

# CHAPTER 3

# ANNUAL PRECIPITATION DATA AT OBSERVATION STATIONS

Table 3-1List of Precipitation Observation Stations

-		
St. No	St. Name	PERIOD
53729320	SAMBAETIBA	1977-1988
53329560	SAO BENTO	1986-1988
53129910	SAO CRISTOVAO	
53189420	SAO JERONIMO	1970-1976
53769080	TANGUA	1977-1988
53329080	XEREM	1977-1988
53729520	FAZENDA COQUEIRO	1979-1988
53769620	FAZENDA MACACU	
53119089	PRAIA DE BOTAFOGO	
53729650	QUIZANGA	1977-1990
53189120	REALENGO	1977-1990
53129470	SABOIA LIMA	1977-1990
53129230	MORRO DO ENCONTRO	1970-1973
53329890	NILOPOLIS	1986-1988
53329780	NOVA IGUACU	1977-1988
53059550	PAQUETA	1977-1981
53189990	PARADA DE LUCAS-DTN	1977-1981
53729710	POSTO GARRAFAO	1977-1990
53129220	PRACA ROCCO	1977-1980
53039660	ILHA DO GOVERNADOR	1977-1981
53189940	IRAJA	1977-1990
53729195	JAPUIBA	1977-1990
53129080	LEOPOLDO	1977-1981
53159930	LOBO JUNIOR	1977-1981
53129440	COLEGIO REGINA COELI	
53189320	СОРЕВА	1977-1985
53119090	ELEV DE BOTAFOGO	
53729870	ESCOLA UNIAO	1977-1990
53189370	FUNABEN	1977-1981
53729420	FAZENDA SANTO AMARO	1977-1990
53969220	HORTO FLORESTAL-NIT	1977-1990
53539240	ANDORINHAS	1977-1990
53569240	APOLINARIO	1977-1988
53149910	BENFICA	1977-1990
53729120	CACHOEIRA DE NACACU	1977-1988 <b>[</b>
53139890	CAJU	1987-1990
53019550	CIDADE UNIVERSITARIA	
		1988-1993

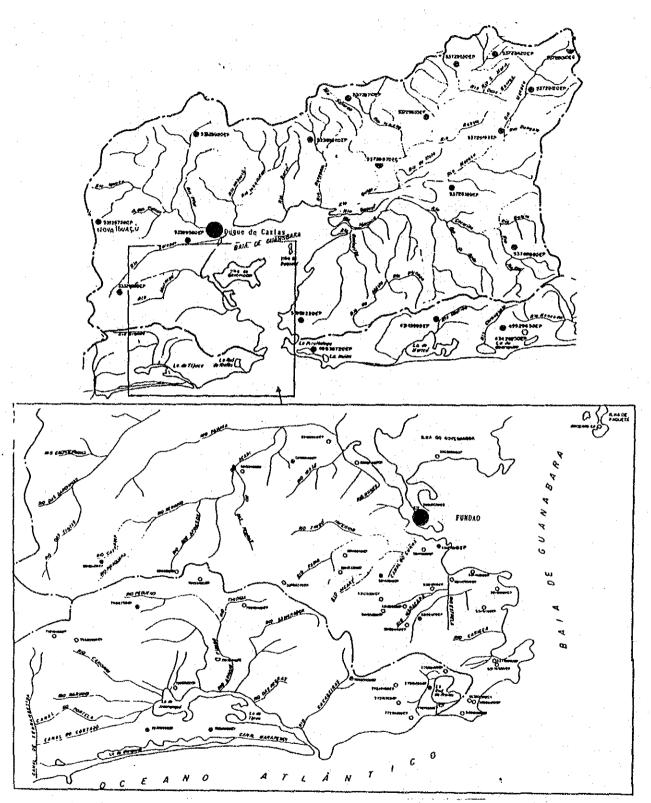
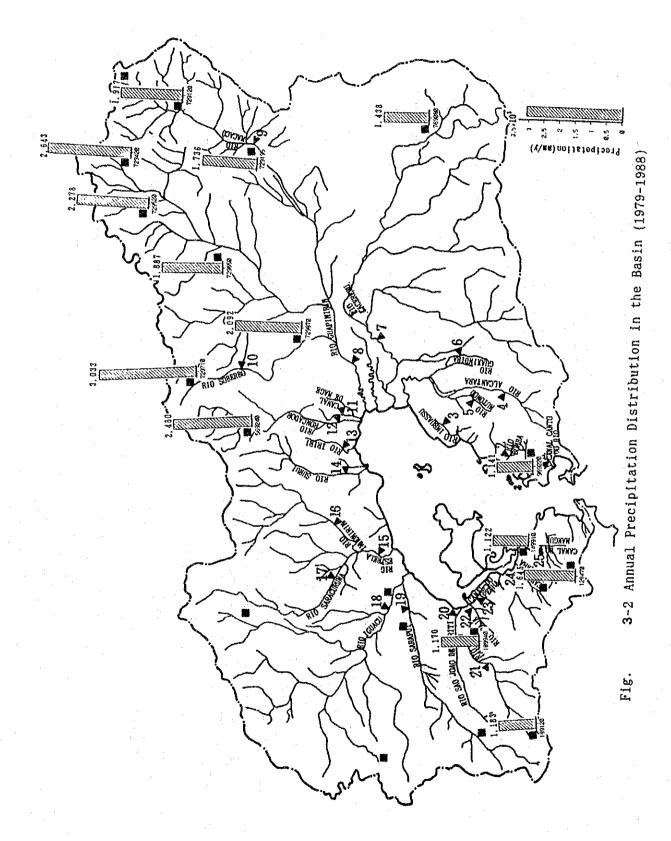
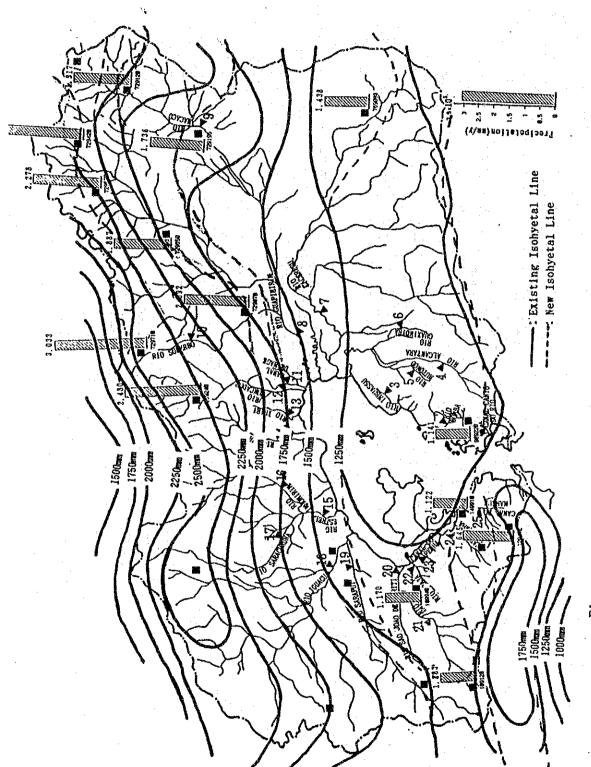


Fig. 3-1 Location of Precipitation Observation Stations





g. 3-3 Existing Isohyetal Lines and New Isohyetal Lines

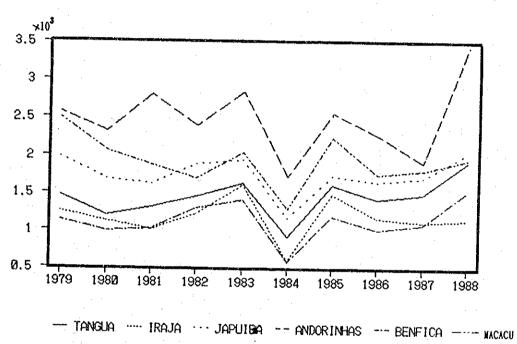


Fig. 3-4 Annual Change of Precipitation at Major Observation Stations (1979-1988)

3-2 Annual Change of Precipitation (1979-1988)

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Average	1		\$	1	1.438		2 278			7.887	1 183	) <del>*</del>	•	1	1			3 033			1.170	1.736	١.		-	1	1	2 042	3	2 \$43	) T	¹   ∞	0.7	12	07	1		
1988	1	1, 785. 2	i	ı	1.912.3		2.696.5	,	-	2 490 5	2 -			1	1	1		4 042 8	, ,	ı	1.147.0	038	Į.		1	1	1	2 976 1	1	3 044 9	526	439.	398.	525.	1.	Ι.		
1987	1	1,548.3		ı	1,482.0	l	2,059.2	,	1	1 661 4	30	S		1, 152, 9	546.	ŀ		2.460.3			1.107.0	702	1			1	1	1.758.9		2.612.8	052	60	1	1.074.7	1,801.2	ı	-	
1986	1	1	1		1, 423. 1	1	2, 141, 5	]	ı	1 560 0	203	719			1, 252.6	1		2,804,2	1	1	1, 162, 6	Ι.	1	1	1	i	1	1.671.8		2.544.8	ြတ		2,674.6	1,009.2	746.	1		-
1985	1,679.5	_	1	-	1,612.0	-	2, 710.9	ı	1	2.339.1	301		,	-		1		2, 998, 5	ł		1, 487.9	6	ı	,	1	1	1	2, 347, 9	ı	2,669.0	1, 155, 6	554.	3, 283, 8	1, 189.9	2, 233, 5	,	ı	
1984	ł	1	1		910.3	1,464.1	1,642.8	1	1	1, 269, 3	5	895.7	1		,	i	1	2,443.6	1		590.4	1, 159, 5	-		-	520.7	1	936.0		2, 173.3	612.	1,717.7	2, 594. 3	577.8	1, 282. 7	I	1	
1983	1	ì	1	ł	1,629.9	2,821.0	417.	1	1	2, 432, 4	522.	1, 696, 2	-	1	1,643.9	1	ı	3, 143.6	-	J	1,607.8	1,940.9	ı	1	-	1,444.4	ł	4, 147.6		2,809,6	1, 521. 1	ا ا	3, 150, 2	1,405.4	2,042.3		1	
1982	ı		1	1,068.7	الما	2, 329, 0	2, 216.8	1	1	1.981.8	04	1,672.0	1	1	1, 204. 2	1		3,064.4	1	1	1, 218.3	1,886.2	ı	1	ı	1, 152. 3	1	1, 991. 8	1	2, 794.8	1, 233, 4	94.		1,301.0	1,692.0	I	1	
1981	1		_	705.0	-1	42		1	1	1,786.7	1.015.1	1,403.1	-	1	1,151.0	l	ł	3, 159.3	1:	1	1,007.2	1,615.5	1	1	_	1,059.2	-	1,582.0	ì	2, 559.9		2,807.4	2, 903, 4		1,871.9	1	1	
1980	ì	'	1	1, 194. 4	1, 197. 5		2,074.2	ı	1	1,517.1	1,023.2	1,487.9	1194.9	1	1, 263.5	1, 148.3	1, 108.5	2, 780, 8	629.7	972.7	1, 121. 4	1,681.1	1,238.9	1,009.3	-	1, 109.6	-	1, 768.5	1,078.2	2, 220, 5		-!	3, 116.4	99	2,063.7	-	1	
	1, 556, 6	-	1	585.1	1,457.9	440	2, 464.3	ı	ţ	1,837.0	1,070.9	1,743.2	1, 273, 1	ī	1,092.8	1, 139, 1	1,097.8	3, 439, 6	1,318.3	1,061.2	1, 253. 6		1, 269, 2	1, 189.9	ı	1, 160, 1	-	1,741.6	1, 285, 4	3,009.0	-1	· . I	603.	128.	2, 496.8	_	-	
St. Name	SAMBAELIBA	SAO BENTO		SAO JERONIMO	TANGUA		FAZENDA COQUEIRO	FAZENDA MACACU	PRAIA DE BOTAFOGO	QUIZANGA	S		MORRO DO ENCONTRO	NILOPOLIS	NOVA IGUACU	PAQUETA	PARADA DE LUCAS-DIN	POSTO GARRAFAO	PRACA ROCCO	ILHA DO GOVERNADOR	IRAJA	JAPUIBA		UNIOR	COLEGIO REGINA COELI	COPEBA	ELEV DE BOTAFOGO	ESCOLA UNIAO		FAZENDA SANTO AMARO	HORTO FLORESTAL-NIT	ANDORINHAS	APOL INARIO		CACHOEIRA DE NACACU		CIDADE UNIVERSITARIA	
St. No	33/29320	53329560	23129910	53189420	53769080	53329080	53729520	53769620	53119089	53729650	53189120	53129470	53129230	53329890	53329780	53059550	53189990	53729710	53129220	53039660	53189940	53729195	53129080	53159930	53129440	53189320	53119090	53729870	53189370	53729420	53969220	53569240	53539240	53149910	53729120	23139890	00081000	

Table 3-3 Monthly Normals of Precipitation (1977-1990)

												•		
St. No	St. Name	JAN	FEB	HAR	APR	MAY	JUN	JUL.	AUG	SEP	oct	NOY	DEC	Total
53729320	SAMBAETIBA	-	]	-			-		-	209.8	71.0	386.4	402.6	
53329560	SAO BENTO	-	-		-		_	-		-			-	
53129910	SAO CRISTOVAO	1 -	-	-	_	-			_	-	-			
53189420	SAO JERONINO	154.3	36.0	68.4	61.6	20.0	27.4	45.8	116.1	32.9	93.8	110.4	120.7	887.4
53769080	TANGUA	191.4	3, 1	98. 1	166.2	69.6	18.0	23.0		99.8	38.4	236.0	136.5	-
55329080	XEREM	269.8	1.9	99.2	274.6	61. 3	44.4	53. 2	-	150.1	109.1	273.8	298.3	-
53729520	FAZENDA COQUEIRO		-			-	<b>+</b> :		-	-		-	-	*
53769520	FAZENDA MACACU			-	-	-	-	-	-		-	-	-	-
53119089	PRAIA DE BOTAFOGO			-	<b>.</b>	-			-		-	-	-	-
53729650		184.3	28.3	125, 1	158.3	41.2	50.0	174, 2	38.2	205.1	59.0	242.7	342.3	1.648.7
53189120		113.3	2.4	187.0	272. 9	69.3	25. 6	51.3	52.2	124.1	37.0	124.6	103.3	1.163.0
	SABOIA LIMA	135.5	0.0	52. 2	201.1	166.0	54.4	81.3	118.3	203.7	75.5	151.1		1.375.6
53129230	MORRO DO ENCONTRO	99.8	31.1	100.8	69. 9	36.6	32.9	86.9	110.3	40.7	97. 2	135.6	96.7	938.5
53329890	NILOPOLIS	-		-	ļ	-	-	-	-	-	-	-	-	
53329780	NOVA IGUACU	160.2	1.7	194.2	162.2	49.5	30.9	67.4		-	-	-		
53059550	PAQUETA	114.8	20.8	101.0	187.5	22. 5	22.3	53.0	21.3	105.5	32.2	103.0	264.7	1.048.6
53189990		206.0	0.0	93.0	215.1	84.1	11.5	47.7	26. 2	114.9	32.4	87.8	137.7	1.056.4
	POSTO GARRAFAO	-			_	-			-	65.9	203.8	557. 9	513.8	
	PRACA ROCCO	42.1	0.0	18.4	211.6	0.0	0.0	0.0	0.0	104.6	60.3	114.6	100.3	651.9
53039660	ILHA DO GOYERNADOR	98. 6	0.0	107.1	180.3	23.0	17.0	38.0	27.5	104.9	30, 0	116.9	153.4	896.7
53183940	IRAJA	106.9	0.0	108, 7	215.8	80.0	19.4	48.1	24.9	190.7	10.3	106. 9	123.6	1.065.3
53729195		243.7	2.0	201.4	180.5	86.0	25. 9	101.9	38.4	103.1	70.0	360.3	166.5	1.579.7
53129080	LEOPOLDO	108.3	0.0	76.1	371.8	132.0	38.6	59.9	71.7	206.7	60.4	117. 8	89.9	1.333.0
53159930	LOBO JUNIOR	120.6	0.0	113.3	218.5	72.1	11.4	46.4	23.1	141.6	39.5	111, 7		1,036.8
53129440	COLEGIO REGINA COELI	-				-	-	-	-	-	-	_	-	-
53189320	COPEBA	104.8	1.0	137.8	277.7	48.7	19.7	53.5	45.9	126. 1	25.1	107. 2	81.5	1.029.0
53119090	ELEV DE BOTAFOGO	-	-	-	-	-	-	-	-	- :			- 1	0.0
	ESCOLA UNIAO	364. 7	2. 6	316.7	211.8	54.5	41.2	55,0	32.0	110.9	50.8	184.7	271.6	1,696.5
	FUNABEN	99.6	0.0	65. 6	214.9	121.0	28.7	55.5	46. 2	126.5	30.7	95.0	108.1	992.8
	FAZENDA SANTO AMARO			-	- 1				5.0	148.2	108.1	535.6	395.4	_
	HORTO FLORESTAL-NIT	119.7	0.0	37, 1	218.2	66.1	23.1	81.1	18.6	119.7	40.0	103.6	195.8	1.023.0
	ANDORINHAS	343.4	28.2	368.3	341.1	83.6	36.4	109.5	99.8	206.6	131.5	422.3	371.5	2,512.2
	APOLINARIO	314.7	37. 9	224.2	409.9	165.6	30.4	91.0	91.1	191.1	106.9	535.1	381.3	2,579.2
	BENFICA	117.4	0.0	121.7	218.8	71.1	25.0	36.6	34.7	172.3	46.0	80.1		1.021.7
	CACHOEIRA DE NACACU	298.1	18.2	212.4	238.5	125.5	41.8	54.9	-	99.3	46.0	345.9	252.4	-
	CAJU		]				-	-	-	-	-		- 1	-
53019550	CIDADE UNIVERSITARIA	-		-	-	-				-	-		-	-

(1978)

