

附表

表 2.1.1 モーリシャス国の人口 (1983年調査)

Island	Both sexes	Male	Female
Total Mauritius	1,000,432	498,257	502,175
=====	=====	=====	=====
Island of Mauritius	966,863	481,368	485,495
Rodrigues	33,082	16,552	16,530
Agalega	350	200	150
St. Brandon	137	137	-

Source: 1983 Housing and Population Census of Mauritius
 Vol II Demographic Characteristics, Central
 Statistics Office, November 1984

表 2.1.2 モーリシャス島の人口推移

Census Year	Population enumerated at each census			(1) Sex ratio	Intercensal increase	Average annual rate of increase (%)
	Both sexes		Female			
	Male	Female	Female			
1846	158,462	104,598	53,864	194.2		
1851	190,823	119,341	61,482	194.1	22,361	2.68%
1861	310,050	202,961	107,089	189.5	129,227	5.54%
1871	316,042	193,575	122,467	158.1	5,992	0.19%
1881	359,874	208,655	151,219	138.0	43,832	1.31%
1891	370,588	206,038	164,550	125.2	10,714	0.29%
1901	371,023	199,552	171,471	116.4	435	0.01%
1911	368,791	194,095	174,696	111.1	-2,232	-0.06%
1921	376,485	194,108	182,377	106.4	7,694	0.21%
1931	393,238	200,609	192,629	104.1	16,753	0.44%
1944	419,185	210,326	208,859	100.7	25,947	0.49%
1952	501,415	252,032	249,383	101.1	82,230	2.26%
1962 (2)	681,619	342,306	339,313	100.9	180,204	3.12%
1972 (2)	826,199	413,580	412,619	100.2	144,580	1.94%
1983 (2)	966,863	481,368	485,495	99.1	140,664	1.44%

Remarks: (1) Number of males per 100 females
(2) de facto population

Source: 1983 Housing and Population Census of Mauritius, Vol II
Demographic Characteristics, Central Statistical Office, November 1984

表 2.1.3 ポートルイス地区の人口

Locality	Both Sexes	Male	Female
District of Port Louis	133,702	66,132	67,570
-----	-----	-----	-----
Port Louis Ward 1	24,052	11,874	12,178
Port Louis Ward 2	12,424	5,984	6,440
Port Louis Ward 3	25,388	12,558	12,830
Port Louis Ward 4	15,710	7,938	7,772
Port Louis Ward 5	20,704	10,221	10,483
Port Louis Ward 6	35,424	17,557	17,867

表 2.1.4 モーリシャス島の地域別、性別人口

Geographical district	Area in sq. km	31st December 1983		31st December 1984		31st December 1985	
		Both sexes	Male	Female	Both sexes	Male	Female
Port Louis	42.7	135,629	67,321	68,308	136,812	68,019	68,793
Pamplemousses	178.7	91,782	46,070	45,712	92,706	46,557	46,148
Riviere du Rempart	147.6	82,188	41,215	40,973	83,035	41,752	41,283
Placq	297.9	109,290	54,803	54,487	110,341	55,432	54,909
Grand Port	260.3	94,490	47,380	47,110	95,294	47,844	47,450
Savanne	244.8	59,611	29,918	29,693	60,051	30,173	29,878
Plaines Wilhems	203.3	308,015	153,229	154,786	310,160	154,729	155,431
Moka	230.5	62,024	30,934	31,090	62,488	31,279	31,209
Black River	259.0	37,470	18,826	18,644	37,895	19,079	18,816
Island of Mauritius	1864.8	980,699	489,696	490,803	988,782	494,864	493,918
Island of Rodrigues	104.0	33,472	16,723	16,749	34,652	17,460	17,192
Other islands	71.2	500	350	150	500	350	150
Mauritius	2040.0	1,014,471	506,769	507,702	1,023,934	512,674	511,260

Remarks: (1) Based on the 1983 population census data adjusted for underenumeration of young children.

No account has been taken of internal migration in computing these estimates.

(2) End of year estimates

Source: Digest of Demographic Statistics 1985, Central Statistical Office, August 1986

表 2.1.5 モーリシャス島の15才以上の就業人口

	1 9 8 6		
	Male	Female	Both Sexes
Employed	238,000	106,000	344,000
Unemployed	37,000	18,000	55,000
Labour force	275,000	124,000	399,000
Inactive	64,000	219,000	283,000
Total	339,000	343,000	682,000

Source: 1983 Housing and Population Census of Mauritius
 (Island of Mauritius), Vol. IV Economic Activity
 Central Statistical Office, April 1987

表 2.1.6 業種別就業者数の推移 (1980-1987)

Industrial Group	1980	1981	1982	1983	1984	1985	1986	1987
Agriculture and fishing	54,014	53,456	52,457	52,145	49,803	48,292	46,910	46,381
Sugar (2)	47,493	47,271	46,457	46,082	44,628	42,882	41,718	40,974
Tea (3)	4,963	4,582	4,747	4,613	3,643	3,508	3,173	3,133
Tobacco	857	729	275	239	263	384	424	455
Other	701	874	978	1,211	1,269	1,518	1,595	1,819
Mining and quarrying	145	147	147	160	164	164	198	171
Manufacturing	36,172	36,889	38,329	36,924	42,168	56,113	76,503	93,311
Electricity and water	4,639	4,430	4,451	4,231	4,084	3,914	3,635	3,688
Construction	8,144	7,257	5,659	4,525	3,971	4,771	5,001	7,191
Wholesale, retail trade, restaurants and hotels	9,297	9,122	9,129	9,070	8,882	9,251	9,573	10,583
Transport, storage and communication	8,987	7,842	8,147	7,963	8,219	8,408	8,611	10,097
Financing, insurance, real estate and business services	4,369	4,576	4,669	4,699	4,784	4,986	5,229	5,672
Community, social and personal services	62,712	62,822	64,008	63,388	62,887	62,991	63,020	63,292
Government:								
(a) Central	48,728	49,029	50,163	49,811	49,536	49,919	49,715	49,669
(b) Local (4)	5,389	5,522	5,536	5,265	5,217	5,109	5,187	5,188
Other	8,595	8,271	8,309	8,312	8,132	7,963	8,118	8,435
Activities not elsewhere specified	8,118	8,913	6,376	6,151	5,864	4,725	4,496	4,995
Grand Total	196,597	193,454	193,372	189,256	190,826	203,615	223,176	245,381

Remarks: (1) Classified according to the International Standard Industrial Classification, 1968 edition

(2) Including factories

(3) Including factories and Tea Development Authority

(4) Municipalities and district councils

Source: Bi-annual Survey of Employment and Earnings in Large Establishments, March 1987, Central Statistical Office, August 1987

表 2.1.7 輸出加工区の業種別就業者数

Industrial Group	March 1985		March 1986		March 1987				
	Males	Females	Both Sexes	Males	Females	Both Sexes			
Manufacturing	9,459	31,575	41,034	18,689	42,724	61,413	26,542	50,004	76,546
of which:									
Textiles	1,219	940	2,159	1,545	959	2,504	2,223	1,074	3,297
Wearing apparel (except footwear)	6,609	27,853	34,462	15,081	38,734	53,815	21,789	45,794	67,583
Hood and furniture	267	98	365	278	90	368	269	92	361
Jewellery and related articles	504	248	752	602	291	893	637	347	984
Other	860	2,436	3,296	1,183	2,650	3,833	1,624	2,697	4,321
Other non-manufacturing	99	78	177	150	98	248	161	112	273
TOTAL	9,558	31,653	41,211	18,839	42,922	61,661	26,703	50,116	76,819

Source: Bi-annual Survey of Employment and Earnings in Large Establishments March 1987
Central Statistical Office, August 1987

表 2.1.8 業種別国民総生産

Unit: Rs. million

	1981	1982	1983	1984	1985	1986(1)	1987(2)
1. Agriculture, hunting, forestry and fishing	1,251	1,530	1,465	1,736	2,123	2,395	2,495
2. Mining and quarrying	16	17	18	19	20	22	25
3. Manufacturing	1,377	1,560	1,678	2,183	2,864	3,730	4,530
4. Electricity, gas and water	188	260	245	296	397	462	510
5. Construction	588	625	655	690	775	895	1,015
6. Wholesale & retail trade, and restaurants & hotels	1,219	1,290	1,455	1,640	1,834	2,210	2,420
of which Wholesale & retail trade	(1,004)	(1,050)	(1,180)	(1,340)	(1,494)	(1,805)	(1,950)
7. Transport, Storage and communications	997	1,112	1,230	1,372	1,510	1,700	1,875
8. Financing, insurance, real estate and business services	1,517	1,755	1,890	2,050	2,190	2,300	2,435
of which Ownership of dwellings	(1,085)	(1,270)	(1,360)	(1,460)	(1,535)	(1,580)	(1,625)
9. Producers of government services	1,104	1,275	1,327	1,379	1,447	1,565	1,885
10. Other services	502	596	650	685	720	766	830
Gross Domestic Product at factor cost	8,765	10,020	10,613	12,050	13,880	16,055	18,020
Net factor income from the rest of the world	-408	-498	-485	-626	-700	-729	-520
Gross National Product at factor cost	8,357	9,522	10,128	11,424	13,180	15,326	17,500

Remarks : (1) Revised

(2) Estimates

Source : Central Statistical Office, Government of Mauritius

表 2.1.9 輸入品目及び輸出品目

Unit: Rs. million

Imports (c.i.f Value)	1985	1986	1987 (1)	
			1st Qr.	2nd Qr.
Food and live animals	1,347.8	1,182.2	355.1	331.1
Beverages and Tobacco	25.9	33.7	9.2	12.8
Crude materials, inedible except fuel	394.5	365.8	79.8	123.1
Mineral fuels, lubricants and related materials	1,144.6	706.6	216.1	190.3
Animals and vegetable oils and fats	261.7	158.7	5.6	47.6
Chemicals	554.0	597.5	157.2	229.2
Manufactured goods classified chiefly by material	2,645.7	3,830.3	962.1	1,236.2
Machinery and transport equipment	1,114.3	1,583.4	504.5	610.9
Miscellaneous manufac- tured articles	624.3	732.8	197.6	229.4
Commodities and trans- actions not classified according to kind	6.3	8.0	7.4	0.8
TOTAL	8,119.1	9,199.0	2,494.7	3,011.4
=====				
Exports (f.o.b Value)	1985	1986	1987 (1)	
			1st Qr.	2nd Qr.
Sugar	2,866.6	3,553.0	1,054.6	866.6
Molasses	89.2	90.3	10.5	1.7
Tea	178.3	104.3	32.0	22.6
Export Processing Zone Products	3,272.2	4,950.5	1,197.3	1,617.2
Other	126.6	218.8	48.5	61.9
Re-exports	110.8	145.1	35.3	46.2
TOTAL	6,643.7	9,062.0	2,378.2	2,636.2
Bankers and Ships' Stores (f.o.b value)	379.0	350.0	85.3	105.8

Remarks: Figures may not add up because of rounding
(1) Provisional

Source: Central Statistical Office

表 2.1.10 國際收支

Unit: Rs. million

Item	1981		1982		1983		1984		1985		1986	
	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit
A. GOODS AND SERVICES	4,628	6,086	5,572	6,400	5,982	6,513	7,029	8,136	8,925	9,340	11,995	11,412
B. UNREQUITED TRANSFERS	211	64	424	53	374	80	486	75	632	76	755	85
C. CAPITAL (EXCLUDING RESERVES AND ITEMS)	238			118		435	163			73	35	
NON-MONETARY SECTORS	248		41			438	200		177		243	
MONETARY SECTORS		10		159	3			37		260		288
D. ALLOCATION OF SDRs	28											
E. RESERVES AND RELATED ITEMS	932		643		510		290			258		1,716
NET ERRORS AND OMISSIONS	123			68	162		263		790		428	

表 2.1.1.11 消费者物価指数

Year	1980	1981	1982	1983	1984	1985	1986	1987
Annual Average	199.4	223.1	248.6 ⁽¹⁾	106.6	114.4	122.1	124.3	125.4 ⁽²⁾
Yearly Change (%)	42	14.5	11.4	5.6	7.3	6.7	1.8	1.2

Remarks: As from July 1982, a new index (Base January-June, 1982=100)

has been introduced: from July, 1976 to June, 1982,
the base period was January-June 1976=100

- (1) Calculated as an average of twelve months on the basis of a conversion of the new indices to the previous base
- (2) 6 months average

表 2.1.12 モーリシャスルピーの為替変動

Currency and Unit	Dec. 1985		March 1986		June 1986		Sept 1986		Dec. 1986		March 1987		June 1987	
	Buying	Selling	Buying	Selling	Buying	Selling	Buying	Selling	Buying	Selling	Buying	Selling	Buying	Selling
Japan Yen 100	6.996	7.170	7.571	7.760	7.952	8.150	8.499	8.690	8.108	8.290	8.587	8.780	8.793	8.990
United States(2) Dollar 1	14.241	14.454	13.692	13.897	13.342	13.541	13.168	13.332	13.109	13.272	12.652	12.809	12.997	13.158
United Kingdom Pound 1	20.427	20.614	20.328	20.514	20.308	20.494	18.840	19.028	19.193	19.385	20.341	20.544	20.790	20.998

Remarks: (1) End of Month T.T. and DD. Rupee Rates

(2) above \$12,000

(3) Telegraphic Transfer Rates

Source: Mauritius Bankers Association

表 2.1.13 平均世帯の家計支出

	1980/81	% total	1986/87	% total	% change 1980/81- 1986/87
Food and drinks	920.0	44.4	1,158.0	41.9	25.9
Alcohol & tobacco	122.0	5.9	198.0	7.2	62.3
Clothing & footwear	178.0	8.6	232.0	8.4	30.3
Fuel & light	126.0	6.1	157.0	5.7	24.6
Housing & household operations	280.0	13.5	374.0	13.5	33.6
Medical care & health expenses	60.0	2.9	83.0	3.0	38.3
Transport & communications	207.0	10.0	257.0	9.2	24.2
Education & other services	91.0	4.4	166.0	6.0	82.4
Total incl others	2,073.0	100.0	2,764.0	100.0	33.3
Average monthly income	2,212.0		3,496.0		58.0
Inflation rate (1980 index=100)	107.2		158.1		47.5

Source : Country Report : Madagascar,
Mauritius, Seychelles, Comoros,
No. 2 1988, Economic Intelligence Unit

表 2.1.14 国家经常收支

Unit: Rs. million

	1983-84	1985-84	1985-86	1986-87	1987-88
	Actual	Actual	Actual	Revised Estimated	Budget Estimated
REVENUE:					
Direct Taxes	547.6	564.2	550.5	759.0	894.2
Indirect Taxes	2,256.5	2,443.0	2,960.8	3,541.1	4,122.1
Receipt from public utilities	145.9	171.2	198.6	198.9	232.0
Receipt from public services	104.2	89.1	108.2	99.7	112.7
Rental of public property	6.3	7.3	7.2	7.6	8.6
Other	195.9	284.2	305.7	303.7	451.0
TOTAL	3,256.8	3,559.0	4,131.0	4,910.0	5,820.6
EXPENDITURE:					
General Administration	337.4	474.1	504.4	538.4	867.0
Economic Services	548.0	467.9	443.3	477.5	610.2
Social Services	1,132.5	1,185.2	1,280.3	1,394.2	1,718.2
Local Government and Rodrigues	244.7	250	267.8	285.9	369.6
Public Debt and Pensions	1,810.1	1,844.3	1,992.8	1,929.0	2,340.0
TOTAL	4,072.7	4,261.5	4,488.2	4,625.0	5,905.0
Surplus (+) or deficit (-)	-815.9	-702.5	-357.2	285.0	-84.4
Source : Financial Reports, Budget Estimates, Government of Mauritius					

表 2.1.15 国家资本收支

	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88
	Actual	Actual	Actual	Actual	Revised Estimates	Budget Estimates
RECEIPTS						
Domestic Revenue	463.7	587.6	516.2	506.0	727.0	834.0
External Receipts	378.5	617.9	1,432.7	592.5	756.9	1,342.0
TOTAL CAPITAL REVENUE	842.2	1,205.5	1,948.9	1,098.5	1,483.9	2,176.0
EXPENDITURE:						
Economic Services	701	646.9	686.4	840	1170.5	1117.6
Social Services	145.9	108.9	124.9	135.5	145.3	204.8
Local Government and Rodrigues	36.4	32.9	39.5	47.2	60.8	65.6
Transfer to International Financial Organisations	16.9	84.6	405.4	364.1	41.5	115.7
Central Administration and Other	109.3	114.6	163.4	213.2	236.9	626.3
TOTAL	1,009.5	987.9	1,419.6	1,600.0	1,655.0	2,130.0
Surplus (+) or deficit (-)	-167.3	217.6	529.3	-460.0	30.0	-43.0

