MONTHLY RAINFALL DATA

AT

BOLE INTERNATIONAL AIRPORT

(1965 – 1995)

STATION ID: 38090362 STATION NAME: A.A Bole (Bole Airport)
LAT: 9.02 LONG: 38.45

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	No.Mths
1965	0.0	0.0	42.5	58.7	6.2	16.8	168.9	231.9	45.7	64.2	6.4	0.5	12
1966	12.4	73.0	6.9	72.9	0.4	149.4	165.2	282.9	111.6	41.9	0.0	0.0	12
1967	0.0	6.2	75.8	107.1	145.6	134.7	263.9	208.9	282.9	20.1	38.9	0.0	12
1968	1.0	149.9	37.8	302.1	15.0	110.5	180.5(30)	155.4	128.6	4.9	0.8	0.0	12
1969	67.5	109.2	153.5	95.8	129.5	138.8	226.0	300.0	109.3	0.0	0.3	0.1	12
1970	10.0	52.3	126.4	39.5	31.5	61.7	340.6	311.3	165.5	2.9	0.0	0.0	12
1971	7.2	0.0	36.8	67.9	154.1	123.1	303.4	300.2	162.3	8.4	4.2	16.0	12
1972	7.7	103.4	82.4	162.8	83.3	91.4	268.9	152.0	134.1	3.2	6.4	0.0	12
1973	0.0	0.0	0.0	25.3	68.8	117.6	266.3	333.7	130.8	31.1	0.0	74.6	12
1974	0.0	15.7	6.4	5.0	142.2	140.3	269.8	237.4	203.3	10.0	0.0	0.0	12
1975	5.7	0.0	26.7	79.2	8.6	112.9	292.7	155.2	128.8	29.5	0.0	0.0	12
1976	28.6	9.2	50.4	99.1	129.2	106.3	249.7	236.9	102.3	0.0	78.3	3.4	12
1977	64.0	46.8	95.2	76.5	104.8	151.7	222.8	300.3	168.5	227.1	9.3	0.0	12
1978	0.0	71.6	28.9	92.0	46.2	101.6	162.3	244.5	195.8	44.8	0.0	0.0	12
1979	91.0	7.2	91.0	31.4	139.5	119.9	249.2	164.2	85.0	15.2	0.0	5.8	12
1980	23.6	26.8	64.3	74.3	44.4	129.1	268.1	214.8	118.6	0.0	0.0	0.0	12
1981	0.0	42.6	217.5	79.0	18.4	56.9	273.9	256.1	162.5	24.7	0.0	3.7	12
1982	26.6	96.4	90.2(30)	48.1	73.5	63.6	220.3	221.6	142.8	19.0(30)	40.7	4.9	12
1983	12.4	41.2	28.9	113.7	186.9	56.3	217.9	213.7	202.2	35.9	0.0	1.5	12
1984	0.0	0.4	11.6	11.6	135.0	334.3	313.7	180.4	98.8	0.0	0.0	7.0	12
1985	35.1	0.0	94.7	132.3	92.8	110.9	209.7	260.8	168.6	29.8	0.0	0.4	12
1986	0.0	45.1	57.6	218.6	37.7	175.2	167.9	222.3	107.4	31.6(30)	0.0	2.5	12
1987	0.0	49.1	180.1	85.7	154.6	71.9	155.9	98.1	57.0	16.6	0.0	0.4	12
1988	4.7	33.4	6.0	157.9	34.7	93.0	147.7	301.9	187.3	57.3	0.0	0.0	12
1989	3.4	33.7(27)	58.4	143.3	0.0	84.0	218.1	318.6	150.0	36.8	0.0	7.9	12
1990	3.2	161.1	60.4	144.5	25.2	48.2	194.2	293.6	228.5	46.1	2.1	0.0	12
1991	0.2	29.6	124.1	15.0	87.7	102.5	379.4	287.9	123.1	4.4(30)	2.1	0.0	12
1992	14.5	25.0	35.0	98.6	55.6	82.	254.8	223.3	157.0	64.4	0.3	0.4	12
1993	11.7	52.1	11.6	108.3	52.5	148.1	209.5	291.7	190.1	54.1	0.0	0.0	12
1994	0.0	0.0	54.8	25.6	31.2	120.0	264.3	174.1(30)	97.0	0.2	11.0	0.0	12
1995	0.0	80.4	76.5	127.7	59.4	49.1	162.0	252.9	-99	-99	-99	-99	8
MEAN:	13.4	43.0	67.5	94.2	72.5	101.	231.9	239.7	143.1	29.8	6.8	4.0	

REGION: SHEWA ELEMENT: Monthly Rainfall
ALT: 2354

NOTE: -99 -> ALL Data Missing
() -> Observation days (when incomplete)

DAILY GAUGE HEIGHT
AND
DISCHARGE
AT
AKAKI GAUGING STATION
OF
AKAKI RIVER
(1981 – 1993)

13

y Gage Height, in Meters, and Discharge, in second - Meters, of AKAKI River Creek

at AKAKI For the Year Ending December 31, 1981

PROVISIONAL MILITARY GOVERNMENT OF SOCIA
NATIONAL WATER RESOURCES COMMISS
WATER RESOURCES DEVELOPMENT A

Drainage area 884·4 Square kms. Observer Yoo

DAY	JANUARY		FEBRUARY		MARCH		APRIL		DAY	MAY		JUNE		JULY	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	0·41	1·212	0·40	0·917	0·40	0·917	0·56	2·720	1	0·40	1·120	0·37	0·641	0·39	0·8
2	·43	1·120	·40	0·917	·40	0·917	·54	2·626	2	·45	1·452	·37	0·641	·39	0·8
3	·40	0·917	·40	0·917	·44	1·338	·56	2·720	3	·43	1·227	·37	0·641	·43	1·02
4	·40	0·917	·40	0·917	·52	2·343	·58	2·813	4	·40	0·917	·37	0·641	·52	2·34
5	·39	0·821	·40	0·917	·72	5·662	·50	2·323	5	·39	0·821	·38	0·729	·46	1·52
6	·40	0·917	·40	0·917	·57	3·072	·64	4·208	6	·39	0·821	·38	0·729	·47	1·57
7	·40	0·917	·40	0·917	·54	2·626	·49	1·942	7	·38	0·729	·38	0·729	·45	1·45
8	·40	0·917	·40	0·917	·45	1·338	·44	1·338	8	·38	0·729	·38	0·729	·41	1·33
9	·40	0·917	·40	0·917	·42	1·120	·42	1·120	9	·38	0·729	·37	0·641	·52	2·34
10	·40	0·917	·40	0·917	·41	1·017	·43	1·120	10	·38	0·729	·37	0·641	·46	1·52
11	·41	1·017	·40	0·917	·40	0·917	·41	1·017	11	·37	0·641	·38	0·729	·59	3·35
12	·41	1·017	·53	2·483	·40	0·917	·40	0·917	12	·37	0·641	·38	0·729	·59	3·35
13	·40	0·917	·42	1·120	·40	0·917	·44	1·338	13	·36	0·558	·38	0·729	·71	5·42
14	·40	0·917	·42	1·120	·44	1·338	·43	1·227	14	·38	0·729	·38	0·729	·70	5·28
15	·40	0·917	·41	1·017	·44	1·338	·60	2·343	15	·37	0·641	·38	0·729	·60	3·55
16	·42	1·227	·40	0·917	·48	1·815	·58	2·720	16	·37	0·641	·38	0·729	1·08	13·95
17	·41	1·017	·43	1·227	·50	2·013	·52	2·343	17	·38	0·729	·39	0·821	·59	3·35
18	·42	1·120	·41	1·017	·45	1·452	·60	3·542	18	·37	0·641	·39	0·821	·92	9·90
19	·40	0·917	·43	1·227	·52	2·343	·47	1·691	19	·38	0·729	·38	0·729	·86	8·56
20	·40	0·917	·40	0·917	·46	1·570	·48	1·815	20	·37	0·641	·39	0·821	1·00	11·86
21	·40	0·917	·41	1·017	·42	1·120	·76	6·447	21	·37	0·641	·56	2·920	·89	8·10
22	·40	0·917	·40	0·917	·46	1·452	·63	5·255	22	·37	0·641	·41	1·017	1·28	18·49
23	·40	0·917	·40	0·917	·51	2·089	·64	4·208	23	·37	0·641	·39	0·821	1·10	11·515
24	·40	0·917	·40	0·917	·77	7·060	·52	2·343	24	·37	0·641	·38	0·729	1·18	16·74
25	·40	0·917	·38	0·729	·48	1·815	·61	3·705	25	·37	0·641	·42	1·120	1·49	26·8
26	·42	1·120	·40	0·917	·72	5·662	·58	3·026	26	·37	0·641	·39	0·821	2·22	55·09
27	·40	0·917	·40	0·917	·64	4·208	·47	1·691	27	·36	0·558	·40	0·917	1·22	17·90
28	·38	0·729	·40	0·917	·63	4·038	·46	1·570	28	·37	0·641	·38	0·729	1·78	36·89
29	·40	0·917			·72	5·662	·44	1·338	29	·37	0·641	·40	0·917	1·46	25·42
30	·40	0·917			·88	9·020	·42	1·120	30	·37	0·641	·41	1·017	4·35	176·16
31	·40	0·917			·68	4·915			31	·37	0·641			1·20	17·31
Second-meter days	29·451		22·38		82·189		74·306			22·833		25·336		504·4	
Mean	0·950		1·014		2·651		2·477			0·737		0·845		16·274	
MILLION M³	2·545		2·452		7·101		6·420			1·973		2·189		43·582	
Maximum	1·120		2·483		9·020		6·447			1·452		2·920		176·166	
Minimum	0·729		0·729		1·917		0·917			0·558		0·641		0·821	

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/ERNMENT OF SOCIALIST ETHIOPIA
RESOURCES COMMISSION
DEVELOPMENT AUTHORITY

Tables dated: Sept 25/1990 | Period of use: From 1981 to Sept 1982 (U.S.G.S.) | Use half-tenths between: D.C.H.II | File Number | Address / Distr.

Observer: Yes | Use hundredths below and tenths above these limits

DAY	JULY Gage height	JULY Discharge	AUGUST Gage height	AUGUST Discharge	SEPTEMBER Gage height	SEPTEMBER Discharge	DAY	OCTOBER Gage height	OCTOBER Discharge	NOVEMBER Gage height	NOVEMBER Discharge	DECEMBER Gage height	DECEMBER Discharge	DAY
1	0.39	0.821	1.64	31.684	3.13	100.632	1	0.68	4.915	0.46	1.570	0.44	1.338	1
2	.39	0.821	1.58	29.542	1.45	25.092	2	.64	4.208	.44	1.338	.44	1.338	2
3	.43	1.223	1.48	26.095	.93	10.183	3	.64	4.235	.43	1.691	.44	1.338	3
4	.52	8.343	1.49	26.433	1.98	44.836	4	.64	4.208	.45	1.452	.44	1.338	4
5	.46	1.570	1.09	14.244	1.78	36.133	5	.62	3.870	.45	1.452	.44	1.338	5
6	.49	1.942	.99	11.647	1.46	25.495	6	.64	4.208	.45	1.452	.44	1.338	6
7	.45	1.452	2.94	90.302	1.16	16.175	7	.73	5.855	.45	1.452	.44	1.338	7
8	.71	5.422	1.35	21.856	2.88	87.134	8	.62	3.870	.45	1.452	.44	1.338	8
9	.52	2.343	1.38	22.809	3.49	118.337	9	.58	3.223	.45	1.452	.44	1.338	9
10	.66	4.559	1.10	14.515	2.90	88.183	10	.57	3.696	.45	1.452	.44	1.338	10
11	.59	3.383	1.00	11.898	2.76	82.459	11	.55	3.772	.44	1.338	.44	1.338	11
12	.59	3.383	1.56	28.840	1.96	44.016	12	.53	3.483	.44	1.338	.44	1.338	12
13	.71	5.422	1.60	30.250	1.15	15.593	13	.52	3.383	.44	1.338	.44	1.338	13
14	.70	5.284	1.36	22.172	1.44	24.761	14	.51	3.207	.45	1.452	.44	1.338	14
15	.60	3.582	2.54	69.956	2.44	65.133	15	.50	3.093	.44	1.338	.44	1.338	15
16	1.09	13.976	2.98	92.449	2.60	72.826	16	.49	1.942	.44	1.338	.44	1.338	16
17		3.383	4.31	201.312	1.93	42.998	17	.48	1.815	.44	1.338	.44	1.338	17
18	.92	9.902	1.18	16.743	3.90	146.512	18	.48	1.815	.44	1.338	.44	1.338	18
19	.86	8.569	1.72	34.626	2.90	88.183	19	.49	1.942	.44	1.338	.43	1.050	19
20	1.02	11.898	1.27	19.387	1.22	12.900	20	.49	1.691	.44	1.338	.44	1.338	20
21	.84	8.107	.85	8.347	.76	10.906	21	.49	1.691	.44	1.338	.43	1.027	21
22	1.24	18.490	1.36	22.172	.84	8.107	22	.48	1.815	.44	1.338	.43	1.027	22
23	1.10	14.515	1.57	29.895	1.64	31.684	23	.48	1.815	.44	1.338	.43	1.027	23
24	1.18	16.743	.85	8.347	1.44	24.761	24	.49	1.691	.44	1.338	.43	1.027	24
25	1.49	26.433	1.02	12.406	1.46	25.092	25	.49	1.691	.44	1.338	.44	1.338	25
26	3.22	55.098	1.76	36.836	1.26	19.026	26	.46	1.570	.44	1.338	.43	1.027	26
27	1.23	17.90	1.53	27.755	.90	9.419	27	.46	1.570	.44	1.338	.43	1.027	27
28	1.78	36.89	1.99	45.268	.76	5.647	28	.46	1.570	.44	1.338	.43	1.027	28
29	1.46	25.425	2.29	58.236	.70	5.284	29	.46	1.570	.44	1.338	.43	1.027	29
30	4.35	176.166	4.01	152.727	.68	4.915	30	.46	1.570	.44	1.338	.44	1.452	30
31	1.20	17.318	1.30	33.892			31	.46	1.570			.46	1.570	31
		504.49		1252.919		1268.50			80.927		41.636		41.050	
		16.274		40.417		42.283			2.161		1.388		1.324	
		43.588		108.258		109.918			6.992		3.597		3.562	298.254
		176.166		201.312		146.512			5.855		1.691		1.570	
		0.821		8.347		4.915			1.570		1.338		1.027	

Remarks

Period Year

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ly Gage Height, in Meters, and Discharge, in second-Meters, of Akaki River Creek

