

State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

01 MAY 24 P3:43

01 MAY 24 P3:10

PETITION TO AMEND INTERIM INSTREAM FLOW STANDARDS

WAHINEPE'E STREAM, EAST MAUI

Instructions: Please print in ink or type and send completed petition with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. Petition must be accompanied by a non-refundable filing fee of \$25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 587-0225.

1. PETITIONER

Firm/Name Na Moku 'Aupuni o Ko'olau Hui c/o Native Hawaiian Legal Corporation
 Contact Person Alan Murakami, Attorney Ph: 521-2302
 Address 1164 Bishop Street, Honolulu, Hawai'i 96813

2. STREAMFLOW DATA

USGS stream gaging station Ungaged. Period of Record N/A
 Location/Reach SEE ATTACHED
 (Attach a USGS map, scale 1"=2000', and a property tax map showing diversion location referenced to established property boundaries.)

TABLE 1. PERIOD OF RECORD AVERAGE MONTHLY STREAMFLOW WITHIN THE AFFECTED STREAM REACH, IN CFS

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--------

CURRENT DATA UNAVAILABLE

Annual Median flow in cfs =

TABLE 2. PROPOSED AVERAGE MONTHLY STREAMFLOW DIVERSION FROM AFFECTED STREAM REACH, IN CFS

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
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NONE. UNDETERMINED; SUFFICIENT FOR TARO FARMING AND/OR GATHERING.

Annual Median flow in cfs =

RESTORATION

TABLE 3. AVERAGE MONTHLY STREAMFLOW IN AFFECTED STREAM REACH AFTER RESTORATION (min release flow), IN CFS

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
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NATURAL STREAMFLOW EXCEPT FOR EXERCISE OF APPURTENANT WATER RIGHTS.

Annual Median flow in cfs =

3. EXISTING INSTREAM AND OFFSTREAM WATER USES FOR ENTIRE STREAM REACH

TMK	OWNER	USE
	RESEARCH IN PROGRESS.	

(If more space is necessary, attach an extended list following above format)

4. ANTICIPATED IMPACTS ON STREAM AND BASIS FOR SUCH IMPACTS:

RESTORATION OF INSTREAM NATURAL HABITAT AND BIOTA, AND BENEFICIAL APPURTENANT AND GATHERING USES.

(Attach supporting documentation, plans, letters, etc.)

May 24, 2001

Date

Signature

NATIVE HAWAIIAN LEGAL CORPORATION

Alan Murakami Petitioner
 Attorney for Na Moku 'Aupuni o Ko'olau Hui

For Official Use

Date Received _____
 Date Accepted _____

WAIHINEPE`E

DVSTAT - DAILY VALUES STATISTICAL PROGRAM

STATION ID - 16552000
 SPRECKELS DITCH AT WAHINEPEE NR HUELO, MAUI, HI
 PARAMETER CODE - 00060 DISCHARGE
 STATISTIC CODE - 00003 MEAN

DURATION TABLE OF DAILY VALUES
 FOR PERIOD OCT TO SEP

CLASS	NUMBER OF DAYS IN CLASS																																																										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35																								
WATER YEAR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31 <td>32</td> <td>33</td> <td>34</td> <td>35</td>	32	33	34	35																								
RANGE	1929 1929	1930 1930	1932 1932	1933 1933	1934 1934	1935 1935	1936 1936	1937 1937	1938 1938	1936 1936	1937 1937	1938 1938	1936 1936	1937 1937	1938 1938	1936 1936	1937 1937	1938 1938	1936 1936	1937 1937	1938 1938	1936 1936	1937 1937	1938 1938	1936 1936	1937 1937	1938 1938	1936 1936	1937 1937	1938 1938	1936 1936	1937 1937	1938 1938	1936 1936	1937 1937	1938 1938																							
VALUE	0.00	0.02	0.03	0.04	0.06	0.07	0.10	0.12	0.16	0.21	0.27	0.35	0.46	0.60	0.78	1.00	1.30	1.70	2.20	2.90	3.70	4.80	6.30	8.10	56.22	55.00	52.87	51.78	50.53	49.32	48.34	46.39	44.84	41.65	38.64	36.36	11.00	14.00	18.00	23.00	30.00	39.00	51.00	66.00	85.00	111.00	0.00												
TOTAL	211	13	3	77	0	125	1	570	170	108	111	50	40	70	36	41	40	32	64	51	105	99	75	88	40	70	36	41	40	32	64	51	105	99	75	88	1848	1808	1738	1702	1661	1621	1589	1525	1474	1369	1270	1195	125	113	142	181	189	165	81	48	61	2	0
ACCUM	3287	3076	3063	3060	2983	2983	2858	2857	2287	2117	2009	1898	1848	1808	1738	1702	1661	1621	1589	1525	1474	1369	1270	1195	1848	1808	1738	1702	1661	1621	1589	1525	1474	1369	1270	1195	1107	982	869	727	546	357	192	111	63	2	0												
PERCT	100.00	93.58	93.19	93.09	90.75	90.75	86.95	86.92	69.58	64.41	61.12	57.74	56.22	55.00	52.87	51.78	50.53	49.32	48.34	46.39	44.84	41.65	38.64	36.36	56.22	55.00	52.87	51.78	50.53	49.32	48.34	46.39	44.84	41.65	38.64	36.36	11.07	29.88	26.44	22.12	16.61	10.86	5.84	3.38	1.92	0.06	0.00												

