

APENDICE 1

Appendix 1

MONTHLY SIMULATION MODEL
CARRIZAL RIVER BASIN-CALCETA HYDROLOGICAL STATION
CALIBRATION
BASIC INFORMATION ON STREAMFLOWS
STARTING JAN. 1964, ENDING DEC. 1980
NUMBER OF SUBBASINS=1
NUMBER OF RAINFALL STATION=1

PARAMETERS FOR EACH SUBBASIN

SUBC	CINF PESC (mm)	HSN (mm)	CT	PQB	PFSE
1	200.00 0.40	200.00	0.40	0.60	0.02

INITIAL DATA, RUNOFFS AND SUBBASIN DATA

SUBC	AIHS (mm)	AIAS (mm)	AISUP (mm)	FSUPA (mm)	FSUBA (mm)	PARTIAL AREA (km ²)	ACCUM. AREA (km ²)	SUBBASINS												
								1	2	3	4	5	6	7	8	9	10			
1	260	0	10.0	0	0	183.00	183.00	0												

INFLUENCE OF EACH RAINFALL STATION

NAME OF STATION	SUBBASIN									
	1	2	3	4	5	6	7	8	9	10
DOS BOCAS	1.000									

ADJUSTMENT FACTOR OF RAINFALL

FACTOR	SUBBASIN									
	1	2	3	4	5	6	7	8	9	10
	1.000									

INFLUENCE OF EACH EVAPORATION STATION

NAME OF STATION	SUBBASIN								
	1	2	3	4	5	6	7	8	9
PORTOVIEJO-UTM	1.00								

ADJUSTMENT FACTOR OF EVAPORATION

FACEVA	SUBBASIN								
	1	2	3	4	5	6	7	8	9
	1.00								

SUMMARY FOR PERIOD 1964-1980
INTERMEDIATE CALCULATION IN "mm"

SUBC	PRECIP.	EVAP.	ETP	ETR	FSUPA	FSUBA	ESC TOT	ESC DIR	Q BASE	FSUBE	BALANCE
1	24809.21	27283.00	10913.20	9509.08	.00	.00	14098.14	10304.71	3793.43	1264.48	.008

FINAL DATA IN "mm"

SUBC	SOIL MOISTURE	GROUNDWATER	SURFACE RUNOFF
1	77.04	0.21	0.25

TOTAL OBSERVED RUNOFF IN "mm"=14061.600
 TOTAL SIMULATED RUNOFF IN "mm"=14098.140
 DIFFERENCE=0.26%
 COEFFICIENT OF LINEAR CORRELATION=0.84

MONTHLY SIMULATION MODEL
SUMMARY OF MONTHLY RUNOFF

DISCHARGE IN m³/sec

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Q-OBS	12.26	32.25	44.45	34.39	17.02	12.98	6.01	2.75	1.38	1.01	0.72	
	0.80											
Q-SIM	15.79	29.76	40.55	32.48	22.81	12.41	6.38	3.10	1.48	0.62	0.27	
	0.38											
DIF(%)	28.82	7.72	8.79	5.55	33.8	4.38	6.15	12.73	7.28	38.10	62.11	
	53.11											

RUNOFF IN "mm"

RAIN 343.78	315.60	345.53	177.11	133.16	35.23	15.88	5.25	16.63	5.85	4.08	61.27
EVAP 129.30	112.28	129.42	127.61	134.21	108.75	125.08	141.78	146.39	151.79	144.82	153.44
ETP. 51.72	44.91	51.77	51.04	53.68	43.50	50.03	56.71	58.56	60.72	57.93	61.38
ETR 47.64	44.91	51.77	51.04	53.68	43.50	50.03	55.85	53.29	45.17	31.23	31.24

INFLUENCE OF EACH EVAPORATION STATION

NAME OF STATION	SUBBASIN										
	1	2	3	4	5	6	7	8	9	10	
PORTOVIEJO-UTM	1.000										

ADJUSTMENT FACTOR OF EVAPORATION

FACEVA	SUBBASIN									
	1	2	3	4	5	6	7	8	9	10
FACEVA	1.000									

SUMMARY FOR PERIOD 1970-1982
INTERMEDIATE CALCULATION IN "mm"

SUBC	PRECIP.	EVAP.	ETP	ETR	FSUPA	FSUBA	ESC TOT	ESC DIR	QBASE	FSUBE	BALANCE
1	15596.20	21090.90	15818.17	830.50	0.00	0.00	6370.86	2893.68	3477.18	.00	.003

FINAL DATA IN "mm"

SUBC	SOIL MOISTURE	GROUNDWATER	SURFACE RUNOFF
1	196.66	140.85	157.33

TOTAL OBSERVED RUNOFF IN "mm"=6340.390
 TOTAL SIMULATED RUNOFF IN "mm"=6370.857
 DIFFERENCE=0.48%
 COEFFICIENT OF LINEAR CORRELATION=0.874

MONTHLY SIMULATION MODEL
SUMMARY OF MONTHLY RUNOFF

DISCHARGE IN m³/sec

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUT	SEP	OCT	NOV	DEC
Q-OBS 2.44	5.58	6.37	5.34	3.27	2.67	1.76	1.44	1.35	1.34	1.42	1.19	
Q-SIM 2.45	5.10	6.41	5.06	3.03	2.52	1.90	1.70	1.59	1.41	1.36	1.74	
DIF(%) .67	8.65	.68	5.15	7.26	5.67	7.68	18.44	17.68	4.98	3.69	45.61	

RUNOFF IN "mm"

RAIN 208.41	273.80	282.49	168.62	77.95	54.38	9.72	4.72	8.81	19.08	19.53	72.19
EVAP 127.14	110.38	137.22	131.92	137.52	114.16	127.52	147.81	152.27	150.78	144.19	141.46
ETP. 95.35	82.79	102.91	98.94	103.14	85.62	95.64	110.86	114.20	113.08	108.14	106.10
ETR 53.68	77.34	100.67	97.15	97.62	73.44	60.30	39.89	22.66	17.90	16.18	22.45

MONTHLY SIMULATION MODEL
 GRANDE RIVER AT A.J.MOSQUITO HYDROLOGICAL STATION
 CLIBRATION
 BASIC INFORMATION ON STREAMFLOWS
 STARTING JAN. 1971, ENDING DEC. 1982
 NUMBER OF SUBBAISNS=1
 NUMBER OF EVAPORATION STATION=1

PARAMETERS FOR EACH SUBBASIN

SUBC	CINF (mm)	HSN (mm)	CT	PQB	PFSE	PESC
1	95.00	225.00	0.70	0.10	0.10	0.60

INITIAL DATA, RUNOFFS AND SUBBASIN DATA

SUBC	AIHS (mm)	AIAS (mm)	AISUP (mm)	FSUPA (mm)	FSUBA (mm)	PARTIAL AREA (km ²)	ACCUM. AREA (km ²)	SUBBAISNS												
								1	2	3	4	5	6	7	8	9	10			
1	300	250	100	0	0	187.20	187.20	0												

INFLUENCE OF EACH RAINFALL STATION

NAME OF STATION	SUBBASIN									
	1	2	3	4	5	6	7	8	9	10
CHONE	1.000									

ADJUSTMENT FACTOR OF RAINFALL

FACPRE	SUBBASIN									
	1	2	3	4	5	6	7	8	9	10
	1.000									

INFLUENCE OF EACH EVAPORATION STATION

NAME OF STATION					SUBBASIN				
	1	2	3	4	5	6	7	8	9
	10								
PORTOVIEJO--UTM	1.000								

INFLUENCE OF EACH EVAPORATION STATION

					SUBBASIN				
	1	2	3	4	5	6	7	8	9
	10								
FACEVA	1.000								

SUMMARY FOR PERIOD 1971-1982
INTERMEDIATE CALCULATION IN "mm"

SUBC	PRECIP.	EVAP.	ETP	ETR	FSUPA	FSUBA	ESC TOT	ESC DIR	QBASE	FSUBE	BALANCE
1	15101.60	19337.40	13536.18	7878.20	.00	.00	6999.18	6438.98	560.21	560.21	.000

FINAL DATA IN "mm"

SUBC	SOIL MOISTURE	GROUNDWATER	SURFACE RUNOFF
1	153.70	26.74	133.58

TOTAL OBSERVED RUNOFF IN "mm"=7032.414
 TOTAL SIMULATED RUNOFF IN "mm"=6999.184
 DIFFERENCE=0.47%
 COEFFICIENT OF LINEAR CORRELATION=0.880

MONTHLY SIMULATION MODEL
SUMMARY OF MONTHLY RUNOFF

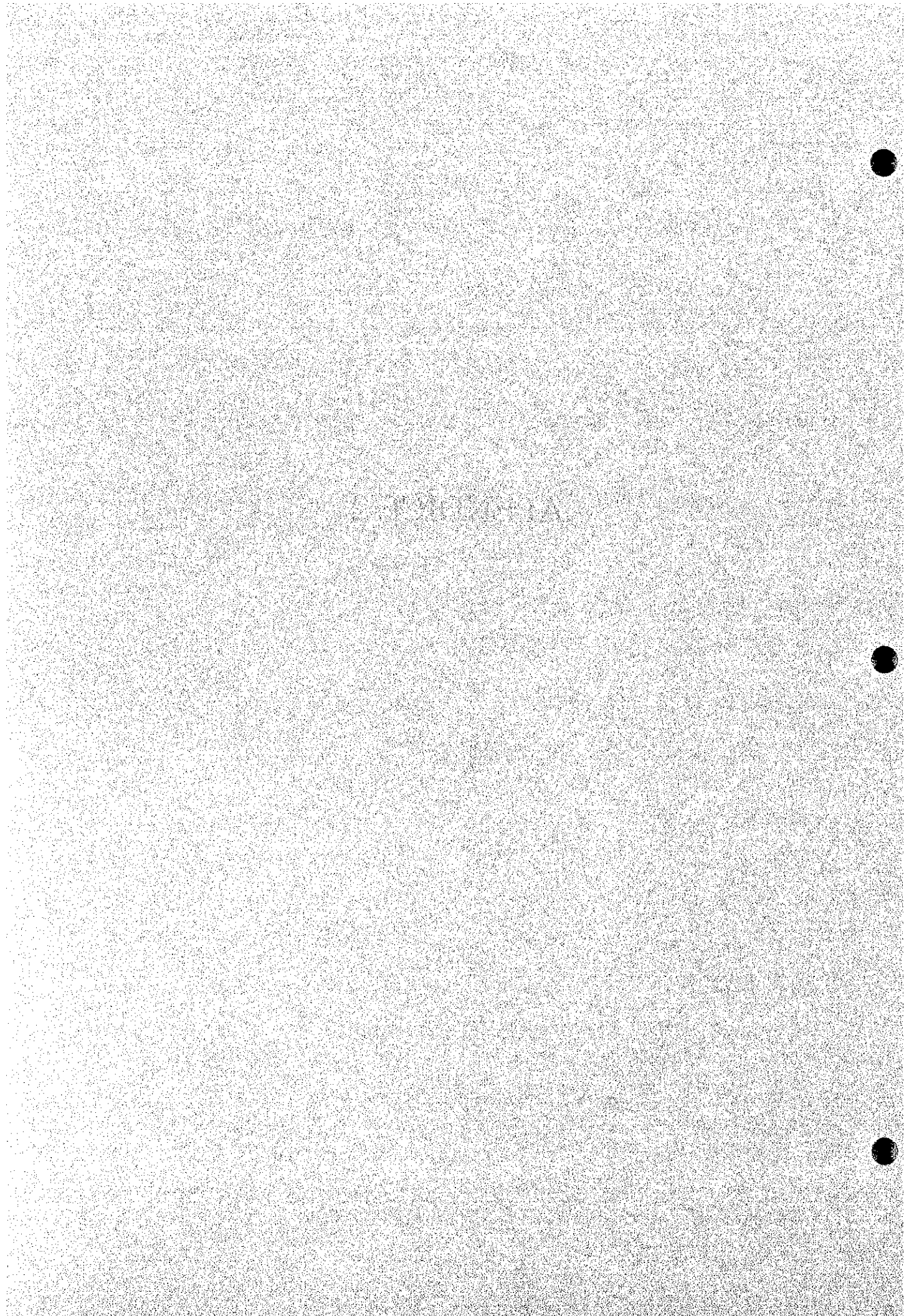
DISCHARGE IN m³/sec

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Q-OBS	3.57	9.69	13.57	7.19	3.20	1.84	.87	.34	.25	.34	.48	.80
Q-SIM	4.18	10.32	12.23	7.65	2.16	1.95	.59	.42	.23	.31	.59	1.40
DIF(%)	16.85	6.47	9.83	6.38	32.65	6.05	31.83	22.61	7.86	9.59	22.35	75.05

RUNOFF IN "mm"

RAIN	220.13	295.54	298.73	156.43	53.77	66.62	13.08	12.21	9.21	29.56	21.05	82.14
EVAP	125.05	109.33	131.24	132.76	138.86	114.84	127.36	147.65	151.38	149.13	143.76	140.08
ETP	87.54	76.53	91.87	92.93	97.20	80.39	89.15	103.35	105.97	104.39	100.63	98.06
ETR	59.86	74.44	90.17	91.46	91.91	69.00	54.51	36.52	23.63	21.45	17.98	25.58

APENDICE 2



GENINTER.RES

MODELO DE SIMULACION MENSUAL SIHIM

THE DETAILED DESIGN STUDY ON THE WATER TRANSBASIN SCHEMES -C SIMULACION

INFORMACION BASICA DE LA CORRIDA

INICIO ENE DE 1964 FINAL DIC DE 1992

NUMERO DE SUBCUENCAS = 8

NUMERO DE EST. DE MED. DE PRECIPITACION = 8

NUMERO DE EST. DE MED. DE EVAPORACION = 1

PARAMETROS PARA CADA SUBCUENCA

SUBC	CINF (mm)	HSN (mm)	CT	PQB	PFSE	PESC
1	200.00	200.00	.75	.10	.02	.40 Chico river(confluent with Portoviejo river)
2	200.00	200.00	.75	.10	.02	.40 Portoviejo river(confluent with Chico river)
3	200.00	200.00	.75	.10	.02	.40 Portoviejo river at El Ceibal
4	200.00	200.00	.75	.10	.02	.40 Chico river at Alajuela
5	200.00	200.00	.75	.10	.02	.40 Chico river at Cienaga
6	140.00	340.00	.40	.60	.20	.50 Carrizal river at Calceta
7	140.00	340.00	.40	.60	.20	.50 Carrizal river at La Estancilla
8	95.00	225.00	.70	.10	.10	.60 Grande river at A.J.Mosquito

ALMACENAMIENTOS INICIALES, FLUJOS AFLUENTES Y SUBCUENCAS TRIBUTARIAS

SUBC	AIHS (mm)	AIAS (mm)	AISUP (mm)	FSUPA (mm)	FSUBA (mm)	AREA PARC. (Km**2)	AREA ACUM. (Km**2)	SUBCUENCAS TRIBUTARIAS												
								1	2	3	4	5	6	7	8	9	10			
1	260.0	.0	10.0	.0	.0	585.00	585.00	0	0	0	0	0	0	0	0	0	0	0	0	0
2	260.0	.0	10.0	.0	.0	1190.00	1190.00	0	0	0	0	0	0	0	0	0	0	0	0	0
3	260.0	.0	10.0	.0	.0	19.35	1794.35	1	2	0	0	0	0	0	0	0	0	0	0	0
4	260.0	.0	10.0	.0	.0	183.00	183.00	0	0	0	0	0	0	0	0	0	0	0	0	0
5	260.0	.0	10.0	.0	.0	164.20	347.20	4	0	0	0	0	0	0	0	0	0	0	0	0
6	100.0	20.0	20.0	.0	.0	523.00	523.00	0	0	0	0	0	0	0	0	0	0	0	0	0
7	100.0	20.0	20.0	.0	.0	246.60	769.60	6	0	0	0	0	0	0	0	0	0	0	0	0
8	300.0	250.0	100.0	.0	.0	187.20	187.20	0	0	0	0	0	0	0	0	0	0	0	0	0

INFLUENCIA DE CADA EST. DE MED. DE PRECIPITACION

NOMBRE DE LA ESTACION	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
BOYACA	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
SANTA ANA	.000	.300	.000	.000	.000	.000	.000	.000	.000	.000
CHONE	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000
PORTOVIEJO U.T.M (INAM	.200	.200	.000	.000	.150	.000	.000	.000	.000	.000
ROCAFUERTE (INAMHI)	.200	.000	1.000	.000	.000	.000	.000	.000	.000	.000
DOS BOCAS	.000	.000	.000	.000	.000	.000	1.000	.680	.000	.000
CALCETA	.000	.000	.000	.000	.000	.000	.000	.320	.000	.000
RIO CHAMOTETE -J.MARIA	.600	.500	.000	1.000	.850	.000	.000	.000	.000	.000

FACTOR DE AJUSTE DE LA PRECIPITACION

FACPRE	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

INFLUENCIA DE CADA EST. DE MED. DE EVAPORACION

NOMBRE DE LA ESTACION	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
PORTOVIEJO (U.T.M.) EV	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

FACTOR DE AJUSTE DE LA EVAPORACION

FACEVA	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

SUMARIO TOTAL PARA EL PERIODO 1964 - 1992

CALCULOS INTERMEDIOS EN "mm"

SUBC	PRECIP.	EVAP.	ETP	ETR	FSUPA	FSUBA	ESC.TOT.	ESC.DIR	Q BASE	FSUBE	BALANCE
1	27996.21	46968.81	35226.61	17093.22	.00	.00	10033.04	5323.14	4709.90	941.98	-.002
2	29051.24	46968.81	35226.61	17606.72	.00	.00	10508.91	5495.13	5013.79	1002.76	.001
3	11939.10	46968.81	35226.61	9954.38	949609.30	90146.74	*****	946781.70	73848.57	14769.72	-.155
4	38021.30	46968.81	35226.61	19285.42	.00	.00	17402.13	10623.79	6778.33	1355.67	.001
5	34414.83	46968.81	35226.61	18567.69	19394.58	1510.88	35216.17	27879.31	7336.85	1467.37	.010
6	44035.50	46968.81	18787.52	16431.88	.00	.00	25504.28	19015.07	6489.22	2163.07	.010
7	39512.98	46968.81	18787.52	16264.42	54090.60	4587.54	78805.99	69289.52	9516.48	3172.16	-.011
8	36259.41	46968.81	32878.17	18927.97	.00	.00	16835.66	15717.49	1118.16	1118.16	.004

ALMACENAMIENTOS FINALES EN "mm"

SUBC	ALMAC HUM SUELO	ALMAC AGUA SUBT	ALMAC EN SUPERF
1	16.67	181.31	.00
2	27.13	175.71	.01
3	.96	2999.53	3610.10
4	25.49	222.58	.01
5	22.58	255.40	61.07
6	75.55	.49	.22
7	77.90	2.14	8.52
8	11.96	15.65	.00