Source : Financial Reports, Budget Estimates, Government of Mauritius

表 2.1.16 CWA企業會計

	1985/86 (Rs. M)	1984/85 (Rs. M)	1983/84 (Rs. M)	1982/83 (Rs. M)	1981/82 (Rs. M)	1980/81 (Rs. M)
Income	184.5	162.4	125.0	110.8	86.4	80.5
Expenditure	173.5	166.3	150.5	126.2	111.2	91.8
Prior year adjustment & exceptional items	2.7	2.3	12.1	8.7	1.8	1.2
Deficit		6.2	37.6	24.1	26.6	10.1
Surplus	8.3					

Source: Summary of Financial Matters for the year 1985/86; CWA, 1987

表 2.2.1 既設送・配水管

	<u>Pailles Plant</u>	<u>Water Reservoirs</u>	<u>Pipe Materials</u>	<u>Remarks</u>
1.	D 19" (482 mm)	to Maupin R.		
2.	D 18" (457 mm)	" "		
3.	D 27" (686 mm)	to Maupin R.		
4.	D 800 mm	to Plaine Lauzun R,		
5.	D 500 mm	" " "		
6.	D 6" (150 mm)	MDA pipeline (Industrial)		
<u>Soreze Pipeline</u>				
7.	D 6" (150 mm)		CIP	
<u>Pierrefonds Pipeline</u>				
8.	D 9" (228 mm)			
<u>Water Reservoirs - Distribution Network</u>				
1.	D 800 mm	from Plaine Lauzun R.		
2.	D 450 mm	" "		
3.	D 12" (300 mm)	from Maupin R.	ACP	
4.	D 9" (230 mm)	" "	CIP	
5.	D 5" (125 mm)	" "	ACP	
6.	D 10" (250 mm)	from Labourdonnais R.	CIP	
7.	D 4" (100 mm)	" "	CIP	
8.	D 6" (150 mm)	from Monneron R.	CIP	
9.	D 18" (450 mm)	from Monneron R.	ACP	
10.	D 10" (250 mm)	from Diego Garcia	CIP	
11.	D 6" (150 mm)	from Diego Garcia R.	ACP	
12.	D 6" (150 mm)	from New Monneron R.	CIP	

Note: MDA - Mon Desert Alma

表 2.2.2 既存の配水池

No.	NAME	CAPACITY		ELEVATION Metres A.M.S.L.	REMARKS
		m/gal	m ³		
1	PAILLES FILTERS	0.60	2725	70.24 (T.W.L)	CSP 88 & 88A
2	LABOURDONNAIS RES.	0.96	4360	54.09	CSP/161
3	MAUPIN RES.	1.35	6135	54.79	CSP/160
4	MONNERON RES.	0.795	3615	54.52	CSP/162
5	DIEGO GARCIA RES.	1.54	7000	46.32	CSP/86
6	PLAINE LAUZUN RES.	1.45	6600	53.34 (T.W.L)	CSP/85
7 - 1	PRIEST PEAK RES.	5.28	24000	76.30 (T.W.L)	CSP/142A
7 - 2	PAILLES RES.			66.00 (T.W.L)	
	PAILLES FILTERS (Extension)				
8 - 1	MONNERON (Extension)	0.440	2000	69.10 (T.W.L)	CSP/143
8 - 2	MONNERON (Additional Site)			95.25 (T.W.L)	CSP/251
9	ANSE COURTOIS (Guibies)	0.88	4000		CSP/230
10	LA CURE	0.15	680	117.06 (T.W.L)	CSP/298
		13.445	61,115		

表 2.2.3 ポートルイス水供給システム

<u>Present Service Area</u>		<u>Remarks: Urbanization & Industrial Zone</u>
1. Old Town	629.3 ha	Saturated
2. Roche Bois	274.4 ha	Saturated Mer Rouge 38 ha
3. Sainte Croix	564.5 ha	Space still exist little
4. Vallee des Pretres	1,003.6 ha	Space exist
5. Vallee Pitot	265.5 ha	Residential area limited
6. Tranquebar	566.6 ha	Newly developed area Space little
7. Belle Village	105.2 ha	Residential area limited Saturated P. Lauzun 25 ha
8. Grand River North West	379.2 ha	Koenig Tour partly
9. Cassis	119 ha	saturated (25 ha)
<hr/> Total 3,907.3 ha		
	cf 4,270 ha ₂ (42.7 km ²)	Saturated area total ≐ 1,400 ha
		Space can be developed ≐ 1,000 ~ 1,500 ha
Ref. National Physical plan	Space for residential buildings	

表 2.3.1 ポートルイス市の人口及び出生・死亡率

Period	Population at mid-period	1) Live births registered	Deaths	Natural increase	Increase rate/year %
1972	133,966				
1973					
1974					
1975	133,915				
1976	133,888	3,305	1,213	2,092	1.56
1977	133,861	3,341	1,250	2,091	1.56
1978	133,834	3,169	1,189	1,980	1.48
1979	133,807	3,508	1,113	2,395	1.79
1980	133,780	3,431	1,190	2,241	1.67
1981	133,753	3,384	1,082	2,302	1.72
1982	133,726	3,070	1,013	2,057	1.54
1983	133,702	2,884	1,042	1,842	1.38
1984	135,200	2,878	1,086	1,792	1.33
1985	136,323	2,865	1,104	1,761	1.29

Note: 1) Figures refer to total population (i.e. Mauritian and non Mauritian).

2) Average increase rate/year

1975 - 1985 : 1.78%

1982 - 1985 : 1.33%

表 2.3.2 これまでの調査によるポートルイス市の人口予測

Year	1 National Census	2 ODA M/P	3 Digest of Demographic Statistics (1)	4 Updated M/P CWA & Estimate
1972	133,996	133,918	-	-
1977	-	140,694	-	-
1982	-	146,914	-	-
1983	133,702	-	133,943	-
1984	-	-	135,200	-
1985	-	-	136,323	-
1987	-	151,919	-	144,000
1992	-	151,919	-	152,850(2)

Note: (1) Mid year estimates 1983 - 1985

(2) Applied annual increase rate, 1.2% p.a

from 1987-1992

Ref: Symbol Mark for Fig. 2.3.2

1 . 2 × 3 ◎ 4 △

表 2.3.3 ポートルイス市の将来人口予測

<u>Year</u>	<u>High Series</u> <u>Increase</u>	<u>Medium Series</u> <u>Increase</u>	<u>Low Series</u> <u>Increase</u>
1985	136,323	136,323	136,323
1990	146,173	144,701	142,172
1995	156,657	153,594	147,817
2000	167,934	163,033	153,092
2005	180,023	173,053	157,986
2010	192,983 (1.051)	183,688 (1.0)	162,494 (0.885)
2030	254,846 (1.093)	233,180 (1.0)	176,838 (0.784)
Note annual increase:	@1.4% p.a	@1.2% p.a	Logistic Curve

表 2.3.4 ポートルイス水供給システムの水消費記録

Year/Month	Monthly consumption (m ³ /Month)	Daily Consumption (m ³ /Day)	Remarks
1984 Jul	1787440	57,660	1984: Max. 57,660 m ³ /d Min. 39,370 m ³ /d
Aug	1302867	47,630	
Sep	1458552	48,620	
Oct	1449034	46,740	
Nov	1477039	49,230	
Dec	1220483	37,370	
1985 Jan	1288696	41,570	1985: Avg. 35,780 m ³ /d Max. 42,280 m ³ /d Min. 30,700 m ³ /d
Feb	1183750	42,280	
Mar	1010801	32,610	
Apr	1153524	38,450	
May	1180501	38,080	
Jun	1103586	36,790	
Jul	951767	30,700	
Aug	1073978	34,560	
Sep	993195	32,110	
Oct	998967	32,220	
Nov	1071416	35,710	
Dec	1030995	33,260	
1986 Jan	1255053	40,490	1986: Avg. 40,570 m ³ /d Max. 43,920 m ³ /d Min. 37,250 m ³ /d
Feb	1042981	37,250	
Mar	1269334	40,950	
Apr	1143934	38,130	
May	1361375	43,920	
Jun	1223951	40,800	
Jul	1168539	37,690	
Aug			
Sep	1252260	41,740	
Oct	1345682	43,410	
Nov	1250078	41,670	
Dec	1245955	41,190	
1987 Jan	1463860	47,220	1987: Avg. 42,370 m ³ /d Max. 47,220 m ³ /d Min. 39,180 m ³ /d
Feb	1313703	46,920	
Mar	1214544	39,180	
Apr			
May	1259056	40,610	
Jun	1200366	40,010	
Jul	1249064	39,890	
Aug	1236475	39,890	
Sep	1260074	42,000	
Oct	1408949	45,450	
Nov	1338851	44,630	
Dec	1235189	39,840	

Note: These volumes have been obtained by adding the volumes measured for each consumer.

表 2.3.5 ポートルイス水供給システムの収入記録

Demand Categories	Year	Number of Connection ¹ (Nos.)	Annual Water Vol. (10 ³ m ³)	Average Daily Water Vol. (m ³ /day)
1. Domestic Water	1981/82	10,572	*	*
	82/83	10,793	*	*
	83/84	22,055	*	*
	84/85	25,073	12,830	35,055
	85/86	24,090	9,685	26,534
	86/87	27,010	10,234	28,038
2. Non-Domestic Water	1981/82	1,403	1,683	4,611
	82/83	1,355	1,895	5,192
	83/84	2,084	1,583	4,377
	84/85	2,093	2,204	6,022
	85/86	2,164	2,958	8,104
	86/87	2,287	4,545	12,452
3. Government Office	1981/82	252	585	1,607
	82/83	263	747	2,047
	83/84	1,204	262	718
	84/85	1,268	583	1,593
	85/86	849	747	2,121
	86/87	840	793	2,173
4. Total	1984/85		15,617	42,670
	85/86		13,390	36,759
	86/87		15,572	42,663

Note: ¹/: Nos. of subscribers

* : Data are not available

表 2.3.6 1988年半年間の月間水消費量

Month	Domestic Consumption		Total Consumption	
	m ³ /month	m ³ /day	m ³ /month	m ³ /day
Jan	741,680	23,925	1,082,677	34,925
Feb	634,680	23,925	1,082,677	34,925
Mar	697,821	22,510	983,583	31,728
Apr	791,557	26,385	1,136,517	37,884
May	657,977	21,225	961,833	31,027
<u>June</u>	700,798	<u>23,360</u>	1,042,658	<u>34,755</u>
Avg.		23,210		33,573

Source: CWA Commercial Service Section

表 2.3.7 1人1日当り給水量 (1985-1988)

Water Consumption	1985		1986		1987		1988		
	Aveg. Day Water Vol. (m3/d)	Estimated LPCD	Aveg. Day Water Vol. (m3/d)	Estimated LPCD	Aveg. Day Water Vol. (m3/d)	Estimated LPCD	Aveg. Day Water Vol. (m3/d)	Estimated LPCD	Population
Domestic	26,534	216 1)	28,038	226 1)	21,920	178 1)	23,210	180	128,800
Non Domestic	8,104	2)	12,452	2)	12,400	89 2)	8,543	94	110,000
Government Institutions	2,120	2) 16	2,173	2) 16	2,470	18 2)	1,820	-	-
Public standpipes	-	-	-	-	-	-	-	-	-
4) Total	36,755	270 2)	42,663	310 20	36,790	290	33,573	240	140,000

Note: 1) Population private connection
 2) Total Population
 3) CWA 1987 Record & past consumption %
 4) Tentative except public standpipes
 LPCD: Litres per Capita per Day
 Ref Table 2.4.8 for applied population served.

表 2.3.8 生活用水需要予測

Items	Year			
	1988	1990	2000	2030
1. Population in Port Louis:	140,000	142,170	153,090	176,840
2. Served Population:	128,800 (92 %)*	135,100 (95 %)	153,090 (100 %)	176,840 (100 %)
3. Per Capita Consumption (l/day):	180	180	190	200
4. Domestic Water Demand (m ³ /day):				
Average	23,184	24,318	29,087	35,368
Maximum (Average x 1.2)	27,820	29,182	34,904	42,442

* : Ref. Table 2.3.9

表 2.3.9 ポートルイス市における給水源別人口

Population	1985	1986	1987	1988
Total population 1)	136,323	137,440	138,580	140,000
Population by Type of Supply				
1. Private connection 2)	122,690 (90%)	124,250 (90%)	126,822 (92)%	128,800 (92)%
2. Stand Pipes 3)	13,633 (10%)	13,190 (10)%	11,758 (8)%	11,200 (8)%

Note: 1) Digest Demographic Statistics, 1985
 2) No. of subscriber X avag. member 4.6
 3) Total population - pop. private connection

表 2.3.10 商業用水需要予測

Items	Year				
	1988	1990	2000	2010	2030
1. Number of Employments	56,000	70,000	90,000	100,000	110,000
2. Per Capita Consumption (l/day)	80	80	90	90	90
3. Commercial Water Demand (m ³ /day)					
- Average	4,480	5,600	8,100	9,000	9,900
- Maximum (Average x 1.2)	5,376	6,720	9,720	10,800	11,880

表 2.3.11 非生活用水需要予測

Items	Year			
	1988	1990	2000	2030
1. Commerce	4,480	5,600	8,100	9,900
2. Industry	2,320	5,000	6,560	11,150
3. Education	1,500	1,500	1,750	2,500
4. Hospital	200	240	320	450
Total	8,500	12,340	16,730	24,000

表 2.3.12 水需要予測 (低位予測)

Sector/Category	Year				
	1988	1990	2000	2010	2030
Domestic	23,200	24,320	30,618	32,498	35,368
Non-domestic	8,500	12,340	16,730	20,000	24,000
Government	1,800	2,500	2,500	2,500	2,500
Total volume requirements	33,500	39,160	49,848	54,998	61,868
Total demand at production level	62,000	60,250	71,210	78,569	82,490
UFW(%)	46	35	30	30	25

Note: UFW: The percentage of unaccounted- for water assumed in accordance with the schedule of leakage reduction program.

表 2.3.13 水需要予測 (中位及び高位予測)

	Year			
	1988	1990	2000	2030
1. Domestic Demand:				
- Population				
Medium increase	143,000	144,701	163,033	183,688
High increase	144,200	146,173	167,934	192,983
- Served population				
Medium increase	131,560 (92%)	137,466 (95%)	163,033 (100%)	233,180 (100%)
High increase	132,664 (92%)	138,864 (95%)	167,934 (100%)	254,846 (100%)
- Per Capita consumption (l/day)	180	180	190	200
- Domestic water demand (m ³ /day)				
Medium increase	23,680	24,744	30,976	36,738
High increase	23,880	24,996	31,907	38,597
2. Non-Domestic Demand (m ³ /day):	8,500	12,340	16,730	24,000
3. Government Demand (m ³ /day):	1,800	2,500	2,500	2,500
4. Total Requirement (m ³ /day):				
Medium increase	33,980	39,584	50,206	59,238
High increase	34,180	39,836	51,137	61,097
5. UFW (%)	46	35	30	25
6. Total Demand at Production Level (m ³ /day):				
Medium increase	62,926	60,898	71,723	84,626
High increase	63,296	61,286	73,053	87,281
				103,290

表 2.4.1 確率降雨量

PROBABLE ONE-DAY RAINFALL

Return Year	Unit : mm				
	Gumbel	Pearson III	Harzen	Log-Normal (IWAI)	Maximum
10000	1168	1147	1053	1140	1168
1000	935	894	842	890	935
200	771	729	700	728	771
100	701	661	642	661	701
50	630	594	581	594	630
20	536	505	501	507	536
10	463	440	438	440	463
5	387	371	374	371	387
2	272	268	271	268	272

PROBABLE TWO-DAY RAINFALL

Return Year	Unit : mm				
	Gumbel	Pearson III	Harzen	Log-Normal (IWAI)	Maximum
10000	1674	1799	1208	1397	1799
1000	1339	1381	1032	1165	1381
200	1104	1114	894	985	1114
100	1003	1003	845	906	1003
50	901	895	781	827	901
20	765	751	696	718	765
10	661	647	619	631	661
5	551	538	541	538	551
2	386	378	398	388	398

PROBABLE THREE-DAY RAINFALL

Return Year	Unit : mm				
	Gumbel	Pearson III	Harzen	Log-Normal (IWAI)	Maximum
10000	1849	1999	1273	1360	1999
1000	1486	1551	1110	1189	1551
200	1231	1260	973	1037	1260
100	1122	1140	930	969	1140
50	1011	1021	867	898	1021
20	864	863	783	798	864
10	751	748	703	715	751
5	632	626	623	622	632
2	454	446	470	464	470

表 2.4.2 年間流出率

(after abstraction)

