

# **Appendix E**

## **IHA Analysis**

(Provided on CD only)

**Analysis 1 - Gerle Creek below Loon Lake Reservoir (Unregulated Flow) versus 4295 Gerle Creek below Loon Lake Dam (Regulated Flow)**

**Errors**

**No Errors**

## Analysis 1 - Gerle Creek below Loon Lake Reservoir (Unregulated Flow) versus 4295 Gerle Creek below Loon Lake Dam (Regulated Flow)

IHA Annual Summary Statistics

Year	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min	1-day max
1875	0.88	3.21	3.57	9.13	26.86	37.36	34.24	150.99	41.61	9.12	1.91	1.19	0.38	0.42	0.44	0.84	2.46	230.43
1876	9.64	16.78	8.96	9.88	10.94	23.55	29.55	15.82	2.31	1.02	1.89	0.65	0.28	0.29	0.29	0.64	0.69	107.8
1877	0.74	0.71	1.1	1.96	5.21	9.95	18.25	19.78	4.85	0.45	0.15	0.21	0.09	0.1	0.11	0.14	0.18	44.95
1878	0.19	1.94	33.92	38.77	29.51	67.71	72.76	92.23	30.2	5.76	1.26	1.47	0.12	0.12	0.17	0.19	1.17	220.08
1879	0.89	3.21	3.57	9.13	26.86	37.36	34.24	150.99	41.61	9.12	1.91	1.19	0.38	0.42	0.34	0.59	1.67	230.43
1880	4.47	15.17	13.06	134.94	63.34	31.28	78.94	77.87	22.7	7.64	1.81	0.56	0.25	0.25	0.25	0.33	0.78	1302.16
1881	0.41	1.7	5.89	9.52	25.28	31.76	63.55	33.06	5.29	0.64	0.26	0.34	0.17	0.19	0.25	0.26	0.34	96.34
1882	1.74	77.85	101.77	26.73	107.72	64.37	103.88	123.28	47.97	9.96	2.51	5.83	0.28	0.3	0.47	1.59	3.78	811.55
1883	26.04	41.69	38.86	28.34	42.42	72.56	45.75	162.13	146.13	40.23	7.45	2.37	1.4	1.4	1.47	2.32	4.08	358.22
1884	4.64	120.08	104.31	28.53	34.54	56.06	56.78	39.35	12.82	3.68	1.01	0.64	0.54	0.54	0.56	0.64	1.1	624.11
1885	2.1	27.45	17.85	8.96	15.3	26.73	76.55	35.54	8.44	1.16	0.57	1.08	0.41	0.41	0.44	0.54	0.83	119.67
1886	1.2	4.34	22.03	58.23	187.57	123.12	77.55	47.56	9.84	3.47	0.99	2.01	0.54	0.54	0.56	0.62	2.07	1321.06
1887	4.28	1.88	2.26	3.58	23.42	33.82	50.31	19.67	3.02	0.93	0.44	0.42	0.38	0.37	0.37	0.4	0.47	144.79
1888	0.7	1.88	11.58	16.37	16.17	20.95	23.67	11.58	6.19	1.06	0.32	0.29	0.25	0.25	0.21	0.27	0.3	112.05
1889	0.3	16.22	8.29	6.6	15.73	117.39	113.46	70.33	15.02	2.17	0.83	1.15	0.15	0.17	0.19	0.3	1.01	380.76
1890	4.87	8.31	6.96	15.56	14.39	41.55	62.39	33.68	14.38	1.93	0.39	0.27	0.17	0.18	0.18	0.2	0.36	156.01
1891	0.45	0.76	0.96	1.42	2.92	40.61	61.87	64.62	18.39	3.35	0.59	0.25	0.17	0.17	0.17	0.22	0.45	445.83
1892	1.4	3.16	2.94	3.4	24.35	42.94	46.15	9.64	2.53	2.04	0.41	0.35	0.17	0.17	0.17	0.35	0.42	86.57
1893	1.64	2.62	10.05	43.27	32.03	91.85	108.74	116.93	58.84	7.36	1.65	0.57	0.25	0.31	0.37	0.53	0.83	249.68
1894	0.97	0.99	3.33	5.13	13.46	32.8	43.16	28.96	4.36	0.7	0.16	0.18	0.1	0.13	0.14	0.15	0.25	64.2
1895	0.63	10.96	16.39	79.57	41.33	124.29	99.96	156.36	92.68	25.72	4.8	1.35	0.18	0.2	0.31	0.64	0.97	571.74
1896	0.87	0.73	38.25	35.01	99.44	56.58	92.63	145.95	14.07	3.12	1.12	0.75	0.5	0.5	0.52	0.61	0.89	735.93
1897	0.94	22.13	122.27	150.04	24.46	55.6	64.17	34.35	12.59	3.14	0.91	0.4	0.2	0.26	0.33	0.4	0.91	1429.9
1898	1.45	5.55	7.78	54.92	40.33	70.41	67.44	112.28	120.18	21.62	2.4	1.52	0.27	0.45	0.47	1.39	1.78	453.48
1899	1.55	15.27	19.05	42.42	46.91	39.45	70.24	119.37	36.92	5.38	1.61	0.82	0.31	0.36	0.31	0.41	1.02	241.81
1900	0.99	3.07	4.4	46.02	53.29	44.23	84.25	61.61	10.93	2.36	0.59	0.83	0.18	0.23	0.25	0.36	0.65	353.18
1901	0.84	2.91	4.41	5.6	10.47	39.07	50.7	35.42	2.98	0.6	0.22	0.21	0.14	0.17	0.19	0.21	0.33	119.35
1975	8.67	8.35	8.53	8.5	8.05	7.83	6.86	8.7	10.29	9.7	8.84	8.2	5.3	5.37	5.53	6.27	7.28	12
1976	8.93	7.81	8.48	8.15	8.25	8.32	8.63	8.16	8.41	8.55	8.03	7.79	6.4	6.53	7.06	7.72	7.98	11
1977	8.18	7.97	8.27	9.13	9.23	4.67	4.27	4.64	4.13	4.3	4.09	3.99	3.6	3.63	3.73	3.88	3.93	9.8
1978	3.93	4	4.45	4.61	5.12	8.03	8.4	8.72	8.17	7.71	7.89	8.27	3.6	3.8	3.8	3.92	4.11	10
1979	8.62	8.35	8.53	8.5	8.05	7.83	6.86	8.7	10.29	9.7	8.84	8.2	5.3	5.37	5.53	6.27	7.28	12
1980	8.62	8.34	8.24	9.85	8.74	7.95	8.61	8.76	8.14	8.3	8.15	8.08	7.2	7.3	7.41	7.66	7.87	25
1981	7.95	7.9	7.77	8.03	8.09	8.04	8.46	8.21	8.14	8.08	8.06	7.96	7.5	7.5	7.54	7.73	7.87	9.5
1982	8.19	9.67	9.21	7.96	9.61	9.48	10.22	15.95	8.3	8.32	8.15	8.3	7.7	7.7	7.7	7.82	8.19	103
1983	8.71	8.65	7.96	7.77	7.88	7.91	7.54	11.45	11.95	9.33	8.57	8.38	5.8	5.8	5.93	6.8	7.65	17
1984	8.22	9.86	23.91	8.37	8.2	9.34	8.5	8.81	8.21	8.01	8.1	8.48	7.7	7.8	7.91	7.99	8.06	238
1985	8.69	9.09	8.26	8.55	8.64	8.78	10.12	8.73	8.29	8.13	8.27	8.13	7.8	7.87	7.94	8.08	8.17	11
1986	8.26	8.41	8.95	9.7	11.32	10.64	9.23	8.84	8.92	8.73	8.56	8.52	8	8	8	8.23	8.51	31
1987	8.51	8.61	8.5	8.61	8.9	9.05	9.33	8.61	8.29	8.77	8.73	8.42	8	8	8	8.16	8.36	14
1988	8.34	8.33	9.55	9.3	9.39	9.04	9.04	8.81	9.12	8.55	8.76	8.8	8	8.03	8.1	8.24	8.71	12
1989	8.86	9.93	8.55	8.33	9.06	11.61	10.24	9.08	8.73	8.93	8.7	8.82	7.7	7.7	7.87	8.24	8.6	16
1990	9.12	8.81	8.92	9.84	9.53	9.17	9.6	9.6	9.17	8.98	9.01	8.84	8.3	8.3	8.4	8.74	8.94	13
1991	12.27	8.74	8.55	8.55	8.53	9.6	9.6	9.8	8.94	8.97	8.76	8.42	8.3	8.3	8.17	8.28	8.54	25
1992	9	8.89	8.61	8.59	9.18	8.83	9.24	10.03	9.81	9.4	9.04	8.94	8	8	8.11	8.51	8.63	14
1993	13.31	8.72	9.03	9.61	8.97	9.95	9.46	9.67	9.71	9.05	8.71	8.45	8	8	8.1	8.33	8.61	54
1994	8.91	8.7	8.9	8.62	9.6	9.75	9.54	9.42	9.67	9.31	9.47	9.71	8.3	8.3	8.39	8.61	8.74	10
1995	9.54	9.97	9.94	11.08	9.37	10.84	9.67	10.73	9.39	15.69	9.14	9.18	8	8.13	8.23	9.04	9.2	50
1996	9.32	9.65	11	11.23	12.79	11.65	10.76	48.71	9.12	9.27	8.77	8.9	8	8.17	8.51	8.76	8.92	403
1997	11.2	9.43	11.3	13.03	10.25	9.26	9.8	9.34	9.9	9.35	9.62	9.84	8.5	8.57	8.59	9.13	9.45	42
1998	10.01	9.93	10.21	10.45	10.06	11.09	11.2	12.03	13.33	11.9	11.81	12.03	9.4	9.53	9.56	9.77	10	18
1999	12	11.2	11.45	12	11.75	11.65	12.5	14.9	13.57	12.03	12	11.97	11	11	11	11.2	11.54	16
2000	11.87	11.83	11.52	12.26	11.82	11.26	13.6	12.77	11.1	10.87	9.54	9.46	8.6	8.6	8.6	8.65	8.87	17
2001	8.69	8.92	9.13	10.75	9.43	11.37	11.8	9.02	8.72	9.38	9.96	10.57	8.3	8.3	8.39	8.7	8.9	16

# Analysis 1 - Gerle Creek below Loon Lake Reservoir (Unregulated Flow) versus 4295 Gerle Creek below Loon Lake Dam (Regulated Flow)

IHA Annual Summary Statistics (Cont)

Year	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	L Rise rate	Fall rate	Reversals
1875	221.96	205.18	152.78	79.64	0	0.02	280	135	4	18	12	6.25	8.67	-6.17	127
1876	51.11	46.82	31.58	24.24	0	0.03	248	300	6	14	6	2.5	4.14	-2.03	124
1877	40.41	34.47	20.01	16.31	0	0.02	228	135	3	60	3	1.67	1.8	-1.26	107
1878	148.03	112.91	102.4	78.5	0	0.01	276	364	4	11	9	14.67	9.9	-5.3	115
1879	221.96	205.18	152.78	79.64	0	0.01	280	135	4	11.25	12	6.25	8.73	-6.14	128
1880	861.64	471.68	141.25	78.29	0	0.01	275	13	3	14.33	11	9.45	20.87	-9.55	94
1881	90.99	84.37	68.37	58.9	0	0.02	210	121	3	31	6	9.5	4.37	-2.35	114
1882	605.34	316.52	141.06	108.95	0	0.01	280	355	5	3.8	7	22.43	32.89	-11.19	96
1883	277.6	239.54	211.36	122.76	0	0.03	264	73	1	3	12	14.67	15.54	-8.01	109
1884	375.63	275.41	125.95	86.03	0	0.01	260	322	1	58	9	16.89	18.35	-9.83	124
1885	115.24	111.37	78.56	47.15	0	0.02	240	101	4	21.25	7	8.29	4.01	-2.57	118
1886	966.93	560.8	243.14	132.74	0	0.01	251	49	4	12.25	6	19.67	24.44	-11.87	107
1887	104.15	71.55	50.55	38.33	0	0.03	274	44	4	29	4	11	3.18	-1.71	112
1888	48.58	36.19	24.29	20.67	0	0.02	251	5	4	25.75	5	1.8	2.99	-2.09	106
1889	299.81	236.55	135.26	102.01	0	0.01	279	68	4	15	4	22.25	9.49	-4.97	114
1890	117.74	84.27	63.83	46.54	0	0.01	255	114	2	33.5	9	6.78	5.57	-3.34	127
1891	213.41	111.67	68.15	56.68	0	0.01	263	64	4	19.5	3	23.33	5.37	-3.94	117
1892	84.4	77.19	56.68	39.12	0	0.01	275	93	3	23.67	4	13.25	2.39	-1.55	109
1893	208.21	164.42	135.18	113.22	0	0.01	271	78	4	12.75	7	19.43	9.19	-5.86	98
1894	62.93	58.6	45.67	35.76	0	0.01	228	108	4	33.75	7	7	2.08	-1.27	134
1895	453.61	332.37	175.04	132.64	0	0.01	275	122	4	12.25	10	16.9	23.37	-14.27	120
1896	685.15	400.5	164.99	100.14	0	0.01	328	138	4	14.5	9	14	26.5	-11.17	102
1897	1094.54	616.48	221.61	105.08	0	0.01	273	1	4	18.75	13	10.23	22.68	-14.06	122
1898	313.47	196.22	133.51	109.43	0	0.01	275	84	4	9.25	12	11	12.46	-8.75	123
1899	181.96	150.76	120.66	79.56	0	0.01	272	18	2	32.5	11	10.09	9.18	-5.37	112
1900	184.16	132.96	88.56	68.41	0	0.01	238	45	4	16	8	13.5	10.14	-6.66	133
1901	94.66	84.17	60.03	42.42	0	0.01	221	85	2	46.5	3	17	2.75	-1.89	105
1975	12	11.29	10.67	9.94	0	0.65	126	347	0	0	0	0	0.48	-0.44	56
1976	9.93	9.46	9	8.42	0	0.85	307	300	0	0	0	0	0.26	-0.28	44
1977	9.4	9.3	9.23	8.9	0	0.62	271	52	0	0	0	0	0.19	-0.28	54
1978	9.73	9.51	8.87	8.61	0	0.57	308	135	0	0	0	0	0.31	-0.27	84
1979	12	11.29	10.67	9.94	0	0.65	126	347	0	0	0	0	0.5	-0.44	56
1980	19	13.99	10.04	8.99	0	0.87	99	13	0	0	0	0	0.71	-0.52	61
1981	9.1	8.93	8.51	9.02	0	0.94	334	139	0	0	0	0	0.25	-0.2	58
1982	71.67	37.71	16.18	11.96	0	0.81	277	149	0	0	1	3	2.13	-1.49	84
1983	14.33	13.86	13.23	14.1	0	0.67	100	73	0	0	0	0	0.64	-0.37	67
1984	158	74.91	24.43	14.24	0	0.8	218	362	0	0	1	2	3.63	-2.65	78
1985	11	10.86	10.19	9.26	0	0.92	360	316	0	0	0	0	0.37	-0.27	61
1986	24.67	17.43	12.53	10.56	0	0.87	285	48	0	0	0	0	1.09	-0.81	77
1987	10.67	9.89	9.34	9.1	0	0.92	278	44	0	0	0	0	0.5	-0.4	59
1988	10.87	10.2	9.56	9.42	0	0.91	299	345	0	0	0	0	0.33	-0.31	89
1989	14.33	13.71	11.7	10.51	0	0.85	24	328	0	0	0	0	0.64	-0.61	59
1990	11.13	10.29	12.35	10.07	0	0.91	321	7	0	0	0	0	0.42	-0.38	63
1991	25	22.71	12.39	9.9	0	0.88	359	296	0	0	0	0	0.62	-0.57	72
1992	12	10.57	13.71	10.59	0	0.89	278	51	0	0	0	0	0.53	-0.41	65
1993	51.67	28.83	13.45	10.41	0	0.85	297	283	0	0	1	3	1.08	-0.96	81
1994	10	9.97	9.92	9.82	0	0.9	27	276	0	0	0	0	0.26	-0.24	67
1995	44.67	31.57	15.89	12.14	0	0.79	112	193	0	0	1	3	1.61	-1.26	73
1996	362.33	182.14	50.85	24.52	0	0.63	168	138	0	0	1	4	9.27	-7.54	48
1997	30.67	20.71	13.53	11.64	0	0.84	312	1	0	0	1	1	1.06	-0.97	79
1998	15	14.57	13.47	12.42	0	0.86	58	84	0	0	0	0	0.98	-0.93	57
1999	16	15.86	15.27	13.81	0	0.9	308	133	0	0	0	0	1.03	-1.21	43
2000	15.33	14.14	13.97	12.62	0	0.75	271	45	0	0	0	0	1.01	-1.07	41
2001	14.67	14	11.8	10.92	0	0.85	287	85	0	0	0	0	0.57	-0.71	75

# Analysis 1 - Gerle Creek below Loon Lake Reservoir (Unregulated Flow) versus 4295 Gerle Creek below Loon Lake Dam (Regulated Flow)

## Non-Parametric IHA Scorecard

Pre-impact period: 1875-1901 (27 years)

Post-impact period: 1975-2001 (27 years)

Watershed area	1.00	
Mean annual flow	27.52	9.36
Mean flow/area	27.52	9.36
Annual C. V.	.93	.10
Flow predictability	.39	.70
Constancy/predictability	.31	.97
% of floods in 60d period	.46	.46
flood-free season	69.00	135.00

Parameter Group #	MEDIANS		COEFF. of DISP.		DEVIATION FACTOR		SIGNIFICANCE COUNT	
	Pre	Post	Pre	Post	Medians	C.V.	Medians	C.V.
<b>Parameter Group #1</b>								
October	1.0	8.7	1.38	.14	7.82	.90	.00	.13
November	3.2	8.7	4.47	.15	1.72	.97	.00	.06
December	9.0	8.9	2.06	.16	.01	.92	.93	.24
January	16.4	8.6	2.24	.24	.47	.89	.00	.51
February	26.9	9.2	1.01	.15	.66	.85	.00	.07
March	41.5	9.3	.84	.30	.78	.64	.37	.33
April	63.5	9.5	.52	.18	.85	.65	.33	.46
May	61.6	9.1	1.40	.22	.85	.84	.10	.12
June	14.1	9.1	2.58	.18	.35	.93	.00	.12
July	3.1	9.0	2.10	.12	1.86	.94	.00	.05
August	1.0	8.8	1.50	.11	7.83	.92	.00	.31
September	.6	8.5	1.31	.12	12.08	.91	.00	.38
<b>Parameter Group #2</b>								
1-day minimum	.3	8.0	.84	.14	31.00	.84	.00	.77
3-day minimum	.3	8.0	.94	.13	29.38	.87	.00	.71
7-day minimum	.3	8.0	.83	.12	24.69	.85	.00	.74
30-day minimum	.4	8.2	.94	.12	19.62	.87	.00	.54
90-day minimum	.8	8.5	.90	.12	9.23	.87	.00	.30
1-day maximum	241.8	16.0	1.87	1.19	.93	.37	.22	.55
3-day maximum	208.2	14.3	1.35	.99	.93	.27	.18	.63
7-day maximum	150.8	13.9	1.27	.76	.91	.40	.27	.56
30-day maximum	120.7	12.3	.77	.31	.90	.60	.28	.41
90-day maximum	78.5	10.4	.80	.28	.87	.65	.20	.25
Number of zero days	.0	.0	.00	.00	999999.00	999999.00	.00	.00
Base flow	.0	.9	.60	.17	66.13	.71	.00	.90
<b>Parameter Group #3</b>								
Date of minimum	271.0	287.0	.07	.28	.09	2.81	.06	.01
Date of maximum	73.0	44.0	.28	.29	.16	.05	.39	.87
<b>Parameter Group #4</b>								
Low pulse count	4.0	.0	.25	.00	1.00	1.00	.03	.00
Low pulse duration	18.0	.0	1.04	.00	1.00	1.00	.06	.01
High pulse count	7.0	.0	.86	.00	1.00	1.00	.37	.38
High pulse duration	11.0	.0	.90	.00	1.00	1.00	.21	.19
The low pulse threshold is	1.46							
The high pulse level is	33.40							
<b>Parameter Group #5</b>								
Rise rate	9.2	.6	1.56	1.10	.93	.30	.16	.62
Fall rate	-5.4	-.5	-1.39	-1.27	.90	.09	.05	.87
Number of reversals	114.0	63.0	.15	.33	.45	1.24	.00	.00

# Analysis 1 - Gerle Creek below Loon Lake Reservoir (Unregulated Flow) versus 4295 Gerle Creek below Loon Lake Dam (Regulated Flow)

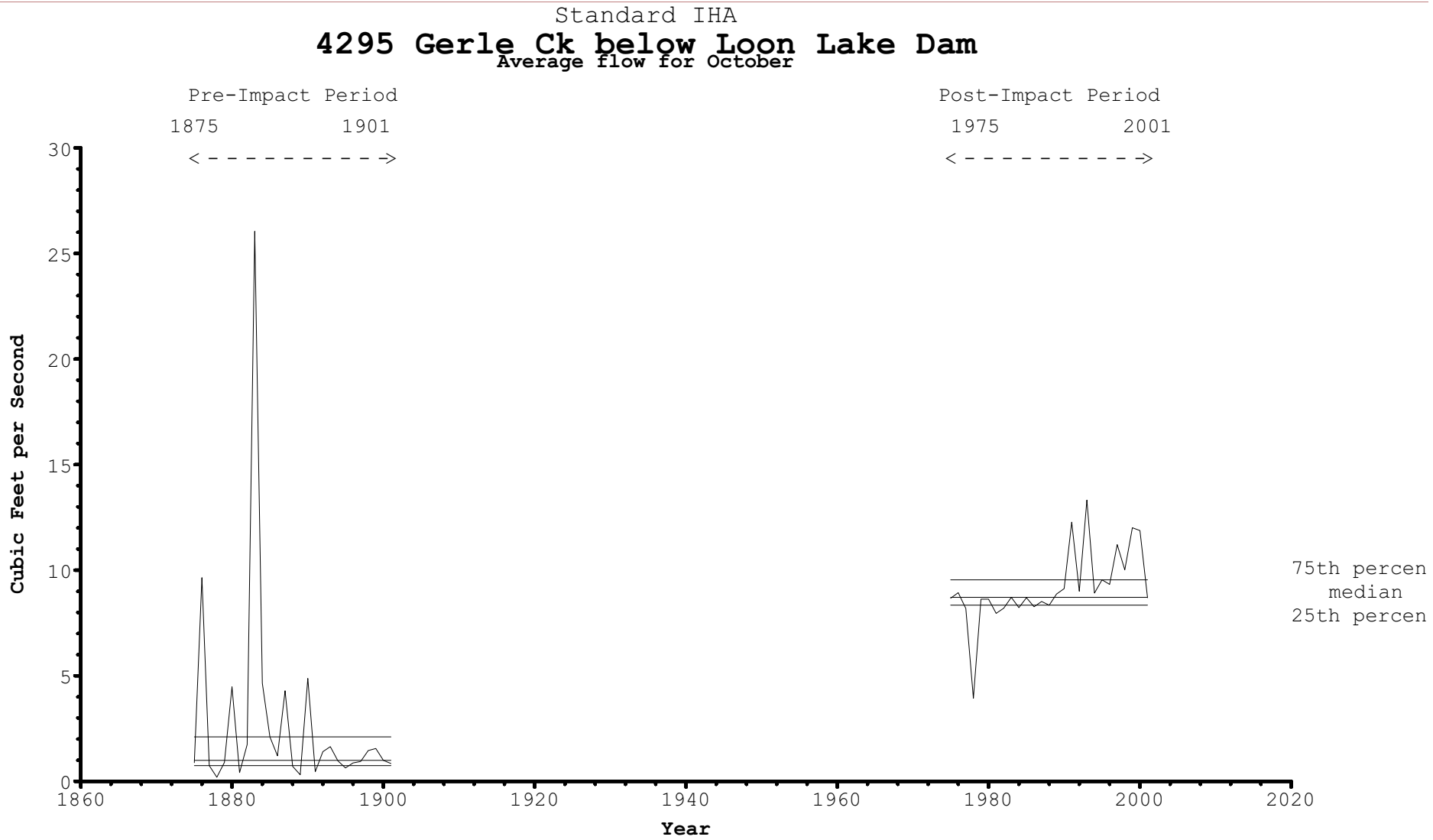
## Variance Data, Box and Whisker Format

	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
<b>Pre-Impact Distribution</b>																	
1-day min	0.19	0.71	0.96	1.42	2.92	9.95	18.25	9.64	2.31	0.45	0.15	0.18	0.09	0.1	0.11	0.14	0.18
25 pctile	0.74	1.88	3.57	6.6	15.3	32.8	45.75	33.06	5.29	1.06	0.41	0.34	0.17	0.17	0.19	0.26	0.42
Median	0.99	3.21	8.96	16.37	26.86	41.55	63.55	61.61	14.07	3.14	0.99	0.65	0.25	0.26	0.31	0.4	0.83
75 pctile	2.1	16.22	22.03	43.27	42.42	67.71	78.94	119.37	41.61	7.64	1.89	1.19	0.38	0.42	0.44	0.64	1.17
1-day max	26.04	120.08	122.27	150.04	187.57	124.29	113.46	162.13	146.13	40.23	7.45	5.83	1.4	1.4	1.47	2.32	4.08
<b>Post-Impact Distribution</b>																	
1-day min	3.93	4	4.45	4.61	5.12	4.67	4.27	4.64	4.13	4.3	4.09	3.99	3.6	3.63	3.73	3.88	3.93
25 pctile	8.34	8.35	8.48	8.37	8.25	8.04	8.5	8.72	8.29	8.32	8.15	8.2	7.2	7.3	7.41	7.72	7.87
Median	8.71	8.74	8.9	8.62	9.18	9.26	9.46	9.08	9.12	8.98	8.76	8.48	8	8	8	8.24	8.54
75 pctile	9.54	9.67	9.94	10.45	9.61	10.84	10.22	10.73	9.9	9.4	9.14	9.18	8.3	8.3	8.39	8.7	8.9
1-day max	13.31	11.83	23.91	13.03	12.79	11.65	13.6	48.71	13.57	15.69	12	12.03	11	11	11	11.2	11.54
<b>1-day max 3-day max 7-day max 30-day max 90-day max Zero days Base flow Date min Date max Lo pulse #Lo pulse LHi pulse #Hi pulse LRise rate Fall rate Reversals</b>																	
<b>Pre-Impact Distribution</b>																	
1-day min	44.95	40.41	34.47	20.01	16.31	0	0.01	210	1	1	3	3	1.67	1.8	-14.27	94	
25 pctile	119.35	94.66	84.17	60.03	42.42	0	0.01	248	13	3	12.25	5	7	4.01	-9.55	107	
Median	241.81	208.21	150.76	120.66	78.5	0	0.01	271	73	4	18	7	11	9.18	-5.37	114	
75 pctile	571.74	375.63	275.41	152.78	105.08	0	0.02	275	114	4	31	11	16.9	18.35	-2.09	124	
1-day max	1429.9	1094.54	616.48	243.14	132.74	0	0.03	328	364	6	60	13	23.33	32.89	-1.26	134	
<b>Post-Impact Distribution</b>																	
1-day min	9.5	9.1	8.93	8.51	8.42	0	0.57	24	1	0	0	0	0	0.19	-7.54	41	
25 pctile	12	10.87	10.2	9.92	9.26	0	0.75	218	345	0	0	0	0	0.37	-0.97	56	
Median	16	14.33	13.86	12.35	10.41	0	0.85	287	44	0	0	0	0	0.62	-0.52	63	
75 pctile	31	25	20.71	13.71	12.14	0	0.9	321	85	0	0	0	0	1.06	-0.31	77	
1-day max	403	362.33	182.14	50.85	24.52	0	0.94	360	362	0	0	1	4	9.27	-0.2	89	

# Analysis 1 - Gerle Creek below Loon Lake Reservoir (Unregulated Flow) versus 4295 Gerle Creek below Loon Lake Dam (Regulated Flow)

## IHA Percentile Data

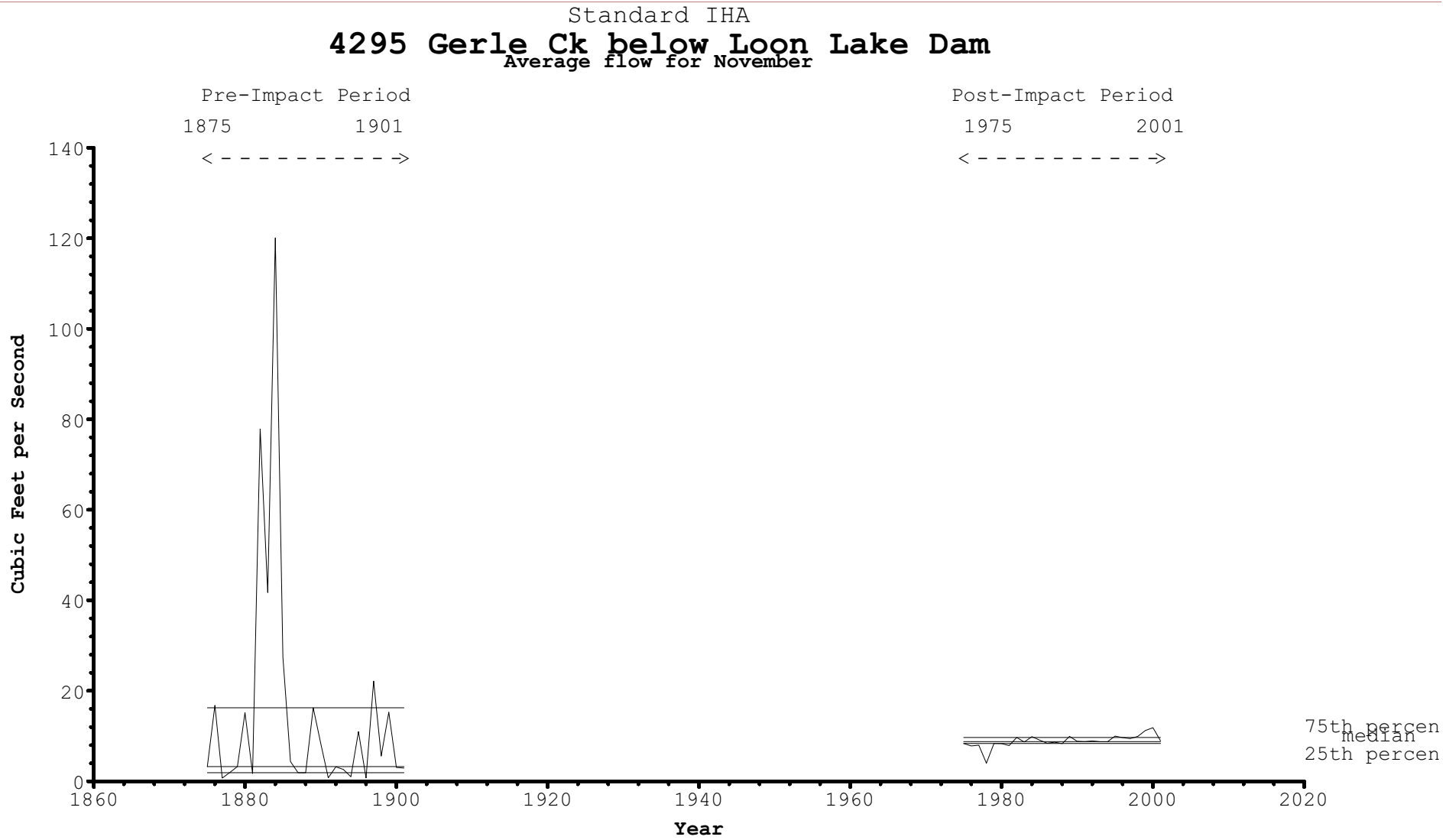
Parameter Group #1	Pre-impact period: 1875-1901 (27 years)						Post-impact period: 1975-2001 (27 years)					
	Pre-Impact					Post-Impact					(75-25)/50	
	10%	25%	50%	75%	90%	10%	25%	50%	75%	90%		
October	.39	.74	.99	2.10	5.82	1.38	8.14	8.34	8.71	9.54	12.05	.14
November	.75	1.88	3.21	16.22	48.92	4.47	7.88	8.35	8.74	9.67	10.22	.15
December	2.03	3.57	8.96	22.03	102.28	2.06	7.92	8.48	8.90	9.94	11.46	.16
January	3.11	6.60	16.37	43.27	90.64	2.24	7.92	8.37	8.62	10.45	12.05	.24
February	9.42	15.30	26.86	42.42	101.09	1.01	8.01	8.25	9.18	9.61	11.76	.15
March	23.03	32.80	41.55	67.71	118.53	.84	7.83	8.04	9.26	10.84	11.62	.30
April	28.37	45.75	63.55	78.94	104.85	.52	6.86	8.50	9.46	10.22	11.94	.18
May	14.97	33.06	61.61	119.37	152.07	1.40	8.20	8.72	9.08	10.73	15.11	.22
June	2.89	5.29	14.07	41.61	98.18	2.58	8.14	8.29	9.12	9.90	12.23	.18
July	.64	1.06	3.14	7.64	22.44	2.10	7.95	8.32	8.98	9.40	11.93	.12
August	.21	.41	.99	1.89	2.96	1.50	8.00	8.15	8.76	9.14	10.33	.11
September	.21	.34	.65	1.19	2.08	1.31	7.93	8.20	8.48	9.18	10.85	.12
Parameter Group #2												
1-day minimum	.12	.17	.25	.38	.54	.84	4.96	7.20	8.00	8.30	8.76	.14
3-day minimum	.13	.17	.26	.42	.54	.94	5.05	7.30	8.00	8.30	8.79	.13
7-day minimum	.16	.19	.31	.44	.56	.83	5.18	7.41	8.00	8.39	8.79	.12
30-day minimum	.18	.26	.40	.64	1.43	.94	5.80	7.72	8.24	8.70	9.26	.12
90-day minimum	.29	.42	.83	1.17	2.72	.90	6.65	7.87	8.54	8.90	9.56	.12
1-day maximum	82.10	119.35	241.81	571.74	1305.94	1.87	9.96	12.00	16.00	31.00	130.00	1.19
3-day maximum	50.60	94.66	208.21	375.63	882.70	1.35	9.67	10.87	14.33	25.00	88.93	.99
7-day maximum	44.70	84.17	150.76	275.41	489.50	1.27	9.43	10.20	13.86	20.71	45.15	.76
30-day maximum	30.12	60.03	120.66	152.78	213.41	.77	8.98	9.92	12.35	13.71	17.83	.31
90-day maximum	23.52	42.42	78.50	105.08	124.74	.80	8.84	9.26	10.41	12.14	14.13	.28
Number of zero days	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Base flow	.01	.01	.01	.02	.03	.60	.63	.75	.85	.90	.92	.17
Parameter Group #3												
Date of minimum	226.60	248.00	271.00	275.00	280.00	.07	109.60	218.00	287.00	321.00	24.60	.28
Date of maximum	348.40	13.00	73.00	114.00	135.00	.28	293.40	345.00	44.00	85.00	141.00	.29
Parameter Group #4												
Low pulse count	1.80	3.00	4.00	4.00	4.20	.25	.00	.00	.00	.00	.00	.00
Low pulse duration	8.16	12.25	18.00	31.00	48.80	1.04	.00	.00	.00	.00	.00	.00
High pulse count	3.00	5.00	7.00	11.00	12.00	.86	.00	.00	.00	.00	1.00	.00
High pulse duration	2.36	7.00	11.00	16.90	22.29	.90	.00	.00	.00	.00	3.00	.00
Parameter Group #5												
Rise rate	2.33	4.01	9.18	18.35	24.85	1.56	.26	.37	.62	1.06	2.43	1.10
Fall rate	-12.31	-9.55	-5.37	-2.09	-1.49	-1.39	-1.72	-.97	-.52	-.31	-.26	-1.27
Number of reversals	97.60	107.00	114.00	124.00	129.00	.15	43.80	56.00	63.00	77.00	84.00	.33



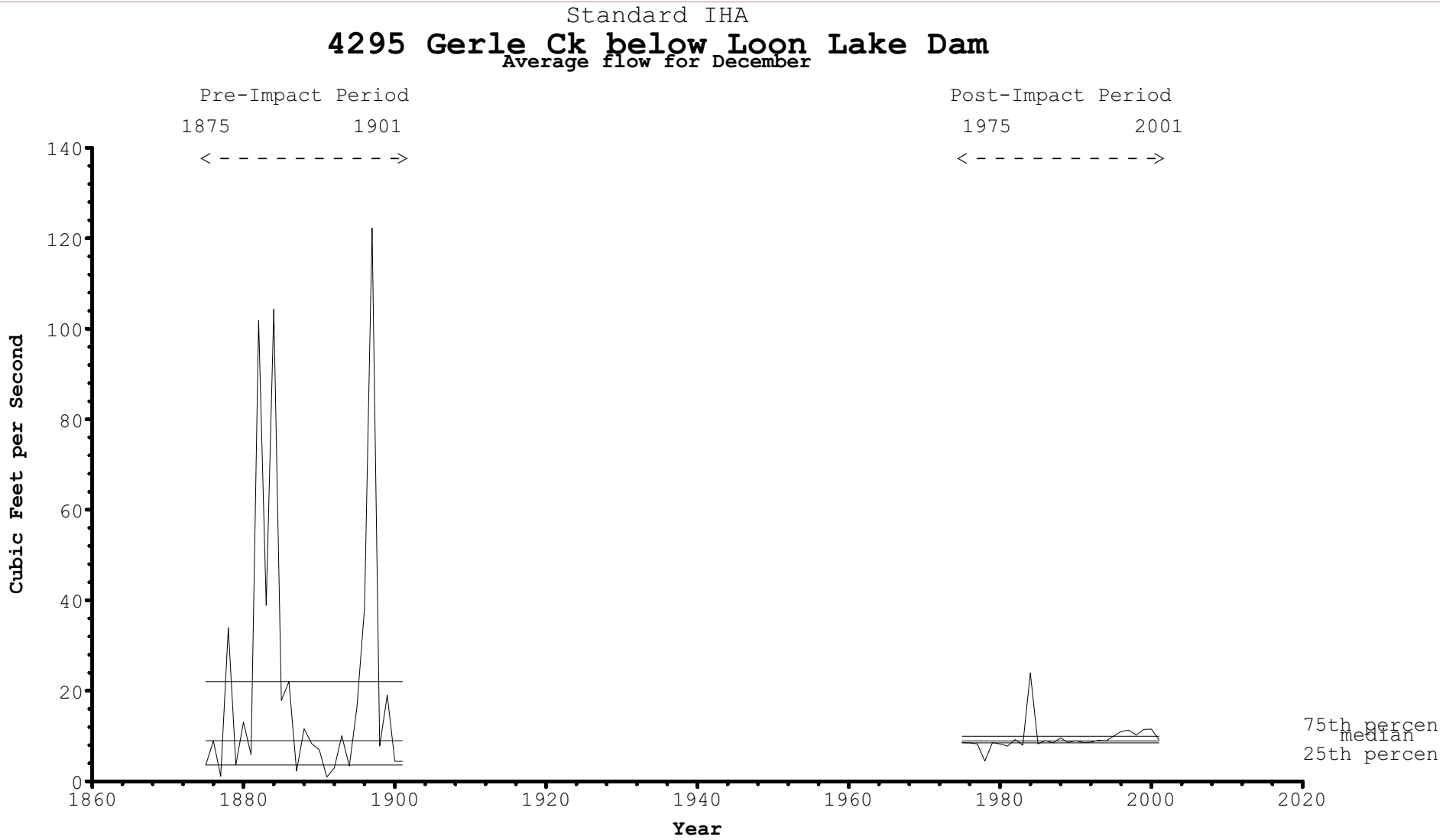
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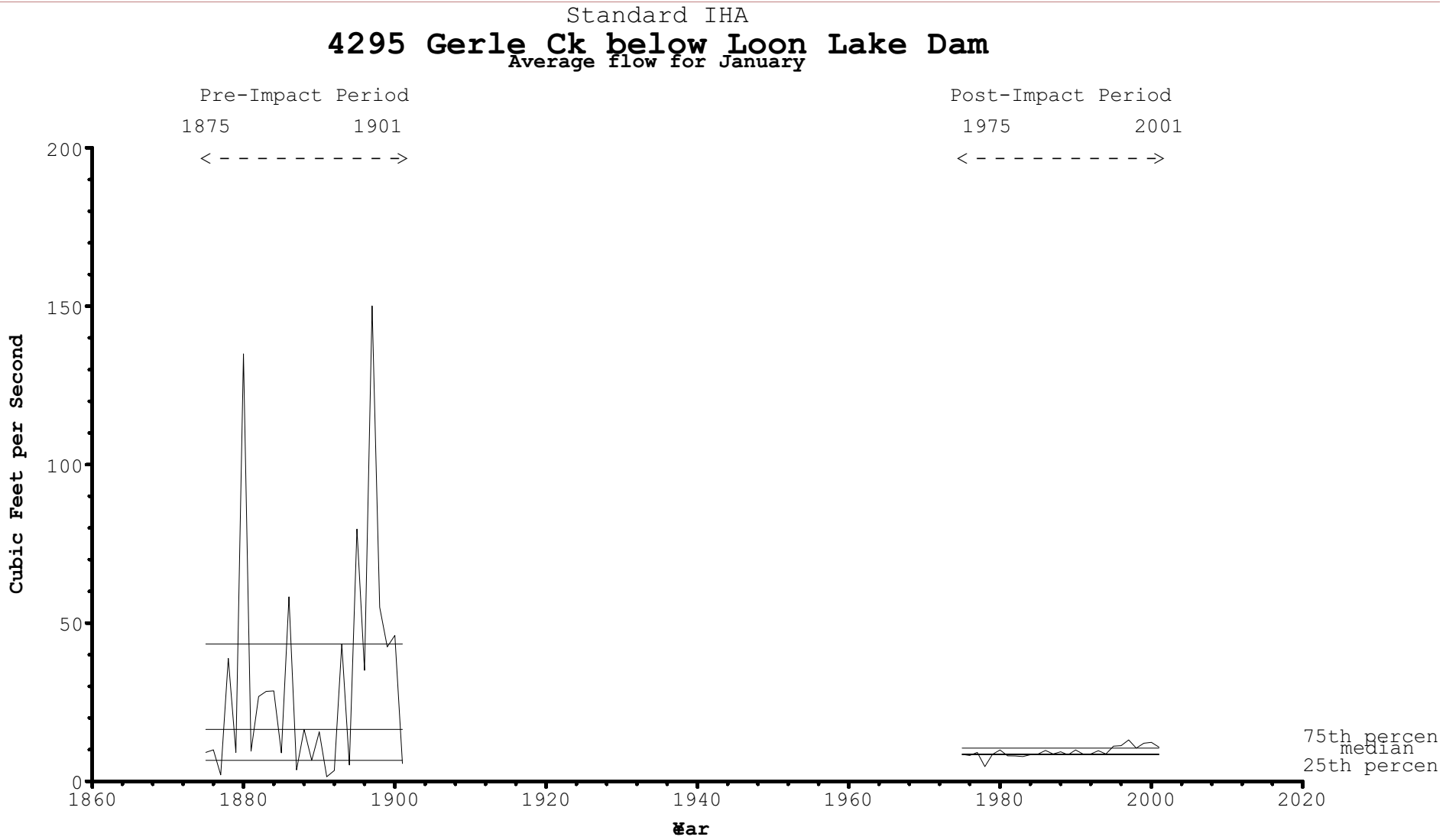
Analysis 1 - Gerle Creek below Loon Lake Reservoir (Unregulated Flow) versus 4295 Gerle Creek below Loon Lake Dam (Regulated Flow)



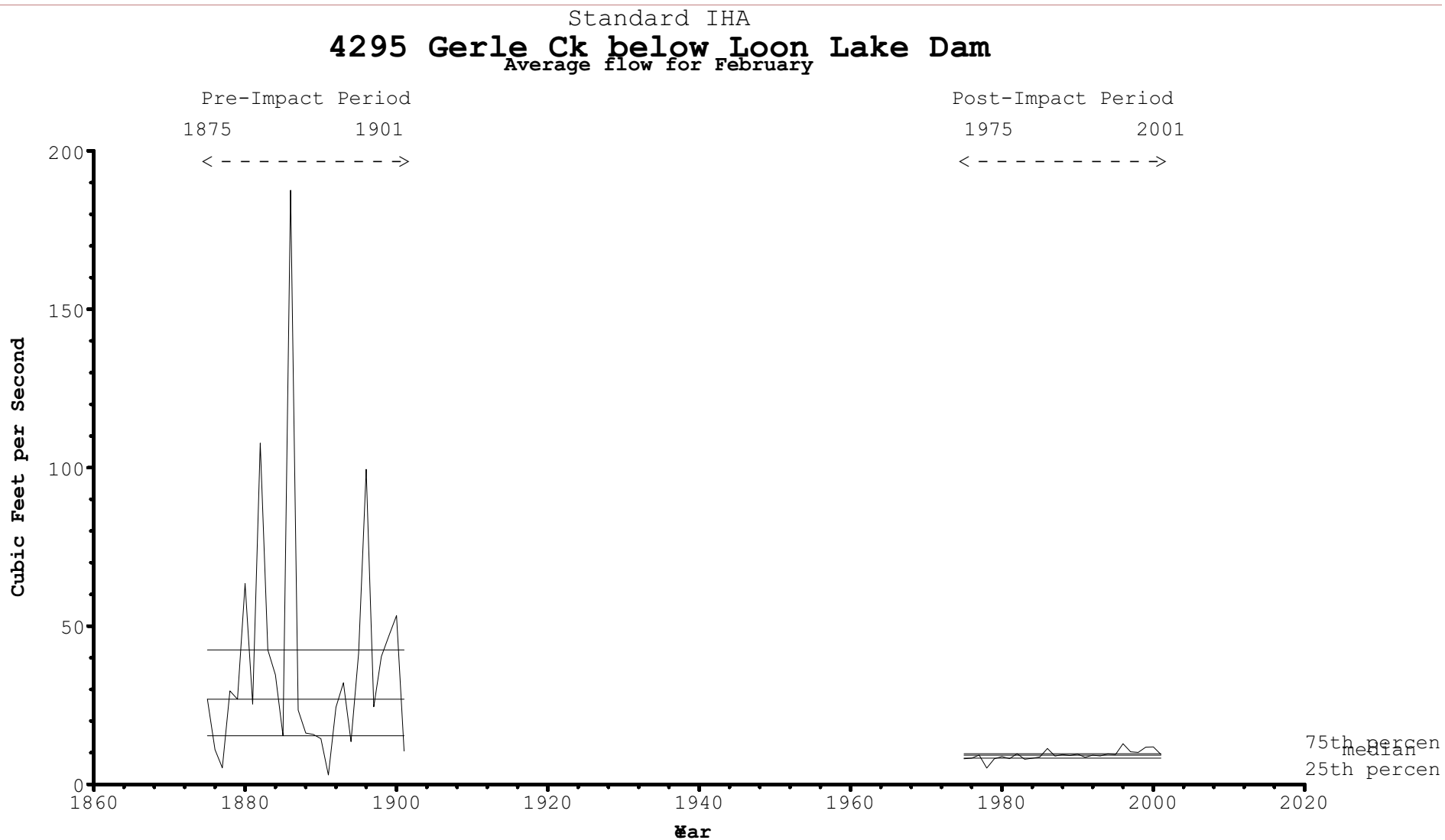
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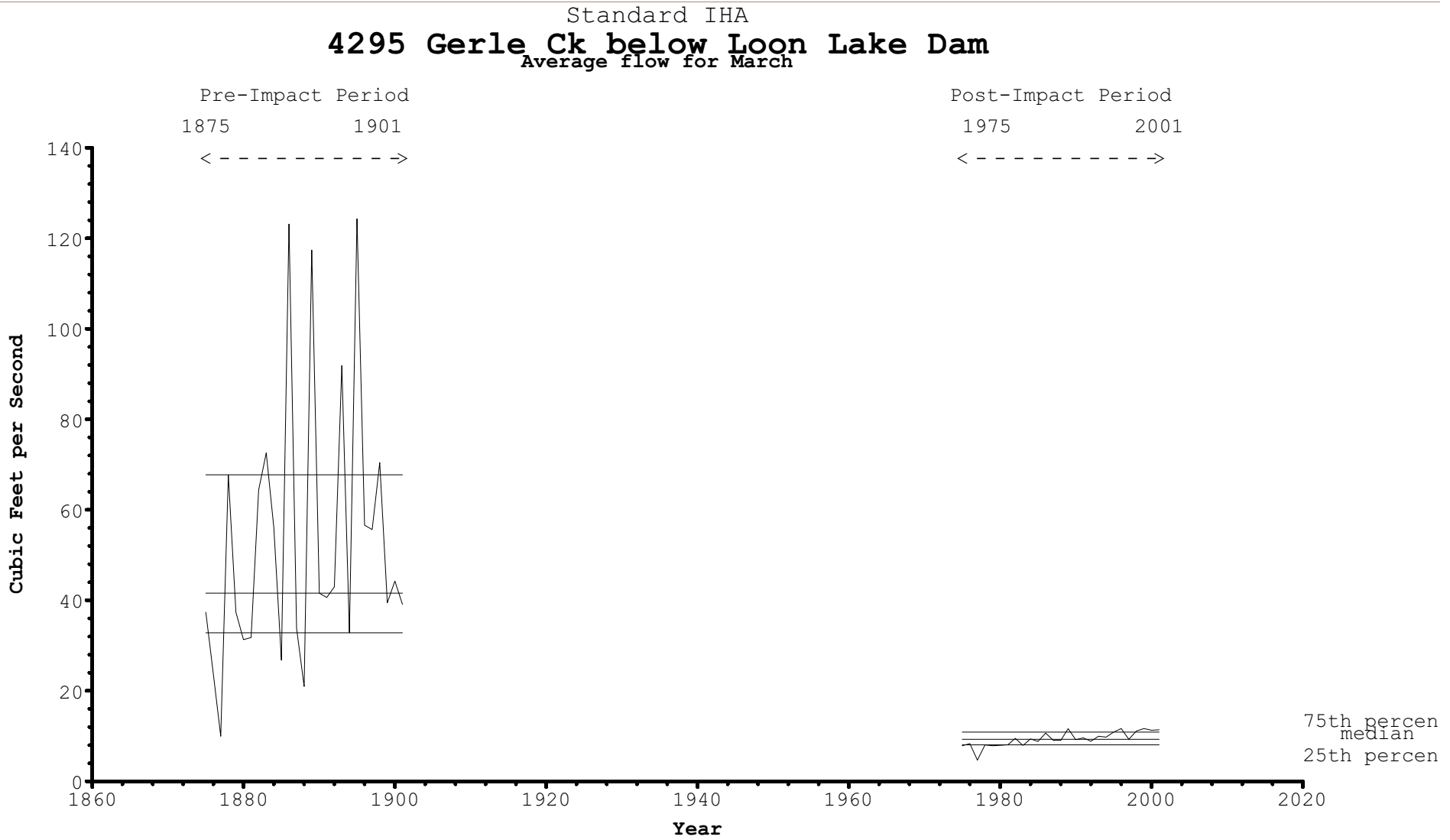


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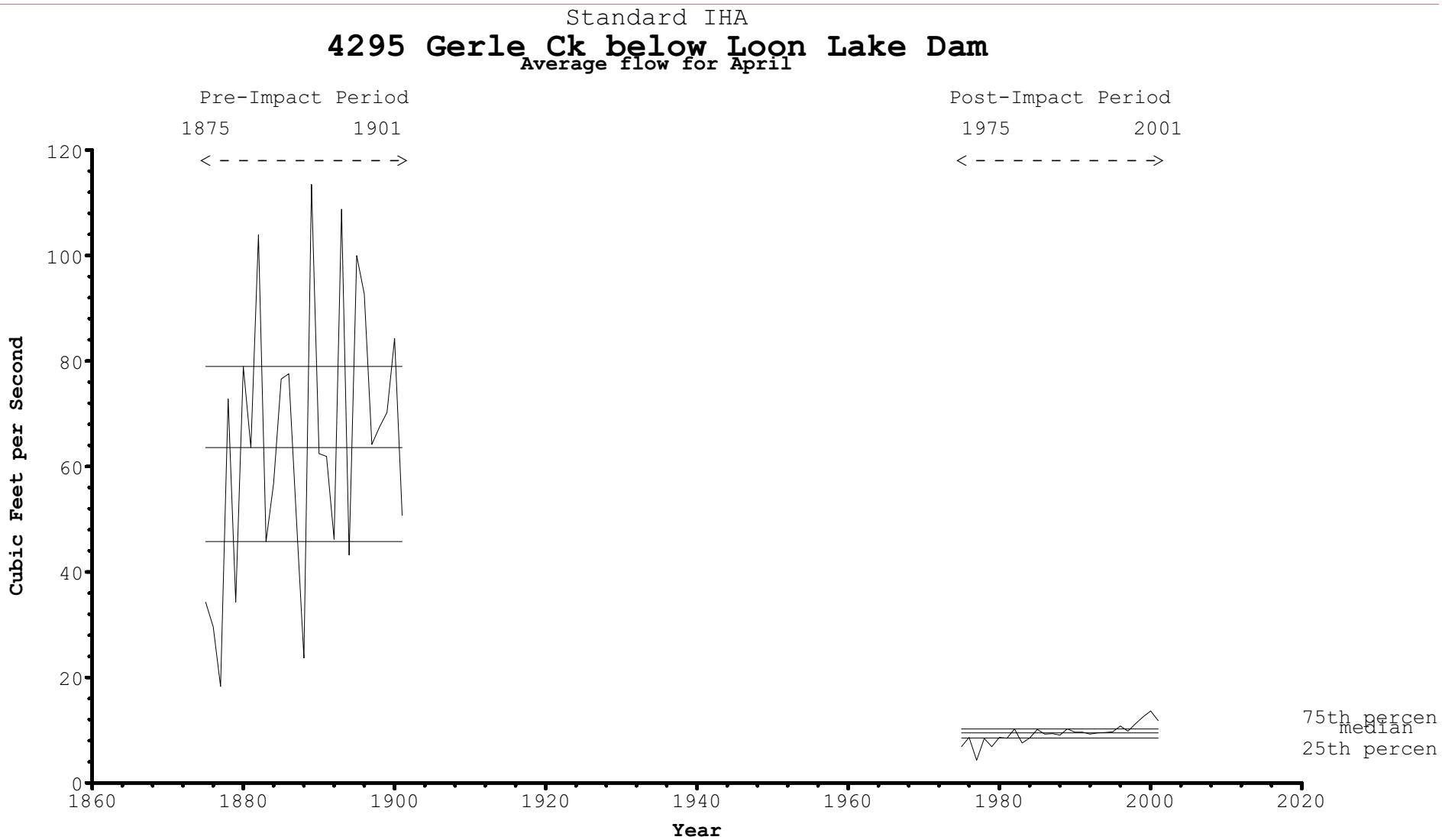


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Analysis 1 - Gerle Creek below Loon Lake Reservoir (Unregulated Flow) versus 4295 Gerle Creek below Loon Lake Dam (Regulated Flow)

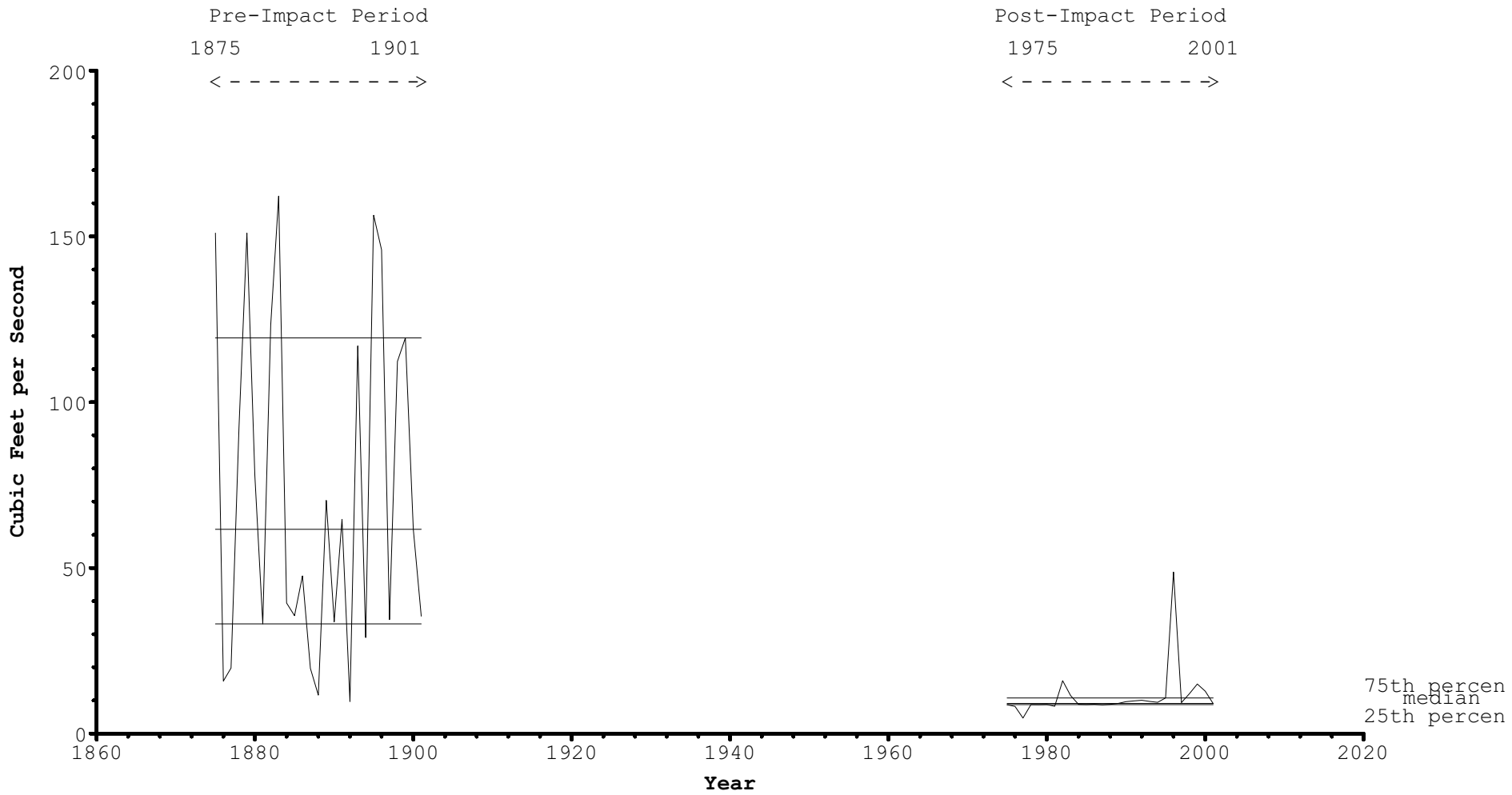


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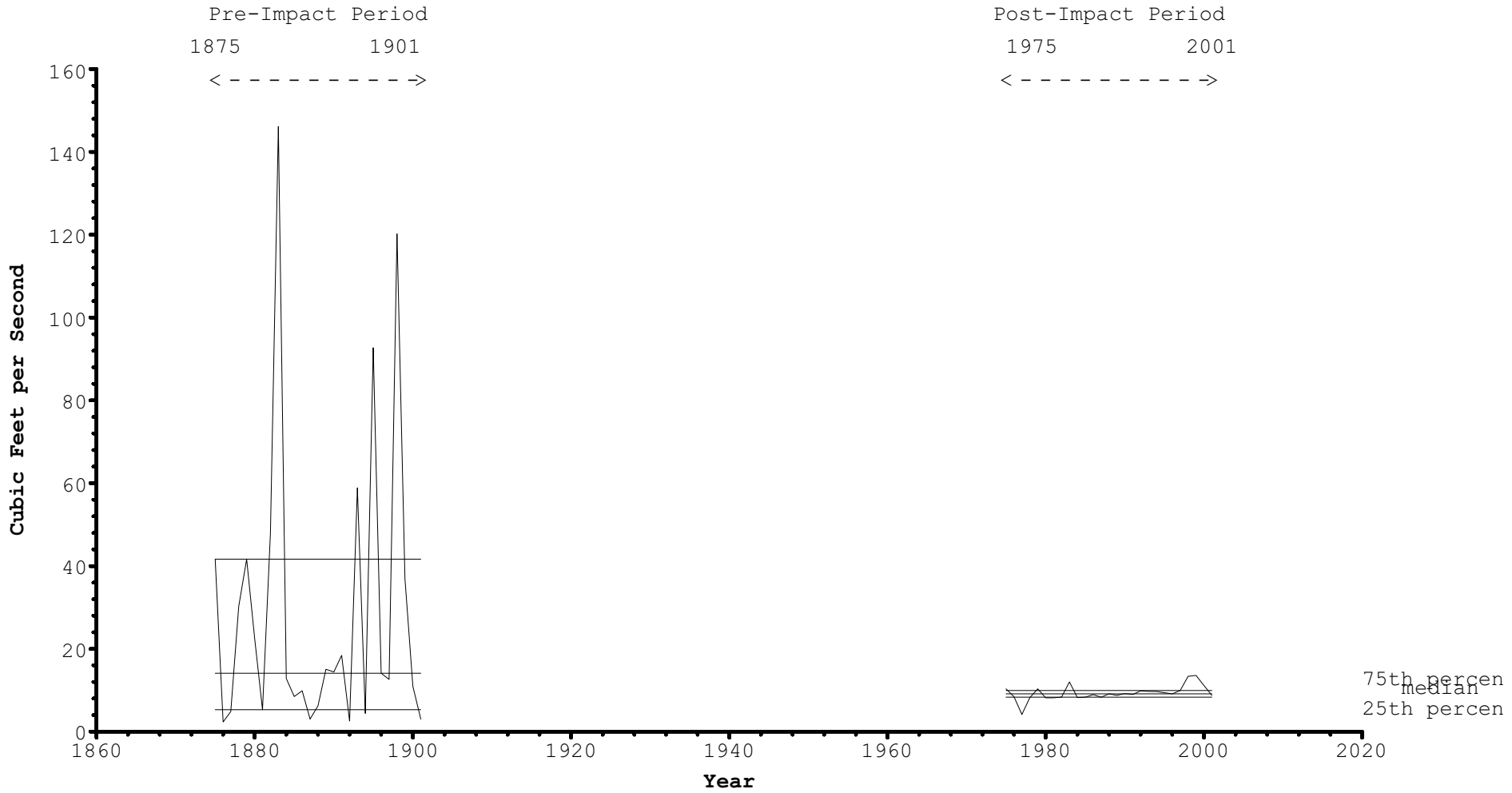
File(s) Used: C:\lha2\Loon\Loon.ann, C:\lha2\Loon\Loon.baw