S3129320   SAMBARTIBA	St. No	St. Name	JAN	FEB	MAR	APR	YAK	אטנ	JUL	AUĞ	SEP	OCT	NOV	DEC	Total
S3129910   SAO ERITO	53729320	SAMBAETIBA	99.6	135. 2	82.2						·				1. 222. 4
S3189420   SAO JERONIMO   118.9   251.6   149.8   144.5   44.0   64.0   29.1   58.6   65.7   171.1   89.0   147.7   1.3	53329560	SAO BENTO	T -	-	-	-	<del>• • • • • • • • • • • • • • • • • • • </del>		<del></del>				<del> </del>		-
\$3159080 TANGUA	53129910	SAO CRISTOVAO	_			-	-	_	-				<u> </u>		
S3169080   TANGUA	53189420	SAO JERONIMO	118.9	251.5	149.8	144.5	44.0	54.0	29.1	58.6	65.7	171 1	89 0	147 7	1 344 0
\$3329080 XEREM	53769080	TANGUA	68.7	56.7	96.3	63.6									1, 027. 1
S3729520 FAZENDA CQUEIRO		XEREM	272.0	253.3	125.9	170.7									
S3169820 FAZENDA MACACU			-:				_		-	<del></del>					
S3119089   PRAÍA DE BOTAFOGO	53769820	FAZENDA MACACU	-	-	-	-	-	_		-			<del></del>	-	<u> </u>
S3189120 REALENGO		PRAIA DE BOTAFOGO	'	-, .	-		-	-	-	-		<del> </del>		<del> </del>	-
S3129470   SABOLA LIMA   92.7   257.7   43.2   173.8   116.8   35.6   35.6   35.6   35.1   19.2   56.8   156.7   160.7   1.2	53729650	QUIZANGA	143.4	264.1	122.5	123.1	107.1	23. 1	40.7	40.9	43.5	54.0	373.5	164 3	1 500 2
S3129470   SABOLA LIMA   92.7   257.7   43.2   173.8   116.5   35.6   35.6   35.6   55.1   19.2   56.8   156.7   160.7   1.2	53189120	REALENGO	43.5	181.9	75.6	102.3									815.7
S3129230   MORRO DO ENCONTRO   136.1   474.7   153.3   201.8   68.5   70.8   17.5   79.6   87.4   168.1   120.2   98.5   1.6			92.7	257.7	43.2	173.8									
S329890   NILOPOLIS			136.1	474.7	153.3	201.8									
52329780   NOVA   GUACU   104.4   123.4   215.6   93.9   56.1   16.4   14.7   26.0   12.4   52.5   138.0   214.3   1,0					- 3							-			-
\$3059550   PAQUETA   \$113.3   \$179.5   \$54.3   \$141.5   \$104.7   \$21.8   \$13.0   \$22.1   \$26.6   \$25.6   \$117.0   \$170.3   \$953189990   PARADA DE LUCAS-DTN   \$64.5   \$138.4   \$85.9   \$97.7   \$79.5   \$17.5   \$11.1   \$29.0   \$23.2   \$22.7   \$101.7   \$120.3   \$753729710   POSTO GARRAFAO   \$548.8   \$352.3   \$202.9   \$366.3   \$139.1   \$110.5   \$51.8   \$94.4   \$51.9   \$170.1   \$473.8   \$286.2   \$2.8   \$3129220   PRACA ROCCO   \$68.6   \$192.2   \$49.0   \$148.7   \$95.7   \$39.6   \$23.7   \$61.2   \$43.3   \$45.0   \$114.8   \$128.2   \$1.0   \$3129220   PRACA ROCCO   \$68.6   \$192.2   \$49.0   \$148.7   \$95.7   \$39.6   \$23.7   \$61.2   \$43.3   \$45.0   \$114.8   \$128.2   \$1.0   \$3129280   ILHA DO GOVERNADOR   \$65.7   \$183.0   \$72.3   \$87.2   \$72.3   \$15.0   \$7.5   \$27.6   \$18.8   \$31.3   \$95.3   \$123.1   \$753189940   IRAJA   \$99.0   \$145.8   \$80.9   \$108.8   \$78.4   \$20.7   \$8.2   \$25.6   \$18.4   \$23.0   \$106.6   \$151.7   \$853129080   ILHA DA DE POLIDO   \$82.7   \$195.9   \$25.2   \$177.9   \$84.0   \$38.5   \$26.7   \$42.0   \$25.7   \$52.4   \$129.7   \$146.2   \$1.0   \$53129080   ILDAD   ILDAD   ILDAD   \$82.7   \$195.9   \$25.2   \$177.9   \$84.0   \$38.5   \$26.7   \$42.0   \$25.7   \$52.4   \$129.7   \$146.2   \$1.0   \$53129320   ILDBO JUNIOR   \$62.6   \$154.5   \$78.4   \$91.4   \$78.4   \$16.2   \$22.8   \$26.0   \$20.4   \$35.6   \$102.7   \$120.7   \$8.5   \$3129320   ILDBO JUNIOR   \$62.6   \$154.5   \$78.4   \$91.4   \$78.4   \$16.2   \$22.8   \$26.0   \$20.4   \$35.6   \$102.7   \$120.7   \$8.5   \$3129320   ILDBO JUNIOR   \$62.6   \$154.5   \$78.4   \$91.4   \$78.4   \$16.2   \$22.8   \$26.0   \$20.4   \$35.6   \$102.7   \$120.7   \$8.5   \$3129320   ILDBO JUNIOR   \$62.6   \$154.5   \$78.4   \$91.4   \$78.4   \$16.2   \$22.8   \$26.0   \$20.4   \$35.6   \$102.7   \$120.7   \$8.5   \$3129320   ILDBO JUNIOR   \$62.6   \$154.5   \$78.4   \$91.4   \$78.4   \$16.2   \$22.8   \$26.0   \$20.4   \$35.6   \$102.7   \$120.7   \$8.5   \$3129320   ILDBO JUNIOR   \$62.6   \$154.5   \$78.4   \$91.4   \$78.4   \$16.2   \$22.8   \$26.0   \$20.4   \$35.6   \$102.7   \$120.7   \$8.5   \$3129320   ILDBO JUNIOR   \$62.6   \$154.5   \$78.4   \$91.4			104.4	123.4	215.6	93. 9	56.1	16.4	14.7	26.0	12. 4	52.5	138.0		1.067.7
\$3189990 PARADA DE LUCAS-DTN			113.3	179.5	54.3	141.6	104.7								989.8
\$\frac{53729710}{53129220}\$ \begin{array}{c c c c c c c c c c c c c c c c c c c			64.5	138. 4	85.9	97.7	79.5								791.5
\$\frac{53129220}{53039660}\$   \text{LHA DO GOVERNADOR} \text{65.7} & \text{183.0} & \text{72.3} & \text{87.2} & \text{72.3} & \text{15.0} & \text{7.5} & \text{27.6} & \text{18.8} & \text{31.3} & \text{95.3} & \text{123.1} & \text{753189940} & \text{RAIA} & \text{99.0} & \text{145.8} & \text{80.9} & \text{108.8} & \text{78.4} & \text{20.7} & \text{8.2} & \text{25.6} & \text{18.4} & \text{23.0} & \text{106.6} & \text{116.7} & \text{85729195} & \text{170.7} & \text{158.3} & \text{76.7} & \text{189.1} & \text{59.7} & \text{78.3} & \text{52.6} & \text{18.4} & \text{23.0} & \text{106.6} & \text{116.7} & \text{853129080} & \text{LEOPOLDO} & \text{82.7} & \text{195.9} & \text{25.2} & \text{177.9} & \text{84.0} & \text{38.5} & \text{26.7} & \text{42.0} & \text{25.7} & \text{52.4} & \text{129.7} & \text{146.2} & \text{1.0} & \text{53129440} & \text{COLEGIO REGINA COEL1} &			548.8	352.3	202.9	356.3									
\$\frac{53039660}{53189940}\$   \text{LHA DO GOVERNADOR} \\ 65.7 \\ 183.0 \\ 72.3 \\ 87.2 \\ 72.3 \\ 15.0 \\ 7.5 \\ 27.6 \\ 18.8 \\ 31.3 \\ 95.3 \\ 123.1 \\ 7 \\ 53189940 \\ 184.A \\ 99.0 \\ 145.8 \\ 80.9 \\ 108.8 \\ 76.7 \\ 169.1 \\ 59.9 \\ 78.3 \\ 52.6 \\ 18.4 \\ 23.0 \\ 106.6 \\ 116.7 \\ 8 \\ 53729195 \\ 1870.0 \\ 195.2 \\ 170.7 \\ 158.3 \\ 76.7 \\ 169.1 \\ 59.9 \\ 78.3 \\ 52.4 \\ 39.5 \\ 71.8 \\ 374.2 \\ 233.7 \\ 1,6 \\ 5312980 \\ 189.0 \\ 195.2 \\ 170.7 \\ 158.3 \\ 76.7 \\ 169.1 \\ 59.9 \\ 78.3 \\ 52.4 \\ 39.5 \\ 71.8 \\ 374.2 \\ 233.7 \\ 1,6 \\ 5312980 \\ 108.0 \\ 100.			68.6	192.2	49.0	148.7			-						
S3189940   IRAJA   99.0   145.8   80.9   108.5   78.4   20.7   8.2   25.6   18.4   23.0   106.6   116.7   8   53729195   JAPUIBA   195.2   170.7   158.3   76.7   169.1   59.9   78.3   62.4   39.5   71.8   374.2   233.7   1,6   53129080   LOPOLDO   82.7   195.9   25.2   177.9   84.0   38.5   26.7   42.0   25.7   52.4   129.7   146.2   1.0   53159930   LOBO JUNIOR   62.6   154.5   78.4   91.4   78.4   16.2   22.8   26.0   20.4   35.6   102.7   120.7   8   120.7   12			65.7	183.0	72.3	87. 2	72.3	15.0							799.1
\$\frac{53729195}{53129080}\$ \text{LEOPOLDO}  \frac{82}{5}.7  \frac{195}{5}.9  \frac{7}{2}.83  \frac{7}{2}.83  \frac{7}{2}.7  \frac{195}{2}.93  \frac{7}{2}.84  \frac{195}{2}.93  \frac{7}{2}.84  \frac{195}{2}.93  \frac{7}{2}.84  \frac{195}{2}.93  \frac{110}{2}.93  \frac{7}{2}.84  \frac{195}{2}.93  \frac{195}{2}.94  195			99.0	145.8	80.9	108.8									832.1
\$3129080 LEOPOLDO			195. 2	170.7	158.3										1.689.8
\$\frac{53159930}{53129440}\$ \text{COLEGIO REGINA COEL1} \tag{COLEGIO REGINA COEL1} COLEGIO REGINA			82.7	195.9	25. 2	177.9	84.0								1.026.9
\$\frac{53129440}{53189320}\$ COLEGIO REGINA COEL1	53159930	LOBO JUNIOR	62.6	154.5	78.4										809.7
S3189320   COPEBA   48.4   165.8   71.0   60.2   68.6   20.5   7.0   29.0   16.0   36.3   123.7   119.6   7.					-										
53119090 ELEV DE BOTAFOGO			48.4	165.8	71.0	60.2	58.5	20.5	7.0	29.0	16.0	36.3	123.7	119.6	766.1
CO100070   PHILIPPA			-	- 1					- 1						-
COLORDON PRINCIPAL			270.2	268.5	104.1	108.9	155.0	32.3	16.3	43.1	42.9	48.8	254.7	434.6	1.779.4
1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			58.4		53.5	76.9	112. 4	26.8	10.9	29.5	20.9	52.6	93.8	188.9	902.9
53729420 FAZENDA SANTO AMARO 366.2 337.7 185.6 267.8 140.3 56.0 81.9 62.6 52.1 117.4 567.3 290.1 2.5					185.6	267.8	140.3	56.0	81.9	62.6	52.1	117.4	567.3	290.1	2. 525. 0
53969220 HORTO FLORESTAL-HIT 57. 2 263. 0 64. 2 107. 7 119. 6 39. 2 9. 2 32. 6 23. 6 33. 1 97. 6 114. 2 91			57. 2	263.0	64.2	107.7	119.6	39. 2	9. 2	32.6	23.6	33.1			961.2
53569240 ANDORINBAS 294.6 389.6 156.8 218.9 127.0 32.5 77.0 50 1 36.8 59 1 286.6 222.2 2.0					156.8	218.9	127.0	33, 5	77.0	50.1	36.8		286.6		
53539240 APOLINARIO 330.9 270.0 162.7 195.7 234.1 86.7 112.2 156.3 43.1 105.6 475.2 279.1 2.41	53539240	APOLINARIO			162.7	195.7	234.1	86.7	112. 2	156.3	43.1	105.6			
53149910 BENFICA 95.8 176.8 36.1 95.3 87.1 28.1 13.5 27.0 22.8 46.8 112.9 122.7 81					36.1	95.3	87.1	28.1	13, 5						864.9
53129120 CACHOEIRA DE NACACU 252.8 245.1 148.3 130.6 132.8 41.0 31.9 80.7 30.1 52.3 445.3 275.3 1.8			252.8	245.1	148.3	130.5	132.8	41.0	31.9	80.7					
[ 571:9590   CAJU						- 1	-	- 1							-
13011550 CIDADE UNIVERSITARIA	73014550	CIDADE UNIVERSITARIA							- 1	-	-	-	-	~-	
	<u> </u>														

Table 3-3 Monthly Normals of Precipitation (1977-1990)

		-												
St. No	St. Name	JAN	FEB	MAR	APR	MAY	JUN	INF	AUG	SEP	oct	NOV	DEC	Total
53729320	SAMBAETIBA	308.1	384.2	102.3	85.2	82.5	52.8	19.1	57.6	90 Z	82.2	146.1	116.3	1,556.6
53379560	SAO BENTO			-	-					-	-	-	-	
123910	SAO CRISTOVÃO		-								-	-		
1:189420	SAO JERONIMO	116.9	0.0	0.0	0.0	22.9	1.8	33.5	59.6	44. 2	91.8	70.8	133.6	585.1
33769080	TANGUA	271.5	285.9	86.8	87.3	62.6	60.4	67. 9	54.5	100.8	29.7			1, 457, 9
53329080	XEREM	425.2	292.8	212.7	157.1	63.9	95.9	88. 9	117.9	151.1	76.5	438.7		2,440.9
53729520	FAZENDA COQUEIRO	417.8	362.3	258.9	95.6	80.9	47.0	65, 2	73.5	158.8	99.6	364.2	440.5	2,464.3
53769620	FAZENDA MACACU		-		_	_	-	-		-		-		
53119089	PRATA DE BOTAFOGO		-	-	-	-	-			-		-	-	
53729650	QUIZANGA	400.3	172.9	201.0	93, 5	69.5	56. 1	77.9	83.3	106.8	73.9	386.0		1,837.0
53189120	REALENGO	185. 2	90.3	79.1	159.7	57.8	54.1	46.7	119.4	111.4	25.2	99.9		1,070.9
53129470	SABOIA LIMA	342.6	118.5	113. 4	116.2	65.6	169.9	104.1	90.6	167.7	26.7	140.0		1,743.2
53129230	MORRO DO ENCONTRO	180.2	233.9	130.0	179.9	66.1	7.7	41.9	88.0	43.8	107.5	93.7	100.4	1,273.1
53329890	NILOPOLIS	-	2 T 1	-	-	-		-	· ·	•	-	-	-	-
53329780	NOVA IGUACU	177.5	138.8	91.2	66.4	41.1	15. 9	44.2	124.4	115.3	48.8	143.7	85. 5	1.092.8
53059550	PAQUETA	204.1	146.9	65, 7	77.1	56.4	47.4	28, 5	91.3	86.2	40.3	85, 9	209.3	1, 139, 1
53189990	PARADA DE LUCAS-DIN	168.8	118.0	128.2	110.2	57.8	15.7	34.6	95.7	78.8	34.1	131.7	124. 2	1,097.8
53729710	POSTO GARRAFAO	884.7	535.0	338.6	153.5	141.7	142.5	124.3	73.6	212.4	152. 1	385.4	495.8	3, 439. 6
53129220	PRACA ROCCO	214, 5	77.3	104.9	101.9	82.7	109.5	60.7	126.9	114.9	23.2	119.1	202.7	1,318.3
53039660	ILHA DO GOVERNADOR	229.5	98.0	90.4	74.8	37.6	22.6	31.3	75.8	85.4	28, 9	103.3	183.6	1.061.2
53189940	IRAJA	184.8	89.7	126.1	93.1	54.3	42.5	44.5	95.1	103.8	29.0	178.9	211.8	1, 253, 6
53729195	JAPUIBA	318.1	298.0	147.9	102.0	77.5	42.4	91.6	99.7	110.3	100.3	271.8	307. 9	1,967.5
53129080	LEOPOLDO	208.1	71.8	77, 1	85.7	68.3	127. 2	75.3	101.5	132.6	25, 8	99.8	196.0	1.269.2
53159930	LOBO JUNIOR	192.0	110.9	98.5	103.4	52.1	41.0	47. 2	107.7	82.2	21.8	98. 5	234.5	1, 189. 9
53129440	COLEGIO REGINA COELI	-	-		-	-	-	-	-	-	-	-	-	-
53189320	COPEBA	201.3	78.9	58.9	151.6	50.1	42.1	57.7	104.0	113.5	27. 8	120.4	153.8	1, 160, 1
53119090	ELEV DE BOTAFOGO	-			_	-	_		-	-	-	-	-	-
53729870	ESCOLA UNIAO	255. 2	304.8	178. 2	80.4	59.3	71.9	104.4	84.3	89.4	88.6	238.7	186.4	1,741.6
53189370	FUNABEN	192.9	77.5	100.3	109.1	67.0	99.6	54.5	122.8	111.7	19.5	155. 2	175.3	1, 285, 4
53729420	FAZENDA SANTO AMARO	537.9	411.8	246.1	143.2	117.3	119.1	98. 2	99.8	179.4	129.2	418.4	508.6	3.009.0
53969220	NORTO FLORESTAL-HIT	199.7	125.6	102.2	69.1	60.0	68. 9	70.0	102.6	125.2	33.5	98.7	138.3	1, 189. 8
53569240	ANDORINHAS	460.4	434.2	204.9	96.8	80.5	145.7	184.5	97.5	133.4	101.1	257. 7	369.5	2,566.2
53539240	APOLINARIO	565.5	500.8	335.4	286.1	142.3	127.7	258. 2	119.2	220.3	212.0	469.3	366. 2	3.603.0
53149910	BENFICA	207.3	118.5	108.9	74.7	43.0	52.1	59.6	73.3	95. 2	32.7	111.4	151.6	1, 128. 3
53729120	CACHOEIRA DE NACACU	426.6	282.4	202.6	163.5	112.2	50. 2	154.8	107.4	134.3	155. 6	313.8	393.4	2, 496. 8
53139890	CAJU	_	1	-	-	_	-	-	-	_	-	-	-	-
53019550	CIDADE UNIVERSITARIA	-	-	-		-			-	-	-	-		_

