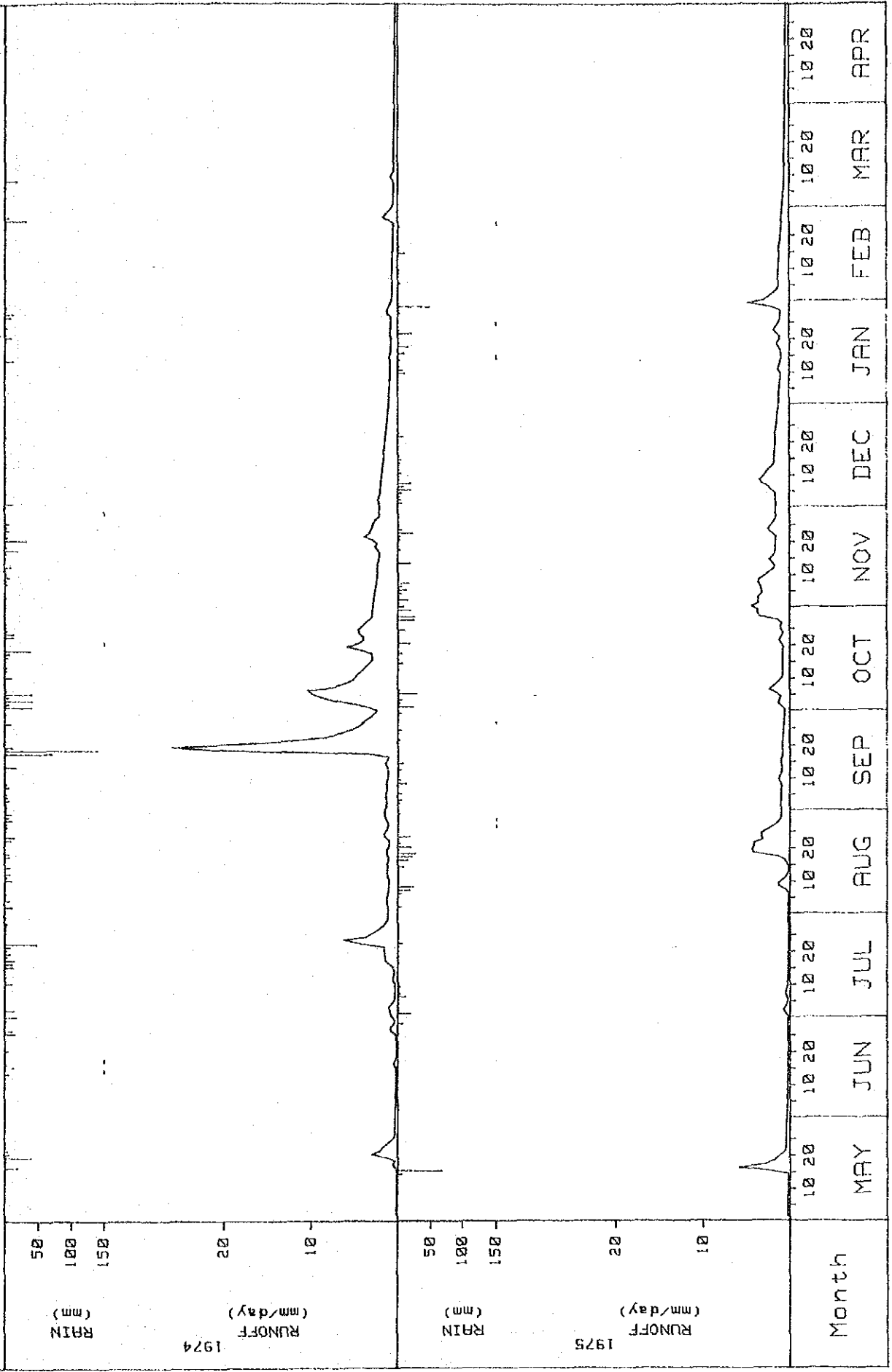


Fig. B-22 PATTERN of RAIN and RUNOFF
from 1976 MAY to 1978 APR

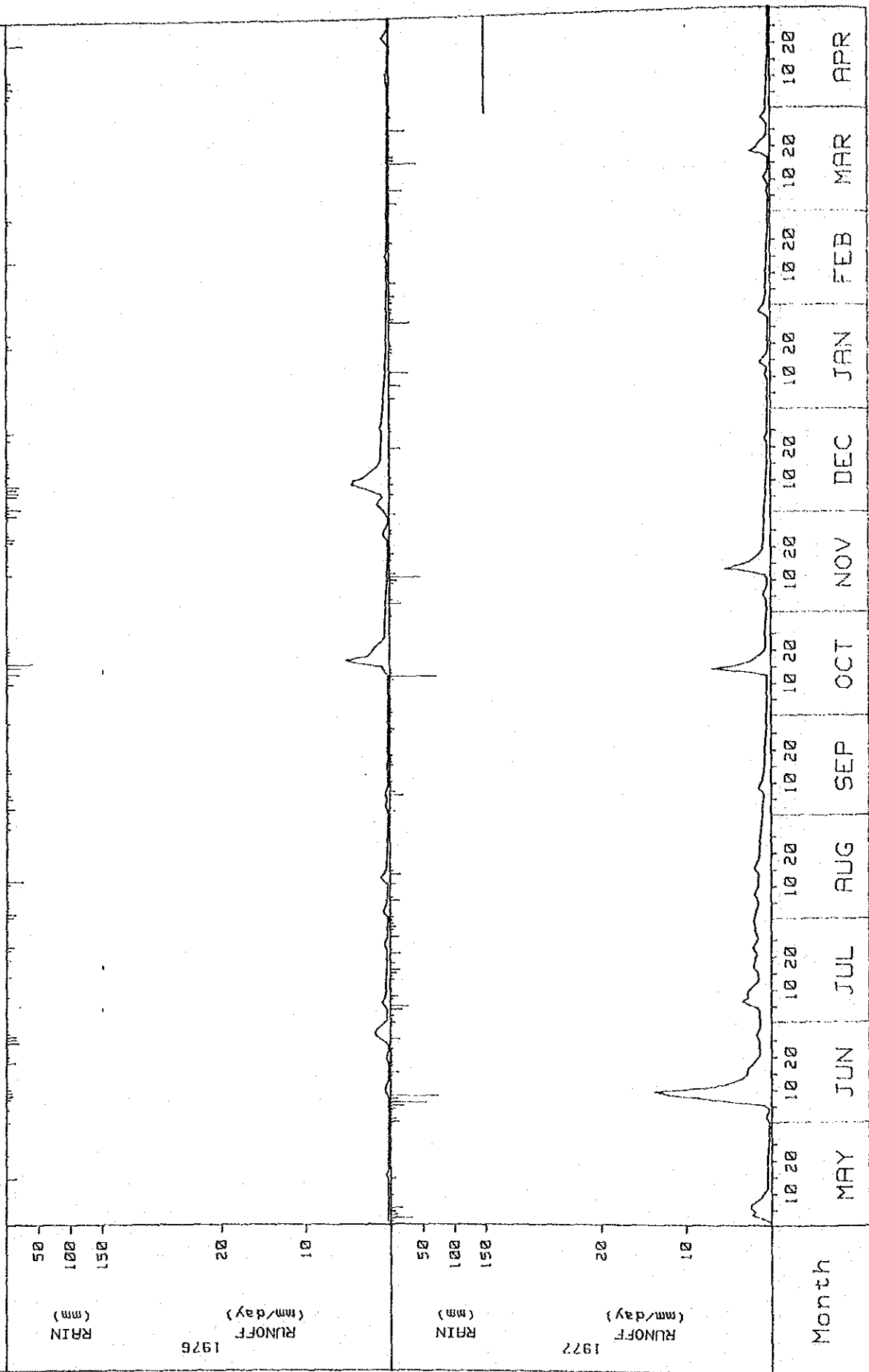
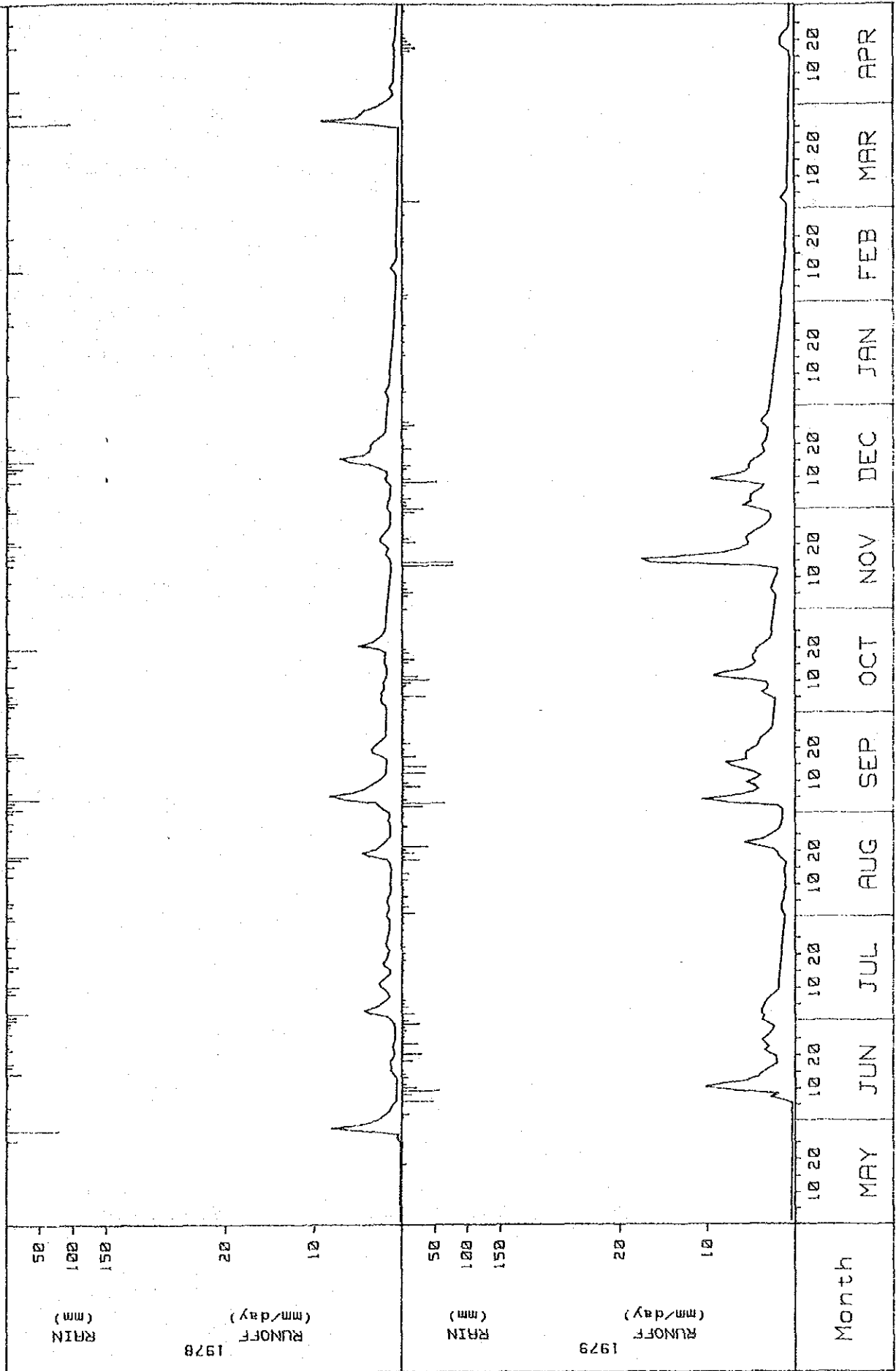


Fig. B-23 PATTERN of RAIN and RUNOFF
from 1978 MAY to 1980 APR



STAGE - DISCHARGE CURVES		
DESCRIPTION	APPLICATION PERIOD	EQUATION
STATION: PTE. OLANCHITO RIVER : RIO AGUAN BASIN : RIO AGUAN	Nº 1: 8/11/80 - 30/4/81	$Q = 304.89(H-0.01)^{1.349}$ $H \leq 1.20$
	Nº 2: 1/5/81 - 31/10/83	$Q = 6.98(H+0.48)^{3.245}$ $H \leq 0.90$
		$Q = 4.43(H+0.48)^{4.695}$ $0.90 < H \leq 2.20$

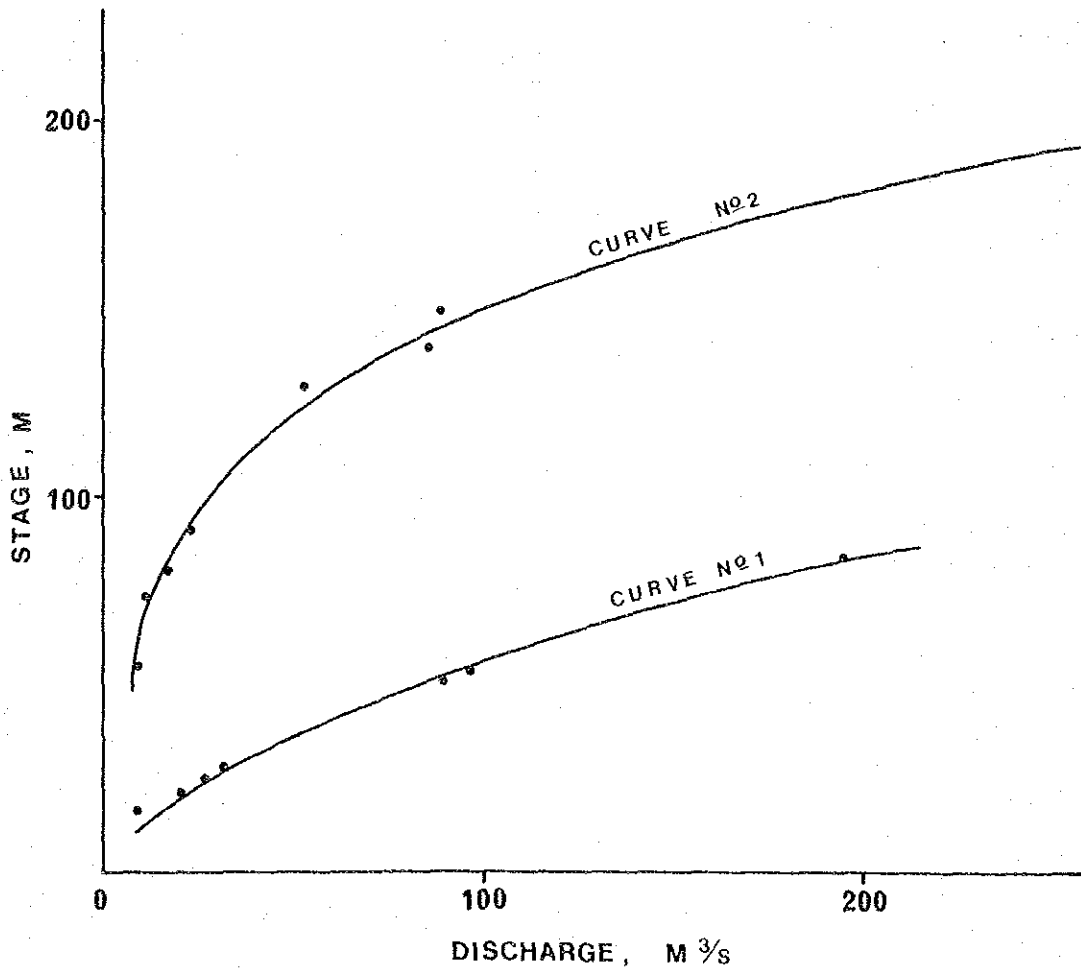


Fig. B-24 STAGE - DISCHARGE CURVES PTE. OLANCHITO

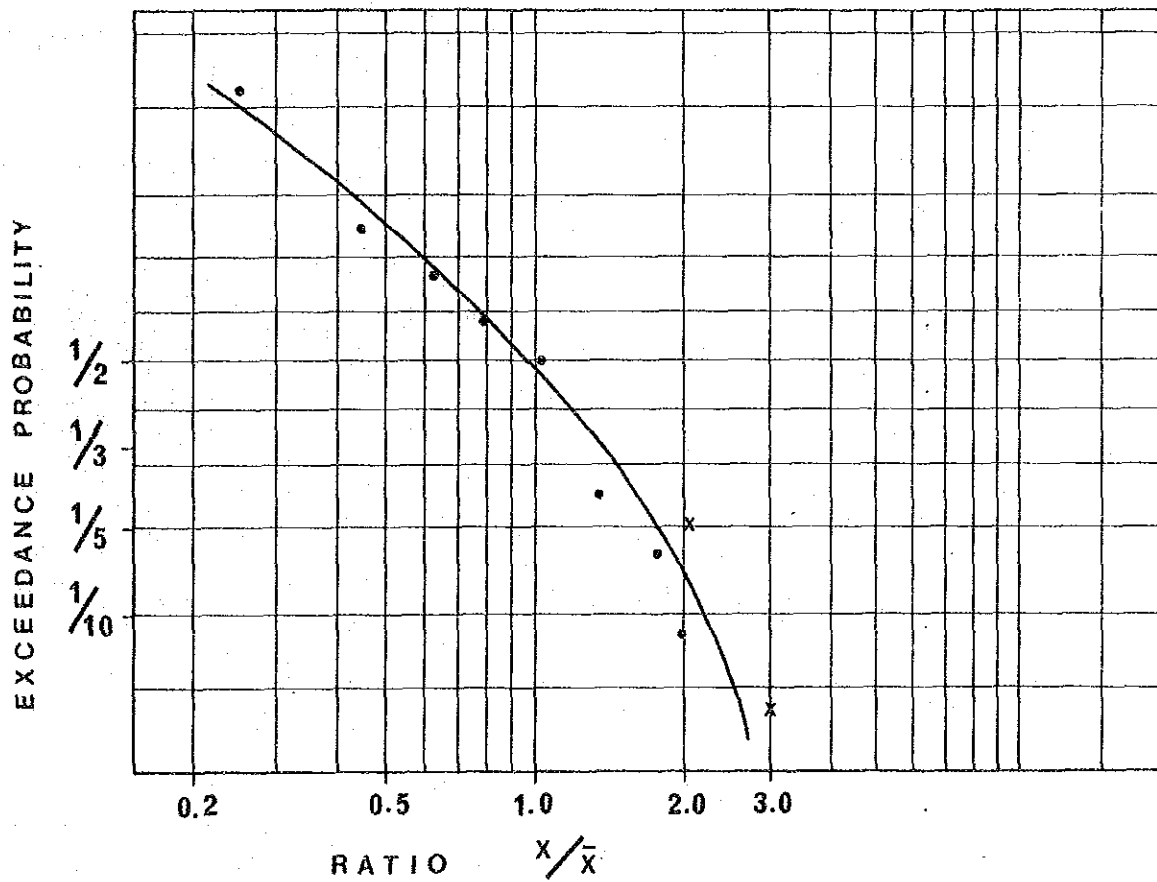


Fig. B-25 PROBABILITY OF MAXIMUM RUNOFF

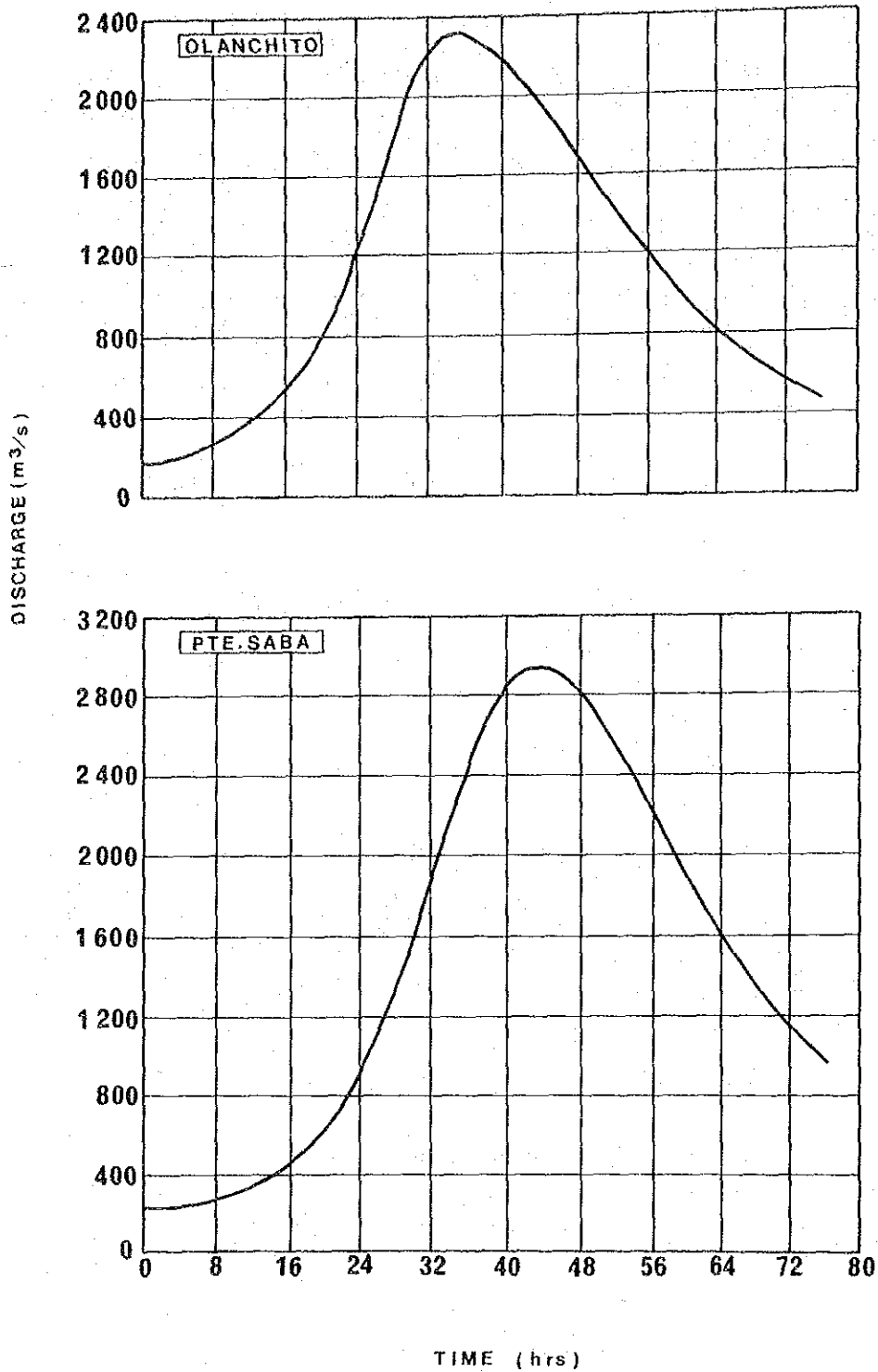


Fig. B-26 PROPAGATION OF THE 1 IN 5 - YEAR HYDROGRAPH IN THE UPPER RIVER
 SOURCE : THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN

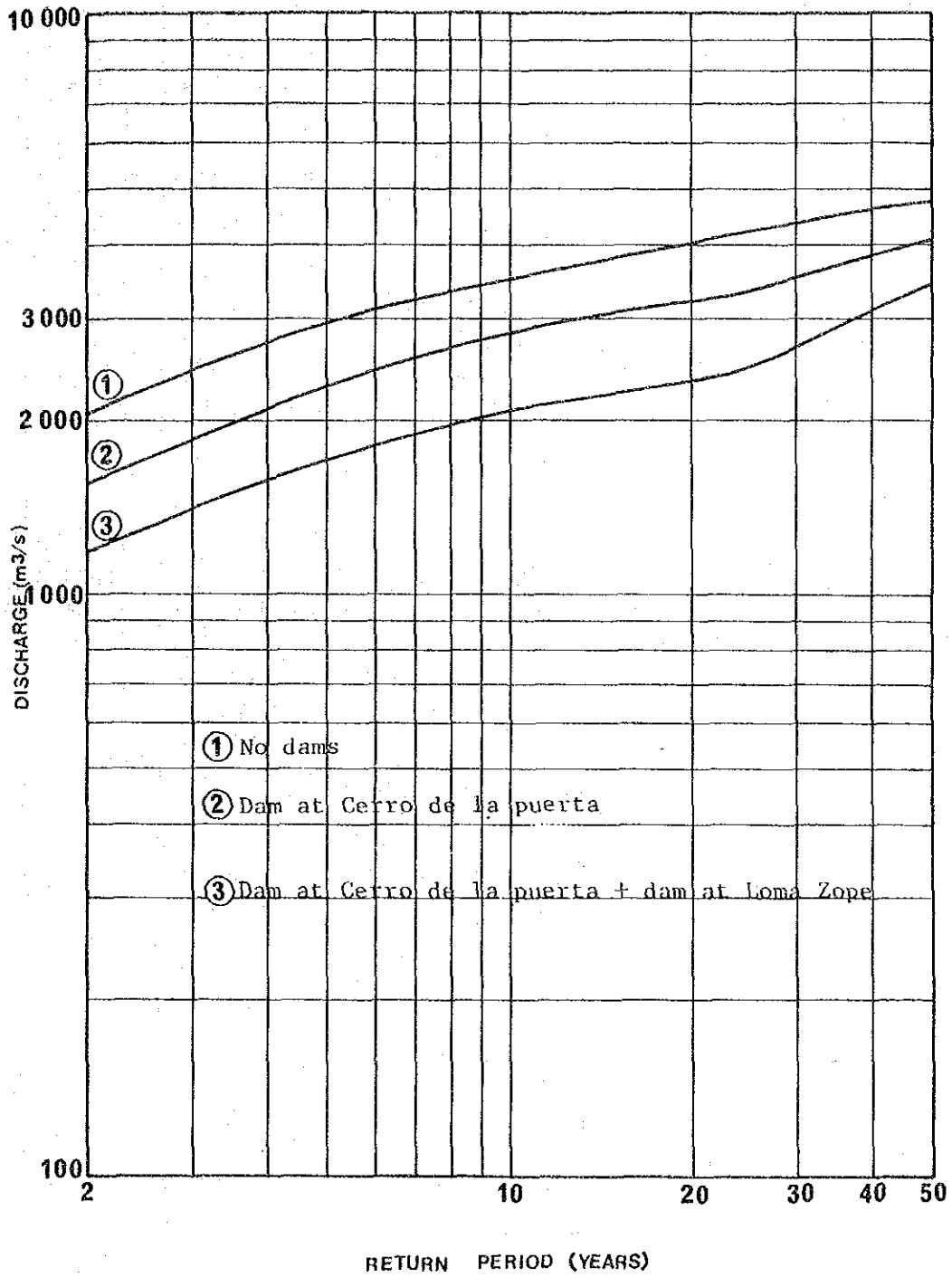


Fig.B-27 FLOOD PEAKS PTE. SABA WITH DAMS IN THE UPPER AGUAN
 SOURCE: THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN

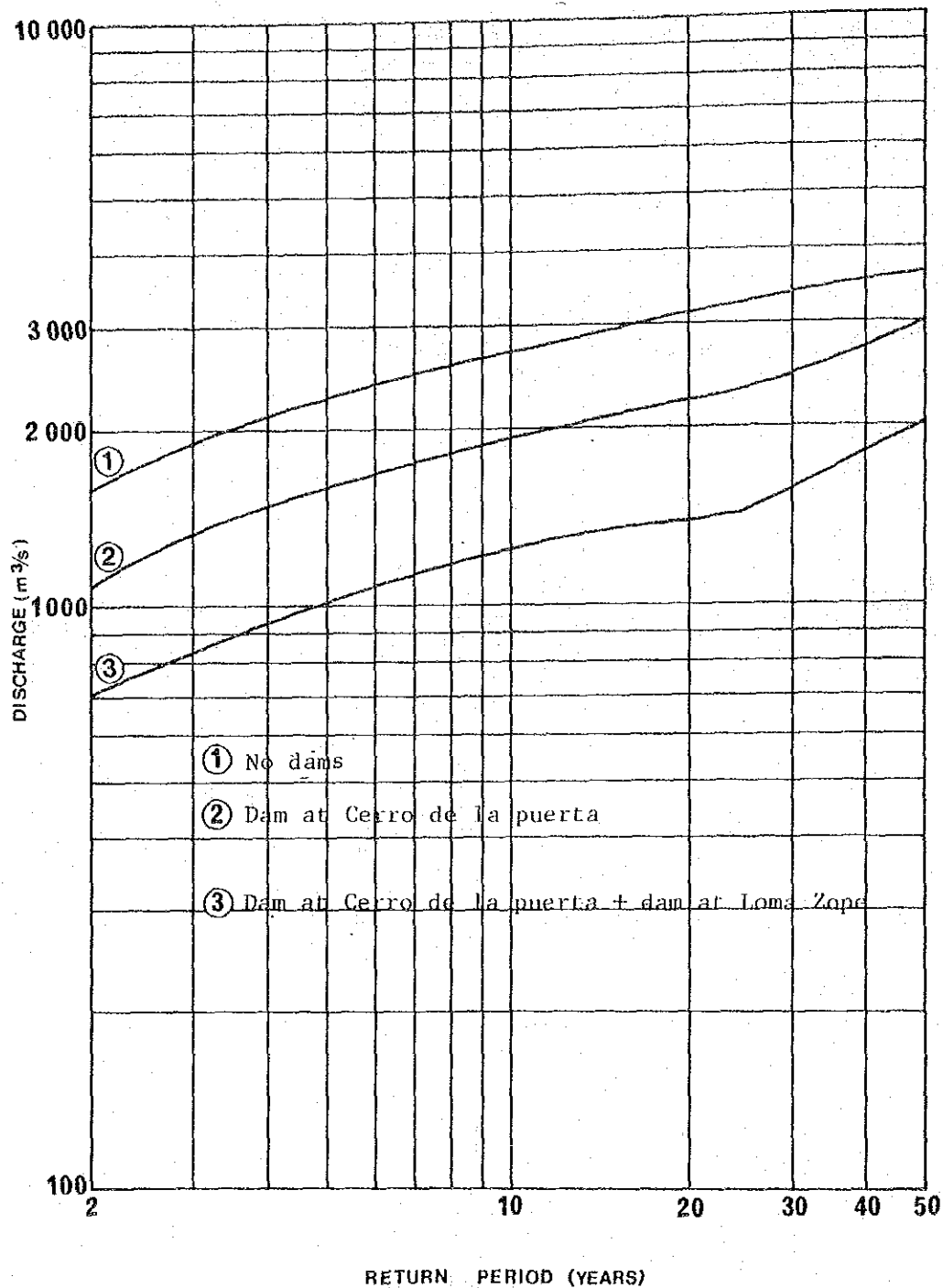


Fig.B-28 FLOOD PEAKS AT OLANCHITO WITH DAMS IN UPPER AGUAN
 SOURCE : THE HYDRAULIC MASTER PLAN FOR THE AGUAN RIVER BASIN

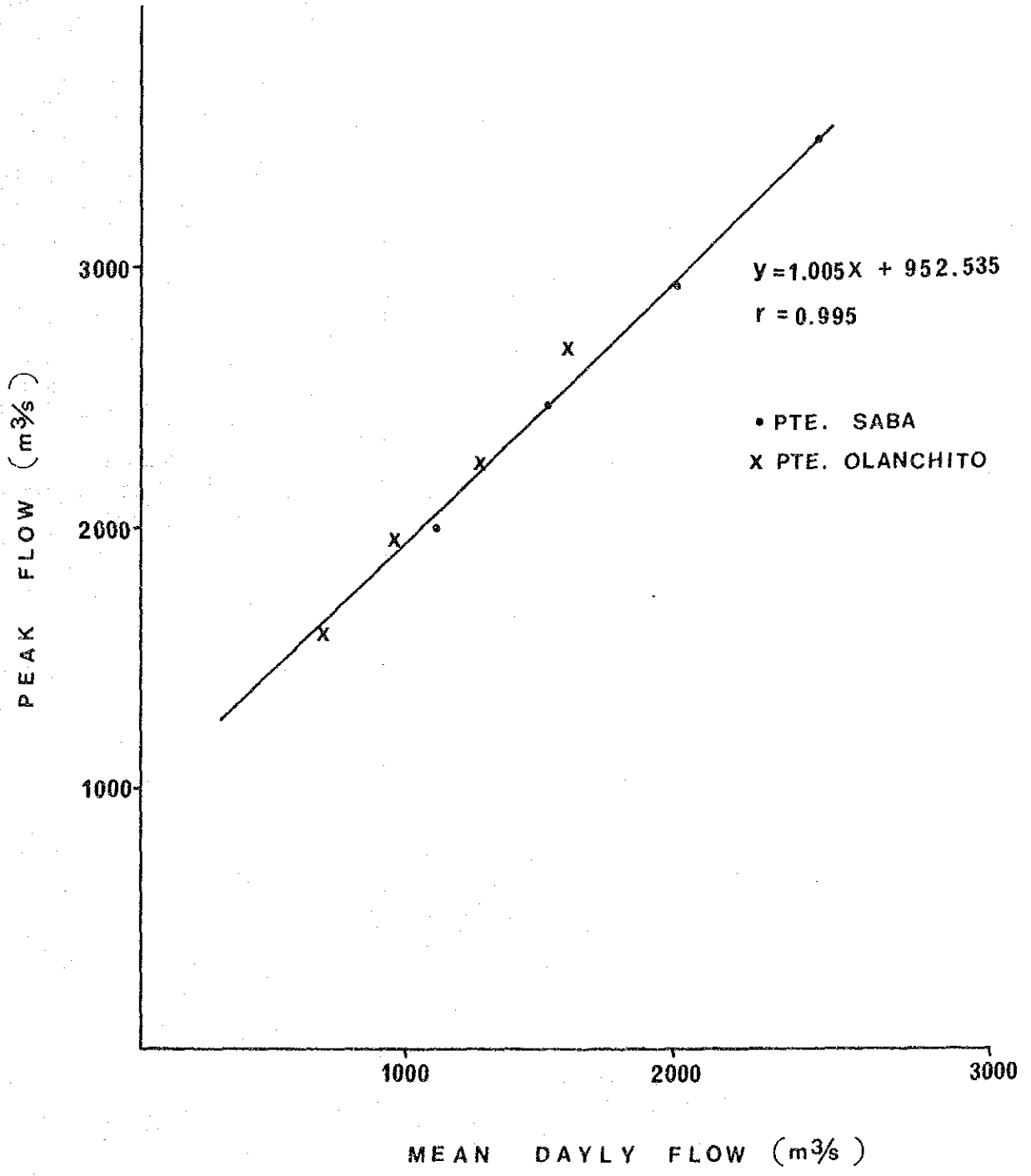


Fig. B-29 RELATION OF MEAN DAILY FLOW AND PEAK FLOW ON THE AGUAN RIVER

Q: DESIGN DISCHARGE (M³/S)

A: CATCHMENT AREA (HA)

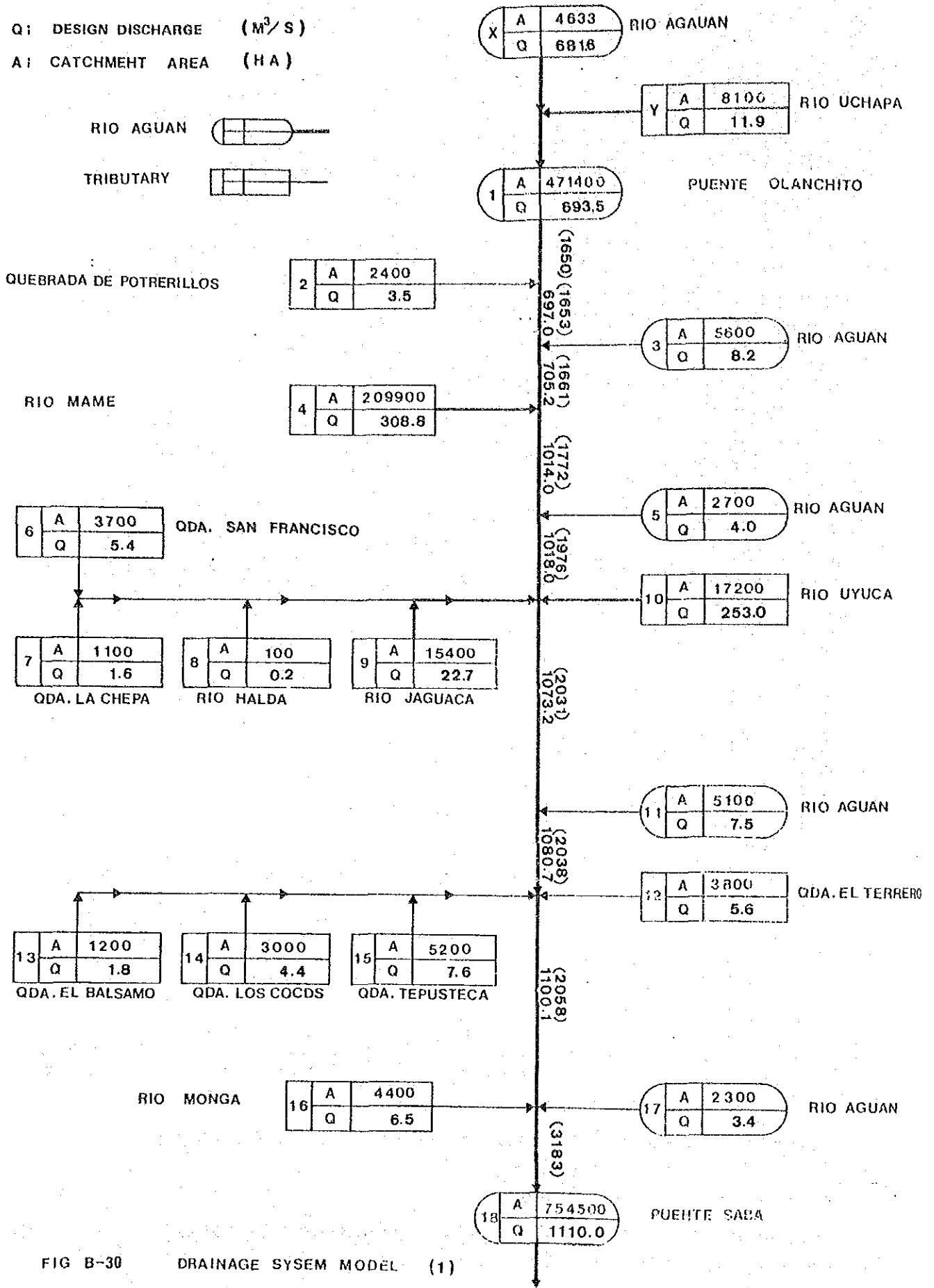
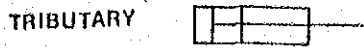


FIG B-30 DRAINAGE SYSEM MODEL (1)

RETURN PERIOD 1/2

Q: DESIGN DISCHARGE (M³/S)

A: CATCHMENT AREA (HA)



QUEBRADA DE POTRERILLOS

2	A	2400
	Q	4.8

RIO MAME

4	A	209900
	Q	422.9

6	A	3700
	Q	7.5

QDA. SAN FRANCISCO

7	A	1100
	Q	2.2

QDA. LA CHEPA

8	A	100
	Q	0.2

RIO HALDA

9	A	15400
	Q	31.0

RIO JAGUACA

13	A	1200
	Q	2.4

QDA. EL BALSAMO

14	A	3000
	Q	6.0

QDA. LOS COCDS

15	A	5200
	Q	10.5

QDA. TEPUSTECA

RIO MONGA

16	A	4400
	Q	8.9

X	A	4633
	Q	933.4

RIO AGUAN

Y	A	8100
	Q	16.3

RIO UCHAPA

1	A	471400
	Q	949.7

PUEBTO OLANCHITO

3	A	5500
	Q	11.3

RIO AGUAN

5	A	2700
	Q	5.4

RIO AGUAN

10	A	17200
	Q	34.6

RIO UYUCA

11	A	5100
	Q	10.3

RIO AGUAN

12	A	3800
	Q	7.7

QDA. EL TERRERO

17	A	2300
	Q	4.6

RIO AGUAN

18	A	754300
	Q	1520.0

PUEBTO SABA

(1906) (1911) 954.5 (1923) 954.8 (2348) 1388.7 (2354) 1394.1 (2430) 1469.6 (2440) 1479.9 (2467) 1506.5 (2480)