DURATION CURVE STATISTICAL CHARACTERISTICS FOR ...
 STATION ID: 16552000 SPECTRELS DITCH AT WAHINEPPEE NR HUELO, MAUI, HI
 PARAMETER CODE = 00060
 STATISTIC CODE = 00003 MEAN

DURATION DATA VALUES ARE INTERPOLATED FROM DURATION TABLE:
 DATA ARE NOT ANALYTICALLY FITTED TO A PARTICULAR STATISTICAL DISTRIBUTION,
 AND THE USER IS RESPONSIBLE FOR ASSESSMENT AND INTERPRETATION.

ADDITIONAL CONDITIONS FOR THIS RUN ARE:
 STATISTICS ARE BASED ON LOGARITHMS (BASE 10).
 NUMBER OF VALUES IS REDUCED FOR EACH NEAR-ZERO OR ZERO VALUE.

NUMBER OF VALUES = 19 (NUMBER OF NEAR-ZERO VALUES = 0)
 LISTING OF DATA FOLLOWS:

PERCENT OF TIME VALUE EQUALED OR EXCEEDED	DATA VALUE	
95.0	0.02	(LOG = -1.80748)
90.0	0.08	(LOG = -1.11960)
85.0	0.12	(LOG = -0.90509)
80.0	0.14	(LOG = -0.86660)
75.0	0.15	(LOG = -0.83123)
70.0	0.16	(LOG = -0.79854)
65.0	0.20	(LOG = -0.68984)
60.0	0.30	(LOG = -0.52794)
55.0	0.60	(LOG = -0.22157)
50.0	1.48	(LOG = 0.16879)
45.0	3.62	(LOG = 0.55861)
40.0	5.62	(LOG = 0.74983)
35.0	9.57	(LOG = 0.98083)
30.0	13.9	(LOG = 1.14306)
25.0	19.7	(LOG = 1.29367)
20.0	25.7	(LOG = 1.40979)
15.0	32.5	(LOG = 1.51217)
10.0	41.1	(LOG = 1.61340)
5.0	56.1	(LOG = 1.74912)