Hydrological Year	W03	W04	W05	W08
1967		0.30	0.35	0.45
1968		0.42	0.48	0.39
1969		0.27	0.33	0.53
1970		0.55	0.54	0.70
1971			0.29	0.60
1972		0.28	0.35	0.39
1973	0.23	0.35	0.43	0.47
1974	0.18	0.21	0.35	0.24
1975		0.28	0.39	0.36
1976		0.33	0.42	0.43
1977	0.11	0.18	0.36	0.41
1978	0.12	0.31	0.43	0.42
1979	0.12	0.27	0.40	0.41
1980	0.47	0.64	0.61	0.77
1981	0.12	0.21	0.33	0.37
1982	0.28	0.44	0.55	0.58
1983	0.17	0.29	0.48	0.43
1984	0.21	0.34	0.51	0.53
1985	0.30	0.42	0.61	0.58
1986	0.17	0.33	0.43	0.54
Average	0.21	0.34	0.43	0.48
Maximum	0.47	0.64	0.61	0.77
Minimum	0.11	0.18	0.29	0.24
Var.	0.10	0.11	0.09	0.12

Var. : Standard Deviation

表 2.4.3 残流域流量算出係数

Moka River

Date	W10 (1)	A-6 (2)	Pailles Canal (3)	W002 (4)	Total of (2) to (4) (5)	Increase Ratio
Area (km ²)	15.1	24.7	-	-	-	1.64
3/Jun.	300	304	142	2	448	1.49
8/Sep.	166	193	85 ^{*)}	2	280	1.69
30/Oct.	70	46	45	2	93	1.33
3/Nov.	70	40	54	2	96	1.37
*) : estimate from formula					Average	1.47

Plaines Wilhems River

Date	W03 (1)	B-1 (2)	P.W Canal (3)	Total of (2)+(3) (5)	Increase Ratio
Area (km ²)	27.5	31	-	-	1.13
3/Jun.	297	50 ^{*)}	297	347	-
8/Sep.	116	-	116	-	-
30/Oct.	84	59	84	143	1.70
3/Nov.	98	59	98	157	1.60
*) : Estimated volume from field observation				Average	1.65

Other rivers (Terre Rouge, Cascade, Profonde)

Date	W04+W05+W08 (1)	B-4 (2)	Bagatelle Canal (3)	W026 (4)	Total of (2) to (4) (5)	Increase Ratio
Area (km ²)	46.9	55.0	-	-	-	1.17
3/Jun.	1200	-	345	25 ^{*)}	-	-
8/Sep.	509	-	163	25	-	-
30/Oct.	496	-	113	25	-	-
3/Nov.	380	128	115	25	527 ^{*)}	1.39
*) Information from CWA					Average	1.39

***) Discharges of W04, W05 and W08 are included

表 2.4.4 水収支 (1966-1986年平均、漏水を考慮した場合)

Total Water Requirement : 1.05 m³/sec

LWL : 139.0 m HWL : 189.0 m

Effective Storage : 6.4 MCH Dead Storage : .275 MCH

SEASON	INFLOW*		PIPELINE SUPPLY (MCH)	RELEASE (MCH)	SPILLOUT (MCH)	DEFICIT & NUMBER (MCH)	WATER LEVEL (m)	EVAPORA- TION (MCH)	LEAKAGE (MCH)
	Resi (MCH)	Dam (MCH)							
NOV. 1	0.28	0.47	0.18	0.45	0.17	0.00 0	185.2	0.010	0.020
2	0.24	0.40	0.18	0.50	0.11	0.00 0	184.0	0.010	0.019
3	0.32	0.51	0.19	0.47	0.23	0.00 0	183.0	0.009	0.017
DEC. 1	0.47	0.68	0.19	0.40	0.30	0.00 0	182.6	0.009	0.015
2	0.71	0.90	0.20	0.33	0.52	0.00 0	182.4	0.009	0.015
3	1.32	1.56	0.22	0.29	0.98	0.00 0	184.7	0.009	0.017
JAN. 1	0.69	0.88	0.20	0.21	0.54	0.00 0	185.0	0.010	0.016
2	1.60	1.82	0.19	0.23	1.53	0.00 0	185.2	0.010	0.018
3	2.74	2.92	0.24	0.15	2.64	0.00 0	185.6	0.010	0.021
FEB. 1	3.42	3.99	0.24	0.04	3.45	0.00 0	187.8	0.009	0.020
2	2.95	3.97	0.24	0.06	3.87	0.00 0	187.8	0.009	0.024
3	2.03	2.44	0.20	0.05	2.34	0.00 0	187.9	0.009	0.020
MAR. 1	2.03	2.55	0.24	0.03	2.38	0.00 0	188.4	0.009	0.024
2	2.54	2.95	0.24	0.01	2.86	0.00 0	188.6	0.010	0.025
3	2.13	2.40	0.26	0.05	2.27	0.00 0	188.8	0.009	0.028
APR. 1	1.39	1.59	0.24	0.04	1.48	0.00 0	189.0	0.009	0.026
2	1.51	2.08	0.24	0.06	1.98	0.00 0	189.0	0.008	0.026
3	1.20	1.77	0.24	0.06	1.68	0.00 0	189.0	0.008	0.026
HAY. 1	0.96	1.24	0.24	0.07	1.14	0.00 0	189.0	0.007	0.026
2	0.75	1.00	0.23	0.11	0.87	0.00 0	188.9	0.007	0.026
3	0.88	1.15	0.25	0.15	1.00	0.00 0	188.8	0.007	0.029
JUN. 1	0.74	1.02	0.23	0.13	0.89	0.00 0	188.7	0.006	0.026
2	0.68	0.95	0.23	0.12	0.78	0.00 0	188.7	0.006	0.025
3	0.63	0.91	0.22	0.16	0.71	0.00 0	188.8	0.006	0.025
JUL. 1	0.55	0.81	0.21	0.18	0.61	0.00 0	188.8	0.006	0.026
2	0.57	0.80	0.22	0.17	0.61	0.00 0	188.8	0.006	0.026
3	0.71	1.00	0.24	0.17	0.80	0.00 0	188.7	0.007	0.028
AUG. 1	0.63	0.83	0.21	0.15	0.65	0.00 0	188.7	0.007	0.025
2	0.77	1.13	0.22	0.15	0.96	0.00 0	188.6	0.007	0.025
3	0.77	1.13	0.24	0.16	0.94	0.00 0	188.6	0.008	0.028
SEP. 1	0.56	0.71	0.21	0.19	0.51	0.00 0	188.5	0.008	0.025
2	0.49	0.56	0.21	0.22	0.34	0.00 0	188.3	0.008	0.025
3	0.40	0.49	0.20	0.29	0.23	0.00 0	188.0	0.009	0.025
OCT. 1	0.40	0.58	0.20	0.34	0.29	0.00 0	187.6	0.009	0.024
2	0.31	0.46	0.20	0.39	0.15	0.00 0	187.0	0.010	0.023
3	0.29	0.45	0.21	0.48	0.10	0.00 0	186.2	0.010	0.024
38.69 49.10 7.88 7.06 40.92 0.00 0 - 0.301 0.835									

* Dam : inflow into TR0 dam reservoir

Resi: river flow of residual basin

表 2.4.5 利水安全度

Period	Numbers of 10-day deficit series										Water demand : 1.00 cumec + 5 % loss at Pailles treatment plant									
	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	Required Volume (MCM)				
1966 - 1967	24 (0.19)	14 (0.28)	9 (0.37)	7 (0.40)	5 (0.44)	5 (0.32)	3 (0.34)	1 (0.45)	-	-	-	-	-	-	-	3.889				
1967 - 1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000				
1968 - 1969	25 (0.23)	16 (0.32)	15 (0.30)	13 (0.30)	11 (0.30)	9 (0.31)	8 (0.27)	5 (0.32)	2 (0.51)	1 (0.44)	-	-	-	-	-	4.883				
1969 - 1970	7 (0.34)	5 (0.36)	4 (0.30)	3 (0.21)	1 (0.06)	-	-	-	-	-	-	-	-	-	-	2.053				
1970 - 1971	13 (0.33)	11 (0.33)	10 (0.31)	8 (0.31)	7 (0.28)	5 (0.27)	4 (0.19)	-	-	-	-	-	-	-	-	3.668				
1971 - 1972	13 (0.27)	11 (0.27)	9 (0.26)	6 (0.30)	4 (0.30)	3 (0.21)	1 (0.05)	-	-	-	-	-	-	-	-	3.046				
1972 - 1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000				
1973 - 1974	9 (0.13)	6 (0.10)	-	-	-	-	-	-	-	-	-	-	-	-	-	0.997				
1974 - 1975	10 (0.09)	4 (0.07)	-	-	-	-	-	-	-	-	-	-	-	-	-	0.739				
1975 - 1976	11 (0.21)	7 (0.25)	6 (0.19)	4 (0.15)	1 (0.15)	-	-	-	-	-	-	-	-	-	-	2.003				
1976 - 1977	5 (0.09)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.369				
1977 - 1978	13 (0.19)	9 (0.20)	8 (0.16)	4 (0.17)	1 (0.11)	-	-	-	-	-	-	-	-	-	-	2.091				
1978 - 1979	8 (0.11)	2 (0.15)	-	-	-	-	-	-	-	-	-	-	-	-	-	0.754				
1979 - 1980	9 (0.16)	4 (0.21)	1 (0.27)	-	-	-	-	-	-	-	-	-	-	-	-	1.230				
1980 - 1981	21 (0.14)	17 (0.14)	12 (0.15)	8 (0.15)	5 (0.12)	1 (0.01)	-	-	-	-	-	-	-	-	-	2.509				
1981 - 1982	14 (0.12)	6 (0.19)	3 (0.20)	1 (0.01)	-	-	-	-	-	-	-	-	-	-	-	1.508				
1982 - 1983	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000				
1983 - 1984	22 (0.33)	20 (0.33)	17 (0.36)	13 (0.43)	11 (0.45)	10 (0.44)	9 (0.42)	8 (0.40)	7 (0.38)	5 (0.41)	4 (0.37)	4 (0.23)	1 (0.23)	-	-	6.285				
1984 - 1985	9 (0.16)	6 (0.15)	3 (0.11)	-	-	-	-	-	-	-	-	-	-	-	-	1.278				
1985 - 1986	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.111				
Total failure (days)	2130	1380	970	670	460	330	250	140	90	60	40	40	10	0	0	-				
Annual Ave. (days)	106.5	69.0	48.5	33.5	23	16.5	12.5	7	4.5	3	2	2	0.5	0	0	-				
Reliability (%)	70.82	81.10	86.71	90.82	93.70	95.48	96.52	98.08	98.77	99.18	99.45	99.45	99.86	100.00	100.00	-				

Ref: *figure in bracket shows supply reduction ratio during the failure in order to cope with deficit
 *Water through Soreze pipe line (0.052 cumec) is considered not to be used for Pailles treatment plant

表 2.4.6 本計画なしの場合の水供給量

(hydrological condition of 1983)

Unit : m³/sec

	Year				
	1988	1990	2000	2010	2030
(a) Demand	0.800	0.780	0.920	1.000	1.050
(b) Deficit	0.063	0.060	0.124	0.170	0.199
(c) : (a)-(b)	0.737	0.720	0.796	0.830	0.851

Capacity of Existing Facilities

(d) Pailles pipelines	0.622	0.618	0.591	0.502	0.470
(e) Montebello pipeline	0.283	0.283	0.283	0.283	0.283
(f) : (d)+(e)	0.905	0.901	0.874	0.785	0.753
(g) Supply by Existing facilities	0.737	0.720	0.796	0.785	0.753
(h) : (g)/(a)	(0.92)	(0.92)	(0.87)	(0.79)	(0.72)

(average hydrological condition)

Unit : m³/sec

	Year				
	1988	1990	2000	2010	2030
(a) Demand	0.800	0.780	0.920	1.000	1.050
(b) Deficit	0.016	0.014	0.033	0.048	0.060
(c) : (a)-(b)	0.784	0.766	0.887	0.952	0.990

Capacity of Existing Facilities

(d) Pailles pipelines	0.622	0.618	0.591	0.502	0.470
(e) Montebello pipeline	0.283	0.283	0.283	0.283	0.283
(f) : (d)+(e)	0.905	0.901	0.874	0.785	0.753
(g) Supply by Existing facilities	0.784	0.766	0.874	0.785	0.753
(h) : (g)/(a)	(0.98)	(0.98)	(0.95)	(0.79)	(0.72)

表 2.6.1 土質材料特性

項目	3-1	3-2	5-1	5-2	7-1	7-2	8-1	8-2	9-1	9-2	10-1	10-2
採取深度	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
自然含水比較	43.0	39.2	42.6	37.9	42.3	44.5	41.5	49.2	37.0	46.1	41.1	49.6
比重	2.91	2.84	2.93	2.91	2.85	2.86	2.84	2.79	2.91	2.90	2.83	2.82
最大粒径	-	2	2	2	12	2	3	8	-	1	1	1
礫 (%)	30	15	20	36	20	26	26	38	15	30	35	43
砂 (%)	30	47	45	46	42	55	45	49	65	53	39	42
シルト (%)	40	36	33	16	26	17	27	5	20	16	25	14
粘土 (%)	MH	MH	MH	MH	MH	MH	MH	ML	MH	MH	MH	MH
単位体積重量	74.2	72.3	68.0	52.0	55.9	54.8	56.0	48.4	58.2	64.0	60.0	50.5
統一土壌分類基準	36.4	55.8	54.6	38.4	42.1	39.1	40.3	NP	41.2	NP	46.5	NP
コンシステンシー	37.8	16.5	13.4	15.6	13.8	15.7	15.7	NP	17.0	NP	13.5	NP
液性界限	36.0	1.36	28.5	28.5	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.5
塑性界限	1.36	1.36	1.53	1.53	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.35
塑性指数	C:0.5, φ:28	C:1.4, φ:7	C:0.8, φ:23	C:0.8, φ:18	C:0.8, φ:5	C:1.0, φ:30	C:0.4, φ:31	C:0.4, φ:33	C:0.8, φ:23	C:1.0, φ:22	C:0.3, φ:16	C:0.2, φ:32
最適含水比	72.3	55.8	13.4	15.6	13.8	15.7	15.7	NP	17.0	NP	13.5	NP
最大乾燥密度	36.4	55.8	54.6	38.4	42.1	39.1	40.3	NP	41.2	NP	46.5	NP
三軸圧縮試験	37.8	16.5	13.4	15.6	13.8	15.7	15.7	NP	17.0	NP	13.5	NP
非圧密非排水試験	36.0	1.36	28.5	28.5	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.5
軟組織の98% 線間	1.36	1.36	1.53	1.53	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.35
最大乾燥密度	C:0.5, φ:28	C:1.4, φ:7	C:0.8, φ:23	C:0.8, φ:18	C:0.8, φ:5	C:1.0, φ:30	C:0.4, φ:31	C:0.4, φ:33	C:0.8, φ:23	C:1.0, φ:22	C:0.3, φ:16	C:0.2, φ:32
軟組織の95% 線間	C:0.9, φ:	C:0, φ:26	C:0.4, φ:31	C:0.4, φ:33	C:0.8, φ:23	C:1.0, φ:22	C:0.3, φ:16	C:0.2, φ:32	C:0.5, φ:29	C:0.8, φ:32	C:0.4, φ:33	C:0.5, φ:29
圧密非排水試験	2.0 × 10 ⁻⁴	7.3 × 10 ⁻⁷	2.1 × 10 ⁻⁶	2.2 × 10 ⁻⁵	1.4 × 10 ⁻⁵	8.2 × 10 ⁻⁷	8.8 × 10 ⁻⁶	4.9 × 10 ⁻⁷	5.6 × 10 ⁻⁶	8.8 × 10 ⁻⁶	4.9 × 10 ⁻⁷	5.6 × 10 ⁻⁶
軟組織の98% 線間	2.0 × 10 ⁻⁴	7.3 × 10 ⁻⁷	2.1 × 10 ⁻⁶	2.2 × 10 ⁻⁵	1.4 × 10 ⁻⁵	8.2 × 10 ⁻⁷	8.8 × 10 ⁻⁶	4.9 × 10 ⁻⁷	5.6 × 10 ⁻⁶	8.8 × 10 ⁻⁶	4.9 × 10 ⁻⁷	5.6 × 10 ⁻⁶
最大乾燥密度	2.1 × 10 ⁻⁶	7.3 × 10 ⁻⁷	2.1 × 10 ⁻⁶	2.2 × 10 ⁻⁵	1.4 × 10 ⁻⁵	8.2 × 10 ⁻⁷	8.8 × 10 ⁻⁶	4.9 × 10 ⁻⁷	5.6 × 10 ⁻⁶	8.8 × 10 ⁻⁶	4.9 × 10 ⁻⁷	5.6 × 10 ⁻⁶
軟組織の95% 線間	2.1 × 10 ⁻⁶	7.3 × 10 ⁻⁷	2.1 × 10 ⁻⁶	2.2 × 10 ⁻⁵	1.4 × 10 ⁻⁵	8.2 × 10 ⁻⁷	8.8 × 10 ⁻⁶	4.9 × 10 ⁻⁷	5.6 × 10 ⁻⁶	8.8 × 10 ⁻⁶	4.9 × 10 ⁻⁷	5.6 × 10 ⁻⁶

c.c. (Unit: kgf/cm²) ; 粘着力

φ, φ' (Unit: degree) ; 内部摩擦角

表 2.6.2 コンクリート骨材の要約

	現地業者から購入された試料			
	岩石/砂	(b)	(c)(i)	(c)(ii)
比 重				
オープン乾燥	3.14	2.74	2.96	2.48
表面乾燥	3.07	2.68	2.94	2.27
吸水率	1.08	1.92	0.78	9.35
単位体積重量	1.818	1.385	1.550	1.428
摩 耗 量				
100 回転 (%)	—	5.9	4.1	13.4
500 回転 (%)	—	23.3	13.3	34.1