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 1 Chico river (confluent with Portoviejo river)
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	2.99	2.57	13.69	11.99	4.67	4.09	3.51	3.11	2.85	2.44	2.24	1.92
1965	1.73	2.05	13.52	11.06	10.00	4.86	3.84	3.41	3.12	2.68	2.45	2.12
1966	12.79	11.60	10.16	7.15	5.92	4.92	4.22	3.74	3.43	2.94	2.69	2.31
1967	22.76	34.49	15.77	6.72	5.41	4.78	4.11	3.64	3.34	2.86	2.62	2.25
1968	2.05	11.76	2.71	2.21	1.81	1.66	1.42	1.26	1.17	.99	.91	.78
1969	1.08	.75	6.46	3.68	6.86	2.98	2.37	2.10	1.93	1.65	1.51	1.30
1970	1.27	1.63	3.70	8.99	4.37	3.01	2.31	2.05	1.88	1.61	1.48	1.27
1971	1.15	3.17	22.27	7.52	3.42	3.10	2.64	2.34	2.15	1.84	1.69	1.45
1972	1.32	3.47	17.25	9.43	5.03	9.31	4.51	3.94	3.60	3.06	2.81	2.58
1973	11.67	21.52	22.64	13.58	9.68	6.81	5.70	5.05	4.63	3.97	3.64	3.12
1974	2.77	8.45	4.92	3.59	2.76	2.54	2.17	1.93	1.76	1.51	1.39	1.20
1975	13.03	34.67	29.96	18.26	7.33	5.96	5.06	4.49	4.11	3.53	3.23	2.78
1976	14.52	26.70	28.97	25.61	15.39	10.11	7.31	6.41	5.88	5.04	4.62	3.97
1977	4.80	11.91	17.23	12.23	5.87	5.23	4.49	3.98	3.65	3.13	2.87	2.46
1978	2.52	5.22	5.47	3.53	2.61	2.23	1.91	1.70	1.55	1.33	1.22	1.05
1979	.98	2.70	2.64	1.64	.98	.87	.74	.66	.60	.52	.47	.41
1980	.37	.58	2.65	6.46	2.65	1.51	1.29	1.15	1.05	.90	.83	.71
1981	.66	9.40	4.56	4.30	2.59	2.01	1.72	1.53	1.40	1.20	1.10	.95
1982	.89	.89	1.01	.63	.53	.48	.41	.36	.33	.47	1.48	12.16
1983	25.70	33.32	34.19	44.54	43.04	37.22	38.64	22.73	19.18	10.76	9.67	8.31
1984	7.94	31.38	35.63	16.08	8.76	7.76	6.66	5.90	5.41	4.64	4.25	3.73
1985	3.43	4.44	6.39	6.87	3.80	3.12	2.63	2.33	2.13	1.83	1.68	1.44
1986	18.30	9.62	4.39	5.91	3.15	2.84	2.44	2.16	1.98	1.70	1.56	1.34
1987	2.05	30.05	21.82	27.06	13.76	6.61	5.46	4.86	4.43	3.81	3.49	2.99
1988	2.84	8.78	4.21	7.51	4.51	3.27	2.80	2.48	2.27	1.95	1.79	1.54
1989	20.03	33.67	24.59	17.93	7.04	5.73	4.91	4.35	3.99	3.42	3.14	2.69
1990	2.40	2.54	3.75	5.09	2.10	1.90	1.63	1.44	1.32	1.14	1.04	.89
1991	1.07	2.13	6.28	2.64	1.60	1.29	1.09	.97	.89	.76	.70	.60
1992	5.94	17.46	40.74	43.48	38.68	17.11	7.98	6.81	6.24	5.36	4.91	4.21

VOLUMEN ESCURRIDO = 5869.3290 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 2 Portoviejo River (confluent with Chico river)
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	7.61	5.39	30.91	31.14	10.60	8.88	7.62	6.75	6.19	5.31	4.87	4.18
1965	3.74	4.41	33.66	26.89	21.13	10.74	8.35	7.38	6.76	5.80	5.32	4.58
1966	22.52	22.00	20.81	14.32	11.40	9.79	8.39	7.44	6.82	5.85	5.36	4.60
1967	46.86	75.14	35.68	14.36	11.18	9.89	8.49	7.53	6.90	5.92	5.42	4.65
1968	4.25	18.48	4.80	4.05	3.29	3.01	2.58	2.29	2.11	1.80	1.65	1.42
1969	1.92	1.48	12.87	13.80	20.74	9.56	6.99	6.18	5.66	4.86	4.45	3.82
1970	3.74	4.87	10.26	22.99	11.17	7.56	5.93	5.25	4.81	4.13	3.79	3.25
1971	2.96	8.89	49.36	17.18	7.71	6.97	5.93	5.26	4.82	4.13	3.79	3.25
1972	3.08	9.43	36.05	18.99	10.42	21.59	10.68	9.05	8.19	6.98	6.40	5.78
1973	21.57	40.79	49.03	34.01	23.25	16.09	12.90	11.43	10.47	8.99	8.23	7.07
1974	6.27	17.61	10.97	8.09	6.14	5.62	4.81	4.26	3.91	3.35	3.07	2.65
1975	28.20	72.04	68.50	45.32	16.72	12.97	10.91	9.67	8.87	7.61	6.97	5.99
1976	31.74	58.36	58.94	52.21	30.90	23.76	15.89	13.76	12.61	10.82	9.91	8.52
1977	10.11	25.75	35.62	24.90	12.22	10.92	9.32	8.26	7.57	6.50	5.95	5.11
1978	5.54	11.35	14.28	8.46	6.48	5.32	4.54	4.03	3.69	3.17	2.90	2.49
1979	2.33	6.09	6.25	4.80	2.70	2.29	1.95	1.73	1.59	1.36	1.25	1.07
1980	.99	1.31	5.67	13.12	6.91	3.52	3.00	2.66	2.44	2.09	1.92	1.65
1981	1.51	16.65	13.63	12.23	6.38	5.05	4.33	3.84	3.52	3.02	2.77	2.37
1982	2.21	2.20	2.46	1.61	1.36	1.20	1.03	.91	.83	1.05	2.92	27.49
1983	57.79	74.75	78.00	94.67	96.36	83.00	79.57	47.13	38.17	21.77	19.62	16.85
1984	15.65	51.39	68.75	31.26	17.34	15.43	13.24	11.74	10.76	9.23	8.46	7.45
1985	6.99	9.54	15.25	15.89	8.17	6.88	5.80	5.14	4.71	4.04	3.71	3.19
1986	38.45	23.56	12.13	14.55	8.04	7.11	6.10	5.41	4.95	4.25	3.90	3.34
1987	6.56	58.30	43.36	56.48	31.91	14.65	11.95	10.71	9.71	8.33	7.64	6.56
1988	6.49	21.10	11.99	18.72	11.74	8.38	7.17	6.36	5.83	5.00	4.58	3.94
1989	34.75	60.04	49.67	38.18	16.46	12.79	10.79	9.56	8.76	7.52	6.89	5.91
1990	5.32	5.63	8.03	9.75	4.43	3.98	3.41	3.03	2.77	2.38	2.18	1.87
1991	2.09	4.12	11.36	4.90	3.00	2.41	2.03	1.80	1.65	1.41	1.29	1.11
1992	11.03	29.65	71.89	73.97	64.60	30.17	15.63	13.43	12.31	10.56	9.68	8.31

VOLUMEN ESCURRIDO = 12505.6000 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 3 Portoviejo river at El Ceibal
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	4.29	6.04	21.51	30.82	24.36	20.73	16.94	14.57	13.13	11.19	10.26	8.84
1965	7.92	8.30	23.79	30.39	30.61	25.82	20.47	17.21	15.25	12.84	11.66	10.00
1966	20.65	27.79	28.07	26.71	23.19	21.06	18.04	16.04	14.80	12.82	11.87	10.30
1967	34.64	67.64	57.94	45.16	33.69	27.62	21.89	18.40	16.30	13.72	12.46	10.67
1968	9.56	18.88	14.17	11.87	9.46	8.25	6.86	5.98	5.44	4.66	4.28	3.69
1969	3.72	3.67	9.99	13.46	19.17	17.29	14.20	12.26	11.07	9.45	8.67	7.48
1970	6.87	7.57	10.03	19.39	17.88	15.77	12.90	11.11	10.02	8.55	7.83	6.75
1971	6.07	9.25	34.16	31.43	23.19	18.92	14.92	12.48	11.02	9.26	8.39	7.18
1972	6.48	9.75	27.28	28.77	23.38	27.45	22.63	19.42	17.43	14.78	13.50	11.79
1973	20.98	39.59	50.82	51.38	43.90	37.37	30.12	25.65	22.94	19.44	17.74	15.25
1974	13.60	20.34	18.15	16.71	14.01	12.68	10.83	9.62	8.85	7.66	7.08	6.14
1975	20.68	57.27	71.01	70.12	51.11	40.12	30.54	24.84	21.45	17.72	15.88	13.48
1976	27.34	52.50	65.56	72.68	61.71	52.94	41.17	33.93	29.61	24.65	22.22	18.93
1977	18.32	28.32	37.55	39.17	31.02	26.78	22.09	19.14	17.33	14.81	13.59	11.73
1978	11.02	14.75	16.59	15.80	13.49	12.06	10.20	9.00	8.25	7.11	6.56	5.68
1979	5.16	7.40	7.93	7.86	6.39	5.57	4.62	4.02	3.65	3.12	2.87	2.47
1980	2.23	2.39	4.84	11.02	10.42	8.72	7.01	5.97	5.33	4.52	4.12	3.54
1981	3.19	12.78	14.40	15.81	13.07	11.26	9.29	8.04	7.28	6.23	5.72	4.93
1982	4.47	4.50	4.07	3.66	3.10	2.80	2.39	2.12	1.95	1.89	3.08	17.80
1983	44.48	73.30	85.14	109.22	120.42	123.78	120.43	101.21	87.06	64.98	53.52	42.61
1984	36.45	58.17	75.90	67.51	51.18	42.58	34.17	28.99	25.86	21.87	19.92	17.22
1985	15.59	17.09	18.89	21.80	18.37	16.31	13.69	12.00	10.96	9.42	8.67	7.51
1986	27.81	32.37	24.78	24.23	19.20	16.56	13.67	11.84	10.73	9.17	8.42	7.26
1987	8.27	41.45	49.10	64.48	56.43	44.33	33.55	27.21	23.41	19.28	17.23	14.60
1988	13.24	21.21	19.10	23.08	20.64	18.22	15.30	13.42	12.26	10.54	9.71	8.41
1989	27.51	56.54	61.02	61.00	45.64	36.61	28.41	23.48	20.54	17.13	15.45	13.18
1990	11.72	11.82	11.76	13.87	11.26	9.93	8.32	7.29	6.65	5.71	5.26	4.55
1991	4.35	5.76	10.50	9.86	7.88	6.68	5.42	4.64	4.16	3.53	3.23	2.78
1992	8.66	24.66	59.50	84.51	90.90	75.96	54.38	41.61	34.15	27.10	23.56	19.56

VOLUMEN ESCURRIDO = 19749.2000 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 4 Chico river at Alajuela
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	1.44	1.12	6.60	6.75	2.01	1.54	1.32	1.17	1.07	.92	.84	.72
1965	.67	1.04	8.85	7.57	7.54	2.66	1.69	1.50	1.37	1.18	1.08	.94
1966	9.83	8.02	6.19	3.76	3.02	2.28	1.94	1.72	1.58	1.35	1.24	1.06
1967	14.73	18.07	9.42	3.43	2.43	1.97	1.69	1.50	1.38	1.18	1.08	.93
1968	.86	8.83	2.26	1.35	1.03	.93	.80	.71	.68	.56	.51	.44
1969	.54	.43	4.91	3.04	5.20	2.02	1.46	1.30	1.19	1.02	.93	.80
1970	.82	1.23	3.03	6.63	2.98	2.10	1.47	1.30	1.19	1.02	.94	.81
1971	.74	2.36	11.53	5.04	1.76	1.50	1.26	1.12	1.02	.88	.80	.69
1972	.64	1.52	8.23	4.63	2.80	5.72	2.39	1.97	1.81	1.51	1.38	1.48
1973	7.31	11.43	13.76	9.30	6.65	3.56	2.64	2.34	2.14	1.84	1.68	1.44
1974	1.28	6.10	3.38	2.05	1.47	1.36	1.16	1.03	.94	.81	.74	.64
1975	7.82	15.95	14.48	10.41	3.96	2.50	2.04	1.81	1.66	1.42	1.30	1.12
1976	8.50	13.55	14.92	14.53	10.03	6.21	3.17	2.57	2.35	2.02	1.85	1.59
1977	2.86	7.48	9.34	6.92	2.70	2.20	1.88	1.67	1.53	1.31	1.20	1.04
1978	1.33	3.47	3.72	2.13	1.65	1.32	1.13	1.01	.92	.79	.72	.62
1979	.61	1.57	2.24	1.58	.91	.78	.67	.59	.54	.46	.43	.37
1980	.33	.50	2.27	5.55	2.68	1.18	.99	.87	.80	.69	.63	.54
1981	.50	6.69	3.89	3.75	2.27	1.46	1.25	1.10	1.01	.87	.80	.68
1982	.69	.73	1.08	.52	.42	.37	.31	.28	.26	.50	1.41	8.80
1983	12.60	16.85	16.85	21.30	18.34	14.40	15.36	10.93	10.27	4.33	3.46	2.97
1984	3.62	15.69	17.92	9.61	3.94	3.04	2.60	2.31	2.11	1.81	1.66	1.44
1985	1.36	2.19	4.26	5.18	2.29	1.78	1.44	1.27	1.17	1.00	.92	.79
1986	10.43	6.97	2.59	3.53	1.71	1.50	1.29	1.14	1.05	.90	.82	.71
1987	1.89	14.88	11.07	15.76	9.62	3.52	2.28	2.04	1.84	1.58	1.45	1.25
1988	1.34	6.41	3.03	5.60	3.39	2.05	1.73	1.54	1.41	1.21	1.11	.95
1989	12.71	17.26	12.59	11.04	4.09	2.45	2.05	1.82	1.67	1.43	1.31	1.12
1990	1.02	1.10	2.72	4.34	1.39	1.17	1.00	.89	.81	.70	.64	.55
1991	.79	1.73	5.69	2.65	1.52	1.12	.93	.82	.75	.65	.59	.51
1992	5.30	11.26	20.14	20.52	19.42	10.59	3.85	2.63	2.40	2.06	1.89	1.62

VOLUMEN ESCURRIDO = 3184.5900 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 5 Chico river at Cienaga
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	1.72	1.72	8.26	9.64	5.16	4.18	3.37	2.86	2.56	2.16	1.96	1.68
1965	1.52	1.88	10.54	10.97	11.45	7.05	5.11	4.14	3.56	2.93	2.61	2.22
1966	11.58	12.12	10.55	8.24	6.76	5.61	4.64	4.03	3.65	3.12	2.85	2.45
1967	17.82	25.82	17.22	10.43	7.56	6.02	4.72	3.94	3.46	2.89	2.61	2.22
1968	2.00	10.46	4.93	3.78	2.89	2.47	2.03	1.75	1.60	1.34	1.23	1.05
1969	1.12	1.01	5.73	4.82	7.36	4.69	3.63	3.09	2.76	2.33	2.12	1.82
1970	1.72	2.15	4.10	8.58	5.64	4.60	3.57	3.05	2.73	2.32	2.11	1.81
1971	1.64	3.41	14.48	9.11	5.35	4.34	3.42	2.86	2.52	2.11	1.91	1.62
1972	1.47	2.57	10.73	8.06	5.84	8.84	5.61	4.70	4.19	3.50	3.17	2.98
1973	9.45	16.26	19.82	16.42	13.08	9.51	7.29	6.05	5.31	4.43	3.99	3.40
1974	3.00	8.13	5.90	4.69	3.68	3.28	2.76	2.42	2.21	1.90	1.74	1.51
1975	9.56	21.61	22.11	18.74	10.95	8.11	6.14	5.00	4.32	3.56	3.18	2.69
1976	10.85	18.75	22.07	23.34	18.55	14.05	9.57	7.53	6.39	5.20	4.60	3.86
1977	4.78	10.25	13.45	12.02	7.39	6.10	4.93	4.20	3.75	3.17	2.89	2.47
1978	2.60	4.99	5.58	4.43	3.61	3.11	2.63	2.32	2.12	1.82	1.67	1.45
1979	1.34	2.46	3.14	2.75	2.03	1.79	1.50	1.32	1.21	1.04	.95	.82
1980	.74	.89	2.75	6.71	4.56	3.15	2.50	2.10	1.86	1.57	1.42	1.21
1981	1.10	7.75	5.87	6.06	4.56	3.59	2.94	2.53	2.27	1.93	1.76	1.51
1982	1.42	1.47	1.67	1.23	1.01	.89	.75	.66	.60	.79	1.83	10.42
1983	17.33	24.67	26.26	33.55	31.94	28.75	28.67	22.62	20.66	12.91	10.35	8.19
1984	7.78	21.58	26.40	18.80	11.76	9.33	7.34	6.12	5.39	4.51	4.07	3.48
1985	3.17	4.05	6.21	7.73	5.12	4.32	3.53	3.06	2.77	2.36	2.16	1.86
1986	12.97	11.25	6.45	6.91	4.60	3.91	3.20	2.76	2.48	2.11	1.93	1.66
1987	2.73	18.75	16.92	23.42	17.46	10.69	7.61	6.04	5.08	4.11	3.62	3.04
1988	2.89	8.31	5.56	8.36	6.41	5.00	4.12	3.57	3.23	2.76	2.52	2.17
1989	15.52	24.28	20.89	19.60	11.33	8.27	6.27	5.09	4.38	3.60	3.22	2.72
1990	2.41	2.48	3.93	5.99	3.45	2.95	2.44	2.12	1.92	1.64	1.50	1.29
1991	1.45	2.56	6.83	4.72	3.44	2.80	2.26	1.93	1.73	1.47	1.34	1.15
1992	6.19	14.49	27.27	31.66	31.96	22.57	13.16	9.51	7.63	5.93	5.07	4.14

VOLUMEN ESCURRIDO = 5782.4950 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 6 Carrizal river at Calceta
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	25.36	27.26	52.28	49.46	18.31	8.49	4.03	1.77	.79	.33	.14	.06
1965	.95	10.91	51.34	51.77	50.80	22.21	8.68	4.33	1.93	.80	.36	.56
1966	37.40	42.97	42.12	31.91	23.49	11.35	6.60	3.24	1.83	.67	.30	.27
1967	52.92	71.59	46.53	23.56	15.62	7.65	3.56	1.53	.68	.28	.12	.05
1968	1.35	45.69	22.14	15.68	7.02	3.55	1.49	.64	.55	.12	.05	.02
1969	2.05	3.02	36.67	30.35	42.31	19.38	8.48	4.27	1.91	.80	.39	.15
1970	1.99	5.02	13.95	32.17	34.40	14.23	8.60	4.43	1.98	.82	.37	.24
1971	1.46	20.45	61.28	33.18	12.91	6.85	3.20	1.38	.69	.25	.11	.07
1972	1.05	34.11	53.77	42.06	23.82	42.86	29.01	15.03	7.62	3.38	1.50	3.00
1973	42.46	25.69	50.20	41.33	37.91	18.09	8.29	4.18	1.88	.78	.35	.17
1974	.16	10.44	11.93	9.74	6.23	3.31	1.42	.61	.27	.11	.05	.19
1975	22.41	73.06	70.84	42.54	17.52	8.50	4.22	1.90	.94	.52	.16	1.20
1976	56.05	47.11	44.29	34.80	21.59	9.96	4.99	2.17	.96	.40	.18	.09
1977	13.85	39.16	60.80	33.30	13.59	6.43	2.84	1.21	.55	.22	.10	.05
1978	2.61	16.18	33.16	21.04	22.35	8.96	4.45	1.93	.86	.35	.16	.07
1979	5.81	14.86	16.58	23.84	24.30	11.27	5.77	2.63	1.17	.48	.21	.09
1980	.67	11.24	16.54	31.93	13.14	6.42	2.88	1.23	.55	.23	.10	.09
1981	.74	39.46	38.55	40.75	13.43	6.28	3.05	1.28	.57	.24	.10	.14
1982	.89	7.36	13.51	15.56	7.23	3.99	1.76	.75	.34	1.78	18.46	45.88
1983	65.52	71.07	90.03	87.54	72.24	60.31	63.99	47.88	34.68	13.56	7.50	5.53
1984	2.80	46.35	51.70	51.71	24.82	10.04	5.16	2.28	1.01	.42	.18	.29
1985	1.16	8.98	24.47	23.70	8.78	4.89	2.18	.93	.41	.17	.08	.46
1986	23.81	28.38	25.42	41.25	14.19	7.02	3.14	1.35	.60	.33	.11	.11
1987	10.98	76.13	83.12	86.34	55.10	21.91	8.89	5.52	2.77	1.15	.51	.37
1988	9.13	55.46	29.67	29.23	29.59	13.23	7.10	3.47	1.54	.66	.30	.22
1989	30.86	54.97	33.83	47.91	20.06	10.32	5.29	2.33	1.06	.43	.19	.15
1990	.51	5.50	7.59	8.52	4.09	1.91	.79	.34	.15	.06	.03	.01
1991	1.29	18.06	33.34	25.09	10.25	7.38	3.38	1.46	.65	.27	.12	.07
1992	.75	5.36	34.54	45.44	25.69	12.08	6.15	2.80	1.25	.52	.23	.14