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St. No	St. Name	JAR	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
53729323	SAMBAETIBA	133.5	56.8	15.0	47.6	19.8	38.9	24.3	103.4	67.6	29.4	11,	-	
53329560	SAO BENTO	- 1	-	-	-	T -				_	-			
53129910	SAO CRISTOVAO		-	-	-							-		
53189420	SAO JERONIMO	281.4	163.9	12.7	53. 2	89.4	3.0	26.2	39.7	82.5	74.7	116.5	191.1	1, 194, 4
5:769080	TANGUA	226.6	94.3	11: 8	139.9	45. 9	30.0	30.8	83.3	70.3		141.0		1.197.5
53329080	XEREM	334.3	163.0	105.1	232.0	23.8	68.2	59.9	141.1	87.4	171.1	210.3		2.019.2
53729520	FAZENDA COQUEIRO	544.1	114.7	126. 3	190.9	31.3	23.9	54.3	127.3	70.5		237.6		2.074.2
53769620	FAZENDA MACACU	-	-	-	-	-			-	-	_	-	-	5, 019. 2
531:9089	PRAIA DE BOTAFOGO	-	-	-	~		-		-	_	_	-		
5729650		290.9	109.5	37. 2	280. 9	11.7	63.1	34.5	100.3	81. 9	189.3	124.2		1.517.1
(3189120	REALENGO	186.8	139.6	30.2	131.7	35. 2	45.7	12.0	61.8	55. 9		136.8		1,023.2
53129470	SABOIA LIMA	192, 5	105.8	60.5	182. 2	27.4	71.8		119.5	104.1	230.5			1. 487. 9
53129230	MORRO DO ENCONTRO	270.3	92.1	95.7	31.1	150.3	5.1	111.7		119.1	81.9		66.4	1194.9
53329890	NILOPOLIS	-	-		-	÷								<del>                                     </del>
53329780	NOVA IGUACU	232.1	105.6	43.0	113.1	33.5	36.0	4.1	72.3	18. Z	116.5	159.1	299 0	1. 263. 5
53059550		181.3	118.6	40.9	85.0	19.5	29.9		70.3	73.6	83.5	92.5		1 115.3
53189990	PARADA DE LUCAS-DIN	248.4	157.4	33. 7	103.8	21.0	48.2	9. 2	36.0	64.3	124.5	134.4	127.6	
53729710	POSTO GARRAFAO	427. 1	121.8	62.5	342.7	46.8	62.9	107.7	221.1	181.3	317.0	251. 2		2.780.8
53129220	PRACA ROCCO	40.0	90, 1	43.4	189.6	28. 1	69.6	27.7	0.0		141.2	0.0	0.0	629.7
53039660	ILHA DO GOVERNADOR	163.0	63.6	23.0	160.5	16.6	27.1	9.3	32.8		120.5	158.7		972.7
52189940	IRAJA	248.9	157.2	37. 6	99.1	17.5	40.4	11.3	47.7	61.8	143.7	148.6	44	1. 121. 4
53729195	JAPUIBA	223.8	117.8	32. 2	215.2	20.6	60.6	30.2	119.9	88.0	128. 4	233.3		1.681.1
	LEOPOLDO	164.9	85. 2		178.4	27.8	71.8	42.2	92.8	86. 5	150.0	166. 4	127.9	
53159930	LOBO JUNIOR	212.3	117.4	35. 1	114.4	16.3	34.4	6,6	30.3	55.4	132.7	139.8	111.6	1,009.3
	COLEGIO REGINA COELI	+	-	+	-	-	· ·	-	_	-	-	-		
	СОРЕВА	205.2	111.5	30.4	124.5	26.0	52.8	12.6	63.6	53.0	124. 5	157.4	148.1	1, 109, 6
	ELEV DE BOTAFOGO	- '	-	-		-	-		: <b>-</b> :	-	-		-	-
53729870	ESCOLA UNIÃO	320.8	139, 9	28.0	235. 2	47.7	10.6	32. 2	114.8	57. 9	166.3	185.3	369. A	1.768.5
	FUNABEN	167. 2	12.9	29.7	98.9	24. 2	71.0	27. 5	56. 2	65. 6	118.4	212.3		1,078.2
	FAZENDA SANTO AMARO	428.0	95.5	38. 1	212.4	37.8	50.7	116.2	158.7	107.4	211.6	370.9		2. 220. 5
53969220	HORTO FLORESTAL-NIT	129.5	77.0	25. 2	124.1	35,0	58, 1	28.8	83. 1					1.064.3
	ANDORINHAS		268.0	134.3	258.9	31.1	85.4	65.7	130.3	65.1				2, 311. 0
		547.7	186.8	27. 5	283.2	57.0	143. 5	153.8	261.0	230.3		486.4		3, 116, 4
		141.0	71.3	36.6	162, 1	15.9	49. 3	12.9	36.4		153.1	137.4	108.5	
	CACHOEIRA DE NACACU	266.5	151.7	28.6	273.8	43.4	72, 3	47.5	97.9	101.6	122.3	291.5		2,063,7
53139890	CAJU	-	-	-	-		-	-		-	-			
53019550	CIDADE UNIVERSITARIA			-			-	-	-	-	-		-	
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Table 3-3 Monthly Normals of Precipitation (1977-1990)

S1, NO S. K. NABRE IBA PEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC TOTAL 53723325 SAMBATIBA - 0.0 - 35.1 0.0 6.4 65.3 26.2 0.0 54.8 229.7 253.4 - 53123956 SAO BENTO										5	/1301/				
S3179320   SAMBAT   IBA			JAN	FEB	MAR	I APR	MAY	1119	7 1111	AllC	922	OCT	NOU.	1 000	·
S3129160   SAO BERTO				0.0	1 -										
S319310   SAO CRISTOVAO			_	T -	-					60, 2	<del></del>		<del></del>	+	
S319420   SAO JERONIHO   78.5   3.4   55.7   69.8   19.9   52.0   0.3   5.5   9.4   110.3   85.6   196.6   705.0   5319400   TANGUM   152.7   58.1   101.0   173.4   9.2   15.6   67.6   64.1   8.0   90.3   152.2   421.2   1.305.4   5319300   TANGUM   360.2   253.2   185.2   151.2   81.9   47.6   76.0   102.0   53.6   151.8   300.3   658.5   2.421.2   1.305.4   131.3   132.7   13			-						<del> </del>	<del>  -</del>	<del> </del>	<del></del>	+	+	<del></del>
\$319890   TANGUA   152.7   \$6.1   10.0   175.4   9.2   15.6   \$7.5   \$6.1   10.0   \$705.5			78.5	3.4	53.7	89.8	10 0	52.0							
\$3319300   REBEN		TANGUA	162.7												
S3129320   PAZENDA COQUEIRO   322.1   414.4   241.2   163.1   103.0   40.8   74.4   61.3   34.5   142.1   211.5   546.0   2,365.0   53769520   PAZENDA MACACU		XEREM	360. 2												
S3193950   PAZENDA MACACU		FAZENDA COQUETRO													
S3119989   PRAÍA DE BOTAFOGO	53769620	FAZENDA MACACU				<del></del>						147. 1	7		
S3129120   REALENGO	53119089	PRAIA DE BOTAFOGO		-	_				<b>}</b>	<del>                                     </del>		ļ <u>-</u>	·	ļ	<del></del>
\$3189120   REALENGO	53729650	QUIZANGA	200.0	88 5	258 S	130 8				<del></del>	L				. I
S3129470   SABOIA LIMA	53189120	REALENGO													
S3129280   MORRO DO ENCONTRO	53123470	SABOLA LIMA													
S3228780   NOVA IGUACU   132.9   78.1   80.4   141.3   34.1   18.6   20.6   37.2   13.5   66.4   146.9   381.0   1.151.0	53129230	MORRO DO ENCONTRO							*******	<del></del>			+		1, 403.1
S3259780   NOVA IGUACU   132.9   78.1   80.4   141.3   34.1   18.6   20.5   37.2   13.5   66.4   146.9   381.0   1.151.0	53323890		1												
S3051550   PAQUETA   S6.1   S0.2   40.1   125.2   21.8		NOVA IGUACU	132 9	78 1											1
ST181P30	53059550	PAQUETA												381.0	1, 151.0
S3729710   POSTO GARRAFAO   S44.9   325.2   S32.7   294.4   38.4   38.1   93.0   89.0   130.8   185.7   281.3   605.8   3.159.3	53181990	PARADA DE LUCAS-DIN												-	-
S3129120	53729710	POSTO GARRAFAO												-	L
\$3033660   ILHA DO GOVERNADOR   72.6   47.1   58.3   114.2   5.7           53.63940   IRAJA   93.3   60.0   65.8   134.2   26.0   31.3   37.1   58.6   6.8   51.0   156.9   284.2   1.007.2   1.5729195   JAPUIBA   151.2   173.9   213.1   149.2   27.6   10.7   73.6   44.3   26.4   115.6   208.6   421.3   1.615.5   2315930   LEOPOLDO   85.9   20.5   122.3   159.5   27.8	53129220														3, 159, 3
S3.63940   IRAJA   93.3   60.0   65.8   134.2   28.0   31.3   37.1   58.6   6.8   51.0   156.9   284.2   1,007.2						I							F		
151.2   173.9   213.1   149.2   27.6   10.7   73.6   44.3   28.4   115.6   208.6   421.3   1,615.5									1	-		-			
39129080   LEOPOLDO															
\$3159930   LOBO JUNIOR   114,3   53,2   64,4   109,6   9,5													208.6	421.3	1,615.5
S3129440   COLEGIO REGINA COELI								~							
S3189320   COPEBA   120.7   27.2   128.6   155.6   26.3   20.8   23.9   64.4   8.9   60.0   76.7   340.1   1,059.2												-	-	*	-
S3119090   ELEV DE BOTAFOGO			·1												
\$\frac{53729870}{53189370} \text{ESCOLA UNIAO} & 198.0 & 95.0 & 111.9 & 105.0 & 13.1 & 10.3 & 58.0 & 84.6 & 31.2 & 96.0 & 241.4 & 537.5 & 1,582.0 \\ \$\frac{53729420}{53189370} \text{FUNABEN} & 91.0 & 19.1 & 107.0 & 126.2 & 54.5 & - & - & - & - & - & - & - & - & - &										64.4	8.9	60.0	76.7	340.1	1,059.2
S3189370 FUNABEN   91.0   19.1   107.0   126.2   54.5   5.5   5.8   54.5   5.8   5									~						-
\$3729420 FAZENDA SANTO AMARO 287. 0 252. 7 269. 4 190. 2 41. 4 24. 8 112. 5 93. 3 57. 3 195. 8 363. 5 672. 0 2. 559. 9 53969220 HORTO FLORESTAL-NIT 107. 6 58. 4 70. 3 106. 6 7. 2 24. 3 81. 4 84. 1 7. 9 62. 6 210. 0 254. 2 1.074. 6 5359240 ANDORINHAS 485. 1 194. 7 234. 8 143. 9 57. 7 47. 5 57. 3 92. 5 52. 4 123. 3 304. 2 1014 2.807. 4 53539240 APOLINARIO 395. 8 235. 3 312. 0 264. 3 43. 6 50. 4 132. 1 117. 7 79. 1 291. 0 355. 5 626. 6 2. 903. 4 53149910 BENFICA 62. 8 57. 8 110. 2 103. 5 11. 4 14. 0 42. 6 65. 3 6. 0 61. 9 150. 0 337. 5 1. 024. 0 53729120 CACHOEIRA DE NACACU 162. 7 130. 6 193. 4 188. 7 35. 5 12. 3 79. 6 47. 3 22. 3 123. 3 323. 2 553. 0 1. 871. 9 53019550 CIDADE UNIVERSITARIA												96.0	241.4	537.5	1,582.0
\$\frac{5369220}{53569240}\$\$ \text{HORTO FLORESTAL-NIT 107.6 \circ 58.4 \circ 70.3 \circ 106.6 \circ 71.2 \circ 24.3 \circ 81.2 \circ 39.3 \circ 57.3 \circ 195.8 \circ 363.5 \circ 672.0 \circ 2.559.9 \circ 53569240 \text{ ANDORINHAS}\$\$ \tag{485.1 \circ 194.7 \circ 234.8 \circ 143.9 \circ 57.7 \circ 47.5 \circ 57.3 \circ 92.5 \circ 52.4 \circ 123.3 \circ 304.2 \circ 1014 \circ 2.807.4 \circ 53539240 \text{ APOLINARIO}\$\$ 395.8 \circ 235.3 \circ 312.0 \circ 264.3 \circ 43.6 \circ 59.4 \circ 132.1 \circ 117.7 \circ 79.1 \circ 1291.0 \circ 335.5 \circ 626.6 \circ 2.903.4 \circ 53729120 \circ CACHOEIRA DE NACACU \circ 162.7 \circ 130.6 \circ 193.4 \circ 188.7 \circ 35.5 \circ 12.3 \circ 79.6 \circ 47.3 \circ 22.3 \circ 123.3 \circ 323.2 \circ 553.0 \circ 1,871.9 \circ 53139890 \circ CAJU\$											1				
\$3569240 ANDORINHAS		HORTO FLORESTAL-MIT													
\$3539240 APOLINARIO \$395.8 235.3 312.0 264.3 43.6 50.4 132.1 117.7 79.1 291.0 355.6 266.6 2.903.4 53149910 BENFICA 62.8 57.8 110.2 103.5 11.4 14.0 42.6 65.3 5.0 61.9 150.0 337.5 1.024.0 53729120 CACHOEIRA DE NACACU 162.7 130.6 193.4 188.7 35.5 12.3 79.6 47.3 22.3 123.3 323.2 553.0 1.871.9 53019550 CIDADE UNIVERSITARIA															
53149910 BENFICA 62.8 57.8 110.2 103.5 11.4 14.0 42.5 65.3 5.0 61.9 150.2 103.5 12.3 79.6 47.3 22.3 123.3 323.2 553.0 1.871.9 53019550 CIDADE UNIVERSITARIA		A	205 0	225 2	210.0										
53729120 CACHOEIRA DE NACACU 162.7 130.6 193.4 188.7 35.5 12.3 79.6 47.3 22.3 123.3 323.2 553.0 1.871.9 53019550 CIDADE UNIVERSITARIA	53149910	BENEICA													
53139890 CAJU															
53019550 CIDADE UNIVERSITARIA		CAJU		130.0	173.4		35.5			47. 3	22. 3	123.3			
								-			I				
		VILLE OF LEAST LAKEN		+											-
	<u> </u>										1				

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St. No	St. Name	JAN	FEB	MAR	APR	MAY	JUN	101	AUG	SEP	OCT	NOV	DEC	Total
53729320	SAMBAETIBA	246.8	72.3	163.8	32.8	15.8	4.2	64.2	24. 2	26.3		- "-	-	10(41
53329560	SAO BENTO	-	-	-	-			-	- 47.4		<del> </del>			
53129910	SAO CRISTOVAO		-	-	_	-	-		<del> </del>	<del></del>	<del> </del>	<del> </del>	-	
53189420	SAO JERONINO	218.7	136.9	- 52.3	97.5	85.4	15.6	9. 1	0.4	45.1	81.8	154.8	170 1	1.068.7
53769080	TANGUA	269.6	102. 2	242.4	99.9	39.5	34.4	85. 2	77.9	17. 2	136.2			1, 457. 3
53329080	XEREM	402.3	229. 2	337.7	224.2	40.5	17.1	99.8	134. 9	152.0	144.6			2, 329, 0
53729520	FAZENDA COQUEIRO	309.9	148.8	388. 9	261.7	21.5	52.4	65. 2	116.3	127.8	198.7			2. 216. 8
53769620	FAZENDA MACACU	-	-				- 70.1	-	114.0	167.0	1,70. 1	100.1	- 300.0	2. 210. 0
53119089	PRAIA DE BOTAFOGO	-	_			-					<u> </u>	<del>  </del>		
53729650	QUIZANGA	365.4	274.0	322.6	118.4	17.8	12.8	58.3	148.1	51.0	119.3	153.5		1. 981. 8
53189120	REALENGO	298.1	72.9	95.0	124.6	25.1	35.3	34.0	31.7	32.7	99.7	79.2		1. 204. 5
53129470	SABOIA LIMA	251.1	139.3	193.9	171.0	35. 2	32. 3	43.4	132.8	93.1	162. 9	86.4		1. 672. 0
	MORRO DO ENCONTRO	~	-	-		-	-	-		-	-102.3	00.4		., 012.0
	NILOPOLIS	-	-	: -		_			-					
	NOVA IGUACU	302.2	87.8	114.8	63. 2	26.5	15. 5	57. 8	80.9	21.7	70.9	89.2	273 Q	1, 204, 2
53059550		-	-	-			-	~				-	-	2, 601, 6
53189990	PARADA DE LUCAS-DIN	-						-					_	-
	POSTO GARRAFAO	388.9	145.6	647.7	234.6	64.8	137.2	69.9	222.5	278.9	197.0	159.2	518 1	3, 054, 4
	PRACA ROCCO	-			_		-		7777					-
53079680		-	-	-	_	_	-		-					
53183940	IRAJA	232.0	94.3	177. 1	78.3	20. 2	21.2	43.7	52.8	17.3	112.4	75.7	292 3	1.218.3
53729195	JAPULBA	332.7	224.3	283.0	110.2	35.7	45.9	100.9	108.2	39. 2	159.9	130.2		1.886.2
	LEOPOLDO	-	-	-			-		-		-	-	~	-
55153330	LOBO JUNIOR	-	-		- 1									_
53173140	COLEGIO REGINA COELI	-	-	-	-	-	-							-, -,
	COPEBA	227.4	82.6	105.6	97.6	24. 1	28.6	60.3	38.3	50.8	113.4	66.6	257 0	1. 152. 3
	ELEY DE BOTAFOGO											-	-	-
	ESCOLA UNIAO	378.8	162.5	292.8	191.5	23.9	27. 8	59.0	91.5	45.0	165.0	121.1	431.7	1. 991. 6
	FUNABEN	-	-	- 1	- 1	-								
53729420	PAZENDA SANTO AMARO	415.7	243.8	442.4	296.6	39.1	84.8	74.3	219.1	206.8	226.9	178.4	366.9	2. 794. 8
	HORTO FLORESTAL-NIT	269.0	45.9	154.7	77.9	29.3	21.1		81.3	24.4				1, 233, 4
	ANDORINHAS	371.9	255.8	367.6	217.4	30.3	74.6		174.0					2, 394. 6
	APOLIKARIO	390.0	271.0	429.5	263.3	67.7			219.4		318.3			2. 933. 2
53149910		208.1		153.7	149.6	26.4	26. 3	49. 7	67.4		140.7	56. 9		1,301.0
	CACHOEIRA DE NACACU	335.1	221.0	314.2	35.5	29.6	82.6	47.0	86.5		115.4	192.1		1.692.0
	CAJU	-	- 1	- 1		-	-	- 1						
53019550	CIDADE UNIVERSITARIA				-		-							
						-								

Table 3-3 Monthly Normals of Precipitation (1977-1990)

