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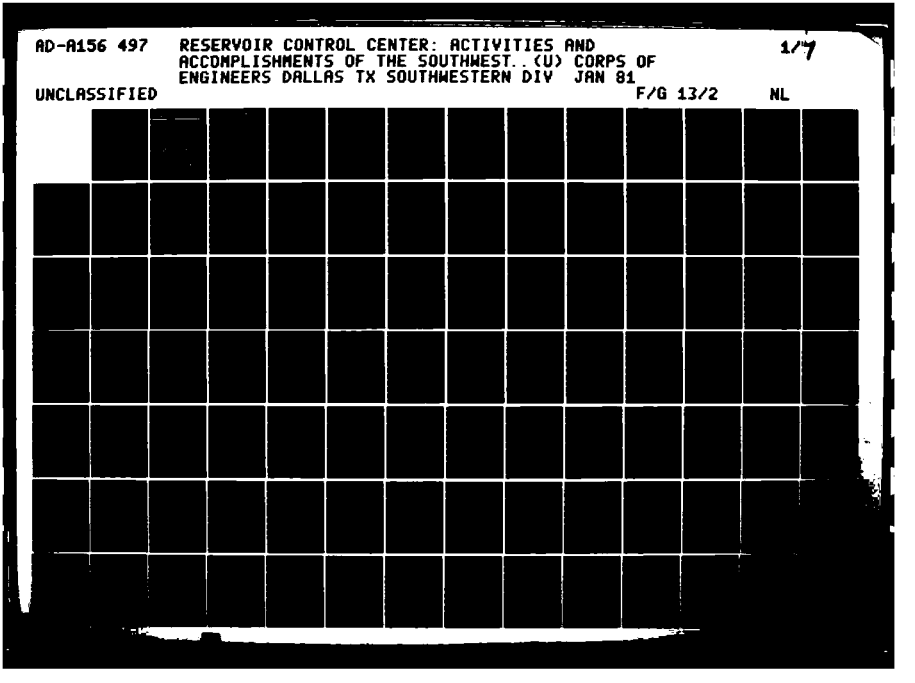

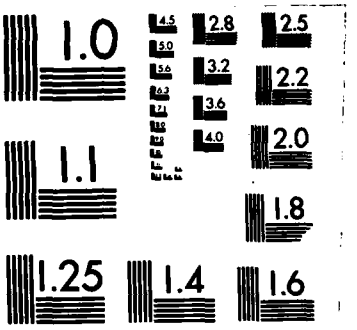

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Southwestern Division

Reservoir Control Center

(Instream Flow Study)

APPENDIX A TO PART III OF THE

ANNUAL REPORT

1980

AD-A156 497

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Southwestern Division
Dallas, Texas

January 1981

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This report presents activities and accomplishments of the Southwestern Division (SWD), related to reservoir regulation and water management through FY 1980. ~~Companion publications, "Parts II and III of the~~ "Annual Report", have been prepared containing detailed summaries of the districts, and minutes of coordinating committee meetings, and instream flow problems and needs evaluation, respectively.

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APPENDIX A

RESERVOIR CONTROL CENTER

1980 ANNUAL REPORT

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ADDENDA

MINUTES OF RCC ANNUAL MEETING	Add No. 1
MINUTES OF WATER QUALITY MEETING	Add No. 2
MINUTES OF HES ANNUAL MEETING	Add No. 3

PLATE

DAMS AND RESERVOIRS IN THE SOUTHWESTERN DIVISION	Inside Front Cover

PART II

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2. DETAILED PROJECT EVALUATION OF INSTREAM FLOW PROBLEMS AND NEEDS
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APPENDIX A

MONTHLY DISCHARGE FREQUENCY AND DURATION CURVES

SECTION IX - INSTREAM FLOW STUDY

1. Summary of Instream Flow Problems and Needs. The instream flow problems and needs evaluation program established by OCE is in response to President Carter's 12 July 1978 memorandum on "Environmental Quality and Water Resources Management". The EC directs all field operating activities having civil works projects responsibilities to conduct a project evaluation of all existing Corps of Engineers water resources projects. The evaluations will be used to assess the magnitude of existing instream flow related problems and needs, the potential cost necessary to meet the identified needs, the opportunities to enhance instream flow affected to accomplish necessary actions. Criteria for the evaluations are contained in EC 1110-2-214 and with further guidance provided by SWDED-XR letter dated 18 August 1980 (Appendix A).

The Southwestern Division Office established a program in mid 1978 to determine minimum flow requirements for fish and wildlife purposes below Corps projects. Several problem areas were determined. Minimum flows were initiated at several projects as a result of that program. Another result was the initiation of studies of several other projects to determine the need for minimum flow and the magnitude of those flows. The Southwest Division has been working with the US Fish and Wildlife Service in an attempt to arrive at a mutually acceptable solution to these problems within present operational constraints. Some of the quantity information required by the EC had therefore been compiled.

The instream flow evaluation program within Southwestern Division has resulted in the evaluation of 84 of the 93 projects. Those omitted are eight low lift navigation structures on the main stem of the Arkansas River and one on the Arkansas Post Canal. These projects have no apparent water quality or water quantity problems associated with project regulation. Low flows on the main stem of the Arkansas River are controlled by hydropower operations at upstream storage and run of river projects. Release requirements are set at the Dardanelle power station which results in adequate minimum flows downstream except under extreme drought conditions.

The number of projects to be evaluated varied tremendously between districts with Galveston District having only two projects to evaluate while Tulsa District had 44. The amount of detail included also varies from district to district. Little Rock and Fort Worth Districts presented a considerable amount of detail on most projects. Tulsa District, due to the large number of projects, grouped projects according to reservoir size and depth, location and outlet works configuration with generalized descriptions for the water quality portions plus known specific problems for individual projects. Of those evaluated about twenty within SWD were described as having no water quality problems or at least none noted to date. Most of these are low lift locks and dams along the McClellan-Kerr Arkansas River Navigation Project. Others are small flood control and conservation projects that do not stratify or if they do it is a mild stratification that is easily broken up by wind action.

Eight projects are currently being studied as part of larger more comprehensive basin restudies or site specific studies to address known high profile problems. Three site specific studies are at Lake Texoma (Denison Dam), Sam Rayburn Dam and Table Rock Dam. These three have been identified by state agencies as having low dissolved oxygen in their releases. An additional study is proposed for Lake Texoma.

Quantity wise, numerous projects have no or extremely low releases for extended periods of time. In appropriated rights states (Texas and New Mexico) most releases, other than for flood control, are made at the request of compact commissions or other state or local agencies having rights to the stored or inflowing waters. Therefore, in most cases, the Corps has no authority to release conservation water for other uses. Even in other states much of the conservation storage is under contract to local governmental agencies and therefore cannot be used to enhance downstream areas.

Twenty projects were identified as having problems severe enough that the districts recommended studies to determine the extent of the problem and alternative solutions. Seven of these are water quantity problems identified by the US Fish and Wildlife Service. The others are water quality problems generally associated with deep stratified impoundments with low level outlets. They are generally low dissolved oxygen, high temperature in trout fisheries, hydrogen sulfide, iron, manganese or pH. Many other reservoirs screened in this program had similar problems but they are not as severe as those indicated.

Table 1 shows projects where studies are recommended including priorities and funding requirements.

PROJECT	PRIORITY	FUNDS
Tenkiller Ferry	1	$30,000
Lake Texoma (Denison Dam)	2	50,000
Sommerville	3	50,000
Nimrod	4	35,000
Keystone	5	30,000
Oologah	6	30,000
Wister	7	20,000
Blue Mountain	8	15,000
Eufaula	9	15,000
Broken Bow	10	15,000
Lavon	11	60,000
Bardwell	12	60,000
Navarro Mills	13	55,000
Proctor	14	55,000
Belton	15	50,000
Stillhouse	16	55,000
Clearwater	17	10,000
Hugo	18	15,000
Greers Ferry	19	20,000
Pine Creek	20	15,000

The Southwestern Division evaluation process required a large expenditure of resources which due to the time frame involved had to be diverted from other programs. These programs are being rescheduled as quickly as manpower and funding allow. The evaluations are, in some instances, the first comprehensive look at problems encountered at the projects. In some districts personnel from Hydraulics, Planning, Operations and project personnel cooperated in the effort to identify all known problems. We feel that this study evaluation will serve as basis for future work to improve the quality and quantity of releases from SWD projects.

2. Detailed Project Evaluation of Instream Flow Problems and Needs. Narratives describing detailed evaluations for individual projects are contained in this volume. An index is shown on pages 4a through 4e.

3. Monthly Discharge - Frequency and Discharge Duration Relations. Monthly discharge - frequency and discharge - duration curves are included in Appendix A for those projects that were evaluated. Projects are in the order shown on pages 4a and 4b.

INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION INDEX

LAKE NAME	STREAM	DIST	STATE	YR COMP	POOL ELEVATION CONS	POOL ELEVATION FC	CAPACITY 1000 AF CONS	CAPACITY 1000 AF FC	PAGE NO
Introduction									1
			WHITE RIVER BASIN						
Beaver	White	LRD	AR	66	1120.0	1130.0	1652	300	5
Table Rock	White	LRD	AR/MO	58	915.0	931.0	2702	760	526
Bull Shoals	White	LRD	AR/MO	52	654.0	695.0	3048	2360	15
Norfork	North Fork	LRD	AR/MO	45	552.0	580.0	1251	732	26
Clearwater	Black	LRD	MO	48	494.0	567.0	22	391	36
Greers Ferry	Little Red	LRD	AR	62	461.0	487.0	1911	934	44
			ARKANSAS RIVER BASIN						
Pueblo	Arkansas R	AD*	CO	74	4880.6	4898.7	264	93	
Trinidad	Purgatoire R	AD	CO	78	6226.4	6260.0	64	58	55
John Martin	Arkansas	AD	CO	51	3851.0	3870.0	351	270	57
Cheney	N F Ninnescah	TD*	KS	64	1421.6	1429.0	167	81	
Eldorado	Walnut	TD	KS	80	1339.0	1347.5	157	79	59
Kaw	Arkansas	TD	OK/KS	76	1010.0	1044.5	429	919	64
Great Salt Plains	Salt Fork Ark	TD	OK	41	1125.0	1138.5	31	240	70
Keystone	Arkansas	TD	OK	64	723.0	754.0	618	1219	77
Heyburn	Polecat Cr	TD	OK	50	761.5	784.0	7	48	86
Toronto	Verdigris R	TD	KS	60	901.5	931.0	22	178	94
Fall River	Fall	TD	KS	49	948.5	987.5	24	235	102
Elk City	Elk	TD	KS	66	792.0	825.0	34	256	110
Big Hill	Big Hill Cr	TD	KS	81	858.0	867.5	27	13	120
Oologah	Verdigris R	TD	OK	63	638.0	661.0	553	966	125
Hulah	Caney	TD	OK/KS	51	733.0	765.0	36	258	136
Copan	L Caney	TD	OK/KS	80	710.0	732.0	43	184	146
Birch	Birch Creek	TD	OK	79	750.5	774.0	19	39	151
Skiatook	Hominy Creek	TD	OK	82	714.0	729.0	305	182	156
Newt Graham LD 18	Verdigris	TD	OK	70	532.0	-	24	0	161
Chouteau LD 17	Verdigris	TD	OK	70	511.0	-	23	0	163
Council Grove	Neosho R	TD	KS	65	1270.0	1289.0	38	76	165
Marion	Cottonwood R	TD	KS	68	1350.5	1358.5	86	60	175
John Redmond	Neosho R	TD	KS	64	1039.0	1068.0	82	563	189
Grand Lake	Neosho (Grand)	TD*	OK	40	745.0	755.0	1672	525	
Lake Hudson	Neosho (Grand)	TD*	OK	64	619.0	636.0	200	244	
Fort Gibson	Neosho (Grand)	TD	OK	52	554.0	582.0	365	919	198
Webbers Falls LD 16	Arkansas	TD	OK	70	490.0		165	0	208
Tenkiller Ferry	Illinois R	TD	OK	52	632.0	667.0	654	577	210
Conchas	Canadian R	AD	NM	39	4201.0	4218.0	330	198	221
Meredith	Canadian R	TD*	TX	65	2941.3	2965.0	945	463	
Thunderbird	Little R	TD*	TX	65	1039.0	1049.4	120	77	
Optima	N Canadian R	TD	OK	78	2763.5	2779.0	129	101	223
Fort Supply	Wolf Cr	TD	OK	42	2004.0	2028.0	14	87	228
Canton	N Canadian R	TD	OK	48	1615.2	1638.0	116	268	234
Eufaula	Canadian R	TD	OK	64	585.0	597.0	2329	1470	242
R S Kerr LD 15	Arkansas	TD	OK	70	460.0	-	494	0	251
W D Mayo LD 14	Arkansas	TD	OK	70	413.0	-	16	0	253
Wister	Poteau R	TD	OK	49	471.6	502.5	27	400	255
LD 13	Arkansas	LRD	AR/OK	69	392.0	-	54	0	
Ozark-J T LD 12	Arkansas	LRD	AR	69	372.0		148	0	504
Dardanelle LD 10	Arkansas	LRD	AR	64	338.0	-	486	0	511
Blue Mountain	Petit Jean	LRD	AR	47	384.0	419.0	25	233	266
LD 9	Arkansas	LRD	AR	69	287.0	-	65	0	
Toad Suck Ferry LD 8	Arkansas	LRD	AR	69	265.0	-	35	0	
Nimrod	Fourche La Fave	LRD	AR	42	342.0	373.0	29	307	273
Murray LD 7	Arkansas	LRD	AR	69	249.0	-	87	0	
D D Terry LD 6	Arkansas	LRD	AR	68	231.0	-	50	0	
LD 5	Arkansas	LRD	AR	68	213.0	-	65	0	
LD 4	Arkansas	LRD	AR	68	196.0	-	70	0	
LD 3	Arkansas	LRD	AR	68	182.0	-	46	0	
LD 2	Arkansas	LRD	AR	67	162.0	-	110	0	519
LD 1	Arkansas	LRD	AR	67	142.0	-	2	0	

* Section 7 Flood Control Projects
Includes dead storage, conservation, water supply, power, irrigation, etc.

RED RIVER BASIN									
Altus	N F Red	TD*	OK	46	1559.0	1562.0	141	21	
Tom Steed	W Otter Creek	TD*	OK	75	1411.0	1414.0	96	20	
Lake Kemp	Wichita R	TD*	TX	77	1144.0	1156.0	299	225	284
Waurika	Beaver Creek	TD	OK	78	951.4	962.5	203	140	290
Foss	Washita	TD*	OK	61	1652.0	1668.6	256	181	
Fort Cobb	Cobb Creek	TD*	OK	59	1342.0	1354.8	78	64	
Arbuckle	Rock Creek	TD*	OK	67	872.0	885.3	72	36	
Lake Texoma	Red	TD	TX/OK	45	617.3	640.0	2836	2660	299
Pat Mayse	Sanders Creek	TD	TX	68	451.0	460.5	124	65	310
Hugo	Kiamichi R	TD	OK	74	404.5	437.5	157	809	317
Pine Creek	Little R	TD	OK	69	443.5	480.0	78	388	322
Broken Bow	Mountain Fork	TD	OK	69	599.5	627.5	919	450	331
DeQueen	Rolling Fork	TD	AR**	77	437.0	473.5	35	101	342
Gillham	Cossatot	TD	AR**	76	502.0	569.0	33	189	348
Dierks	Saline R	TD	AR**	76	526.0	557.5	30	67	355
Millwood	Little R	TD	AR	66	259.2	287.0	207	1653	362
Wright Patman	Sulphur River	FWD	TX	56	220.0	259.5	143	2509	368
Lake O the Pines	Cypress Creek	FWD	TX	60	228.5	249.5	251	580	375
NECHES RIVER BASIN									
Sam Rayburn	Angelina R	FWD	TX	65	164.4	173.0	2898	1009	380
B A Steinhagen	Neches R	FWD	TX	51	81.0	83.0	70	24	386
TRINITY RIVER BASIN									
Benbrook	Clear Fork	FWD	TX	52	694.0	724.0	88	170	391
Lewisville	Elm Fork	FWD	TX	54	515.0	532.0	465	525	398
Grapevine	Denton Cr	FWD	TX	52	535.0	560.0	189	248	403
Lavon	East Fork	FWD	TX	77	492.0	503.5	457	277	408
Navarro Mills	Richland Cr	FWD	TX	68	424.5	443.0	63	149	414
Bardwell	Waxahachie Cr	FWD	TX	65	421.0	439.0	55	85	420
SAN JACINTO RIVER BASIN									
Barker	Buffalo Bayou	GD	TX	45	-	107.0	0	207	426
Addicks	Buffalo Bayou	GD	TX	48	-	114.0	0	205	429
BRAZOS RIVER BASIN									
Whitney	Brazos	FWD	TX	51	533.0	571.0	627	1372	432
Waco	Bosque	FWD	TX	65	455.0	500.0	153	574	438
Proctor	Leon R	FWD	TX	63	1162.0	1197.0	59	315	443
Belton	Leon R	FWD	TX	54	594.0	631.0	458	640	449
Stillhouse H	Lampasas R	FWD	TX	68	622.0	666.0	236	395	455
North Fork	N F San Gabriel	FWD	TX	79	791.0	834.0	37	93	461
Granger	San Gabriel R	FWD	TX	79	504.0	528.0	66	179	466
Somerville	Yegua Cr	FWD	TX	67	238.0	258.0	160	347	471
COLORADO RIVER BASIN									
Twin Buttes	S&M Concho R	FWD*	TX	63	1940.2	1969.1	186	454	
O C Fisher	N Concho R	FWD	TX	52	1908.0	1938.5	119	277	478
Hords Cr	Hords Cr	FWD	TX	48	1900.0	1920.0	9	17	482
Marshall Ford	Colorado R	FWD*	TX	40	681.0	714.0	1172	780	
GUADALUPE RIVER BASIN									
Canyon	Guadalupe R	FWD	TX	64	909.0	943.0	386	355	487
RIO GRANDE BASIN									
Platoro	Conejos R	AD*	CO	51	10027.5	10034.0	54	6	
Abiquiu	Rio Chama	AD	NM	63	-	6283.5	0	568	492
Cochiti	Rio Grande	AD	NM	75	5321.45	5460.5	47	539	494
Galisteo	Galisteo Cr	AD	NM	70	-	5608.0	0	90	496
Jemez Canyon	Jemez R	AD	NM	53	5160.0	5232.0	2	104	498
Los Esteros	Pecos R	AD	NM	80	4776.5	4797.0	267	182	500
Sumner	Pecos R	AD*	NM	37	4261.0	4282.0	47	86	
Two Rivers	Rio Hondo	AD	NM	63	-	4032.0	0	168	502

** These projects transferred to Little Rock District 1 Oct 80.

ALPHABETICAL INDEX

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Abiquiu	Rio Grande	492
Addicks	San Jacinto	429
Altus	Red	
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D D Terry LD 6	Arkansas	
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Denison Dam (Lake Texoma)	Red	299
DeQueen	Red	342
Dierks	Red	355
Eldorado	Arkansas	59
Elk City	Arkansas	110
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Marshall Ford Dam (Mansfield Dam) Lake Travis	Colorado	
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Ozark-J T LD 12	Arkansas	504
Pat Mayse	Red	310
Pensacola Dam, Grand Lake O' the Cherokees	Arkansas	
Pine Creek	Red	322
Platoro	Rio Grande	
Proctor	Brazos	443
Pueblo	Arkansas	
R S Kerr LD 15	Arkansas	251
Sam Rayburn	Neches	380
Sanford Dam, Lake Meredith	Arkansas	
Skiatook	Arkansas	156
Somerville	Brazos	471
Stillhouse H	Brazos	455
Sumner	Rio Grande	
Table Rock	White	526
Tenkiller Ferry	Arkansas	210
Texoma Lake (Denison Dam)	Red	299
Thunderbird	Arkansas	
Toad Suck Ferry LD 8	Arkansas	
Tom Steed	Red	
Toronto	Arkansas	94
Trinidad	Arkansas	55
Twin Buttes	Colorado	
Two Rivers	Rio Grande	502
W D Mayo LD 14	Arkansas	253
Waco	Brazos	438
Waurika	Red	290
Webbers Falls LD 16	Arkansas	208
Whitney	Brazos	432
Wister	Arkansas	255
Wright Patman	Red	368

Bull Shoals

A-1 [illegible]

JANUARY FLOW DURATION

Mean Daily Flows Existing Conditions

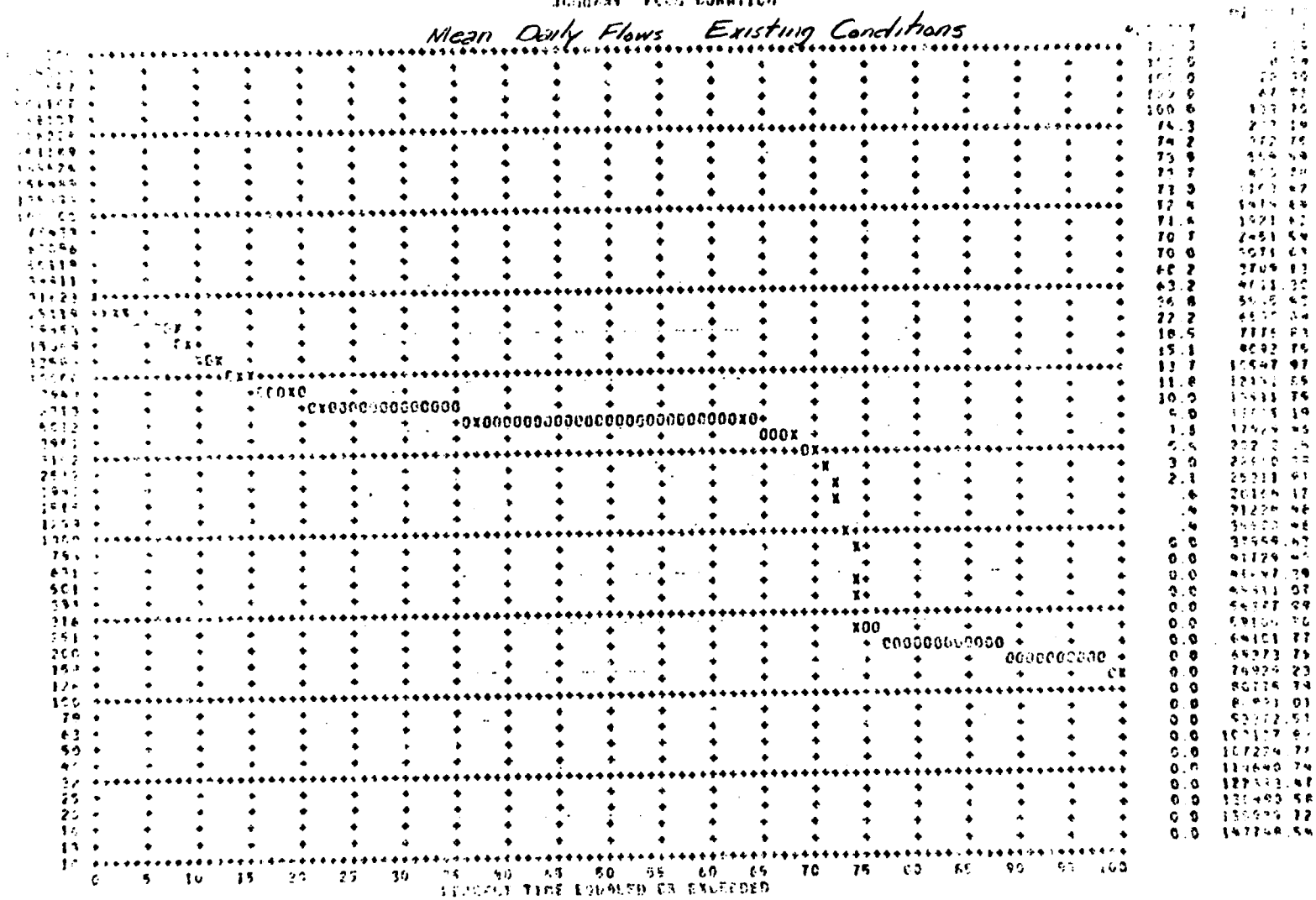


Fig 4

Bull Shoals

FEBRUARY FLOW DURATION

Mean Daily Flows Existing Conditions

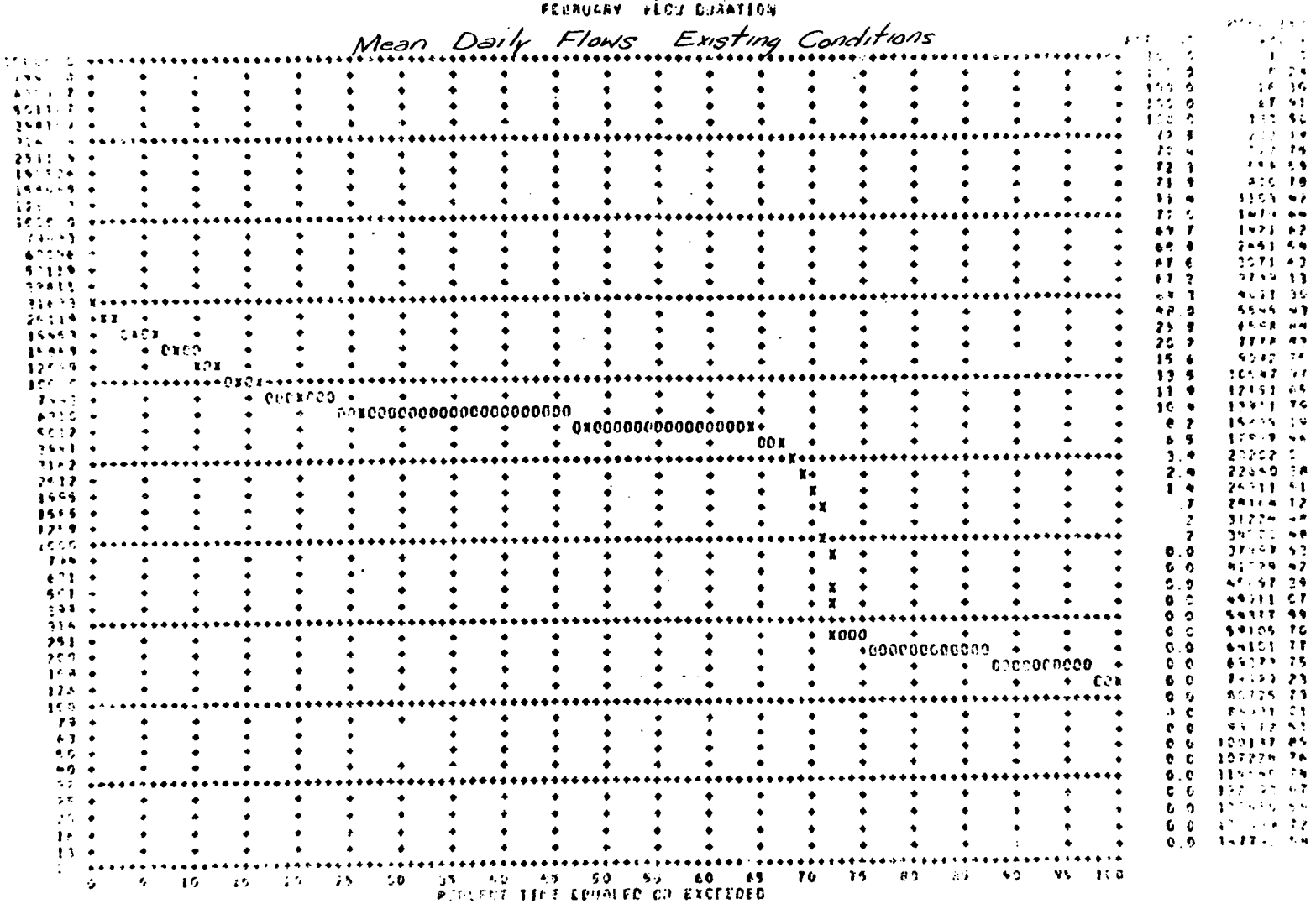


Fig 5

Bull Shoals

R-1 FLIPPER

MARCH FLOW DURATION

Mean Daily Flows Existing Conditions

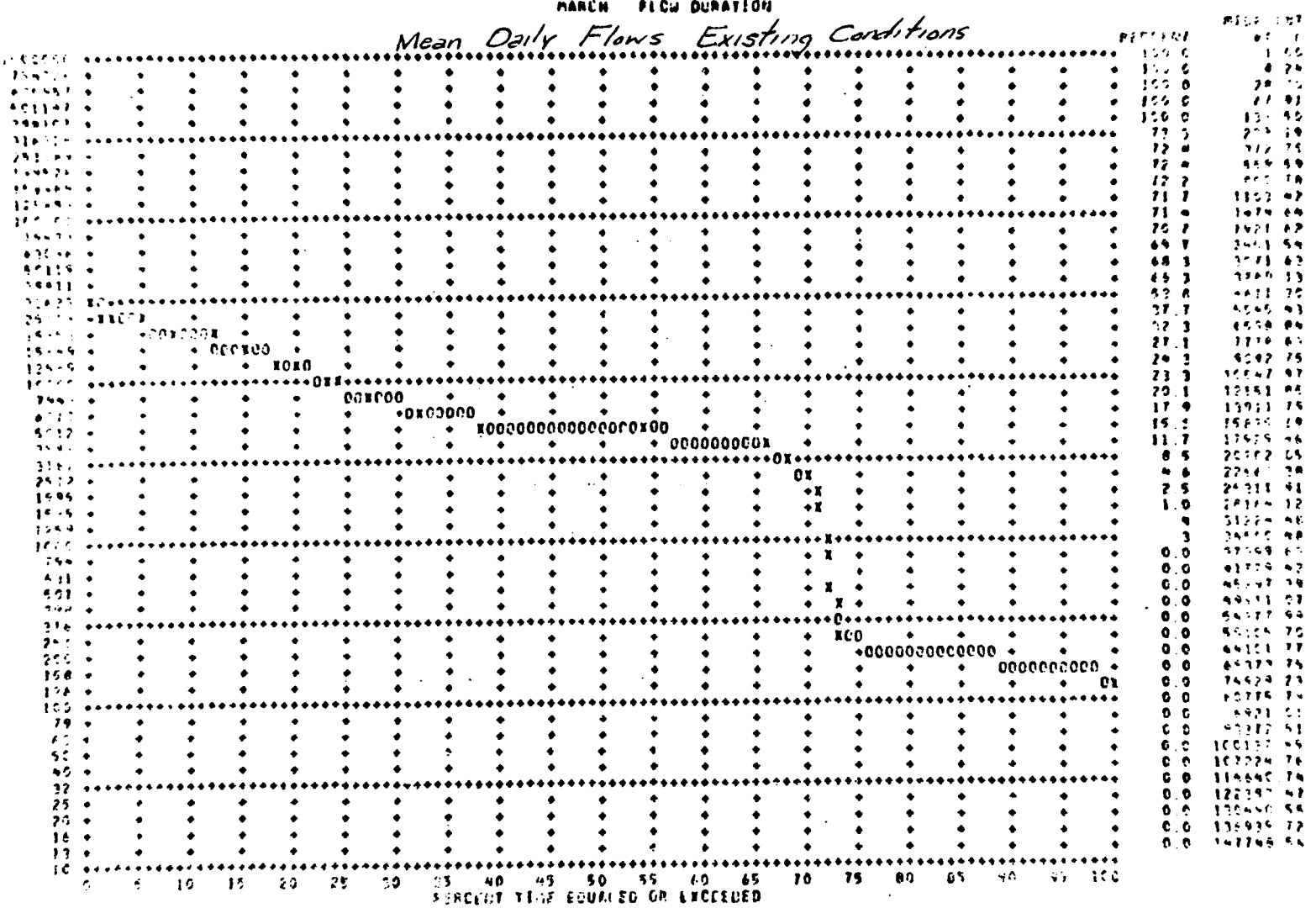


Fig 6

Bull Shoals

9-1 FLIPPIN

APRIL FLOW DURATION

Mean Daily Flows Existing Conditions

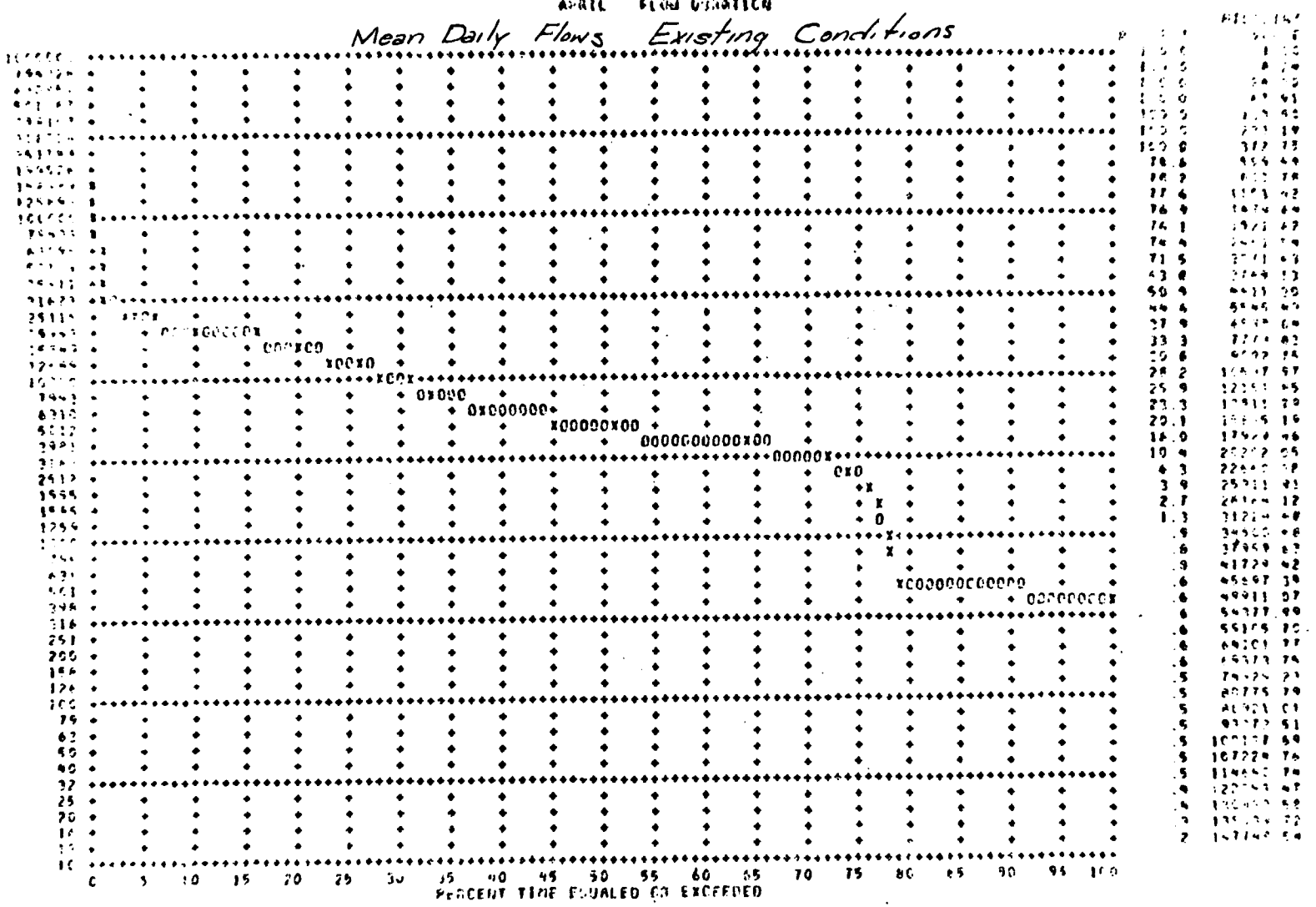


Fig 7

Bull Shoals
R-1 FLIPPEN
MAY FLOW DURATION

Mean Daily Flows Existing Conditions

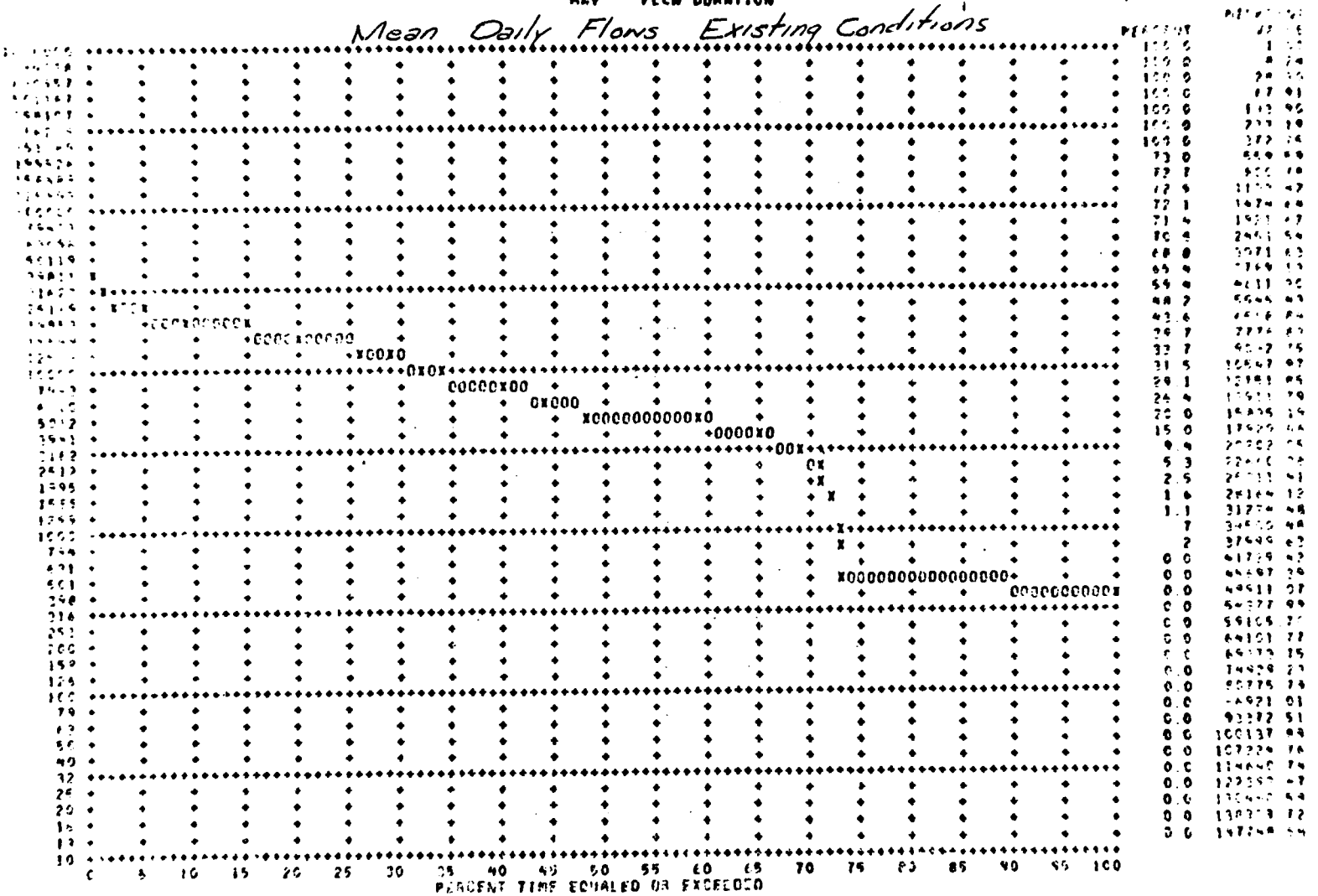


Fig 8

Bull Shoals

Mean Daily Flows Existing Conditions

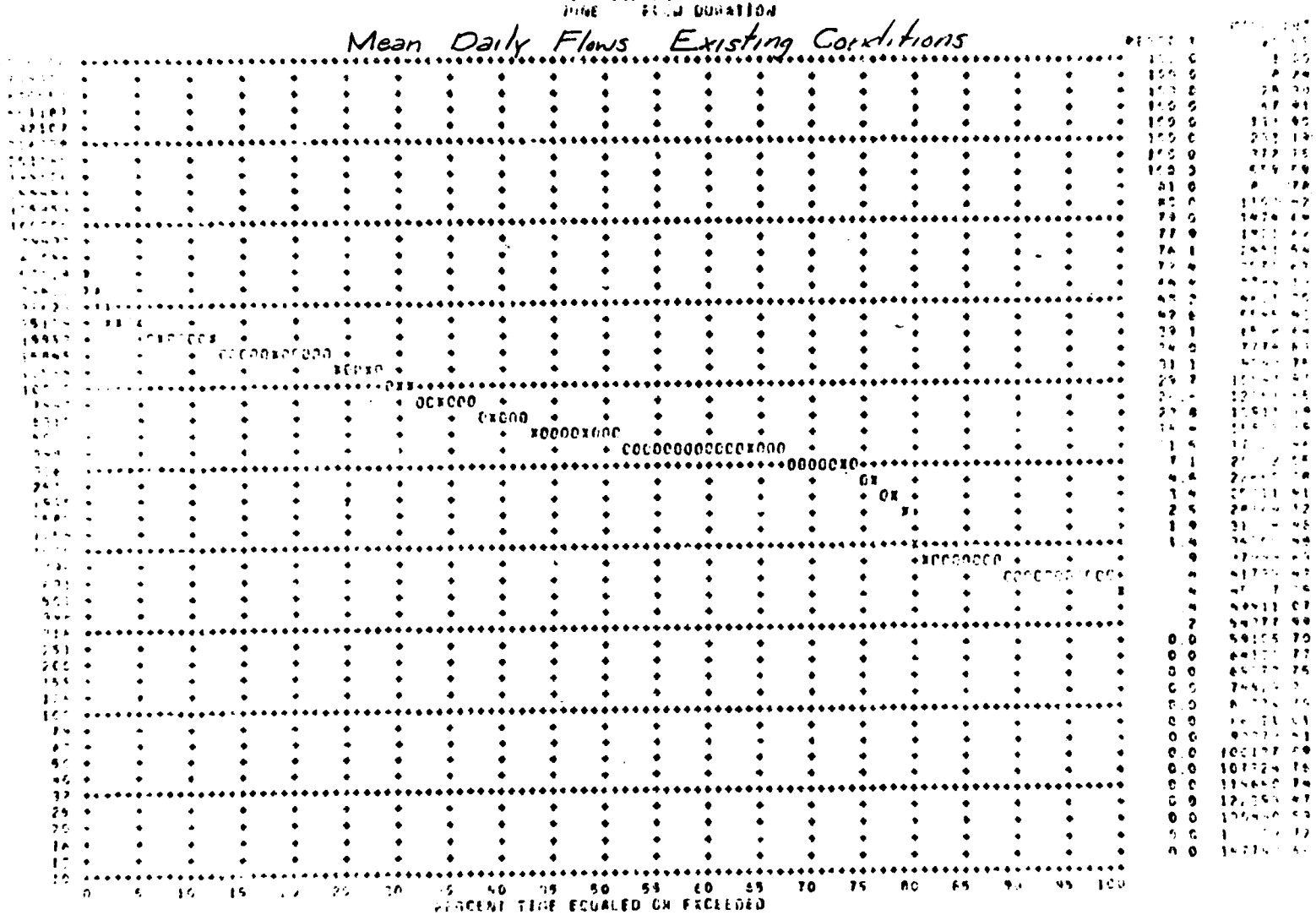


Fig 9

Bull Shoals

Mean Daily Flows Existing Conditions

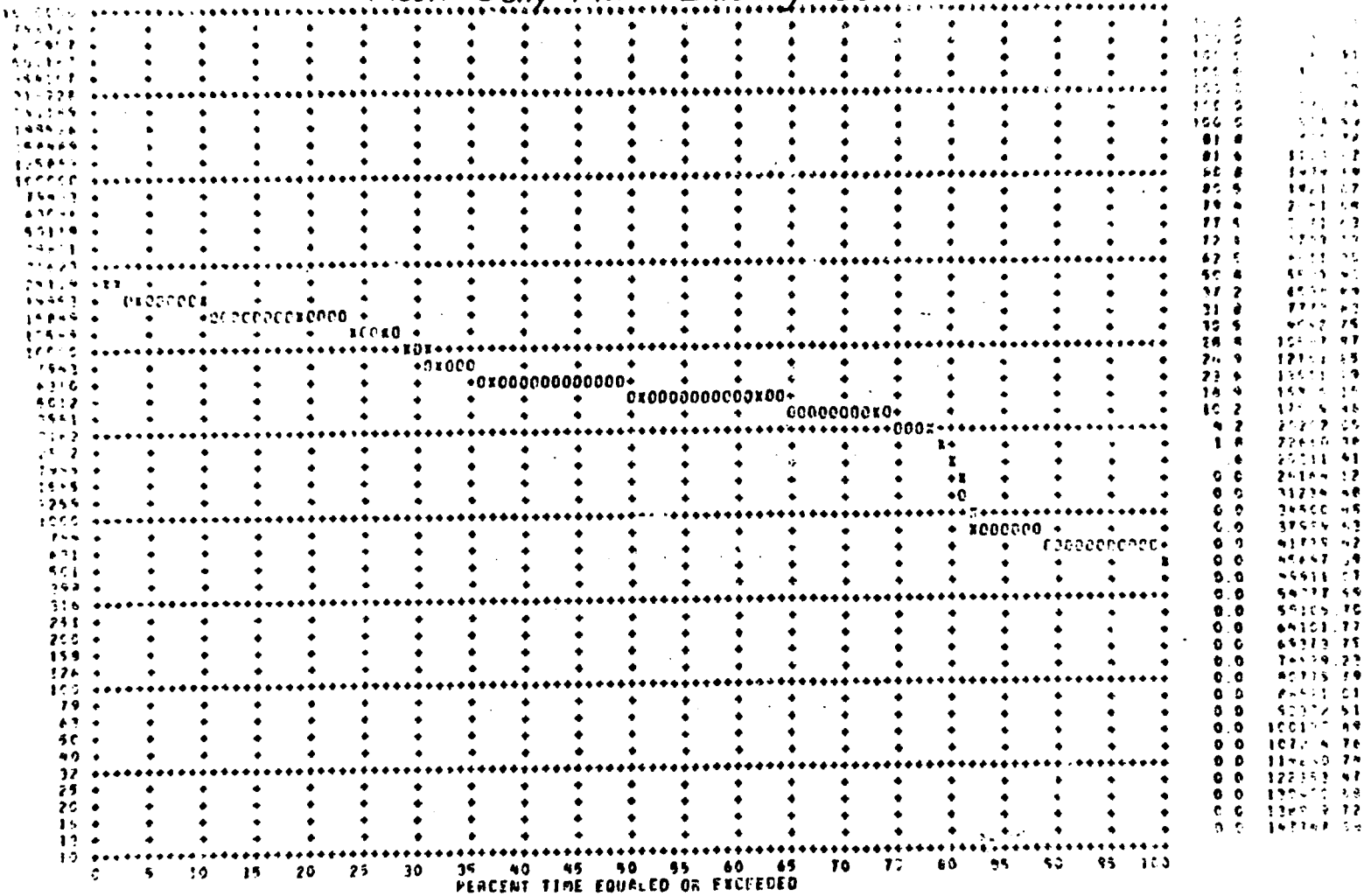


Fig 10

Bull Shoals
R-1 FLIPPIN
AUGUST FLOW DURATION

Mean Daily Flows Existing Conditions

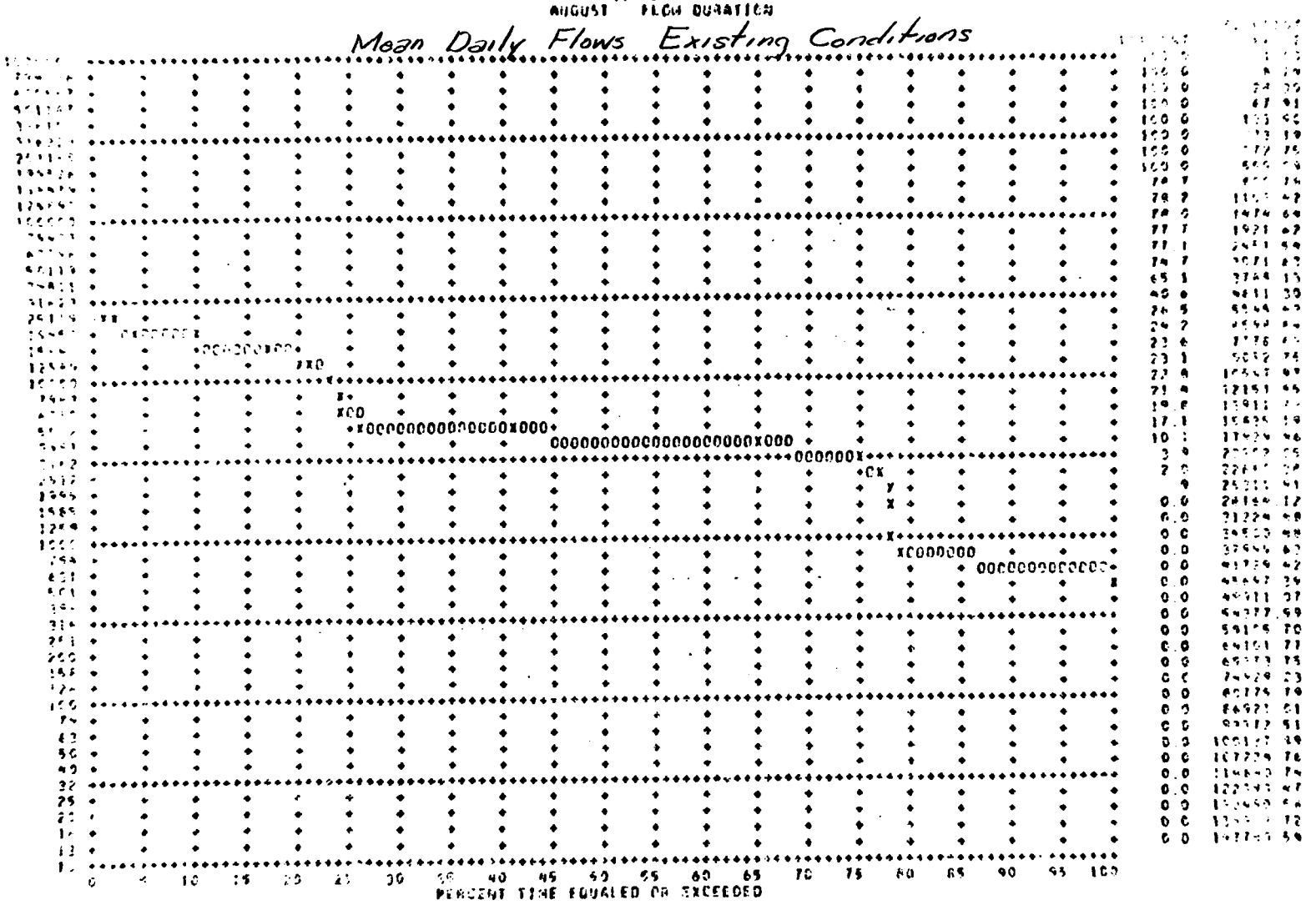


Fig 11

Bull Shoals

A-1 FLIPPIN

SEPTEMBER FLOW DURATION

Mean Daily Flows Existing Conditions

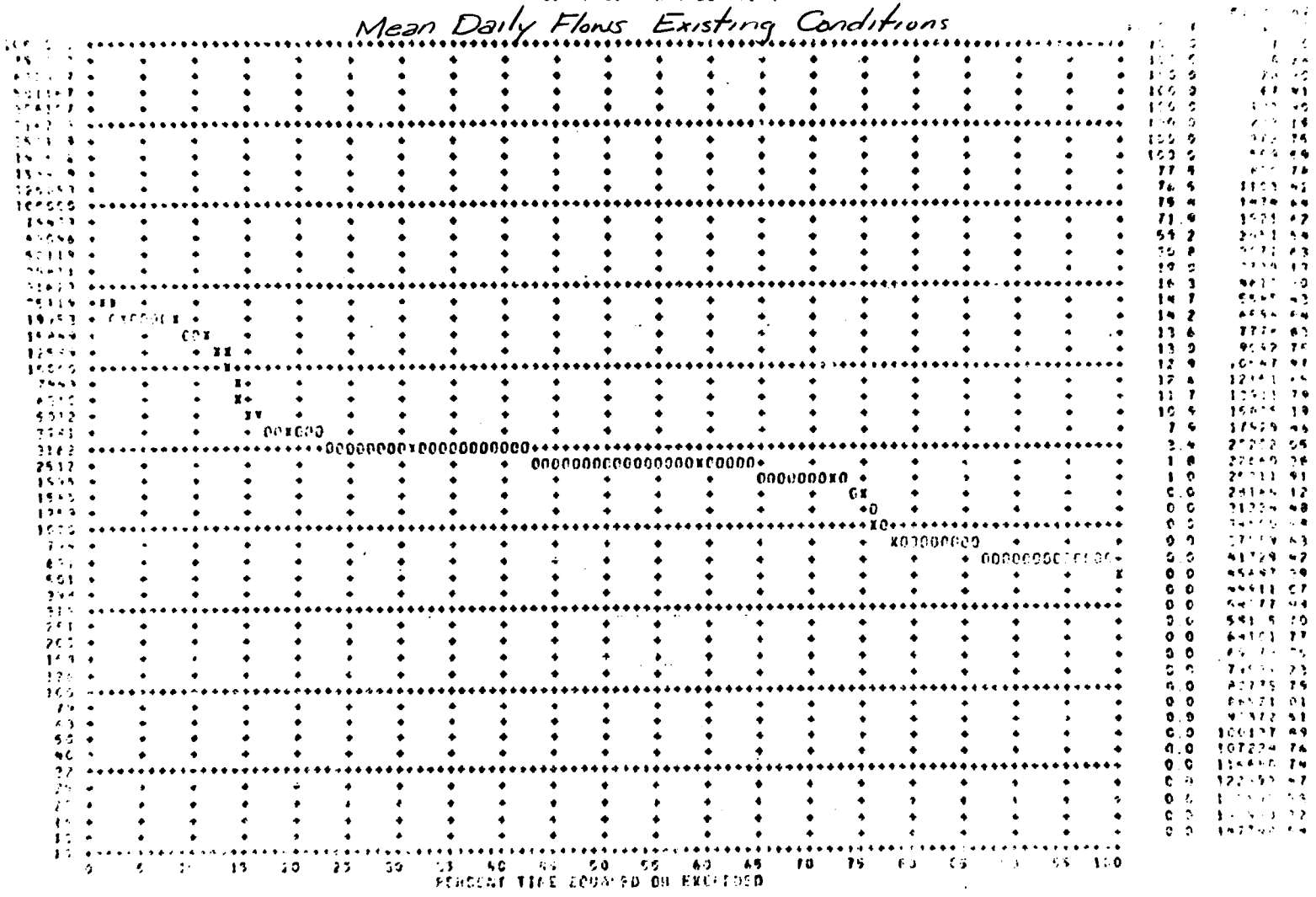


Fig 12

Bull Shoals

OCTOBER FLOW DURATION

Mean Daily Flows Existing Conditions

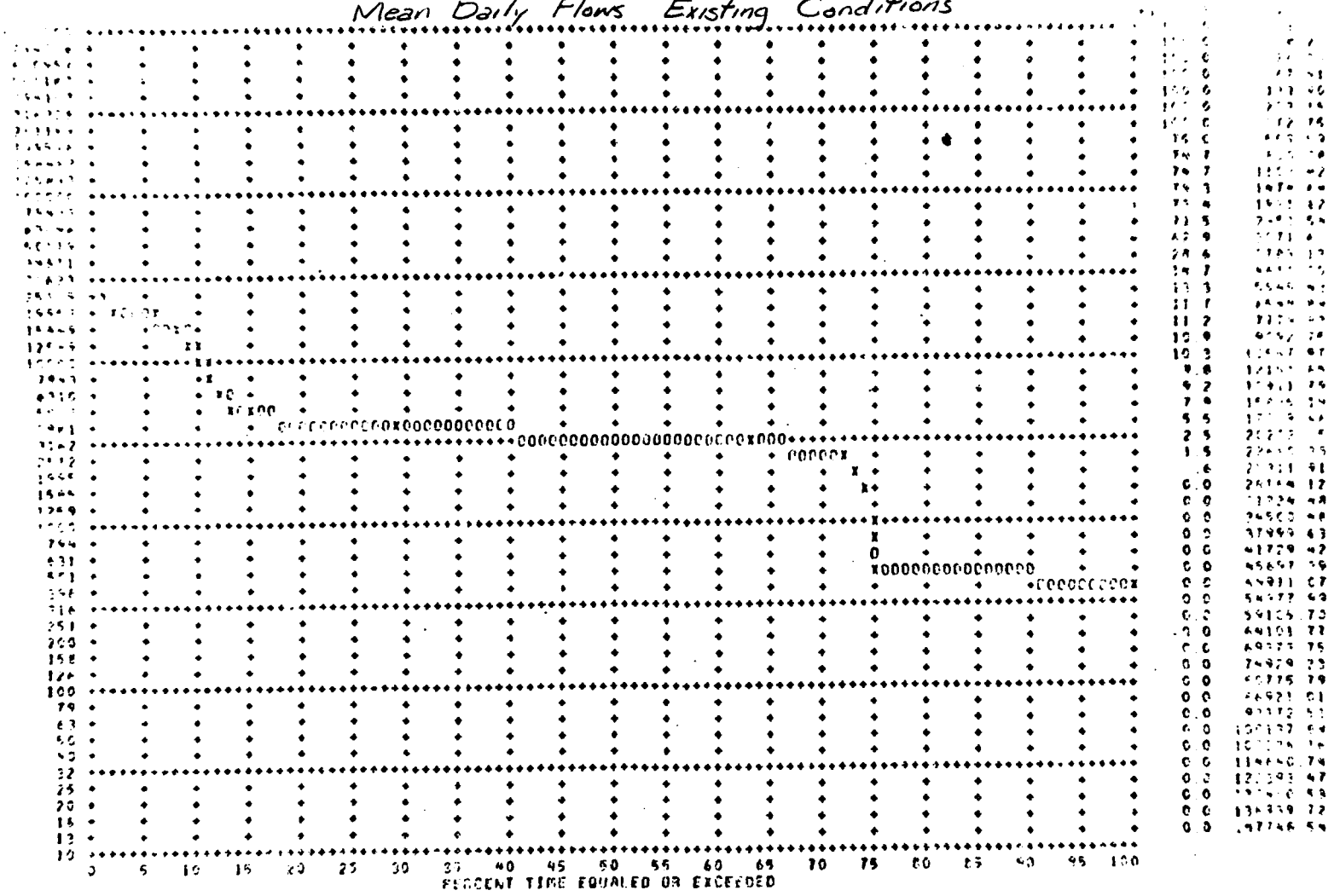


Fig 13

Bull Shoals
R-1 FLIPPIN
NOVEMBER FLOW DURATION

Mean Daily Flows Existing Conditions

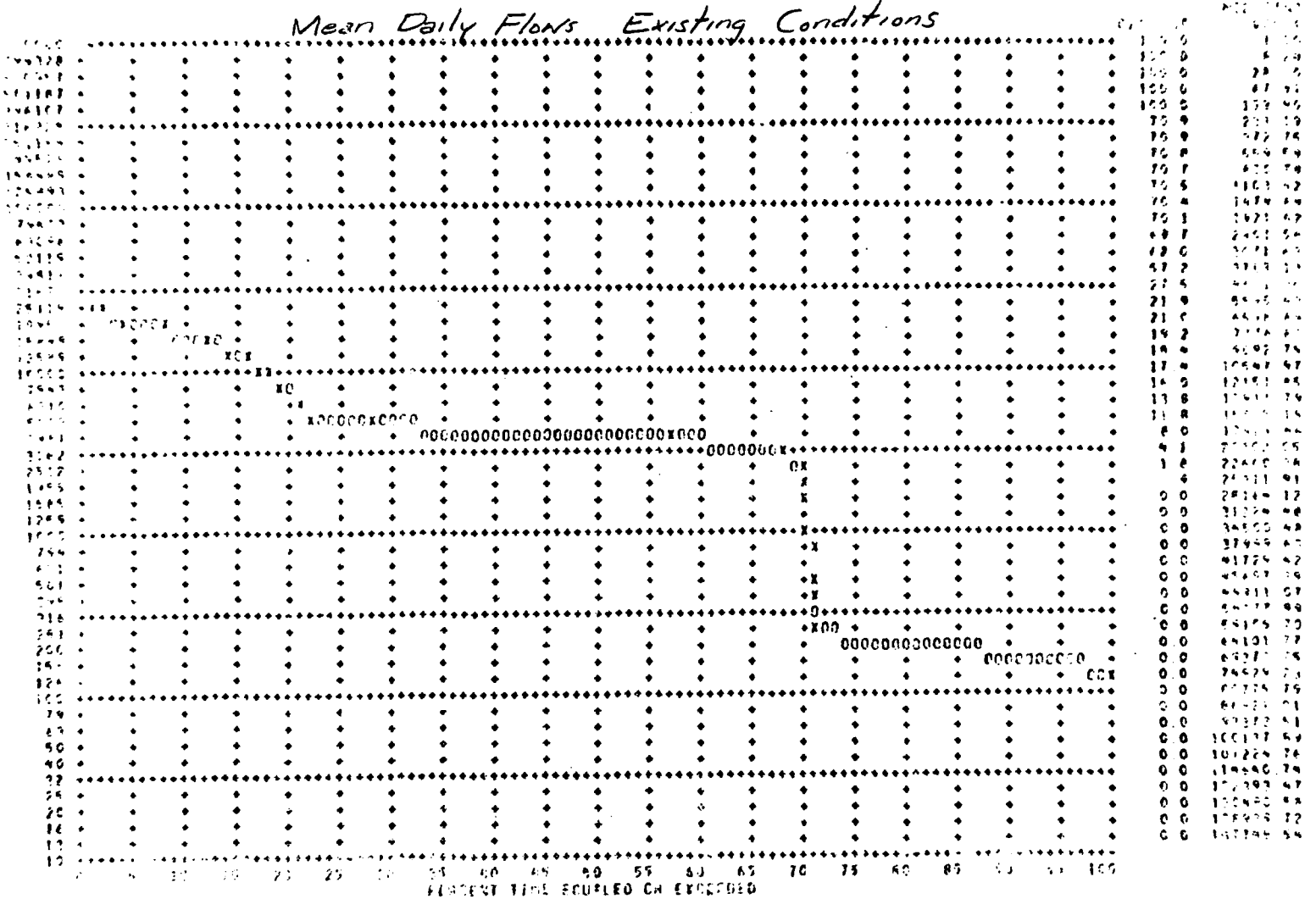


Fig 14

Bull Shoals
R-1 FLIPPIN
DECEMBER FLOW DURATION

Mean Daily Flows Existing Conditions

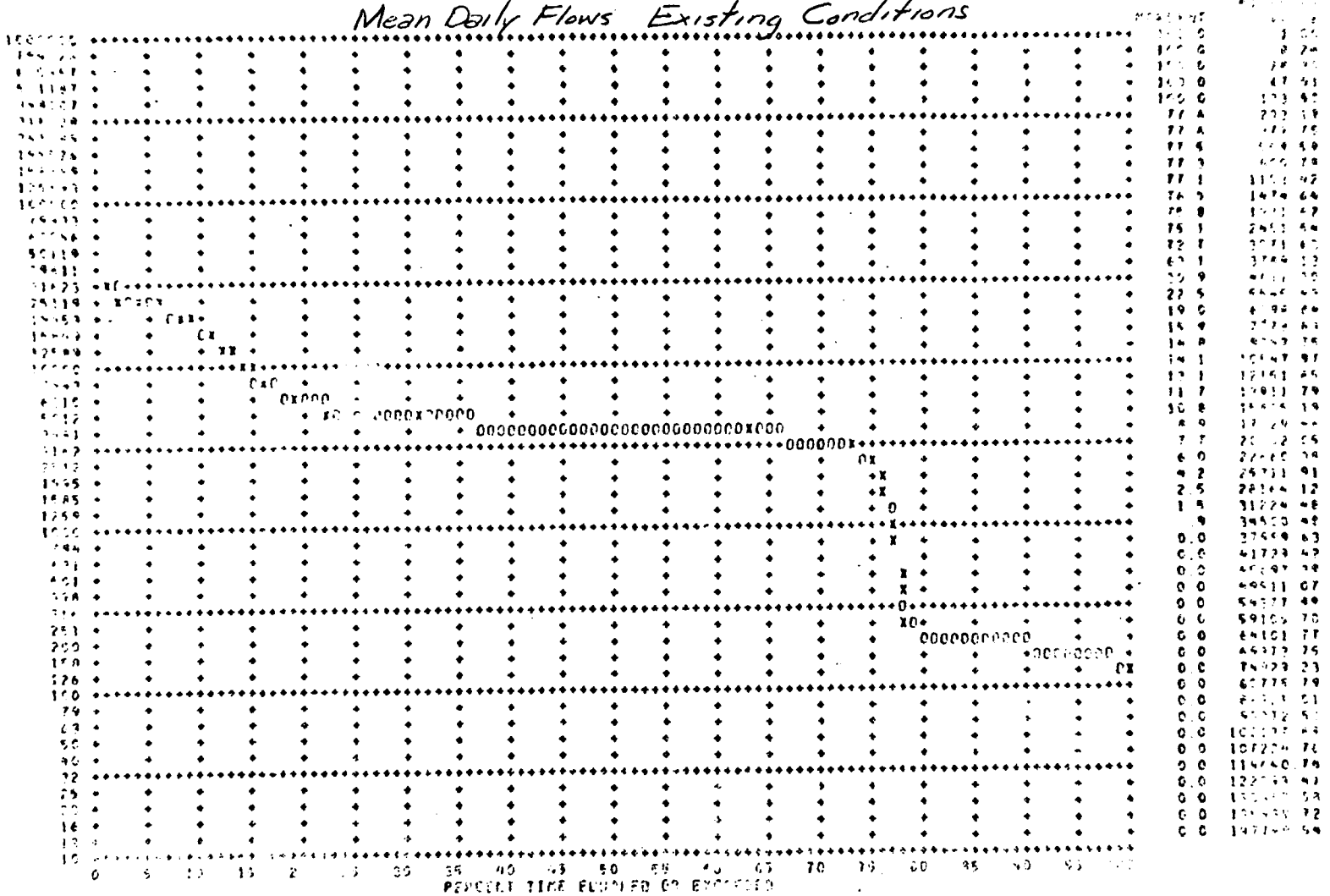
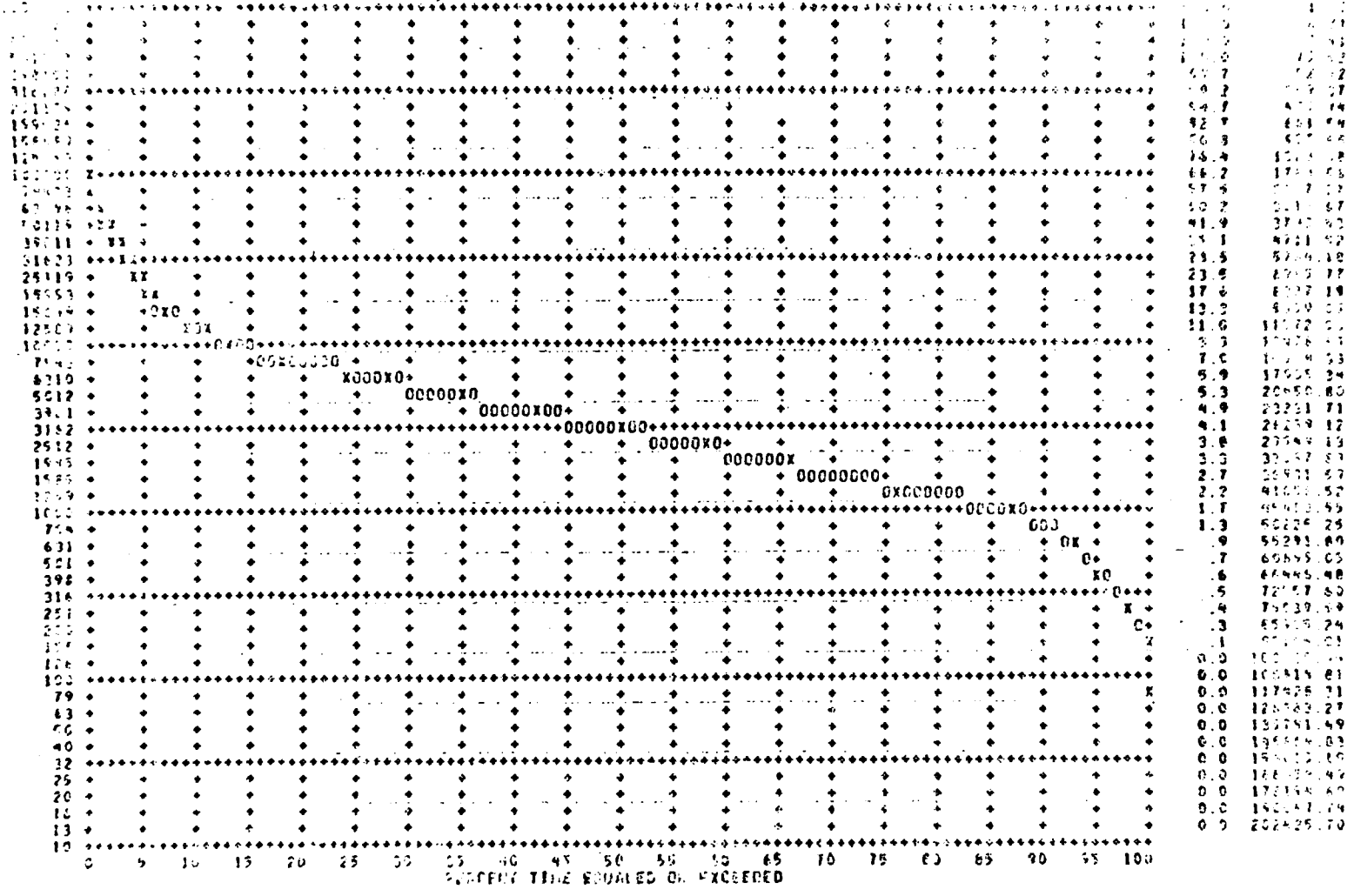


Fig 15

Bull Shoals

M.D.F. Natural Conditions



PERCENT TIME EQUALED OR EXCEEDED

Fig 16

Bull Shoals

M-1 BLIFFIN

FEBRUARY FLOW DURATION

M.O.F. Natural Conditions

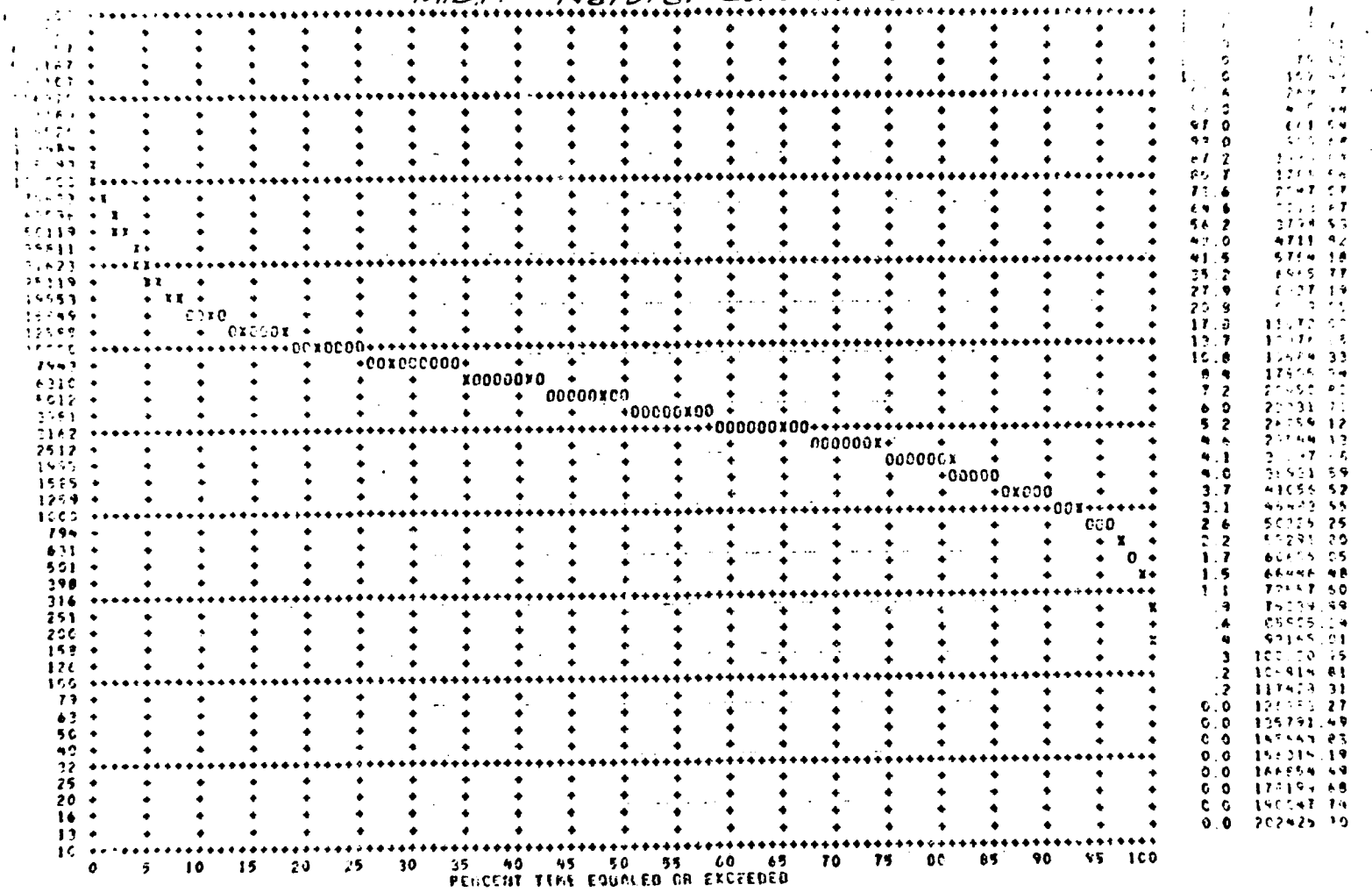


Fig 17

Bull Shoals

R-1 FLIPPIN
MARCH FLOW DURATION

M.D.F. Natural Conditions

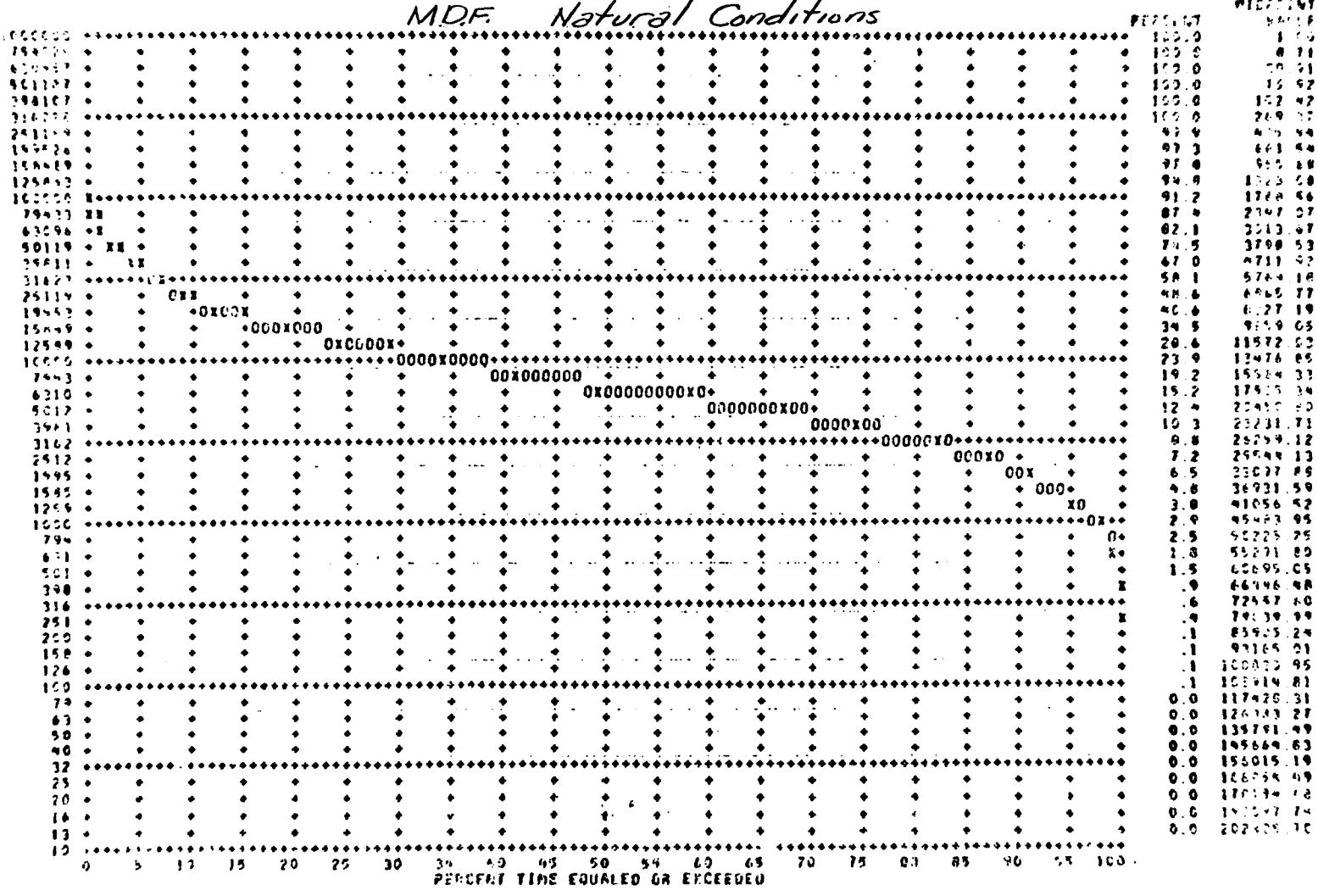


Fig 18

Bull Shoals

R-1 CLIPPER
APRIL FLOW DURATION

M.D.F. Natural Conditions

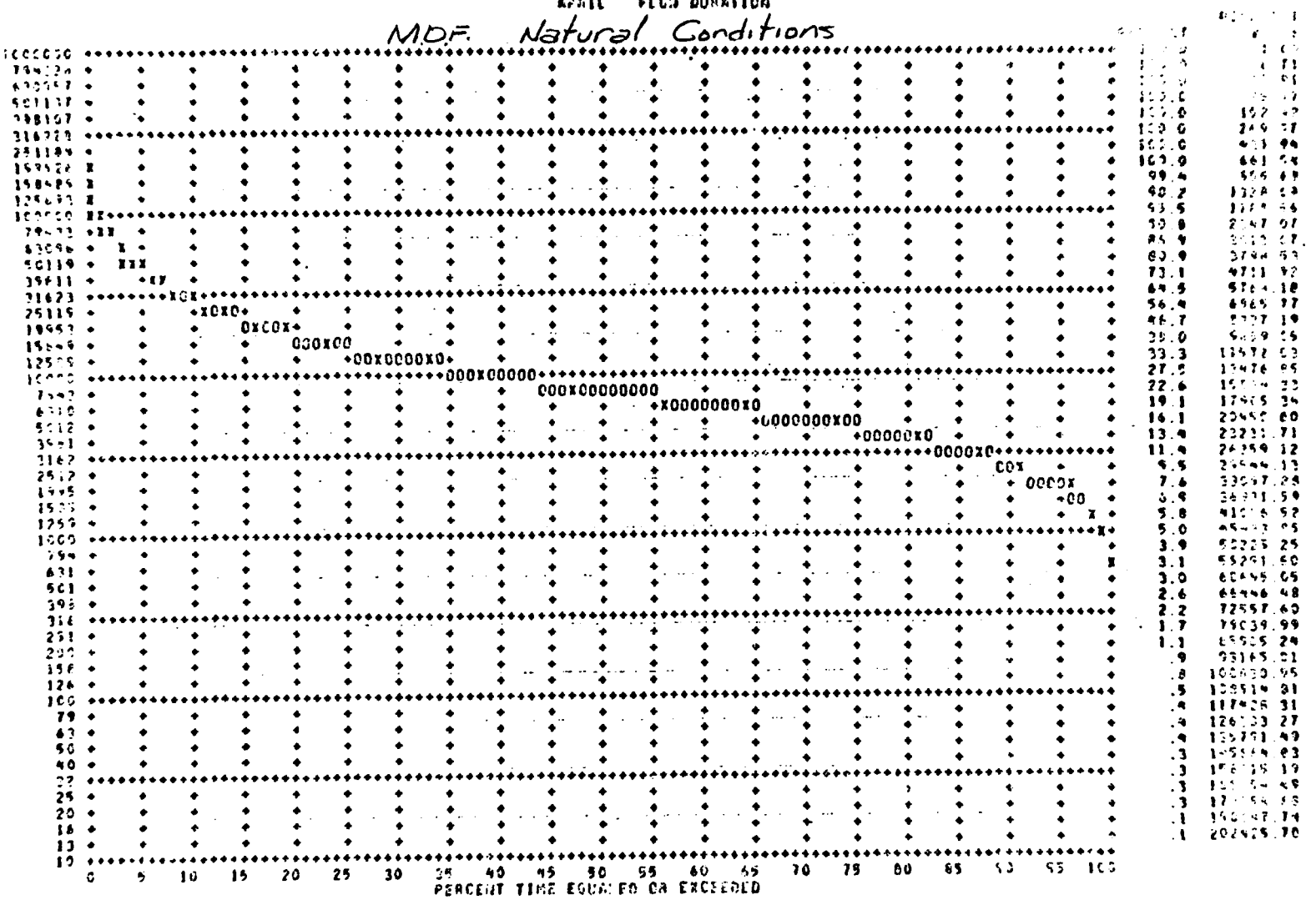


Fig 19

Bull Shoals

R-1 FLIPPEN

MAY FLOW DURATION

MDF Natural Conditions

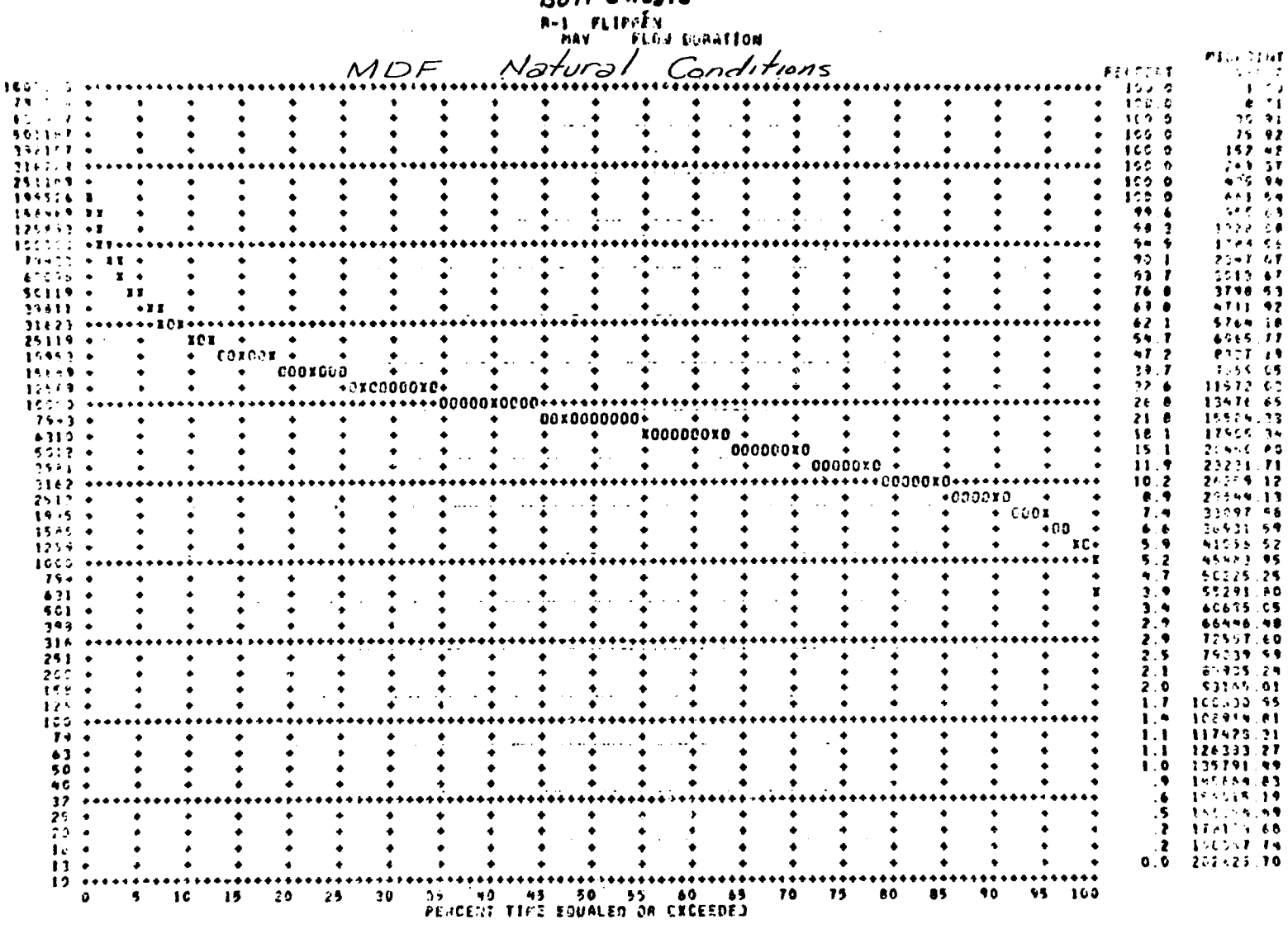


Fig 20

Bull Shoals

R-1 FLIPPED

JUNE FLOW DURATION

M.D.F. Natural Conditions

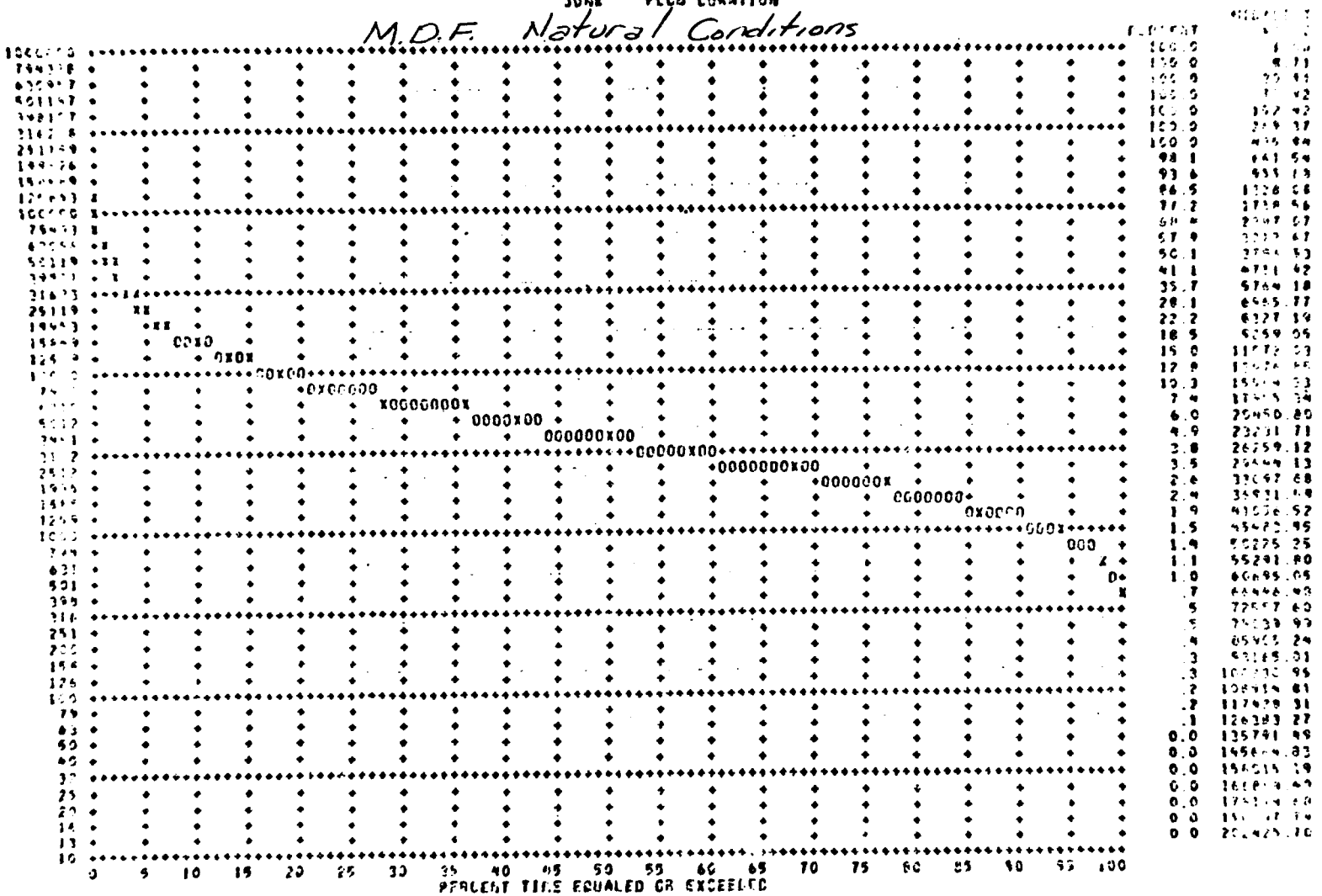


Fig 21

Bull Shoals

R-1 FLIPPIN

JULY FLOW DURATION

M.O.F. Natural Conditions

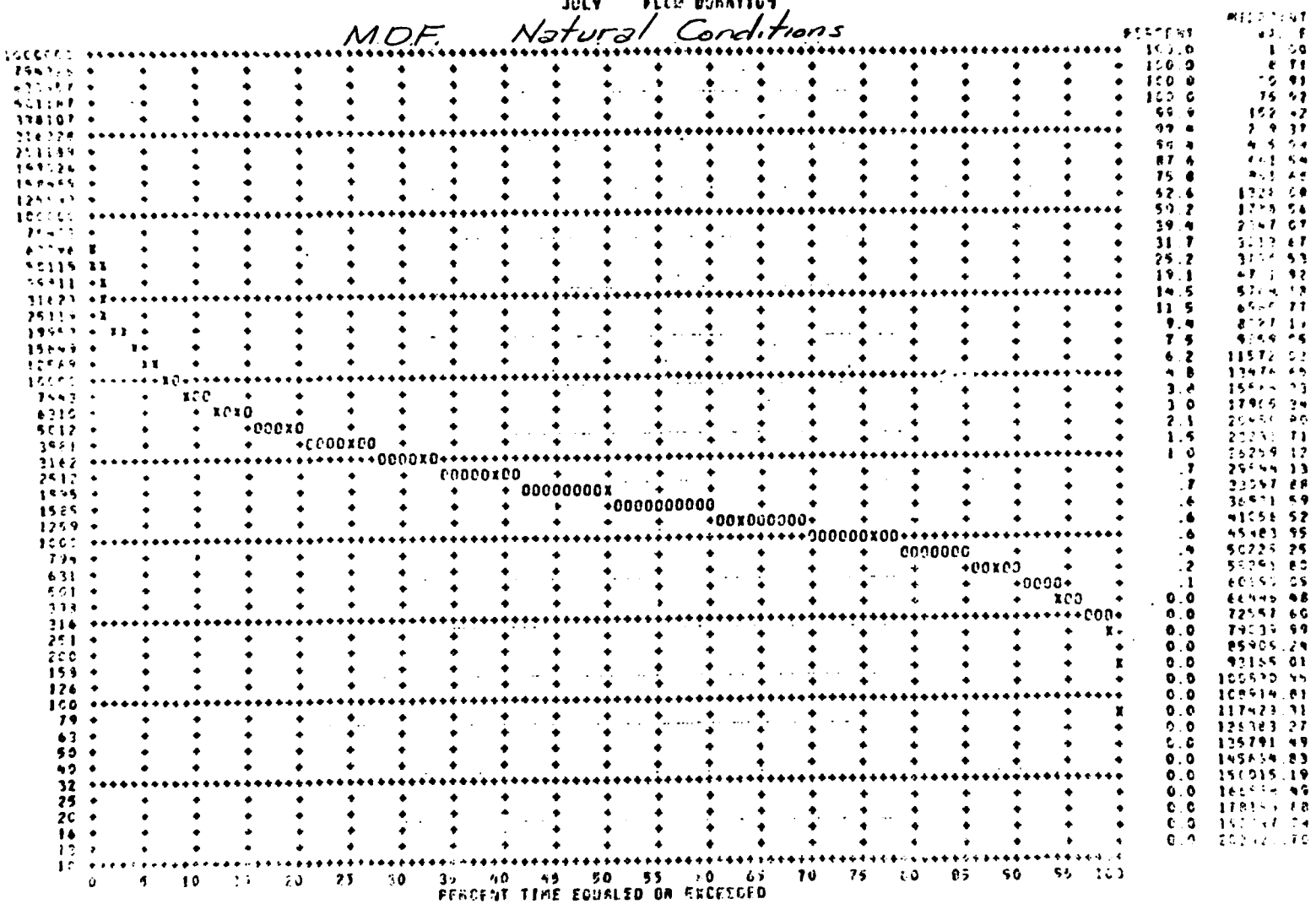
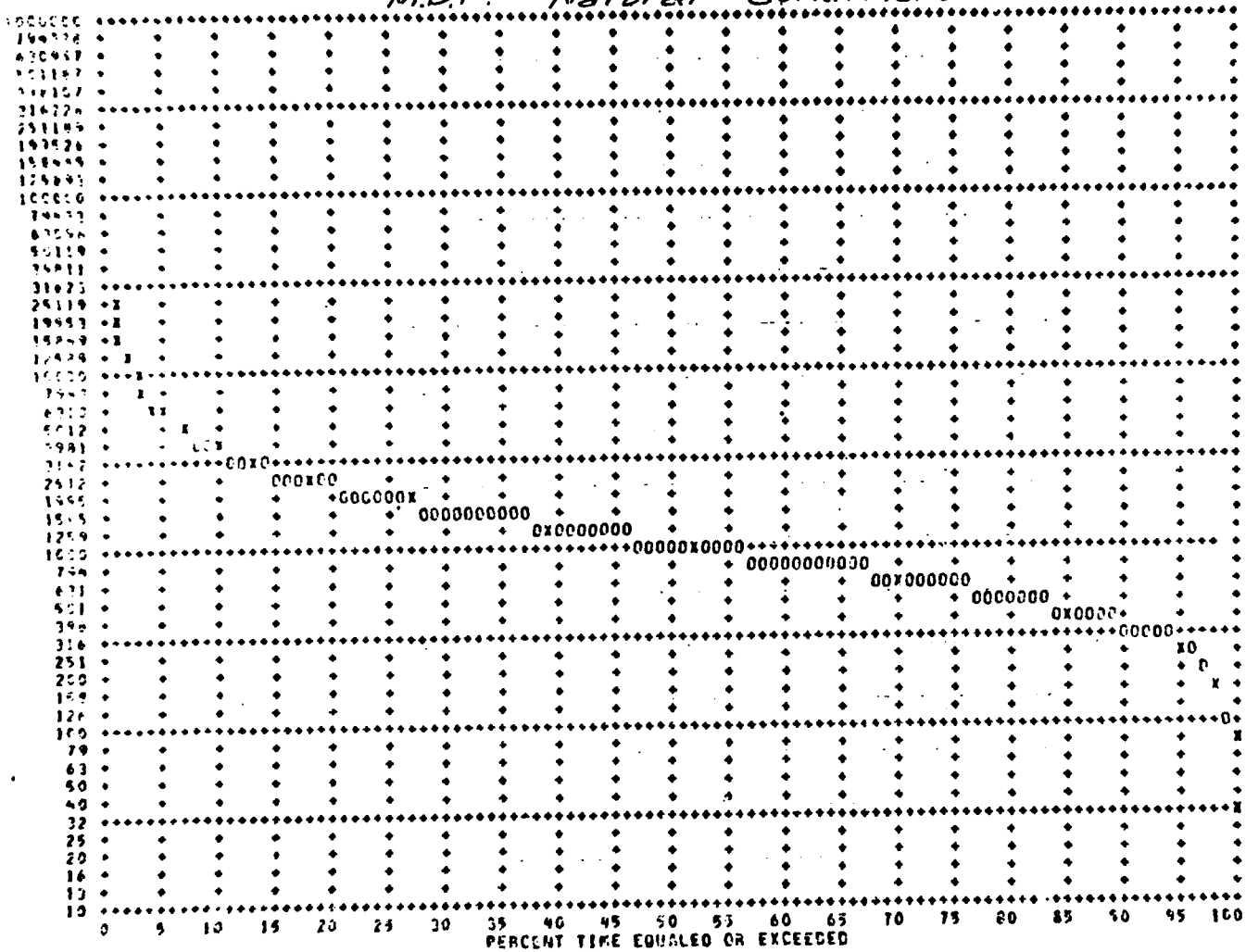


Fig 22

Bull Shoals

R-1 FLIPPIN
AUGUST FLOW DURATION

M.D.F. Natural Conditions



PERCENT	FIDDOINT KNEE
100.0	1.[illegible]
100.0	8.71
100.0	[illegible].91
97.7	[illegible].92
90.0	152.42
85.5	249.37
84.5	435.94
70.3	661.54
52.2	955.48
39.3	1323.08
27.1	1745.56
18.4	2347.07
12.7	3013.47
9.6	3798.53
7.0	4711.92
5.3	5764.18
4.0	6965.77
3.0	8327.19
2.6	9659.05
2.2	11572.[illegible]
1.9	13476.85
1.5	15[illegible]
1.4	17905.[illegible]
.8	20[illegible]
.6	23231.71
0.0	26259.12
0.0	29544.13
0.0	33097.58
0.0	34931.59
0.0	41056.52
0.0	45443.95
0.0	50225.25
0.0	55291.80
0.0	60695.05
0.0	66446.48
0.0	72557.60
0.0	79039.99
0.0	85905.24
0.0	93165.01
0.0	100830.95
0.0	108914.81
0.0	117428.31
0.0	126383.27
0.0	135791.49
0.0	145664.83
0.0	156015.19
0.0	166854.49
0.0	178194.68
0.0	190047.74
0.0	202425.70

Fig 23

Bull Shoals

MDF. Natural Conditions

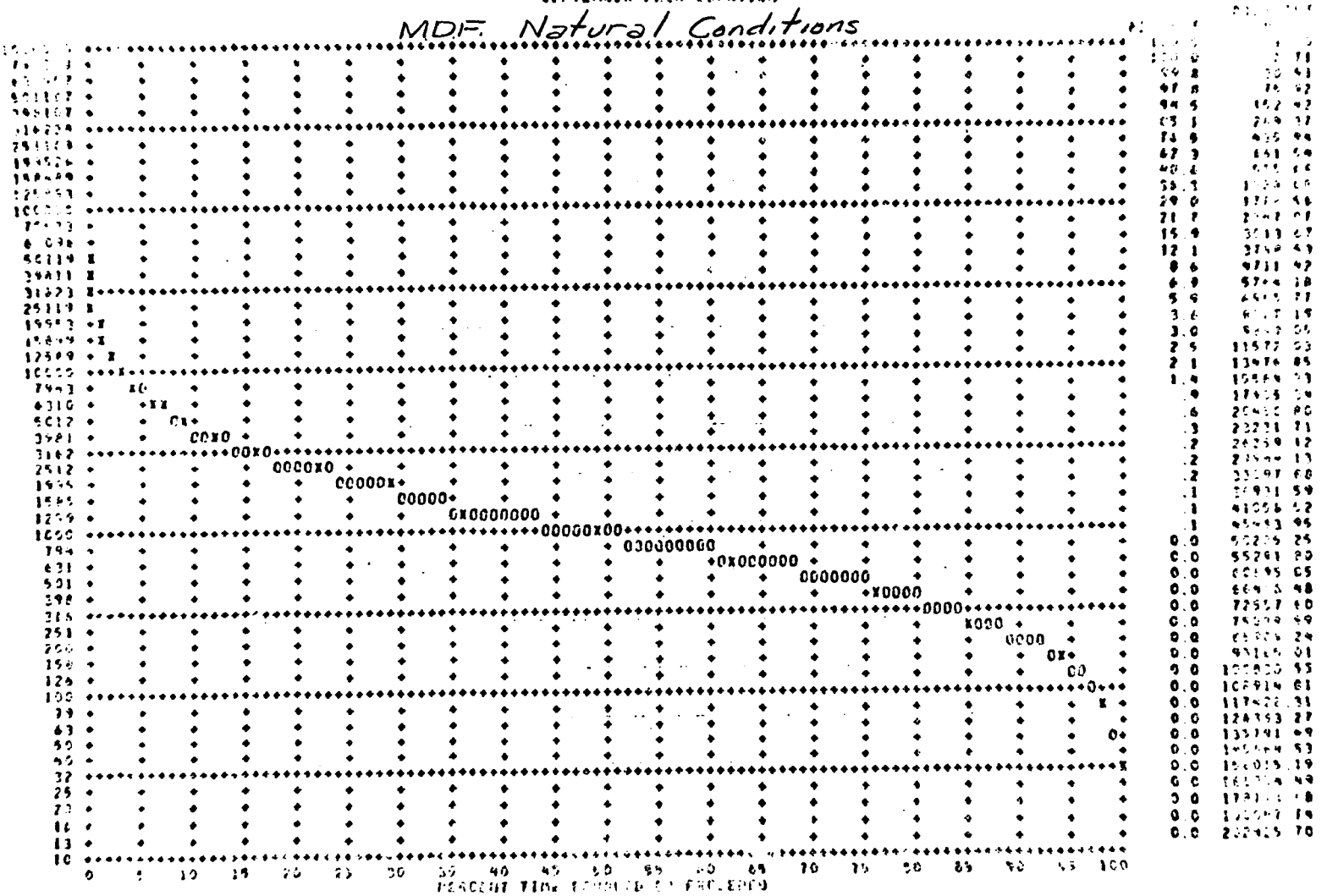


Fig 24

Bull Shoals

R-1 FLOOD

CONSTANT FLOW DURATION

M.D.F. Natural Conditions

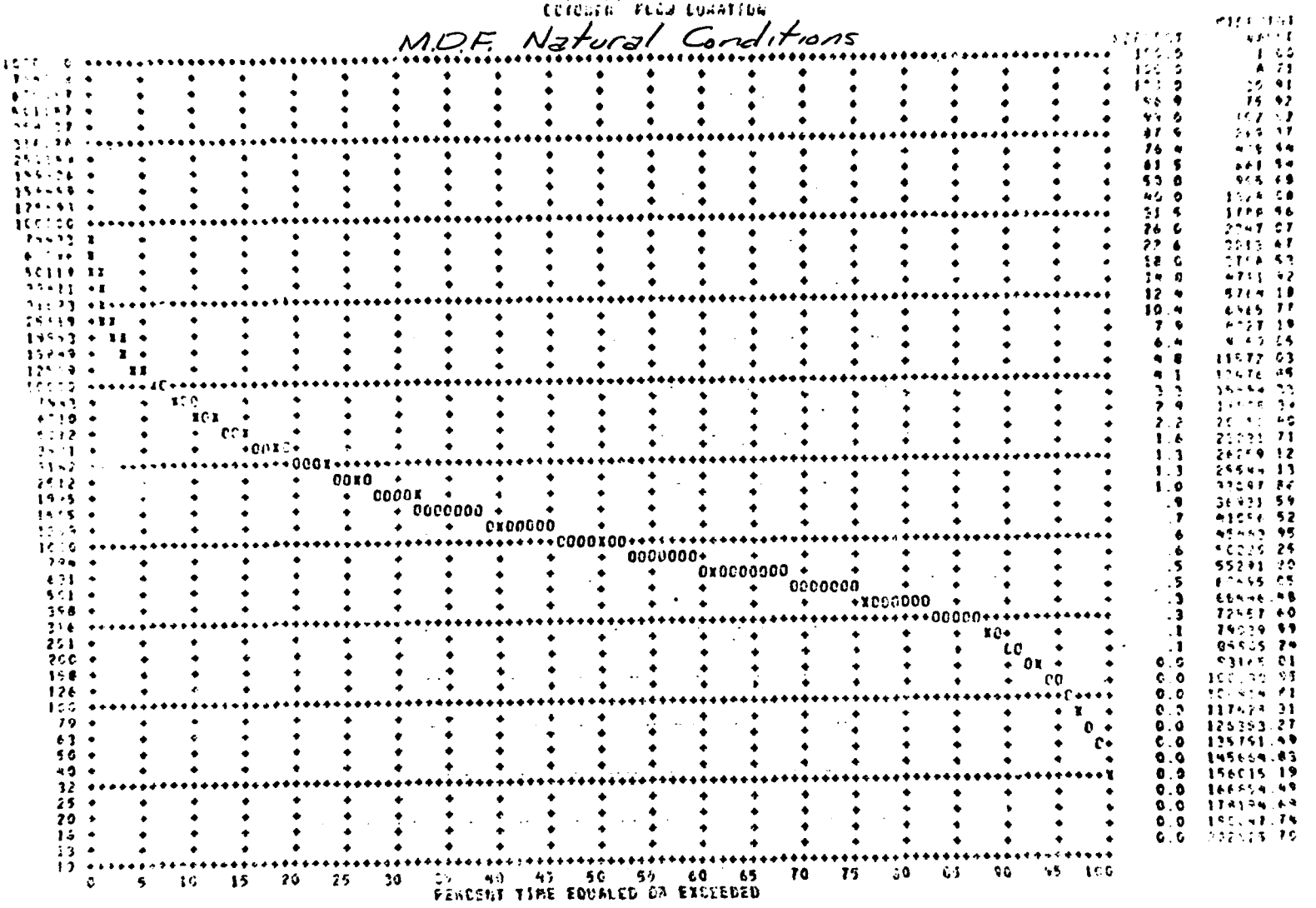


Fig 25

Bull Shoals

M.D.F. Natural Conditions

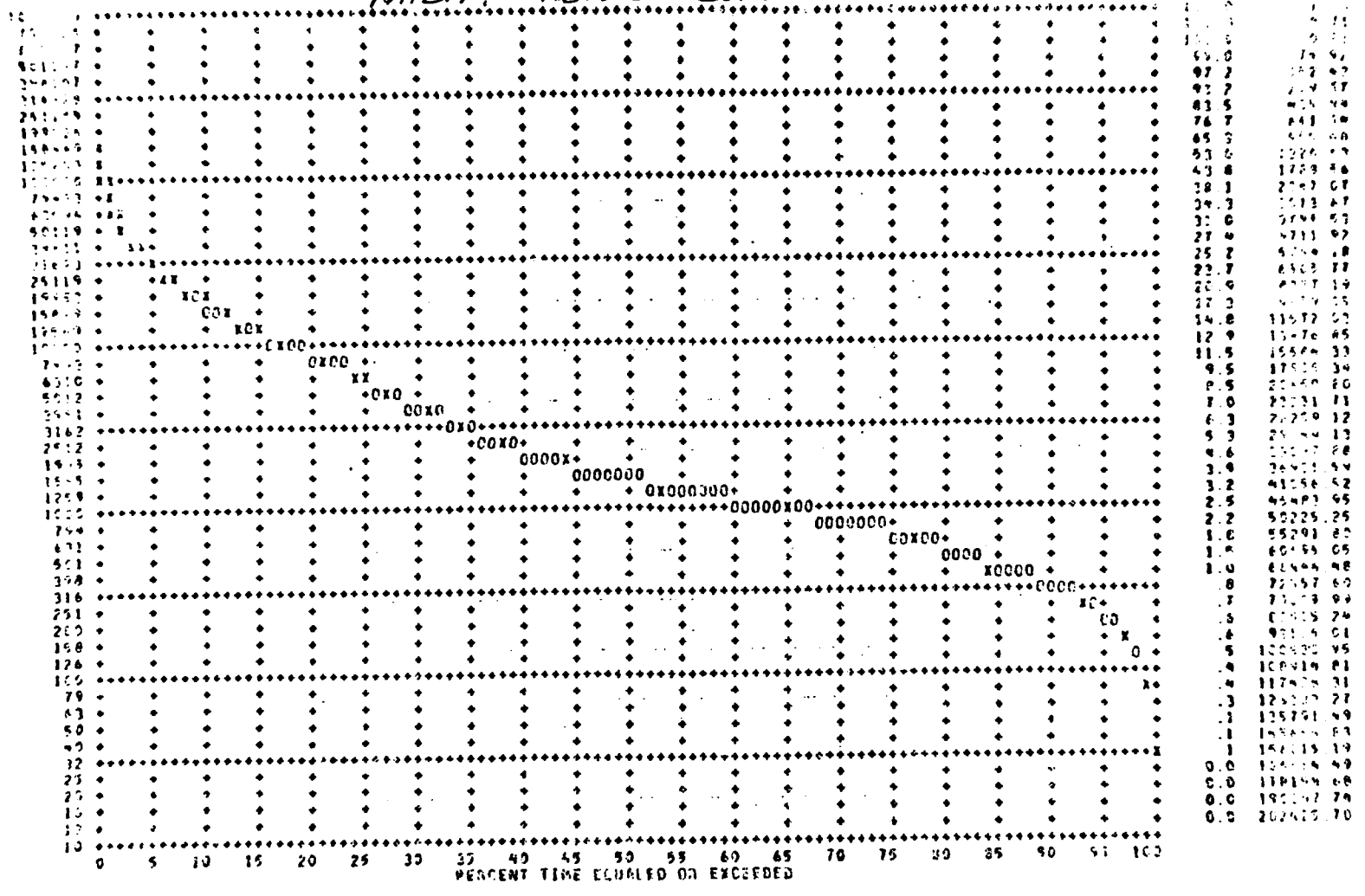


Fig 26

Bull Shoals

DECEMBER FLOW DURATION

M.O.F. Natural Conditions

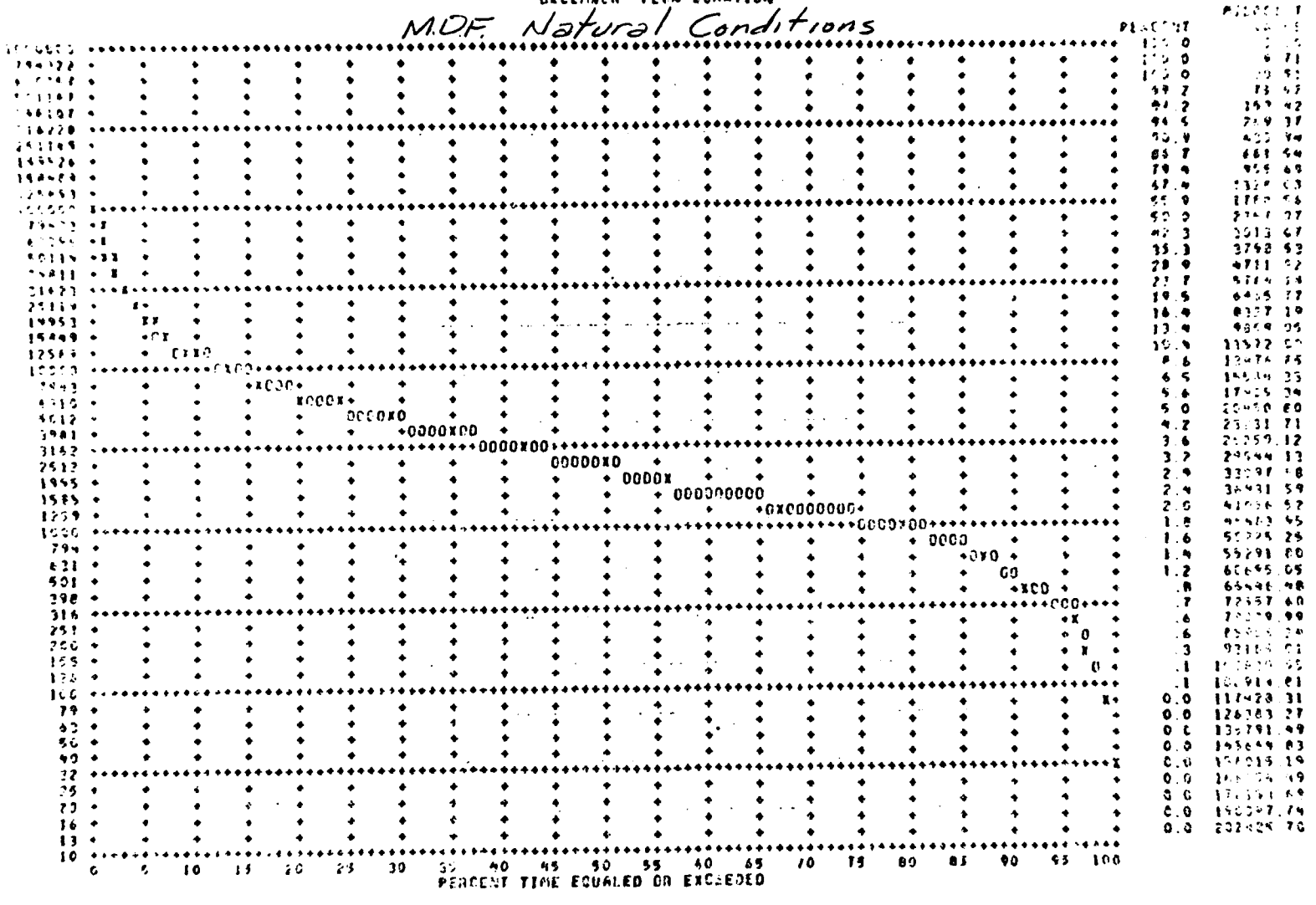


Fig 27

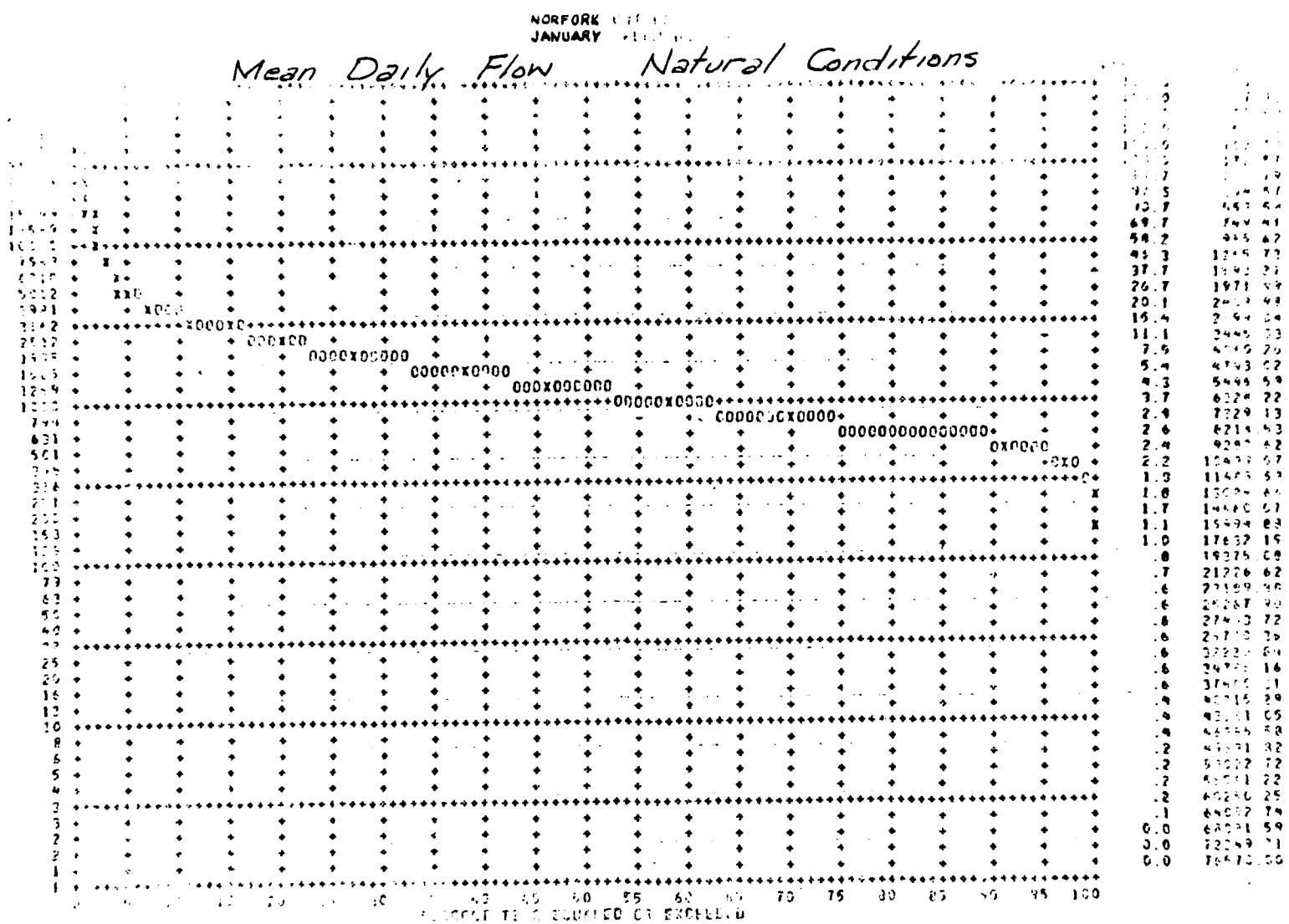


Fig. 4

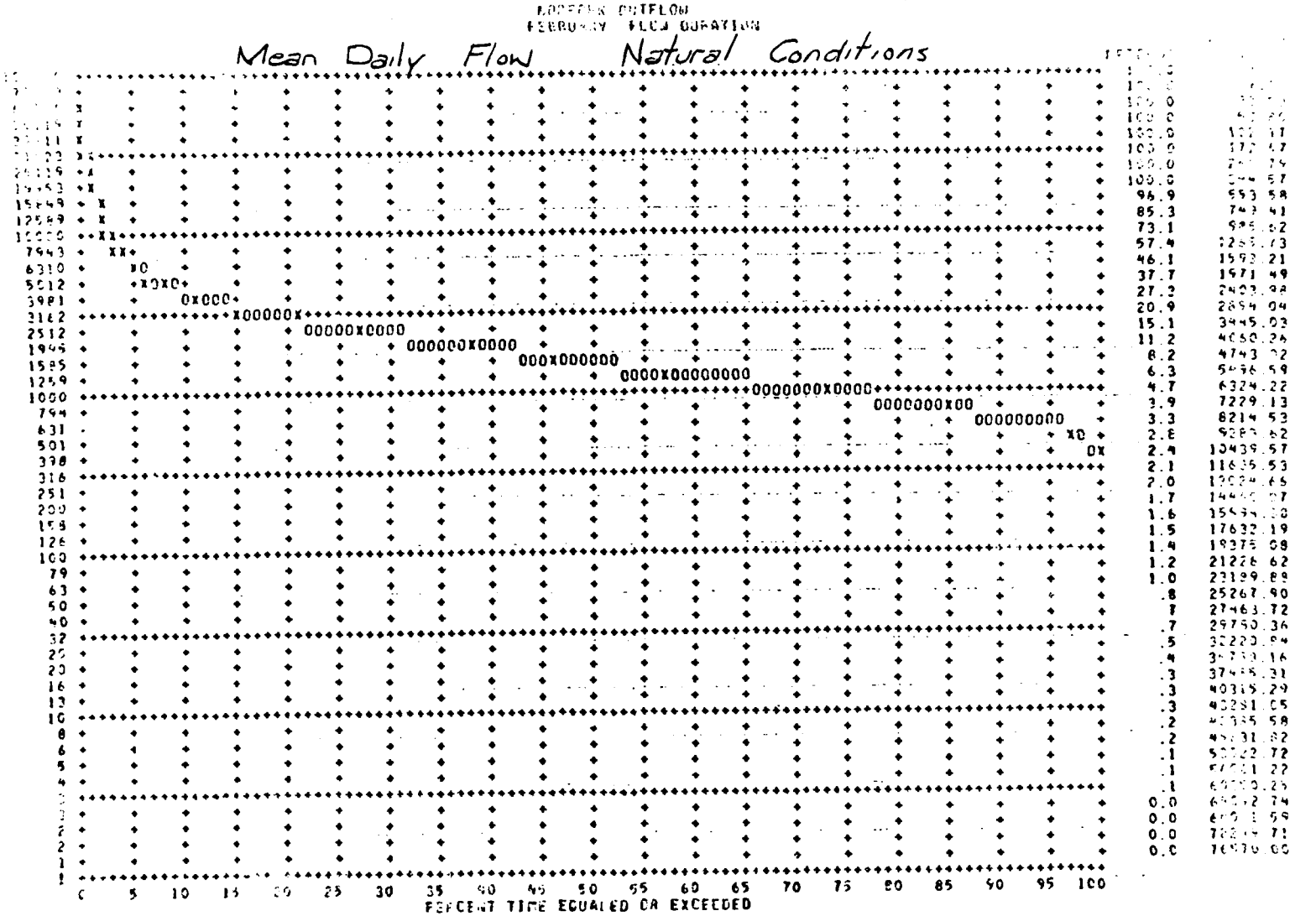

FEBRUARY FLOW DURATION
Mean Daily Flow Natural Conditions
PERCENT TIME EQUALED OR EXCEEDED

Fig 51

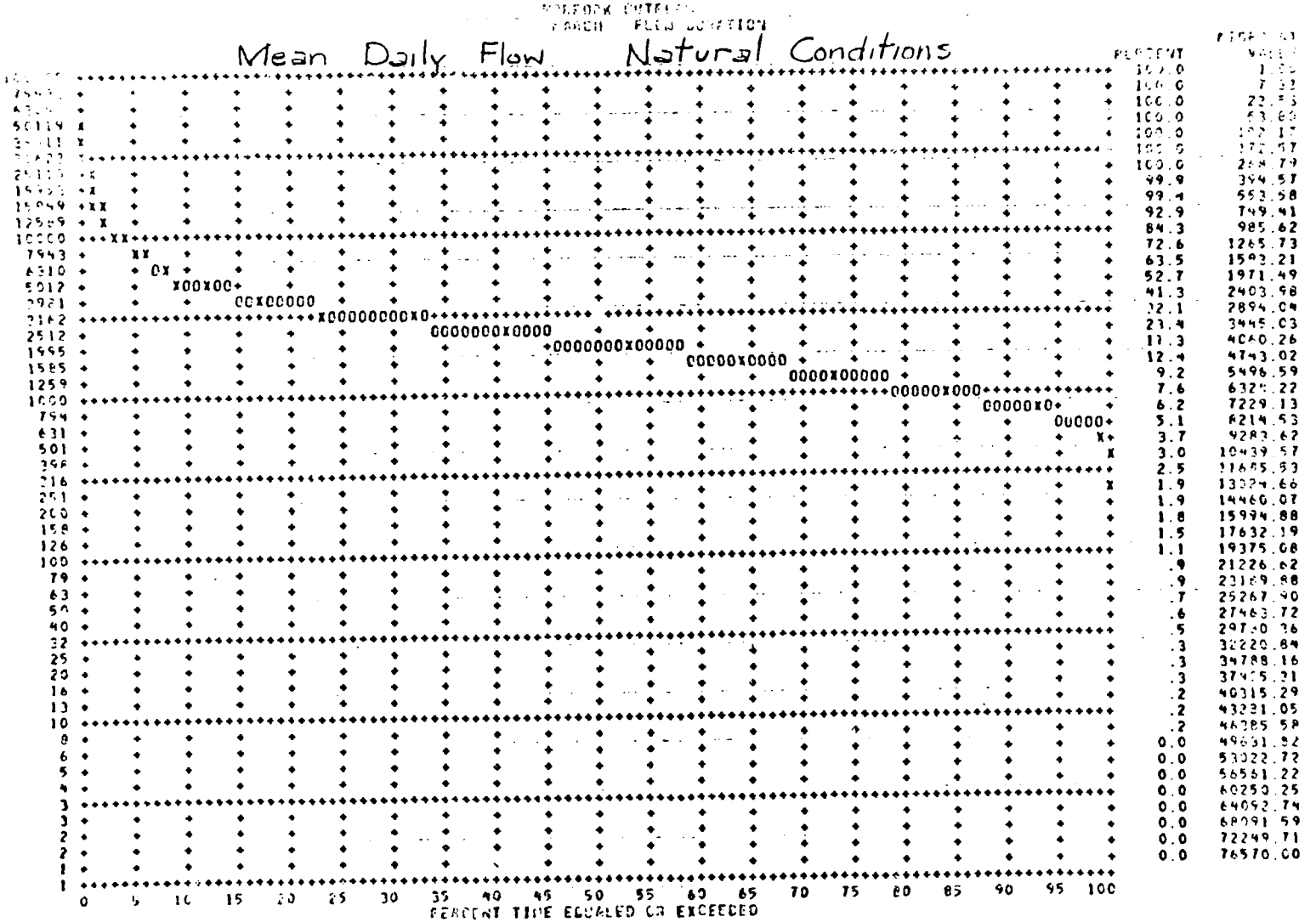

Mean Daily Flow Natural Conditions
PERCENT TIME EQUALED OR EXCEEDED
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Fig. 6

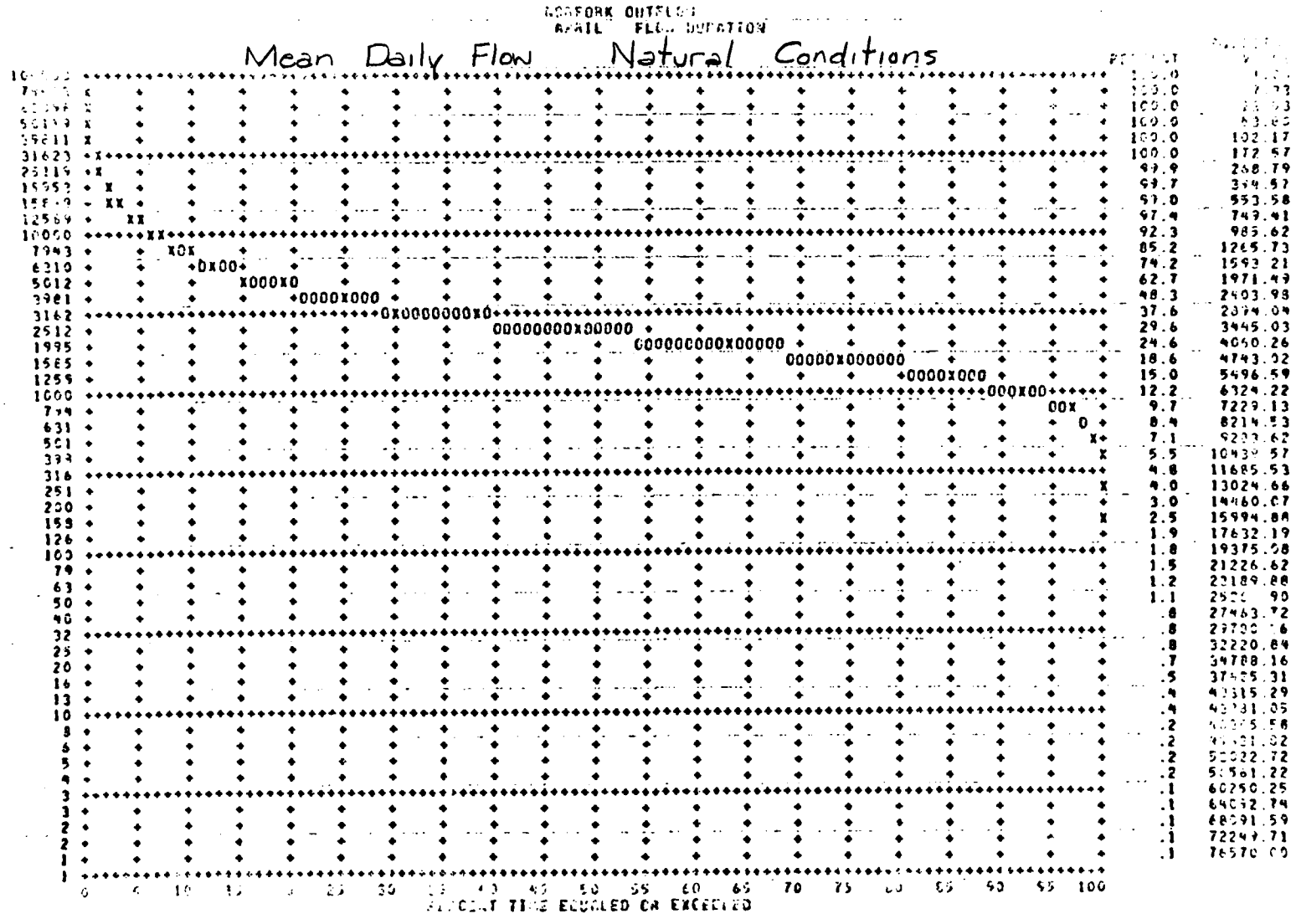

LOOFORK OUTFLOW
APRIL FLOW DURATION
Mean Daily Flow Natural Conditions
PERCENT TIME EQUALED OR EXCEEDED

Fig. 7

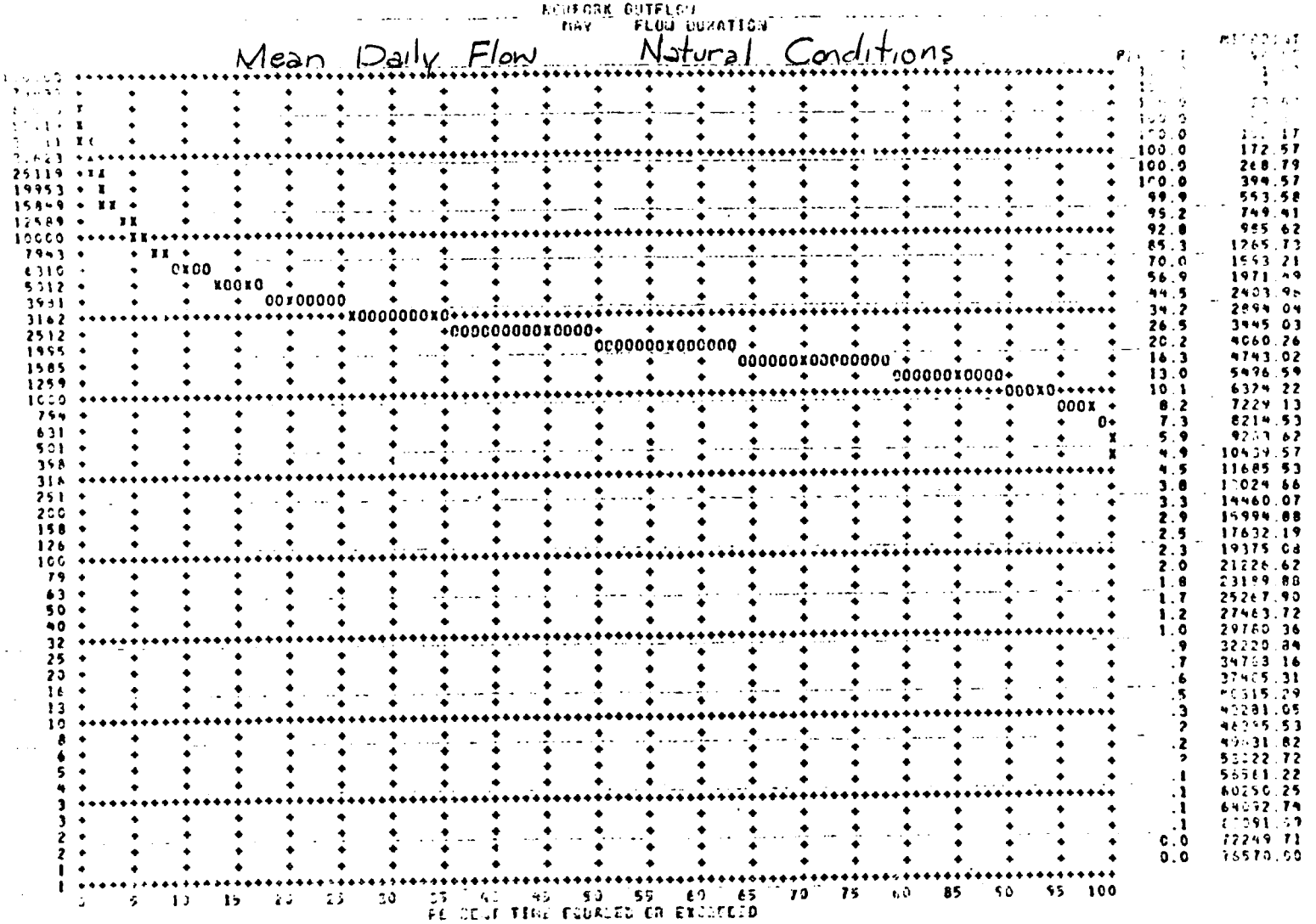

HOOSICK OUTFLOW
MAY FLOW DURATION
Mean Daily Flow Natural Conditions
PERCENT
FLOW
PERCENT OF TIME EQUALED OR EXCEEDED

Fig 6

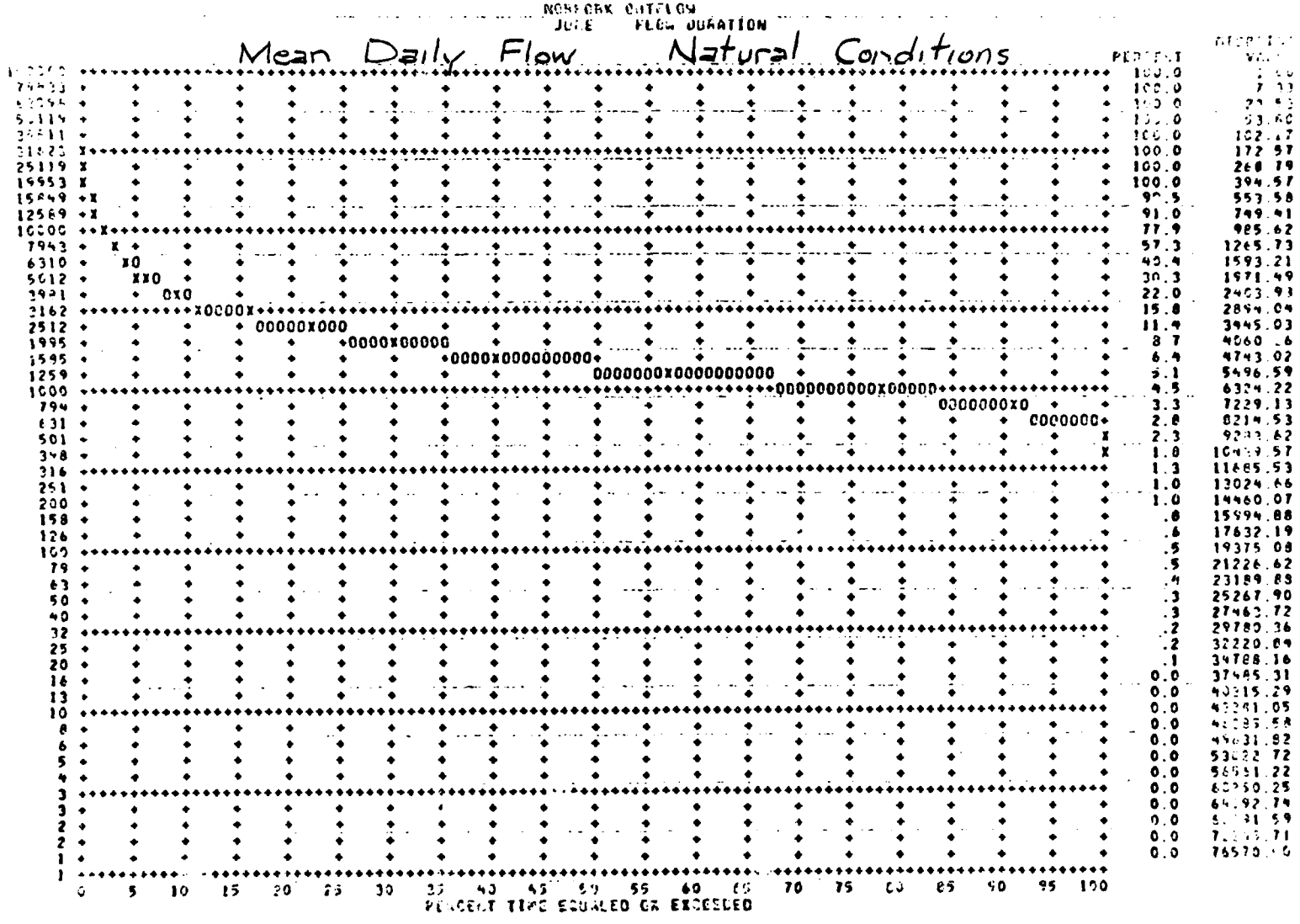
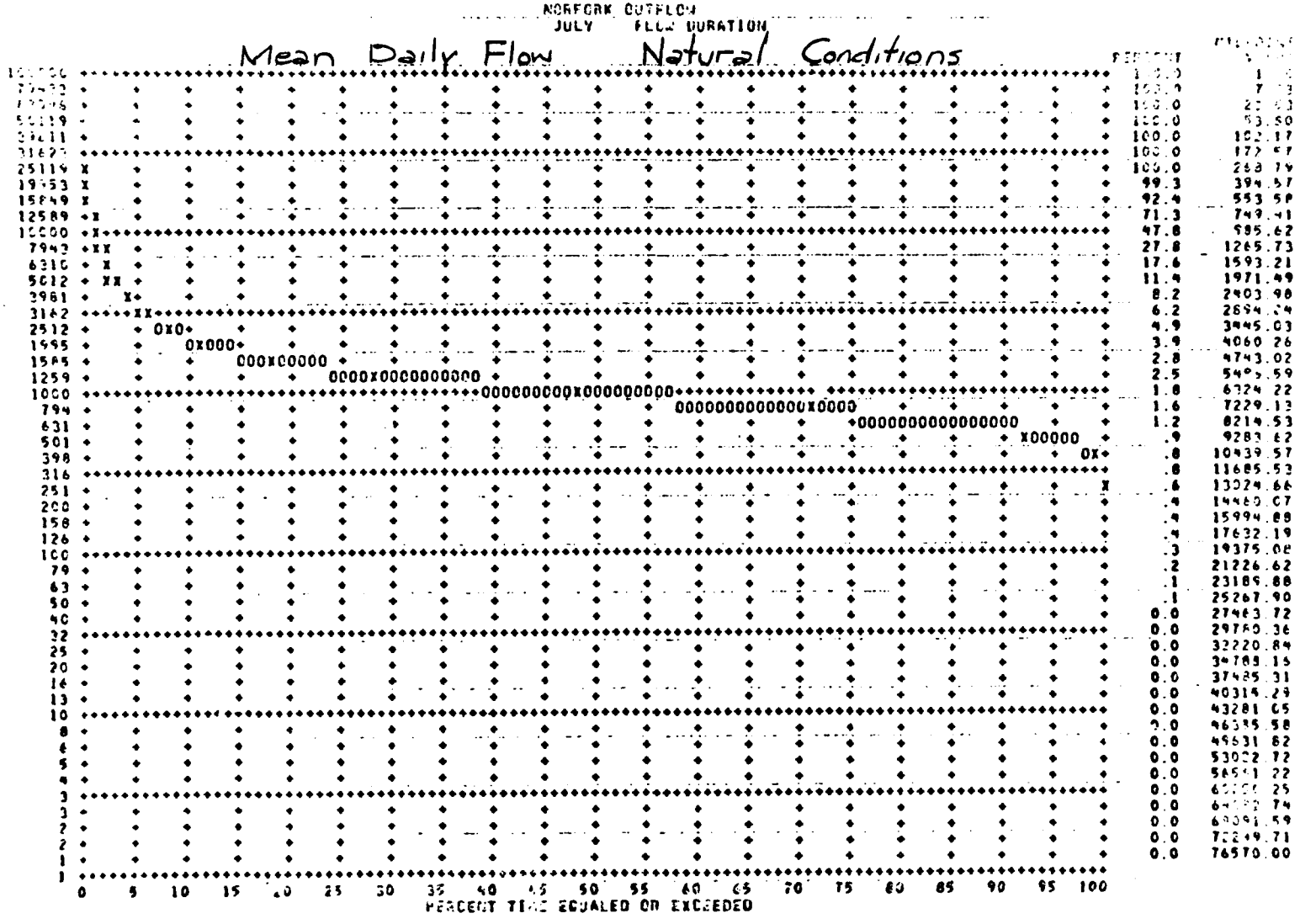
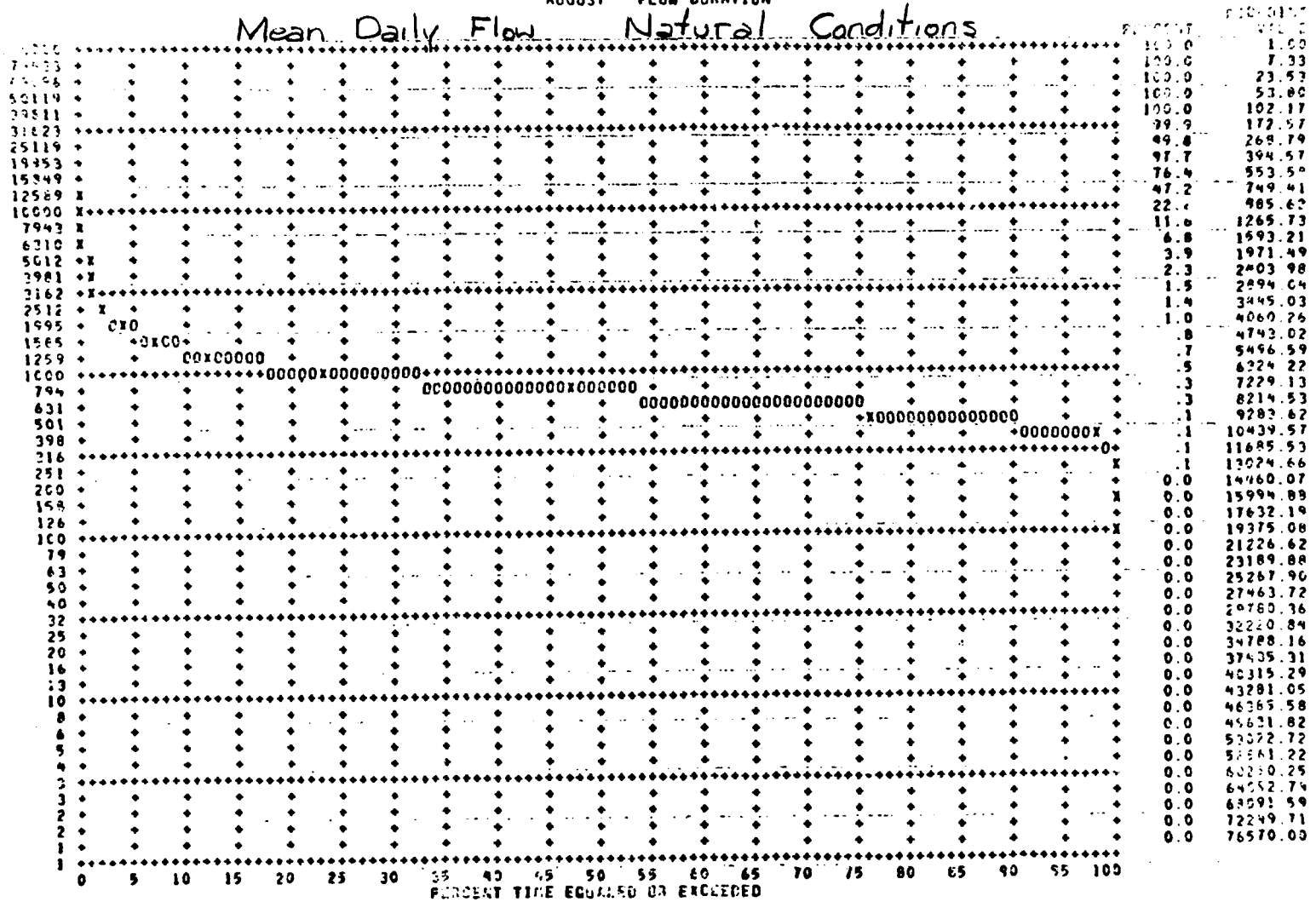

NONE OAK OUTFLOW
JULE FLOW DURATION
Mean Daily Flow Natural Conditions
PERCENT
100.0
100.0
100.0
100.0
100.0
100.0
100.0
90.5
91.0
77.9
57.3
45.4
30.3
22.0
15.8
11.4
8.7
6.4
5.1
4.5
3.3
2.8
2.3
1.8
1.3
1.0
1.0
.8
.6
.5
.5
.4
.3
.3
.2
.2
.1
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100
PERCENT TIME EQUALED OR EXCEEDED

Fig. 9


NORFORK OUTFLOW
JULY FLOW DURATION
Mean Daily Flow Natural Conditions
PERCENT
25119
19953
15849
12589
10000
7943
6310
5012
3981
3162
2512
1995
1585
1259
1000
794
631
501
398
316
251
200
158
126
100
79
63
50
40
32
25
20
16
13
10
8
6
5
4
3
3
2
2
1
1
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100
PERCENT TIME EQUALED OR EXCEEDED
100.0
100.0
100.0
100.0
99.3
92.4
71.3
47.8
27.8
17.6
11.4
8.2
6.2
4.9
3.9
2.8
2.5
1.8
1.6
1.2
.9
.8
.8
.6
.4
.4
.4
.3
.2
.1
.1
0.0
0.0
0.0

NORFORK OUTFLOW
AUGUST FLOW DURATION

Mean Daily Flow Natural Conditions

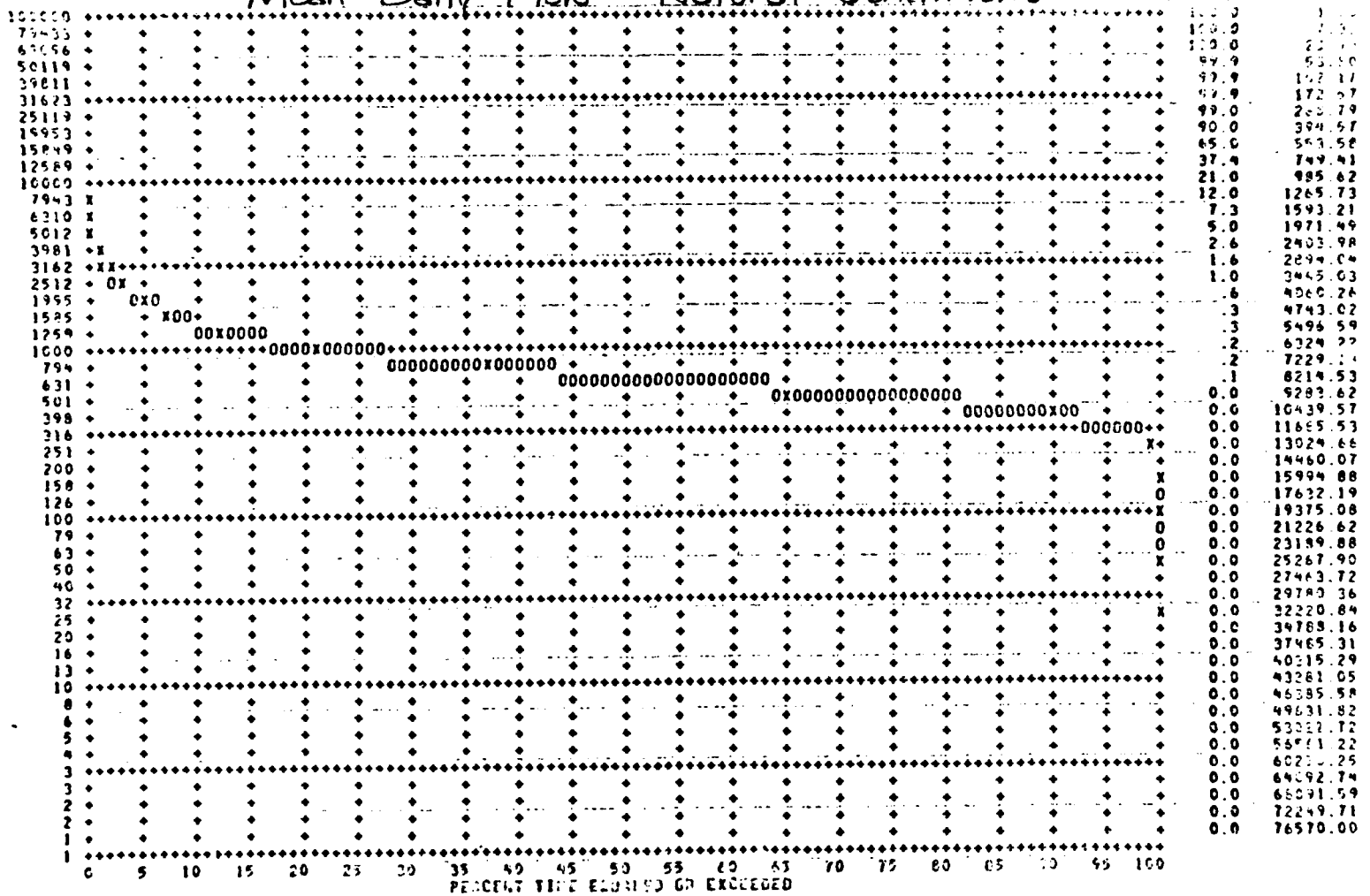


100.0	1.00
100.0	7.33
100.0	23.53
100.0	53.80
100.0	102.17
99.9	172.57
99.8	268.79
97.7	394.57
76.4	553.5[illegible]
47.2	749.41
22.[illegible]	985.62
11.6	1265.73
6.8	1593.21
3.9	1971.49
2.3	2403.98
1.5	2894.04
1.4	3445.03
1.0	4060.26
.8	4743.02
.7	5496.59
.5	6324.22
.3	7229.13
.3	8214.53
.1	9283.62
.1	10439.57
.1	11685.53
.1	13024.66
0.0	14460.07
0.0	15994.89
0.0	17632.19
0.0	19375.08
0.0	21226.62
0.0	23189.88
0.0	25267.90
0.0	27463.72
0.0	29780.36
0.0	32220.84
0.0	34788.16
0.0	37435.31
0.0	40315.29
0.0	43281.05
0.0	46365.58
0.0	49631.82
0.0	53072.72
0.0	56661.22
0.0	60330.25
0.0	64052.74
0.0	67891.59
0.0	72249.71
0.0	76570.00

Fig. 11

NORFORK OUTFLOW
SEPTEMBER FLOW DURATION

Mean Daily Flow Natural Conditions



100.0	1
100.0	2
100.0	22
99.9	53.50
99.9	102.17
99.9	172.97
99.0	268.79
90.0	394.67
65.0	553.58
37.4	749.41
21.0	985.62
12.0	1265.73
7.3	1593.21
5.0	1971.49
2.6	2403.98
1.6	2894.04
1.0	3445.03
.6	4060.26
.3	4743.02
.3	5496.59
.2	6324.22
.2	7229.14
.1	8214.53
0.0	9283.62
0.0	10439.57
0.0	11685.53
0.0	13024.66
0.0	14460.07
0.0	15994.88
0.0	17632.19
0.0	19375.08
0.0	21226.62
0.0	23189.88
0.0	25267.90
0.0	27463.72
0.0	29780.36
0.0	32220.84
0.0	34788.16
0.0	37485.31
0.0	40315.29
0.0	43281.05
0.0	46385.58
0.0	49631.82
0.0	53022.72
0.0	56561.22
0.0	60249.25
0.0	64092.74
0.0	68091.59
0.0	72249.71
0.0	76570.00

Fig. 12

NORFORK OUTFLOW
OCTOBER FLOW DURATION

Mean Daily Flow Natural Conditions

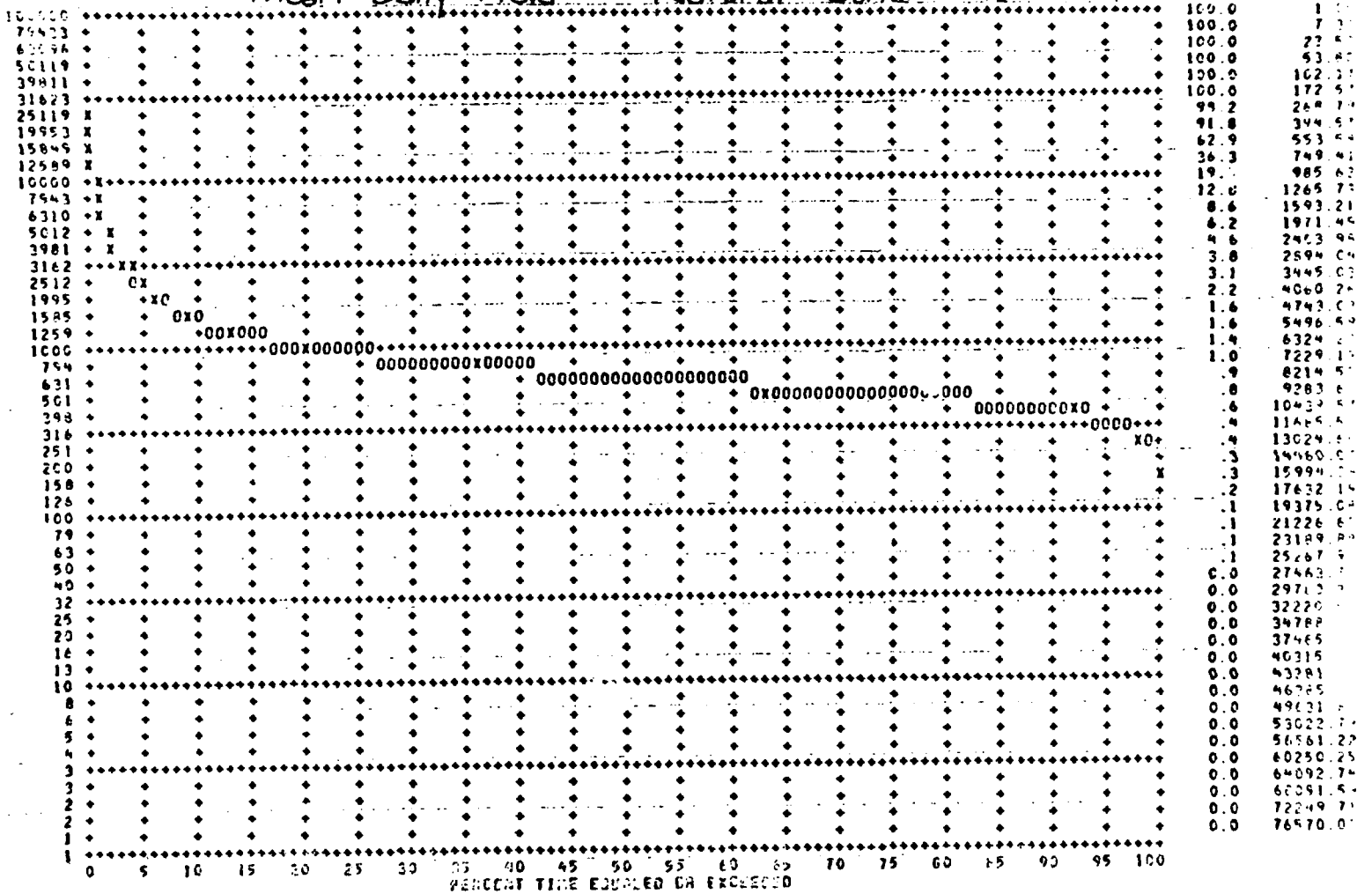


Fig. 13

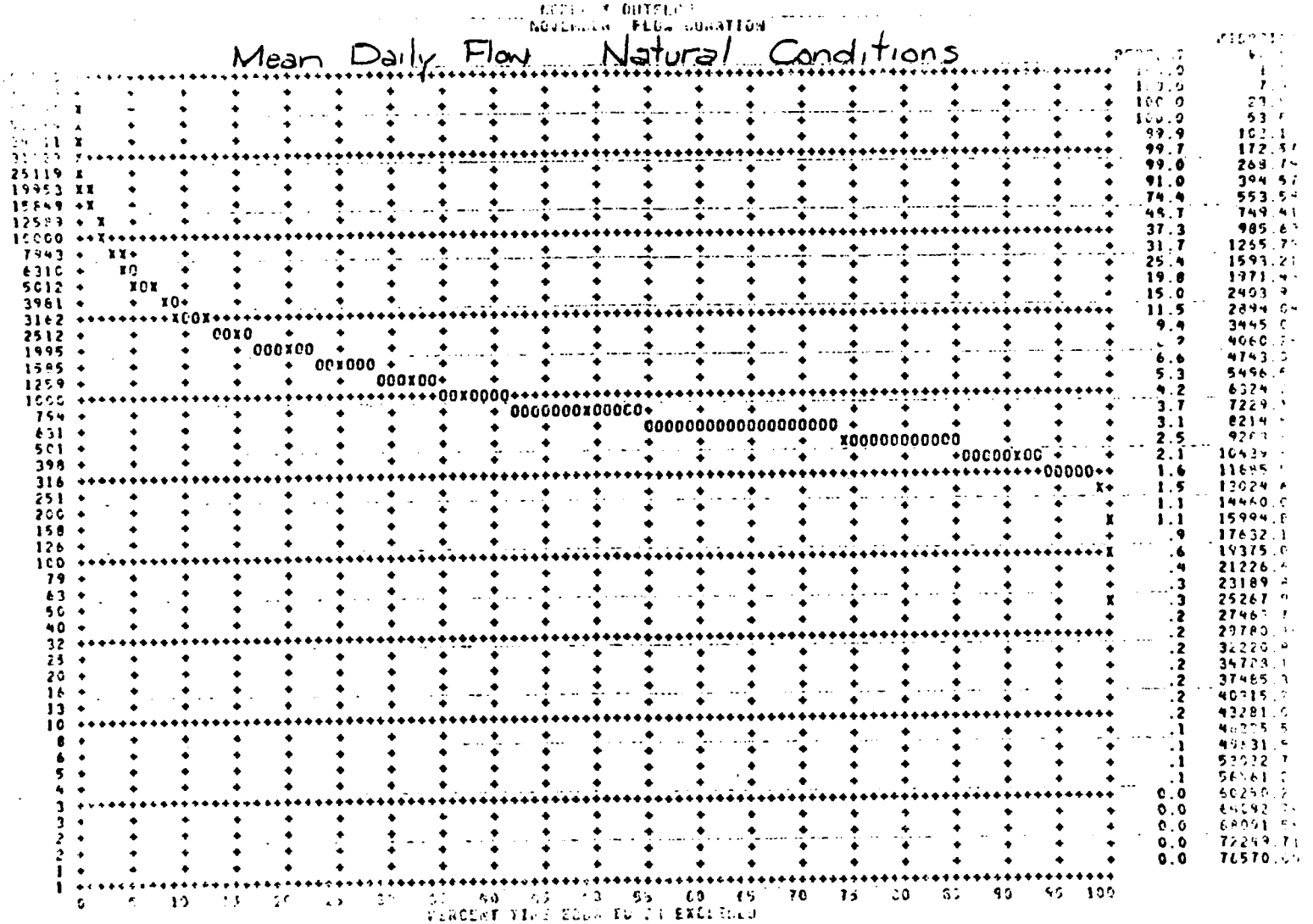

Mean Daily Flow Natural Conditions
NOVEMBER FLOW DURATION
VERCENT TIME EQUAL TO OR EXCEEDED

Fig. 14

NORACK OUTFLOW
DECEMBER FLOW DURATION

Mean Daily Flow Natural Conditions

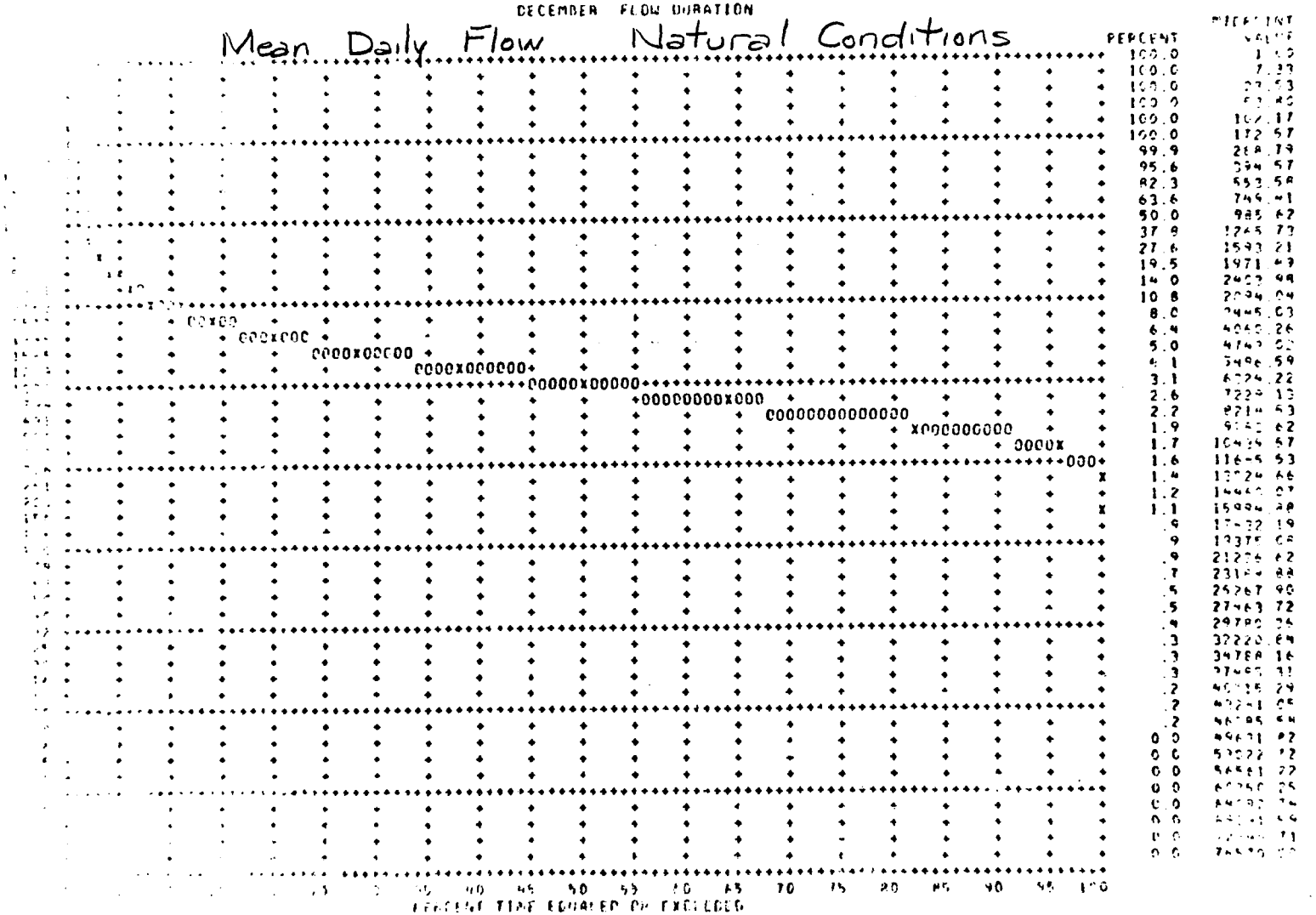


Fig. 15

MERCORK OUTFLOW
JANUARY FLOW DURATION

Mean Daily Flow Existing Conditions

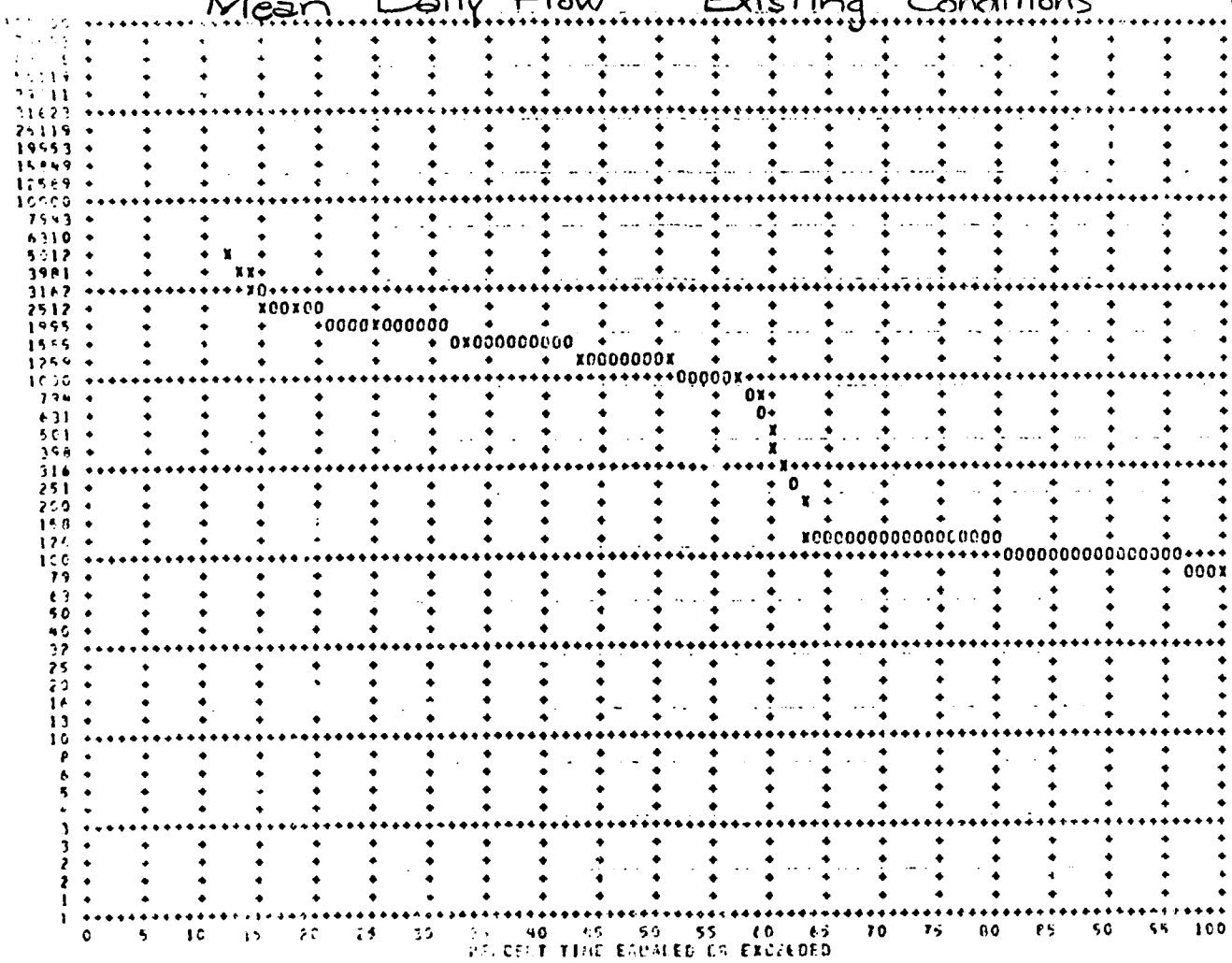


Fig. 16

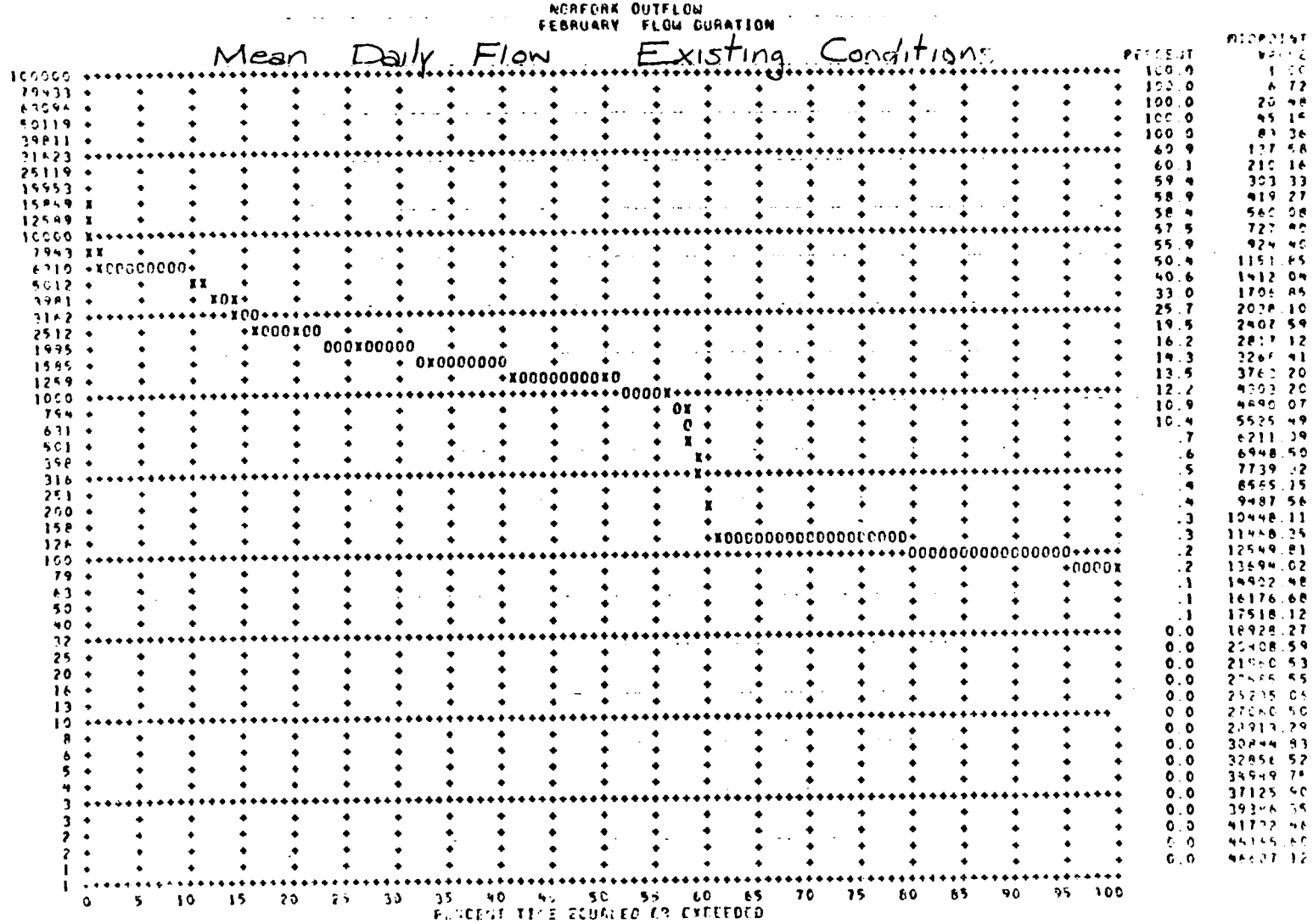

NORFORK OUTFLOW
FEBRUARY FLOW DURATION
Mean Daily Flow Existing Conditions
PERCENT TIME EQUALED OR EXCEEDED
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Fig. 17

NORFORK OUTFLOW
MARCH FLOW DURATION

Mean Daily Flow Existing Conditions

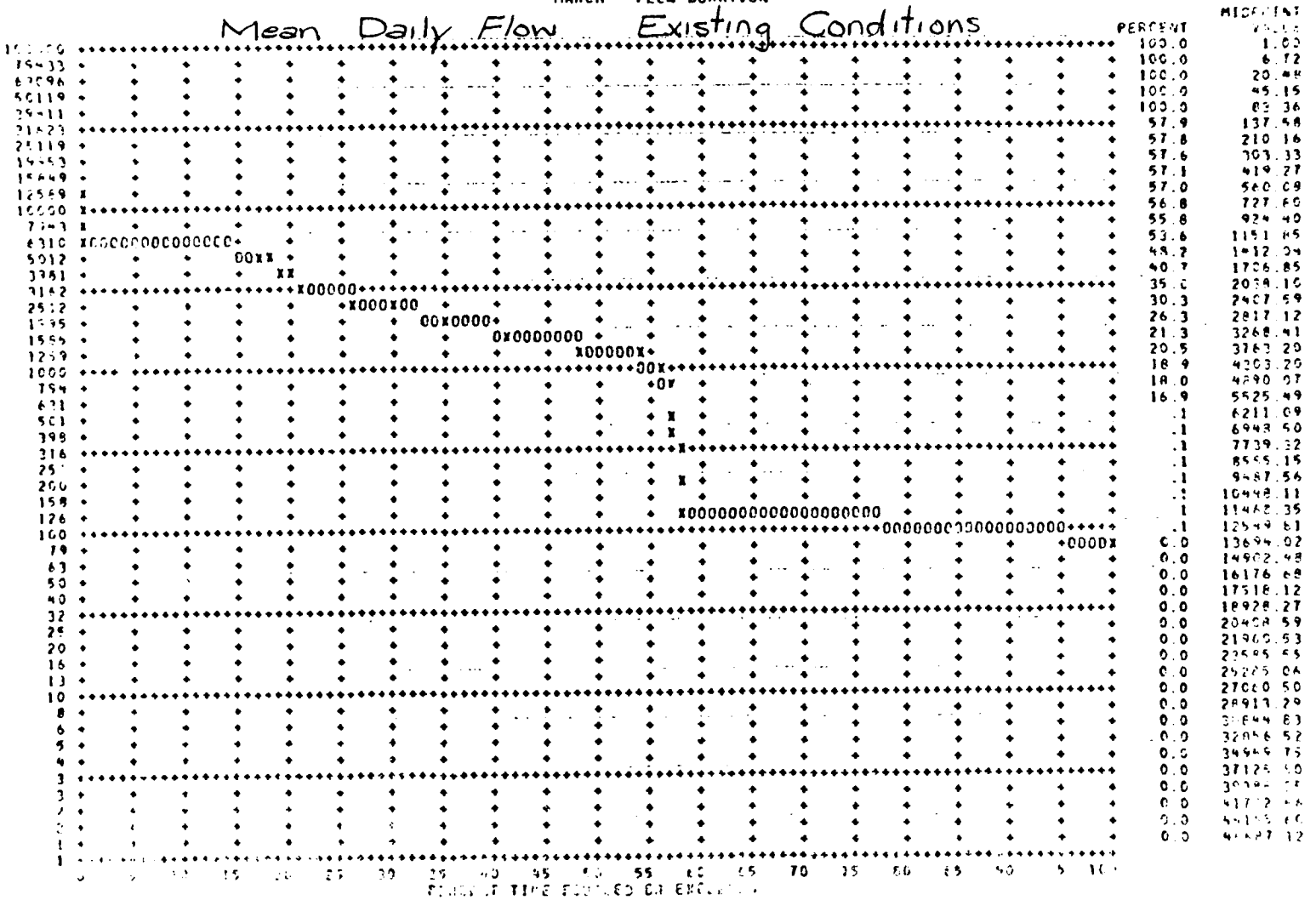


Fig. 18

NORFORK OUTFLOW
APRIL FLOW DURATION

Mean Daily Flow — Existing Conditions

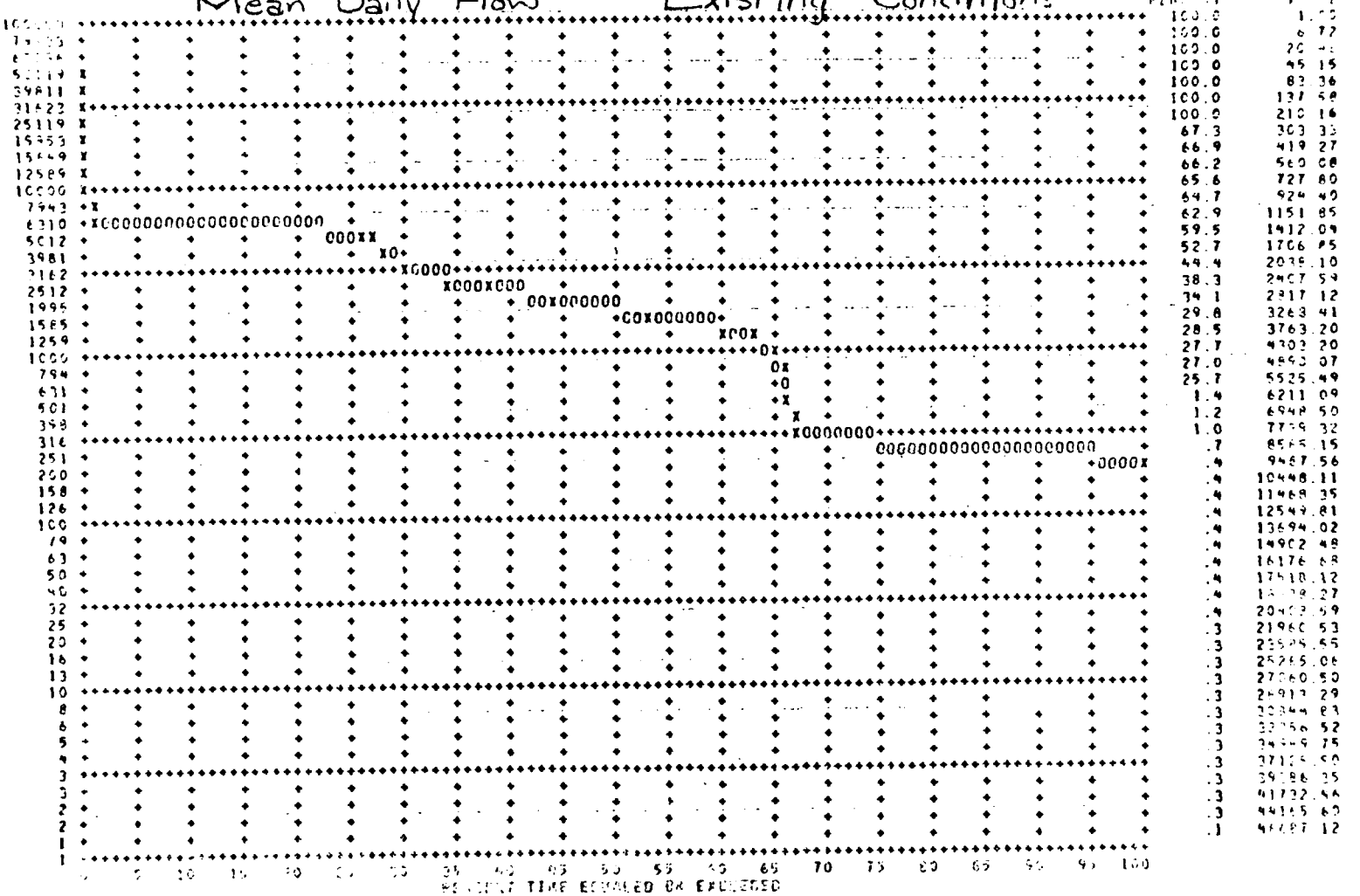


Fig. 19

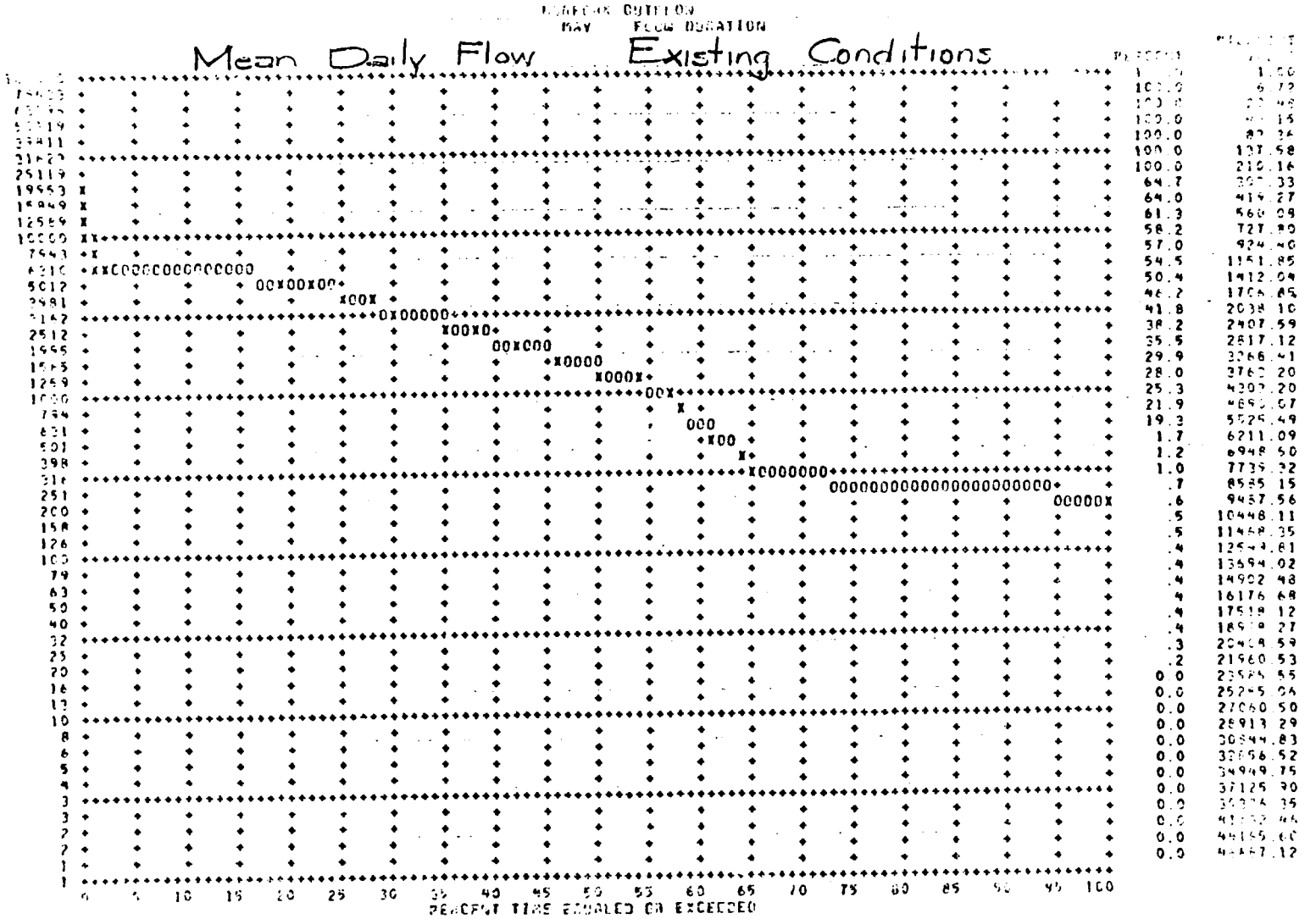

MAY FLOW DURATION
Mean Daily Flow Existing Conditions
PERCENT TIME EQUALED OR EXCEEDED

Fig. 20

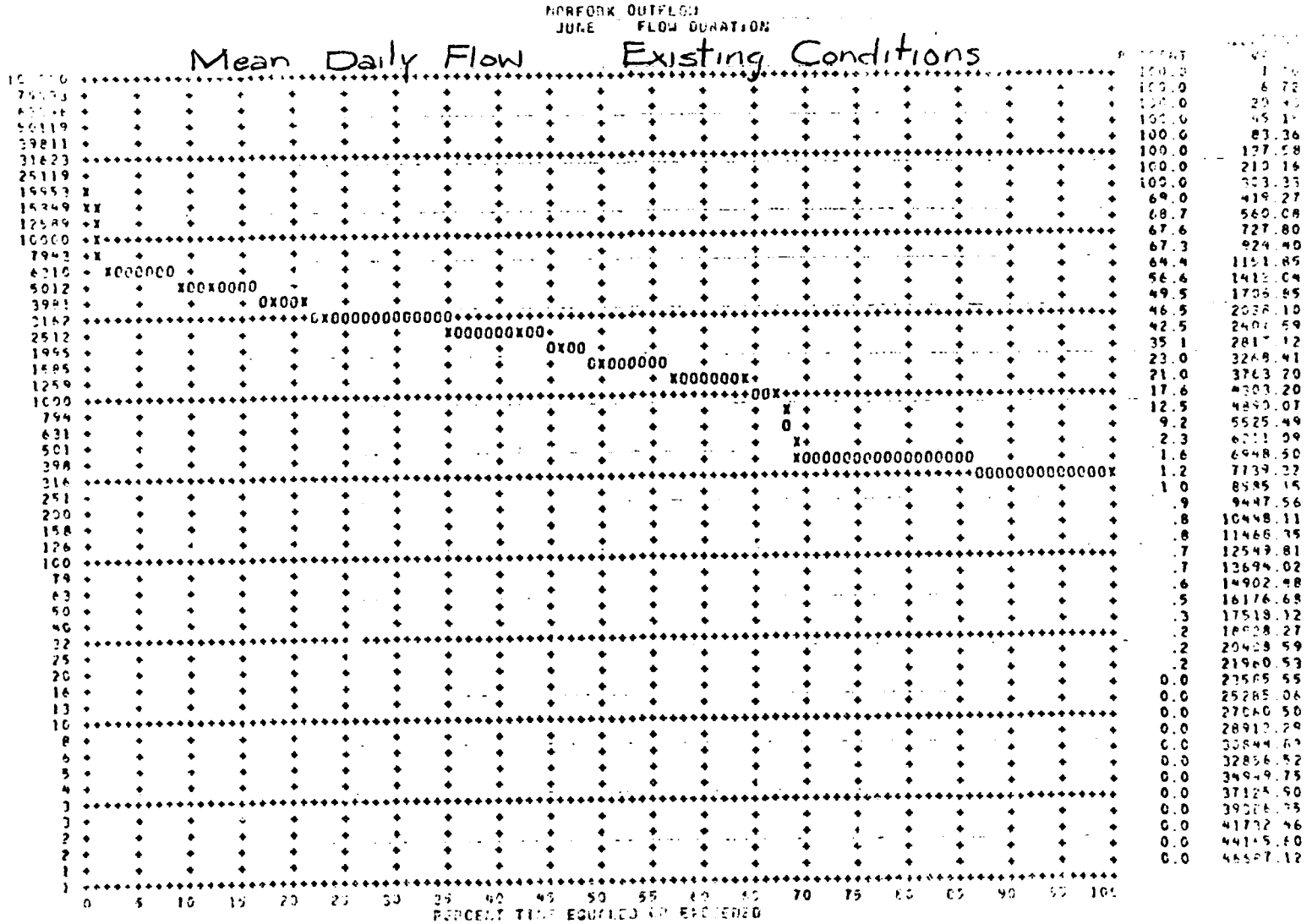
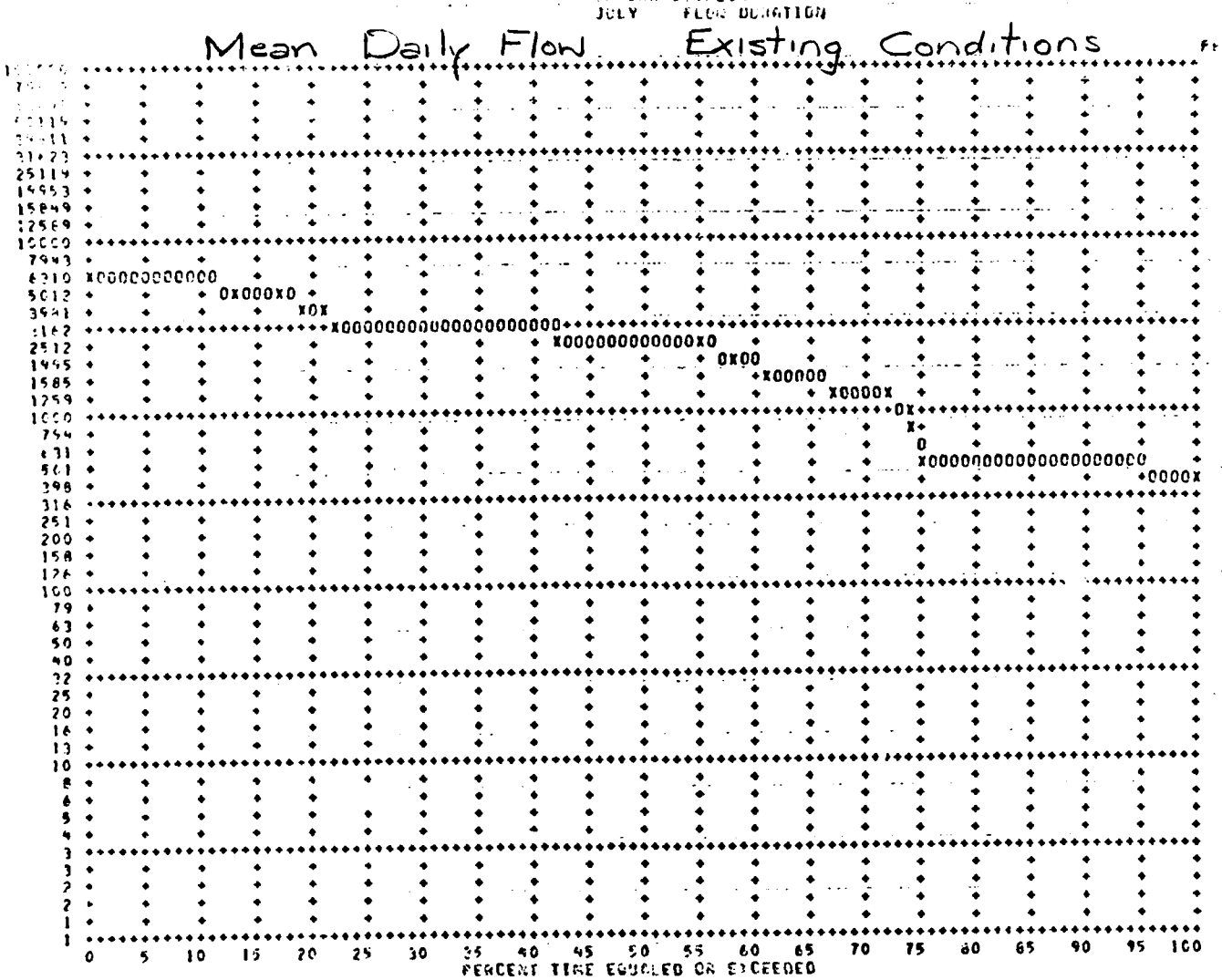

NORFORK OUTFLOW
JUNE FLOW DURATION
Mean Daily Flow Existing Conditions
PERCENT TIME EQUALED OR EXCEEDED

Fig. 21

FORKSAK OUTFLOW
JULY FLOW DURATION

Mean Daily Flow Existing Conditions



PERCENT	MIDPOINT VALUE
100.0	1.03
100.0	6.77
100.0	29.48
100.0	85.15
100.0	83.36
100.0	137.58
100.0	210.16
100.0	303.33
100.0	419.27
75.0	560.08
74.3	727.80
73.8	924.40
72.4	1151.85
67.0	1412.04
60.7	1706.85
58.2	2038.10
54.7	2407.49
42.5	2817.12
22.2	3268.41
20.9	3763.20
19.3	4303.20
17.4	4890.07
13.1	5525.49
.3	6211.09
0.0	6948.50
0.0	7739.32
0.0	8585.15
0.0	9487.96
0.0	10448.11
0.0	11468.35
0.0	12549.81
0.0	13694.02
0.0	14902.48
0.0	16176.68
0.0	17518.17
0.0	18928.27
0.0	20408.59
0.0	21960.53
0.0	23585.56
0.0	25285.06
0.0	27060.50
0.0	28913.29
0.0	30844.83
0.0	32856.52
0.0	34949.75
0.0	37125.90
0.0	39385.35
0.0	41732.46
0.0	44165.60
0.0	46687.12

Fig. 22

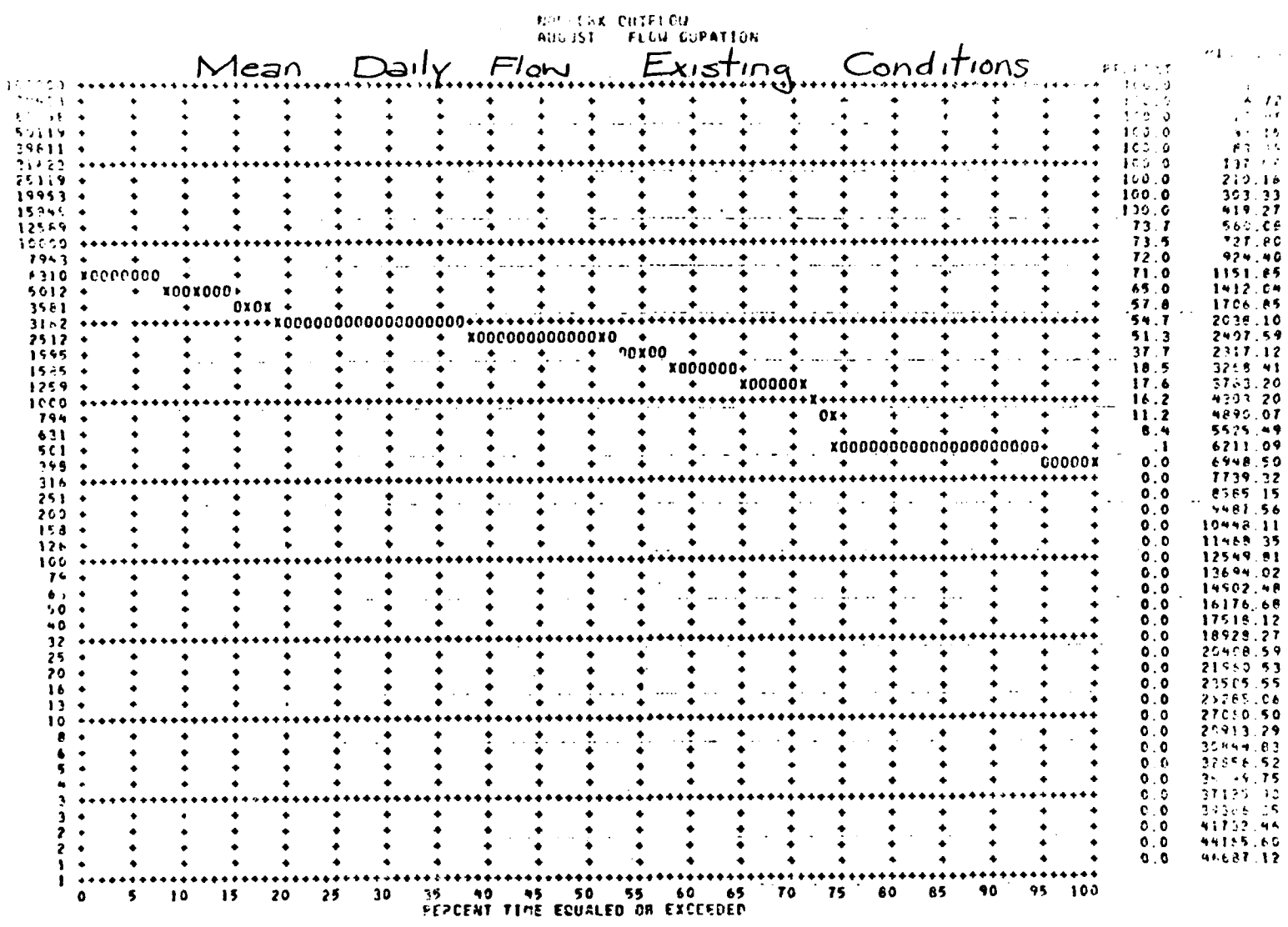

Mean Daily Flow Existing Conditions
PERCENT TIME EQUALED OR EXCEEDED
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Fig. 23

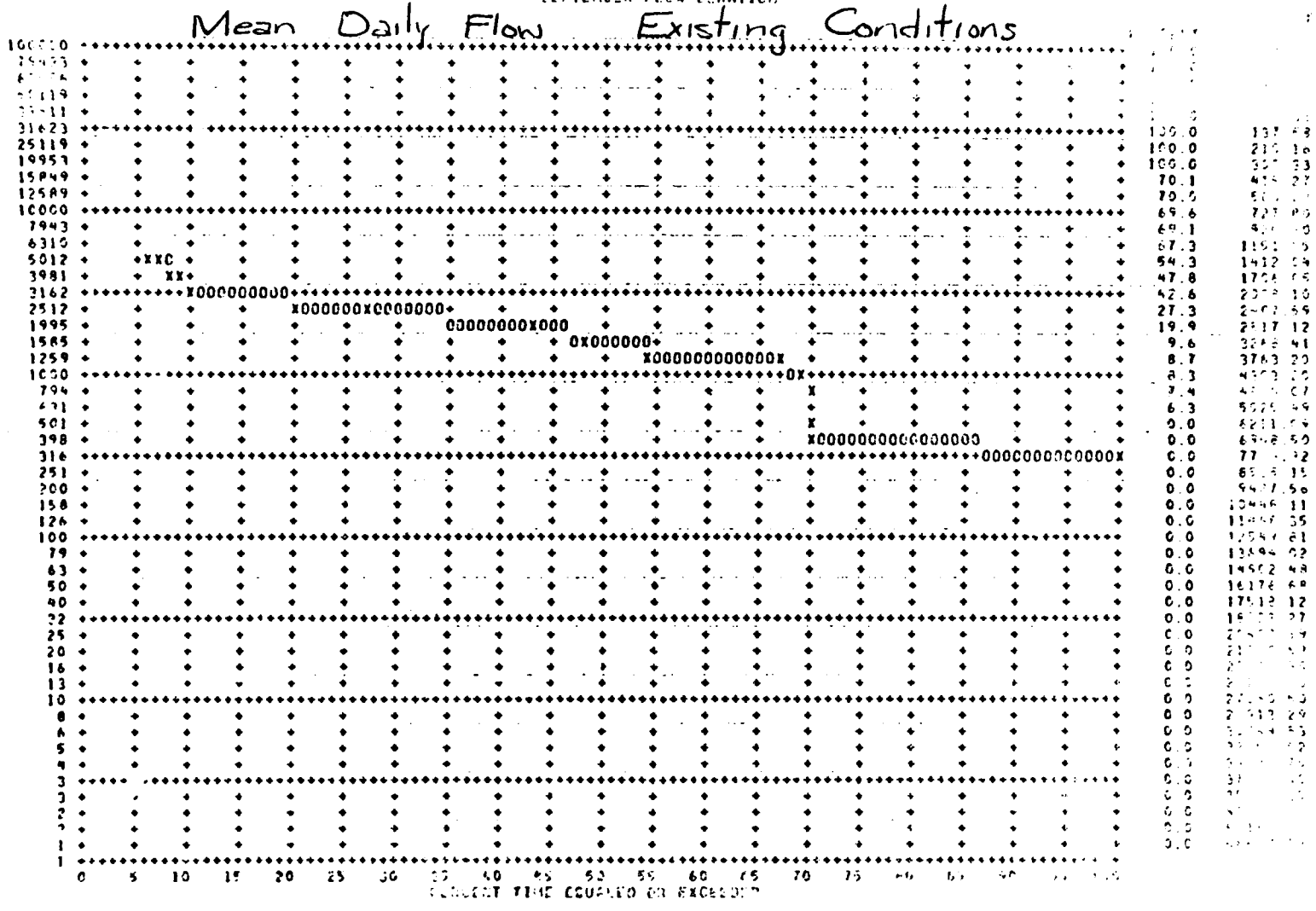

Mean Daily Flow Existing Conditions
31623
25119
19953
15849
12589
10000
7943
6310
5012
3981
3162
2512
1995
1585
1259
1000
794
631
501
398
316
251
200
158
126
100
79
63
50
40
32
25
20
16
13
10
8
6
5
4
3
2
1
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75
PERCENT TIME EQUALED OR EXCEEDED

Fig. 24

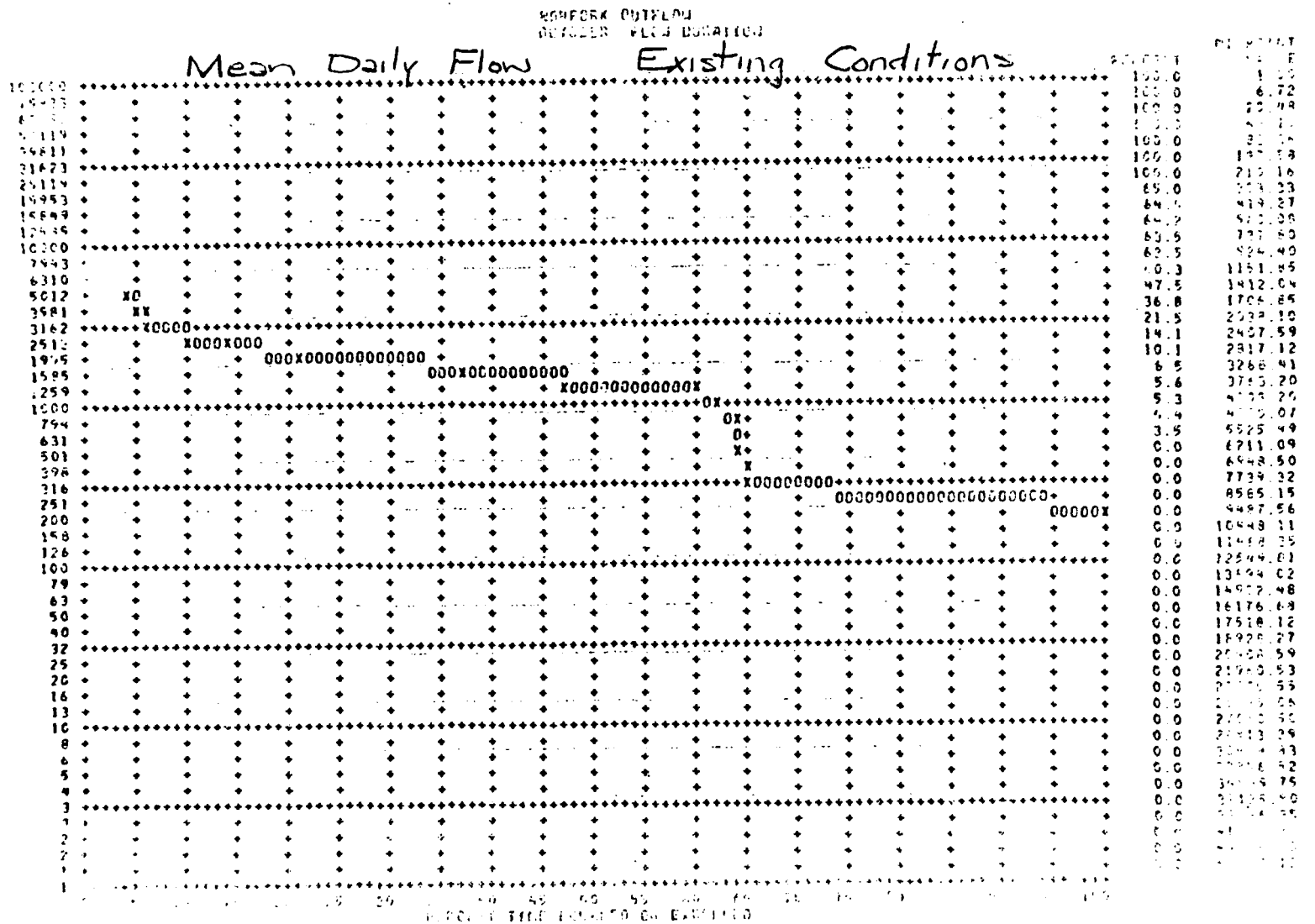


Fig. 25

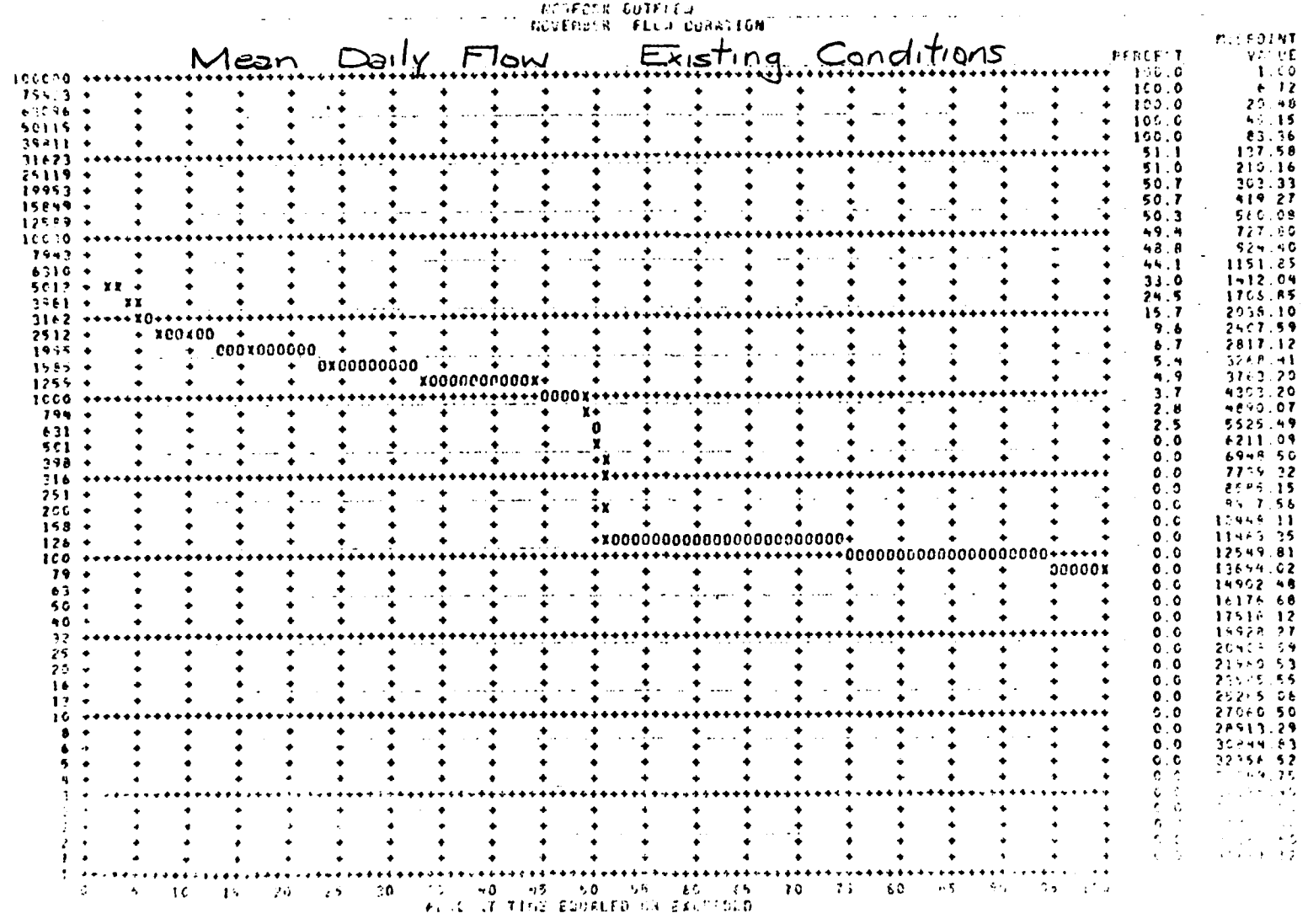

NORFORK OUTFLOW
NOVEMBER FLOW DURATION
Mean Daily Flow Existing Conditions
PERCENT
MIDPOINT VALUE
100.0 1.00
100.0 6.12
100.0 20.48
100.0 46.15
100.0 83.36
51.1 137.58
51.0 210.16
50.7 303.33
50.7 419.27
50.3 560.08
49.4 727.80
48.8 924.40
44.1 1151.25
33.0 1412.04
24.5 1708.85
15.7 2036.10
9.6 2407.59
6.7 2817.12
5.4 3268.41
4.9 3763.20
3.7 4303.20
2.8 4890.07
2.5 5525.49
0.0 6211.09
0.0 6948.50
0.0 7739.22
0.0 8586.15
0.0 9487.56
0.0 10449.11
0.0 11465.25
0.0 12549.81
0.0 13694.02
0.0 14902.48
0.0 16176.68
0.0 17518.12
0.0 18928.27
0.0 20408.59
0.0 21960.53
0.0 23585.55
0.0 25285.06
0.0 27060.50
0.0 28913.29
0.0 30844.83
0.0 32856.52
AT TIME EQUALED OR EXCEEDED

Fig. 26

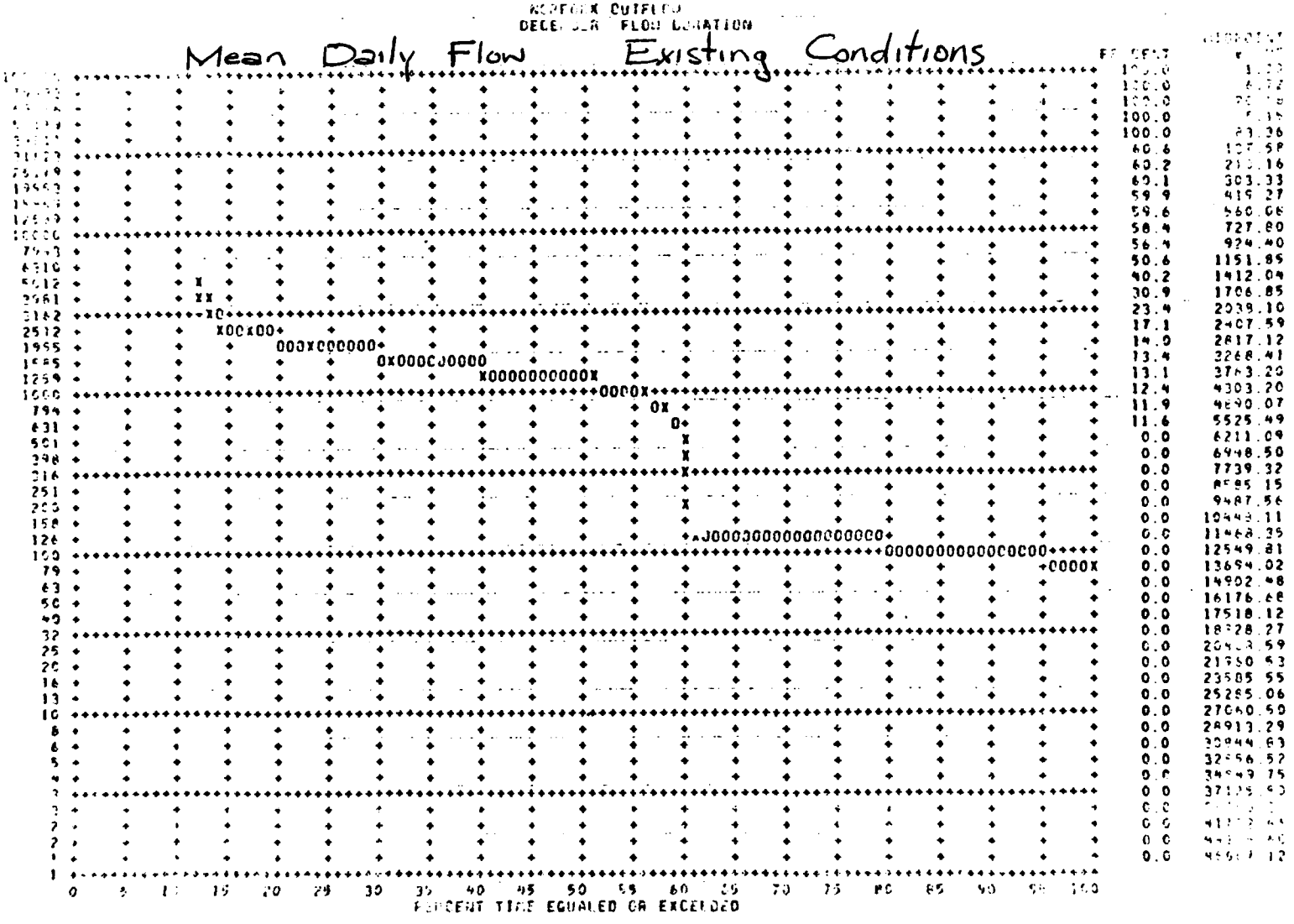

Mean Daily Flow
Existing Conditions
PERCENT TIME EQUALED OR EXCEEDED

Fig. 27

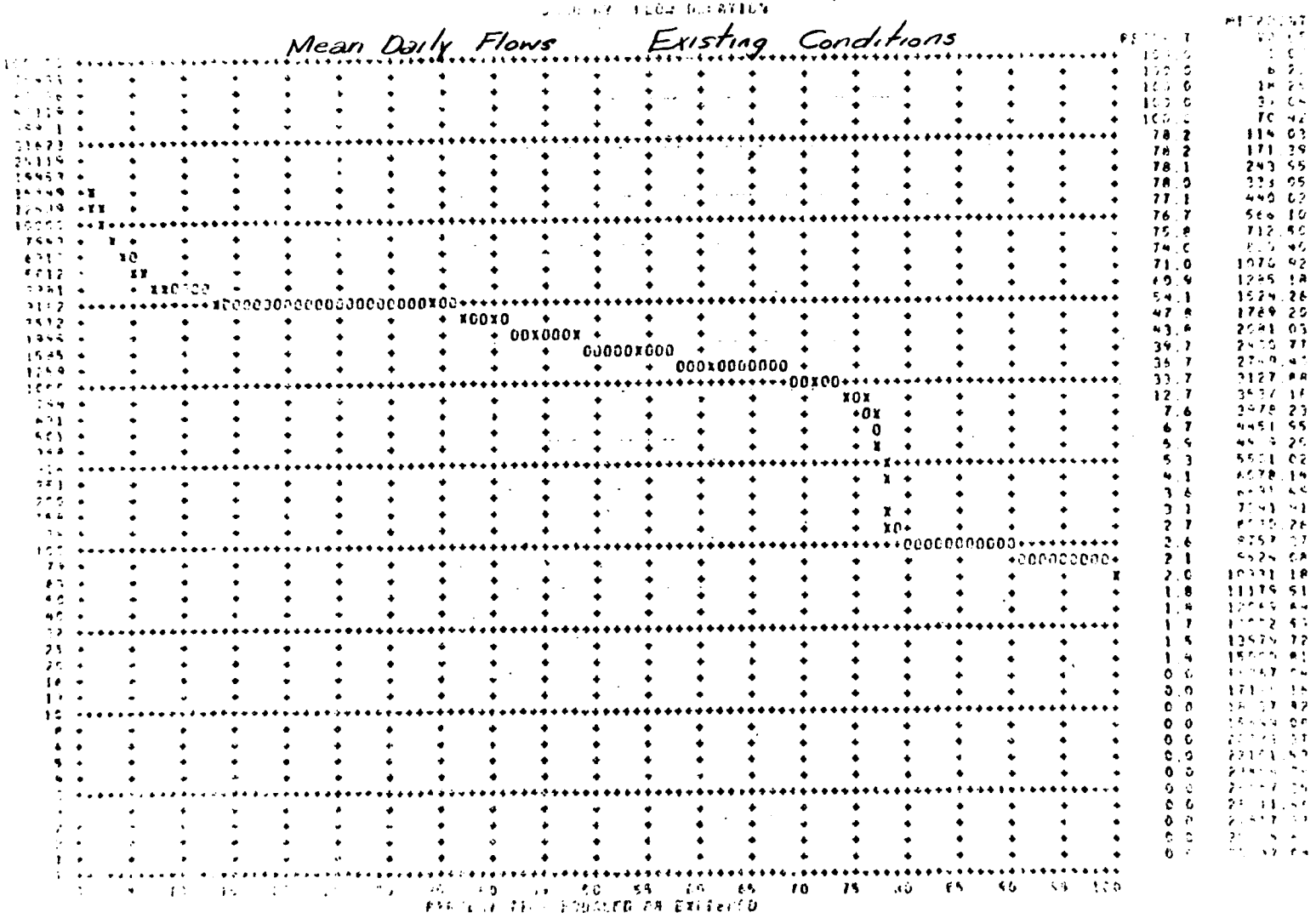


Fig. 4

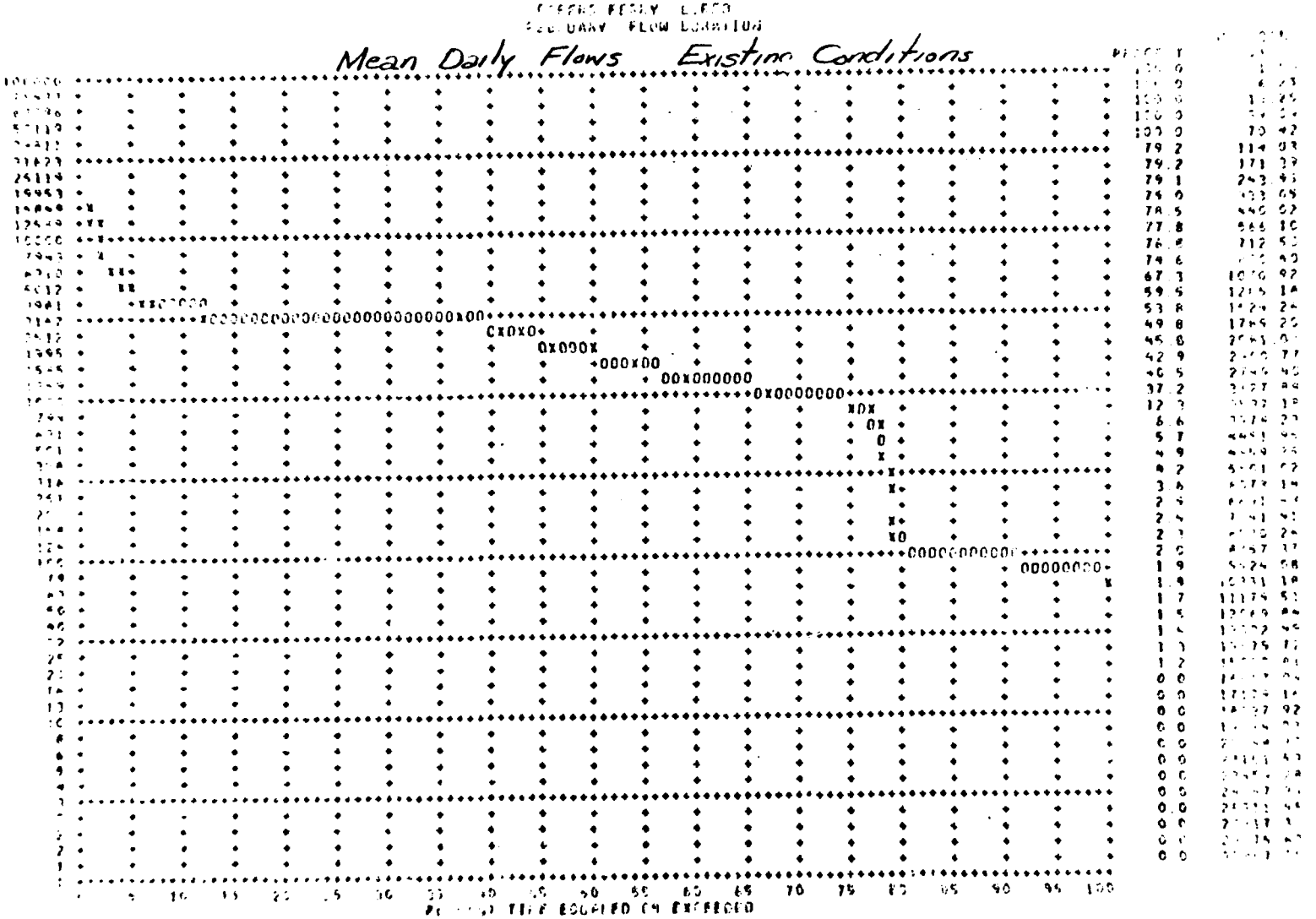


Fig. 5

Mean Daily Flows Existing Conditions

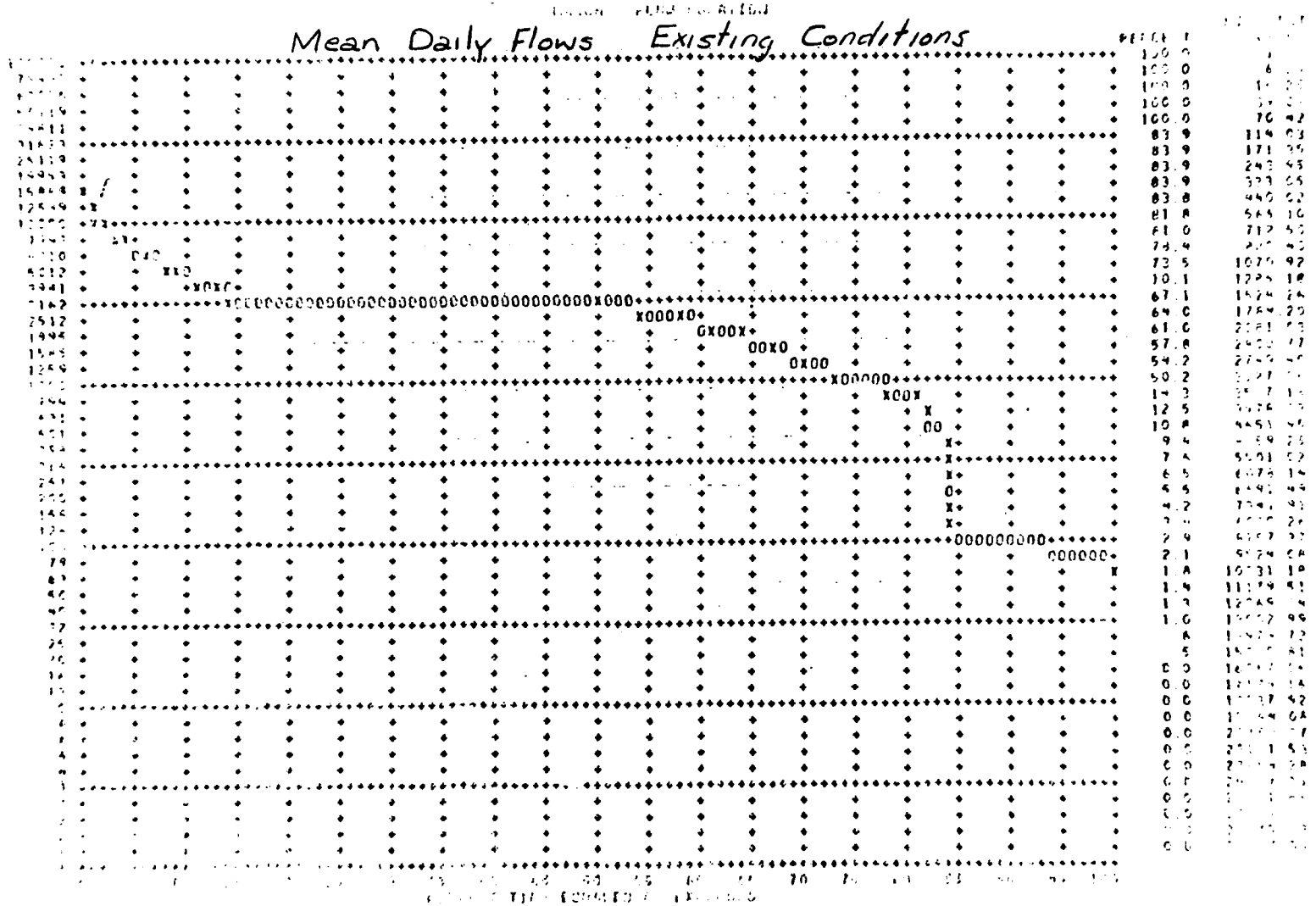


Fig. 6

Mean Daily Flows Existing Conditions

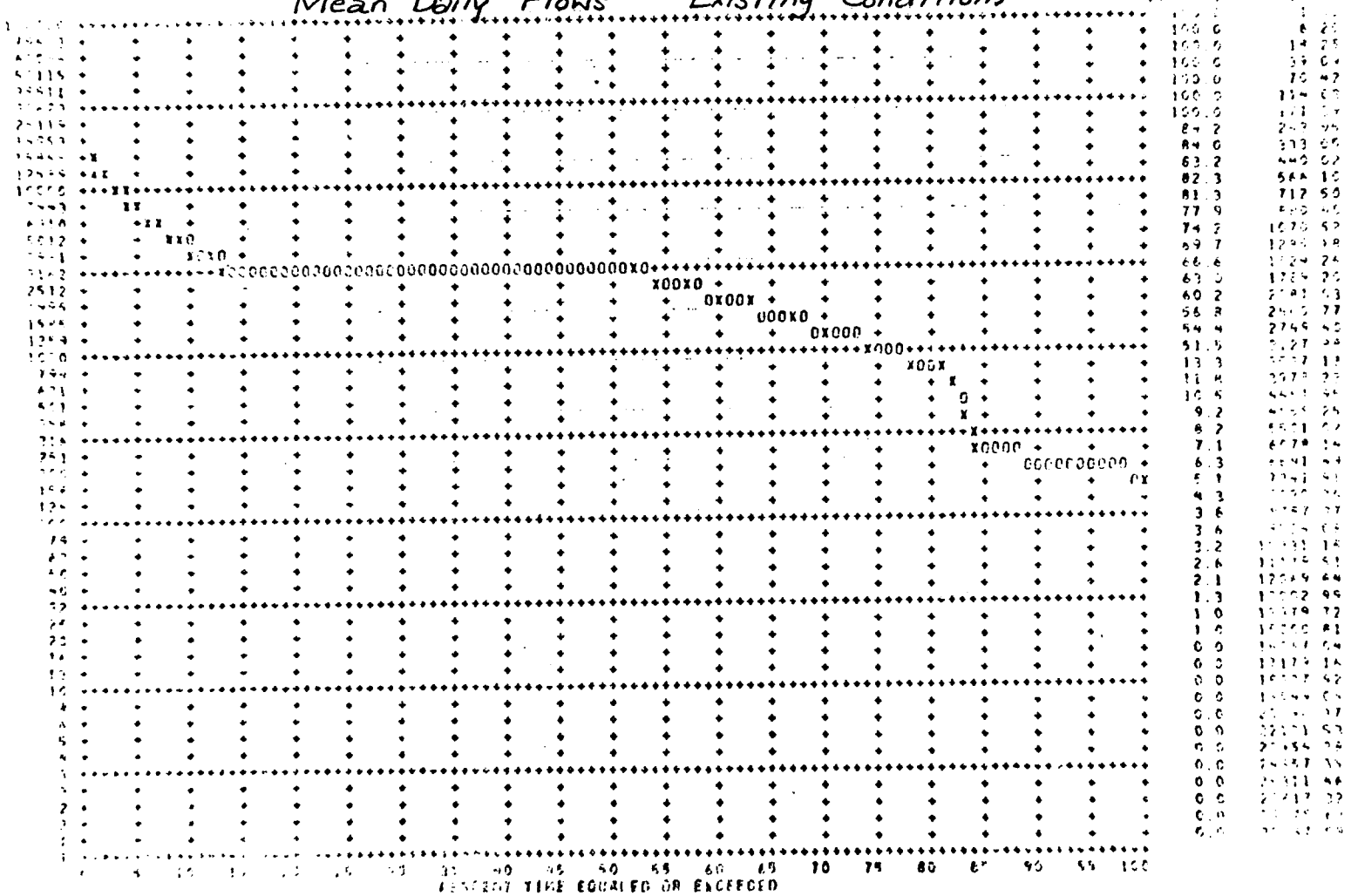


Fig. 7

GREERS FERRY L.RED
MAY FLOW DURATION

Mean Daily Flows Existing Conditions

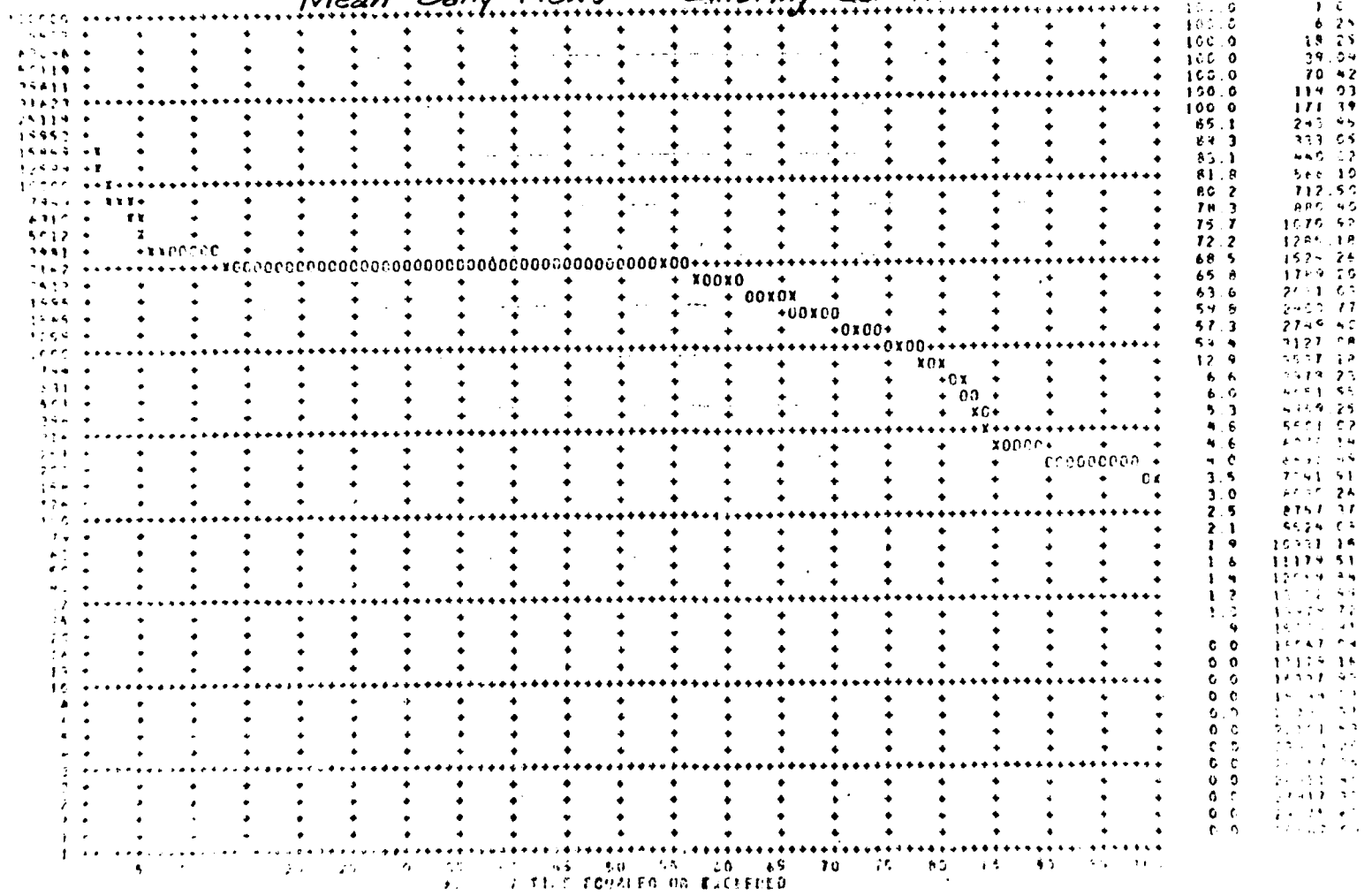


Fig. 8

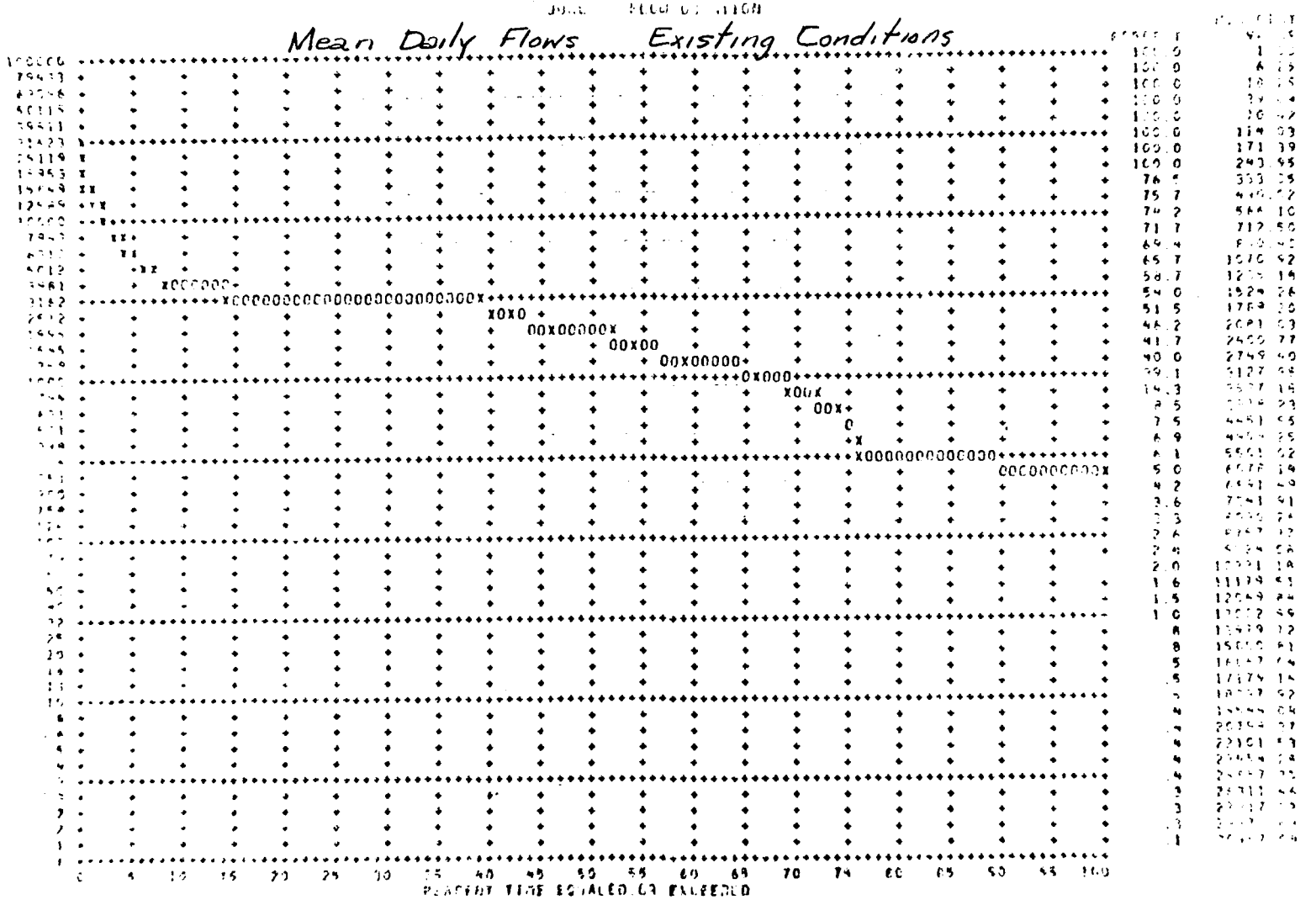

Mean Daily Flows Existing Conditions
PERCENT TIME EQUALED OR EXCEEDED

Fig 6

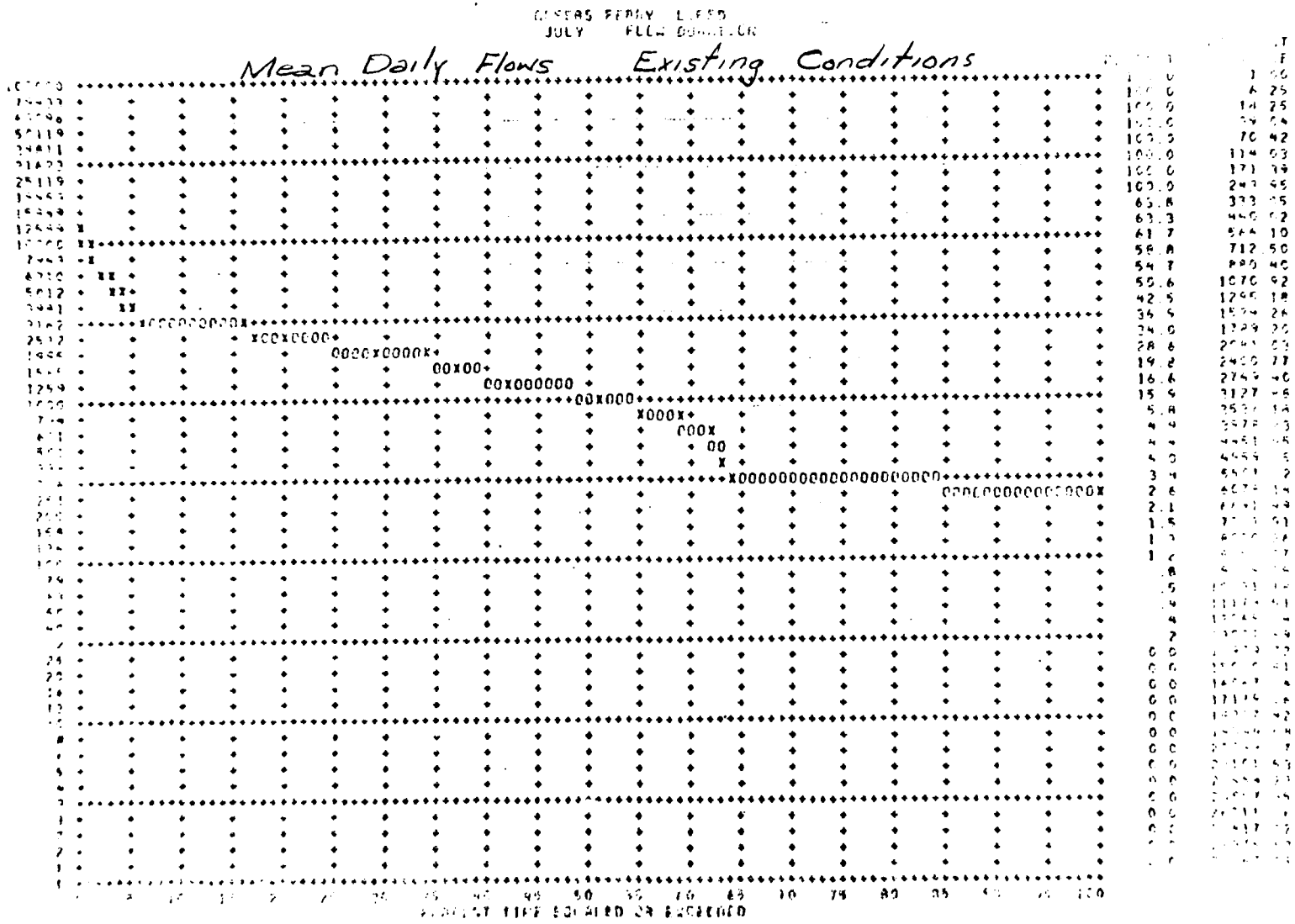


Fig 10

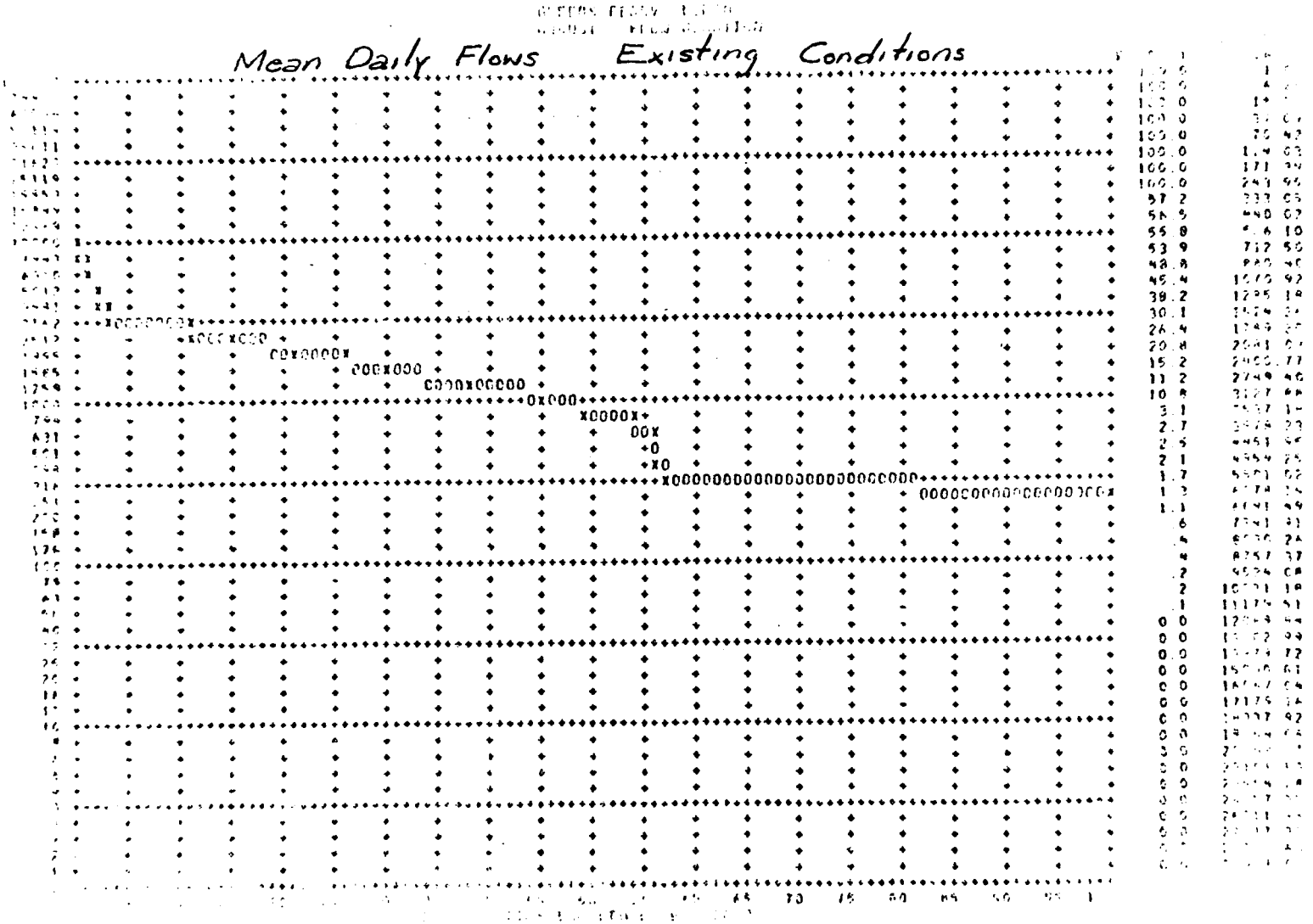
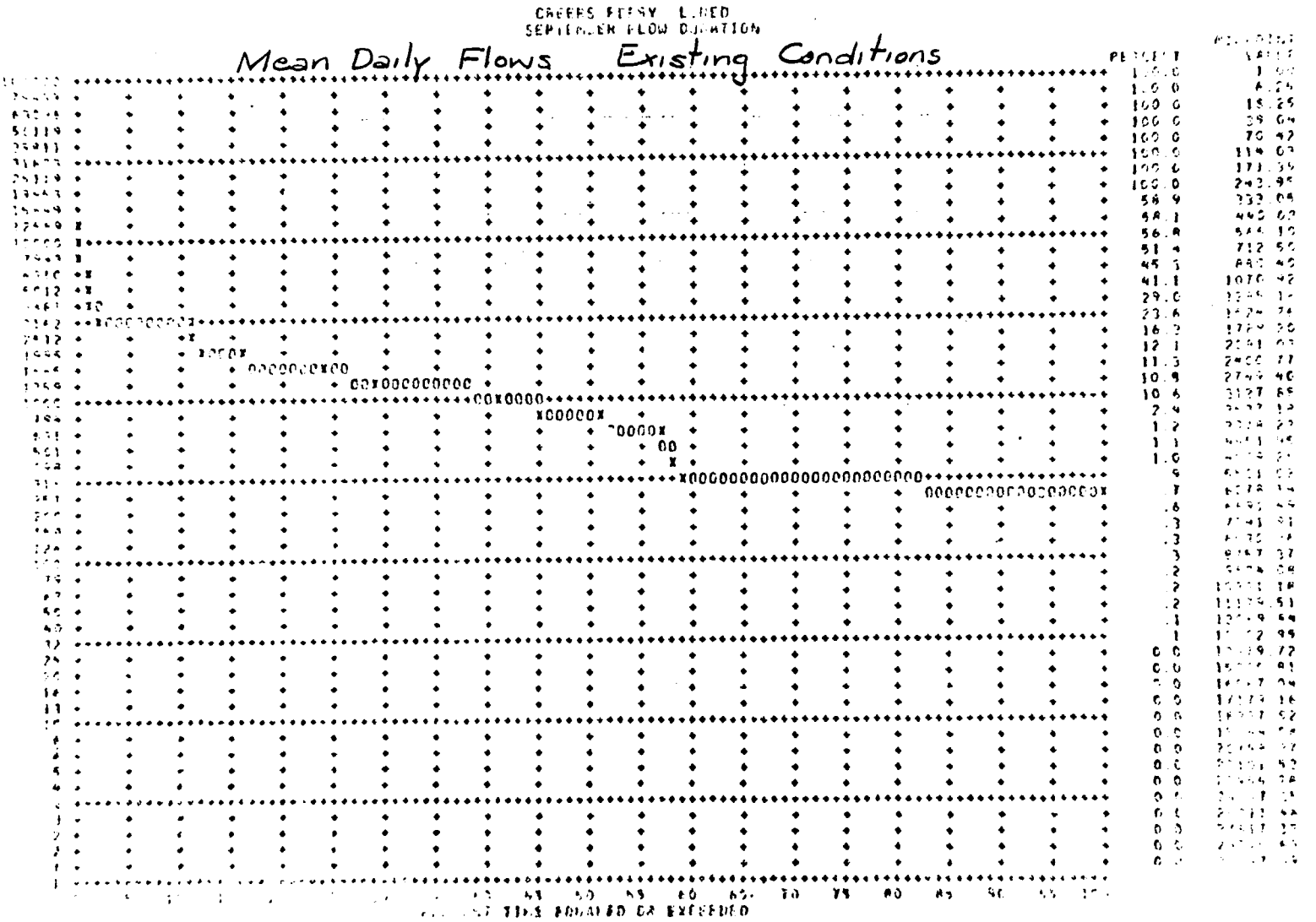


Fig 11


CREEKS PERRY LAKED
SEPTEMBER FLOW DURATION
Mean Daily Flows Existing Conditions
PERCENT
100.0
100.0
100.0
100.0
100.0
100.0
58.9
48.1
36.8
31.4
45.1
41.1
29.0
23.6
16.2
12.1
11.3
10.9
10.6
2.4
1.2
1.1
1.0
.7
.6
.3
.3
.3
.2
.2
.1
0.0
0.0
0.0

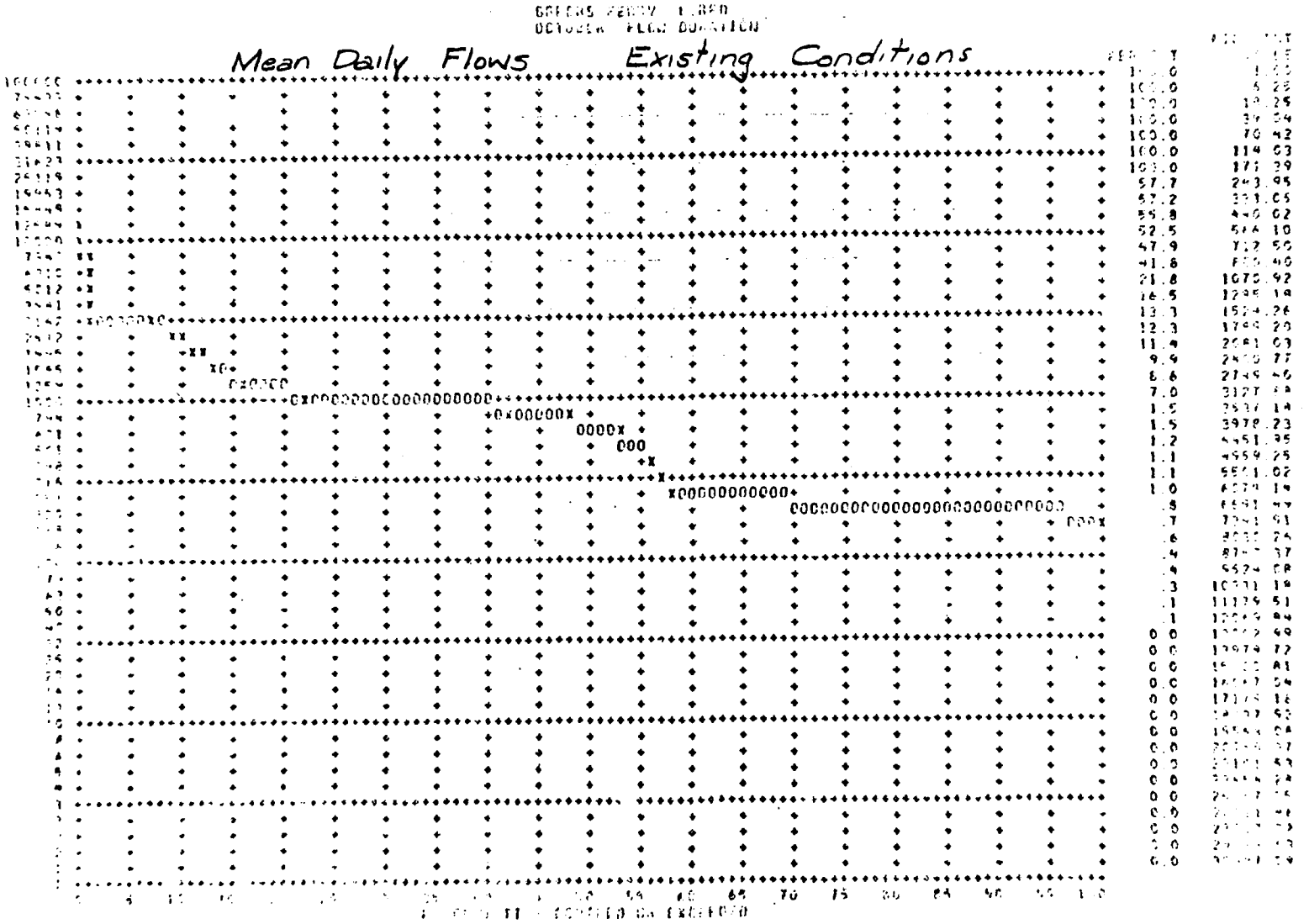

GREENS FERRY LAKE
OCTOBER FLOW DURATION
Mean Daily Flows Existing Conditions

Fig. 13

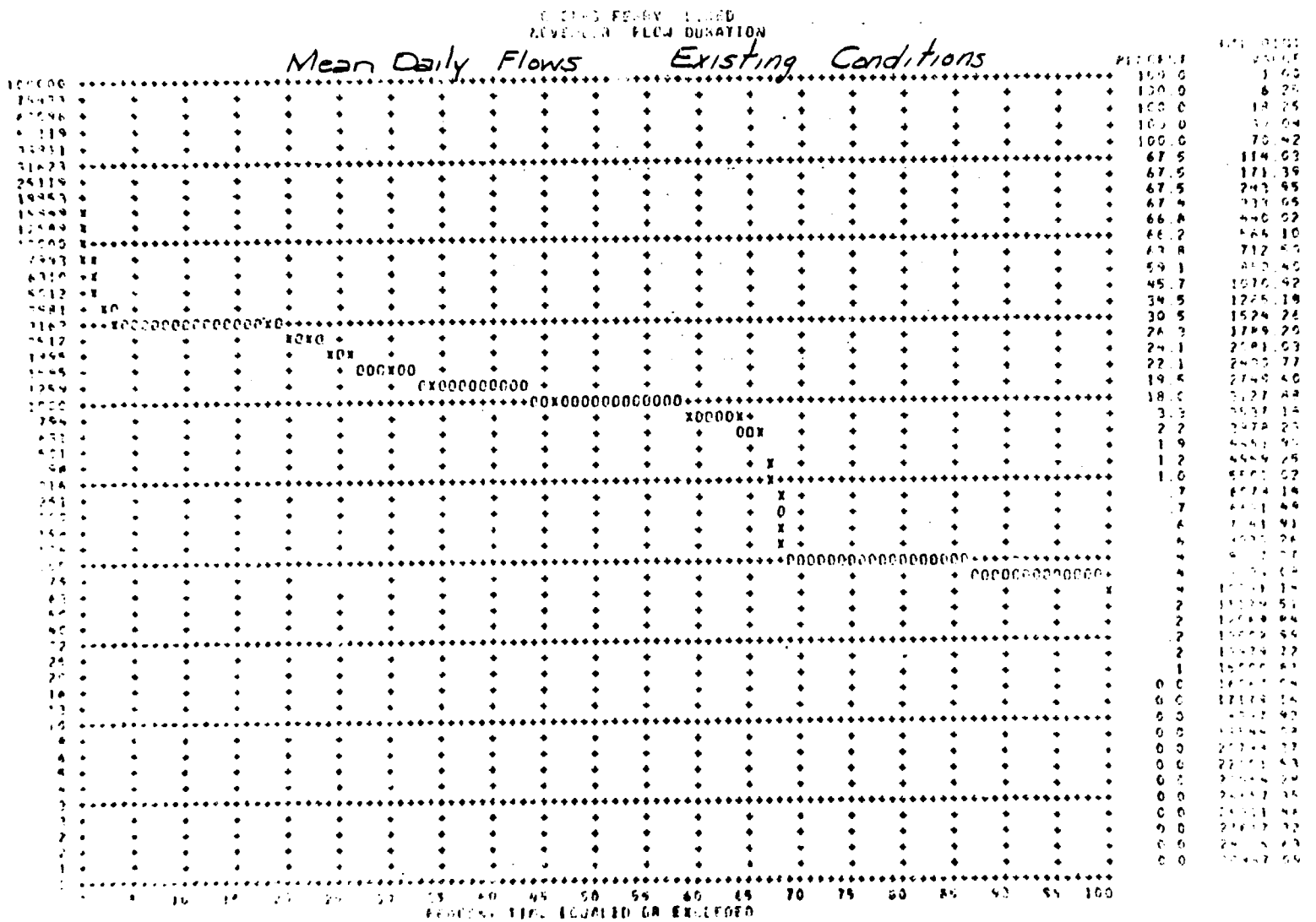

Mean Daily Flows
Existing Conditions
PERCENT TIME EQUALED OR EXCEEDED

Fig. 14

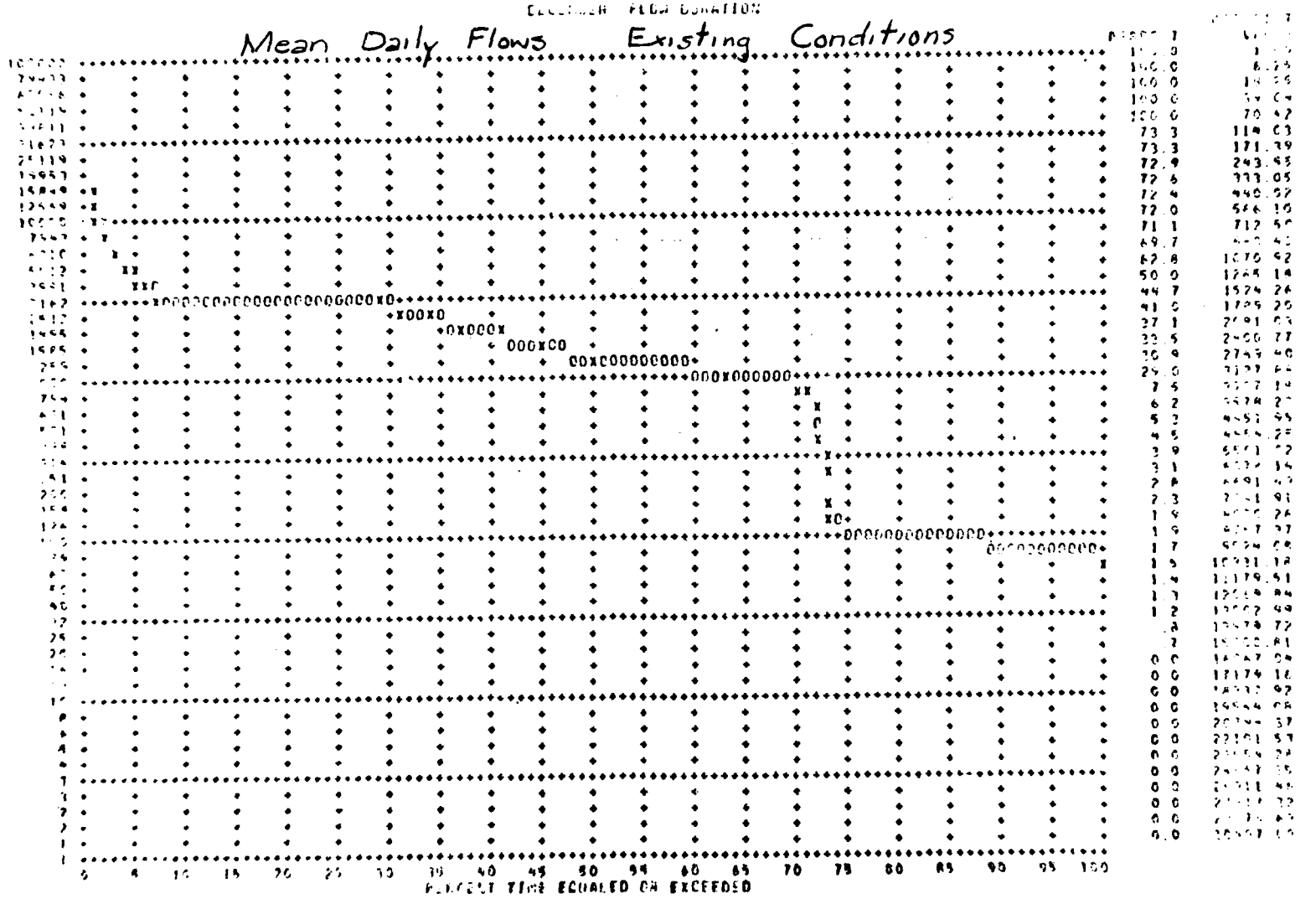

Mean Daily Flows Existing Conditions
PERCENT TIME EQUALED OR EXCEEDED

Fig. 15

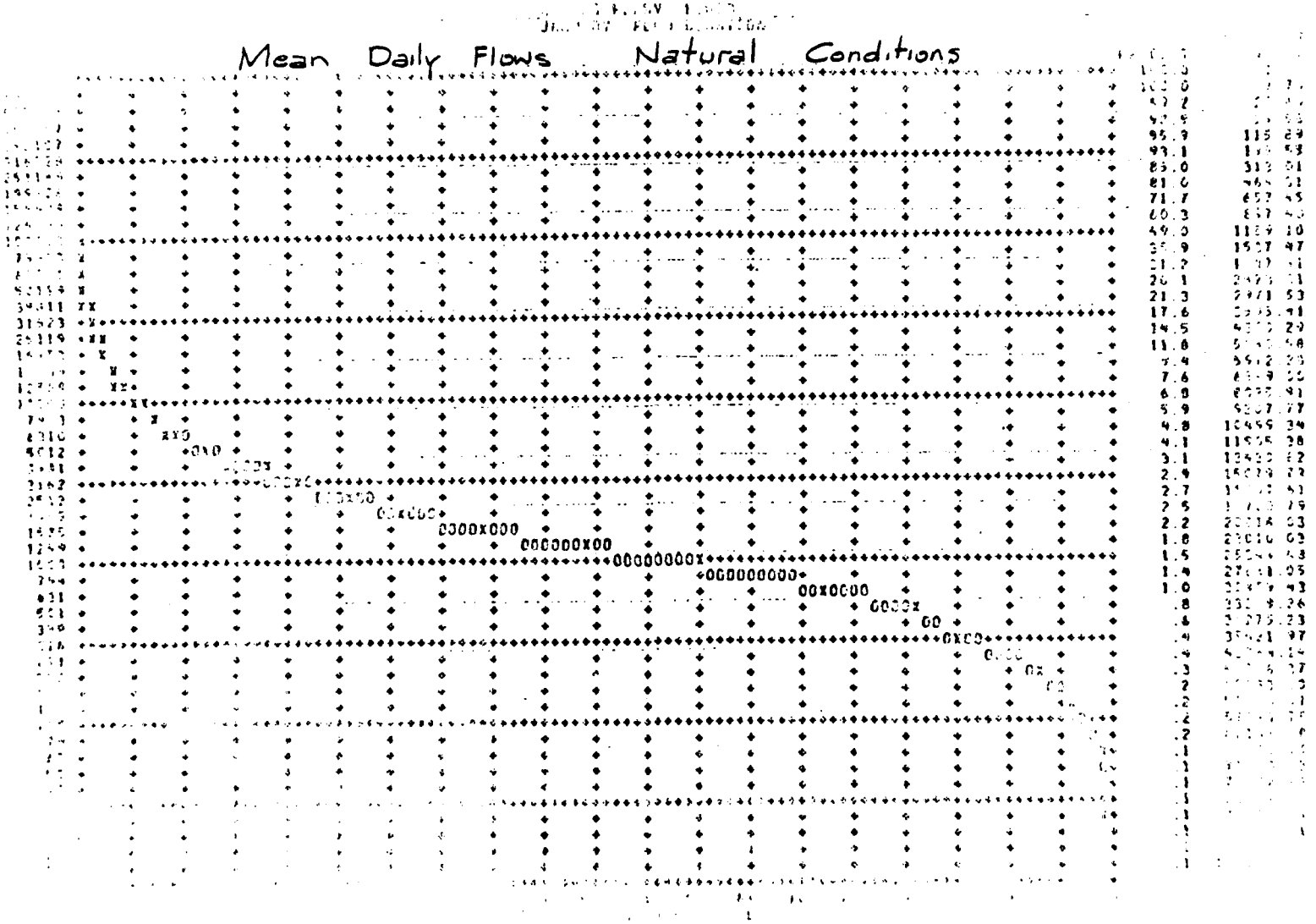


Fig. 16

Mean Daily Flows Natural Conditions

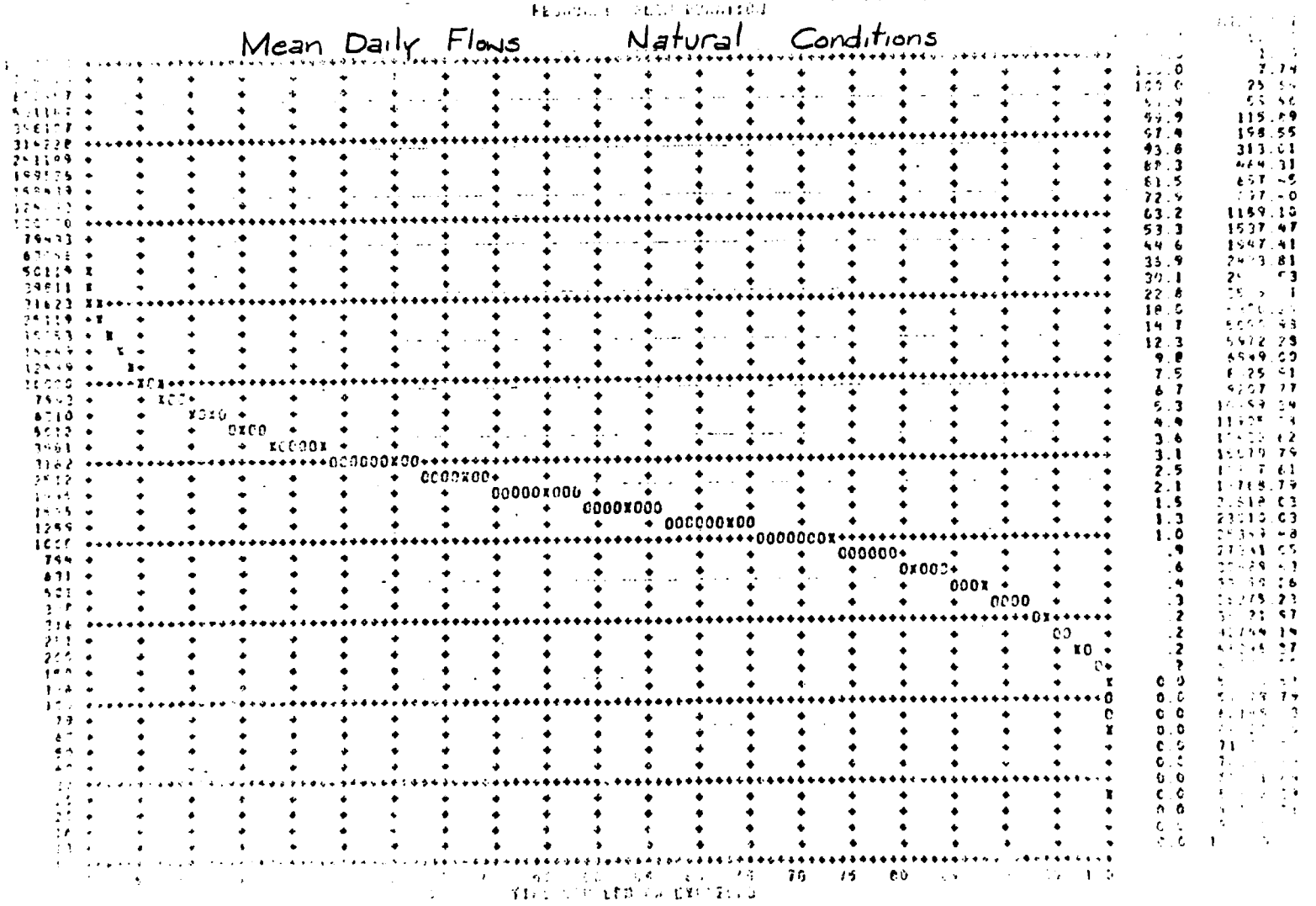


Fig. 17

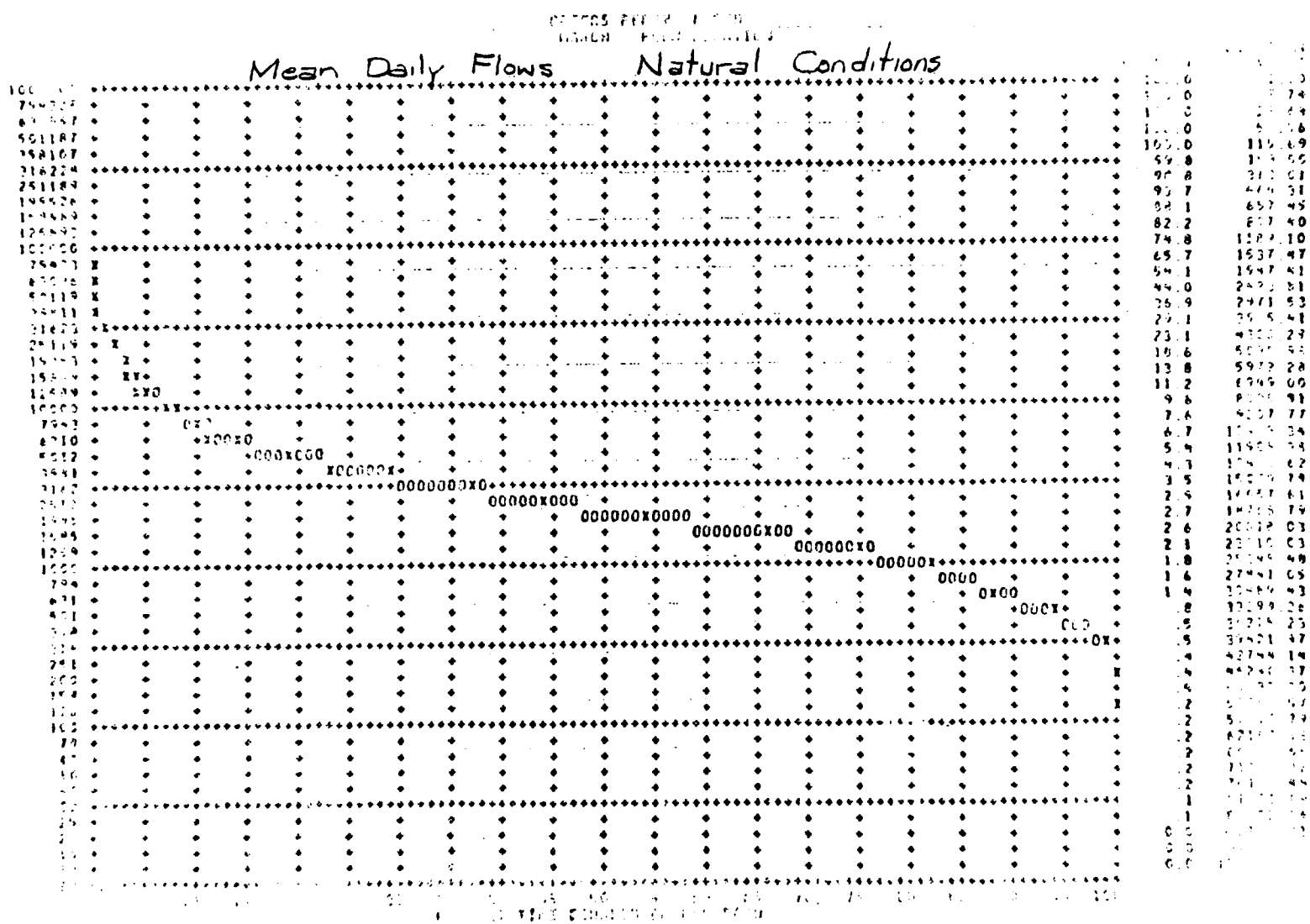


Fig. 18

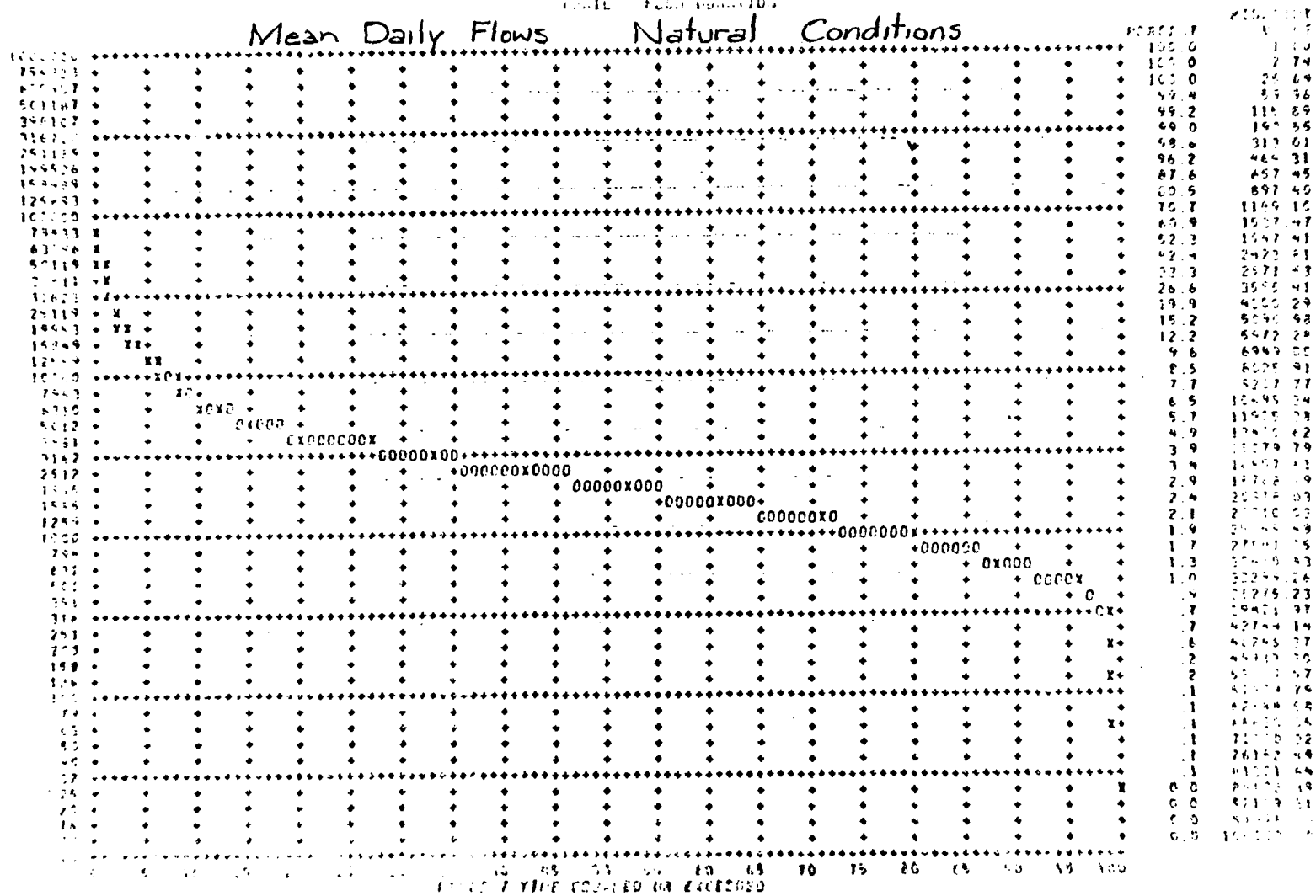


Fig. 19

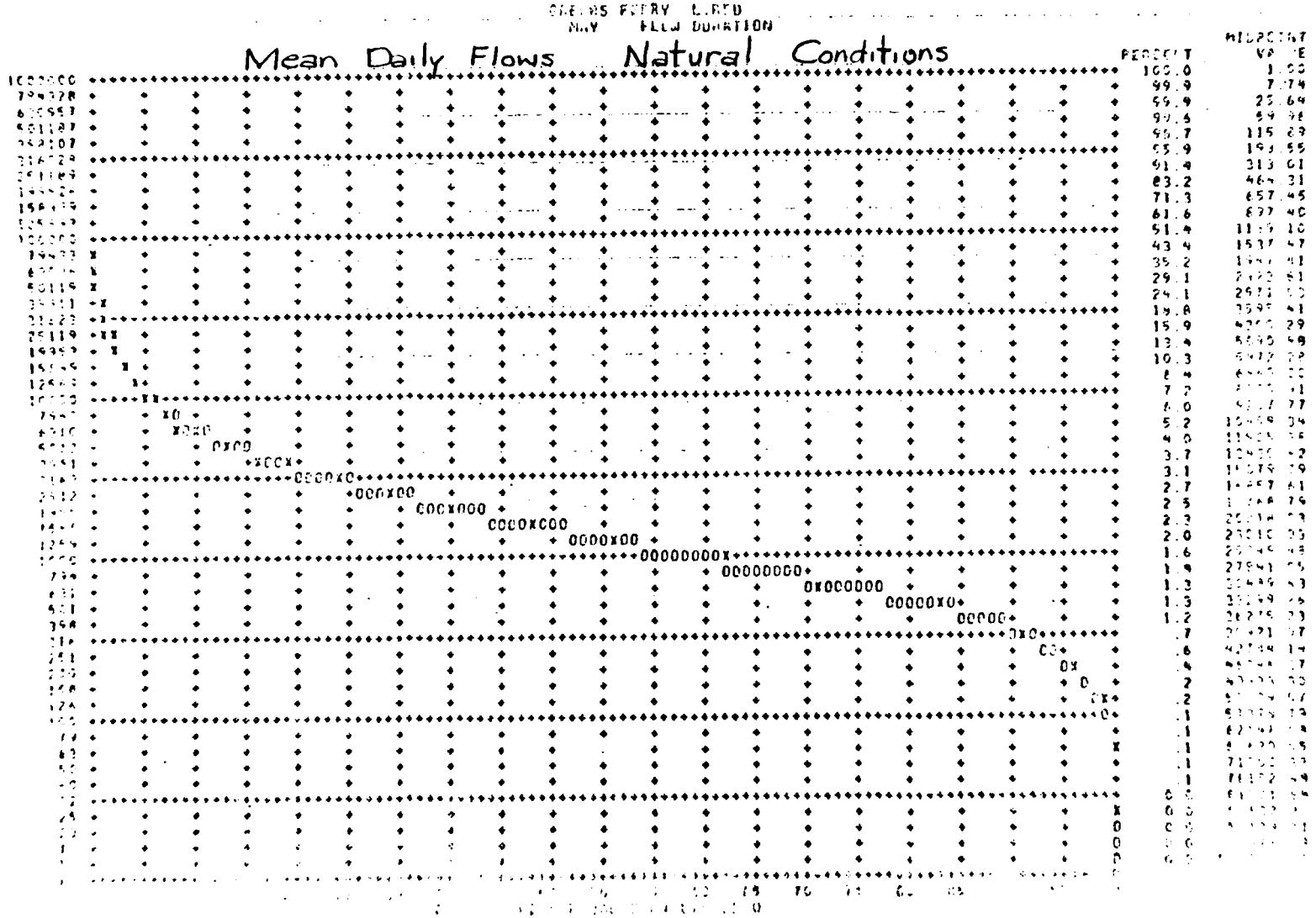

CREEKS FERRY L.RED
MAY FLOW DURATION
Mean Daily Flows Natural Conditions
PERCENT
MIDPOINT VALUE