At Akaki For the Year Ending December 31, 19 82

PROVISIONAL MILITARY GOVERNMENT OF SOCI
NATIONAL WATER RESOURCES COMMIS
WATER RESOURCES DEVELOPMENT A

Drainage area 2284 Square kms. Observer yes

DAY	JANUARY		FEBRUARY		MARCH		APRIL		DAY	MAY		JUNE		JULY	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		Gage height	Discharge	Gage height	Discharge	Gage height	Disch.
1	.44	1.338	.43	1.227	.50	2.013	.56	2.920	1	.40	0.917	.38	0.729	.50	2.0
2	.45	1.452	.43	1.227	.44	1.338	.46	1.570	2	.40	0.917	.38	0.729	.62	3.8
3	.44	1.338	.42	1.120	.46	1.570	.44	1.338	3	.39	0.821	.38	0.729	.58	3.0
4	.45	1.452	.43	1.120	.44	1.338	.44	1.338	4	.38	0.729	.39	0.821	.62	3.2
5	.45	1.452	.43	1.120	.42	1.120	.44	1.338	5	.40	0.917	.38	0.729	.52	2.2
6	.44	1.338	.43	1.120	.42	1.120	.44	1.338	6	.38	0.729	.39	0.821	.95	10.4
7	.44	1.338	.43	1.227	.42	0.917	.60	2.269	7	.56	2.920	.40	0.917	.73	5.2
8	.44	1.338	.43	1.227	.40	0.917	.45	1.452	8	.46	1.570	.42	0.917	.62	3.8
9	.44	1.338	.43	1.227	.38	0.729	.42	1.120	9	.46	1.570	.39	0.821	.58	3.0
10	.40	1.120	.43	1.227	.38	0.729	.40	0.917	10	.52	2.920	.40	0.917	.51	2.2
11	.43	1.227	.42	1.227	.38	0.729	.40	0.917	11	.53	3.483	.39	0.821	.59	3.2
12	.44	1.338	.70	5.284	.38	0.729	.42	1.120	12	.58	9.020	.38	0.821	.50	2.0
13	.44	1.338	.54	2.013	.38	0.729	.56	2.920	13	.56	2.920	.38	0.821	.47	1.6
14	.58	3.226	.53	2.483	.38	0.729	.48	1.815	14	.59	3.583	.40	0.917	.54	2.0
15	.56	2.920	.54	2.013	.38	0.729	.46	1.570	15	.58	3.226	.40	0.917	.71	5.0
16	.48	1.815	.53	2.343	.38	0.729	.44	1.338	15	.67	4.735	.42	1.120	.60	2.8
17	.83	7.909	.46	1.570	.38	0.729	.44	1.338	17	.60	3.542	.42	1.120	.91	9.9
18	.58	3.226	.46	1.570	.38	0.729	.42	1.120	18	.52	2.343	.42	1.120	.81	7.4
19	.48	1.815	.45	1.452	.38	0.729	.41	1.017	19	.48	1.815	.42	1.947	.67	4.2
20	.46	1.570	.42	1.120	.40	0.917	.44	1.338	20	.45	1.452	.63	4.038	.58	3.0
21	.45	1.452	.41	1.017	.40	0.917	.41	1.017	21	.43	1.227	.55	2.772	.58	3.0
22	.45	1.452	.40	0.917	.40	0.917	.40	0.917	22	.42	1.120	.49	1.947	.87	8.3
23	.44	1.338	.40	0.917	.40	0.917	.44	1.338	23	.42	1.120	.43	1.227	1.30	33
24	.44	1.338	.40	0.917	.40	0.917	.58	3.226	24	.41	1.017	.41	1.017	.88	9.0
25	.44	1.338	.42	1.120	.40	0.917	.44	1.338	25	.40	1.120	.41	1.017	1.90	41
26	.43	1.227	.44	1.338	.40	0.917	.40	0.917	26	.41	1.017	.40	0.917	.91	9.4
27	.43	1.227	.44	1.338	.40	0.917	.44	1.338	27	.42	1.120	.48	1.815	1.01	12.4
28	.44	1.338	.53	2.483	.40	0.917	.46	1.570	28	.41	1.017	.47	1.691	1.06	13.4
29	.41	1.017			.42	1.120	.40	0.917	29	.40	0.917	.53	2.343	2.67	76
30	.43	1.227			.52	2.343	.40	0.917	30	.40	0.917	.49	1.947	1.38	22.4
31	.43	1.227			.68	4.915			31	.39	0.821			1.66	39
Second-meter days		54.069		43.084		35.043		52.115			60.342		38.460		350.
Mean		1.744		1.539		1.130		1.737			1.947		1.282		11.3
MILLION M³		4.692		3.722		3.028		4.503			5.214		3.323		30.
Maximum		7.909		5.284		4.915		7.269			9.020		4.038		76.3
Minimum		1.017		0.917		0.729		0.917			0.729		0.729		1.67

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GOVERNMENT OF SOCIALIST ETHIOPIA
ER RESOURCES COMMISSION
S DEVELOPMENT AUTHORITY

Tables dated: Sept 26/1990

Periods of use: R.C# II use from Jan. 1st to Sept 1982
R.C# III use from Sept 1982 to Sept 1988

Use half-tenths between

File Number { Address / District

Ame Observer: yes

Use hundredths below and tenths above these limits

Discharge	JULY Gage height	JULY Discharge	AUGUST Gage height	AUGUST Discharge	SEPTEMBER Gage height	SEPTEMBER Discharge	DAY	OCTOBER Gage height	OCTOBER Discharge	NOVEMBER Gage height	NOVEMBER Discharge	DECEMBER Gage height	DECEMBER Discharge	DAY
·729	·50	2·073	·85	8·347	·69	5·098	1	·41	1·632	·34	0·931	·34	0·93'	1
729	·62	3·870	1·14	15·644	1·66	32·411	2	·46	2·282	·39	0·731	·34	0·931	2
729	·58	3·926	·90	9·471	1·65	39·610	3	·42	1·744	·34	0·931	·38	0·931	3
821	·62	3·870	·88	9·020	·75	35·754	4	·33	3·164	·38	0·931	·38	0·931	4
729	·52	2·343	·82	7·694	·62	30·969	5	·37	3·760	·34	0·931	·38	0·931	5
821	·95	10·663	·69	5·098	1·38	22·809	6	·57	3·760	·37	1·212	·39	0·931	6
911	·73	5·855	·66	4·559	1·98	44·236	7	·46	2·282	·38	1·313	·38	0·931	7
911	·62	3·870	1·80	37·664	·93	10·765	8	·52	3·022	·36	1·115	·33	0·844	8
821	·50	2·073	1·03	12·663	·68	5·598	9	·49	2·610	·38	1·313	·34	0·731	9
911	·51	2·202	·76	6·447	·66	5·242	10	·48	2·448	·43	1·364	·34	0·731	10
821	·59	3·383	1·03	12·663	1·88	40·774	11	·42	1·744	·37	1·212	·33	0·844	11
821	·50	2·073	·89	9·248	1·66	32·516	12	·46	1·744	·36	1·115	·34	0·93'	12
821	·43	1·691	1·58	29·542	1·12	15·596	13	·40	1·522	·36	1·115	·34	0·931	13
919	·54	2·626	·97	11·151	1·47	25·987	14	·41	1·632	·36	1·115	·36	1·115	14
919	·71	5·422	·99	11·647	1·22	18·299	15	·40	1·522	·34	0·931	·34	0·931	15
120	·80	7·269	1·18	16·743	·92	10·533	16	·39	1·416	·36	0·931	·36	0·931	16
120	·91	9·912	1·53	28·840	·74	6·716	17	·38	1·313	·38	0·931	·36	1·115	17
120	·81	7·480	1·00	11·898	·64	4·896	18	·38	1·313	·34	0·931	·34	0·931	18
942	·67	4·735	·89	9·348	·64	4·896	19	·38	1·313	·35	1·022	·34	0·931	19
1·038	·76	9·020	1·52	27·455	·62	4·559	20	·38	1·313	·38	0·931	·38	0·931	20
·922	·58	3·626	3·31	110·788	·50	2·745	21	·36	1·115	·38	0·931	·34	0·731	21
·947	·81	8·393	4·30	120·838	·46	2·422	22	·35	1·022	·38	0931	·32	0·760	22
·839	1·70	33·822	2·99	98·789	·66	5·242	23	·36	1·115	·38	0931	·33	2·840	23
047	·88	9·020	1·96	64·046	1·14	16·066	24	·35	1·022	·38	0931	·33	0·844	24
012	1·99	41·591	1·30	30·300	·57	3·960	25	·35	1·022	·34	0·731	·33	0·844	25
919	·91	9·912	1·31	36·133	·49	2·610	26	·34	0·931	·38	0·931	·32	0·760	26
815	1·01	12·151	1·24	19·692	·45	2·099	27	·38	0·931	·38	0931	32	0·760	27
691	1·56	13·445	1·23	17·960	·44	1·978	28	·38	0·931	·38	0931	32	0·760	28
·343	2·67	26·360	1·44	35·761	·44	1·978	29	·34	0·931	·38	0·931	·32	0·760	29
942	1·38	20·809	·91	12·151	·41	1·632	30	·38	0·931	·38	0·931	·32	0·760	30
	1·60	38·411	1·14	15·644			31	·38	0·931			32	0·760	31
460		350·811		862·112		438·120			52·328		36·896		27·326	
257		11·316		25·813		10·606			1·628		1·630		0·931	
323		30·310		69·139		37·352			4·301		2 669		2·361	171·312
257		26·360		120·838		44·256			3·960		1·360		1·115	
929		1·691		11·557		1·632			0·931		0·931		0·760	

Remarks

Period
Year

1-1

ge Height, in Meters, and Discharge, in second - Meters, of AKAKI River Creek

AKAKI For the Year Ending December 31, 19 83

PROVISIONAL MILITARY GOVERNMENT OF SOCIALIST E
NATIONAL WATER RESOURCES COMMISSION
WATER RESOURCES DEVELOPMENT AUTHO

Drainage area 55'4 Square kms Observer Yeo

DAY	JANUARY		FEBRUARY		MARCH		APRIL		DAY	MAY		JUNE		JULY	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	0.32	0.760	.34	0.731	.32	0.760	.28	0.460	1	.30	0.603	.33	0.844	.45	2.099
2	.32	0.760	.34	0.731	.31	0.679	.28	0.460	2	.30	0.603	.38	1.313	.32	1.313
3	.32	0.760	.33	0.884	.29	0.529	.28	0.460	3	.31	0.679	.53	3.164	.31	0.931
4	.32	0.760	.35	1.022	.30	0.603	.26	0.333	4	.31	0.679	.48	3.915	.32	0.760
5	.32	0.760	.33	0.844	.32	0.760	.25	0.276	5	.32	0.760	.51	3.760	.31	0.679
6	.32	0.760	.31	0.679	.30	0.603	.25	0.276	6	.32	0.760	.48	3.915	.30	0.603
7	.32	0.760	.31	0.679	.28	0.460	.26	0.333	7	.33	0.844	.53	3.052	.30	0.603
8	.32	0.760	.32	0.760	.28	0.460	.27	0.379	8	.33	0.844	.41	1.978	.32	1.313
9	.32	0.760	.33	0.844	.27	0.379	.27	0.379	9	.33	0.844	.34	0.931	.36	1.115
10	.32	0.760	.32	0.760	.28	0.460	.27	0.379	10	.34	0.931	.46	2.022	.34	0.931
11	.32	0.760	.33	0.844	.26	0.460	.26	0.333	11	.34	0.931	.50	2.715	.33	0.844
12	.32	0.760	.34	0.931	.28	0.460	.27	0.379	12	.34	0.931	.46	2.022	.39	1.416
13	.31	0.679	.32	0.760	.28	0.460	.28	0.460	13	.35	1.022	.48	2.022	.45	2.099
14	.31	0.679	.32	0.760	.29	0.529	.29	0.529	14	.43	1.859	.46	2.022	.53	3.164
15	.31	0.679	.32	0.760	.30	0.603	.31	0.679	15	.38	1.313	.49	2.610	.65	5.067
16	.31	0.679	.31	0.679	.30	0.603	.31	0.679	16	.58	3.915	.30	0.603	.72	6.334
17	.31	0.679	.31	0.679	.31	0.679	.31	0.679	17	.69	5.778	.44	1.978	.58	3.915
18		0.760	.32	0.760	.30	0.603	.31	0.679	18	.107	14.207	.54	3.307	.67	5.418
19	.31	0.679	.32	0.760	.28	0.460	.31	0.679	19	.35	1.022	.38	1.313	.54	3.251
20	.31	0.679	.32	0.760	.27	0.379	.31	0.679	20	.24	0.223	.38	1.313	.84	8.354
21	.31	0.679	.33	0.844	.26	0.333	.31	0.679	21	.47	2.349	.34	0.931	.86	9.186
22	.32	0.760	.33	0.844	.26	0.333	.30	0.603	22	.42	1.744	.32	0.760	.82	8.329
23	.32	0.760	.31	0.679	.27	0.379	.30	0.603	23	.23	0.174	.35	1.022	.92	10.563
24	.33	0.844	.31	0.679	.28	0.460	.30	0.603	24	.73	6.524	.53	0.844	1.24	18.815
25	.33	0.844	.34	0.931	.26	0.529	.28	0.603	25	.21	0.276	.31	0.679	1.00	12.439
26	.33	0.844	.35	1.022	.25	0.276	.30	0.603	26	.33	1.212	.40	1.522	1.14	16.666
27	.33	0.844	.35	1.022	.25	0.276	.30	0.603	27	.25	0.276	.40	1.522	1.34	21.858
28	.32	0.760	.33	0.844	.24	0.223	.30	0.603	28	.48	2.022	.53	3.160	1.81	39.686
29	.32	0.760			.24	0.223	.30	0.603	29	.37	3.915	.52	3.022	1.26	19.453
30	.32	0.760			.25	0.276	.30	0.603	30	.51	2.822	.37	3.760	1.30	20.644
31	.32	0.760			.27	0.379			31	.42	2.178			1.37	22.786
Total cubic kms		23.248		22.352		14.626		15.616			63.056		63.043		260.068
Mean		0.750		0.816		0.473		0.523			2.034		2.101		8.389
MILLION M³		2.009		1.924		1.268		1.354			5.448		5.443		22.470
Maximum		0.844		1.022		0.760		0.679			14.207		3.915		87.686
Minimum		0.679		1.679		0.223		0.276			0.174		6.679		0.603

11

RY GOVERNMENT OF SOCIALIST ETHIOPIA
VATER RESOURCES COMMISSION
RCES DEVELOPMENT AUTHORITY

Tables dated 5-APR-1990 | Periods of use DEC # III | Use half-tenths between | File Number: A 0

Juare Kms Observer Yeo | Use hundredths below and tenths above these limits

DAY	JULY Gage height	JULY Discharge	AUGUST Gage height	AUGUST Discharge	SEPTEMBER Gage height	SEPTEMBER Discharge	OCTOBER Gage height	OCTOBER Discharge	NOVEMBER Gage height	NOVEMBER Discharge	DECEMBER Gage height	DECEMBER Discharge	DAY
1	.45	2.099	.54	28.326	1.70	33.963	.70	5.961	.34	0.931	.31	0.679	1
2	.34	1.313	1.13	15.495	1.61	30.743	.54	3.309	.34	0.931	.32	0.760	2
3	.34	0.931	1.15	16.339	1.33	22.726	.50	2.745	.34	0.931	.31	0.679	3
4	.32	0.760	1.16	16.643	1.07	14.269	.47	2.349	.34	0.931	.31	0.679	4
5	.31	0.679	1.16	16.643	.89	9.857	.43	2.349	.34	0.931	.30	0.603	5
6	.30	0.603	1.38	23.098	.99	12.196	.51	2.882	.34	0.931	.29	0.529	6
7	.30	0.603	1.31	21.242	1.08	14.462	.43	2.349	.34	0.931	.29	0.529	7
8	.38	1.313	2.19	53.669	.86	9.186	.43	2.349	.34	0.931	.29	0.529	8
9	.36	1.115	1.58	29.008	1.15	16.339	.41	1.632	.34	0.931	.29	0.529	9
10	.34	0.931	1.66	32.516	1.93	42.351	.41	1.632	.34	0.931	.29	0.529	10
11	.33	0.844	1.48	25.610	3.11	99.375	.39	1.313	.33	0.844	.29	0.529	11
12	.39	1.416	2.81	83.257	1.65	31.605	.39	1.313	.33	0.844	.29	0.529	12
13	.46	2.099	3.59	127.482	1.70	33.965	.39	1.313	.32	0.760	.29	0.529	13
14	.53	3.164	3.33	111.895	1.75	35.805	.39	1.313	.32	0.760	.28	0.460	14
15	.65	5.067	3.23	106.132	1.26	19.452	.40	1.522	.33	0.760	.29	0.529	15
16	.72	6.334	3.69	133.682	1.12	15.526	.40	1.522	.32	0.760	.29	0.529	16
17	.58	3.915	3.33	111.895	1.98	26.312	.37	2.349	.33	0.844	.29	0.529	17
18	.67	5.418	3.33	111.895	1.87	40.383	.54	3.309	.32	0.760	.29	0.529	18
19	.29	9.851	1.21	12.815	1.52	26.720	.40	1.744	.32	0.760	.28	0.460	19
20	.84	8.454	1.09	14.929	1.39	23.073	.38	1.313	.32	0.760	.28	0.460	20
21	.86	9.186	.94	10.998	1.18	12.168	.37	1.212	.31	0.760	.29	0.529	21
22	.82	8.329	.81	8.100	.71	6.146	.36	1.115	.32	0.760	.29	0.529	22
23	.92	10.563	1.35	22.165	.64	4.896	.35	1.022	.32	0.760	.30	0.603	23
24	1.24	18.835	2.19	50.593	.71	6.146	.34	0.931	.30	0.603	.29	0.529	24
25	1.50	12.439	1.79	32.309	.56	11.951	.38	0.931	.30	0.603	.30	0.603	25
26	1.14	16.666	2.65	67.686	.34	2.205	.34	0.931	.31	0.679	.30	0.603	26
27	1.34	21.858	3.21	56.960	.61	5.062	.35	1.022	.31	0.679	.29	0.581	27
28	.31	31.626	1.90	41.56	.96	11.951	.35	1.022	.31	0.679	.29	0.529	28
29	.26	19.452	3.59	127.482	.56	9.186	.26	1.115	.32	0.760	.28	0.460	29
30	1.30	20.644	1.99	45.173	.93	11.253	.25	1.022	.31	0.679	.28	0.460	30
31	1.31	22.286	3.33	138.317			.34	0.931			.28	0.460	31
		26.662		1654.564		652.565		55.822		24.124		16.962	
		8.387		54.315		21.919		1.801		0.804		0.547	
		22.470		133.317		55.815		4.823		2.684		1.466	.250
		37.626		138.317		99.375		5.961		0.931		0.760	
		6.662		3.20		4.576		1.931		0.603		0.460	