St. No.   St. Name	St. No	St. Nage	JAN	FEB	WAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	T VOU	7-75-	T-2
\$3329560   SAO BENTO			7711												
S3129910   SAO CRISTOVAO			-	<del> </del>			03.0	170.0	1 20	<del></del>	213.1	140.3	101.0	203.8	·
S319920   SAO JERONINO   51.1   114.0   125.7   37.5   187.7   .				<b>!</b>	<del></del>		-		<del> </del>	4		<del> </del>		ļ	
S3769808   TANGUA				114. O	195 7	37 5	197 7		<del></del>	I	<del></del>	<del> </del>	<u> </u>	<b> </b>	
S329088   XEREN   467.9   122.4   454.5   180.9   179.4   218.7   86.3   61.1   356.5   193.1   221.7   278.5   2.821.0   5379520   FAZENDA KOQUEIRO   194.4   185.6   388.0   161.7   153.8   237.0   71.4   39.9   350.1   165.1   210.3   299.7   2.417.0   5379520   FAZENDA KOCCU								L/				102 1			
S37299520   FAZENDA COQUEIRO   194.4   165.6   368.0   161.7   153.8   237.0   71.4   39.9   350.1   165.1   210.3   299.7   2.417.0															
S3769820 FAZENDA MACACU															
S3119089   PRAIA DE BOTAFOGO							100:0	201.0			330. 1	105.1			2.411.U
\$31292650   QUIZANCA   \$340.2   \$192.9   \$362.8   \$163.1   \$87.7   \$199.7   \$68.1   \$37.5   \$235.0   \$154.5   \$201.3   \$389.6   \$2.32.4   \$53189120   REALENGO   \$188.8   78.0   \$301.8   \$86.8   \$67.8   \$136.6   \$52.7   \$28.9   \$206.4   74.5   \$123.8   \$176.1   \$1.522.2   \$53129230   NURRO DO EKCONTRO   \$100.1   \$100.1   \$69.1   \$344.3   \$115.1   \$111.9   \$180.4   \$52.2   \$56.7   \$25.2   \$124.7   \$119.3   \$187.2   \$1.696.2   \$3329930   NULROPOLIS   \$1.5329390   NULROPOLIS   \$1.532						<del> </del>						<del> </del>		<del></del>	
S3189120 REALENGO				102 0		163 1	97 7	100 7		27 6	225 0	ica e		200 6	D 100 1
S3129470   SABOIA LINA   110.1   69.1   344.3   115.1   111.9   180.4   52.2   56.7   225.2   124.7   119.3   187.2   1.696.2															
S3129230   NORNO DO ENCONTRO															
53329890   NILOPOLIS   157.   115. 3   285. 6   102. 1   90. 5   150. 0   51. 4   37. 4   186. 3   102. 3   88. 4   277. 5   1.643. 9   1.643				<del></del>	V	·	·	.00.4	. UL. E				· · · · · · · · · · · · · · · · · · ·	101.2	1.090.2
\$3329780   NOVA   GUACU   157.1   115.3   285.6   102.1   90.5   150.0   51.4   37.4   185.3   102.3   88.4   277.5   1.643.9								-		<del></del>				<del></del> -	
\$3189980 PARADA DE LUCAS-DTN								150 A	51 4	37 /					L
S318990   PARADA DE LUCAS-DIN			-		200.0				- 01. 4	01.7			00.3		1. 043. 9
S3729710   POSTO GARRAFAO   229.8   339.9   531.7   256.8   211.4   243.3   32.4   59.6   434.0   246.1   189.4   319.2   3.143.6   53129220   PRACA ROCCO							<b></b>								
\$3129220 PRACA ROCCO 53039560 ILBA DO GOVERNADOR			229.8	339 9	531 7	256.8	211.4	243 9	92.4	<u> </u>	434 0	246 1	100 4		2 145 C
\$3189360   LUNA DO GOVERNADOR		PRACA ROCCO		3000		-			~~~		101. 0				0. 149. 0
\$\frac{33189940}{53729195}\$\$ \frac{1814}{JAPUIBA}\$\$ \frac{166.4}{164.6}\$\$ \frac{21.7}{14.9}\$\$ \frac{287.2}{280.0}\$\$ \frac{2}{182.2}\$\$ \frac{78.7}{136.0}\$\$ \frac{99.4}{99.4}\$\$ \frac{49.5}{49.5}\$\$ \frac{231.9}{231.9}\$\$ \frac{66.5}{66.5}\$\$ \text{ 197.1}\$\$ \text{ 191.2}\$\$ \text{ 1.607.8}\$\$ \frac{53729195}{53129980}\$\$ \text{ LEOPOLDO}\$\$\$					19 14 1										<del></del>
53129980 LEOPOLDO			166. 4	21.7			78.7		8 00					101 0	1 007 6
\$3129080 LEOPOLDO	53729195	JAPUIBA													
S315930   LOBO JUNIOR	53129080	LEOPOLDO	-				-		-	-	- 10-1	100.0	192.1	005.0	
S3129440   COLEGIO REGINA COELI	53159930	LOBO JUNIOR	-	-	-	-									
\$\frac{53189320}{53189320}\$ COPEBA \$\frac{133.4}{53119990}\$ \$\frac{124.5}{62.6}\$ \$\frac{130.4}{62.7}\$ \$130.4	53129440	COLEGIO REGINA COELI	-			-									
\$\frac{53119990}{53729870}\$ \text{EEV DE BOTAFOGO} \tag{263.7}\$ \text{121.5}\$ \text{341.8}\$ \text{137.2}\$ \text{99.2}\$ \text{164.7}\$ \text{69.5}\$ \text{33.5}\$ \text{261.3}\$ \text{127.6}\$ \text{2.194.5}\$ \text{333.1}\$ \text{4.147.6}\$ \text{53189370}\$ \text{FUNMBEN}\$ \$\text{53189370}\$ \text{FUNMBEN}\$ \$\text{53729420}\$ \text{FAZENDA SANTO ANARO}\$ \text{275.1}\$ \text{295.2}\$ \text{350.7}\$ \text{180.4}\$ \text{153.3}\$ \text{274.7}\$ \text{67.6}\$ \text{68.6}\$ \text{68.6}\$ \text{386.9}\$ \text{191.1}\$ \text{217.6}\$ \text{348.4}\$ \text{2.899.6}\$ \text{53369220}\$ \text{HORTO FLORESTAL-NIT}\$ \text{91.7}\$ \text{27.2}\$ \text{287.5}\$ \text{99.7}\$ \text{81.9}\$ \text{172.5}\$ \text{54.4}\$ \text{57.4}\$ \text{57.4}\$ \text{224.3}\$ \text{107.9}\$ \text{145.8}\$ \text{170.8}\$ \text{1.521.1}\$ \text{53539240} \text{APOLINARIO}\$ \text{322.8}\$ \text{332.8}\$ \text{354.4}\$ \text{507.3}\$ \text{178.7}\$ \text{191.7}\$ \text{70.3}\$ \text{37.0}\$ \text{330.2}\$ \text{156.2}\$ \text{160.7}\$ \text{752.4}\$ \text{2.831.4}\$ \text{53149910}\$ \text{BENFICA}\$ \text{117.7}\$ \text{14.9}\$ \text{328.9}\$ \text{38.4}\$ \text{47.7}\$ \text{70.8}\$ \text{155.2}\$ \text{251.1}\$ \text{53139890}\$ \text{CACHOEIRA DE NACACU}\$ \text{136.7}\$ \text{141.5}\$ \text{70.9}\$ \text{190.3}\$ \text{54.0}\$ \text{24.2}\$ \text{301.6}\$ \text{134.1}\$ \text{247.0}\$ \text{313.4}\$ \text{247.0}\$ \text{313.4}\$ \text{2042.3}\$	53189320	COPEBA	133. 4	100.0	286.3	88. 7	65, 6	130. 4	52.3	33.4	188.0	80.6	114 1	171 2	1 444 4
S3189370   FÜNABEN	53119090	ELEY DE BOTAFOGO		1,500.0							100.0	00.0	114.1	311.3	1. 444. 4
\$ \begin{array}{c ccccccccccccccccccccccccccccccccccc	53729870	ESCOLA UNIÃO	263. 7	121.5	341.8	137. 2	99. 2	164.7	69. 5	33.5	261. 3	127.6	2 194 5	333 1	1 147 6
53729420   FAZENDA SANTO ANARO   275. 1   295. 2   350. 7   180. 4   153. 3   274. 7   67. 6   68. 6   386. 9   191. 1   217. 6   348. 4   2,809. 6   53969220   HORTO FLORESTAL-NIT   91. 7   27. 2   287. 5   99. 7   81. 9   172. 5   54. 4   57. 4   224. 3   107. 9   145. 8   170. 8   1,521. 1   53569240   ANDORINHAS   332. 8   354. 4   507. 3   178. 7   159. 7   191. 7   70. 3   37. 0   330. 2   156. 2   160. 7   352. 4   2.831. 4   53339240   APOLINARIO   329. 9   186. 0   408. 9   233. 7   203. 9   251. 7   75. 0   80. 2   476. 0   247. 3   205. 0   452. 6   3,150. 2   53149910   BENFICA   117. 7   14. 9   328. 9   89. 4   77. 7   166. 5   46. 1   40. 5   171. 5   67. 1   133. 4   151. 7   1.405. 4   15339890   CACHOEIRA DE NACACU   136. 7   187. 4   241. 2   141. 5   70. 9   190. 3   54. 0   24. 2   301. 6   34. 1   247. 0   313. 4   2.042. 3   53139890   CADUSTINARIO   136. 7   187. 4   241. 2   141. 5   70. 9   190. 3   54. 0   24. 2   301. 6   34. 1   247. 0   313. 4   2.042. 3   2301.6   247. 0   313. 4   2.042. 3   2301.6   247. 0				-		- ,							154.0	000.1	1. 1.1.0
53969220         HORTO FLORESTAL-RIT         91.7         27.2         287.5         99.7         81.9         172.5         54.4         57.4         224.3         107.9         145.8         170.8         1.521.1           53569240         ANDORINHAS         332.8         354.4         507.3         178.7         159.7         191.7         70.3         37.0         330.2         156.2         160.7         352.4         2831.4           53539240         APOLINARIO         329.9         186.0         408.9         233.7         203.9         251.7         75.0         80.2         476.0         247.3         205.0         452.6         3.150.2           53149910         BENFICA         117.7         14.9         328.9         89.4         77.7         166.5         46.1         40.5         171.5         67.1         133.4         151.7         1.405.4           53729120         CACHOEIRA DE NACACU         136.7         187.4         241.2         141.5         70.9         190.3         54.0         24.2         301.6         134.1         247.0         313.4         2.042.3           53139890         CADU         CADUS         187.4         241.2         141.5         70.9			275. 1	295. 2	350.7	180.4	153. 3			68.6	386. 9	191. 1	217.6	348 4	2 209 6
53569240         ANDORINHAS         332.8         354.4         507.3         178.7         159.7         191.7         70.3         37.0         330.2         156.2         160.7         352.4         2.831.4           53539240         APOLINARIO         329.9         186.0         408.9         233.7         203.9         251.7         75.0         80.2         476.0         247.3         205.0         452.6         3.150.2           53149910         BENFICA         117.7         14.9         328.9         89.4         77.7         166.5         46.1         40.5         171.5         67.1         133.4         151.7         1.405.4           53139890         CAJU         CAJUSTONIA         -<															
53539240 APOLINARIO 329.9 186.0 408.9 233.7 203.9 251.7 75.0 80.2 476.0 247.3 205.0 452.6 3.150.2 53149910 BENFICA 117.7 14.9 328.9 89.4 77.7 166.5 46.1 40.5 171.5 67.1 133.4 151.7 1.405.4 53729120 CACHOETRA DE NACACU 136.7 187.4 241.2 141.5 70.9 190.3 54.0 24.2 301.6 134.1 247.0 313.4 2.042.3 53139890 CAJU		ANDORINHAS	332. 8	354.4											
53149910 BENFICA 117.7 14.9 328.9 89.4 77.7 166.5 46.1 40.5 171.5 67.1 133.4 151.7 1.405.4 53729120 CACHOEIRA DE NACACU 136.7 187.4 241.2 141.5 70.9 190.3 54.0 24.2 301.6 134.1 247.0 313.4 2.042.3 53139890 CAJU			329. 9	186.0											
53729120 CACHOETRA DE NACACU 136. 7 187. 4 241. 2 141. 5 70. 9 190. 3 54. 0 24. 2 301. 6 134. 1 247. 0 313. 4 2.042. 3 5313999 CAPU															
53139890 CAPU			136.7	187. 4	241. 2	141.5									
530:9550 CIDADE UNIVERSITARIA			-		-	-	•	-		-					
	53019550	CIDADE UNIVERSITARIA	-		-				•					-	<del></del>
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33129320   SANBARTIBA   68.0   49.8   140.3   112.2   14.9   19.6   61.7   32.7   35.0   113.3   194.3	St. No	St. Name	JAH	FEB	MAR	APR	MAY	JUN	JUI.	AUG	SEP	OCT	NOV	DEC	Total
33129910 SAO ZEISTOVAD	53729320	SAMBAETIBA	68.0	49.8		*****									
S3169420   SAO JERONINO	53329560	SAO BENTO		-				-							_
S3759080   TARGUA	53129910	SAO CRISTOVAO	-	-	-	-		_	-	-					
33129080 XEREM 185.9 65.2 172.7 140.7 126.4 33.1 20.7 91.9 61.5 120.8 201.1 244.1 1, 464.1 33128520 FAZENDA COQUEIRO 151.4 72.8 289.6 149.1 79.2 34.5 50.2 108.0 69.7 76.7 247.3 313.3 1, 642.8 33169520 FAZENDA MACCU	53189420	SAO JERONIMO	-	-	-		-	-	~ :	-					
\$3329080   XEREM	53769080	TANGUA	102.0	5, 2	144.5	115.6	133.5	21. 6	23.8	23. 2	39.8	61.9	135.8	102.4	910 3
S312940   FAZENDA COQUEIRO   161. 4   72. 8   289. 6   149. 1   79. 2   34. 5   50. 2   108. 0   60. 7   76. 7   247. 3   313. 3   642. 8   33169520   FAZENDA MACACU	53329080	XEREM	185.9	65.2	172.7	140.7									
S3198920   PAZENDA MACACU	53729520	FAZENDA COQUEIRO	161.4	72.8	289. 6	149.1	79. 2	34.5	50. 2						
\$3729850   QUIZANGA   \$217.0   \$18.4   \$172.2   \$3.9   \$125.9   \$21.0   \$16.8   \$78.8   \$19.4   \$95.6   \$197.9   \$22.4   \$1,269.3   \$3189120   REALENGO   \$109.6   \$0.0   \$125.7   \$52.7   \$104.2   \$1.5   \$14.7   \$29.8   \$29.3   \$52.5   \$45.9   \$67.2   \$643.1   \$3129470   \$33129470   \$34010   \$LIMA   \$78.3   \$1.0   \$185.5   \$122.1   \$67.3   \$7.5   \$75.7   \$85.4   \$46.7   \$67.0   \$64.2   \$74.9   \$895.7   \$33129230   MORRO DO ENCONTRO   \$	53769620	FAZENDA MACACU	-	-	-		-								
S3189120   REALENGO   109.6   0.0   125.7   62.7   104.2   1.5   14.7   29.8   29.3   52.5   45.9   67.2   643.1	53119089	PRAIA DE BOTAFCCO	-	-	-			-	-						
S318970   REALEMOO   109.6   0.0   125.7   82.7   104.2   1.5   14.7   29.8   29.3   \$2.5   45.9   67.2   643.1	53729650	QUIZANGA	217.0	18.4	172. 2	83. 9	125. 9	21.0	15.8	78.8	13.4	95. 6	197.9	222.4	1. 259. 3
SAB12470   SABOIA LIMA   78.3   1.0   185.5   122.1   67.3   7.6   75.7   85.4   46.7   67.0   84.2   74.9   895.7	53189120	REALENGO	109.6	0.0	125. 7	52.7	104.2		14.7	29.8	29.3				
S3129230   MORRO DO ENCONTRO	53129470	SABOIA LIMA	78, 3	1.0	185.5	122.1	67.3	7.6							
\$3329780 NOVA IGUACU	53129230	MORRO DO ENCONTRO		-		-				***************************************					
S3059550   PAQUETA	53329890	NILOPOLIS	-	-	-	-	_		-	-	_	· -		- <del>-</del> -	-
S3189990   PARADA DE LUCAS-DTN			181.6	1.2	160. 9	65.4	99.2	6.8	13.5	31.2	35.7	26.4		124.8	-
S3729710   POSTO GARRAFAO   228.5   91.8   385.2   189.1   146.1   64.3   73.5   166.1   81.8   177.3   387.5   452.4   2.443.6   53129220   PRACA ROCCO		PAQUETA	-	_	-	-	-	+			-		-		
\$312920 PRACA ROCCO		PARADA DE LUCAS-DIN	-	-	-	-		-	-	-	-	-	-	-	-
STATES   STATE   STA			228.5	91.8	\$85. 2	189.1	146.1	64.3	73.5	166.1	81.8	177.3	387.5	452.4	2. 443. 6
S3189340   IRAJA   125.6   1.7   113.2   71.8   87.8   4.2   8.4   38.8   41.5   41.1   0.0   56.2   590.4	53129220	PRACA ROCCO	-	-	-	-	-	-	-	-	-	-	-	_	-
S3729195   JAPUIBA   158.2   55.6   173.9   161.3   94.5   19.7   43.3   82.8   19.7   65.8   132.9   151.8   159.5			-	-	-	*	-		-	-		-		_	_
\$3729195   JAPUIBA	53189940	IRAJA	125. 6	1.7	113. 2	71.8	87.8	1.2	8.4	38.8	41.5	41.1	0.0	56. 2	590.4
S3129080   LEOPOLDO	53729195	JAPUIBA	158. 2	55.6	173, 9	161.3	94.5	19.7	13.3	82.8		65.8	132.9	151.8	
S3129440   COLEGIO REGINA COELI	53129080	LEOPOLDO	+	-	-	-	-	147	-		_	+	-		
\$\frac{53189320}{53119990} \text{COPEBA} \text{ 67.8 } 0.2 \text{ 104.5 } 78.7 \text{ 101.8 } 1.9 \text{ 7.4 } 29.6 \text{ 31.0 } 22.1 \text{ 0.0 } 55.7 \text{ 520.7 } 520.7 \text{ 53119990 } ELEV DE BOTAFOGO	53159930	LOBO JUNIOR	-	-		-	-	-	1		-	_	-	-	-
S3119090   ELEV DE BOTAFOGO			-	-;	-	-	-	-	-	-,		-	-	-	,-
\$\frac{53729870}{53169370}\$ \begin{array}{c ccccccccccccccccccccccccccccccccccc			87.8	0. 2	104:5	18.7	101.8	1. 9	7.4	29.6	31.0	22. 1	0.0	\$5.7	520.7
\$3189370 FUNABEN			~	-	-	- :	-	-	1	-	-	-	-	-	-
\$\frac{53729420}{53729420}\$ FAZENDA SANTO AMARO			190.4	34. 9	118. 3	124.3	101.3	19. 2	23. 1	59. 3	26.5	8. 4	21.7	208.0	936.0
\$3969220 HORTO FLORESTAL-NIT 82.7 6.4 85.1 87.6 91.0 32.3 25.2 45.0 46.6 1.1 30.5 81.2 612.7 \$3569240 ANDORINHAS 255.1 60.6 266.7 149.2 121.5 32.0 33.4 97.9 33.1 143.1 213.6 311.5 1,717.7 \$3539240 APOLINARIO 292.7 115.4 337.5 246.3 108.5 65.0 84.6 205.9 90.6 272.5 332.0 445.3 2,594.3 \$314910 BENFICA 116.5 0.0 95.9 75.1 80.2 3.2 28.7 32.5 37.2 48.7 0.0 60.8 577.8 \$3729120 CACHOEIRA DE NACACU 150.3 35.7 182.4 184.5 75.4 0.7 53.6 92.6 37.8 122.9 104.1 242.7 1,282.7 \$3139890 CAU				-			-	-	-	-	-	.= 1	-	-	-
\$3569240 ANDORINHAS				95.6	342. 6	273.1	136. 2	52.0	42.2	146.6	59.6	167.7	280.0	437. 3	2, 173. 3
\$3559240 ANDORINHAS				5.4	85.1	87.6	91.0	32. 3	25. 2	43.0	45.6	1.1	30, 5	81.2	612, 7
\$3149910 BENFICA 118.5 0.0 93.9 75.1 80.2 7.2 28.7 32.5 37.2 48.7 0.0 60.8 577.8 53729120 CACHOEIRA DE NACACU 150.3 35.7 182.4 184.5 75.4 0.7 53.6 92.6 37.8 122.9 104.1 242.7 1,282.7 53139890 CAU							121.5	32.0	33.4	97. 9	33. 1	143.1	213.6	311.5	
\$3729120 CACHOEIRA DE NACACU 150.3 35.7 182.4 184.5 75.4 0.7 53.6 92.6 37.8 122.9 104.1 242.7 1,262.7 53139890 CAJU				115.4	337. 5	246.3	106.5	65.0	84. 6	205. 9	90.6	272.5	332.0	145.3	2, 594. 3
SOLORE CAND				0.0		75.1	80.2	2, 2	28.7	32.5	37. 2	48.7	0.0	60.B	577.8
53139890 CANU			150.3	35.7	182.4	184.5	75.4	0.7	53. 6	92.6	37.8	122.9	104.1	242.7	1, 282. 7
53019550 CIDADE UNIVERSITARIA			-		1		-	-	. ~	-	-		-	-	•
	53019550	CIDADE UNIVERSITARIA	_		-		-	-			-		-	-	•
	<u> </u>														

able 3-3 Monthly Normals of Precipitation (1977-1990)