表 2.6.3 ロック材の試験結果

	単位体積重量 (tf/m ³)	圧縮強度 (kgf/cm ²)	比 重 Dry *** Satu.	吸水率 (%)
*Q(1)				
7.5 - 7.8 m	2.90	1,370	2.94 2.96	0.8
*Q(1)				
11.5 - 11.7 m	2.93	710	2.96 2.97	0.6
**Q(1)				
12.3 - 12.5 m	2.70	580	2.57 2.70	4.9
**Q(1)				
15.2 - 15.3 m	2.42	320	2.19 2.43	11.0

注：* 緻密な玄武岩

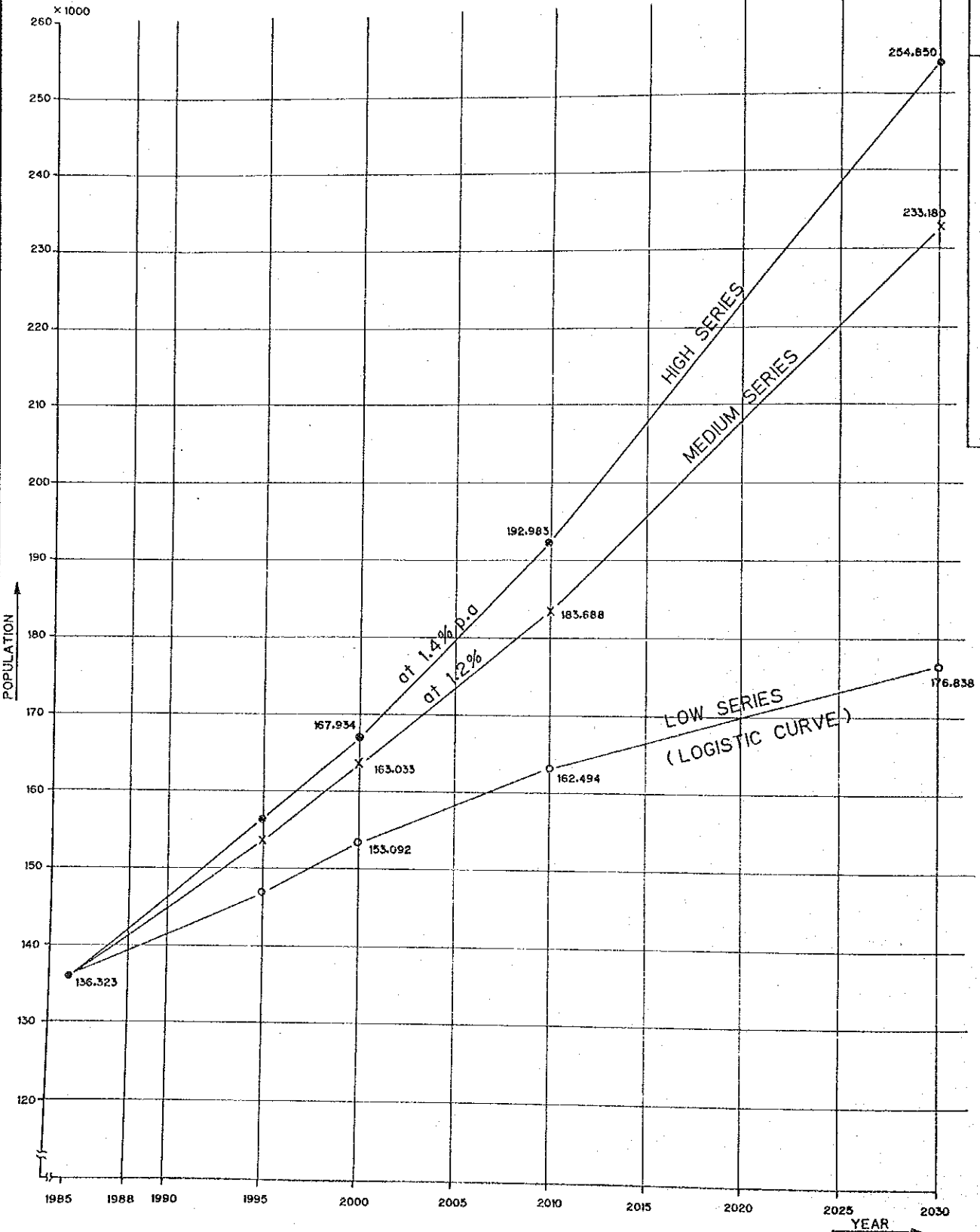
** 集塊岩

*** 飽 和

表 2.6.4 フィル材の設計値

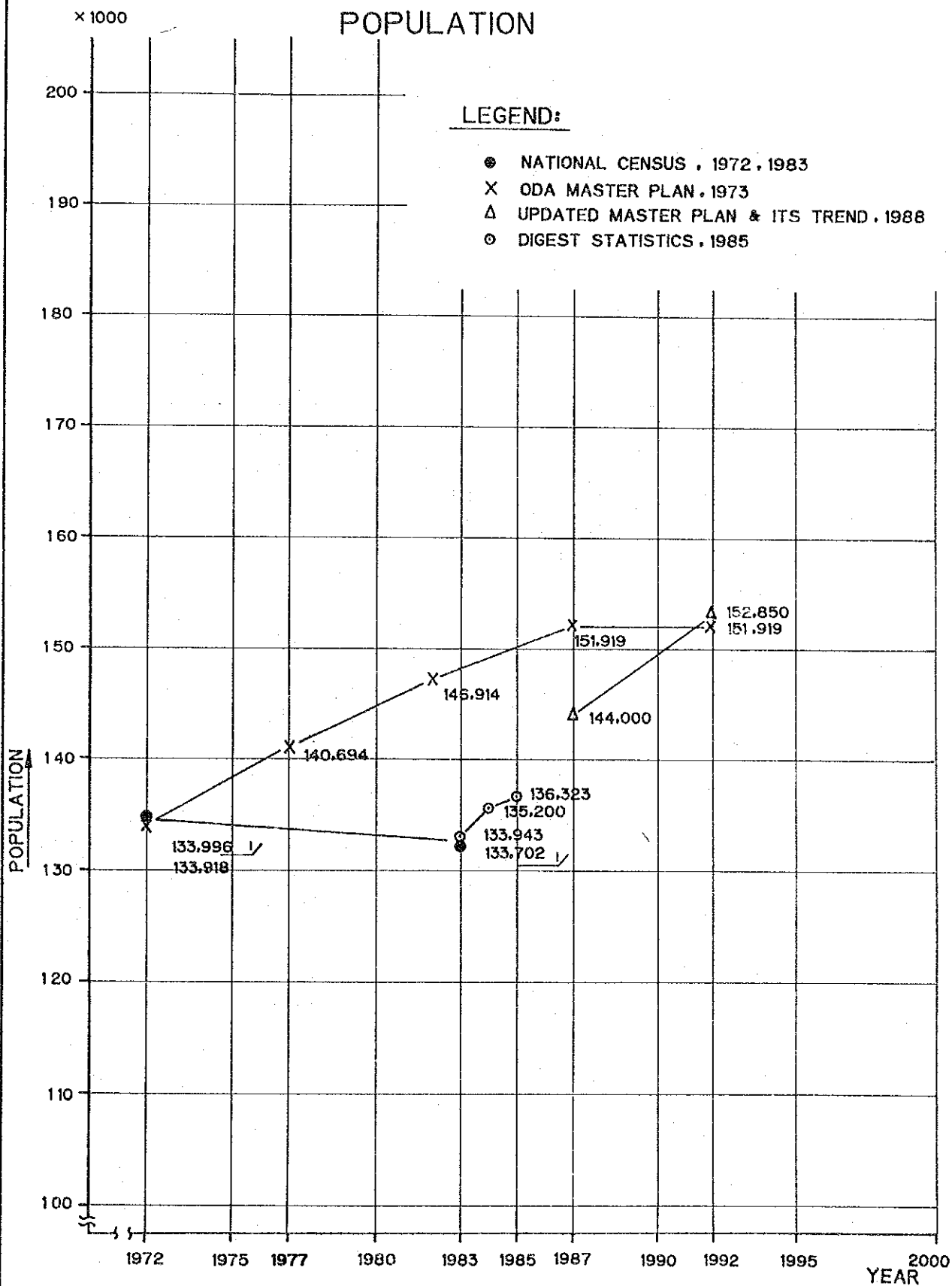
	Core Material	Filter Material	Rock Material
Wet Density Dt (tf/m ³)	1.80	2.00	1.95
Saturated Density Dsat (tf/m ³)	1.90	2.15	2.10
Cohesion C (tf/m ²)	2.0	0	0
Angle of Internal Friction / (degree)	25	35	41
Coefficient of Permeability Permeability K (cm/sec)	1x10 ⁻⁵	1x10 ⁻³	1x10 ⁻¹

附 图



将来人口予測

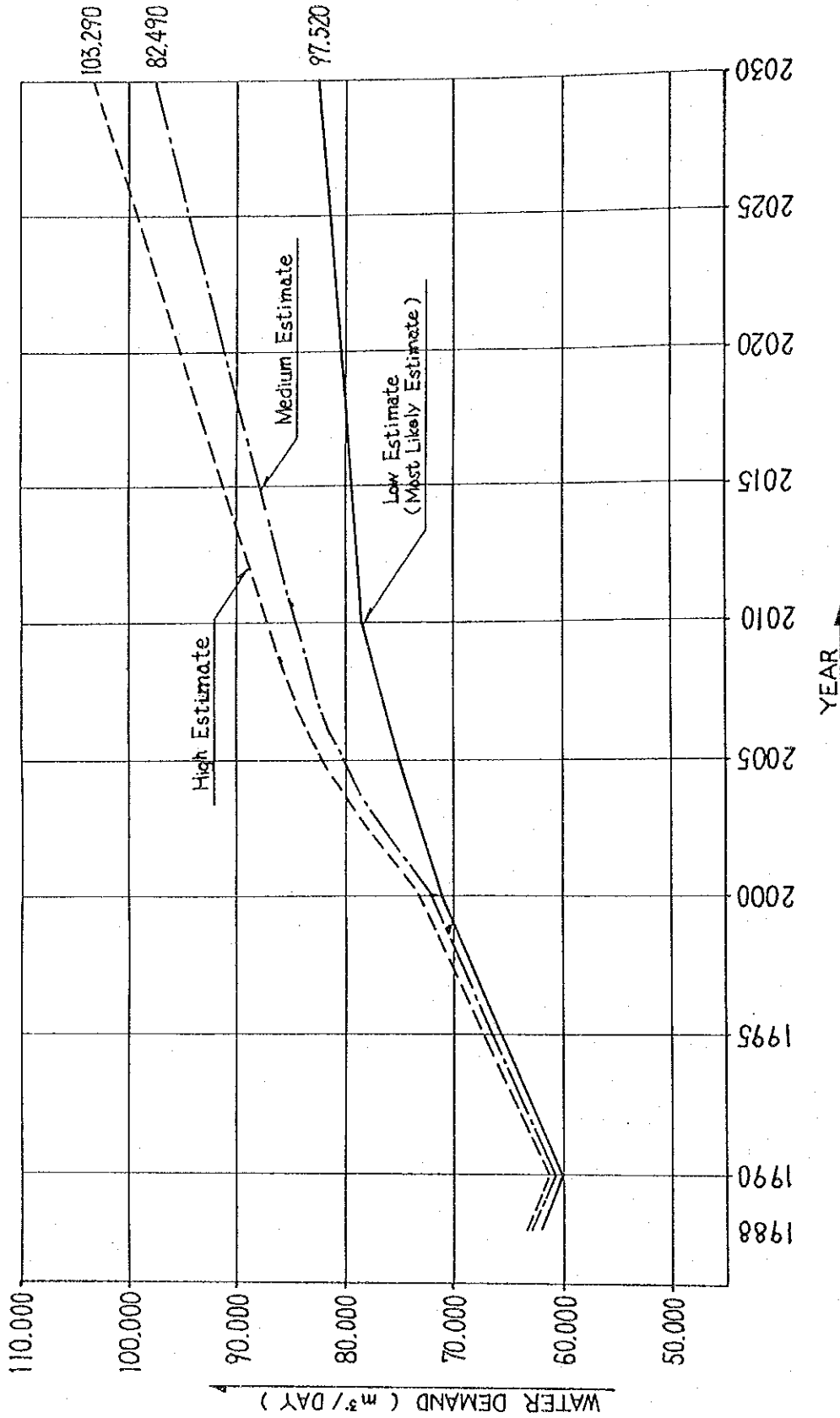
PORT LOUIS POPULATION



過去の調査による人口予測

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 PORT LOUIS WATER SUPPLY PROJECT
 JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 2.3.3

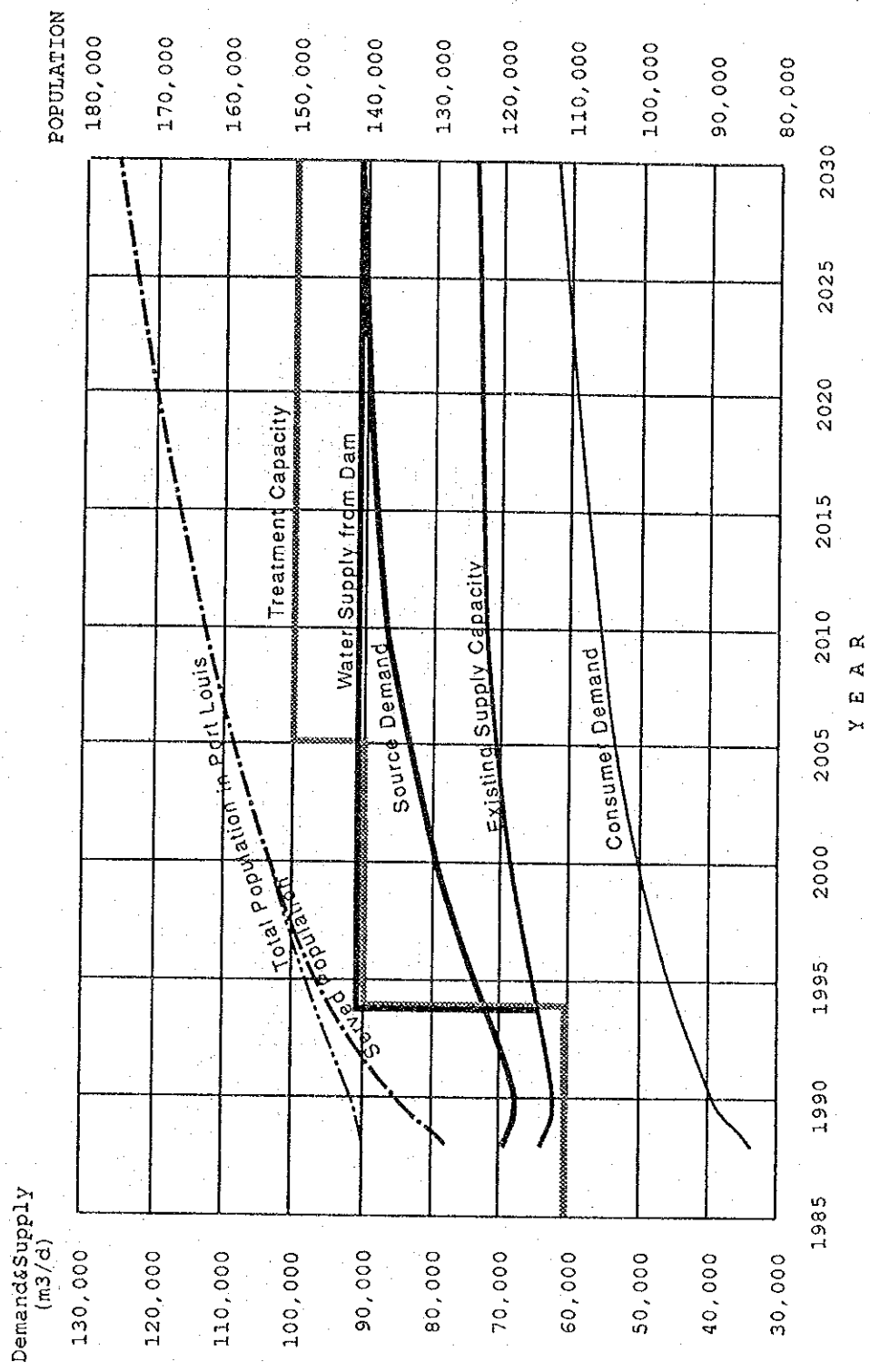


水需要予測

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PORT LOUIS WATER SUPPLY PROJECT