Fig. 20

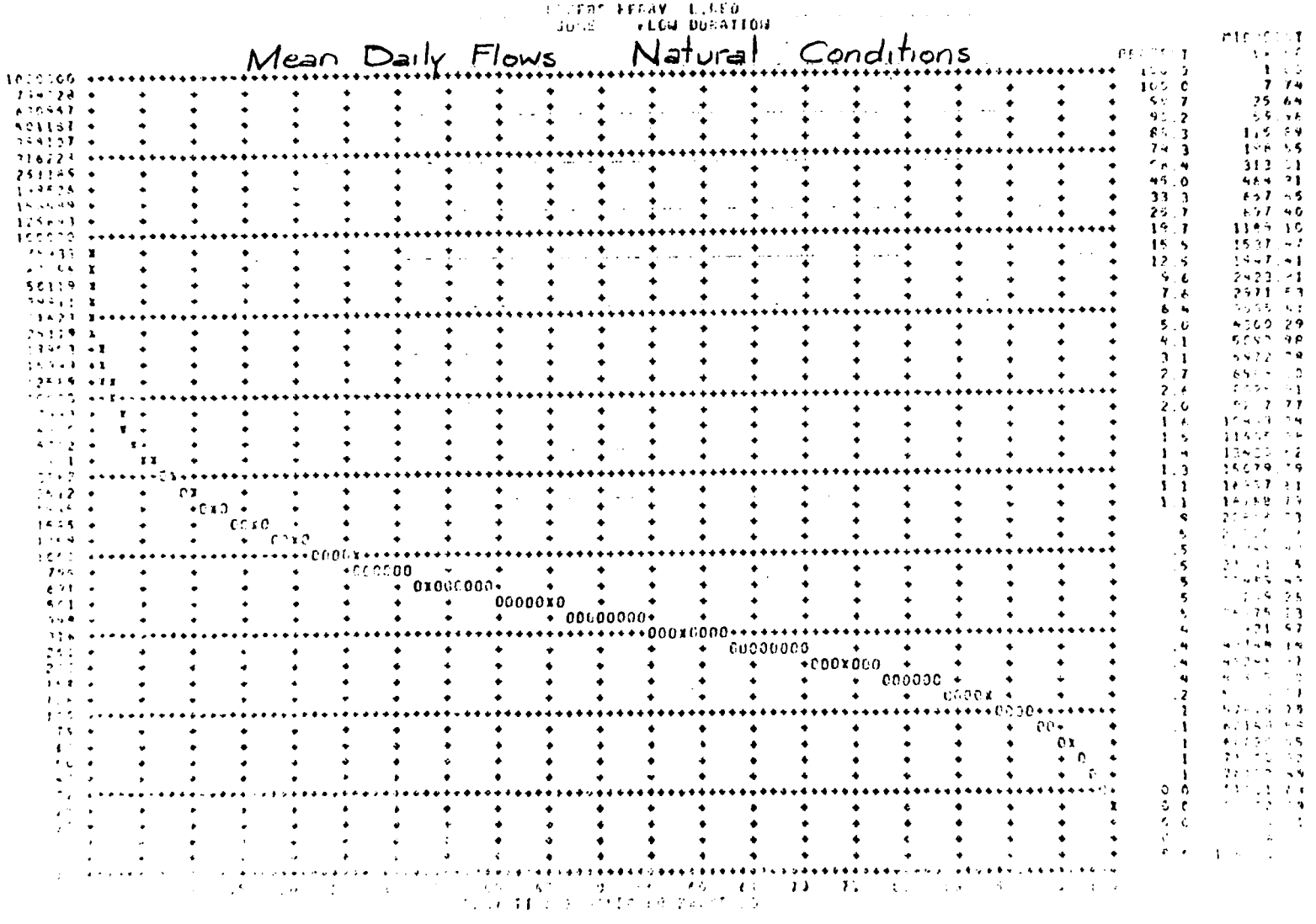


Fig. 21

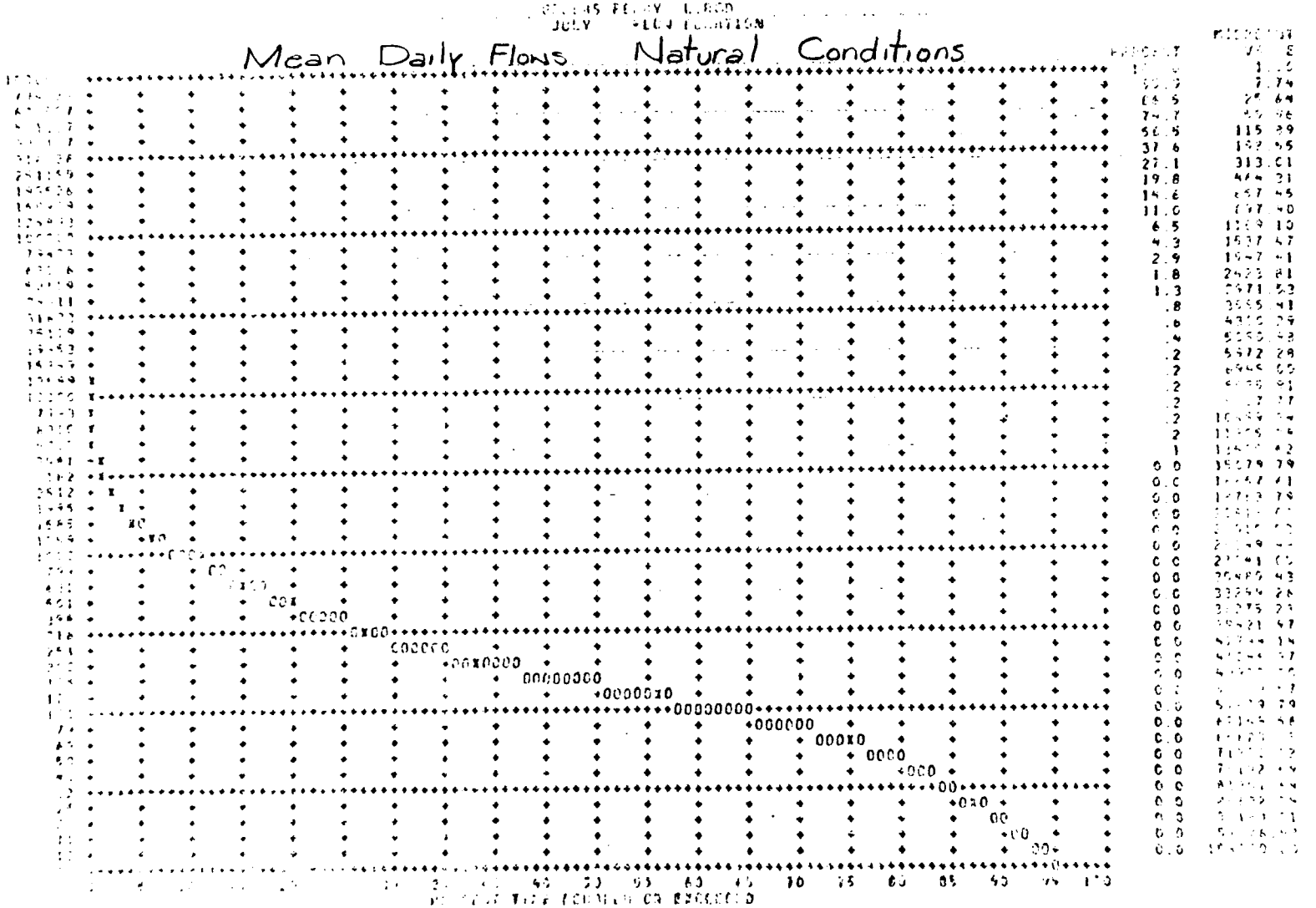


Fig 22

Mean Daily Flows Natural Conditions

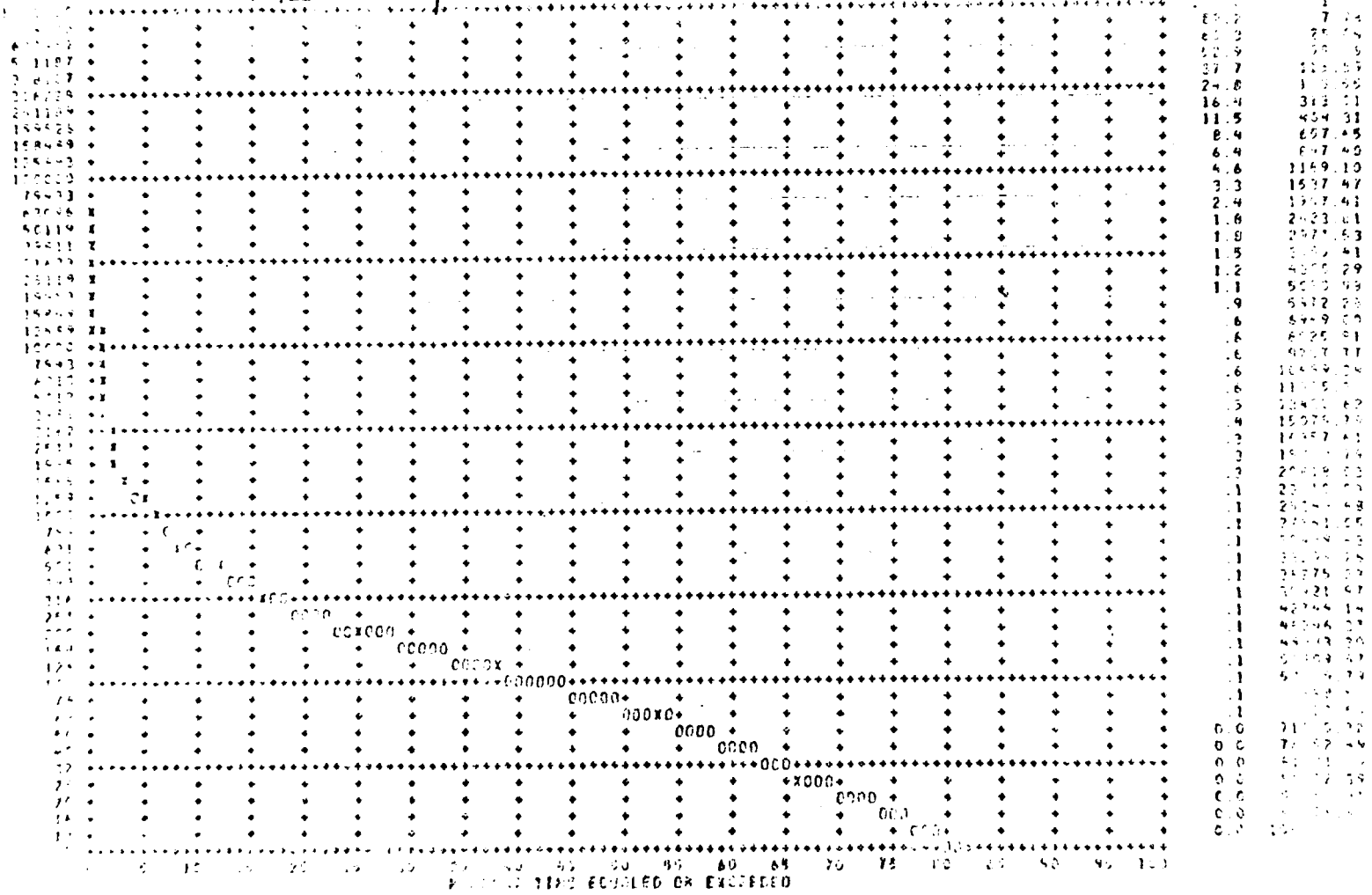


Fig. 23

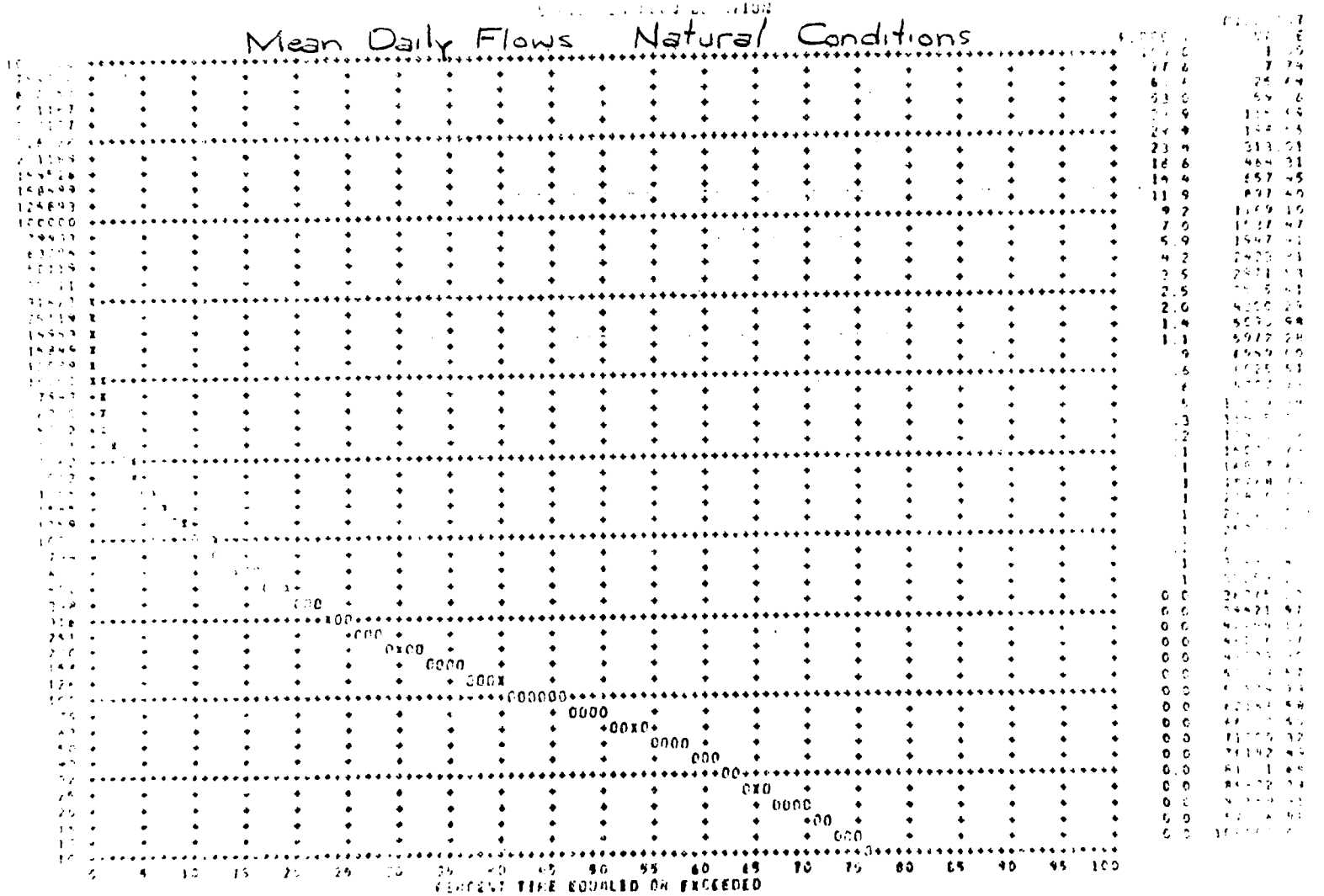

Mean Daily Flows Natural Conditions
PERCENT TIME EQUALED OR EXCEEDED

Fig. 24

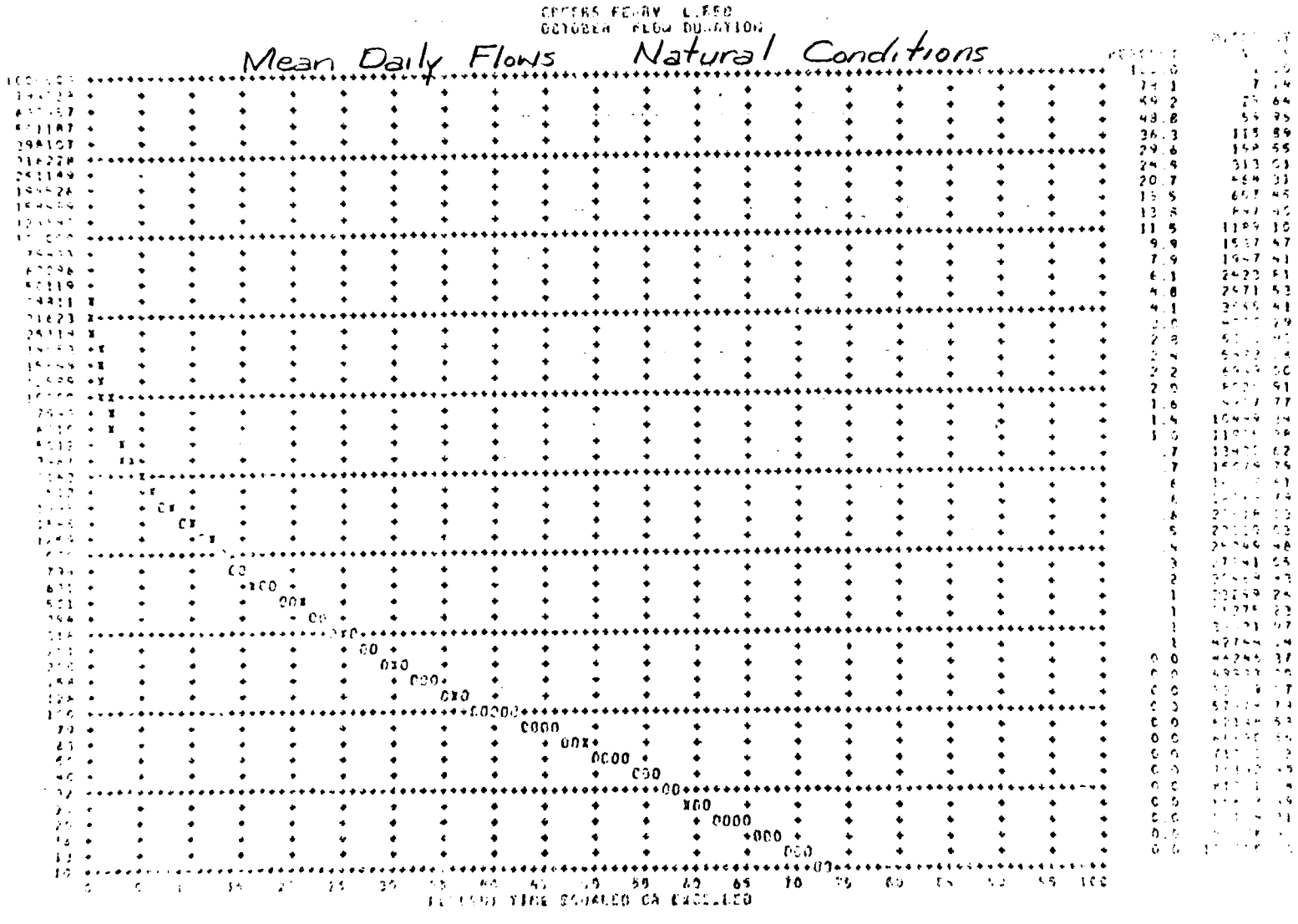


Fig 25

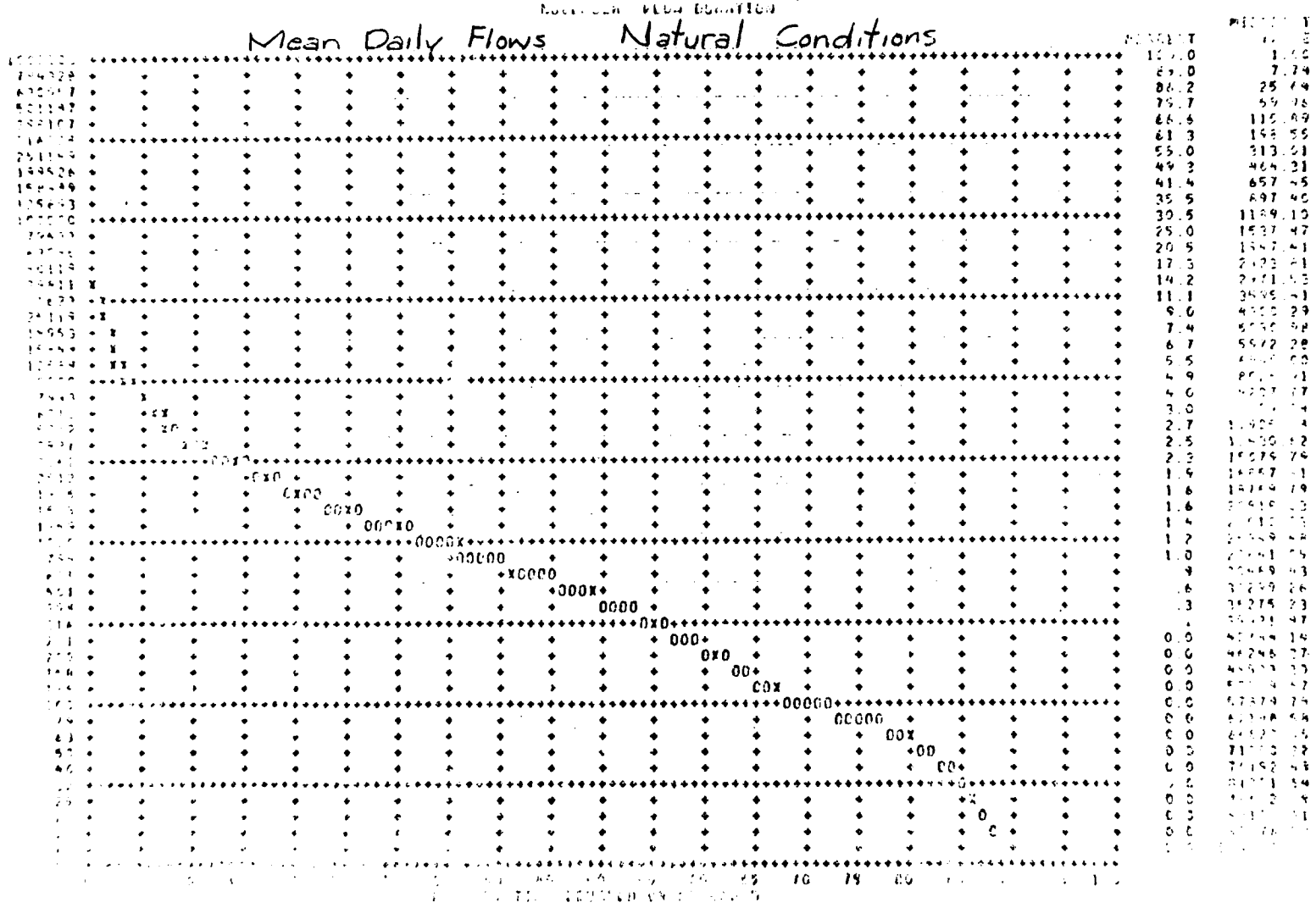


Fig. 26

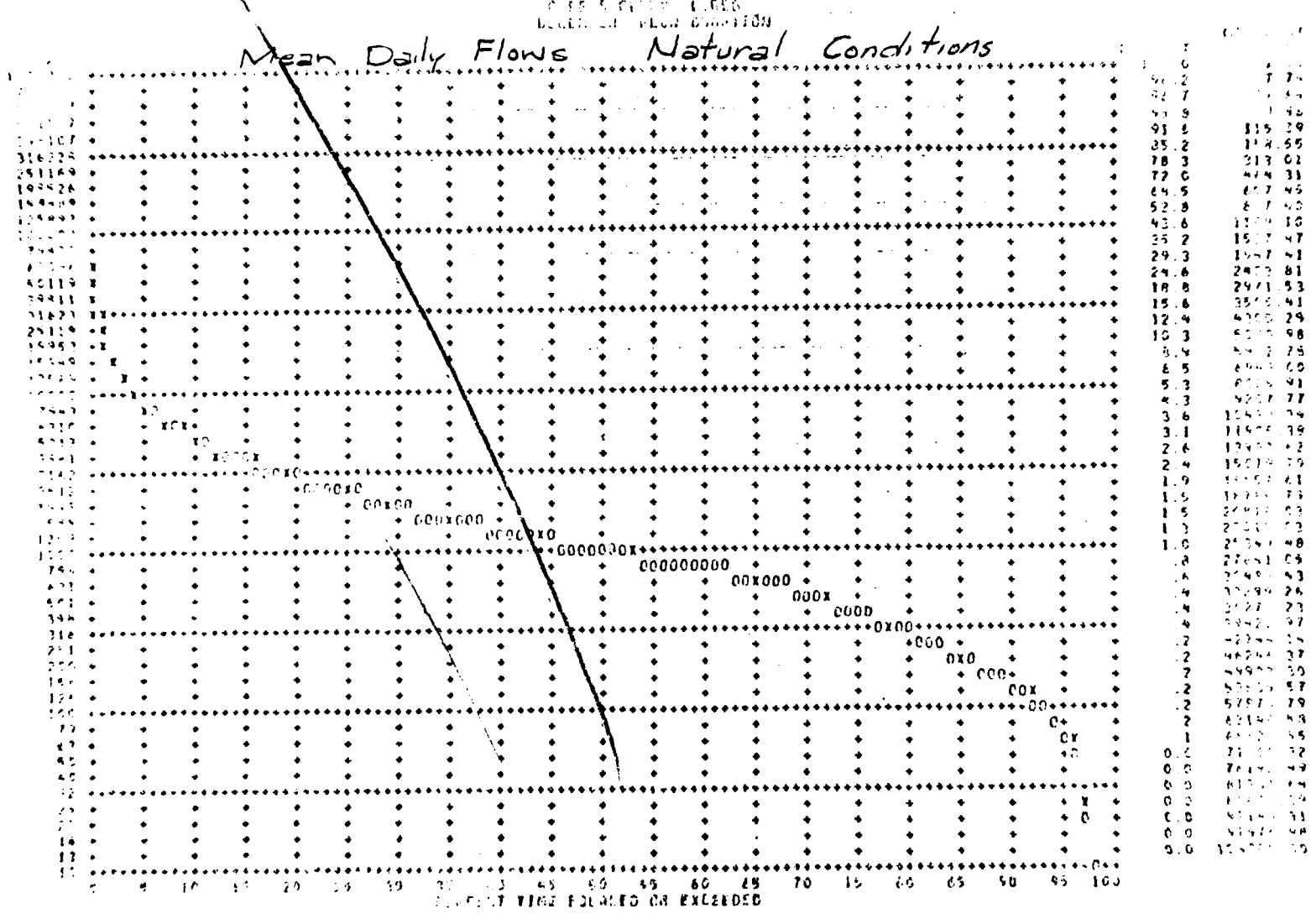
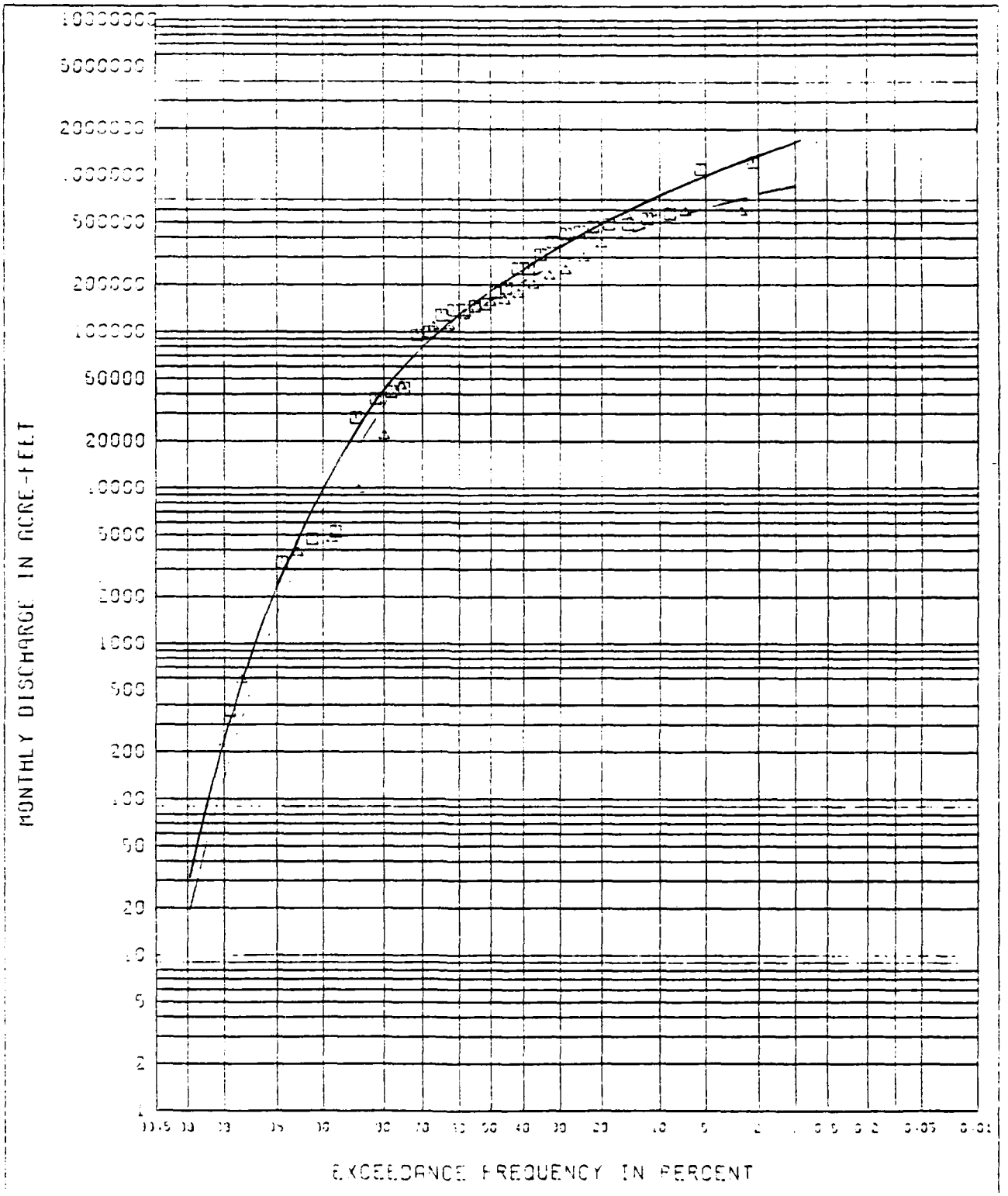


Fig. 27



LEGEND

PRE-IMPOUNDMENT CONDITIONS
PERIOD OF RECORD (1923-1953)

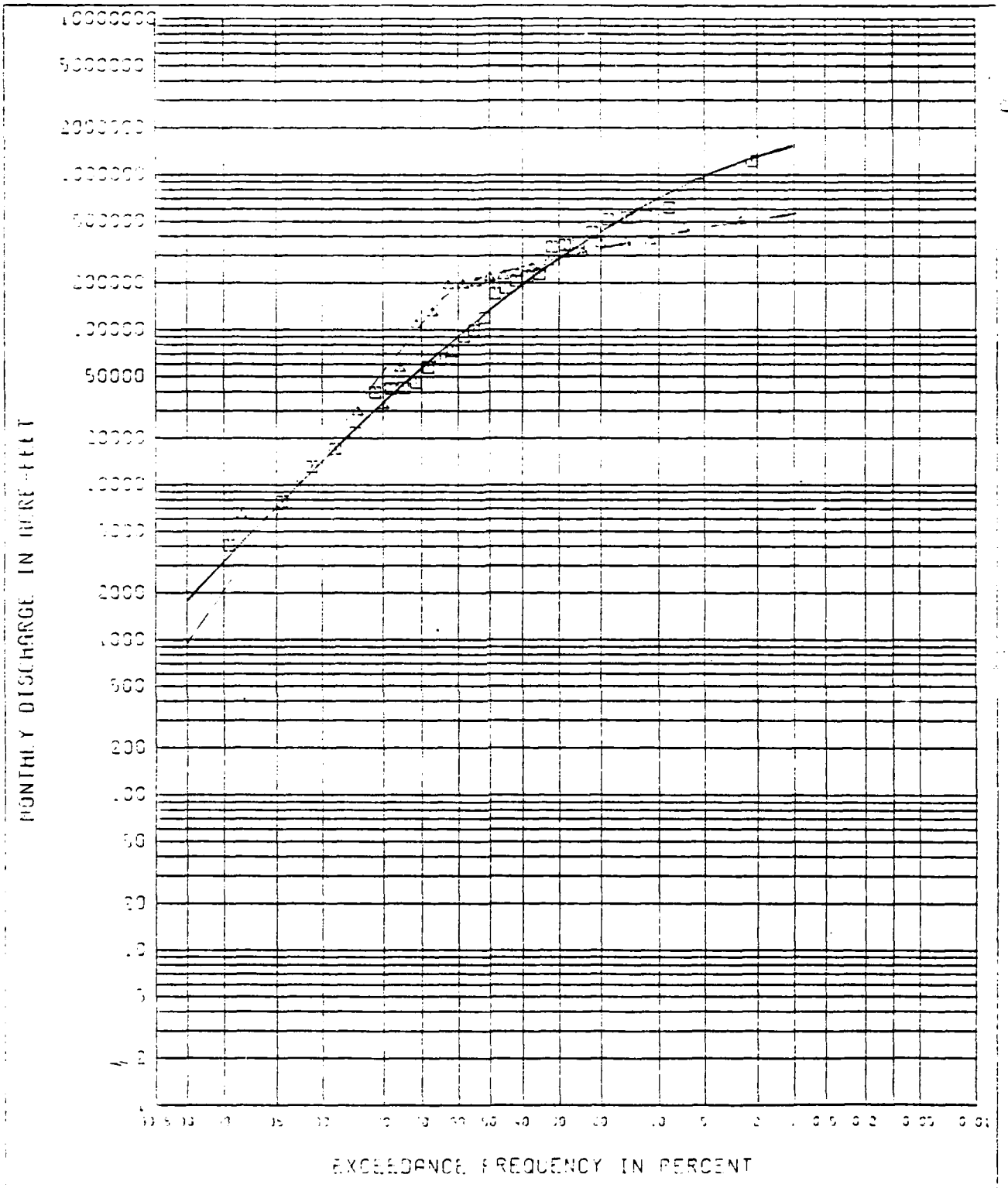
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
JANUARY 1940 S

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
PERIOD OF RECORD (1923-1953)

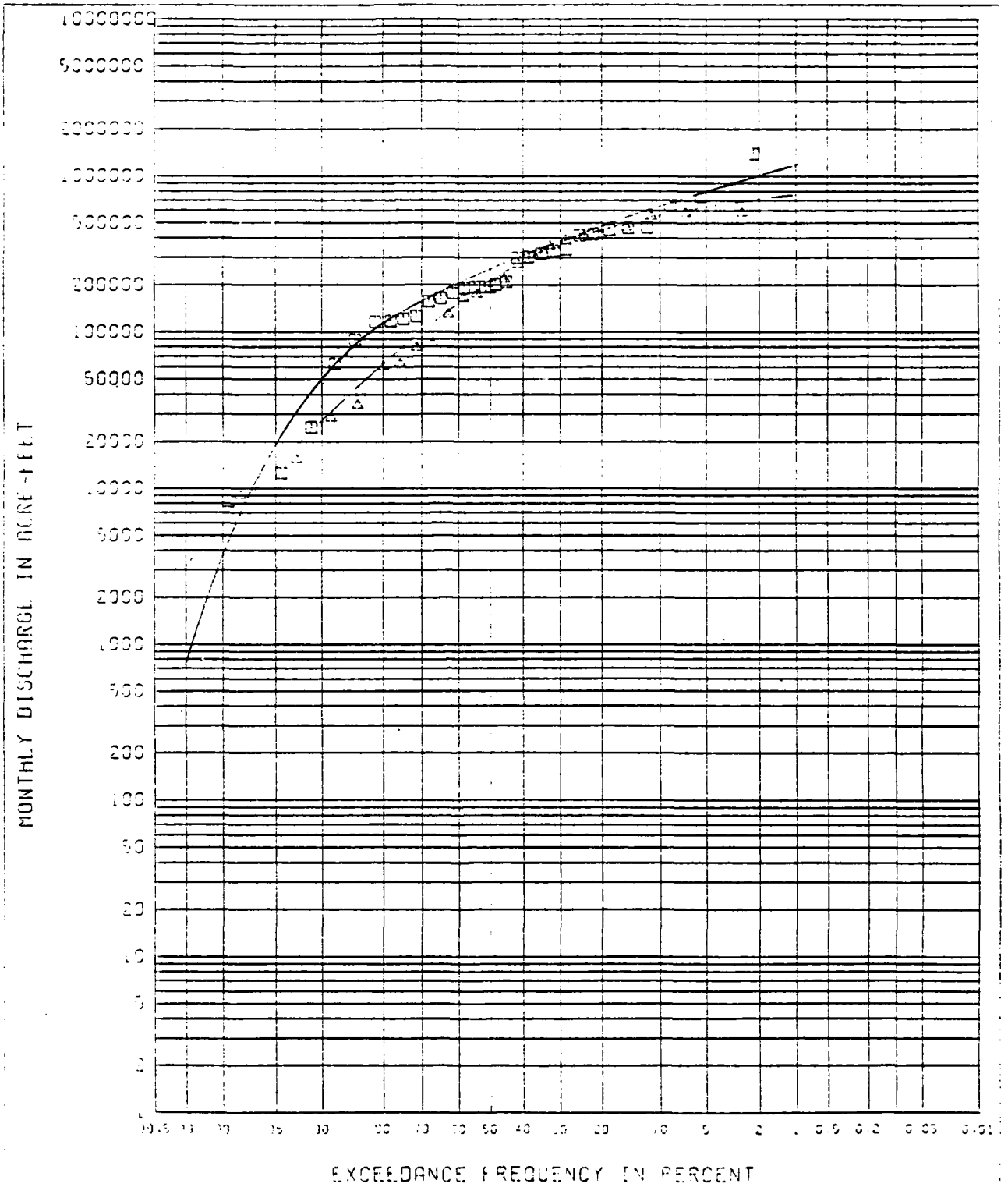
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

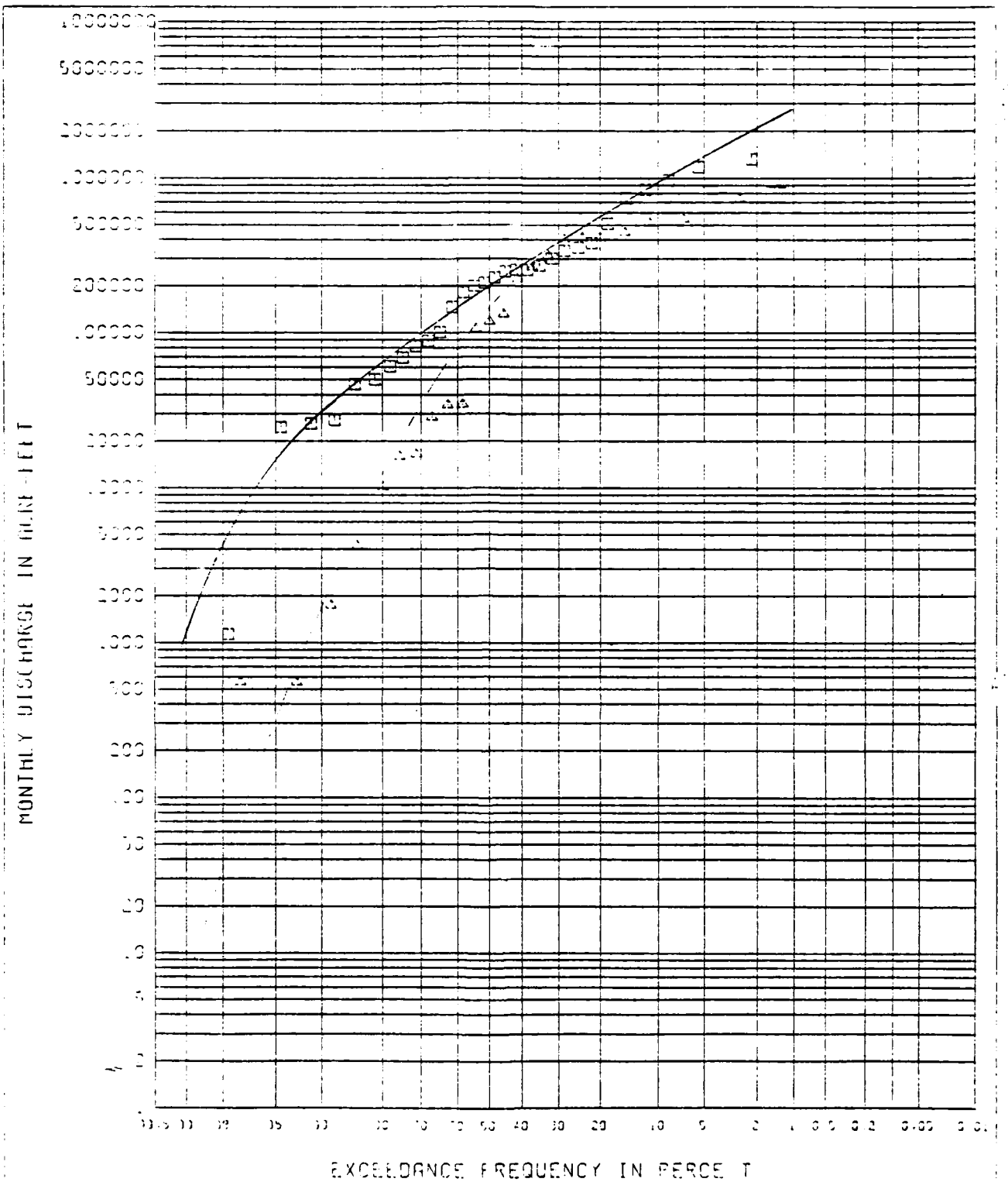
PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1923-1957)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 3



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1923-1953)

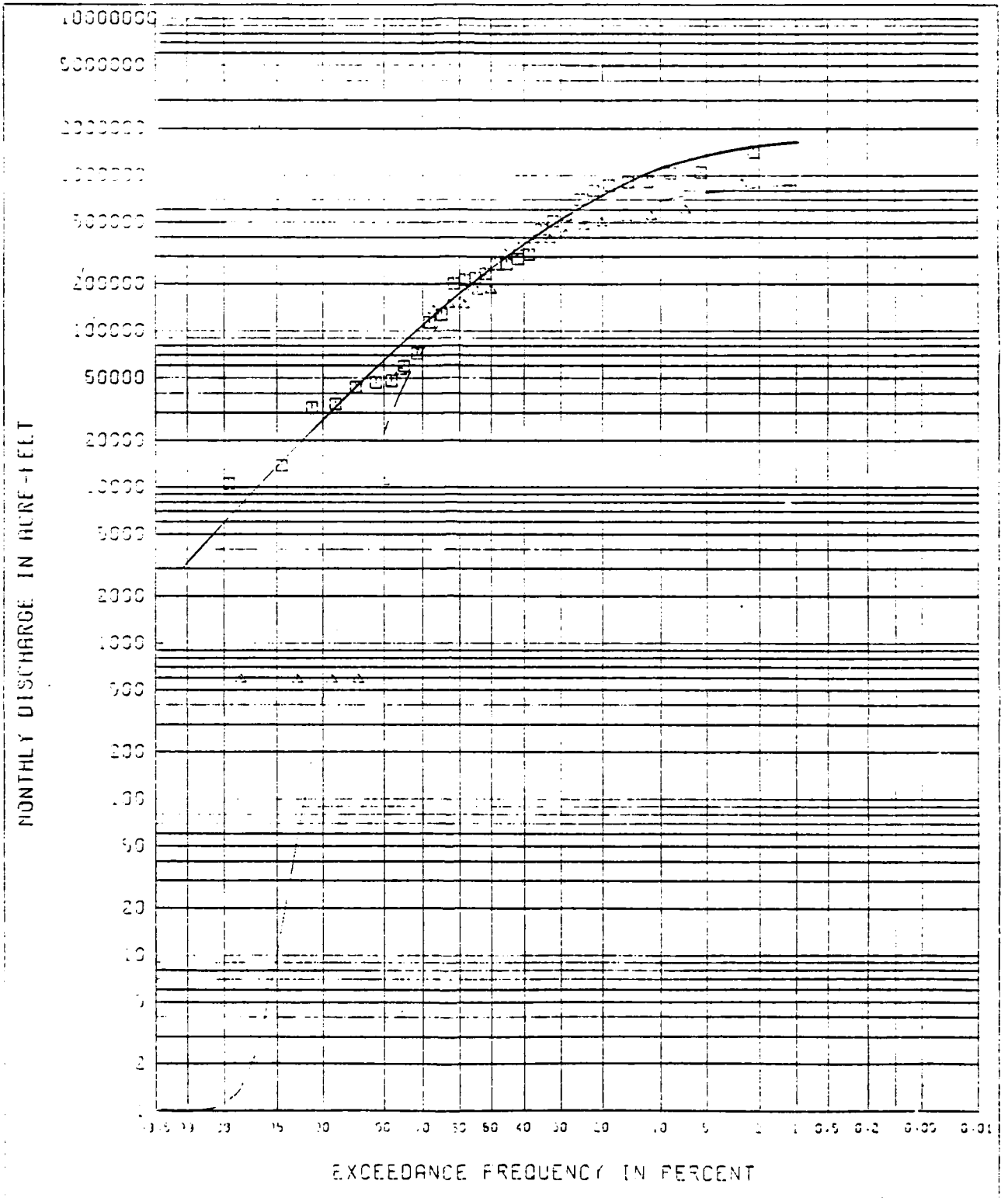
POST-IMPOUNDMENT CONDITIONS
PERIOD OF RECORD (1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INTERIM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1990

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1923-1953)

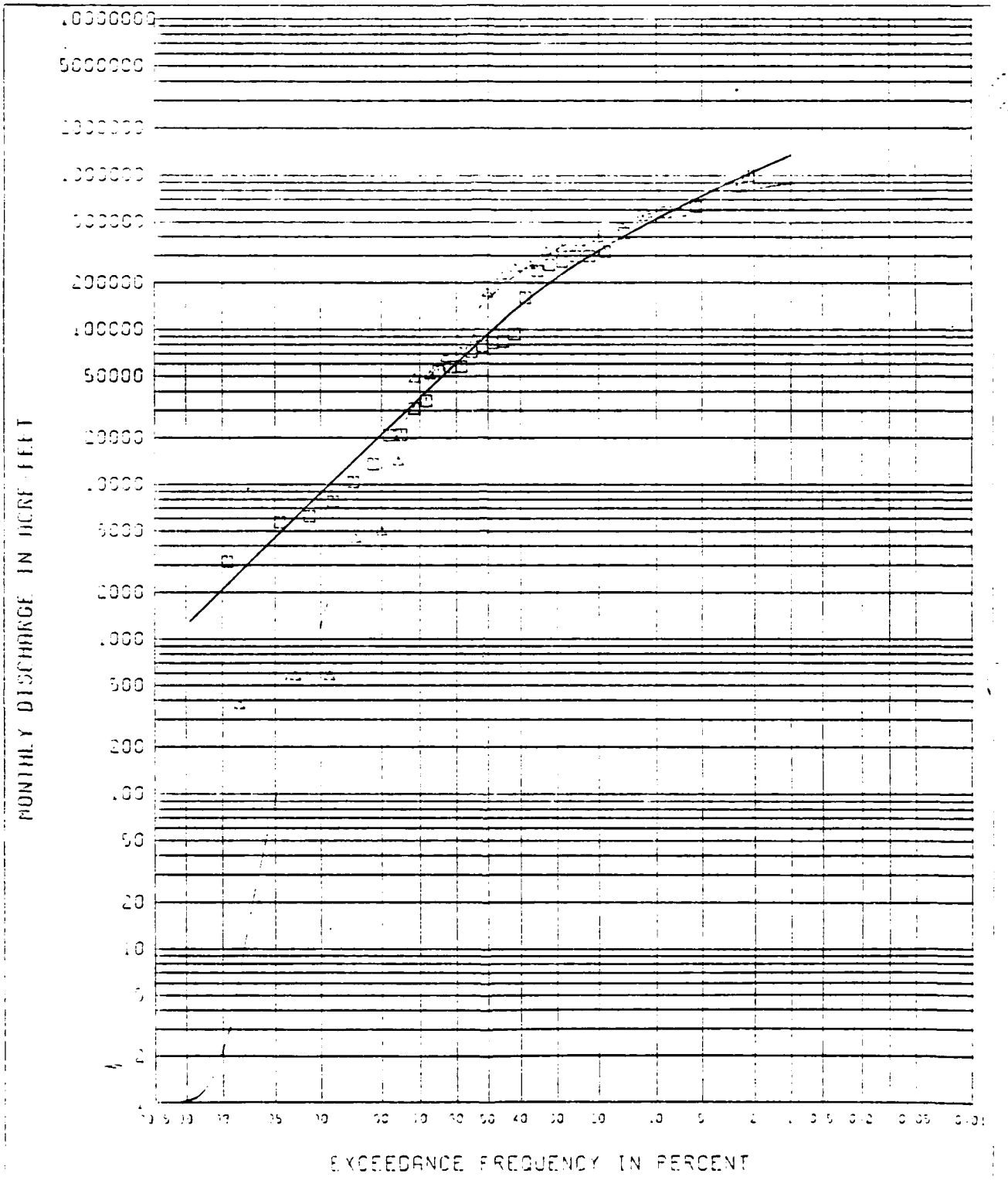
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INTERIM OK PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1923-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS

WRIGHT PATMAN LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

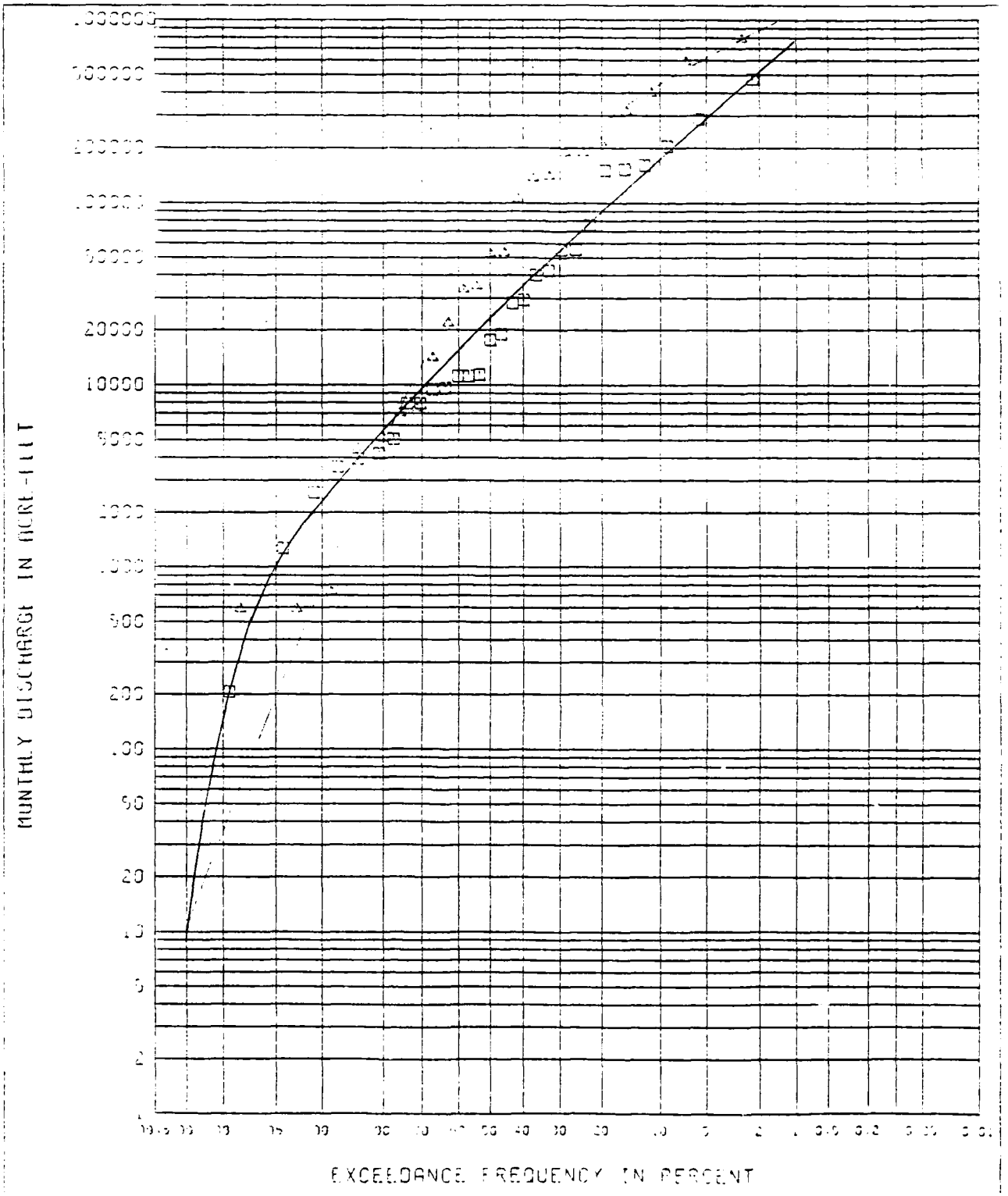
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1923-1953)

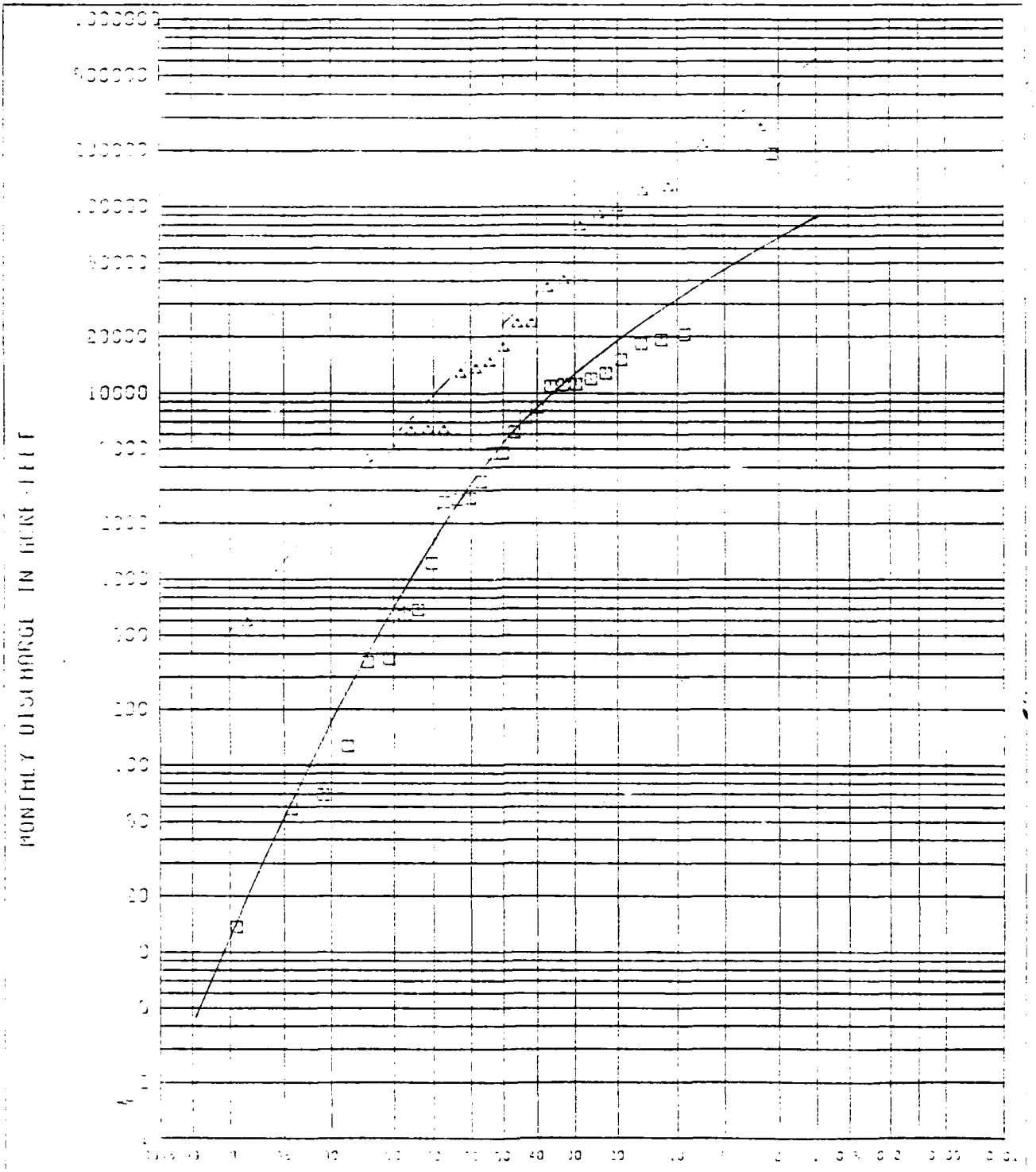
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

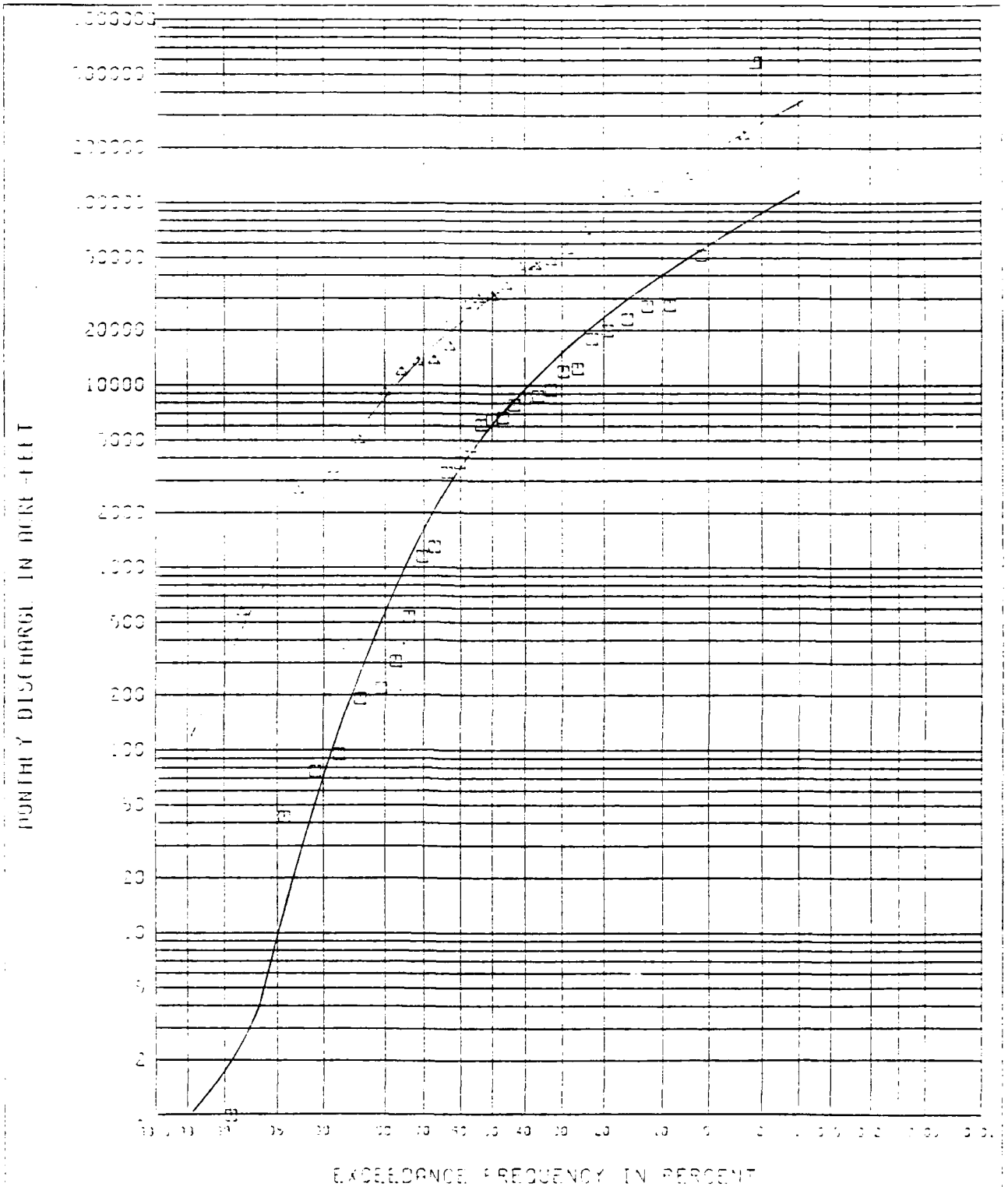
PRE-IMPOUNDMENT CONDITIONS
PERIOD OF RECORD 1923-1953

POST-IMPOUNDMENT CONDITIONS
PERIOD OF RECORD 1954-1973

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

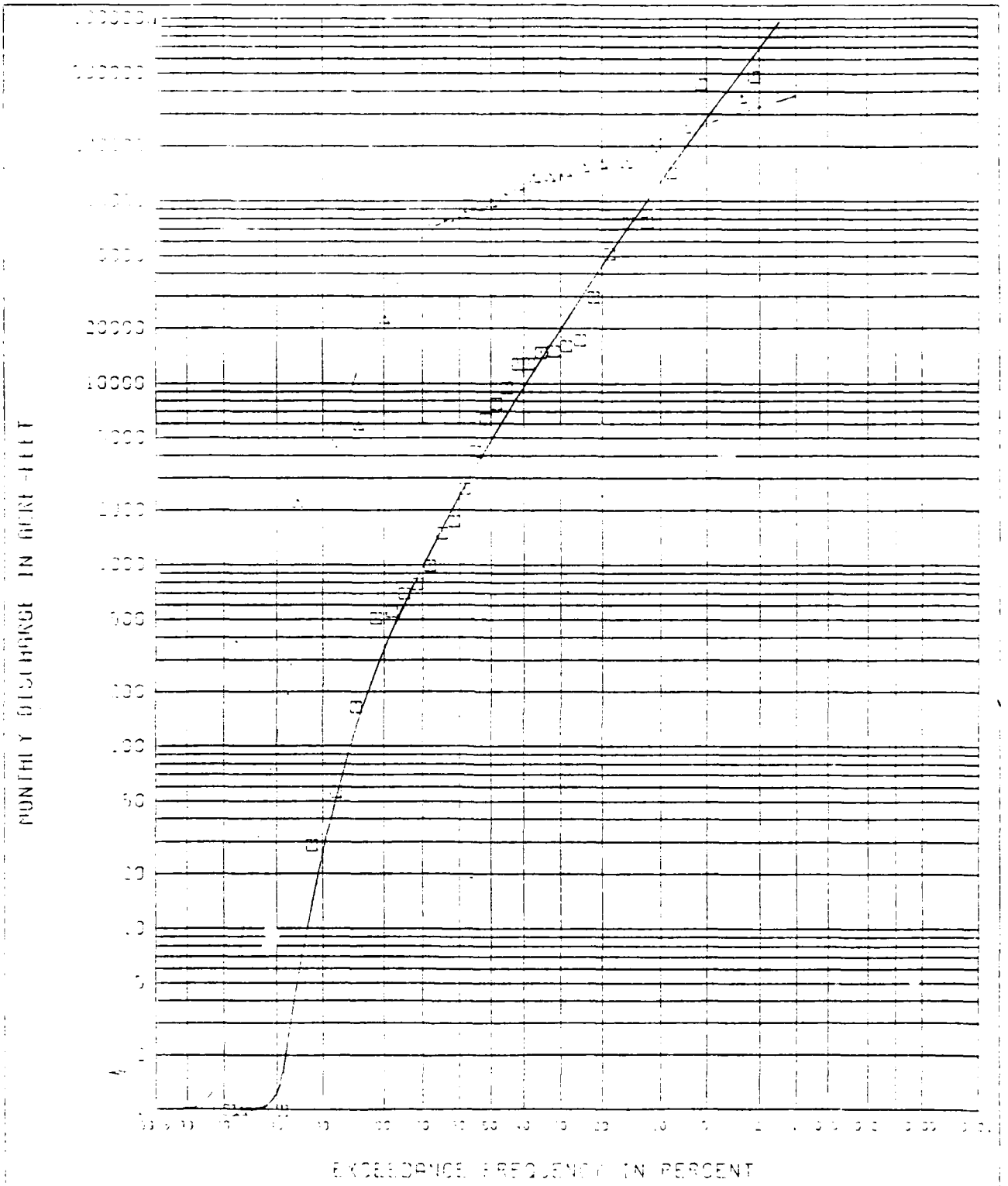
PLATE 8



SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 9



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1939-1957)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1979)

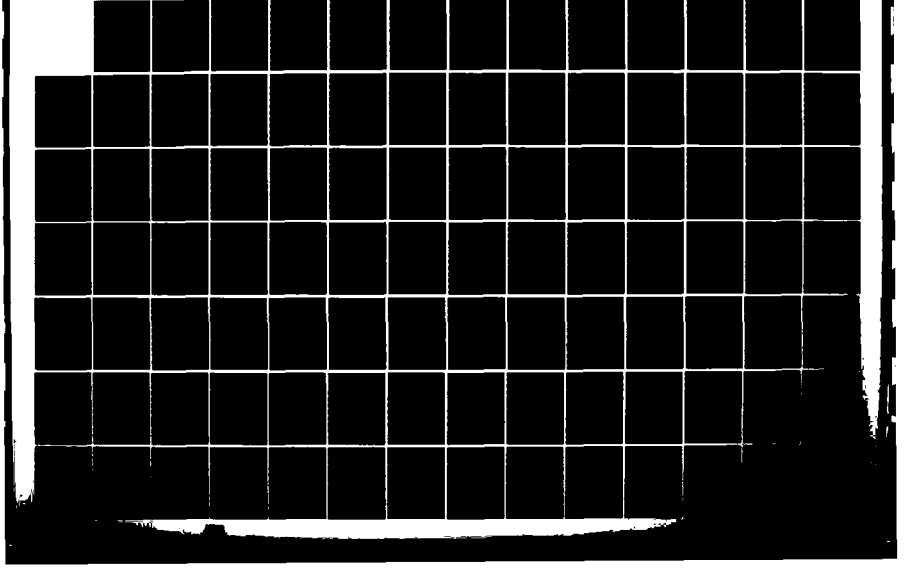
SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
OCTOBER FLOWS

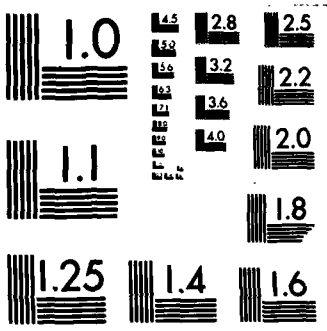
U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INCREMENT FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 10

AD-A156 497 RESERVOIR CONTROL CENTER: ACTIVITIES AND ACCOMPLISHMENTS OF THE SOUTHWEST..(U) CORPS OF ENGINEERS DALLAS TX SOUTHWESTERN DIV JAN 81 2/7

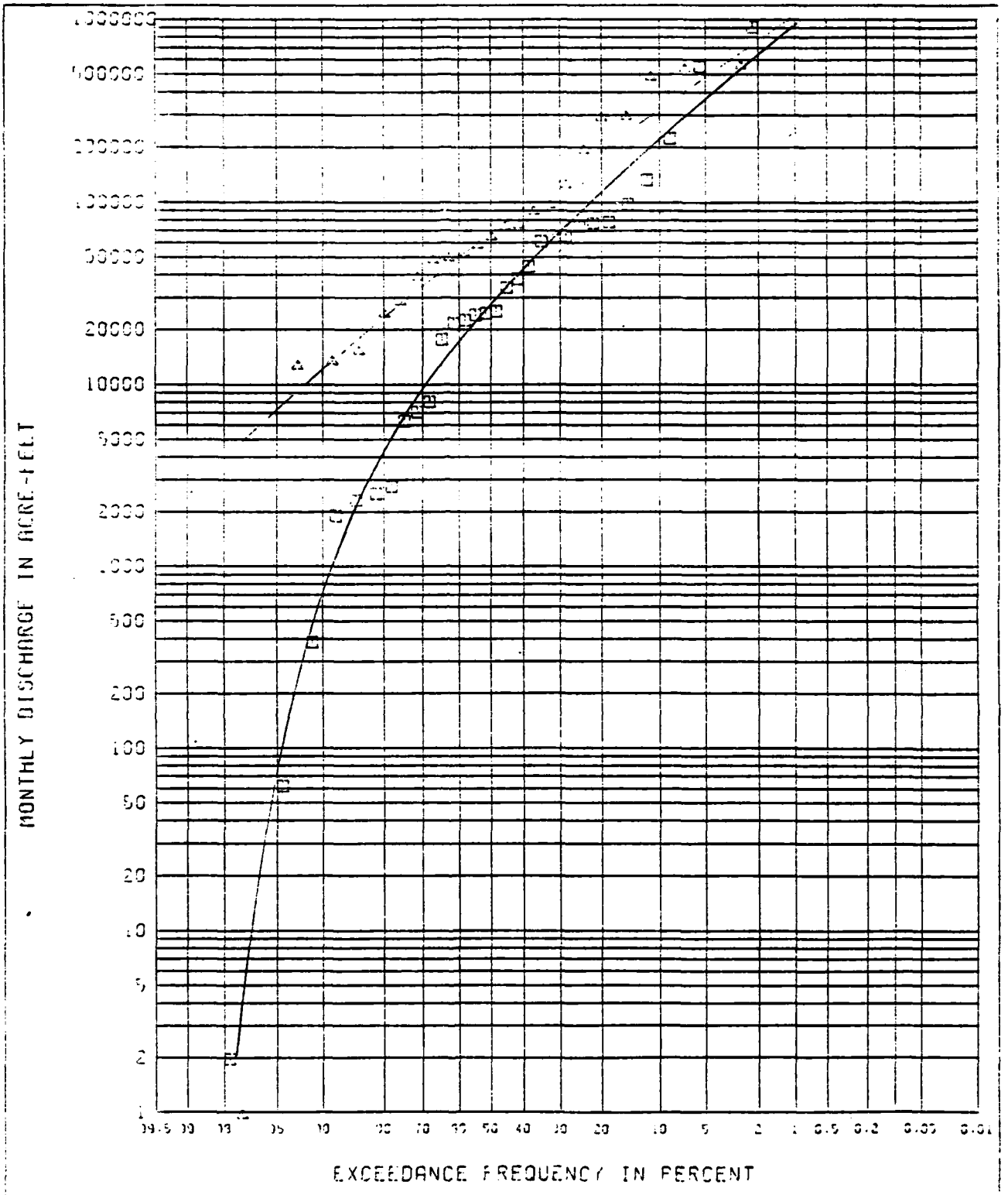
UNCLASSIFIED F/G 13/2 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1923-1957)

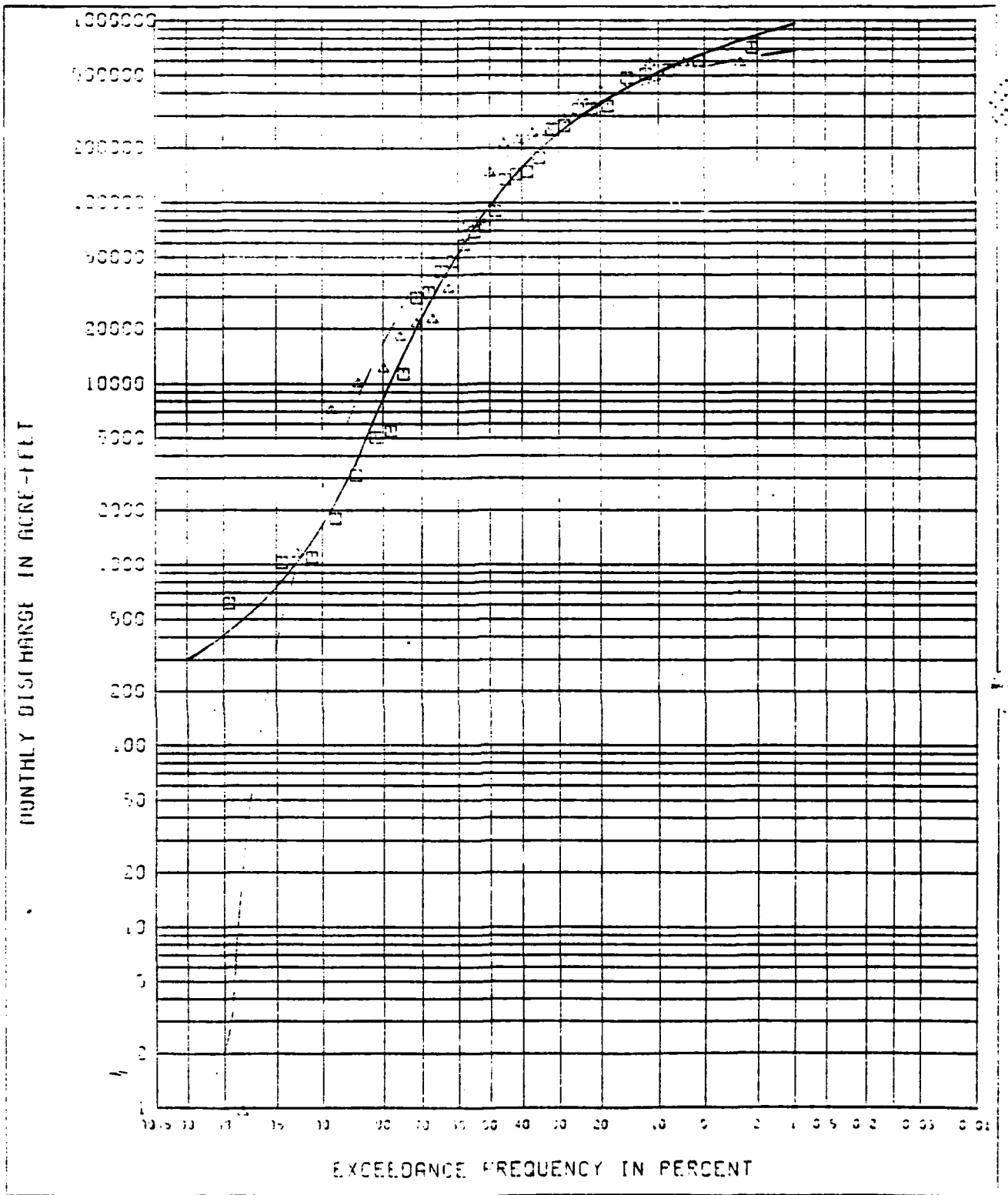
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
DISCHARGE-FREQUENCY RELATIONS AT DAM SITE
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1923-1953)

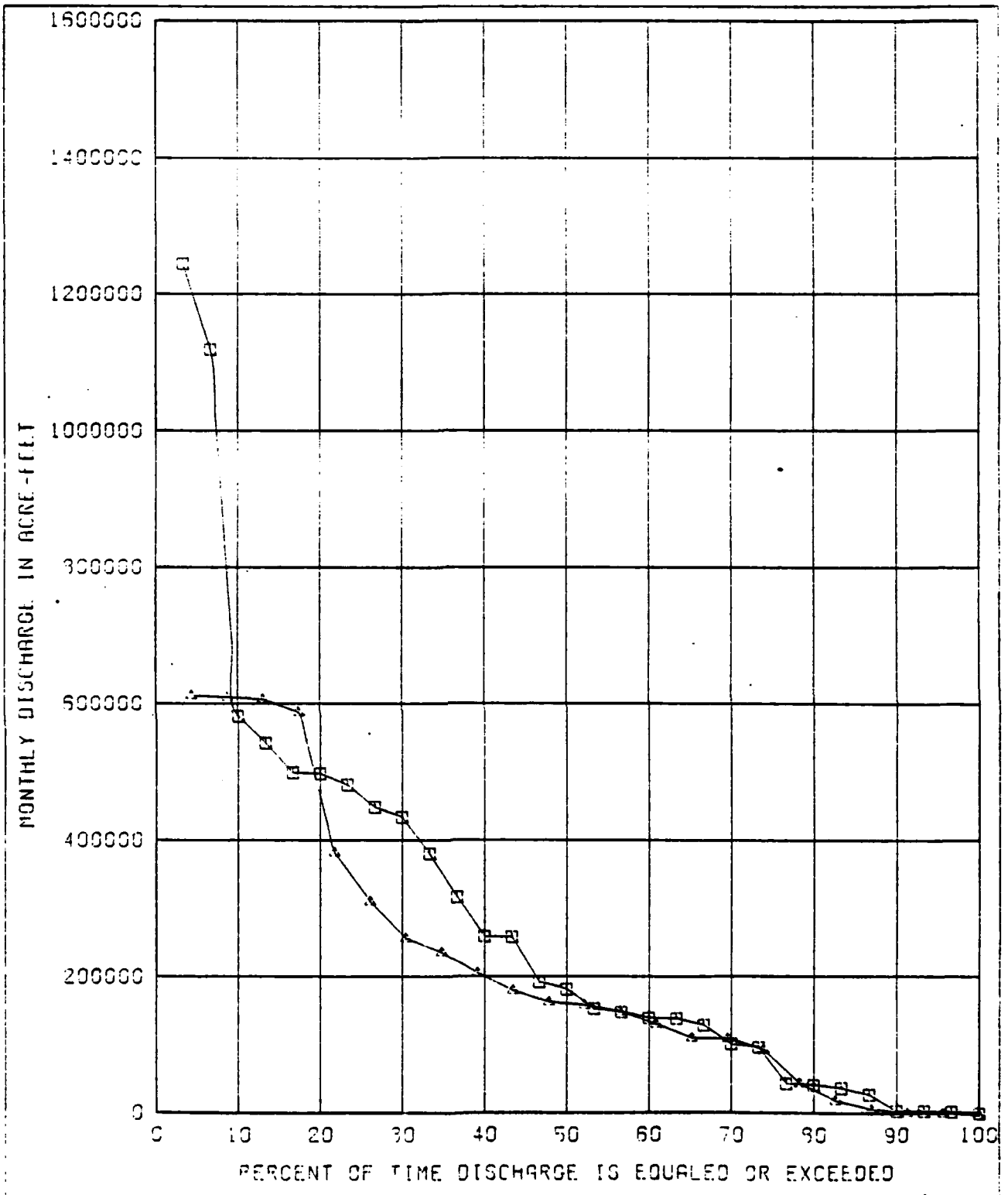
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
DISCHARGE-FREQUENCY RELATIONS AT DAM SITE
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1923-1953)

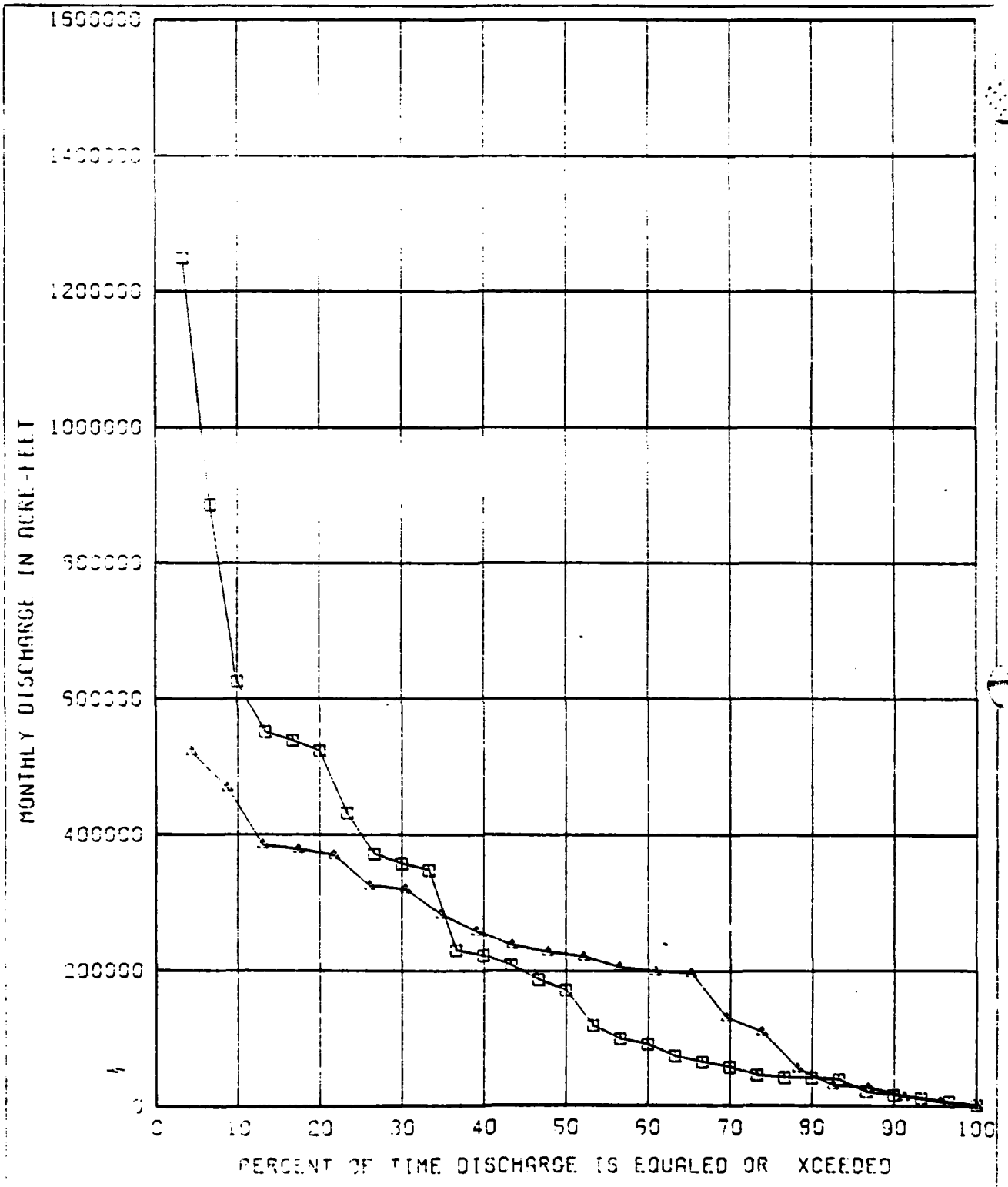
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
FLOW DURATION CURVES AT DAM SITE
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1923-1963)

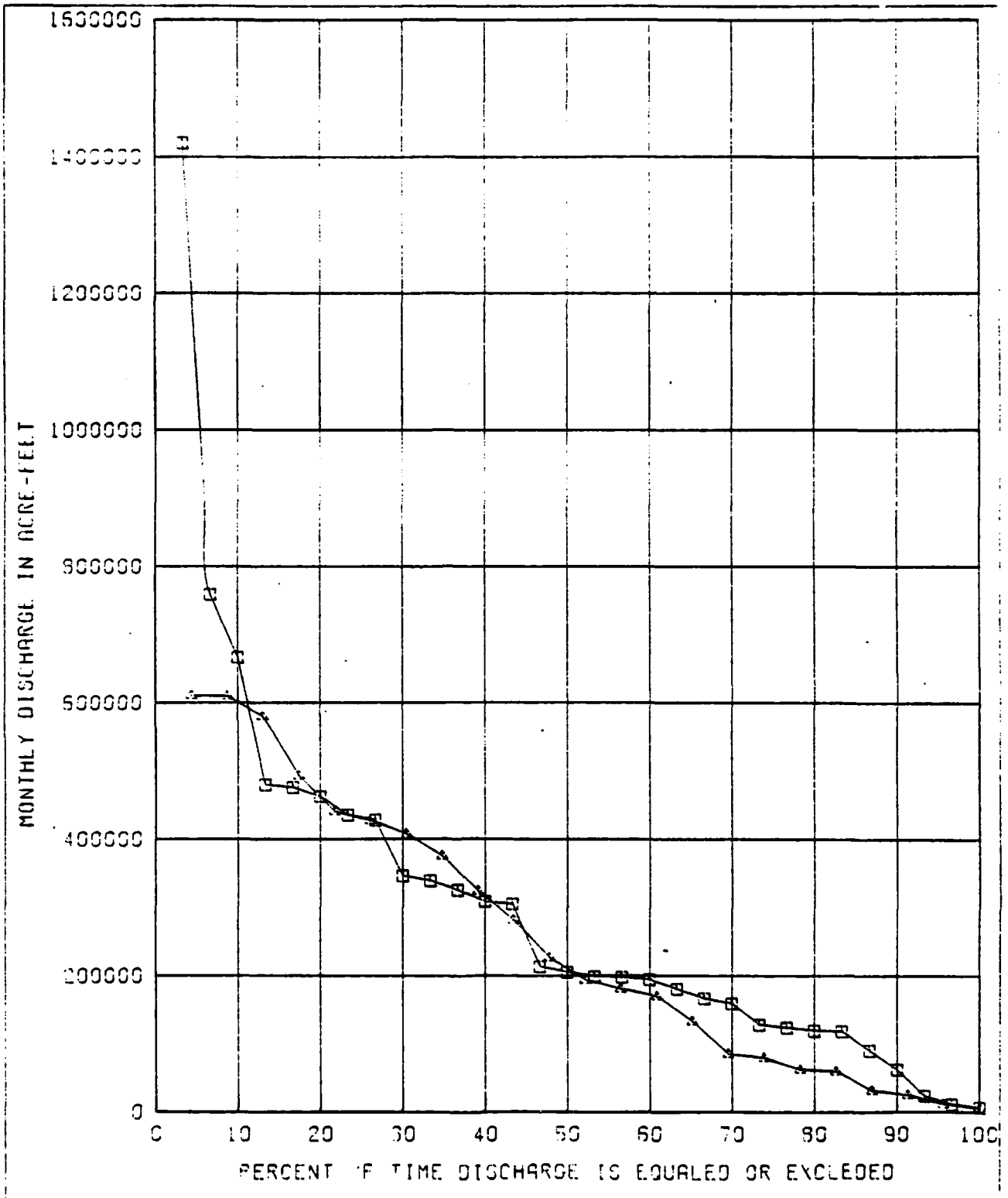
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1977)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
FLOW DURATION CURVES AT DAM SITE
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1923-1953)

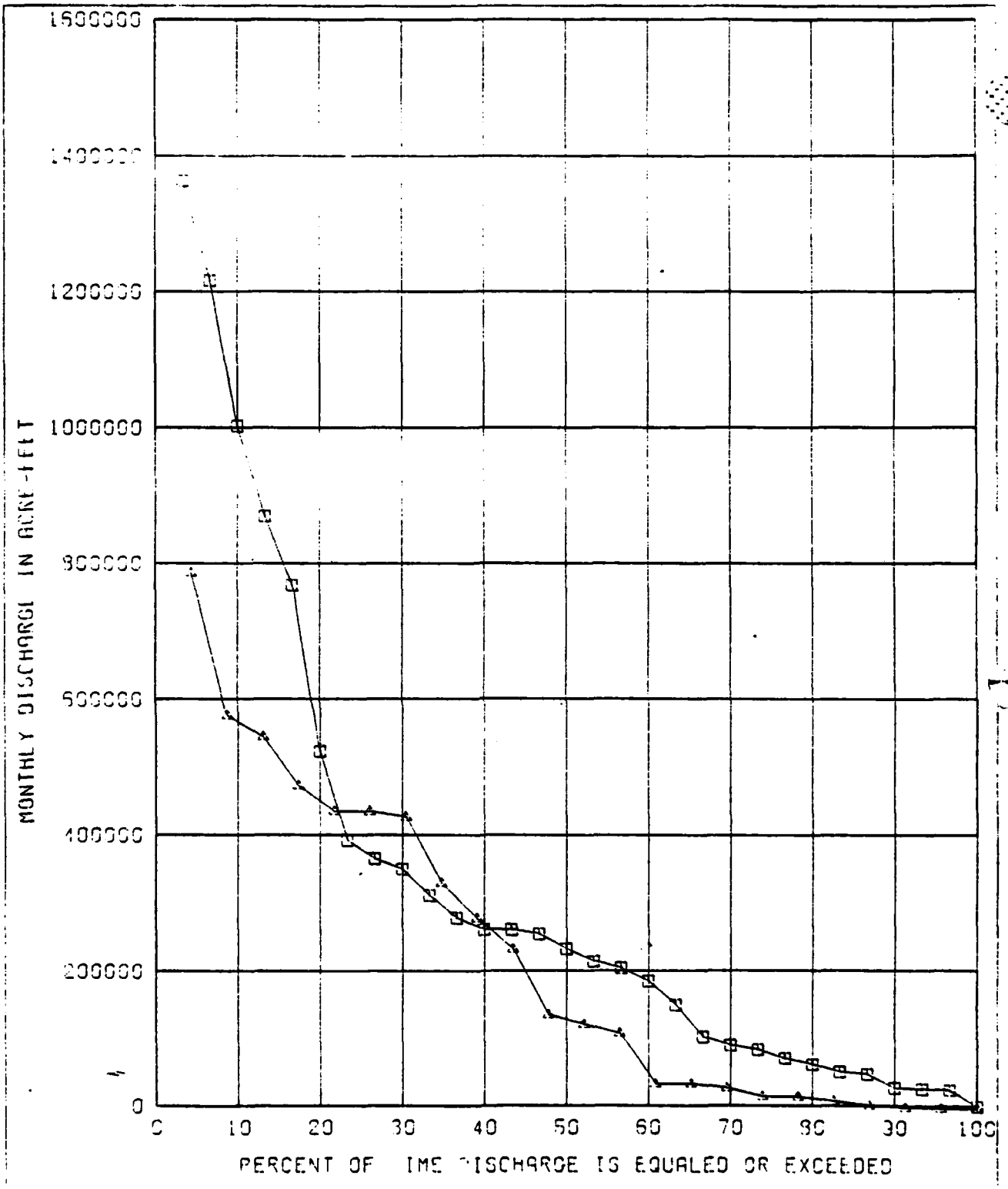
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
FLOW DURATION CURVES AT DAM SITE
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1923-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS

WRIGHT PATMAN LAKE

FLOW DURATION CURVES AT DAM SITE

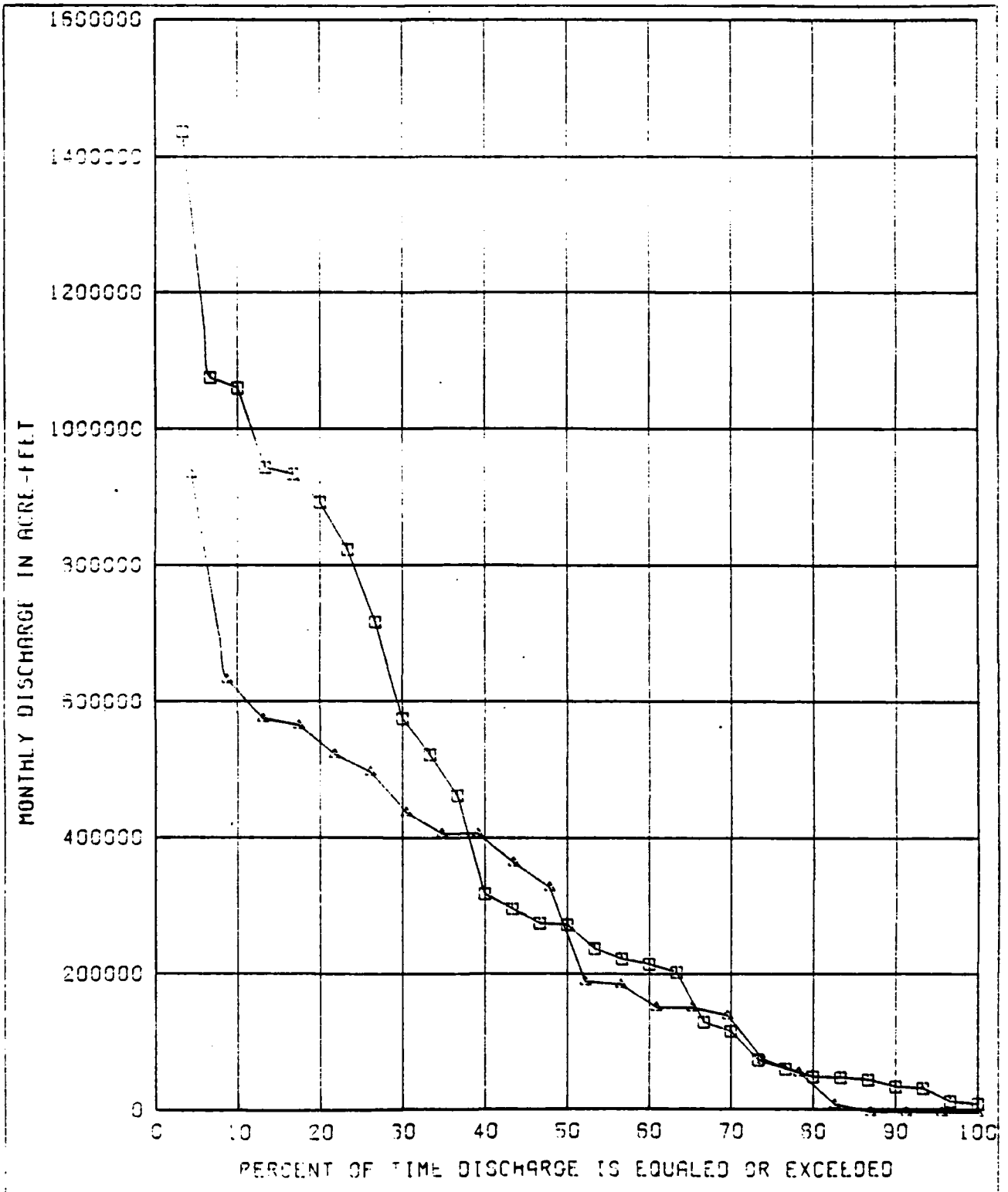
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

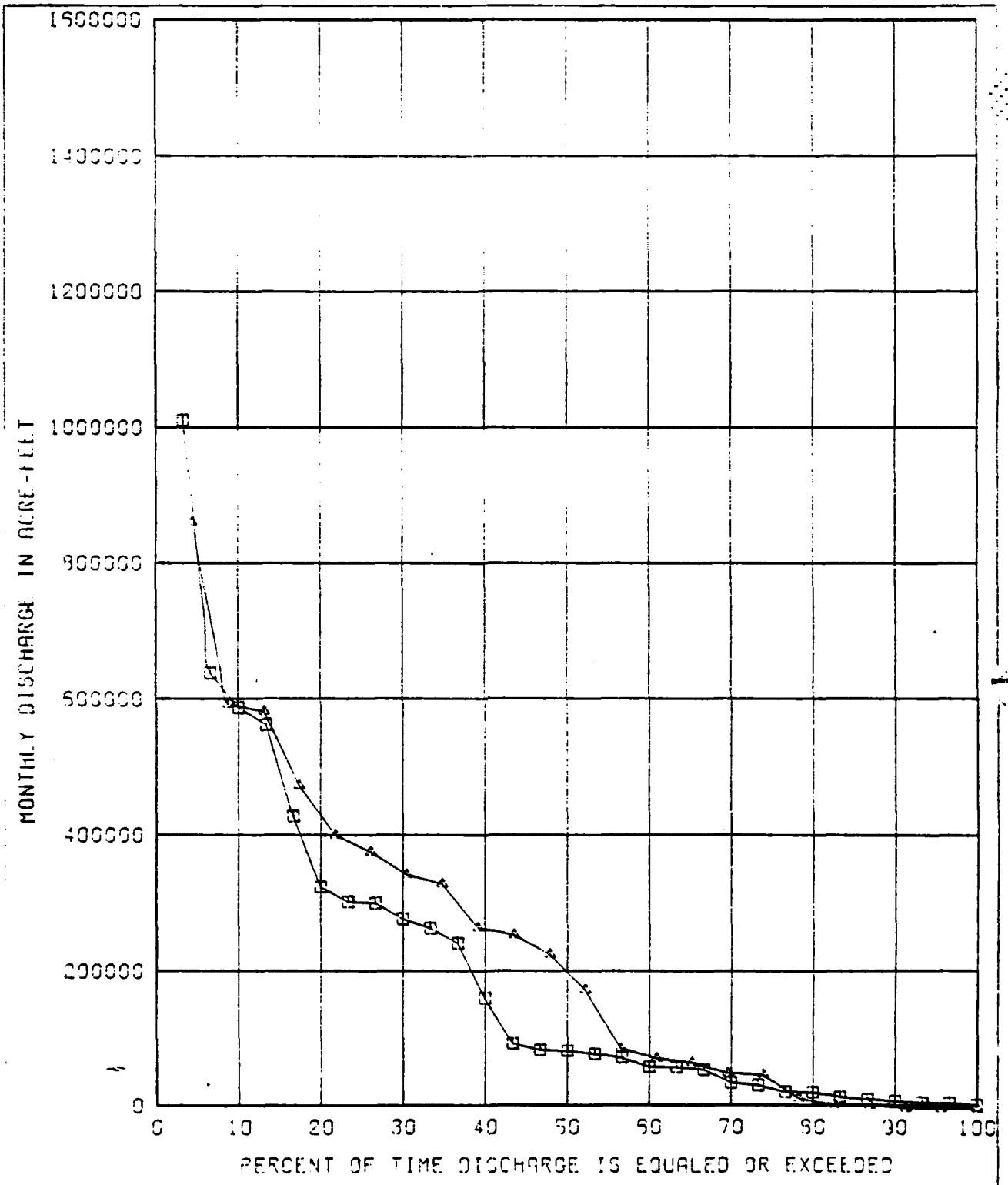
PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1923-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
FLOW DURATION CURVES AT DAM SITE
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980
PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1923-1953)

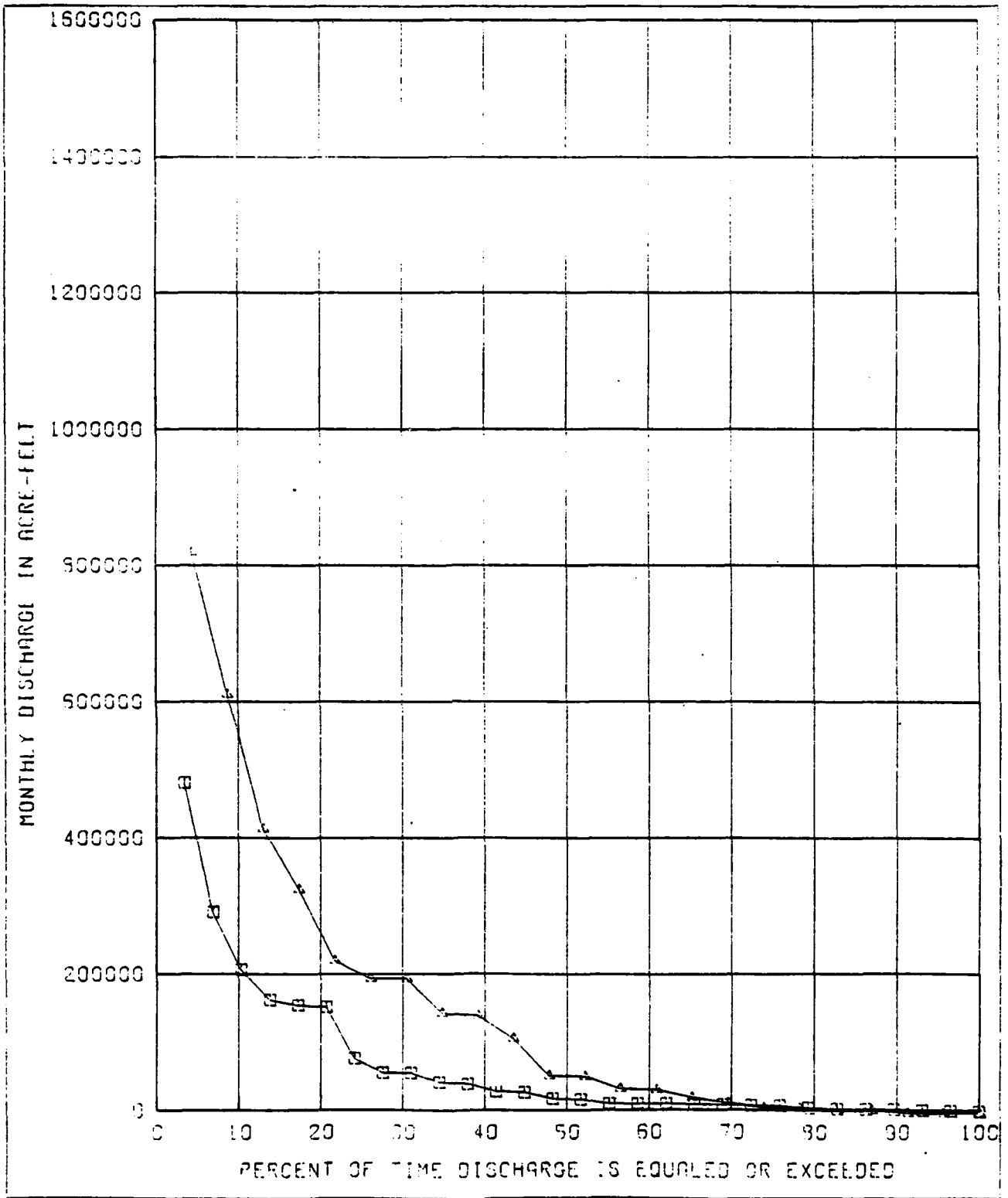
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
FLOW DURATION CURVES AT DAM SITE
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1923-1953)

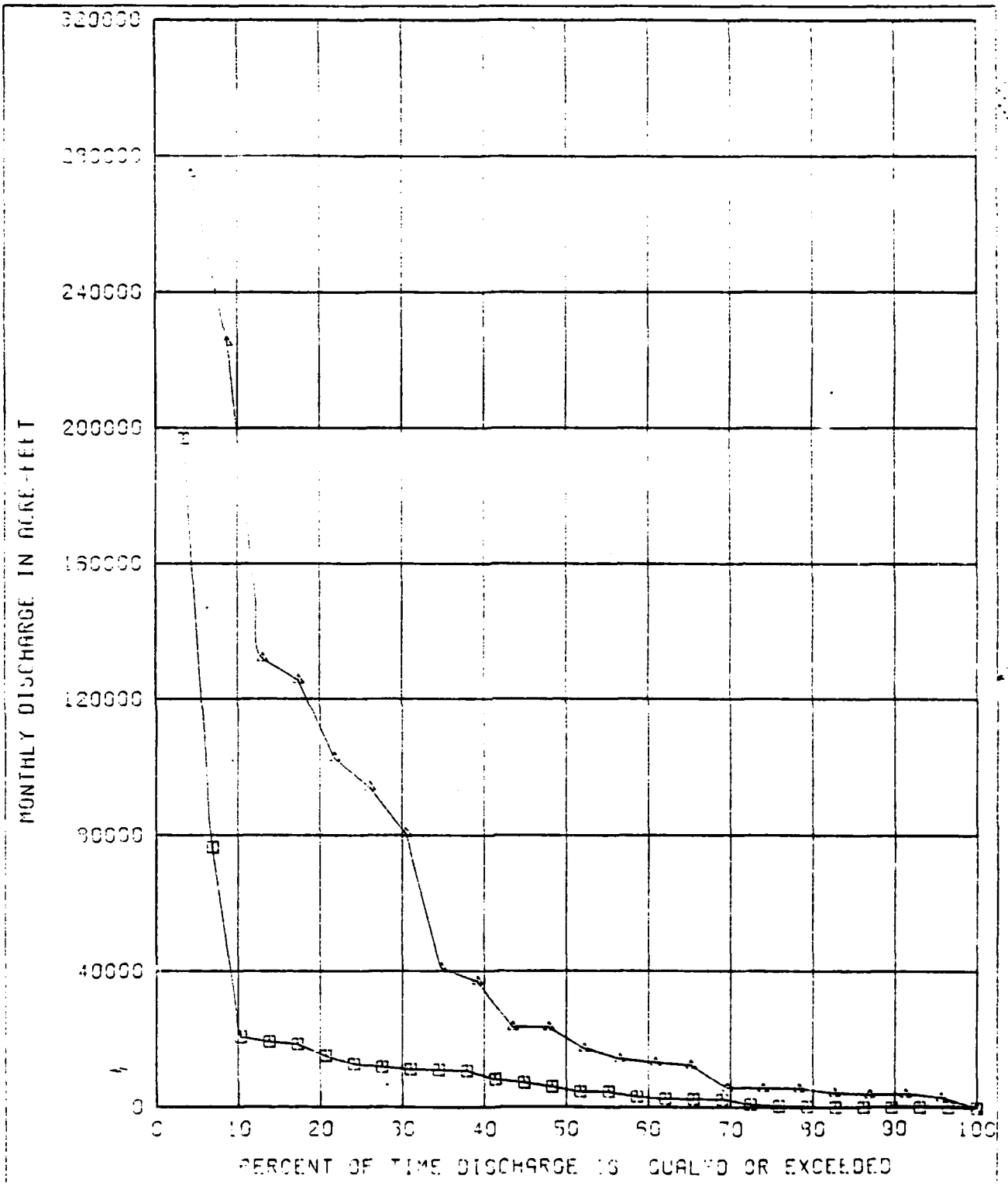
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
FLOW DURATION CURVES AT DAM SITE
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1923-1957)

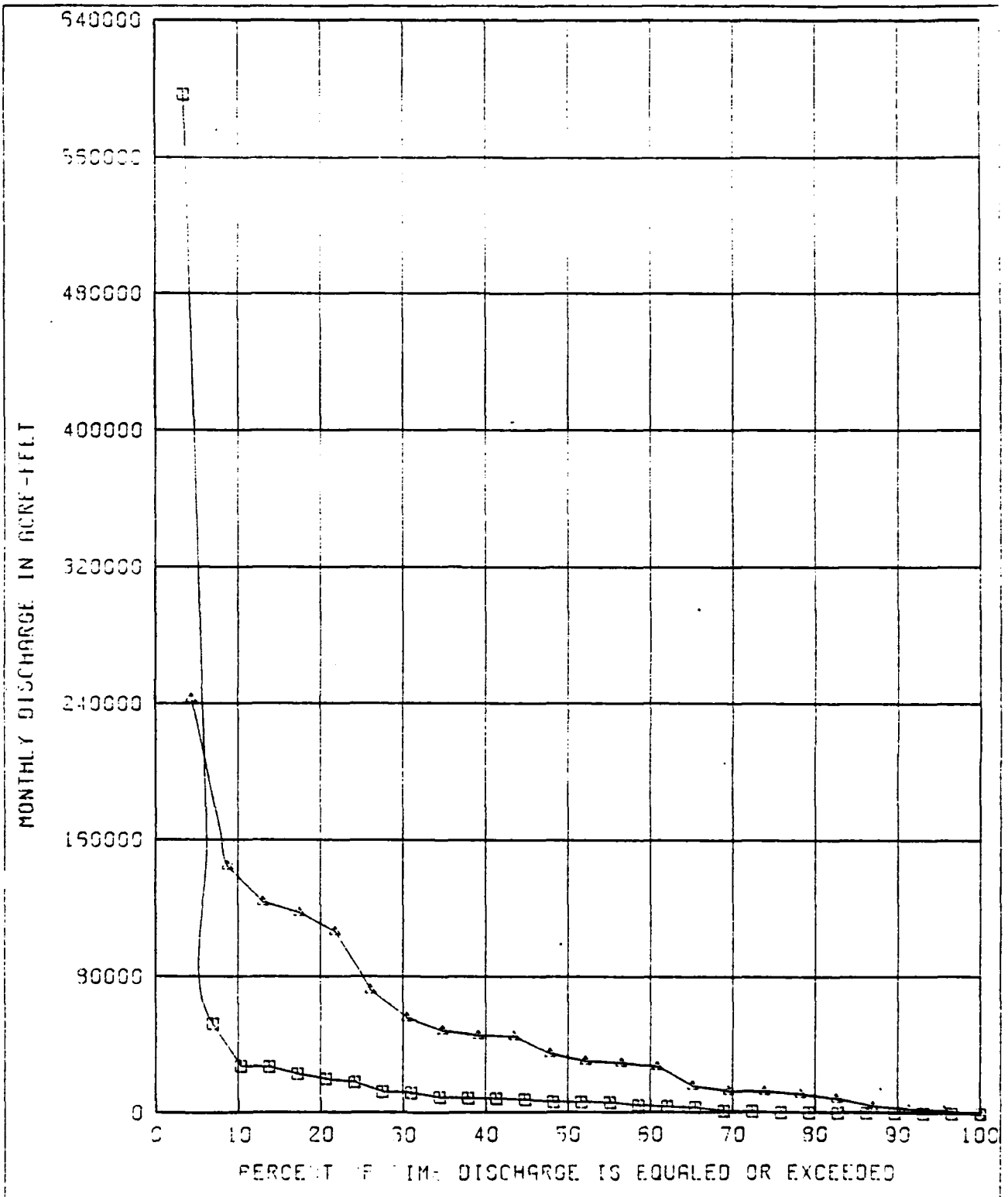
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
FLOW DURATION CURVES AT DAM SITE
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1923-1953)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1973)

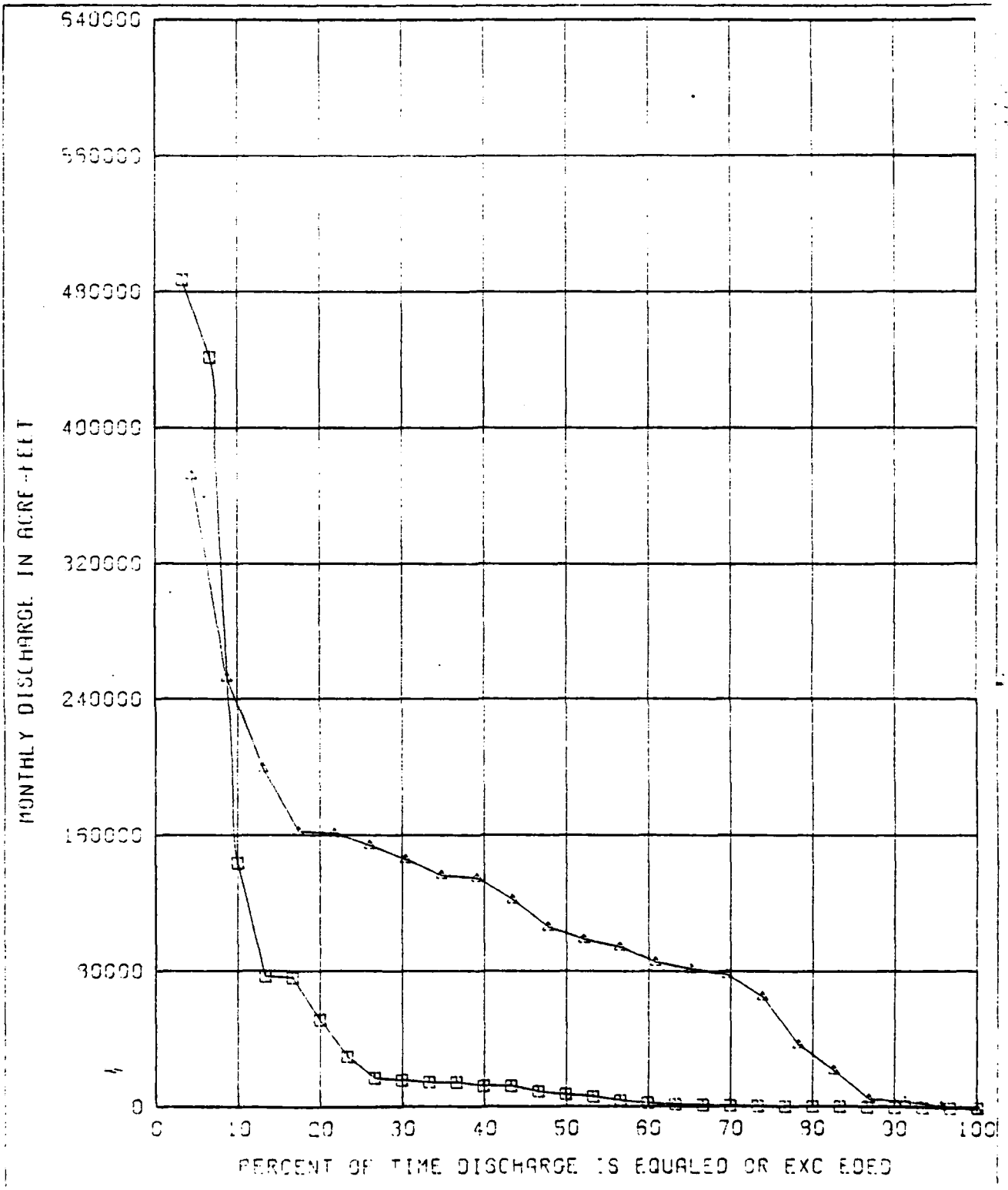
SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE

FLOW DURATION CURVES AT DAM SITE
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1923-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS

WRIGHT PATMAN LAKE

FLOW DURATION CURVES AT DAM SITE

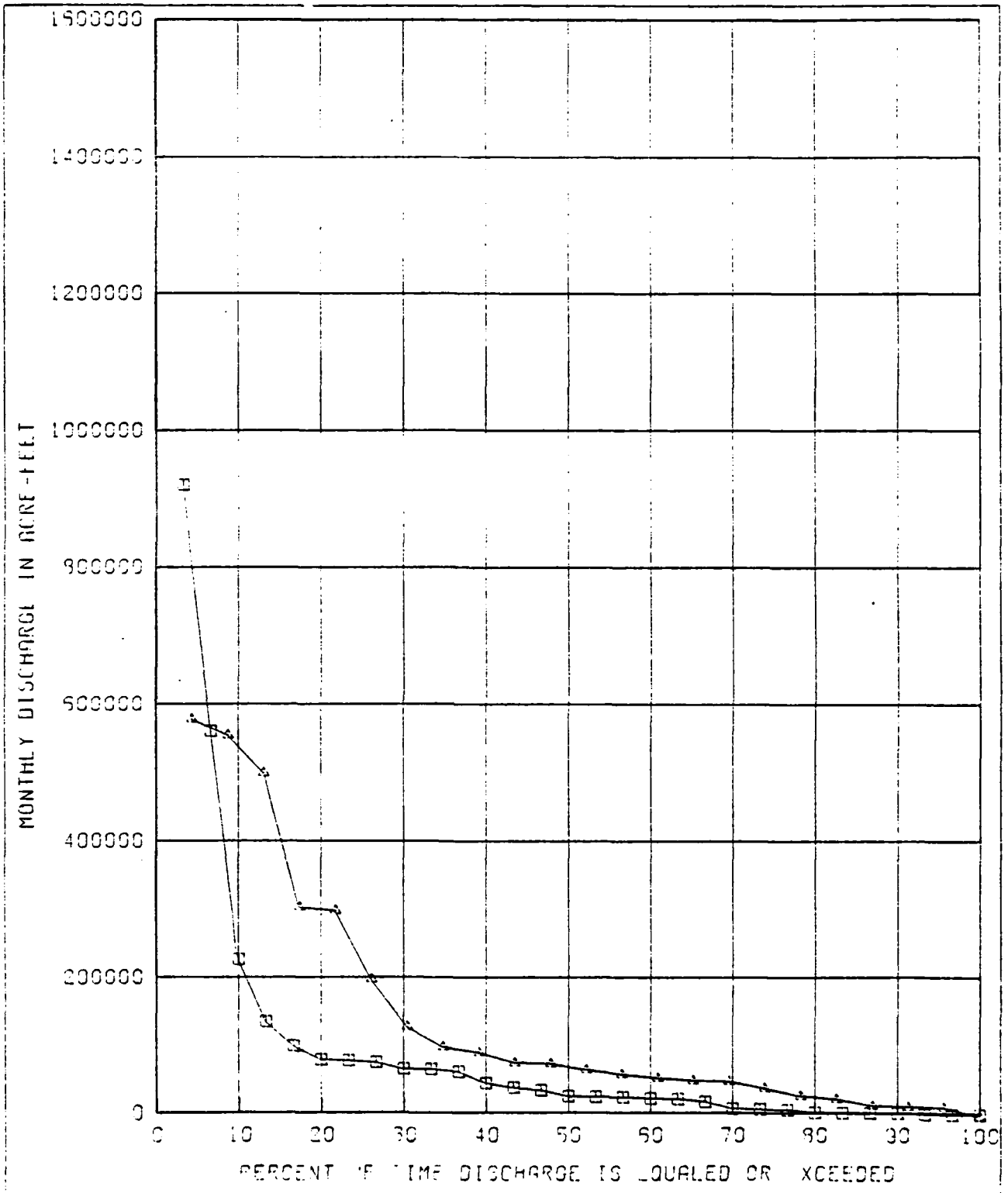
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1923-1950)

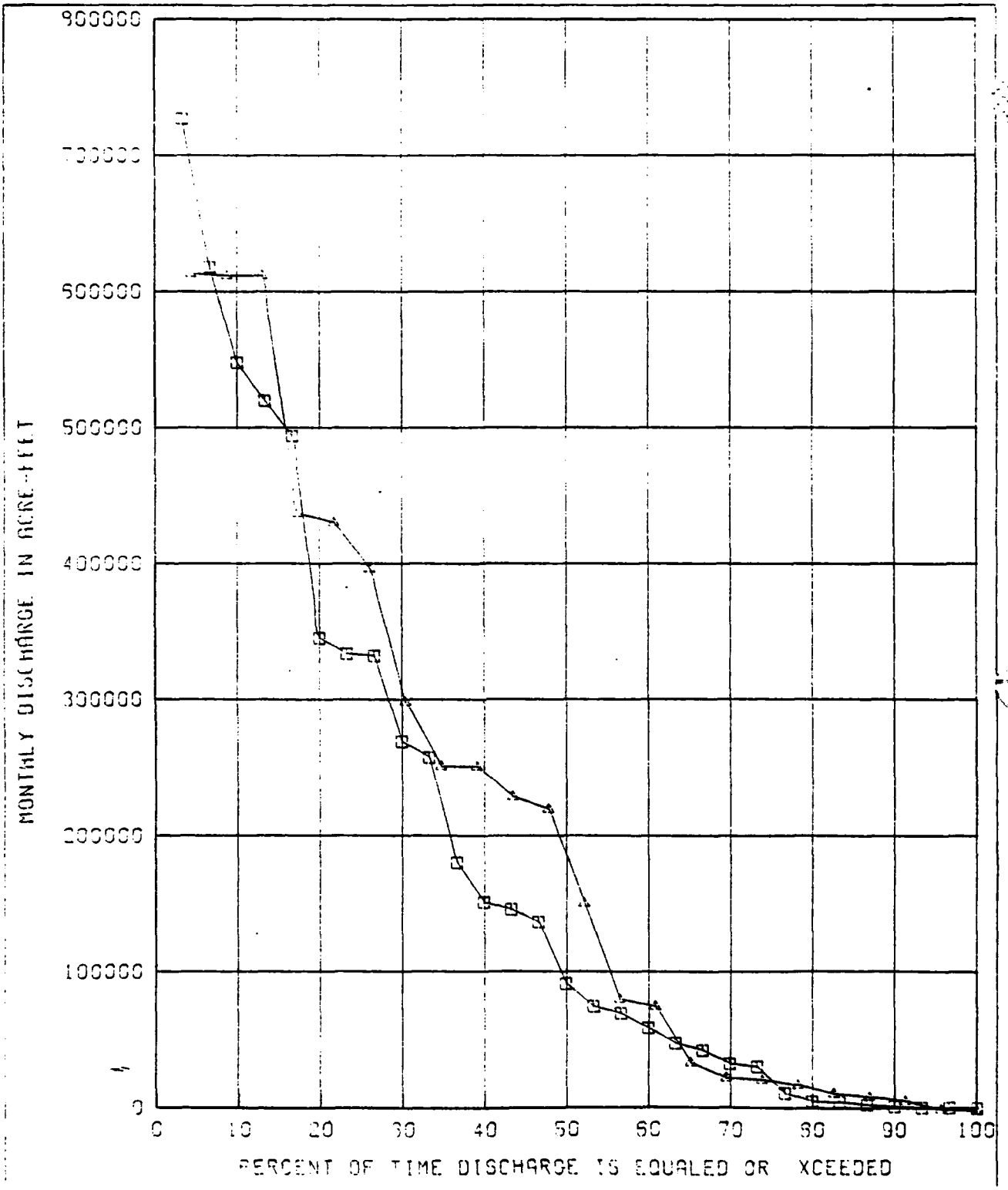
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
FLOW DURATION CURVES AT DAM SITE
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1923-1959)

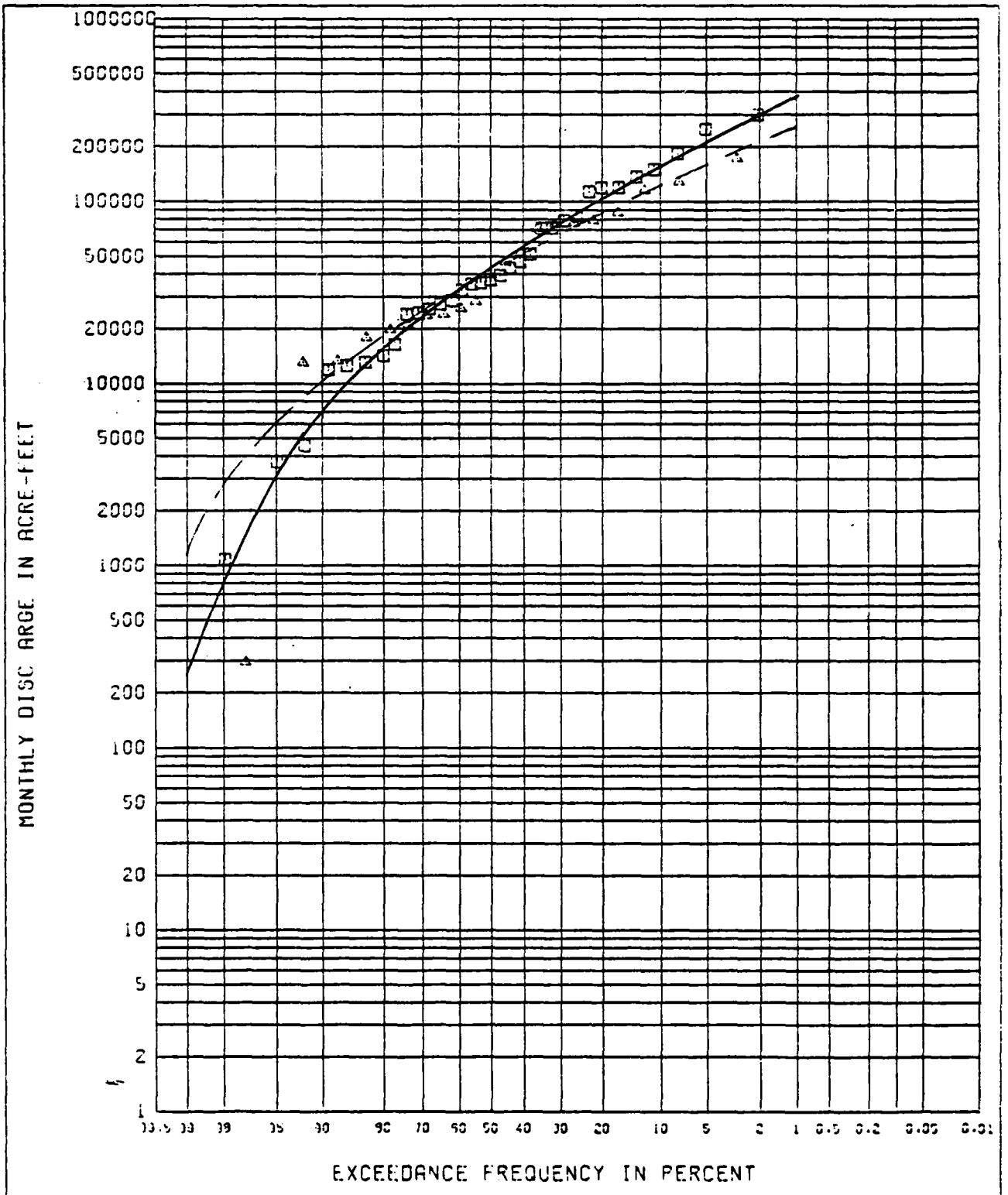
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1973)

SULPHUR RIVER BASIN, TEXAS
WRIGHT PATMAN LAKE
FLOW DURATION CURVES AT DAM SITE
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1957)

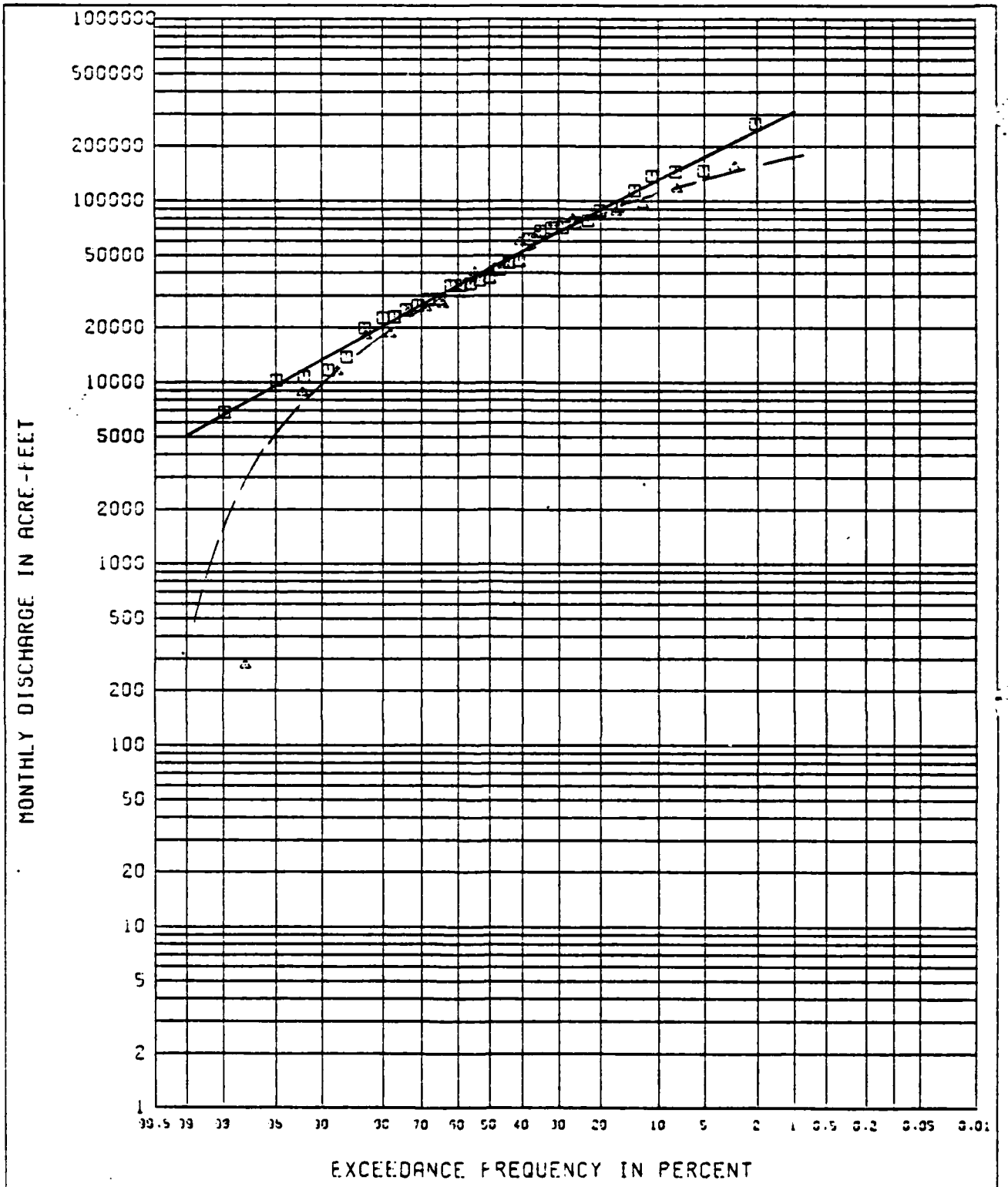
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1958-1973)

CYPRESS CREEK BASIN, TEXAS
LAKE OF THE PINES
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1959-1979)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

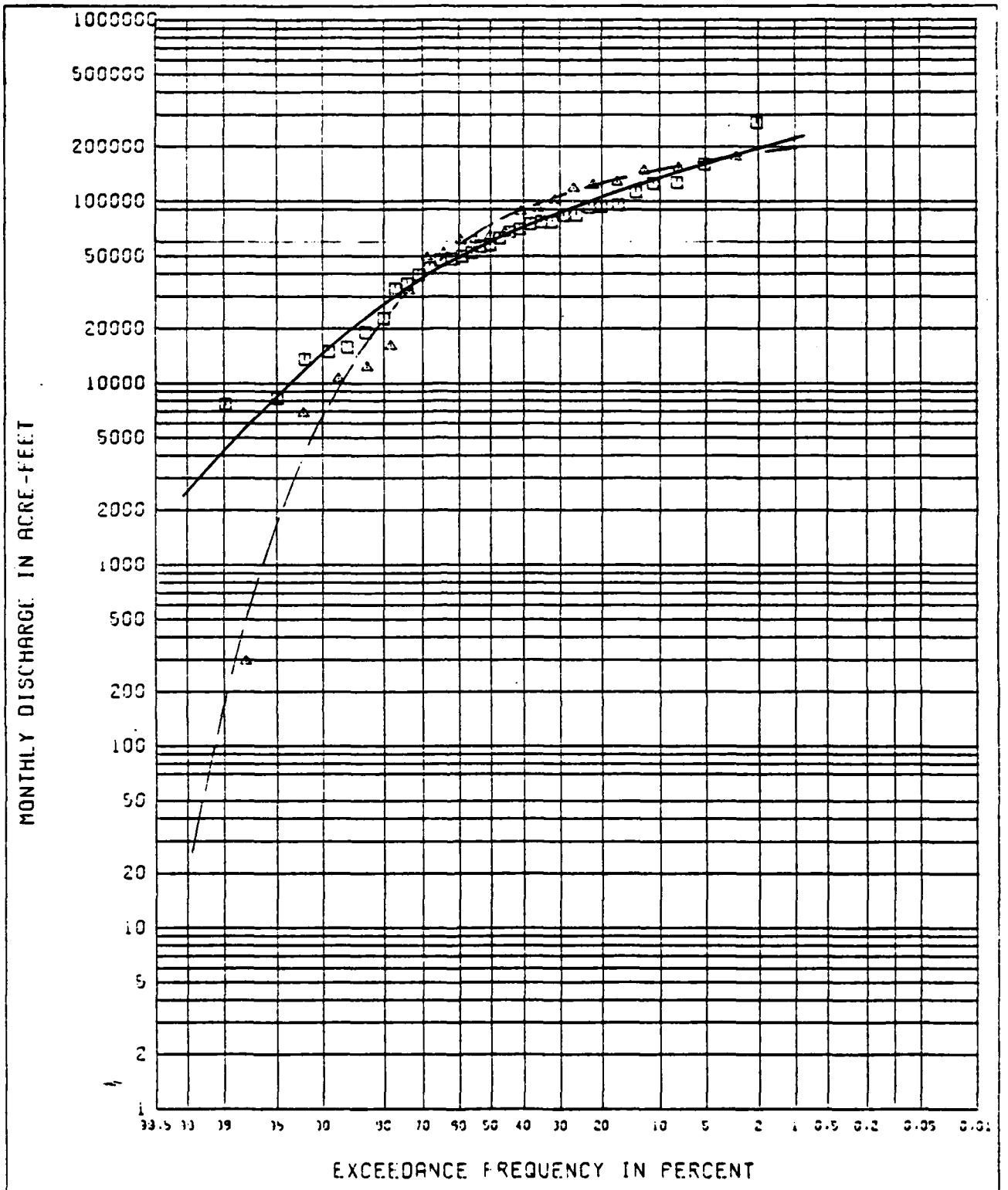
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1958-1979)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

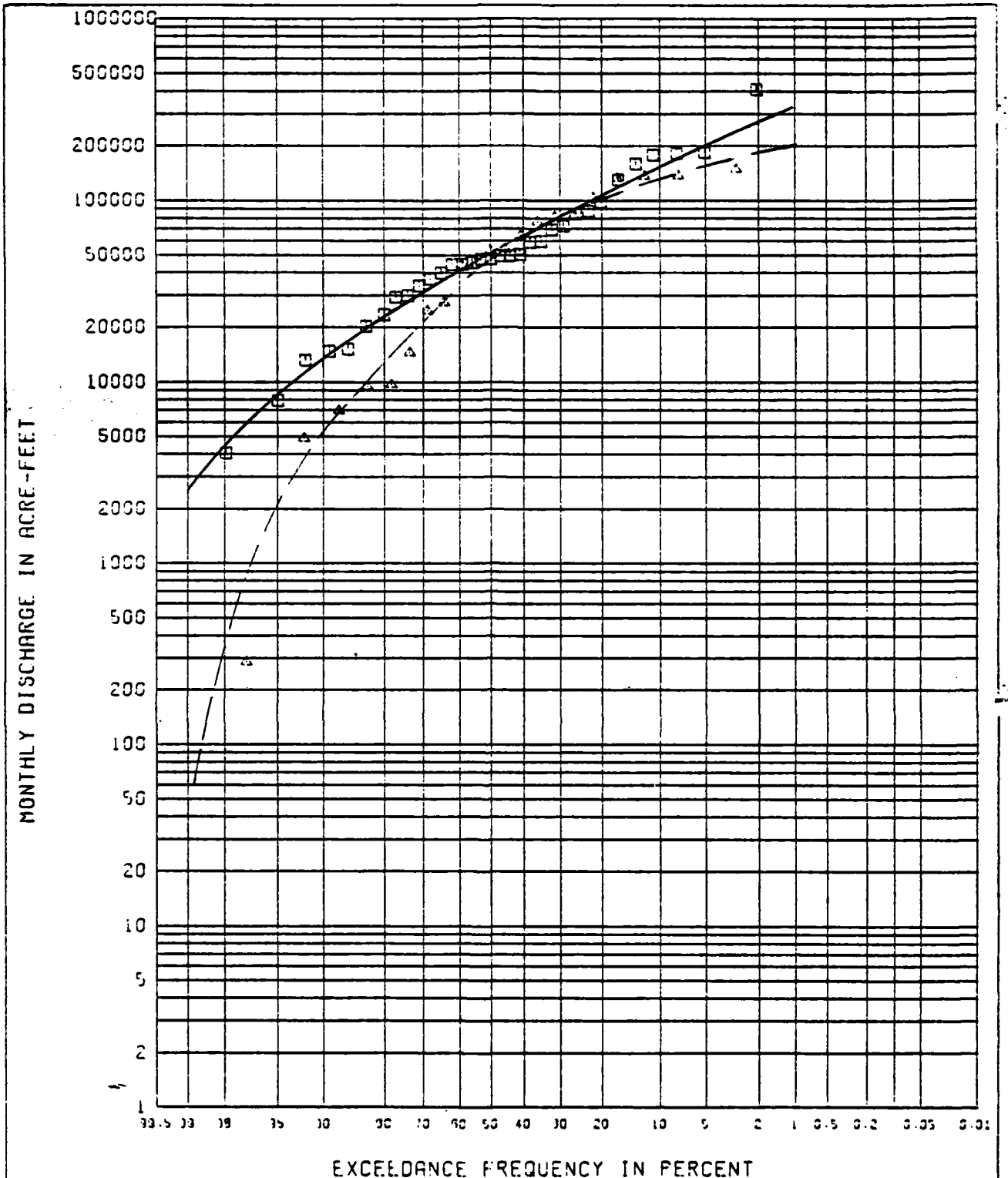
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1951-1973)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

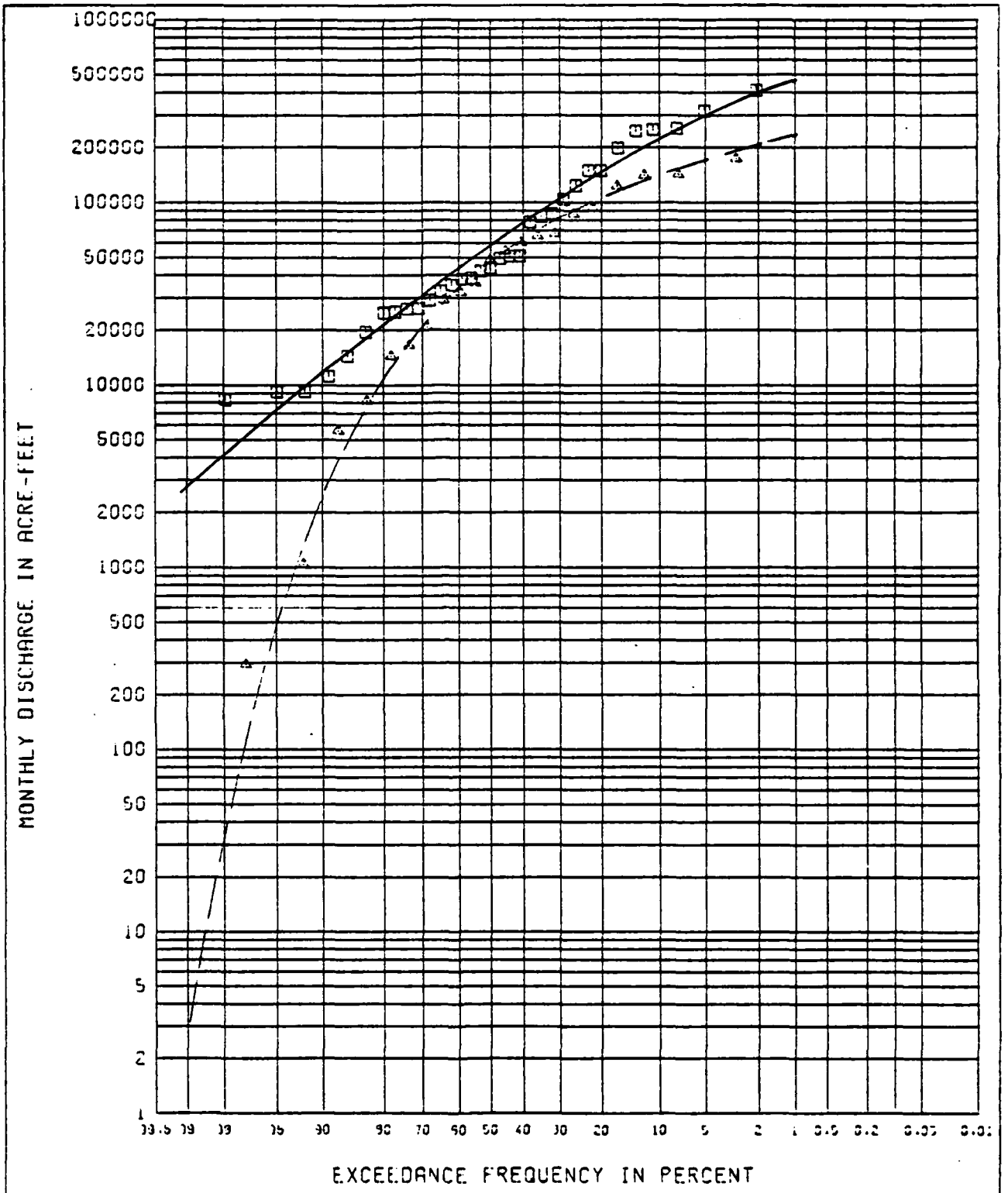
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1959-1979)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

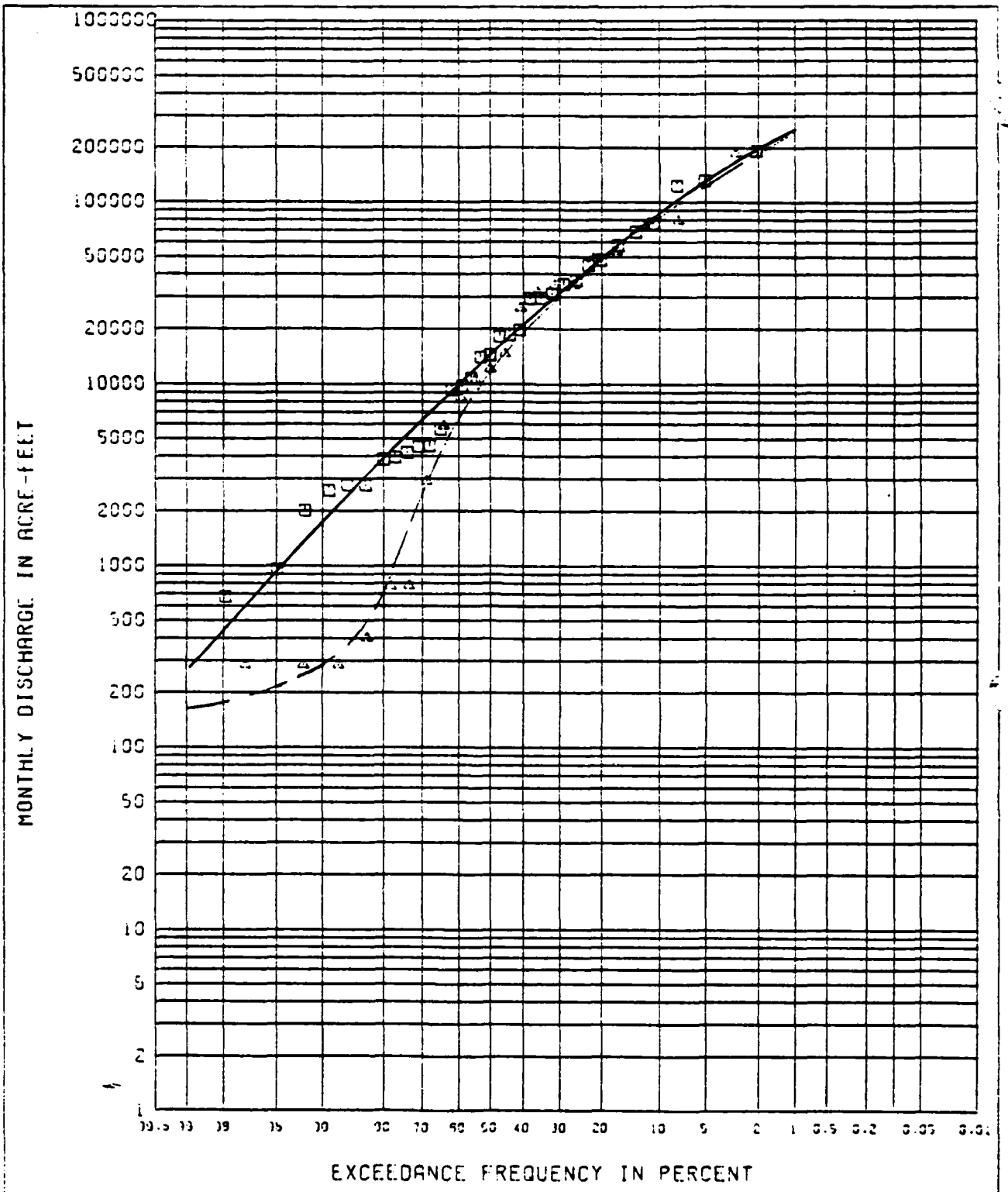
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1958-1973)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

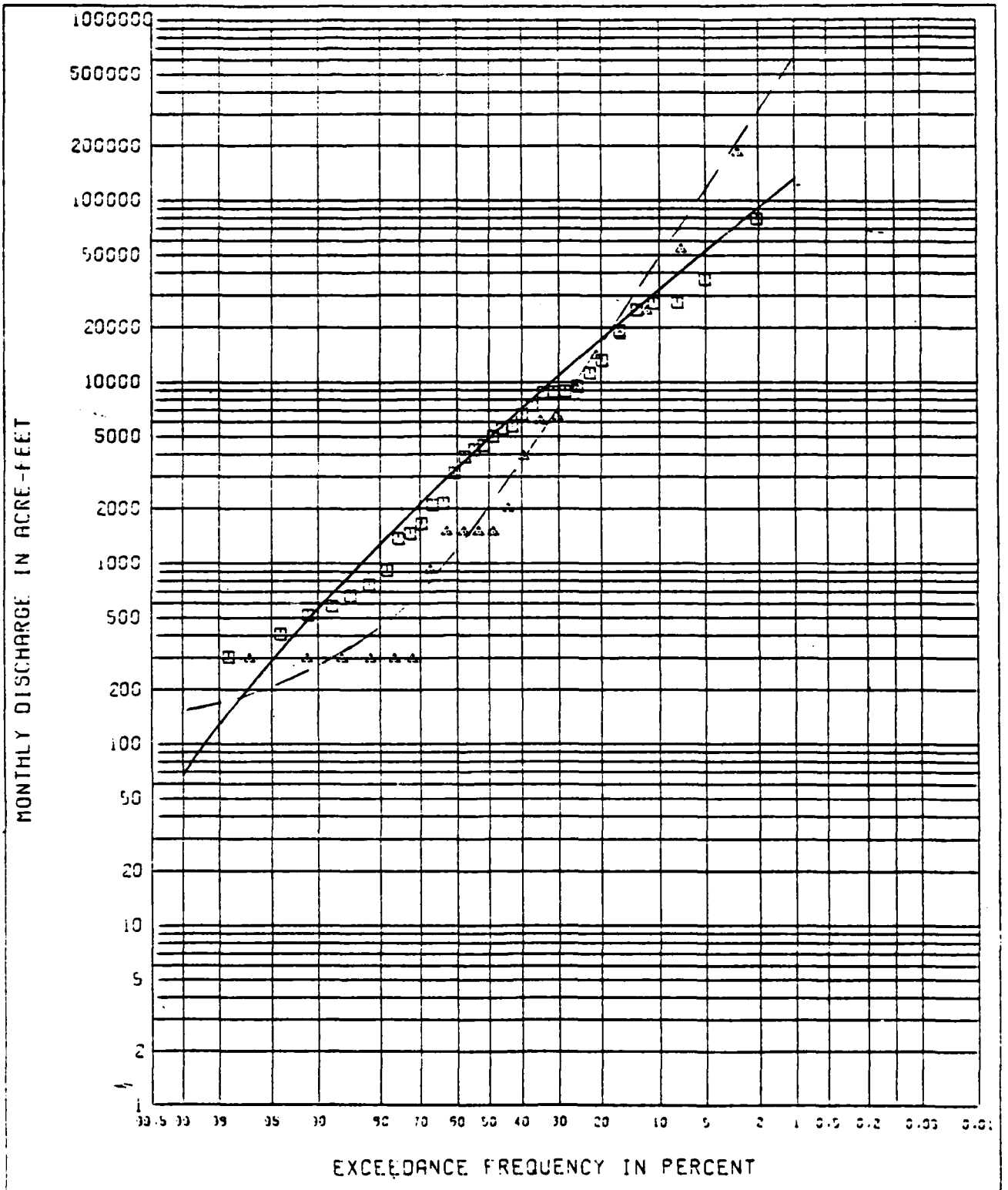
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1959-1970)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

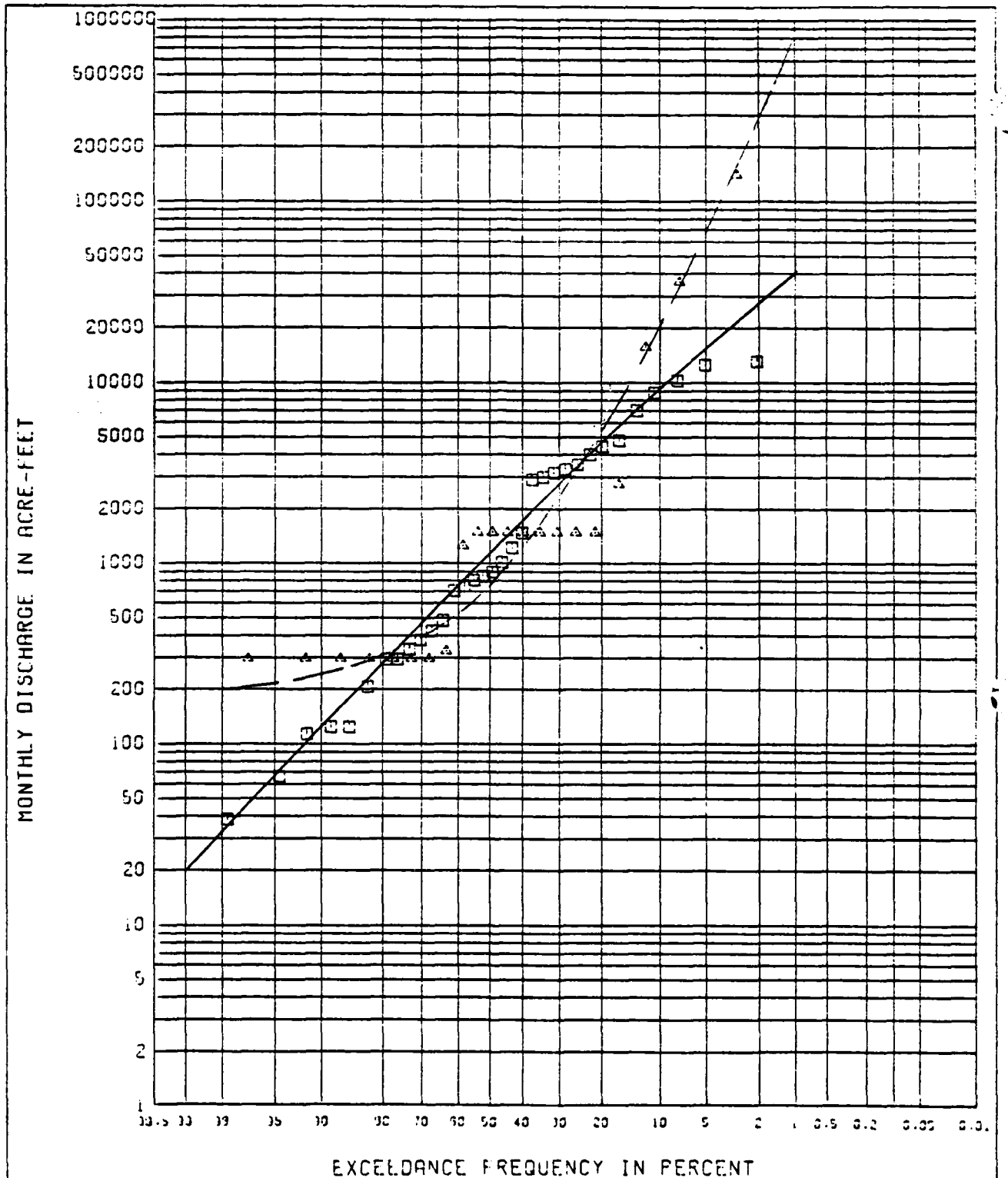
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1970

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1959-1979)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

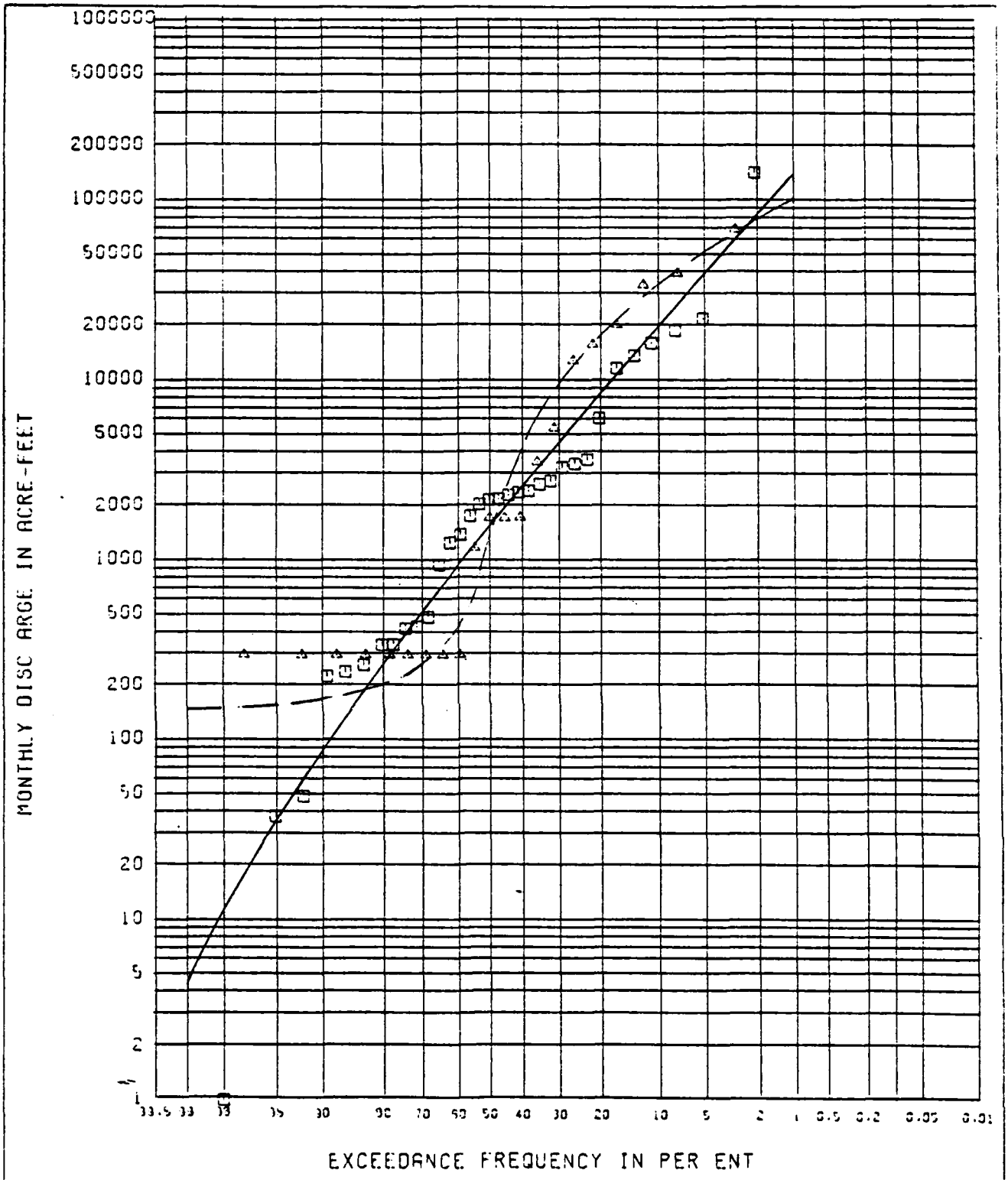
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1959-1979)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

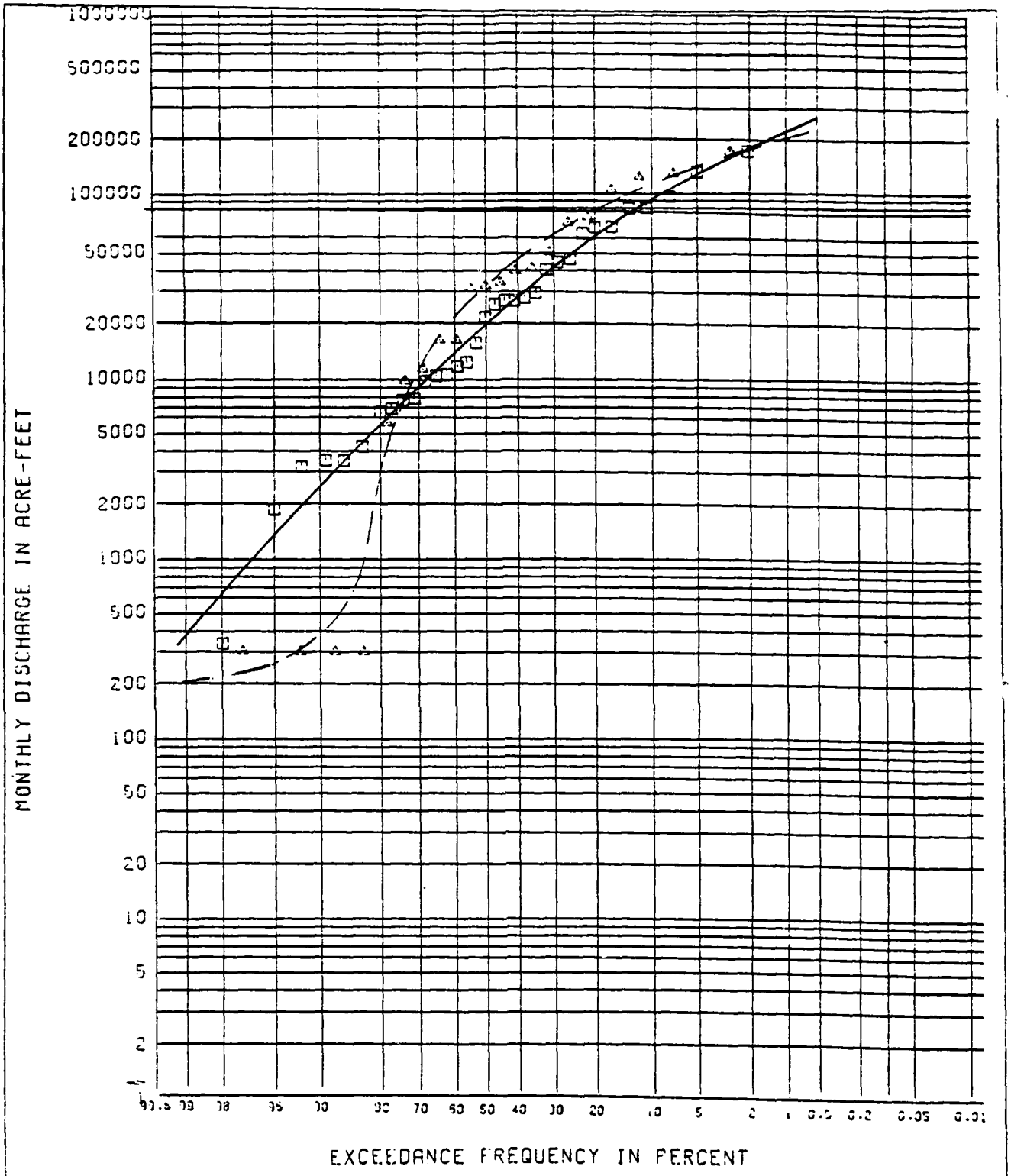
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1958-1973)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

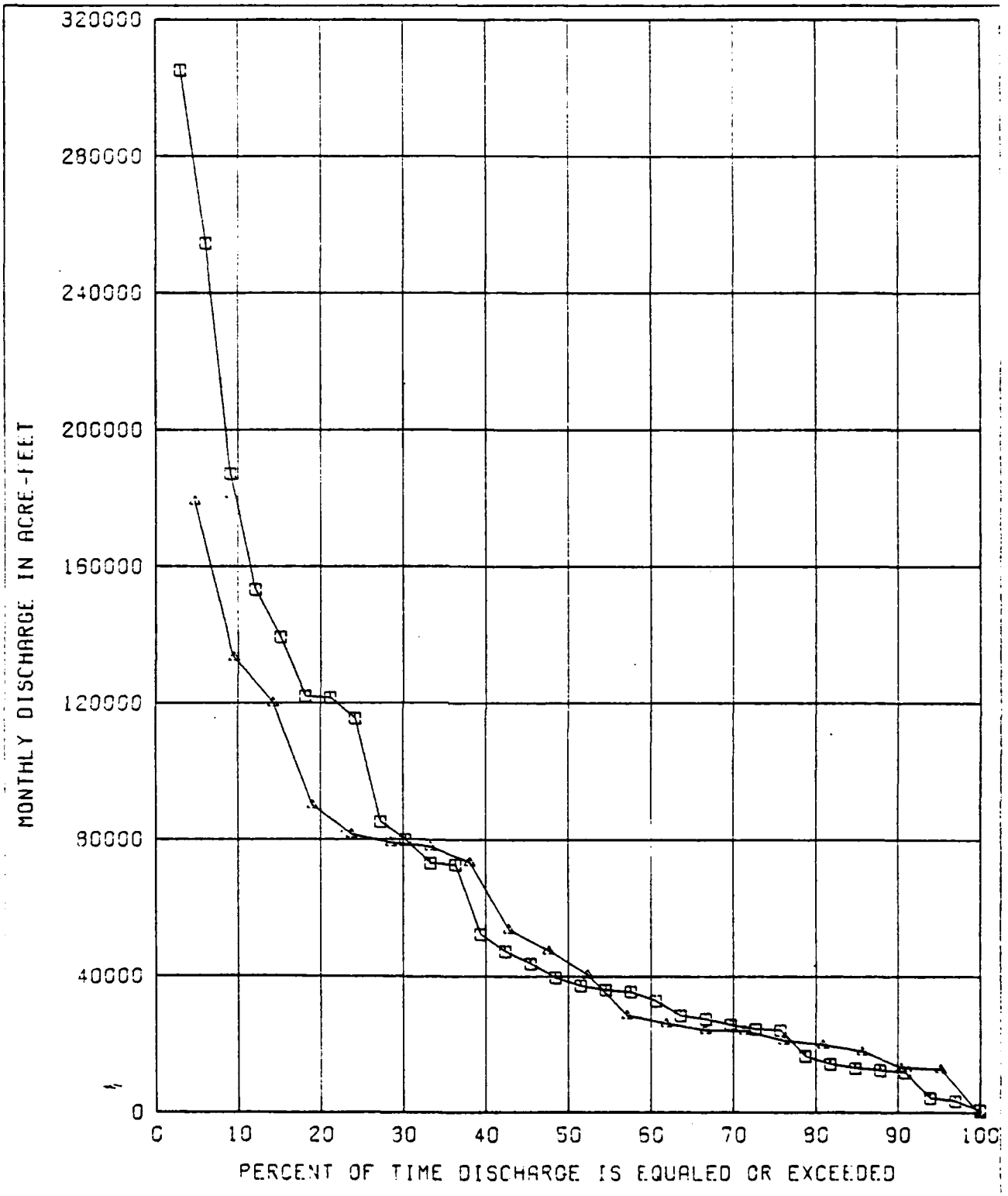
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1959-1979)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

FLOW DURATION CURVES AT DAM SITE

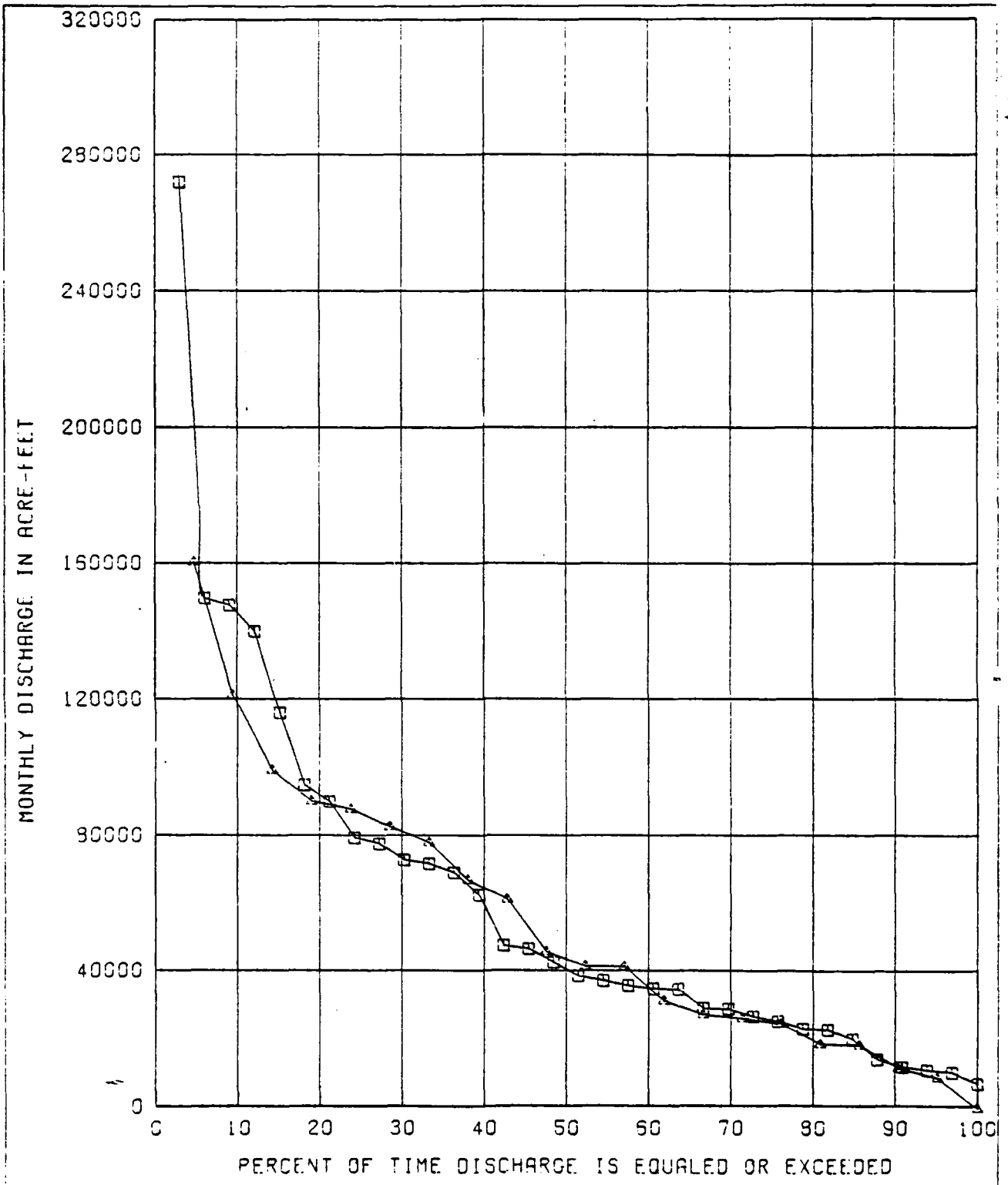
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1959-1973)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

FLOW DURATION CURVES AT DAM SITE

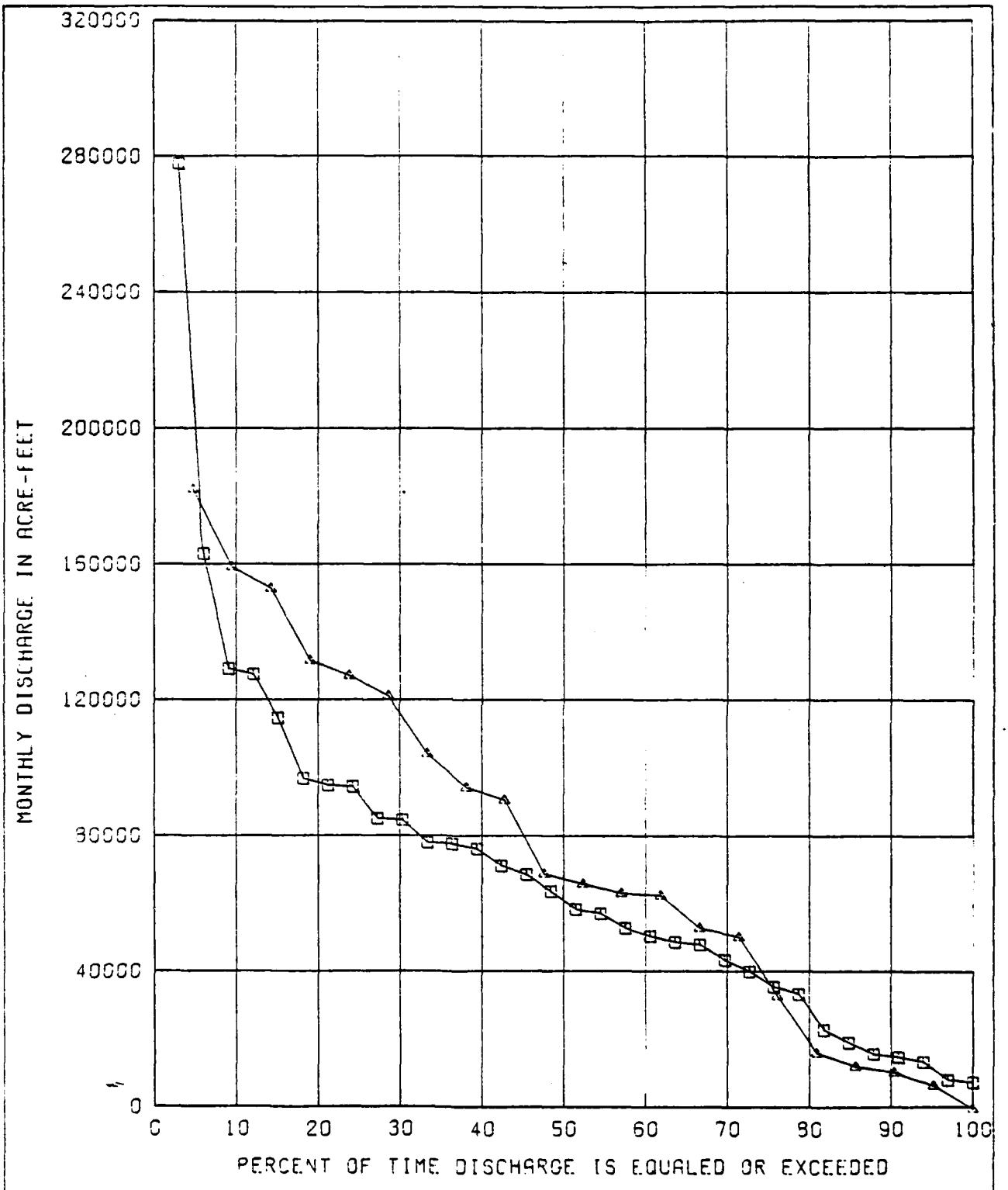
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1959-1979)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

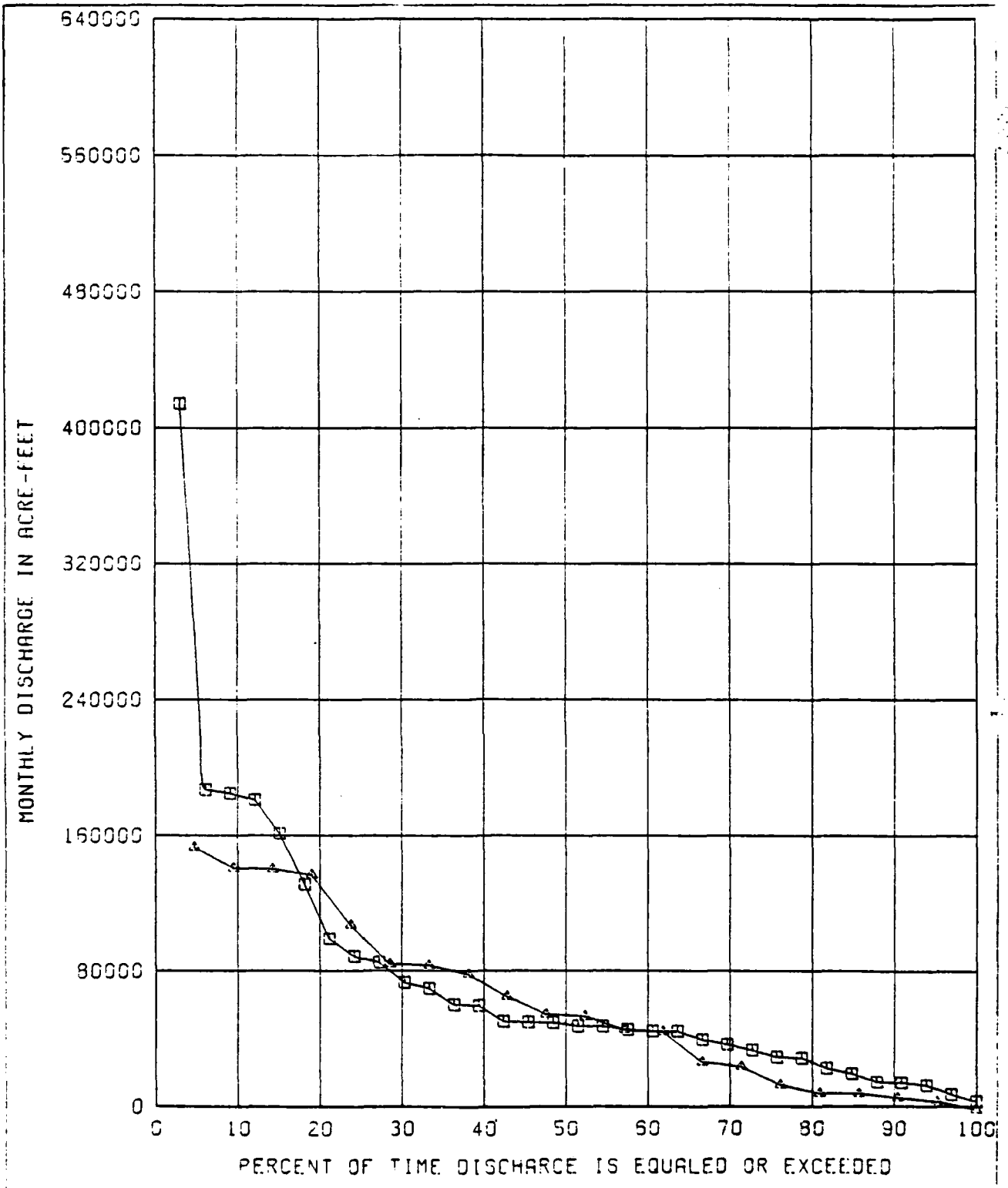
FLOW DURATION CURVES AT DAM SITE

MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1958-1979)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

FLOW DURATION CURVES AT DAM SITE

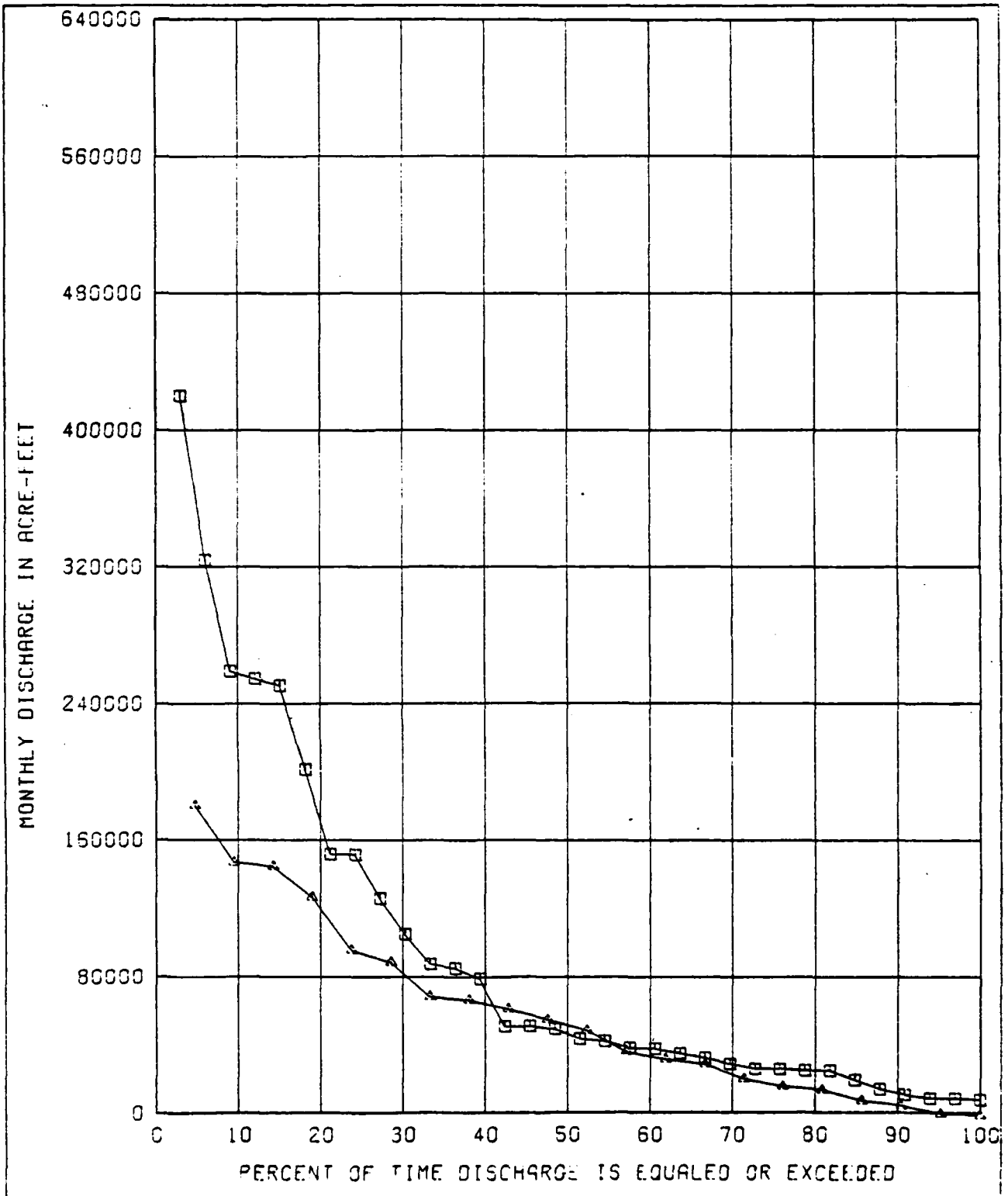
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1958-1973)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

FLOW DURATION CURVES AT DAM SITE

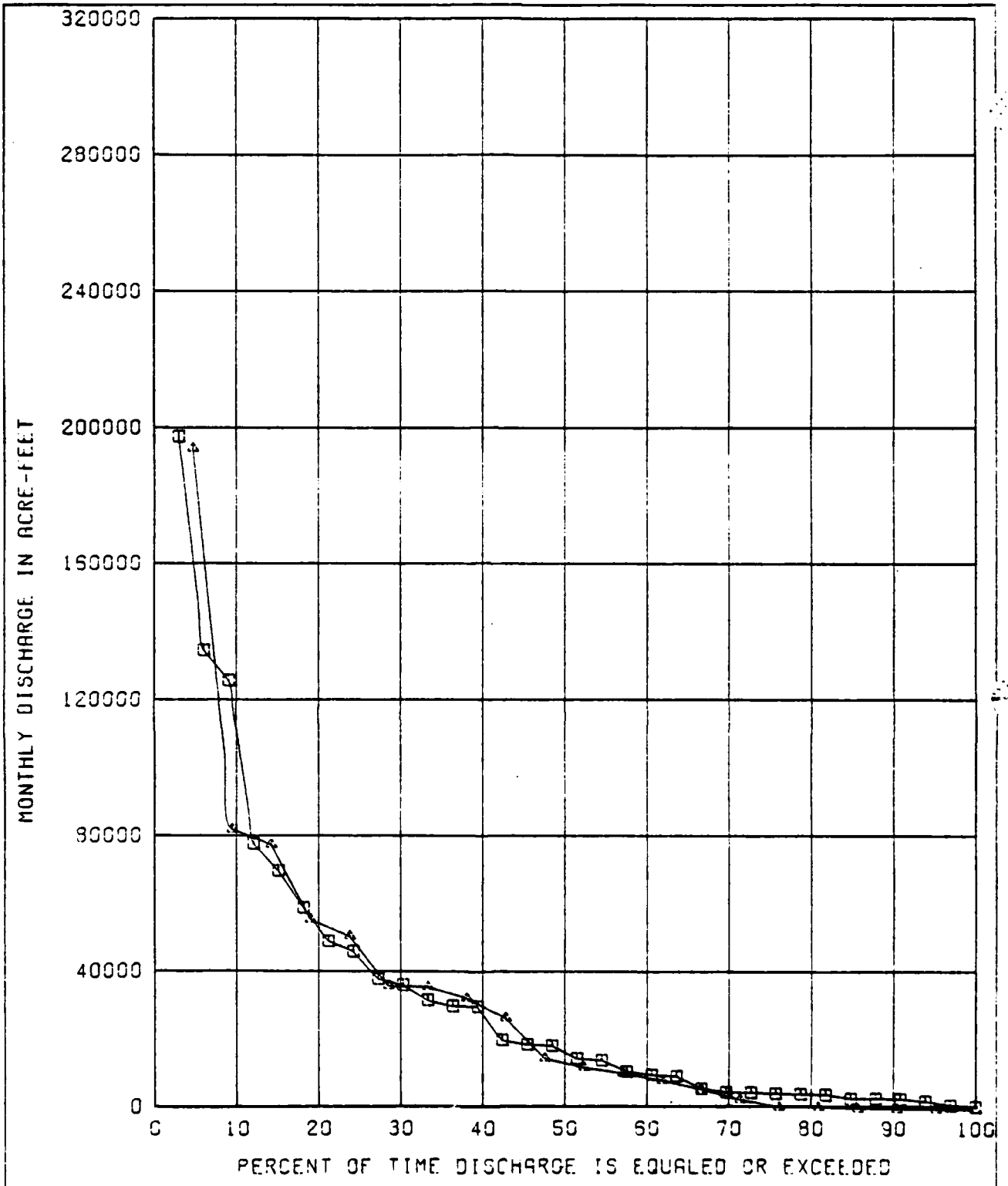
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1958-1973)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

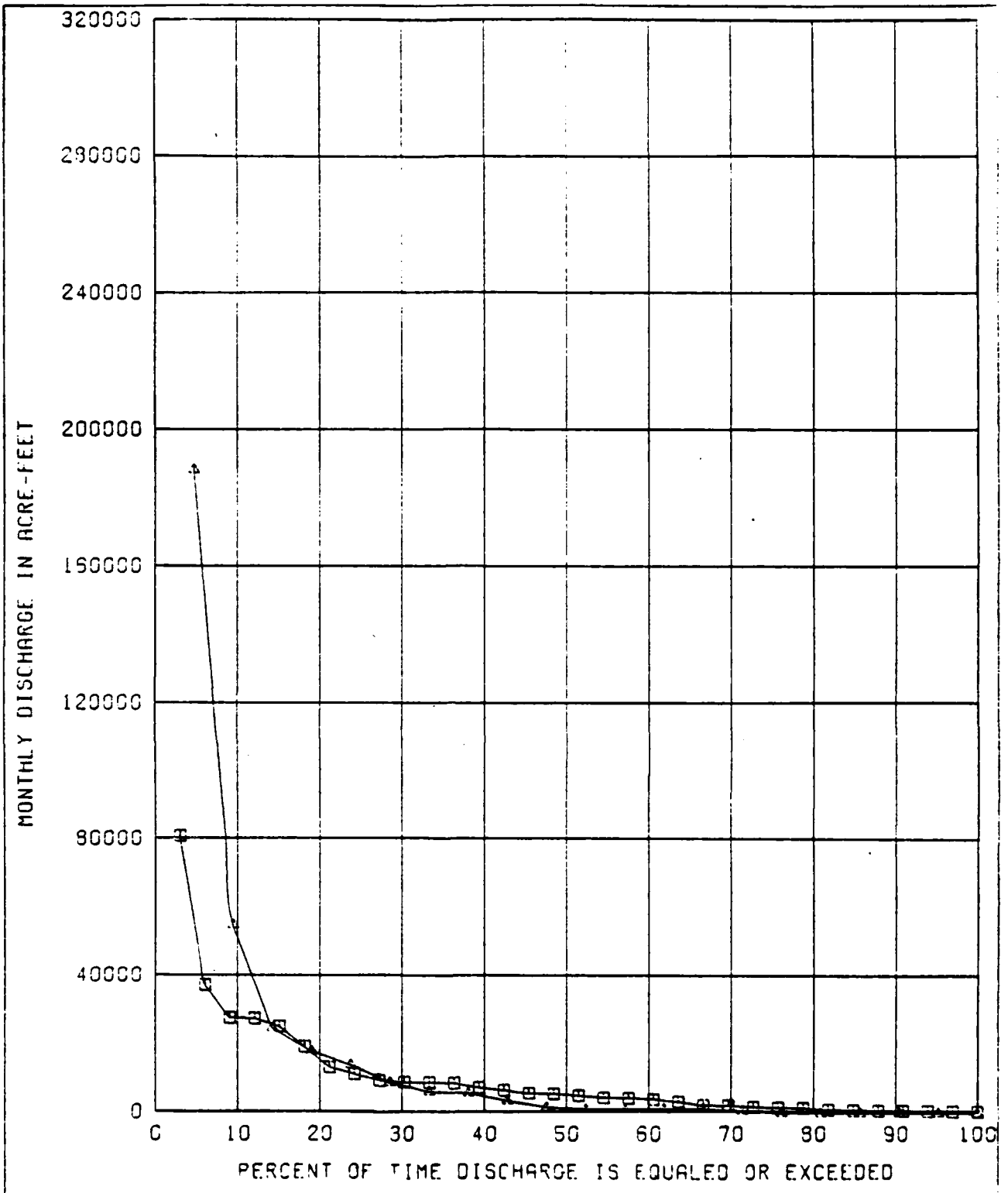
FLOW DUR ION CURVES AT DAM SITE

JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 18



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1959-1979)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

FLOW DURATION CURVES AT DAM SITE

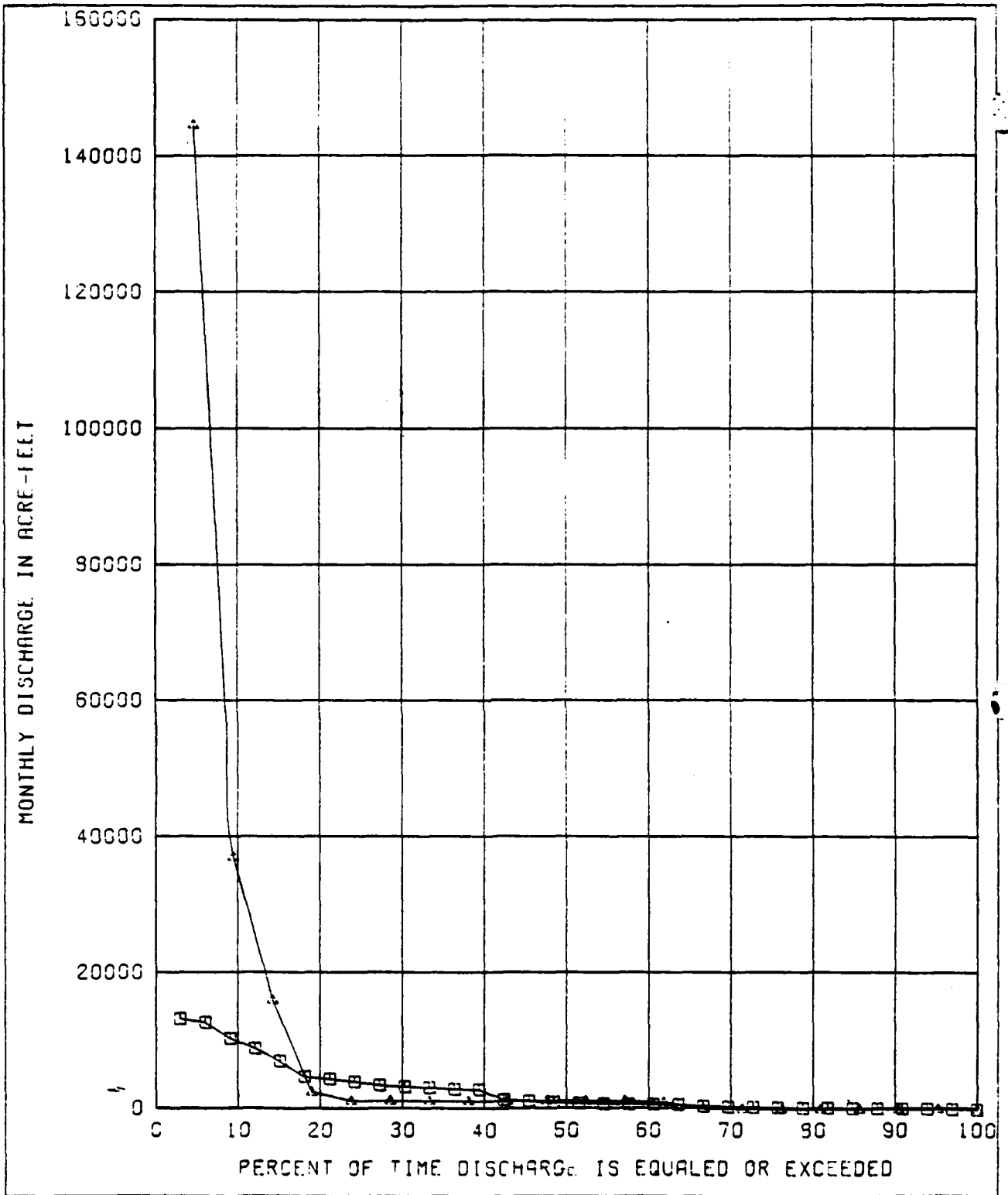
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1957)

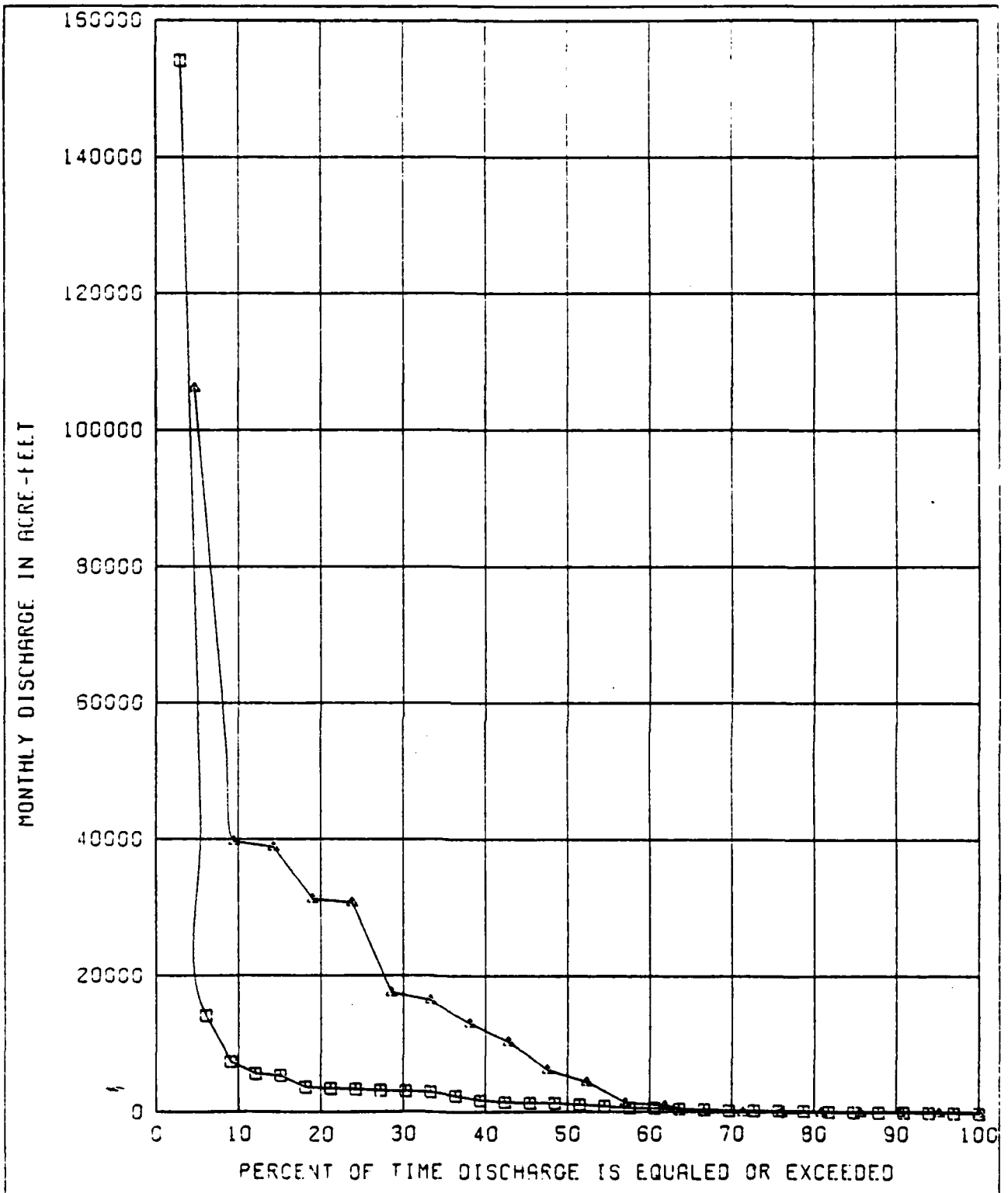
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1959-1979)

CYPRESS CREEK BASIN, TEXAS
LAKE OF THE PINES
FLOW DURATION CURVES AT DAM SITE
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1957)

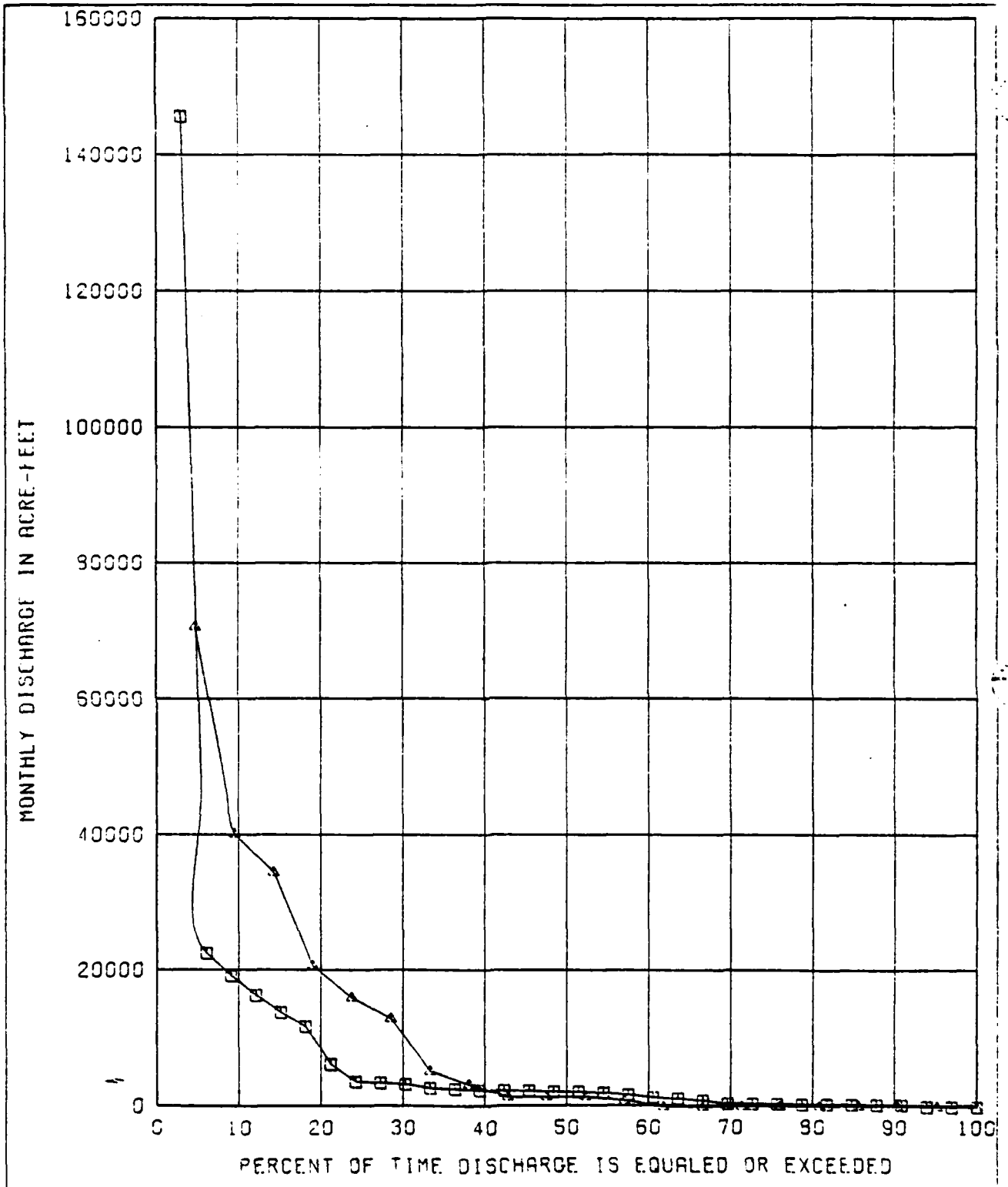
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1959-1979)

CYPRESS CREEK BASIN, TEXAS
LAKE OF THE PINES
FLOW DURATION CURVES AT DAM SITE
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1958-1979)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

FLOW DURATION CURVES AT DAM SITE

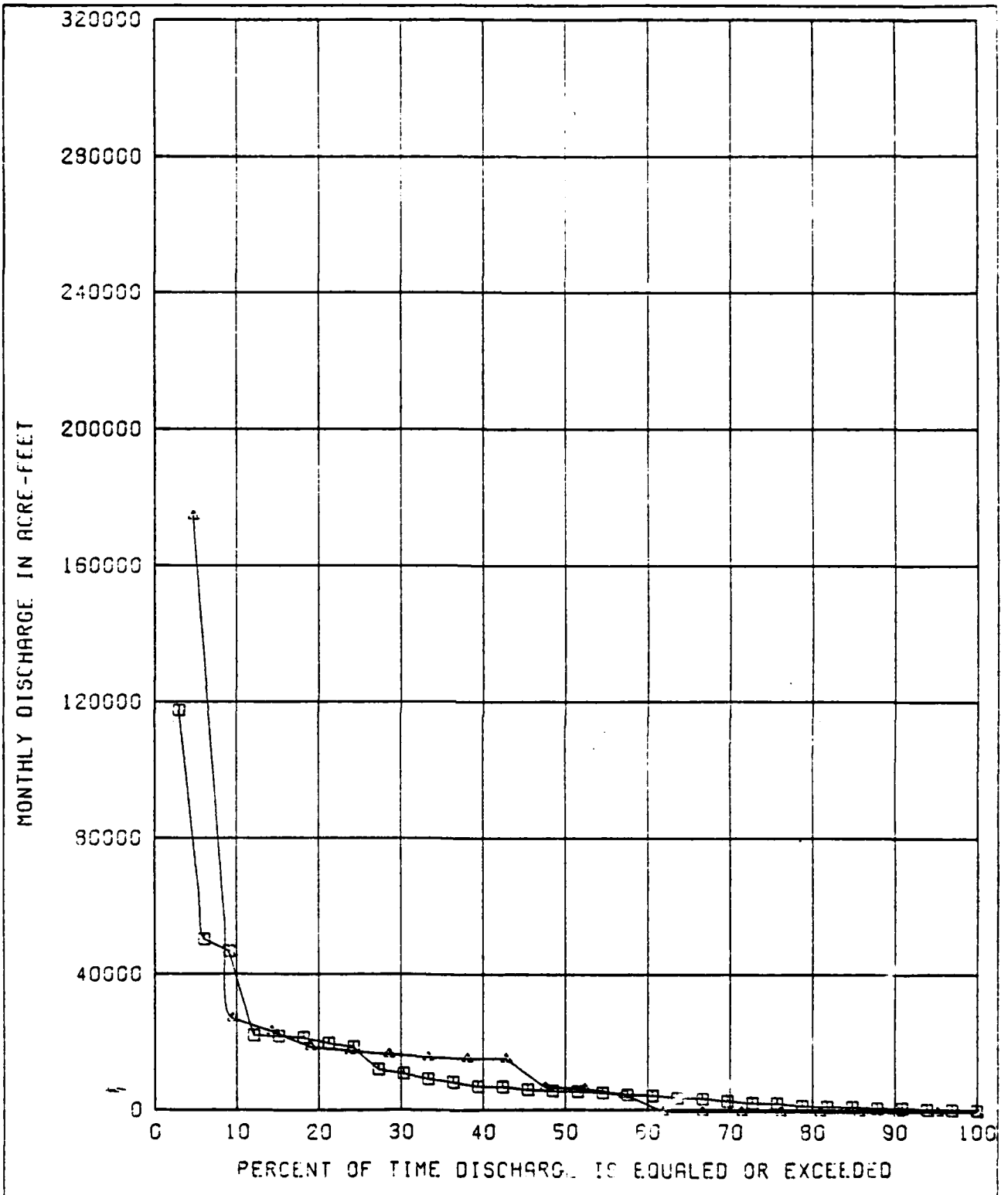
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1959-1979)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

FLOW DURATION CURVES AT DAM SITE

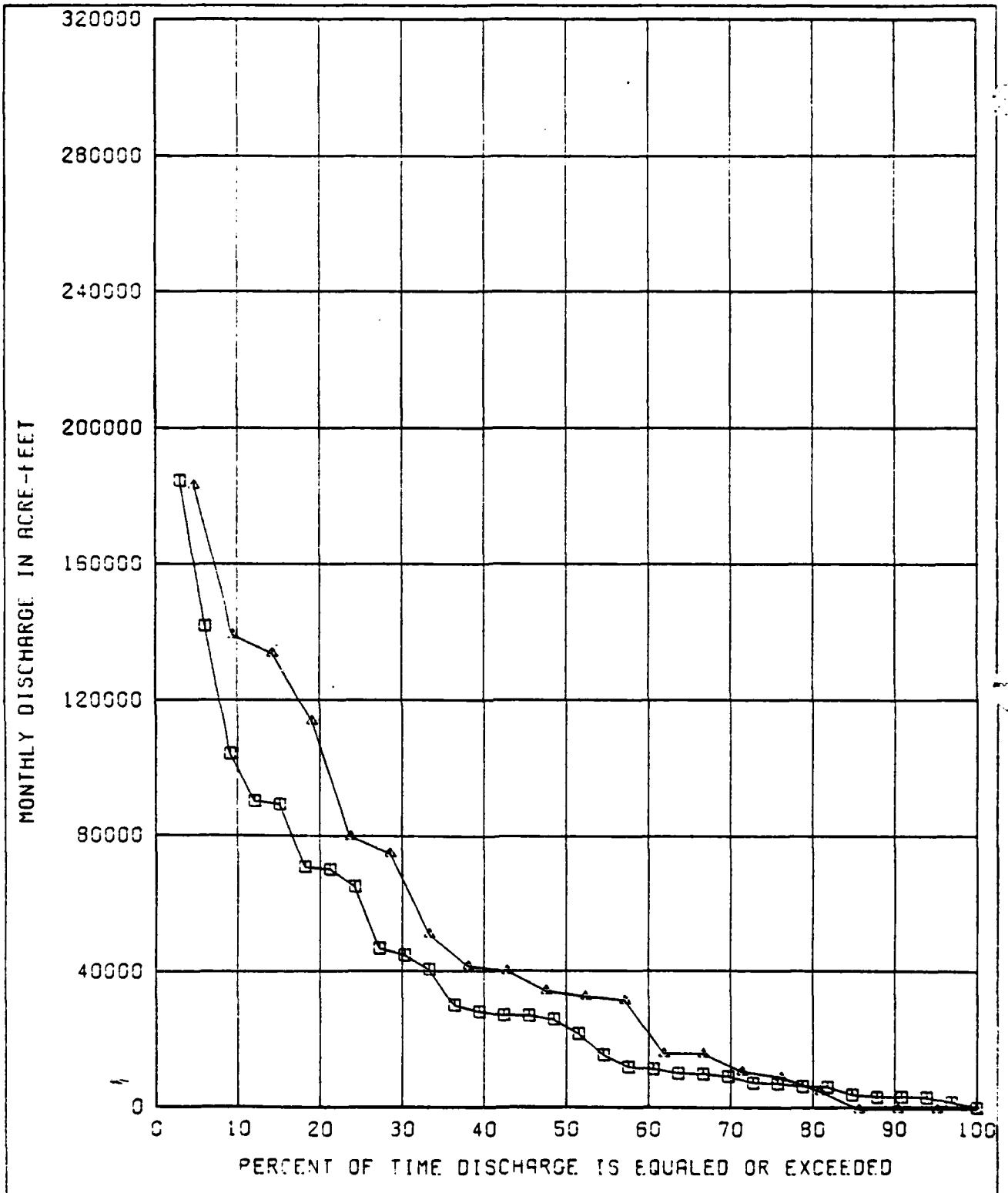
NOVEMBER LOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1958-1979)

CYPRESS CREEK BASIN, TEXAS

LAKE OF THE PINES

FLOW DURATION CURVES AT DAM SITE

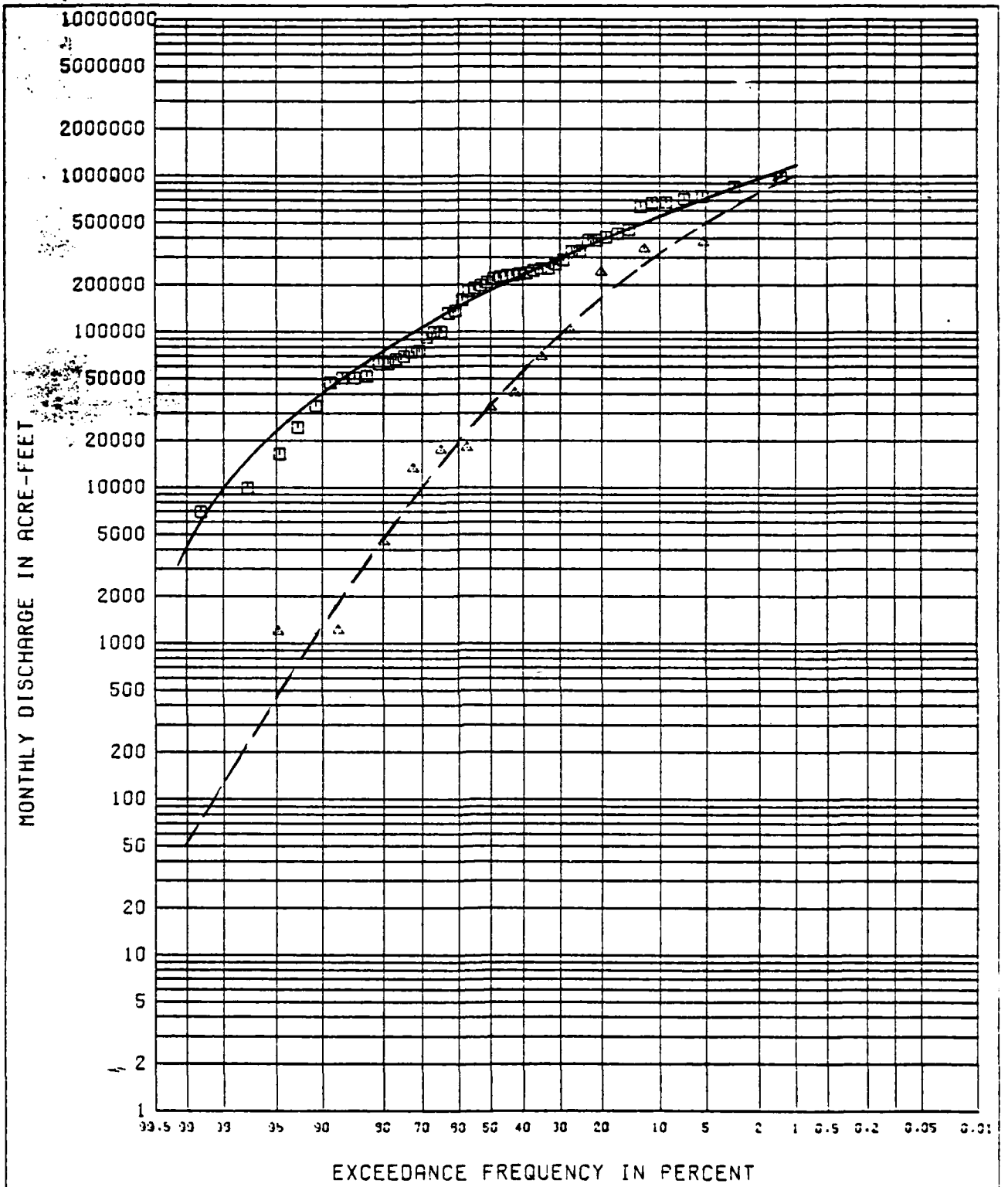
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1978)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

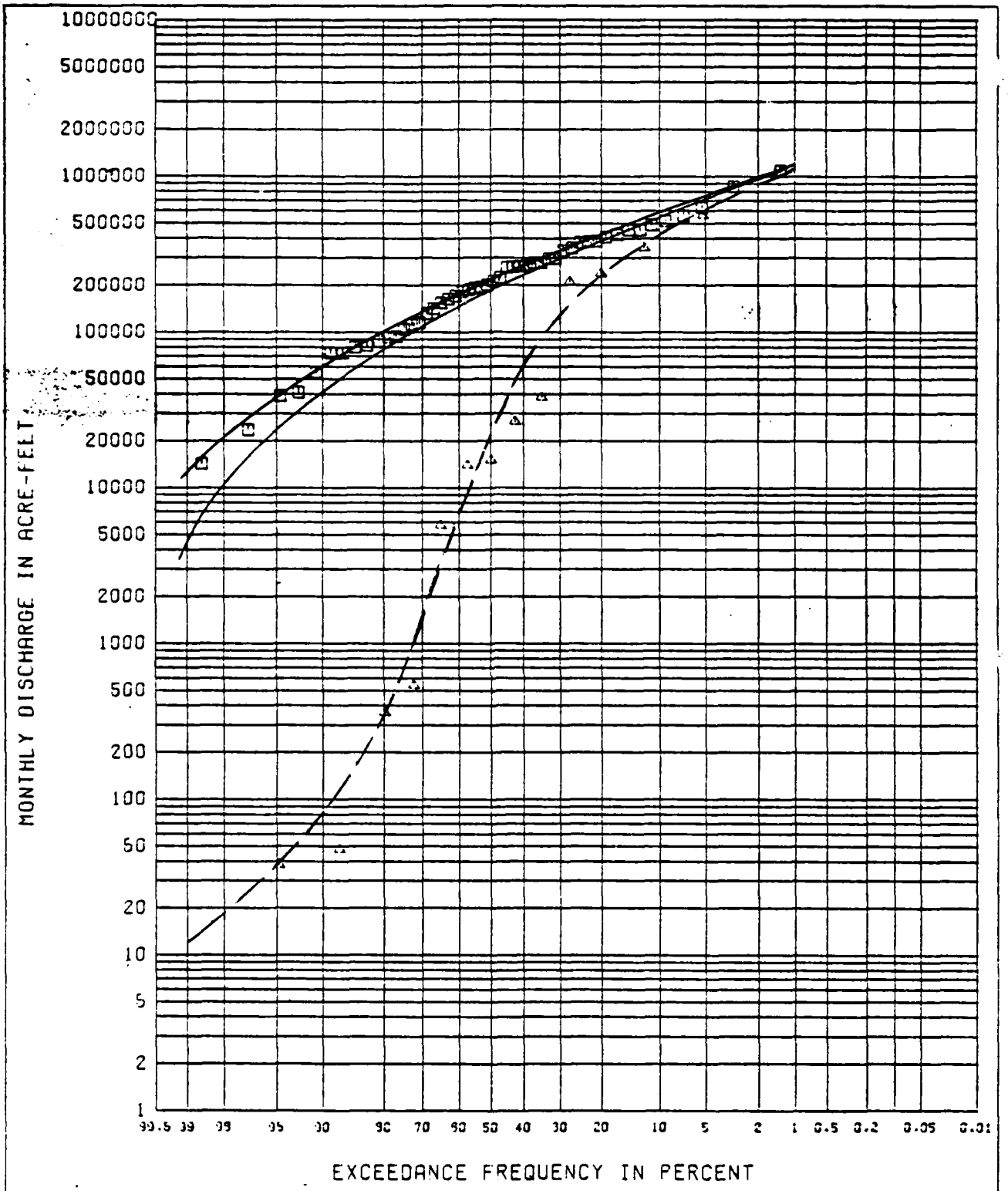
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1978)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

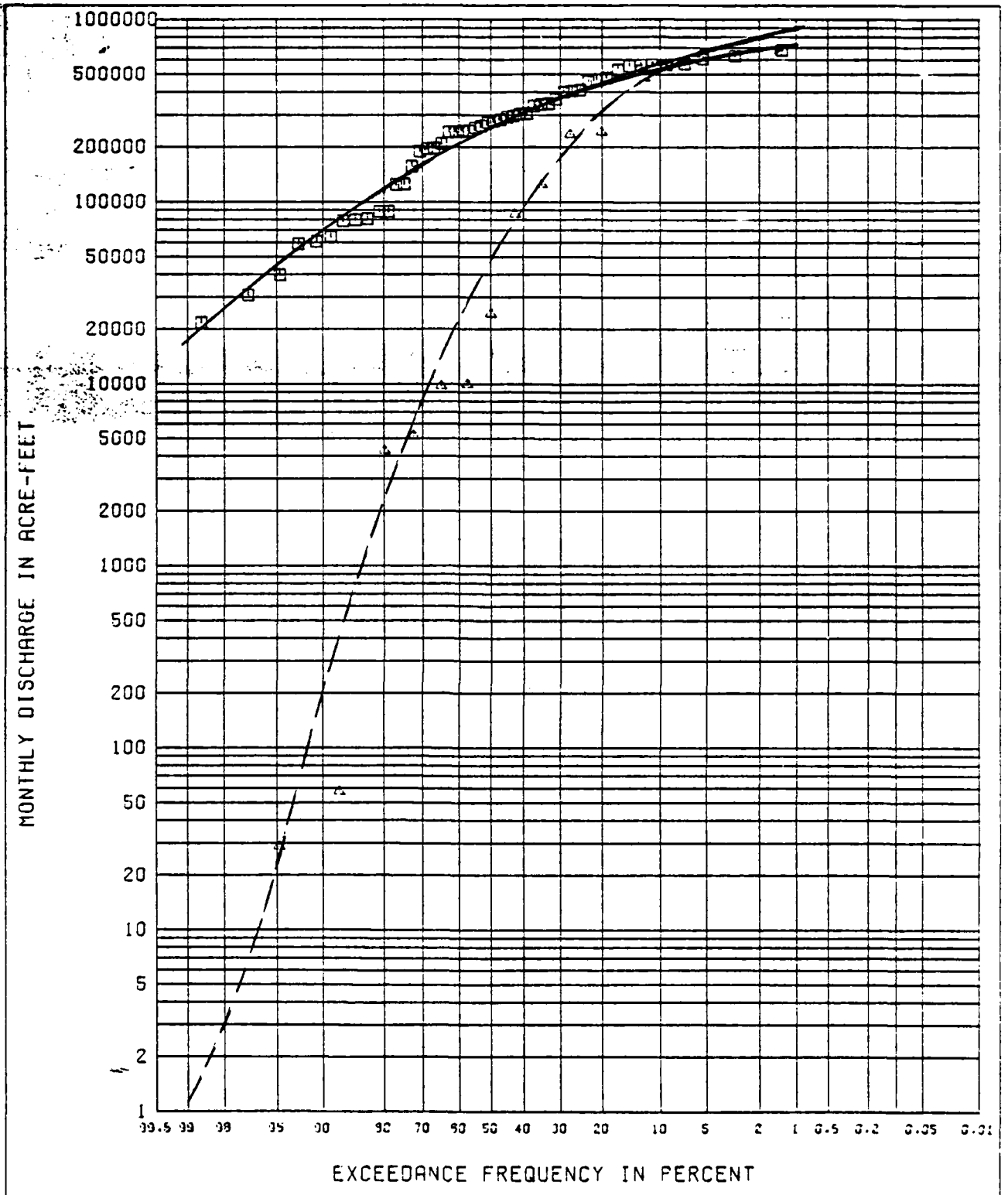
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1978)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

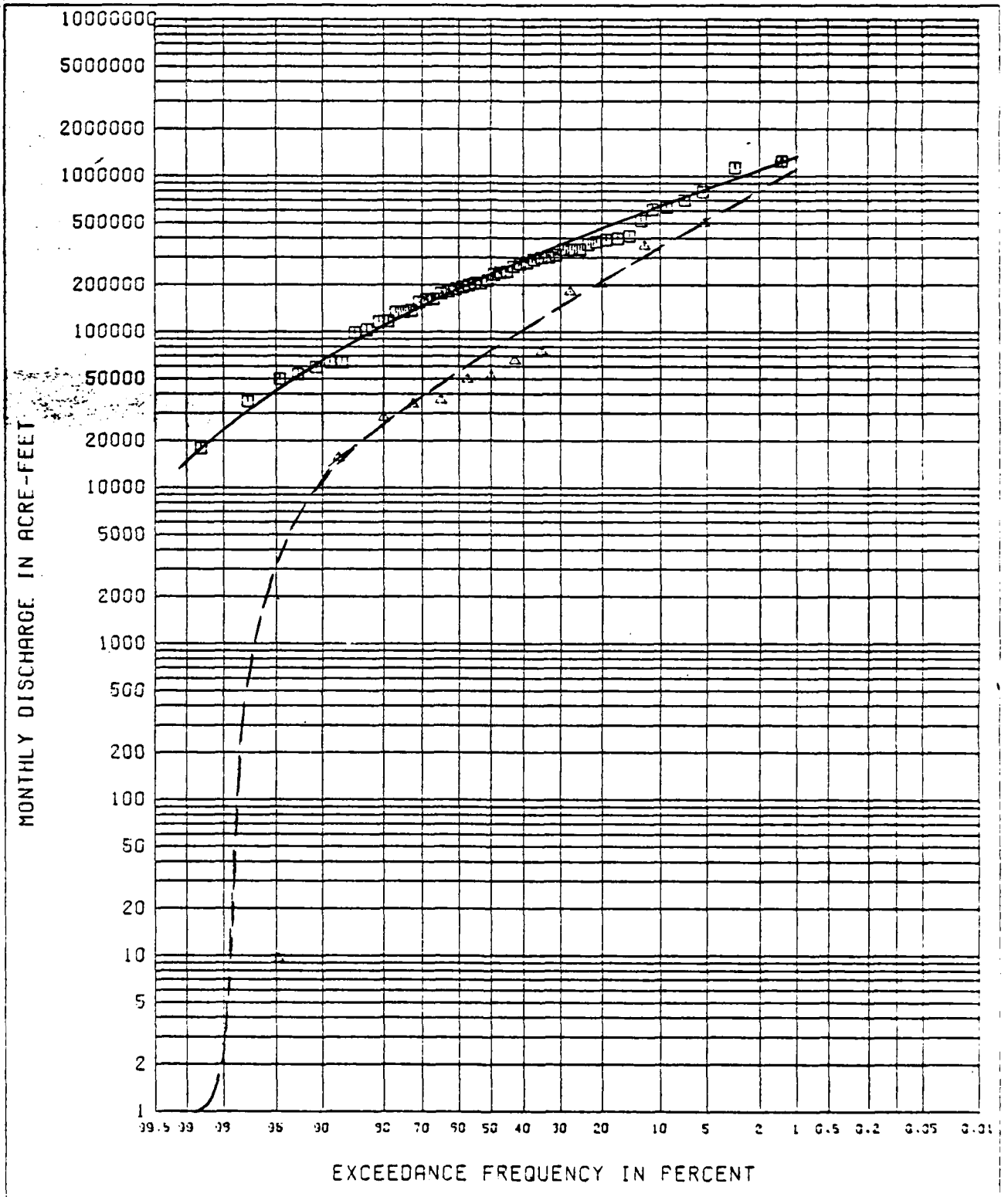
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1965-1978)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

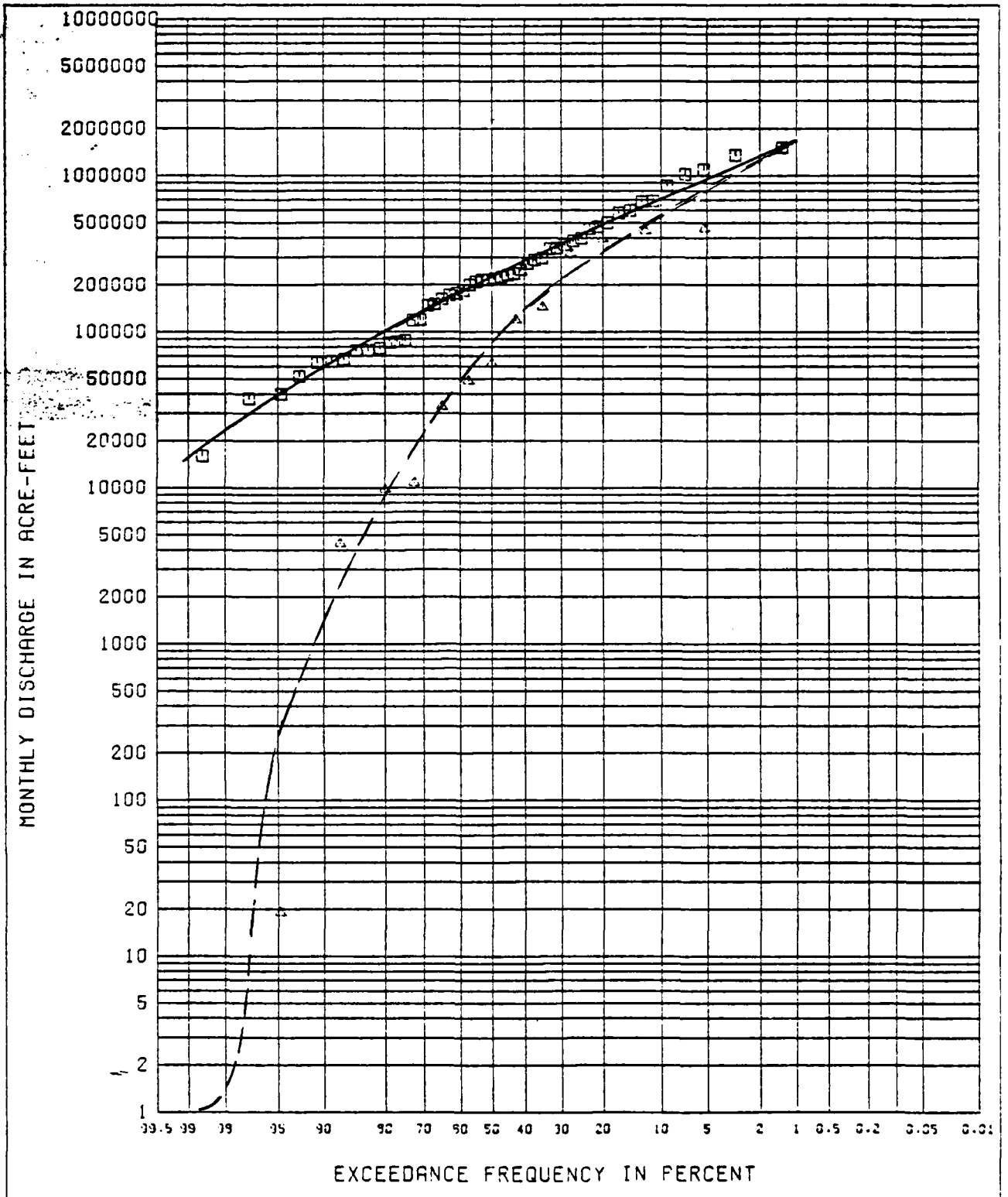
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1979)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

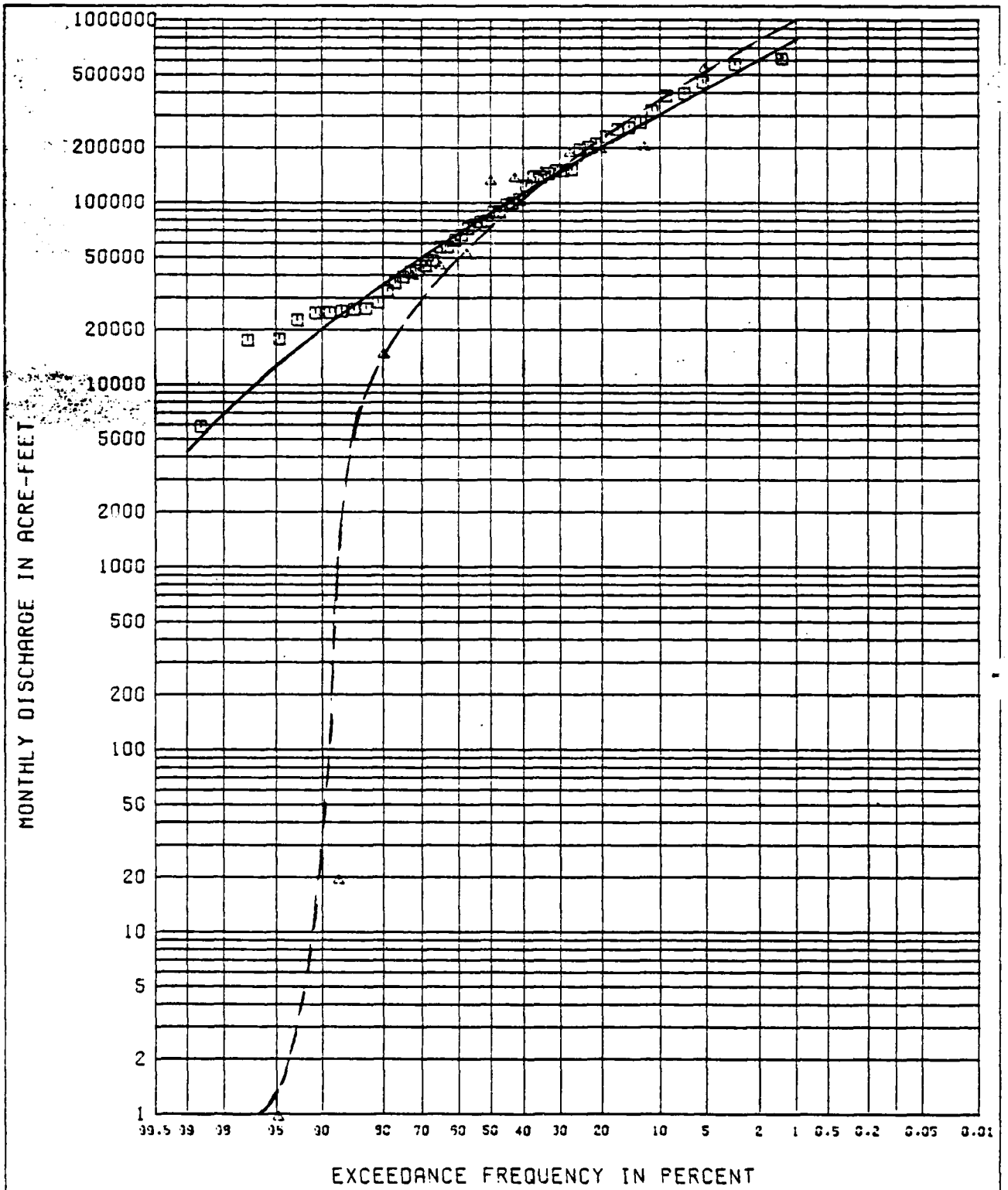
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1978)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

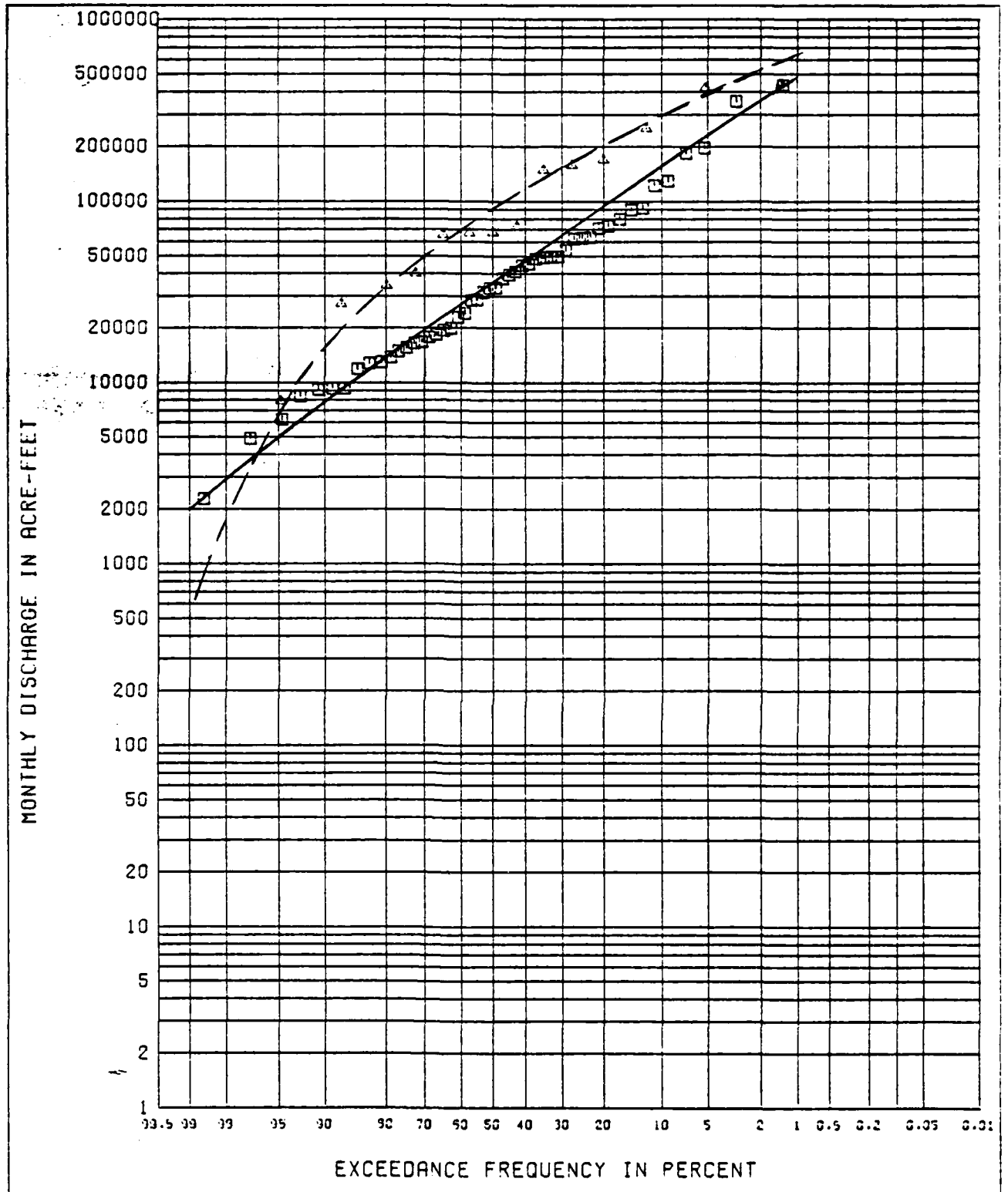
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1978)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

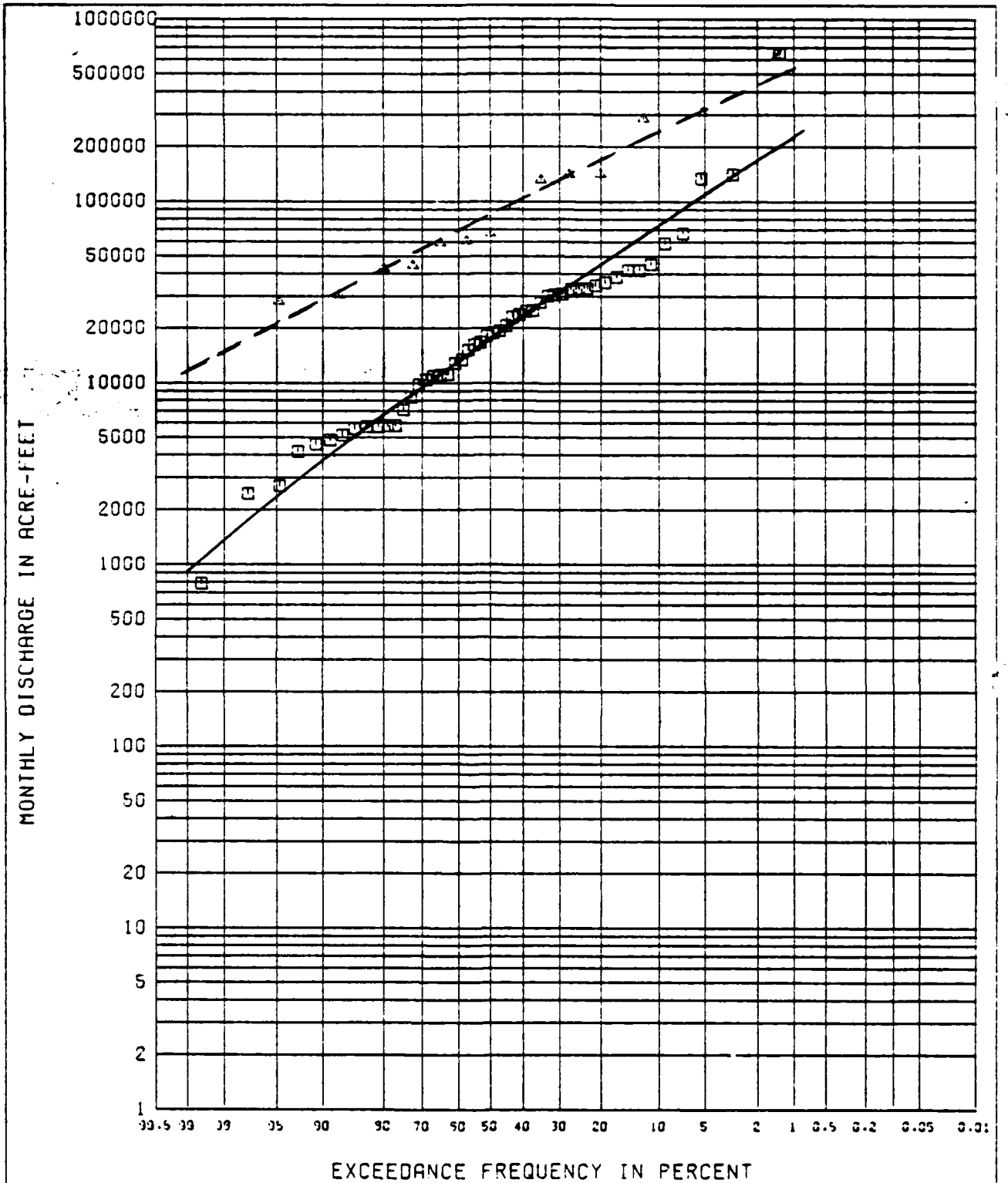
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1978)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

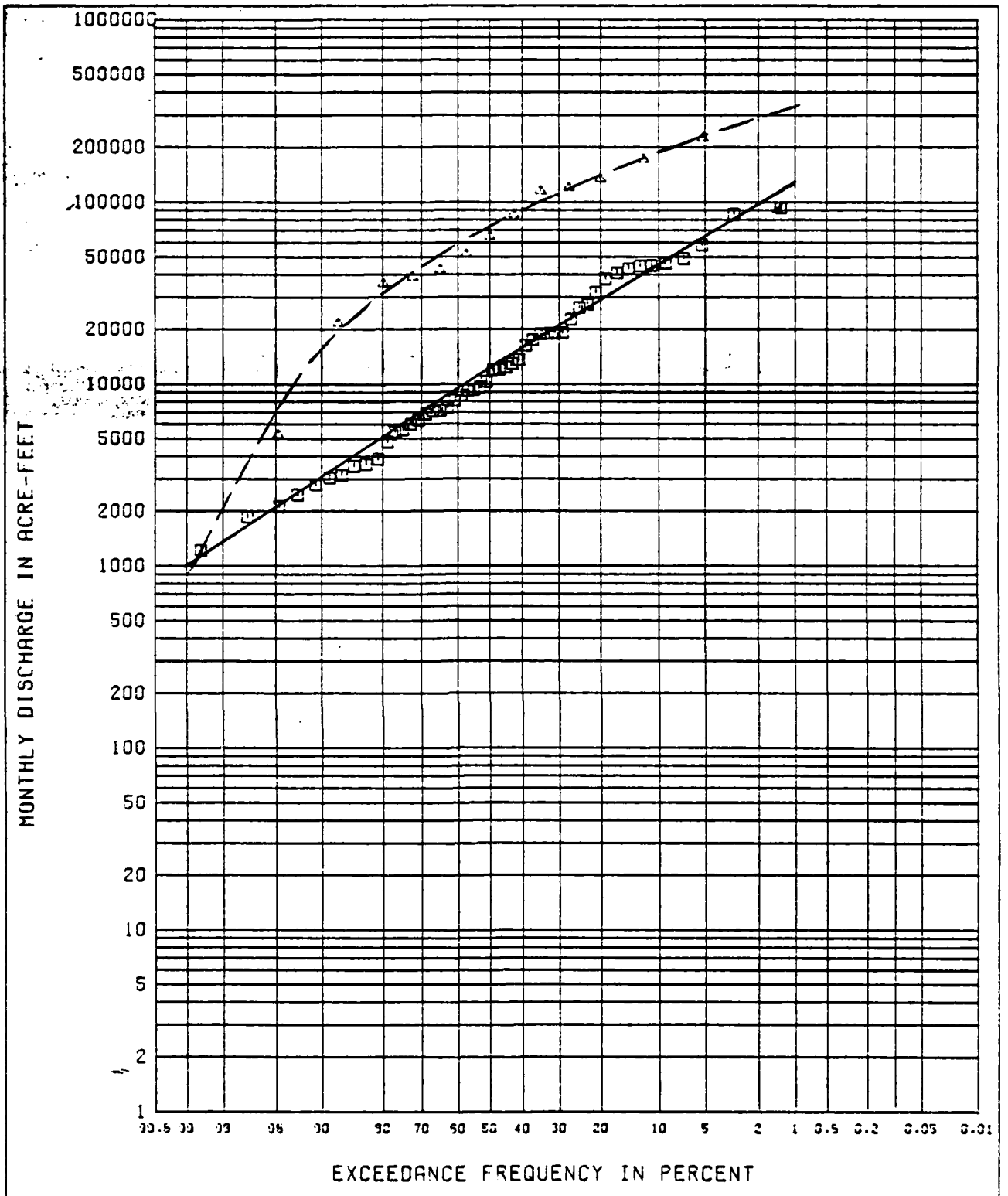
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1978)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

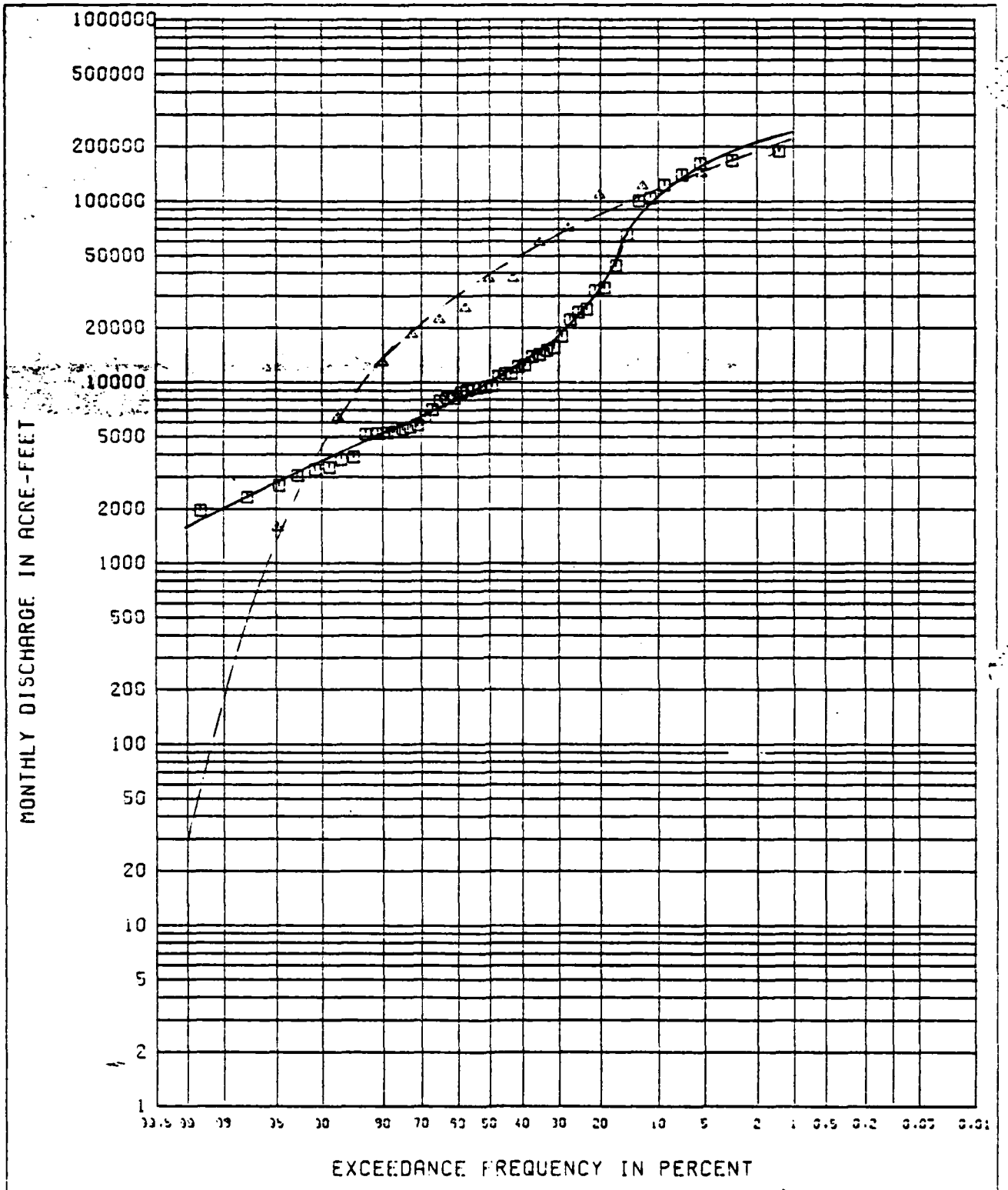
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1965-1979)

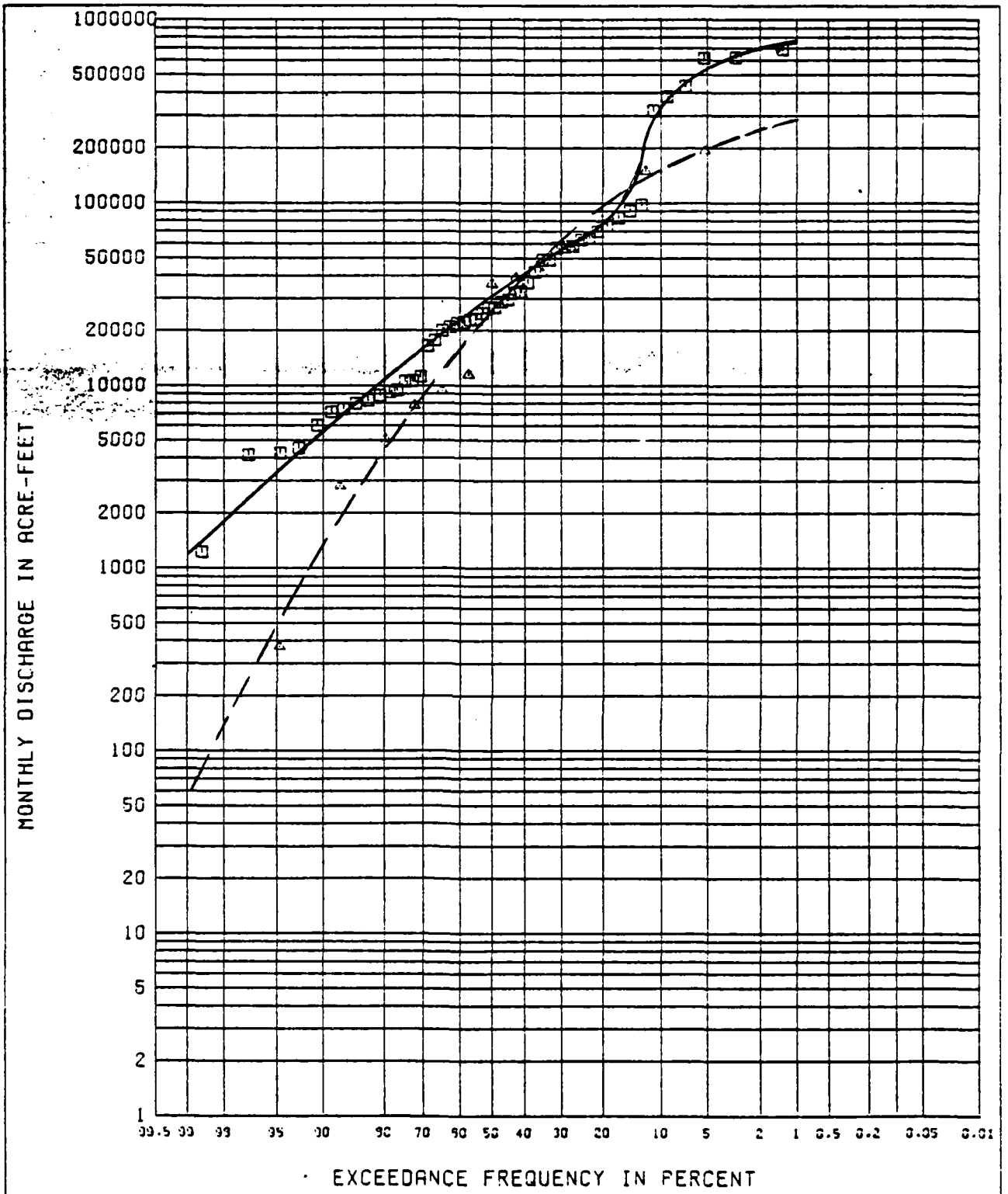
NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1979)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

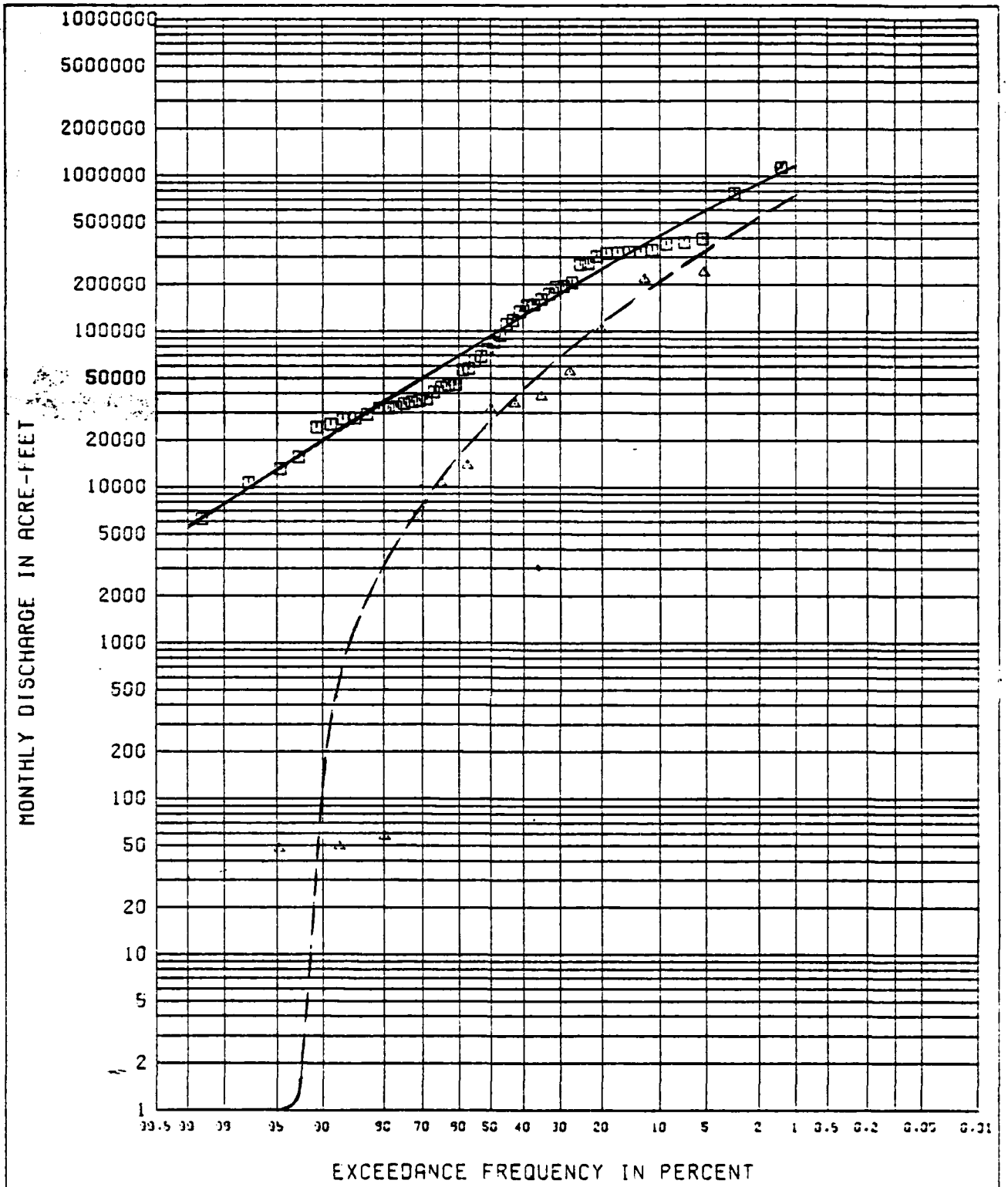
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1979)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

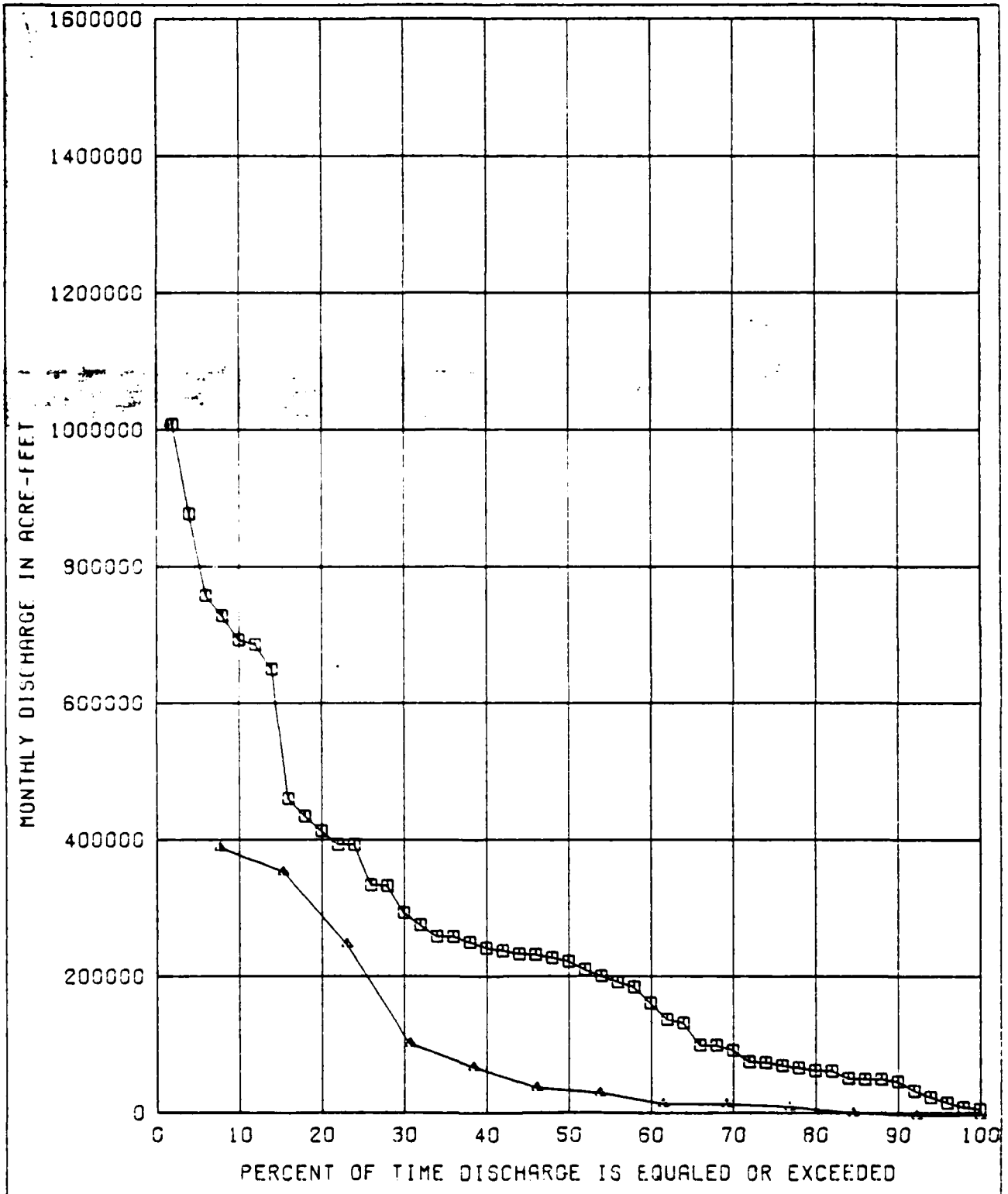
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1909-1957)

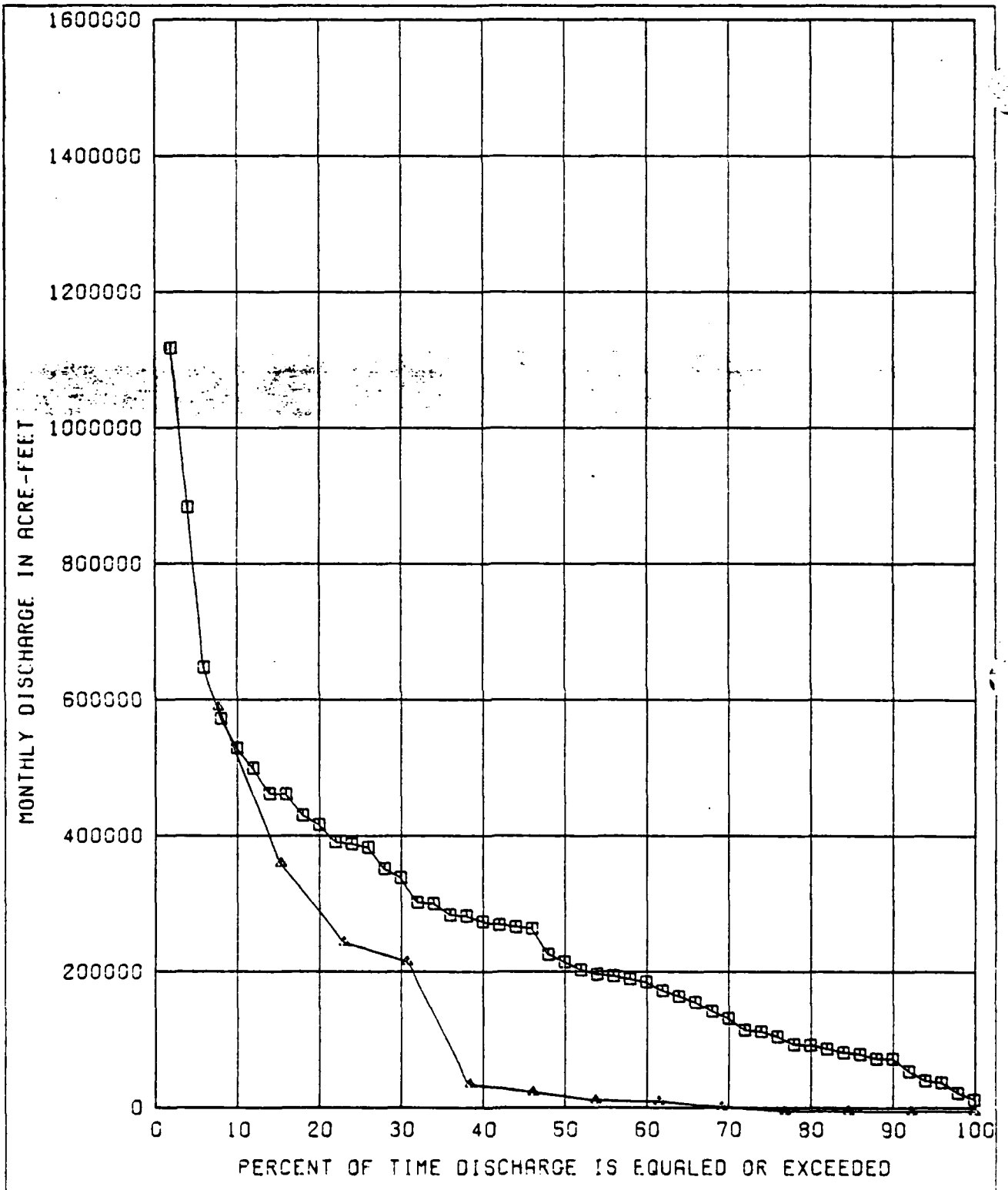
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1965-1979)

NECHES RIVER BASIN, TEXAS
SAM RAYBURN RESERVOIR
FLOW DURATION CURVES AT DAM SITE
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1979)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

FLOW DURATION CURVES AT DAM SITE

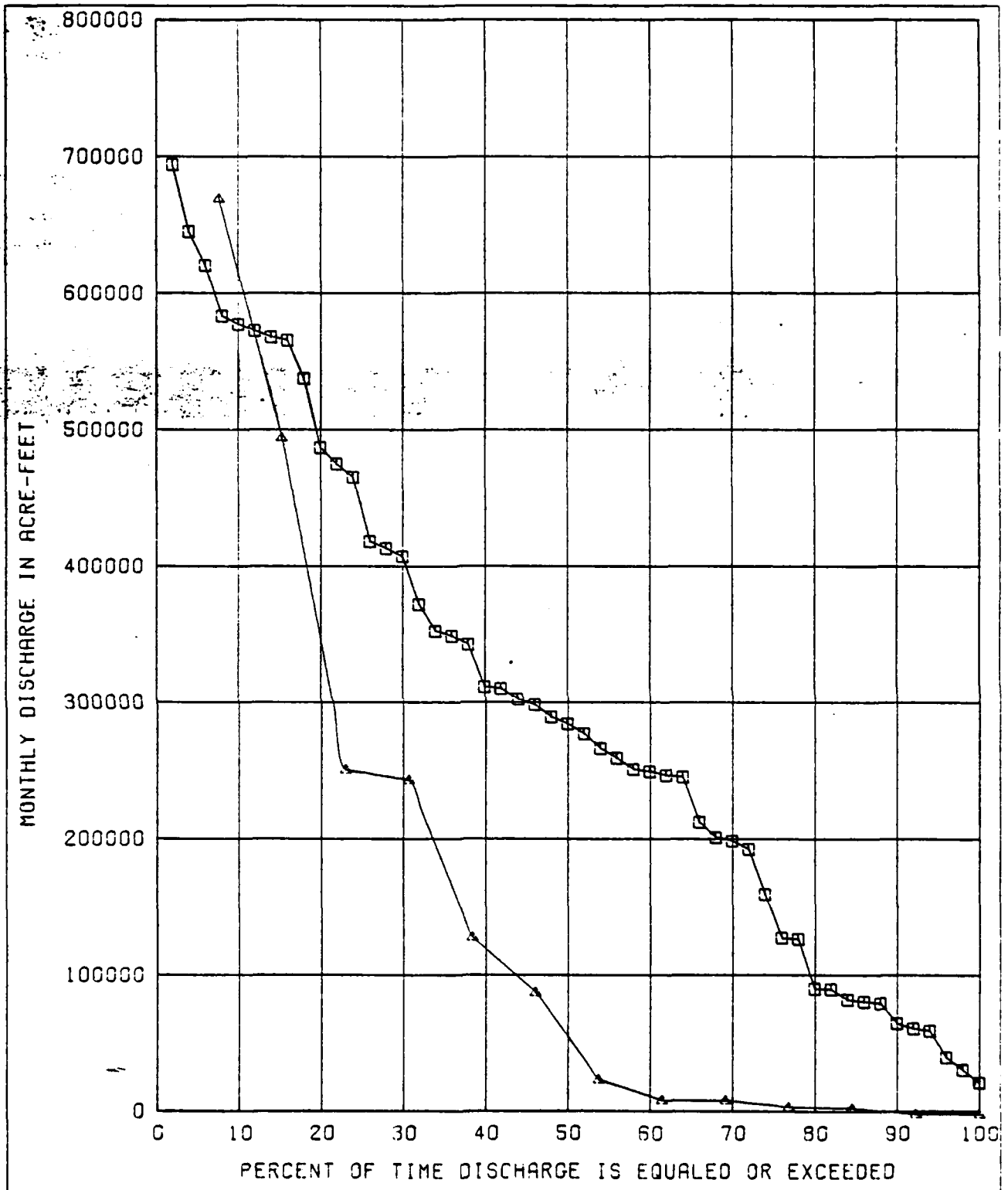
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1979)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

FLOW DURATION CURVES AT DAM SITE

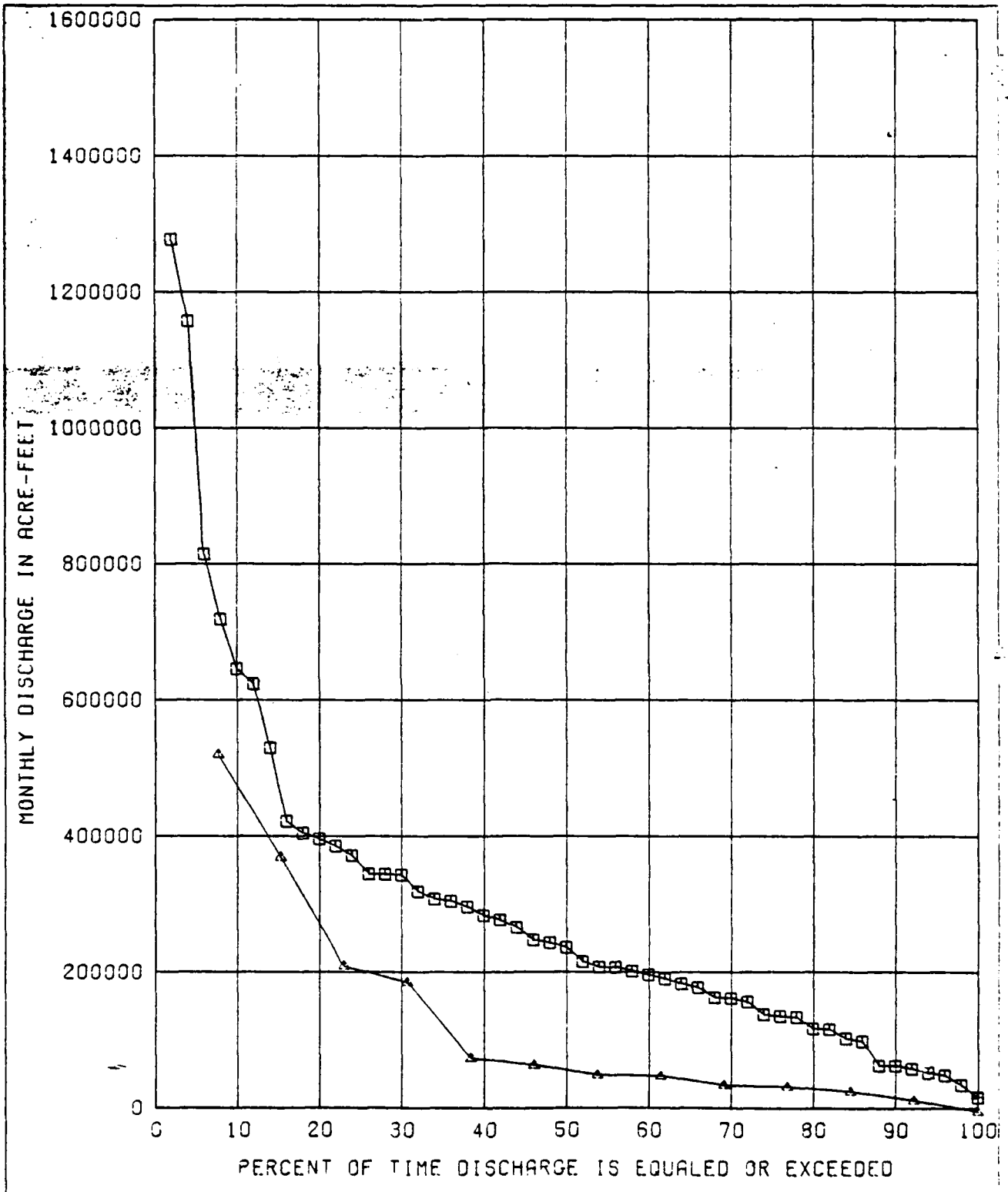
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1979)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

FLOW DURATION CURVES AT DAM SITE

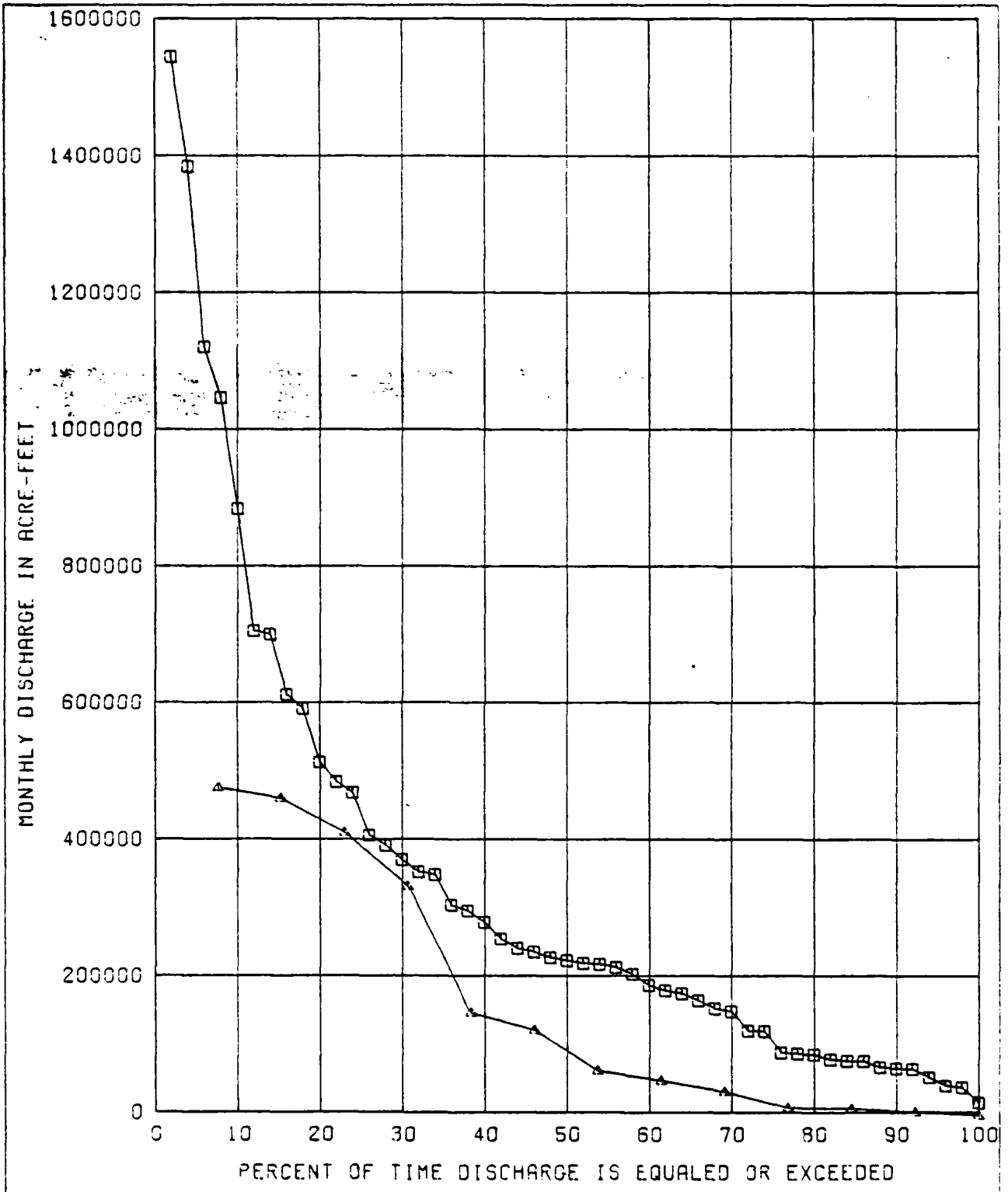
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1979)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

FLOW DURATION CURVES AT DAM SITE

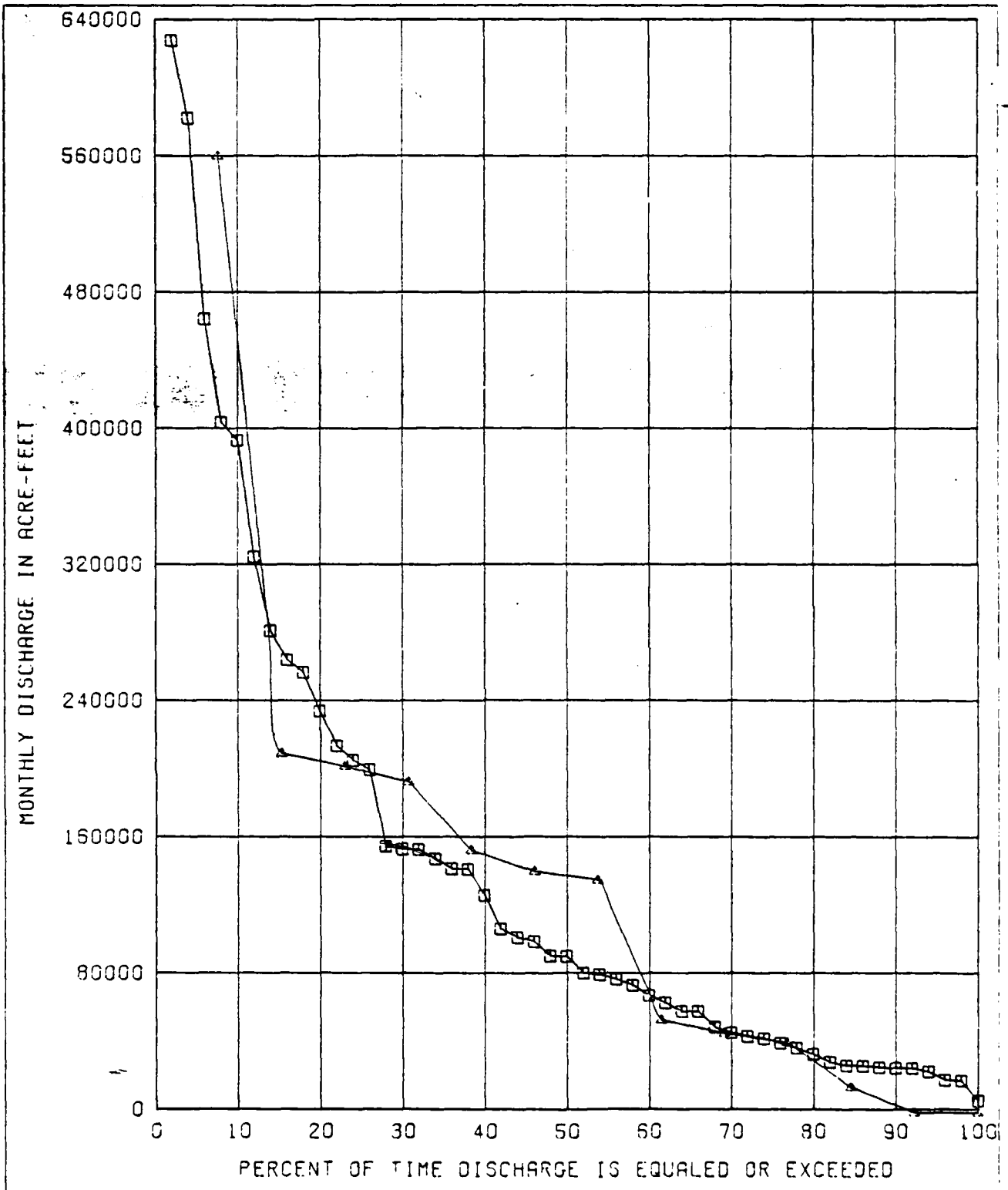
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1909-1957)

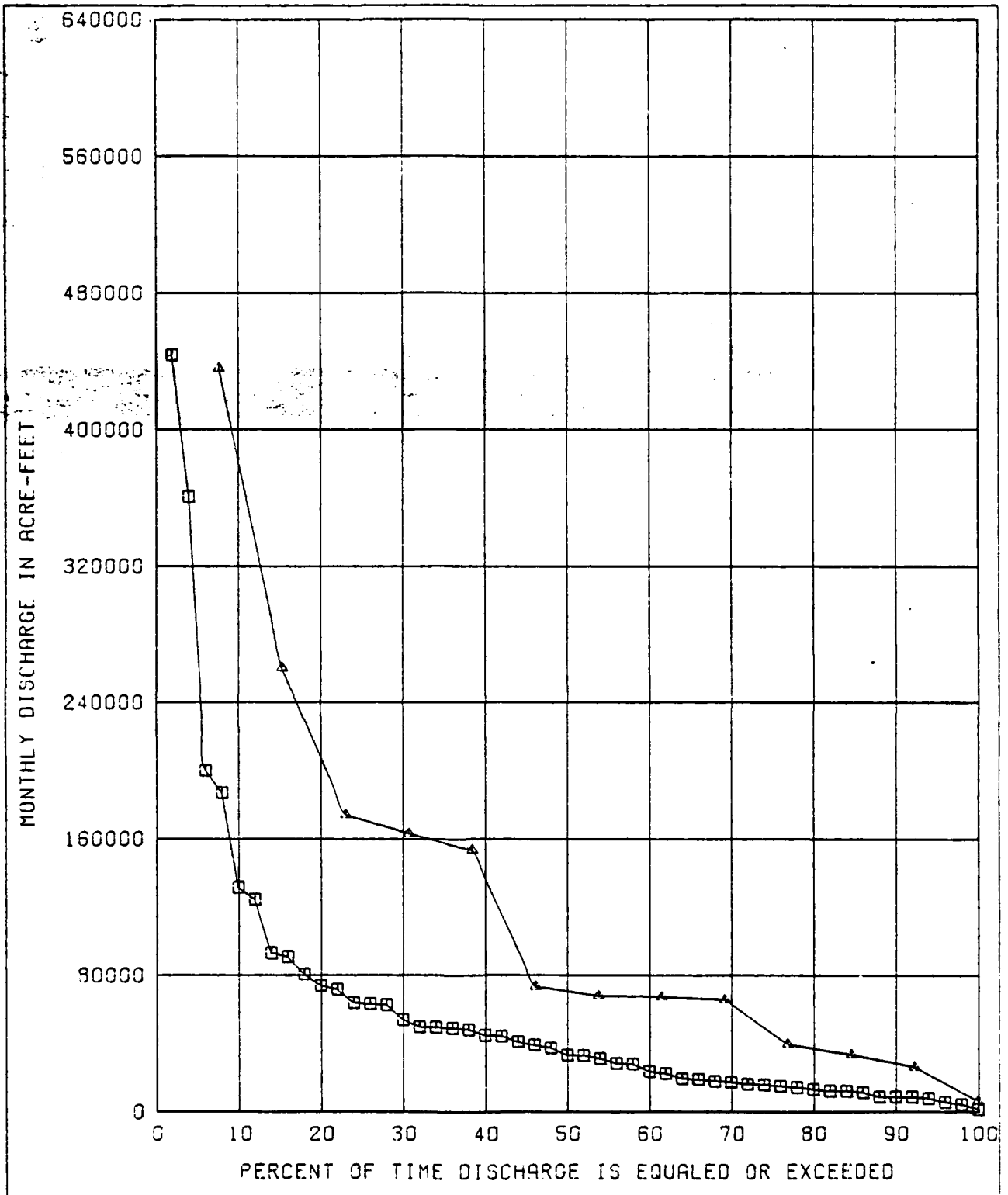
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1965-1979)

NECHES RIVER BASIN, TEXAS
SAM RAYBURN RESERVOIR
FLOW DURATION CURVES AT DAM SITE
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1903-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1979)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

FLOW DURATION CURVES AT DAM SITE

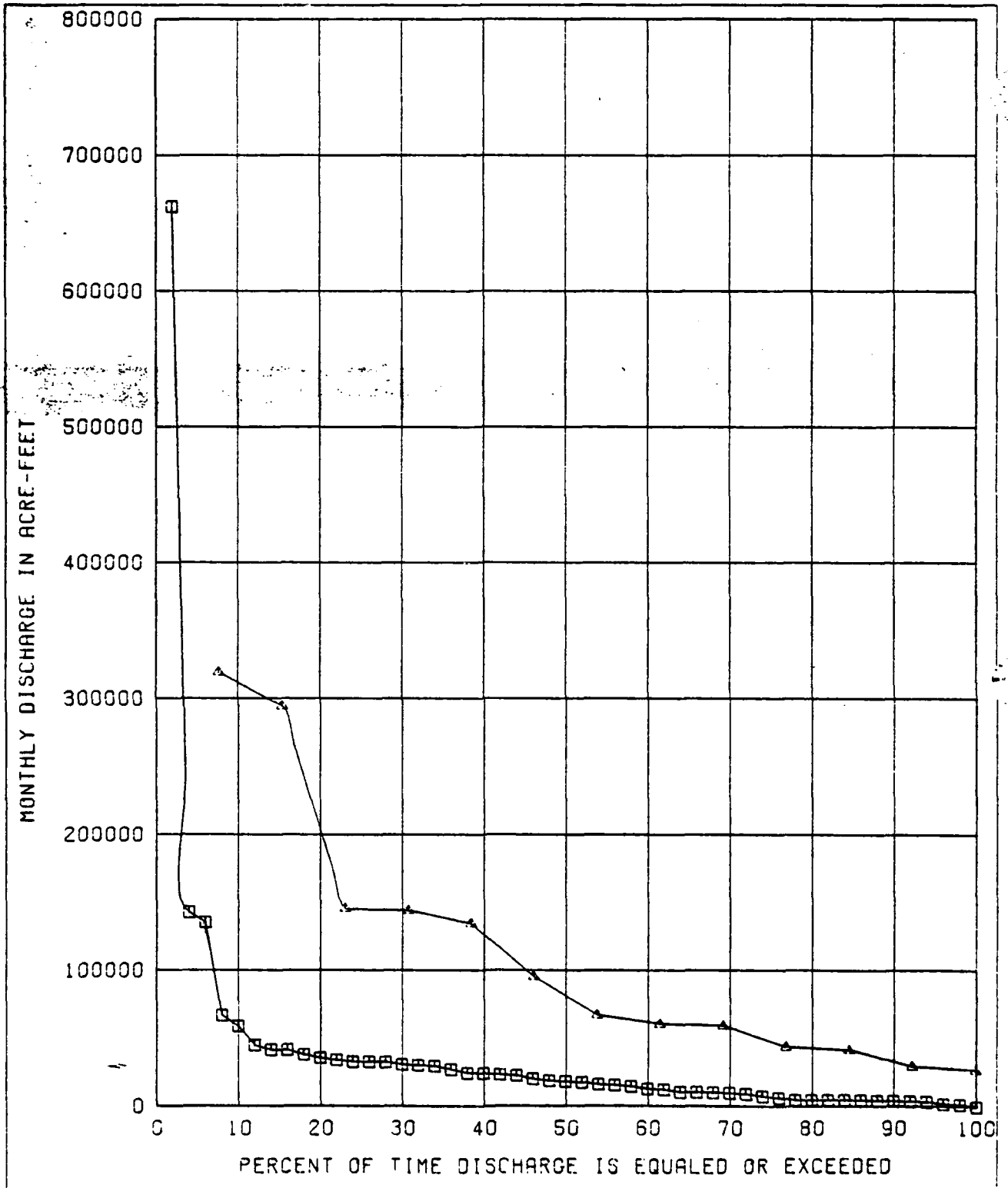
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1965-1978)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