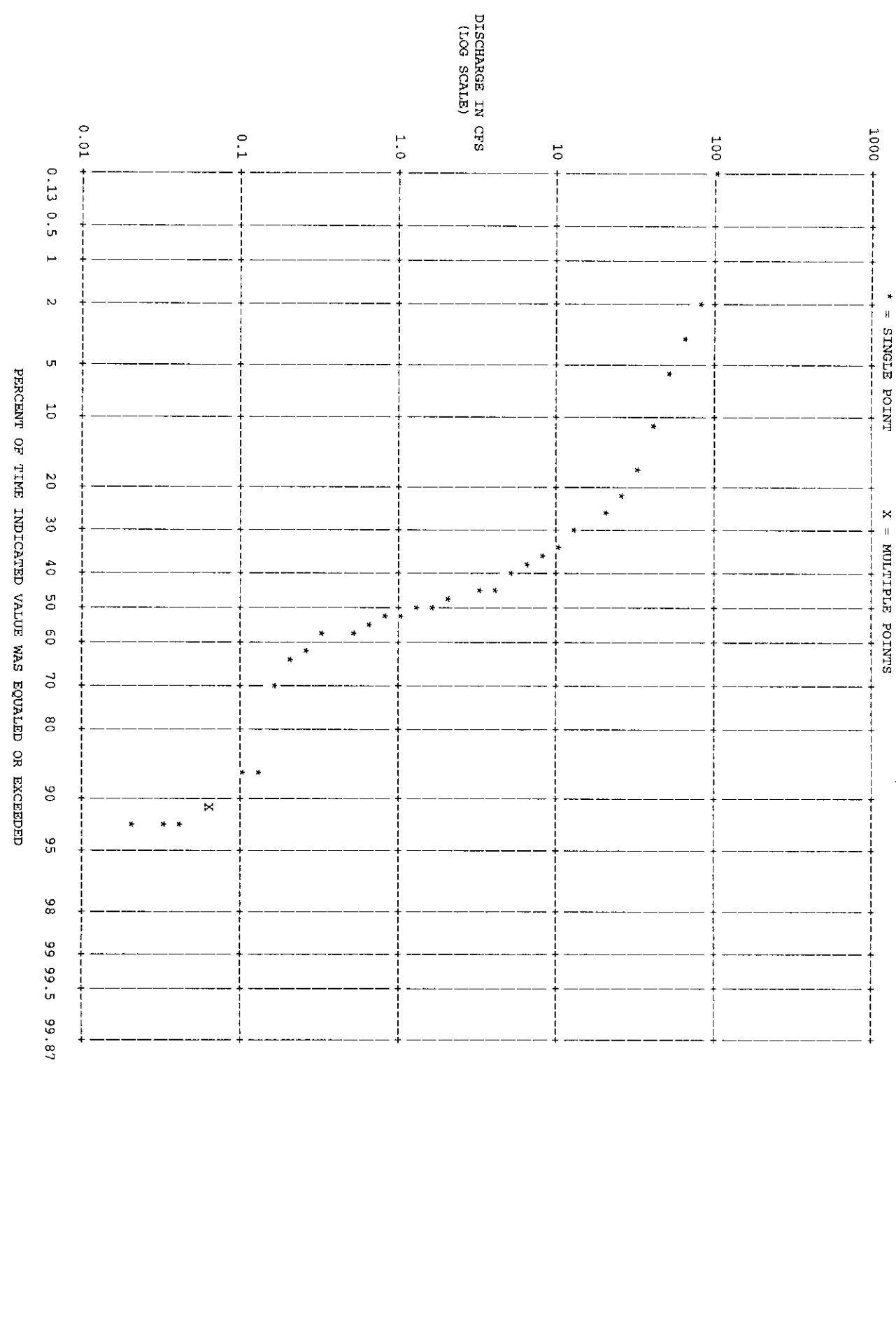
MEAN OF LOGS = 0.17955

STANDARD DEVIATION OF LOGS = 1.11535 (VARIABILITY INDEX - SEE USGS WSP 1542-A)

COEFFICIENT OF VARIATION = 6.21203

COEFFICIENT OF SKEW = -0.06391

LOG-NORMAL DURATION PLOT FOR PERIOD OCT TO SEP (YEARS 1928 - 1939)
 STATION ID: 16552000 SPRECKELS DITCH AT WAHINEPEE NR HUELO, MAUI, HI
 PARAMETER CODE - 00060 DISCHARGE
 STATISTIC CODE - 00003 MEAN



DVSTAT - DAILY VALUES STATISTICAL PROGRAM

STATION ID - 16552000
 SPRICKELS DITCH AT WAHINEPEE NR HUALO, MAUI, HI
 PARAMETER CODE - 00060 DISCHARGE
 STATISTIC CODE - 00003 MEAN

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS
 FOR PERIOD OCT TO SEP

WATER YEAR RANGE	1	9	3	9	7	8	14	8	30	9	60	8	90	7	120	7	183	7
1929 1929	.31	9	.36	9	1.51	8	3.23	8	6.09	9	9.60	8	11.9	7	12.3	7	13.8	7
1930 1930	.0000	1	.0000	1	1.67	9	3.48	9	4.40	8	10.9	9	11.9	8	12.4	8	14.7	8
1932 1932	.0000	2	.10	8	.13	7	.15	7	.87	6	2.76	5	8.28	6	7.33	6	11.8	6
1933 1933	.0000	3	.0000	2	.0000	1	.0000	1	.015	2	.29	1	.57	1	1.08	1	1.30	1
1934 1934	.0000	4	.0000	3	.0000	2	.0000	2	.0000	1	1.08	2	1.19	3	1.34	2	2.81	2
1935 1935	.0000	5	.0000	4	.051	5	.093	5	.43	5	3.13	6	3.37	4	4.32	4	8.28	4
1936 1936	.0000	6	.0000	5	.020	3	.046	3	.26	4	1.12	3	1.01	2	2.71	3	5.39	3
1937 1937	.050	7	.090	7	.090	6	.10	6	2.59	7	7.50	7	15.6	9	17.1	9	20.6	9
1938 1938	.050	8	.050	6	.050	4	.067	4	.17	3	2.07	4	4.37	5	6.08	5	10.6	5