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Fig. 2.3.4

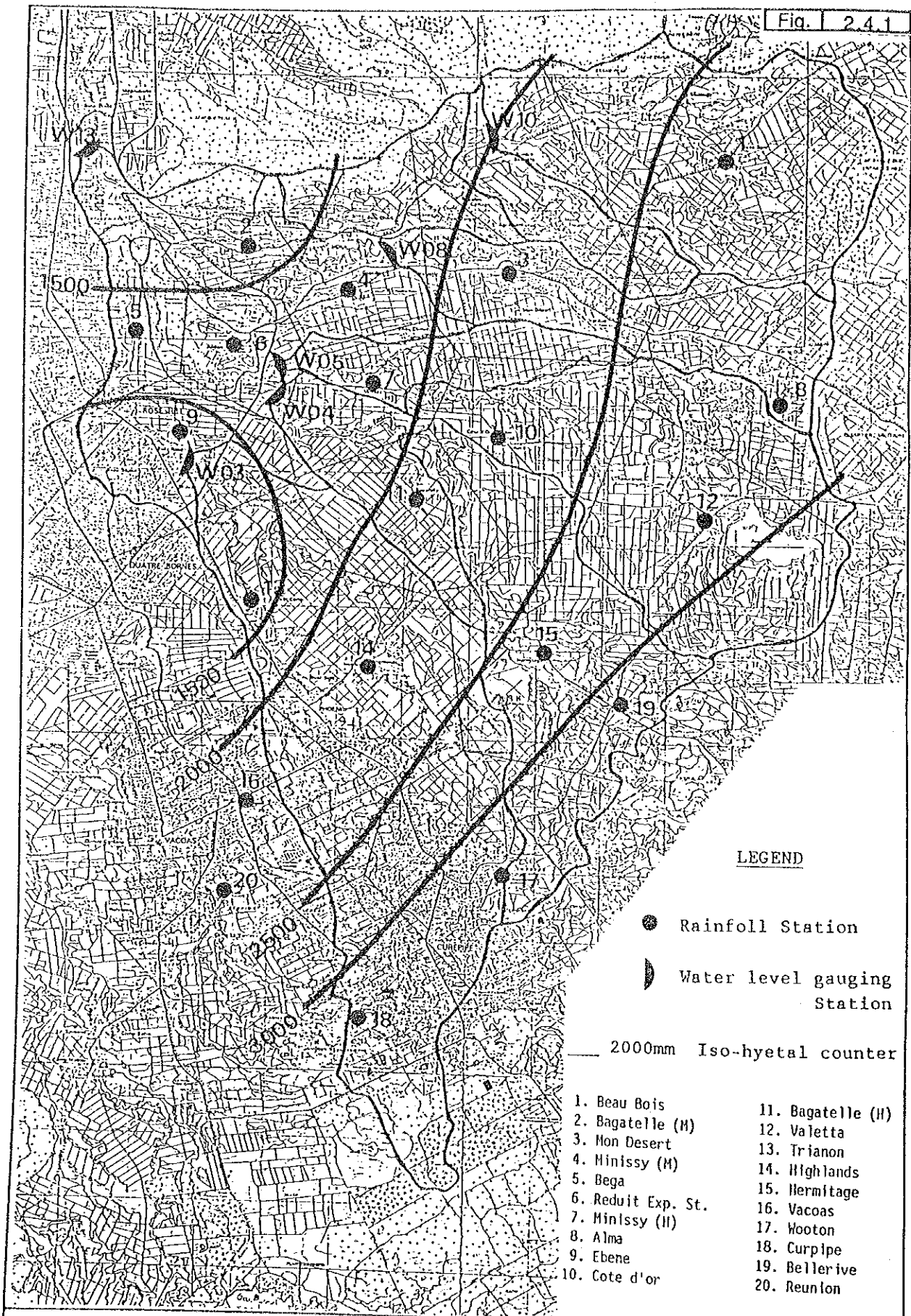


Year	1988	1990	2000	2010	2030
Population in Port Louis	140,100	153,092	153,092	162,494	176,838
Served population	128,900	135,063	153,092	162,494	176,838
Service ratio	92%	95%	100%	100%	100%
Consumer Demand	33,500	39,160	49,850	55,000	61,870 (m3/d)
Source Demand	69,600	67,700	79,300	87,000	91,200 (m3/d)
Existing Supply	63,700	62,200	68,800	71,700	73,500 (m3/d)
Treatment Capacity	60,000	60,000	90,000	100,000	100,000 (m3/d)

水需要及び供給計画

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 PORT LOUIS WATER SUPPLY PROJECT
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Fig. 2.4.1



LEGEND

● Rainfall Station

◐ Water level gauging Station

— 2000mm Iso-hyetal counter

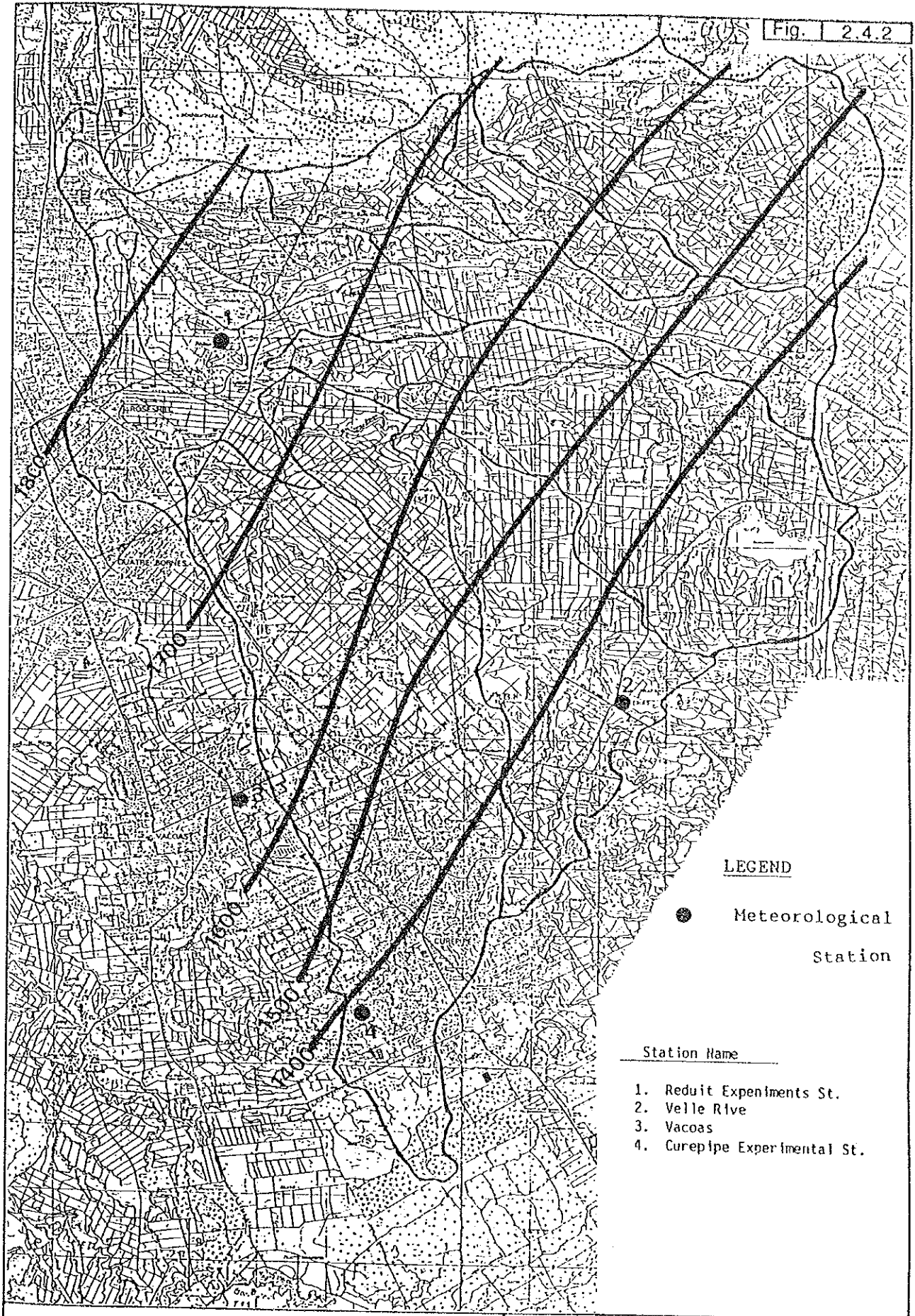
- | | |
|-------------------|--------------------|
| 1. Beau Bois | 11. Bagatelle (II) |
| 2. Bagatelle (M) | 12. Valetta |
| 3. Mon Desert | 13. Trianon |
| 4. Minissy (M) | 14. Highlands |
| 5. Bega | 15. Hermitage |
| 6. Redit Exp. St. | 16. Vacoas |
| 7. Minissy (II) | 17. Wooton |
| 8. Alma | 18. Curpipe |
| 9. Ebene | 19. Bellerive |
| 10. Cote d'or | 20. Reunion |

水文観測所位置図及び等雨量線図

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PORT LOUIS WATER SUPPLY PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 2.4.2



LEGEND

● Meteorological Station

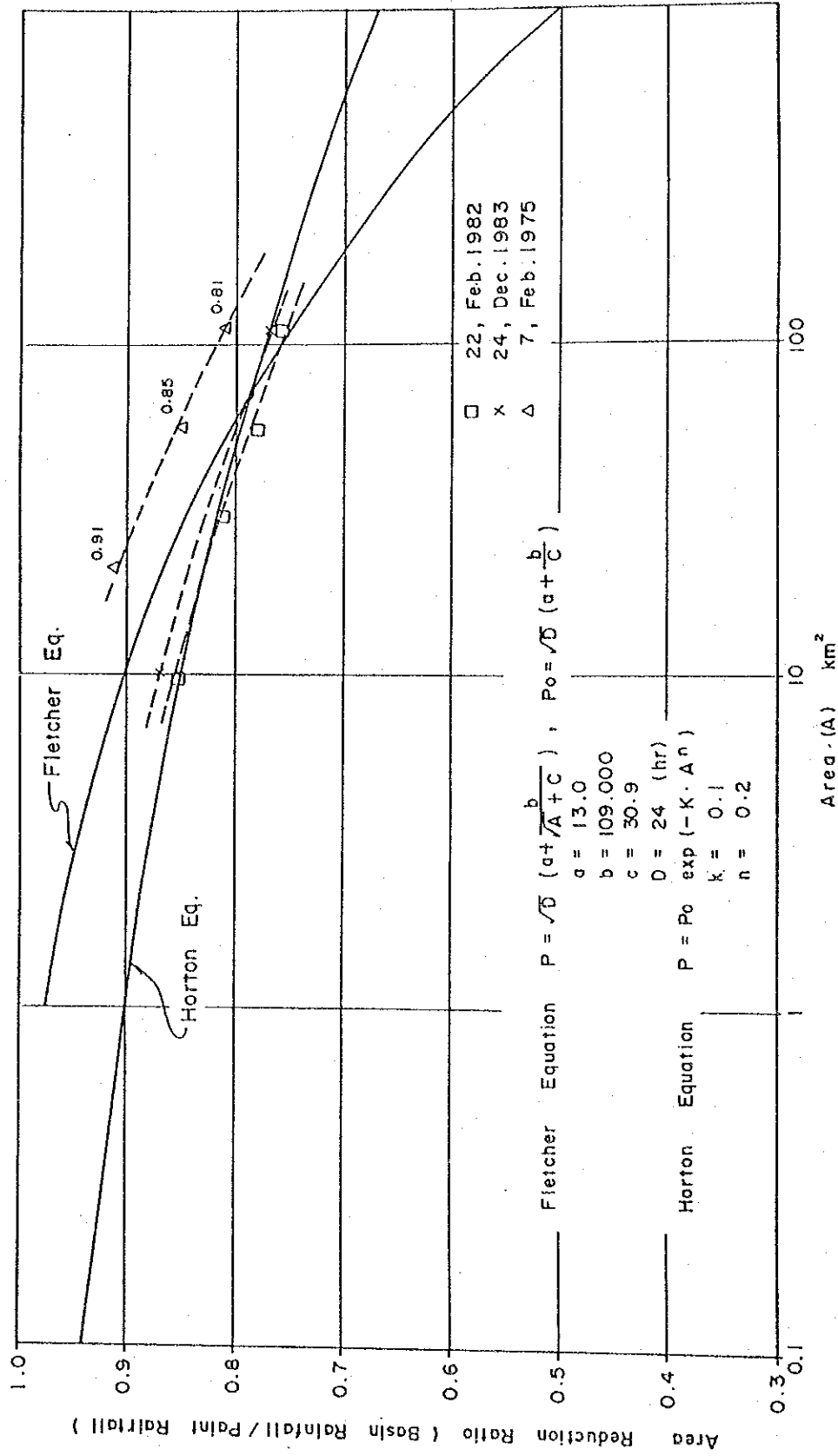
Station Name

- 1. Redit Expeniments St.
- 2. Velle Rive
- 3. Vacoas
- 4. Curepipe Experimental St.

気象観測所位置図及び等蒸発量線図

GOVERNMENT OF MAURITIUS
 PORT LOUIS WATER SUPPLY PROJECT
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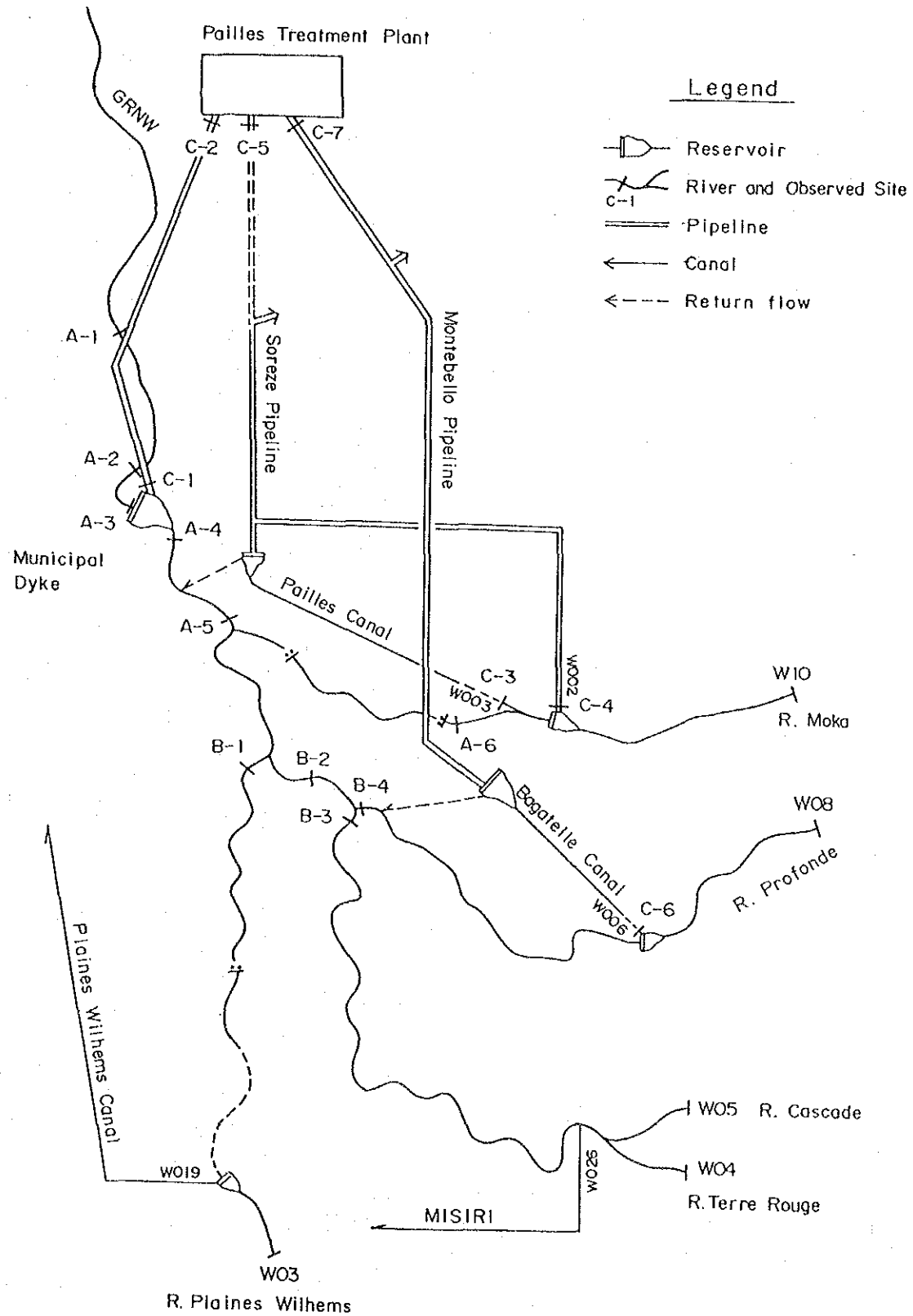
Fig. 2.4.3