FLOW DURATION CURVES AT DAM SITE

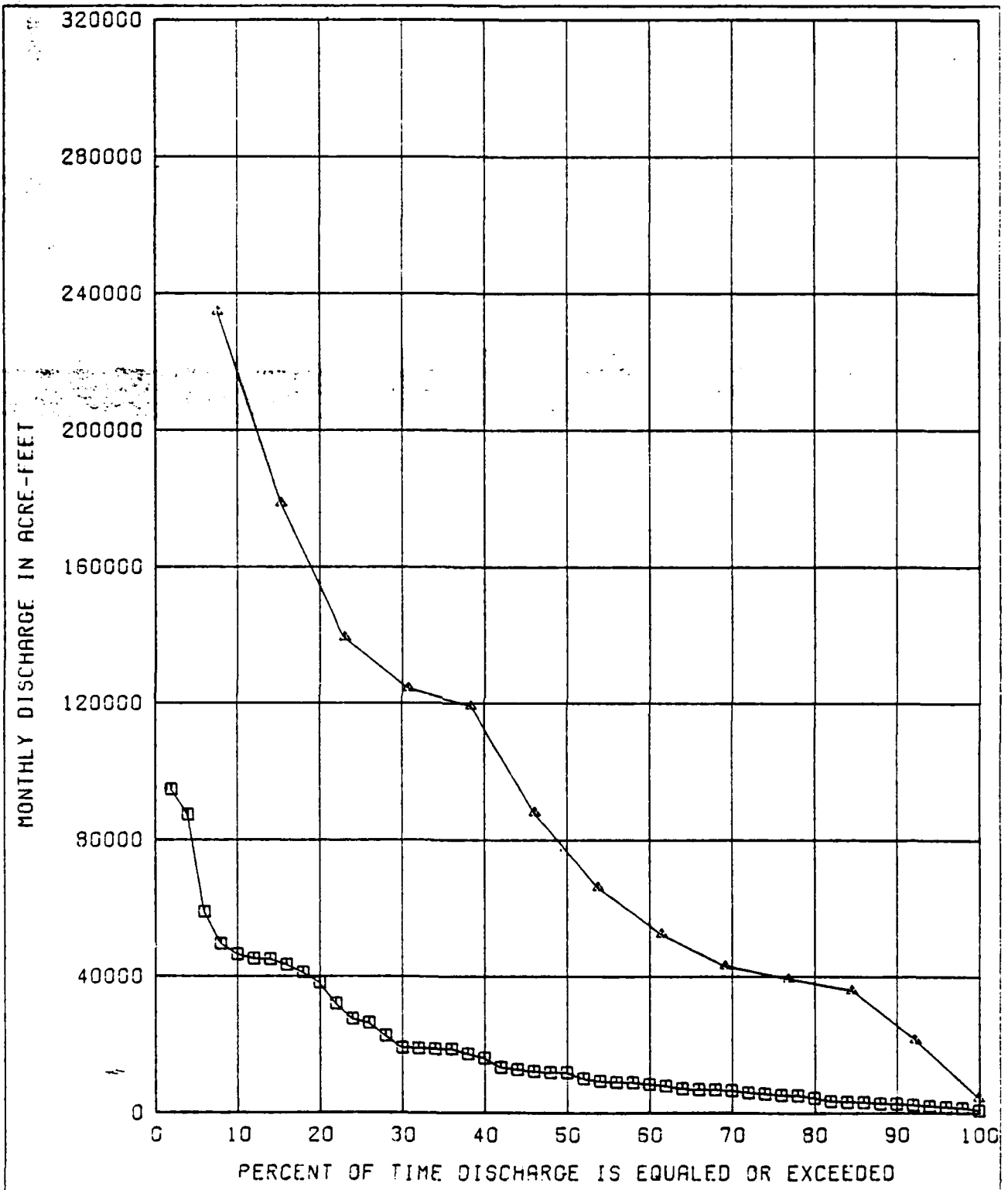
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1979)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

FLOW DURATION CURVES AT DAM SITE

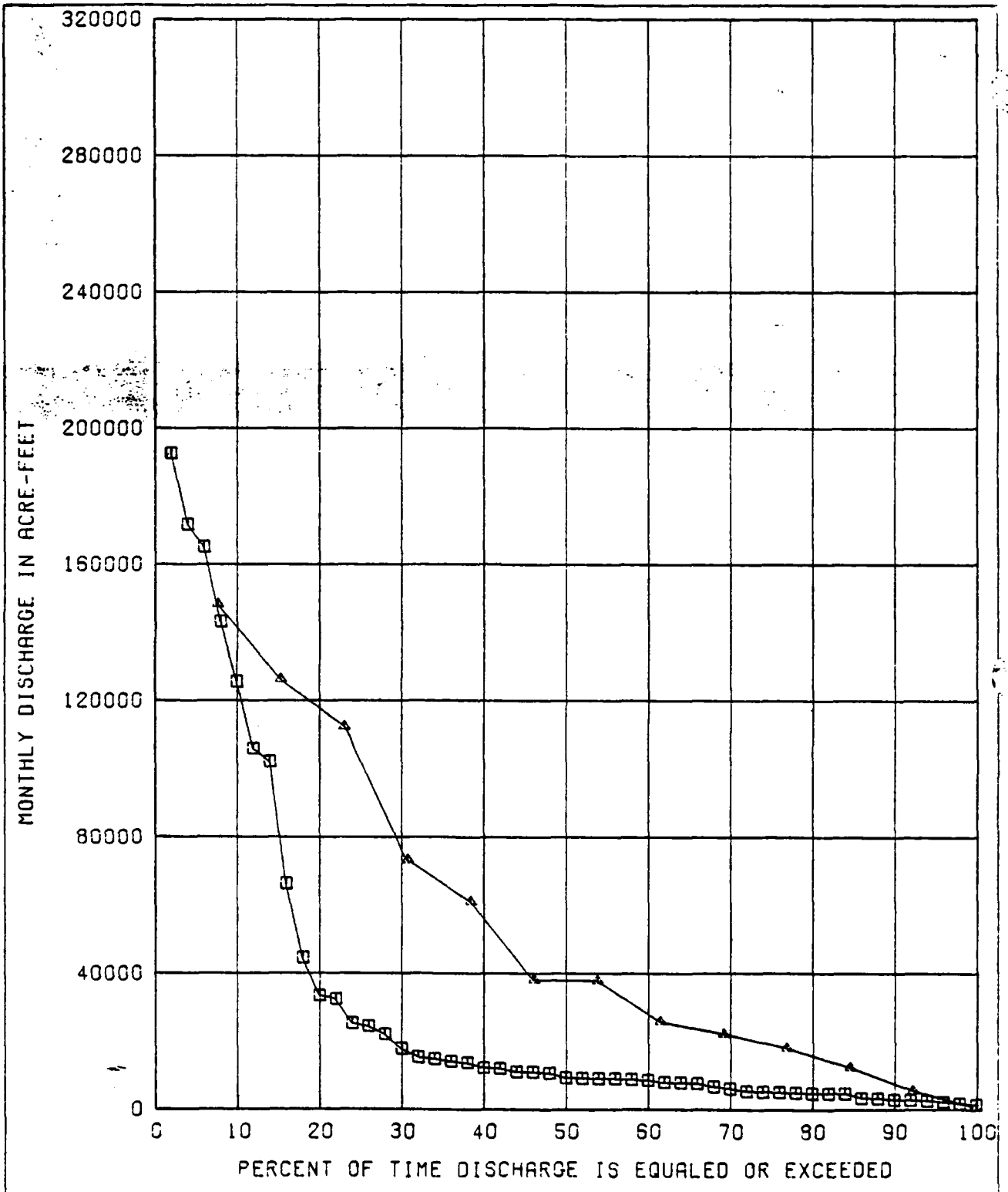
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1909-1957)

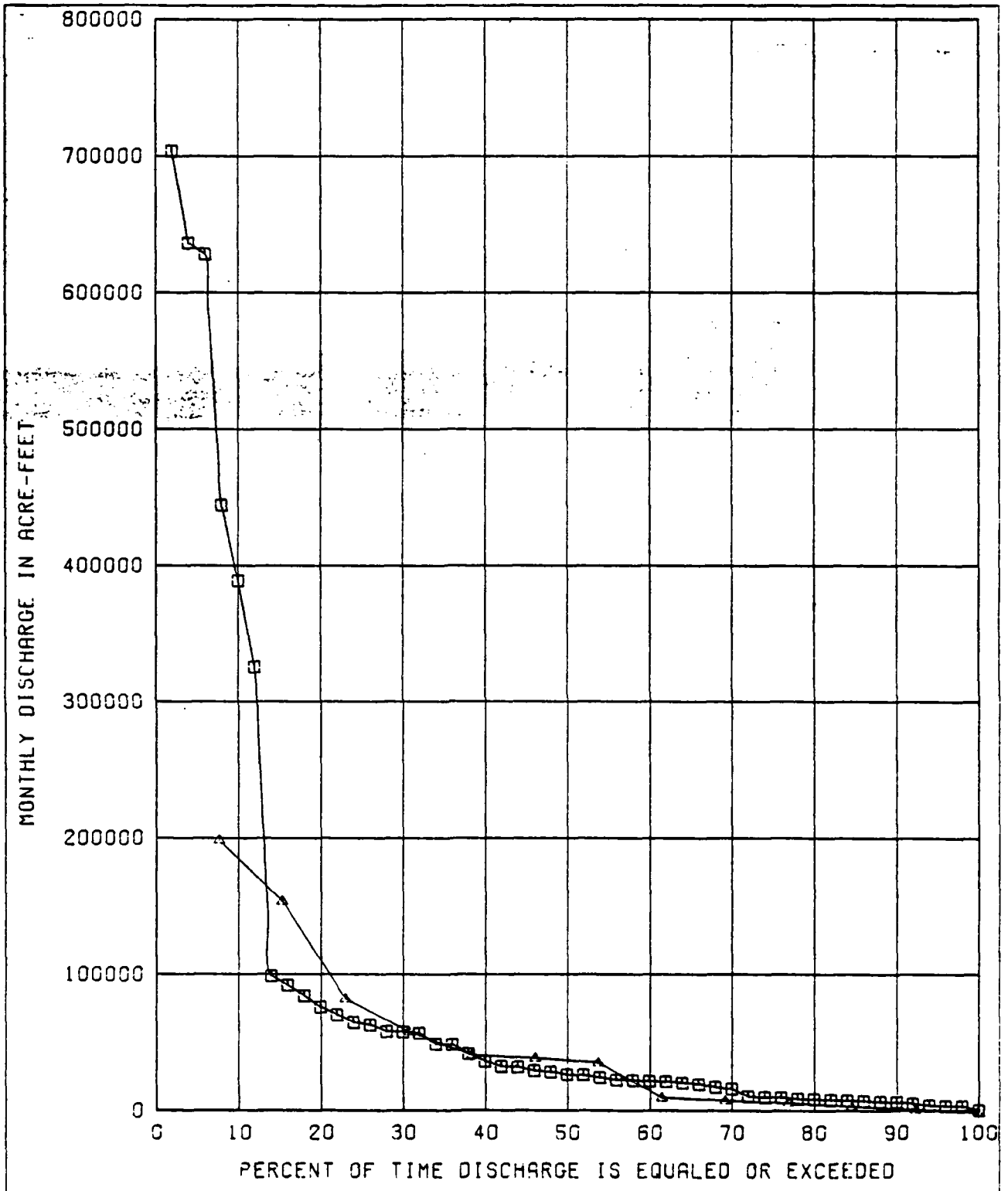
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1965-1978)

NECHES RIVER BASIN, TEXAS
SAM RAYBURN RESERVOIR
FLOW DURATION CURVES AT DAM SITE
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1908-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1978)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

FLOW DURATION CURVES AT DAM SITE

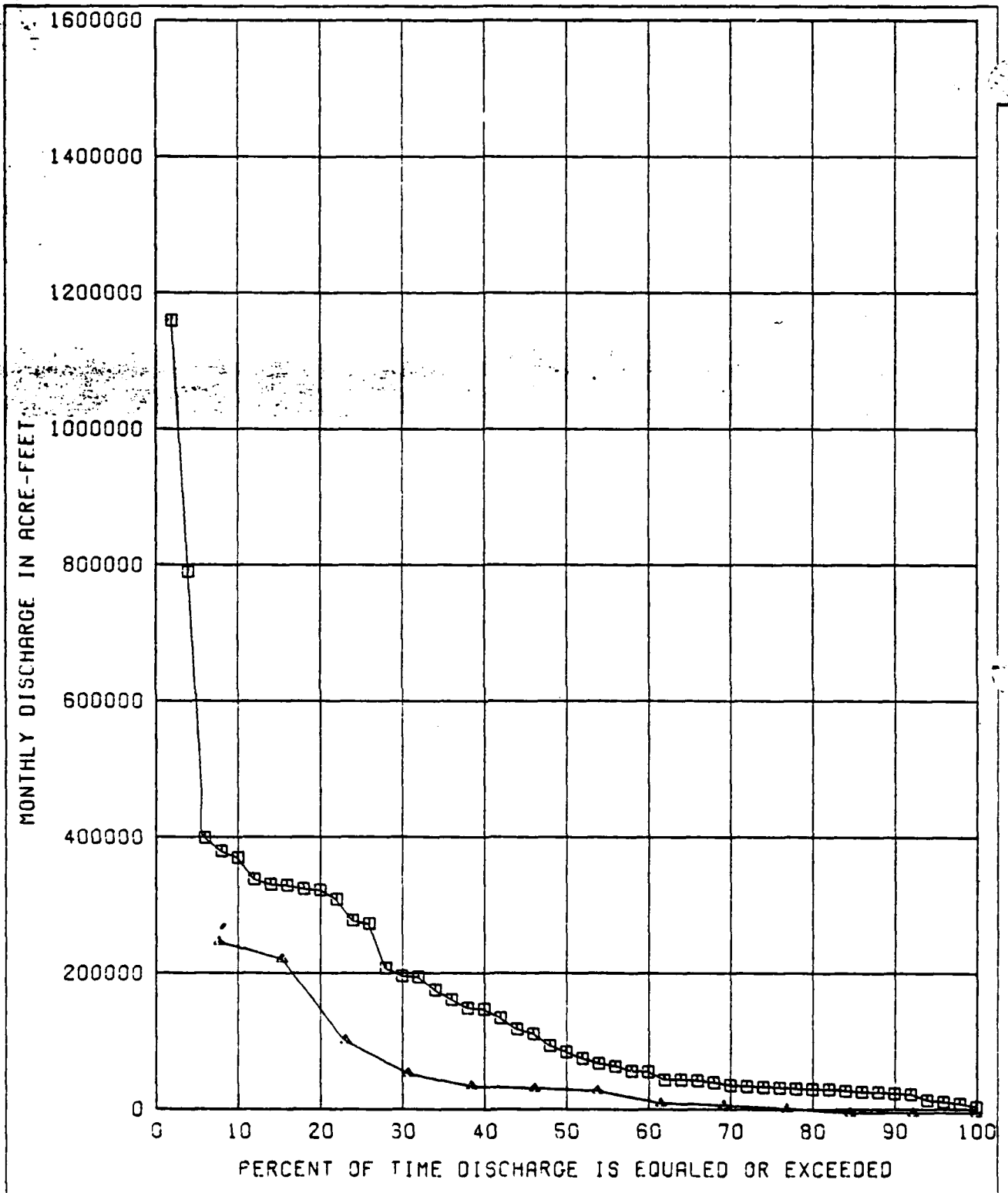
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1979)

NECHES RIVER BASIN, TEXAS

SAM RAYBURN RESERVOIR

FLOW DURATION CURVES AT DAM SITE

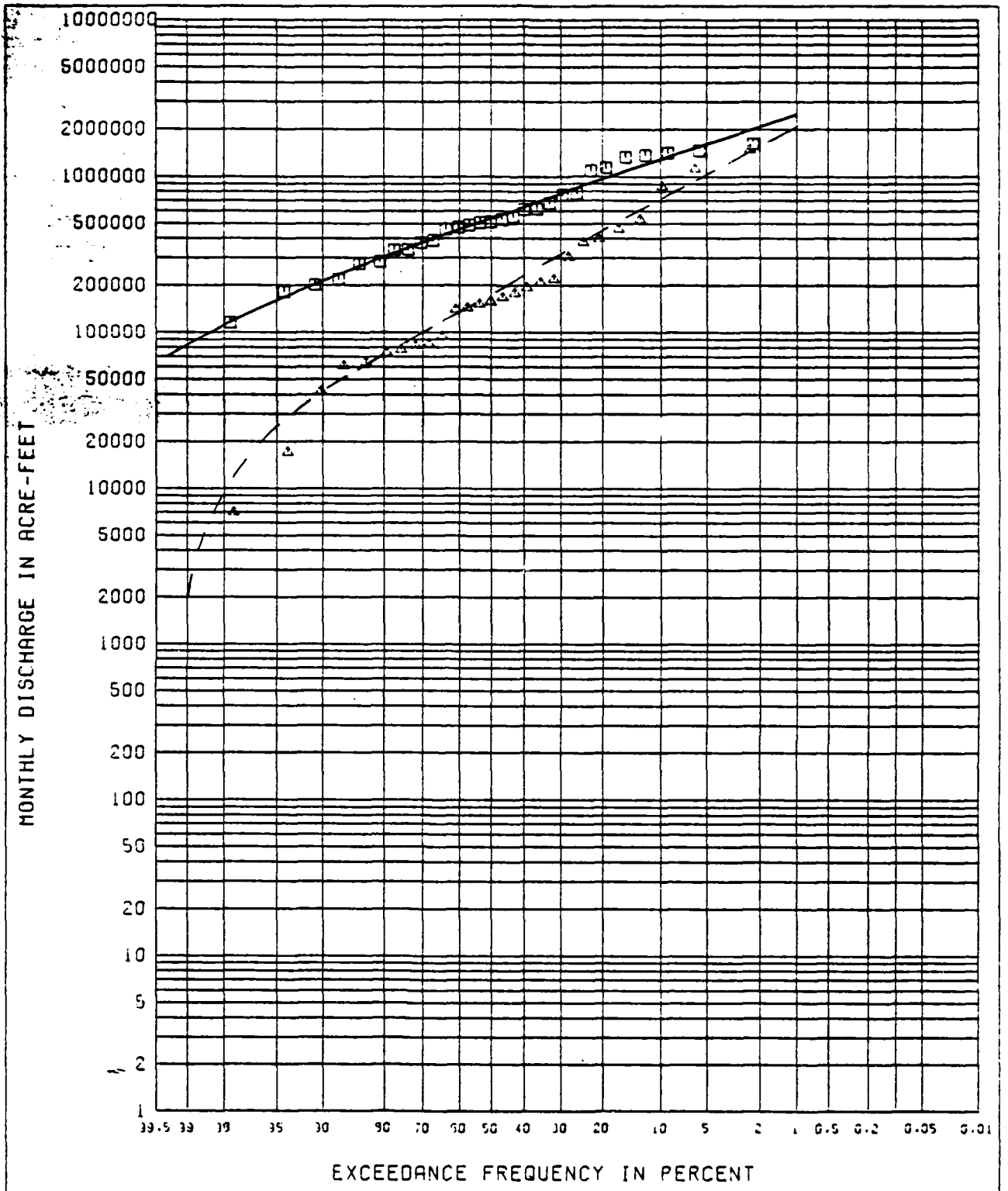
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

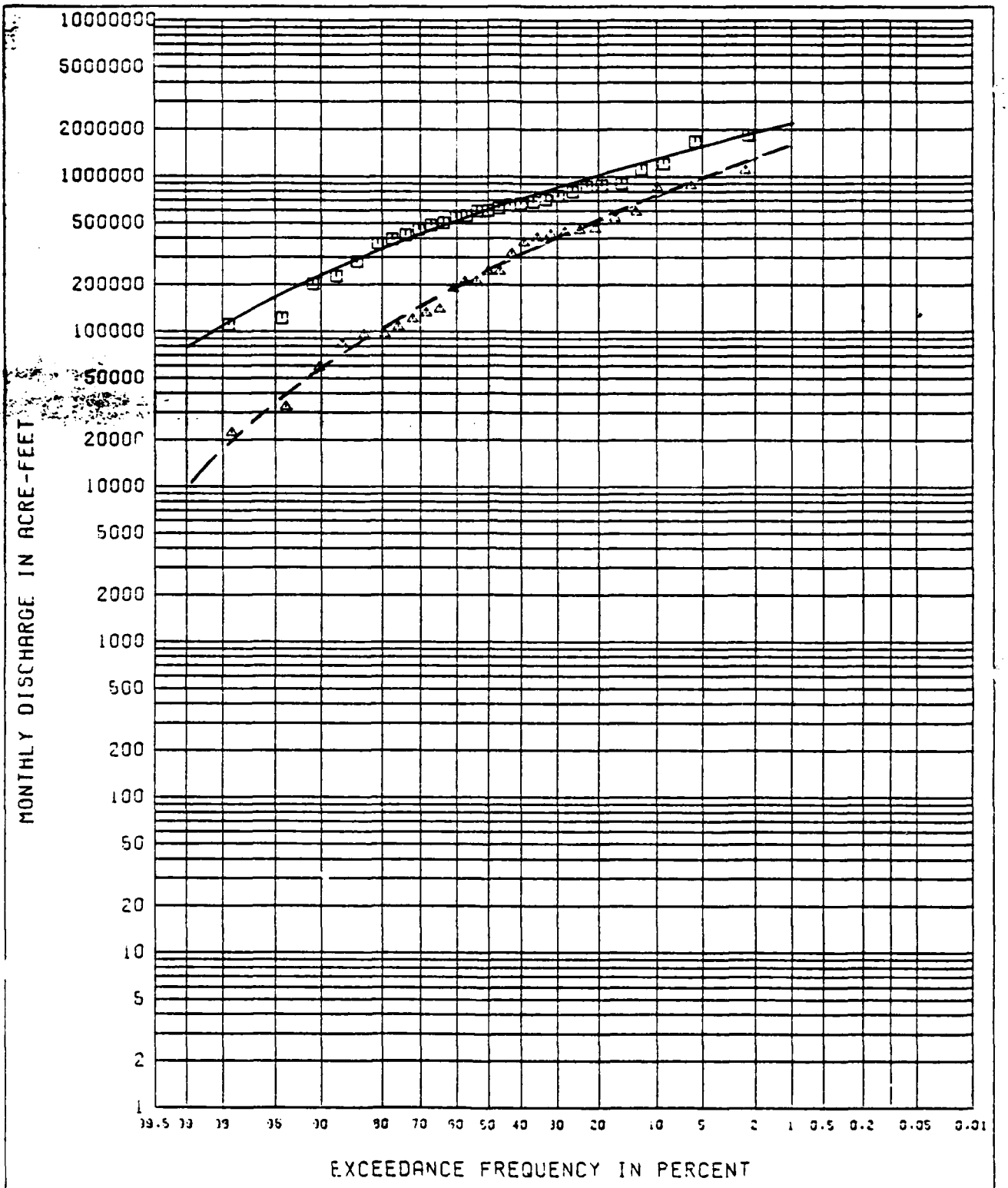
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1978)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

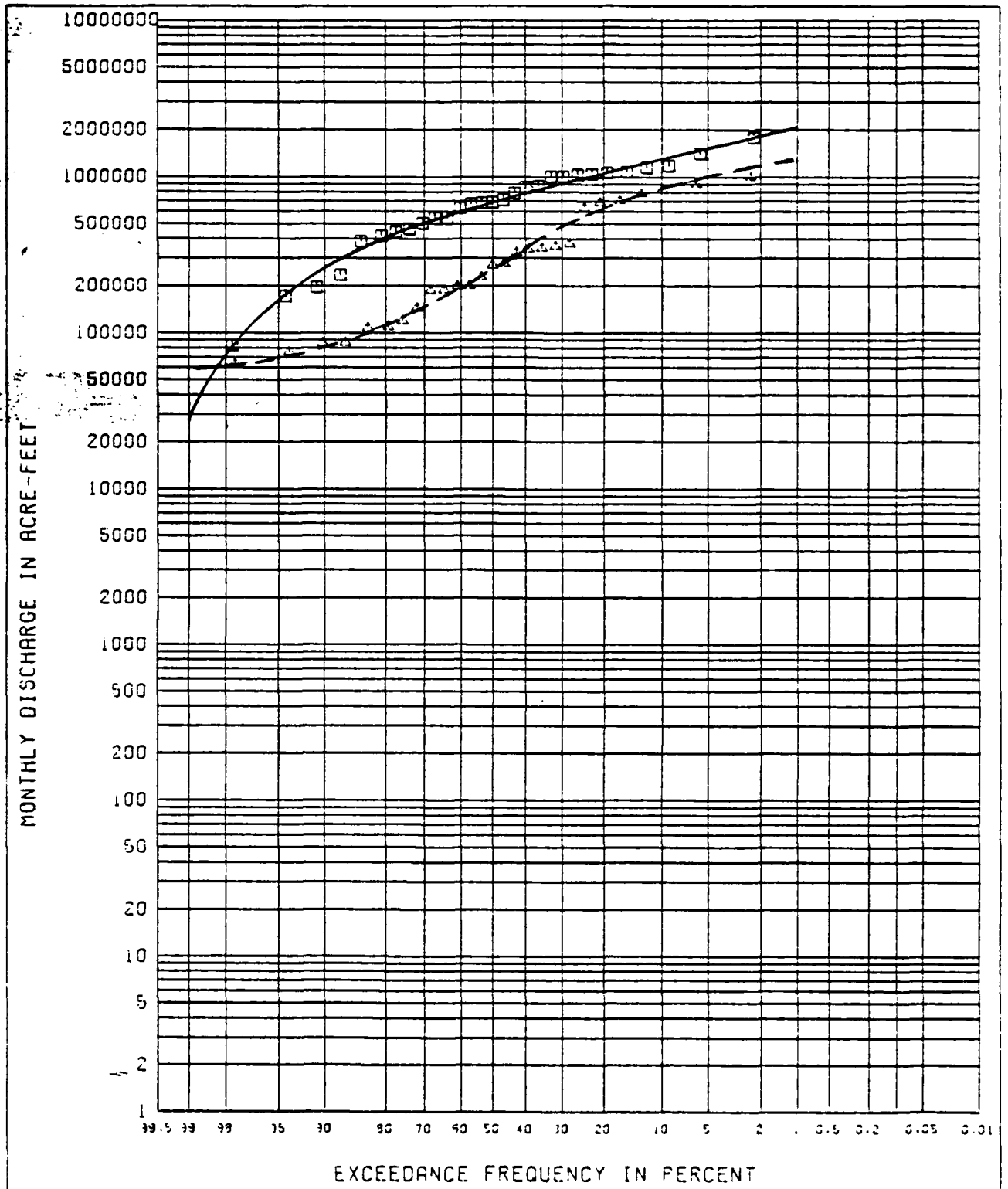
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

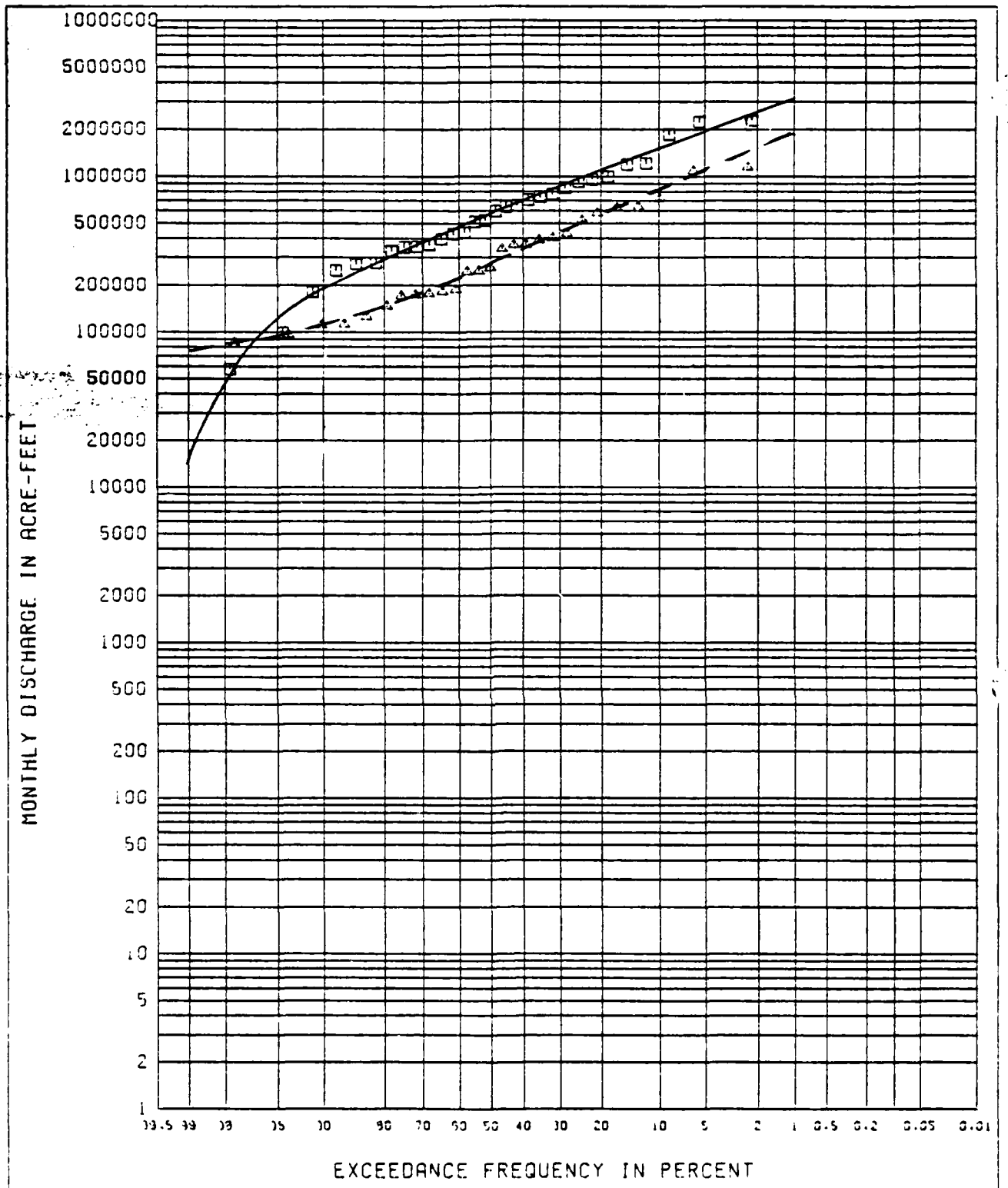
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

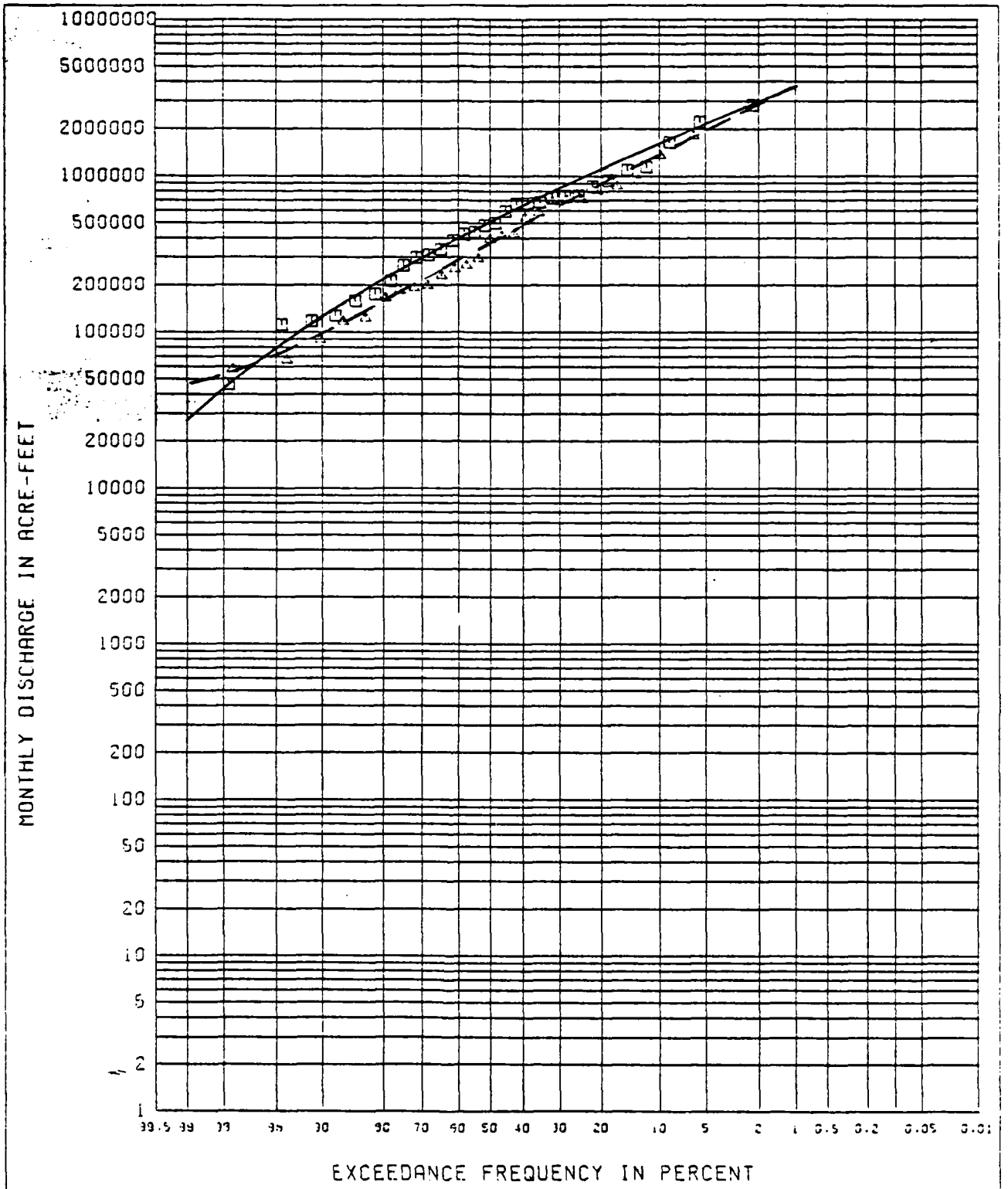
NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1978)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

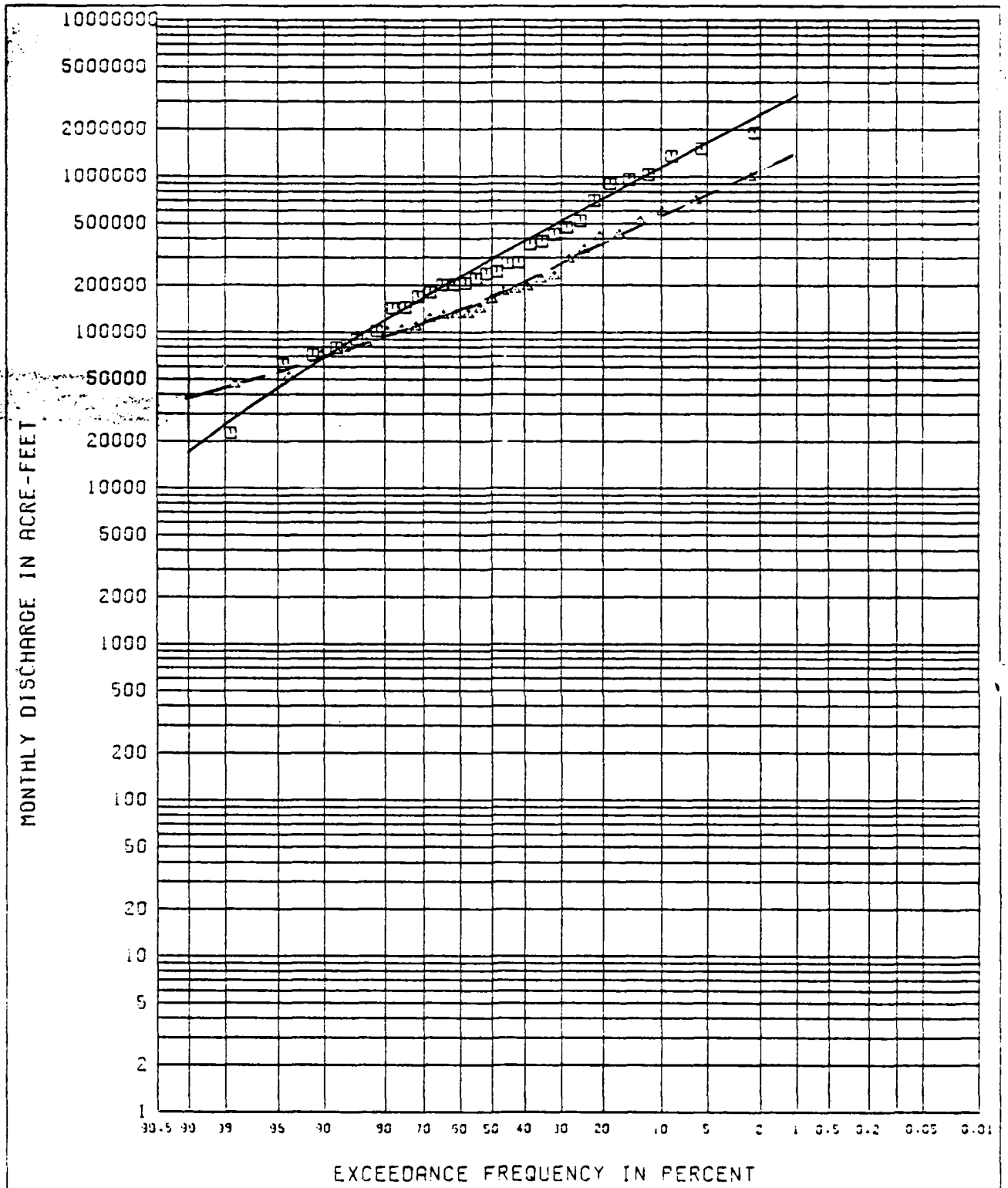
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

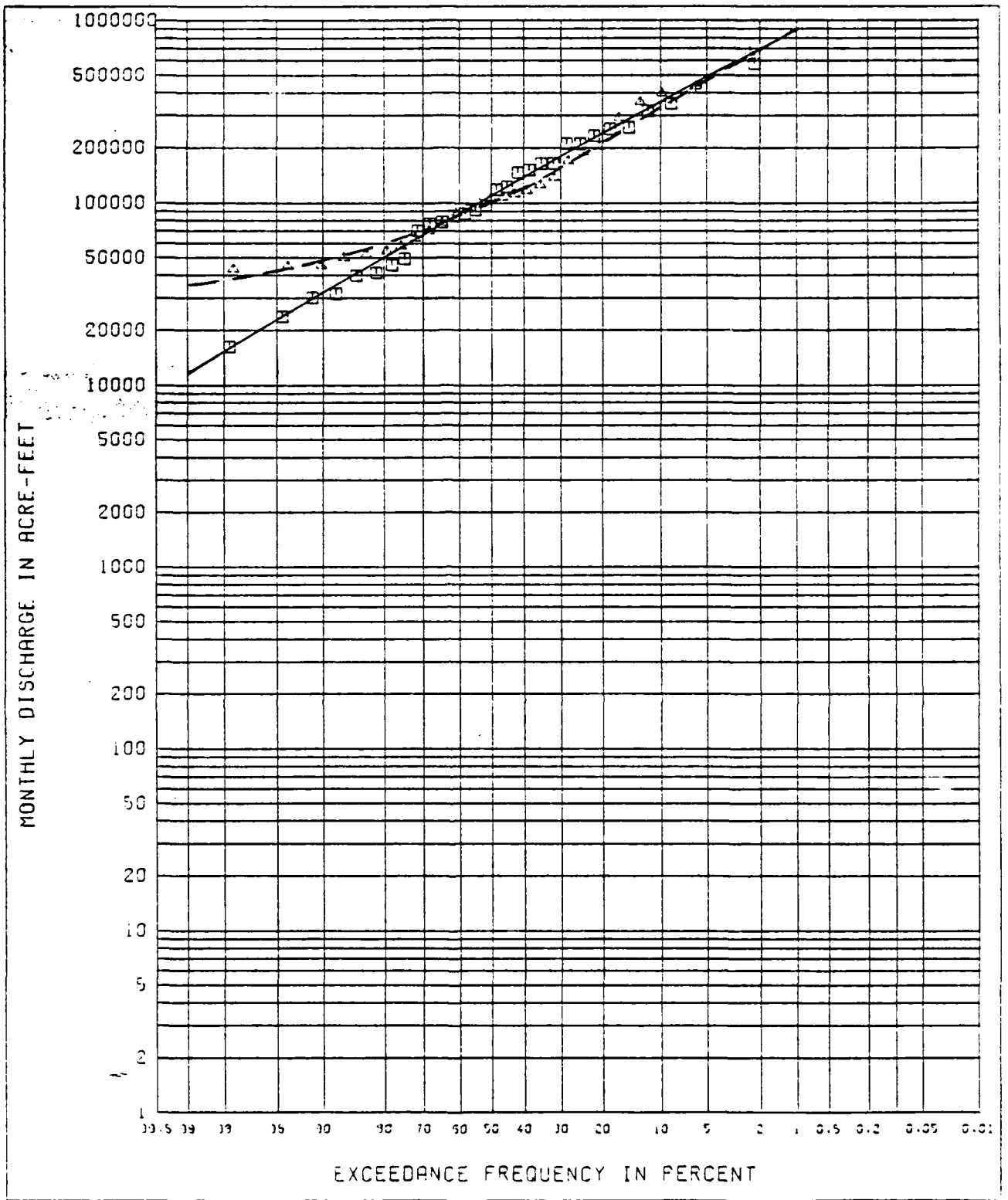
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

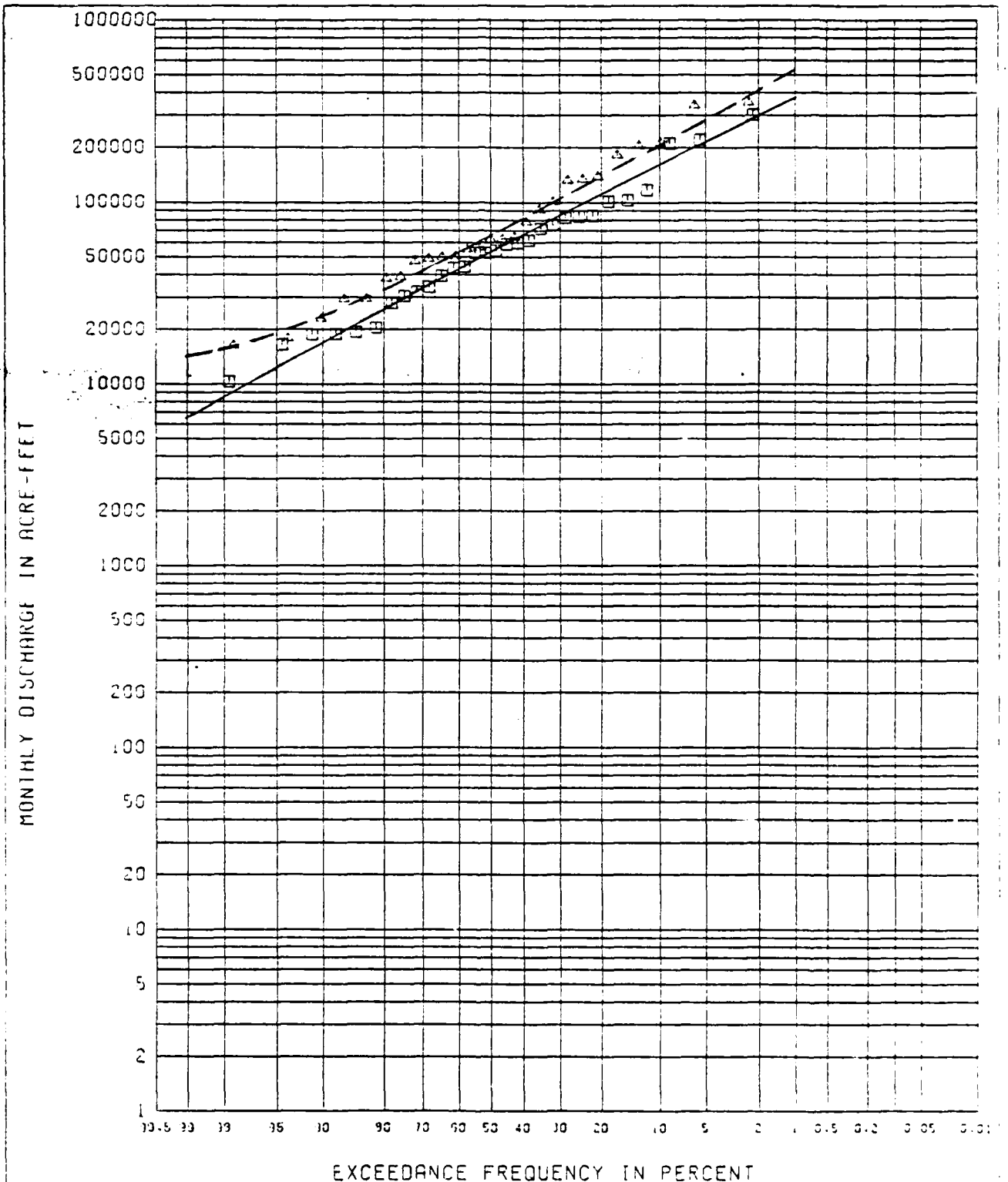
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980.

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1978)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

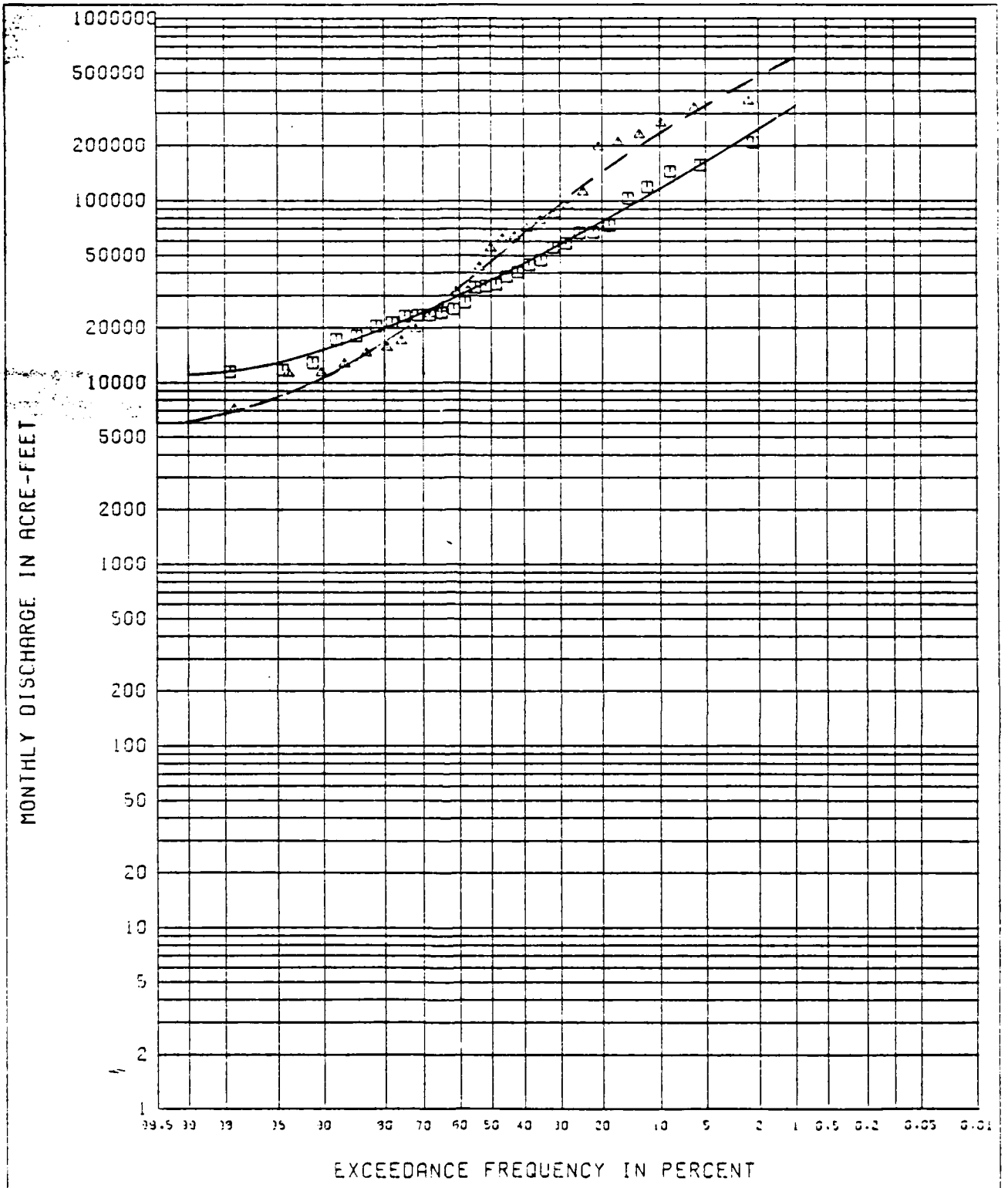
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

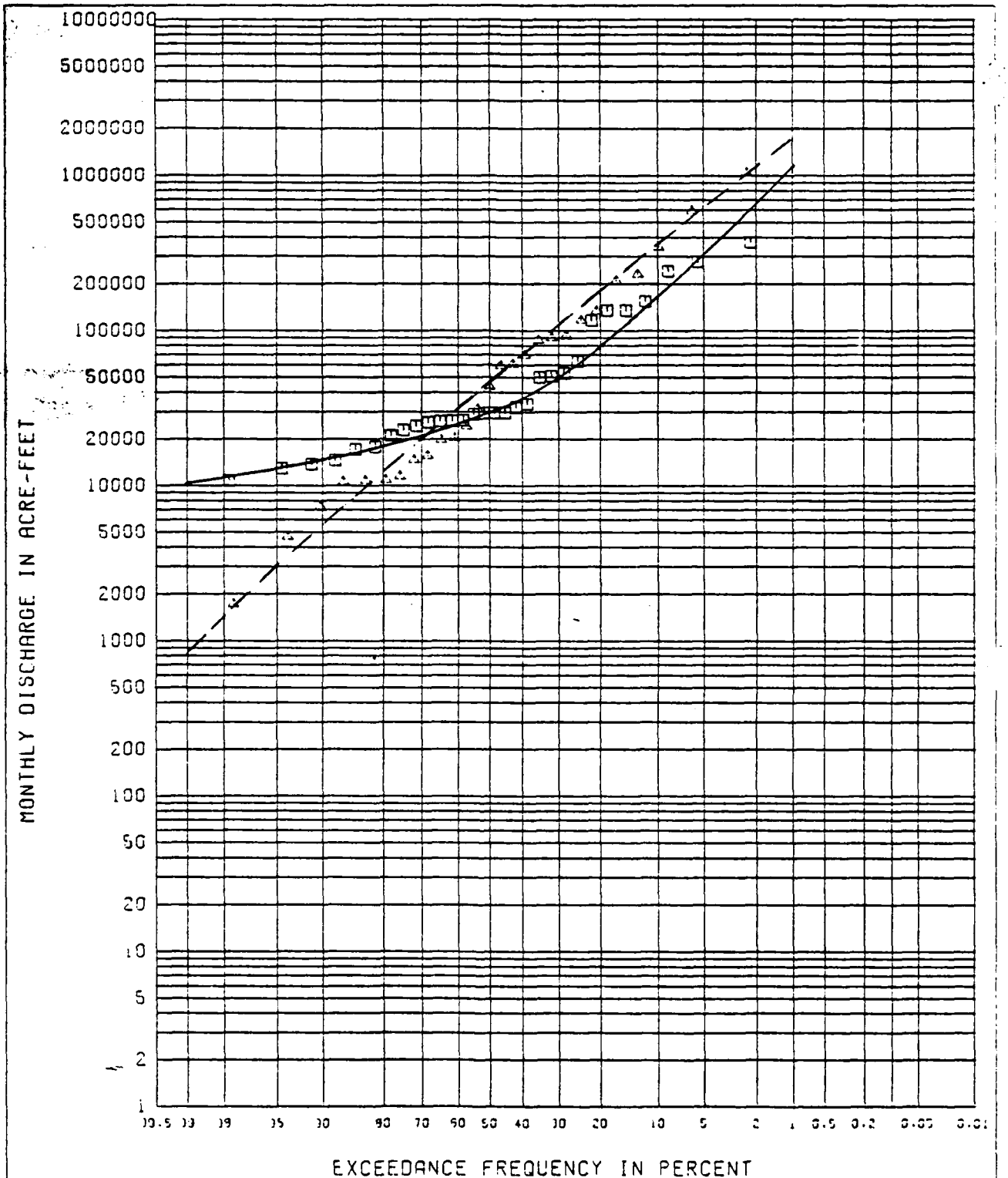
NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

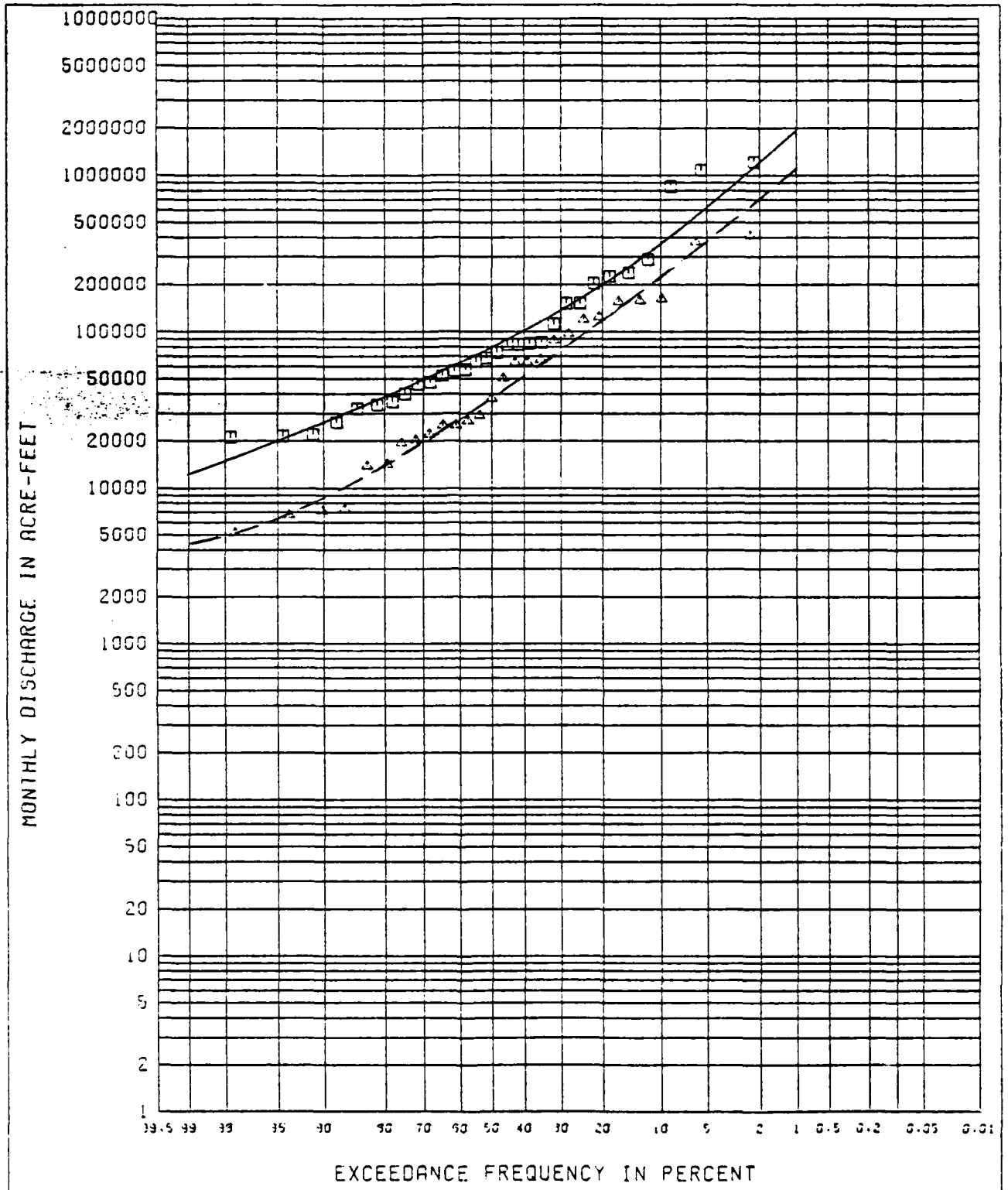
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1978)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

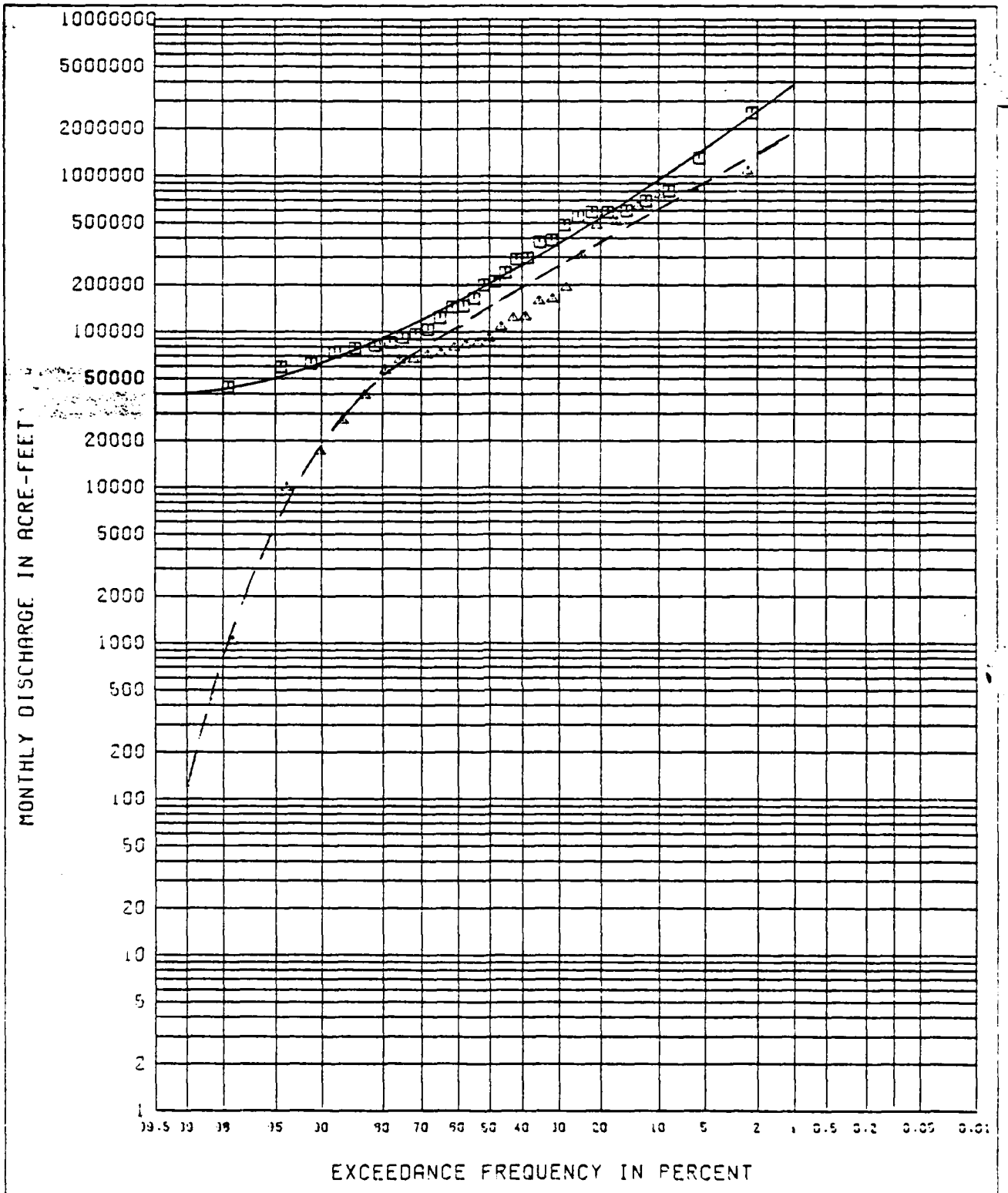
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

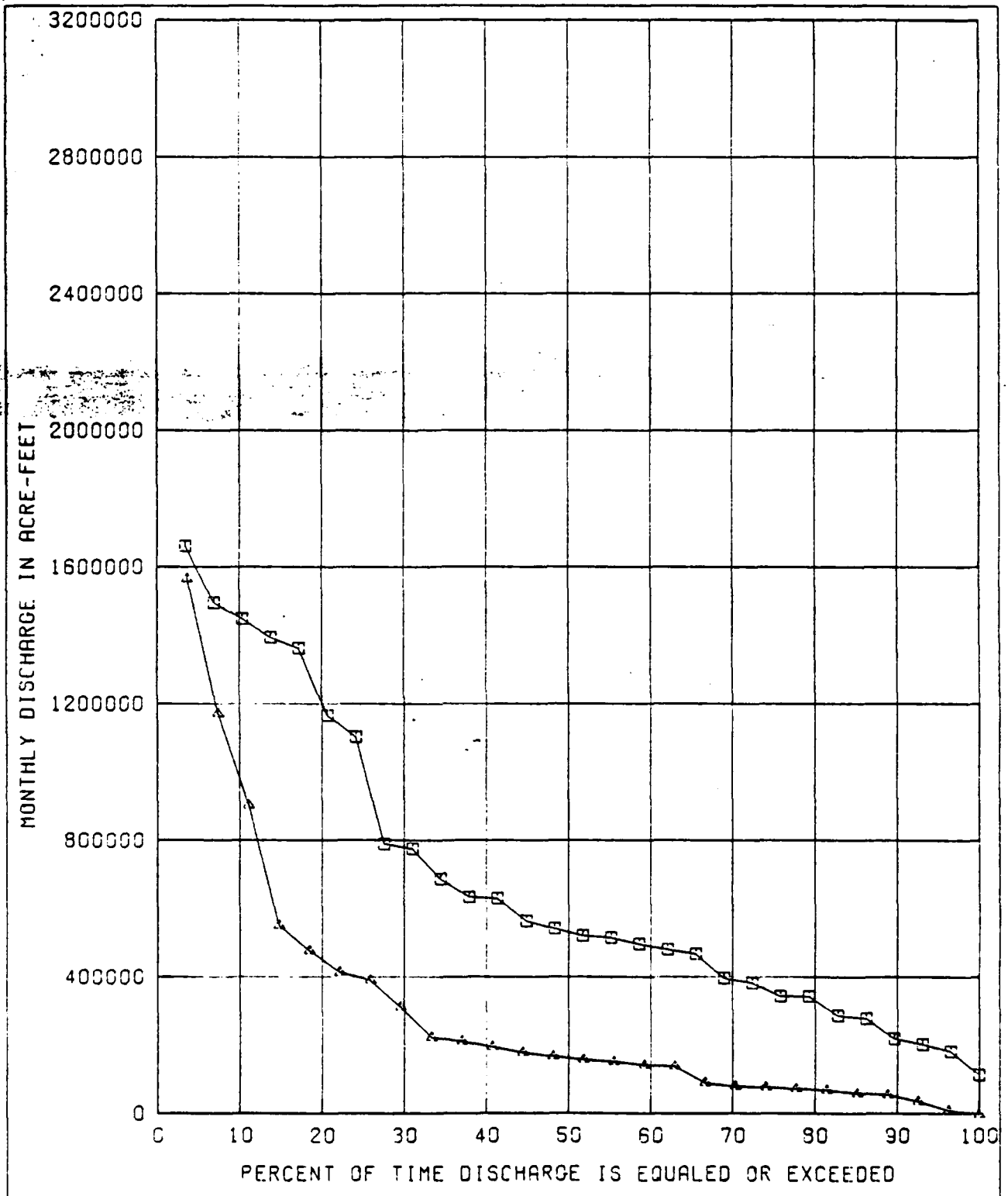
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

FLOW DURATION CURVES AT DAM SITE

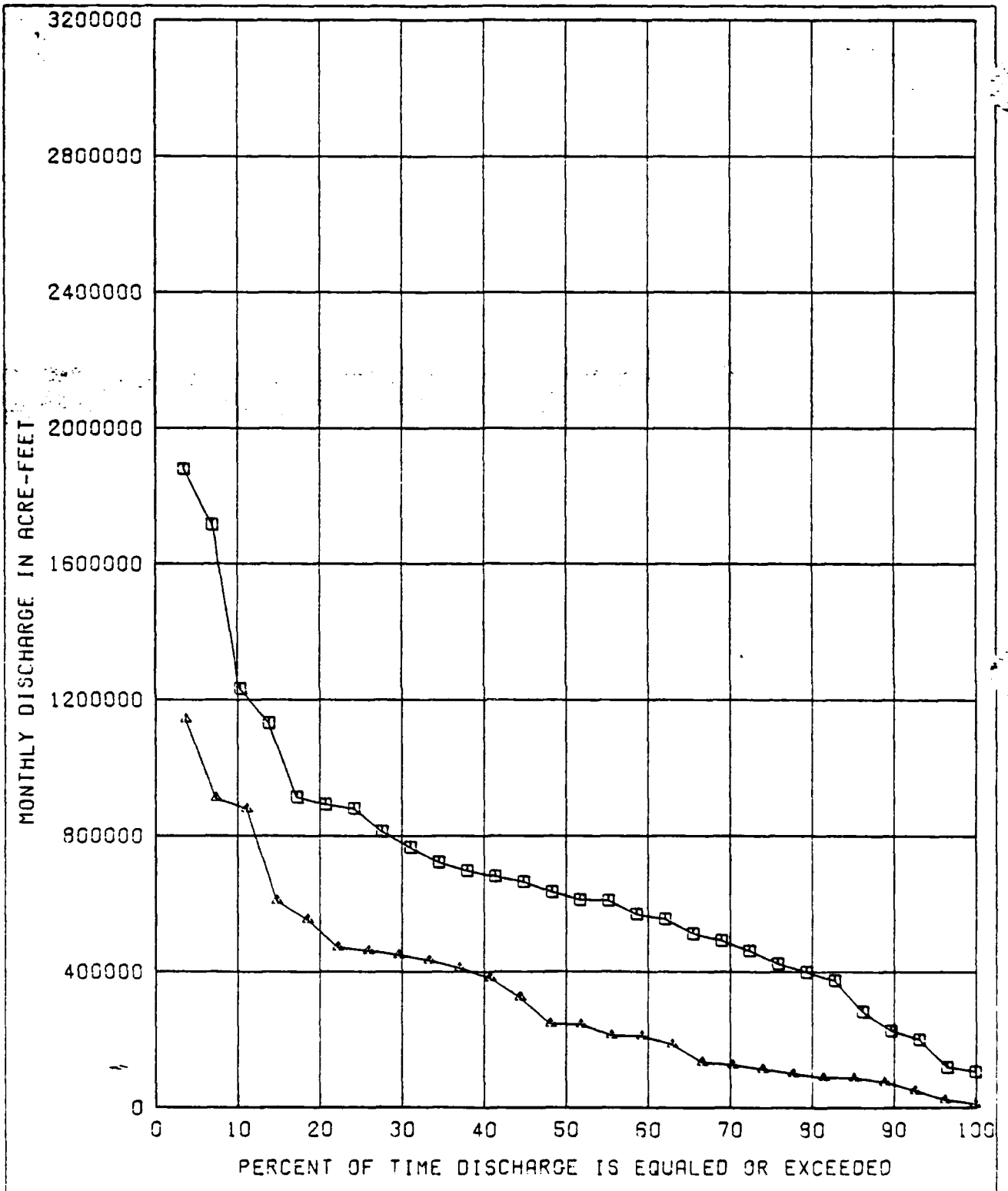
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

FLOW DURATION CURVES AT DAM SITE

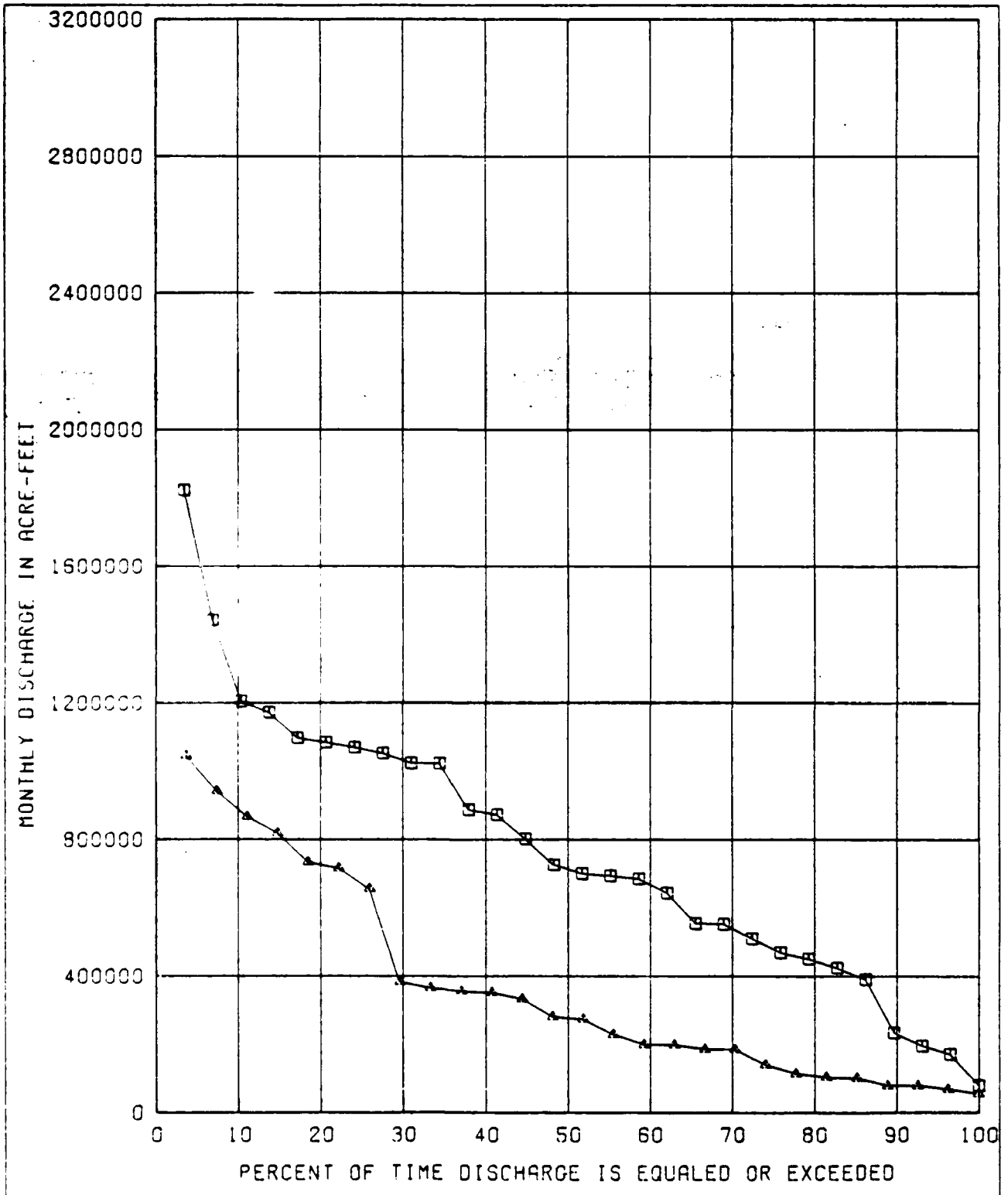
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

FLOW DURATION CURVES AT DAM SITE

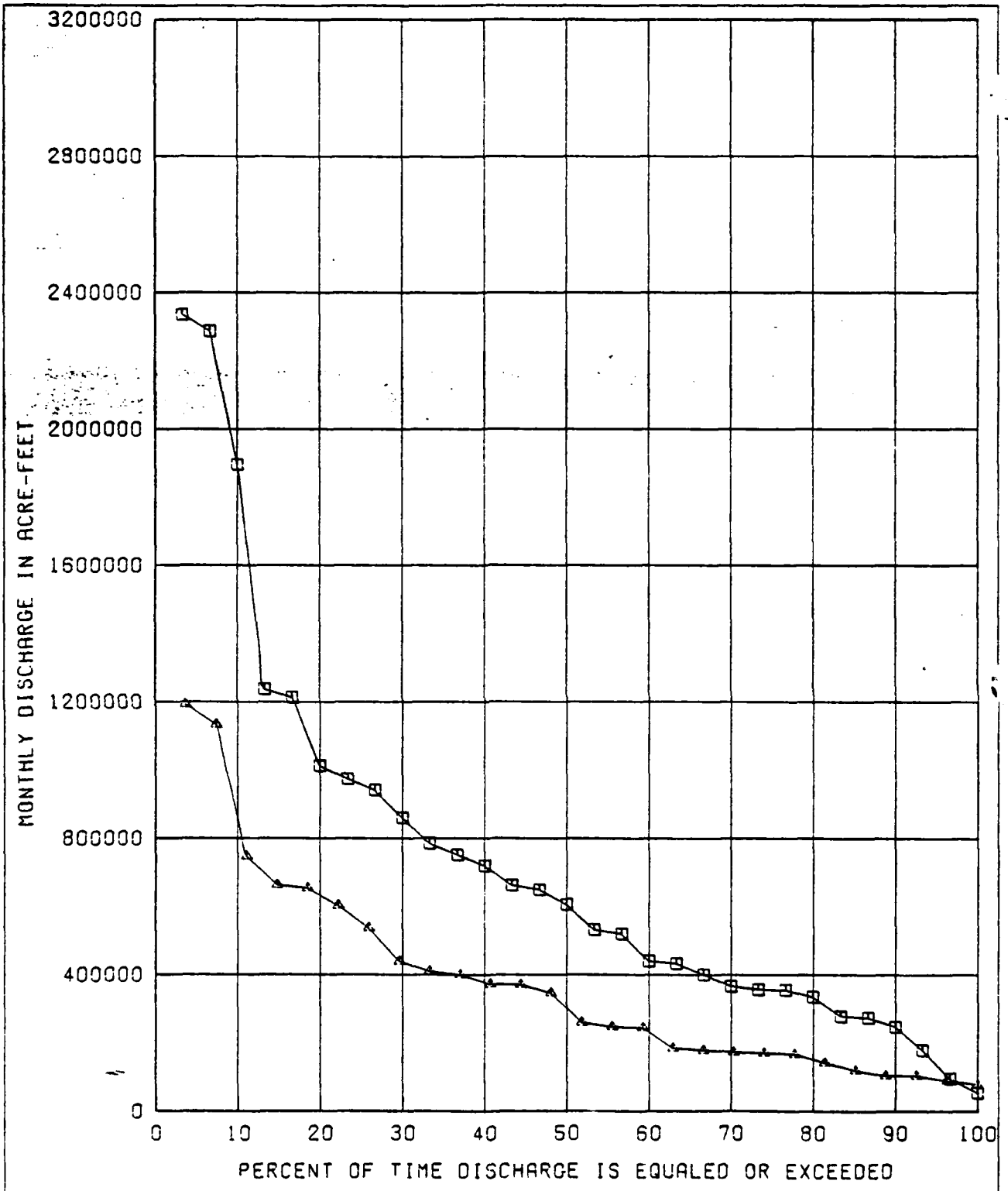
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

FLOW DURATION CURVES AT DAM SITE

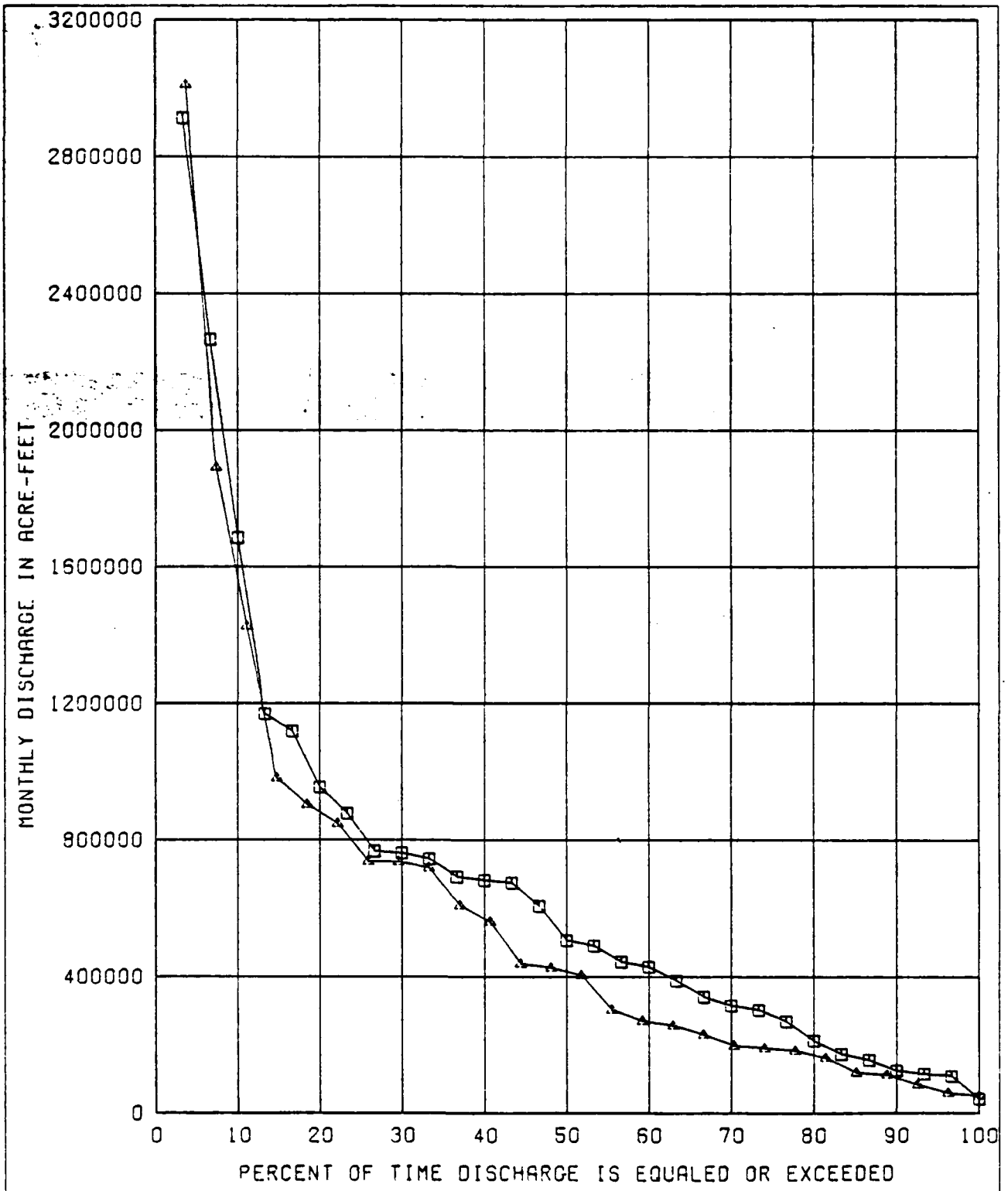
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

FLOW DURATION CURVES AT DAM SITE

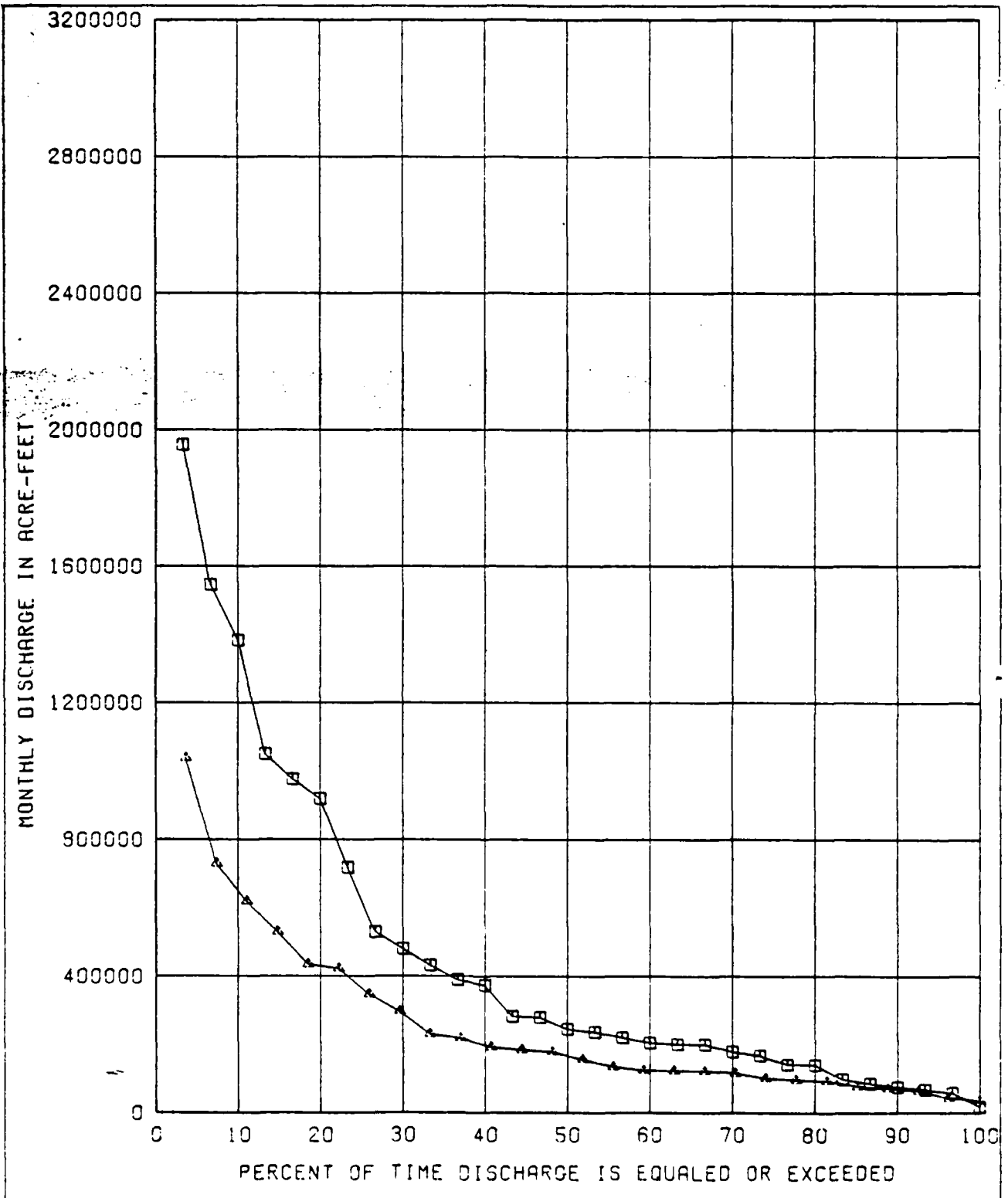
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

FLOW DURATION CURVES AT DAM SITE

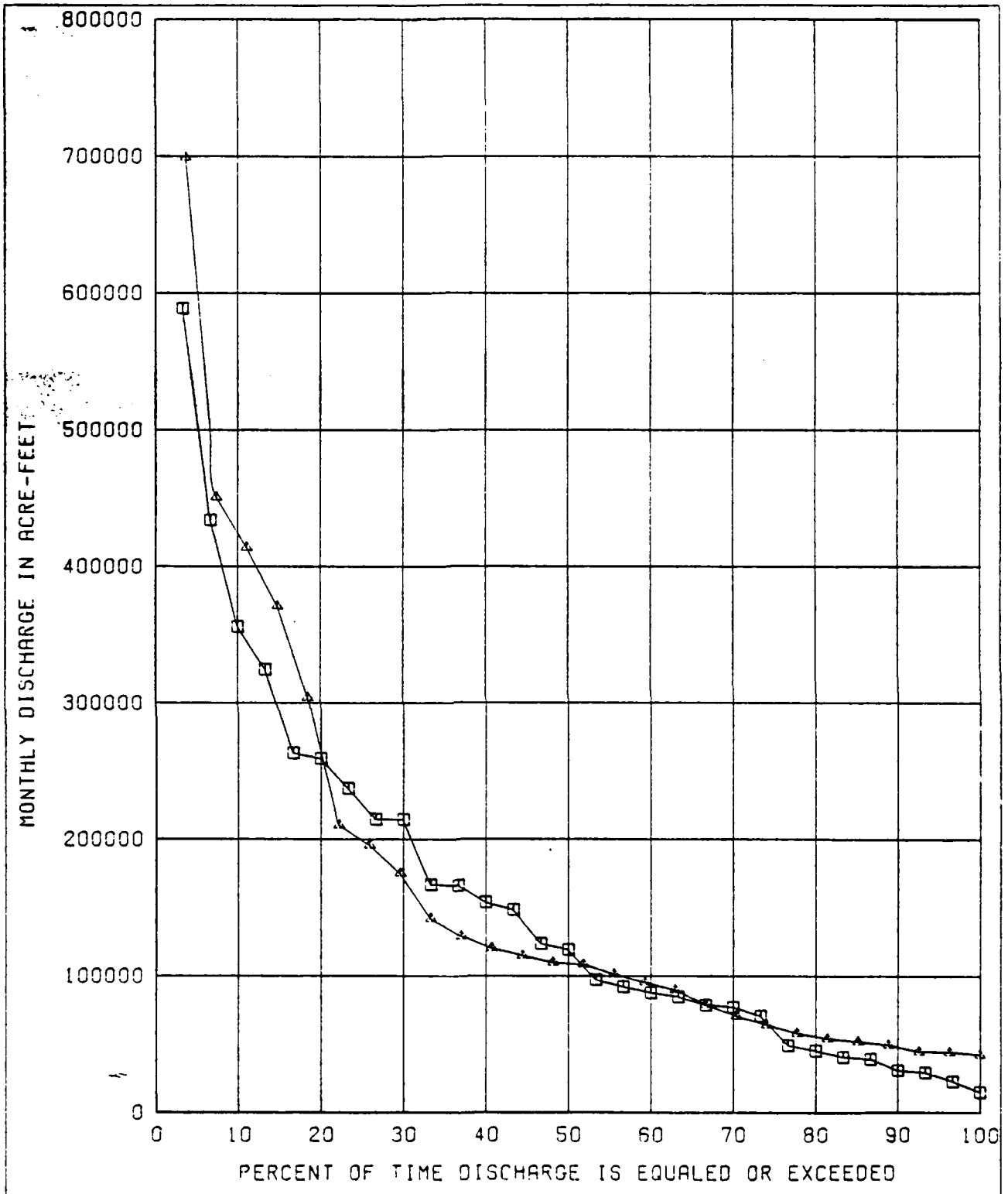
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1978)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

FLOW DURATION CURVES AT DAM SITE

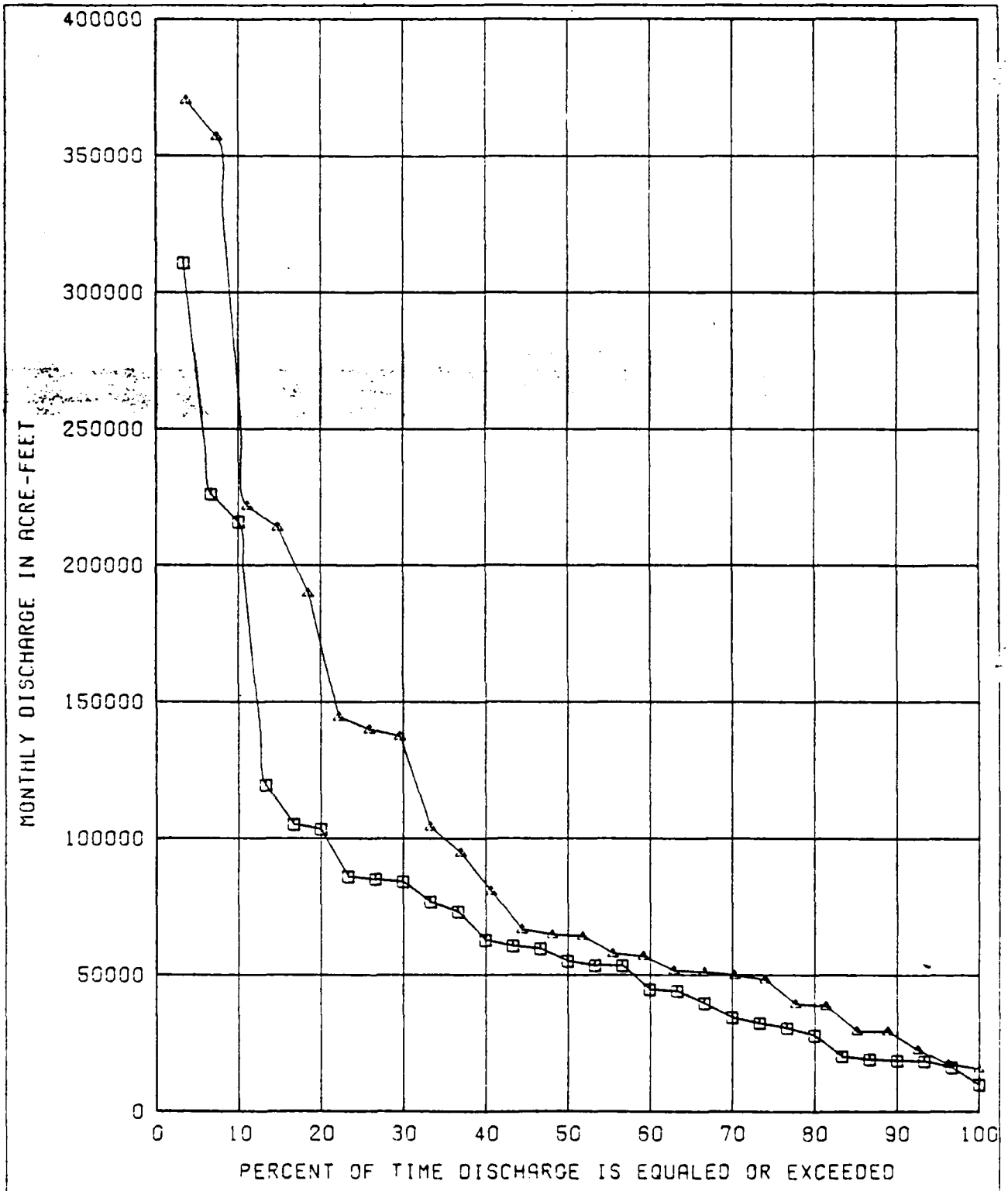
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

FLOW DURATION CURVES AT DAM SITE

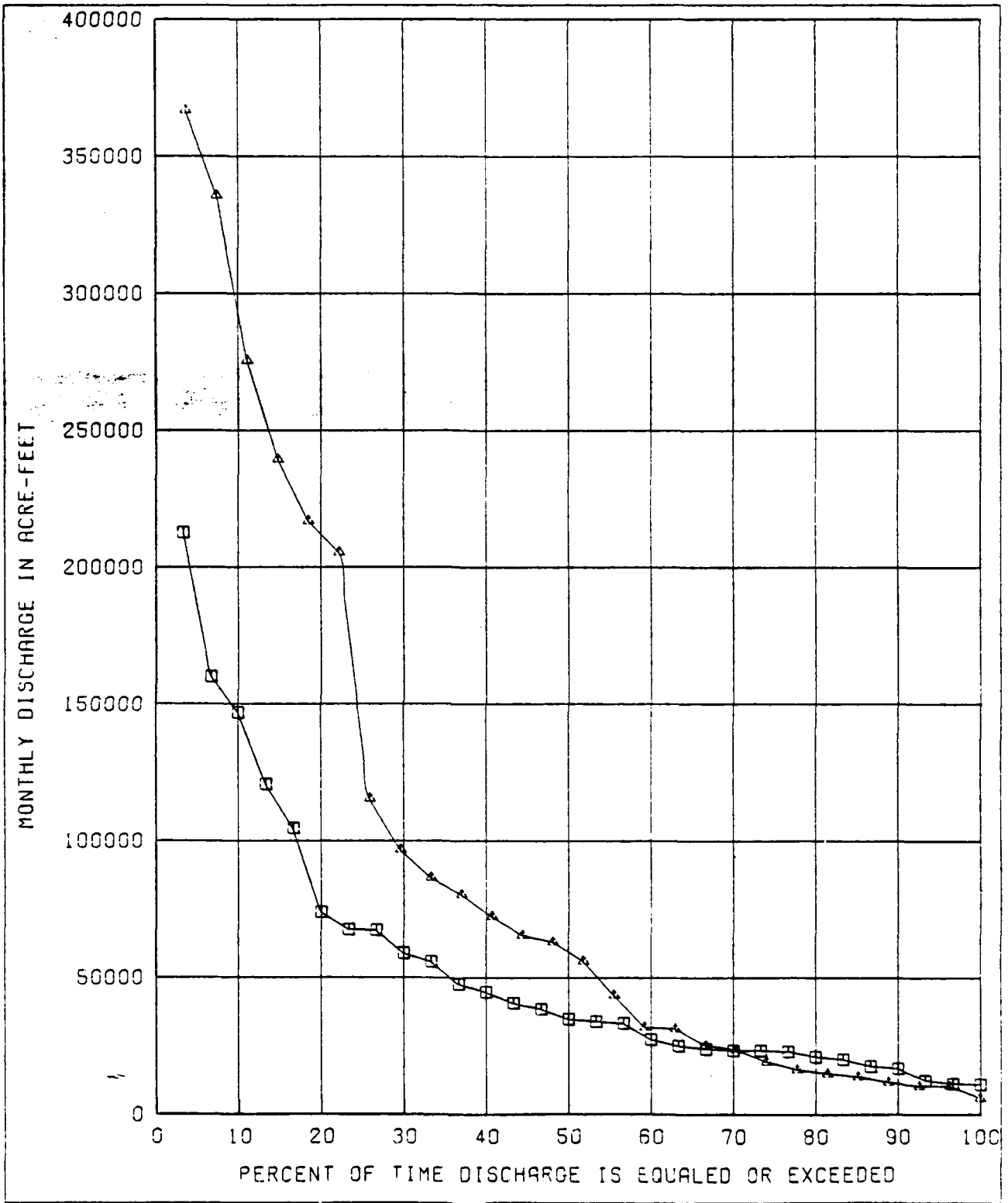
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

FLOW DURATION CURVES AT DAM SITE

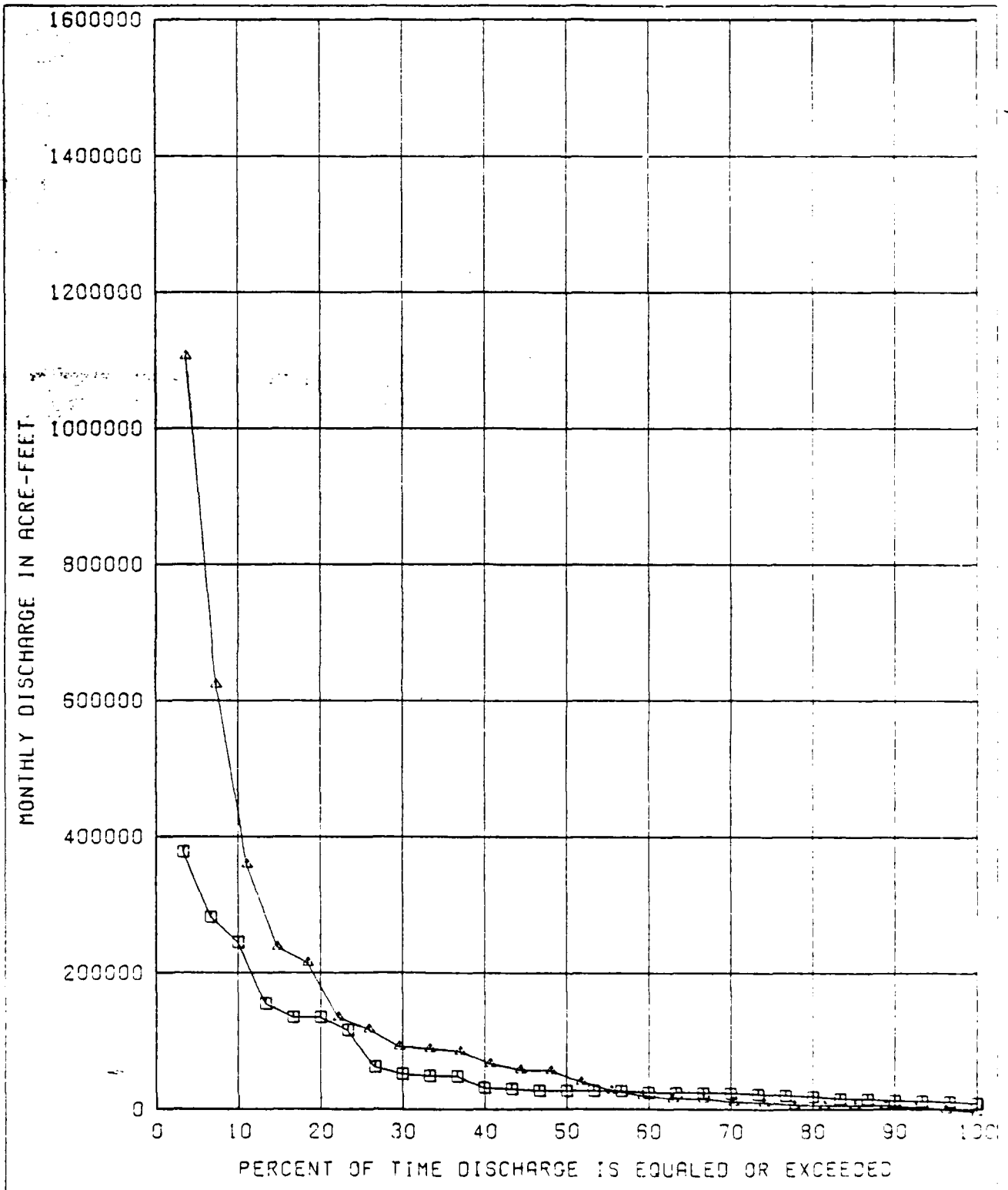
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1921-1950)

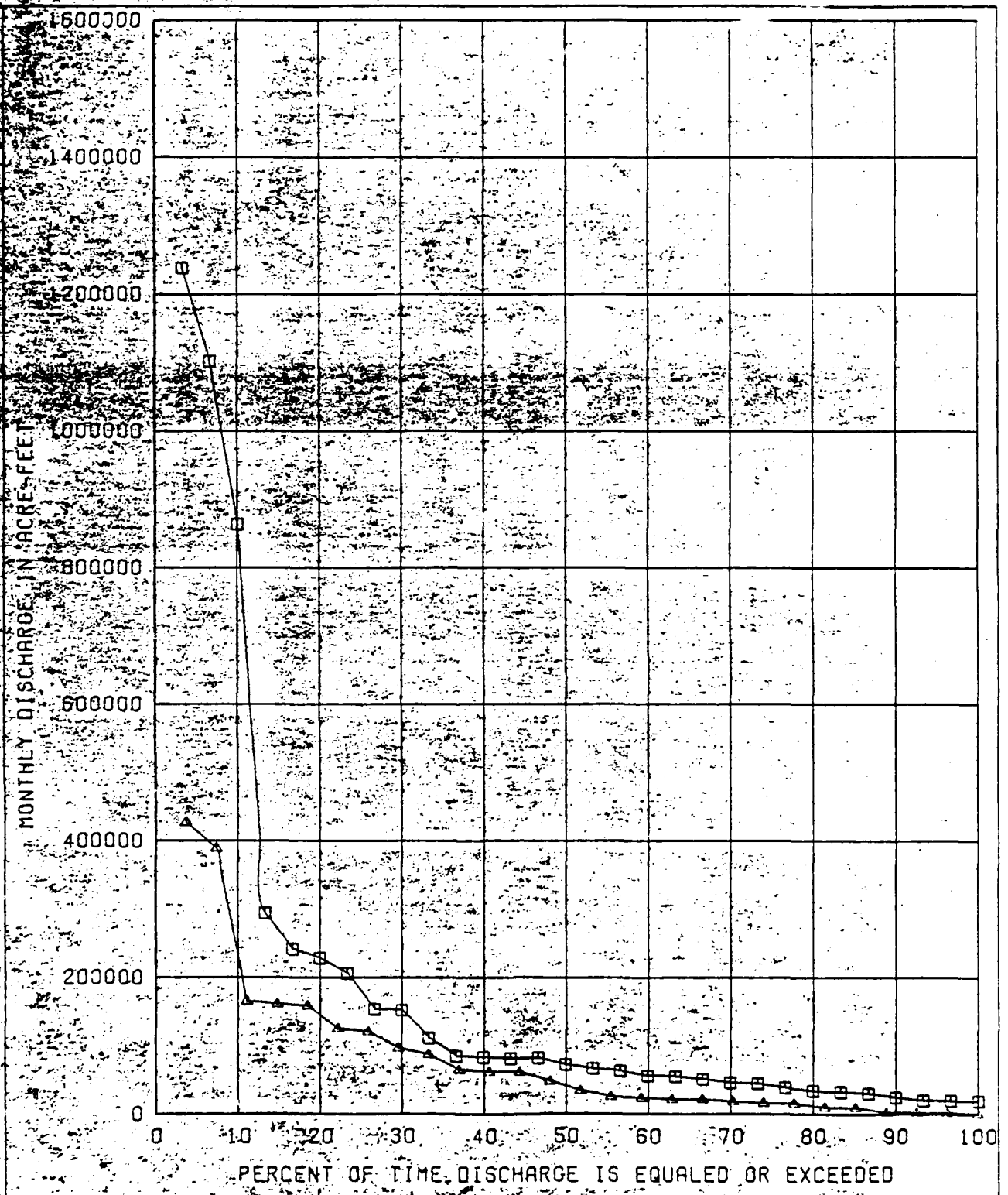
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1978)

NECHES RIVER BASIN, TEXAS
B.A. STEINHAGEN LAKE
FLOW DURATION CURVES AT DAM SITE
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1921-1950)

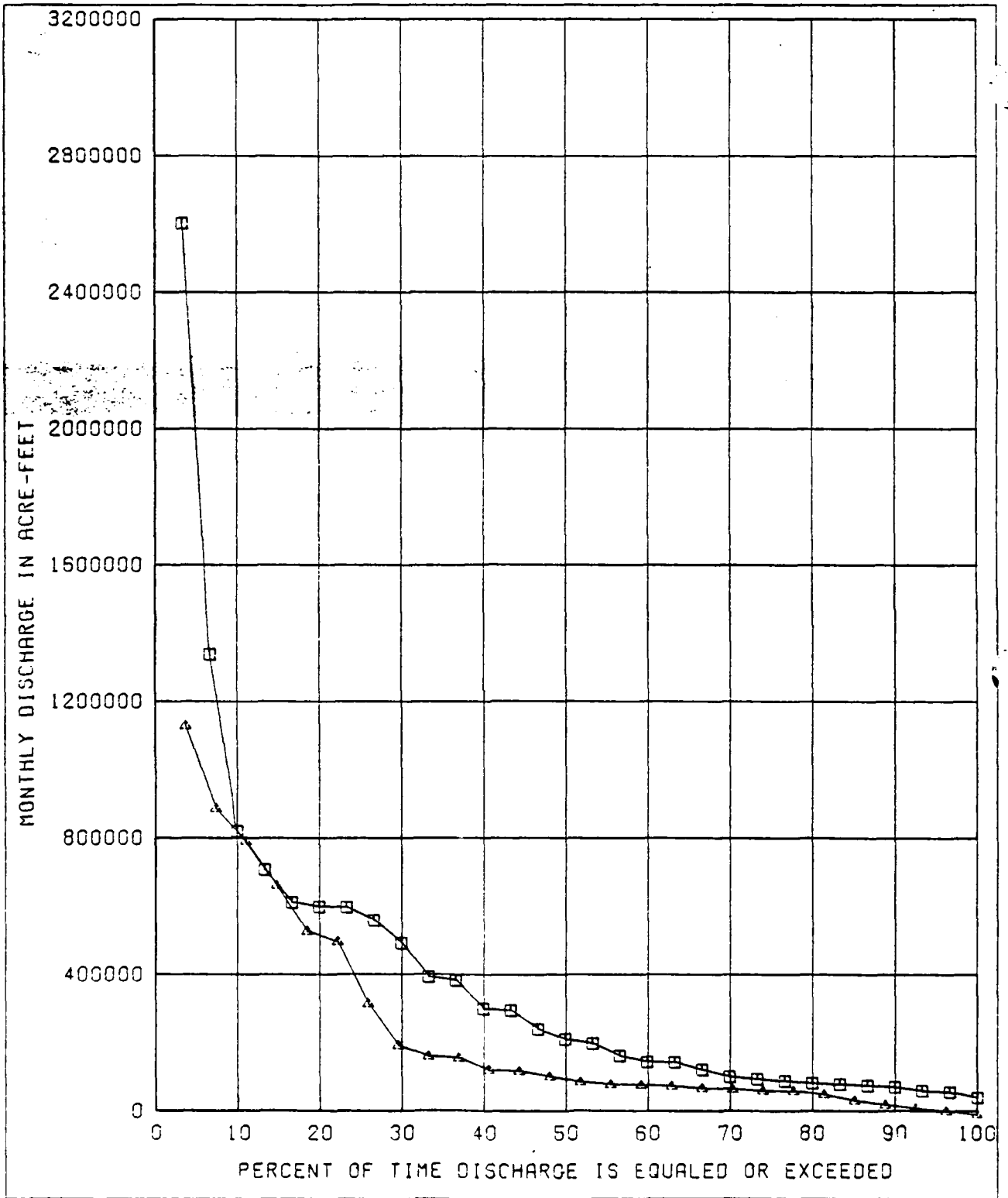
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1978)

NECHES RIVER BASIN, TEXAS
B. A. STEINHAGEN LAKE
FLOW DURATION CURVES AT DAM SITE
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1950)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

NECHES RIVER BASIN, TEXAS

B.A. STEINHAGEN LAKE

FLOW DURATION CURVES AT DAM SITE

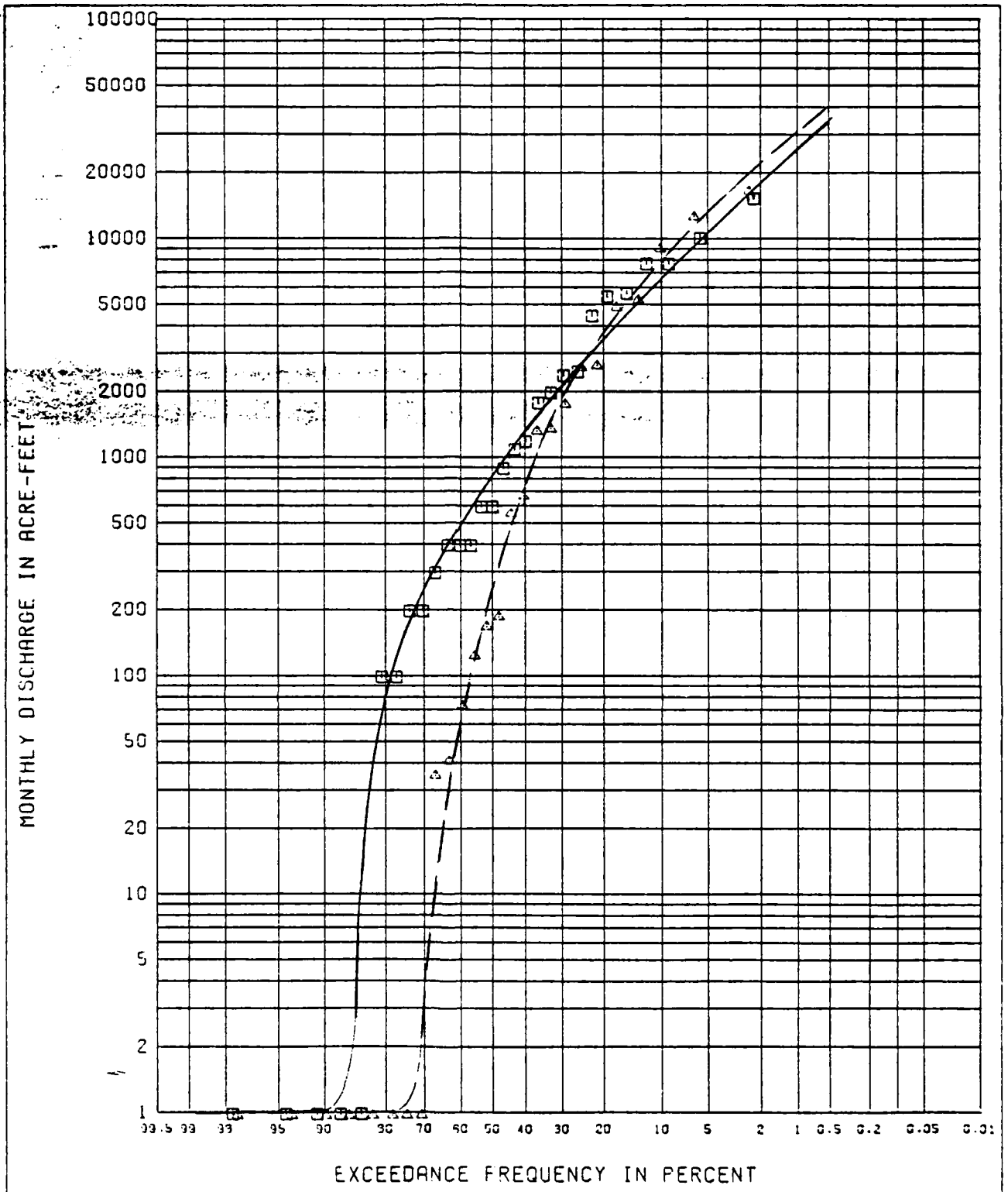
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

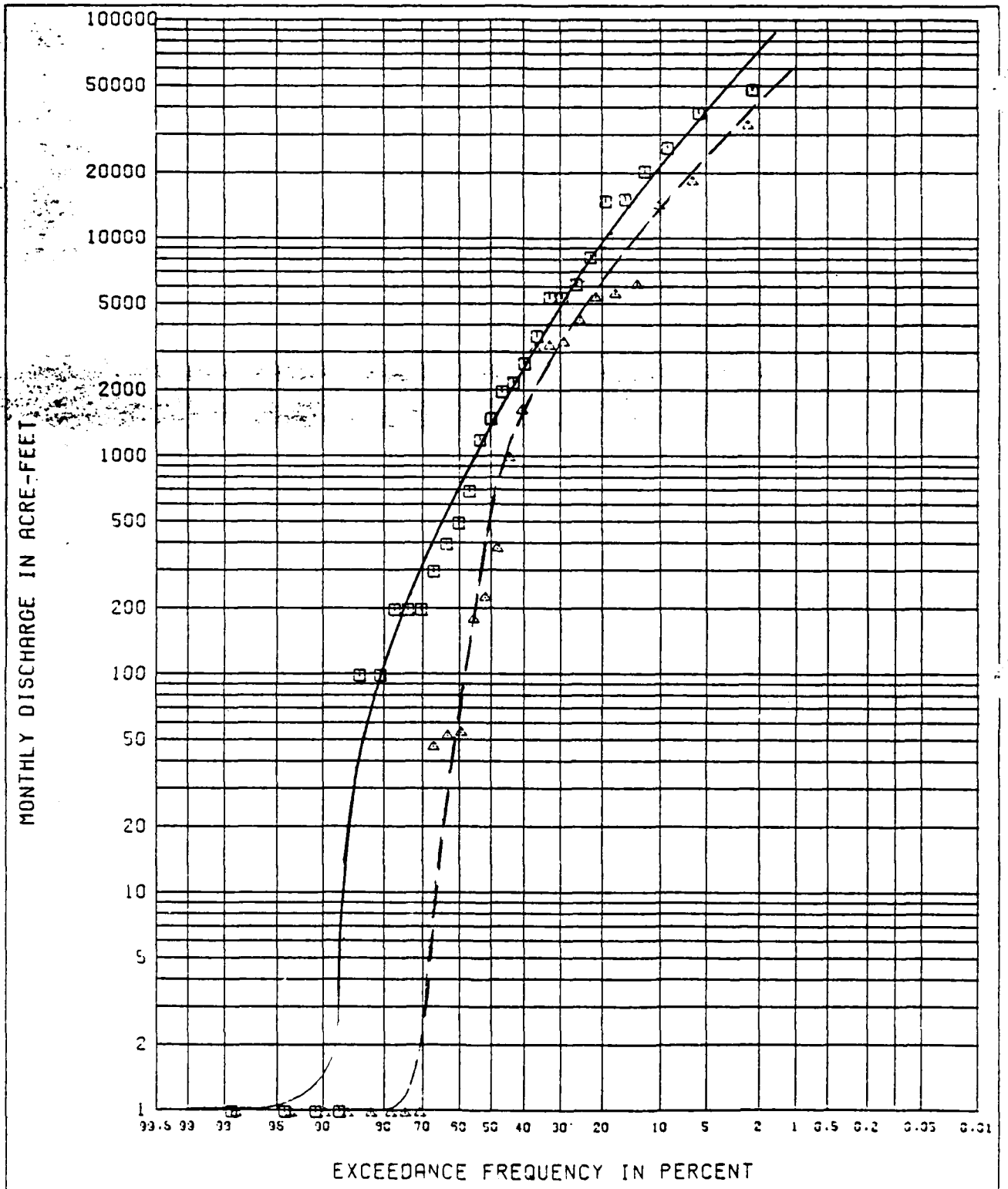
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

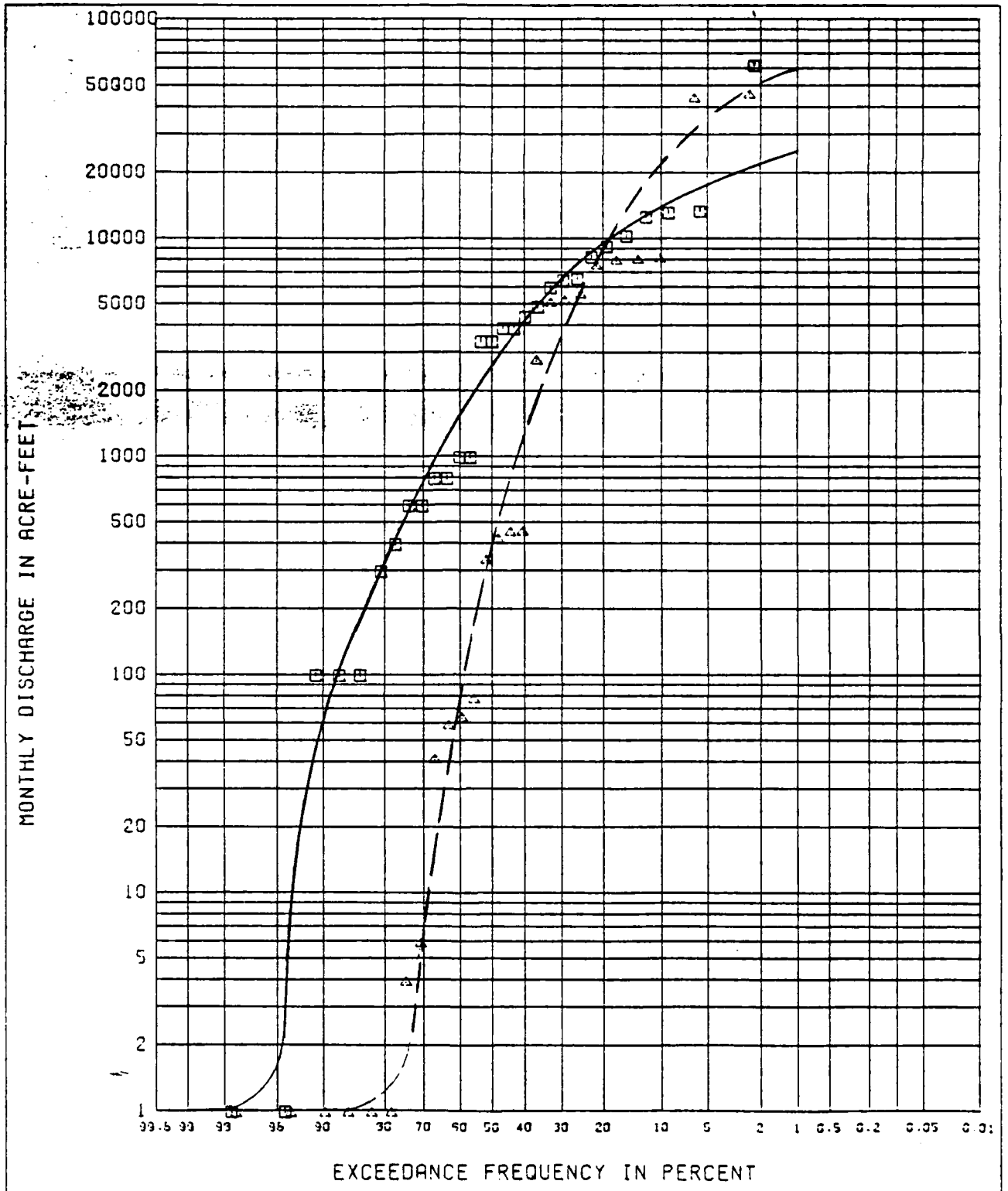
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

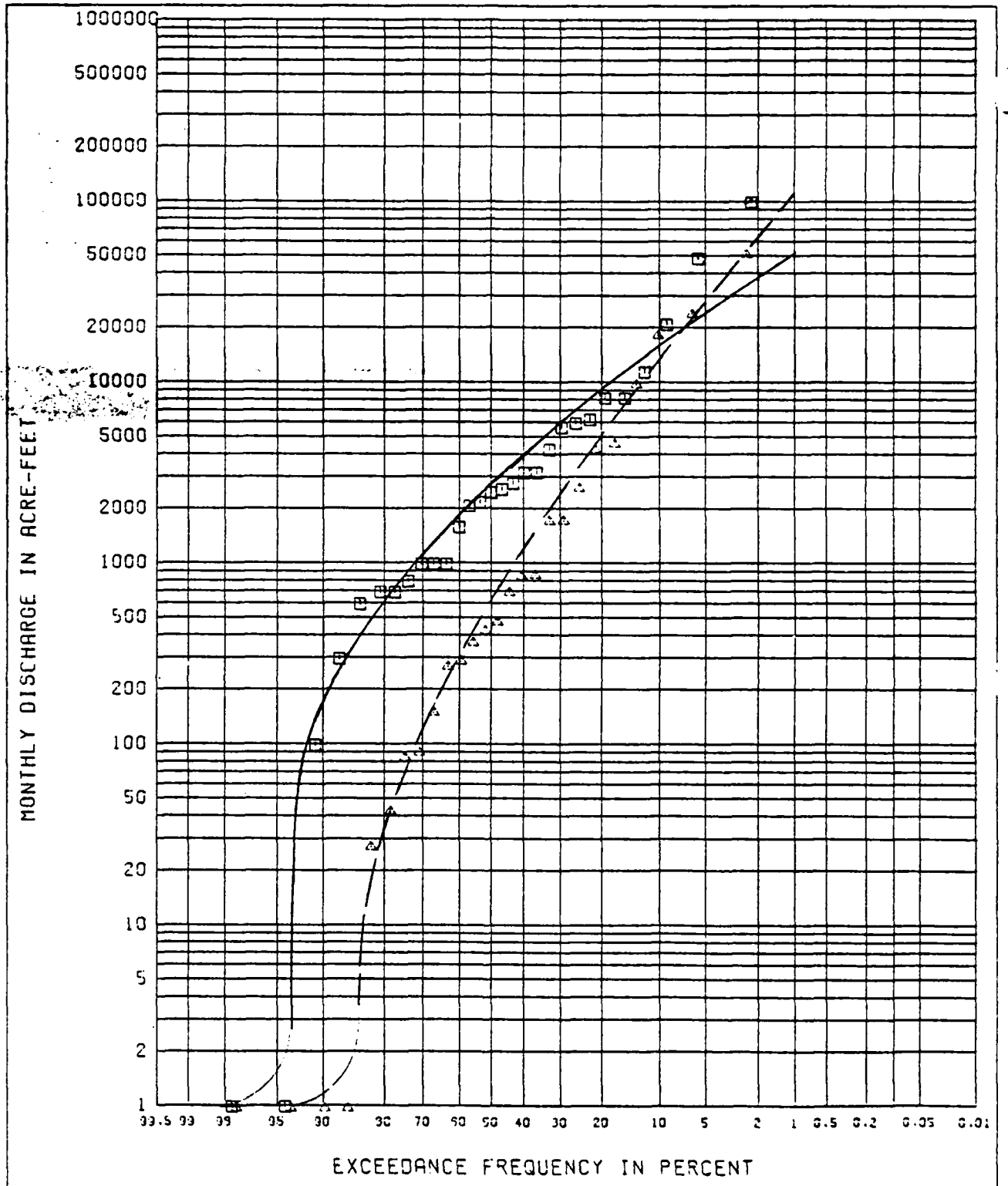
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

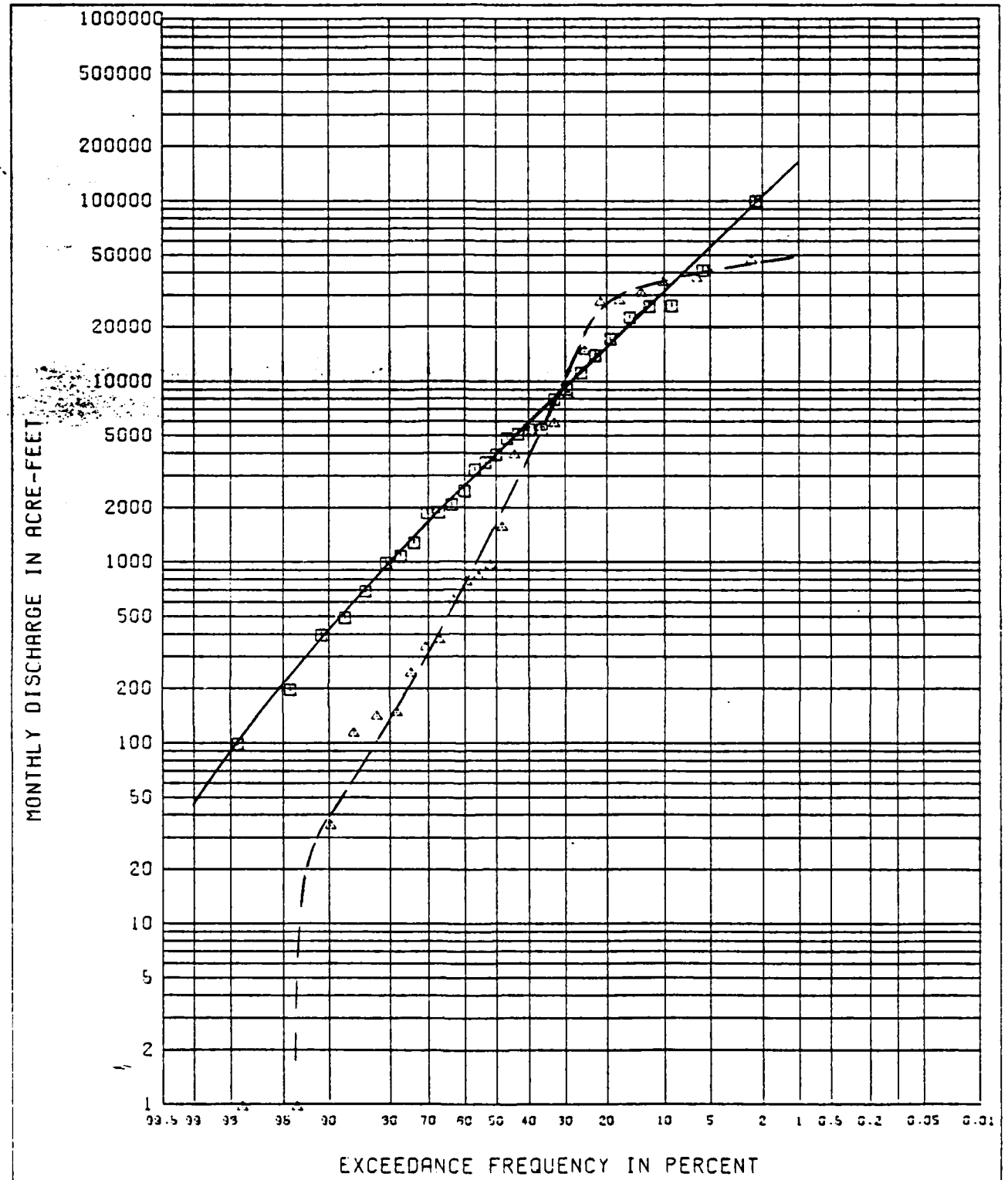
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

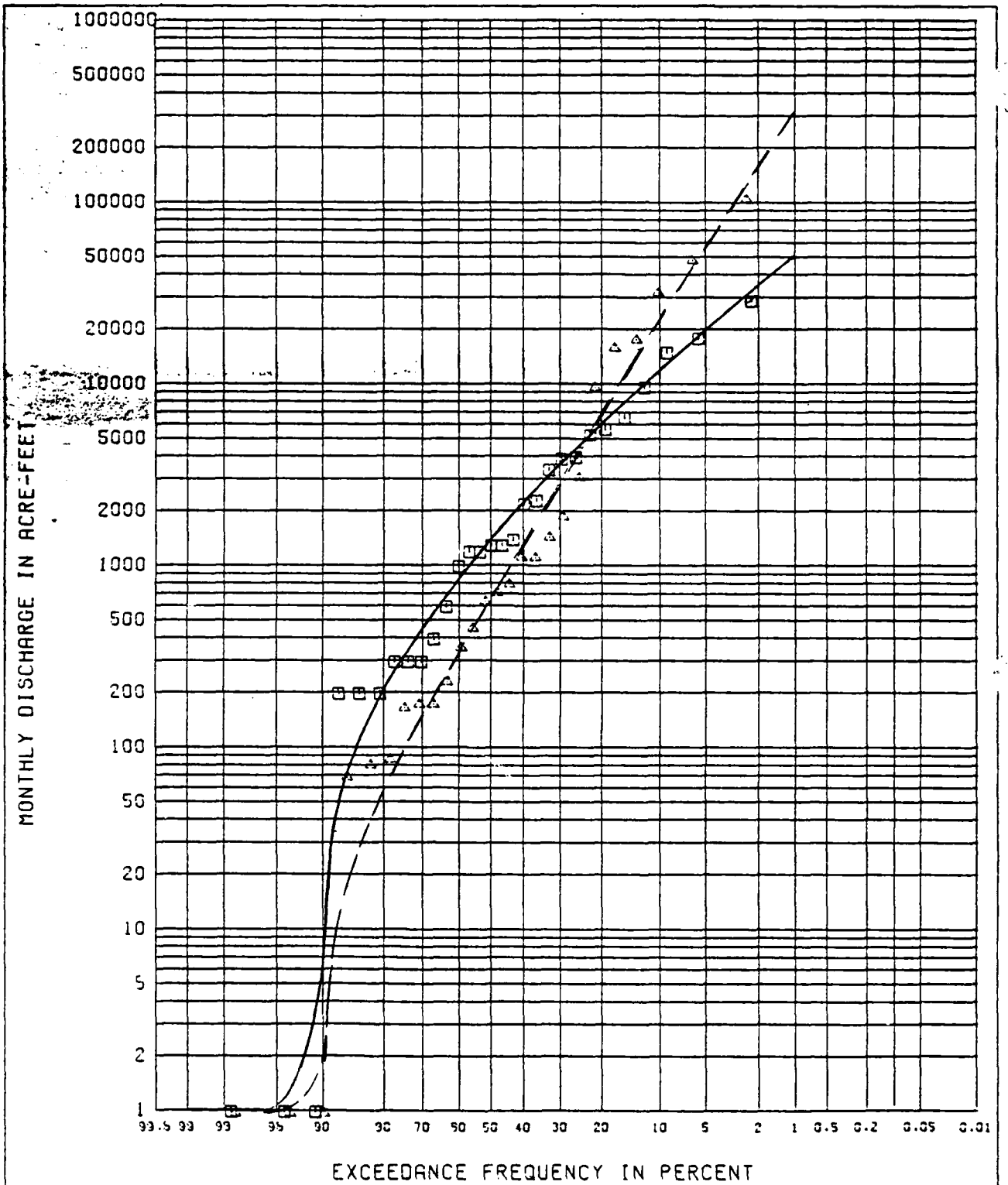
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

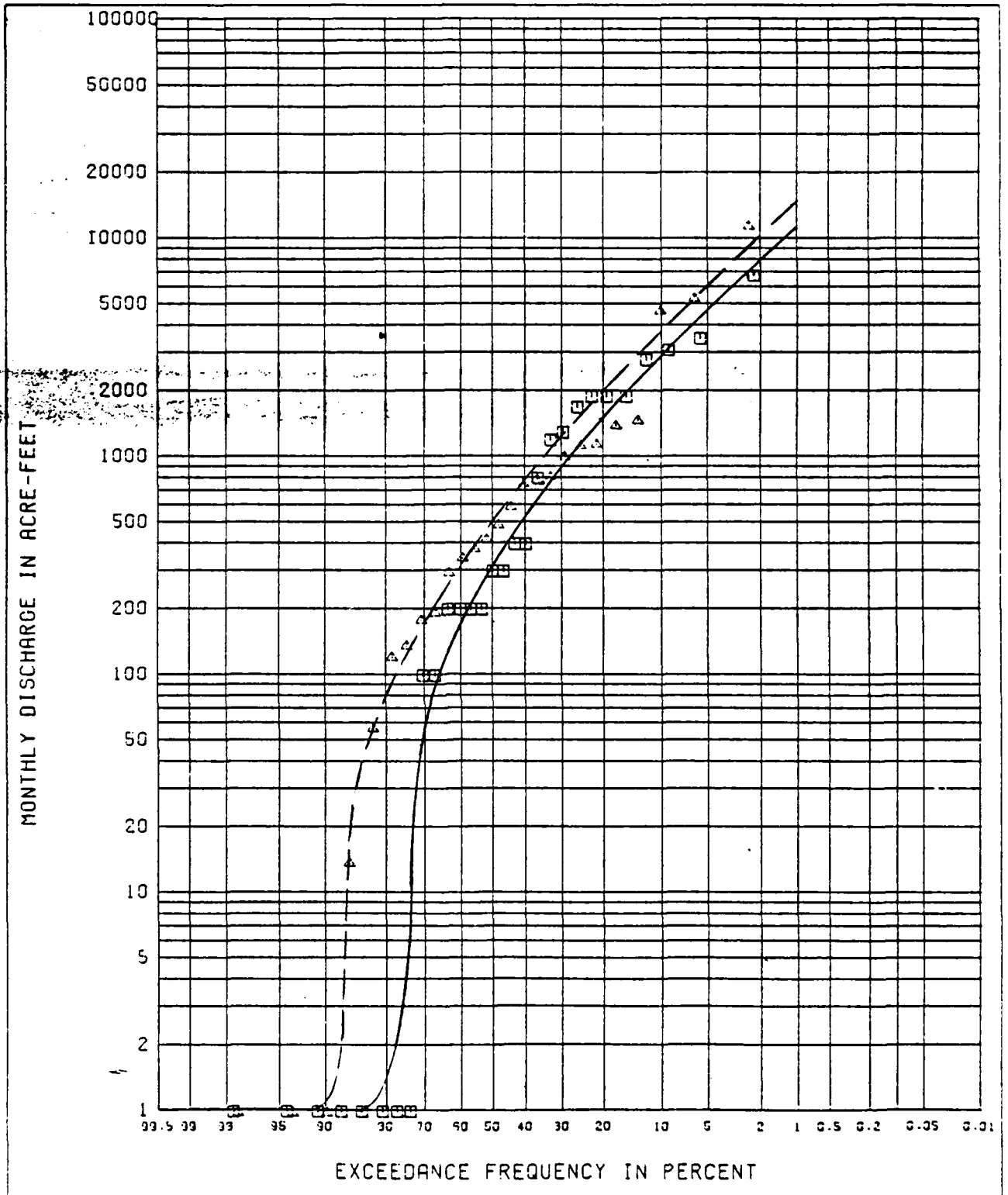
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

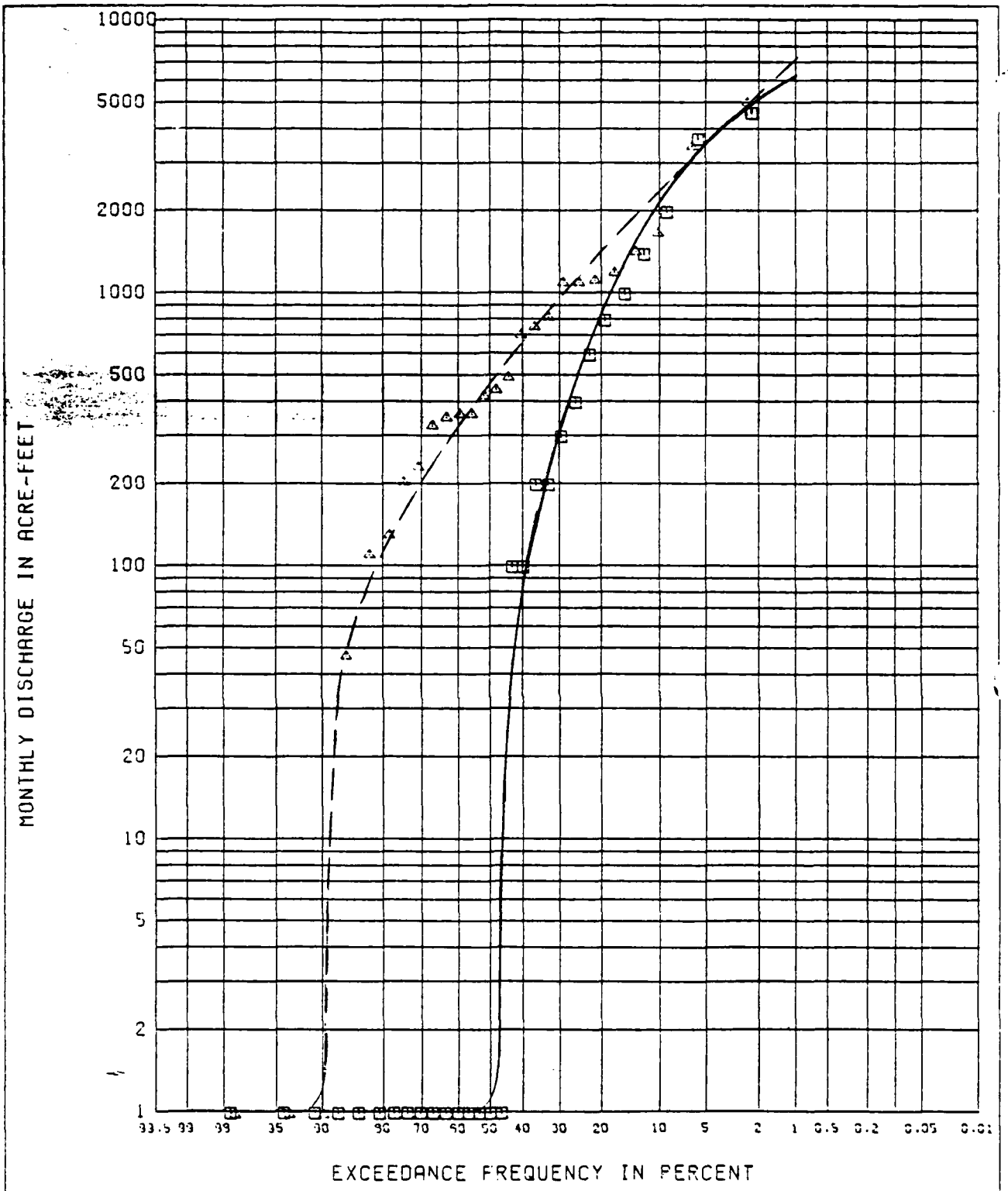
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

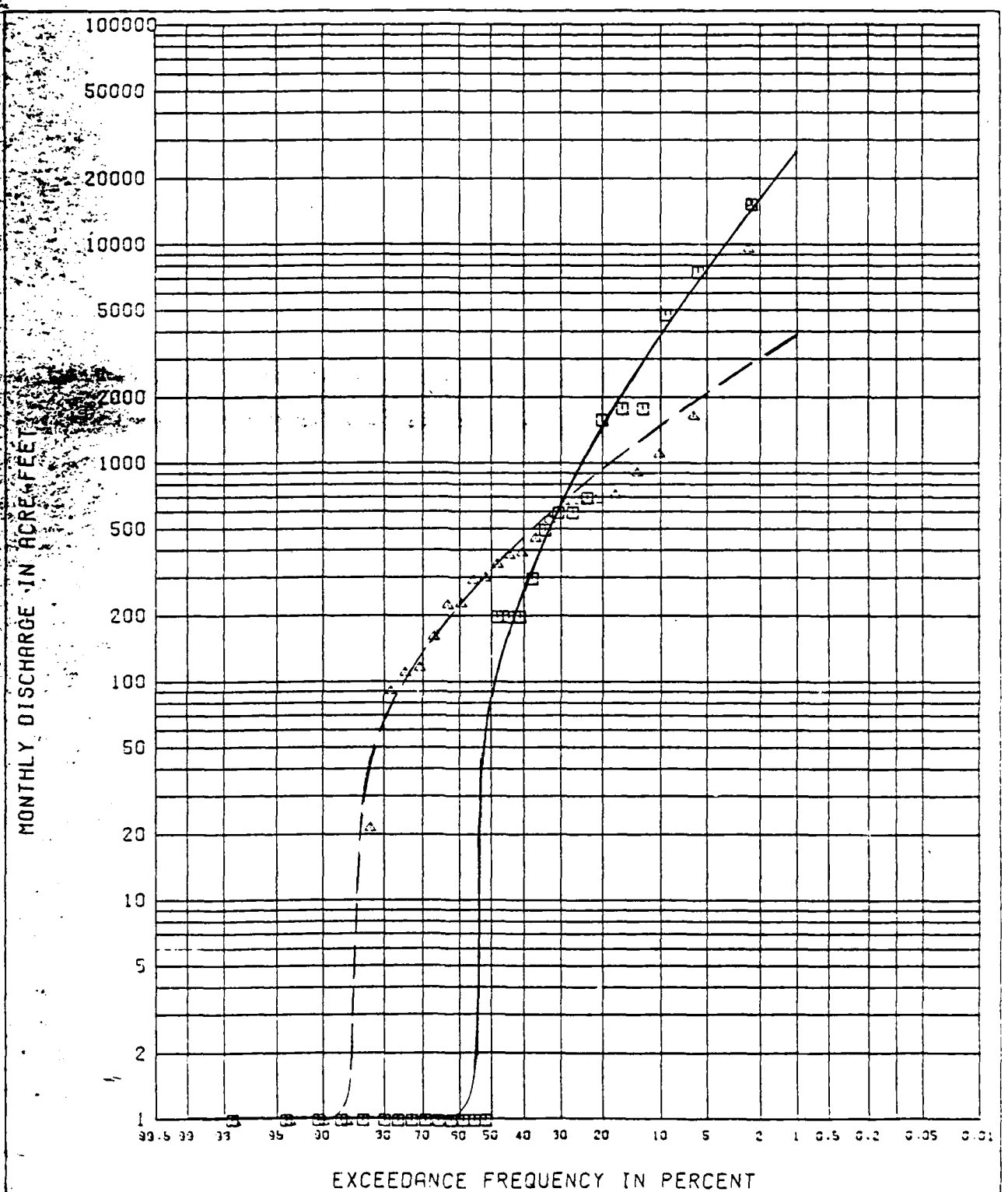
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

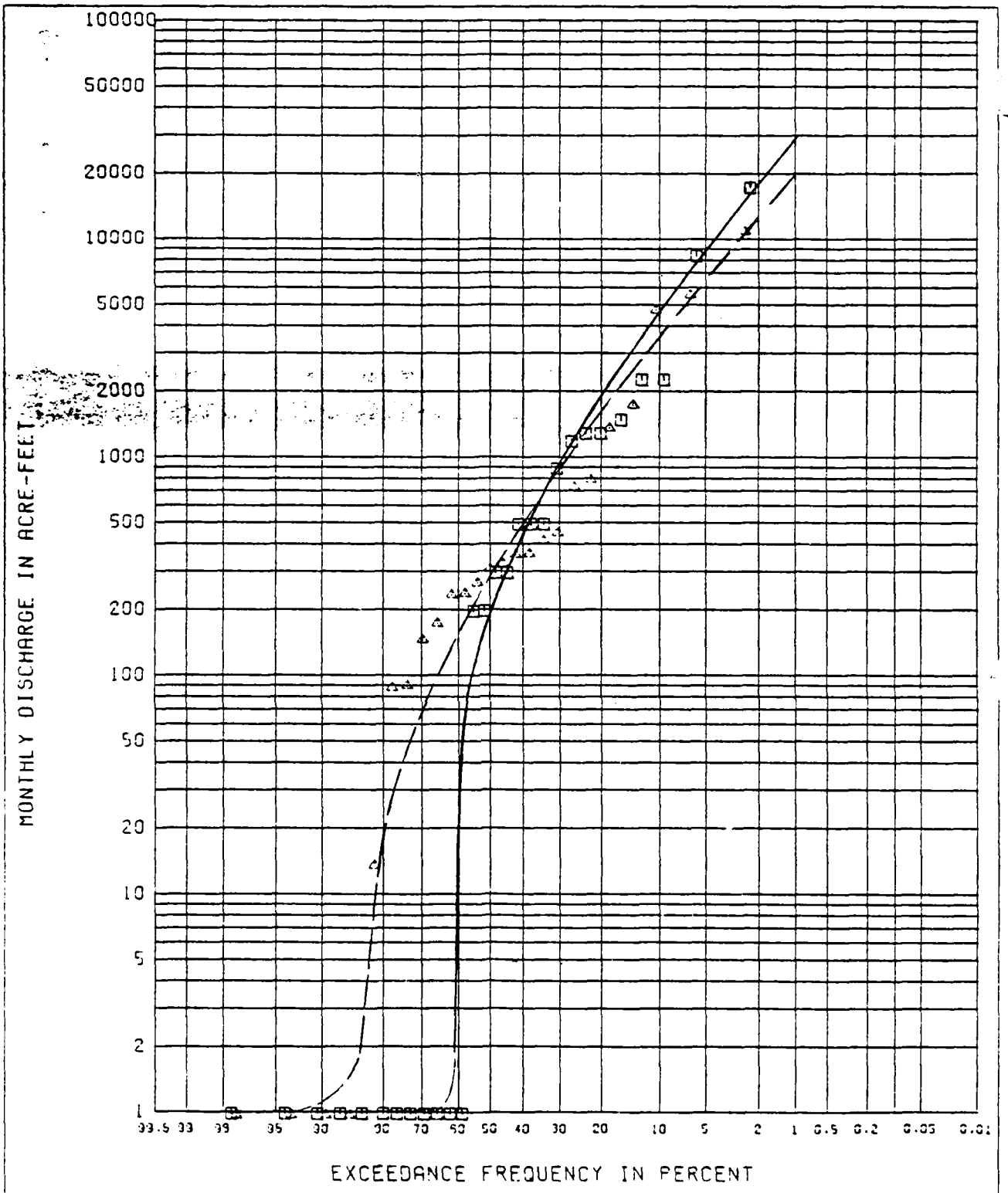
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

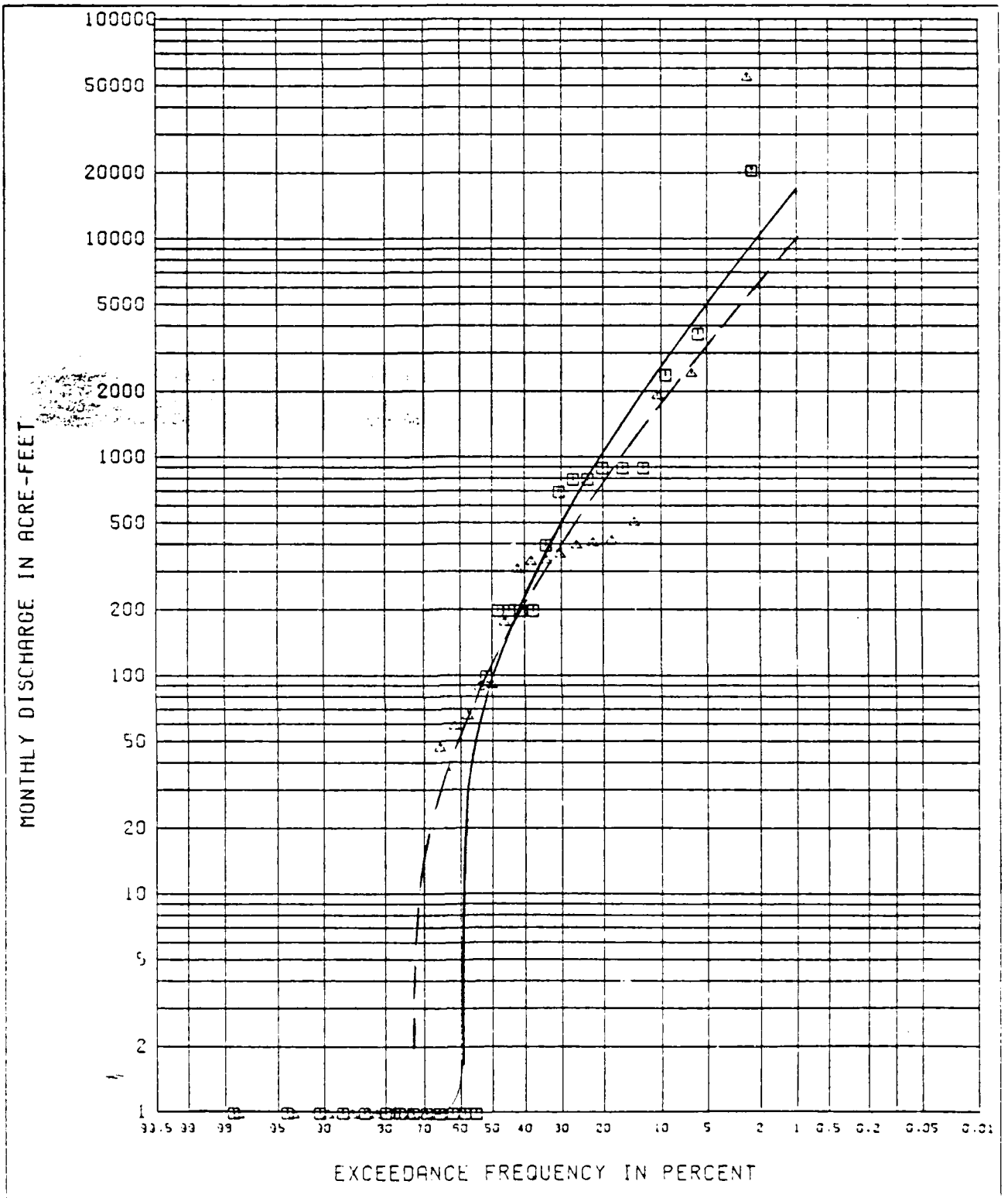
TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1990

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

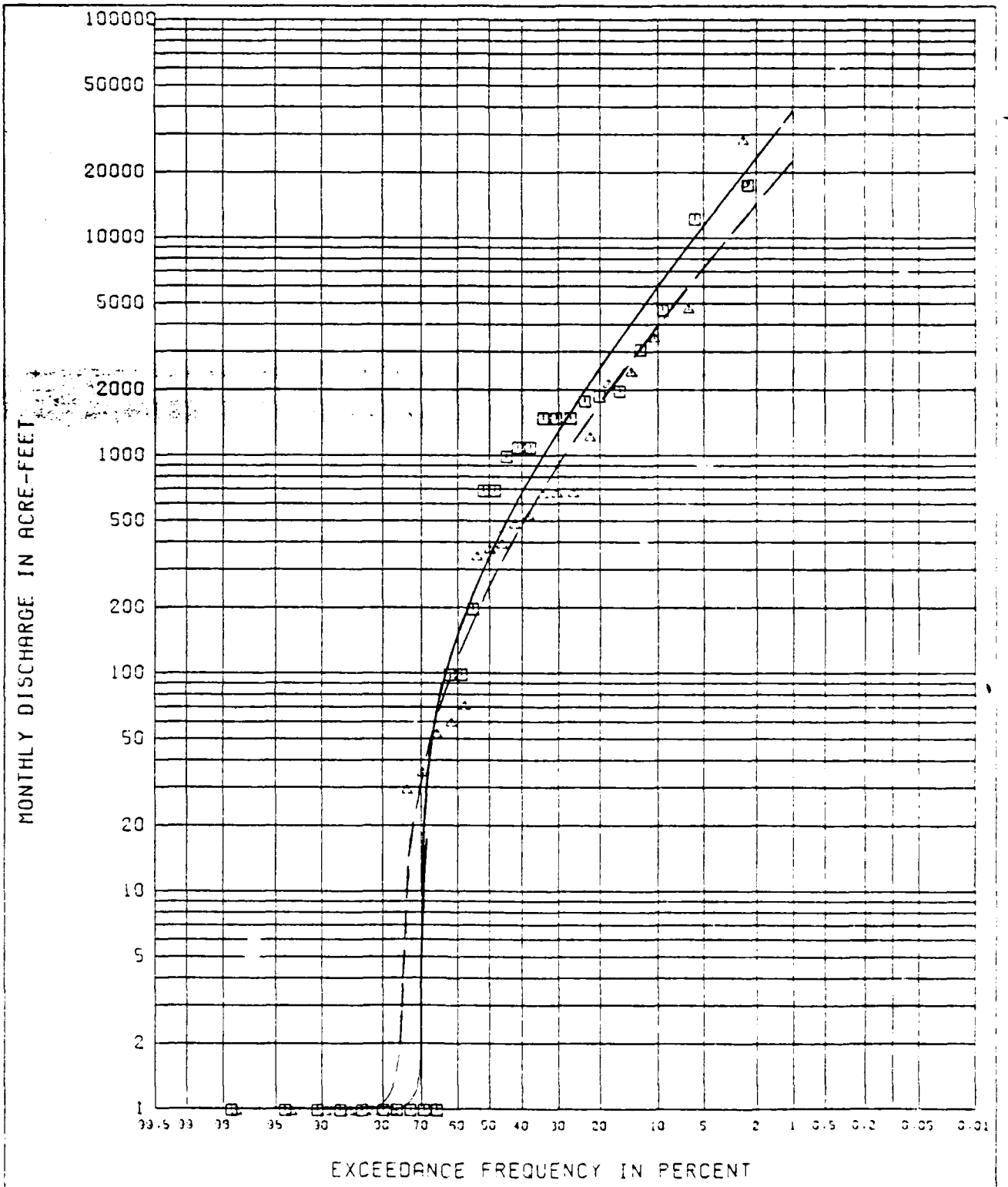
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

DECEMBER FLOWS

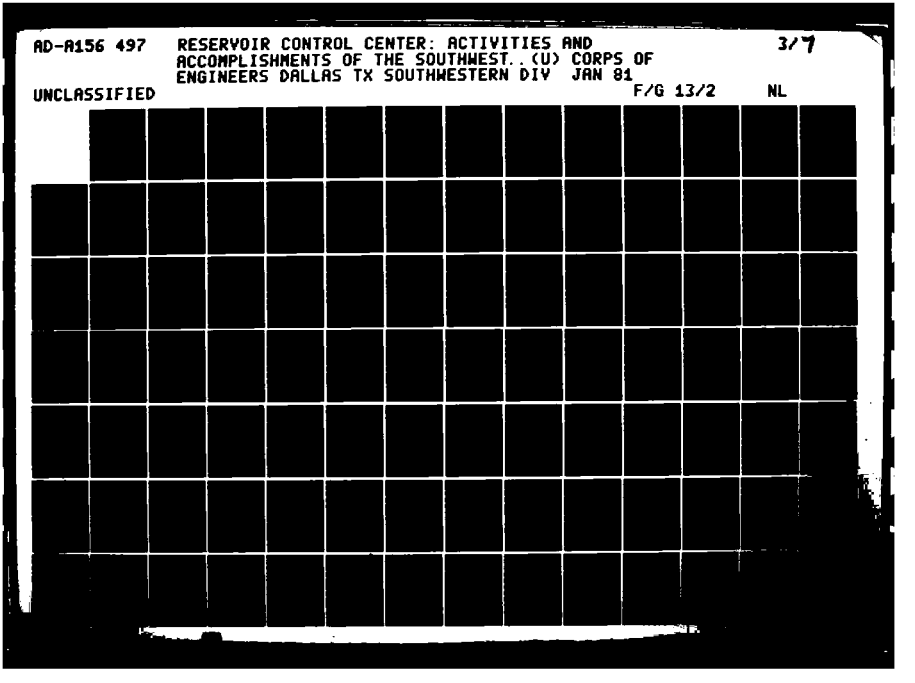
U.S. ARMY ENGINEER DISTRICT, FORT WORTH

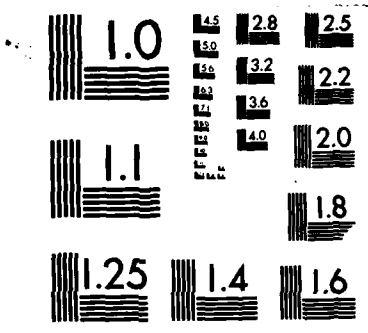
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 12

AD-A156 497 RESERVOIR CONTROL CENTER: ACTIVITIES AND ACCOMPLISHMENTS OF THE SOUTHWEST.. (U) CORPS OF ENGINEERS DALLAS TX SOUTHWESTERN DIV JAN 81 3/7

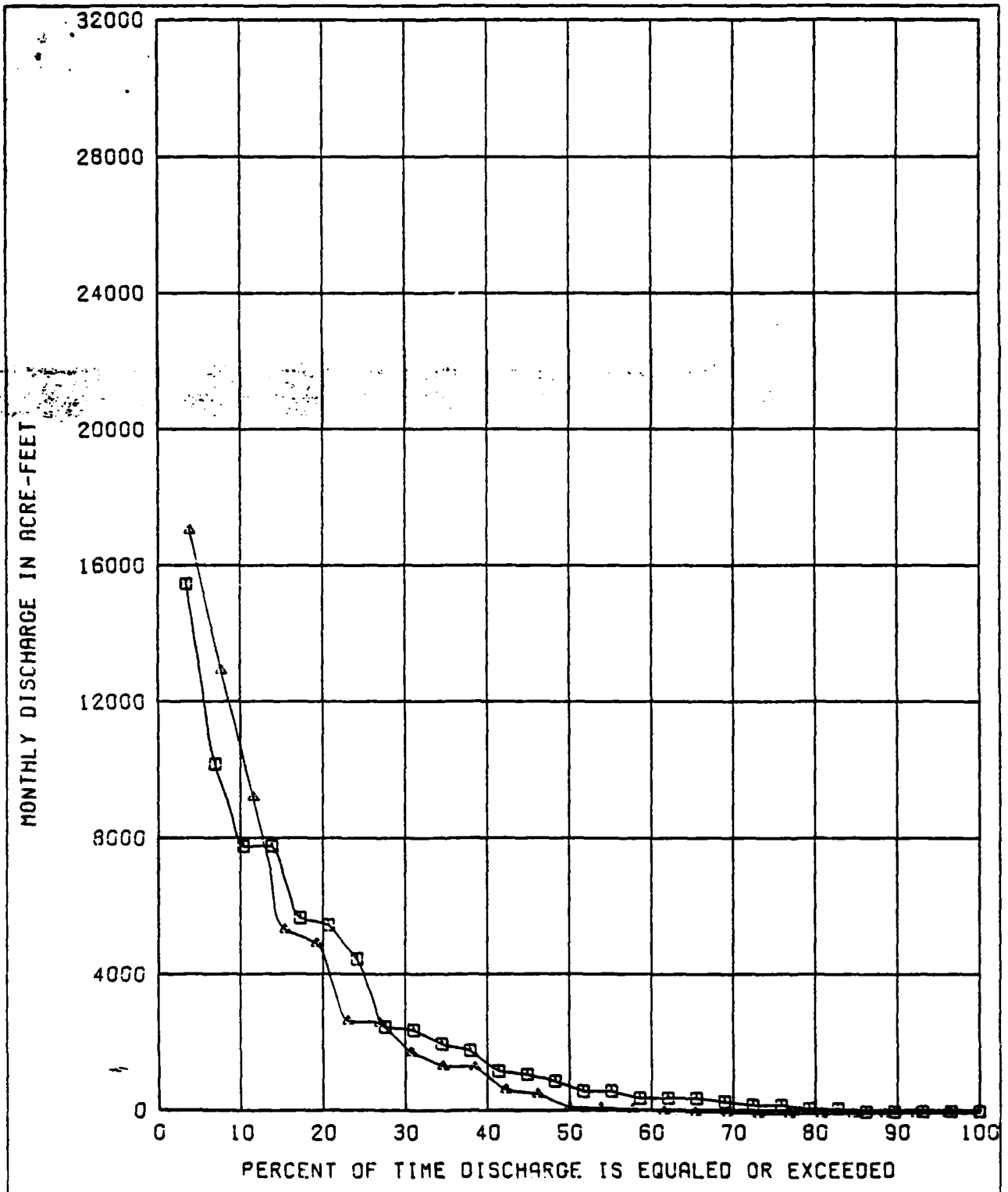
UNCLASSIFIED F/G 13/2 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

FLOW DURATION CURVES AT DAM SITE

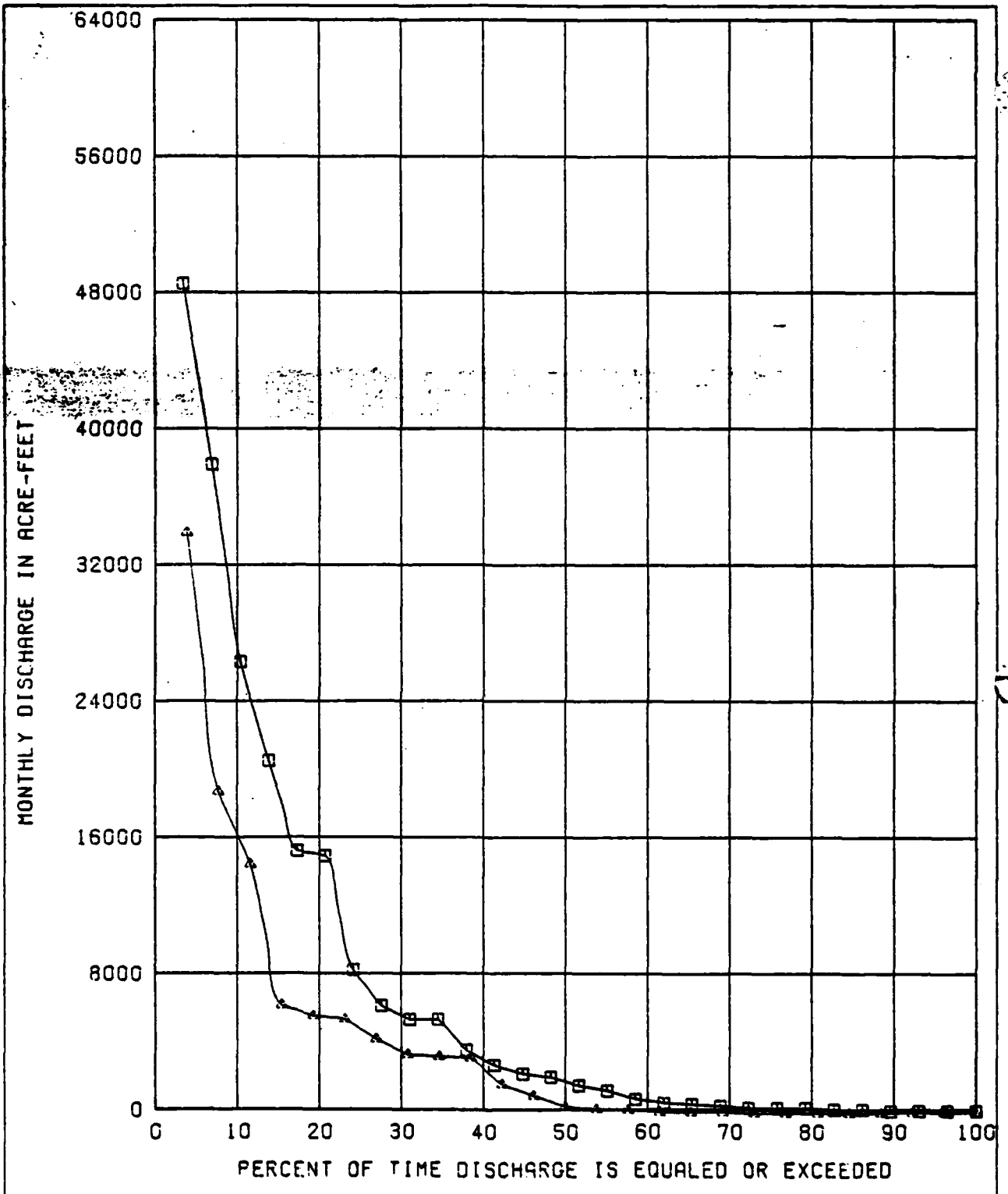
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

FLOW DURATION CURVES AT DAM SITE

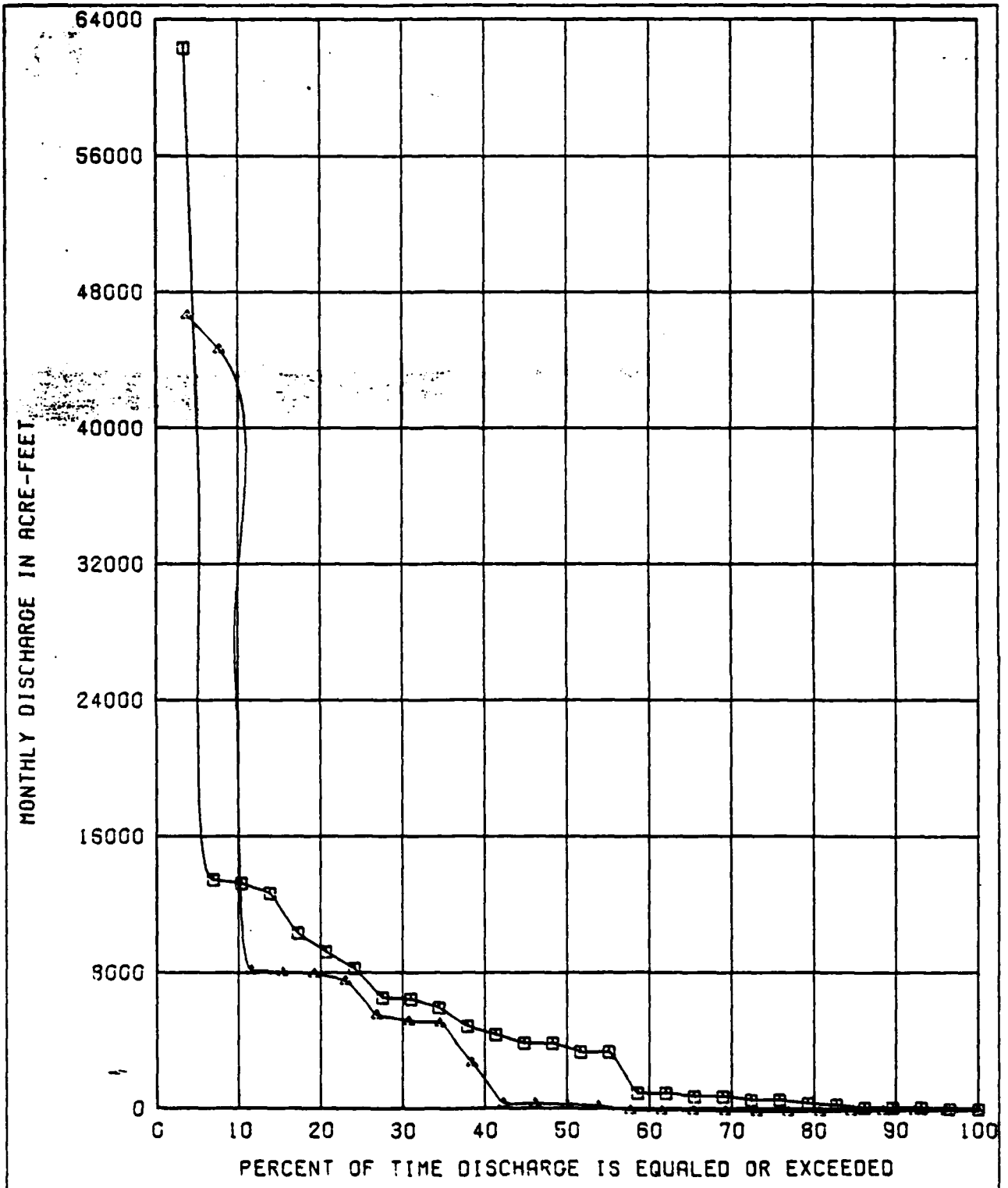
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

FLOW DURATION CURVES AT DAM SITE

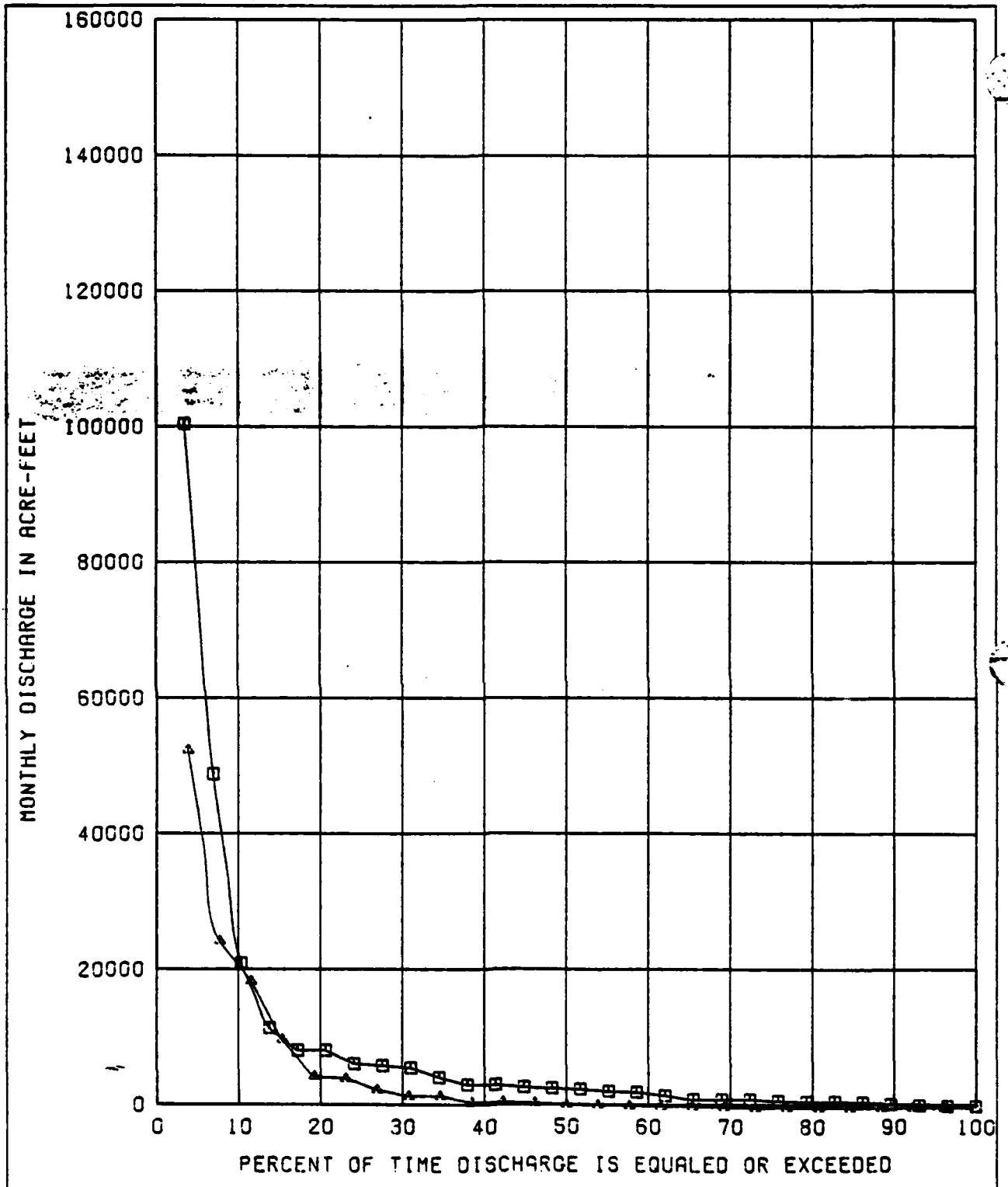
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

FLOW DURATION CURVES AT DAM SITE

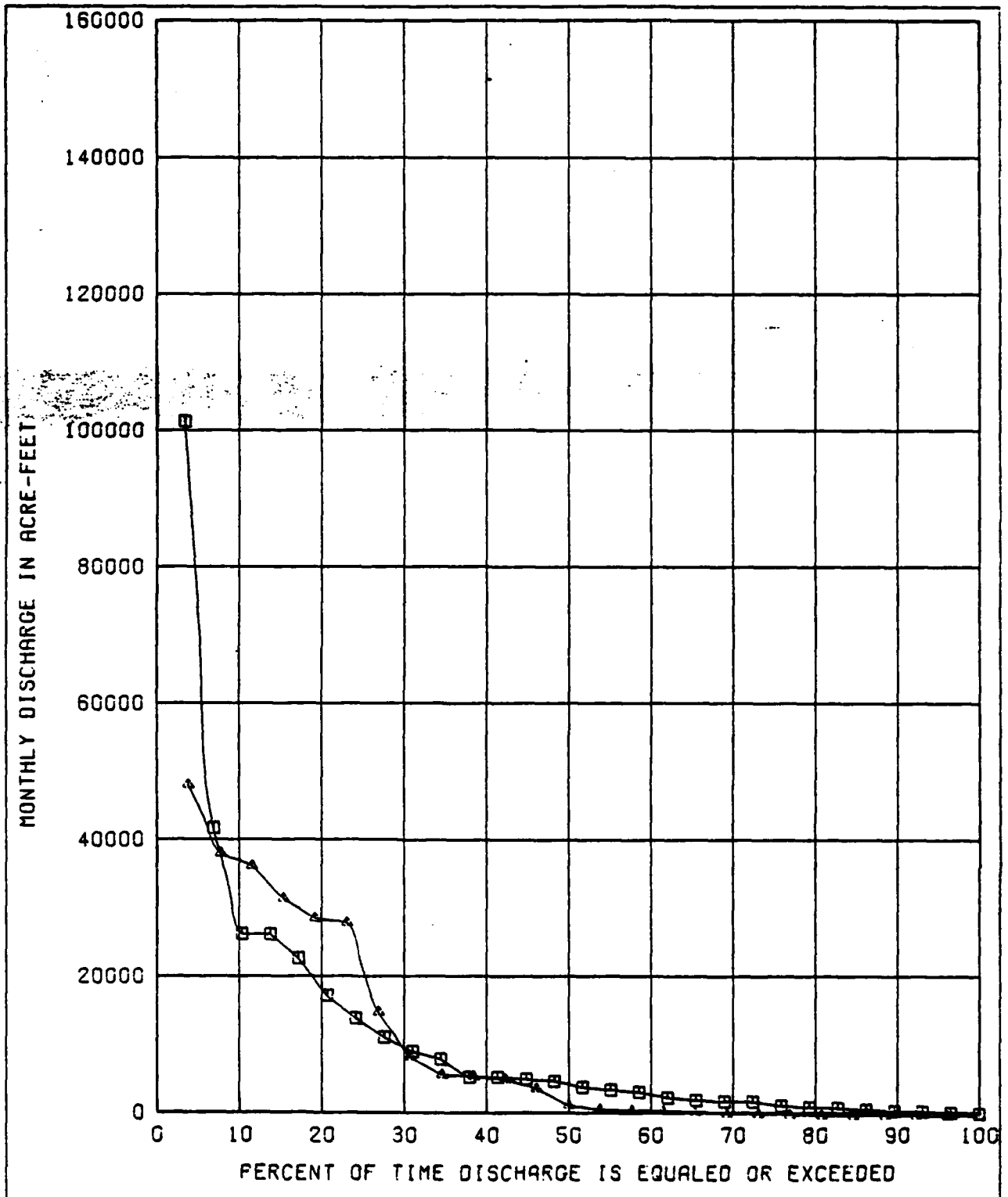
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

FLOW DURATION CURVES AT DAM SITE

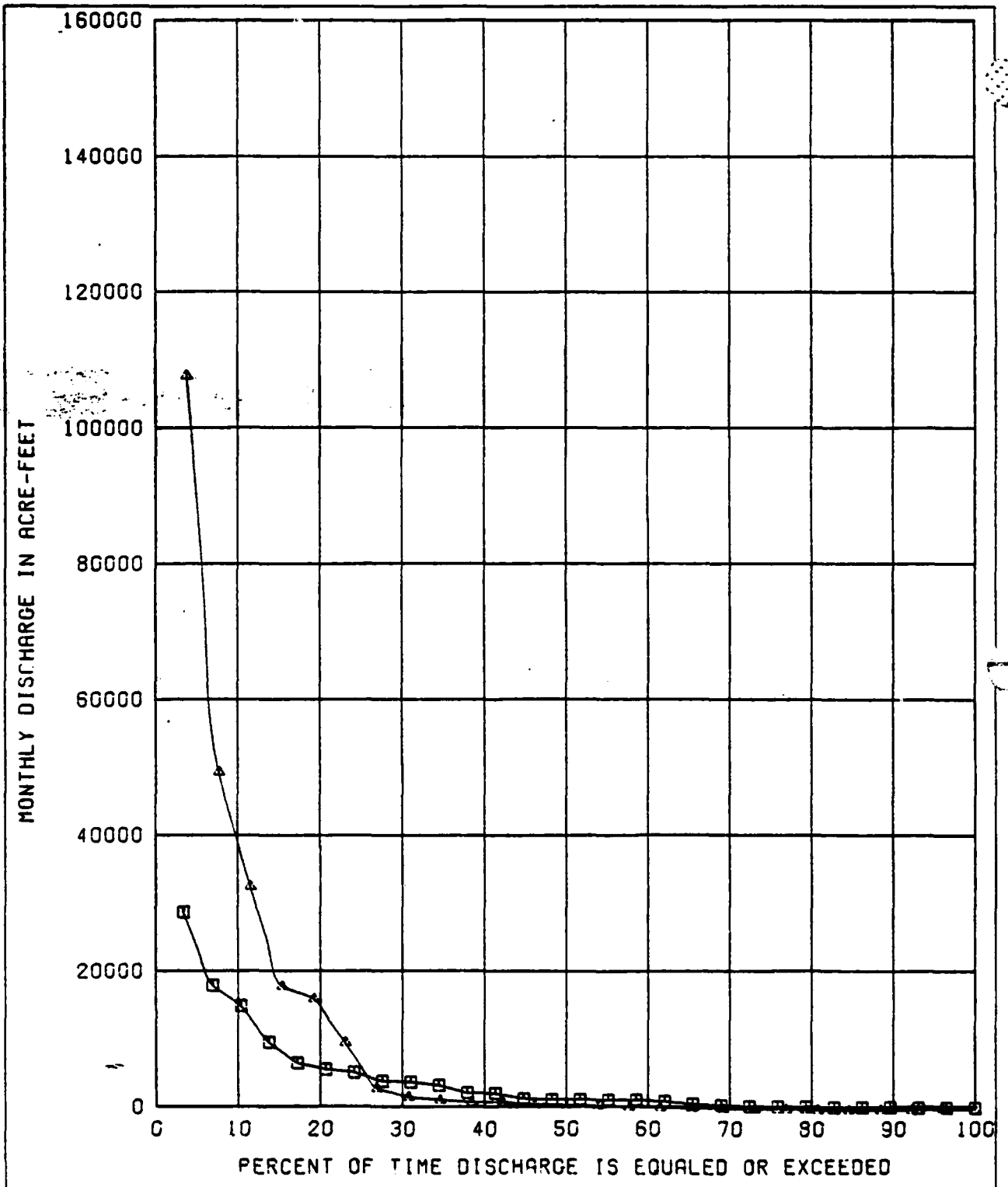
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

FLOW DURATION CURVES AT DAM SITE

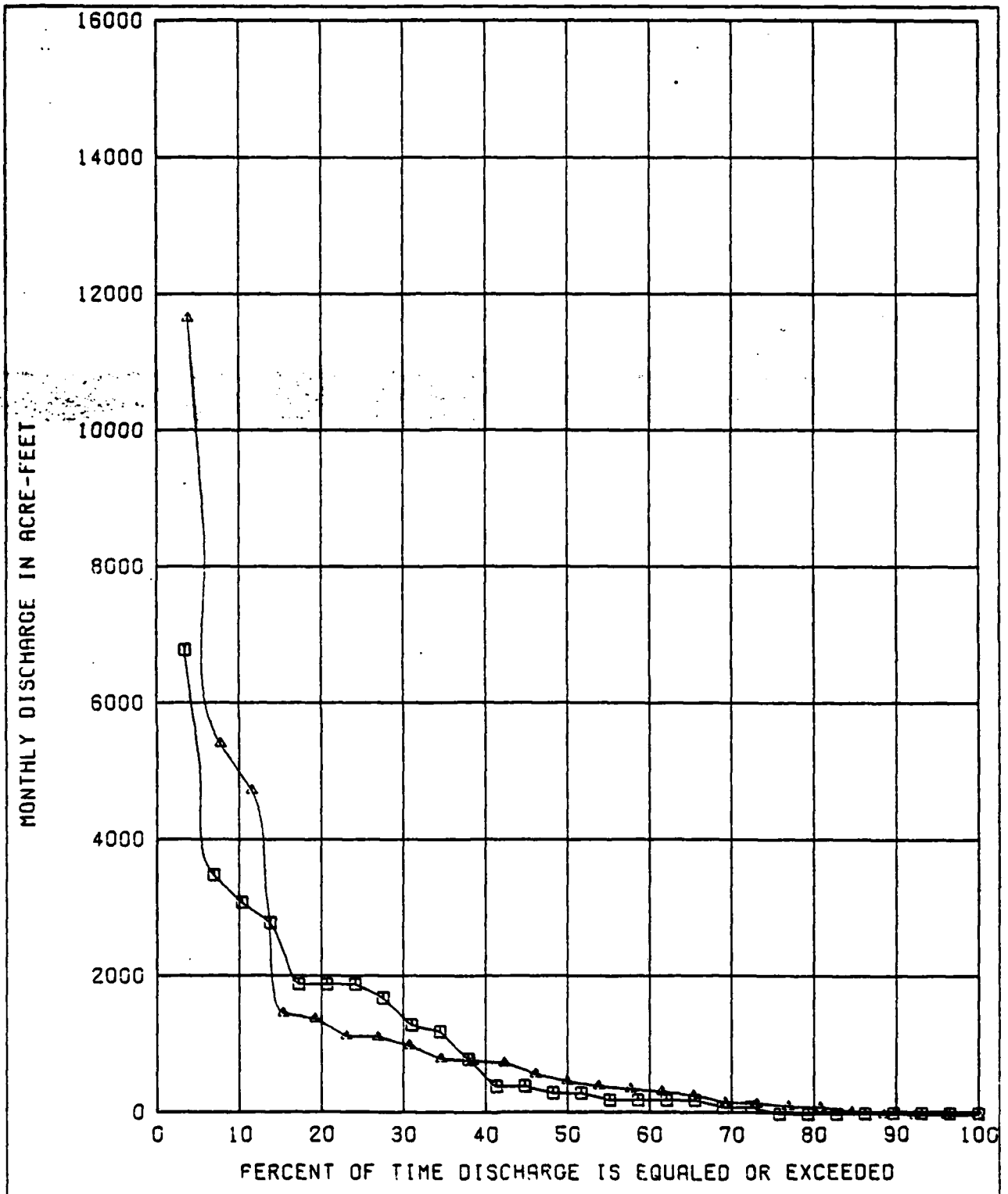
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

FLOW DURATION CURVES AT DAM SITE

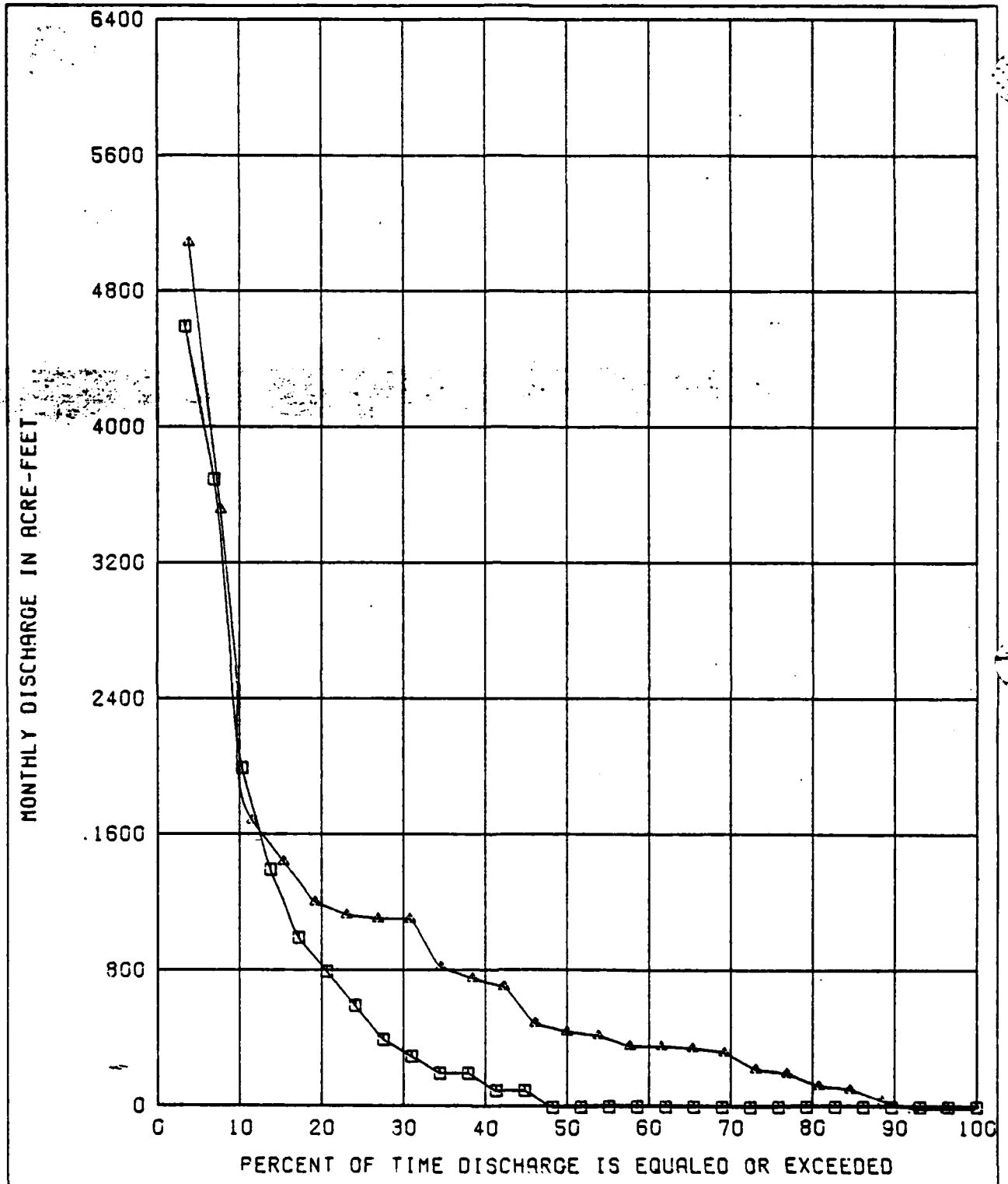
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

FLOW DURATION CURVES AT DAM SITE

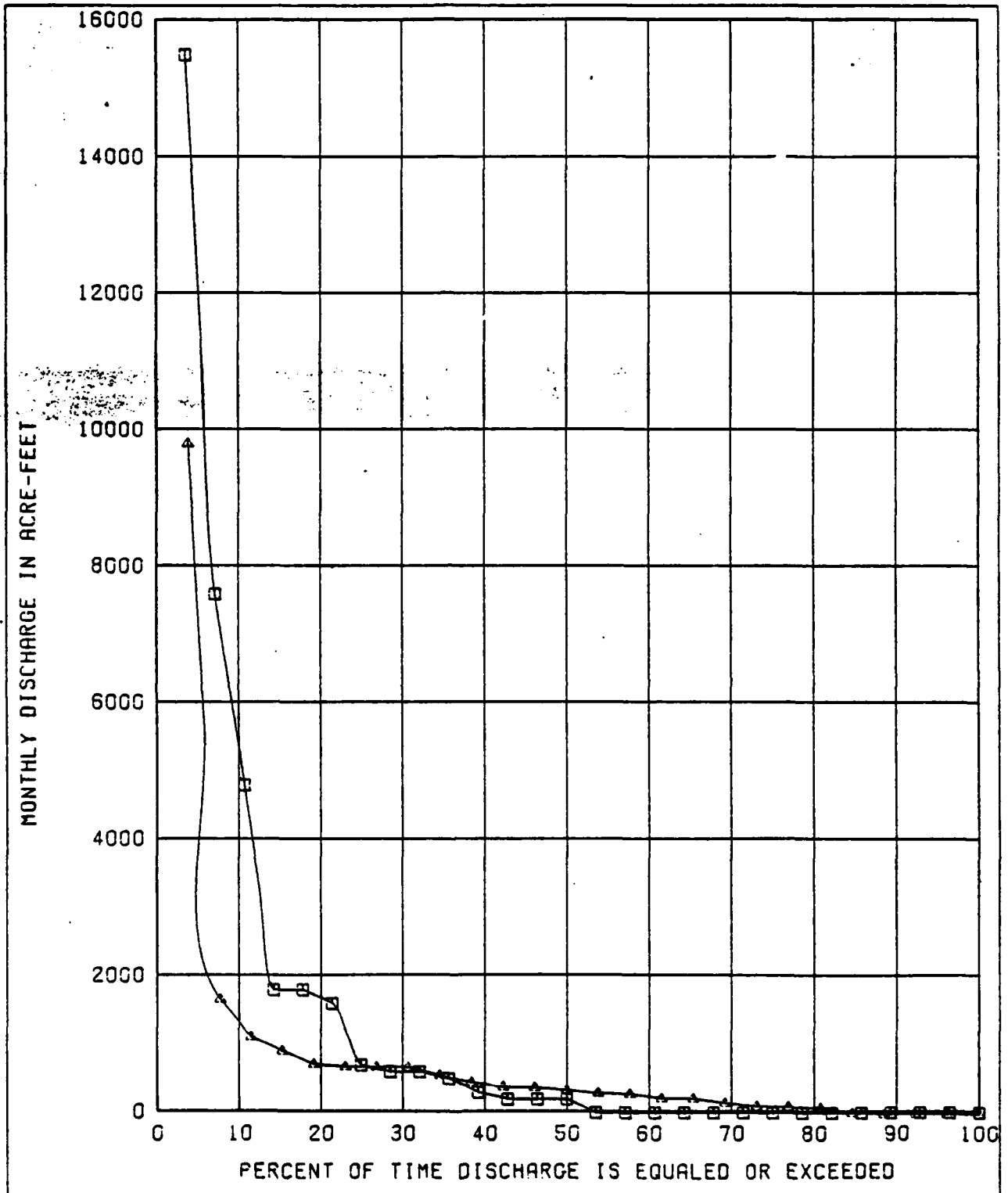
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

FLOW DURATION CURVES AT DAM SITE

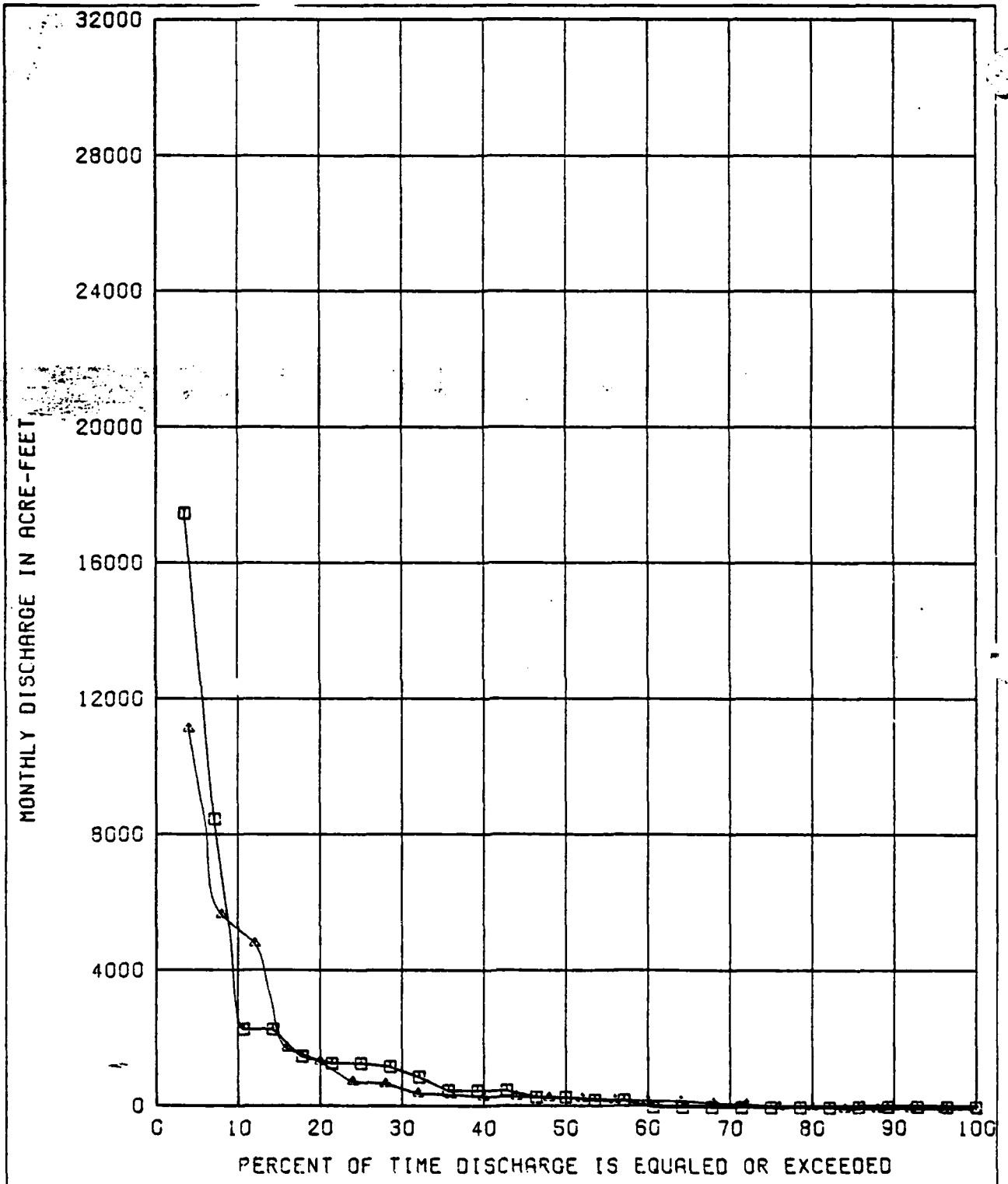
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

FLOW DURATION CURVES AT DAM SITE

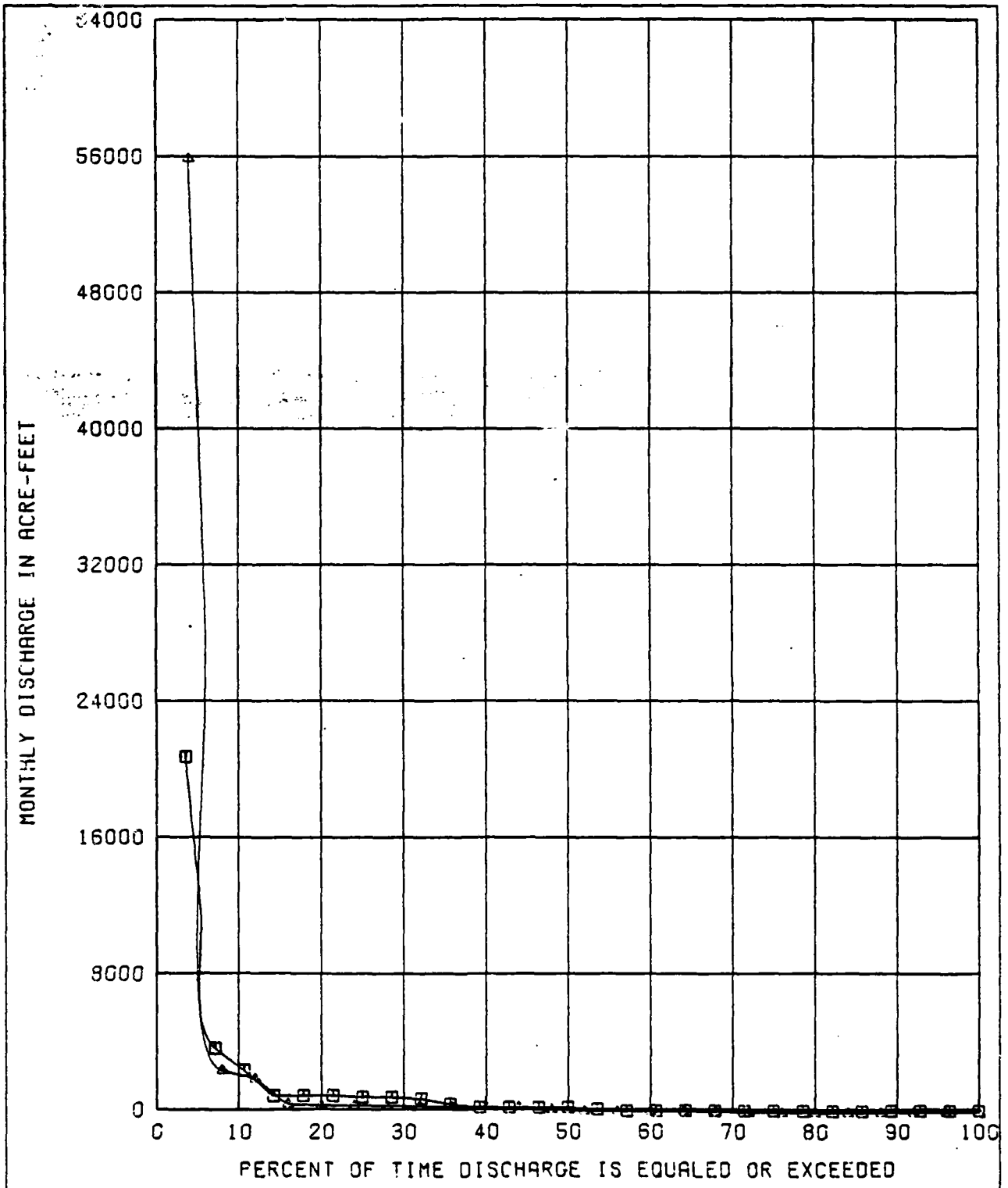
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

FLOW DURATION CURVES AT DAM SITE

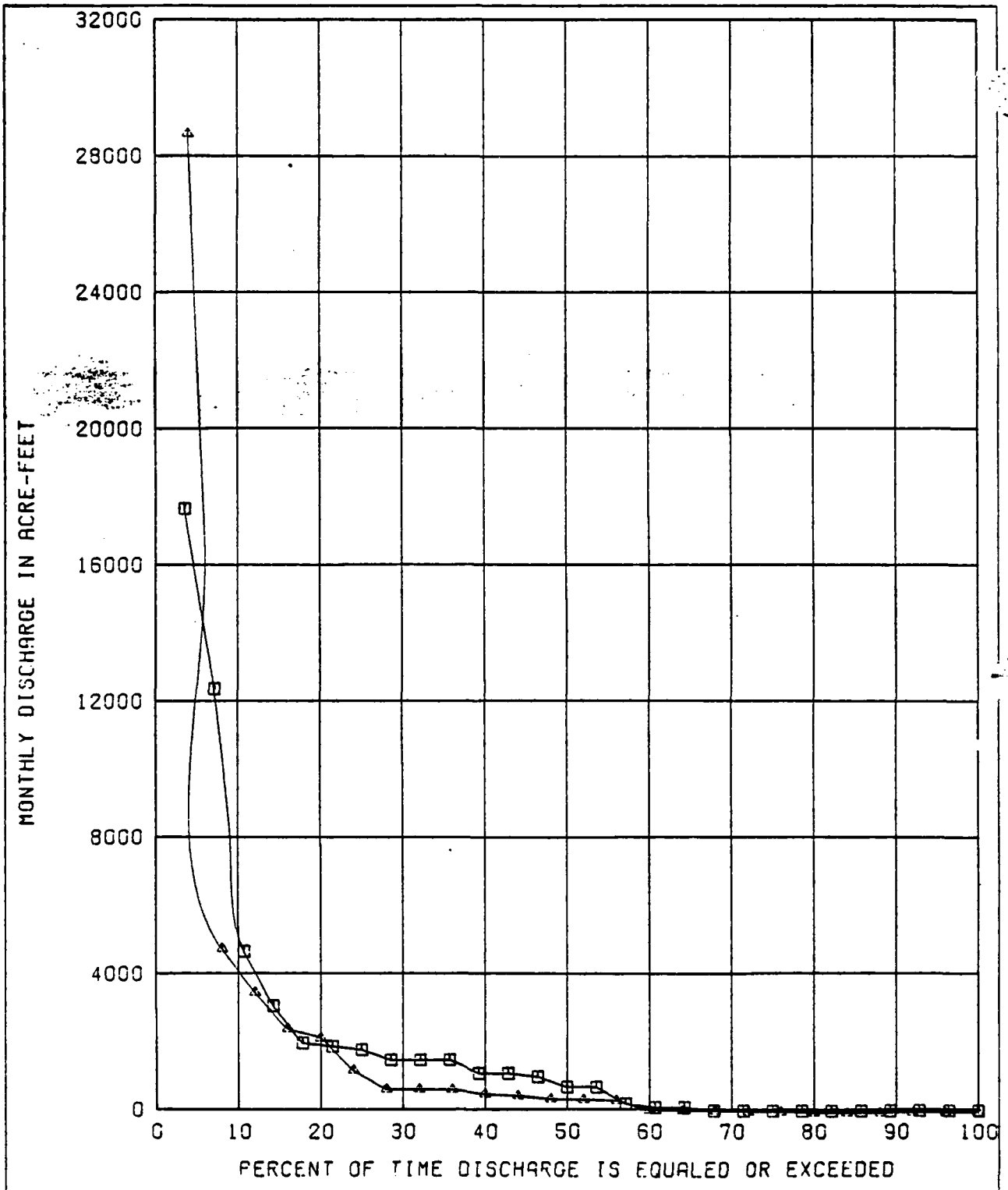
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980.

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

BENBROOK LAKE

FLOW DURATION CURVES AT DAM SITE

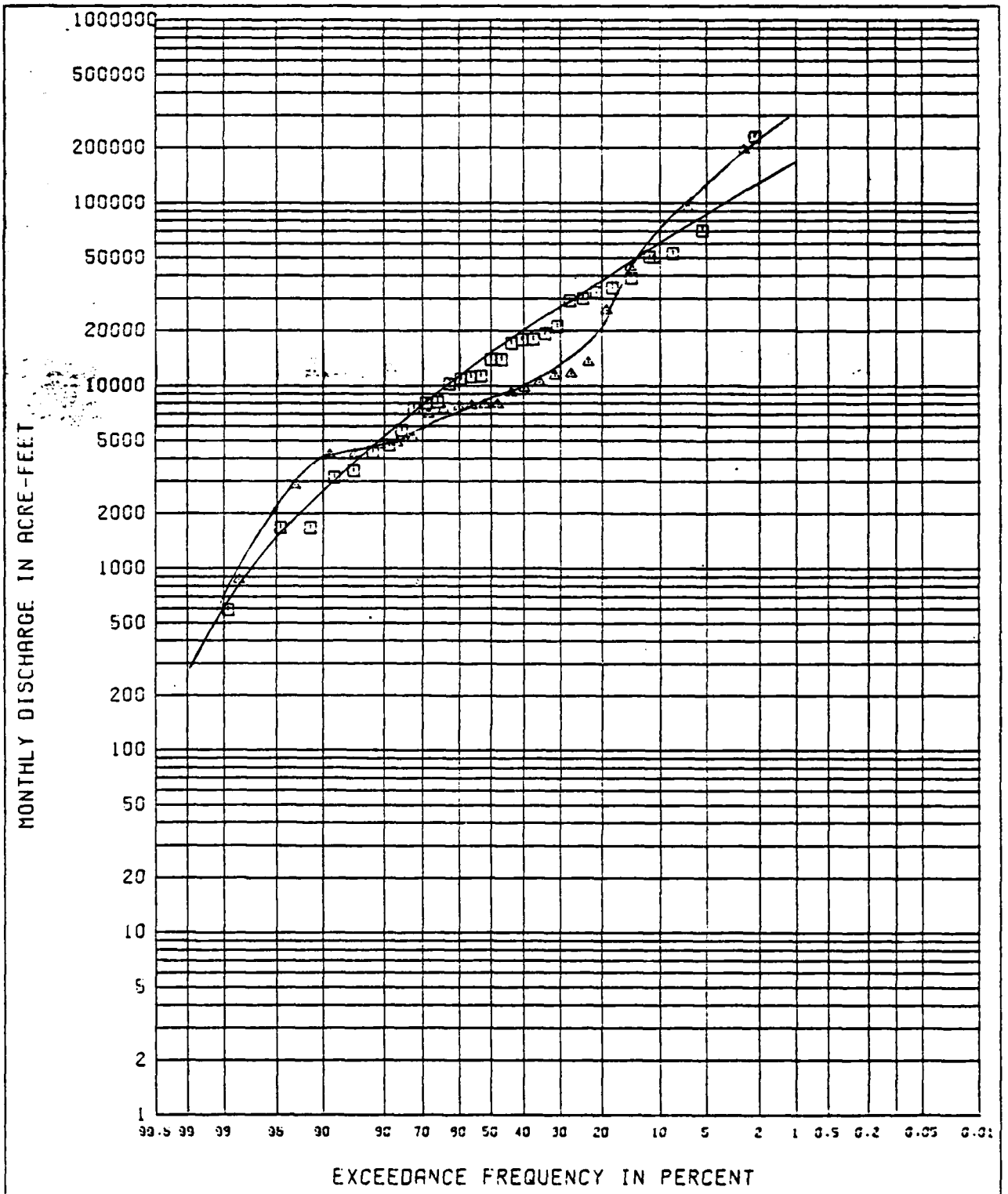
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1978)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

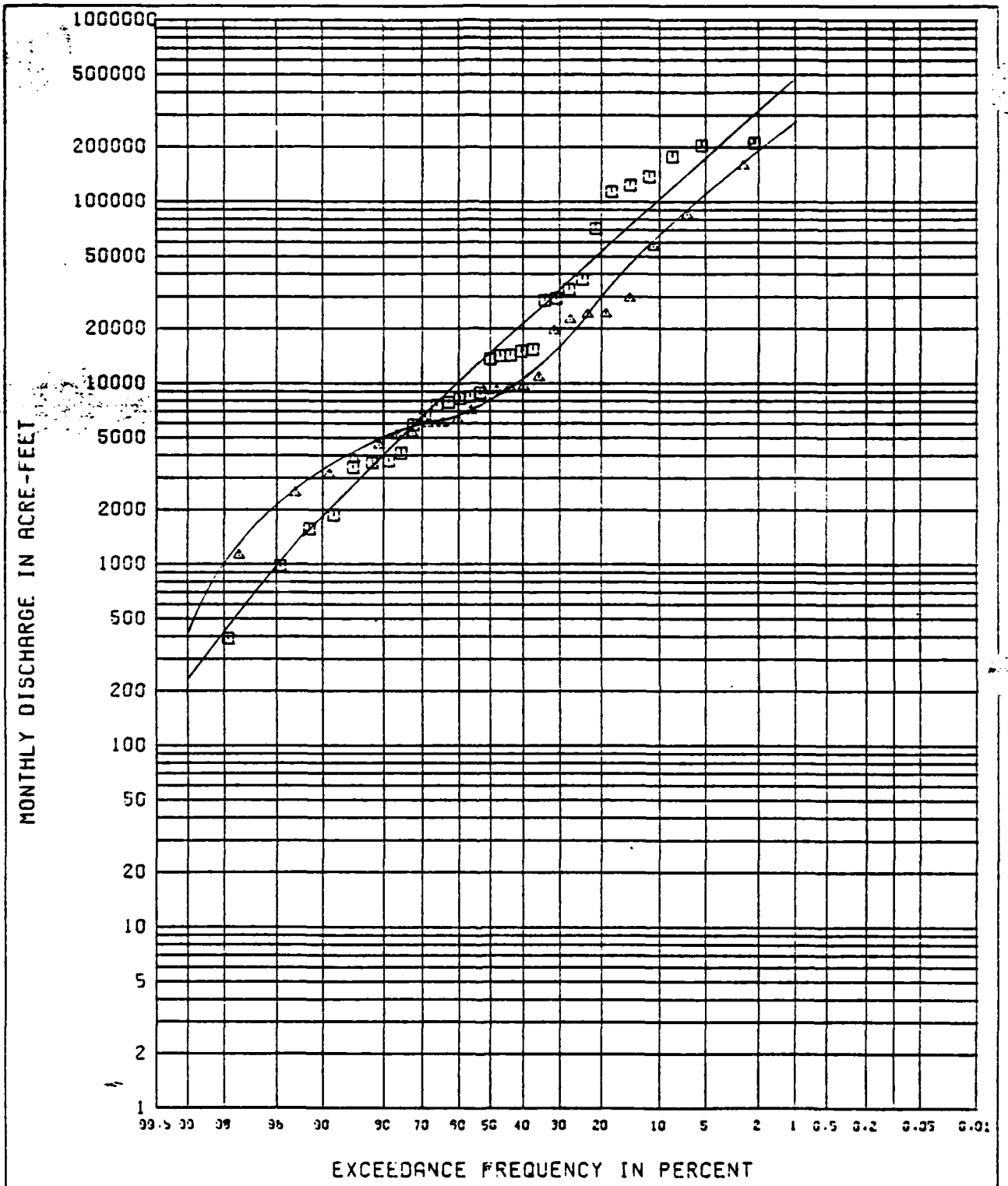
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

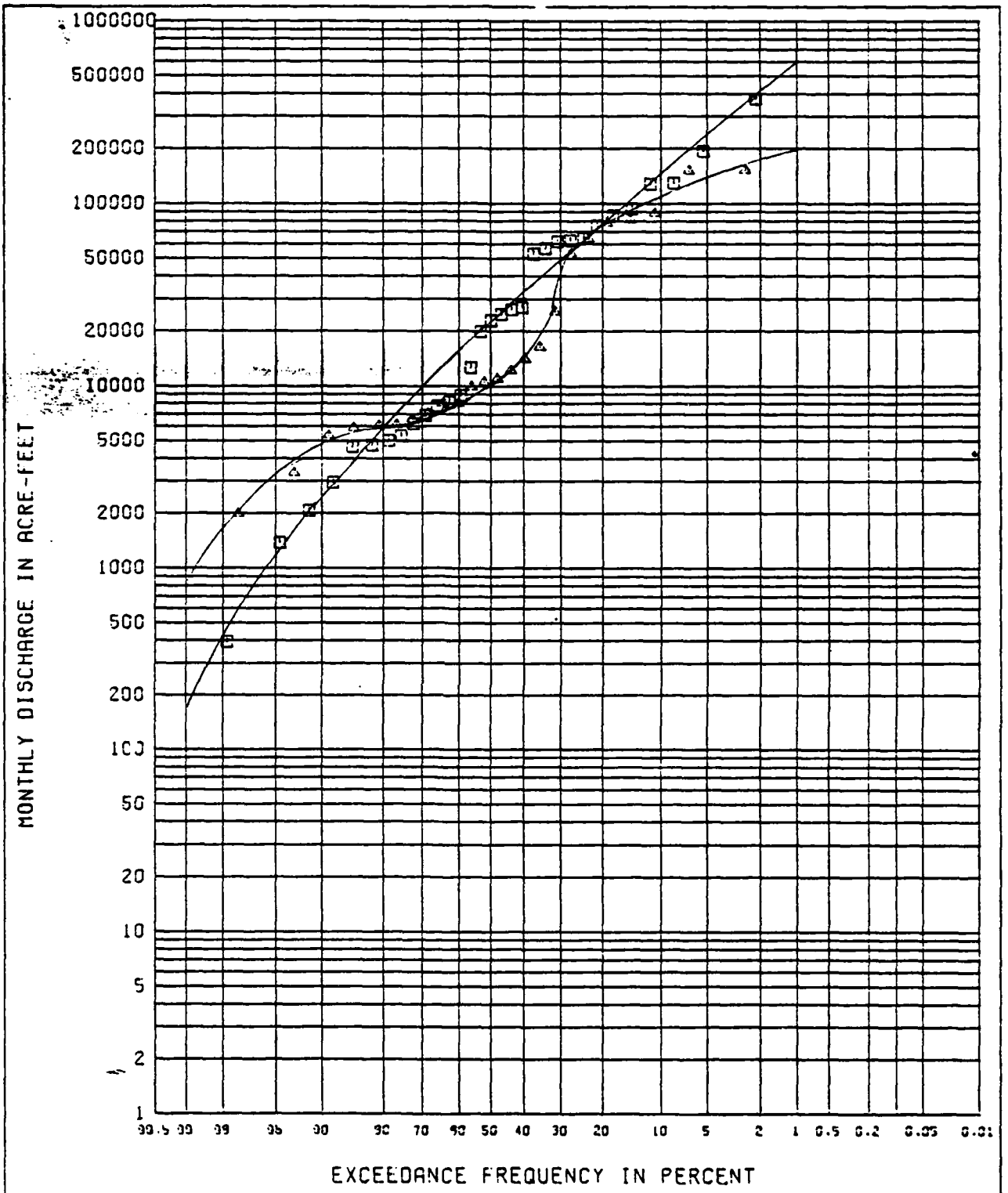
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

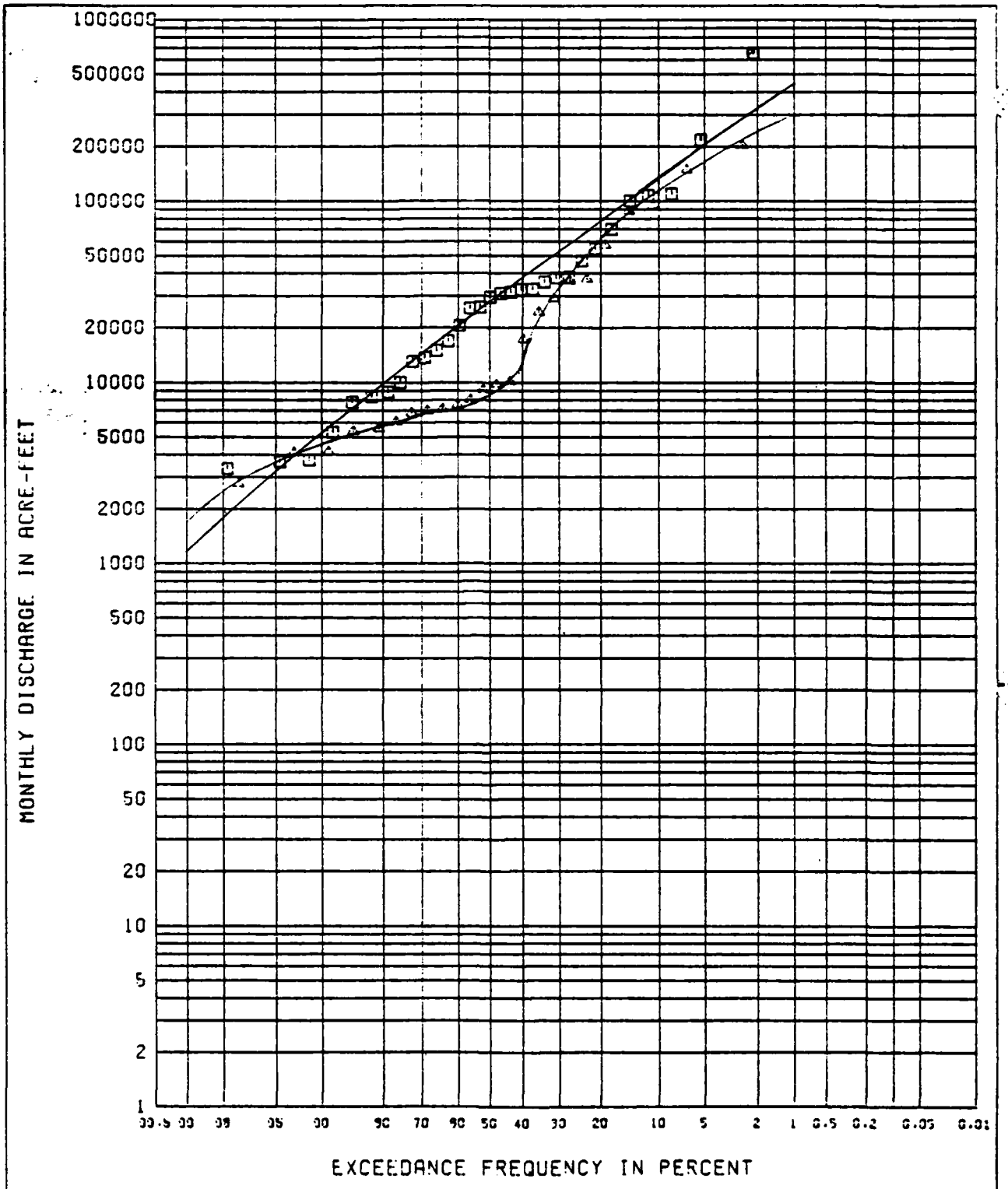
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

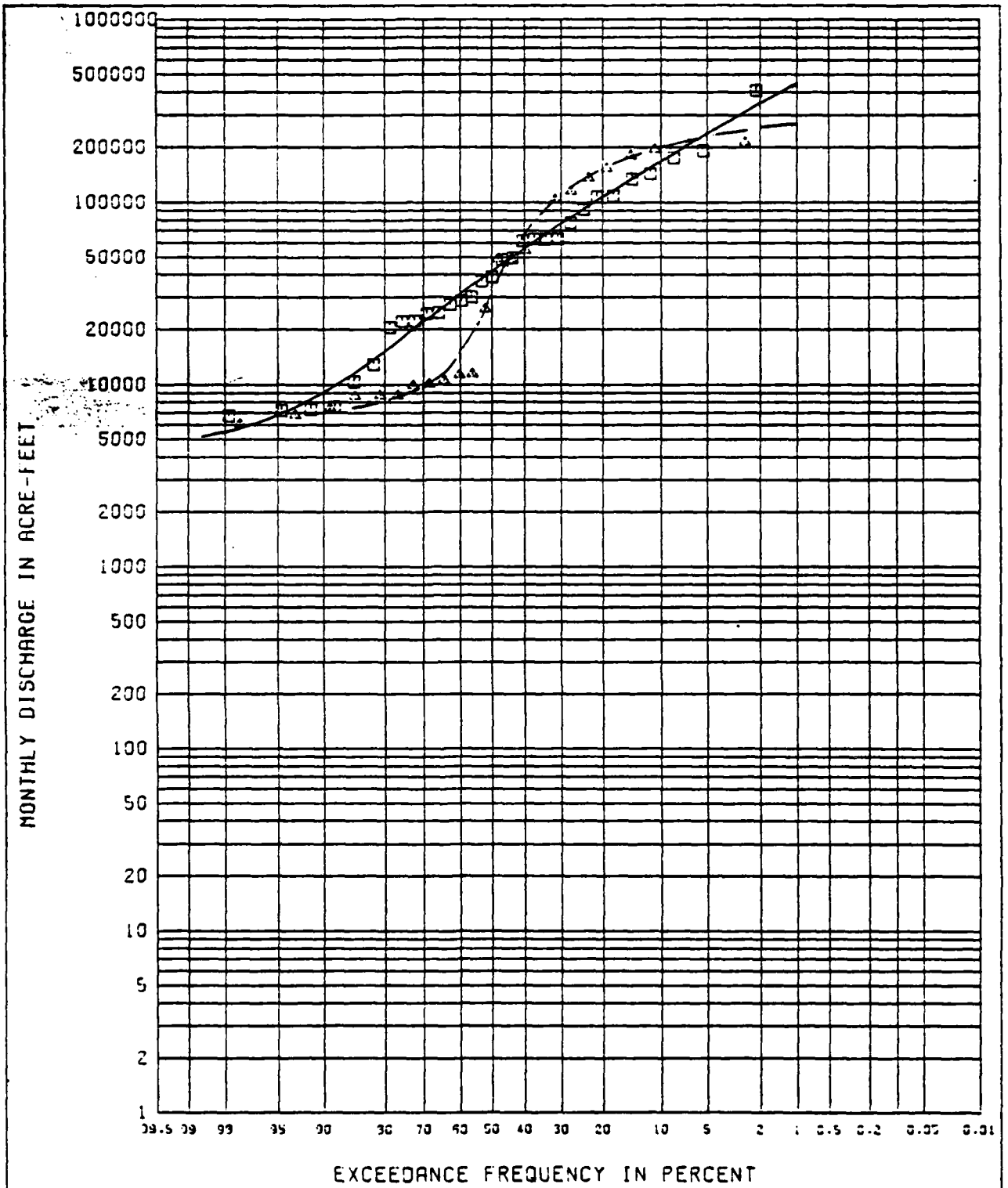
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

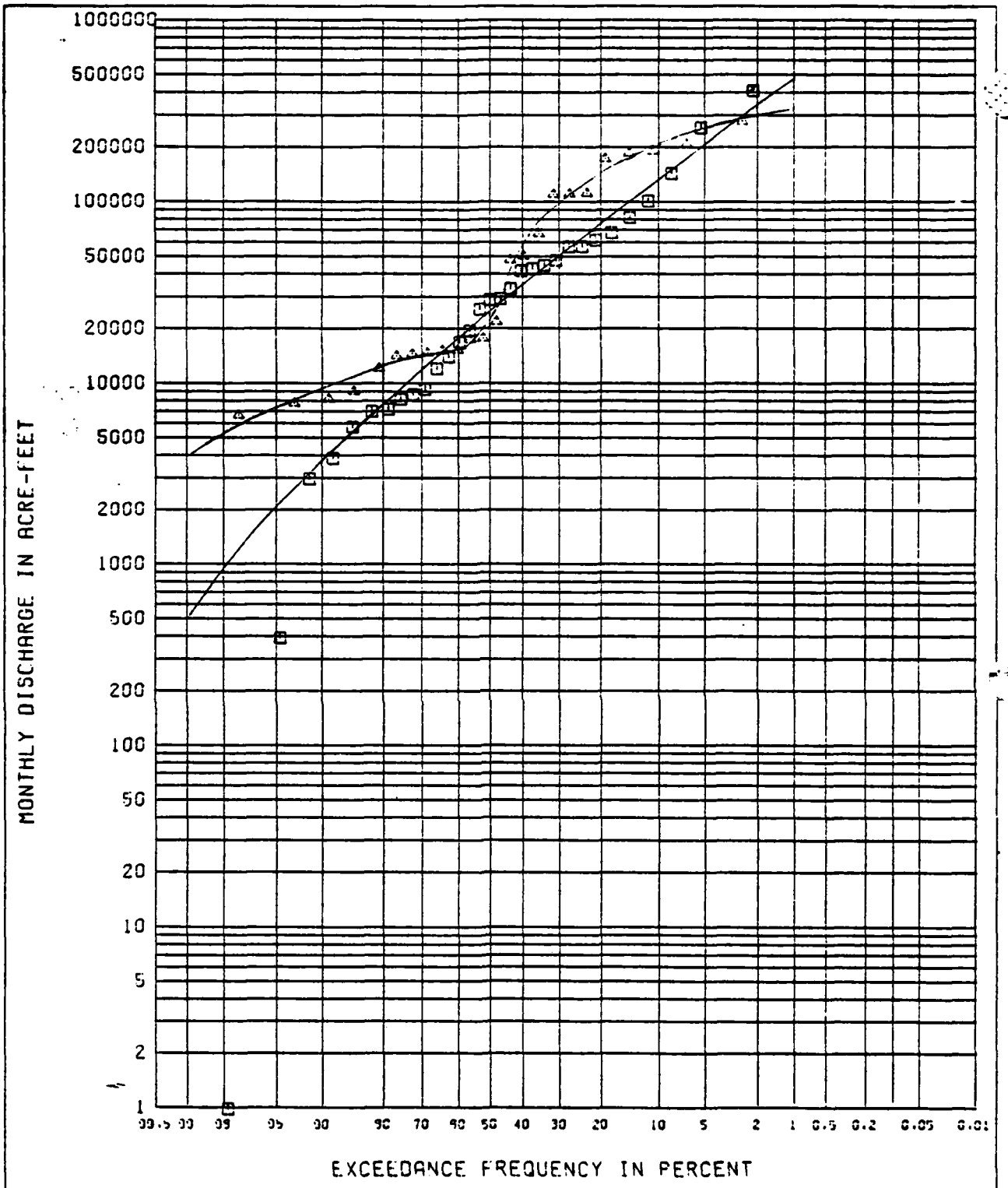
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

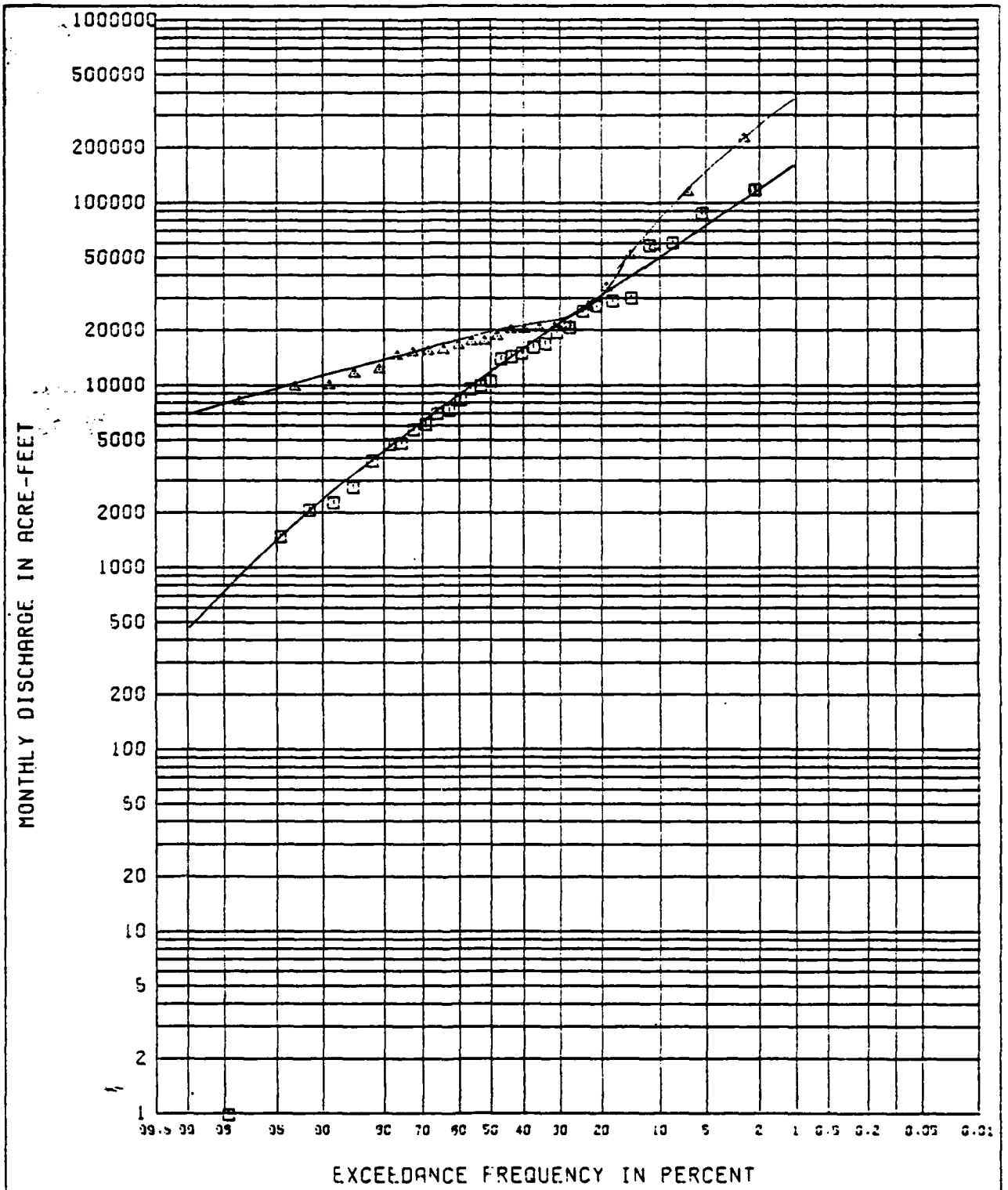
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

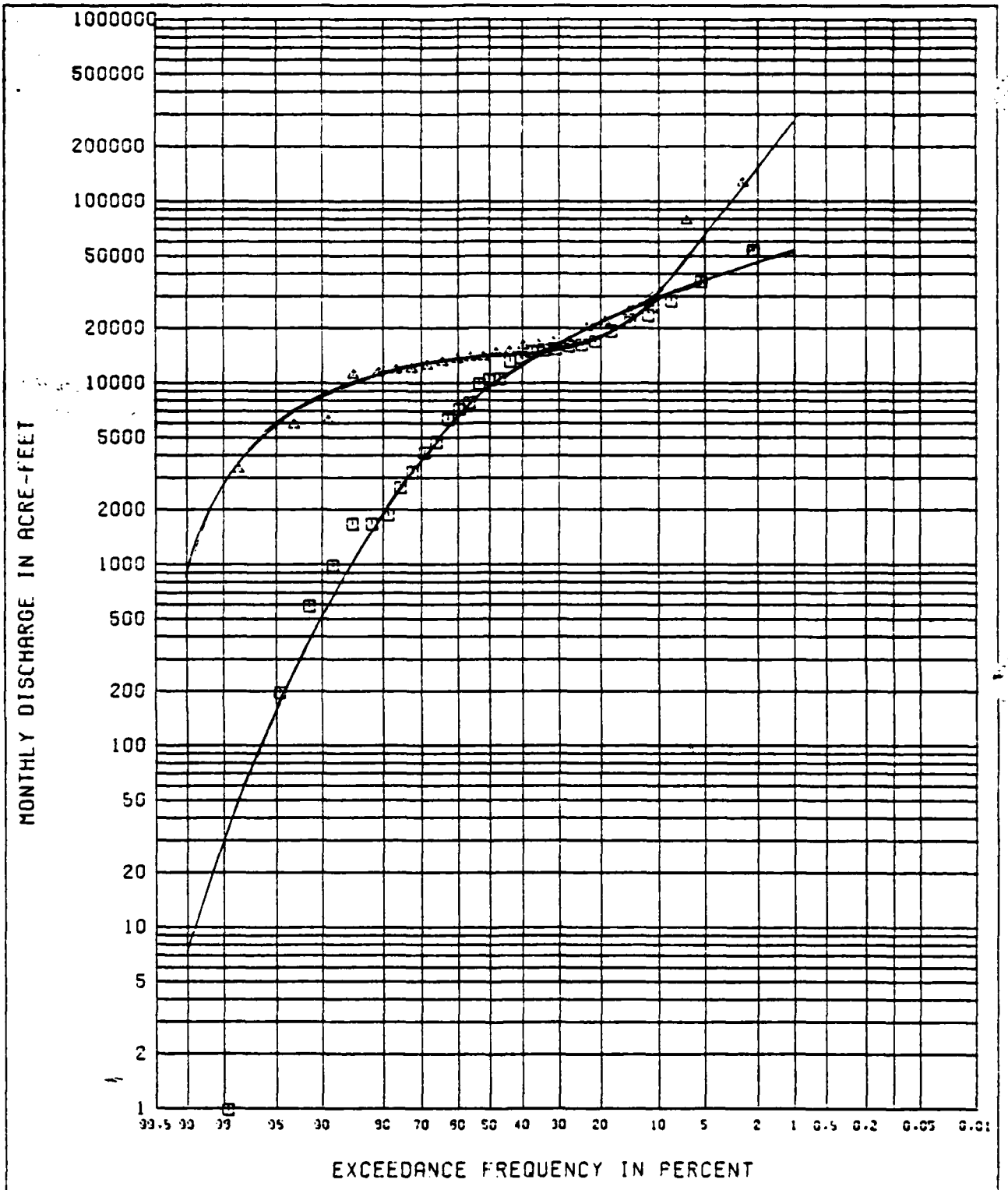
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

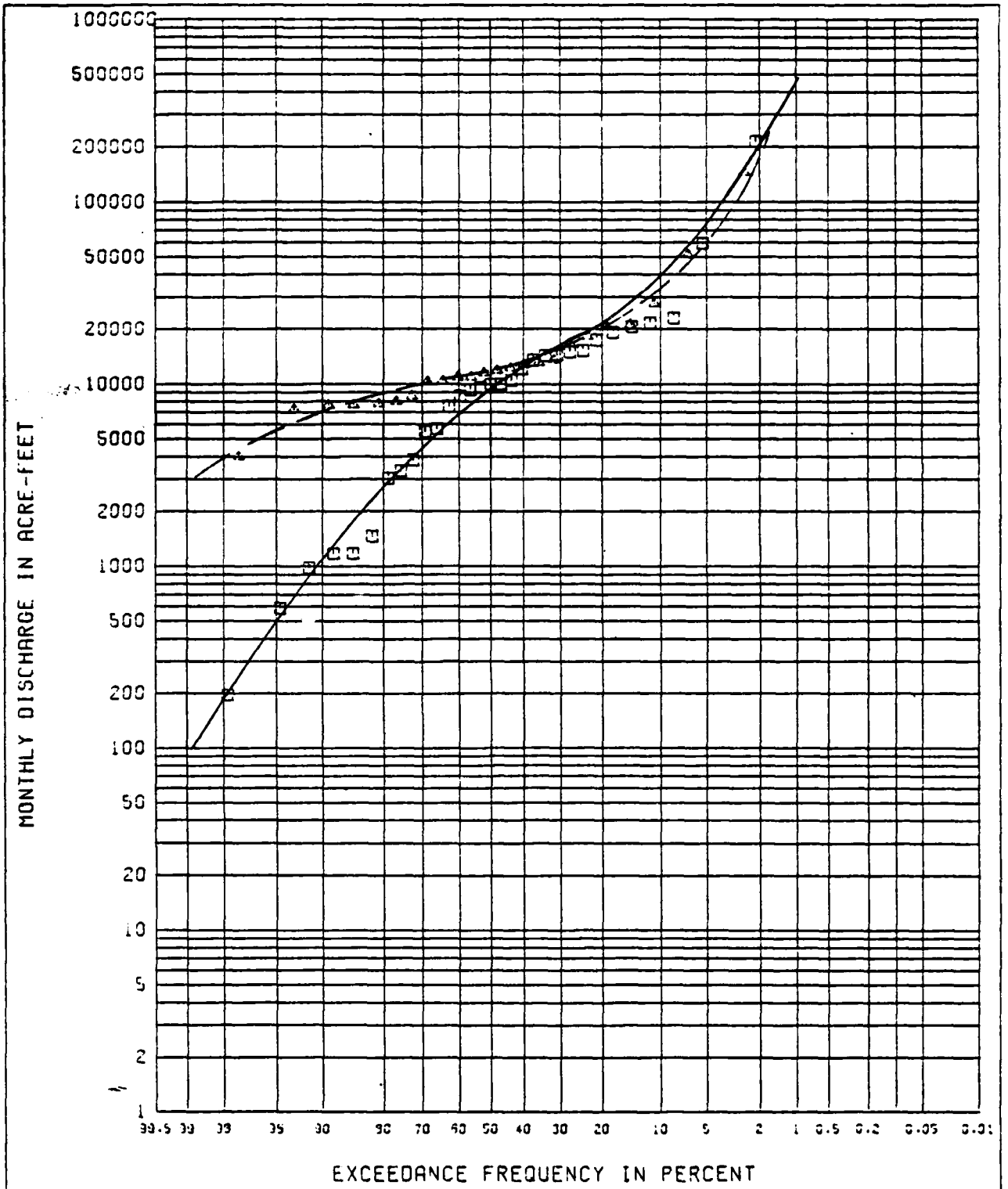
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

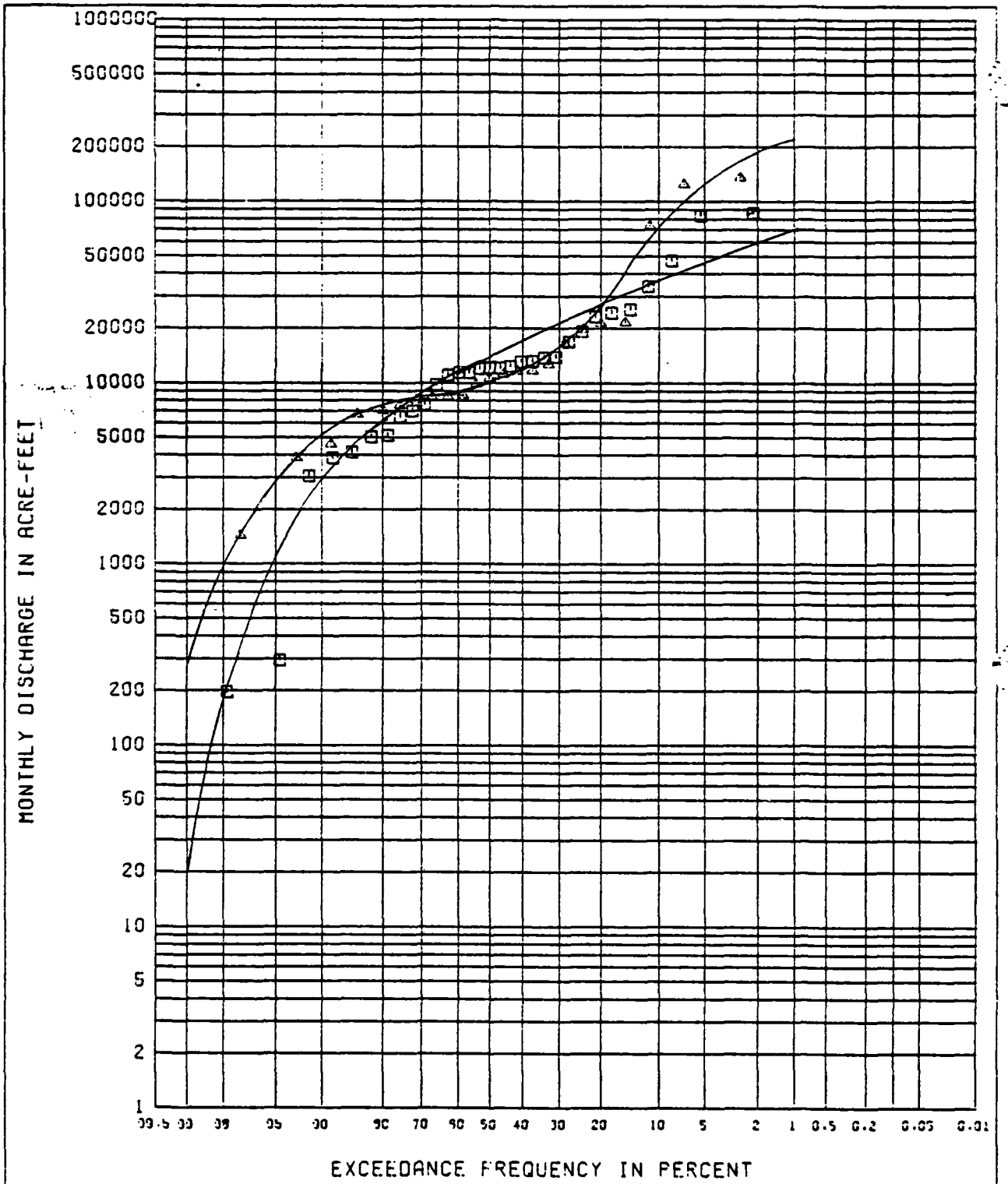
LEWISVILLE LAKE
DISCHARGE-FREQUENCY RELATIONS AT DAM SITE
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

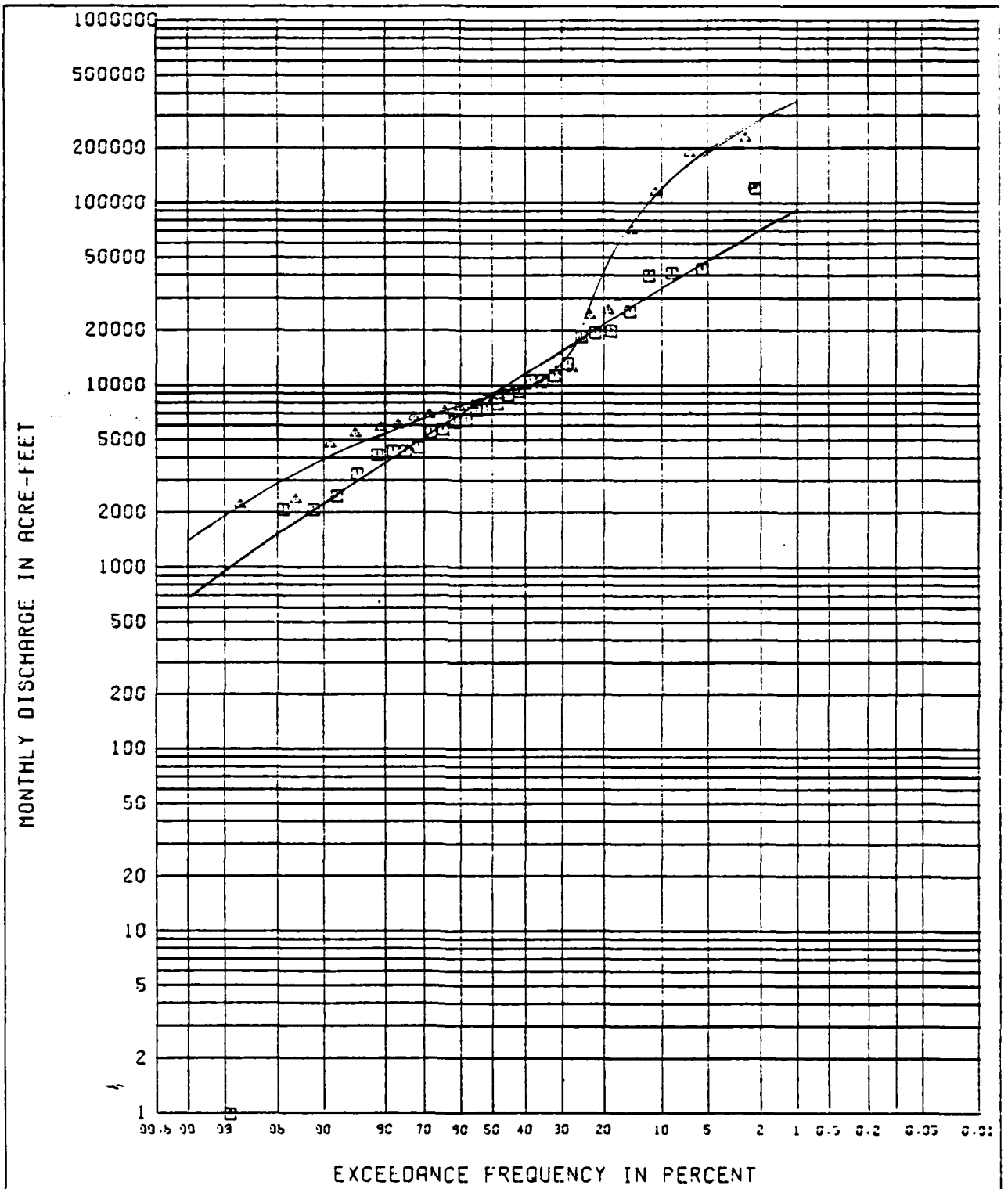
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1978)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

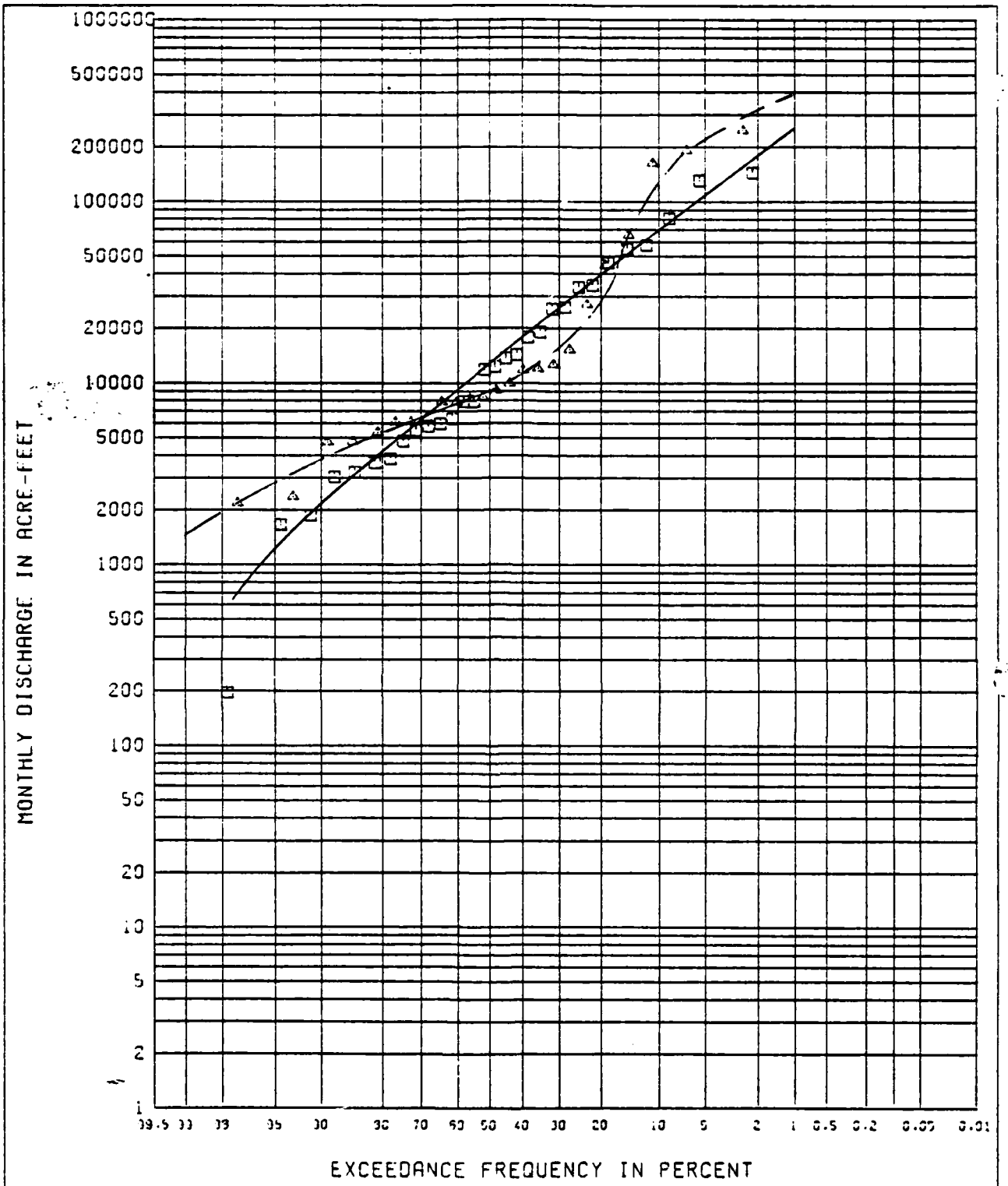
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

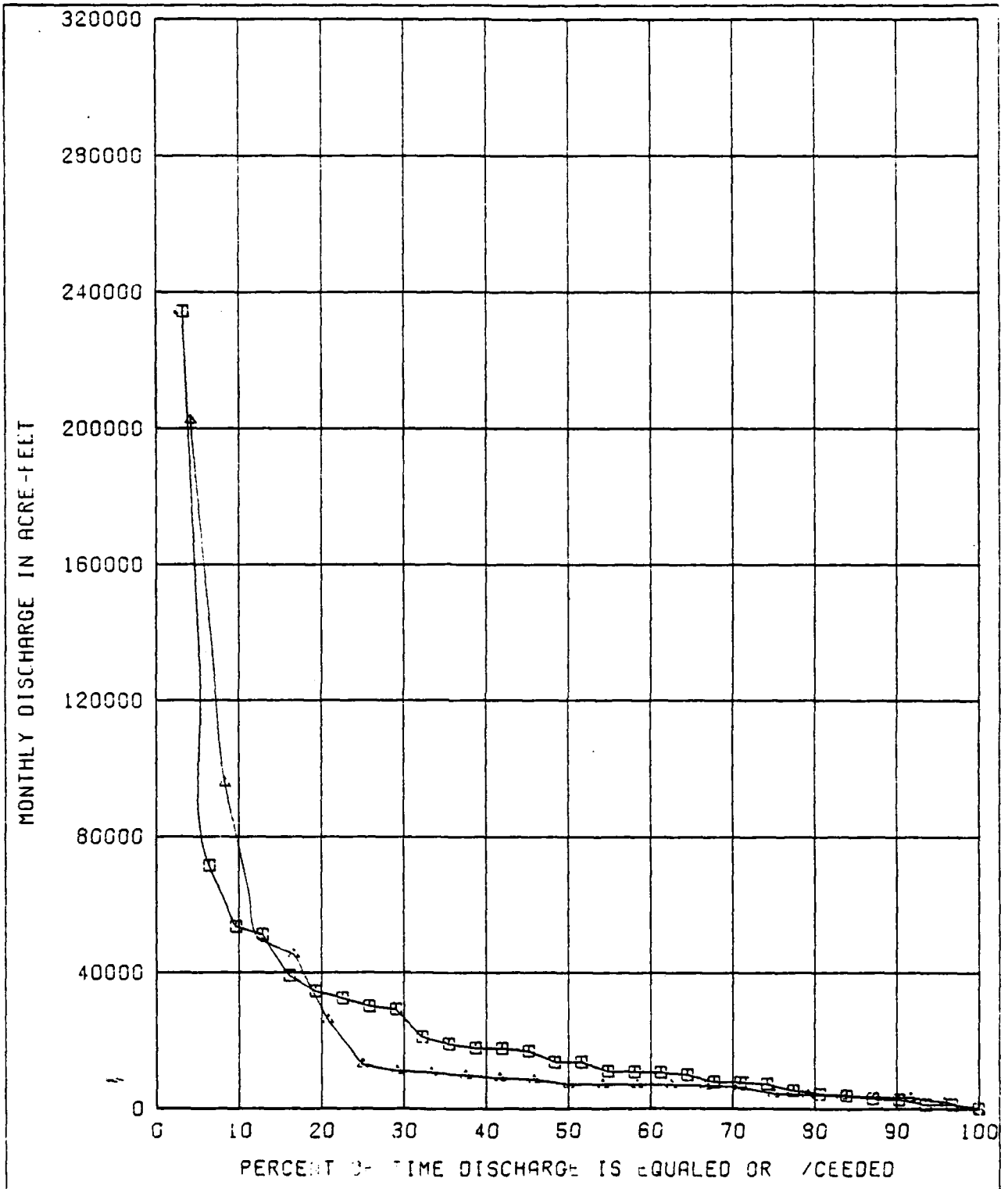
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

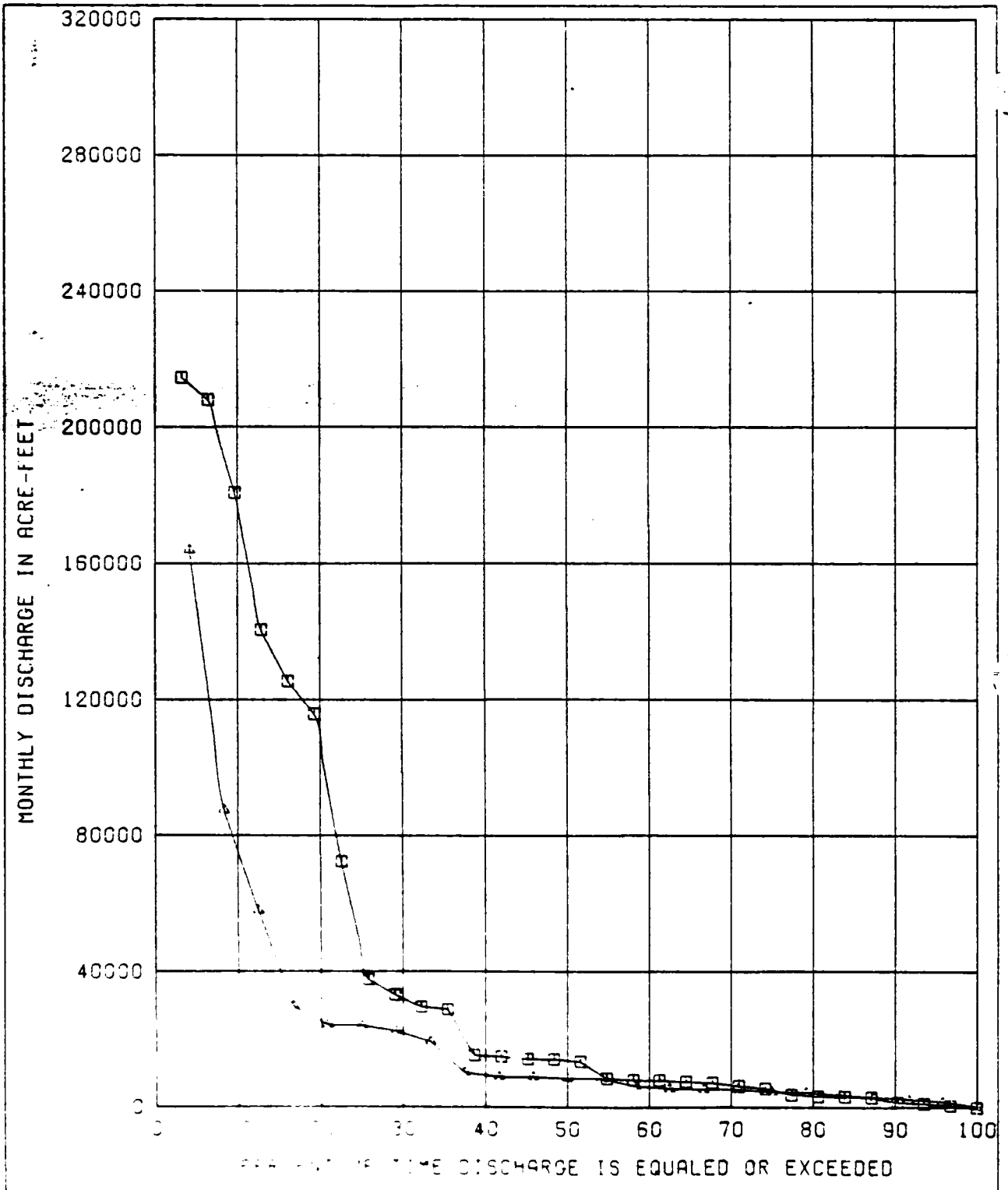
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

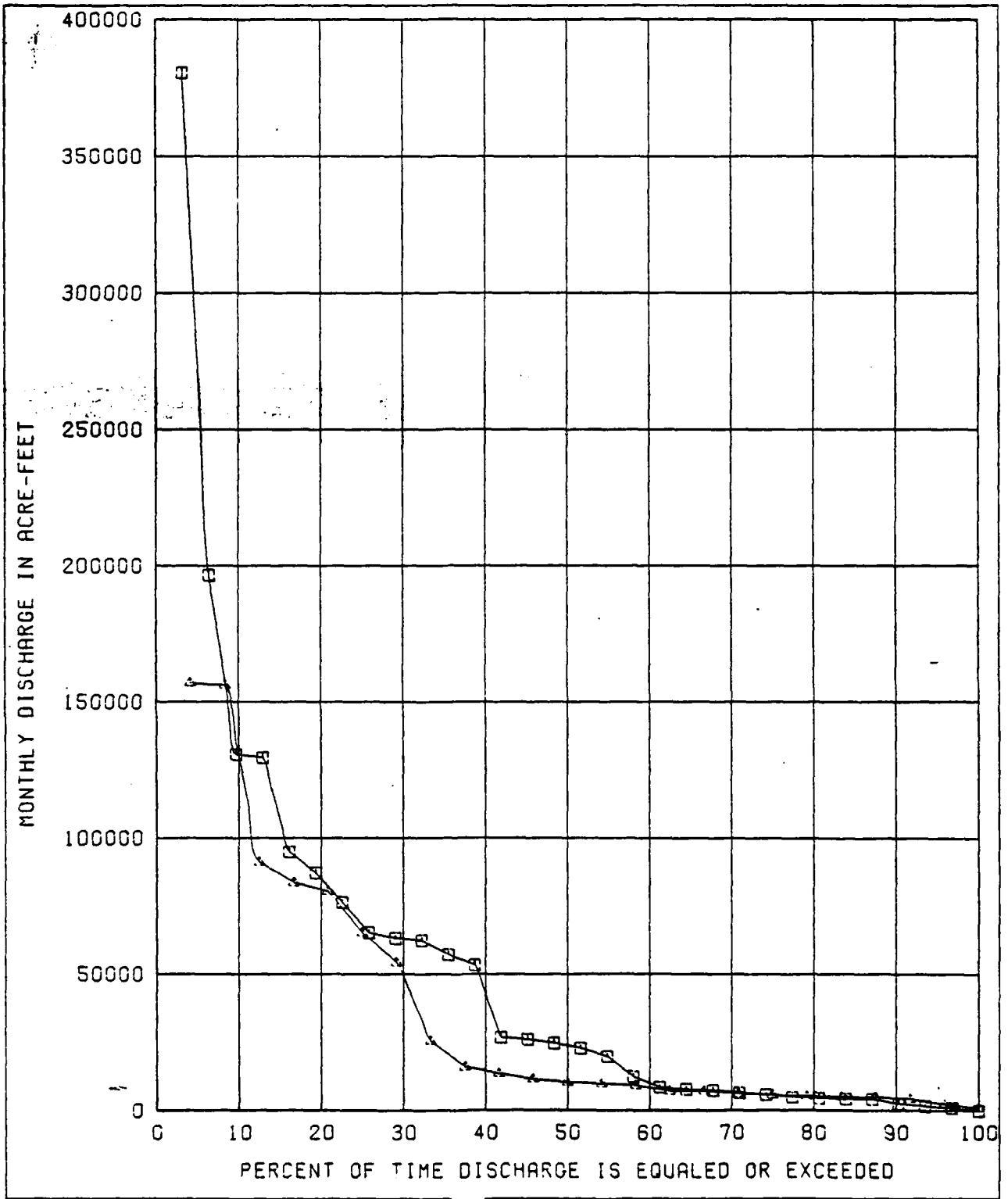
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

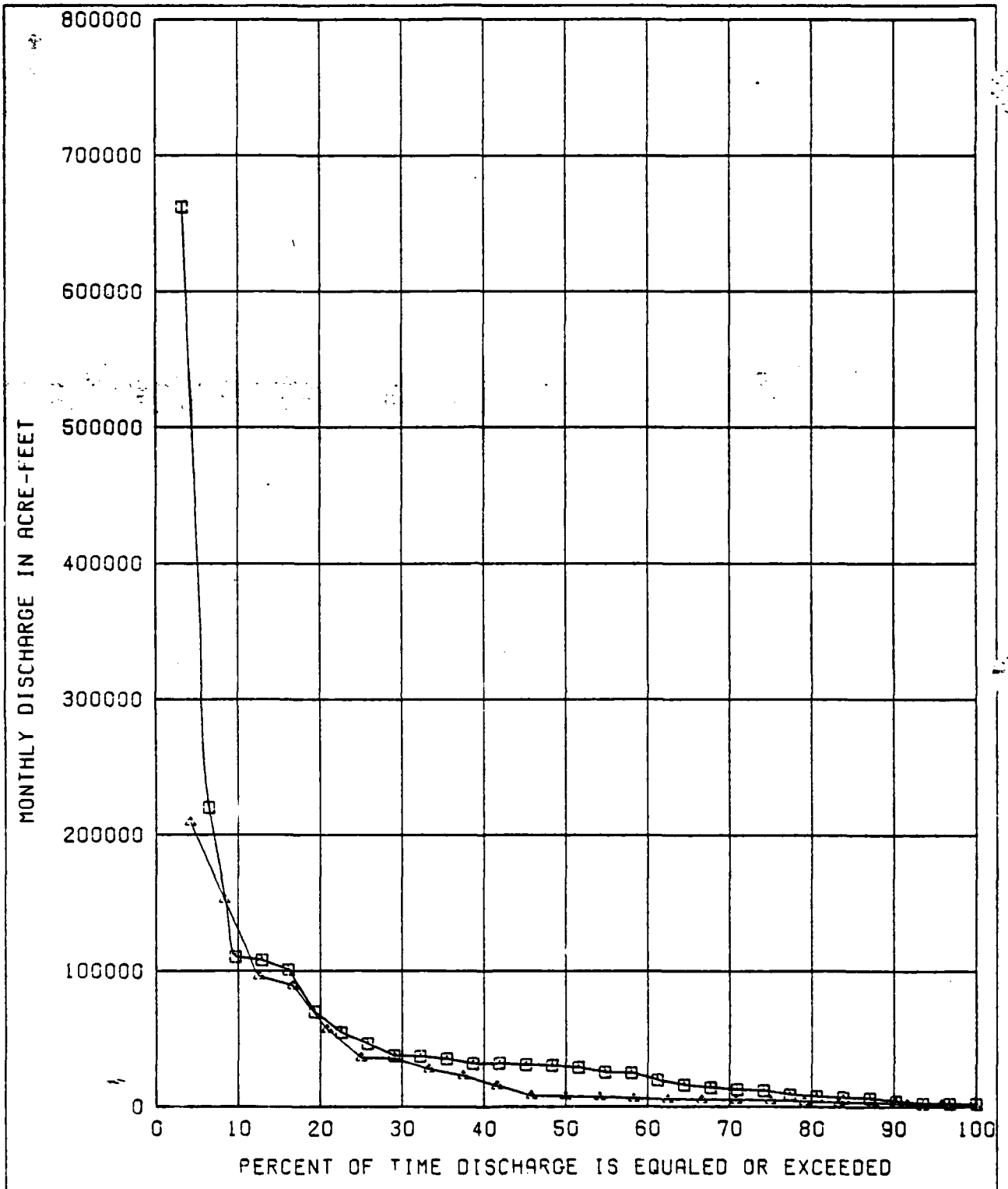
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

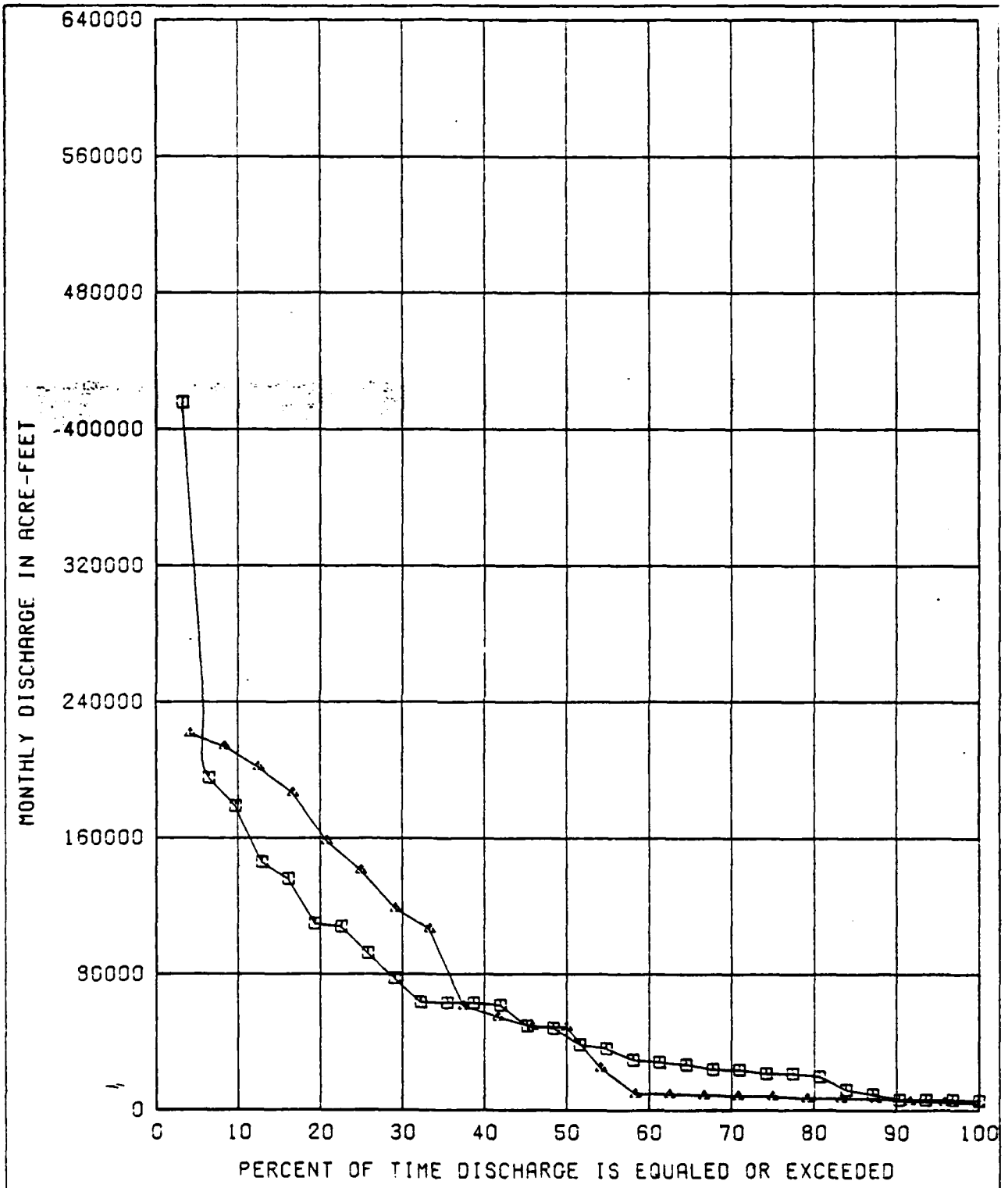
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1978)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

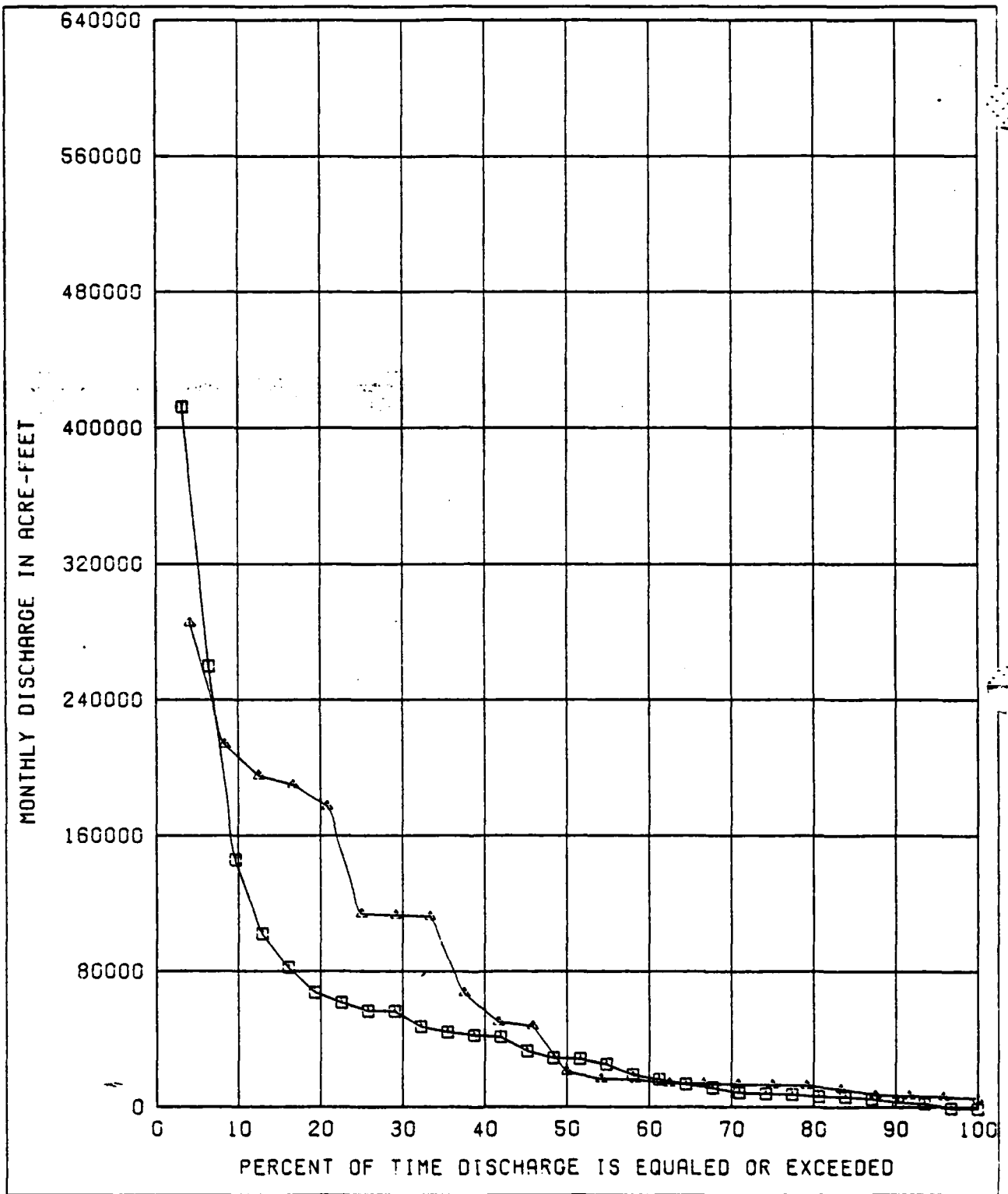
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

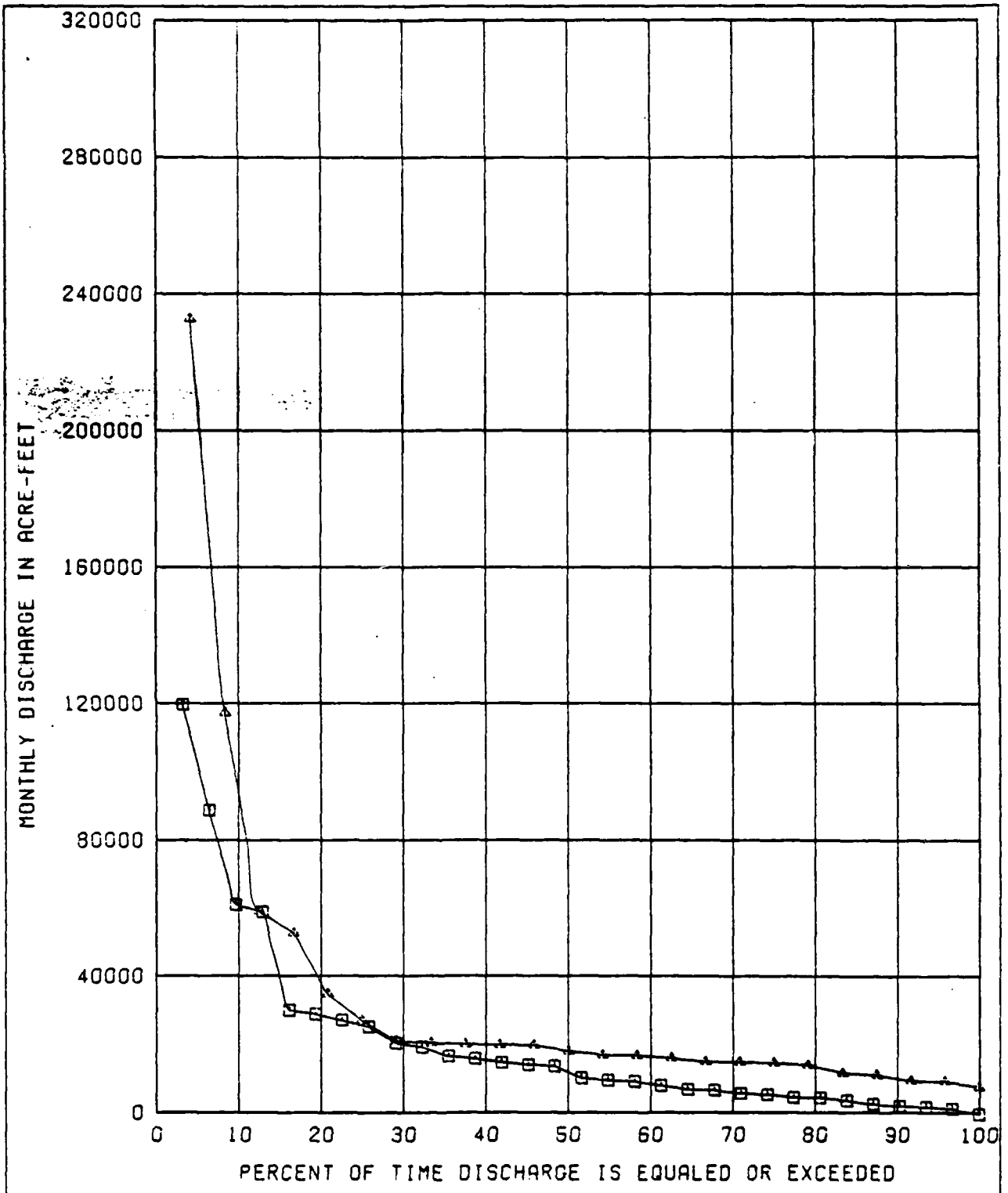
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

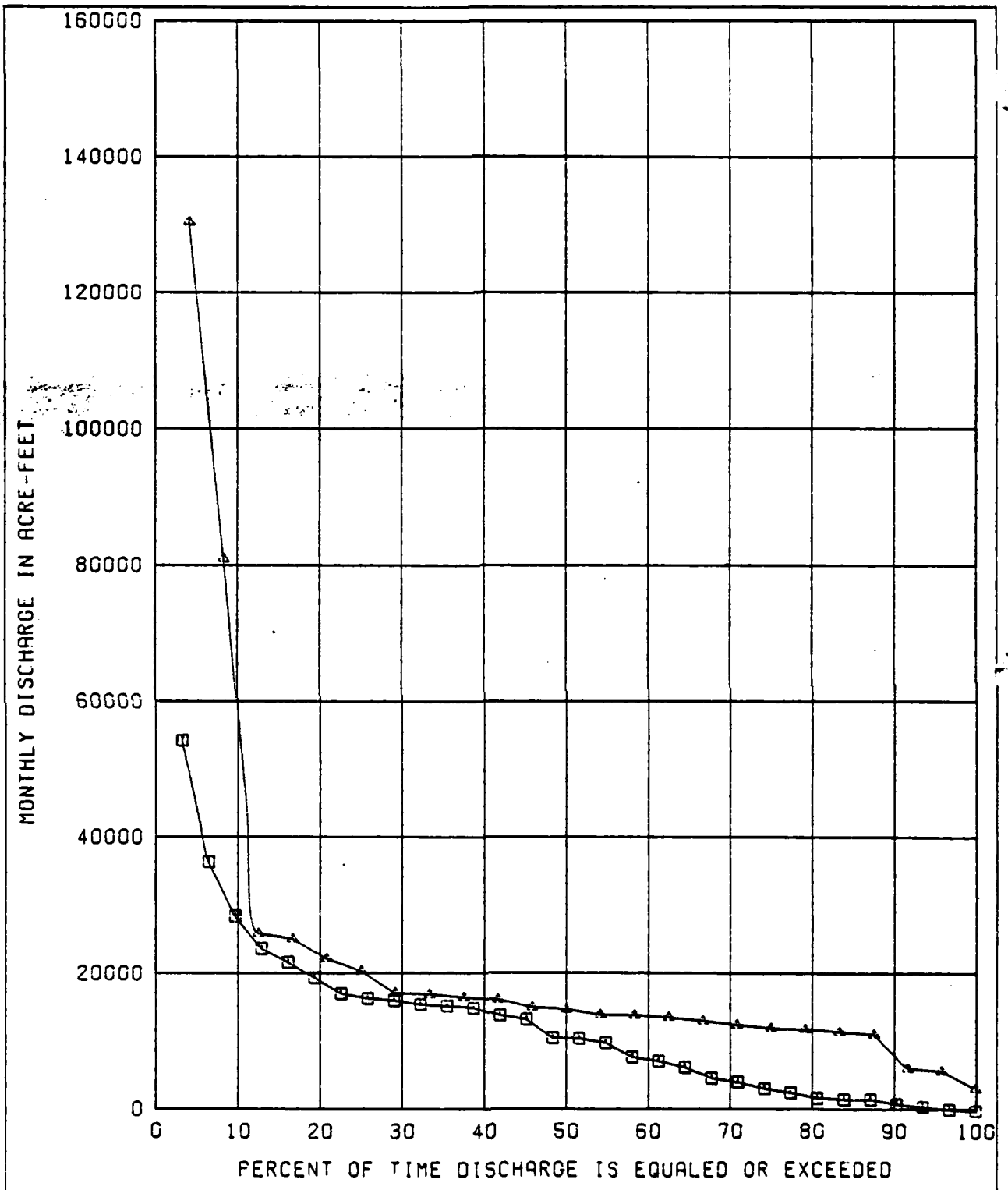
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