DVSTAT - DAILY VALUES STATISTICAL PROGRAM

STATION ID - 16552000
 SPRUCKELS DITCH AT WAHINEPEE NR HUELO, MAUI, HI
 PARAMETER CODE - 00060 DISCHARGE
 STATISTIC CODE - 00003 MEAN

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS
 FOR PERIOD OCT TO SEP

WATER YEAR RANGE	1	2	3	4	5	6	7	8	9	10	15	20	30	40	50	60	70	80	90	100	120	150	183	
1929 1929	50.0	8	50.0	7	39.1	7	35.1	7	29.0	6	26.7	4	24.1	4	21.8	6	20.8	5	23.2	3	21.2	2		
1930 1930	53.0	7	50.3	6	45.4	6	40.7	5	35.7	3	26.1	5	21.8	6										
1932 1932	68.0	6	63.3	5	47.4	5	39.3	6	31.0	4	27.8	3	25.9	2	23.7	2	20.9	3						
1933 1933	50.0	9	37.7	9	21.6	9	11.9	9	11.0	9	8.61	9	7.30	9	6.38	9	5.14	9						
1934 1934	71.0	5	47.7	8	35.1	8	25.3	8	21.5	8	16.5	8	13.8	8	13.2	8	10.9	8						
1935 1935	108	3	92.7	3	78.1	2	45.8	4	28.4	7	24.3	6	20.4	7	17.7	7	16.3	7						
1936 1936	111	2	84.0	4	70.3	4	54.1	2	44.0	2	29.3	2	25.3	3	21.2	4	17.7	5						
1937 1937	124	1	101	1	86.1	1	68.8	1	55.7	1	41.8	1	38.5	1	33.5	1	29.3	1						
1938 1938	104	4	97.7	2	76.0	3	49.0	3	30.1	5	23.1	7	23.2	5	19.8	6	16.8	6						

DVSTAT - DAILY VALUES STATISTICAL PROGRAM

STATION ID - 16552000
 SPRECKELS DITCH AT WAHINEPEE NR HUELO, MAUI, HI
 PARAMETER CODE - 00060 DISCHARGE
 STATISTIC CODE - 00003 MEAN

ANNUAL AND/OR SEMI-ANNUAL VALUES

MEAN VALUE AND RANKING FOR PERIOD INCLUDED IN LOW-VALUE ANALYSIS (OCT-SEP)		MEAN VALUE AND RANKING FOR PERIOD INCLUDED IN HIGH-VALUE ANALYSIS (OCT-SEP)	
WATER YEAR RANGE		WATER YEAR RANGE	
1929 1929	16.8 7	1929 1929	16.8 3
1930 1930	17.2 8	1930 1930	17.2 2
1932 1932	13.8 6	1932 1932	13.8 4
1933 1933	2.95 1	1933 1933	2.95 9
1934 1934	6.42 2	1934 1934	6.42 8
1935 1935	10.5 3	1935 1935	10.5 7
1936 1936	11.1 4	1936 1936	11.1 6
1937 1937	22.6 9	1937 1937	22.6 1
1938 1938	12.4 5	1938 1938	12.4 5

DURATION CURVE STATISTICAL CHARACTERISTICS FOR ...
 STATION ID: 16551000 KOOLAU DITCH AT WAHINEPEE NR HOELO, MAUI, HI
 PARAMETER CODE = 00060
 STATISTIC CODE = 00003 MEAN

DURATION DATA VALUES ARE INTERPOLATED FROM DURATION TABLE:
 DATA ARE NOT ANALYTICALLY FITTED TO A PARTICULAR STATISTICAL DISTRIBUTION,
 AND THE USER IS RESPONSIBLE FOR ASSESSMENT AND INTERPRETATION.

ADDITIONAL CONDITIONS FOR THIS RUN ARE:
 STATISTICS ARE BASED ON LOGARITHMS (BASE 10).
 NUMBER OF VALUES IS REDUCED FOR EACH NEAR-ZERO OR ZERO VALUE.