Remarks

Period Year

1b

Gage Height, in Meters, and Discharge, in second - Meters, of Arabi River Creek

For the Year Ending December 31, 1984

PROVISIONAL MILITARY GOVERNMENT OF SOCIALIS
NATIONAL WATER RESOURCES COMMISSIO
WATER RESOURCES DEVELOPMENT AUT

Drainage area 224.4 Square kms. Observer

DAY	JANUARY		FEBRUARY		MARCH		APRIL		DAY	MAY		JUNE		JULY	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	0.27	0.529	0.34	0.931	0.32	0.760	0.28	0.460	1	0.30	0.603	0.33	0.844	0.70	5.961
2	0.29	0.529	0.34	0.931	0.31	0.679	0.28	0.460	2	0.30	0.603	0.38	1.313	0.64	4.896
3	0.29	0.529	0.33	0.844	0.29	0.529	0.28	0.460	3	0.31	0.679	0.53	3.164	0.53	3.164
4	0.29	0.529	0.35	1.022	0.30	0.603	0.26	0.333	4	0.31	0.679	0.58	3.915	0.74	6.716
5	0.30	0.603	0.33	0.844	0.32	0.760	0.25	0.276	5	0.32	0.760	0.53	3.164	0.63	4.326
6	0.30	0.603	0.31	0.679	0.30	0.603	0.25	0.276	6	0.32	0.760	0.58	3.915	0.69	5.378
7	0.29	0.529	0.31	0.679	0.28	0.460	0.26	0.333	7	0.33	0.844	0.53	3.164	0.62	4.559
8	0.29	0.529	0.32	0.760	0.28	0.460	0.27	0.374	8	0.33	0.844	0.44	1.978	0.61	4.374
9	0.29	0.529	0.33	0.844	0.29	0.529	0.27	0.374	9	0.33	0.844	0.34	0.931	0.72	6.334
10	0.30	0.603	0.32	0.760	0.28	0.460	0.27	0.374	10	0.34	0.931	0.46	1.822	0.70	5.961
11	0.29	0.529	0.32	0.760	0.28	0.460	0.26	0.333	11	0.34	0.931	0.50	2.164	0.94	10.991
12	0.30	0.603	0.34	0.931	0.29	0.460	0.27	0.374	12	0.34	0.931	0.46	1.822	0.76	7.106
13	0.30	0.603	0.32	0.760	0.28	0.460	0.28	0.460	13	0.35	1.022	0.46	1.822	1.13	15.795
14	0.30	0.603	0.32	0.760	0.29	0.529	0.29	0.529	14	0.43	1.859	0.46	1.822	1.72	34.695
15	0.32	0.760	0.32	0.760	0.30	0.529	0.31	0.679	15	0.36	1.115	0.49	2.010	1.30	20.645
16	0.33	0.844	0.31	0.679	0.30	0.529	0.31	0.679	15	0.30	0.603	0.63	4.259	2.36	61.234
	0.32	0.760	0.31	0.679	0.31	0.679	0.31	0.679	17	0.29	0.529	0.53	3.164	1.50	26.980
18	0.30	0.603	0.32	0.760	0.30	0.529	0.31	0.679	18	0.29	0.529	0.68	2.605	2.81	84.812
19	0.29	0.529	0.32	0.760	0.28	0.460	0.31	0.679	19	0.30	2.345	0.96	8.079	1.90	33.963
20	0.29	0.529	0.32	0.760	0.28	0.374	0.31	0.679	20	0.40	1.322	0.49	2.010	1.16	16.613
21	0.29	0.529	0.33	0.844	0.26	0.333	0.31	0.679	21	0.34	0.931	0.61	5.418	0.94	10.991
22	0.30	0.603	0.33	0.844	0.26	0.333	0.30	0.603	22	0.30	0.603	0.48	2.418	0.75	6.910
23	0.31	0.679	0.31	0.679	0.27	0.374	0.30	0.603	23	0.30	0.603	0.76	7.106	1.78	36.929
24	0.31	0.679	0.31	0.679	0.28	0.460	0.30	0.603	24	0.34	0.931	0.58	3.915	1.40	23.732
25	0.31	0.679	0.33	0.931	0.29	0.529	0.30	0.603	25	0.32	0.760	0.54	3.415	1.40	23.732
26	0.30	0.603	0.35	1.022	0.28	0.276	0.30	0.603	26	0.52	3.022	1.50	26.980	1.66	32.516
27	0.31	0.679	0.35	1.022	0.26	0.333	0.30	0.603	27	0.38	1.313	1.21	15.213	4.52	189.383
28	0.33	0.844	0.33	0.844	0.24	0.223	0.30	0.603	28	0.48	2.498	1.02	12.935	3.56	125.615
29	0.33	0.844	0.32	0.760	0.24	0.223	0.30	0.603	29	0.58	3.915	0.89	9.851	2.16	52.314
30	0.32	0.760			0.30	0.603	0.30	0.603	30	0.51	2.882	0.79	7.408	3.32	111.313
31	0.32	0.760			0.27	0.374			31	0.48	2.418			1.28	20.047
Second-meter days	19.534		23.441		14.838		15.676			36.78		165.1116		998.861	
Mean	0.630		0.808		0.479		0.523			1.186		5.514		32.221	
MILLION M³	1.688		2.075		1.282		1.354			3.178		14.292		86.807	
Maximum	0.844		1.022		0.760		0.679			3.915		26.980		189.383	
Minimum	0.529		0.679		0.223		0.276			0.529		0.844		3.164	

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OVERNMENT OF SOCIALIST ETHIOPIA
: RESOURCES COMMISSION
DEVELOPMENT AUTHORITY

Tables dated: Sept 25/1990 | Periods of use: R.C.H III | Use half-tenths between: | File Number: Adda Abet / District:

Observer: | Use hundredths below and tenths above these limits:

	JULY		AUGUST		SEPTEMBER		DAY	OCTOBER		NOVEMBER		DECEMBER		DAY
harge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	
·44	0·70	5·961	1·64	21·802	1·96	43·856	1	0·43	1·859	0·35	1·022	0·31	0·679	1
13	0·64	4·896	4·14	163·940	1·28	20·047	2	0·42	1·744	0·35	1·022	0·31	0·679	2
·64	0·53	3·164	3·46	65·897	0·98	11·951	3	0·42	1·744	0·35	1·022	0·31	0·679	3
915	0·74	6·716	2·66	70·619	0·98	11·951	4	0·41	1·632	0·35	1·022	0·31	0·679	4
960	0·65	4·326	0·96	11·471	1·63	21·447	5	0·41	1·632	0·35	1·022	0·30	0·603	5
·15	0·61	5·778	1·74	35·434	1·26	19·457	6	0·41	1·632	0·35	1·022	0·30	0·603	6
·64	0·62	4·559	1·48	33·286	1·06	13·909	7	0·43	1·744	0·35	1·022	0·30	0·603	7
778	0·61	4·894	0·88	9·627	3·26	107·842	8	0·39	1·416	0·33	0·844	0·29	0·529	8
331	0·72	6·334	0·71	6·146	2·14	51·453	9	0·39	1·416	0·34	0·931	0·28	0·460	9
222	0·70	5·961	0·73	6·584	1·58	29·697	10	0·38	1·315	0·34	0·931	0·29	0·589	10
·15	0·94	10·998	0·82	11·559	1·58	29·697	11	0·38	1·315	0·33	0·844	0·30	0·603	11
·22	0·76	7·106	0·93	10·765	1·70	33·968	12	0·37	1·215	0·34	0·931	0·30	0·603	12
222	1·13	15·795	0·86	9·186	0·84	8·754	13	0·36	1·115	0·34	0·931	0·31	0·645	13
222	1·72	34·695	1·67	32·875	0·72	6·338	14	0·39	1·313	0·34	0·931	0·31	0·679	14
510	1·30	20·644	0·88	9·693	0·64	4·896	15	0·40	1·522	0·34	0·931	0·30	0·603	15
557	2·26	61·234	2·12	52·749	0·62	4·559	16	0·34	0·931	0·33	0·844	0·30	0·603	16
·64		26·980	1·40	93·729	0·56	3·607	17	0·33	0·844	0·32	0·760	0·31	0·679	17
·56	2·89	84·812	2·37	61·694	0·53	3·164	18	0·34	0·931	0·32	0·760	0·30	0·603	18
017	1·70	33·963	0·81	8·120	0·50	2·745	19	0·33	0·844	0·32	0·760	0·29	0·529	19
610	1·16	16·613	1·44	25·010	0·53	3·164	20	0·33	0·844	0·32	0·760	0·29	0·529	20
418	0·94	10·998	0·96	11·471	0·70	5·961	21	0·33	0·844	0·31	0·679	0·29	0·589	21
478	0·75	6·910	0·80	7·913	0·48	2·478	22	0·33	0·844	0·31	0·679	0·30	0·603	22
156	1·38	36·929	0·68	5·597	0·49	2·610	23	0·33	0·844	0·31	0·679	0·32	0·760	23
915	1·40	23·729	0·66	5·242	0·51	2·782	24	0·33	0·844	0·31	0·679	0·32	0·760	24
215	1·40	23·729	1·08	14·462	0·47	2·349	25	0·33	0·844	0·32	0·760	0·32	0·760	25
169	1·66	32·516	0·88	9·627	0·46	2·312	26	0·33	0·844	0·32	0·760	0·31	0·679	26
613	4·52	189·383	1·03	13·185	0·49	2·610	27	0·33	0·844	0·32	0·760	0·30	0·603	27
235	3·56	125·658	0·79	7·708	0·47	2·478	28	0·34	0·931	0·32	0·760	0·30	0·603	28
251	2·16	52·814	0·80	7·913	0·46	2·222	29	0·34	0·931	0·31	0·679	0·29	0·529	29
408	3·32	111·823	1·43	26·317	0·50	2·966	30	0·33	0·844	0·31	0·679	0·28	0·496	30
	1·28	20·047	1·22	20·047			31	0·34	0·931			0·28	0·460	31
416	998·861		801·57		471·328			36·546		25·612		19·063		
14	32·221		25·857		15·711			1·179		0·856		0·615		
92	86·802		69·256		40·723			3·158		2·219		1·647		227·12·4
280	189·383		169·94		107·848			1·359		1·022		0·844		
14	3·164		4·559		2·022			0·844		0·679		0·460		

Remarks

Period
Year

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...age Height, in Meters, and Discharge, in second-Meters, of Atak... River Creek

Atak... For the Year Ending December 31, 1985

PROVISIONAL MILITARY GOVERNMENT OF SOCIALIST
NATIONAL WATER RESOURCES COMMISSION
WATER RESOURCES DEVELOPMENT AUTH

Drainage area 884.4 Square kms. Observer

DAY	JANUARY		FEBRUARY		MARCH		APRIL		DAY	MAY		JUNE		JULY	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	0.30	c.603	0.33	1.344	0.31	0.619			1	0.34	c.703	0.40	1.582	0.45	2.099
2	0.30	c.603	0.33	1.344	0.30	0.603			2	0.32	c.660	0.40	1.582	0.49	2.610
3	0.30	c.603	0.33	0.344	0.30	c.603			3	0.32	c.660	0.39	1.416	0.61	4.314
4	0.30	c.603	0.33	c.344	0.30	c.603			4	0.31	c.619	0.40	1.582	0.64	4.596
5	0.31	c.619	0.33	0.344	0.30	0.603			5	0.33	c.660	0.40	1.582	0.52	3.360
6	0.32	c.640	0.33	0.344	0.30	c.603			6	0.46	3.621	0.42	1.582	0.45	3.099
7	0.32	c.640	0.33	0.344	0.30	c.603			7	0.37	2.205	0.41	1.632	0.54	3.307
8	0.32	c.640	0.33	0.344	0.29	c.579			8	0.32	1.339	0.41	1.632	0.54	3.309
9	0.32	c.640	0.33	0.344	0.29	c.579			9	1.51	21.314	0.42	1.744	0.58	3.309
10	0.31	c.619	0.36	c.931	0.27	c.539			10	0.32	6.334	0.42	1.744	0.53	3.164
11	0.31	0.603	0.36	1.115	0.29	c.579			11	0.56	3.609	0.42	1.744	0.56	3.609
12	0.32	c.640	0.36	1.115					12	0.50	2.345	0.41	1.632	0.66	5.262
13	0.33	c.660	0.36	1.115					13	0.44	1.492	0.41	1.632	0.70	5.961
14	0.35	1.022	0.36	1.115					14	0.40	1.582	0.41	1.632	0.68	5.597
15	0.35	1.022	0.34	0.931					15	0.37	1.212	0.41	1.632	0.66	5.242
16	0.35	1.022	0.34	0.931					15	0.36	1.115	0.41	1.632	0.61	5.244
17	0.34	0.931	0.34	0.931					17	0.35	1.115	0.41	1.632	0.65	8.541
18	0.33	0.844	0.33	0.844					18	0.36	1.115	0.42	1.744	0.84	8.754
19	0.34	0.931	0.32	0.760					19	0.37	1.212	0.42	1.744	0.84	8.354
20	0.35	1.022	0.32	0.760					20	0.36	1.115	0.42	1.744	0.86	9.186
21	0.34	0.931	0.32	0.760					21	0.38	1.313	0.43	1.859	0.93	10.765
22	0.33	0.844	0.33	0.844					22	0.38	1.313	0.46	2.222	0.92	10.533
23	0.34	0.931	0.33	0.844					23	0.38	1.313	0.46	2.222	1.26	13.997
24	0.33	0.844	0.32	0.760					24	0.37	1.212	0.43	1.859	1.05	13.693
25	0.32	0.760	0.32	0.760					25	0.37	1.212	0.43	1.859	1.22	18.897
26	0.33	0.844	0.32	0.760					26	0.37	1.212	0.43	1.859	1.56	29.005
27	0.33	0.844	0.32	0.760					27	0.38	1.212	0.46	2.222	1.34	21.858
28	0.33	0.844	0.32	0.760			0.46	2.099	28	0.37	1.212	0.41	1.744	1.16	16.613
29	0.33	0.844					0.42	1.744	29	0.33	1.212	0.46	2.222	3.14	101.048
30	0.33	0.844					0.36	1.115	30	0.39	1.416	0.45	2.099	2.24	55.816
31	0.32	0.844							31	0.40	1.582			0.61	73.192
Second-meter days		25.345		24.392							86.27		53.318		465.61
Mean		0.818		0.871							2.783		1.777		15.022
MILLION M³		2.190		2.103							7.454		4.607		40.236
Maximum		1.022		1.115							21.314		2.349		101.048
Minimum		0.603		0.760							0.760		1.416		2.099

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ITARY GOVERNMENT OF SOCIALIST ETHIOPIA
AL WATER RESOURCES COMMISSION
OURCES DEVELOPMENT AUTHORITY

Tables dated: Sept 26/1990 | Periods of use: R-C-H III | Use half-tenths between: | File Number:

Square kms. Observer: | Use hundredths below and tenths above these limits:

DAY	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUGUST Gage height	AUGUST Discharge	SEPTEMBER Gage height	SEPTEMBER Discharge	DAY	OCTOBER Gage height	OCTOBER Discharge	NOVEMBER Gage height	NOVEMBER Discharge	DECEMBER Gage height	DECEMBER Discharge	DAY
1		1·582	0·85	2·099	2·09	119·324	1·78	36·989	1	0·74	6·716	0·39	1·416	0·38	1·313	1
2		1·582	0·49	8 610	1·54	28·326	1·53	23·987	2	0·73	6·524	0·38	1·313	0·37	1·213	2
3		1·416	0·61	4·319	1·89	111·166	1·16	16·683	3	0·69	5·938	0·38	1·313	0·38	1·313	3
4		1·582	0·64	4·596	3·60	93·335	1·01	12·686	4	0·64	4·896	0·38	1·313	0·39	1·416	4
5		1·582	0·53	3·960	2·06	157·533	1·50	26·98	5	0·61	4·399	0·37	1·212	0·40	1·582	5
6		1·582	0·65	3·987	1·26	19·457	1·44	25·610	6	0·57	3·760	0·37	1·212	0·40	1·582	6
7		1·632	0·54	3·309	1·38	83·098	1·59	30·044	7	0·56	3·607	0·36	1·115	0·41	1·632	7
8		1·632	0·54	3·309	5·35	113·110	2·18	53·181	8	0·56	3·607	0·35	1·092	0·41	1·632	8
9		1·744	0·54	3·309	2·83	64·484	1·98	44·766	9	0·58	3·915	0·35	1·092	0·40	1·582	9
10		1·744	0·53	3·160	2·22	185·662	1·82	40·382	10	0·58	3·915	0·35	1·092	0·40	1·582	10
11		1·744	0·56	3·607	2·46	65·897	1·57	44·356	11	0·58	3·915	0·35	1·092	0·41	1·632	11
12		1·632	0·66	5·262	3·02	94·428	1·54	29·352	12	0·59	4·022	0·35	1·092	0·41	1·632	12
13		1·632	0·70	5·961	1·38	83·098	0·69	5·738	13	0·58	3·915	0·35	1·092	0·41	1·632	13
14		1·632	0·68	5·593	4·18	165·650	0·60	4·232	14	0·57	3·760	0·36	1·115	0·41	1·632	14
15		1·632	0·66	5·262	2·93	91·914	0·61	8·120	15	0·56	3·607	0·36	1·115	0·41	1·632	15
16		1·632	0·69	5·738	1·84	31·818	0·70	10·076	16	0·55	3·453	0·36	1·115	0·40	1·582	16
17		1 12	0·83	8·541	1·08	26·37	0·81	8·120	17	0·54	3·309	0·36	1·115	0·40	1·582	17
18		1·744	0·84	8·758	2·05	48·903	1·19	17·648	18	0·53	3·164	0·39	1·212	0·41	1·632	18
19		1·744	0·85	8·758	1·78	44·766	1·29	20·34	19	0·51	2·892	0·37	1·212	0·58	1·632	19
20		1·744	0·96	9·186	1·76	43·958	1·16	16·613	20	0·49	2·610	0·36	1·115	0·41	1·632	20
21		1·859	0·93	10·761	1·61	32·875	1·38	21·858	21	0·47	2·349	0·36	1·115	0·40	1·582	21
22		2·222	0·92	10·533	2·49	64·016	1·32	21·849	22	0·45	2·079	0·37	1·212	0·41	1·632	22
23		2·222	1·06	13·949	3·22	105·582	1·20	13·330	23	0·59	1·978	0·38	1·313	0·40	1·582	23
24		1·859	0·95	13·673	3·20	54·054	1·02	12·935	24	0·52	1·859	0·38	1·313	0·39	1·582	24
25		1·859	1·22	18·299	3·10	101·048	0·91	10·533	25	0·52	1·744	0·36	1·115	0·40	1·582	25
26		1·859	1·56	29 008	2·06	48·069	0·82	9·603	26	0·50	1·632	0·36	1·115	0·39	1·416	26
27		2·222	1·34	21·858	1·28	20·043	0·85	8·541	27	0·41	1·632	0·37	1·092	0·39	1·416	27
28		2·349	1·16	16·613	1·52	22·655	0·81	8·120	28	0·40	1·582	0·37	1·092	0·39	1·416	28
29		2·222	3·10	101·048	1·02	12·935	0·81	7·505	29	0·39	1·416	0·38	1·212	0·38	1·313	29
30		2 079	2·44	55 816	1·13	16·890	0·76	7·106	30	0·40	1·582	0·37	1·092	0·39	1·416	30
31			2·61	73·142	1·46	25·66			31	0·43	1·582			0·37	1·416	31
		53·318		465·693		1848·122		604·225			101 078		35·152		46·922	
		1·722		15 022		59·619		20·141			3·261		1·172		1·514	
		4·607		40 236		159·682		52 205			8·733		3 039		4·054	
		2·349		101·048		154·513		53·181			6·716		1·416		1·632	
		1·416		2·099		12 935		4·232			1·416		1·092		1·212	

Remarks: Gage Height in Meters, Discharge in Cubic Meters per Second

Printed Year

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ge Height, in Meters, and Discharge, in second - Meters, of Akaki River Creek

Akaki ..... For the Year Ending December 31, 1986

PROVISIONAL MILITARY GOVERNMENT OF SOCIALIST E
NATIONAL WATER RESOURCES COMMISSION
WATER RESOURCES DEVELOPMENT AUTH

Drainage area 95.4 Square kms. Observer

DAY	JANUARY		FEBRUARY		MARCH		APRIL		DAY	MAY		JUNE		JULY	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	0.39	1.416	0.35	1.212	0.34	1.212	[illegible]	1.859	1	0.45	2.079	0.33	[illegible]	[illegible]	[illegible]
2	0.38	1.313	0.34	1.212	0.43	1.359	0.69	2.245	2	0.38	1.515	0.32	[illegible]	[illegible]	[illegible]
3	0.38	1.313	0.38	1.313	0.50	2.351	0.69	5.343	3	0.41	2.389	0.34	[illegible]	[illegible]	[illegible]
4	0.38	1.313	0.39	1.212	0.65	3.664	[illegible]	1.571	4	0.45	2.612	0.33	[illegible]	[illegible]	[illegible]
5	0.37	1.216	0.36	1.212	0.51	[illegible]	[illegible]	[illegible]	5	0.44	1.024	[illegible]	[illegible]	[illegible]	[illegible]
6	0.36	1.212	0.37	1.212	[illegible]	[illegible]	0.65	5.222	6	0.33	1.212	0.33	[illegible]	0.91	[illegible]
7	0.37	1.212	0.33	1.212	[illegible]	[illegible]	0.64	4.876	7	0.36	1.216	0.35	[illegible]	0.92	[illegible]
8	0.38	1.313	0.33	1.212	[illegible]	[illegible]	0.75	6.920	8	0.36	1.216	0.33	[illegible]	0.96	[illegible]
9	0.39	1.416	0.37	1.212	[illegible]	[illegible]	0.48	2.418	9	0.35	1.024	0.38	1.313	0.93	[illegible]
10	0.35	1.313	0.36	1.115	[illegible]	[illegible]	0.48	[illegible]	10	0.37	1.115	0.42	[illegible]	0.90	[illegible]
11	0.38	1.313	0.35	1.115	[illegible]	[illegible]	0.49	2.612	11	0.74	6.116	0.45	[illegible]	0.94	[illegible]
12	0.38	1.313	0.36	1.115	0.41	[illegible]	0.49	2.610	12	0.42	1.264	0.45	[illegible]	0.89	[illegible]
13	0.37	1.212	0.36	1.115	0.40	[illegible]	0.51	2.892	13	0.38	1.313	0.42	[illegible]	0.84	[illegible]
14	0.33	1.212	0.36	1.115	0.48	[illegible]	0.80	7.913	14	0.53	1.859	0.50	[illegible]	0.81	[illegible]
15	0.33	1.212	0.35	1.115	0.55	1.733	0.42	[illegible]	15	0.44	1.918	0.41	[illegible]	0.87	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.37	[illegible]	16	[illegible]	[illegible]	0.45	[illegible]	0.83	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.36	[illegible]	17	0.38	1.313	0.53	[illegible]	0.84	[illegible]
18	0.37	[illegible]	0.42	[illegible]	0.63	1.859	0.36	[illegible]	18	0.38	1.313	0.58	[illegible]	0.84	[illegible]
19	0.34	[illegible]	0.37	[illegible]	0.53	3.760	0.52	[illegible]	19	0.37	1.416	0.72	[illegible]	0.84	[illegible]
20	0.36	[illegible]	0.39	[illegible]	0.58	[illegible]	0.65	[illegible]	20	0.38	1.313	0.91	[illegible]	0.91	[illegible]
21	0.35	[illegible]	0.38	[illegible]	0.54	[illegible]	0.42	[illegible]	21	0.40	[illegible]	0.71	[illegible]	0.86	[illegible]
22	0.35	[illegible]	0.33	[illegible]	0.49	[illegible]	0.41	[illegible]	22	0.42	[illegible]	0.64	[illegible]	0.90	[illegible]
23	0.36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	23	0.37	[illegible]	0.57	[illegible]	0.86	[illegible]
24	0.35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	24	0.33	[illegible]	0.65	[illegible]	1.17	[illegible]
25	0.35	[illegible]	0.38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	25	[illegible]	[illegible]	0.58	[illegible]	[illegible]	[illegible]
26	0.35	[illegible]	0.45	[illegible]	0.45	[illegible]	0.42	[illegible]	26	0.39	[illegible]	0.55	[illegible]	0.95	[illegible]
27	[illegible]	[illegible]	0.37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27	[illegible]	[illegible]	0.60	[illegible]	0.81	[illegible]
28	[illegible]	[illegible]	0.36	[illegible]	[illegible]	[illegible]	0.42	[illegible]	28	[illegible]	[illegible]	0.96	[illegible]	0.93	[illegible]
29	0.36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.69	[illegible]	29	0.34	[illegible]	0.92	[illegible]	0.93	[illegible]
30	0.36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.41	[illegible]	30	0.34	[illegible]	0.71	[illegible]	1.50	[illegible]
31	0.36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	31	0.34	[illegible]	[illegible]	[illegible]	1.44	[illegible]
Second-ft/s	36.965		37.238		66.250		96.342			48.171		106.057		331.962	
Mean	1.192		1.330		2.137		3.213			1.555		3.535		10.708	
MILLION M³	3.194		3.312		5.724		8.327			4.164		9.163		28.682	
Maximum	1.416		2.345		5.067		7.913			8.716		11.471		67.800	
Minimum	1.022		1.022		1.212		1.022			0.731		0.760		3.082	

8

GOVERNMENT OF SOCIALIST ETHIOPIA
ER RESOURCES COMMISSION
ES DEVELOPMENT AUTHORITY

Tables dated | Periods of use | Use half-tenths between

File Number | Addr. | Distr.

e Kms. Observer

Use hundredths below and tenths above these limits

	JULY			AUGUST			SEPTEMBER			DAY	OCTOBER			NOVEMBER			DECEMBER			DAY
	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge				Gage height	Discharge		Gage height	Discharge		Gage height	Discharge		
	[illegible]	0.58	3.915	1.22	18.299	1.56	29.008			1	0.58	3.911		0.53	3.164		0.31	0.679		1
	[illegible]	0.62	4.659	1.03	13.185	0.96	11.471			2	0.64	4.896		0.53	3.164		0.31	0.679		2
	[illegible]	0.60	4.832	1.17	16.890	0.87	9.406			3	0.60	4.832		0.53	3.164		0.31	0.679		3
	[illegible]	0.92	10.553	1.49	26.649	0.81	8.20			4	0.60	4.832		0.52	3.022		0.31	0.679		4
	[illegible]	0.86	9.196	1.16	16.615	0.88	9.622			5	0.61	4.394		0.52	3.007		0.31	0.679		5
	[illegible]	0.91	10.365	1.26	21.852	1.10	23.229			6	0.63	4.726		0.51	2.892		0.31	0.679		6
	[illegible]	0.96	10.026	1.05	13.603	1.18	17.162			7	0.64	4.896		0.50	2.745		0.31	0.679		7
	[illegible]	0.96	11.471	1.82	38.449	2.52	68.760			8	0.64	4.896		0.49	2.610		0.31	0.679		8
	[illegible]	0.93	10.365	2.32	59.606	1.68	33.256			9	0.64	4.896		0.49	2.610		0.31	0.679		9
	[illegible]	0.90	10.236	1.36	22.695	1.06	25.66			10	0.64	4.826		0.48	2.567		0.31	0.679		10
	[illegible]	0.94	10.953	1.20	17.730	1.41	24.054			11	0.64	4.896		0.46	2.522		0.31	0.679		11
	[illegible]	0.89	[illegible]	1.11	15.258	1.01	12.686			12	0.64	4.896		0.45	2.499		0.31	0.679		12
	[illegible]	0.64	4.896	1.17	16.890	1.40	23.729			13	0.64	4.896		0.45	2.499		0.30	0.603		13
	[illegible]	0.61	4.394	1.21	17.751	1.03	13.185			14	0.64	4.826		0.44	1.918		0.30	0.603		14
	[illegible]	0.58	3.960	1.36	22.165	1.52	21.650			15	0.64	4.896		0.43	1.859		0.30	0.603		15
	[illegible]	0.53	3.164	1.51	27.314	1.60	30.393			16	0.68	5.593		0.42	1.744		0.30	0.603		16
	[illegible]	0.52	3.022	1.84	39.218	0.93	10.765			17	0.58	3.911		0.41	1.631		0.30	0.603		17
	[illegible]	0.52	3.022	1.63	31.447	0.91	10.304			18	0.58	3.915		0.40	1.568		0.30	0.603		18
	[illegible]	0.55	[illegible]	1.56	29.008	0.83	8.54			19	0.59	4.072		0.39	1.506		0.31	0.679		19
	[illegible]	0.71	6.146	1.25	13.165	0.76	7.106			20	0.60	4.238		0.39	1.506		0.31	0.679		20
	[illegible]	0.86	9.186	1.40	23.329	0.86	9.156			21	0.61	4.394		0.38	1.443		0.31	0.679		21
	[illegible]	0.70	5.961	1.35	22.165	1.01	12.686			22	0.63	4.726		0.37	1.382		0.31	0.679		22
	[illegible]	0.86	9.186	1.22	18.299	0.68	5.577			23	0.61	4.394		0.37	1.382		0.31	0.679		23
	[illegible]	1.12	15.870	2.34	55.816	0.92	9.310			24	0.59	4.232		0.36	1.320		0.31	0.679		24
	[illegible]	1.01	12.585	1.22	38.449	0.93	10.451			25	0.58	4.062		0.35	1.259		0.31	0.679		25
	[illegible]	0.95	11.633	1.18	19.168	0.66	4.557			26	0.55	3.747		0.34	0.731		0.31	0.679		26
	[illegible]	0.81	9.060	1.53	22.989	0.59	3.947			27	0.51	3.581		0.34	0.731		0.31	0.679		27
	[illegible]	0.90	10.365	0.96	11.471	0.56	3.661			28	0.56	3.909		0.33	0.731		0.31	0.679		28
	[illegible]	0.90	10.365	1.52	22.695	0.58	3.911			29	0.56	3.909		0.33	0.731		0.31	0.679		29
	[illegible]	0.88	10.110	2.07	48.480	0.59	4.024			30	0.55	3.824		0.32	0.700		0.31	0.679		30
	[illegible]	1.00	12.016	1.57	41.116					31	0.54	3.309					0.31	0.679		31
	1.054	331.762		817.489			475.749					135.346			96.903			20.593		
	535	16.308		26.371			15.860					4.366			1.897			0.664		
	163	22.648		70.631			41.108					11.694			4.916			1.779		
	71	67.300		55.816			68.760					4.896			3.164			0.679		
	[illegible]	3.021		11.471			3.607					3.309			0.760			0.603		