FIG B-31 DRAINAGE SYSTEM MODEL (2)

RETURN PERIOD $\frac{1}{3}$

Q: DESIGN DISCHARGE (M³/S)
 A: CATCHMENT AREA (HA)

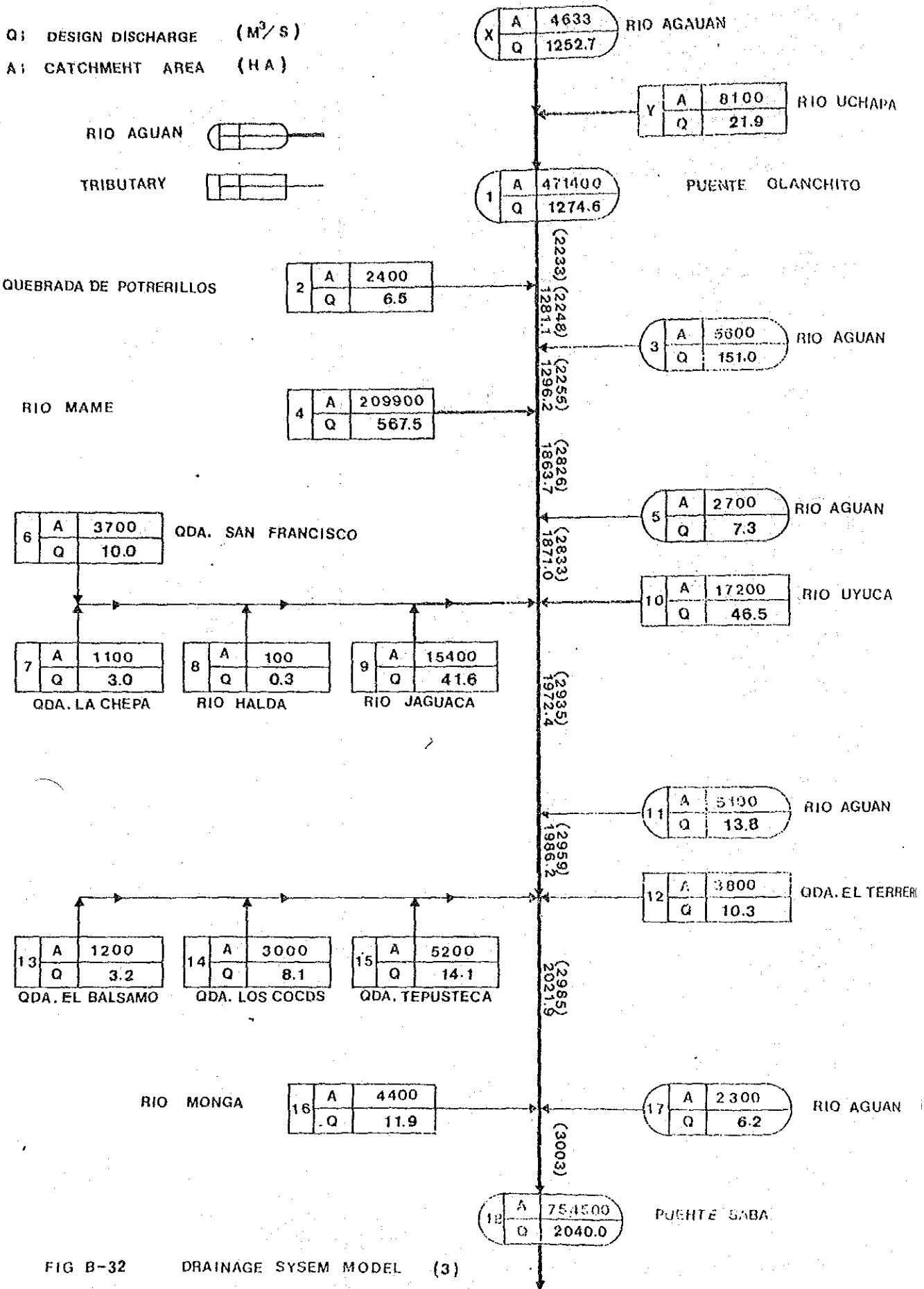


FIG B-32 DRAINAGE SYSEM MODEL (3)

RETURN PERIOD $\frac{1}{5}$

Q1 DESIGN DISCHARGE (M³/S)

A1 CATCHMENT AREA (HA)

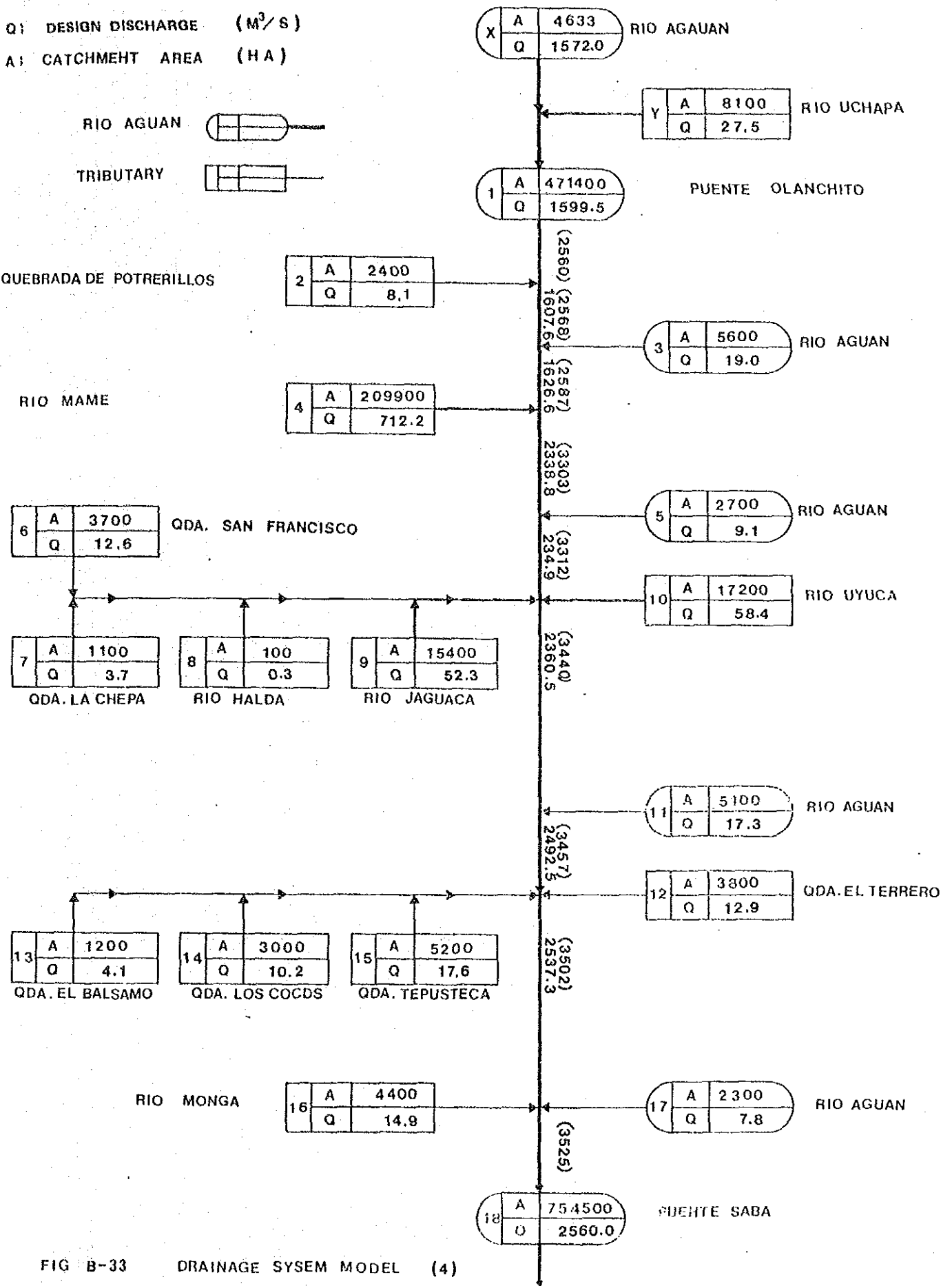


FIG B-33 DRAINAGE SYSEM MODEL (4)

RETURN PERIOD $\frac{1}{10}$

Table B-1 (1) Summary of Available Data for the Daily Rainfall Stations

STATION	LOCATION		ELEVATION				RECORD		
	LAT.	LONG.	(m.a.s.l.)				1950	1960	1970
1. VICTORIA	14°56'	87°24'	360				65		
2. SULACO	14°53'	87°13'	700				65		
3. MORAZAN	15°20'	87°36'	240				65		
4. MARALE	14°53'	37°08'	650				65		
5. SUBIRANA	15°12'06"	87°26'52"	870						79
6. YORITO	15°04'	87°17'	760					68	
7. LA HABANA	15°13'34"	87°20'54"	800						79
8. CHAMUSCADO	15°13'49"	87°14'07"	615						79
9. YORO	15°08'18"	87°07'35"	660						80
10. OCOTAL	15°23'	87°20'	700					68	
11. LA GUATA, PUEBLO NUEYO	15°13'	87°00'	700					68	
12. P. DE CONEJO, SANTA RITA	14°57'30"	86°50'47"	870						80
13. MALACATON	15°23'52"	87°14'52"	900						79
14. ROSARIO	14°54'19"	86°42'06"	780						79
15. MANGULILE	15°04'	86°49'	970					68	
16. MEJIA	15°17'29"	86°52'28"	560						80
17. SALAMA	14°50'	86°36'	1,300					68	
18. TERGALES	15°17'04"	87°00'53"	970						80
19. YOCON	15°00'	86°43'	700					68	

Source: The Hydraulic Master Plan for the Aguan River Basin

Table B-1 (2) Summary of Available Data for the Daily Rainfall Stations

STATION	LOCATION		ELEVATION (m.a.s.l.)	RECORD			
	LAT.	LONG.		1950	1960	1970	1980
20. AGUA CALIENTE	15°24'50"	87°03'29"	390	53			
21. JOCON	15°17'	86°53'	500		68		
22. SAN JUAN PUEBLO	15°36'	87°12'	70			71	
23. SAN MARCOS	15°31'50"	87°06'49"	220				79
24. SAN LORENZO	15°25'20"	87°57'12"	320			72	
25. JANO	15°01'46"	86°30'32"	800				79
26. MANTO	14°56'	86°23'	600		68		
27. PIEDRA BLANCA	15°19'31"	86°42'31"	480				79
28. LA GUATA, OLANCHO	15°06'	86°24'	970		68		
29. LA UNION	15°01'14"	86°42'31"	780				81
30. ESQUIPULAS NORTE	15°19'	86°33'	360				82
31. COYOLAS	15°29'	86°41'	305	36			
32. PUEBLO VIEJO DE GUATA	15°14'	86°52'	900		68		
33. PLAN GRANDE	15°36'	86°44'	530			73	
34. GOLOSON	15°47'	86°47'	5			71	
35. LA COLORADA	15°38'25"	86°44'37"	360			73	
36. OLANCHITO	15°31'10"	86°34'20"	150	50			
37. STANDARD	15°47'	86°50'	25	28			

Table B-1 (3) Summary of Available Data for the Daily Rainfall Stations

STATION	LOCATION		ELEVATION (m.a.s.l.)	RECORD			
	LAT.	LONG.		1950	1960	1970	1980
38. PIEDRAS NEGRAS	15°41'	86°43'	180			72	
39. RIO VIEJO	15°40'	86°42'	260			73	
40. TONCONTIN	15°39'	86°41'	320			73	
41. SAGUAY	15°07'	86°03'	625			73	
42. SAN FRANCISCO	15°26'	86°25'	140				80
43. LA VENTA	15°04'30"	85°53'	520		66	73	
44. LAS LIMAS	15°06'06"	85°47'48"	840				
45. LOS PLANES	15°37'	86°24'	200	28			
46. SONAGUERA	15°31'19"	86°16'17"	90				80
47. ISLETAS	15°37'	86°10'	50	58			
48. TAPIQUIL	15°29'06"	86°01'30"	440				80
49. LAS MANGAS	15°33'35"	86°03'40"	180				80
50. LA SOLEDAD	15°20'48"	85°46'	388			74	
51. EL COCO	15°44'44"	86°03'24"	50				80
52. SINALOA	15°41'28"	85°57'42"	20				80
53. EL PEDRERO	15°29'	85°41'	270			73	
54. LA ESPERANZA	15°38'	85°43'	120				80
55. TRUJILLO	15°55'	85°59'	3	50			
56. COROCITO	15°46'51"	85°47'37"	12				80
57. PUERTO CASTILLA	16°01'	80°01'	3				80
58. LIMON	15°02'	85°30'	3				

Table B-2 (1) Summary of Available Data for Climate Stations

STATION	LOCATION		ELEVATION (m. a. s. l.)	TYPE	RECORD					
	LAT.	LONG.			1970	72	74	76	78	1980
1. VICTORIA	14°56'	87°24'	360	T, RH, E, P						
2. MORAZAN	15°20'	87°36'	240	T, RH, E, P						
3. SUBIRANA	15°12'06"	87°26'56"	870	T, P						
4. LA HABANA	15°13'34"	87°20'54"	800	T, RH, PG, P						
5. CHAMUSCADO	15°13'49"	87°14'07"	615	T, PG, P						
6. YORO	15°08'18"	87°14'07"	660	T, RH, E, S, P						
7. MALACATON	15°23'52"	87°14'52"	900	T, P						
8. EL ROSARIO	14°54'19"	86°42'06"	780	T, PG, P						
9. MEJIA	15°17'29"	86°52'28"	560	T, PG, P						
10. TERCALES	15°17'04"	87°00'53"	970	T, P						
11. LA UNION	15°01'14"	86°42'31"	780	T, RH, PG, P						
12. JANO	15°01'46"	86°30'32"	800	T, PG, P						
13. ESQUIPULAS DEL NORTE	15°19'	86°33'	360	T, P						
14. OLANCHITO	15°31'10"	86°34'20"	150	T, RH, E, W, P						
15. SAN FRANCISCO	15°26'	86°25'	140	T, P						
16. LAS LIMAS	15°06'06"	85°47'48"	500	T, RH, E, P						
17. TAPIQUIL	15°29'06"	86°01'30"	440	T, PG						
18. LAS MANGAS	15°33'35"	86°03'40"	180	T, P						
19. SINALOA	15°41'28"	85°57'42"	20	T, RH, E, S, PG						

Source: The Hydraulic Master Plan for the Aguan River Basin

Table B-2 (2) Summary of Available Data for Climate Stations

STATION	LOCATION		ELEVATION (m.a.s.l.)	TYPE	RECORD					
	LAT.	LONG.			1970	72	74	76	78	1980
20. LA ESPERANZA	15°38'	85°43'	120	T, RH, P						
21. COROCITO	15°46'51"	85°47'37"	12	T, P						
22. PUERTO CASTILLA	16°01'	80°01'	3	T, S, PG, P						
23. EL PANTANO	15°08'18"	87°07'35"	660	PG, P						
24. AGUA CALIENTE	15°24'50"	87°03'29"	390	PG, P						
25. PIEDRA BLANCA	15°19'31"	86°42'31"	480	PG, P						

Notes:

Type refers to measurement of following parameters:

T - Temperature; RH - Relative Humidity

E - Evaporation; P - Daily rainfall

PG - Autographic rainfall; S - Sunshine duration

W - Wind speed

Table B-3 Effective Rainfall

Rainfall		Effective Rainfall		
inches	mm	inches	mm	%
1	25.4	0.95	24.13	95
2	50.8	1.85	46.99	93
3	76.2	2.67	67.82	89
4	101.6	3.32	84.33	83
5	127.0	3.79	96.87	74
6	152.4	4.02	102.11	67
7	177.8	4.07	103.38	58
8	203.2	4.12	104.65	52
9	228.6	4.17	105.92	46
10	254.0	4.22	107.19	42

Table B-4 Maximum Rainfall Data for Different Duration

(Olanchito mm)

Year	5'	10'	15'	30'	1 hr	2 hr	24hr	Annual
1972	(8.5)*	(15.0)*	(17.5)*	(24.0)*	-	-	(108.1)	-
73	(6.0)*	(8.3)*	(10.0)*	(16.0)*	(21.5)*	-	33.6	668.8
74	(10.0)	(20.0)	(26.0)	(33.0)	(37.5)	-	140.4	1,135.7
75	20.0	33.0	40.0	55.0	61.3	67.9	67.0	902.9
76	(3.0)	(5.0)	(7.0)	(9.0)	(14.0)	(17.9)	49.5	779.1
77	17.0	20.0	25.0	35.0	50.0	71.0	73.5	946.3
78	10.5	18.0	26.0	50.0	72.6	74.3	79.0	1,287.2
79	11.0	20.0	29.0	41.0	51.7	55.4	92.8	1,657.6
1980	15.5	25.5	38.1	49.1	53.1	32.8	145.0	1,208.8
81	9.9	13.6	18.1	19.8	34.0	35.0	72.8	1,280.3
82	10.3	17.0	19.6	22.7	32.5	38.4	47.5	1,156.7
83	18.0	28.0	37.5	58.0	67.8	75.9	107.4	1,099.3
Mean	(10.8)	(18.6)	(24.5)	(34.4)	(45.1)	(52.1)	(84.7)	-
	14.0	21.9	29.2	41.3	52.9	56.3	82.6	1,102.1

* : Data is less than two months

() : Data is not complete

Table B-5 Maximum Rainfall for the Different Duration in Order

(Olanchito mm)

No.	5'	10'	15'	30'	1 hr	2 hr	24 hr	Annual
1	20.0	33.0	40.0	58.0	72.6	75.9	145.0	1,657.6
2	48.0	28.0	38.1	55.0	67.8	74.3	140.4	1,287.2
3	17.0	25.5	37.5	50.0	61.3	71.0	(108.1)	1,280.3
4	15.5	20.0	29.0	49.1	53.1	67.9	107.4	1,208.8
5	11.0	20.0	26.0	41.0	51.7	55.4	92.8	1,156.7
6	10.5	(20.0)	(26.0)	35.0	50.0	38.4	79.0	1,135.7
7	10.3	18.0	25.0	(33.0)	(37.5)	35.0	73.5	1,099.3
8	(10.0)	17.0	19.6	(24.0)	34.0	32.8	72.8	946.3
9	9.9	(15.0)	18.1	22.7	32.5	(17.9)	67.0	902.9
10	(8.5)	13.6	(17.5)	19.0	(21.5)	-	49.5	779.1
11	(6.0)	(8.3)	(10.0)	(16.0)	(14.0)	-	47.5	668.8
12	(3.0)	(5.0)	(7.0)	(9.0)	-	-	33.6	-
Number of Data	(12)	(12)	(12)	(12)	(11)	(9)	(12)	-
	8	8	8	8	8	8	11	11

Table B-6 Rainfall and Intensity Probability for Different Duration (1) and (2)

Rainfall Probability for Different Duration (1)

(mm)

Return Period	5'	10'	15'	*30'	1 hr	2 hr	Remarks
1/2	13.5	21.1	28.1	39.5	51.1	56.1	* The data for 30
1/3	15.4	24.6	32.8	47.5	59.0	64.2	minutes were
1/5	18.2	28.5	38.0	53.8	67.8	75.4	adjusted
1/10	21.3	33.4	44.5	62.3	78.9	89.5	
1/15	23.1	36.2	48.1	66.0	85.1	97.5	
1/20	24.3	38.1	50.7	71.0	89.5	103.1	

Intensity Probability for Different Duration (2)

(mm/hr)

Return Period	5'	10'	15'	30'	1 hr	2 hr	Remarks
1/2	162.0	126.6	112.4	79.0	51.1	28.1	
1/3	184.8	147.6	131.2	95.0	59.0	32.1	
1/5	218.4	171.0	152.0	107.6	67.8	37.7	
1/10	255.6	200.4	178.0	124.6	78.9	44.8	
1/15	277.2	217.2	192.4	132.0	85.1	48.8	
1/20	291.6	228.6	202.8	142.0	89.5	51.6	