面積雨量低減曲線

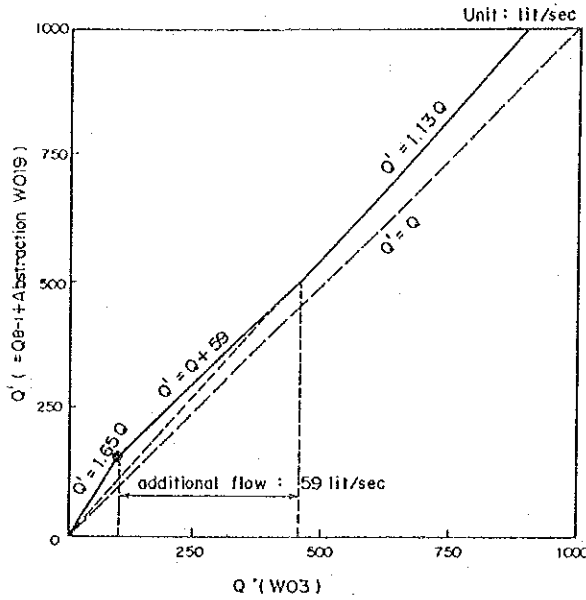
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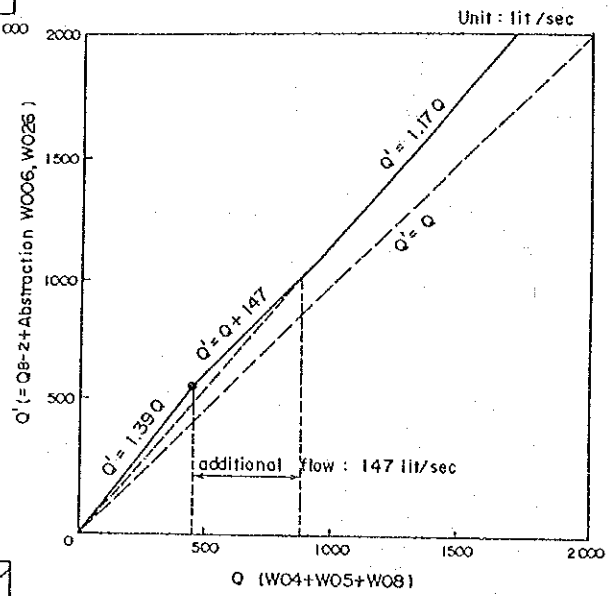


GRNW水系模式図及び既存導水管位置図

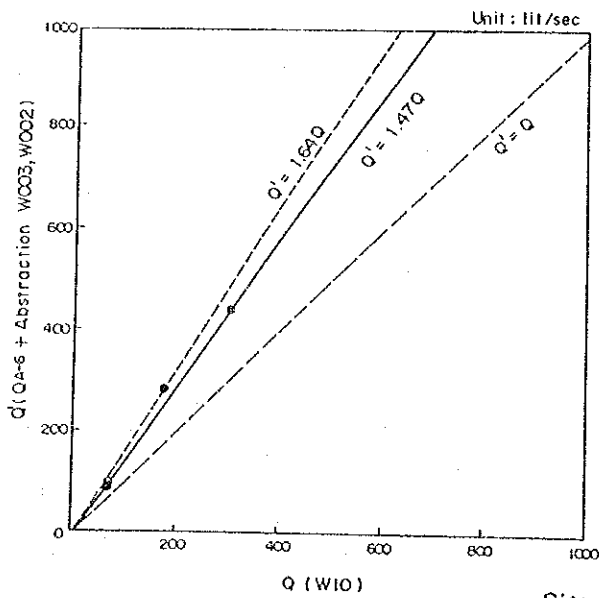
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Plaines Wilhems river



Terre Rouge river
(downstream of three tributaries)



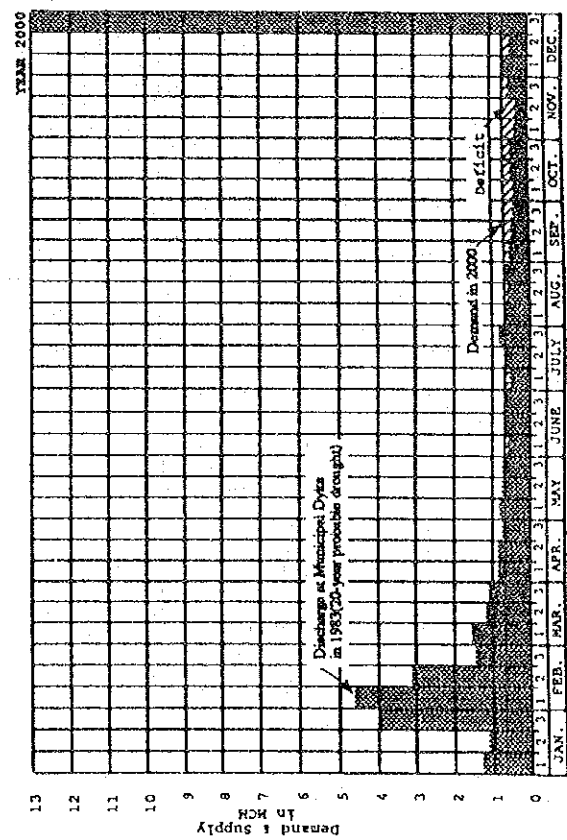
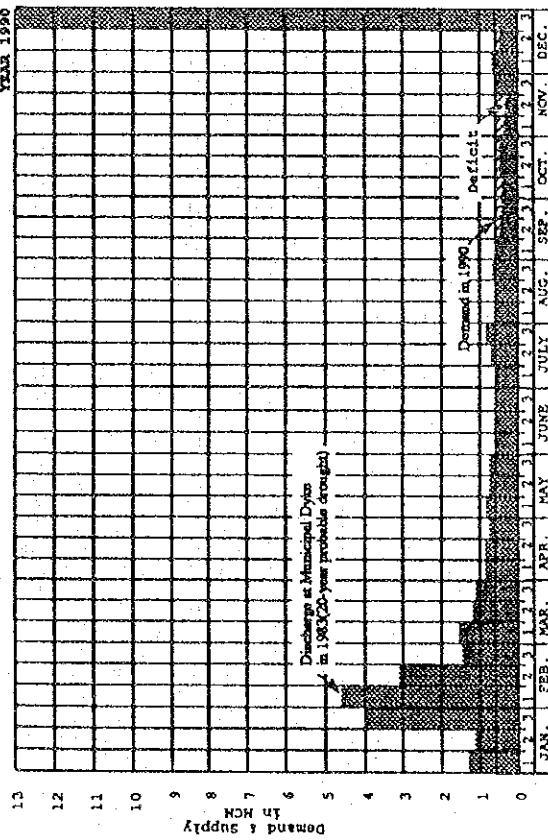
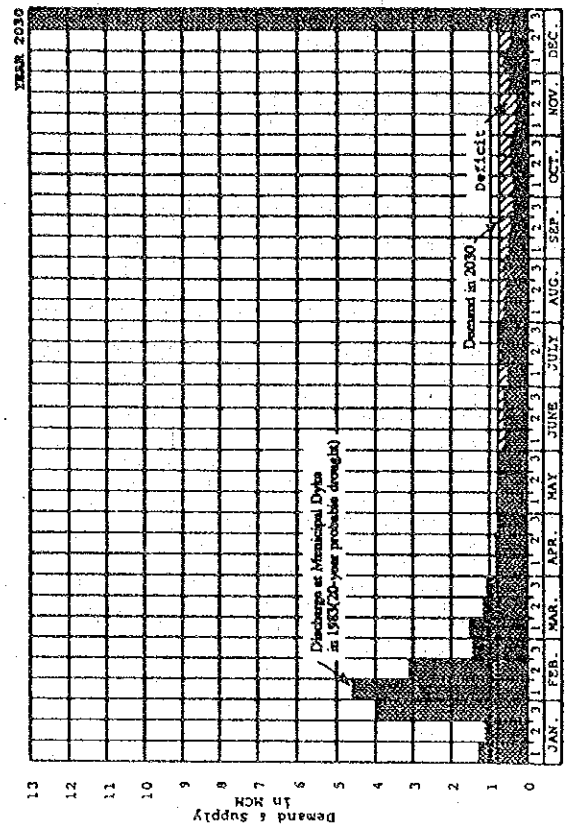
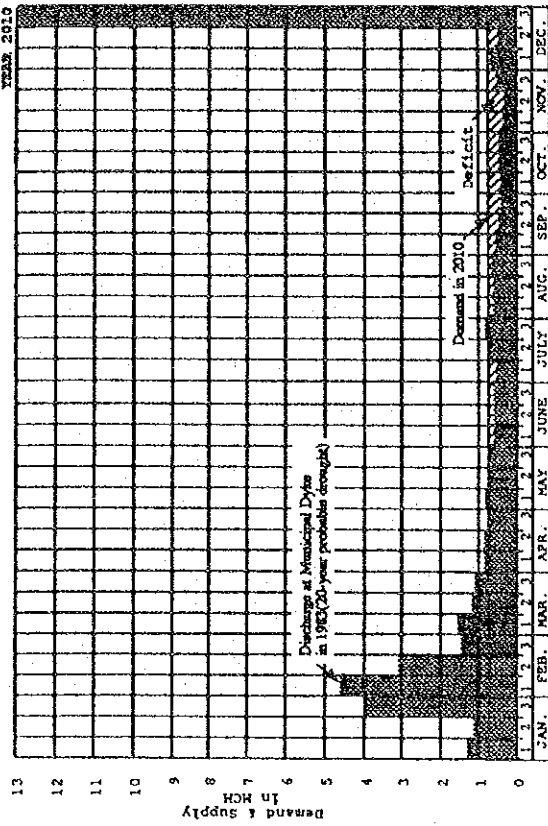
Moka river

Site Indicate (ex. B-4) ; See Fig. A.3.4
 ——— applied lien to estimate discharge at sites
 which are located downstream of gauging stations

残流域流量と観測所流量の関係

GOVERNMENT OF MAURITIUS
 PORT LOUIS WATER SUPPLY PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY

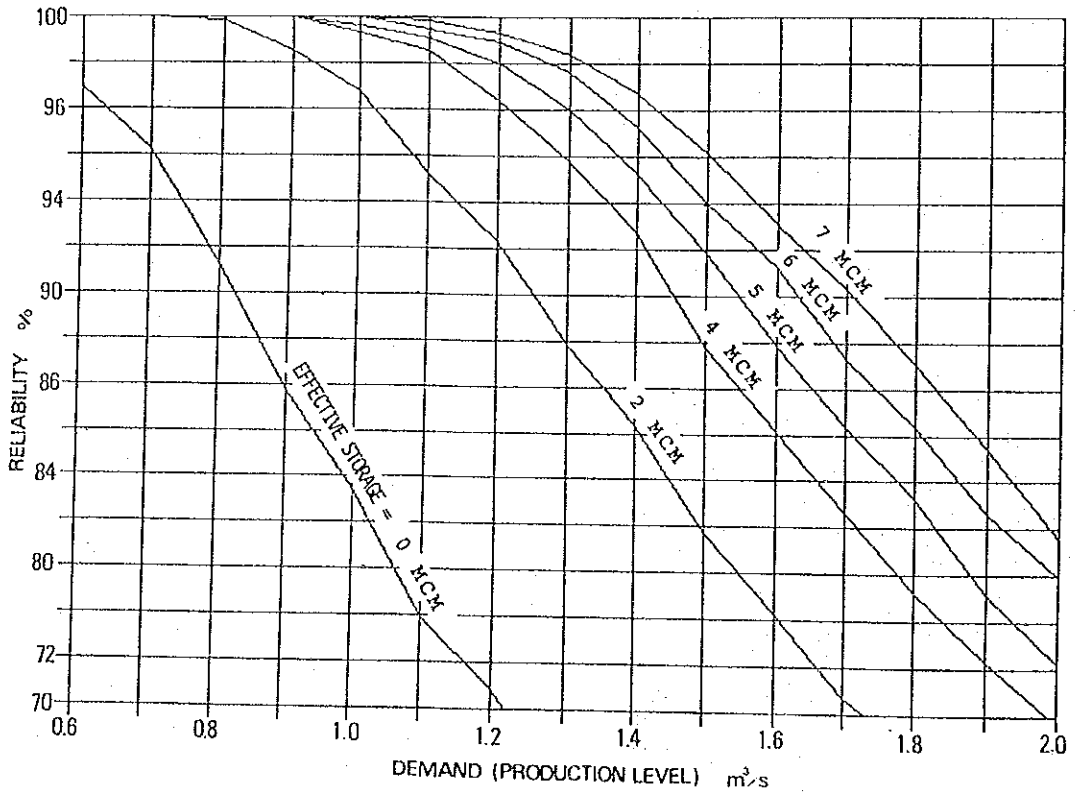
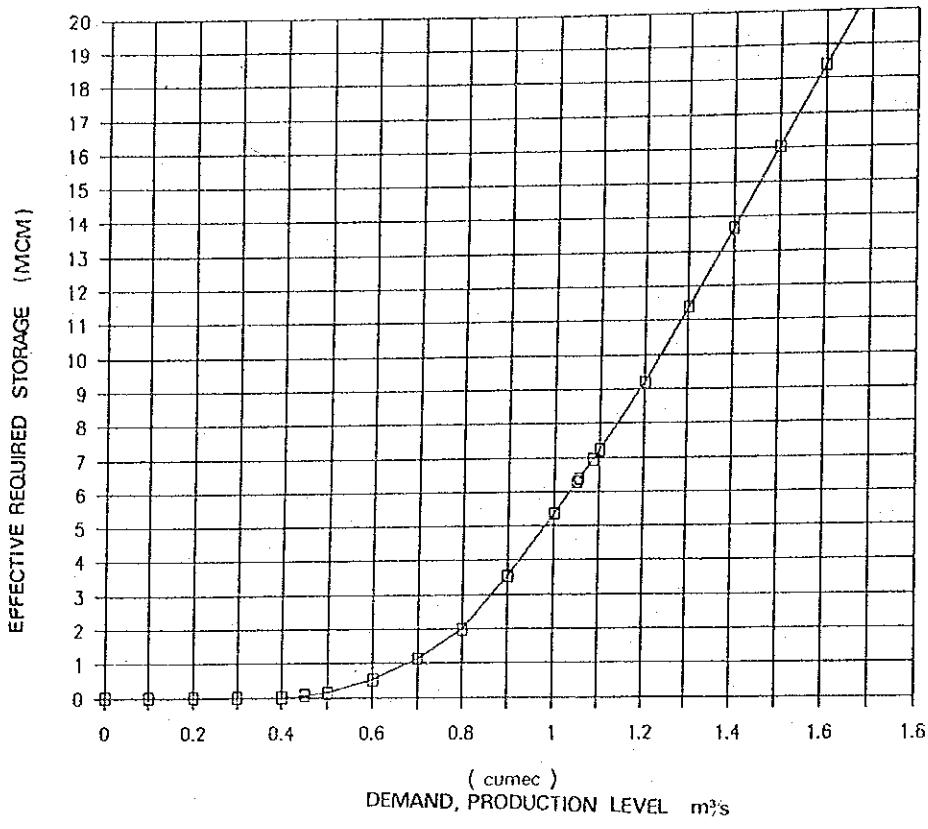