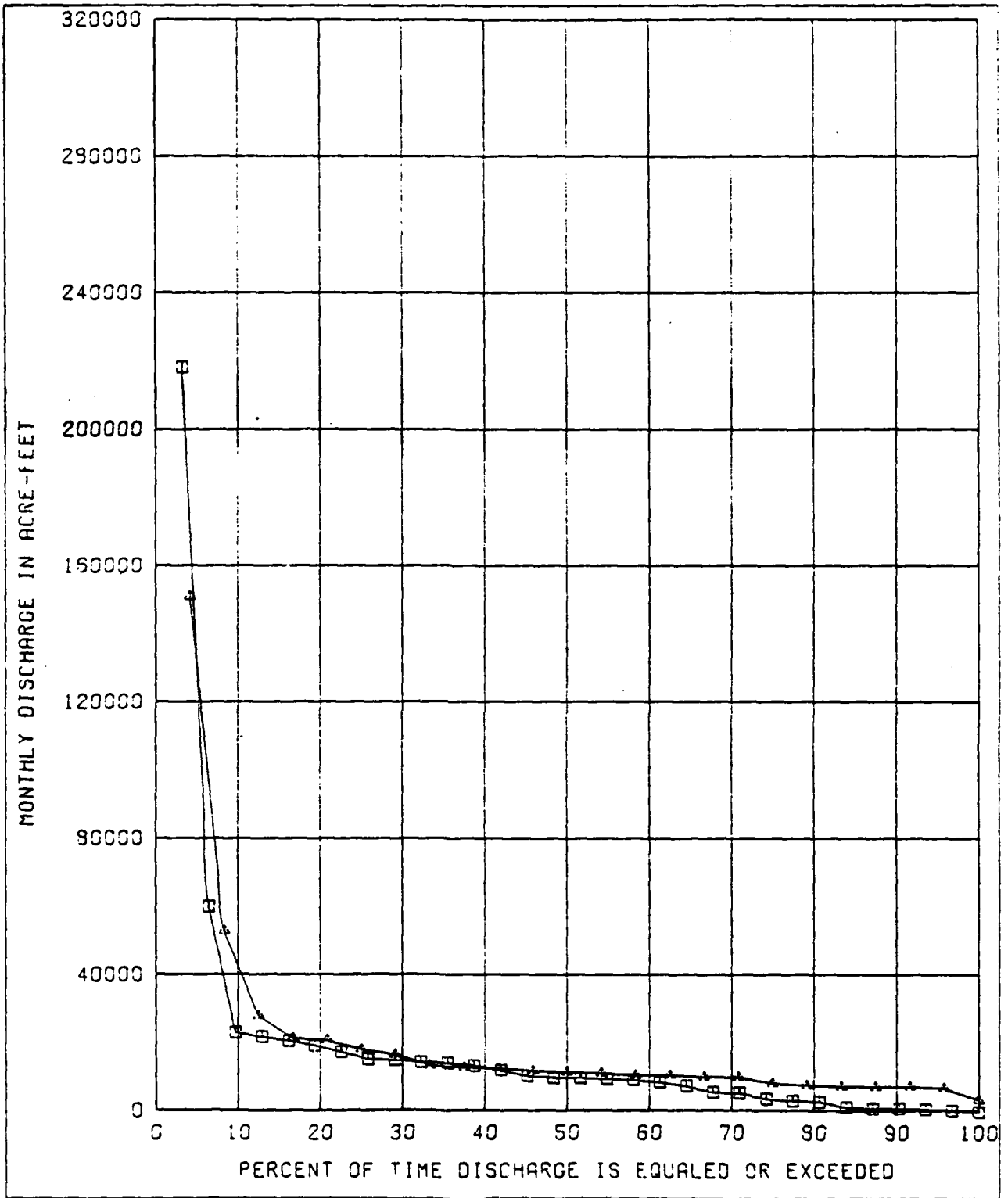
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

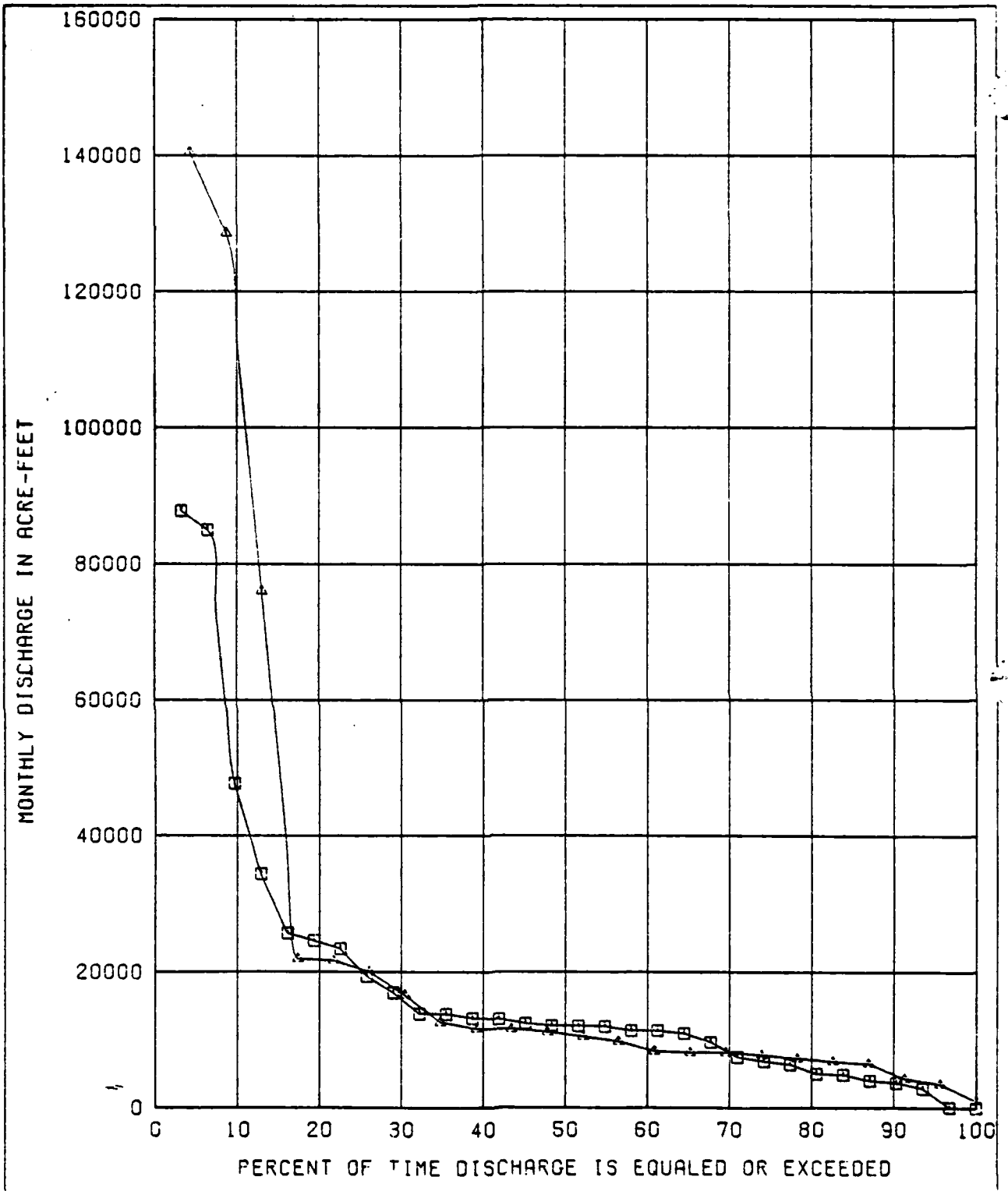
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

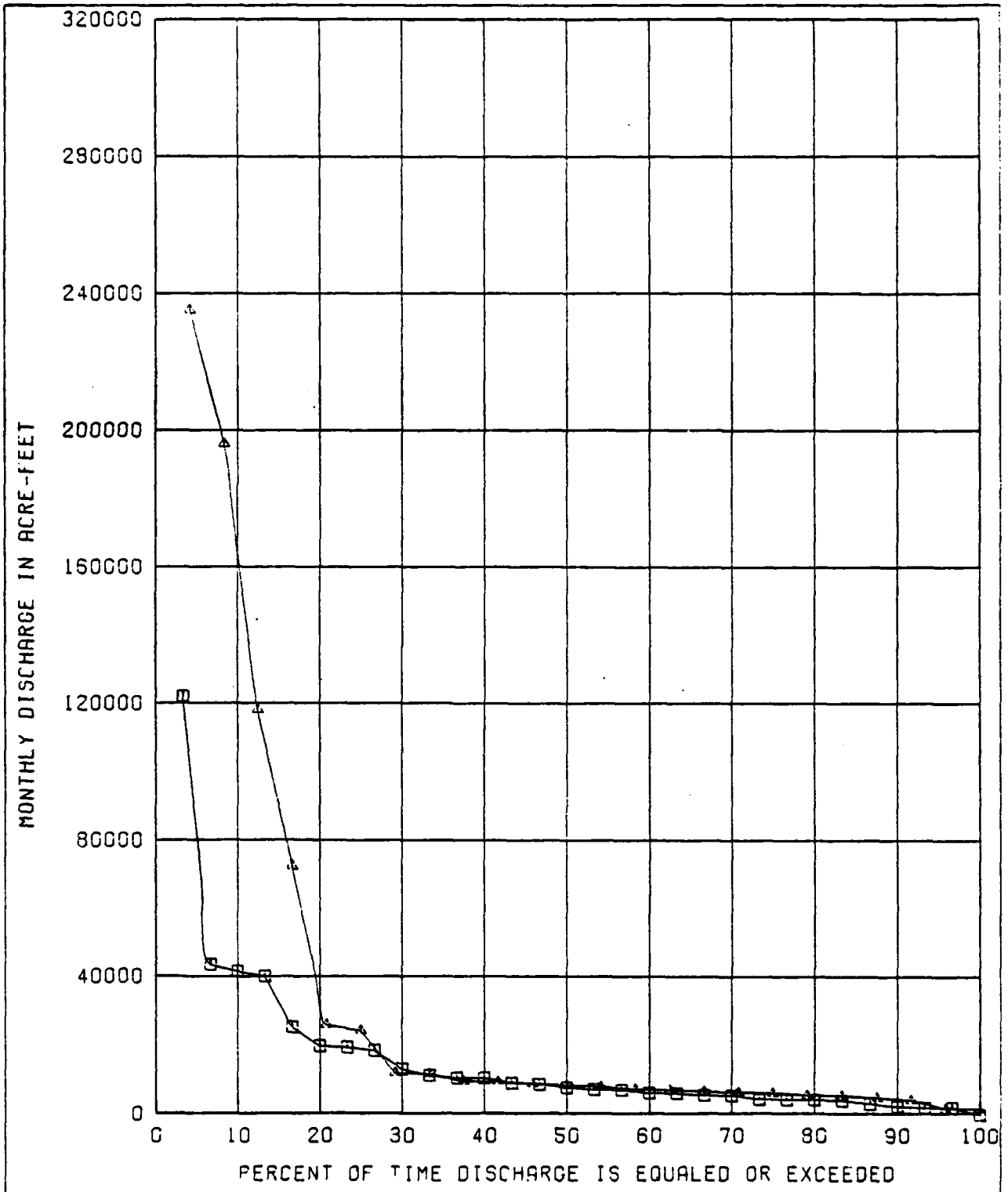
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

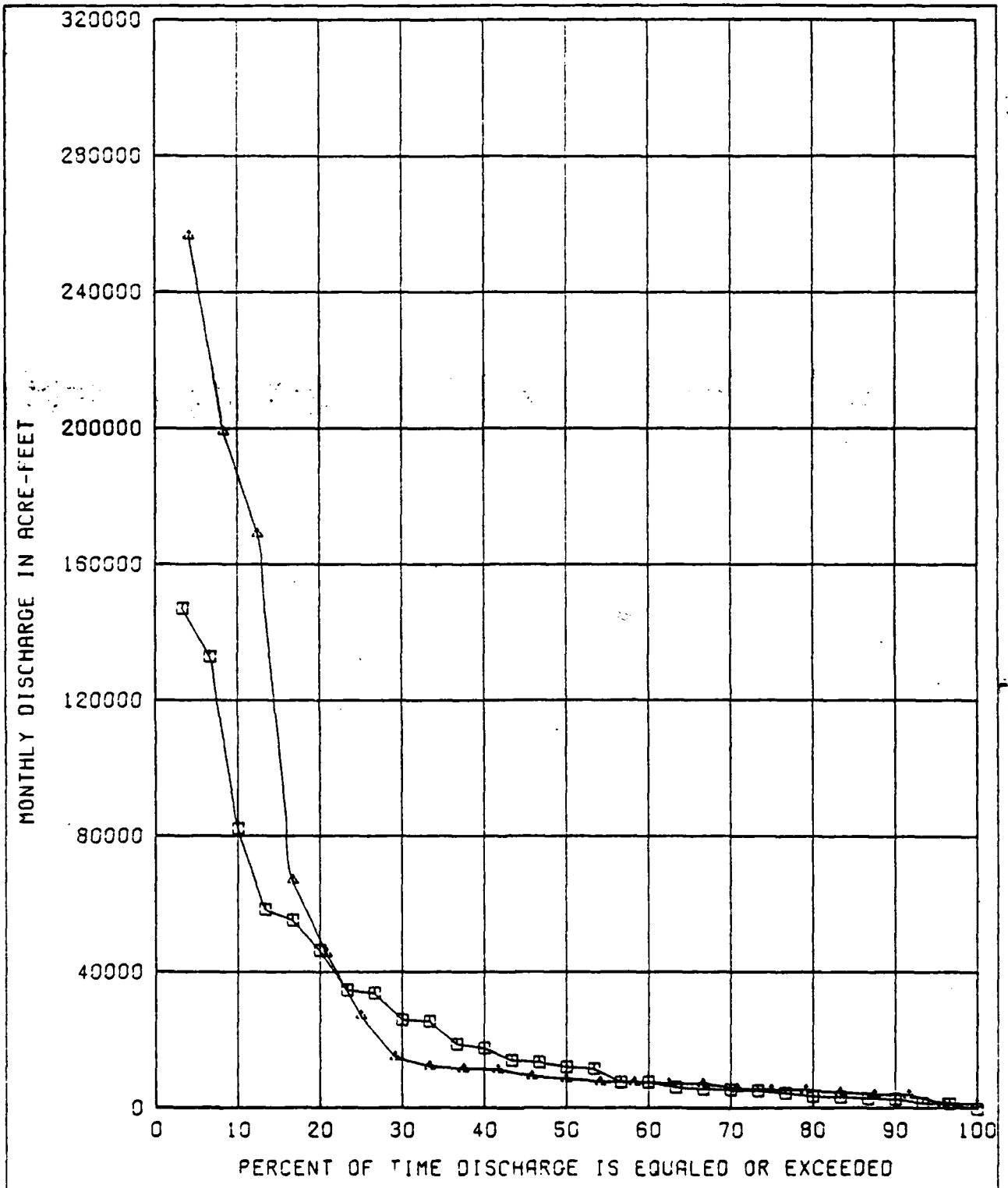
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

TRINITY RIVER BASIN, TEXAS

LEWISVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

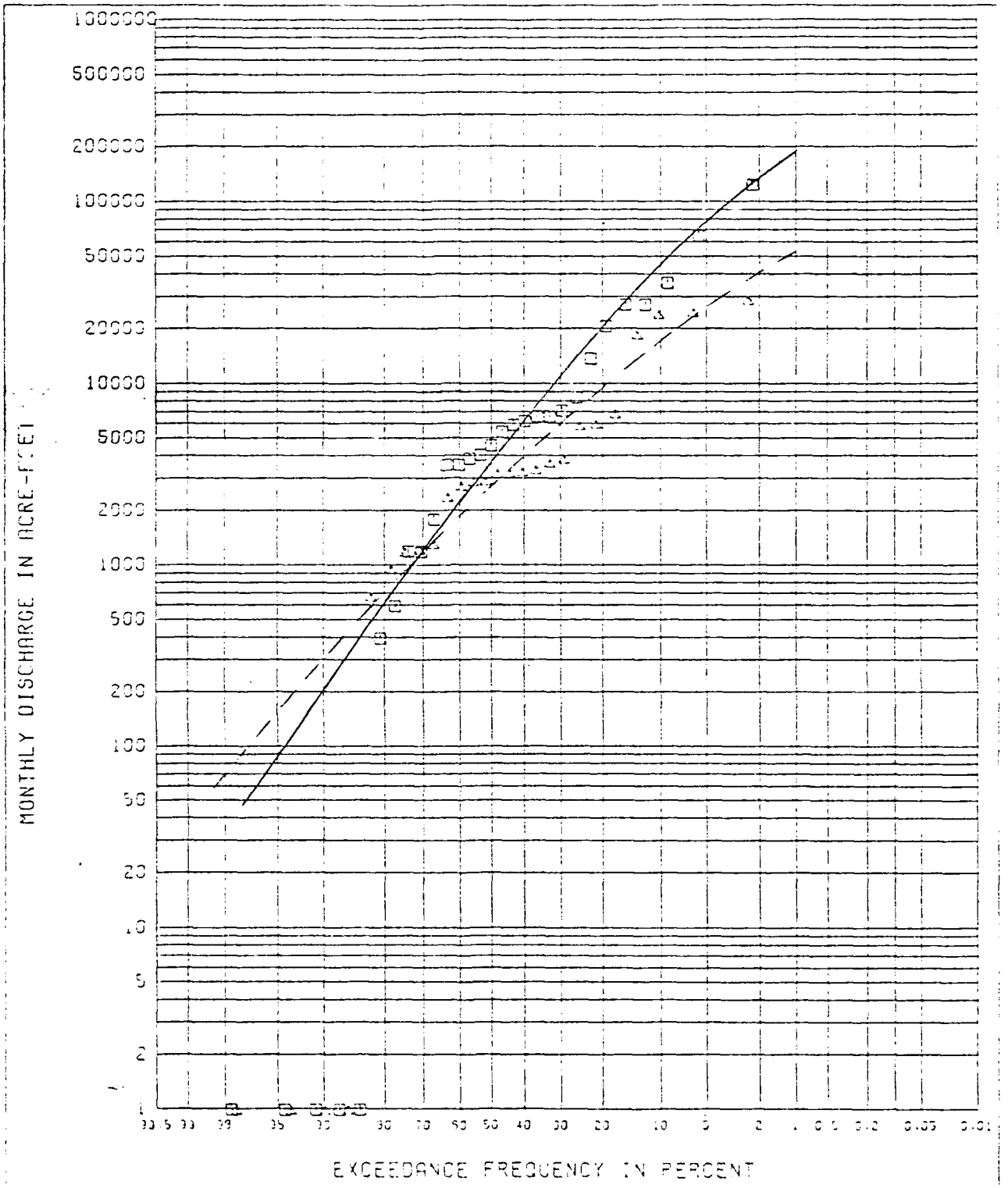
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

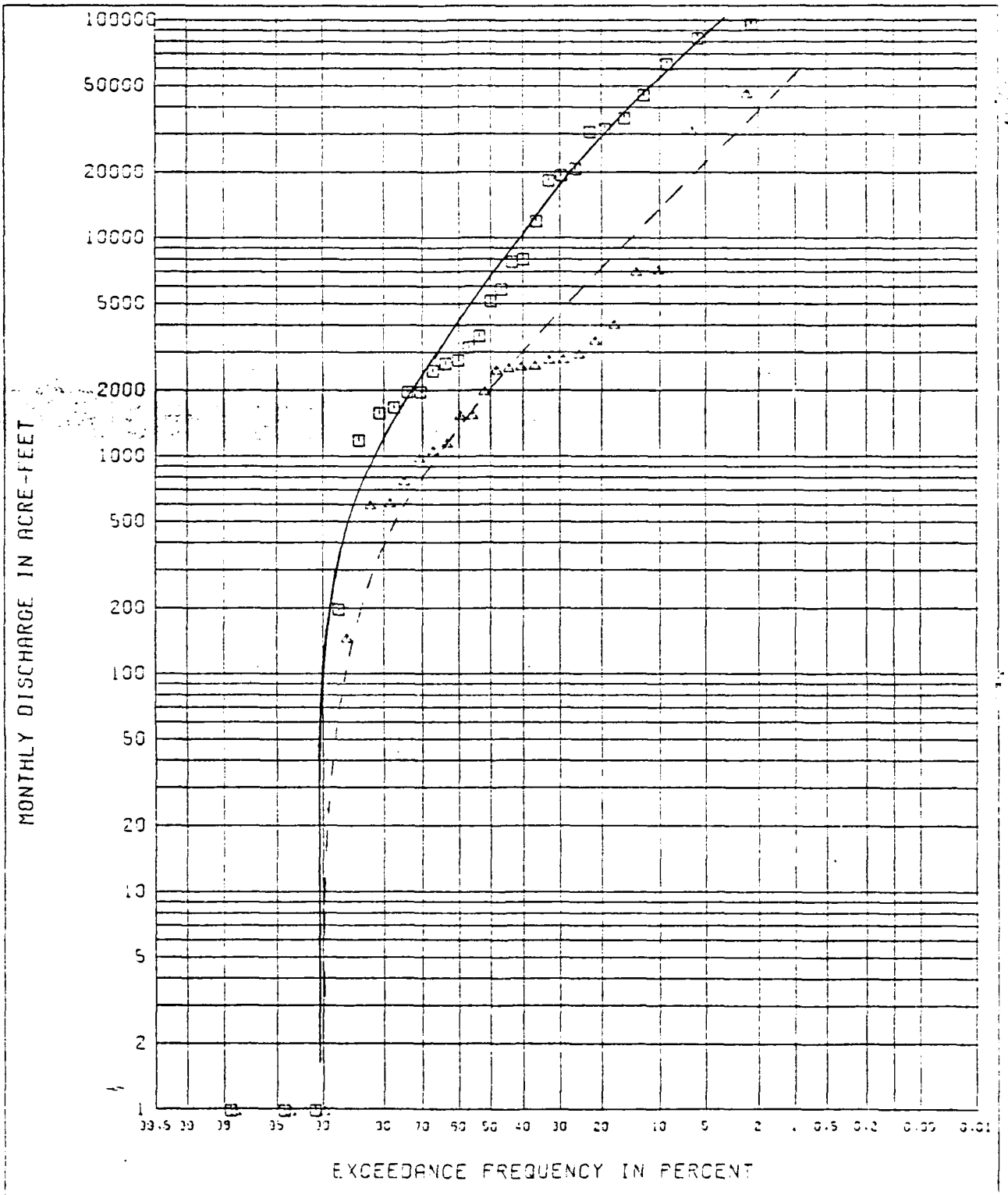
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

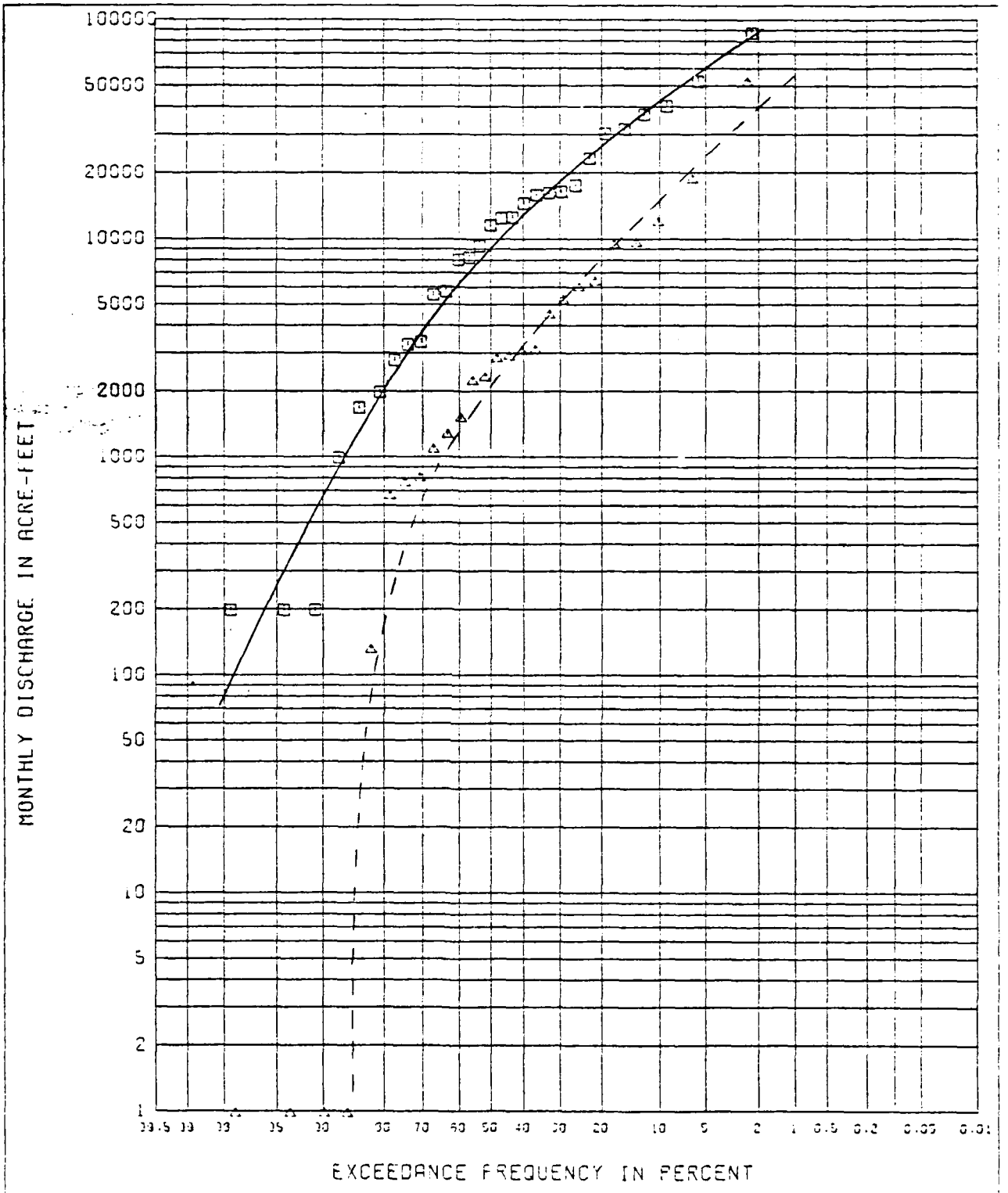
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

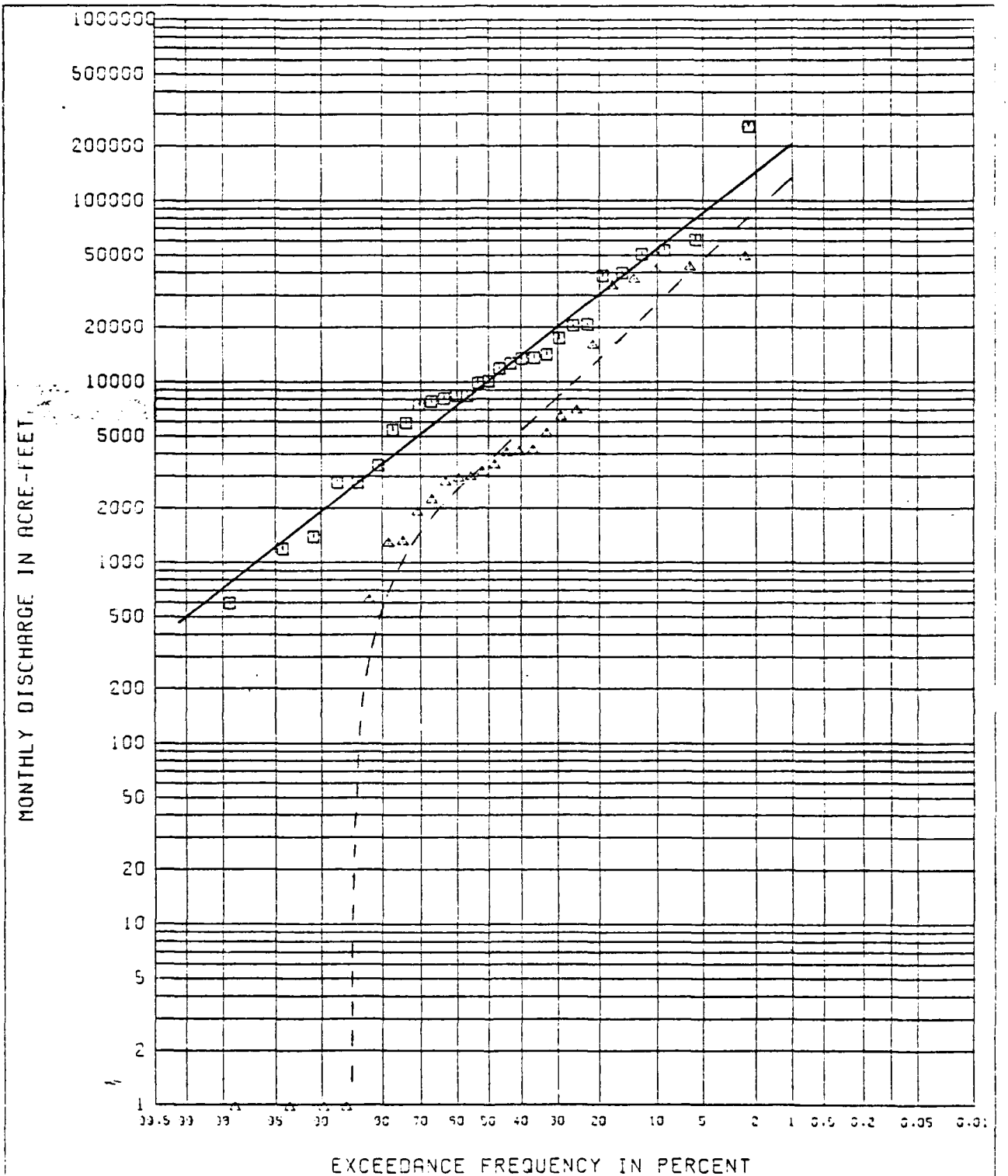
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

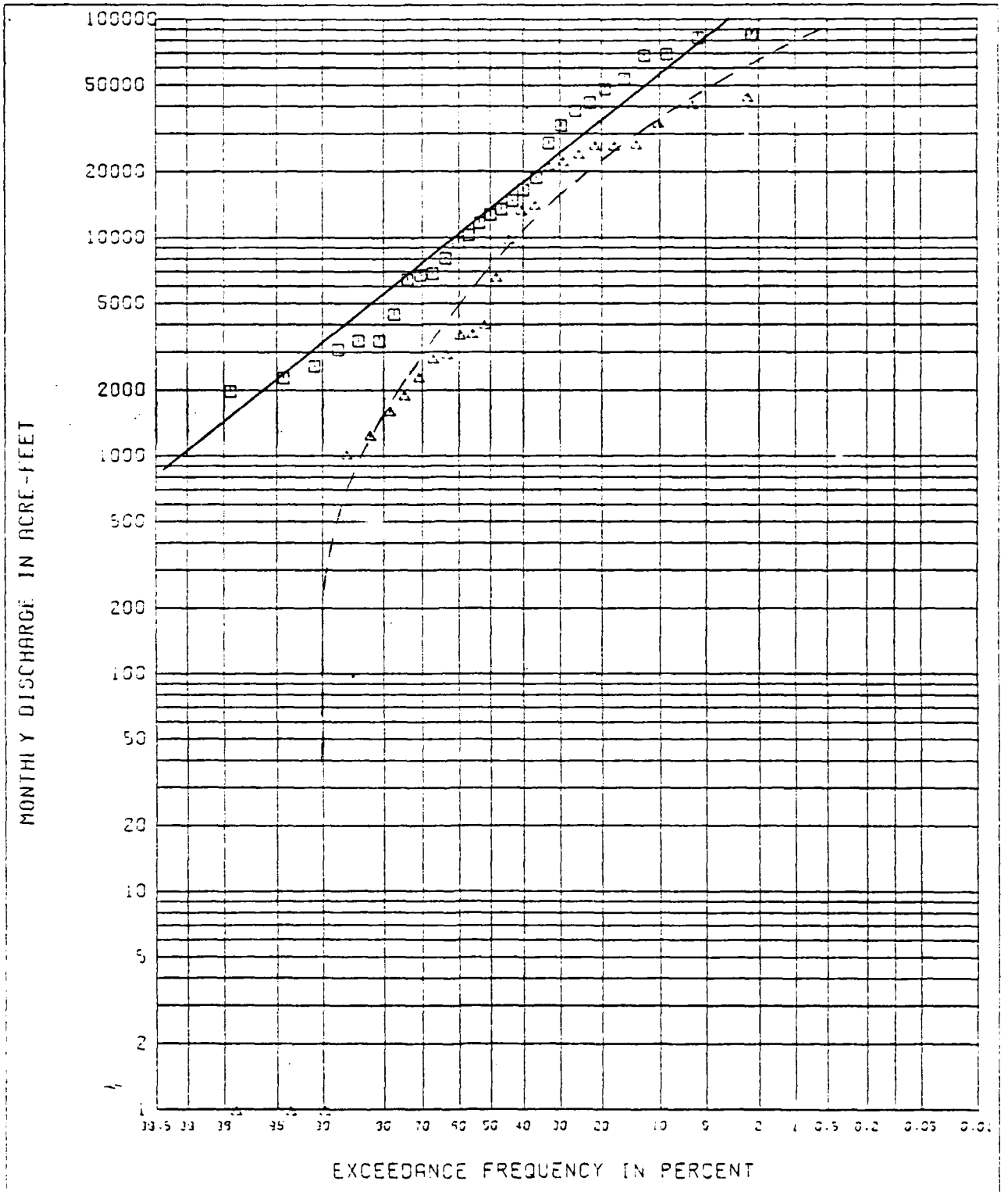
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

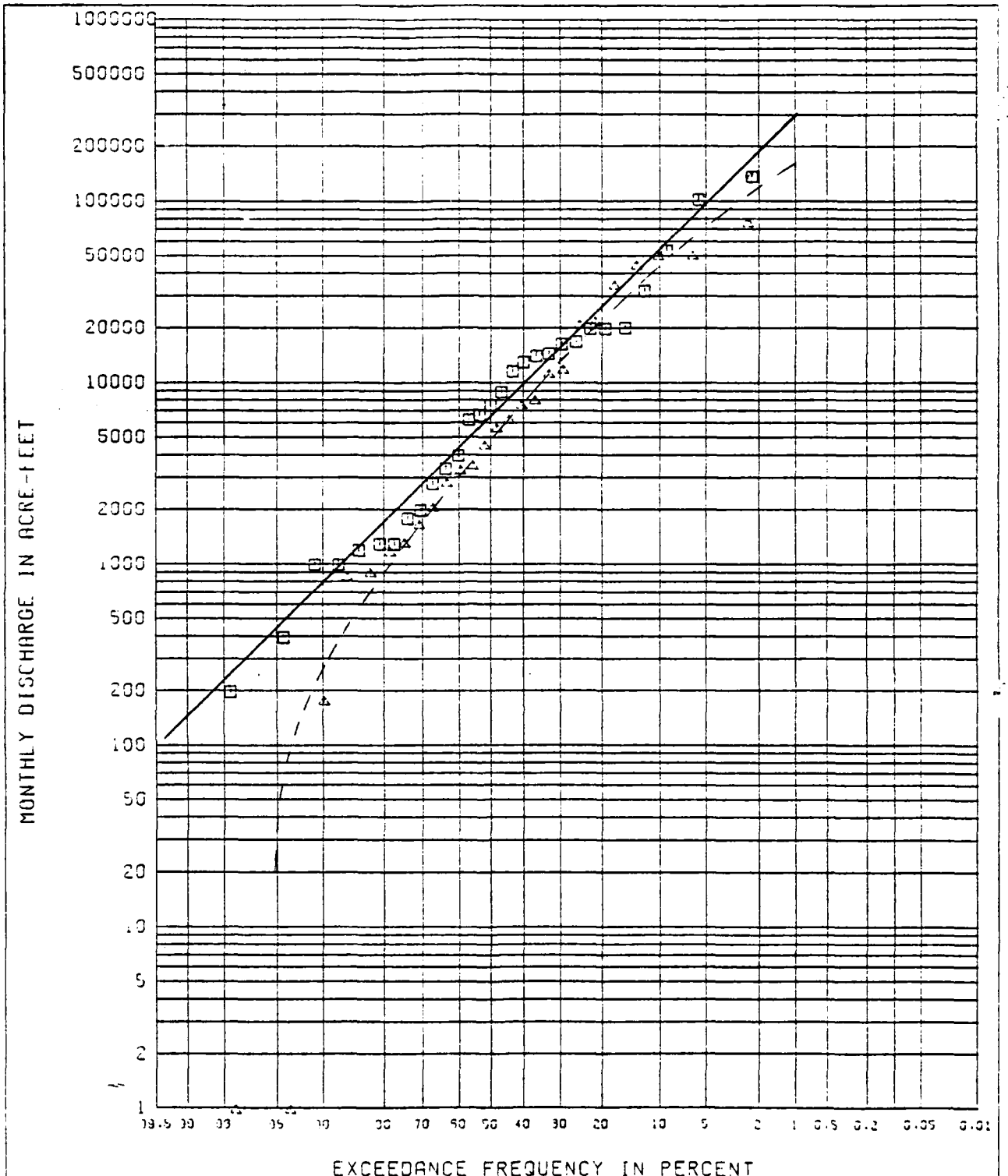
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

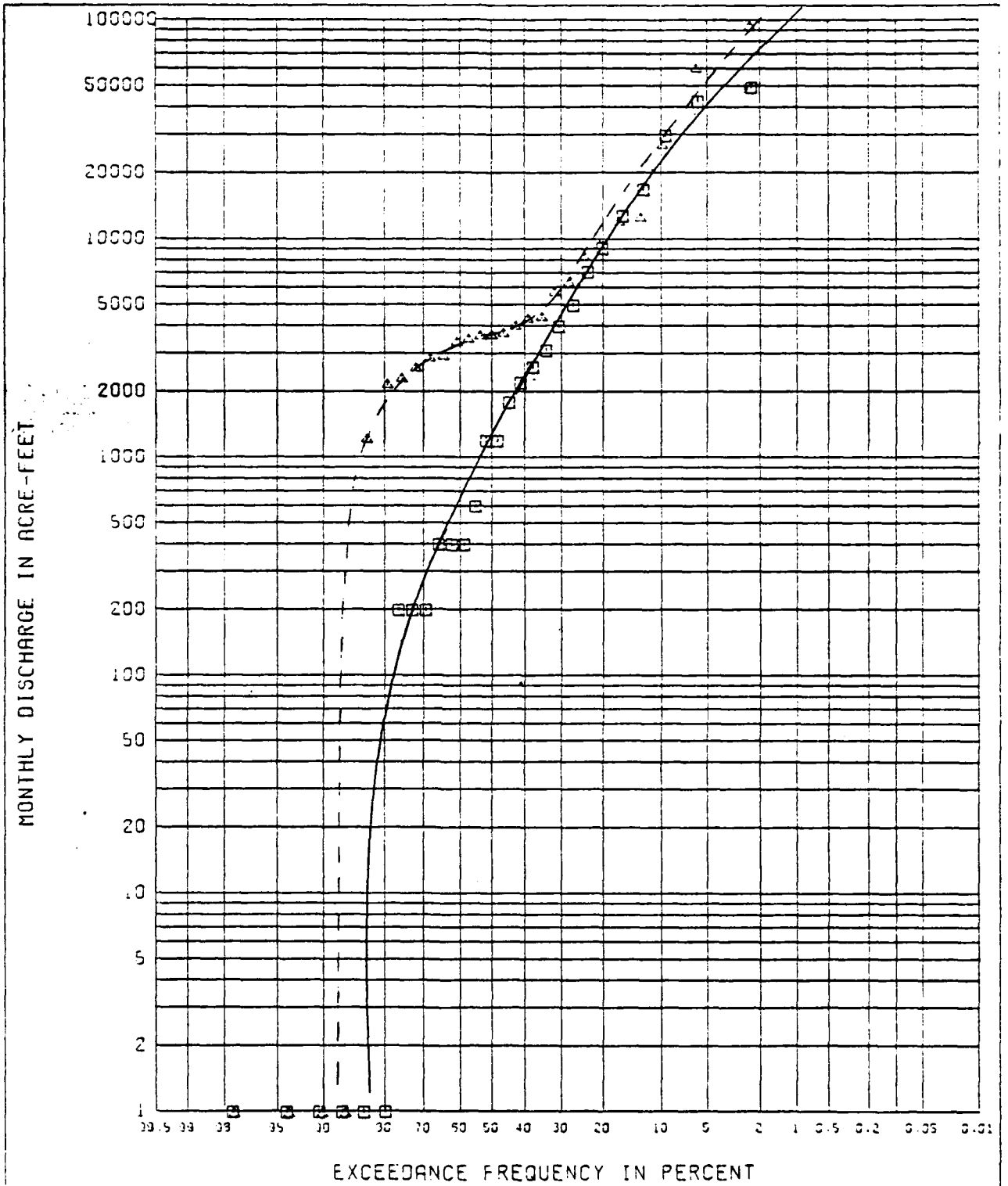
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

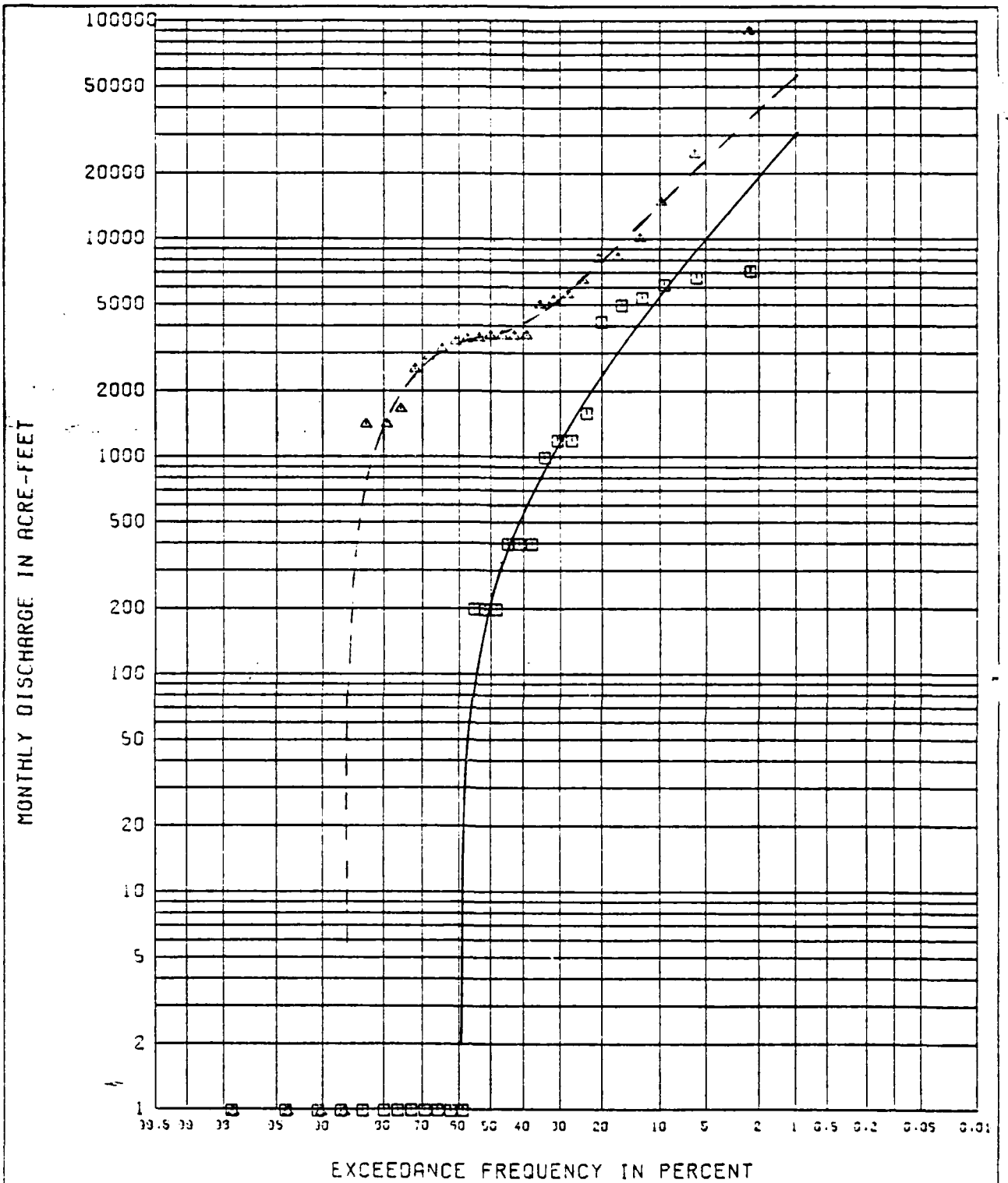
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7.

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

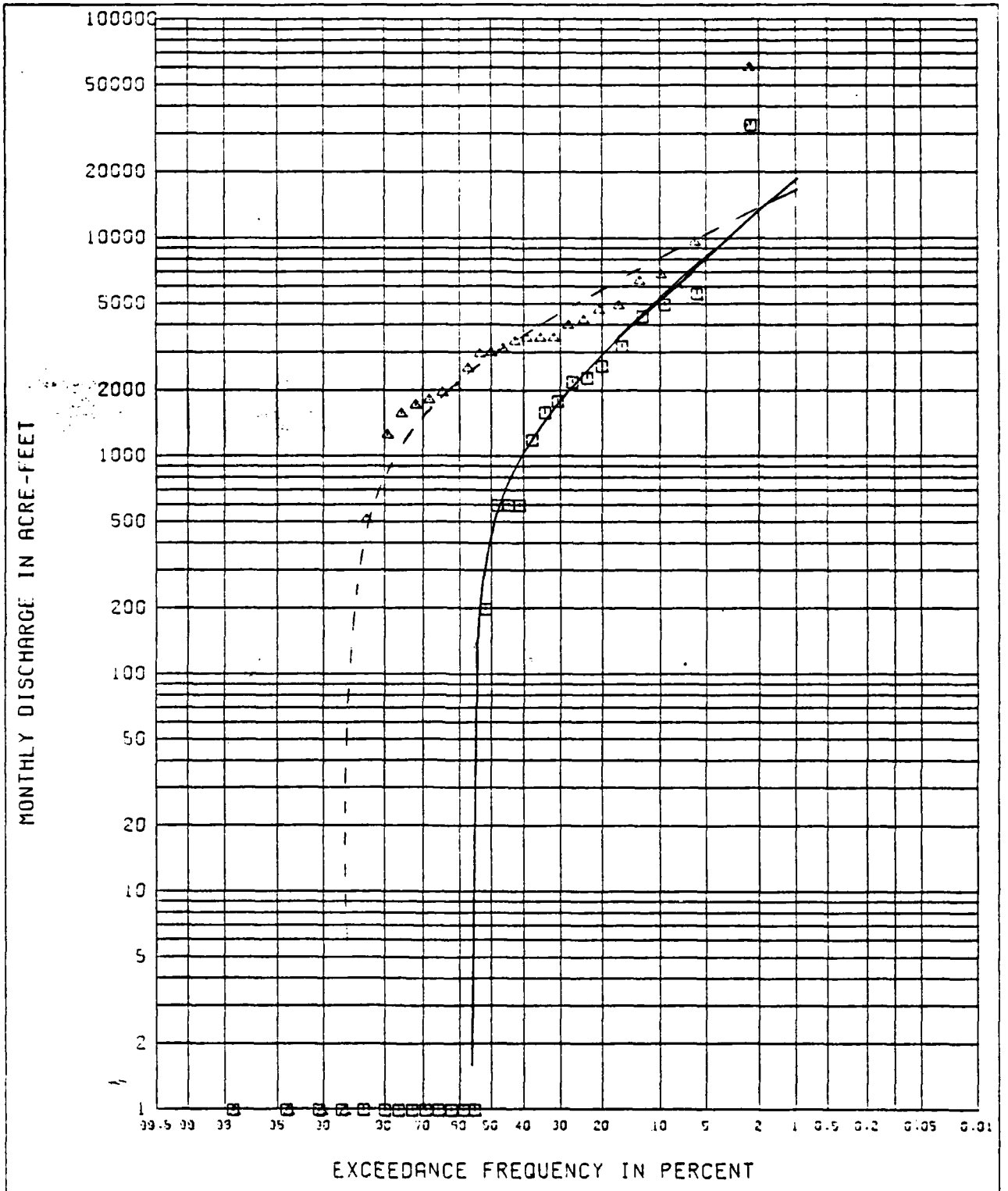
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

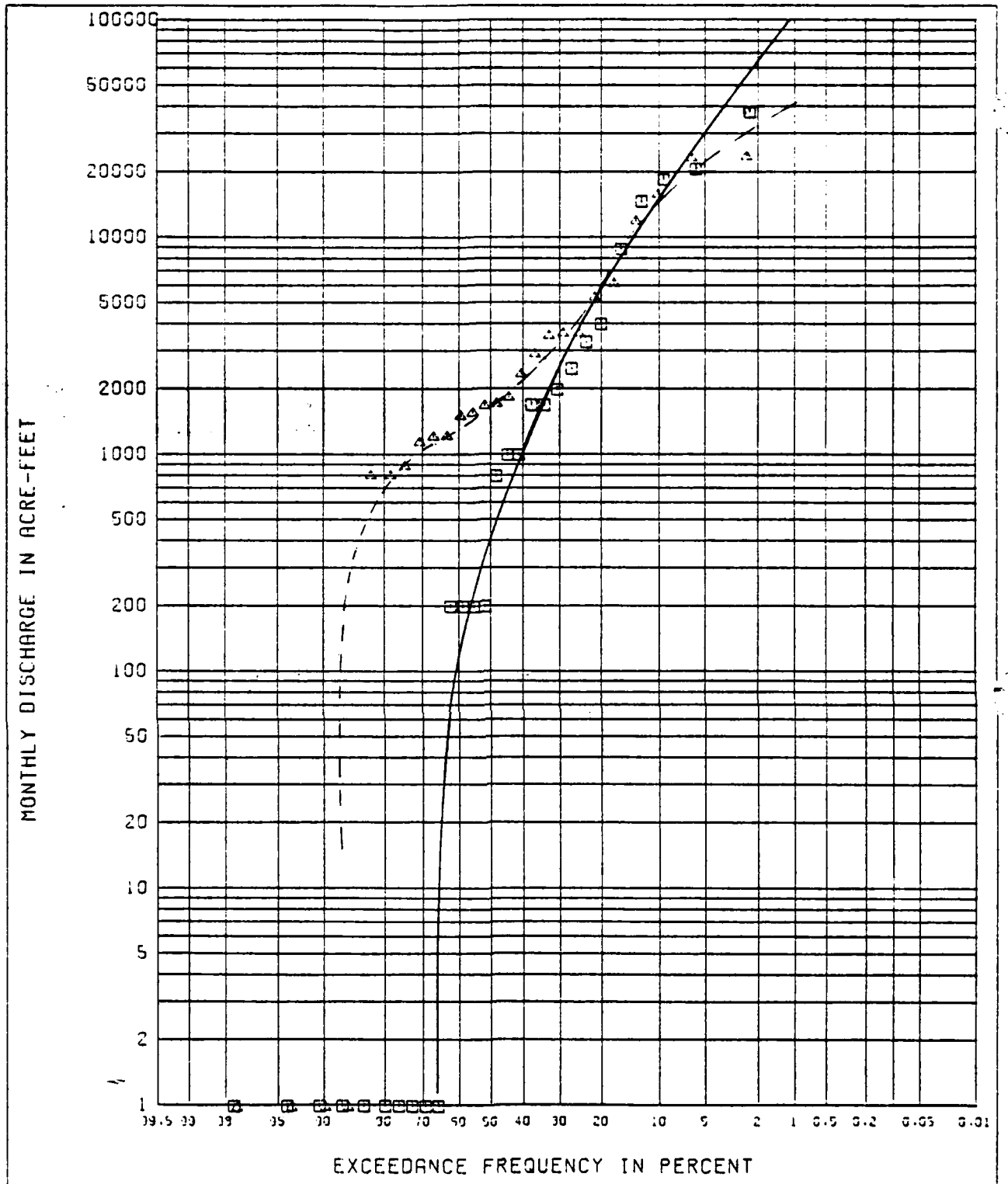
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

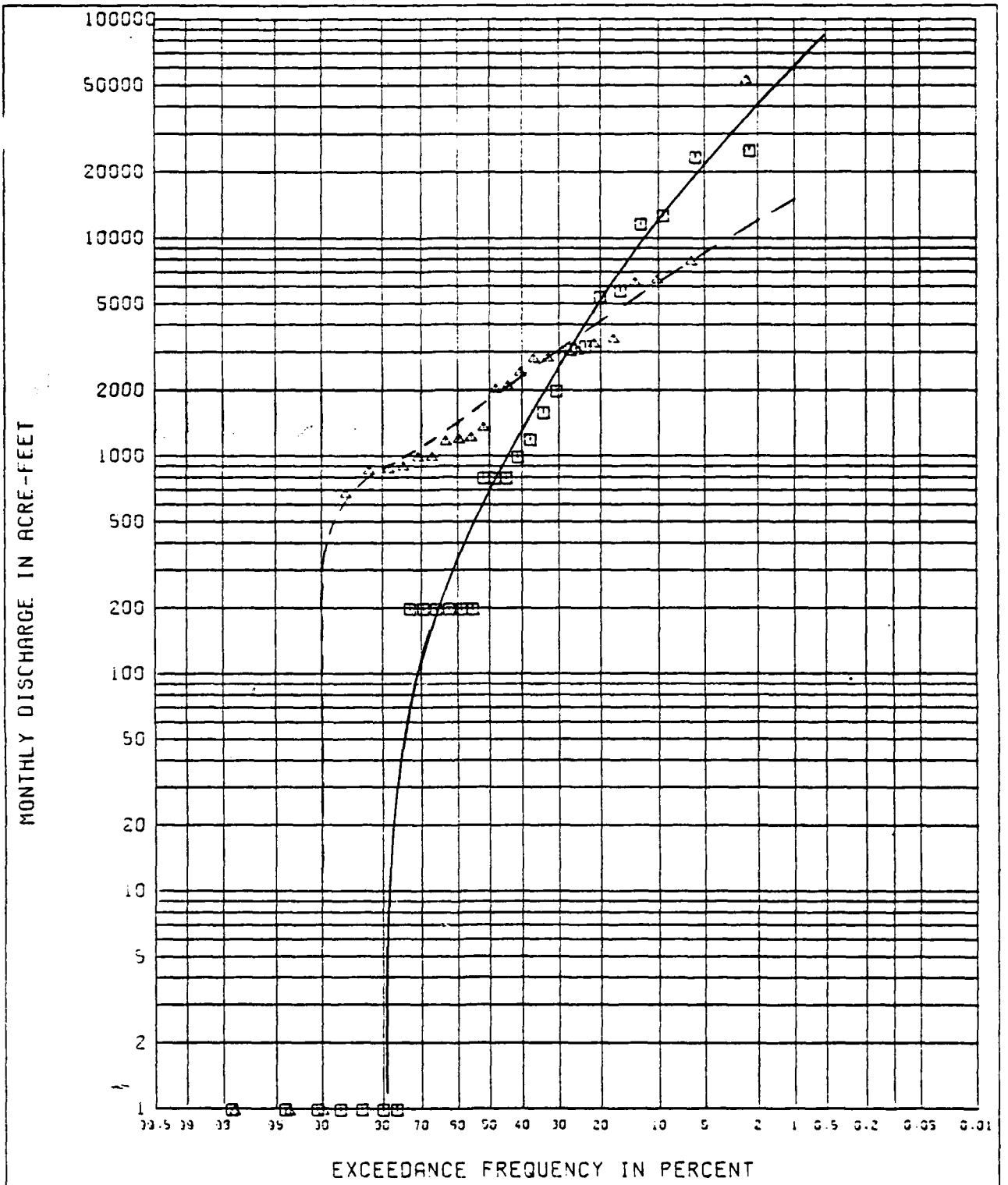
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

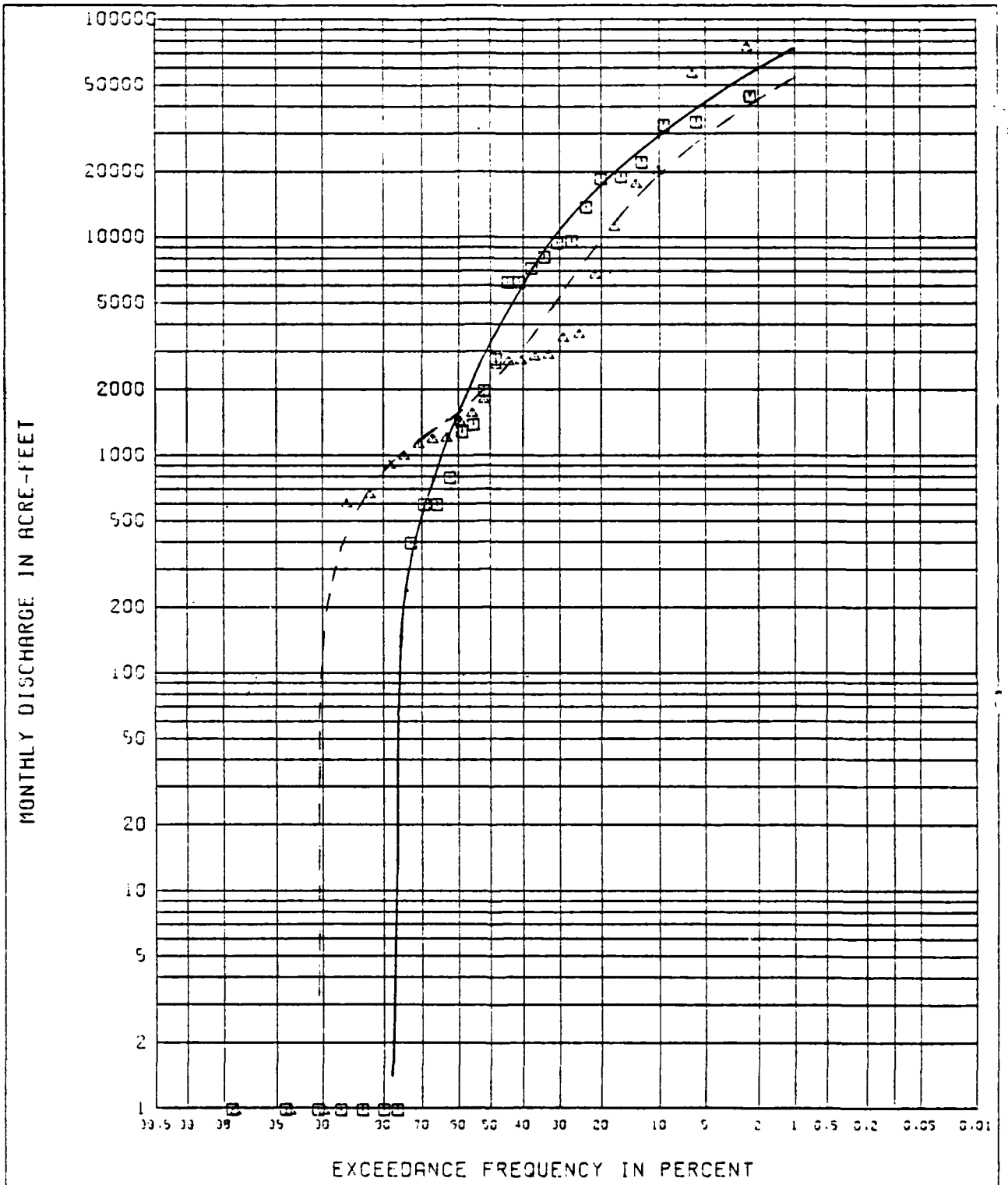
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

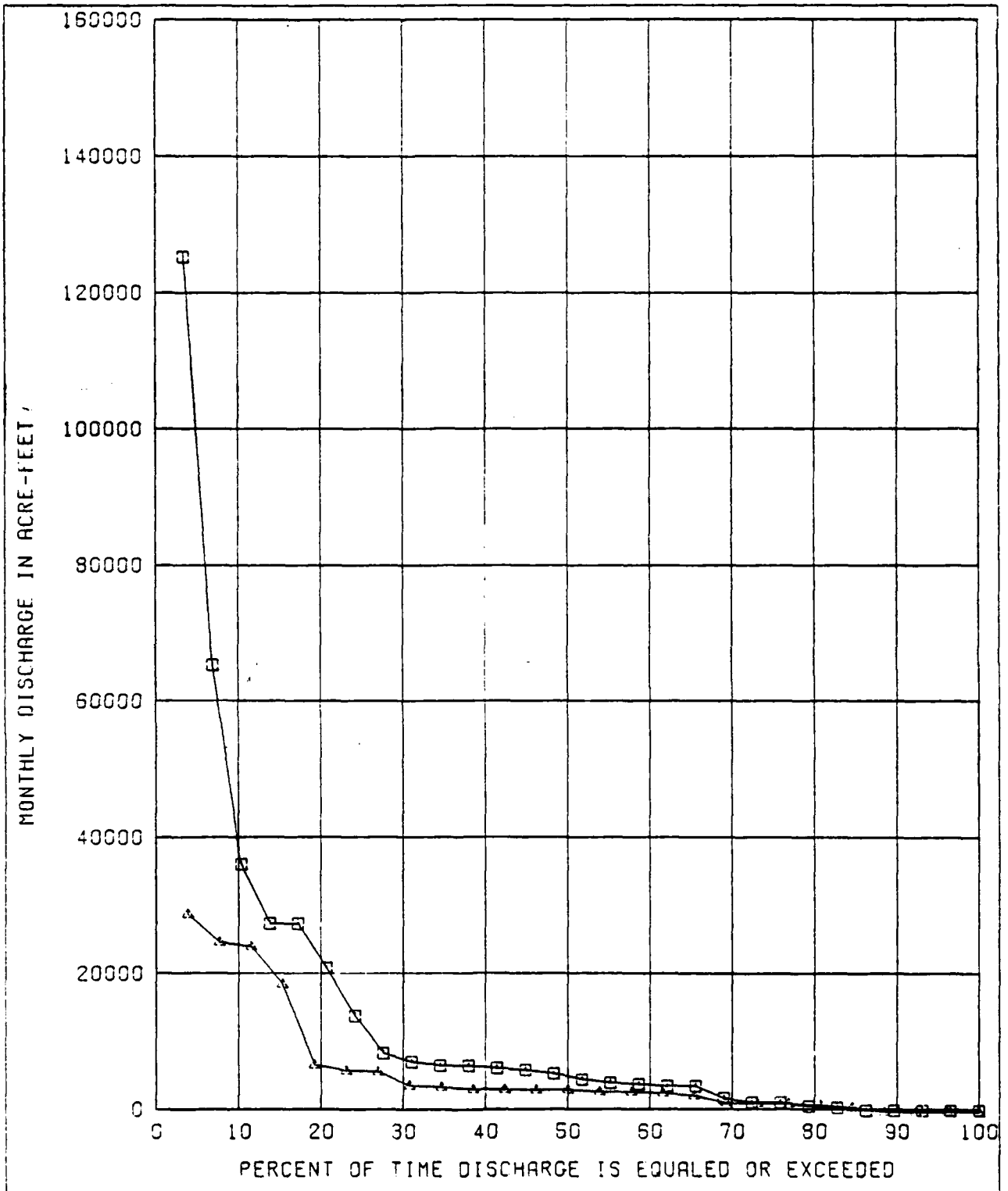
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

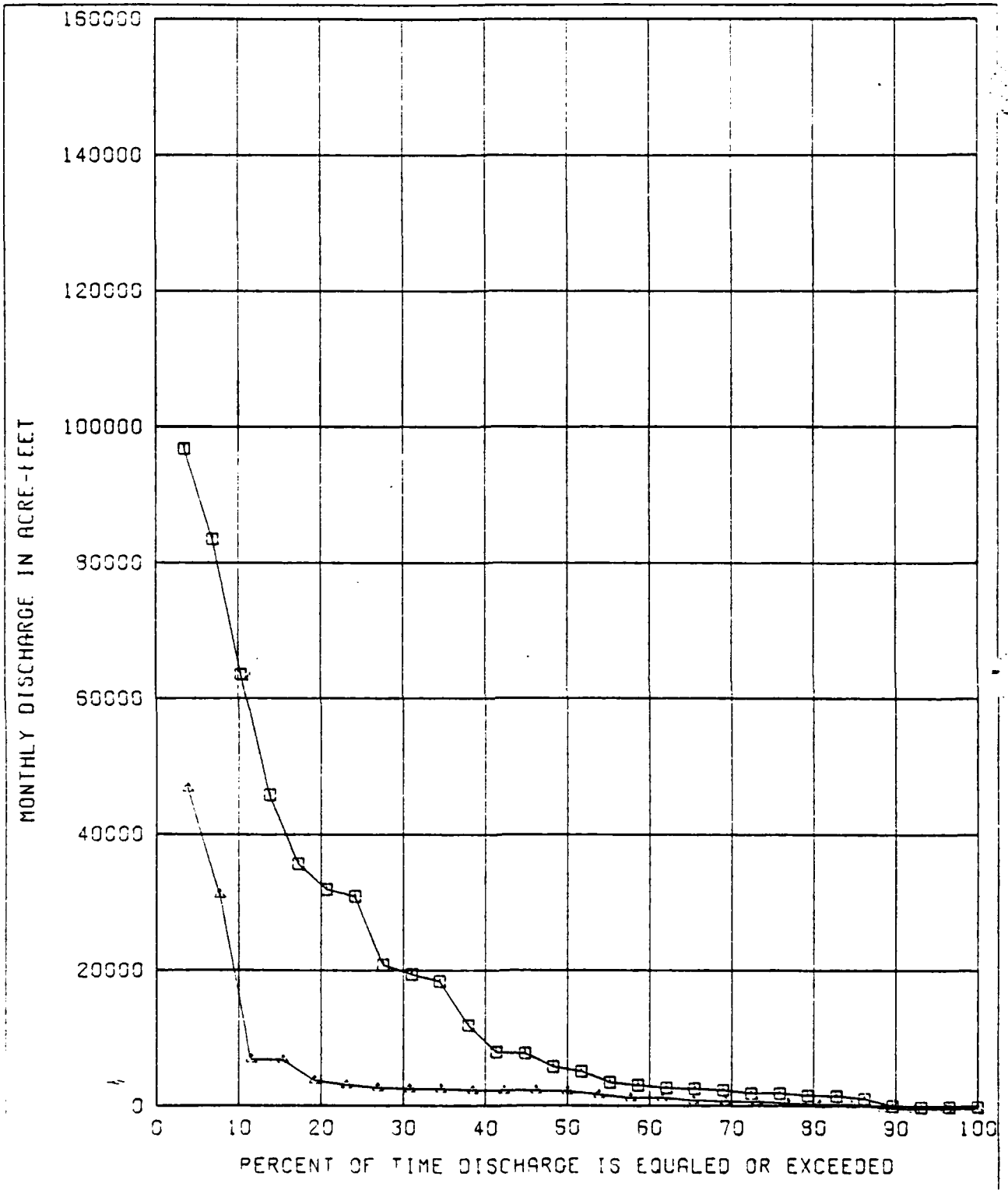
TRINITY RIVER BASIN, TEXAS
GRAPEVINE RESERVOIR

FLOW DURATION CURVES AT DAM SITE
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

CRAPEVINE RESERVOIR

FLOW DURATION CURVES AT DAM SITE

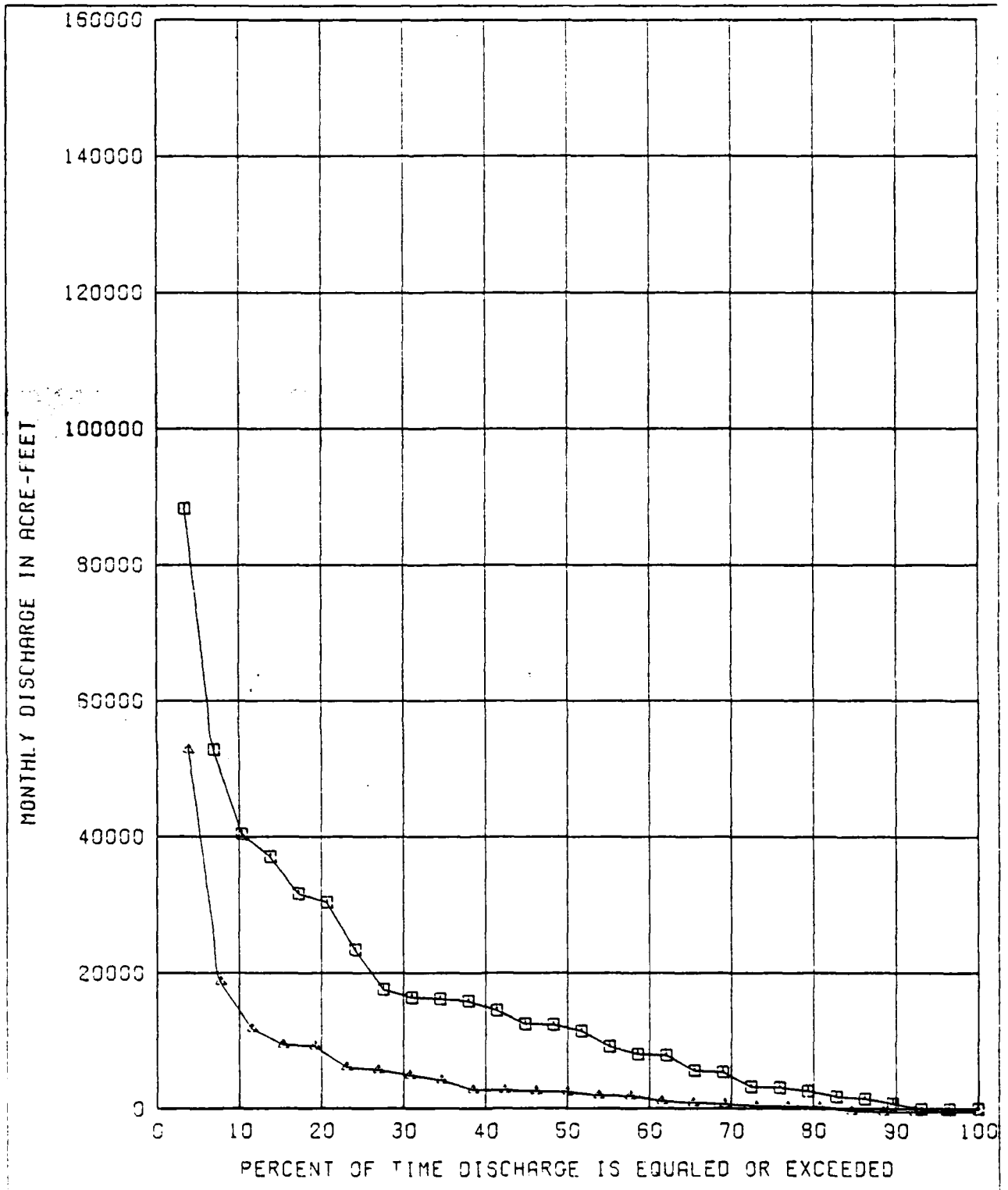
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

CRAPEVINE RESERVOIR

FLOW DURATION CURVES AT DAM SITE

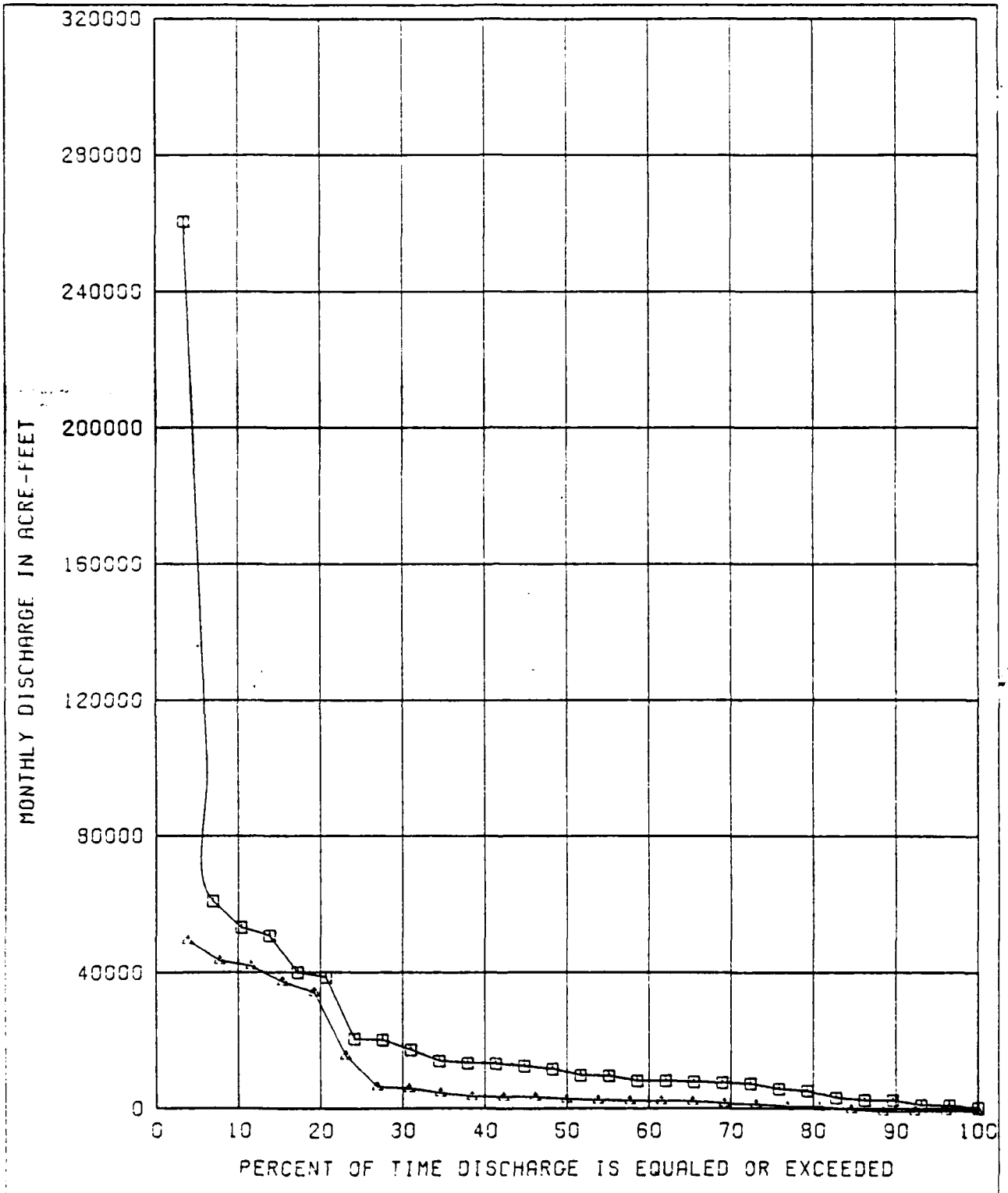
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

FLOW DURATION CURVES AT DAM SITE

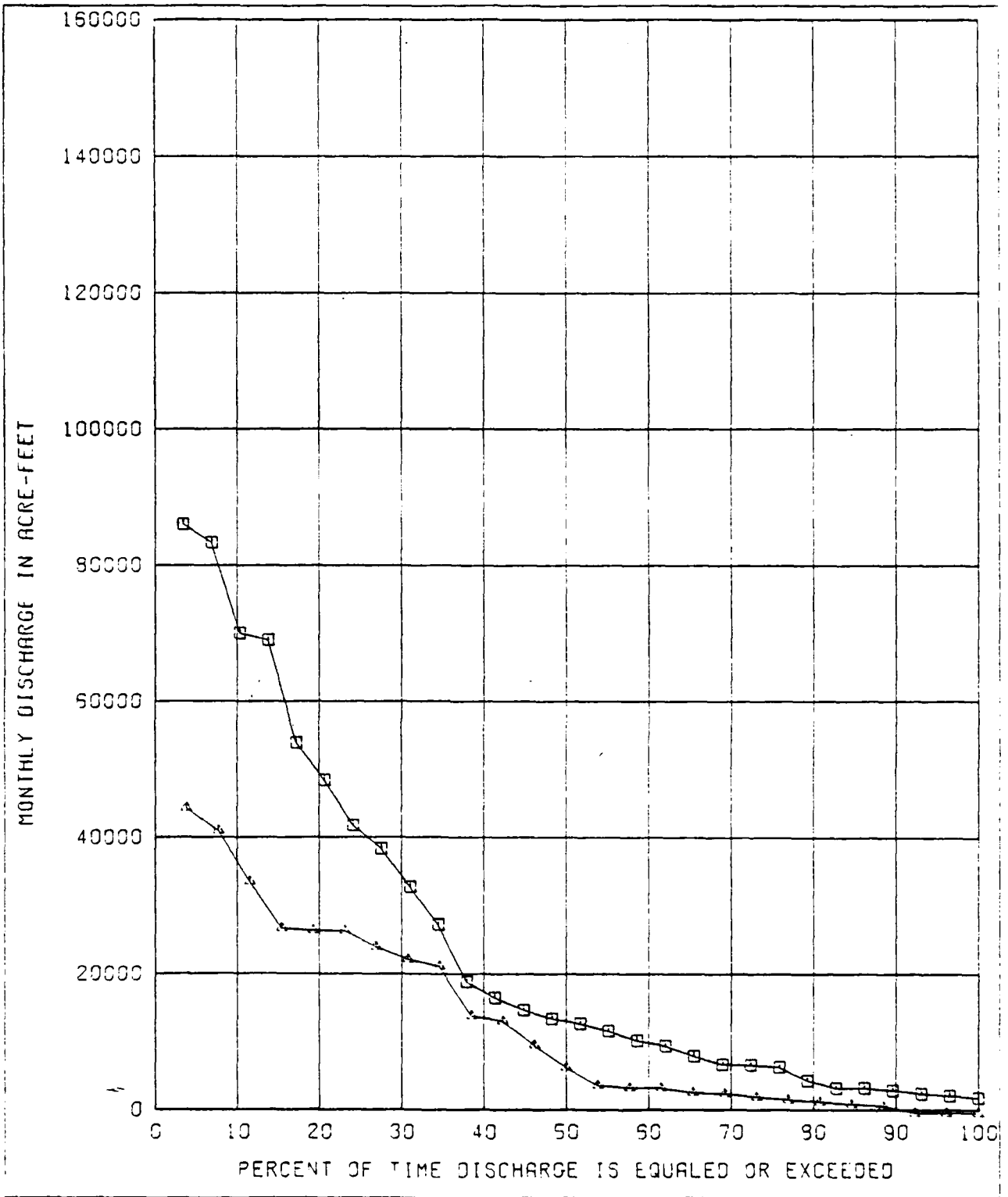
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

FLOW DURATION CURVES AT DAM SITE

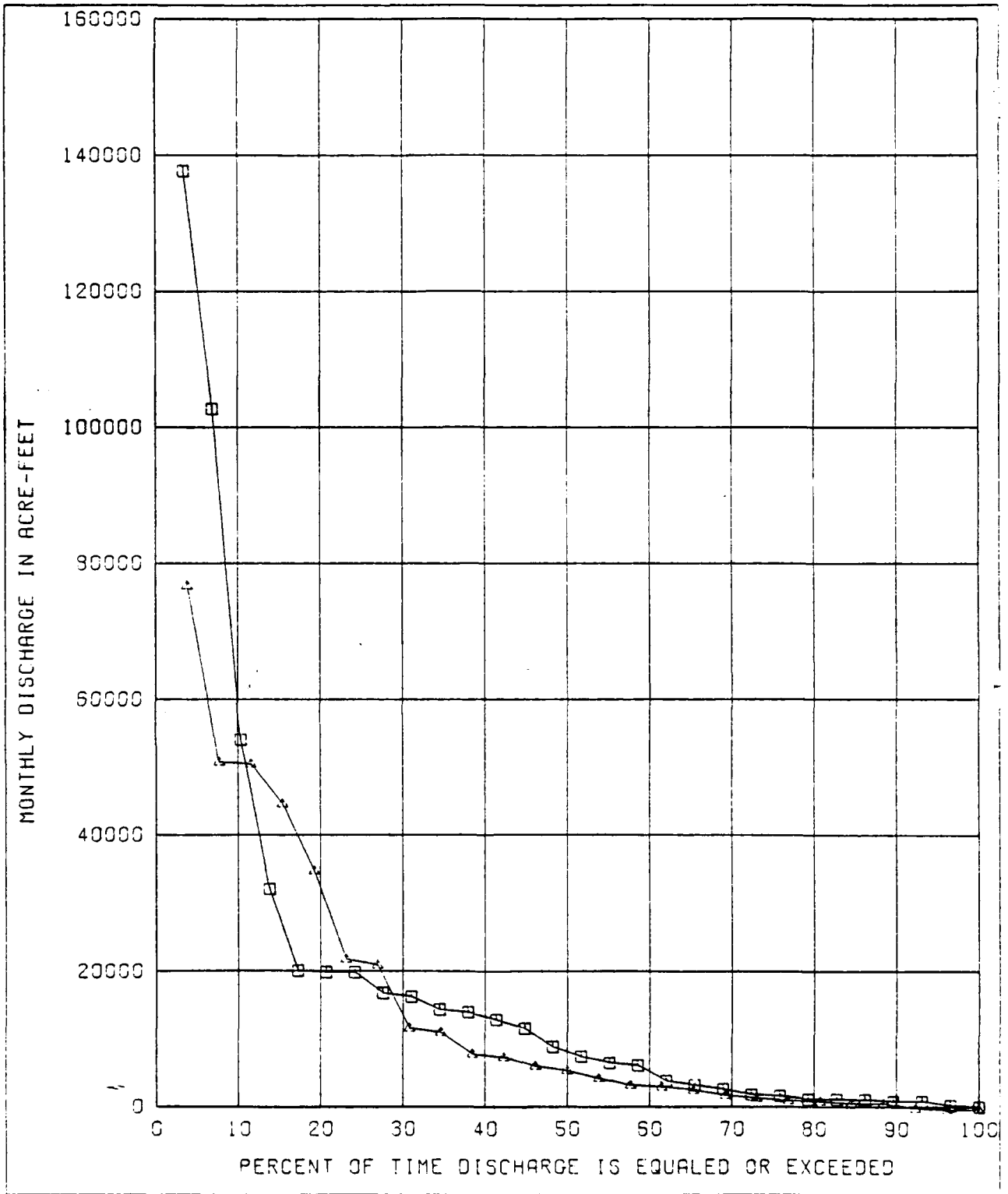
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1978)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

FLOW DURATION CURVES AT DAM SITE

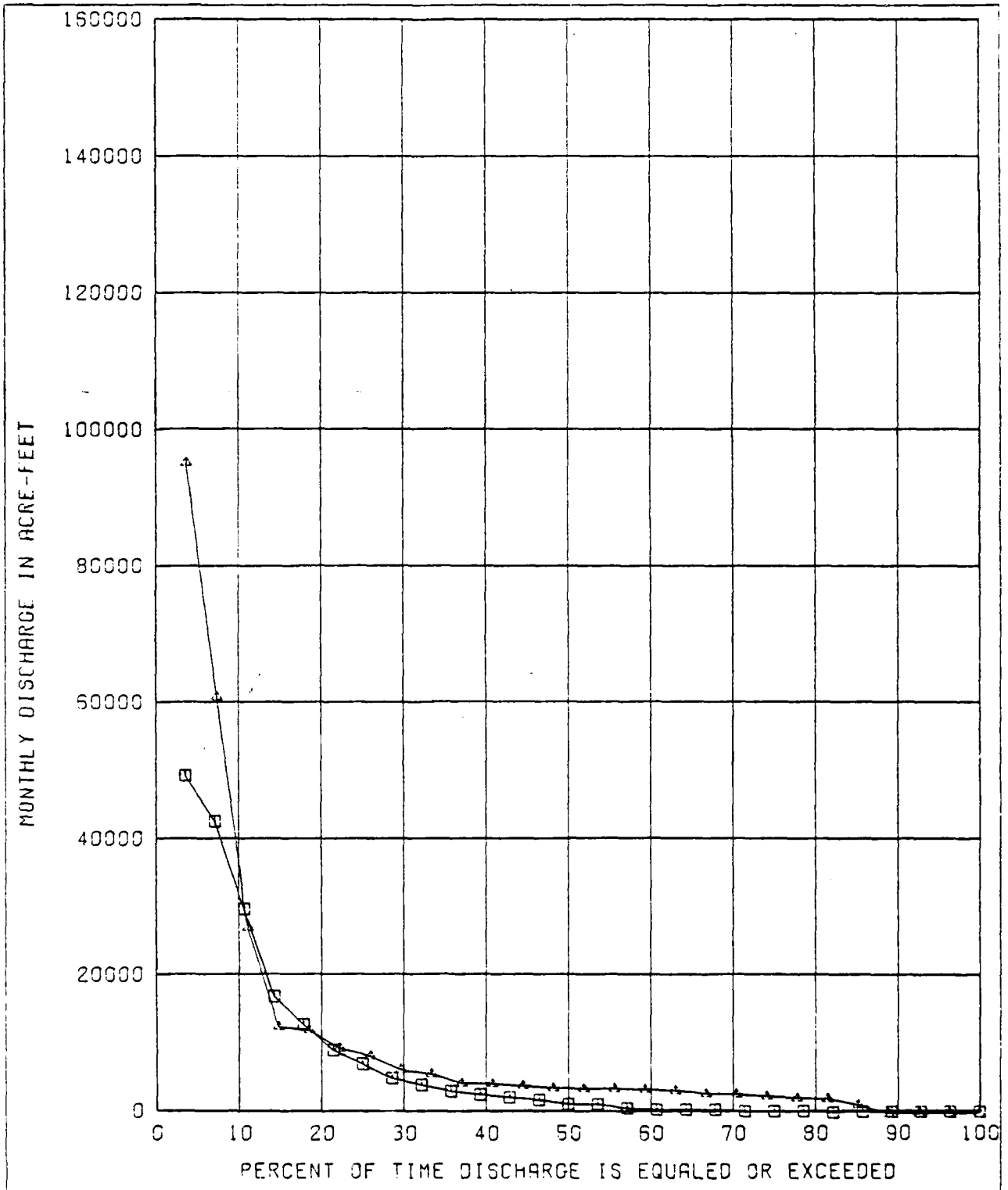
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

CRAPEVINE RESERVOIR

FLOW DURATION CURVES AT DAM SITE

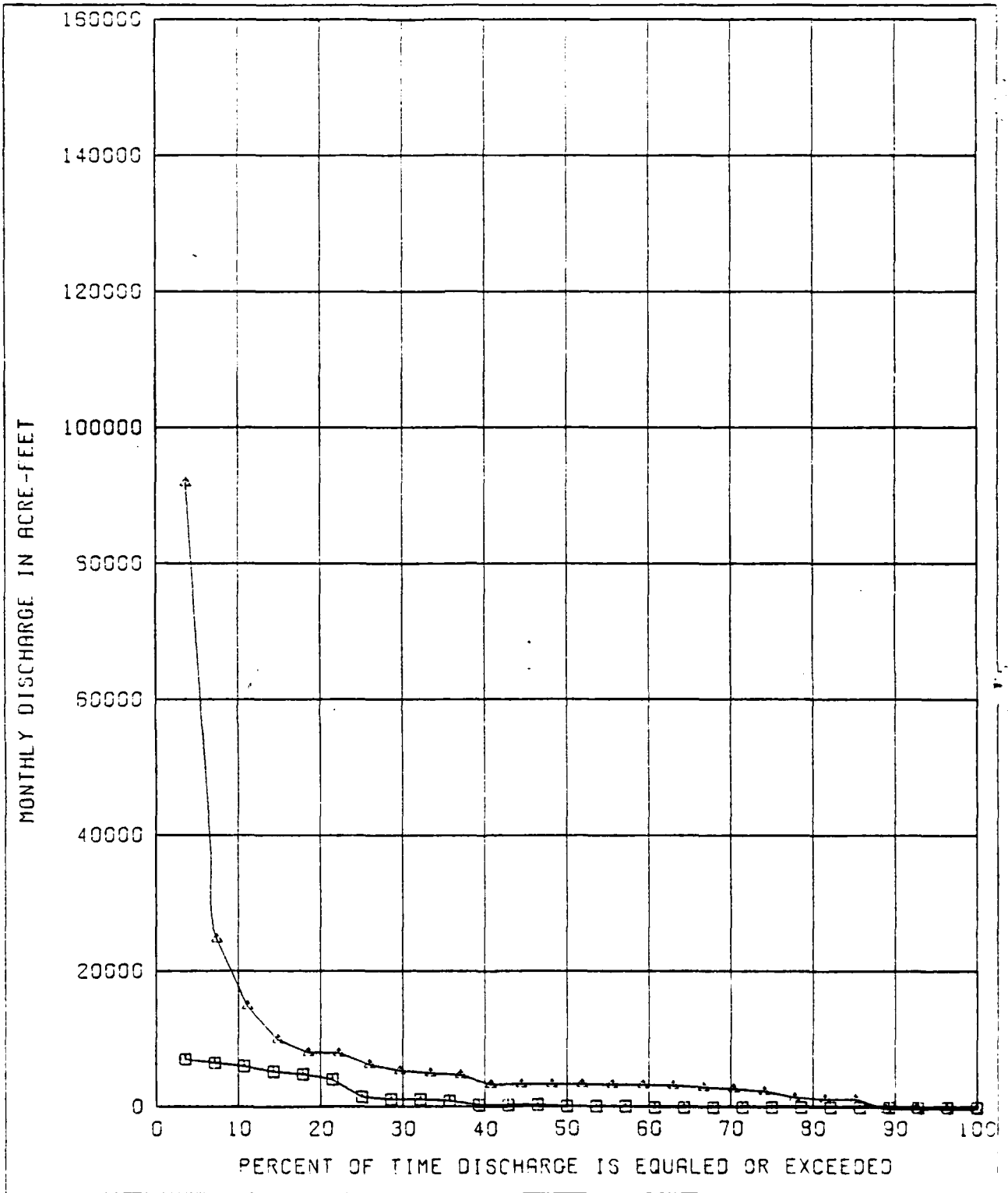
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1952)

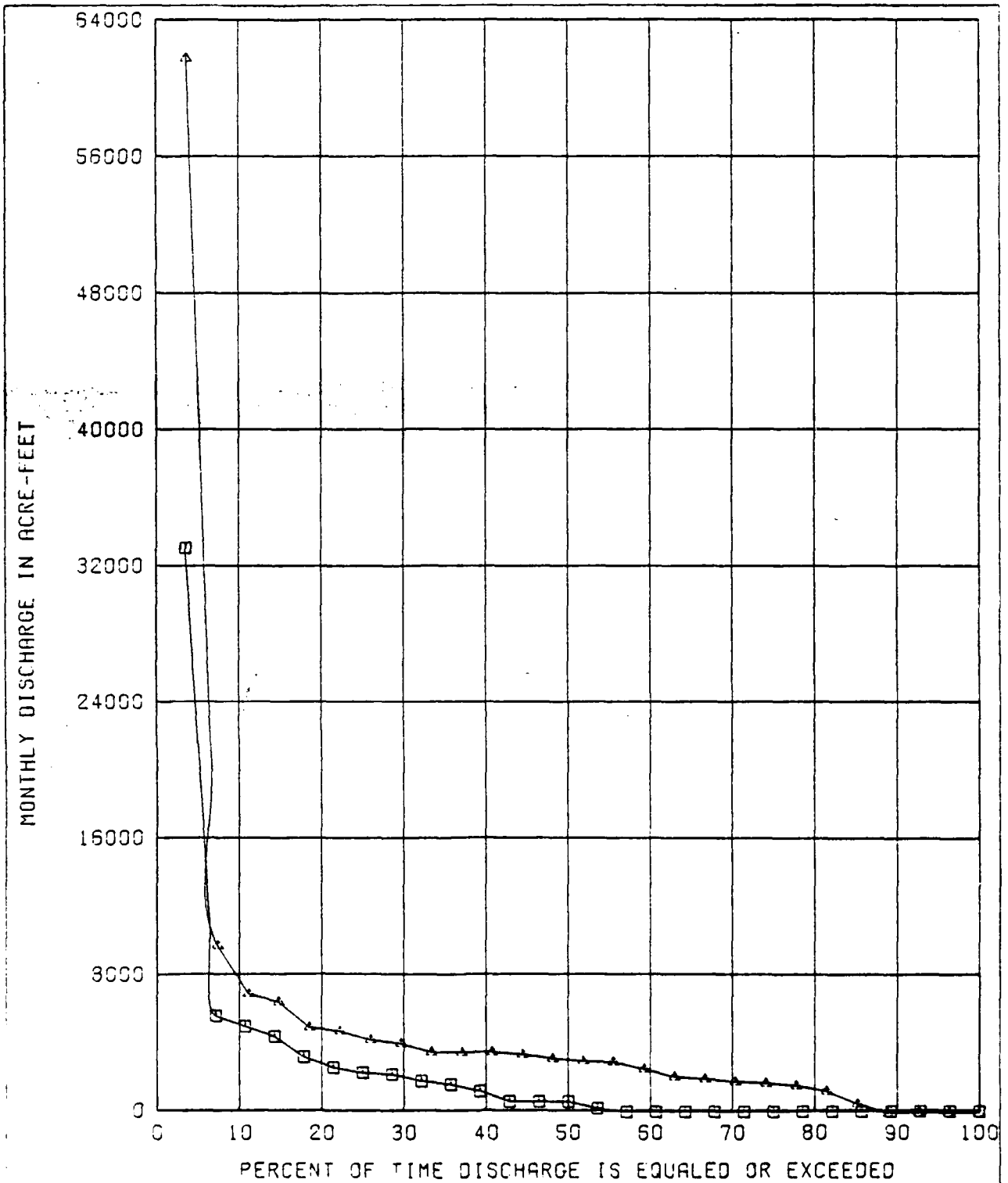
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS
GRAPEVINE RESERVOIR
FLOW DURATION CURVES AT DAM SITE
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1952)

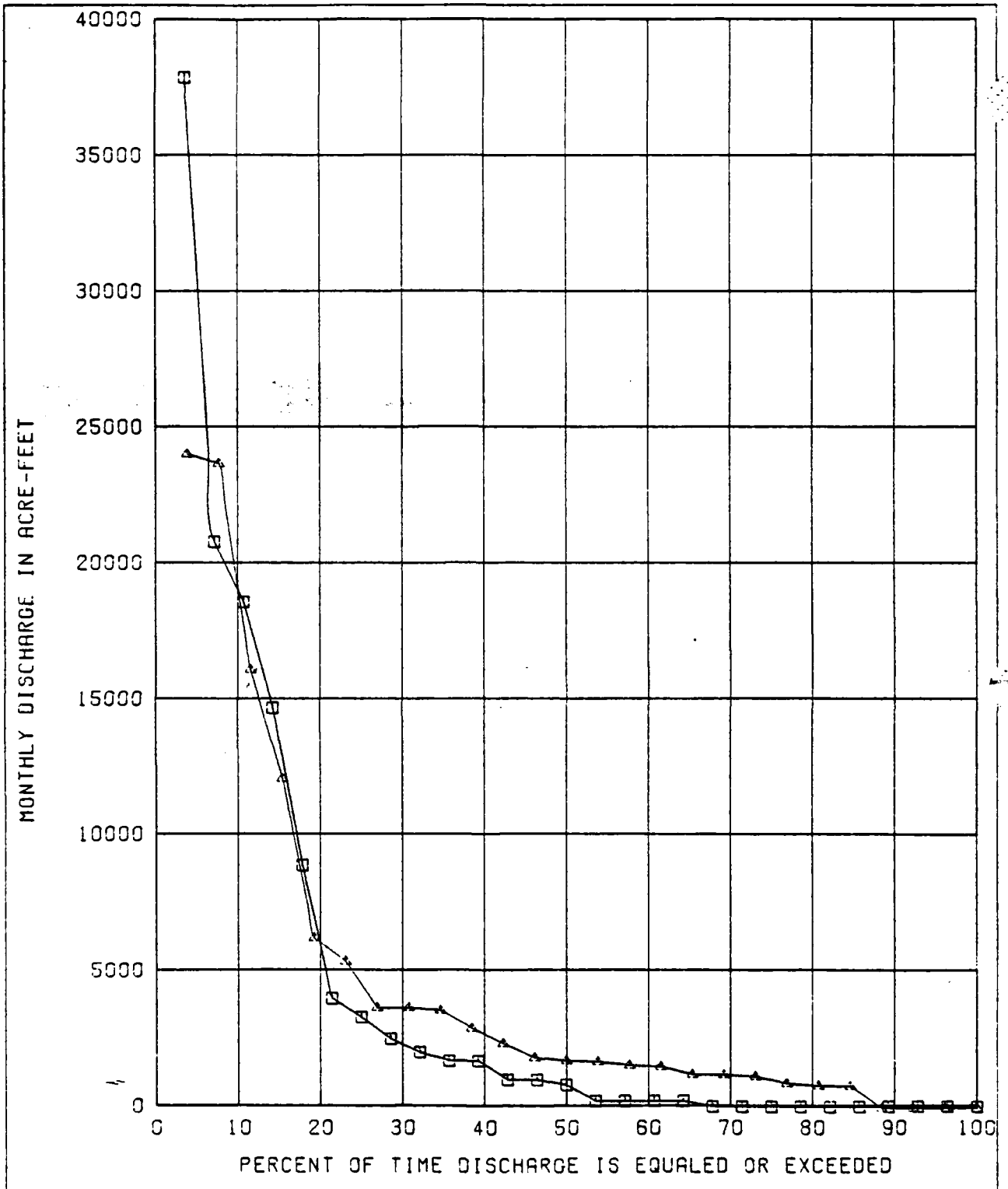
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS
CRAPEVINE RESERVOIR
FLOW DURATION CURVES AT DAM SITE
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

FLOW DURATION CURVES AT DAM SITE

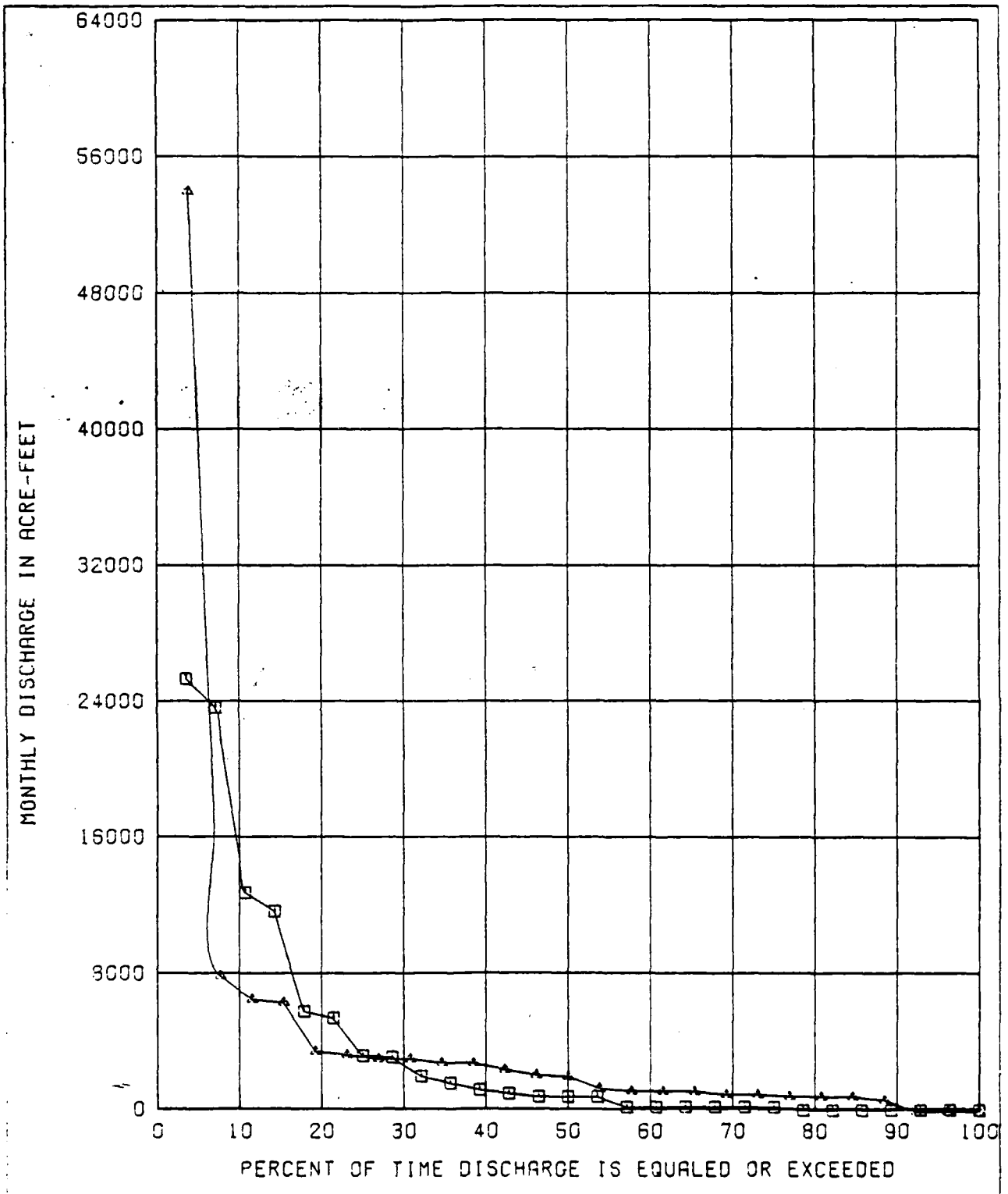
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

FLOW DURATION CURVES AT DAM SITE

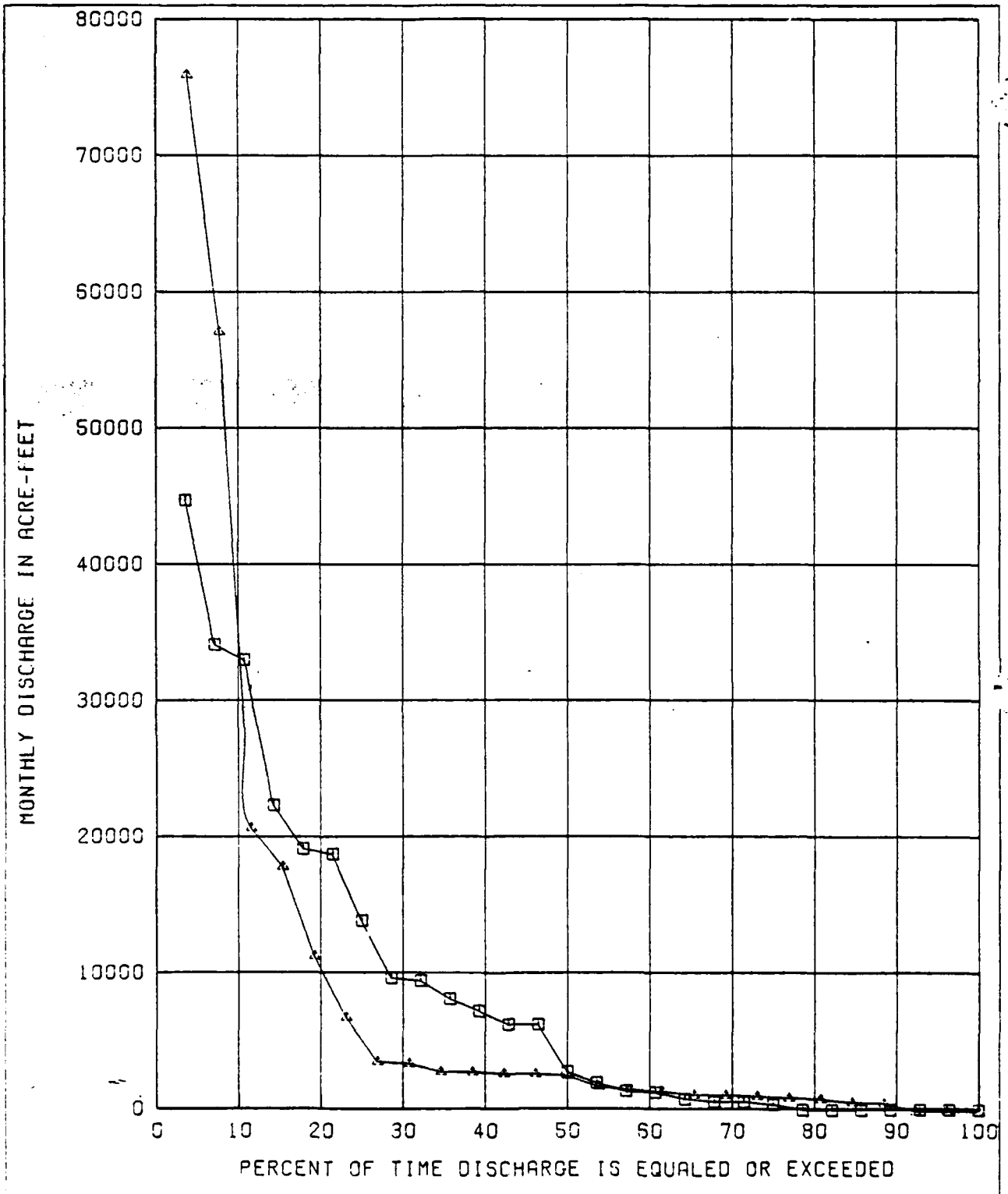
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

TRINITY RIVER BASIN, TEXAS

GRAPEVINE RESERVOIR

FLOW DURATION CURVES AT DAM SITE

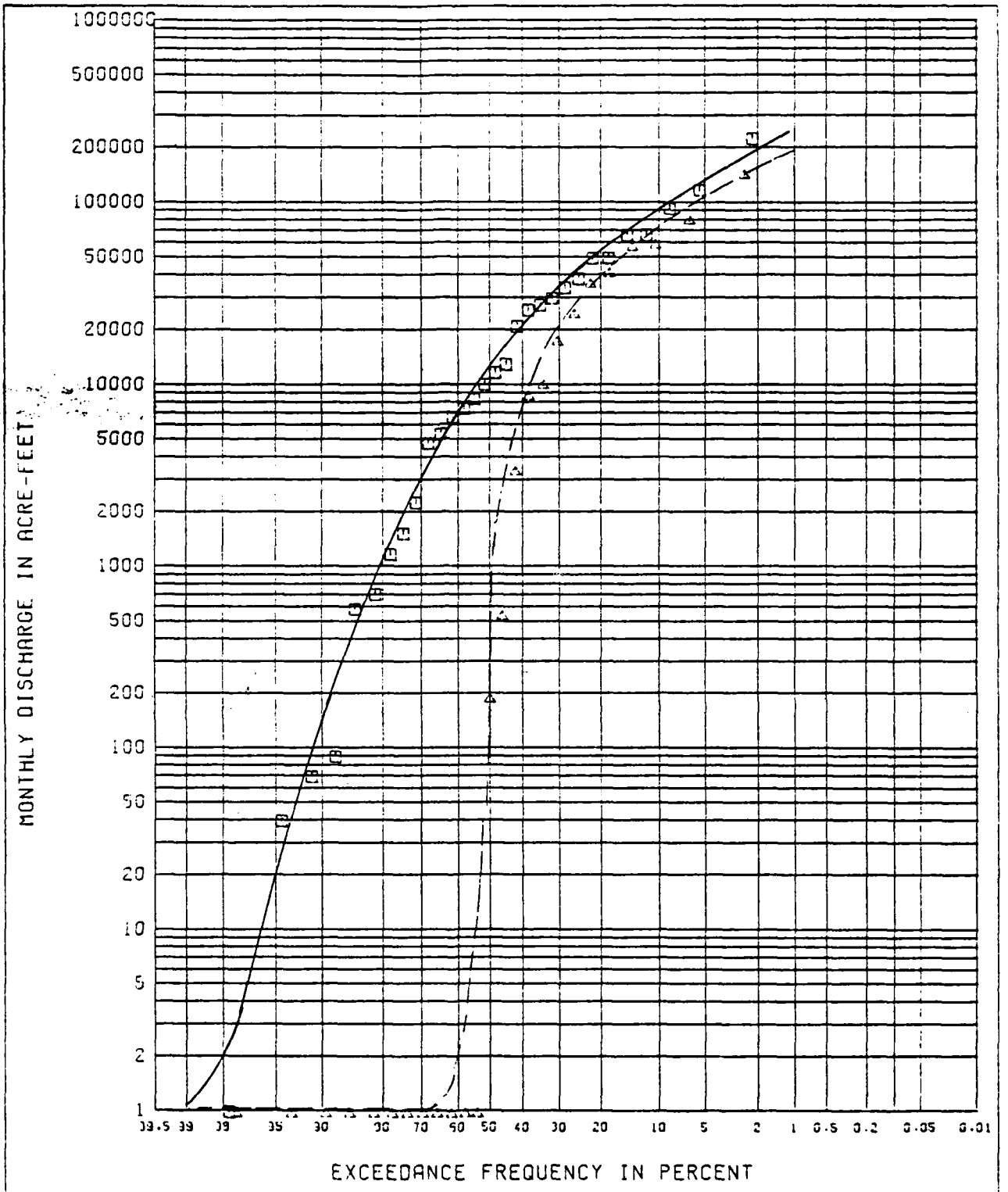
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

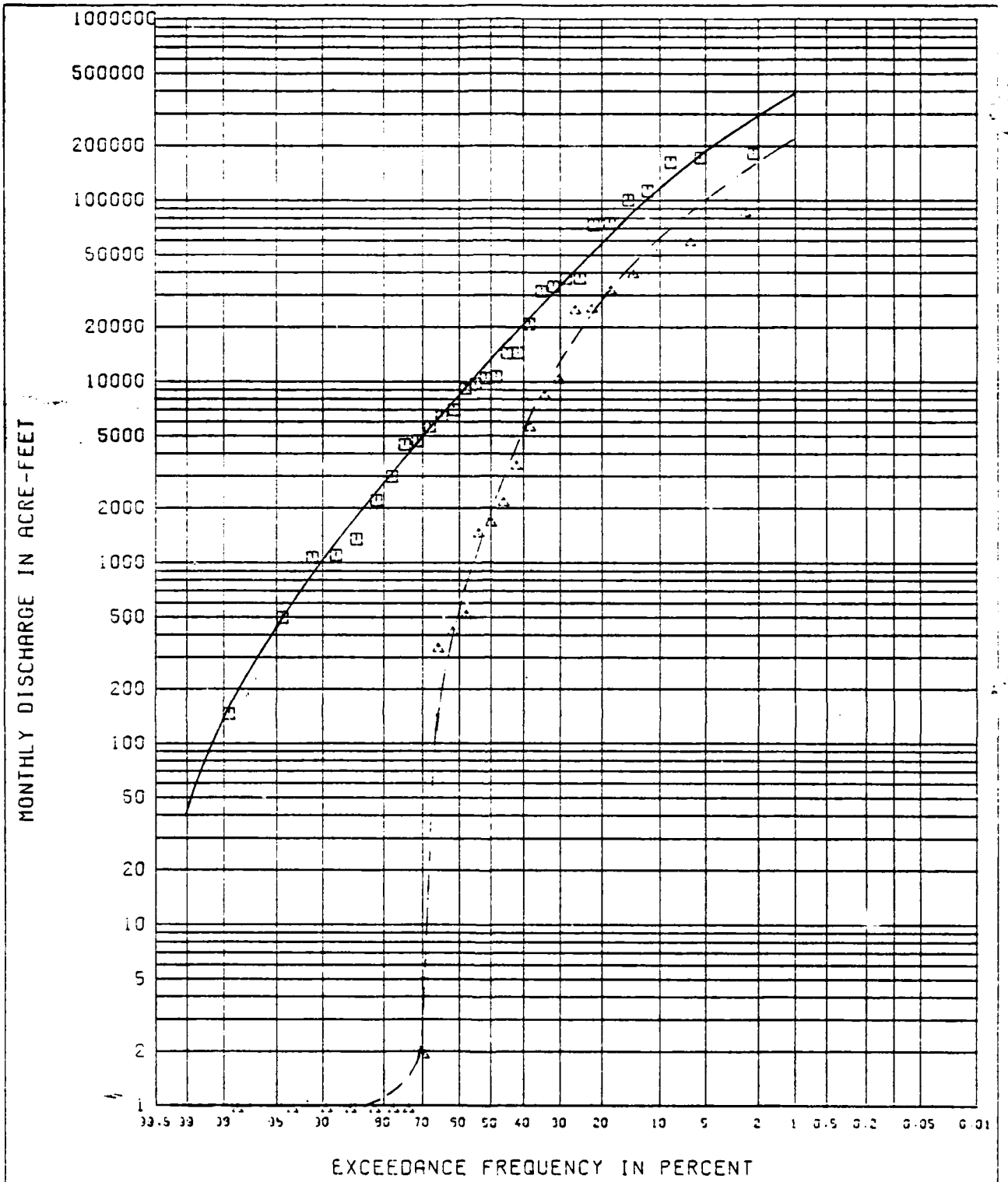
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

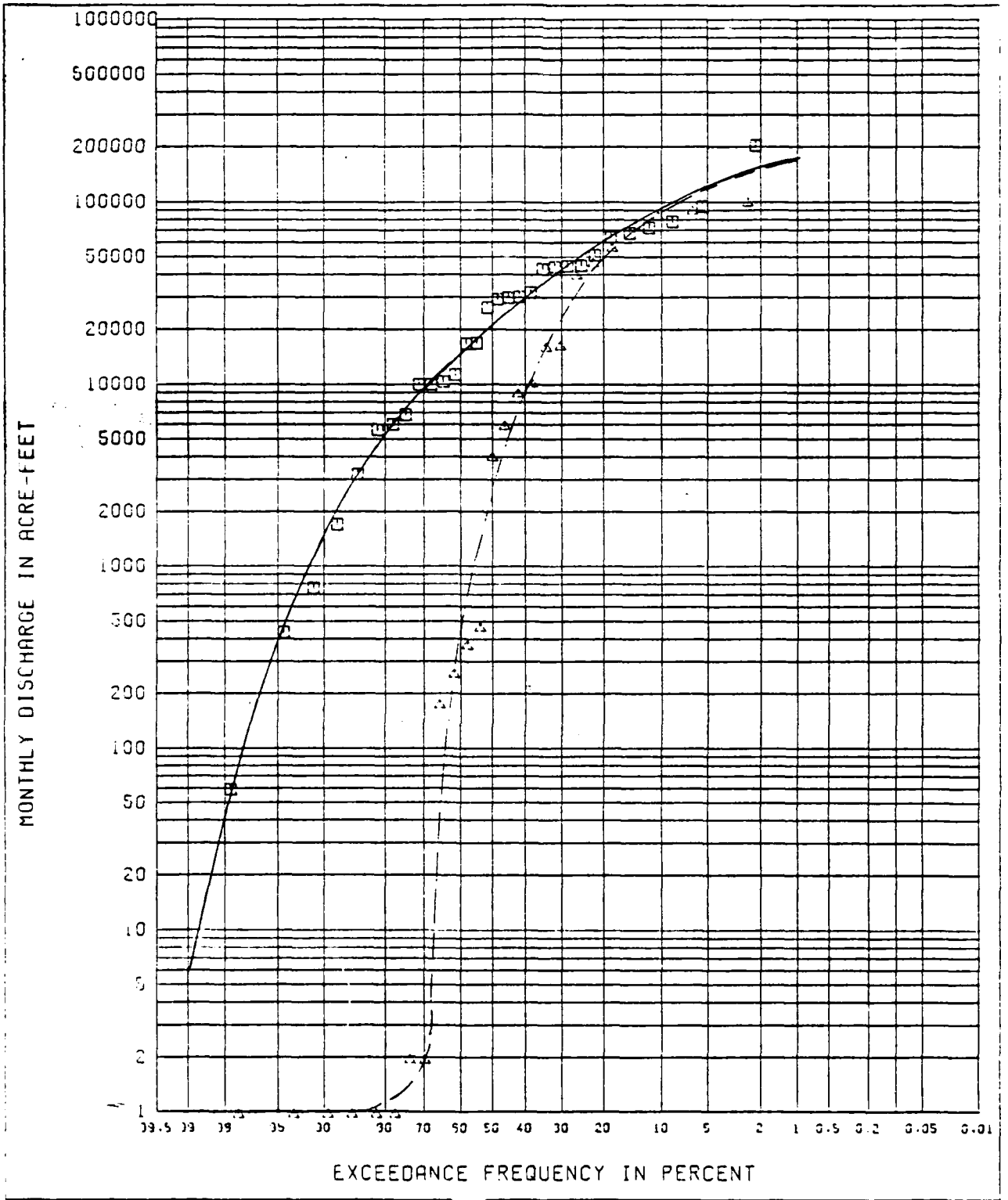
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1954-1979)

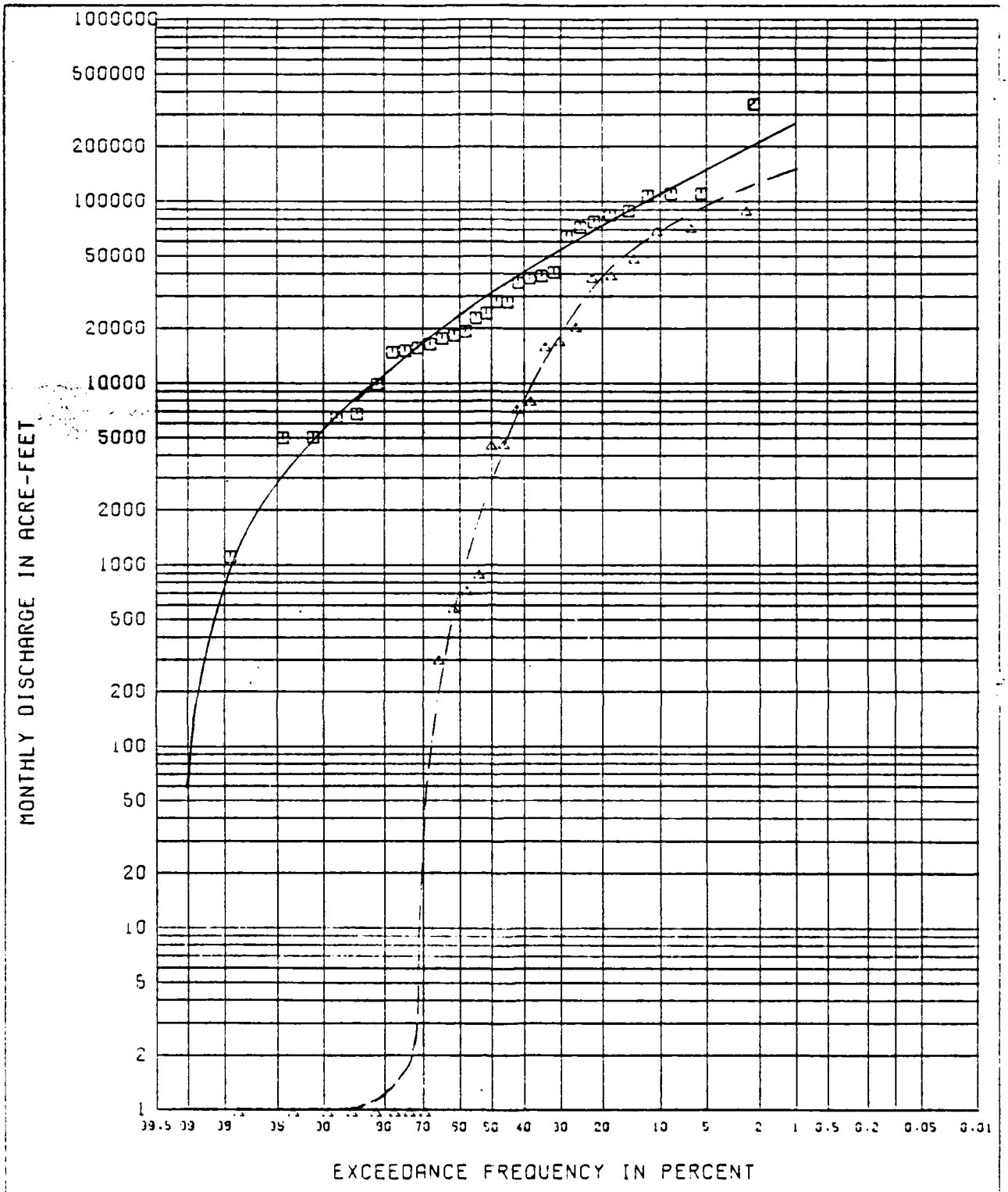
TRINITY RIVER BASIN, TEXAS

LAVON LAKE
DISCHARGE-FREQUENCY RELATIONS AT DAM SITE
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

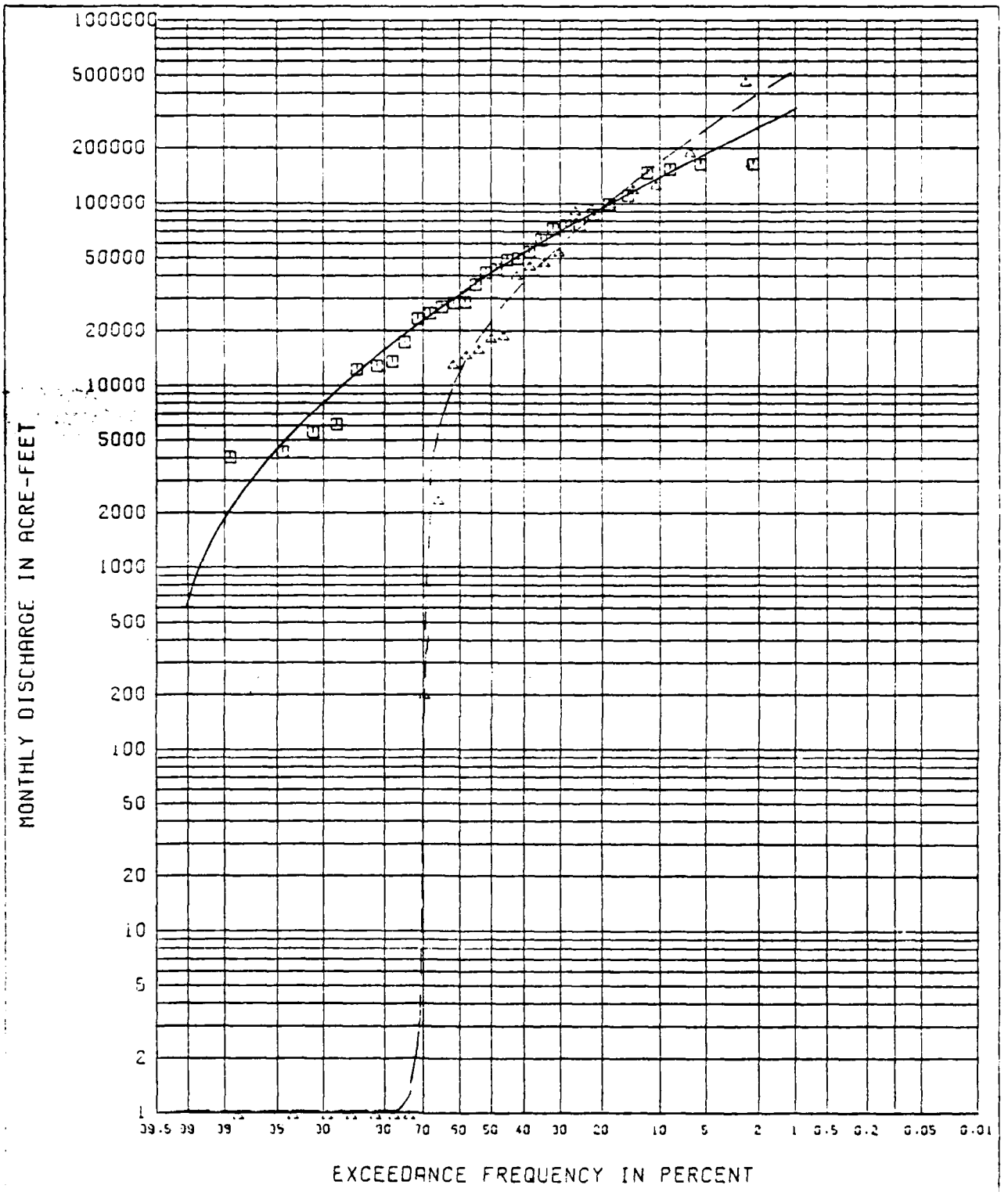
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1978)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

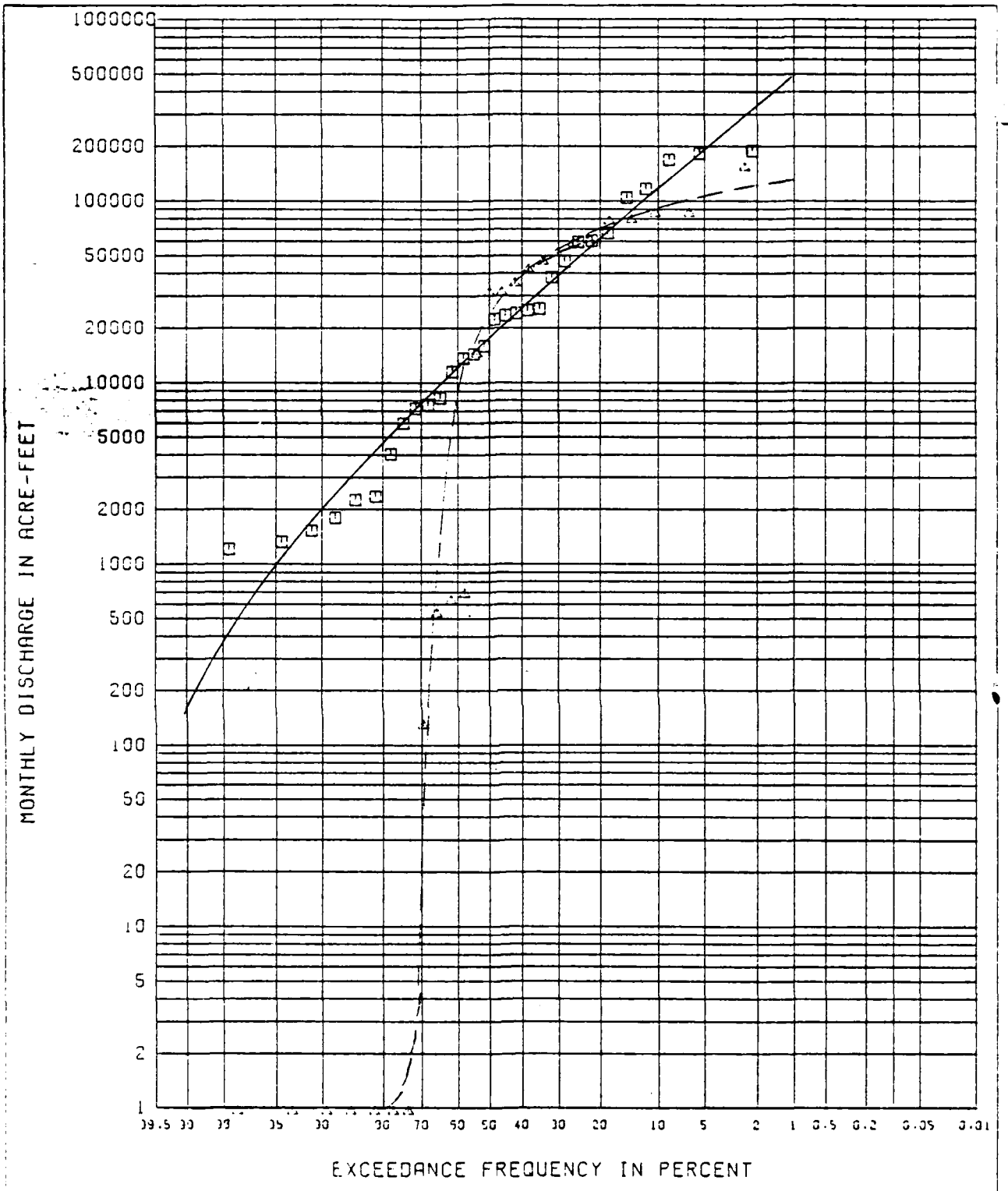
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

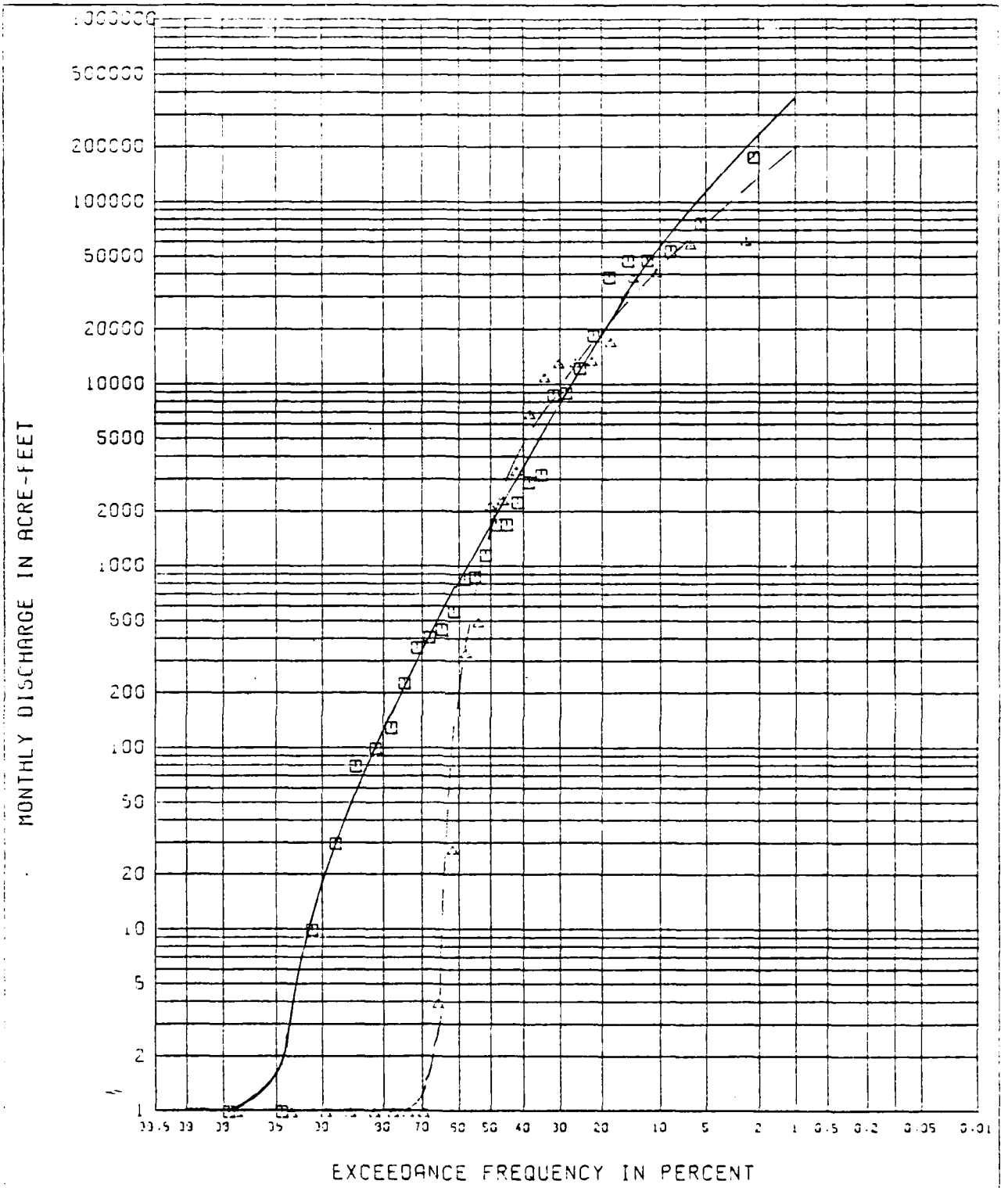
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

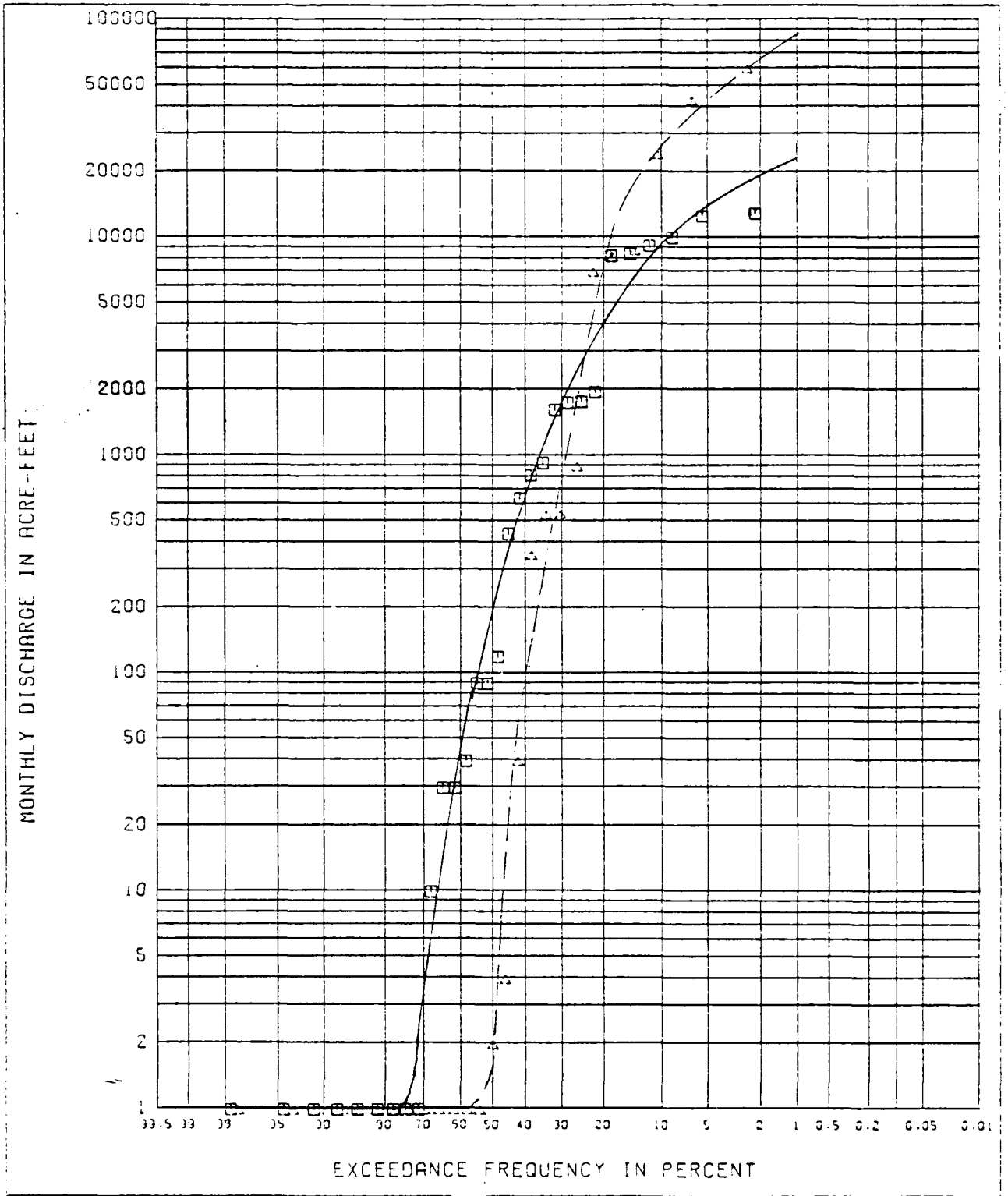
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

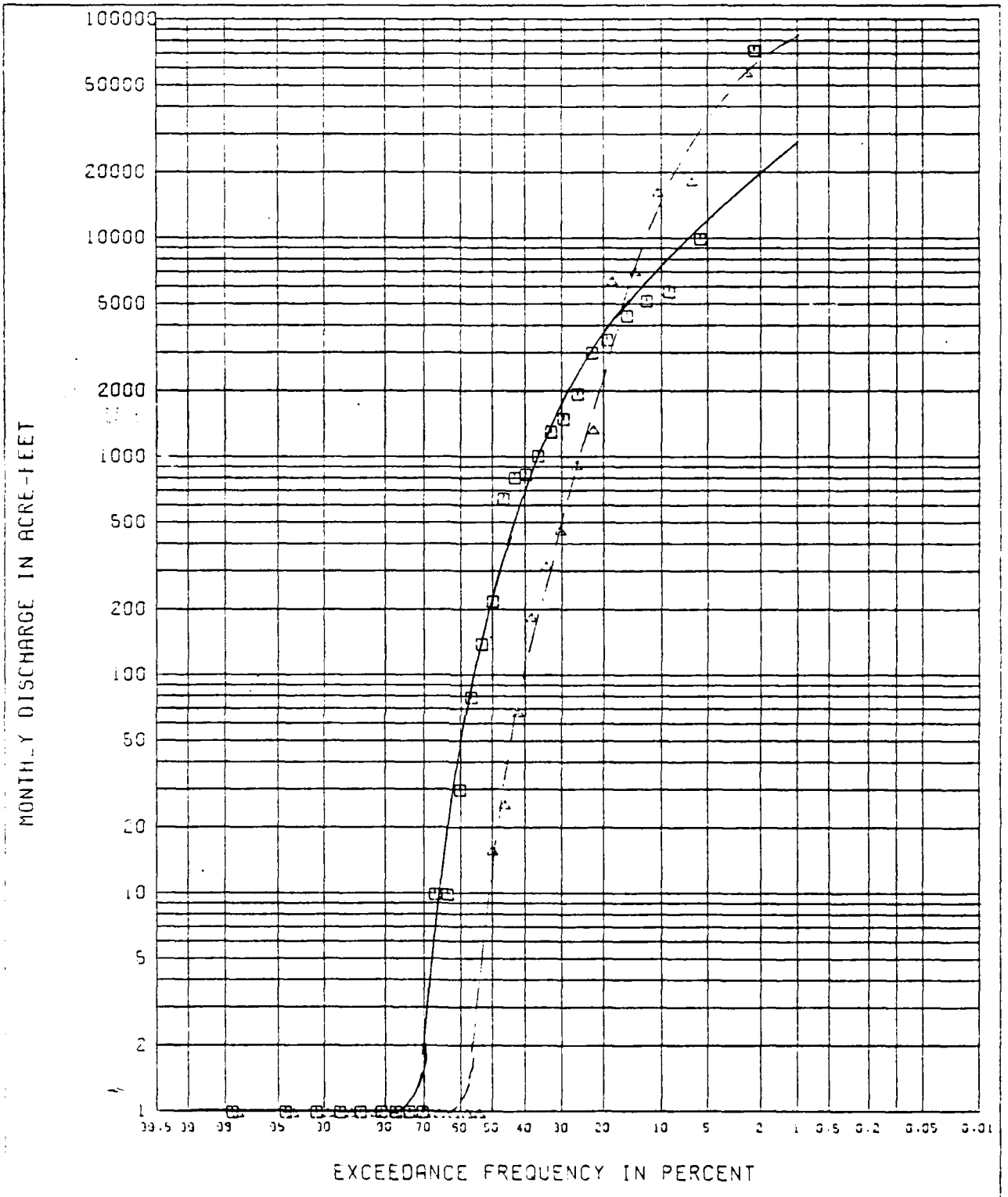
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

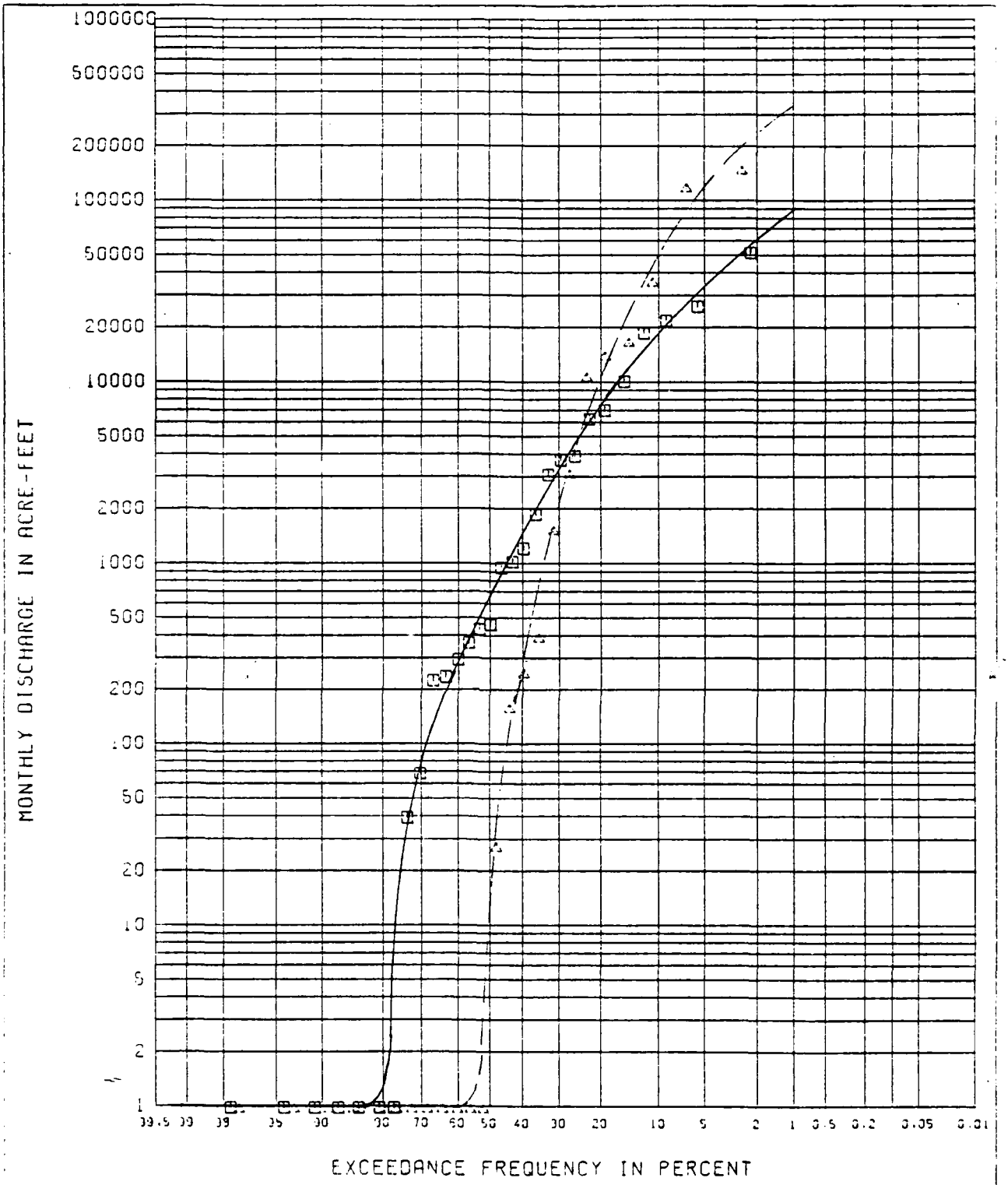
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

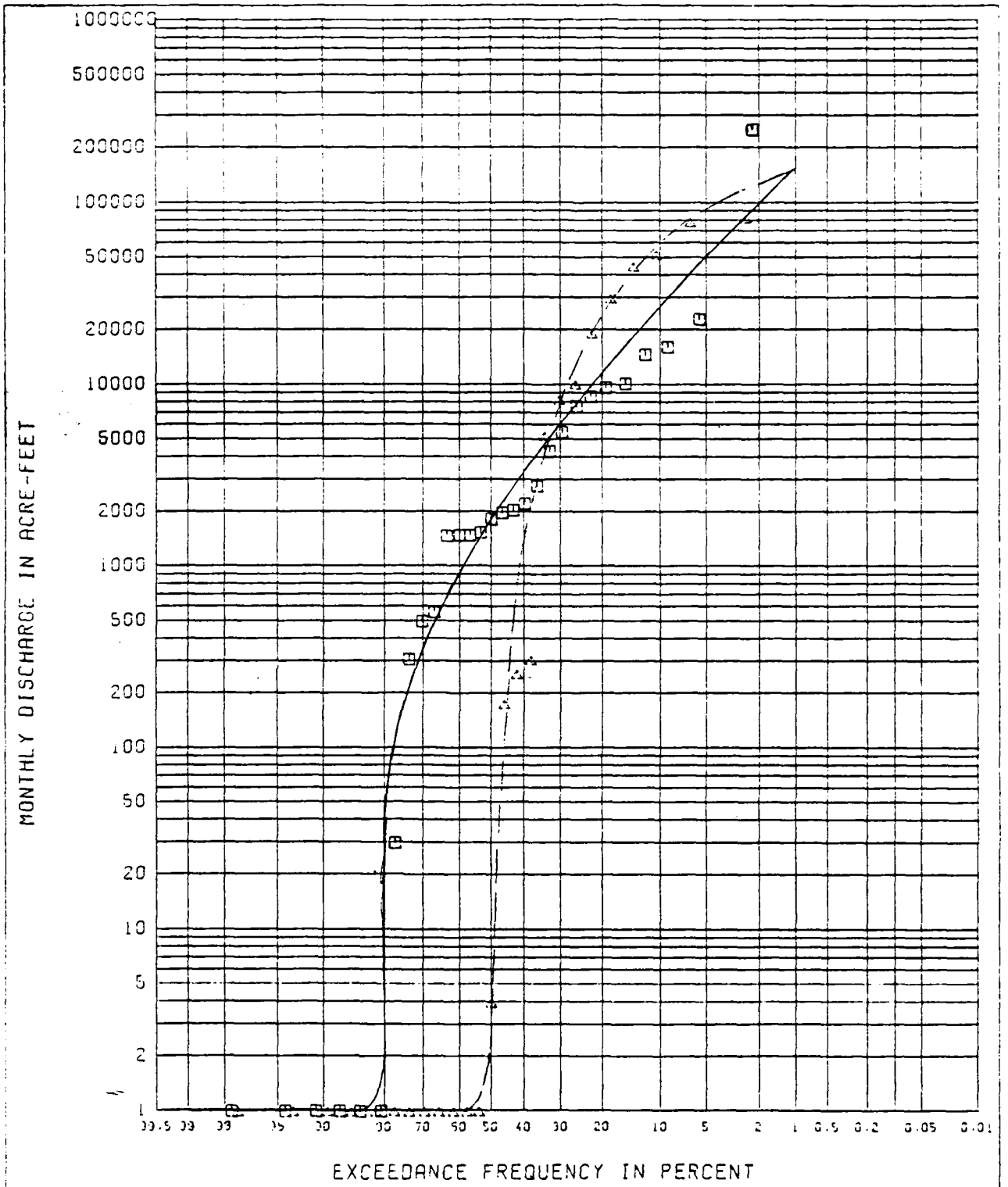
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1978)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

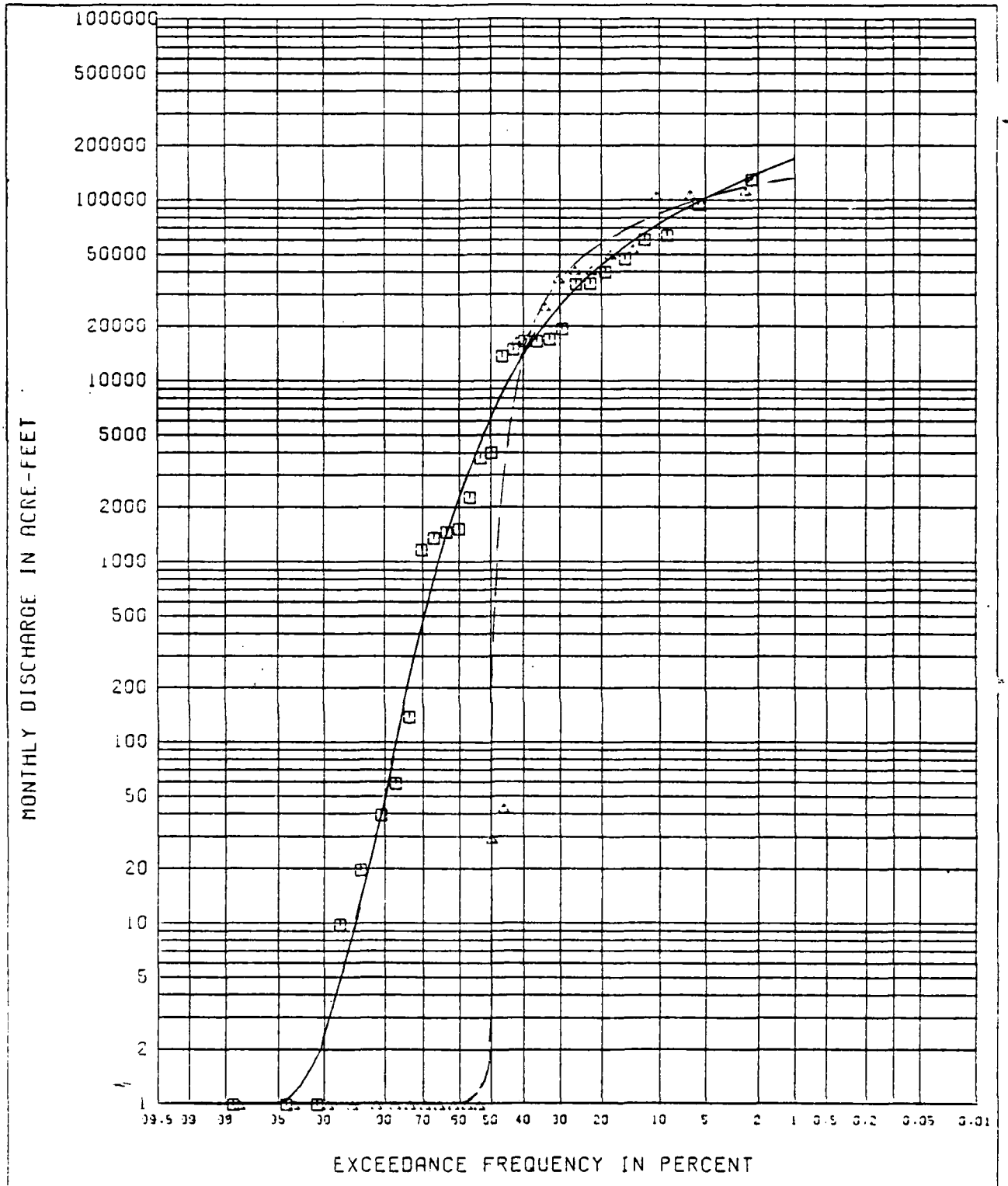
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1978)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

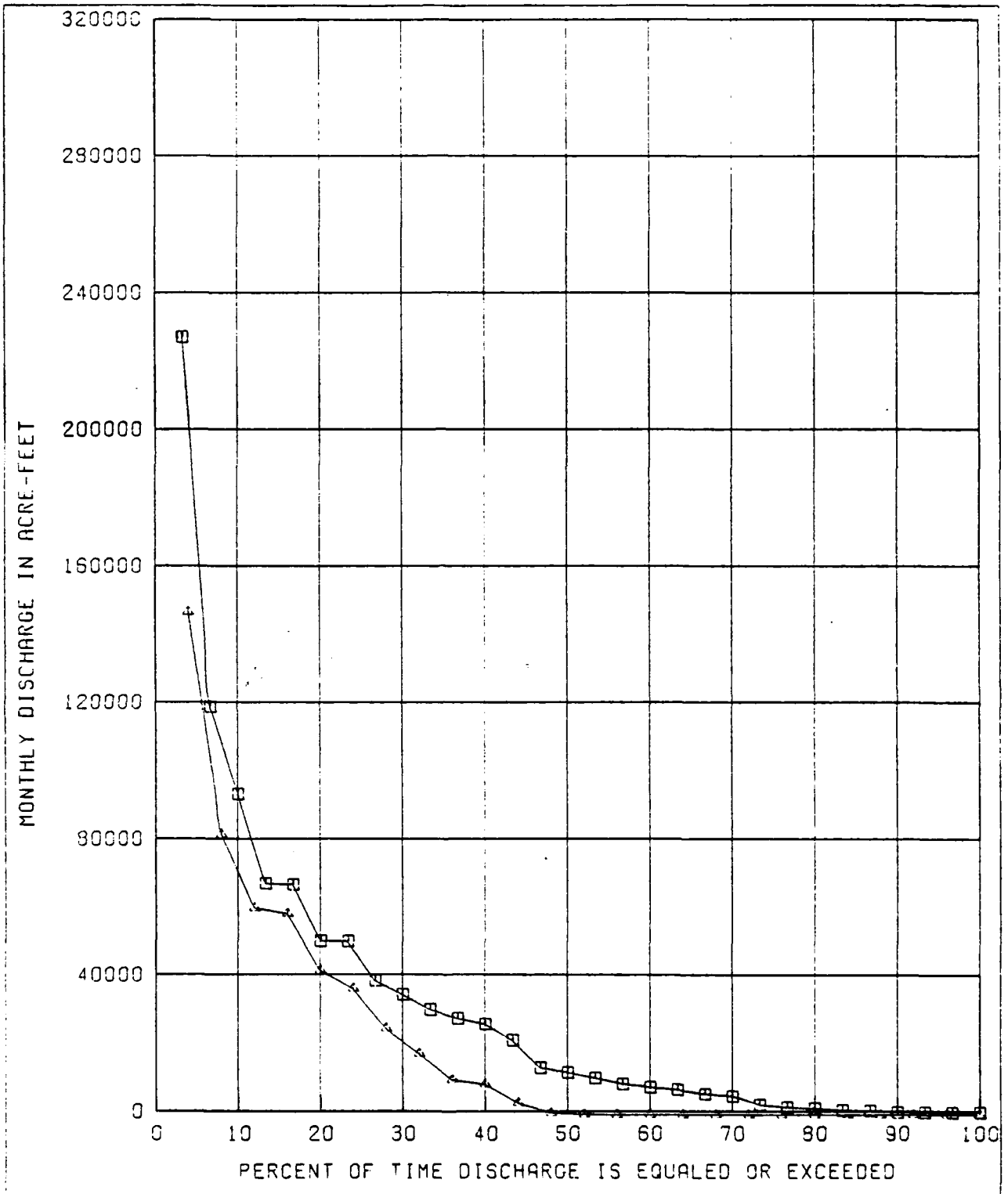
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

FLOW DURATION CURVES AT DAM SITE

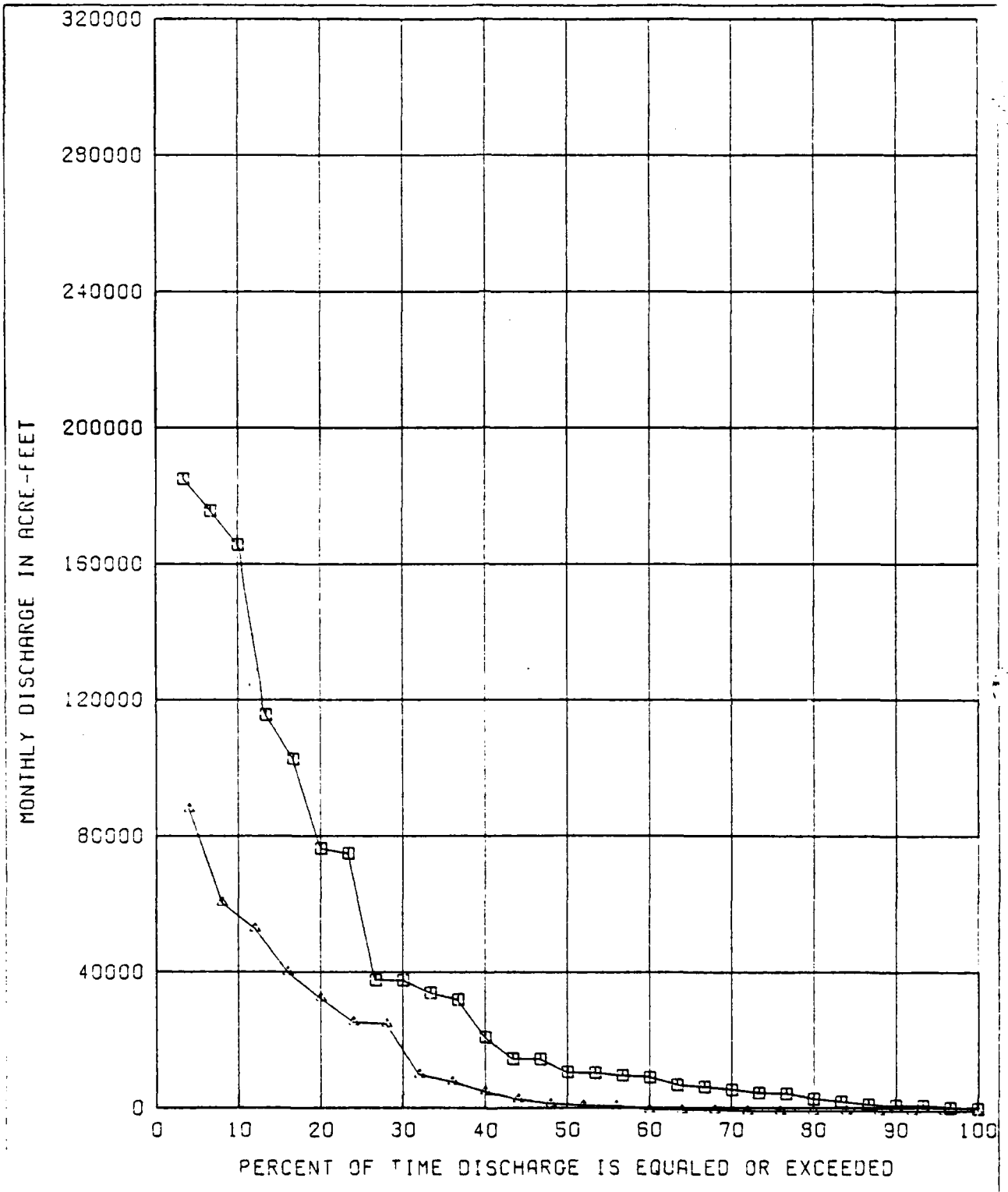
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

FLOW DURATION CURVES AT DAM SITE

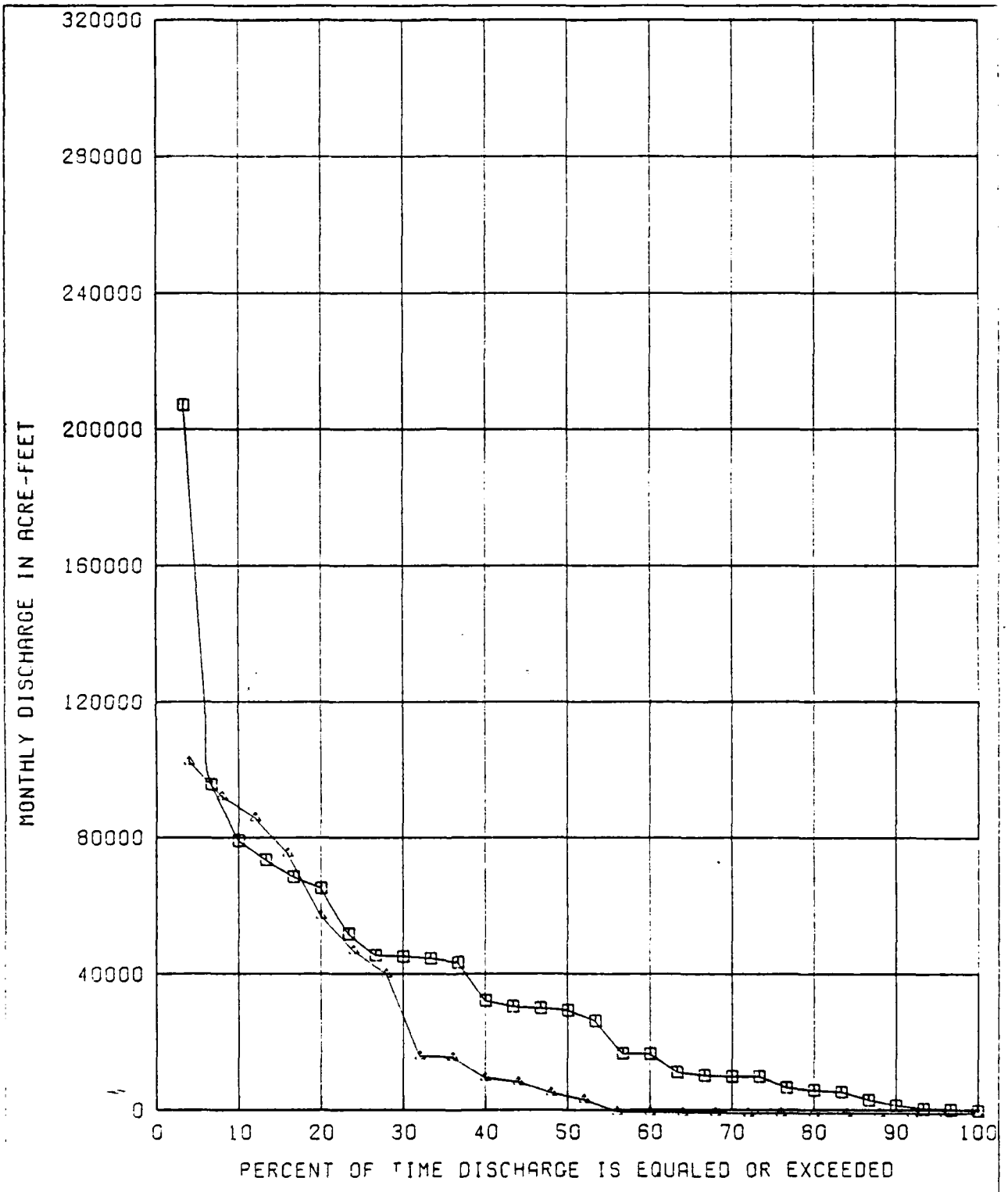
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

FLOW DURATION CURVES AT DAM SITE

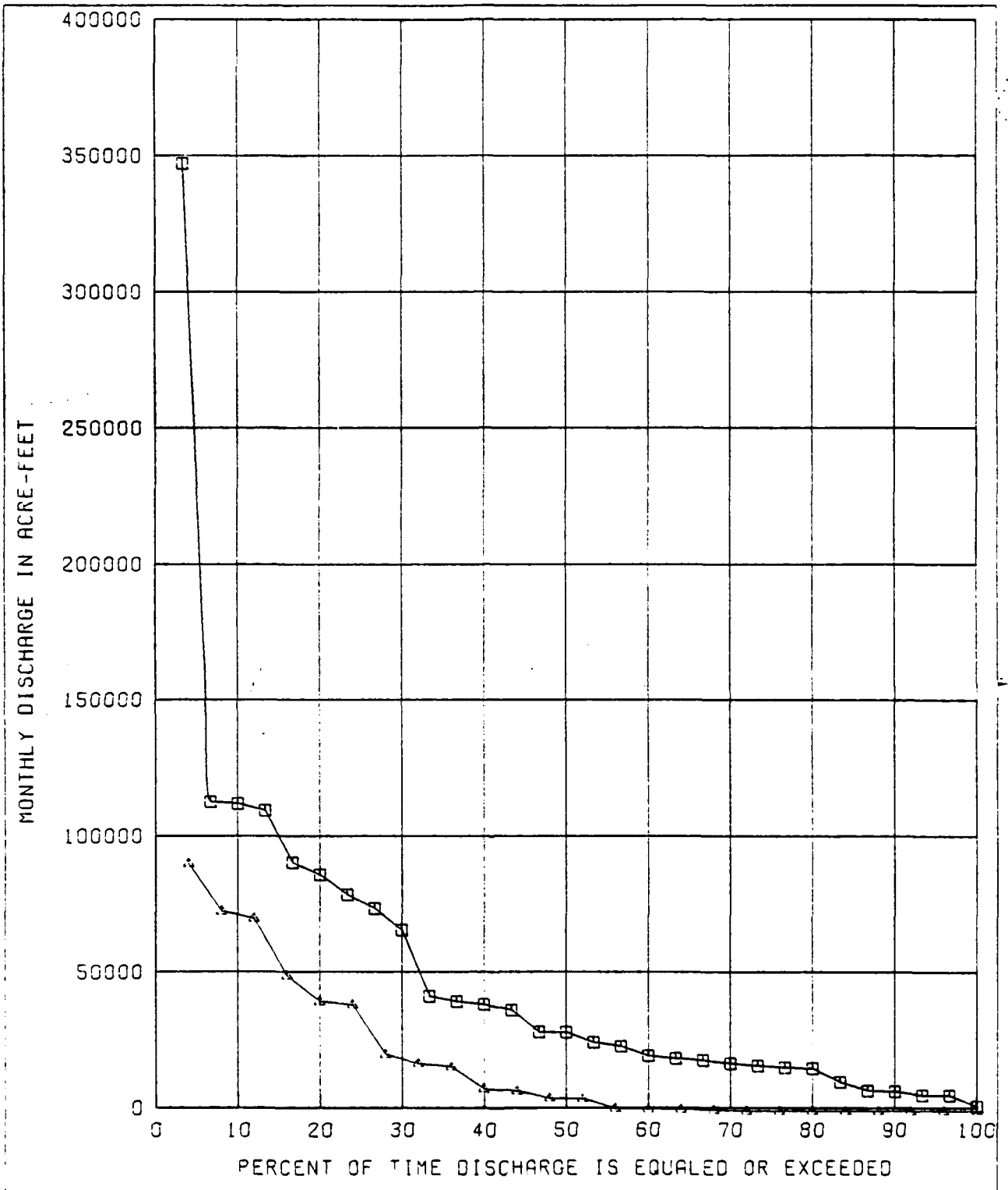
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

FLOW DURATION CURVES AT DAM SITE

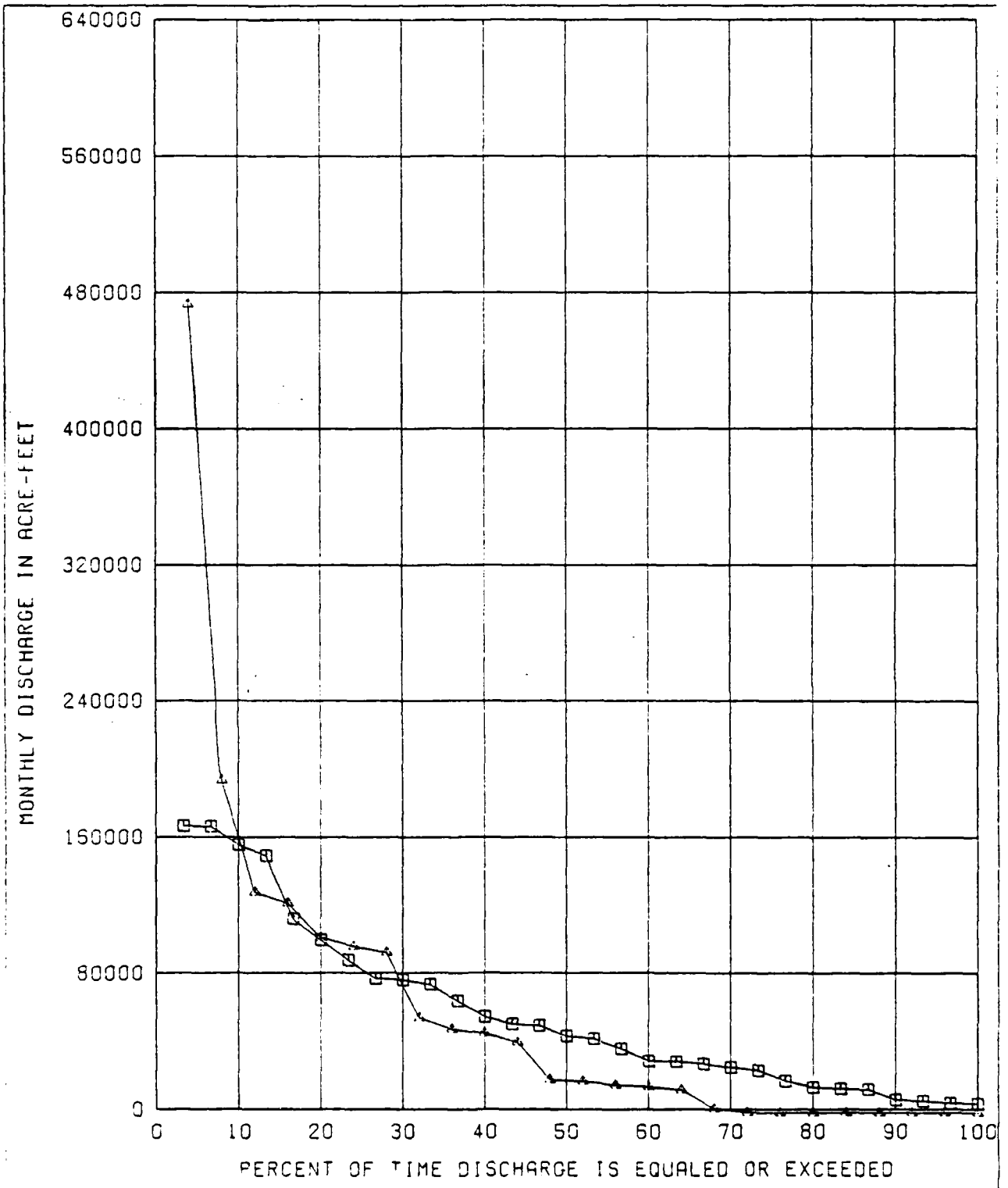
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

FLOW DURATION CURVES AT DAM SITE

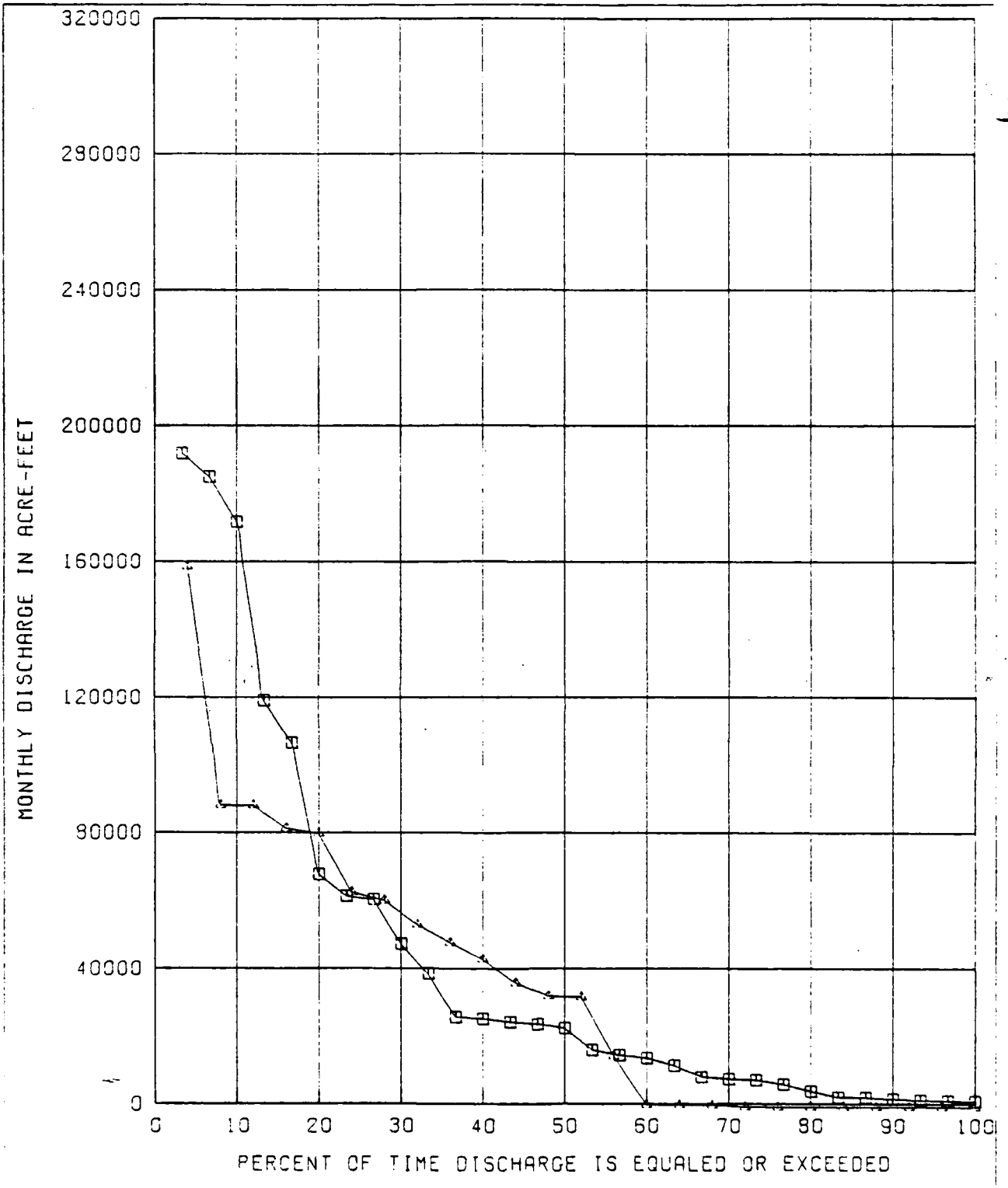
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

FLOW DURATION CURVES AT DAM SITE

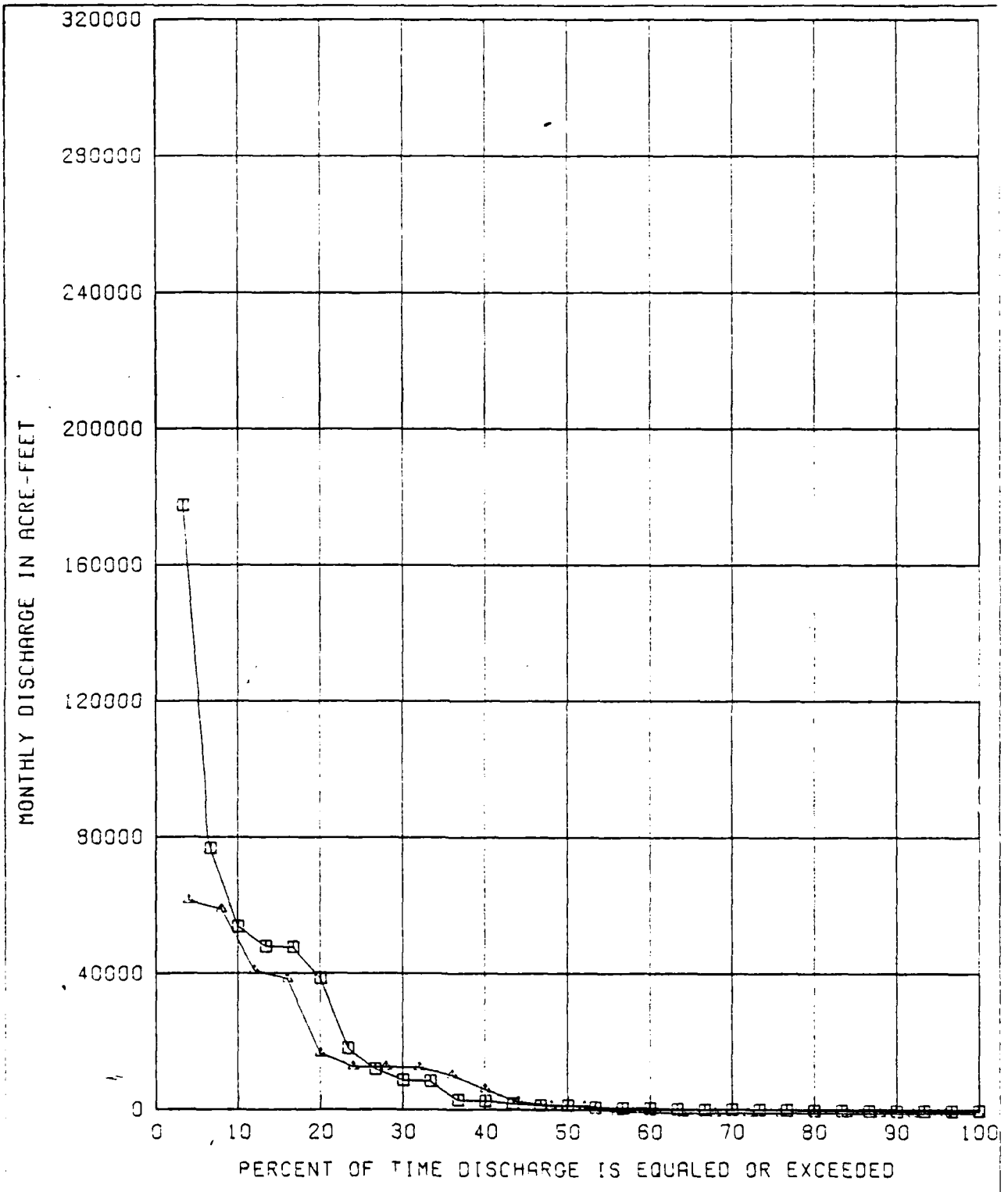
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

FLOW DURATION CURVES AT DAM SITE

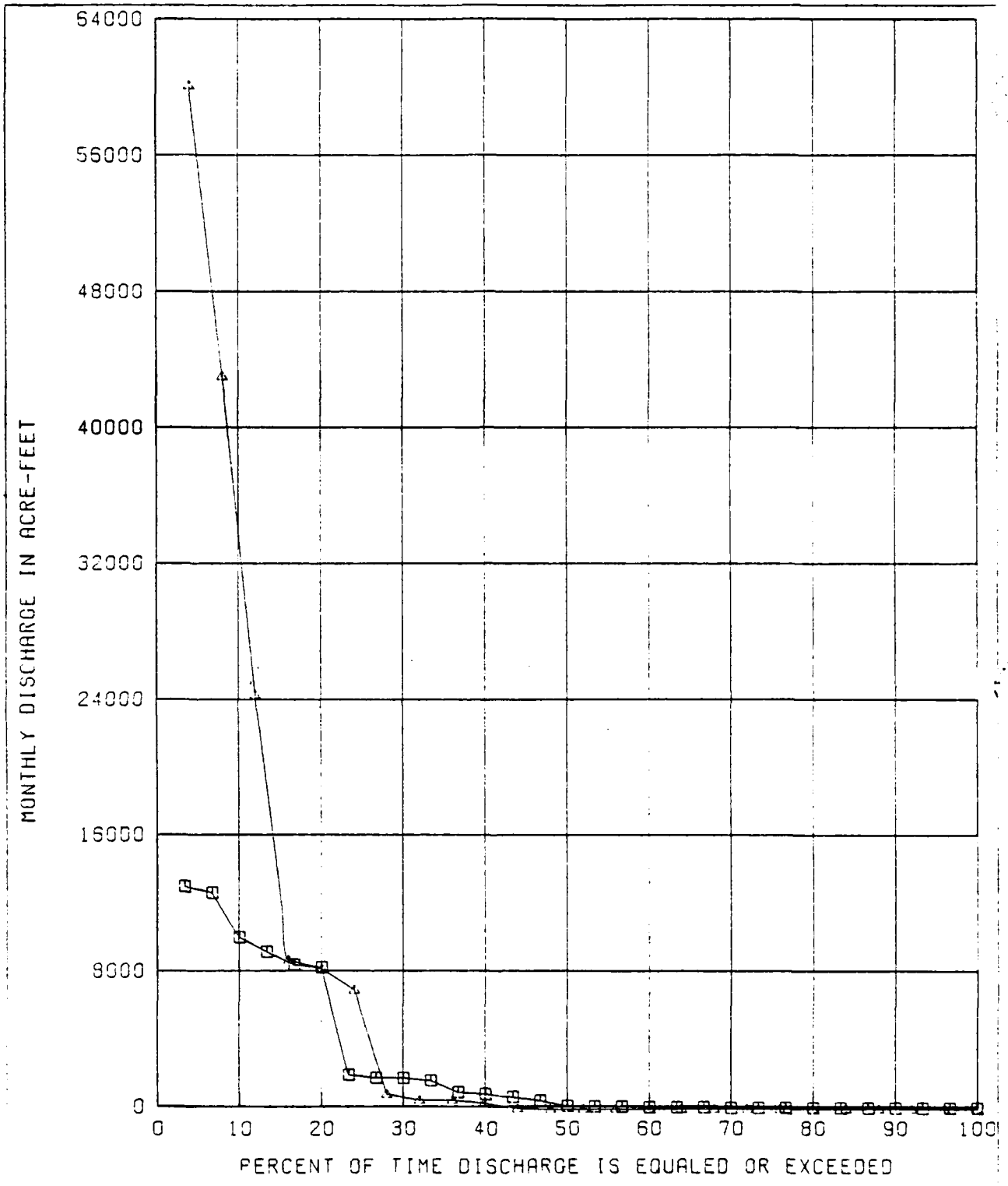
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

FLOW DURATION CURVES AT DAM SITE

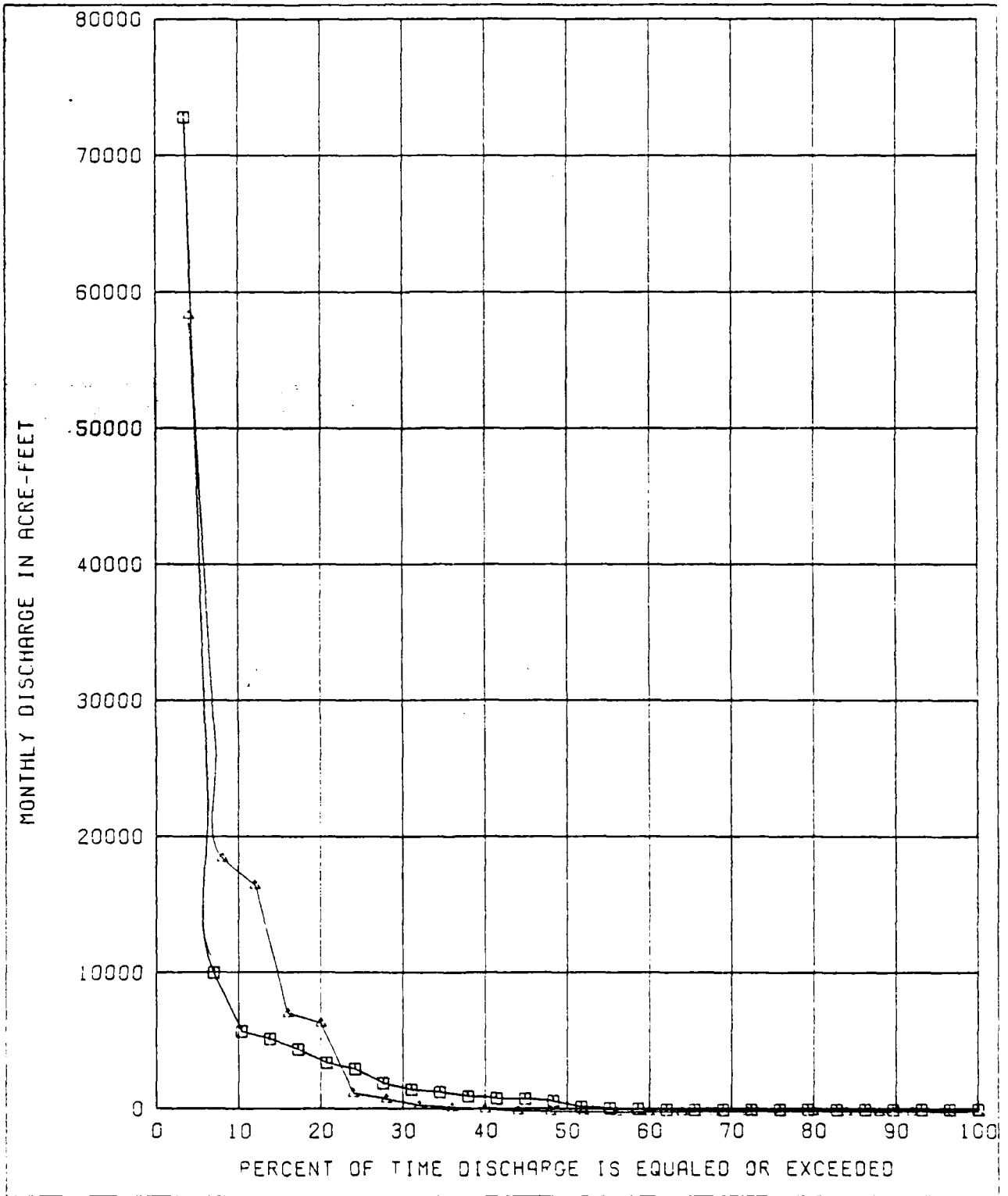
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1978)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

FLOW DURATION CURVES AT DAM SITE

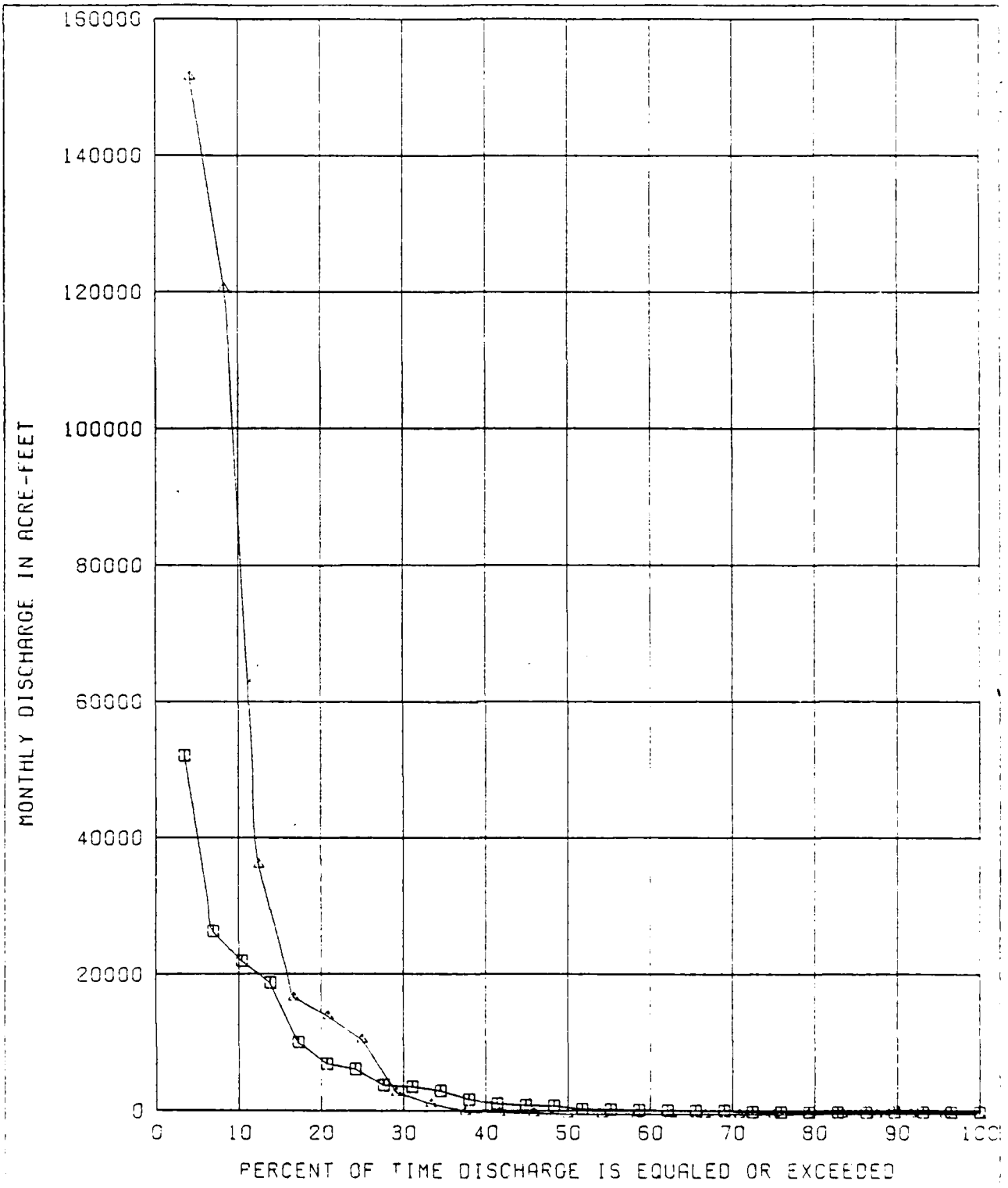
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

FLOW DURATION CURVES AT DAM SITE

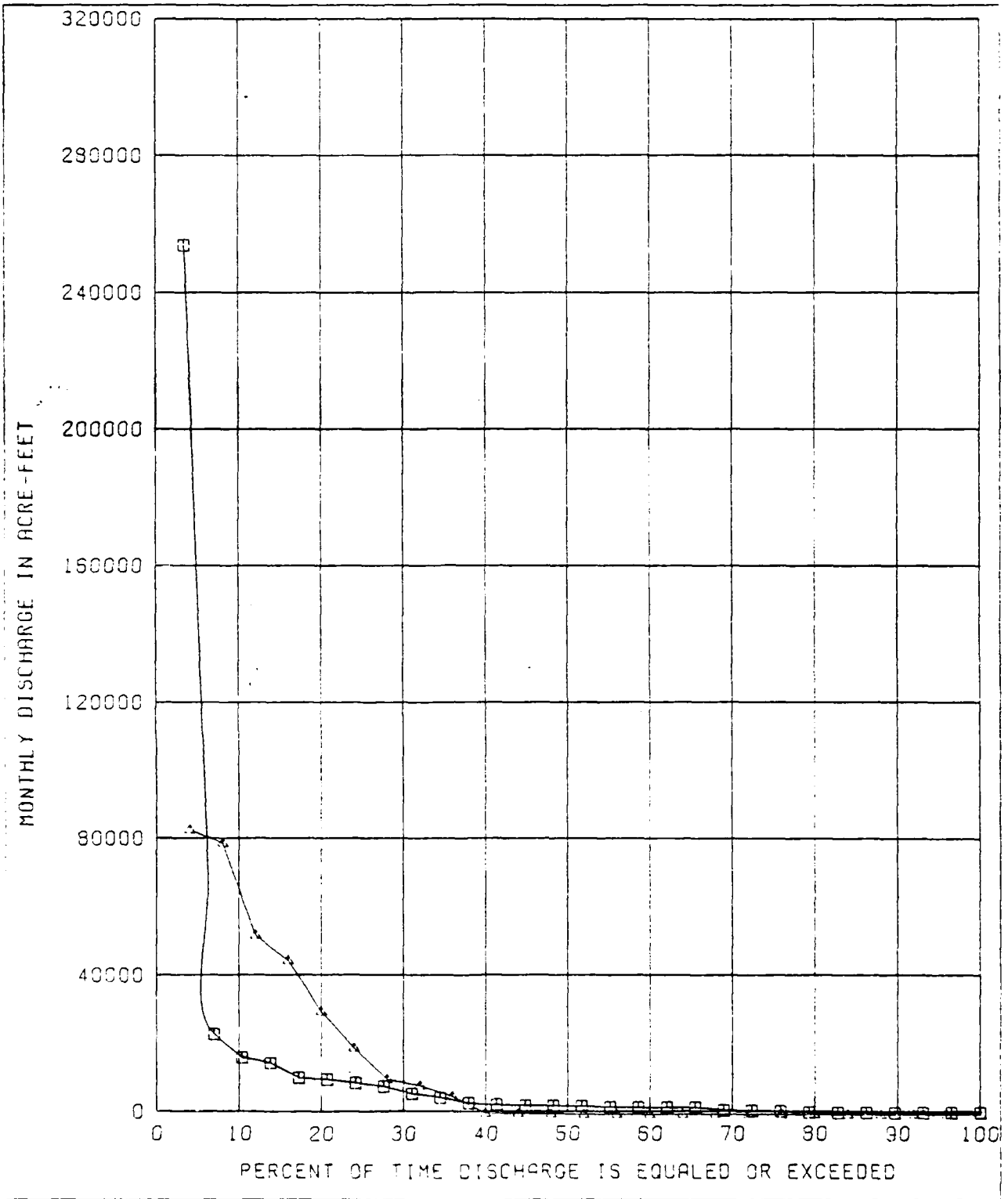
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

FLOW DURATION CURVES AT DAM SITE

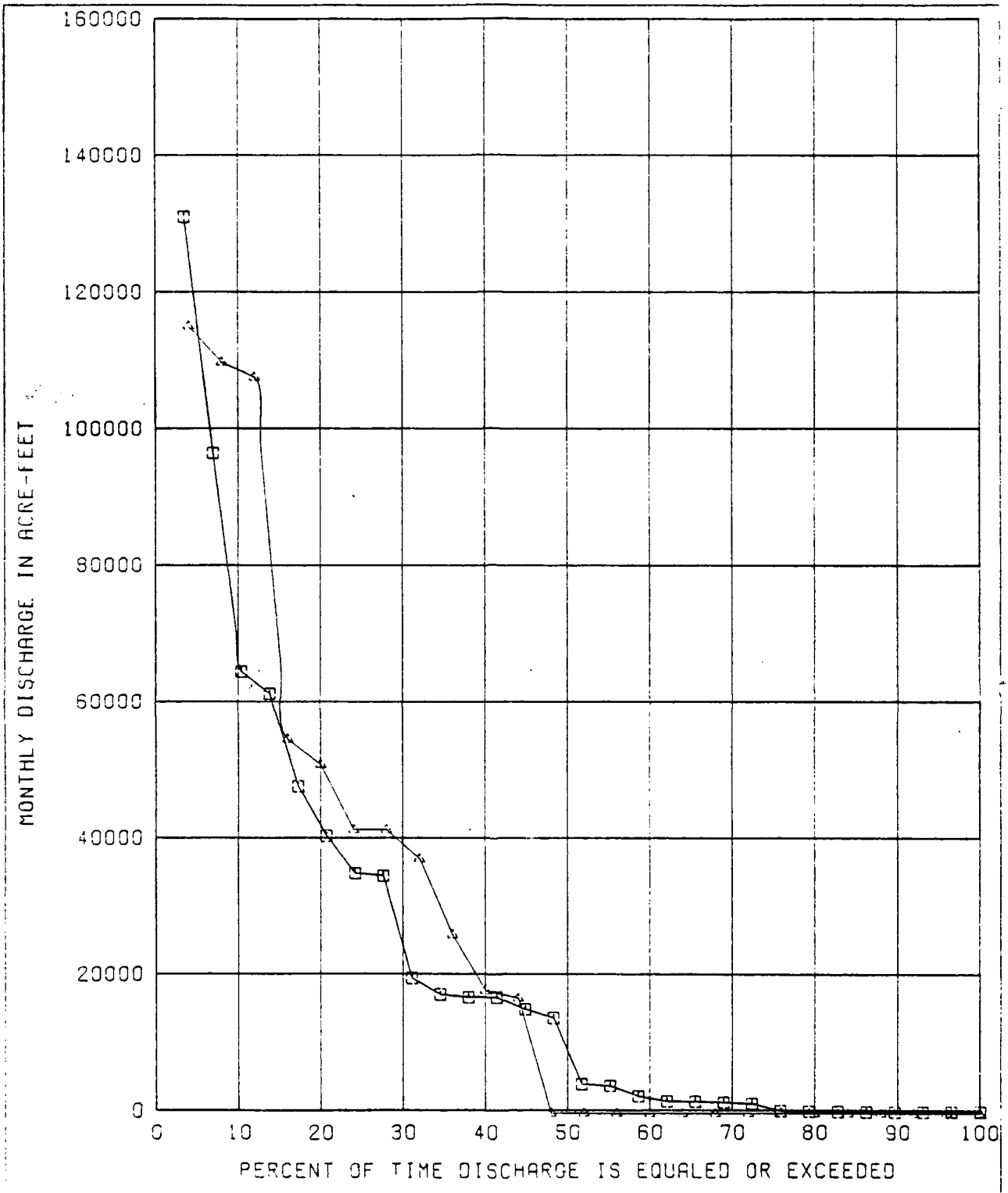
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

TRINITY RIVER BASIN, TEXAS

LAVON LAKE

FLOW DURATION CURVES AT DAM SITE

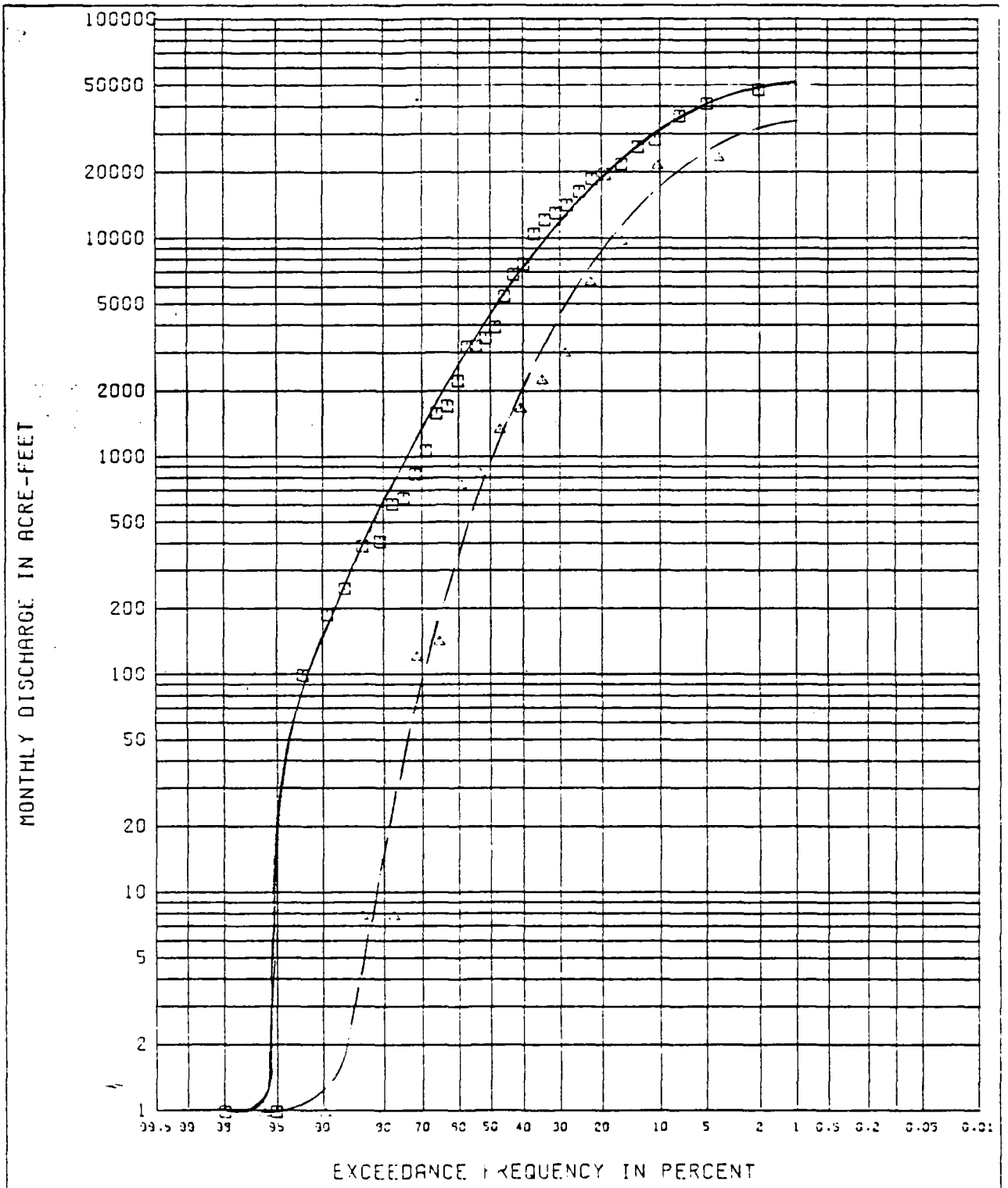
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS F ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

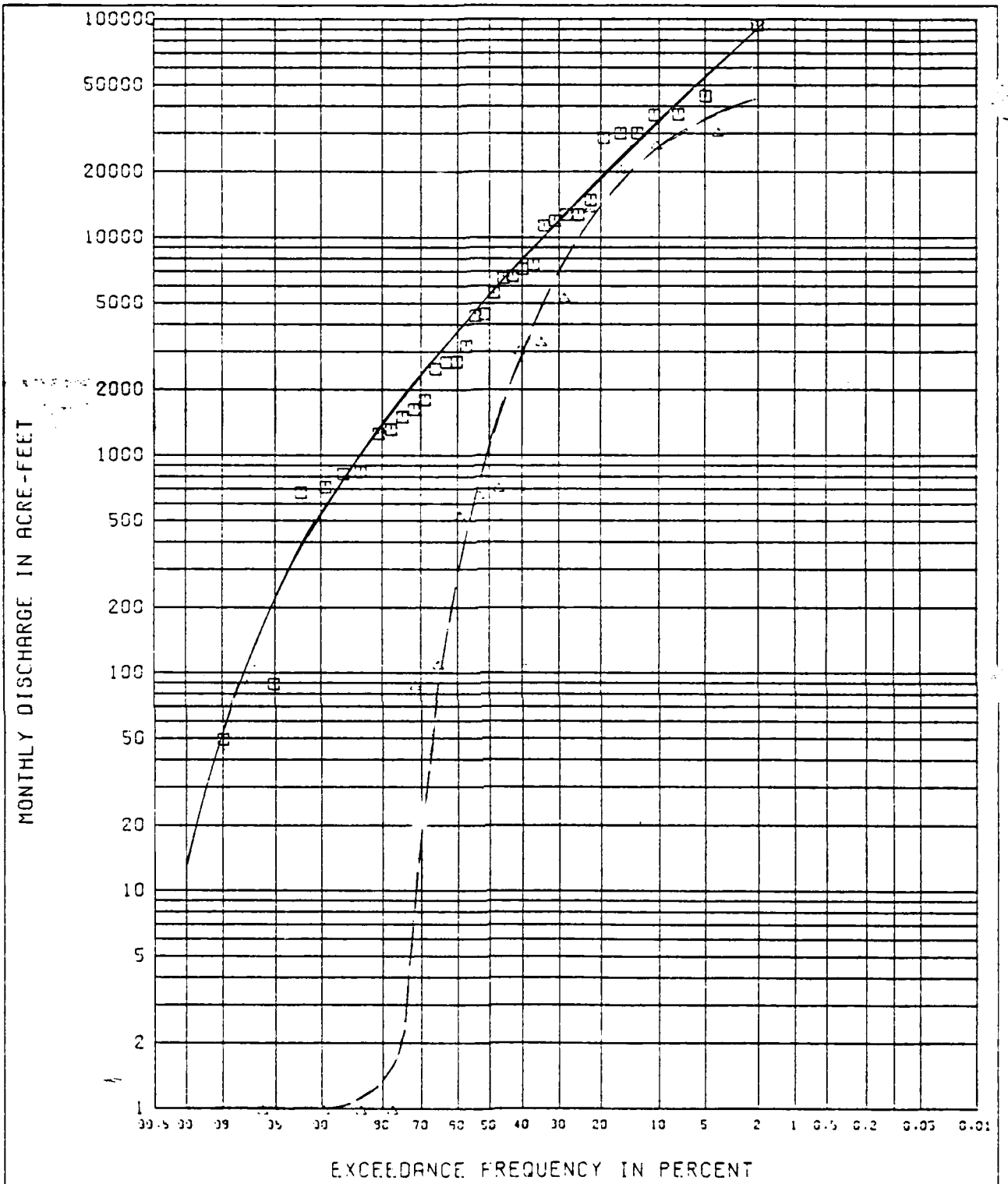
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

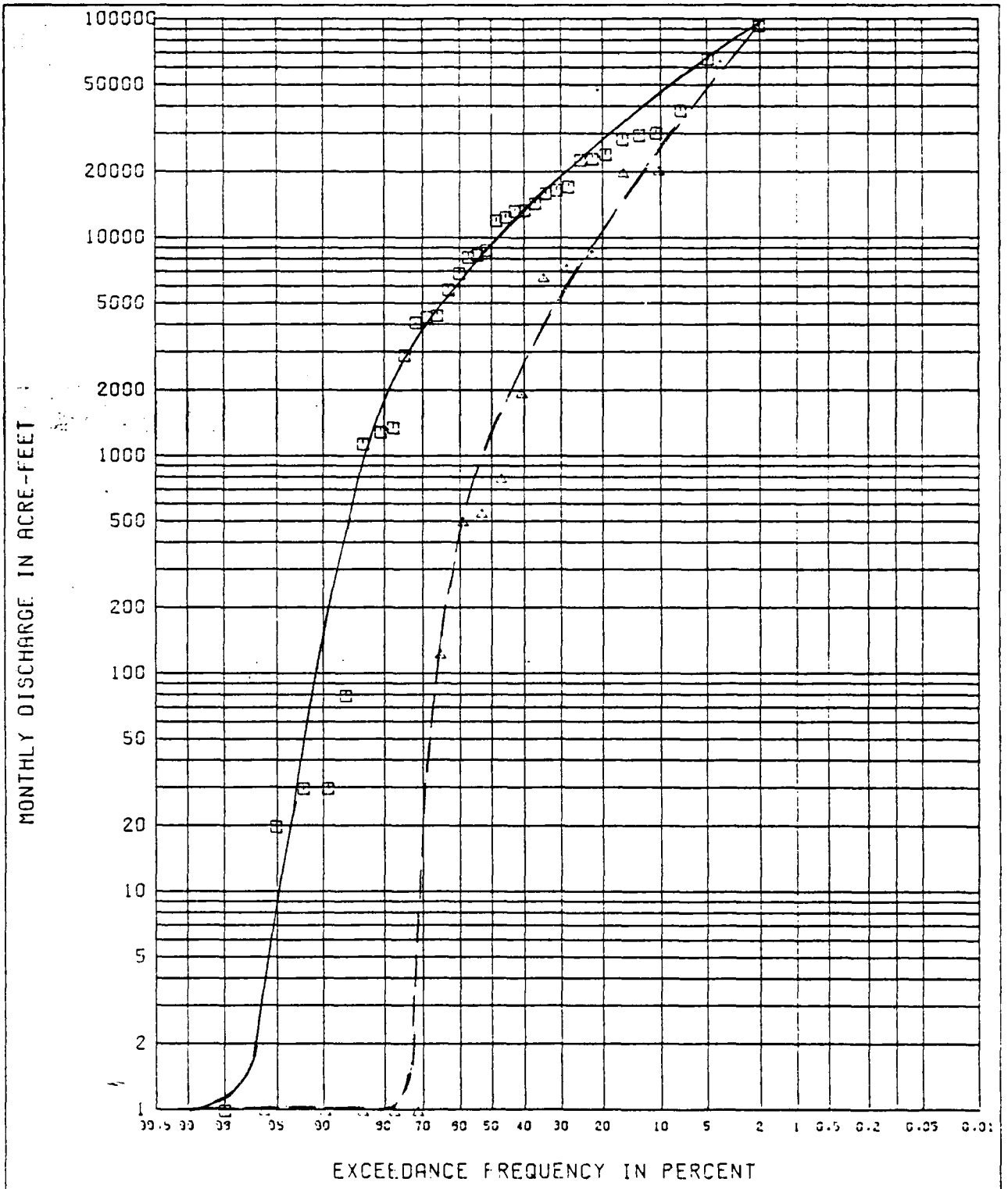
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1978)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

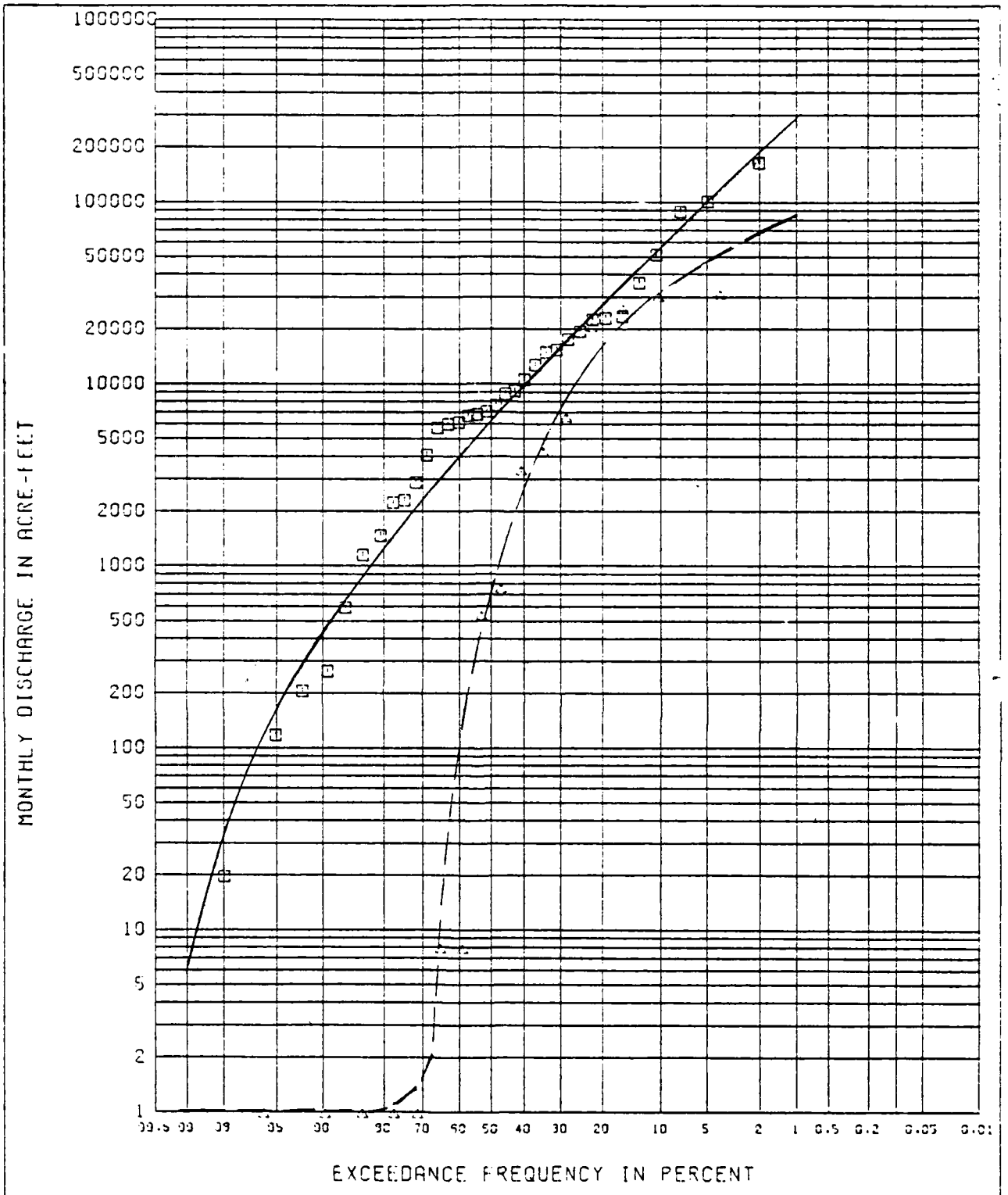
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

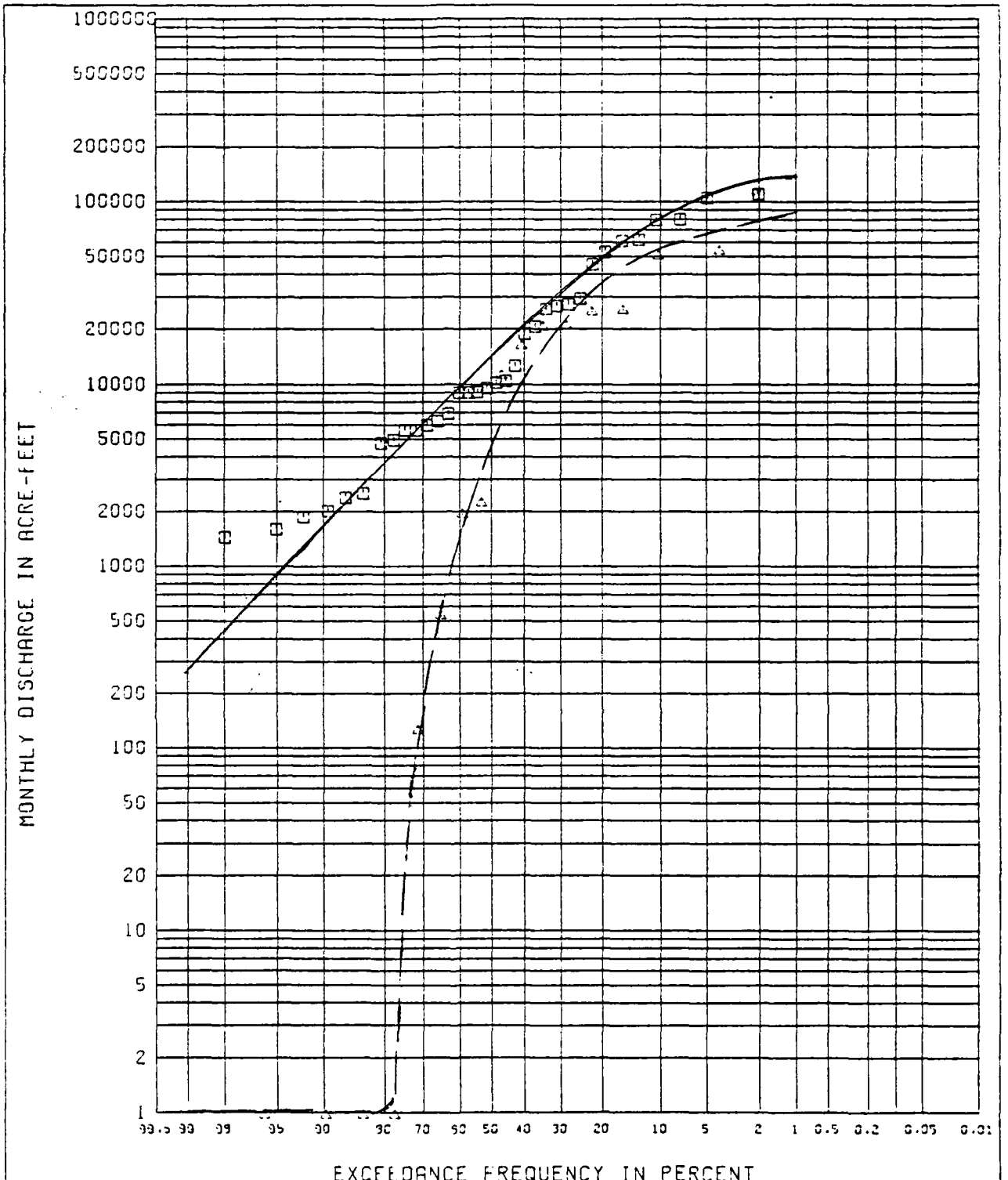
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE

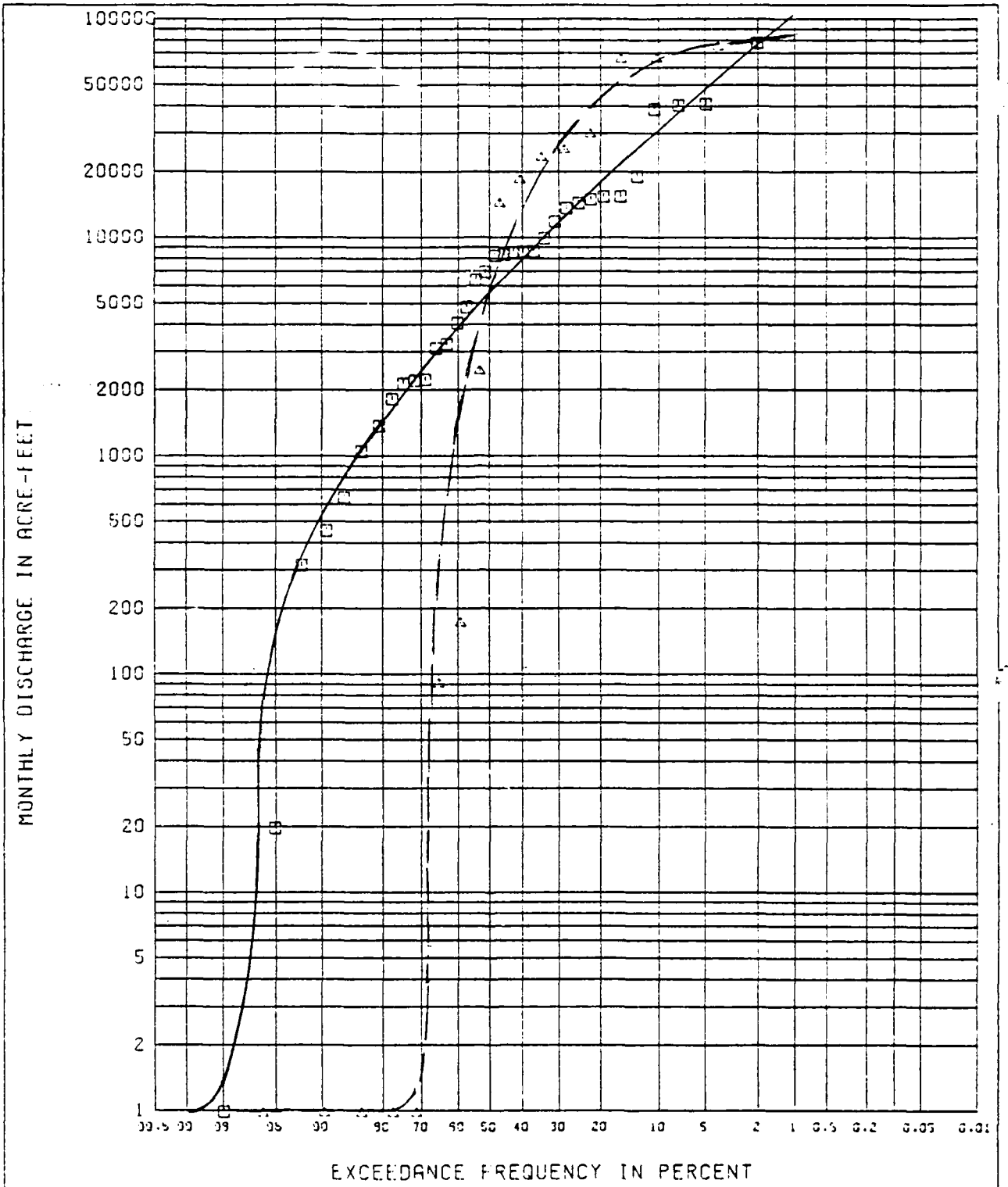
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

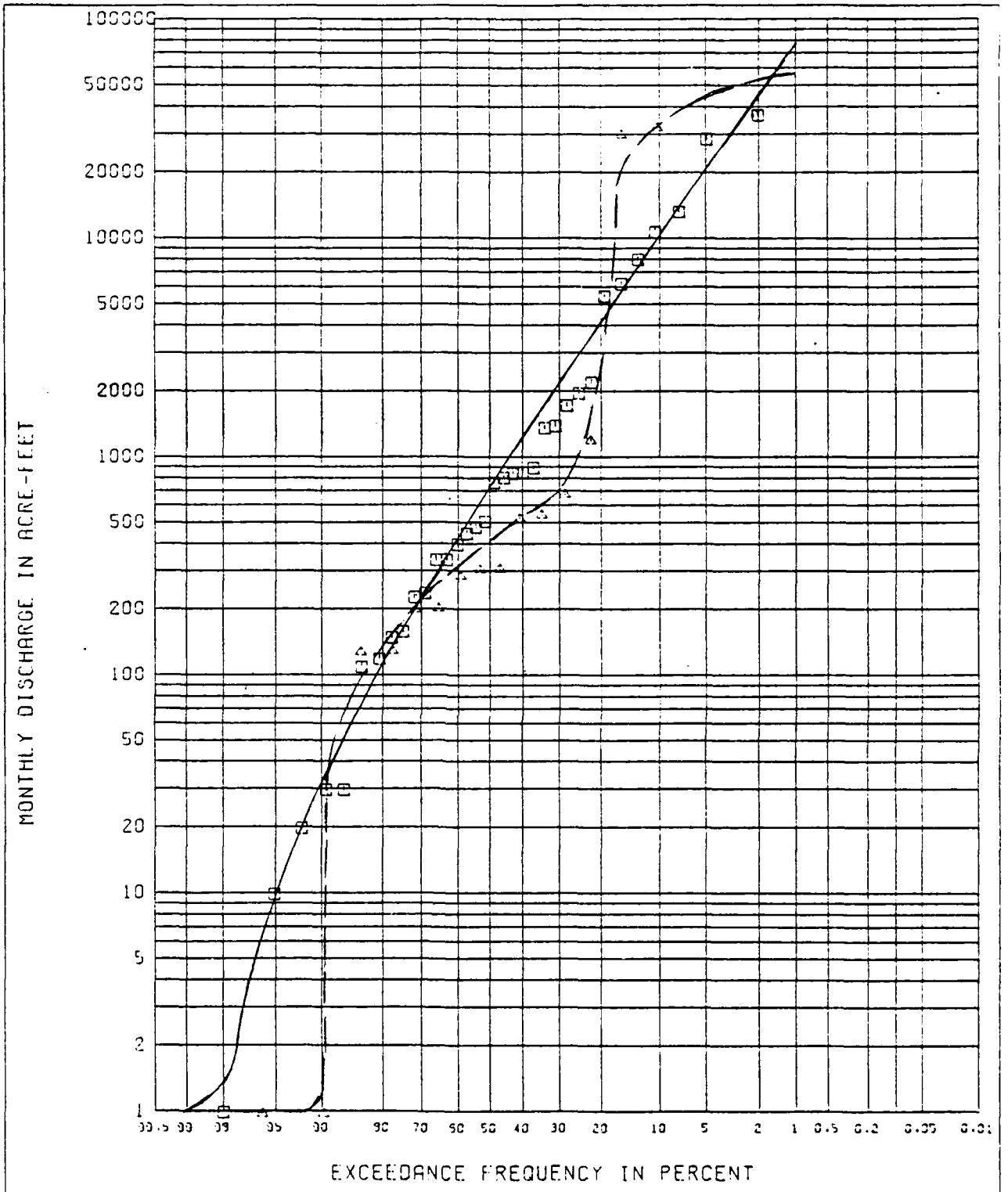
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

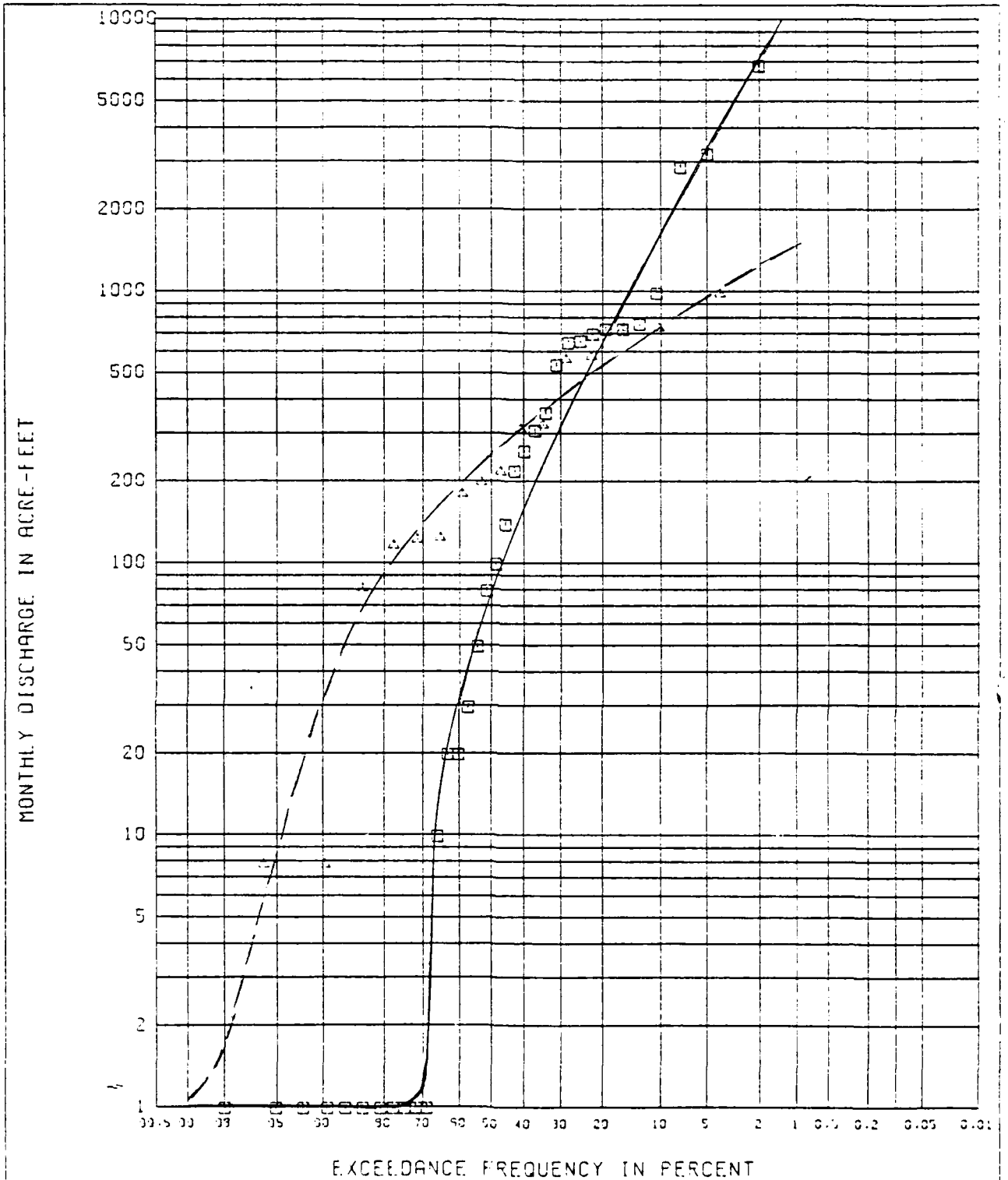
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

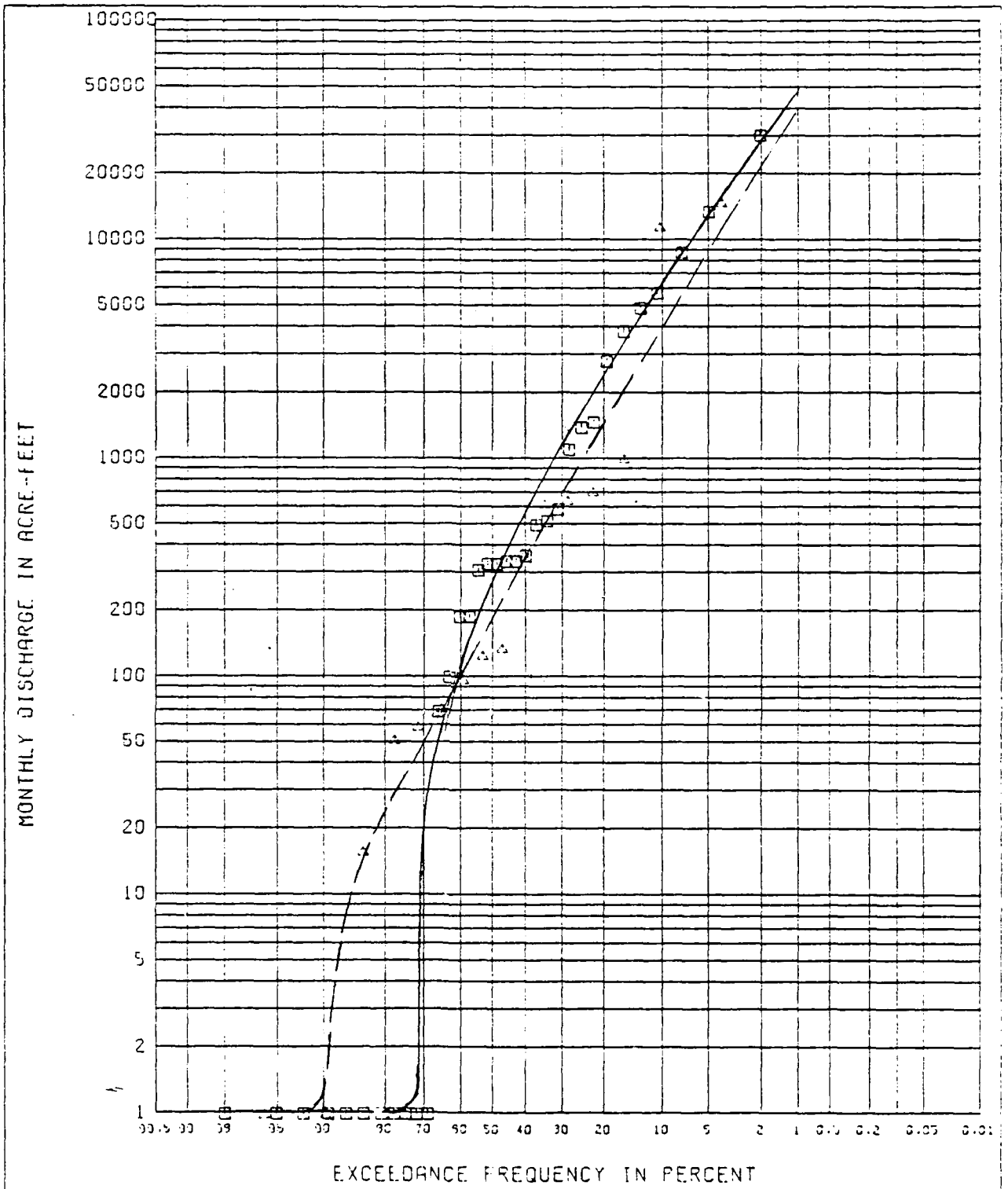
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

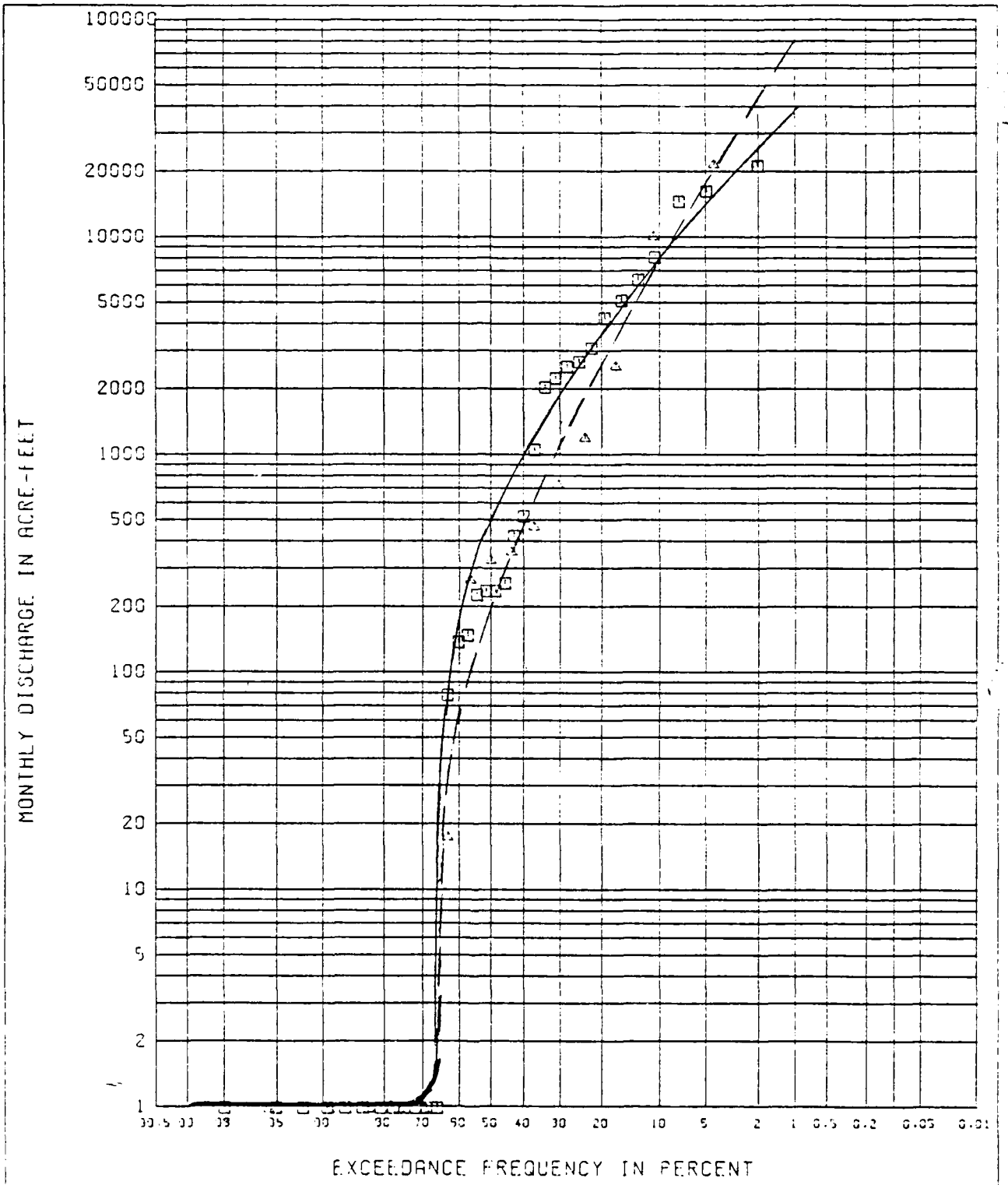
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

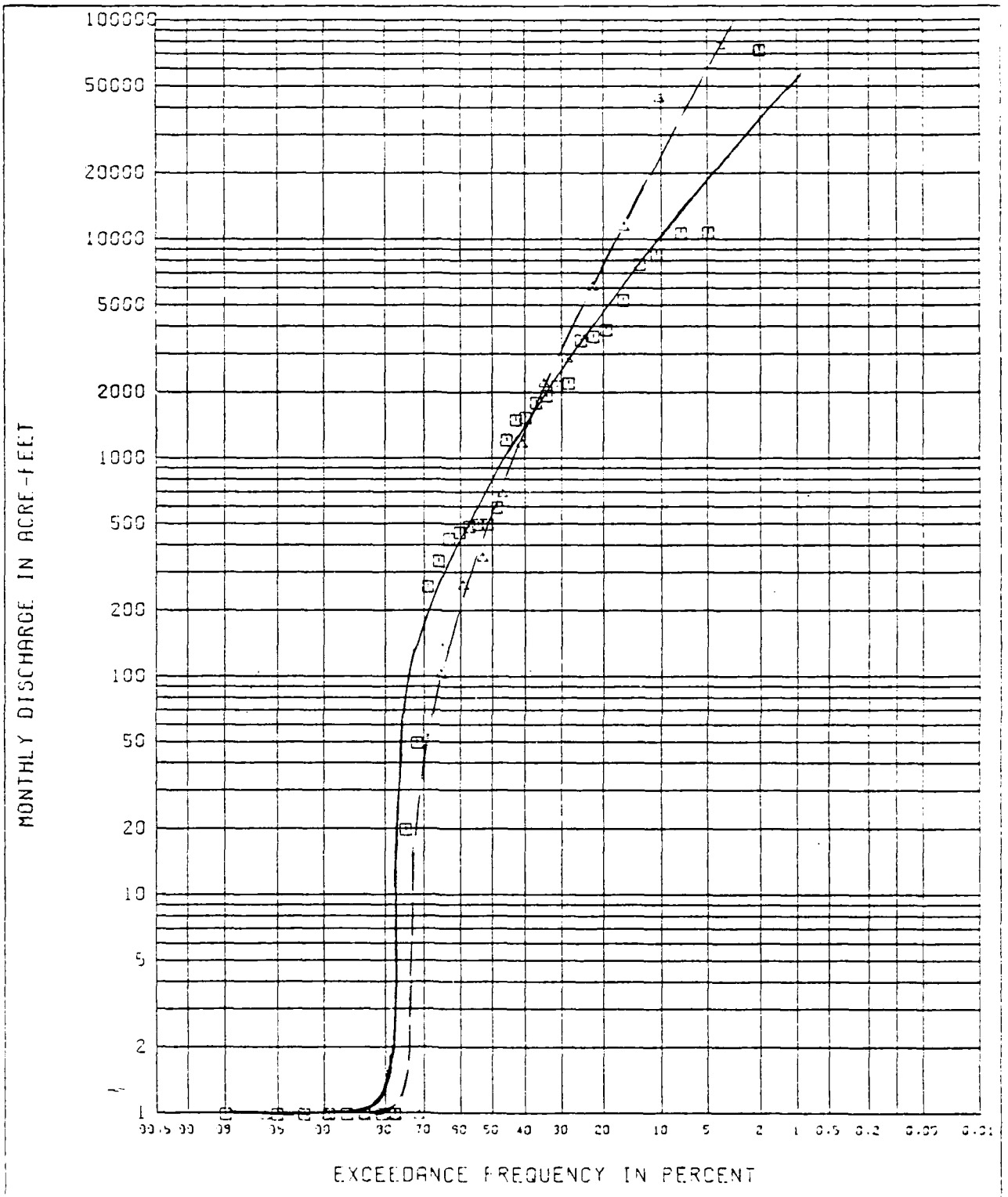
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1958-1978)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

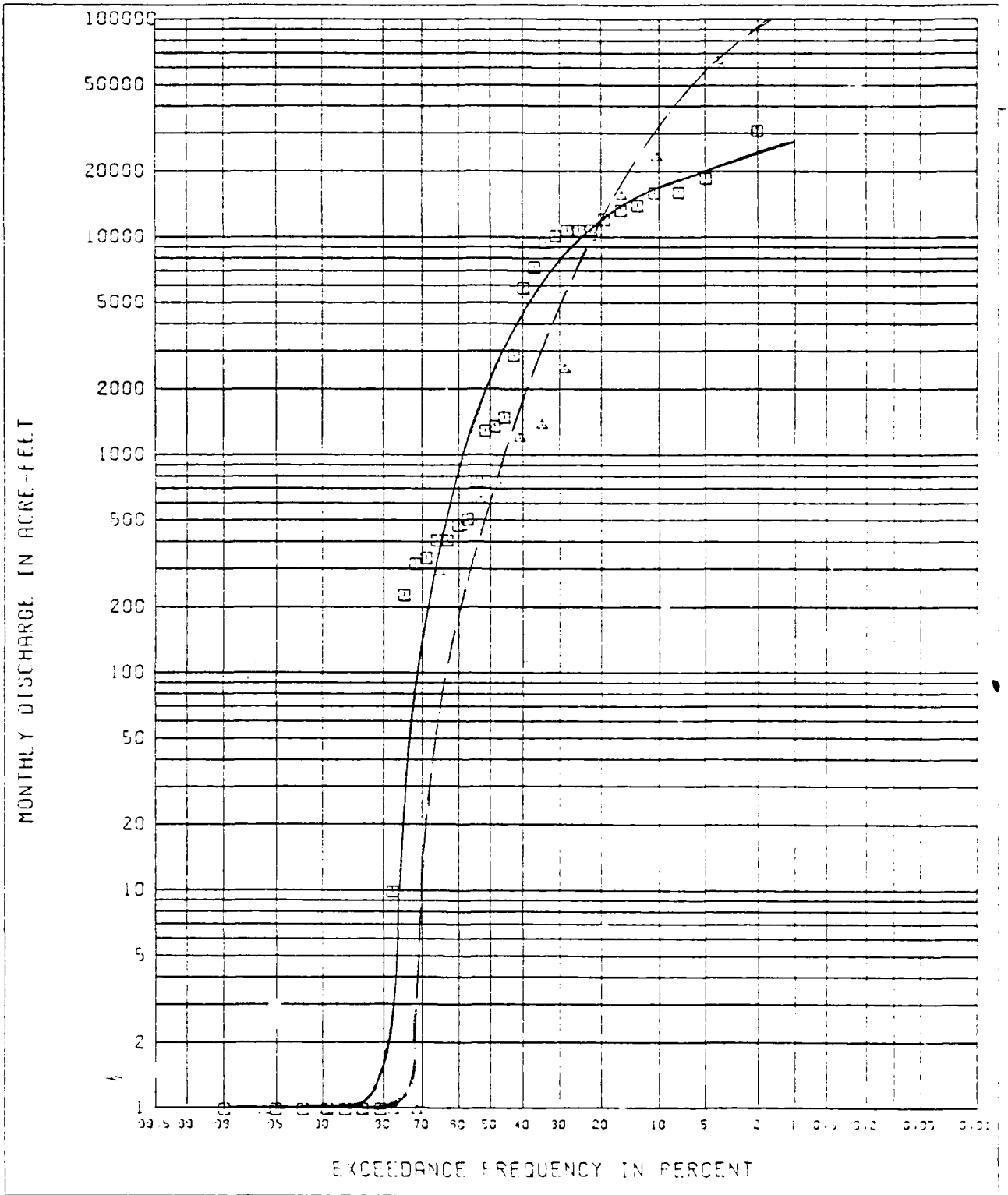
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

DECEMBER FLOWS

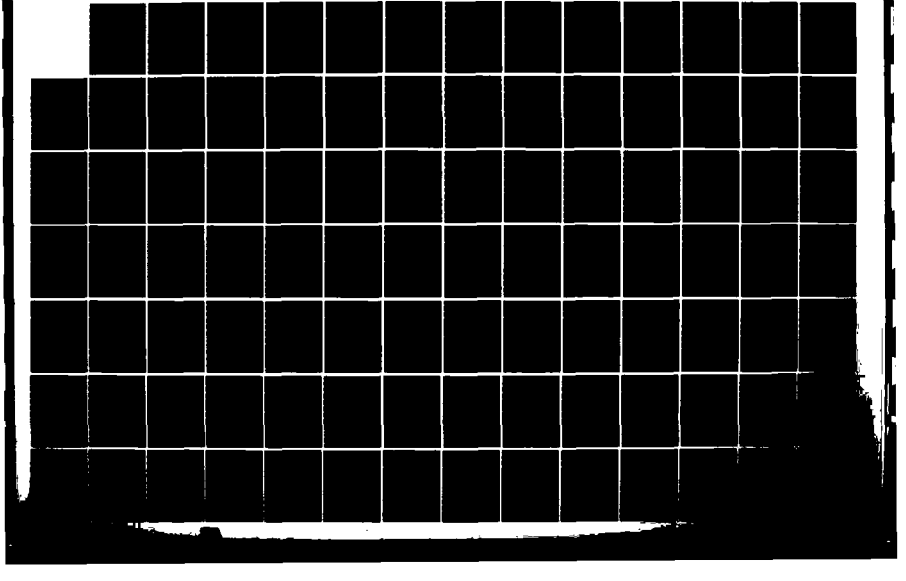
U.S. ARMY ENGINEER DISTRICT, FORT WORTH

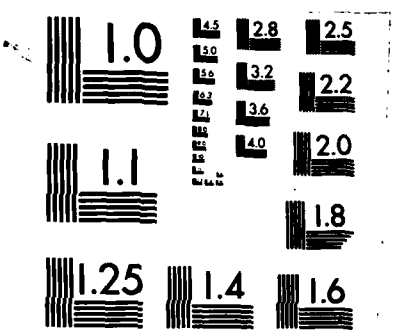
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

AD-A156 497 RESERVOIR CONTROL CENTER: ACTIVITIES AND ACCOMPLISHMENTS OF THE SOUTHWEST..(U) CORPS OF ENGINEERS DALLAS TX SOUTHWESTERN DIV JAN 81 4/7

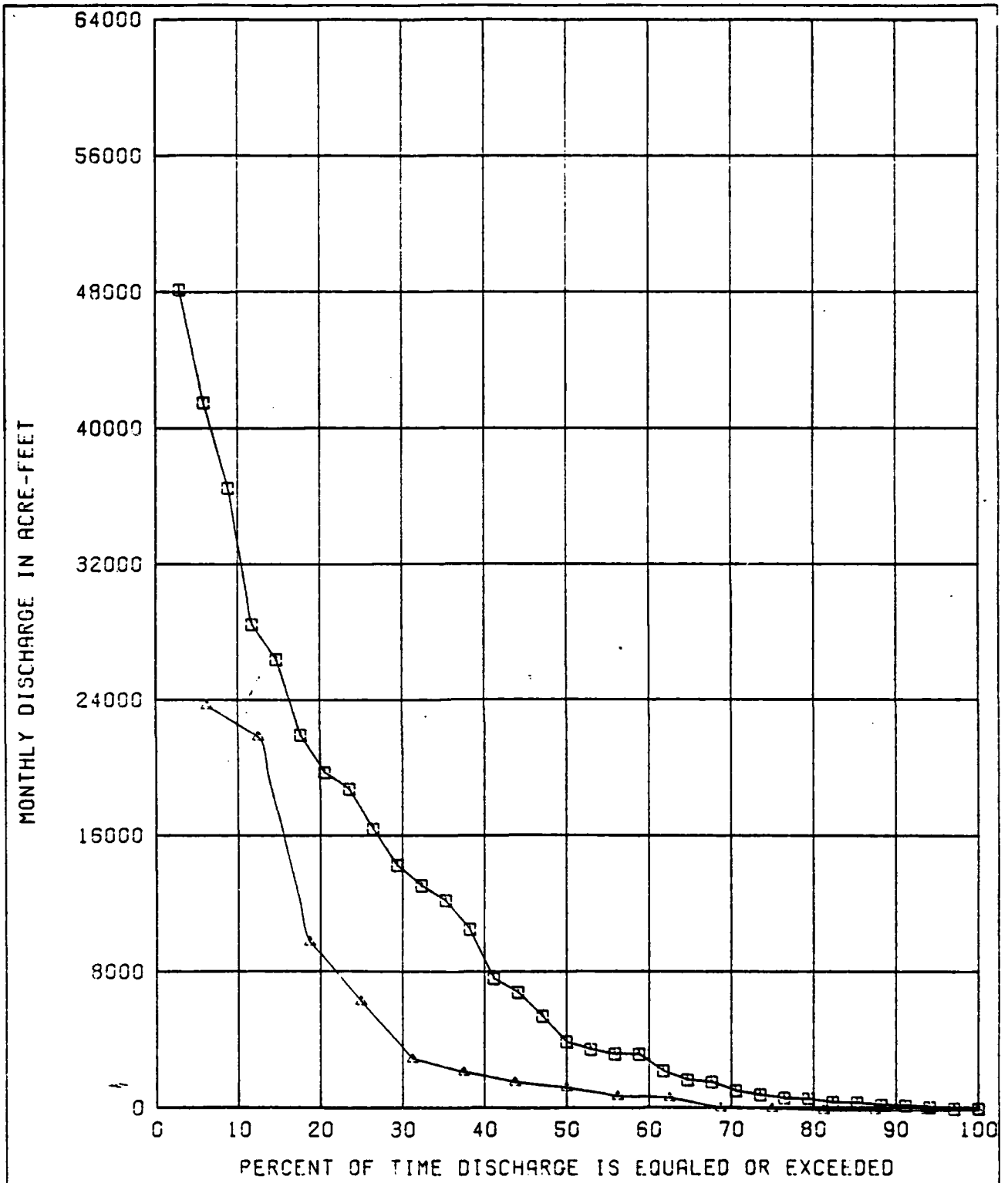
UNCLASSIFIED F/G 13/2 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1978)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

FLOW DURATION CURVES AT DAM SITE

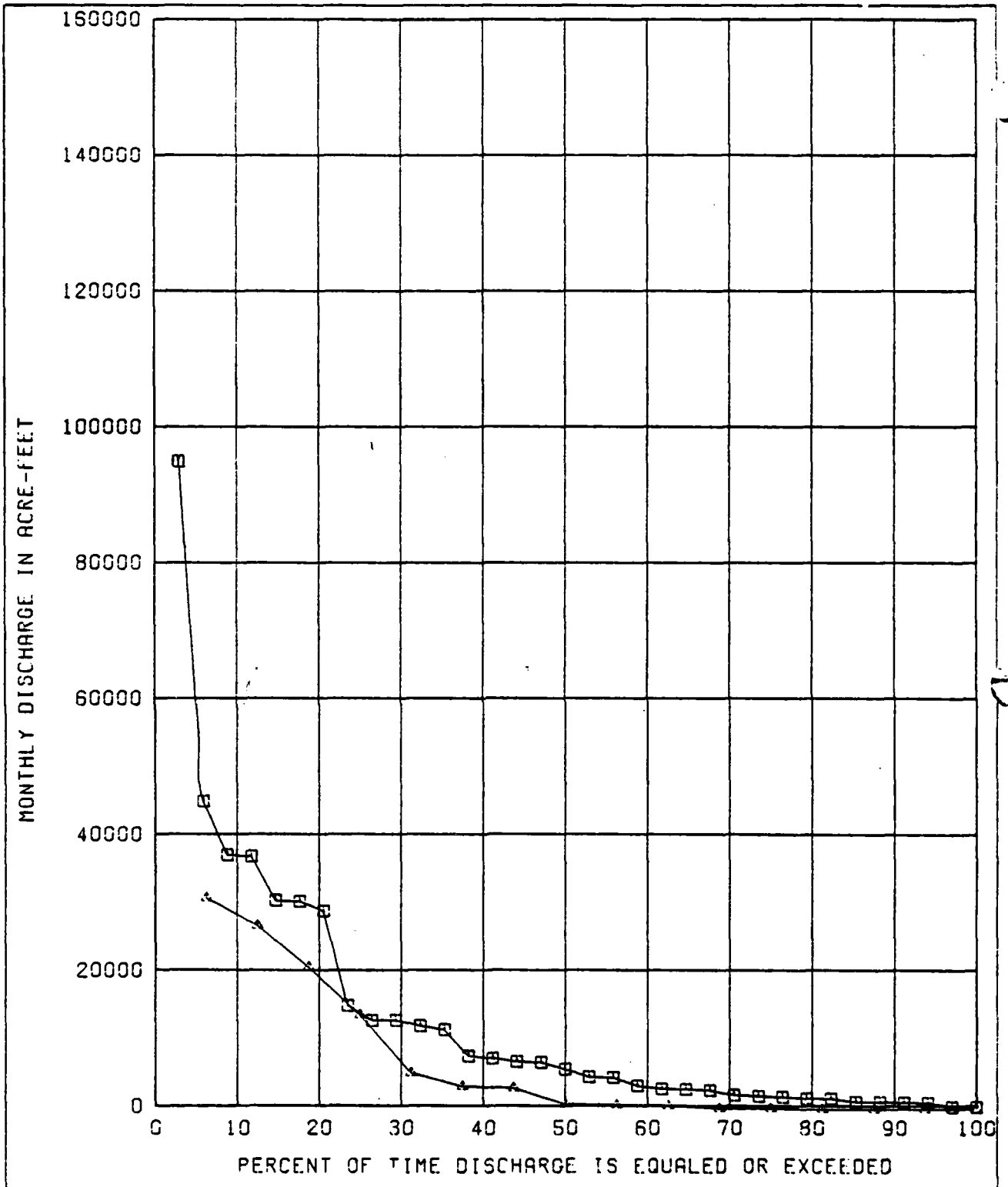
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

FLOW DURATION CURVES AT DAM SITE

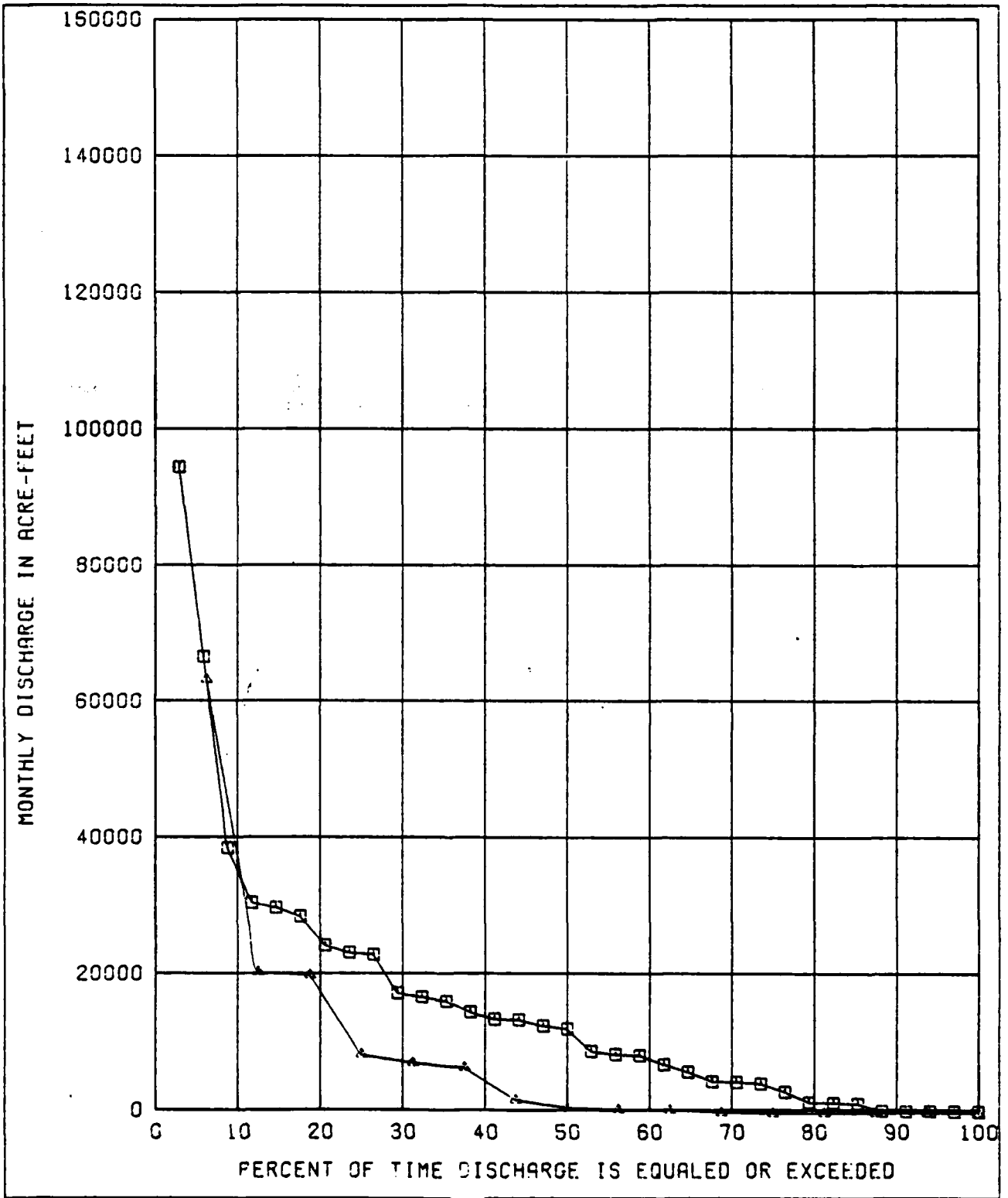
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITI NS (PERIOD OF RECORD 1993-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

FLOW DURATION CURVES AT DAM SITE

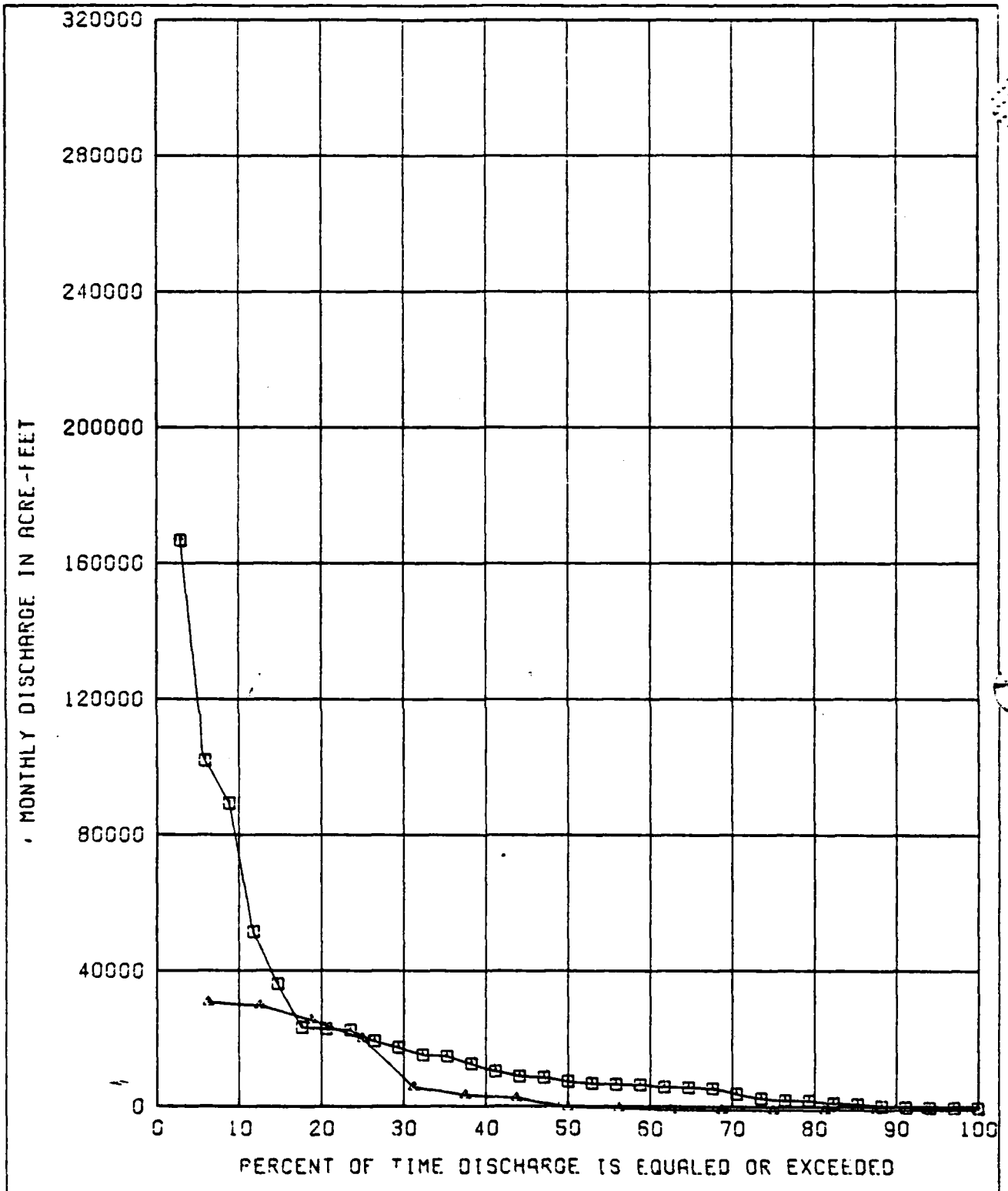
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

FLOW DURATION CURVES AT DAM SITE

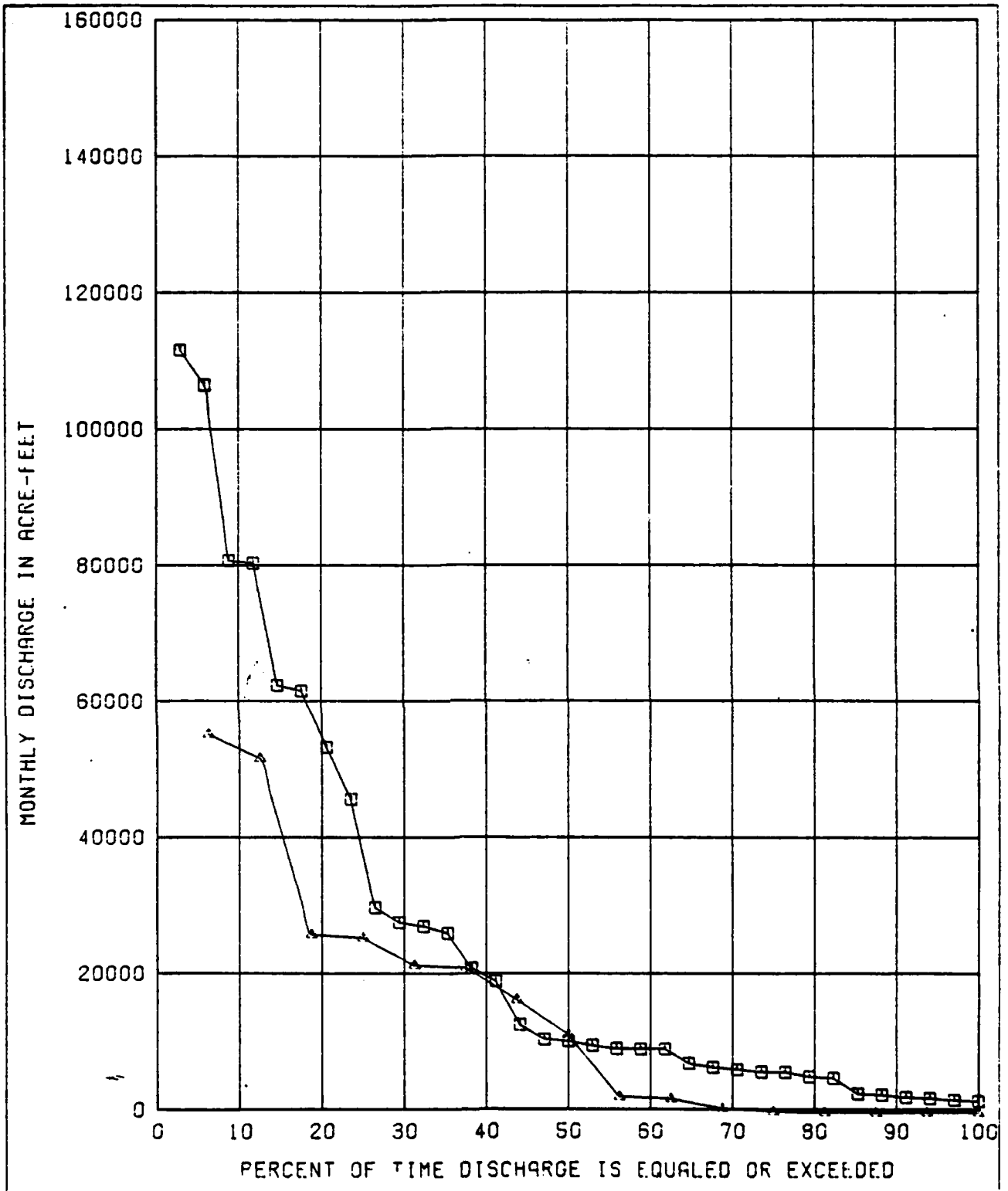
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

FLOW DURATION CURVES AT DAM SITE

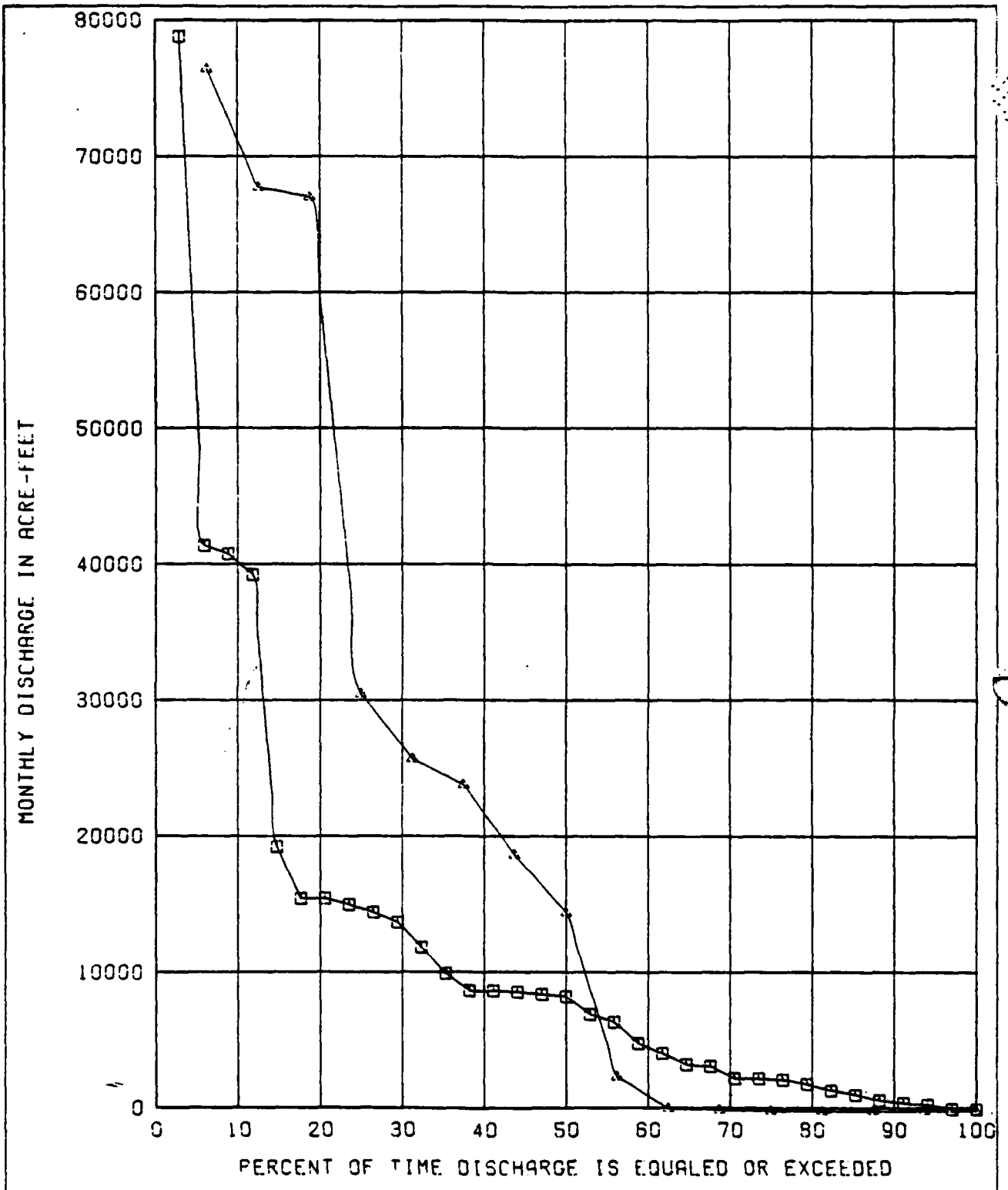
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

FLOW DURATION CURVES AT DAM SITE

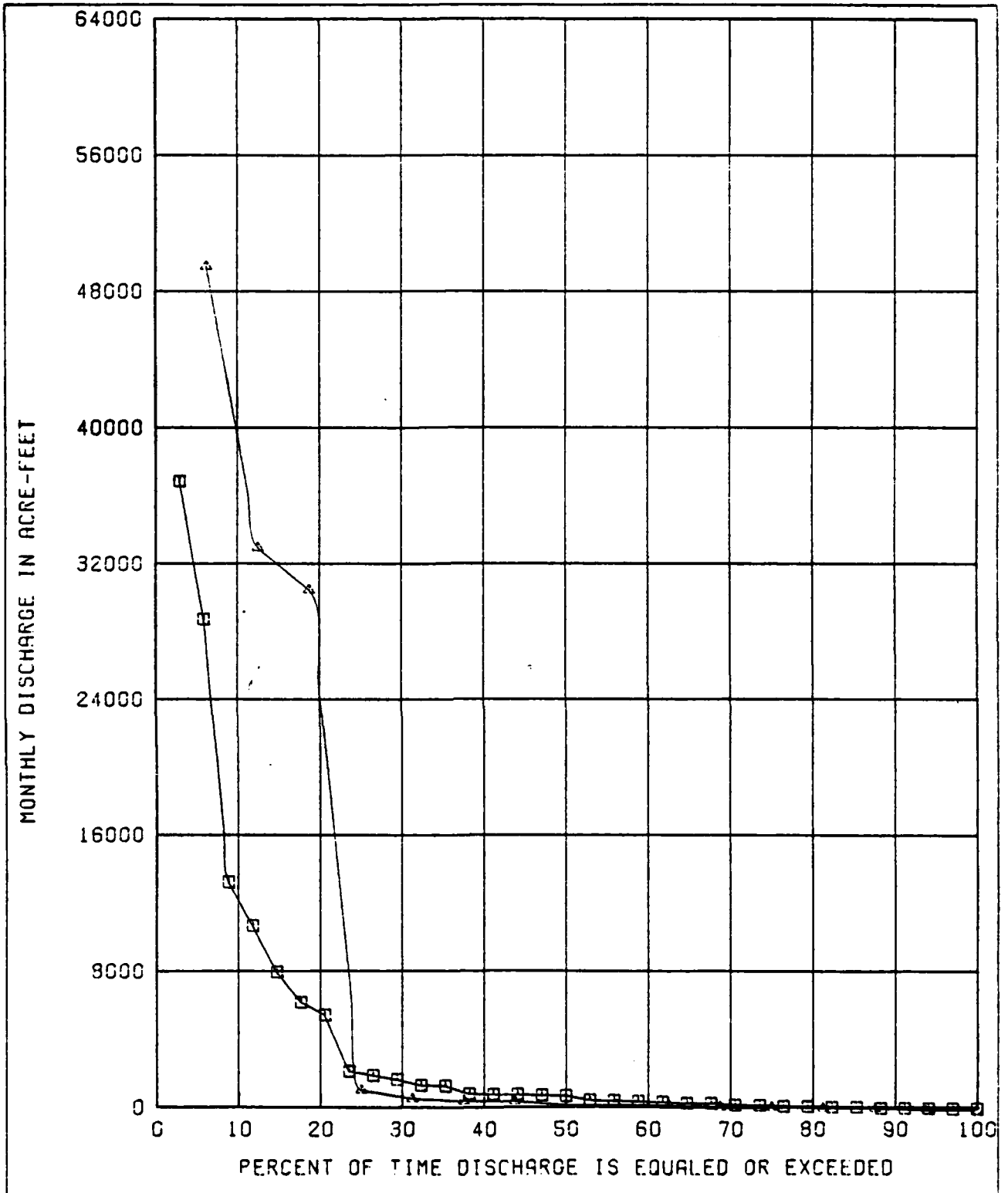
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM LOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

FLOW DURATION CURVES AT DAM SITE

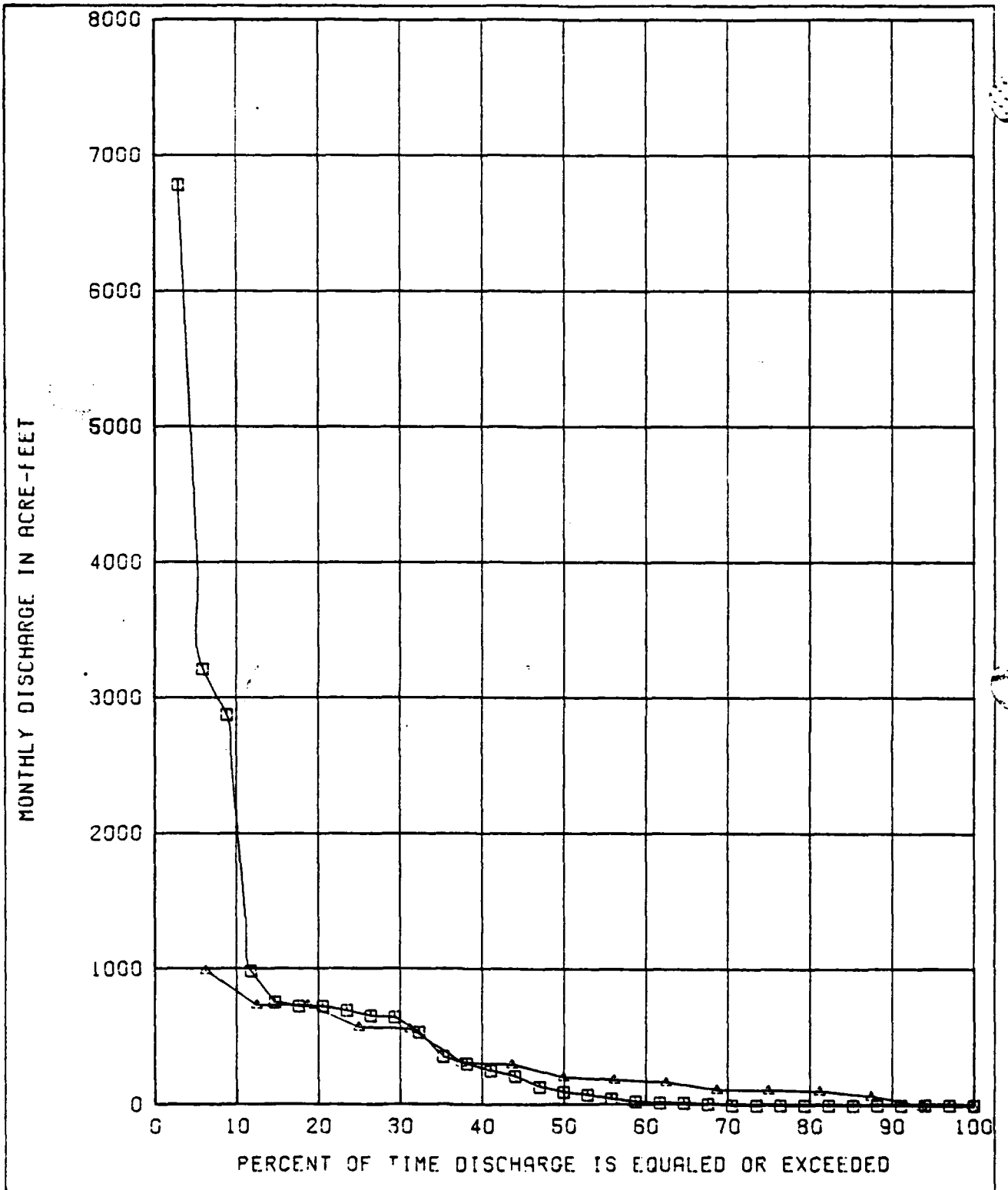
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1957)

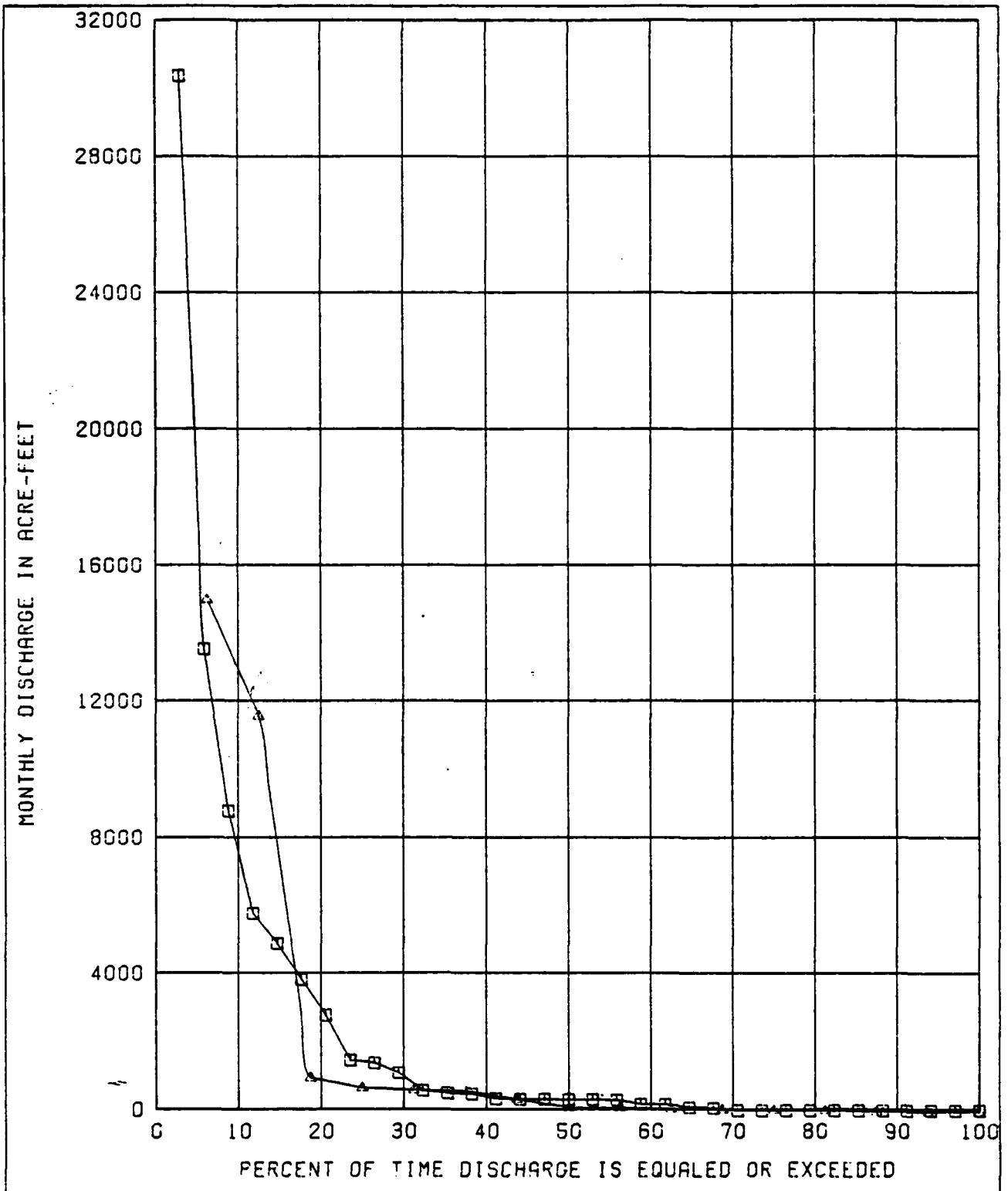
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS
NAVARRO MILLS LAKE
FLOW DURATION CURVES AT DAM SITE
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1993-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