VOLUMEN ESCURRIDO = 13338.7400 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 7 Carrizal river at La Estancilla
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	20.03	31.04	59.06	66.91	40.25	25.89	15.17	8.64	4.90	2.54	1.38	.69
1965	1.13	8.84	49.77	62.93	65.44	44.77	26.92	16.33	9.59	5.09	2.81	1.73
1966	30.99	49.12	53.92	49.24	39.75	27.65	17.95	11.06	6.86	3.67	2.05	1.16
1967	45.71	78.29	64.63	46.17	32.80	21.92	12.87	7.35	4.18	2.17	1.18	.60
1968	1.24	35.41	27.71	25.39	16.52	10.84	6.17	3.46	2.13	1.06	.57	.29
1969	1.92	2.85	31.72	37.25	49.86	36.64	23.03	14.35	8.56	4.59	2.58	1.32
1970	2.23	5.12	13.94	36.78	41.94	29.01	19.96	12.92	7.89	4.29	2.41	1.30
1971	1.68	17.85	62.69	50.42	30.55	20.34	11.92	6.78	3.90	2.01	1.09	.56
1972	1.11	29.32	54.83	56.62	41.24	56.01	45.10	32.09	21.62	12.58	7.38	5.76
1973	38.52	37.85	57.49	57.09	54.47	37.87	23.76	14.62	8.68	4.64	2.58	1.33
1974	.78	10.53	13.76	14.45	11.38	8.10	4.79	2.75	1.56	.81	.45	.39
1975	21.38	73.47	87.91	72.07	43.22	27.52	16.20	9.25	5.32	2.87	1.54	1.68
1976	45.71	56.15	63.90	57.56	42.05	28.14	17.18	9.97	5.66	2.93	1.59	.82
1977	12.82	39.95	65.88	53.53	32.49	20.88	11.90	6.66	3.74	1.92	1.04	.53
1978	2.61	16.59	34.38	29.95	30.88	21.07	13.12	7.74	4.49	2.36	1.30	.66
1979	4.53	14.60	19.09	27.93	30.84	22.69	14.82	9.06	5.37	2.87	1.59	.81
1980	.88	9.48	19.09	35.85	24.18	16.58	9.88	5.66	3.23	1.68	.91	.50
1981	.80	33.49	44.08	52.63	30.62	19.77	11.52	6.50	3.67	1.90	1.03	.58
1982	.89	6.01	12.61	18.98	13.50	9.69	5.80	3.34	1.91	2.21	14.97	44.31
1983	75.88	95.02	110.82	119.48	109.03	99.27	98.67	79.97	64.04	37.64	24.53	16.01
1984	9.72	45.36	61.34	66.52	44.86	28.94	17.43	10.13	5.82	3.04	1.66	1.09
1985	1.68	9.20	23.88	29.38	18.92	13.06	7.68	4.39	2.49	1.29	.70	.67
1986	18.86	32.68	35.37	50.48	30.97	20.65	12.08	6.82	3.84	2.04	1.09	.61
1987	9.75	70.32	94.24	109.30	86.18	54.89	32.06	19.93	12.06	6.51	3.64	2.03
1988	8.20	49.46	41.64	42.44	41.09	28.89	18.85	11.68	6.96	3.74	2.08	1.14
1989	25.02	57.43	50.38	62.84	40.80	27.82	17.20	10.08	5.81	3.03	1.65	.91
1990	.88	4.94	8.20	10.70	7.92	5.35	3.06	1.72	.97	.50	.27	.14
1991	1.04	14.34	32.17	32.67	21.56	16.18	9.96	5.89	3.42	1.80	.99	.52
1992	.96	5.88	32.82	50.53	39.45	27.76	17.70	10.65	6.23	3.29	1.82	.97

VOLUMEN ESCURRIDO = 19433.5600 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 8 Grande river at A.J.Mosquito
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	12.99	9.61	15.31	19.31	4.08	1.29	.94	.77	.65	.51	.43	.34
1965	.42	1.68	10.06	14.62	5.71	1.81	.66	.29	.22	.17	.15	.12
1966	4.30	15.32	14.14	7.04	2.25	.79	.44	.37	.32	.25	.20	.17
1967	8.37	19.31	7.28	1.90	.79	.42	.33	.27	.23	.18	.15	.12
1968	.21	.68	.75	.59	.06	.04	.03	.03	.02	.02	.01	.01
1969	.24	.15	3.80	4.47	2.64	3.46	1.50	.32	.26	.21	.18	.14
1970	.54	.89	4.88	12.94	4.43	.82	.25	.19	.16	.13	.11	.09
1971	.12	3.30	23.52	8.07	.94	.26	.19	.15	.13	.10	.09	.07
1972	.06	6.41	10.70	5.58	1.24	9.93	2.98	2.29	.45	.35	.29	1.35
1973	8.35	5.11	12.82	9.37	5.68	1.04	.50	.34	.29	.23	.19	.15
1974	.19	14.30	3.05	4.94	.60	.24	.16	.13	.11	.09	.07	.11
1975	10.02	20.28	25.15	15.85	2.79	1.05	.44	.33	.28	.22	.18	.17
1976	11.55	15.00	15.35	13.39	7.68	8.52	1.16	.42	.35	.28	.24	.20
1977	8.92	22.42	18.68	9.47	.87	.33	.24	.19	.16	.13	.11	.09
1978	1.76	9.39	8.81	2.22	1.00	.24	.18	.15	.12	.10	.08	.07
1979	.57	5.74	2.98	1.28	.20	.28	.10	.08	.07	.05	.05	.04
1980	.44	5.06	11.88	9.39	2.59	.31	.18	.15	.12	.10	.08	.07
1981	.60	8.00	8.39	8.75	.70	.20	.16	.13	.11	.09	.07	.06
1982	.48	.45	1.39	.67	.19	.03	.02	.02	.01	1.54	5.27	14.15
1983	24.69	34.19	30.88	20.58	32.40	26.34	19.28	9.38	4.91	.77	.48	.47
1984	.31	7.69	17.30	13.22	2.22	.57	.32	.26	.22	.17	.15	.37
1985	1.02	5.73	4.17	2.21	.41	.18	.14	.12	.10	.08	.07	.10
1986	9.26	5.26	5.79	9.58	1.35	.28	.22	.18	.15	.12	.10	.15
1987	2.54	26.99	21.61	26.23	11.26	1.49	.38	.44	.24	.19	.16	.14
1988	1.37	7.69	1.46	1.74	.79	.21	.13	.10	.09	.07	.06	.05
1989	4.16	18.02	8.61	9.88	2.50	.60	.31	.25	.21	.17	.14	.11
1990	.36	2.41	4.87	7.34	.58	.17	.13	.10	.09	.07	.06	.05
1991	.14	4.49	2.77	.76	.11	.09	.07	.06	.05	.04	.03	.03
1992	1.39	4.01	8.07	11.17	7.67	1.06	.36	.27	.23	.18	.15	.12

VOLUMEN ESCURRIDO = 3151.6360 millones de metros cubicos

GENINTEI . RES

MODELO DE SIMULACION MENSUAL

SIHIM

THE DETAILED DESIGN STUDY ON THE WATER TRANSBASIN SCHEMES -C

SIMULACION

INFORMACION BASICA DE LA CORRIDA

INICIO ENE DE 1964 FINAL DIC DE 1992

NUMERO DE SUBCUENCAS = 8

NUMERO DE EST. DE MED. DE PRECIPITACION = 8

NUMERO DE EST. DE MED. DE EVAPORACION = 1

PARAMETROS PARA CADA SUBCUENCA

SUBC	CINF (mm)	HSN (mm)	CT	PQB	PFSE	PESC
1	200.00	200.00	.75	.10	.02	.40 Alajuela
2	200.00	200.00	.75	.10	.02	.40 Alajuela
3	200.00	200.00	.75	.10	.02	.40 Alajuela
4	200.00	200.00	.75	.10	.02	.40 Alajuela
5	200.00	200.00	.75	.10	.02	.40 Alajuela
6	140.00	340.00	.40	.60	.20	.50 Calceta
7	140.00	340.00	.40	.60	.20	.50 Calceta
8	95.00	225.00	.70	.10	.10	.60 A.J.Mosquito

ALMACENAMIENTOS INICIALES, FLUJOS AFLUENTES Y SUBCUENCAS TRIBUTARIAS

SUBC	AIHS (mm)	AIAS (mm)	AISUP (mm)	FSUPA (mm)	FSUBA (mm)	AREA PARC. (Km**2)	AREA ACUM. (Km**2)	SUBCUENCAS TRIBUTARIAS													
								1	2	3	4	5	6	7	8	9	10				
1	260.0	.0	10.0	.0	.0	585.00	585.00	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	260.0	.0	10.0	.0	.0	1190.00	1190.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	260.0	.0	10.0	.0	.0	19.35	1794.35	1	2	0	0	0	0	0	0	0	0	0	0	0	0
4	260.0	.0	10.0	.0	.0	183.00	183.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	260.0	.0	10.0	.0	.0	164.20	347.20	4	0	0	0	0	0	0	0	0	0	0	0	0	0
6	100.0	20.0	20.0	.0	.0	523.00	523.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	100.0	20.0	20.0	.0	.0	246.60	769.60	6	0	0	0	0	0	0	0	0	0	0	0	0	0
8	300.0	250.0	100.0	.0	.0	187.20	187.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INFLUENCIA DE CADA EST. DE MED. DE PRECIPITACION

NOMBRE DE LA ESTACION	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
BOYACA	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
SANTA ANA	.000	.300	.000	.000	.000	.000	.000	.000	.000	.000
CHONE	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000
PORTOVIEJO U.T.M (INAM	.200	.200	.000	.000	.150	.000	.000	.000	.000	.000
ROCAFUERTE (INAMHI)	.200	.000	1.000	.000	.000	.000	.000	.000	.000	.000
DOS BOCAS	.000	.000	.000	.000	.000	.000	1.000	.680	.000	.000
CALCETA	.000	.000	.000	.000	.000	.000	.000	.320	.000	.000
RIO CHAMOTETE -J.MARIA	.600	.500	.000	1.000	.850	.000	.000	.000	.000	.000

FACTOR DE AJUSTE DE LA PRECIPITACION

NOMBRE DE LA ESTACION	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
FACPRE	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

INFLUENCIA DE CADA EST. DE MED. DE EVAPORACION

NOMBRE DE LA ESTACION	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
PORTOVIEJO (U.T.M.) EV	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

FACTOR DE AJUSTE DE LA EVAPORACION

NOMBRE DE LA ESTACION	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
FACEVA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

SUMARIO TOTAL PARA EL PERIODO 1964 - 1992
 CALCULOS INTERMEDIOS EN "mm"

SUBC	PRECIP.	EVAP.	ETP	ETR	FSUPA	FSUBA	ESC TOT	ESC DIR	Q BASE	FSUBE	BALANCE
1	27996.21	46968.81	35226.61	17093.22	.00	.00	10033.04	5323.14	4709.90	941.98	-.002
2	29051.24	46968.81	35226.61	17606.72	.00	.00	10508.91	5495.13	5013.79	1002.76	.001
3	11939.10	46968.81	35226.61	9954.38	949609.30	90146.74	*****	946781.70	73848.57	14769.72	-.155
4	38021.30	46968.81	35226.61	19285.42	.00	.00	17402.13	10623.79	6778.33	1355.67	.001
5	34414.83	46968.81	35226.61	18567.69	19394.58	1510.88	35216.17	27879.31	7336.85	1467.37	.010
6	44035.50	46968.81	18787.52	16431.88	.00	.00	25504.28	19015.07	6489.22	2163.07	.010
7	39512.98	46968.81	18787.52	16264.42	54090.60	4587.54	78805.99	69289.52	9516.48	3172.16	-.011
8	36259.41	46968.81	32878.17	18927.97	.00	.00	16835.66	15717.49	1118.16	1118.16	.004

ALMACENAMIENTOS FINALES EN "mm"

SUBC ALMAC HUM SUELO ALMAC AGUA SUBT ALMAC EN SUPERF

1	16.67	181.31	.00
2	27.13	175.71	.01
3	.96	2999.53	3610.10
4	25.49	222.58	.01
5	22.58	255.40	61.07
6	75.55	.49	.22
7	77.90	2.14	8.52
8	11.96	15.65	.00

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 1
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	8.00	6.43	36.67	31.08	12.52	10.59	9.39	8.33	7.38	6.55	5.81	5.15
1965	4.62	4.96	36.22	28.67	26.79	12.60	10.29	9.12	8.09	7.18	6.36	5.67
1966	34.26	28.05	27.21	18.52	15.85	12.77	11.30	10.01	8.89	7.87	6.98	6.19
1967	60.97	83.45	42.23	17.41	14.49	12.40	11.00	9.75	8.65	7.67	6.80	6.03
1968	5.48	29.48	7.25	5.74	4.85	4.29	3.81	3.38	3.03	2.65	2.35	2.09
1969	2.88	1.80	17.29	9.53	18.36	7.74	6.35	5.63	4.99	4.43	3.93	3.48
1970	3.41	3.94	9.90	23.31	11.70	7.80	6.19	5.48	4.86	4.31	3.82	3.39
1971	3.08	7.67	59.66	19.50	9.17	8.02	7.07	6.27	5.56	4.93	4.37	3.88
1972	3.54	8.70	46.21	24.44	13.46	24.13	12.09	10.55	9.33	8.20	7.28	6.90
1973	31.27	52.06	60.63	35.20	25.94	17.65	15.26	13.53	12.00	10.64	9.43	8.37
1974	7.43	20.44	13.18	9.31	7.40	6.57	5.82	5.16	4.57	4.06	3.60	3.20
1975	34.89	83.86	80.24	47.34	19.64	15.44	13.56	12.02	10.66	9.46	8.38	7.44
1976	38.90	66.89	77.59	66.38	41.22	26.20	19.58	17.18	15.23	13.51	11.98	10.63
1977	12.86	28.82	46.14	31.70	15.71	13.56	12.02	10.66	9.45	8.38	7.43	6.59
1978	6.75	12.63	14.65	9.16	6.98	5.78	5.12	4.54	4.03	3.57	3.17	2.81
1979	2.63	6.53	7.06	4.25	2.63	2.26	1.99	1.76	1.56	1.39	1.23	1.09
1980	.99	1.45	7.09	16.75	7.09	3.92	3.46	3.07	2.72	2.42	2.14	1.90
1981	1.78	22.73	12.21	11.14	6.95	5.21	4.62	4.09	3.63	3.22	2.85	2.53
1982	2.40	2.16	2.72	1.63	1.42	1.23	1.09	.97	.86	1.27	3.83	32.57
1983	68.83	80.62	91.57	115.46	115.27	96.48	103.50	60.87	49.71	28.81	25.07	22.25
1984	21.28	78.62	95.42	41.69	23.45	20.11	17.83	15.81	14.02	12.44	11.03	10.00
1985	9.18	10.75	17.12	17.81	10.18	8.09	7.03	6.24	5.53	4.91	4.35	3.87
1986	49.02	23.28	11.77	15.32	8.43	7.37	6.54	5.80	5.14	4.56	4.04	3.58
1987	5.49	72.70	58.44	70.13	36.86	17.12	14.62	13.01	11.49	10.19	9.04	8.02
1988	7.62	22.00	11.28	19.47	12.07	8.47	7.49	6.64	5.89	5.23	4.63	4.11
1989	53.66	81.46	65.86	46.46	18.86	14.85	13.14	11.65	10.34	9.17	8.13	7.21
1990	6.44	6.15	10.03	13.20	5.61	4.92	4.36	3.87	3.43	3.04	2.70	2.40
1991	2.85	5.16	16.82	6.85	4.29	3.34	2.93	2.60	2.30	2.04	1.81	1.61
1992	15.91	43.74	109.12	112.69	103.60	44.35	21.38	18.25	16.18	14.35	12.72	11.28

VOLUMEN ESCURRIDO = 5869.3290 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 2
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	20.38	13.51	82.80	80.72	28.40	23.02	20.40	18.09	16.04	14.23	12.62	11.19
1965	10.03	10.66	90.16	69.71	56.58	27.84	22.36	19.77	17.53	15.55	13.79	12.26
1966	60.32	53.22	55.74	37.12	30.55	25.38	22.47	19.92	17.69	15.67	13.89	12.32
1967	125.51	181.79	95.58	37.21	29.94	25.63	22.73	20.16	17.87	15.85	14.06	12.46
1968	11.37	46.29	12.85	10.49	8.81	7.80	6.92	6.14	5.48	4.83	4.28	3.80
1969	5.14	3.59	34.47	35.77	55.55	24.77	18.73	16.54	14.67	13.01	11.54	10.23
1970	10.01	11.77	27.47	59.58	29.93	19.58	15.88	14.07	12.48	11.07	9.81	8.70
1971	7.93	21.50	132.22	44.52	20.64	18.06	15.87	14.08	12.48	11.07	9.82	8.70
1972	8.26	23.63	96.57	49.21	27.90	55.96	28.60	24.23	21.23	18.71	16.59	15.49
1973	57.77	98.69	131.33	88.14	62.27	41.70	34.55	30.61	27.14	24.07	21.34	18.93
1974	16.80	42.61	29.38	20.96	16.44	14.57	12.88	11.42	10.13	8.98	7.97	7.10
1975	75.53	174.27	183.48	117.47	44.79	33.62	29.23	25.91	22.98	20.38	18.07	16.04
1976	85.00	146.22	157.87	135.32	82.76	61.58	42.57	36.86	32.68	28.98	25.70	22.81
1977	27.08	62.28	95.40	64.53	32.72	28.29	24.95	22.13	19.62	17.40	15.43	13.70
1978	14.85	27.46	38.25	21.92	17.37	13.78	12.16	10.78	9.56	8.48	7.52	6.67
1979	6.23	14.74	16.74	12.43	7.24	5.95	5.23	4.64	4.11	3.64	3.23	2.87
1980	2.64	3.29	15.18	34.01	18.50	9.13	8.04	7.13	6.32	5.61	4.97	4.41
1981	4.03	40.29	36.51	31.69	17.08	13.08	11.60	10.28	9.12	8.09	7.17	6.36
1982	5.92	5.32	6.58	4.18	3.64	3.10	2.75	2.44	2.16	2.82	7.56	73.64
1983	154.80	180.84	208.90	245.38	258.10	215.12	213.12	126.24	98.93	58.32	50.86	45.14
1984	41.92	128.77	184.15	81.03	46.45	40.01	35.47	31.45	27.89	24.73	21.93	19.96
1985	18.71	23.08	40.86	41.20	21.89	17.82	15.53	13.78	12.22	10.83	9.61	8.55
1986	102.98	56.99	32.50	37.72	21.53	18.42	16.33	14.48	12.84	11.39	10.10	8.96
1987	17.56	141.03	116.13	146.39	85.48	37.98	32.01	28.70	25.17	22.32	19.79	17.56
1988	17.39	52.88	32.11	48.51	31.44	21.72	19.20	17.03	15.10	13.39	11.87	10.54
1989	93.06	145.25	133.05	98.96	44.08	33.15	28.89	25.60	22.71	20.14	17.86	15.84
1990	14.24	13.62	21.52	25.27	11.87	10.31	9.14	8.10	7.19	6.37	5.65	5.02
1991	5.60	9.98	30.43	12.69	8.03	6.24	5.43	4.81	4.27	3.78	3.36	2.98
1992	29.54	74.30	192.55	191.74	173.01	78.19	41.88	35.98	31.90	28.29	25.08	22.25