既往最渇水年流量による水収支

GOVERNMENT OF MAURITIUS
PORT LOUIS WATER SUPPLY PROJECT

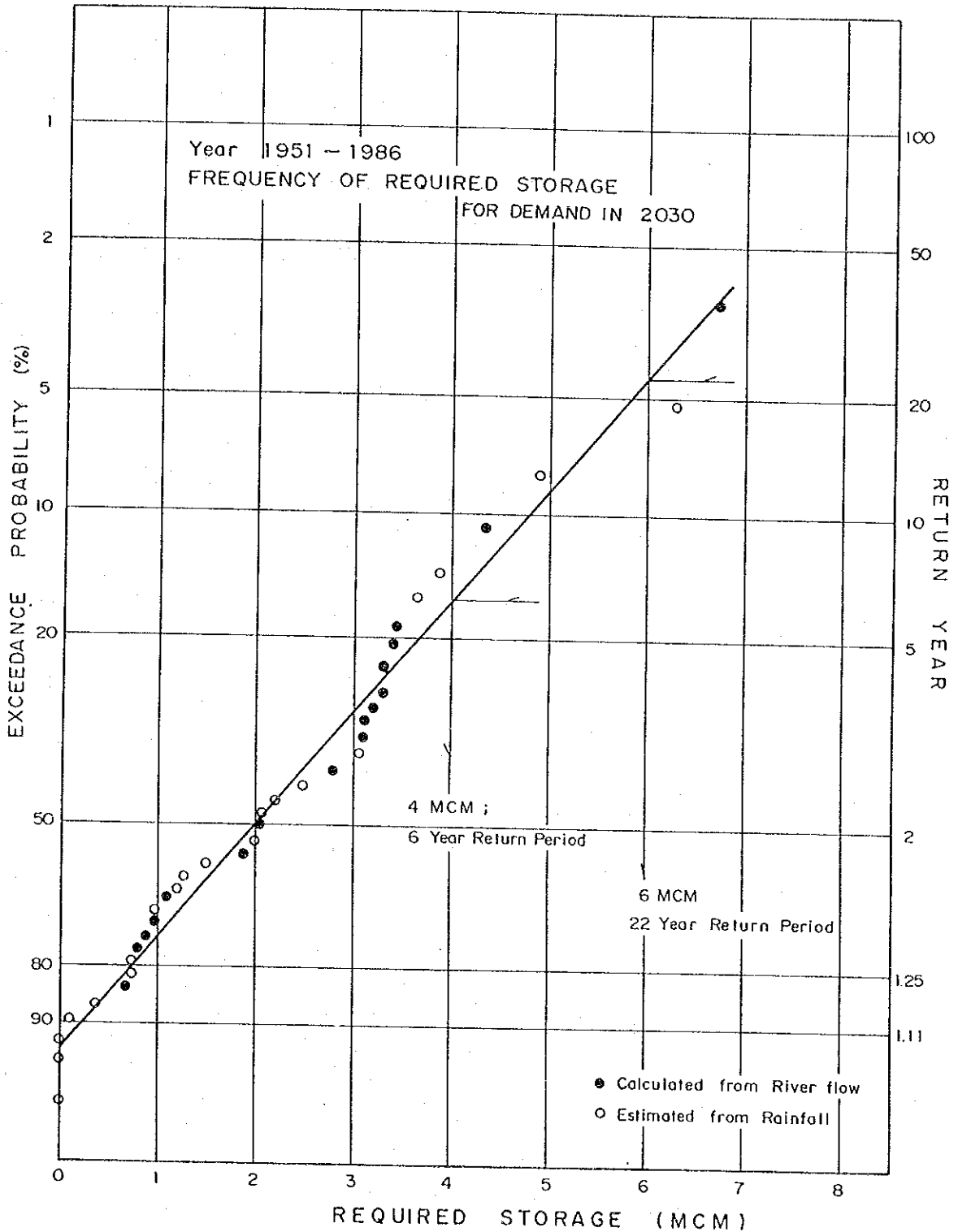
JAPAN INTERNATIONAL COOPERATION AGENCY

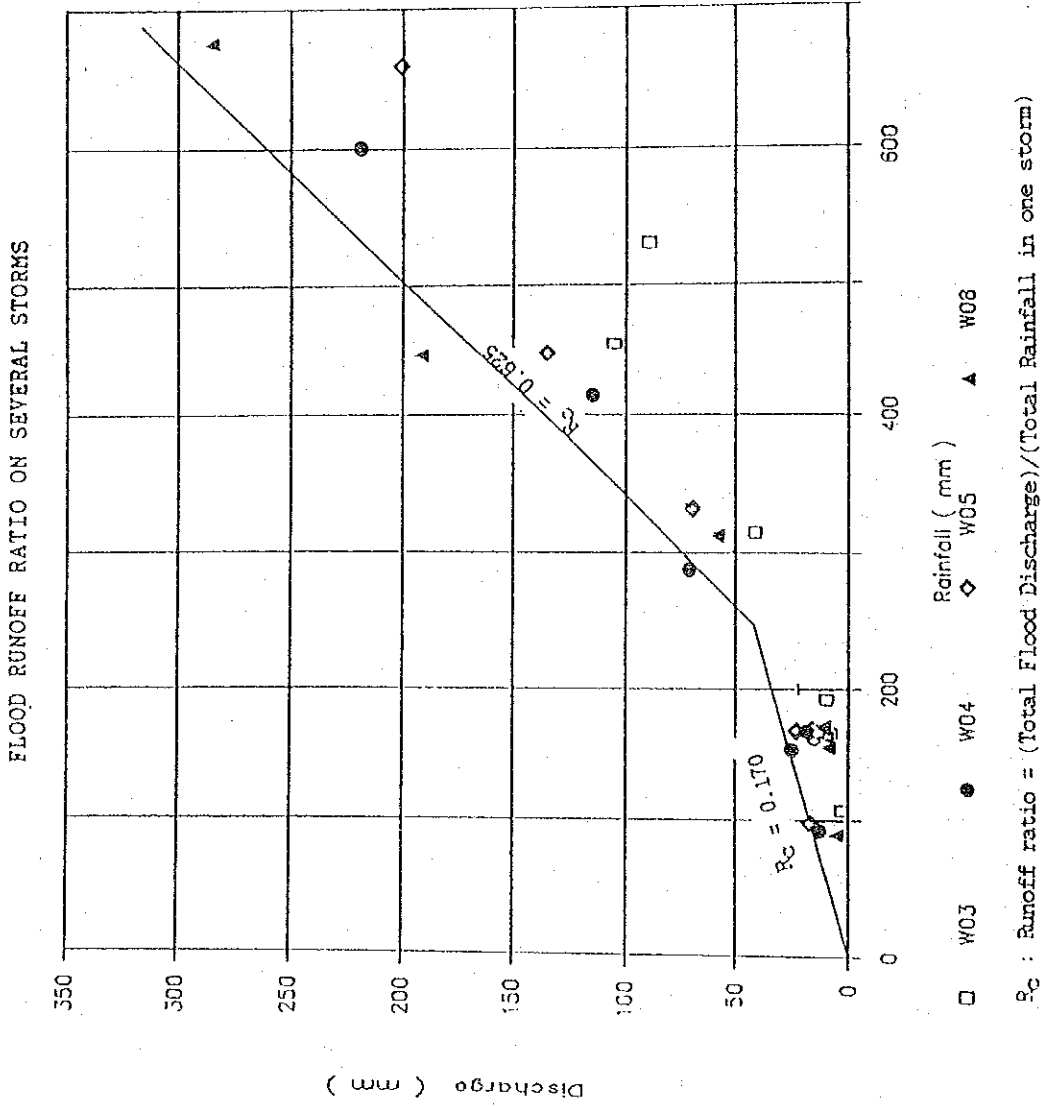
Fig. 2.4.7



水需要量と必要貯水容量の関係

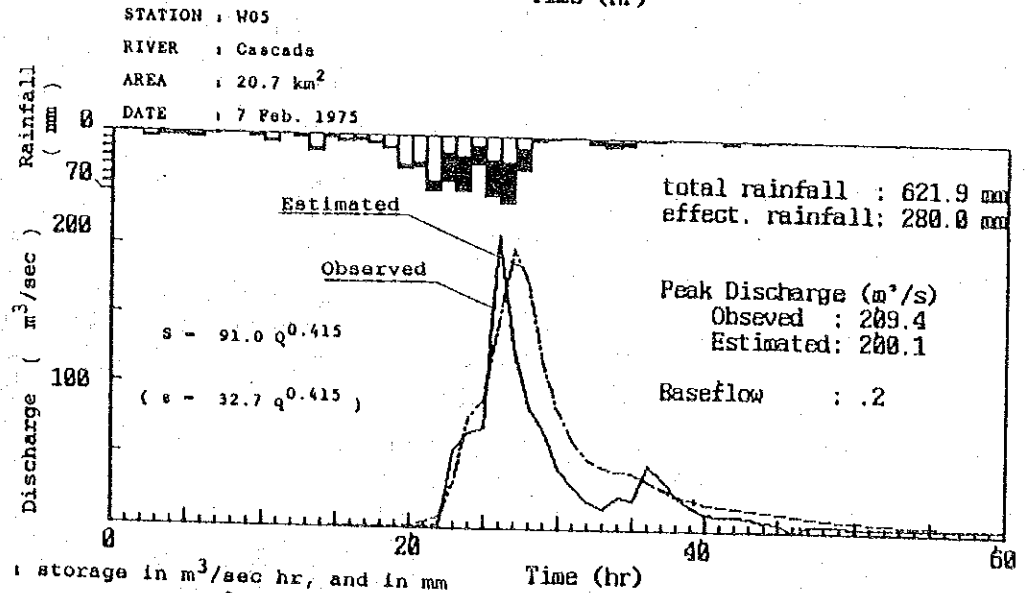
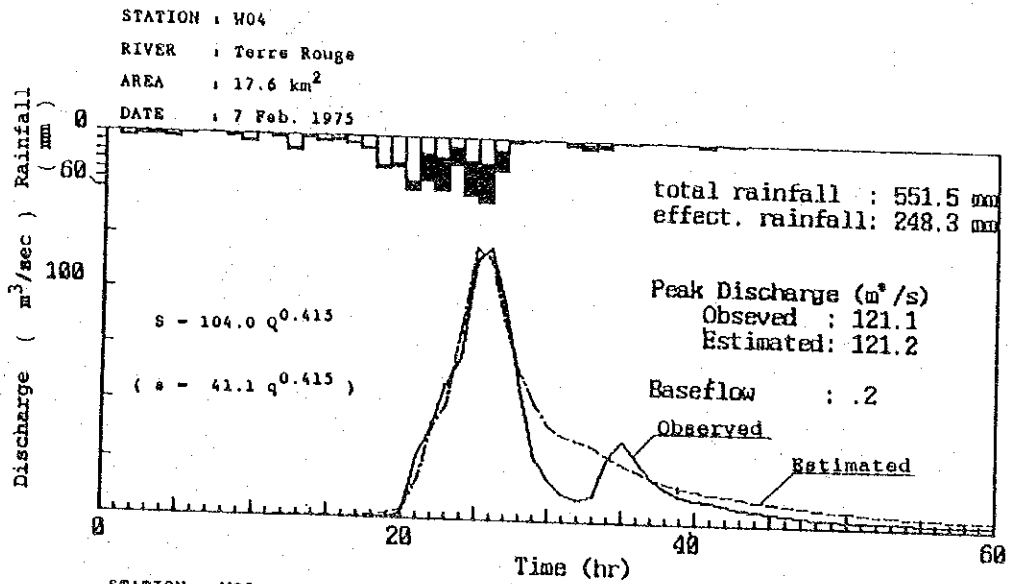
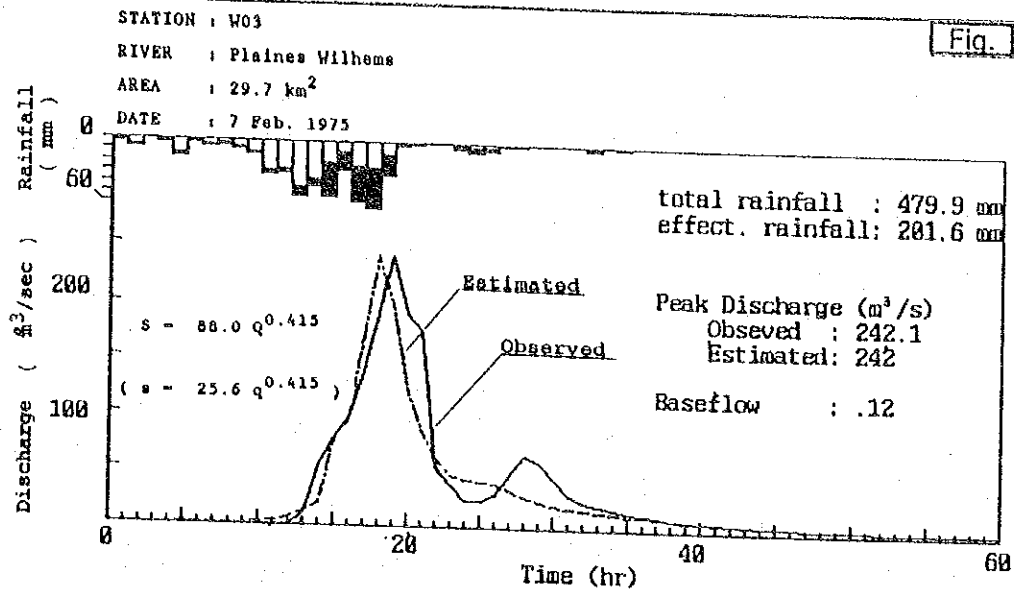
GOVERNMENT OF MAURITIUS
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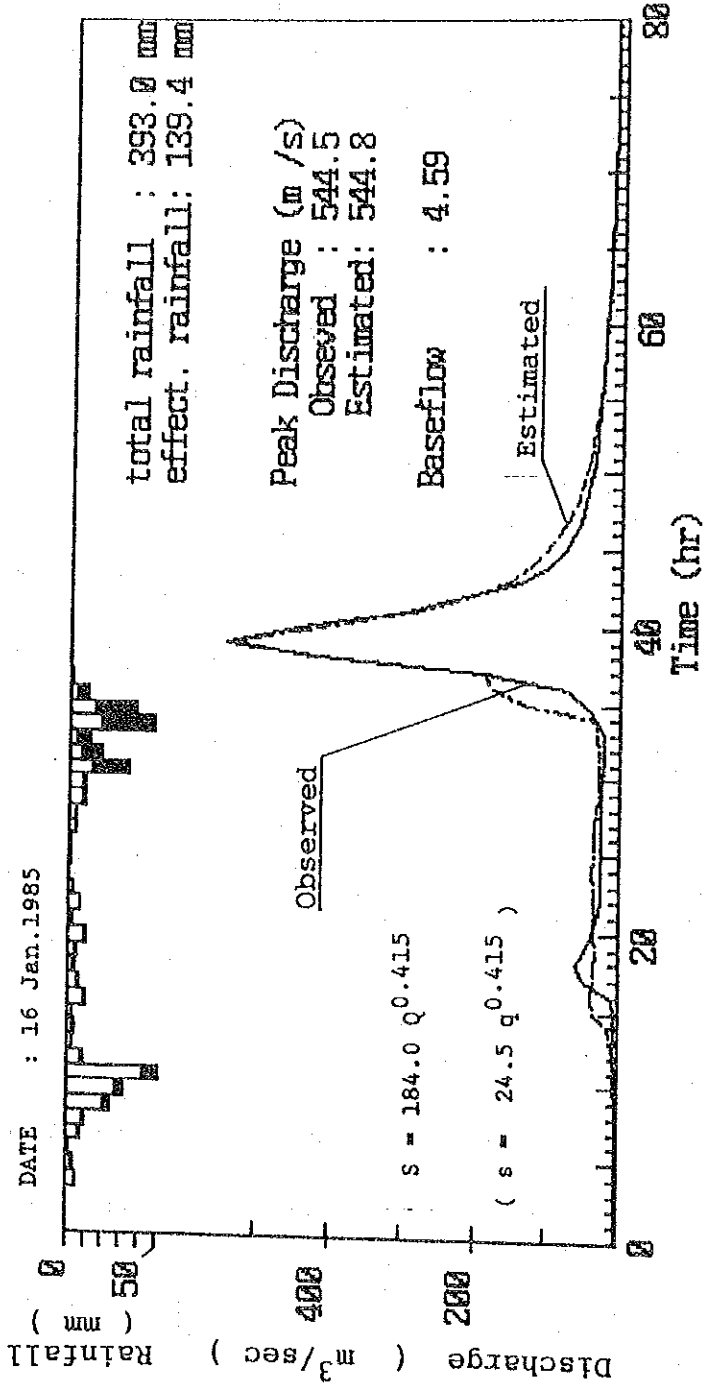
流出係数