FLOW DURATION CURVES AT DAM SITE

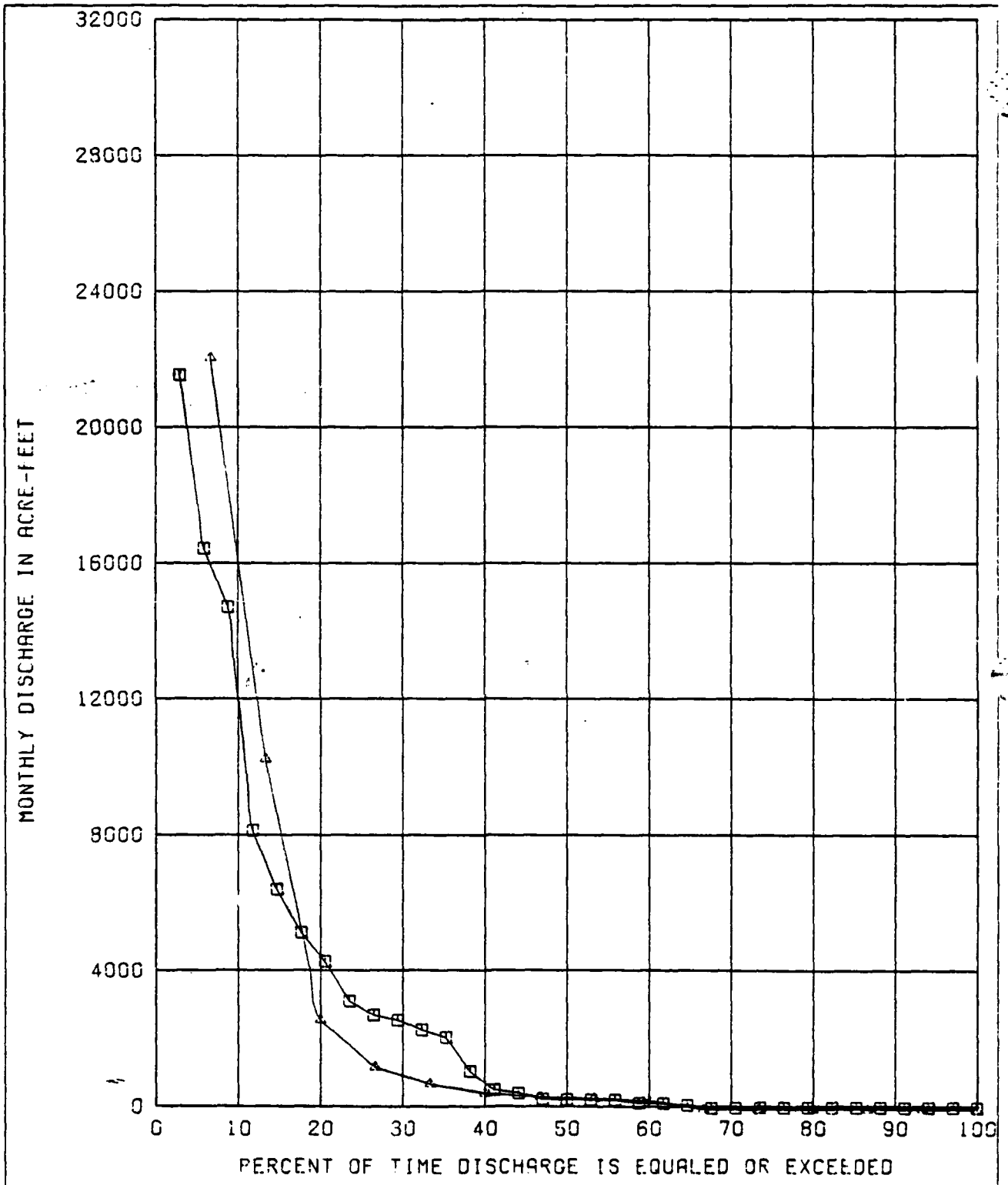
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

FLOW DURATION CURVES AT DAM SITE

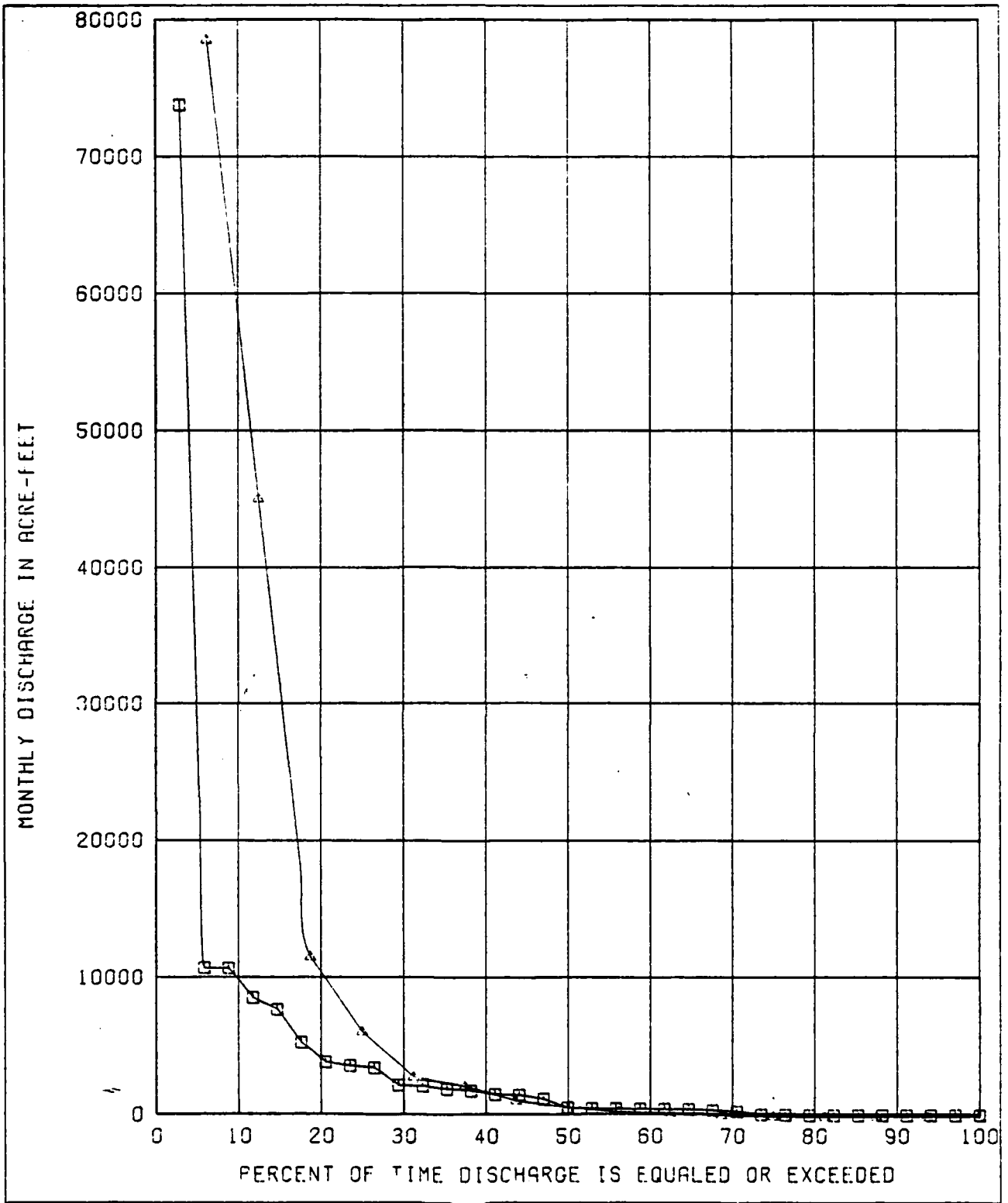
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS

NAVARRO MILLS LAKE

FLOW DURATION CURVES AT DAM SITE

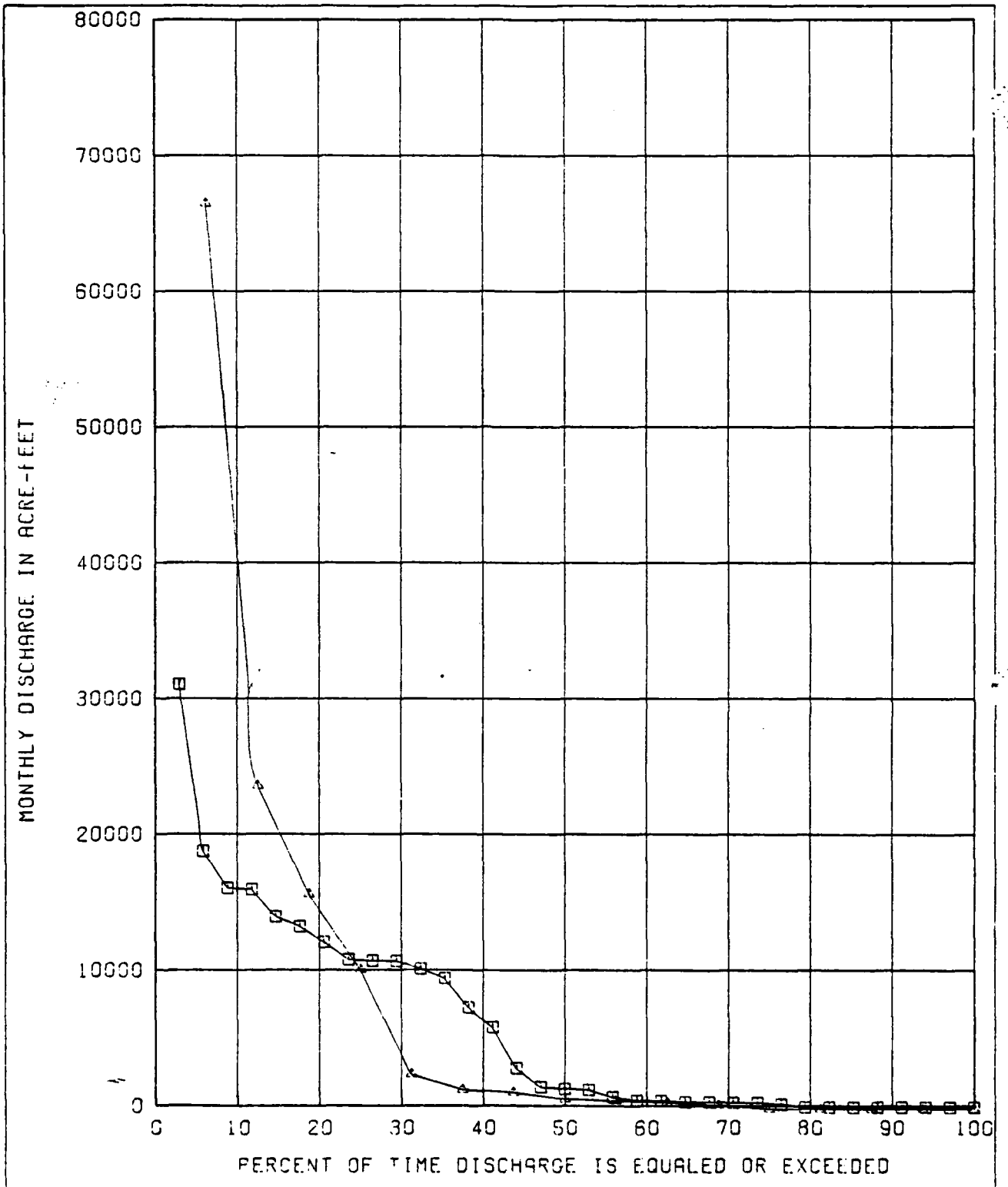
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1957)

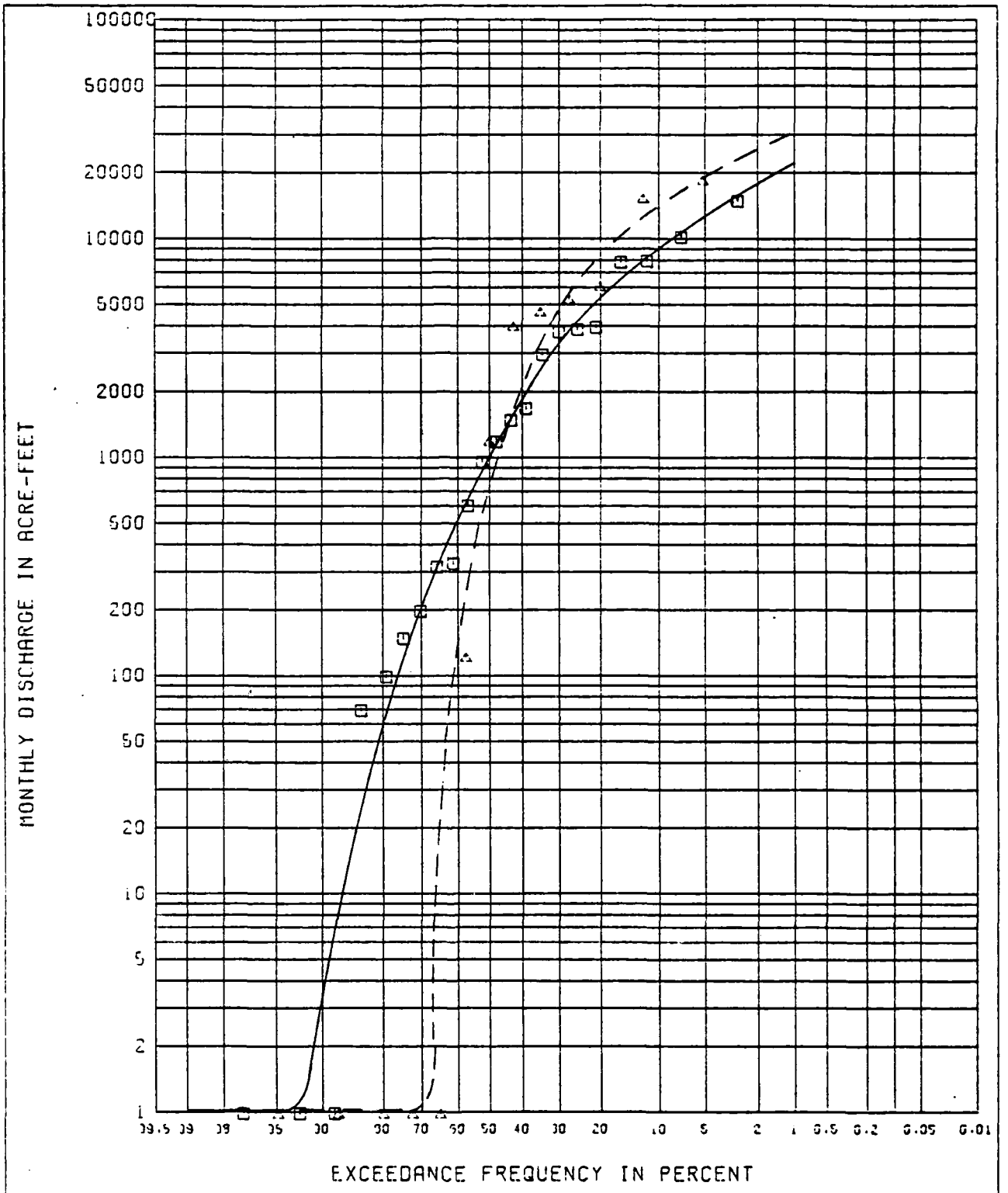
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1979)

TRINITY RIVER BASIN, TEXAS
NAVARRO MILLS LAKE
FLOW DURATION CURVES AT DAM SITE
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

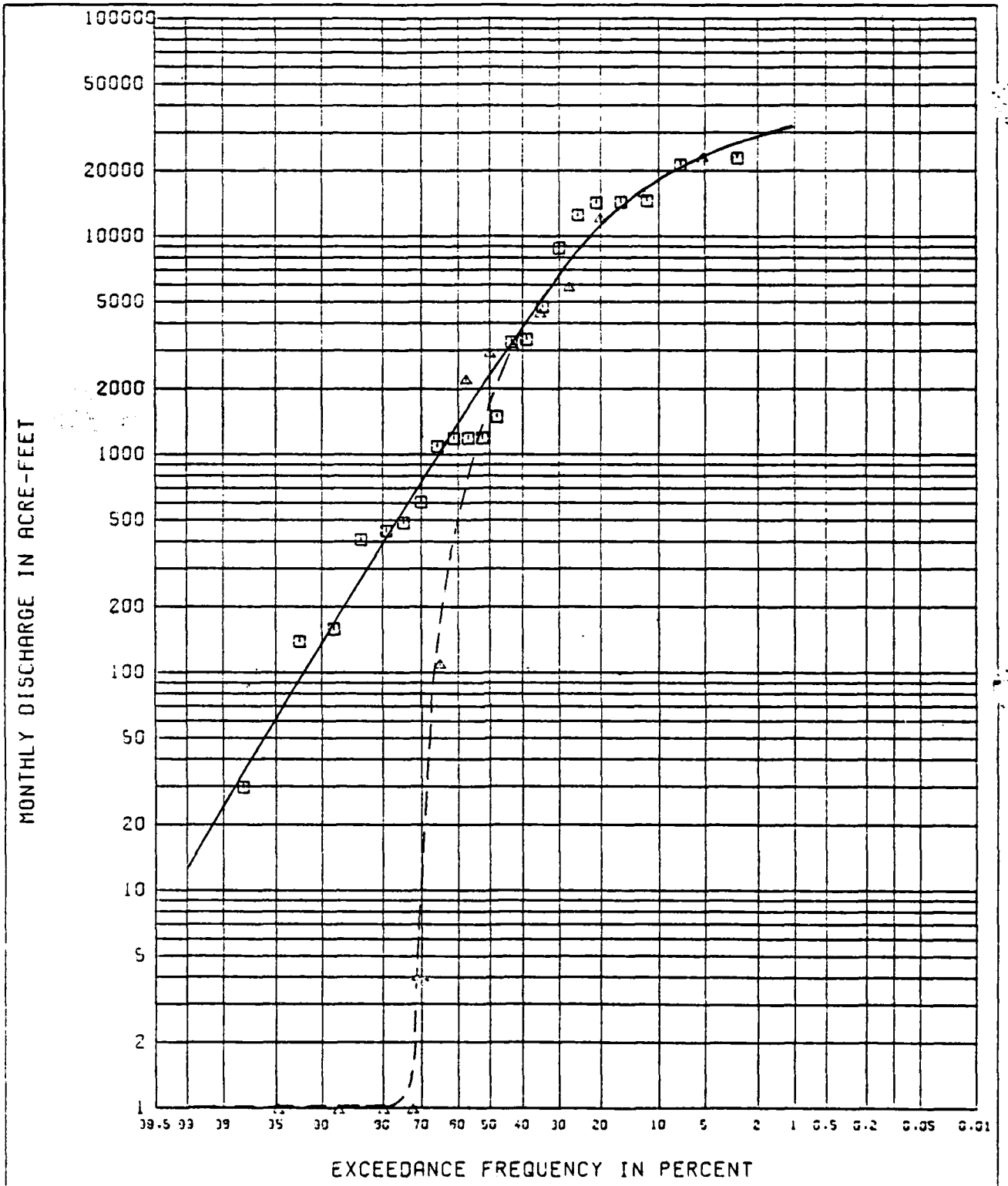
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1969-1979)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

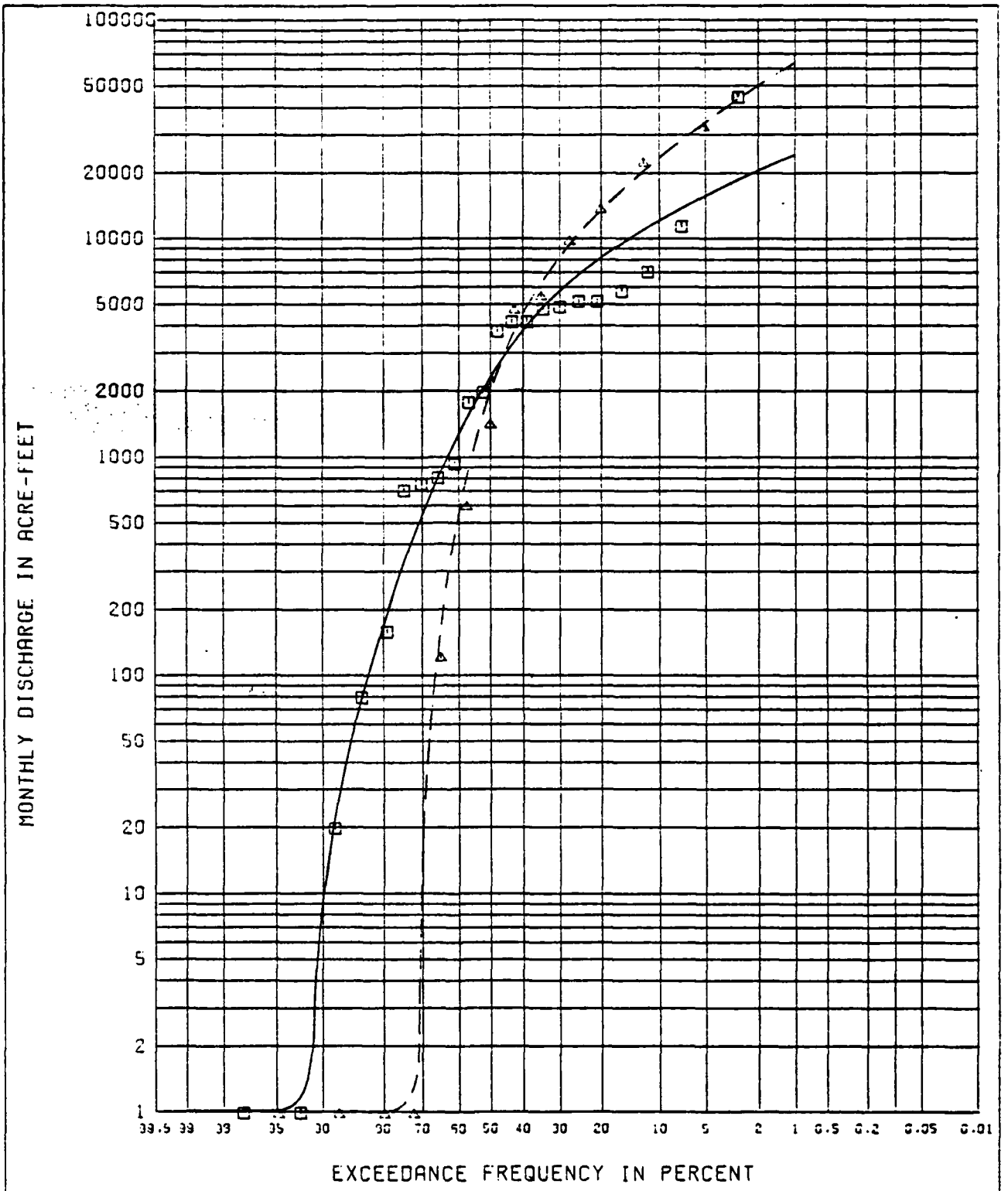
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

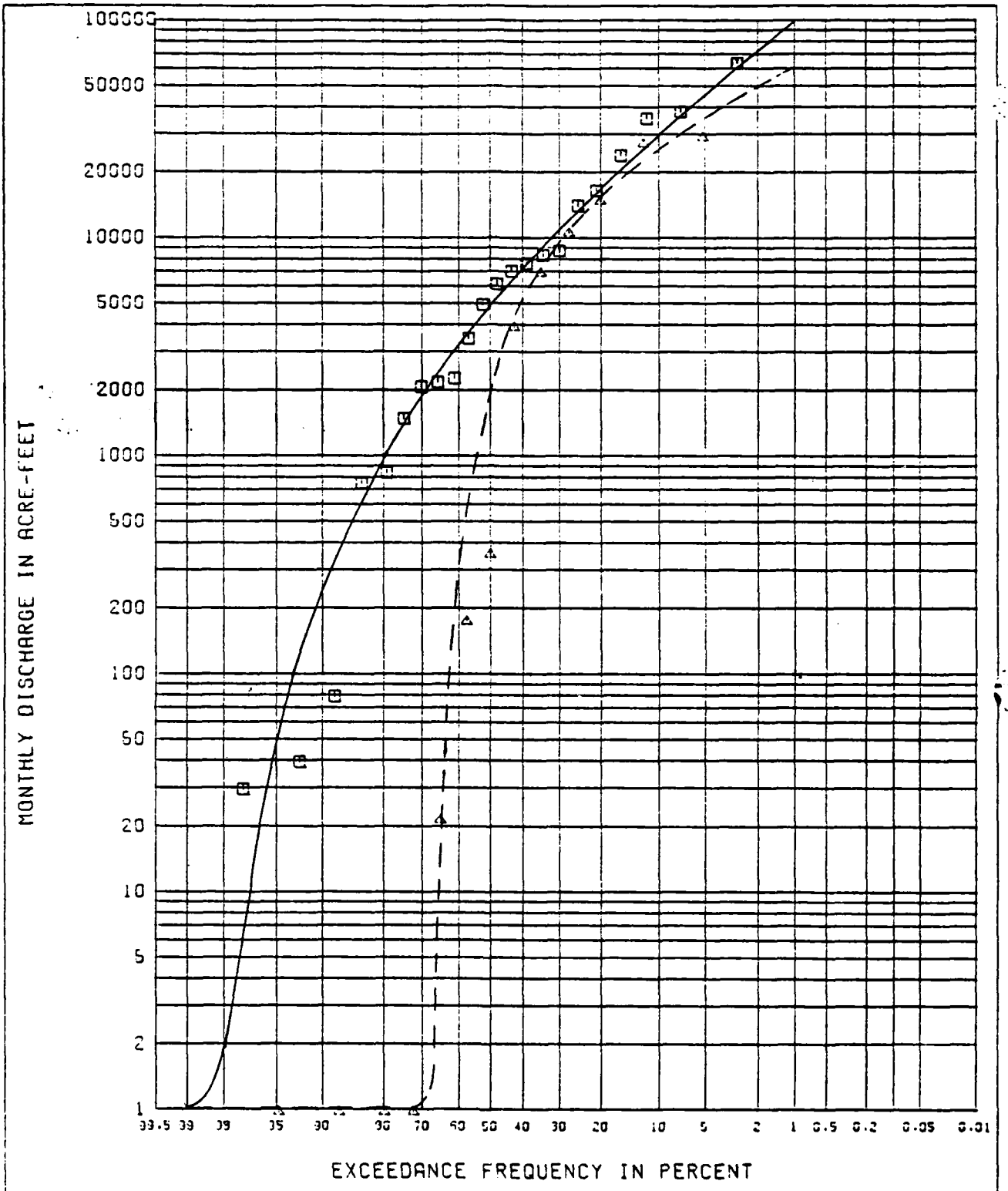
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1930-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1956-1979)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

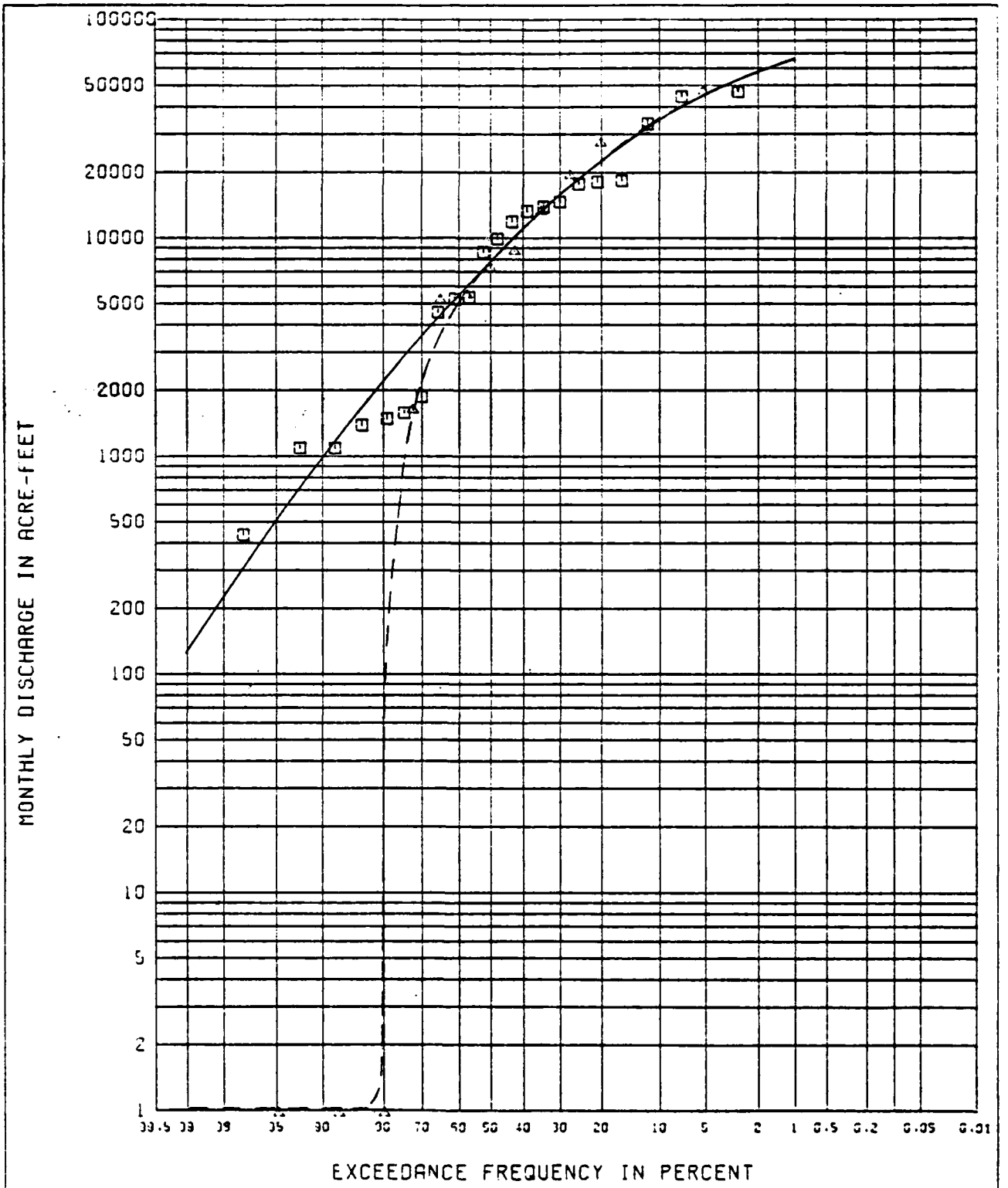
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1930-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1979)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

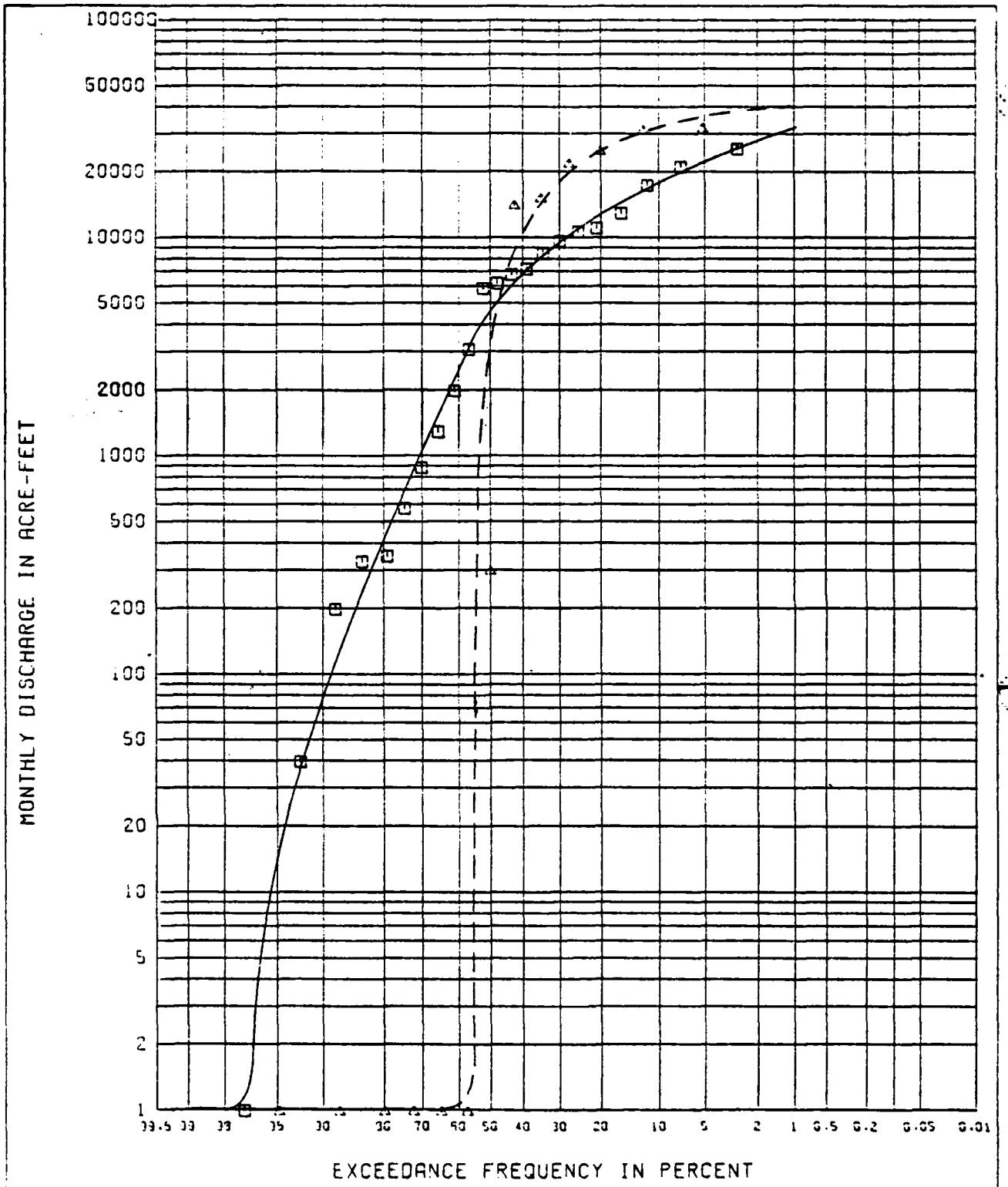
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

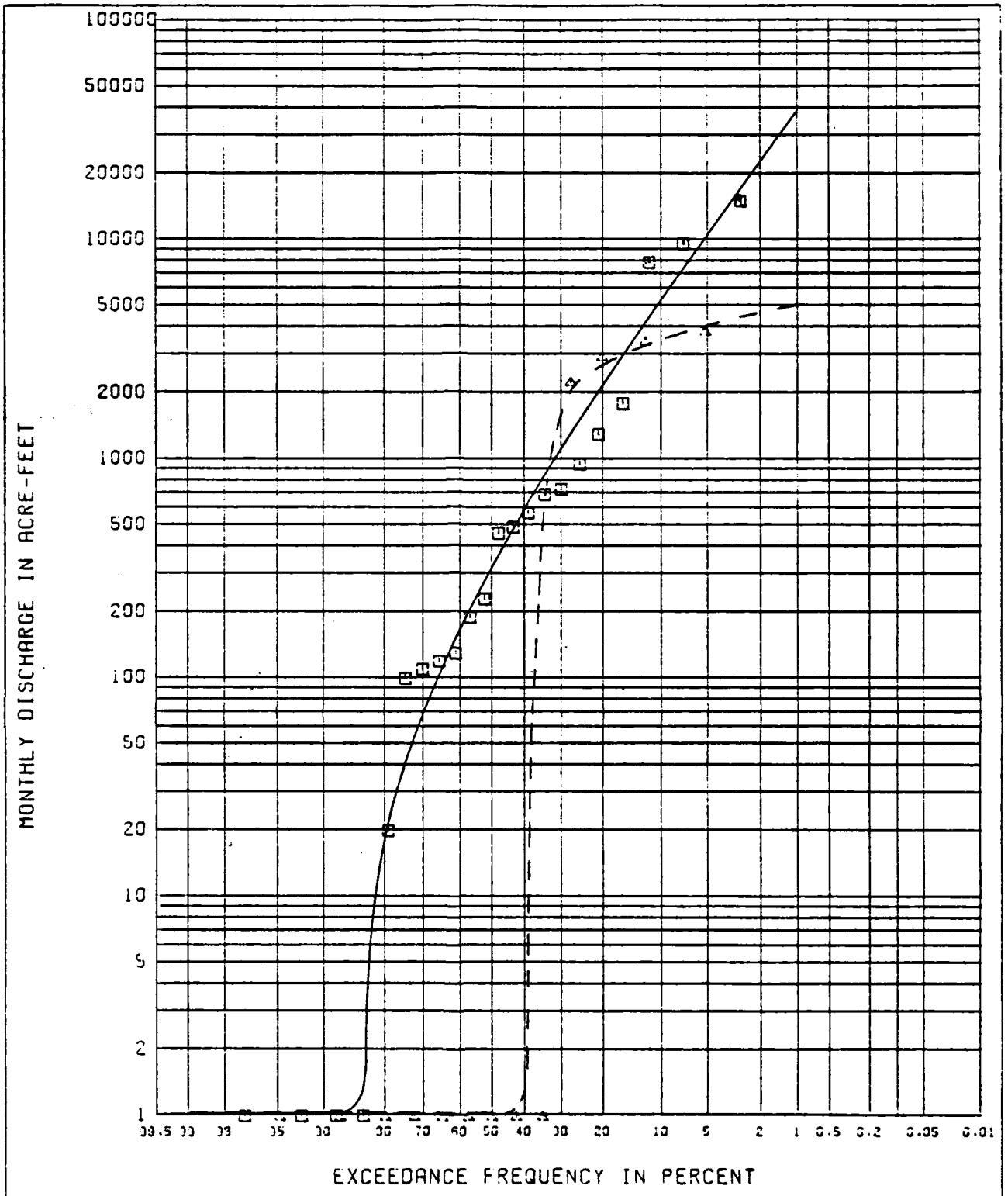
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1969-1979)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

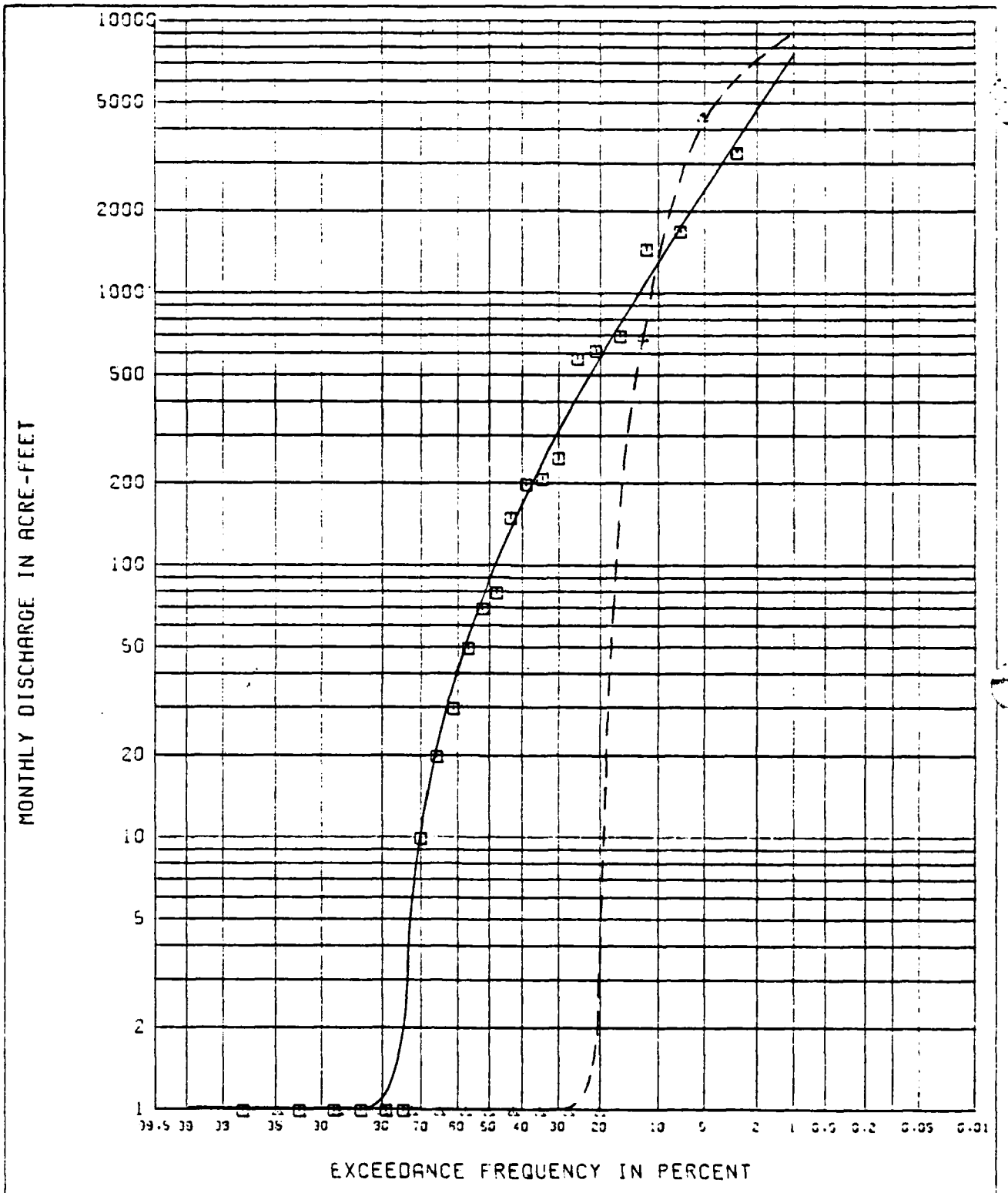
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1976)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

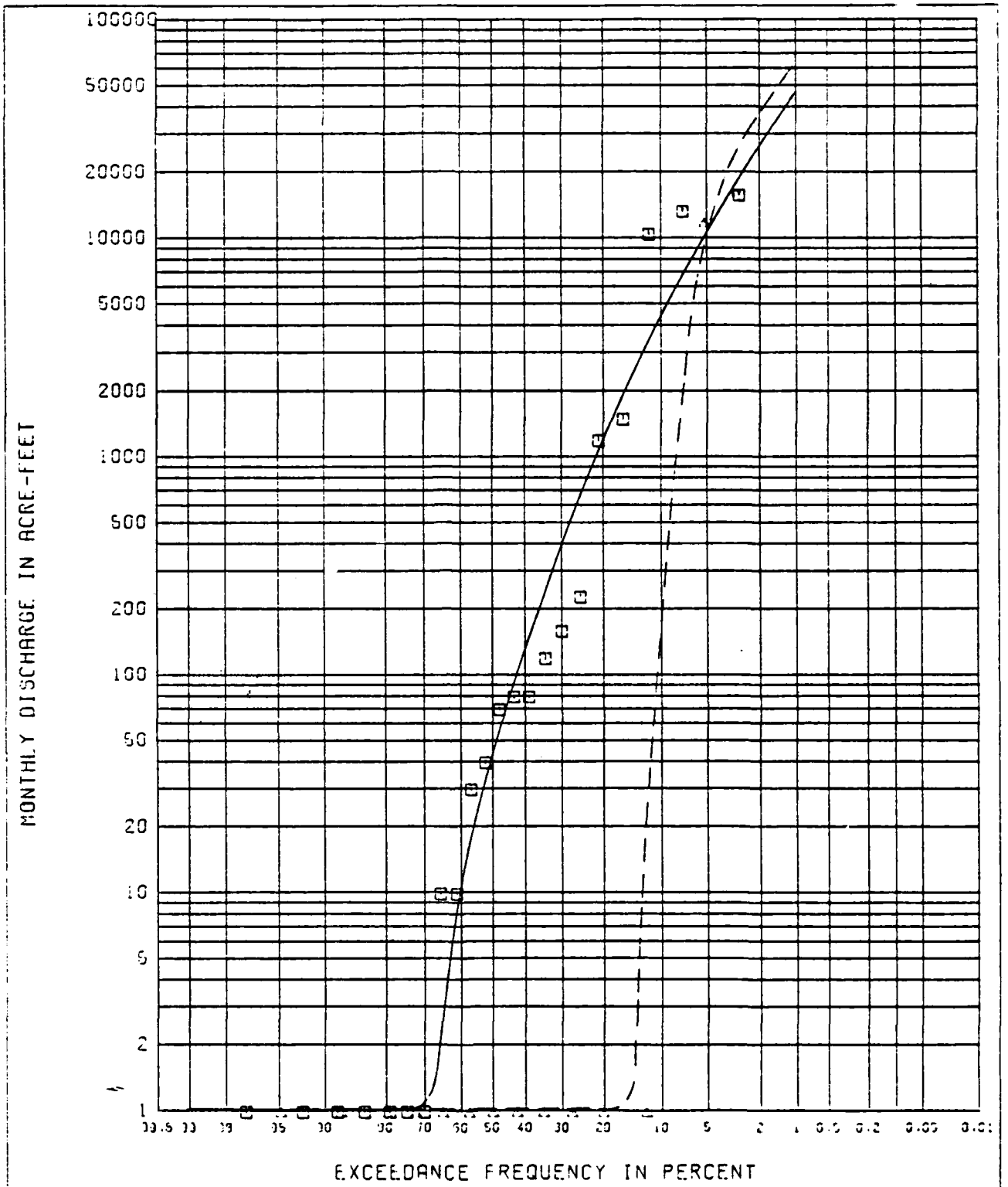
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1976)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

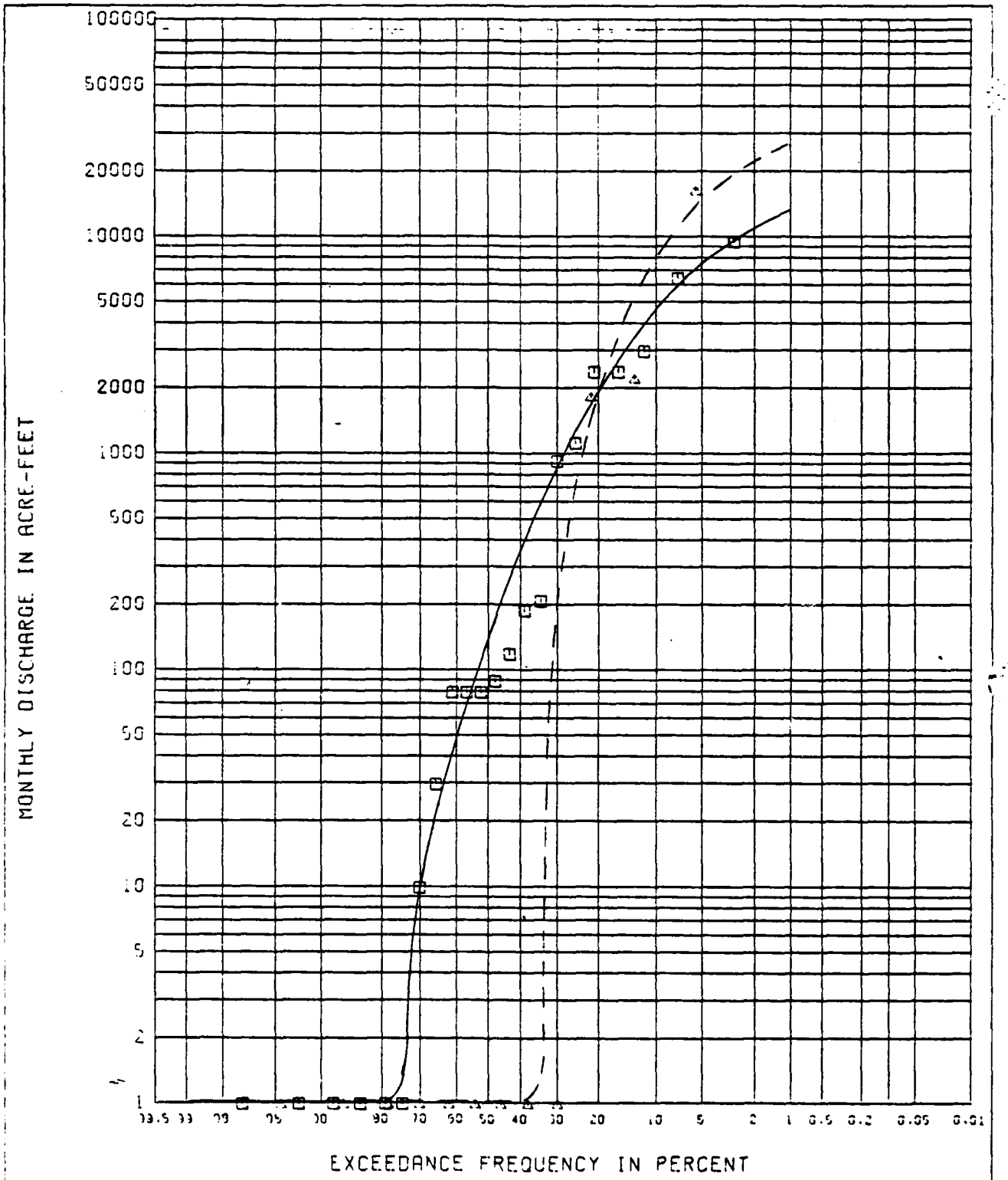
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1975)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

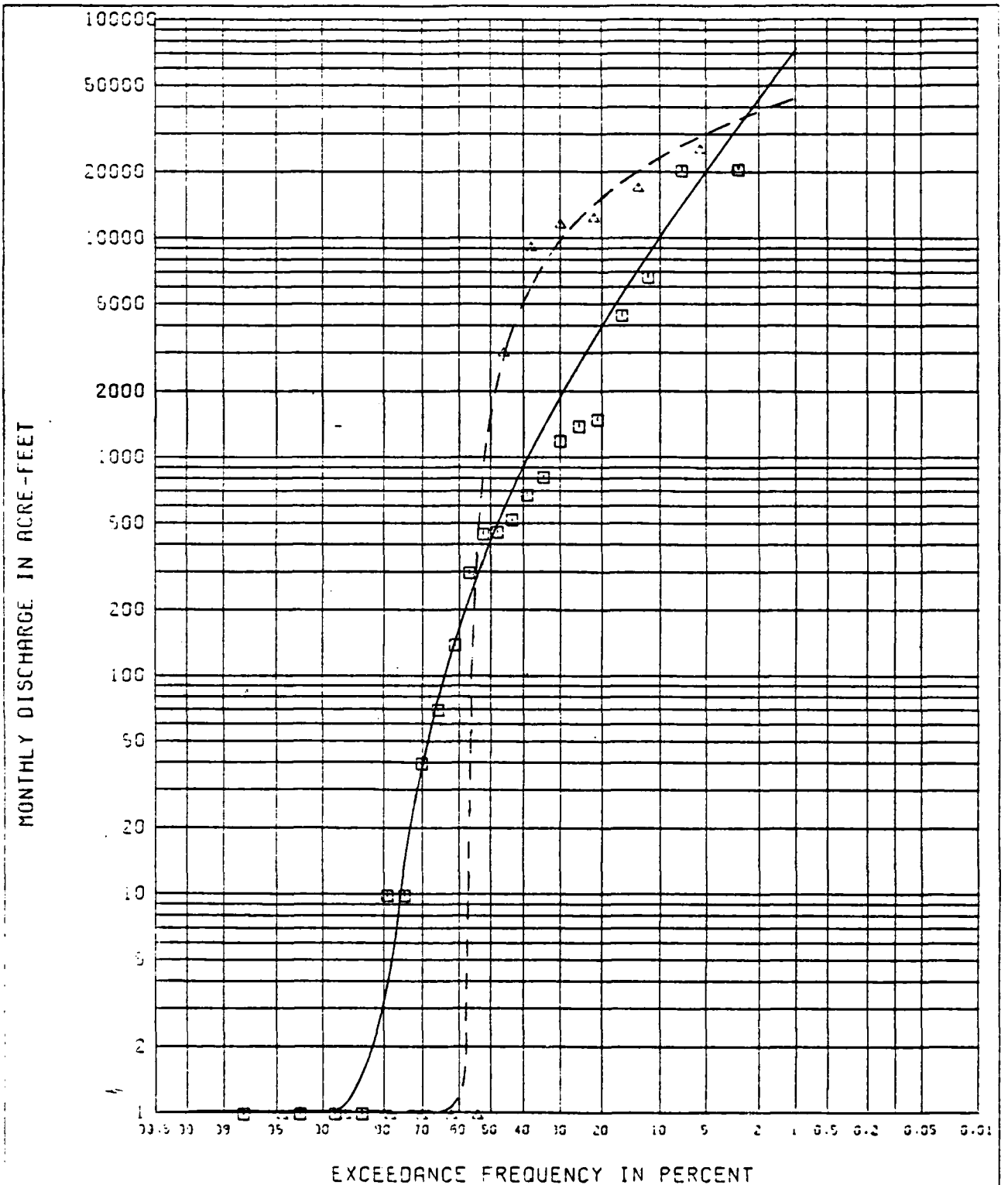
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

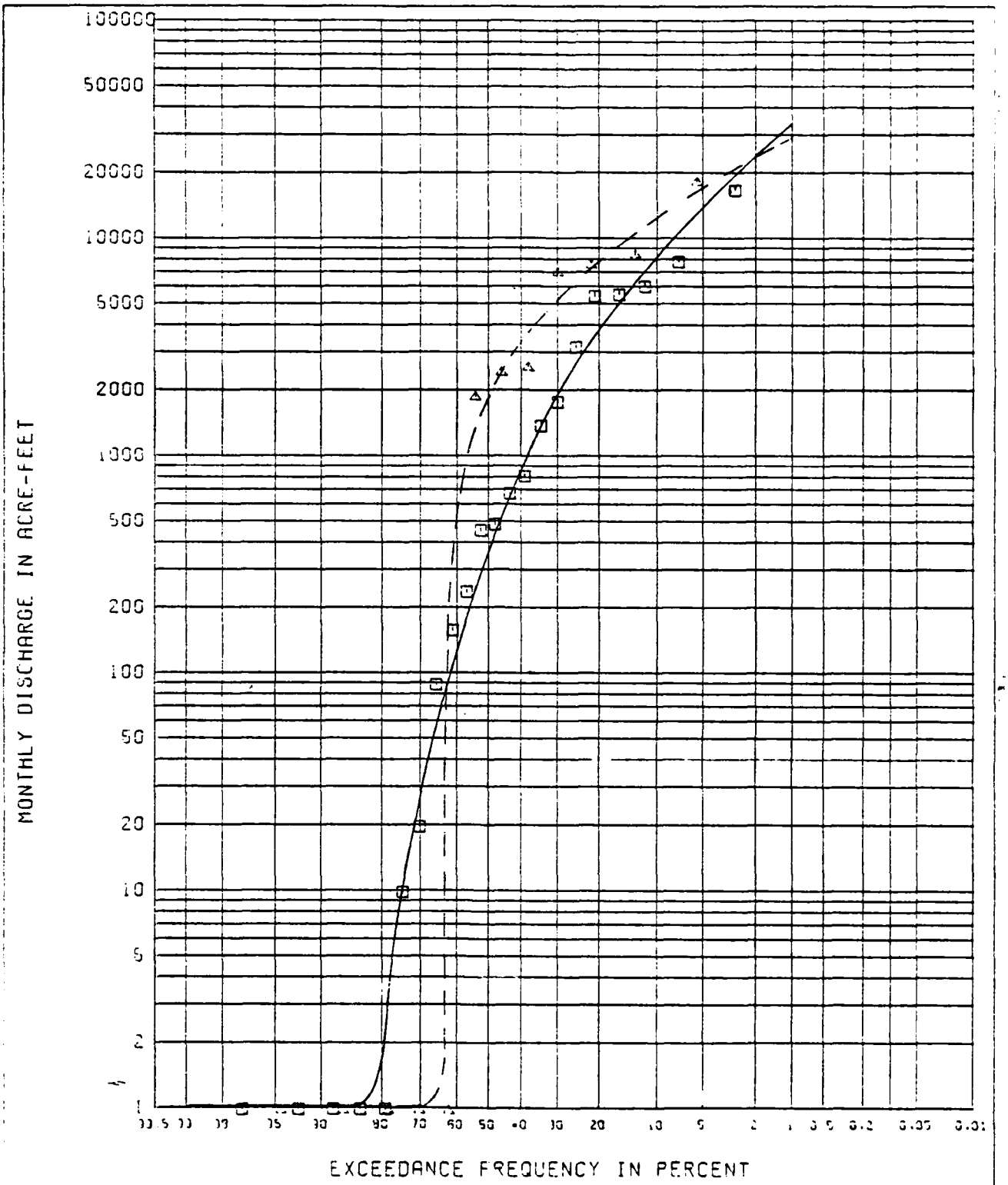
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1969-1976)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

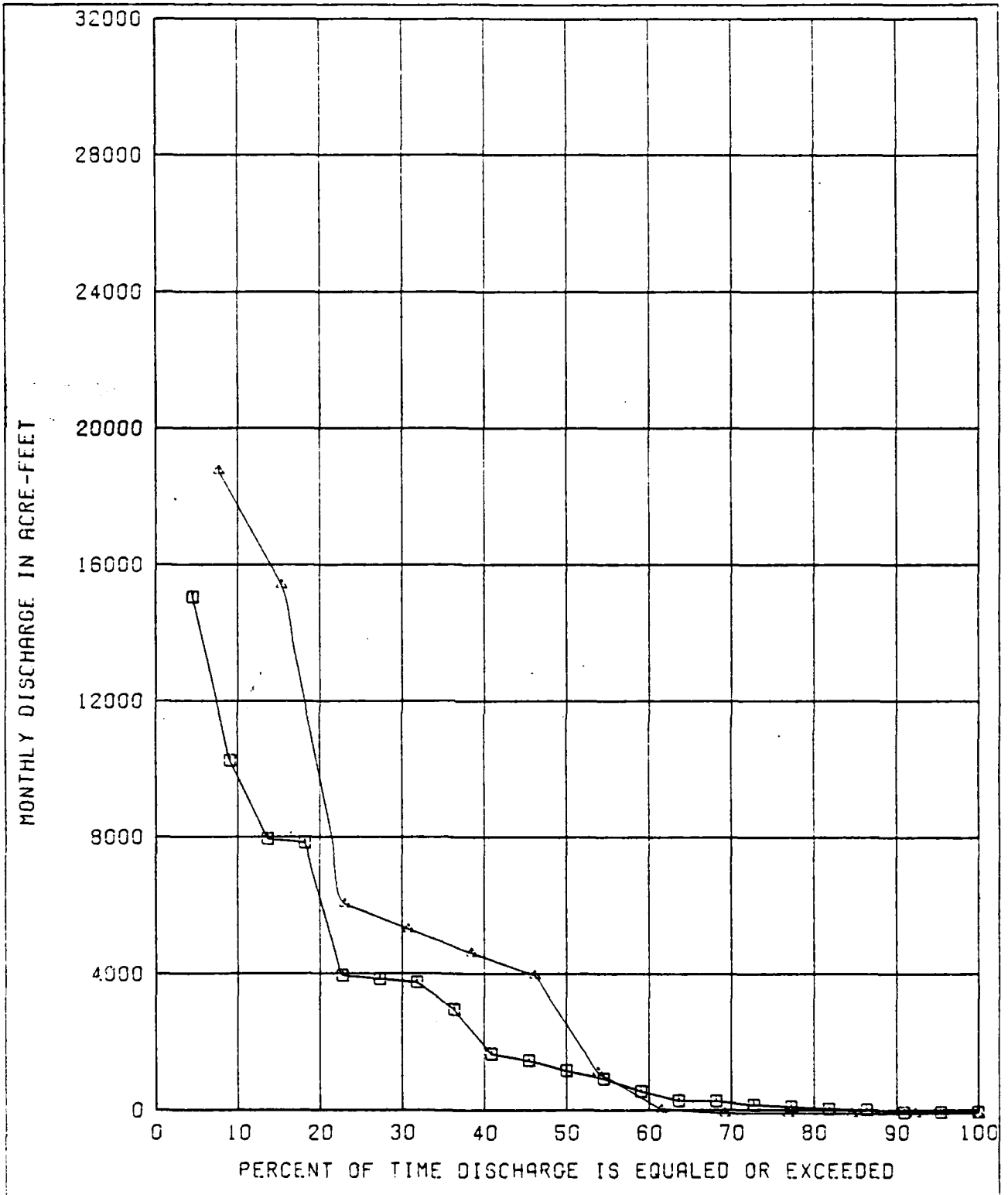
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1965-1975)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

FLOW DURATION CURVES AT DAM SITE

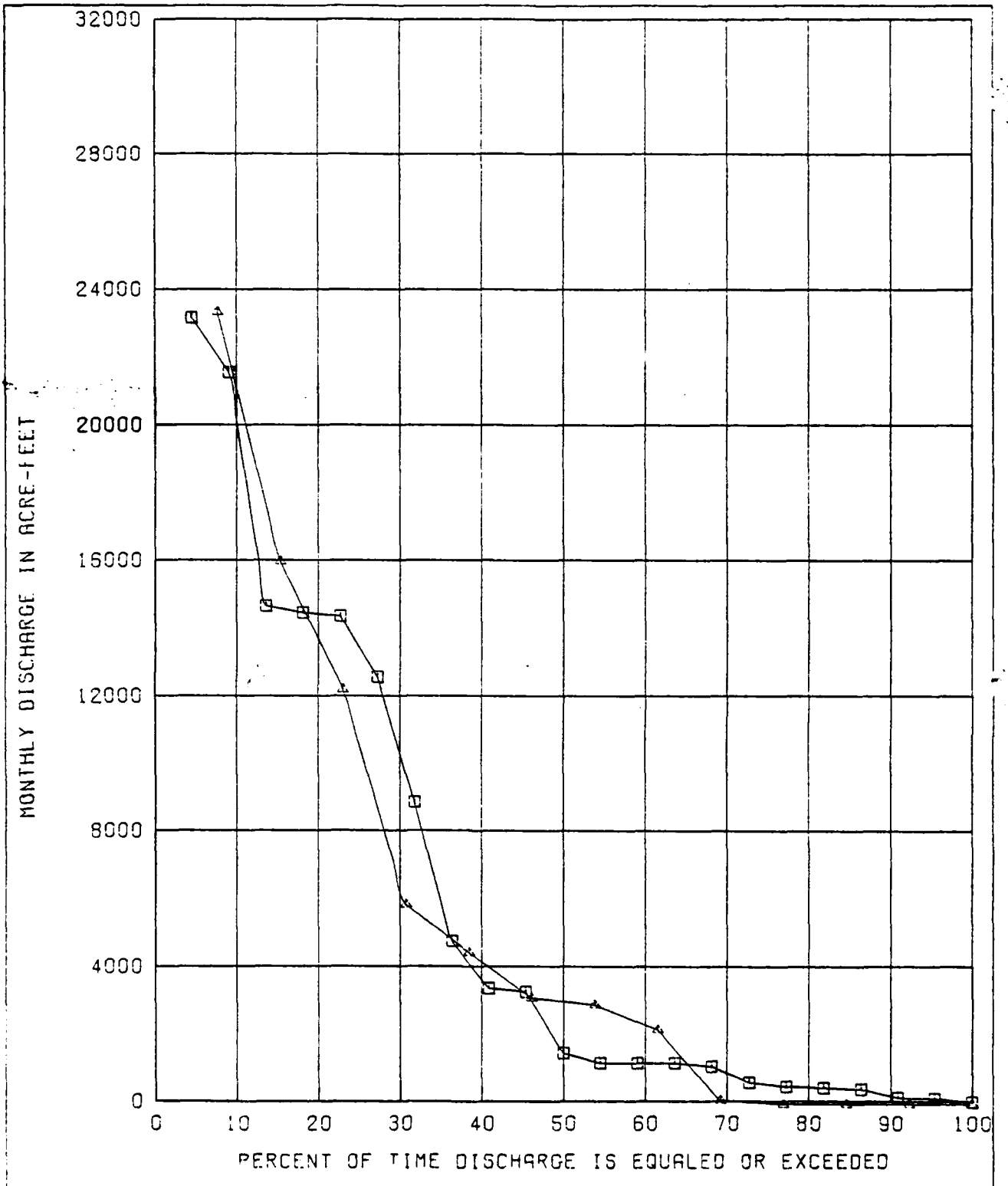
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1975)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

FLOW DURATION CURVES AT DAM SITE

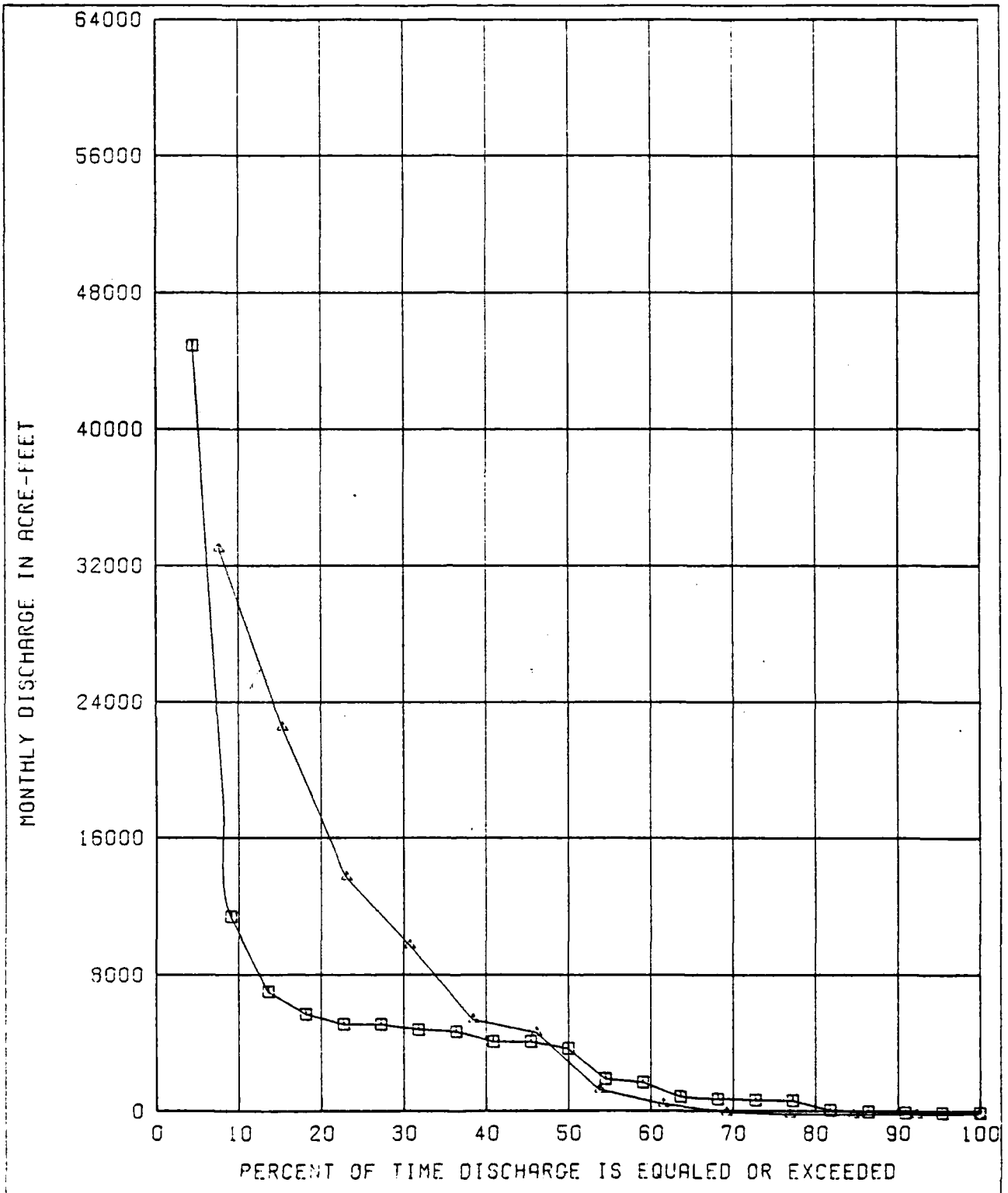
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1963)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

FLOW DURATION CURVES AT DAM SITE

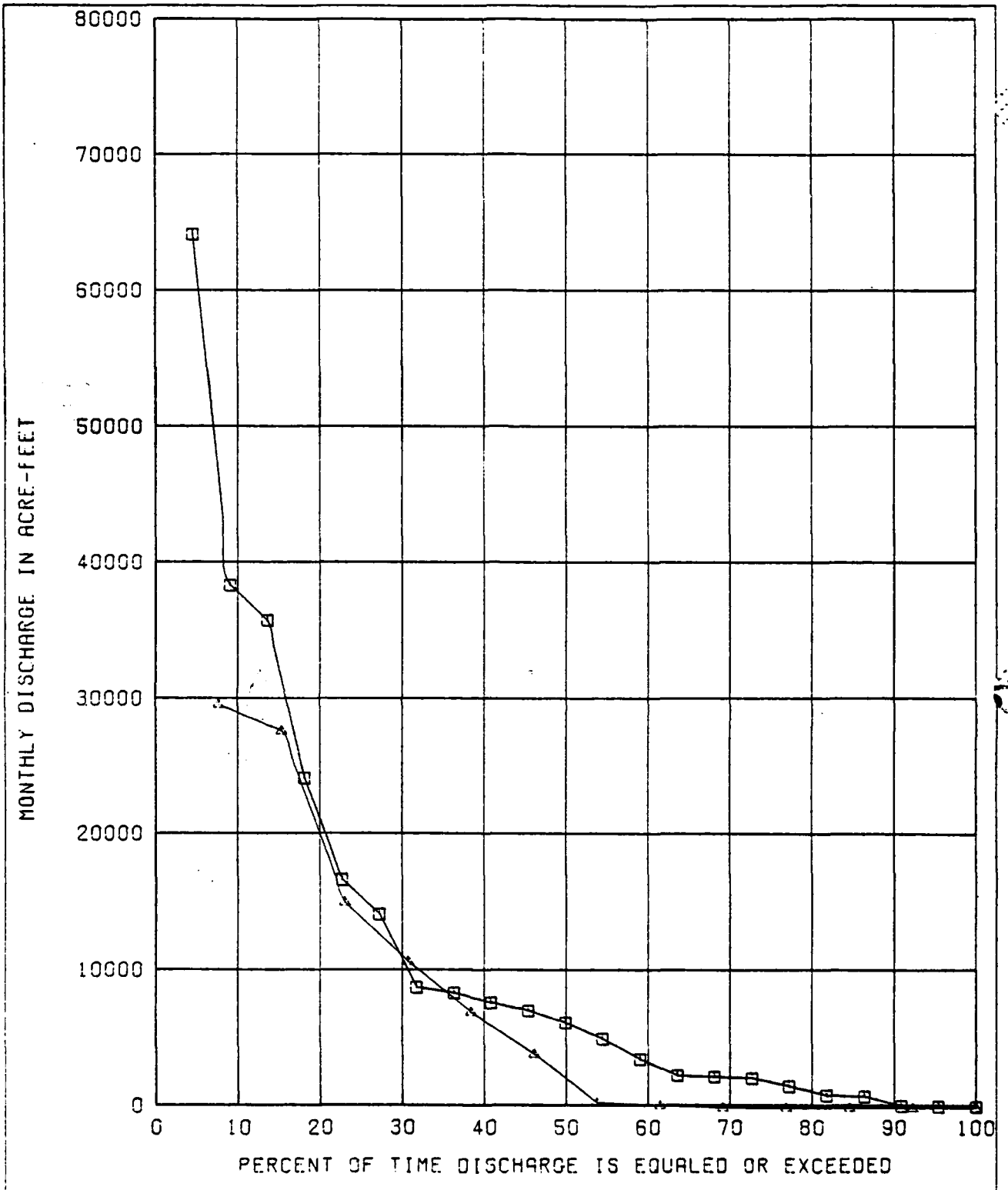
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1966-1979)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

FLOW DURATION CURVES AT DAM SITE

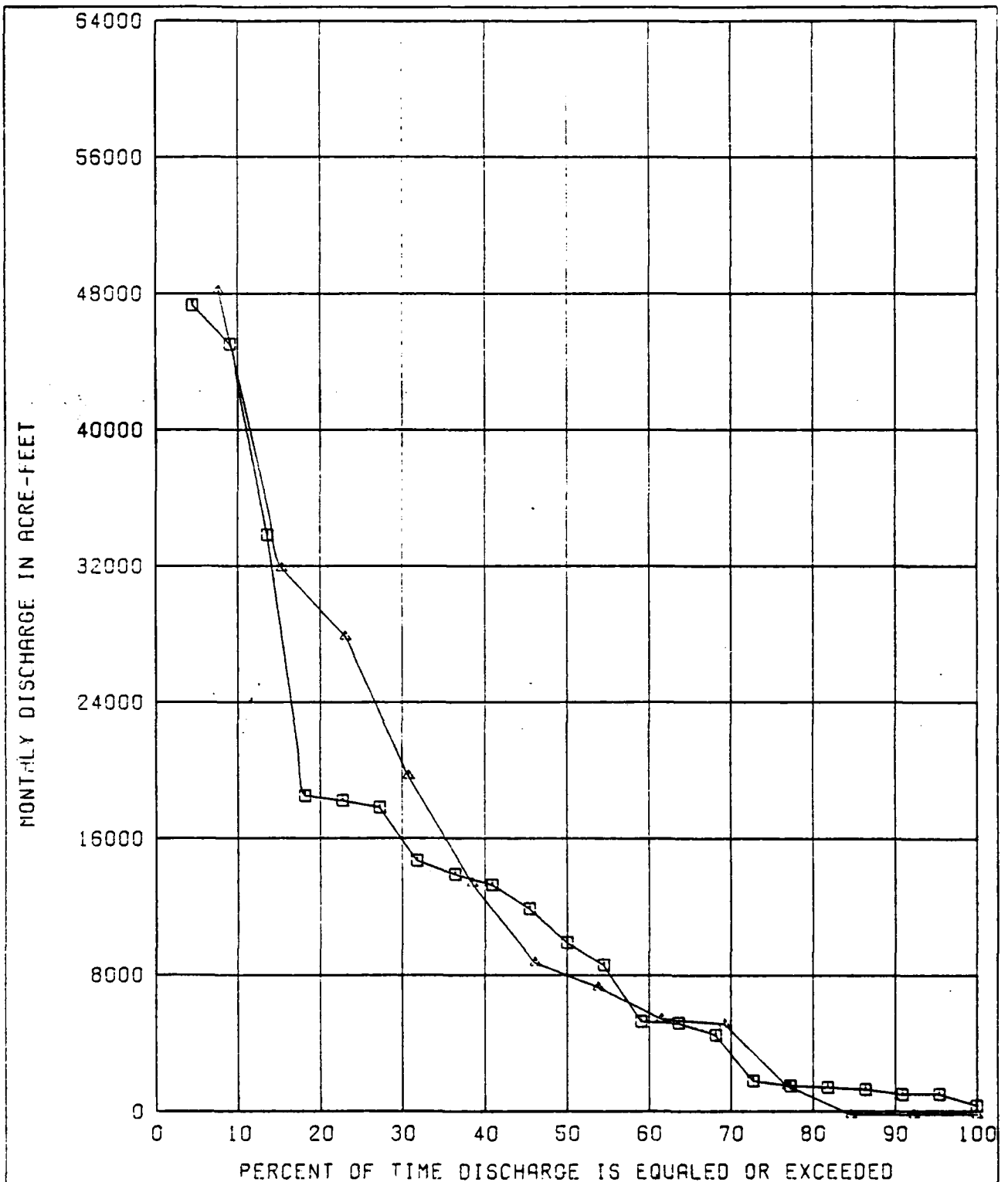
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1956-1976)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

FLOW DURATION CURVES AT DAM SITE

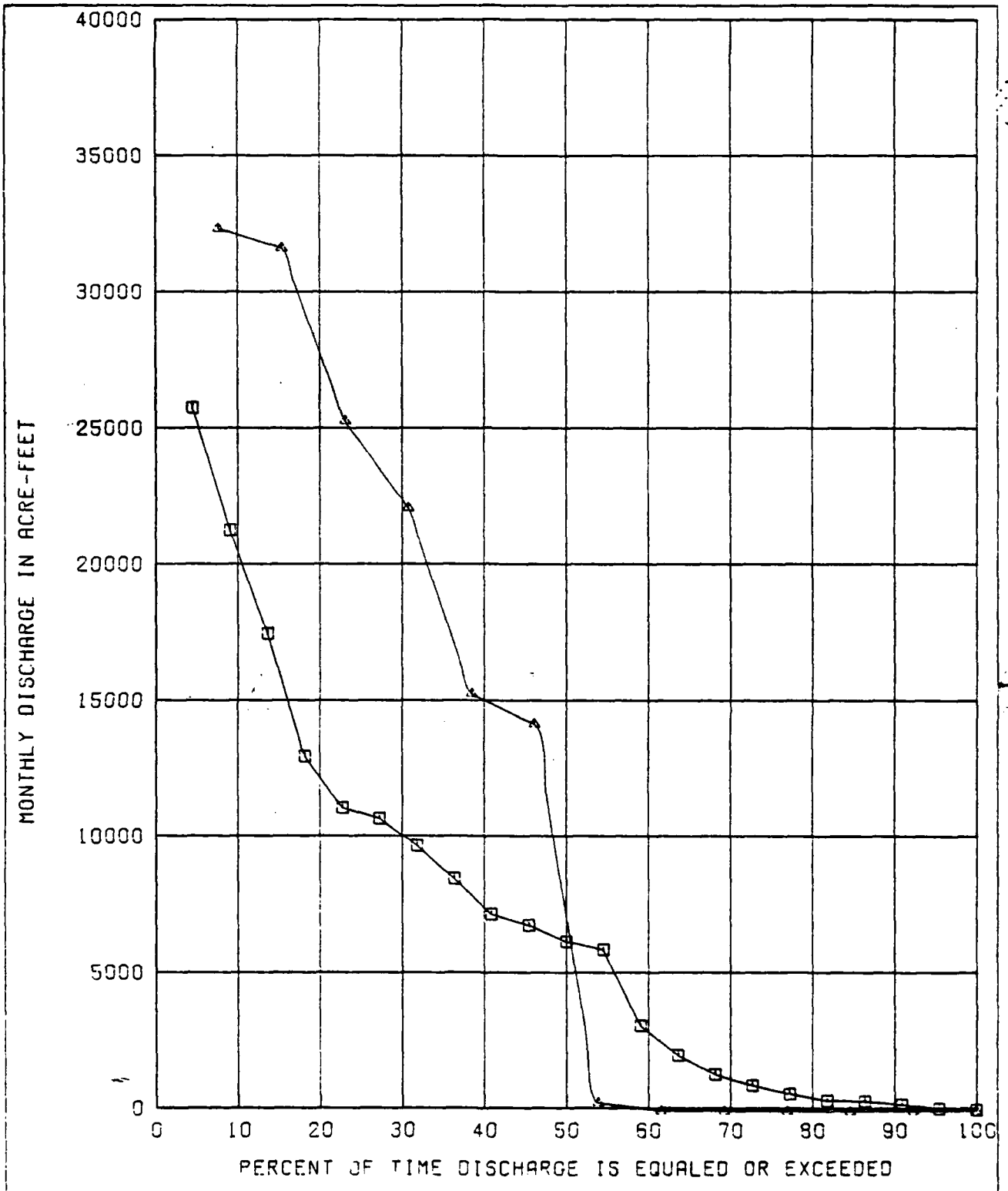
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1969-1979)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

FLOW DURATION CURVES AT DAM SITE

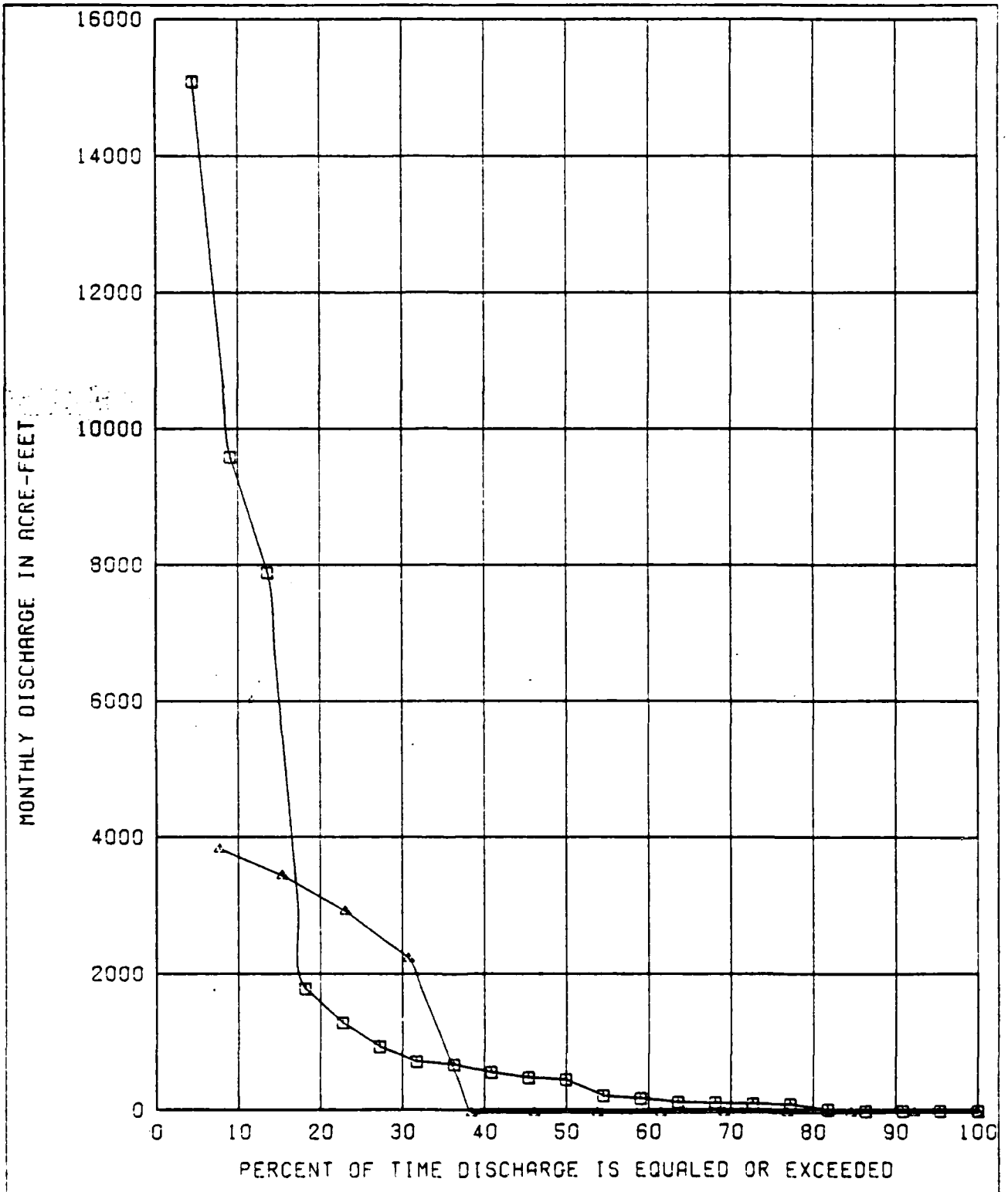
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990.

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1976)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

FLOW DURATION CURVES AT DAM SITE

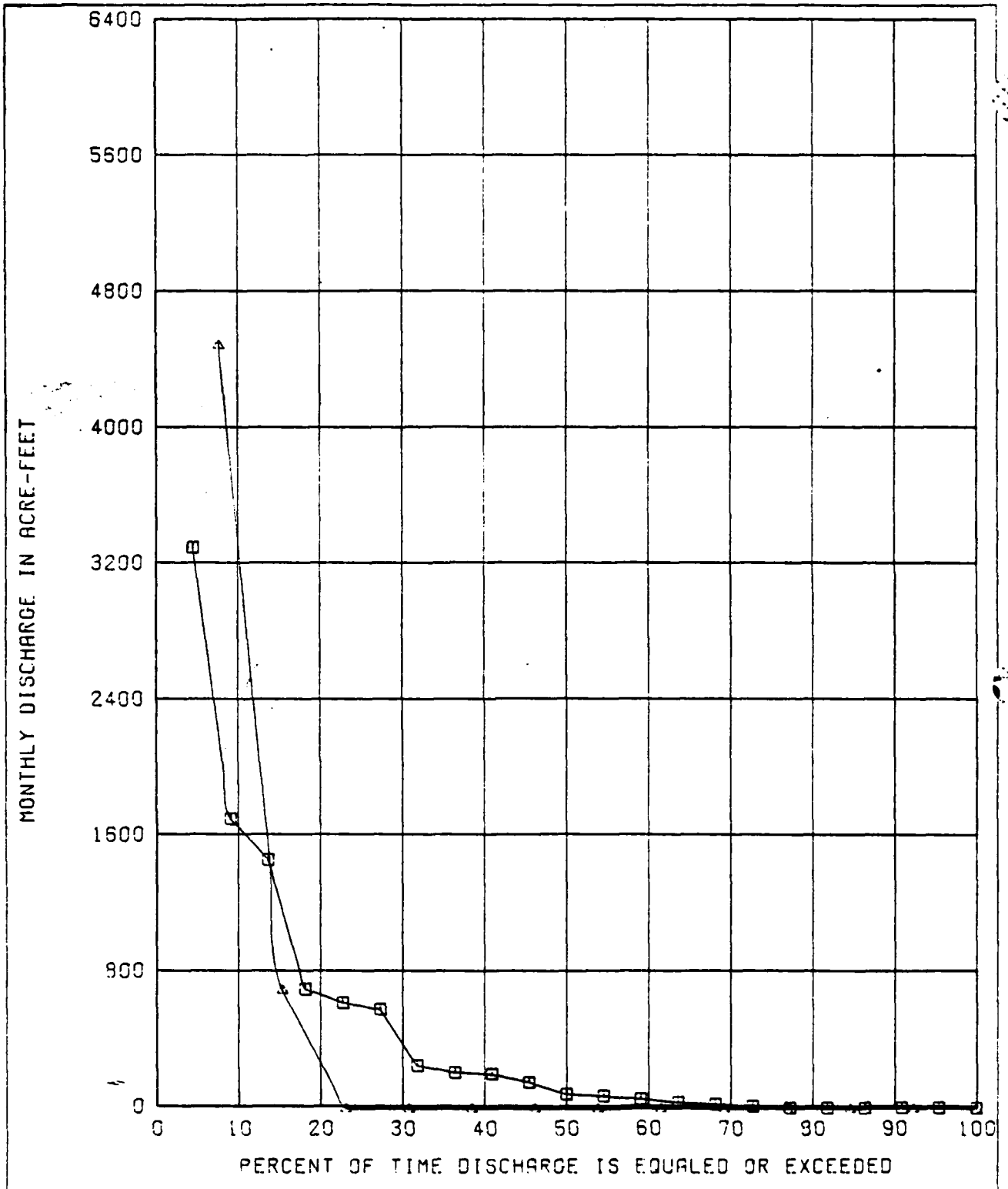
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1969-1979)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

FLOW DURATION CURVES AT DAM SITE

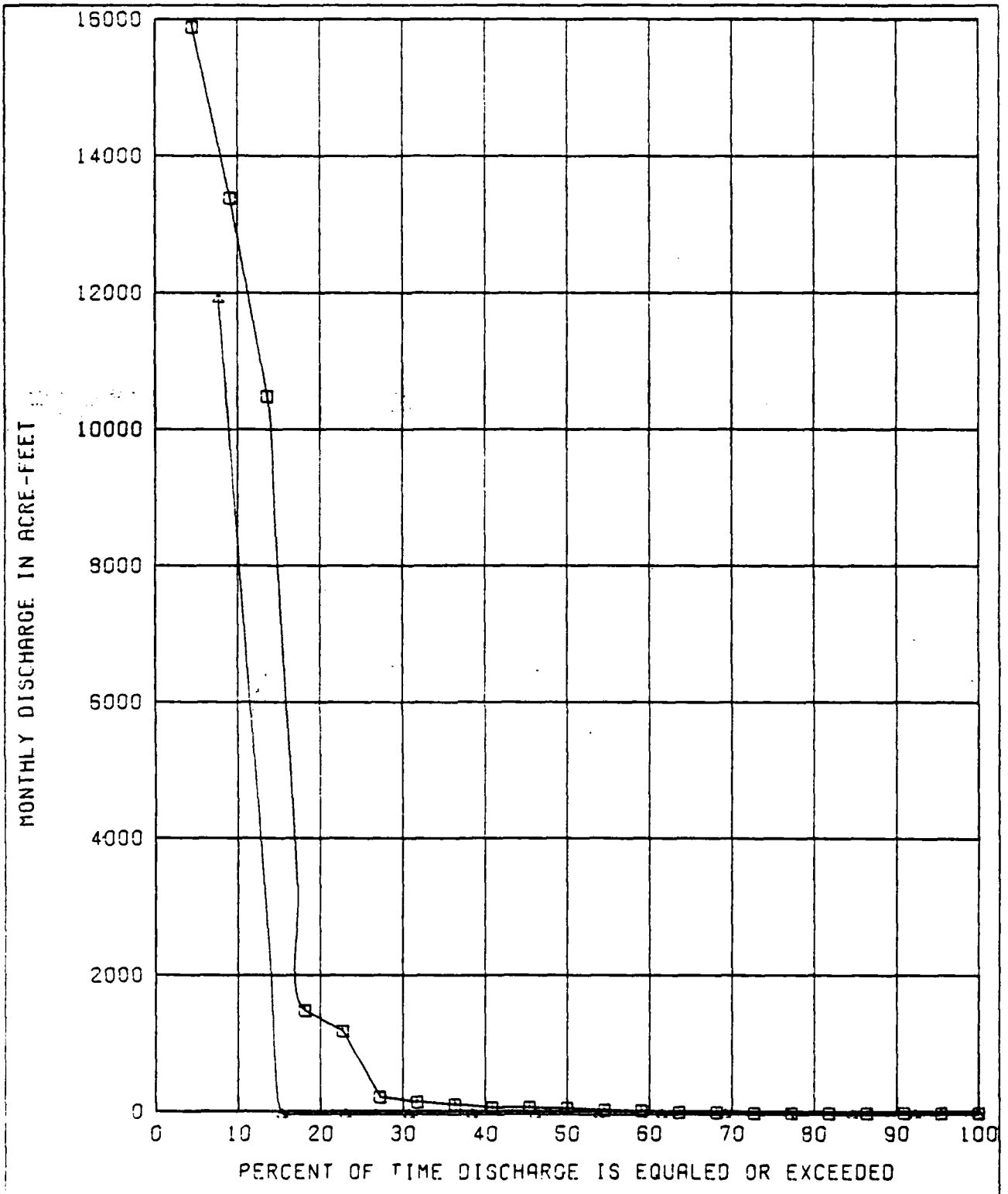
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1956-1976)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

FLOW DURATION CURVES AT DAM SITE

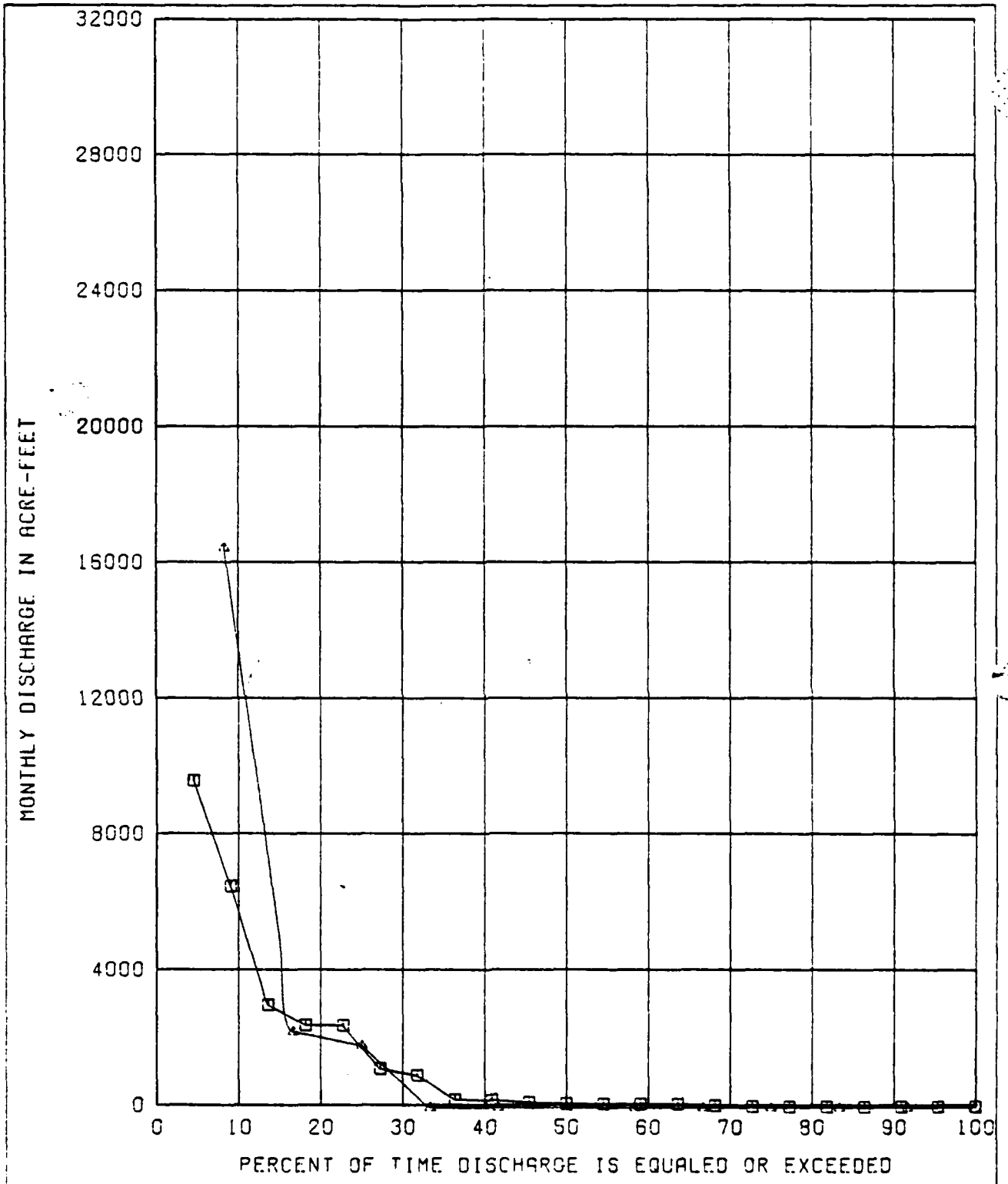
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1976)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

FLOW DURATION CURVES AT DAM SITE

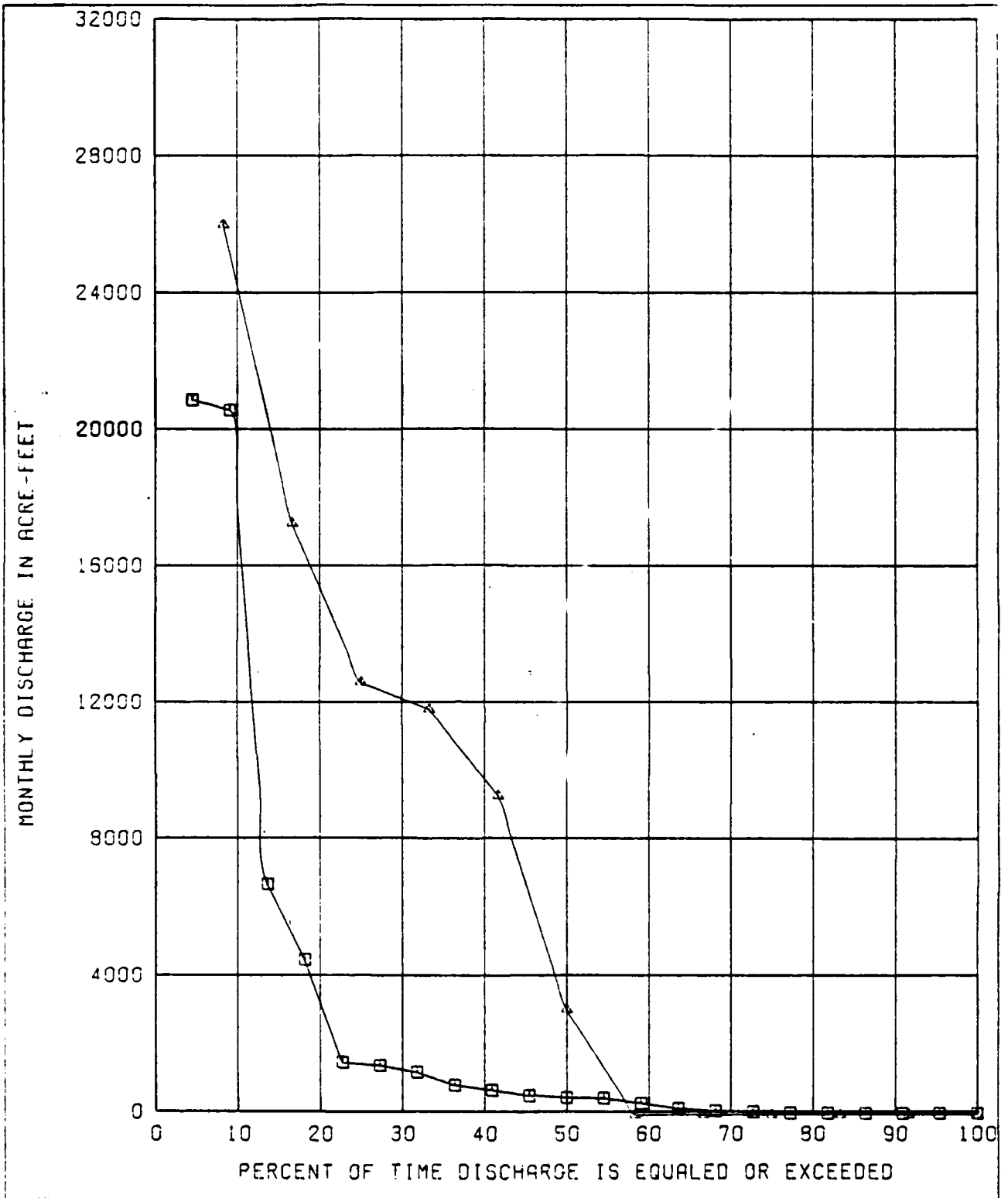
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1966-1976)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

FLOW DURATION CURVES AT DAM SITE

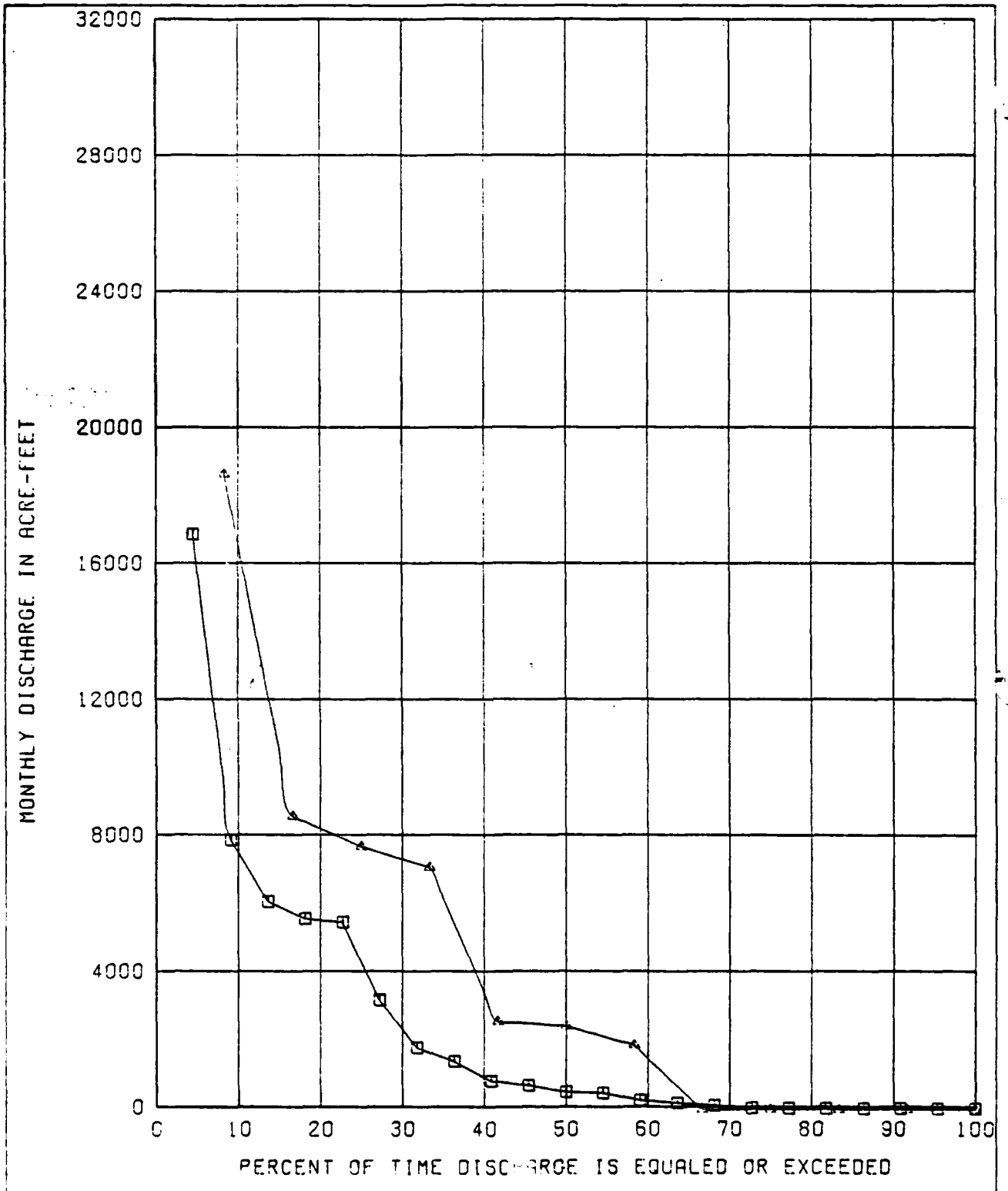
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1939-1959)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1966-1976)

TRINITY RIVER BASIN, TEXAS

BARDWELL LAKE

FLOW DURATION CURVES AT DAM SITE

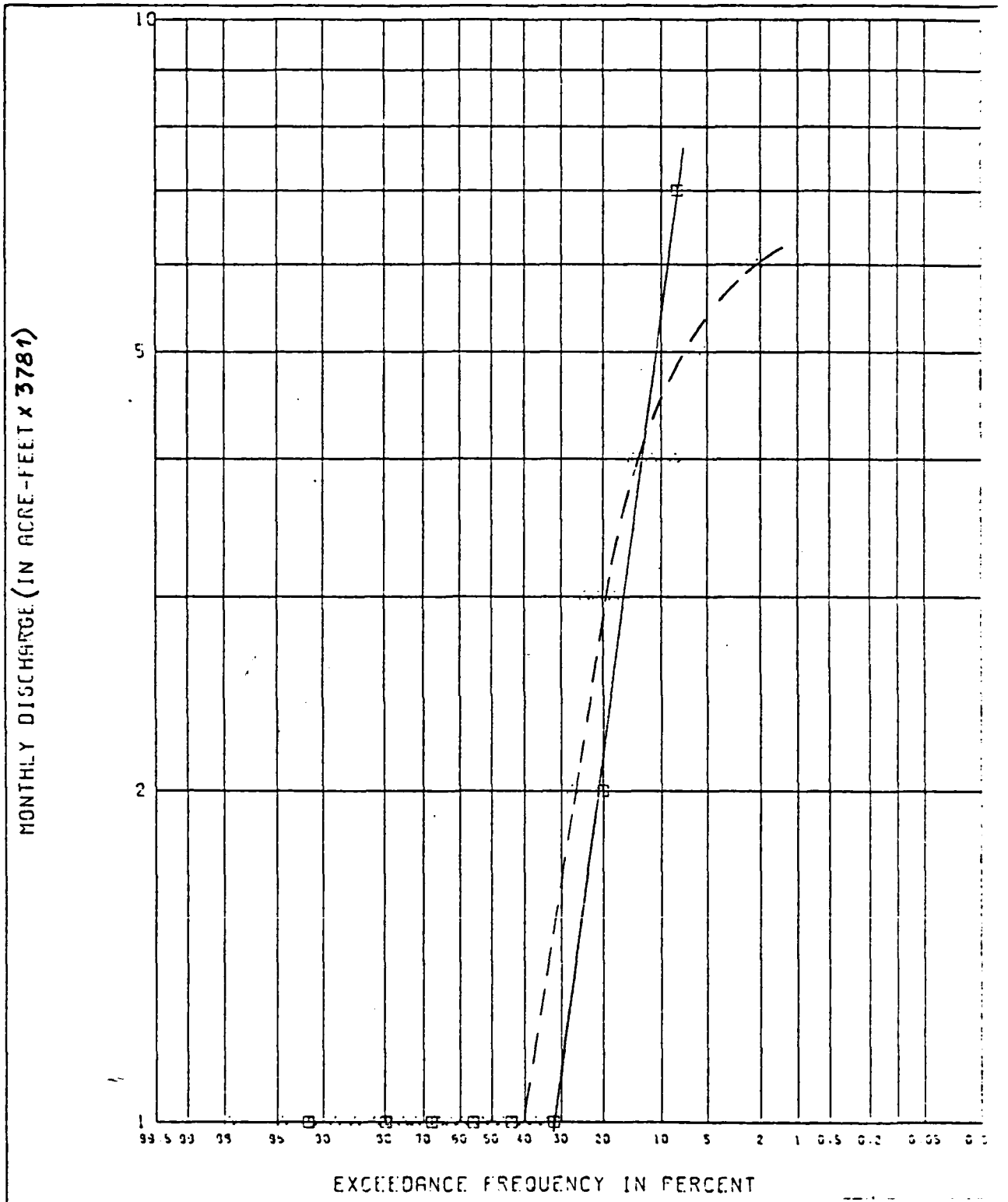
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1976)

BUFFALO BAYOU

BARKER RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

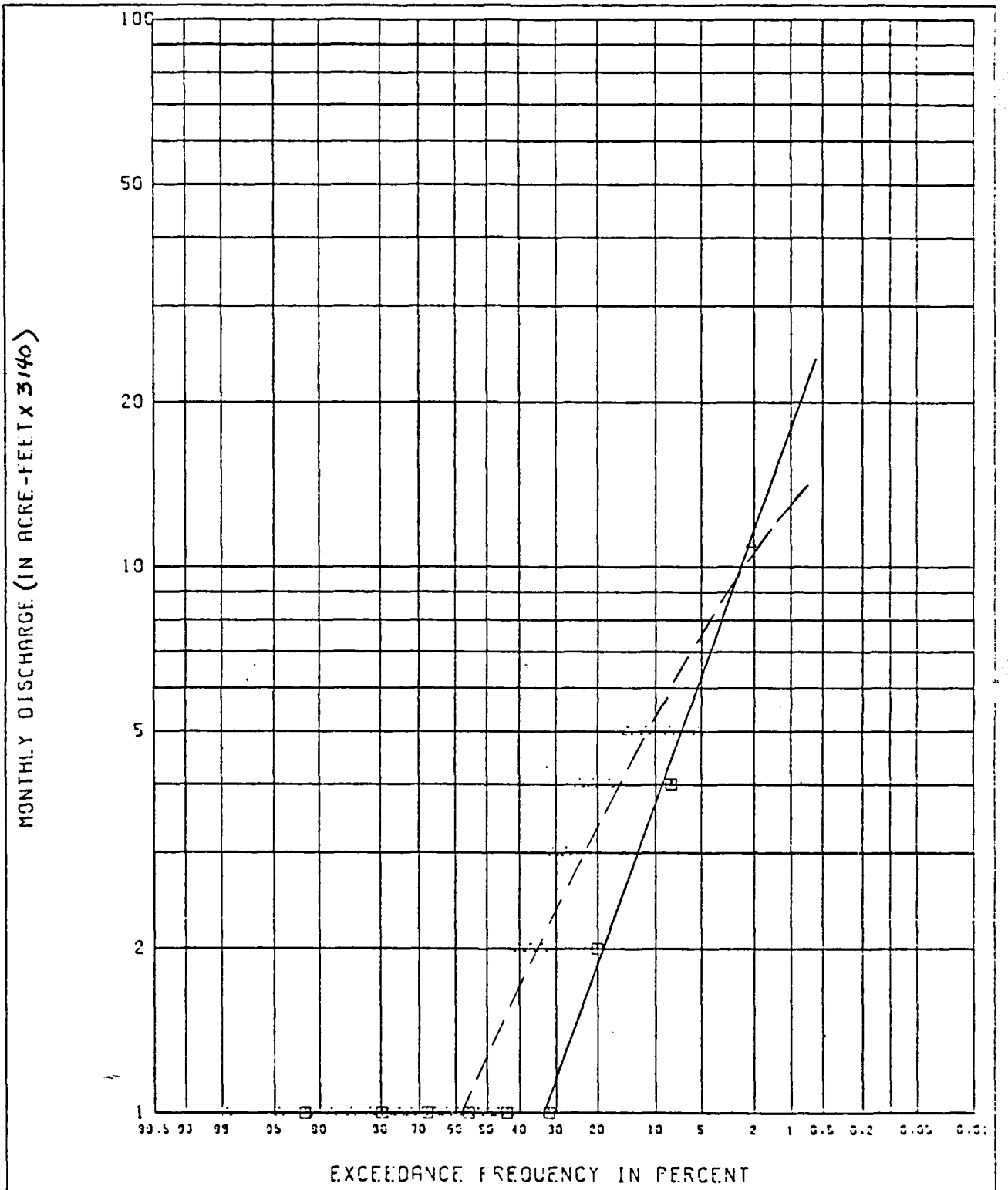
JANUARY FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU

BARKER RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

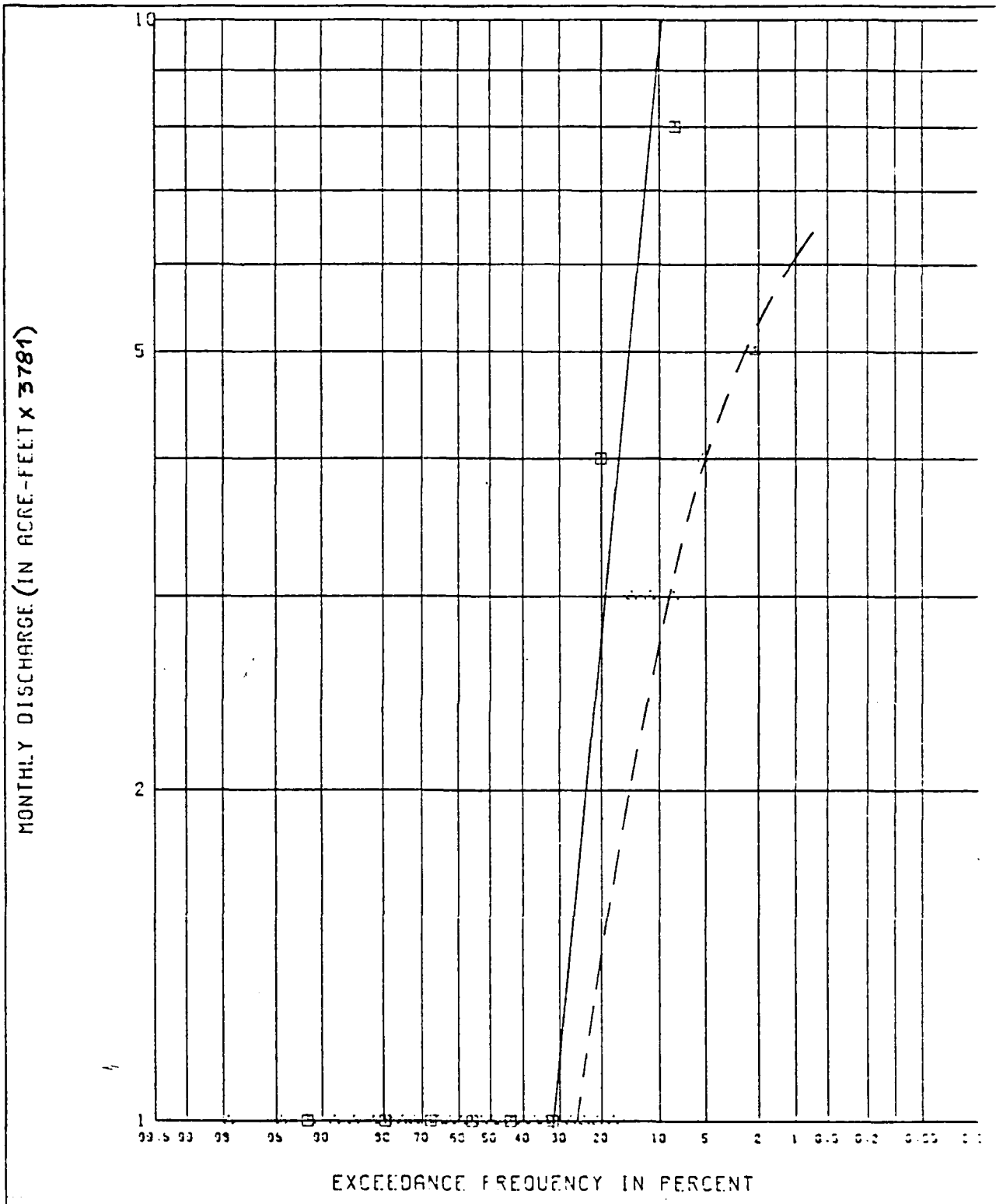
FEBRUARY FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU

BARKER RESERVOIR

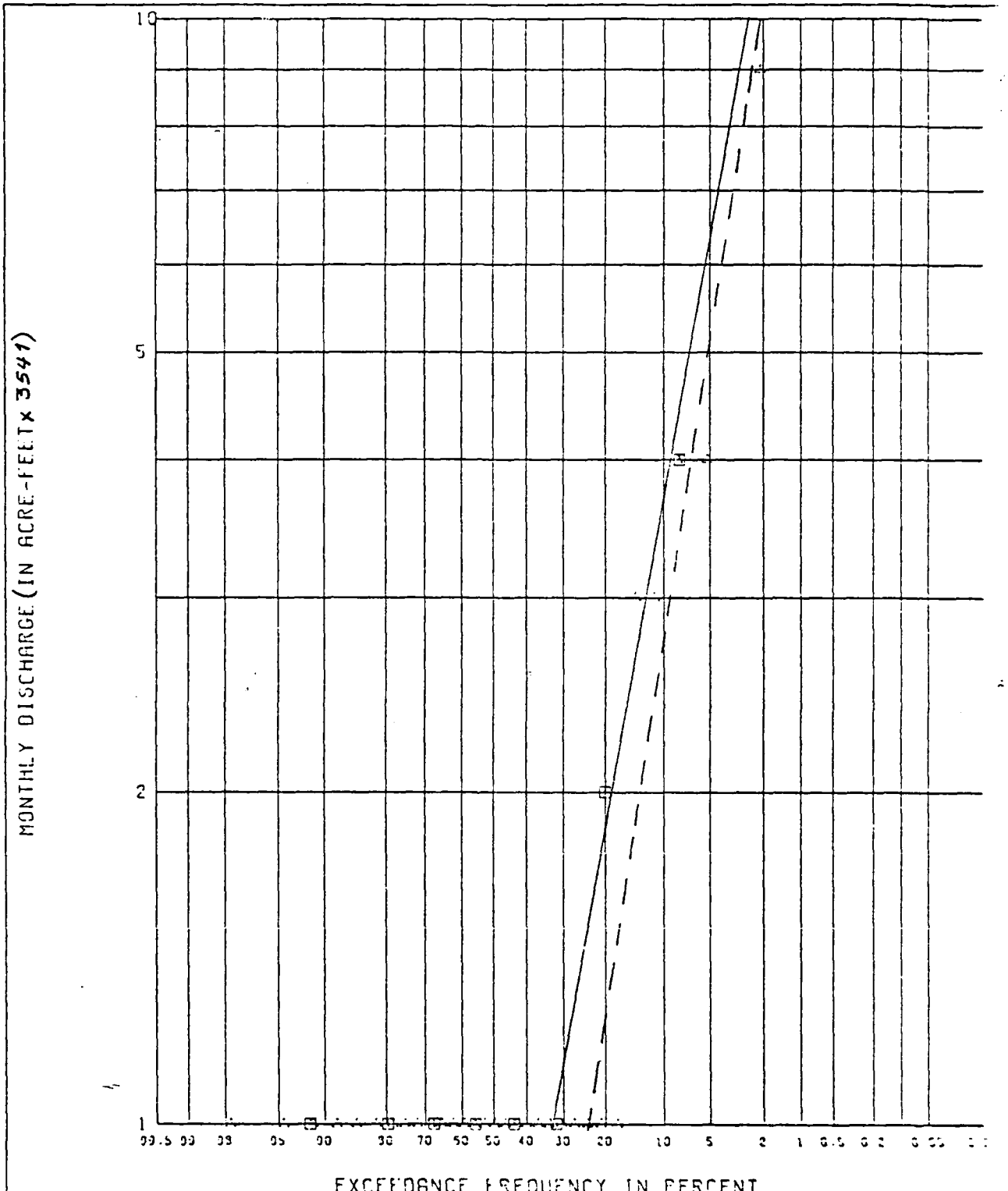
DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

MARCH FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1937-1944)

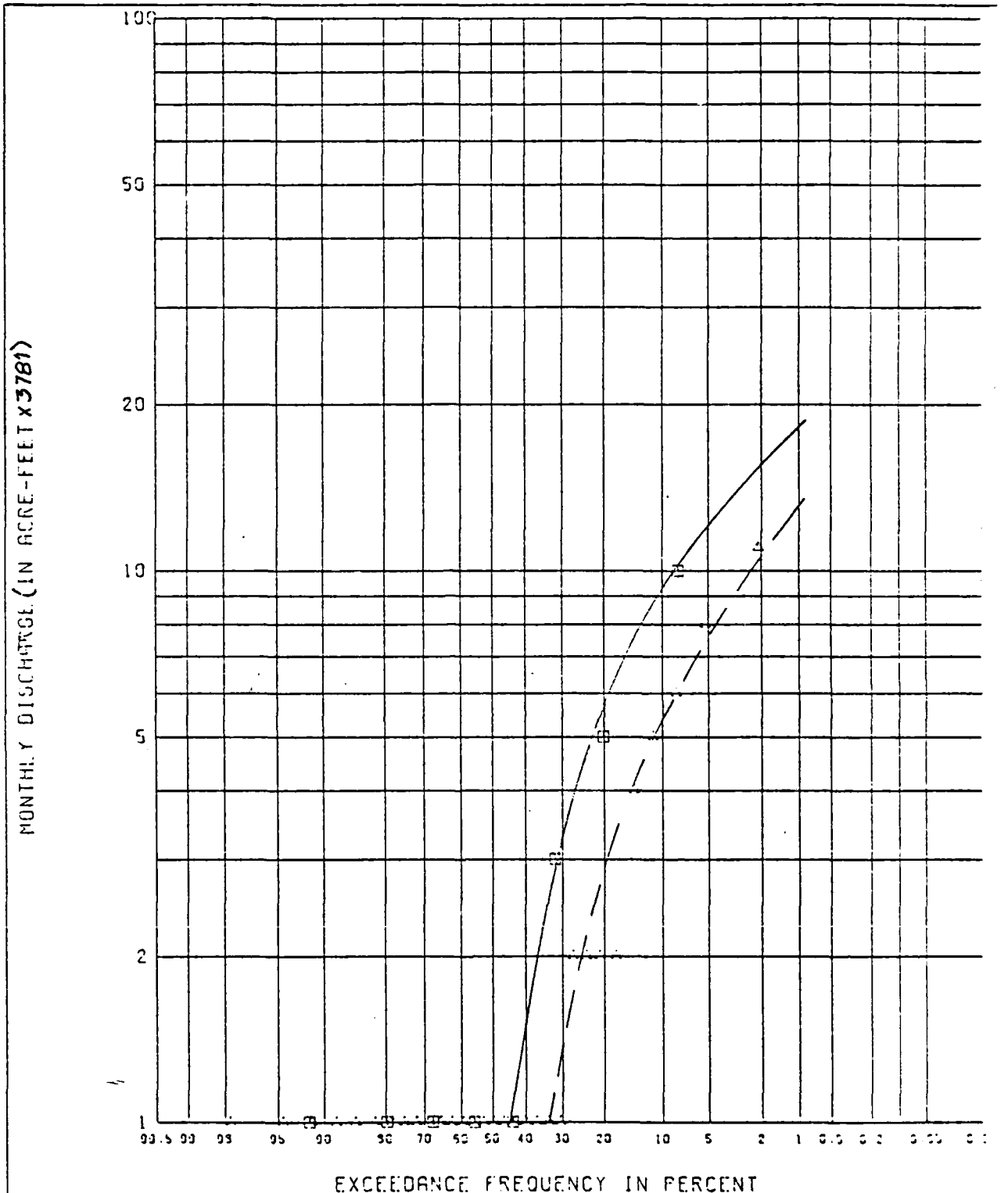
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU
BARKER RESERVOIR
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
APRIL FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1964)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1965-1975)

BUFFALO BAYOU

BARKER RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

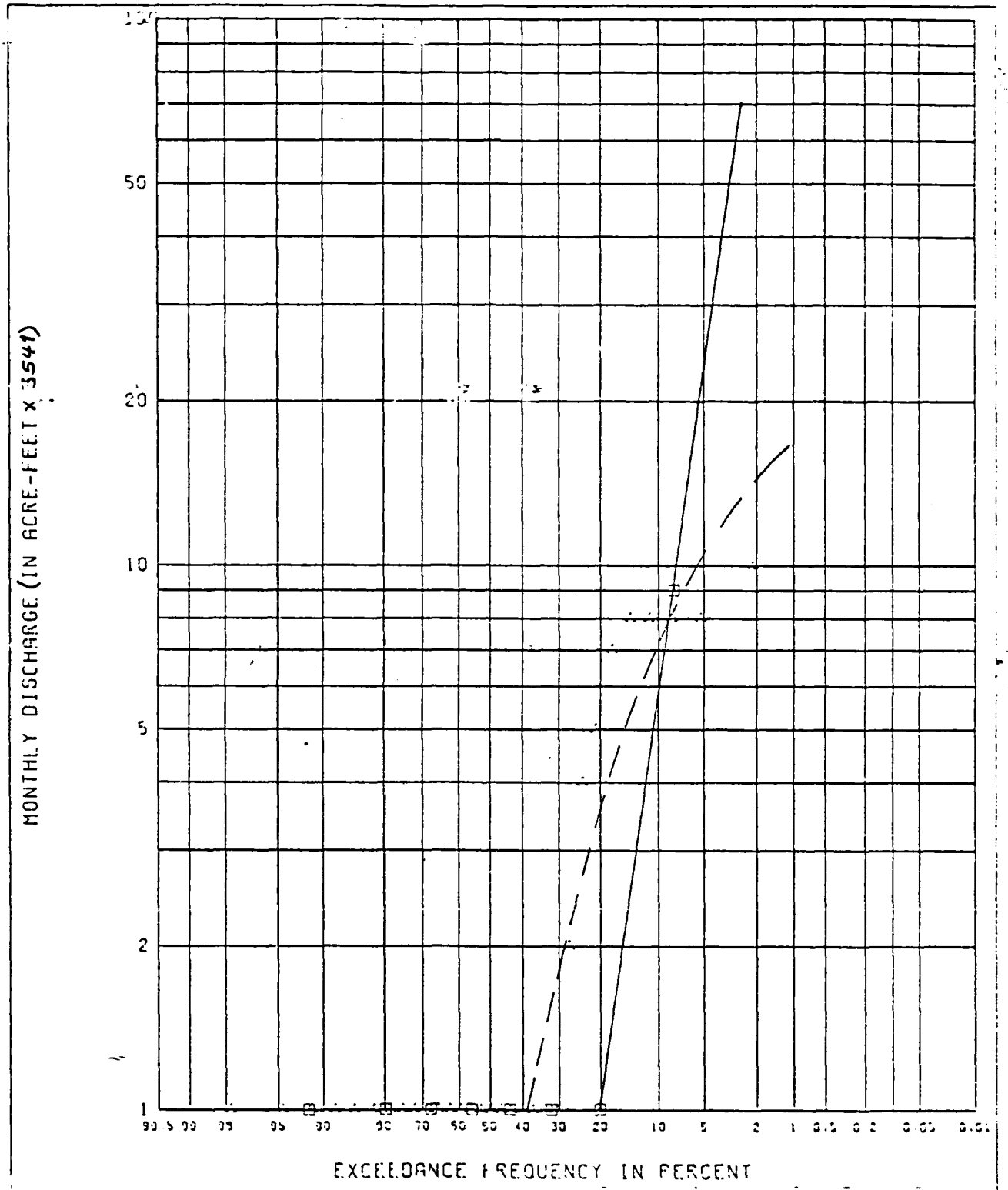
MAY FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

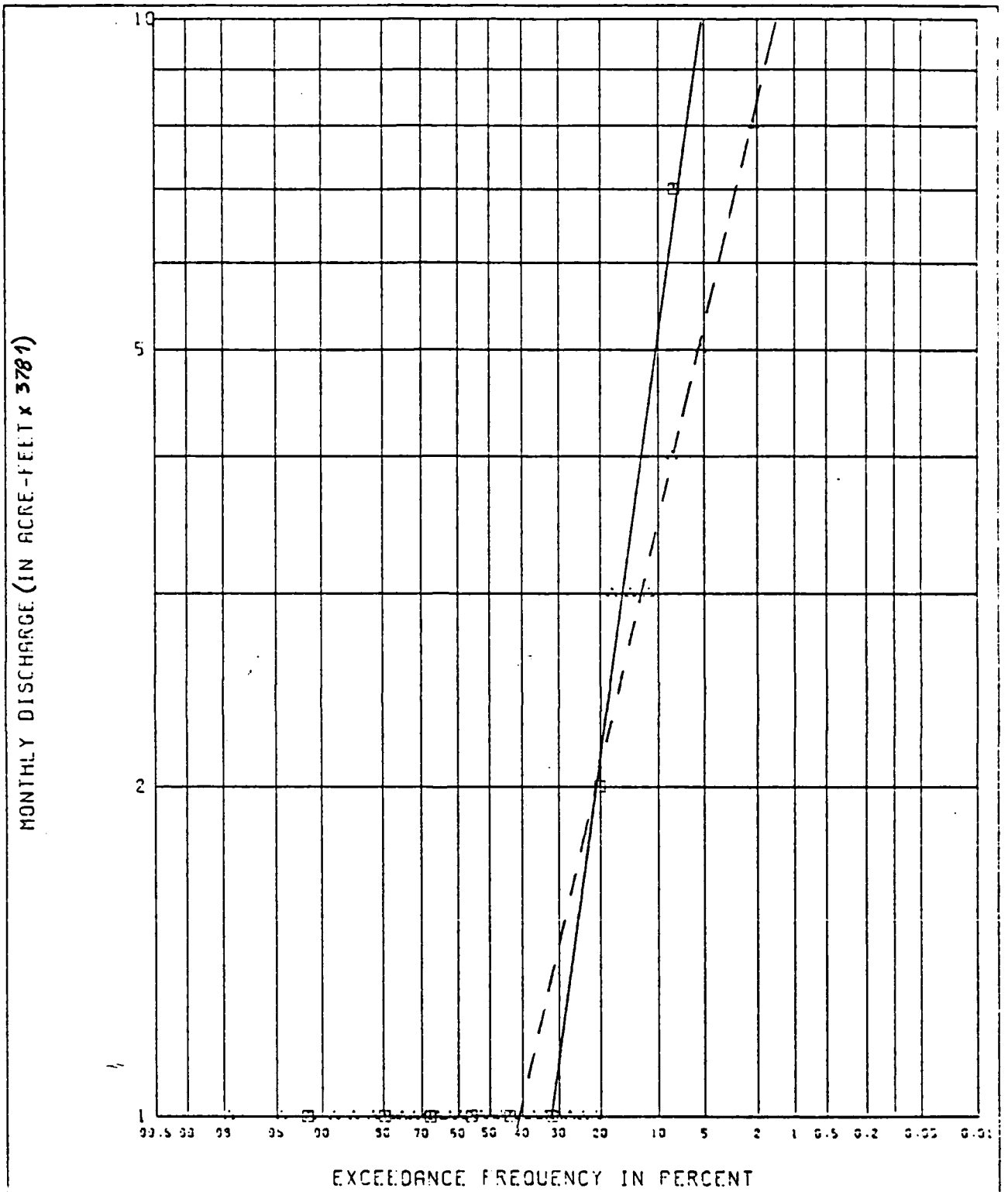
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU
BARKER RESERVOIR
DISCHARGE-FREQUENCY RELATIONS AT DAM SITE
JUNE FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU

BARKER RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

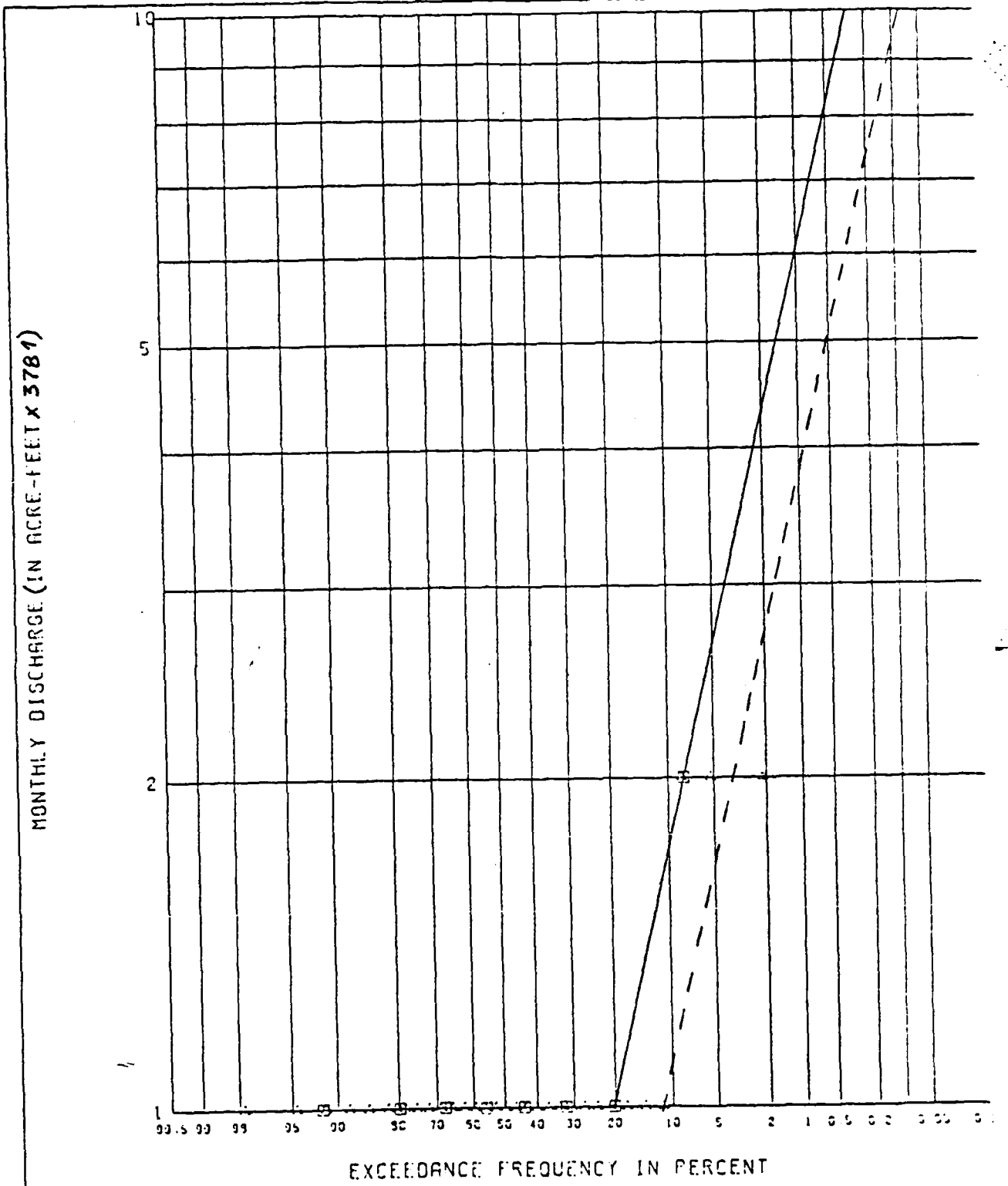
JULY FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU

BARKER RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

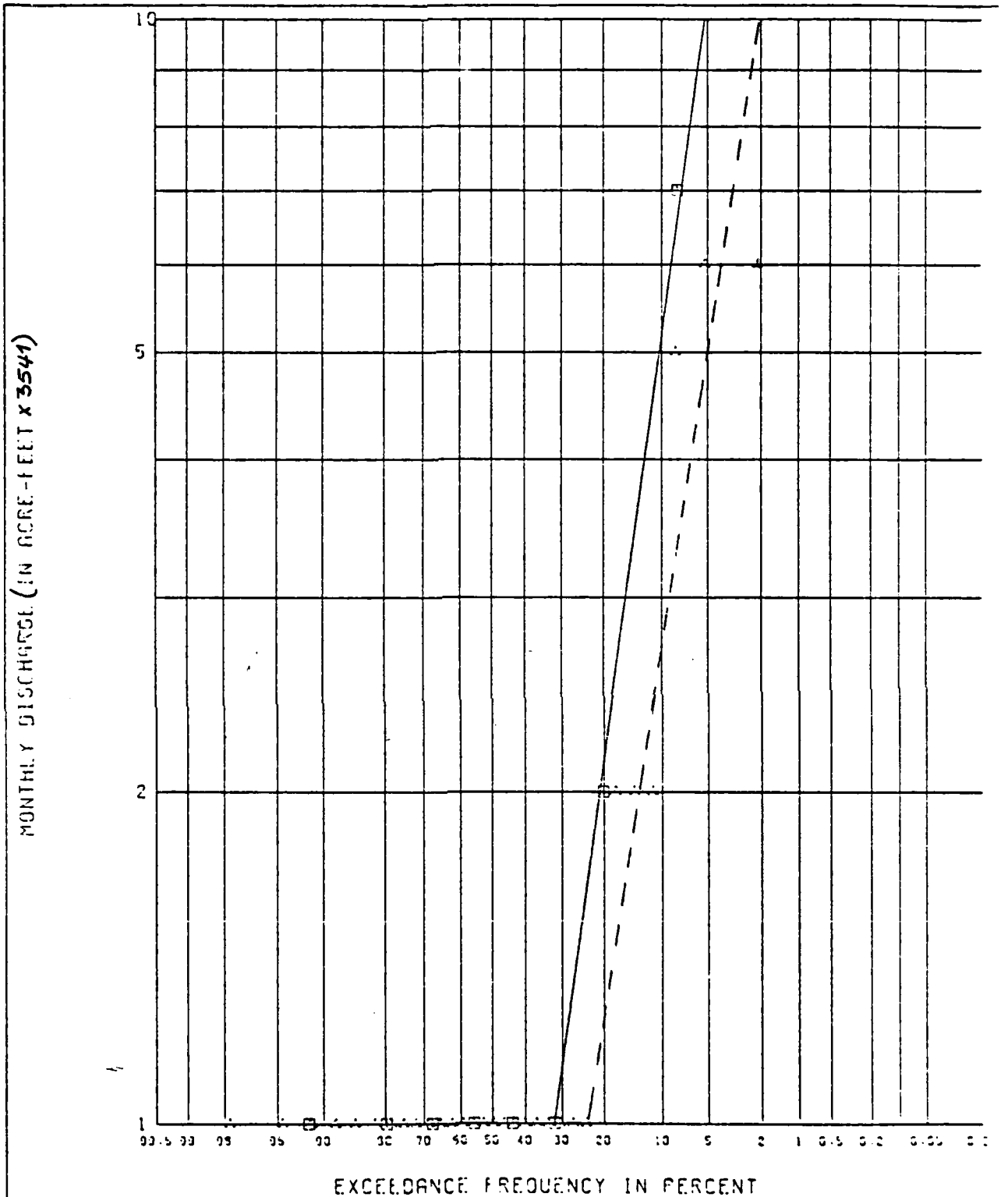
AUGUST FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INTERIM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1941)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU

BARKER RESERVOIR

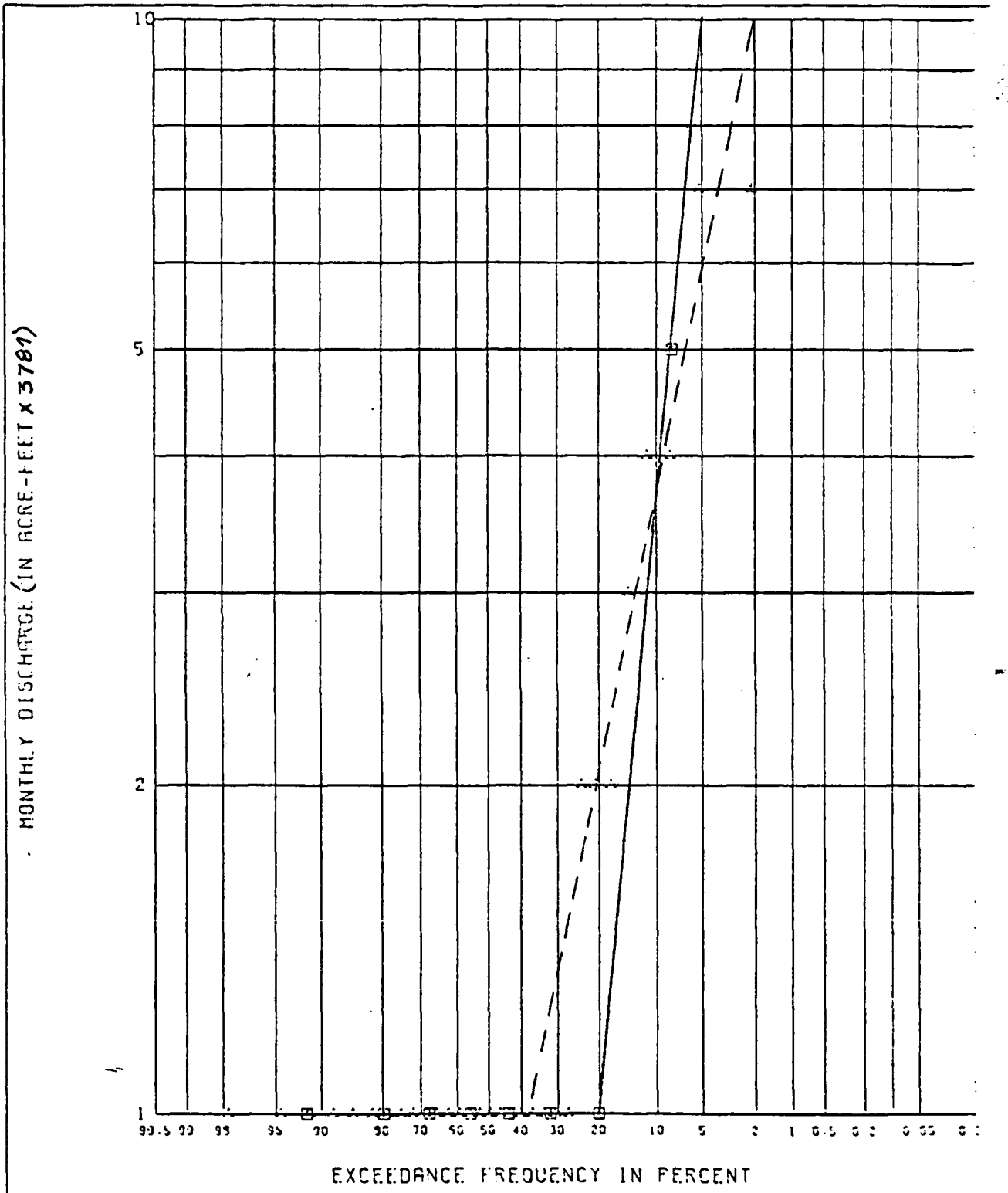
DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

SEPTEMBER FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1974)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1975-1975)

BUFFALO BAYOU

BARKER RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

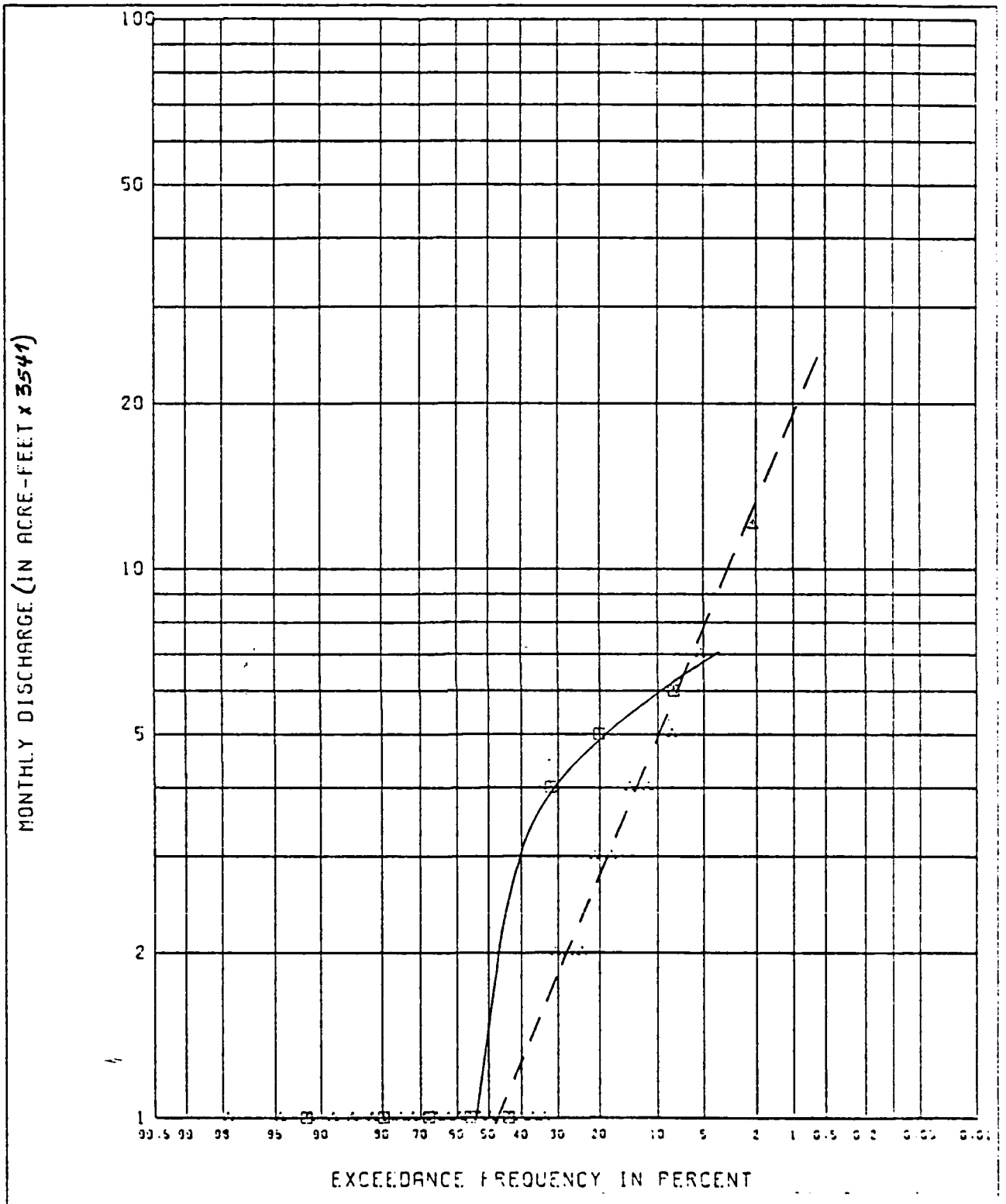
OCTOBER FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

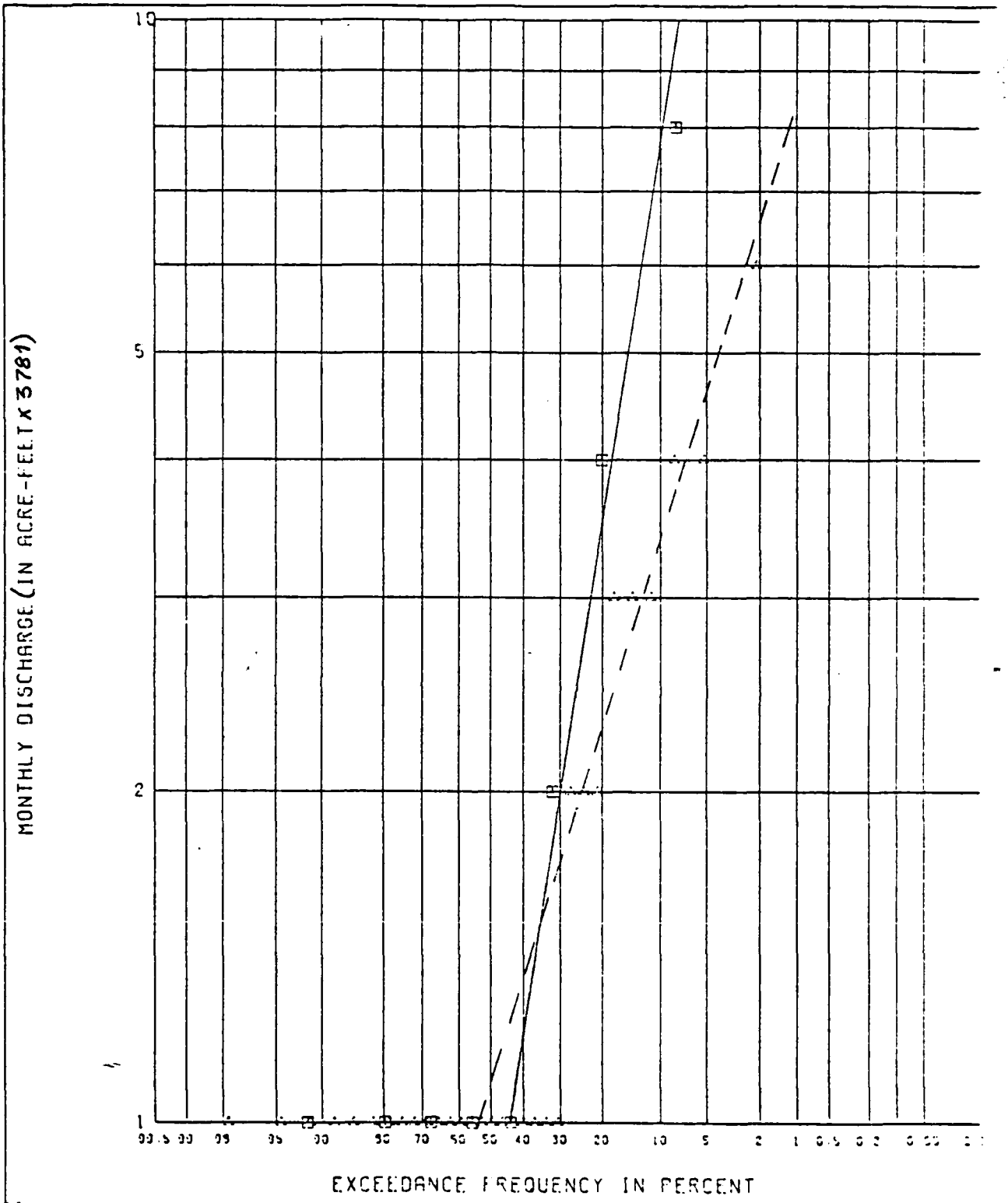
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU
BARKER RESERVOIR
DISCHARGE-FREQUENCY RELATIONS AT DAM SITE
NOVEMBER FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE A1

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1974)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1975-1975)

BUFFALO BAYOU

BARKER RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

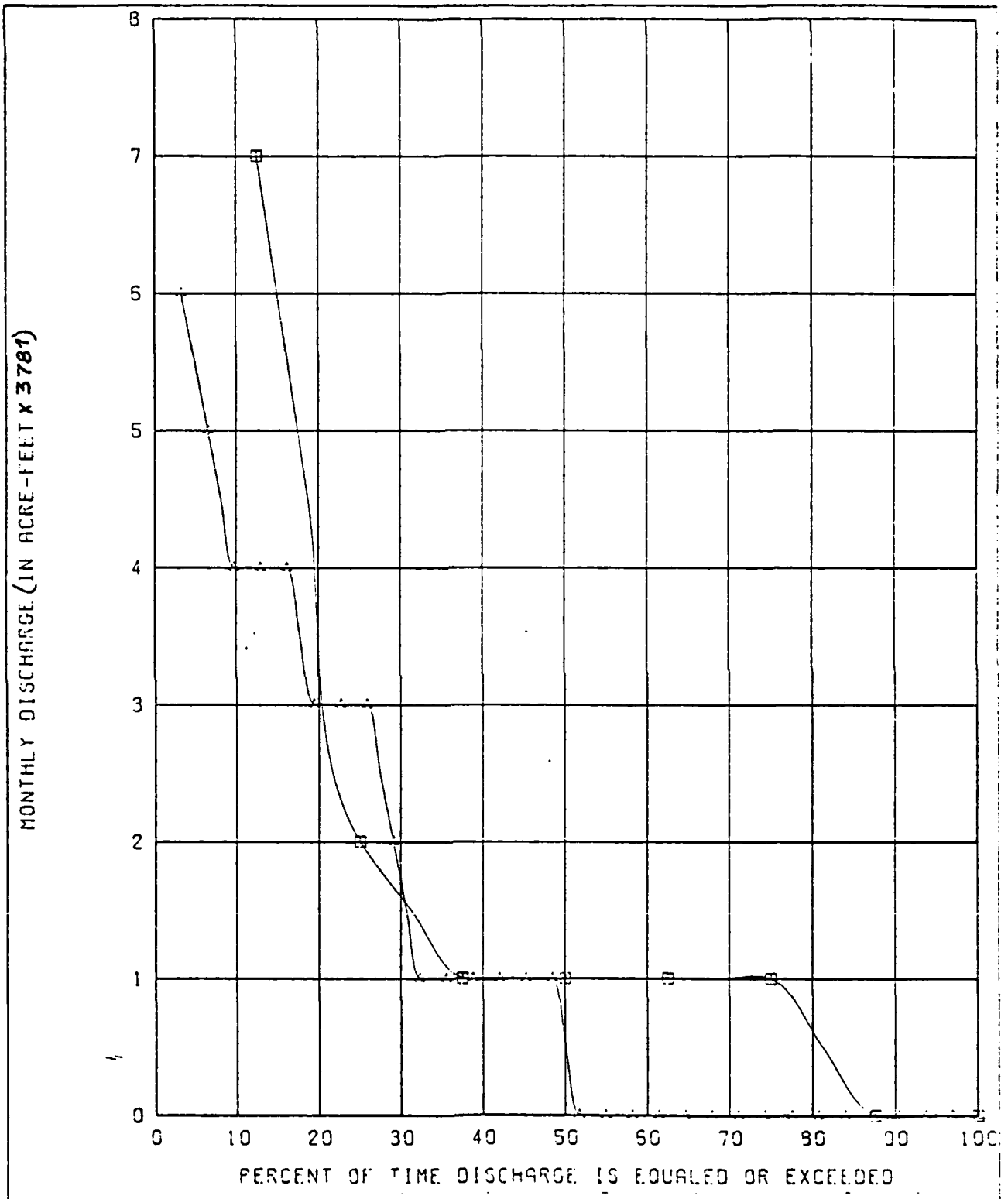
DECEMBER FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 42

CORPS OF ENGINEERS U.S. ARMY



LEGEND

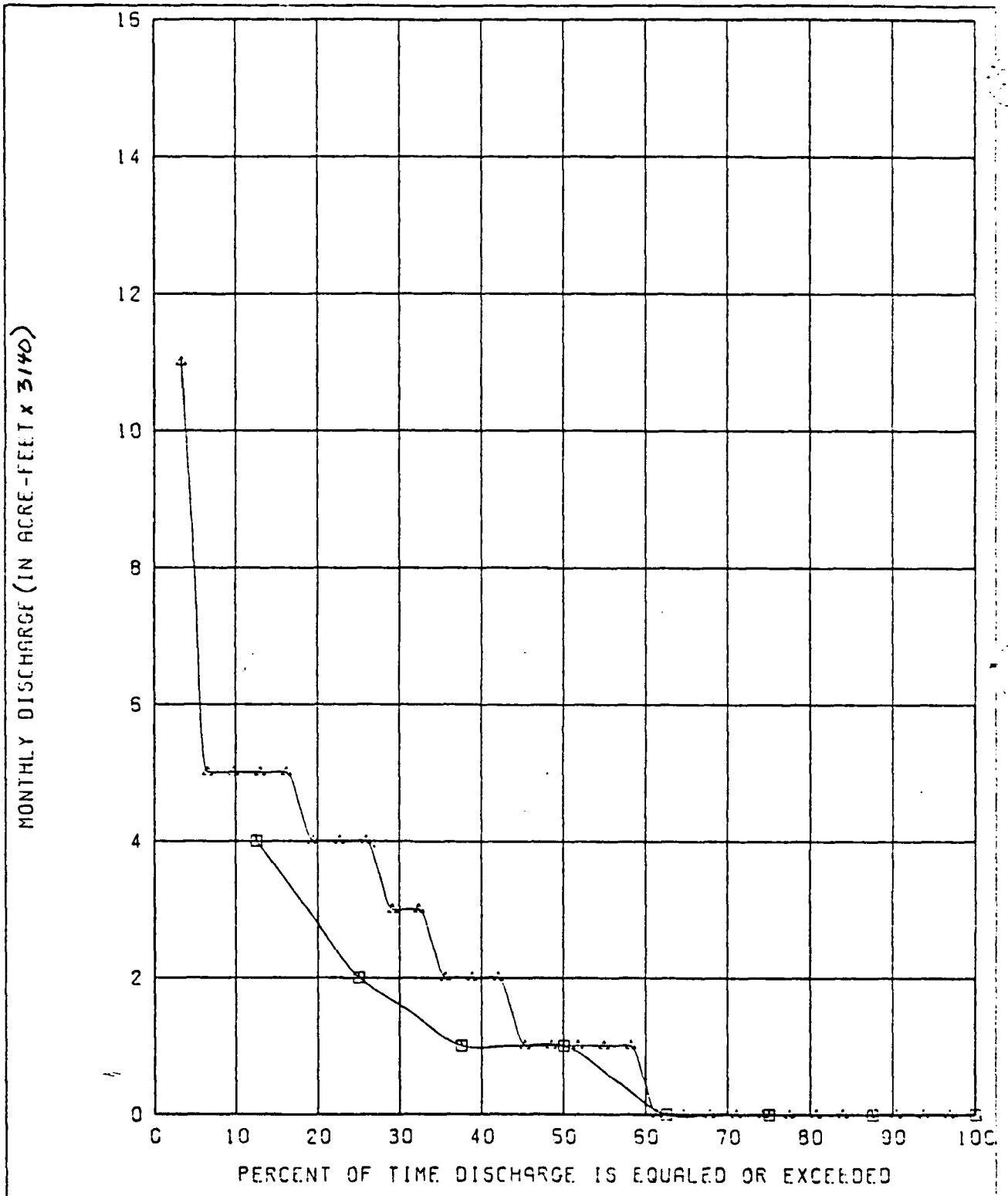
PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1974)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1946-1975)

BUFFALO BAYOU
BARKER RESERVOIR
FLOW DURATION CURVES AT DAM SITE
JANUARY FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1937-1941)

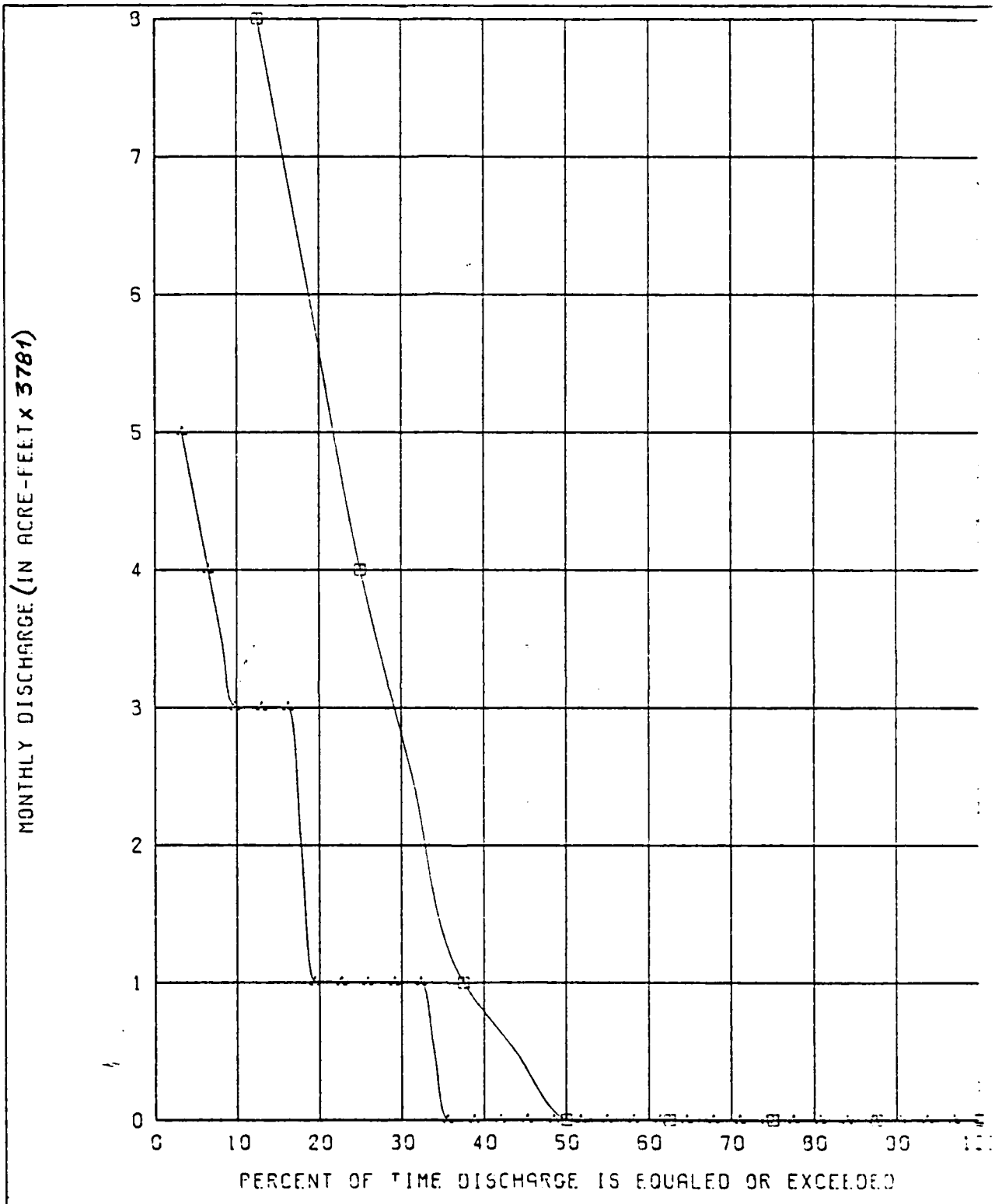
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1946-1975)

BUFFALO BAYOU
BARKER RESERVOIR
FLOW DURATION CURVES AT DAM SITE
FEBRUARY FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INTERIM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

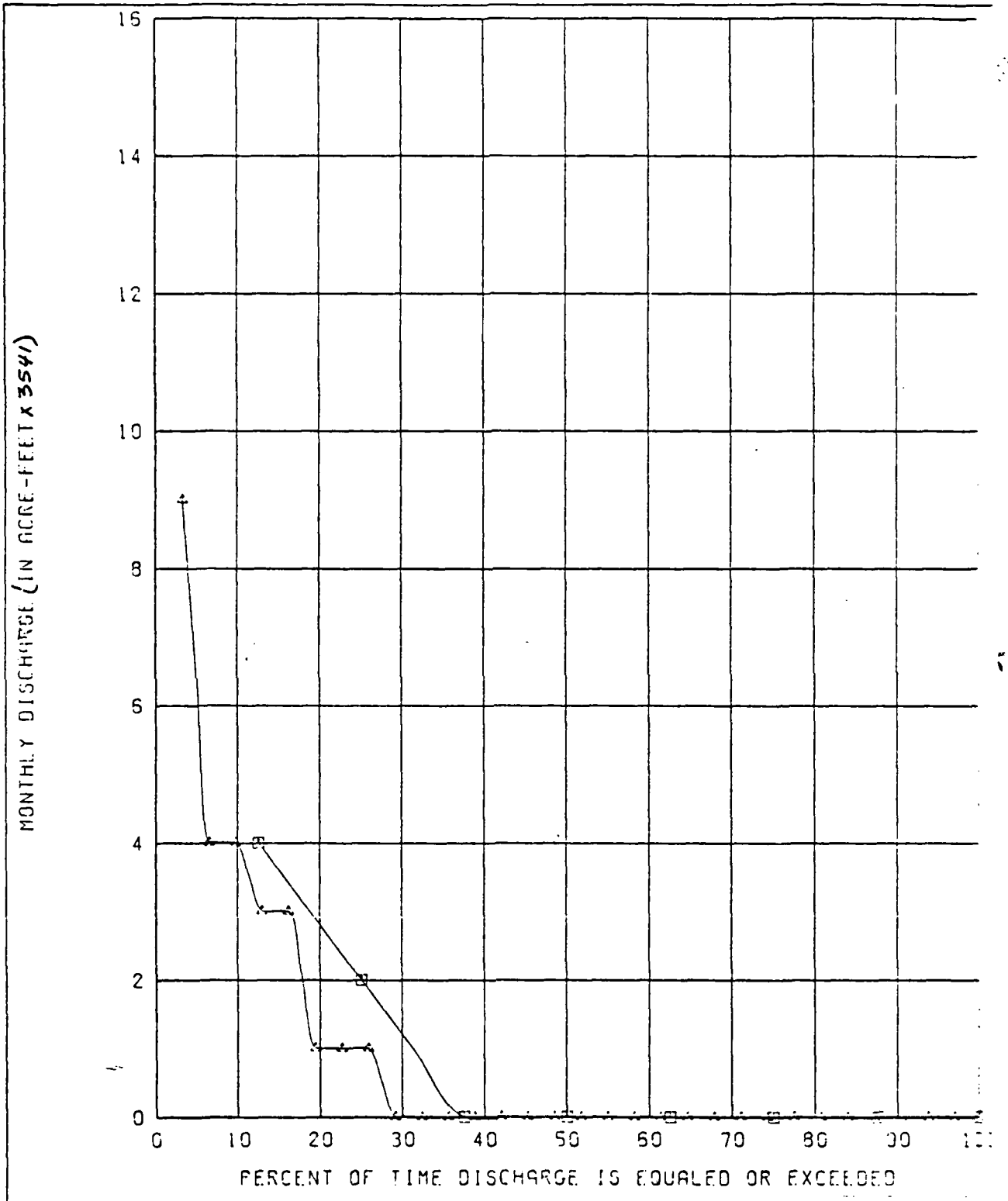
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU
BARKER RESERVOIR
FLOW DURATION CURVES AT DAM SITE
MARCH FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INTERIM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1973)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU

BARKER RESERVOIR

FLOW DURATION CURVES AT DAM SITE

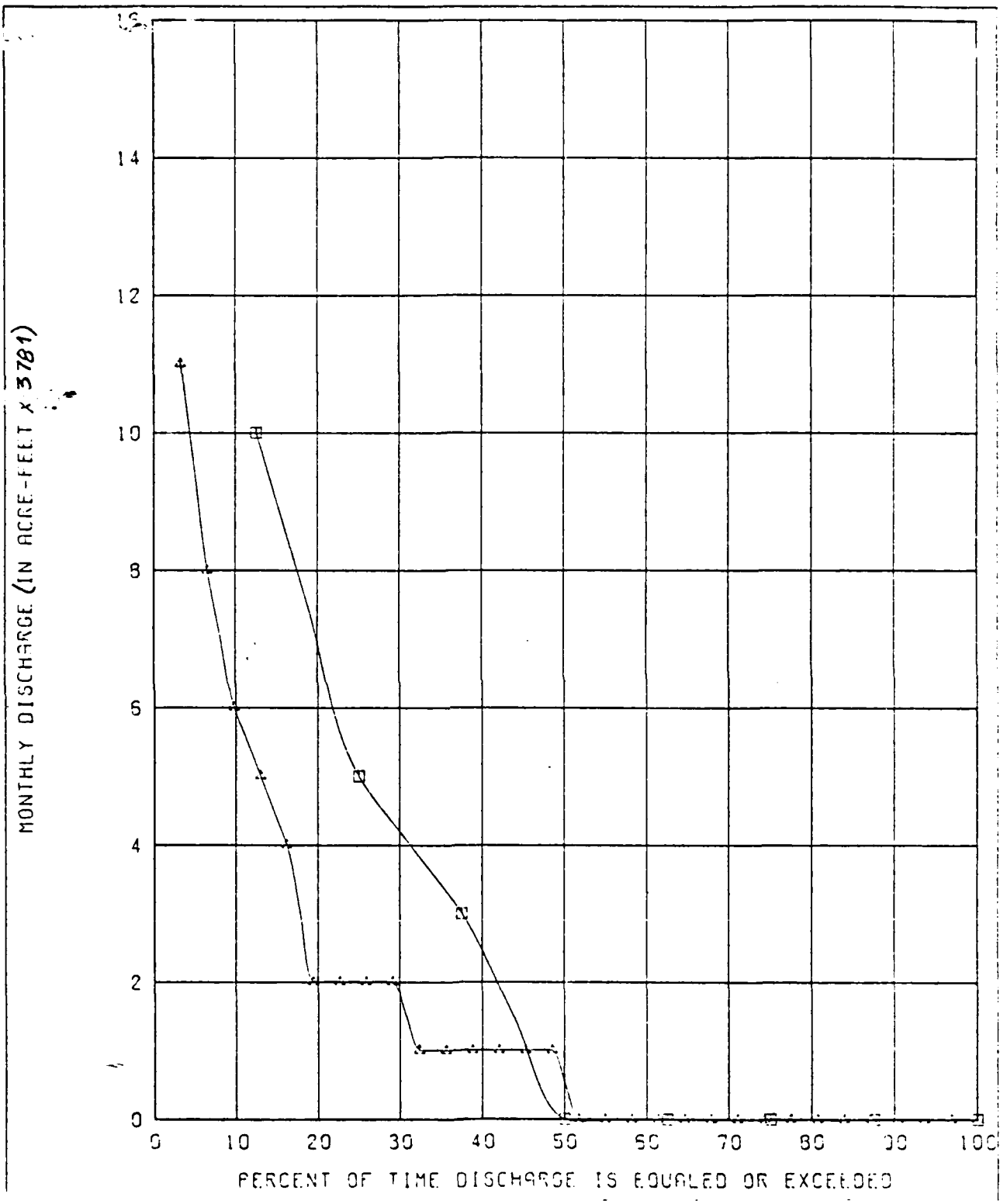
APRIL FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 44

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1941)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU

BARKER RESERVOIR

FLOW DURATION CURVES AT DAM SITE

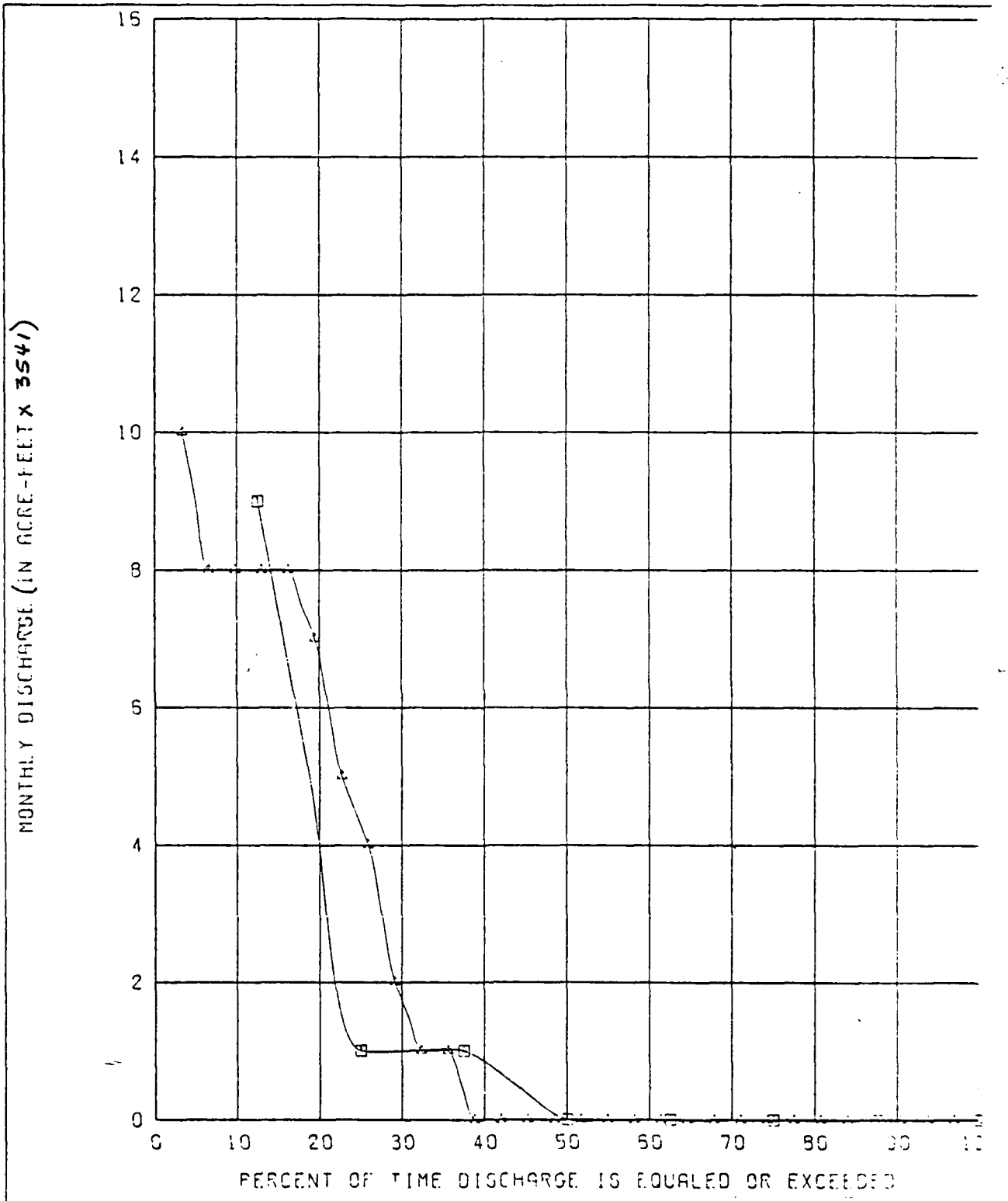
MAY FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1937-1941)

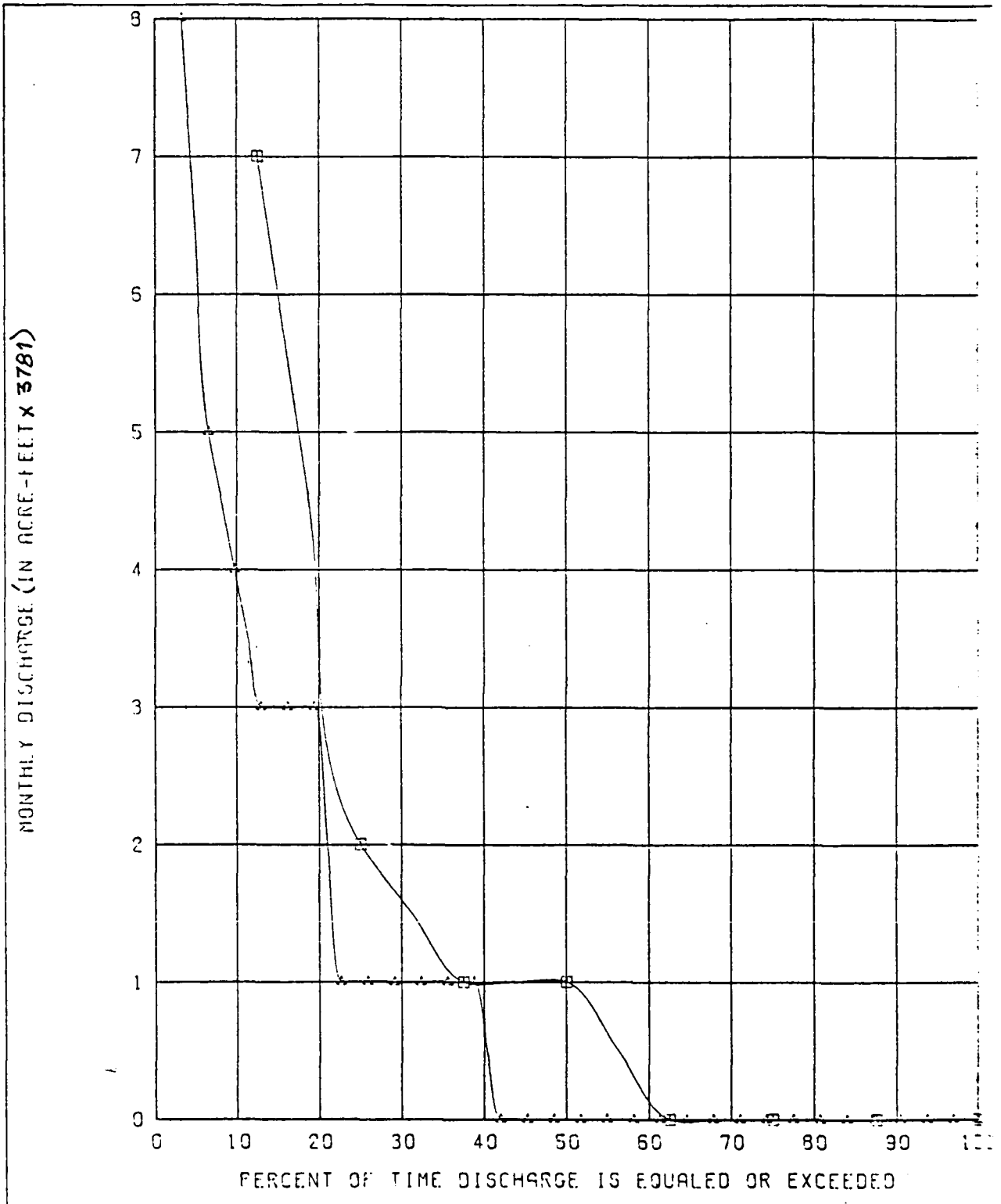
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU
BARKER RESERVOIR
FLOW DURATION CURVES AT DAM SITE
JUNE FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INTERIM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 46

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1937-1974)

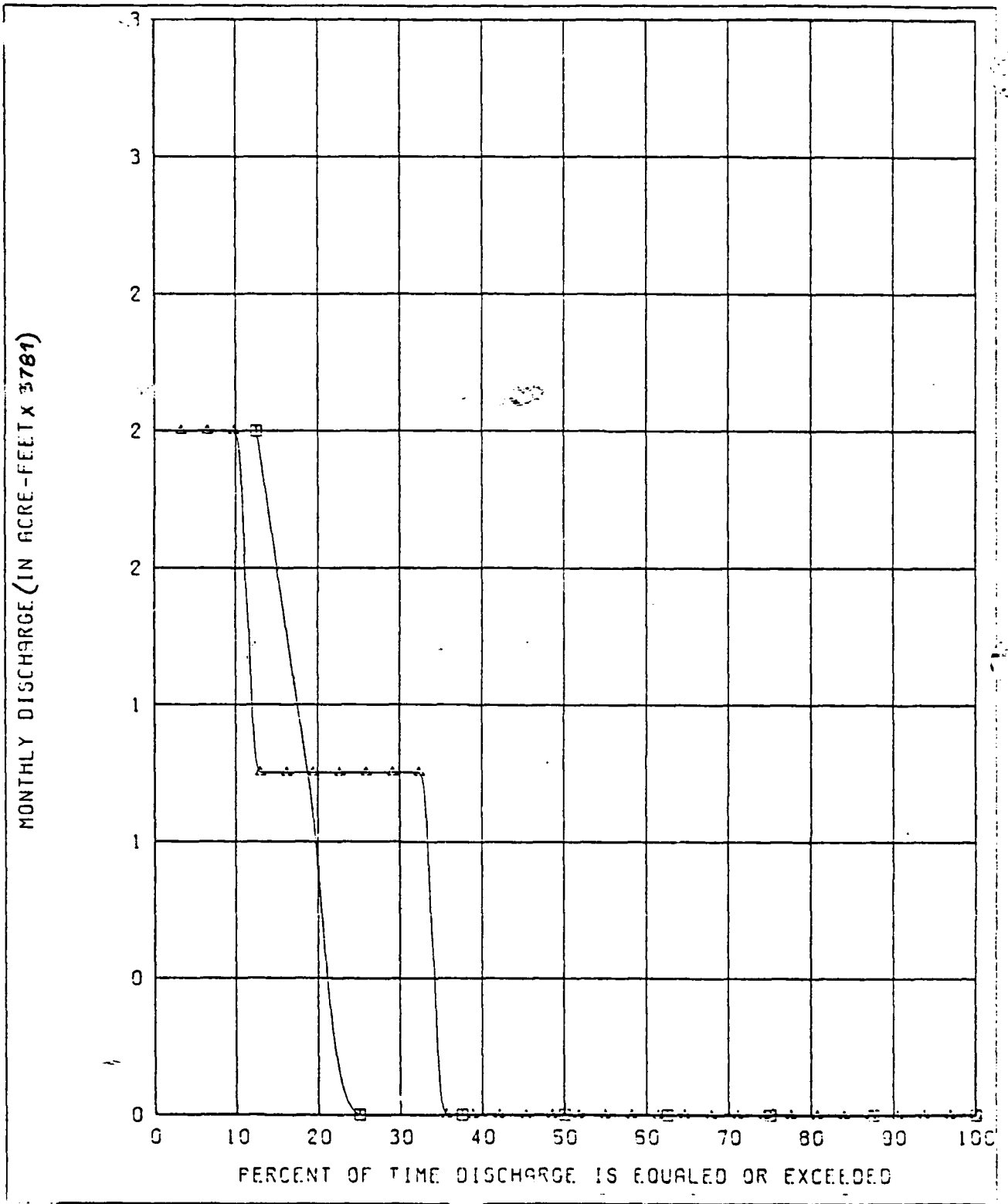
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1975-1979)

BUFFALO BAYOU
BARKER RESERVOIR
FLOW DURATION CURVES AT DAM SITE
JULY FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

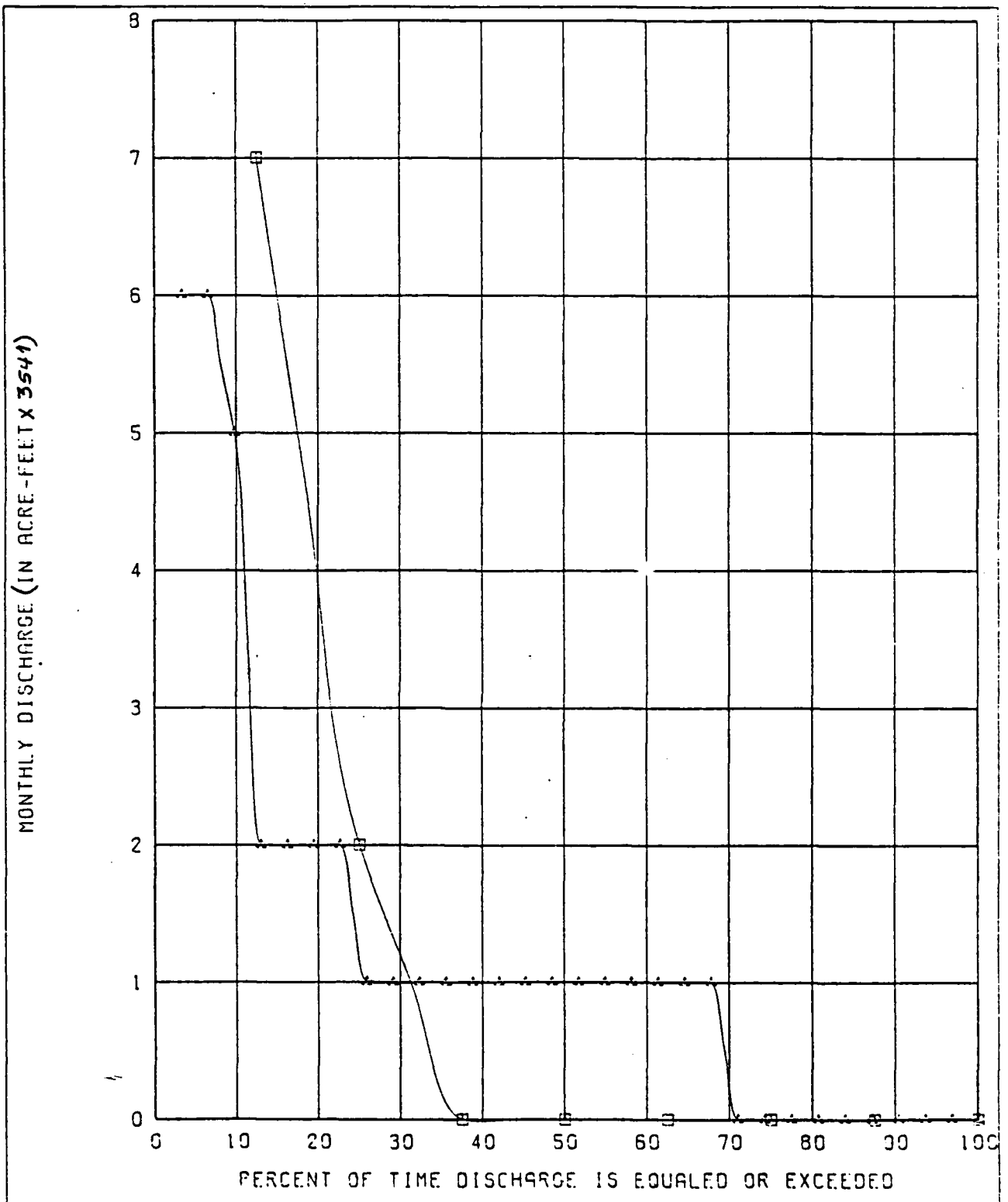
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU
BARKER RESERVOIR
FLOW DURATION CURVES AT DAM SITE
AUGUST FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1937-1964)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1965-1975)

BUFFALO BAYOU

BARKER RESERVOIR

FLOW DURATION CURVES AT DAM SITE

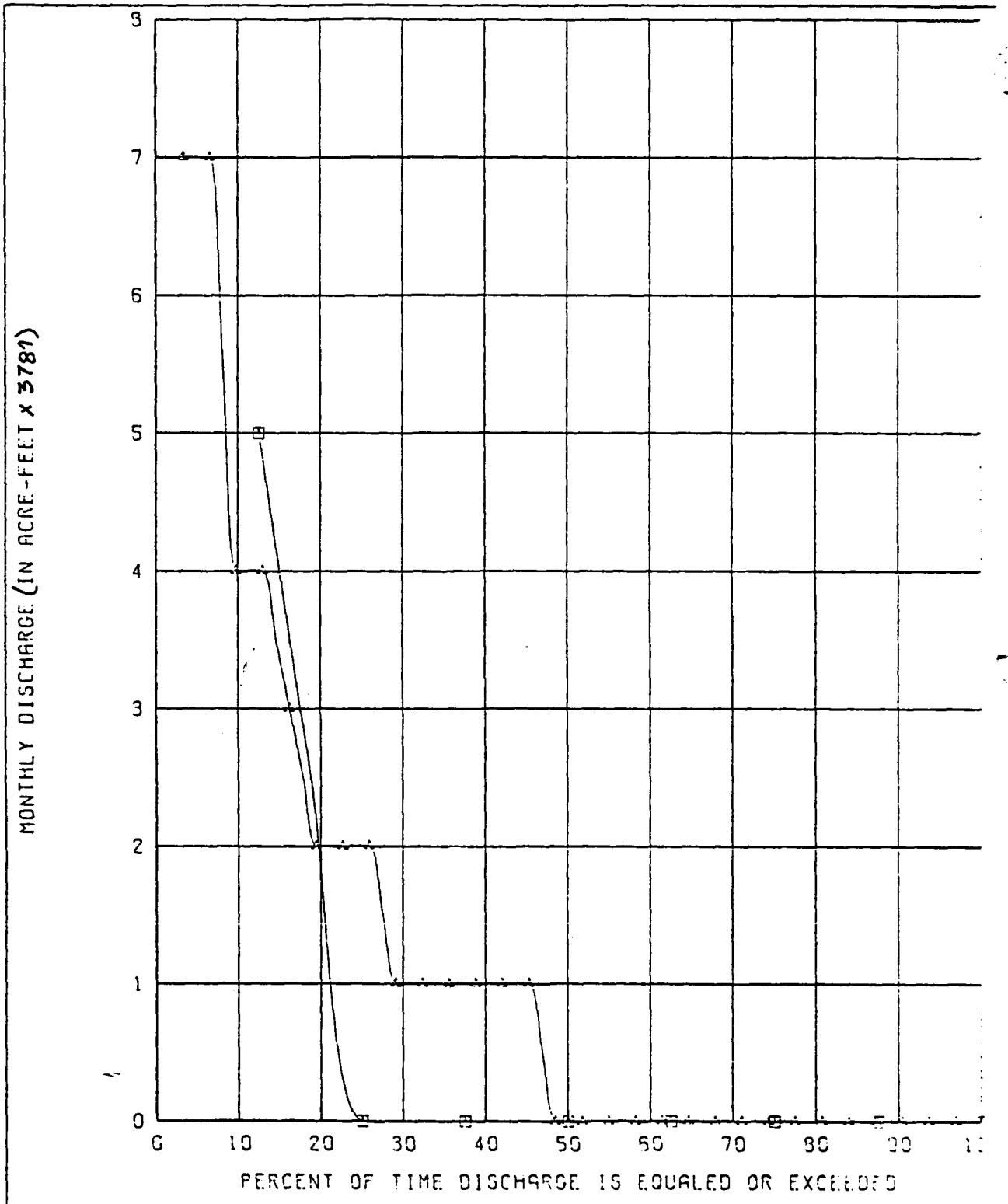
SEPTEMBER FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

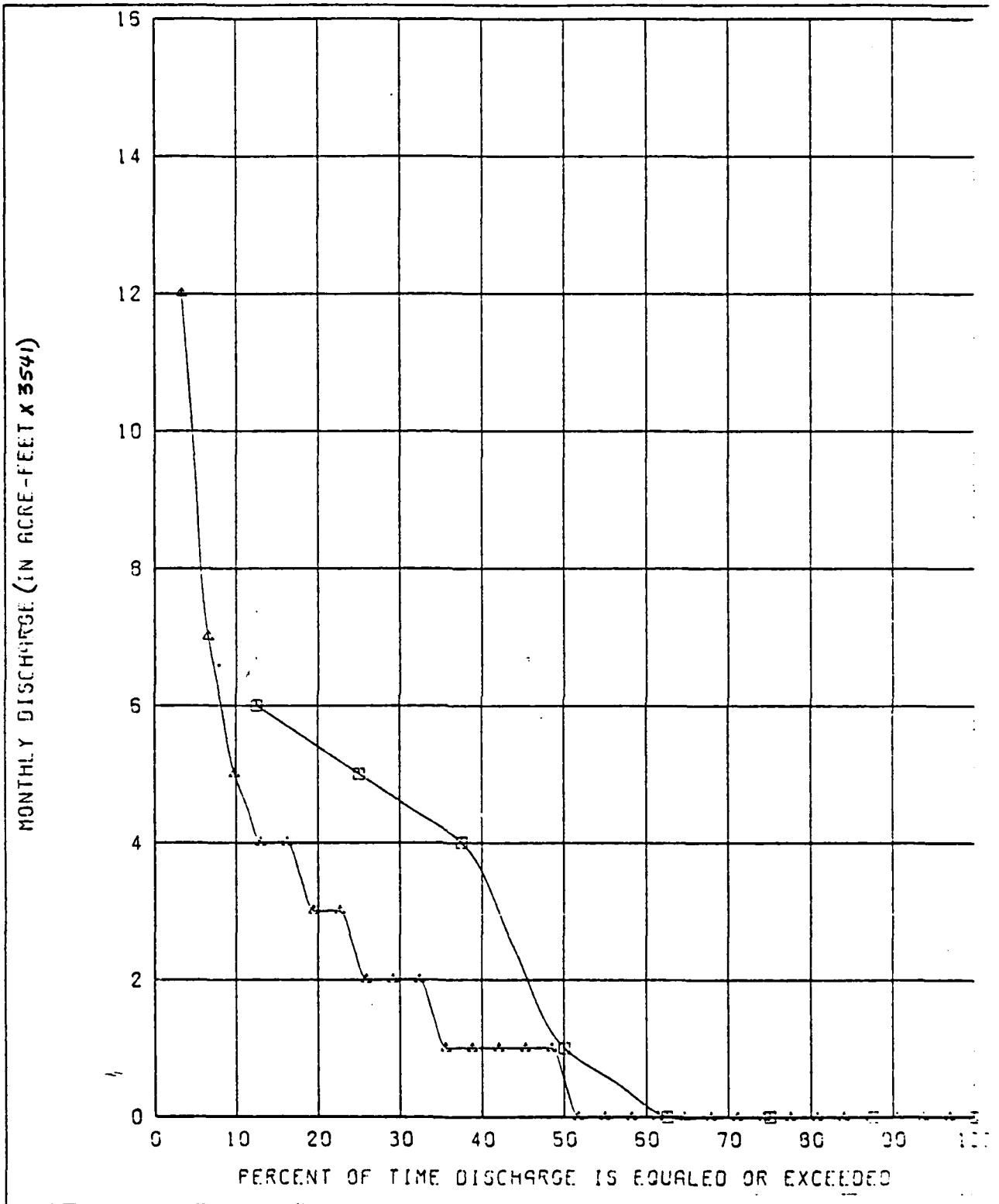
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU
BARKER RESERVOIR
FLOW DURATION CURVES AT DAM SITE
OCTOBER FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 22

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1941)

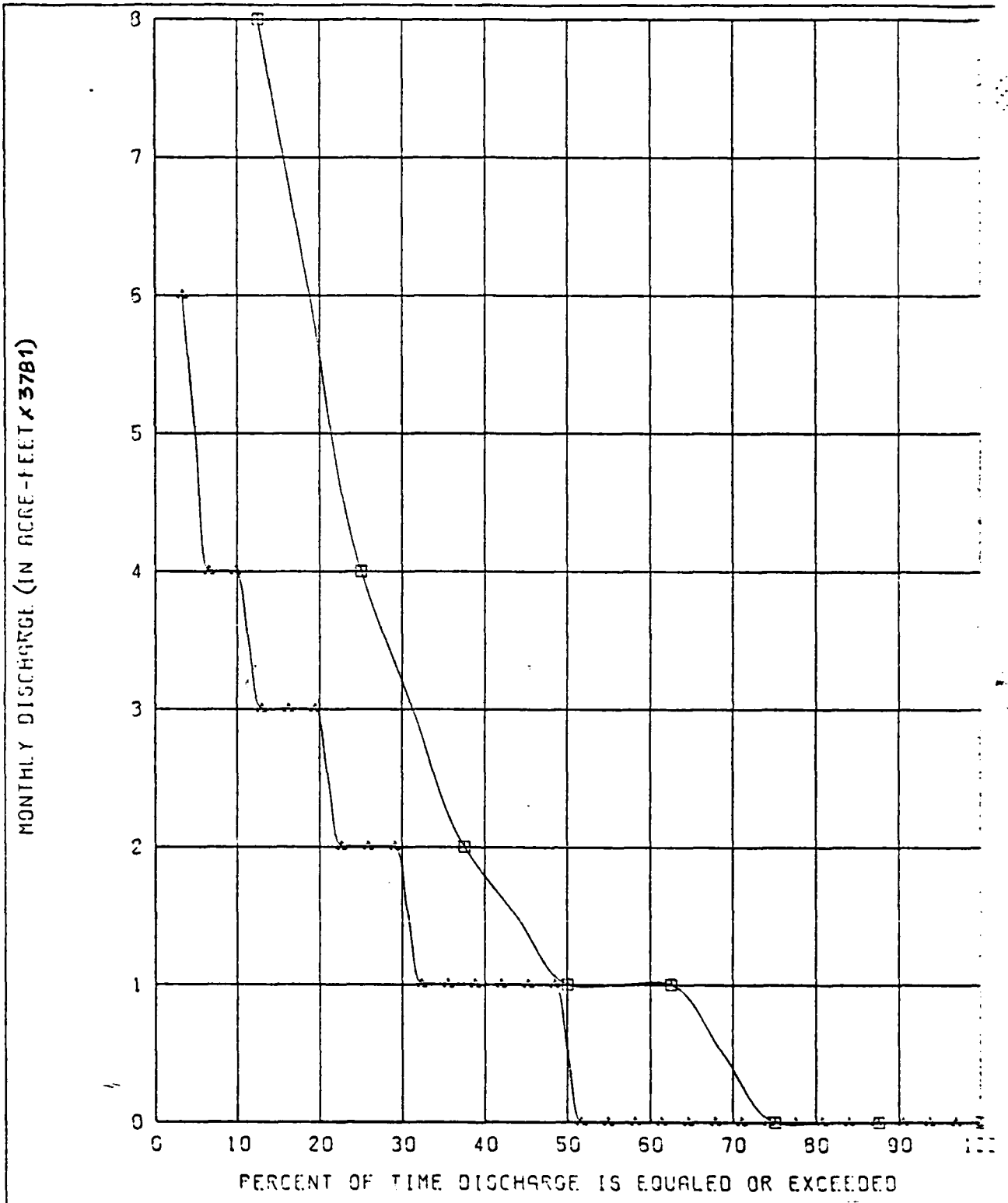
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU
BARKER RESERVOIR
FLOW DURATION CURVES AT DAM SITE
NOVEMBER FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1974)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1945-1975)

BUFFALO BAYOU

BARKER RESERVOIR

FLOW DURATION CURVES AT DAM SITE

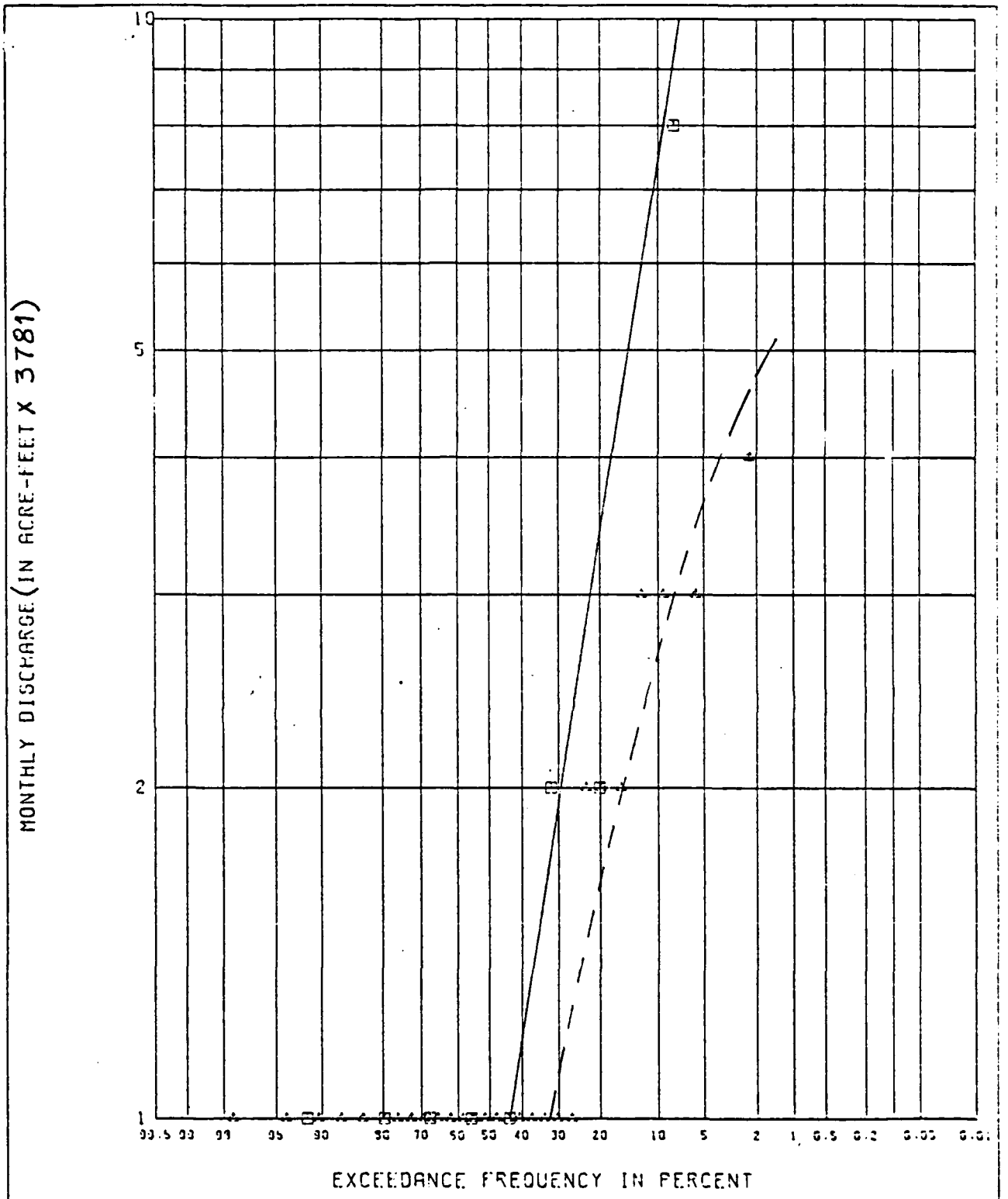
DECEMBER FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1949-1975)

BUFFALO BAYOU

ADDICKS RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

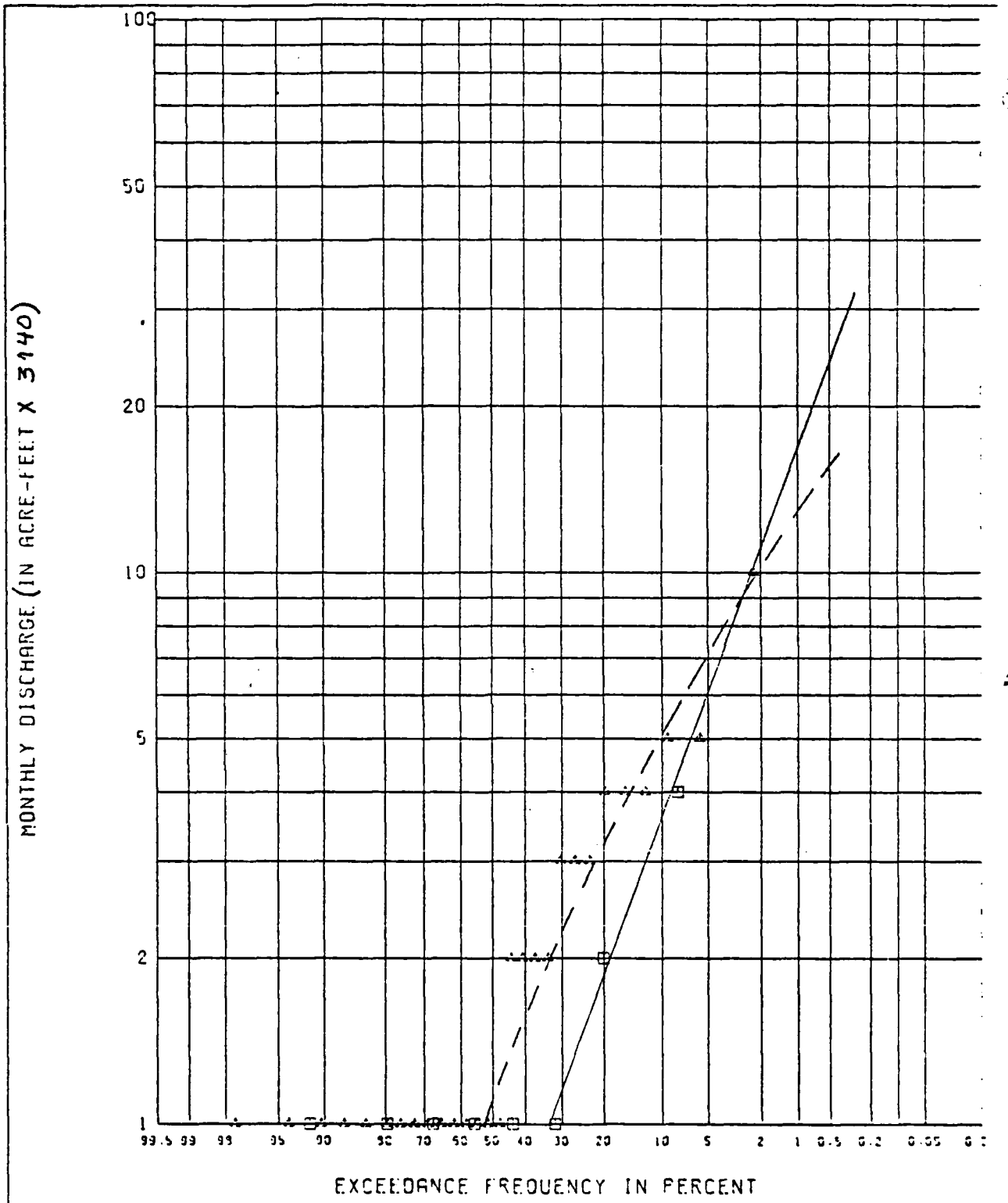
JANUARY FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1949-1975)

BUFFALO BAYOU

ADDICKS RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

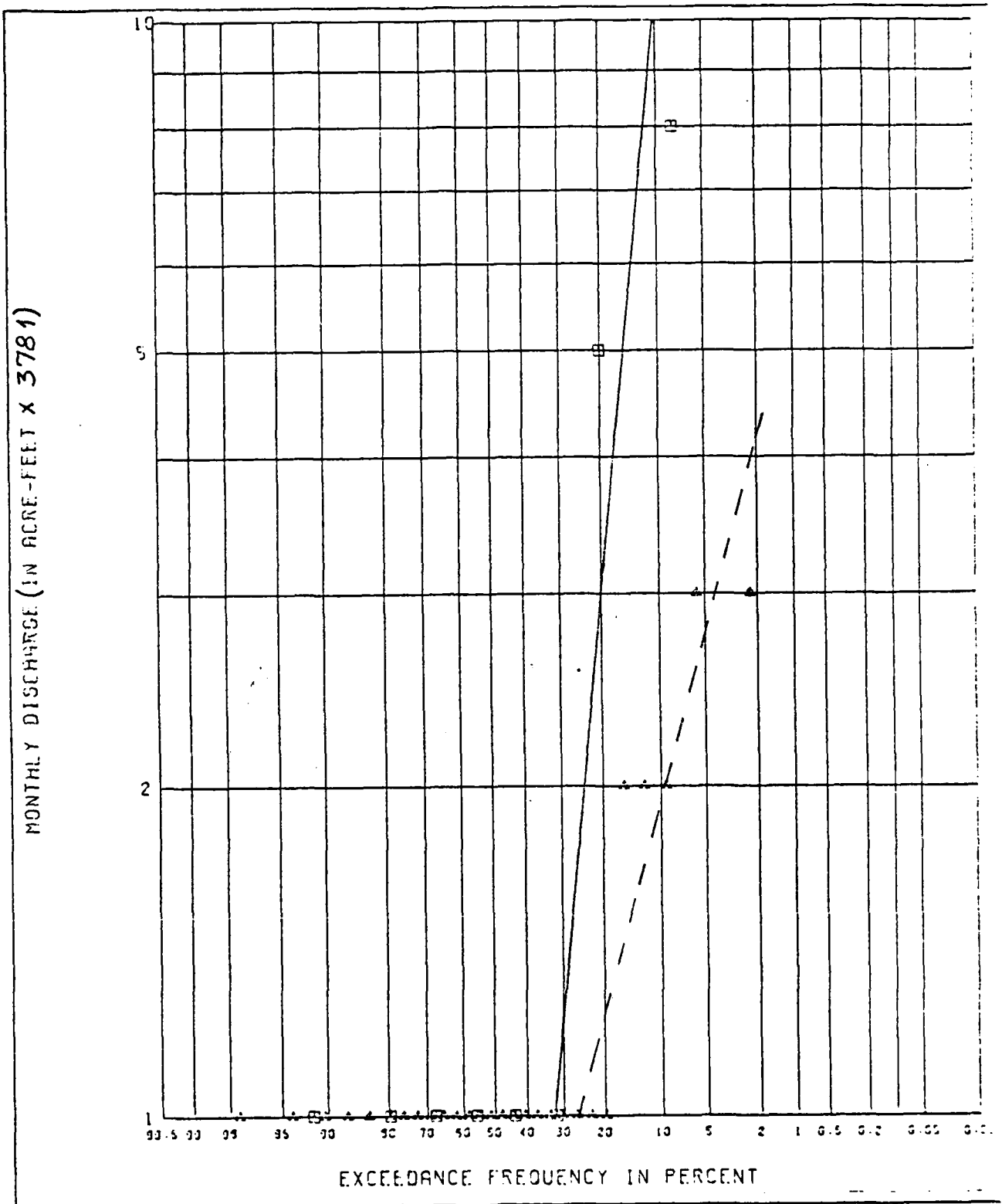
FEBRUARY FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1949-1975)

BUFFALO BAYOU

ADDICKS RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

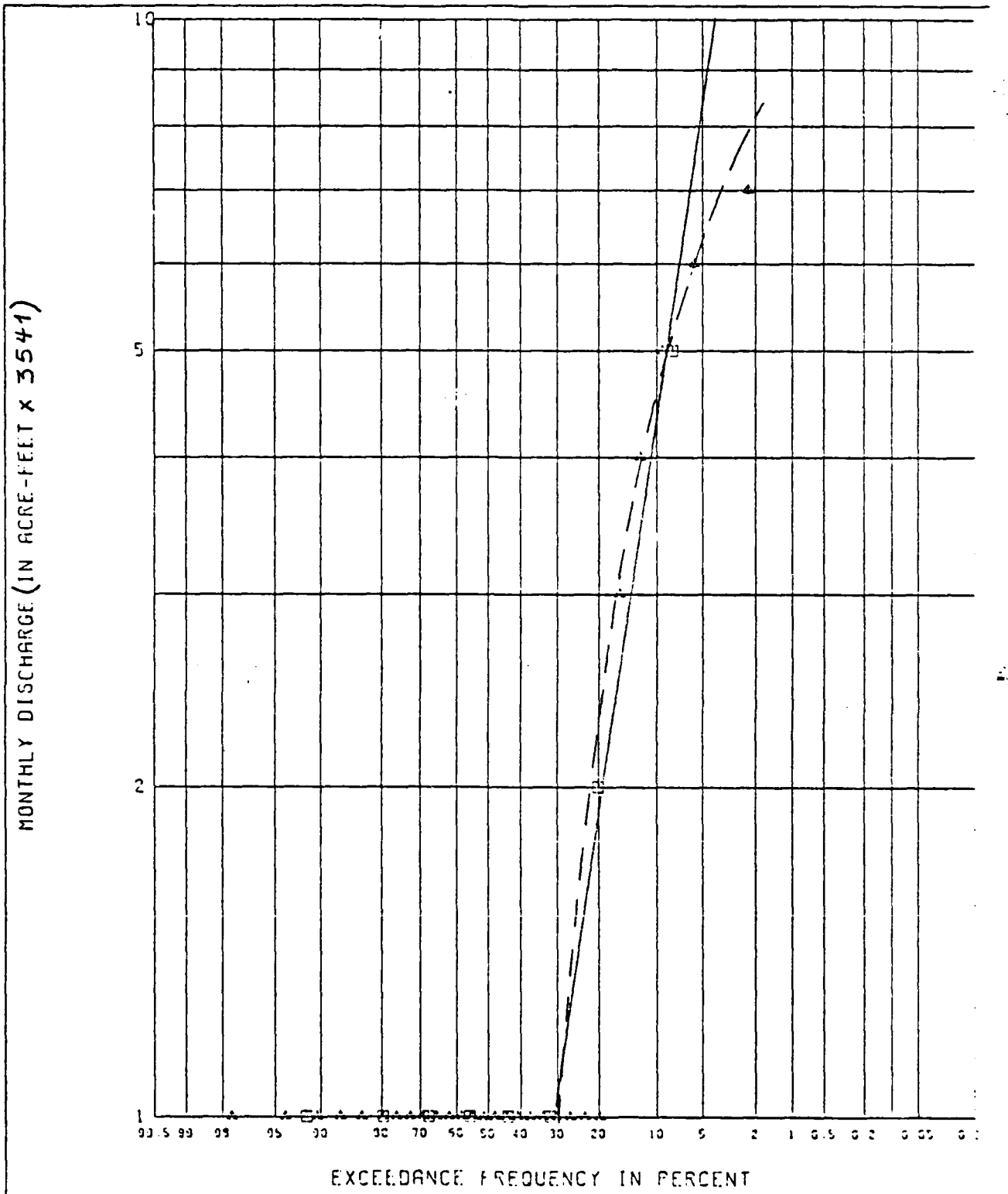
MARCH FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1941)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1942-1975)

BUFFALO BAYOU

ADDICKS RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

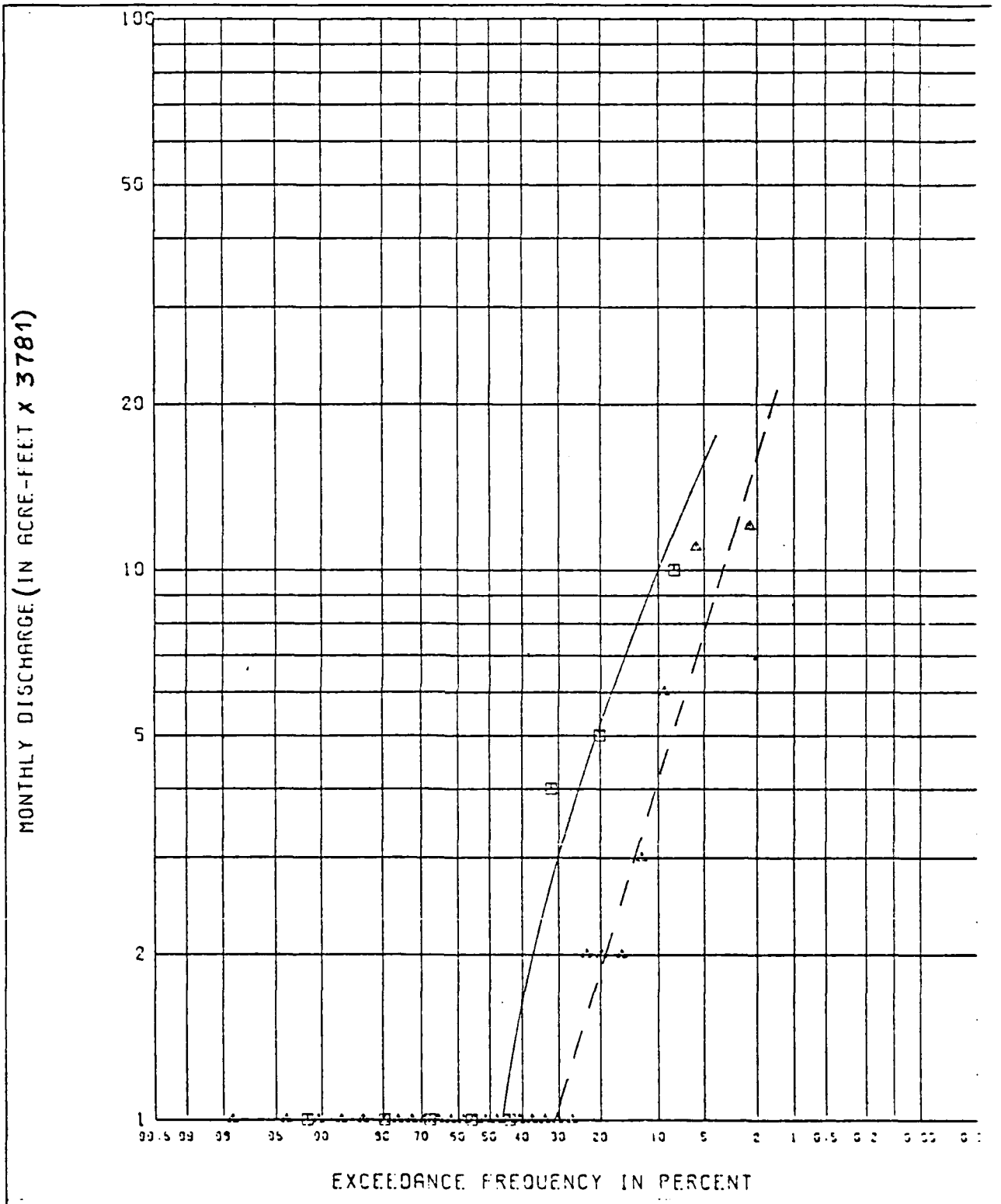
APRIL FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1949-1975)

BUFFALO BAYOU

ADDICKS RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

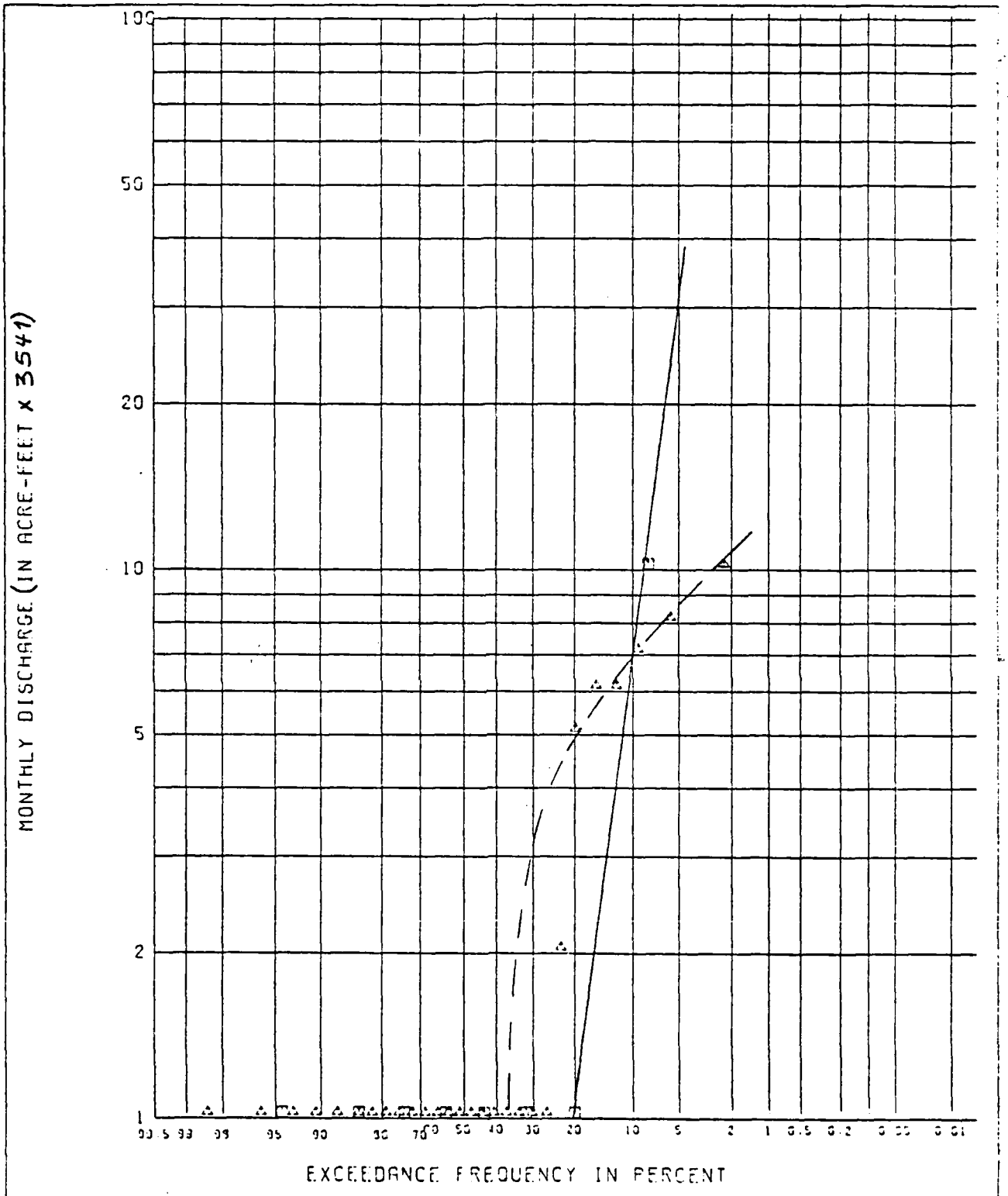
MAY FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

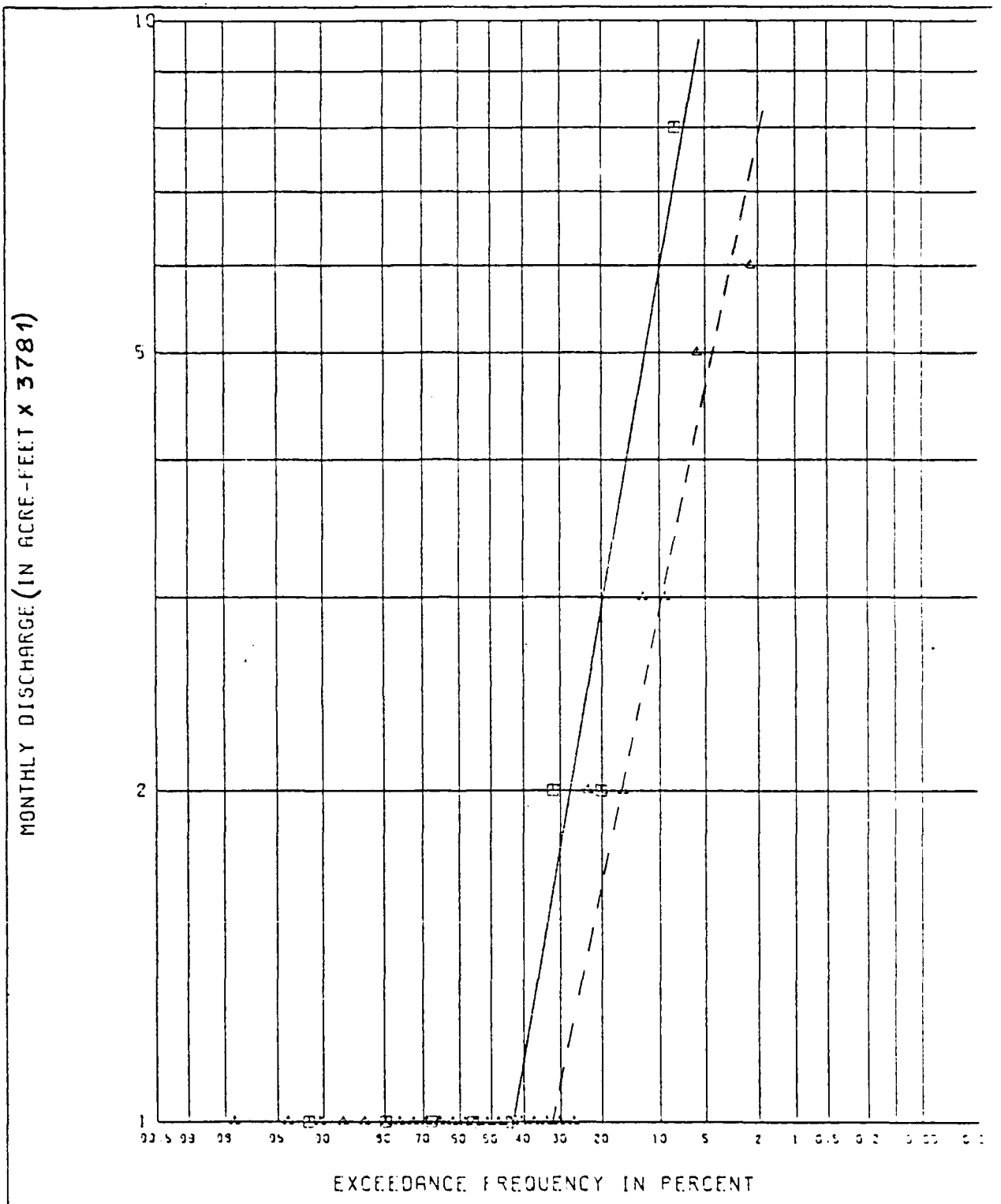
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1949-1975)

BUFFALO BAYOU
ADDICKS RESERVOIR
DISCHARGE-FREQUENCY RELATIONS AT DAM SITE
JUNE FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1949-1975)

BUFFALO BAYOU

ADDICKS RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

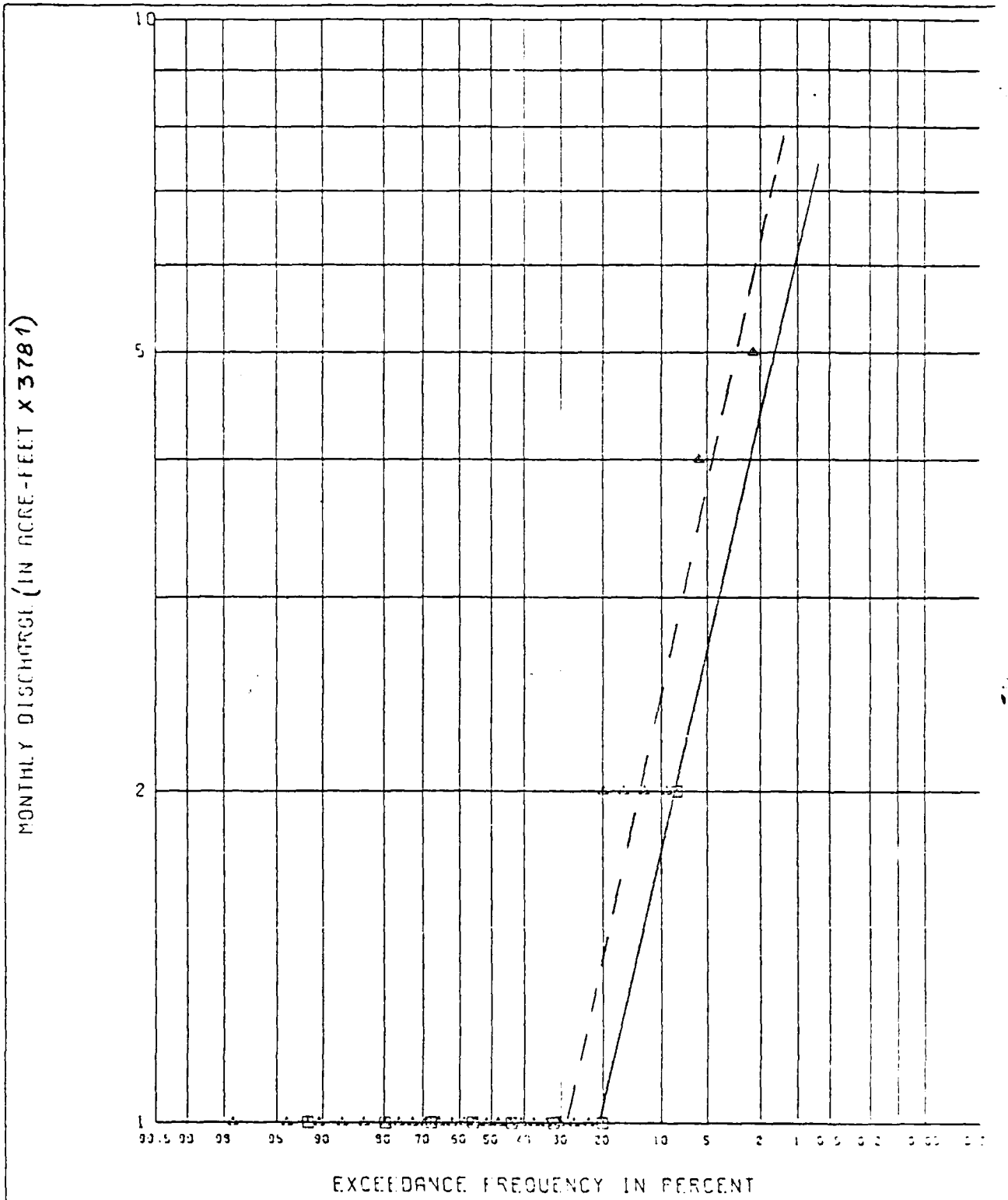
JULY FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1941)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1942-1975)

BUFFALO BAYOU

ADDICKS RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

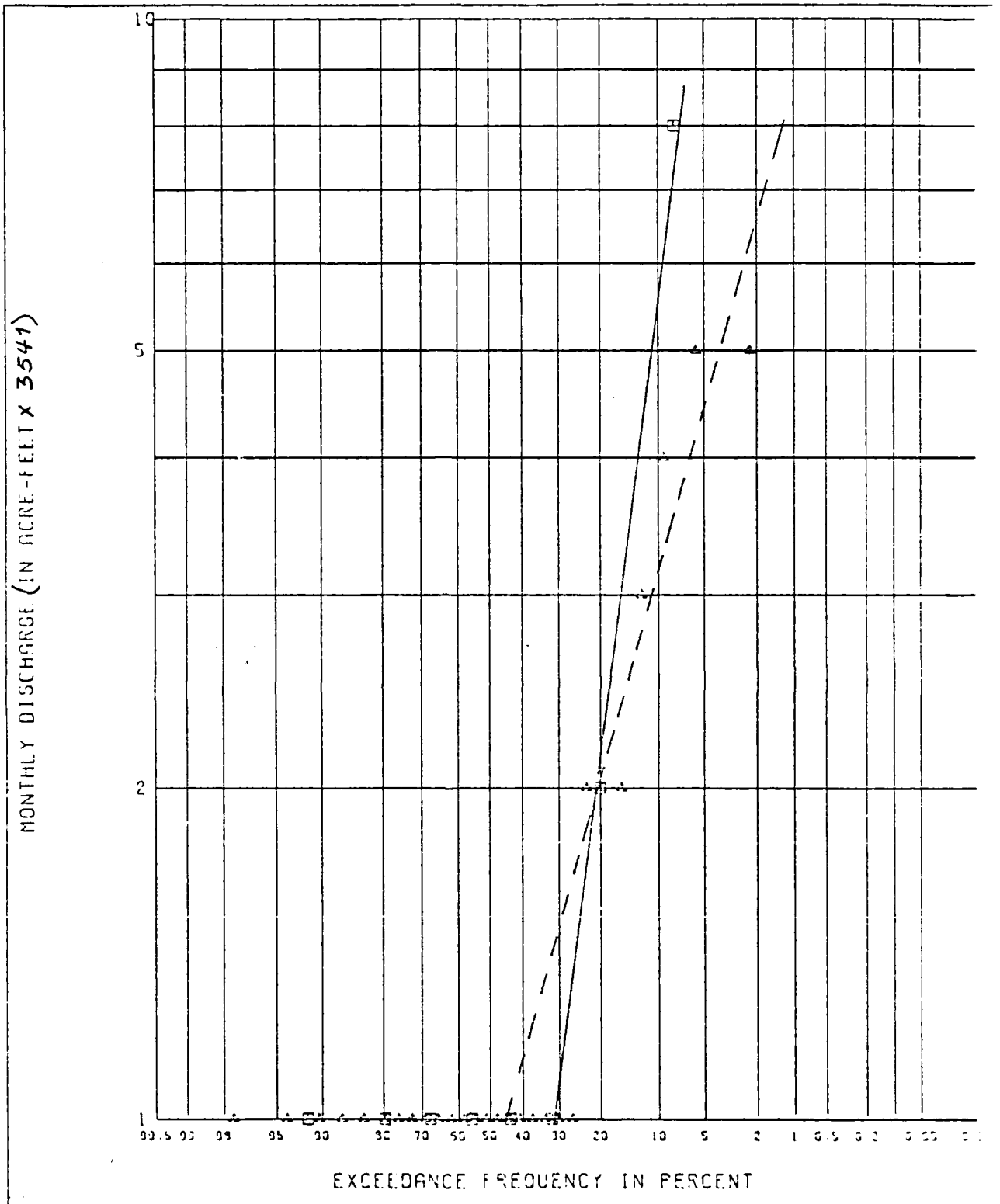
AUGUST FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE e

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1974)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1976)

BUFFALO BAYOU

ADDICKS RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

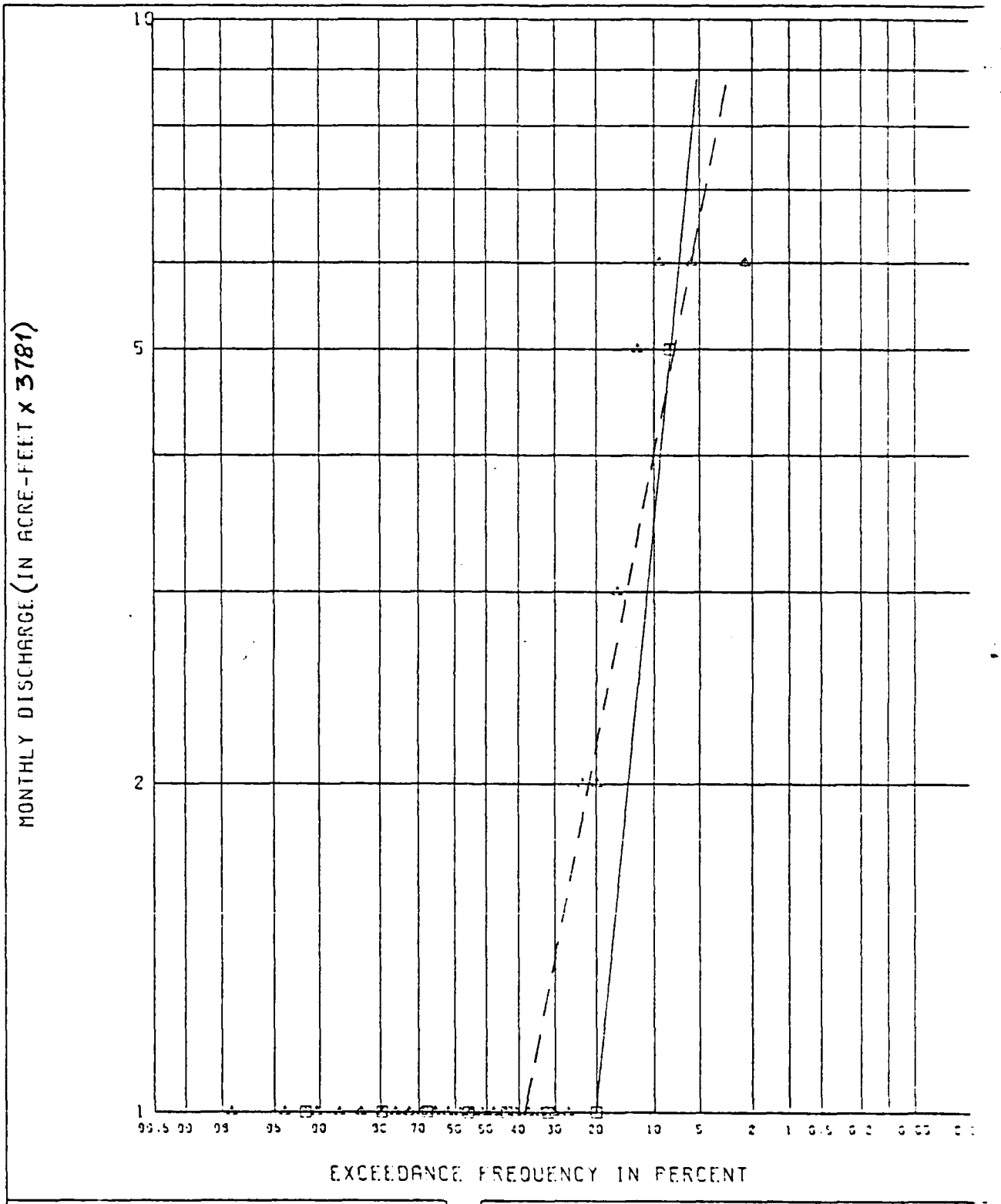
SEPTEMBER FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1974)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1975)

BUFFALO BAYOU

ADDICKS RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

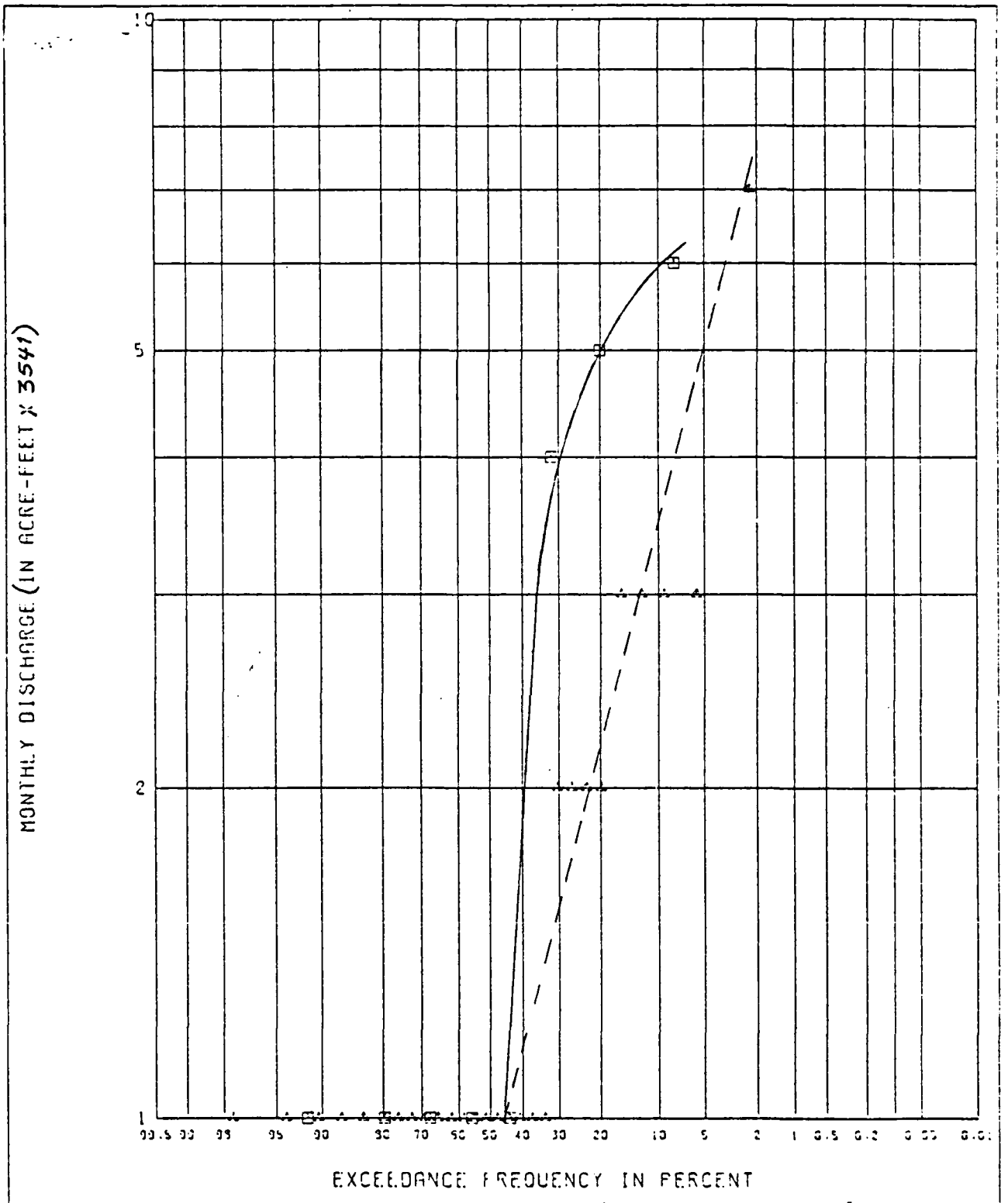
OCTOBER FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1960-1976)

BUFFALO BAYOU

ADDICKS RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

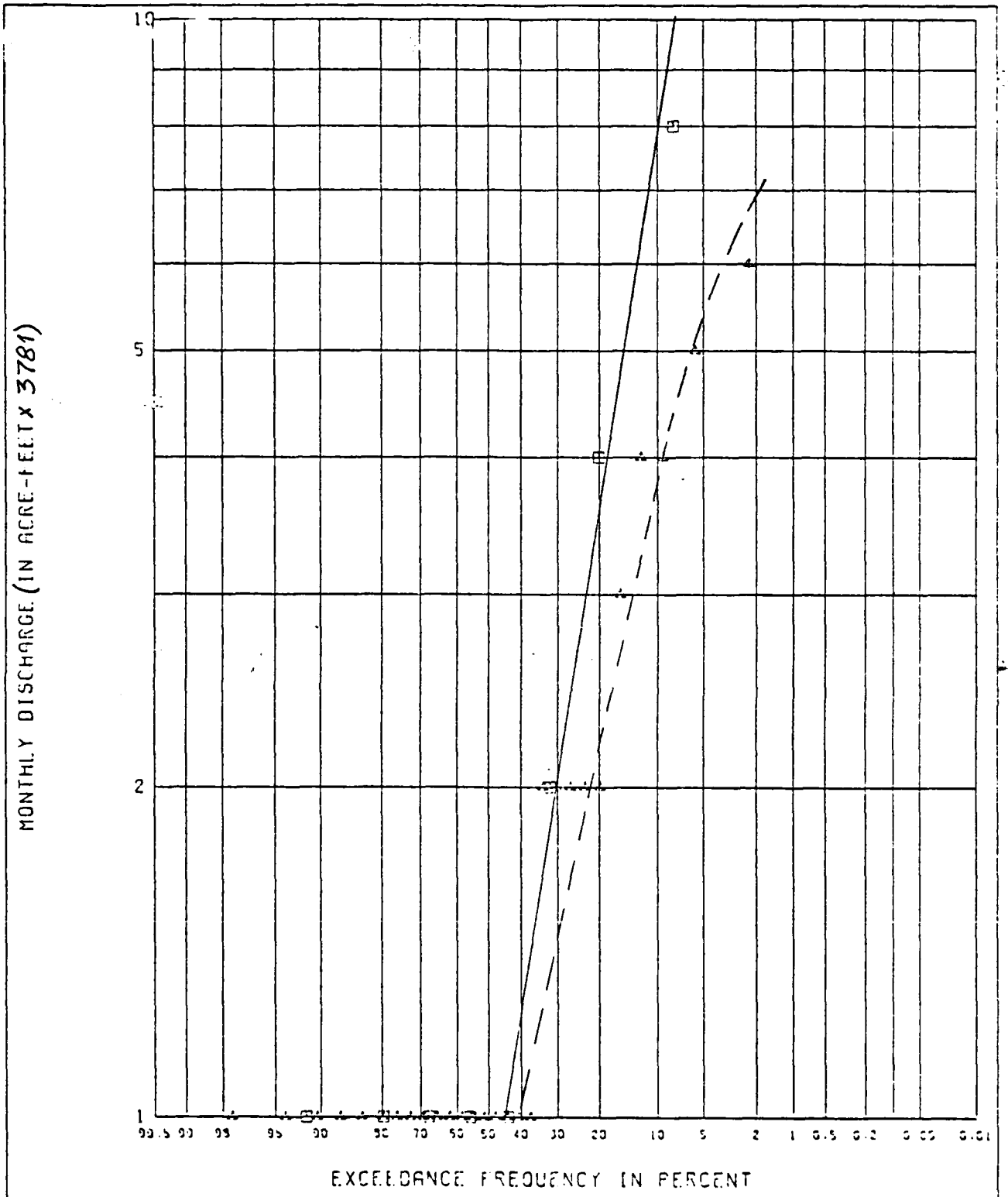
NOVEMBER FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1964)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1913-1975)

BUFFALO BAYOU

ADDICKS RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

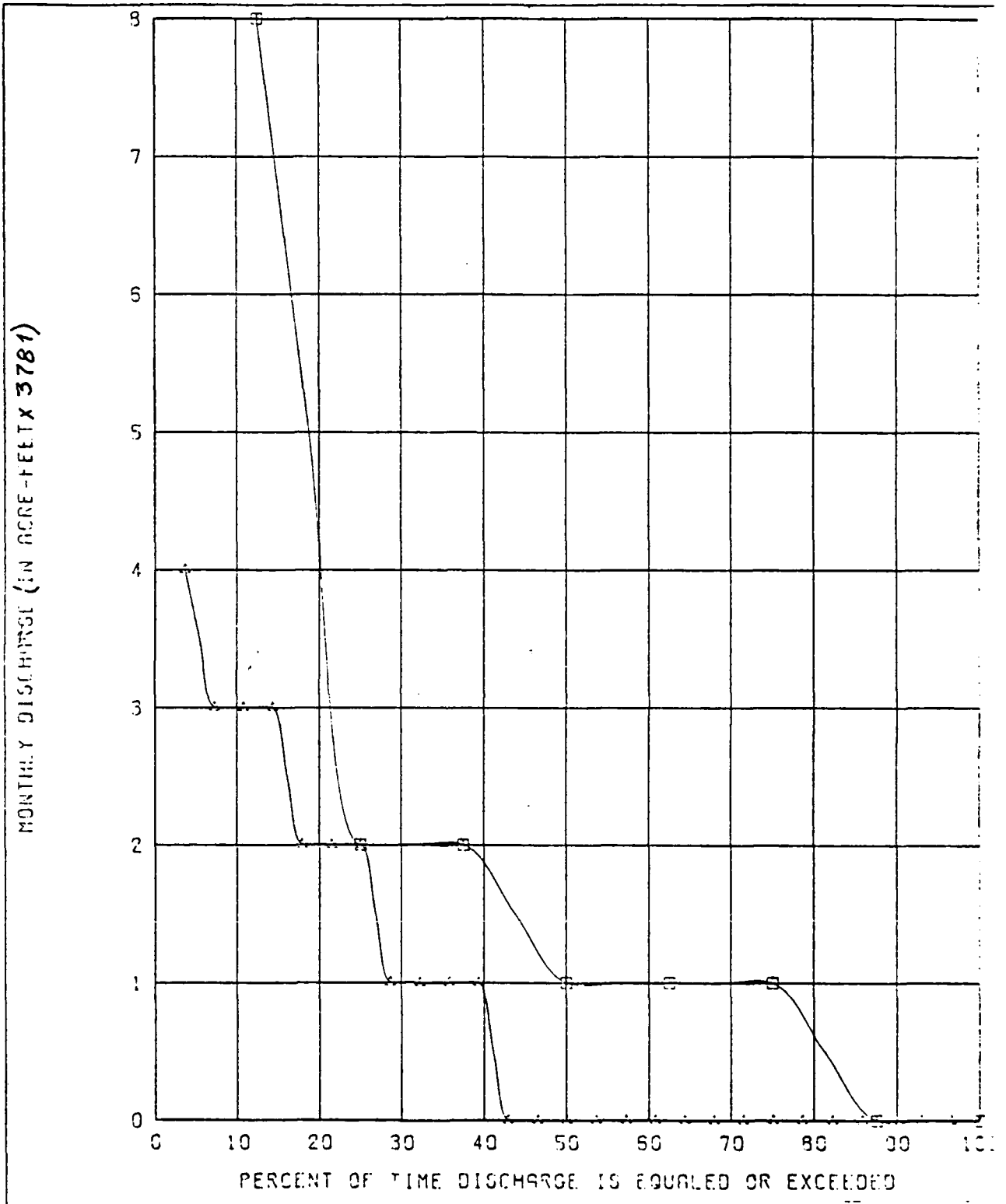
DECEMBER FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1954)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1975)

BUFFALO BAYOU

ADDICKS RESERVOIR

FLOW DURATION CURVES AT DAM SITE

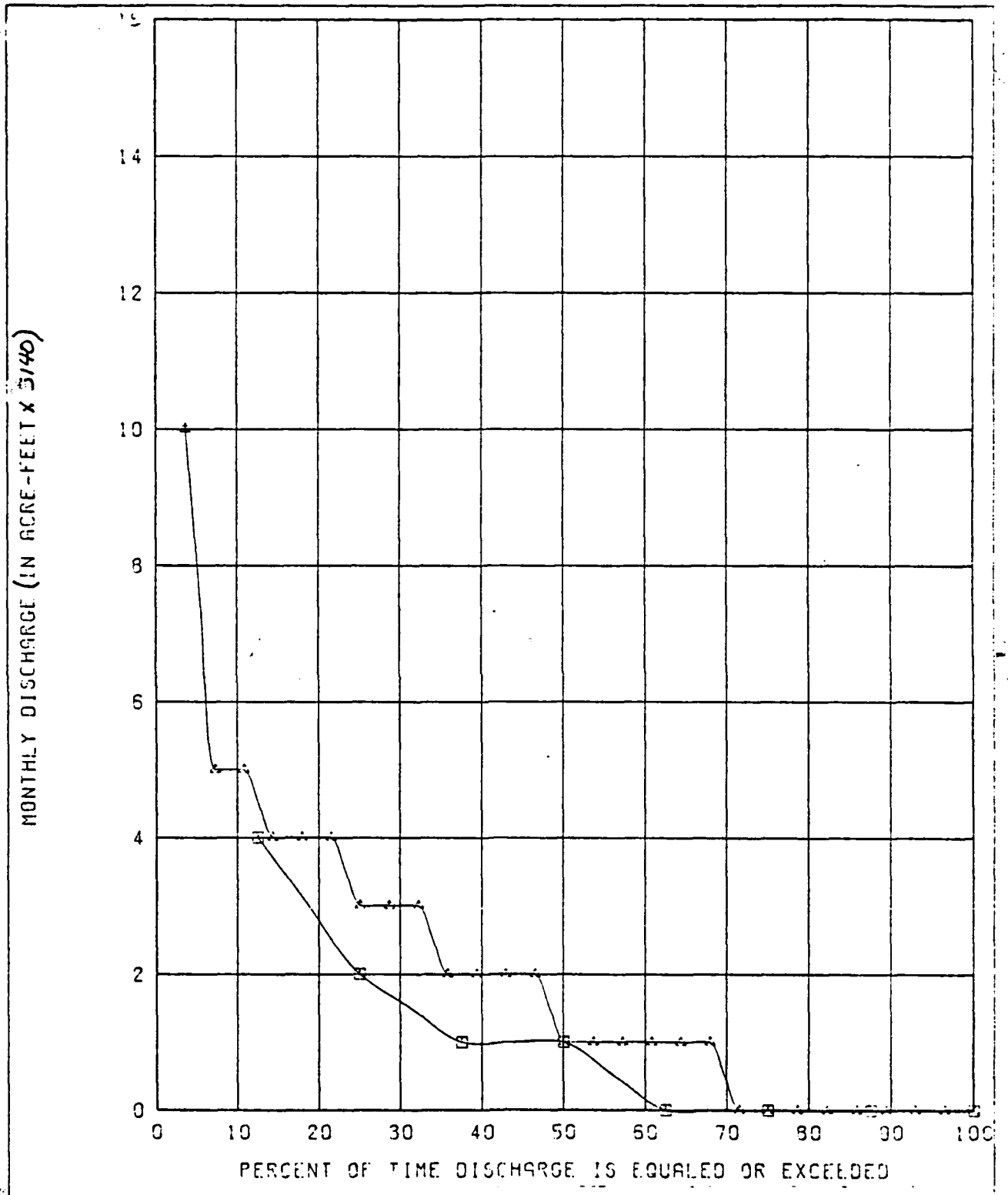
JANUARY FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSPECTOR FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1960-1975)

BUFFALO BAYOU

ADDICKS RESERVOIR

FLOW DURATION CURVES AT DAM SITE

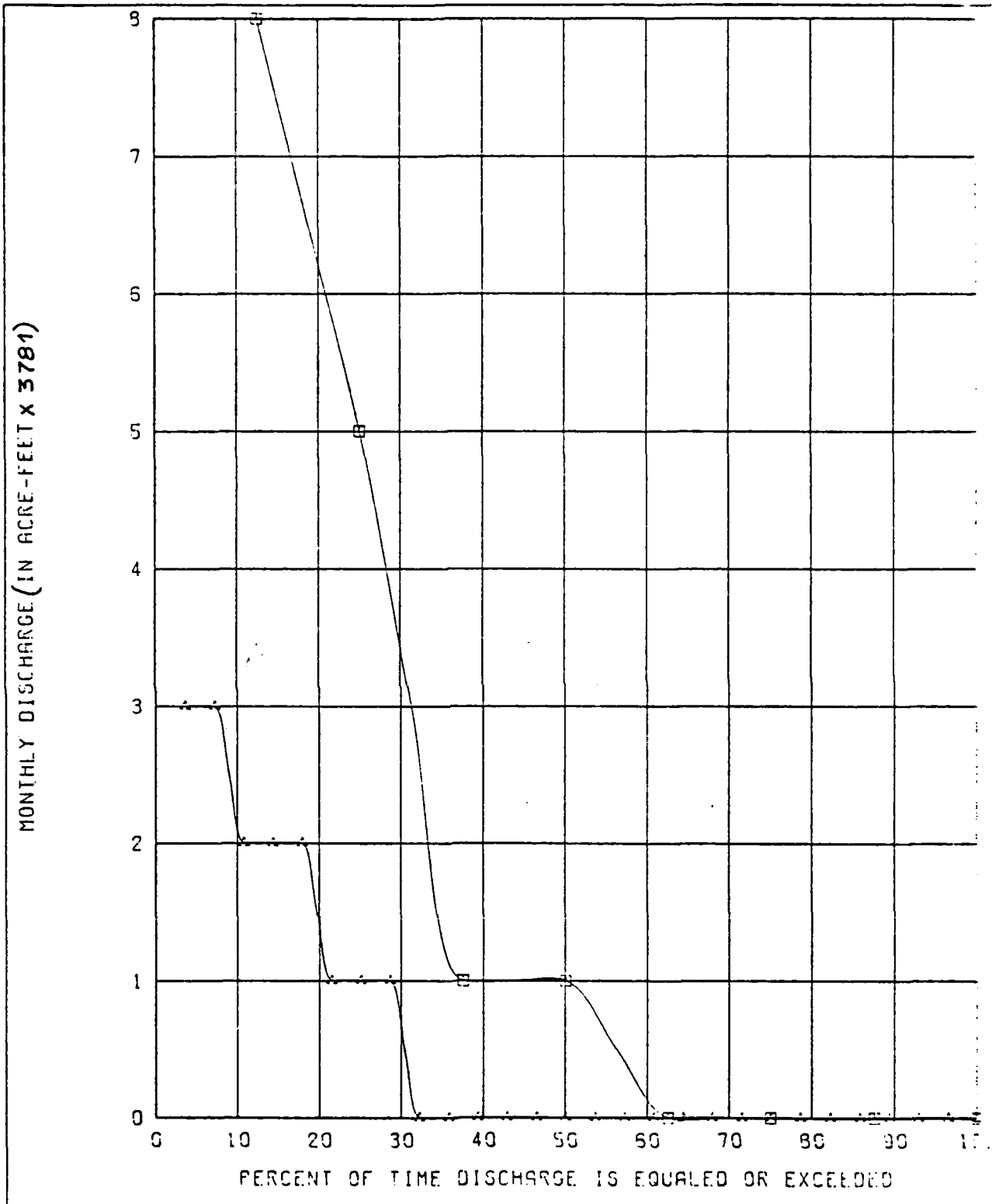
FEBRUARY FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 44

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1937-1941)

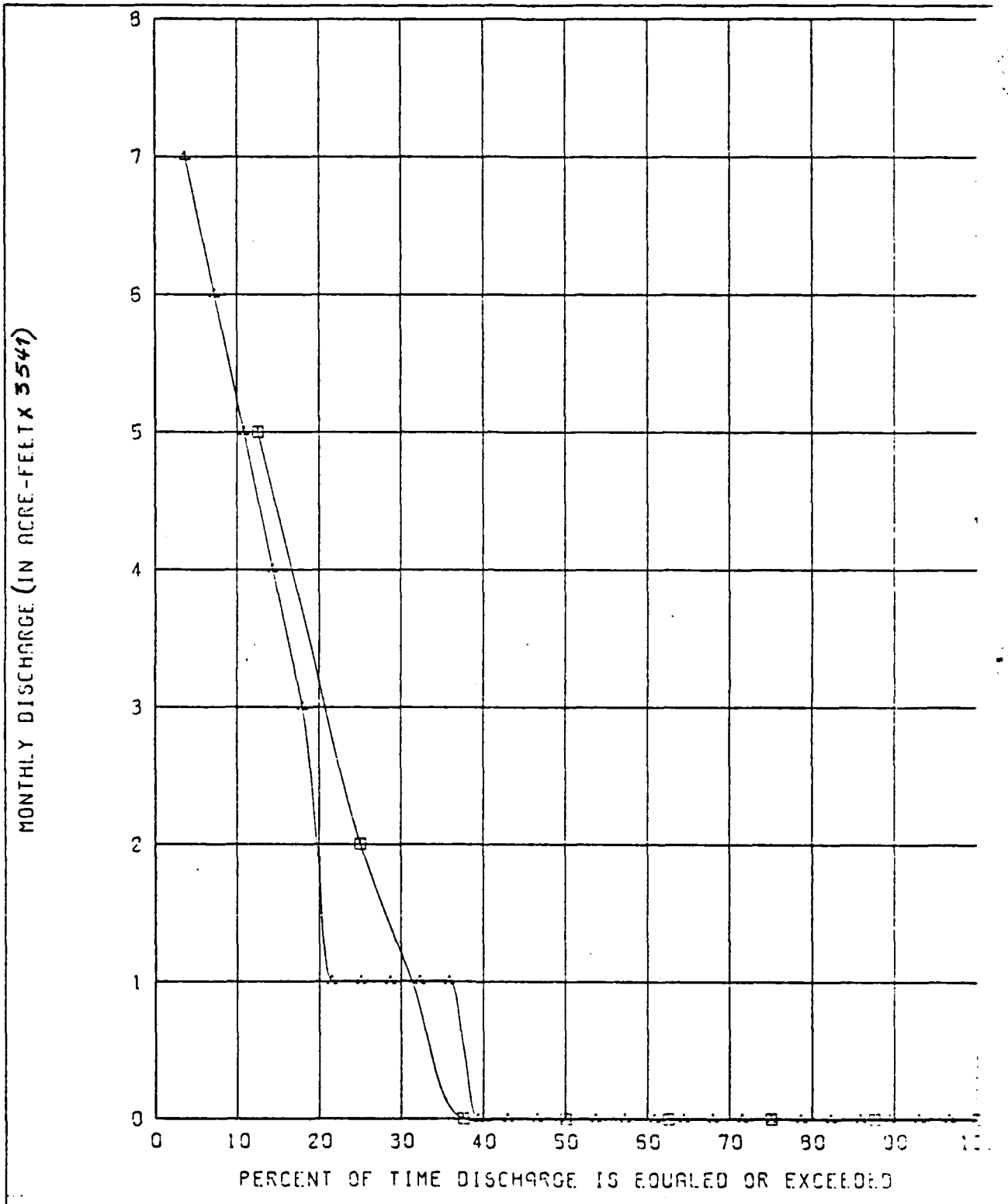
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1949-1975)

BUFFALO BAYOU
ADDICKS RESERVOIR
FLOW DURATION CURVES AT DAM SITE
MARCH FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INTERIM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1937-1974)

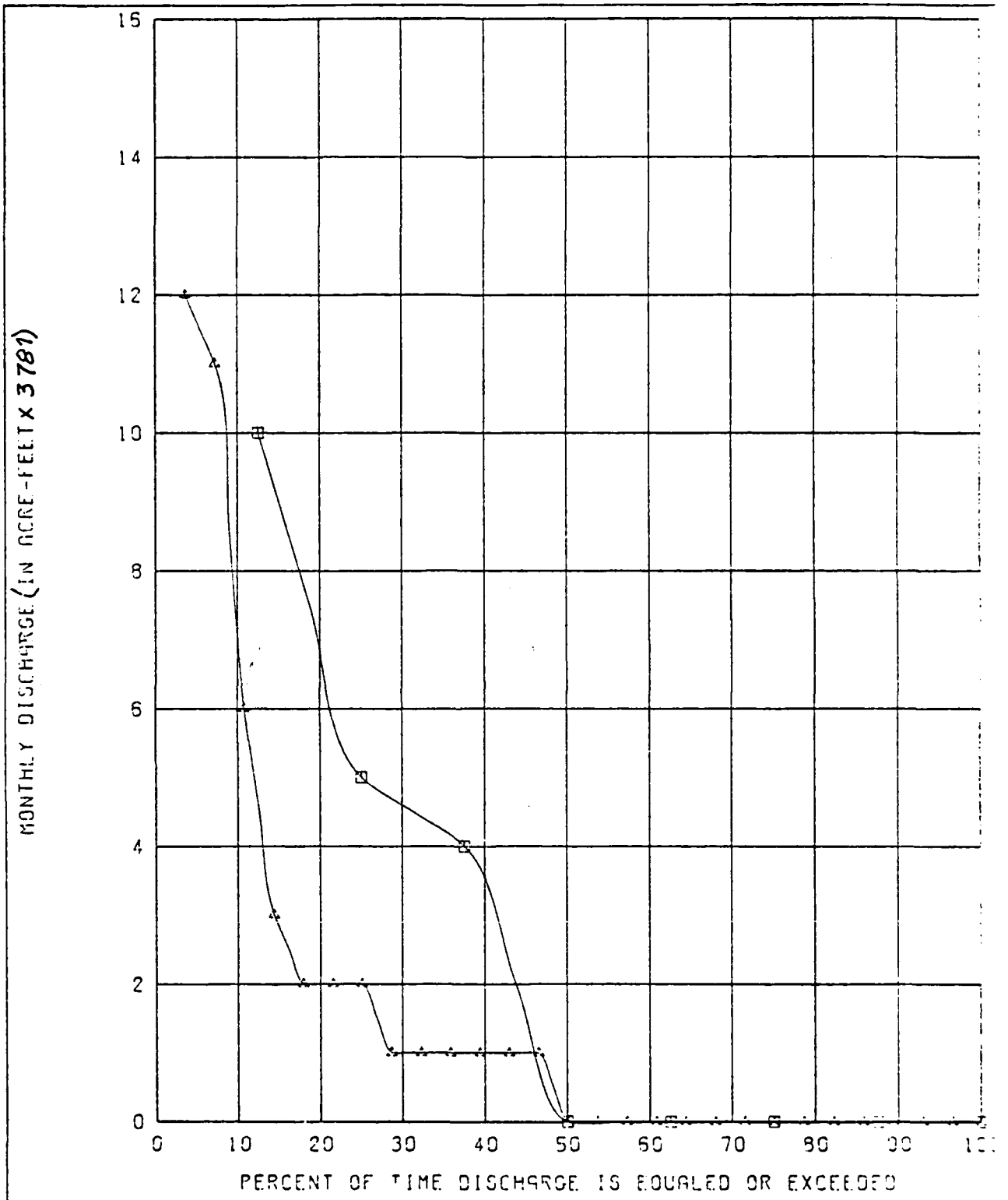
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1975)

BUFFALO BAYOU
ADDICKS RESERVOIR
FLOW DURATION CURVES AT DAM SITE
APRIL FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE A6

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

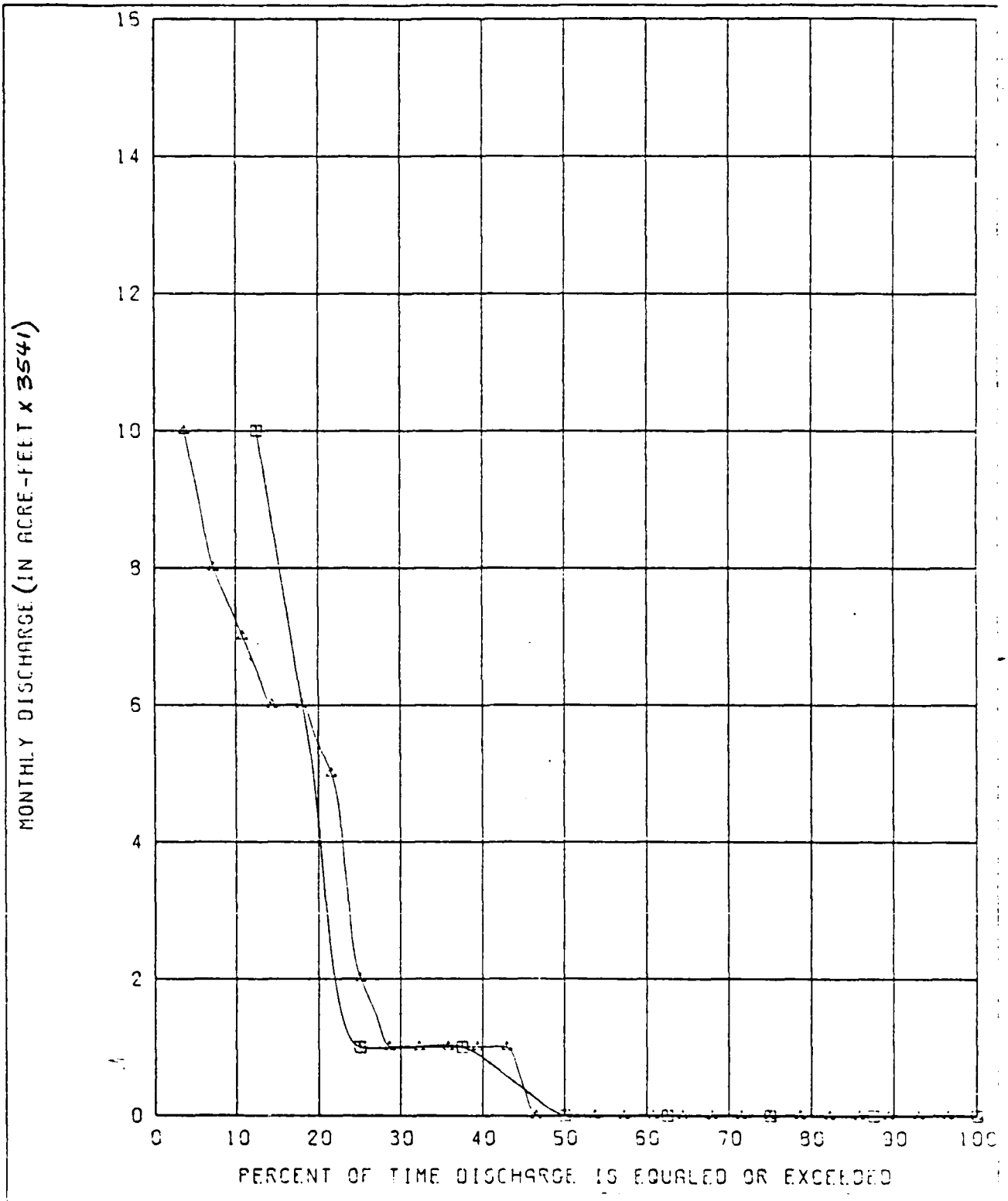
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1970-1979)

BUFFALO BAYOU
ADDICKS RESERVOIR
FLOW DURATION CURVES AT DAM SITE
MAY FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 47

CORPS OF ENGINEERS U.S. ARMY



LEGEND

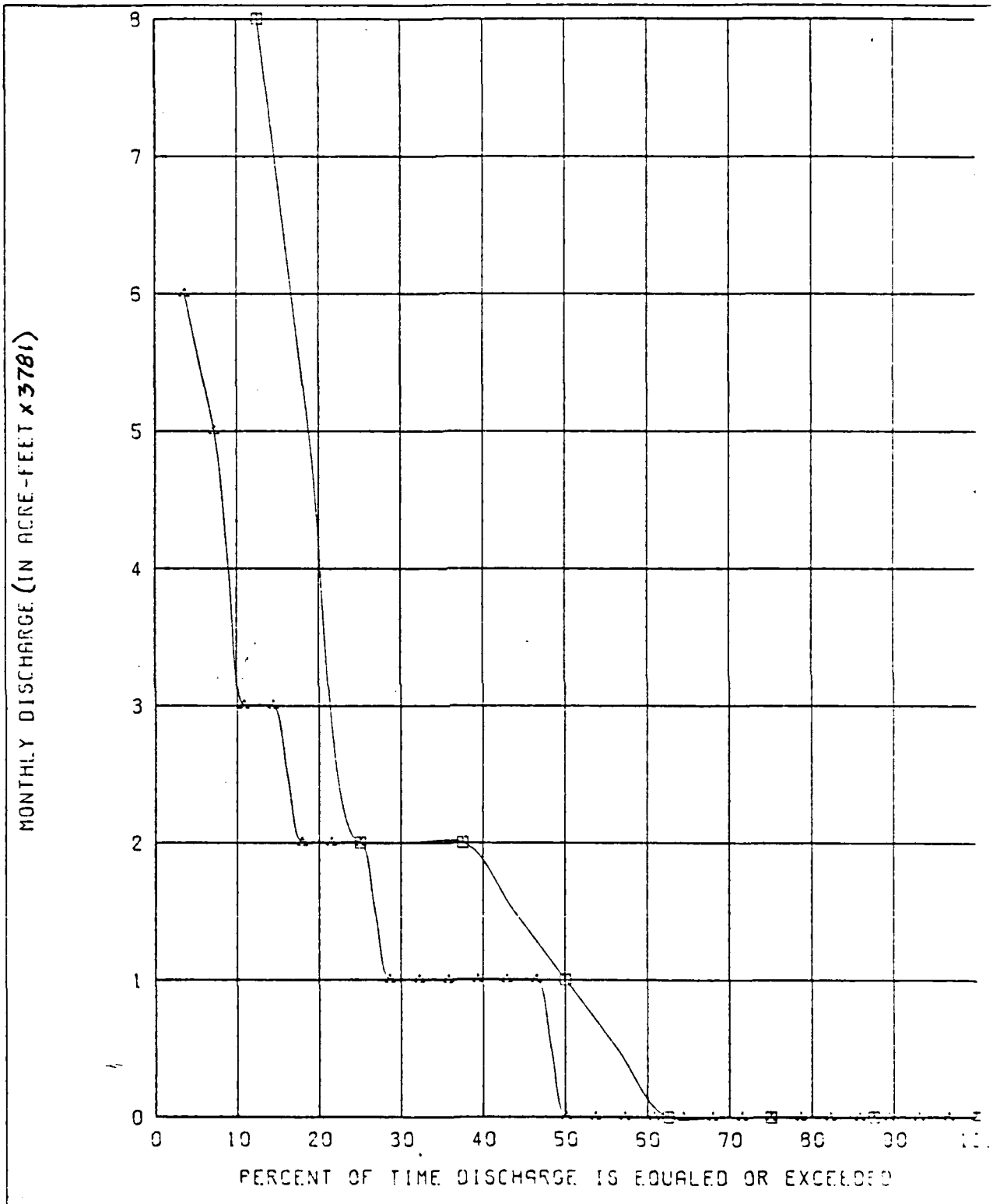
PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1941)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1975)

BUFFALO BAYOU
ADDICKS RESERVOIR
FLOW DURATION CURVES AT DAM SITE
JUNE FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1937-1941)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1943-1975)

BUFFALO BAYOU
ADDICKS RESERVOIR

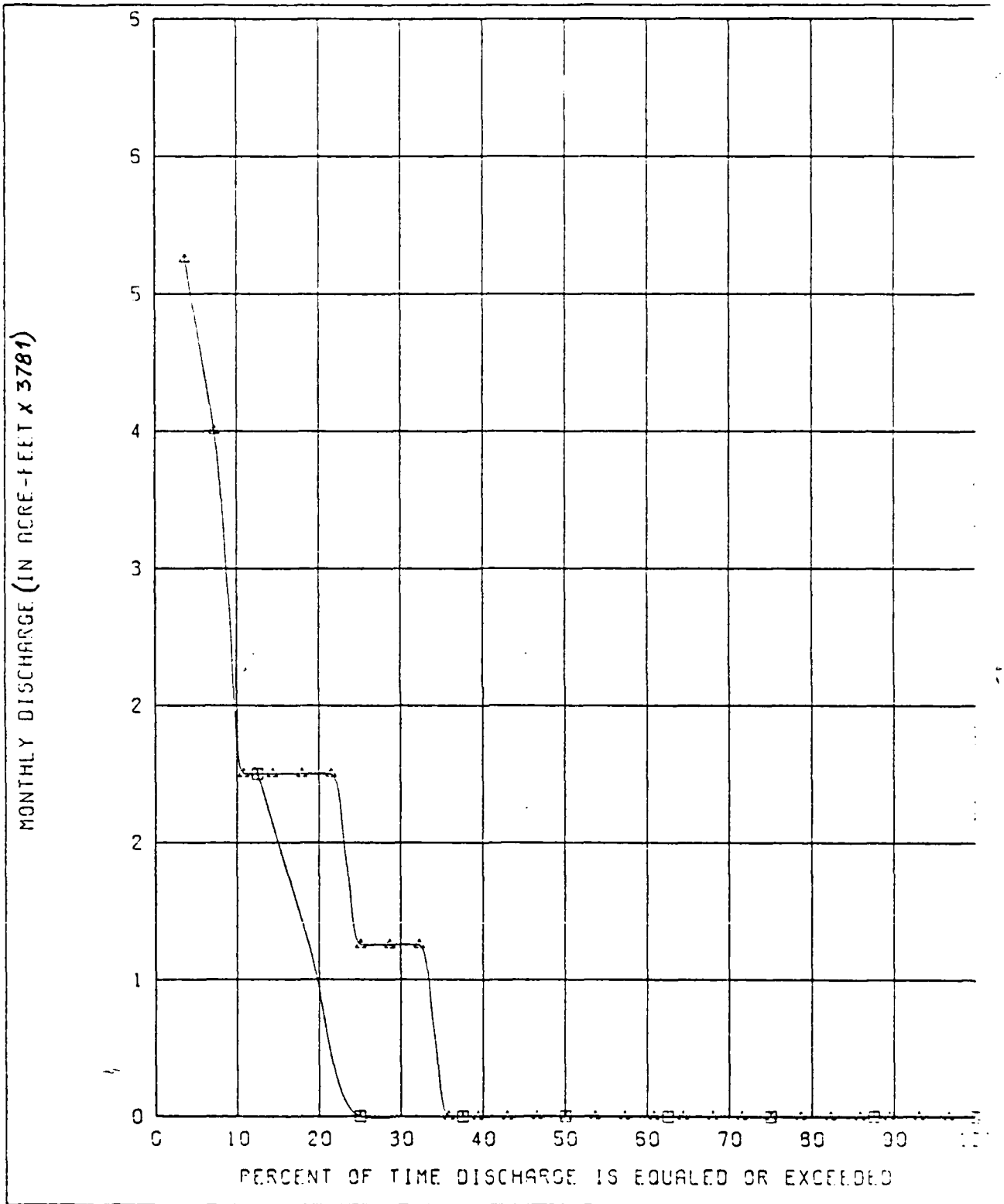
FLOW DURATION CURVES AT DAM SITE

JULY FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INTERIM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1944)

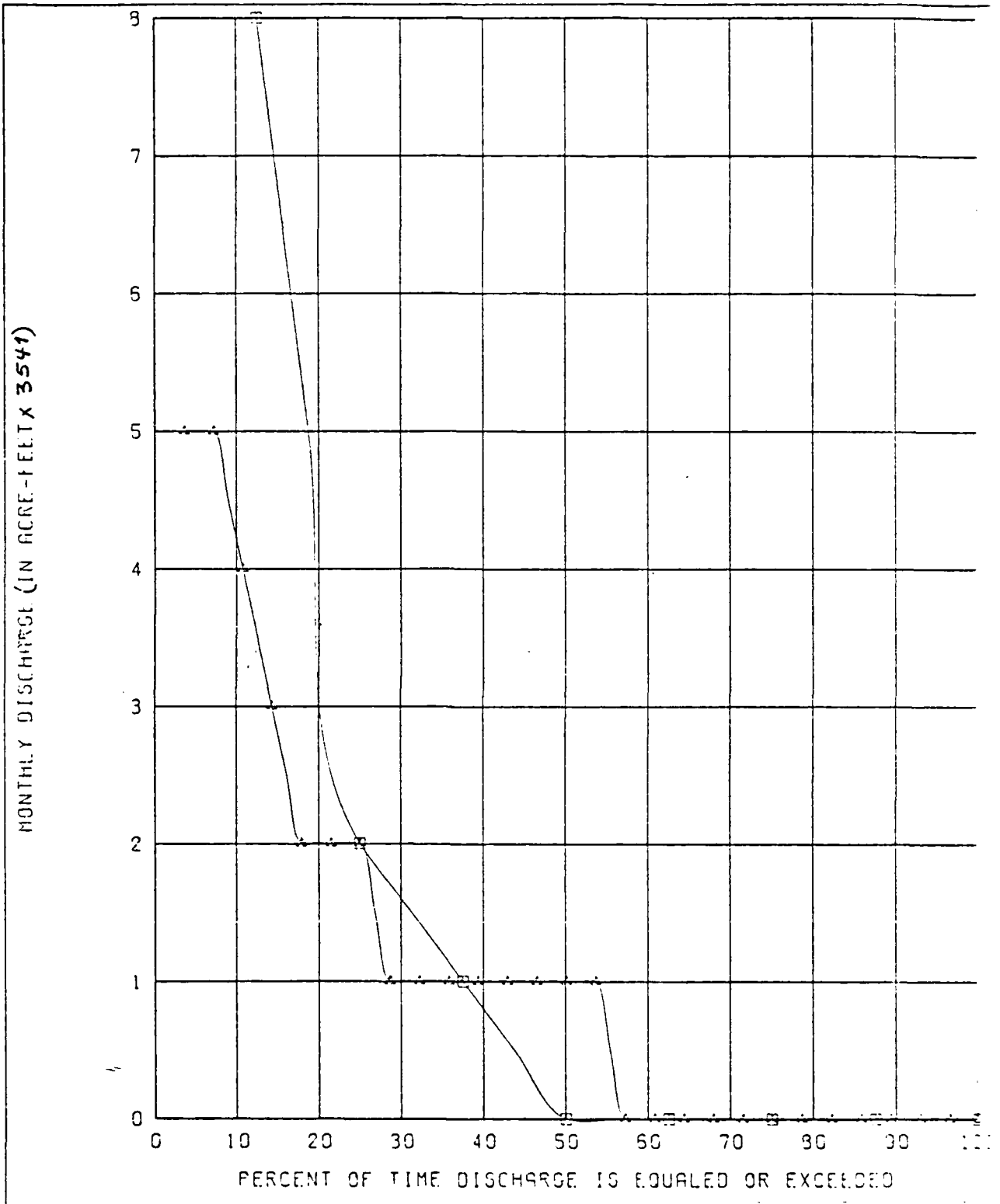
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1950-1975)

BUFFALO BAYOU
ADDICKS RESERVOIR
FLOW DURATION CURVES AT DAM SITE
AUGUST FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 20

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1937-1974)

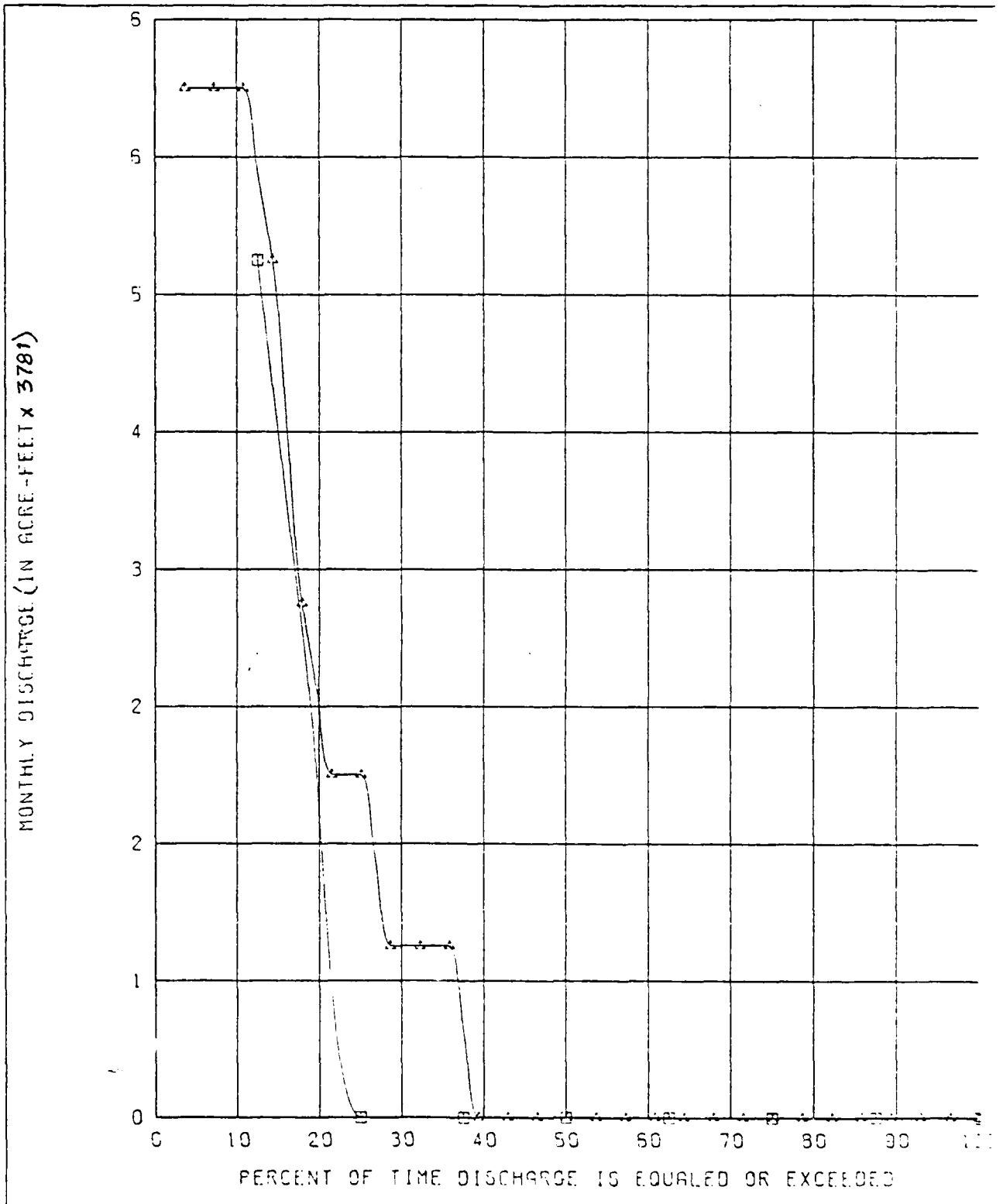
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1949-1979)

BUFFALO BAYOU
ADDICKS RESERVOIR
FLOW DURATION CURVES AT DAM SITE
SEPTEMBER FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INTERIM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1937-1974)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1913-1975)