Table B-7 Calculation of Special Coefficient

Type Item	I	II	III
Formula	$I = \frac{a}{t + b}$	$I = \frac{a}{t^n}$	$I = \frac{a}{\sqrt{t} \pm b}$
$I_t = \beta t \cdot R$ ($\beta t = I_t/R$)	$\beta t = \frac{a'}{t + b}$	$\beta t = \frac{a'}{t^n}$	$\beta t = \frac{a'}{\sqrt{t} \pm b}$
a' & b or n	$a' = b + 60$ $b = \frac{60 - \beta t \cdot t}{\beta t - 1}$	$\log a' = \frac{\log \beta t - \log 60}{\log 60 - \log t}$ $n = \log a' / \log 60$	$a' = \sqrt{60} + b$ $b = \frac{\sqrt{60} - \beta t \sqrt{t}}{\beta t - 1}$
Remarks	$I = \beta t \cdot R$ $a = a' \times R$ R : 60 minutes Rainfall (mm/hr) βt : Special Coefficient = I_t/R I_t : t minutes Rainfall Intensity (mm/hr) t : Usually 10 minutes		

Table B-8 Details of Flow Recording Stations

STATION	LOCATION		ELEVATION	TYPE
	LAT.	LONG.		
1. ISLENA	15°10'36"	87°12'30"	560	A, S
2. ENEIDA	15°01'15"	86°47'54"	620	A, S
3. SABANA LARGA	15°23'43"	86°59'23"	260	A, S
4. TEGUAJAL	15°21'54"	86°45'27"	160	A, S
5. PTE. OLANCHITO	15°27'28"	86°32'17"	120	A, S
6. PTE. MAME	15°25'50"	86°27'50"	120	A, S, M
7. TEPUSTECA				S, M
8. PTE. SABA	15°31'29"	86°14'02"	70	A, S, M
9. PTE. REFORMA AGRARIA	15°42'20"	86°00'30"	34	S, M
10. SAN ISIDRO	15°38'14"	85°58'24"	80	A, S
11. QDA. DE ARENA				S
12. PASO DEL AGUAN (Briches)				S
13. PTE. DURANGO	15°48'36"	85°47'00"	12	A, S
14. AGUA AMARILLA	15°21'26"	85°48'48"	6	M

NOTES: A - Autographic Recorder

S - Staff Gauge

M - Maximum Water Level Recorder

Table B-9 RAINFALL AT BLANCHITO (Sheet 1, mm)

Period from 1972 to 1983

B

YEAR	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1972	MAX	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	27.60	27.70	-0.00	18.50	108.10	108.10
	MEAN	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	3.32	3.51	-0.00	1.93	5.15	3.49
	TOTAL	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	103.00	105.30	-0.00	57.80	160.00	426.10
1973	MAX	5.00	6.80	1.10	.20	18.20	15.50	33.60	27.60	18.70	19.90	12.60	33.60
	MEAN	.54	.52	.04	.01	2.57	2.75	4.35	2.63	2.50	3.55	1.19	1.83
	TOTAL	16.80	14.50	1.10	.40	38.40	85.40	135.30	78.90	77.40	106.50	37.00	568.60
1974	MAX	4.30	32.60	1.30	8.60	18.20	48.20	14.50	140.40	41.30	32.10	11.90	140.40
	MEAN	.73	2.89	.10	.38	2.73	4.70	3.87	9.24	8.03	3.41	.86	3.26
	TOTAL	22.70	75.20	3.00	11.30	75.30	145.80	120.10	277.20	240.90	99.00	26.70	1171.70
1975	MAX	12.30	30.60	17.70	.70	7.70	19.80	26.80	12.80	29.20	23.50	20.70	67.00
	MEAN	1.81	1.31	.59	.04	.38	1.64	6.01	2.17	6.24	4.07	3.30	2.49
	TOTAL	56.10	36.70	18.40	1.30	73.00	50.80	174.40	63.00	193.40	122.00	102.30	902.80
1976	MAX	49.50	10.80	.70	.90	19.80	21.10	25.30	12.20	40.50	12.60	22.40	49.50
	MEAN	4.61	.94	.04	.04	3.64	2.00	2.42	1.83	3.49	1.43	4.69	2.16
	TOTAL	133.60	26.40	1.20	1.30	26.10	58.00	75.00	55.00	104.70	42.90	145.50	779.10
1977	MAX	8.70	13.70	8.10	25.10	73.50	27.80	15.20	19.40	71.90	47.10	16.40	73.50
	MEAN	.68	.73	.30	2.05	7.54	5.08	1.70	1.92	2.90	3.63	1.51	2.60
	TOTAL	20.93	20.50	9.40	61.50	226.20	157.60	52.60	57.70	89.60	109.00	46.70	948.33
1978	MAX	31.10	8.80	41.80	-0.00	22.90	31.20	32.20	48.50	44.60	21.20	40.40	79.00
	MEAN	3.34	1.19	3.67	-0.00	3.40	5.14	4.00	5.71	4.21	3.39	4.78	3.87
	TOTAL	103.60	33.40	113.80	-0.00	105.50	159.20	124.10	171.40	130.40	101.60	138.60	1287.20
1979	MAX	17.00	22.40	92.80	16.70	55.10	17.70	38.20	64.00	40.70	78.30	52.70	92.80
	MEAN	1.48	1.53	4.10	1.35	9.64	2.03	5.05	8.70	5.77	9.32	5.38	4.51
	TOTAL	46.00	42.90	127.00	40.40	6.50	289.20	156.40	260.90	179.00	279.50	166.80	1657.60
1980	MAX	5.30	8.10	25.30	19.30	31.10	36.20	17.10	60.80	33.60	145.00	28.50	145.00
	MEAN	.83	.99	.67	2.09	5.13	4.96	2.51	3.77	5.73	8.73	3.73	3.30
	TOTAL	25.60	28.60	27.10	62.70	153.90	153.70	77.70	113.20	177.50	261.90	115.70	1207.30
1981	MAX	10.20	69.70	7.50	16.50	36.60	19.00	37.40	15.20	28.40	72.80	50.40	72.80
	MEAN	.98	7.46	.54	1.48	6.21	4.47	5.25	3.79	2.91	4.39	4.06	3.51
	TOTAL	30.30	208.90	16.60	44.50	186.30	138.50	162.70	113.70	90.10	131.60	125.80	1280.30
1982	MAX	5.00	10.60	47.50	6.70	29.60	42.20	25.70	33.90	42.00	25.50	19.90	51.60
	MEAN	.99	1.09	2.02	.42	2.75	4.15	5.73	4.92	3.62	2.65	1.86	3.17
	TOTAL	30.70	30.60	62.70	12.60	85.20	225.50	177.50	147.60	118.30	79.60	57.70	1156.70
1983	MAX	19.40	2.30	1.80	39.20	4.80	29.60	27.20	-0.00	-0.00	-0.00	-0.00	39.20
	MEAN	1.56	.23	.11	2.19	.21	3.85	4.35	-0.00	-0.00	-0.00	-0.00	2.17
	TOTAL	48.40	6.40	3.40	65.60	6.40	115.40	134.70	-0.00	-0.00	-0.00	-0.00	528.50
from 1972 to 1983	MAX	49.50	69.70	92.80	39.20	79.00	48.20	38.20	140.40	71.90	145.00	108.10	145.00
	MEAN	1.58	1.71	1.13	1.01	1.62	3.80	4.04	4.39	4.55	4.23	3.31	3.17
	TOTAL	48.63	47.65	34.68	30.16	50.18	143.28	117.17	124.45	131.25	140.15	126.49	1048.57

Table B-9 RAINFALL AT OLANCHITO (Sheet 2, mm)

DAY	YEAR											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.40	11.60	-0.00	.50	3.80
2	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	0.00	.90	-0.00	.20	1.90
3	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	0.00	.20	-0.00	0.00	4.10
4	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	0.00	0.00	-0.00	0.00	0.00
5	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	6.90	.10	-0.00	0.00	0.00
6	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	2.10	.30	-0.00	0.00	0.00
7	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	0.00	0.00	-0.00	2.10	0.00
8	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	3.20	.60	-0.00	18.50	3.10
9	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	11.20	.10	-0.00	-0.00	15.70	1.70
10	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	11.90	2.40	-0.00	-0.00	14.60	0.00
11	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	6.50	.20	-0.00	-0.00	.20	2.70
12	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	4.70	.10	-0.00	-0.00	0.00	0.00
13	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	4.40	0.00	-0.00	-0.00	0.00	0.00
14	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.50	0.00	-0.00	-0.00	0.00	0.00
15	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	9.00	0.00	-0.00	-0.00	0.00	0.00
16	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.60	0.00	-0.00	-0.00	0.00	108.10
17	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.30	1.10	-0.00	-0.00	0.00	25.30
18	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	0.00	23.70	-0.00	-0.00	0.00	0.00
19	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	4.40	27.70	-0.00	-0.00	0.00	0.00
20	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	2.40	.50	-0.00	-0.00	0.00	0.00
21	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	0.00	0.00	-0.00	-0.00	0.00	1.30
22	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.30	5.10	-0.00	-0.00	0.00	0.00
23	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	0.00	8.40	-0.00	-0.00	0.00	0.00
24	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	0.00	0.00	-0.00	-0.00	0.00	3.50
25	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.20	0.00	-0.00	-0.00	0.00	0.00
26	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	0.00	8.70	-0.00	-0.00	0.00	4.40
27	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	2.60	13.20	-0.00	-0.00	0.00	0.00
28	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.70	.40	-0.00	-0.00	0.00	0.00
29	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	0.00	0.00	-0.00	-0.00	0.00	0.00
30	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	27.60	0.00	-0.00	-0.00	6.00	0.00
31	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.10	-0.00	-0.00	-0.00	-0.00	0.00
MEAN	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	3.32	3.51	-0.00	-0.00	1.93	5.16
MAX	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	27.60	27.70	-0.00	-0.00	18.50	109.10
TOTAL	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	103.00	105.30	-0.00	-0.00	57.80	150.00

Table B-9 RAINFALL AT DLANCHITO (Sheet 3, mm)

1973

YEAR

DAY	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.00	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	.50	0.00	0.00
2	.40	0.00	0.00	0.00	0.00	0.00	1.70	0.00	0.00	.20	12.90	.50
3	0.00	6.80	0.00	0.00	0.00	0.00	0.00	21.80	0.00	17.80	6.50	0.00
4	5.00	3.50	0.00	0.00	0.00	0.00	0.00	0.00	3.40	.20	3.20	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	.60	0.00	27.60	.40	.40	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	.20	0.00	11.20	15.90	19.50	.20
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.80	0.00	1.80	3.70	12.50
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.30	0.00	5.90
9	0.00	0.00	0.00	0.00	0.00	.70	0.00	.20	0.00	1.10	0.00	.10
10	0.00	.30	0.00	0.00	0.00	2.00	0.00	.40	0.00	0.00	14.40	0.00
11	4.00	0.00	0.00	.10	0.00	0.00	4.50	0.00	0.00	18.70	8.00	2.50
12	.70	0.00	0.00	.10	0.00	0.00	13.50	0.00	0.00	0.00	.20	1.80
13	.30	0.00	0.00	.20	0.00	0.00	.30	0.00	0.00	0.00	.80	0.00
14	0.00	0.00	0.00	.20	0.00	.30	0.00	0.00	0.00	0.00	7.70	0.00
15	1.90	0.00	0.00	0.00	.60	0.00	15.50	0.00	3.00	.70	0.00	0.00
16	.10	0.00	0.00	0.00	0.00	16.20	.70	0.00	0.00	.40	3.10	5.30
17	0.00	0.00	1.10	0.00	0.00	6.70	6.00	5.80	4.80	.10	.50	0.00
18	0.00	0.00	0.00	0.00	0.00	5.60	12.70	5.80	.30	.80	0.00	0.00
19	0.00	0.00	0.00	0.00	.50	.30	3.90	6.20	6.70	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	15.70	2.00	0.00	5.30	0.00	0.00	5.50
21	0.00	1.20	0.00	0.00	8.50	0.00	2.80	4.80	3.90	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	13.20	9.10	2.50	4.80	0.00	5.80	.20
23	0.00	0.00	0.00	0.00	.20	10.60	3.90	4.40	0.00	0.00	.40	0.00
24	0.00	0.00	0.00	0.00	0.00	1.10	1.00	.20	0.00	0.00	9.20	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.30	0.00	3.30	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.60	0.00	10.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	4.70	8.40	0.00	0.00	0.00	0.00
28	3.90	2.50	0.00	0.00	0.00	1.70	0.00	5.80	0.00	.80	0.00	2.30
29	.60	-0.00	0.00	0.00	28.60	0.00	0.00	1.00	0.00	1.40	4.30	0.00
30	0.00	-0.00	0.00	0.00	0.00	0.00	0.00	.70	0.00	0.00	5.10	0.00
31	0.00	-0.00	0.00	-0.00	0.00	-0.00	0.00	30.40	-0.00	0.00	-0.00	0.00
MEAN	.54	.52	.04	.01	1.24	2.57	2.75	4.36	2.63	2.50	3.55	1.19
MAX	5.00	6.80	1.10	.20	28.60	18.20	16.50	33.60	27.60	18.70	19.90	12.50
TOTAL	16.80	14.50	1.10	.40	38.40	77.10	85.40	135.30	78.90	77.40	106.50	37.00

Table B-9 RAINFALL AT OLANCHITO (Sheet 4 , mm)

DAY	1974											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.00	0.00	0.00	0.00	0.00	0.00	.50	0.00	1.70	40.50	.50	11.90
2	0.00	0.00	.30	0.00	0.00	.10	14.00	11.10	1.70	6.20	0.00	.40
3	0.00	0.00	.50	0.00	0.00	.50	0.00	0.00	7.10	41.30	1.10	1.20
4	1.20	0.00	0.00	0.00	0.00	0.00	0.00	7.50	4.30	5.10	0.00	1.80
5	4.30	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.10	40.80	0.00	.30
6	3.30	-0.00	0.00	.90	0.00	0.00	0.00	1.80	.70	2.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.20	1.70	3.00	0.00
8	2.30	0.00	1.30	0.00	0.00	0.00	0.00	0.00	2.90	.30	1.00	1.60
9	0.00	22.60	0.00	0.00	0.00	.40	0.00	0.00	0.00	0.00	6.90	2.70
10	0.00	9.20	0.00	0.00	0.00	0.00	10.50	9.70	0.00	10.30	.10	0.00
11	1.00	5.00	0.00	0.00	0.00	0.00	1.60	3.40	0.00	0.00	.40	0.00
12	1.50	1.10	0.00	0.00	0.00	0.00	2.10	7.60	0.00	4.00	9.30	1.60
13	3.60	0.00	0.00	0.00	0.00	5.30	0.00	0.00	15.30	2.40	0.00	1.00
14	1.20	0.00	0.00	0.00	0.00	-0.00	0.00	7.20	0.00	.50	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	12.40	12.80	0.00	0.00	.40	0.00	0.00
16	.50	0.00	.10	0.00	19.30	2.60	11.40	1.30	.30	5.30	1.50	0.00
17	3.60	0.00	.80	0.00	0.00	-0.00	14.50	7.50	69.90	7.00	19.60	.10
18	0.00	0.00	0.00	0.00	.90	.10	3.10	7.00	140.40	38.40	2.50	0.00
19	0.00	0.00	0.00	0.00	39.10	.50	8.50	0.00	10.90	0.00	.10	0.00
20	0.00	0.00	0.00	0.00	7.10	5.40	3.20	0.00	1.20	-0.00	32.10	0.00
21	0.00	0.00	0.00	0.00	5.30	0.00	8.30	0.00	1.20	.50	4.10	2.50
22	0.00	.50	0.00	0.00	.40	0.00	48.20	9.50	0.00	12.20	.70	0.00
23	0.00	0.00	0.00	0.00	.90	0.00	.20	14.50	0.00	12.70	6.30	.50
24	0.00	.30	0.00	0.00	.60	0.00	0.00	.30	0.00	3.40	2.20	0.00
25	0.00	.30	0.00	0.00	0.00	16.40	.70	0.00	0.00	1.20	6.10	0.00
26	0.00	32.50	0.00	0.00	0.00	11.50	.70	3.70	8.90	2.10	0.00	0.00
27	0.00	1.70	0.00	1.60	0.00	.20	0.00	1.60	0.00	0.00	0.00	.90
28	0.00	1.90	0.00	8.60	0.00	0.00	3.30	10.90	0.00	0.00	-0.00	0.00
29	0.00	-0.00	0.00	0.00	0.00	2.50	0.00	5.40	2.10	0.00	0.00	0.00
30	0.00	-0.00	0.00	0.00	0.00	19.20	1.70	8.90	.30	.80	1.10	0.00
31	0.00	-0.00	0.00	-0.00	0.00	-0.00	0.00	1.20	-0.00	1.80	-0.00	0.00
MEAN	.73	2.89	.10	.38	2.37	2.75	4.70	3.87	9.24	8.03	3.41	.85
MAX	4.30	32.60	1.30	8.60	39.10	19.20	48.20	14.50	140.40	41.30	32.10	11.90
TOTAL	22.70	75.20	3.00	11.30	73.50	76.30	145.60	120.10	277.20	240.90	99.00	25.70

Table B-9 RAINFALL AT OLANCHITO (Sheet 5, mm)

DAY	YEAR											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.00	0.00	0.00	0.00	0.00	0.00	19.80	0.00	0.00	23.30	1.70	6.20
2	0.00	0.00	0.00	0.00	0.00	0.00	1.10	5.00	3.10	3.50	15.80	5.20
3	0.00	0.00	.40	0.00	0.00	0.00	0.00	.40	5.90	5.10	.80	2.70
4	0.00	0.00	0.00	0.00	0.00	0.00	1.70	0.00	0.00	.90	4.90	5.70
5	.50	0.00	0.00	0.00	0.00	0.00	1.00	0.00	5.50	29.20	13.50	19.80
6	2.00	0.00	.30	0.00	0.00	0.00	11.50	5.00	0.00	1.80	5.10	8.10
7	0.00	0.00	0.00	0.00	0.00	0.00	3.30	18.10	.30	0.00	16.60	20.70
8	0.00	0.00	17.70	0.00	0.00	0.00	.40	23.30	12.80	0.00	0.00	1.40
9	0.00	0.00	0.00	0.00	0.00	0.00	3.60	0.00	4.30	1.30	0.00	1.40
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.90
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.10	0.00	0.00	1.40
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.60	1.10	0.00	0.00
13	12.20	0.00	0.00	0.00	0.00	.30	0.00	0.00	1.20	.70	19.80	3.20
14	.10	0.00	0.00	0.00	5.00	0.00	0.00	8.10	8.30	7.10	.10	5.10
15	0.00	0.00	0.00	0.00	67.00	0.00	0.00	0.00	0.00	0.00	0.00	.30
16	0.00	0.00	0.00	0.00	0.00	0.00	1.50	15.90	0.00	0.00	0.00	.20
17	0.00	0.00	0.00	0.00	0.00	0.00	.60	22.60	0.00	5.60	3.30	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	.40	26.80	0.00	0.00	.80	2.80
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.60	1.40	.20	.10	1.80
20	8.60	0.00	0.00	0.00	0.00	0.00	0.00	19.80	.20	18.10	2.60	1.70
21	2.60	0.00	0.00	.50	0.00	0.00	.10	3.90	3.10	0.00	3.10	8.40
22	.20	0.00	0.00	0.00	0.00	0.00	5.80	1.20	0.00	0.00	23.50	1.30
23	4.40	0.00	0.00	.70	0.00	0.00	0.00	18.50	1.20	0.00	5.80	0.00
24	0.00	30.60	0.00	0.00	0.00	0.00	0.00	0.00	5.40	11.10	2.00	0.00
25	0.00	6.10	0.00	0.00	0.00	2.40	0.00	0.00	0.00	1.00	0.00	0.00
26	9.10	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	-0.00	.30	0.00	0.00
27	12.30	0.00	0.00	0.00	0.00	.60	0.00	0.00	0.00	25.10	.30	0.00
28	1.80	0.00	0.00	0.00	0.00	7.70	0.00	-0.00	0.00	26.30	.30	0.00
29	2.10	-0.00	0.00	0.00	0.00	.30	0.00	.20	5.00	0.00	0.00	0.00
30	0.00	-0.00	0.00	0.00	0.00	.10	0.00	3.40	.60	20.20	1.70	0.00
31	0.00	-0.00	0.00	-0.00	0.00	-0.00	0.00	.60	-0.00	9.50	-0.00	0.00
MEAN	1.81	1.31	.59	.04	2.35	.38	1.64	6.01	2.17	6.24	4.07	3.30
MAX	12.30	30.60	17.70	.70	67.00	7.70	19.80	26.80	12.80	29.20	23.50	20.70
TOTAL	56.10	36.70	18.40	1.30	73.00	11.40	50.80	174.40	63.00	193.40	122.00	102.30