CASAGORA L T	St. Name	JAN												
CASAGORA L T			FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	001	NOV	DEC	Total 1, 679, 5
COACOFFO IC	ANBAETIBA	355. 3	172.6	216. 7	228.5	119.9	43.4	13. 9	63. 3	96. 4	73. 2	108.8	187. 5	1. 619. 5
53329560 SA	AO BENTO			-										
53129910 SA	AO CRISTOVAO								.*		-			
53189420 SA	AO JERONINO	-		• 11	-	- 1	- :				-			
53769080 TA	ANGUA	271.8	119.9	227. 9	224.8	95. 7	69. 8	24.6	63. 3	128. 9	73. 7	120. 1	191.5	1.612.0
53329080 XE	EREN	546.4	423.7	328. 7	224.6	138.0	33.0	11.9	75.8	197. 5	260. 1	262. 9		
53729520   FA	AZENDA COQUETRO	682. 5	307.6	273. 2	263. 3	132.6	30. 5	16. 2	89.0	247.6	91.0	320. 7		2, 710, 9
53769620 FA	AZENDA WACACU	: •.	•	-										
53119089 PF	RATA DE BOTAFOGO	-	-		-1									
53729650 QL	ULZANGA	473.8	380. 1	225. 1	337.0	121.3	26. 3	13. 2	66. 3	162. 4	131.8	237. 3		2, 339, 1
53189120   RE	EALENGO	264. 5	223. 4	128. 2	126.6	74.0	22.3	2. 3	44.0	127. 5	41.1	61.3		1, 301.8
53129470 SA	ABOLA LINA	269.5	214. 4	241.9	157.1	126.6	77.4	38.6	55. 1	163. 5	61.0	168.7	258.1	1.831.9
53129230 NO	ORRO DO ENCONTRO		. 14	- 1	-						•			
53329890 N	ILOPOLIS	T - 1.		· +, :		•	-		- 11	•	-			-
53329780 NO	OVA IGUACU	375. 1	235. 0	203. 1	79. 7	101.2	7.1	0.0	50. 2	-	-	-		
53059550 PA	AQUETA				,									<u> </u>
53189990 PA	ARADA DE LUCAS-DIN	٠.	-	٠	- 1					-				
53729710 P	OSTO GARRAFAO	697. 1	362. 2	256. 7	313.4	185. 3	33. 9	27. 1	87. 5	224. 1	192. 5	418.9	199.8	2. 998. 5
53129220   PA	RACA ROCCO	- :			-		-	-	-					
53039660 11	LIIA DO GOVERNADOR		-	<u>- 11</u>				-				<u> </u>		
53189940   11	RAJA	229. 5	358.8	178.2	71.9	59. 9	31.0	12.8	47.6	248.5	10.8	54.4	184.5	1. 487. 9
53729195 1	APULBA	374. 2	203. 9	199.4	180. 7	153.4	38.0	21.7	54. 7	115.9	109. 2	172.8	102. 9	l. 726 8
53129080 LI	EOPOLDO	-		<u> </u>	-	•	-	-	: -	<u> </u>	<u> </u>	<u> </u>		~
	OBO JUNIOR	-	-	- :	: -		-					<u> </u>	-	
53129440 CO	OLEGIO REGINA COELI	•	-	:	-									
53189320 C	OPEBA	305.7	215.4	72.5		*	-					<u> </u>		
53119090 E	LEV DE BOTAFOGO	٠	- :					-					100 5	0.000
53729870 E	SCOLA UNIAO	423.6	471.1	297. 1	180.6	144. 4	28. 3	10.3	71.1	203. 4	147.0	208. 3	162.7	2. 347. 9
53189370 F	UNABEN	-	<u> </u>											2 000 0
53729420 F	AZENDA SANTO ANARO	669.5	300. L	344.7	260. 1	182.7	41.6	13. 2	59.8	192.8	57. 2	377. 0		2.669.0
53969220 H	IORTO FLORESTAL-NIT	301.5	182. 1	101.5	116.6	75. 2	52.7	9. 0	35.9	0.0	0.0	81.2		1. 155. 6
53569240 A	ANDORINHAS	524. 2	390.5	274 3	275. 9	43.5	24.2	16. I	85.5		215.6	312.1		2.554.8
53539240 A	UPOLINARIO	746.8	389. 3	296.2	235. 5	194.0	95. 5	60. 9	133.6		233. 5	427.6		3. 283. 8
	BENFICA	211.9	224. 3	140.7	78. 9	57. 2	53.5	12.5	45. 2	91.8	30.4	59.1		1, 189. 9
53729120 C	CACHOETRA DE NACACU	513.3	282. 5	299. 3	217.8	201.4	44.0	40.6	66.3	114.9	126. 1	212.7	114.6	2. 233. 5
	CAJU							-		<u> </u>	<u> </u>		ļ <u>-</u>	
53019550 C	IDADE UNIVERSITARIA	-		<u> </u>				-	ļ <u>-</u>	ļ <u>-</u>				
				!	<u> </u>		<u> </u>	<u> </u>	<u> </u>	<u>!</u>	L		<u> </u>	L

(1986)

St. No	St. Name	JAN	1 FEB	MAR	I APR	1 12117	7	7						
53729320	SAMBAETIBA	302.3		199.6	131.3	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
53329560		302.3	200.0	133.0	131.3	57.8	41.8	<u> </u>	40.7	63.7	56.7	+	197.7	
53129910	SAO CRISTOVAO		<del> </del> -	<del> </del>	<del>  -</del> -	<del></del>	<del>                                     </del>	<del>  -</del> -	50.4	ļ <del>.</del>	26.8	50.7		
53189420	SAO JERONIMO		<del></del>	<del>  _</del>	<del>                                     </del>	<del>  -</del>	<del> </del>	<u> </u>	<del> </del>	<u> </u>	<del>  -</del> -	<u> </u>		-
53769080	TANGUA	145.1	300.3	188.4	129.9	5.8	<del> </del>		-	ļ <u>-</u>		-		. <b>-</b> .
53329080	XEREM	154.0	280. 9	241. 0	269.8	61.2	42.3	84.4	37.1	54.6	55.0	-	278. 3	1, 423.1
53/29520	FAZENDA COQUEIRO	312.4	233.8	207. 4	228.6	38.6	33.3	131.3	85.6		<del>  -</del>	123.8	<u>  - </u>	
53769620	FAZENDA MACACU	- 415.7		201.4	220.0	30 6	22.8	159.3	72.7	150.9	120.7	99.7	494.6	2, 141, 5
53119089			<del> </del>	<del> </del>	<del> </del>		- <u>-</u> -		<del></del>	<del> </del>	<del> </del>	<u> </u>		
53/29650		266.4	228.7	152. 2	165.7	44.2				ļ	<u> </u>	<del>  -</del>	<u> </u>	
5:189120		50.5	299.4	187.7	96.8	22.4	22.5	91.5	43.2	96.1	103.0	117.5	229.0	
5-129470	SABOIA LIMA	42.1	221.6	203.3	266.7		28.8	78. 1	46.3	60.0	33.7			1, 203.8
5:129230	MORRO DO ENCONTRO	- 35. 4	261.0	203.3	200.7	41.5	30.6	223.1	57.8	176.8	67.2	72.3	316.5	1, 719.7
13329890	NILOPOLIS	<del> </del>			<u> </u>	-			<del></del>			ļ <u>-</u> -	-	<u> </u>
55329780		129.1	286.8	183.8	83.5	28.1			46.7	59.4	35.2	27.2	196.7	
53059550		1		100.0	03.3	_ 20. 1	22.6	84.4	44.0	67.8	20.2	65.0	237.3	1, 252.6
53189990	PARADA DE LUCAS-DIN	-								-			-	-
53729710	POSTO GARRAFAO	308.4	333 3	257. 2	256.3	70.2	48.8							-
53129220		-			130.3	10.6	40.0	241.6	107. 7	262.6	136.1	177.3	604.7	2,804.2
53039660	ILHA DO GOVERNADOR	-					<del></del>			<u> </u>			-	
53189940		100.4	195.0	172.7	142.3	19.1	37.8	80.4				-	-	-
53729195	JAPUIBA	259.9	266.5	213.7	199.2	32.3	30. 2	63.2	44.2	82.6	33.2	41.8		1, 162.6
53129080	LEOPOLDO				- "		30.8	- 03. 4	48.0	94.9	62.1	101.5	278.4	1,649.9
53159930	LOBO JUNIOR		- 1					<del></del>			-	-	-	
53129440	COLEGIO REGINA COELI										- '	-		
53189320	COPEBA	7 - 1										-	-	~
	ELEY DE BOTAFOGO													
	ESCOLA UNIAO	238.6	194.2	266.1	133.5	37. 2	34.7	80.3	55.1	108.7	75. 4	-		
53189370		- 1			~				33.11	100.1	15.1	83.0	365.0	1,671.8
	FAZENDA SANTO AMARO	428.2	289.5	240.8	211.1	36.5		152.9	73.5		136.3	231.3		
53969220	HORTO FLORESTAL-NIT	46.8			137.1	28.0		134.9	12.3	41.6	54.4		491.0	
	ANDORINHAS	326.7				117.7	-	174.2			142.3	55.5	185.5	983, 8
	APOLINARIO	104.5			288.1	61. 1		110.7			129.3			2,276.0
	BENFICA				177.8	15. 2	20.8	56.0	39.0	55.3	20.8		488.9	
	CACHOEIRA DE NACACU				101.0	21.4	43.7	66.8					173.0	
53139890	CAJU		-						43.3	110.3	103. 3		403.9	. 746.5
53019550	CIDADE UNIVERSITARIA		- 1	- 1			+							
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Table 3-3 Monthly Normals of Precipitation (1977-1990)

<u> </u>	<del></del>					·	ويمدسهم بيماعك	<del></del>						
St. No.	St. Name	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	oct	NOV	DEC	lotal
53729320	SAMBAETIBA	200.0	304.1	133. 5	228. 7		-	11.0	52.2	86. 2	75.5	69.9	253. 8	
53329560	SAO BENTO	250. 7	215.4	128.7	207. 4	88.8	90. 2	12.9	39. 1	104.0	90.4	35. 2	285. 5	1.548.3
53129910	SAO CRISTOVAO				ــــــــــــــــــــــــــــــــــــــ	-				- :		-	T -	-
53189420	SAO JERONINO	_								-	1		-	
53769080	TANGUA	175. 2	211.2	112. 4	208. 7	108.3	145. 0	12.5	37. 8	75.8	83.8	62.3	249.0	1, 482, 0
53329080	XEREN		240.8	165. 1	271.4	146.5	182.7	24.4	99.8	206.4	-	1	430.9	
53729520	FAZENDA COQUETRO	239.8	288.2	200.6	227. 8	107.6	102. 2	21.6	56.8	183. 4	149.1	146.2		2.059.2
53769620	FAZENDA MACACU		-	-	-	-	-			-	1,1,1,1	7.13		1
53119089	PRATA DE BOTAFOGO	Ţ				-	+ ;	-			-	-	-	1.0
53729650	QUIZANGA	300.0	289.8	148. 3	201.8	31.6	40.8	7.5	55. 4	104.0	110.4	113.6	258. 2	1.661.4
53189120	REALENGO	249. 5	69. 1	77. 1	277.5	88.2	75. 5	29.3	18. 1	73.8	95.8	58. 2		1, 239, 7
53129470	SABOIA LINA	206.3	152.3	81.6	223.8	113.9	168. 3	40.0	55. 0	161.6	119.1	84. 1		1. 540. 7
53129230	MORRO DO ENCONTRO	-					-				1		1071	- × · · · ·
53329890	NILOPOLIS	106.4	90.9	114.5	258.9	66. 8	79.4	21.5	21. 8	94. 9	89. I	59. 2		1, 152, 9
53329780	NOVA IGUACU	348.4	192.7	136. 9	249.6	62, 1	53. 7	18.7	22. 5	103.3	69.8	38.1		1. 546. 2
53059550	PAQUETA	-	-	-			- 001		-	100.0	- 00.0	00.1	200.4	1. 010. 2
53189990	PARADA DE LUCAS-DIN		-:			-	-				<del></del>	<del> </del>		
53729710	POSTO GARRAFAO	149. 9	200.1	315.5	264. 2	145. 9	109.4	32. 3	111.9	212. 9	220.8	318.0	379. 4	2, 460, 3
53129220	PRACA ROCCO			-		-	7.00.1		111.0		0.03	710.0	010.4	C. 400. 0
53039660	ILHA DO GOYERNADOR													
53189940	IRAJA	253. 7	152. 1	74.8	213.0	65. 8	118.7	24.6	33. 5	102.5	29.8	33. 5	5.0	1, 107, 0
52729195	JAPUIBA	343.6	289. 4	146.5	99. 4	98. 1	100.6	11.6	47. 9	93. 1	103. 0	94. 2		1. 702. 7
53129080	LEOPOLDO	010.0	*****		33.1	30.1	100.0	11.0		30.1	103.0	34. 2	213. 0	1. 102. 1
52159930	LOBO JUNIOR	<b></b>	-											
53129440	COLEGIO REGINA COELI													
53189320	COPEBA	<del></del>										ļ		
53119090	ELEV DE BOTAFOGO										-	ļ		
53729870	ESCOLA UNIÃO	313.4	176.4	192. 0	166. 4	93.0	129.4	15. 9	45. 4	130.0	131.5	84. 1	201	1. 758. 9
53189370	FUNABEN	V.V.3	110.4	102.0	100.4	30.0	120.4	10.3	43.4	100.0	101.0	04. i	201.4	1. 138. 9
	FAZENDA SANTO ANARO	310.3	329.4	286. 9	298. 4	162. 9	159. 2	0.0	98. 9	206. 7	175.8	169. 6	417.2	2. 612. 8
	HORTO FLORESTAL-NIT	103.4	127.3	68.3	56.6	115.1	129.3	19.4	48. 9	88.8	119.5	37.7		
53569240	ANDORINIAS	100.4	219.8	207. 5	269. 9	114.3	103.3	32.6	39.5	214.3	156. 2	217.0		1, 052, 0 1, 909, 9
53539240		366.2		303. 7		264.5	225. 4	34.1	135. 5	230.7	150. 2	329. 6	459.7	1, 809. 9
53149910	BENFICA	115.6	96.6	63. 9	202.7	79.5	92.6	11.4	39.5	74.1	80.3	57. 5		. 071 -
	CACHOEIRA DE NACACU	291.7	191.4	174.0	189. 9	113.4	92.6	10.7	49.7	97. 0	105.9			1.074.7
	CAJU		101.4	112.0	109. 3	110.4	32.0	10.1		31.0	109. 9		384.6	
	CIDADE UNIVERSITARIA												192. 2	
20013000	OLDUND AULITURALITY	<del></del>												
<u> </u>		<del></del>					<del></del>		1			1		

(1988)