GOVERNMENT OF MAURITIUS
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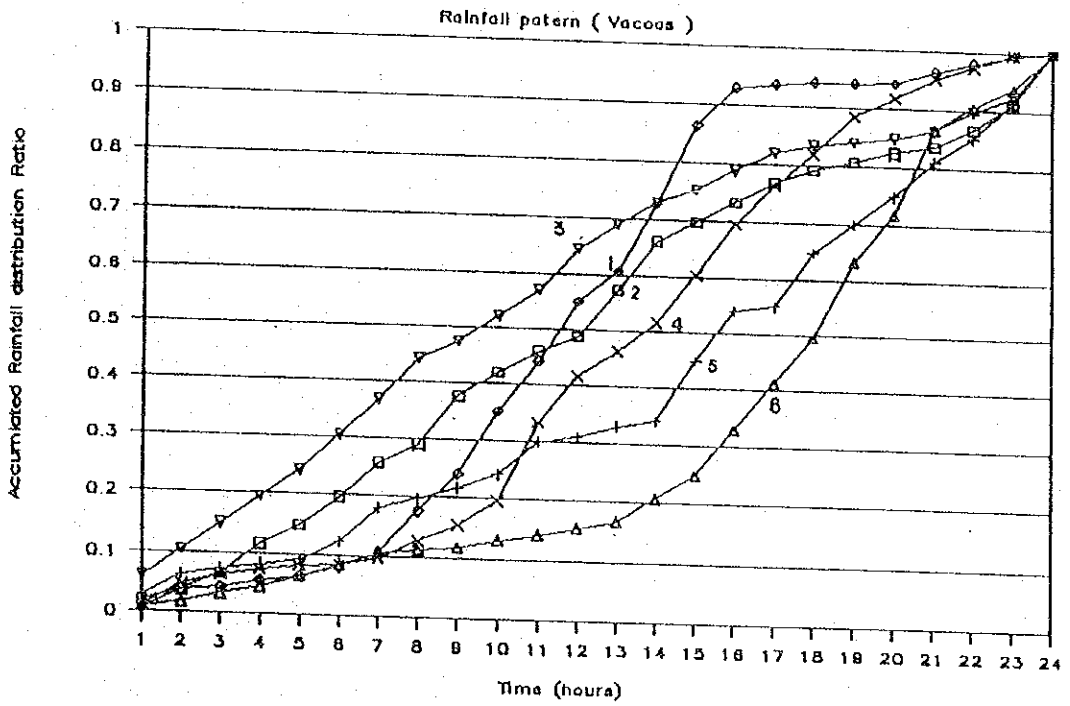
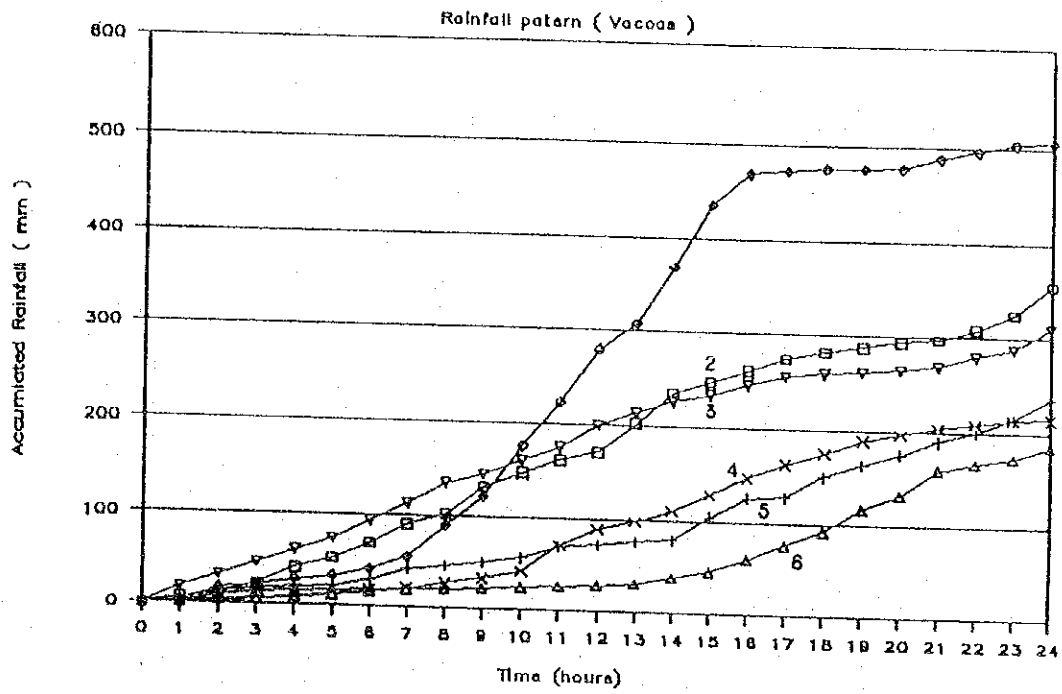
S, s : storage in m³/sec hr, and in mm
 Q, q : discharge in m³/sec, and in mm/hr

STATION : WL3
 RIVER : GRNW
 AREA : 113.2 km²
 DATE : 16 Jan. 1985



S, s : storage in m³/sec hr, and in mm
 Q, q : discharge in m³/sec, and in mm/hr

Fig. 2.4.11

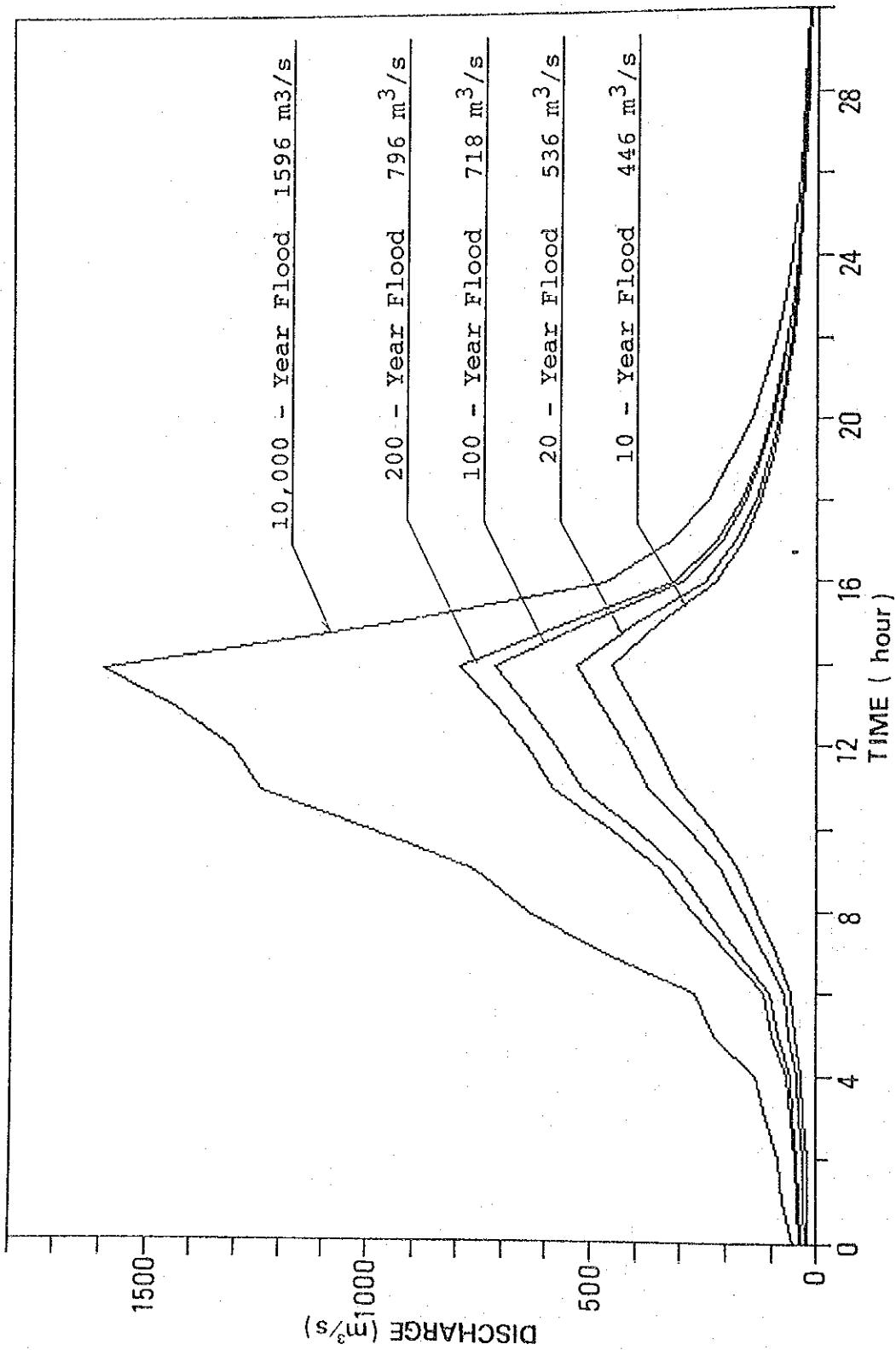


- | | |
|----------------------|---------------------|
| 1. 6. February 1975 | 4. 7. February 1971 |
| 2. 14. January 1967 | 5. 4. February 1982 |
| 3. 24. December 1983 | 6. 20. January 1978 |

実績累積降雨量

GOVERNMENT OF MAURITIUS
 PORT LOUIS WATER SUPPLY PROJECT
 JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 2.4.12

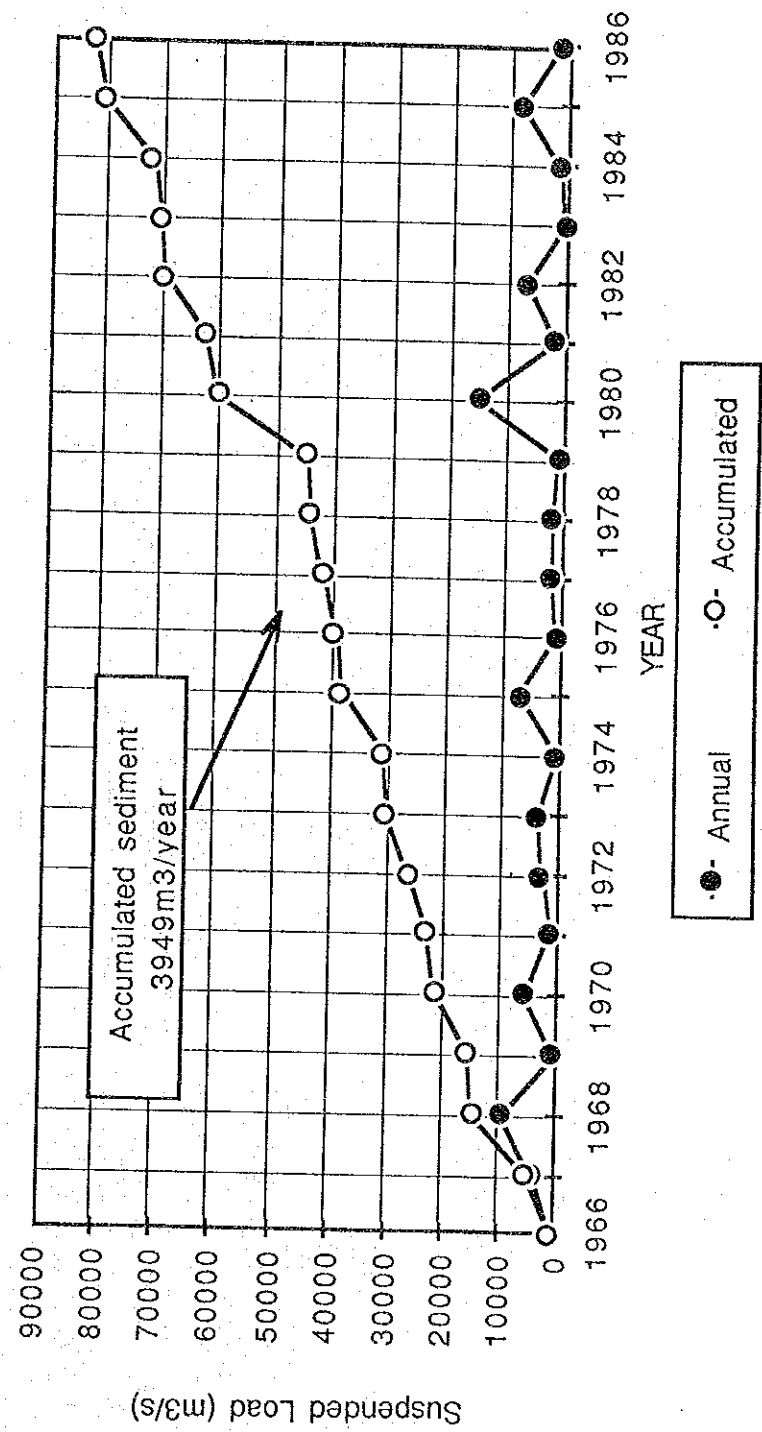


確率洪水量

GOVERNMENT OF MAURITIUS
PORT LOUIS WATER SUPPLY PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY

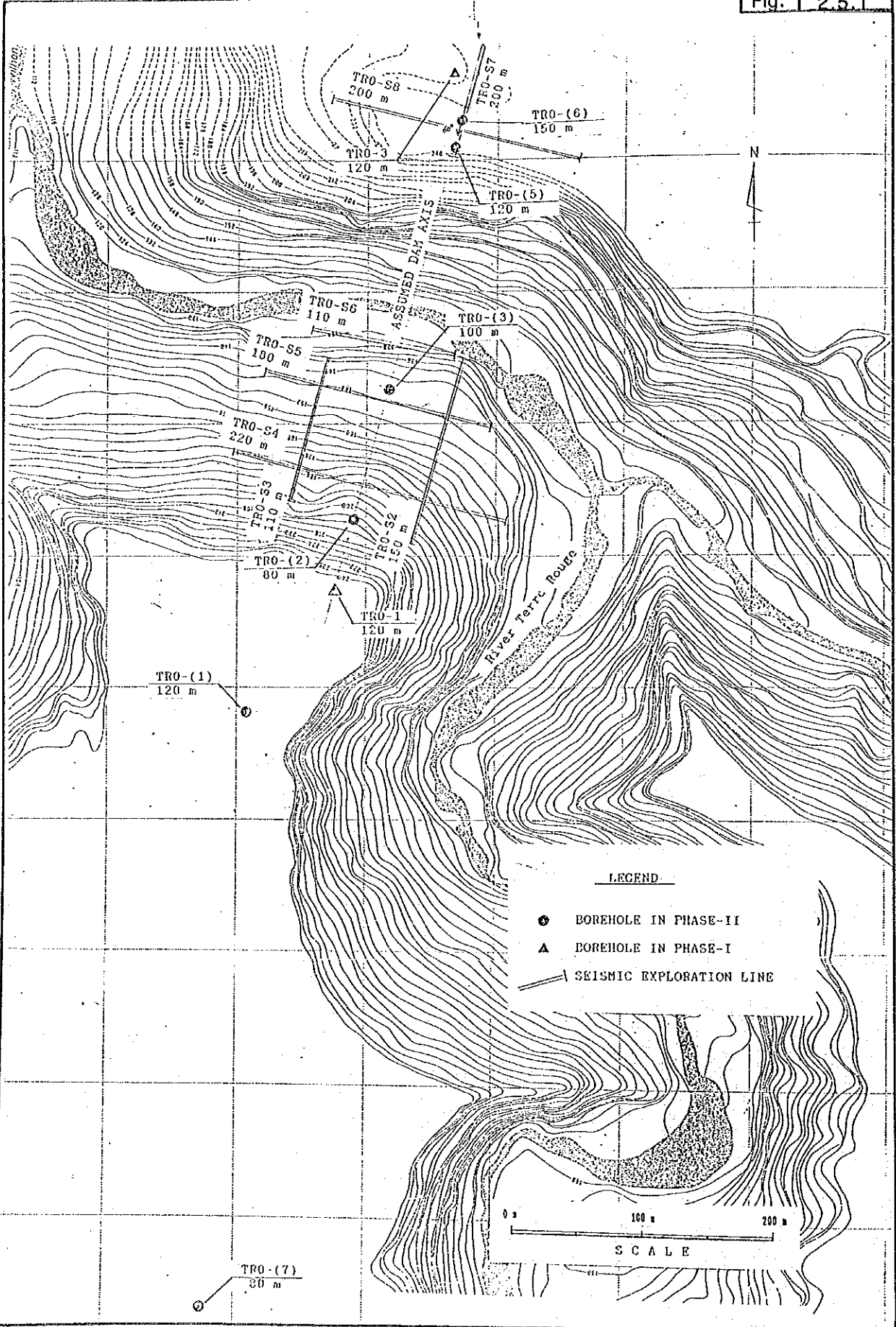
Fig. 2.4.13



浮流砂量

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 PORT LOUIS WATER SUPPLY PROJECT
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Fig. 2.5.1



地質調査位置図-I

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