Table B-9 RAINFALL AT OLANCHITO (Sheet 6, mm)

DAY	YEAR											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	15.60
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.50	2.70	0.00	0.00	4.40
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70	12.20	0.00	0.00	22.40
4	.20	0.00	0.00	0.00	1.10	3.20	-0.00	2.60	1.20	0.00	0.00	4.20
5	.90	3.30	0.00	0.00	.10	0.00	21.10	1.60	0.00	0.00	0.00	.10
6	.30	0.00	.50	0.00	0.00	0.00	.40	1.50	9.20	0.00	0.00	0.00
7	0.00	.10	0.00	0.00	0.00	5.80	.70	.20	5.40	0.00	0.00	14.70
8	.20	3.20	0.00	0.00	0.00	8.90	3.10	0.00	0.00	0.00	0.00	18.20
9	10.80	2.20	0.00	.10	0.00	8.10	0.00	.90	1.20	0.00	1.50	14.50
10	7.10	0.00	.70	0.00	0.00	5.60	0.00	0.00	.90	.40	0.00	19.70
11	1.40	0.00	0.00	0.00	0.00	1.20	.30	5.20	0.00	9.80	0.00	3.20
12	1.40	0.00	0.00	0.00	0.00	.10	0.00	25.30	1.20	.60	0.00	0.00
13	2.30	0.00	0.00	0.00	0.00	0.00	0.00	.30	.20	2.10	7.20	4.60
14	-0.00	10.80	0.00	0.00	0.00	0.00	6.30	0.00	5.50	18.50	0.00	.20
15	9.80	1.00	0.00	0.00	15.10	0.00	0.00	0.00	4.80	-0.00	.40	.70
16	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	2.60	21.10	2.40	2.40
17	16.20	0.00	0.00	.30	0.00	0.00	-0.00	0.00	0.00	40.50	0.00	3.40
18	1.00	0.00	0.00	0.00	.50	13.70	0.00	0.00	.30	0.00	.80	.20
19	.30	0.00	0.00	0.00	0.00	2.50	5.00	0.00	0.00	0.00	0.00	0.00
20	22.50	0.00	0.00	0.00	0.00	3.80	.60	.20	0.00	4.10	0.00	.20
21	3.00	0.00	0.00	0.00	3.40	.50	0.00	0.00	0.00	5.20	0.00	.10
22	.50	1.40	0.00	0.00	.90	.60	6.00	1.10	0.00	2.10	.30	0.00
23	-0.00	-0.00	0.00	0.00	0.00	.60	11.20	0.00	0.00	.30	9.80	0.00
24	0.00	0.00	0.00	0.00	0.00	19.80	1.70	0.00	.20	0.00	12.60	5.60
25	0.00	.50	0.00	0.00	0.00	15.00	.30	.40	1.30	0.00	3.70	0.00
26	0.00	0.00	0.00	0.00	0.00	14.60	0.00	0.00	0.00	0.00	2.20	11.00
27	2.70	.70	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00	0.00	.10
28	1.90	0.00	0.00	0.00	0.00	.30	0.00	5.00	0.00	0.00	0.00	0.00
29	49.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
30	1.80	-0.00	0.00	0.00	0.00	.10	0.00	4.30	1.00	0.00	1.90	0.00
31	0.00	-0.00	0.00	-0.00	5.00	-0.00	1.30	1.20	-0.00	0.00	-0.00	0.00
MEAN	4.61	.94	.04	.04	.84	5.64	2.00	2.42	1.83	3.49	1.43	4.69
MAX	49.50	10.80	.70	.90	15.10	19.80	21.10	25.30	12.20	40.50	12.60	22.40
TOTAL	133.80	26.40	1.20	1.30	26.10	109.20	58.00	75.00	55.00	104.70	42.90	145.50

Table B-9 RAINFALL AT CLANCHITO (Sheet 7, mm)

YEAR 1977

DAY	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.00	0.00	8.10	0.00	3.60	7.70	1.40	4.70	0.00	1.00	0.00	9.20
2	0.00	0.00	.50	0.00	33.50	0.00	5.20	1.80	7.40	4.20	0.00	0.00
3	0.00	0.00	0.00	0.00	9.70	0.00	0.00	0.00	1.00	1.50	0.00	0.00
4	0.00	0.00	0.00	0.00	5.30	6.00	17.20	0.00	0.00	0.00	17.00	0.00
5	0.00	0.00	0.00	0.00	17.70	19.70	27.80	0.00	0.00	0.00	4.40	0.00
6	0.00	.40	0.00	0.00	0.00	55.20	0.00	13.70	0.00	.50	.20	1.00
7	.20	0.00	0.00	3.60	0.00	11.10	3.40	4.00	19.40	0.00	0.00	5.20
8	0.00	0.00	.70	5.20	.40	73.50	10.50	0.00	7.10	0.00	0.00	0.00
9	0.00	0.00	0.00	.40	3.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	.10	0.00	9.20	.50	0.00	2.10	0.00	.20	0.00	5.30	5.00
11	0.00	.60	0.00	2.10	0.00	0.00	0.00	7.70	3.40	0.00	10.10	.70
12	0.00	0.00	0.00	6.80	0.00	0.00	0.00	0.00	1.10	4.80	47.10	2.30
13	0.00	0.00	0.00	0.00	0.00	0.00	5.10	0.00	.10	71.90	3.10	0.00
14	0.00	0.00	0.00	0.00	6.90	2.80	2.20	15.20	0.00	1.80	1.30	0.00
15	0.00	1.10	0.00	0.00	0.00	12.60	8.70	4.30	0.00	.70	0.00	0.00
16	0.00	13.70	0.00	0.00	0.00	0.00	13.60	.40	4.30	0.00	0.00	0.00
17	1.23	.10	0.00	0.00	0.00	3.10	0.00	.80	1.70	0.00	2.60	0.00
18	.70	0.00	0.00	0.00	0.00	2.50	5.40	0.00	1.30	0.00	.40	0.00
19	.60	0.00	0.00	0.00	0.00	.50	.80	0.00	3.40	0.00	5.60	2.00
20	0.00	1.50	0.00	0.00	0.00	1.80	0.00	0.00	0.00	0.00	0.00	0.00
21	8.70	.40	0.00	0.00	0.00	1.10	15.70	0.00	0.00	0.00	0.00	15.40
22	2.40	0.00	0.00	0.00	0.00	4.10	3.40	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	25.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	1.70	.50	0.00	0.00	0.00	.10	0.00
25	5.40	0.00	0.00	1.30	0.00	13.90	.40	0.00	0.00	0.00	3.10	0.00
26	0.00	0.00	0.00	0.00	0.00	1.30	12.50	0.00	2.30	.40	2.70	1.40
27	0.00	0.00	0.00	0.00	0.00	0.00	.50	0.00	5.70	0.00	0.00	1.80
28	0.00	2.60	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	1.70
29	0.00	-0.00	0.00	0.00	0.00	2.00	8.60	0.00	.30	0.00	0.00	0.00
30	0.00	-0.00	0.00	7.80	1.20	5.60	5.30	0.00	0.00	0.00	0.00	0.00
31	0.00	-0.00	0.00	-0.00	12.60	-0.00	2.00	0.00	-0.00	2.90	-0.00	0.00
MEAN	.68	.73	.30	2.05	3.11	7.54	5.08	1.70	1.52	2.90	3.63	1.51
MAX	8.70	13.70	8.10	25.10	33.50	73.50	27.80	15.20	19.40	71.90	47.10	15.40
TOTAL	20.93	20.50	9.40	61.50	96.40	226.20	157.60	52.60	57.70	89.90	109.00	46.70

Table B-9 RAINFALL AT CLANCHITO (Sheet 8, mm)

DAY	YEAR											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.00	4.50	0.00	-0.00	0.00	3.70	13.20	0.00	24.30	3.90	.20	4.10
2	0.00	0.00	0.00	-0.00	0.00	0.00	31.20	0.00	7.60	10.00	1.10	0.00
3	0.00	4.00	0.00	-0.00	0.00	1.70	0.00	7.90	11.80	15.40	5.10	0.00
4	0.00	3.20	0.00	-0.00	0.00	5.70	.60	9.00	48.50	3.80	.20	0.00
5	8.40	7.30	11.40	-0.00	0.00	0.00	0.00	1.80	.40	7.60	0.00	0.00
6	.70	.10	0.00	-0.00	0.00	0.00	0.00	.10	6.40	2.00	0.00	2.80
7	0.00	0.00	0.00	-0.00	0.00	0.00	1.50	.10	0.00	0.00	0.00	3.50
8	0.00	0.00	0.00	-0.00	0.00	0.00	12.80	0.00	0.00	10.70	5.80	20.60
9	16.30	8.80	19.90	-0.00	0.00	0.00	5.70	.50	0.00	0.00	0.00	-0.00
10	0.00	.50	.20	-0.00	0.00	.50	18.50	1.10	0.00	0.00	0.00	1.30
11	0.00	0.00	0.00	-0.00	0.00	3.20	.20	0.00	.20	0.00	0.00	13.10
12	0.00	0.00	0.00	-0.00	0.00	0.00	0.00	9.20	0.00	0.00	0.00	24.00
13	28.50	0.00	0.00	-0.00	0.00	1.00	.20	0.00	4.10	.10	8.30	6.90
14	0.00	0.00	0.00	-0.00	0.00	22.90	.10	1.20	0.00	15.40	0.00	40.40
15	0.00	0.00	0.00	-0.00	0.00	.20	8.60	10.20	0.00	.20	11.50	1.60
16	0.00	0.00	0.00	-0.00	.20	8.00	17.10	.20	5.80	5.50	11.10	0.00
17	0.00	0.00	41.80	-0.00	1.90	10.30	.10	21.50	25.30	3.60	0.00	0.00
18	0.00	0.00	5.20	-0.00	0.00	0.00	.30	32.20	17.60	.10	3.10	11.90
19	3.90	0.00	7.00	-0.00	0.00	.90	6.20	.30	1.40	44.80	21.20	6.40
20	3.90	0.00	0.00	-0.00	0.00	1.30	0.00	.20	1.70	.10	11.10	0.00
21	1.80	4.60	.50	-0.00	1.70	8.50	2.10	1.30	0.00	.10	1.10	-0.00
22	0.00	0.00	0.00	-0.00	.50	4.10	13.30	.10	0.00	0.00	2.00	0.00
23	0.00	.40	0.00	-0.00	.80	.80	.40	2.00	0.00	0.00	.20	0.00
24	0.00	0.00	0.00	-0.00	.80	0.00	2.80	0.00	2.50	4.50	1.00	0.00
25	0.00	0.00	0.00	-0.00	15.30	.40	3.70	.60	0.00	0.00	.10	0.00
26	.20	0.00	0.00	-0.00	.60	7.50	.40	6.70	3.90	0.00	0.00	0.00
27	.30	0.00	24.40	-0.00	.80	0.00	.60	0.00	2.20	0.00	0.00	0.00
28	31.10	0.00	0.00	-0.00	79.00	5.10	0.00	9.30	.90	0.00	.40	0.00
29	6.10	-0.00	0.00	-0.00	0.00	5.20	0.00	0.00	6.00	.10	13.60	0.00
30	0.00	-0.00	0.00	-0.00	4.50	13.60	12.00	0.00	.80	2.30	4.50	2.00
31	2.80	-0.00	2.40	-0.00	0.00	-0.00	7.40	8.60	-0.00	.10	-0.00	0.00
MEAN	3.34	1.19	3.67	-0.00	3.40	3.52	5.14	4.00	5.71	4.21	3.39	4.79
MAX	31.10	8.80	41.80	-0.00	79.00	22.90	31.20	32.20	48.50	44.60	21.20	40.40
TOTAL	103.60	33.40	113.80	-0.00	105.50	105.60	159.20	124.10	171.40	130.40	101.60	138.60

Table B-9 RAINFALL AT OLANCHITO (Sheet 9, mm)

DAY	YEAR											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.00	0.00	0.00	0.00	0.00	2.50	1.70	19.20	0.00	5.00	0.00	5.30
2	1.50	0.00	0.00	0.00	0.00	9.80	17.70	0.00	30.20	1.40	0.00	5.10
3	17.00	0.00	0.00	0.00	0.00	0.00	.10	8.40	64.00	.80	0.00	12.80
4	.70	0.00	0.00	15.70	0.00	0.00	9.00	1.60	6.10	3.90	7.60	2.10
5	0.00	0.00	0.00	0.00	0.00	0.00	3.20	.10	1.30	33.90	14.60	0.00
6	0.00	0.00	0.00	0.00	0.00	46.50	4.70	7.00	.40	3.10	6.40	0.00
7	0.00	0.00	1.00	0.00	.80	0.00	.10	.20	3.00	1.50	1.20	4.80
8	3.30	.10	0.00	0.00	0.00	13.00	.30	1.90	26.10	5.00	5.10	52.70
9	.20	22.40	0.00	0.00	0.00	56.10	0.00	.50	7.80	11.70	0.00	12.50
10	0.00	2.10	0.00	0.00	0.00	21.00	0.00	.30	.20	40.70	0.00	0.00
11	0.00	.50	.10	0.00	0.00	5.40	0.00	7.90	1.90	23.40	0.00	.30
12	0.00	.10	.50	0.00	0.00	.20	.30	0.00	33.50	1.40	1.50	5.70
13	0.00	.50	0.00	0.00	0.00	8.20	0.00	0.00	2.80	0.00	78.10	11.50
14	2.40	1.60	1.20	0.00	0.00	5.40	0.00	9.80	2.80	0.00	78.30	1.30
15	3.10	0.00	3.60	0.00	0.00	1.50	2.70	0.00	36.00	8.10	0.00	.50
16	0.00	0.00	2.90	0.00	0.00	0.00	.40	0.00	.50	16.80	1.40	.50
17	0.00	0.00	2.30	12.80	0.00	0.00	.90	25.30	20.30	.80	.30	1.40
18	.50	1.00	0.00	.10	5.70	15.10	5.00	3.60	1.90	8.90	0.00	13.30
19	0.00	9.60	.10	0.00	0.00	.30	.40	17.50	3.00	4.90	.70	2.40
20	0.00	0.00	0.00	0.00	0.00	28.80	4.20	4.40	0.00	0.00	19.40	0.00
21	1.70	0.00	0.00	1.30	0.00	1.50	0.00	38.20	10.80	0.00	9.40	.10
22	0.00	0.00	0.00	1.80	0.00	2.00	4.30	.10	2.70	0.00	2.60	0.00
23	0.00	0.00	0.00	.10	0.00	23.50	1.00	0.00	.70	0.00	1.30	0.00
24	9.00	0.00	0.00	7.50	0.00	1.30	0.00	0.00	1.80	0.00	.10	5.80
25	1.80	4.70	92.80	.10	0.00	2.50	.50	0.00	0.00	0.00	0.00	17.80
26	0.00	.30	1.10	0.00	0.00	2.20	0.00	0.00	0.00	0.00	0.00	9.50
27	0.00	0.00	.30	0.00	0.00	5.50	1.40	6.40	1.30	0.00	.20	0.00
28	4.60	0.00	20.90	0.00	0.00	3.70	0.00	0.00	2.80	0.00	2.80	.20
29	0.00	-0.00	0.00	0.00	0.00	24.90	2.40	0.00	1.60	0.00	17.50	0.00
30	0.00	-0.00	.20	0.00	0.00	8.30	.30	2.70	0.00	0.00	30.90	0.00
31	0.00	-0.00	0.00	-0.00	0.00	-0.00	2.40	2.30	-0.00	6.50	-0.00	0.00
MEAN	1.48	1.53	4.10	1.35	.21	9.64	2.03	5.05	8.70	5.77	9.32	5.38
MAX	17.00	22.40	92.80	16.70	5.70	56.10	17.70	38.20	64.00	40.70	78.30	52.70
TOTAL	46.00	42.90	127.00	40.40	6.50	389.20	63.00	156.40	260.90	179.00	279.50	166.90

Table B-9 RAINFALL AT OLANCHITO (Sheet 10, mm)

DAY	YEAR											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.40	6.50	0.00	0.00	0.00	0.00	0.00	17.10	0.00	0.00	0.00	.70
2	0.00	6.10	25.30	0.00	0.00	4.30	0.00	6.70	0.00	0.00	2.00	0.00
3	0.00	1.30	1.20	0.00	0.00	1.00	0.00	.50	0.00	5.00	4.20	0.00
4	5.30	2.70	0.00	0.00	0.00	4.60	0.00	0.00	0.00	4.60	14.40	.80
5	2.50	.50	0.00	0.00	0.00	0.00	1.70	9.90	6.00	33.60	15.50	8.00
6	.50	0.00	0.00	0.00	0.00	7.00	11.00	0.00	0.00	9.70	145.00	9.10
7	0.00	0.00	0.00	0.00	0.00	1.70	6.20	4.90	0.00	13.10	10.40	9.30
8	0.00	0.00	0.00	0.00	0.00	1.10	19.70	1.80	7.70	32.40	.40	1.50
9	.20	0.00	0.00	0.00	0.00	8.80	9.50	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	31.10	0.00	0.00	5.60	2.30	0.00	5.40
11	0.00	0.00	0.00	0.00	0.00	.60	15.40	1.30	.40	0.00	0.00	28.50
12	0.00	.40	0.00	0.00	0.00	26.20	.40	4.00	.20	0.00	0.00	1.30
13	0.00	0.00	0.00	0.00	0.00	5.90	3.40	1.10	2.30	0.00	0.00	4.30
14	0.00	0.00	.30	.10	0.00	22.70	2.20	2.10	0.00	0.00	0.00	4.90
15	4.50	0.00	0.00	2.80	0.00	0.00	.10	6.30	0.00	.70	0.00	.10
16	2.00	0.00	.30	11.00	0.00	4.50	.70	.80	0.00	.80	0.00	0.00
17	0.00	0.00	0.00	19.30	0.00	0.00	0.00	1.40	0.00	0.00	.30	6.30
18	0.00	2.20	0.00	12.50	0.00	0.00	0.00	3.90	60.80	0.00	1.60	.40
19	3.40	2.60	0.00	6.80	0.00	2.90	7.00	.70	.90	.30	17.00	.60
20	.50	0.00	0.00	4.70	0.00	1.20	15.20	5.30	.80	3.30	1.30	14.00
21	0.00	0.00	0.00	2.00	0.00	.60	36.20	3.00	20.90	12.10	11.80	2.20
22	0.00	0.00	0.00	0.00	0.00	6.50	.50	0.00	0.00	11.30	8.70	1.00
23	1.80	0.00	0.00	0.00	0.00	.10	0.00	1.80	.70	2.70	4.30	1.90
24	4.40	0.00	0.00	0.00	5.70	6.20	0.00	0.00	0.00	6.30	4.00	3.10
25	0.00	0.00	0.00	0.00	4.00	0.00	5.10	.40	0.00	.60	.70	10.30
26	0.00	3.60	0.00	0.00	0.00	0.00	0.00	0.00	5.20	2.00	.10	1.60
27	0.00	.60	0.00	0.00	0.00	0.00	0.00	4.60	.50	.40	0.00	.40
28	0.00	0.00	0.00	3.50	0.00	15.70	14.70	0.00	0.00	26.80	9.50	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	3.50	.10	0.00	0.00	4.60	0.00
30	0.00	-0.00	0.00	0.00	0.00	0.00	.20	0.00	.20	2.80	6.10	0.00
31	0.00	-0.00	0.00	-0.00	0.00	-0.00	0.00	0.00	-0.00	5.70	-0.00	0.00
MEAN	.63	.99	.87	2.09	.31	5.13	4.96	2.51	3.77	5.73	6.73	3.73
MAX	5.30	8.10	25.30	19.30	5.70	31.10	36.20	17.10	60.80	33.60	145.00	28.50
TOTAL	25.60	28.60	27.10	62.70	9.70	153.90	153.70	77.70	113.20	177.50	251.90	115.70