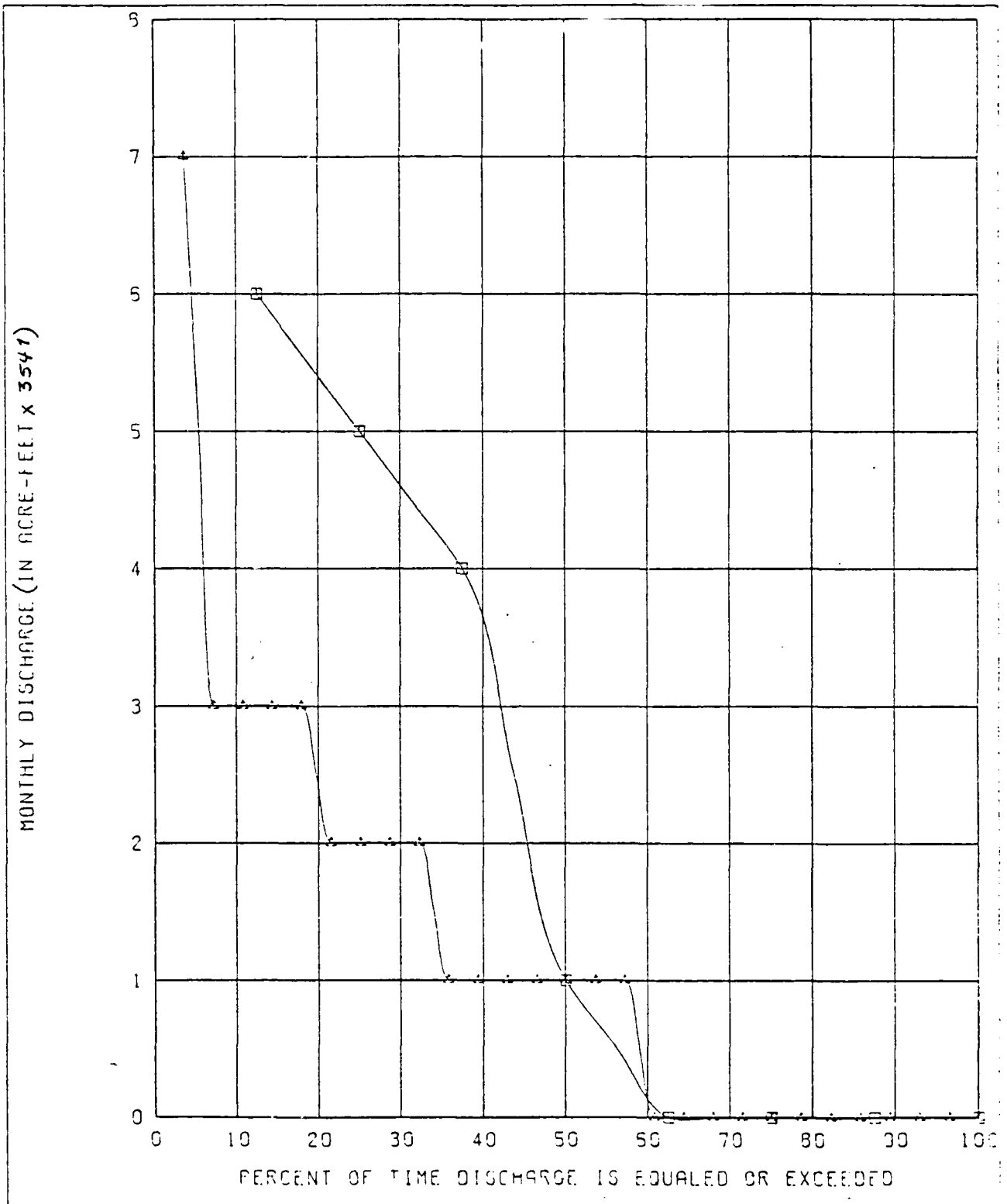
BUFFALO BAYOU
ADDICKS RESERVOIR

FLOW DURATION CURVES AT DAM SITE
OCTOBER FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1937-1974)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1913-1975)

BUFFALO BAYOU

ADDICKS RESERVOIR

FLOW DURATION CURVES AT DAM SITE

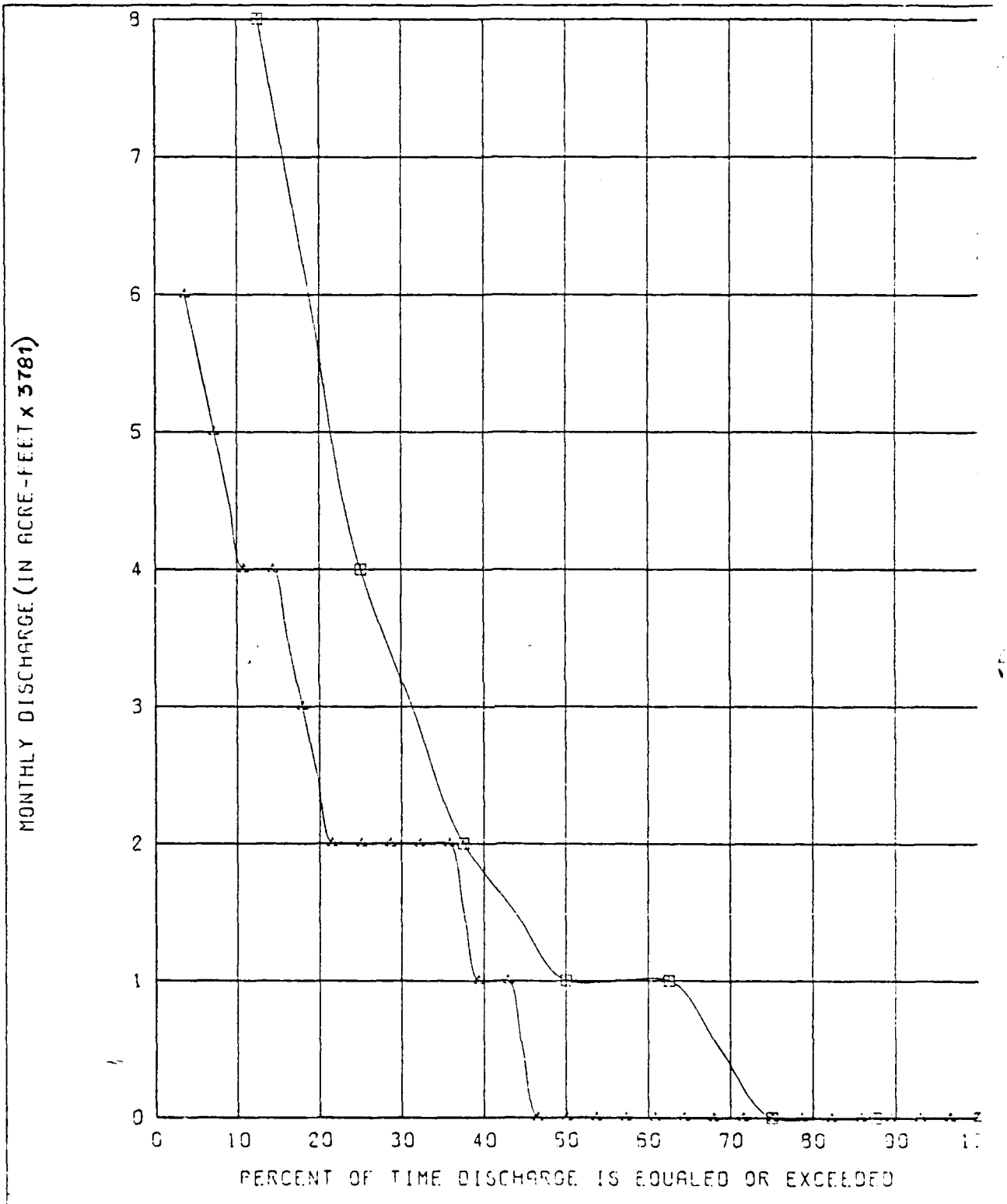
NOVEMBER FLOWS

GALVESTON DISTRICT

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 23

CORPS OF ENGINEERS U.S. ARM



LEGEND

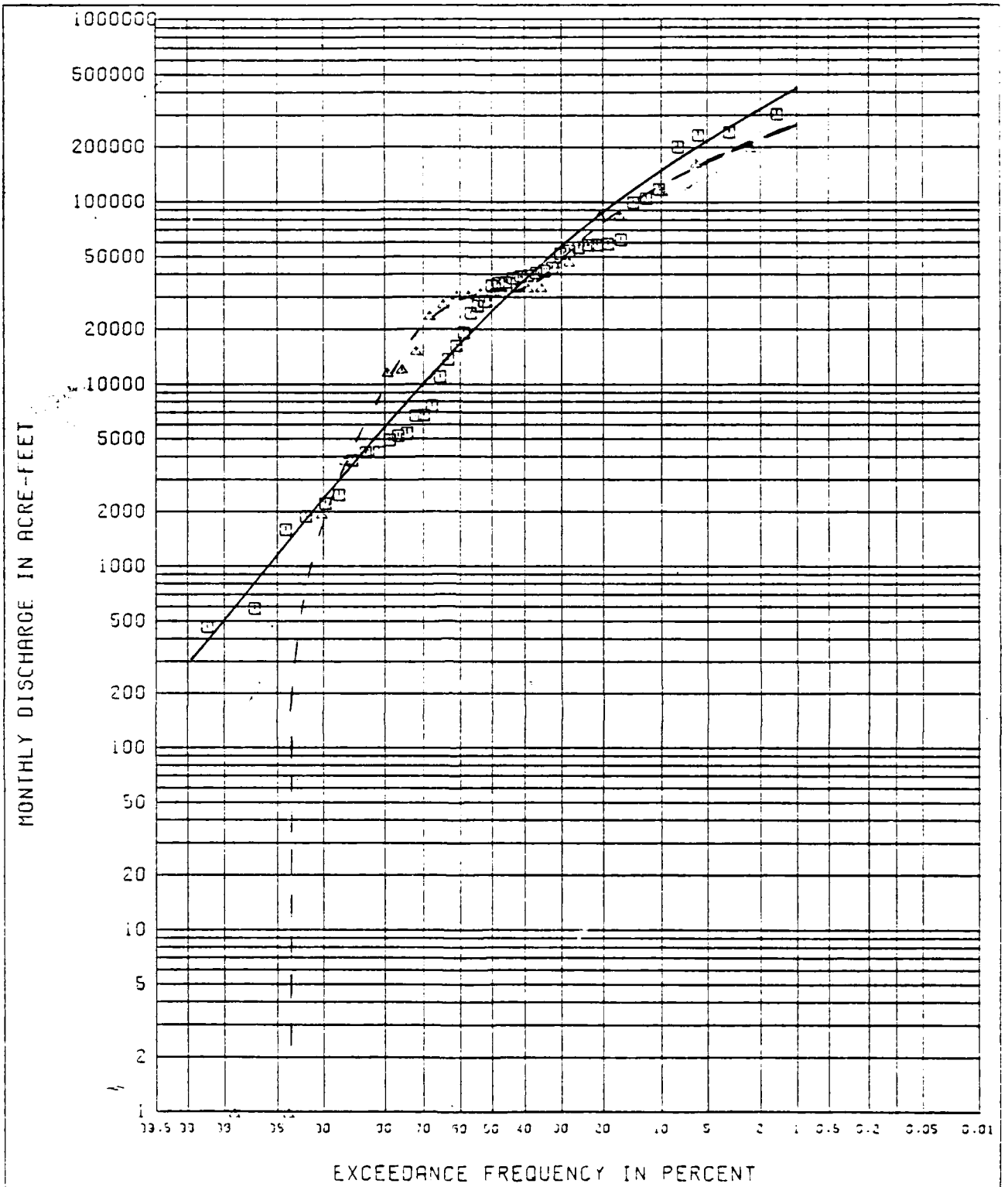
PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1937-1944)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1949-1975)

BUFFALO BAYOU
ADDICKS RESERVOIR
FLOW DURATION CURVES AT DAM SITE
DECEMBER FLOWS

GALVESTON DISTRICT
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1933-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

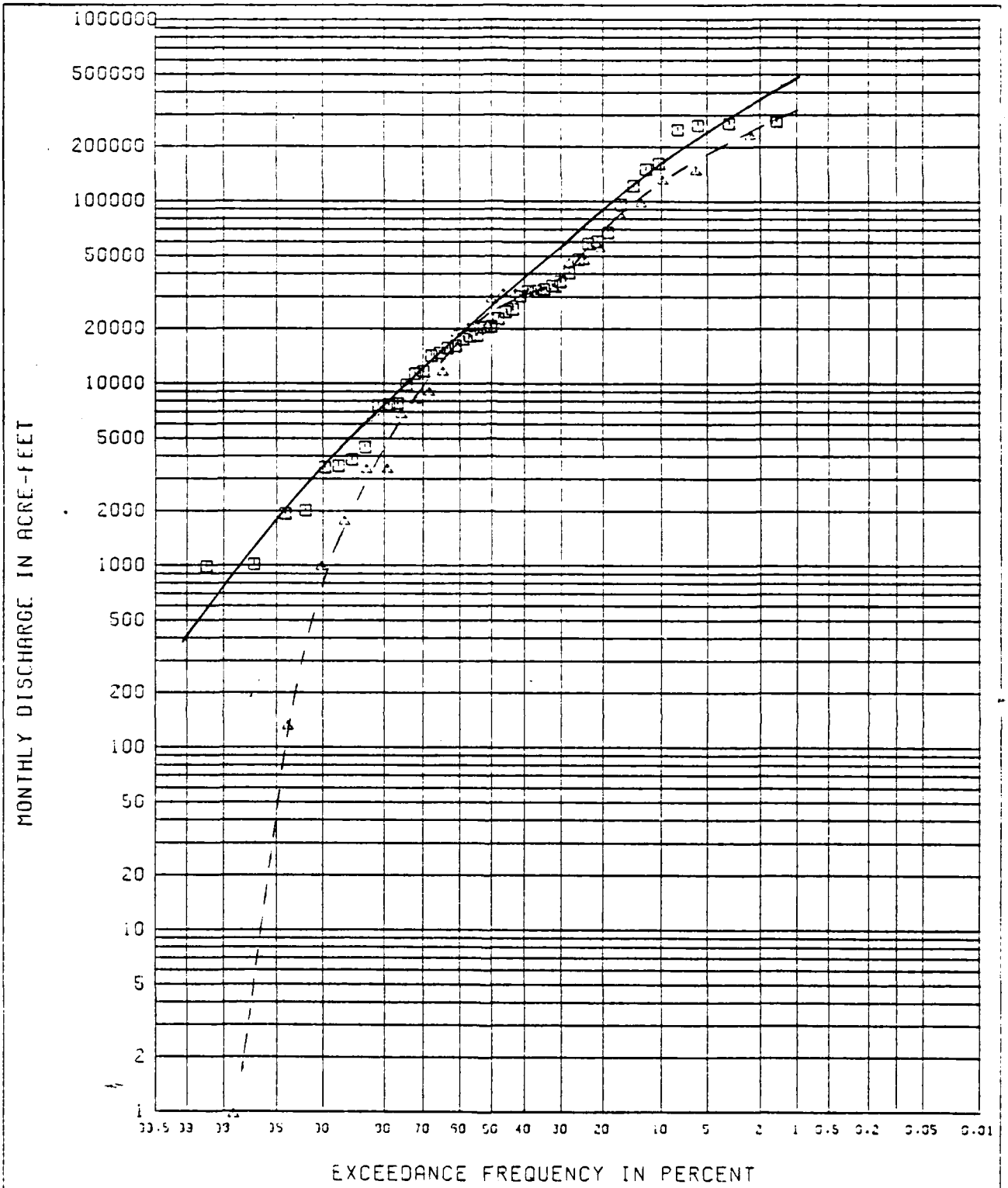
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1900-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

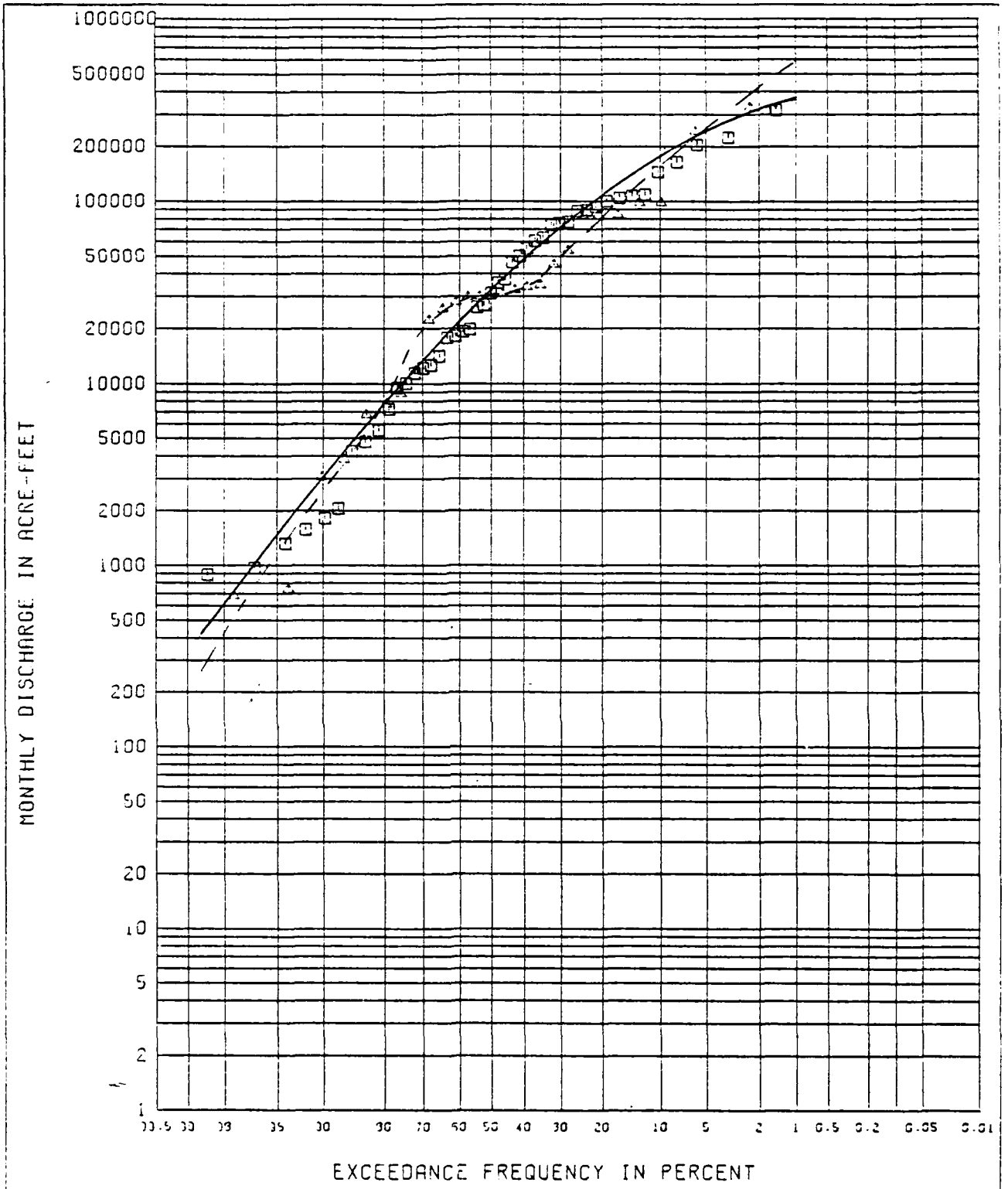
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1893-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

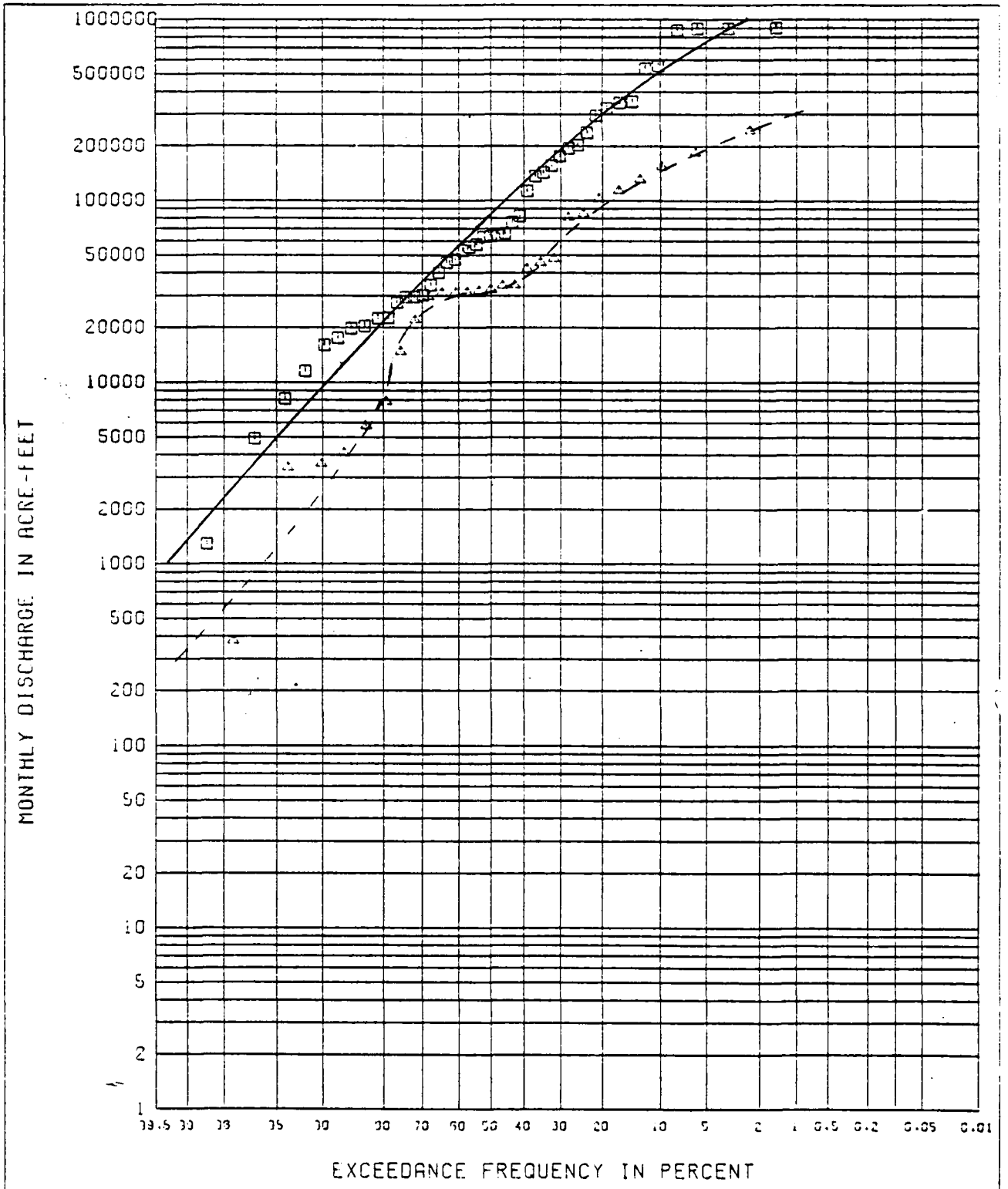
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1893-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

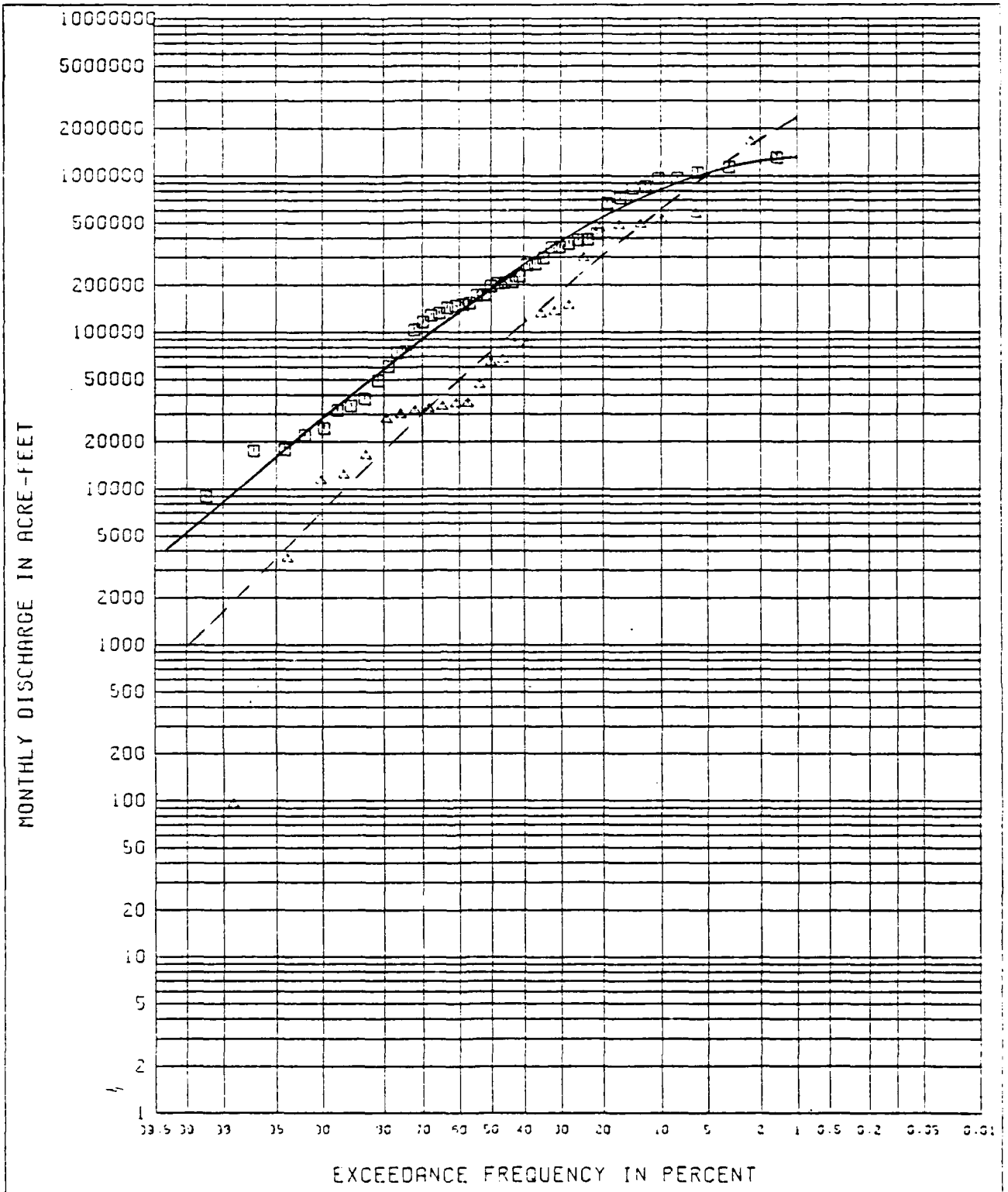
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INCREASM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1900-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

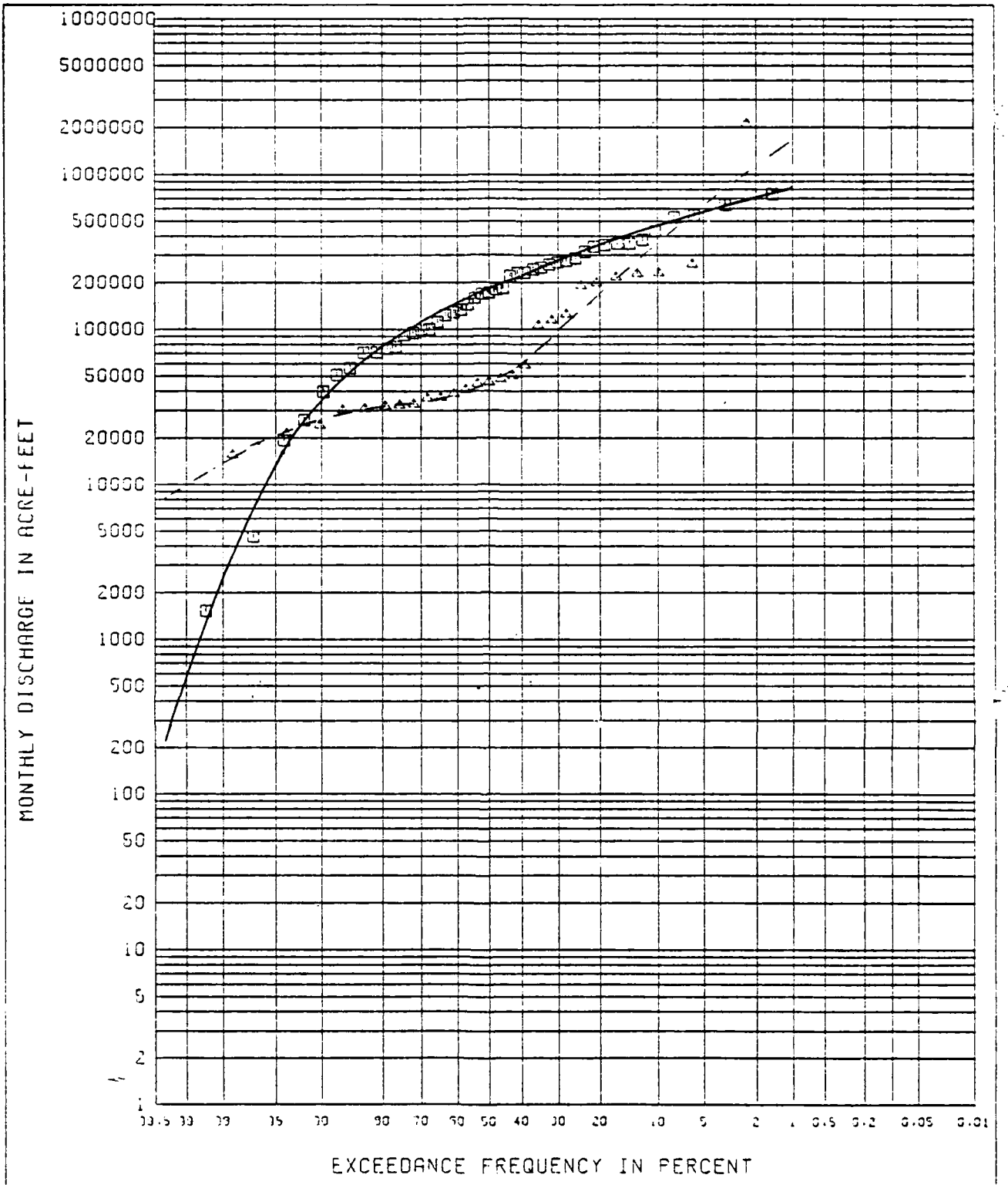
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1899-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

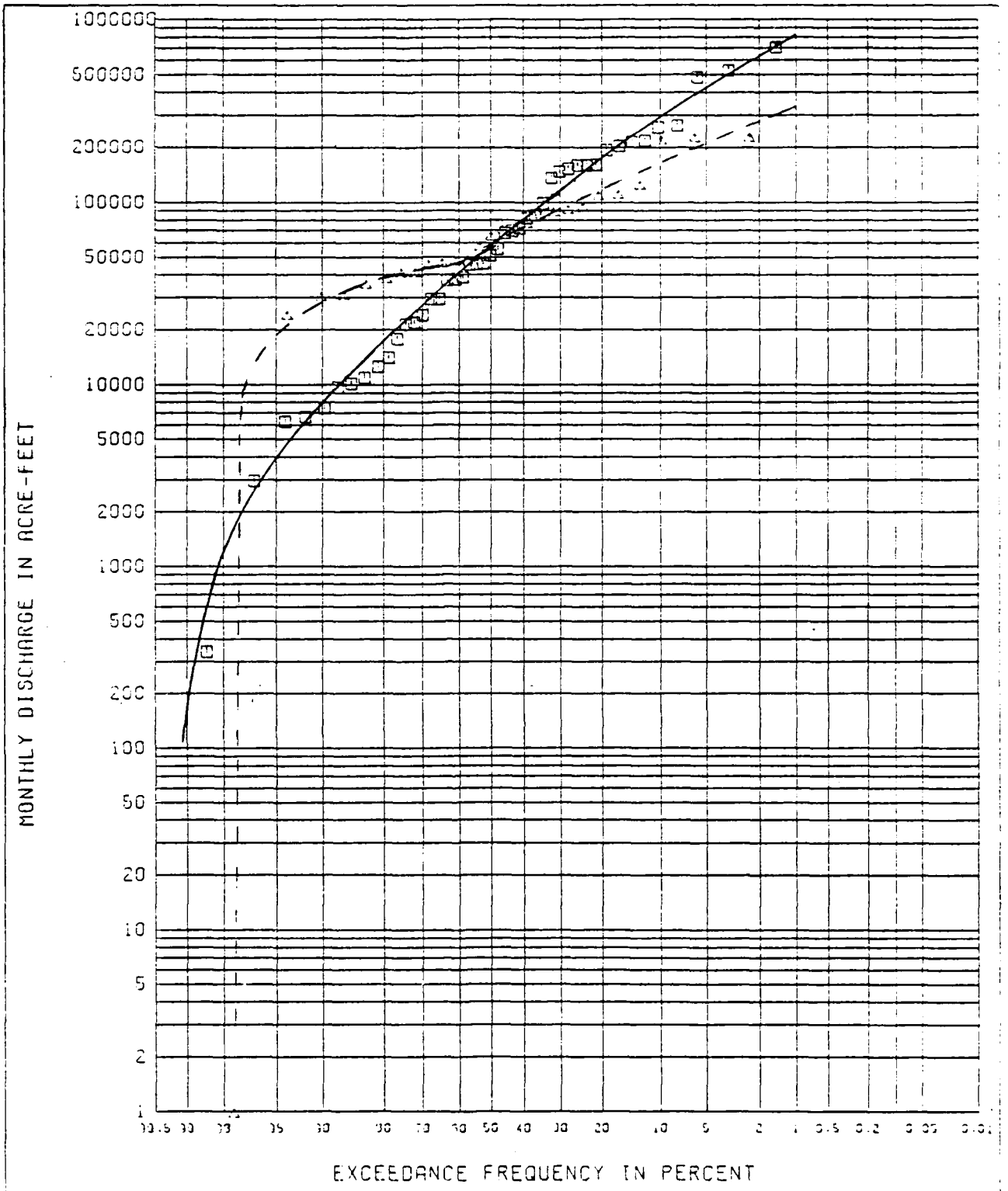
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1900-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

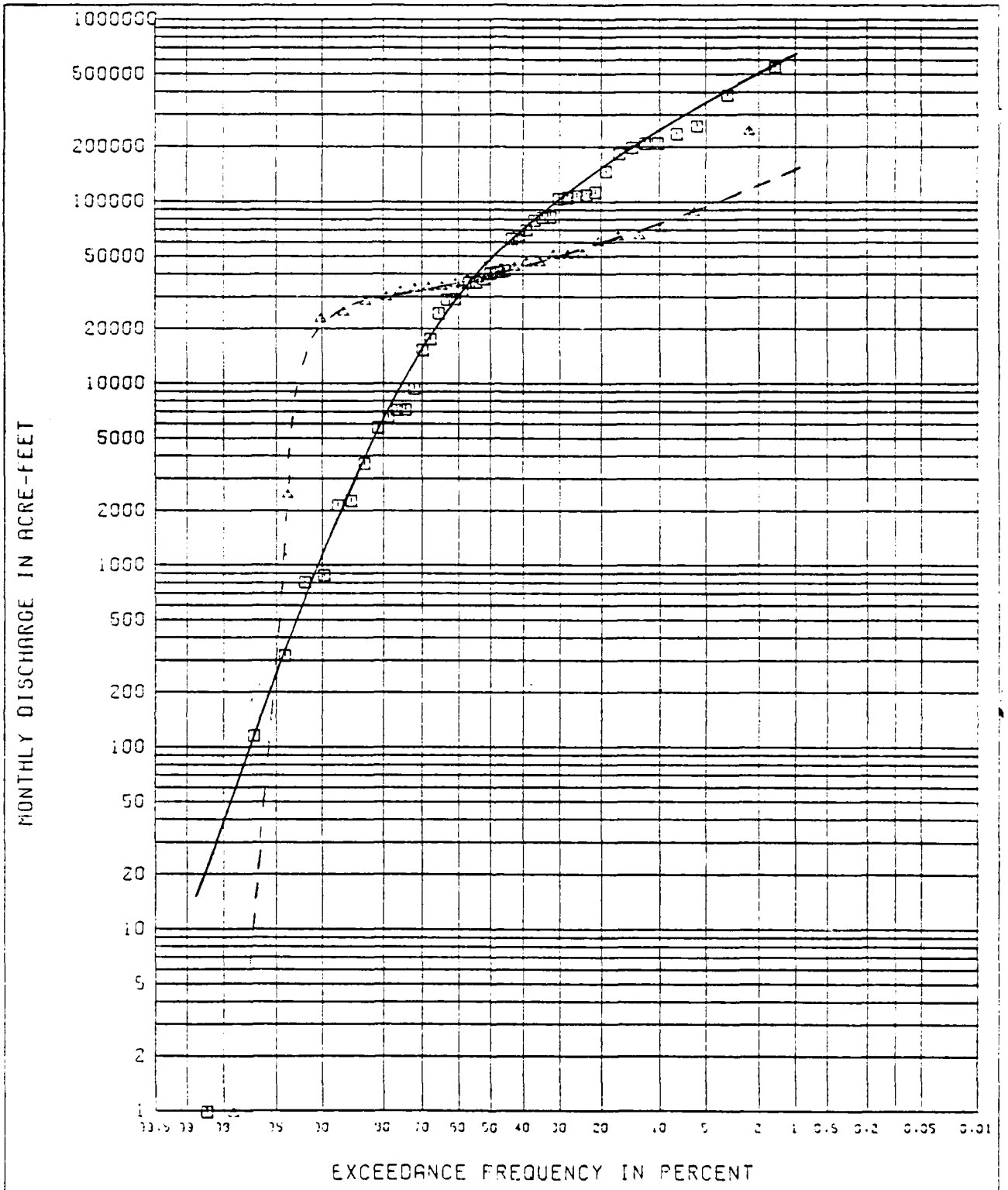
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1899-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

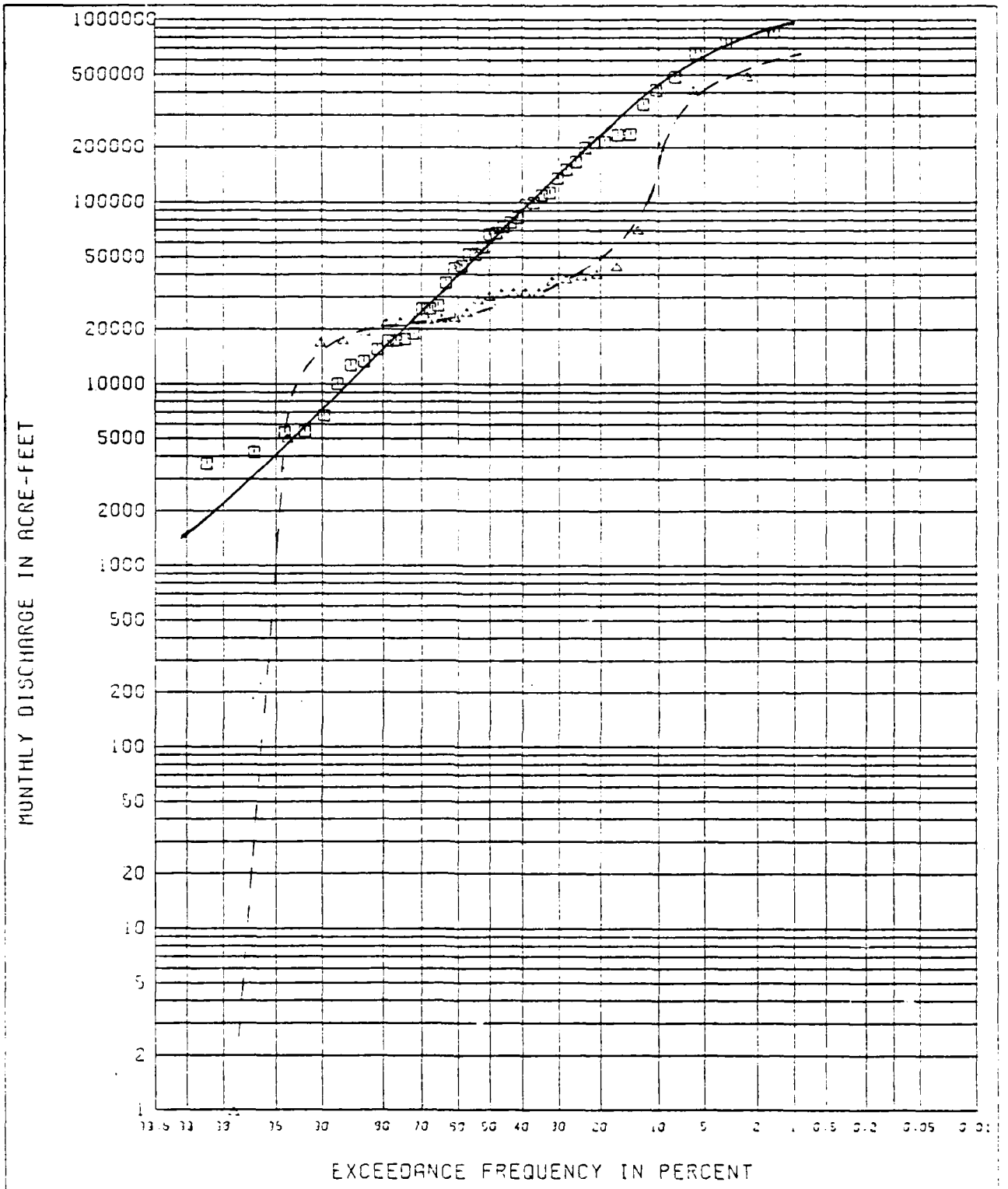
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1933-1943)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

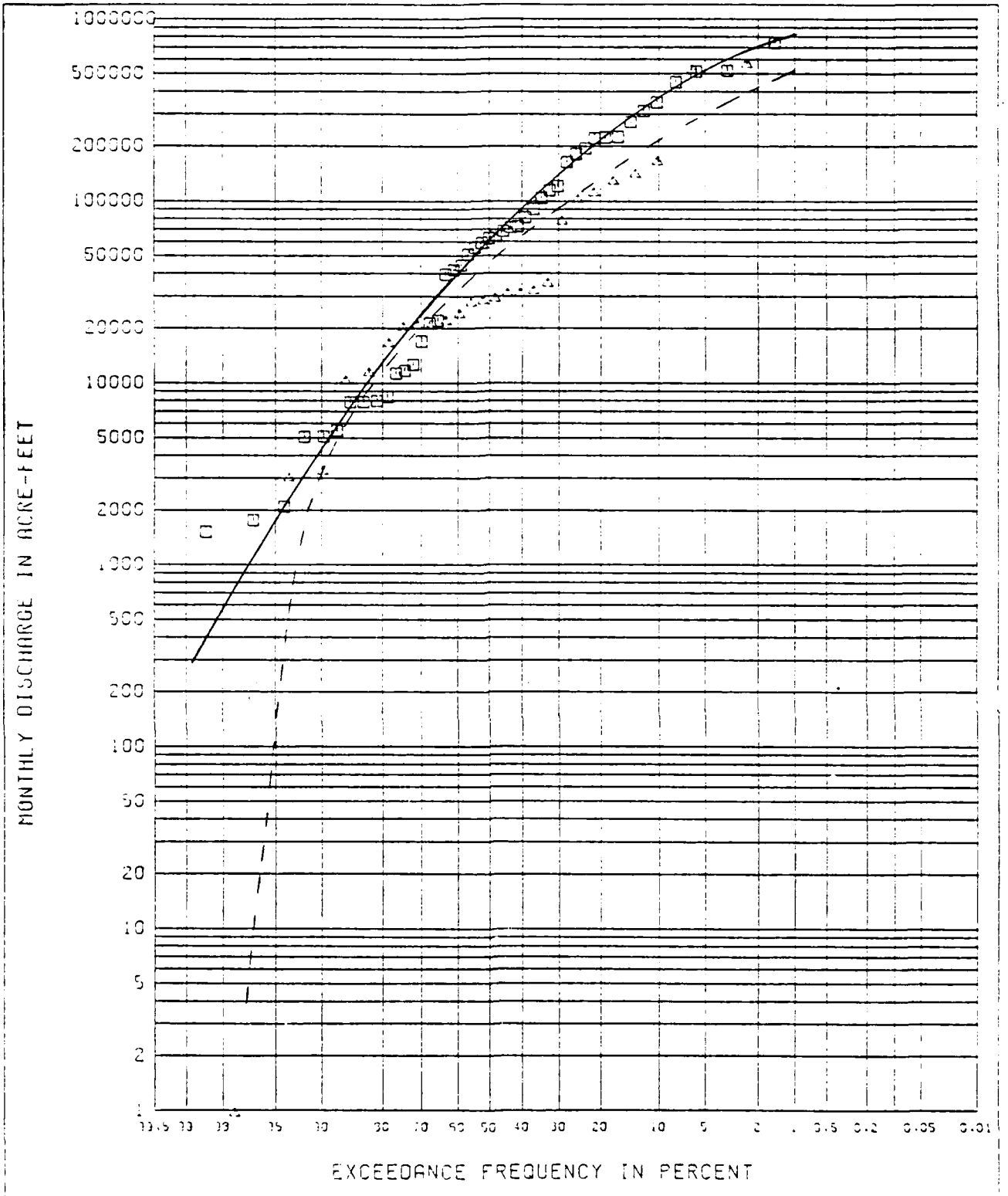
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1900-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

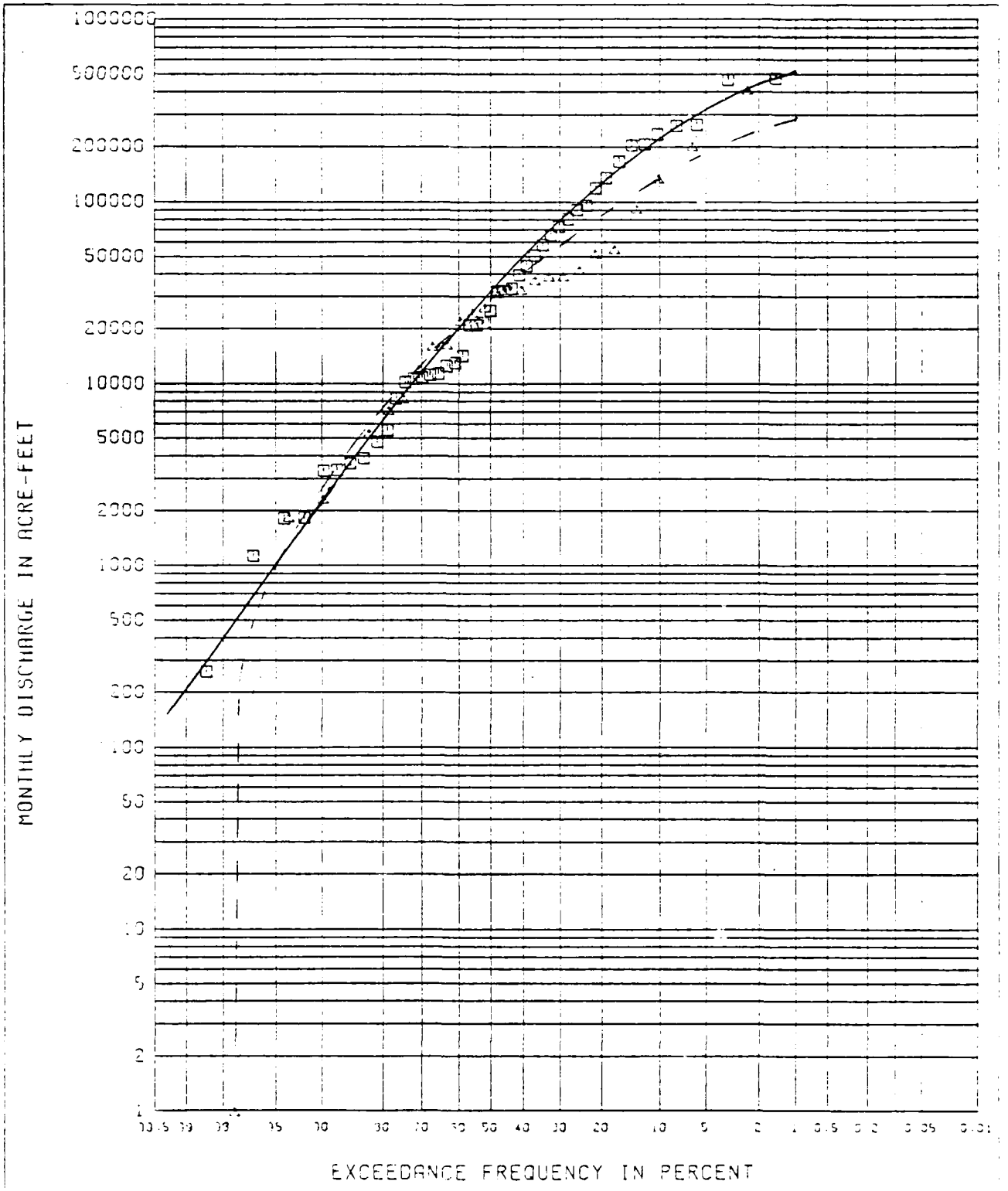
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1933-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

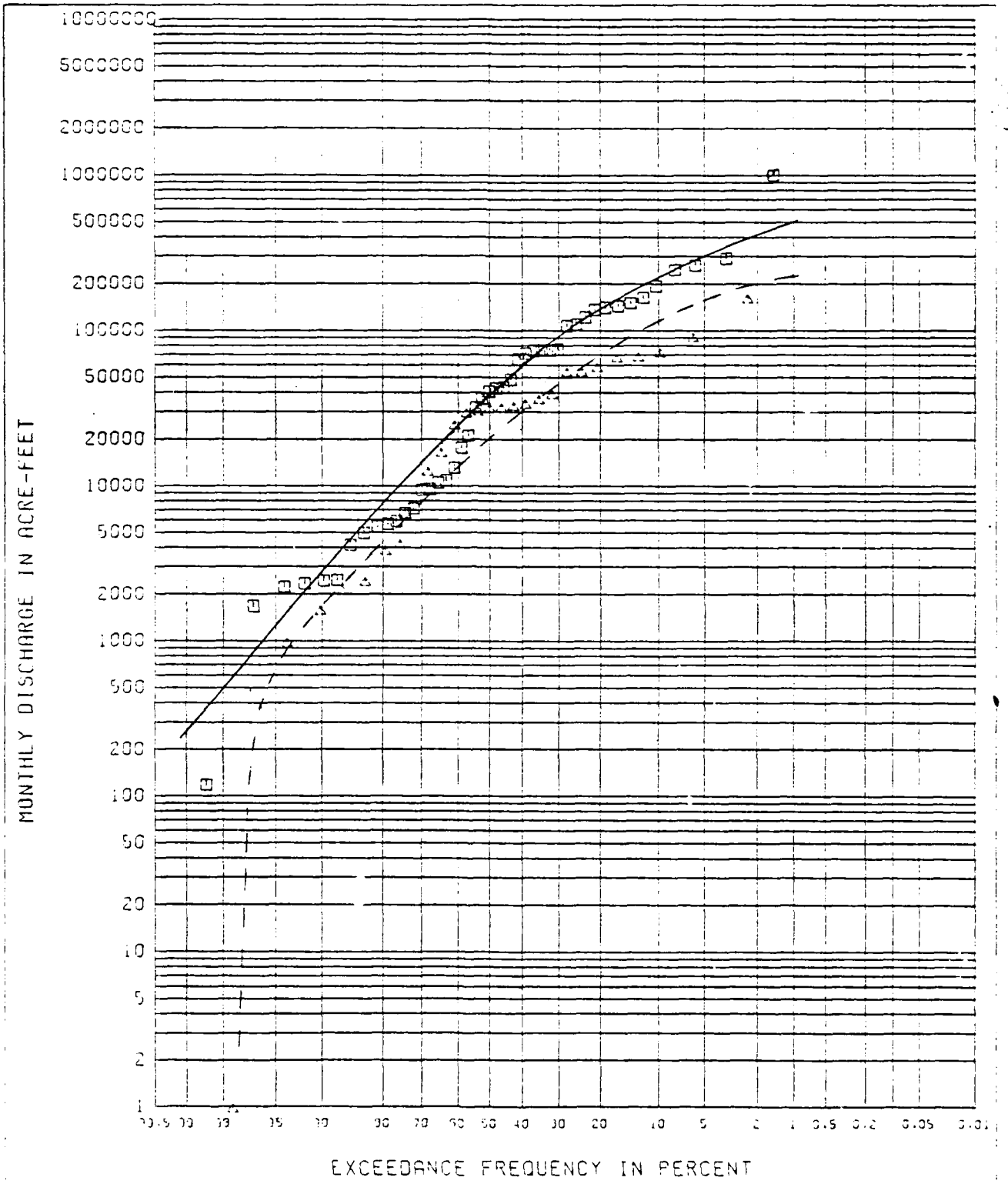
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1899-1943)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

DECEMBER FLOWS

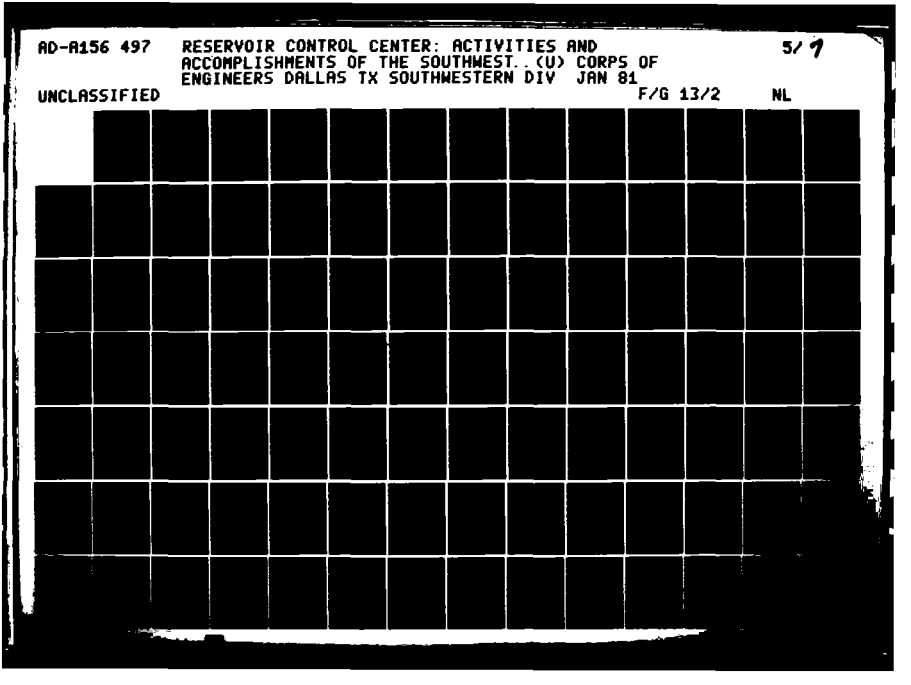
U.S. ARMY ENGINEER DISTRICT, FORT WORTH

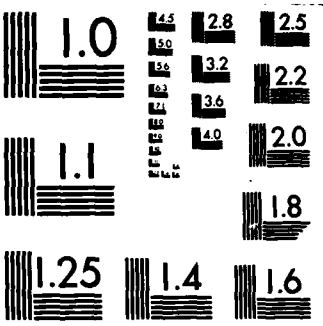
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

AD-A156 497 RESERVOIR CONTROL CENTER: ACTIVITIES AND ACCOMPLISHMENTS OF THE SOUTHWEST..(U) CORPS OF ENGINEERS DALLAS TX SOUTHWESTERN DIV JAN 81 5/7

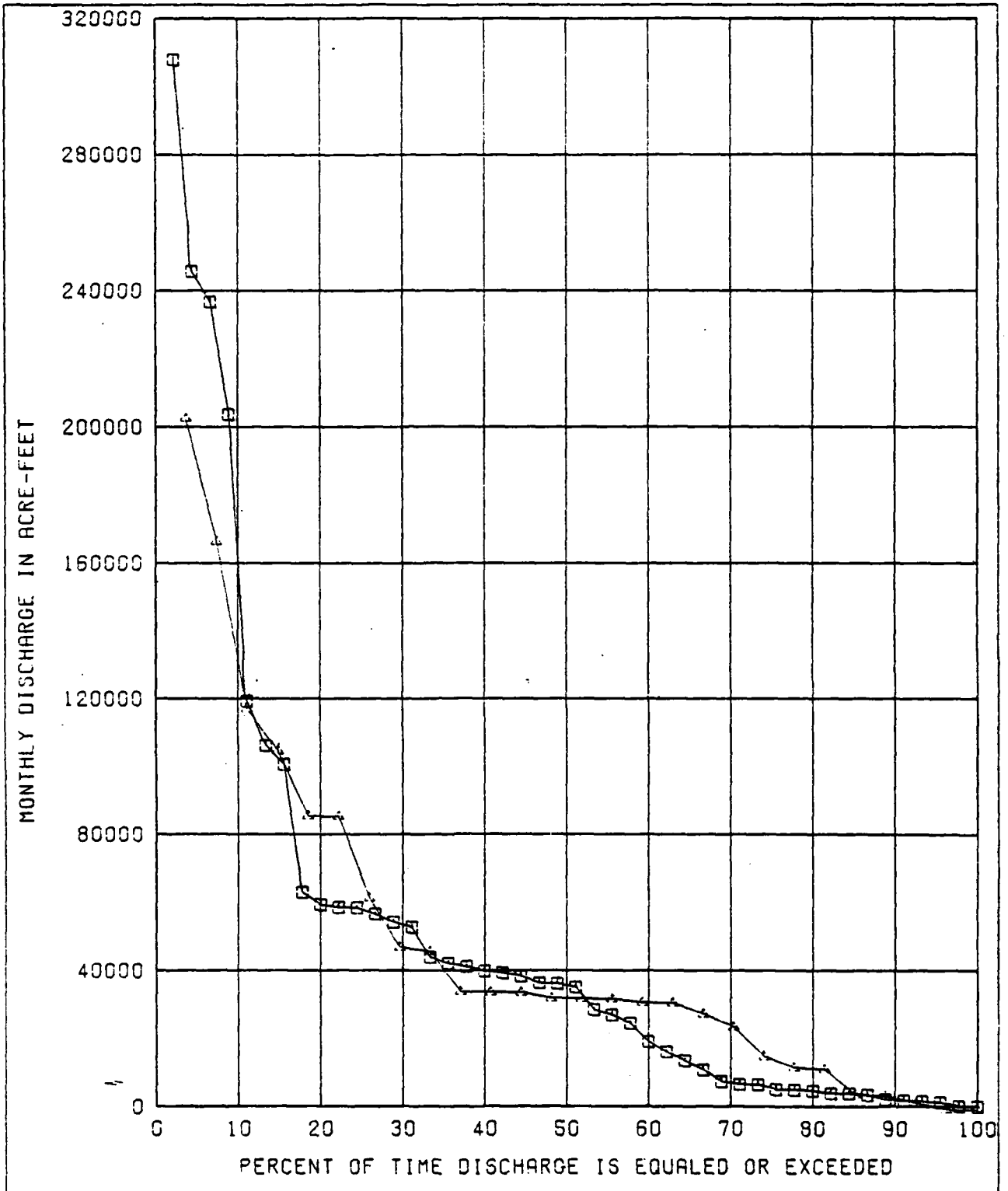
UNCLASSIFIED F/G 13/2 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1899-1943)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1978)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

FLOW DURATION CURVES AT DAM SITE

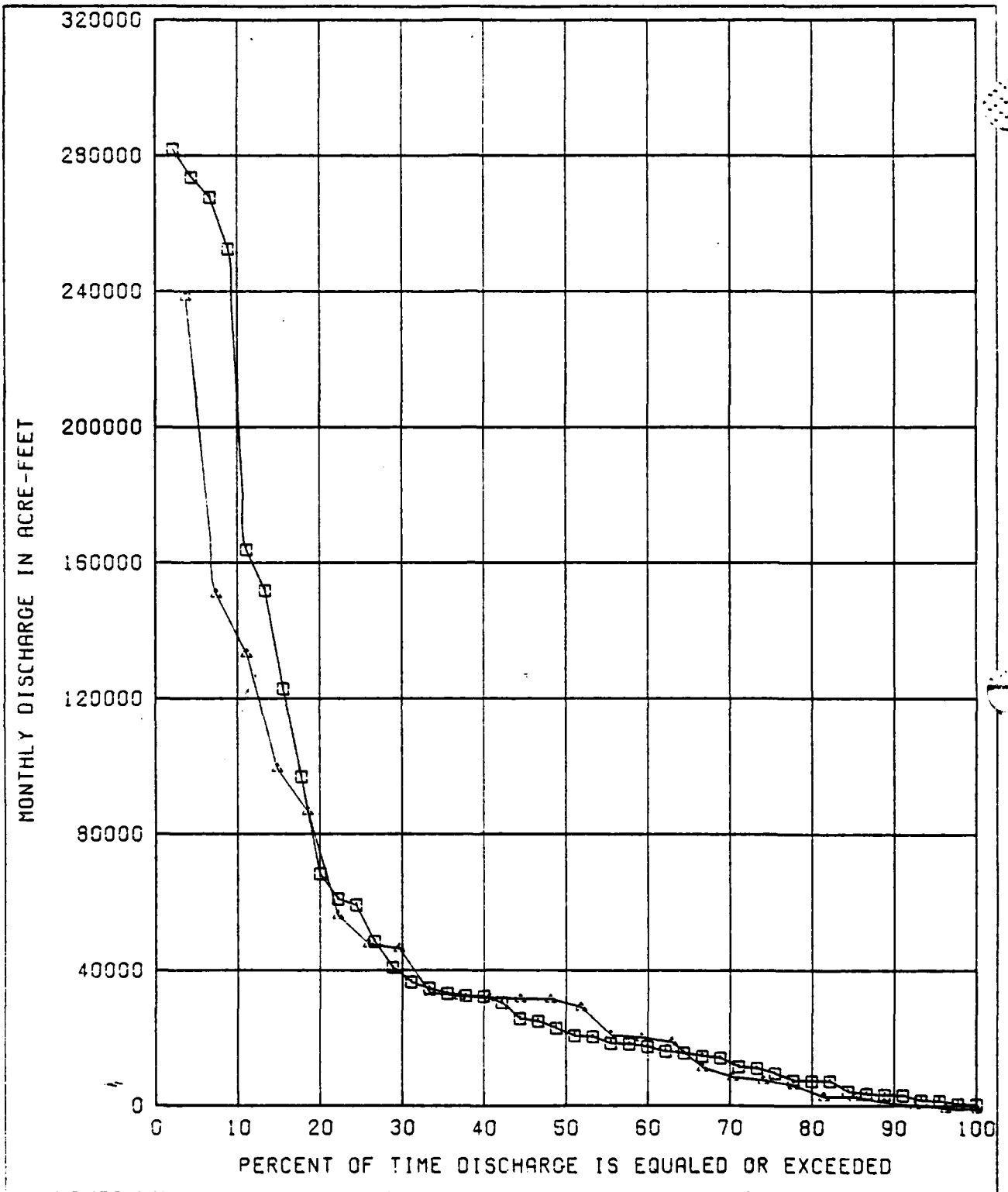
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1899-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

FLOW DURATION CURVES AT DAM SITE

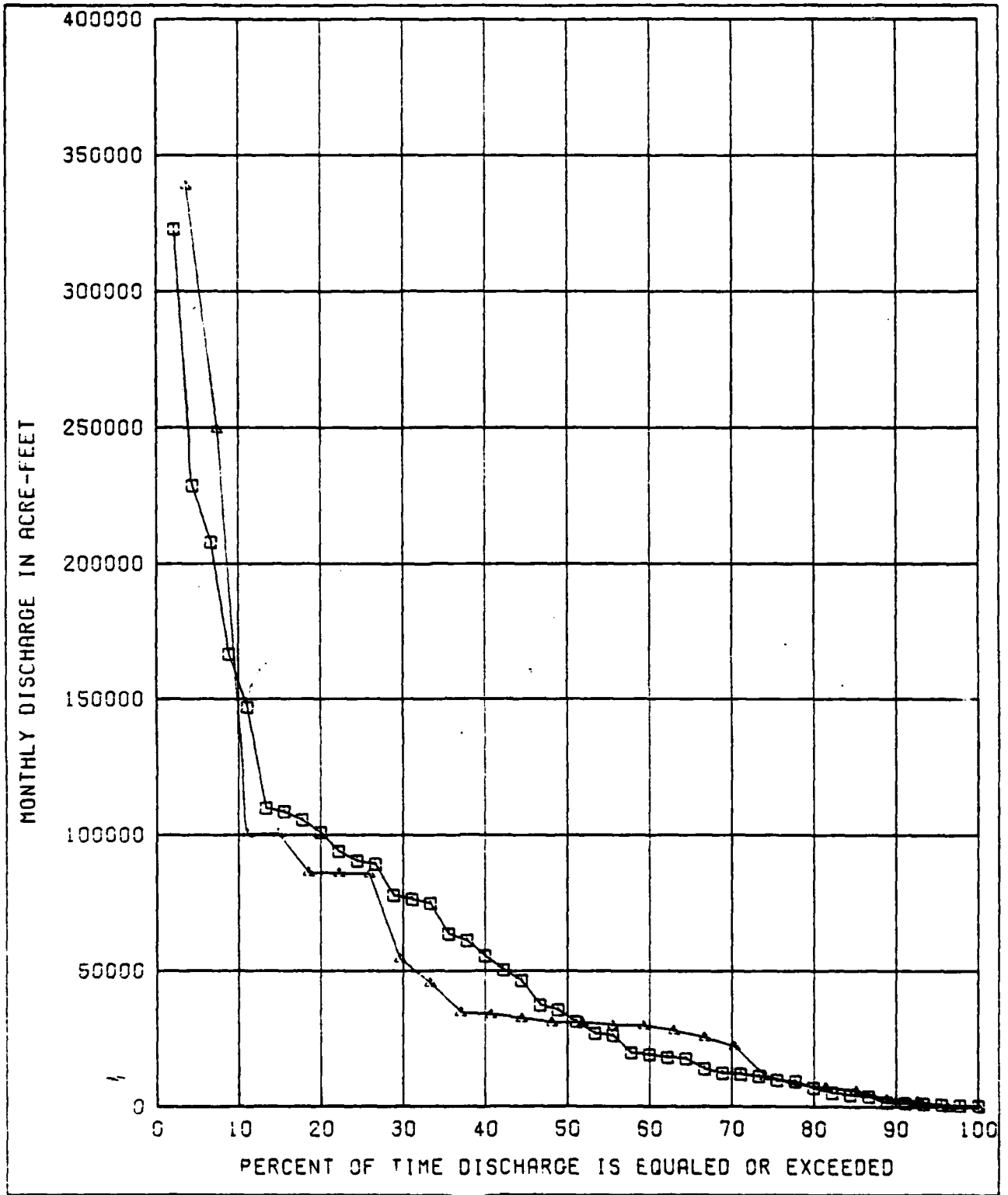
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1899-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

FLOW DURATION CURVES AT DAM SITE

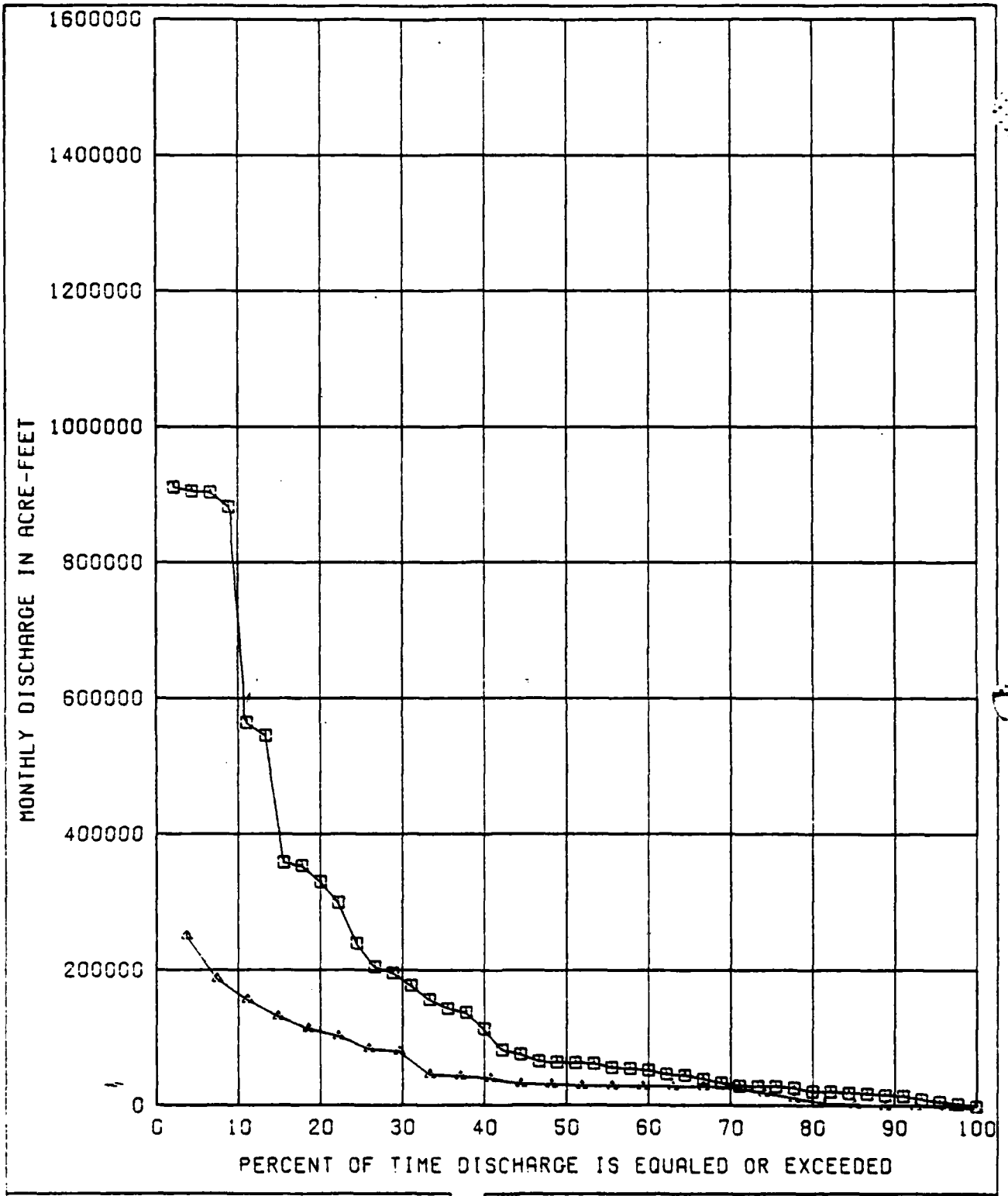
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1978)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

FLOW DURATION CURVES AT DAM SITE

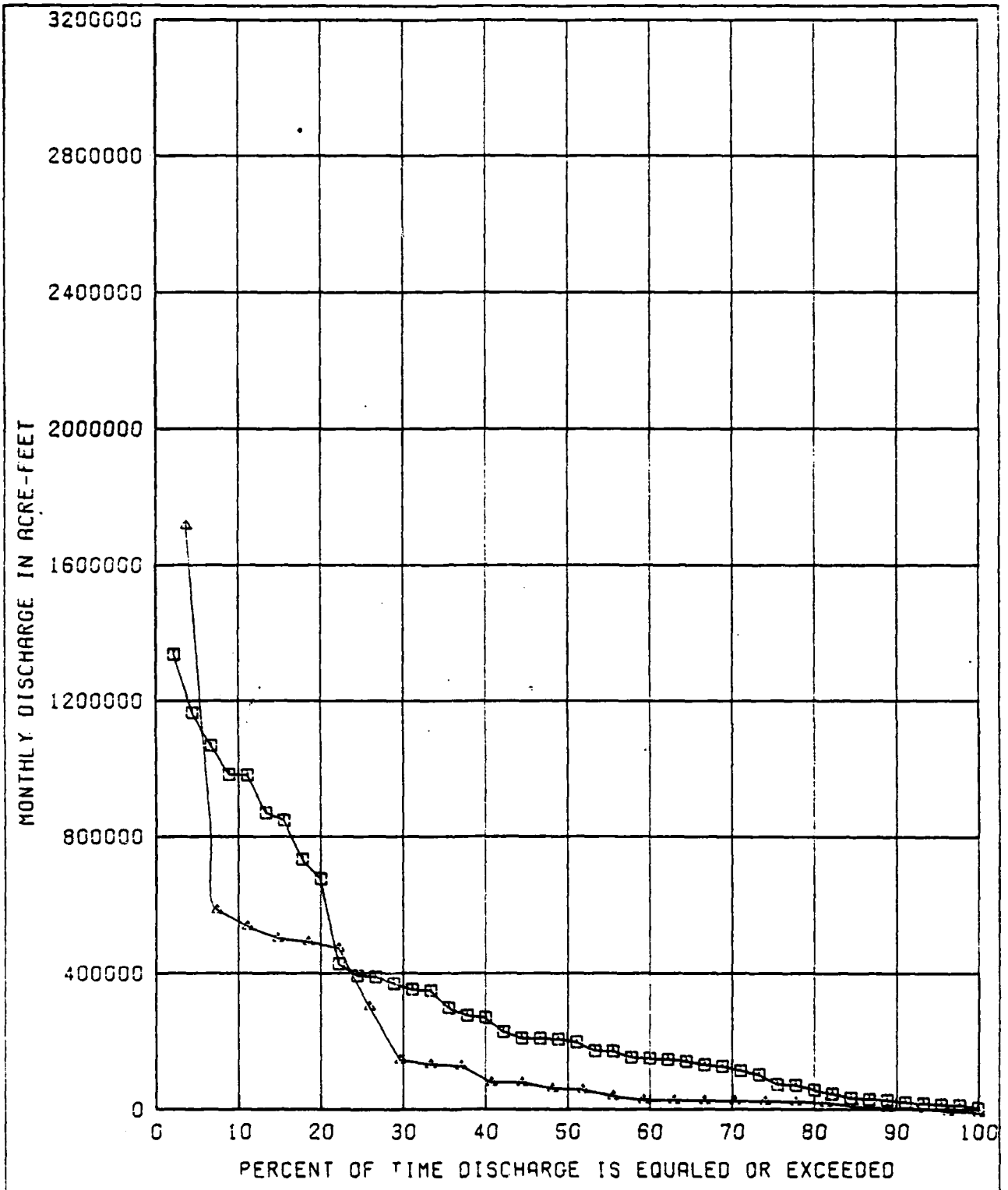
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1899-1943)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

FLOW DURATION CURVES AT DAM SITE

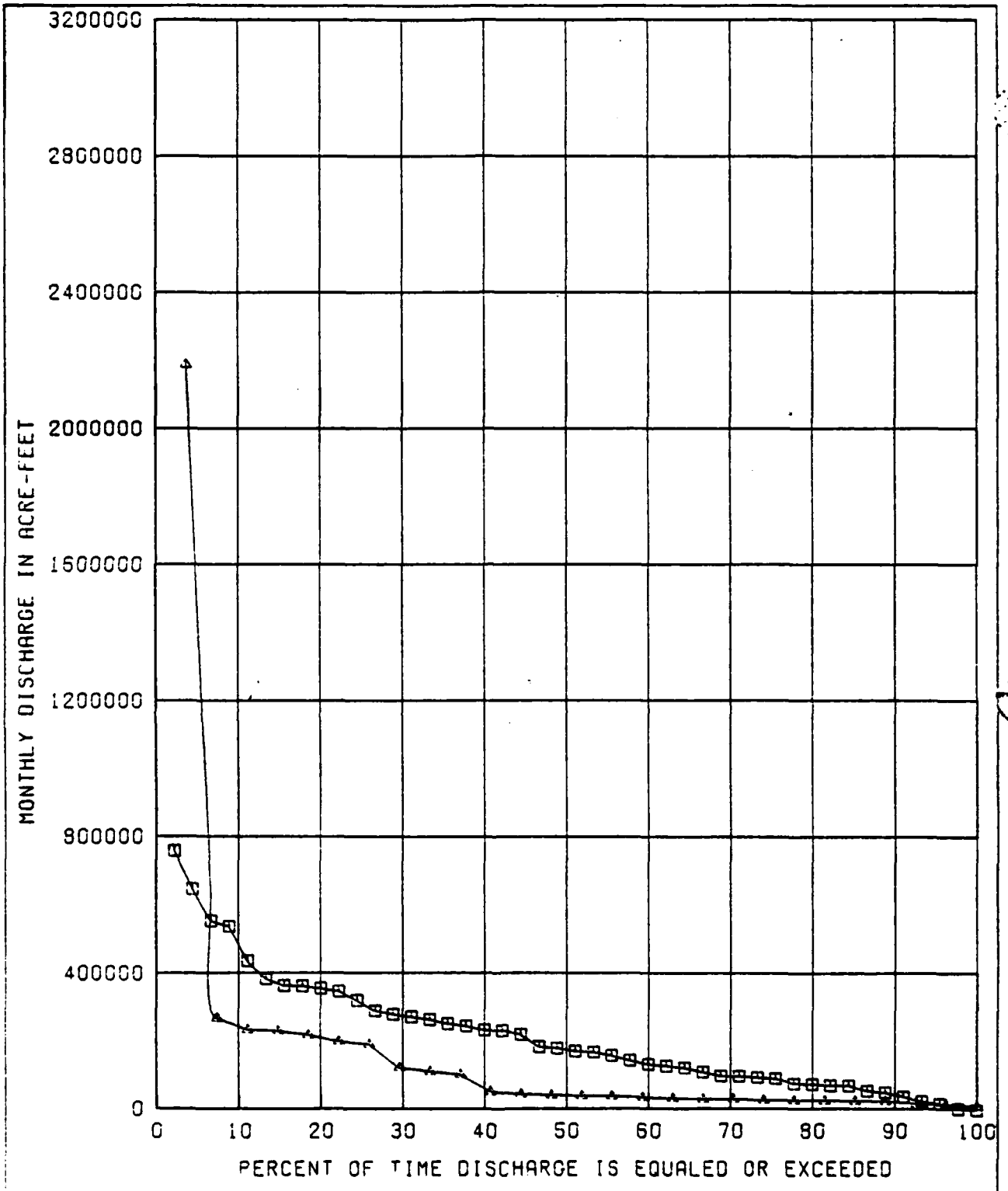
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1899-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

FLOW DURATION CURVES AT DAM SITE

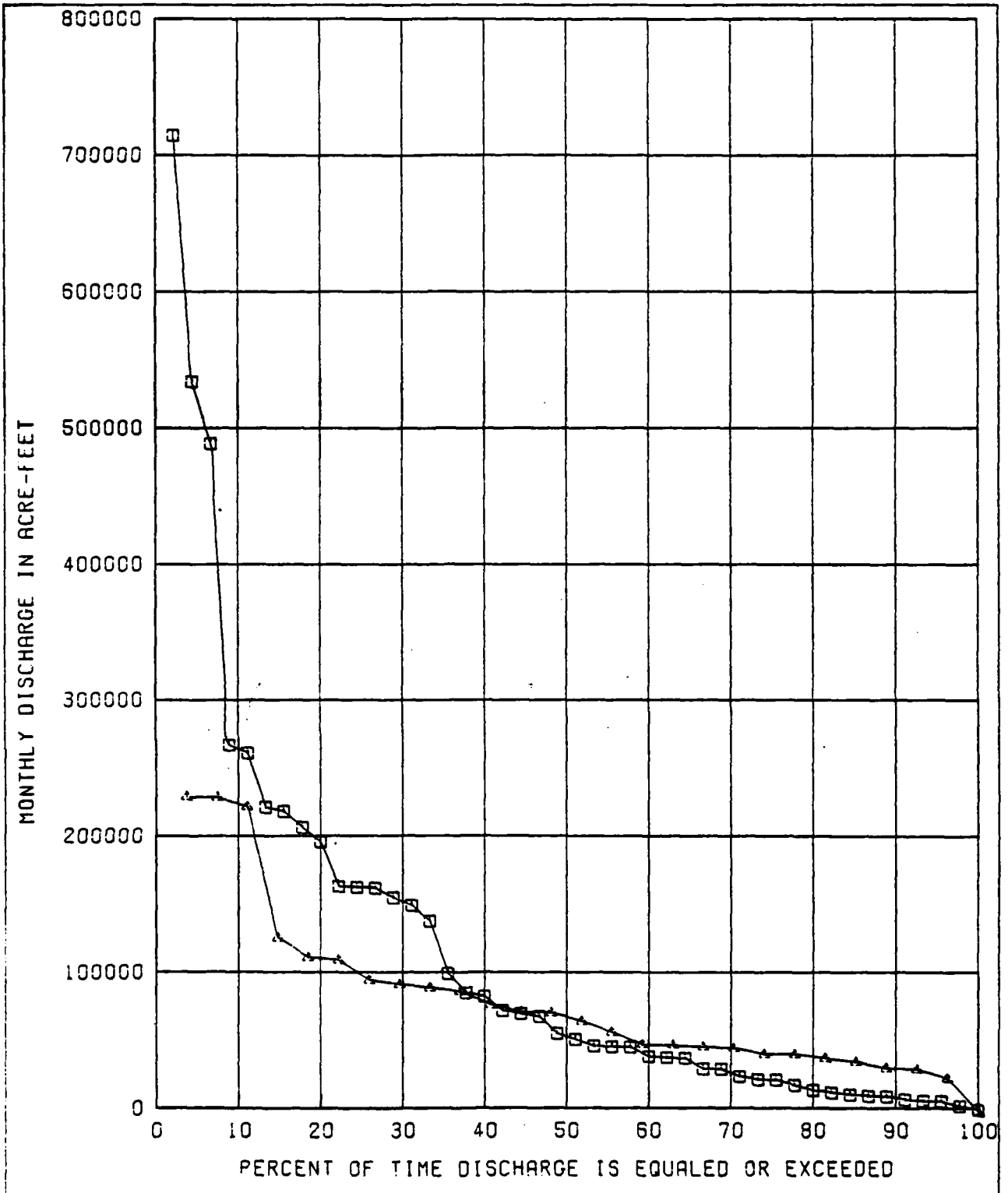
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1899-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1978)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

FLOW DURATION CURVES AT DAM SITE

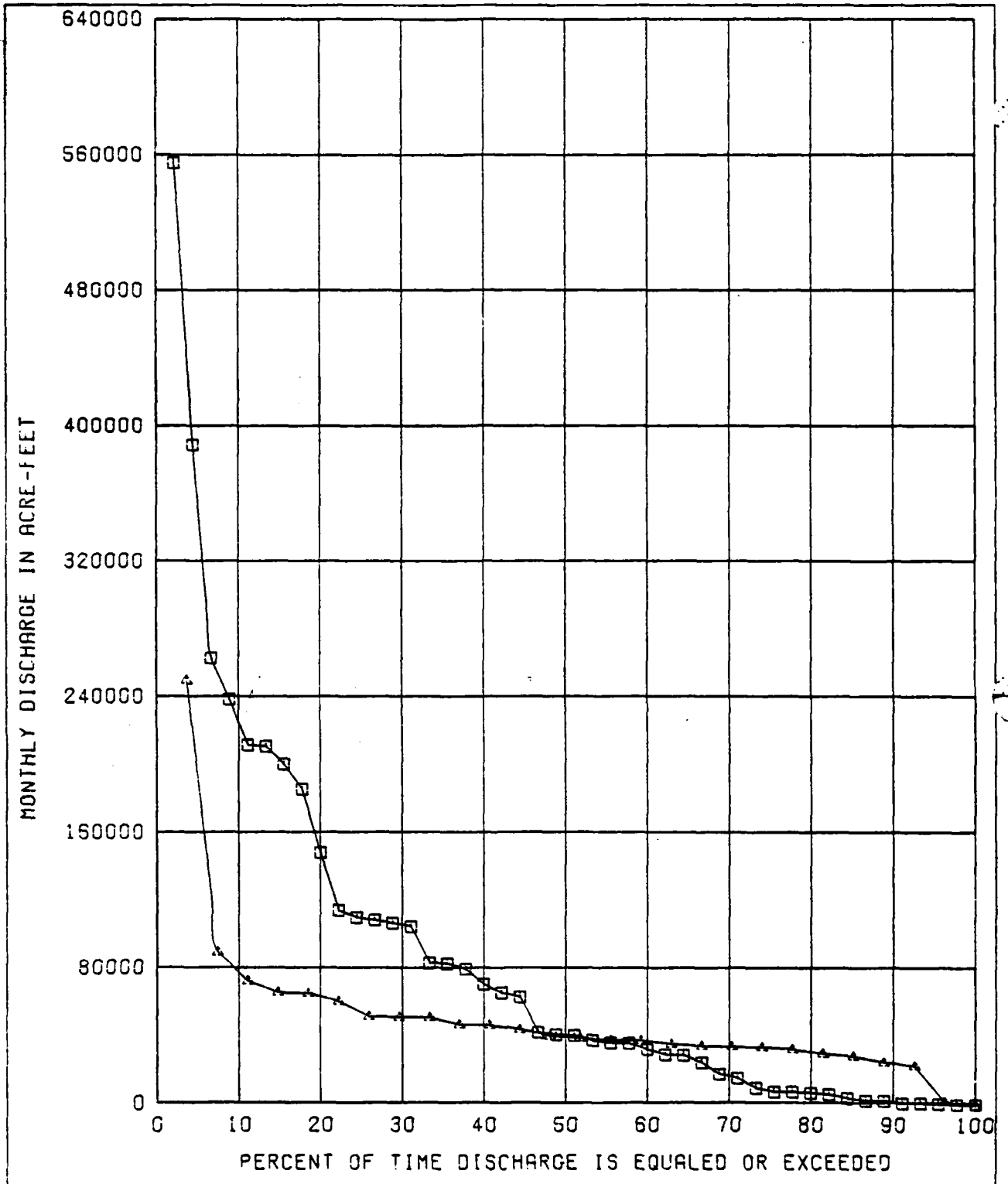
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

FLOW DURATION CURVES AT DAM SITE

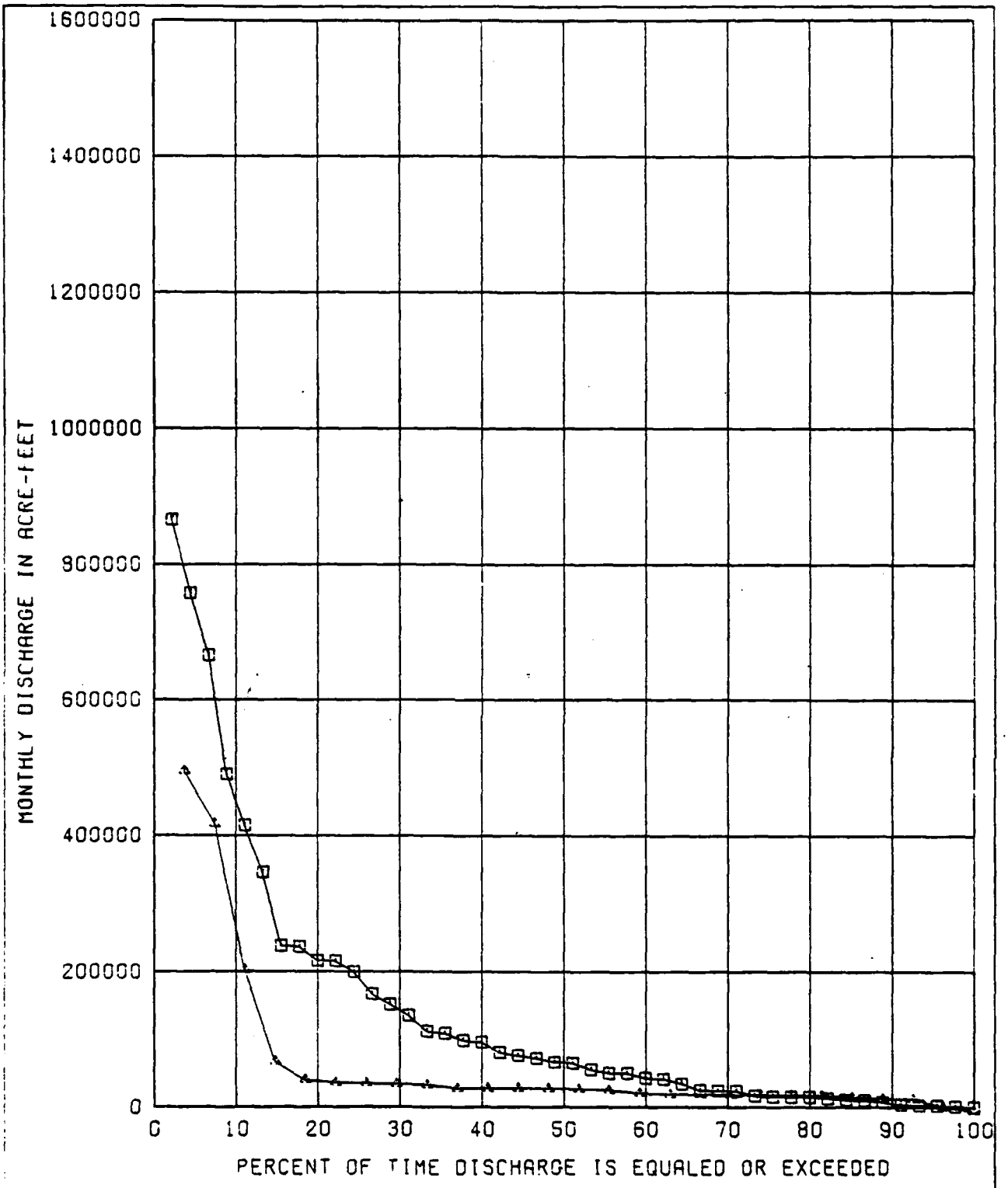
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1899-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

FLOW DURATION CURVES AT DAM SITE

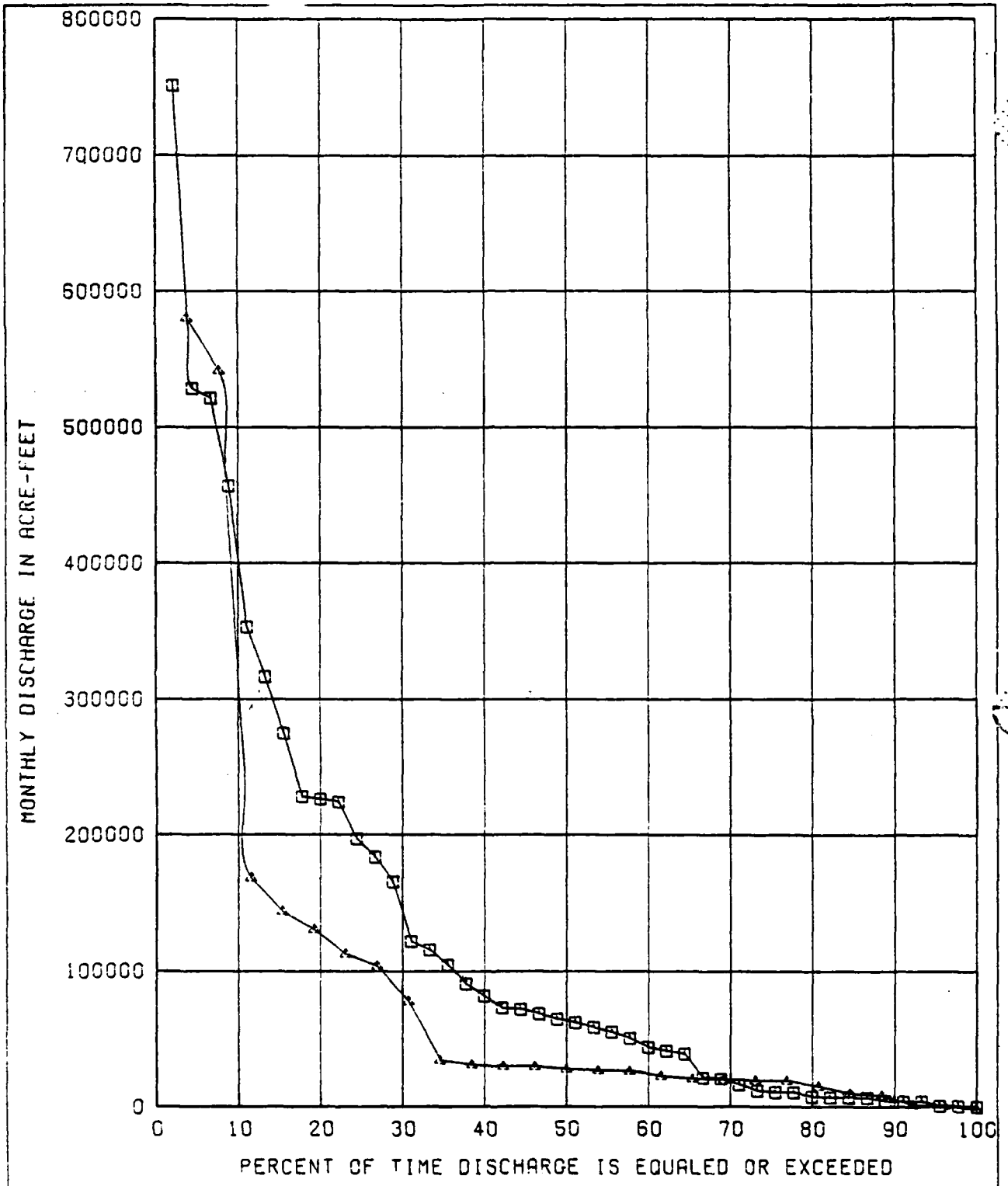
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

FLOW DURATION CURVES AT DAM SITE

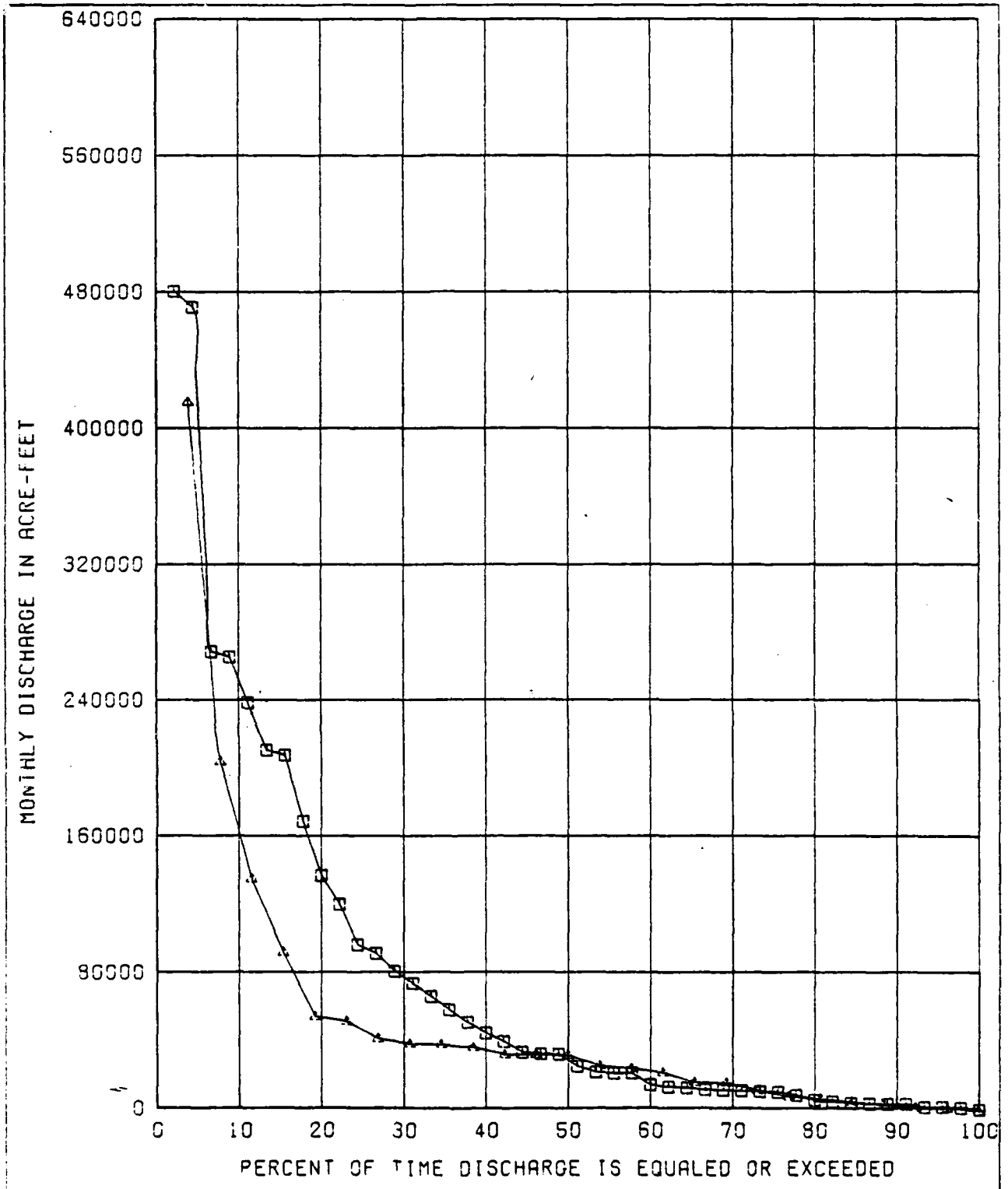
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1933-1943)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

FLOW DURATION CURVES AT DAM SITE

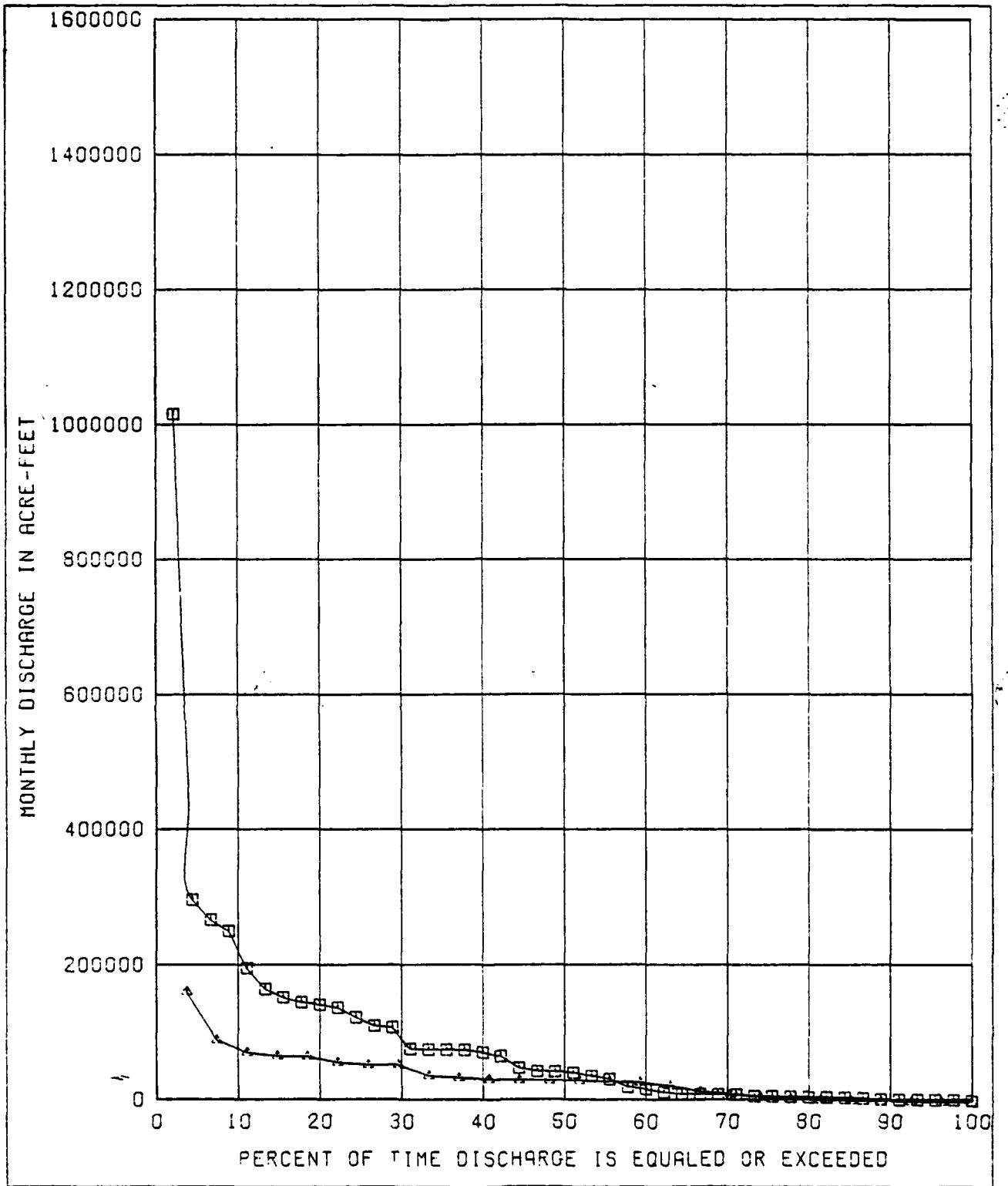
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1939-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

BRAZOS RIVER BASIN, TEXAS

WHITNEY LAKE

FLOW DURATION CURVES AT DAM SITE

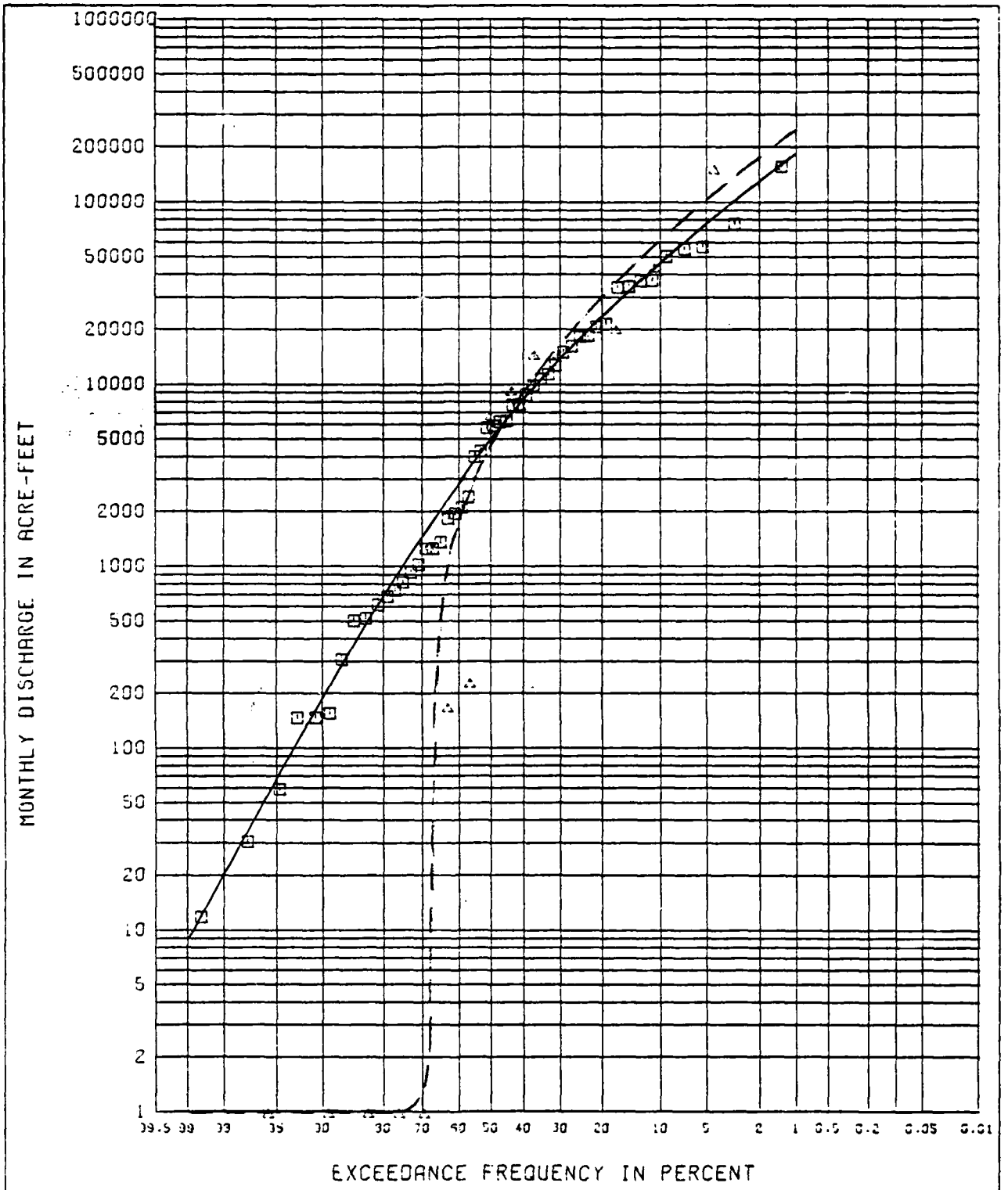
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1956)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

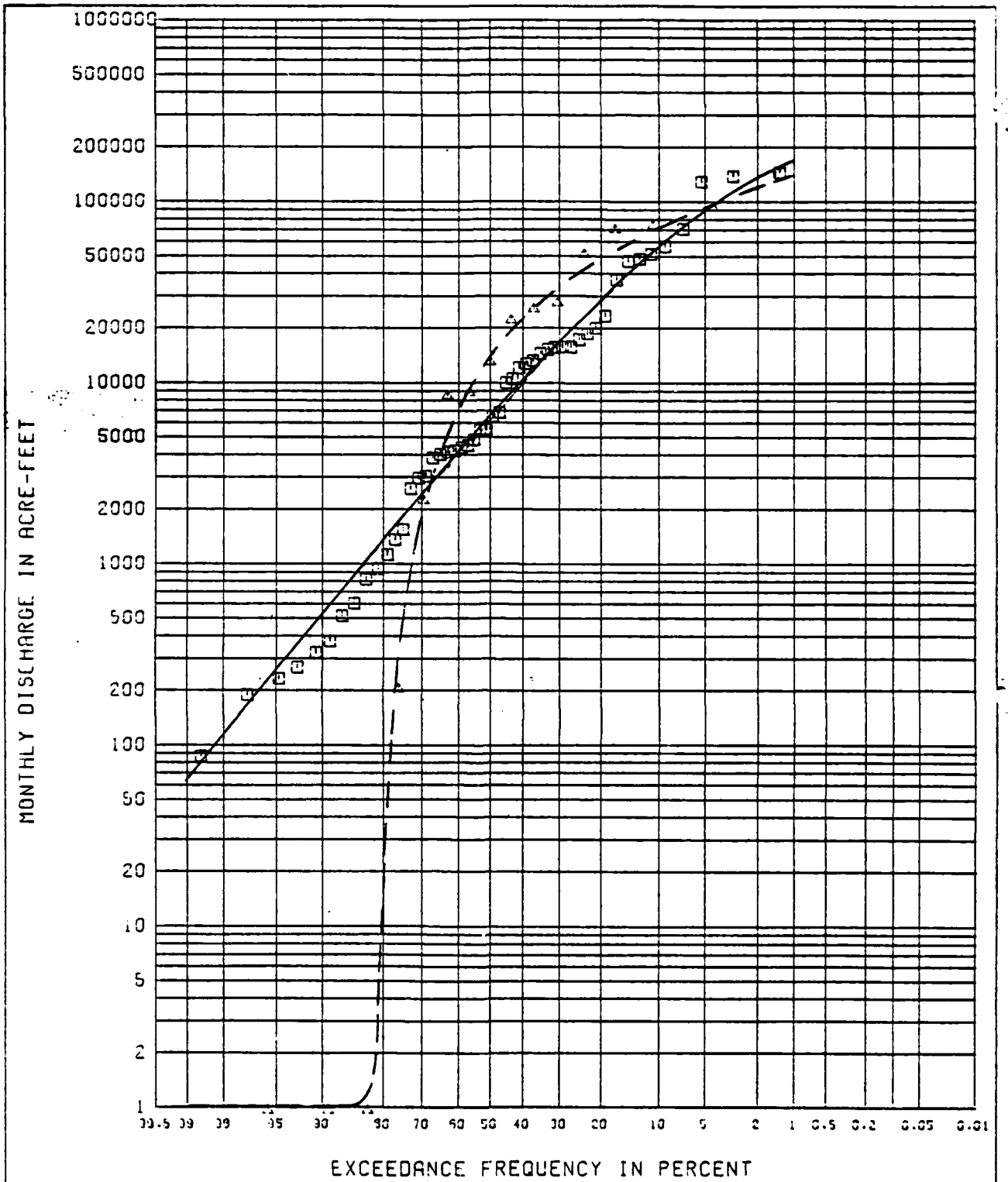
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1955)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

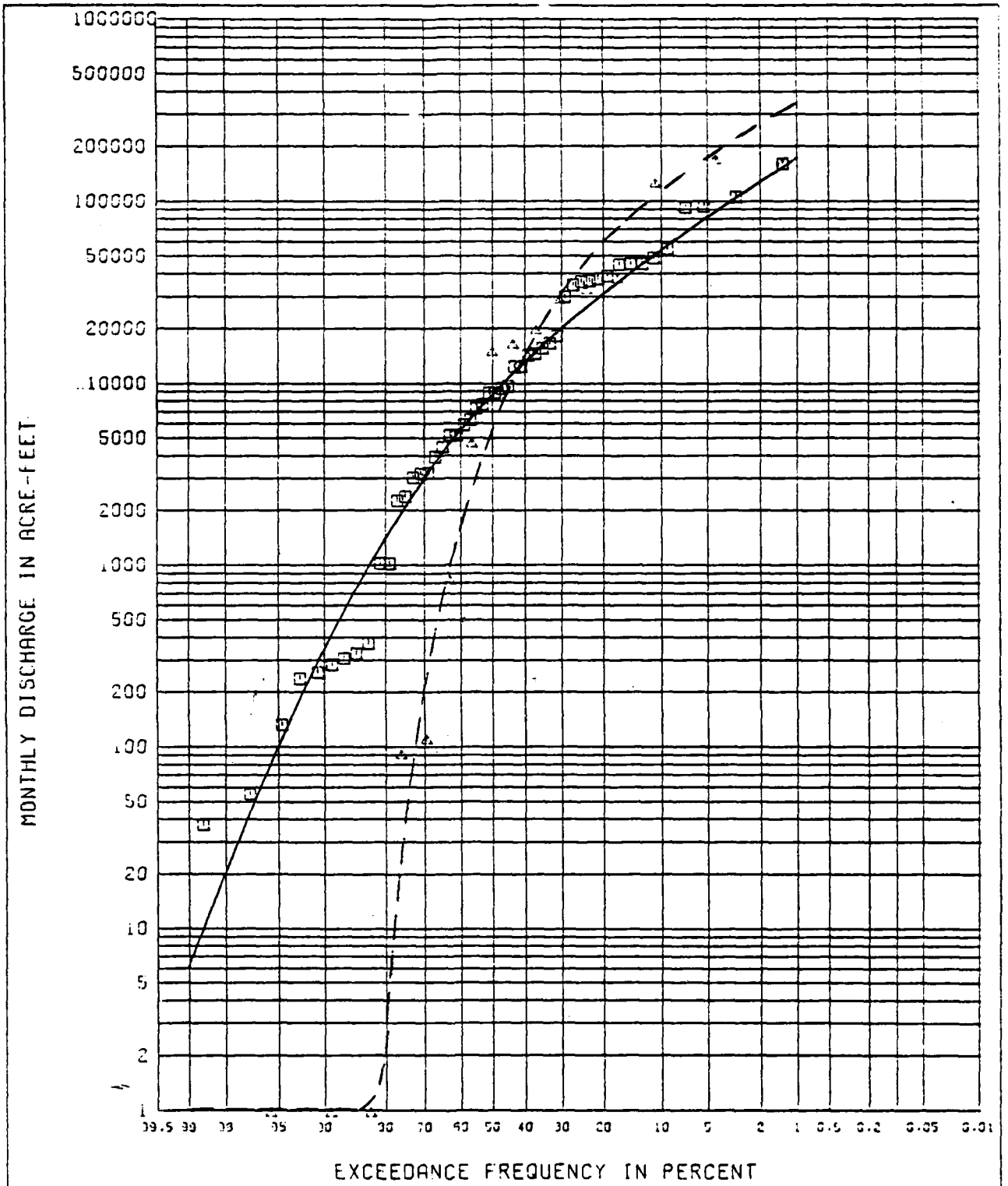
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1907-1956)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

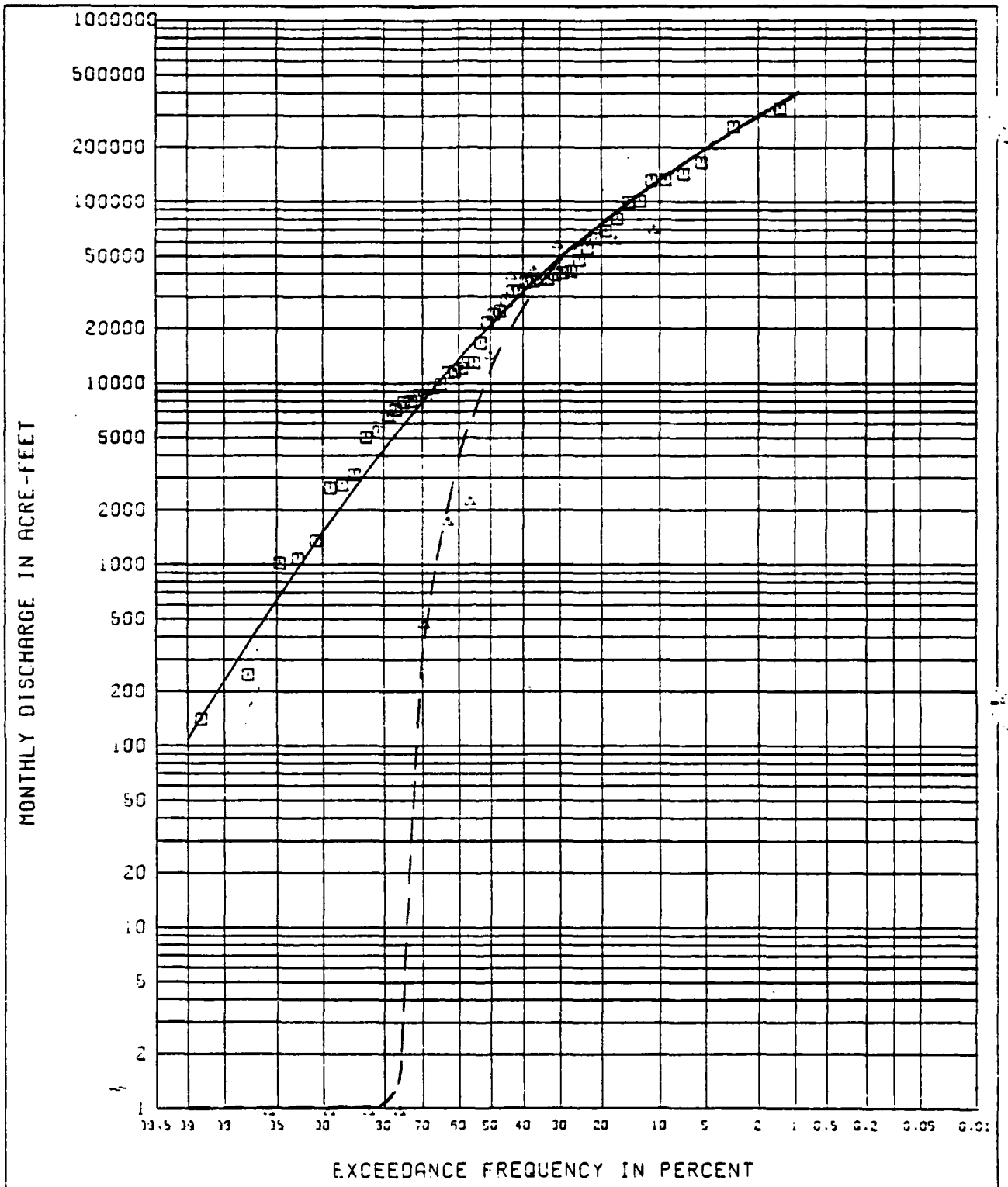
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1907-1956)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

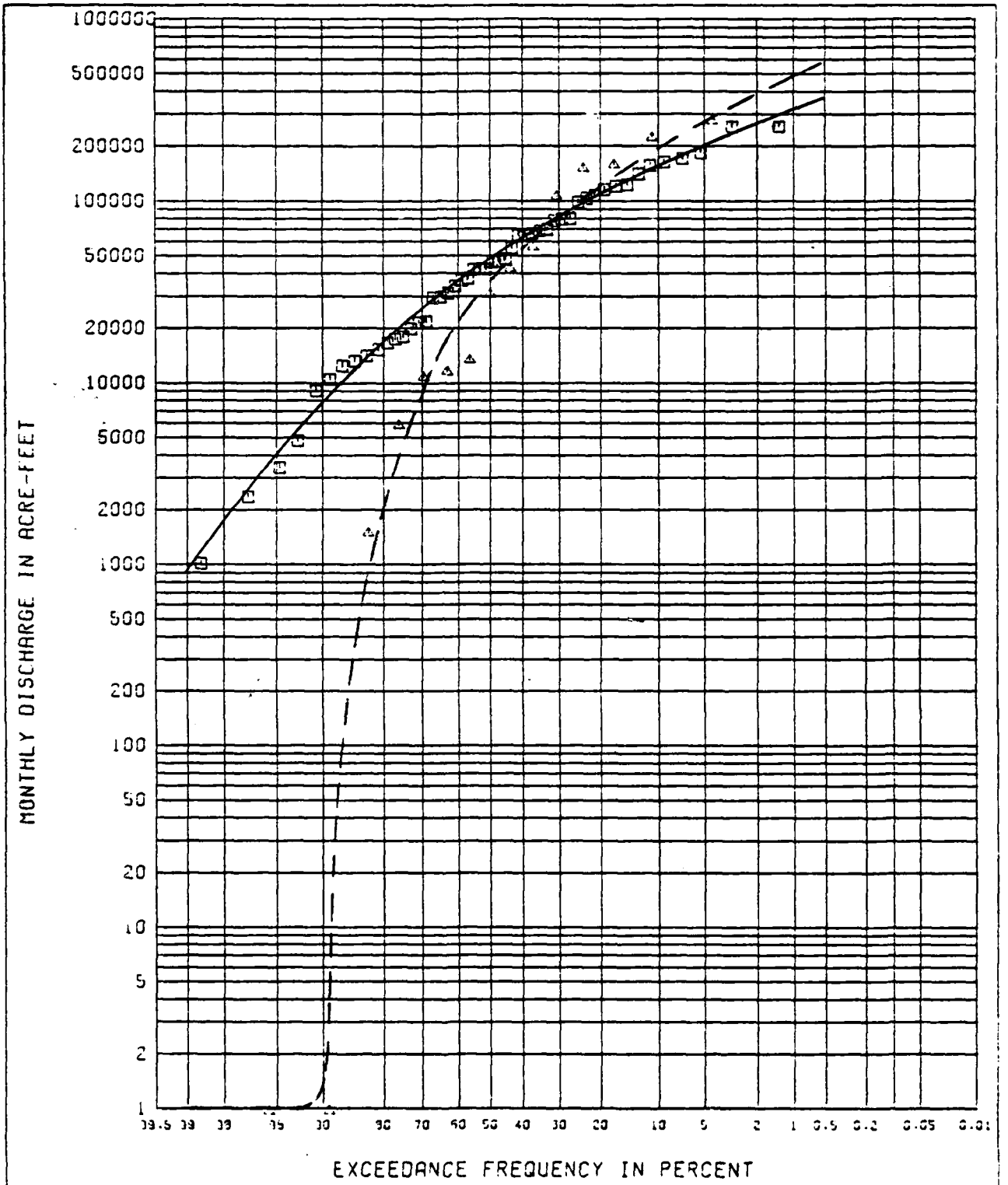
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1955)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

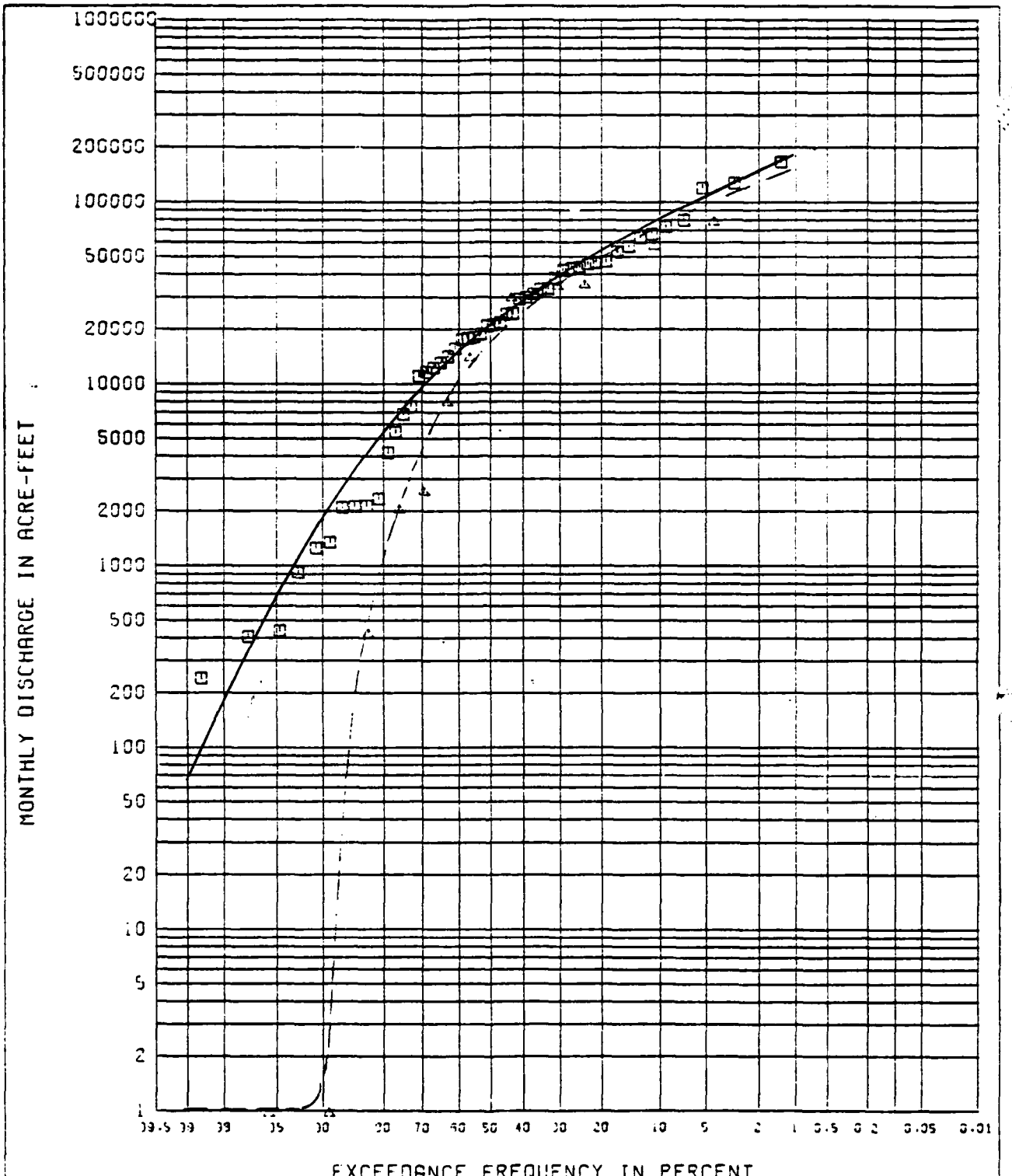
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1956)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

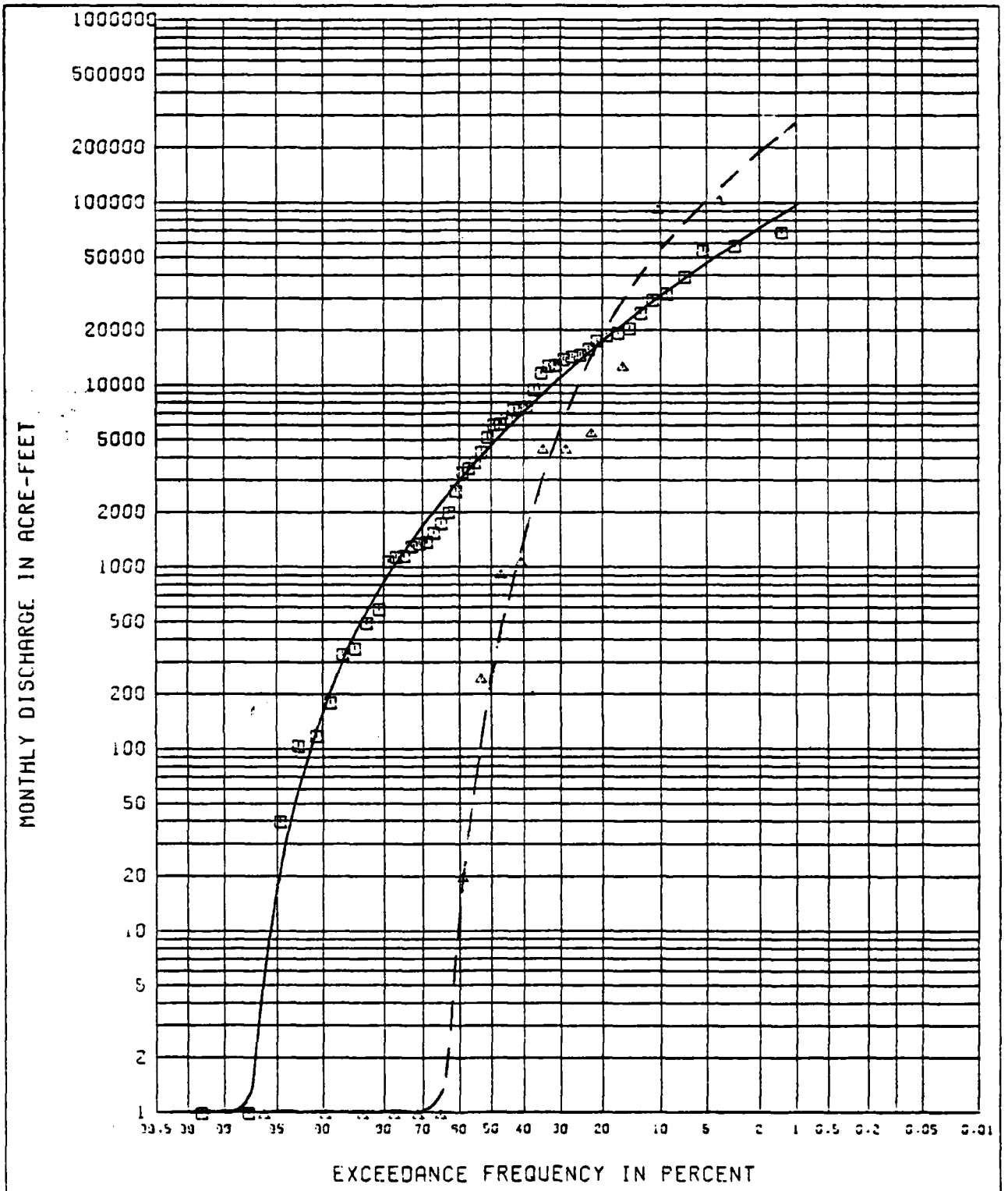
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1955)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

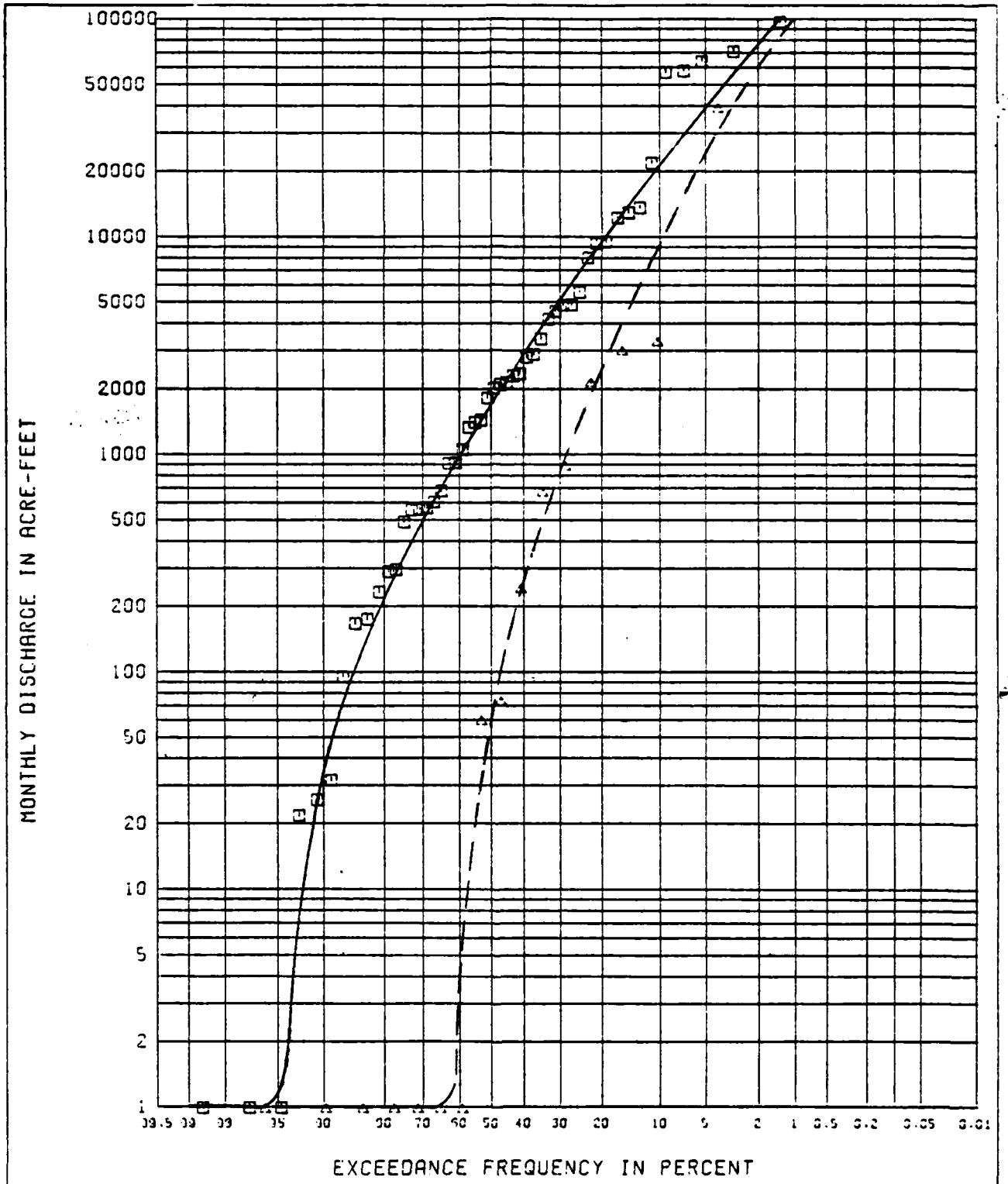
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1955)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

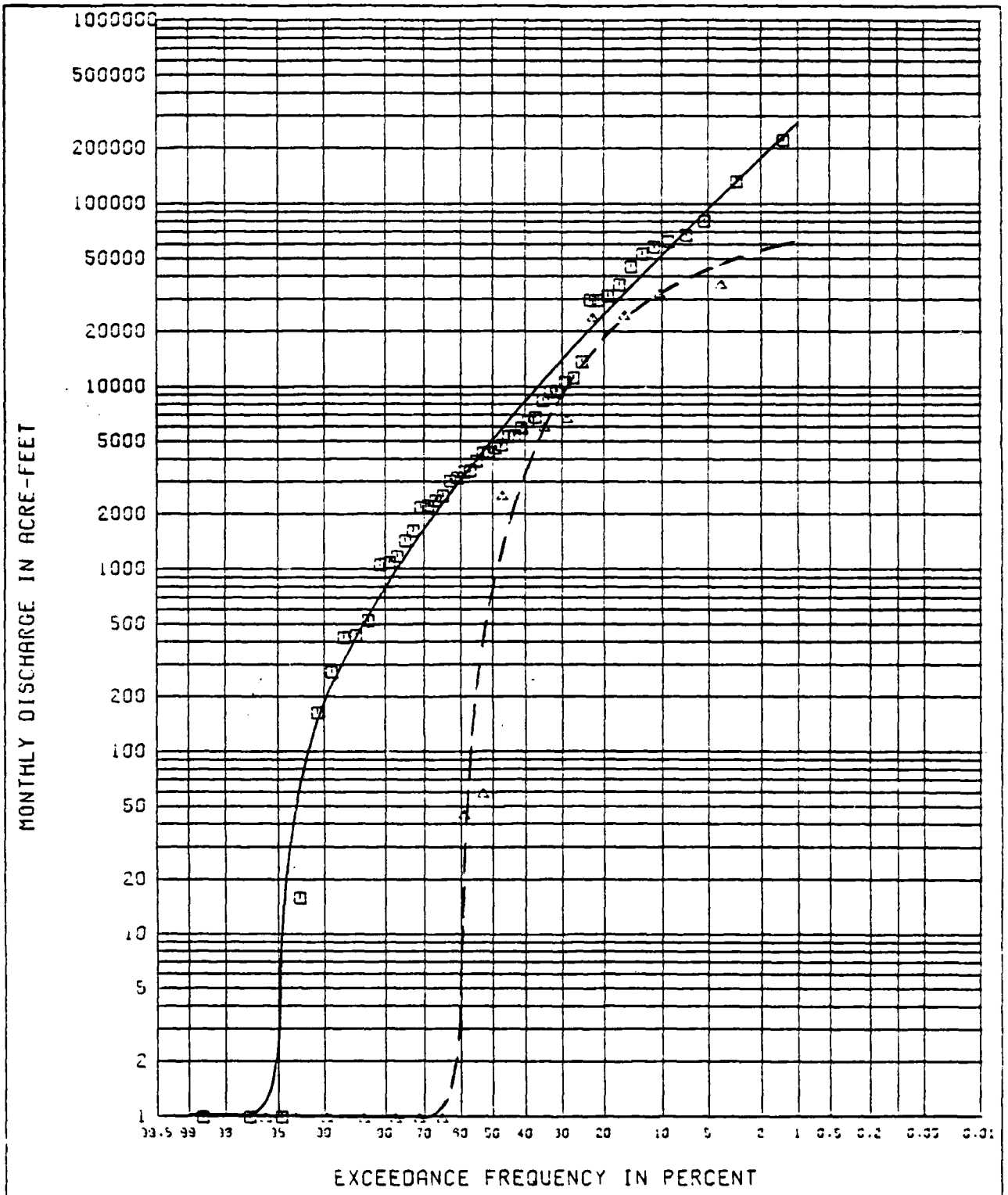
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1955)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

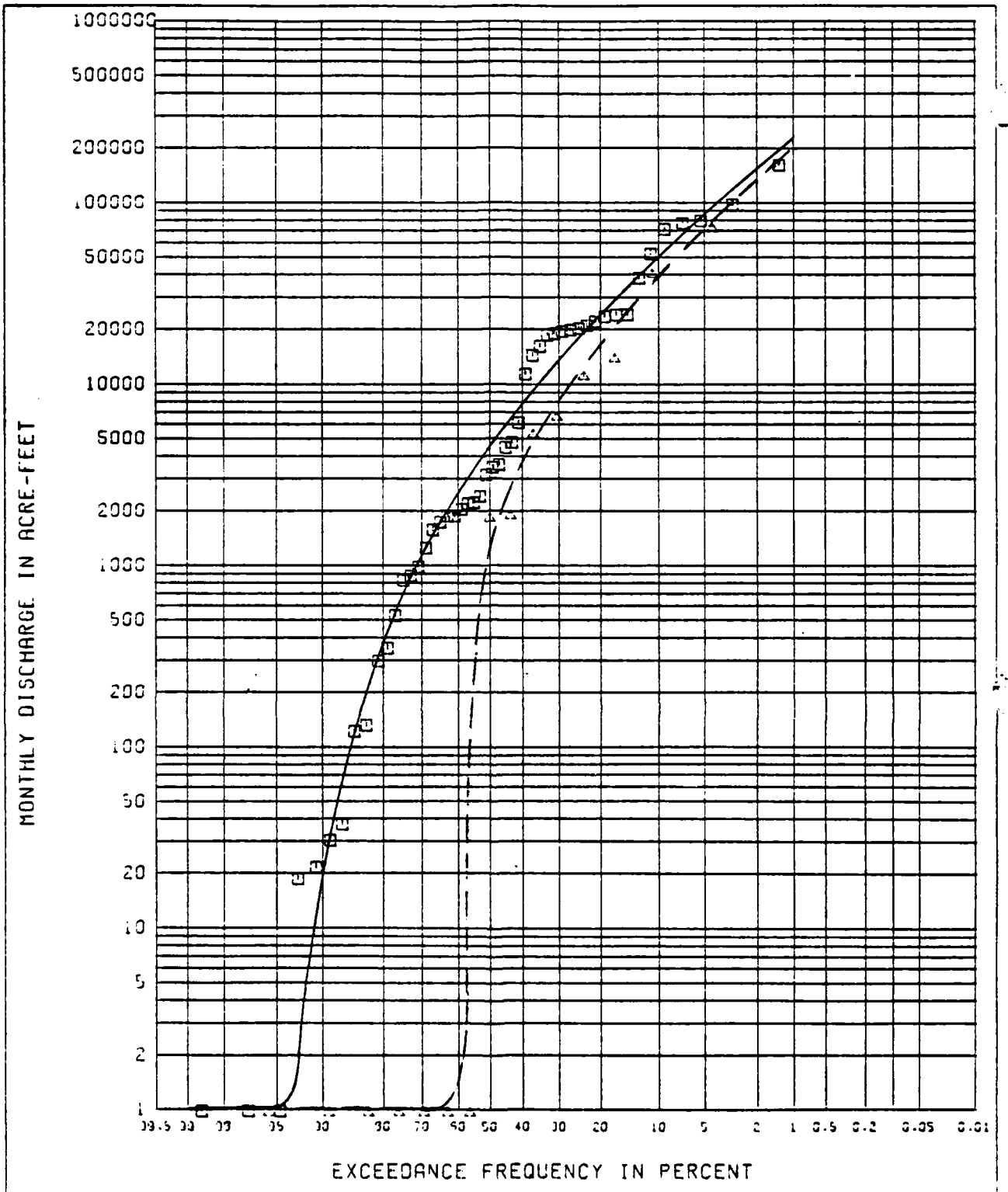
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1956)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

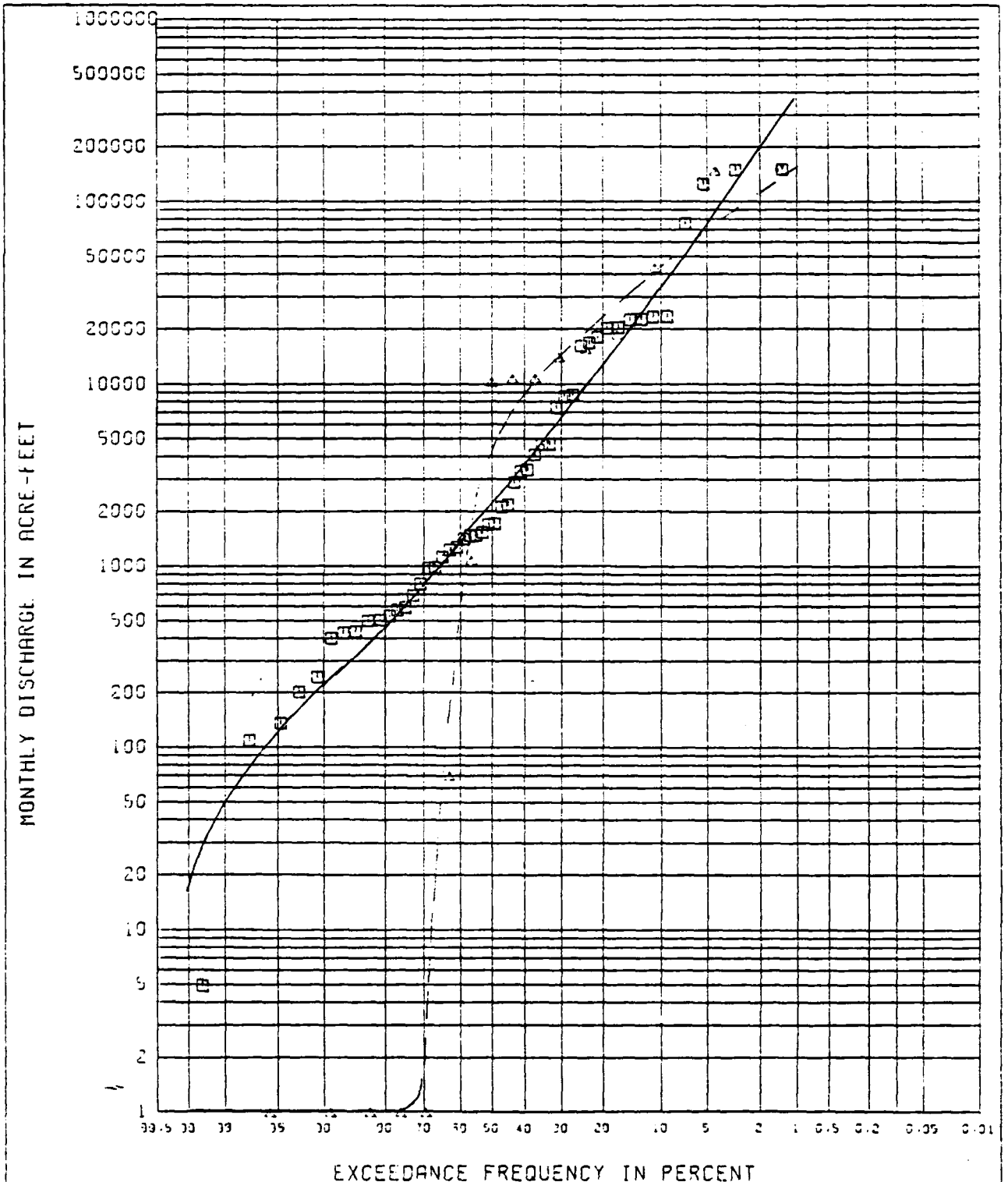
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1907-1956)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

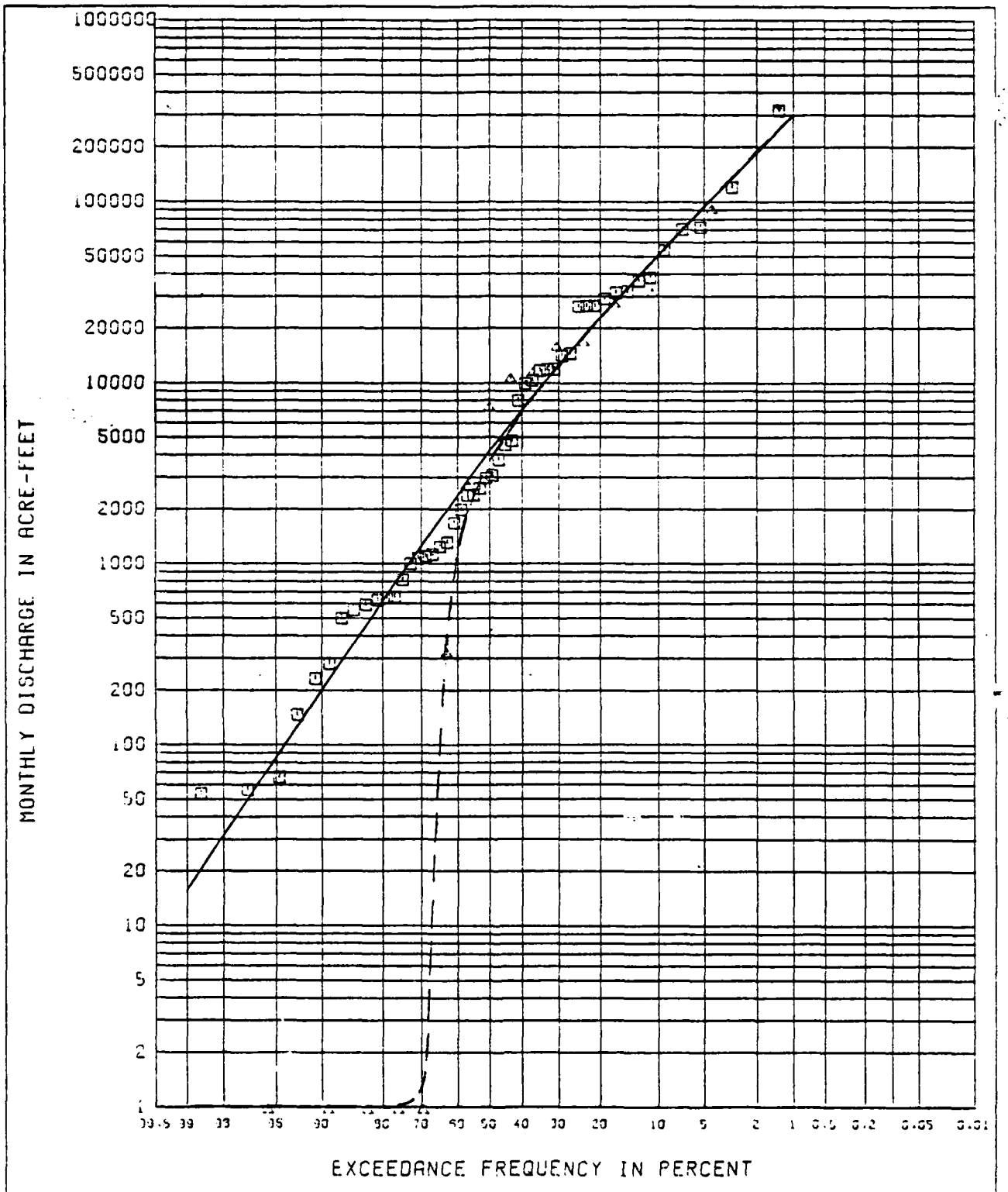
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1955)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

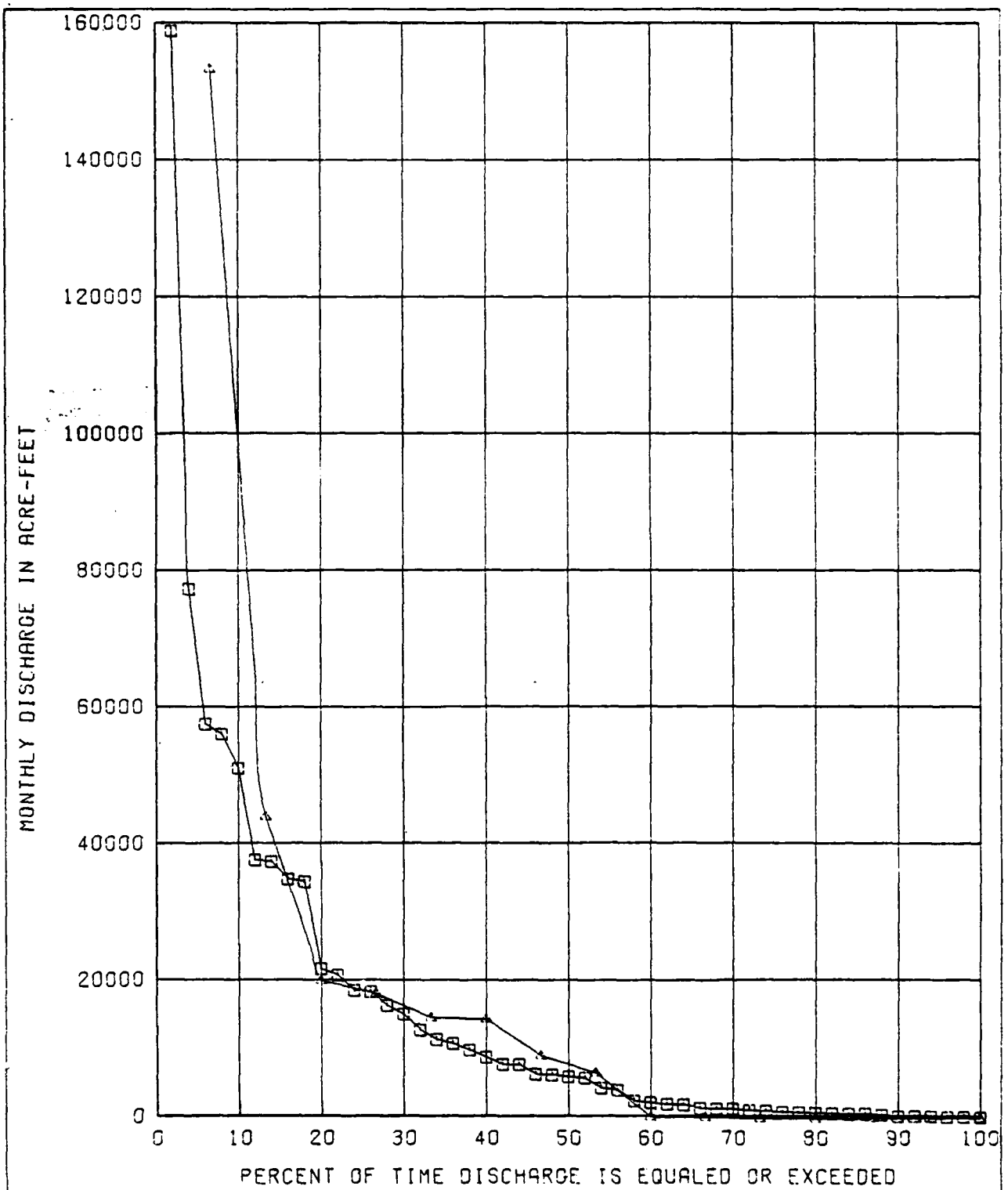
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1907-1956)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1978)

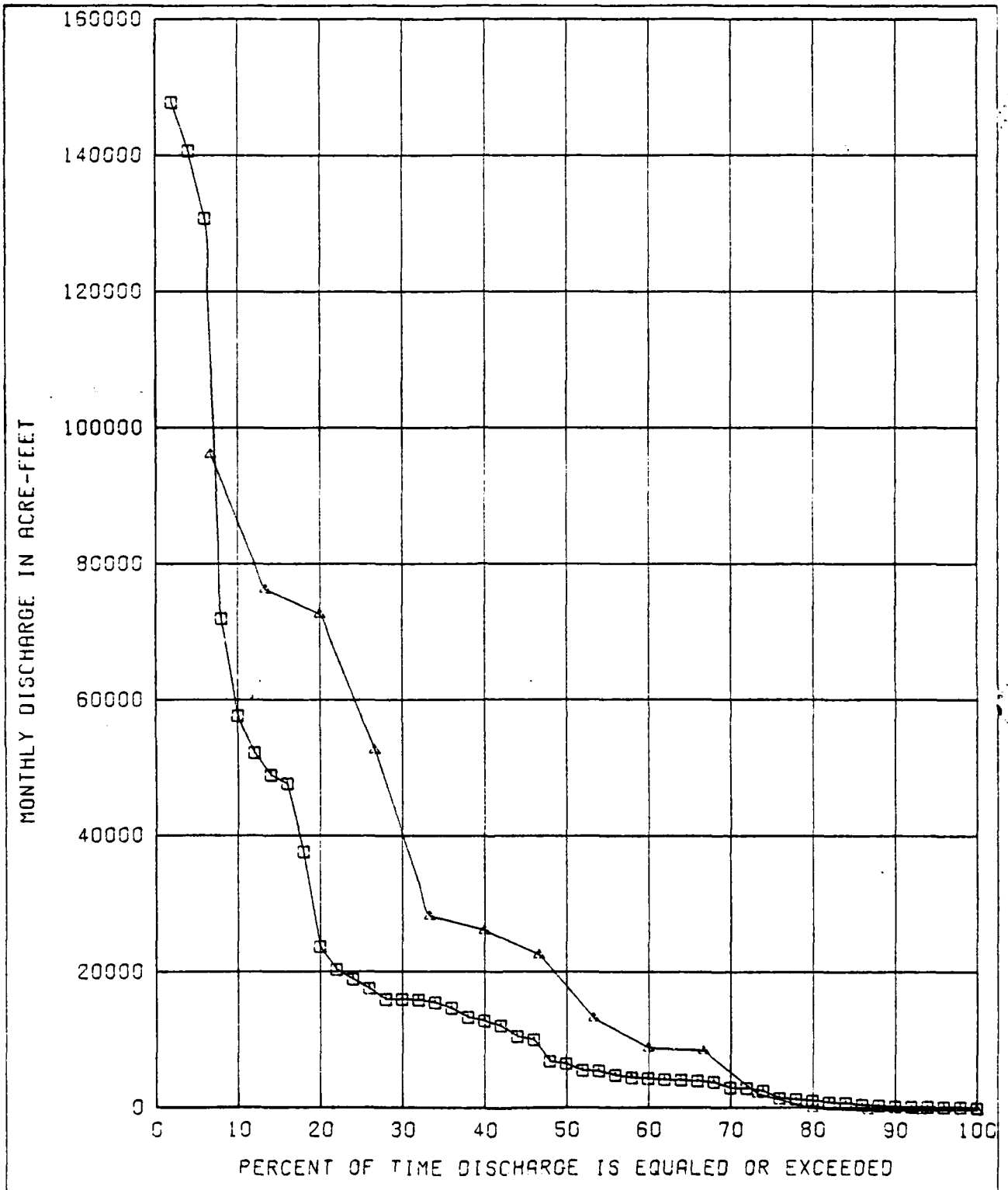
BRAZOS RIVER BASIN, TEXAS
WACO LAKE

FLOW DURATION CURVES AT DAM SITE
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1955)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1978)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

FLOW DURATION CURVES AT DAM SITE

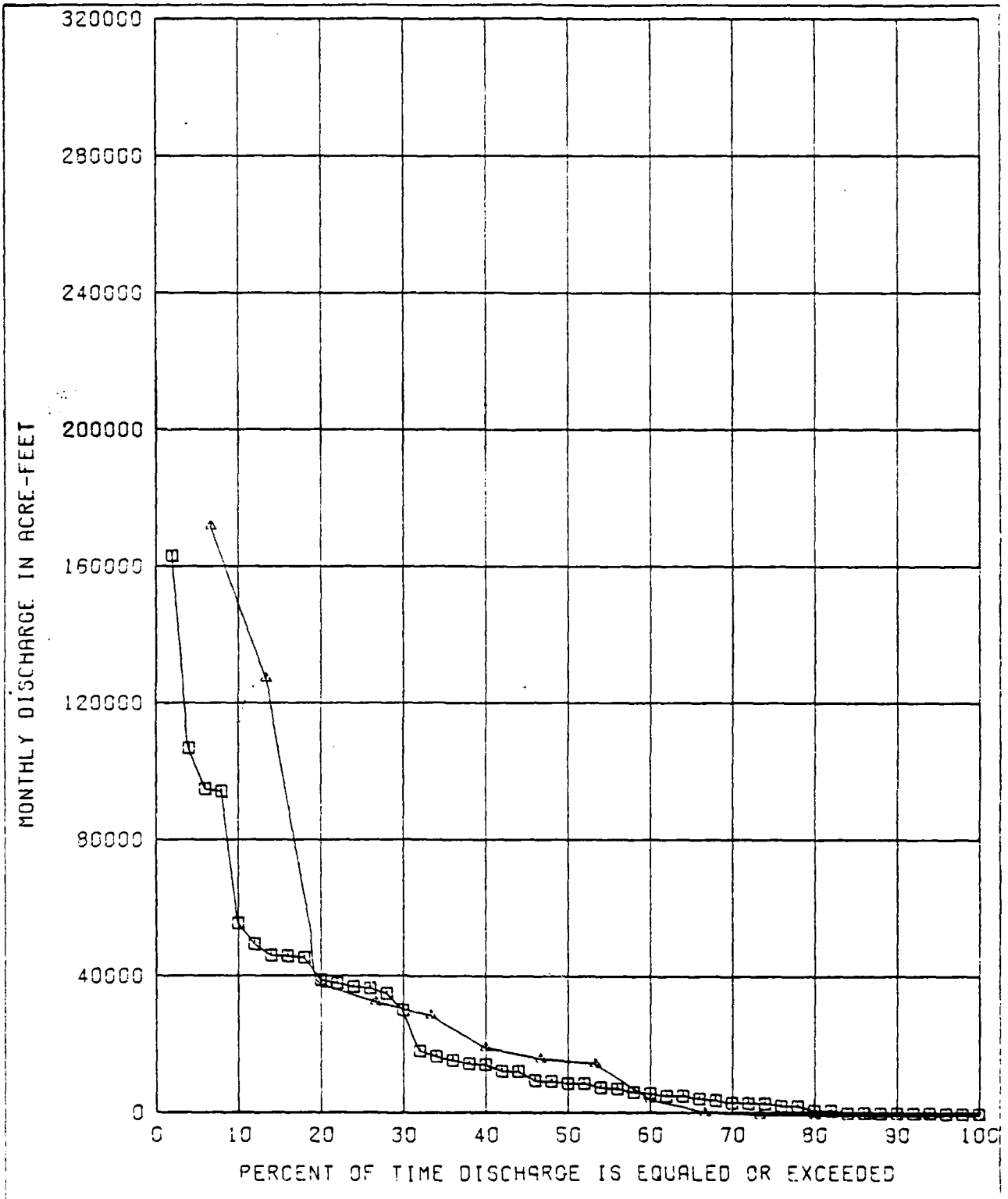
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1907-1956)

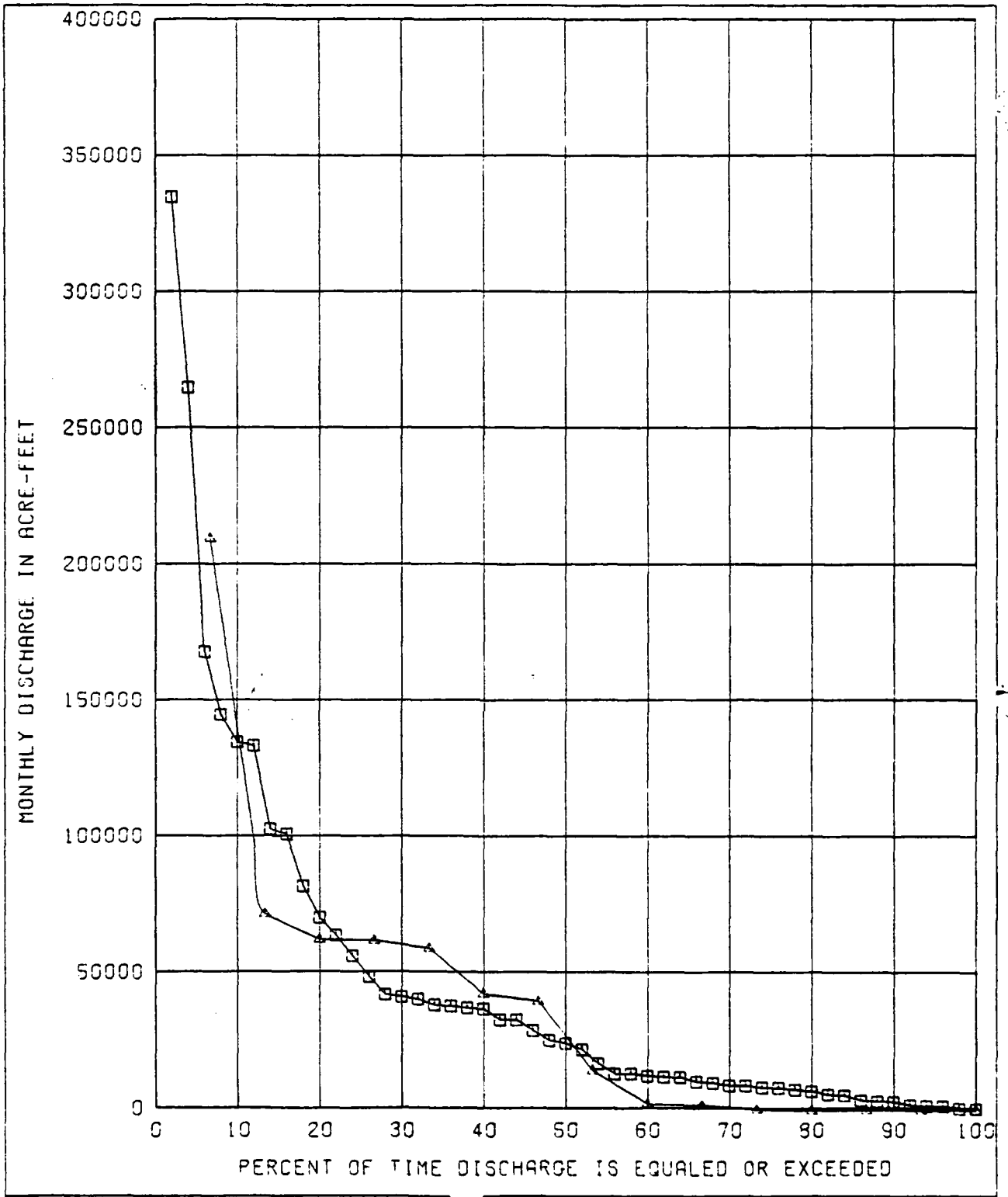
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS
WACO LAKE
FLOW DURATION CURVES AT DAM SITE
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1956)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

FLOW DURATION CURVES AT DAM SITE

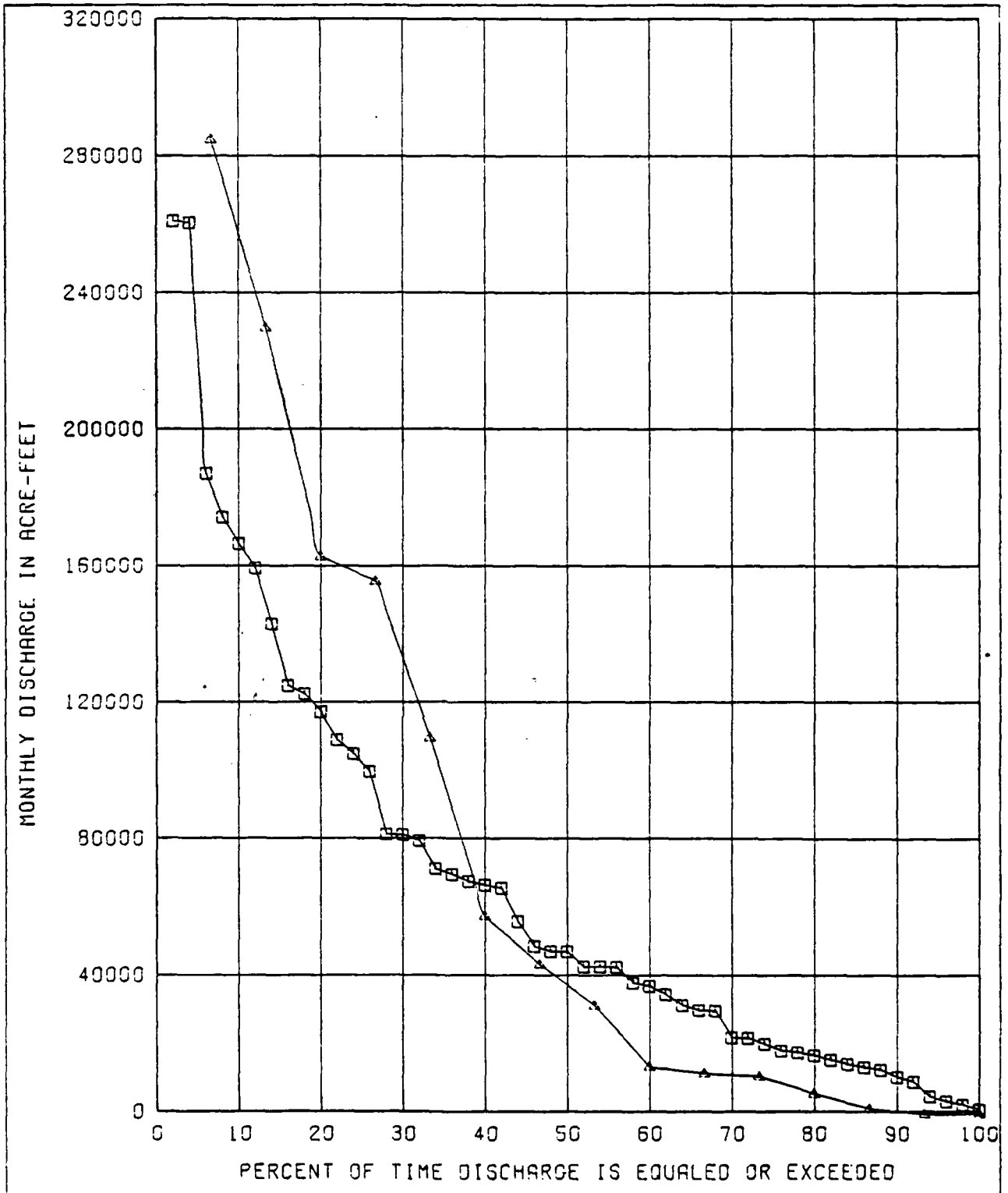
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1955)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

FLOW DURATION CURVES AT DAM SITE

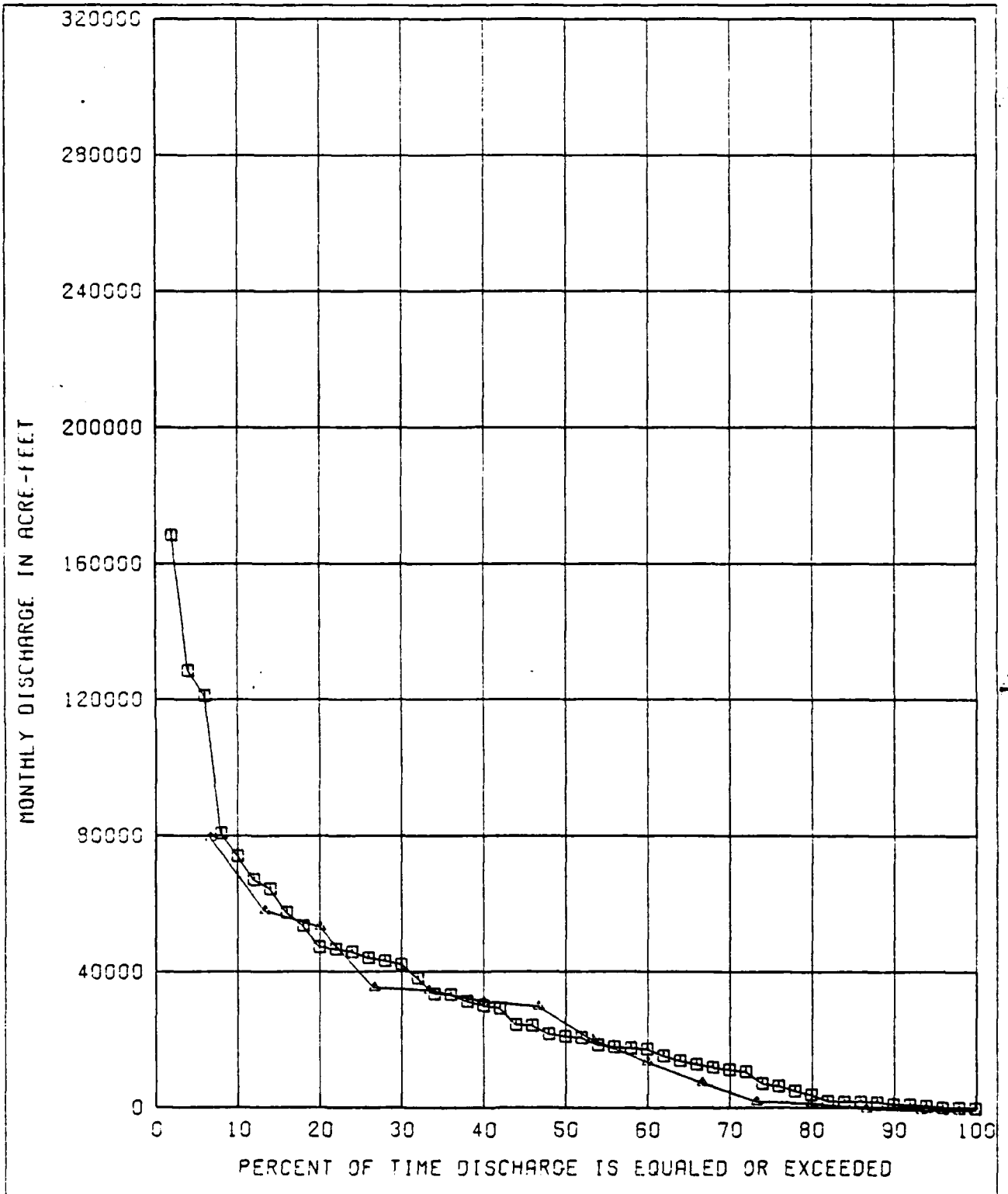
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

FLOW DURATION CURVES AT DAM SITE

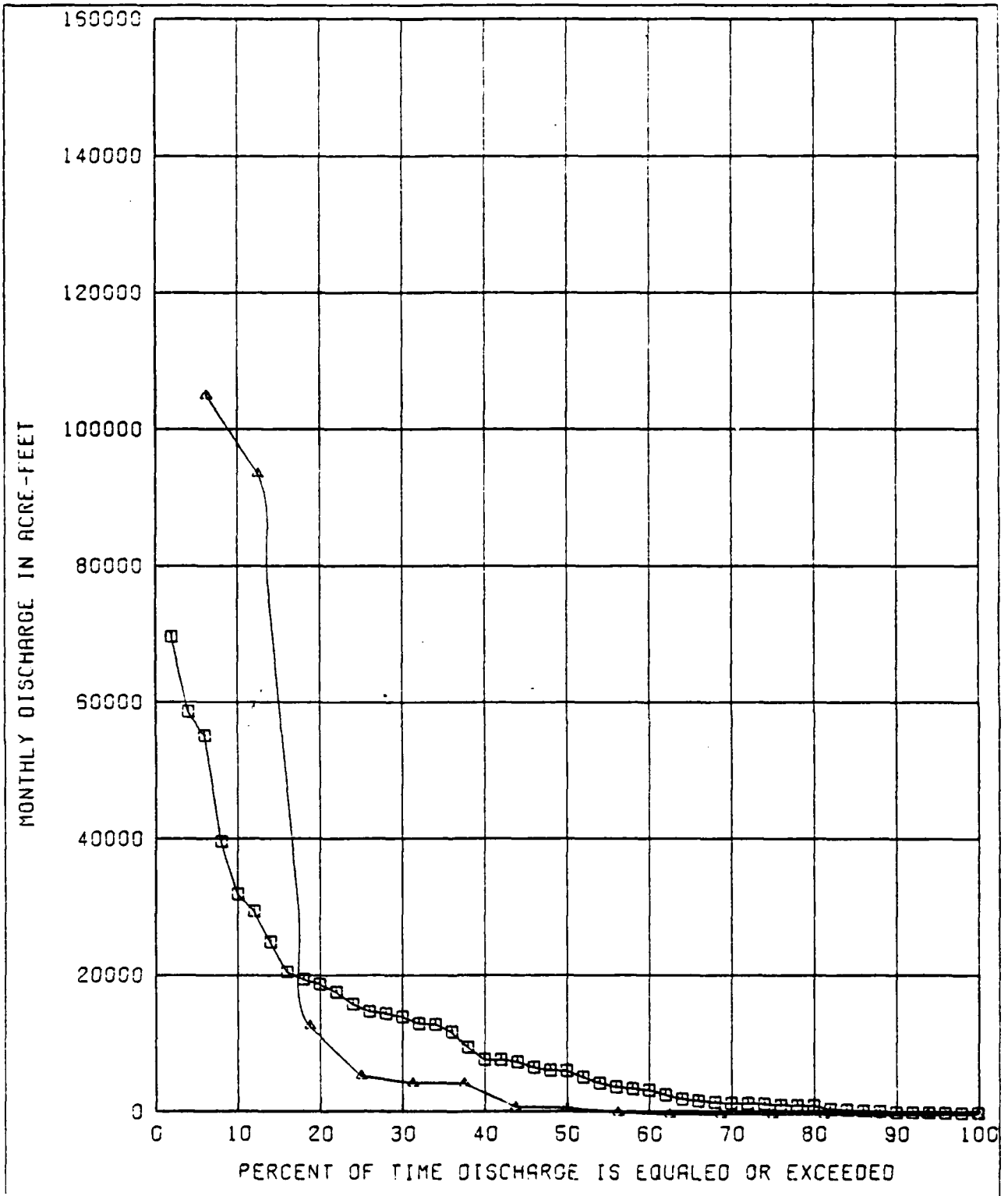
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1907-1956)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

FLOW DURATION CURVES AT DAM SITE

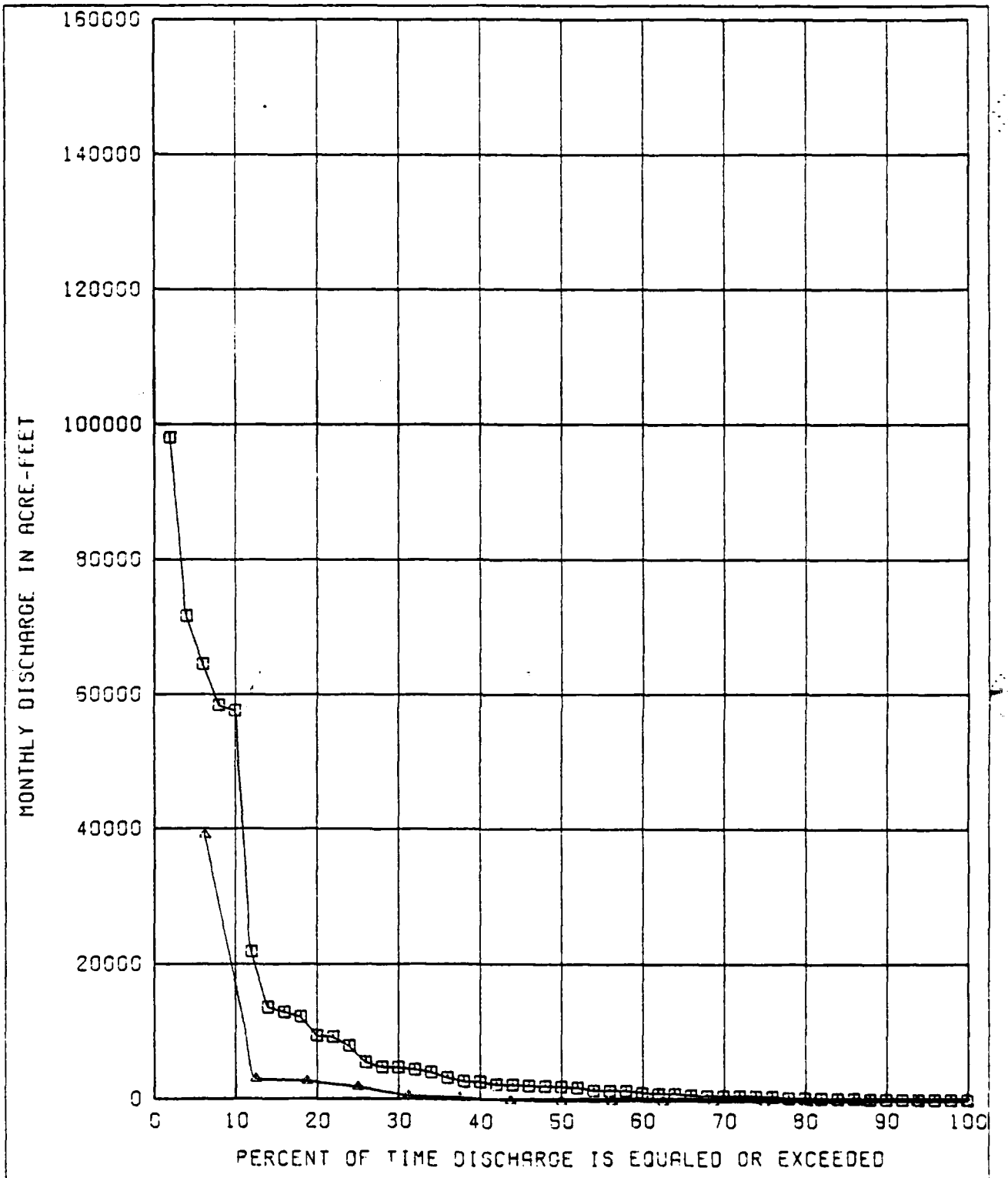
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

FLOW DURATION CURVES AT DAM SITE

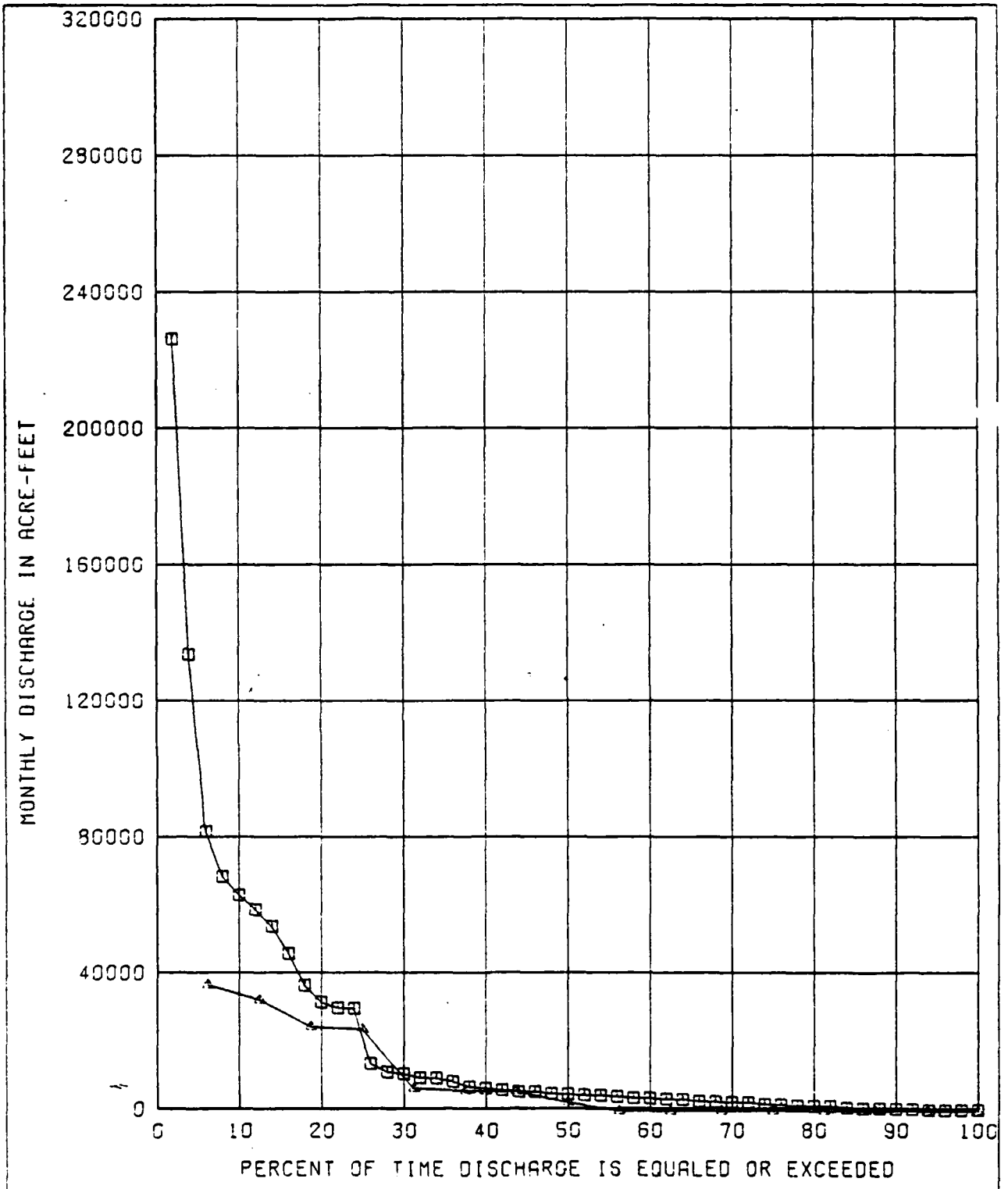
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1956)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1978)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

FLOW DURATION CURVES AT DAM SITE

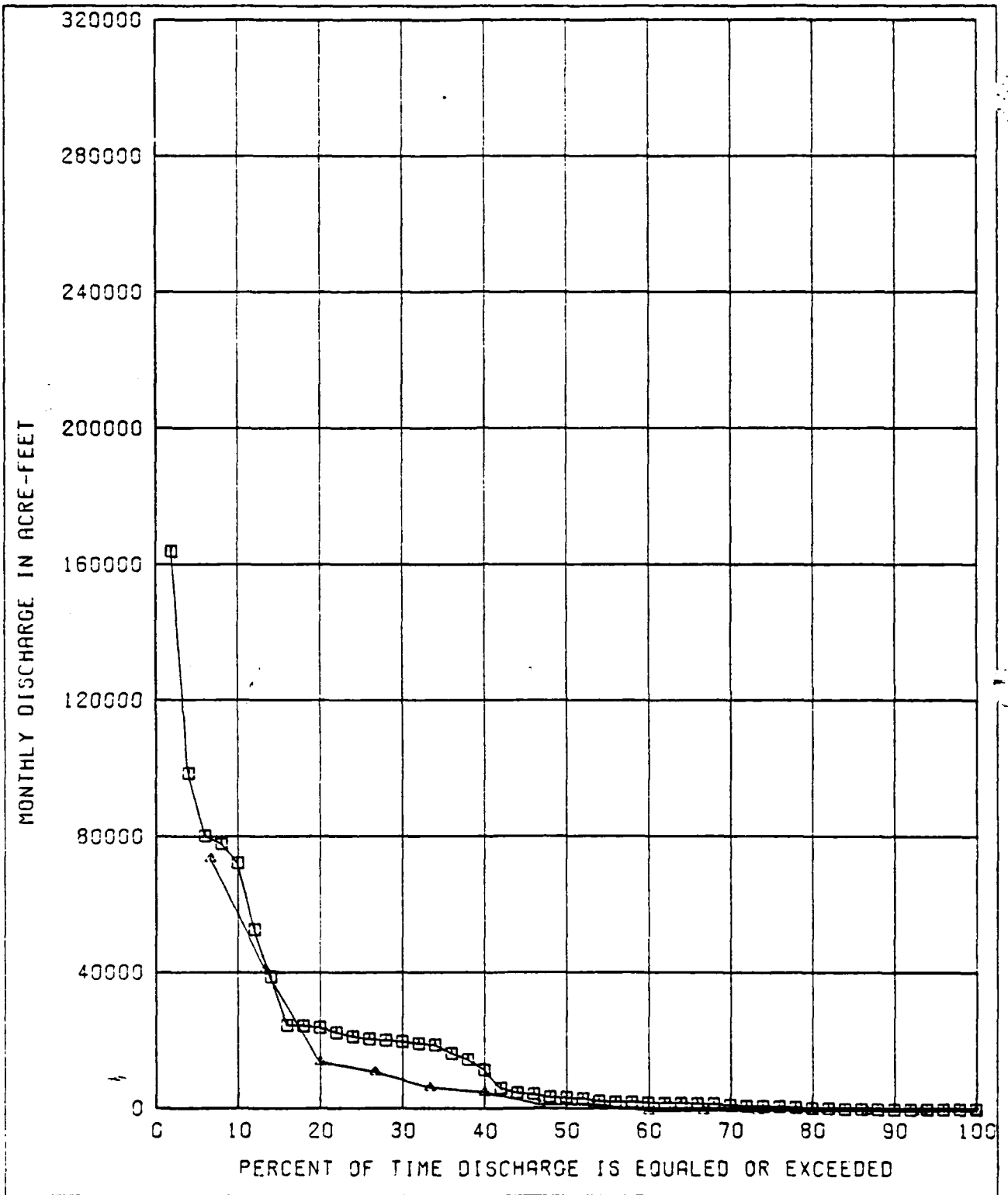
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1955)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

FLOW DURATION CURVES AT DAM SITE

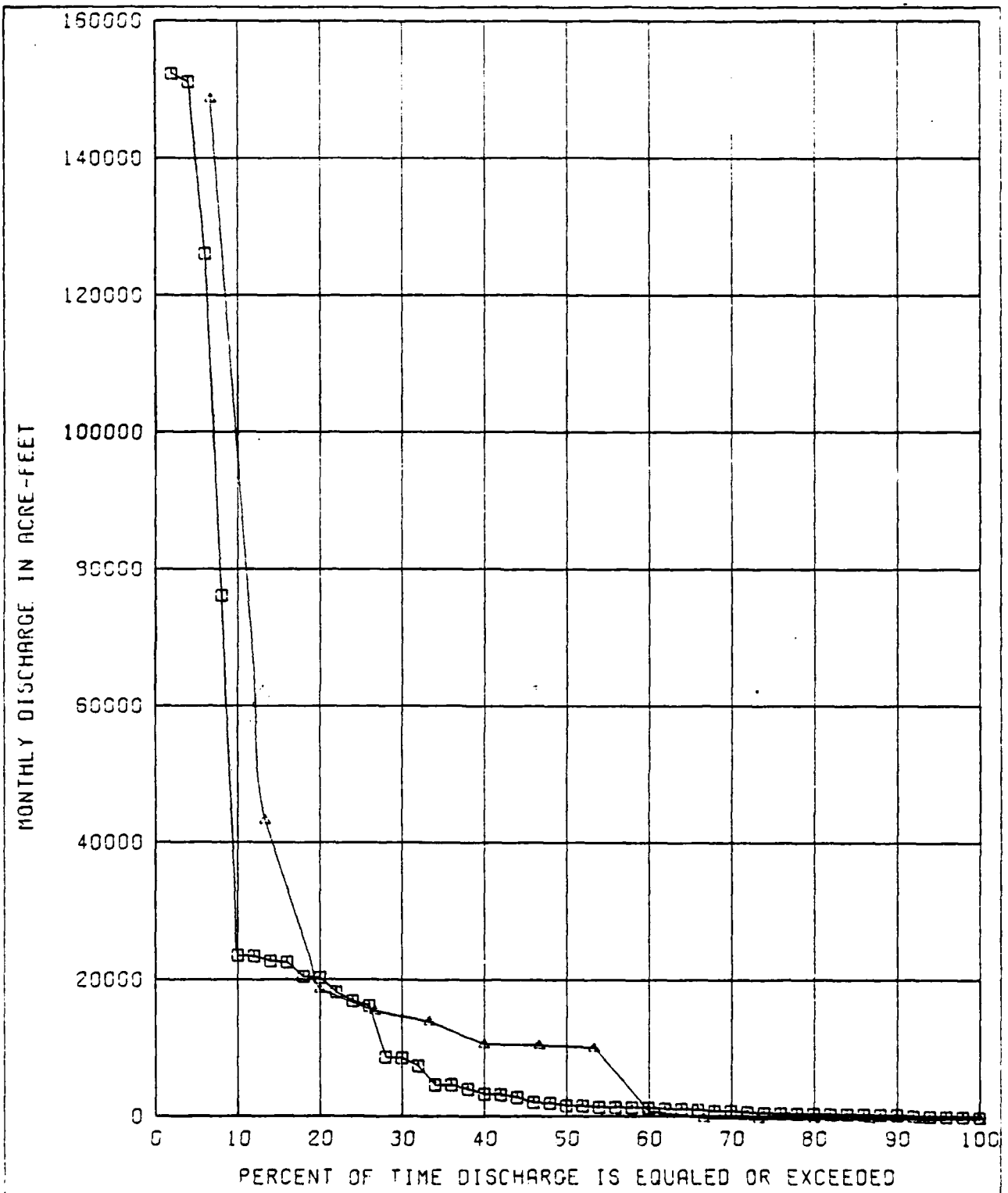
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1907-1955)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

WACO LAKE

FLOW DURATION CURVES AT DAM SITE

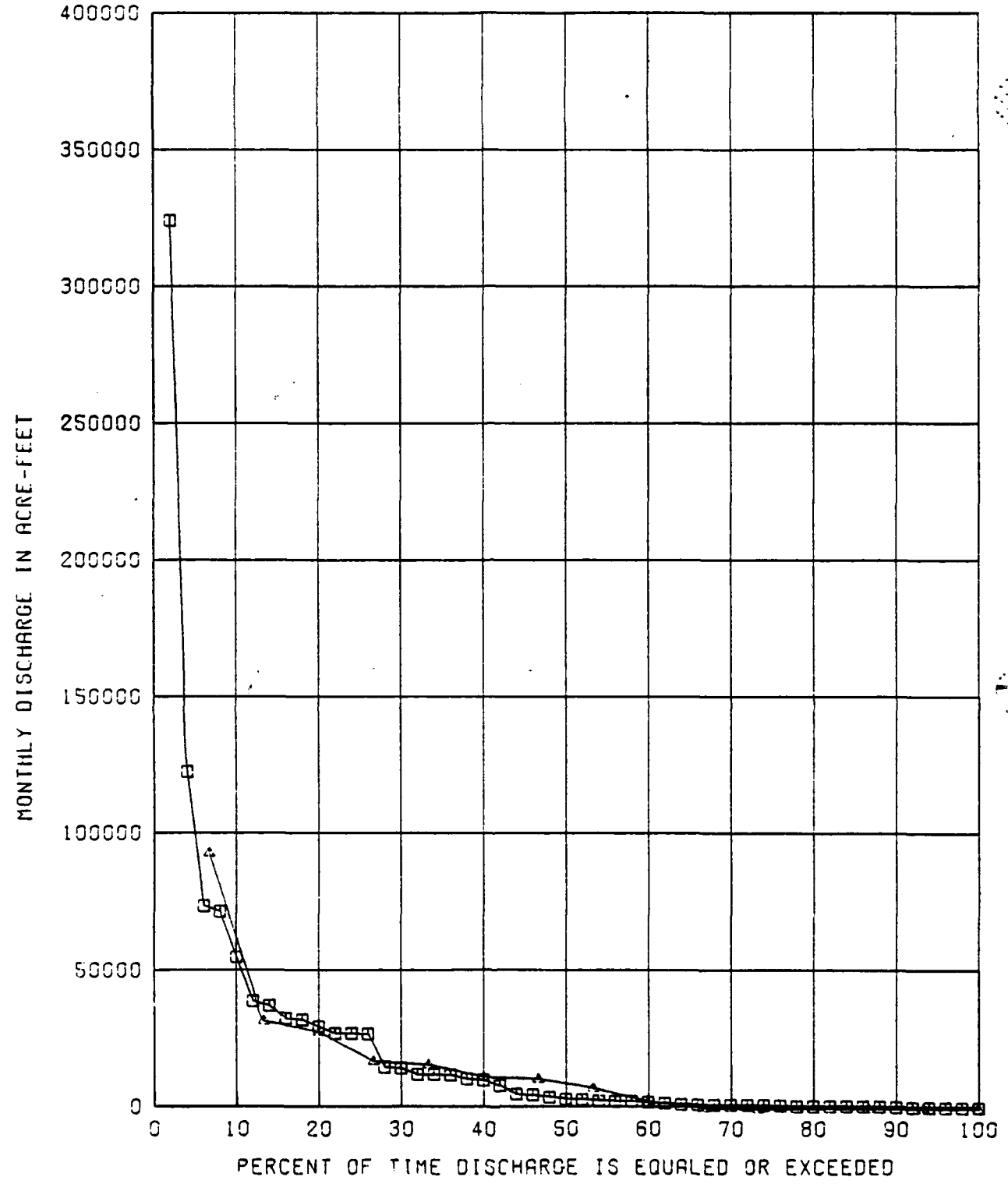
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS O NGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1907-1959)

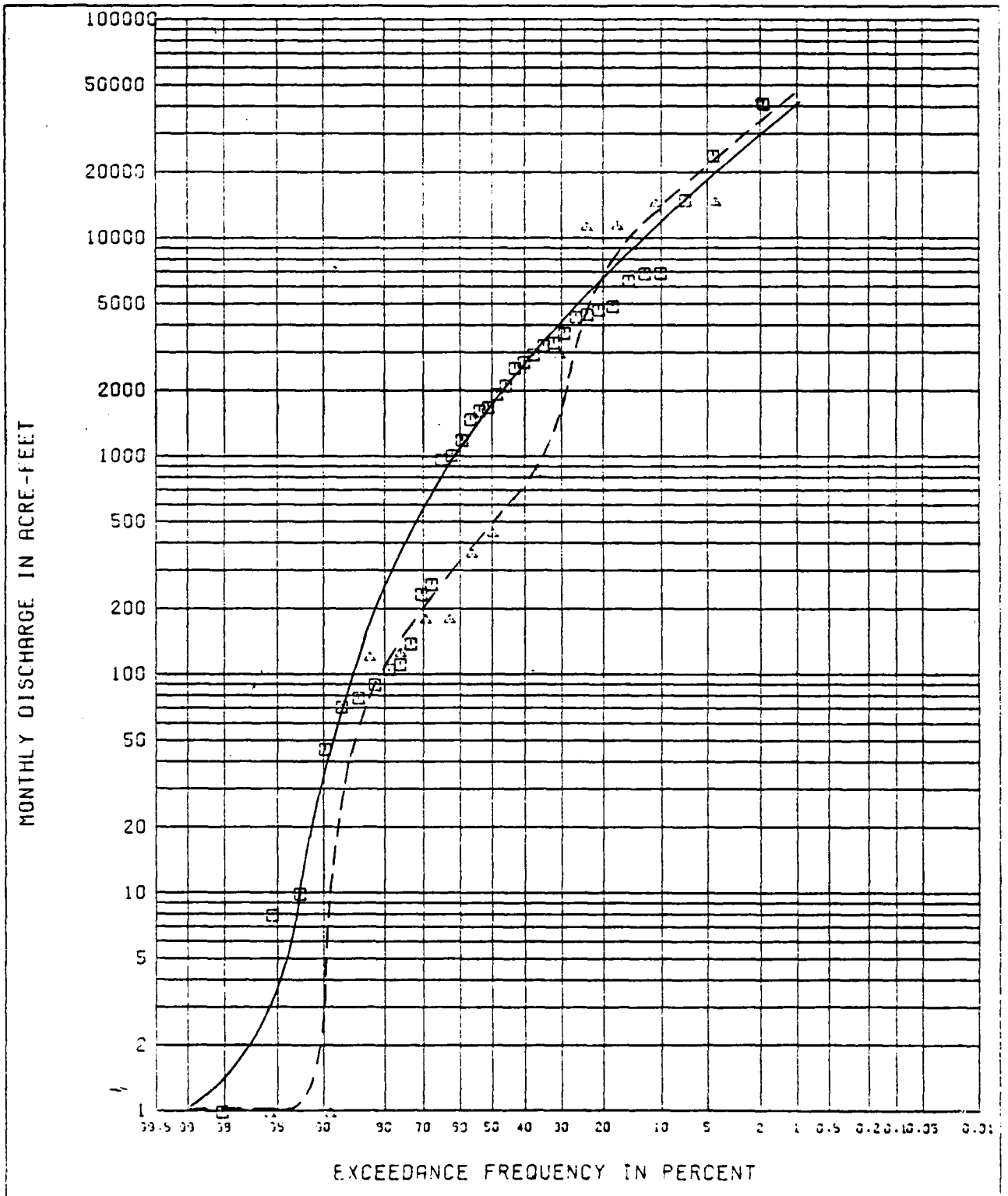
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1969-1979)

BRAZOS RIVER BASIN, TEXAS
WACO LAKE
FLOW DURATION CURVES AT DAM SITE
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

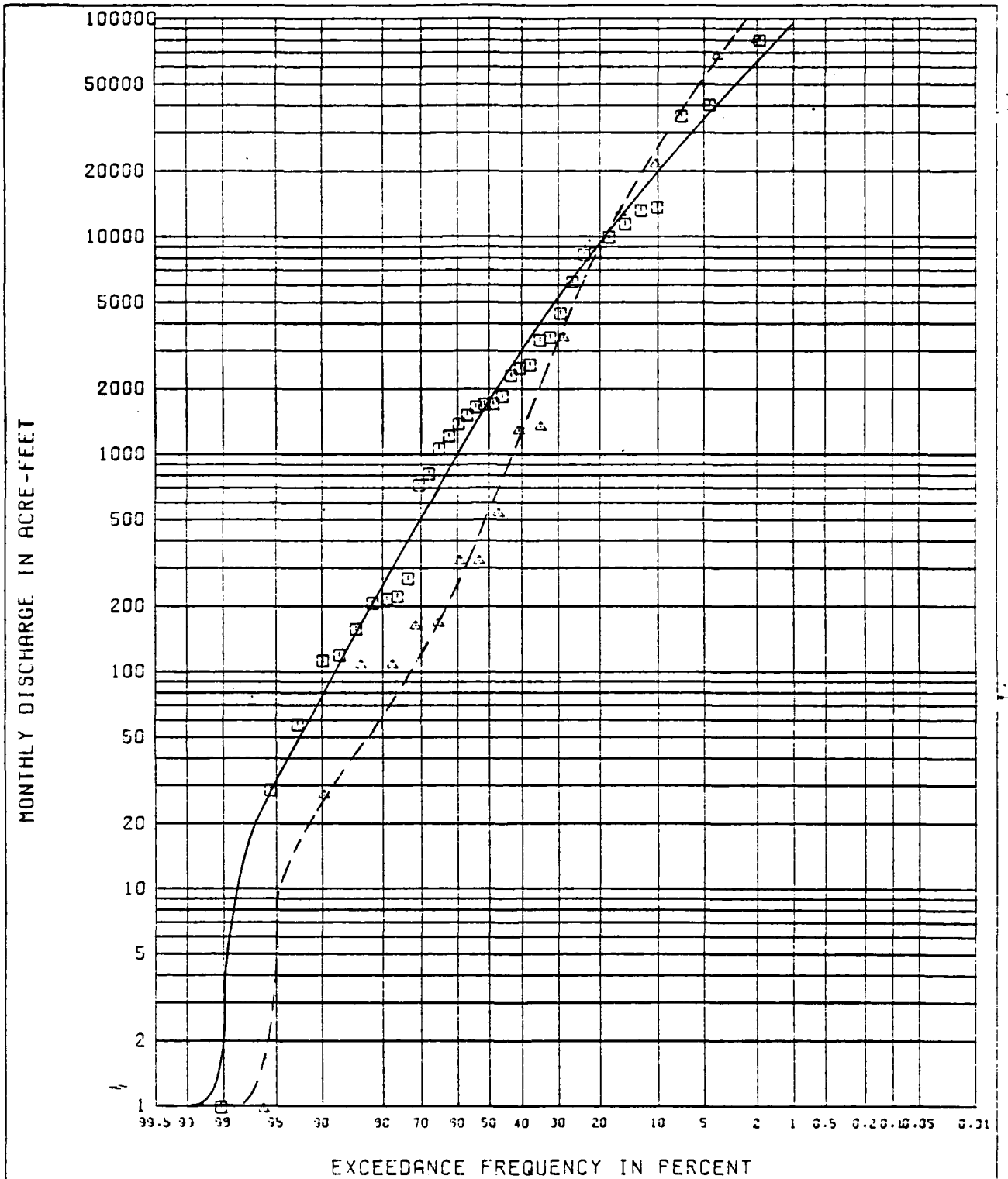
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1978)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

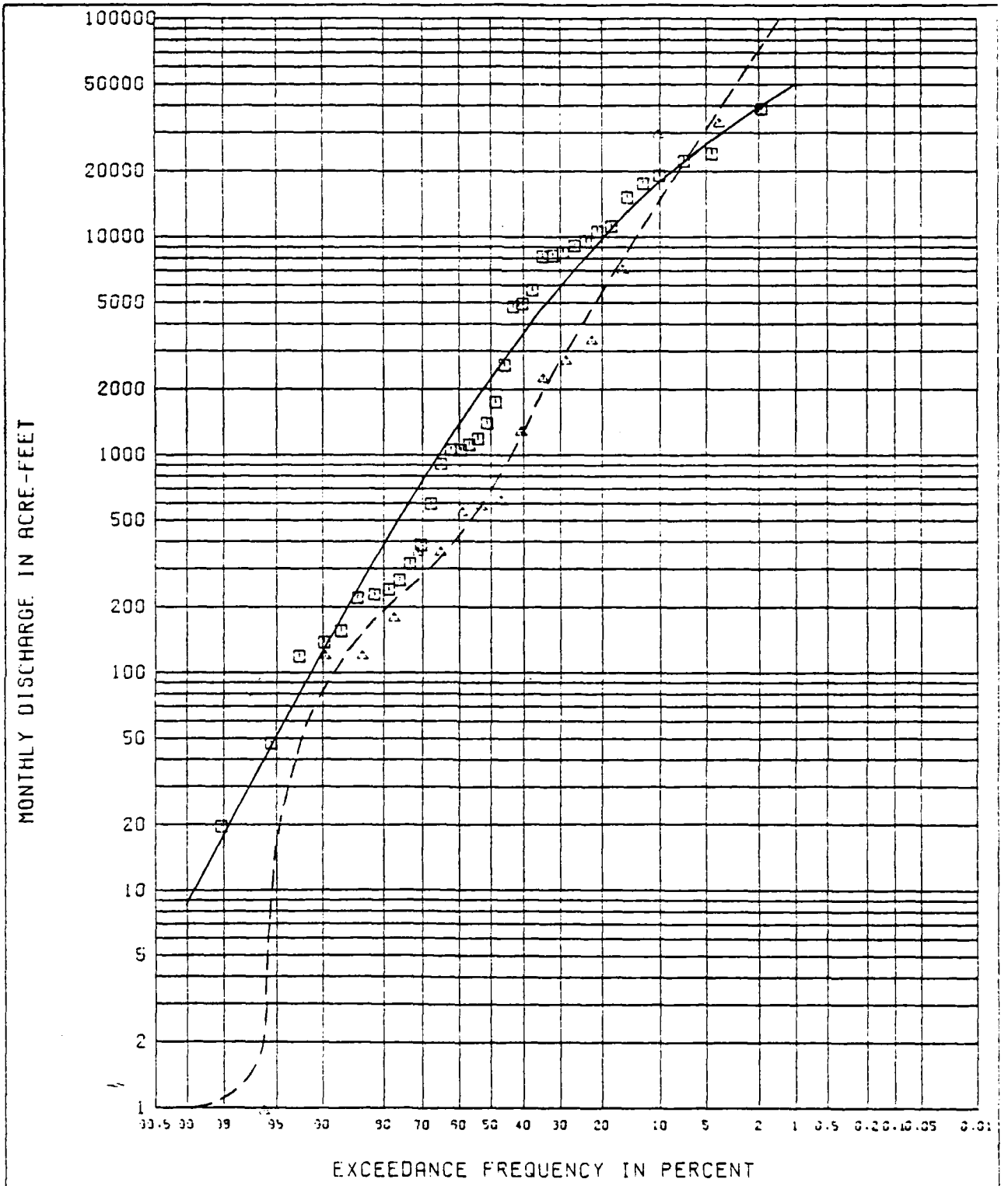
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1978)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

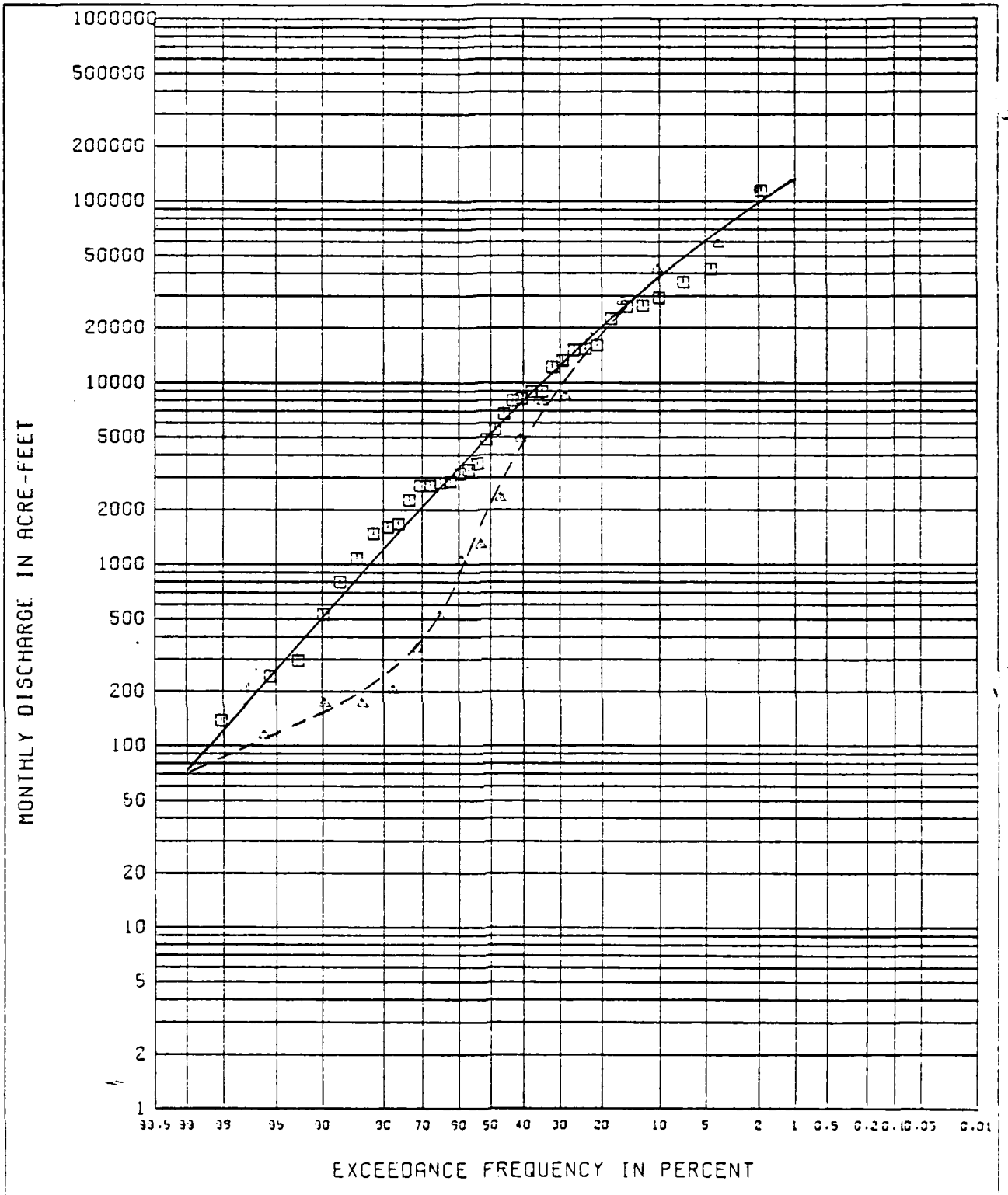
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

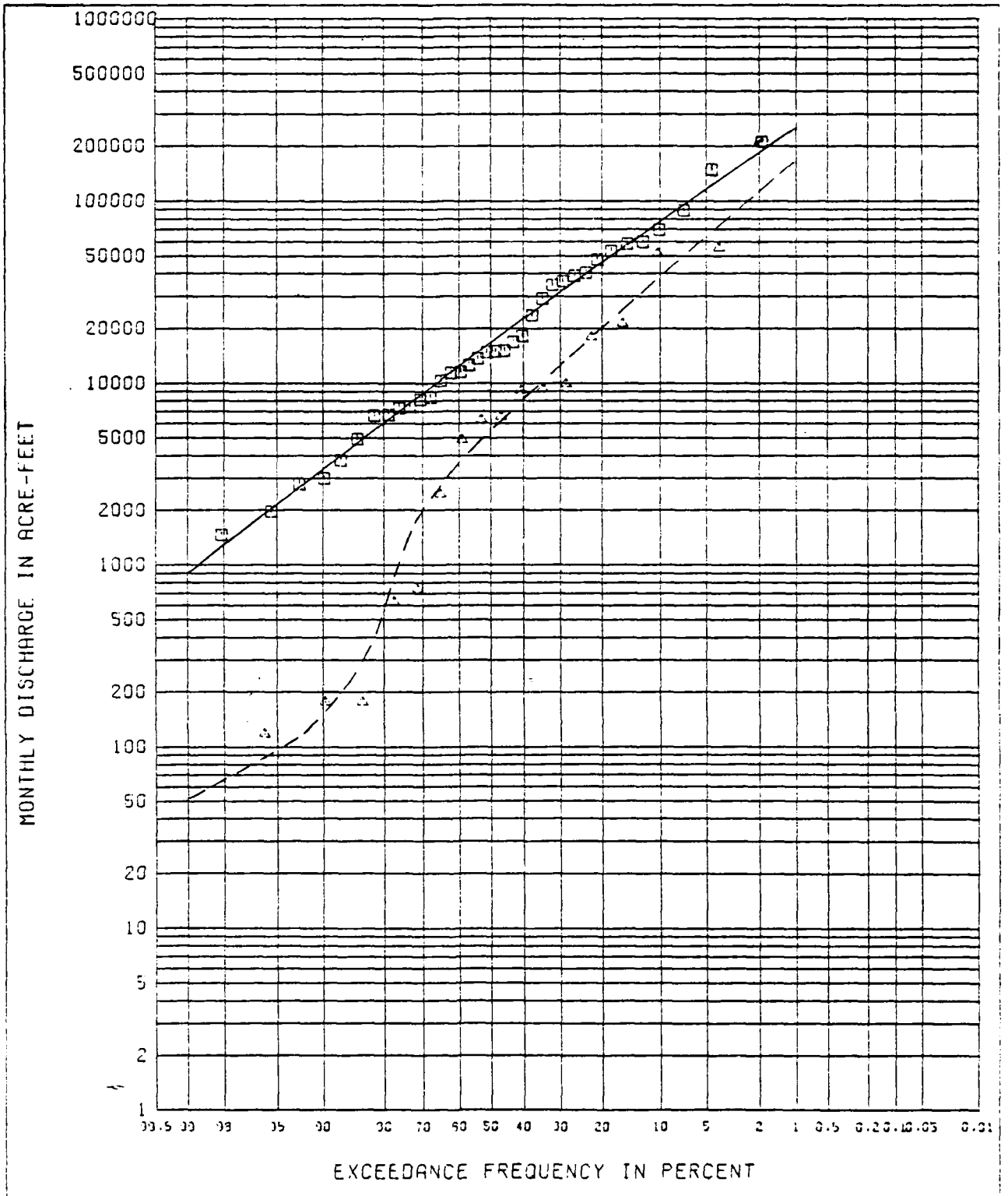
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

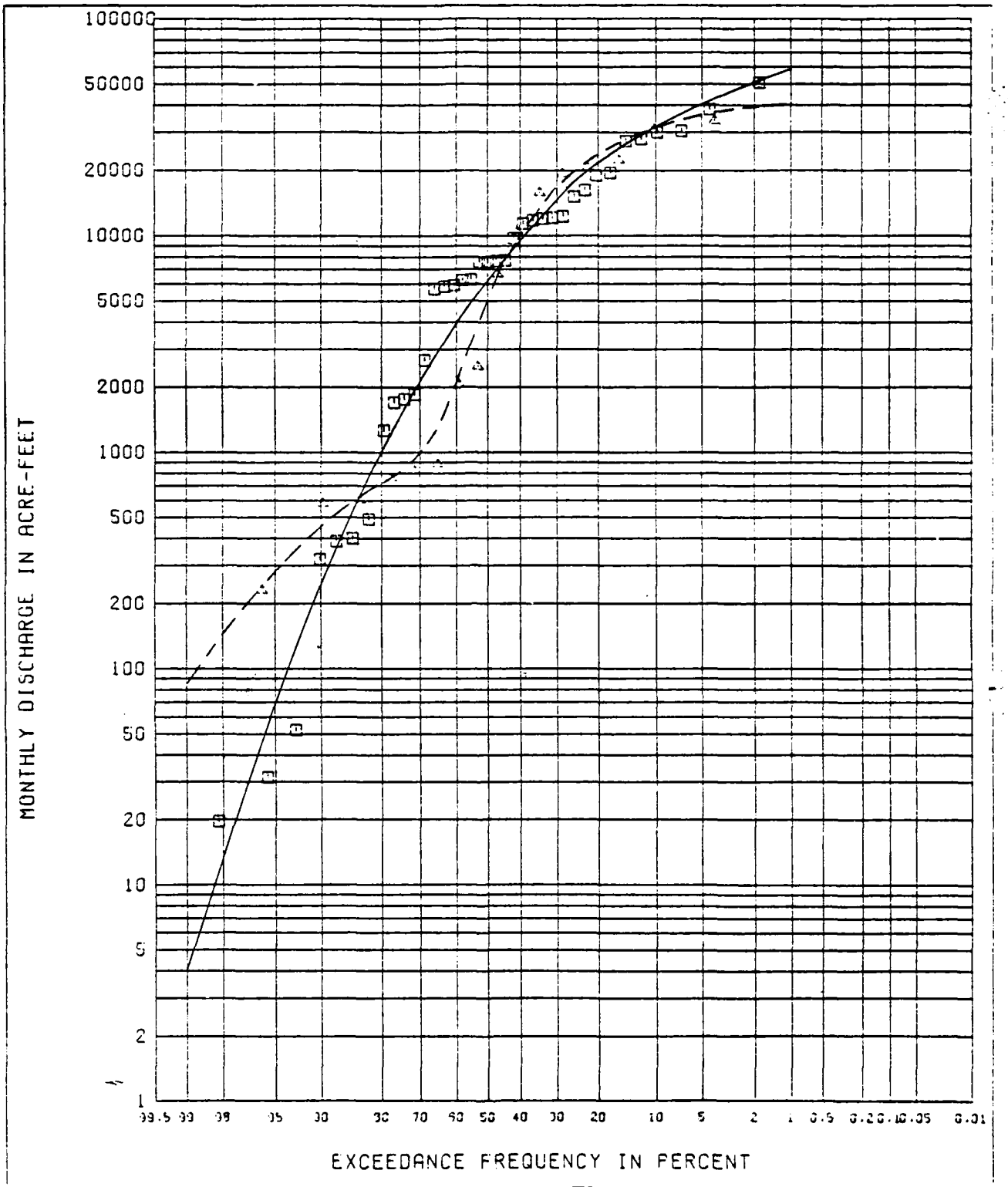
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1958)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

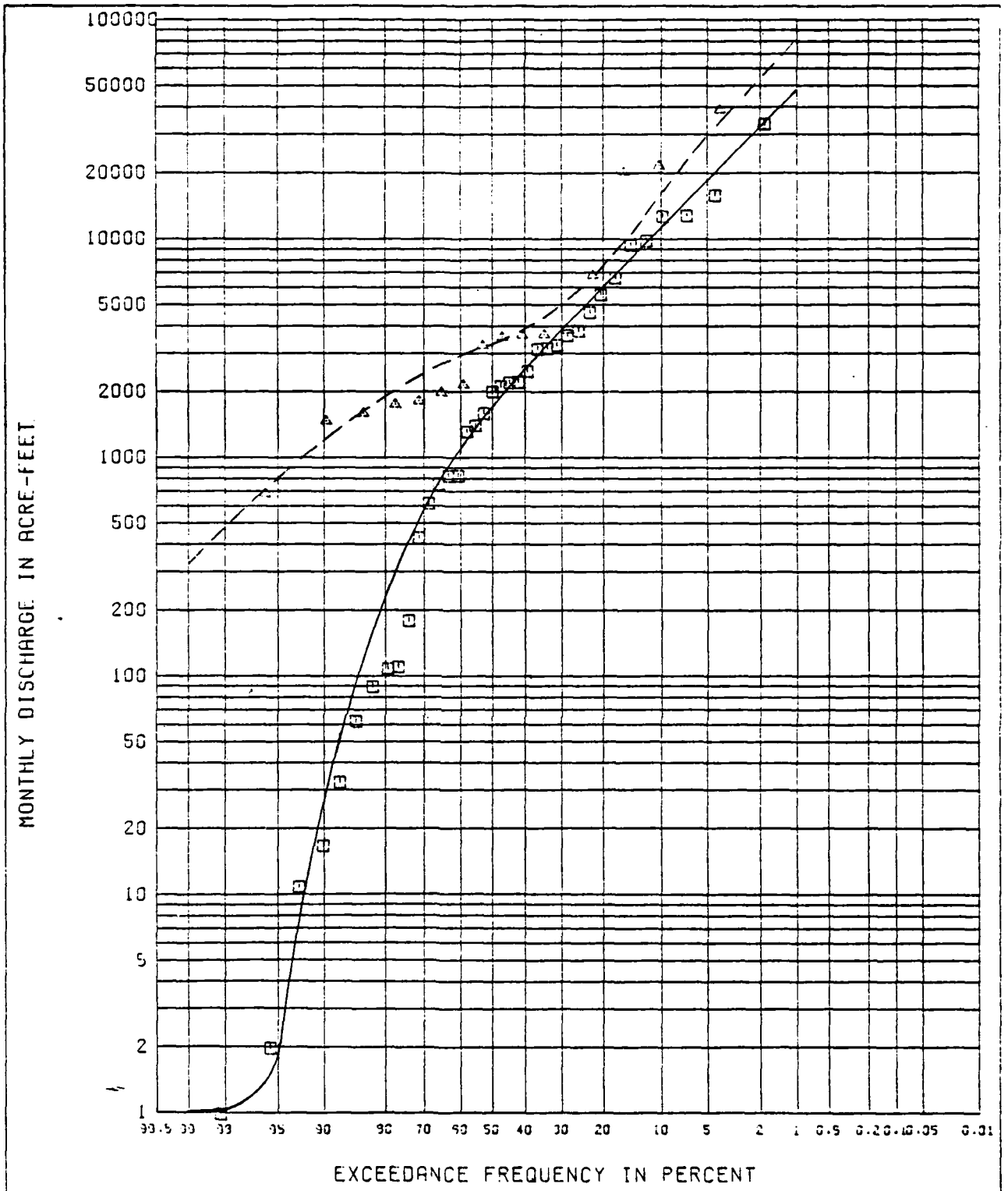
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

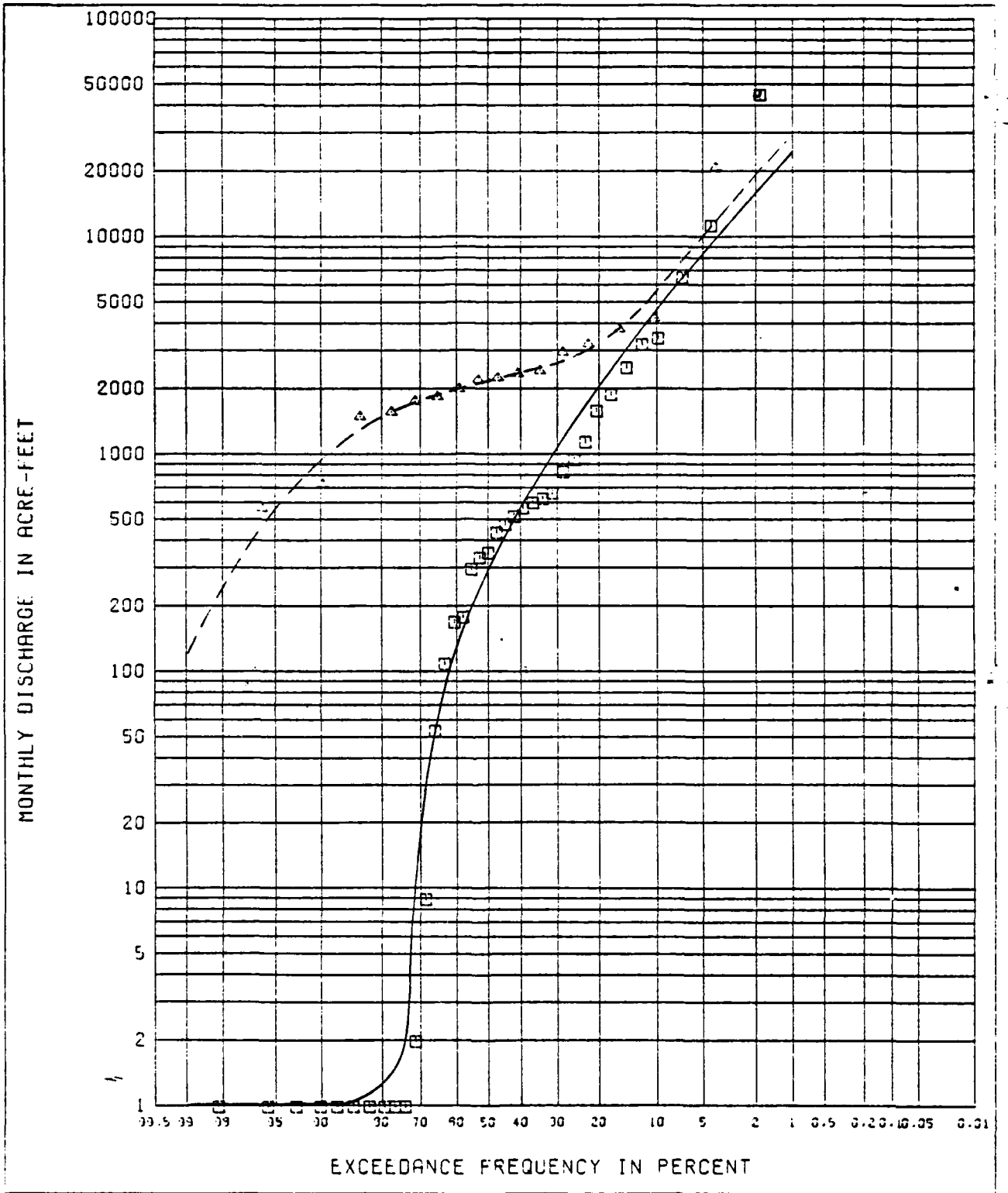
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1978)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

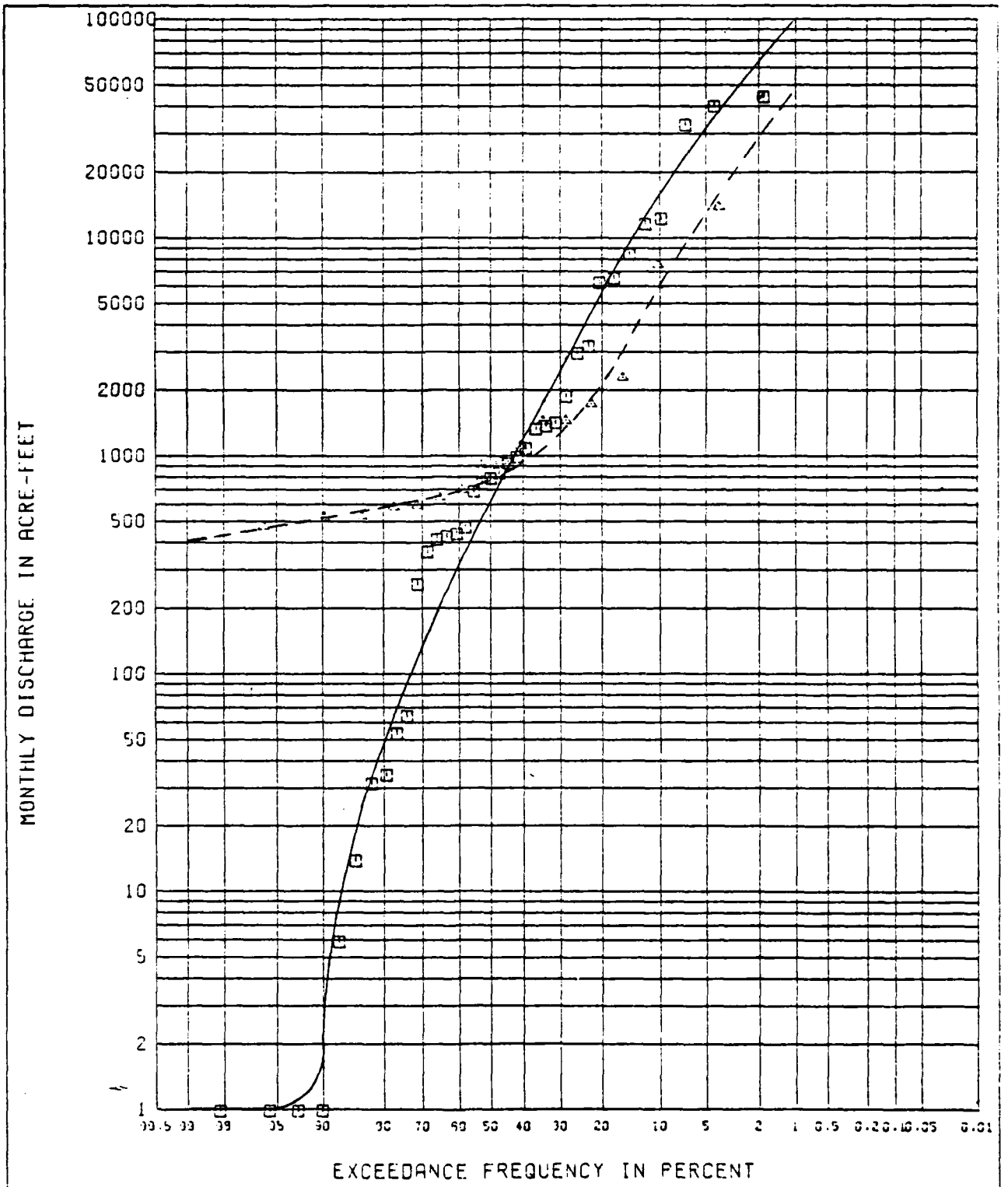
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1958)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1978)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

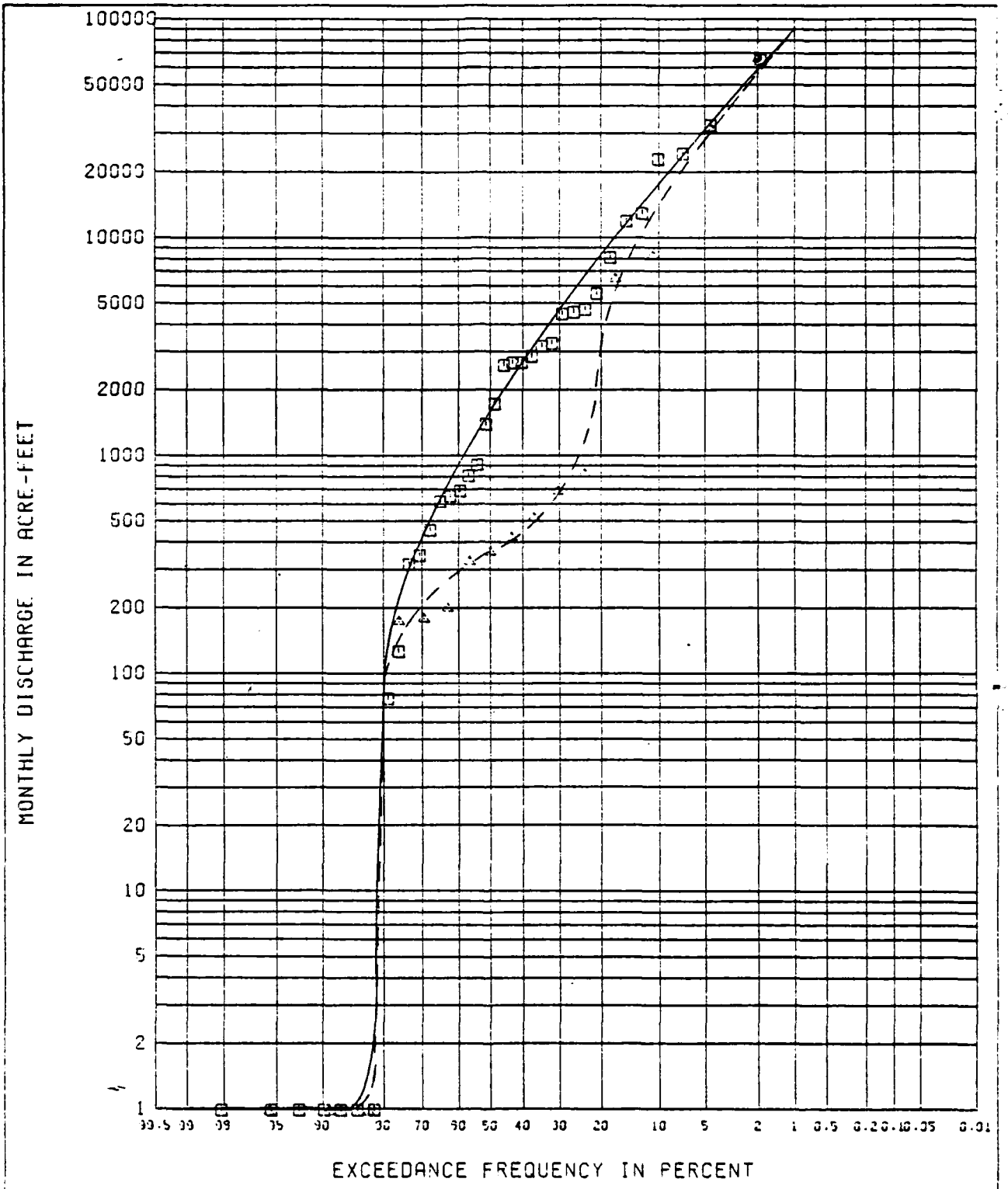
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1978)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

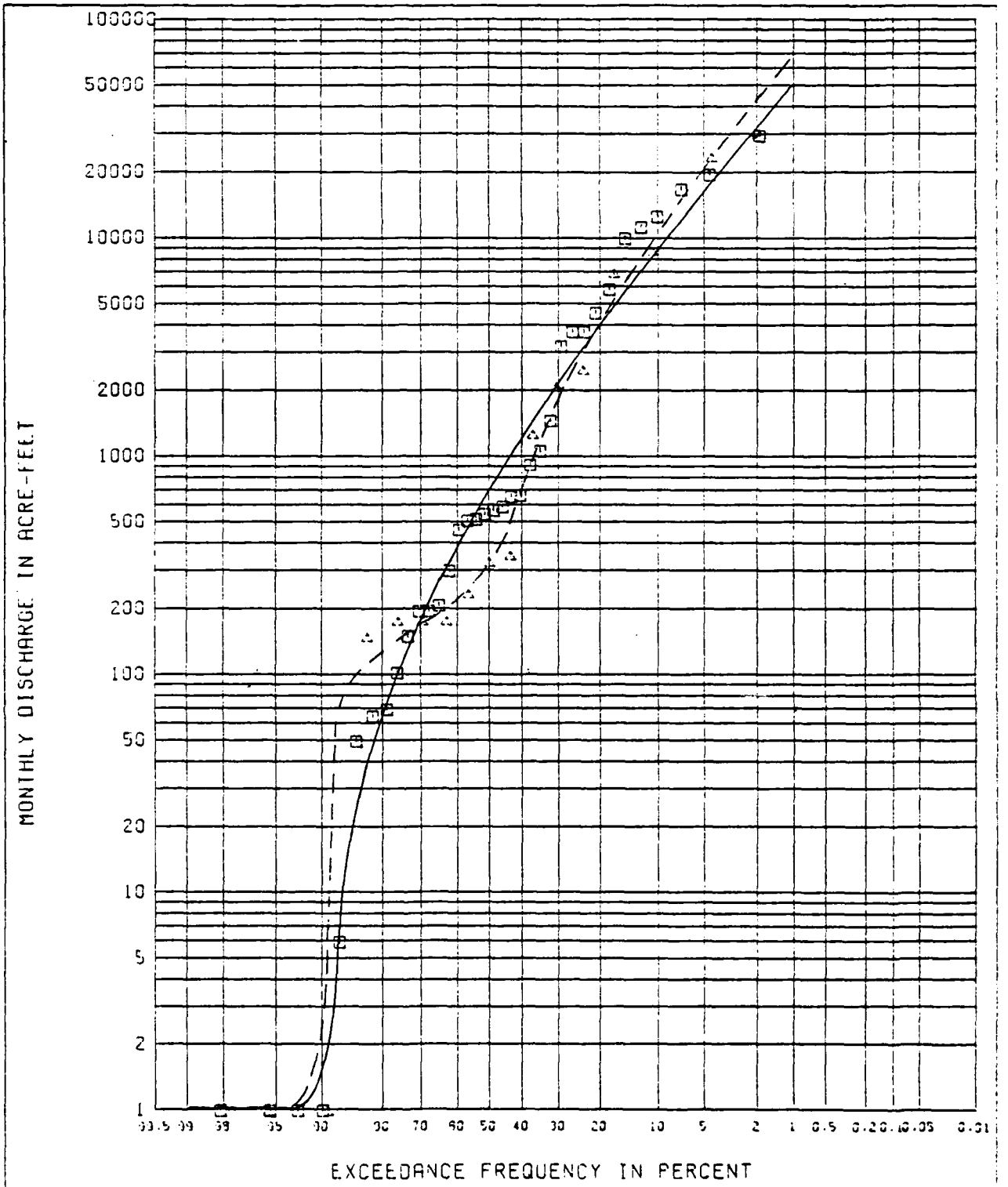
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

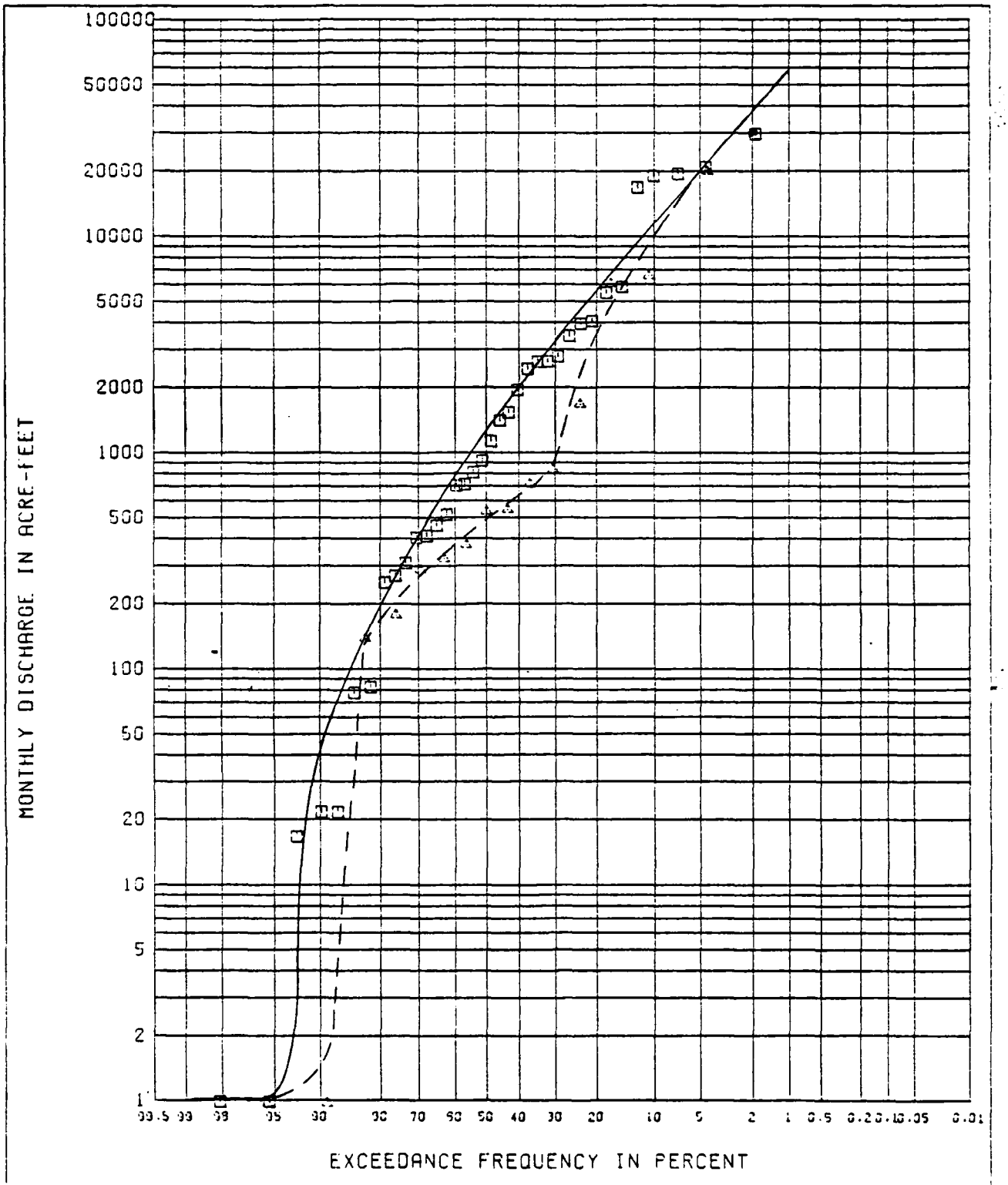
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE II

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

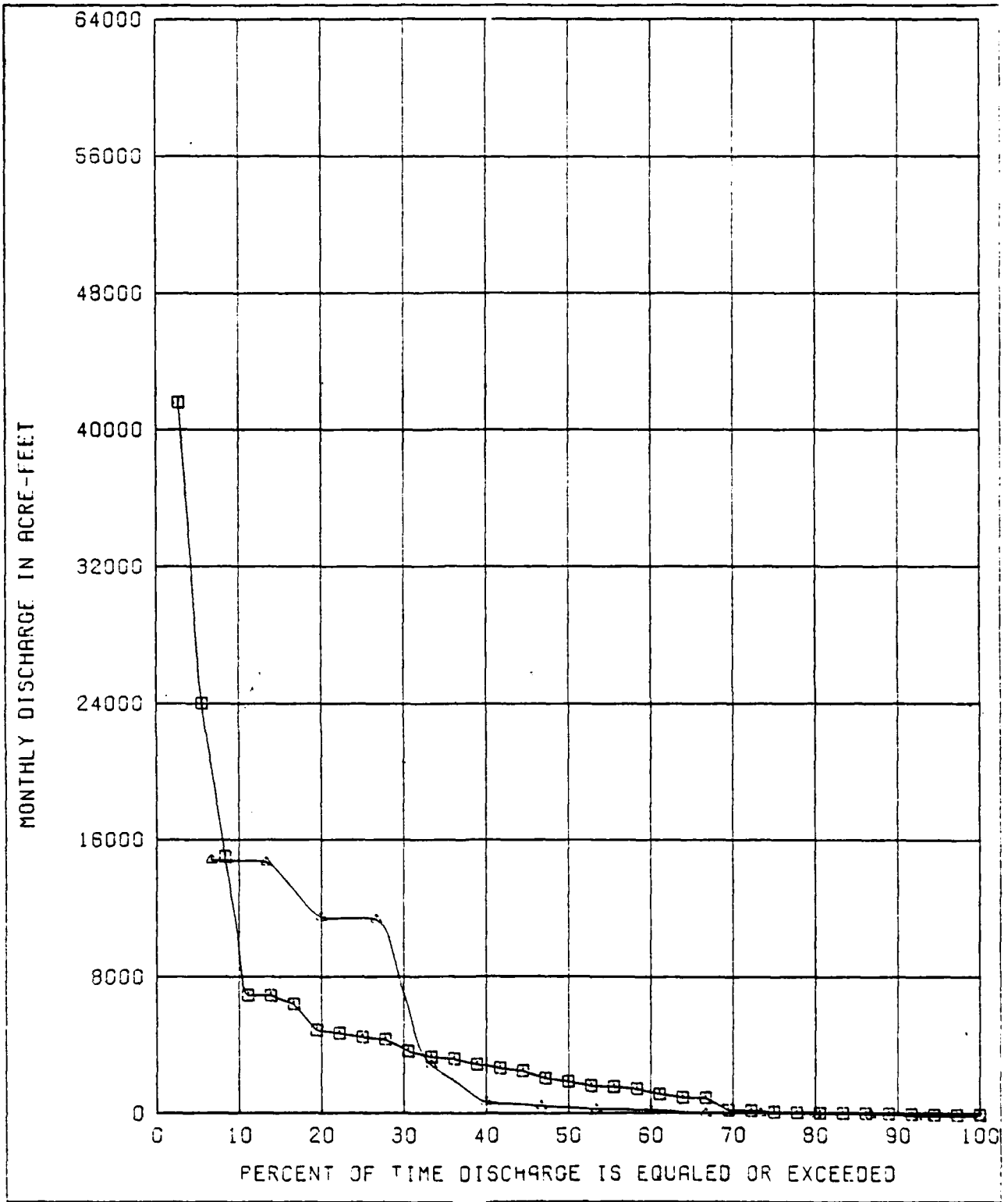
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1958)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1978)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

FLOW DURATION CURVES AT DAM SITE

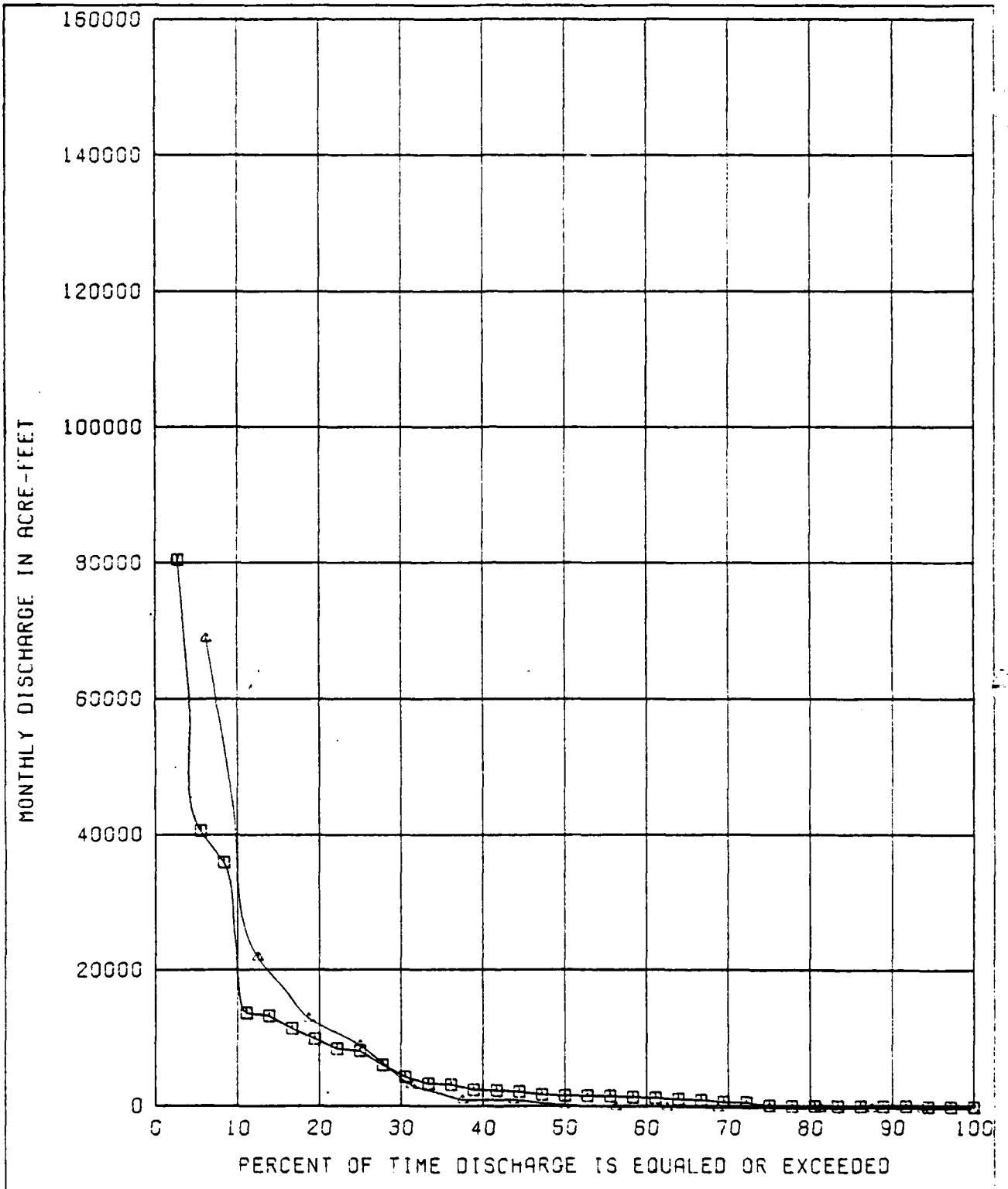
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

FLOW DURATION CURVES AT DAM SITE

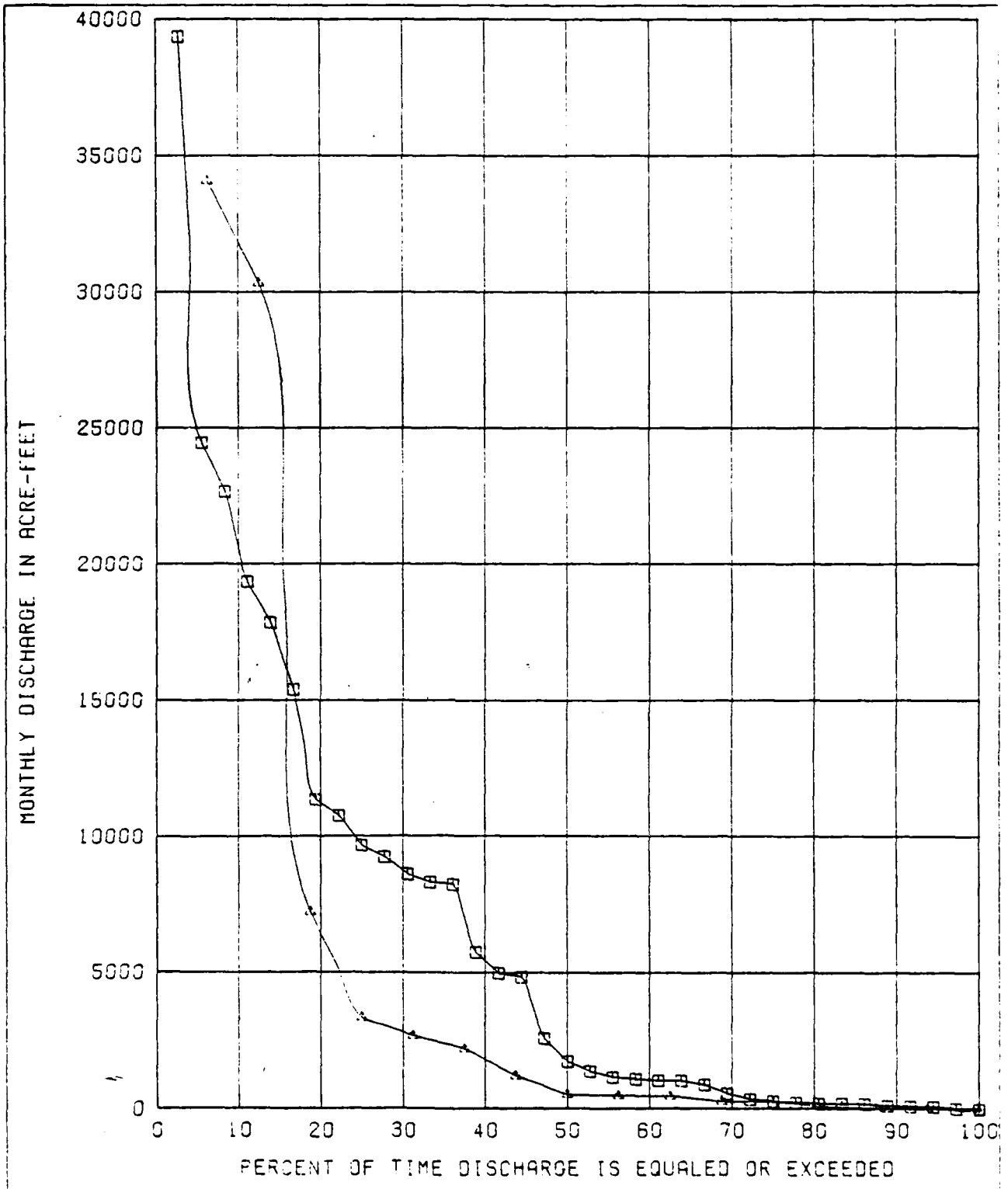
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1958)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

FLOW DURATION CURVES AT DAM SITE

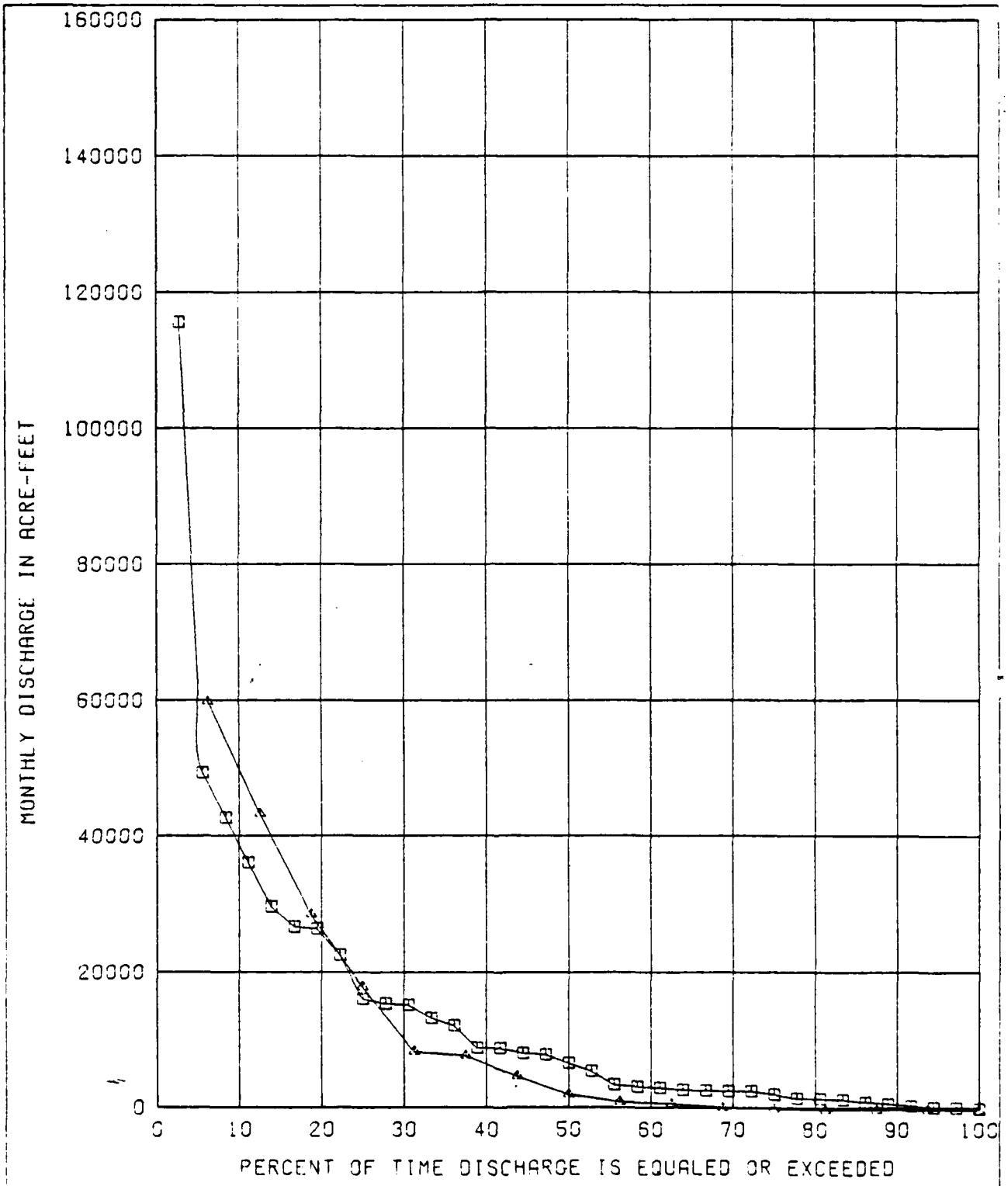
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1958)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

FLOW DURATION CURVES AT DAM SITE

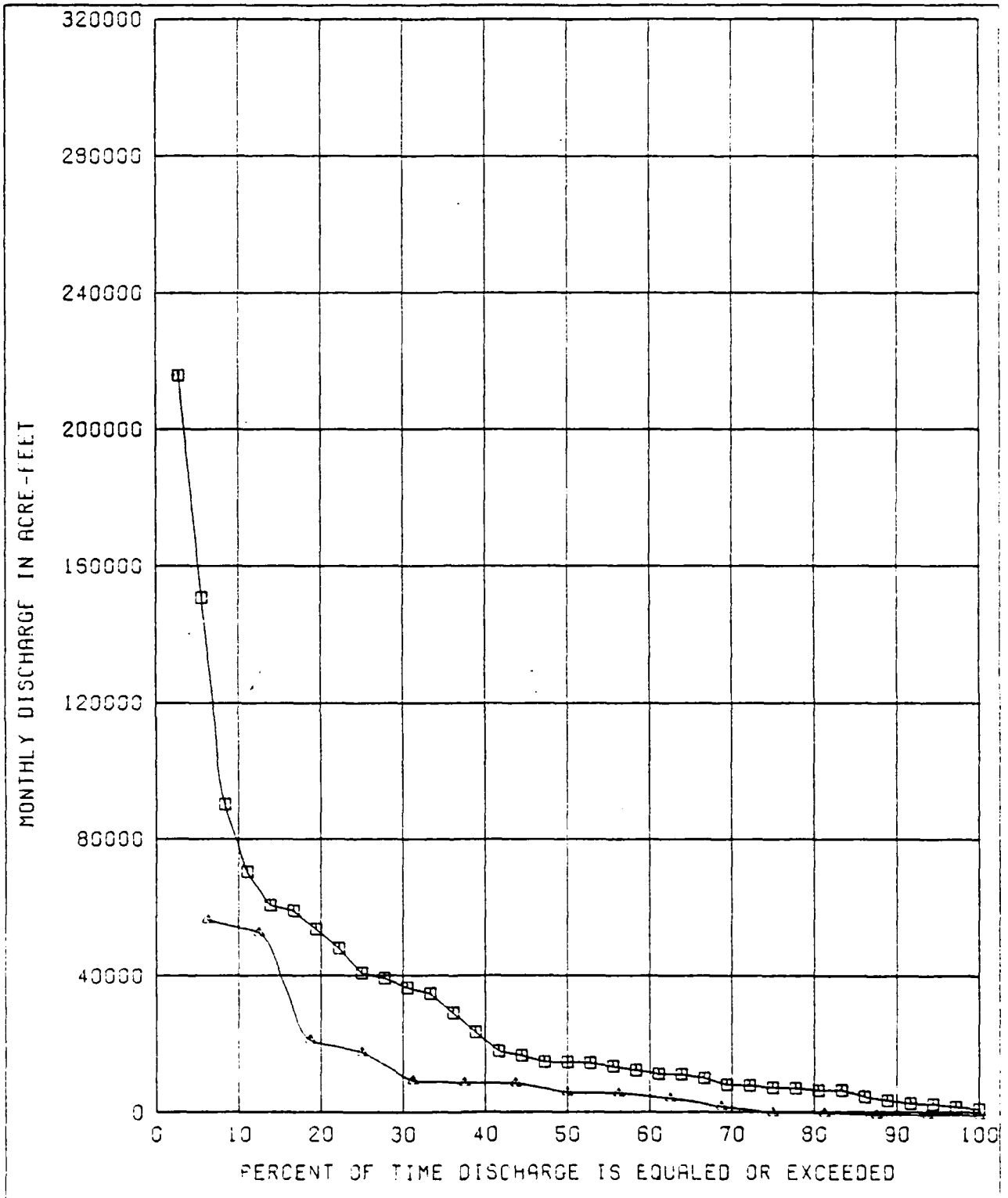
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

FLOW DURATION CURVES AT DAM SITE

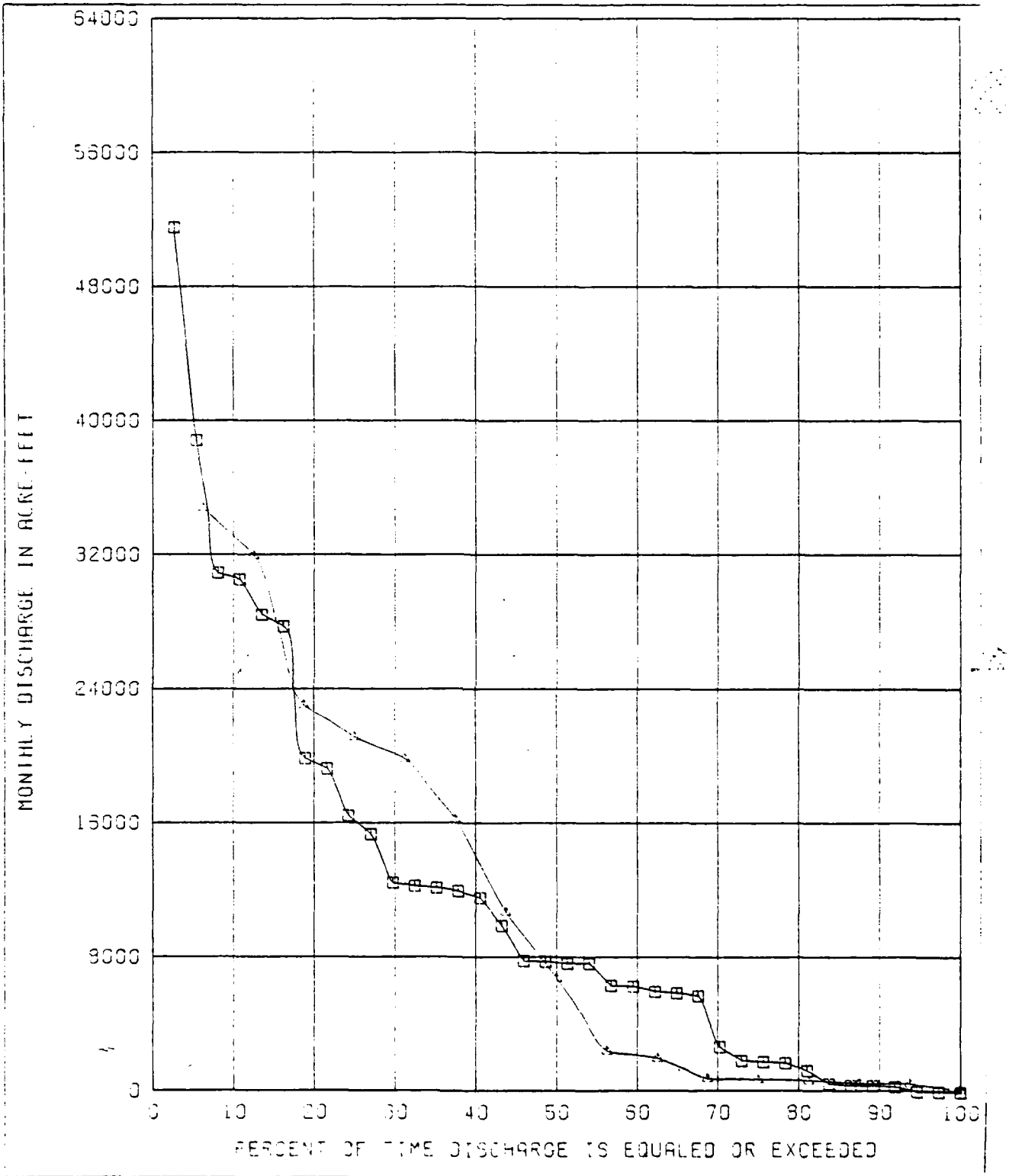
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

FLOW DURATION CURVES AT DAM SITE

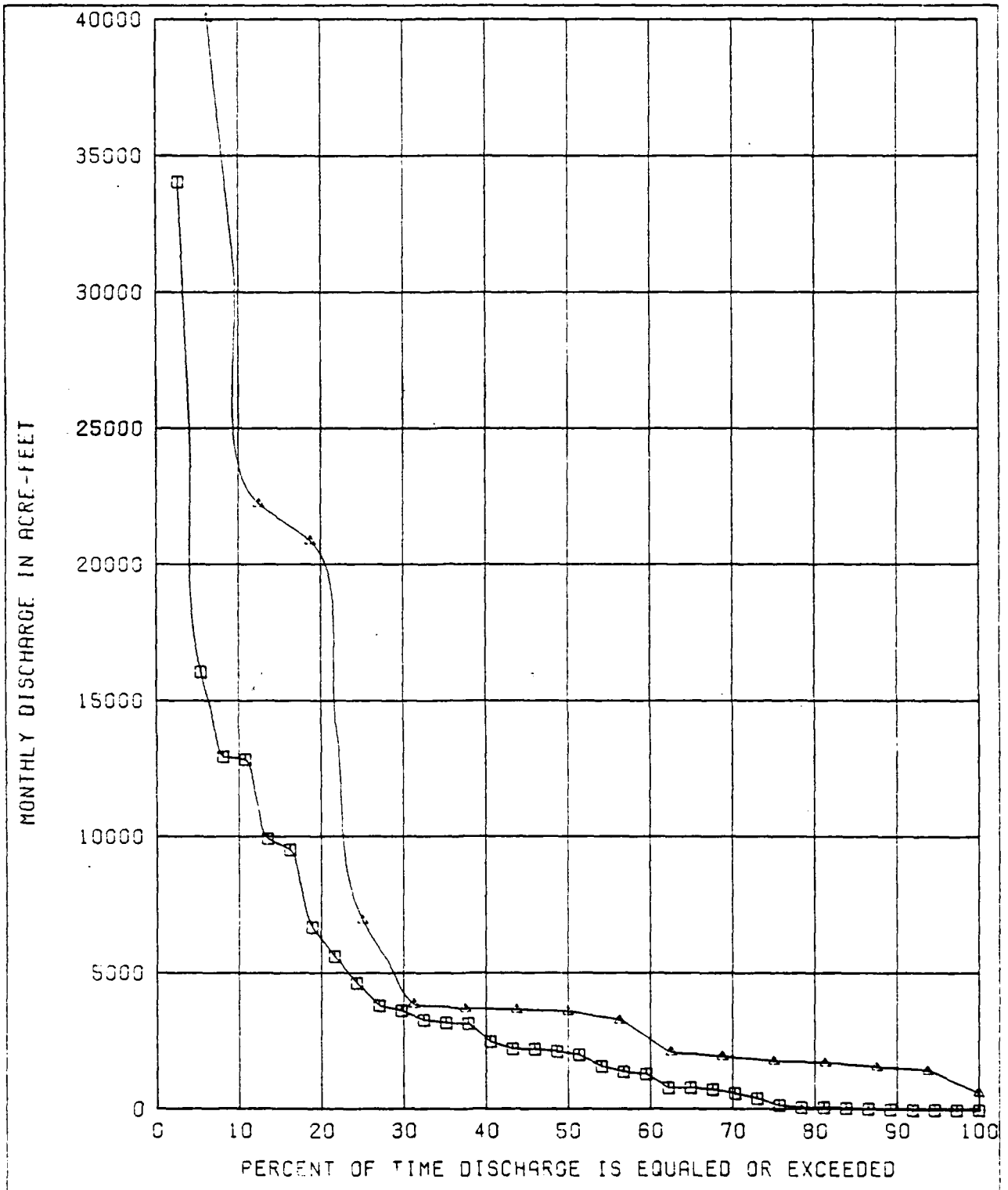
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1960-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

FLOW DURATION CURVES AT DAM SITE

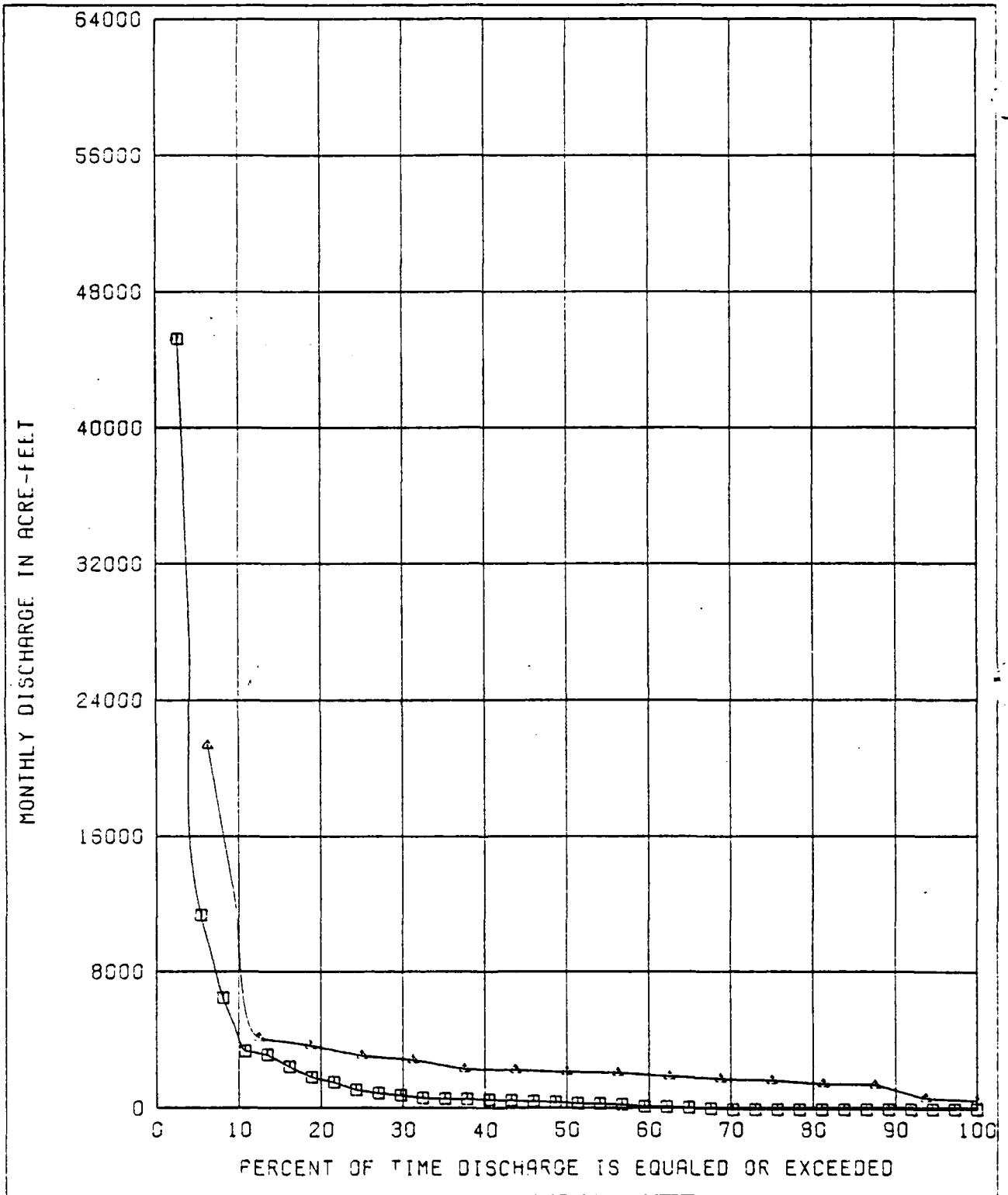
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1958)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1960-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

FLOW DURATION CURVES AT DAM SITE

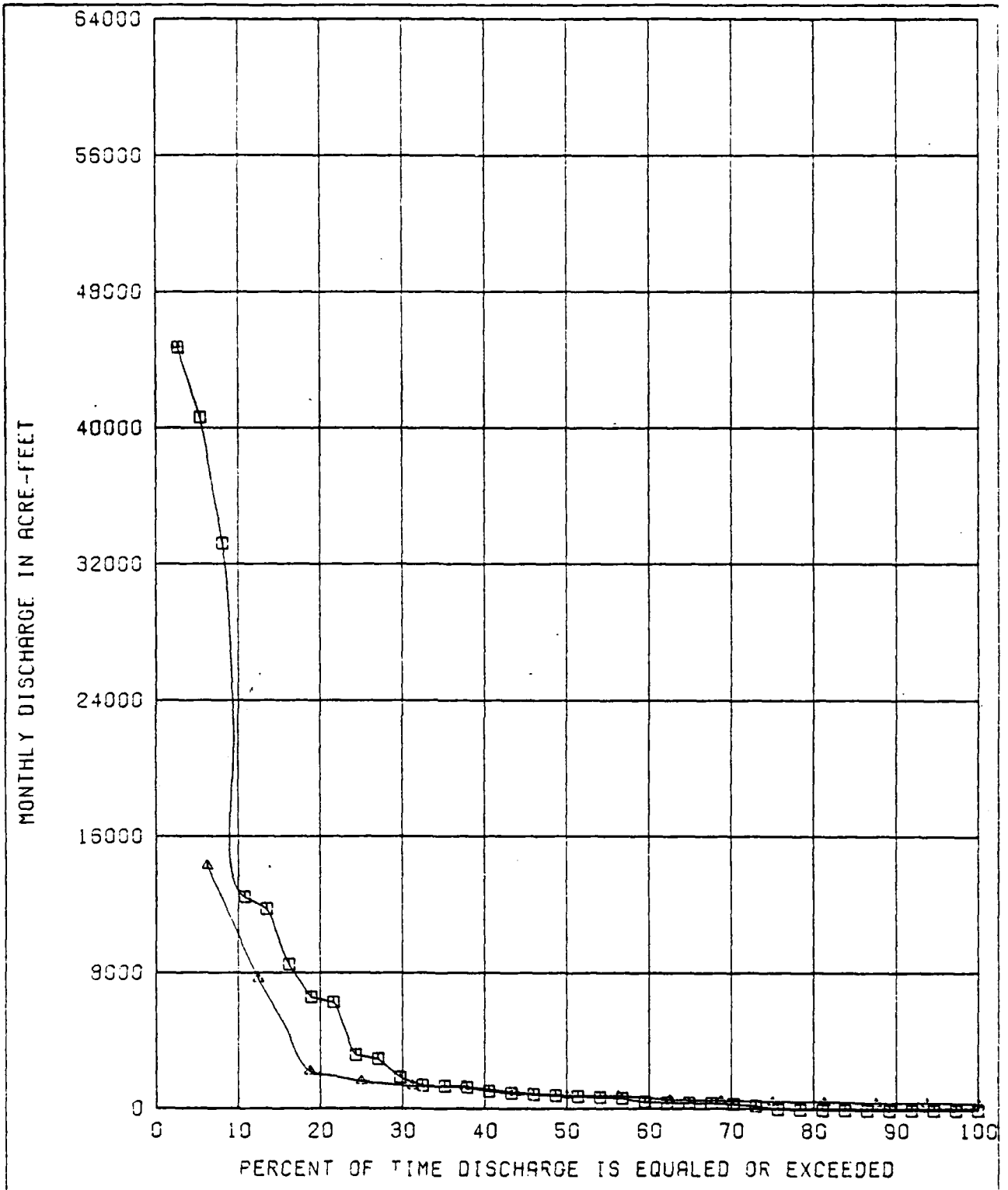
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1956)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

FLOW DURATION CURVES AT DAM SITE

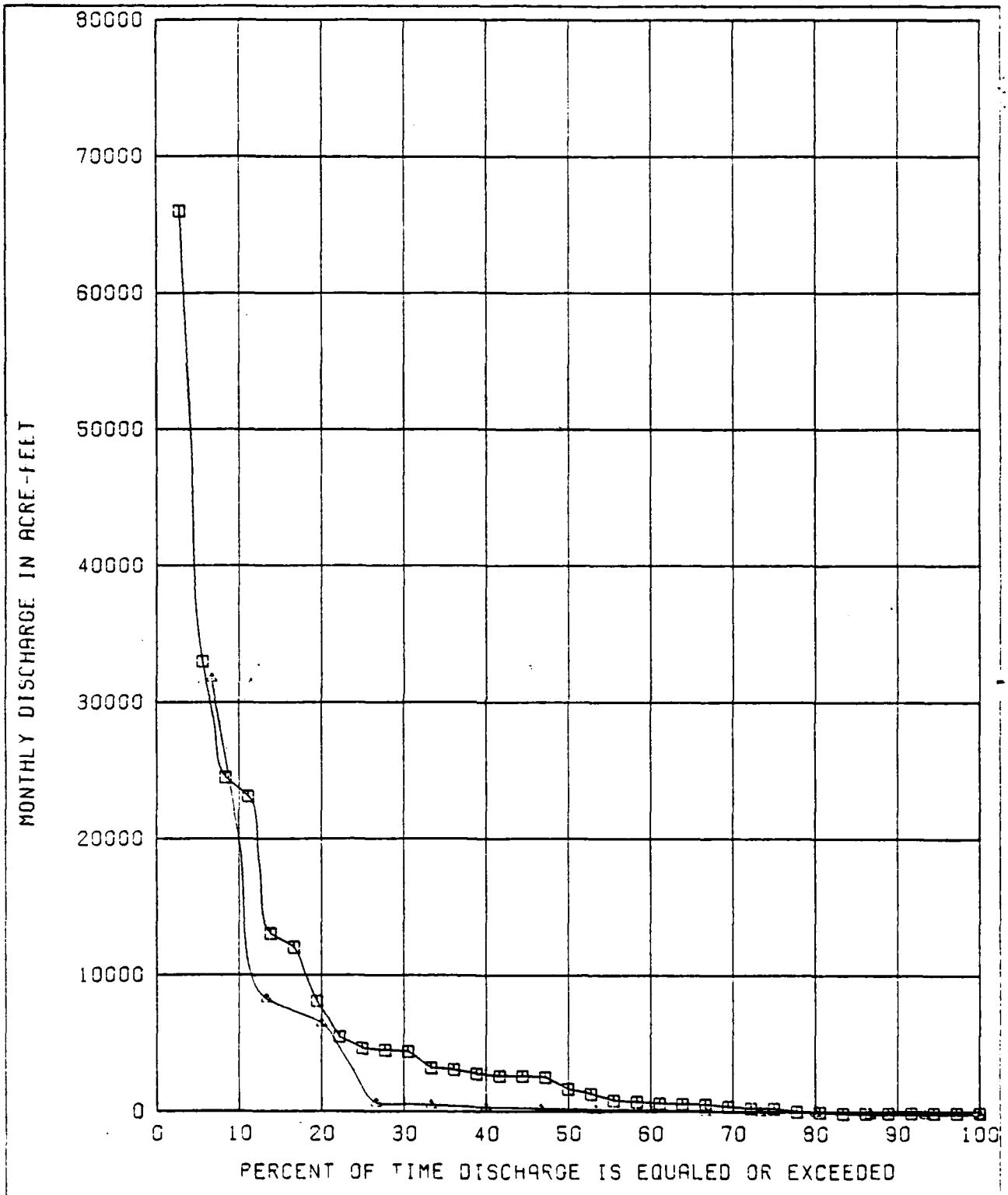
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1958)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

FLOW DURATION CURVES AT DAM SITE

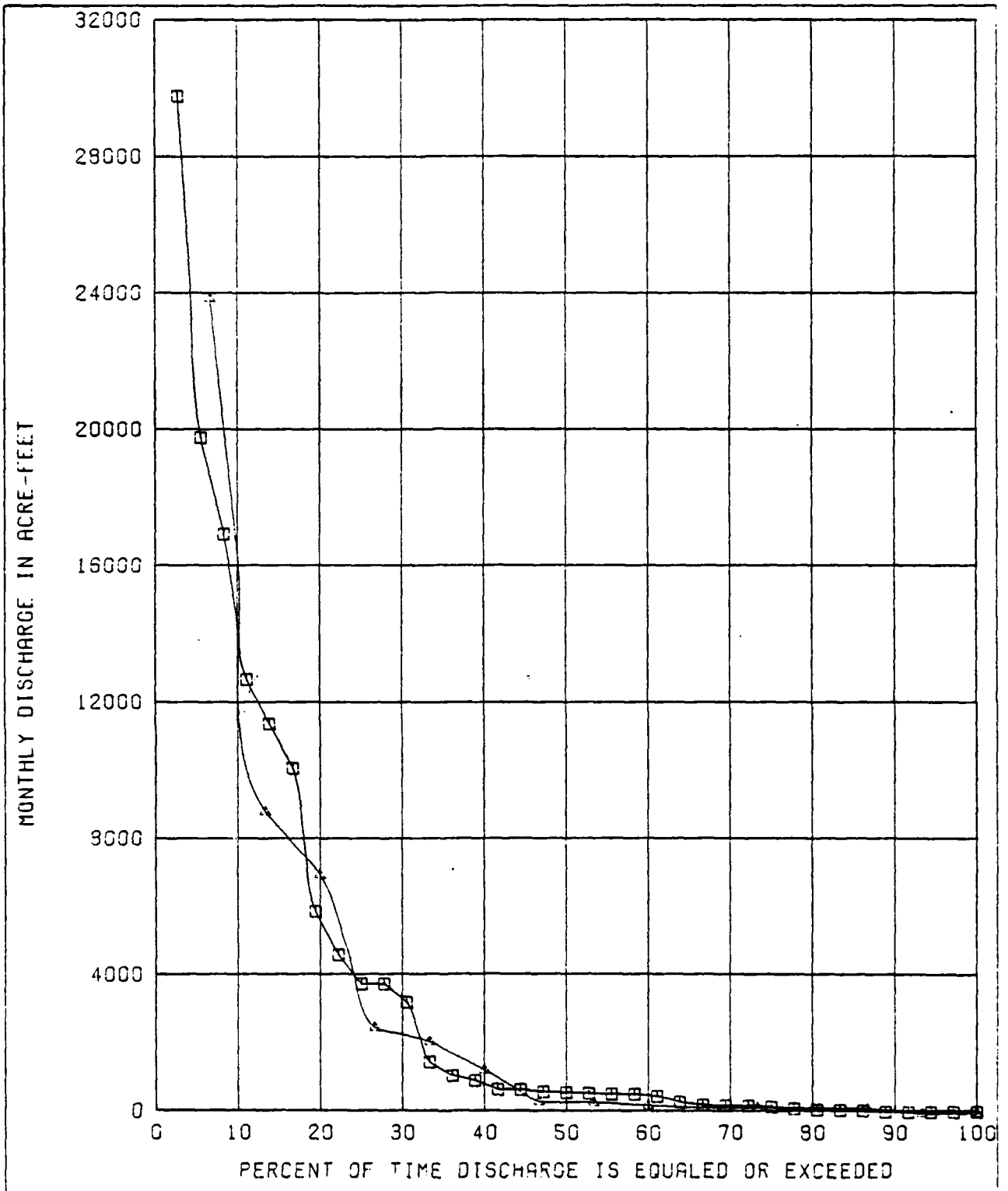
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1958)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1978)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