St.No. St.Name JAN FEB MAR APR MAY JUN JUL ALG SEP CCT NOY DEC TOTAL STREAM 193.3 528.1 151.3 238.4 179.1 89.1 - 0.0 6.4.9 148.4 243.8 298.3 - 5332950 SAUBERTO 110.4 614.5 160.9 174.6 104.9 70.2 25.8 2.8 34.6 171.1 154.4 161.0 1.785.2 53129910 SAO CRISTOYAO															i,
S3329560   SAO BENTO	St. No	St. Nane	JAN	FEB	. WAR		MAY	JUN	100	AUG	SEP	OCT	NOV	DEC	Total
\$319910 SAO CRISTOYAO  \$3189420 SAO JERONIBO  \$122.6 541.2 105.2 174.7 125.6 66.9 99.0 16.7 42.3 143.3 206.4 288.4 1.912.3 53799080 NEREW  \$231.6			193.3	528. 1	151.3	238. 4	179.1	89. 1		0.0	54.9	148.4	243.8	296.3	
Said Said   Said   Jeronino   12.6   541.2   105.2   174.7   125.6   66.9   99.0   16.7   42.3   143.3   206.4   268.4   1.912.3   5329080   Teren   231.6   354.9   116.0   129.8   116.0   139.8   35329080   Teren   231.6   354.9   116.0   129.8   116.0   353.6   269.8   35329080   Teren   231.6   354.9   116.0   129.8   116.0   139.8   316.7   274.6   2.696.5   353769520   FAZENDA MACACU   1.5			110.4	614.5	160. 9	174.6	104.9	70. 2	25.8	2.8	34.6	171. [	154.4	161.0	1. 785. 2
1.05   1.05				•	-			-	-	-		-		-	
\$3329880   XEREN	53189420	SAO JERONINO	-	-	-	-	-	-		-	-		-	-	
53329808   SERN   231.6   - 354.9   - 116.0   129.8   - 115.0   - 353.6   269.8   - 3729520   FAZENDA COQUEIRO   191.3   485.9   169.1   469.9   215.0   87.3   79.1   9.0   103.3   295.3   316.7   274.6   2.696.5		TANGUA	122.6	541.2	105. 2	174.7	125.6	66. 9	99. 0	16.7	42.3	143.3	206. 4	268. 4	1, 912, 3
53729520   FAZENDA COQUÉIRO   191.3   485.9   169.1   469.9   215.0   87.3   79.1   9.0   103.3   295.3   316.7   274.6   2.696.5   53769620   FAZENDA MACACU	53329080	XEREN	231.6		-	354. 9	-	116.0	129.8	-	115.0		353.6		
S3169620   FAZENDA MACACU	53729520		191.3	485. 9	169. 1	469.9	215.0	87.3	79. 1	9. 0	103.3	295. 3			2, 696, 5
S31299550   QUIZANGA   334.1   494.4   126.5   264.8   155.1   58.2   106.5   8.5   70.3   207.0   292.5   372.6   2.490.5   53189120   REALENGO   148.3   601.3   165.2   130.4   113.2   72.5   25.5   2.7   28.9   94.4   110.2   119.0   1.611.6   53129470   SANDIA LIMA   840.0   157.2   238.7   174.1   187.0   102.4   15.1   116.4   171.7   267.1   114.1   2.463.9   12.238.9   10.0   10.0   1.611.6   10.0   1	53769620	FAZENDA WACACU		-	-	-	-	-							
\$3189120   REALENGO	53119089	PRAIA DE BOTAFOGO	-		-	-	-	: -		-	-		-		
S3189120   REALEMOD   148.3   601.3   168.2   130.4   113.2   72.5   25.5   2.7   28.9   94.4   110.2   119.0   1.511.6	53729650	QUIZANGA	334.1	194.4	126.5	264.8	155. [	58. 2	106.5	8.5	70. 3	207.0	292.5	372.6	2, 490, 5
SAIL SAIL			148.3	601.3	165. 2	130.4	113.2	72.5	25.5		28. 9				
S3129230   MORRO DO ENCONTRO   -     -     -     -     -     -       -			80.1	840.0	157. 2	238.7	174.1								
S3329780   NOVA IGUACU   210.4   623.6   -				-	•		-	: -	-	-	-			-	
S329780   NOVA   GUACU   210.4   623.6   -			164.5	641.6	174.2	197. 1		-	20. 9	2. 5	39. 2	110.0	1	-	
S3189990   PARADA DE LUCAS-DTN   -   -   -   -   -   -   -   -   -	53329780	NOVA IGUACU	210.4	623.6		•	103.0	-	12.4	3. 1	51.4	137. 3	157. 0	145. 4	-
Texas	53059550		-	-	-		-	-	-	•	-			-	
S3129220   PRACA ROCCO	53189990	PARADA DE LUCAS-DIN		-		-	,	•	•		-	-			_
S3129220   PRACA ROCCO	53729710	POSTO GARRAFAO	125. 7	1, 005. 1	242.4	499.5	293.0	148. 9	127. 3	21. 1	178.8	381.4	551.7	467. 9	1.042.8
S3189940   IRAJA   117.5   437.9   143.6   152.8   110.5   28.3   27.4   4.0   26.0   0.1   0.0   98.9   1.147.0	53129220	PRACA ROCCO		-				-			-			-33.13	
\$3729195 JAPUIBA 197.3 435.5 141.4 230.3 154.7 76.4 57.0 20.3 46.0 138.2 224.5 316.9 2.038.5 53129080 LODO JUNIOR	53039660	ILHA DO GOVERNADOR	-	-	<del></del>		-	-		-	1				
53129308 LEOPOLDO	53189940	IRAJA	117.5	437.9	143.6	152.8	110.5	28. 3	27. 4	4. 0	26.0	0. I	0.0	98. 9	1, 147, 0
\$3129080 LOBO JUNIOR	53729195	JAPUIBA	197.3	435.5	141.4	230.3	154.7	76.4	57.0	20. 3	46.0	138.2	224.5		
\$\frac{5}{3189320}\$ \begin{array}{cccccccccccccccccccccccccccccccccccc	53129080	LEOPOLDO	. •	-	- 1	-	-		-	-		-	-		
53189320         COPEBA         -         <	53152930	LOBO JUNIOR	-			-		-	-	-	•	-		*	
\$\frac{53119990}{53729870}\$\$ \text{EEV DE BOTAFOGO}\$\$  \text{	53129440		-	-		-	-	•			-	-		-	-
S3729870   ESCOLA UNIAO   336.9   813.3   132.7   355.4   168.7   88.0   76.3   10.4   68.6   177.6   281.0   467.2   2.976.1	53189320	COPEBA :	-	٠.	-	-	•				. •	-			
5.7189370 FUNABEN	53119090	ELEV DE BOTAFOGO	-	-	•		-	-			-	-	-		
53729420 FAZENDA SANTO AMARO 234. 1 617. 5 168. 0 410. 1 234. 3 127. 2 130. 6 25. 3 116. 2 287. 5 379. 3 314. 8 3. 044. 9 5.7969220 HORTO FLORESTAL-NIT 31. 9 343. 3 145. 5 156. 6 144. 1 100. 5 92. 9 22. 9 46. 6 113. 1 178. 0 150. 6 1.526. 0 5.3569240 ANDORINHAS 314. 1 904. 6 200. 8 494. 3 186. 8 123. 7 82. 1 11. 1 150. 5 278. 5 324. 5 368. 3 3. 439. 3 5.3539240 APOLINARIO 239. 3 588. 4 196. 0 397. 1 300. 5 169. 8 234. 6 44. 6 114. 2 256. 0 482. 7 375. 3 8.398. 5 33729120 CACHOEIRA DE NACACU 101. 3 465. 7 121. 8 162. 4 190. 1 771. 8 7. 4 20. 9 42. 1 173. 8 268. 6 237. 4 1.946. 6 53139890 CAJU 46. 6 310. 1 185. 3 195. 6 85. 3 55. 2 37. 6 3. 7 33. 4 66. 2 139. 8 131. 5 1. 290. 3	53729870		336. 9	813.3	132.7	355. 4	168. 7	88.0	76.3	10.4	68.6	177.6	281.0	467. 2	2, 976, 1
5/969220         HORTO FLORESTAL-NIT         31.9         343.3         145.5         156.6         144.1         100.5         92.9         22.9         46.6         113.1         178.0         150.6         1.526.0           53569240         ANDORINHAS         314.1         904.6         200.8         494.3         186.8         123.7         82.1         11.1         150.5         278.5         324.5         368.3         3.439.3           53339240         APOLINARIO         239.3         588.4         196.0         397.1         300.5         169.8         234.6         44.6         114.2         256.0         482.7         375.3         3.388.5           53149910         BENFICA         77.5         508.7         155.3         136.4         99.0         82.3         38.8         3.7         34.8         104.9         143.8         140.6         525.8           53729120         CACHOEIRA DE NACACU         101.3         46.6         310.1         185.3         195.6         85.3         55.2         37.6         3.7         33.4         66.2         139.8         131.5         1,290.3	53189370			-	-	-				- 1		-	13,43,4		
5.7969220         HORTO FLORESTAL-NIT         31. 9         343. 3         145. 5         156. 6         144. 1         100. 5         92. 9         22. 9         46. 6         113. 1         178. 0         150. 6         1.526. 0           5.3569240         ANDORINHAS         314. 1         904. 6         200. 8         494. 3         186. 8         123. 7         82. 1         11. 1         150. 5         278. 5         324. 5         368. 3         3.439. 3           53393940         APOLINARIO         239. 3         588. 4         196. 0         397. 1         300. 5         169. 8         234. 6         44. 6         114. 2         256. 0         482. 7         375. 3         3.398. 5           53149910         BENFICA         77. 5         508. 7         155. 3         136. 4         99. 0         82. 3         38. 8         3. 7         34. 8         104. 9         143. 8         140. 6         525. 8         53729120         CACHOSIRA DE NACACU         101. 3         463. 7         121. 8         162. 4         190. 1         77. 6         3. 7         33. 4         66. 2         139. 8         131. 5         1, 290. 3           53139890         CAJU         46. 6         310. 1         185. 3         195. 6		FAZENDA SANTO ANARO	234. l	617.5	168.0	410.1	234.3	127. 2	130.6	25. 3	116.2	287. 5	379.3	314.8	3.044.9
5.3569240 ANDORINHAS 314.1 904.6 200.8 494.3 186.8 123.7 82.1 11.1 150.5 278.5 324.5 368.3 3.439.3 5339240 APOLINARIO 239.3 588.4 196.0 397.1 300.5 169.8 234.6 44.6 114.2 256.0 482.7 375.3 3.398.5 53149910 BENFICA 77.5 508.7 155.3 136.4 99.0 82.3 38.8 3.7 34.8 104.9 143.8 140.6 1.525.8 53729120 CACHOEIRA DE NACACU 101.3 463.7 121.8 162.4 190.5 15				343.3	145.5	156.6	144.1	100.5							
5333240         APOLINARIO         239.3         588.4         196.0         397.1         300.5         169.8         234.6         44.6         114.2         256.0         482.7         375.3         3,398.5           53149910         BENFICA         77.5         508.7         155.3         136.4         99.0         82.3         38.8         3.7         34.8         104.9         143.8         140.6         6.525.8           53729120         CACHOEIRA DE NACACU         101.3         463.7         121.8         162.4         190.1         77.1         87.4         20.9         42.1         173.8         268.6         237.4         9.946.6           53139890         CAJU         46.6         310.1         185.3         195.6         85.3         55.2         37.6         3.7         33.4         66.2         139.8         131.5         1.290.3			314. 1	904.6	200.8	494.3	186.8	123.7				278.5			
53149910 BENFICA 77. 5 508. 7 155. 3 136. 4 99. 0 82. 3 38. 8 3. 7 34. 8 104. 9 143. 8 140. 6 1. 525. 8 53729120 CACHOEIRA DE NACACU 101. 3 463. 7 121. 8 162. 4 190. 1 77. 1 87. 4 20. 9 42. 1 173. 8 268. 6 237. 4 1. 946. 6 53139890 CAJU 46. 6 310. 1 185. 3 195. 6 85. 3 55. 2 37. 6 3. 7 33. 4 66. 2 139. 8 131. 5 1. 290. 3	53539240	APOLINARIO	239. 3	588. 4	196.0	397.1	300.5	169.8							
37729120 CACHOEIRA DE NACACU 101. 3 463. 7 121. 8 162. 4 190. 1 77. 1 87. 4 20. 9 42. 1 173. 8 268. 6 237. 4 1. 946. 6 53139890 CAJU 46. 6 310. 1 185. 3 195. 6 85. 3 55. 2 37. 6 3. 7 33. 4 66. 2 139. 8 131. 5 1. 290. 3	53149910	BENFICA	77.5	508.7	155.3										
53139890 CAJU 46.6 310.1 185.3 195.6 85.3 55.2 37.6 3.7 33.4 66.2 139.8 131.5 1, 230.3	53729120	CACHOEIRA DE NACACU	101.3	463.7	121.8	162. 4									
53019550 CIDADE UNIVERSITARIA	53139890	CAJU	46.6	310.1											
	53019550	CIDADE UNIVERSITARIA	-	-		-	-		•			- :		*	-

Table 3-3 Monthly Normals of Precipitation (1977-1990)

(1989)

Printers and the same of the s		·				·	1							
St. No	St. Name	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
53729320	SAMBAETIBA		_		-	-	-	-			1-25	1 101	DEC.	iotai
53329560	SAO BENTO			Τ-	T -	_	T	_	<del>  _</del>		<del>                                     </del>	<del>                                     </del>	<del> </del>	<del> </del>
53129910	SAO CRISTOVAO	T -		T -		<del>-</del>				<del>  _</del>	<del> </del>	<del> </del>	<del> </del>	<del> </del> -
53139420	SAO JERONIMO	_	-	-		<del> </del>				<u> </u>	<del></del>	<del> </del> -	<del>  -<u>-</u>-</del> -	<del>                                     </del>
53769080	TANGUA	_		-	-	T		-		<u> </u>	<del> </del>	<del>                                     </del>	<del>                                     </del>	·
53329080	XEREM	-			-		-		<del> </del> -	<del> </del>	<del> </del>	<del> </del>	<del>                                     </del>	-
53729520	FAZENDA COQUEIRO	-	-	-	-	-				<del> </del>	<del> </del>	<del> </del>		<del> </del>
53769620	FAZENDA MACACU	-	-	-	<del>  -</del>	-	31, 4	90.5	54.4	75.8	46.1	14.1		<del> </del>
53119089	PRAIA DE BOTAFOGO	-	-	-	_				7.3	10.0	90.1	1	0.0	<del>  -</del>
53729650	QUIZANGA	336.4	257.0	187.7	117.0	71. 2	109.5	99.7	50.6	119.6	83. 2	55.4	175.0	
53189120	REALENGO	145. 2	135.4	95.6	134.0	64.5	174.7	70.8	41.7	77.9	40.4	94.0		1,662.3
53129470	SABOLA LIMA	158.8	154.6	39.1	106.6	127.0	17. 1	176.4	53.5	116.4	90.6	131.6		1, 174. 2
53129230	MORRO DO ENCONTRO	-	+		-		-	-	- 00.0	110.9	30.0	131.6	79.1	1.250.8
53329890	NILOPOLIS	-	_		-	_		-	<u> </u>	<u> </u>	<del>                                     </del>	<del> </del> -	<del></del>	<u> </u>
53329780	NOVA IGUACU	-			-				<del></del>		<del></del>	ļ		
53059550	PAQUETA	-			_	_	<del></del>				<u> </u>	<u> </u>		<del></del>
53189990	PARADA DE LUCAS-DIN	-		_		_				<u> </u>	<del> </del>	<u> </u>		
53729710	POSTO GARRAFAO	234.4	342.4	625.7	205.4	177.7	229.6	122.9	92. 2	164.9	184.8			-
53129220	PRACA ROCCO	-	-	~	-			166.3	36.6	104.3	104. 6	26.6	283.3	2.689.9
53039660	ILHA DO GOVERNADOR	-	-	- :		-			<u> </u>		<del></del>		_	
53189940	IRAJA	80.9	217. 9	80.0	102.0	30.0	129.9	58.3	36.9	98. 2	49.3	<del></del>		
53729195	JAPUIBA	222. 7		154.3	125.5	13.0	57. 7	43.7	29. 7	107.0	67.7	80. 1 52. 4		1.024.6
53129080	LEOPOLDO		-	-		-	V		- 63, 1	101.0	- 01.1	34.4		1, 179, 7
53159930	LOBO JUNIOR		-	-		<del>-</del>				<del></del> -				
53129440	COLEGIO REGINA COELI	-		-										-
53189320	COPEBA	-	_		-									
53119090	ELEV DE BOTAFOGO			-										
53729870	ESCOLA UNIAO	261.0	298.4	245.2	117.3	117, 7	151. 2	117.9	65.7	10.9	86. 8	04.6	117.0	
53189370	FUNABEN	-		-	-					10.3	80.0	34.0	117.0	1, 084. 3
53729420	FAZENDA SANTO AMARO	242.8	360.7	302.4	235.5	120.1	0.0	114.1	85.0	201.1	158.8	134.0	205	<del></del>
	HORTO FLORESTAL-NIT	67.0	183.7	56.7	77.0	65. 4	141.4	106.1	56.1	103.8	93.3	80.5	305.1	
53569240	ANDORINHAS	271.8	200.8	287.7	206.6	130.6	251.9	90.4	71.8	118.0	124.3	186.0	148.2 329.5	
53539240	APOLINARIO	-	- 1					30.4	- 11.0	110.0	144.3	100.0	329. 3	
53149910	BENF I CA	120.4	140.8	67.1	83.2	52, 2	157.4	62. 4	22.9	76. 9	31.4	94.5	- 100 7	
53729120	CACHOEIRA DE NACACU	_	-						42.3	10.3	31,4	94. 3	109.7	
53139890	CAJU	91.7	165.2	22.7	88.7	42.7	183.6	40.5	27. 2	41.8	17. 2			0.0
53019550	CIDADE UNIVERSITARIA		-				.00.0	30.0	61.6	41.0	11.4	100.0	101.0	952.3
D	VQUE DE CAXIOS	-	0.0	0.0	0.0	46.0	54.0	164.9	25.0	0.0	0.0			
				· · · · · ·	<u> </u>	14.0	y 1. U	104.31	20.01	<u> </u>	U. U	0.0	0.0	290.9

(1990)

St. Yo	St. Name	JAN	FEB	MAR	i APR	MAY	JUN	1 101.	AUG	SEP	OCT	Lugir	200	
53729320	SAMBAETIBA	1	-	~			7015	1 -	- Auu	351	001	NOV	DEC	Total
53329560	SAO BENTO		<del>  -</del>	-	_	<del>  </del>	<del>  _</del>	<del>                                     </del>	<del></del>	<del>                                     </del>	<del></del>		<del></del>	<del>  -</del> -
53129910	SAO CRISTOVAO	<b> </b>		-	<del>  _</del>	<del> </del>	<del> </del>	<del> </del>	+ -	<del></del>	<del> </del>	<del>  -</del>		-
53189420	SAO JERONIMO	<del></del>	-	<del> </del>	<del>  _</del> _	1	<del> </del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>	<u> </u>	<del> </del>	-
53769080	TANGUA			1	<del> </del>	<del> </del>	<del> </del>	<del>  -</del>	<del>  -</del>	<del> </del>	<del> </del>	<del>  -</del>		<u> </u>
53323080	XEREM			<u> </u>	<del>  </del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>	<del></del>	<u> </u>		<b>↓</b>	<u> </u>
53729520	FAZENDA COQUEIRO			<del> </del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>	<del> </del> -	<del> </del> -	<del>  -</del>	<del>-</del>		<u> </u>
53'59620	FAZENDA MACACU			<del> </del>	<del> </del>	<del> </del>	<del>├</del> <del>-</del> -	<del>  -</del> -	<del> </del>		<del>  -</del> -	-	<del>  -</del>	
53113069	PRAIA DE BOTAFOGO	-	- <del>-</del> -	<del>  </del>	-	<del> </del>	<del>                                     </del>	ļ	·	<u> </u>	<u> </u>			ļ <u>-</u>
729550	QUIZANGA	158.7	143.9	277.3	0.0	197.5	51.6		<del> </del>	1	<del>-</del>	-	<u> </u>	
33153120	REALENGO	80.1	0.0	0.0	157.7	94.6		64.3		15E.3	0.0	0.0	0.0	1,088.0
53175170	SABOIA LIMA	101.5	30.9	120.4	464.6	150.5	12.0	41.9		105.8	<del>  -</del>	<u> </u>	~	
\$311,9230	MORRO DO ENCONTRO	10	30.3	160.4	404.0	130.5	53.5	108.8	98.2	166.8	<del> </del>	<u>  -</u>	ļ <u> </u>	-
53329890	NILOPOLIS			<del> </del>	ļ <u> </u>	-	ļ <u> </u>	<del> </del> -	ļ. <u>-</u>		<u> </u>	<u> </u>		<u> </u>
53329780	NOVA IGUACU	ļ- <u>-</u>			<u> </u>	<del> </del>	<del> </del>		-	<u> </u>	<u> </u>	-		-
53059550	PAQUETA		<del></del>		<del>  -</del>	<del> </del>	<u> </u>		<u> </u>	-		ļ <u> </u>		
53189990	PARADA DE LUCAS-DIN	<u> </u>		<del></del>	ļ	<u>-</u>	<del>  -</del>		<del> </del>	<u> </u>			<u> </u>	-
53729710	POSTO GARRAFAO	182.7	250.0	65.5	196.4	100 0		<del></del>	<del> </del>				~_	
53129220	PRACA ROCCO		230.0	03.3	130.4	193.2	90.2	67.4	174.3	207.4		<del>  -</del>	-	
53039660	ILHA DO GOVERNADOR			<del> </del>	<del>-</del> -	-	<del> </del>	<u> </u>	<u> </u>	_~_			<u> </u>	
53189940	IRAJA	136.1	36. 7	80.6	285.7	101.6			<u> </u>					
	JAPUIBA	92. 6	155. 4	268. 2	144.1	101.6	28.8	97.0	54.9	101. Z	0.0	0.0	0.0	922.6
	LEOPOLDO	74.0	133.1	200. 2		205.4	26.5	0.0	92.4	158.8	-	ļ <u>-</u>		_
53159930	LOBO JUNIOR	-					-	-	-				-	
53129440	COLEGIO REGINA COELI					<u>-</u>				-	-	<u></u>		
	COPEBA													
	ELEY DE BOTAFOGO					<del>-</del>	-							-
	ESCOLA UNIAO	90.31	172.5	212	-		-		-		-			
	FUNABEN	30.3	112.5	212.4	218.6	182.4	573.6	53.8	88.8	164.5	-	-		-
	FAZENDA SANTO AMARO	74.0	-		201.0						-			
	HORTO FLORESTAL-NIT	79.3	212.8	272.3	301.0	112.4	112. 4	146.6	132.5	222. 9	·		-	~.
	ANDORINHAS	145.9	19. 9	12. 2	254.4	100.3	37. 6	139.2	76.4	148.0			-	
	APOLINARIO	143. 9	177.7	248. 9	330. 1	191.8	77.4	51.7	110.5	148.2				
	BENFICA	68.8	21.0				-	-			-		-	-
	CACHOEIRA DE NACACU	20.0	21.0	57.9	189.0	90.4	20. 9	8.7	58.5	103.6		-		
	CAJU	66.5												
	CIDADE UNIVERSITARIA		21.2	26.5	208.1	96.8	19.1	65.1			-	-		
	DUQUE DE CAXIOS			<del>-</del> - 1							_			
	TOUGH DE CHATOS		0.0	0.0	147.5	6.3	20.6	0, 0	92.1	79.1	169.6	123.3	125.4	763.9

# 3-4 Monthly Precipitation at Observation Stations

Monthly Pracipitation of St-(53725528EP), SAMESETIES.