Standard IHA  
**4295 Gerle Ck below Loon Lake Dam**  
Average flow for May



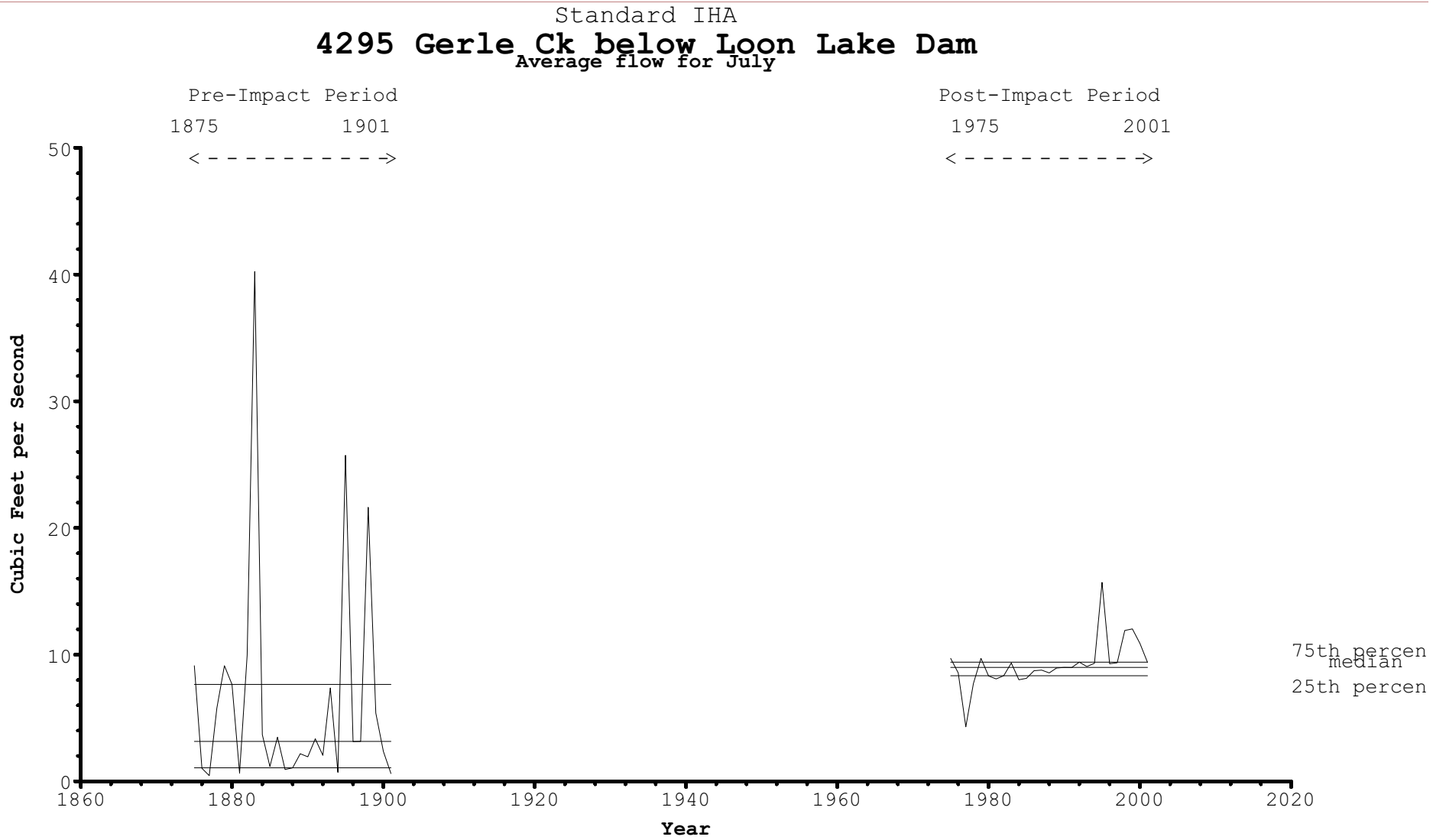
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Standard IHA  
**4295 Gerle Ck below Loon Lake Dam**  
 Average flow for June

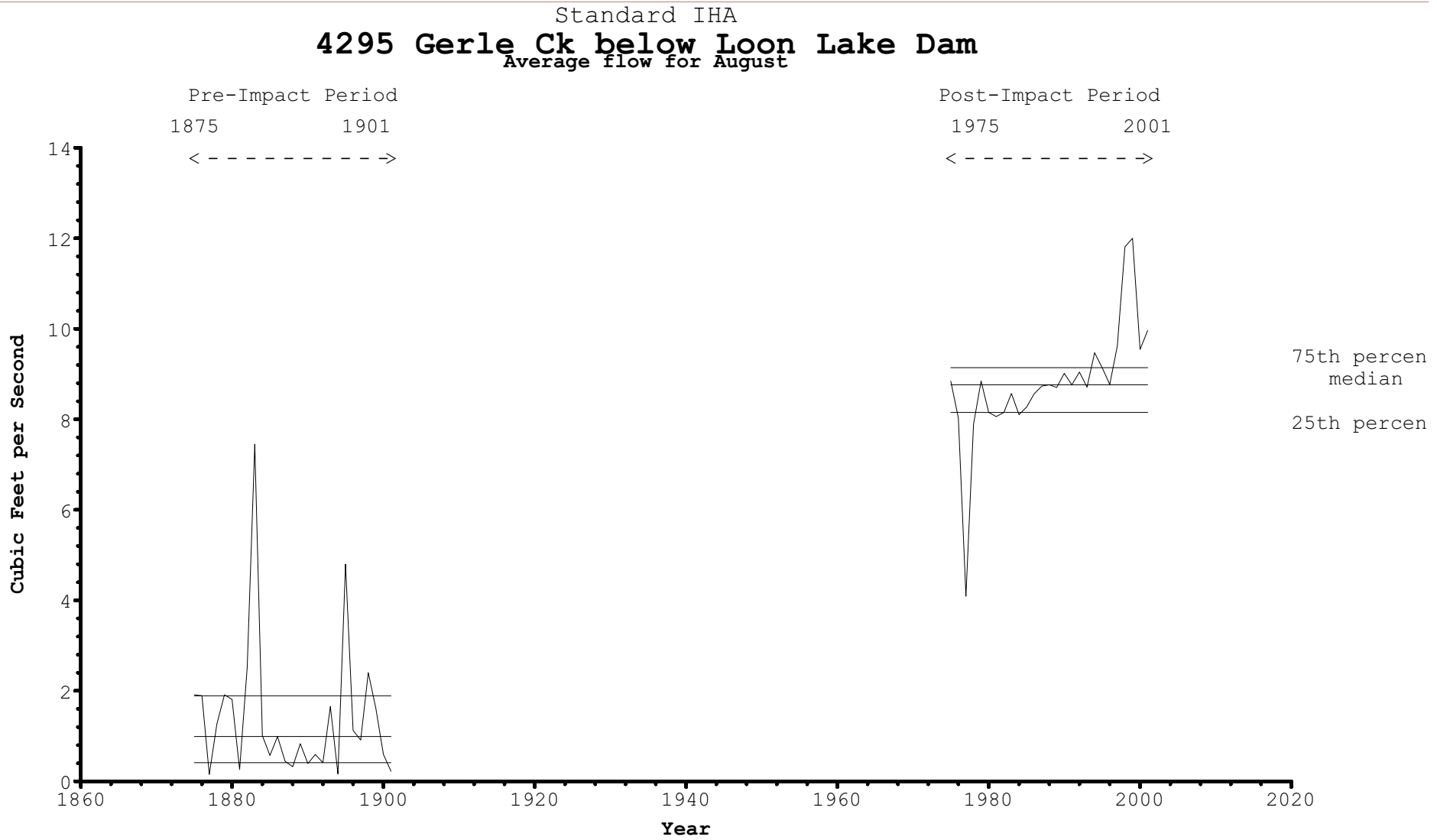


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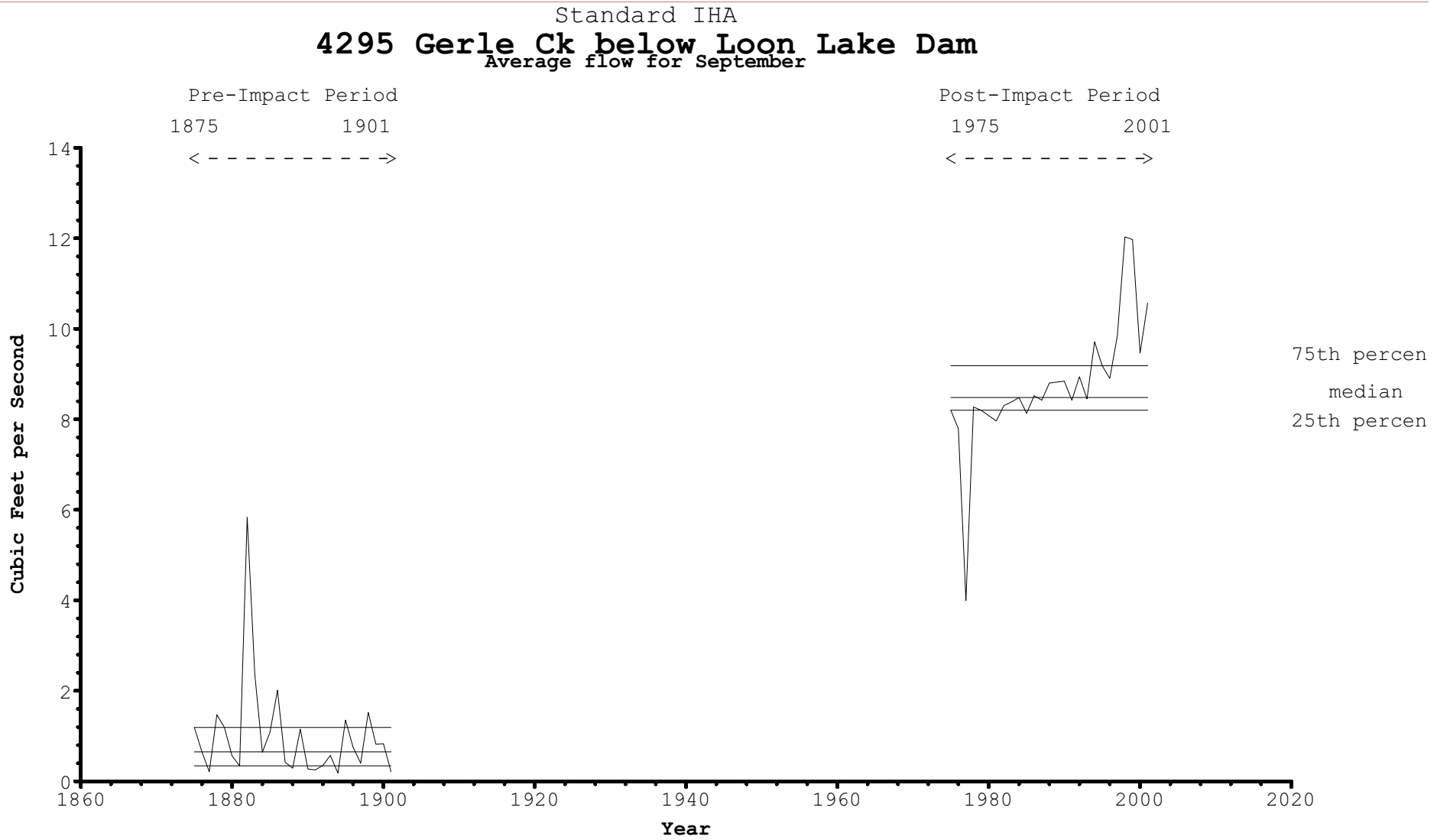




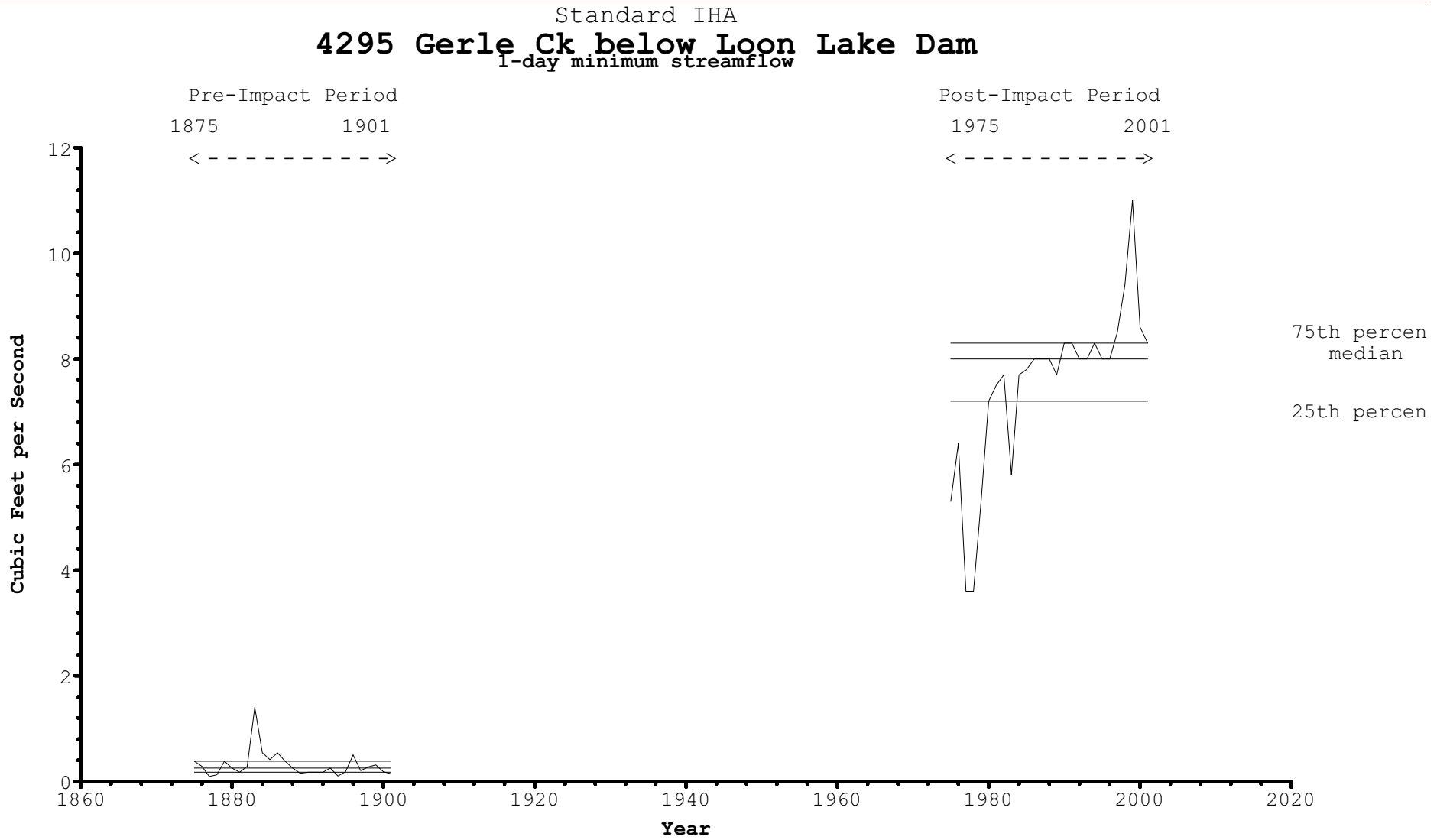
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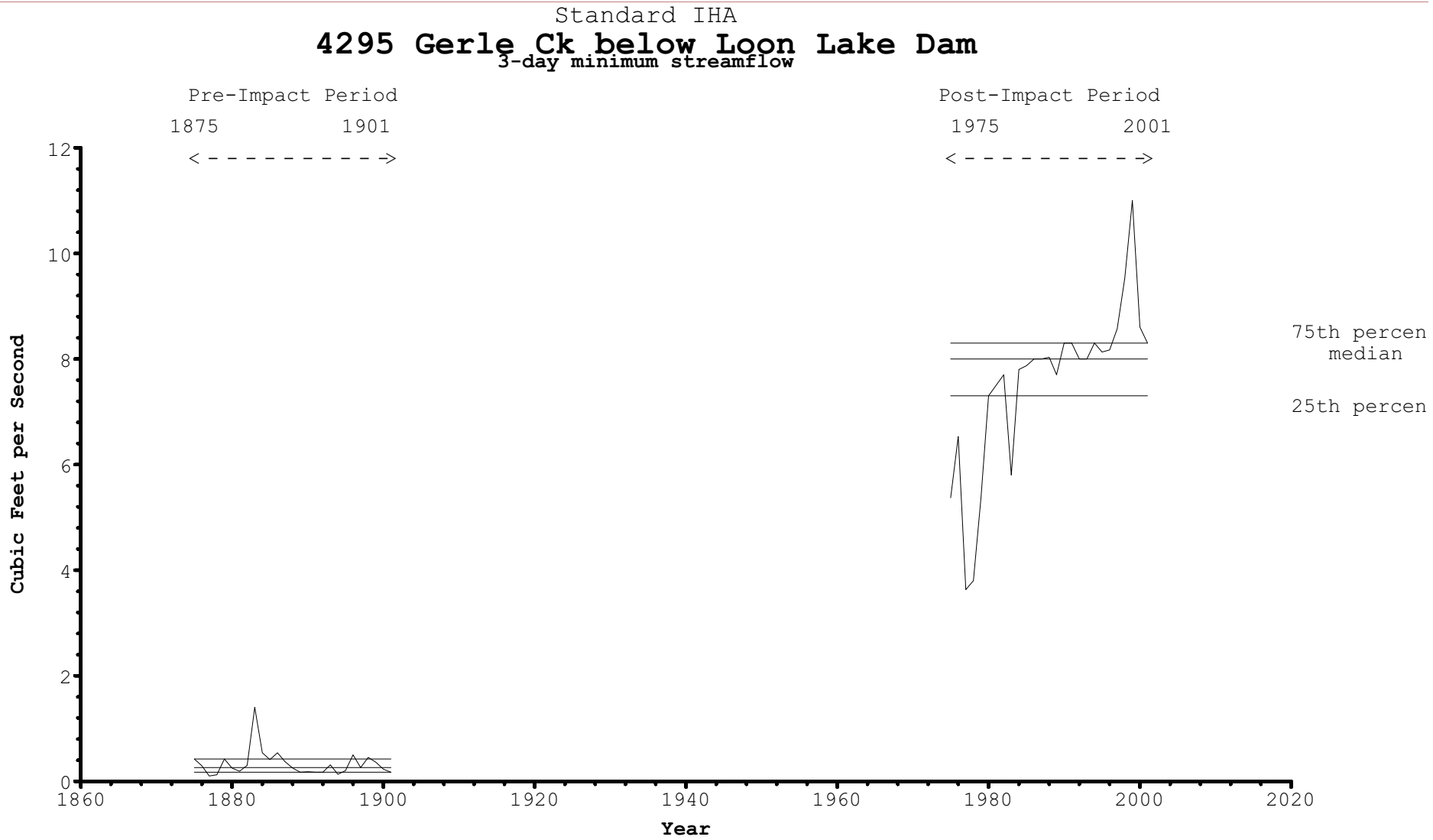
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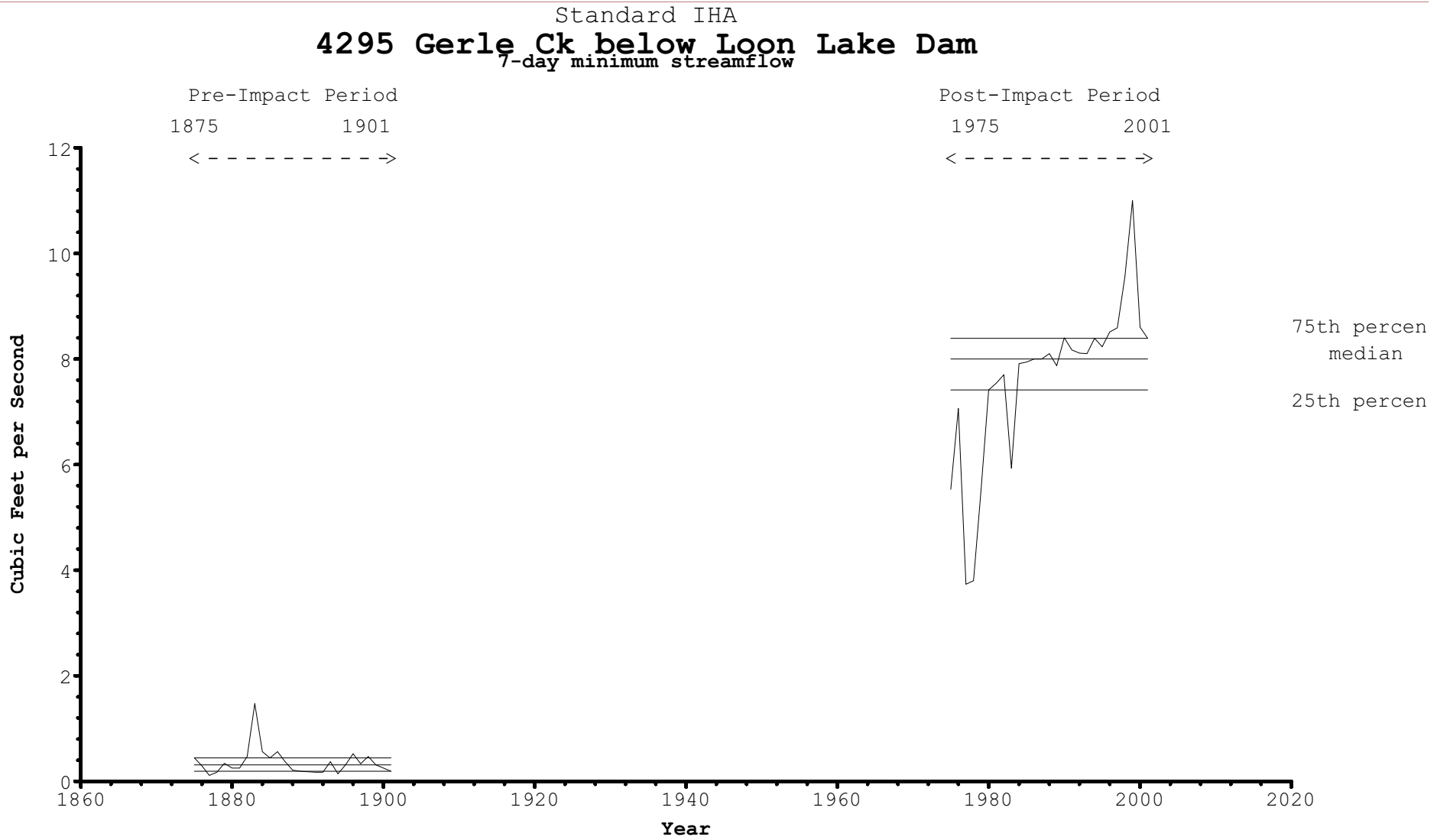
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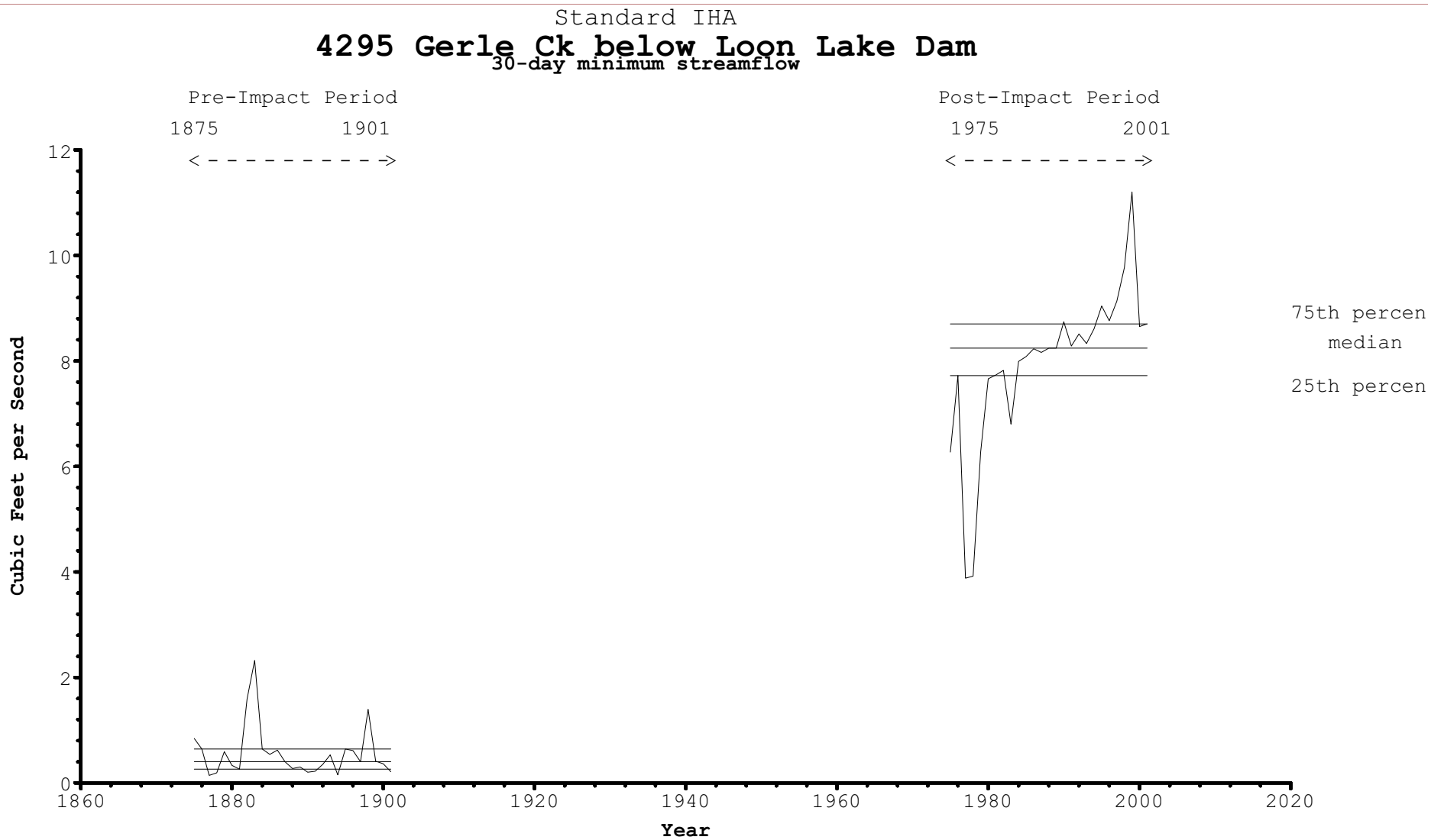
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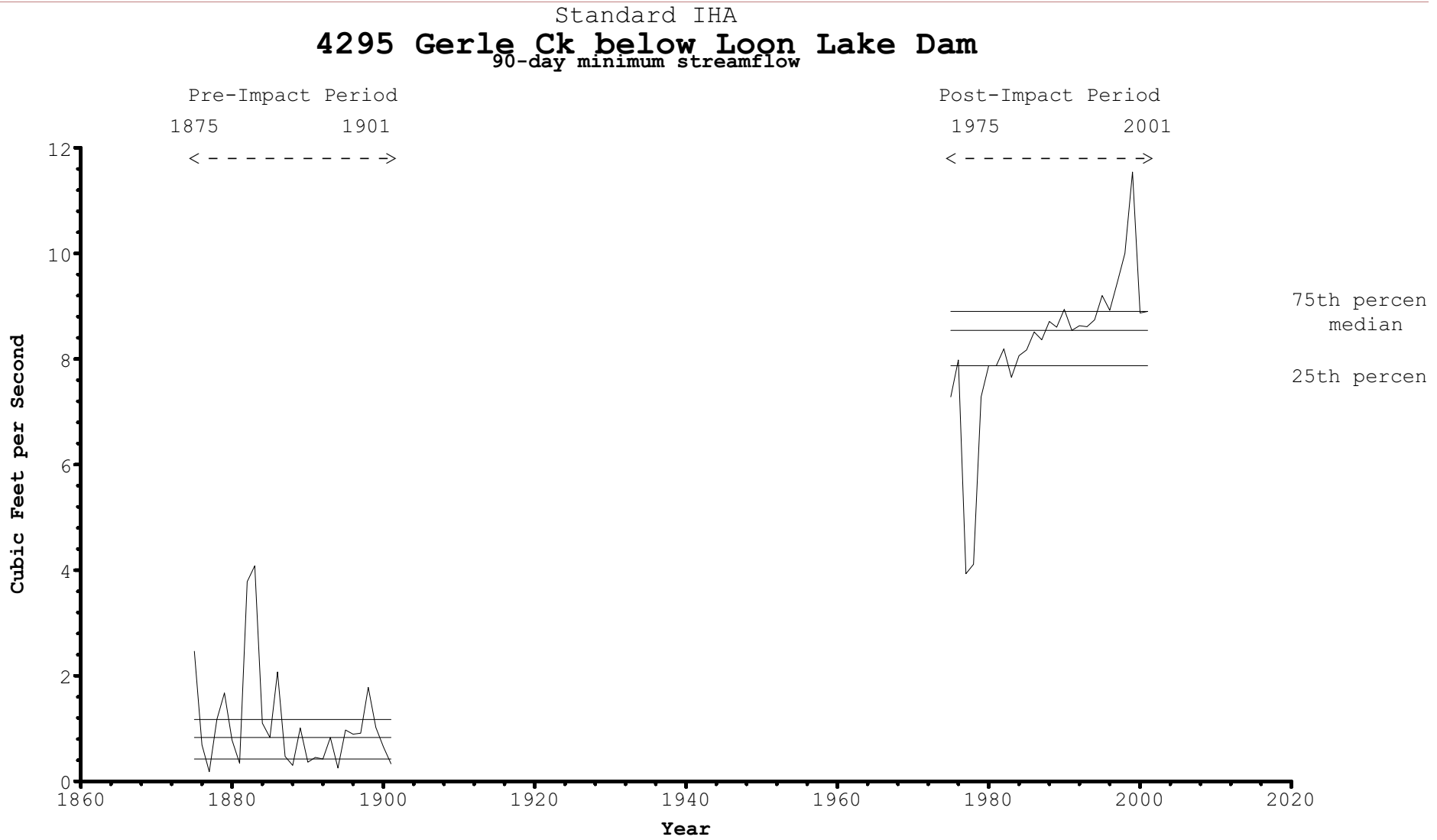
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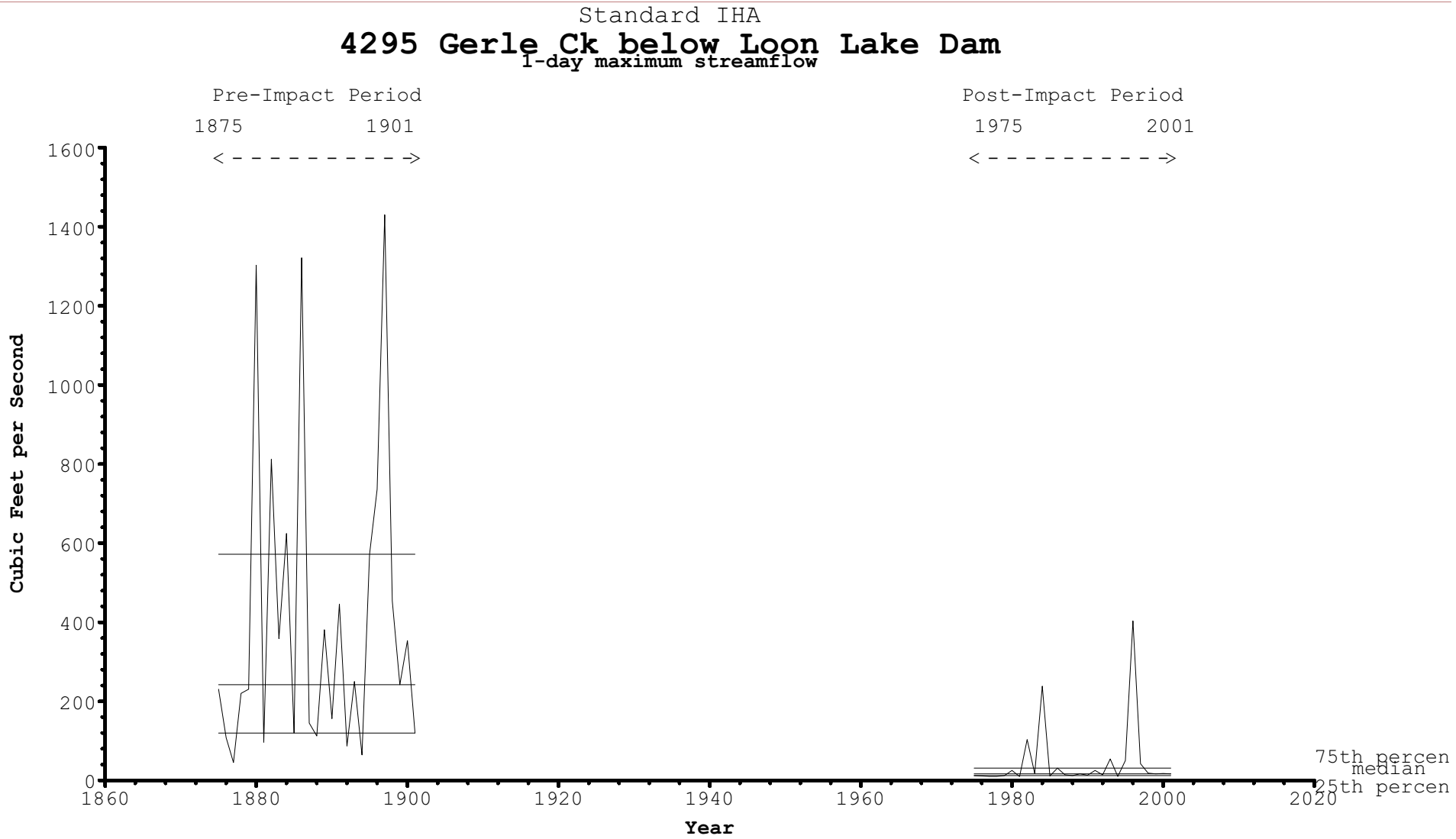


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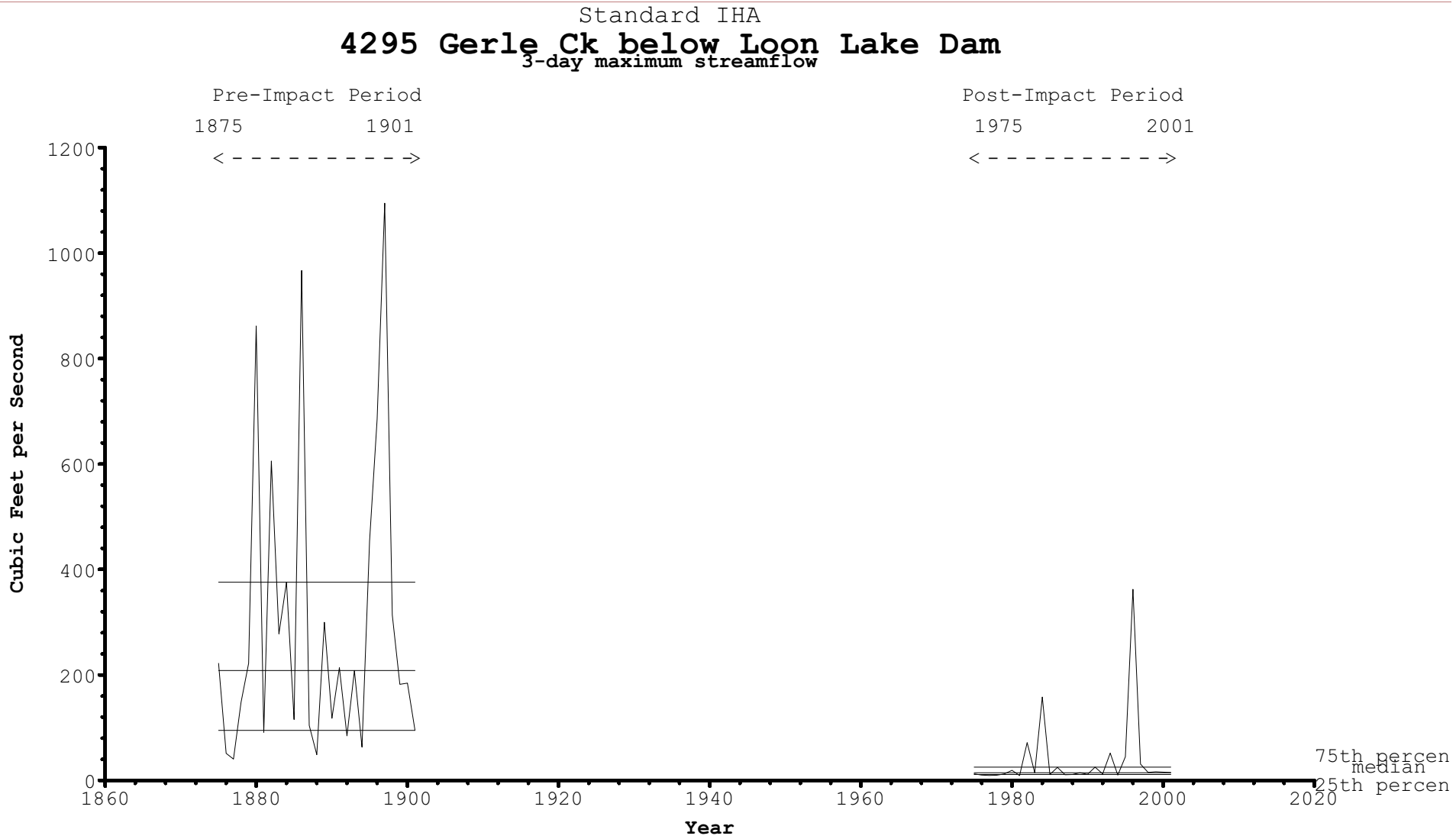


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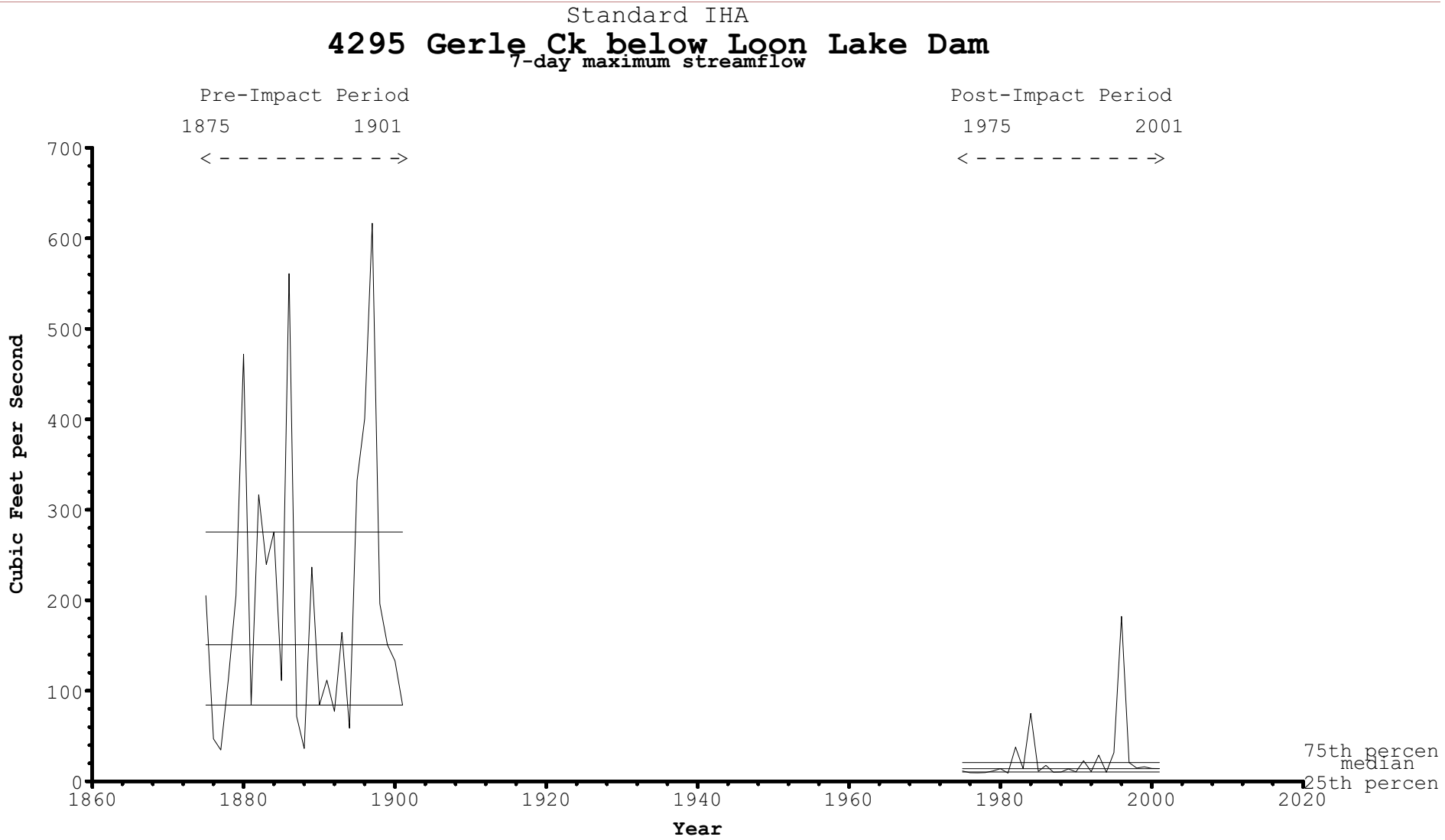




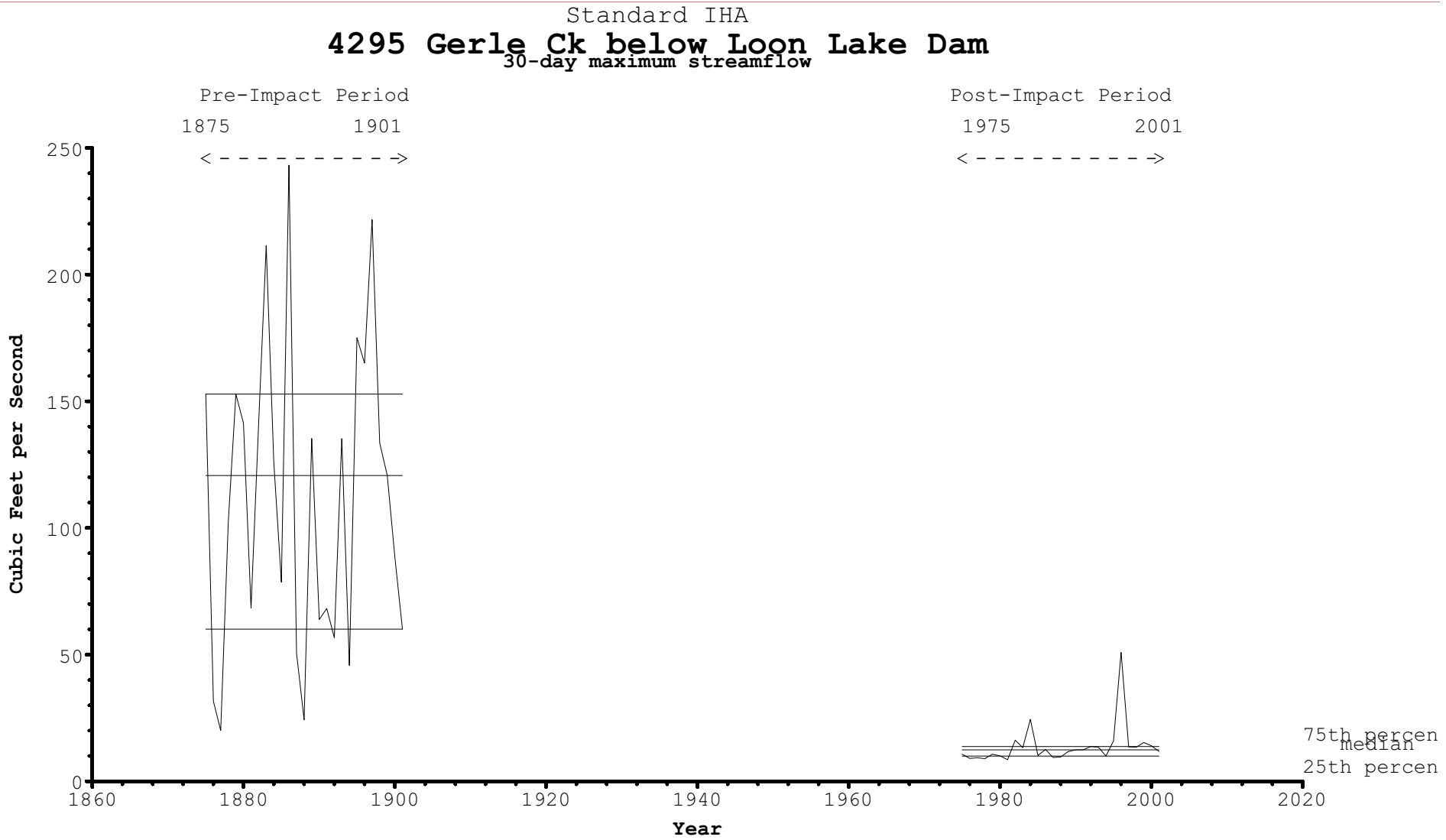
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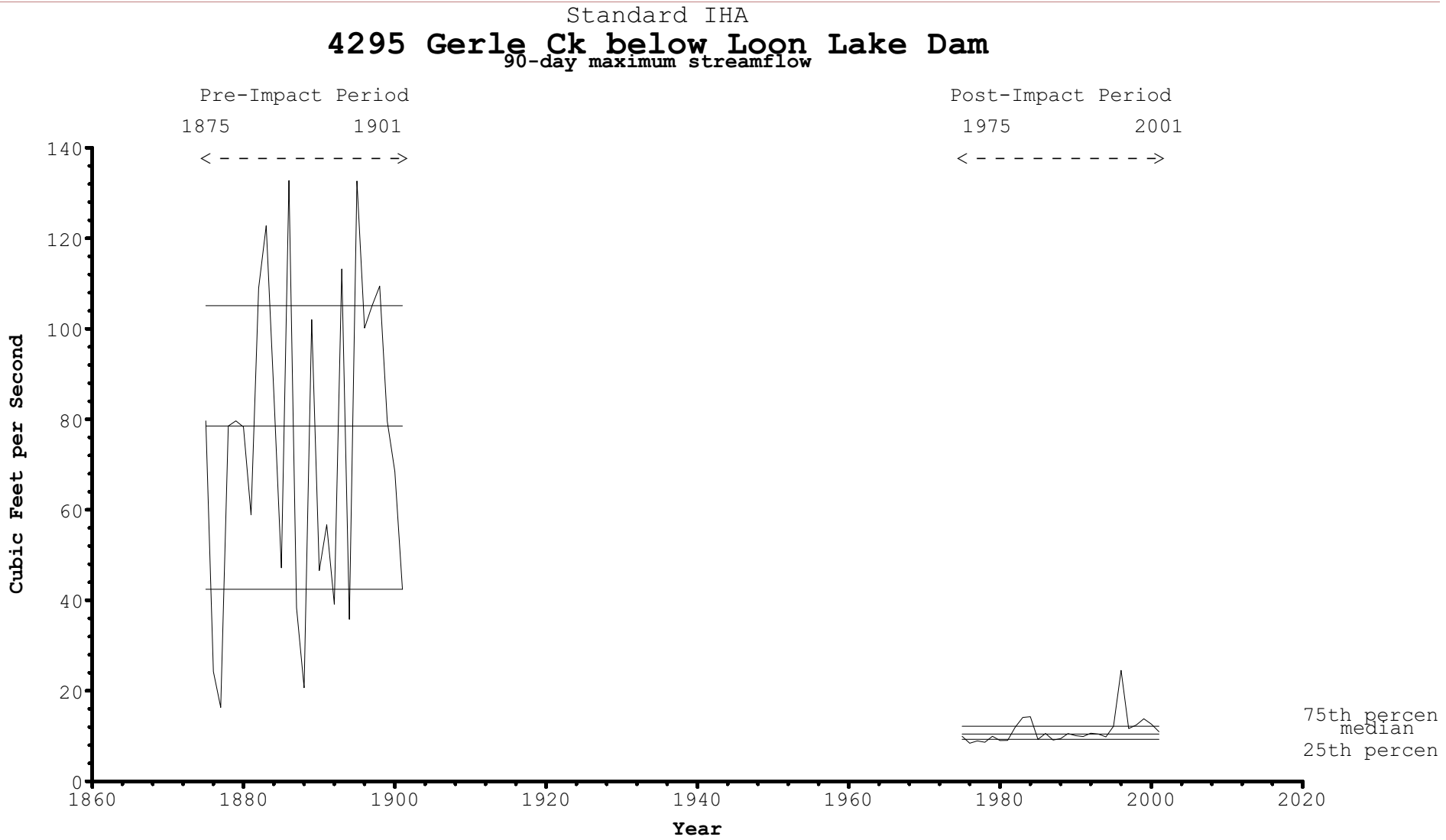
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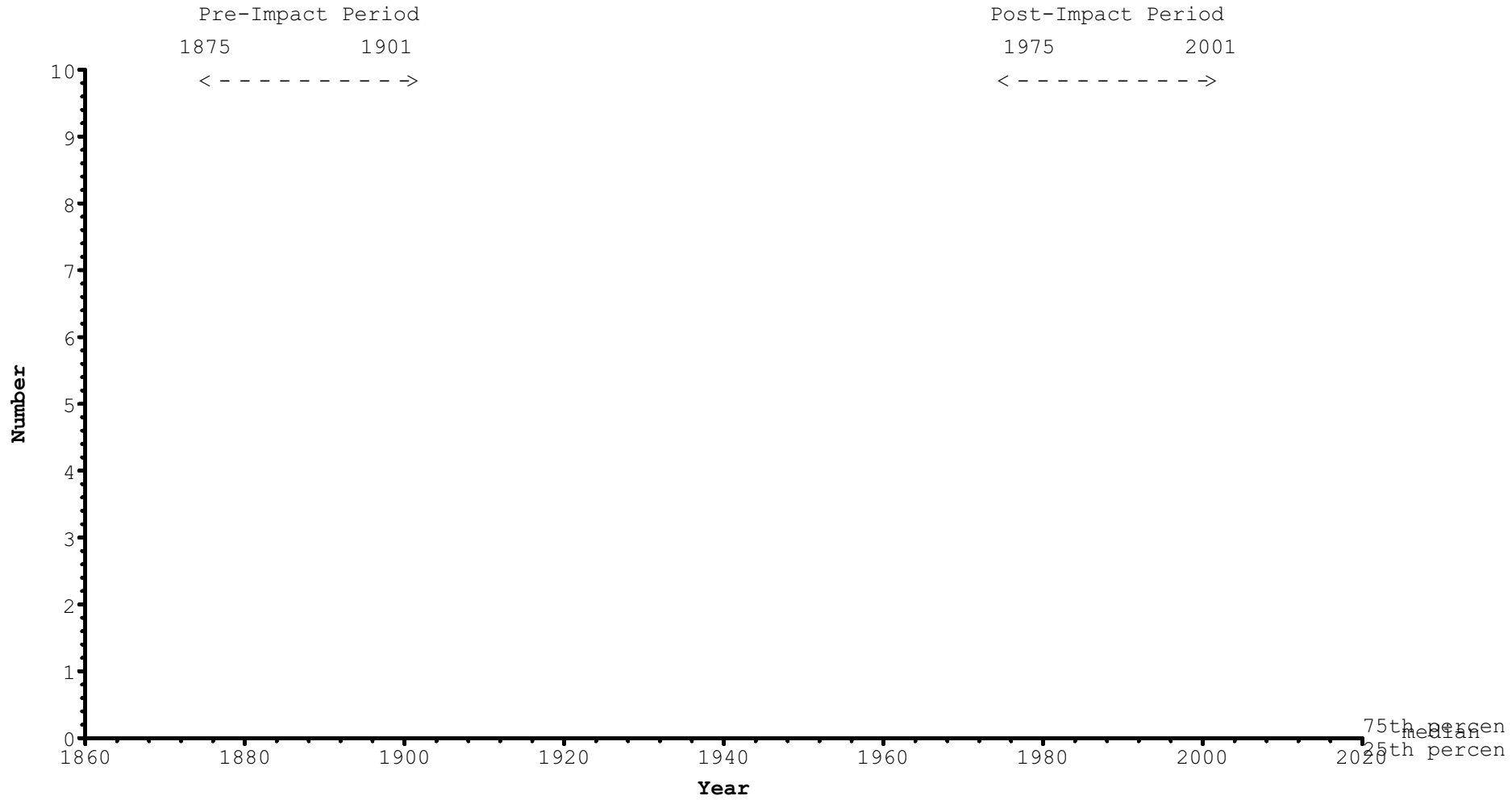


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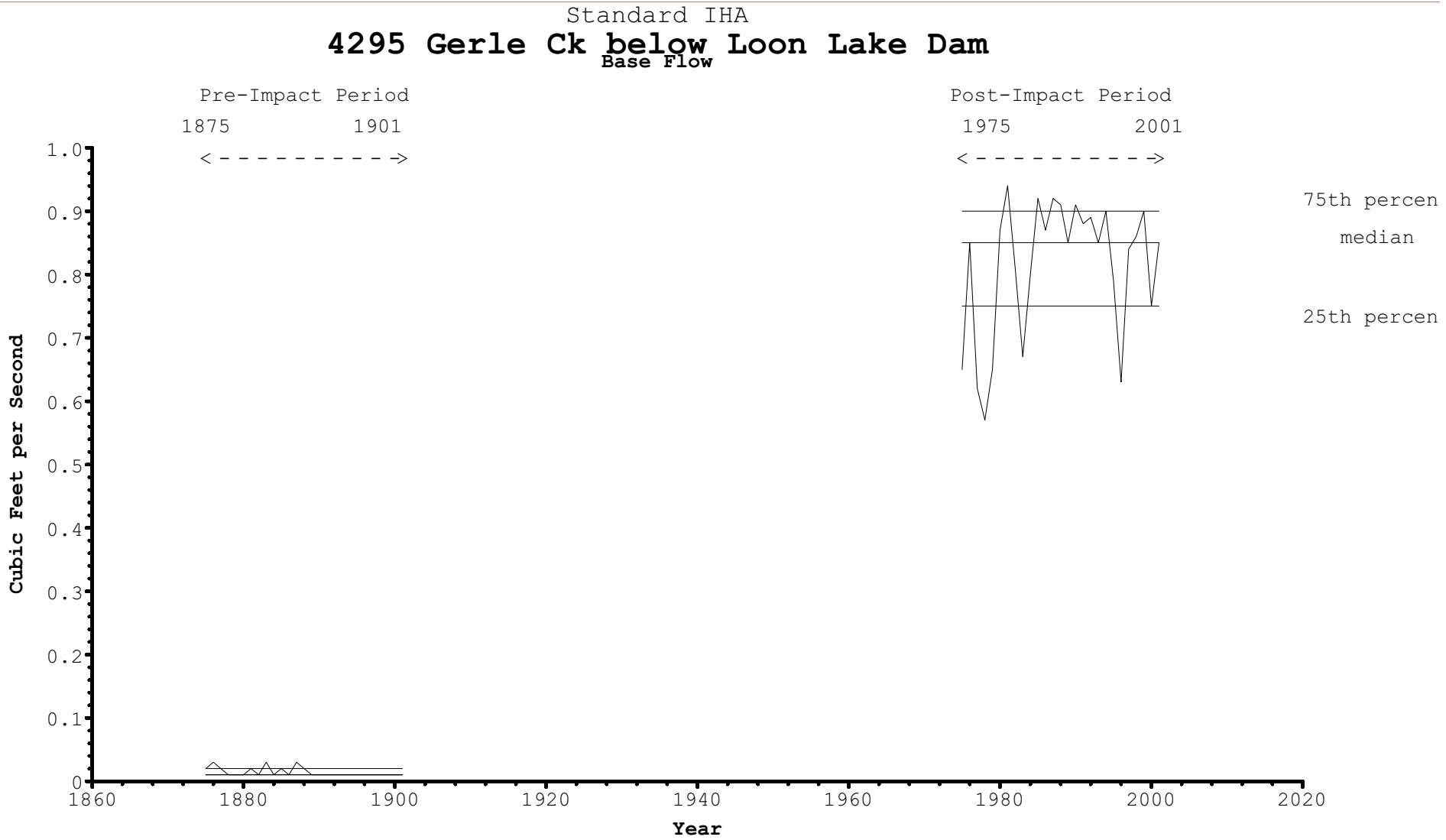


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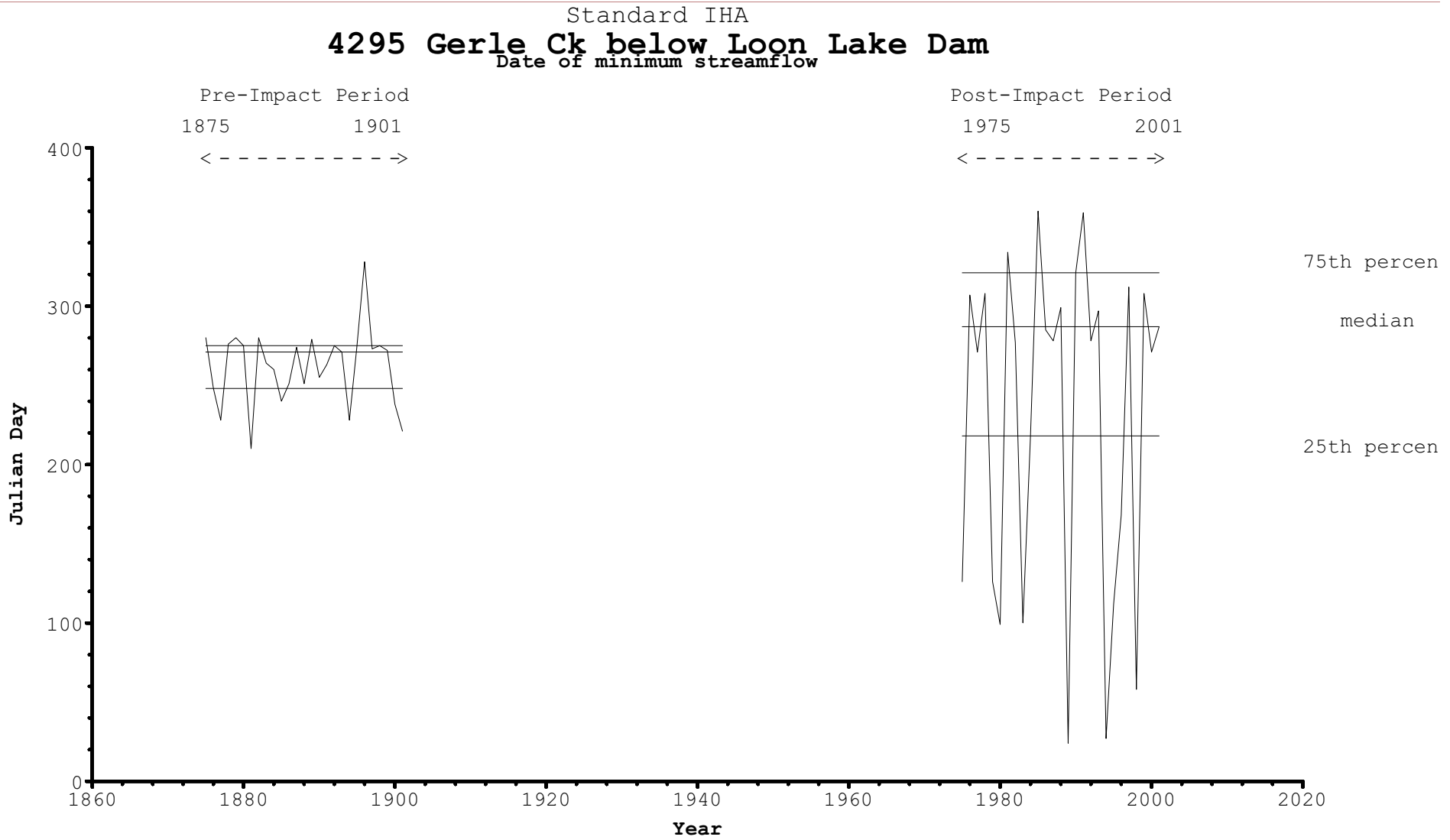
Standard IHA  
**4295 Gerle Ck below Loon Lake Dam**  
 Zero streamflow days