Remarks

Period Year

7

Gage Height, in Meters, and Discharge, in second-Meters, of - Akaki River Creek

Akaki For the Year Ending December 31, 1987

PROVISIONAL MILITARY GOVERNMENT OF SOCIALIST
NATIONAL WATER RESOURCES COMMISSION
WATER RESOURCES DEVELOPMENT AUTH

Drainage area 984 Square kms Observer Recorder

DAY	JANUARY		FEBRUARY		MARCH		APRIL		DAY	MAY		JUNE		JULY	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	0.31	0.679	0.32	0.760	0.37	1.876	0.42	1.744	1	0.34	0.731	0.73	6.524	0.85	2.099
2	0.31	0.679	0.32	0.760	0.41	1.634	0.51	2.282	2	0.31	0.731	0.62	5.418	0.44	1.442
3	0.32	0.760	0.34	0.860	0.35	1.022	0.48	2.478	3	0.33	0.731	0.58	3.915	0.45	2.099
4	0.33	0.844	0.32	0.760	0.35	1.022	0.72	4.559	4	0.29	0.529	0.58	3.915	0.59	2.745
5	0.31	0.760	0.32	0.760	0.51	1.876	0.64	11.896	5	0.29	0.529	0.63	4.226	0.70	3.610
6	0.31	0.760	0.32	0.760	0.37	1.222	0.60	4.837	6	0.29	0.529	0.53	4.022	0.75	6.916
7	0.30	0.760	0.31	0.760	0.76	3.305	0.95	11.233	7	0.31	0.679	0.55	3.457	0.60	4.832
8	0.31	0.679	0.32	0.760	0.53	3.164	0.56	3.607	8	0.33	0.844	0.52	3.022	0.54	3.309
9	0.32	0.760	0.32	0.760	0.45	2.097	0.63	4.726	9	0.49	1.522	0.58	3.915	1.42	1.744
10	0.31	0.679	0.31	0.760	0.58	3.915	1.31	6.910	10	0.32	1.313	0.60	4.394	0.97	11.210
11	0.31	0.679	0.32	0.760	0.52	3.300	0.52	3.692	11	0.34	0.93	0.85	7.913	0.86	9.136
12	0.31	0.679	0.49	2.349	0.41	1.632	1.39	23.413	12	0.32	0.760	0.58	3.915	0.73	6.524
13	0.31	0.679	0.36	1.115	0.58	2.365	0.91	11.210	13	0.31	0.679	0.54	3.309	1.02	12.935
14	0.31	0.679	0.32	0.844	0.70	5.961	0.78	7.505	14	0.31	0.679	0.62	4.559	0.79	7.708
15	0.31	0.679	0.32	0.760	0.66	5.242	0.64	11.896	15	0.32	0.760	0.50	2.745	0.87	9.406
16	0.31	0.679	0.31	0.679	0.59	4.012	0.55	3.457	16	0.32	0.760	0.46	2.222	0.79	7.708
17	0.31	0.679	0.31	0.679	0.46	2.212	0.56	3.607	17	0.32	0.760	0.45	2.099	0.89	9.851
18	0.31	0.679	0.30	0.603	0.47	2.349	0.52	3.022	18	0.32	0.760	0.62	1.744	1.02	12.935
19	0.31	0.679	0.33	0.904	0.36	1.115	0.50	2.745	19	0.32	0.760	0.61	1.632	0.99	12.194
20	0.31	0.679	0.31	1.416	0.40	1.522	0.48	2.478	20	0.33	1.212	0.60	1.522	0.88	9.627
21	0.31	0.679	0.34	0.931	0.39	1.416	0.43	2.478	21	0.59	4.022	0.45	2.099	0.82	8.329
22	0.31	0.679	0.34	0.931	0.44	1.918	0.46	8.022	22	0.62	4.559	0.41	1.632	0.89	9.851
23	0.33	0.931	0.34	0.931	0.28	1.313	0.38	1.513	23	0.78	7.505	0.41	1.632	0.99	12.194
24	0.32	0.760	0.35	1.212	0.33	0.844	0.36	1.115	24	1.12	14.992	0.49	2.610	1.01	12.686
25	0.32	0.760	0.33	0.844	0.33	0.844	0.37	1.212	25	1.31	36.353	0.62	3.349	0.96	11.421
26	0.32	0.760	0.33	0.844	0.34	1.212	0.38	1.313	26	0.82	8.329	0.89	2.610	1.32	31.247
27	0.32	0.760	0.33	0.844	0.34	1.212	0.39	1.212	27	0.60	4.232	0.45	1.859	0.85	8.969
28	0.32	0.760	0.32	1.212	0.48	2.478	0.38	1.313	28	0.78	7.505	0.42	1.744	0.84	8.754
29	0.33	0.844	—	—	0.81	9.851	0.37	1.212	29	0.60	4.232	0.42	1.744	0.96	11.421
30	0.33	0.844	—	—	0.45	2.099	0.37	1.212	30	0.56	3.607	0.46	2.222	1.01	12.194
31	0.32	0.760	—	—	0.51	2.882	—	—	31	0.80	7.913	—	—	1.06	13.949
Second-meter days	22.60		25.203		80.952		127.729			120.293		95.519		268.625	
Mean	0.729		0.900		2.611		4.258			3.881		3.184		8.665	
MILLION M³	1.953		2.175		6.994		11.036			10.394		8.253		23.209	
Maximum	0.844		2.349		9.851		23.413			36.553		6.524		21.209	
Minimum	0.679		0.603		0.844		1.115			0.529		1.522		1.744	

7

ALIST ETHIOPIA
SSION
AUTHORITY

Tables dated | Periods of use | Use half-tenths between

File Number { Addis Ababa / District

Use hundredths below and tenths above these limits

Record

	AUGUST		SEPTEMBER		DAY	OCTOBER		NOVEMBER		DECEMBER		DAY
	Gage height	Discharge	Gage height	Discharge		Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	
	1.14	16.066	0.59	4.072	1	0.45	2.099	0.34	0.931	0.34	0.931	1
	1.00	12.439	0.56	3.607	2	0.36	1.115	0.34	0.931	0.34	0.931	2
	0.89	9.851	0.51	3.760	3	0.35	1.022	0.34	0.931	0.34	0.931	3
	0.80	7.913	0.63	4.726	4	0.39	1.416	0.35	1.022	0.36	1.115	4
	0.35	6.910	0.67	4.559	5	0.39	1.416	0.35	1.022	0.36	1.115	5
	1.20	17.930	0.84	2.354	6	0.37	1.212	0.35	1.022	0.36	1.115	6
	0.98	11.951	0.65	5.069	7	0.34	0.931	0.35	1.022	0.35	1.022	7
	1.13	15.455	0.58	3.915	8	0.33	0.844	0.35	1.022	0.35	1.022	8
	1.10	14.993	0.56	3.607	9	0.33	0.844	0.35	1.022	0.35	1.022	9
	1.14	16.066	0.50	2.345	10	0.33	0.844	0.35	1.022	0.35	1.022	10
	1.30	33.965	0.71	6.146	11	0.34	0.931	0.36	1.111	0.35	1.022	11
	1.00	12.439	0.64	4.876	12	0.34	0.931	0.36	1.115	0.37	1.212	12
	0.91	10.304	0.65	5.069	13	0.34	0.931	0.36	1.111	0.36	1.115	13
	1.23	35.064	0.65	5.069	14	0.33	0.844	0.36	1.115	0.35	1.022	14
	0.95	11.833	0.58	3.915	15	0.32	0.760	0.36	1.111	0.35	1.022	15
	1.11	15.268	0.54	3.309	16	0.32	0.760	0.36	1.111	0.35	1.022	16
	[illegible]	10.304	0.51	2.882	17	0.32	0.760	0.36	1.111	0.35	1.022	17
	0.82	8.329	0.47	2.349	18	0.32	0.760	0.36	1.111	0.35	1.022	18
	1.02	12.935	0.45	2.099	19	0.33	0.844	0.37	1.212	0.35	1.022	19
	1.00	12.439	0.45	2.099	20	0.33	0.844	0.37	1.212	0.35	1.022	20
	0.92	10.533	0.47	2.349	21	0.33	0.844	0.36	1.111	0.35	1.022	21
	0.82	9.637	0.45	2.099	22	0.32	0.760	0.35	1.022	0.35	1.022	22
	0.77	7.305	0.50	2.345	23	0.32	0.760	0.34	0.931	0.35	1.022	23
	0.86	9.186	0.46	2.222	24	0.32	0.760	0.34	0.931	0.35	1.022	24
	1.10	12.439	0.46	2.222	25	0.33	0.844	0.34	0.931	0.35	1.022	25
	0.77	7.305	0.42	1.744	26	0.33	0.844	0.34	0.931	0.36	1.115	26
	0.74	6.716	0.42	1.650	27	0.34	0.931	0.34	0.931	0.36	1.111	27
	0.77	7.305	0.43	1.859	28	0.34	0.931	0.36	0.931	0.36	1.111	28
	0.77	6.334	0.43	1.859	29	0.34	0.931	0.34	0.931	0.36	1.115	29
	1.12	15.526	0.44	1.918	30	0.39	0.931	0.34	0.931	0.37	1.212	30
	0.64	4.896			31	0.34	0.931			0.37	1.212	31
		389.114		103.462			29.525		30.132		32.723	
		12.553		3.449			0.954		1.004		1.056	
		33.623		8.931			2.555		2.623		2.827	
		35.064		8.754			2.099		1.115		1.212	
		11.896		1.744			0.760		0.931		0.931	

Remarks: All Gage heights from chart

Period
Year

114.584

COMPUTATIONS — Quarter: First / Second / Third / Fourth — Computed / Checked / Date

DISCHARGE — Quarter: First / Second / Third / Fourth — Applied / Checked / Date

GAGE HEIGHT — Quarter: First / Second / Third / Fourth — Copied / Checked / Date

6

ily Gage Height, in Meters, and Discharge, in second - Meters, of AKACI River Creek

At Near AKACI For the Year Ending December 31, 1988

PROVISIONAL MILITARY GOVERNMENT OF SOCIALI
NATIONAL WATER RESOURCES COMMISSI
WATER RESOURCES DEVELOPMENT AU

Drainage area 284 Square kms Observer

DAY	JANUARY		FEBRUARY		MARCH		APRIL		DAY	MAY		JUNE		JULY	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	0.37	1.212	0.36	1.115	0.37	1.212	0.34	0.931	1	0.50	2.345	0.34	0.931	0.48	2.021
2	0.33	1.313	0.38	1.313	0.36	1.115	0.34	0.931	2	0.44	1.938	0.39	1.416	0.42	2.021
3	0.38	1.313	0.36	1.115	0.41	1.632	0.34	0.931	3	0.40	1.632	0.45	2.099	0.58	3.915
4	0.38	1.313	0.33	1.115	0.35	1.313	0.34	0.931	4	0.38	1.313	0.45	2.099	0.56	3.600
5	0.33	1.313	0.33	1.115	0.33	1.313	0.34	0.931	5	0.38	1.313	0.44	1.938	0.72	6.552
6	0.38	1.313	0.36	1.115	0.38	1.313	0.31	1.212	6	0.36	1.115	0.66	2.345	0.65	11.20
7	0.38	1.313	0.36	1.115	0.38	1.313	0.36	1.115	7	0.35	1.022	0.55	1.938	0.58	8.915
8	0.33	1.313	0.36	1.115	0.38	1.115	0.35	1.022	8	0.34	0.931	0.49	1.534	0.65	8.96
9	0.38	1.313	0.38	1.313	0.39	1.115	0.38	1.313	9	0.38	0.931	0.52	1.632	0.83	9.91
10	0.33	1.313	0.42	1.313	0.36	1.115	0.36	1.115	10	0.33	0.864	0.52	1.632	0.90	12.60
11	0.32	1.313	0.50	2.021	0.36	1.115	0.36	1.212	11	0.33	0.864	0.56	1.115	0.66	9.18
12	0.32	1.313	0.46	1.534	0.35	1.022	0.38	1.313	12	0.34	0.931	0.34	1.212	1.25	19.16
13	0.38	1.313	0.46	1.534	0.35	1.022	0.38	1.313	13	0.44	1.938	0.39	1.416	0.95	10.07
14	0.38	1.313	0.53	3.164	0.34	0.931	0.52	3.915	14	0.41	1.632	0.42	1.534	0.76	7.10
15	0.38	1.313	0.45	1.938	0.34	0.931	0.47	2.349	15	0.38	1.313	0.39	1.416	0.81	5.12
16	0.38	1.313	0.42	1.534	0.35	0.931	0.96	7.106	16	0.37	1.212	0.38	1.313	0.85	8.96
17	0.38	1.313	0.37	1.416	0.34	0.931	0.44	1.938	17	0.36	1.115	0.36	1.115	1.42	15.50
18	0.38	1.313	0.37	1.416	0.35	1.022	0.38	1.313	18	0.35	1.022	0.38	1.416	0.83	8.34
19	0.32	1.313	0.39	1.416	0.36	1.115	0.68	5.597	19	0.35	1.022	0.38	1.313	0.79	7.20
20	0.38	1.313	0.37	1.212	0.35	1.022	0.44	1.938	20	0.34	0.931	0.38	1.313	0.88	9.60
21	0.40	1.534	0.37	1.212	0.35	1.022	0.62	4.559	21	0.34	0.931	0.38	1.313	0.79	8.30
22	0.37	1.212	0.37	1.212	0.35	1.022	0.45	2.099	22	0.34	0.931	0.36	1.115	0.71	6.16
23	0.37	1.212	0.37	1.212	0.35	1.022	0.40	1.534	23	0.34	0.931	0.40	1.534	0.64	11.50
24	0.37	1.212	0.42	1.534	0.35	1.022	0.43	1.854	24	0.34	0.931	0.40	1.534	1.30	20.50
25	0.37	1.212	0.39	1.416	0.35	1.022	0.38	1.313	25	0.33	0.864	0.36	1.115	0.93	16.30
26	0.37	1.212	0.39	1.416	0.36	1.115	0.52	3.621	26	0.39	0.931	0.46	2.021	1.10	14.50
27	0.37	1.212	0.37	1.416	0.35	1.022	0.43	1.859	27	0.34	0.931	0.46	2.021	1.10	14.70
28	0.36	1.115	0.37	1.212	0.37	0.993	0.42	1.744	28	0.34	0.931	0.51	2.282	1.18	17.50
29	0.36	1.115	0.37	1.212	0.35	0.993	0.38	1.313	29	0.34	0.931	0.48	2.021	0.96	11.47
30	0.36	1.115			0.36	0.993	0.42	1.744	30	0.34	0.931	0.51	2.142	0.80	9.91
31	0.36	1.115			0.36	0.931			31	0.33	0.864			1.13	16.85
Second-metre days	39.413		41.664		33.569		60.55			35.877		50.544		252.833	
Mean	1.271		1.437		1.023		2.018			1.157		1.689		9.446	
MILLION M³	3.405		3.600		2.900		5.231			3.099		4.369		25.301	
Maximum	1.521		3.164		1.632		7.106			2.345		3.022		20.644	
Minimum	1.115		1.115		0.931		0.931			0.864		0.931		2.021	

NAL MILITARY GOVERNMENT OF SOCIALIST ETHIOPIA
NATIONAL WATER RESOURCES COMMISSION
R RESOURCES DEVELOPMENT AUTHORITY

Tables dated: Sept. 25/1940

Periods of use: ① 1. c#11 ... ② 1. c#7 ...

Use half-tenths between: ① 1. c#11 ... ② 1. c#7 ...

34 4 Square kms. Observer

Use hundredths below and tenths above these limits

DAY	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUGUST Gage height	AUGUST Discharge	SEPTEMBER Gage height	SEPTEMBER Discharge	DAY	OCTOBER Gage height	OCTOBER Discharge	NOVEMBER Gage height	NOVEMBER Discharge	DECEMBER Gage height	DECEMBER Discharge	DAY
1	0.34	2.931	0.48	2.428	1.91	24.047	0.84	8.754	1	0.75	6.910		3.076		1.670	1
2	0.39	1.416	0.48	2.428	1.19	17.448	1.06	13.949	2	0.86	9.186		3.005		1.641	2
3	0.45	2.029	0.53	3.915	1.68	33.836	1.26	19.431	3	0.76	7.106		2.937		1.614	3
4	0.45	2.079	0.56	3.609	1.22	18.099	1.08	14.462	4	0.69	5.228		2.871		1.587	4
5	0.44	1.928	0.73	6.594	1.42	25.983	1.03	13.185	5	0.66	5.263		2.806		1.562	5
6	0.43	2.478	0.63	11.976	1.01	9.686	0.88	9.627	6	0.64	4.876		2.744		1.539	6
7	0.45	2.636	0.58	3.915	0.84	8.754	0.90	10.076	7	0.62	4.559		2.684		1.512	7
8	0.40	1.522	0.85	8.969	0.90	10.076	0.83	8.511	8	0.64	4.814		2.625		1.489	8
9	0.37	1.212	0.80	7.913	1.55	28.665	0.85	8.969	9	0.60	4.252		2.568		1.466	9
10	0.33	1.313	0.90	10.076	1.40	23.083	1.35	20.209	10	0.66	4.252		2.513		1.444	10
11	0.36	1.115	0.86	9.186	2.40	53.283	1.05	12.646	11	0.58	3.915		2.459		1.423	11
12	0.38	1.313	1.25	13.185	1.03	13.185	1.05	13.673	12	0.58	3.915		2.407		1.402	12
13	0.39	1.416	0.90	10.076	3.92	148.353	1.02	12.935	13	0.58	3.915		2.357		1.382	13
14	0.42	1.719	0.76	7.106	1.02	12.935	3.08	91.713	14	0.58	3.915		2.308		1.362	14
15	0.39	1.416	0.81	8.120	1.03	46.816	0.39	32.149	15	0.62	4.559		2.261		1.343	15
16	0.38	1.313	0.85	8.969	3.05	96.662	1.03	13.185	16		4.552		2.215		1.325	16
17	0.36	1.115	1.12	15.526	1.01	12.935	3.54	120.440	17		4.439		2.170		1.307	17
18	0.35	1.014	0.93	8.541	1.05	13.438	1.53	23.122	18		4.325		2.127		1.289	18
19	0.36	1.313	0.79	7.308	1.32	21.931	1.02	12.902	19		4.217		2.085		1.273	19
20	0.38	1.313	0.82	9.697	1.06	13.942	1.55	25.666	20		4.113		2.044		1.256	20
21	0.38	1.313	0.80	8.329	1.96	41.431	1.50	49.200	21		4.011		2.005		1.241	21
22	0.36	1.115	0.71	6.164	1.64	41.431	1.04	13.438	22		3.913		1.966		1.225	22
23	0.40	1.522	0.64	4.876	1.04	13.438	1.09	14.735	23		3.817		1.929		1.210	23
24	0.42	1.719	0.50	3.609	1.50	38.665	1.22	18.099	24		3.724		1.893		1.196	24
25	0.35	1.115	0.93	10.365	1.12	28.665	1.05	13.673	25		3.634		1.858		1.182	25
26	0.44	1.928	1.15	14.793	1.52	18.235	1.32	17.359	26		3.547		1.824		1.168	26
27	0.46	2.233	1.10	14.993	1.20	13.942	1.12	15.254	27		3.462		1.791		1.155	27
28	0.51	3.063	1.18	16.760	1.12	15.526	1.26	19.536	28		3.381		1.760		1.142	28
29	0.52	3.411	0.98	12.421	1.55	46.206	0.98	12.421	29		3.301		1.729		1.130	29
30	0.46	2.636	0.80	7.913	1.14	21.931	0.90	10.076	30		3.223		1.699		1.118	30
31	0.42	1.719	1.02	10.870	1.00	14.793			31		3.149				1.106	31
	50.564		292.833		933.919		329.954			142.182		68.206		41.752		
	1.685		9.446		30.126		24.665			4.587		2.200		1.347		
	4.367		25.301		80.671		63.932			12.925		5.936		3.668		
	3.022		20.644		148.353		126.[illegible]			9.186		3.076		1.670		
	0.931		2.428		8.354		6.334			2.149		1.699		1.106		