VOLUMEN ESCURRIDO = 12505.6000 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 3
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	11.49	15.13	57.61	79.89	65.25	53.74	45.37	39.03	34.04	29.98	26.59	23.68
1965	21.22	20.08	63.73	78.77	81.98	66.92	54.84	46.10	39.52	34.38	30.22	26.78
1966	55.32	67.23	75.19	69.23	62.11	54.59	48.31	42.97	38.37	34.33	30.76	27.59
1967	92.79	163.63	155.18	117.04	90.22	71.58	58.64	49.29	42.26	36.75	32.30	28.58
1968	25.60	47.29	37.96	30.76	25.34	21.38	18.38	16.01	14.10	12.48	11.09	9.89
1969	9.98	8.88	26.75	34.88	51.34	44.82	38.04	32.83	28.71	25.32	22.48	20.04
1970	18.41	18.31	26.87	50.25	47.90	40.86	34.56	29.77	25.98	22.89	20.30	18.08
1971	16.26	22.39	91.51	81.47	62.10	49.04	39.95	33.44	28.57	24.80	21.75	19.23
1972	17.35	24.43	73.07	74.58	62.63	71.16	60.62	52.02	45.18	39.60	34.99	31.58
1973	56.19	95.77	136.11	133.17	117.59	96.87	80.68	68.69	59.46	52.08	45.99	40.85
1974	36.43	49.20	48.61	43.31	37.52	32.88	29.02	25.76	22.95	20.50	18.35	16.46
1975	55.38	138.54	190.19	181.74	136.88	104.00	81.80	66.53	55.61	47.47	41.17	36.11
1976	73.22	131.55	175.58	188.38	165.28	137.21	110.26	90.87	76.75	66.03	57.59	50.71
1977	49.07	68.51	100.58	101.54	83.09	69.41	59.17	51.26	44.92	39.68	35.24	31.42
1978	29.53	35.68	44.43	40.94	36.13	31.25	27.33	24.11	21.39	19.05	17.01	15.22
1979	13.81	17.89	21.23	20.38	17.10	14.43	12.37	10.76	9.45	8.36	7.43	6.62
1980	5.97	5.99	12.97	28.56	27.92	22.59	18.79	15.98	13.82	12.10	10.68	9.48
1981	8.54	30.91	38.56	40.98	35.02	29.19	24.87	21.54	18.88	16.68	14.82	13.21
1982	11.99	10.88	10.90	9.48	8.29	7.25	6.39	5.67	5.04	5.07	7.97	47.67
1983	119.13	177.33	228.04	283.10	322.53	320.85	322.56	271.09	225.65	174.05	138.74	114.13
1984	97.63	145.76	203.29	174.98	137.07	110.38	91.52	77.65	67.02	58.57	51.64	46.12
1985	41.76	41.35	50.60	56.49	49.21	42.28	36.67	32.15	28.40	25.23	22.49	20.11
1986	74.49	78.31	66.37	62.81	51.43	42.93	36.61	31.72	27.80	24.56	21.81	19.45
1987	22.15	100.27	131.51	167.13	151.15	114.89	89.87	72.89	60.67	51.63	44.67	39.11
1988	35.46	53.15	51.15	59.82	55.28	47.23	40.97	35.94	31.77	28.23	25.18	22.52
1989	73.67	136.79	163.43	158.12	122.25	94.89	76.10	62.90	53.24	45.88	40.06	35.29
1990	31.39	28.58	31.51	35.95	30.17	25.73	22.29	19.52	17.24	15.30	13.63	12.18
1991	11.65	13.94	28.12	25.55	21.11	17.32	14.52	12.42	10.78	9.46	8.36	7.43
1992	23.18	61.78	159.35	219.05	243.45	196.90	145.65	111.45	88.51	72.58	61.06	52.39

VOLUMEN ESCURRIDO = 19749.2000 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 4
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	3.85	2.80	17.67	17.48	5.39	3.99	3.54	3.14	2.78	2.47	2.19	1.94
1965	1.80	2.50	23.71	19.61	20.20	6.90	4.53	4.01	3.56	3.15	2.80	2.53
1966	26.32	19.40	16.58	9.74	8.09	5.90	5.20	4.60	4.10	3.62	3.21	2.85
1967	39.46	43.72	25.22	8.89	6.52	5.12	4.53	4.02	3.57	3.16	2.80	2.49
1968	2.30	22.12	6.04	3.51	2.75	2.42	2.15	1.90	1.76	1.50	1.33	1.18
1969	1.45	1.04	13.15	7.87	13.92	5.25	3.92	3.47	3.08	2.73	2.42	2.15
1970	2.19	2.97	8.10	17.18	7.97	5.44	3.94	3.49	3.09	2.74	2.43	2.16
1971	1.99	5.72	30.89	13.06	4.72	3.89	3.37	2.99	2.65	2.35	2.09	1.85
1972	1.72	3.81	22.05	12.01	7.50	14.82	6.39	5.29	4.69	4.04	3.58	3.97
1973	19.57	27.64	36.86	24.11	17.80	9.23	7.08	6.26	5.55	4.92	4.36	3.87
1974	3.44	14.75	9.06	5.31	3.95	3.51	3.10	2.75	2.44	2.16	1.92	1.71
1975	20.95	38.58	38.78	26.99	10.60	6.48	5.47	4.85	4.30	3.81	3.38	3.00
1976	22.77	33.96	39.95	37.65	26.86	16.10	8.49	6.88	6.09	5.40	4.79	4.25
1977	7.66	18.10	25.02	17.95	7.22	5.71	5.04	4.47	3.97	3.52	3.12	2.77
1978	3.56	8.40	9.97	5.51	4.41	3.43	3.04	2.69	2.39	2.12	1.88	1.66
1979	1.62	3.80	6.00	4.09	2.43	2.03	1.78	1.58	1.40	1.24	1.10	.98
1980	.88	1.24	6.08	14.38	7.18	3.07	2.64	2.34	2.08	1.84	1.63	1.45
1981	1.35	16.18	10.43	9.73	6.08	3.78	3.34	2.96	2.62	2.33	2.06	1.83
1982	1.84	1.77	2.89	1.35	1.12	.95	.84	.75	.66	1.35	3.66	23.57
1983	33.75	40.76	45.13	55.21	49.11	37.33	41.14	29.27	26.61	11.60	8.96	7.94
1984	9.71	39.32	47.98	24.91	10.55	7.87	6.97	6.18	5.48	4.86	4.31	3.85
1985	3.63	5.29	11.41	13.43	6.13	4.61	3.85	3.41	3.03	2.68	2.38	2.12
1986	27.94	16.87	6.93	9.16	4.57	3.89	3.45	3.05	2.71	2.40	2.13	1.89
1987	5.07	35.99	29.64	40.86	25.76	9.12	6.11	5.47	4.77	4.23	3.75	3.34
1988	3.59	16.06	8.12	14.52	9.09	5.30	4.64	4.11	3.65	3.23	2.87	2.55
1989	34.04	41.76	33.71	28.61	10.95	6.34	5.49	4.87	4.32	3.83	3.39	3.01
1990	2.73	2.67	7.30	11.25	3.71	3.03	2.68	2.38	2.11	1.87	1.66	1.48
1991	2.13	4.19	15.24	6.87	4.07	2.90	2.48	2.20	1.95	1.73	1.54	1.36
1992	14.19	28.22	53.94	53.18	52.01	27.44	10.32	7.04	6.21	5.51	4.89	4.33

VOLUMEN ESCURRIDO = 3184.5900 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 5
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	4.60	4.32	22.11	25.00	13.81	10.83	9.02	7.67	6.62	5.78	5.09	4.50
1965	4.07	4.55	28.24	28.44	30.68	18.28	13.68	11.09	9.23	7.85	6.78	5.96
1966	31.01	29.32	28.25	21.35	18.11	14.53	12.43	10.79	9.47	8.34	7.39	6.57
1967	47.72	62.46	46.13	27.02	20.25	15.59	12.66	10.54	8.97	7.74	6.76	5.95
1968	5.35	26.20	13.22	9.81	7.74	6.41	5.44	4.68	4.14	3.60	3.18	2.81
1969	3.01	2.45	15.36	12.48	19.71	12.14	9.73	8.28	7.15	6.25	5.50	4.87
1970	4.61	5.20	10.98	22.23	15.10	11.93	9.55	8.17	7.08	6.21	5.47	4.85
1971	4.39	8.26	38.78	23.61	14.34	11.26	9.15	7.65	6.53	5.65	4.94	4.35
1972	3.95	6.45	28.74	20.89	15.65	22.92	15.02	12.59	10.87	9.38	8.23	7.98
1973	25.32	39.33	53.08	42.55	35.03	24.65	19.52	16.21	13.76	11.86	10.34	9.09
1974	8.05	19.67	15.80	12.16	9.85	8.50	7.39	6.49	5.73	5.08	4.52	4.04
1975	25.60	52.28	59.22	48.59	29.32	21.01	16.46	13.40	11.19	9.54	8.25	7.21
1976	29.07	46.97	59.13	60.50	49.68	36.42	25.63	20.17	16.55	13.91	11.91	10.34
1977	12.79	24.79	36.02	31.16	19.79	15.82	13.20	11.25	9.73	8.50	7.48	6.63
1978	6.97	12.07	14.95	11.49	9.66	8.05	7.04	6.20	5.49	4.88	4.34	3.87
1979	3.60	5.94	8.41	7.12	5.43	4.63	4.03	3.54	3.13	2.78	2.47	2.20
1980	1.99	2.23	7.37	17.40	12.22	8.16	6.69	5.63	4.83	4.19	3.68	3.25
1981	2.94	18.75	15.71	15.70	12.20	9.31	7.87	6.76	5.89	5.17	4.57	4.05
1982	3.81	3.56	4.48	3.18	2.70	2.30	2.01	1.77	1.56	2.10	4.74	27.92
1983	46.43	59.68	70.33	86.97	85.54	74.52	76.78	60.58	53.54	34.57	26.84	21.93
1984	20.85	54.07	70.72	48.74	31.49	24.18	19.66	16.41	13.97	12.07	10.54	9.32
1985	8.49	9.81	16.63	20.03	13.72	11.19	9.45	8.19	7.17	6.32	5.60	4.98
1986	34.73	27.23	17.27	17.91	12.31	10.13	8.58	7.39	6.44	5.66	5.00	4.44
1987	7.32	45.35	45.33	60.72	46.77	27.71	20.38	16.18	13.16	11.01	9.39	8.13
1988	7.73	20.82	14.90	21.68	17.18	12.96	11.05	9.57	8.38	7.38	6.54	5.81
1989	41.56	58.74	55.95	50.81	30.36	21.43	16.79	13.62	11.35	9.65	8.33	7.27
1990	6.46	6.01	10.52	15.52	9.24	7.65	6.54	5.68	4.97	4.38	3.88	3.45
1991	3.89	6.20	18.29	12.25	9.21	7.25	6.05	5.18	4.49	3.94	3.47	3.08
1992	16.58	36.31	73.04	82.06	85.60	58.49	35.23	25.48	19.78	15.89	13.13	11.10

VOLUMEN ESCURRIDO = 5782.4950 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 6
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	67.91	68.30	140.02	128.21	49.03	22.01	10.80	4.75	2.04	.88	.37	.16
1965	2.54	26.40	137.50	134.18	136.05	57.58	23.24	11.60	5.01	2.15	.92	1.51
1966	100.18	103.94	112.80	82.71	62.92	29.43	17.68	8.69	4.76	1.79	.77	.73
1967	141.74	173.19	124.63	61.06	41.84	19.82	9.52	4.09	1.75	.76	.32	.15
1968	3.61	114.48	59.30	40.63	18.80	9.19	3.98	1.71	1.42	.31	.14	.06
1969	5.50	7.30	98.22	78.66	113.33	50.24	22.70	11.43	4.95	2.13	1.01	.39
1970	5.34	12.15	37.35	83.40	92.14	36.88	23.03	11.87	5.14	2.20	.95	.64
1971	3.91	49.47	164.12	86.01	34.57	17.75	8.56	3.70	1.80	.68	.29	.18
1972	2.80	85.48	144.02	109.03	63.80	111.10	77.69	40.25	19.76	9.07	3.89	8.03
1973	113.73	62.14	134.44	107.13	101.55	46.90	22.21	11.19	4.86	2.08	.90	.45
1974	.43	25.25	31.94	25.23	16.70	8.58	3.79	1.62	.71	.30	.13	.50
1975	60.03	176.74	189.73	110.28	46.94	22.04	11.31	5.10	2.44	1.40	.42	3.23
1976	150.14	118.05	118.64	90.21	57.83	25.81	13.36	5.82	2.50	1.07	.46	.24
1977	37.09	94.75	162.84	86.30	36.41	16.66	7.60	3.25	1.42	.60	.26	.15
1978	7.00	39.14	88.81	54.55	59.87	23.24	11.93	5.16	2.22	.95	.40	.18
1979	15.57	35.96	44.40	61.79	65.07	29.20	15.46	7.04	3.03	1.30	.55	.24
1980	1.79	28.15	44.31	82.76	35.18	16.64	7.72	3.31	1.42	.61	.26	.25
1981	1.98	95.47	103.26	105.61	35.96	16.27	8.17	3.42	1.47	.63	.27	.37
1982	2.39	17.81	36.18	40.32	19.35	10.33	4.71	2.01	.87	4.77	47.86	122.88
1983	175.49	171.94	241.15	226.90	193.49	156.32	171.40	128.23	89.89	36.32	19.44	14.80
1984	7.50	116.14	138.48	134.02	66.47	26.02	13.81	6.11	2.62	1.13	.48	.78
1985	3.12	21.72	65.55	61.44	23.52	12.69	5.83	2.50	1.07	.46	.20	1.24
1986	63.76	68.65	68.10	106.91	38.02	18.18	8.41	3.60	1.54	.89	.28	.31
1987	29.40	184.18	222.62	223.80	147.59	56.78	23.82	14.79	7.17	3.08	1.33	.98
1988	24.44	138.96	79.46	75.77	79.24	34.29	19.01	9.29	3.99	1.76	.77	.58
1989	82.67	132.99	90.62	124.18	53.74	26.75	14.17	6.23	2.75	1.16	.49	.40
1990	1.37	13.30	20.32	22.09	10.95	4.94	2.11	.91	.39	.17	.07	.04
1991	3.45	43.68	89.31	65.03	27.45	19.12	9.06	3.92	1.68	.72	.31	.18
1992	2.01	13.42	92.52	117.77	68.81	31.30	16.47	7.49	3.24	1.39	.60	.37

VOLUMEN ESCURRIDO = 13338.7400 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 7
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE.	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	53.66	77.77	158.18	173.42	107.81	67.10	40.62	23.15	12.70	6.80	3.58	1.86
1965	3.02	21.40	133.31	163.12	175.27	116.04	72.09	43.73	24.87	13.64	7.29	4.63
1966	82.99	118.83	144.41	127.64	106.47	71.68	48.08	29.63	17.79	9.82	5.31	3.10
1967	122.42	189.39	173.10	119.67	87.86	56.82	34.48	19.69	10.84	5.80	3.06	1.59
1968	3.32	88.73	74.23	65.82	44.24	28.09	16.53	9.26	5.51	2.85	1.48	.77
1969	5.14	6.91	84.96	96.56	133.55	94.98	61.68	38.44	22.19	12.29	6.69	3.53
1970	5.98	12.38	37.32	95.32	112.32	75.18	53.47	34.61	20.44	11.48	6.24	3.48
1971	4.50	43.18	167.91	130.68	81.82	52.72	31.93	18.16	10.11	5.38	2.83	1.50
1972	2.98	73.46	146.86	146.75	110.47	145.18	120.81	85.95	56.03	33.70	19.13	15.44
1973	103.16	91.56	153.98	147.98	145.88	98.15	63.63	39.16	22.51	12.42	6.67	3.57
1974	2.08	25.47	36.84	37.47	30.48	20.99	12.84	7.35	4.06	2.18	1.16	1.04
1975	57.26	177.75	235.46	186.80	115.75	71.33	43.38	24.78	13.78	7.69	4.00	4.49
1976	122.43	140.68	171.14	149.18	112.62	72.94	46.01	26.70	14.68	7.86	4.13	2.19
1977	34.35	96.64	176.46	138.75	87.03	54.13	31.86	17.83	9.69	5.14	2.69	1.42
1978	6.99	40.13	92.08	77.63	82.71	54.60	35.14	20.74	11.65	6.33	3.36	1.76
1979	12.12	35.31	51.12	72.41	82.60	58.81	39.68	24.26	13.92	7.68	4.12	2.17
1980	2.35	23.76	51.13	92.93	64.77	42.96	26.45	15.17	8.36	4.49	2.37	1.34
1981	2.13	81.01	118.05	136.41	82.02	51.24	30.85	17.40	9.52	5.08	2.67	1.55
1982	2.39	14.53	33.76	49.21	36.17	25.12	15.52	8.94	4.95	5.92	38.80	118.69
1983	203.25	229.86	296.81	309.69	292.02	257.30	264.29	214.19	165.98	100.82	63.57	42.88
1984	26.03	113.66	164.28	172.42	120.15	75.02	46.69	27.12	15.09	8.15	4.31	2.91
1985	4.50	22.26	63.97	76.15	50.68	33.86	20.58	11.76	6.47	3.47	1.83	1.80
1986	50.52	79.07	94.74	130.84	82.94	53.52	32.36	18.26	9.95	5.48	2.83	1.64
1987	26.12	170.12	252.40	283.31	230.83	142.28	85.88	53.39	31.25	17.43	9.43	5.44
1988	21.97	123.93	111.52	110.01	110.06	74.88	50.49	31.27	18.03	10.01	5.40	3.06
1989	67.02	138.93	134.95	162.89	109.27	72.10	46.08	27.01	15.07	8.11	4.28	2.43
1990	2.36	11.96	21.95	27.73	21.20	13.87	8.20	4.61	2.51	1.33	.70	.37
1991	2.78	34.69	86.15	84.68	57.76	41.94	26.67	15.78	8.86	4.82	2.57	1.38
1992	2.57	14.73	87.91	130.98	105.66	71.96	47.40	28.53	16.16	8.82	4.71	2.59