File(s) Used: C:\lha2\Loon\Loon.ann, C:\lha2\Loon\Loon.baw

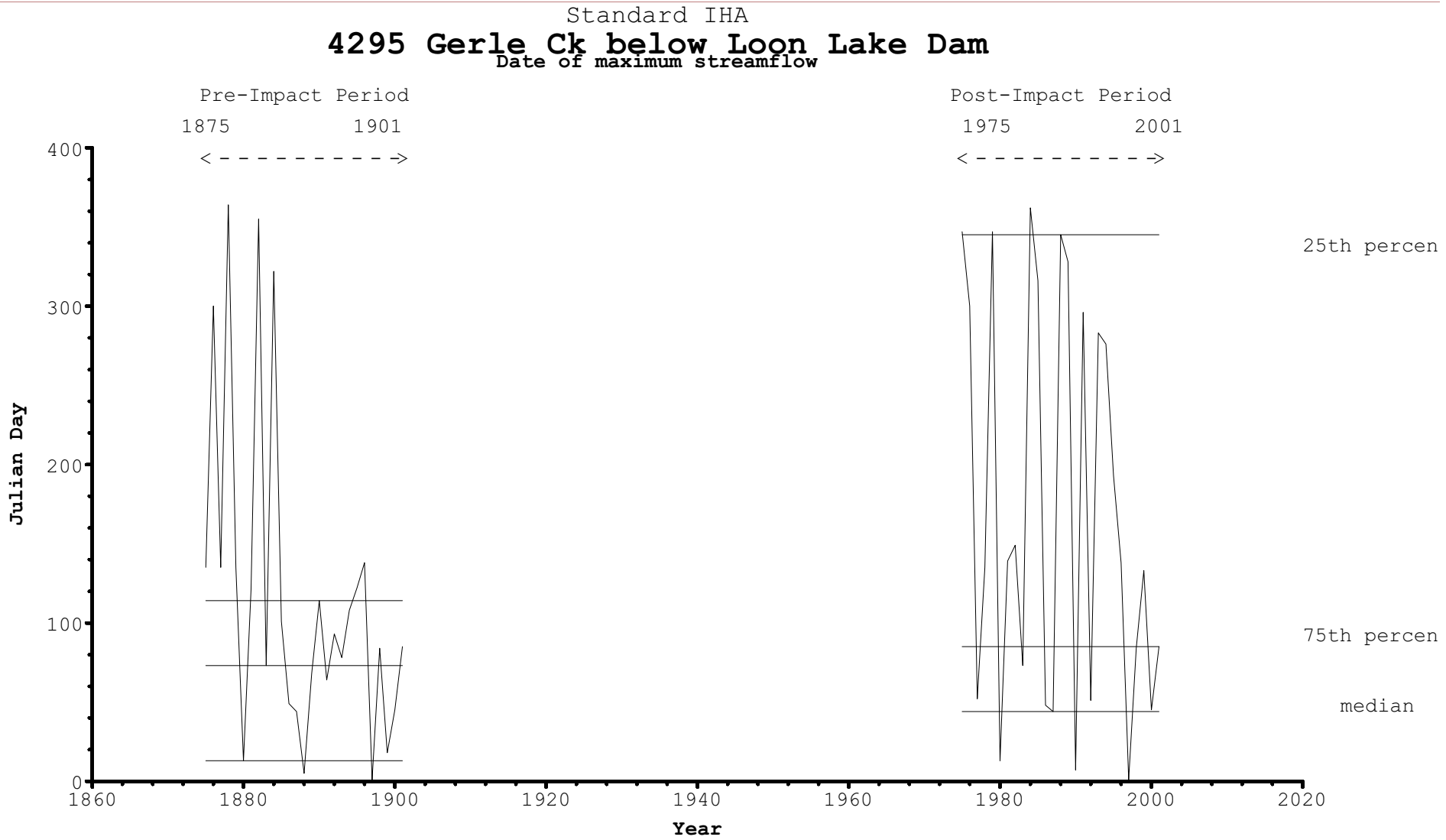


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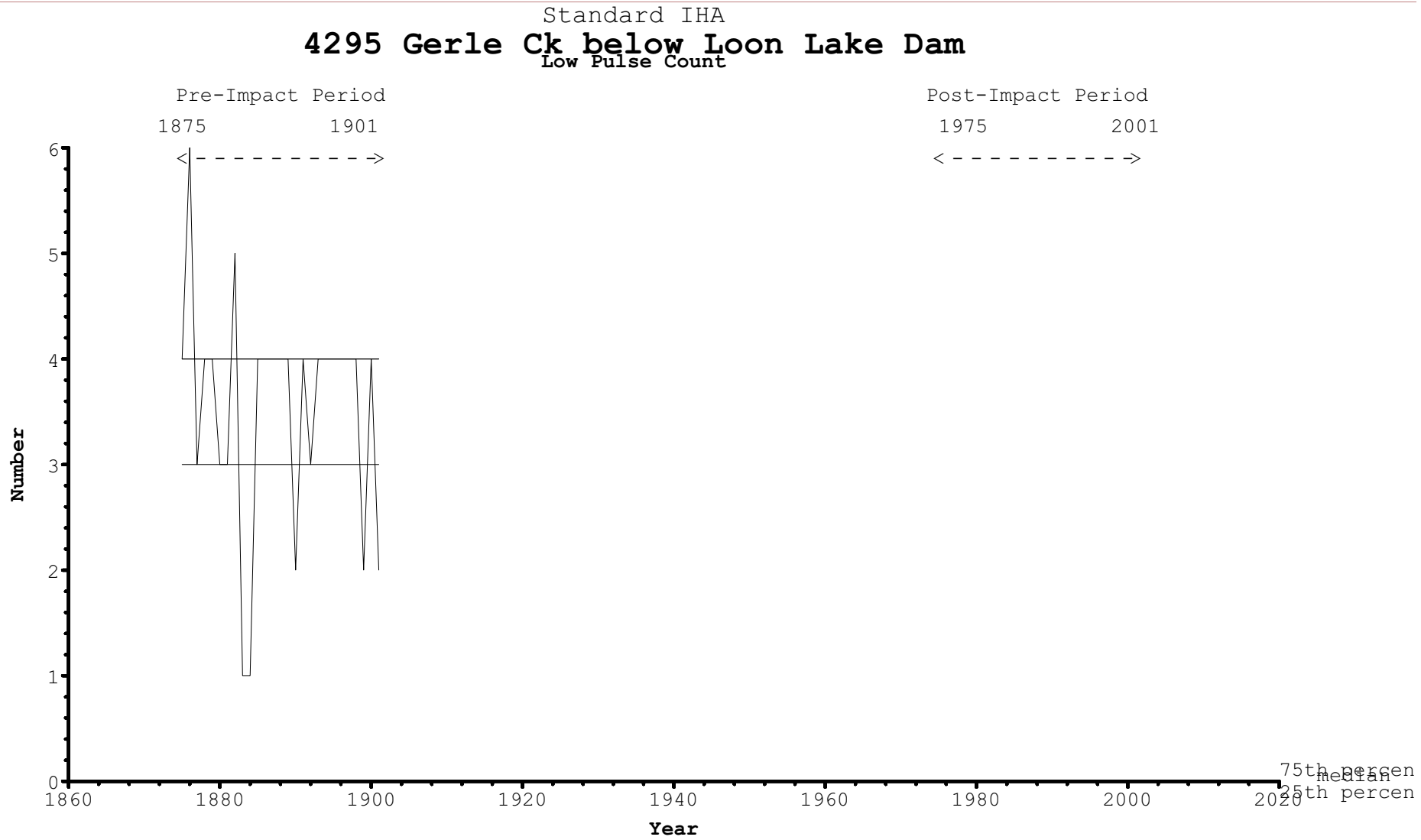


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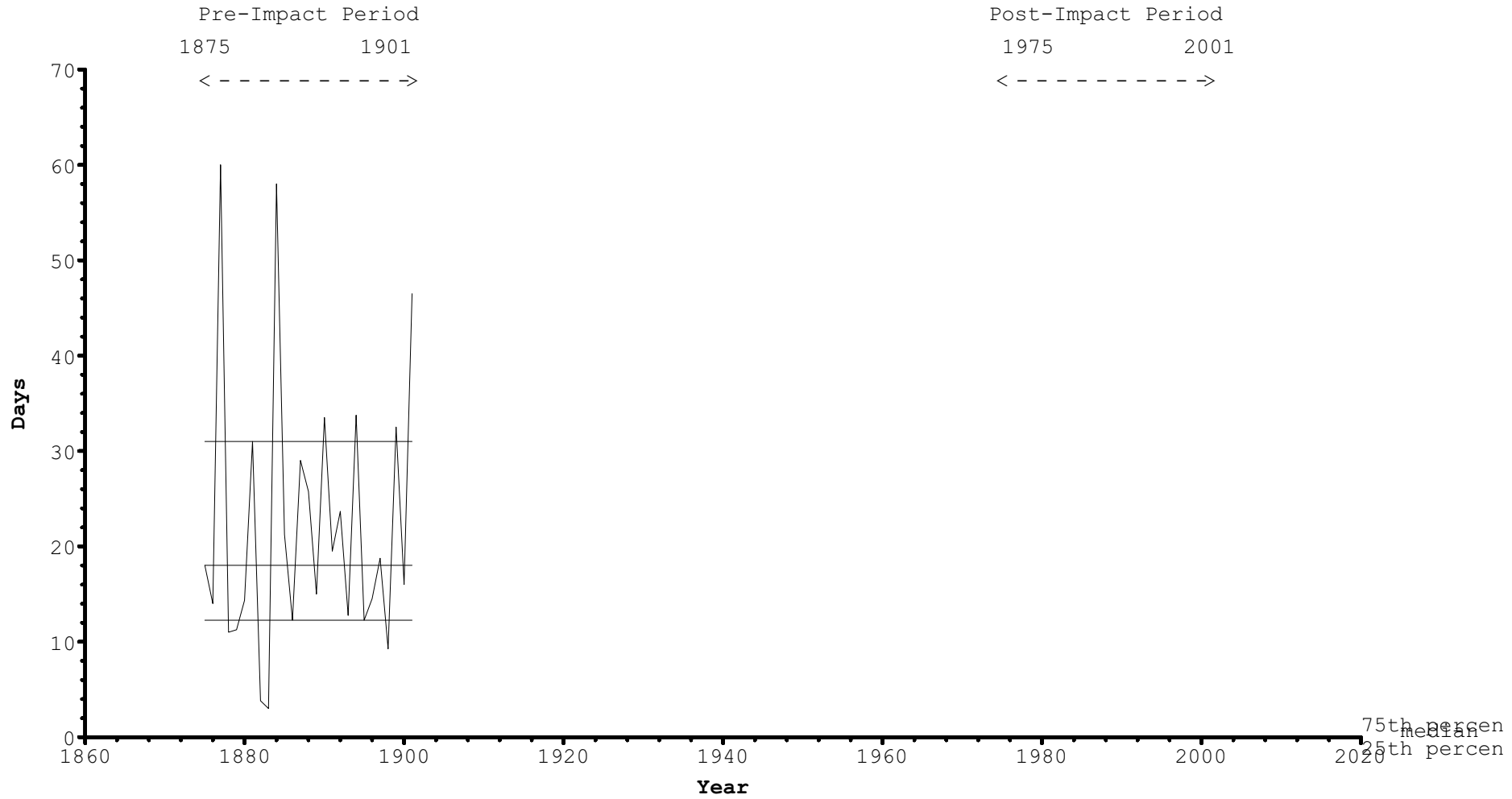


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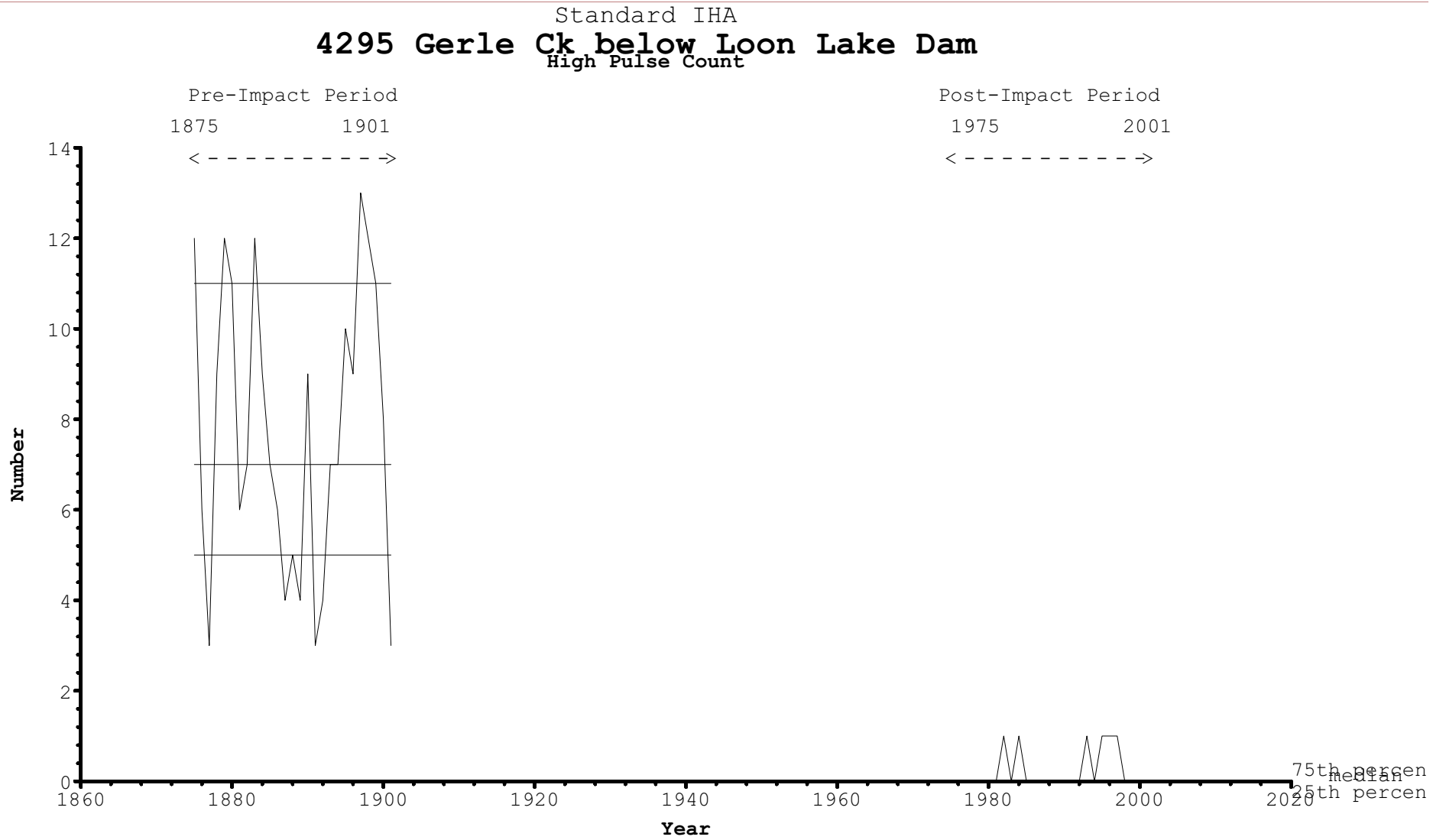


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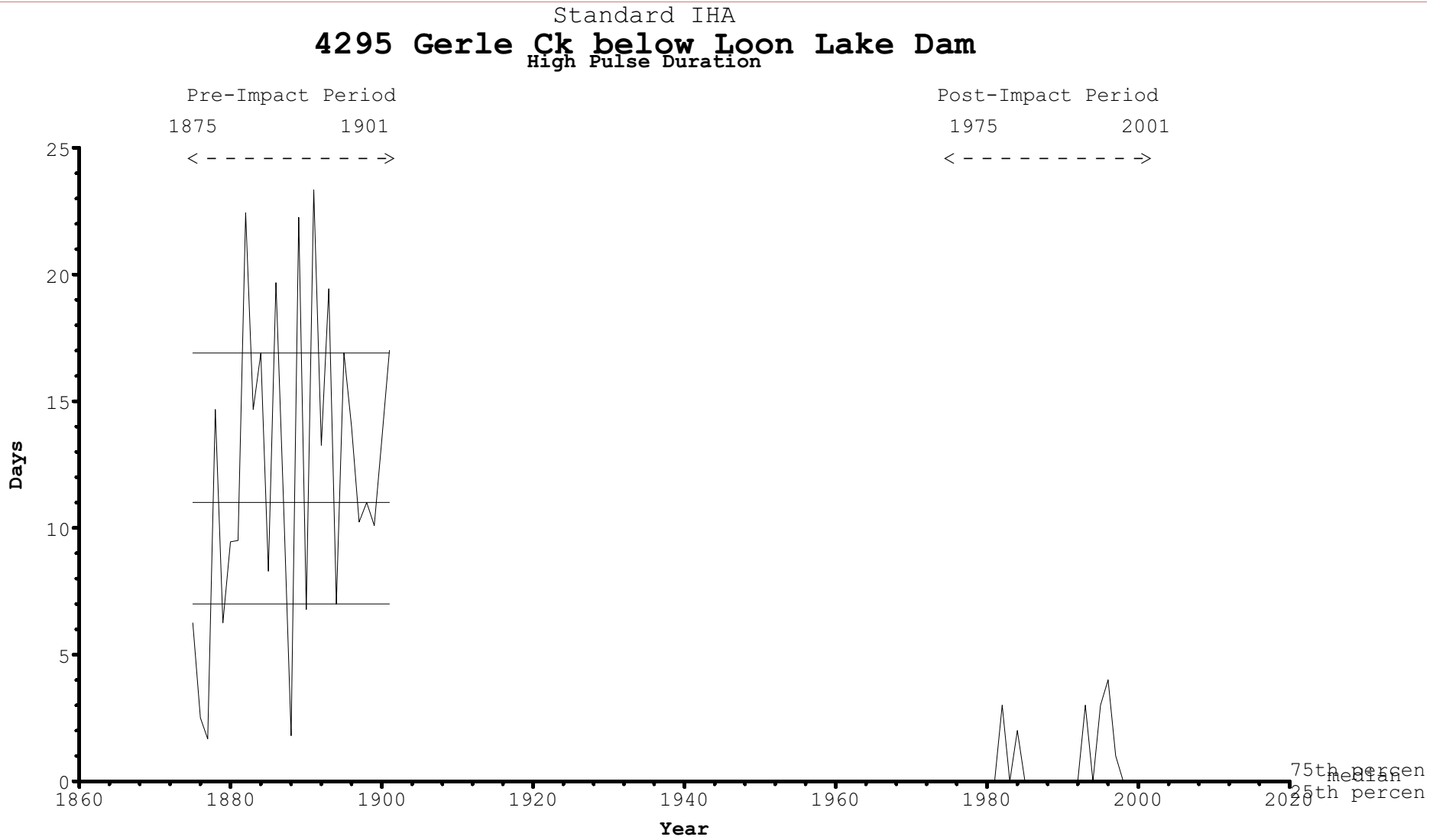
Standard IHA  
**4295 Gerle Ck below Loon Lake Dam**  
 Low Pulse Duration



File(s) Used: C:\lha2\Loon\Loon.ann, C:\lha2\Loon\Loon.baw

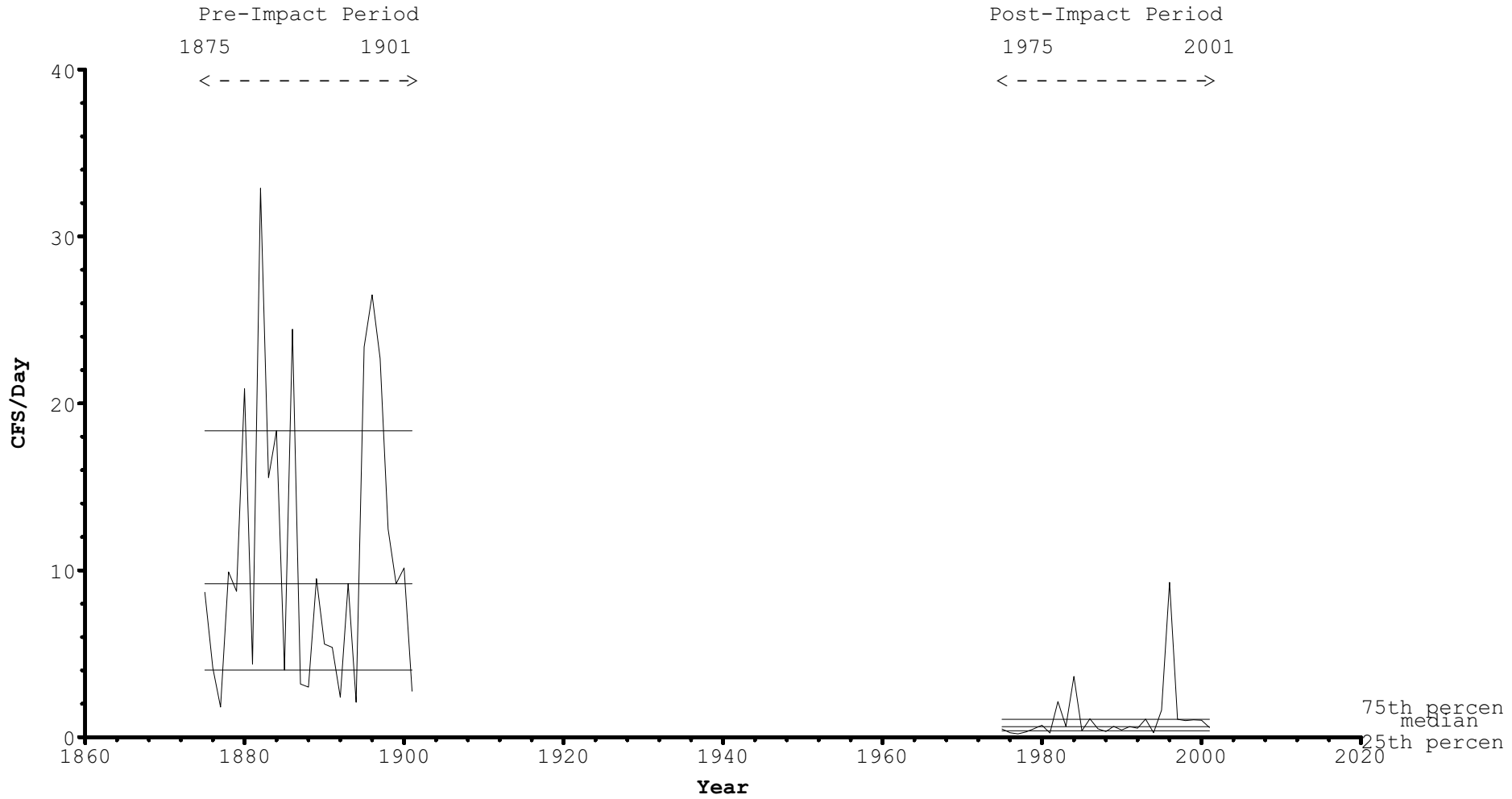


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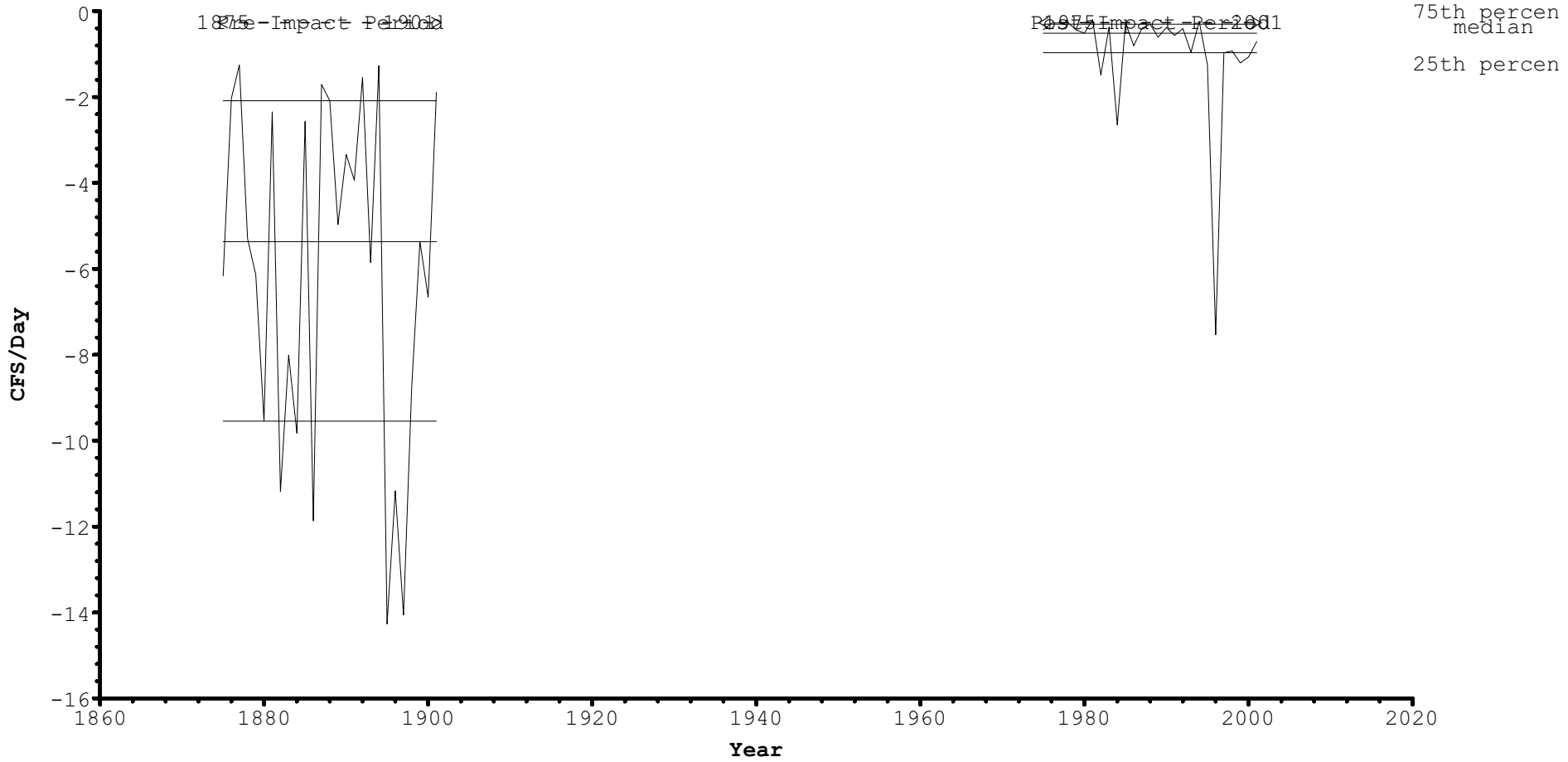
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Standard IHA  
**4295 Gerle Ck below Loon Lake Dam**  
Rise Rate



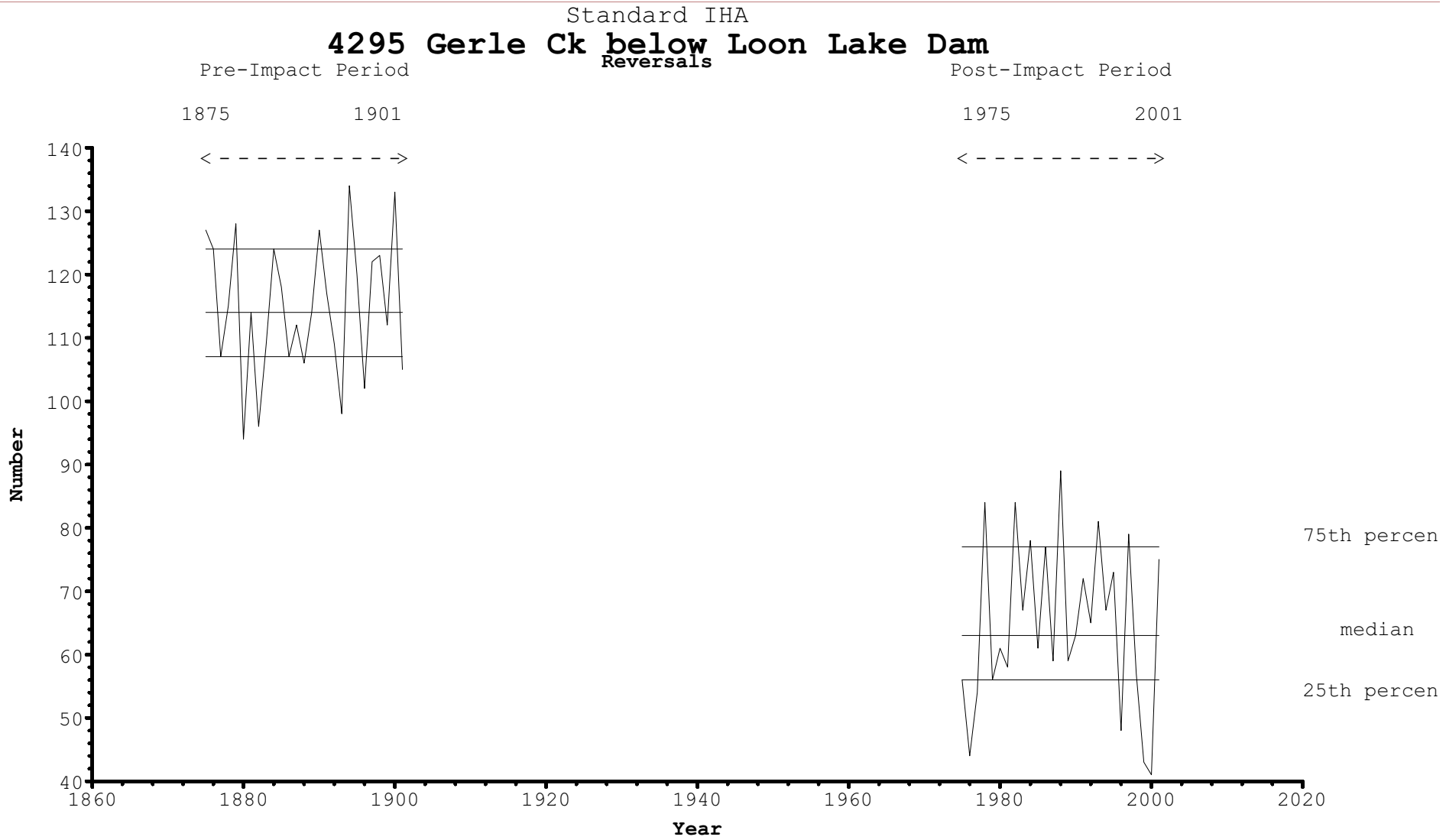
File(s) Used: C:\lha2\Loon\Loon.ann, C:\lha2\Loon\Loon.baw

Standard IHA  
**4295 Gerle Ck below Loon Lake Dam**  
Fall Rate



File(s) Used: C:\Iha2\Loon\Loon.ann, C:\Iha2\Loon\Loon.baw

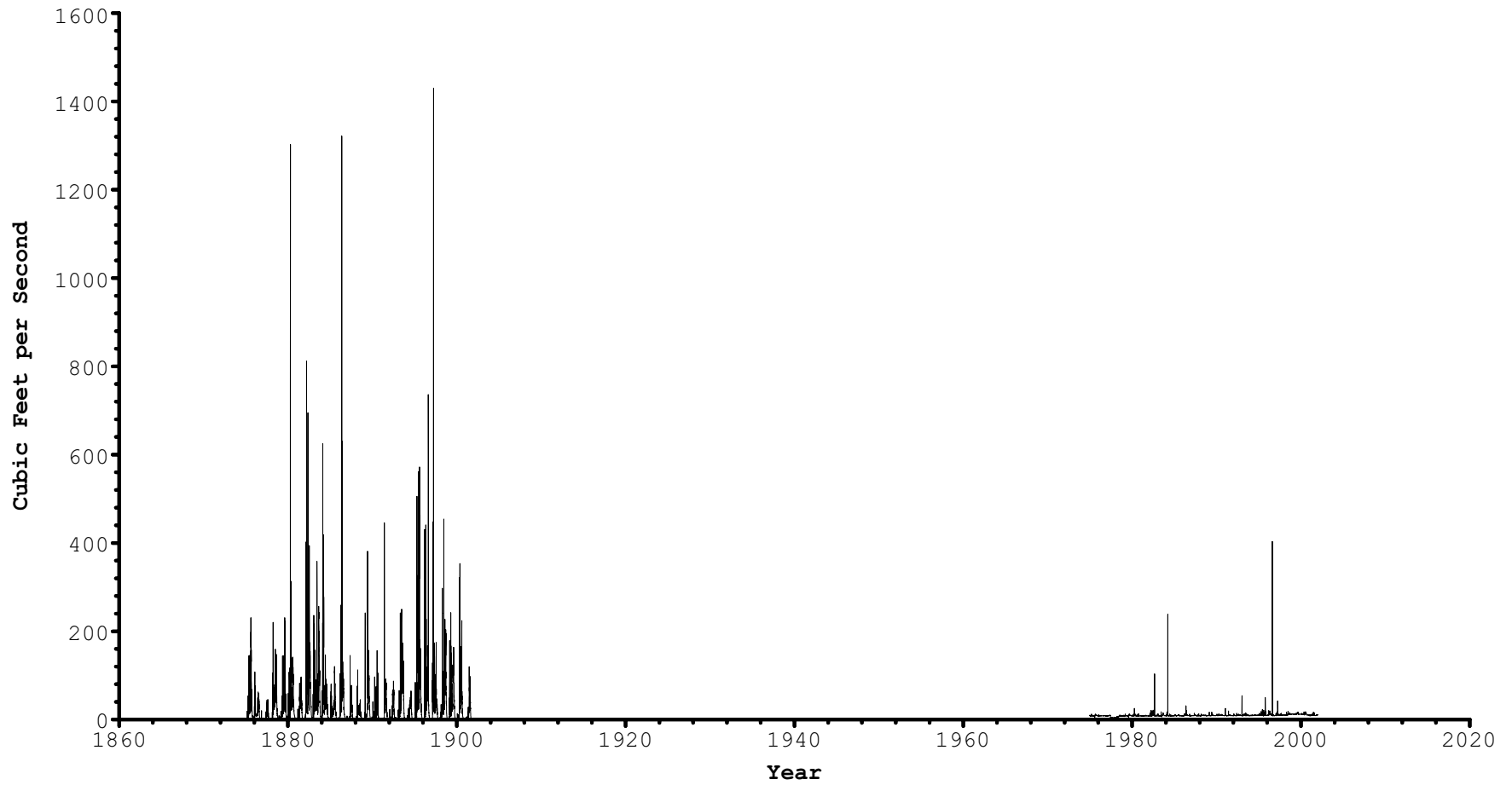
Analysis 1 - Gerle Creek below Loon Lake Reservoir (Unregulated Flow) versus 4295 Gerle Creek below Loon Lake Dam (Regulated Flow)



File(s) Used: C:\Iha2\Loon\Loon.ann, C:\Iha2\Loon\Loon.baw



### 4295 Gerle Ck below Loon Lake Dam



File(s) Used: C:\lha2\Loon\Loon.dat

**Analysis 2 - South Fork Rubicon Below Gerle Creek (Unregulated) versus 4300 South Fork Rubicon Below Gerle Creek (Regulated)**

**Errors**

**No Errors**

## Analysis 2 - South Fork Rubicon Below Gerle Creek (Unregulated) versus 4300 South Fork Rubicon Below Gerle Creek (Regulated)

IHA Annual Summary Statistics

Year	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
1875	7.31	18.56	16.51	32.26	115.98	177.21	180.81	793.18	288.07	46.77	12.9	3.78	2.83	2.9	2.91	3.78	12.69
1876	48.88	64.1	46.86	44.23	58.44	114.7	156.44	91.03	15.55	3.44	4.41	3.38	1.83	1.93	2.11	2.56	3.58
1877	3.85	4.07	10.06	20.84	35.71	38.81	72.06	95.57	32.11	4.03	1.3	1.49	0.76	0.8	0.82	1.28	1.53
1878	1.93	9.12	168.97	224.24	143.49	420.71	413.72	496.82	213.43	37.43	10.57	6.66	1.51	1.51	1.53	1.91	7.73
1879	7.31	18.56	16.51	32.26	115.98	177.21	180.81	793.18	288.07	46.77	12.9	3.78	2.83	2.83	2.38	2.96	8.85
1880	10.54	56.36	68.32	851.15	364.54	169.34	405.56	362.43	139.83	38.71	8.63	3.1	2.24	2.3	2.31	2.71	4.3
1881	3.76	8.68	20.04	44.41	123.3	169.17	337.16	149.52	29.44	3.76	1.81	2.13	1.44	1.48	1.53	1.8	2.28
1882	7.36	442.38	595.13	149.3	568.32	355.16	535.63	518.62	190.16	45.16	14.45	40.17	2.3	2.55	3.15	6.95	25.28
1883	144.6	181.46	197.05	149.93	219.69	423.29	295.52	938.28	735.82	193.55	32.26	9.33	5.17	5.21	5.57	8.11	17.01
1884	15.34	556.46	562.65	183.38	156.11	292.11	269.25	257.35	88.21	31.08	6.33	3.3	2.9	2.92	3.01	3.3	6.12
1885	9.29	134.4	63.66	54.7	84.47	134.75	463.16	202.68	38.61	5.02	3.14	4.22	2.47	2.47	2.54	2.87	3.81
1886	6.46	36.58	132.6	334.54	1127.42	623.51	318.84	217.19	66.67	25.81	6.27	7.05	2.71	2.82	3	3.47	7.5
1887	10.03	7.86	19.03	20.94	105.25	171.21	248.95	94.65	16.96	5.54	2.55	2.76	2.36	2.3	2.32	2.53	2.93
1888	4.09	10.11	43.37	104.78	88.9	131.8	138.75	66.62	28.79	4.53	2.33	2.33	1.96	1.97	2.04	2.15	2.4
1889	2.58	58.17	44.35	42.72	100.89	649.61	552.89	231.24	95.33	14.17	4.64	4.45	1.94	1.95	1.98	2.57	5.2
1890	11.9	19.25	33.6	88.47	69.45	234.52	293.32	162.27	59.75	10.85	2.97	2.7	2.23	2.24	2.28	2.47	3.1
1891	3.83	6.17	8.39	12.9	22.28	199.06	316.53	334.55	95.67	17.85	4.41	2.5	2.15	2.19	2.2	2.35	3.58
1892	7.59	14.9	13.56	16.13	112.52	233.69	238.47	42.85	16.89	5.14	2.26	2.02	1.81	1.83	1.87	2.01	2.31
1893	6.1	10.37	52.49	223.24	162.07	525.49	559.99	601.57	281.35	43.29	12.17	3.8	1.98	2.09	2.18	3.57	5.04
1894	5.68	6.07	17.11	25.6	47.15	185.34	210.32	149.25	22.94	4.18	1.78	2.09	1.31	1.41	1.52	1.78	2.23
1895	3.41	43.65	64.15	460.53	258.52	686.94	605.78	864.9	483.56	180.65	41.61	8.49	2.14	2.26	2.74	3.37	7.49
1896	6.11	8.07	172.25	152.28	618.51	355.79	520.32	593.7	82.74	20.1	8.4	3.73	3.15	3.12	2.92	3.16	4.86
1897	4.33	101.83	670.67	952.77	171.38	291.6	313.78	176.46	74.24	22.75	5.98	3.14	2.47	2.52	2.57	3.12	5.27
1898	6.92	25.14	37.54	279.94	199.9	421.7	409.45	645.53	662.44	108.18	12.22	5.66	3	3.35	3.6	5.46	8.47
1899	8	65.9	95.85	224.87	273.14	260.53	395.52	608.92	202.62	30.92	8.94	3.49	2.8	2.82	2.96	3.38	6.07
1900	7.13	17.28	14.95	245.04	316.19	272.96	452.71	314.51	60.93	16.34	3.41	3.18	2.34	2.41	2.44	2.68	3.69
1901	5.17	16.54	29.58	23.82	39.98	213.07	277.95	181.72	10.55	3.51	1.92	1.69	1.5	1.53	1.54	1.67	2.33
1975	9.86	6.03	6.11	6.31	7.7	9.63	9.65	23.2	10.88	12	11.9	10.51	5.3	5.33	5.44	5.74	6.06
1976	11.35	6.03	5.72	5.48	6	6.03	5.26	5.25	5.1	5.66	6.18	6.1	4.8	4.83	4.86	5.05	5.19
1977	5.77	5.22	5.08	5.26	5.31	3.11	2.35	2.42	2.29	2.36	2.03	1.99	1.5	1.53	1.7	1.95	2.07
1978	2.4	2.75	5.59	8.96	5.64	10.05	10.01	10.95	10.7	9.99	9.99	11.19	1.8	2.07	2.19	2.39	3.48
1979	9.86	6.03	6.11	6.31	7.7	9.63	9.65	23.2	10.88	12	11.9	10.51	5.3	5.33	5.44	5.74	6.06
1980	10.48	5.87	8.53	483.91	60.17	10.25	9.72	10.51	10.5	10.03	9.59	9.55	4.6	4.67	4.79	5.62	7.45
1981	11.3	5.83	5.81	5.72	6.55	7.43	5.62	5.43	5.24	5.25	5.11	7.24	4.7	4.73	4.77	5.02	5.2
1982	5.33	100.56	189.24	8.73	197.71	13.61	140.88	69.35	12.04	9.82	10.22	22.26	4.4	4.53	4.63	5.16	10.17
1983	21.67	11.2	19.14	8.56	11.08	61.39	10.28	125.29	248.7	41.34	12.48	11.63	4.8	4.97	5.06	7.1	11.16
1984	11.06	268.03	248.15	7.03	7.07	11.69	5.54	11.1	10.67	10.09	10.57	10.77	4.3	4.47	4.77	5.49	8.15
1985	10.9	8.2	6.04	5.6	7.52	6.79	7.97	10.19	10.38	11.12	11.55	11.66	4	4.47	4.79	5.49	6.34
1986	11.42	6.43	8	43.32	524.11	130.27	7.22	11.52	10.57	10.9	11	13.37	5	5.07	5.4	6.4	8.11
1987	12.39	5.85	5.6	5.75	10.31	8.04	5.74	5.58	5.88	5.68	5.57	5.52	4.8	4.97	5.13	5.42	5.54
1988	6.07	6.02	6.26	7.5	6.67	5.77	5.96	5.85	5.97	5.83	5.95	5.63	5	5.1	5.21	5.42	5.68
1989	5.65	6.48	5.79	6.23	6.79	21.55	8.08	11.97	11.8	11.09	11.13	11.33	5	5.07	5.23	5.57	5.96
1990	11.65	6.58	6.02	6.88	7.15	7.75	6.06	6.49	6.2	6.16	6.05	5.57	5	5.07	5.17	5.32	5.54
1991	5.89	5.36	5.36	5.42	6.12	37.99	8.66	5.61	6.43	6.06	6.37	6.01	4.8	5	5.19	5.32	5.38
1992	6.98	5.72	5.53	5.97	8.48	7.82	5.78	6.15	6.43	5.64	5.69	5.59	5.1	5.13	5.23	5.48	5.61
1993	6	5.55	7.61	12.9	8.9	25.04	11.41	17.48	15.6	11.06	11.29	11.2	5.2	5.2	5.34	5.52	6.33
1994	11.29	6.59	6.03	5.84	6.62	7.55	5.92	6.22	6.23	6.92	6.15	6.11	5.1	5.23	5.4	5.7	6.02
1995	6.28	6.75	8.41	73.05	7.64	98.35	53.91	100.81	52.83	11.94	12.19	11.7	5.7	5.7	5.7	6.25	7.16
1996	11	5.97	26.74	8.95	120.12	13.71	13.59	276.23	11.77	10.87	11.23	11.67	5.7	5.7	5.71	5.85	10.28
1997	11.48	8.05	157.53	530.45	9.46	6.63	6.7	11.81	13.17	12.42	12.06	11.97	5.3	5.43	5.77	6.12	7.53
1998	12.74	7.28	7.8	22.77	13.89	55.45	13.87	15.74	12.67	11.1	10.84	11.03	6.4	6.43	6.49	7.2	8.74
1999	11.58	7.83	8.43	10.29	17.28	10.67	9.06	11.1	11.07	11.19	11.26	11.3	6.1	6.17	6.36	7.48	8.42
2000	11.26	7.59	7.06	30.31	30.52	9.63	8.39	14.48	11.37	11.81	11.48	12.73	5.5	5.73	6.14	6.72	7.97
2001	12.13	6.88	7.35	7	7.29	10.59	10.19	7.08	7.66	7.35	6.82	7.55	5.1	5.23	5.56	6.74	7.03

## Analysis 2 - South Fork Rubicon Below Gerle Creek (Unregulated) versus 4300 South Fork Rubicon Below Gerle Creek (Regulated)

IHA Annual Summary Statistics (Cont)

Year	1-day max	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	LRise rate	Fall rate	Reversals
1875	1214.6	1162.11	1114.01	846.59	439.01	0	0.02	271	135	3	20	11	6.82	28.62	-21.22	141
1876	543.08	259.43	234.19	164.77	125.3	0	0.04	226	300	4	22.25	6	2.33	15.93	-8.21	135
1877	181.9	160.41	136.02	97.25	72.43	0	0.03	228	100	2	46	1	1	7.13	-5.64	117
1878	1065.52	814.46	634.42	578.75	449.72	0	0.01	280	364	4	10.5	9	14.67	48.64	-32.13	126
1879	1214.6	1162.11	1114.01	846.59	439.01	0	0.02	271	135	3	11	11	6.82	28.43	-21.22	141
1880	7372.06	4970.07	2887.99	890.65	472.27	0	0.01	275	13	2	24	12	9.75	103.16	-47.45	101
1881	536.46	452.91	409.65	340.74	338.69	0	0.02	228	118	5	20.8	6	8.67	20.53	-12.49	128
1882	4949.38	3525.5	1836.15	724.32	552.84	0	0.01	276	355	3	9	7	21.57	163.72	-60.09	110
1883	2092.84	1607.03	1552.38	1207.66	673.93	0	0.02	265	74	2	8.5	11	15.27	86.64	-42.49	99
1884	2623.33	1882.18	1489.9	604.84	441.5	0	0.01	268	322	3	25	11	13.73	88.06	-43.17	122
1885	725.9	700.1	658.18	472.6	270.54	0	0.03	240	106	4	23.75	8	6.75	14.96	-10.15	122
1886	6667.29	5347.39	3309.24	1404.63	695.12	0	0.01	244	49	3	16.67	8	15.88	115.3	-64.21	115
1887	929.67	473.37	337.83	248.95	189.71	0	0.04	224	44	4	31	8	5	15.96	-9.91	126
1888	640.81	286.8	205.83	141.31	123.06	0	0.04	251	5	3	32.67	7	1.71	12.98	-9.74	119
1889	1506.41	1339.84	1138.12	734.72	488.76	0	0.01	276	69	4	14.25	7	12.86	34.72	-24.49	124
1890	628.84	469.39	376.6	301.71	231.05	0	0.03	256	152	2	36	6	10	18.79	-14.16	113
1891	2287.42	1117.29	599.06	350.85	288.26	0	0.03	269	64	5	21.6	2	34.5	26.9	-20.78	114
1892	429.14	413.88	380.52	282.8	194.54	0	0.03	224	93	2	45	6	8.33	12.93	-6.73	121
1893	1579.67	1256.63	908	671.38	597.8	0	0.01	275	78	3	14	8	16.13	51.5	-32.72	126
1894	335.97	306.99	285.04	220.33	186.7	0	0.03	228	128	3	45.33	9	5.11	10.29	-6.66	130
1895	2903.12	2549.62	1870.8	970.58	757.85	0	0.01	276	14	2	8.5	6	29.83	98.89	-59.1	100
1896	2771.27	2112.51	1325.22	681.04	511.28	0	0.01	271	36	5	13	5	25.4	112.74	-45.54	97
1897	8682.42	6357.88	3771.83	1311.79	622.73	0	0.01	274	2	4	18.25	9	15.11	131.32	-63.3	99
1898	2131.77	1766.58	1136.02	725	627.36	0	0.02	275	84	5	9.2	7	19	59.69	-35.76	99
1899	1053.86	918.44	753.26	614.89	428.66	0	0.02	274	18	3	15.67	10	11.9	52.22	-28.67	116
1900	2018.36	1156.49	700.77	460.01	383.1	0	0.02	238	45	2	30.5	6	18.33	51.58	-29.8	125
1901	570.78	544.38	466.85	326.12	228.04	0	0.02	221	86	2	52	2	24	12.12	-8.87	157
1975	85	65.67	53.57	23.64	15.59	0	0.53	2	135	13	9.62	0	0	2.42	-2.16	101
1976	16	13.67	12.57	11.4	7.74	0	0.79	93	300	5	66	0	0	0.41	-0.37	115
1977	8.7	6.9	6.04	5.77	5.36	0	0.47	203	52	2	110.5	0	0	0.33	-0.26	94
1978	87	36.33	20.41	13.18	11.36	0	0.27	278	116	15	6.4	0	0	2.81	-1.94	93
1979	85	65.67	53.57	23.64	15.59	0	0.53	2	135	13	9.62	0	0	2.42	-2.16	101
1980	5990	3923.33	2084.14	502.34	190.33	0	0.09	317	13	13	7.77	2	4.5	70.05	-53.29	107
1981	19	13.87	12.29	11.49	99.94	0	0.75	124	85	10	31.8	0	0	0.95	-0.67	123
1982	2990	1841	795.71	257.18	151.55	0	0.07	308	47	8	6.38	8	2.5	98.58	-66.98	114
1983	1390	514.33	357	259.03	169.18	0	0.1	312	73	10	8.3	8	4.63	33.57	-25.15	111
1984	2600	1893.33	1050	268.98	178.39	0	0.09	120	322	9	13.56	4	3.75	91.57	-46.4	100
1985	37	18.53	13.43	12.2	11.58	0	0.53	309	40	7	21.86	0	0	1.27	-0.98	109
1986	5380	4100	1979.43	613.9	222.85	0	0.09	307	48	12	8.83	3	4.33	145.8	-71.2	79
1987	94	39.67	21.94	12.43	8.02	0	0.75	262	44	3	104.33	0	0	1.25	-1	115
1988	16	10.83	9.63	7.61	6.87	0	0.85	1	8	10	34.6	0	0	0.62	-0.45	125
1989	167	72.67	46.71	22.8	14.07	0	0.53	309	68	5	27.6	0	0	3.71	-2.94	100
1990	16	15	13.43	11.67	8.14	0	0.75	322	297	12	25.25	0	0	0.68	-0.51	121
1991	791	317	141.6	39.13	17.94	0	0.59	133	64	6	32	1	1	6.46	-6.17	121
1992	21	16	12.63	9.63	7.43	0	0.83	309	51	3	105.67	0	0	0.51	-0.42	130
1993	301	123	63.57	26.89	20.1	0	0.44	275	77	9	10.11	2	1	8.28	-6.3	82
1994	13	12	11.71	11.3	8.03	0	0.79	96	289	4	78.75	0	0	0.47	-0.42	152
1995	2090	1099	560.86	142.3	86.71	0	0.15	286	122	7	13.43	5	2.2	52.42	-42.06	127
1996	3200	2223.33	1170.71	285.29	104.15	0	0.13	307	137	4	17.5	3	3.33	94.92	-53.79	93
1997	8050	5520	2644.29	683.91	239.94	0	0.09	83	1	11	8.91	3	3	120.64	-80.75	93
1998	1210	452.33	204	57.77	31.73	0	0.4	307	84	5	10.8	2	1	18.87	-16.6	96
1999	84	51.33	30.71	18.13	12.87	0	0.58	318	40	7	10.14	0	0	2.39	-1.73	97
2000	554	219.67	102.14	51.17	23.44	0	0.45	99	45	8	11.75	2	1	13.48	-9.99	111
2001	15	13.33	12.71	12.13	9.43	0	0.68	167	85	13	19.23	0	0	0.45	-0.6	110

## Analysis 2 - South Fork Rubicon Below Gerle Creek (Unregulated) versus 4300 South Fork Rubicon Below Gerle Creek (Regulated)

### Non-Parametric IHA Scorecard

Pre-impact period: 1875-1901 (27 years)

Post-impact period: 1975-2001 (27 years)

Watershed area	1.00	
Mean annual flow	145.64	22.02
Mean flow/area	145.64	22.02
Annual C. V.	.95	.14
Flow predictability	.40	.60
Constancy/predictability	.29	.91
% of floods in 60d period	.46	.46
flood-free season	67.00	111.00

	MEDIANS		COEFF. of DISP.		DEVIATION FACTOR		SIGNIFICANCE COUNT	
	Pre	Post	Pre	Post	Medians	C.V.	Medians	C.V.
Parameter Group #1								
October	6.9	11.0	.75	.49	.59	.35	.03	.28
November	18.6	6.4	2.96	.27	.65	.91	.01	.44
December	44.3	6.3	2.60	.42	.86	.84	.14	.20
January	104.8	7.0	1.84	1.00	.93	.45	.18	.45
February	123.3	7.7	1.41	.94	.94	.34	.21	.69
March	234.5	10.1	1.06	1.39	.96	.31	.24	.77
April	316.5	8.4	.68	.51	.97	.25	.33	.91
May	257.4	11.1	1.76	1.02	.96	.42	.17	.57
June	82.7	10.7	2.22	.52	.87	.77	.16	.13
July	20.1	10.1	1.90	.51	.50	.73	.00	.23
August	6.0	10.6	1.61	.50	.77	.69	.00	.21
September	3.4	10.8	.57	.52	2.18	.10	.00	.66
Parameter Group #2								
1-day minimum	2.2	5.0	.43	.12	1.23	.72	.00	.09
3-day minimum	2.3	5.1	.39	.12	1.21	.69	.00	.14
7-day minimum	2.3	5.2	.41	.15	1.25	.64	.00	.13
30-day minimum	2.7	5.6	.45	.17	1.06	.63	.00	.15
90-day minimum	4.9	6.3	.94	.40	.30	.57	.01	.12
1-day maximum	1214.6	94.0	1.64	22.03	.92	12.42	.11	.00
3-day maximum	1156.5	65.7	1.22	16.51	.94	12.51	.11	.00
7-day maximum	753.3	53.6	1.47	10.23	.93	5.95	.09	.00
30-day maximum	604.8	23.6	.90	10.39	.96	10.53	.05	.00
90-day maximum	439.0	15.6	.74	6.16	.96	7.32	.05	.00
Number of zero days	.0	.0	.00	.00	999999.00	999999.00	.00	.00
Base flow	.0	.5	.83	1.17	29.68	.42	.00	.76
Parameter Group #3								
Date of minimum	268.0	307.0	.13	.41	.21	2.19	.03	.02
Date of maximum	64.0	51.0	.24	.20	.07	.17	.63	.64
Parameter Group #4								
Low pulse count	3.0	8.0	.67	.88	1.67	.31	.00	.49
Low pulse duration	20.8	13.6	.87	1.65	.35	.91	.23	.04
High pulse count	7.0	.0	.43	.00	1.00	1.00	.11	.21
High pulse duration	12.9	.0	.90	.00	1.00	1.00	.11	.16
The low pulse threshold is	8.35							
The high pulse level is	179.91							
Parameter Group #5								
Rise rate	34.7	2.8	2.08	18.43	.92	7.87	.13	.00
Fall rate	-24.5	-2.2	-1.36	-19.18	.91	13.12	.19	.00
Number of reversals	121.0	109.0	.13	.23	.10	.73	.02	.01

## Analysis 2 - South Fork Rubicon Below Gerle Creek (Unregulated) versus 4300 South Fork Rubicon Below Gerle Creek (Regulated)

### Variance Data, Box and Whisker Format

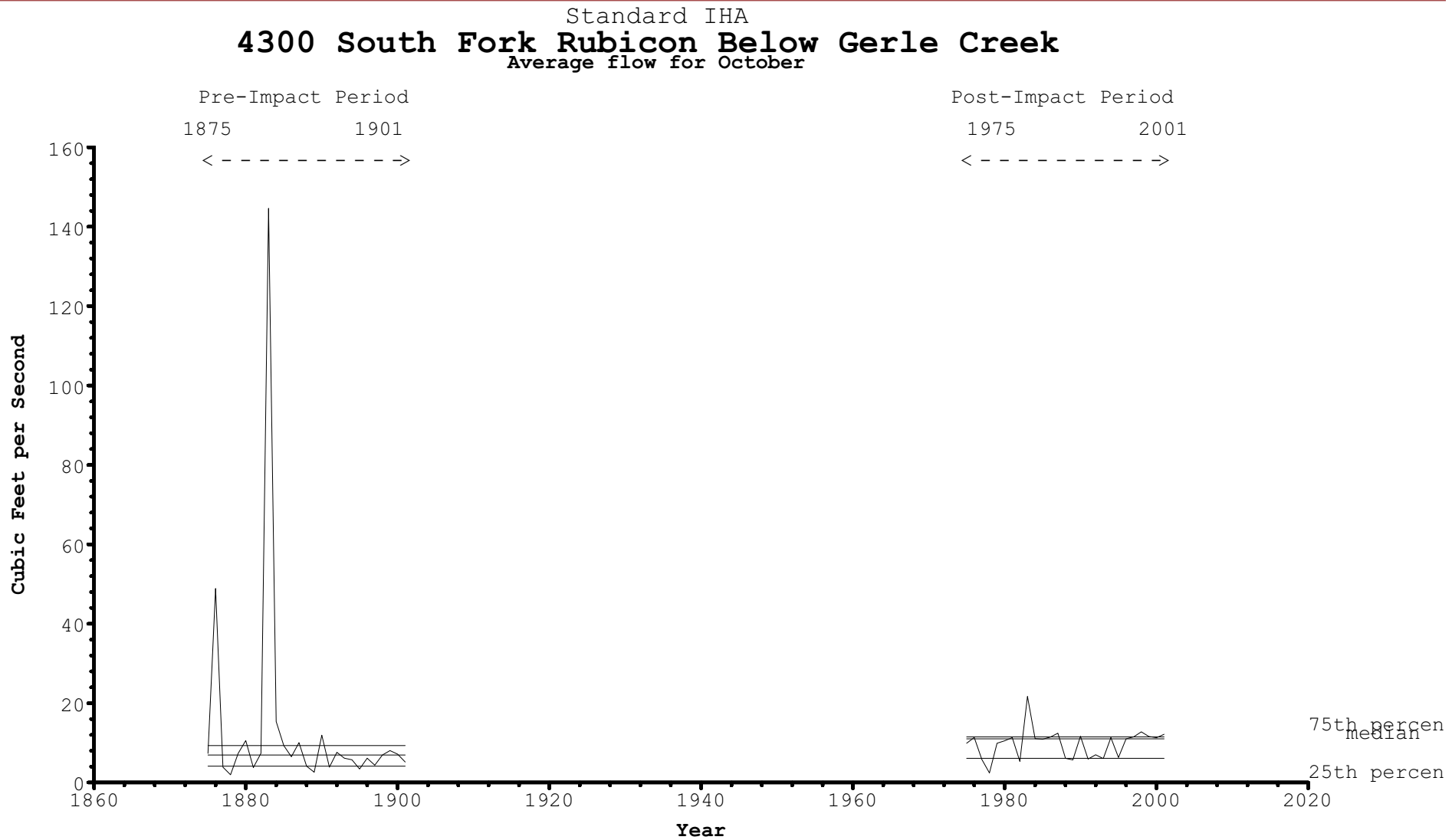
	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
<b>Pre-Impact Distribution</b>																	
1-day min	1.93	4.07	8.39	12.9	22.28	38.81	72.06	42.85	10.55	3.44	1.3	1.49	0.76	0.8	0.82	1.28	1.53
25 pctile	4.09	9.12	17.11	32.26	84.47	171.21	238.47	149.52	29.44	5.02	2.55	2.5	1.83	1.93	1.98	2.15	2.93
Median	6.92	18.56	44.35	104.78	123.3	234.52	316.53	257.35	82.74	20.1	5.98	3.38	2.24	2.3	2.32	2.71	4.86
75 pctile	9.29	64.1	132.6	224.87	258.52	420.71	452.71	601.57	213.43	43.29	12.17	4.45	2.8	2.82	2.92	3.38	7.5
1-day max	144.6	556.46	670.67	952.77	1127.42	686.94	605.78	938.28	735.82	193.55	41.61	40.17	5.17	5.21	5.57	8.11	25.28
<b>Post-Impact Distribution</b>																	
1-day min	2.4	2.75	5.08	5.26	5.31	3.11	2.35	2.42	2.29	2.36	2.03	1.99	1.5	1.53	1.7	1.95	2.07
25 pctile	6.07	5.85	5.79	5.84	6.67	7.55	5.92	6.15	6.23	6.06	6.15	6.1	4.7	4.73	4.79	5.32	5.54
Median	11	6.43	6.26	7.03	7.7	10.05	8.39	11.1	10.67	10.09	10.57	10.77	5	5.07	5.23	5.57	6.33
75 pctile	11.48	7.59	8.43	12.9	13.89	21.55	10.19	17.48	11.8	11.19	11.48	11.66	5.3	5.33	5.56	6.25	8.11
1-day max	21.67	268.03	248.15	530.45	524.11	130.27	140.88	276.23	248.7	41.34	12.48	22.26	6.4	6.43	6.49	7.48	11.16

	1-day max	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	LRise rate	Fall rate	Reversals
<b>Pre-Impact Distribution</b>																
1-day min	181.9	160.41	136.02	97.25	72.43	0	0.01	221	2	2	8.5	1	1	7.13	-64.21	97
25 pctile	628.84	469.39	380.52	301.71	228.04	0	0.01	228	13	2	13	6	6.82	15.93	-43.17	110
Median	1214.6	1156.49	753.26	604.84	439.01	0	0.02	268	64	3	20.8	7	12.86	34.72	-24.49	121
75 pctile	2623.33	1882.18	1489.9	846.59	552.84	0	0.03	275	100	4	31	9	18.33	88.06	-9.91	126
1-day max	8682.42	6357.88	3771.83	1404.63	757.85	0	0.04	280	364	5	52	12	34.5	163.72	-5.64	157
<b>Post-Impact Distribution</b>																
1-day min	8.7	6.9	6.04	5.77	5.36	0	0.07	1	1	2	6.38	0	0	0.33	-80.75	79
25 pctile	19	15	12.71	11.67	8.14	0	0.13	167	13	5	9.62	0	0	0.68	-42.06	96
Median	94	65.67	53.57	23.64	15.59	0	0.53	307	51	8	13.56	0	0	2.81	-2.16	109
75 pctile	2090	1099	560.86	257.18	104.15	0	0.75	317	85	12	32	3	2.5	52.42	-0.6	121
1-day max	8050	5520	2644.29	683.91	239.94	0	0.85	322	322	15	110.5	8	4.63	145.8	-0.26	152

## Analysis 2 - South Fork Rubicon Below Gerle Creek (Unregulated) versus 4300 South Fork Rubicon Below Gerle Creek (Regulated)