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Height, in Meters, and Discharge, in second - Meters, of Akaki River Creek

Akaki for the Year Ending December 31, 1989

PROVISIONAL MILITARY GOVERNMENT OF SOCIALIST ETH
NATIONAL WATER RESOURCES COMMISSION
WATER RESOURCES DEVELOPMENT AUTHOR

Drainage area 884·4 Square kms Observer

DAY	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1		1·095		0·832	0·43	0·666	0·56	1·683	0·58	1·951	0·55	1·55	0·68	3·530
2		1·084		0·868	0·44	0·383	0·53	1·300	0·58	1·952	0·55	1·551	1·02	10·401
3		1·073		0·865	0·44	0·333	0·51	1·180	0·57	1·818	0·55	1·551	0·92	5·165
4		1·063		0·859	0·43	0·296	0·50	1·180	0·56	1·683	0·55	1·551	0·91	4·649
5		1·053		0·856	0·42	0·296	0·52	1·180	0·56	1·683	0·55	1·551	0·90	3·100
6		1·043	0·71	4·062	0·42	0·296	0·50	1·180	0·56	1·683	0·55	1·551	0·90	3·100
7		1·034	0·61	2·394	0·42	0·296	0·51	1·064	0·56	1·683	0·56	1·683	0·92	3·530
8		1·025	0·55	1·551	0·43	0·463	0·50	0·953	0·56	1·683	0·56	1·683	0·92	5·165
9		1·016	0·63	2·703	0·44	0·333	0·52	1·180	0·56	1·683	0·59	2·699	0·94	8·298
10		1·007	0·55	1·551	0·44	0·333	0·53	1·300	0·56	1·683	0·60	2·826	1·10	12·600
11		0·999	0·54	1·424	0·42	0·296	0·55	1·551	0·55	1·551	0·63	2·324	0·93	5·165
12		0·991	0·51	1·064	0·42	0·296	0·52	1·180	0·56	1·683	0·59	2·071	1·36	38·180
13		0·983	0·51	1·064	0·44	0·333	0·52	1·180	0·56	1·683	0·66	3·190	1·52	16·201
14		0·976	0·52	1·180	0·44	0·333	0·52	1·180	0·56	1·683	0·64	2·961	0·94	39·363
15		0·968	0·51	1·064	0·43	0·463	0·52	1·180	0·56	1·683	0·59	2·699	0·98	9·908
16		0·961	0·50	0·953	0·56	0·953	0·52	1·180	0·56	1·683	0·58	1·957	1·32	19·501
17		0·954	0·51	1·064	0·61	3·324	0·50	0·953	0·56	1·683	0·56	1·683	0·89	7·965
18		0·947	0·51	1·064	0·56	1·683	0·52	1·180	0·56	1·683	0·56	1·683	1·78	35·770
19		0·941	0·50	0·953	0·56	1·683	0·51	1·064	0·56	1·683	0·56	1·683	1·02	10·917
20		0·934	0·50	0·953	0·52	1·180	0·58	1·952	0·55	1·551	0·56	1·683	0·86	7·681
21		0·928	0·50	0·953	0·49	0·946	0·59	2·079	0·56	1·683	0·56	1·683	1·41	13·319
22		0·922	0·50	0·953	0·49	0·946	0·60	2·265	0·55	1·551	0·57	1·816	2·03	28·536
23		0·917	0·50	0·953	0·48	0·903	0·56	1·951	0·56	1·683	0·61	2·394	1·04	11·451
24		0·911	0·50	0·953	0·52	1·180	0·96	9·416	0·56	1·683	0·59	2·069	0·99	10·533
25		0·906	0·50	0·953	0·52	1·180	0·99	9·992	0·55	1·551	0·58	1·957	1·02	11·433
26		0·900	0·50	0·953	0·46	0·553	0·60	2·201	0·55	1·551	0·58	1·957	1·64	30·485
27		0·895	0·48	0·783	0·50	0·753	1·42	22·769	0·55	1·551	0·60	2·394	1·19	13·642
28		0·890	0·46	0·553	0·48	0·903	0·71	4·062	0·55	1·551	1·02	10·919	1·57	31·200
29		0·885			0·74	4·649	0·63	2·703	0·55	1·551	0·66	3·190	1·96	56·181
30		0·881			0·62	2·547	0·60	2·265	0·55	1·551	0·61	2·394	1·67	51·111
31		0·876			0·62	2·547			0·55	1·551			1·36	34·241
Total water days		30·058		34·376		31·528		82·538		51·404		72·721		555·811
Mean		0·970		1·228		1·017		2·751		1·658		2·424		17·929
Runoff M³		2·597		2·970		2·724		7·131		4·441		6·283		48·027
Maximum		1·095		4·062		4·649		22·769		1·951		10·919		80·536
Minimum		0·876		0·553		0·236		0·953		1·551		1·551		3·190

5

ALIST ETHIOPIA
ISSION
AUTHORITY

Tables dated: Sept. 25/1990 — Periods of use: R.C #1 — Use half-tenths between: ____ — File Number: Addis Ababa ____ District ____

Use hundredths below and tenths above these limits

	AUGUST			SEPTEMBER			DAY	OCTOBER			NOVEMBER			DECEMBER			DAY
harge	Gage height		Discharge	Gage height		Discharge		Gage height		Discharge	Gage height		Discharge	Gage height		Discharge	
530	1.12		13.593	3.69		133.512	1	0.76		5.005	0.54		1.424	0.56		1.683	
401	1.14		14.152	1.82		37.366	2	0.72		4.241	0.55		1.551	0.58		1.424	
205	2.32		78.423	1.90		40.598	3	0.70		3.881	0.54		1.424	0.55		1.551	
619	1.70		33.324	1.40		22.105	4	0.68		3.530	0.54		1.424	0.55		1.551	
40	3.28		57.008	1.16		14.319	5	0.66		3.190	0.54		1.424	0.55		1.551	
401	1.06		11.964	0.93		8.694	6	0.64		2.862	0.54		1.424	0.54		1.424	
892	1.30		18.901	0.96		8.932	7	0.63		2.703	0.54		1.424	0.54		1.424	
708	1.02		10.919	1.65		20.485	8	0.63		2.703	0.54		1.424	0.55		1.424	
223	1.47		23.973	1.70		32.324	9	0.62		2.547	0.54		1.424	0.55		1.551	
052	1.12		13.593	1.12		13.593	10	0.62		2.547	0.54		1.424	0.54		1.424	
208	2.61		63.135	0.98		9.908	11	0.60		2.245	0.54		1.424	0.54		1.424	
160	1.12		13.593	0.92		8.457	12	0.59		2.099	0.54		1.424	0.54		1.424	
401	1.84		38.160	0.83		6.838	13	0.59		2.099	0.54		1.424	0.55		1.551	
363	3.63		73.900	2.09		47.768	14	0.60		2.245	0.53		1.30	0.54		1.424	
908	1.30		15.876	1.53		26.117	15	0.58		1.957	0.54		1.424	0.54		1.424	
521	2.82		54.332	1.28		18.281	16	0.57		1.818	0.54		1.424	0.54		1.424	
963	3		66.012	1.75		34.632	17	0.57		1.818	0.54		1.424	0.58		1.957	
774	5.08		148.139	2.85		85.246	18	0.59		2.099	0.54		1.424	0.56		1.683	
919	5.42		162.660	1.32		19.523	19	0.58		1.957	0.54		1.424	0.56		1.683	
087	1.37		21.125	1.10		13.042	20	0.68		3.530	0.54		1.424	0.56		1.683	
319	1.88		31.766	0.99		10.157	21	0.60		2.245	0.55		1.551	0.56		1.683	
536	5.16		233.924	0.94		8.932	22	0.58		1.957	0.54		1.424	0.56		1.683	
431	5.23		37.048	0.98		9.661	23	0.59		0.846	0.56		1.683	0.56		1.683	
521	1.52		37.366	0.90		7.892	24	0.56		1.653	0.54		1.424	0.56		1.683	
437	2.08		48.139	0.91		8.253	25	0.56		1.683	0.55		1.551	0.61		2.294	
485	2.05		206.661	0.94		8.932	26	0.55		1.551	0.55		1.551	0.57		1.818	
642	3.28		109.01	0.96		9.416	27	0.56		1.683	0.56		1.683	0.57		1.818	
305	3.00		93.362	1.05		11.270	28	0.55		1.551	0.55		1.551	0.57		1.818	
161	2.68		73.318	0.90		7.892	29	0.56		1.683	0.56		1.683	0.57		1.957	
913	2.13		59.219	0.80		5.808	30	0.55		1.551	0.55		1.551	0.56		1.683	
249	1.81		36.971				31	0.54		1.424				0.57		1.818	
811			1737.367			700.937				72.937			84.008			50.722	
09			56.076			23.365				2.353			1.467			1.636	
29			150.195			60.561				6.302			3.802			4.362	
536			833.924			133.512				5.005			1.683			2.294	
6			10.919			5.808				0.846			1.30			1.424	

Remarks: ① G.H. Gage Height of Ecah Kranium 9 - Factor for August. ② From Jan 1st to Feb. 6 use flow Recession curve $Y = C_1(2n-1)^{C_2}$; where $C_1 = 0.43$, $a = 0.82$, $b = -0.0385$

Period
Year

DISCHARGE — COMPUTATIONS — GAGE HEIGHT

Quarter: First | Second | Third | Fourth

Computed | Checked | Date

Applied | Checked | Date

Copied | Checked | Date

299.111

4

Daily Gage Height, in Meters, and Discharge, in second-Meters, of Akaki ... River / Creek

At / Near Akaki ... For the Year Ending December 31, 1970

PROVISIONAL MILITARY GOVERNM
NATIONAL WATER RESOU
WATER RESOURCES DEVE

Drainage area BB4-4 Square kms Obse

DAY	JANUARY		FEBRUARY		MARCH		APRIL		DAY	MAY		JUNE	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		Gage height	Discharge	Gage height	Discharge
1	0.54	1.424	0.54	1.424	1.17	15.006	0.65	3.024	1	0.60	2.245	0.69	3.704
2	0.54	1.424	0.58	1.957	0.72	4.245	0.70	3.881	2	0.59	2.099	0.63	2.703
3	0.54	1.424	0.55	1.551	0.70	3.881	0.70	3.881	3	0.58	1.957	0.69	3.704
4	0.54	1.424	0.56	1.683	0.70	3.881	0.78	5.401	4	0.57	1.818	0.62	2.547
5	0.54	1.424	0.56	1.683	1.00	10.401	1.00	10.401	5	0.56	1.683	0.59	2.099
6	0.54	1.424	0.68	3.530	0.80	5.808	0.98	9.908	6	0.56	1.683	0.60	2.245
7	0.54	1.424	0.60	2.245	0.74	4.619	1.66	16.39	7	0.56	1.683	0.59	2.099
8	0.54	1.424	0.69	3.704	0.68	3.530	1.06	11.964	8	0.56	1.683	0.60	2.245
9	0.54	1.424	0.78	5.401	0.64	2.862	1.00	10.401	9	0.54	1.424	0.60	2.245
10	0.54	1.424	0.60	2.245	0.62	2.547	0.72	5.202	10	0.56	1.683	0.59	2.099
11	0.54	1.424	0.62	2.547	0.61	2.394	0.71	4.062	11	0.54	1.424	0.60	2.245
12	0.54	1.424	0.56	1.683	0.60	2.245	0.66	3.190	12	0.60	2.245	0.58	1.957
13	0.54	1.424	0.54	1.424	0.60	2.245	0.62	2.547	13	0.55	1.551	0.58	1.957
14	0.54	1.424	0.54	1.424	0.60	2.245	0.60	2.245	14	0.58	1.957	0.58	1.957
15	0.54	1.424	0.54	1.424	0.59	2.099	0.60	2.245	15	0.57	1.818	0.58	1.957
16	0.54	1.424	0.67	1.818	0.59	2.099	0.60	2.245	16	0.56	1.683	0.62	2.547
17	0.54	1.424	0.72	4.245	0.58	1.957	0.59	2.099	17	0.56	1.683	0.61	2.394
18	0.55	1.551	0.76	5.005	0.58	1.957	0.57	1.818	18	0.56	1.683	0.63	2.703
19	0.55	1.551	0.68	3.530	0.58	1.957	0.57	1.818	19	0.56	1.683	0.63	2.703
20	0.55	1.551	0.70	3.881	0.58	1.957	0.58	1.957	20	0.56	1.683	0.74	4.619
21	0.55	1.551	0.64	2.862	0.64	2.862	0.58	1.957	21	0.58	1.957	0.70	3.881
22	0.58	1.424	0.74	4.619	0.64	2.862	0.58	1.957	22	0.57	1.818	0.61	2.394
23	0.54	1.424	0.73	5.603	0.62	2.862	0.58	1.957	23	0.56	1.683	0.58	1.957
24	0.54	1.424	0.74	4.619	0.58	1.957	0.68	3.530	24	0.57	1.818	0.56	1.683
25	0.54	1.424	0.75	4.811	0.58	1.957	0.58	1.957	25	0.57	1.818	0.56	1.683
26	0.54	1.424	0.92	8.457	0.58	1.957	0.58	1.957	26	0.57	1.818	0.56	1.683
27	0.54	1.424	0.78	5.401	0.57	1.818	0.62	2.547	27	0.56	1.683	0.62	2.547
28	0.54	1.424	1.00	10.401	0.57	1.818	0.59	2.099	28	0.57	1.818	0.58	1.957
29	0.54	1.424			0.57	1.818	0.94	8.932	29	0.57	2.099	0.58	1.957
30	0.54	1.424			0.53	1.180	0.68	3.530	30	0.70	3.881	0.57	2.099
31	0.54	1.424			0.79	5.005			31	0.64	2.862		
Second-meter days		44.652		99.112		104.031		195.102			58.623		72.570
Mean		1.440		3.542		3.356		6.503			1.891		2.419
Million M³		3.858		8.568		8.988		16.857			5.065		6.270
Maximum		1.551		10.401		15.006		76.39			3.881		4.619
Minimum		1.424		1.424		1.180		1.818			1.424		1.683

Max. Disch. ... Sec.-mt. at ... (G. H. ... mt.) Max. G. H. ... on ...
Min. Disch. ... Sec.-mt. on ... (G. H. ... mt.) Min. G. H. ... on ...