VOLUMEN ESCURRIDO = 19433.5600 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 8
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	34.79	24.07	41.00	50.05	10.94	3.35	2.52	2.05	1.68	1.37	1.12	.92
1965	1.13	4.06	26.93	37.90	15.30	4.69	1.77	.77	.56	.47	.38	.32
1966	11.53	37.06	37.86	18.24	6.04	2.04	1.19	.99	.83	.67	.53	.44
1967	22.41	46.71	19.50	4.92	2.12	1.09	.88	.72	.60	.48	.39	.32
1968	.57	1.71	2.02	1.53	.16	.12	.09	.07	.06	.05	.04	.03
1969	.64	.37	10.18	11.58	7.06	8.98	4.02	.85	.68	.55	.45	.37
1970	1.45	2.16	13.08	33.54	11.87	2.13	.67	.51	.42	.34	.28	.23
1971	.31	7.99	62.99	20.91	2.51	.68	.50	.41	.33	.28	.22	.19
1972	.17	16.05	28.66	14.47	3.31	25.75	7.97	6.15	1.18	.93	.76	3.60
1973	22.38	12.37	34.33	24.28	15.22	2.69	1.34	.91	.75	.61	.50	.41
1974	.51	34.61	8.18	12.81	1.62	.62	.43	.35	.29	.24	.19	.29
1975	26.84	49.07	67.37	41.09	7.46	2.73	1.17	.87	.71	.58	.48	.47
1976	30.93	37.58	41.11	34.71	20.58	22.09	3.11	1.13	.92	.75	.61	.54
1977	23.88	54.23	50.04	24.56	2.33	.85	.63	.52	.42	.34	.28	.23
1978	4.71	22.71	23.60	5.76	2.67	.62	.48	.39	.32	.27	.22	.18
1979	1.53	13.88	7.98	3.31	.54	.72	.26	.21	.18	.14	.12	.10
1980	1.19	12.67	31.81	24.35	6.95	.79	.48	.39	.32	.26	.21	.18
1981	1.61	19.36	22.46	22.67	1.88	.52	.43	.34	.28	.23	.19	.16
1982	1.27	1.09	3.72	1.73	.51	.08	.06	.05	.04	4.13	13.66	37.89
1983	66.13	82.72	82.71	53.35	86.78	68.27	51.64	25.12	12.71	2.05	1.26	1.25
1984	.84	19.28	46.33	34.27	5.95	1.49	.86	.70	.57	.47	.38	1.00
1985	2.74	13.87	11.18	5.73	1.09	.47	.38	.31	.25	.21	.17	.26
1986	24.79	12.73	15.52	24.84	3.61	.74	.59	.48	.39	.33	.26	.40
1987	6.80	65.29	57.88	68.00	30.15	3.87	1.01	1.18	.63	.50	.41	.37
1988	3.66	19.27	3.92	4.52	2.13	.54	.34	.27	.22	.18	.15	.12
1989	11.13	43.59	23.06	25.60	6.69	1.55	.84	.68	.55	.46	.37	.31
1990	.96	5.82	13.04	19.02	1.55	.43	.34	.28	.23	.18	.15	.12
1991	.38	10.86	7.41	1.96	.30	.23	.18	.15	.12	.10	.08	.07
1992	3.73	10.04	21.61	28.95	20.55	2.74	.97	.73	.59	.49	.40	.33

VOLUMEN ESCURRIDO = 3151.6360 millones de metros cubicos

GENERCH 1

MODELO DE SIMULACION MENSUAL

SIHIM

THE DETAILED DESIGN STUDY ON THE WATER TRANSBASIN SCHEMES -C

SIMULACION

INFORMACION BASICA DE LA CORRIDA

INICIO ENE DE 1964 FINAL DIC DE 1992

NUMERO DE SUBCUENCAS = 9

NUMERO DE EST. DE MED. DE PRECIPITACION = 8

NUMERO DE EST. DE MED. DE EVAPORACION = 1

PARAMETROS PARA CADA SUBCUENCA

SUBC	CINF (mm)	HSN (mm)	CT	PQB	PFSE	PESC
1	140.00	340.00	.40	.60	.20	.50
2	200.00	200.00	.75	.10	.02	.40
3	200.00	200.00	.75	.10	.02	.40
4	200.00	200.00	.75	.10	.02	.40
5	200.00	200.00	.75	.10	.02	.40
6	200.00	200.00	.75	.10	.02	.40
7	140.00	340.00	.40	.60	.20	.50
8	95.00	225.00	.70	.10	.10	.60
9	95.00	225.00	.70	.10	.10	.60

INFLUENCIA DE CADA EST. DE MED. DE EVAPORACION

NOMBRE DE LA ESTACION	1	2	3	4	5	6	7	8	9	10
PORTOVIEJO (U.T.M.) EV	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

FACTOR DE AJUSTE DE LA EVAPORACION

	1	2	3	4	5	6	7	8	9	10
FACEVA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

SUMARIO TOTAL PARA EL PERIODO 1964 - 1992

CALCULOS INTERMEDIOS EN "mm"

SUBC	PRECIP.	EVAP.	EIP	ETR	FSUPA	FSUBA	ESC TOT	ESC DIR	Q BASE	FSUBE	BALANCE
1	44035.50	46968.81	18787.52	16431.88	.00	.00	25504.28	19015.07	6489.22	2163.07	.010
2	38021.30	46968.81	35226.61	19285.42	.00	.00	17402.13	10623.79	6778.33	1355.67	.001
3	33859.88	46968.81	35226.61	18683.41	.00	.00	14004.39	7941.40	6062.99	1212.60	-.009
4	27996.21	46968.81	35226.61	17093.22	.00	.00	10033.04	5323.14	4709.90	941.98	-.002
5	29051.24	46968.81	35226.61	17606.72	.00	.00	10508.91	5495.13	5013.79	1002.76	.001
6	11939.10	46968.81	35226.61	9954.38	64473.44	6120.49	71116.88	65011.02	6105.86	1221.17	-.021
7	39335.88	46968.81	18787.52	16272.48	.00	.00	21107.16	15037.85	6069.32	2023.11	-.005
8	34096.88	46968.81	32878.17	18839.17	.00	.00	14804.09	13733.19	1070.90	1070.90	-.016
9	25446.80	46968.81	32878.17	17738.45	103433.60	9154.54	115492.40	110187.70	5304.68	5304.68	-.014

ALMACENAMIENTOS FINALES EN "mm"

SUBC ALMAC HUM SUELO ALMAC AGUA SUBT ALMAC EN SUPERF

1	75.55	.49	.22
2	25.49	222.58	.01
3	30.95	198.50	.02
4	16.67	181.31	.00
5	27.13	175.71	.01
6	.96	264.56	245.11
7	72.50	.47	.17
8	17.64	15.09	.00
9	40.17	101.97	7.36

ALMACENAMIENTOS INICIALES, FLUJOS AFLUENTES Y SUBCUENCAS TRIBUTARIAS

SUBC	AIHS (mm)	AIAS (mm)	AISUP (mm)	FSUJA (mm)	FSUBA (mm)	AREA PARC. (Km**2)	AREA ACUM. (Km**2)	SUBCUENCAS TRIBUTARIAS												
								1	2	3	4	5	6	7	8	9	10			
1	100.0	20.0	20.0	.0	.0	445.00	445.00	0	0	0	0	0	0	0	0	0	0	0	0	0
2	260.0	.0	10.0	.0	.0	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	0
3	260.0	.0	10.0	.0	.0	481.86	481.86	0	0	0	0	0	0	0	0	0	0	0	0	0
4	260.0	.0	10.0	.0	.0	585.00	585.00	0	0	0	0	0	0	0	0	0	0	0	0	0
5	260.0	.0	10.0	.0	.0	1190.00	1190.00	0	0	0	0	0	0	0	0	0	0	0	0	0
6	260.0	20.0	20.0	.0	.0	285.00	2060.00	4	5	0	0	0	0	0	0	0	0	0	0	0
7	100.0	20.0	20.0	.0	.0	1166.00	1166.00	0	0	0	0	0	0	0	0	0	0	0	0	0
8	300.0	250.0	100.0	.0	.0	755.00	755.00	0	0	0	0	0	0	0	0	0	0	0	0	0
9	300.0	250.0	100.0	.0	.0	346.00	2267.00	7	8	0	0	0	0	0	0	0	0	0	0	0

La Esperanza damsite
Poza Honda damsite
Santa Ana
Chico river (confluent with portoviejo river)
Portoviejo river (confluent with Chico river)
Estuary of Portoviejo river
Carrizal river (confluent with Carrizal river)
Chone river (confluent with Chone river)
Estuary of Chone river

INFLUENCIA DE CADA EST. DE MED. DE PRECIPITACION

NOMBRE DE LA ESTACION	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
BOYACA	.000	.000	.000	.000	.000	.000	.000	.200	.000	1.000
SANTA ANA	.000	.000	.300	.000	.300	.000	.000	.000	.000	.000
CHONE	.000	.000	.000	.000	.000	.000	.150	.800	.000	.000
PORTOVIEJO U.T.M (INAM)	.000	.000	.000	.200	.200	.000	.000	.000	.000	.000
ROCAFUERTE (INAMHI)	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000
DOS BOCAS	1.000	.000	.000	.000	.000	.000	.600	.000	.000	.000
CALCETA	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000
RIO CHAMOTETE - J. MARIA	.000	1.000	.700	.600	.500	.000	.000	.000	.000	.000

FACTOR DE AJUSTE DE LA PRECIPITACION

FACPRE	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

MODELO DE SIMULACION MENSUAL
SUBCUENCA NUMERO 1 La Esperanza damsite
PERIODO 1964-1992
ESCORRENTIA SIMULADA
m3/seg**

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	21.57	23.19	44.48	42.09	15.58	7.23	3.43	1.51	.67	.28	.12	.05
1965	.81	9.28	43.68	44.05	43.22	18.90	7.38	3.68	1.65	.68	.30	.48
1966	31.83	36.56	35.84	27.15	19.99	9.66	5.62	2.76	1.56	.57	.25	.23
1967	45.03	60.91	39.59	20.04	13.29	6.51	3.03	1.30	.58	.24	.11	.05
1968	1.15	38.87	18.84	13.34	5.97	3.02	1.27	.54	.47	.10	.04	.02
1969	1.75	2.57	31.20	25.82	36.00	16.49	7.21	3.63	1.62	.68	.33	.13
1970	1.69	4.27	11.87	27.38	29.27	12.11	7.32	3.77	1.69	.70	.31	.20
1971	1.24	17.40	52.14	28.23	10.98	5.83	2.72	1.17	.59	.22	.10	.06
1972	.89	29.03	45.75	35.79	20.27	36.47	24.68	12.79	6.49	2.88	1.28	2.55
1973	36.13	21.85	42.71	35.17	32.26	15.40	7.05	3.56	1.60	.66	.29	.14
1974	.14	8.88	10.15	8.28	5.30	2.82	1.20	.52	.23	.10	.04	.16
1975	19.07	62.16	60.27	36.20	14.91	7.23	3.59	1.62	.80	.44	.14	1.02
1976	47.69	40.09	37.69	29.61	18.37	8.47	4.24	1.85	.82	.34	.15	.08
1977	11.78	33.32	51.73	28.33	11.57	5.47	2.41	1.03	.47	.19	.08	.05
1978	2.22	13.77	28.21	17.91	19.02	7.63	3.79	1.64	.73	.30	.13	.06
1979	4.94	12.65	14.11	20.28	20.67	9.59	4.91	2.24	.99	.41	.18	.07
1980	.57	9.56	14.08	27.17	11.18	5.46	2.45	1.05	.47	.19	.09	.08
1981	.63	33.58	32.80	34.67	11.42	5.34	2.59	1.09	.48	.20	.09	.12
1982	.76	6.26	11.49	13.24	6.15	3.39	1.49	.64	.29	1.51	15.71	39.04
1983	55.75	60.47	76.61	74.48	61.47	51.31	54.45	40.74	29.51	11.54	6.38	4.70
1984	2.38	39.44	43.99	44.00	21.11	8.54	4.39	1.94	.86	.36	.16	.25
1985	.99	7.64	20.82	20.17	7.47	4.16	1.85	.79	.35	.15	.07	.40
1986	20.26	24.15	21.63	35.09	12.08	5.97	2.67	1.15	.51	.28	.09	.10
1987	9.34	64.78	70.72	73.46	46.88	18.64	7.57	4.70	2.35	.98	.44	.31
1988	7.77	47.19	25.24	24.87	25.17	11.26	6.04	2.95	1.31	.56	.25	.18
1989	26.26	46.77	28.79	40.76	17.07	8.78	4.50	1.98	.90	.37	.16	.13
1990	.44	4.68	6.46	7.25	3.48	1.62	.67	.29	.13	.05	.02	.01
1991	1.10	15.36	28.37	21.35	8.72	6.28	2.88	1.25	.55	.23	.10	.06
1992	.64	4.56	29.39	38.66	21.86	10.27	5.23	2.38	1.06	.44	.20	.12

VOLUMEN ESCURRIDO = 11349.4000 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 2 Poza Honda dams site
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	1.34	1.04	6.13	6.27	1.87	1.43	1.23	1.09	1.00	.86	.78	.67
1965	.62	.96	8.22	7.03	7.01	2.47	1.57	1.39	1.27	1.09	1.00	.88
1966	9.13	7.45	5.75	3.49	2.81	2.11	1.80	1.60	1.47	1.25	1.15	.99
1967	13.69	16.79	8.75	3.19	2.26	1.83	1.57	1.39	1.28	1.10	1.01	.86
1968	.80	8.20	2.10	1.26	.95	.87	.74	.66	.63	.52	.48	.41
1969	.50	.40	4.56	2.82	4.83	1.88	1.36	1.20	1.10	.95	.87	.74
1970	.76	1.14	2.81	6.16	2.76	1.95	1.37	1.21	1.11	.95	.87	.75
1971	.69	2.20	10.71	4.68	1.64	1.39	1.17	1.04	.95	.82	.75	.64
1972	.60	1.41	7.65	4.30	2.60	5.31	2.22	1.83	1.68	1.40	1.28	1.38
1973	6.79	10.61	12.79	8.64	6.17	3.31	2.46	2.17	1.99	1.71	1.56	1.34
1974	1.19	5.66	3.14	1.90	1.37	1.26	1.07	.95	.87	.75	.69	.59
1975	7.27	14.81	13.45	9.67	3.68	2.32	1.90	1.68	1.54	1.32	1.21	1.04
1976	7.90	12.59	13.86	13.49	9.32	5.77	2.94	2.39	2.18	1.87	1.72	1.48
1977	2.66	6.95	8.68	6.43	2.50	2.05	1.75	1.55	1.42	1.22	1.12	.96
1978	1.24	3.23	3.46	1.98	1.53	1.23	1.05	.93	.86	.73	.67	.58
1979	.56	1.46	2.08	1.47	.84	.73	.62	.55	.50	.43	.40	.34
1980	.31	.46	2.11	5.15	2.49	1.10	.92	.81	.74	.64	.59	.50
1981	.47	6.21	3.62	3.49	2.11	1.35	1.16	1.03	.94	.81	.74	.63
1982	.64	.68	1.00	.48	.39	.34	.29	.26	.24	.47	1.31	8.17
1983	11.71	15.65	15.65	19.79	17.03	13.38	14.27	10.15	9.54	4.02	3.21	2.76
1984	3.37	14.58	16.64	8.93	3.66	2.82	2.42	2.14	1.96	1.68	1.54	1.34
1985	1.26	2.03	3.96	4.81	2.13	1.65	1.33	1.18	1.08	.93	.85	.74
1986	9.69	6.48	2.40	3.28	1.59	1.39	1.20	1.06	.97	.83	.76	.66
1987	1.76	13.82	10.28	14.64	8.93	3.27	2.12	1.90	1.71	1.47	1.34	1.16
1988	1.25	5.95	2.82	5.21	3.15	1.90	1.61	1.43	1.31	1.12	1.03	.88
1989	11.81	16.03	11.69	10.25	3.80	2.27	1.90	1.69	1.55	1.33	1.22	1.04
1990	.95	1.02	2.53	4.03	1.29	1.08	.93	.83	.76	.65	.59	.51
1991	.74	1.61	5.29	2.46	1.41	1.04	.86	.76	.70	.60	.55	.47
1992	4.92	10.46	18.71	19.06	18.04	9.83	3.58	2.44	2.23	1.91	1.75	1.50

VOLUMEN ESCURRIDO = 2958.3620 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 3 Santa Ana
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	3.65	2.55	15.46	16.63	5.04	3.91	3.35	2.97	2.72	2.34	2.14	1.84
1965	1.67	2.20	19.75	16.41	13.71	5.67	4.06	3.59	3.29	2.82	2.59	2.23
1966	16.18	14.70	12.01	7.51	5.98	4.95	4.24	3.75	3.45	2.95	2.71	2.32
1967	28.17	39.67	20.62	7.59	5.43	4.62	3.96	3.51	3.22	2.76	2.53	2.17
1968	2.00	13.30	3.29	2.49	2.00	1.83	1.57	1.39	1.29	1.09	1.00	.86
1969	1.06	.89	8.65	8.08	12.15	5.17	3.65	3.22	2.95	2.53	2.32	1.99
1970	2.02	2.85	6.15	13.88	6.52	4.42	3.31	2.93	2.69	2.31	2.11	1.81
1971	1.67	5.20	25.83	10.24	3.95	3.48	2.94	2.61	2.39	2.05	1.88	1.61
1972	1.53	4.14	17.46	9.52	5.54	12.17	5.58	4.61	4.17	3.53	3.24	3.10
1973	12.81	21.97	28.24	20.12	13.84	8.48	6.41	5.67	5.19	4.46	4.08	3.50
1974	3.11	11.12	6.71	4.51	3.36	3.08	2.63	2.34	2.14	1.84	1.68	1.45
1975	16.03	35.88	34.25	24.37	8.88	6.11	5.04	4.46	4.09	3.51	3.22	2.76
1976	17.64	30.95	32.24	30.24	19.10	13.53	7.67	6.41	5.87	5.04	4.62	3.97
1977	5.86	15.16	19.76	13.84	6.14	5.33	4.54	4.03	3.69	3.17	2.90	2.50
1978	2.99	6.99	8.57	4.55	3.69	2.97	2.54	2.25	2.06	1.77	1.62	1.39
1979	1.33	3.36	4.27	3.36	1.92	1.62	1.37	1.22	1.12	.96	.88	.75
1980	.69	.96	4.02	9.41	5.12	2.43	2.05	1.81	1.66	1.43	1.31	1.12
1981	1.03	11.59	9.08	8.30	4.40	3.17	2.72	2.41	2.21	1.90	1.74	1.49
1982	1.42	1.44	1.83	1.06	.87	.76	.65	.58	.53	.78	2.05	17.19
1983	29.06	38.98	39.54	47.44	45.55	36.24	35.96	23.67	20.37	9.78	8.51	7.31
1984	7.35	29.40	37.22	18.12	8.35	7.11	6.10	5.41	4.96	4.25	3.90	3.40
1985	3.25	4.91	8.67	9.85	4.57	3.74	3.11	2.76	2.53	2.17	1.99	1.71
1986	20.94	13.91	6.29	7.89	4.13	3.60	3.09	2.74	2.51	2.15	1.97	1.69
1987	4.19	29.89	22.59	31.72	19.50	7.51	5.53	5.00	4.49	3.85	3.53	3.03
1988	3.20	12.87	7.11	11.46	7.18	4.71	4.01	3.56	3.26	2.80	2.56	2.21
1989	21.29	33.10	26.11	22.06	8.95	6.11	5.08	4.50	4.13	3.54	3.24	2.79
1990	2.53	2.69	4.91	6.77	2.72	2.39	2.05	1.82	1.66	1.43	1.31	1.13
1991	1.36	2.70	8.72	3.93	2.37	1.86	1.55	1.38	1.26	1.08	.99	.85
1992	8.21	19.35	38.54	38.74	35.19	17.93	7.62	6.15	5.63	4.83	4.43	3.80