IHA Percentile Data

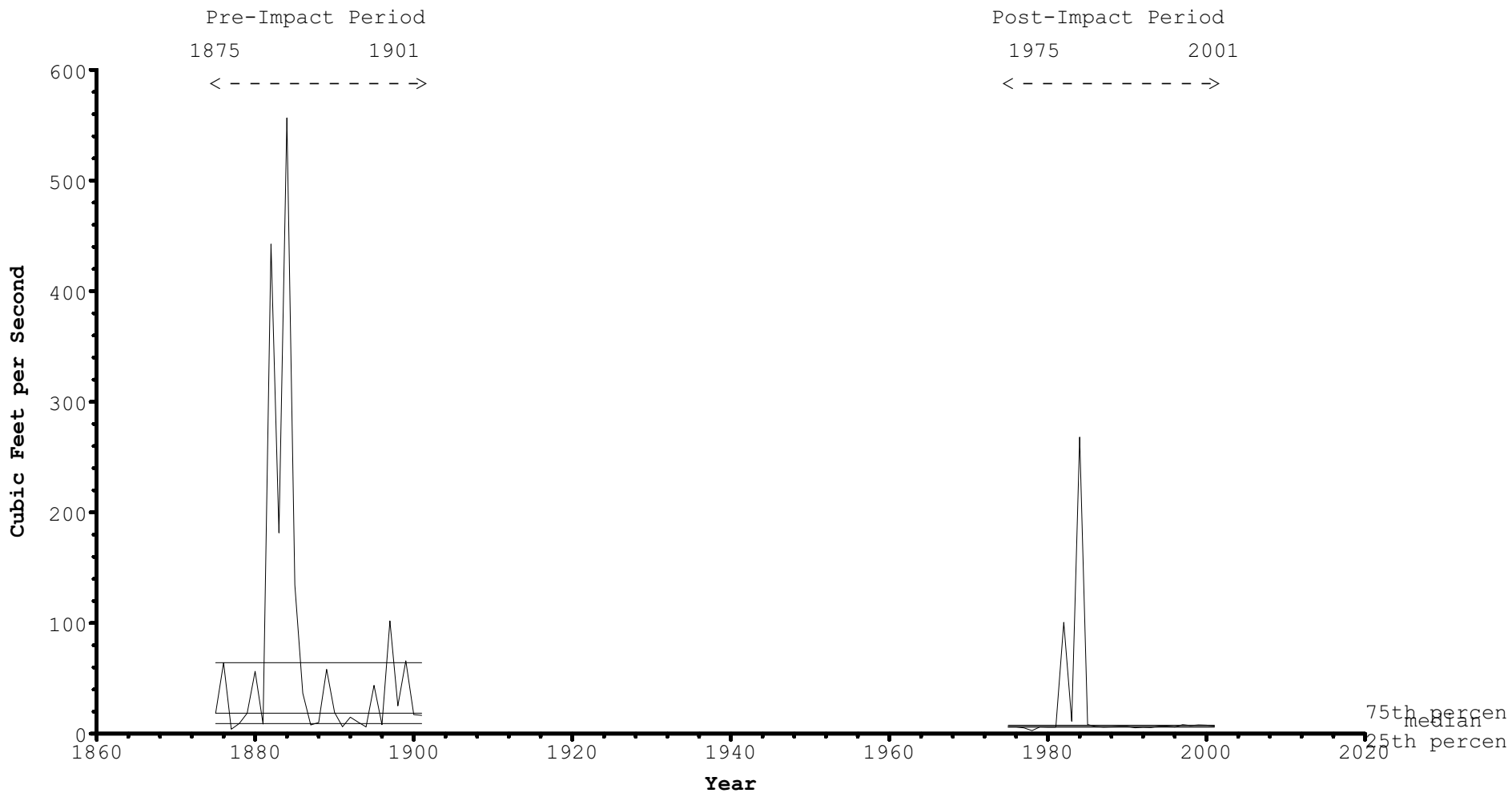
	Pre-impact period: 1875-1901 (27 years)						Post-impact period: 1975-2001 (27 years)					
	10%	25%	50%	75%	90%	(75-25)/50	10%	25%	50%	75%	90%	(75-25)/50
<b>Parameter Group #1</b>												
October	3.25	4.09	6.92	9.29	22.05	.75	5.59	6.07	11.00	11.48	12.46	.49
November	6.15	9.12	18.56	64.10	233.64	2.96	5.33	5.85	6.43	7.59	29.07	.27
December	12.86	17.11	44.35	132.60	569.15	2.60	5.50	5.79	6.26	8.43	163.87	.42
January	19.90	32.26	104.78	224.87	538.65	1.84	5.47	5.84	7.03	12.90	155.22	1.00
February	39.13	84.47	123.30	258.52	578.36	1.41	5.93	6.67	7.70	13.89	135.64	.94
March	128.38	171.21	234.52	420.71	628.73	1.06	5.97	7.55	10.05	21.55	68.78	1.39
April	152.90	238.47	316.53	452.71	554.31	.68	5.48	5.92	8.39	10.19	21.88	.51
May	86.15	149.52	257.35	601.57	807.53	1.76	5.39	6.15	11.10	17.48	105.70	1.02
June	16.62	29.44	82.74	213.43	519.34	2.22	5.21	6.23	10.67	11.80	23.05	.52
July	3.71	5.02	20.10	43.29	122.67	1.90	5.56	6.06	10.09	11.19	12.08	.51
August	1.80	2.55	5.98	12.17	18.02	1.61	5.48	6.15	10.57	11.48	12.09	.50
September	1.96	2.50	3.38	4.45	8.66	.57	5.56	6.10	10.77	11.66	12.86	.52
<b>Parameter Group #2</b>												
1-day minimum	1.41	1.83	2.24	2.80	3.03	.43	3.56	4.70	5.00	5.30	5.78	.12
3-day minimum	1.47	1.93	2.30	2.82	3.16	.39	3.99	4.73	5.07	5.33	5.82	.12
7-day minimum	1.53	1.98	2.32	2.92	3.24	.41	4.14	4.79	5.23	5.56	6.19	.15
30-day minimum	1.76	2.15	2.71	3.38	5.76	.45	4.49	5.32	5.57	6.25	7.12	.17
90-day minimum	2.27	2.93	4.86	7.50	13.56	.94	4.85	5.54	6.33	8.11	10.19	.40
1-day maximum	410.51	628.84	1214.60	2623.33	6808.24	1.64	14.60	19.00	94.00	2090.00	5502.00	22.03
3-day maximum	281.32	469.39	1156.49	1882.18	5045.53	1.22	11.77	15.00	65.67	1099.00	3958.67	16.51
7-day maximum	228.52	380.52	753.26	1489.90	2972.24	1.47	11.30	12.71	53.57	560.86	2000.37	10.23
30-day maximum	160.08	301.71	604.84	846.59	1228.49	.90	9.23	11.67	23.64	257.18	524.65	10.39
90-day maximum	124.85	228.04	439.01	552.84	678.17	.74	7.31	8.14	15.59	104.15	196.84	6.16
Number of zero days	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Base flow	.01	.01	.02	.03	.04	.83	.09	.13	.53	.75	.80	1.17
<b>Parameter Group #3</b>												
Date of minimum	224.00	228.00	268.00	275.00	276.00	.13	98.40	167.00	307.00	317.00	2.00	.41
Date of maximum	348.40	13.00	64.00	100.00	135.00	.24	299.40	13.00	51.00	85.00	135.00	.20
<b>Parameter Group #4</b>												
Low pulse count	2.00	2.00	3.00	4.00	5.00	.67	3.00	5.00	8.00	12.00	13.00	.88
Low pulse duration	8.90	13.00	20.80	31.00	45.47	.87	7.50	9.62	13.56	32.00	104.60	1.65
High pulse count	2.00	6.00	7.00	9.00	11.00	.43	.00	.00	.00	3.00	5.60	.00
High pulse duration	2.21	6.82	12.86	18.33	26.29	.90	.00	.00	.00	2.50	4.37	.00
<b>Parameter Group #5</b>												
Rise rate	11.75	15.93	34.72	88.06	118.50	2.08	.44	.68	2.81	52.42	103.00	18.43
Fall rate	-60.73	-43.17	-24.49	-9.91	-6.72	-1.36	-67.83	-42.06	-2.16	-.60	-.41	-19.18
Number of reversals	99.00	110.00	121.00	126.00	141.00	.13	90.80	96.00	109.00	121.00	127.60	.23



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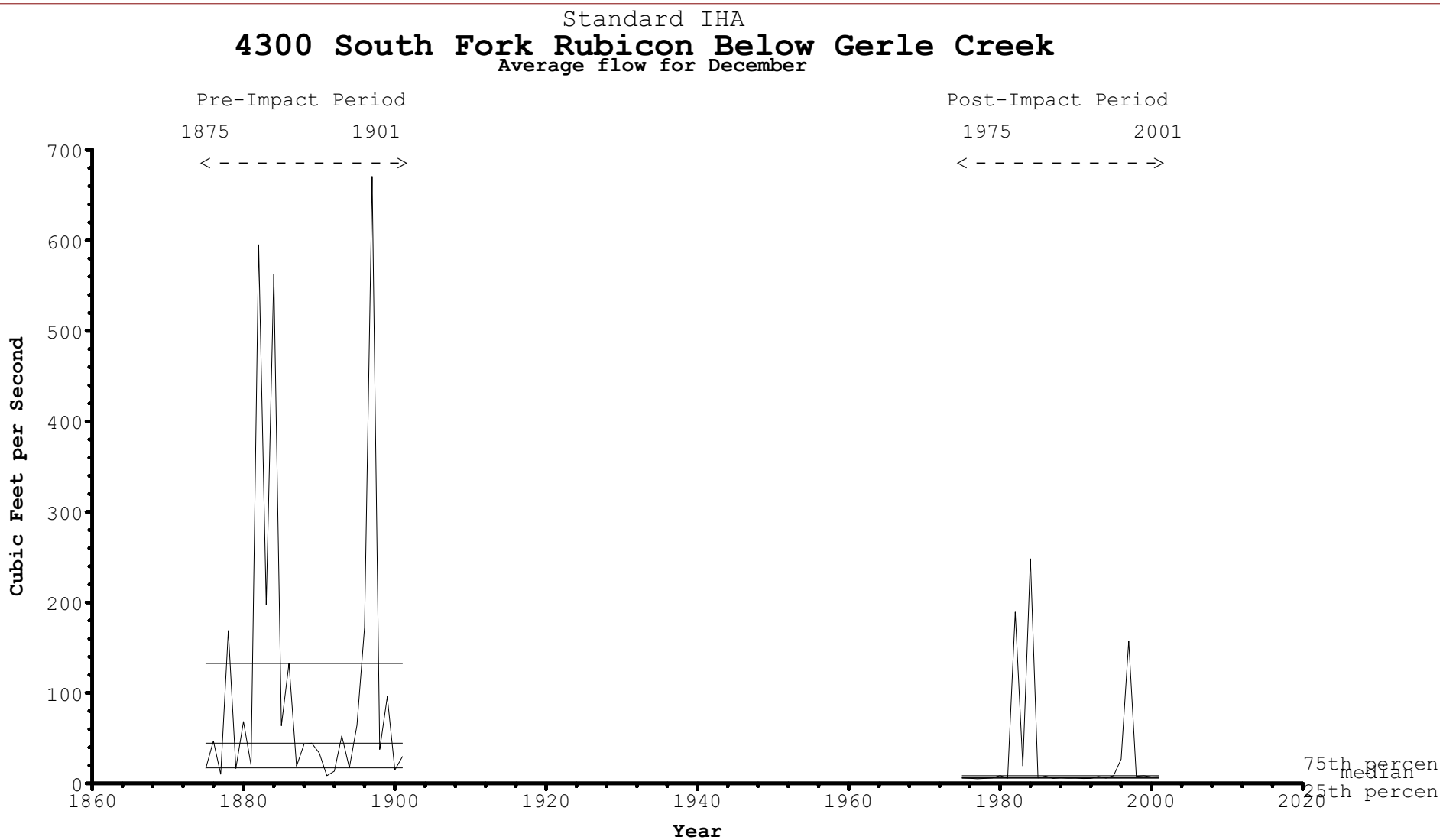


Standard IHA  
**4300 South Fork Rubicon Below Gerle Creek**  
Average flow for November



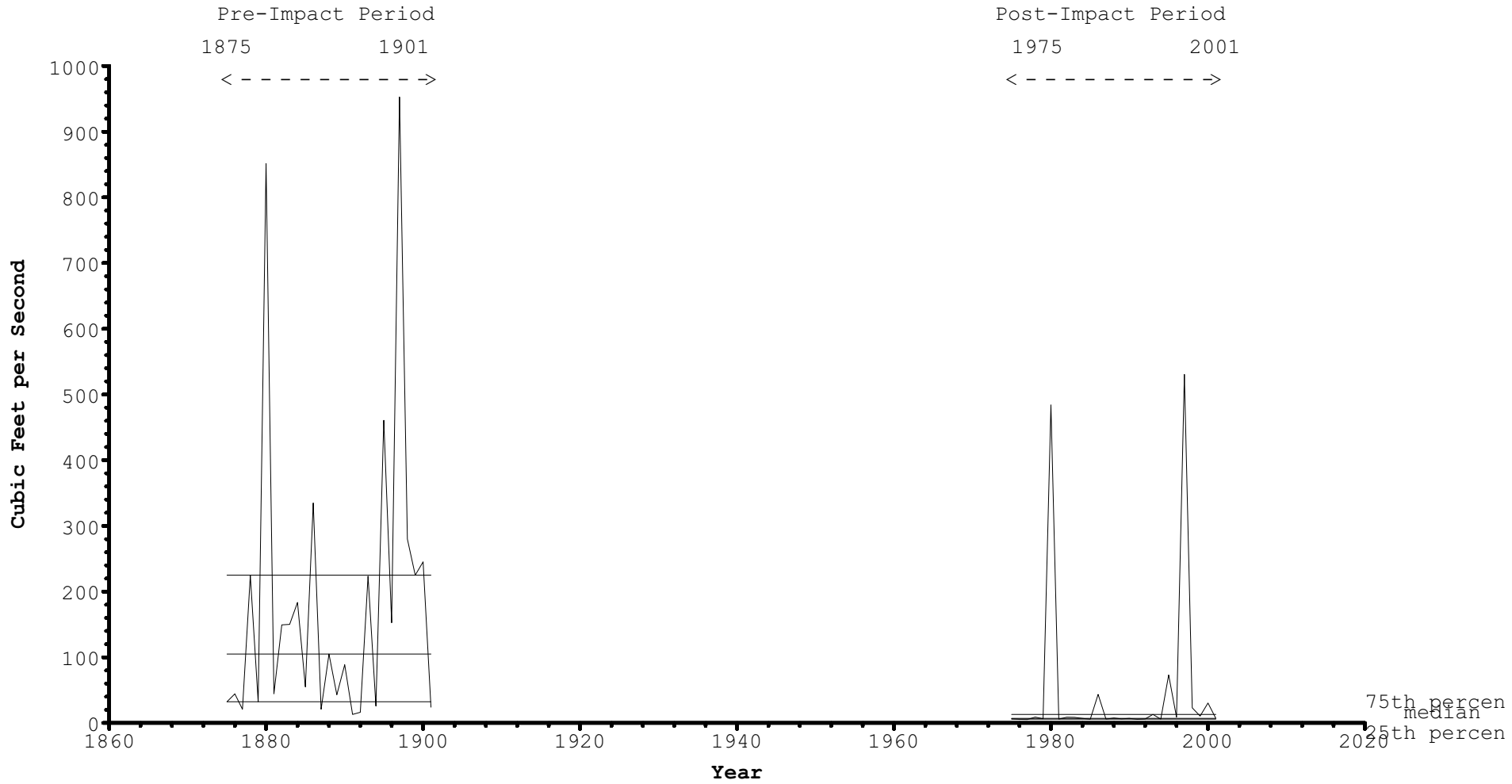
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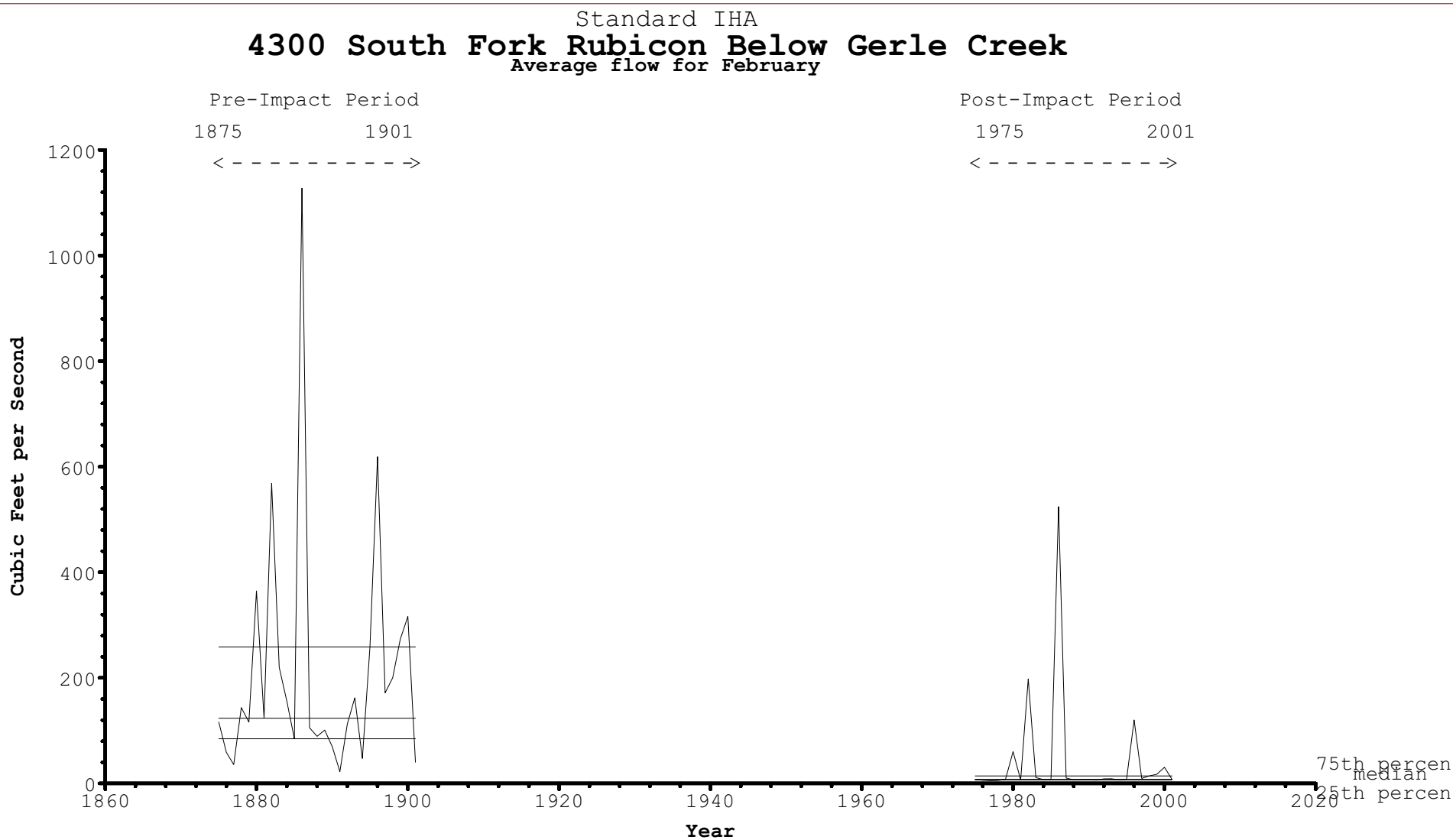
Analysis 2 - South Fork Rubicon Below Gerle Creek (Unregulated) versus 4300 South Fork Rubicon Below Gerle Creek (Regulated)



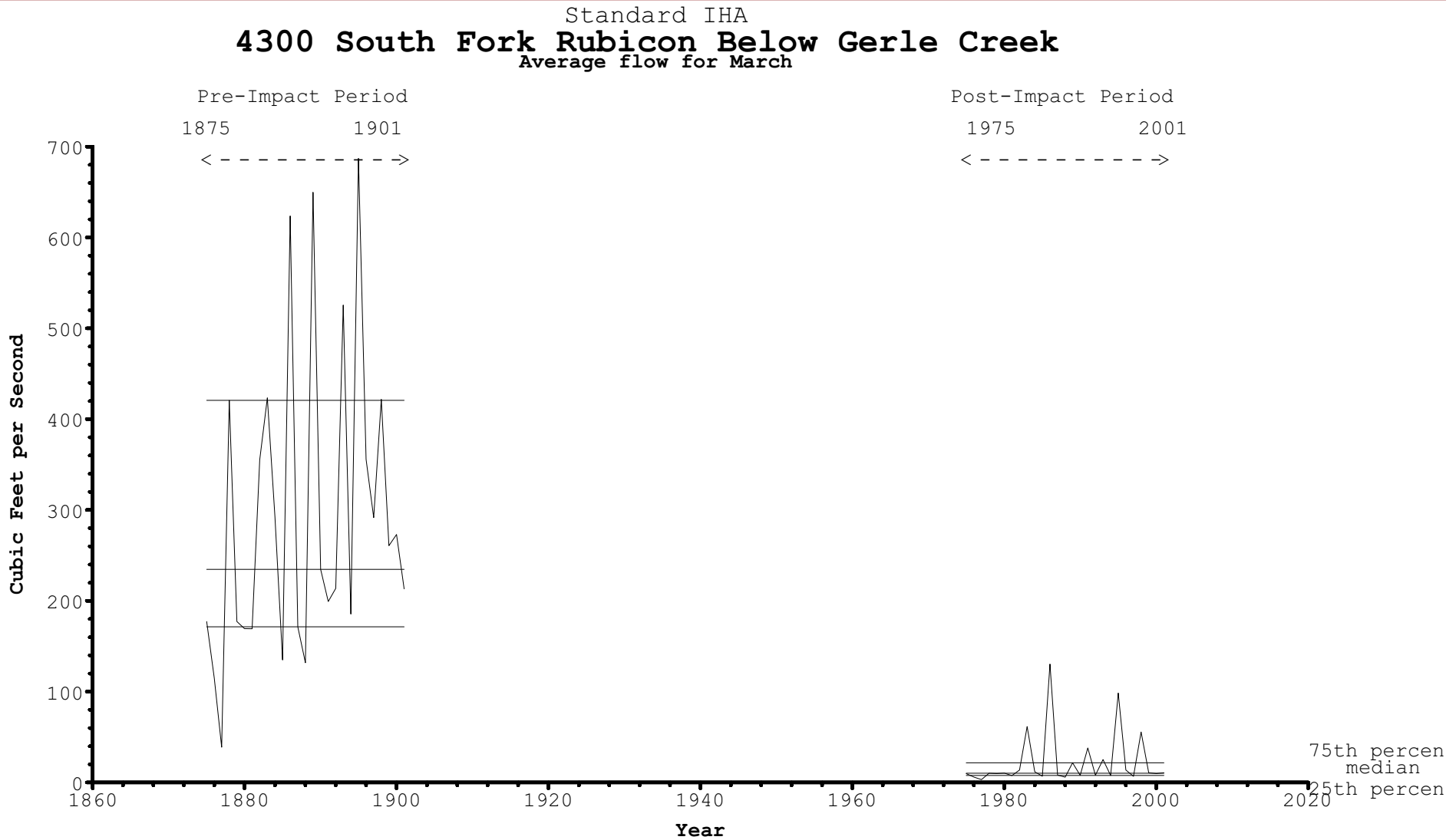
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Standard IHA  
**4300 South Fork Rubicon Below Gerle Creek**  
 Average flow for January



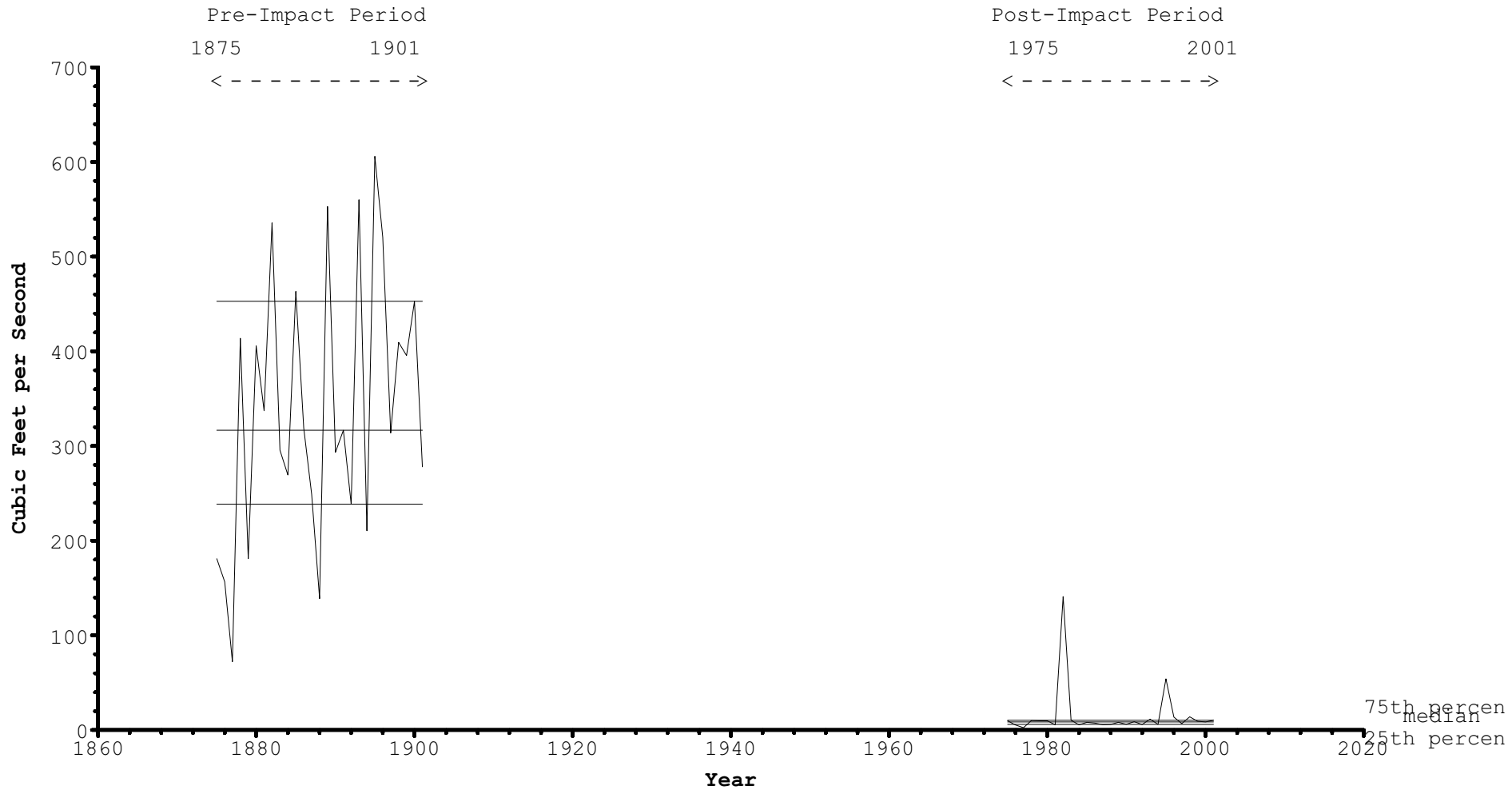


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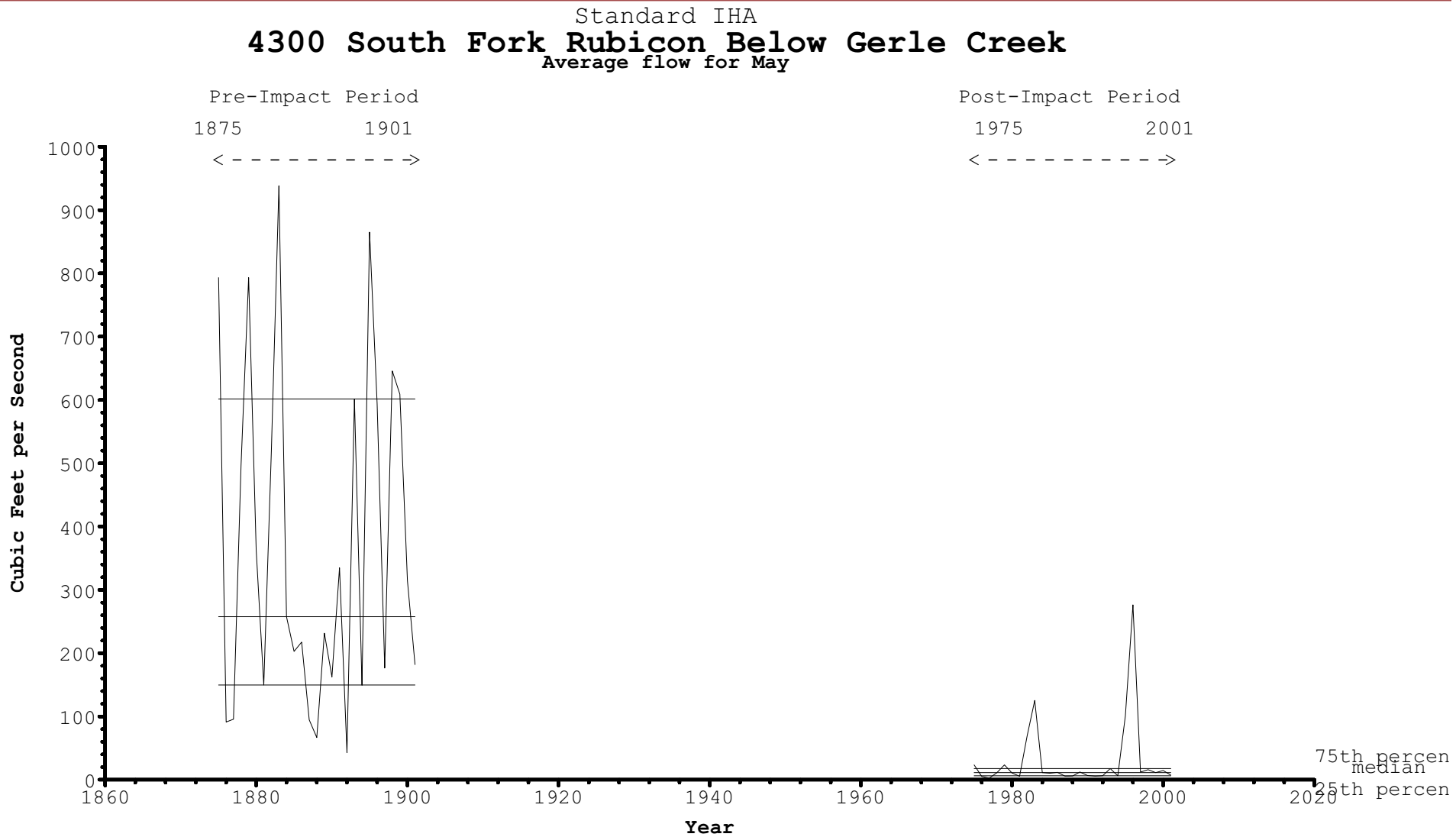
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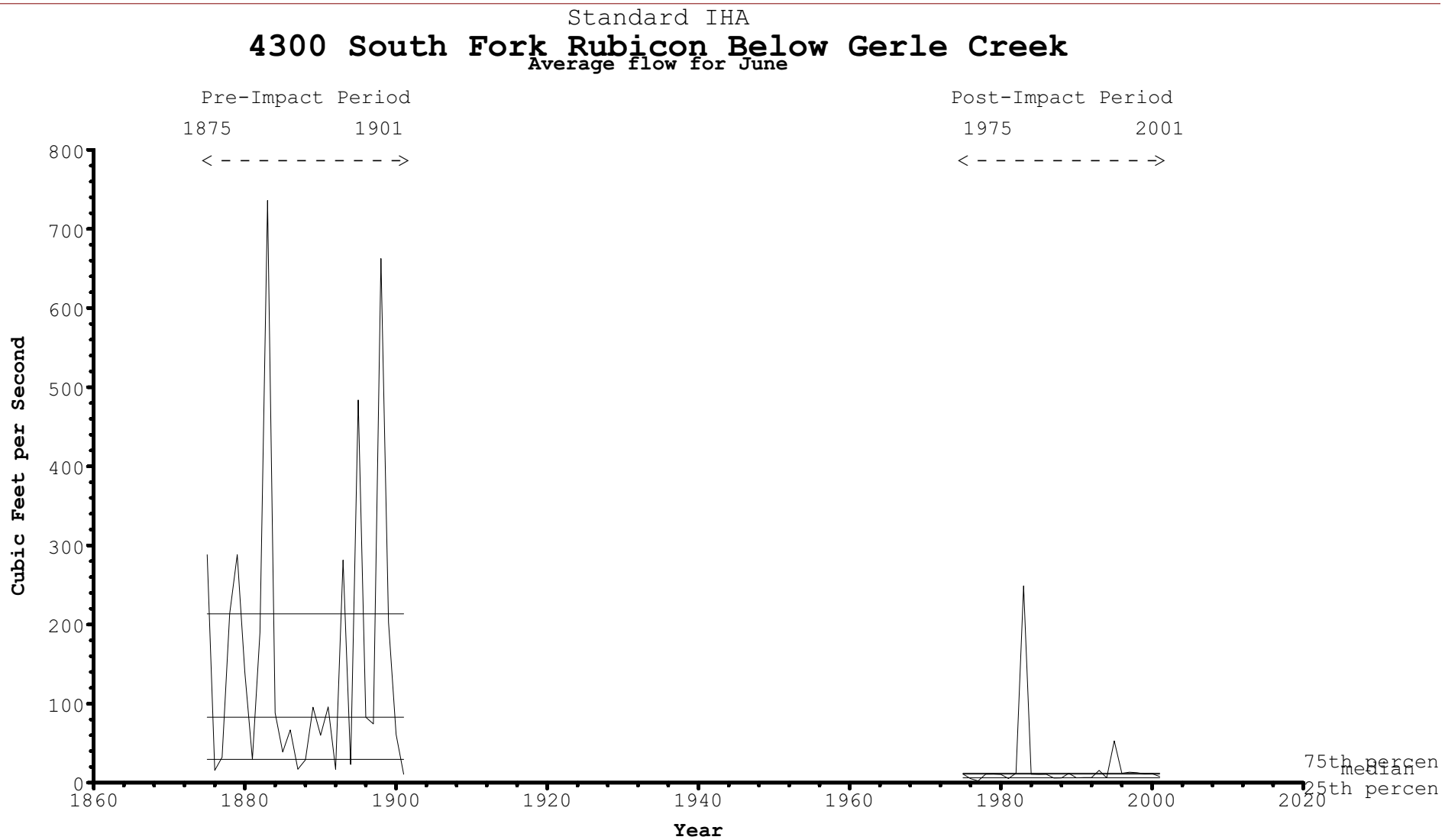
Standard IHA  
**4300 South Fork Rubicon Below Gerle Creek**  
Average flow for April



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Analysis 2 - South Fork Rubicon Below Gerle Creek (Unregulated) versus 4300 South Fork Rubicon Below Gerle Creek (Regulated)

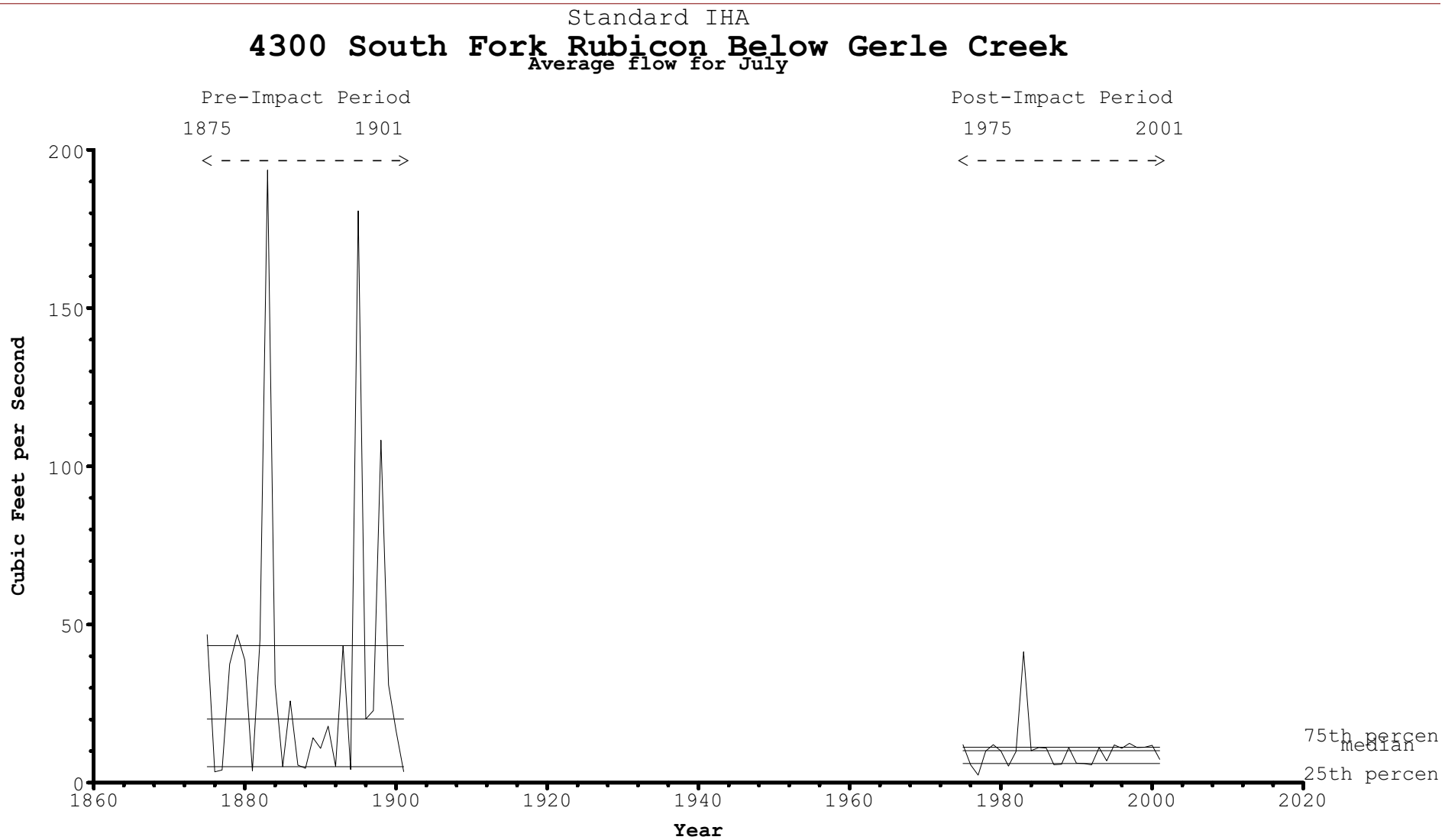




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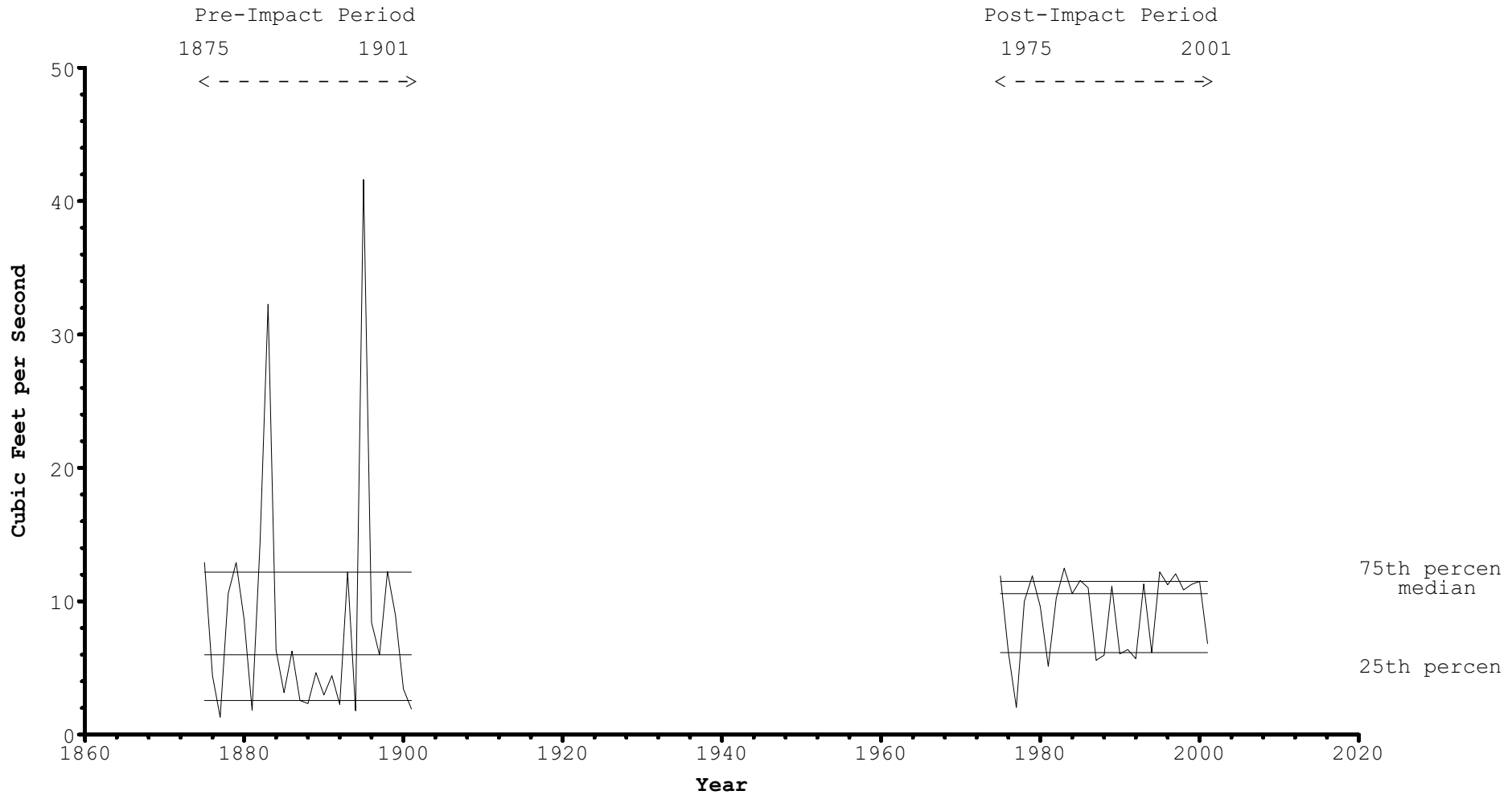


Analysis 2 - South Fork Rubicon Below Gerle Creek (Unregulated) versus 4300 South Fork Rubicon Below Gerle Creek (Regulated)



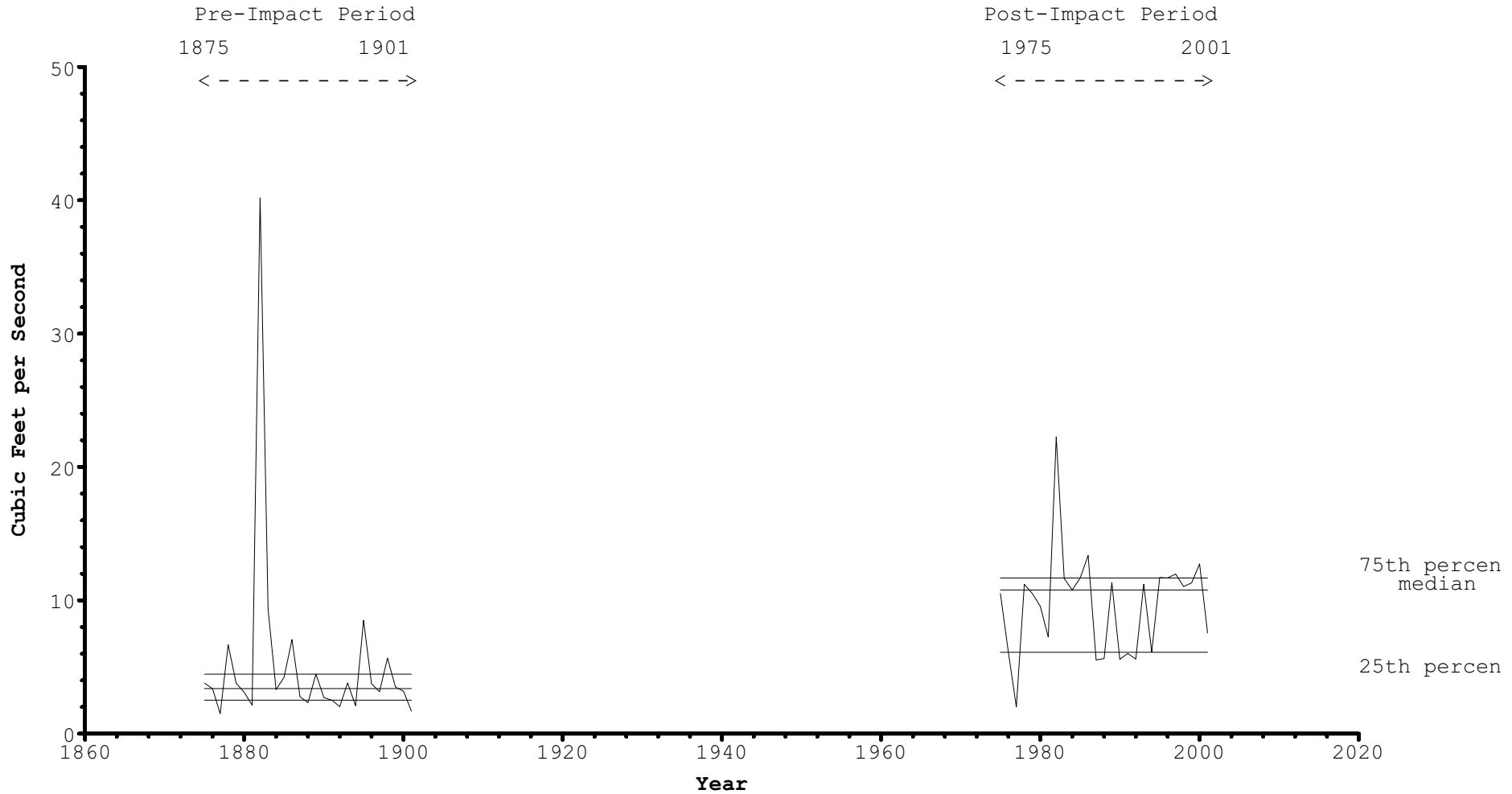
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Standard IHA  
**4300 South Fork Rubicon Below Gerle Creek**  
Average flow for August

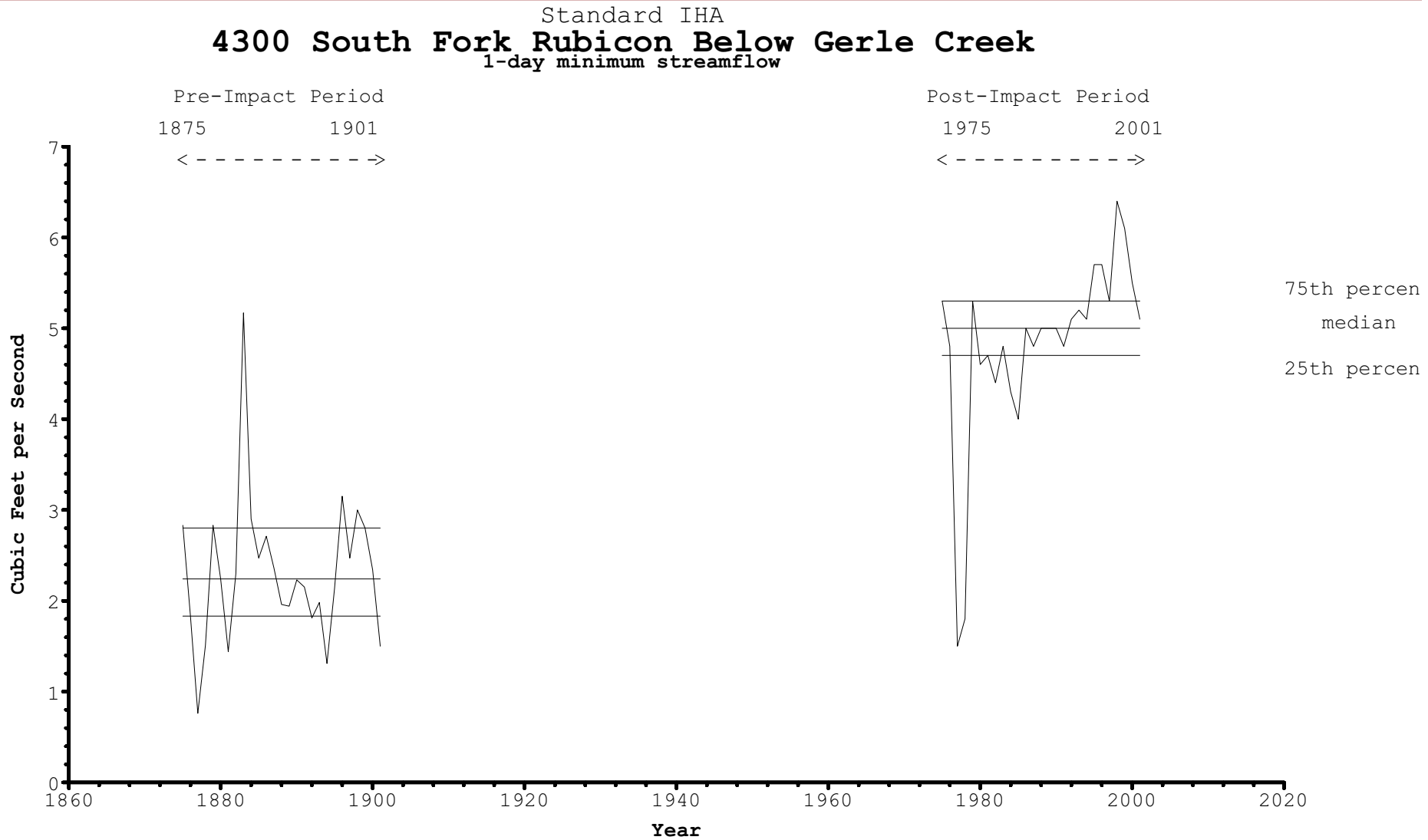


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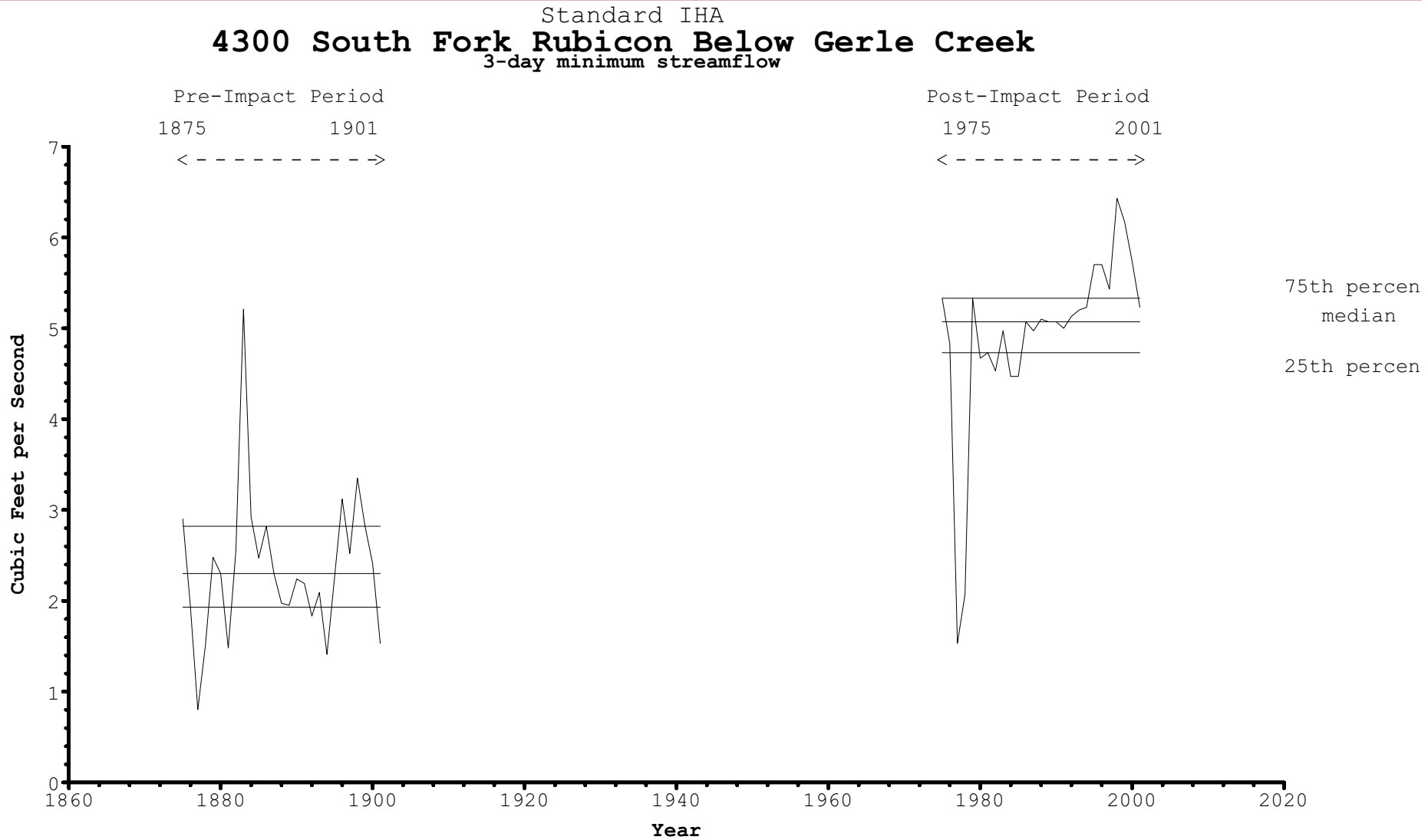
Standard IHA  
**4300 South Fork Rubicon Below Gerle Creek**  
Average flow for September



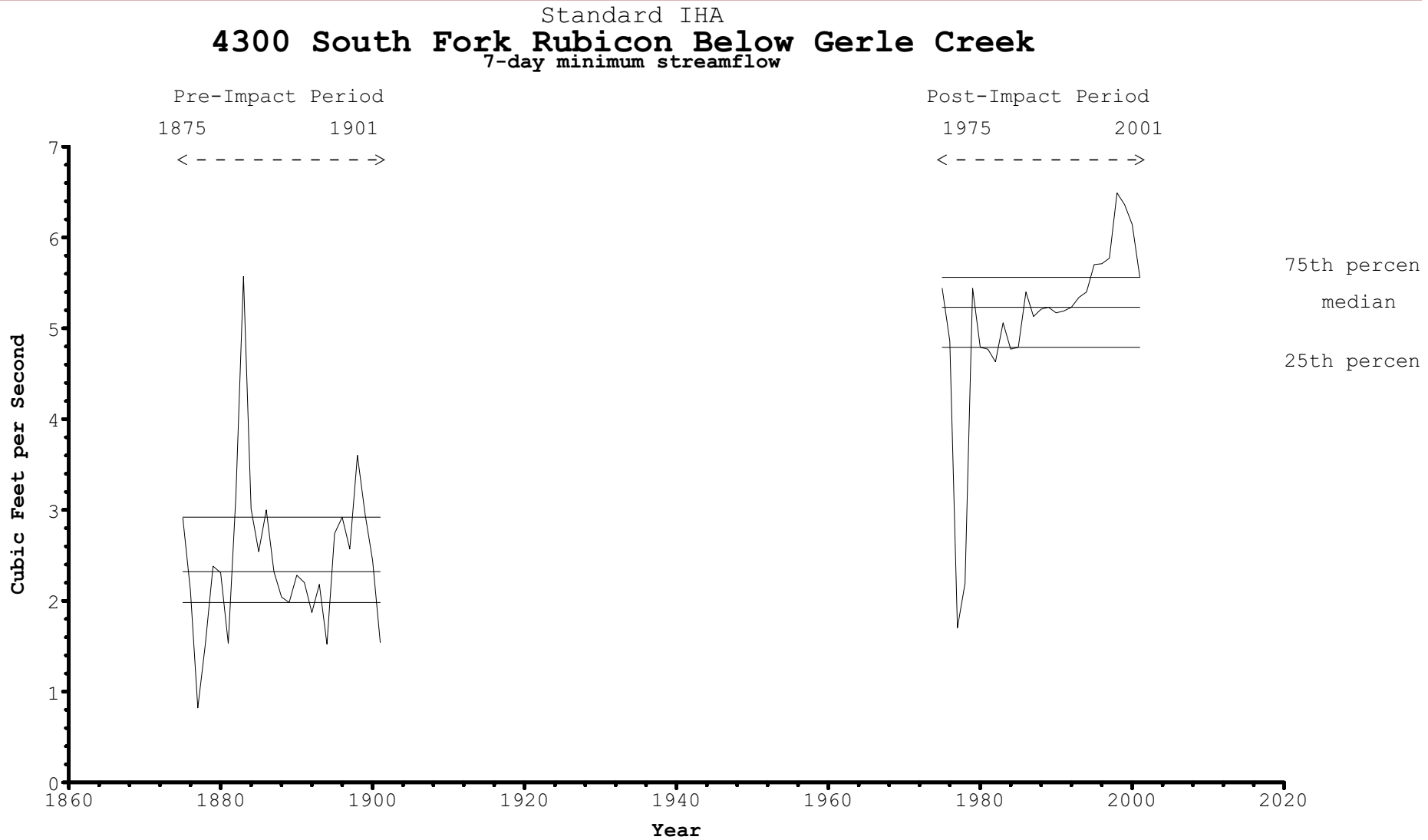
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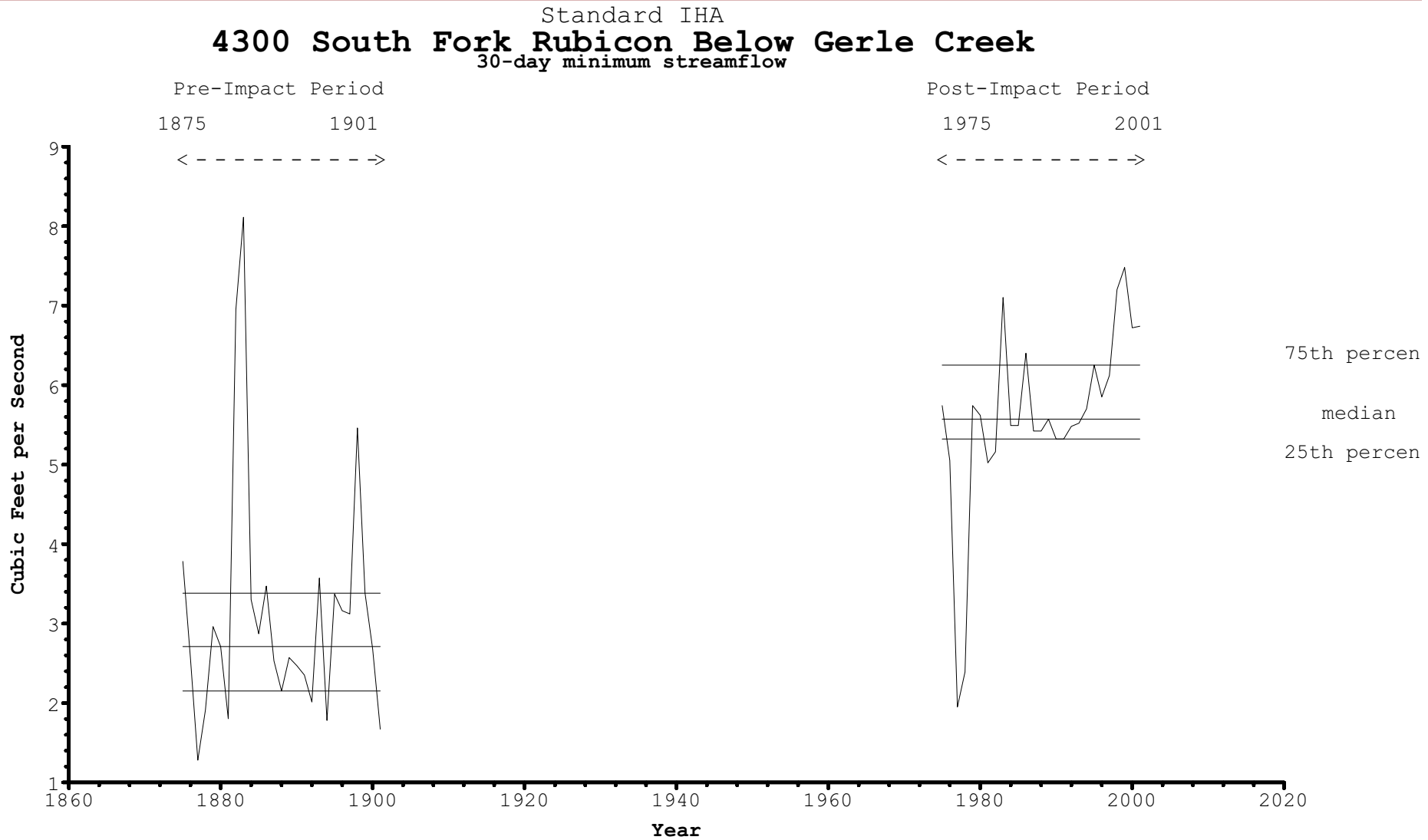


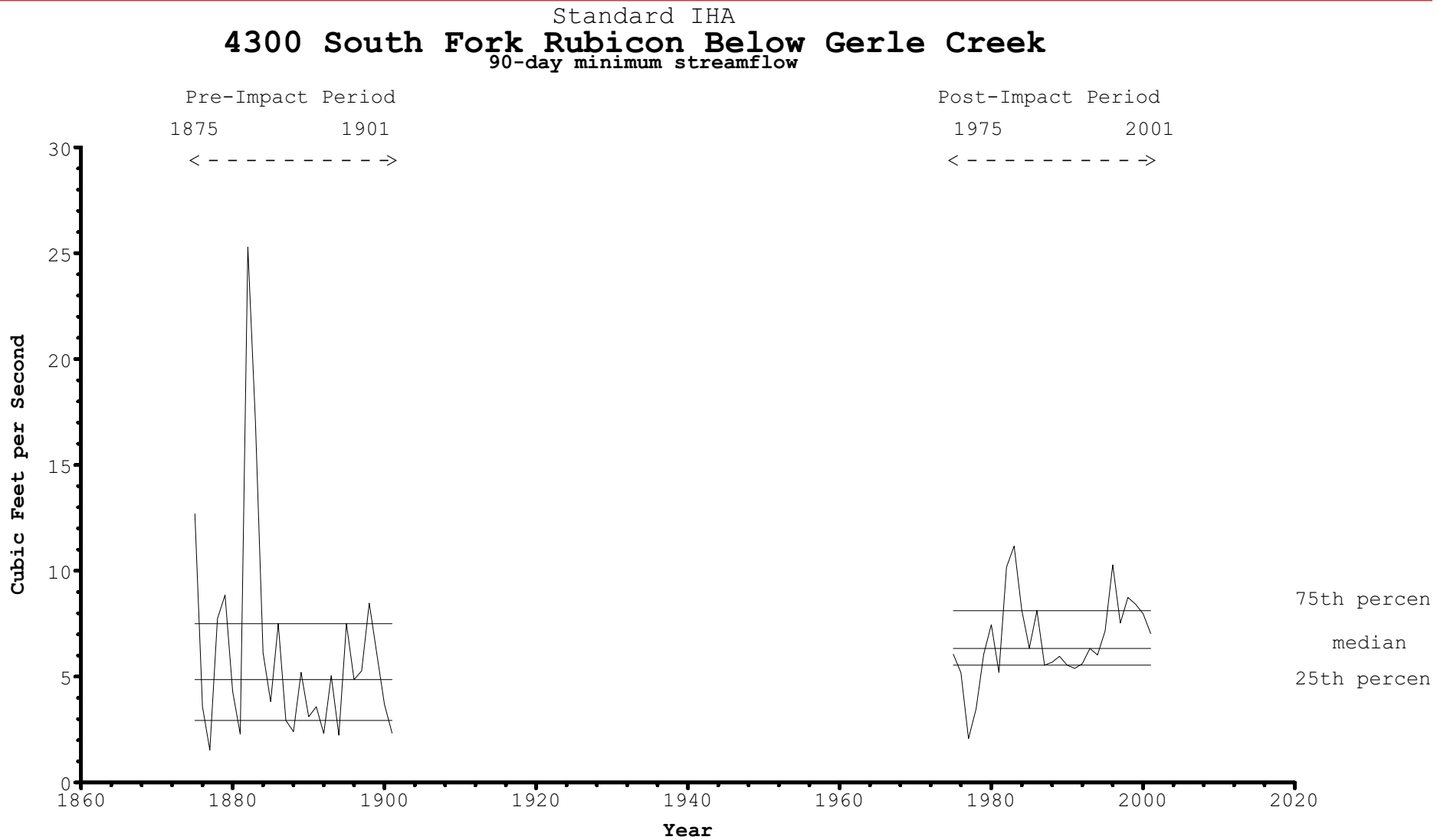
Analysis 2 - South Fork Rubicon Below Gerle Creek (Unregulated) versus 4300 South Fork Rubicon Below Gerle Creek (Regulated)