Table B-3 RAINFALL AT DLANCHITO (Sheet 11, mm)

1981

YEAR

DAY	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.00	0.00	0.00	0.00	0.00	1.10	0.00	10.20	0.00	19.00	31.70	0.00
2	.40	.30	0.00	.30	0.00	0.00	.80	.40	0.00	.30	72.80	.10
3	0.00	22.30	0.00	.10	0.00	0.00	0.00	15.50	0.00	0.00	0.00	5.80
4	.70	5.40	0.00	0.00	18.90	0.00	13.40	.70	0.00	3.00	0.00	50.40
5	1.40	7.10	0.00	2.40	3.70	0.00	0.00	.30	.10	.80	0.00	27.50
6	0.00	.70	0.00	.20	.10	10.50	0.00	9.50	0.00	1.80	6.00	.50
7	0.00	0.00	0.00	0.00	32.50	0.00	0.00	1.50	2.00	.40	3.50	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	19.00	5.00	13.00	0.00	0.00	3.30
9	0.00	0.00	.80	0.00	.30	6.90	6.90	4.50	5.20	2.50	0.00	1.40
10	5.80	0.00	2.70	.50	.90	3.20	3.20	5.50	0.00	6.10	.10	.70
11	10.20	16.50	0.00	1.30	.20	9.50	9.50	12.10	9.70	7.10	2.10	0.00
12	.40	17.50	0.00	0.00	.90	7.60	7.60	1.20	8.50	0.00	.30	0.00
13	3.50	32.50	0.00	.90	0.00	2.10	2.10	1.50	3.00	0.00	1.50	0.00
14	0.00	10.60	1.50	16.50	0.00	4.40	.30	0.00	11.50	0.00	0.00	0.00
15	0.00	0.00	0.00	11.40	0.00	13.90	1.20	.50	11.90	1.20	3.30	0.00
16	0.00	.50	0.00	4.80	0.00	19.60	8.60	.20	8.30	5.70	0.00	0.00
17	4.40	7.00	7.50	1.50	35.60	18.10	18.10	.60	0.00	0.00	.10	0.00
18	.90	3.10	0.00	3.40	0.00	2.00	2.00	1.00	5.00	0.00	0.00	9.50
19	0.00	69.70	.80	1.10	7.70	.80	.80	16.00	0.00	28.40	0.00	20.20
20	0.00	13.10	0.00	0.00	3.00	.10	.10	0.00	0.00	4.70	.40	5.10
21	0.00	.60	0.00	0.00	24.80	8.20	8.20	1.30	3.00	3.20	1.00	0.00
22	0.00	0.00	.30	0.00	4.20	8.20	8.20	37.40	.10	.20	0.00	0.00
23	1.90	.30	3.00	0.00	.10	2.10	2.10	15.90	15.20	2.50	0.00	0.00
24	0.00	.30	0.00	0.00	.30	4.20	4.20	1.10	9.70	2.70	0.00	0.00
25	.70	0.00	0.00	0.00	8.30	0.00	0.00	4.80	.30	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	12.30	5.20	5.20	15.70	.10	0.00	.10	0.00
27	0.00	.40	0.00	0.00	.10	0.00	0.00	0.00	1.30	0.00	4.10	0.00
28	0.00	0.00	0.00	0.00	3.90	5.50	5.50	0.00	0.00	0.00	4.40	0.00
29	0.00	-0.00	0.00	0.00	0.00	1.80	1.80	0.00	1.20	0.00	0.00	0.00
30	0.00	-0.00	0.00	0.00	8.60	8.50	8.50	0.00	.40	0.00	0.00	0.00
31	0.00	-0.00	0.00	-0.00	0.00	1.00	1.00	0.00	-0.00	.50	-0.00	0.00
MEAN	.98	7.45	.54	1.48	1.01	6.21	4.47	5.25	3.79	2.91	4.39	4.05
MAX	10.20	69.70	7.50	16.50	18.90	36.60	19.00	37.40	15.20	28.40	72.80	50.40
TOTAL	30.30	208.90	15.60	44.50	31.30	185.30	138.50	152.70	113.70	90.10	131.50	125.80

Table B-9 RAINFALL AT OLANCHITO (Sheet 12, mm)

DAY	YEAR											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.00	.20	0.00	0.00	0.00	41.40	0.00	4.70	1.20	.20	0.00	.40
2	0.00	0.00	.50	0.00	0.00	0.00	4.00	5.90	.10	1.70	0.00	4.40
3	0.00	0.00	0.00	0.00	0.00	17.90	7.10	2.90	8.90	.40	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	1.30	2.50	1.40	42.00	20.20	.10
5	4.10	0.00	0.00	0.00	0.00	0.00	0.00	1.10	1.20	.30	25.50	0.00
6	1.70	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	10.60	47.50	0.00	0.00	7.00	3.50	.30	2.50	.40	0.00	3.50
8	3.10	8.10	10.60	0.00	0.00	13.20	.50	.30	0.00	0.00	4.90	3.70
9	.30	0.00	0.00	0.00	0.00	3.40	0.00	0.00	0.00	3.30	.70	3.40
10	3.30	4.00	3.00	0.00	0.00	3.00	0.00	1.80	.70	.20	6.50	0.00
11	0.00	0.00	0.00	5.90	0.00	3.00	1.30	18.40	0.00	0.00	.60	0.00
12	0.00	0.00	0.00	0.00	0.00	4.70	2.00	25.70	7.20	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	51.80	2.50	0.00	.50	7.80	4.10	.10
14	4.00	0.00	0.00	0.00	0.00	.60	.40	0.00	25.10	.40	3.00	4.10
15	0.00	.30	0.00	0.00	0.00	31.70	5.00	.90	1.40	.10	.20	1.30
16	.50	0.00	0.00	0.00	0.00	.20	.20	17.00	15.40	5.40	.40	11.00
17	2.40	0.00	0.00	0.00	0.00	19.40	1.00	1.50	12.50	0.00	0.00	19.90
18	5.00	0.00	0.00	0.00	0.00	0.00	9.50	.20	11.50	.40	1.70	2.60
19	.40	0.00	0.00	0.00	10.30	0.00	.60	.10	.30	7.30	0.00	.10
20	.20	0.00	0.00	0.00	21.40	0.00	0.00	10.30	.30	5.90	0.00	1.80
21	.50	0.00	0.00	0.00	0.00	0.00	13.80	0.00	.30	.50	0.00	0.00
22	0.00	0.00	0.00	0.00	5.30	21.00	3.40	2.40	4.80	.50	0.00	0.00
23	0.00	0.00	0.00	0.00	6.40	1.90	5.70	1.40	0.00	5.90	0.00	0.00
24	1.00	0.00	0.00	0.00	29.60	0.00	0.00	1.50	0.00	2.60	0.00	0.00
25	0.00	0.00	0.00	0.00	2.30	0.00	.10	24.90	0.00	0.00	4.30	0.00
26	0.00	0.00	.70	0.00	2.30	5.40	1.90	18.50	5.60	.70	5.90	1.30
27	0.00	0.00	0.00	0.00	4.70	0.00	42.20	2.00	33.90	27.10	0.00	0.00
28	0.00	2.60	0.00	0.00	2.00	0.00	13.80	12.90	1.00	.70	.20	0.00
29	4.20	-0.00	0.00	0.00	0.00	0.00	1.50	3.80	1.00	2.60	0.00	0.00
30	0.00	-0.00	0.00	5.70	.90	0.00	4.80	5.30	10.80	0.00	.40	0.00
31	0.00	-0.00	0.00	-0.00	0.00	-0.00	2.40	11.20	-0.00	1.70	-0.00	0.00
MEAN	.99	1.09	2.02	.42	2.75	7.52	4.15	5.73	4.92	3.82	2.65	1.86
MAX	5.00	10.60	47.50	6.70	29.60	51.80	42.20	25.70	33.90	42.00	25.50	19.90
TOTAL	30.70	30.60	62.70	12.60	85.20	225.50	128.70	177.50	147.60	118.30	79.60	57.70

Table B-9 RAINFALL AT OLANCHITO (Sheet 13, mm)

YEAR 1983

DAY	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3.30	0.00	0.00	1.90	0.00	0.00	1.80	.70	-0.00	-0.00	-0.00	-0.00
2	0.00	0.00	0.00	13.70	0.00	0.00	2.70	.30	-0.00	-0.00	-0.00	-0.00
3	.30	0.00	0.00	0.00	0.00	0.00	10.30	0.00	-0.00	-0.00	-0.00	-0.00
4	.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
5	.10	0.00	0.00	0.00	0.00	0.00	0.00	8.10	-0.00	-0.00	-0.00	-0.00
6	0.00	0.00	0.50	0.00	0.00	.90	8.40	0.00	-0.00	-0.00	-0.00	-0.00
7	0.00	0.00	0.00	0.00	19.10	0.00	5.80	26.80	-0.00	-0.00	-0.00	-0.00
8	0.00	2.30	0.00	0.00	0.00	0.00	3.70	8.10	-0.00	-0.00	-0.00	-0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	.50	1.10	-0.00	-0.00	-0.00	-0.00
10	1.30	0.00	0.00	.50	0.00	1.00	20.30	.20	-0.00	-0.00	-0.00	-0.00
11	19.40	0.00	1.80	3.40	0.00	0.00	10.60	1.30	-0.00	-0.00	-0.00	-0.00
12	8.10	1.70	0.00	0.00	0.00	.60	0.00	.10	-0.00	-0.00	-0.00	-0.00
13	1.20	.30	0.00	0.00	0.00	3.40	1.50	0.00	-0.00	-0.00	-0.00	-0.00
14	2.10	0.00	1.50	0.00	0.00	18.30	0.00	0.00	-0.00	-0.00	-0.00	-0.00
15	4.40	0.00	0.00	0.00	0.00	10.90	4.80	27.20	-0.00	-0.00	-0.00	-0.00
16	0.00	0.00	0.00	39.20	0.00	2.90	0.00	0.00	-0.00	-0.00	-0.00	-0.00
17	0.00	0.00	0.00	5.90	0.00	5.30	0.00	0.00	-0.00	-0.00	-0.00	-0.00
18	.70	0.00	0.00	0.00	0.00	1.70	0.00	0.00	-0.00	-0.00	-0.00	-0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.90	-0.00	-0.00	-0.00	-0.00
20	0.00	0.00	0.00	0.00	27.50	0.00	2.80	8.20	-0.00	-0.00	-0.00	-0.00
21	0.00	0.00	0.00	0.00	.80	0.00	0.00	1.70	-0.00	-0.00	-0.00	-0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	12.60	13.60	-0.00	-0.00	-0.00	-0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	25.70	12.90	-0.00	-0.00	-0.00	-0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	2.10	1.70	-0.00	-0.00	-0.00	-0.00
25	3.60	.20	0.00	0.00	14.00	0.00	0.00	7.00	-0.00	-0.00	-0.00	-0.00
26	0.00	1.50	0.00	0.00	.80	0.00	0.00	.40	-0.00	-0.00	-0.00	-0.00
27	0.00	.30	0.00	0.00	0.00	0.00	0.00	3.90	-0.00	-0.00	-0.00	-0.00
28	2.50	0.00	0.00	0.00	0.00	0.00	0.00	.60	-0.00	-0.00	-0.00	-0.00
29	0.00	-0.00	0.00	0.00	8.40	0.00	2.90	0.00	-0.00	-0.00	-0.00	-0.00
30	.50	-0.00	0.00	0.00	0.00	0.00	29.60	.10	-0.00	-0.00	-0.00	-0.00
31	0.00	-0.00	0.00	-0.00	0.00	-0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
MEAN	1.56	.23	.11	2.19	.21	3.85	4.78	4.35	-0.00	-0.00	-0.00	-0.00
MAX	19.40	2.30	1.80	39.20	4.80	27.30	29.60	27.20	-0.00	-0.00	-0.00	-0.00
TOTAL	48.40	5.40	3.40	55.50	5.40	115.40	148.20	134.70	-0.00	-0.00	-0.00	-0.00

Table B-10 SYNTHESIZED RUNOFF DATA AT PTE.SABA (Sheet 1, mm/day)

Period from 1972 8 to 1983 8

YEAR	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
1972	MAX	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.75	2.74	1.06	1.70	13.72	13.72
	MIN	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.89	.71	.47	.36	.31	.31
	MEAN	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.16	1.28	.75	.59	1.95	1.15
1973	MAX	.91	.37	.23	.16	1.35	.99	2.17	3.38	1.40	1.36	.86	3.38
	MIN	.33	.24	.16	.11	.07	.16	.25	.80	.52	.50	.31	.07
	MEAN	.55	.28	.20	.14	.36	.48	.67	1.36	.85	.84	.44	.53
1974	MAX	.31	1.27	.54	.17	.80	6.25	1.50	25.88	10.35	3.79	2.18	25.88
	MIN	.21	.17	.13	.08	.11	.30	.87	.97	2.73	1.95	.98	.07
	MEAN	.26	.37	.17	.11	.24	1.33	1.13	4.58	4.70	2.43	1.49	1.44
1975	MAX	1.18	1.59	.85	.32	.30	.78	4.35	1.30	4.41	3.66	3.48	5.85
	MIN	.62	.47	.32	.23	.16	.12	.11	.52	.72	1.52	1.24	.11
	MEAN	.81	.63	.41	.27	.20	.22	1.42	.84	1.41	2.31	1.83	.93
1976	MAX	4.79	2.42	.69	.41	1.87	1.02	1.17	.57	5.14	.76	4.41	5.14
	MIN	.89	.72	.42	.29	.18	.24	.20	.16	.14	.18	.42	.14
	MEAN	1.36	1.12	.51	.35	.50	.45	.39	.24	.89	.32	1.45	.66
1977	MAX	.76	.52	.29	.85	13.68	3.38	1.96	1.53	6.88	5.31	.76	13.68
	MIN	.28	.20	.14	.10	.33	1.33	1.02	.53	.47	.44	.33	.10
	MEAN	.45	.25	.17	.20	3.09	1.95	1.47	.82	1.09	1.16	.47	.59
1978	MAX	1.41	.69	2.47	.47	2.39	4.33	4.56	8.28	5.01	2.54	7.19	8.28
	MIN	.26	.25	.21	.20	.56	1.31	1.16	1.76	1.69	1.21	1.23	.15
	MEAN	.49	.42	.60	.30	.96	1.91	1.71	2.85	2.18	1.57	2.42	1.36
1979	MAX	1.92	1.30	9.36	1.81	10.28	3.86	5.80	10.60	9.32	17.44	9.53	17.44
	MIN	.72	.51	.38	.52	.28	1.14	.99	1.40	2.28	1.98	2.83	.28
	MEAN	1.15	.65	1.41	.88	3.12	2.00	1.83	4.62	3.75	4.74	4.32	2.41
1980	MAX	2.80	1.57	1.62	1.65	4.06	4.60	2.23	4.93	5.95	23.14	3.62	23.14
	MIN	1.43	.87	.60	.50	.31	.78	.95	.56	.94	1.58	2.01	.31
	MEAN	2.08	1.10	.78	.73	1.29	1.63	1.39	1.30	2.12	4.85	2.48	1.68
1981	MAX	1.97	11.24	1.88	1.38	5.30	2.51	5.27	2.89	2.43	10.81	6.87	11.24
	MIN	.97	.92	.87	.55	.35	1.22	1.55	1.65	1.29	1.18	1.08	.35
	MEAN	1.46	3.11	1.36	.75	1.81	1.69	2.33	2.04	1.65	2.56	2.01	1.76
1982	MAX	1.17	.98	3.73	.33	6.74	4.92	3.73	3.89	5.43	3.50	1.81	6.74
	MIN	.57	.41	.33	.23	1.51	1.04	1.36	1.77	1.76	1.31	.75	.18
	MEAN	.79	.53	.70	.28	3.06	1.71	2.29	2.55	2.44	1.89	1.05	1.49
1983	MAX	1.35	.50	.36	2.19	1.53	2.13	2.71	-0.00	-0.00	-0.00	-0.00	2.71
	MIN	.51	.36	.25	.19	.12	.52	1.02	-0.00	-0.00	-0.00	-0.00	.12
	MEAN	.67	.43	.30	.38	.52	1.09	1.73	-0.00	-0.00	-0.00	-0.00	.67
from 1972 to 1983													
MAX	4.79	11.24	9.36	2.19	8.03	13.68	6.25	5.80	25.68	10.35	23.14	13.72	25.68
MIN	.21	.17	.13	.09	.07	.12	.24	1.11	1.15	1.14	1.14	.31	1.07
MEAN	.52	.61	.60	.40	.47	1.38	1.31	1.46	2.04	1.98	2.11	1.81	1.26

Table B-10 SYNTHESIZED RUNOFF DATA AT PTE.SABA (Sheet 2, mm/day)

DAY	1972											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.98	1.69	1.05	.46	.39
2	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.99	1.52	1.05	.46	.40
3	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.99	1.30	1.05	.45	.42
4	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.99	1.07	1.04	.45	.38
5	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.98	.94	1.02	.44	.55
6	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.99	.94	1.00	.44	.34
7	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.95	.94	.98	.43	.34
8	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.94	.95	.95	.68	.53
9	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.16	.91	.93	1.35	.53
10	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.58	.89	.90	1.70	.53
11	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.71	.87	.87	1.55	.52
12	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.63	.84	.84	1.14	.52
13	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.53	.92	.91	.74	.51
14	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.36	.79	.78	.50	.51
15	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.38	.76	.75	.47	.51
16	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.40	.74	.73	.48	.48
17	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.19	.71	.70	.49	.49
18	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.06	1.06	.68	.49	5.10
19	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.07	2.48	.65	.48	13.72
20	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.10	2.74	.63	.47	10.34
21	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.06	1.85	.60	.45	4.06
22	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.05	1.63	.58	.44	3.24
23	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.04	1.73	.56	.42	2.52
24	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.02	1.62	.54	.40	1.87
25	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.00	1.21	.51	.38	1.46
26	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.97	1.16	.49	.38	1.15
27	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.95	1.71	.49	.37	.93
28	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.92	1.83	.48	.37	.94
29	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.89	1.43	.48	.37	.95
30	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.31	1.11	.47	.36	.94
31	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.76	-0.00	.47	-0.00	.92
MEAN	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.16	1.28	.75	.59	1.95
MAX	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	1.76	2.74	1.06	1.70	13.72
MIN	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	.89	.71	.47	.36	.31

Table B-10 SYNTHESIZED RUNOFF DATA AT PTE. SABA (Sheet 3, mm/day)