VOLUMEN ESCURRIDO = 6748.1560 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 4 Chico river(confluent with Portoviejo river)
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	2.99	2.57	13.69	11.99	4.67	4.09	3.51	3.11	2.85	2.44	2.24	1.92
1965	1.73	2.05	13.52	11.06	10.00	4.86	3.84	3.41	3.12	2.68	2.45	2.12
1966	12.79	11.60	10.16	7.15	5.92	4.92	4.22	3.74	3.43	2.94	2.69	2.31
1967	22.76	34.49	15.77	6.72	5.41	4.78	4.11	3.64	3.34	2.86	2.62	2.25
1968	2.05	11.76	2.71	2.21	1.81	1.66	1.42	1.26	1.17	.99	.91	.78
1969	1.08	.75	6.46	3.68	6.86	2.98	2.37	2.10	1.93	1.65	1.51	1.30
1970	1.27	1.63	3.70	8.99	4.37	3.01	2.31	2.05	1.88	1.61	1.48	1.27
1971	1.15	3.17	22.27	7.52	3.42	3.10	2.64	2.34	2.15	1.84	1.69	1.45
1972	1.32	3.47	17.25	9.43	5.03	9.31	4.51	3.94	3.60	3.06	2.81	2.58
1973	11.67	21.52	22.64	13.58	9.68	6.81	5.70	5.05	4.63	3.97	3.64	3.12
1974	2.77	8.45	4.92	3.59	2.76	2.54	2.17	1.93	1.76	1.51	1.39	1.20
1975	13.03	34.67	29.96	18.26	7.33	5.96	5.06	4.49	4.11	3.53	3.23	2.78
1976	14.52	26.70	28.97	25.61	15.39	10.11	7.31	6.41	5.88	5.04	4.62	3.97
1977	4.80	11.91	17.23	12.23	5.87	5.23	4.49	3.98	3.65	3.13	2.87	2.46
1978	2.52	5.22	5.47	3.53	2.61	2.23	1.91	1.70	1.55	1.33	1.22	1.05
1979	.98	2.70	2.64	1.64	.98	.87	.74	.66	.60	.52	.47	.41
1980	.37	.58	2.65	6.46	2.65	1.51	1.29	1.15	1.05	.90	.83	.71
1981	.66	9.40	4.56	4.30	2.59	2.01	1.72	1.53	1.40	1.20	1.10	.95
1982	.89	.89	1.01	.63	.53	.48	.41	.36	.33	.47	1.48	12.16
1983	25.70	33.32	34.19	44.54	43.04	37.22	38.64	22.73	19.18	10.76	9.67	8.31
1984	7.94	31.38	35.63	16.08	8.76	7.76	6.66	5.90	5.41	4.64	4.25	3.73
1985	3.43	4.44	6.39	6.87	3.80	3.12	2.63	2.33	2.13	1.83	1.68	1.44
1986	18.30	9.62	4.39	5.91	3.15	2.84	2.44	2.16	1.98	1.70	1.56	1.34
1987	2.05	30.05	21.82	27.06	13.76	6.61	5.46	4.86	4.43	3.81	3.49	2.99
1988	2.84	8.78	4.21	7.51	4.51	3.27	2.80	2.48	2.27	1.95	1.79	1.54
1989	20.03	33.67	24.59	17.93	7.04	5.73	4.91	4.35	3.99	3.42	3.14	2.69
1990	2.40	2.54	3.75	5.09	2.10	1.90	1.63	1.44	1.32	1.14	1.04	.89
1991	1.07	2.13	6.28	2.64	1.60	1.29	1.09	.97	.89	.76	.70	.60
1992	5.94	17.46	40.74	43.48	38.68	17.11	7.98	6.81	6.24	5.36	4.91	4.21

VOLUMEN ESCURRIDO = 5869.3290 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 5 Portoviejo river(confluent with Chico river)
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	7.61	5.39	30.91	31.14	10.60	8.88	7.62	6.75	6.19	5.31	4.87	4.18
1965	3.74	4.41	33.66	26.89	21.13	10.74	8.35	7.38	6.76	5.80	5.32	4.58
1966	22.52	22.00	20.81	14.32	11.40	9.79	8.39	7.44	6.82	5.85	5.36	4.60
1967	46.86	75.14	35.68	14.36	11.18	9.89	8.49	7.53	6.90	5.92	5.42	4.65
1968	4.25	18.48	4.80	4.05	3.29	3.01	2.58	2.29	2.11	1.80	1.65	1.42
1969	1.92	1.48	12.87	13.80	20.74	9.56	6.99	6.18	5.66	4.86	4.45	3.82
1970	3.74	4.87	10.26	22.99	11.17	7.56	5.93	5.25	4.81	4.13	3.79	3.25
1971	2.96	8.89	49.36	17.18	7.71	6.97	5.93	5.26	4.82	4.13	3.79	3.25
1972	3.08	9.43	36.05	18.99	10.42	21.59	10.68	9.05	8.19	6.98	6.40	5.78
1973	21.57	40.79	49.03	34.01	23.25	16.09	12.90	11.43	10.47	8.99	8.23	7.07
1974	6.27	17.61	10.97	8.09	6.14	5.62	4.81	4.26	3.91	3.35	3.07	2.65
1975	28.20	72.04	68.50	45.32	16.72	12.97	10.91	9.67	8.87	7.61	6.97	5.99
1976	31.74	58.36	58.94	52.21	30.90	23.76	15.89	13.76	12.61	10.82	9.91	8.52
1977	10.11	25.75	35.62	24.90	12.22	10.92	9.32	8.26	7.57	6.50	5.95	5.11
1978	5.54	11.35	14.28	8.46	6.48	5.32	4.54	4.03	3.69	3.17	2.90	2.49
1979	2.33	6.09	6.25	4.80	2.70	2.29	1.95	1.73	1.59	1.36	1.25	1.07
1980	.99	1.31	5.67	13.12	6.91	3.52	3.00	2.66	2.44	2.09	1.92	1.65
1981	1.51	16.65	13.63	12.23	6.38	5.05	4.33	3.84	3.52	3.02	2.77	2.37
1982	2.21	2.20	2.46	1.61	1.36	1.20	1.03	.91	.83	1.05	2.92	27.49
1983	57.79	74.75	78.00	94.67	96.36	83.00	79.57	47.13	38.17	21.77	19.62	16.85
1984	15.65	51.39	68.75	31.26	17.34	15.43	13.24	11.74	10.76	9.23	8.46	7.45
1985	6.99	9.54	15.25	15.89	8.17	6.88	5.80	5.14	4.71	4.04	3.71	3.19
1986	38.45	23.56	12.13	14.55	8.04	7.11	6.10	5.41	4.95	4.25	3.90	3.34
1987	6.56	58.30	43.36	56.48	31.91	14.65	11.95	10.71	9.71	8.33	7.64	6.56
1988	6.49	21.10	11.99	18.72	11.74	8.38	7.17	6.36	5.83	5.00	4.58	3.94
1989	34.75	60.04	49.67	38.18	16.46	12.79	10.79	9.56	8.76	7.52	6.89	5.91
1990	5.32	5.63	8.03	9.75	4.43	3.98	3.41	3.03	2.77	2.38	2.18	1.87
1991	2.09	4.12	11.36	4.90	3.00	2.41	2.03	1.80	1.65	1.41	1.29	1.11
1992	11.03	29.65	71.89	73.97	64.60	30.17	15.63	13.43	12.31	10.56	9.68	8.31

VOLUMEN ESCURRIDO = 12505.6000 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 6 Estuary of Portoviejo river
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	4.66	6.58	23.67	32.03	25.16	21.47	17.57	15.13	13.65	11.63	10.66	9.19
1965	8.23	8.61	24.25	30.81	30.82	26.01	20.63	17.35	15.37	12.94	11.76	10.08
1966	20.77	28.28	28.48	26.90	23.32	21.18	18.14	16.13	14.88	12.89	11.93	10.35
1967	34.71	68.86	58.76	45.67	34.10	28.00	22.22	18.69	16.57	13.95	12.67	10.85
1968	9.72	19.08	14.30	11.98	9.56	8.34	6.94	6.04	5.50	4.71	4.33	3.73
1969	3.86	3.71	10.11	13.49	19.20	17.31	14.22	12.28	11.09	9.47	8.68	7.49
1970	6.89	7.58	10.04	19.45	18.01	15.77	12.91	11.12	10.03	8.55	7.83	6.75
1971	6.07	9.29	35.94	31.57	23.28	19.00	14.99	12.55	11.08	9.31	8.44	7.22
1972	6.51	10.07	28.71	29.99	23.83	27.93	22.98	19.73	17.71	15.02	13.72	11.98
1973	21.36	40.42	51.21	51.65	44.11	37.55	30.28	25.79	23.07	19.55	17.84	15.34
1974	13.68	20.45	18.29	16.78	14.05	12.73	10.87	9.65	8.89	7.68	7.10	6.16
1975	21.18	62.07	74.17	71.75	52.31	41.22	31.48	25.68	22.22	18.38	16.49	14.00
1976	28.13	55.46	69.08	74.82	63.12	54.18	42.23	34.87	30.48	25.40	22.90	19.52
1977	18.87	29.09	39.40	40.21	31.57	27.28	22.53	19.52	17.68	15.11	13.87	11.97
1978	11.24	15.03	16.81	15.95	13.62	12.18	10.31	9.09	8.33	7.18	6.63	5.74
1979	5.21	7.66	7.98	7.90	6.42	5.59	4.64	4.04	3.67	3.14	2.88	2.49
1980	2.24	2.44	4.90	11.04	10.43	8.72	7.02	5.97	5.34	4.52	4.12	3.54
1981	3.20	13.19	14.43	15.81	13.08	11.26	9.29	8.05	7.28	6.23	5.72	4.94
1982	4.48	4.50	4.07	3.66	3.10	2.80	2.39	2.12	1.95	1.89	3.08	17.82
1983	47.15	77.44	88.71	113.58	130.24	132.19	129.24	104.98	90.31	67.68	55.99	44.73
1984	38.33	62.24	79.47	69.71	53.03	44.28	35.63	30.28	27.04	22.89	20.86	18.16
1985	16.34	17.85	19.45	22.31	18.82	16.72	14.04	12.31	11.24	9.66	8.90	7.70
1986	28.38	32.54	24.91	24.43	19.31	16.66	13.75	11.92	10.79	9.23	8.47	7.31
1987	8.31	42.78	50.43	65.11	56.88	44.71	33.88	27.51	23.68	19.51	17.45	14.79
1988	13.40	21.38	19.23	23.20	20.74	18.31	15.37	13.49	12.32	10.59	9.76	8.45
1989	27.61	58.99	62.93	61.87	46.32	37.22	28.94	23.95	20.97	17.50	15.79	13.47
1990	11.98	12.08	11.97	14.06	11.42	10.07	8.45	7.40	6.75	5.80	5.34	4.62
1991	4.41	5.83	10.55	9.90	7.92	6.72	5.45	4.66	4.18	3.55	3.25	2.79
1992	8.68	24.98	63.70	89.90	93.51	77.44	55.64	42.72	35.17	27.97	24.36	20.25

VOLUMEN ESCURRIDO = 20268.3100 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 7 Carrizal river (confluent with Portoviejo river)
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	31.94	44.10	101.34	105.04	38.56	18.38	8.66	3.80	1.68	.70	.31	.13
1965	1.35	12.51	93.12	100.09	85.05	38.59	18.41	9.20	4.12	1.72	.76	.68
1966	49.83	79.45	83.66	62.13	42.13	22.72	12.38	5.88	3.09	1.19	.52	.36
1967	82.97	127.19	80.15	40.20	25.67	13.51	5.96	2.56	1.17	.47	.21	.09
1968	1.22	47.83	22.71	22.95	10.72	5.24	2.19	.94	.59	.18	.08	.03
1969	2.94	2.60	52.47	50.49	66.36	36.82	18.36	9.29	4.15	1.72	.80	.32
1970	2.79	7.10	24.79	73.34	61.06	27.45	15.78	7.88	3.51	1.46	.65	.34
1971	1.35	29.27	126.02	67.31	25.85	14.05	6.46	2.78	1.31	.52	.23	.11
1972	1.11	51.97	88.11	73.63	38.85	77.54	47.06	28.21	15.04	6.51	2.89	5.11
1973	67.85	51.46	91.64	74.10	65.61	30.84	16.00	7.83	3.51	1.45	.65	.29
1974	.31	28.32	23.87	23.76	13.67	7.24	3.10	1.33	.59	.24	.12	.40
1975	46.39	139.43	152.27	100.19	39.90	20.09	10.30	4.69	2.17	1.03	.39	1.50
1976	79.09	81.71	104.45	84.15	52.25	31.28	16.04	7.75	3.48	1.44	.64	.31
1977	28.31	83.44	115.57	68.79	26.04	13.15	5.78	2.47	1.12	.45	.20	.10
1978	5.07	36.27	61.81	35.27	34.55	16.09	7.57	3.27	1.45	.60	.26	.11
1979	5.54	24.54	27.26	36.22	33.36	18.39	9.22	4.04	1.79	.74	.33	.14
1980	.83	17.10	40.55	63.58	27.83	13.93	6.28	2.69	1.19	.50	.22	.16
1981	1.06	59.83	69.75	76.76	25.02	12.43	5.61	2.35	1.05	.43	.19	.13
1982	.95	7.68	16.41	24.73	12.33	6.76	2.92	1.25	.56	2.62	23.65	78.29
1983	135.99	159.58	176.29	167.83	156.89	138.07	144.29	96.76	68.12	26.64	14.98	10.39
1984	4.95	78.89	103.92	93.19	40.18	18.99	9.44	4.11	1.82	.76	.33	.85
1985	3.06	20.55	41.46	40.75	17.40	9.31	4.02	1.72	.76	.31	.14	.50
1986	33.38	50.86	55.66	78.33	29.68	15.74	7.31	3.17	1.40	.69	.26	.27
1987	17.45	138.57	154.82	161.49	98.74	41.04	19.35	11.58	5.80	2.44	1.08	.83
1988	12.12	82.76	49.58	48.88	43.26	22.22	12.07	5.66	2.51	1.07	.47	.30
1989	39.61	99.05	73.93	91.94	40.57	22.57	12.01	5.55	2.53	1.04	.45	.33
1990	1.03	8.72	15.09	19.17	9.39	4.59	1.91	.82	.36	.15	.06	.03
1991	1.33	22.60	47.07	35.55	15.96	10.01	4.36	1.87	.83	.34	.15	.08
1992	1.86	13.55	63.27	81.69	47.70	24.09	12.87	6.00	2.69	1.12	.49	.28

VOLUMEN ESCURRIDO = 24610.9500 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 8 Chone river (confluent with Carrizal river)
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	50.24	39.16	56.30	66.93	14.73	5.26	3.79	3.08	2.60	2.06	1.74	1.38
1965	1.65	6.36	37.11	53.22	19.82	5.87	2.06	1.06	.84	.67	.56	.45
1966	13.02	51.59	52.85	25.90	8.00	2.83	1.69	1.41	1.20	.94	.78	.63
1967	26.99	70.03	25.04	6.46	3.37	1.64	1.29	1.05	.90	.70	.59	.47
1968	.83	5.03	3.53	2.65	.24	.19	.14	.11	.09	.08	.06	.05
1969	.66	.44	13.58	16.05	9.37	10.57	4.19	1.08	.90	.71	.60	.48
1970	2.12	3.16	17.61	51.11	16.97	2.86	.94	.72	.61	.48	.41	.33
1971	.41	12.32	82.58	26.20	2.71	1.02	.71	.58	.49	.39	.33	.26
1972	.25	22.32	39.33	20.70	4.15	33.97	9.17	6.27	1.58	1.21	1.02	3.63
1973	30.29	21.42	46.48	33.23	19.66	3.52	1.82	1.29	1.09	.86	.72	.58
1974	.74	50.34	10.99	16.05	1.95	.85	.61	.50	.42	.33	.28	.36
1975	38.07	80.44	95.21	57.86	9.48	3.34	1.63	1.23	1.04	.82	.69	.62
1976	40.61	51.61	52.07	45.30	25.34	25.96	3.43	1.63	1.37	1.08	.92	.76
1977	27.54	78.55	66.32	33.69	2.96	1.54	.94	.77	.65	.51	.43	.35
1978	6.38	32.96	30.14	6.75	2.69	.83	.65	.53	.45	.36	.30	.24
1979	1.91	22.52	10.24	4.12	.66	.82	.34	.28	.24	.19	.16	.13
1980	1.25	16.00	41.75	30.20	8.14	1.03	.65	.53	.45	.36	.30	.24
1981	2.20	28.12	31.01	30.27	2.22	.78	.62	.50	.43	.33	.28	.23
1982	1.52	1.29	5.91	2.47	.60	.11	.08	.06	.05	.05	3.76	45.21
1983	84.50	116.77	112.95	81.94	122.10	94.52	71.05	33.09	16.92	2.84	1.92	1.75
1984	1.35	30.91	61.23	45.57	7.73	2.19	1.23	.99	.84	.66	.56	1.08
1985	4.11	21.94	18.55	10.09	1.95	.77	.58	.47	.40	.32	.27	.36
1986	25.47	14.83	17.16	28.44	3.62	1.05	.81	.67	.56	.45	.38	.44
1987	9.83	95.72	80.42	92.34	39.19	5.91	1.59	1.61	.98	.76	.64	.58
1988	4.72	25.78	7.01	6.98	2.85	.85	.52	.42	.35	.28	.23	.19
1989	12.07	59.06	30.19	32.72	7.78	2.07	1.15	.92	.78	.62	.52	.42
1990	1.29	8.18	16.27	22.94	1.88	.62	.46	.38	.32	.25	.21	.17
1991	.60	14.63	10.25	3.08	.44	.32	.24	.20	.17	.13	.11	.09
1992	4.98	16.53	31.56	39.63	25.10	3.75	1.43	1.06	.89	.71	.60	.47

VOLUMEN ESCURRIDO = 11177.0800 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 9 Estuary of Chone river
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 m**3/seg

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	68.76	90.97	138.94	166.69	98.91	58.40	33.24	20.23	13.46	8.98	6.82	5.11
1965	5.35	16.66	94.90	141.73	117.70	76.28	43.54	25.33	15.02	8.54	5.44	3.70
1966	40.82	102.21	134.43	110.31	73.66	47.71	29.05	17.92	11.68	7.20	4.98	3.52
1967	70.89	167.01	122.21	79.69	51.33	31.90	18.48	11.09	7.18	4.59	3.34	2.42
1968	3.05	43.71	31.56	29.78	18.38	11.73	6.62	3.86	2.51	1.52	1.05	.73
1969	2.70	3.24	44.55	61.48	70.59	58.51	37.36	22.49	13.55	7.72	4.92	3.11
1970	5.58	9.60	33.84	108.78	87.77	53.81	32.25	19.44	11.75	6.72	4.29	2.78
1971	2.78	30.67	150.67	115.11	62.30	36.28	19.58	10.93	6.54	3.85	2.59	1.77
1972	2.01	50.39	104.96	102.56	64.98	99.73	72.88	51.71	33.43	19.37	11.94	11.23
1973	71.18	84.41	122.53	119.02	100.40	63.43	37.56	22.61	13.98	8.33	5.60	3.78
1974	3.18	59.11	42.34	43.15	26.67	17.03	9.81	5.87	3.78	2.41	1.77	1.58
1975	64.69	189.66	237.57	196.34	103.09	58.35	31.70	17.92	10.84	6.54	4.44	3.87
1976	82.21	119.79	143.07	141.01	103.60	79.00	44.32	25.38	15.21	8.90	5.92	4.02
1977	37.64	127.73	165.08	132.55	68.11	40.02	20.70	11.54	7.02	4.28	2.97	2.10
1978	9.97	52.02	76.71	56.72	45.54	30.46	18.07	10.66	6.55	3.94	2.67	1.82
1979	5.97	40.32	36.33	39.82	36.77	28.03	17.79	10.76	6.58	3.84	2.51	1.64
1980	2.37	22.98	65.24	82.63	54.63	32.45	17.79	9.98	5.92	3.46	2.32	1.60
1981	3.60	60.29	89.52	103.40	55.79	32.25	17.36	9.63	5.80	3.36	2.27	1.58
1982	2.68	6.94	19.36	24.21	17.50	11.99	7.00	4.05	2.44	5.13	26.94	85.87
1983	177.01	255.24	292.24	295.25	309.96	274.93	249.58	178.57	128.14	69.39	41.70	25.92
1984	17.34	87.50	140.97	145.01	86.01	50.42	27.98	16.07	9.84	5.97	4.13	3.69
1985	8.07	37.21	59.01	58.17	34.32	21.35	12.14	7.15	4.52	2.83	2.02	1.81
1986	36.55	56.45	65.22	92.15	56.96	35.11	19.81	11.39	6.91	4.19	2.84	2.11
1987	21.28	168.84	220.27	252.01	181.58	104.67	54.83	31.69	18.97	10.73	6.74	4.57
1988	13.62	74.84	67.07	63.14	53.08	37.39	23.60	14.48	8.93	5.25	3.44	2.31
1989	32.96	112.83	108.16	121.56	77.15	48.43	28.36	16.77	10.28	6.09	4.07	2.82
1990	3.45	13.71	26.32	37.00	21.58	12.81	7.05	4.11	2.61	1.66	1.21	.89
1991	2.03	25.20	46.24	42.98	26.93	18.15	10.53	6.10	3.68	2.15	1.44	.97
1992	6.04	28.48	77.48	108.50	85.93	53.55	30.81	17.98	10.87	6.36	4.21	2.86