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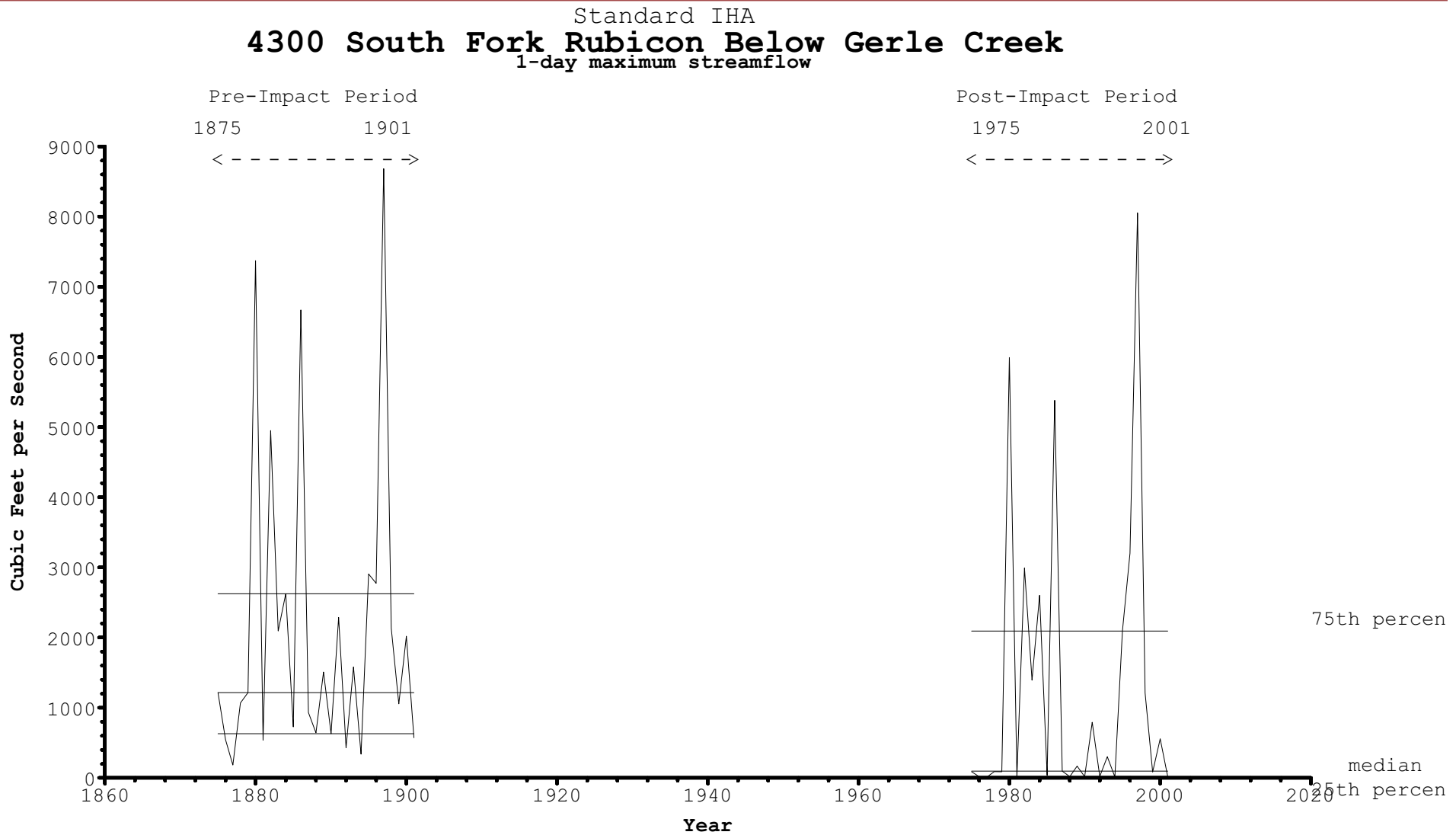


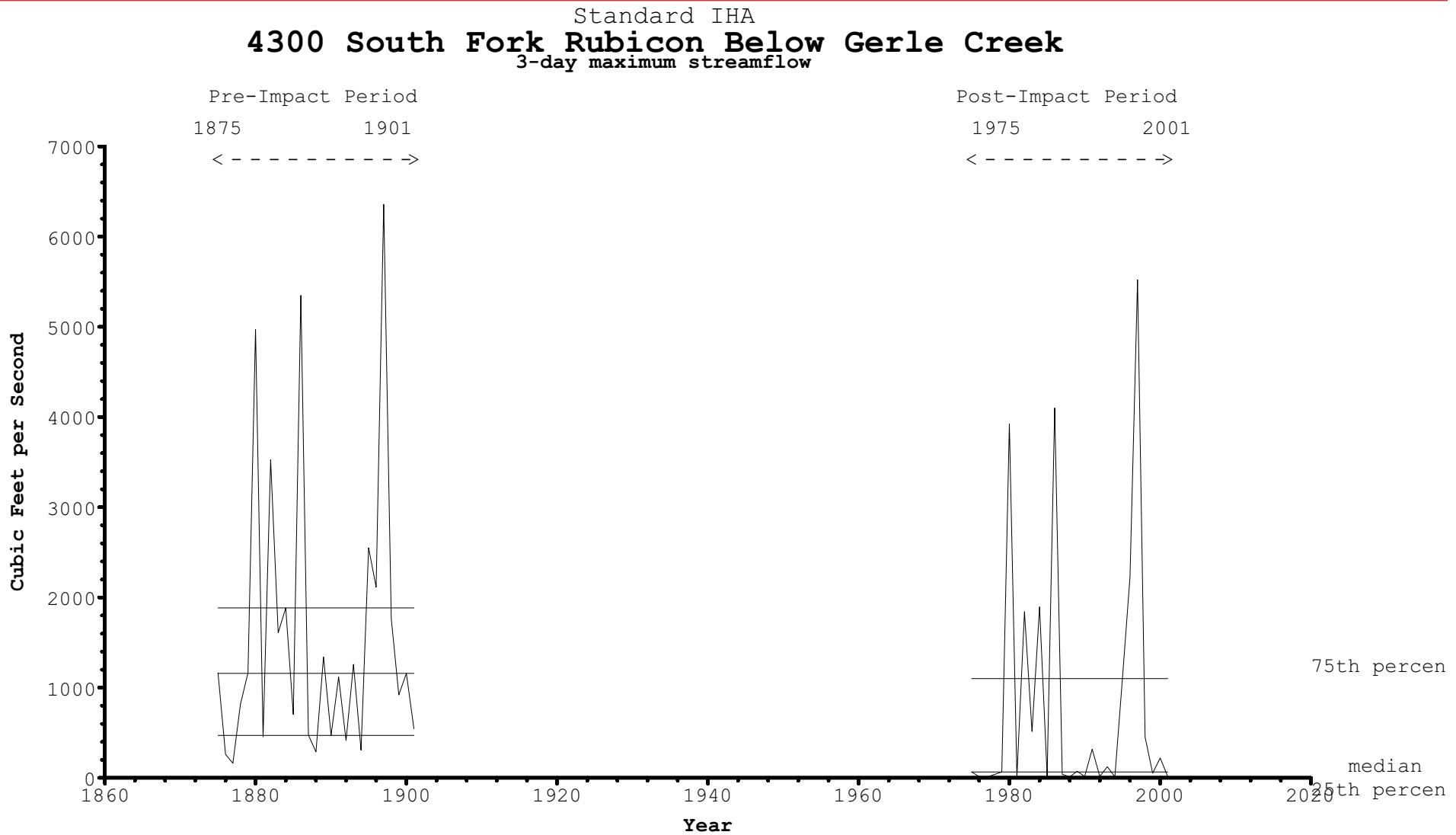


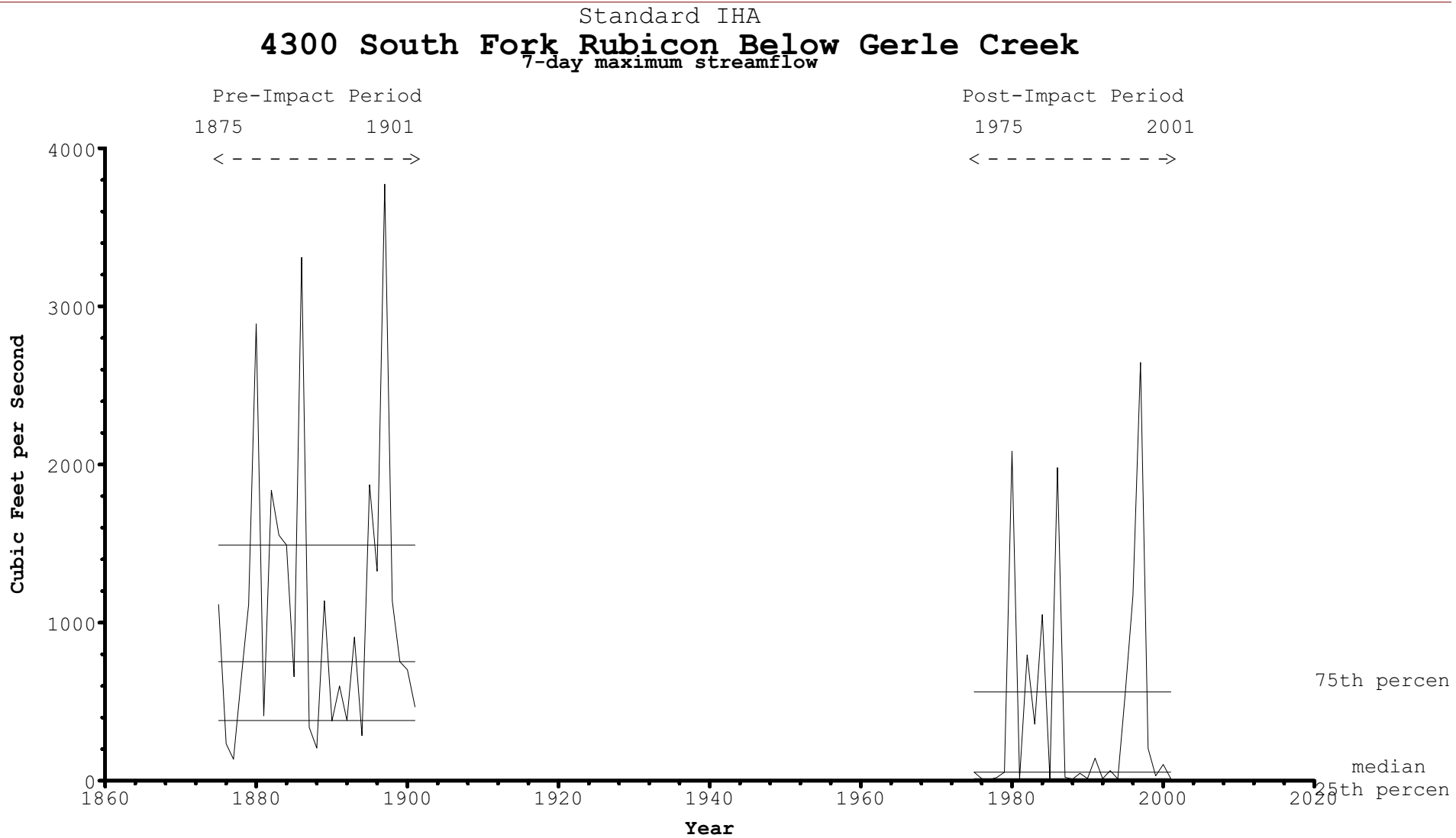


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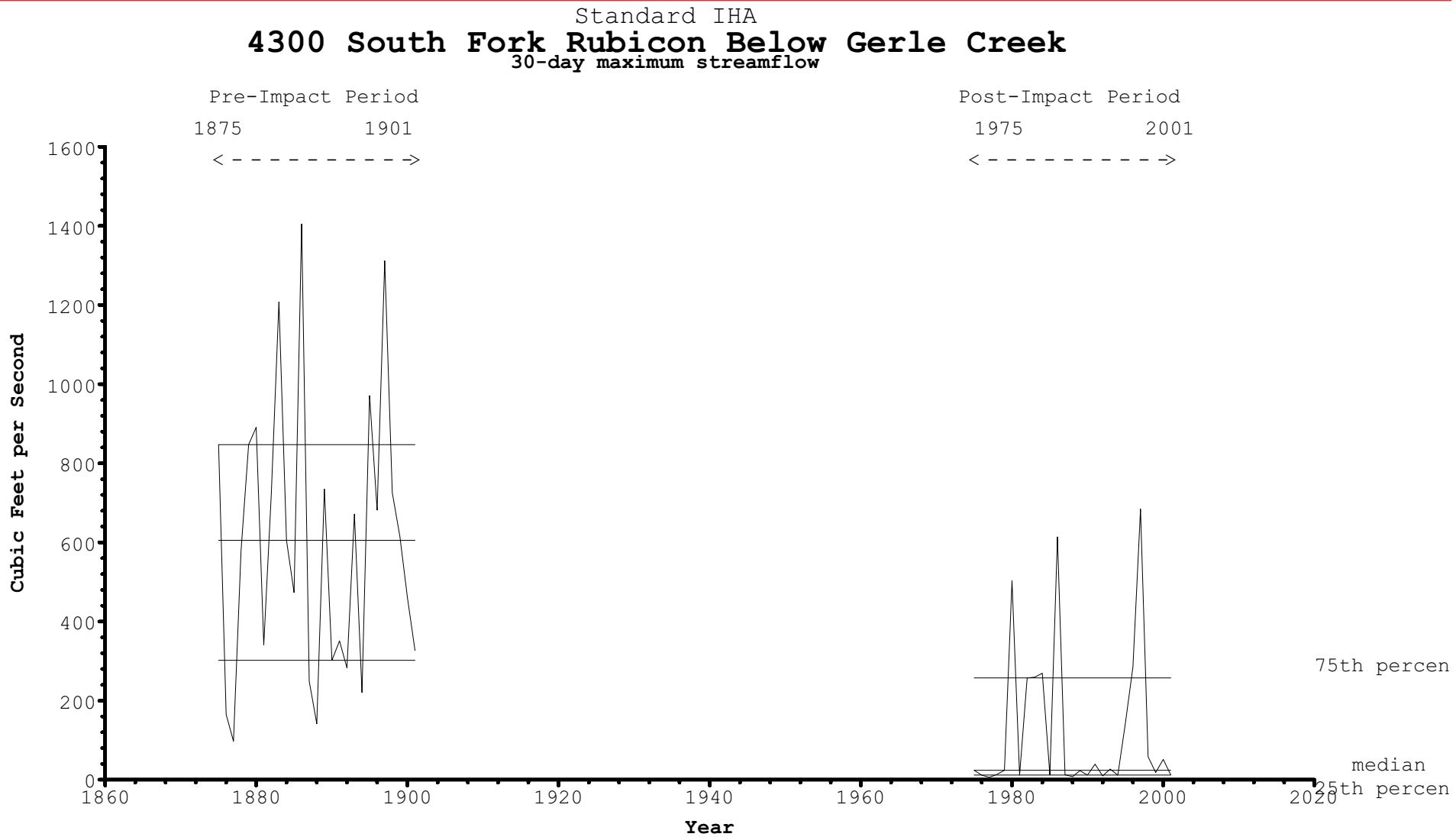


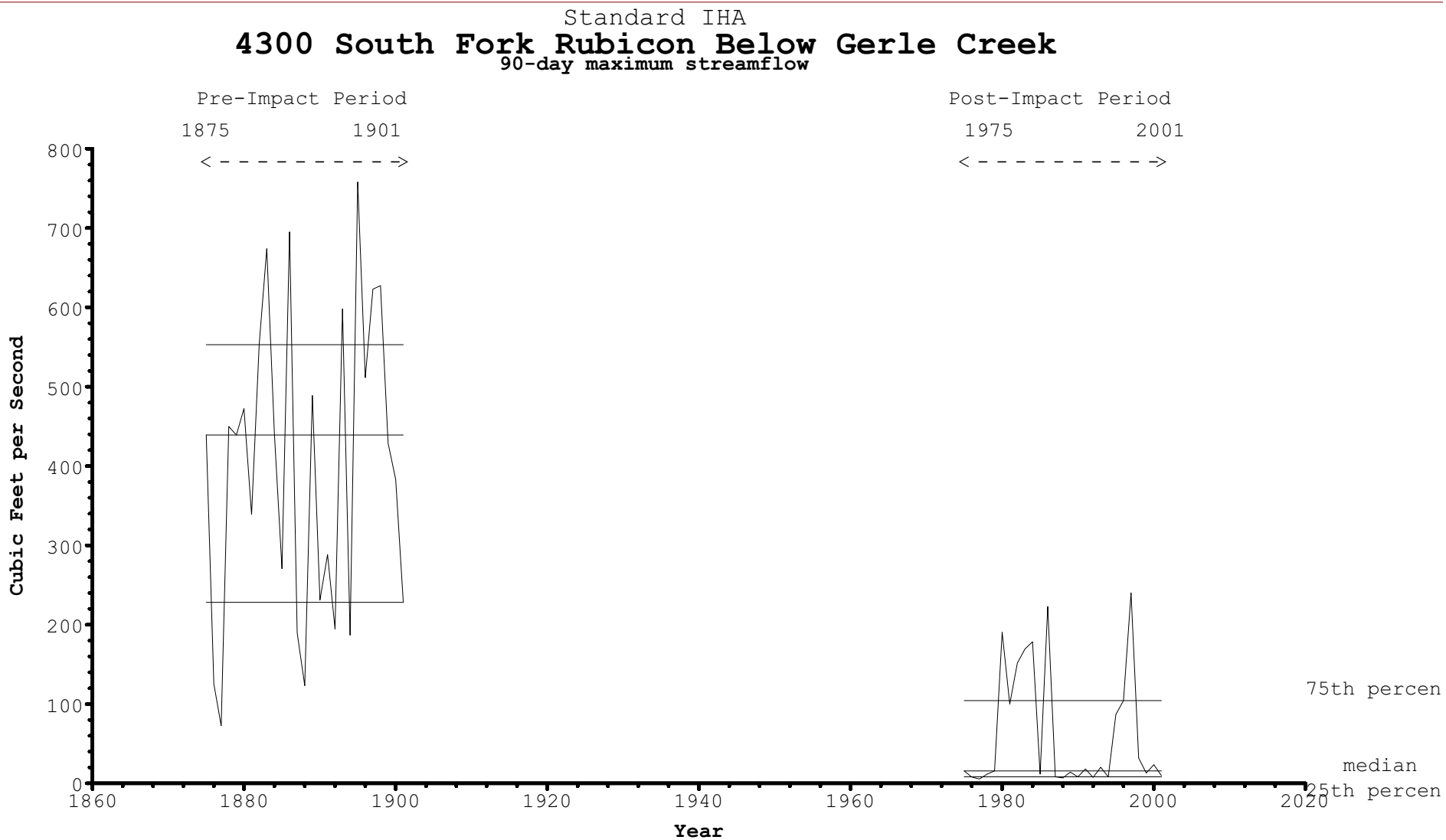






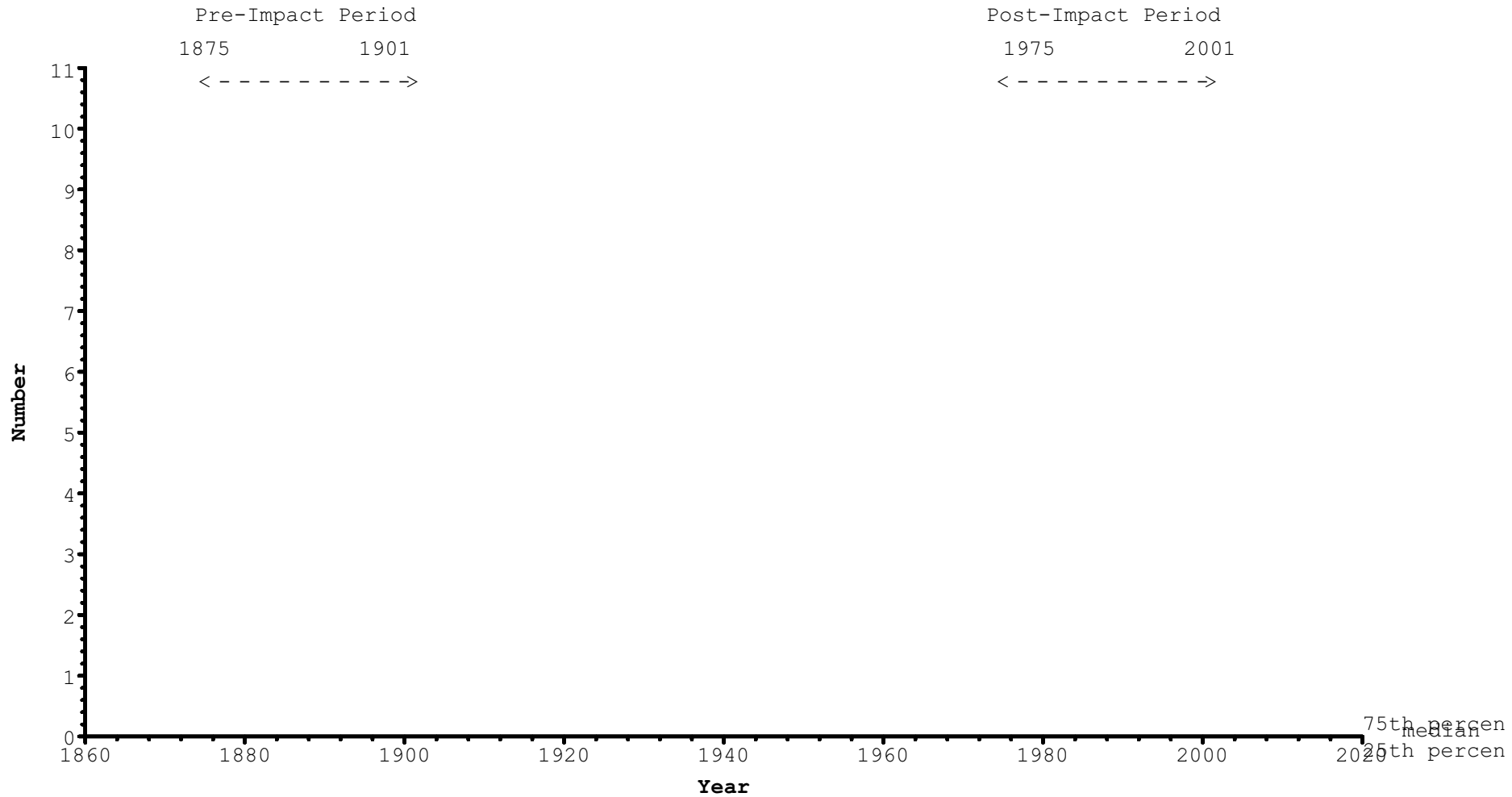
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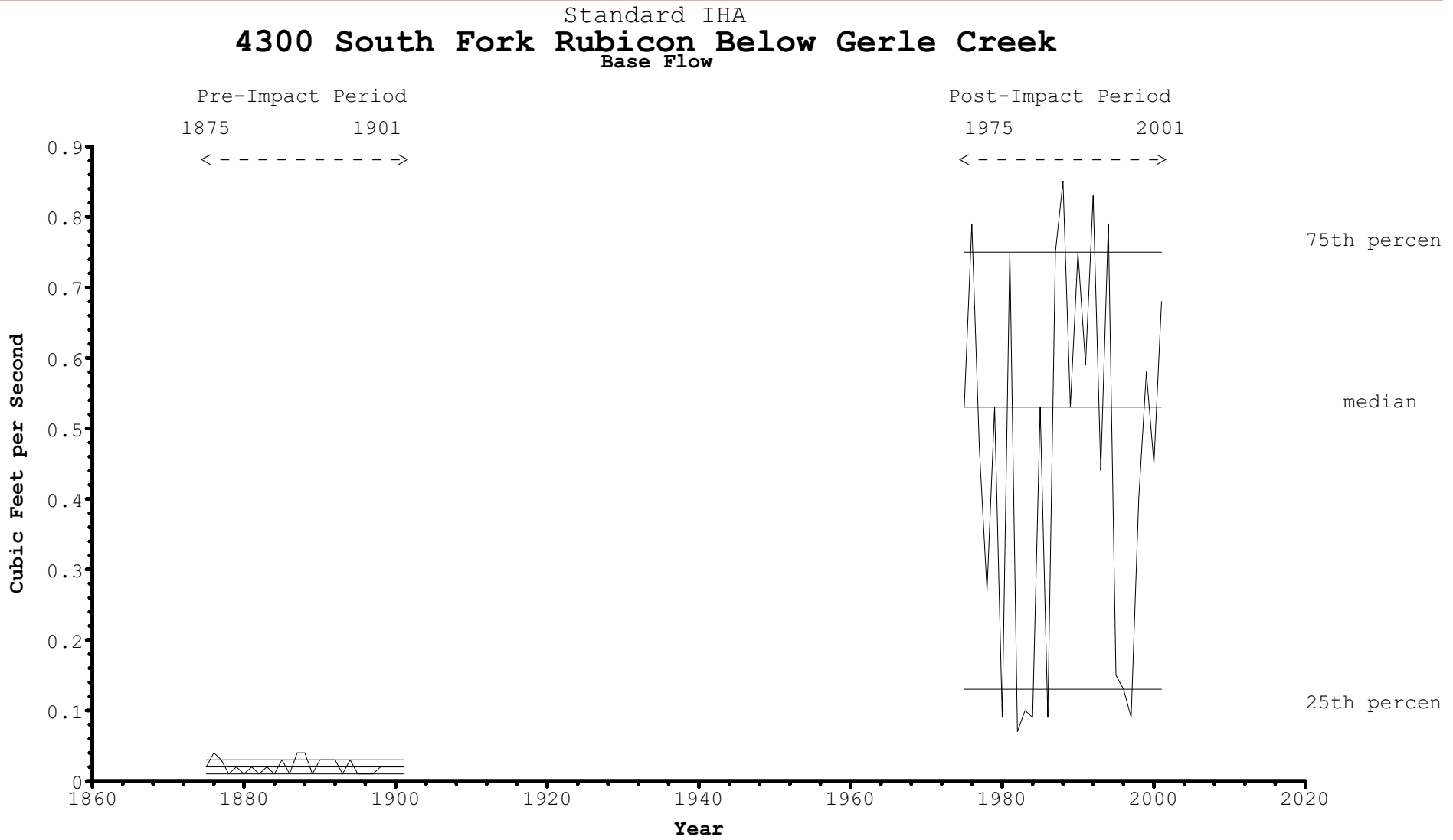


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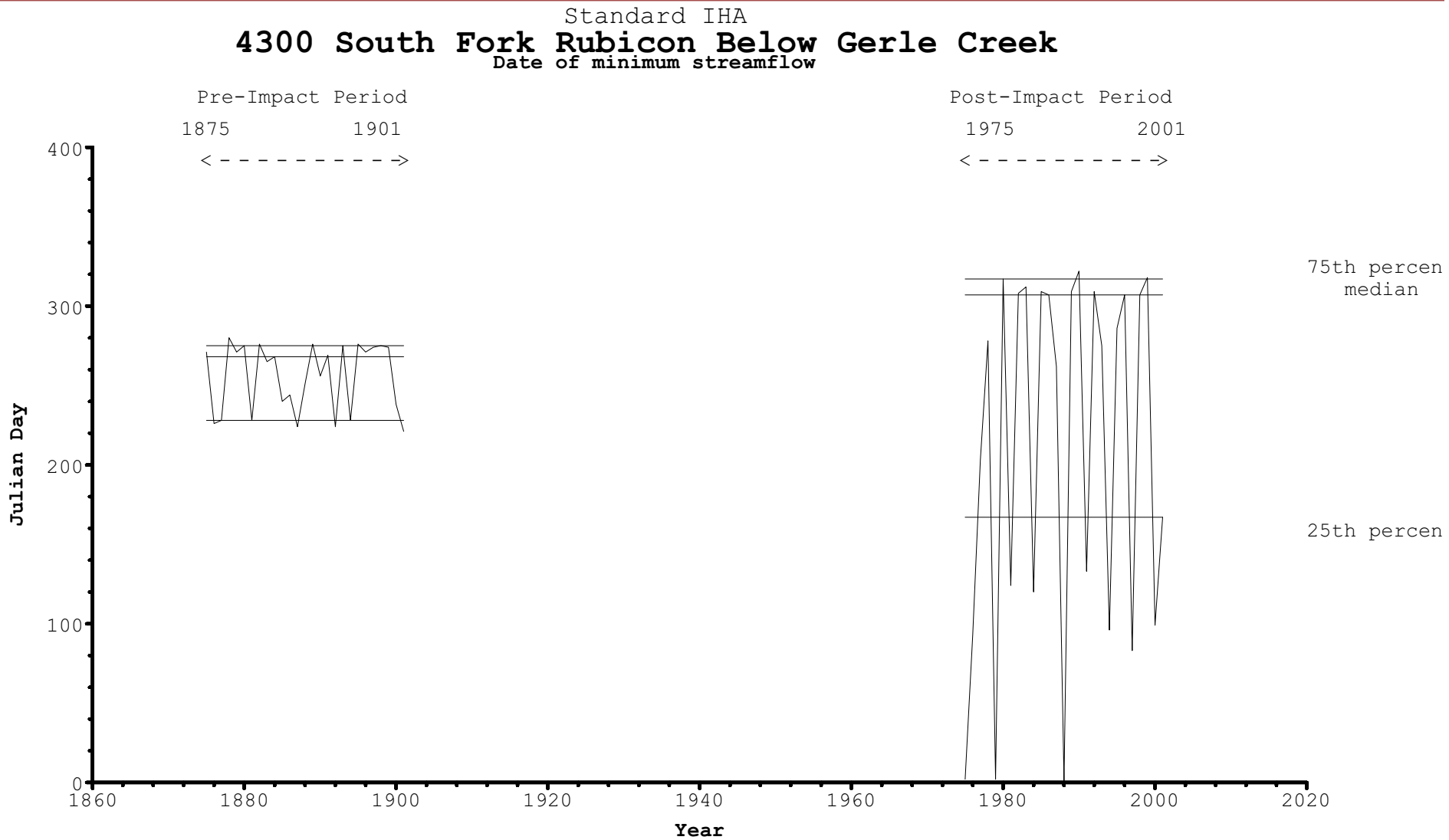
Standard IHA  
**4300 South Fork Rubicon Below Gerle Creek**  
 Zero streamflow days



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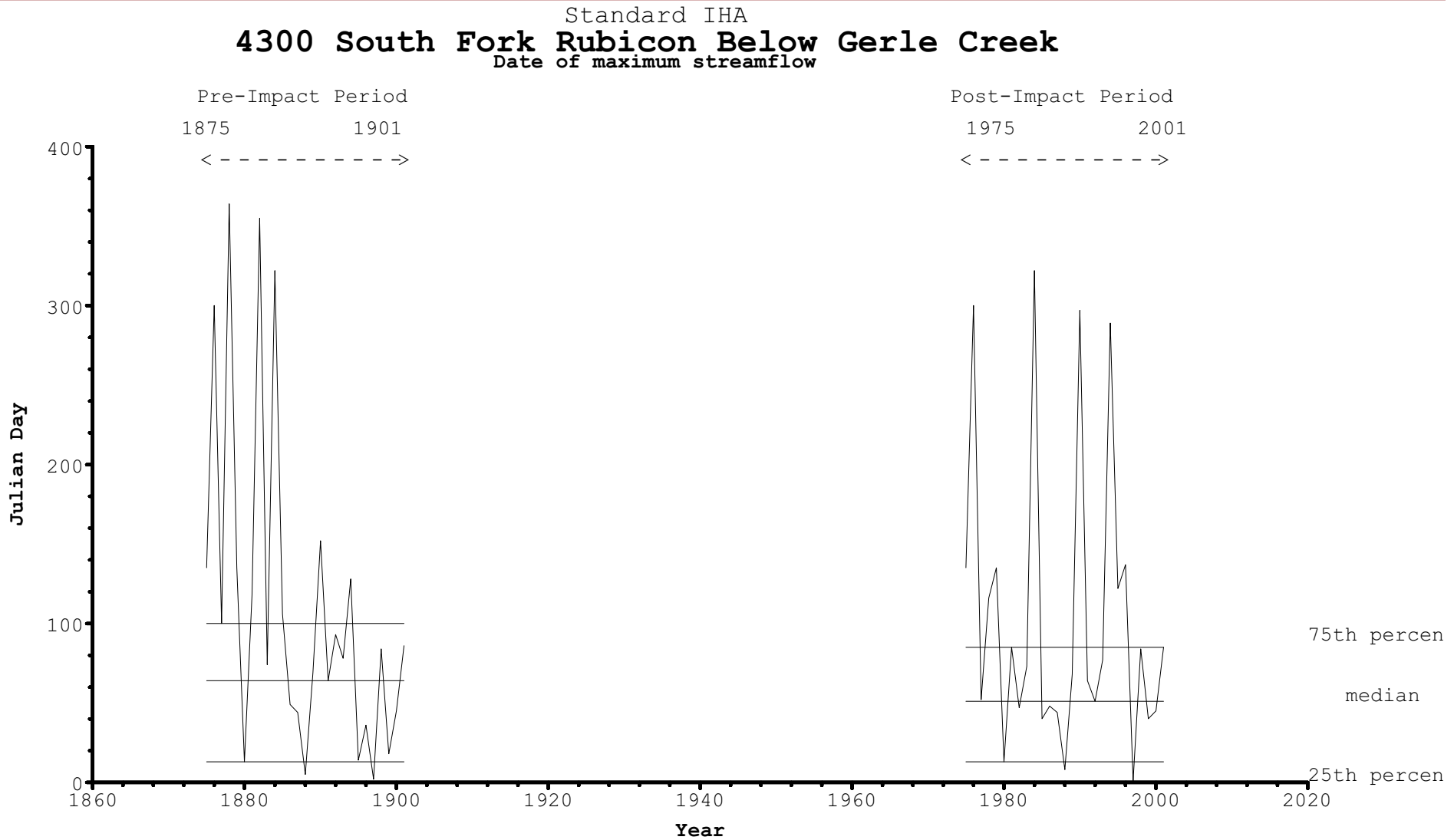


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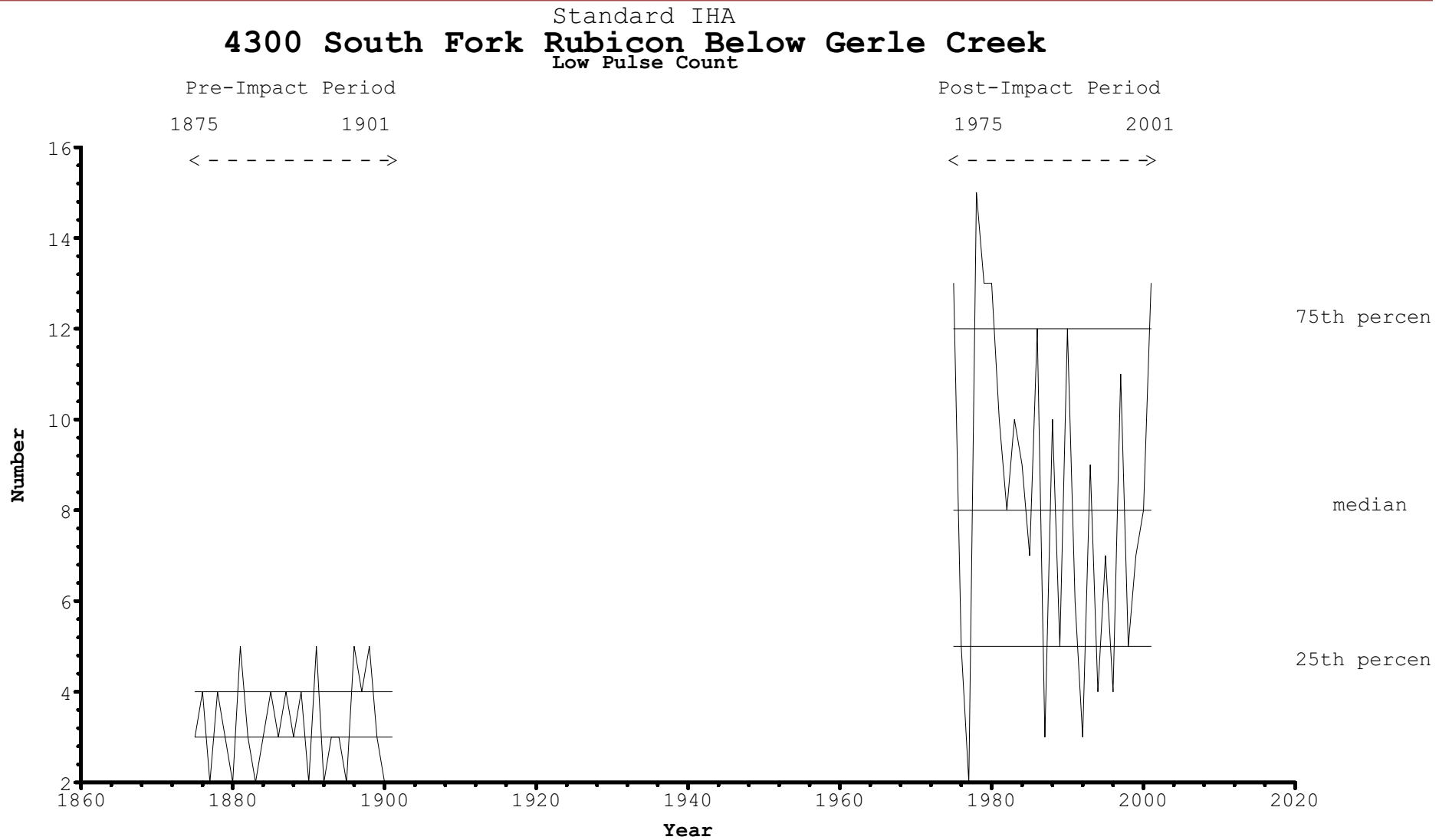


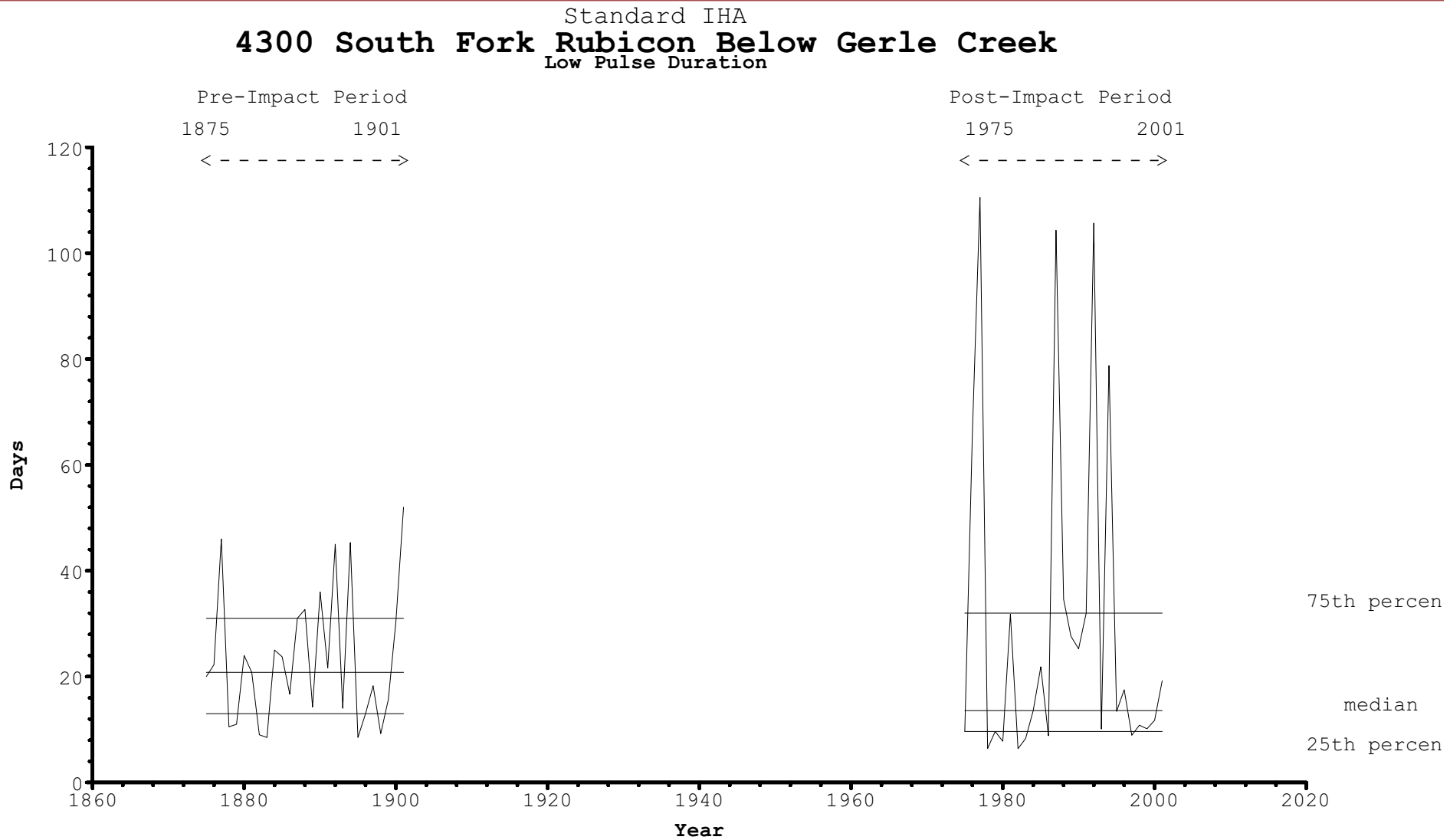
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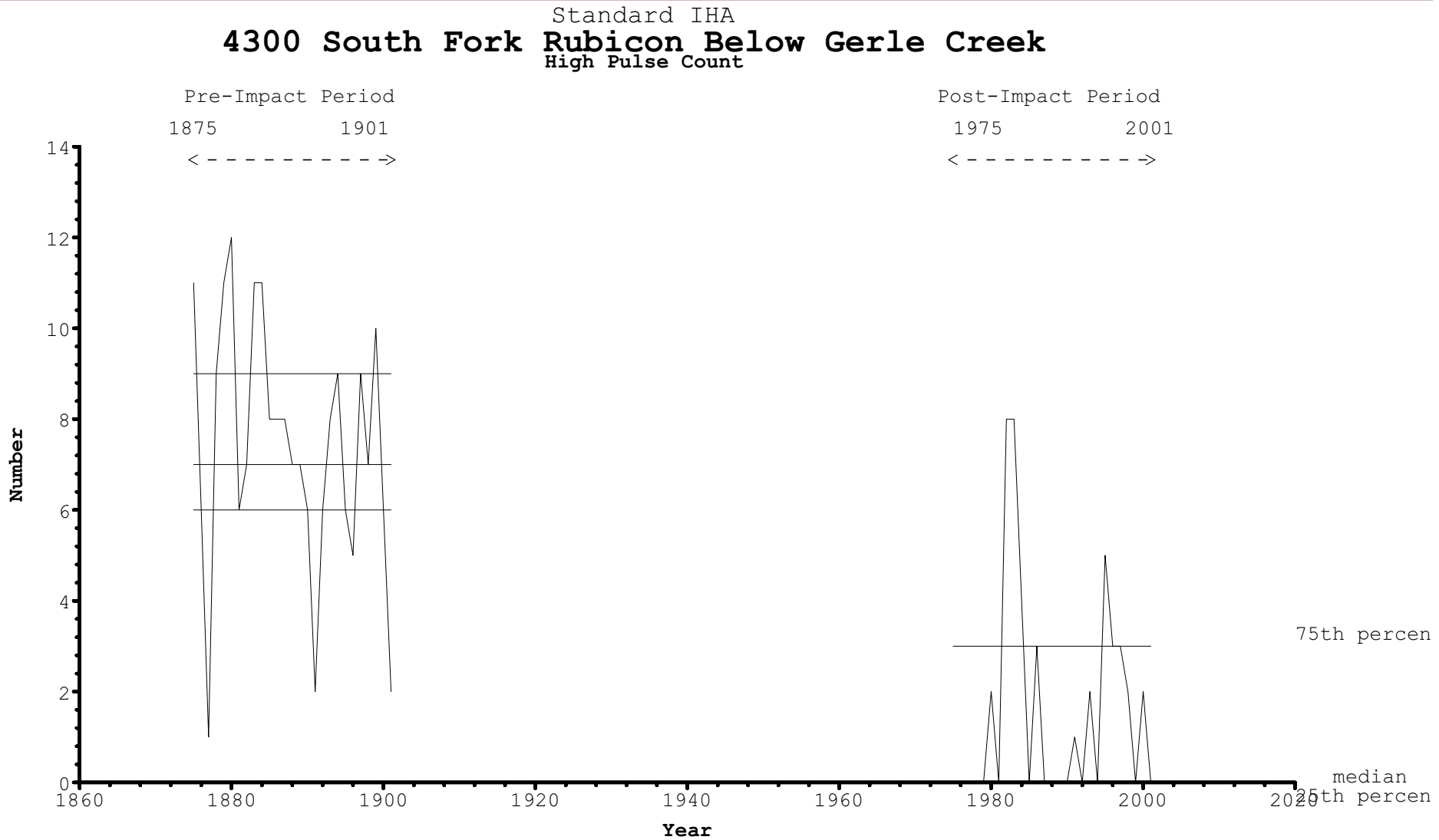


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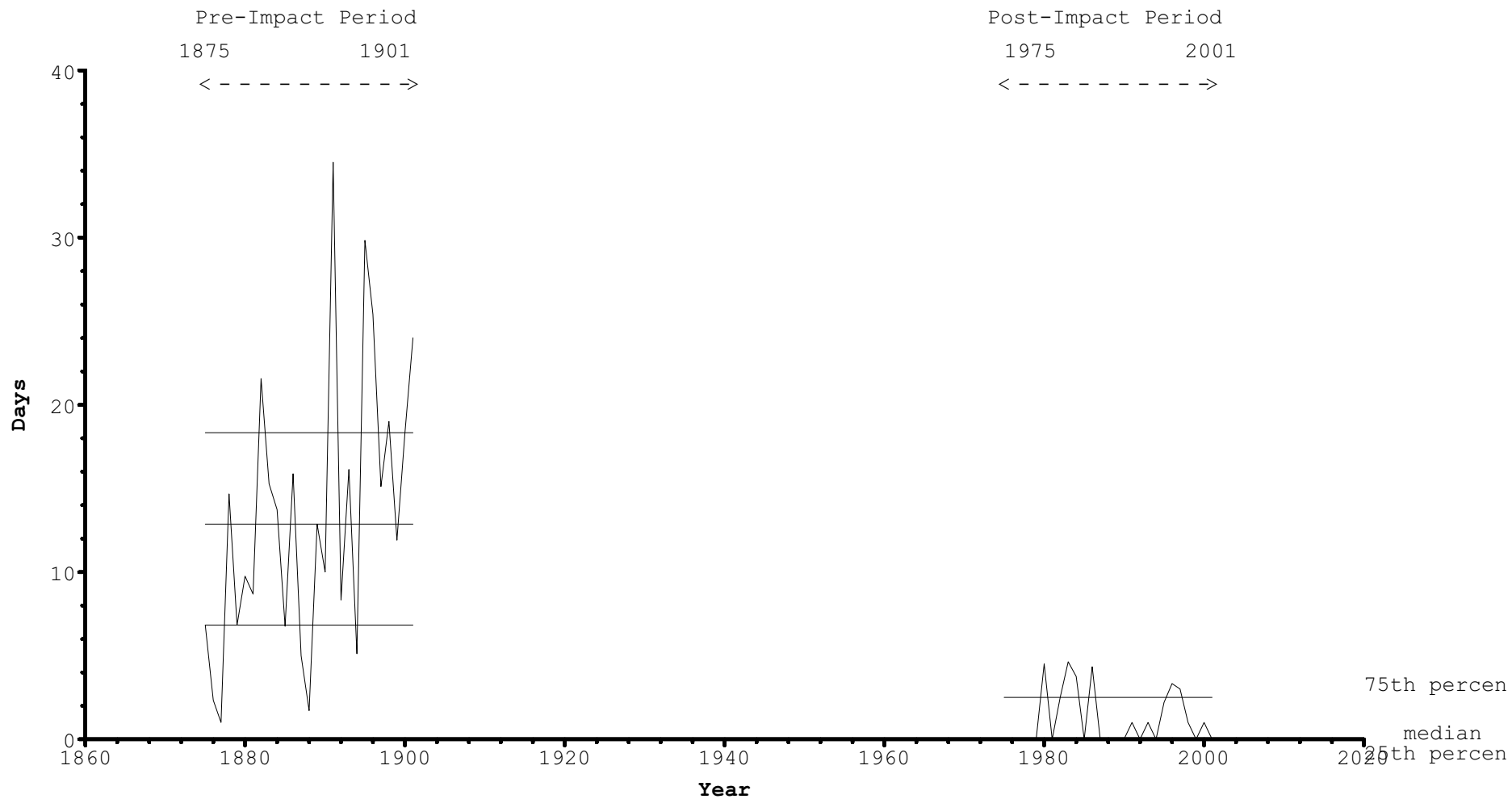




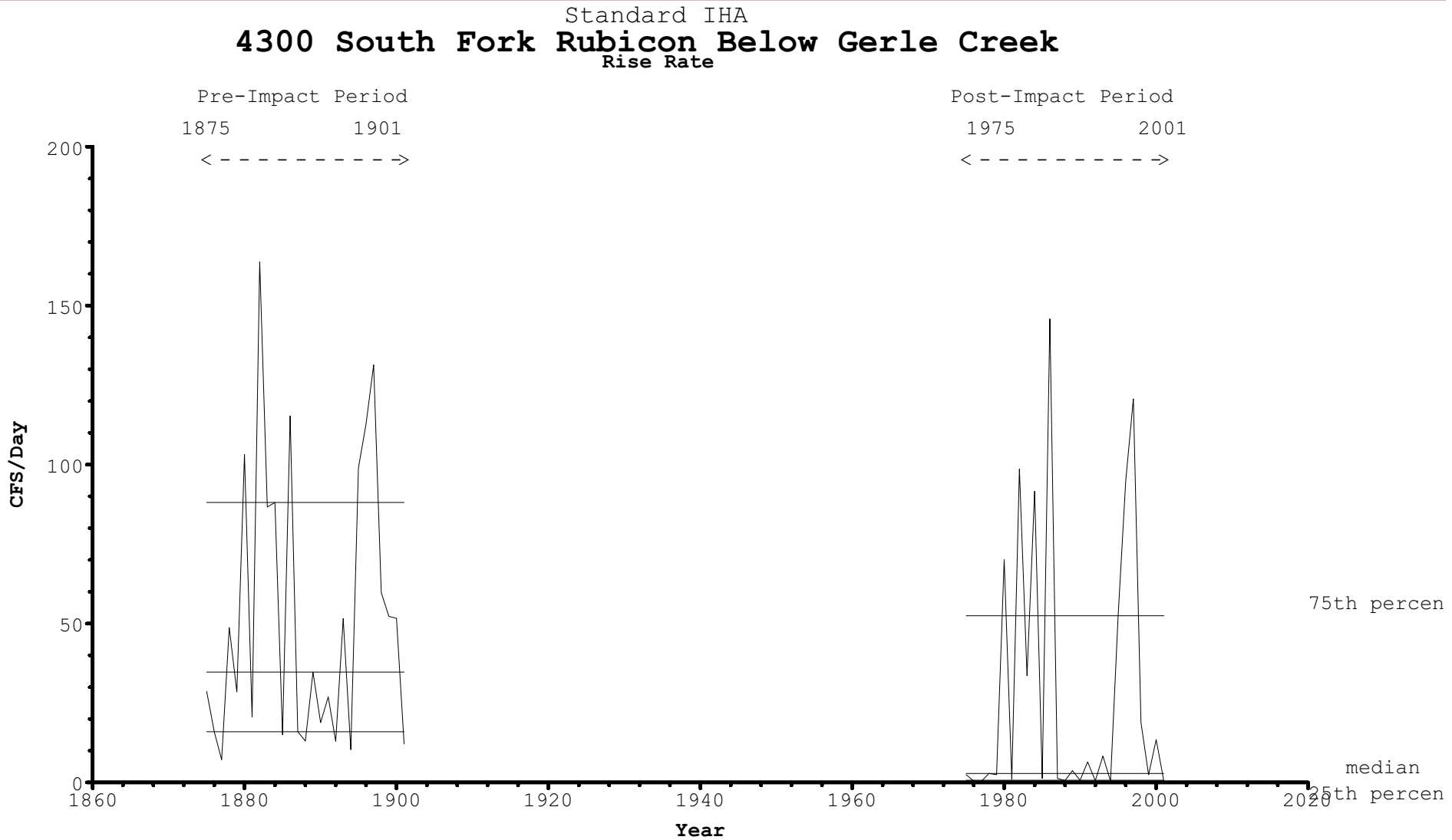
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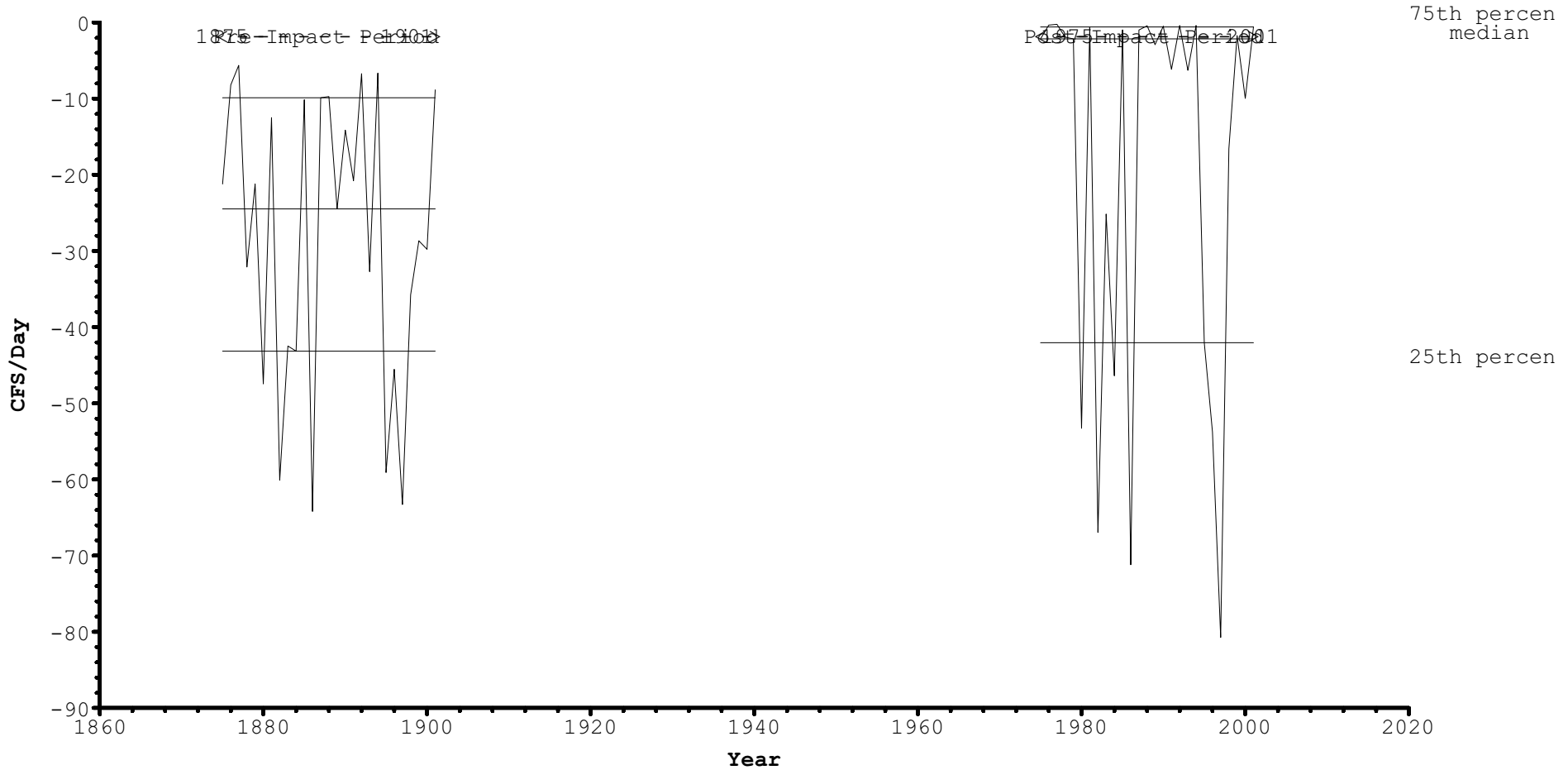
Standard IHA  
**4300 South Fork Rubicon Below Gerle Creek**  
 High Pulse Duration



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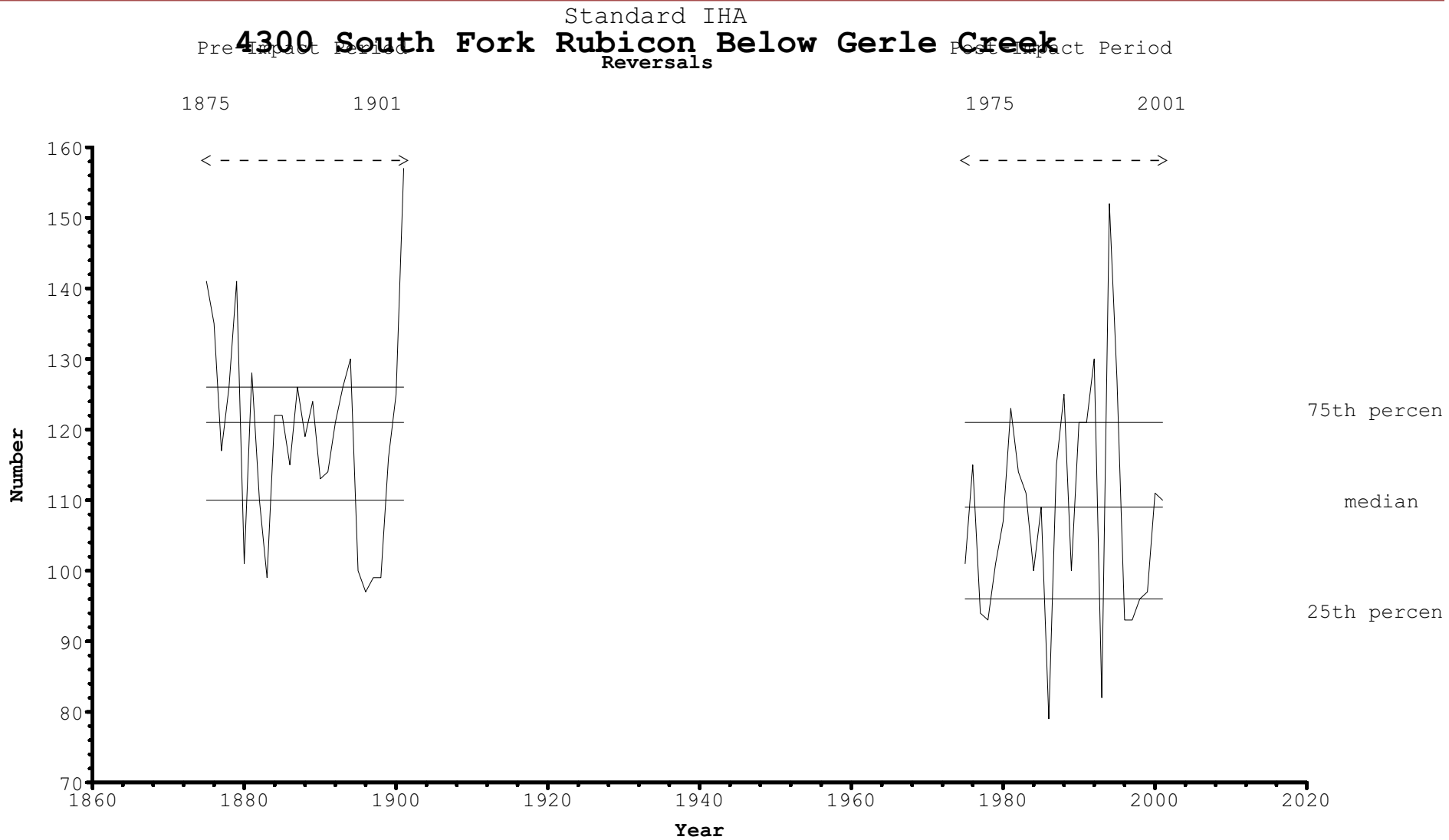


Standard IHA  
**4300 South Fork Rubicon Below Gerle Creek**  
Fall Rate



File(s) Used: P:\Framatome\IHA\2-Rubicon\rubicon.ann, P:\Framatome\IHA\2-Rubicon\rubicon.baw

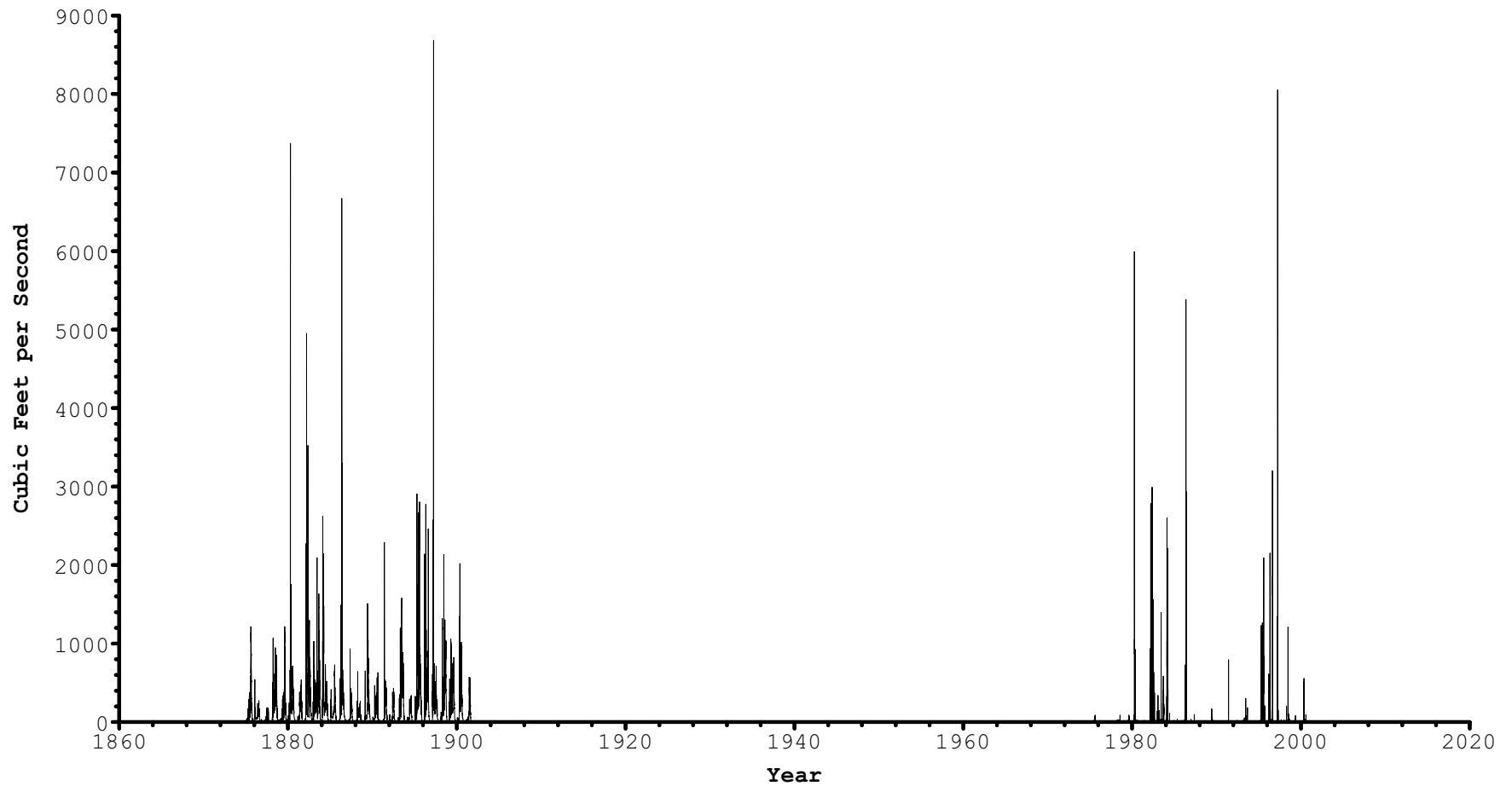
Analysis 2 - South Fork Rubicon Below Gerle Creek (Unregulated) versus 4300 South Fork Rubicon Below Gerle Creek (Regulated)



File(s) Used: P:\Framatome\IHA\2-Rubicon\rubicon.ann, P:\Framatome\IHA\2-Rubicon\rubicon.baw