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		ŧ	2	11.1	2	144.3		1	211.2	140 %	471.0	5	=
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Ξ			18.	131 1	116.5	:	**	5.5	7.7	=	144.0	141.	1, 574. 5
ã		*	11.	11.1	53.4	=	ŧ	¥	177	7	121,1	117.7	=
2		 :	3.75	211.1	1	ı	=	=======================================	11.2	2	5	152	
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being the yearly nean (1979~1958)

Searce: Dolotty Platingthics noi-2 decrease de extend for de lancino. Stranische describeds of Proletol, bytheo de hibbologia (1416 Pagetogi de extendes of Proletol, bytheo de hibbologia (1416

... 60.1 164 6 1.173 4 1 5 5 222 225 1 5 5 7 X 325 122 Monthly Precipitation at 59-(5322994057), 540 MUTO 1 77 # <u>#</u> 116.8 == 125 25

170 4 276.2 76.1 127.3 Sole: The yearly name (1970-1933)

Samena BOLETIN FLORINCESCO NOI-3 GATERRO DE ESSADO DES DE JARGERO. STRUK, PERO, SERVINOS E PEDICEUX, DIFIELDO DE BIODOLUCIA 1969 BIRGESOGI DE EXTREMS E PEDICEUX, DIFIELDO DE BIODOLUCIA 1969

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Source: Moletia Publiathico MD-2 COFERO de Estado NIO DE JAMEIRO, ELEMA SERLA ESTUDOS E PROJECCE, DITESAO DE BIDROLOGIA 1988 DIMETORI DE ESTUDOS E PROJECCE, DITESAO DE BIDROLOGIA 1988 Bote: The yearly sena(1975-1948)

Monthly Precipitatio at St-j(\$215942029), SAG SEBORING

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Bute: The prestly mank(1819-1956) 141. 3 100. 2

Source: MOLETIM PLURIMETAICD MOI-2 COVERND DE ESTADO BIO DE FAMEIRO. STEMA, CELLA SIMETORI DE EXTEDOS E PEDAFTOS, BIVISAO DE ELOROGADIA 1849

3-4 Monthly Precipitation at Observation Stations Table

Southly Precipitation at St. (1376908829), TARGEA

74ble 1. 2-5

Manihir Precipitation at St-f8312952027), 9422304 COQUEIES

Table 1.2-7

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Source: Goldia Playiadhico noi-1 Strain, strain Bressel De Essous & Projetos, prisso De Hiddiccia (166 Enter the runch seas(1971~1312)

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Source: BOI ETH PLUTHEFRICO BOIL: COTEND DE ESTADO RIO DE JAREJRO, STRAN, STREJA DIRETORI: DE ESTADOS & PROJETOS, DIFISAG DE HIBBOLGGIA 1999 Hoter ?he yearly bean(9976-1498)

3-4 Monthly Precipitation at Observation Stations Table

Monthly Fracipitation at 54-(\$116\$120£7), BEALENCO

Table 2, 3-(1)

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Source: BOLITH FLUTHETPIC BOL-2 COTESO DE ESTADO DIO DE JAKEIRO. CEMAS SERA. PIETORI DE ESTADOS E PPOJETOS, DIVISSO DE MIDE Solo: The pearly ness (1979-1948)

Monthly Precipitation at St. (\$2179479EP), SABUSE LIMA Table 1. 1-12

Source: BOLETIA PLUVINGTRICO BOL:2 COMENO DE ESTADO RIO DE JAMEIRO. SENA, ZDEJA ESTADOS E PROJETOS. DITESAD DE MIDBOLOCIA 1919

Rote: The yearly beas(1379-1510)

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Searce; MOLETIE PLUTINETEC 801-7 SEMELSER, DE ESTADO DIO 46 JARRINO, SEMELSER, SER, DIRECTORI DE ESTUDOS E PROJETOS, CHITSO DE RIDDUGGIA 1919 Note: the pearly negativity-1988)

Monthly Precipitation at Observation Stations 3-4 Table

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Source: MOLEDIA PLOVINGTRICO NOT-2 COMENDO DE TITADO REO DE JANGINO. TERRAS ESENDAN DE PREMIUTOS DISTINAM DE MIDANINCES 1985 REPUTADO DE CESTURAS P. PREMIUTOS. DISTINAM DE MIDANINCES 1985

194 T 263 Z 141. B 1, 152.9 .... .... ## <u>#</u> 122 = = -Monthly Proctedington at St-(Shirusadep), mildeolis 1 = 2 121 1 = 1 # = 122 1 2 3 Table 2, 2-14 ; <u>7</u> 7 3-17 Sois: The yearly exem(1)79-1561)

Source: Boldia Pletingible 801-1 Schieb de Simbo Bio De Jameiso. Semaliete de Elimbos e Peoletos. Dilisão de Ribeliccia 1933

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Teble 1, 1-15

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Bouthly Pracipitation at Sc-(\$30595548P), page214

Table 1, 1-11

Sources: MOLETIM PLUVIMETRICO NOI-2 CONMA ESCADO NIO DE JAREINO, SEMMA ESCADOS E PROJETOS, DITASAO DE KIDADIDGIA 1983 Hote. The pearly need (1919~1968)

3-4 Monthly Precipitation at Observation Stations Table

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Source	Source: BOLETIN PLOYINETHICO MOI-7 COVERIO DE ESTADO 210 DE JAKIRO.	HETRICO POI-	∾ .							-		:
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Bonthly Precipitation at St-(ABIII12087), PMACA BOCCO

Tobin 2. 2-19

	Tabie 2.3-20	90	Boathly Pr	Mosthiy Precipitation at 31-23038666893, 1584 Do Goterhaddz	11 31-5303	116927), 13	EN DO COT	ERNADOR					
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Monthly Precipitation at Observation Stations 3-4

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Searce Doletia Flutietisto Mol.: Stanko de Estado Bio Of Jameiro, Stanko Sera Berzogi de Estados & Prolejos, Diffisio de Biodelogia 1989

Monthly Precipitation at St-(\$21291852), JAPUSA Table 2. 2-22

44.7 11.9 797.0 1,734.4 . . 37 252 4 221. 0 179. 7 157. 6 19. 7

Motal The yearly mean(1879-1988)

Source: BELETIN PLEVINETRICO ROT-2 COPERDO DE ESTADO RIO DE JAREIRO, TENHA SERLA SEL DESTORE DE ESTUDIOS E PROJETOS, DITEGO DE RIDROLGEJA 1943

8 2 2 2 2 200 Momibil Precipitation at 21-(53)19969EP), LEOPOLDG 1225 Table 2.2-73

1915 - 375 - 375 - 375 - 378 - 378 - 375 -Rain. The pearly seas(1979-1948)

SAMERA DE ESTADO ELO DE LASELEO. SERVAS DE ESTADO ELO DE LASELEO. SERVA SELLA DE ESTEDOS E PROJETOS, DIFIESAD DE RIBROLOCIA (188)

Mosthly Precipitation of St-(S31599302F), LOBO JOSIOS

Table 2.2-74

164.3 35.7 42.1 193.9 Note: The rearty near (1979-1918)

SARCE: DOLETIE PLUTIEETO DOL-1 SERVE DE ESTADO ELO DE JAREIRO, SERVE, JOHE DIREIGII DE ESTUDOZ E PROJETOS, APPEADO DE RIDROLOGIA 1989

Monthly Precipitation at Observation Stations 3-4

Mosthly Precipitation at St-(SSISOSSEP), SLEY DE SDIAFOGO

Table 3, 2-27

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4255555 424222222 Monthly Precipitation of St-(53123320ff), COPTRA 발로 R 및 및 및 및 및 를 구 ------Toble 2, 2-46 2-222222 ------3-20

Secret MOLETIE PLEVIMETRICO MOL-1 SERIES DE ESTAD BIO DE JAREIRO, SEMALISTAL DIRETORI DE ESTUDI E PROJETOS, DITILLO DE RIODRUCCE 1845

Beis: The party wash (1979-1938)

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Rote: The restly none(1179-1250)

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Mosthir Peacletication of 2t-(53719970EP), ESCOLa UNIAD

Table 1. 7-28

Searce: Bouldin Pluyindiblo vol.:2 Search De Period big de jaheldo. Sean, Seel Difficel de Estidos & Projitos, Diffish de Hipelggia (185

Bote: The rearly sand 1979 - 1964)

SONTER: BOLETIN PLEY INCEPTOD NOT-T SCHOOL ESTADO BEO DE FAMELRO, SCHOOL STATE STATE STATE STATE DE GEDROLOGIA ISSE DESTORT DE ESTUDOS E, PROFETOS, BYYSSAO DE GEDROLOGIA ISSE

3-4 Monthly Precipitation at Observation Stations Table

Monthly Precipitation at St-(S194722927), NORTO SLORESTAL-ALT

Table 7. 2-31

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Monthly Procipitation at St. (\$234437627), FULLER

Table 2. 2-19

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SOMEON: MOLETAN PLENIMETRICO MOLES. SENIME DE EXTADO NIO DE JAMEIRO, SENIME TERLA DIRECTORI DE EXTRUDOS E PROJETOS, DIVISÃO DE MEDROLOGIA 1949 Soto: The party sand [1975-1994]

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372.6 243.7 273.6 247.6 114.7 78.0

Monthly Precipitation at St. (\$344024027), ANDOR(MRAS Table 2. 2-32

Source: Moletin Plumingfatco noi-s Coffeno de Estado Rio de Jameiro. Estan, seria Difeira: de Estados e Projetos, difesso de mideologia 1939

136.4 104.5 115.4 193.2 46.7

Bole: The yearly meas([979~1948]

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Source: BOLETIN PLUTINEZNICO ROI-2 GOVERNO DE ESTADO RIO DE JANGIRO, STRME, SCRIA DIRETORI DE ESTUDOS & PROJETOS, SÍFISAO DE RIDBOLDGIA 1988 fota: The yearly sens(1379-1348).

3-4 Monthly Precipitation at Observation Stations

Meachig Precipitation at 51-643549848895, 2001|MARIG

Table 1. 1-55

Fable 2.2-25 Mosther Frecipitation at 51-(5273912959), Cachelesk De Ancach

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Source; POALTIN PLAYINGTRICO NOI-2 STANKO DE ESTADO RIO DE JAMEIRO. STRAK, SCELLA RHRIORI DE ESTUDOS E PROJEIOS, DITTARO DE RIGNALOCIA 1939

Mnie: Ibe pearly mosa(1979-1948)

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	1	4.4	** #	ŗ		2,2	17.7	7	12	5		=	321.0
	2	24.3	166.7	1 1	21.2		=	45.2	=		3	124	1 111
	=	ž	106.2	137.8	1	20.1		20.0	2	7.77	20		100
	3.6	=	47.4	162.7	1.1	:	=	**	Z	=	3	=	1.021
	7	199	137.1	138.1	:	12. 2	=	-	25	1	7.03	140.	1.525 8
_	120.6		17.1	2	11.1	153.4	-	2		1	2	100	918
_	4,5	11.0	¥.	1		24.9	-		103		;		9
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l	9 9 9	506 d. 3 235 0 t 340 3 t 254	1 348 3	1 126	1	7. 7.7	1 724		1	1			•
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Source: MOLETIA FLETHETRICO MOL-1 GOTERRO EM ESTADO RIO DI JAMPIRO, STRAM, SERRI DEL ESTODOS E PROSEDO, DIFESSO DE RIDROLDGIA 1815 Soto: Phe puerty sees (1975-1956)

	7	ž.	E K	27	141	133	E	919			2	-
111												4
1378												
=												
140			:									
111												
115												
===												
1345												:
1336												
1361											:	
	\$ °	10.1	1 2 2	117.6	17.	17.75	* 12	:	;	;		
	<u>.</u>	=	11.	=	5	162.6	•		:	:		2
			ž	204.	=		5	:	;	:		
135			:		:		•					
1112												

Source: BOLETIA FLUFINETRICO 801-1 SUNED DE ESTADO BIO DE LAMBIED, STAMALSERA FINETORI DE ESTADOS D'ENDISTOS, DIFFSSO DE RIPPOLOGIA 1989 Sote: The party neadility-1988)

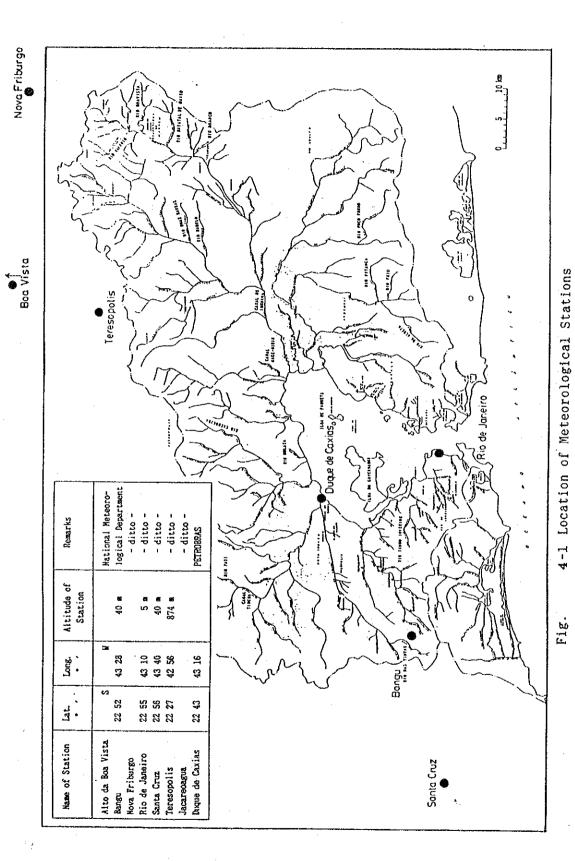
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date: The youth seas (1979-1944)

Sewice: MONETLE FLUTHETHICO NOI-2 SEMENTENDE ESTADO BIG DE PAREIRO, SEMENTATEL DE ESTADOS E PROJETOS. DIFISSO DE RIPROLOCIA, 1919

# CHAPTER 4

# METEOROLOGICAL DATA



4-1

Table

4-1 Monthly Normals of Precipitation at Meteorological Sations

(unit:0.1mm)

1966-1990 1961-1990 1961-1990 1973-1990 1964-1990 PERIOD 1961-1990 1988-1990 ANN DEC NOV SCI SEP AUG JIII M MAY APR MAR FEB JAN Alto da Boa Vista Duque de Caxias Rio de Janeiro Nova Friburgo Teresopolis Santa Cruz STATION Bangu