VOLUMEN ESCURRIDO = 39960.3600 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SIHIM
 THE DETAILED DESIGN STUDY ON THE WATER TRANSBASIN SCHEMES -C
 SIMULACION
 INFORMACION BASICA DE LA CORRIDA
 INICIO ENE DE 1964 FINAL DIC DE 1992
 NUMERO DE SUBCUENCAS = 9
 NUMERO DE EST. DE MED. DE PRECIPITACION = 8
 NUMERO DE EST. DE MED. DE EVAPORACION = 1

PARAMETROS PARA CADA SUBCUENCA

SUBC	CINF (mm)	HSN (mm)	CT	PQB	PFSE	PESC
1	140.00	340.00	.40	.60	.20	.50
2	200.00	200.00	.75	.10	.02	.40
3	200.00	200.00	.75	.10	.02	.40
4	200.00	200.00	.75	.10	.02	.40
5	200.00	200.00	.75	.10	.02	.40
6	200.00	200.00	.75	.10	.02	.40
7	140.00	340.00	.40	.60	.20	.50
8	95.00	225.00	.70	.10	.10	.60
9	95.00	225.00	.70	.10	.10	.60

ALMACENAMIENTOS INICIALES, FLUJOS AFLUENTES Y SUBCUENCAS TRIBUTARIAS

SUBC	AIHS (mm)	AIAS (mm)	AISUP (mm)	FSUPA (mm)	FSUBA (mm)	AREA (Km**2)	AREA (Km**2)	AREA ACUM.	1	2	3	4	5	6	7	8	9	10
1	100.0	20.0	20.0	.0	.0	.0	445.00	445.00	0	0	0	0	0	0	0	0	0	0
2	260.0	.0	10.0	.0	.0	.0	170.00	170.00	0	0	0	0	0	0	0	0	0	0
3	260.0	.0	10.0	.0	.0	.0	481.86	481.86	0	0	0	0	0	0	0	0	0	0
4	260.0	.0	10.0	.0	.0	.0	585.00	585.00	0	0	0	0	0	0	0	0	0	0
5	260.0	.0	10.0	.0	.0	.0	1190.00	1190.00	0	0	0	0	0	0	0	0	0	0
6	260.0	.0	10.0	.0	.0	.0	285.00	2060.00	4	5	0	0	0	0	0	0	0	0
7	100.0	20.0	20.0	.0	.0	.0	1166.00	1166.00	0	0	0	0	0	0	0	0	0	0
8	300.0	250.0	100.0	.0	.0	.0	755.00	755.00	0	0	0	0	0	0	0	0	0	0
9	300.0	250.0	100.0	.0	.0	.0	346.00	2267.00	7	8	0	0	0	0	0	0	0	0

INFLUENCIA DE CADA EST. DE MED. DE PRECIPITACION

NOMBRE DE LA ESTACION	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
BOYACA	.000	.000	.000	.000	.000	.000	.000	.200	1.000	
SANTA ANA	.000	.000	.300	.000	.300	.000	.000	.000	.000	.000
CHONE	.000	.000	.000	.000	.000	.000	.150	.800	.000	.000
PORTOVIEJO U.T.M (INAM	.000	.000	.000	.200	.200	.000	.000	.000	.000	.000
ROCAFUERTE (INAMHI)	.000	.000	.000	.200	.000	1.000	.000	.000	.000	.000
DOS BOCAS	1.000	.000	.000	.000	.000	.000	.600	.000	.000	.000
CALCETA	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000
RIO CHAMOTETE -J.MARIA	.000	1.000	.700	.600	.500	.000	.000	.000	.000	.000

FACTOR DE AJUSTE DE LA PRECIPITACION

FACPRE	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

INFLUENCIA DE CADA EST. DE MED. DE EVAPORACION

NOMBRE DE LA ESTACION	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
PORTOVIEJO (U.T.M.) EV	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

FACTOR DE AJUSTE DE LA EVAPORACION

FACEVA	SUBCUENCA									
	1	2	3	4	5	6	7	8	9	10
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

SUMARIO TOTAL PARA EL PERIODO 1964 - 1992

CALCULOS INTERMEDIOS EN "mm"

SUBC	PRECIP.	EVAP.	ETP	ETR	FSUPA	FSUBA	ESC TOT	ESC DIR	Q BASE	FSUBE	BALANCE
1	44035.50	46968.81	18787.52	16431.88	.00	.00	25504.28	19015.07	6489.22	2163.07	.010
2	38021.30	46968.81	35226.61	19285.42	.00	.00	17402.13	10623.79	6778.33	1355.67	.001
3	33859.88	46968.81	35226.61	18683.41	.00	.00	14004.39	7941.40	6062.99	1212.60	-.009
4	27996.21	46968.81	35226.61	17093.22	.00	.00	10033.04	5323.14	4709.90	941.98	-.002
5	29051.24	46968.81	35226.61	17606.72	.00	.00	10508.91	5495.13	5013.79	1002.76	.001
6	11939.10	46968.81	35226.61	9954.38	64473.44	6120.49	71116.88	65011.02	6105.86	1221.17	-.021
7	39335.88	46968.81	18787.52	16272.48	.00	.00	21107.16	15037.85	6069.32	2023.11	-.005
8	34096.88	46968.81	32878.17	18839.17	.00	.00	14804.09	13733.19	1070.90	1070.90	-.016
9	25446.80	46968.81	32878.17	17738.45	103433.60	9154.54	115492.40	110187.70	5304.68	5304.68	-.014

ALMACENAMIENTOS FINALES EN "mm"

SUBC ALMAC HUM SUELO ALMAC AGUA SUBT ALMAC EN SUPERF

1	75.55	.49	.22
2	25.49	222.58	.01
3	30.95	198.50	.02
4	16.67	181.31	.00
5	27.13	175.71	.01
6	.96	264.56	245.11
7	72.50	.47	.17
8	17.64	15.09	.00
9	40.17	101.97	7.36

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 1
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	57.78	58.11	119.13	109.09	41.72	18.73	9.19	4.04	1.73	.74	.32	.14
1965	2.16	22.46	116.99	114.17	115.76	48.99	19.77	9.87	4.27	1.83	.78	1.29
1966	85.24	88.44	95.98	70.38	53.54	25.04	15.05	7.39	4.05	1.52	.65	.62
1967	120.60	147.36	106.04	51.96	35.60	16.87	8.10	3.48	1.49	.64	.27	.12
1968	3.07	97.40	50.45	34.57	16.00	7.82	3.39	1.45	1.21	.27	.12	.05
1969	4.68	6.21	83.57	66.93	96.43	42.75	19.32	9.73	4.21	1.82	.86	.33
1970	4.54	10.34	31.78	70.96	78.40	31.38	19.59	10.10	4.37	1.87	.80	.55
1971	3.33	42.09	139.65	73.18	29.42	15.10	7.28	3.15	1.53	.58	.25	.15
1972	2.38	72.73	122.54	92.77	54.28	94.53	66.10	34.25	16.81	7.71	3.31	6.84
1973	96.77	52.87	114.39	91.15	86.40	39.91	18.89	9.53	4.14	1.77	.76	.38
1974	.36	21.48	27.18	21.47	14.21	7.30	3.23	1.38	.60	.26	.11	.42
1975	51.08	150.38	161.44	93.83	39.94	18.75	9.63	4.34	2.07	1.19	.36	2.75
1976	127.75	100.44	100.95	76.75	49.21	21.96	11.37	4.95	2.12	.91	.39	.20
1977	31.56	80.62	138.55	73.43	30.98	14.18	6.46	2.77	1.21	.51	.22	.12
1978	5.95	33.30	75.57	46.41	50.94	19.77	10.15	4.39	1.89	.81	.34	.15
1979	13.24	30.59	37.78	52.57	55.37	24.85	13.15	5.99	2.58	1.10	.47	.20
1980	1.52	23.95	37.70	70.42	29.94	14.16	6.57	2.81	1.21	.52	.22	.21
1981	1.68	81.23	87.86	89.86	30.60	13.84	6.95	2.91	1.25	.54	.23	.31
1982	2.03	15.15	30.79	34.31	16.47	8.79	4.00	1.71	.74	4.06	40.72	104.55
1983	149.32	146.30	205.18	193.06	164.63	133.01	145.84	109.11	76.48	30.90	16.54	12.59
1984	6.38	98.82	117.83	114.04	56.55	22.14	11.75	5.20	2.23	.96	.41	.66
1985	2.65	18.48	55.78	52.28	20.01	10.79	4.96	2.13	.91	.39	.17	1.06
1986	54.25	58.41	57.94	90.97	32.35	15.47	7.16	3.07	1.31	.76	.24	.26
1987	25.01	156.71	189.42	190.42	125.58	48.31	20.27	12.59	6.10	2.62	1.13	.84
1988	20.80	118.23	67.61	64.47	67.42	29.18	16.18	7.91	3.40	1.50	.65	.49
1989	70.34	113.16	77.10	105.66	45.72	22.76	12.06	5.30	2.34	.99	.42	.34
1990	1.17	11.32	17.29	18.79	9.32	4.20	1.80	.77	.33	.14	.06	.03
1991	2.93	37.17	75.99	55.33	23.36	16.27	7.71	3.34	1.43	.61	.26	.15
1992	1.71	11.42	78.72	100.21	58.55	26.63	14.01	6.37	2.75	1.18	.51	.31

VOLUMEN ESCURRIDO = 11349.4000 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 2
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	3.58	2.60	16.41	16.24	5.01	3.71	3.28	2.91	2.58	2.29	2.03	1.80
1965	1.67	2.33	22.03	18.22	18.76	6.41	4.21	3.72	3.30	2.93	2.60	2.35
1966	24.45	18.02	15.40	9.05	7.52	5.48	4.83	4.27	3.81	3.36	2.98	2.64
1967	36.66	40.62	23.43	8.26	6.05	4.75	4.21	3.74	3.31	2.94	2.61	2.31
1968	2.13	20.55	5.61	3.26	2.55	2.25	1.99	1.77	1.64	1.39	1.23	1.09
1969	1.35	.97	12.22	7.31	12.93	4.88	3.64	3.22	2.86	2.54	2.25	1.99
1970	2.03	2.76	7.53	15.96	7.41	5.05	3.66	3.24	2.87	2.55	2.26	2.00
1971	1.85	5.31	28.70	12.13	4.39	3.61	3.13	2.78	2.46	2.19	1.94	1.72
1972	1.60	3.54	20.48	11.15	6.97	13.77	5.94	4.91	4.36	3.75	3.33	3.69
1973	18.18	25.68	34.24	22.40	16.54	8.58	6.58	5.81	5.15	4.57	4.05	3.59
1974	3.19	13.70	8.42	4.94	3.67	3.26	2.88	2.55	2.26	2.01	1.78	1.59
1975	19.46	35.84	36.03	25.07	9.85	6.02	5.08	4.50	3.99	3.54	3.14	2.79
1976	21.15	31.55	37.11	34.98	24.96	14.96	7.89	6.39	5.66	5.02	4.45	3.95
1977	7.11	16.82	23.24	16.67	6.71	5.30	4.68	4.15	3.68	3.27	2.90	2.58
1978	3.31	7.81	9.26	5.12	4.10	3.18	2.82	2.50	2.22	1.97	1.74	1.55
1979	1.51	3.53	5.58	3.80	2.26	1.89	1.66	1.47	1.30	1.15	1.02	.91
1980	.82	1.16	5.64	13.35	6.67	2.85	2.45	2.18	1.93	1.71	1.52	1.35
1981	1.25	15.03	9.69	9.04	5.65	3.51	3.10	2.75	2.44	2.16	1.92	1.70
1982	1.71	1.64	2.68	1.25	1.04	.88	.78	.69	.61	1.25	3.40	21.90
1983	31.36	37.86	41.92	51.29	45.62	34.68	38.22	27.19	24.72	10.78	8.33	7.38
1984	9.02	36.52	44.58	23.14	9.80	7.32	6.47	5.74	5.09	4.51	4.00	3.58
1985	3.38	4.92	10.60	12.47	5.70	4.28	3.58	3.17	2.81	2.49	2.21	1.97
1986	25.95	15.67	6.44	8.51	4.25	3.61	3.20	2.84	2.52	2.23	1.98	1.76
1987	4.71	33.43	27.54	37.96	23.93	8.47	5.68	5.08	4.43	3.93	3.48	3.10
1988	3.34	14.92	7.55	13.49	8.44	4.93	4.31	3.82	3.39	3.00	2.66	2.37
1989	31.62	38.79	31.32	26.57	10.17	5.89	5.10	4.52	4.01	3.55	3.15	2.80
1990	2.54	2.48	6.78	10.45	3.45	2.81	2.49	2.21	1.96	1.74	1.54	1.37
1991	1.98	3.89	14.16	6.39	3.78	2.69	2.31	2.05	1.82	1.61	1.43	1.27
1992	13.18	26.22	50.11	49.40	48.32	25.49	9.59	6.54	5.77	5.12	4.54	4.03

VOLUMEN ESCURRIDO = 2958.3620 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUCENCA NUMERO 3
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cúbicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	9.77	6.39	41.41	43.10	13.49	10.14	8.98	7.96	7.06	6.26	5.55	4.92
1965	4.46	5.32	52.90	42.55	36.72	14.69	10.88	9.62	8.53	7.56	6.71	5.98
1966	43.35	35.57	32.17	19.46	16.01	12.83	11.35	10.06	8.94	7.91	7.01	6.22
1967	75.46	95.97	55.22	19.66	14.55	11.97	10.61	9.41	8.34	7.40	6.56	5.82
1968	5.36	33.33	8.81	6.46	5.35	4.73	4.20	3.72	3.35	2.93	2.59	2.30
1969	2.84	2.15	23.17	20.95	32.54	13.41	9.77	8.63	7.66	6.79	6.02	5.34
1970	5.41	6.90	16.48	35.99	17.45	11.45	8.87	7.86	6.97	6.18	5.48	4.86
1971	4.47	12.58	69.19	26.55	10.57	9.02	7.87	6.98	6.19	5.49	4.87	4.32
1972	4.10	10.38	46.75	24.66	14.83	31.55	14.96	12.35	10.81	9.46	8.39	8.29
1973	34.32	53.16	75.65	52.14	37.07	21.97	17.16	15.18	13.46	11.93	10.58	9.39
1974	8.33	26.90	17.96	11.69	9.00	7.99	7.05	6.25	5.55	4.92	4.36	3.89
1975	42.94	86.81	91.74	63.17	23.79	15.83	13.49	11.95	10.60	9.40	8.34	7.40
1976	47.25	77.55	86.36	78.38	51.15	35.08	20.54	17.17	15.21	13.49	11.96	10.63
1977	15.69	36.68	52.94	35.89	16.46	13.82	12.16	10.78	9.56	8.48	7.52	6.68
1978	8.02	16.92	22.96	11.81	9.88	7.70	6.79	6.02	5.34	4.74	4.20	3.72
1979	3.55	8.13	11.45	8.72	5.13	4.20	3.68	3.26	2.89	2.57	2.28	2.02
1980	1.85	2.40	10.77	24.39	13.72	6.29	5.48	4.86	4.31	3.82	3.39	3.01
1981	2.75	28.03	24.32	21.53	11.78	8.22	7.28	6.46	5.73	5.08	4.50	3.99
1982	3.81	3.49	4.89	2.74	2.34	1.96	1.74	1.54	1.37	2.10	5.31	46.04
1983	77.84	94.29	105.90	122.97	122.00	93.94	96.32	63.39	52.79	26.20	22.06	19.58
1984	19.70	73.68	99.70	46.97	22.35	18.44	16.34	14.49	12.85	11.39	10.10	9.11
1985	8.70	11.88	23.21	25.52	12.24	9.70	8.32	7.38	6.55	5.80	5.15	4.59
1986	56.10	33.65	16.86	20.44	11.06	9.33	8.27	7.33	6.50	5.77	5.11	4.54
1987	11.23	72.30	60.52	82.23	52.24	19.45	14.82	13.38	11.63	10.31	9.14	8.12
1988	8.58	32.25	19.04	29.71	19.24	12.22	10.75	9.53	8.45	7.50	6.65	5.91
1989	57.03	80.07	69.95	57.19	23.97	15.85	13.61	12.06	10.70	9.48	8.41	7.46
1990	6.76	6.51	13.15	17.54	7.28	6.19	5.48	4.86	4.31	3.82	3.39	3.01
1991	3.63	6.54	23.36	10.20	6.36	4.82	4.16	3.69	3.27	2.90	2.57	2.28
1992	21.99	48.49	103.21	100.41	94.25	46.47	20.42	16.47	14.59	12.94	11.47	10.18

VOLUMEN ESCURRIDO = 6748.1560 millones de metros cúbicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 4
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	8.00	6.43	36.67	31.08	12.52	10.59	9.39	8.33	7.38	6.55	5.81	5.15
1965	4.62	4.96	36.22	28.67	26.79	12.60	10.29	9.12	8.09	7.18	6.36	5.67
1966	34.26	28.05	27.21	18.52	15.85	12.77	11.30	10.01	8.89	7.87	6.98	6.19
1967	60.97	83.45	42.23	17.41	14.49	12.40	11.00	9.75	8.65	7.67	6.80	6.03
1968	5.48	29.48	7.25	5.74	4.85	4.29	3.81	3.38	3.03	2.65	2.35	2.09
1969	2.88	1.80	17.29	9.53	18.36	7.74	6.35	5.63	4.99	4.43	3.93	3.48
1970	3.41	3.94	9.90	23.31	11.70	7.80	6.19	5.48	4.86	4.31	3.82	3.39
1971	3.08	7.67	59.66	19.50	9.17	8.02	7.07	6.27	5.56	4.93	4.37	3.88
1972	3.54	8.70	46.21	24.44	13.46	24.13	12.09	10.55	9.33	8.20	7.28	6.90
1973	31.27	52.06	60.63	35.20	25.94	17.65	15.26	13.53	12.00	10.64	9.43	8.37
1974	7.43	20.44	13.18	9.31	7.40	6.57	5.82	5.16	4.57	4.06	3.60	3.20
1975	34.89	83.86	80.24	47.34	19.64	15.44	13.56	12.02	10.66	9.46	8.38	7.44
1976	38.90	66.89	77.59	66.38	41.22	26.20	19.58	17.18	15.23	13.51	11.98	10.63
1977	12.86	28.82	46.14	31.70	15.71	13.56	12.02	10.66	9.45	8.38	7.43	6.59
1978	6.75	12.63	14.65	9.16	6.98	5.78	5.12	4.54	4.03	3.57	3.17	2.81
1979	2.63	6.53	7.06	4.25	2.63	2.26	1.99	1.76	1.56	1.39	1.23	1.09
1980	.99	1.45	7.09	16.75	7.09	3.92	3.46	3.07	2.72	2.42	2.14	1.90
1981	1.78	22.73	12.21	11.14	6.95	5.21	4.62	4.09	3.63	3.22	2.85	2.53
1982	2.40	2.16	2.72	1.63	1.42	1.23	1.09	.97	.86	1.27	3.83	32.57
1983	68.83	80.62	91.57	115.46	115.27	96.48	103.50	60.87	49.71	28.81	25.07	22.25
1984	21.28	78.62	95.42	41.69	23.45	20.11	17.83	15.81	14.02	12.44	11.03	10.00
1985	9.18	10.75	17.12	17.81	10.18	8.09	7.03	6.24	5.53	4.91	4.35	3.87
1986	49.02	23.28	11.77	15.32	8.43	7.37	6.54	5.80	5.14	4.56	4.04	3.58
1987	5.49	72.70	58.44	70.13	36.86	17.12	14.62	13.01	11.49	10.19	9.04	8.02
1988	7.62	22.00	11.28	19.47	12.07	8.47	7.49	6.64	5.89	5.23	4.63	4.11
1989	53.66	81.46	65.86	46.46	18.86	14.85	13.14	11.65	10.34	9.17	8.13	7.21
1990	6.44	6.15	10.03	13.20	5.61	4.92	4.36	3.87	3.43	3.04	2.70	2.40
1991	2.85	5.16	16.82	6.85	4.29	3.34	2.93	2.60	2.30	2.04	1.81	1.61
1992	15.91	43.74	109.12	112.69	103.60	44.35	21.38	18.25	16.18	14.35	12.72	11.28