### 4300 South Fork Rubicon Below Gerle Creek



File(s) Used: P:\Framatome\IHA\2-Rubicon\rubicon.dat

**Analysis 3 - South Fork Silver Creek below Ice House Reservoir (Unregulated) versus 4415 South Fork Silver Creek below Ice House Reservoir (Regulated)**

**Errors**

**No Errors**

### Analysis 3 - South Fork Silver Creek below Ice House Reservoir (Unregulated) versus 4415 South Fork Silver Creek below Ice House Reservoir (Regulated)

IHA Annual Summary Statistics

Year	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
1886	6.41	8.89	34.32	99.96	277.62	283.76	229.66	324.47	187.64	47.21	13.19	11.08	3.99	4.09	4.17	6.16	8.89
1887	11.87	6.71	7.14	9.77	33.13	35.67	160.13	111.84	22.4	5.67	2.67	2.21	1.79	1.83	1.91	2.15	2.66
1888	3.34	6.89	32.45	28.11	33.6	67.11	102.3	81.73	31.02	5.1	2.3	2.1	1.42	1.42	1.56	1.69	1.95
1889	1.65	18.76	18.25	15.76	28.67	175.15	297.76	227.46	124.09	15.24	5.24	6.17	1.34	1.46	1.49	1.64	5.83
1890	12.01	13.79	14.92	28.49	24.01	65.01	175.34	107.85	80.59	11.68	3.24	2.86	1.97	2.01	2.07	2.44	3.07
1891	3.27	3.83	4.19	4.7	11.65	64.39	85.14	204.5	120.64	20.01	5	2.48	1.82	1.89	1.92	2.02	3.63
1892	6.87	10.62	9.61	9.51	39.56	56.01	156.93	72.07	23.76	5.57	2.2	1.61	1.22	1.25	1.31	1.58	2
1893	5.08	7.2	23.23	43.02	40.03	134.15	216.57	462.04	242.53	66.64	14.79	4.93	1.46	1.63	1.76	4.45	4.85
1894	5.5	4.41	13.34	17.62	21.5	50.01	117.76	129.85	24.13	4.17	1.61	1.72	1.18	1.25	1.32	1.44	1.98
1895	2.73	12.03	15.68	150.11	88.94	189.26	213.31	439.95	550.64	278.15	51.33	13.79	1.8	2.03	2.25	2.73	7.66
1896	6.33	5.31	74.16	66.01	161.84	129.61	240.36	471.35	173.35	42.24	10.01	4.83	3.73	3.66	3.28	3.13	4.63
1897	3.64	62.04	192.34	454.39	95.53	139.01	219.94	250.49	124.84	24.44	7	3.69	2.09	2.15	2.29	3.47	4.97
1898	5.94	12.86	17.11	114.38	67.82	140.17	161.3	272.67	563.23	188.62	19.35	8.44	2.6	3.15	3.55	5.05	8.14
1899	6.4	22.16	39.07	84.53	81.53	80.47	144.85	425.64	270.79	47.43	10.77	4.21	2.93	2.94	2.84	2.92	5.09
1900	4.74	8	8.51	48.7	73.66	83.3	219.82	301.98	88.4	15.64	4.07	3.76	2.55	2.55	2.38	2.8	3.89
1901	4.54	6.89	9.21	9.44	11.45	67.78	104.98	168.93	14.75	4.3	1.91	1.85	1.37	1.47	1.49	1.63	2.62
1986	12.48	8.24	4.85	3.86	7.03	54.98	4.01	9.49	9.66	16	16.06	16.43	2.8	3.2	3.46	3.83	4.51
1987	12.65	8.51	5.06	3.65	3.97	4.13	6.07	6.84	6.51	5.46	5.72	5.53	3	3.07	3.13	3.58	3.91
1988	5.83	6.15	5.4	5.73	5.74	6.05	5.62	5.49	5.54	5.59	5.52	5.51	5	5	5.07	5.32	5.44
1989	5.32	6.07	5.49	5.8	6.21	7.24	4.06	9.72	8.74	16	16.13	16.07	3	3	3.04	4.04	5.62
1990	13.9	8.47	4.78	5.11	4.81	4.29	6.13	6.68	5.87	5.76	5.96	6	3.3	3.3	3.36	4.11	4.71
1991	5.74	5.72	5.88	5.72	5.96	6.58	6.1	6.24	5.91	5.94	5.79	5.95	5.1	5.27	5.37	5.58	5.77
1992	6.02	5.78	5.55	5.61	6.15	6.06	6.08	6.25	6.01	5.71	5.21	5.29	5.1	5.1	5.1	5.14	5.29
1993	5.48	5.65	6.12	6.84	6.11	7.04	4.37	9.67	8.6	16	16.1	16	3.5	3.5	3.61	4.37	5.76
1994	12.45	7.95	4.78	3.65	4.14	4.33	5.02	5.61	5.55	6.1	6.2	6.2	3.1	3.13	3.21	3.49	4.01
1995	5.74	5.7	6.03	6.98	6.27	7.78	5.33	9.5	167.82	61.9	16.23	15.8	3.6	3.6	3.64	5.33	5.81
1996	13.45	8.32	5.53	4.54	5.99	6.15	6.07	87.95	10.38	17.52	17.77	17.57	3.9	3.93	3.97	4.5	5.16
1997	13.52	11.21	6.03	183.63	5.94	5.18	5.12	9.35	14.39	16.9	18.19	17.5	4.6	4.6	4.61	4.71	5.39
1998	14.32	8.82	5.95	5.54	4.87	6.07	5.7	10.03	85.82	25	16	17.17	4	4.1	4.2	4.73	5.36
1999	13.35	8.5	5.91	4.83	5.43	5.25	5.08	11.26	12.3	15.77	15.84	15.8	3.9	4	4.39	4.71	5.11
2000	13.16	9.47	4.97	4.66	4.83	4.96	4.73	9.69	10.12	17.39	16.48	15.93	3.7	3.7	3.79	4.45	4.8
2001	13.52	8.11	5	4.13	4.35	4.9	5.16	6.07	6.26	6.02	6.06	6.46	3.9	2.47	1.06	0.25	0.08

### Analysis 3 - South Fork Silver Creek below Ice House Reservoir (Unregulated) versus 4415 South Fork Silver Creek below Ice House Reservoir (Regulated)

IHA Annual Summary Statistics (Cont)

Year	1-day max	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	LRise rate	Fall rate	Reversals
1886	2025.63	1529.43	830.27	448.23	295.2	0	0.03	256	68	4	10.75	6	24.67	51	-24.79	93
1887	292.3	229.62	217.5	183.8	104.42	0	0.06	274	44	4	22	2	20.5	5.89	-3.69	116
1888	195.8	134.2	123.43	104.02	84.09	0	0.05	251	345	4	27	7	4.14	6.17	-4.18	113
1889	611.01	468.83	401.47	310.25	241.71	0	0.02	306	68	6	9.33	4	25.75	16.42	-9.55	122
1890	279.43	227.88	201.37	175.34	130.13	0	0.05	256	114	3	27.33	5	12.4	8.17	-4.18	101
1891	752.69	367.65	286.87	224.42	138.67	0	0.04	269	64	6	24.33	4	14.25	12.51	-7.76	108
1892	306.16	238.99	204.18	156.93	102.07	0	0.04	273	108	4	20.25	3	14.67	6.83	-4.03	129
1893	627.5	574.64	535.19	465.67	315.76	0	0.02	288	152	7	7.14	3	40	23.65	-11.45	112
1894	246.08	232.47	210.77	159.65	101.27	0	0.04	254	132	4	34.25	5	7.2	5.62	-3.33	118
1895	1557.86	1078.76	779.74	564.02	448.5	0	0.01	276	122	1	0	6	27.17	47.46	-24.77	90
1896	1684.95	1392.27	936.61	498.87	307.71	0	0.03	271	137	5	15.8	6	23.33	47.35	-18.16	89
1897	5084.66	3266.45	1753.2	540.16	259.86	0	0.02	284	1	6	10.33	8	18.75	69.43	-33.42	103
1898	910.44	718.63	687.13	563.23	368.06	0	0.03	275	84	4	8	5	25.6	28.85	-14.81	95
1899	806.57	791.49	718.81	459.14	287.58	0	0.03	274	147	5	10	7	14.43	22.87	-11.34	104
1900	784.45	538.76	421.45	310.87	214.93	0	0.03	274	129	7	11.29	6	15.67	18.48	-10.86	123
1901	293.1	285.62	264.38	207.37	117.01	0	0.04	242	129	7	16.43	3	14.67	5.76	-3.73	125
1986	649	481.33	226.5	59.06	23.7	0	0.25	3	68	6	23.83	1	4	9.18	-6.9	71
1987	15	13.33	13	12.63	8.82	0	0.51	11	275	5	50.8	0	0	0.31	-0.38	95
1988	6.6	6.5	6.49	6.19	5.85	0	0.89	362	325	9	36.22	0	0	0.19	-0.19	99
1989	18	16.67	16.29	16.13	16.07	0	0.34	102	231	11	10.91	0	0	0.5	-0.4	85
1990	16	14.67	14.29	13.93	9.15	0	0.52	49	275	9	29.44	0	0	0.33	-0.39	88
1991	12	9.1	7.57	6.62	6.31	0	0.9	315	64	18	14.61	0	0	0.31	-0.28	83
1992	10	7.47	6.79	6.41	6.17	0	0.88	8	113	12	27.75	0	0	0.29	-0.24	86
1993	18	16.67	16.29	16.1	16.03	0	0.4	112	224	9	8.33	0	0	0.5	-0.41	83
1994	14	13.33	13.14	12.43	8.48	0	0.53	22	275	6	50.33	0	0	0.23	-0.34	84
1995	451	450.33	398.86	217.93	83.42	0	0.14	108	178	10	12.4	2	12.5	7.32	-6.22	95
1996	1250	768.67	355	90.67	40.66	0	0.24	11	137	12	11.67	1	4	20.46	-16.5	62
1997	2840	1751.67	789.29	189.69	70.45	0	0.18	335	2	7	16.71	2	2.5	43.14	-30.68	78
1998	457	382.33	228.43	98.3	43.72	0	0.25	6	173	12	11.08	2	3.5	7.97	-8.49	115
1999	16	16	16	16	15.82	0	0.44	6	190	8	18.75	0	0	0.69	-0.56	63
2000	19	18	18	17.4	16.64	0	0.39	6	309	3	53	0	0	0.8	-0.63	83
2001	15	14.33	14.14	13.53	8.97	0	0.17	7	275	6	49.17	0	0	0.25	-0.4	63

# Analysis 3 - South Fork Silver Creek below Ice House Reservoir (Unregulated) versus 4415 South Fork Silver Creek below Ice House Reservoir (Regulated)

## Non-Parametric IHA Scorecard

Pre-impact period: 1886-1901 (16 years)

Post-impact period: 1986-2001 (16 years)

Watershed area	1.00	
Mean annual flow	76.31	4.73
Mean flow/area	76.31	4.73
Annual C. V.	.99	1.25
Flow predictability	.43	.61
Constancy/predictability	.28	.91
WARNING: Some of the Colwell Parameters are based on < 20 years of data		
% of floods in 60d period	.48	.54
flood-free season	84.00	175.00

	MEDIANS		COEFF. of DISP.		DEVIATION FACTOR		SIGNIFICANCE COUNT	
	Pre	Post	Pre	Post	Medians	C.V.	Medians	C.V.
Parameter Group #1								
October	5.3	12.6	.57	.62	1.37	.09	.00	.68
November	8.4	8.2	.81	.32	.03	.60	.68	.35
December	16.4	5.5	1.50	.17	.66	.88	.02	.08
January	35.8	5.3	2.37	.29	.85	.88	.10	.10
February	39.8	5.8	1.56	.23	.85	.85	.29	.14
March	81.9	6.1	.92	.33	.93	.64	.32	.72
April	168.3	5.2	.57	.24	.97	.57	.50	.96
May	239.0	9.4	1.19	.37	.96	.69	.33	.69
June	122.4	8.7	1.66	.68	.93	.59	.16	.33
July	17.8	15.9	2.34	.72	.11	.69	.36	.31
August	5.1	15.9	1.99	.65	2.11	.67	.00	.33
September	3.7	15.8	1.00	.66	3.24	.34	.00	.30
Parameter Group #2								
1-day minimum	1.8	3.8	.67	.34	1.10	.49	.00	.19
3-day minimum	1.9	3.6	.71	.36	.87	.49	.00	.17
7-day minimum	2.0	3.7	.61	.35	.86	.43	.00	.22
30-day minimum	2.6	4.5	.67	.26	.73	.62	.00	.16
90-day minimum	4.3	5.2	.71	.19	.23	.72	.05	.18
1-day maximum	690.1	17.0	1.60	25.96	.98	15.23	.08	.01
3-day maximum	503.8	16.3	1.53	25.71	.97	15.76	.07	.01
7-day maximum	411.5	16.1	1.34	13.31	.96	8.92	.04	.01
30-day maximum	310.6	16.0	1.01	4.38	.95	3.34	.09	.03
90-day maximum	228.3	15.9	.86	1.75	.93	1.03	.16	.09
Number of zero days	.0	.0	.00	.00	999999.00	999999.00	.00	.00
Base flow	.0	.4	.68	.74	10.89	.09	.00	.95
Parameter Group #3								
Date of minimum	273.5	7.5	.05	.11	.55	.95	.45	.01
Date of maximum	118.0	207.0	.19	.43	.49	1.30	.00	.00
Parameter Group #4								
Low pulse count	4.5	9.0	.44	.64	1.00	.44	.00	.25
Low pulse duration	13.5	21.3	1.05	1.60	.57	.52	.14	.14
High pulse count	5.0	.0	.55	.00	1.00	1.00	.08	.07
High pulse duration	17.2	.0	.64	.00	1.00	1.00	.30	.30
The low pulse threshold is	6.22							
The high pulse level is	95.45							
Parameter Group #5								
Rise rate	17.5	.5	2.09	15.04	.97	6.21	.03	.01
Fall rate	-10.2	-.4	-1.30	-15.58	.96	10.99	.08	.01
Number of reversals	110.0	83.5	.22	.25	.24	.10	.01	.75

### Analysis 3 - South Fork Silver Creek below Ice House Reservoir (Unregulated) versus 4415 South Fork Silver Creek below Ice House Reservoir (Regulated)

Variance Data, Box and Whisker Format

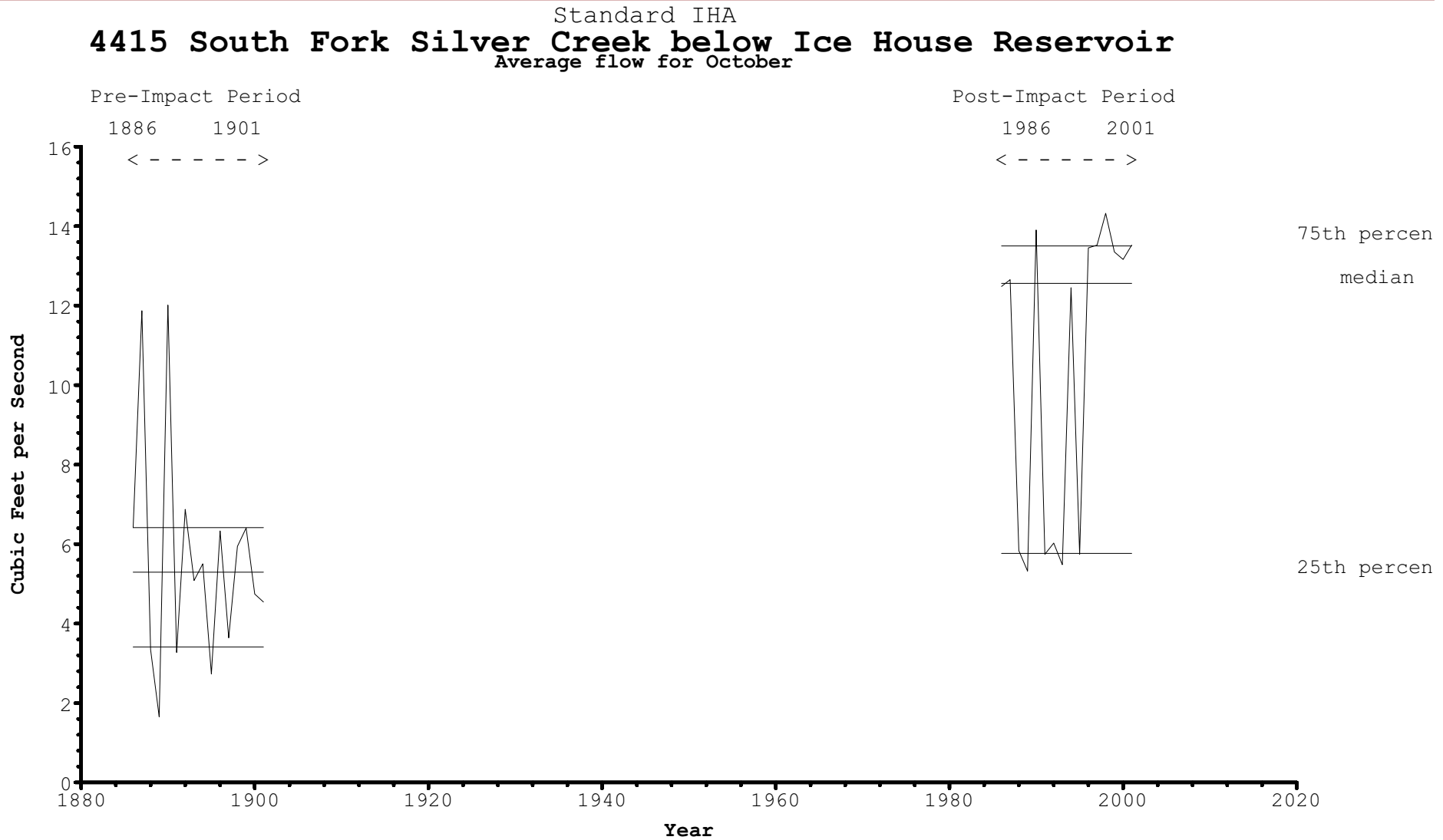
	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
<b>Pre-Impact Distribution</b>																	
1-day min	1.65	3.83	4.19	4.7	11.45	35.67	85.14	72.07	14.75	4.17	1.61	1.61	1.18	1.25	1.31	1.44	1.95
25 pctile	3.41	6.76	9.31	11.27	25.17	64.55	124.53	116.34	25.85	5.6	2.39	2.13	1.38	1.46	1.51	1.65	2.63
Median	5.29	8.44	16.4	35.75	39.8	81.89	168.32	238.97	122.36	17.83	5.12	3.72	1.81	1.95	2	2.58	4.26
75 pctile	6.41	13.55	33.86	96.1	87.08	139.88	219.91	400.35	228.81	47.38	12.58	5.86	2.59	2.84	2.73	3.39	5.64
1-day max	12.01	62.04	192.34	454.39	277.62	283.76	297.76	471.35	563.23	278.15	51.33	13.79	3.99	4.09	4.17	6.16	8.89
<b>Post-Impact Distribution</b>																	
1-day min	5.32	5.65	4.78	3.65	3.97	4.13	4.01	5.49	5.54	5.46	5.21	5.29	2.8	2.47	1.06	0.25	0.08
25 pctile	5.76	5.86	4.98	4.23	4.81	4.92	4.8	6.24	5.93	5.8	5.83	5.96	3.15	3.15	3.25	3.88	4.56
Median	12.56	8.17	5.51	5.32	5.84	6.05	5.24	9.42	8.67	15.89	15.92	15.8	3.8	3.65	3.71	4.48	5.22
75 pctile	13.5	8.51	5.94	5.78	6.14	6.92	6.07	9.72	11.82	17.27	16.2	16.34	4.45	4.47	4.56	5.04	5.58
1-day max	14.32	11.21	6.12	183.63	7.03	54.98	6.13	87.95	167.82	61.9	18.19	17.57	5.1	5.27	5.37	5.58	5.81

	1-day max	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	LRise rate	Fall rate	Reversals
<b>Pre-Impact Distribution</b>																
1-day min	195.8	134.2	123.43	104.02	84.09	0	0.01	242	1	1	0	2	4.14	5.62	-33.42	89
25 pctile	292.5	234.1	212.45	177.45	107.57	0	0.02	256	68	4	9.5	3.25	14.29	6.33	-17.32	96.5
Median	690.09	503.8	411.46	310.56	228.32	0	0.03	273.5	118	4.5	13.54	5	17.21	17.45	-10.2	110
75 pctile	1396.01	1006.94	764.51	490.57	304.58	0	0.04	275.75	135.75	6	23.75	6	25.37	42.73	-4.06	121
1-day max	5084.66	3266.45	1753.2	564.02	448.5	0	0.06	306	345	7	34.25	8	40	69.43	-3.33	129
<b>Post-Impact Distribution</b>																
1-day min	6.6	6.5	6.49	6.19	5.85	0	0.14	3	2	3	8.33	0	0	0.19	-30.68	62
25 pctile	14.25	13.33	13.04	12.48	8.57	0	0.24	3.75	119	6	11.85	0	0	0.29	-6.73	72.75
Median	17	16.33	16.14	16.05	15.93	0	0.39	7.5	207	9	21.29	0	0	0.5	-0.41	83.5
75 pctile	455.5	433.33	227.95	82.77	36.42	0	0.53	42.25	275	11.75	45.93	1	3.25	7.81	-0.35	93.25
1-day max	2840	1751.67	789.29	217.93	83.42	0	0.9	362	325	18	53	2	12.5	43.14	-0.19	115

**Analysis 3 - South Fork Silver Creek below Ice House Reservoir (Unregulated) versus 4415 South Fork Silver Creek below Ice House Reservoir (Regulated)**

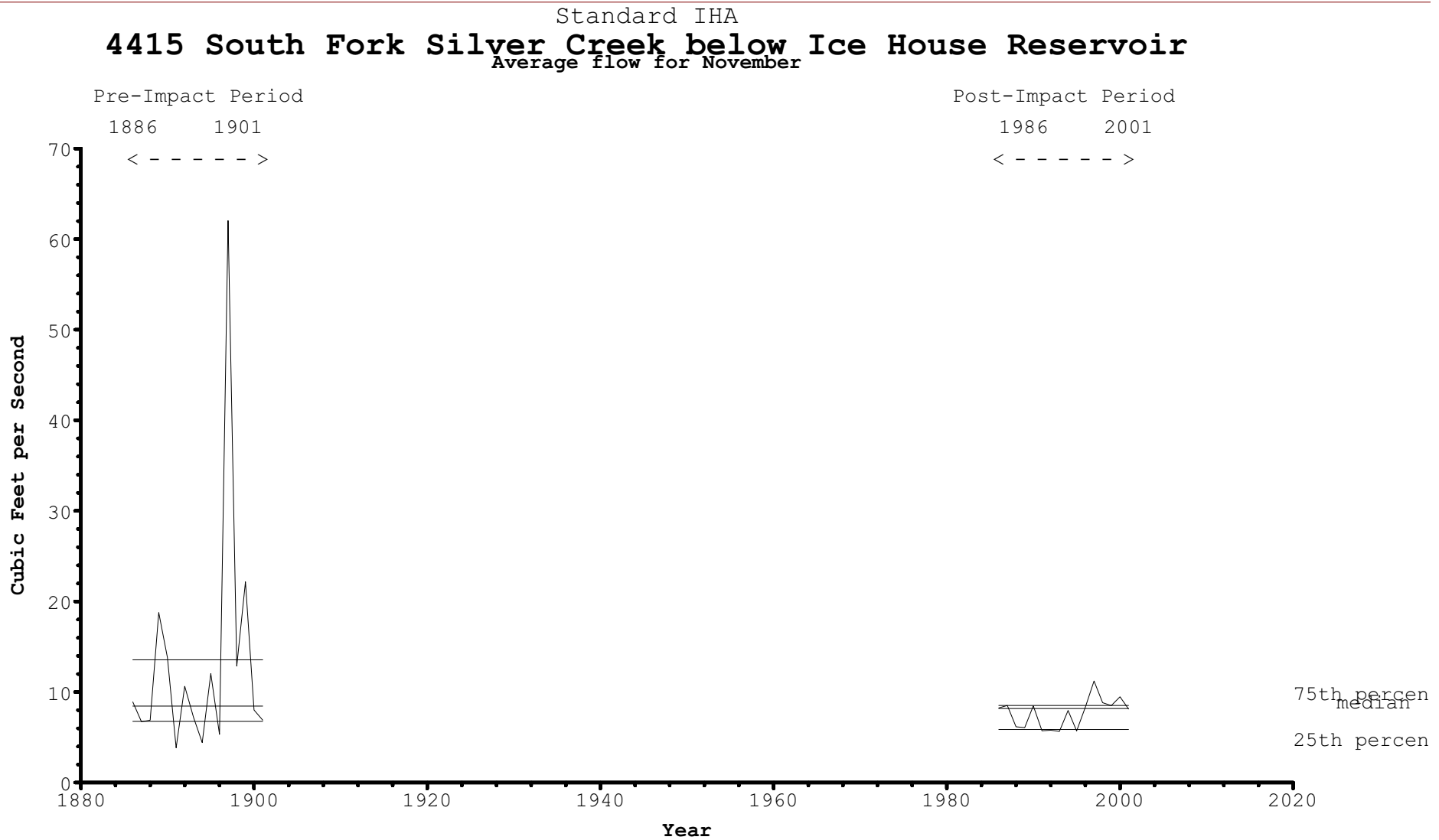
IHA Percentile Data

	Pre-impact period: 1886-1901 (16 years)						Post-impact period: 1986-2001 (16 years)					
	10%	25%	50%	75%	90%	(75-25)/50	10%	25%	50%	75%	90%	(75-25)/50
<b>Parameter Group #1</b>												
October	2.41	3.41	5.29	6.41	11.91	.57	5.43	5.76	12.56	13.50	14.03	.62
November	4.24	6.76	8.44	13.55	34.13	.81	5.69	5.86	8.17	8.51	9.99	.32
December	6.25	9.31	16.40	33.86	109.62	1.50	4.78	4.98	5.51	5.94	6.06	.17
January	8.02	11.27	35.75	96.10	241.39	2.37	3.65	4.23	5.32	5.78	59.97	.29
February	11.59	25.17	39.80	87.08	196.58	1.56	4.09	4.81	5.84	6.14	6.50	.23
March	45.70	64.55	81.89	139.88	217.61	.92	4.24	4.92	6.05	6.92	21.94	.33
April	97.15	124.53	168.32	219.91	257.58	.57	4.05	4.80	5.24	6.07	6.11	.24
May	78.83	116.34	238.97	400.35	464.83	1.19	5.57	6.24	9.42	9.72	34.27	.37
June	20.11	25.85	122.36	228.81	554.42	1.66	5.54	5.93	8.67	11.82	110.42	.68
July	4.26	5.60	17.83	47.38	215.48	2.34	5.55	5.80	15.89	17.27	36.07	.72
August	1.82	2.39	5.12	12.58	28.94	1.99	5.43	5.83	15.92	16.20	17.90	.65
September	1.69	2.13	3.72	5.86	11.89	1.00	5.44	5.96	15.80	16.34	17.52	.66
<b>Parameter Group #2</b>												
1-day minimum	1.21	1.38	1.81	2.59	3.81	.67	2.94	3.15	3.80	4.45	5.10	.34
3-day minimum	1.25	1.46	1.95	2.84	3.79	.71	2.84	3.15	3.65	4.47	5.15	.36
7-day minimum	1.31	1.51	2.00	2.73	3.74	.61	2.45	3.25	3.71	4.56	5.18	.35
30-day minimum	1.54	1.65	2.58	3.39	5.39	.67	2.51	3.88	4.48	5.04	5.40	.26
90-day minimum	1.97	2.63	4.26	5.64	8.37	.71	2.76	4.56	5.22	5.58	5.78	.19
1-day maximum	231.00	292.50	690.09	1396.01	2943.34	1.60	8.98	14.25	17.00	455.50	1727.00	25.96
3-day maximum	199.77	234.10	503.80	1006.94	2050.54	1.53	7.18	13.33	16.33	433.33	1063.57	25.71
7-day maximum	177.99	212.45	411.46	764.51	1181.59	1.34	6.70	13.04	16.14	227.95	515.99	13.31
30-day maximum	141.06	177.45	310.56	490.57	563.47	1.01	6.34	12.48	16.05	82.77	198.16	4.38
90-day maximum	96.11	107.57	228.32	304.58	392.19	.86	6.07	8.57	15.93	36.42	74.34	1.75
Number of zero days	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Base flow	.02	.02	.03	.04	.05	.68	.16	.24	.39	.53	.90	.74
<b>Parameter Group #3</b>												
Date of minimum	248.30	256.00	273.50	275.75	293.40	.05	329.00	3.75	7.50	42.25	109.20	.11
Date of maximum	31.10	68.00	118.00	135.75	209.90	.19	45.40	119.00	207.00	275.00	313.80	.43
<b>Parameter Group #4</b>												
Low pulse count	2.40	4.00	4.50	6.00	7.00	.44	4.40	6.00	9.00	11.75	13.80	.64
Low pulse duration	5.00	9.50	13.54	23.75	29.41	1.05	10.14	11.85	21.29	45.93	51.46	1.60
High pulse count	2.70	3.25	5.00	6.00	7.30	.55	.00	.00	.00	1.00	2.00	.00
High pulse duration	6.28	14.29	17.21	25.37	31.02	.64	.00	.00	.00	3.25	6.55	.00
<b>Parameter Group #5</b>												
Rise rate	5.72	6.33	17.45	42.73	56.53	2.09	.22	.29	.50	7.81	27.26	15.04
Fall rate	-27.38	-17.32	-10.20	-4.06	-3.58	-1.30	-20.75	-6.73	-.41	-.35	-.22	-15.58
Number of reversals	89.70	96.50	110.00	121.00	126.20	.22	62.70	72.75	83.50	93.25	103.80	.25



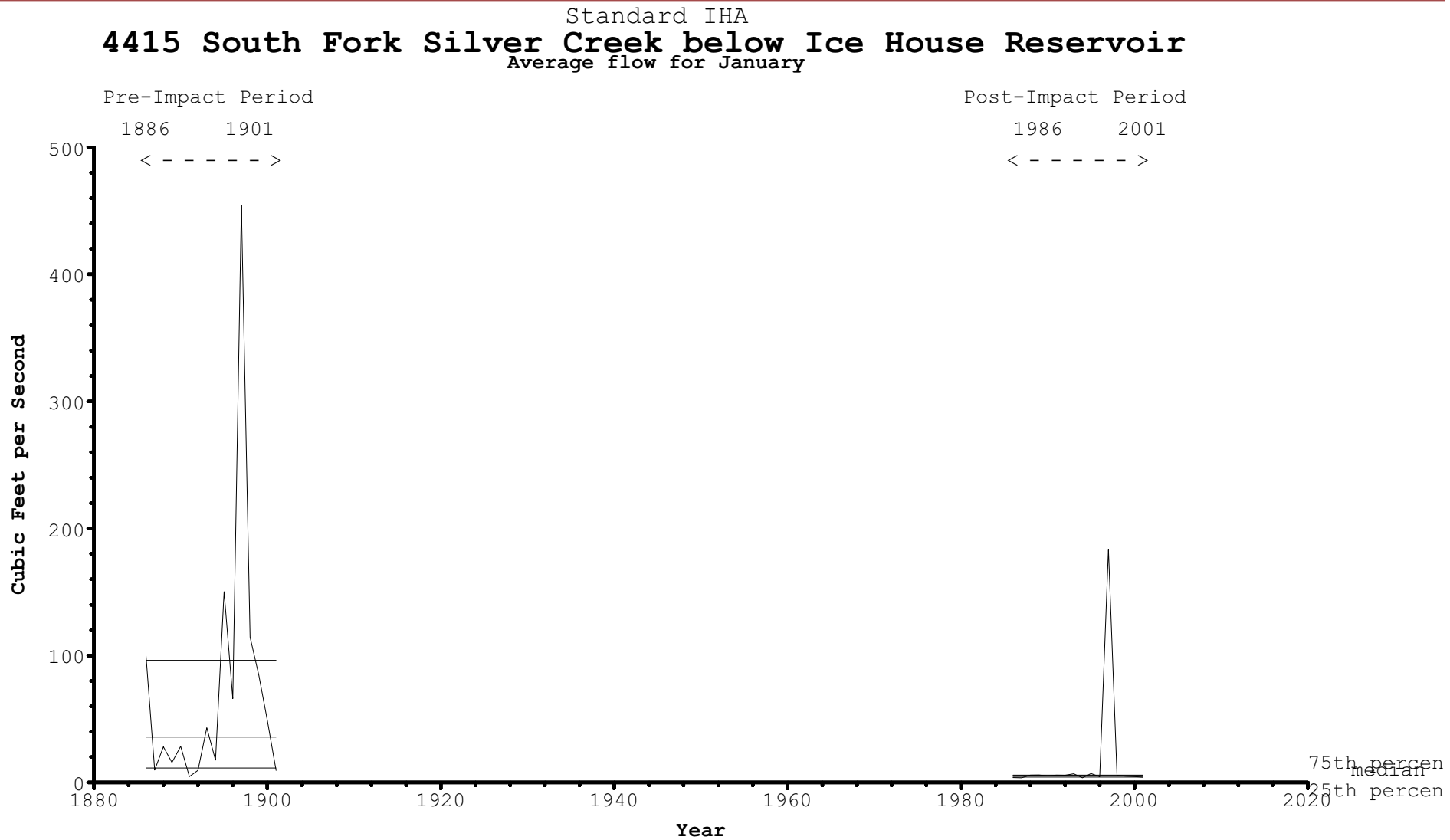
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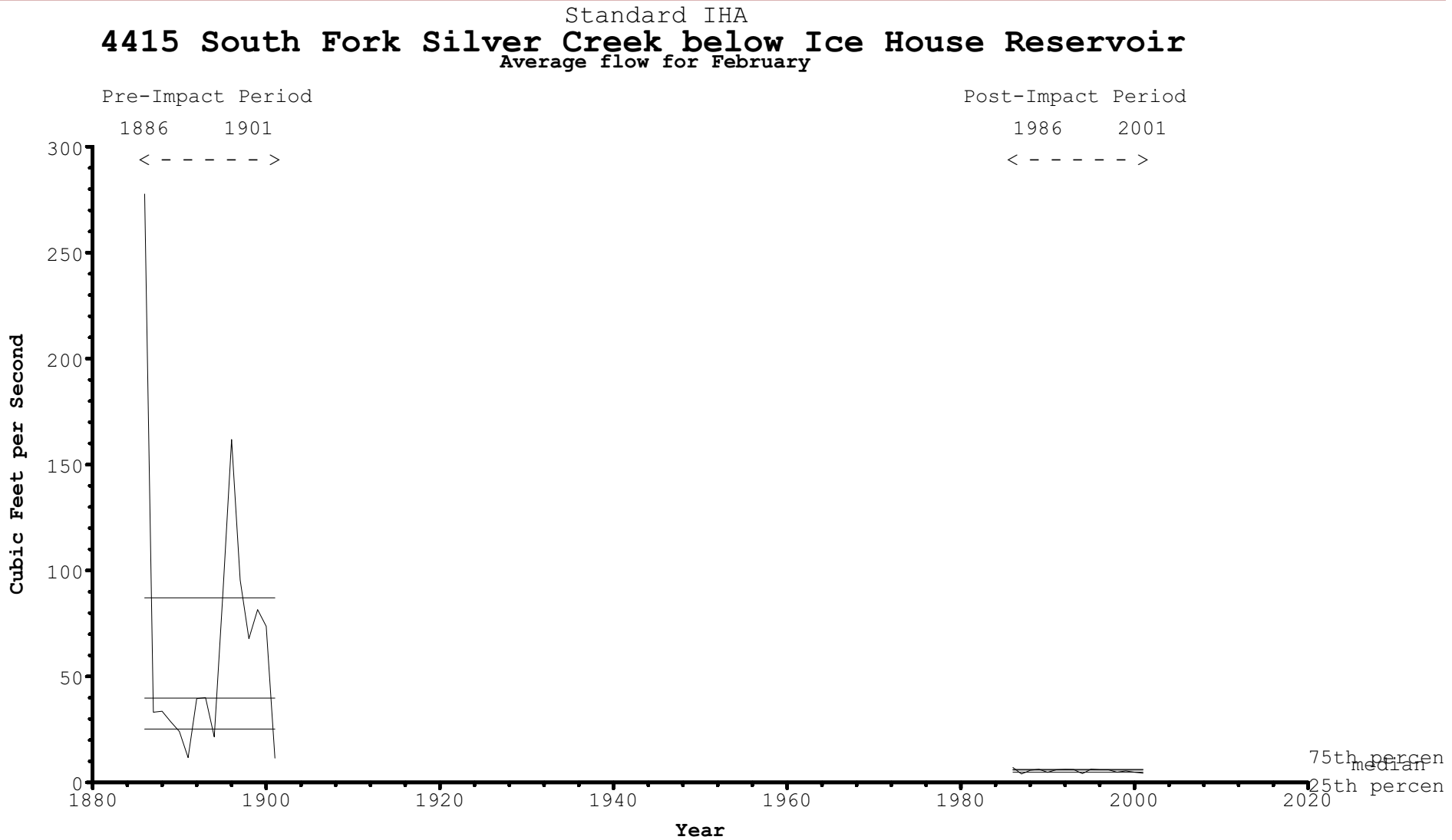


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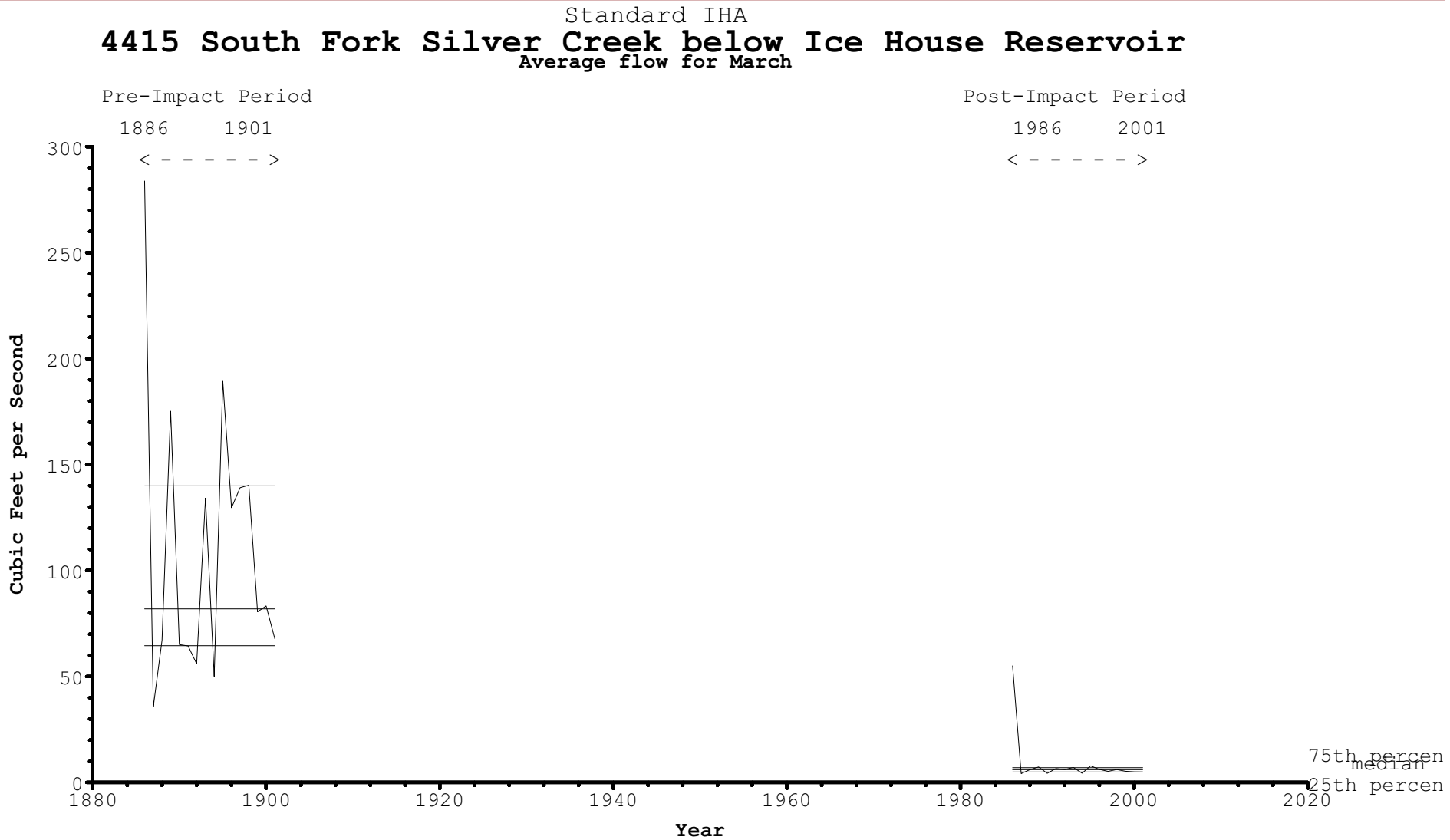


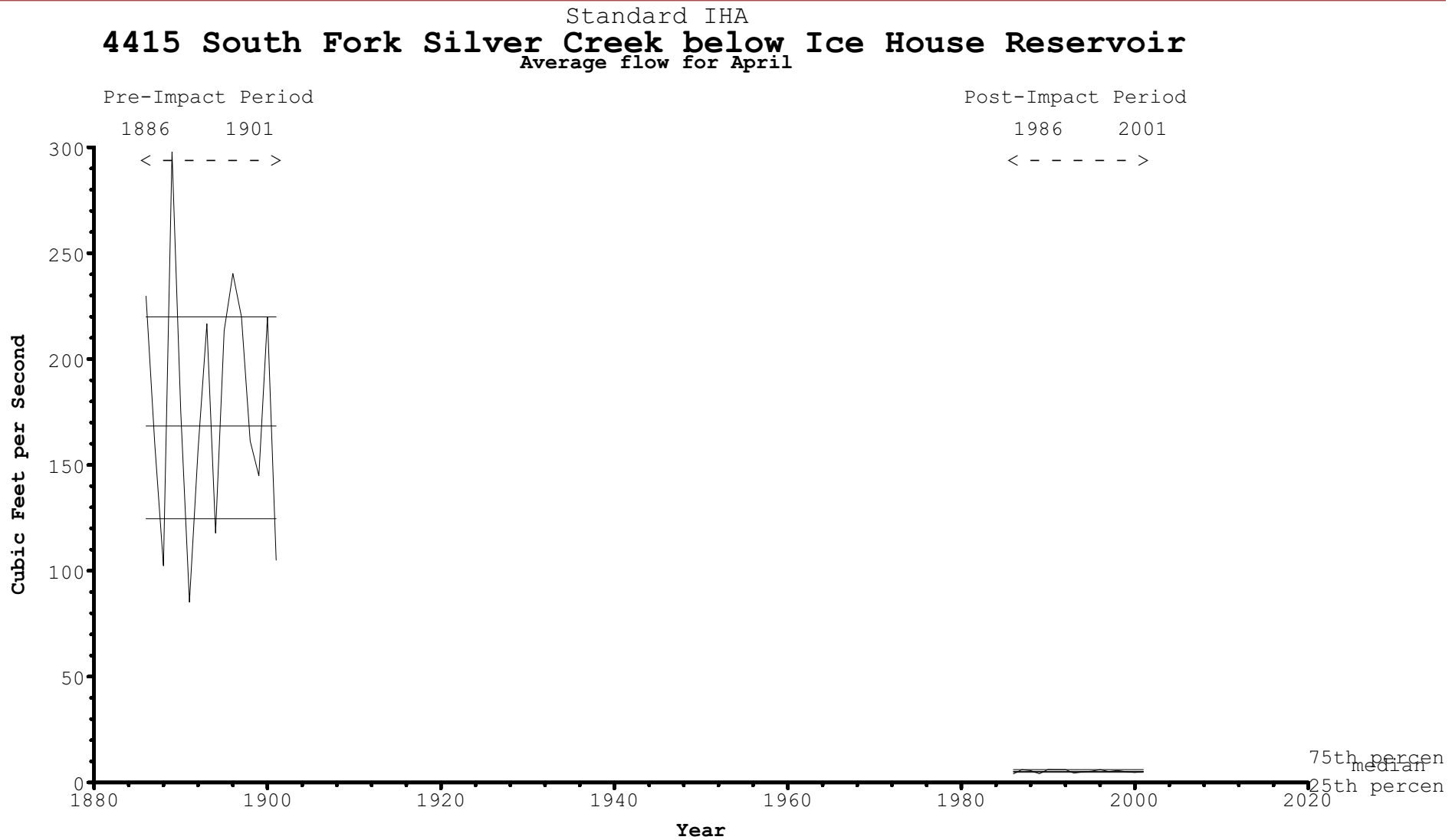


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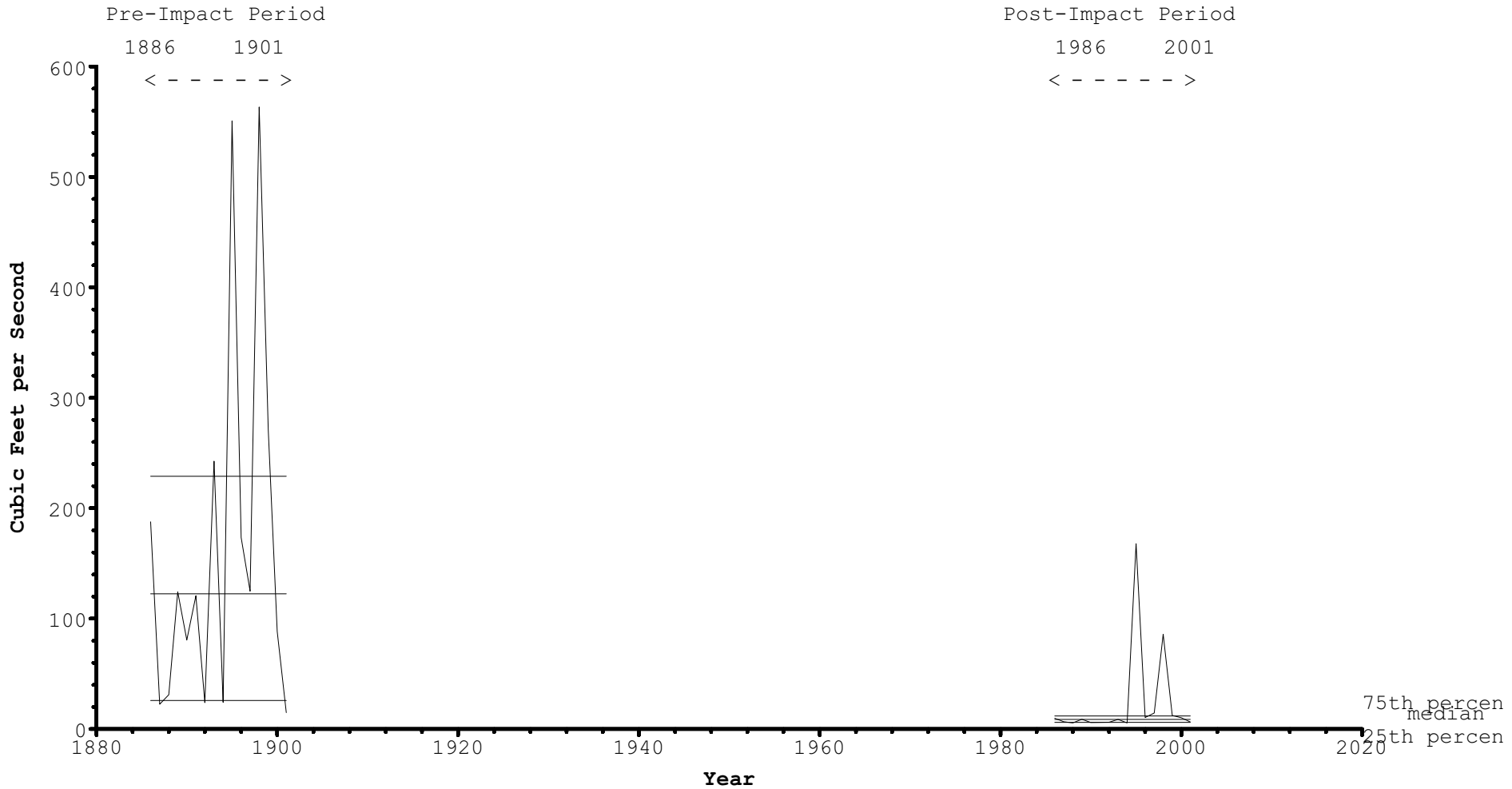




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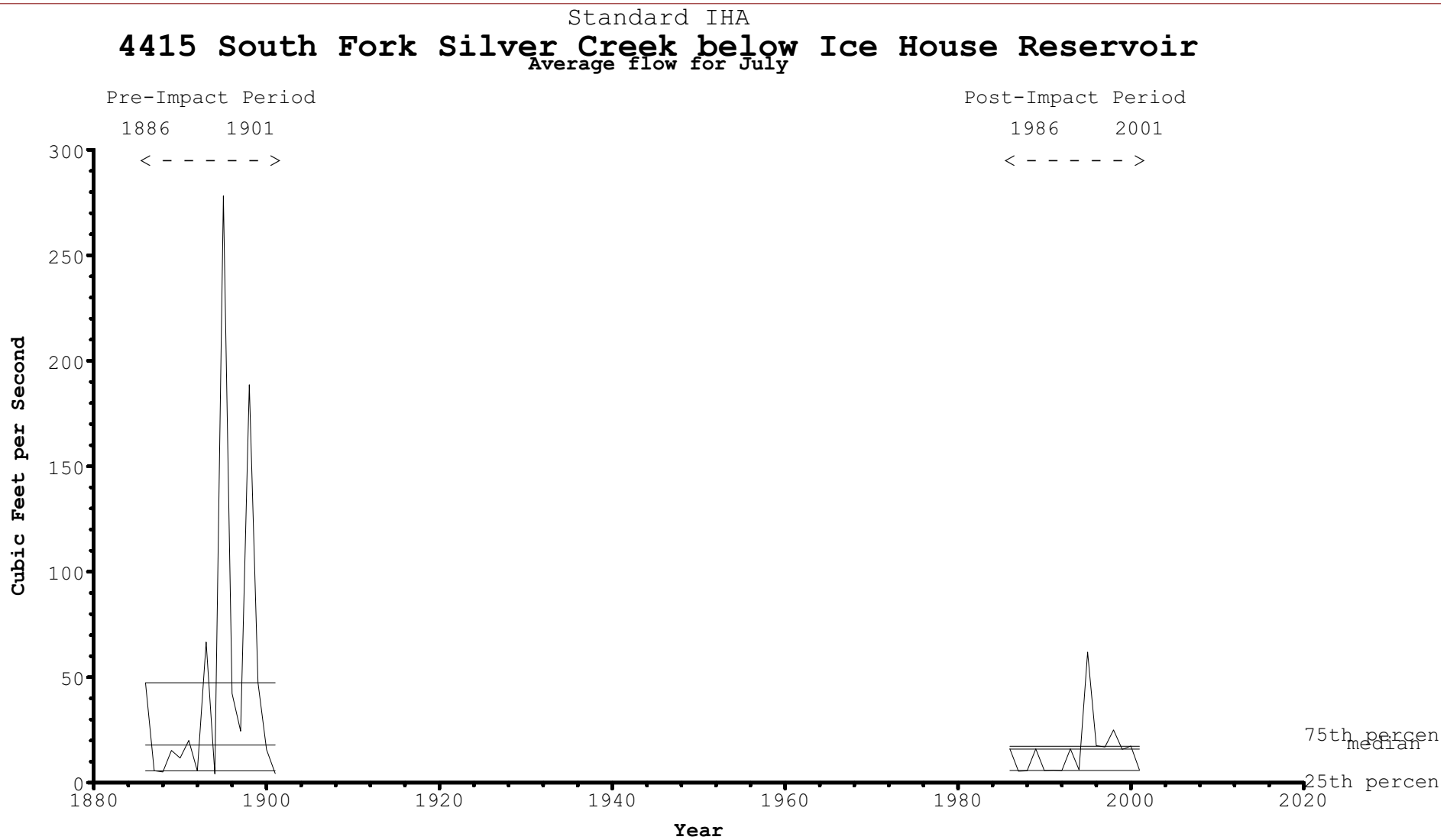


Standard IHA  
**4415 South Fork Silver Creek below Ice House Reservoir**  
 Average flow for June

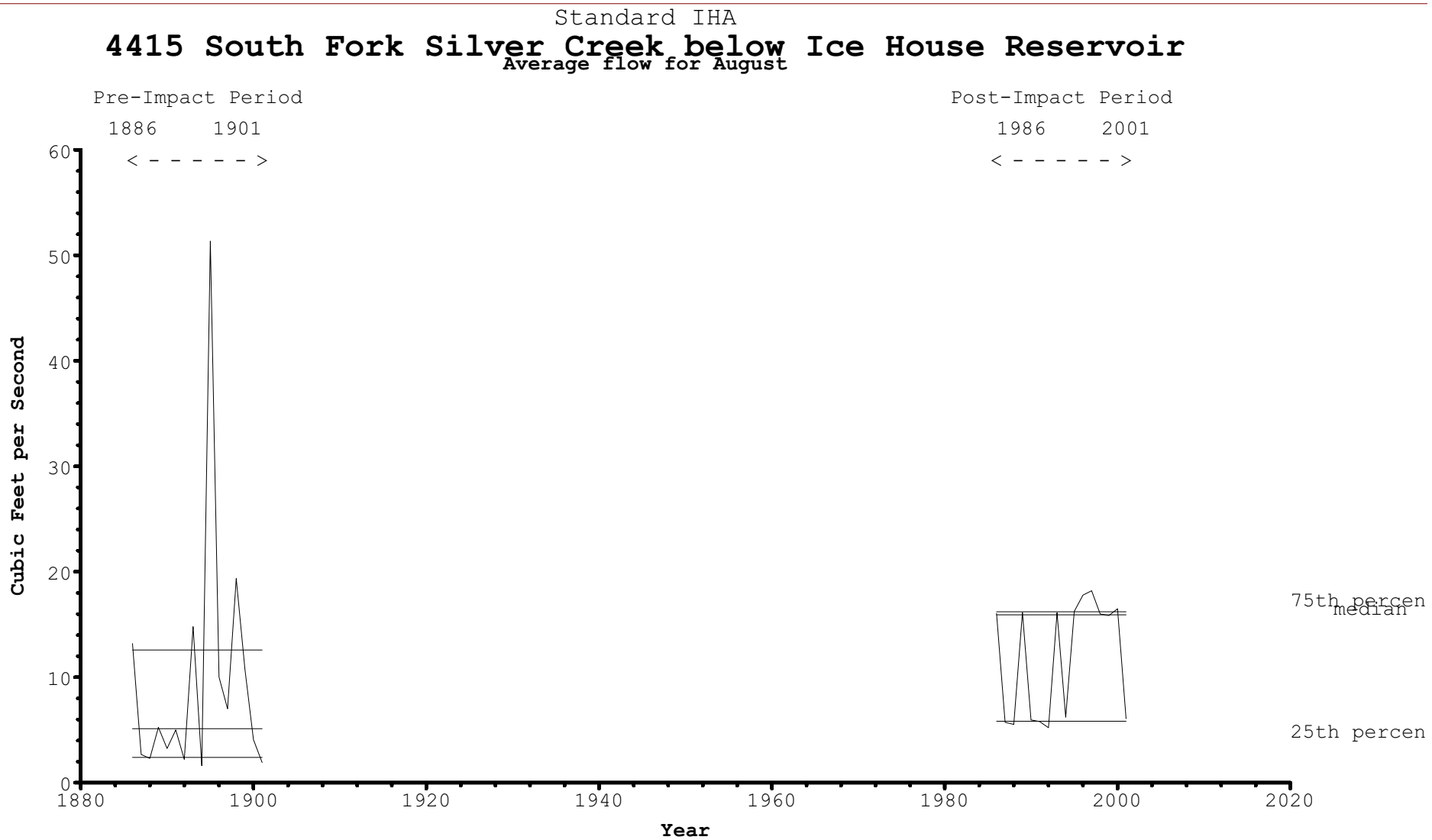


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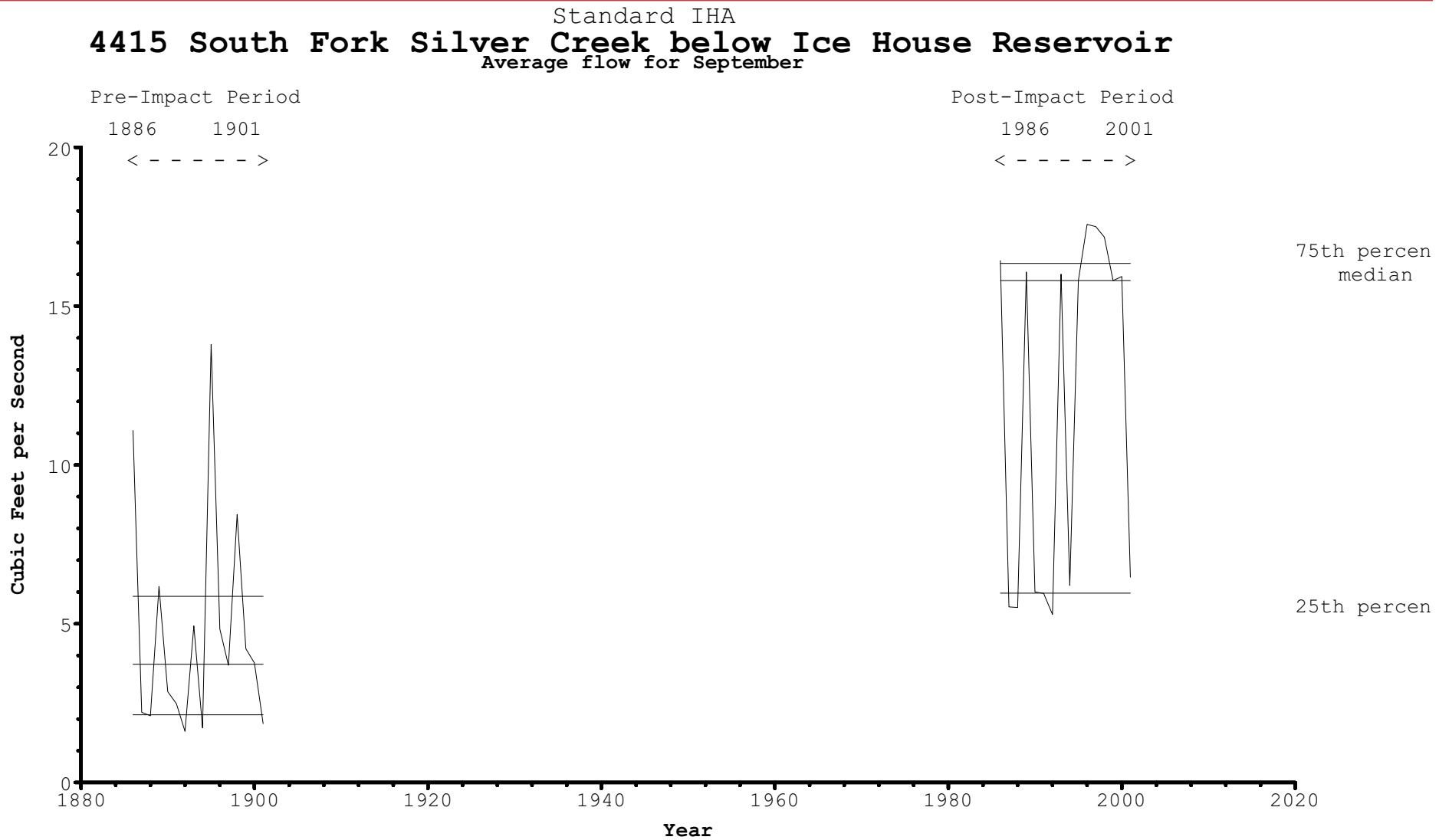