FLOW DURATION CURVES AT DAM SITE

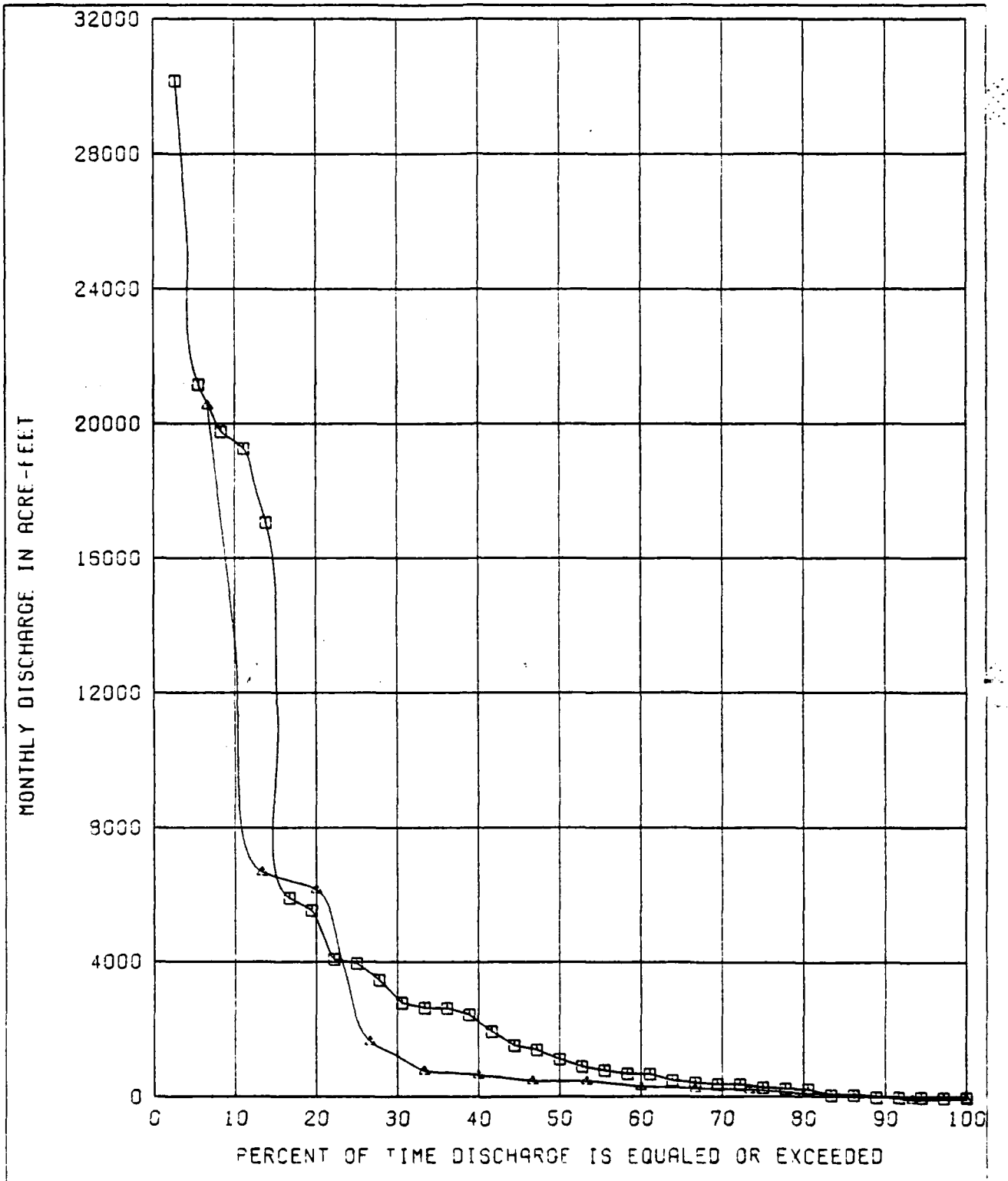
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1922-1969)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1969-1979)

BRAZOS RIVER BASIN, TEXAS

PROCTOR LAKE

FLOW DURATION CURVES AT DAM SITE

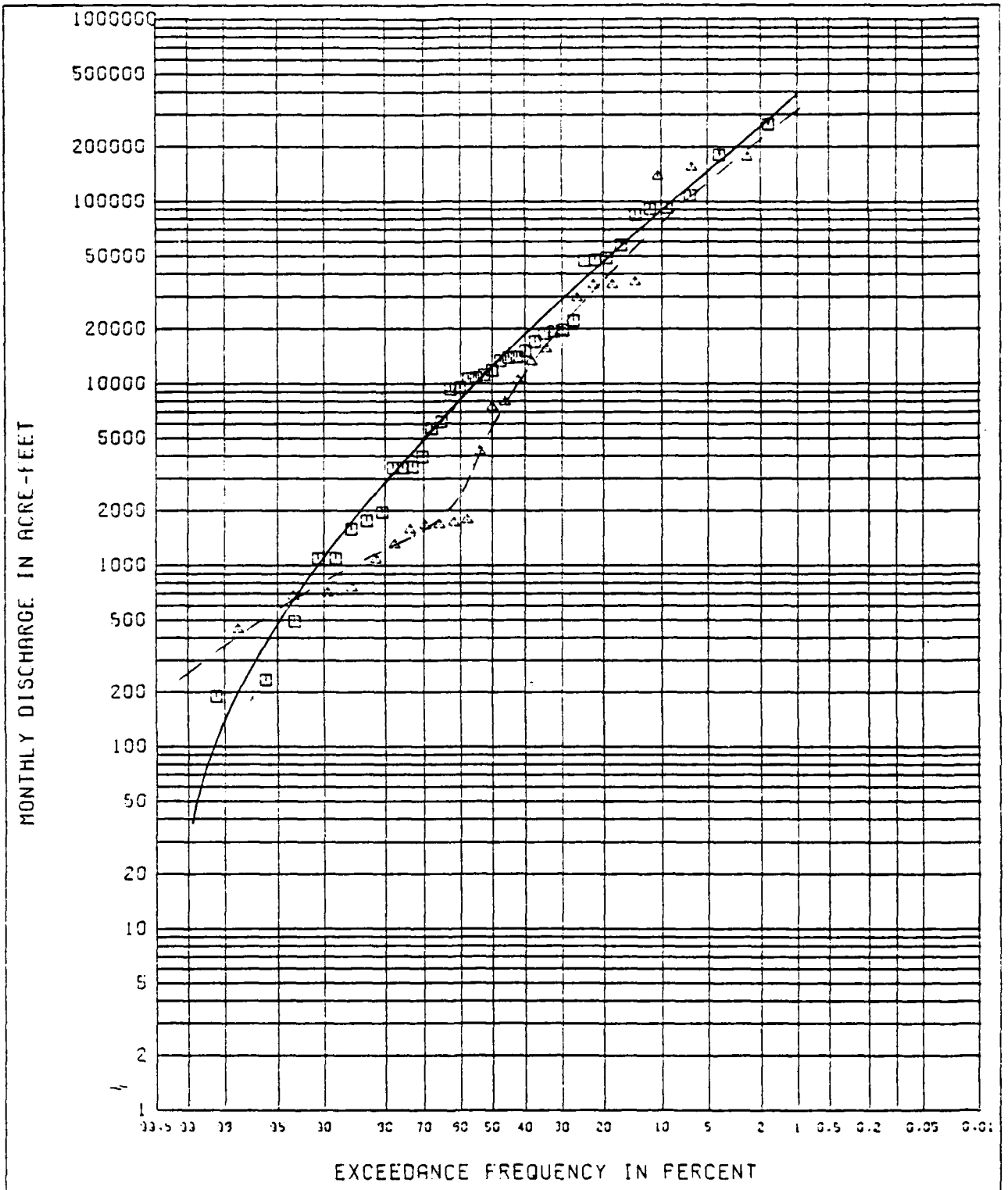
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

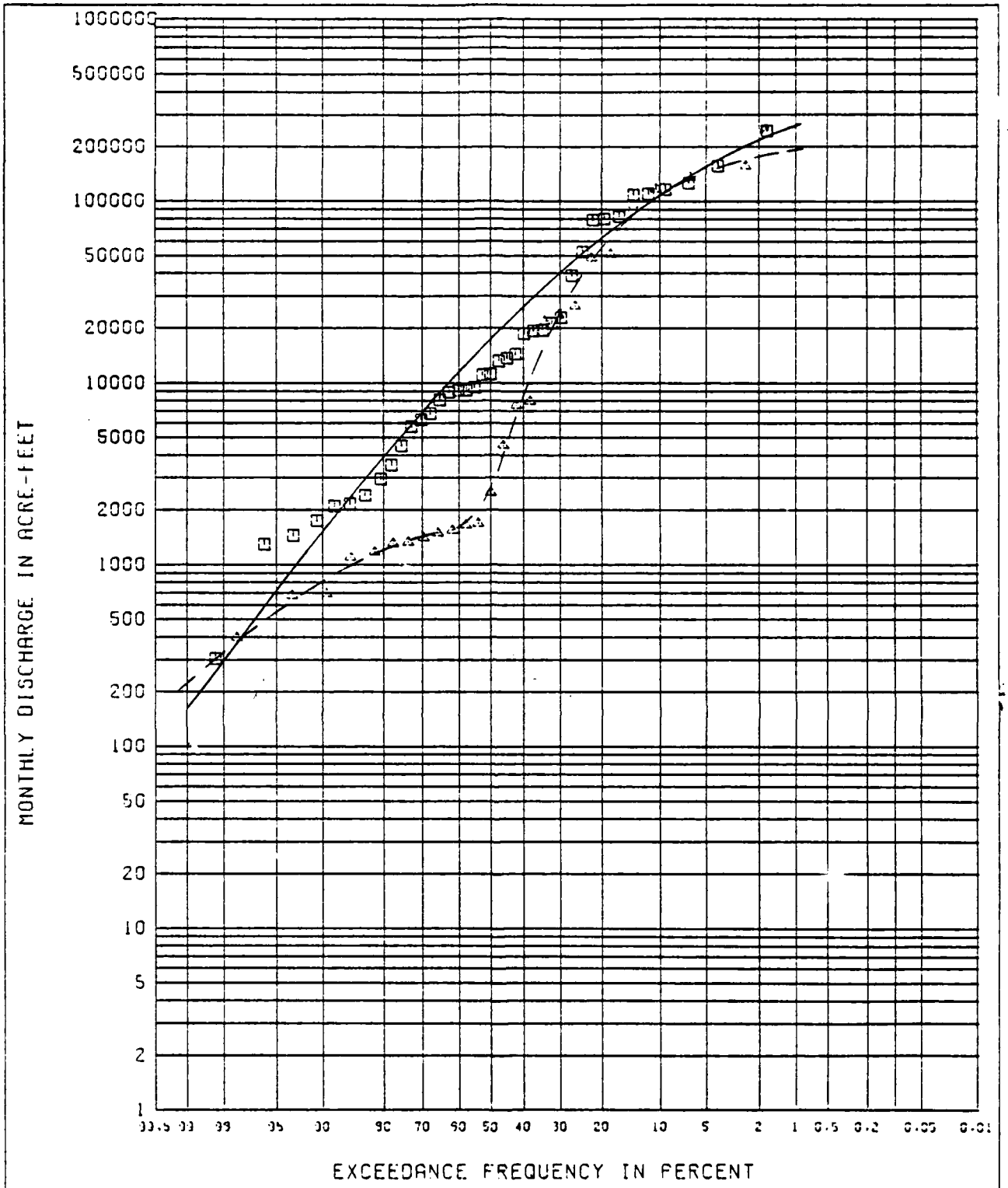
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1903-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1950-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

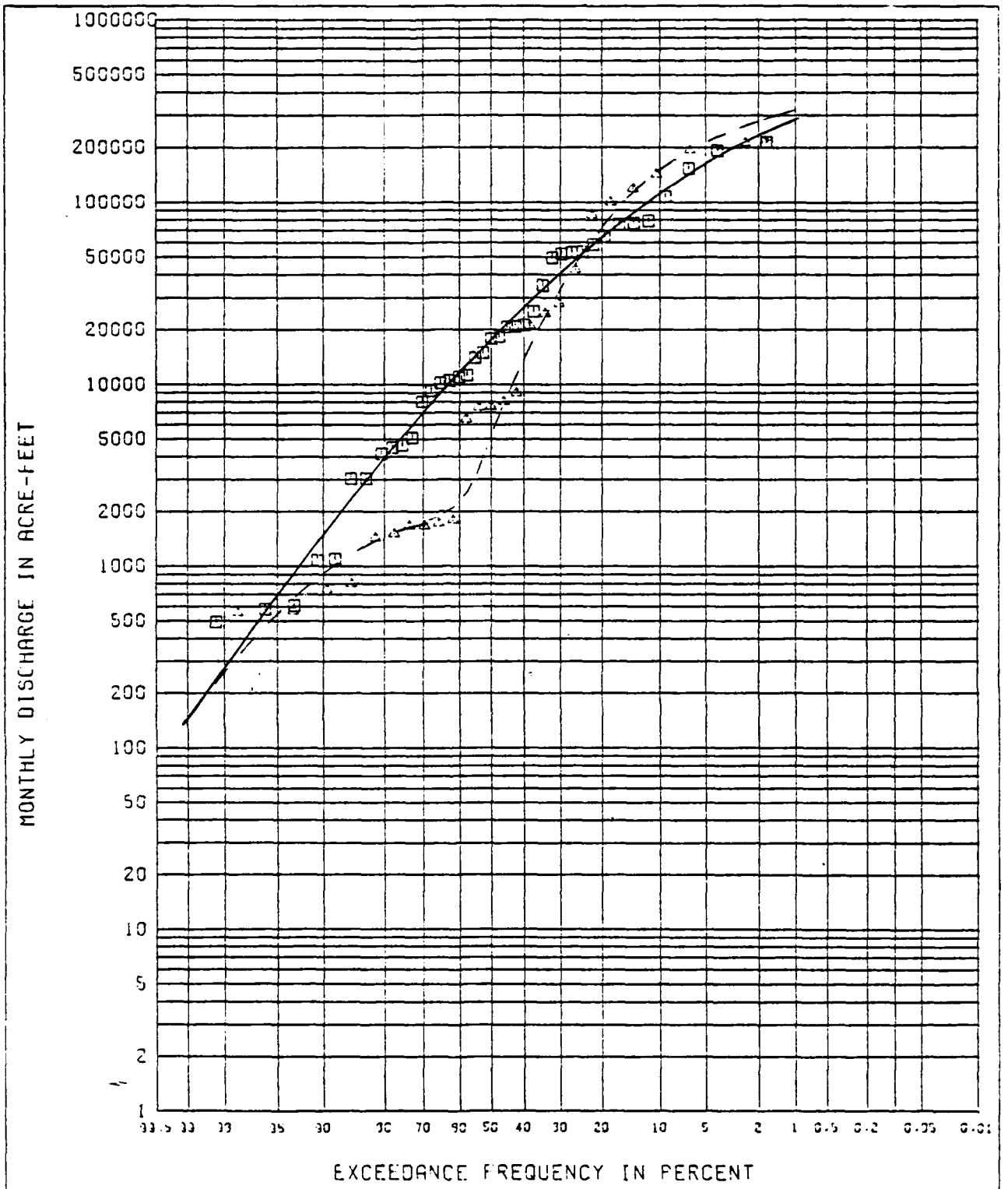
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

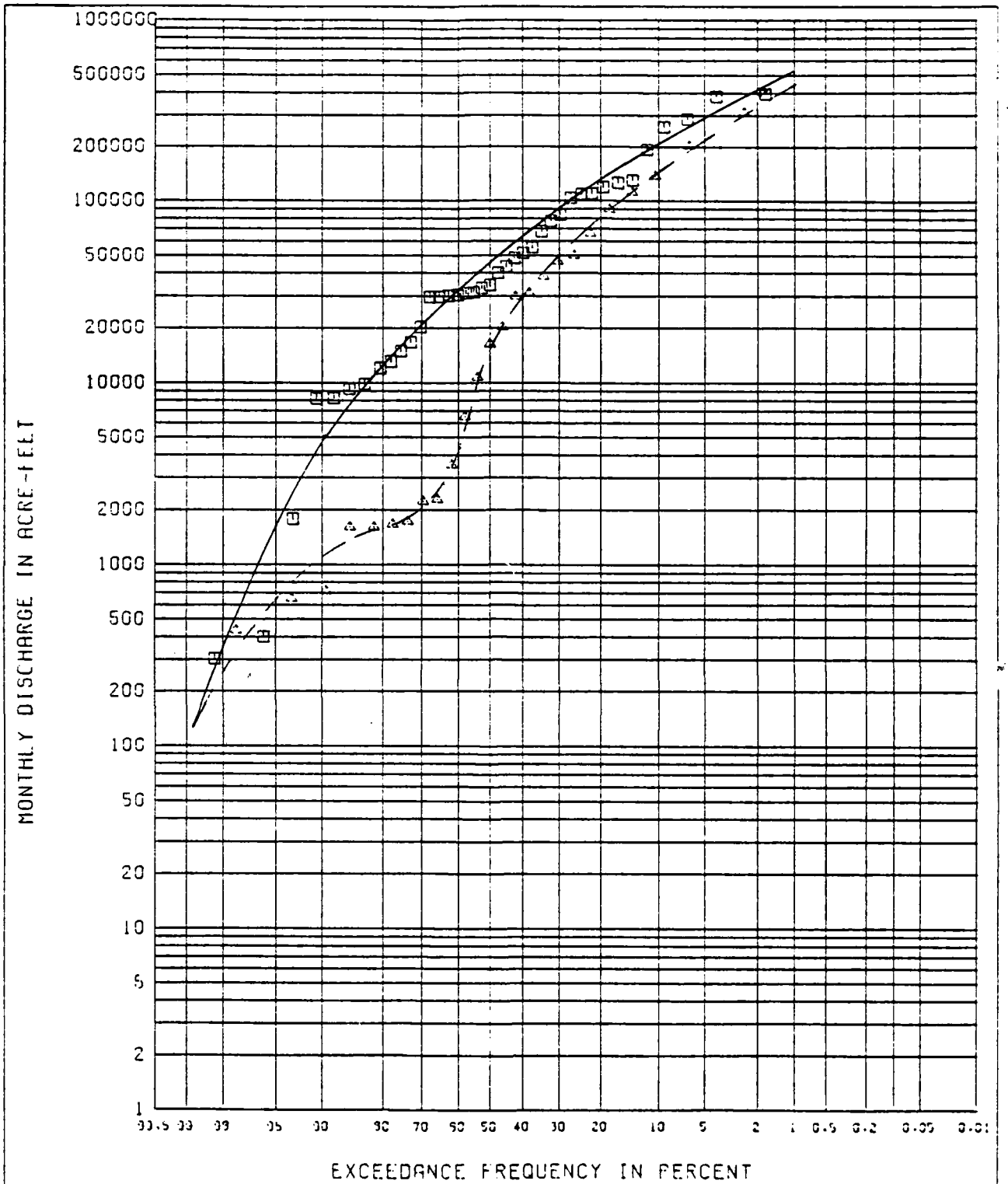
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1945)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

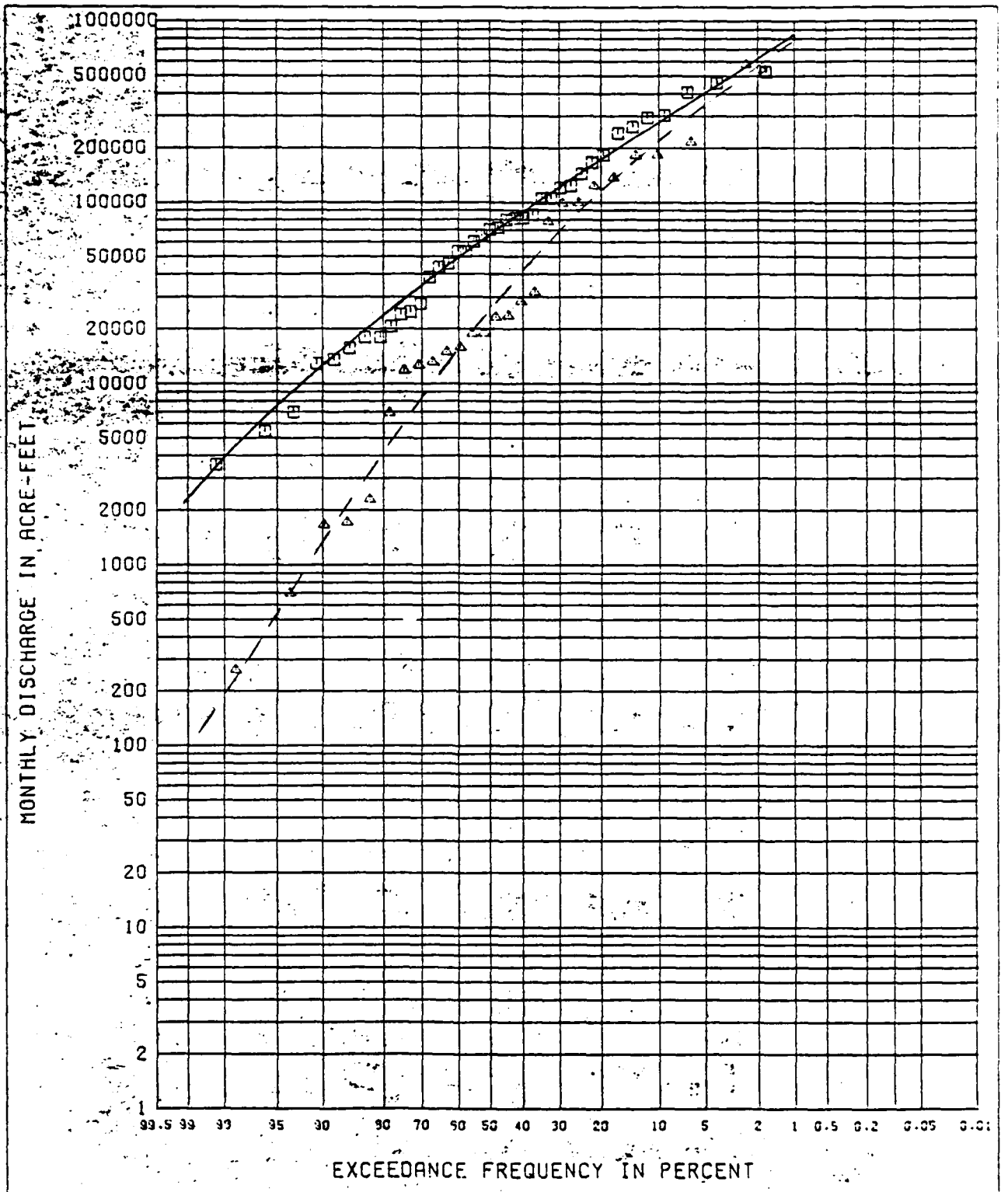
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1948)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

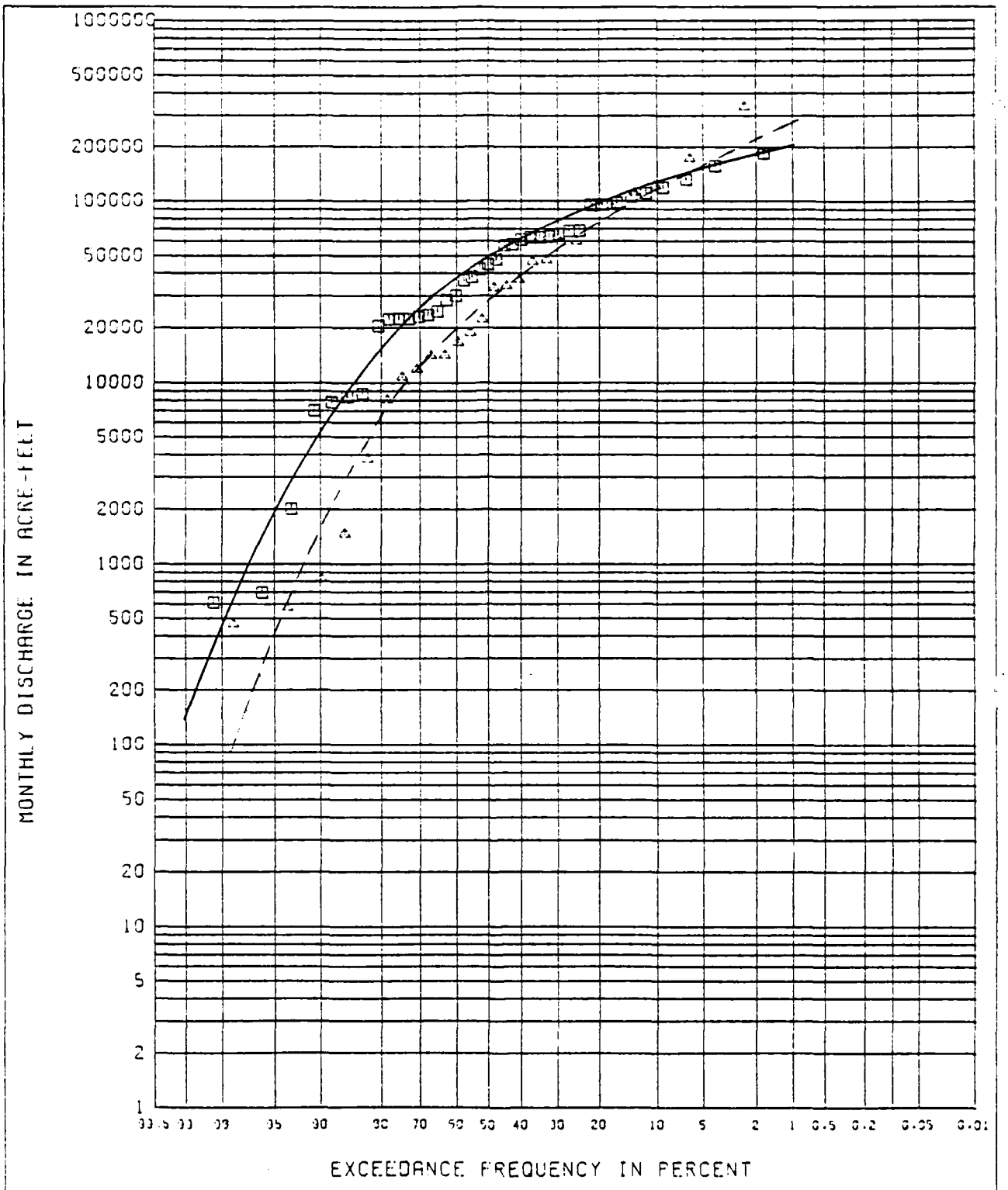
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1903-1945)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1950-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

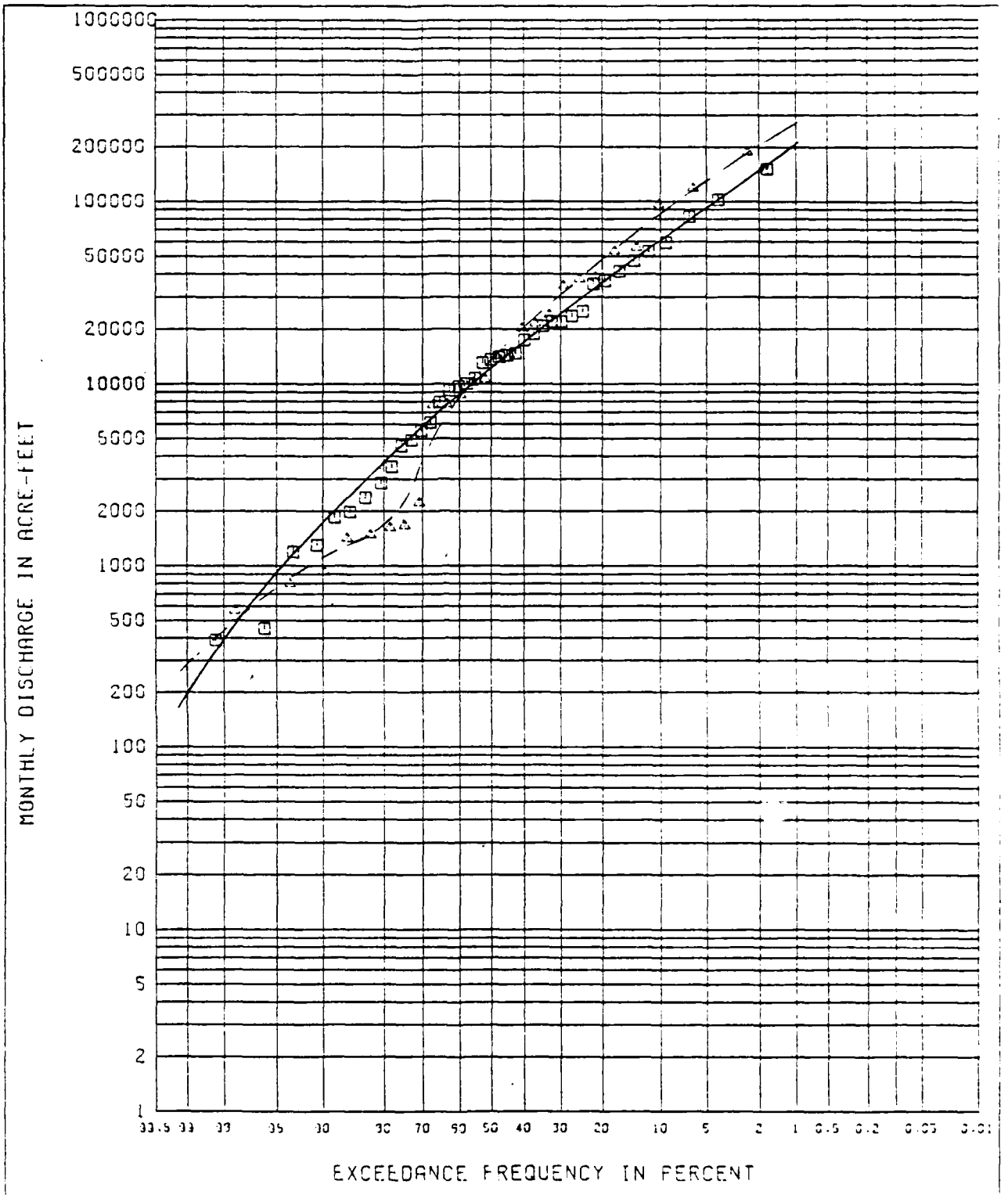
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1948)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

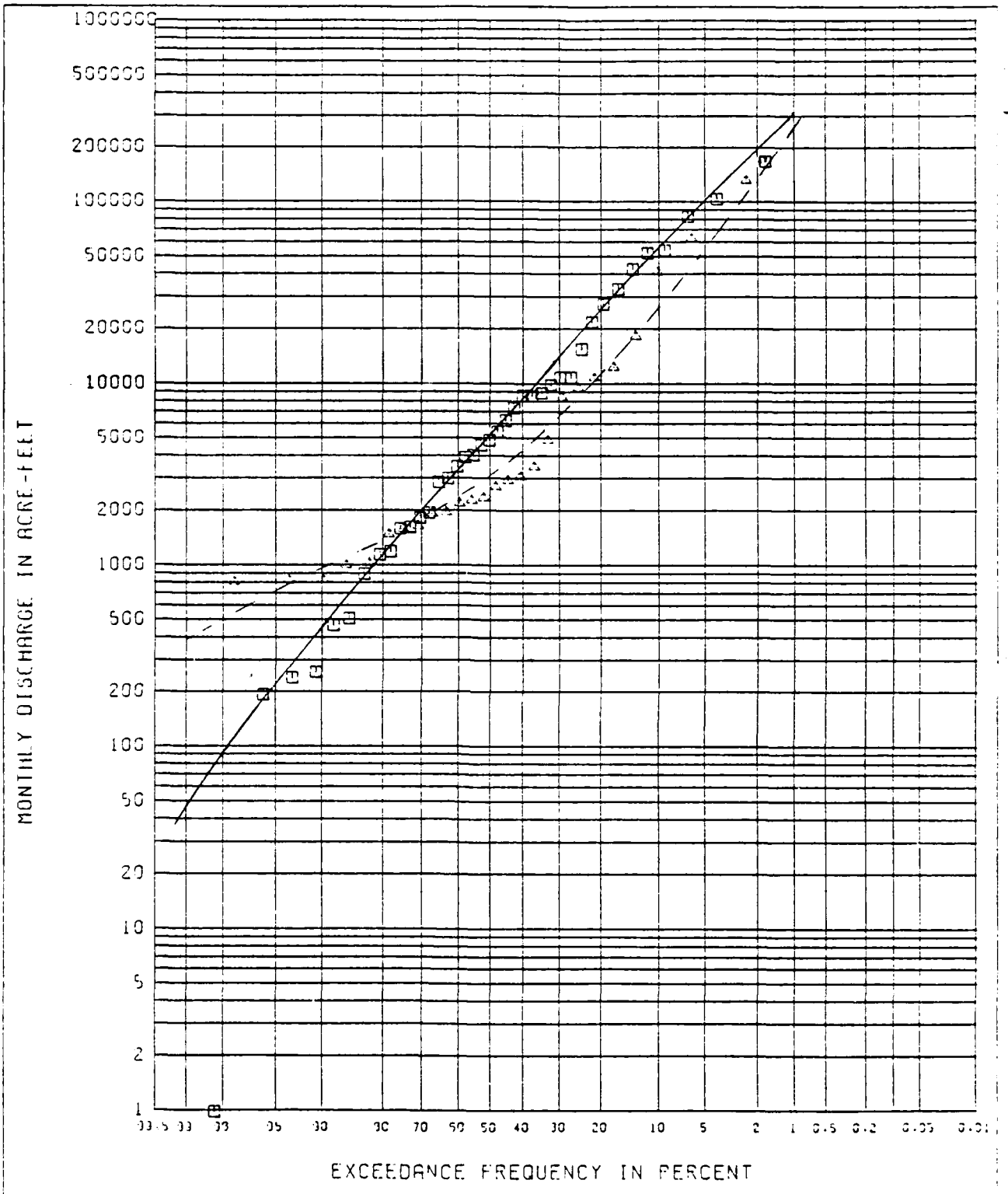
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1969)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

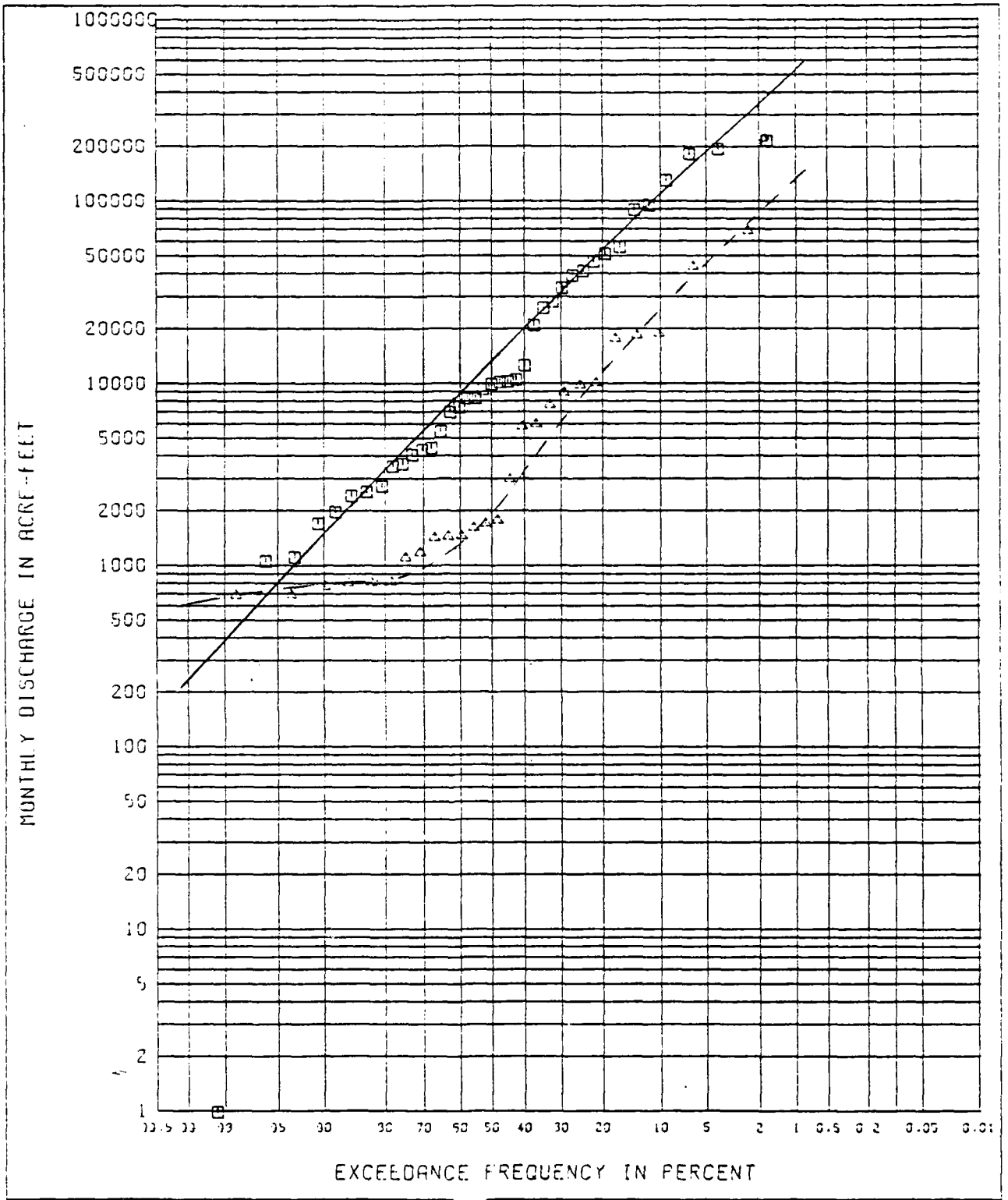
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1903-1915)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

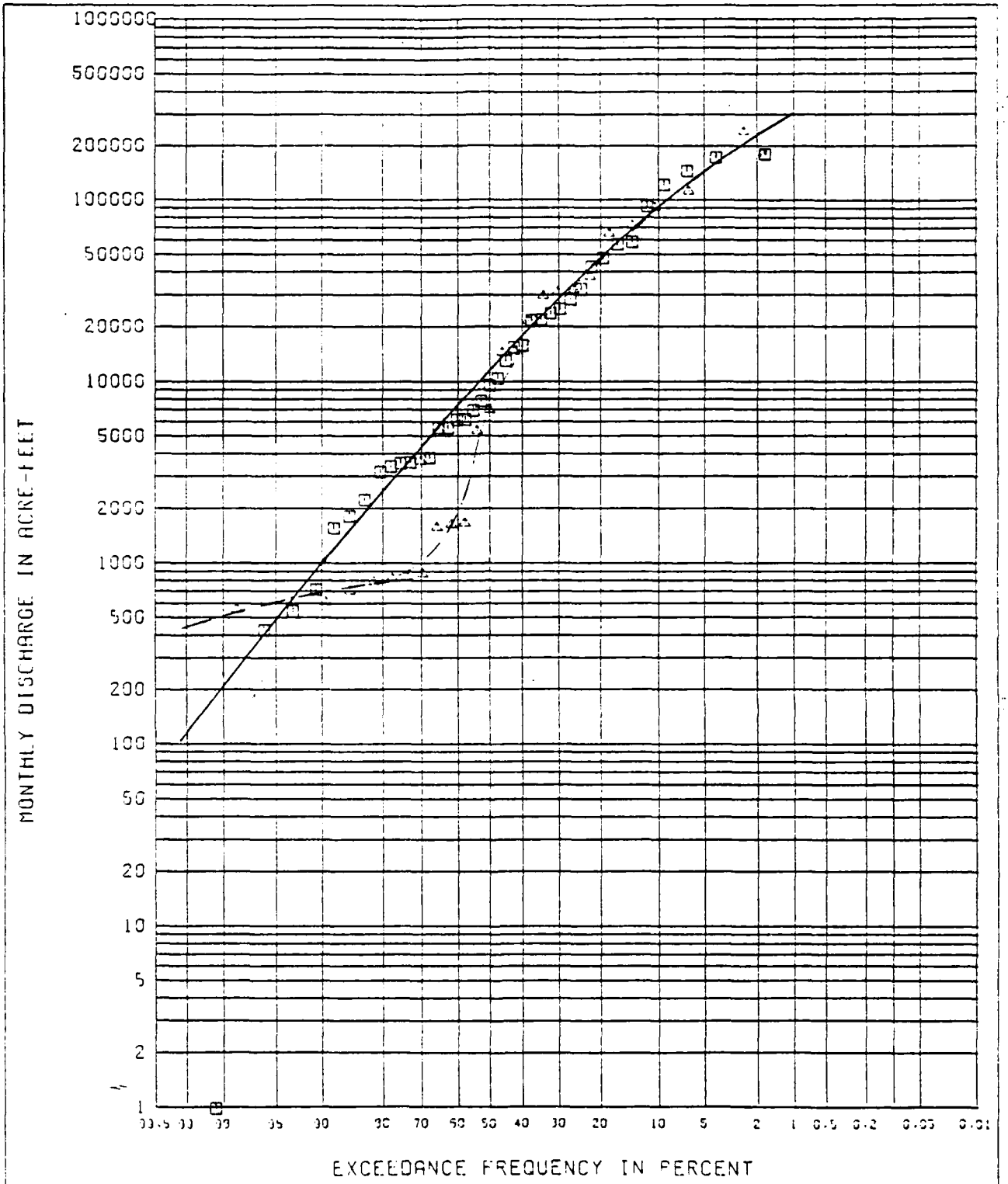
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1903-1965)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

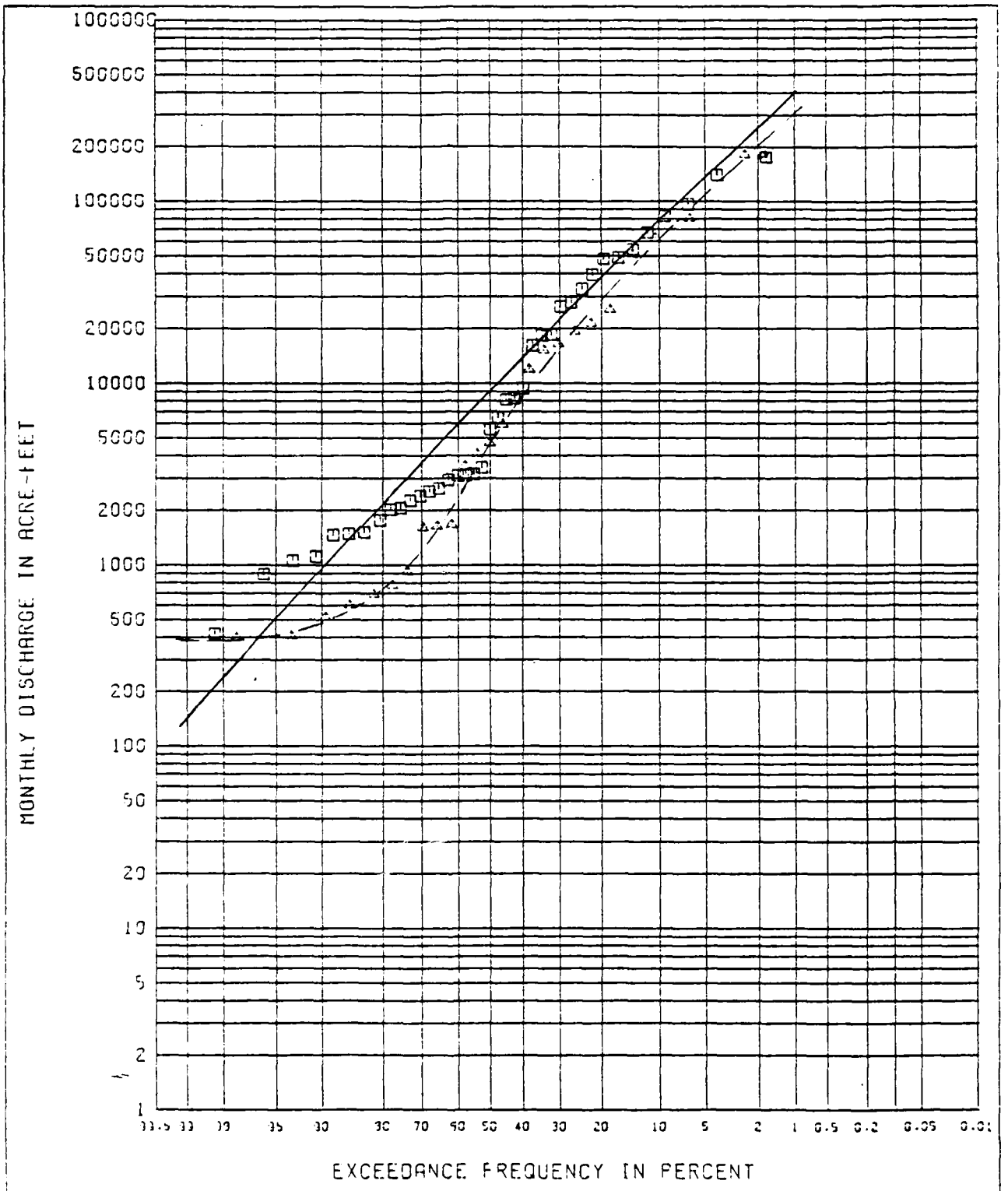
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1909-1945)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

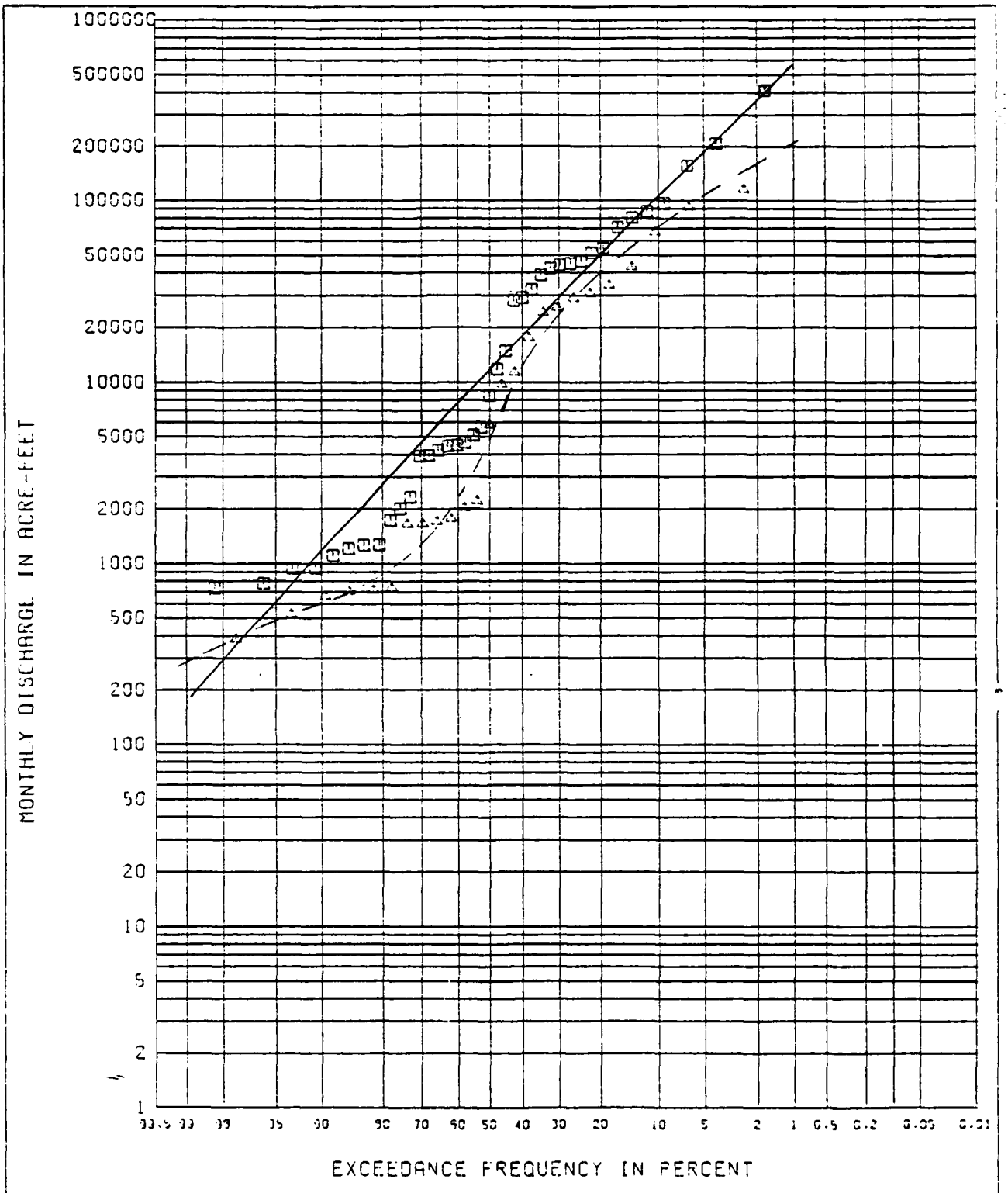
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE II

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1950-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

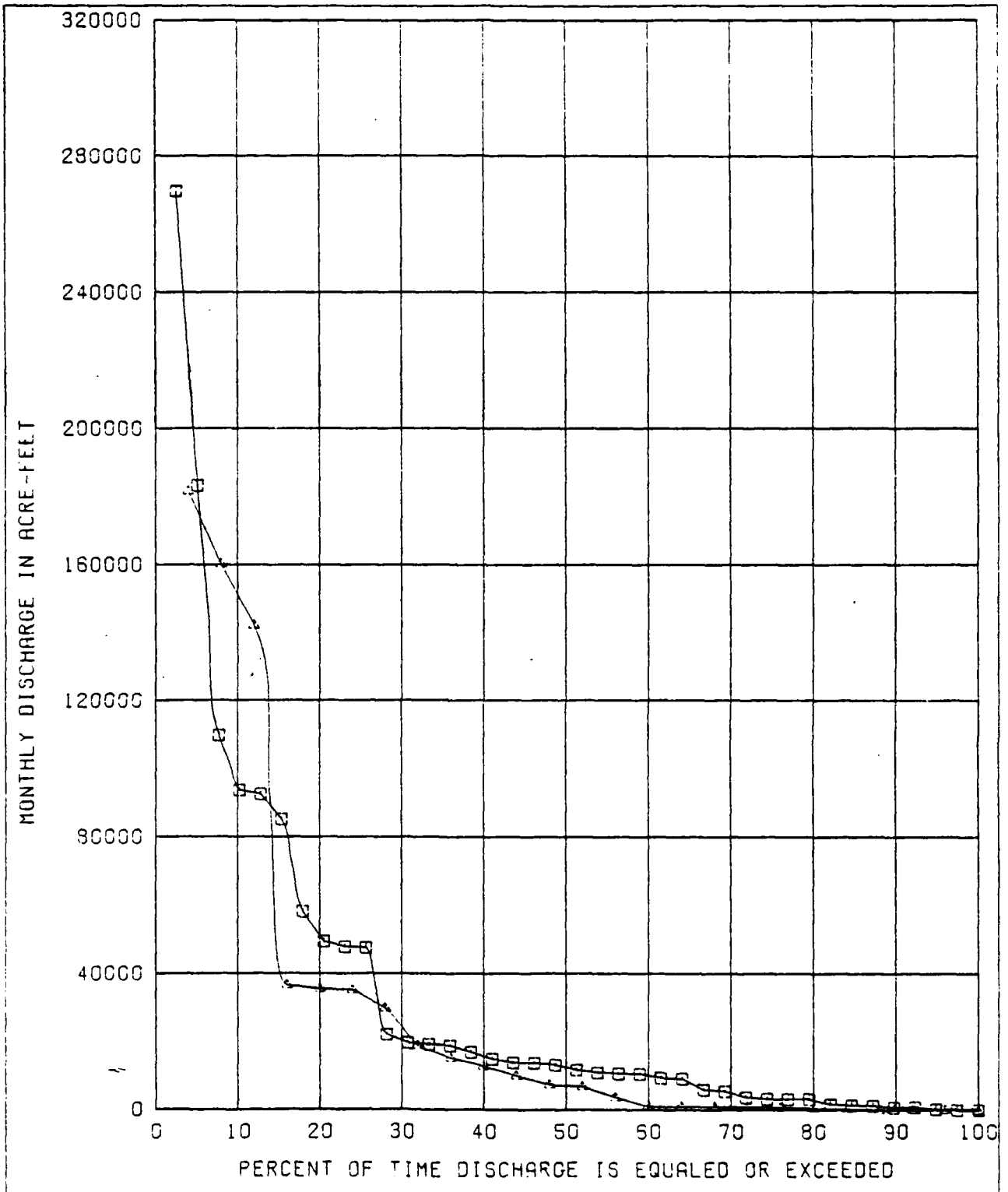
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1948)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1950-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

FLOW DURATION CURVES AT DAM SITE

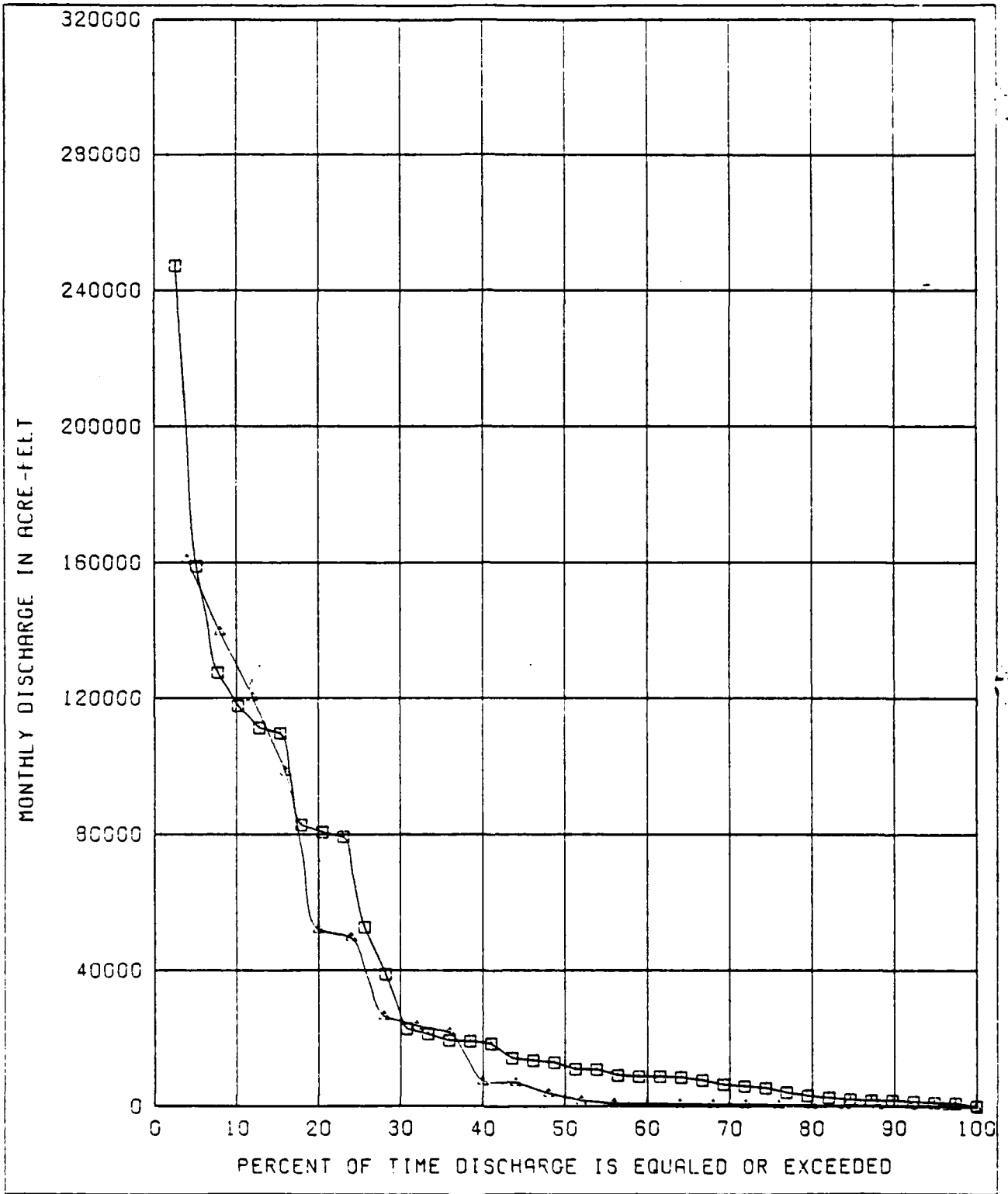
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1946)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

FLOW DURATION CURVES AT DAM SITE

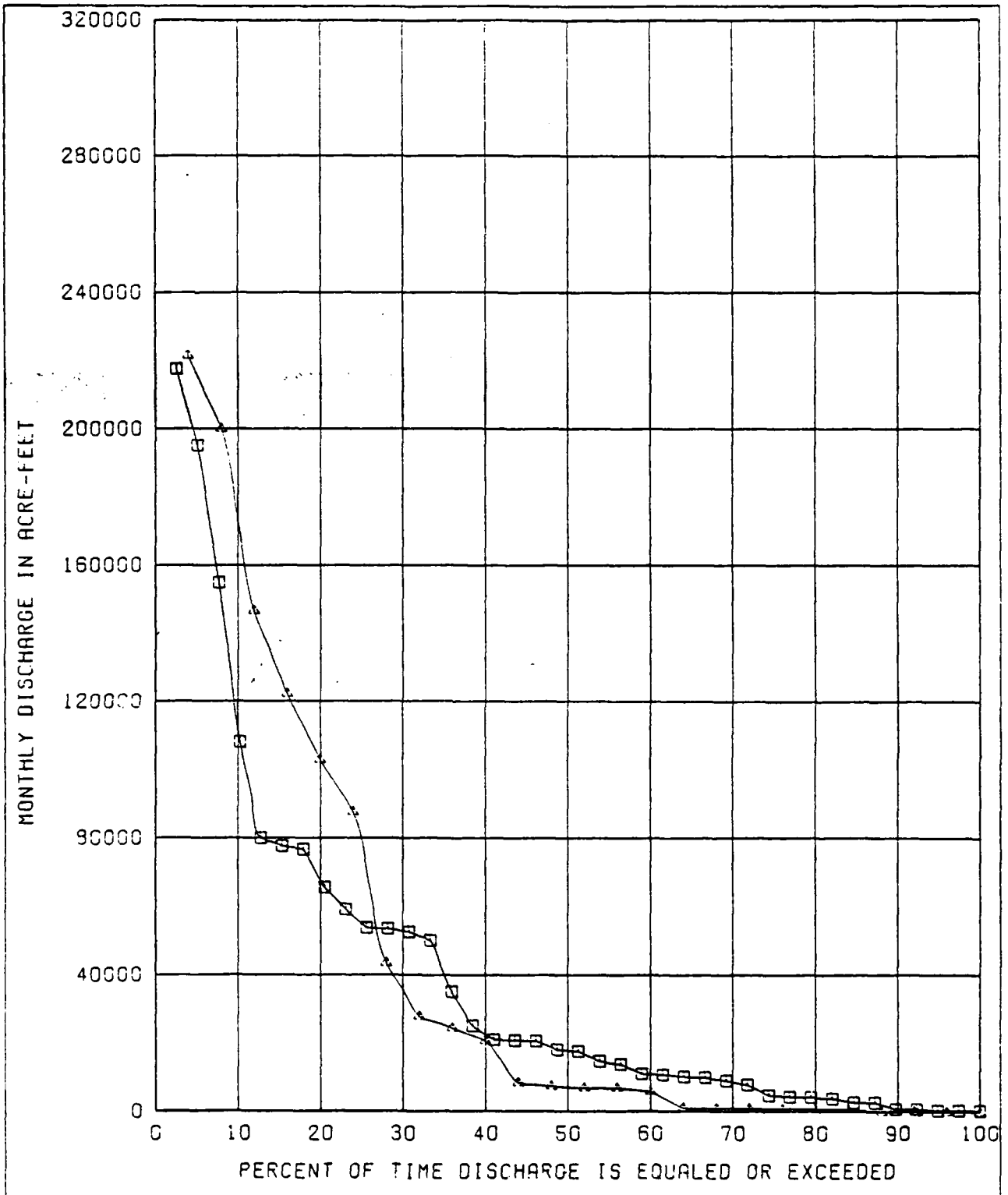
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1946)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1950-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

FLOW DURATION CURVES AT DAM SITE

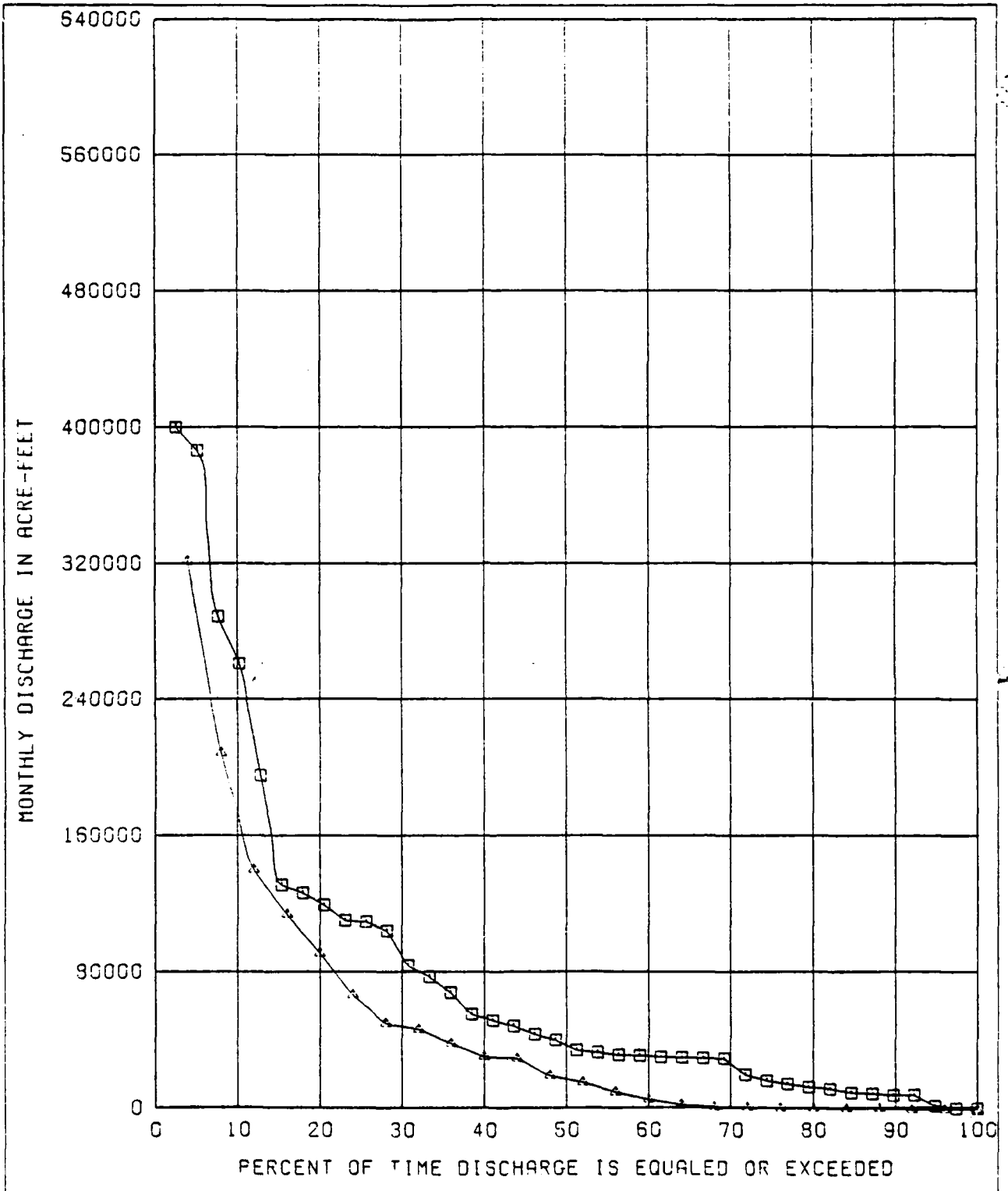
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1945)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

FLOW DURATION CURVES AT DAM SITE

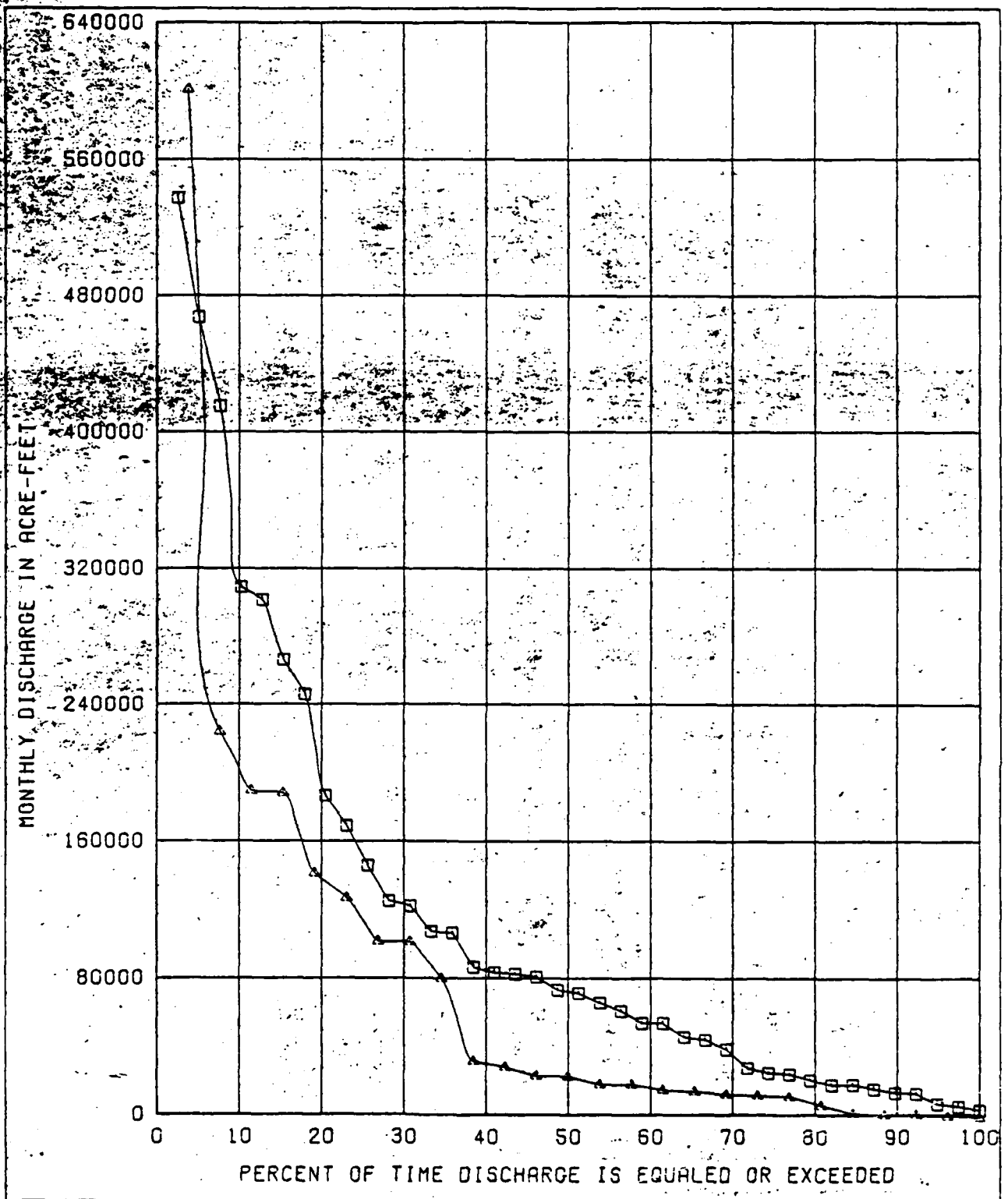
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

FLOW DURATION CURVES AT DAM SITE

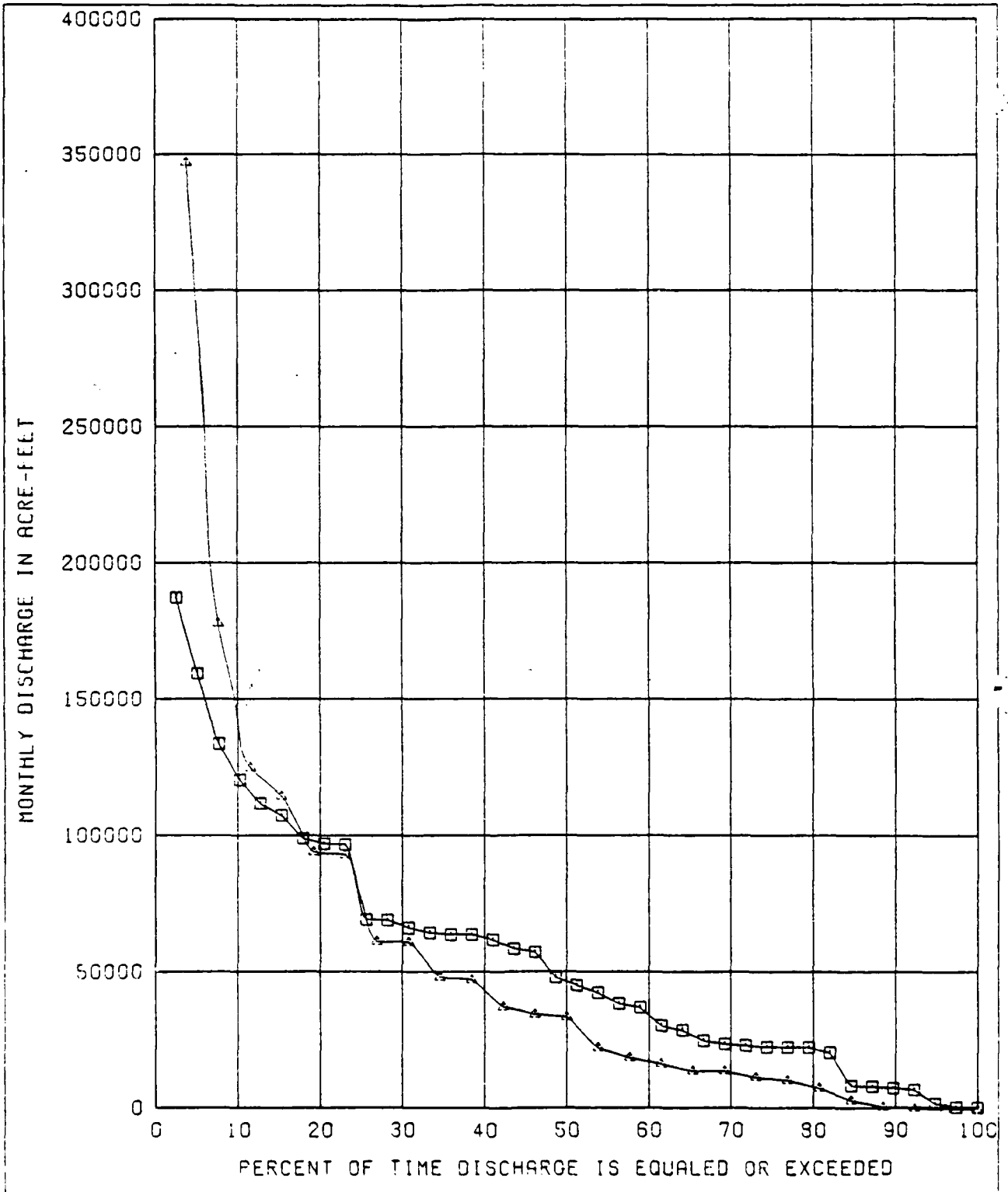
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1909-1948)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

FLOW DURATION CURVES AT DAM SITE

JUNE FLOWS

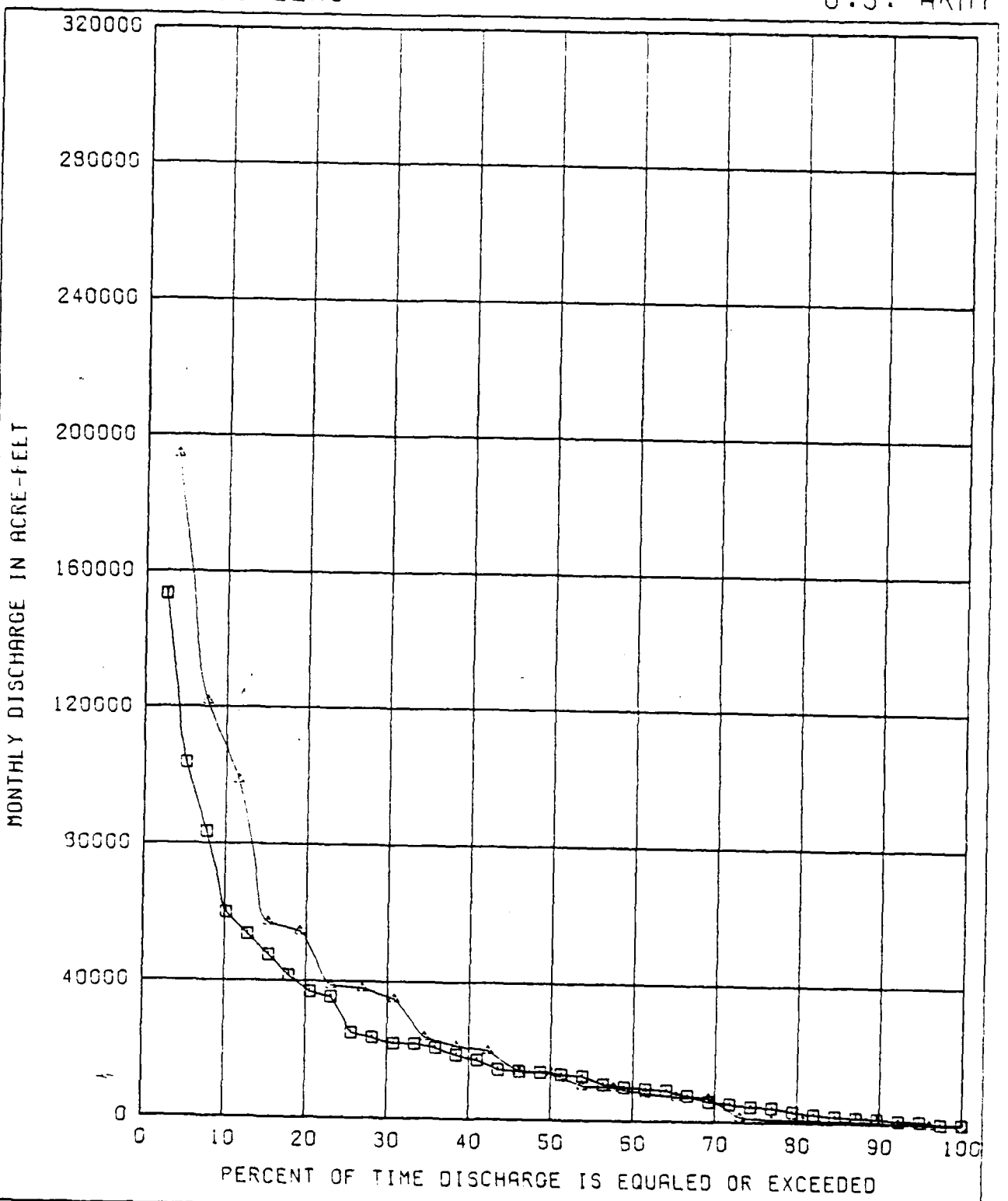
U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 18

CORPS OF ENGINEERS

U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

FLOW DURATION CURVES AT DAM SITE

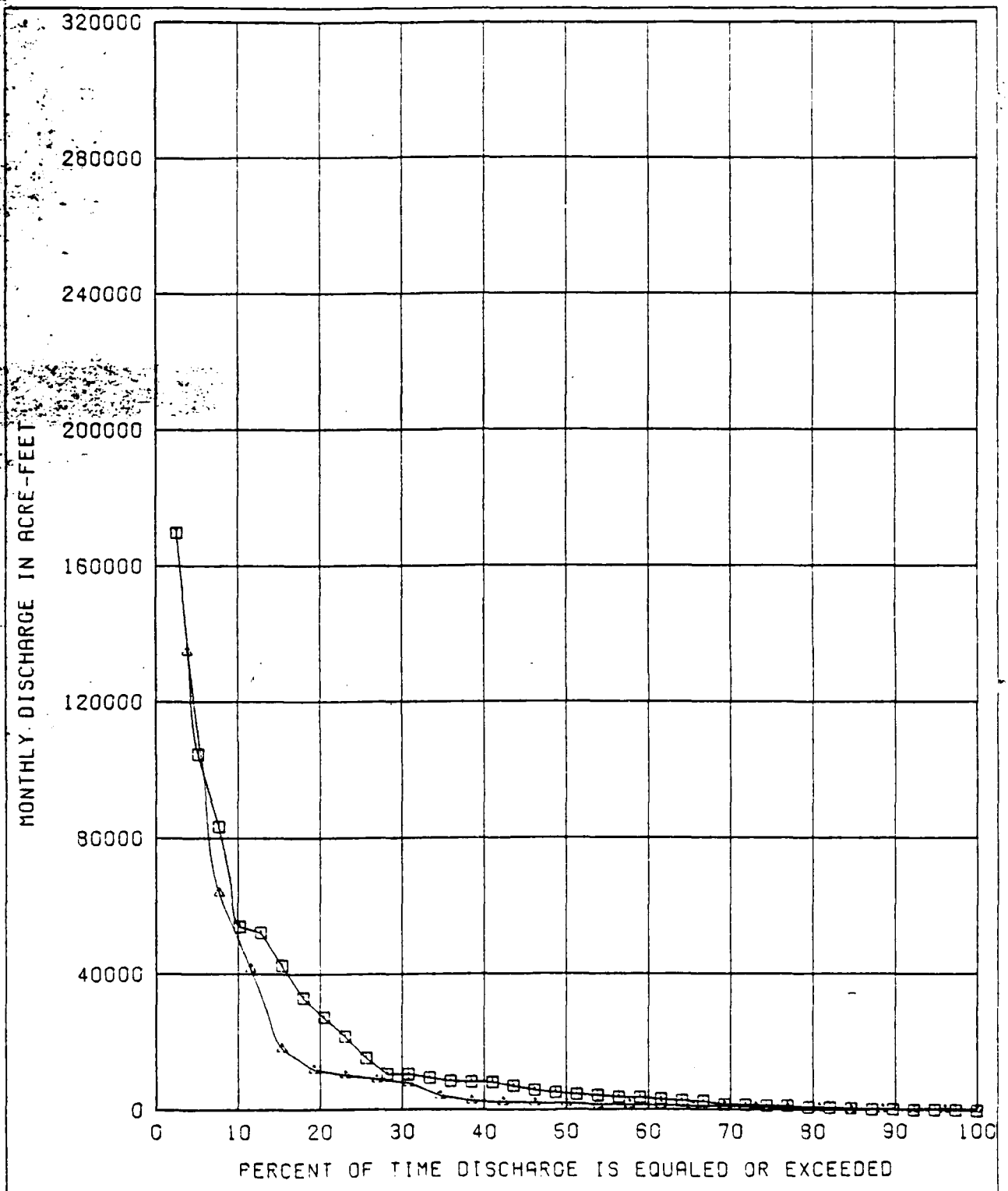
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1946)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1951-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

FLOW DURATION CURVES AT DAM SITE

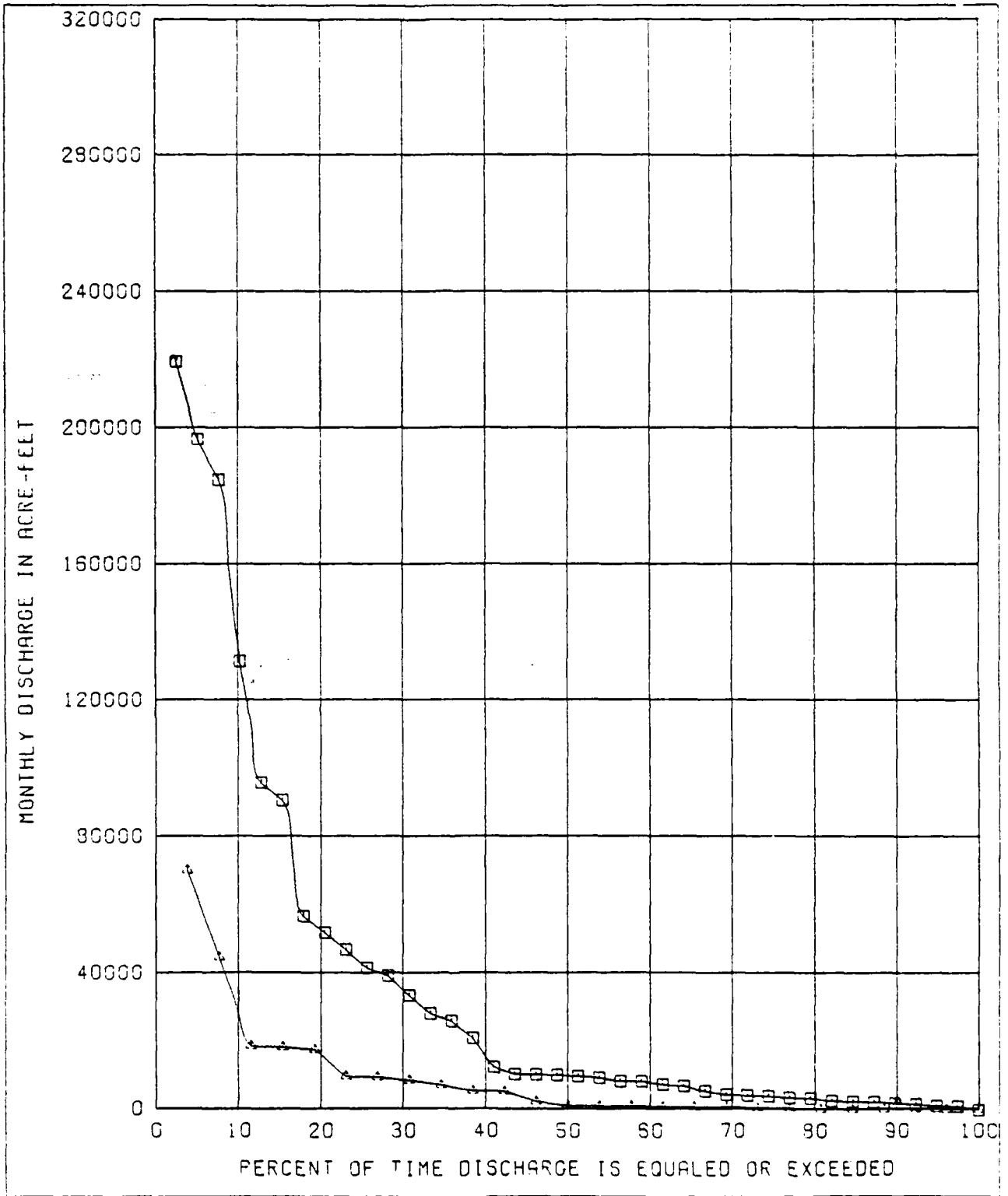
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1950-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

FLOW DURATION CURVES AT DAM SITE

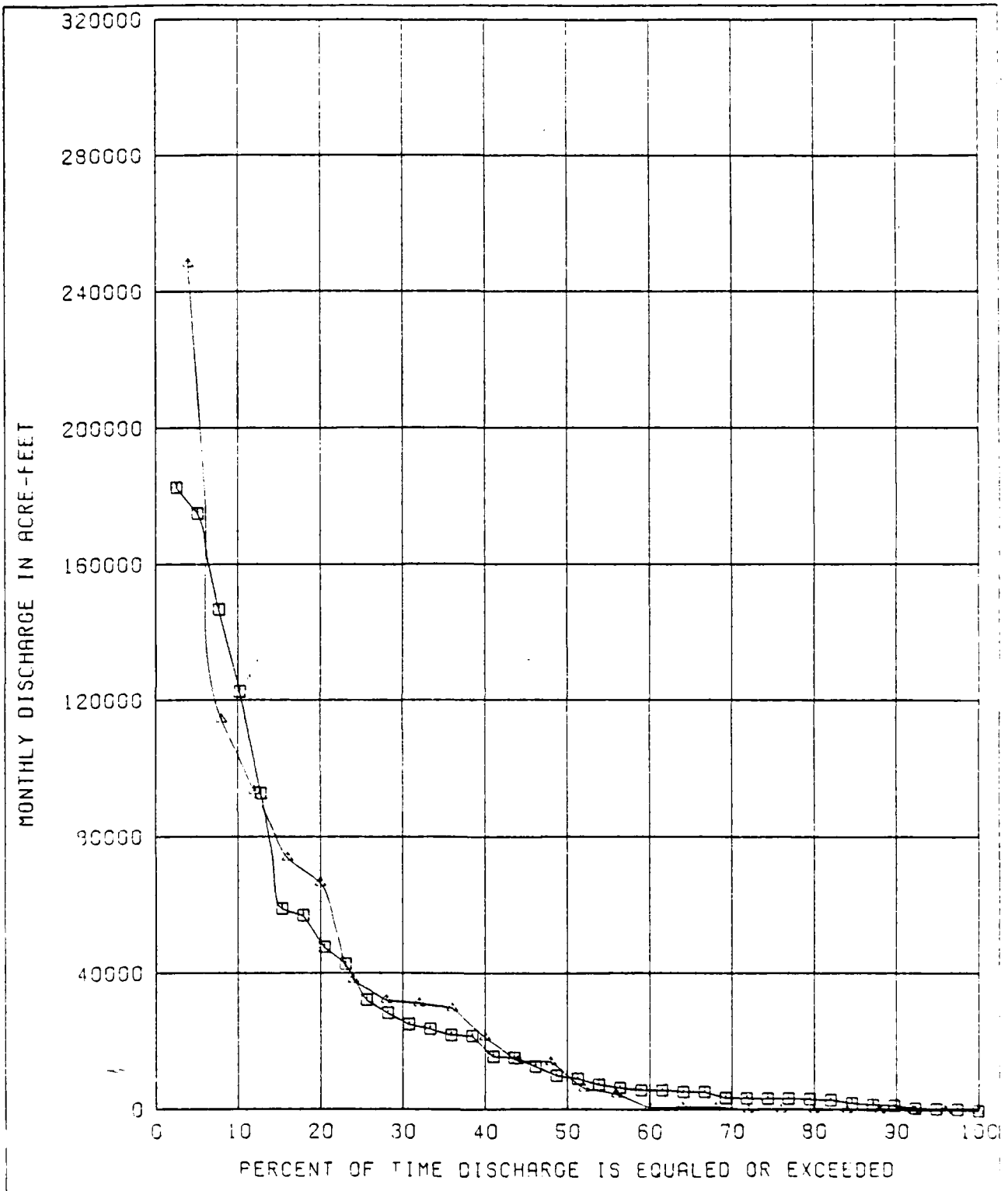
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1950-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

FLOW DURATION CURVES AT DAM SITE

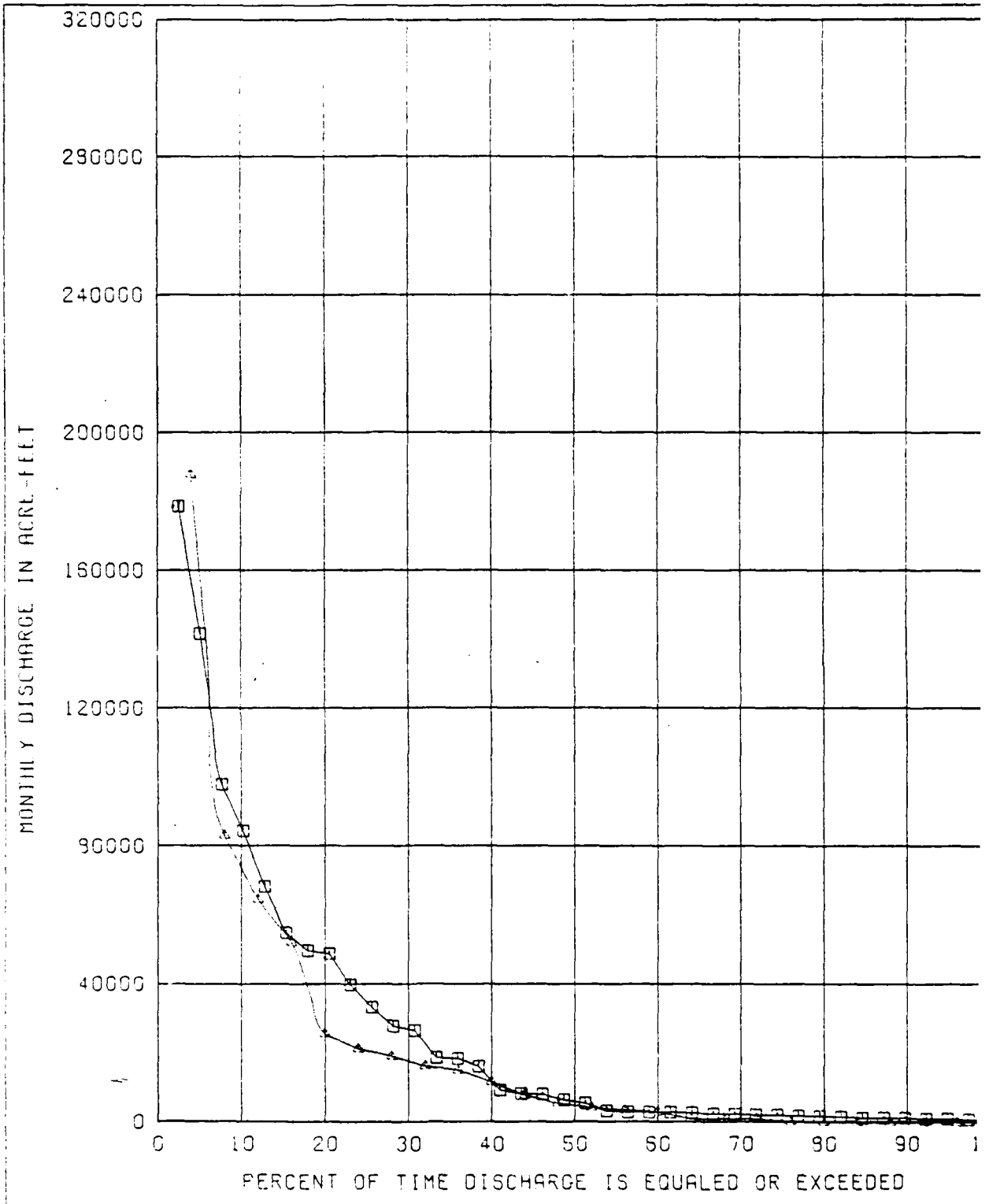
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 22

CORPS OF ENGINEERS U.S. ARM



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1903-1945)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1973)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

FLOW DURATION CURVES AT DAM SIT

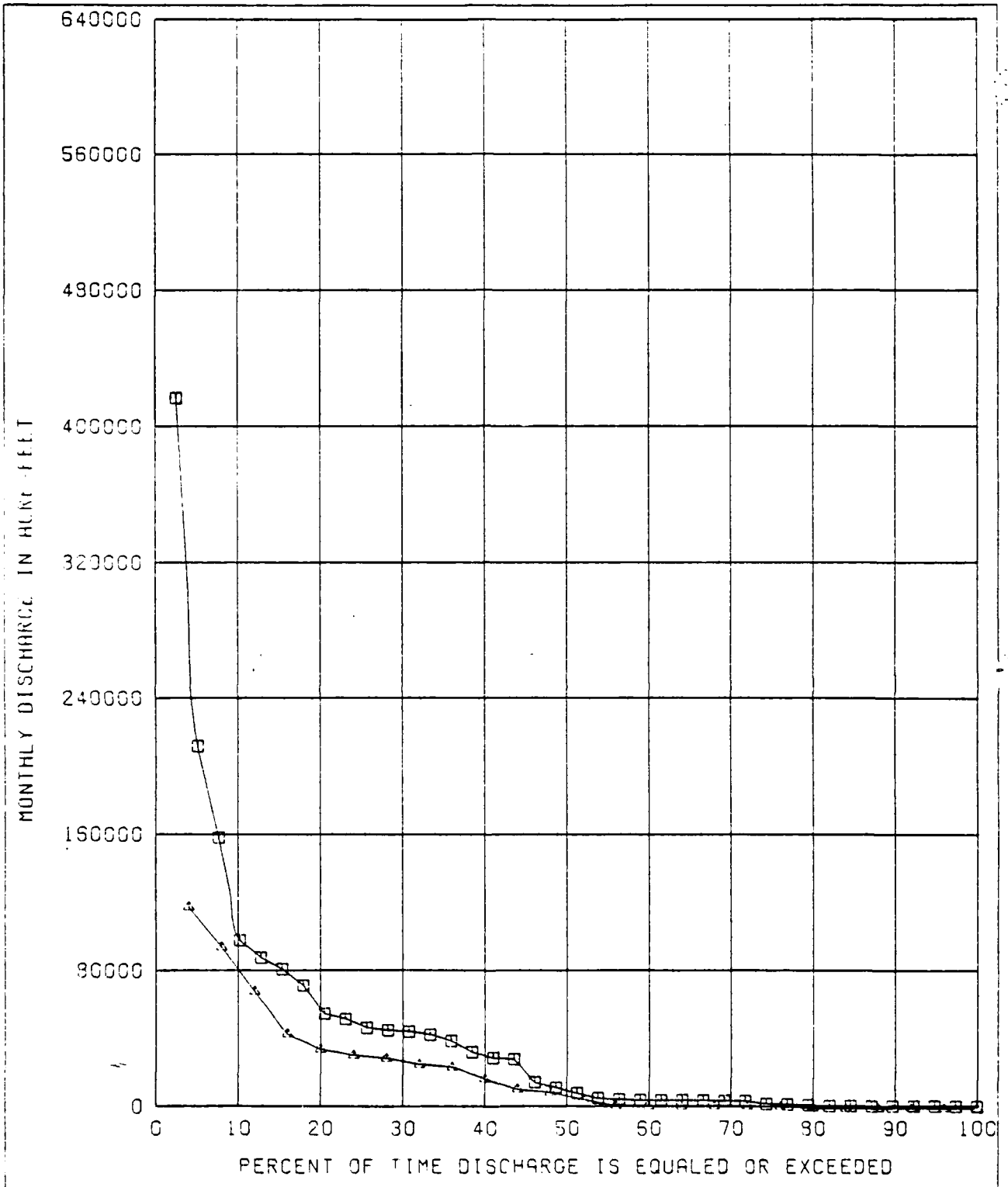
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1909-1945)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

BRAZOS RIVER BASIN, TEXAS

BELTON RESERVOIR

FLOW DURATION CURVES AT DAM SITE

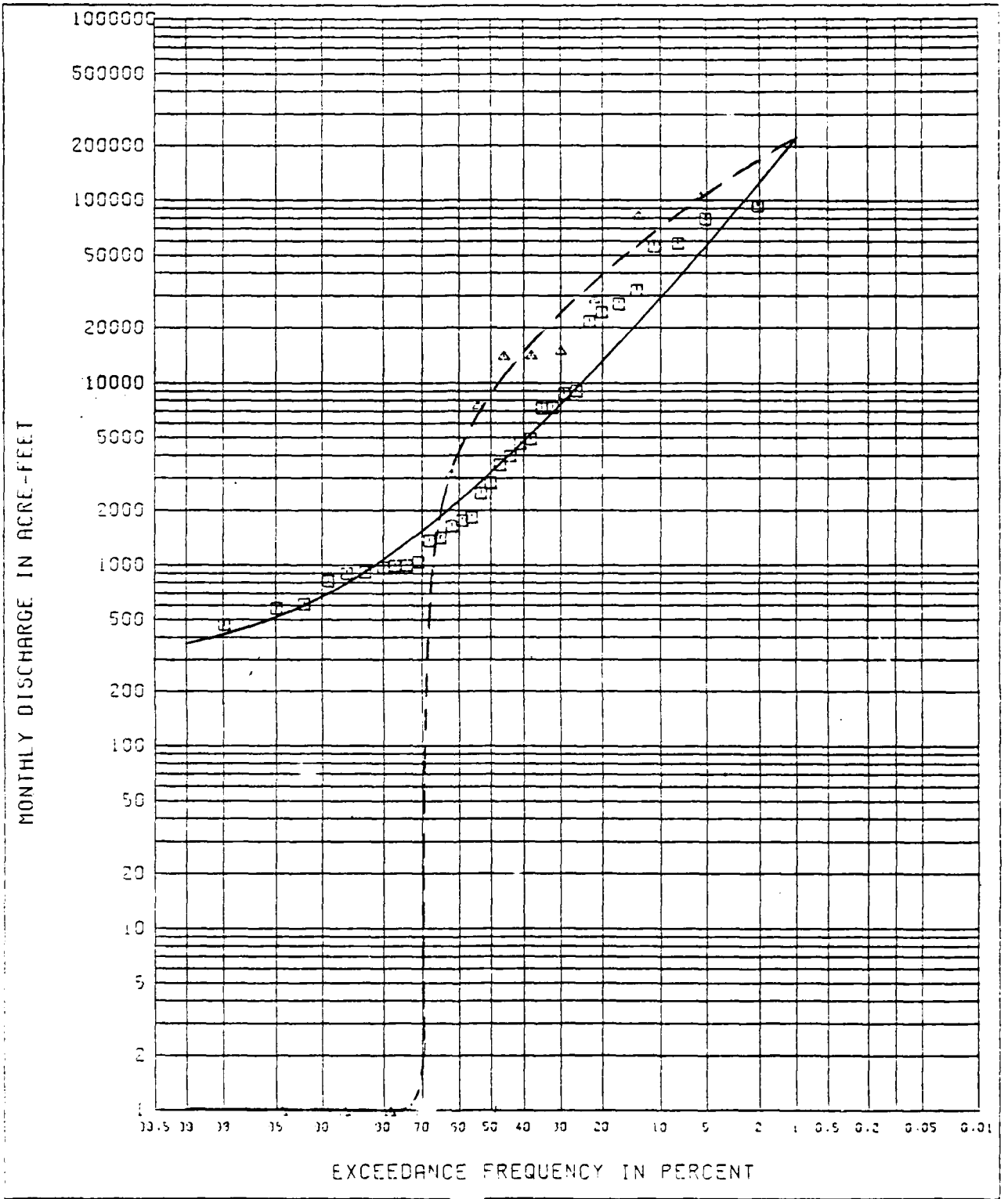
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1967-1973)

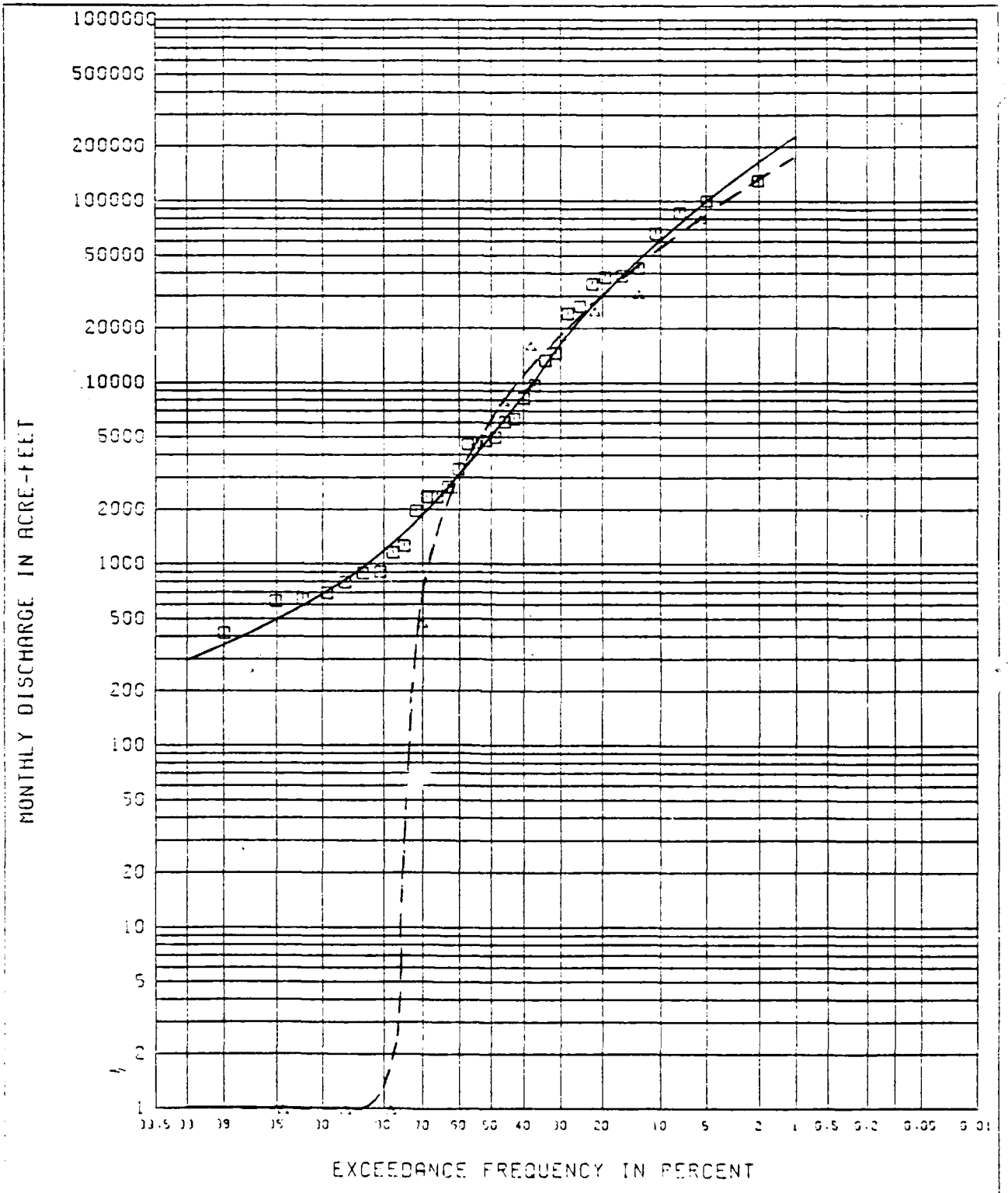
BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

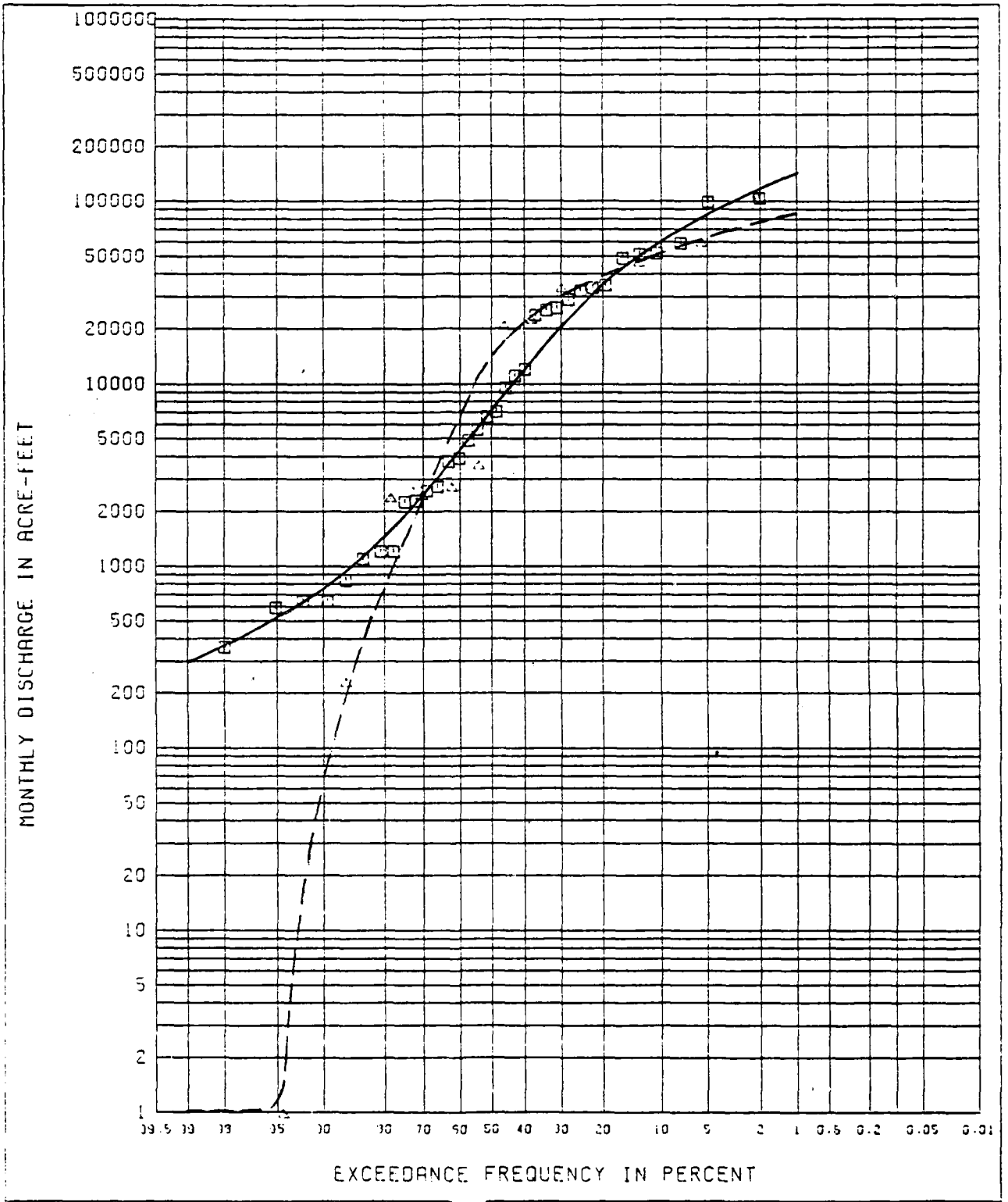
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

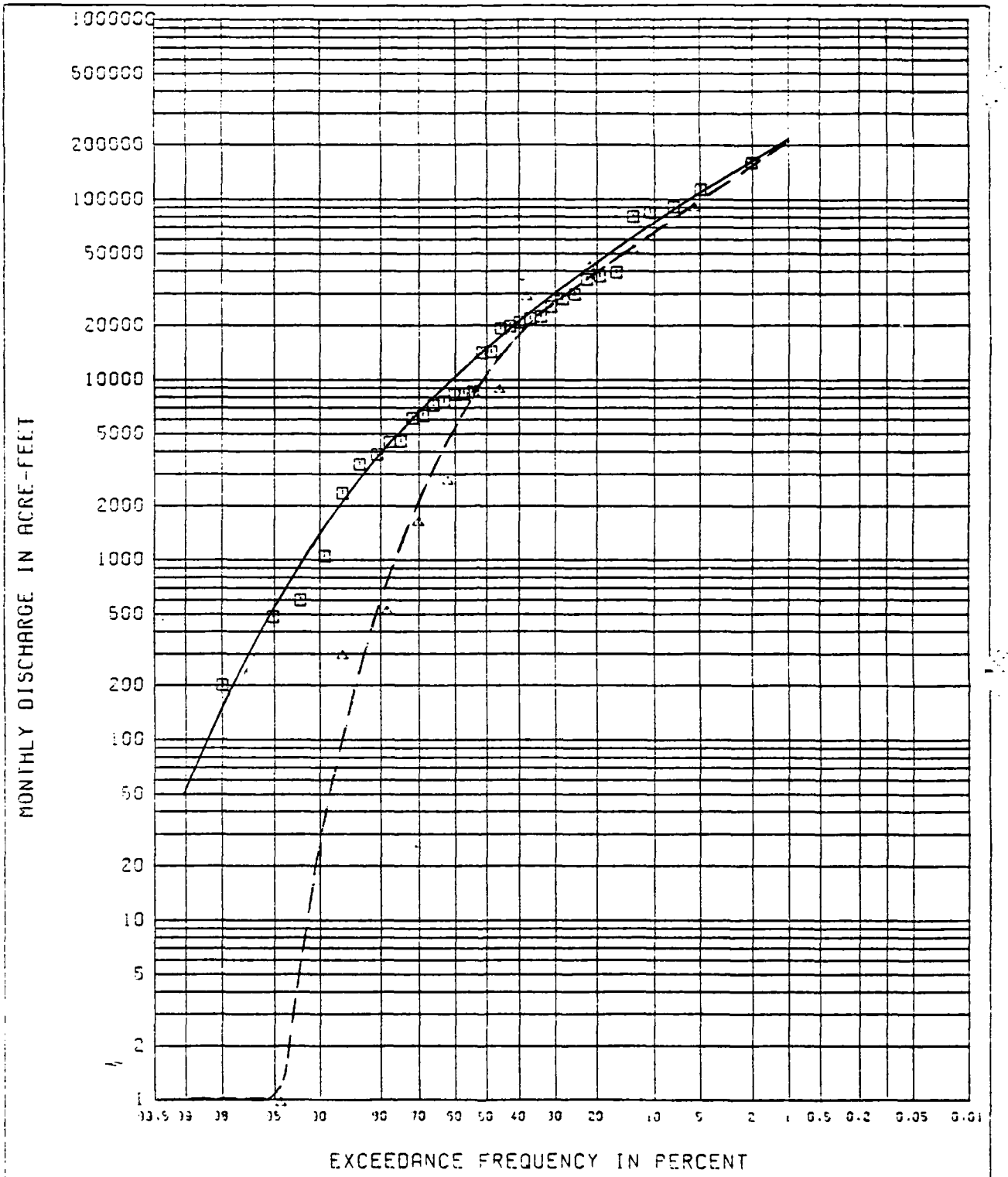
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1979)

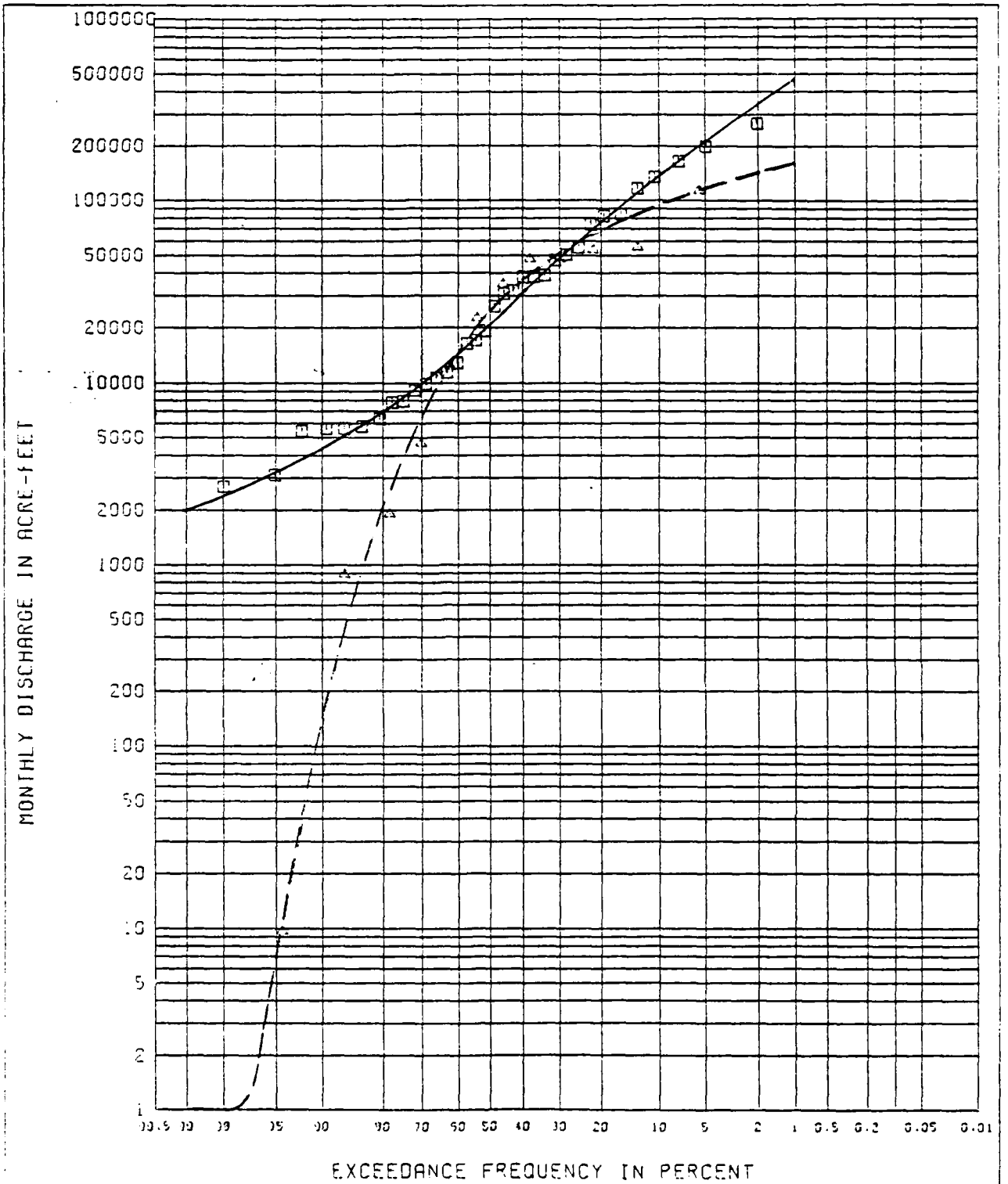
BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

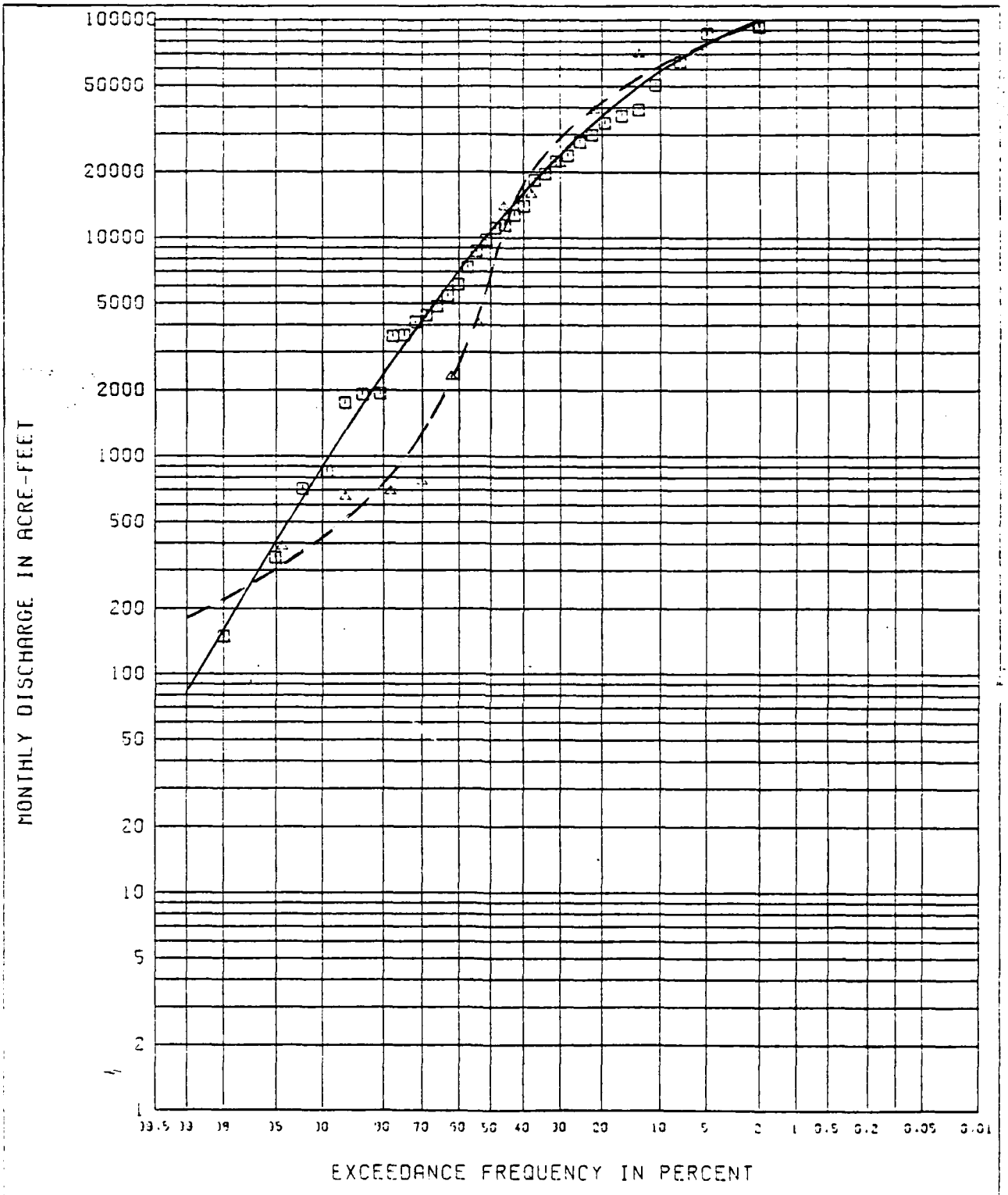
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1967-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

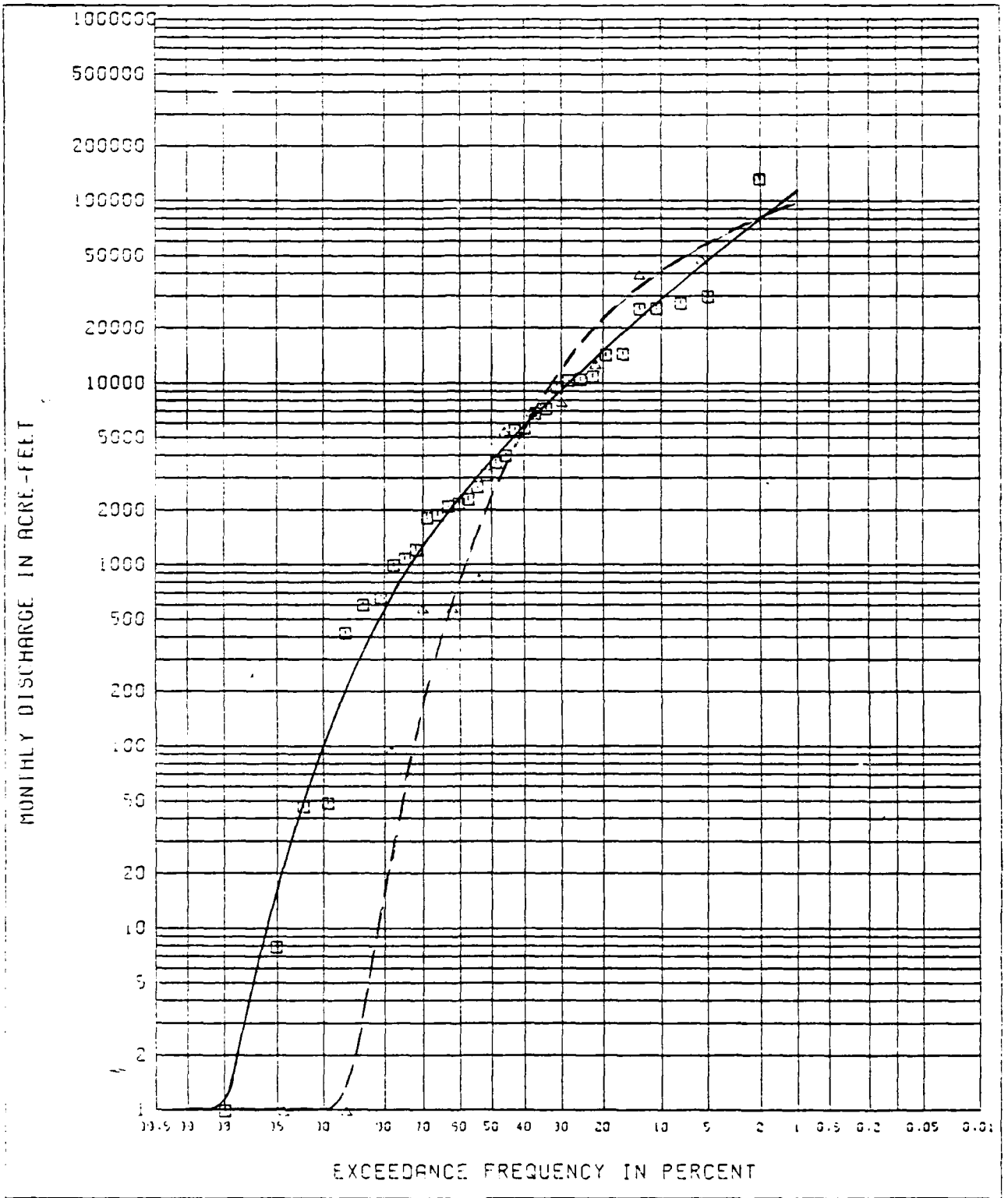
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1967-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

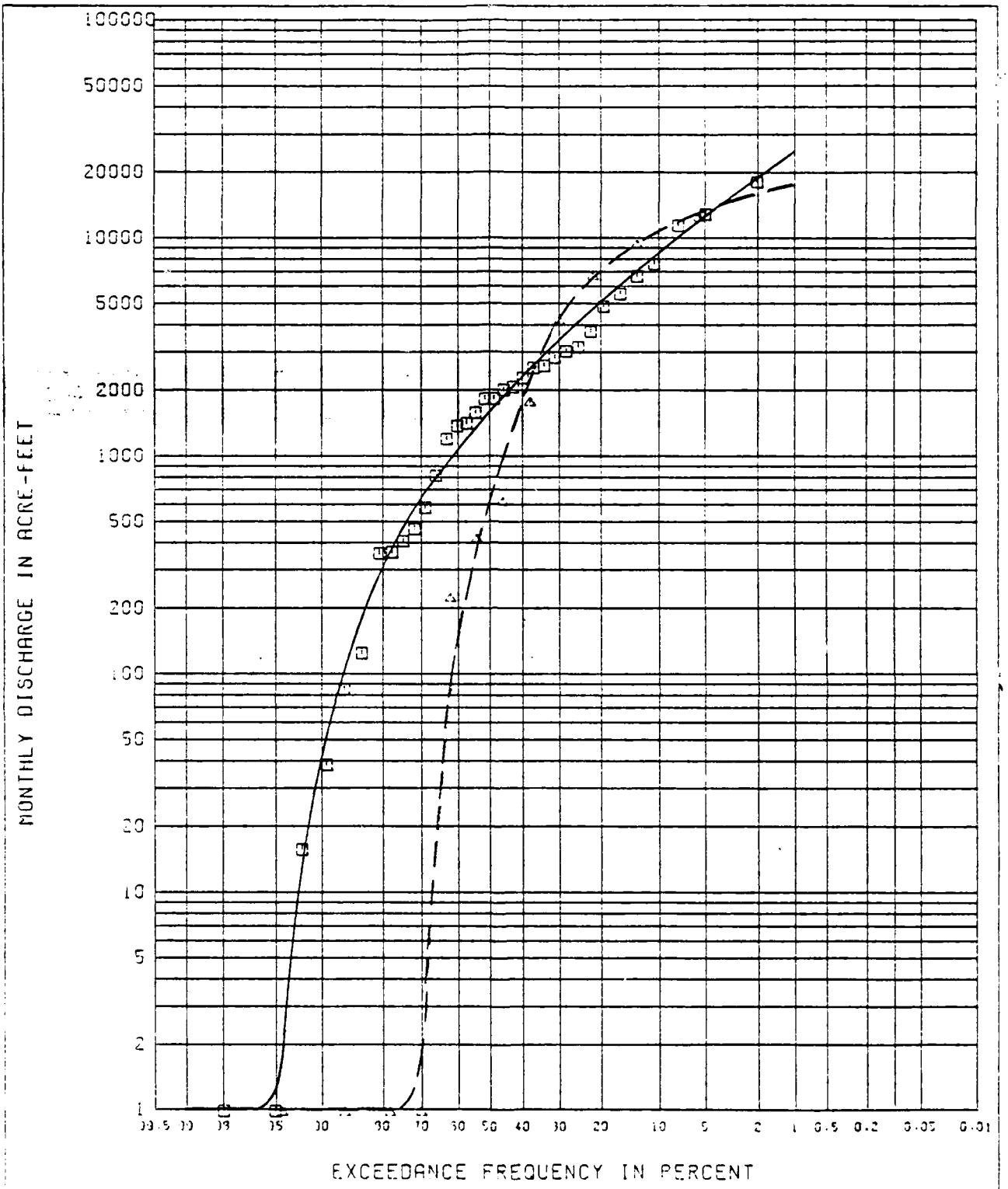
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1967-1979)

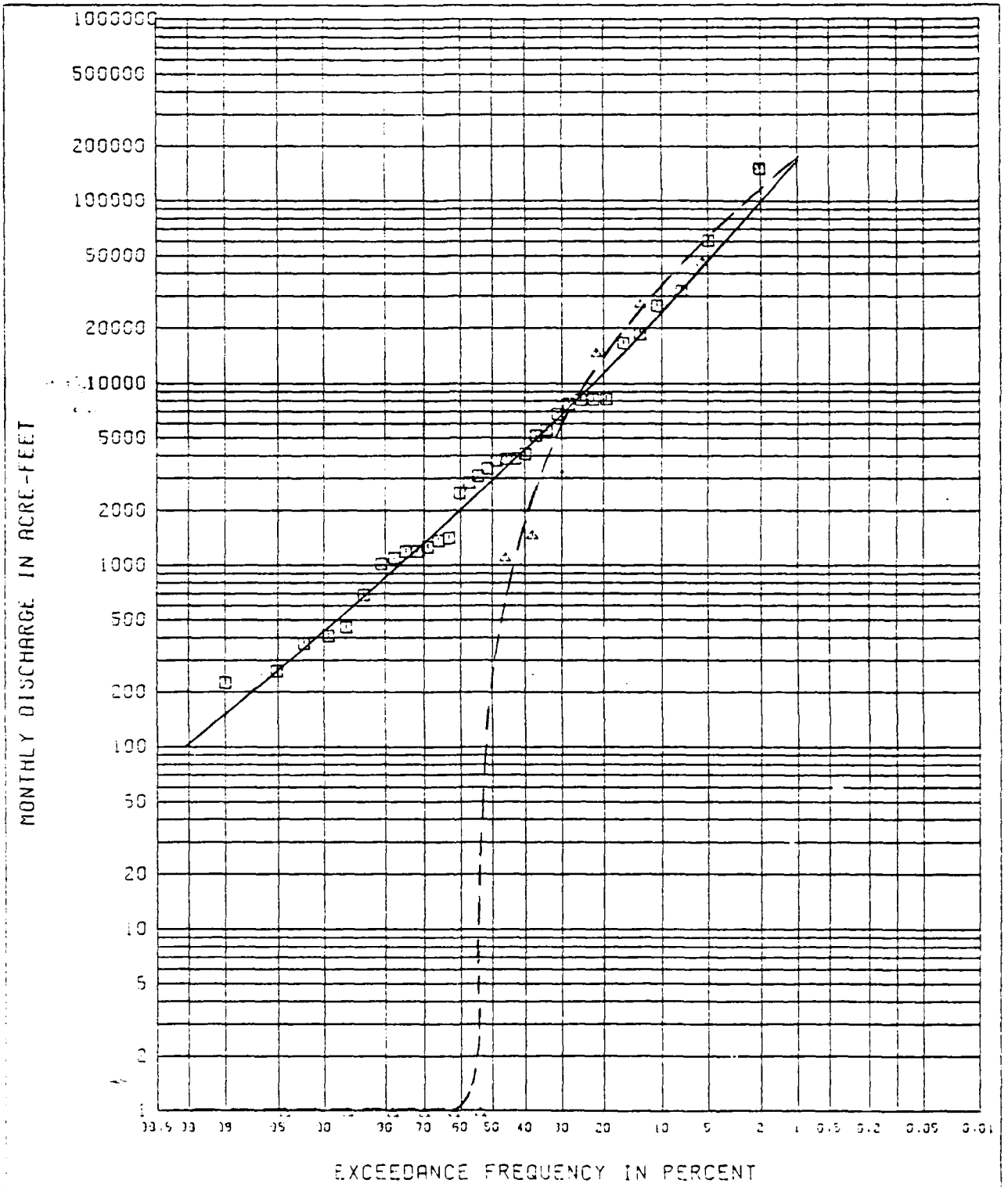
BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

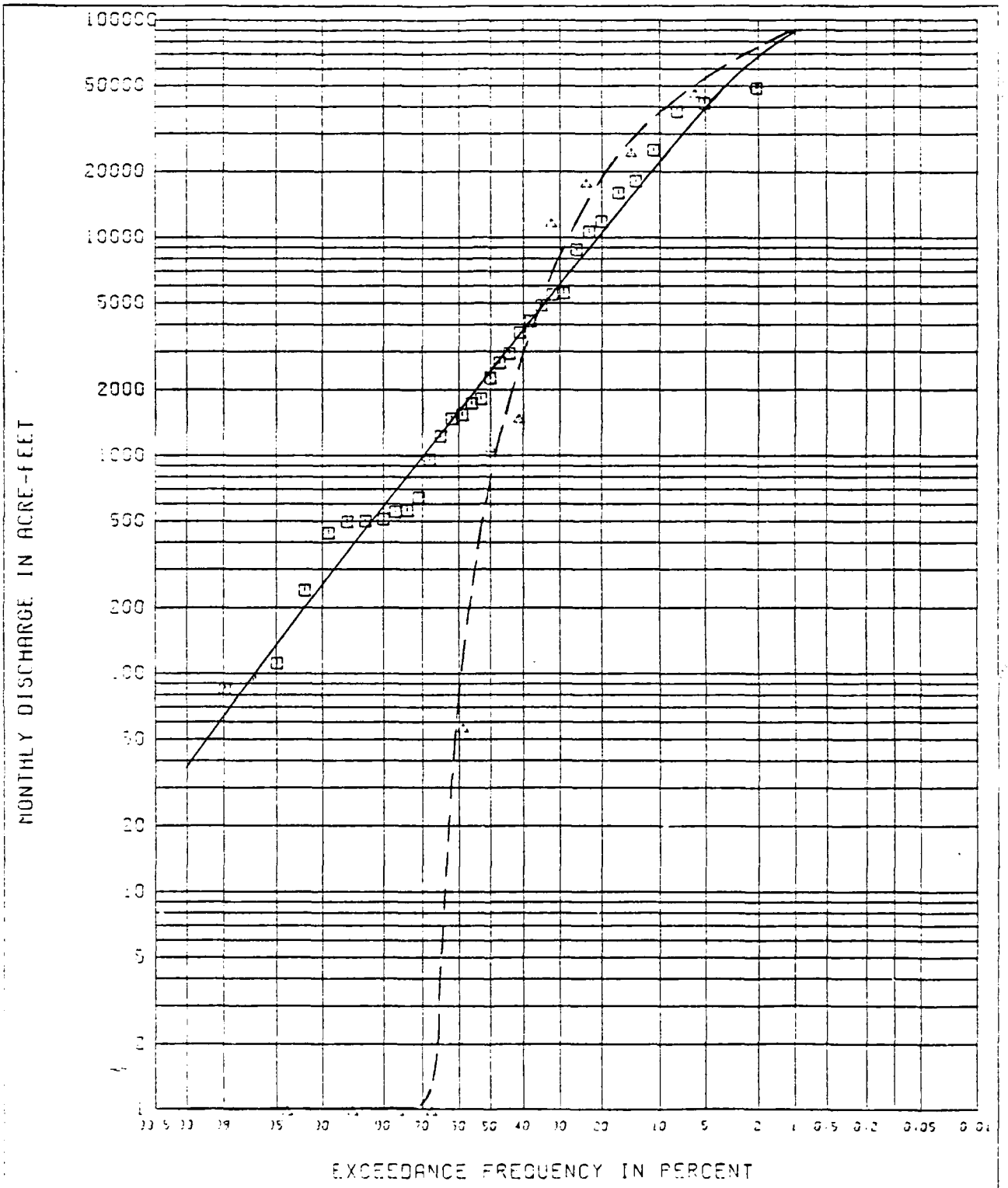
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1967-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

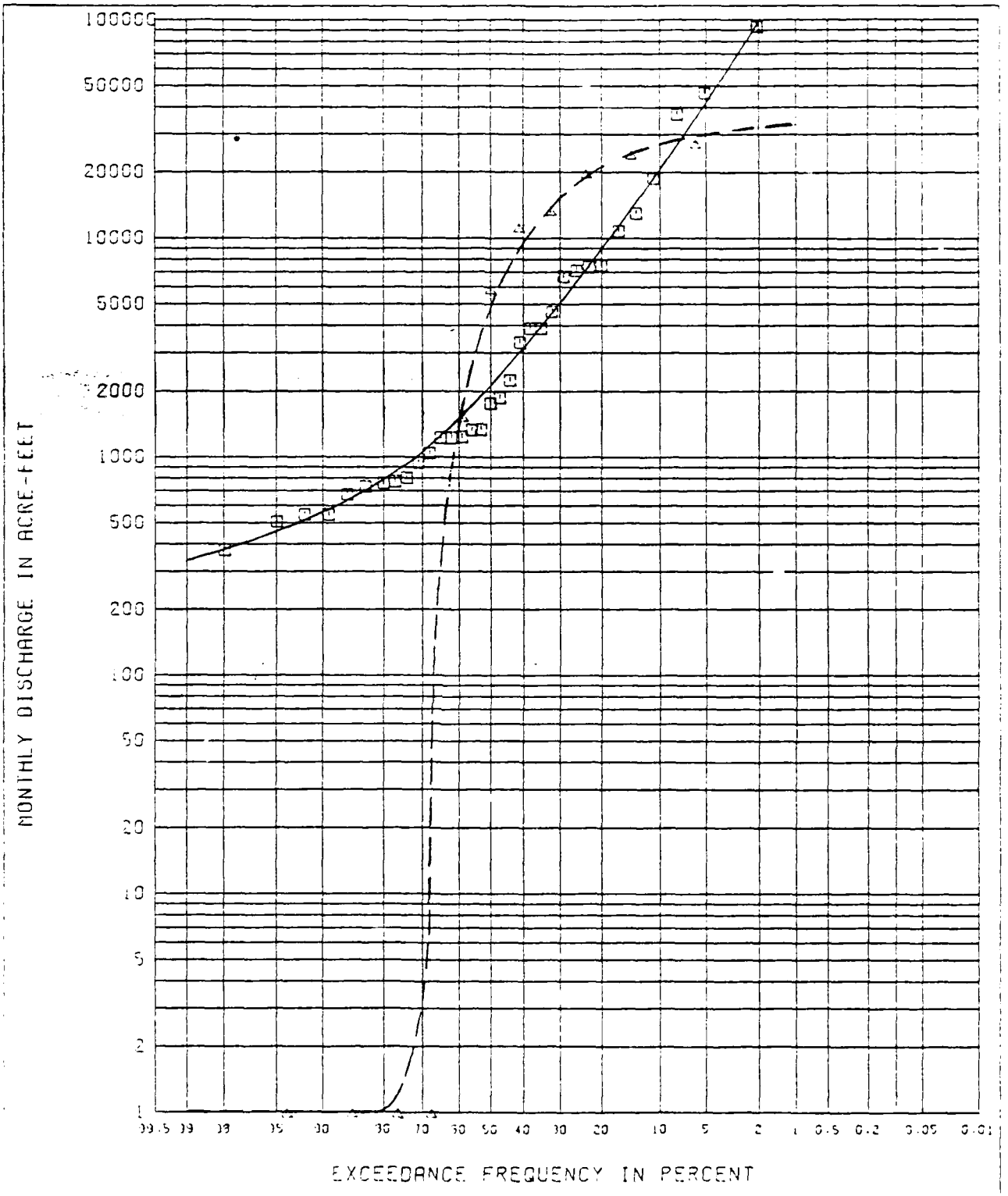
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1967-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

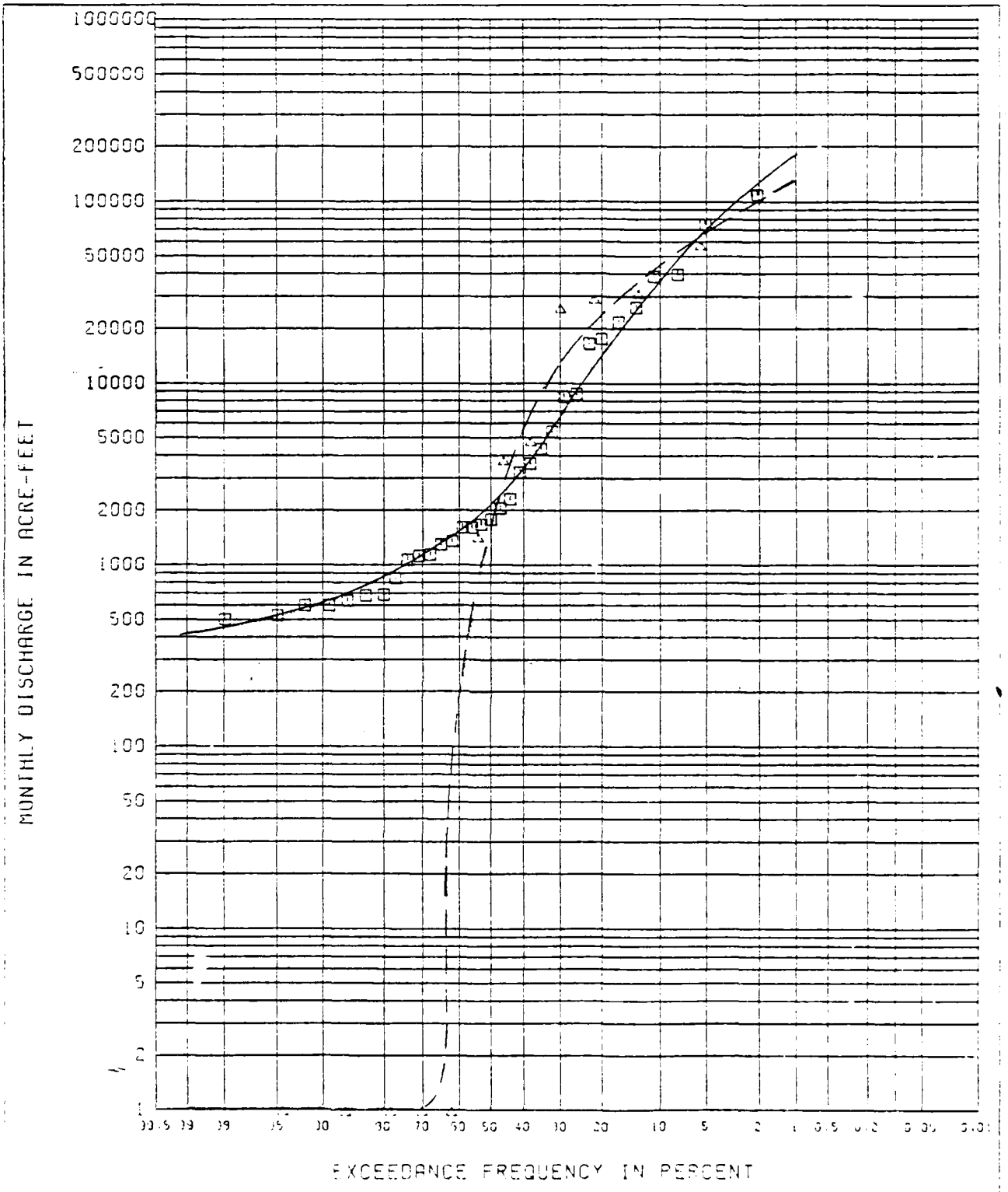
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE II

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1978)

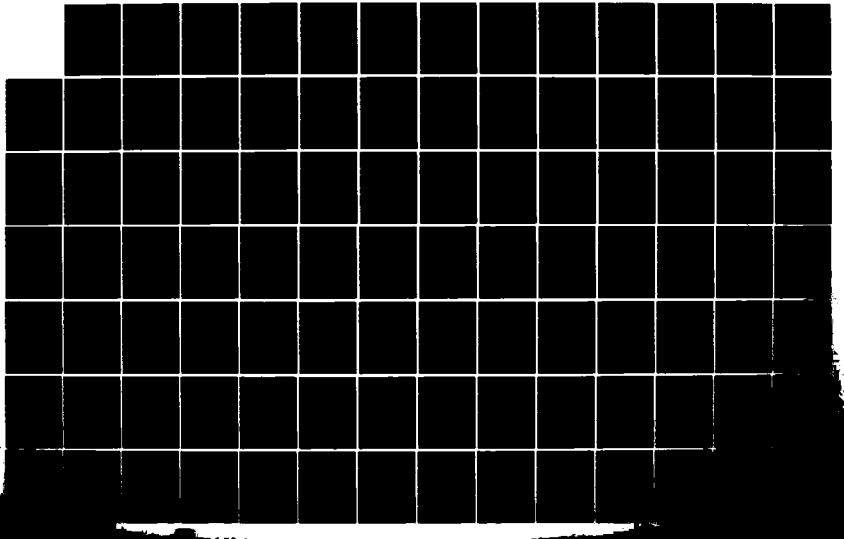
BRAZOS RIVER BASIN, TEXAS
STILLHOUSE HOLLOW LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
DECEMBER FLOWS

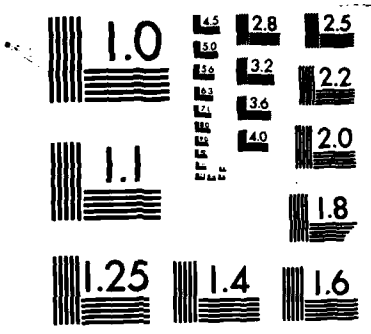
U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS
EVALUATION REPORT OF DECEMBER 1980

PLATE 12

AD-A156 497 RESERVOIR CONTROL CENTER: ACTIVITIES AND ACCOMPLISHMENTS OF THE SOUTHWEST..(U) CORPS OF ENGINEERS DALLAS TX SOUTHWESTERN DIV JAN 81 6/7

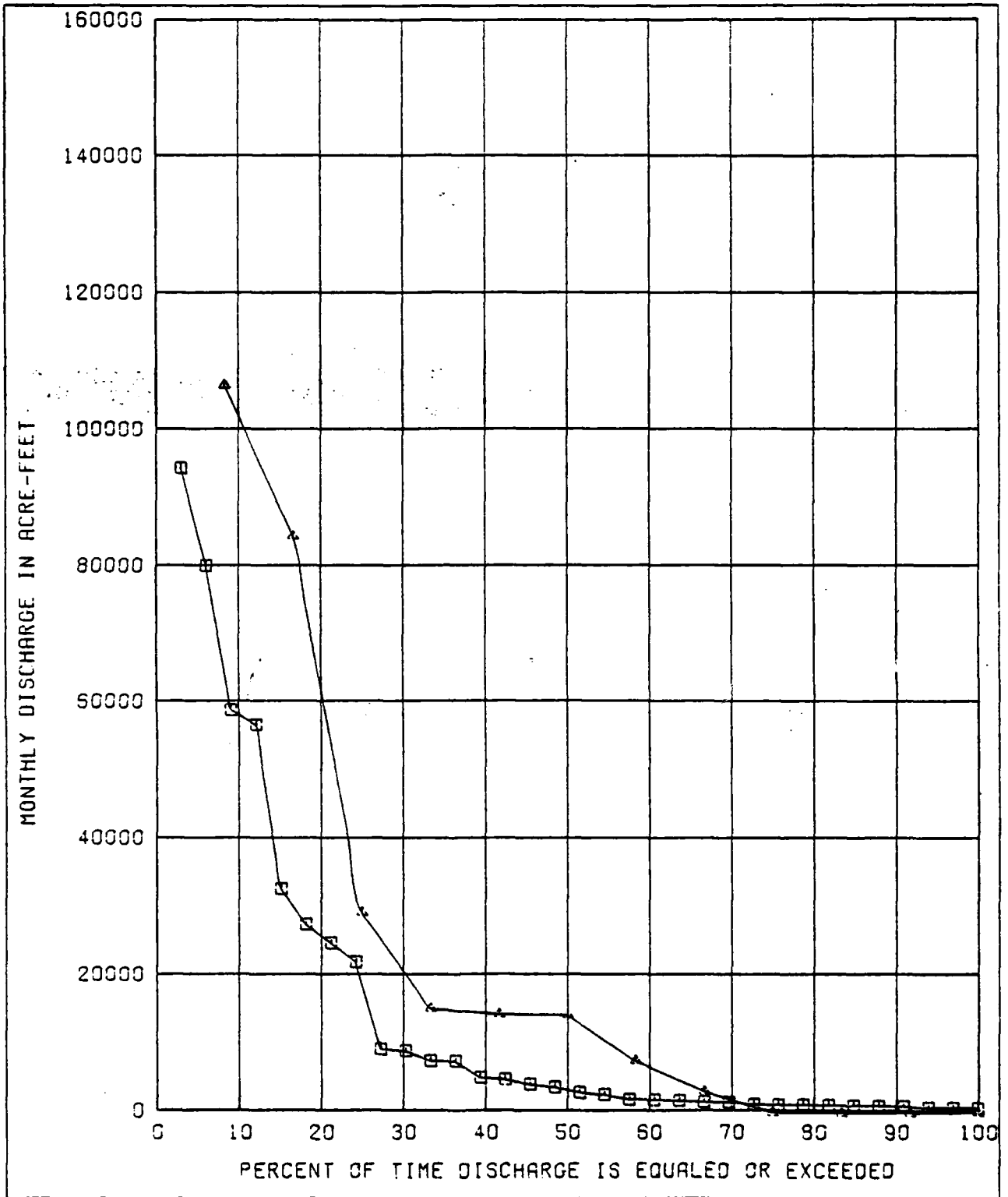
UNCLASSIFIED F/G 13/2 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

FLOW DURATION CURVES AT DAM SITE

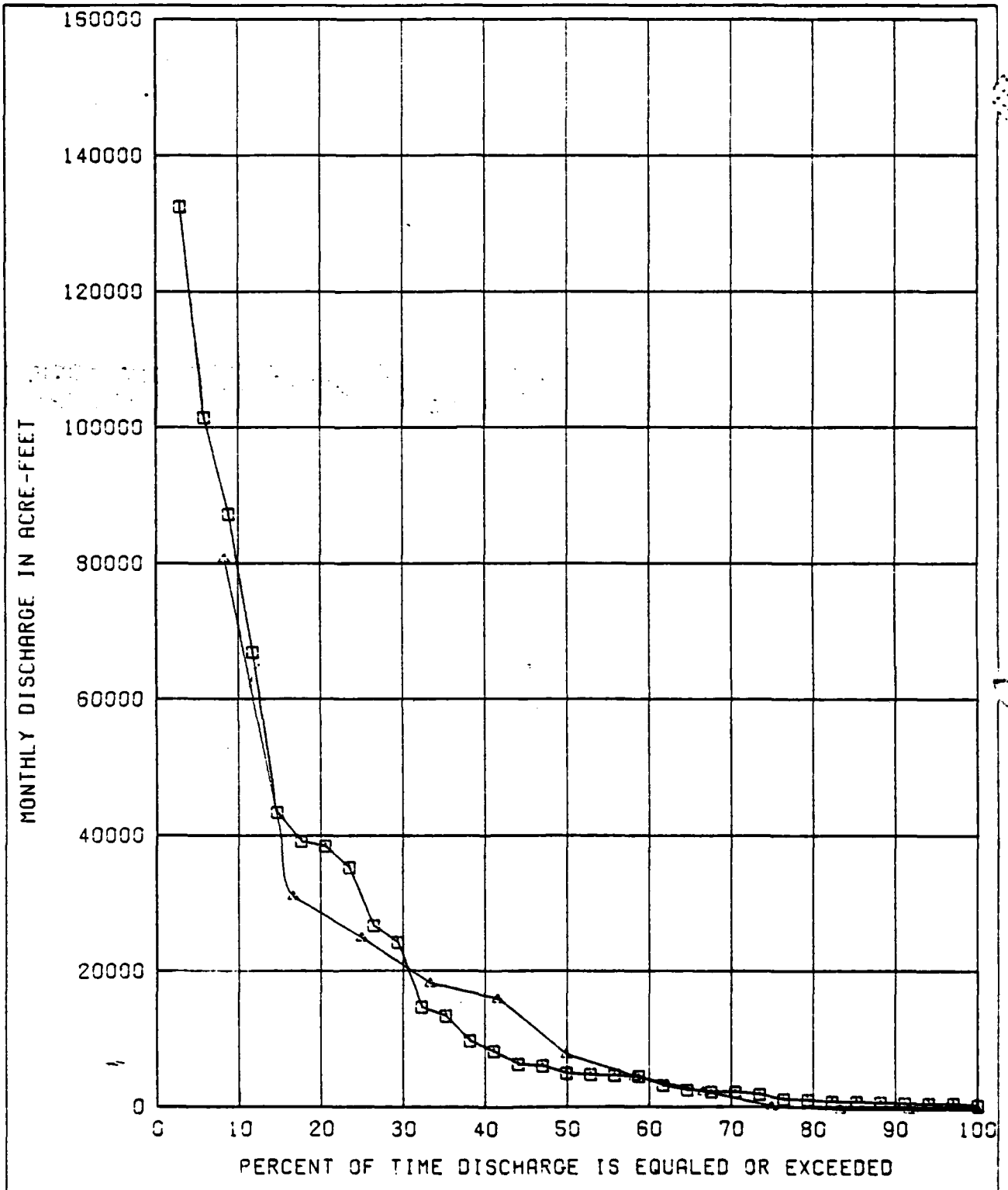
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1957-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

FLOW DURATION CURVES AT DAM SITE

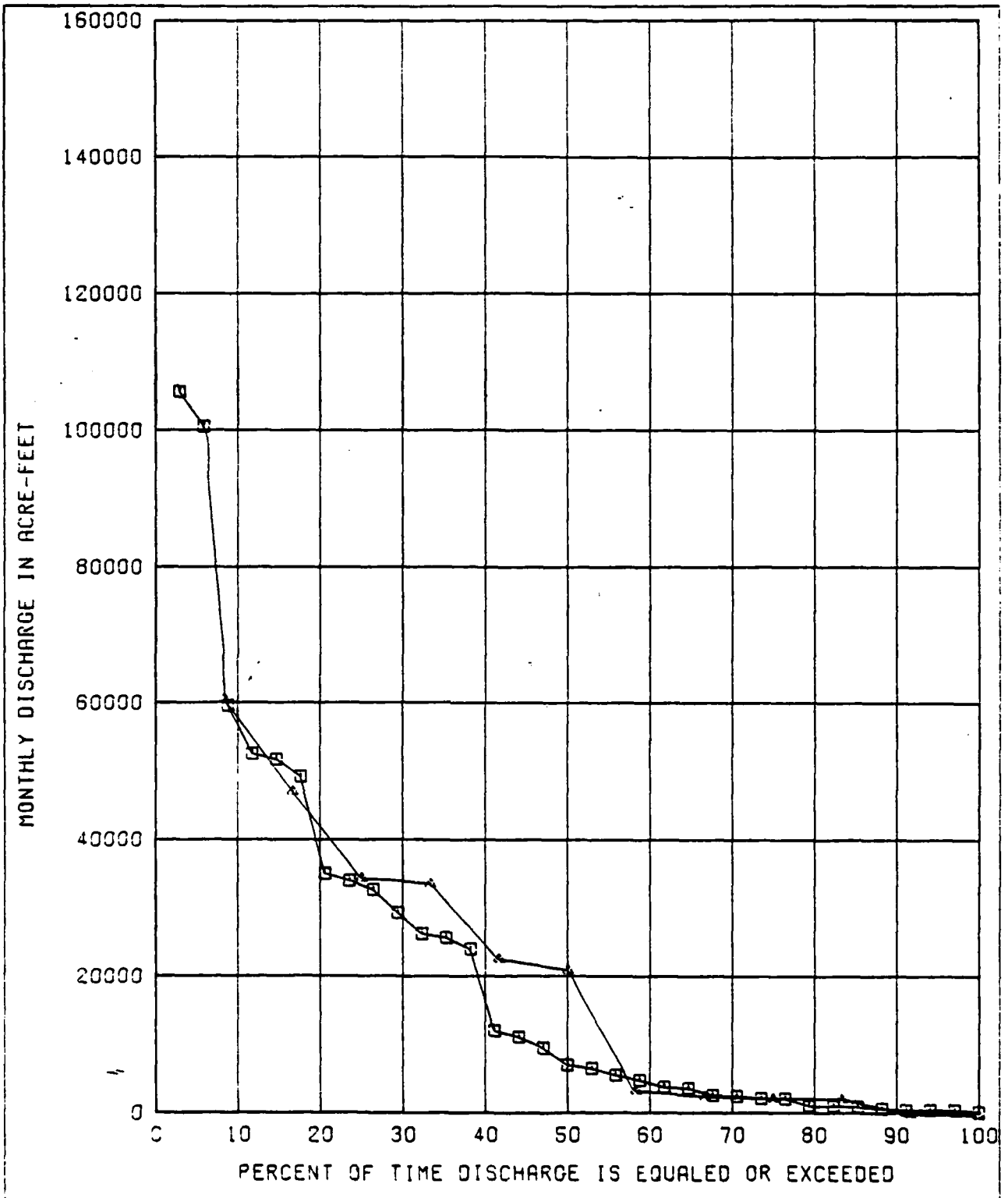
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

FLOW DURATION CURVES AT DAM SITE

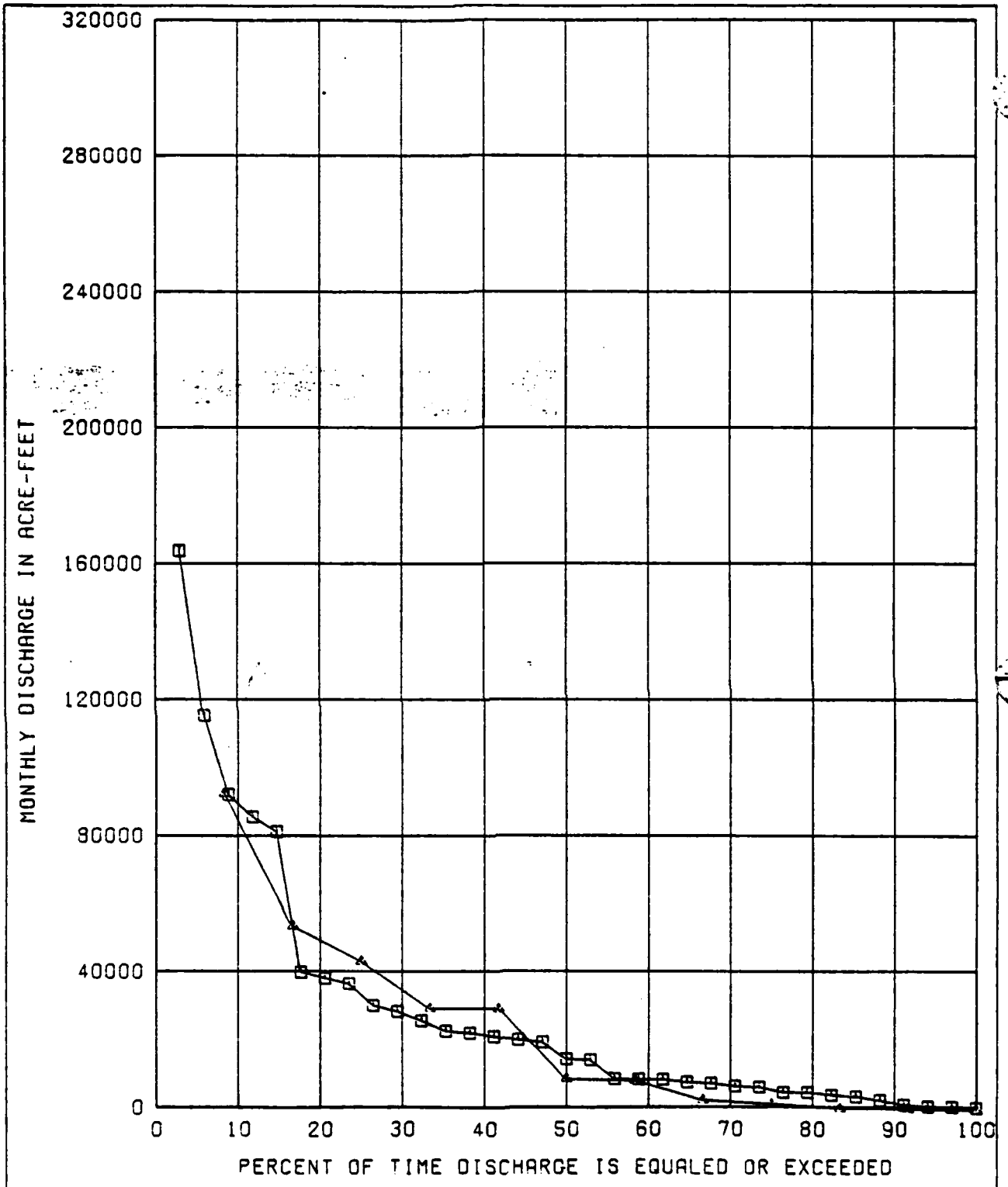
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1967-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

FLOW DURATION CURVES AT DAM SITE

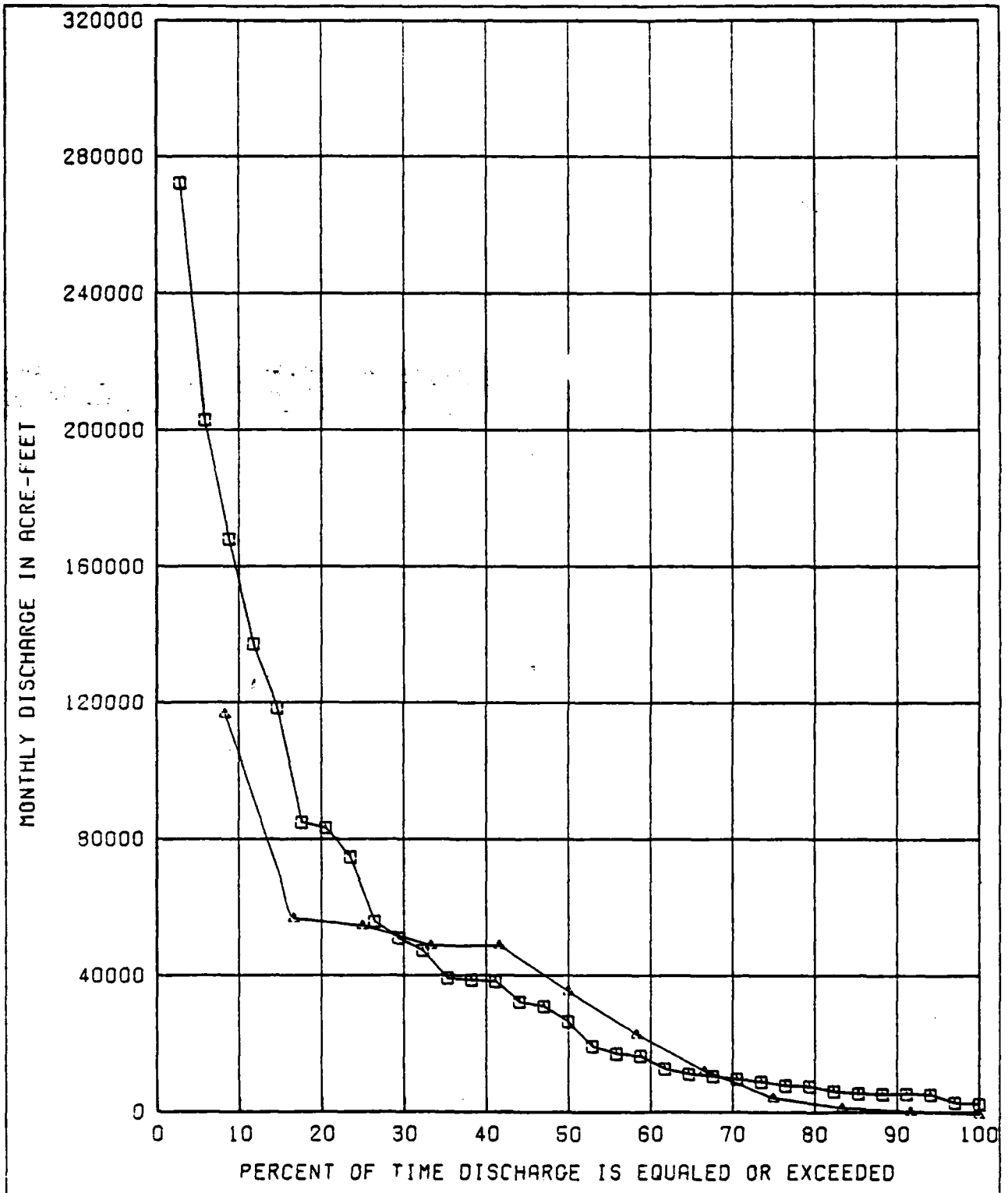
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1967-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

FLOW DURATION CURVES AT DAM SITE

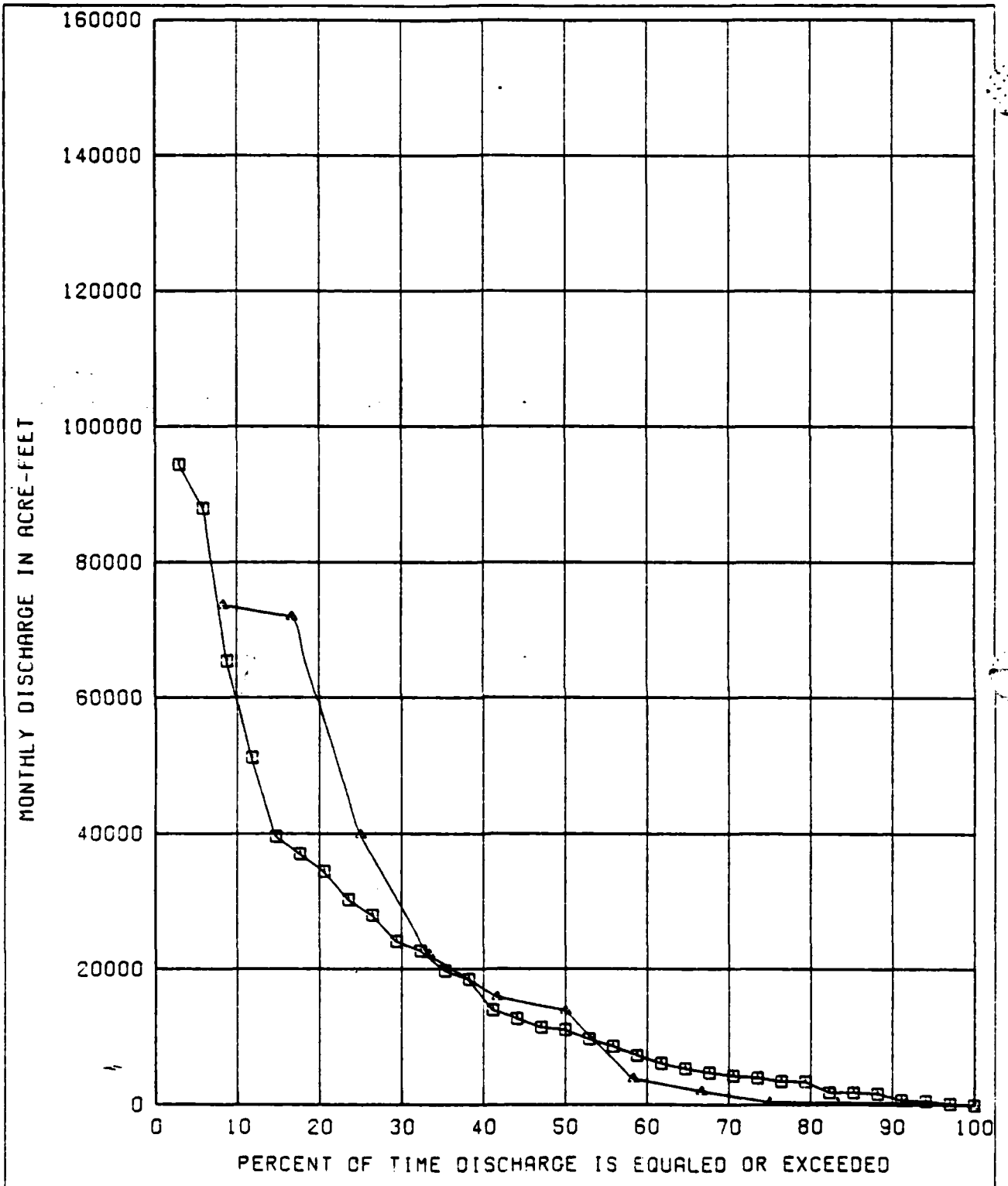
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1967-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

FLOW DURATION CURVES AT DAM SITE

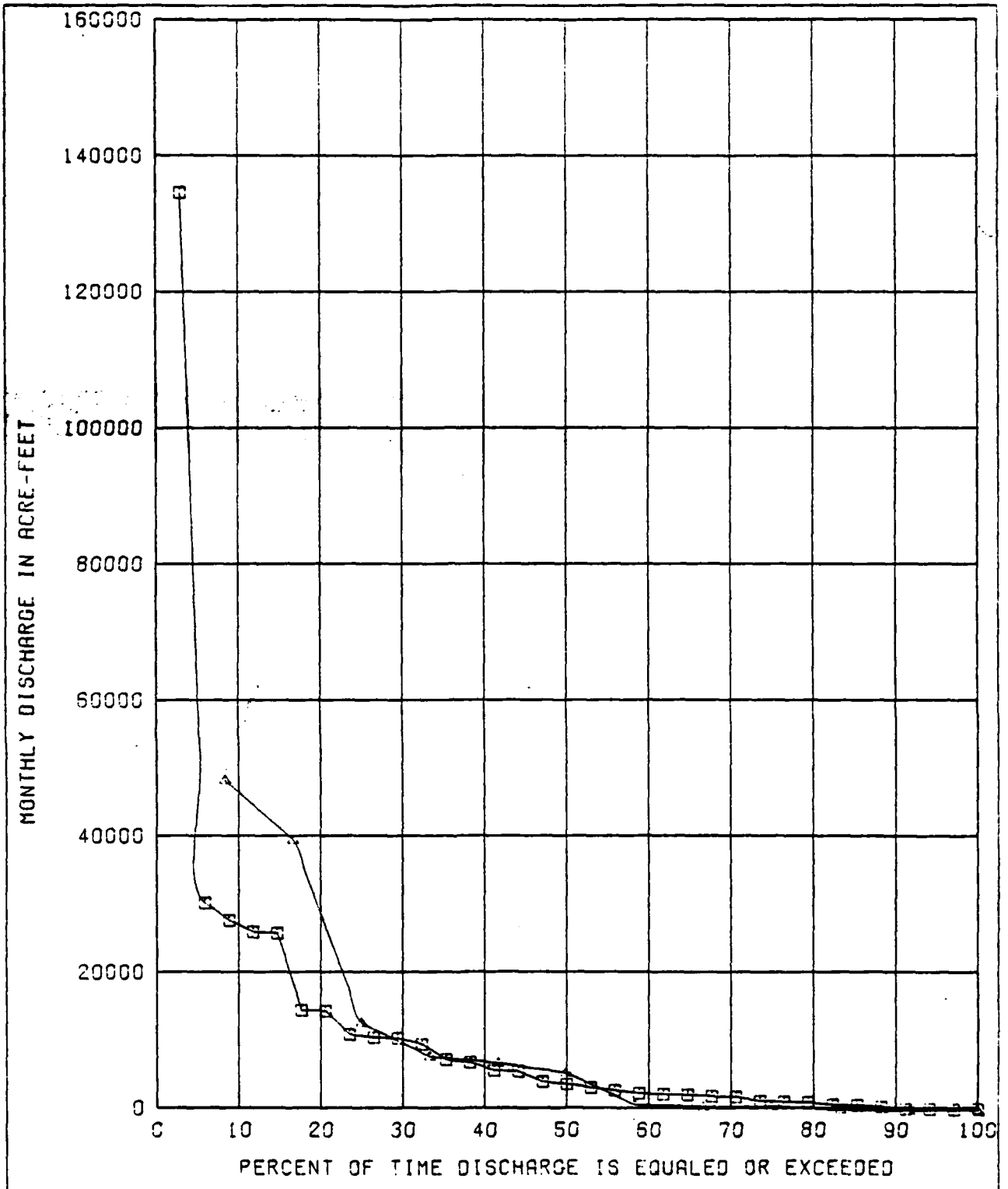
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1967-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

FLOW DURATION CURVES AT DAM SITE

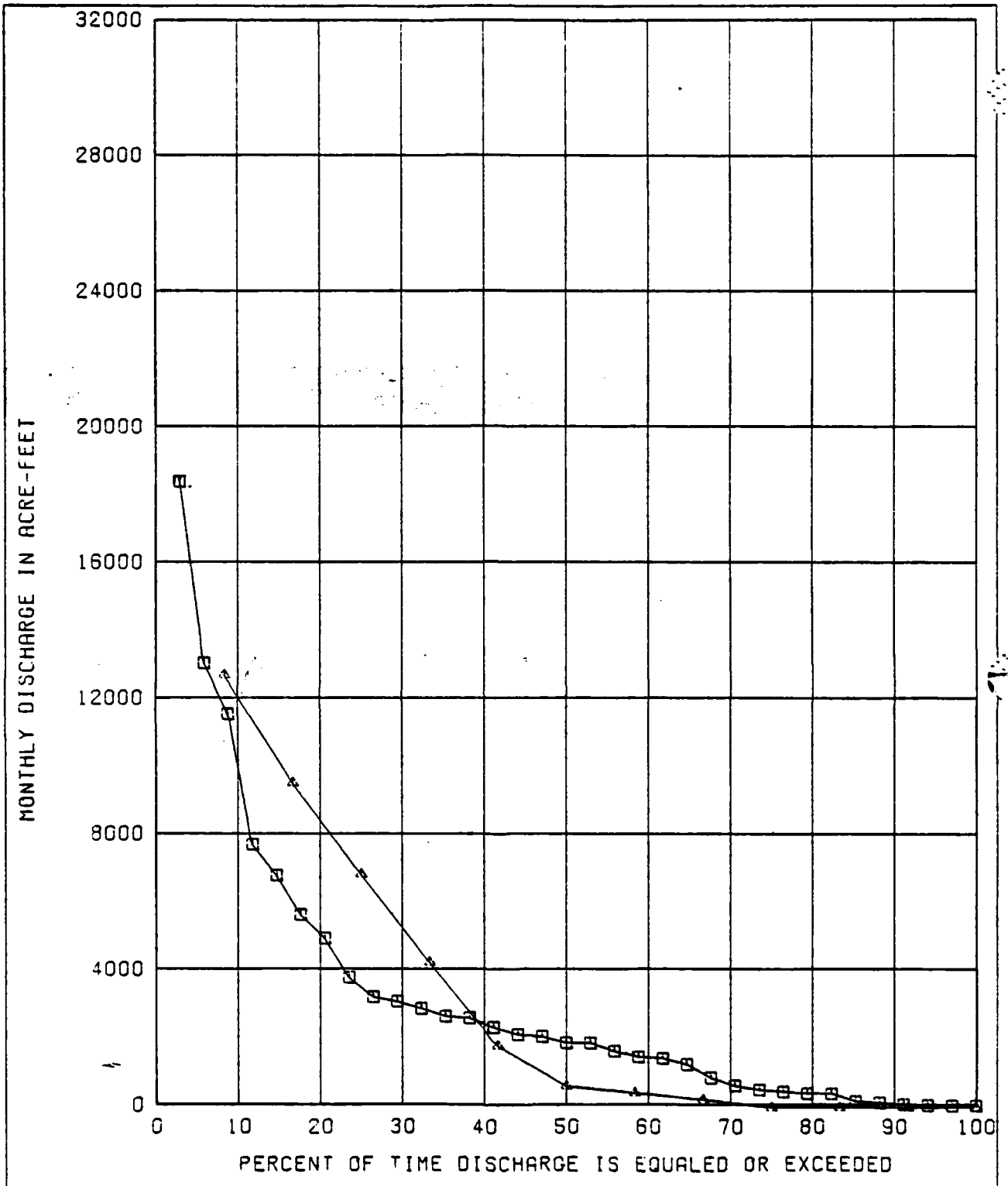
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1967-1978)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

FLOW DURATION CURVES AT DAM SITE

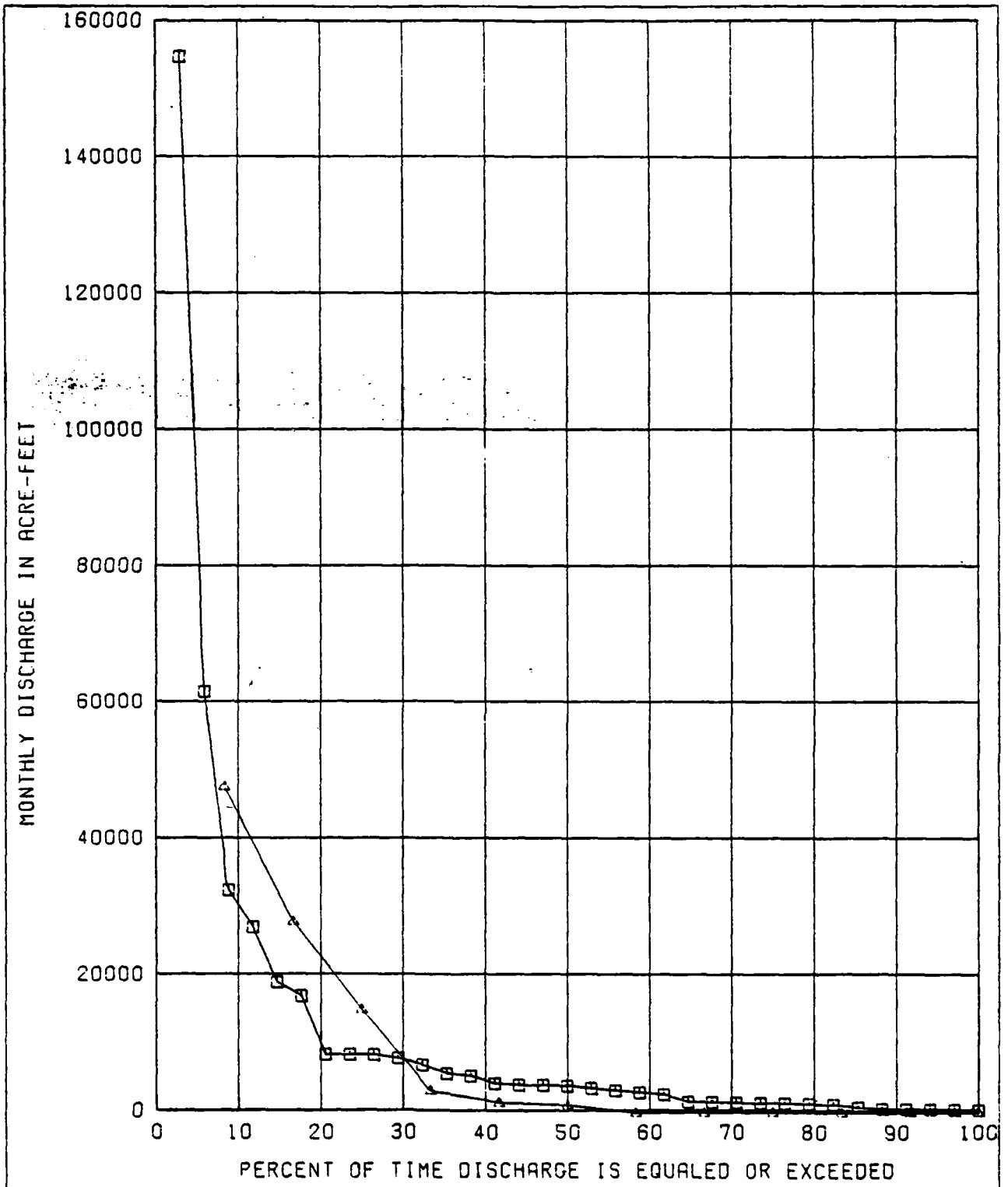
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1967-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

FLOW DURATION CURVES AT DAM SITE

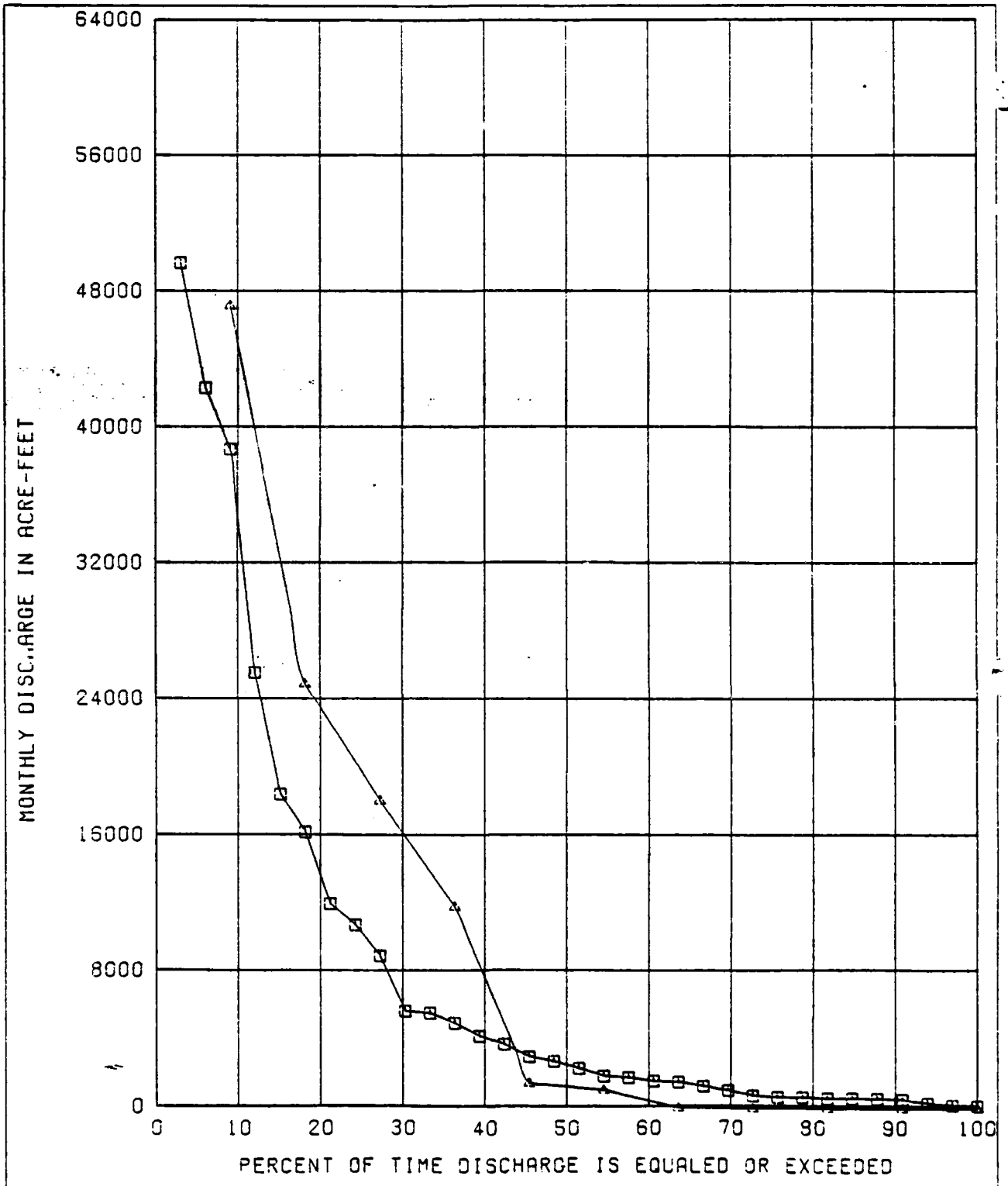
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1967-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

FLOW DURATION CURVES AT DAM SITE

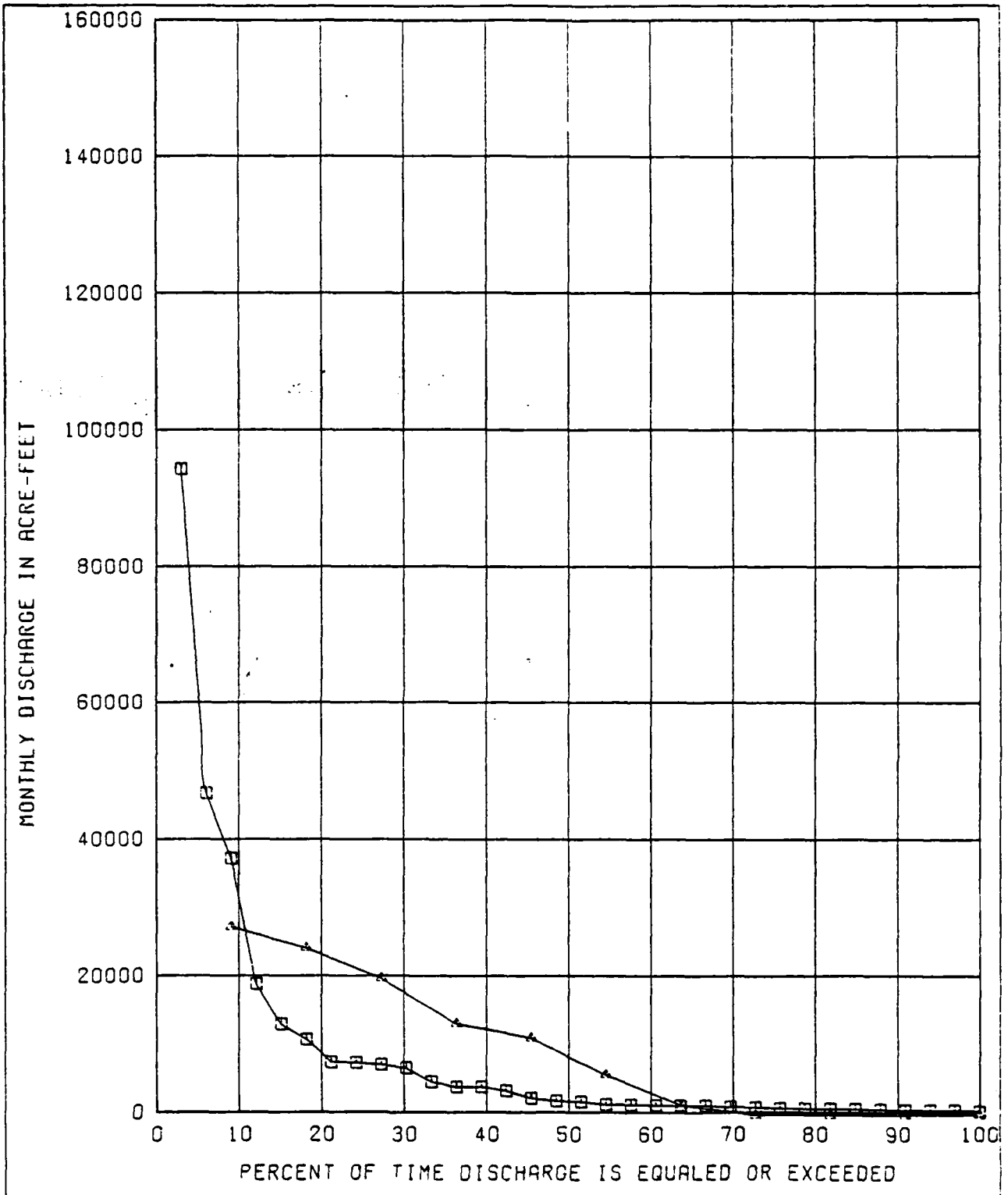
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1967-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

FLOW DURATION CURVES AT DAM SITE

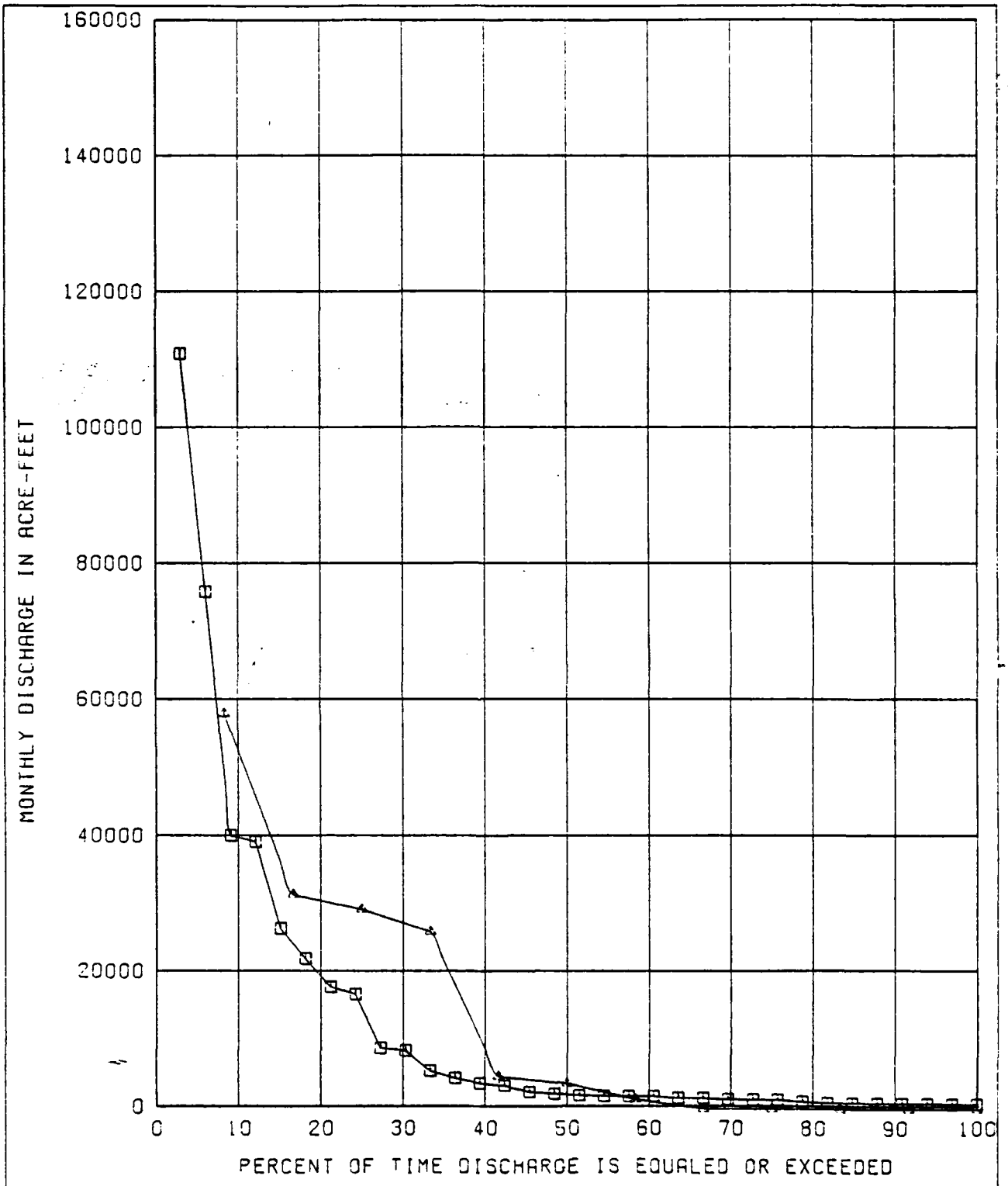
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1957)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1957-1979)

BRAZOS RIVER BASIN, TEXAS

STILLHOUSE HOLLOW LAKE

FLOW DURATION CURVES AT DAM SITE

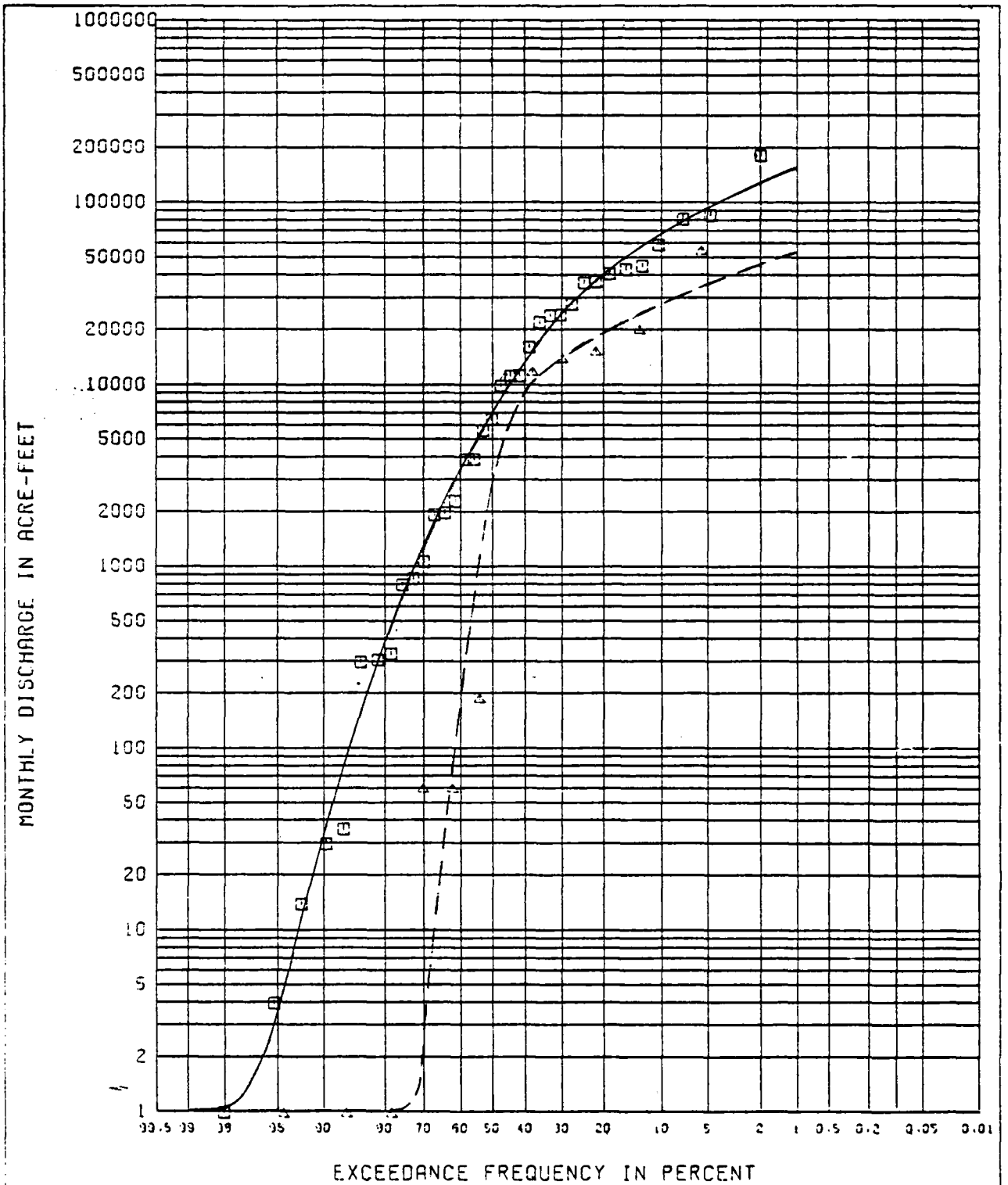
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990.

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

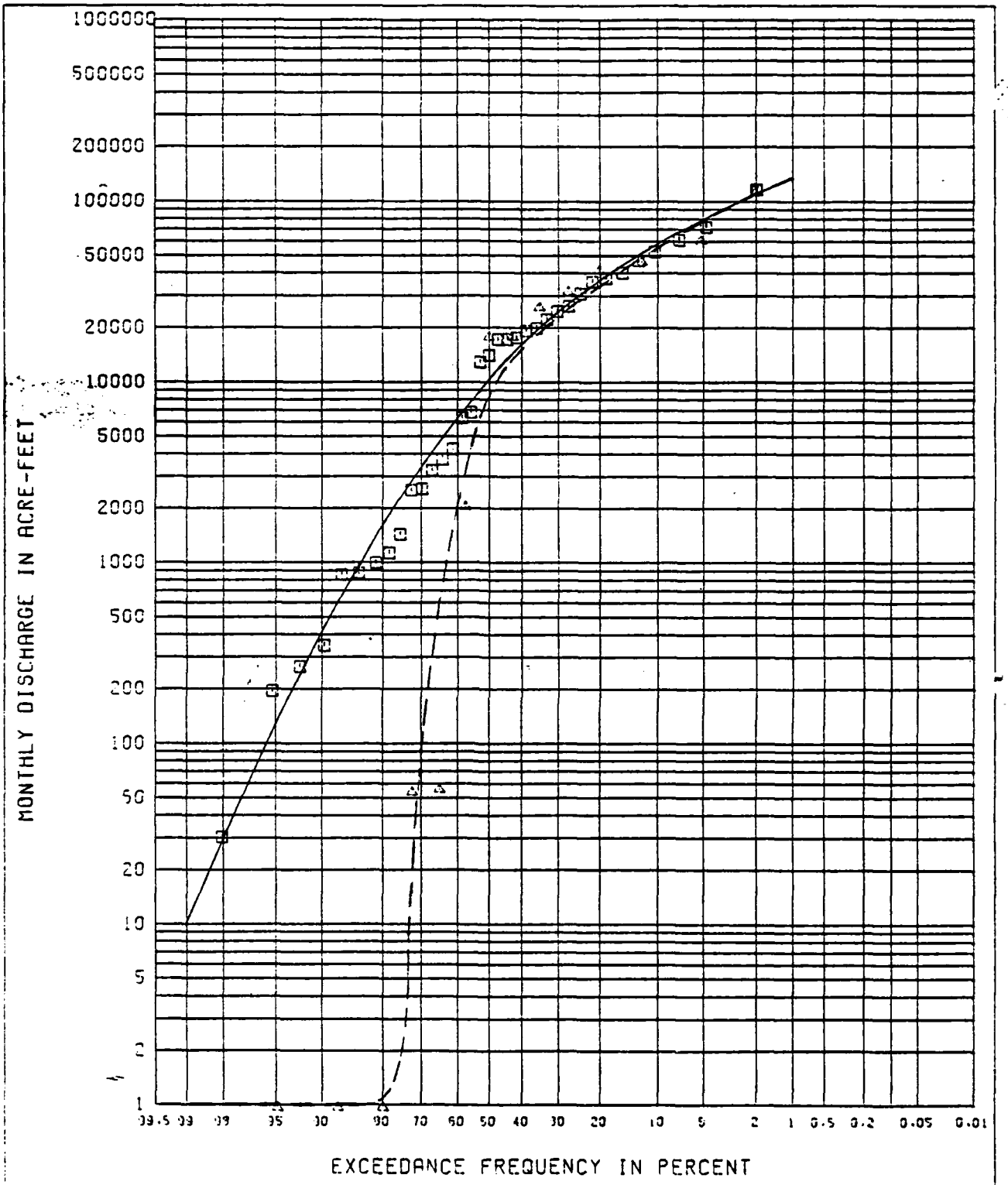
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

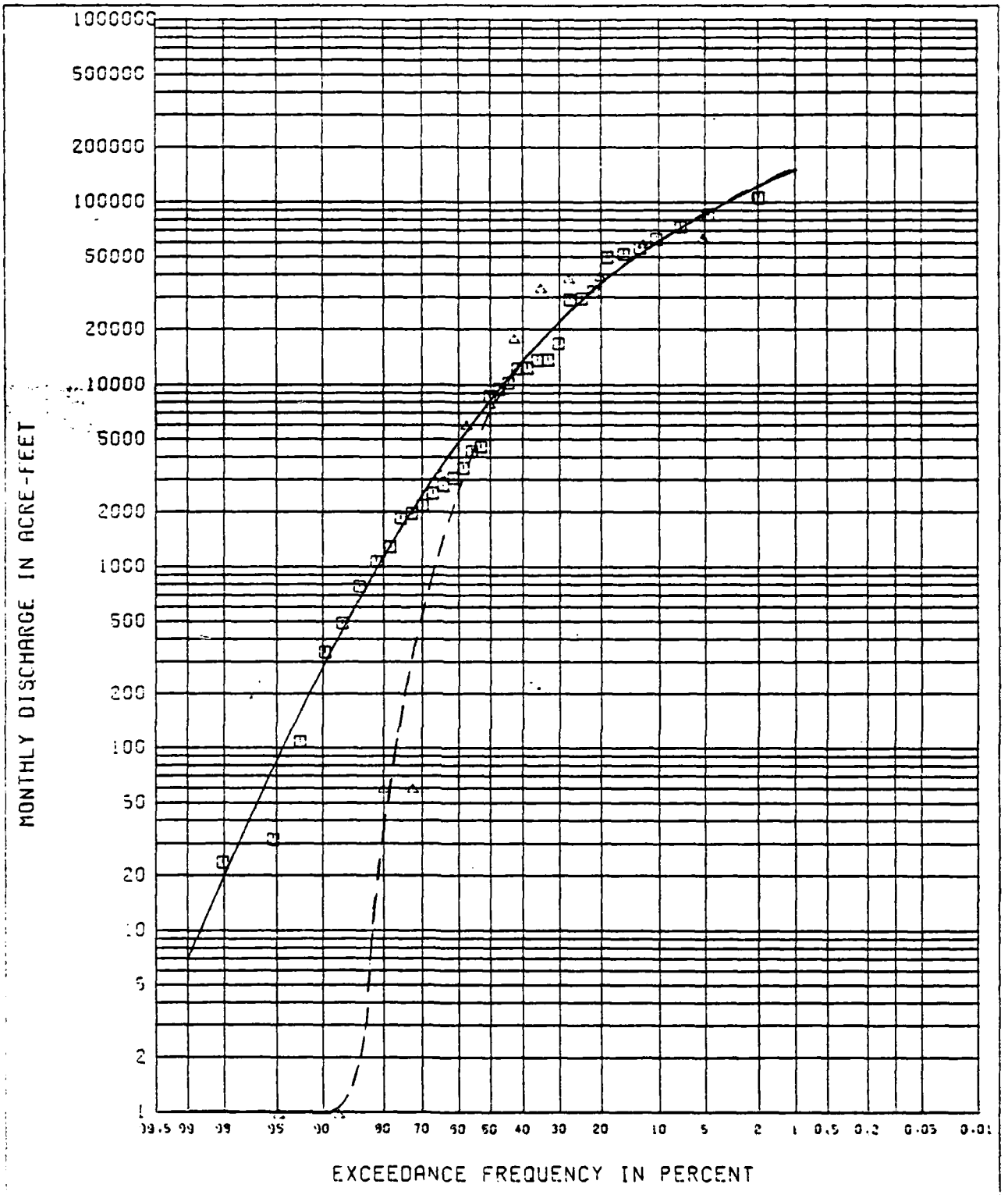
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1978)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

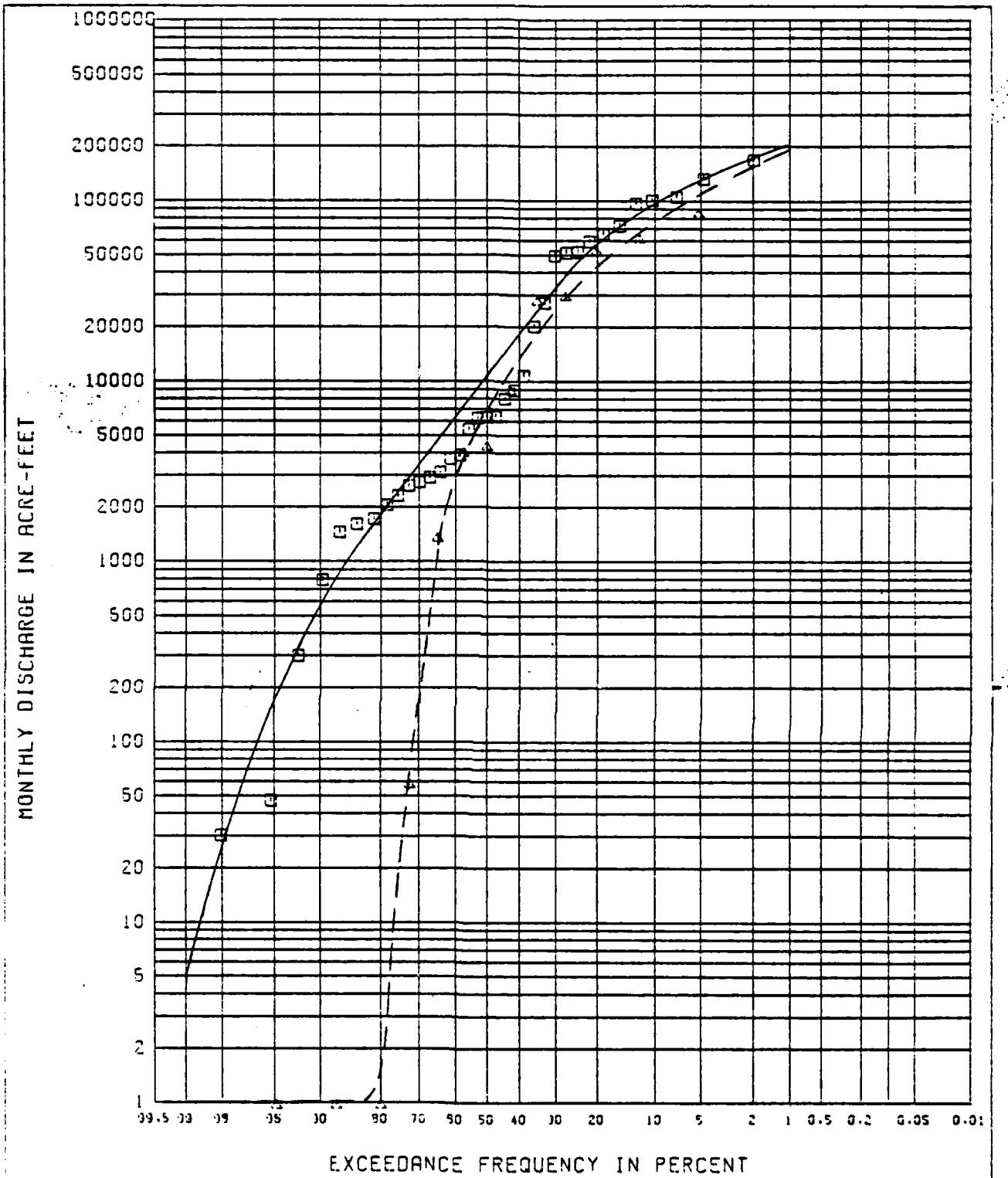
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

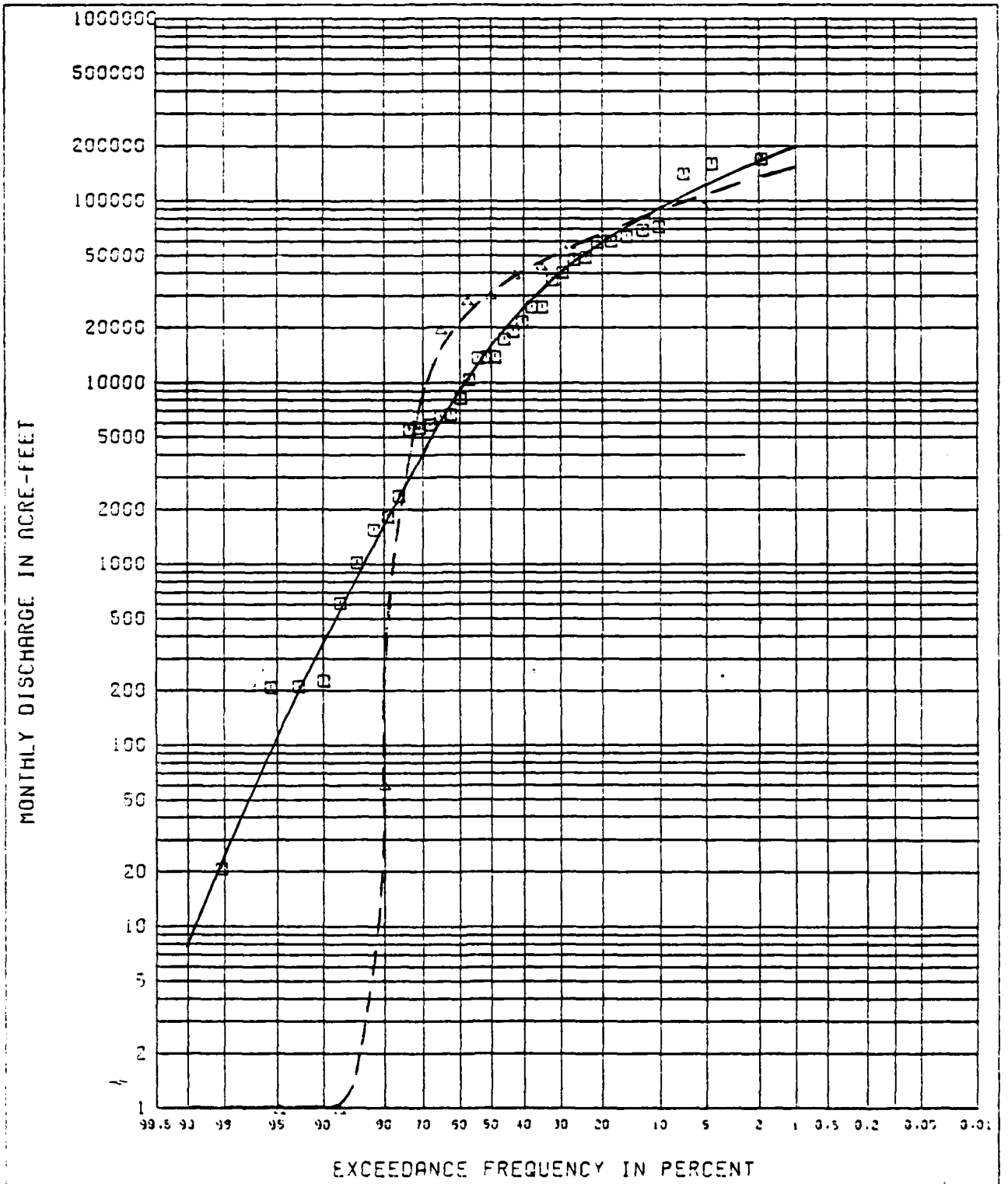
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

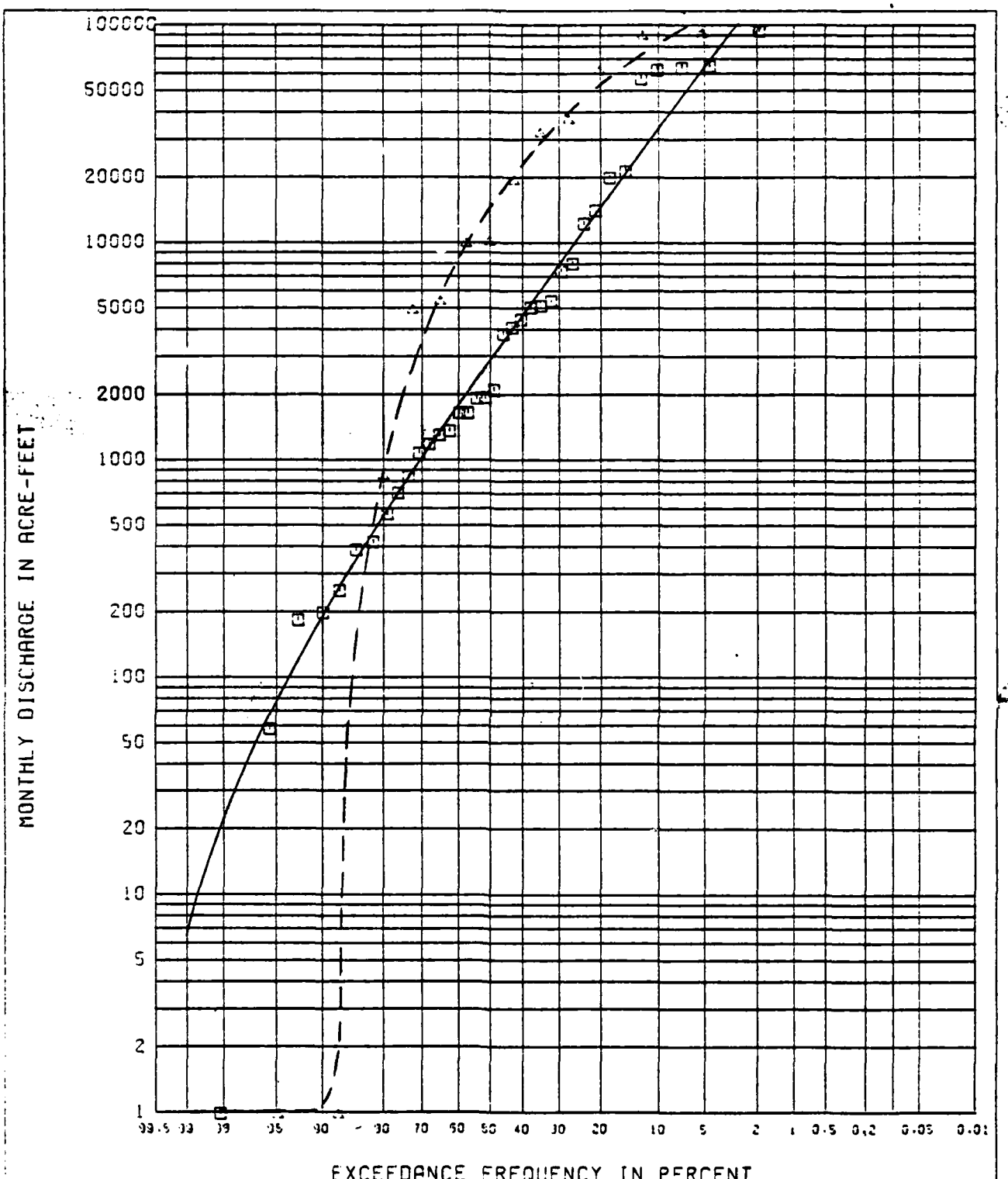
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

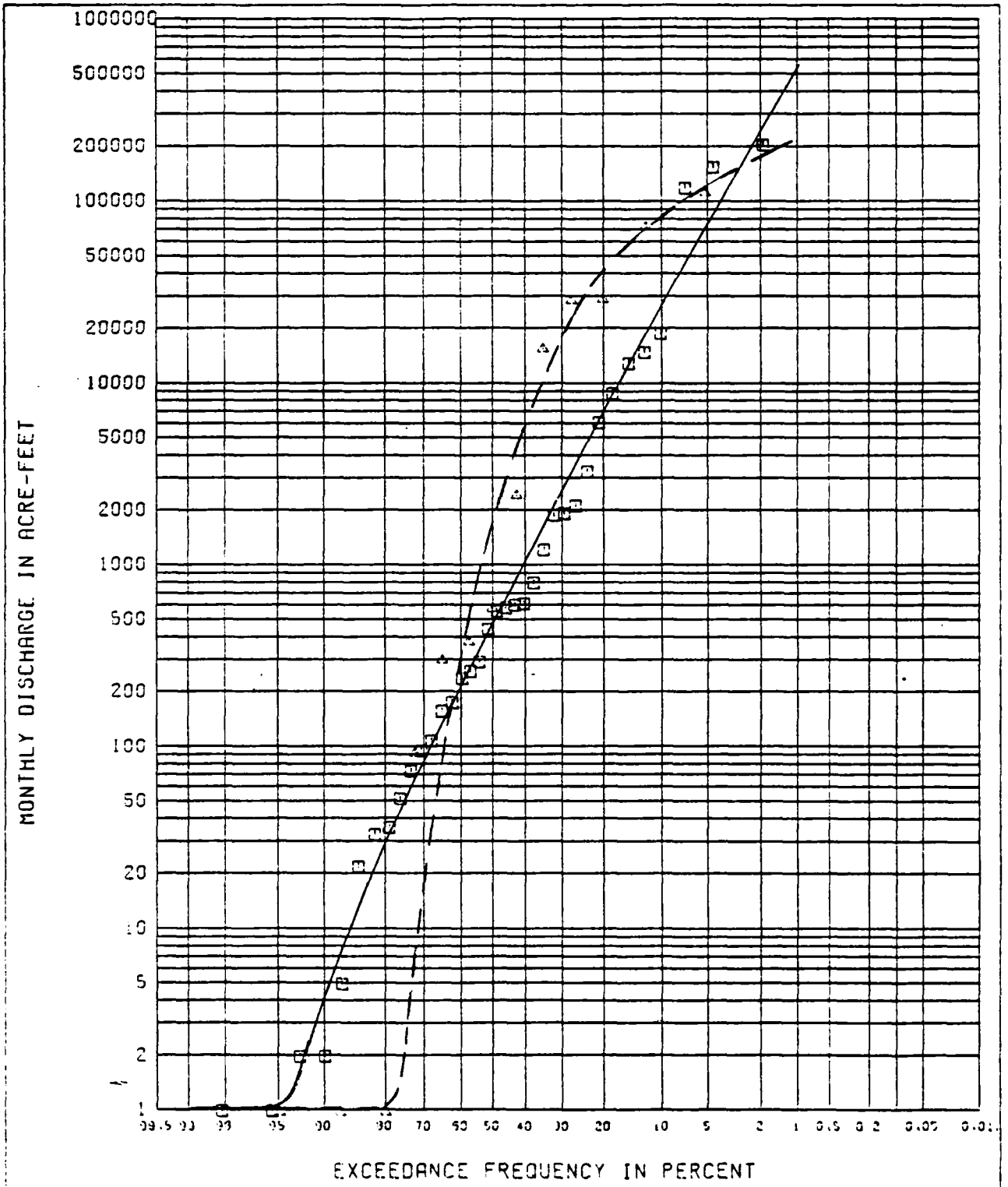
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1959)

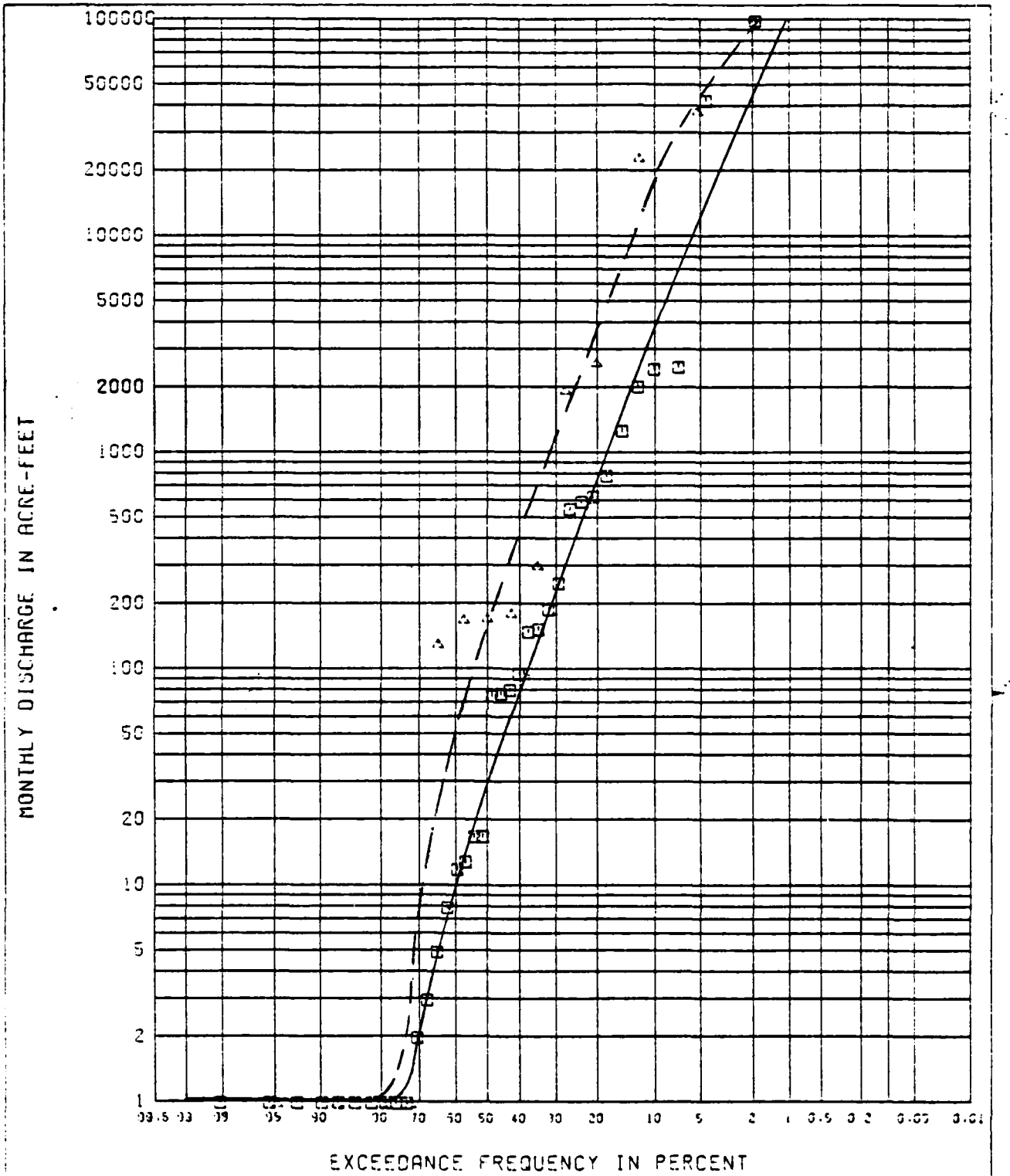
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS
SOMERVILLE LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

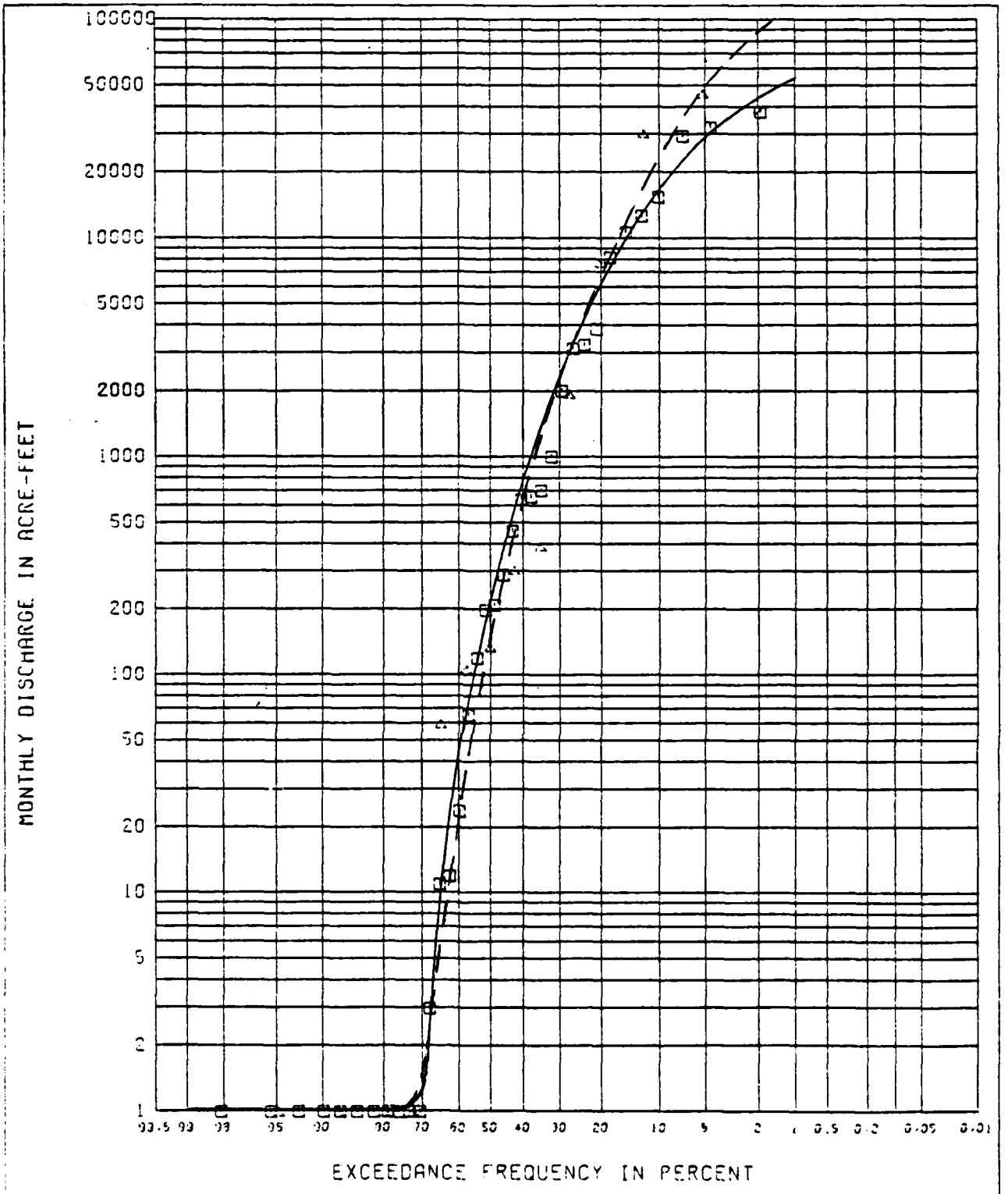
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

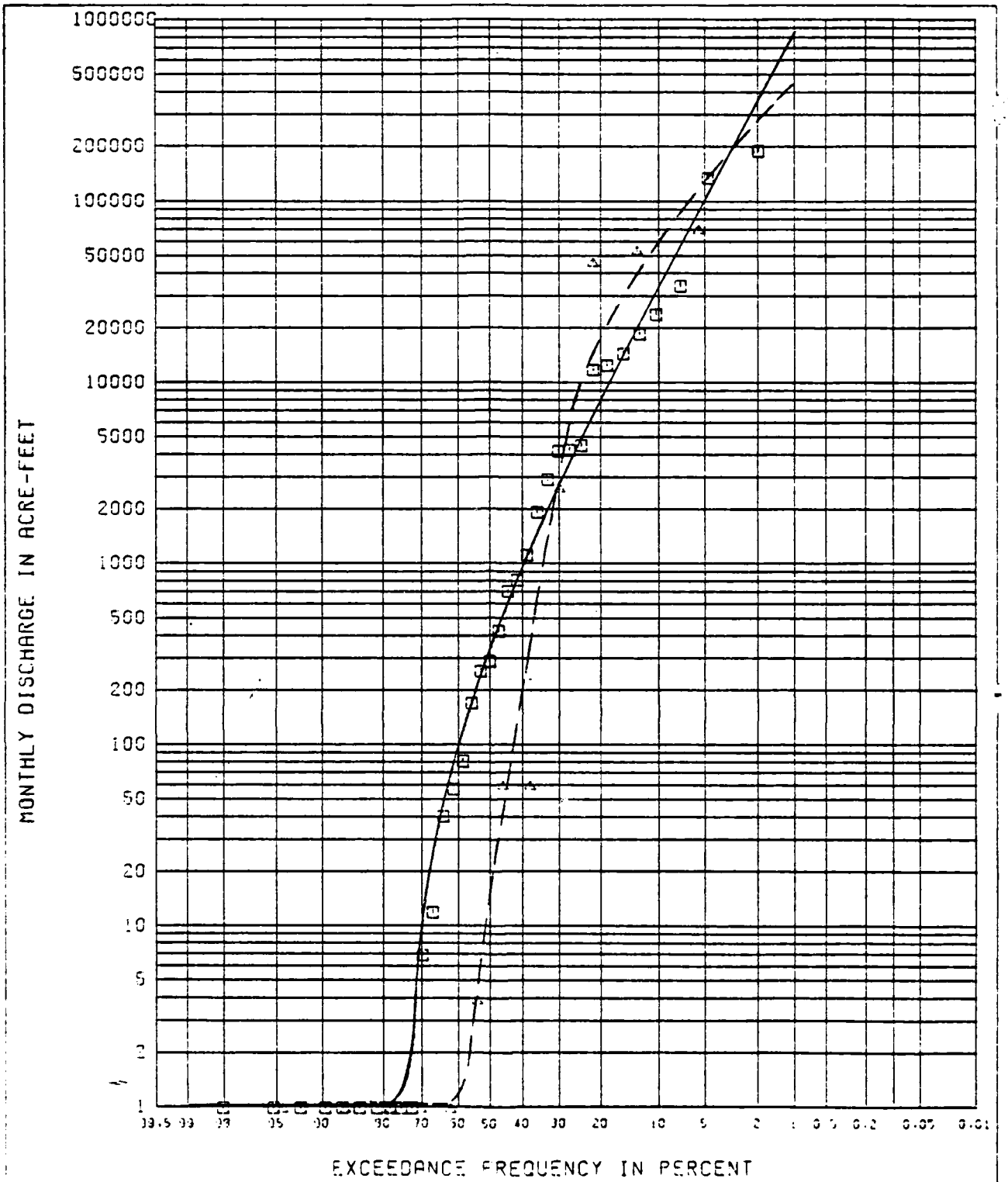
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

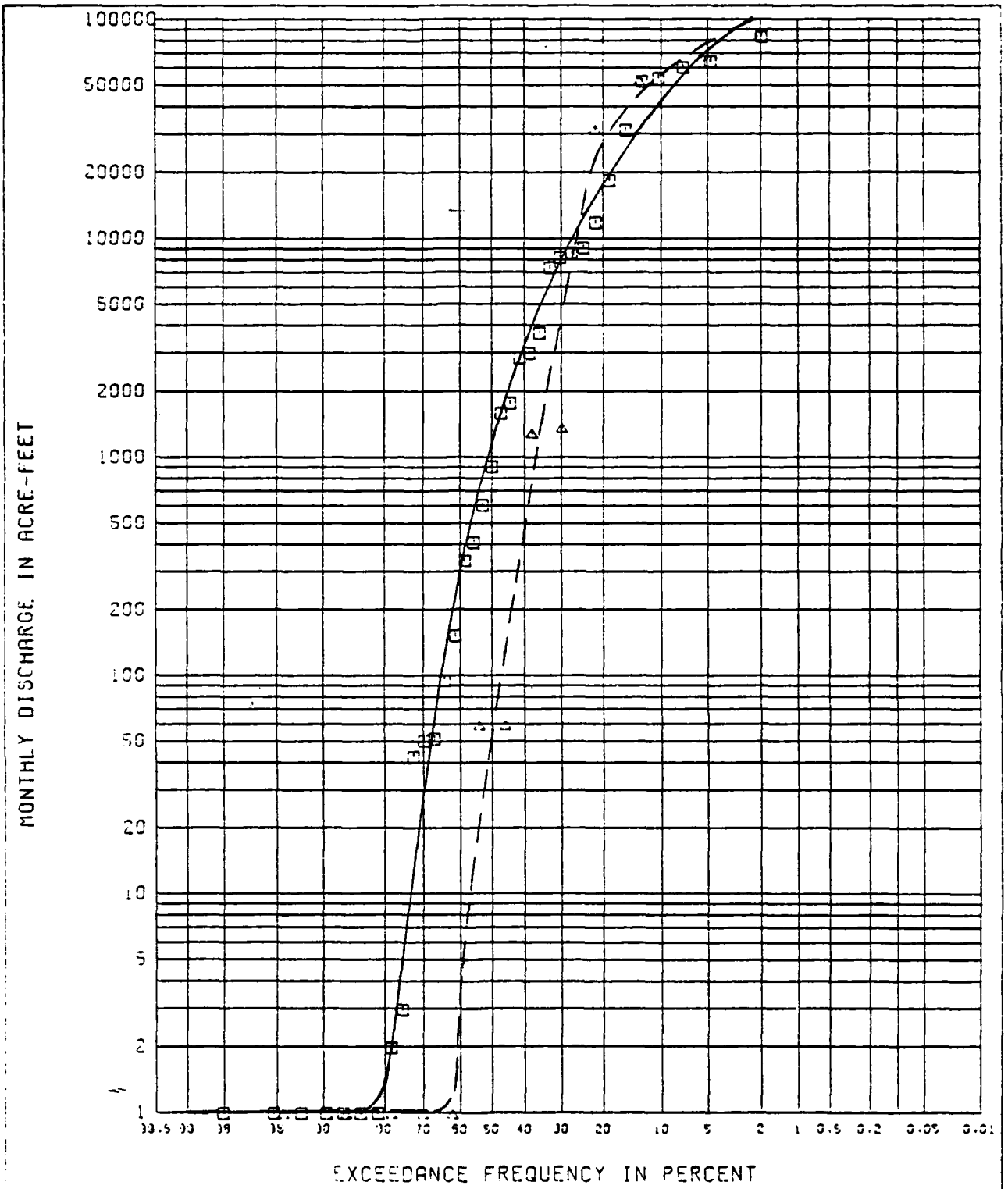
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

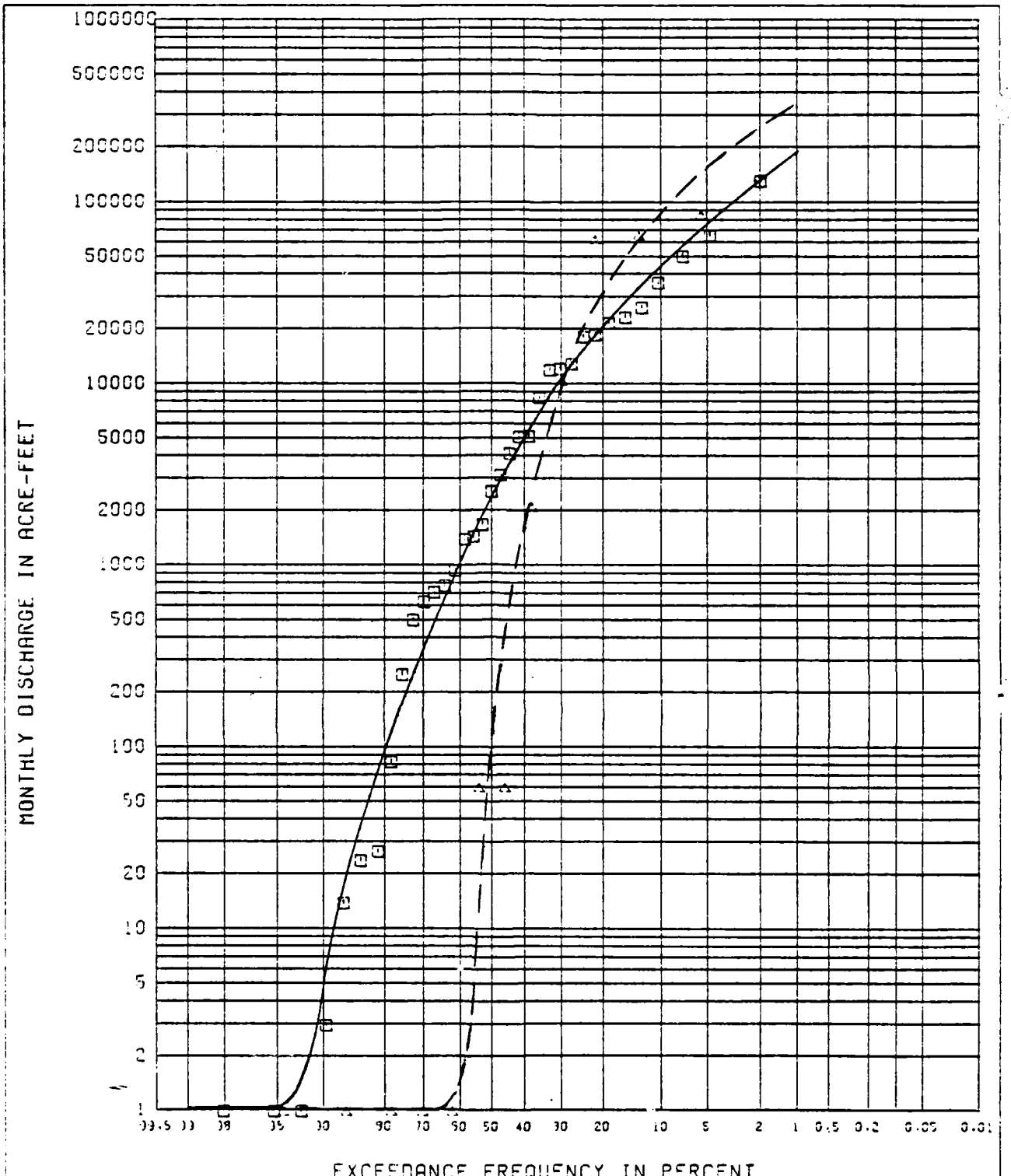
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1968-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

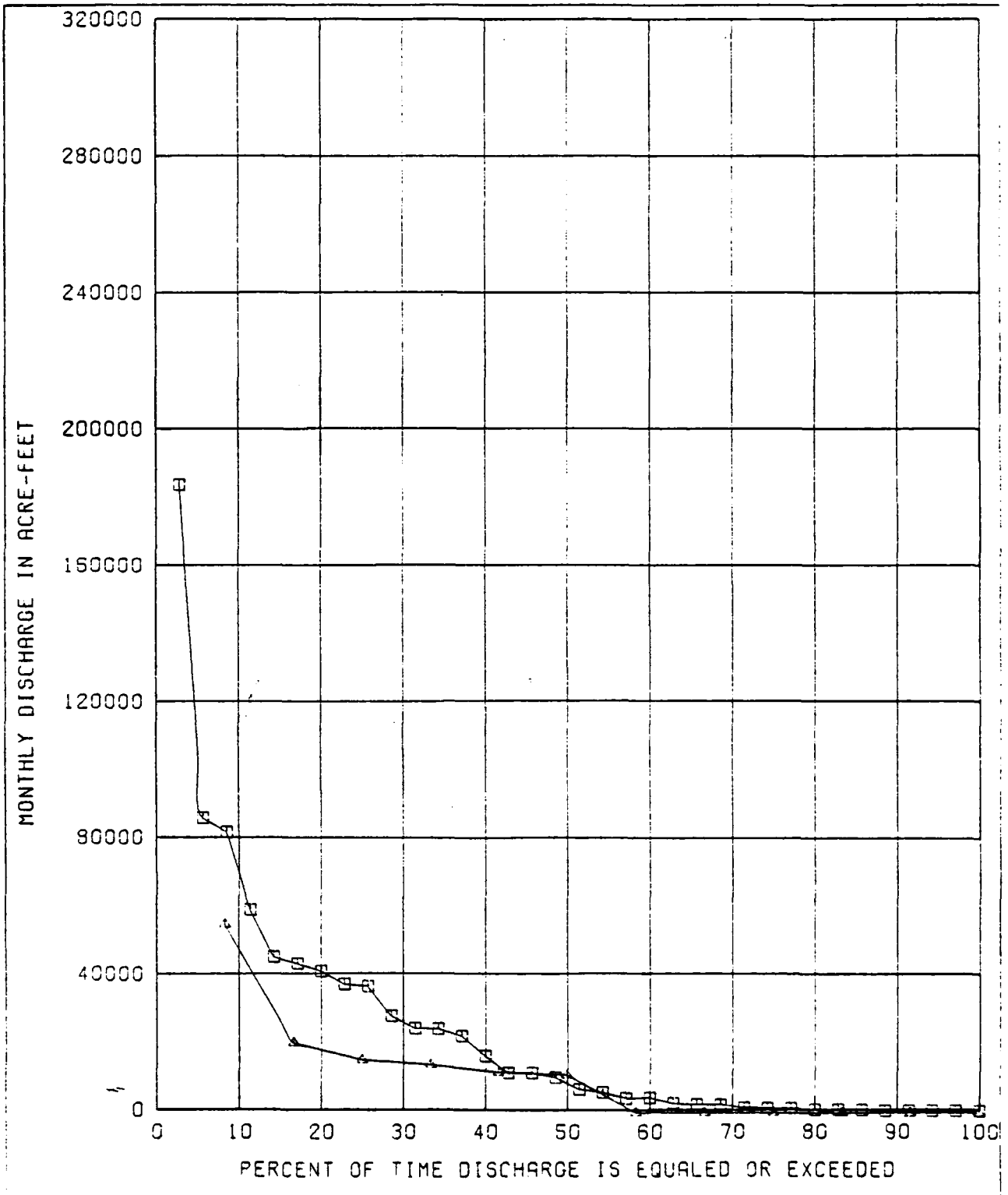
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

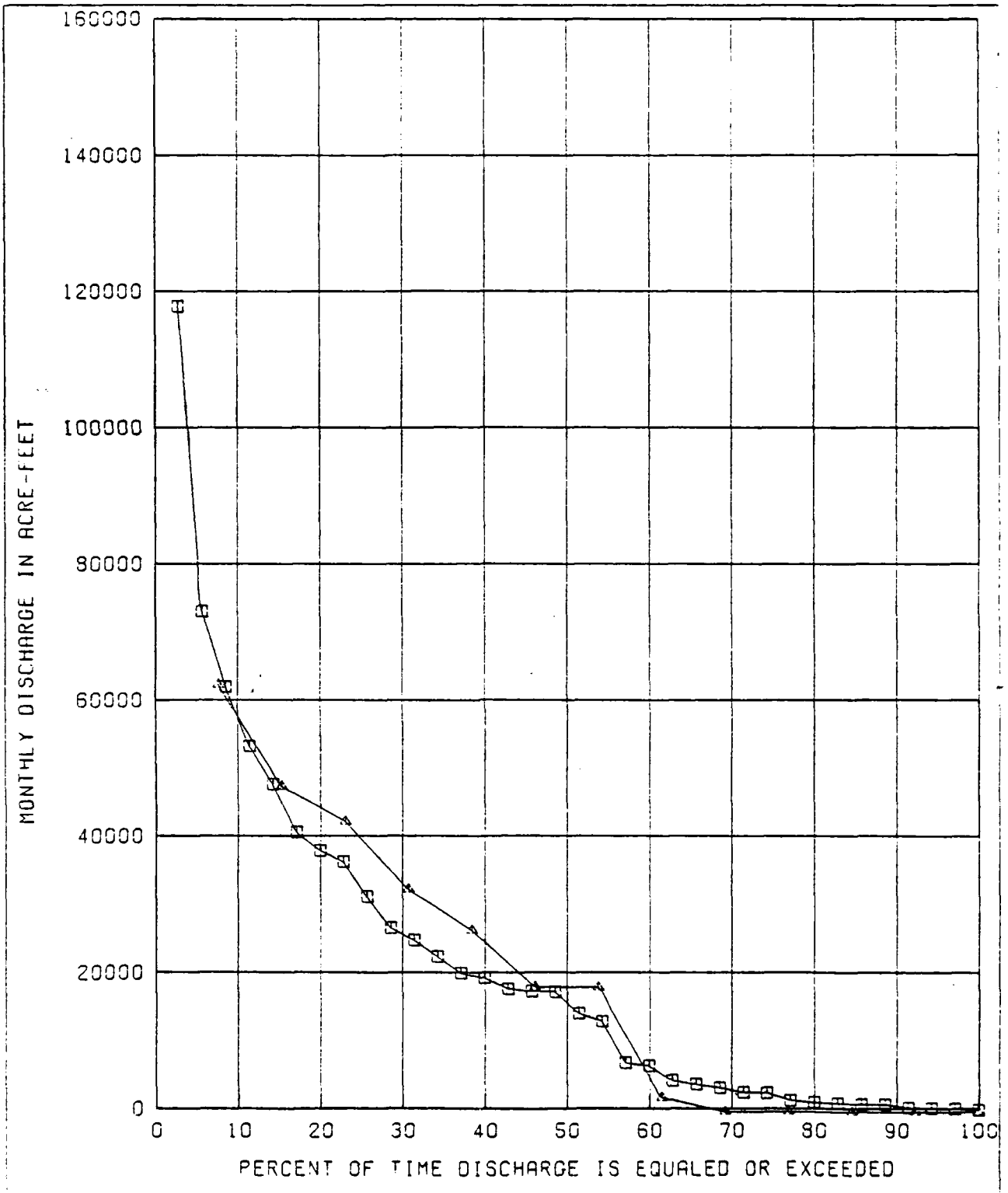
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

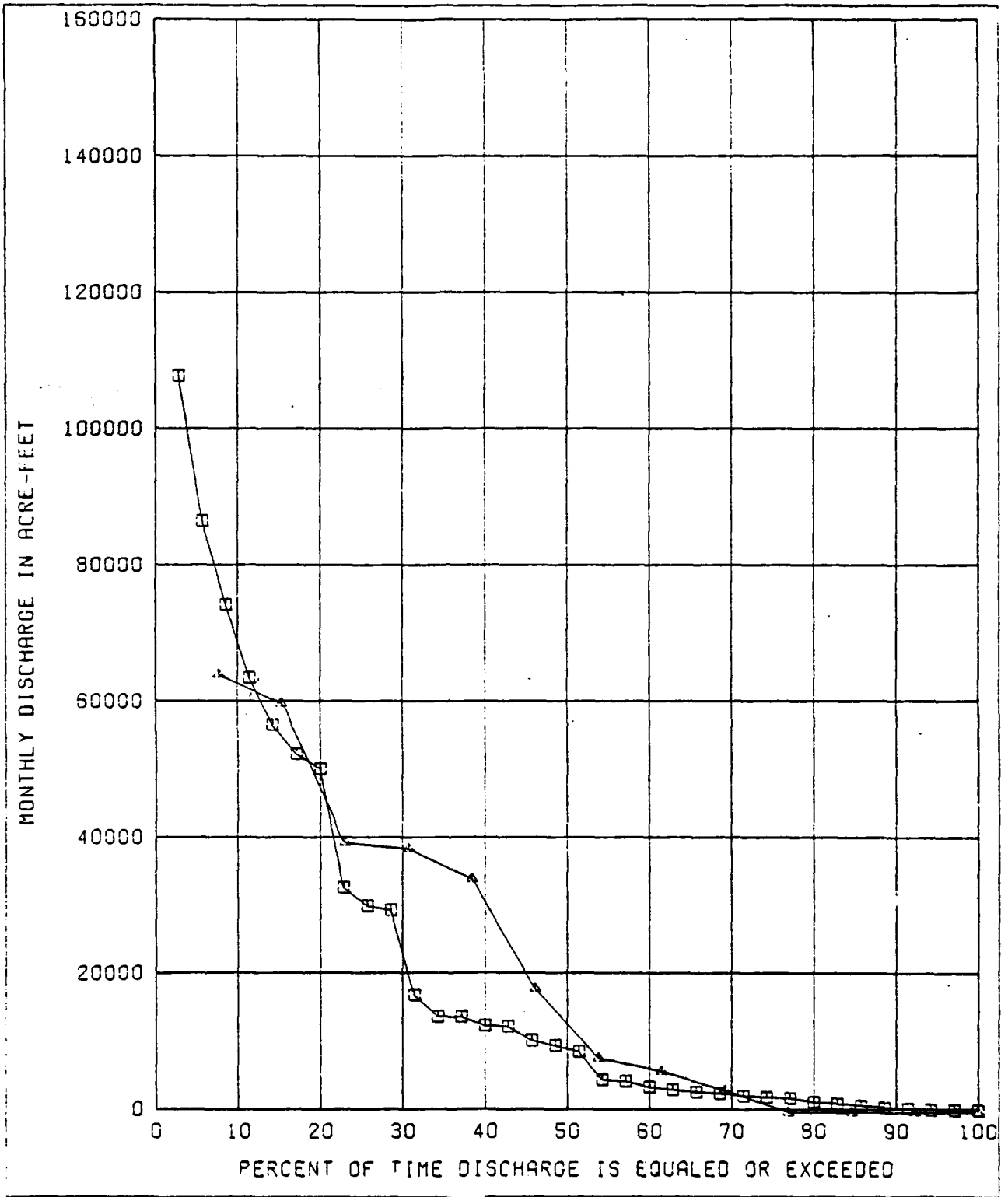
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

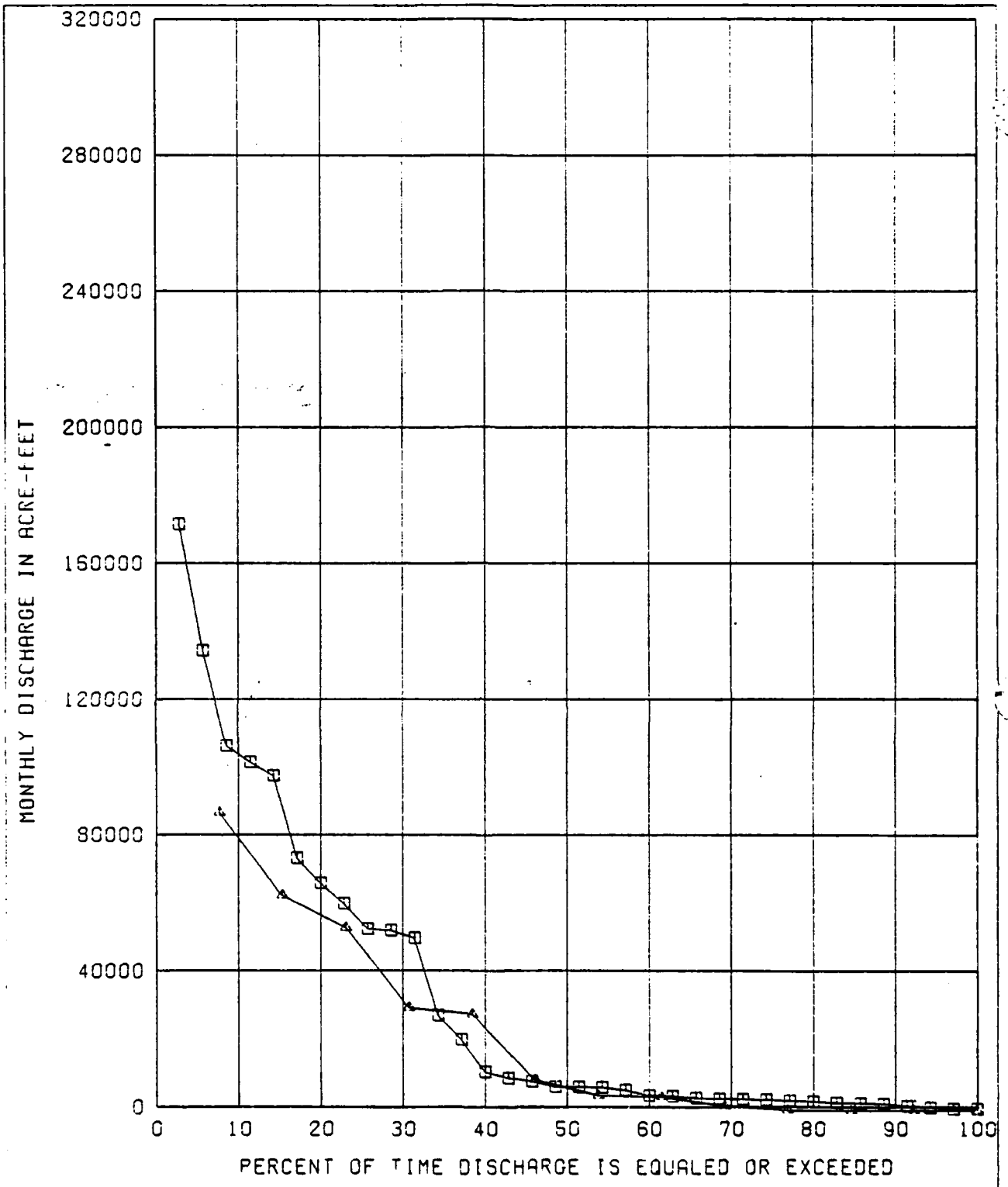
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1978)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

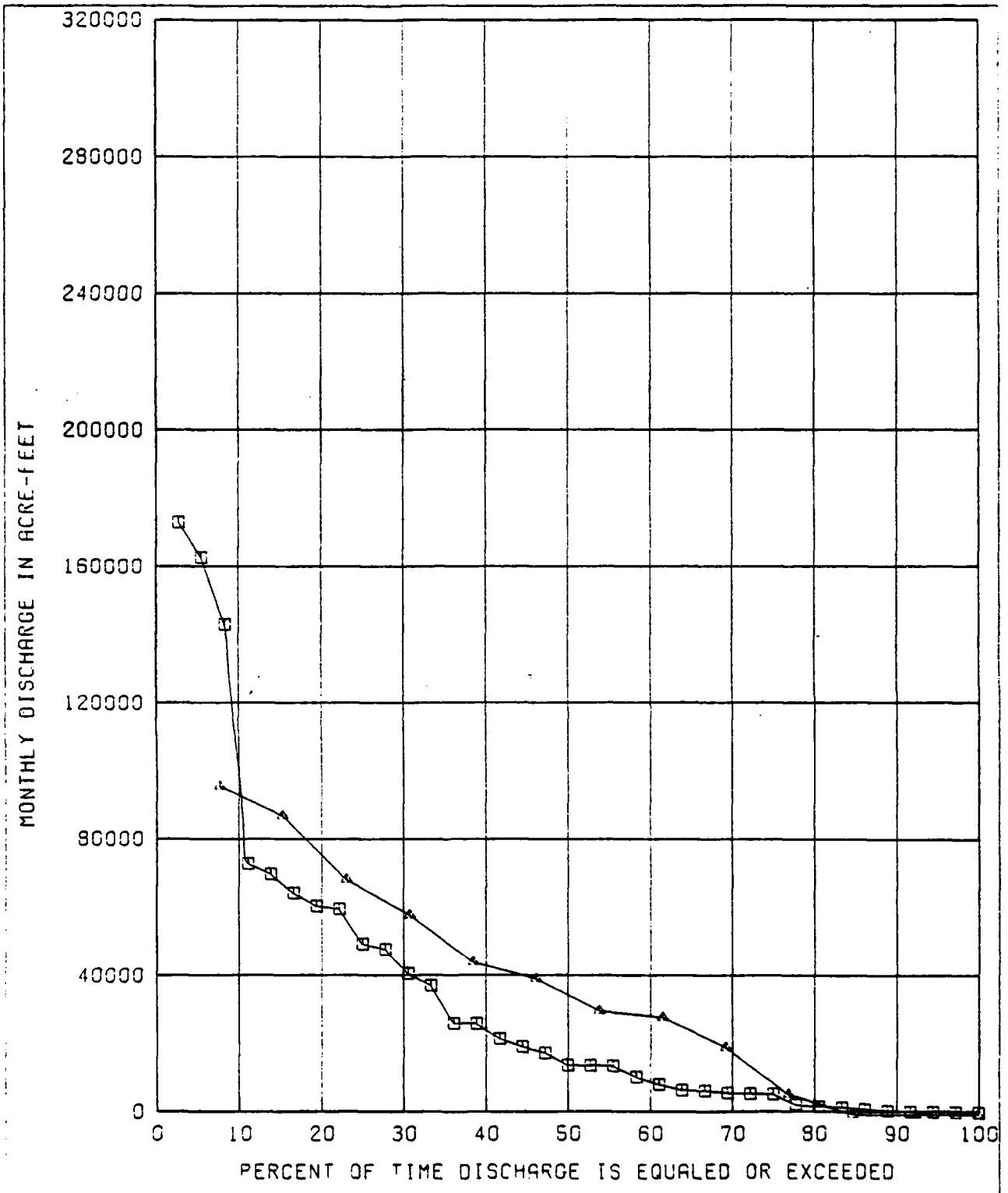
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

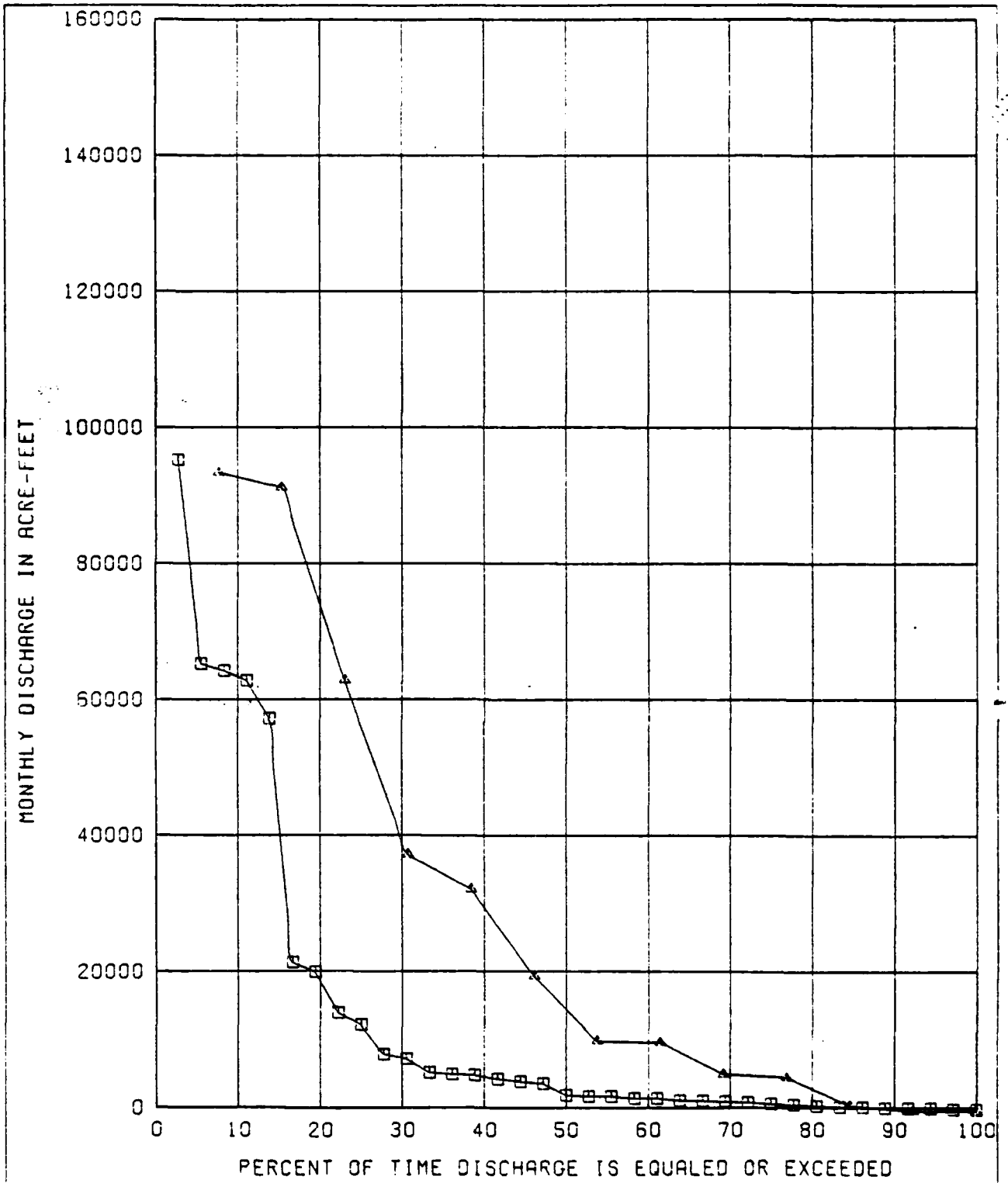
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

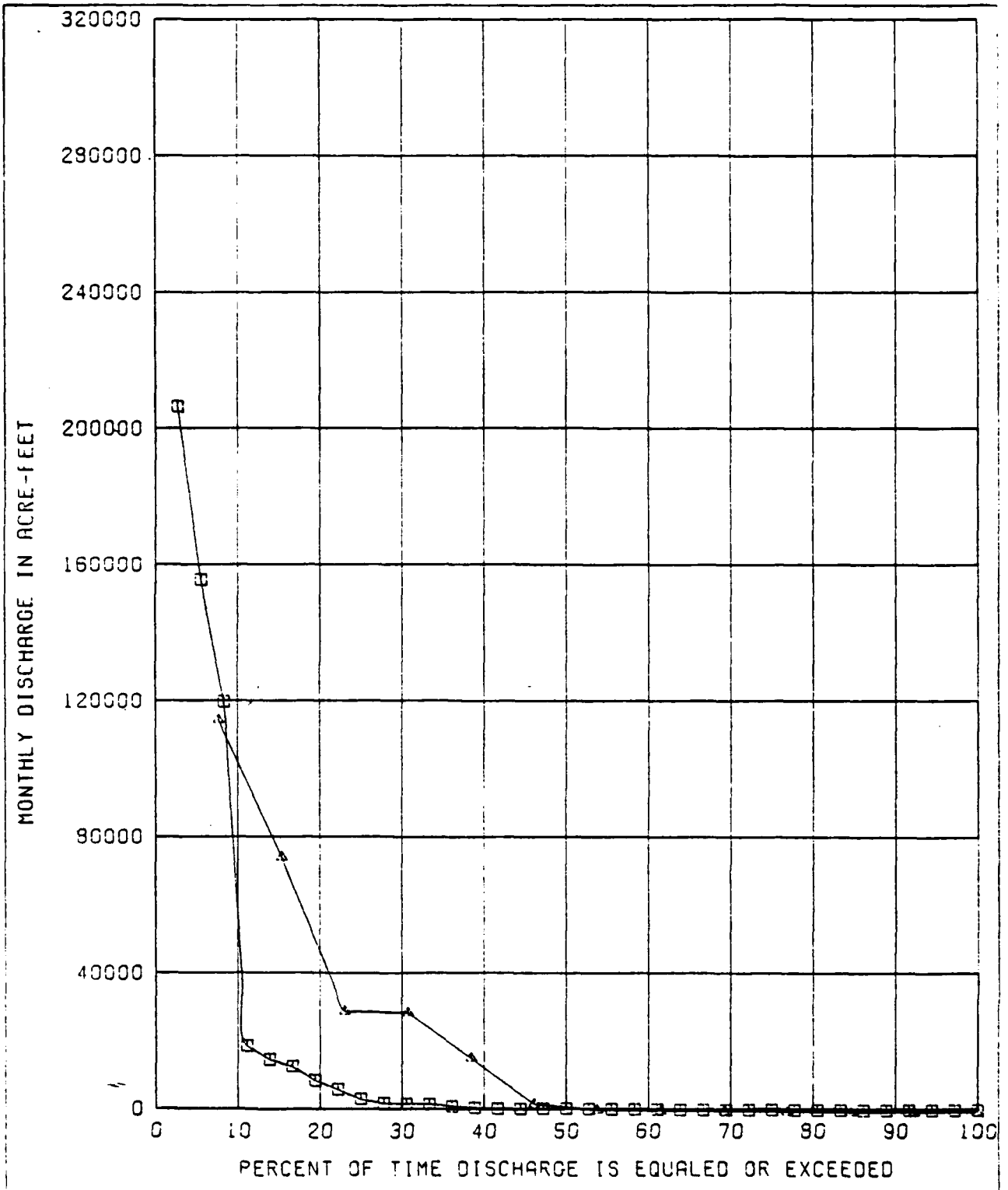
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

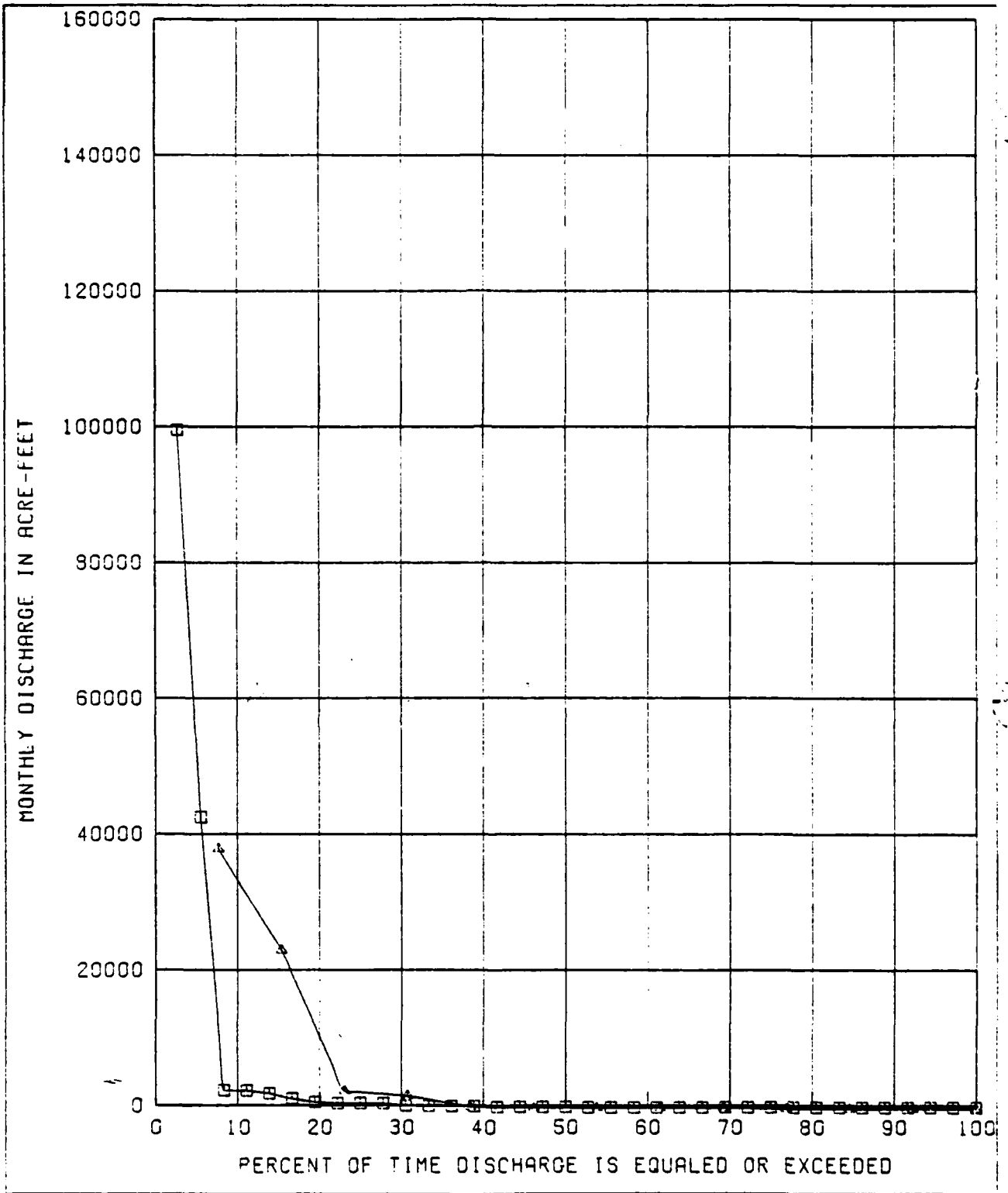
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

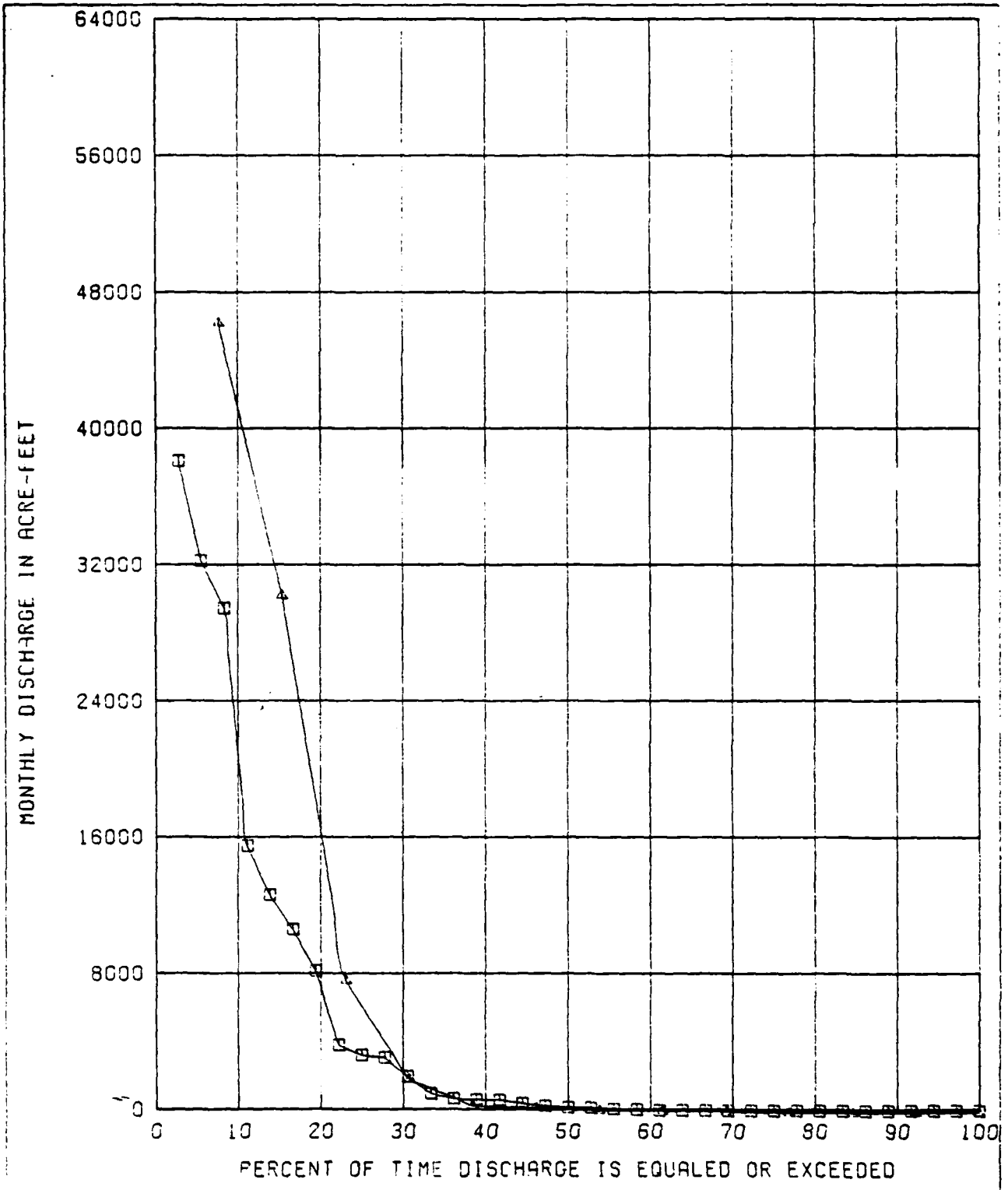
FLOW DURATION CURVES AT DAM SITE

AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

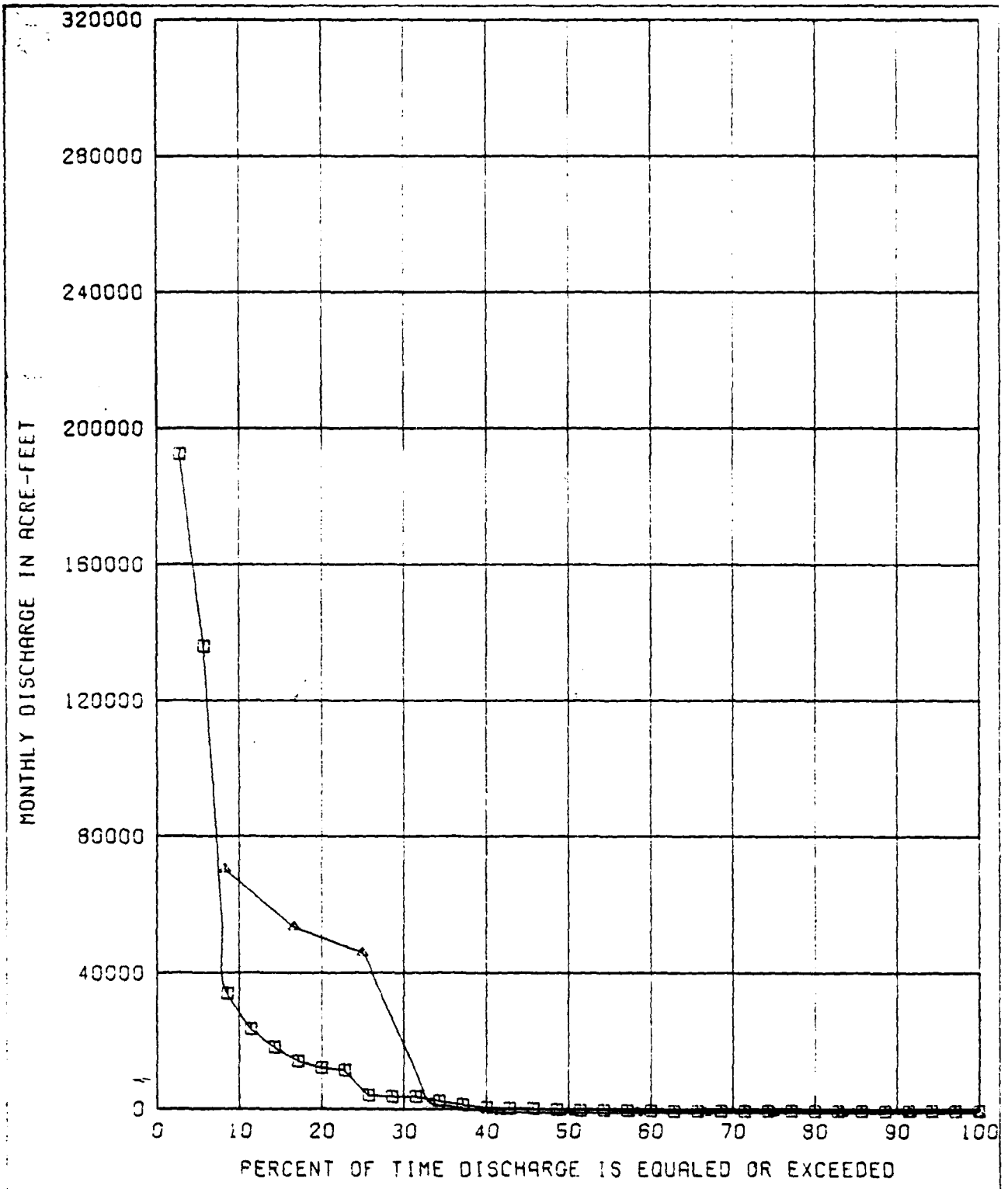
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1959)

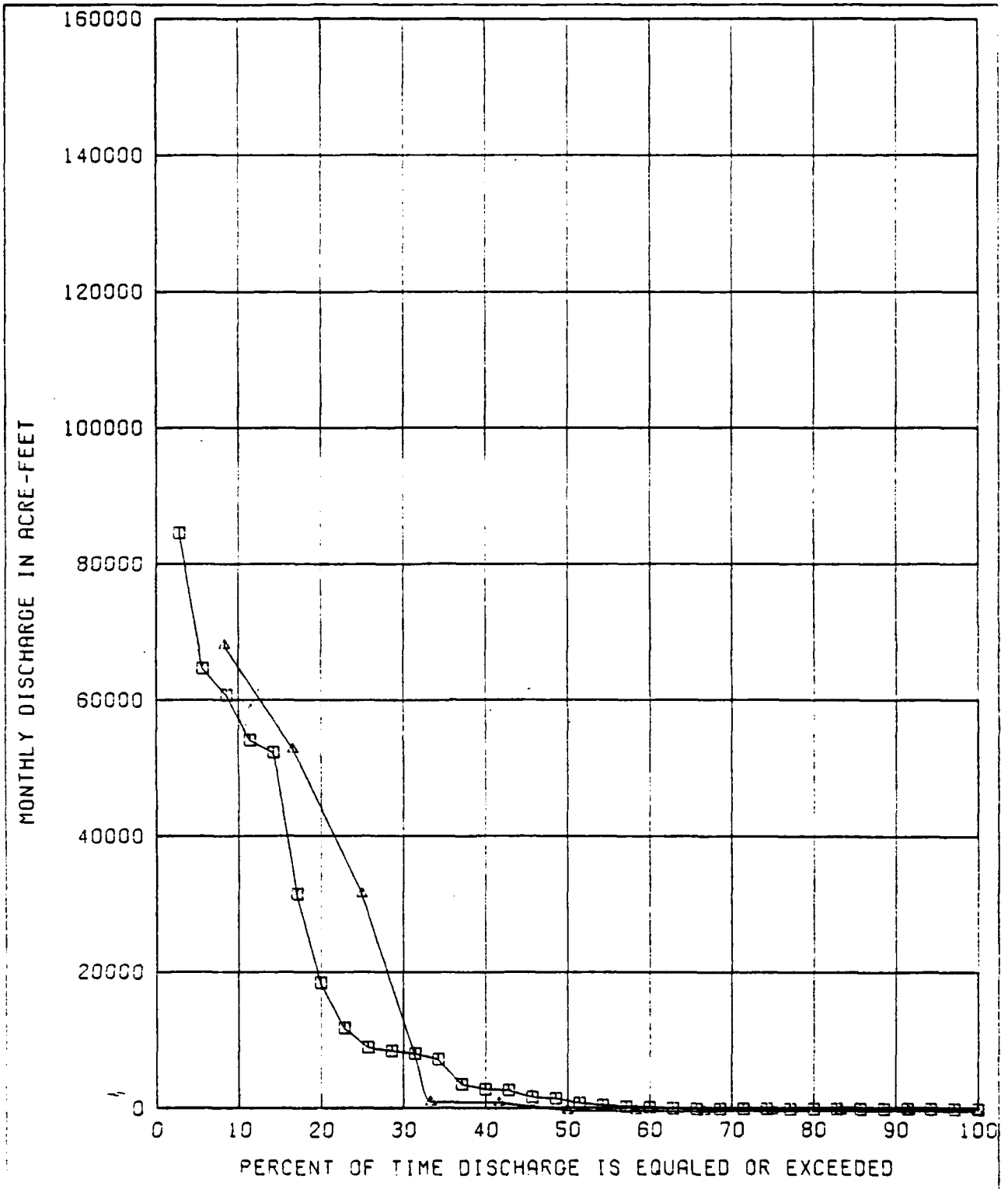
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1956-1979)

BRAZOS RIVER BASIN, TEXAS
SOMERVILLE LAKE
FLOW DURATION CURVES AT DAM SITE
OCTOBER - OWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPOR OF DECEMBER 1990

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1953)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1966-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

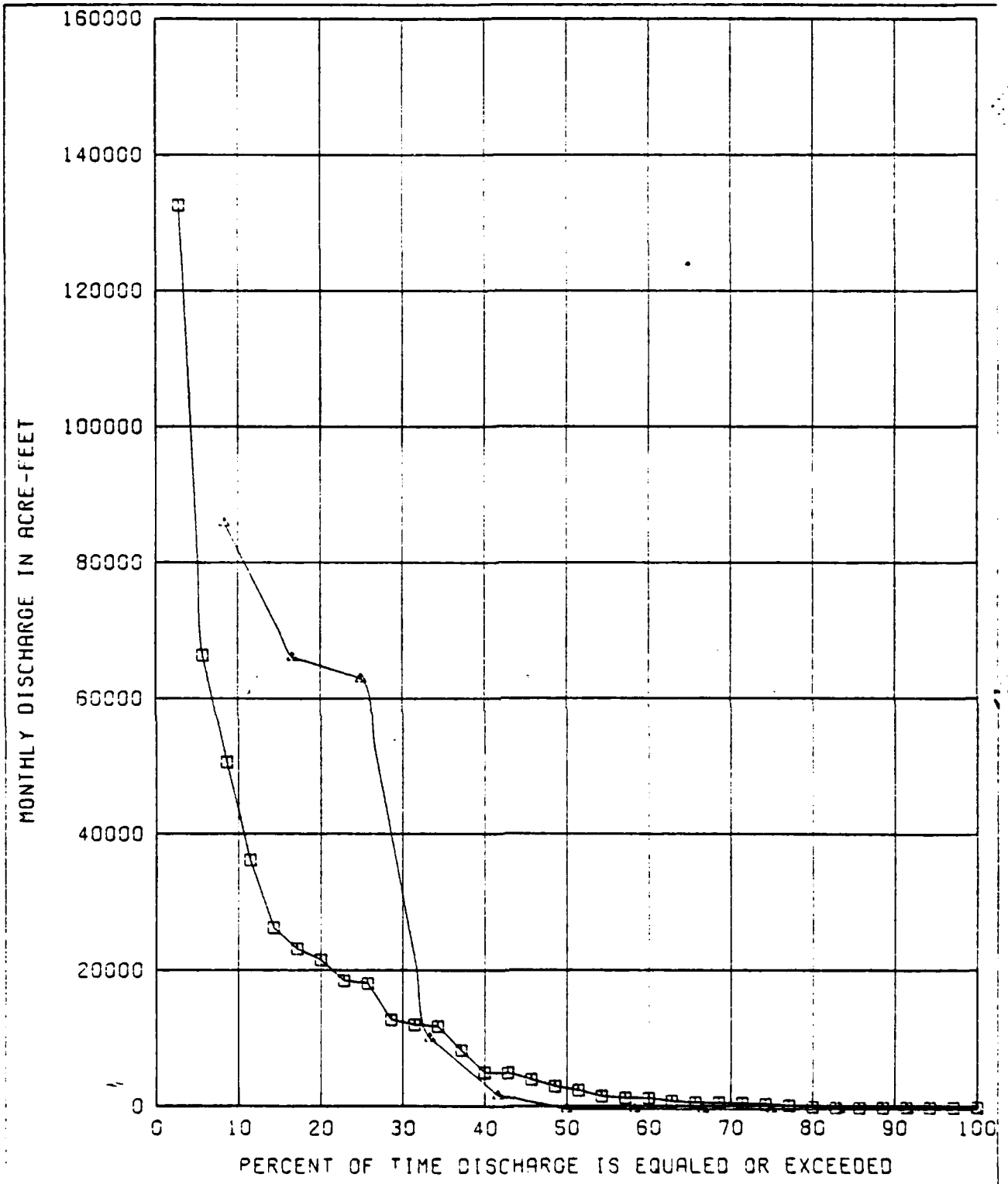
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1959)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1969-1979)

BRAZOS RIVER BASIN, TEXAS

SOMERVILLE LAKE

FLOW DURATION CURVES AT DAM SITE

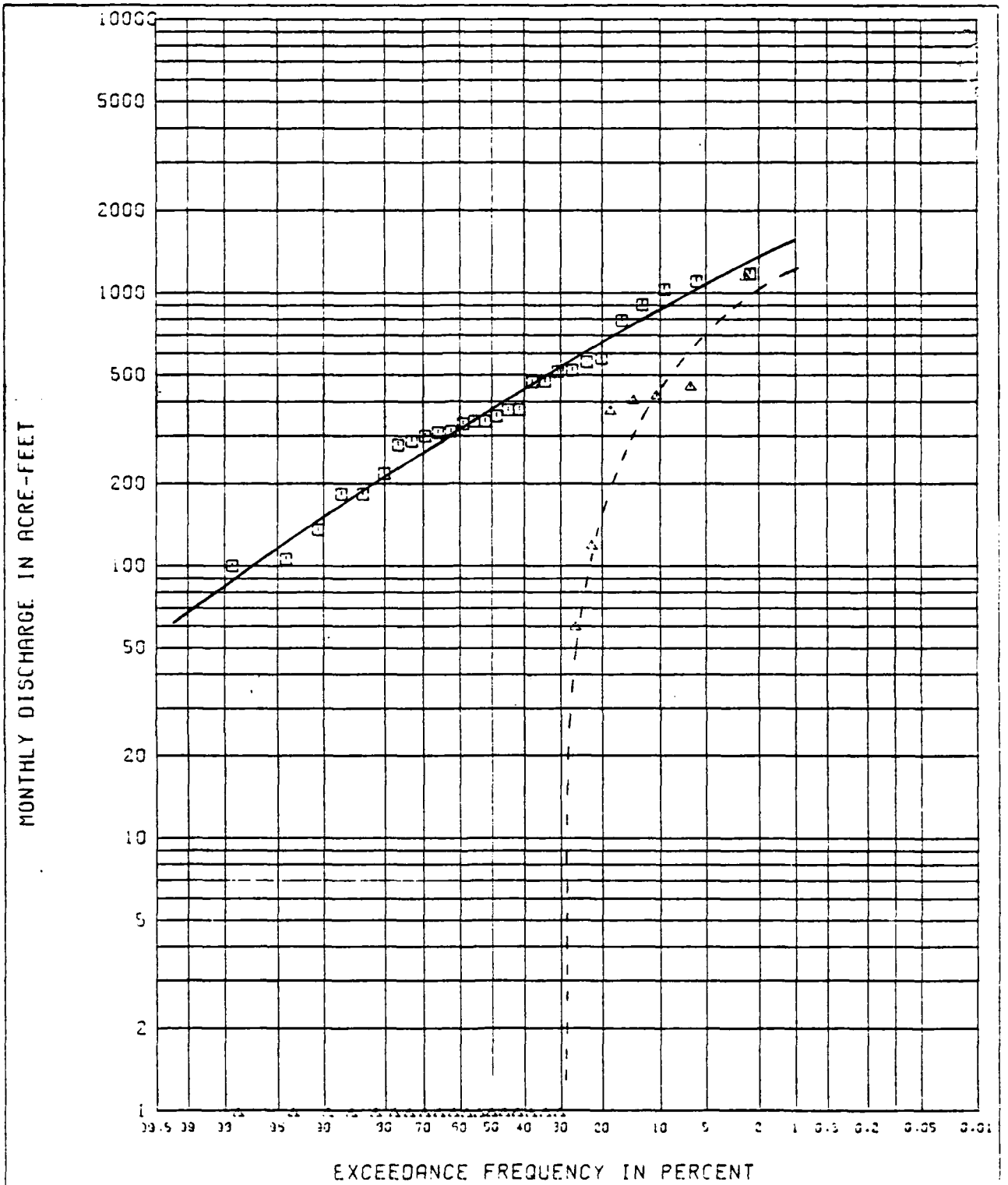
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U. . ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

O DRADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

DISCHARGE-FREQUENCY RELATIONS AT AM SITE

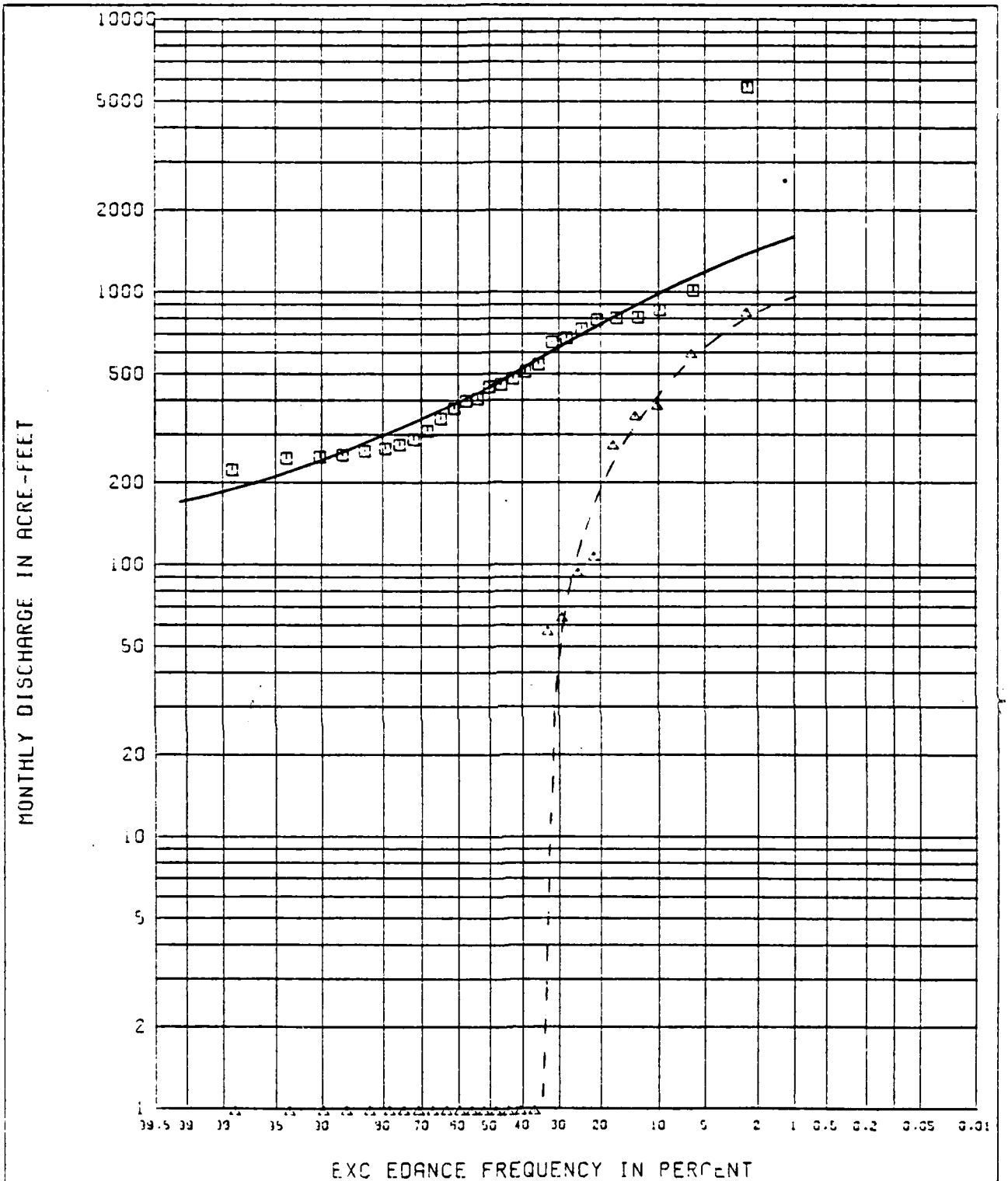
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT - DECEM ER 19C

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1932-1952)

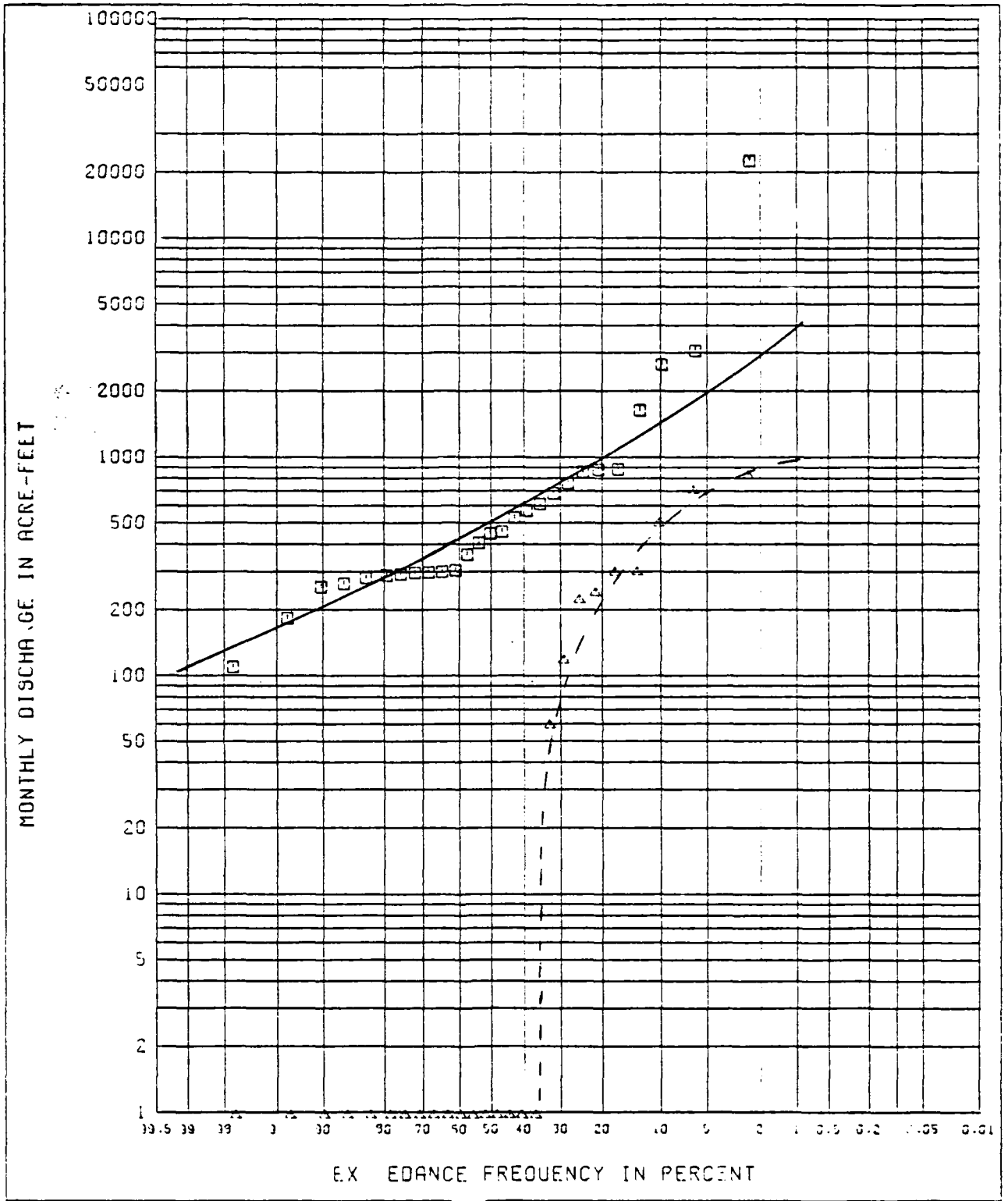
POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

COLORADO RIVER BASIN, TEXAS
O.C. FISHER LAKE
DISCHARGE-FREQUENCY RELATIONS AT DAM SITE
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

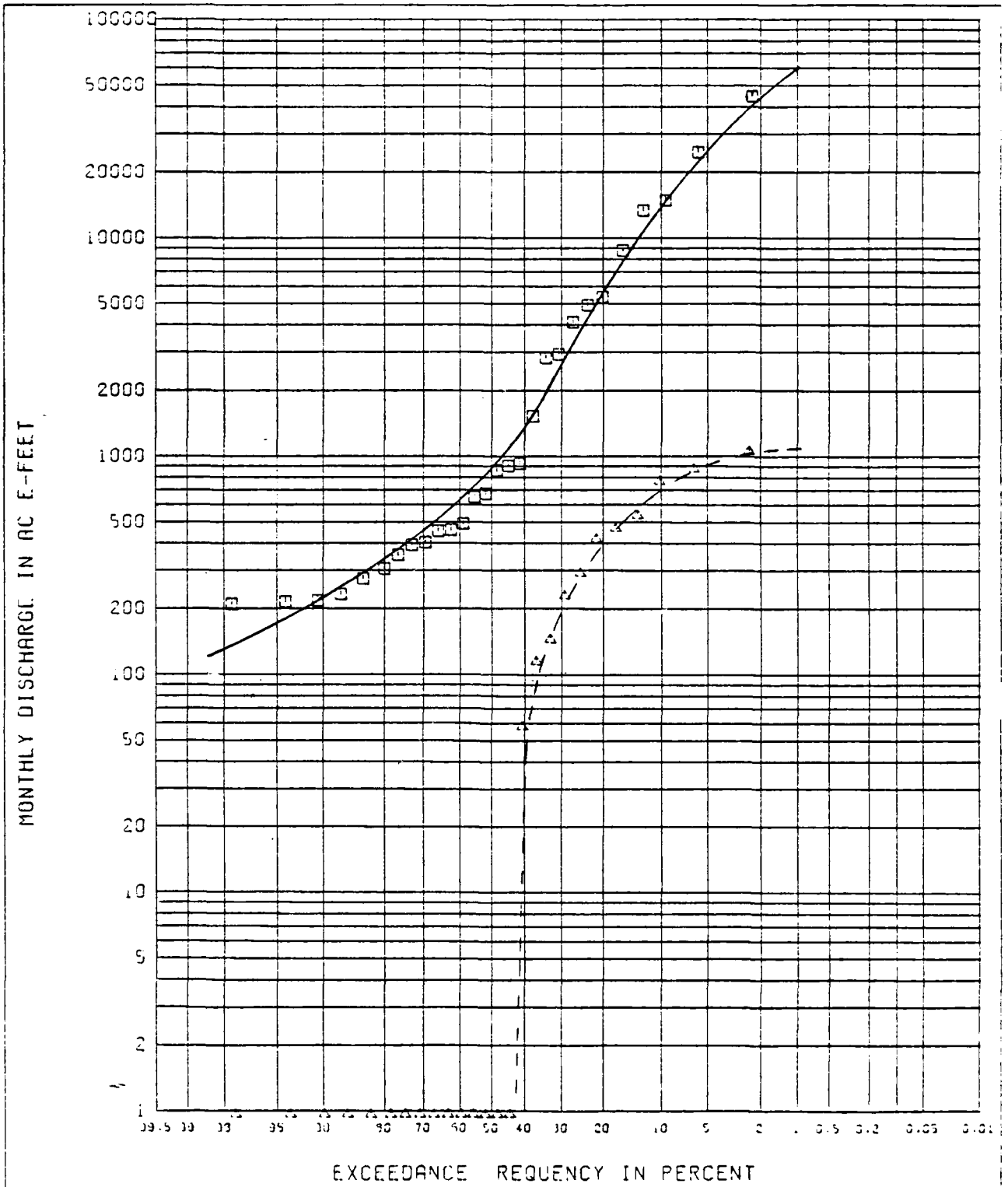
ARMY FLOOD STUDY

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT, DECEMBER 1980

PLATE 3

CORPS O ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1 24-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

DISCHARG -FREQUENCY RELATIONS AT DAM SITE

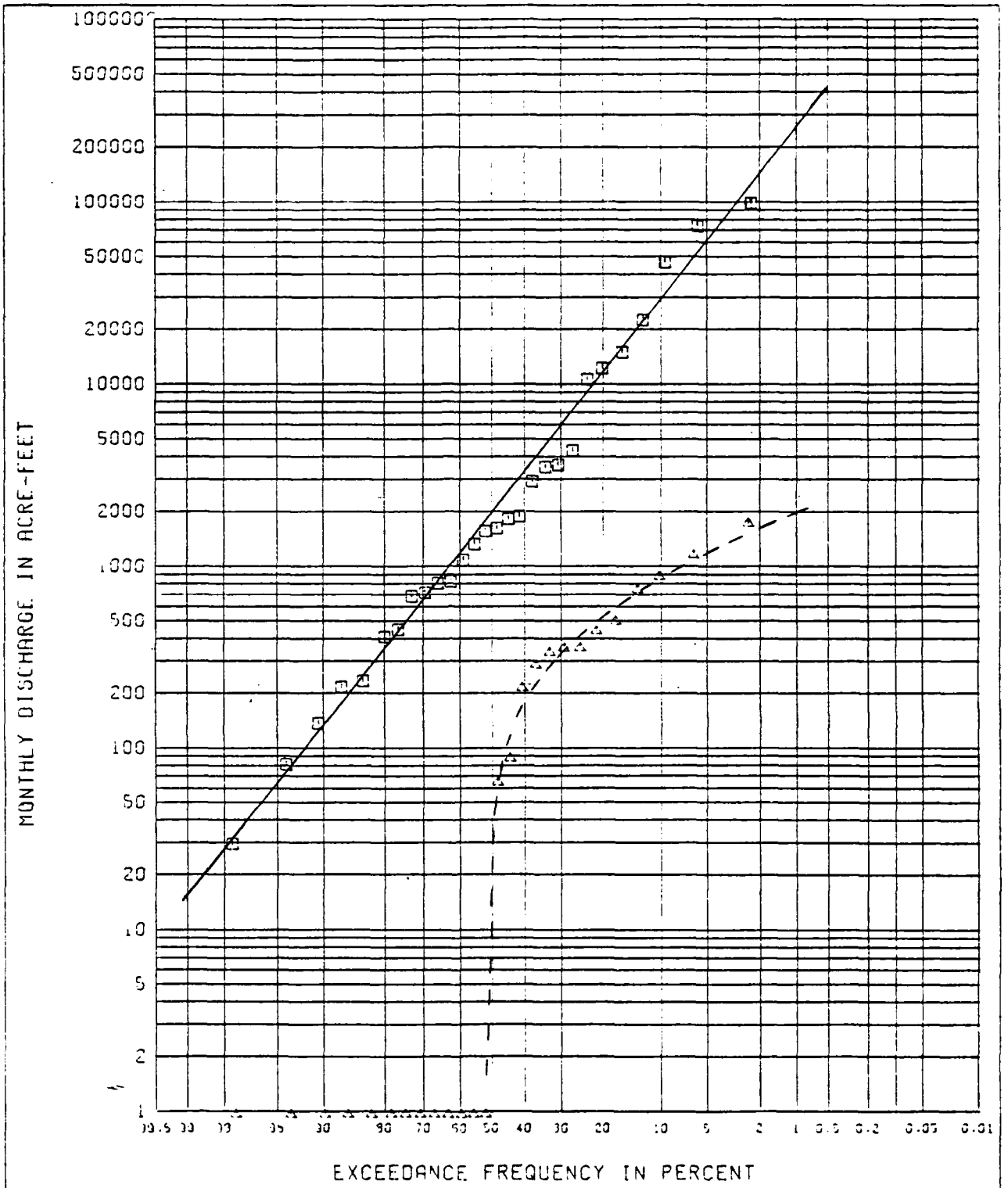
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEM AND NEEDS EVALUATI N REPO T D ECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1-2 -195

POST-IMPOUNDMENT NDITIONS (PERI D OF RECORD 1952-1979)

OLORADO RIVER BASIN, TEXAS

O.C. ISHER LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

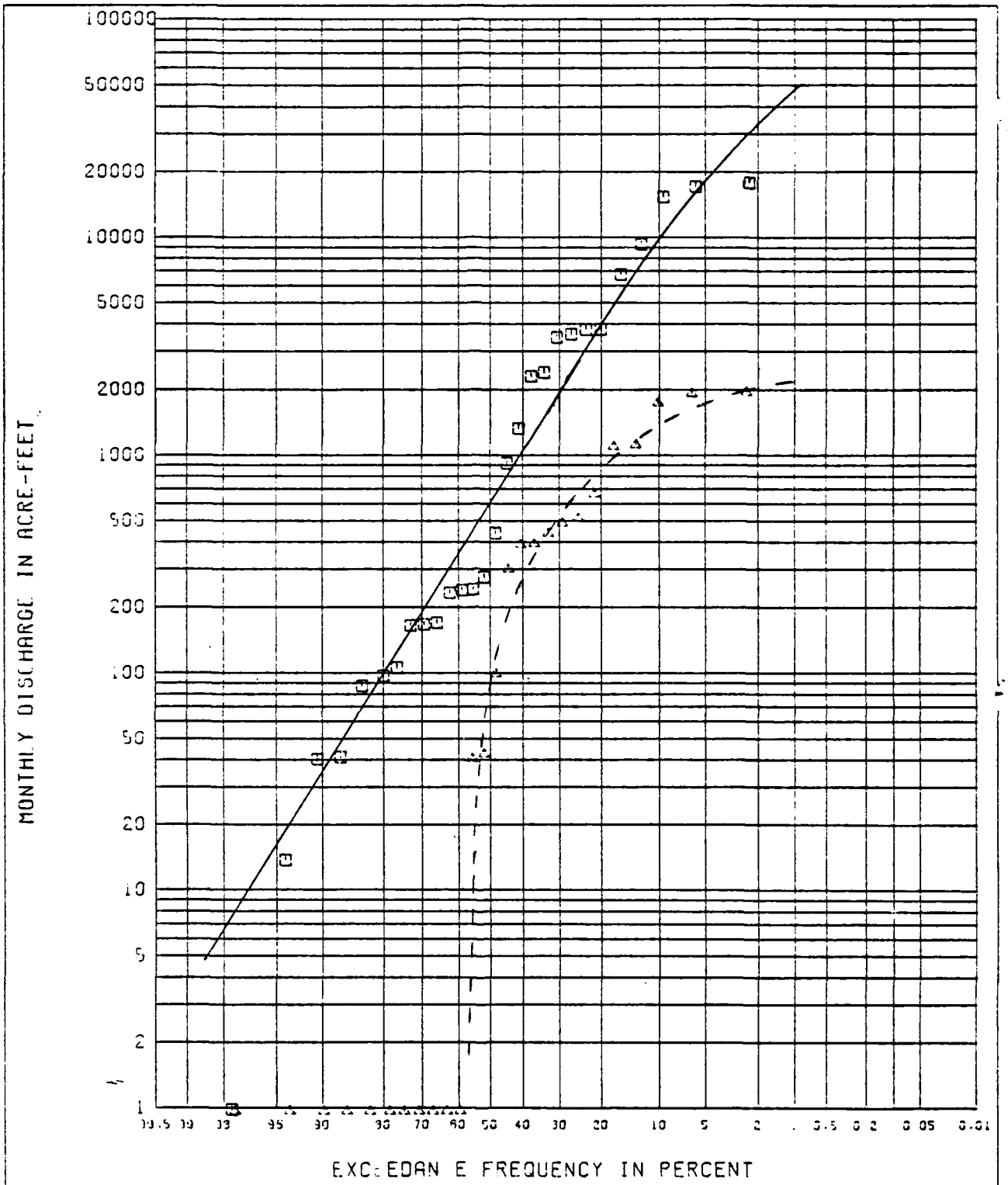
MAY FLOWS

U. . ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM LOW PROBLEMS NO NEEDS EVALUATION REPORT O EC BER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1921-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

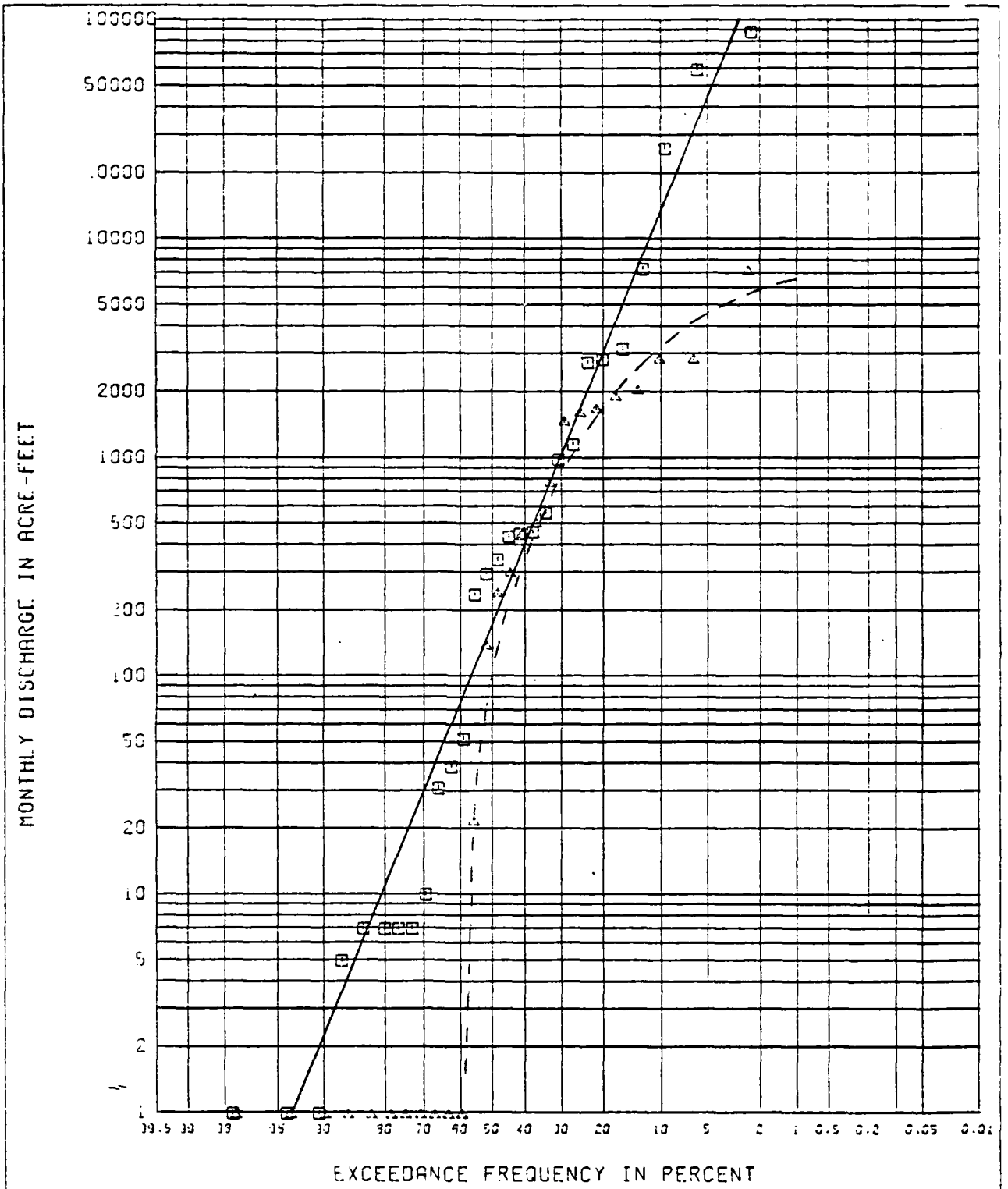
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS O ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUND ENT CONDITIONS
(PERIOD O RECORD 1924-1-52

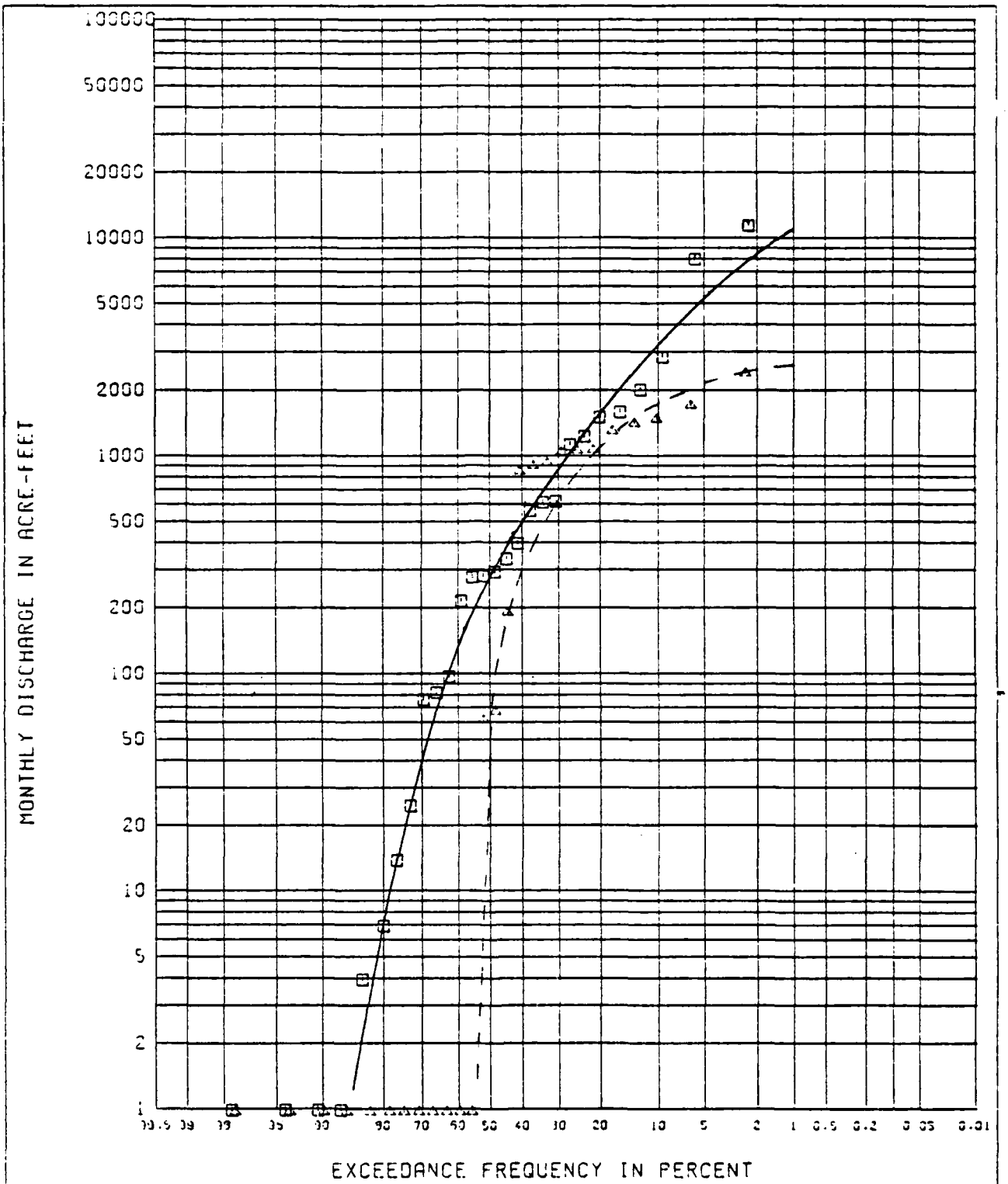
POST-IMPOUNDMENT CONDITIONS
(PERI O O RECORD 1952-1979.