NUMBER OF VALUES = 19 (NUMBER OF NEAR-ZERO VALUES = 0)
 LISTING OF DATA FOLLOWS:

PERCENT OF TIME VALUE EQUALED OR EXCEEDED	DATA VALUE	(LOG =
95.0	32.5	1.51242)
90.0	41.3	(LOG = 1.61608)
85.0	48.3	(LOG = 1.68369)
80.0	56.7	(LOG = 1.75337)
75.0	65.7	(LOG = 1.81732)
70.0	73.4	(LOG = 1.86598)
65.0	81.5	(LOG = 1.91119)
60.0	91.5	(LOG = 1.96133)
55.0	100.5	(LOG = 2.00222)
50.0	109.7	(LOG = 2.04024)
45.0	119.0	(LOG = 2.07557)
40.0	129.8	(LOG = 2.11334)
35.0	140.2	(LOG = 2.14668)
30.0	147.3	(LOG = 2.16832)
25.0	154.5	(LOG = 2.18892)
20.0	161.3	(LOG = 2.20772)
15.0	167.1	(LOG = 2.22292)
10.0	172.8	(LOG = 2.23760)
5.0	178.6	(LOG = 2.25181)

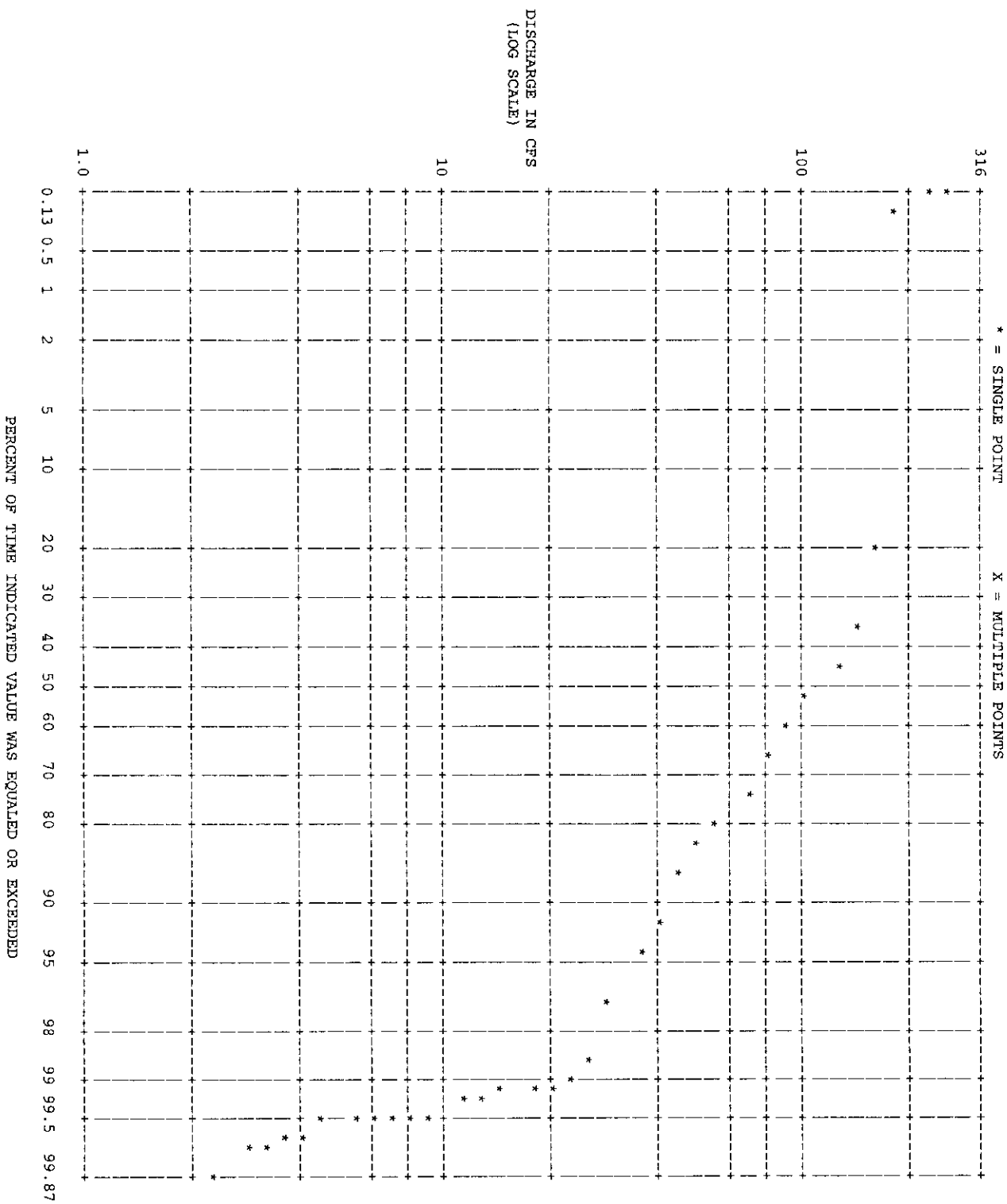
MEAN OF LOGS = 1.98825

STANDARD DEVIATION OF LOGS = 0.22639 (VARIABILITY INDEX - SEE USGS WSP 1542-A)

COEFFICIENT OF VARIATION = 0.11386

COEFFICIENT OF SKEW = -0.69474

LOG-NORMAL DURATION PLOT FOR PERIOD OCT 10 SEP
 STATION ID: 16551000 KOOLAU DITCH AT WAHINEPEE NR HUELO, MAUI, HI (YEARS 1922 - 1930)
 PARAMETER CODE - 00060 DISCHARGE
 STATISTIC CODE - 00003 MEAN



DVSTAT - DAILY VALUES STATISTICAL PROGRAM

STATION ID - 16551000
 KOOLAU DITCH AT WAHINEPEE NR HUELO, MAUI, HI
 PARAMETER CODE - 00060 DISCHARGE
 STATISTIC CODE - 00003 MEAN

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS
 FOR PERIOD OCT TO SEP

WATER YEAR	1	3	7	14	30	60	90	120	183
1923 1923	2.30 1	2.30 1	2.30 1	12.7 1	60.4 6	63.4 4	82.4 6	94.3 7	112 7
1924 1924	26.0 5	26.3 5	28.7 5	35.9 6	49.9 5	59.7 3	79.3 4	86.3 5	97.5 5
1925 1925	10.0 3	11.0 3	16.9 3	43.9 7	61.2 7	74.7 6	79.5 5	83.4 4	93.3 4