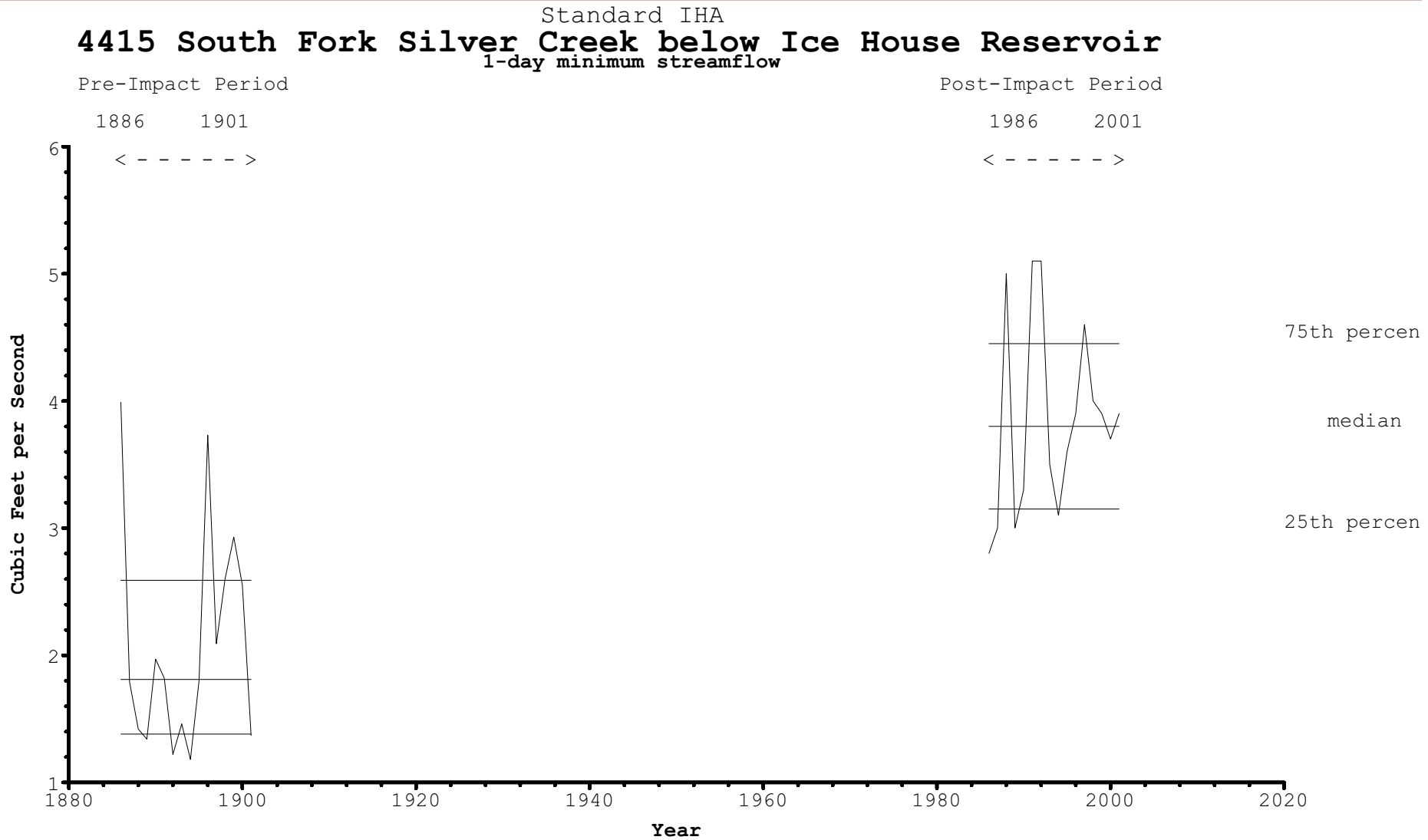
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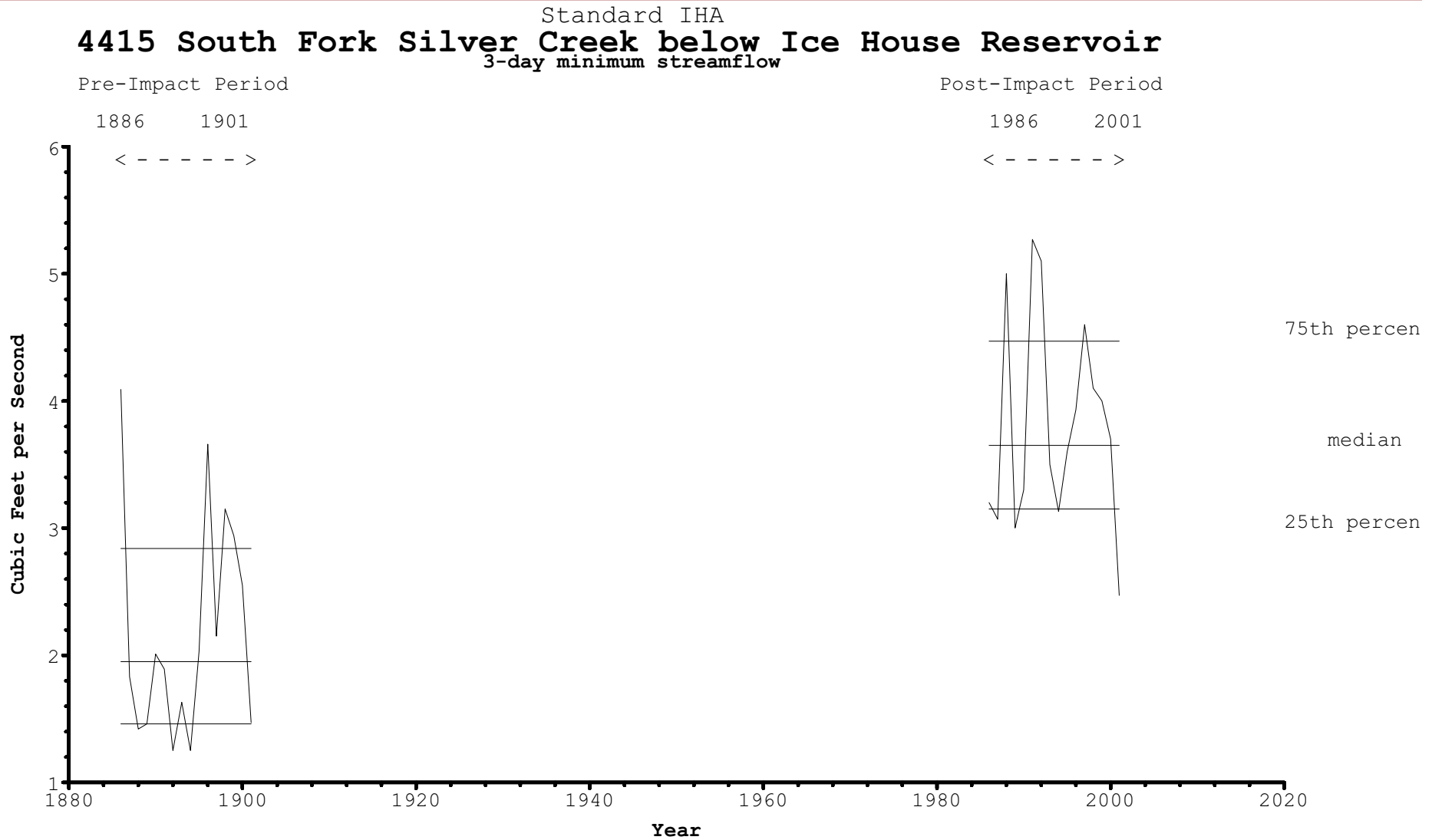
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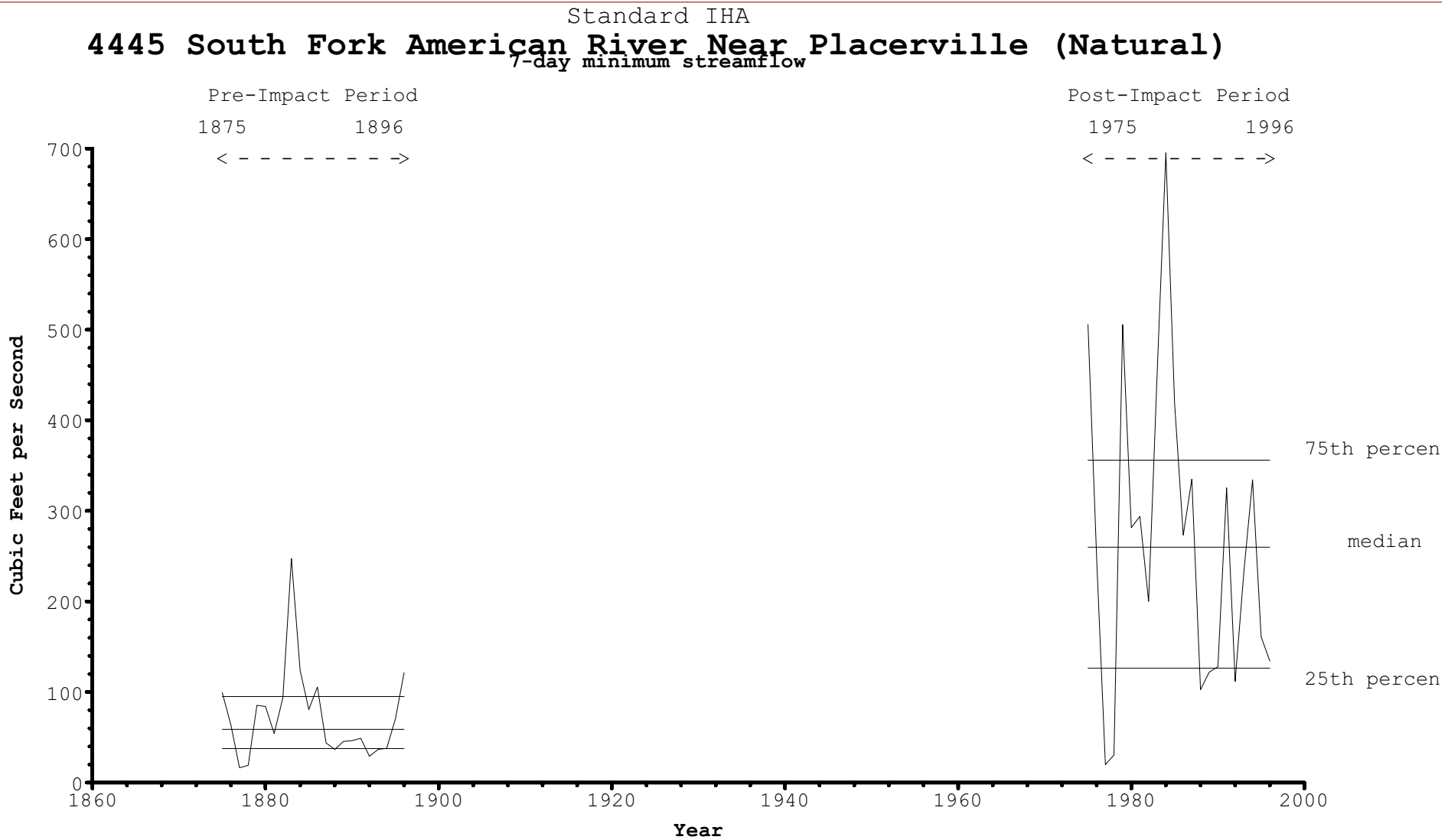
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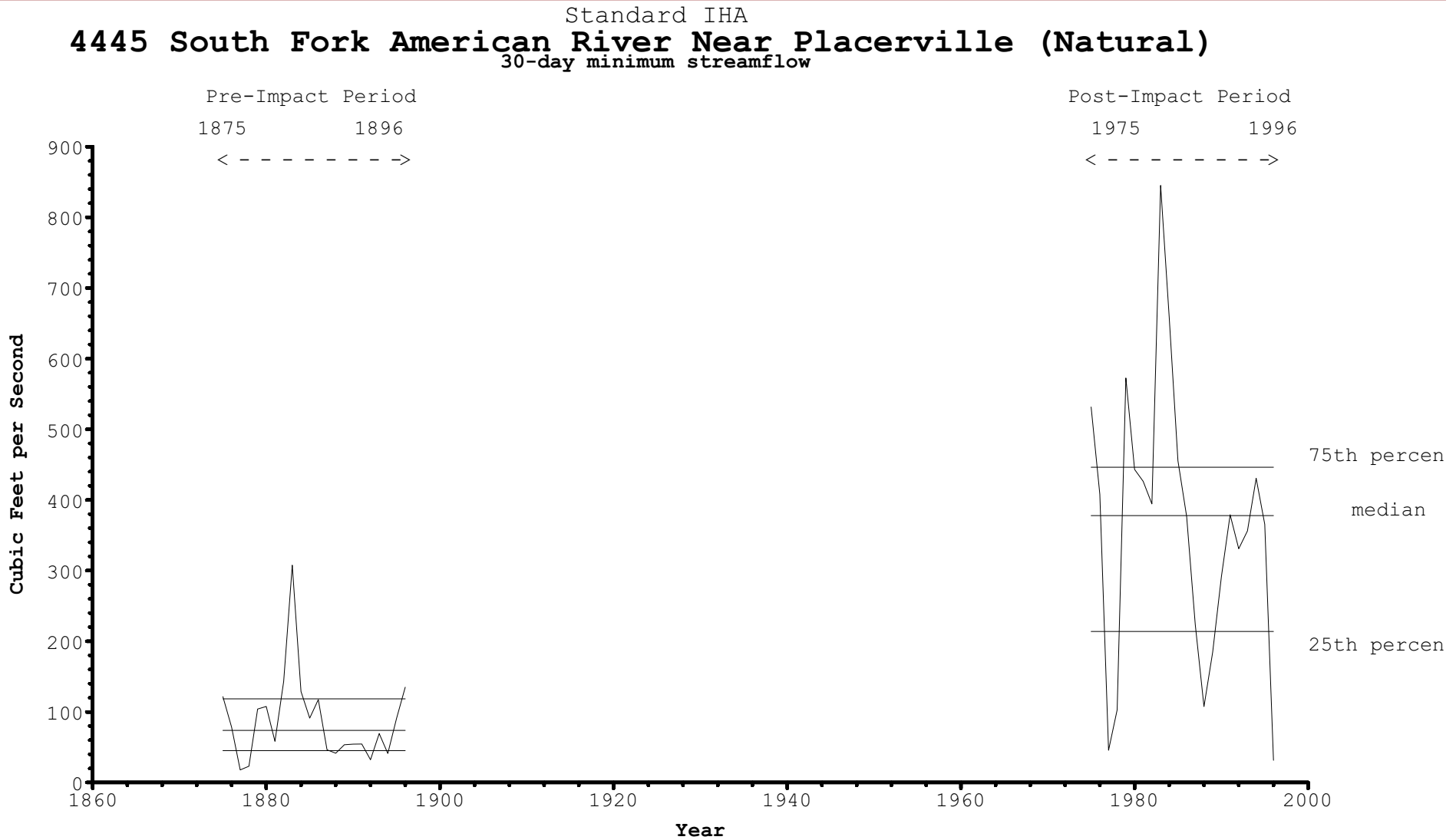
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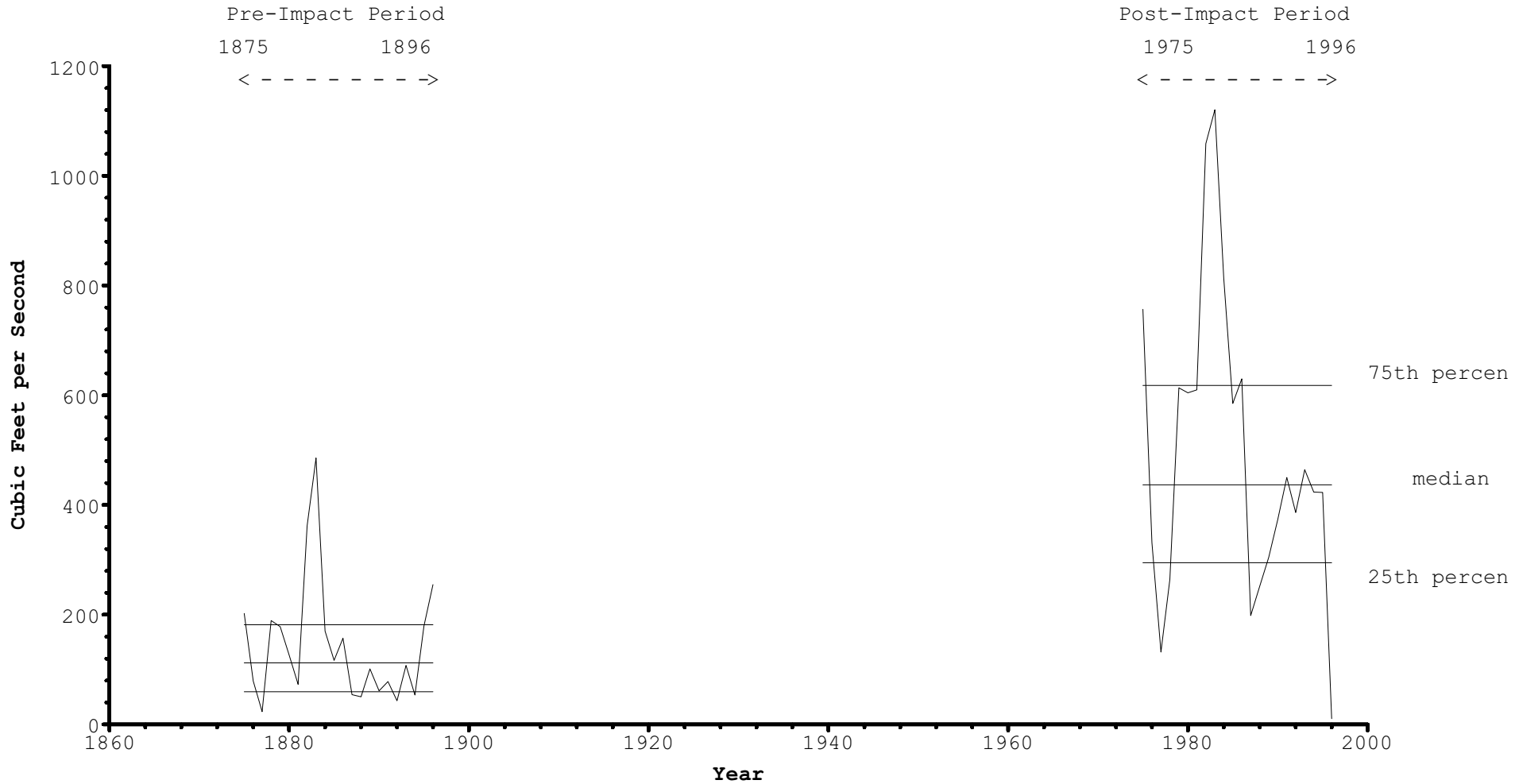
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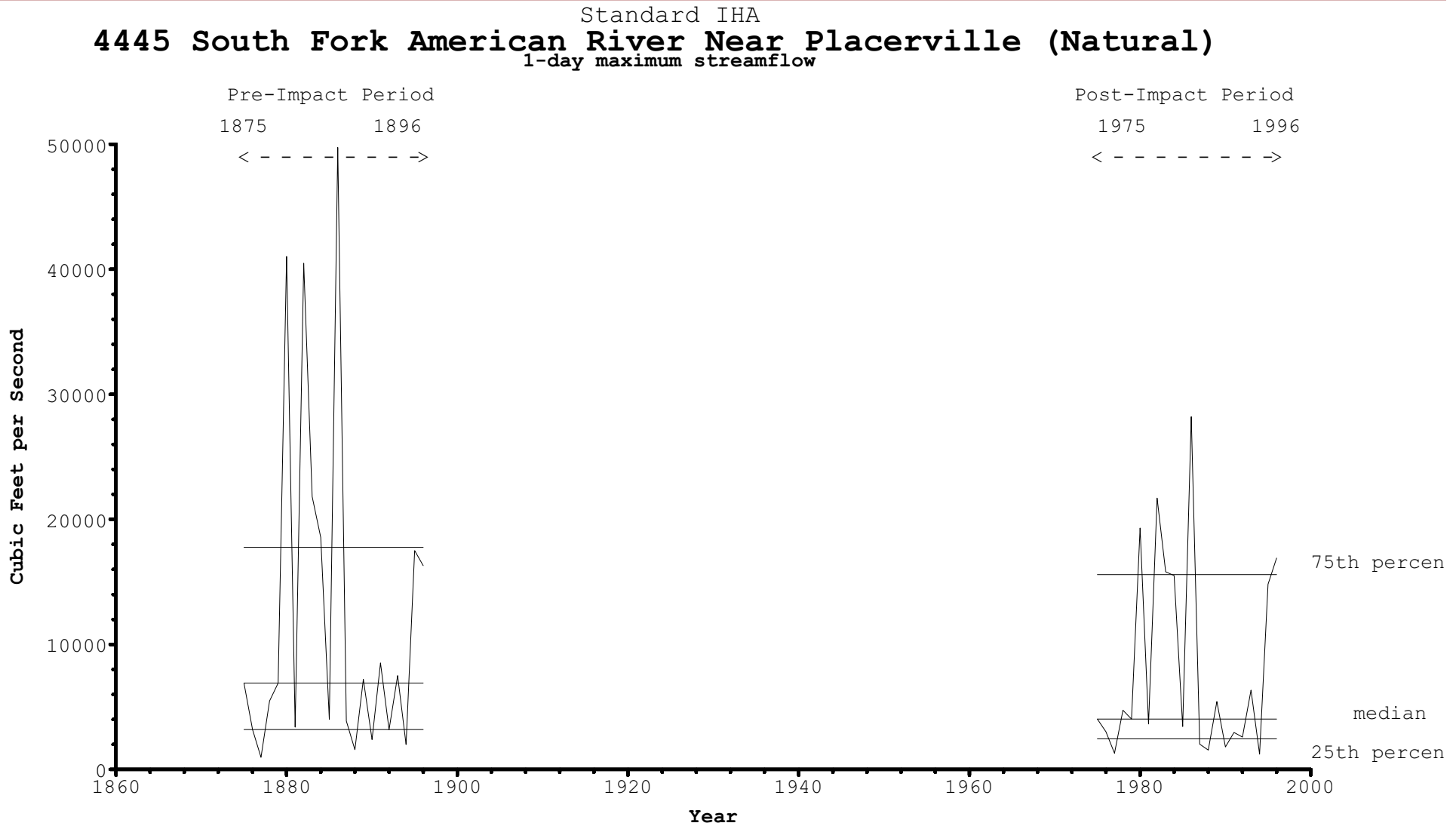
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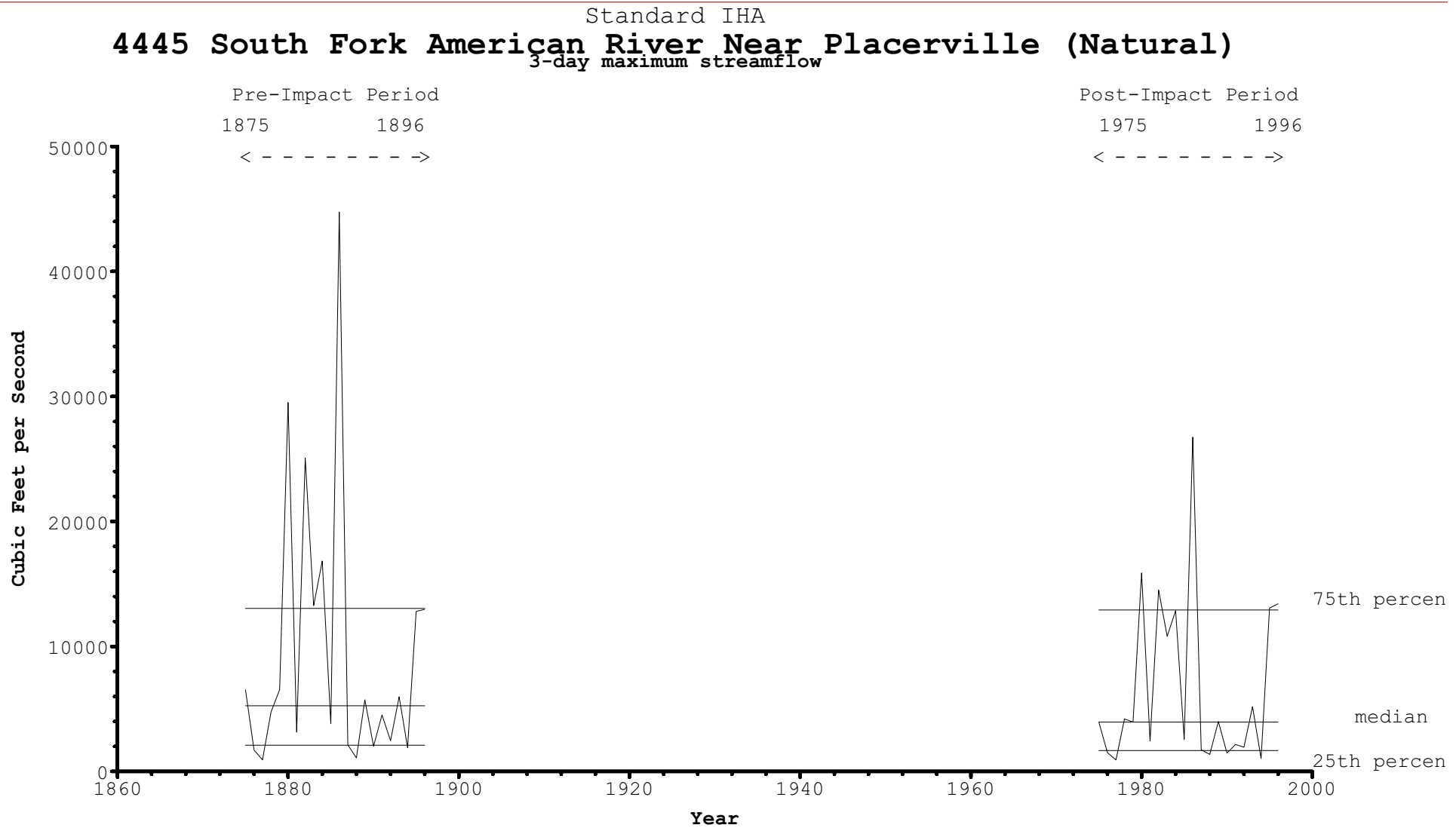
Standard IHA  
**4445 South Fork American River Near Placerville (Natural)**  
90-day minimum streamflow



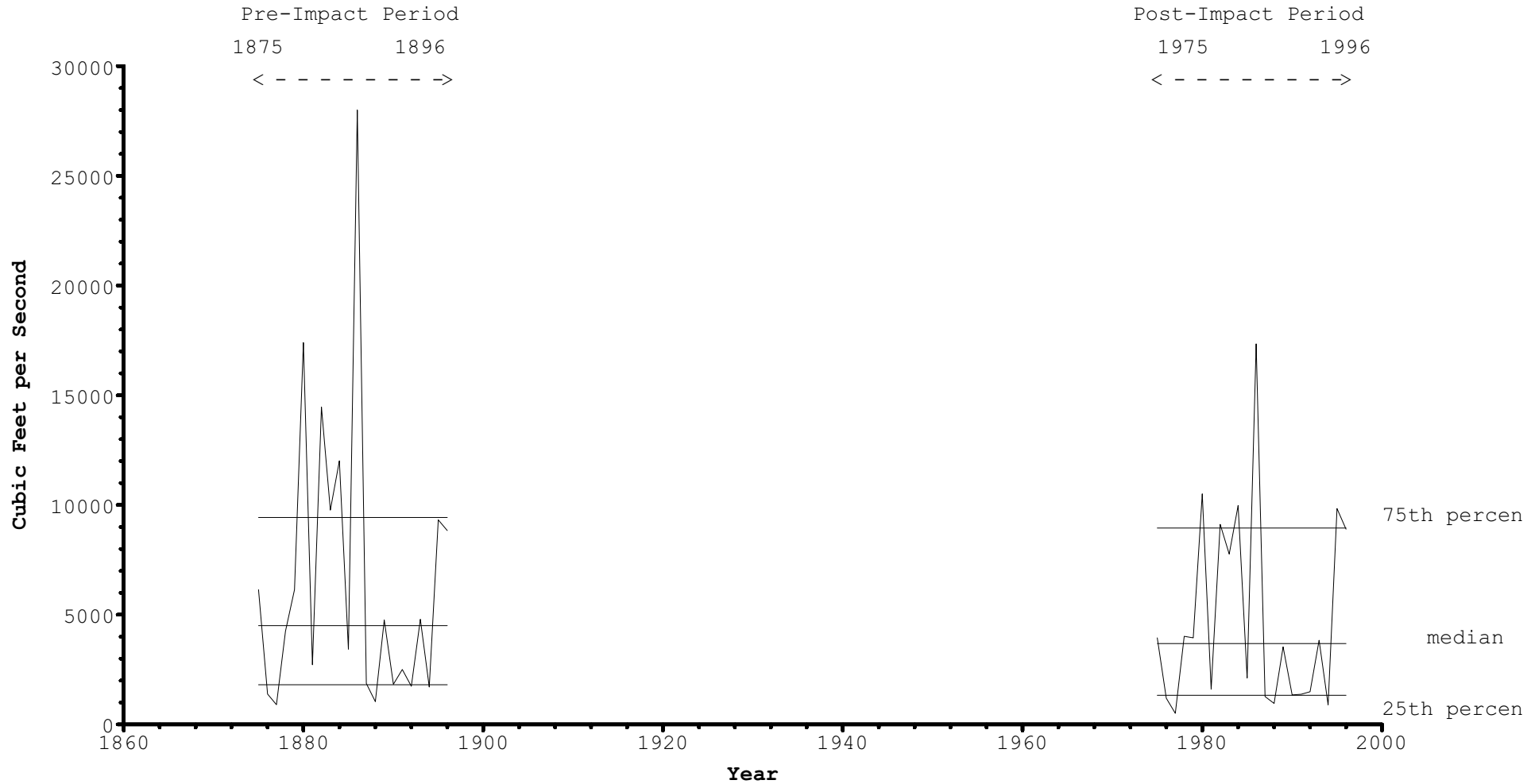




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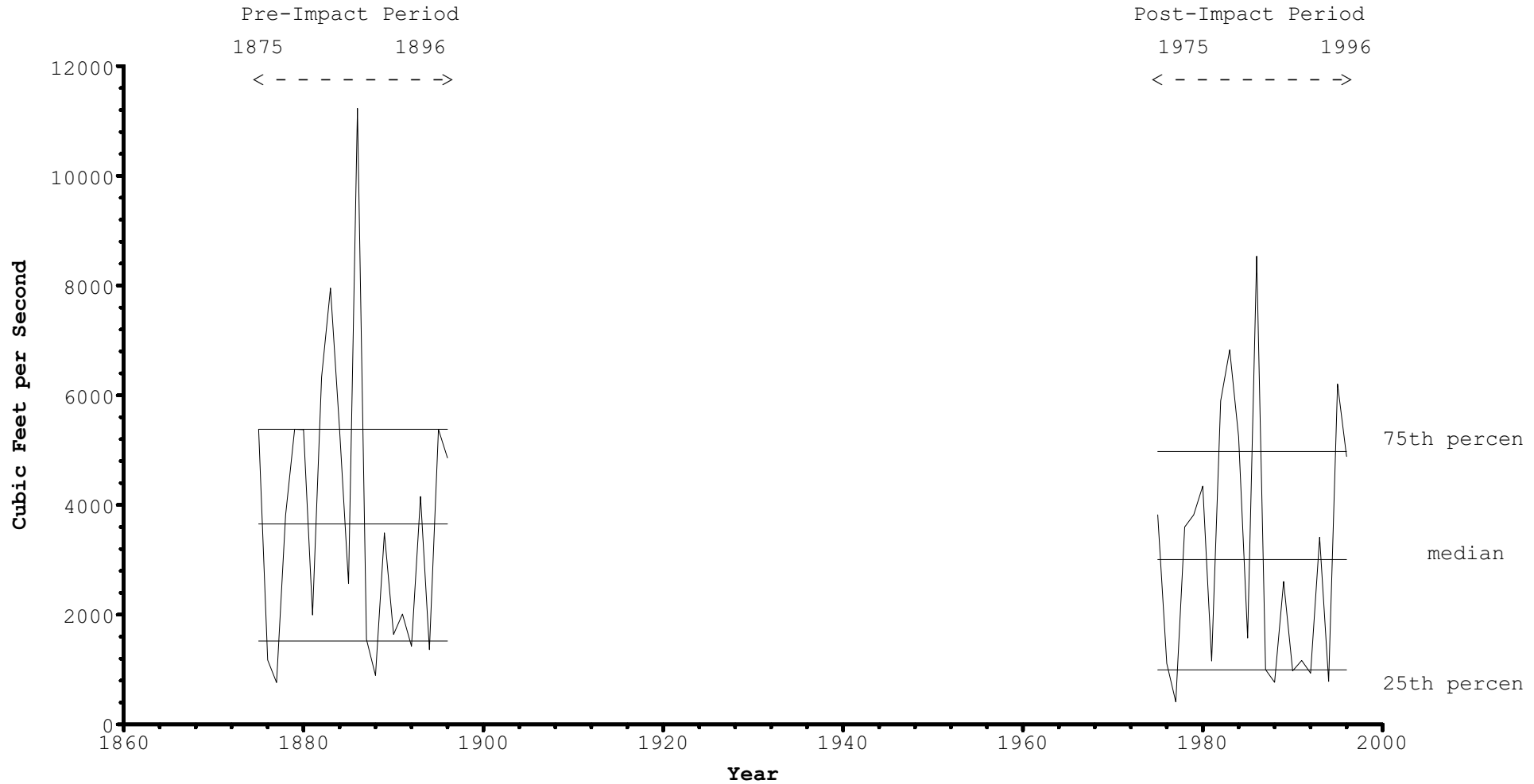


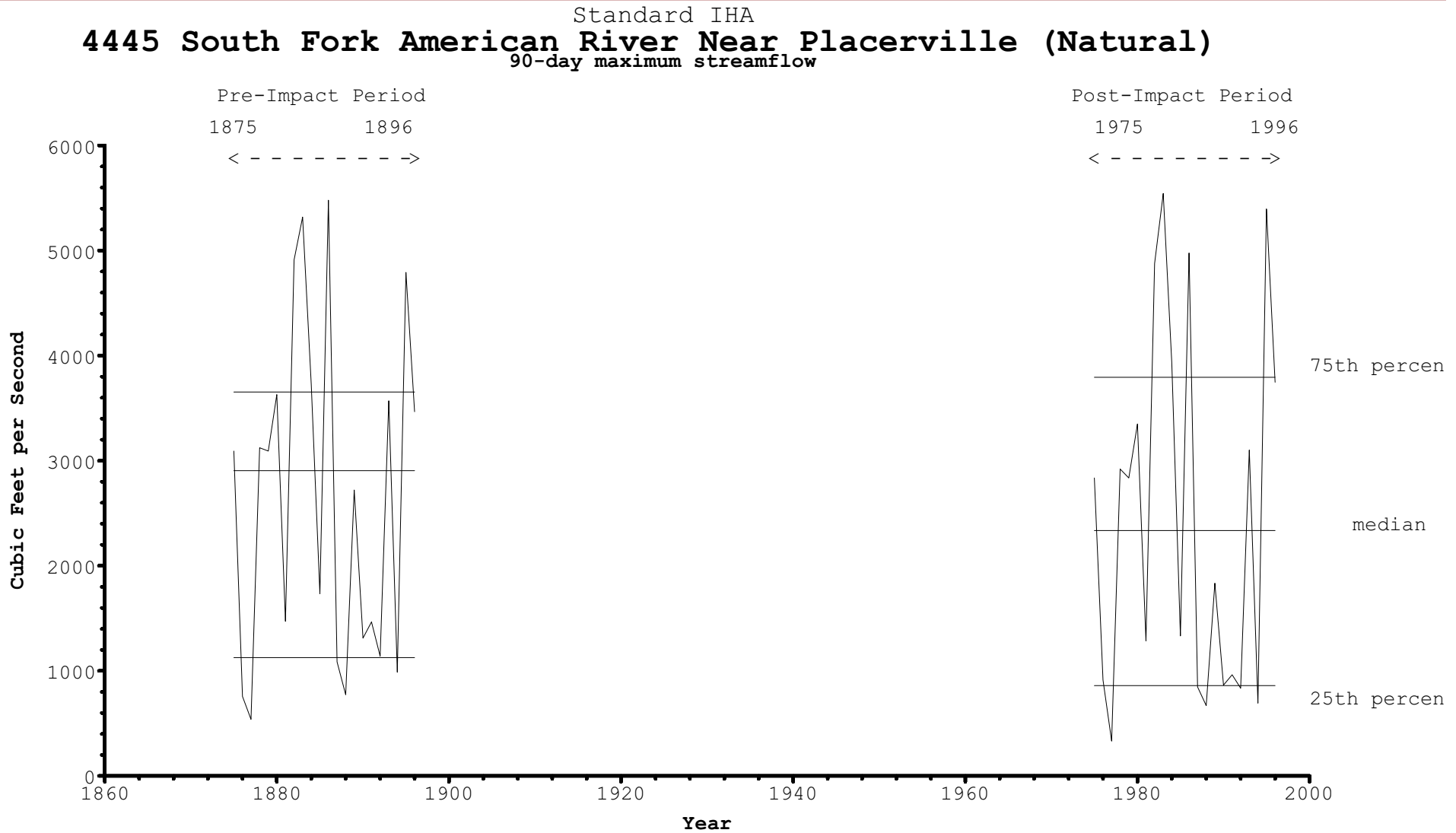
Standard IHA  
**4445 South Fork American River Near Placerville (Natural)**  
7-day maximum streamflow



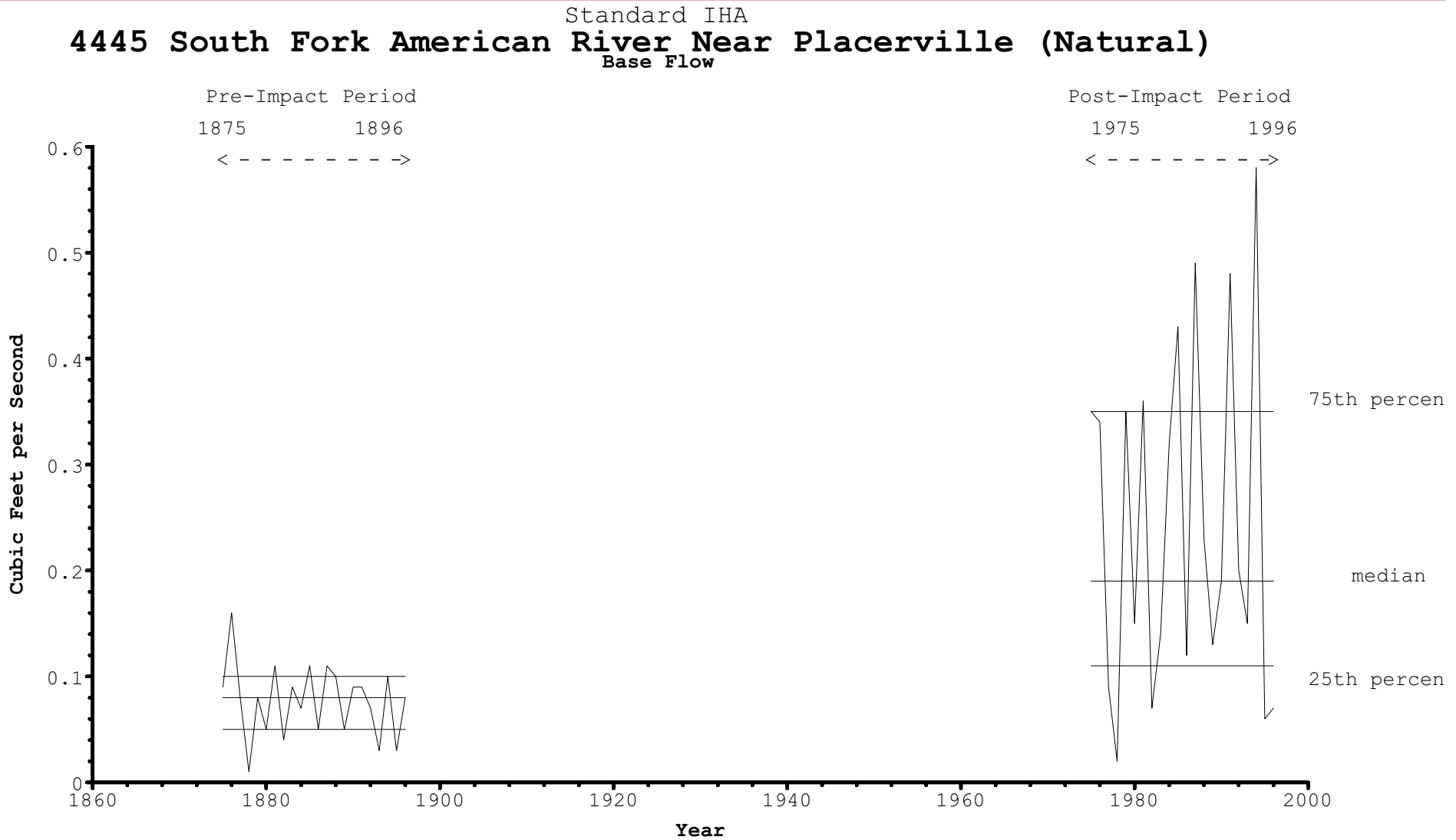
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Standard IHA  
**4445 South Fork American River Near Placerville (Natural)**  
30-day maximum streamflow

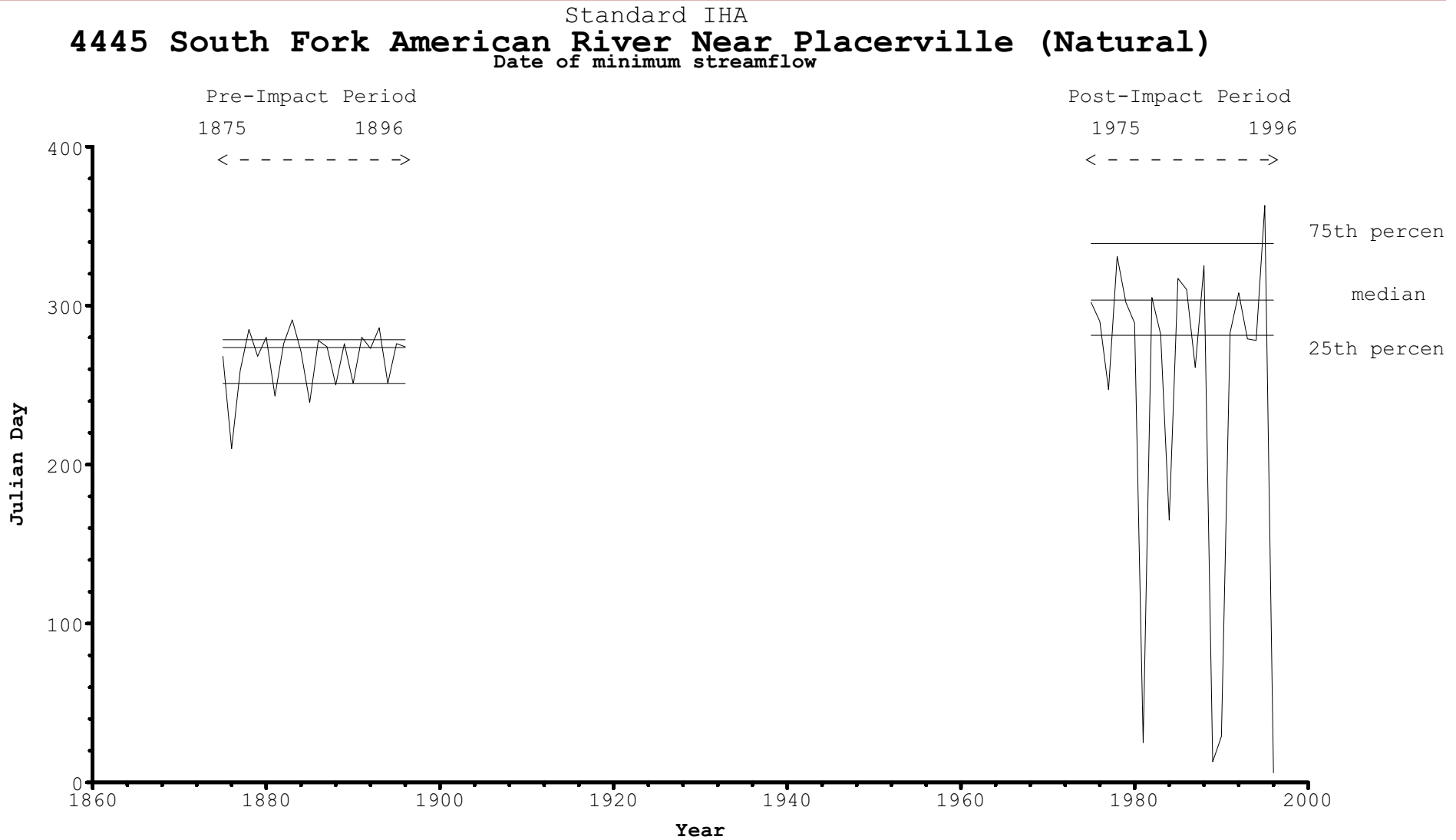






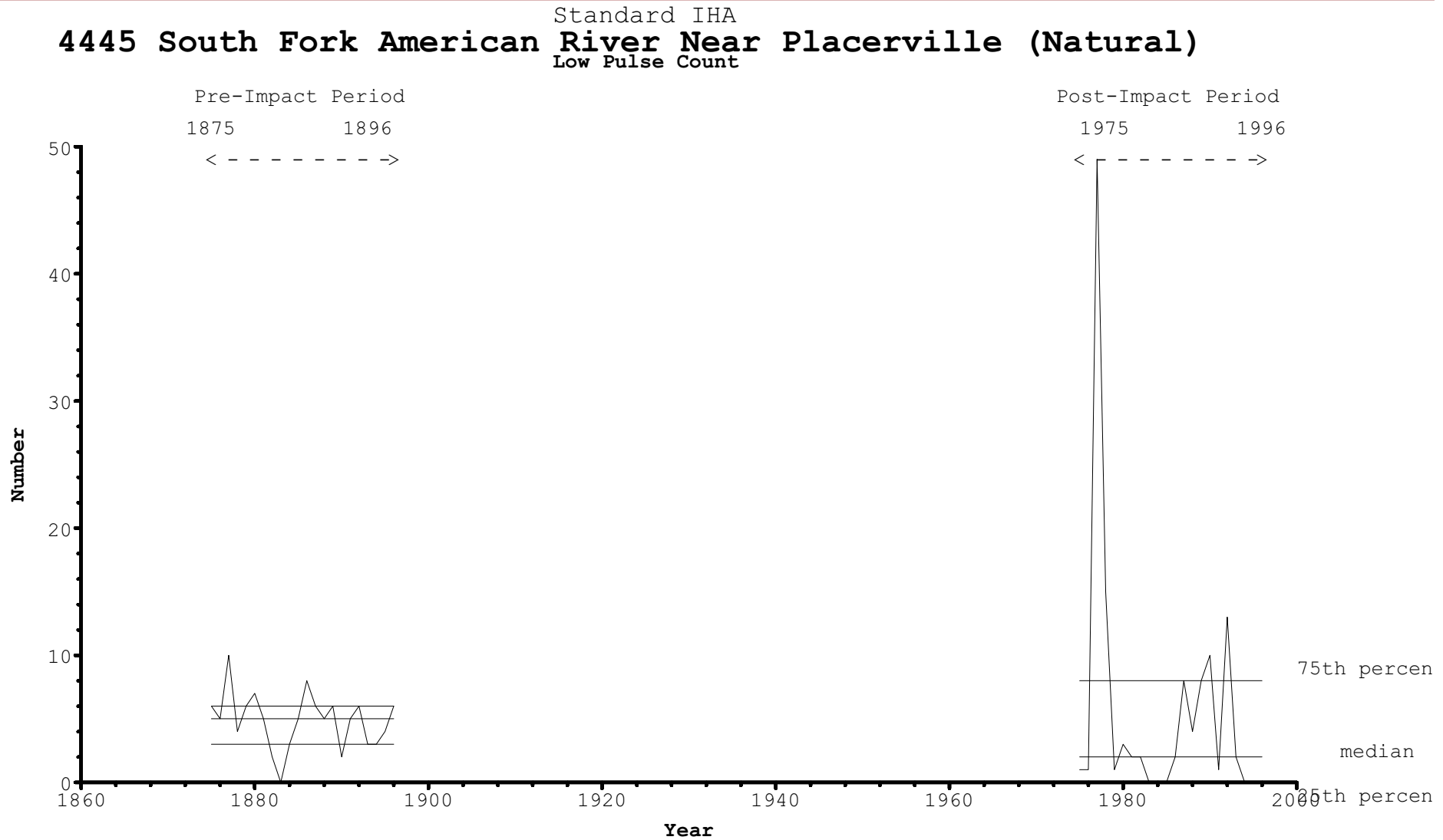


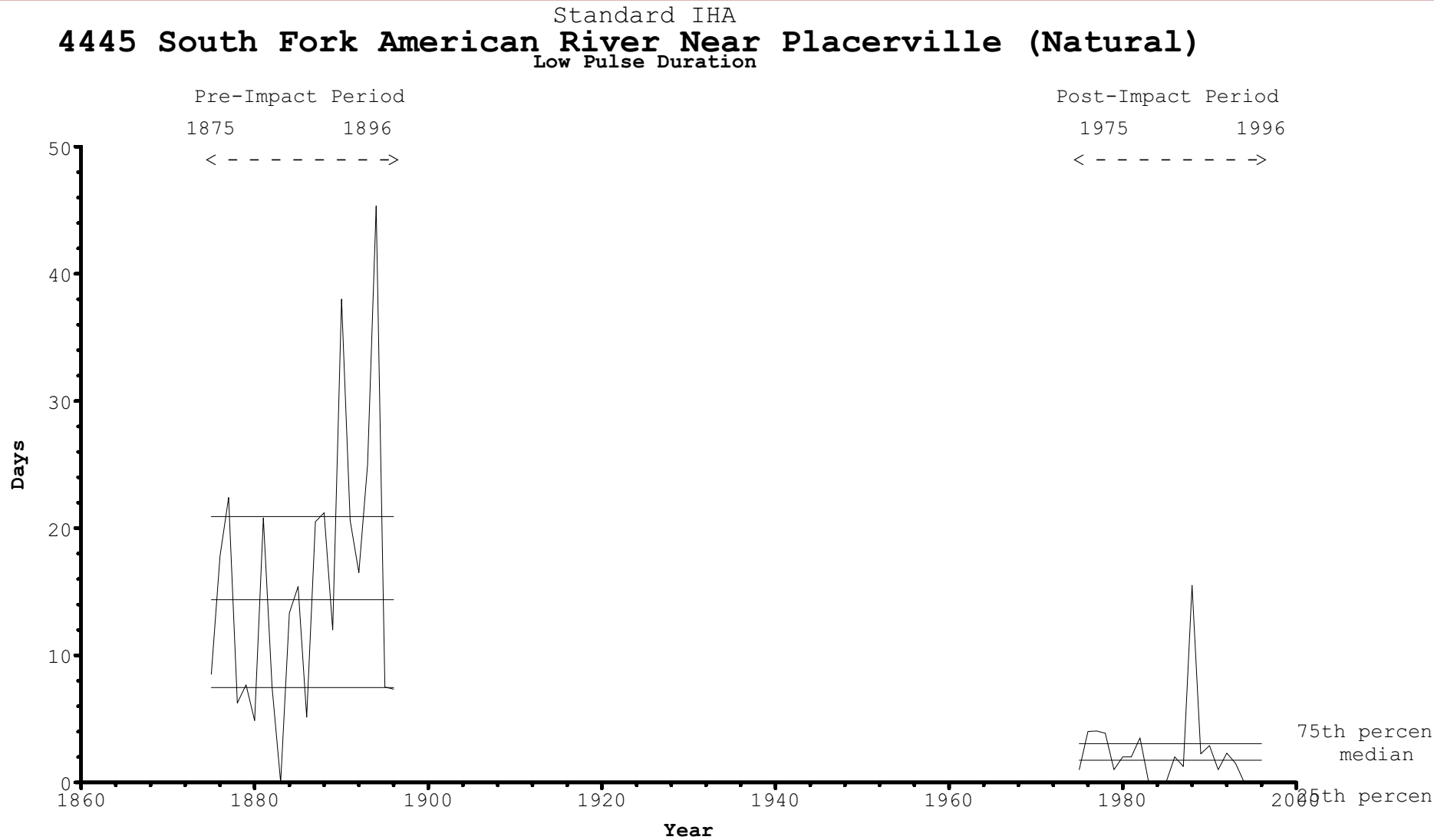
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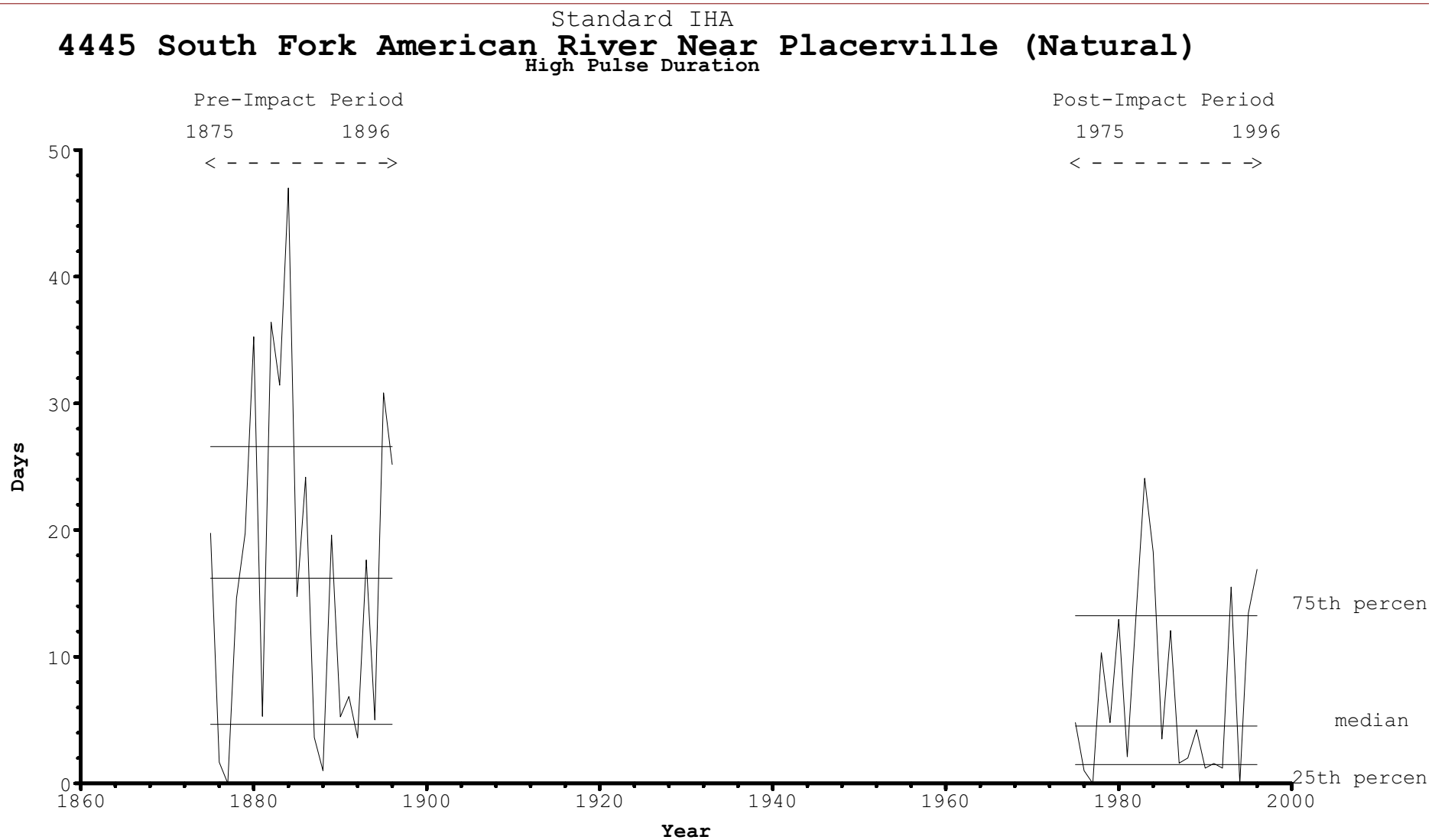






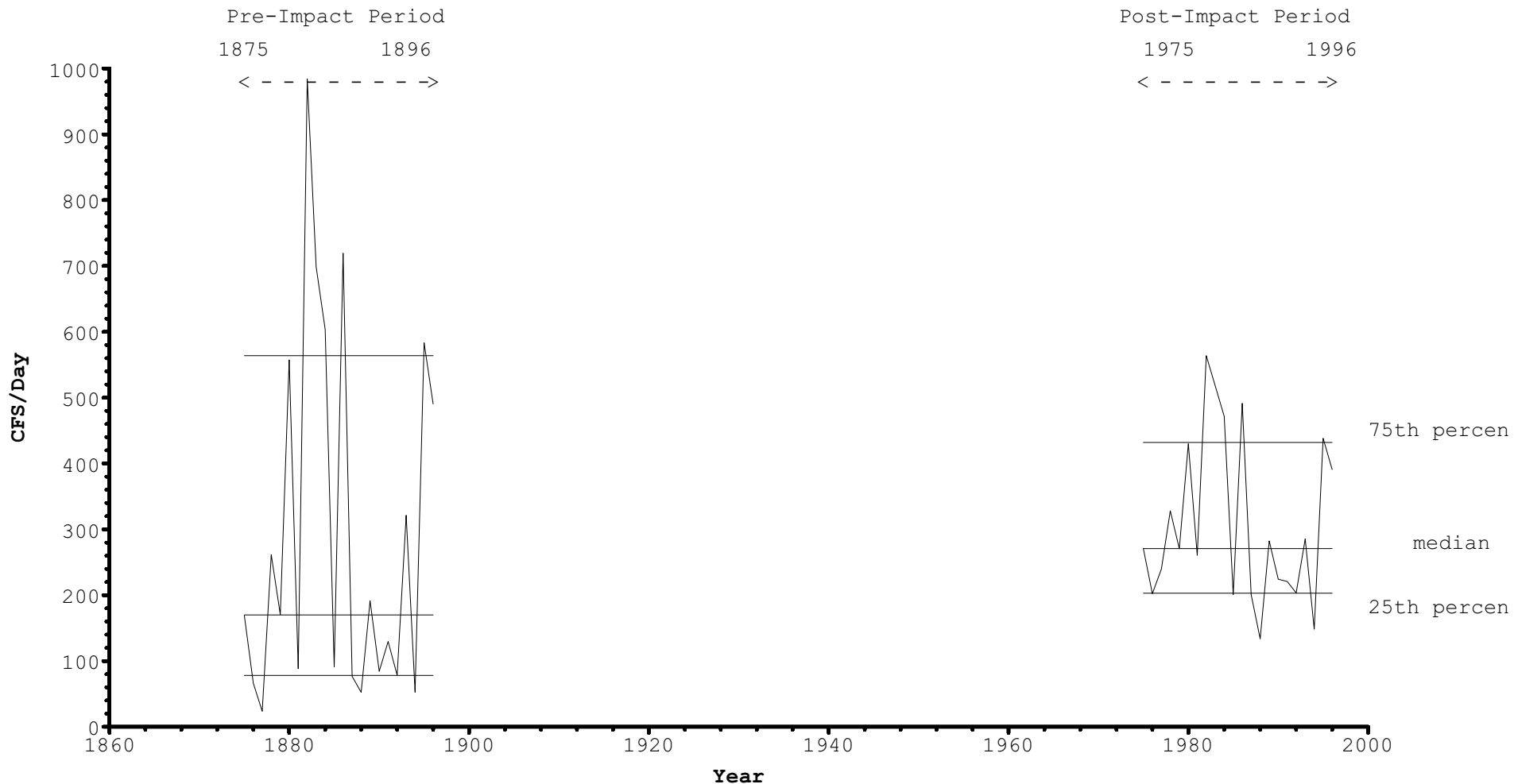
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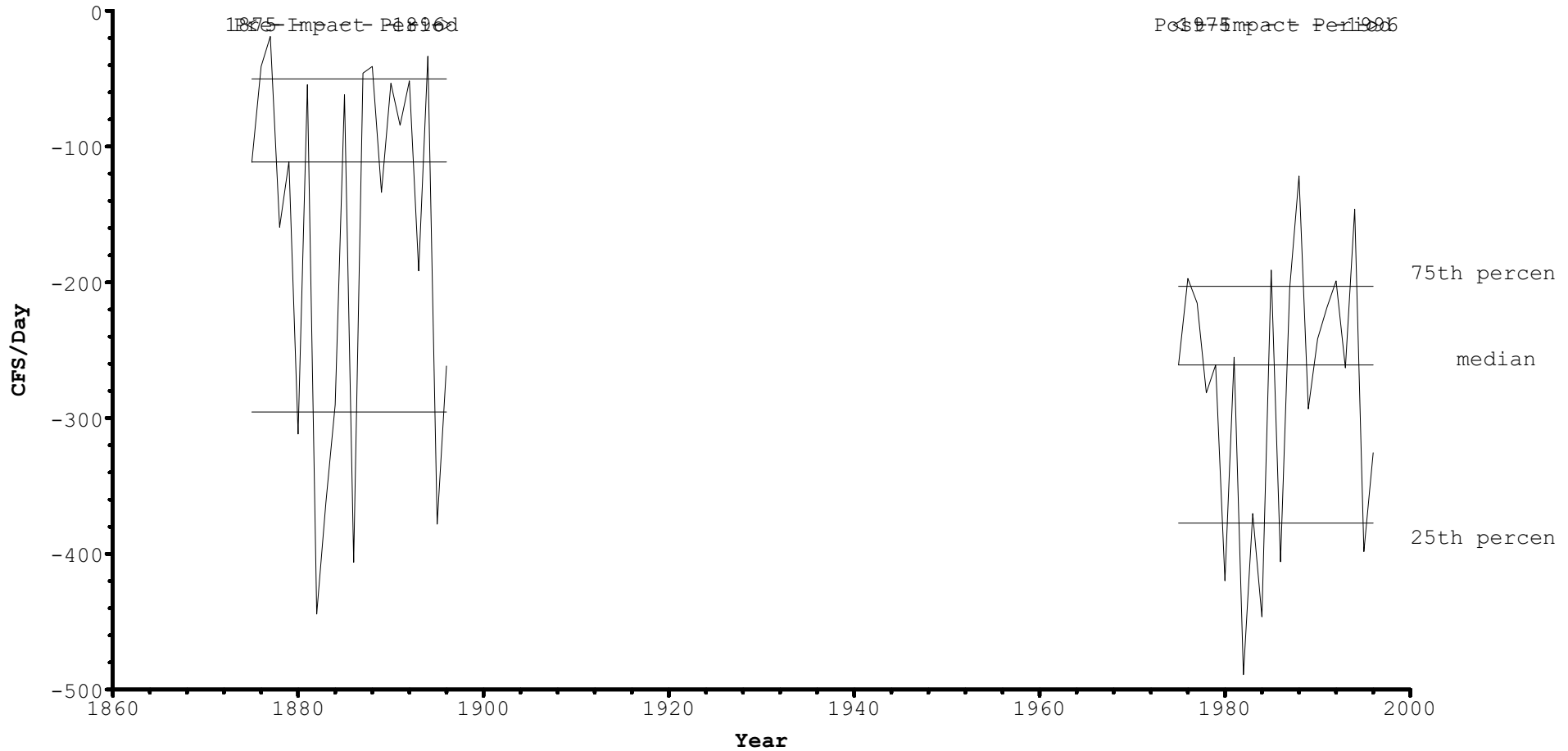
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Standard IHA  
**4445 South Fork American River Near Placerville (Natural)**  
 Rise Rate

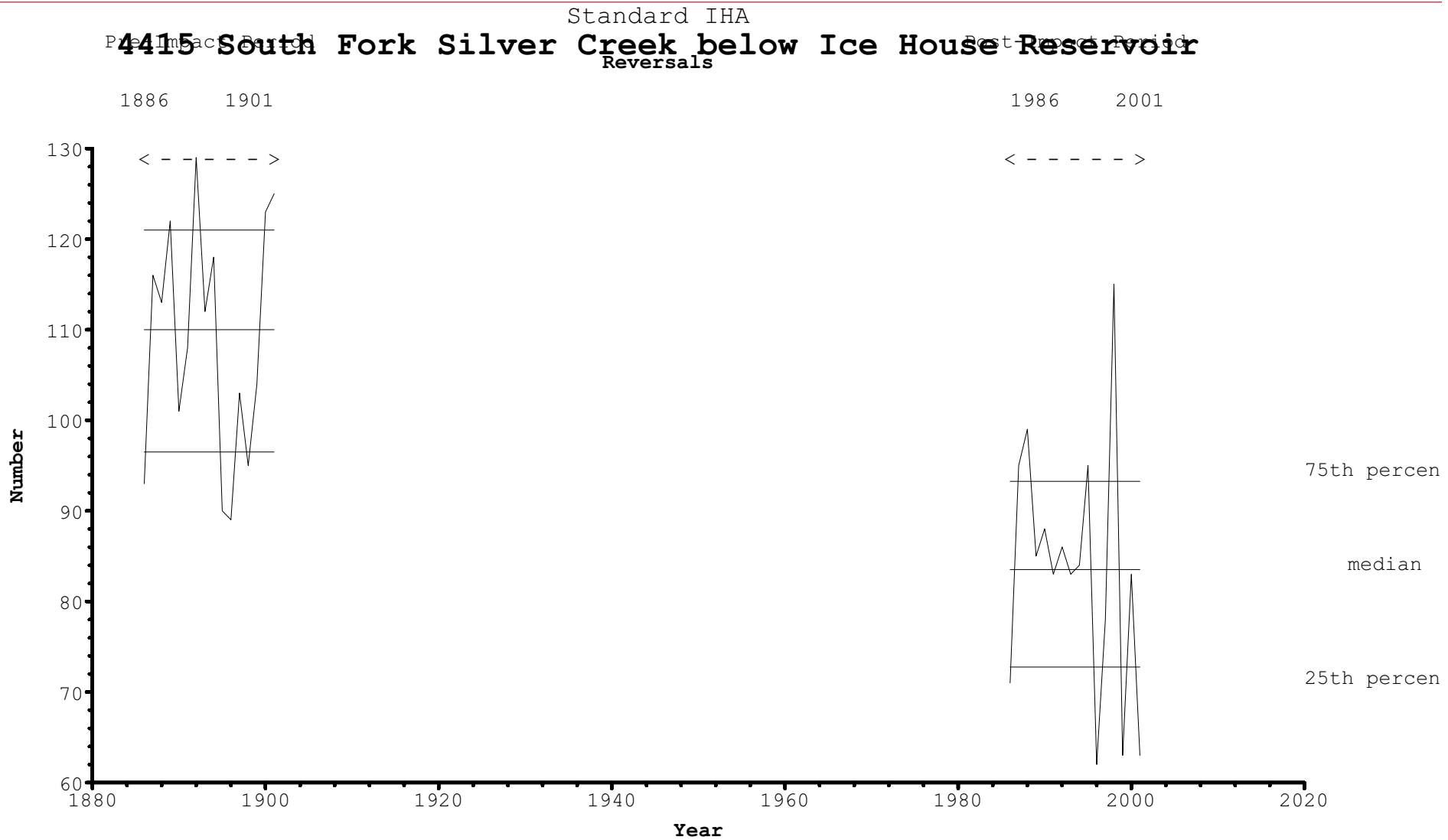


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Standard IHA  
4445 South Fork American River Near Placerville (Natural)  
Fall Rate