DAY	1973											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.91	.33	.23	.16	.11	.26	.31	.45	2.62	.77	.50	.62
2	.88	.32	.23	.16	.11	.08	.31	.44	2.07	.74	.55	.58
3	.86	.32	.23	.15	.11	.08	.30	.71	1.55	.91	.89	.56
4	.83	.37	.22	.15	.11	.08	.29	1.05	1.20	1.17	.87	.54
5	.81	.32	.22	.15	.11	.08	.27	.72	2.02	.90	.71	.52
6	.78	.31	.22	.15	.10	.08	.25	.51	3.38	1.15	1.08	.50
7	.75	.30	.22	.15	.10	.08	.24	.46	2.91	1.33	1.36	.54
8	.72	.30	.21	.15	.10	.08	.22	.44	2.33	1.13	1.06	.66
9	.70	.30	.21	.15	.10	.07	.20	.43	1.79	.98	.78	.75
10	.67	.29	.21	.14	.10	.07	.18	.43	1.31	.82	1.00	.54
11	.64	.29	.21	.14	.10	.07	.16	.41	.98	1.19	1.33	.46
12	.62	.29	.20	.14	.10	.07	.15	.40	.99	1.40	1.25	.45
13	.59	.28	.20	.14	.10	.07	.14	.38	.99	1.08	.94	.45
14	.57	.28	.20	.14	.10	.07	.13	.36	1.00	.87	.96	.43
15	.54	.28	.20	.14	.09	.07	.12	.34	.98	.81	.97	.42
16	.52	.27	.19	.13	.09	.25	.11	.32	.98	.81	.86	.40
17	.50	.27	.19	.13	.09	.25	.10	.30	.97	.80	.81	.39
18	.48	.27	.19	.13	.09	.25	.09	.28	.95	.79	.75	.37
19	.45	.26	.18	.13	.09	.25	.09	.27	.99	.77	.76	.35
20	.43	.26	.18	.13	.09	.25	.08	.25	1.17	.75	.75	.35
21	.41	.26	.18	.12	.09	.25	.08	.24	1.22	.73	.74	.34
22	.39	.25	.18	.12	.13	.75	.08	.23	1.21	.71	.73	.34
23	.37	.25	.18	.12	.09	1.32	.08	.22	1.11	.68	.71	.34
24	.35	.25	.18	.12	.08	1.35	.08	.21	.92	.66	.78	.34
25	.35	.24	.17	.12	.08	.95	.08	.20	.90	.63	.85	.33
26	.34	.24	.17	.12	.08	.54	.08	.19	.89	.68	.68	.33
27	.34	.24	.17	.12	.08	.26	.08	.18	.87	.68	.66	.33
28	.34	.24	.17	.12	.08	.28	.08	.17	.85	.59	.65	.32
29	.34	.24	.17	.11	.08	.30	.08	.16	.82	.56	.63	.32
30	.33	.24	.16	.11	.08	.31	.08	.15	.80	.54	.63	.31
31	.33	.24	.16	.11	.08	-0.00	.08	.14	-0.00	.52	-0.00	.31
MEAN	.55	.28	.20	.14	.15	.36	.48	.67	1.35	.85	.84	.44
MAX	.91	.37	.23	.16	.97	1.35	.99	2.17	3.38	1.40	1.35	.86
MIN	.33	.24	.16	.11	.08	.07	.16	.25	.80	.52	.50	.31

Table B-10 SYNTHESIZED RUNOFF DATA AT PTE.SABA (Sheet 4, mm/day)

1974

DAY	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.31	.21	.54	.13	.09	.27	.82	1.00	1.25	3.40	2.69	2.04
2	.30	.21	.30	.13	.09	.26	.89	1.05	1.13	5.42	2.64	2.18
3	.30	.21	.15	.12	.09	.24	4.03	1.19	1.19	7.62	2.59	2.00
4	.30	.20	.15	.12	.09	.22	.65	1.19	1.30	8.94	2.54	1.91
5	.29	.20	.16	.12	.08	.20	.38	1.19	1.25	9.97	2.49	1.87
6	.29	.20	.16	.12	.08	.18	.30	1.05	1.12	10.35	2.43	1.84
7	.29	.20	.16	.12	.08	.17	.32	.98	1.15	7.27	2.37	1.81
8	.28	.19	.16	.12	.08	.15	.32	.97	1.21	5.94	2.32	1.78
9	.28	.49	.16	.12	.08	.13	.33	.95	1.10	5.06	2.26	1.74
10	.28	1.06	.16	.11	.08	.11	.35	.94	1.02	4.74	2.24	1.71
11	.27	.99	.16	.11	.08	.11	.53	1.12	1.01	4.43	2.16	1.67
12	.27	.74	.16	.11	.08	.11	.44	1.20	.99	3.94	2.18	1.63
13	.27	.46	.16	.11	.08	.11	.34	1.16	1.15	3.61	2.23	1.59
14	.26	.25	.16	.11	.08	.11	.34	1.13	1.38	3.21	2.03	1.55
15	.26	.18	.16	.11	.07	.26	.50	1.11	1.12	2.83	1.99	1.51
16	.26	.18	.15	.11	.29	.47	.98	.94	.97	2.79	1.95	1.47
17	.25	.18	.15	.10	.58	.29	1.35	1.02	3.44	2.95	2.24	1.43
18	.25	.18	.15	.10	.30	.11	1.39	1.21	19.92	4.14	2.54	1.40
19	.25	.18	.15	.10	1.12	.11	1.46	1.15	25.66	5.62	2.25	1.36
20	.24	.18	.15	.10	2.92	.11	1.50	.94	17.82	4.49	2.84	1.32
21	.24	.18	.15	.10	1.93	.11	1.51	.87	11.96	3.93	3.79	1.29
22	.24	.18	.14	.10	1.60	.11	4.20	.93	8.15	3.95	3.20	1.26
23	.24	.17	.14	.10	1.16	.11	6.25	1.43	6.60	4.44	3.00	1.22
24	.23	.17	.14	.10	.76	.11	3.57	1.49	5.42	4.48	3.00	1.19
25	.23	.17	.14	.10	.37	.25	2.89	1.18	4.43	4.08	2.70	1.16
26	.23	.72	.14	.09	.26	.80	2.30	1.06	3.95	3.57	2.49	1.13
27	.22	1.27	.13	.09	.28	.73	1.75	1.02	3.58	3.25	2.08	1.10
28	.22	.85	.13	.09	.29	.40	1.38	1.22	2.97	2.83	1.98	1.07
29	.22	-0.00	.13	.17	.29	.25	1.08	1.41	2.58	2.80	1.97	1.04
30	.22	-0.00	.13	.09	.29	.62	.99	1.50	2.27	2.77	1.95	1.01
31	.21	-0.00	.13	-0.00	.28	-0.00	1.00	1.46	-0.00	2.73	-0.00	.98
MEAN	.26	.37	.17	.11	.45	.24	1.33	1.13	4.58	4.70	2.43	1.49
MAX	.31	1.27	.54	.17	2.92	.80	6.25	1.50	25.66	10.35	3.79	2.18
MIN	.21	.17	.13	.09	.07	.11	.30	.87	.97	2.73	1.95	.98

Table B-10 SYNTHESIZED RUNOFF DATA AT PTE. SABA (Sheet 5, mm/day)

1975

YEAR

DAY	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.95	.62	.45	.32	.22	.50	.50	.12	.96	.95	3.59	1.50
2	.92	.61	.44	.32	.22	.28	.78	.12	.95	1.35	3.55	1.50
3	.90	.60	.44	.31	.22	.26	.47	.12	.94	1.19	3.60	1.62
4	.87	.60	.43	.31	.22	.24	.28	.12	.95	1.03	3.14	1.64
5	.85	.59	.43	.31	.21	.22	.19	.12	.95	1.55	3.29	2.12
6	.83	.58	.43	.30	.21	.21	.59	.11	.94	2.38	3.37	2.47
7	.82	.58	.42	.30	.21	.20	.55	.48	.88	1.88	3.55	3.14
8	.81	.57	.42	.29	.21	.20	.39	1.06	1.42	1.42	3.64	3.48
9	.80	.56	.42	.29	.20	.20	.29	1.30	1.05	1.05	3.01	3.02
10	.80	.56	.41	.29	.20	.20	.21	1.14	.77	.77	2.43	2.73
11	.79	.55	.41	.28	.20	.20	.15	.92	.76	.76	1.93	2.47
12	.78	.54	.40	.28	.20	.20	.15	.89	.77	.77	1.60	2.05
13	.80	.54	.40	.28	.19	.19	.15	.90	.77	.77	1.95	1.75
14	.97	.53	.40	.27	.19	.19	.15	.20	.76	.76	2.32	1.77
15	.78	.52	.39	.27	2.58	.19	.14	.28	1.03	.79	1.92	1.74
16	.74	.52	.39	.27	5.86	.19	.14	.58	.84	.75	1.68	1.63
17	.73	.51	.38	.25	2.80	.19	.14	1.38	.82	.74	1.62	1.62
18	.73	.50	.38	.26	1.85	.18	.14	4.16	.80	.77	1.61	1.60
19	.72	.50	.38	.26	1.32	.18	.14	4.35	.78	.72	1.59	1.58
20	.71	.49	.37	.25	.84	.18	.14	4.07	.75	1.03	1.57	1.56
21	.82	.48	.37	.25	.45	.18	.14	4.06	.74	1.26	1.55	1.60
22	.72	.48	.36	.25	.38	.17	.14	3.12	.71	.96	2.09	1.68
23	.70	.47	.35	.25	.39	.17	.14	3.25	.69	.76	2.52	1.52
24	.68	.46	.35	.24	.40	.17	.13	3.25	.66	.95	2.27	1.47
25	.67	1.59	.35	.24	.40	.17	.13	2.58	.64	1.07	1.96	1.44
26	.69	1.22	.34	.24	.40	.17	.13	1.97	.61	.87	1.71	1.41
27	1.11	.83	.34	.23	.39	.16	.13	1.44	.59	1.39	1.57	1.38
28	1.18	.58	.34	.23	.38	.16	.13	1.09	.56	3.34	1.56	1.35
29	.97	-0.00	.33	.23	.36	.18	.13	.97	.54	3.74	1.54	1.31
30	.78	-0.00	.33	.23	.34	.16	.12	.97	.52	3.67	1.52	1.27
31	.62	-0.00	.32	-0.00	.32	-0.00	.12	.97	-0.00	4.41	-0.00	1.24
MEAN	.81	.63	.41	.27	.72	.20	.22	1.42	.84	1.41	2.31	1.83
MAX	1.18	1.59	.85	.32	5.86	.30	.78	4.35	1.30	4.41	3.66	3.48
MIN	.62	.47	.32	.23	.19	.16	.12	.11	.52	.72	1.52	1.24

Table B-10 SYNTHESIZED RUNOFF DATA AT PTE. SABA (Sheet 6, mm/day)

DAY	YEAR											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.20	2.42	.69	.41	.29	.20	.36	.22	.20	.16	.50	.42
2	1.17	1.91	.67	.41	.28	.20	.38	.72	.20	.15	.46	.72
3	1.13	1.46	.64	.40	.28	.19	.39	.81	.38	.15	.46	1.11
4	1.10	1.22	.62	.40	.26	.19	.40	.61	.54	.15	.44	1.45
5	1.07	1.22	.60	.39	.27	.19	.68	.48	.33	.15	.41	1.23
6	1.03	1.22	.57	.39	.27	.19	1.02	.37	.39	.15	.39	.83
7	1.00	1.22	.55	.38	.27	.18	.74	.26	.57	.14	.37	1.08
8	.97	1.21	.54	.38	.26	.33	.63	.26	.45	.14	.35	2.00
9	.96	1.19	.54	.39	.26	.59	.54	.26	.27	.14	.33	3.14
10	1.27	1.16	.53	.37	.26	.67	.48	.25	.19	.14	.31	4.41
11	1.24	1.15	.53	.37	.26	.55	.48	.25	.19	.14	.29	4.21
12	1.07	1.13	.52	.36	.25	.33	.47	.83	.18	.25	.27	3.09
13	.98	1.10	.52	.36	.25	.17	.46	1.17	.18	.16	.25	2.60
14	.89	1.09	.51	.35	.35	.17	.45	.77	.18	.57	.23	2.16
15	1.00	1.25	.51	.35	.57	.17	.44	.50	.29	.76	.22	1.65
16	1.08	1.15	.50	.34	.34	.17	.42	.33	.22	.97	.20	1.29
17	1.33	1.06	.50	.34	.24	.17	.41	.33	.22	4.00	.19	1.09
18	1.49	1.01	.49	.34	.23	.24	.39	.33	.18	5.14	.19	.96
19	1.19	.99	.48	.33	.23	.50	.37	.33	.18	2.65	.19	.95
20	.99	.96	.48	.33	.23	.42	.35	.32	.18	2.18	.19	.95
21	1.45	.94	.47	.32	.23	.32	.33	.31	.17	1.94	.19	.94
22	1.81	.91	.47	.32	.22	.17	.31	.29	.17	1.66	.19	.93
23	1.50	.88	.46	.32	.22	.16	.59	.28	.17	1.24	.19	.91
24	1.23	.85	.45	.31	.22	.52	.59	.26	.17	.78	.62	.89
25	1.04	.82	.45	.31	.22	1.16	.49	.24	.17	.52	.76	.87
26	1.00	.79	.44	.31	.21	1.65	.31	.22	.17	.54	.59	.99
27	1.00	.77	.44	.30	.21	1.87	.29	.21	.16	.55	.38	1.10
28	1.00	.74	.43	.30	.21	1.59	.28	.20	.16	.55	.19	.88
29	2.16	.72	.43	.29	.21	1.14	.27	.20	.16	.54	.18	.83
30	4.79	-0.00	.42	.29	.20	.70	.26	.20	.16	.53	.18	.81
31	2.95	-0.00	.42	-0.00	.20	-0.00	.24	.20	-0.00	.52	-0.00	.79
MEAN	1.36	1.12	.51	.35	.26	.50	.45	.39	.24	.89	.32	1.46
MAX	4.79	2.42	.69	.41	.57	1.87	1.02	1.17	.57	5.14	.76	4.41
MIN	.89	.72	.42	.29	.20	.16	.24	.20	.16	.14	.18	.42

Table B-10 SYNTHESIZED RUNOFF DATA AT PTE. SABA (Sheet 7, mm/day)

DAY	1977											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.76	.28	.20	.14	.22	.66	1.36	1.86	.99	.52	.52	.70
2	.74	.27	.29	.13	1.01	.58	1.37	1.80	.96	.52	.50	.75
3	.71	.27	.19	.13	2.27	.34	1.33	1.65	.95	.52	.48	.66
4	.68	.27	.19	.13	1.81	.33	1.64	1.55	.91	.51	.63	.64
5	.65	.26	.19	.13	2.45	.97	2.62	1.54	.88	.51	.99	.62
6	.63	.26	.19	.13	2.41	4.63	3.38	1.68	.85	.50	.80	.59
7	.60	.26	.18	.13	1.84	8.00	2.71	1.78	1.53	.49	.57	.54
8	.58	.25	.18	.12	1.32	11.98	2.83	1.95	1.53	.49	.46	.54
9	.55	.25	.18	.12	1.00	13.68	2.71	1.56	1.34	.48	.45	.52
10	.53	.25	.18	.24	.74	6.56	2.29	1.50	1.05	.48	.44	.50
11	.50	.25	.17	.37	.45	5.44	1.90	1.50	.95	.47	.68	.46
12	.48	.24	.17	.38	.47	4.38	1.48	1.55	.90	.47	2.43	.46
13	.46	.24	.17	.34	.48	3.45	1.48	1.45	.82	.47	5.31	.44
14	.44	.24	.17	.15	.49	2.79	1.54	1.68	.81	3.07	3.56	.42
15	.42	.23	.17	.11	.49	2.79	1.67	1.96	.80	6.88	2.50	.40
16	.39	.33	.16	.11	.49	2.65	2.08	1.77	.79	3.78	1.93	.39
17	.37	.32	.16	.11	.48	2.22	2.10	1.56	.77	2.44	1.52	.38
18	.35	.30	.16	.11	.47	1.94	1.91	1.41	.75	1.86	1.17	.38
19	.33	.22	.16	.11	.45	1.61	1.81	1.40	.73	1.34	.99	.38
20	.31	.22	.16	.11	.44	1.37	1.61	1.38	.71	.88	.92	.37
21	.30	.22	.15	.11	.42	1.38	1.69	1.35	.69	.65	.84	.52
22	.42	.21	.15	.11	.39	1.37	2.13	1.32	.67	.68	.85	.76
23	.32	.21	.15	.46	.37	1.36	1.90	1.29	.65	.68	.85	.50
24	.30	.21	.15	.85	.35	1.35	1.68	1.26	.62	.68	.84	.36
25	.30	.21	.15	.50	.33	1.58	1.55	1.22	.60	.67	.83	.35
26	.32	.20	.15	.26	.31	1.76	1.78	1.19	.58	.65	.81	.35
27	.29	.20	.14	.10	.29	1.52	1.91	1.15	.55	.63	.80	.34
28	.29	.20	.14	.10	.27	1.33	1.81	1.12	.54	.61	.78	.34
29	.29	-0.00	.14	.10	.25	1.32	1.94	1.09	.54	.59	.75	.34
30	.28	-0.00	.14	.10	.23	1.33	2.04	1.05	.53	.57	.73	.34
31	.28	-0.00	.14	-0.00	.30	-0.00	1.94	1.02	-0.00	.54	-0.00	.33
MEAN	.45	.25	.17	.20	.75	3.09	1.95	1.47	.82	1.09	1.15	.47
MAX	.76	.52	.29	.85	2.45	13.68	3.38	1.96	1.53	6.88	5.31	.76
MIN	.28	.20	.14	.10	.22	.33	1.33	1.02	.53	.47	.44	.33

Table B-10 SYNTHESIZED RUNOFF DATA AT PTE. SABA (Sheet 8 , mm/day)

DAY	1978											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.33	.69	.25	.47	.20	2.39	1.66	1.67	2.15	1.75	1.66	1.66
2	.33	.58	.24	.47	.20	1.90	3.56	1.43	2.67	1.94	1.62	1.52
3	.32	.50	.24	.47	.19	1.39	4.33	1.47	3.07	2.40	1.58	1.32
4	.32	.54	.24	.46	.19	1.21	2.87	1.71	6.76	2.51	1.55	1.29
5	.31	.65	.25	.45	.19	1.02	2.31	1.73	8.28	2.40	1.51	1.27
6	.36	.64	.41	.43	.19	.61	1.78	1.51	5.70	2.32	1.47	1.25
7	.31	.46	.23	.41	.18	.58	1.37	1.32	4.56	2.02	1.43	1.23
8	.30	.44	.23	.39	.18	.58	1.58	1.28	3.78	2.12	1.39	1.68
9	.50	.48	.55	.37	.18	.60	1.87	1.28	3.10	2.15	1.36	1.92
10	.72	.59	.82	.35	.18	.59	2.44	1.26	2.51	1.88	1.32	1.59
11	.45	.45	.50	.33	.18	.58	2.68	1.23	2.10	1.74	1.28	1.75
12	.29	.45	.28	.31	.17	.57	2.19	1.21	1.82	1.73	1.25	2.51
13	.89	.44	.22	.29	.17	.56	1.72	1.27	1.82	1.71	1.21	3.59
14	1.27	.43	.22	.27	.17	.91	1.31	1.16	1.80	1.85	1.22	6.06
15	.61	.42	.21	.25	.17	1.25	1.36	1.32	1.78	2.06	1.39	7.19
16	.50	.40	.21	.23	.17	1.11	1.97	1.39	1.76	1.95	1.78	4.54
17	.31	.38	.98	.23	.16	1.31	2.23	1.76	2.37	1.96	1.72	3.78
18	.28	.36	2.47	.23	.16	1.23	1.82	3.64	3.42	1.83	1.49	3.62
19	.27	.34	1.64	.22	.16	.94	1.67	4.56	3.46	2.82	1.91	3.65
20	.27	.32	1.45	.22	.16	.79	1.56	3.02	3.09	5.01	2.48	3.27
21	.30	.30	1.04	.22	.15	.89	1.42	2.54	2.57	3.44	2.54	2.69
22	.28	.28	.65	.22	.15	1.03	1.70	2.08	2.21	2.90	2.21	2.18
23	.28	.26	.34	.22	.15	.93	1.82	1.70	1.85	2.40	1.85	1.63
24	.27	.25	.35	.22	.15	.75	1.63	1.37	1.84	2.13	1.49	1.78
25	.27	.25	.37	.21	.28	.71	1.59	1.36	1.83	1.89	1.33	1.77
26	.26	.25	.38	.21	.51	.74	1.51	1.36	1.82	1.80	1.33	1.75
27	.26	.25	.74	.21	.30	.81	1.36	1.41	1.80	1.79	1.33	1.73
28	.77	.25	1.13	.21	3.65	.78	1.37	1.50	1.79	1.78	1.31	1.70
29	1.41	-0.00	.75	.20	8.03	.90	1.35	1.56	1.77	1.75	1.40	1.67
30	1.06	-0.00	.56	.20	4.69	1.23	1.42	1.36	1.79	1.73	1.70	1.63
31	.76	-0.00	.48	-0.00	2.94	-0.00	1.76	1.45	-0.00	1.59	-0.00	1.59
MEAN	.49	.42	.60	.30	.79	.96	1.91	1.71	2.85	2.18	1.57	2.42
MAX	1.41	.69	2.47	.47	8.03	2.39	4.33	4.56	9.28	5.01	2.54	7.19
MIN	.26	.25	.21	.20	.15	.56	1.31	1.16	1.76	1.69	1.21	1.23