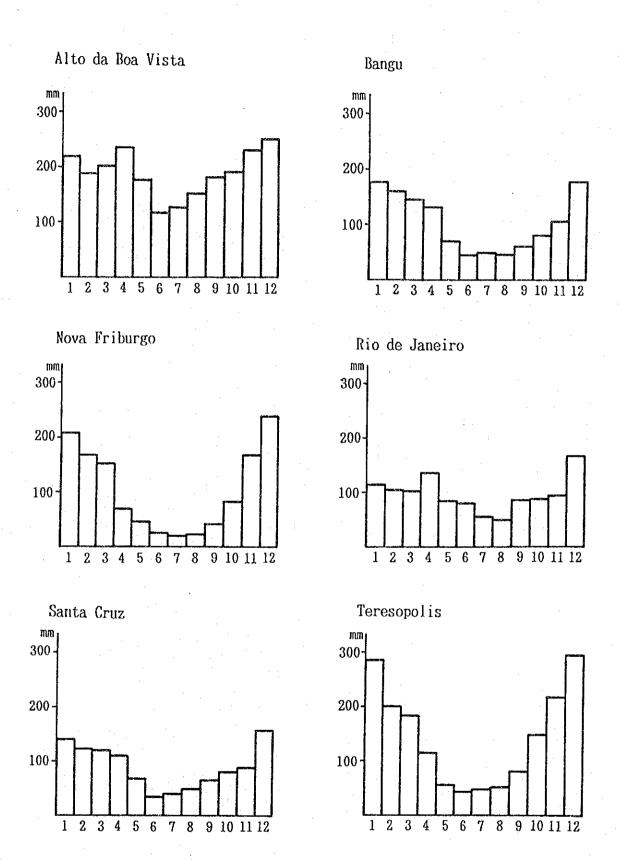


Fig. 4-2 Monthly Normals of Precipitation at Meteorological Stations

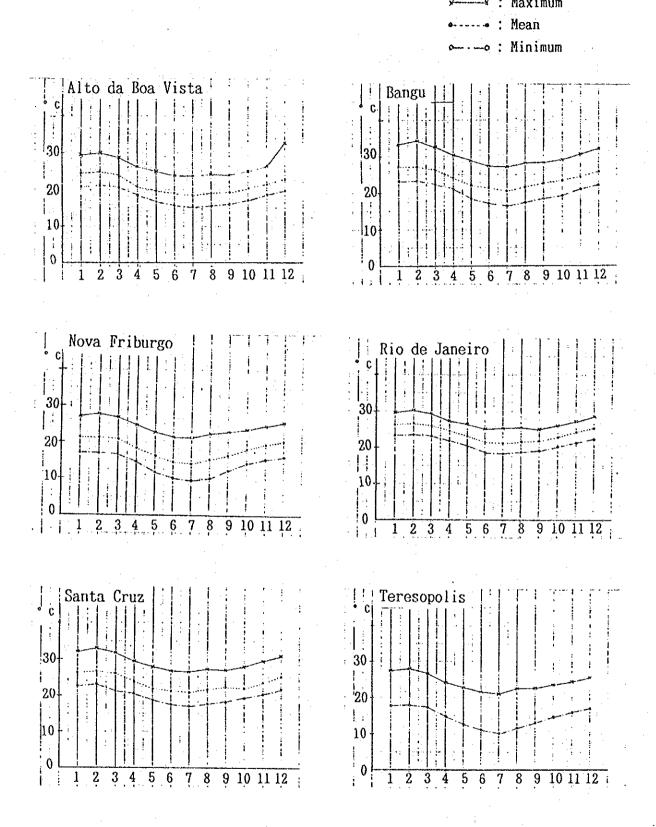


Fig. 4-3 Monthly Normals of Temperature at Meteorological Stations

Table 4-2 Meteorological (Temperature etc.) Data at Meteorological Stations

### 1. Monthly Normals

### 1) Temperature

(1)

### Monthly Normals of Temperature (Mean)

(unit : T)

STATION	JAN	FEB	MAR	APR	HAY	JUN	JUL	AUG	SEP	0CT	NOV	DEC	ANN	PERIOD
Alto da Boa Vista	24.4	24.6	23. 7	20.8	19.6	19.0	18. 5	19.0	19.4	20.2	21.3	22.8	21, 1	1966-1978
Bangu	27.0	27.1	26.4	24. 2	22.0	21.1	20.5	21.8	22.5	23.3	24. 4	25, 8	23.9	1961-1978
Nova Friburgo	21.2	21.4	20.9	18.7	16.2	14.7	14.0	15.2	16.6	18.3	19.5	20.3	18, 1	1961-1990
Rio de Janeiro	26.2	26.5	26.0	24.5	23.0	21.5	21.3	21.8	21.8	22.8	24.2	25. 2	23.7	1973-1090
Santa Cruz	26. 2	26.6	25.8	23.8	21.9	21.1	20.7	21.7	22.3	22.5	23.5	25. 2	23.5	1964-1976
Teresopolis	-	-		·	·	_	-	-	_	-	. —			
Duque de Caxias		30.4	26.6	25.0	21,7	20.0	19.5	19.6	21.8	22. 2	24.7	-	22.1	1988-1990

(2)

### Monthly Normals of Daily Maximum Temperature (Mean)

(unit : T)

JAN	FEB	MAR	APR	MAY ·	JUN	JUL	AUG	SEP	0CT	NOV	DEC	ANN	PERIOD
29.5	30.0	28.6	26.4	24. 9	23.7	23.7	24. 2	24.0	25.0	26.3	27. 9	26.2	1966-1990
33.2	33.8	32.6	30.2	28.8	27.4	27.1	28.2	28.3	29.1	30.7	32.0	30.1	1961-1990
27.0	27.6	26.9	24.8	22.9	21.6	21.1	22.5	22.9	23.9	24.8	25.5	24.3	1961-1990
29.7	30. 2	29.4	27.8	26.4	25. 2	25, 3	25.6	25.0	26.0	27.4	28.6	27.2	1973-1990
32.5	33.1	31.8	29.5	27.8	26. 9	26.6	27.4	27. 2	28.0	29.6	31.0	29.3	1964-1990
27.5	28. 0	26. 7	24.2	22.9	21.9	21.0	22.7	22.8	23.7	24.7	25. 9	24.3	1964-1987
	38. 5	35.0	33.9	33.0	30.0	32.0	34.9	37.1	36.5	37.5	_	40.5	1988-1990
	29. 5 33. 2 27. 0 29. 7 32. 5 27. 5	29. 5 30. 0 33. 2 33. 8 27. 0 27. 6 29. 7 30. 2 32. 5 33. 1 27. 5 28. 0	29. 5 30. 0 28. 6 33. 2 33. 8 32. 6 27. 0 27. 6 26. 9 29. 7 30. 2 29. 4 32. 5 33. 1 31. 8 27. 5 28. 0 26. 7	29. 5 30. 0 28. 6 26. 4 33. 2 33. 8 32. 6 30. 2 27. 0 27. 6 26. 9 24. 8 29. 7 30. 2 29. 4 27. 8 32. 5 33. 1 31. 8 29. 5 27. 5 28. 0 26. 7 24. 2	29. 5 30. 0 28. 6 26. 4 24. 9 33. 2 33. 8 32. 6 30. 2 28. 8 27. 0 27. 6 26. 9 24. 8 22. 9 29. 7 30. 2 29. 4 27. 8 26. 4 32. 5 33. 1 31. 8 29. 5 27. 8 27. 5 28. 0 26. 7 24. 2 22. 9	29. 5 30. 0 28. 6 26. 4 24. 9 23. 7 33. 2 33. 8 32. 6 30. 2 28. 8 27. 4 27. 0 27. 6 26. 9 24. 8 22. 9 21. 6 29. 7 30. 2 29. 4 27. 8 26. 4 25. 2 32. 5 33. 1 31. 8 29. 5 27. 8 26. 9 27. 5 28. 0 26. 7 24. 2 22. 9 21. 9	29. 5 30. 0 28. 6 26. 4 24. 9 23. 7 23. 7 33. 2 33. 8 32. 6 30. 2 28. 8 27. 4 27. 1 27. 0 27. 6 26. 9 24. 8 22. 9 21. 6 21. 1 29. 7 30. 2 29. 4 27. 8 26. 4 25. 2 25. 3 32. 5 33. 1 31. 8 29. 5 27. 8 26. 9 26. 6 27. 5 28. 0 26. 7 24. 2 22. 9 21. 9 21. 0	29.5     30.0     28.6     26.4     24.9     23.7     23.7     24.2       33.2     33.8     32.6     30.2     28.8     27.4     27.1     28.2       27.0     27.6     26.9     24.8     22.9     21.6     21.1     22.5       29.7     30.2     29.4     27.8     26.4     25.2     25.3     25.6       32.5     33.1     31.8     29.5     27.8     26.9     26.6     27.4       27.5     28.0     26.7     24.2     22.9     21.9     21.0     22.7	29. 5     30. 0     28. 6     26. 4     24. 9     23. 7     23. 7     24. 2     24. 0       33. 2     33. 8     32. 6     30. 2     28. 8     27. 4     27. 1     28. 2     28. 3       27. 0     27. 6     26. 9     24. 8     22. 9     21. 6     21. 1     22. 5     22. 9       29. 7     30. 2     29. 4     27. 8     26. 4     25. 2     25. 3     25. 6     25. 0       32. 5     33. 1     31. 8     29. 5     27. 8     26. 9     26. 6     27. 4     27. 2       27. 5     28. 0     26. 7     24. 2     22. 9     21. 9     21. 0     22. 7     22. 8	29. 5     30. 0     28. 6     26. 4     24. 9     23. 7     23. 7     24. 2     24. 0     25. 0       33. 2     33. 8     32. 6     30. 2     28. 8     27. 4     27. 1     28. 2     28. 3     29. 1       27. 0     27. 6     26. 9     24. 8     22. 9     21. 6     21. 1     22. 5     22. 9     23. 9       29. 7     30. 2     29. 4     27. 8     26. 4     25. 2     25. 3     25. 6     25. 0     26. 0       32. 5     33. 1     31. 8     29. 5     27. 8     26. 9     26. 6     27. 4     27. 2     28. 0       27. 5     28. 0     26. 7     24. 2     22. 9     21. 9     21. 0     22. 7     22. 8     23. 7	29.5     30.0     28.6     26.4     24.9     23.7     23.7     24.2     24.0     25.0     26.3       33.2     33.8     32.6     30.2     28.8     27.4     27.1     28.2     28.3     29.1     30.7       27.0     27.6     26.9     24.8     22.9     21.6     21.1     22.5     22.9     23.9     24.8       29.7     30.2     29.4     27.8     26.4     25.2     25.3     25.6     25.0     26.0     27.4       32.5     33.1     31.8     29.5     27.8     26.9     26.6     27.4     27.2     28.0     29.6       27.5     28.0     26.7     24.2     22.9     21.9     21.0     22.7     22.8     23.7     24.7	29. 5     30. 0     28. 6     26. 4     24. 9     23. 7     23. 7     24. 2     24. 0     25. 0     26. 3     27. 9       33. 2     33. 8     32. 6     30. 2     28. 8     27. 4     27. 1     28. 2     28. 3     29. 1     30. 7     32. 0       27. 0     27. 6     26. 9     24. 8     22. 9     21. 6     21. 1     22. 5     22. 9     23. 9     24. 8     25. 5       29. 7     30. 2     29. 4     27. 8     26. 4     25. 2     25. 3     25. 6     25. 0     26. 0     27. 4     28. 6       32. 5     33. 1     31. 8     29. 5     27. 8     26. 9     26. 6     27. 4     27. 2     28. 0     29. 6     31. 0       27. 5     28. 0     26. 7     24. 2     22. 9     21. 9     21. 0     22. 7     22. 8     23. 7     24. 7     25. 9	29. 5     30. 0     28. 6     26. 4     24. 9     23. 7     23. 7     24. 2     24. 0     25. 0     26. 3     27. 9     26. 2       33. 2     33. 8     32. 6     30. 2     28. 8     27. 4     27. 1     28. 2     28. 3     29. 1     30. 7     32. 0     30. 1       27. 0     27. 6     26. 9     24. 8     22. 9     21. 6     21. 1     22. 5     22. 9     23. 9     24. 8     25. 5     24. 3       29. 7     30. 2     29. 4     27. 8     26. 4     25. 2     25. 3     25. 6     25. 0     26. 0     27. 4     28. 6     27. 2       32. 5     33. 1     31. 8     29. 5     27. 8     26. 9     26. 6     27. 4     27. 2     28. 0     29. 6     31. 0     29. 3       27. 5     28. 0     26. 7     24. 2     22. 9     21. 9     21. 0     22. 7     22. 8     23. 7     24. 7     25. 9     24. 3

[NOTE] Duque de Caxias\* : Daily Maximum Temperature (Maximum)

(3)

# Monthly Normals of Daily Minimum Temperature (Mean)

(unit : T)

STATION	JAN	FBB	MAR	APR	HAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	ANN	PERIOD
Alto da Boa Vista	20,7	21.0	20.3	18. 4								19.7	17.9	1966-1990
Bangu	23.1	23. 4	22.7	20.9	18.6	17.2	16.4	17.4	18.4	19.8	21.1	22. 2	20.1	1961-1990
Nova Friburgo	17.1	17.1	16.8	14.8	11, 9	10.1	9.5	10.3	12.3	14.3	15.5	16.3	13.8	1961-1990
Rio de Janeiro	23.3	23.5	23.3	21.9	20.4	18.7	18.4	18.9	19.2	20.2	21.4	22.4	21.0	1973-1990
Santa Cruz	22.6	23, 0	22.3	20.7	18.8	17, 7	17.1	17.8	18.3	19.4	20.4	21.8	20.0	1964-1990
Teresopolis	17.7	17.9	17.1				ľ	11.7				17.2	14.6	1964-1987
Duque de Caxias*	-	23.0	15.7					11.0					9.8	1988-1990

[NOTE] Duque de Caxias\* : Daily Minimum Temperature (Minimum)

# 4-2 Meteorological (Temperature etc.) Data at Meteorological Stations

2) Atmospheric Pressure

### Monthly Normals of Atmospheric Pressure

(unit : bPA)

ROTATE	JAX	17.5	MAR	APR	XAY	JAJN	JUL.	NG.	SEP	0CT	107	69C	ARR	PER (00
Alto da Boa Yista	-	_			_	_	-	_	-					
Варви	-			_ [	_		-	:	-		_	_	:	
Nova Fributgo	917.1	917.7	918.8	920.3	921, 2	921.9	922, 5	921.7	920.1	918.9	916.8	916.5	919.5	1961-72
Rio de Janeiro	1011.3	1012.1	1012.5	1014.8	1016.3	1918.7	1019.6	1018.3	1017, 5	1014.7	1012.8			1973-90
Santa Cruz		:	_	-:	_			- 1		_	-	~		
Teresepolis	915.2	915.7	917.1	918, 1	919.7	920.8	922.0	920.7	819.3	917.4	915.6	915, 2	918.1	1961-72
luque de Carias	-	1013.0	1016.0	1015.8	1015.4	1016.9	1018.2	1022.6	1017.6					1988-90

3) Sunshine Duration

### Monthly Normals of Sunshine Duration

(unit : 0.1 II)

STATION	JAK	FE8	MAR	APR	MAY	JUK	JUL	AUG	SEP	007	NOA	DEC.	AKN	PERIOD
Alto da Boa Vista	-		_		_	_	_	_	_		_			
Rangu	1876	1822	2070	1783	1958	1763	1839	1987	1705	1478	1732	1733	21745	1961-1969
Nova Friburgo	1482	1366	1573	1332	1587	1320	1459	1624	1384	985	1082	1510	16719	1901-1974
Rio de Janeiro	1962	2070	1956	1660	1714	1656	1825	1784	1369	1585	1687	1601	20869	1973-1989
Santa Cruz	<u>-</u>	-			-		_	-	-	-				1010 1000
Teresopolis			-		- 1	_	_					_		
Duque de Caxias	-						- 1	_ '	Í _	_			_	

4) Wind Speed

### Monthly Normals of Wind Speed

{ unit : m/sec ]

STATION	JAN	FEB	MAR	APR	RAY	JUN	JUL	AUG	SEP	ОСТ	KOV	DEC	ANX	PERIOD
Alto da Boa Vista		1	1		1	1		1		1	<del>                                     </del>	<del> </del>	<u> </u>	
Rangu	1,0	1.1	1.0	1.0	1.0	1.0	0.9	1.0	1.3	1.1	$ _{1,1}$	1.1	1.0	1931-1960
Nova Friburgo		· ·			1	1	1		'					1001 2000
Rio de Janeiro	3.5	3.5	3.2	3.1	2,7	2.7	2.8	2.9	3.3	3.4	3.7	3.4	3.2	1974-1985
Santa Cruz	3.7	3.7	3.5	3.7	3.7	3.6	3.9	3.9	3.9	3.6	1	3.6	3.7	1943-1960
Teresopolis	1.8	1.6	1,4	1.6	1. €	1.5	1.5	1.7	1.8	1.8	1.8	1.7	1.6	1931-1970
Duque de Caxias	2.0	2.2	2.2	2.4	2.1	1.9	2.2	2.1	2.3	2.3	2.3	2.4	2.1	1988-1990

Table 4-2 Meteorological (Temperature etc.) Data at Meteorological Stations
5) Wind Direction

# Monthly Normals of Prevailing Wind Direction

STATION		JAN	FEB	MAR	APR	YAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	PERIOD
Alto da Bo ist Freq (0.1	uency %)														
2nd Freq (0.1	X)														,
3rd Freq (0.1	. 1														1001 1000
Bangu	:			_				[		١					1931-1960
1st Freque		Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	Calm	
(0.1		495	464	505	522	527	533	548	516	489	462	489	473	502	,
2nd Frequ	,	SW	S₩	S₩	SW	SH	SW	SW	SW	SW	SW	SW	SW	SW	
(0.1		161	167	140	156	172	167	140	172	178	194	167	172	165	
3rd Freq (0, 1	<b>%</b> )	SE 108	SE 119	SE 118	SE 100	E 86	SE 89	SE 108	SE 108	SE 111	SE 108	SE 100	SE 118	SB 105	
Nova Fribu	- 1							ļ							
ist Frequence (0.1															1
2nd Frequ															
(0.1	<b>%</b> )													i	
3rd Frequence (0.1															
Rio de Jan	eiro							ĺ							1974-1985
1st Freq	uency	\$	S	S	S	S	S	N	S	S	S	S	S	S	ı
(0.1	<b>%</b> )	258	262	247	222	194	200	204	204	222	280	311	258	235	
2nd Freq	uency	SE	SE	SE	SE	N	N	S	SE	SE	SE	SE	SE	SEW	
(0.1	<b>%</b> )	215	202	194	189	172	189	172	161	189	. 247	233	194	185	
3rd Frequ	епсу	N	N	K	N	SE&C	Calm	SE	Ж	Calm	N&C	N&E	N	K	
(0.1	<b>%</b> )	129	155	161	178	151	156	151	161	122	97	111	140	150	· 
Santa Cruz															1943-1960
1st Frequ	ioncy	2M	SK	SE	SE	NE	SE	SE	SB	SW	SH	SY	SH	S₩	
(0.1	<b>%</b> )	161	155	172	189	172	167	172	161	200	183	189	183	166	
2nd Frequ	иепсу	SE	SE	SN	SW	SE -	SM.	S	SY	SR	SE	SE	SE	SE	
(0.1	X)	161	155	151	156	161	151	161	161	144	151	167	161	164	
3rd Frequ	тенсу	S&NE	S	S	NE	SH	S	SH	S	W	¥	H	W&NE	S	
(0.1	%)	129	155	140	144	151	140	151	151	144	- 151	133	129	133	•
Teresopolis	3									4					1931-1970
lst Frequ	1	Calm	Calm	Calm	Calm	Calm	Caim	Calm	1	Calm	SW	SW	Calm	Calm	
(0.1	%)	290	310	322	311	355	367	355	312	267	239	267	247	300	
2nd Frequ	iency	N	N	S₩	SY	SW	S₩	SW	SW	S₩	Calm	Calm	SW	SW	
(0.1	%)	183	179	204	256	.215	167	194	194	200	239	233	237	207	
3rd Frequ		NE	SW	Н	И	H	N	И	N	И	N	N&S	N	N	
(0.1		151	167	129	156	140	167	151	151	156	151	122	161	154	1000 1000
Duque de Ca	3													5777	1988-1989
ist Frequ	1	NW		SW	Ħ	H	HW	NA	SE	SE	SE	KK	S	NH.	
(0, 1	1	246		329	186	320	214	283	212	252	269	212	233	421	
2nd Frequ														SB	
(0.1														263	
3rd Frequ							.							N & H	
(0.1	%)								,		,			105	1

[NUTE] Observation time: 3 times per day (9,15 & 21 h)