4

GOVERNMENT OF SOCIALIST ETHIOPIA
ER RESOURCES COMMISSION
S DEVELOPMENT AUTHORITY

Tables dated: Sept 25/1990 | Periods of use | Use half-tenths between

R.C.H I

File Number | Address | District

Time Observer

Use hundredths below and tenths above these limits

	JULY			AUGUST			SEPTEMBER			DAY	OCTOBER			NOVEMBER			DECEMBER			DAY
scharge	Gage height		Discharge	Gage height		Discharge	Gage height		Discharge		Gage height		Discharge	Gage height		Discharge	Gage height		Discharge	
·704	0.84		2·862	1·18		15·294	1·82		18·831	1	1·09		12·769	0·57		1·818	0·56		1·683	1
·703	0·64		2·862	0·33		59·62	1·92		16·466	2	1·60		29·024	0·57		1·818	0·56		1·683	2
·704	0·94		8·732	2·96		91·08	1·18		15·294	3	1·08		14·499	0·58		1·953	0·55		1·551	3
·547	0·92		8·457	2·40		62·63	1·10		13·042	4	0·84		6·682	0·57		1·818	0·54		1·424	4
·099	0·62		2·547	1·86		38·96	1·22		18·281	5	0·80		5·808	0·56		1·683	0·56		1·683	5
·245	0·83		6·438	1·25		18·59	1·64		30·435	6	0·76		5·05	0·57		1·818	0·55		1·551	6
·099	0·62		2·547	3·05		95·99	1·54		26·879	7	0·74		4·619	0·56		1·683	0·56		1·683	7
·845	0·76		6·005	2·99		92·91	1·34		20·161	8	0·74		4·619	0·56		1·683	0·53		1·957	8
·845	0·72		4·845	1·37		19·597	1·18		13·593	9	0·70		3·881	0·56		1·683	0·52		1·180	9
·099	0·69		3·704	1·36		20·802	1·65		30·854	10	0·69		3·704	0·56		1·683	0·54		1·424	10
·245	0·80		5·805	1·80		36·537	1·47		24·451	11	0·66		3·510	0·56		1·683	0·55		1·551	11
·957	0·75		5·603	2·00		44·783	0·92		8·457	12	0·65		3·024	0·56		1·683	0·56		1·683	12
·957	0·70		3·881	3·84		142·82	1·10		13·042	13	0·69		3·358	0·56		1·683	0·56		1·683	13
·957	1·04		11·437	3·41		99·32	1·86		38·966	14	0·63		2·703	0·56		1·683	0·56		1·683	14
·957	1·24		17·064	3·45		118·89	1·32		19·587	15	0·64		2·862	0·56		1·683	0·55		1·551	15
·549	1·61		27·751	1·88		39·766	1·56		27·582	16	0·65		2·903	0·56		1·683	0·54		1·424	16
·399	20		10·401	2·42		63·58	1·48		24·793	17	0·62		2·547	0·54		1·424	0·56		1·683	17
·703	1·12		13·593	4·31		173·64	1·26		17·669	18	0·60		2·845	0·56		1·683	0·55		1·551	18
·703	1·97		43·465	2·65		74·87	1·96		43·048	19	0·64		2·862	0·56		1·683	0·55		1·551	19
·649	0·97		9·661	1·94		48·219	1·68		21·971	20	0·62		2·547	0·53		1·30	0·56		1·683	20
3·881	2·18		52·51	1·60		29·024	1·22		16·466	21	0·60		2·245	0·55		1·551	0·55		1·551	21
1·354	0·99		10·157	1·18		15·294	1·09		12·769	22	0·58		1·957	0·55		1·551	0·52		1·180	22
1·957	0·98		9·908	2·32		88·93	1·50		25·487	23	0·59		2·099	0·55		1·551	0·52		1·180	23
1·683	1·04		11·037	6·71		277·22	2·39		6/21	24	0·59		2·099	0·56		1·683	0·55		1·551	24
1·683	1·42		22·762	2·42		88·93	1·22		18·281	25	0·60		2·245	0·56		1·683	0·55		1·551	25
1·683	1·33		19·843	1·65		30·117	1·12		13·593	26	0·58		1·957	0·56		1·683	0·55		1·551	26
2·549	0·93		8·694	1·58		28·302	1·00		10·401	27	0·58		1·957	0·55		1·551	0·55		1·551	27
1·957	0·81		6·015	1·24		17·064	1·24		17·064	28	0·58		1·957	0·56		1·683	0·55		1·551	28
1·957	0·84		6·652	1·20		16·669	0·96		9·416	29	0·58		1·957	0·56		1·683	0·55		1·551	29
2·099	1·39		19·527	1·72		33·420	0·84		6·652	30	0·56		1·683	0·56		1·683	0·55		1·551	30
	3·03		94·89	1·56		27·588				31	0·54		1·424				0·55		1·551	31

Remarks: 1·683 recorded on 1 Sept 90

Period Year

·570		460·663		2005·228		644·176		138·201		50·134		48·181		
119		14·860		64·685		21·473		4·432		1·671		1·554		
70		39·801		173·252		55·657		11·941		4·332		4 163		338·751
19		94·89		877·22		61·21		29·024		1·957		1·957		
3		2·547		15·294		6·652		1·424		1·424		1·180		

3

The Transitional G
Ethiopian Valleys Developme
Water Resources Studies a

Daily Gage Height, in Meters, and Discharge, in second-Meters, of AKAKI River Creek

At Near AKAKI For the Year Ending December 31, 1971

Drainage area Square kms. Observer

Max. Disch. ____ Sec.-mt. ____ on ____ (G. H. ____ mtr.) Max. G. H. ____ mtr. on ____
Min. Disch. ____ Sec.-mt. ____ on ____ (G. H. ____ mtr.) Min. G. H. ____ mtr. on ____

DAY	JANUARY		FEBRUARY		MARCH		APRIL		DAY	MAY		JUNE		
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		Gage height	Discharge	Gage height	Discharge	Gage height
1	0.55	1.551	0.54	[illegible]	0.54	1.421	0.53	2.765	1	0.50	[illegible]	0.50	0.953	1.53
2	0.54	[illegible]	0.54	[illegible]	0.53	[illegible]	0.52	[illegible]	2	0.36	[illegible]	0.52	1.150	1.15
3	0.56	[illegible]	0.52	[illegible]	0.52	[illegible]	0.95	[illegible]	3	[illegible]	[illegible]	[illegible]	0.953	[illegible]
4	0.53	1.30	[illegible]	[illegible]	0.53	1.30	[illegible]	3.21	4	0.52	[illegible]	0.53	[illegible]	[illegible]
5	0.55	[illegible]	[illegible]	[illegible]	0.53	[illegible]	0.60	[illegible]	5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	0.54	[illegible]	0.50	[illegible]	0.53	[illegible]	0.52	[illegible]	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	0.55	1.551	0.52	[illegible]	0.15	[illegible]	[illegible]	1.150	7	0.15	[illegible]	0.52	0.953	1.15
8	0.55	1.551	0.54	[illegible]	0.56	1.687	0.53	1.189	8	[illegible]	[illegible]	0.50	[illegible]	[illegible]
9	0.56	[illegible]	0.52	[illegible]	0.51	[illegible]	[illegible]	[illegible]	9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	0.55	1.55	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	0.54	[illegible]	0.60	[illegible]	0.61	[illegible]	[illegible]	[illegible]	11	[illegible]	1.186	[illegible]	[illegible]	[illegible]
12	0.53	[illegible]	0.55	1.551	0.62	[illegible]	[illegible]	[illegible]	12	0.50	0.953	0.62	[illegible]	[illegible]
13	0.55	[illegible]	0.69	[illegible]	0.79	[illegible]	0.51	0.953	13	0.58	0.953	0.53	1.421	3.15
14	0.55	1.551	0.56	1.683	0.22	[illegible]	0.50	0.953	14	0.50	0.953	0.56	[illegible]	1.12
15	0.54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	0.54	[illegible]	[illegible]	[illegible]	0.55	[illegible]	[illegible]	[illegible]	15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	0.54	[illegible]	[illegible]	[illegible]	0.56	1.687	[illegible]	[illegible]	17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	0.54	[illegible]	[illegible]	[illegible]	0.56	[illegible]	[illegible]	[illegible]	18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	0.54	[illegible]	[illegible]	[illegible]	0.50	0.953	[illegible]	[illegible]	19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	0.52	1.180	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	0.52	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	0.53	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	0.53	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	0.53	1.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	0.54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	0.53	1.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	[illegible]			[illegible]	[illegible]			31	[illegible]	[illegible]			
Second-meters	[illegible]	44.391		47.604		59.628		48.298			35.95		110.367	
Mean		1.430		1.700		1.923		1.610			1.153		3.679	
MILLION M³		3.83		4.11		5.15		4.17			3.09		9.54	
Maximum		1.683		4.431		5.603		9.908			4.431		18.901	
Minimum		1.30		1.180		0.743		0.743			0.743		0.953	

The Transitional Government of Ethiopia
Ethiopian Valleys Development Studies Authority
Water Resources Studies and Utilization Desk

Tables dated | Periods of use | Use half-tenths between

Use hundredths below and tenths above these limits

pe area ____ Square kms. Observer ____

DAY	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUGUST Gage height	AUGUST Discharge	SEPTEMBER Gage height	SEPTEMBER Discharge	DAY	OCTOBER Gage height	OCTOBER Discharge	NOVEMBER Gage height	NOVEMBER Discharge	DECEMBER Gage height	DECEMBER Discharge	DAY
1	c.953	0.50	0.953	1.48	21.785	2.81	83.693	3.08	92.649	1	0.80	5.808	2.66	3.550	c.67	3.358	1
2	0.703	.52	1.160	1.18	15.293	2.15	61.435	2.76	77.408	2	0.50	5.888	2.63	2.703	c.67	3.358	2
3	c.953	.50	0.953	.92	7.992	1.54	41.433	2.39	105.547	3	c.78	5.401	c.67	3.358	c.67	3.358	3
4	c.953	c.50	0.953	.68	11.437	c.96	7.089	.76	31.225	4	c.76	5.401	c.66	3.190	c.67	3.358	4
5	c.953	.53	1.196	0.16	9.416	1.22	25.603	c.50	215.224	5	c.76	5.603	c.65	2.530	c.64	3.530	5
6	c.953	.50	c.953	1.06	10.401	3.37	104.126	2.52	62.432	6	c.71	5.603	c.67	3.358	c.70	3.881	6
7	0.431	0.50	0.953	1.09	35.137	1.35	70.151	3.73	135.95	7	c.77	5.202	c.65	3.196	c.71	3.881	7
8	1.653	.50	c.953	1.36	35.016	1.35	70.151	.55	36.577	8	0.76	5.005	c.66	3.196	c.67	3.358	8
9		.51	1.160	.98	12.401	.98	19.293	.58	22.555	9	c.73	5.603	c.67	3.196	c.67	3.530	9
10		0.96	0.847	0.91	9.416	1.22	25.603	.93	120.224	10	c.73	5.610	c.66	2.530	c.65	3.196	10
11	1.180	c.60	1.160	1.65	11.701	1.81	56.902	1.29	15.231	11	c.76	5.619	c.66	2.196	c.66	3.358	11
12	0.953	0.62	1.160	0.98	9.905	1.96	63.228	3.96	91.080	12	c.73	5.610	0.66	3.196	c.67	3.530	12
13	c.953	.54	1.020	2.18	58.206	1.78	35.792	1.93	41.809	13	c.73	4.619	c.66	3.196	c.66	3.196	13
14	0.953	.56	1.683	1.12	13.593	1.32	19.593	1.93	16.466	14	c.72	4.265	c.66	3.196	c.64	2.862	14
15		.52	1.160	1.04	12.969	3.13	170.685	1.10	10.152	15	c.70	3.581	c.66	3.196	c.67	3.358	15
16		0.53	1.196	2.62	9.593	1.64	32.435	1.06	11.364	16	c.71	4.063	c.66	3.196	c.66	3.196	16
17		c.95	c.953	1.63	13.161	2.07	55.103	.77	10.401	17	c.76	3.881	c.65	3.196	c.66	3.196	17
18		.51	1.683	1.56	25.293	1.72	35.792	c.98	9.905	18	c.73	3.881	c.65	3.196	c.66	3.358	18
19	c.953	c.60	3.503	1.38	21.450	1.23	33.543	1.00	10.401	19	c.70	3.881	c.62	3.358	c.65	3.530	19
20	1.653	1.51	1.196	1.20	15.876	2.31	68.118	c.96	9.416	20	c.70	3.881	c.62	3.358	c.63	3.358	20
21		c.64	2.862	1.20	17.693	3.35	115.900	c.93	8.674	21	c.69	3.724	c.66	3.196	c.64	3.530	21
22		c.58	c.953	1.11	23.161	c.93	22.555	c.96	12.356	22	c.69	3.724	c.63	3.530	c.65		22
23		c.59		1.03	19.446	c.93		c.96	11.962	23	c.69	3.530	c.65	3.530			23
24		c.65	2.503	1.20	15.937				9.416	24		3.358	c.65				24
25		.56	1.683	1.36	21.450	1.67	51.930		8.648	25	c.72	3.530	c.63		c.60		25
26		0.95		c.62				c.96	7.658	26	c.68	3.530					26
27		c.59		c.62		3.42		c.96	7.763	27	c.68	3.530	c.62				27
28		c.58		c.62		c.93				28							28
29		c.58								29							29
30		c.58		1.61		c.93		c.98	8.401	30	c.68	3.581	c.63				30
31				0.96		1.51				31	c.68	3.560					31
	35.225		110.367		655.64		1914.957		1300.86			133.496		97.261		106.45	
	1.153		3.679		21.150		61.773		43.362			9.306		3.242		3.369	
	3.09		9.54		56.65		165.45		112.39			11.53		8.40		9.02	
	4.631		18.901		102.680		121.225		215.224			5.808		3.356		9.908	
	c.703		0.953		7.992		7.089		5.401			2.862		2.703		1.818	

The Transitional Government of Ethiopia
Ethiopian Valleys Development Studies Authority
Water Resources Studies and Utilization Desk

Height, in Meters, and Discharge, in second - Meters, of AKAKI River Creek

AKAKI For the Year Ending December 31, 19 92

Drainage area Square kms. Observer

DAY	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUG
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height
1		2.245	1.63	2.363	0.59	2.099	0.62	2.547	0.58	1.951	0.56	1.683	0.96	9.416	1.80
2		1.951	0.70	3.881	0.62	2.547	0.63	2.703	0.59	2.099	0.66	2.245	0.81	6.615	1.10
3		2.099	0.62	3.358	0.58	1.951	0.61	2.394	0.59	2.099	0.58	1.951	0.77	5.603	1.08
4		2.099	0.95	8.654	0.59	2.099	0.64	2.394	0.60	2.245	0.56	1.683	0.91	8.223	1.23
5		2.703	0.82	3.358	0.56	1.683	0.59	2.099	0.58	1.625	0.58	1.683	1.08	28.302	3.33
6		2.245	0.84	6.658	0.58	1.951	0.58	1.951	0.56	1.683	0.66	2.245	0.73	13.278	2.38
7		2.245	0.86	7.559	0.58	1.951	0.56	1.951	0.56	1.683	0.62	2.547	0.89	10.157	1.81
8		2.245	0.68	3.530	0.56	1.623	0.58	1.683	0.70	2.881	0.64	3.190	1.11	13.314	1.37
9		2.245	0.76	3.881	0.57	1.818	0.58	1.951	0.64	2.868	0.62	2.547	1.13	13.832	2.45
10		1.951	0.62	3.358	0.56	1.683	0.57	1.818	0.63	2.703	0.60	3.190	1.09	12.[illegible]	2.21
11		2.245	0.72	4.245	0.58	1.951	0.56	1.683	0.59	2.099	0.60	2.245	0.79	5.603	1.60
12	0.56	1.683	0.66	3.190	0.56	1.683	0.56	1.683	0.60	2.245	0.62	2.547	0.89	7.763	1.76
13	0.58	1.951	0.68	2.547	0.56	1.683	0.55	1.551	0.60	2.245	0.67	3.358	0.85	6.270	1.24
14	0.60	2.245	0.61	2.394	0.56	1.683	0.55	1.551	0.59	2.099	0.63	2.703	1.12	13.593	1.96
15	0.58	1.951	0.60	2.245	0.55	1.551	0.56	1.683	0.55	1.551	0.61	2.245	1.13	12.832	1.39
16		1.818	0.59	2.099	0.56	1.683	0.60	2.245	0.55	1.551	0.55	1.551	0.88	7.536	1.24
17		1.818	0.59	2.099	0.56	1.683	0.63	2.703	0.55	1.551	0.56	1.951	0.94	8.932	1.42
18		1.818	0.58	1.951	0.56	1.683	0.57	1.818	0.55	1.551	0.59	2.099	0.82	6.225	1.36
19		2.099	0.52	2.099	0.56	1.683	0.56	1.683	0.59	2.099	0.55	1.551	1.12	13.593	1.73
20		2.547	0.58	1.951	0.55	1.551	0.56	1.683	0.63	2.547	0.56	1.683	1.10	13.042	1.30
21		3.704	0.58	1.951	0.56	1.683	0.58	1.951	0.59	2.099	0.55	1.551	0.98	9.908	1.24
22		3.704	0.59	2.099	0.56	1.683	0.56	1.683	0.57	1.818	0.55	1.551	1.11	13.317	1.23
23		3.704	0.58	1.951	0.56	1.683	0.58	1.683	0.56	1.683	0.54	1.683	1.14	14.152	1.25
24		3.704	0.58	1.951	0.56	1.683	0.59	2.099	0.55	1.551	0.58	1.951	1.04	11.432	1.32
25		1.951	0.68	1.951	0.56	1.683	0.61	2.394	0.60	2.245	0.53	1.818	1.10	13.042	1.24
26	0.81	6.015	0.58	1.951	0.56	1.683	0.66	3.190	0.70	3.881	0.72	4.619	1.08	12.499	1.20
27	0.74	4.619	0.52	2.099	0.56	1.683	0.61	2.394	0.66	3.530	0.72	4.245	1.04	11.432	3.38
28	1.63	2.703	0.52	1.951	0.58	1.951	0.64	2.862	0.60	2.245	0.75	5.005	2.17	52.061	2.58
29	0.64	2.862	0.58	1.951	0.63	2.703	0.59	2.099	0.58	1.951	0.68	3.530	1.68	12.499	2.63
30	0.70	3.881			0.61	2.394	0.59	2.099	0.52	1.818	0.72	4.245	1.15	14.435	1.83
31	0.66	3.190			0.59	2.099			0.57	1.818			1.54	42.219	1.33
		89.27		93.186		57.252		68.252		68.21		75.113		425.49	
		2.653		3.213		1.847		2.075		2.200		2.503		13.725	
		2.108		8.654		11.847		5.378		5.893		6.489		36.762	
		6.015		8.654		2.703		3.190		3.881		4.619		52.061	
		1.683		1.951		1.551		1.551		1.551		1.551		5.603	

2

ment of Ethiopia
sities Authority
ilization Desk

Tables dated ____ Periods of use ____ Use half-tenths between ____

File Number | Addis Ababa ____ District ____

Use hundredths below and tenths above these limits.