Table B-10 SYNTHESIZED RUNOFF DATA AT PTE. SABA (Sheet 9, mm/day)

DAY	1979											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.55	.70	.50	1.81	.50	.29	3.60	1.41	1.40	2.40	2.32	5.96
2	1.51	.67	.49	1.30	.48	.32	3.91	1.53	2.01	2.36	2.27	4.93
3	1.69	.66	.49	.97	.45	.43	3.86	1.53	7.62	2.32	2.22	5.07
4	1.92	.65	.48	1.17	.43	.28	3.58	1.51	10.60	2.28	2.17	4.98
5	1.64	.65	.48	1.43	.41	.29	3.43	1.28	7.23	3.08	2.54	4.42
6	1.43	.64	.47	1.10	.39	1.25	3.15	1.27	4.89	3.77	2.78	3.82
7	1.40	.63	.46	.94	.38	1.93	2.79	1.26	4.20	3.21	2.60	3.47
8	1.37	.63	.45	.95	.38	6.46	2.31	1.13	4.63	3.04	2.44	5.63
9	1.34	.91	.45	.94	.38	1.92	1.92	1.06	5.53	3.32	2.30	9.53
10	1.31	1.30	.45	.94	.37	10.28	1.66	1.05	4.64	5.76	2.08	7.45
11	1.28	1.00	.44	.92	.37	8.39	1.85	1.05	3.98	9.32	2.01	5.72
12	1.25	.76	.44	.91	.37	5.47	1.83	1.11	4.71	8.20	1.98	5.18
13	1.21	.60	.43	.88	.36	4.25	1.80	1.20	5.97	5.70	4.89	5.20
14	1.19	.59	.43	.86	.36	3.90	1.77	1.26	7.29	4.92	16.50	5.00
15	1.14	.58	.42	.83	.36	3.35	1.73	1.05	7.91	4.52	17.44	4.42
16	1.11	.58	.42	.80	.35	2.67	1.69	.99	5.54	4.86	11.60	3.88
17	1.08	.57	.41	.84	.35	2.04	1.65	1.47	5.94	4.84	7.96	3.44
18	1.05	.57	.41	1.01	.34	2.15	1.61	1.92	5.55	4.53	6.31	3.53
19	1.02	.56	.40	.79	.34	2.22	1.57	2.07	4.93	4.42	5.33	3.78
20	.99	.66	.40	.74	.33	2.90	1.54	2.51	4.30	3.99	5.30	3.43
21	.96	.55	.39	.71	.33	3.52	1.50	4.60	4.12	3.43	5.58	3.12
22	.93	.54	.39	.69	.33	3.03	1.46	5.90	4.01	2.94	5.25	3.05
23	.90	.54	.38	.67	.32	3.49	1.43	3.73	3.56	2.71	4.65	3.02
24	.87	.53	.38	.65	.32	3.81	1.39	3.06	3.13	2.68	4.04	2.98
25	.96	.52	4.02	.67	.32	3.31	1.36	2.45	2.73	2.65	3.46	3.43
26	.83	.52	9.36	.61	.31	2.87	1.32	2.58	2.58	2.51	3.03	3.81
27	.81	.51	5.32	.59	.31	2.60	1.28	1.70	2.54	2.57	2.78	3.61
28	.79	.51	4.73	.57	.30	2.43	1.25	1.53	2.51	2.53	2.75	3.25
29	.77	-0.00	4.28	.54	.30	3.10	1.21	1.42	2.48	2.48	3.06	3.00
30	.74	-0.00	3.13	.52	.30	3.86	1.17	1.42	2.44	2.42	4.44	2.85
31	.72	-0.00	2.43	-0.00	.29	-0.00	1.14	1.41	-0.00	2.37	-0.00	2.83
MEAN	1.15	.65	1.41	.89	.36	3.12	2.00	1.83	4.52	3.75	4.74	4.32
MAX	1.92	1.30	9.36	1.81	.50	10.28	3.86	5.80	10.60	9.32	17.44	9.53
MIN	.72	.51	.38	.52	.29	.28	1.14	.99	1.40	2.28	1.98	2.83

Table B-10 SYNTHESIZED RUNOFF DATA AT PTE.SABA (Sheet 10 , mm/day)

YEAR 1980

DAY	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2.80	1.40	.85	.59	.55	.32	.83	1.75	.92	.98	1.90	2.58
2	2.75	1.53	1.21	.58	.53	.32	.82	2.23	.89	.96	1.60	2.36
3	2.71	1.57	1.62	.58	.51	.31	.81	2.10	.87	.95	1.58	2.26
4	2.66	1.45	1.25	.57	.49	.31	.79	1.71	.84	.94	1.92	2.23
5	2.61	1.35	.97	.56	.46	.31	.78	1.70	.81	1.81	2.72	2.21
6	2.56	1.28	.81	.56	.44	.33	.82	1.74	.78	3.04	14.94	2.48
7	2.51	1.26	.80	.55	.43	.42	1.11	1.54	.76	3.30	23.14	2.70
8	2.46	1.23	.79	.54	.42	.33	1.55	1.62	.73	5.61	15.05	2.65
9	2.41	1.20	.78	.54	.42	.44	1.91	1.48	.76	5.95	10.76	2.38
10	2.35	1.17	.77	.53	.41	1.29	1.59	1.42	.77	3.91	7.49	2.29
11	2.30	1.14	.75	.52	.41	1.78	1.97	1.41	.78	3.29	6.24	2.99
12	2.25	1.11	.74	.52	.41	2.47	2.14	1.40	.66	2.07	5.18	3.62
13	2.20	1.08	.74	.51	.40	3.47	1.83	1.38	.64	2.07	4.28	3.37
14	2.15	1.05	.73	.51	.40	4.06	1.60	1.36	.62	1.65	3.61	3.23
15	2.10	1.03	.73	.50	.39	3.89	1.27	1.38	.60	1.39	3.09	2.94
16	2.05	1.00	.72	.59	.39	2.90	1.01	1.41	.58	1.39	2.65	2.49
17	2.00	.99	.71	.59	.39	2.41	1.01	1.30	.56	1.38	2.45	2.32
18	1.96	.98	.70	1.21	.38	1.81	1.01	1.29	1.82	1.37	2.43	2.31
19	1.91	.97	.69	1.60	.38	1.39	1.01	1.27	4.93	1.35	2.62	2.16
20	1.87	.96	.68	1.57	.37	1.08	1.46	1.28	2.51	1.33	2.87	2.43
21	1.82	.95	.67	1.38	.37	.77	3.18	1.33	2.91	1.47	2.94	2.62
22	1.78	.94	.67	1.05	.36	.82	4.60	1.23	3.08	1.91	3.16	2.41
23	1.74	.93	.66	.65	.36	.87	2.99	1.18	3.08	1.94	3.24	2.26
24	1.70	.92	.65	.65	.35	.89	2.44	1.16	1.97	1.83	3.13	2.21
25	1.66	.91	.64	.64	.35	.91	2.11	1.13	1.47	1.71	2.87	2.42
26	1.62	.90	.64	.64	.35	.81	1.83	1.11	1.23	1.53	2.51	2.49
27	1.58	.89	.63	.63	.34	.81	1.40	1.08	1.05	1.40	2.36	2.28
28	1.54	.88	.62	.62	.34	1.03	1.65	1.05	.98	1.98	2.45	2.09
29	1.51	.87	.61	.61	.33	1.26	1.95	1.02	.98	2.39	2.63	2.06
30	1.47	-0.00	.61	.61	.33	1.00	1.70	.99	.99	2.10	2.66	2.04
31	1.43	-0.00	.60	-0.00	.33	-0.00	1.42	.95	-0.00	2.06	-0.00	2.01
MEAN	2.08	1.10	.78	.73	.40	1.29	1.63	1.39	1.30	2.12	4.85	2.48
MAX	2.80	1.57	1.62	1.65	.55	4.06	4.60	2.23	4.93	5.95	23.14	3.62
MIN	1.43	.87	.60	.50	.33	.31	.79	.95	.56	.94	1.58	2.01

Table B-10 SYNTHESIZED RUNOFF DATA AT PTE.SABA (Sheet 11, mm/day)

1981

DAY	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.97	.94	1.88	.84	.55	.38	1.24	1.82	1.83	2.00	1.82	1.15
2	1.93	.92	1.86	.81	.54	.38	1.24	1.84	1.82	2.25	7.75	1.12
3	1.89	1.20	1.84	.79	.54	.37	1.24	2.03	1.79	1.95	10.81	1.08
4	1.85	1.70	1.81	.75	.73	.37	1.34	2.14	1.77	1.82	6.64	2.30
5	1.80	1.64	1.77	.74	1.10	.37	1.52	1.83	1.74	1.74	4.46	6.87
6	1.76	1.47	1.74	.71	.87	.36	1.30	1.85	1.70	1.67	3.92	6.28
7	1.71	1.19	1.70	.69	.63	1.33	1.22	1.90	1.66	1.65	3.57	3.70
8	1.67	.99	1.66	.68	.51	1.84	1.56	1.82	1.76	1.63	3.06	3.19
9	1.63	.93	1.61	.68	.50	1.10	1.98	1.84	2.03	1.60	2.49	2.76
10	1.59	.93	1.57	.67	.50	.75	1.86	1.87	1.88	1.58	2.03	2.28
11	1.77	1.14	1.53	.66	.49	.51	1.85	2.14	1.89	1.76	1.75	1.82
12	1.82	1.85	1.49	.65	.49	.36	2.05	2.26	2.11	1.73	1.75	1.46
13	1.67	4.03	1.45	.65	.48	.35	2.03	1.97	2.09	1.52	1.74	1.43
14	1.56	5.85	1.41	.81	.48	.35	1.72	1.72	2.19	1.49	1.73	1.42
15	1.46	4.19	1.37	1.34	.47	.73	1.44	1.58	2.53	1.46	1.71	1.41
16	1.44	3.22	1.34	1.38	.47	1.39	1.54	1.58	2.89	1.44	1.68	1.40
17	1.41	2.88	1.30	1.15	.45	4.45	2.15	1.56	2.75	1.41	1.65	1.37
18	1.38	2.88	1.27	.96	.45	5.30	2.51	1.55	2.63	1.38	1.62	1.35
19	1.35	6.56	1.23	.83	.45	3.43	2.18	1.74	2.51	1.90	1.59	1.97
20	1.32	11.24	1.20	.67	.44	3.07	1.79	1.94	2.07	2.43	1.55	2.29
21	1.28	8.28	1.17	.62	.44	3.54	1.70	1.70	1.79	2.14	1.51	2.01
22	1.25	5.42	1.13	.62	.43	4.27	1.95	2.53	1.72	1.85	1.47	1.67
23	1.22	4.52	1.10	.62	.43	3.55	1.95	5.27	2.01	1.65	1.43	1.45
24	1.18	3.73	1.07	.61	.42	2.68	1.80	4.47	2.43	1.58	1.39	1.37
25	1.15	3.04	1.04	.60	.42	2.39	1.66	3.63	2.42	1.46	1.35	1.36
26	1.12	2.50	1.01	.58	.41	2.69	1.61	3.88	2.04	1.39	1.32	1.34
27	1.09	2.12	.98	.57	.41	2.60	1.57	3.85	1.84	1.38	1.28	1.32
28	1.06	1.89	.95	.56	.40	2.21	1.55	3.22	1.74	1.37	1.25	1.30
29	1.03	-0.00	.92	.56	.40	1.87	1.58	2.65	1.73	1.35	1.21	1.27
30	1.00	-0.00	.89	.55	.39	1.42	1.68	2.16	1.71	1.32	1.18	1.24
31	.97	-0.00	.87	-0.00	.43	-0.00	1.72	1.84	-0.00	1.29	-0.00	1.21
MEAN	1.46	3.11	1.36	.75	.51	1.81	1.69	2.33	2.04	1.65	2.56	2.01
MAX	1.97	11.24	1.88	1.38	1.10	5.30	2.51	5.27	2.89	2.43	10.81	6.87
MIN	.97	.92	.87	.55	.39	.35	1.22	1.55	1.66	1.29	1.18	1.08

Table B-10 SYNTHESIZED RUNOFF DATA AT PTE. SABA (Sheet 12, mm/day)

DAY	YEAR											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.17	.57	.41	.33	.23	1.58	1.70	2.53	3.48	3.09	1.75	1.28
2	1.14	.55	.40	.33	.23	3.24	1.67	2.41	2.96	2.58	1.72	1.24
3	1.11	.55	.40	.32	.23	3.03	1.67	2.25	2.78	2.31	1.71	1.21
4	1.07	.55	.39	.32	.22	3.00	1.72	1.98	2.69	3.58	1.98	1.17
5	1.04	.54	.39	.32	.22	2.39	1.59	1.69	2.32	5.43	2.95	1.14
6	1.01	.53	.38	.31	.22	1.82	1.56	1.41	1.96	4.01	3.50	1.11
7	.98	.65	1.29	.31	.21	1.58	1.52	1.40	1.92	3.43	2.89	1.08
8	.95	.98	3.73	.30	.21	1.96	1.49	1.39	1.90	2.90	2.52	1.05
9	.92	.92	2.26	.30	.21	2.11	1.46	1.38	1.89	2.53	2.38	1.03
10	.90	.75	1.67	.30	.21	1.87	1.42	1.35	1.86	2.24	2.23	1.00
11	.87	.65	1.32	.29	.20	1.55	1.38	1.61	1.84	2.14	2.10	.97
12	.84	.50	.88	.29	.20	1.51	1.34	2.55	1.80	2.13	1.87	.94
13	.81	.49	.49	.29	.20	3.82	1.30	2.94	1.77	2.11	1.83	.91
14	.79	.49	.50	.28	.20	6.48	1.26	2.43	2.31	2.14	1.88	.89
15	.76	.48	.51	.28	.20	6.57	1.23	2.03	2.65	2.06	1.81	.86
16	.74	.47	.52	.28	.19	5.74	1.19	2.37	2.68	2.04	1.78	.86
17	.71	.47	.52	.27	.19	5.90	1.16	2.63	2.68	2.01	1.76	.82
18	.69	.46	.51	.27	.19	5.28	1.19	2.23	3.69	1.98	1.73	1.81
19	.67	.46	.50	.27	.19	4.19	1.28	1.81	3.73	1.95	1.70	1.44
20	.65	.45	.48	.26	.87	3.42	1.09	1.89	3.18	2.13	1.67	1.19
21	.64	.45	.47	.26	1.05	2.75	1.33	1.89	2.68	2.07	1.64	1.02
22	.63	.44	.45	.26	.76	3.04	1.54	1.72	2.39	1.89	1.60	.90
23	.63	.44	.43	.25	.73	3.34	1.48	1.64	2.15	1.90	1.56	.90
24	.62	.43	.41	.25	1.44	2.85	1.35	1.57	1.93	1.95	1.52	.90
25	.61	.43	.38	.25	2.58	2.33	1.13	2.15	1.93	1.82	1.48	.89
26	.61	.42	.36	.25	1.85	2.08	1.04	3.52	1.91	1.76	1.48	.87
27	.60	.42	.35	.24	1.62	1.87	2.05	3.63	2.76	2.30	1.49	.85
28	.59	.41	.34	.24	1.38	1.75	4.92	3.68	3.59	2.59	1.38	.83
29	.59	-0.00	.34	.24	.99	1.74	3.92	3.73	3.11	2.33	1.34	.80
30	.58	-0.00	.34	.23	.61	1.72	3.12	3.48	3.16	2.08	1.31	.78
31	.57	-0.00	.33	-0.00	.45	-0.00	2.82	3.60	-0.00	1.88	-0.00	.75
MEAN	.79	.53	.70	.28	.59	3.06	1.71	2.29	2.55	2.44	1.89	1.05
MAX	1.17	.98	3.73	.33	2.58	6.74	4.92	3.73	3.89	5.43	3.50	1.81
MIN	.57	.41	.33	.23	.19	1.51	1.04	1.36	1.77	1.76	1.31	.75

Table B-10 SYNTHESIZED RUNOFF DATA AT PTE. SABA (Sheet 13, mm/day)

DAY	YEAR											
	JUN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.73	.50	.36	.25	.19	.14	.53	1.75	-0.00	-0.00	-0.00	-0.00
2	.70	.49	.35	.37	.19	.14	.52	1.39	-0.00	-0.00	-0.00	-0.00
3	.68	.49	.35	.55	.19	.13	.77	1.09	-0.00	-0.00	-0.00	-0.00
4	.67	.48	.34	.52	.19	.13	.83	1.02	-0.00	-0.00	-0.00	-0.00
5	.66	.48	.34	.23	.19	.13	.62	1.06	-0.00	-0.00	-0.00	-0.00
6	.66	.47	.34	.23	.19	.13	.69	1.14	-0.00	-0.00	-0.00	-0.00
7	.65	.46	.33	.23	.18	.36	.91	1.69	-0.00	-0.00	-0.00	-0.00
8	.64	.46	.33	.23	.18	.64	.95	2.42	-0.00	-0.00	-0.00	-0.00
9	.64	.45	.32	.22	.18	.34	.81	2.34	-0.00	-0.00	-0.00	-0.00
10	.63	.45	.32	.22	.18	.17	1.19	1.94	-0.00	-0.00	-0.00	-0.00
11	.67	.44	.32	.22	.18	.12	1.82	1.56	-0.00	-0.00	-0.00	-0.00
12	1.35	.44	.31	.21	.17	.12	1.82	1.23	-0.00	-0.00	-0.00	-0.00
13	1.20	.43	.31	.21	.17	.12	1.45	1.17	-0.00	-0.00	-0.00	-0.00
14	1.95	.43	.30	.21	.17	.46	1.10	1.17	-0.00	-0.00	-0.00	-0.00
15	.87	.42	.30	.21	.17	.99	.92	1.66	-0.00	-0.00	-0.00	-0.00
16	.76	.42	.30	.21	.17	.91	.89	2.17	-0.00	-0.00	-0.00	-0.00
17	.58	.41	.29	2.19	.16	.72	.80	1.93	-0.00	-0.00	-0.00	-0.00
18	.58	.41	.29	1.21	.16	.57	.80	1.54	-0.00	-0.00	-0.00	-0.00
19	.57	.40	.29	.74	.16	.34	.80	1.48	-0.00	-0.00	-0.00	-0.00
20	.57	.40	.28	.43	.16	.94	.79	1.67	-0.00	-0.00	-0.00	-0.00
21	.56	.39	.28	.23	.16	1.63	.78	1.67	-0.00	-0.00	-0.00	-0.00
22	.56	.39	.28	.21	.15	1.22	.87	1.94	-0.00	-0.00	-0.00	-0.00
23	.55	.38	.27	.22	.15	.79	1.74	2.62	-0.00	-0.00	-0.00	-0.00
24	.55	.38	.27	.23	.15	.41	2.03	2.71	-0.00	-0.00	-0.00	-0.00
25	.54	.37	.27	.23	.15	.67	1.66	2.56	-0.00	-0.00	-0.00	-0.00
26	.54	.37	.26	.23	.15	.88	1.27	2.35	-0.00	-0.00	-0.00	-0.00
27	.53	.36	.26	.22	.15	.62	.99	2.05	-0.00	-0.00	-0.00	-0.00
28	.52	.36	.26	.21	.14	.45	.90	1.79	-0.00	-0.00	-0.00	-0.00
29	.52	-0.00	.25	.20	.14	.57	.90	1.49	-0.00	-0.00	-0.00	-0.00
30	.51	-0.00	.25	.19	.14	.64	1.59	1.46	-0.00	-0.00	-0.00	-0.00
31	.51	-0.00	.25	-0.00	.14	-0.00	2.13	1.45	-0.00	-0.00	-0.00	-0.00
MEAN	.67	.43	.30	.38	.17	.52	1.09	1.73	-0.00	-0.00	-0.00	-0.00
MAX	1.35	.50	.36	2.19	.19	1.63	2.13	2.71	-0.00	-0.00	-0.00	-0.00
MIN	.51	.36	.25	.19	.14	.12	.52	1.02	-0.00	-0.00	-0.00	-0.00