C LORAD RIVER BSIN. TEXAS
O. FISHER LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT. FORT WORTH
TO ACCOMPANY INSTREAM FLO PROBLEM AND NEDS
EVALUATION REPORT F DEC M ER 1-90

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

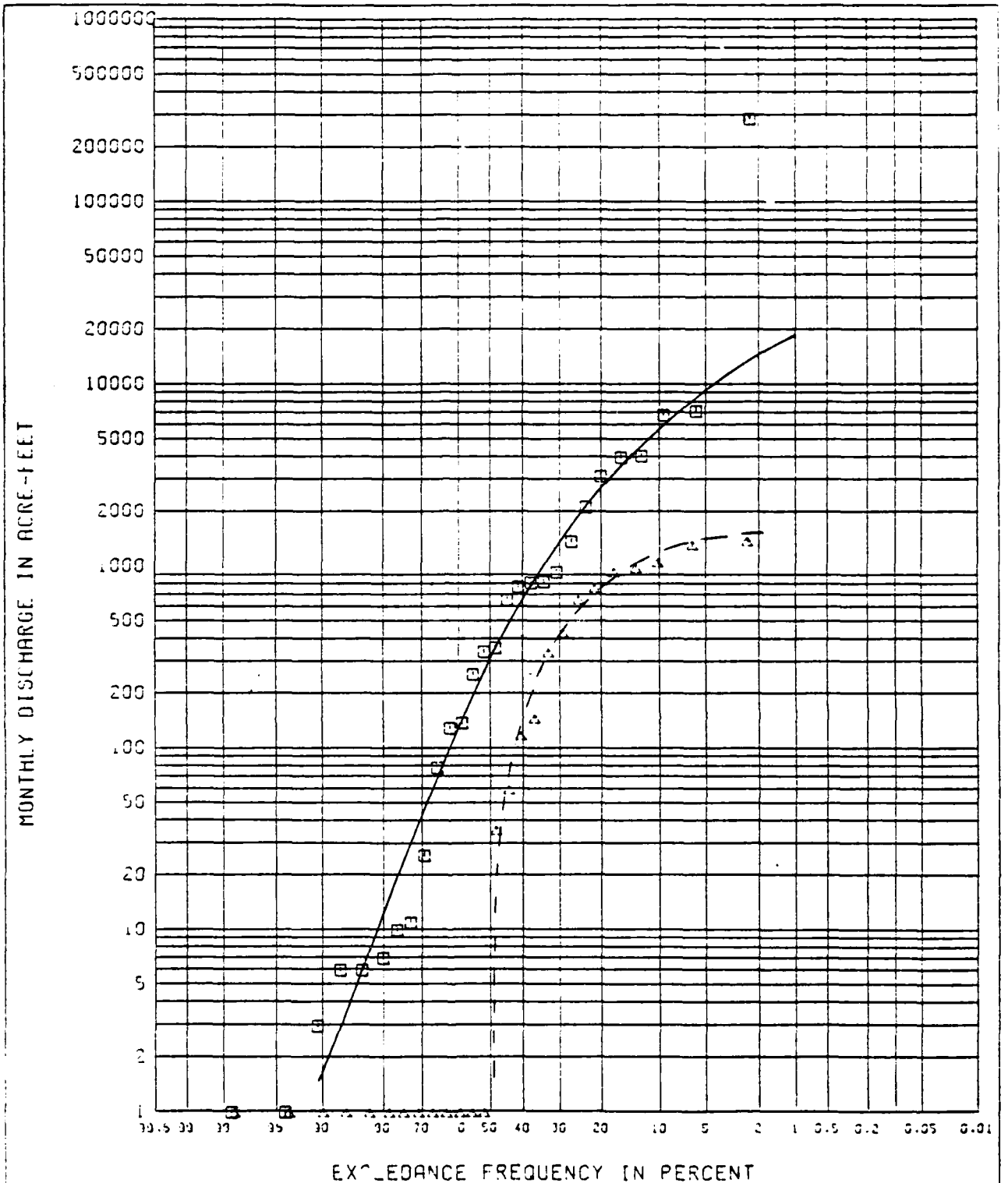
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1 90

PLATE B

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1932-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1955-1981)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

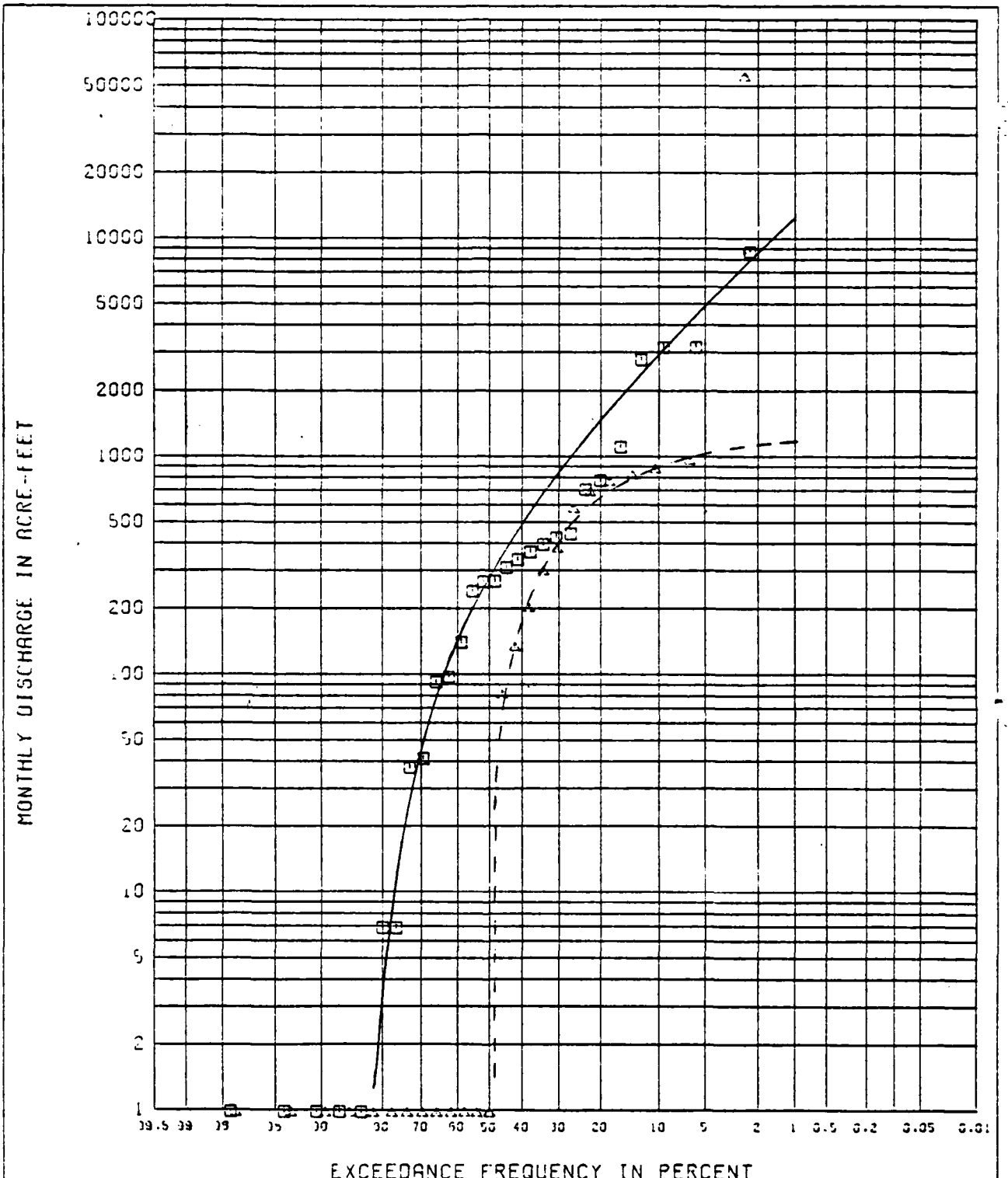
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 195 -1979)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

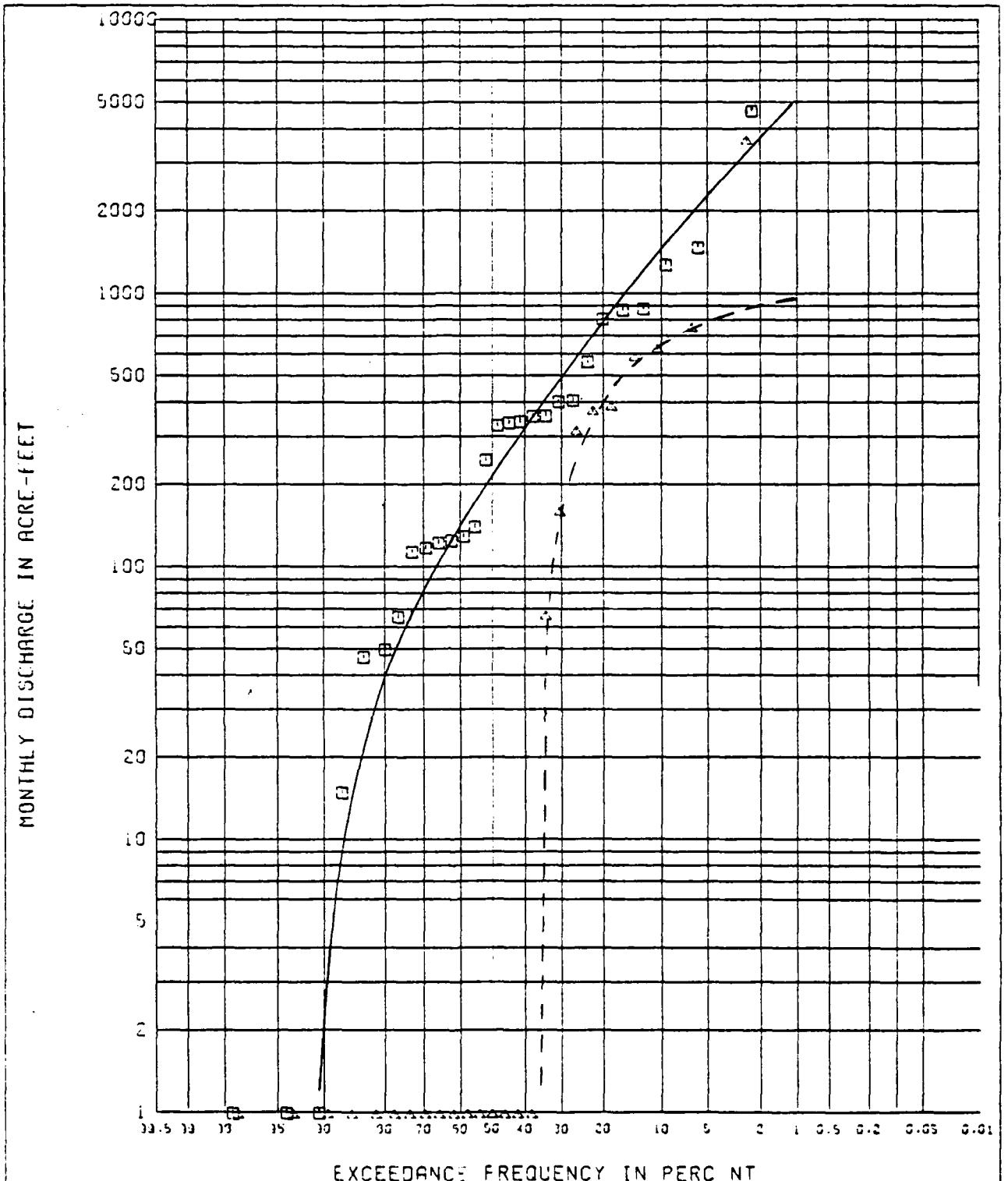
OCTOBER LOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM LOW PROBLEMS AND NEEDS EVALUATION REPORT OF OCTOBER 1980

PLATE 10

CORPS O ENGINEER[illegible] U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1932-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

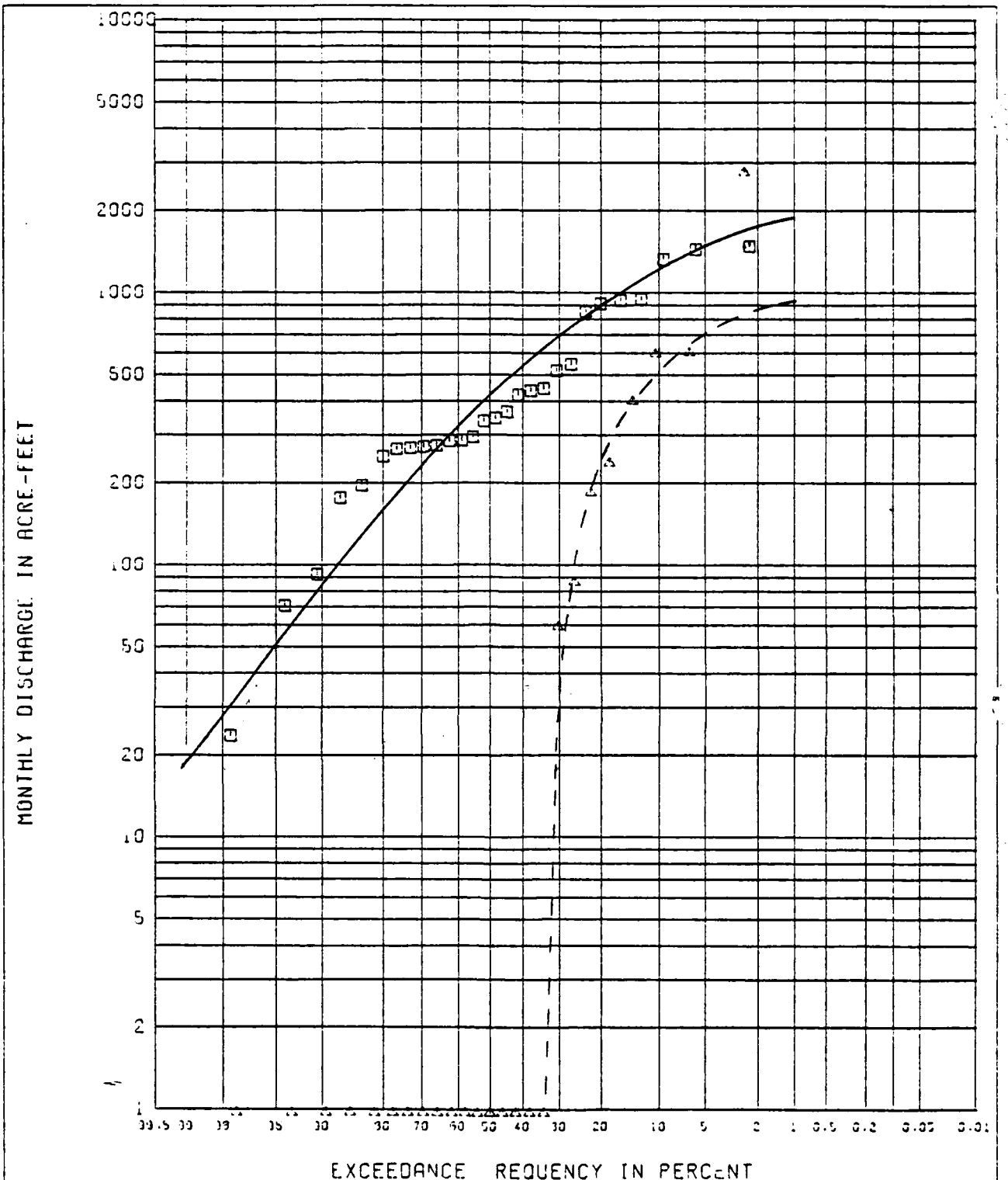
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO A COMPANY INSTREAM FLO[illegible] PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 980

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1954-1979)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

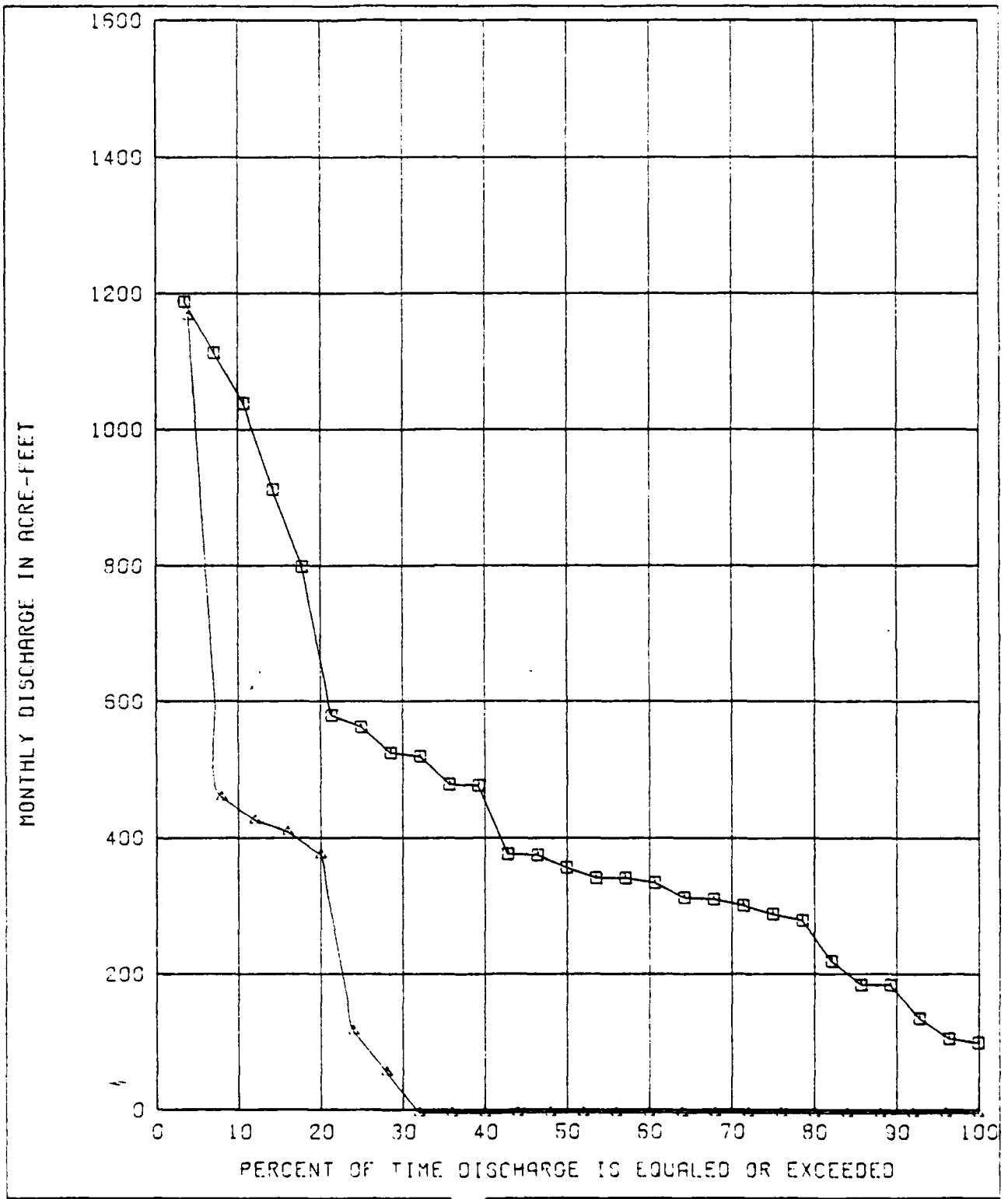
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

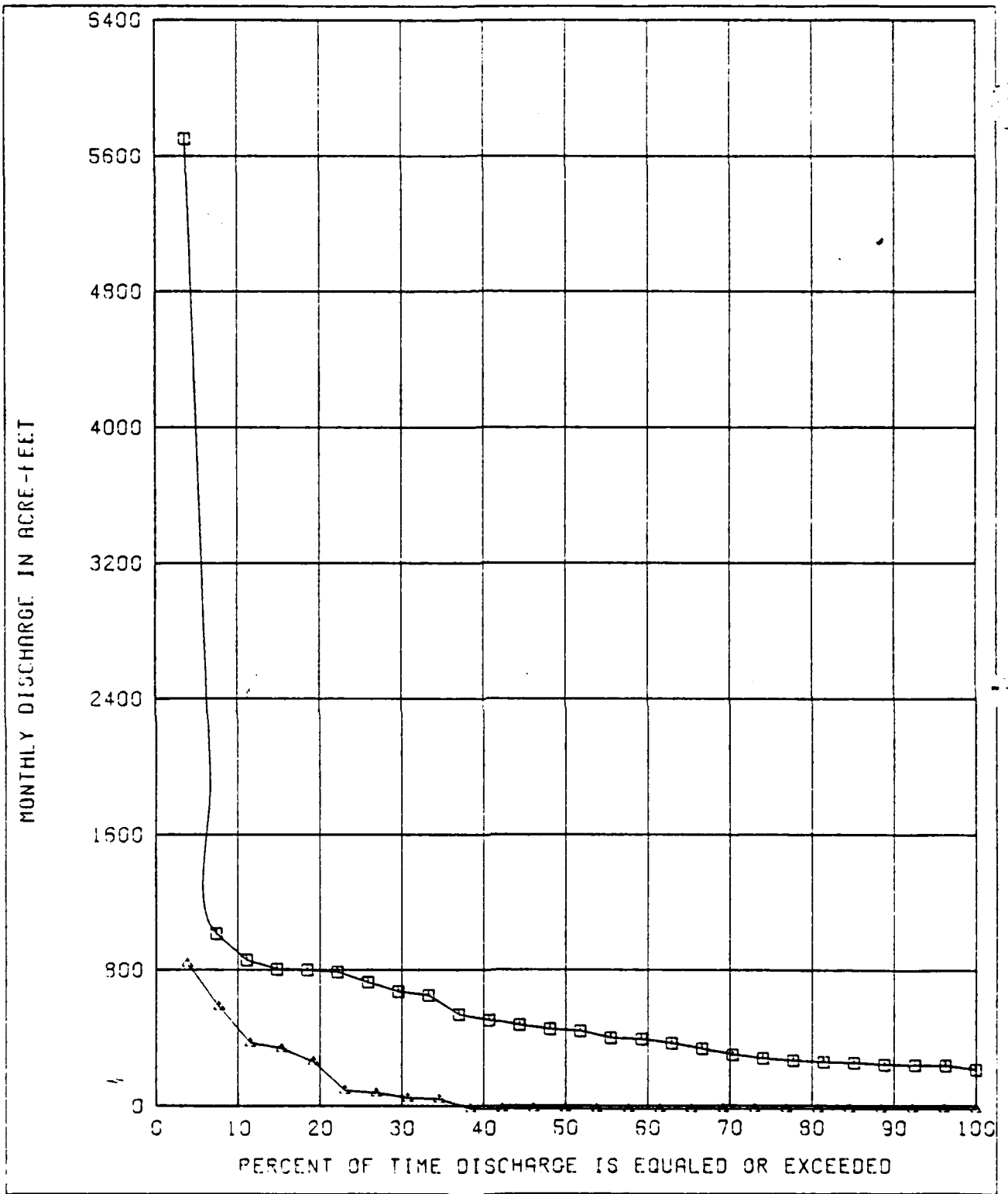
COLORADO RIVER BASIN, TEXAS
O.C. FISHER LAKE

FLOW DURATION CURVES AT DAM SITE
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

FLOW DURATION CURVES AT DAM SITE

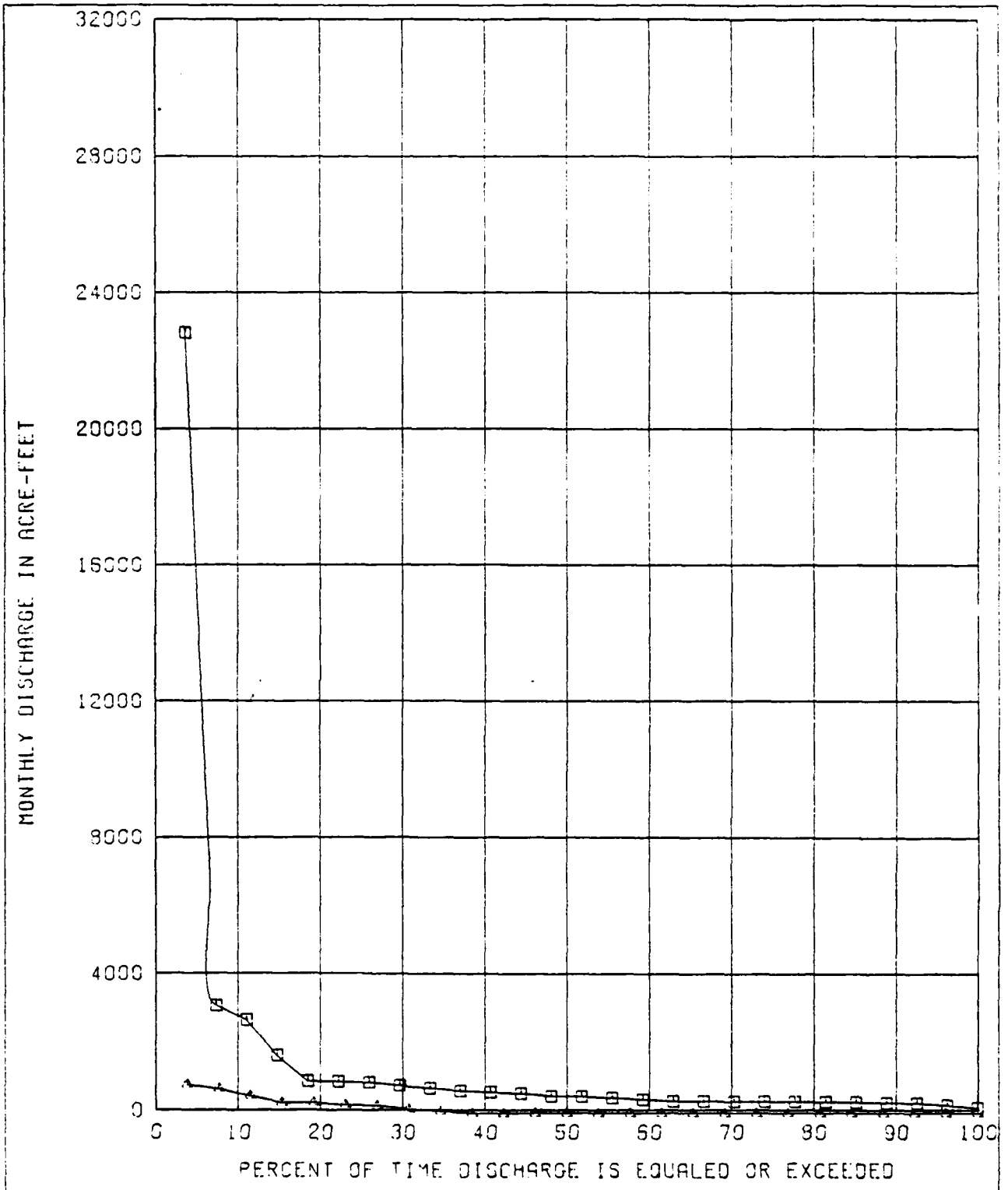
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

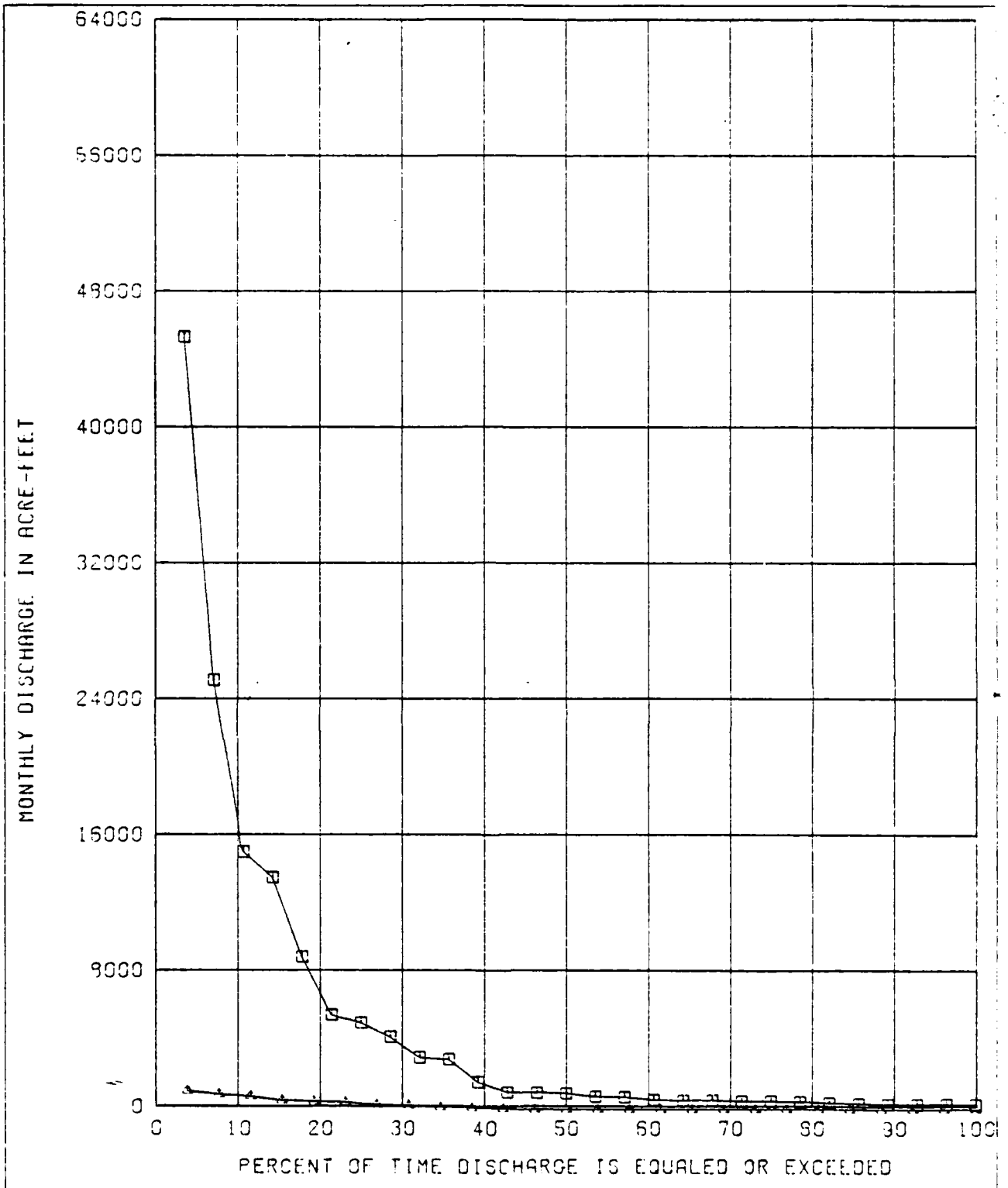
COLORADO RIVER BASIN, TEXAS
O.C. FISHER LAKE

FLOW DURATION CURVES AT DAM SITE
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1978)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

FLOW DURATION CURVES AT DAM SITE

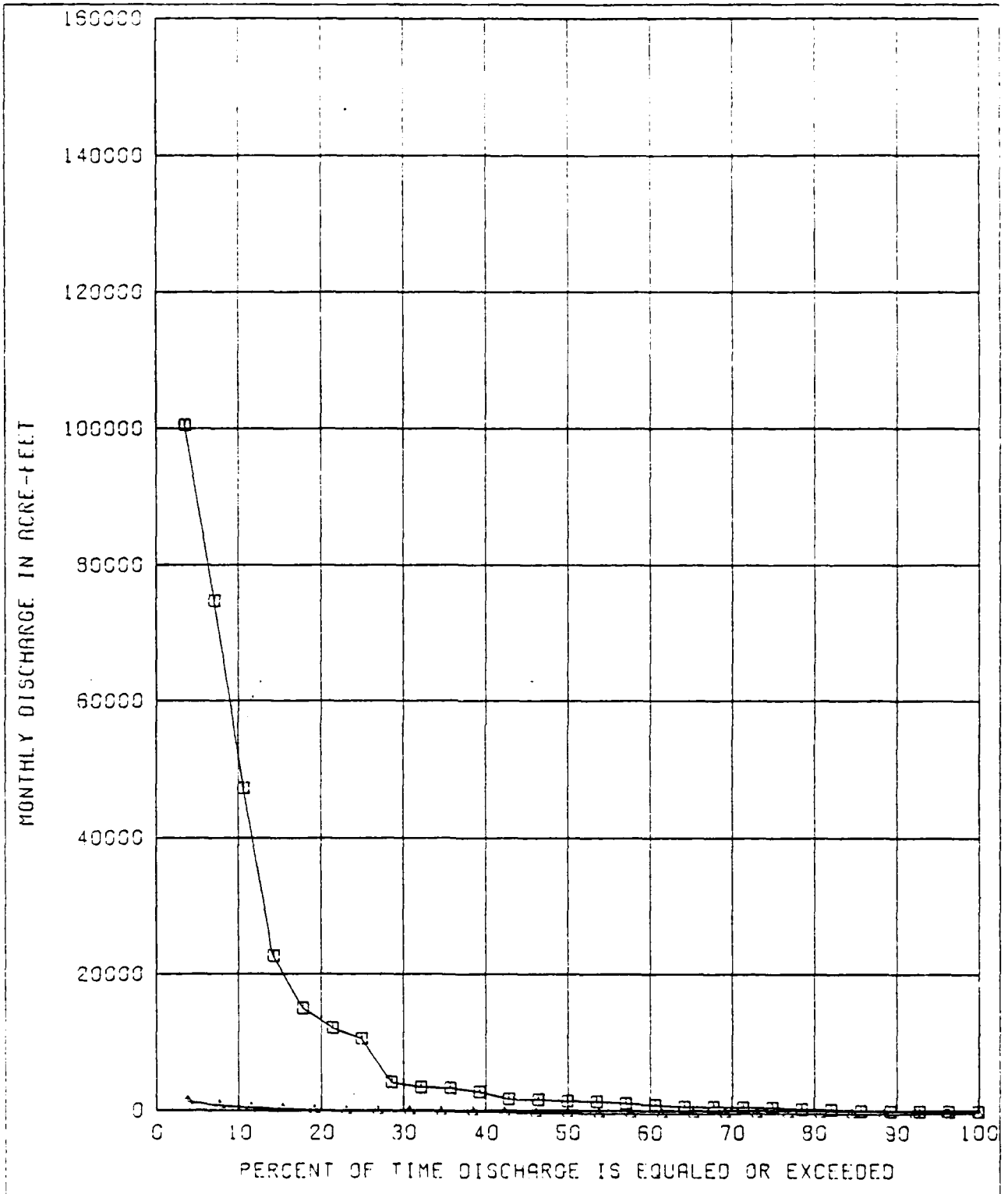
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

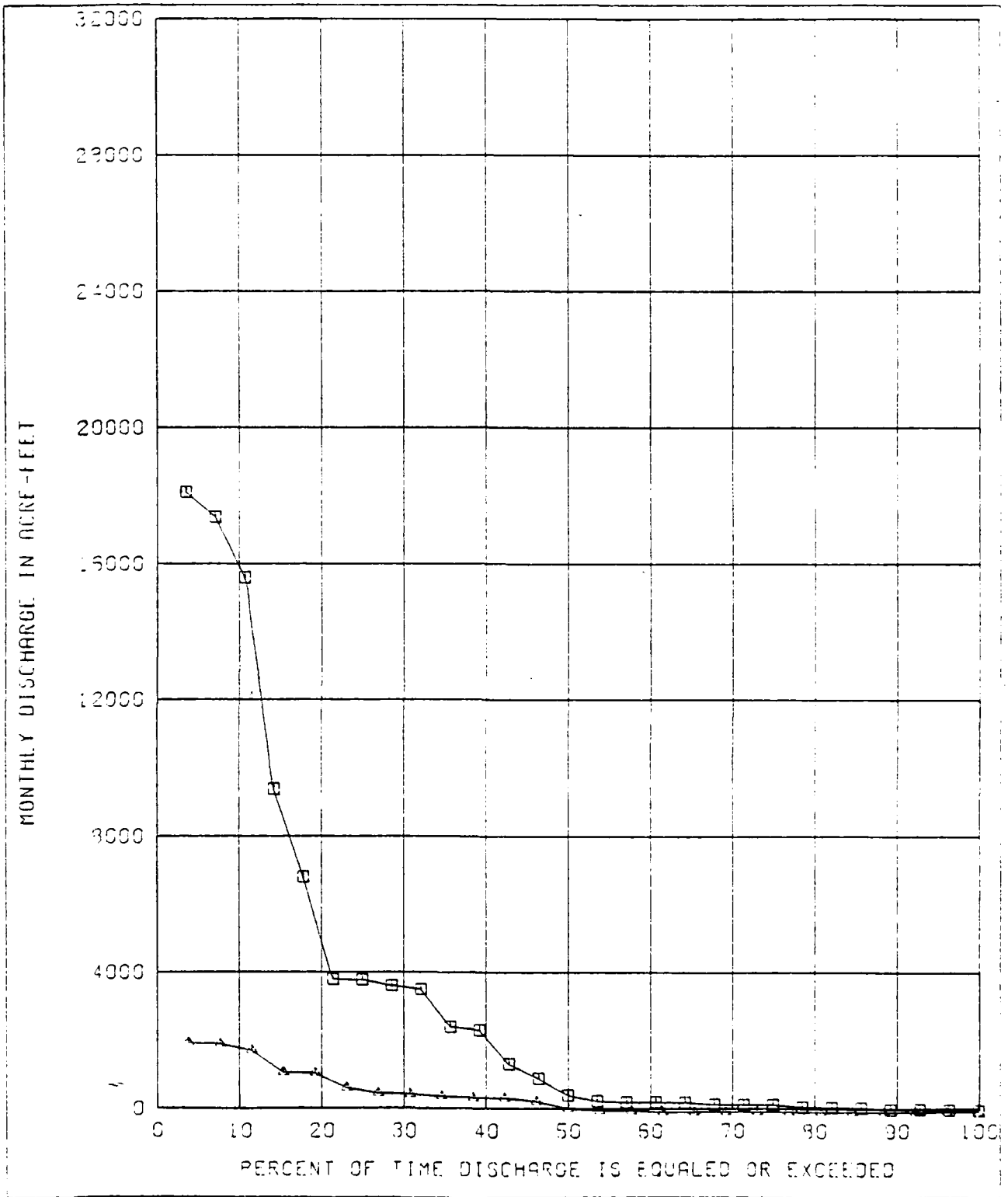
FLOW DURATION CURVES AT DAM SITE

MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1962)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1962-1979)

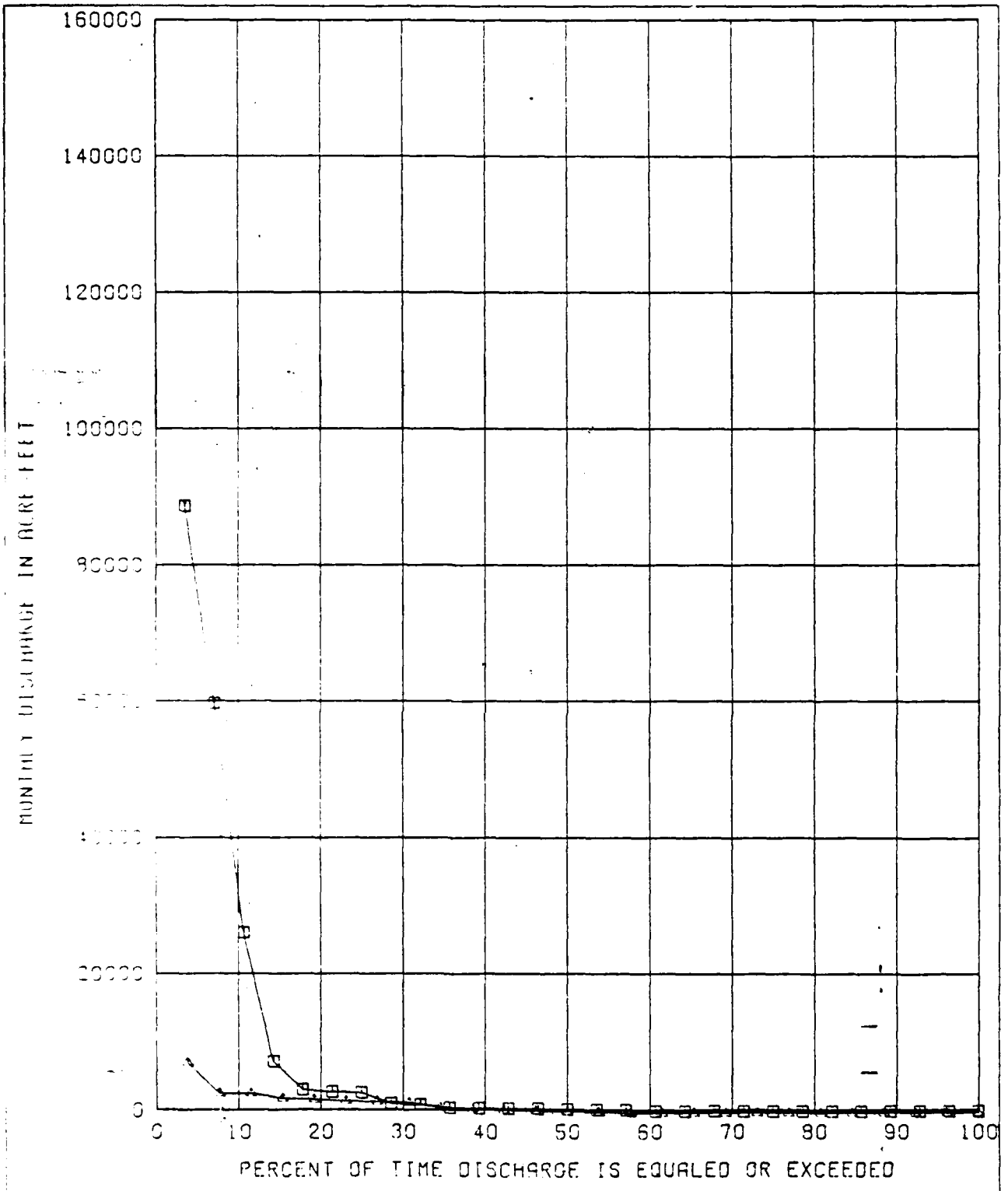
COLORADO RIVER BASIN, TEXAS
O.C. FISHER LAKE

FLOW DURATION CURVES AT DAM SITE
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

FLOW DURATION CURVES AT DAM SITE

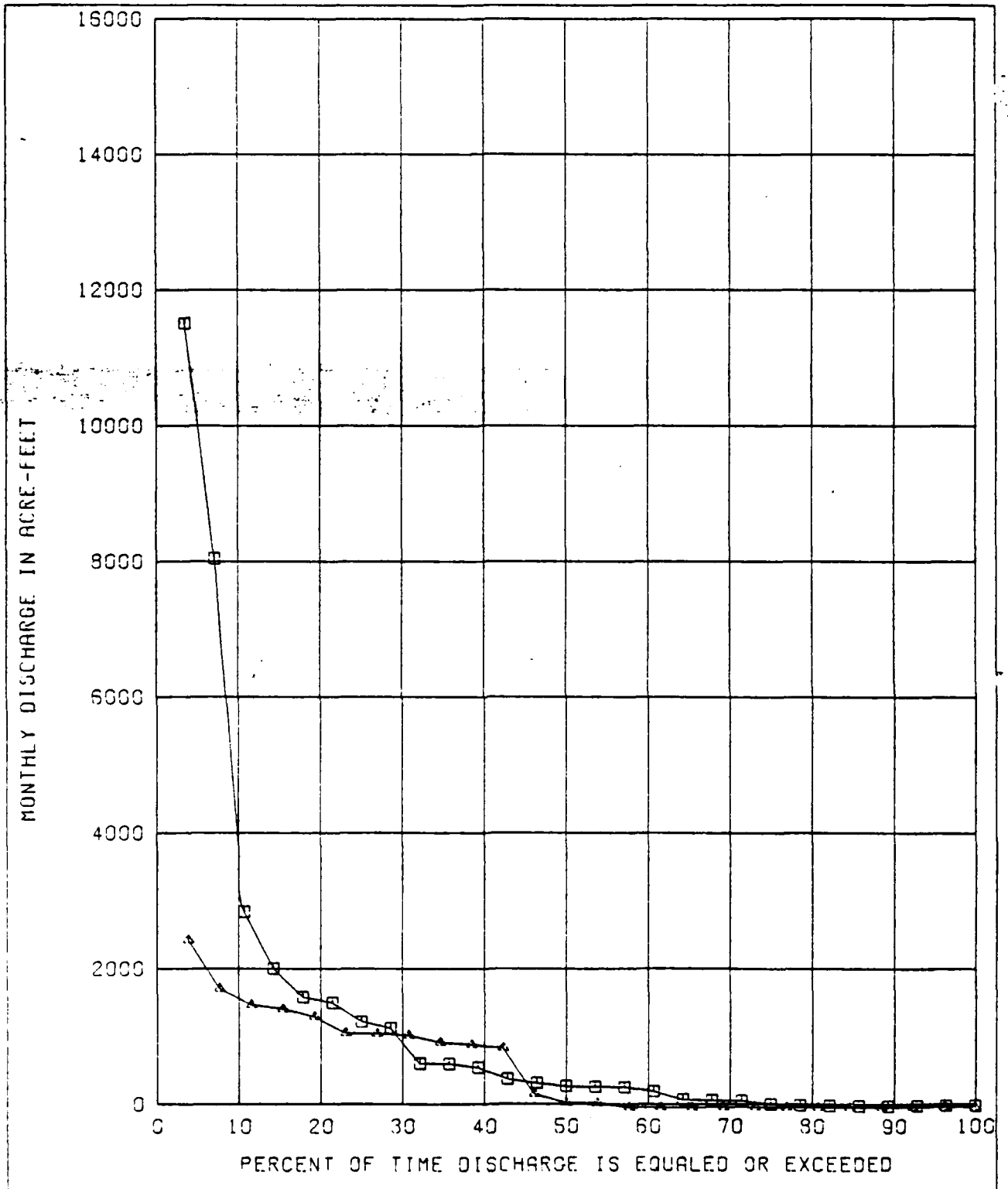
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1978)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

FLOW DURATION CURVES AT DAM SITE

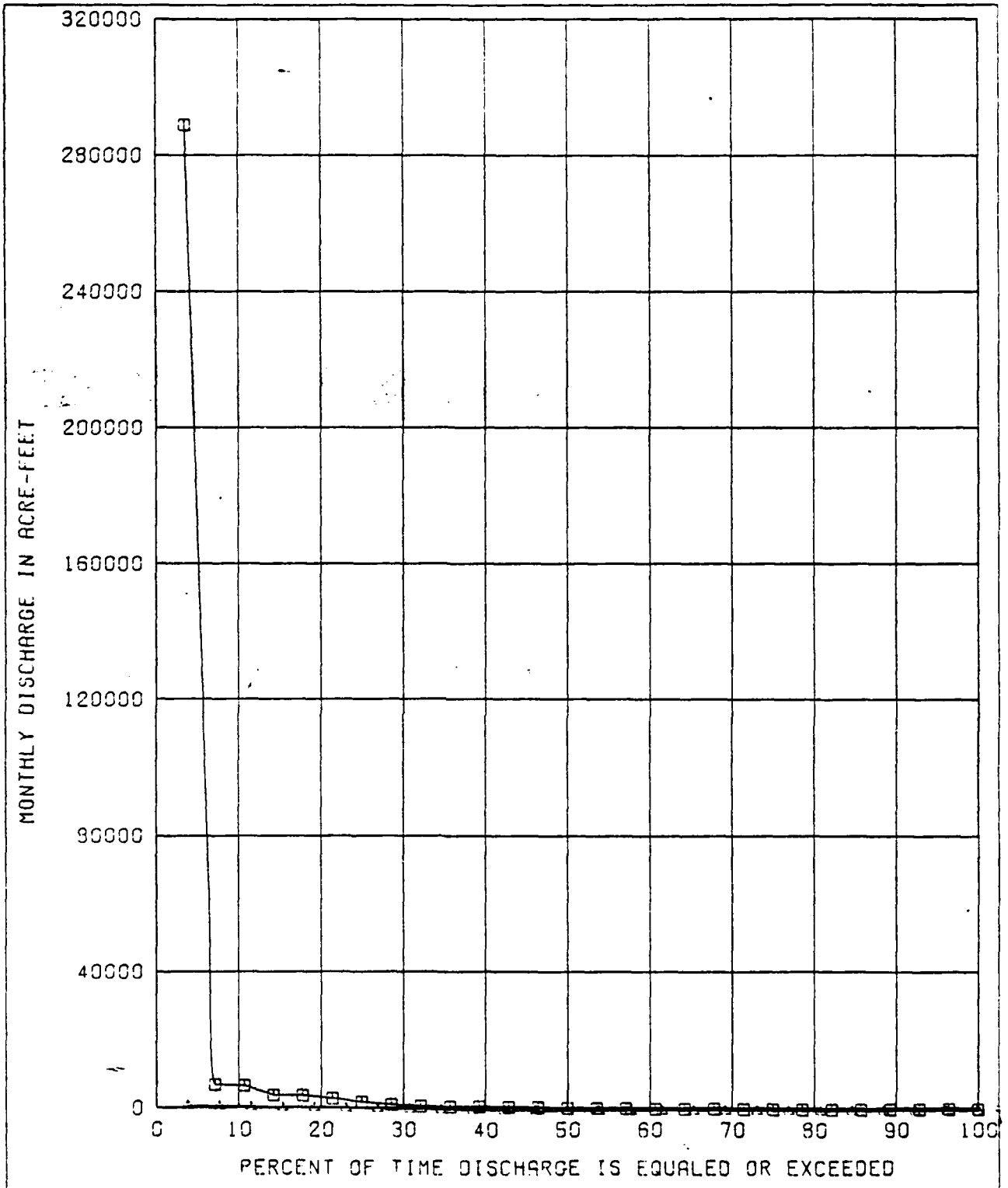
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1952)

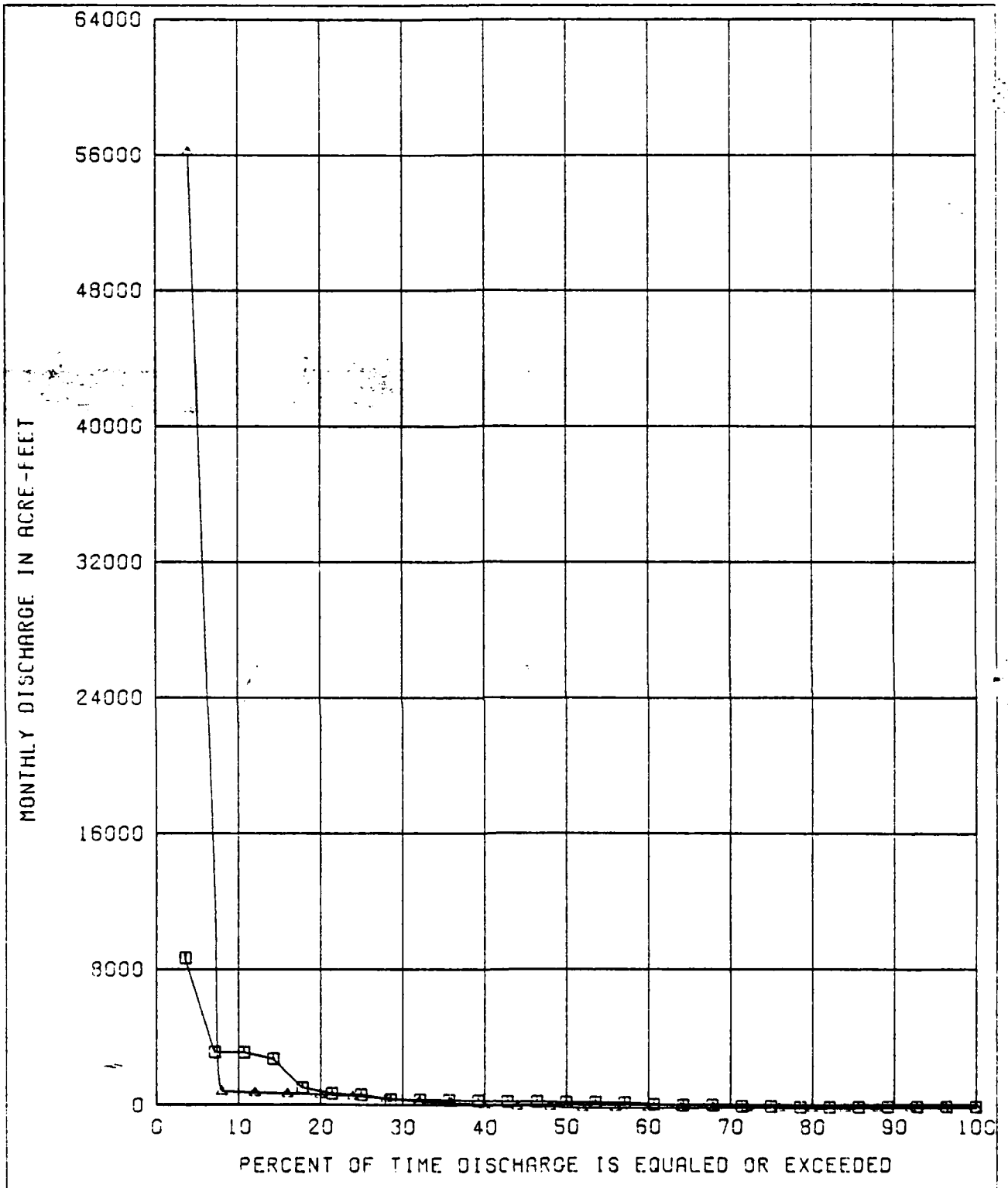
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1979)

COLORADO RIVER BASIN, TEXAS
O.C. FISHER LAKE
FLOW DURATION CURVES AT DAM SITE
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

FLOW DURATION CURVES AT DAM SITE

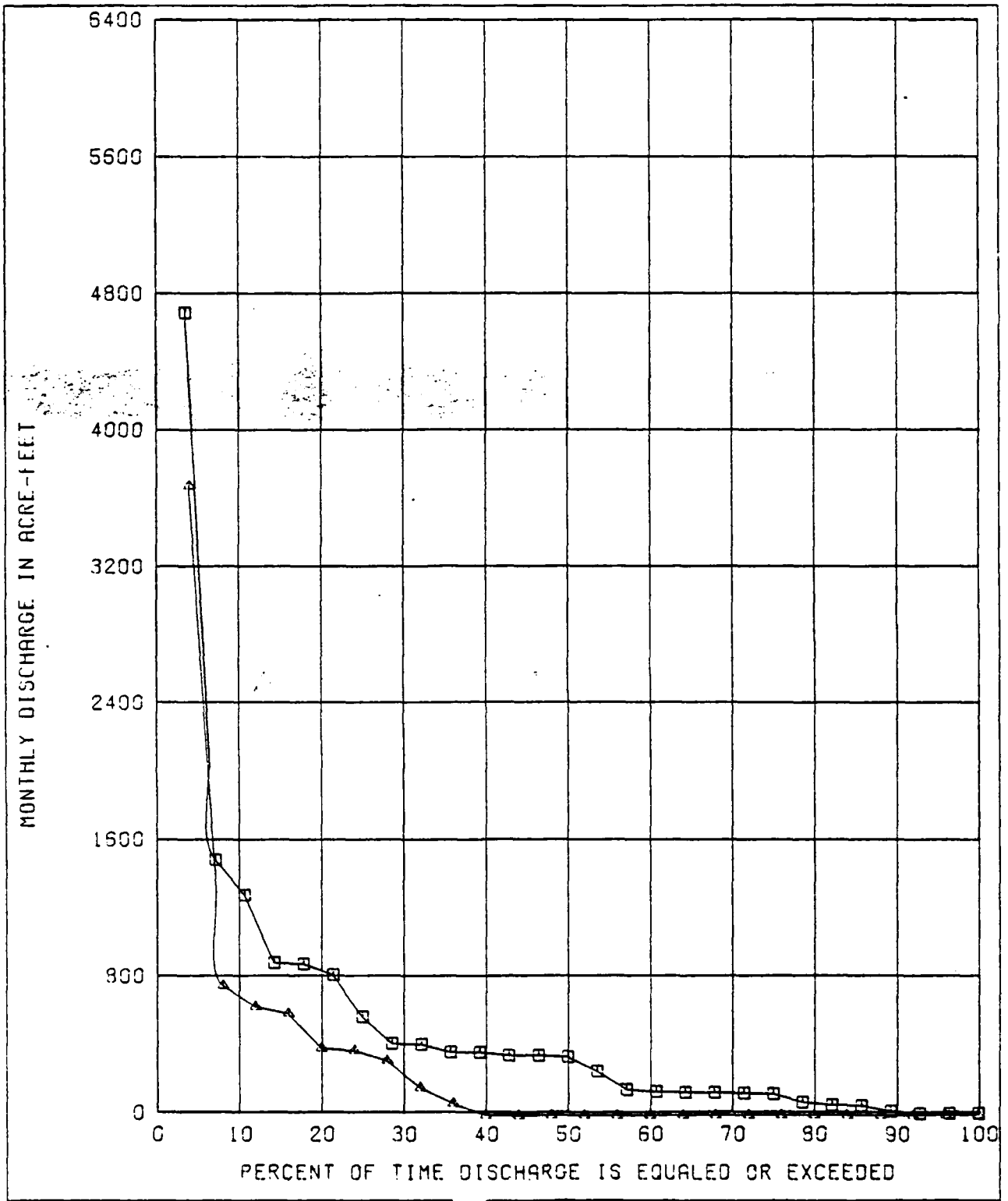
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1952-1979)

COLORADO RIVER BASIN, TEXAS

O.C. FISHER LAKE

FLOW DURATION CURVES AT DAM SITE

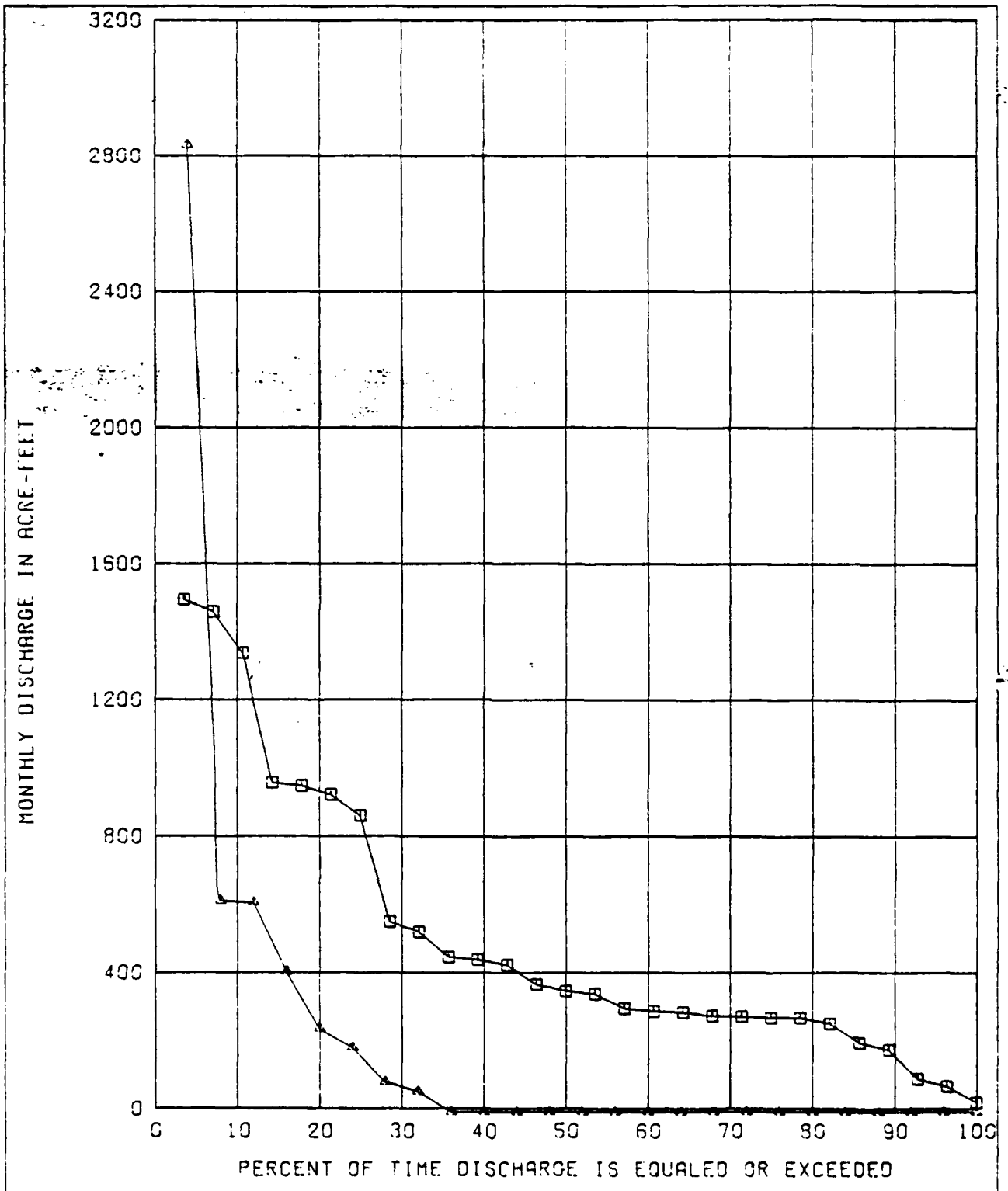
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1924-1952)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1952-1978)

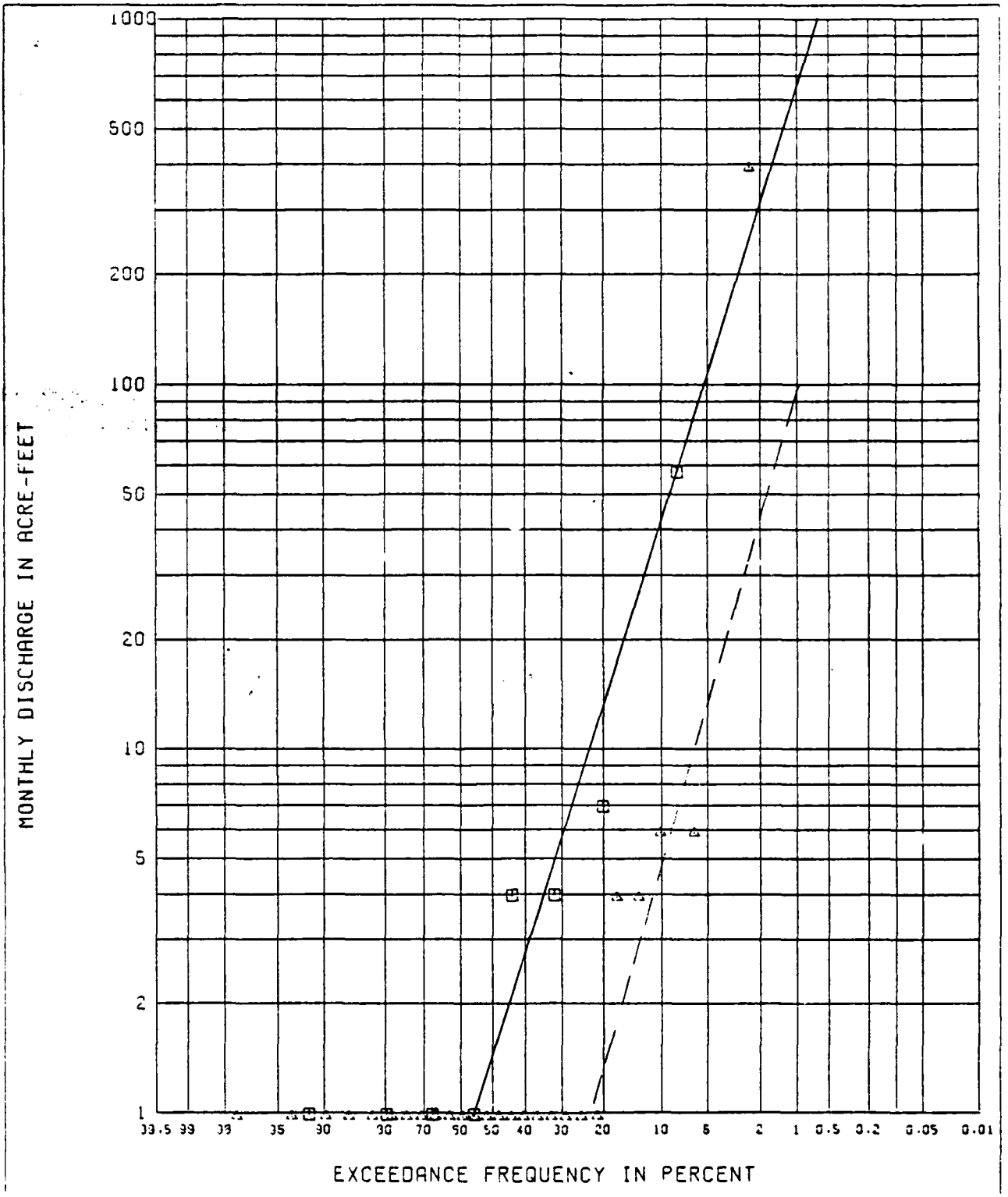
COLORADO RIVER BASIN, TEXAS
O.C. FISHER LAKE

FLOW DURATION CURVES AT DAM SITE
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

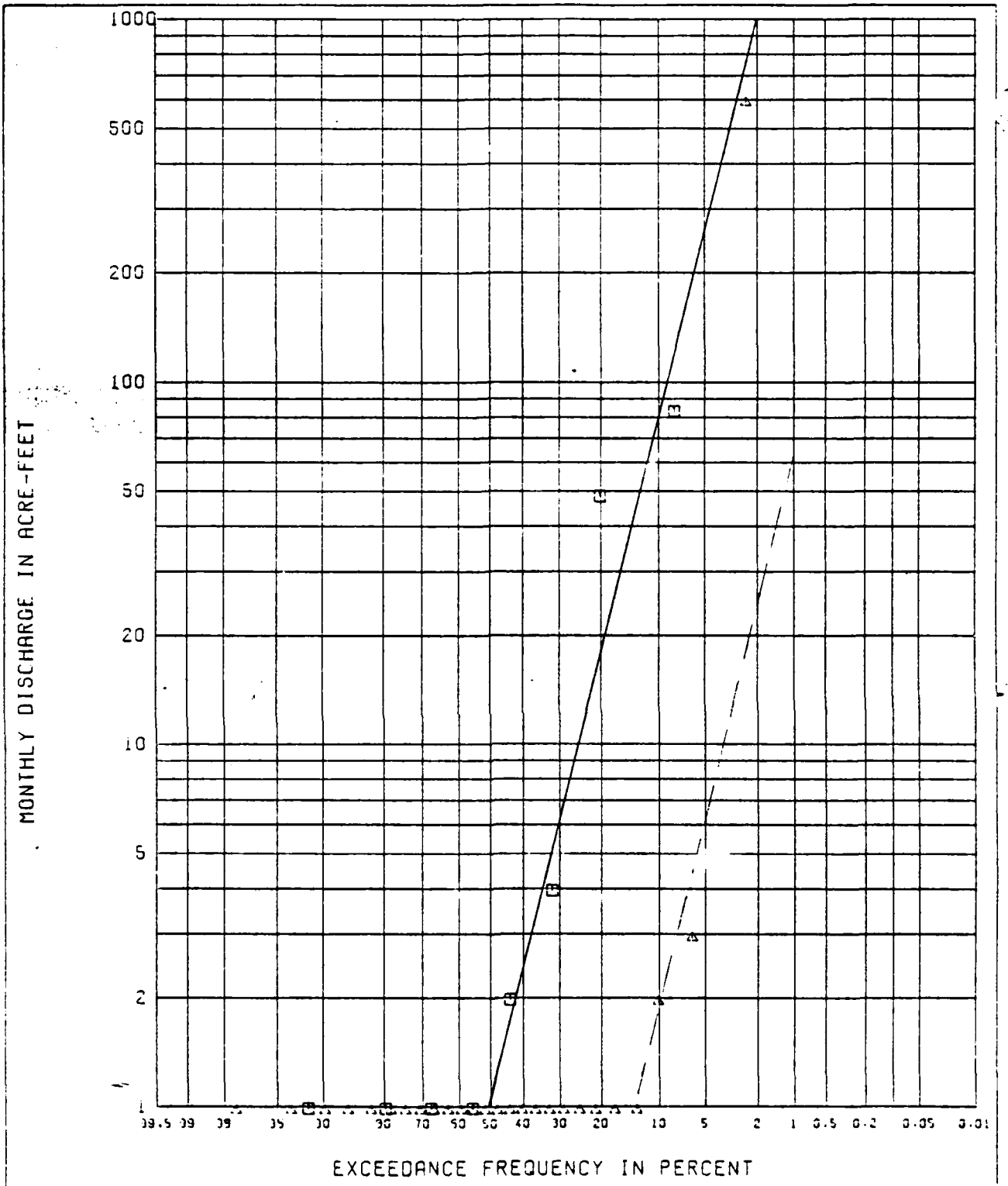
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 1

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

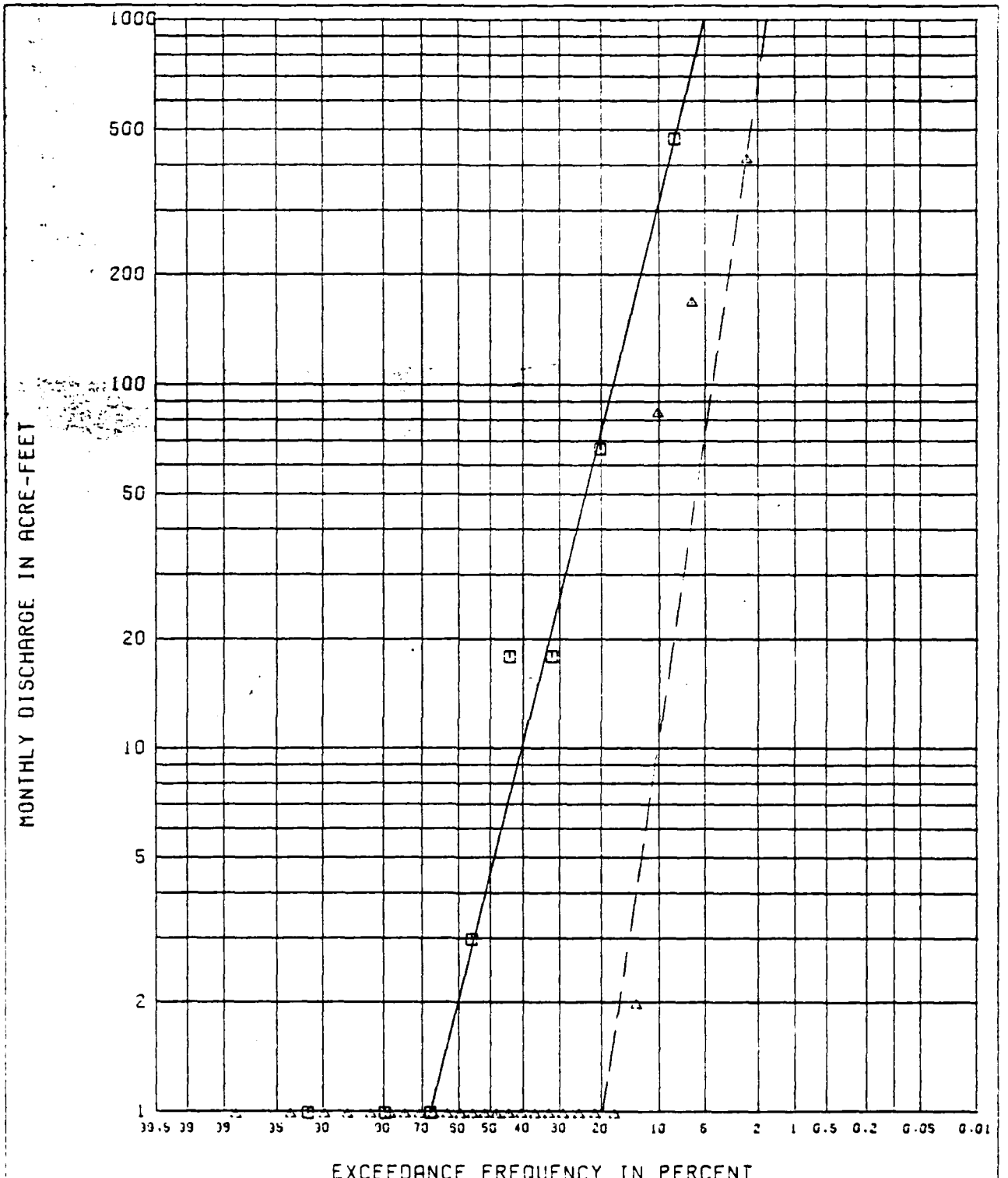
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE-2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

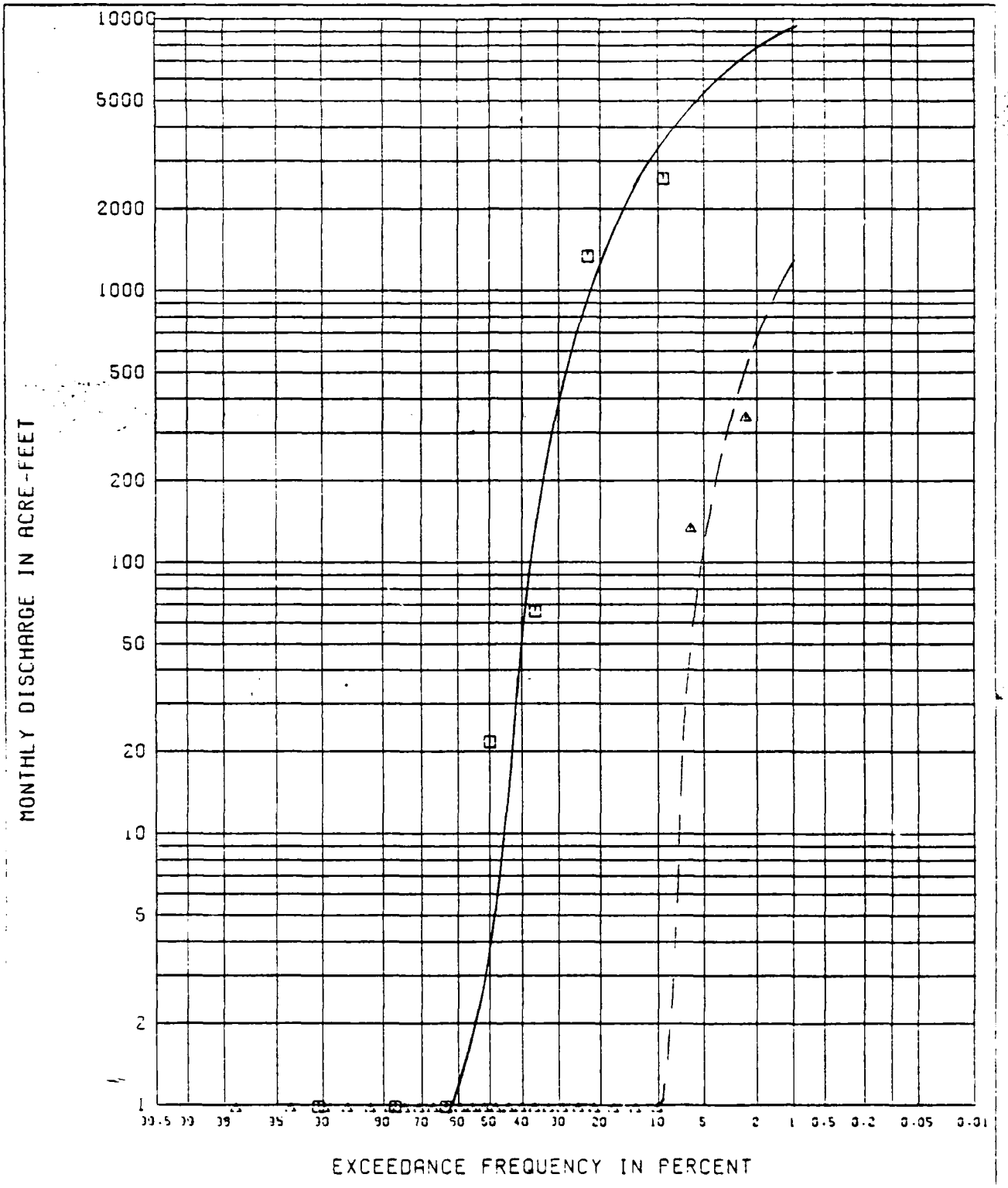
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1940-1949)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1950-1978)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE

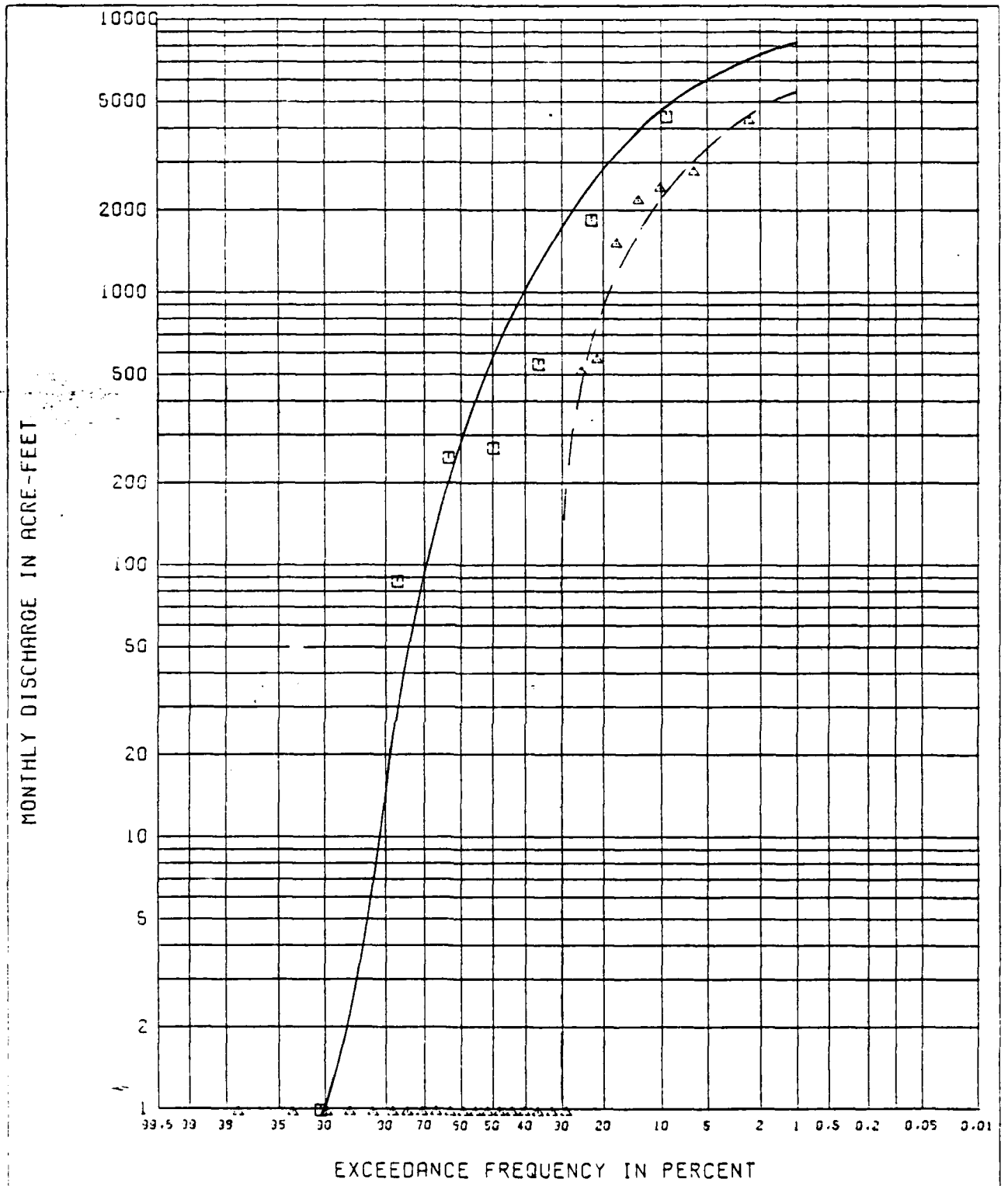
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1940-1948)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

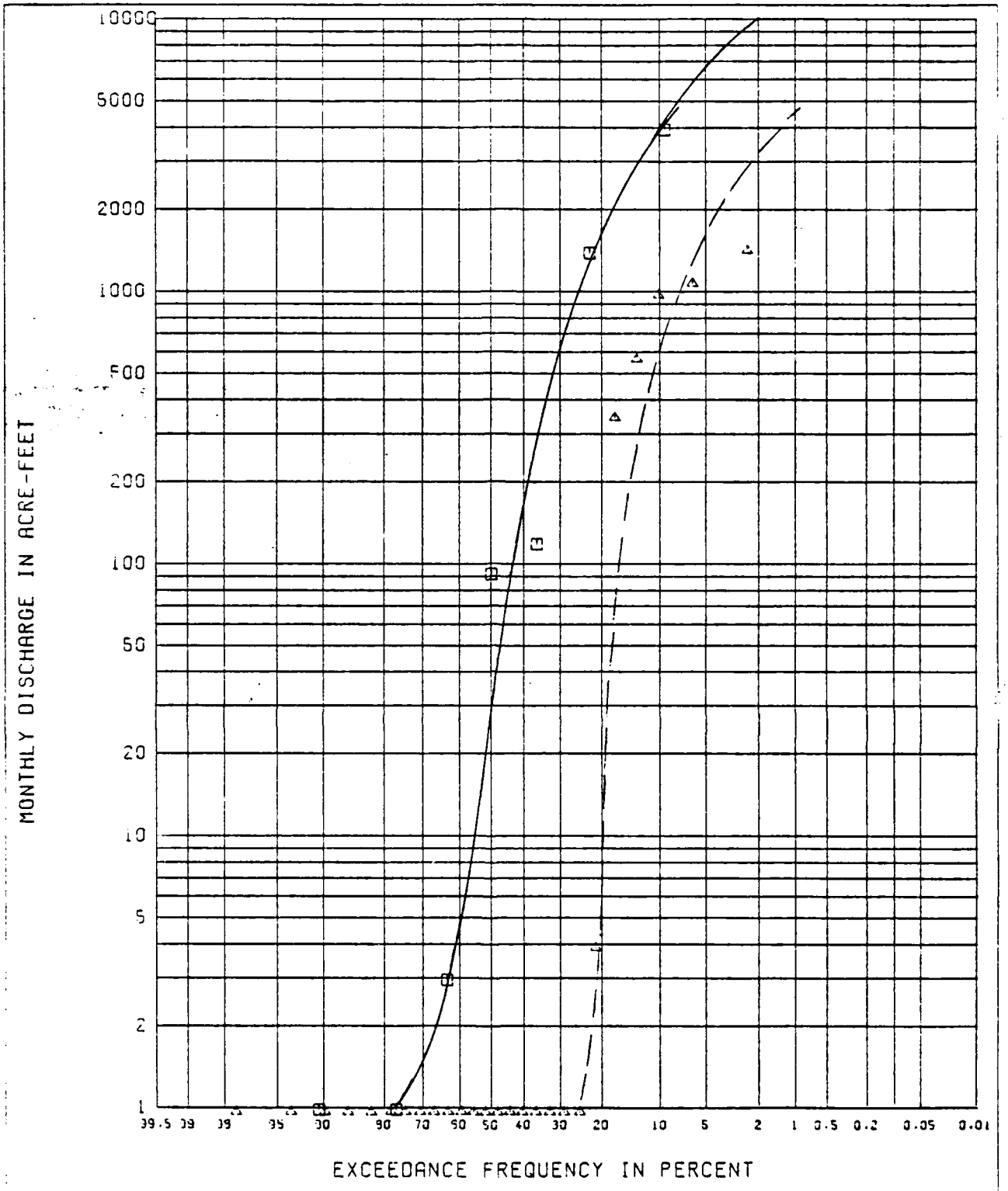
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1948)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

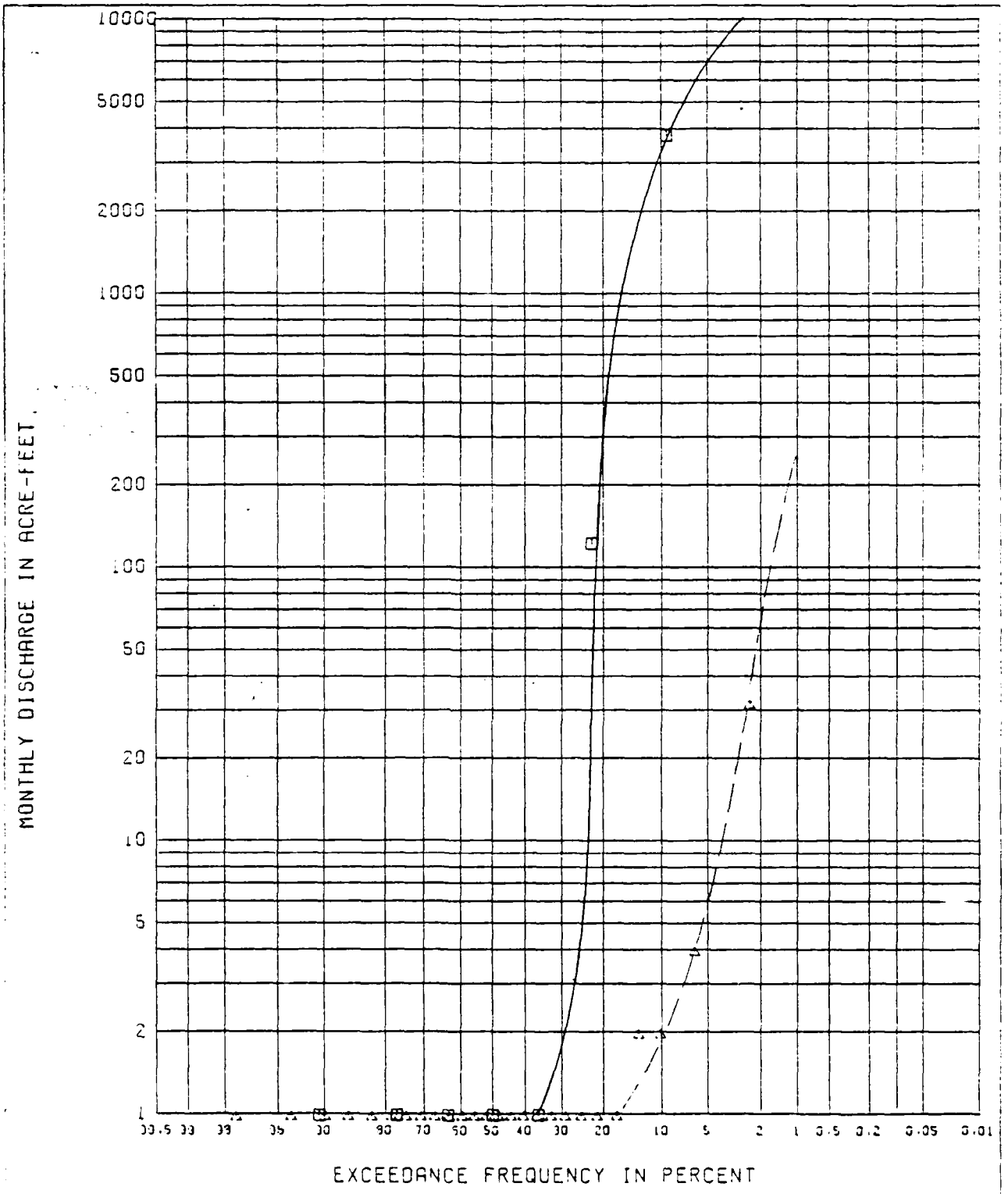
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1940-1948)

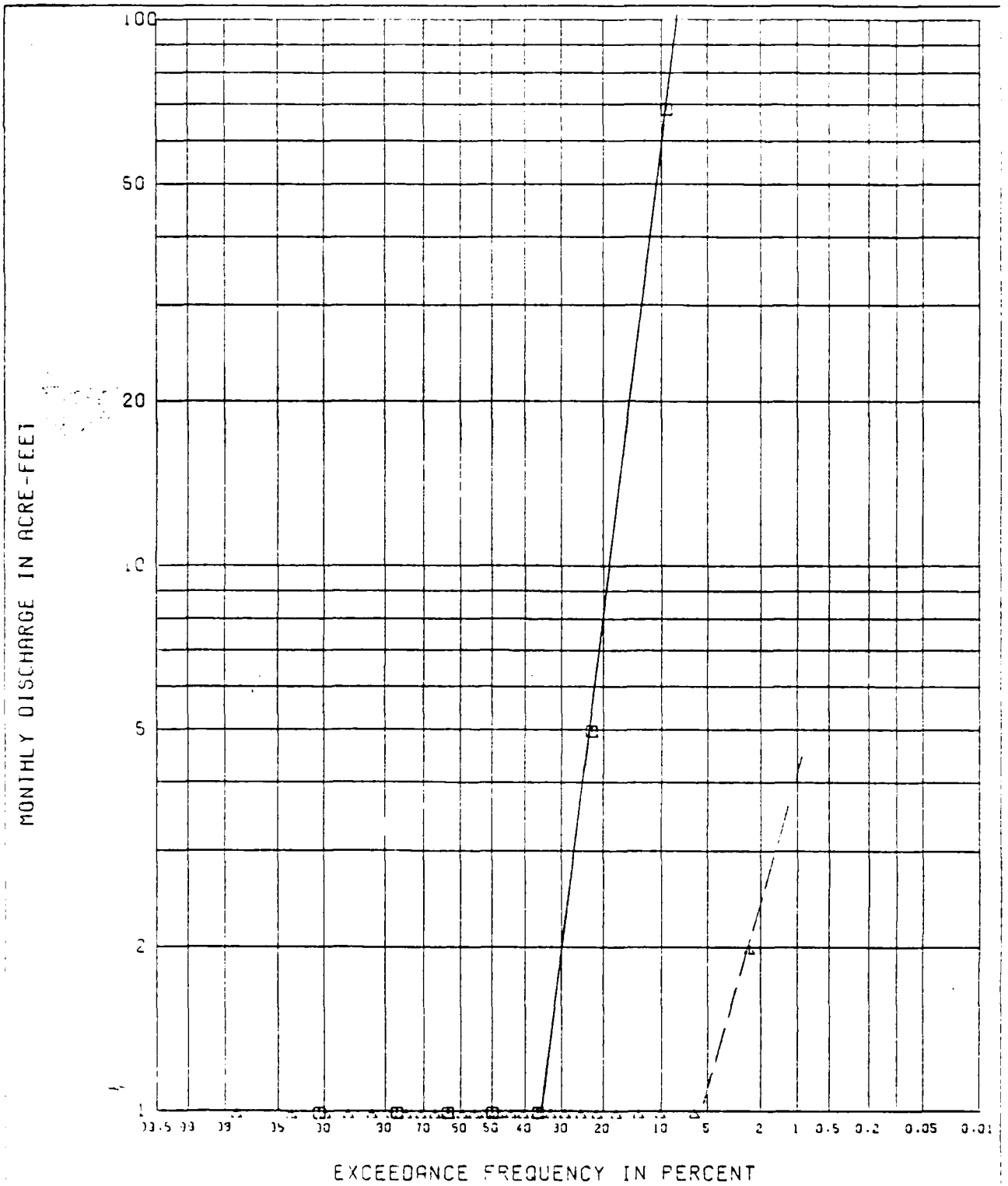
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS
HORDS CREEK LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1948)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

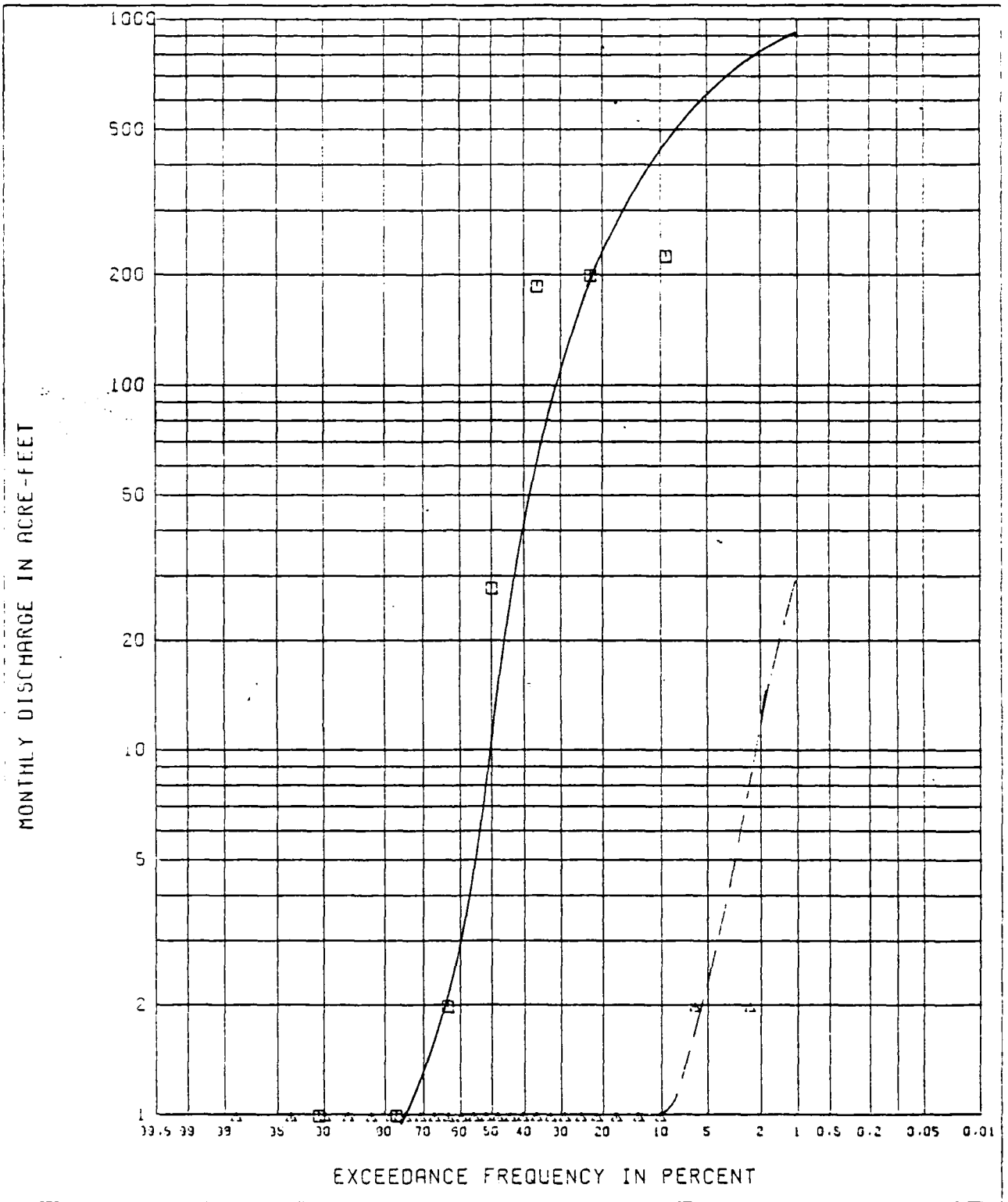
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

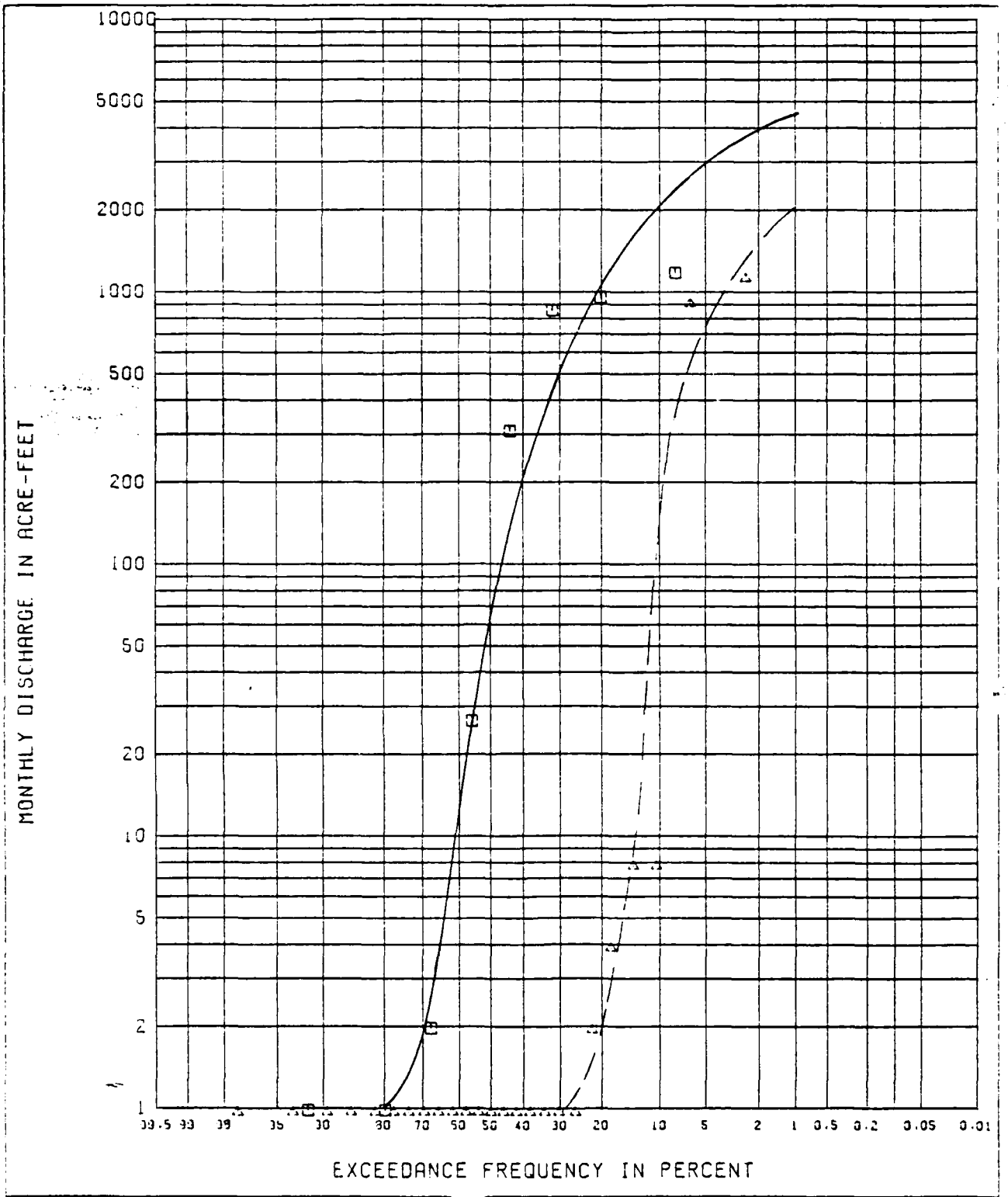
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

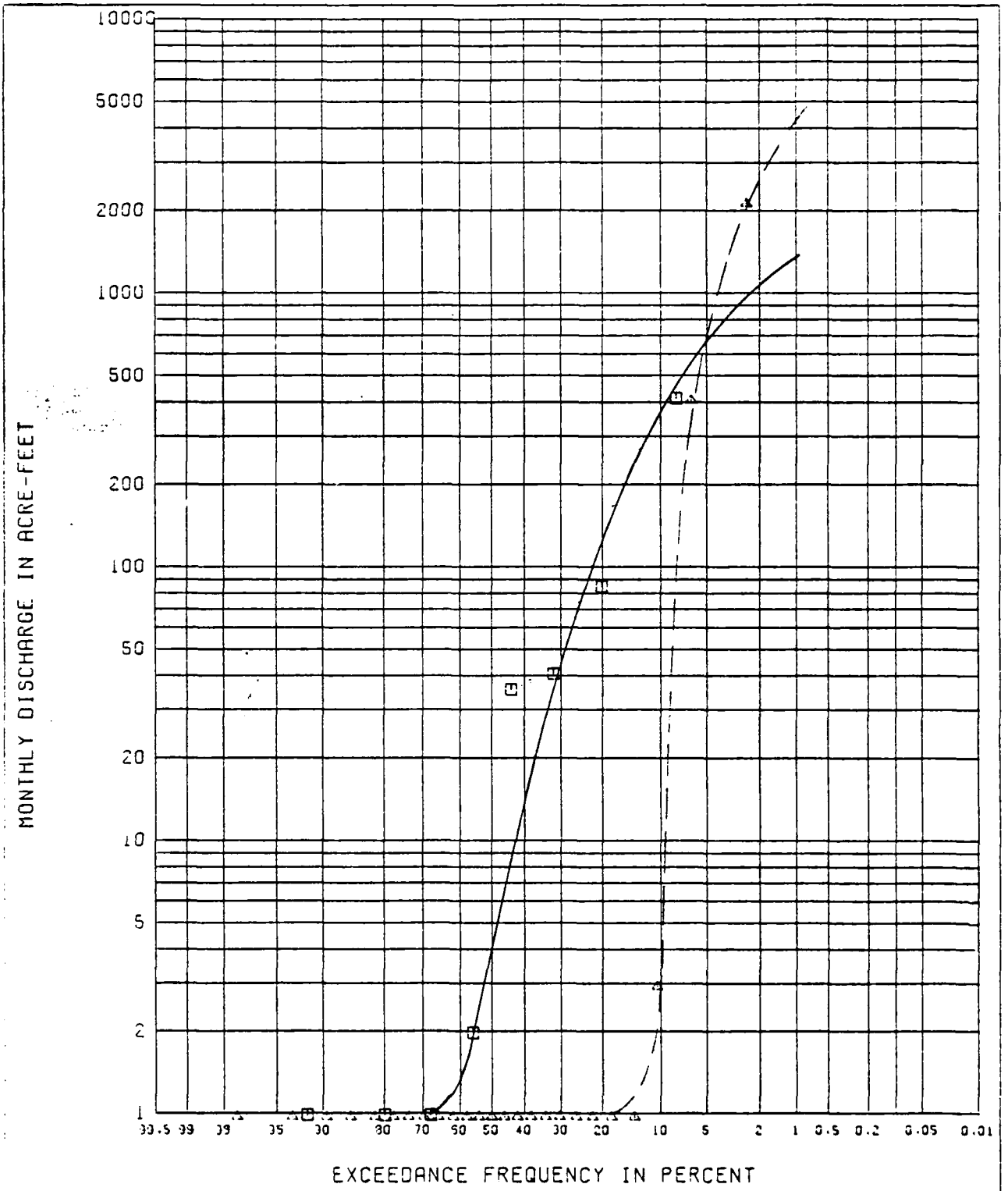
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1948)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

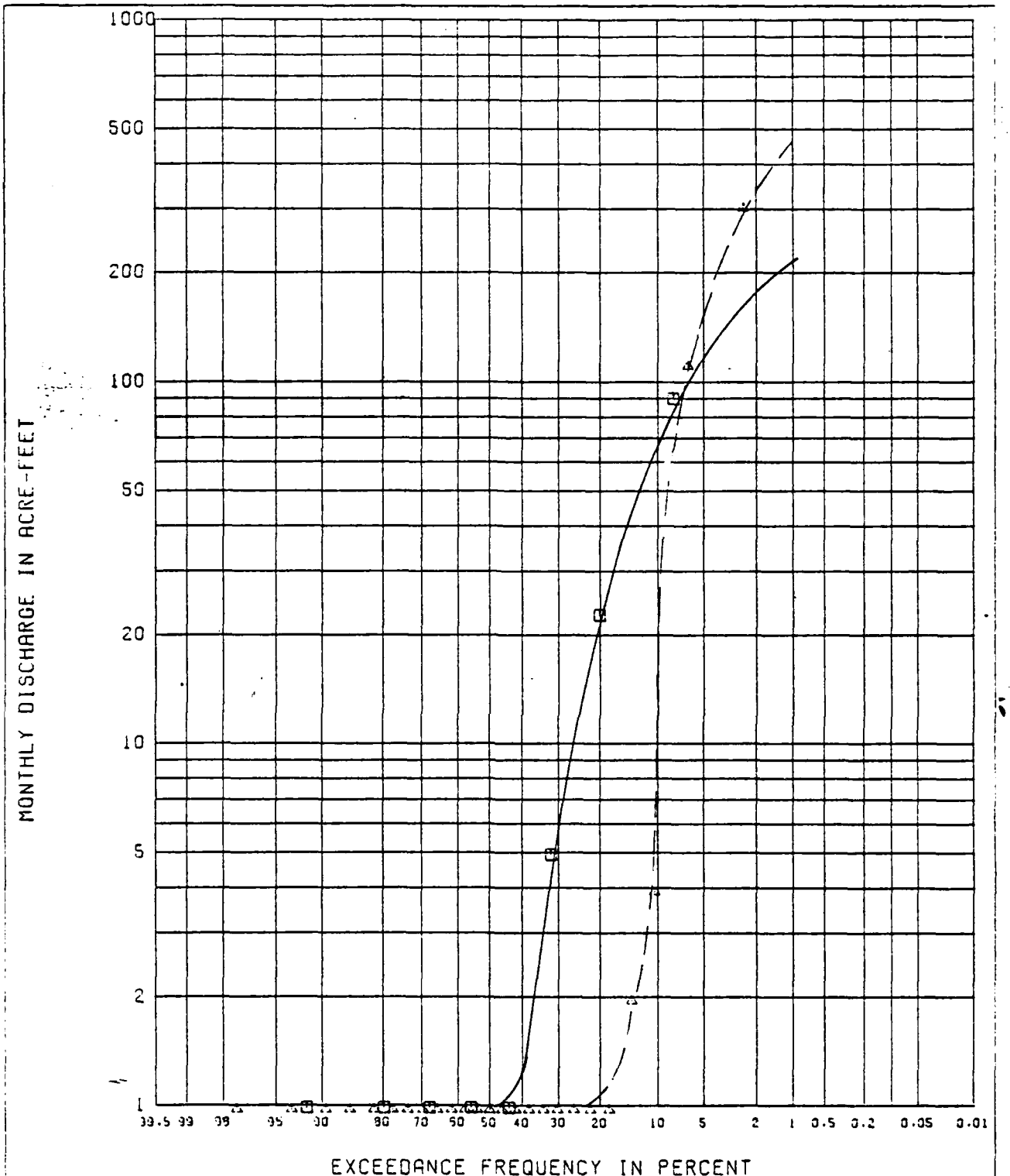
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 11

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1948)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

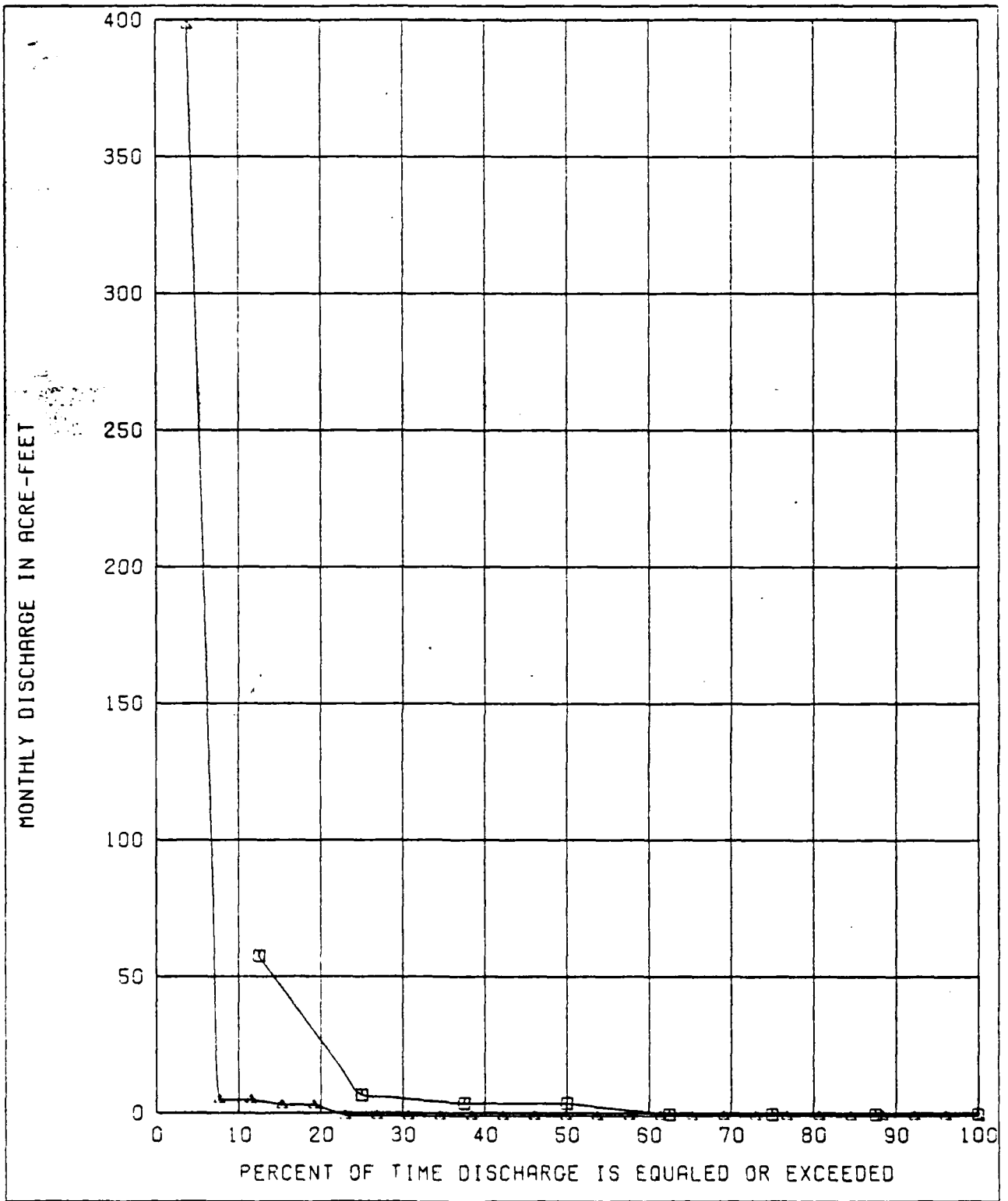
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1940-1949)

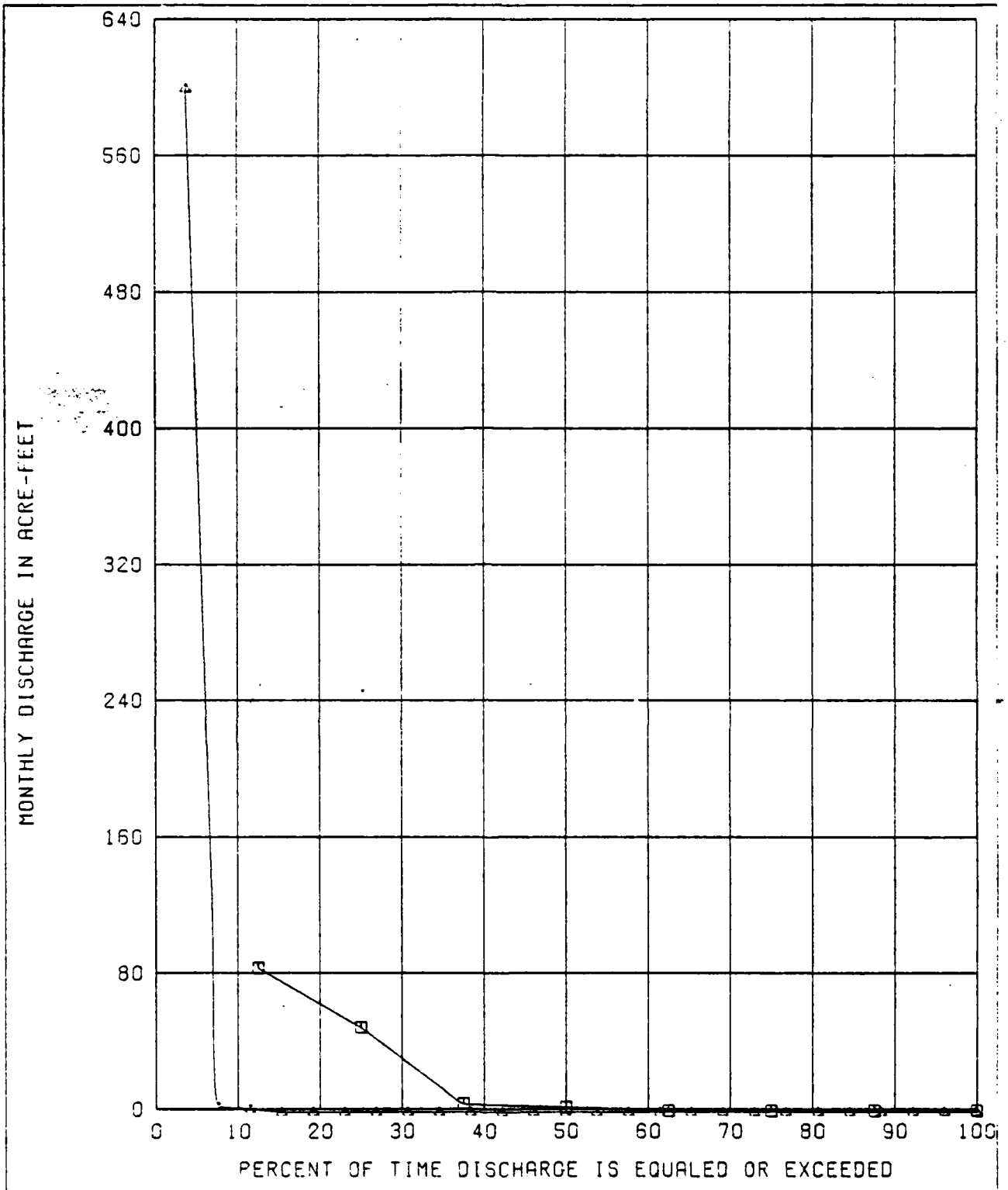
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS
HORDS CREEK LAKE
FLOW DURATION CURVES AT DAM SITE
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

FLOW DURATION CURVES AT DAM SITE

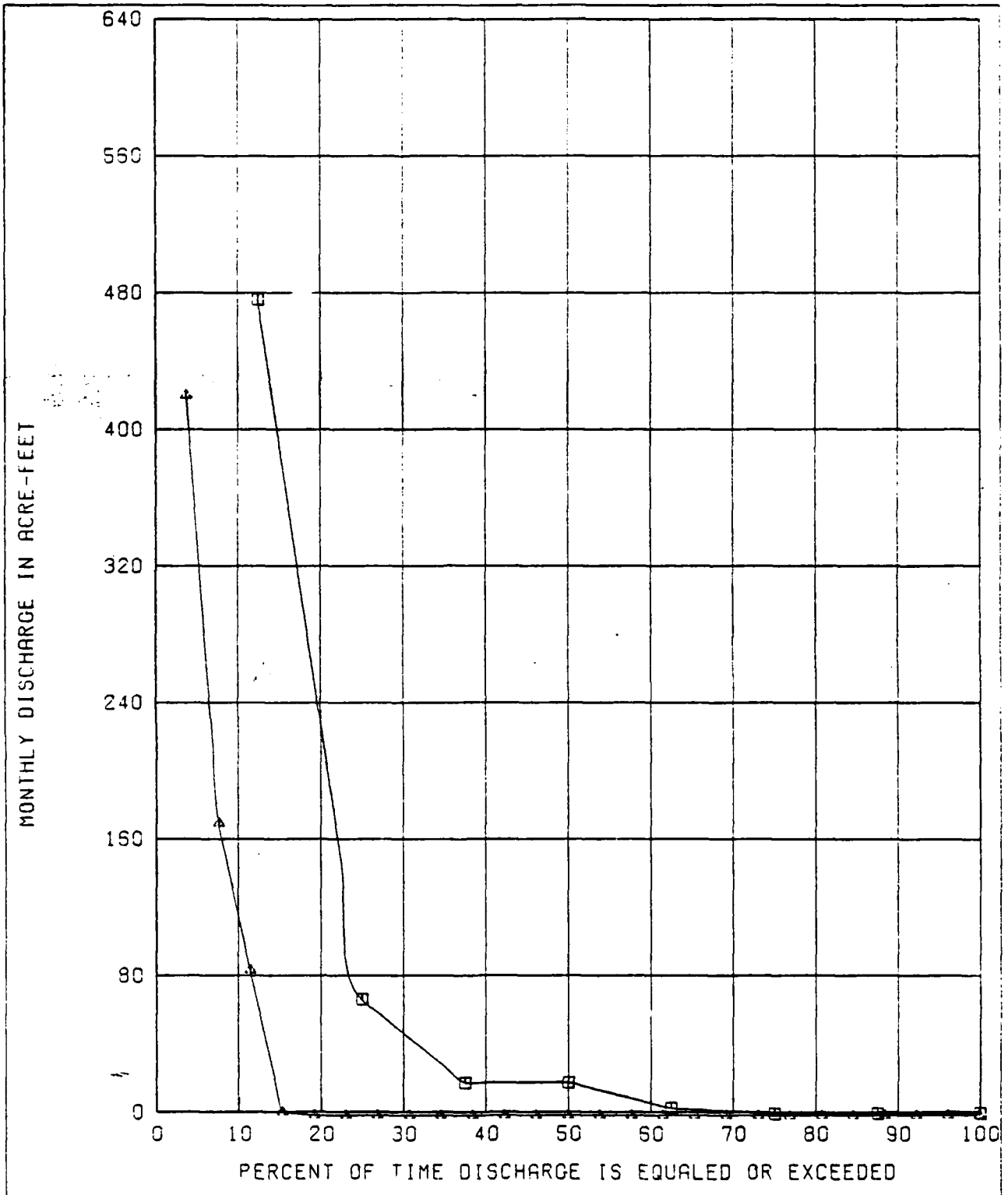
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1940-1949)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

FLOW DURATION CURVES AT DAM SITE

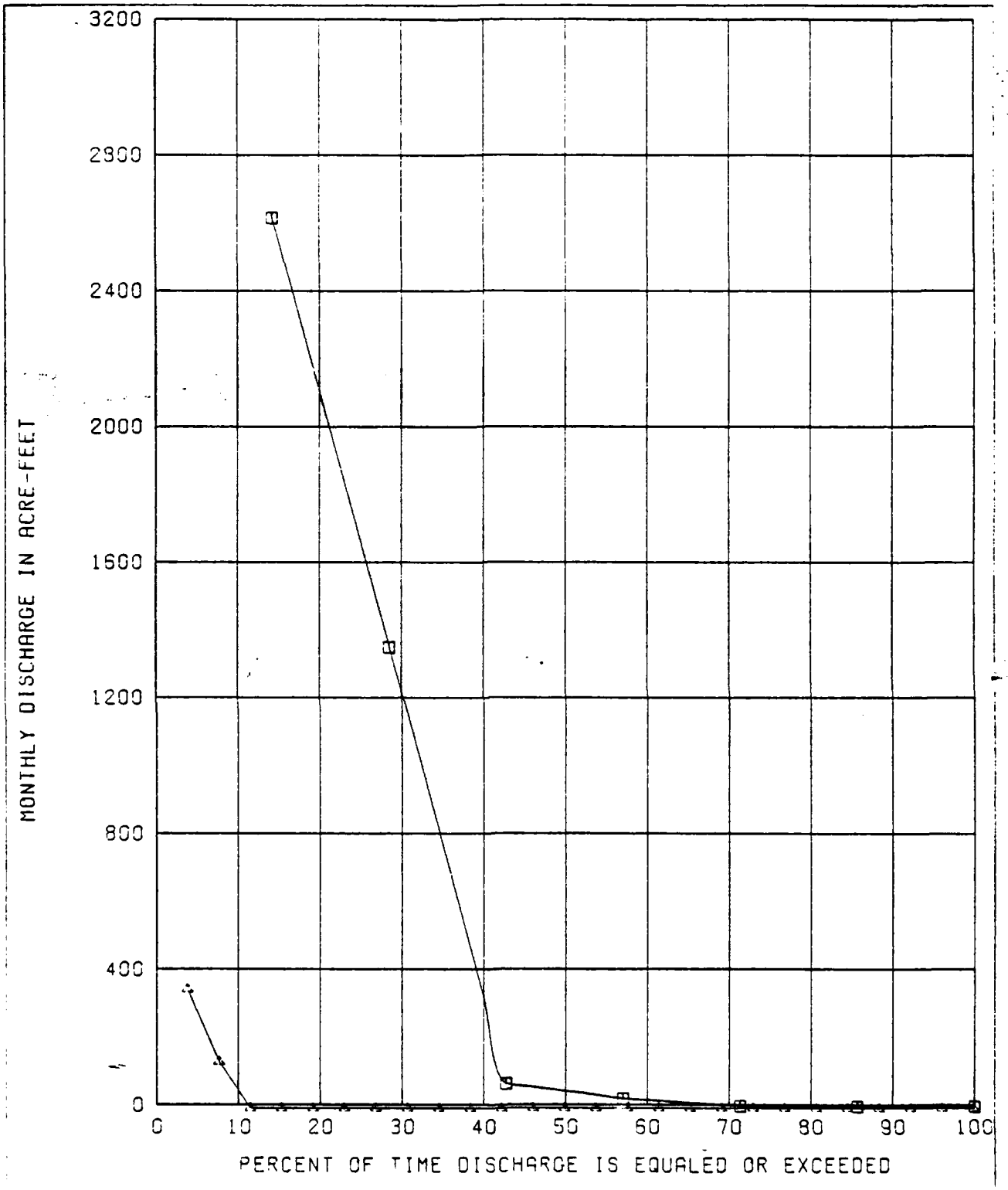
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

FLOW DURATION CURVES AT DAM SITE

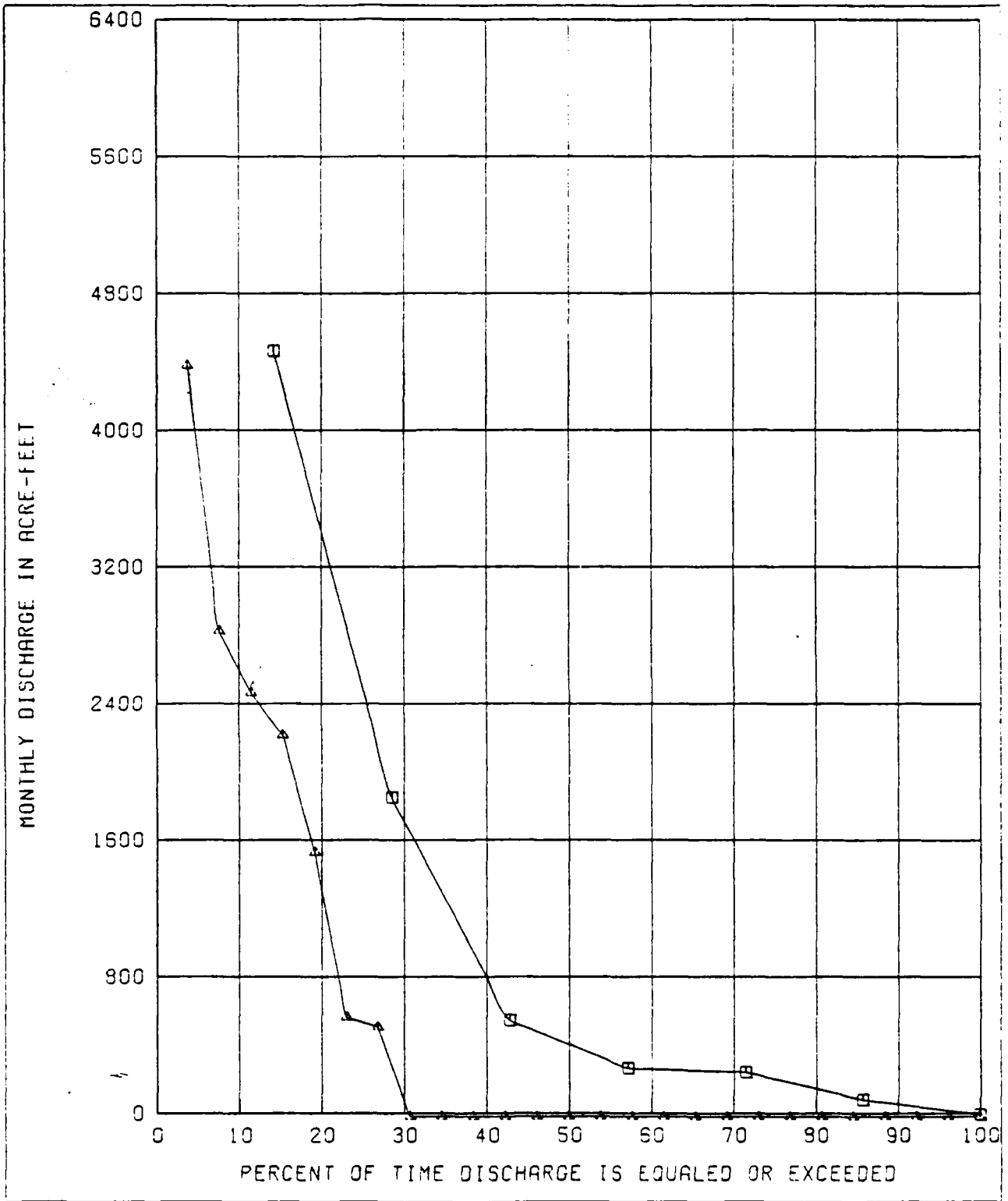
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1940-1949)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

FLOW DURATION CURVES AT DAM SITE

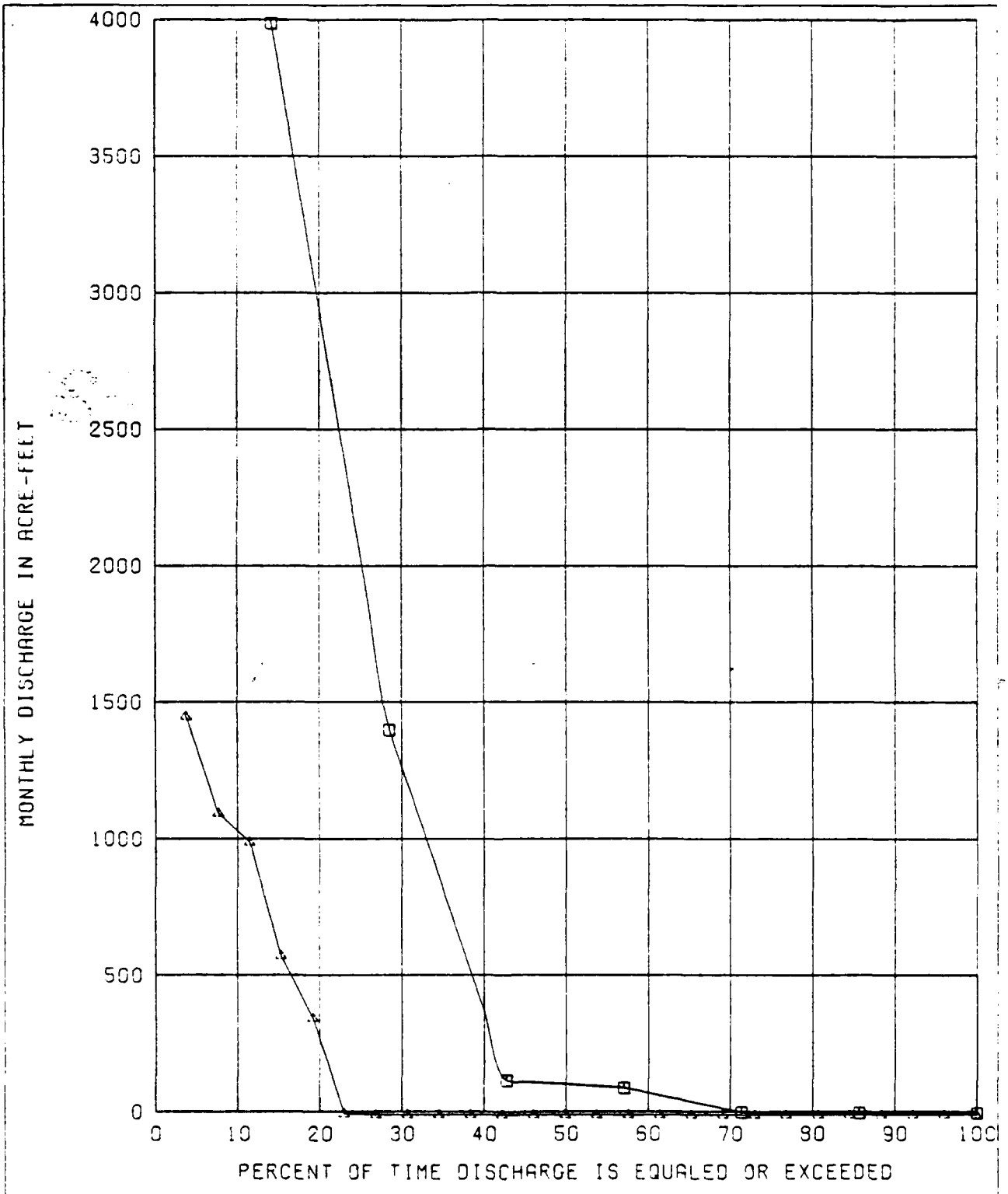
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

FLOW DURATION CURVES AT DAM SITE

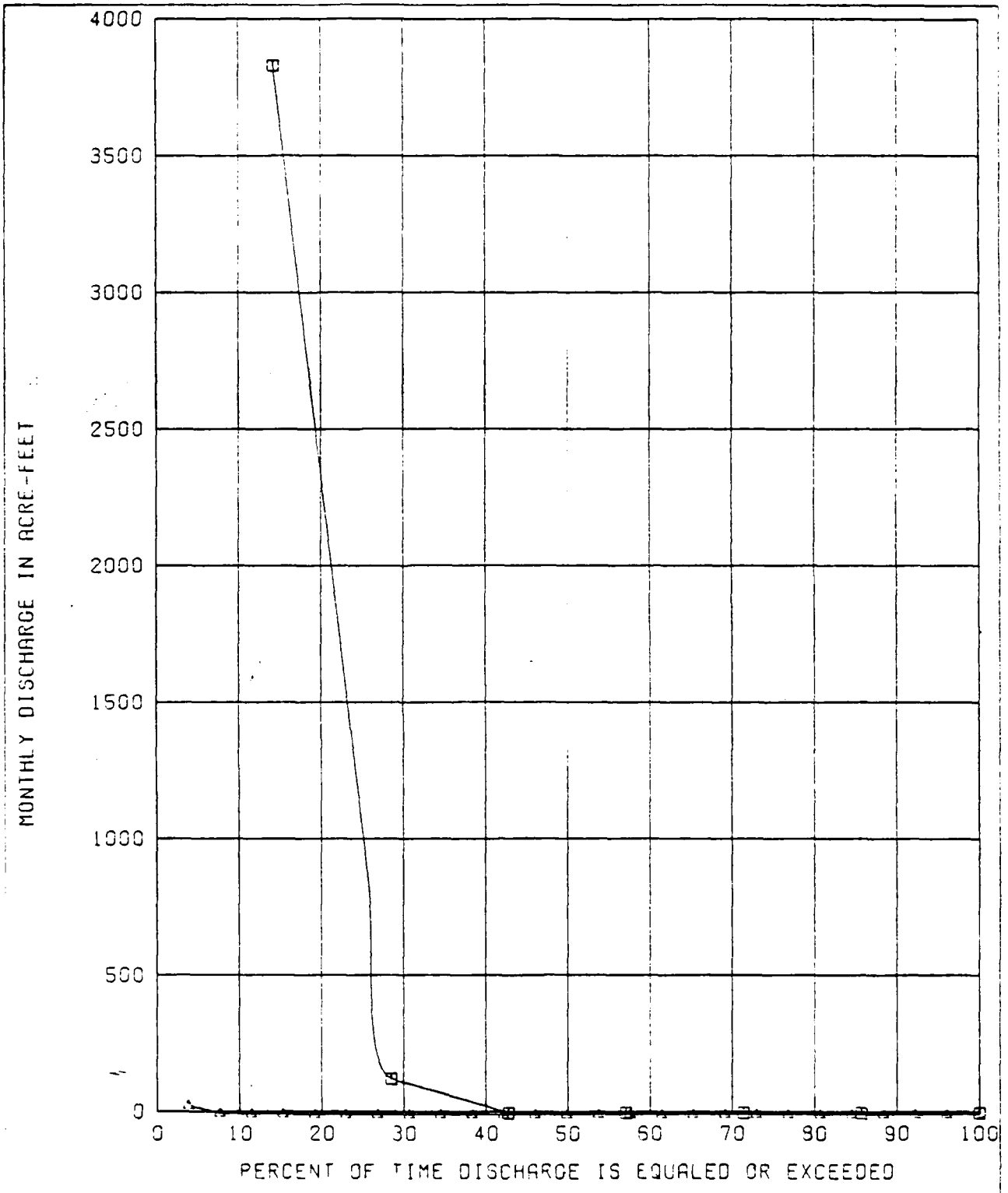
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1940-1949)

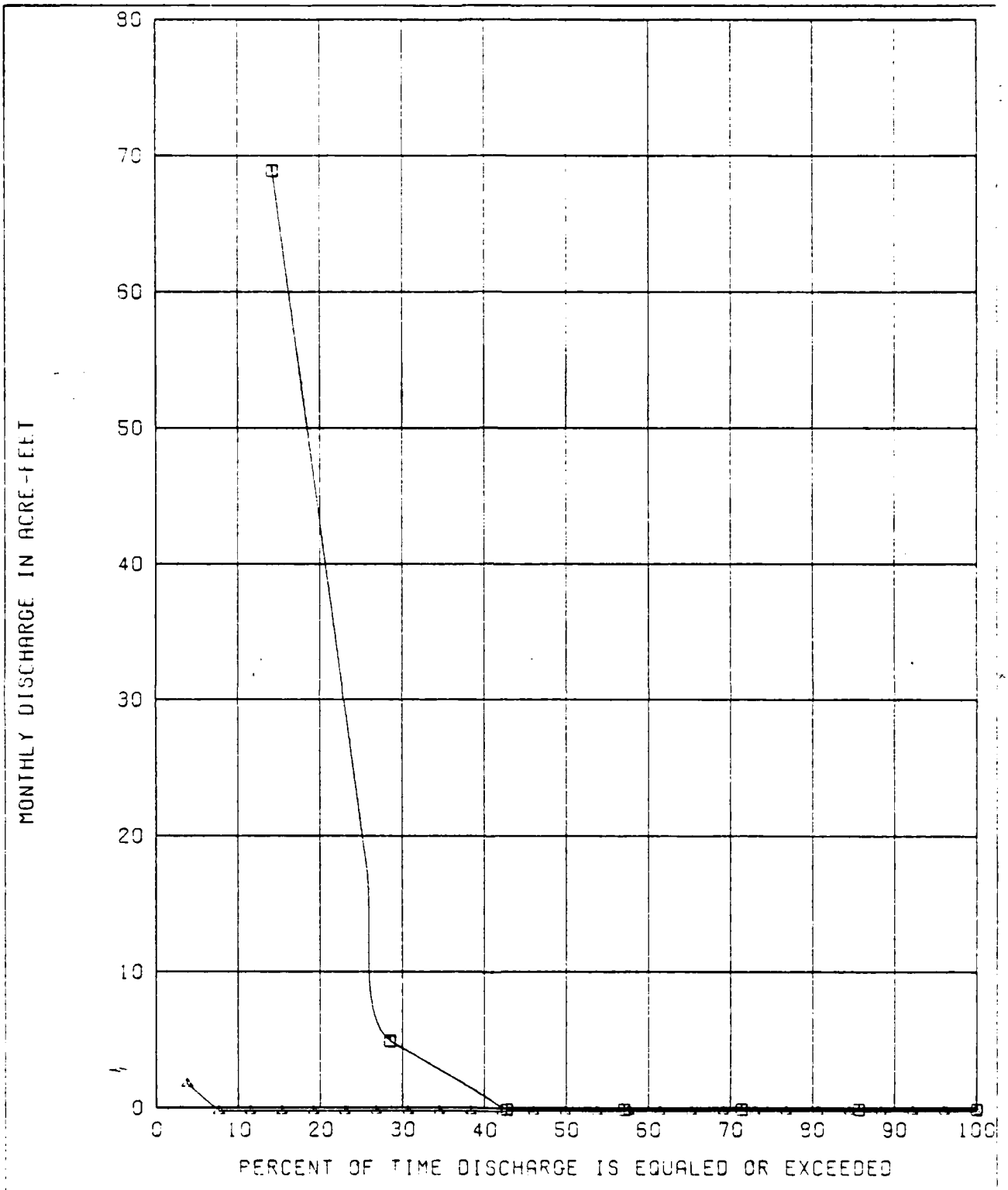
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS
HORDS CREEK LAKE
FLOW DURATION CURVES AT DAM SITE
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

FLOW DURATION CURVES AT DAM SITE

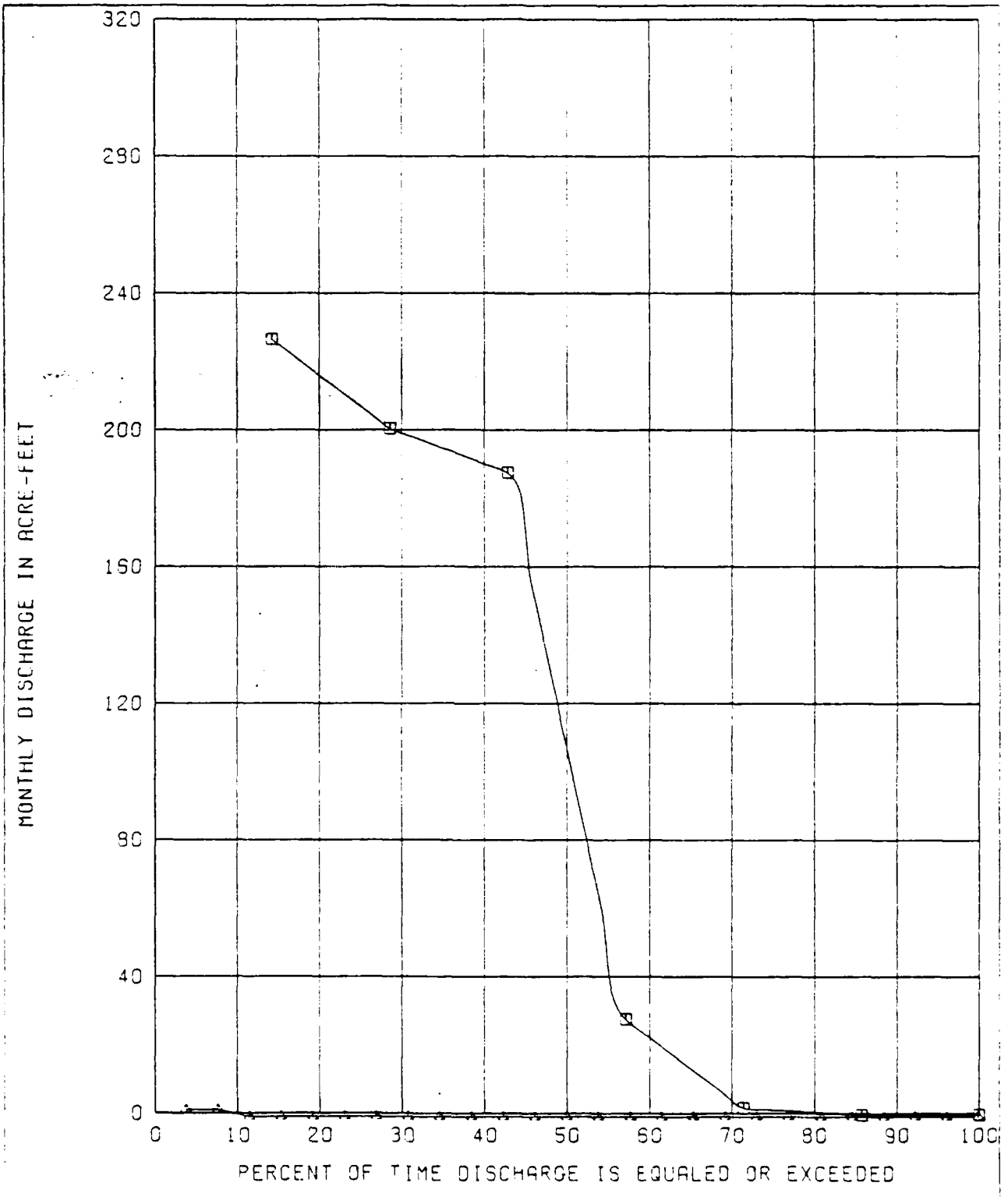
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1940-1949)

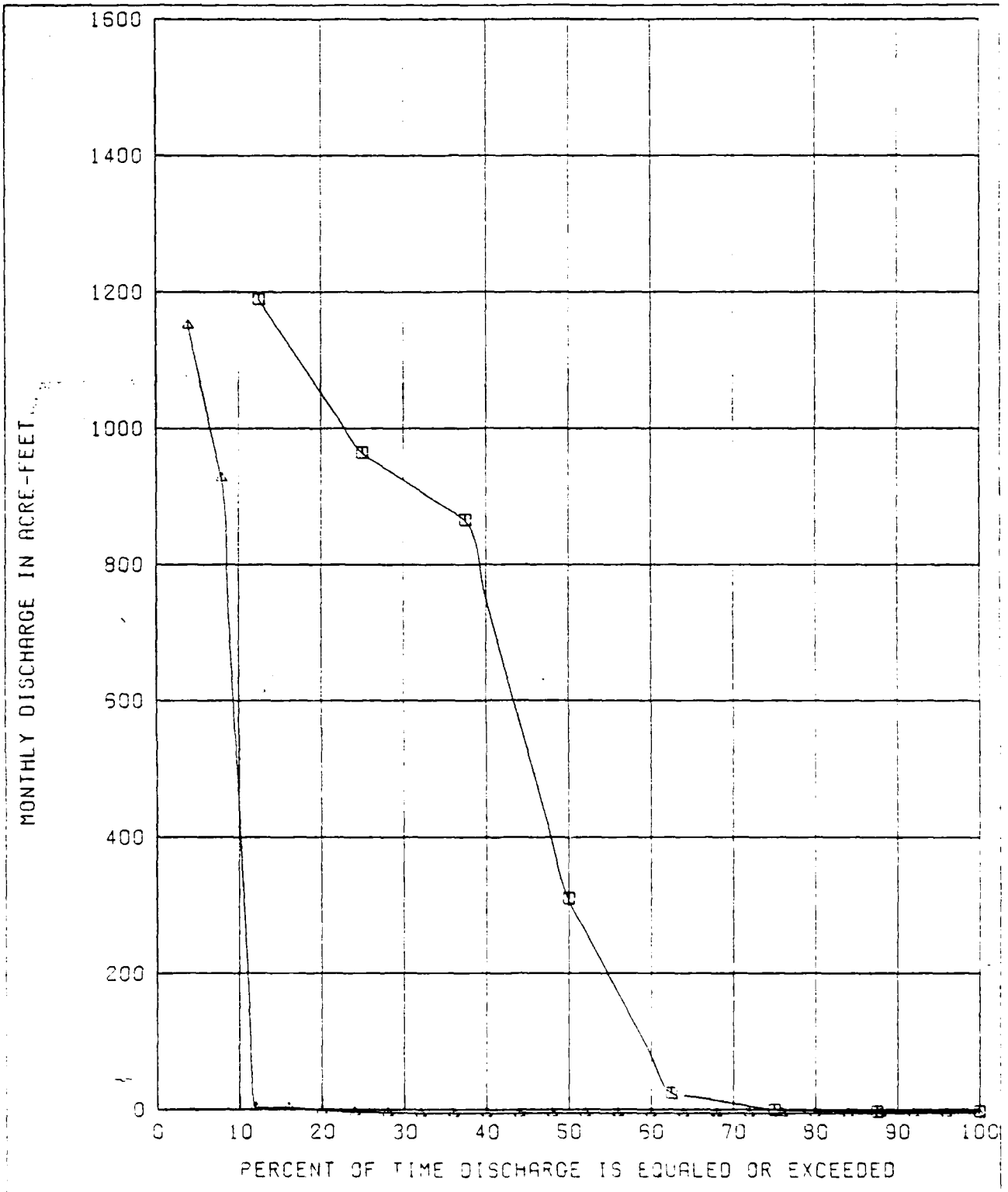
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS
HORDS CREEK LAKE
FLOW DURATION CURVES AT DAM SITE
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1948)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

FLOW DURATION CURVES AT DAM SITE

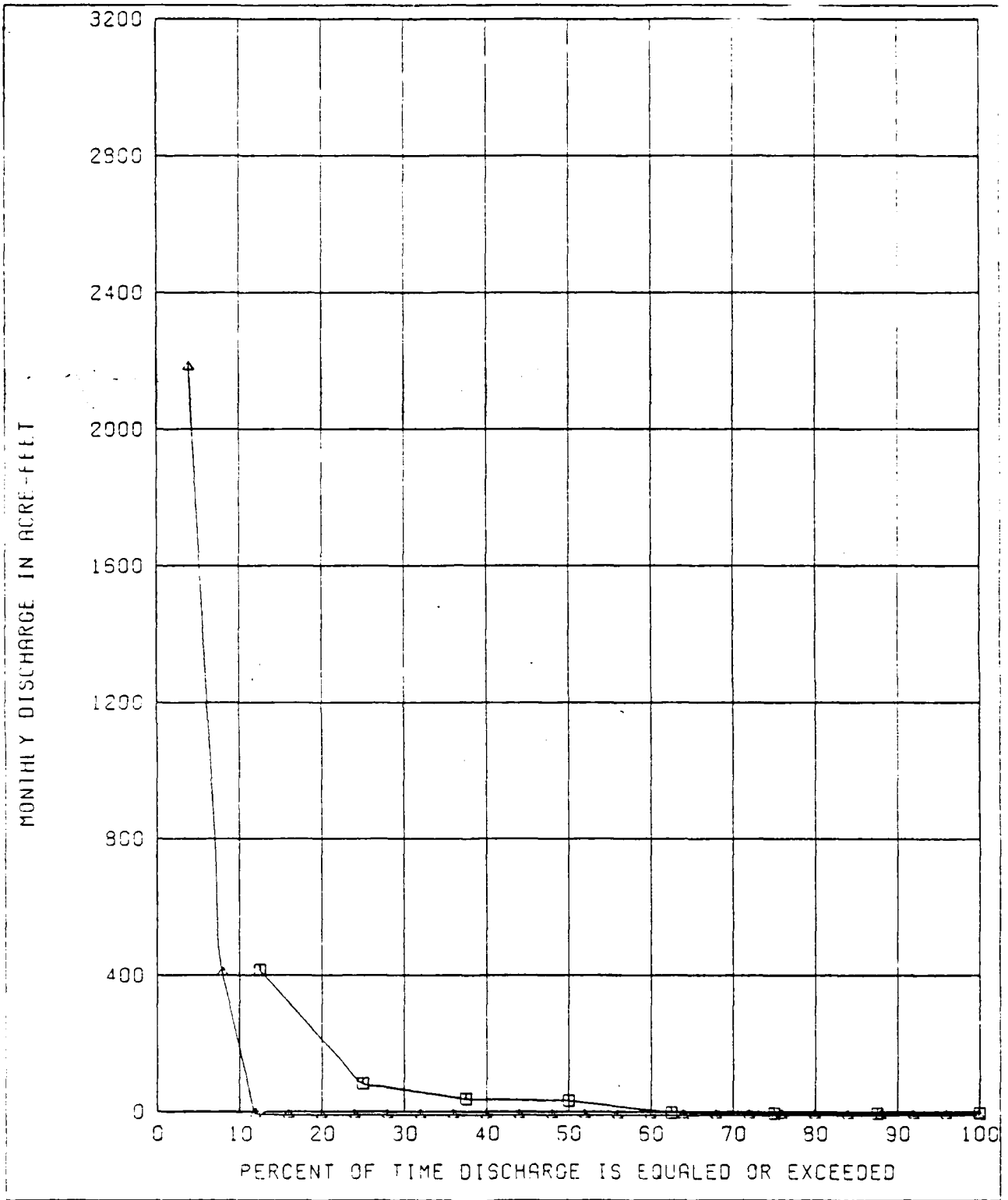
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1940-1949)

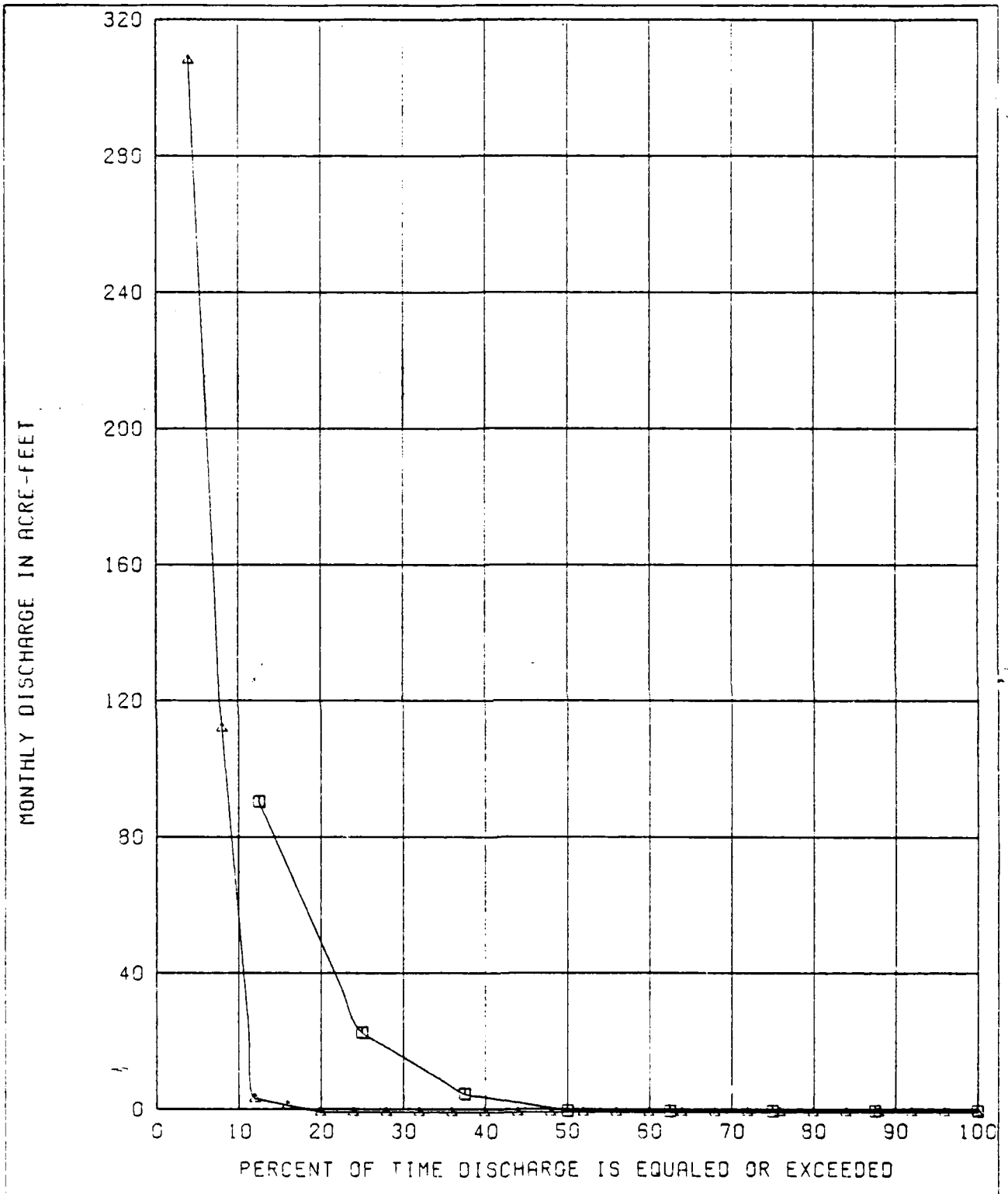
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS
HORDS CREEK LAKE
FLOW DURATION CURVES AT DAM SITE
NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 23

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1940-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1979)

COLORADO RIVER BASIN, TEXAS

HORDS CREEK LAKE

FLOW DURATION CURVES AT DAM SITE

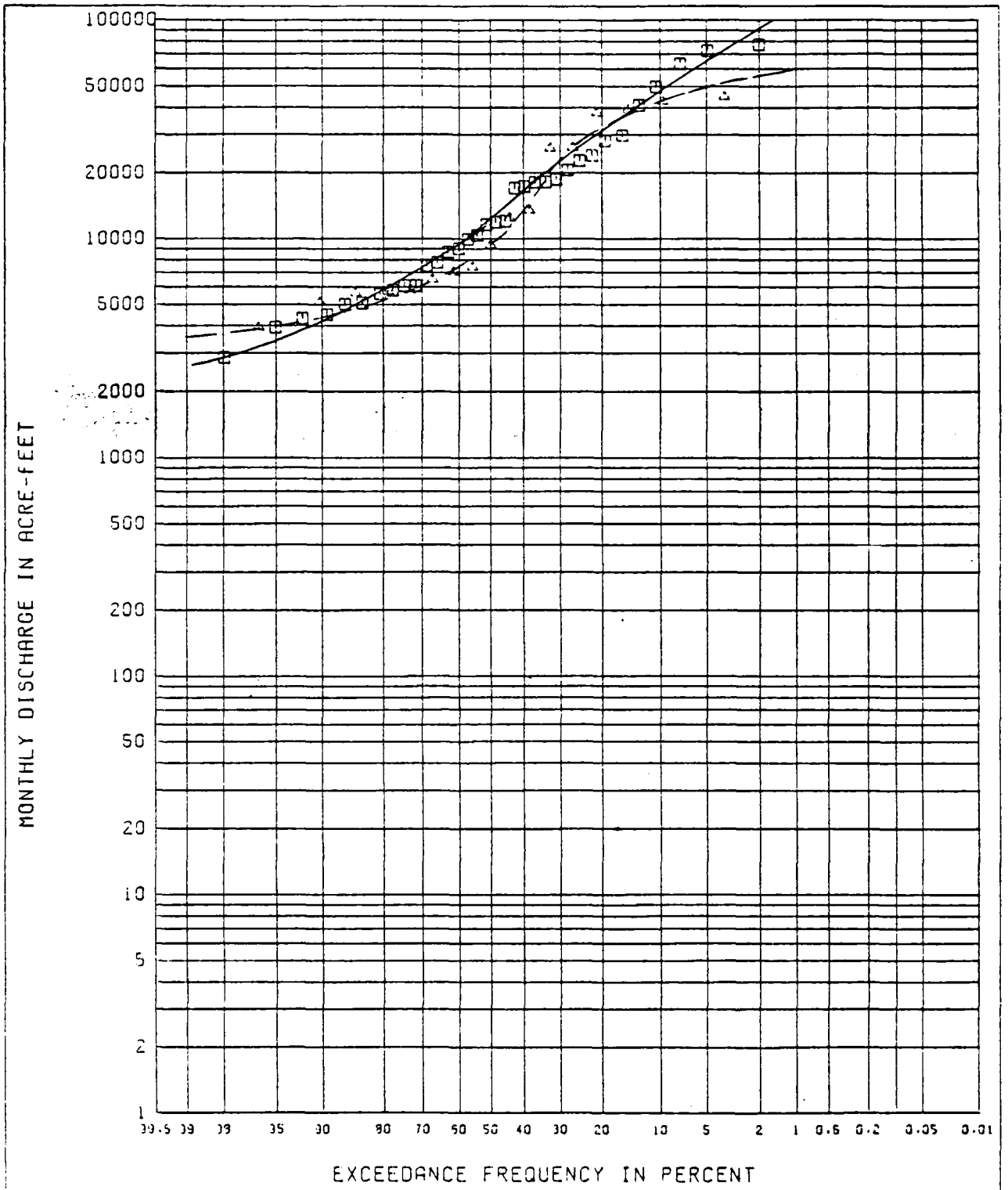
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 24

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1915-1943)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

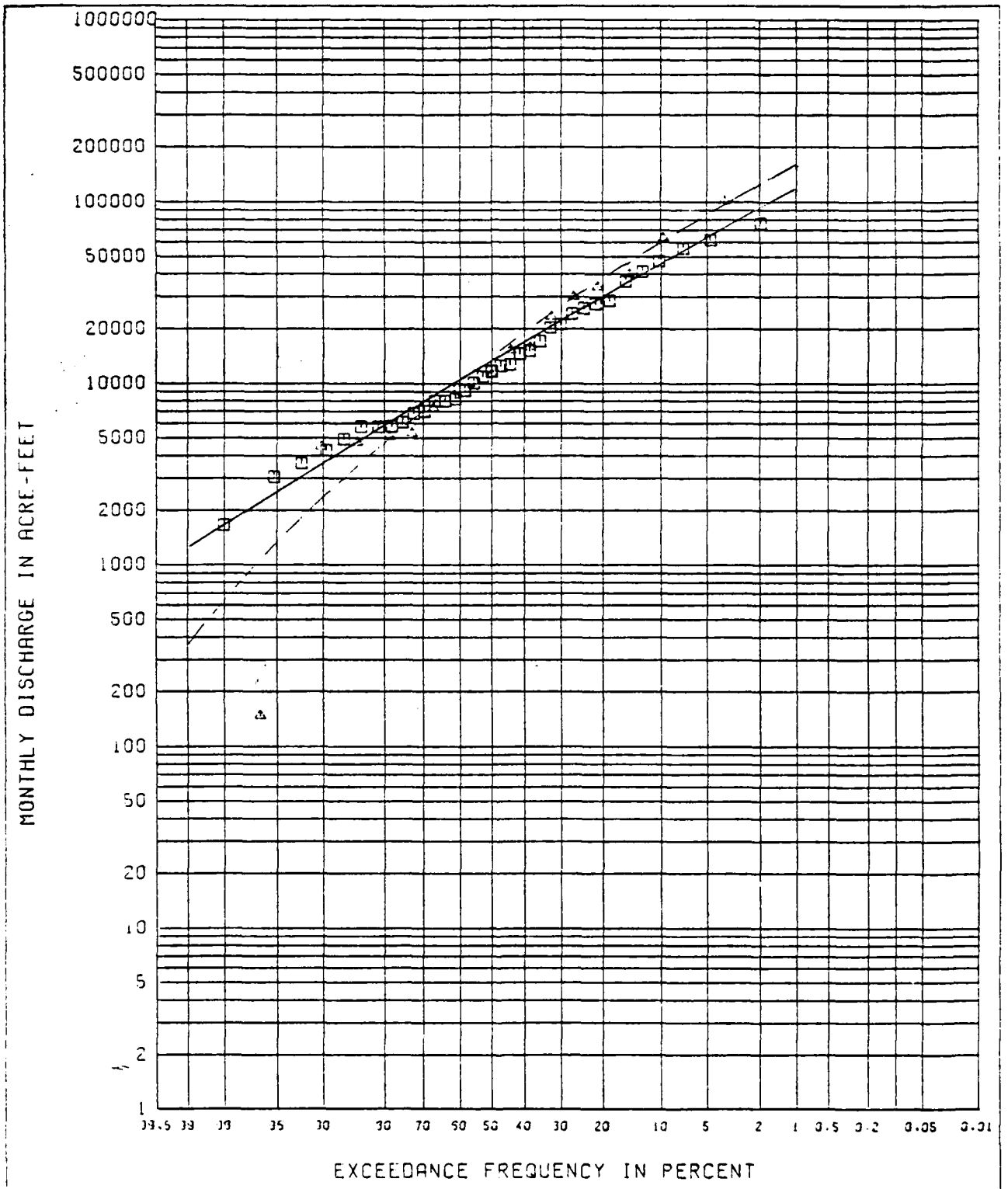
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1940)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

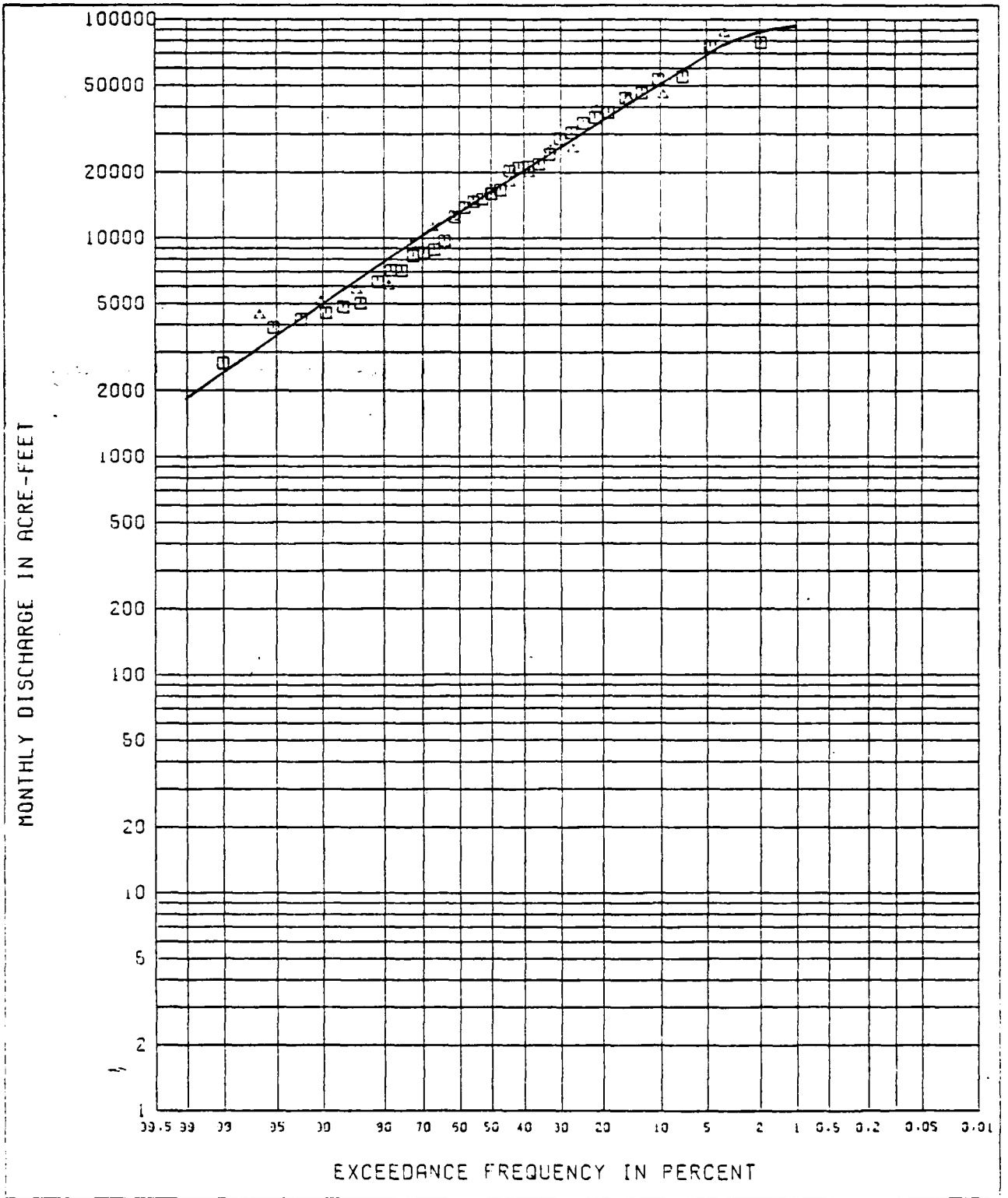
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 2

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1973)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

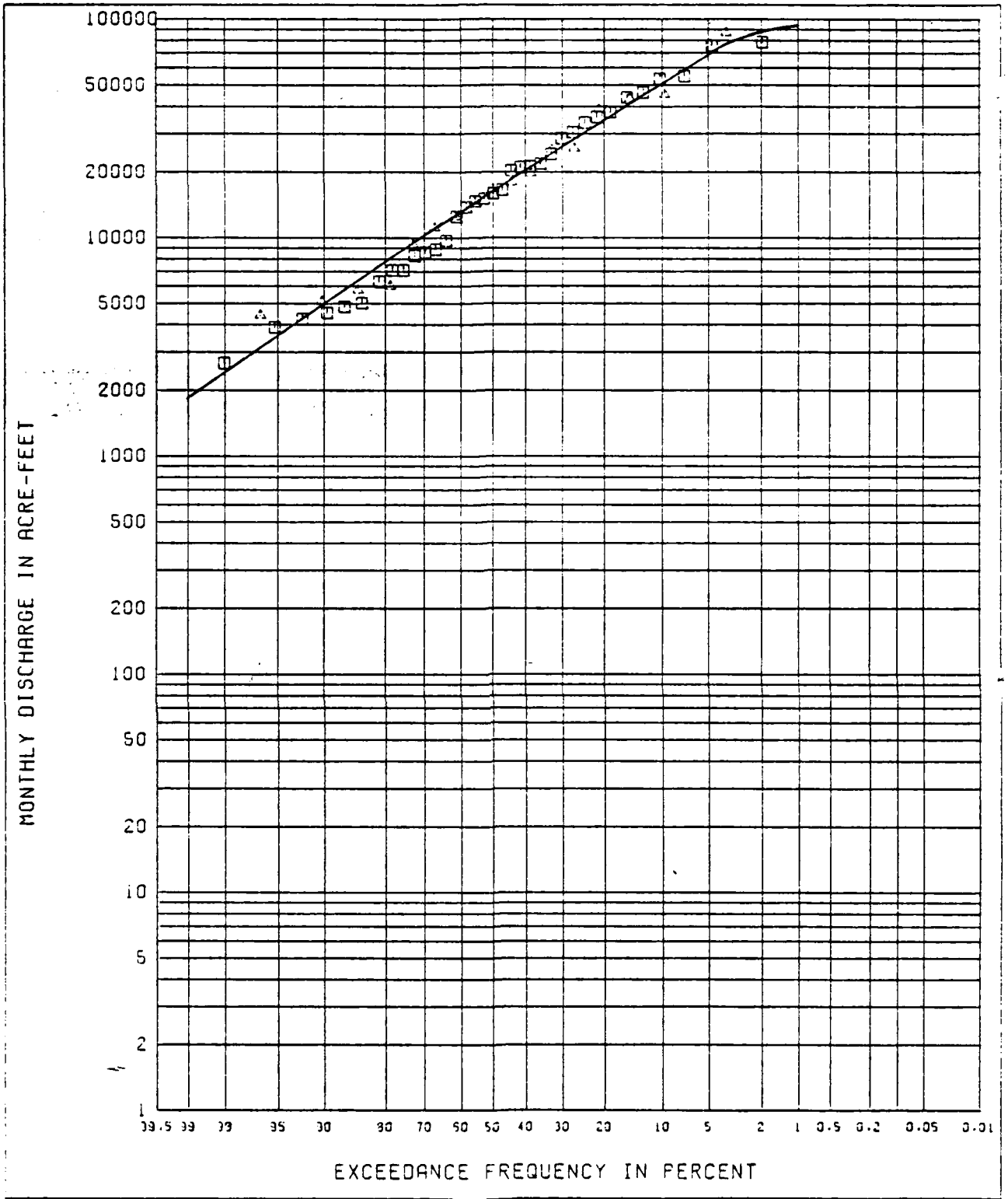
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

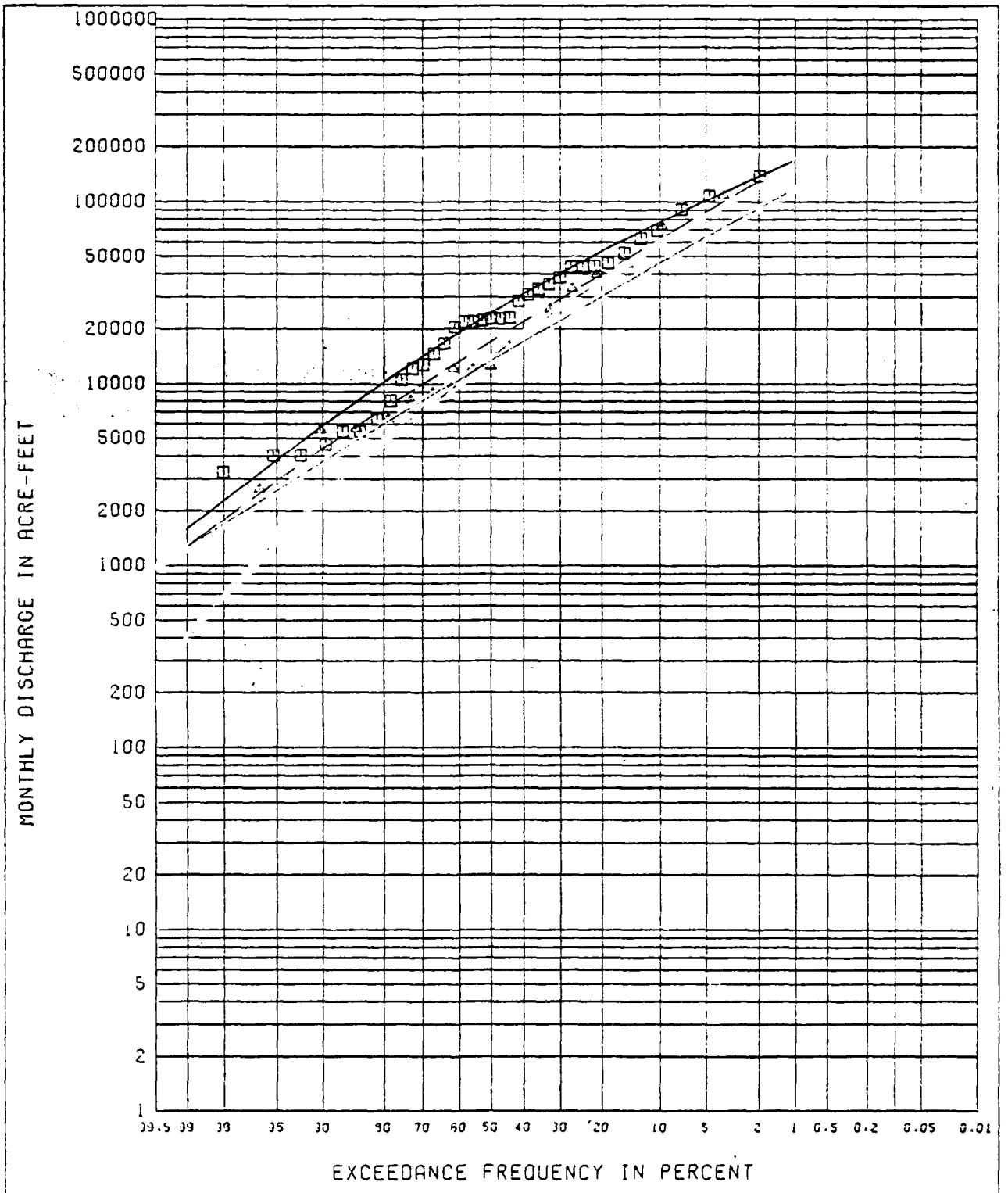
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 3

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1915-1943)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1979)

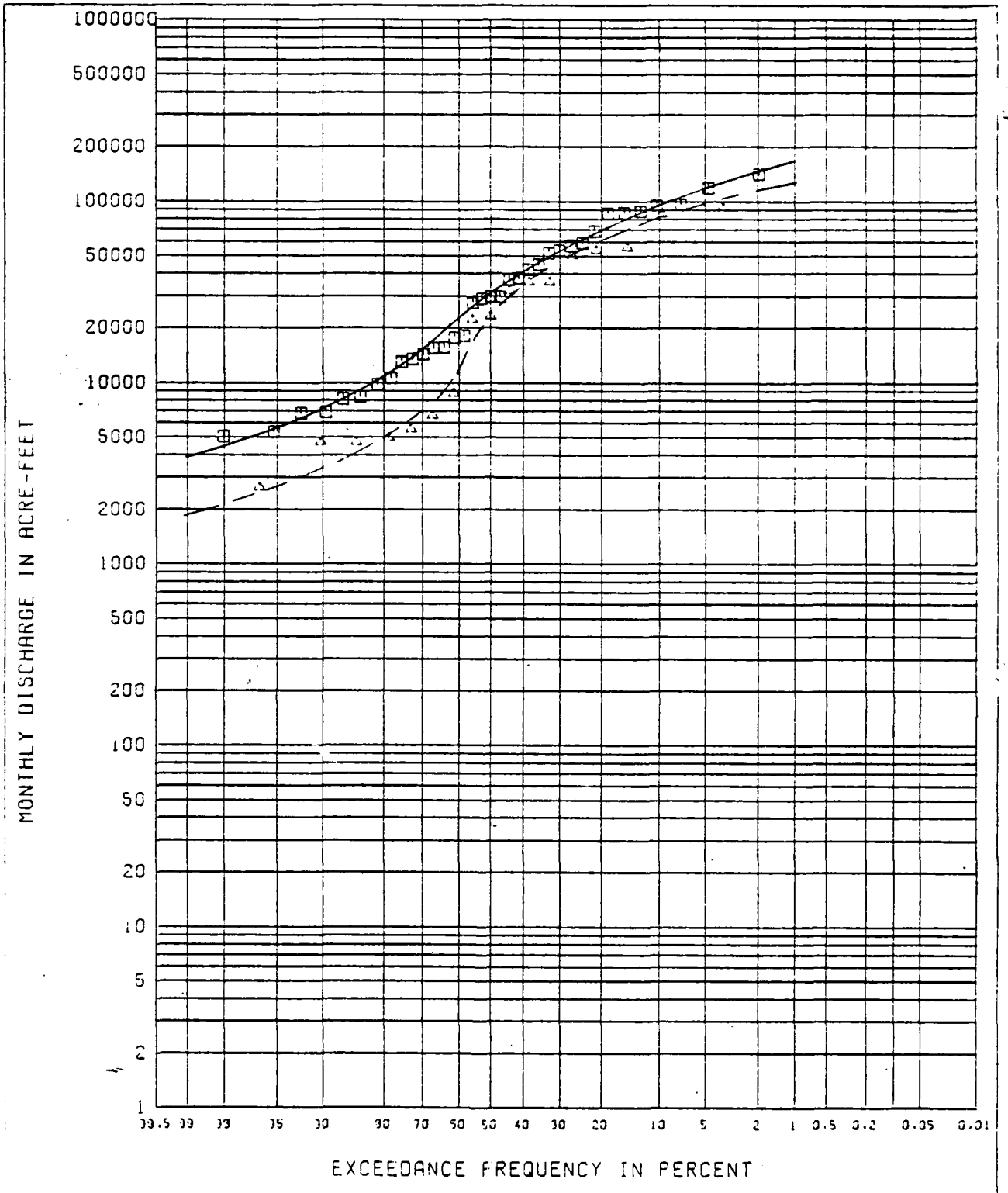
GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE
DISCHARGE-FREQUENCY RELATIONS
AT DAM SITE
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 4

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1973)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

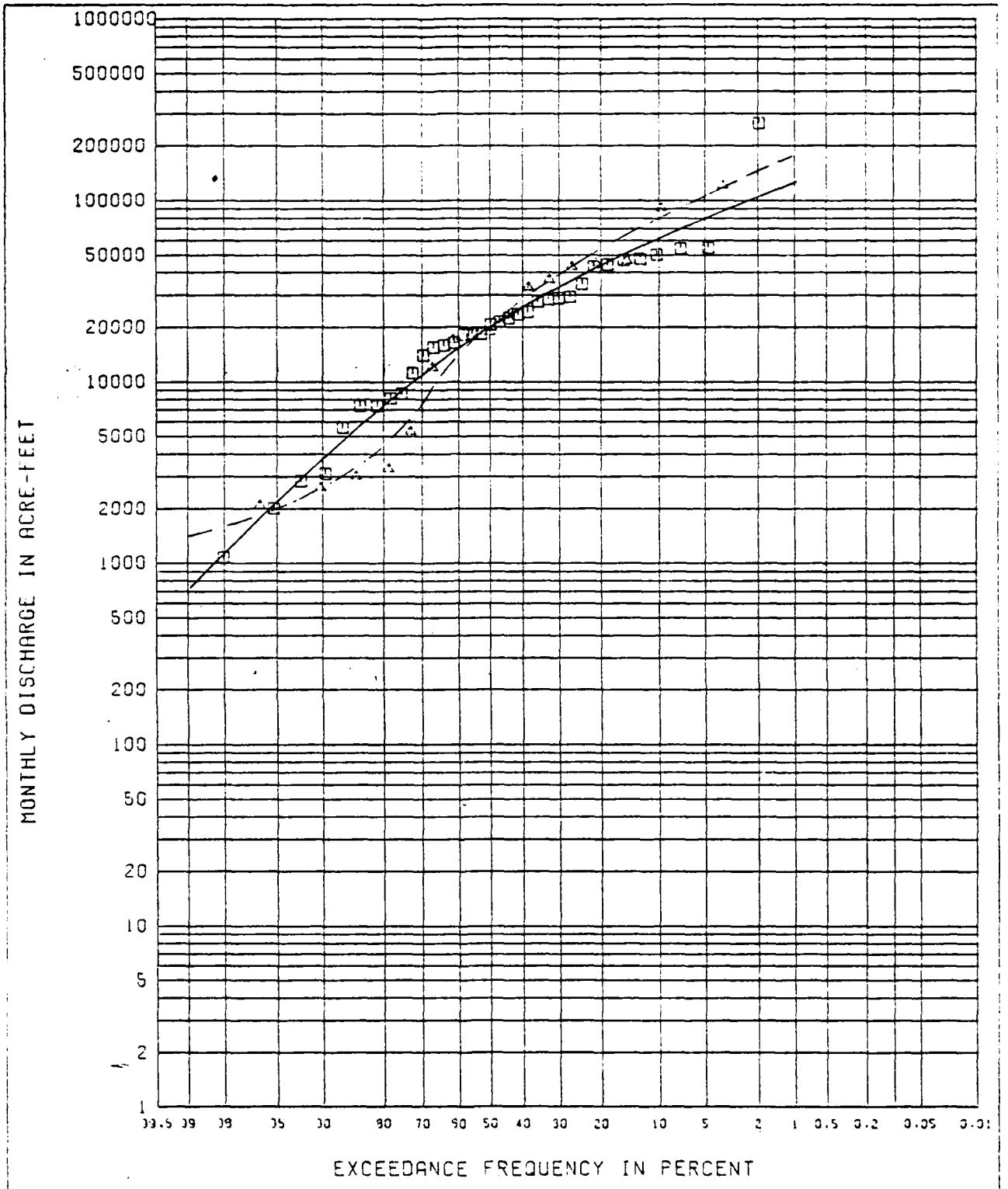
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 5

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

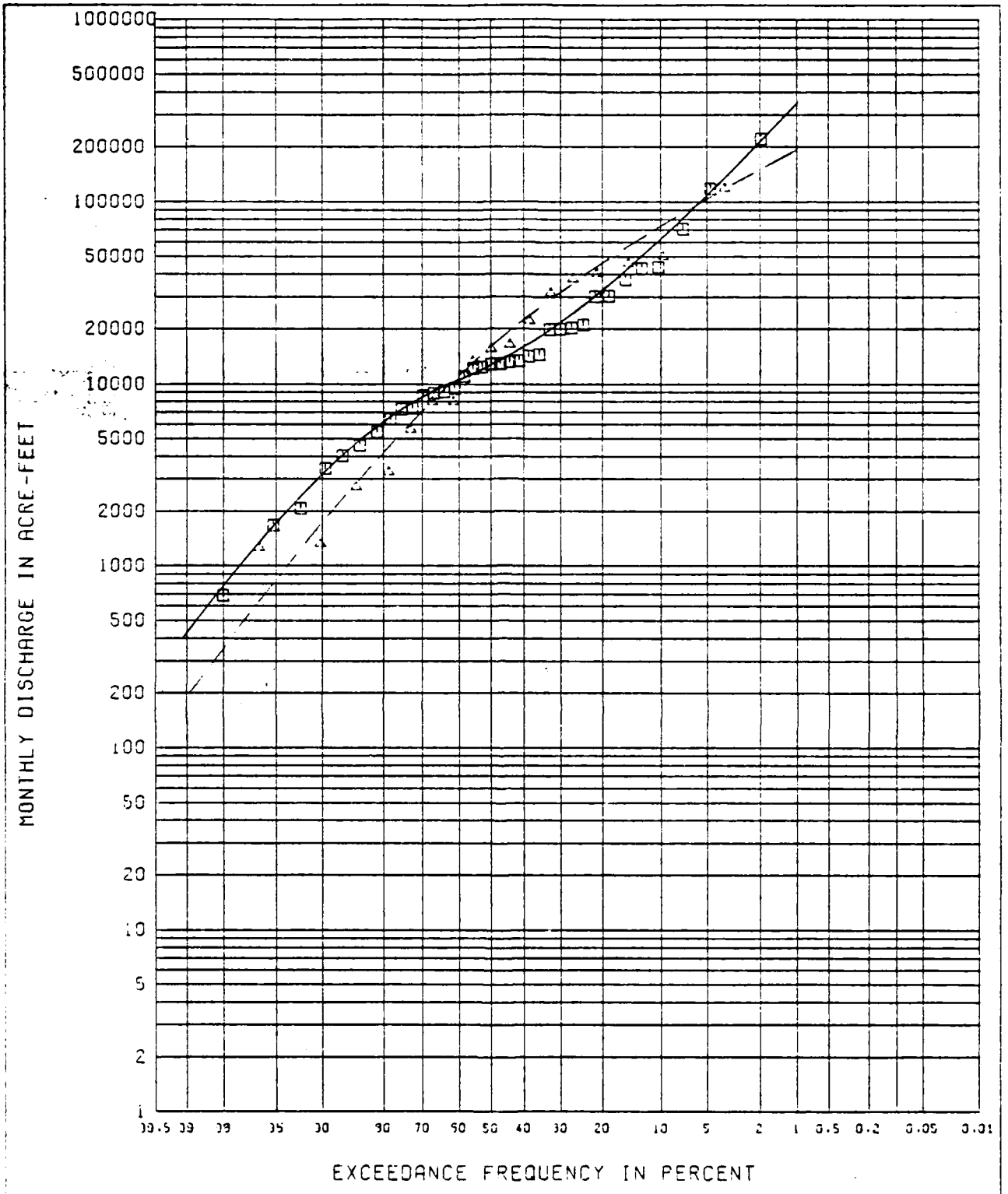
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 6

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1973)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

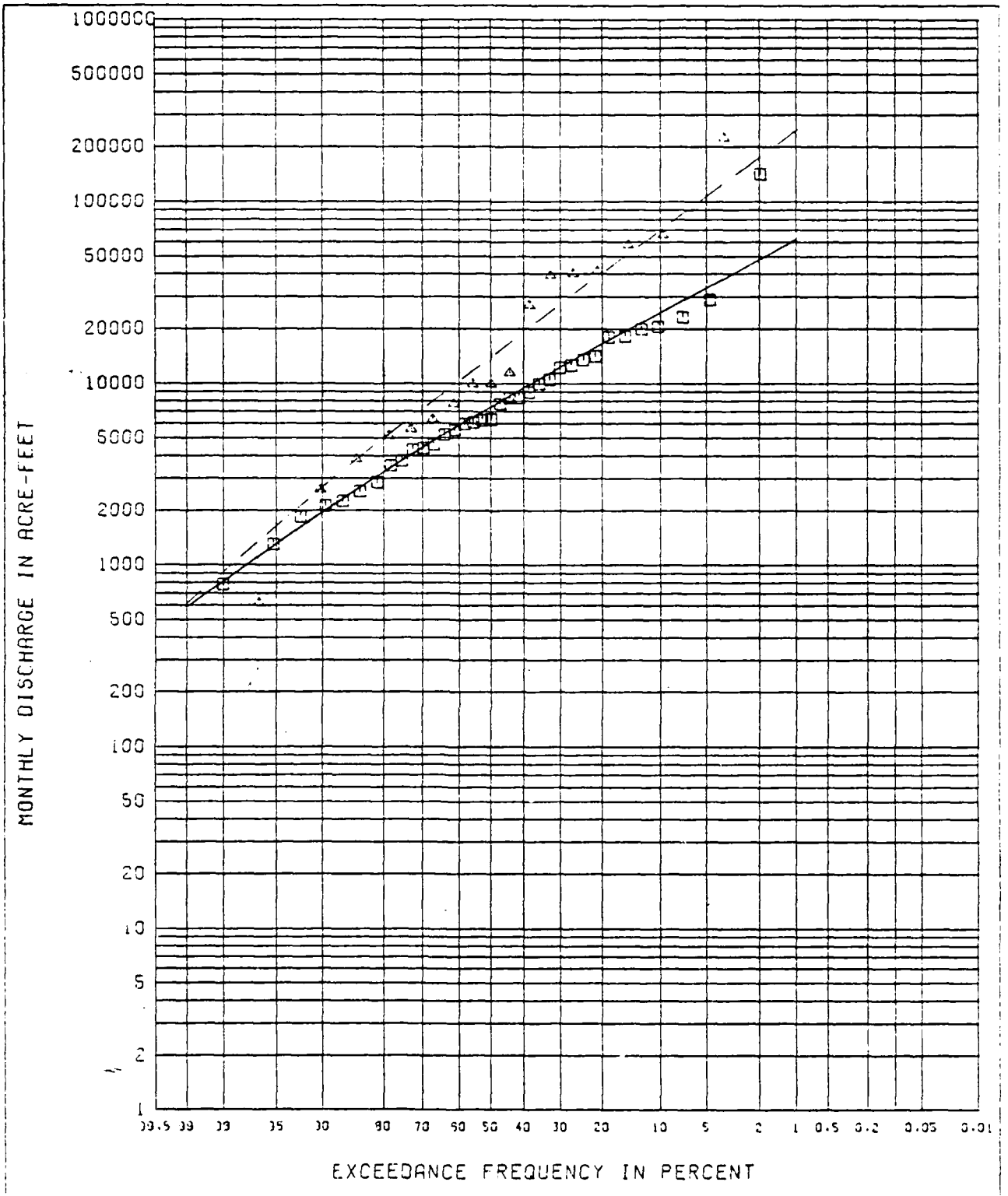
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 7

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1915-1943)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

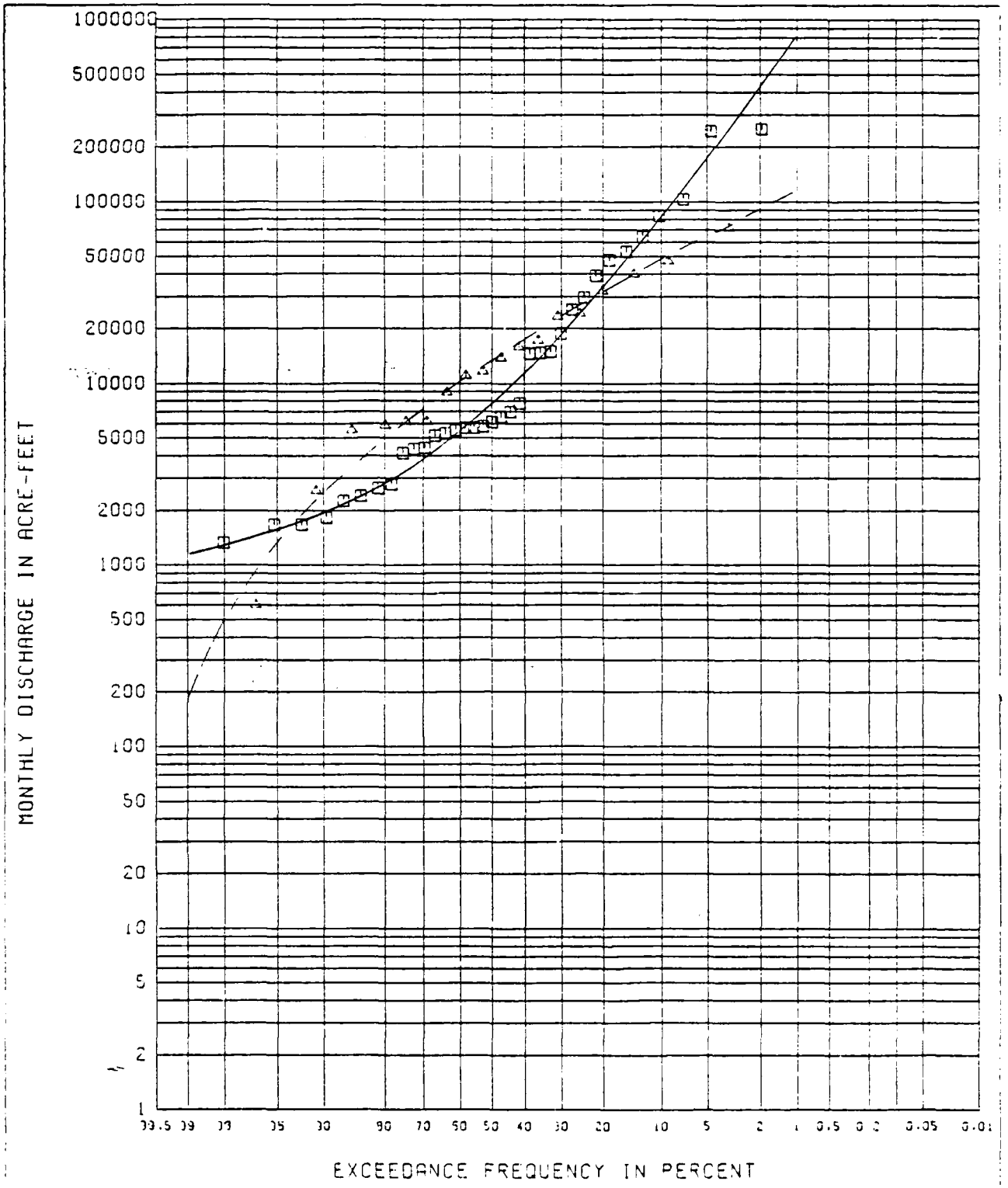
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 8

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1963)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1973)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

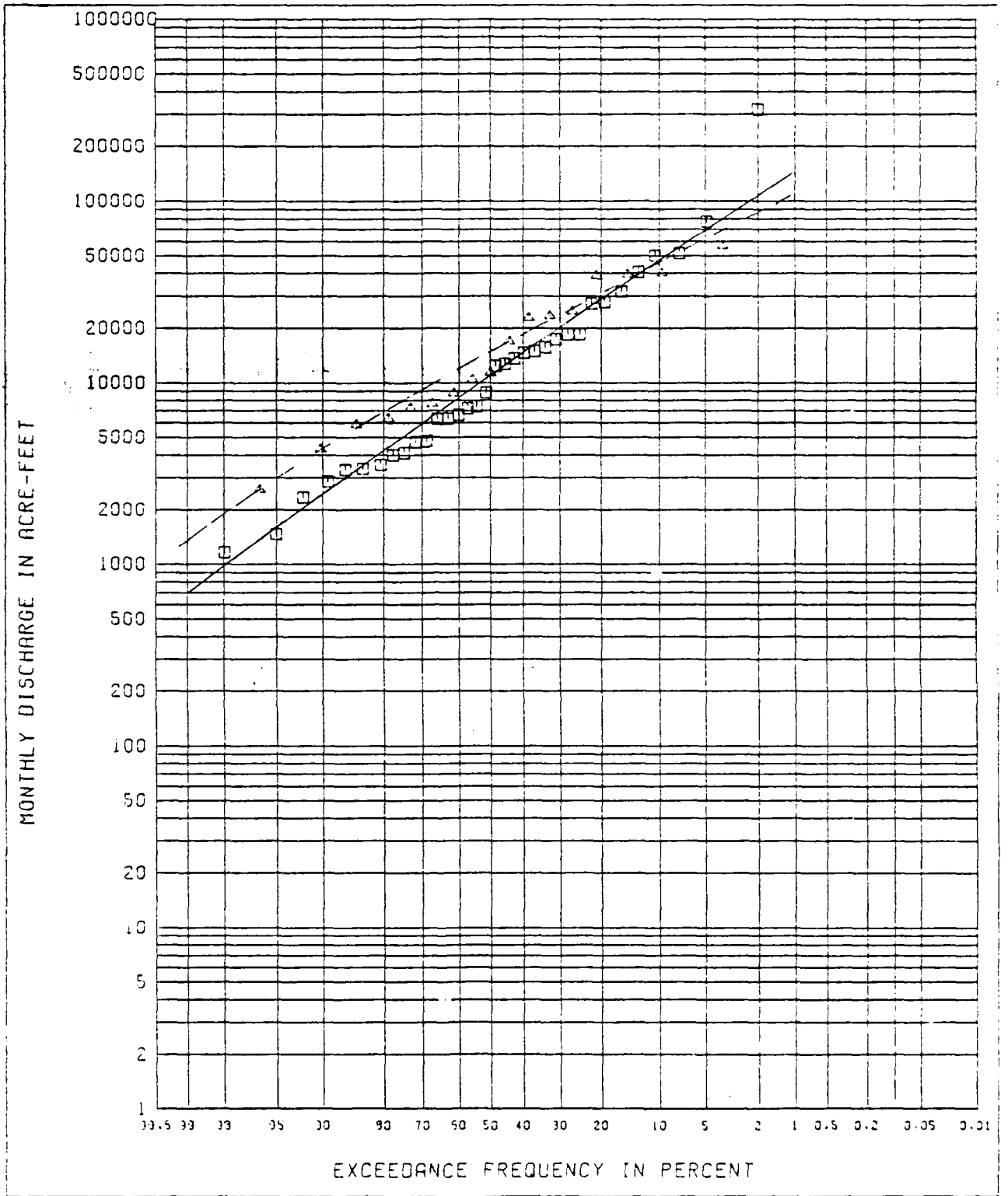
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 9

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1915-1949)

POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1973)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

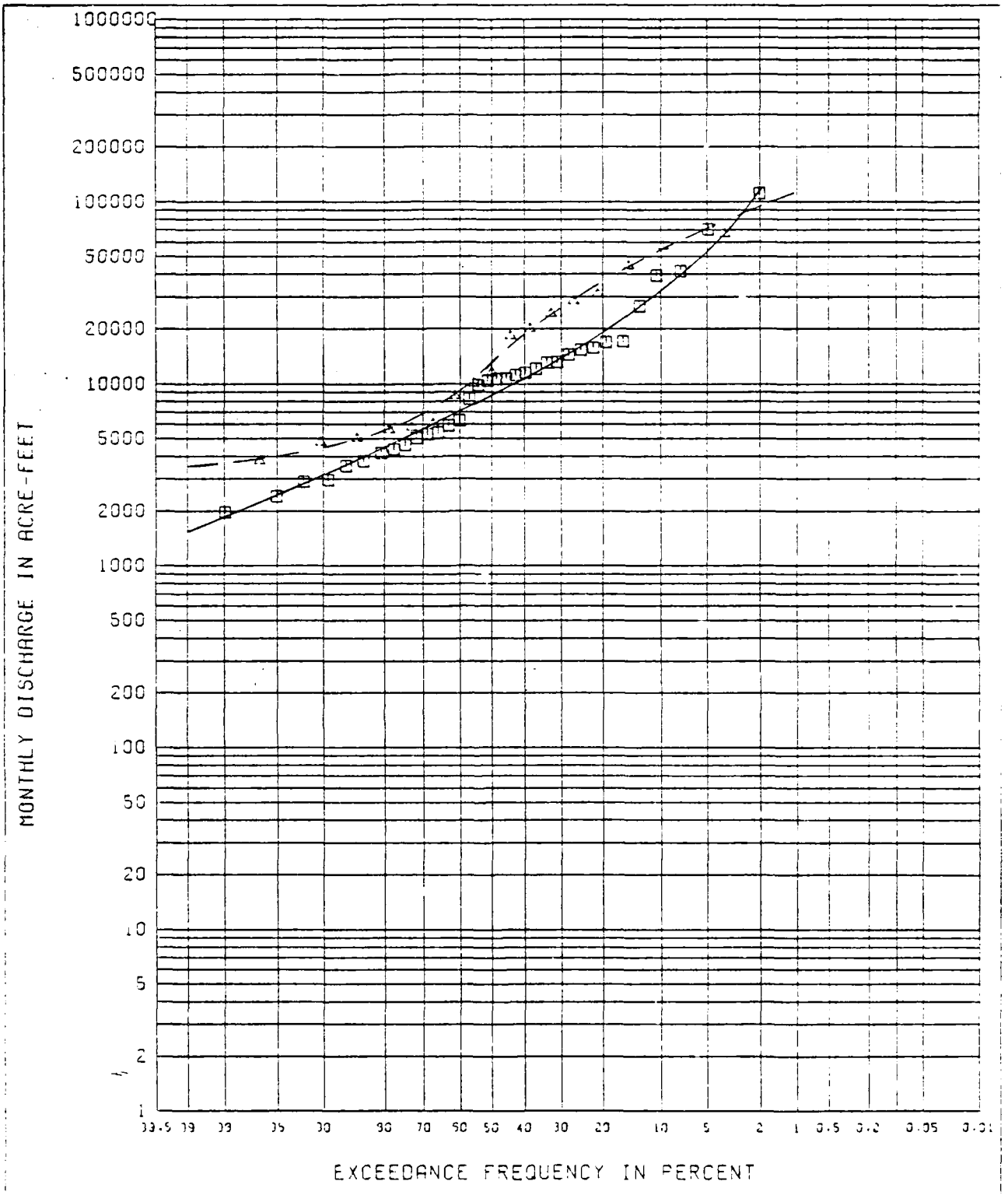
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 10

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1953-1973)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

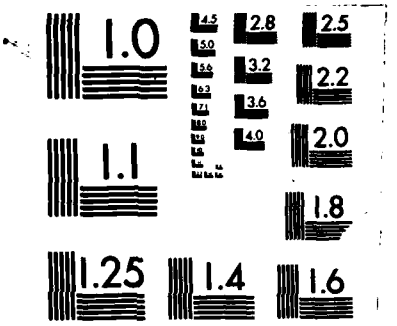
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 11

AD-A156 497 RESERVOIR CONTROL CENTER: ACTIVITIES AND ACCOMPLISHMENTS OF THE SOUTHWEST..(U) CORPS OF ENGINEERS DALLAS TX SOUTHWESTERN DIV JAN 81 7/7

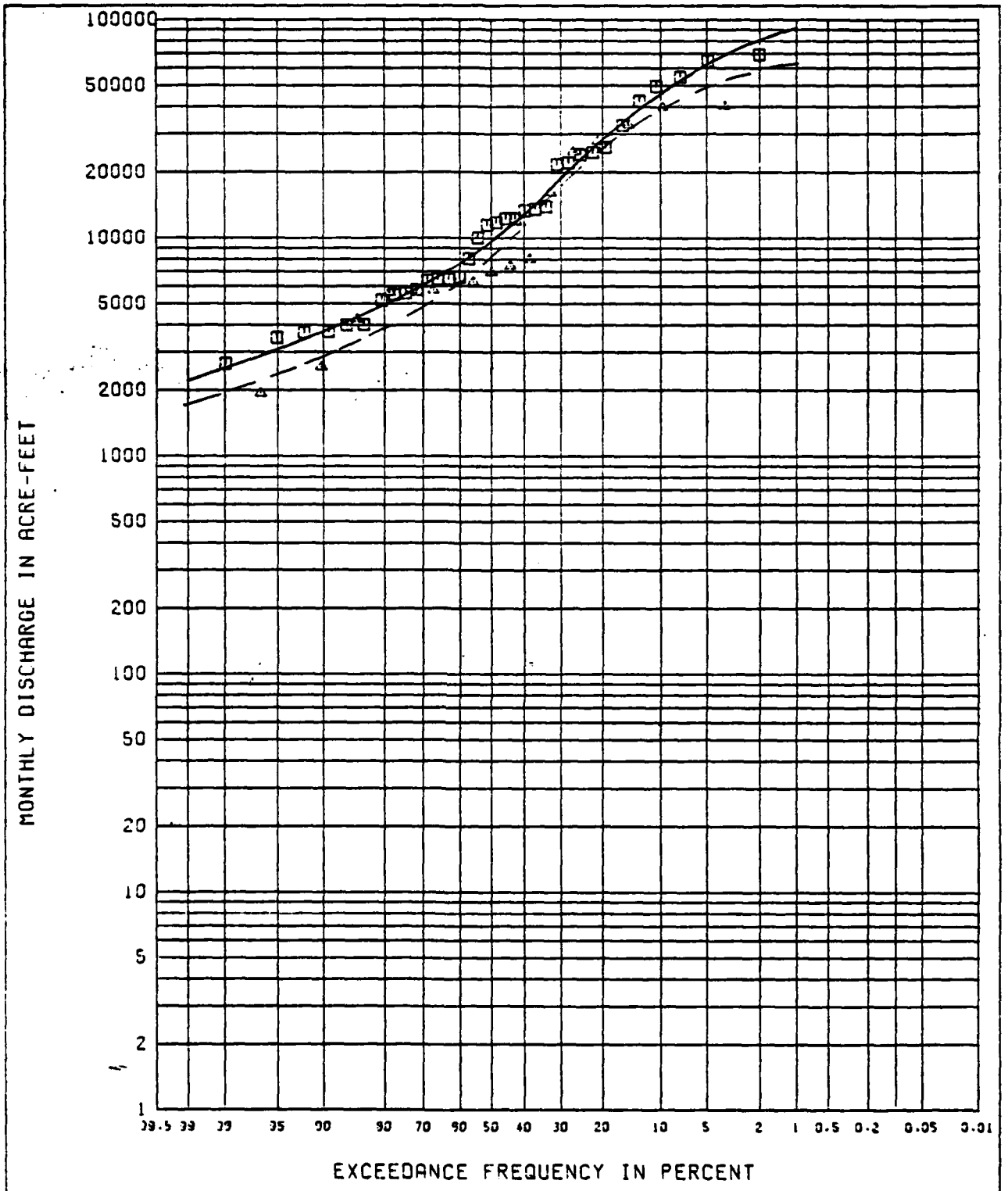
UNCLASSIFIED F/G 13/2 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

DISCHARGE-FREQUENCY RELATIONS AT DAM SITE

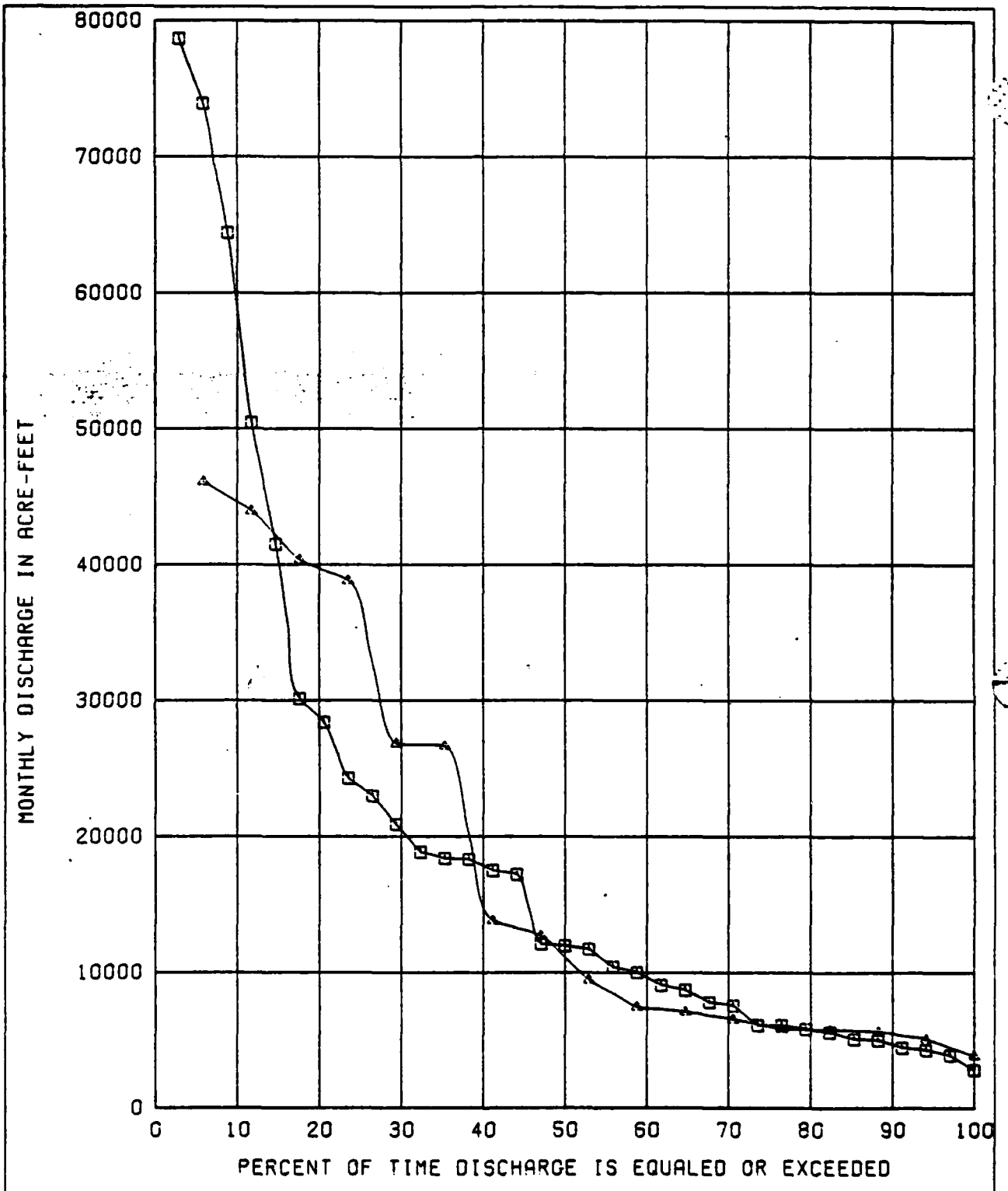
DECEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 12

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

FLOW DURATION CURVES AT DAM SITE

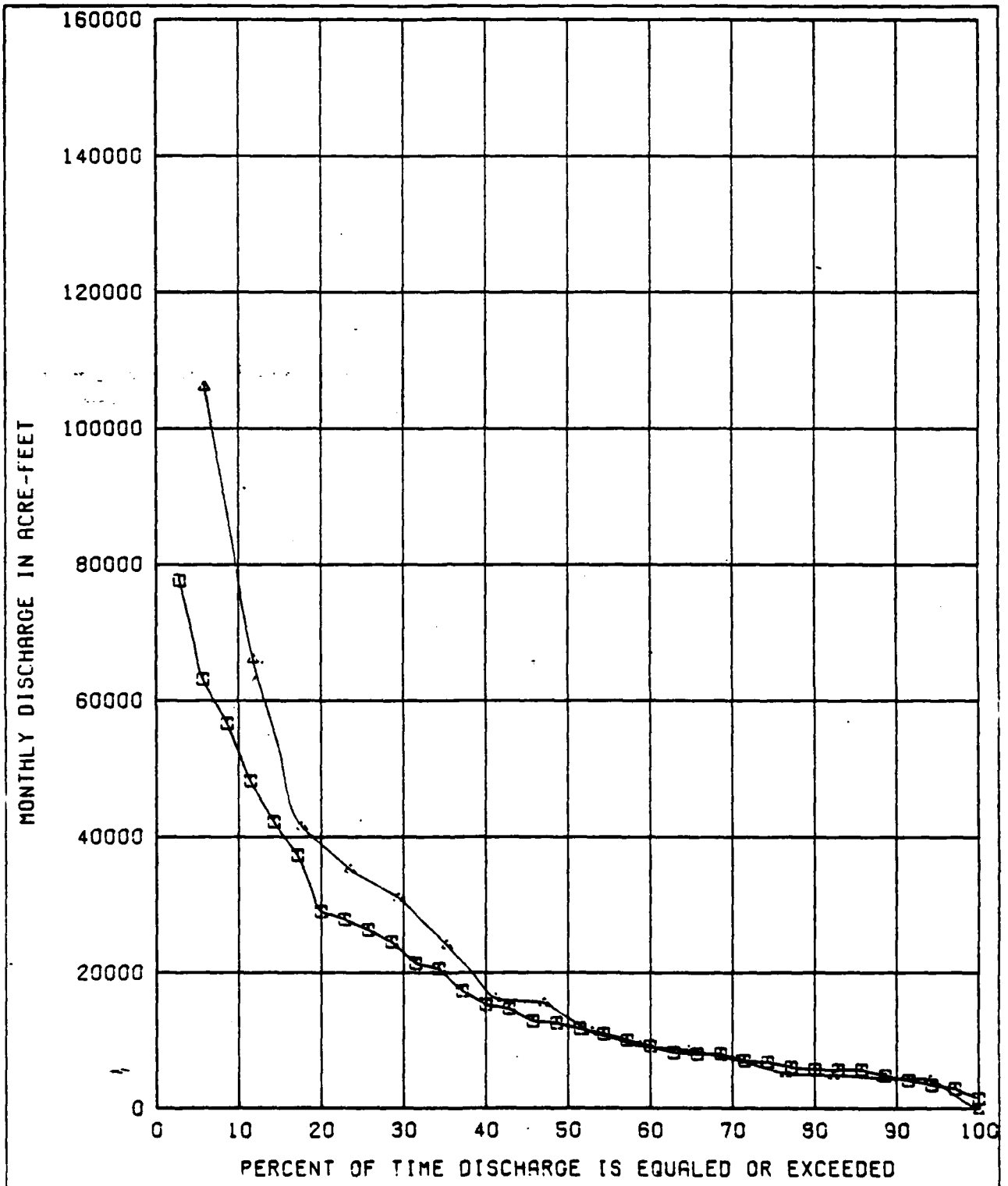
JANUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 13

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

FLOW DURATION CURVES AT DAM SITE

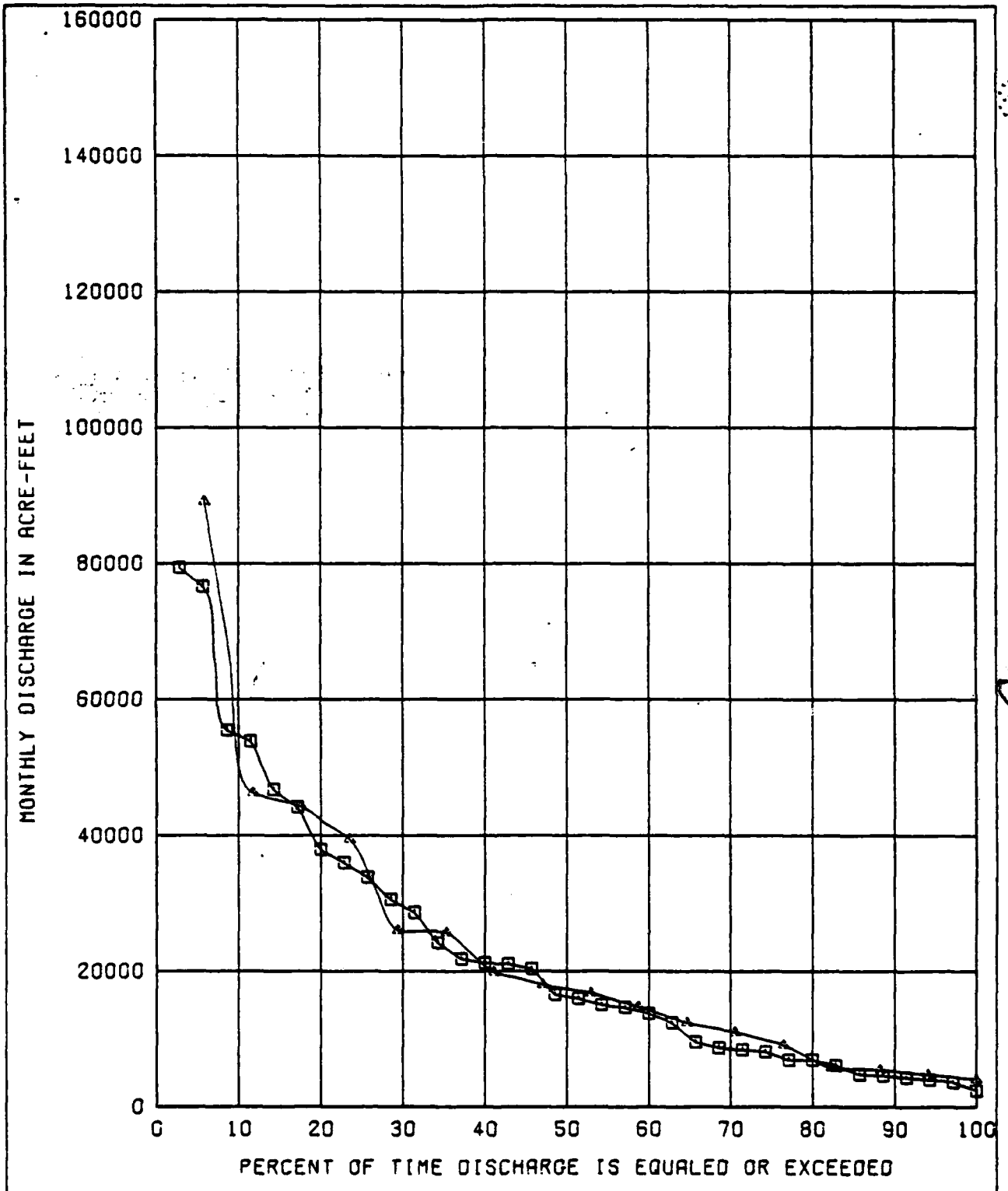
FEBRUARY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 14

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1915-1943)

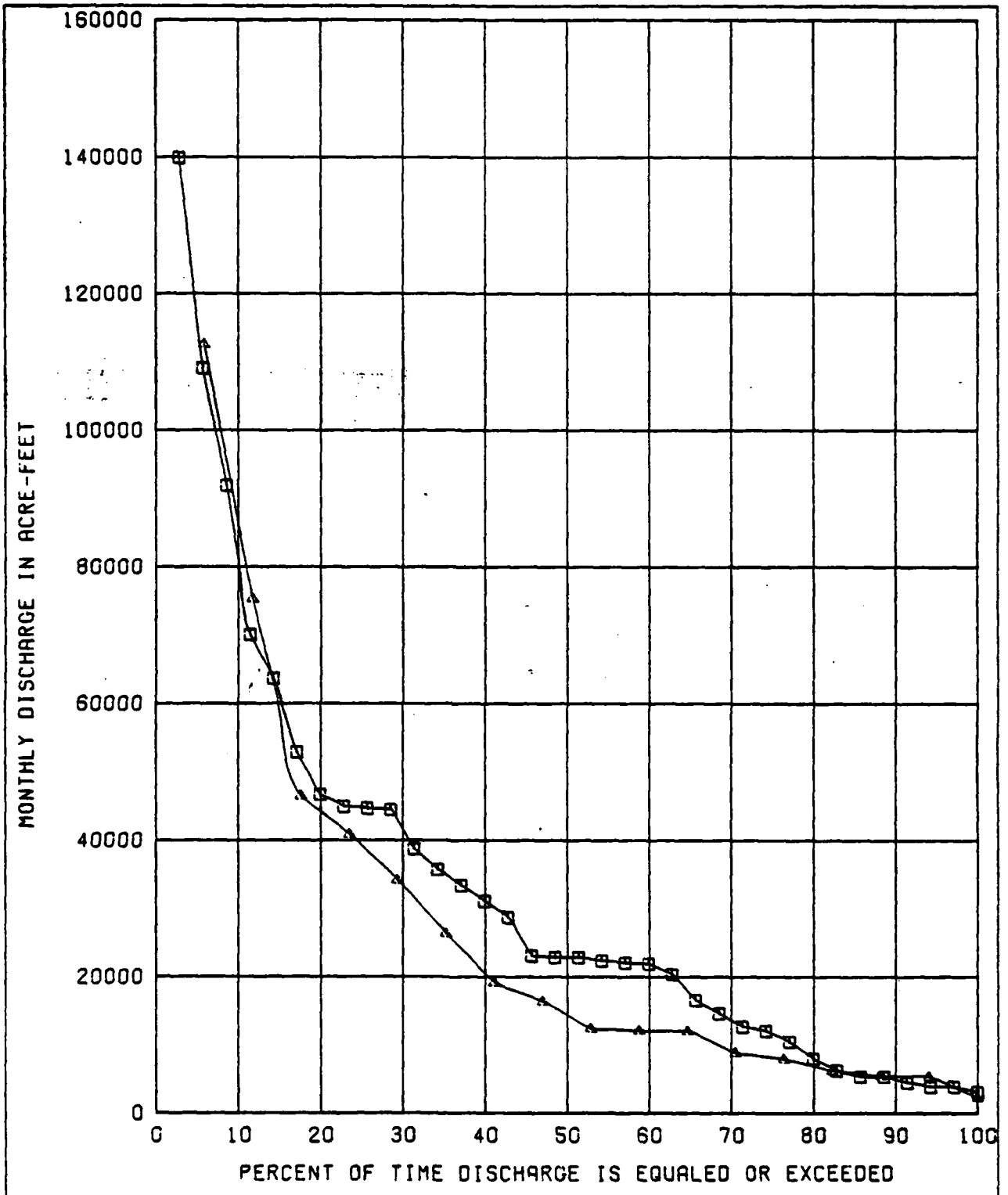
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS
CANYON LAKE
FLOW DURATION CURVES AT DAM SITE
MARCH FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 15

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

FLOW DURATION CURVES AT DAM SITE

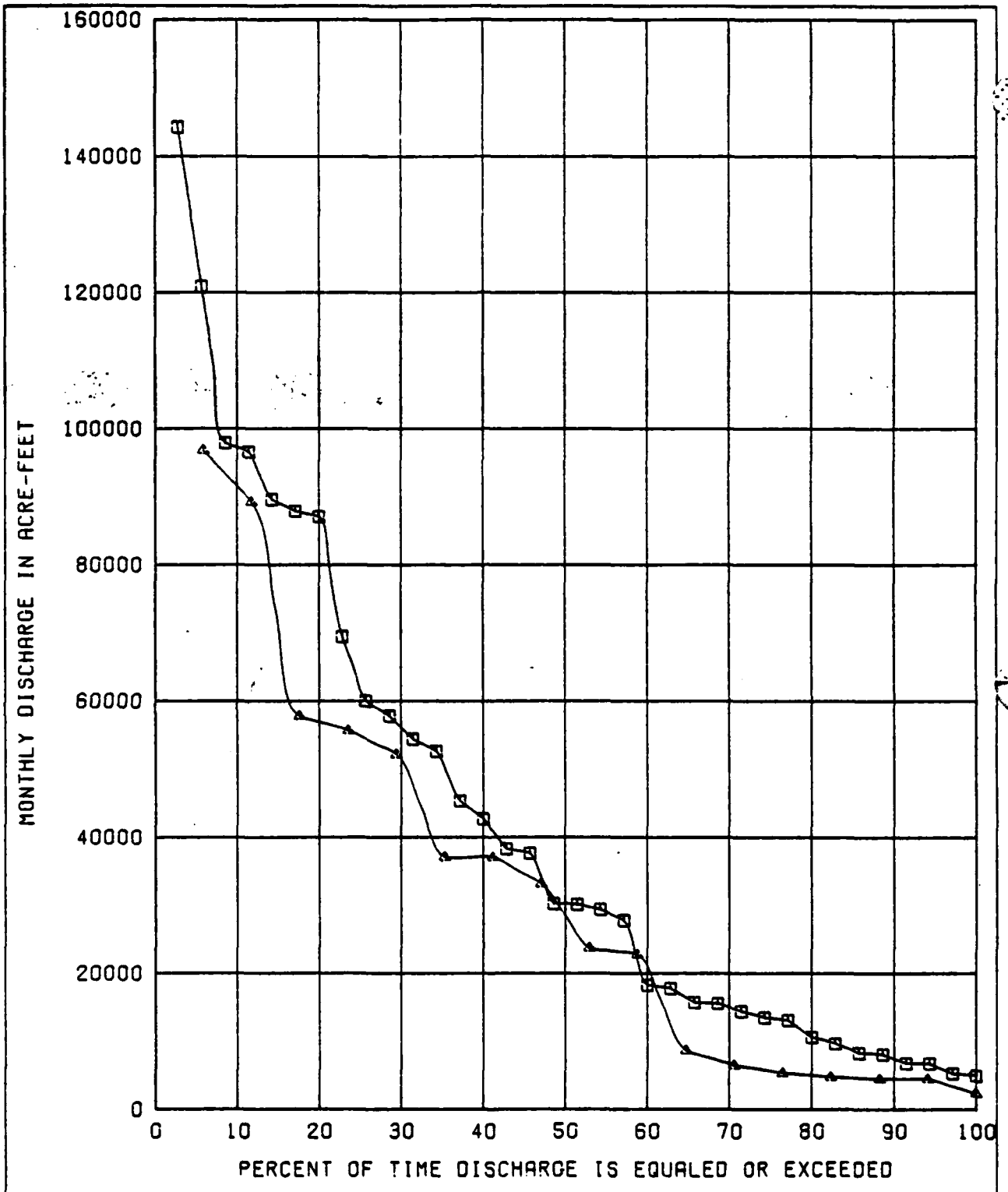
APRIL FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 16

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

FLOW DURATION CURVES AT DAM SITE

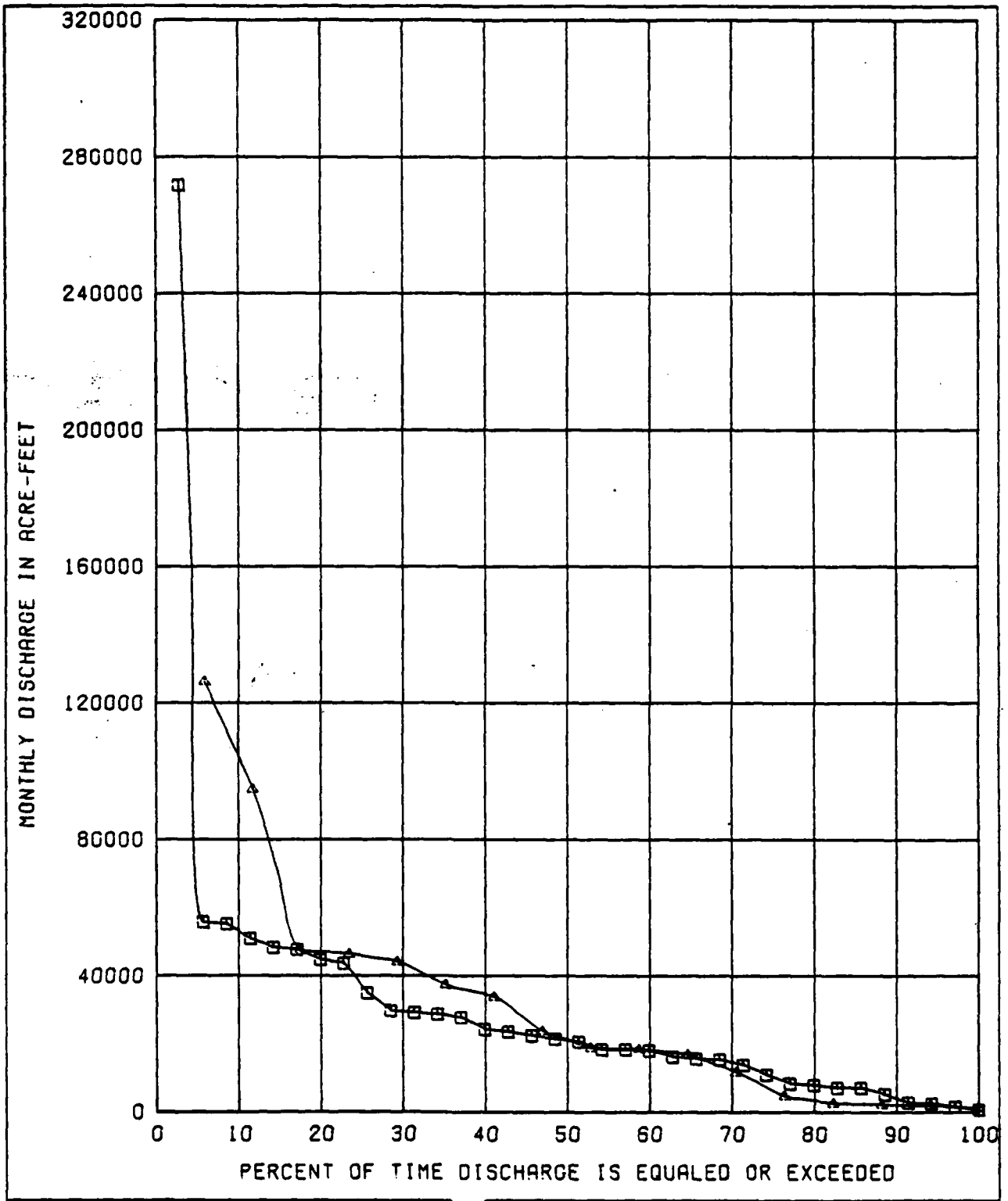
MAY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 17

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1915-1949)

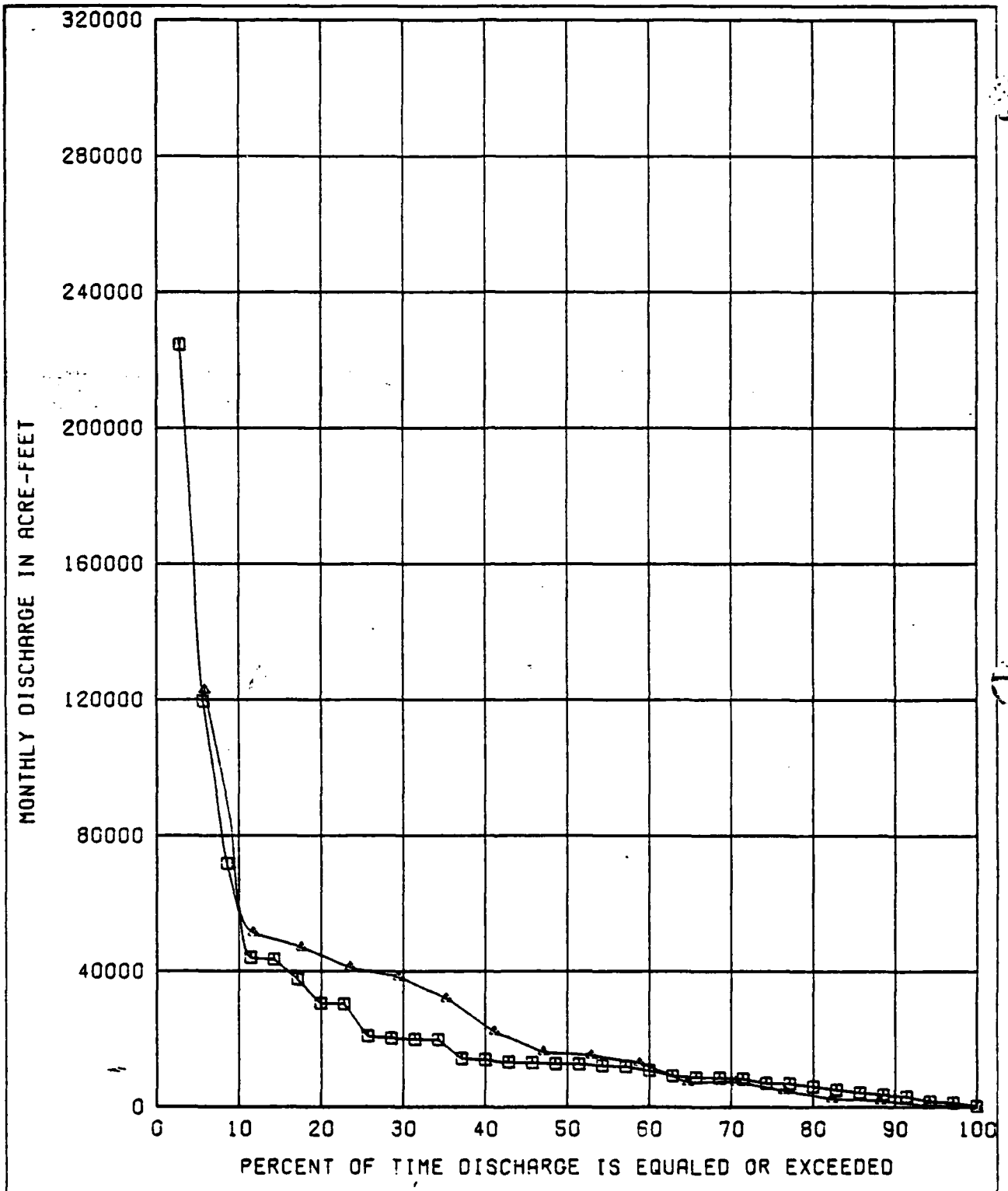
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS
CANYON LAKE
FLOW DURATION CURVES AT DAM SITE
JUNE FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 18

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1983-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

FLOW DURATION CURVES AT DAM SITE

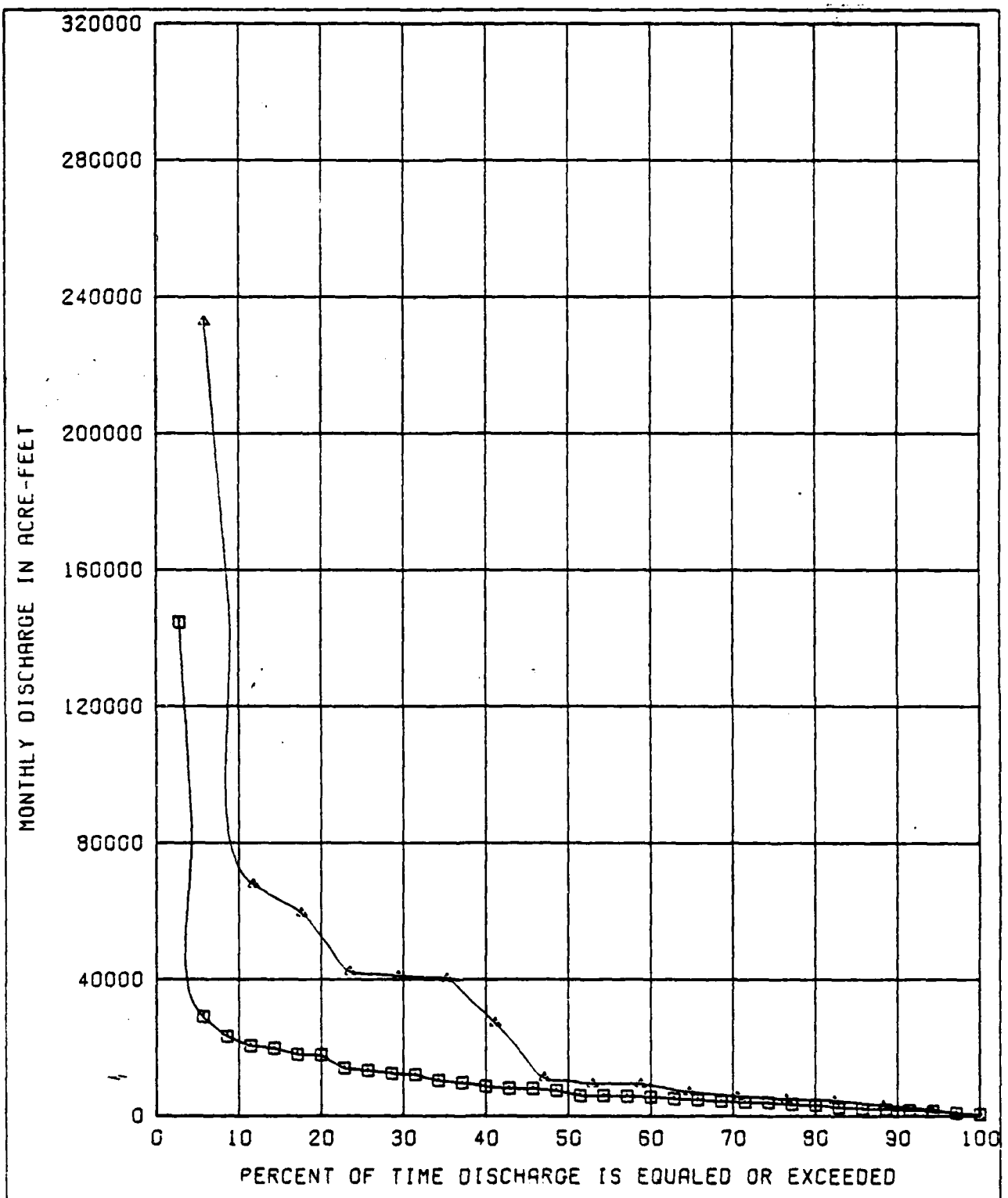
JULY FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 19

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1943)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

FLOW DURATION CURVES AT DAM SITE

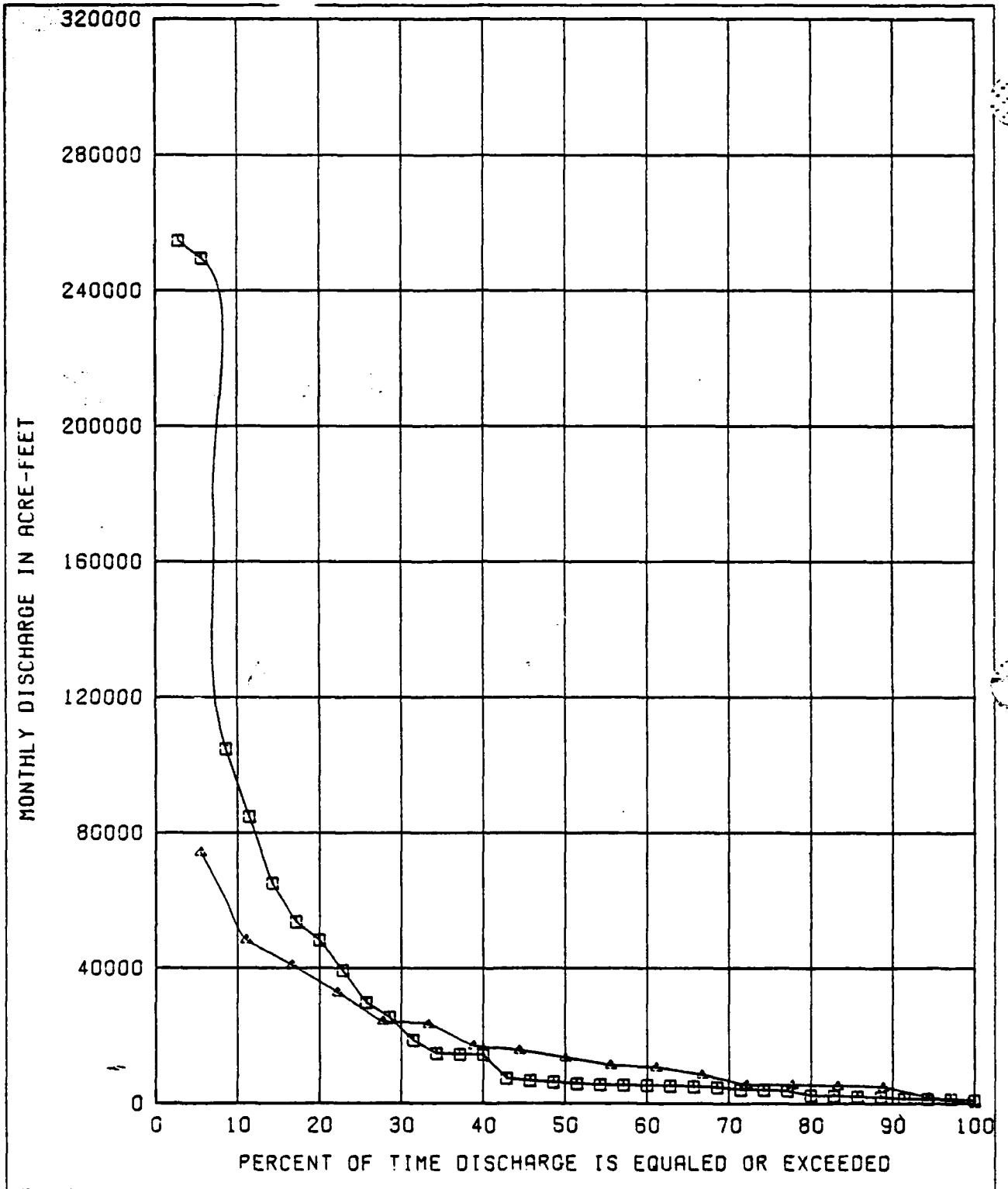
AUGUST FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 20

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

FLOW DURATION CURVES AT DAM SITE

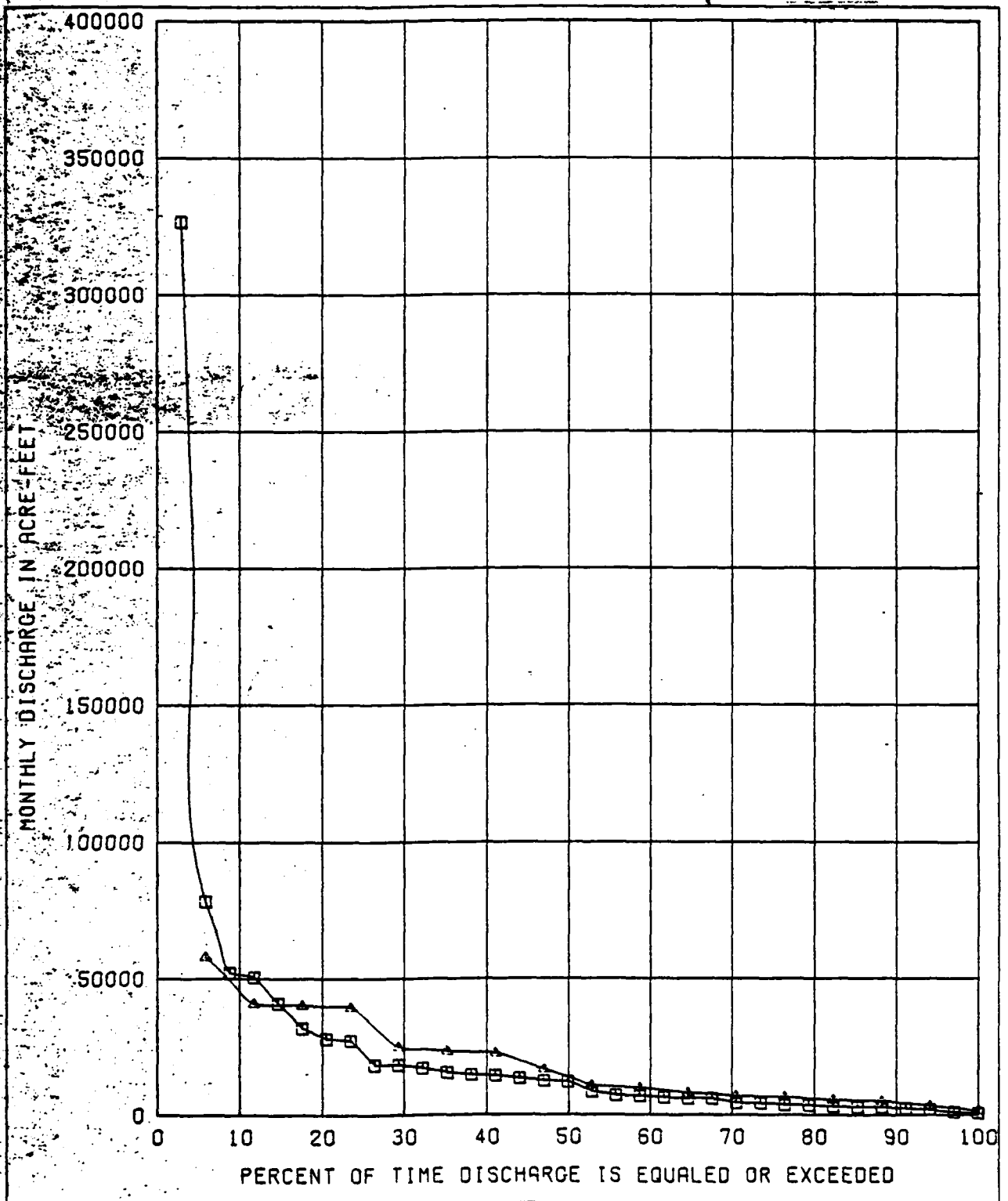
SEPTEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1990

PLATE 21

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1915-1949)

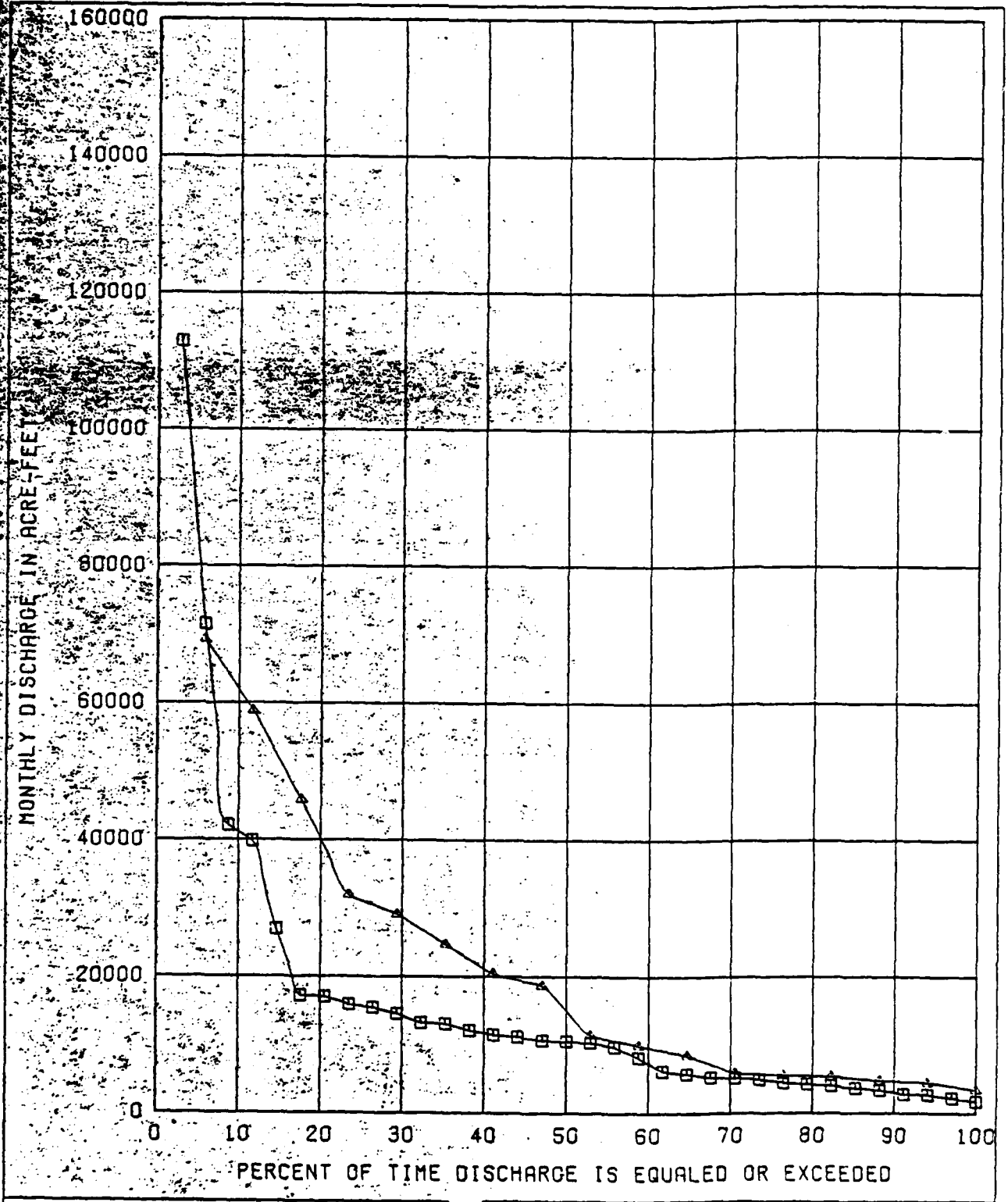
POST-IMPOUNDMENT CONDITIONS
(PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS
CANYON LAKE
FLOW DURATION CURVES AT DAM SITE
OCTOBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 22

CORPS OF ENGINEERS U.S. ARMY



LEGEND

PRE-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1915-1949)

POST-IMPOUNDMENT CONDITIONS (PERIOD OF RECORD 1963-1979)

GUADALUPE RIVER BASIN, TEXAS

CANYON LAKE

FLOW DURATION CURVES AT DAM SITE

NOVEMBER FLOWS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

TO ACCOMPANY INSTREAM FLOW PROBLEMS AND NEEDS EVALUATION REPORT OF DECEMBER 1980

PLATE 23

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