VOLUMEN ESCURRIDO = 5869.3290 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 5
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	20.38	13.51	82.80	80.72	28.40	23.02	20.40	18.09	16.04	14.23	12.62	11.19
1965	10.03	10.66	90.16	69.71	56.58	27.84	22.36	19.77	17.53	15.55	13.79	12.26
1966	60.32	53.22	55.74	37.12	30.55	25.38	22.47	19.92	17.69	15.67	13.89	12.32
1967	125.51	181.79	95.58	37.21	29.94	25.63	22.73	20.16	17.87	15.85	14.06	12.46
1968	11.37	46.29	12.85	10.49	8.81	7.80	6.92	6.14	5.48	4.83	4.28	3.80
1969	5.14	3.59	34.47	35.77	55.55	24.77	18.73	16.54	14.67	13.01	11.54	10.23
1970	10.01	11.77	27.47	59.58	29.93	19.58	15.88	14.07	12.48	11.07	9.81	8.70
1971	7.93	21.50	132.22	44.52	20.64	18.06	15.87	14.08	12.48	11.07	9.82	8.70
1972	8.26	23.63	96.57	49.21	27.90	55.96	28.60	24.23	21.23	18.71	16.59	15.49
1973	57.77	98.69	131.33	88.14	62.27	41.70	34.55	30.61	27.14	24.07	21.34	18.93
1974	16.80	42.61	29.38	20.96	16.44	14.57	12.88	11.42	10.13	8.98	7.97	7.10
1975	75.53	174.27	183.48	117.47	44.79	33.62	29.23	25.91	22.98	20.38	18.07	16.04
1976	85.00	146.22	157.87	135.32	82.76	61.58	42.57	36.86	32.68	28.98	25.70	22.81
1977	27.08	62.28	95.40	64.53	32.72	28.29	24.95	22.13	19.62	17.40	15.43	13.70
1978	14.85	27.46	38.25	21.92	17.37	13.78	12.16	10.78	9.56	8.48	7.52	6.67
1979	6.23	14.74	16.74	12.43	7.24	5.95	5.23	4.64	4.11	3.64	3.23	2.87
1980	2.64	3.29	15.18	34.01	18.50	9.13	8.04	7.13	6.32	5.61	4.97	4.41
1981	4.03	40.29	36.51	31.69	17.08	13.08	11.60	10.28	9.12	8.09	7.17	6.36
1982	5.92	5.32	6.58	4.18	3.64	3.10	2.75	2.44	2.16	2.82	2.56	2.36
1983	154.80	180.84	208.90	245.38	258.10	215.12	213.12	126.24	98.93	58.32	50.86	45.14
1984	41.92	128.77	184.15	81.03	46.45	40.01	35.47	31.45	27.89	24.73	21.93	19.96
1985	18.71	23.08	40.86	41.20	21.89	17.82	15.53	13.78	12.22	10.83	9.61	8.55
1986	102.98	56.99	32.50	37.72	21.53	18.42	16.33	14.48	12.84	11.39	10.10	8.96
1987	17.56	141.03	116.13	146.39	85.48	37.98	32.01	28.70	25.17	22.32	19.79	17.56
1988	17.39	52.88	32.11	48.51	31.44	21.72	19.20	17.03	15.10	13.39	11.87	10.54
1989	93.06	145.25	133.05	98.96	44.08	33.15	28.89	25.60	22.71	20.14	17.86	15.84
1990	14.24	13.62	21.52	25.27	11.87	10.31	9.14	8.10	7.19	6.37	5.65	5.02
1991	5.60	9.98	30.43	12.69	8.03	6.24	5.43	4.81	4.27	3.78	3.36	2.98
1992	29.54	74.30	192.55	191.74	173.01	78.19	41.88	35.98	31.90	28.29	25.08	22.25

VOLUMEN ESCURRIDO = 12505.6000 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 6
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	12.48	16.48	63.41	83.03	67.40	55.64	47.05	40.53	35.37	31.16	27.63	24.60
1965	22.04	20.82	64.96	79.86	82.55	67.41	55.25	46.46	39.85	34.67	30.48	27.00
1966	55.62	68.42	76.29	69.72	62.47	54.89	48.58	43.21	38.58	34.51	30.92	27.73
1967	92.96	166.58	157.38	118.37	91.34	72.57	59.52	50.07	42.95	37.37	32.84	29.06
1968	26.04	47.81	38.30	31.06	25.61	21.62	18.58	16.19	14.27	12.62	11.22	10.00
1969	10.34	8.98	27.07	34.97	51.42	44.88	38.09	32.88	28.74	25.36	22.51	20.06
1970	18.46	18.34	26.90	50.41	48.24	40.88	34.58	29.78	25.99	22.90	20.31	18.09
1971	16.27	22.47	96.26	81.84	62.35	49.26	40.14	33.61	28.72	24.93	21.87	19.34
1972	17.44	25.23	76.91	77.73	63.81	72.38	61.54	52.83	45.90	40.24	35.55	32.08
1973	57.22	97.78	137.16	133.87	118.14	97.34	81.10	69.07	59.79	52.37	46.25	41.08
1974	36.64	49.47	48.99	43.48	37.64	32.99	29.12	25.85	23.03	20.57	18.41	16.51
1975	56.73	150.16	198.64	185.97	140.10	106.85	84.33	68.77	57.59	49.24	42.73	37.50
1976	75.36	138.95	185.04	193.92	169.05	140.43	113.11	93.40	78.99	68.02	59.35	52.28
1977	50.55	70.37	105.53	104.22	84.56	70.72	60.33	52.29	45.83	40.48	35.95	32.05
1978	30.09	36.37	45.02	41.34	36.48	31.56	27.60	24.35	21.60	19.24	17.18	15.37
1979	13.95	18.53	21.37	20.47	17.19	14.50	12.44	10.82	9.50	8.40	7.47	6.66
1980	6.00	6.12	13.12	28.63	27.94	22.61	18.80	15.99	13.83	12.11	10.69	9.49
1981	8.57	31.91	38.66	40.99	35.03	29.20	24.88	21.55	18.88	16.68	14.82	13.22
1982	11.99	10.88	10.91	9.49	8.29	7.25	6.39	5.67	5.05	5.07	7.99	47.73
1983	126.28	187.33	237.61	294.40	348.84	342.63	346.17	281.19	234.09	181.27	145.13	119.81
1984	102.66	155.95	212.84	180.69	142.05	114.79	95.43	81.11	70.10	61.30	54.06	48.64
1985	43.77	43.18	52.10	57.82	50.42	43.33	37.59	32.97	29.13	25.87	23.06	20.61
1986	76.02	78.71	66.73	63.31	51.71	43.18	36.83	31.92	27.97	24.71	21.95	19.57
1987	22.26	103.50	135.07	168.76	152.36	115.90	90.75	73.68	61.37	52.25	45.22	39.60
1988	35.90	53.57	51.51	60.13	55.55	47.47	41.18	36.12	31.93	28.38	25.31	22.63
1989	73.96	142.70	168.55	160.38	124.05	96.49	77.52	64.16	54.36	46.87	40.93	36.07
1990	32.08	29.24	32.06	36.43	30.60	26.11	22.62	19.82	17.50	15.54	13.84	12.37
1991	11.82	14.11	28.26	25.67	21.21	17.41	14.60	12.49	10.85	9.52	8.41	7.48
1992	23.25	62.59	170.61	233.02	250.45	200.72	149.02	114.43	91.16	74.93	63.14	54.23

VOLUMEN ESCURRIDO = 20268.3100 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 7
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	85.54	110.50	271.43	272.26	103.27	47.65	23.20	10.18	4.36	1.87	.80	.35
1965	3.62	30.26	249.40	259.43	227.79	100.02	49.30	24.63	10.68	4.60	1.97	1.81
1966	133.47	192.20	224.07	161.03	112.84	58.88	33.15	15.76	8.01	3.18	1.36	.96
1967	222.23	307.71	214.67	104.21	68.76	35.03	15.96	6.87	3.04	1.27	.54	.24
1968	3.27	119.85	60.82	59.50	28.72	13.59	5.86	2.52	1.53	.47	.20	.08
1969	7.88	6.29	140.54	130.87	177.74	95.43	49.16	24.88	10.76	4.62	2.08	.85
1970	7.48	17.17	66.41	190.10	163.54	71.16	42.27	21.11	9.10	3.90	1.68	.91
1971	3.62	70.81	337.53	174.47	69.23	36.43	17.31	7.45	3.39	1.38	.58	.31
1972	2.97	130.22	236.00	190.86	104.06	200.98	126.04	75.55	38.98	17.45	7.49	13.69
1973	181.74	124.50	245.44	192.05	175.73	79.93	42.86	20.96	9.09	3.89	1.67	.79
1974	.83	68.50	63.93	61.58	36.61	18.77	8.29	3.55	1.54	.65	.31	1.08
1975	124.24	337.31	407.83	259.70	106.86	52.06	27.58	12.56	5.64	2.77	1.01	4.01
1976	211.84	204.73	279.75	218.13	139.95	81.08	42.96	20.76	9.01	3.86	1.66	.83
1977	75.82	201.87	309.54	178.29	69.76	34.10	15.47	6.63	2.89	1.21	.52	.27
1978	13.59	87.73	165.54	91.43	92.55	41.70	20.27	8.75	3.76	1.61	.68	.30
1979	14.84	59.36	73.00	93.89	89.34	47.66	24.68	10.82	4.65	1.99	.85	.37
1980	2.23	42.85	108.60	164.81	74.55	36.10	16.83	7.20	3.09	1.33	.56	.42
1981	2.83	144.73	186.82	198.96	67.02	32.22	15.03	6.31	2.71	1.15	.50	.35
1982	2.53	18.57	43.95	64.10	33.03	17.52	7.82	3.34	1.45	7.02	61.30	209.70
1983	364.24	386.06	472.18	435.01	420.21	357.88	386.47	259.15	176.56	71.37	38.82	27.83
1984	13.25	197.67	278.34	241.55	107.63	49.23	25.28	11.00	4.73	2.03	.86	2.28
1985	8.20	49.73	111.06	105.63	46.60	24.14	10.76	4.61	1.98	.84	.37	1.35
1986	89.41	123.05	149.08	203.02	79.48	40.79	19.57	8.48	3.64	1.84	.67	.73
1987	46.75	335.22	414.66	418.57	264.47	106.38	51.82	31.02	15.02	6.52	2.81	2.22
1988	32.46	207.37	132.80	126.71	115.86	57.59	32.34	15.16	6.52	2.85	1.22	.80
1989	106.09	239.63	198.02	238.31	108.65	58.50	32.18	14.87	6.55	2.79	1.17	.88
1990	2.75	21.11	40.41	49.70	25.15	11.90	5.13	2.20	.94	.41	.17	.09
1991	3.56	54.67	126.07	92.14	42.74	25.96	11.68	5.02	2.15	.92	.40	.22
1992	4.99	33.94	169.48	211.74	127.75	62.45	34.46	16.07	6.97	2.99	1.28	.74

VOLUMEN ESCURRIDO = 24610.9500 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 8
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	134.56	98.12	150.79	173.48	39.45	13.63	10.15	8.24	6.74	5.51	4.51	3.69
1965	4.41	15.38	99.39	137.95	53.08	15.22	5.52	2.83	2.17	1.79	1.45	1.21
1966	34.88	124.80	141.56	67.15	21.43	7.33	4.54	3.78	3.12	2.52	2.02	1.68
1967	72.28	169.42	67.07	16.75	9.03	4.25	3.44	2.81	2.33	1.88	1.54	1.26
1968	2.22	12.61	9.45	6.86	.65	.51	.37	.30	.25	.20	.16	.13
1969	1.76	1.07	36.36	41.61	25.09	27.40	11.21	2.89	2.33	1.91	1.56	1.28
1970	5.67	7.64	47.17	132.48	45.46	7.40	2.51	1.93	1.57	1.29	1.07	.88
1971	1.10	29.81	221.17	67.91	7.27	2.65	1.89	1.55	1.27	1.05	.85	.70
1972	.66	55.91	105.35	53.65	11.11	88.05	24.55	16.80	4.10	3.25	2.65	9.73
1973	81.13	51.83	124.50	86.13	52.65	9.13	4.87	3.45	2.82	2.30	1.88	1.55
1974	1.99	121.77	29.43	41.60	5.21	2.21	1.63	1.33	1.09	.89	.73	.97
1975	101.97	194.61	255.00	149.98	25.38	8.66	4.38	3.30	2.69	2.20	1.80	1.66
1976	108.76	129.30	139.47	117.41	67.87	67.30	9.19	4.35	3.55	2.90	2.37	2.04
1977	73.76	190.03	177.63	87.32	7.94	4.00	2.51	2.05	1.68	1.38	1.12	.93
1978	17.08	79.73	80.72	17.49	7.20	2.16	1.73	1.42	1.16	.96	.78	.64
1979	5.12	54.49	27.43	10.68	1.76	2.13	.92	.75	.62	.50	.41	.34
1980	3.34	40.10	111.83	78.29	21.81	2.66	1.74	1.42	1.16	.95	.78	.64
1981	5.90	68.02	83.05	78.47	5.95	2.02	1.66	1.34	1.11	.90	.73	.61
1982	4.07	3.12	15.84	6.41	1.61	.30	.21	.17	.14	10.07	40.75	121.09
1983	226.34	282.50	302.54	212.38	327.04	244.99	190.29	88.62	43.85	7.60	4.97	4.68
1984	3.61	77.45	164.01	118.11	20.71	5.67	3.29	2.66	2.18	1.78	1.46	2.89
1985	11.01	53.09	49.69	26.17	5.21	2.00	1.55	1.26	1.03	.84	.69	.96
1986	68.22	35.88	45.97	73.71	9.70	2.72	2.18	1.78	1.46	1.21	.98	1.18
1987	26.32	231.57	215.40	239.34	104.98	15.32	4.26	4.31	2.54	2.03	1.65	1.54
1988	12.63	64.59	18.77	18.10	7.64	2.21	1.38	1.12	.91	.74	.61	.50
1989	32.32	142.88	80.86	84.80	20.83	5.37	3.08	2.47	2.03	1.66	1.35	1.12
1990	3.47	19.79	43.58	59.47	5.03	1.62	1.24	1.02	.83	.68	.56	.46
1991	1.60	35.38	27.46	7.99	1.17	.83	.65	.53	.43	.35	.29	.25
1992	13.34	41.41	84.53	102.72	67.22	9.73	3.82	2.83	2.31	1.89	1.55	1.27

VOLUMEN ESCURRIDO = 11177.0800 millones de metros cubicos

MODELO DE SIMULACION MENSUAL
 SUBCUENCA NUMERO 9
 PERIODO 1964-1992
 ESCORRENTIA SIMULADA
 millones de metros cubicos

ANO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1964	184.18	227.94	372.13	432.07	264.93	151.36	89.03	54.19	34.89	24.06	17.68	13.68
1965	14.32	40.30	254.17	367.36	315.24	197.72	116.62	67.84	38.94	22.86	14.11	9.90
1966	109.32	247.27	360.06	285.92	197.28	123.67	77.82	48.01	30.28	19.29	12.92	9.44
1967	189.88	404.04	327.32	206.55	137.48	82.68	49.50	29.71	18.60	12.29	8.66	6.48
1968	8.16	109.51	84.53	77.18	49.23	30.39	17.74	10.34	6.50	4.07	2.73	1.95
1969	7.23	7.85	119.31	159.36	189.06	151.66	100.06	60.24	35.12	20.68	12.76	8.34
1970	14.95	23.21	90.63	281.95	235.09	139.48	86.37	52.08	30.46	18.01	11.13	7.44
1971	7.46	74.19	403.55	298.35	166.86	94.04	52.44	29.27	16.95	10.31	6.71	4.74
1972	5.37	126.25	281.13	265.85	174.05	258.51	195.20	138.50	86.64	51.89	30.96	30.07
1973	190.64	204.21	328.19	308.49	268.91	164.42	100.61	60.55	36.23	22.32	14.53	10.13
1974	8.53	143.01	113.40	111.83	71.42	44.13	26.28	15.72	9.79	6.47	4.58	4.23
1975	173.25	458.82	636.30	508.91	276.12	151.26	84.90	48.00	28.09	17.53	11.50	10.38
1976	220.20	300.15	383.21	365.51	277.47	204.76	118.72	67.97	39.42	23.83	15.36	10.75
1977	100.81	309.01	442.15	343.58	182.44	103.74	55.45	30.91	18.19	11.47	7.71	5.62
1978	26.69	125.85	205.46	147.01	121.98	78.95	48.39	28.55	16.98	10.55	6.92	4.87
1979	16.00	97.53	97.31	103.22	98.48	72.64	47.65	28.83	17.05	10.28	6.50	4.38
1980	6.36	57.59	174.75	214.16	146.32	84.11	47.66	26.72	15.34	9.28	6.01	4.30
1981	9.63	145.85	239.76	268.03	149.41	83.59	46.50	25.79	15.04	8.99	5.88	4.24
1982	7.18	16.79	51.86	62.74	46.87	31.08	18.75	10.86	6.34	13.74	69.84	230.00
1983	474.12	617.48	782.73	765.29	830.21	712.61	668.48	478.28	332.13	185.86	108.08	69.42
1984	46.45	219.23	377.59	375.87	230.36	130.68	74.95	43.05	25.52	15.98	10.72	9.88
1985	21.63	90.02	158.05	150.79	91.91	55.34	32.51	19.16	11.73	7.59	5.25	4.84
1986	97.90	136.56	174.68	238.86	152.55	91.00	53.07	30.51	17.90	11.22	7.35	5.66
1987	56.98	408.45	589.97	653.20	486.34	271.31	146.85	84.88	49.16	28.73	17.48	12.23
1988	36.47	187.51	179.63	163.67	142.16	96.93	63.21	38.79	23.15	14.06	8.92	6.19
1989	88.28	272.97	289.71	315.08	206.63	125.54	75.97	44.92	26.65	16.32	10.56	7.56
1990	9.23	33.17	70.50	95.90	57.80	33.21	18.88	11.01	6.76	4.46	3.15	2.38
1991	5.44	60.97	123.85	111.41	72.14	47.06	28.22	16.33	9.53	5.77	3.72	2.61
1992	16.19	71.37	207.53	281.23	230.16	138.81	82.51	48.15	28.19	17.05	10.92	7.66

VOLUMEN ESCURRIDO = 39960.3600 millones de metros cubicos