1926 1926	20.0 4	20.0 4	21.1 4	24.8 2	27.9 1	40.6 1	45.0 1	49.7 1	52.1 1
1927 1927	30.0 7	30.3 7	32.0 7	34.3 4	45.5 3	59.5 2	74.2 2	80.5 3	90.1 3
1928 1928	27.0 6	28.0 6	29.9 6	35.1 5	47.8 4	80.2 7	91.9 7	91.4 6	106 6
1929 1929	3.40 2	3.83 2	14.0 2	29.7 3	39.6 2	72.1 5	74.4 3	75.1 2	86.2 2

DVSTAT - DAILY VALUES STATISTICAL PROGRAM

STATION ID - 16551000
 KOOLAU DITCH AT WAHINEPEE NR HUELO, MAUI, HI
 PARAMETER CODE - 00060 DISCHARGE
 STATISTIC CODE - 00003 MEAN

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS
 FOR PERIOD OCT TO SEP

WATER YEAR	1	3	7	15	30	60	90	120	183
1923 1923	179	175	169	168	159	153	149	143	138
1924 1924	175	170	169	166	154	143	132	119	114
1925 1925	175	175	167	160	151	147	142	137	131
1926 1926	176	169	167	164	144	128	105	94.2	79.0
1927 1927	184	182	179	177	171	162	149	137	139
1928 1928	184	181	177	172	168	163	158	140	132
1929 1929	189	178	176	174	159	145	139	132	127

DVSTAT - DAILY VALUES STATISTICAL PROGRAM

STATION ID - 16551000
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 PARAMETER CODE - 00060 DISCHARGE
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ANNUAL AND/OR SEMI-ANNUAL VALUES

MEAN VALUE AND RANKING FOR PERIOD INCLUDED IN LOW-VALUE ANALYSIS (OCT-SEP)		MEAN VALUE AND RANKING FOR PERIOD INCLUDED IN HIGH-VALUE ANALYSIS (OCT-SEP)	
WATER YEAR RANGE		WATER YEAR RANGE	
1923 1923	119 6	1923 1923	119 2
1924 1924	102 2	1924 1924	102 6
1925 1925	113 4	1925 1925	113 4
1926 1926	76.1 1	1926 1926	76.1 7
1927 1927	115 5	1927 1927	115 3
1928 1928	120 7	1928 1928	120 1
1929 1929	105 3	1929 1929	105 5