	AUGUST			SEPTEMBER			DAY	OCTOBER			NOVEMBER			DECEMBER			DAY
Discharge	Gage height		Discharge	Gage height		Discharge		Gage height		Discharge	Gage height		Discharge	Gage height		Discharge	
2.416	1.80		36.530	1.21		16.170	1	0.75		4.811	0.61		2.394	0.60		2.245	1
2.015	1.10		13.040	1.22		16.466	2	0.75		4.811	0.60		2.245	0.59		2.099	2
2.603	1.08		12.499	1.33		19.843	3	0.73		4.431	0.60		2.245	0.59		2.099	3
2.223	2.83		64.146	1.35		34.632	4	0.70		3.881	0.60		2.245	0.59		2.099	4
8.302	2.35		60.273	3.24		106.614	5	0.70		3.881	0.60		2.245	0.59		2.099	5
1.878	2.28		57.629	1.65		30.814	6	0.70		3.881	0.60		2.245	0.59		2.099	6
0.157	1.81		36.971	2.15		51.174	7	0.69		3.704	0.60		2.245	0.59		2.099	7
3.317	1.27		17.924	2.20		53.405	8	0.80		5.808	0.60		2.245	0.59		2.099	8
3.872	2.45		65.615	3.09		98.203	9	0.70		3.881	0.60		2.245	0.60		2.245	9
2.229	2.52		70.330	1.40		22.105	10	0.99		5.103	0.60		2.245	0.60		2.245	10
0.603	1.65		30.854	1.90		40.378	11	1.08		12.769	0.59		2.099	0.59		2.099	11
2.763	1.72		33.482	1.34		20.161	12	0.86		7.089	0.59		2.099	0.59		2.099	12
5.820	1.24		17.064	2.16		52.506	13	0.73		4.431	0.59		2.099	0.59		2.099	13
13.593	1.96		43.048	2.90		87.855	14	0.68		3.530	0.59		2.099	0.59		2.099	14
13.872	1.99		21.223	1.74		34.247	15	0.66		3.190	0.59		2.099	0.59		2.099	15
7.536	4.		20.161	1.17		15.686	16	0.66		3.190	0.59		2.099	0.59		2.099	16
5.532	1.46		24.111	1.13		13.872	17	0.69		3.704	0.57		1.818	0.60		2.245	17
6.225	2.76		80.493	1.02		10.919	18	0.67		3.358	0.57		1.818	0.60		2.245	18
3.523	1.71		33.864	1.26		17.669	19	0.67		3.358	0.57		1.818	0.60		2.245	19
13.042	1.30		18.901	4.00		153.074	20	0.67		3.358	0.57		1.818	0.60		2.245	20
9.908	1.24		17.064	1.48		24.793	21	0.67		3.358	0.57		1.818	0.60		2.245	21
13.312	1.22		16.466	1.10		13.040	22	0.67		3.358	0.57		1.818	0.59		2.099	22
14.156	2.83		83.62	1.90		9.416	23	0.64		2.862	0.52		1.957	0.59		2.099	23
11.432	1.34		20.161	0.89		7.763	24	0.64		2.862	0.58		1.957	0.58		1.957	24
13.042	1.24		17.669	0.84		6.652	25	0.60		2.362	0.58		1.957	0.58		1.957	25
12.499	1.20		15.236	0.81		6.015	26	0.60		2.862	0.58		1.957	0.59		2.099	26
11.432	3.35		113.423	0.72		5.202	27	0.63		2.703	0.58		1.957	0.59		2.099	27
12.021	2.52		73.760	1.38		5.401	28	0.62		2.547	0.58		1.957	0.59		2.099	28
12.499	2.63		73.861	0.76		5.005	29	0.60		2.362	0.58		1.957	0.60		2.245	29
14.435	1.83		37.760	0.35		4.811	30	0.60		2.547	0.58		1.957	0.60		2.245	30
12.219	1.23		16.466				31	0.60		2.547				0.60		2.245	31
435.498			1252.72			983.488				123.724			61.757			66.351	
13.225			40.731			32.782				3.991			2.058			2.141	
36.762			108.668			84.923				10.689			5.335			5.736	
2.061			12.428			153.074				12.769			2.394			2.245	
5.603			12.499			4.811				2.547			1.818			1.957	

Remarks: Chart = mean of 5 gage height readings at 2 hour intervals
Discharge = gage height reading at same time

Period ____ Year ____

COMPUTATIONS: Quarter | First | Second | Third | Fourth | Computed | Checked | Date

DISCHARGE: Quarter | First | Second | Third | Fourth | Applied | Checked | Date

GAGE HEIGHT: Quarter | First | Second | Third | Fourth | Copied | Checked | Date

The Transitional
Ethiopian Valleys Develop
Water Resources Studies

Daily Gage Height, in Meters, and Discharge, in second-Meters, of AKAKI River Creek

At Near AKAKI For the Year Ending December 31, 1993

Drainage area Square kms. Observer

DAY	JANUARY		FEBRUARY		MARCH		APRIL		DAY	MAY		JUNE		
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		Gage height	Discharge	Gage height	Discharge	Gage height
1	[illegible]	2.245	0.57	1.818	[illegible]	1.683	0.54	[illegible]	1	0.68	3.550	0.60	2.245	[illegible]
2	[illegible]	2.245	[illegible]	1.683	[illegible]	1.683	0.54	[illegible]	2	0.64	2.863	0.88	7.536	[illegible]
3	[illegible]	2.041	0.56	1.683	[illegible]	1.551	0.54	[illegible]	3	0.66	3.190	0.73	4.431	[illegible]
4	[illegible]	2.245	[illegible]	2.863	[illegible]	1.424	0.52	[illegible]	4	0.66	3.190	0.60	2.245	[illegible]
5	[illegible]	[illegible]	[illegible]	1.818	[illegible]	1.424	[illegible]	[illegible]	5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	1.313	0.81	6.695	0.55	1.551	0.60	[illegible]	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	1.551	[illegible]	4.811	0.56	1.683	[illegible]	[illegible]	7	0.59	2.095	1.58	28.362	[illegible]
8	[illegible]	1.551	[illegible]	3.547	[illegible]	1.683	[illegible]	[illegible]	8	0.65	3.814	0.90	7.795	[illegible]
9	[illegible]	0.465	0.68	2.547	0.56	1.683	[illegible]	[illegible]	9	0.60	2.245	1.16	24.111	[illegible]
10	[illegible]	1.913	[illegible]	[illegible]	[illegible]	1.424	[illegible]	[illegible]	10	0.57	1.818	0.94	4.619	[illegible]
11	[illegible]	1.818	0.95	4.811	[illegible]	1.424	[illegible]	[illegible]	11	0.58	1.818	1.40	22.105	[illegible]
12	[illegible]	1.818	0.95	10.157	0.54	1.424	0.56	1.683	12	0.56	1.683	0.75	4.811	[illegible]
13	[illegible]	1.551	0.66	3.190	[illegible]	1.424	[illegible]	[illegible]	13	0.62	1.420	0.64	2.863	[illegible]
14	0.56	1.683	[illegible]	2.245	[illegible]	1.424	[illegible]	[illegible]	14	0.64	3.190	1.62	23.541	[illegible]
15	[illegible]	1.551	0.58	1.957	[illegible]	1.551	[illegible]	[illegible]	15	1.65	3.624	1.65	3.624	[illegible]
16	[illegible]	1.683	[illegible]	1.818	[illegible]	1.424	[illegible]	[illegible]	16	0.58	1.551	0.63	[illegible]	[illegible]
17	[illegible]	1.683	[illegible]	1.683	[illegible]	1.424	[illegible]	[illegible]	17	0.53	1.818	0.63	8.548	[illegible]
18	0.56	1.683	[illegible]	1.683	[illegible]	1.551	[illegible]	[illegible]	18	[illegible]	1.683	0.62	[illegible]	[illegible]
19	0.56	1.683	0.56	1.683	0.56	1.683	0.66	[illegible]	19	[illegible]	1.683	0.69	[illegible]	[illegible]
20	[illegible]	1.683	[illegible]	1.551	[illegible]	1.424	[illegible]	[illegible]	20	[illegible]	1.818	[illegible]	[illegible]	[illegible]
21	[illegible]	1.683	[illegible]	1.551	[illegible]	1.424	[illegible]	[illegible]	21	[illegible]	1.683	[illegible]	[illegible]	[illegible]
22	[illegible]	1.683	[illegible]	1.551	[illegible]	1.424	[illegible]	[illegible]	22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	1.683	[illegible]	1.683	[illegible]	1.424	[illegible]	[illegible]	23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	1.683	[illegible]	1.551	[illegible]	1.551	[illegible]	[illegible]	24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	1.424	[illegible]	1.551	[illegible]	1.424	[illegible]	[illegible]	25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	1.683	[illegible]	1.424	[illegible]	[illegible]	26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	1.957	[illegible]	1.957	[illegible]	1.424	[illegible]	[illegible]	27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	1.683	[illegible]	1.683	[illegible]	[illegible]	[illegible]	[illegible]	28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	1.683			[illegible]	1.424	[illegible]	[illegible]	29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	1.424			[illegible]	1.424	[illegible]	[illegible]	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	1.683			[illegible]	1.424			31	[illegible]	[illegible]			[illegible]
Second-meter days		54.736		71.729		46.333		163.487			120.215		978.608	
Mean		1.75		2.56		1.49		5.45			3.88		7.60	
MILLION M³		4.69		6.20		4.00		14.13			10.39		19.2[illegible]	
Maximum		2.245		10.157		1.683		34.241			21.125		28.362	
Minimum		0.465		1.551		1.424		[illegible]			1.683		2.245	

Max. Disch. ____ Sec.-mt. at ____ on ____ (G. H. ____ mtrs.) Min. G. H. ____ mtrs. on ____
Min. Disch. ____ Sec.-mt. on ____ (G. H. ____ mtrs.) Max. G. H. ____ mtrs. on ____

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The Transitional Government of Ethiopia
Ethiopian Valleys Development Studies Authority
Water Resources Studies and Utilization Desk

Table dated | Periods of use | Use half-tenths between

Square tens Observer | Use hundredths below and tenths above these limits

DAY	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUGUST Gage height	AUGUST Discharge	SEPTEMBER Gage height	SEPTEMBER Discharge	DAY	OCTOBER Gage height	OCTOBER Discharge	NOVEMBER Gage height	NOVEMBER Discharge	DECEMBER Gage height	DECEMBER Discharge	DAY
1	0.60	2.245	1.16	14.319	1.97	43.465	5.70	276.42	1	2.26	56.11	0.89	7.763	0.81	6.225	1
2	0.88	7.536	1.23	16.364	2.69	75.82	4.68	158.29	2	1.53	26.523	0.88	7.536	0.80	5.788	2
3	0.73	4.431	1.32	21.125	1.66	36.37	3.53	123.02	3	1.30	18.501	0.87	7.311	0.82	6.225	3
4	0.60	2.245	1.08	12.499	1.13	58.41	3.58	126.70	4	1.24	17.064	0.88	7.536	0.82	6.225	4
5	0.88	7.536	1.30	18.701	1.66	36.37	3.62	129.13	5	1.21	16.336	0.87	7.311	0.81	6.01	5
6	1.41	22.435	1.31	19.213	2.98	57.03	4.10	159.61	6	1.15	14.185	0.87	7.311	0.81	6.01	6
7	1.58	28.382	1.82	10.919	4.33	175.60	2.91	88.39	7	1.14	14.112	0.86	7.089	0.81	6.011	7
8	0.90	7.998	2.97	8.453	1.71	34.09	1.72	33.02	8	1.11	13.317	0.86	7.089	0.81	6.011	8
9	1.16	24.111	1.18	15.894	1.38	81.410	1.68	31.971	9	1.08	12.471	0.85	6.890	0.81	6.011	9
10	1.30	4.669	1.15	14.435	1.26	13.665	1.56	27.583	10	1.06	11.964	0.85	6.890	0.81	6.011	10
11	1.80	92.105	1.12	13.593	1.82	16.466	1.80	36.587	11	2.57	10.157	0.86	7.089	0.81	5.828	11
12	0.75	11.811	1.37	21.125	1.93	41.358	1.66	31.225	12	0.99	10.157	0.85	6.890	0.81	6.011	12
13	0.64	2.862	1.25	17.365	2.05	46.845	1.68	31.971	13	0.97	9.661	0.84	6.652	0.81	6.011	13
14	0.68	3.547	1.03	16.466	3.20	104.38	2.18	58.51	14	0.92	9.661	0.84	6.652	0.80	5.828	14
15		3.094	1.19	15.006	2.84	142.82	1.90	40.598	15	0.96	9.416	0.84	6.652	0.81	6.011	15
16		3.703	0.98	9.908	1.60	29.629	3.81	140.25	16	0.94	8.932	0.83	6.438	0.81	6.011	16
17	0.65	3.547	1.32	33.492	1.66	31.225	2.21	49.317	17	0.92	8.451	0.82	6.225	0.81	6.011	17
18	0.62	2.547	1.01	10.663	2.77	81.01	1.64	30.485	18	0.92	8.453	0.84	6.652	0.81	6.011	18
19	0.69	3.704	1.32	33.492	3.95	107.23	1.76	35.018	19	0.92	8.453	0.84	6.652	0.81	6.011	19
20	0.70	3.881	1.71	33.108	2.84	41.61	1.48	24.993	20	0.92	8.453	0.84	6.652	0.81	5.828	20
21	1.19	15.584	1.64	30.485	2.16	51.62	1.41	22.435	21	1.08	12.499	0.83	6.438	0.80	5.828	21
22	0.70	3.881	2.89	54.30	4.32	178.41	1.31	21.277	22	0.92	7.908	0.83	6.438	0.80	5.828	22
23	0.63	2.703	3.41	62.63	5.41	253.62	1.66	32.347	23	1.12	13.573	0.83	6.438	0.80	5.828	23
24	0.63	2.703	0.96	80.49	3.03	54.89	1.36	20.892	24	1.31	20.481	0.84	6.652	0.81	5.828	24
25	0.85	6.652	2.16	51.62	2.32	61.868	1.86	33.760	25	1.82	18.281	0.85	6.925	0.81	6.225	25
26	1.08	10.919	2.19	52.66	3.78	139.64	1.51	25.825	26	1.04	11.437	0.85	6.925	0.81	6.225	26
27	1.35	5.603	1.92	41.896	1.70	36.249	2.56	68.41	27	0.96	9.416	0.82	6.225	0.81	6.225	27
28	0.85	7.536	3.49	118.80	1.78	36.734	1.56	26.33	28	0.94	8.932	0.83	6.225	0.81	6.225	28
29	0.86	4.619	4.84	189.48	2.05	46.845	1.56	26.33	29	0.96	8.452	0.83	6.438	0.81	6.225	29
30	1.82	6.925	1.78	34.249	3.18	103.62	1.30	19.81	30	0.90	7.958	0.81	6.015	0.81	5.828	30
31			1.66	31.225	1.84	216.85			31	0.89	7.763				5.828	31
		328.608		1159.351		8535.359		2345.561			421.916		208.[illegible]		5[illegible]	
		7.68		35.52		81.98		55.52			13.59		6.951		5.78	
		17.35		95.26		810.60		122.22			36.41		9.57		16.02	
		24.303		189.65		253.65		99.[illegible]			56.11		7.365		5.[illegible]	
		9.90		9.452		16.466		30.803			13.763		6.015		5.828