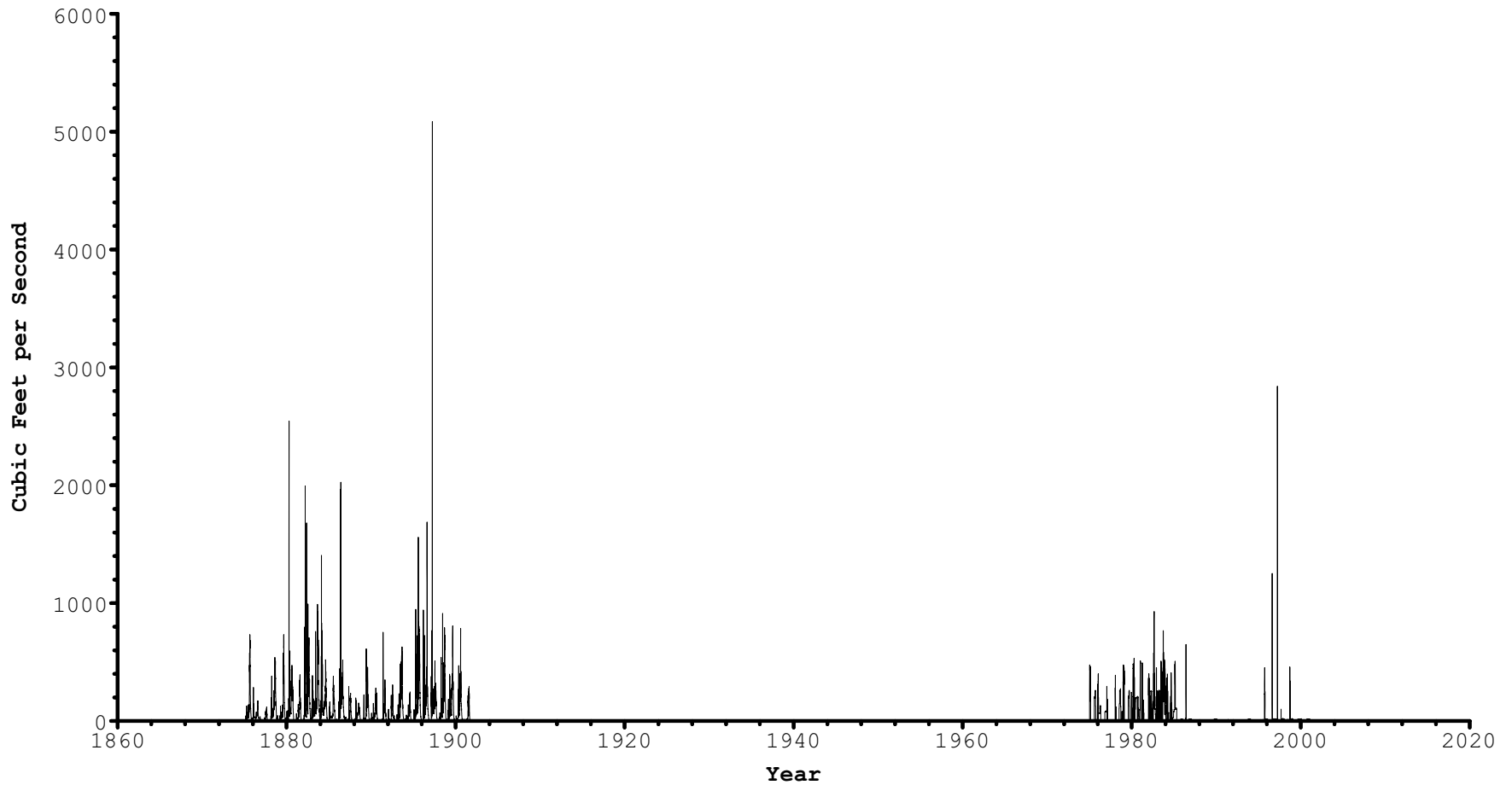
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File(s) Used: P:\Framatome\IHA\3-Icehouse\Icehouse.ann, P:\Framatome\IHA\3-Icehouse\Icehouse.baw



### 4415 South Fork Silver Creek below Ice House Reservoir



File(s) Used: P:\Framatome\IHA\3-Icehouse\Icehouse.dat

**Analysis 4 - Silver Creek below Camino Diversion Dam (Unregulated) versus 4419 Silver Creek below Camino Diversion Dam (Regulated)**

**Errors**

No Errors

## Analysis 4 - Silver Creek below Camino Diversion Dam (Unregulated) versus 4419 Silver Creek below Camino Diversion Dam (Regulated)

### IHA Annual Summary Statistics

Year	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
1875	47.6	84.1	103.2	184.5	261.3	490.9	458.8	1635.2	1254.8	238.3	60.9	35.7	30.6	31.0	31.0	35.7	61.4
1876	167.1	164.0	125.5	121.0	138.4	223.6	322.8	344.0	79.3	32.2	44.8	34.7	26.1	26.2	27.0	29.7	36.8
1877	36.8	39.1	38.3	70.2	91.4	97.4	215.5	265.6	131.6	19.5	5.6	7.0	3.9	4.1	4.2	5.6	7.2
1878	9.9	52.4	380.9	772.8	424.0	929.2	902.3	1288.5	974.9	259.6	69.2	75.4	8.0	8.1	8.3	9.8	60.6
1879	47.8	84.1	103.2	184.5	261.3	490.9	458.8	1635.2	1254.8	238.3	60.9	35.7	30.6	28.2	27.7	31.7	54.0
1880	70.8	177.2	192.2	2778.1	1037.5	587.4	889.7	1101.3	805.2	353.6	62.1	32.4	26.3	24.1	22.8	27.9	37.9
1881	32.4	55.3	110.7	119.2	274.5	396.8	704.0	543.8	125.1	39.9	25.1	23.1	19.5	20.0	20.3	21.7	27.7
1882	57.5	1012.4	1249.3	559.3	1745.3	1065.9	1591.6	2243.5	1215.5	288.5	91.1	169.2	27.0	31.4	35.4	55.6	118.9
1883	414.8	398.6	788.6	616.3	930.4	1714.1	935.4	1957.0	2815.4	1315.7	325.9	99.1	69.2	70.7	73.5	74.5	163.3
1884	106.0	2040.6	1862.1	767.2	530.2	711.5	667.6	1157.0	576.1	153.3	49.2	35.2	32.9	33.0	33.5	35.2	47.7
1885	64.8	376.8	198.2	164.1	232.8	344.6	1039.8	714.7	209.4	46.8	35.9	52.0	31.2	31.2	31.7	35.5	43.7
1886	58.7	126.4	317.5	708.6	3475.3	2102.7	919.8	1032.9	574.1	130.5	59.4	57.1	35.7	36.0	36.3	40.6	60.1
1887	73.6	54.7	62.5	86.1	273.4	366.9	628.3	385.4	106.6	41.6	30.2	28.4	26.9	27.4	27.7	28.3	31.4
1888	44.9	55.3	157.6	206.0	218.5	321.7	372.3	300.6	145.4	37.7	28.6	29.9	22.1	22.2	23.4	26.4	28.6
1889	27.5	144.5	126.3	107.3	207.7	1402.1	1222.9	844.5	442.9	79.7	38.1	51.8	19.9	20.2	20.7	27.4	45.4
1890	80.7	101.0	103.5	202.2	165.9	474.5	708.5	461.9	296.5	63.2	33.0	26.3	20.8	21.1	21.6	25.6	30.8
1891	33.9	39.3	43.0	49.8	84.1	480.4	560.8	791.5	429.3	98.1	42.9	32.2	25.0	25.1	25.6	29.1	37.6
1892	57.4	78.7	78.1	85.5	334.1	413.8	622.9	237.1	108.2	46.9	26.8	16.9	13.9	14.1	14.6	16.9	24.1
1893	43.6	52.6	173.0	543.7	422.7	1322.4	1274.6	1637.3	942.1	254.5	108.0	55.5	19.5	21.3	22.0	40.3	56.0
1894	56.0	59.4	109.5	116.6	158.5	405.1	505.9	480.4	120.4	41.4	28.8	29.3	22.4	23.2	24.2	25.3	27.6
1895	24.9	117.0	208.4	1227.1	686.4	1683.8	1575.8	2283.2	1765.4	823.0	227.5	95.5	16.1	17.2	20.7	24.8	69.7
1896	58.3	63.7	407.5	532.8	1502.5	1152.3	1317.6	1861.3	606.1	171.8	87.1	60.3	53.2	54.1	51.8	54.4	60.9
1897	63.2	432.6	1550.7	4007.2	791.0	745.5	868.4	789.9	403.9	137.0	67.1	59.7	45.0	45.7	46.0	55.0	60.7
1898	63.2	106.5	145.4	822.7	751.2	1231.3	1113.0	1482.6	2203.5	719.1	134.4	89.4	41.0	42.6	45.8	62.5	84.6
1899	72.3	197.6	280.8	673.6	1175.8	854.2	949.1	1585.9	933.1	192.2	93.4	62.3	57.4	41.7	36.7	40.0	60.3
1900	48.8	91.2	85.4	551.8	815.8	710.9	972.6	1109.2	327.4	91.4	51.1	45.5	32.2	32.1	29.4	38.2	46.2
1901	47.3	89.4	118.8	95.0	132.2	471.1	598.1	591.3	80.7	43.0	33.2	27.8	25.6	24.4	23.6	23.2	15.4
1975	23.1	11.9	10.0	13.3	24.2	33.8	28.9	24.9	21.5	20.9	19.8	22.0	9.4	9.5	9.7	9.9	11.2
1976	22.6	10.9	10.6	11.0	12.5	11.0	10.2	5.6	5.6	5.3	5.5	5.4	3.9	3.9	4.3	5.3	5.4
1977	5.6	5.8	5.4	5.2	5.5	3.6	3.1	3.3	3.3	3.0	3.1	3.2	2.0	2.0	2.7	3.0	3.1
1978	3.1	3.4	9.6	26.5	17.1	25.2	26.7	17.0	16.9	23.3	20.6	20.1	2.9	3.0	3.0	3.1	4.9
1979	23.0	11.9	10.0	13.3	24.2	33.8	28.9	24.9	21.5	20.9	19.8	22.0	9.4	9.5	9.7	9.9	11.2
1980	15.9	9.6	10.7	634.8	47.2	24.7	13.8	20.3	19.3	19.0	19.0	19.0	7.3	7.5	7.9	9.0	11.6
1981	19.3	10.0	9.8	11.4	15.6	20.6	11.2	10.0	9.6	10.1	10.3	9.9	1.0	4.8	8.1	9.6	9.6
1982	10.0	24.0	111.2	31.8	552.6	94.3	514.8	991.2	609.8	20.0	21.5	20.8	4.4	5.6	5.9	8.9	20.1
1983	23.4	19.8	69.6	25.3	147.7	824.7	751.7	605.7	919.6	411.6	20.6	19.8	9.6	9.9	10.0	18.0	20.0
1984	20.2	1088.1	729.6	205.6	20.7	23.8	16.1	17.8	19.6	24.6	24.7	21.3	3.8	10.3	10.7	14.2	17.6
1985	21.7	18.2	14.6	15.5	20.7	22.5	21.9	17.0	15.3	16.7	16.9	17.5	9.3	9.7	10.7	14.2	14.5
1986	18.2	10.6	14.5	19.1	1168.0	1206.5	49.3	24.4	20.3	21.1	21.9	22.2	7.6	8.2	8.5	10.5	14.1
1987	22.0	11.3	11.8	12.7	17.7	20.1	12.3	11.8	11.5	10.7	10.7	11.0	9.6	10.0	10.1	10.5	8.5
1988	11.0	6.9	7.4	10.0	6.8	6.6	6.7	5.5	5.2	5.5	6.1	6.5	5.1	5.1	5.1	5.2	5.4
1989	6.0	7.1	5.5	6.2	11.0	41.5	12.5	20.7	22.5	22.6	23.5	23.6	5.1	5.2	5.3	5.5	6.1
1990	22.0	12.0	11.4	11.6	27.7	18.0	10.7	10.7	11.0	11.0	11.2	11.0	10.0	10.0	10.0	10.3	8.3
1991	11.1	6.9	6.6	6.5	67.9	12.9	17.8	11.0	11.3	11.9	11.2	11.1	5.8	6.0	6.1	6.3	6.6
1992	10.9	6.9	6.8	6.8	16.1	12.9	6.9	11.1	11.0	11.0	11.0	11.0	6.4	6.5	6.5	6.7	6.8
1993	12.0	6.9	8.7	63.0	24.4	39.4	19.9	23.6	21.7	20.6	20.5	21.0	6.4	6.4	6.6	6.7	8.9
1994	21.3	11.4	10.8	11.0	11.4	12.8	11.0	6.3	5.5	5.4	5.5	5.4	5.3	5.3	5.3	5.4	5.5
1995	137.8	52.7	9.7	154.1	14.8	104.0	402.4	1504.7	1019.4	503.3	23.7	23.8	5.3	5.3	5.4	8.5	15.9
1996	23.9	11.3	11.7	22.6	74.7	226.6	87.7	979.3	54.3	28.1	27.9	28.3	11.0	11.0	11.0	11.0	13.6
1997	30.2	12.0	436.0	4121.7	510.8	163.0	13.8	23.6	97.3	22.9	22.6	23.1	10.0	10.0	10.3	11.9	17.0
1998	24.0	14.8	11.5	42.8	45.6	63.8	23.2	23.1	961.6	187.0	31.6	28.8	11.0	11.0	11.0	11.0	15.5
1999	27.7	25.1	20.2	41.8	423.3	320.4	51.8	36.7	28.2	27.1	27.1	28.7	19.0	19.0	19.4	19.9	14.7
2000	20.6	11.4	11.2	24.8	44.7	22.1	13.8	22.9	22.5	24.3	22.9	23.0	7.3	7.9	8.6	10.5	11.3
2001	20.2	13.8	13.5	13.7	13.8	14.7	20.7	13.9	14.0	13.9	14.0	13.5	6.7	8.3	12.1	13.2	13.6

## Analysis 4 - Silver Creek below Camino Diversion Dam (Unregulated) versus 4419 Silver Creek below Camino Diversion Dam (Regulated)

IHA Annual Summary Statistics (Cont)

Year	1-day max	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	LRise rate	Fall rate	Reversals
1875	2669.5	2431.1	2314.8	2011.8	1147.2	0.0	0.1	271.0	152.0	3.0	25.0	3.0	23.3	64.5	-38.9	113.0
1876	1537.8	751.9	505.3	446.9	303.6	0.0	0.2	211.0	300.0	5.0	19.8	1.0	1.0	29.4	-15.4	126.0
1877	445.1	411.9	376.8	289.4	213.8	0.0	0.1	228.0	148.0	7.0	24.0	0.0	0.0	10.0	-7.9	112.0
1878	2505.1	1919.2	1552.6	1370.9	1124.0	0.0	0.0	278.0	17.0	3.0	12.0	10.0	14.1	114.2	-65.2	112.0
1879	2669.5	2431.1	2314.8	2011.8	1147.2	0.0	0.1	271.0	152.0	3.0	16.0	3.0	23.3	64.5	-38.7	114.0
1880	24024.1	17237.8	9879.4	2900.0	1504.0	0.0	0.0	275.0	13.0	3.0	17.0	6.0	21.7	294.5	-142.5	87.0
1881	1411.8	1308.1	1164.1	797.3	737.6	0.0	0.1	264.0	115.0	4.0	28.5	4.0	7.0	45.1	-20.7	105.0
1882	12008.8	7906.3	4769.2	2261.7	1721.3	0.0	0.0	276.0	47.0	3.0	7.7	7.0	24.6	408.0	-168.4	102.0
1883	10551.7	6059.6	3830.0	3223.1	2087.7	0.0	0.1	279.0	73.0	0.0	0.0	7.0	30.1	262.0	-135.7	109.0
1884	9581.7	6583.1	4796.4	2149.5	1583.3	0.0	0.1	268.0	322.0	1.0	55.0	9.0	17.7	275.0	-133.3	112.0
1885	1837.9	1725.5	1529.9	1104.7	707.9	0.0	0.1	240.0	106.0	4.0	22.8	3.0	19.0	38.0	-25.8	116.0
1886	17632.5	15706.4	9722.2	4531.8	2161.6	0.0	0.1	256.0	48.0	2.0	19.5	6.0	24.0	346.4	-166.1	97.0
1887	2251.1	1172.5	798.4	670.0	484.7	0.0	0.2	274.0	44.0	6.0	22.7	5.0	5.6	31.9	-21.8	120.0
1888	1018.6	499.6	426.8	378.8	338.0	0.0	0.2	251.0	5.0	6.0	20.7	2.0	1.0	25.1	-18.5	121.0
1889	4001.3	3179.8	2571.7	1556.2	1174.4	0.0	0.1	276.0	68.0	7.0	10.6	5.0	17.2	84.6	-52.6	122.0
1890	1081.6	891.3	789.9	709.2	565.0	0.0	0.1	256.0	114.0	3.0	24.7	7.0	6.3	35.2	-19.9	113.0
1891	5103.5	2614.1	1418.2	837.8	621.4	0.0	0.1	279.0	64.0	2.0	34.0	7.0	7.6	59.0	-39.4	112.0
1892	1137.5	1027.8	785.6	624.8	494.1	0.0	0.1	273.0	108.0	4.0	25.3	5.0	3.8	29.6	-15.5	123.0
1893	4253.6	3298.4	2464.3	1669.9	1529.6	0.0	0.0	275.0	77.0	4.0	13.3	5.0	23.6	144.5	-64.4	103.0
1894	912.0	874.6	788.5	616.5	473.1	0.0	0.1	254.0	110.0	4.0	32.5	3.0	5.7	24.3	-15.1	128.0
1895	8831.9	7156.0	5289.8	2468.3	1971.4	0.0	0.0	276.0	122.0	2.0	2.0	7.0	26.1	255.2	-147.0	96.0
1896	6131.6	5826.7	3864.4	2024.5	1460.7	0.0	0.1	282.0	36.0	9.0	4.4	6.0	24.3	250.7	-95.9	95.0
1897	32435.2	24443.4	13791.9	4474.7	2196.6	0.0	0.1	283.0	2.0	7.0	6.7	8.0	18.0	459.6	-221.3	101.0
1898	7818.4	4963.8	3370.9	2203.5	1689.6	0.0	0.1	279.0	84.0	3.0	2.7	4.0	38.8	167.4	-95.4	113.0
1899	4223.5	3070.1	2504.7	1656.6	1175.5	0.0	0.1	274.0	40.0	2.0	3.5	6.0	23.0	153.5	-77.5	106.0
1900	4493.7	2698.3	1701.2	1153.4	955.4	0.0	0.1	279.0	45.0	9.0	8.4	5.0	21.4	117.4	-66.5	119.0
1901	1296.1	1215.3	1088.0	832.4	562.4	0.0	0.1	281.0	85.0	2.0	51.0	3.0	14.0	28.6	-15.6	119.0
1975	121.0	85.0	57.1	34.4	30.7	0.0	0.5	314.0	84.0	3.0	70.7	0.0	0.0	4.5	-2.6	65.0
1976	27.0	25.3	24.1	22.7	14.8	0.0	0.4	132.0	300.0	2.0	0.5	0.0	0.0	0.7	-0.6	92.0
1977	8.7	7.1	6.4	5.8	5.6	0.0	0.6	67.0	315.0	2.0	107.0	0.0	0.0	0.3	-0.2	109.0
1978	103.0	76.3	56.7	29.6	23.8	0.0	0.2	283.0	17.0	4.0	62.8	0.0	0.0	5.7	-3.3	68.0
1979	121.0	85.0	57.1	34.4	30.7	0.0	0.5	314.0	84.0	3.0	70.7	0.0	0.0	4.5	-2.6	65.0
1980	5280.0	3710.0	2487.9	656.4	242.6	0.0	0.1	338.0	13.0	3.0	82.0	1.0	9.0	94.0	-46.6	66.0
1981	66.0	55.0	40.6	21.1	46.9	0.0	0.7	306.0	86.0	3.0	70.7	0.0	0.0	1.8	-1.5	99.0
1982	5010.0	3203.3	1756.0	991.5	717.1	0.0	0.0	309.0	47.0	9.0	21.1	7.0	8.3	138.3	-91.3	105.0
1983	3800.0	2143.3	1451.4	1185.8	806.6	0.0	0.0	346.0	73.0	8.0	18.3	9.0	10.1	107.0	-70.5	110.0
1984	4470.0	3566.7	2630.0	1194.9	685.2	0.0	0.1	195.0	322.0	6.0	48.0	4.0	7.0	143.5	-87.8	99.0
1985	43.0	36.3	34.0	26.5	21.8	0.0	0.6	344.0	333.0	2.0	107.0	0.0	0.0	2.3	-1.9	95.0
1986	9810.0	7253.3	4095.7	2071.0	797.1	0.0	0.0	317.0	48.0	5.0	40.2	4.0	6.5	186.7	-128.2	102.0
1987	53.0	36.3	27.4	22.0	16.9	0.0	0.7	365.0	44.0	2.0	107.0	0.0	0.0	2.4	-1.8	61.0
1988	19.0	15.7	13.8	11.0	8.6	0.0	0.7	144.0	11.0	2.0	0.5	0.0	0.0	0.5	-0.4	135.0
1989	99.0	66.0	53.9	42.3	25.2	0.0	0.3	309.0	68.0	4.0	53.0	0.0	0.0	2.9	-2.4	125.0
1990	130.0	86.7	72.0	31.6	18.8	0.0	0.7	112.0	52.0	4.0	55.3	0.0	0.0	6.3	-4.6	47.0
1991	477.0	439.0	251.0	68.2	32.4	0.0	0.4	15.0	52.0	2.0	109.0	0.0	0.0	7.9	-5.8	93.0
1992	53.0	44.3	33.1	19.2	12.4	0.0	0.6	98.0	51.0	2.0	0.5	0.0	0.0	1.3	-0.9	92.0
1993	818.0	444.3	214.1	68.5	45.2	0.0	0.3	351.0	22.0	4.0	61.8	1.0	1.0	13.3	-9.6	86.0
1994	24.0	23.3	22.6	112.8	68.1	0.0	0.5	176.0	289.0	2.0	107.0	0.0	0.0	0.5	-0.6	98.0
1995	7280.0	5623.3	3334.3	1506.2	1122.4	0.0	0.0	279.0	123.0	8.0	26.1	9.0	8.2	150.4	-110.2	117.0
1996	6170.0	5660.0	3409.4	1021.9	447.9	0.0	0.1	308.0	137.0	12.0	13.2	4.0	3.3	124.7	-85.1	114.0
1997	32900.0	22333.3	13677.1	4308.9	1763.5	0.0	0.0	307.0	2.0	6.0	34.0	7.0	6.4	584.9	-346.3	103.0
1998	2380.0	2256.7	1901.1	1112.1	395.8	0.0	0.1	321.0	169.0	8.0	26.5	2.0	11.0	68.1	-48.9	99.0
1999	1850.0	998.3	795.6	598.4	264.0	0.0	0.2	329.0	40.0	8.0	30.9	3.0	6.7	49.0	-37.8	122.0
2000	323.0	183.3	108.1	49.2	30.9	0.0	0.4	298.0	45.0	4.0	60.5	0.0	0.0	10.2	-6.9	77.0
2001	57.0	56.3	43.4	20.9	16.4	0.0	0.8	301.0	111.0	2.0	107.0	0.0	0.0	2.5	-2.2	85.0

## Analysis 4 - Silver Creek below Camino Diversion Dam (Unregulated) versus 4419 Silver Creek below Camino Diversion Dam (Regulated)

### Non-Parametric IHA Scorecard

Pre-impact period: 1875-1901 (27 years)

Post-impact period: 1975-2001 (27 years)

Watershed area	1.00	
Mean annual flow	450.03	89.48
Mean flow/area	450.03	89.48
Annual C. V.	.94	.08
Flow predictability	.41	.42
Constancy/predictability	.44	.79
% of floods in 60d period	.41	.41
flood-free season	53.00	125.00

	MEDIANS		COEFF. of DISP.		DEVIATION FACTOR		SIGNIFICANCE COUNT	
	Pre	Post	Pre	Post	Medians	C.V.	Medians	C.V.
Parameter Group #1								
October	57.4	20.6	.47	.58	.64	.24	.06	.51
November	91.2	11.4	1.34	.67	.88	.50	.20	.44
December	145.4	10.8	1.47	.45	.93	.69	.25	.38
January	206.0	15.5	2.87	1.99	.92	.31	.15	.64
February	334.1	24.2	1.82	2.19	.93	.20	.15	.71
March	587.4	24.7	1.27	3.22	.96	1.53	.18	.15
April	868.4	17.8	.55	.99	.98	.80	.26	.41
May	1032.9	20.3	1.12	.69	.98	.39	.22	.60
June	442.9	19.6	1.90	.88	.96	.54	.13	.33
July	130.5	20.6	1.62	.65	.84	.60	.05	.22
August	51.1	19.8	1.06	.60	.61	.43	.00	.34
September	35.7	20.1	.87	.60	.44	.32	.00	.69
Parameter Group #2								
1-day minimum	26.3	6.7	.49	.67	.75	.36	.16	.51
3-day minimum	26.2	7.9	.45	.60	.70	.32	.20	.57
7-day minimum	27.0	8.5	.51	.58	.69	.14	.25	.85
30-day minimum	29.7	9.9	.50	.48	.67	.06	.17	.91
90-day minimum	46.2	11.2	.65	.72	.76	.11	.12	.77
1-day maximum	4001.3	130.0	1.85	33.98	.97	17.32	.14	.00
3-day maximum	2614.1	86.7	1.87	36.45	.97	18.50	.17	.00
7-day maximum	2314.8	72.0	1.32	25.93	.97	18.58	.10	.00
30-day maximum	1556.2	49.2	.96	20.32	.97	20.16	.02	.00
90-day maximum	1147.2	32.4	.89	13.24	.97	13.88	.04	.00
Number of zero days	.0	.0	.00	.00	999999.00	999999.00	.00	.00
Base flow	.1	.4	.88	1.42	4.47	.61	.00	.29
Parameter Group #3								
Date of minimum	274.0	309.0	.06	.16	.19	1.57	.00	.01
Date of maximum	68.0	47.0	.20	.20	.11	.01	.21	.97
Parameter Group #4								
Low pulse count	3.0	4.0	1.33	1.00	.33	.25	.01	.56
Low pulse duration	19.5	55.3	.89	1.01	1.83	.14	.00	.65
High pulse count	5.0	.0	.80	.00	1.00	1.00	.03	.05
High pulse duration	18.0	.0	.96	.00	1.00	1.00	.04	.05
The low pulse threshold is	60.38							
The high pulse level is	580.89							
Parameter Group #5								
Rise rate	84.6	6.3	2.64	16.66	.93	5.31	.17	.00
Fall rate	-52.6	-4.6	-2.16	-15.04	.91	5.98	.22	.00
Number of reversals	112.0	98.0	.14	.33	.13	1.29	.01	.00

## Analysis 4 - Silver Creek below Camino Diversion Dam (Unregulated) versus 4419 Silver Creek below Camino Diversion Dam (Regulated)

Variance Data, Box and Whisker Format

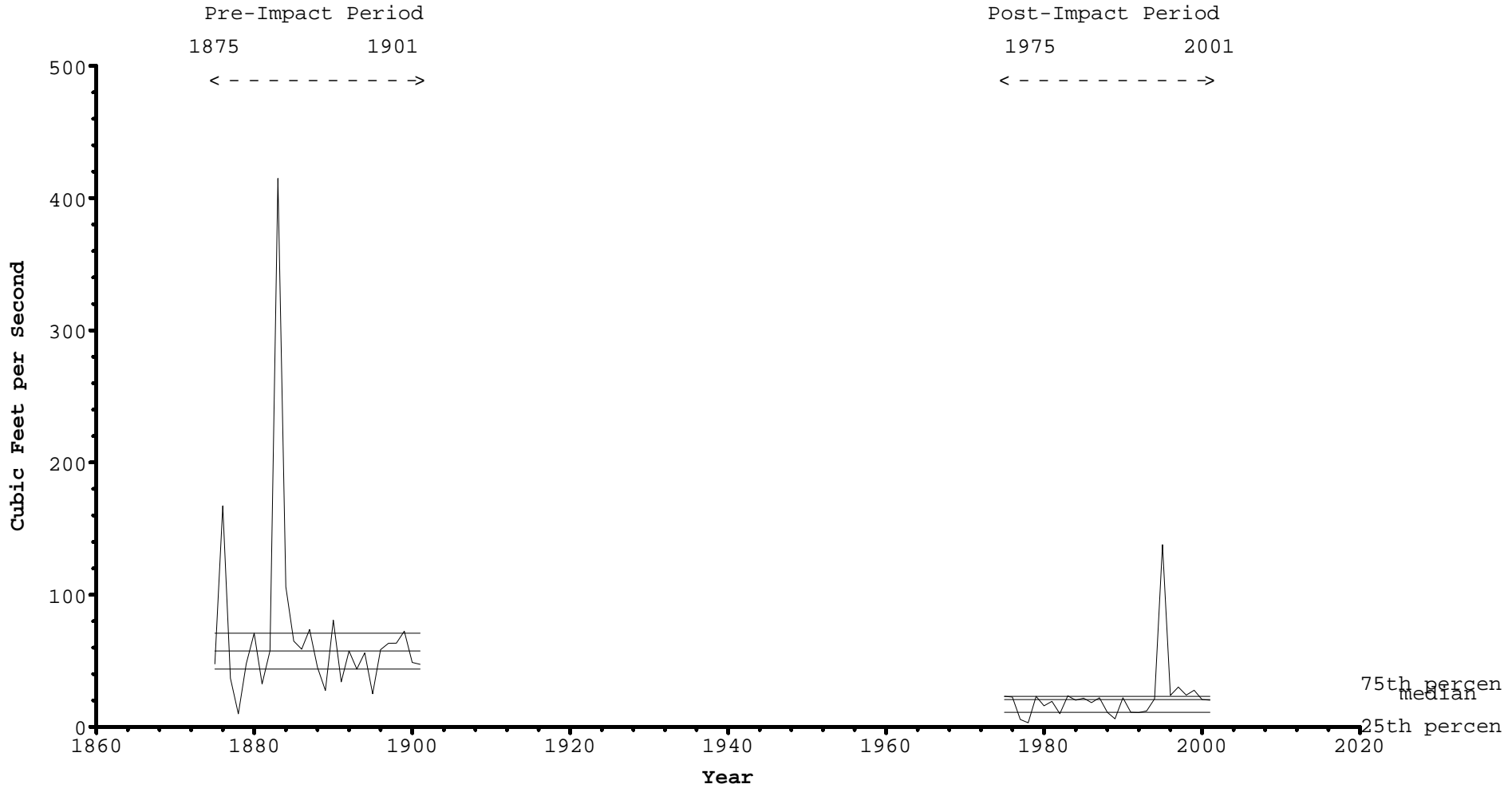
	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
<b>Pre-Impact Distribution</b>																	
1-day min	9.9	39.1	38.3	49.8	84.1	97.4	215.5	237.1	79.3	19.5	5.6	7.0	3.9	4.1	4.2	5.6	7.2
25 pctile	43.6	55.3	103.2	116.6	207.7	405.1	560.8	480.4	131.6	43.0	33.0	29.3	19.9	21.1	21.6	25.3	30.8
Median	57.4	91.2	145.4	206.0	334.1	587.4	868.4	1032.9	442.9	130.5	51.1	35.7	26.3	26.2	27.0	29.7	46.2
75 pctile	70.8	177.2	317.5	708.6	815.8	1152.3	1039.8	1635.2	974.9	254.5	87.1	60.3	32.9	33.0	35.4	40.3	60.7
1-day max	414.8	2040.6	1862.1	4007.2	3475.3	2102.7	1591.6	2283.2	2815.4	1315.7	325.9	169.2	69.2	70.7	73.5	74.5	163.3
<b>Post-Impact Distribution</b>																	
1-day min	3.1	3.4	5.4	5.2	5.5	3.6	3.1	3.3	3.3	3.0	3.1	3.2	1.0	2.0	2.7	3.0	3.1
25 pctile	11.1	7.1	9.6	11.0	14.8	14.7	11.2	11.0	11.0	11.0	11.0	11.0	5.1	5.3	5.4	6.3	6.6
Median	20.6	11.4	10.8	15.5	24.2	24.7	17.8	20.3	19.6	20.6	19.8	20.1	6.7	7.9	8.5	9.9	11.2
75 pctile	23.1	14.8	14.5	41.8	67.9	94.3	28.9	24.9	28.2	24.3	22.9	23.0	9.6	10.0	10.3	11.0	14.7
1-day max	137.8	1088.1	729.6	4121.7	1168.0	1206.5	751.7	1504.7	1019.4	503.3	31.6	28.8	19.0	19.0	19.4	19.9	20.1
<b>1-day max 3-day max 7-day max 30-day max 90-day max Zero days Base flow Date min Date max Lo pulse #Lo pulse LHi pulse #Hi pulse LRise rate Fall rate Reversals</b>																	
<b>Pre-Impact Distribution</b>																	
1-day min	445.1	411.9	376.8	289.4	213.8	0.0	0.0	211.0	2.0	0.0	0.0	0.0	0.0	10.0	-221.3	87.0	
25 pctile	1411.8	1172.5	798.4	709.2	562.4	0.0	0.1	256.0	36.0	2.0	7.7	3.0	6.3	31.9	-133.3	103.0	
Median	4001.3	2614.1	2314.8	1556.2	1147.2	0.0	0.1	274.0	68.0	3.0	19.5	5.0	18.0	84.6	-52.6	112.0	
75 pctile	8831.9	6059.6	3864.4	2203.5	1583.3	0.0	0.1	279.0	110.0	6.0	25.0	7.0	23.6	255.2	-19.9	119.0	
1-day max	32435.2	24443.4	13791.9	4531.8	2196.6	0.0	0.2	283.0	322.0	9.0	55.0	10.0	38.8	459.6	-7.9	128.0	
<b>Post-Impact Distribution</b>																	
1-day min	8.7	7.1	6.4	5.8	5.6	0.0	0.0	15.0	2.0	2.0	0.5	0.0	0.0	0.3	-346.3	47.0	
25 pctile	53.0	44.3	34.0	22.7	18.8	0.0	0.1	279.0	11.0	2.0	26.1	0.0	0.0	2.3	-70.5	77.0	
Median	130.0	86.7	72.0	49.2	32.4	0.0	0.4	309.0	47.0	4.0	55.3	0.0	0.0	6.3	-4.6	98.0	
75 pctile	4470.0	3203.3	1901.1	1021.9	447.9	0.0	0.6	338.0	84.0	6.0	82.0	4.0	6.7	107.0	-1.8	109.0	
1-day max	32900.0	22333.3	13677.1	4308.9	1763.5	0.0	0.8	365.0	333.0	12.0	109.0	9.0	11.0	584.9	-0.2	135.0	

## Analysis 4 - Silver Creek below Camino Diversion Dam (Unregulated) versus 4419 Silver Creek below Camino Diversion Dam (Regulated)

IHA Percentile Data

	Pre-impact period: 1875-1901 (27 years)						Post-impact period: 1975-2001 (27 years)					
	Pre-Impact					(75-25)/50	Post-Impact					
	10%	25%	50%	75%	90%		10%	25%	50%	75%	90%	(75-25)/50
<b>Parameter Group #1</b>												
October	27.01	43.63	57.36	70.77	118.21	.47	5.92	11.06	20.58	23.10	28.20	.58
November	49.76	55.27	91.23	177.22	548.60	1.34	6.64	7.14	11.40	14.77	30.65	.67
December	58.61	103.24	145.44	317.54	1309.61	1.47	6.38	9.61	10.81	14.49	176.12	.45
January	82.43	116.59	206.01	708.60	1537.27	2.87	6.46	11.00	15.48	41.81	291.40	1.99
February	124.03	207.67	334.09	815.80	1551.04	1.82	10.20	14.82	24.18	67.85	519.15	2.19
March	302.03	405.09	587.37	1152.30	1689.89	1.27	10.15	14.65	24.74	94.32	421.28	3.22
April	362.39	560.82	868.39	1039.84	1369.27	.55	6.84	11.23	17.77	28.87	424.89	.99
May	293.60	480.43	1032.94	1635.15	2014.30	1.12	5.59	11.00	20.29	24.94	981.70	.69
June	101.40	131.56	442.90	974.90	1853.05	1.90	5.41	11.00	19.60	28.23	928.00	.88
July	36.62	43.04	130.46	254.52	739.86	1.62	5.41	11.00	20.58	24.32	231.90	.65
August	26.46	33.02	51.08	87.10	153.02	1.06	5.50	11.00	19.77	22.94	27.23	.60
September	21.88	29.27	35.70	60.32	96.20	.87	5.43	11.00	20.10	22.97	28.35	.60
<b>Parameter Group #2</b>												
1-day minimum	12.73	19.90	26.33	32.90	54.03	.49	2.72	5.10	6.70	9.60	11.00	.67
3-day minimum	12.91	21.14	26.18	33.02	47.34	.45	3.74	5.30	7.87	10.00	11.00	.60
7-day minimum	13.35	21.61	26.98	35.39	47.14	.51	4.03	5.36	8.47	10.29	11.21	.58
30-day minimum	15.45	25.28	29.74	40.29	56.98	.50	4.77	6.32	9.91	11.03	14.98	.48
90-day minimum	22.33	30.76	46.20	60.69	91.41	.65	5.28	6.60	11.20	14.69	18.10	.72
1-day maximum	997.28	1411.75	4001.28	8831.91	18910.81	1.85	23.00	53.00	130.00	4470.00	7786.00	33.98
3-day maximum	701.41	1172.48	2614.10	6059.56	16012.68	1.87	21.80	44.33	86.67	3203.33	5978.67	36.45
7-day maximum	489.58	798.42	2314.82	3864.35	9753.63	1.32	20.81	34.00	72.00	1901.14	3546.68	25.93
30-day maximum	433.25	709.24	1556.21	2203.49	3473.44	.96	17.53	22.73	49.17	1021.90	1619.13	20.32
90-day maximum	331.13	562.38	1147.20	1583.30	2102.47	.89	11.66	18.81	32.41	447.92	869.77	13.24
Number of zero days	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Base flow	.03	.05	.07	.11	.15	.88	.02	.08	.39	.64	.73	1.42
<b>Parameter Group #3</b>												
Date of minimum	237.60	256.00	274.00	279.00	281.20	.06	128.00	279.00	309.00	338.00	2.20	.16
Date of maximum	358.80	36.00	68.00	110.00	148.80	.20	312.00	11.00	47.00	84.00	125.80	.20
<b>Parameter Group #4</b>												
Low pulse count	1.80	2.00	3.00	6.00	7.40	1.33	2.00	2.00	4.00	6.00	8.20	1.00
Low pulse duration	2.53	7.67	19.50	25.00	37.40	.89	.50	26.13	55.25	82.00	107.00	1.01
High pulse count	1.80	3.00	5.00	7.00	8.20	.80	.00	.00	.00	4.00	7.40	.00
High pulse duration	1.00	6.29	18.00	23.60	26.94	.96	.00	.00	.00	6.67	9.22	.00
<b>Parameter Group #5</b>												
Rise rate	24.95	31.90	84.59	255.19	358.69	2.64	.49	2.29	6.29	106.99	157.68	16.66
Fall rate	-166.59	-133.29	-52.63	-19.86	-15.30	-2.16	-113.79	-70.53	-4.57	-1.81	-.55	-15.04
Number of reversals	95.80	103.00	112.00	119.00	123.60	.14	64.20	77.00	98.00	109.00	122.60	.33

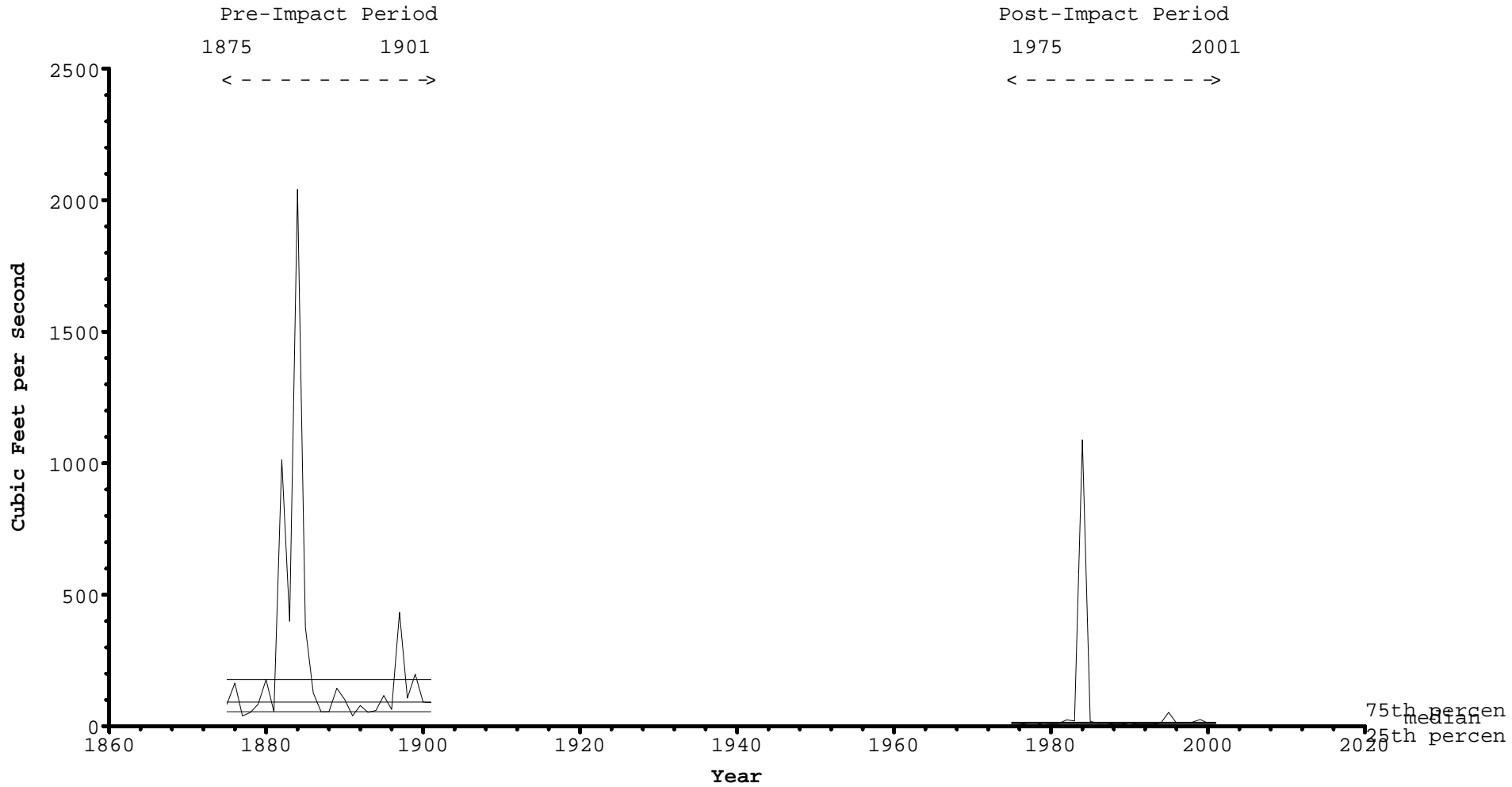
Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Average flow for October



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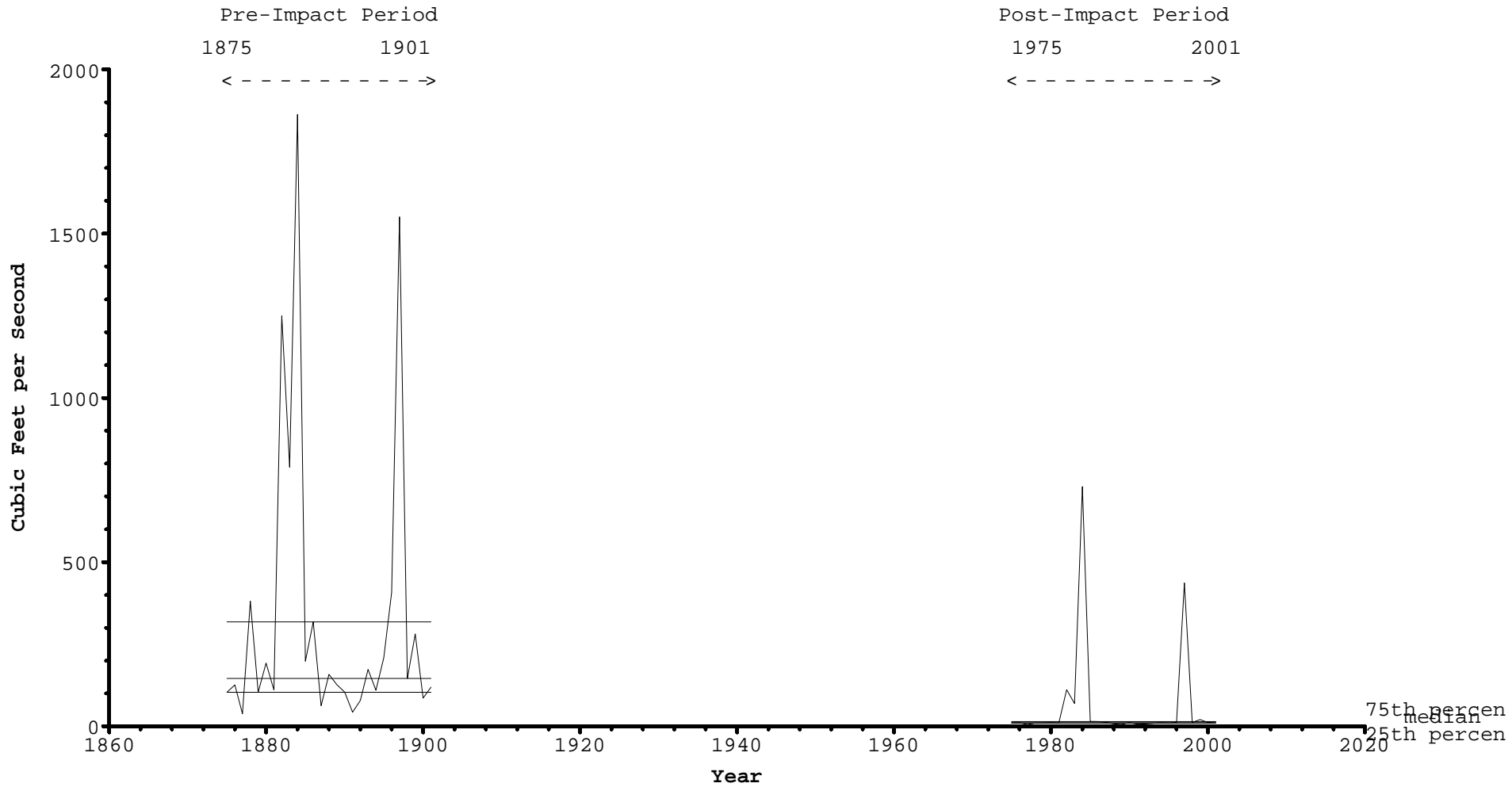


Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Average flow for November



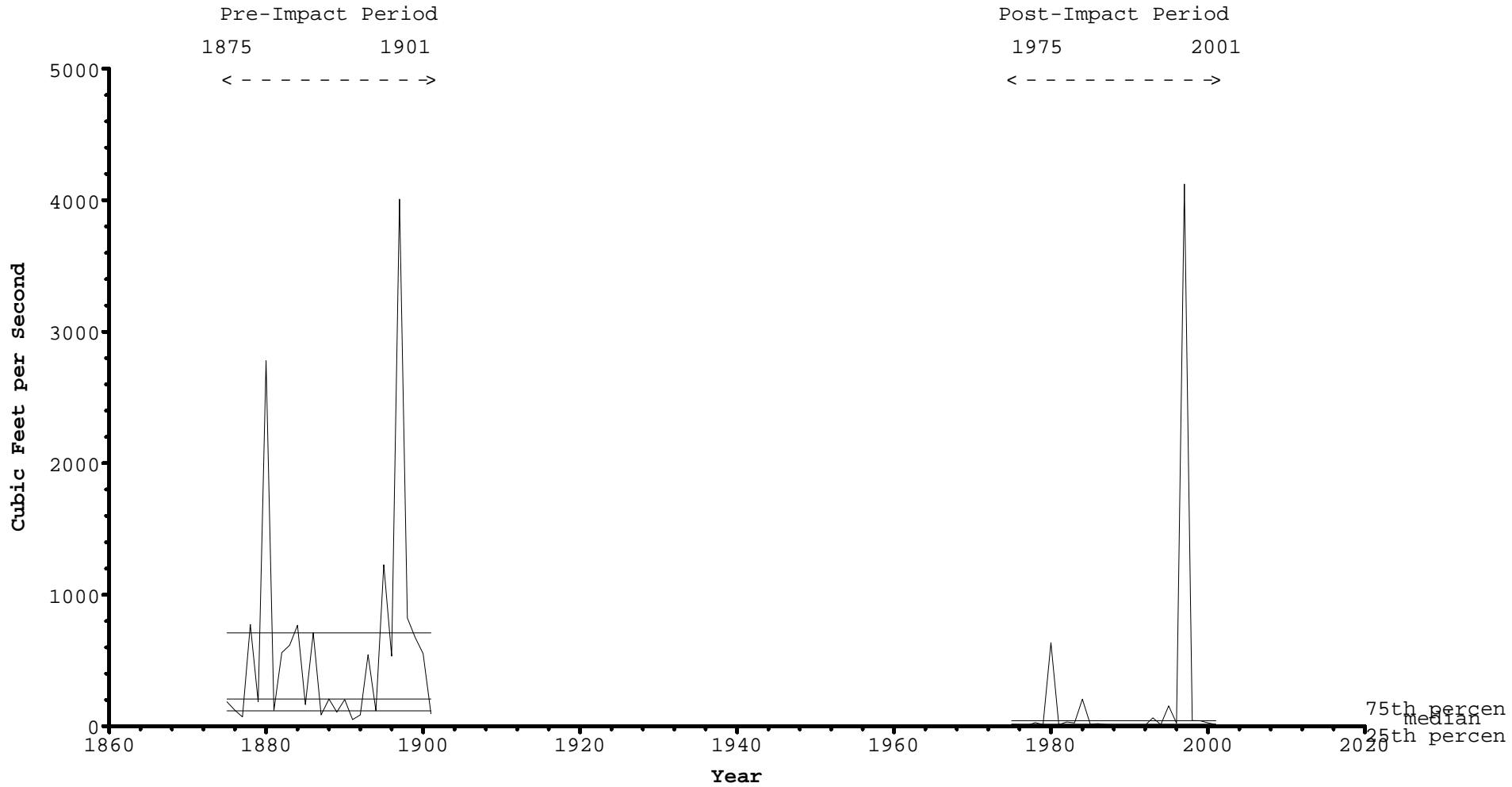
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Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Average flow for December

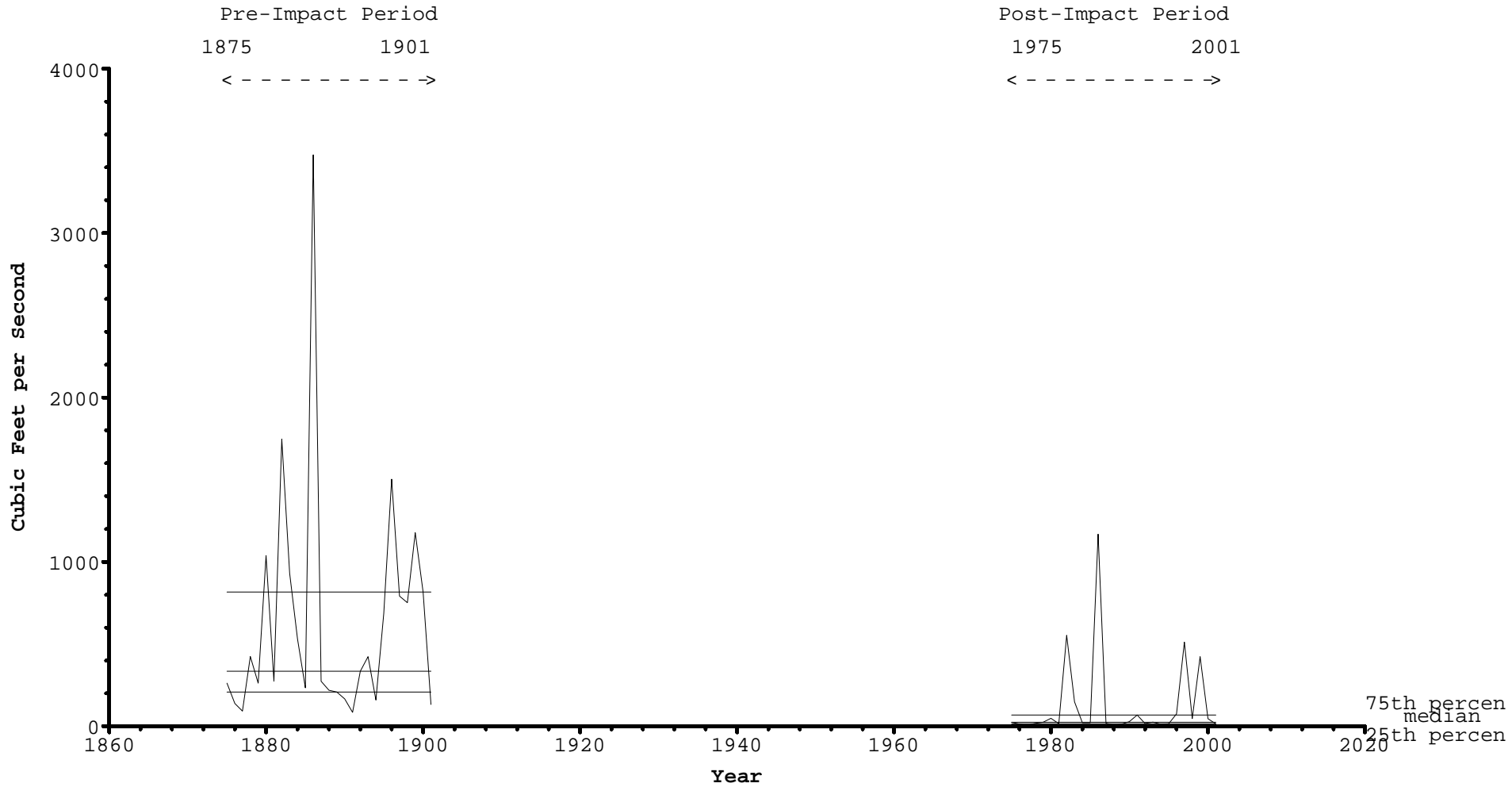


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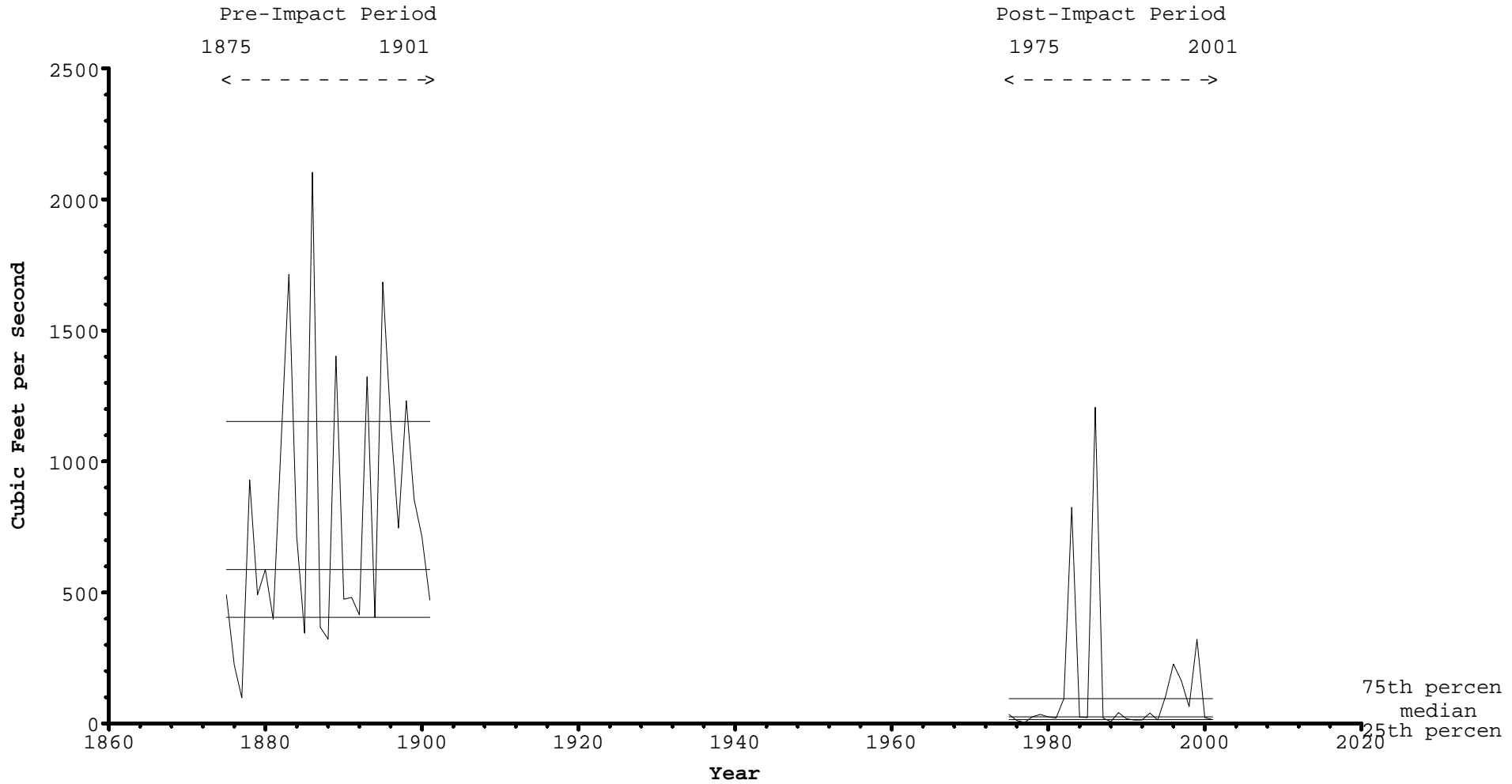
Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Average flow for January



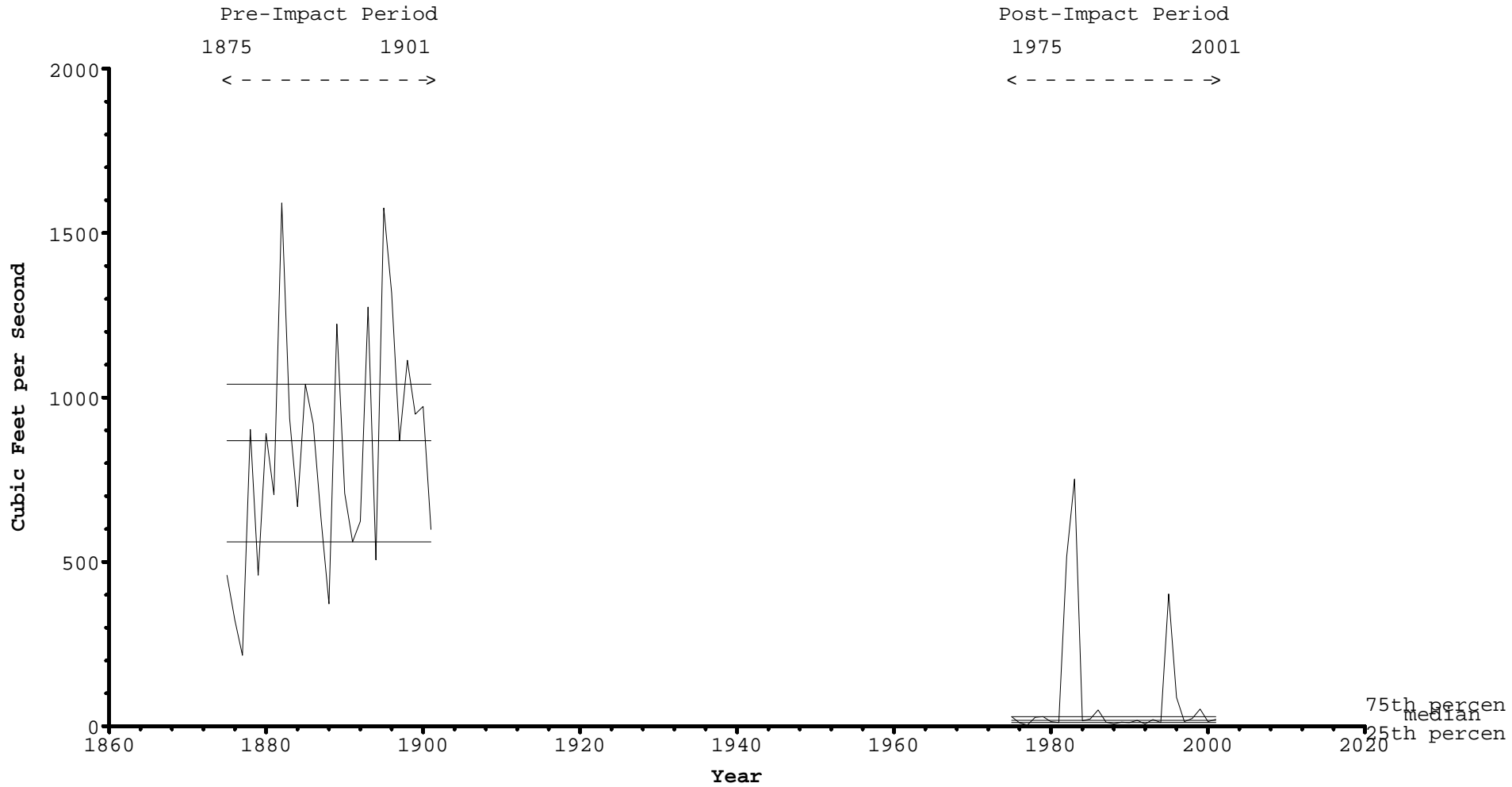
Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Average flow for February



Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Average flow for March

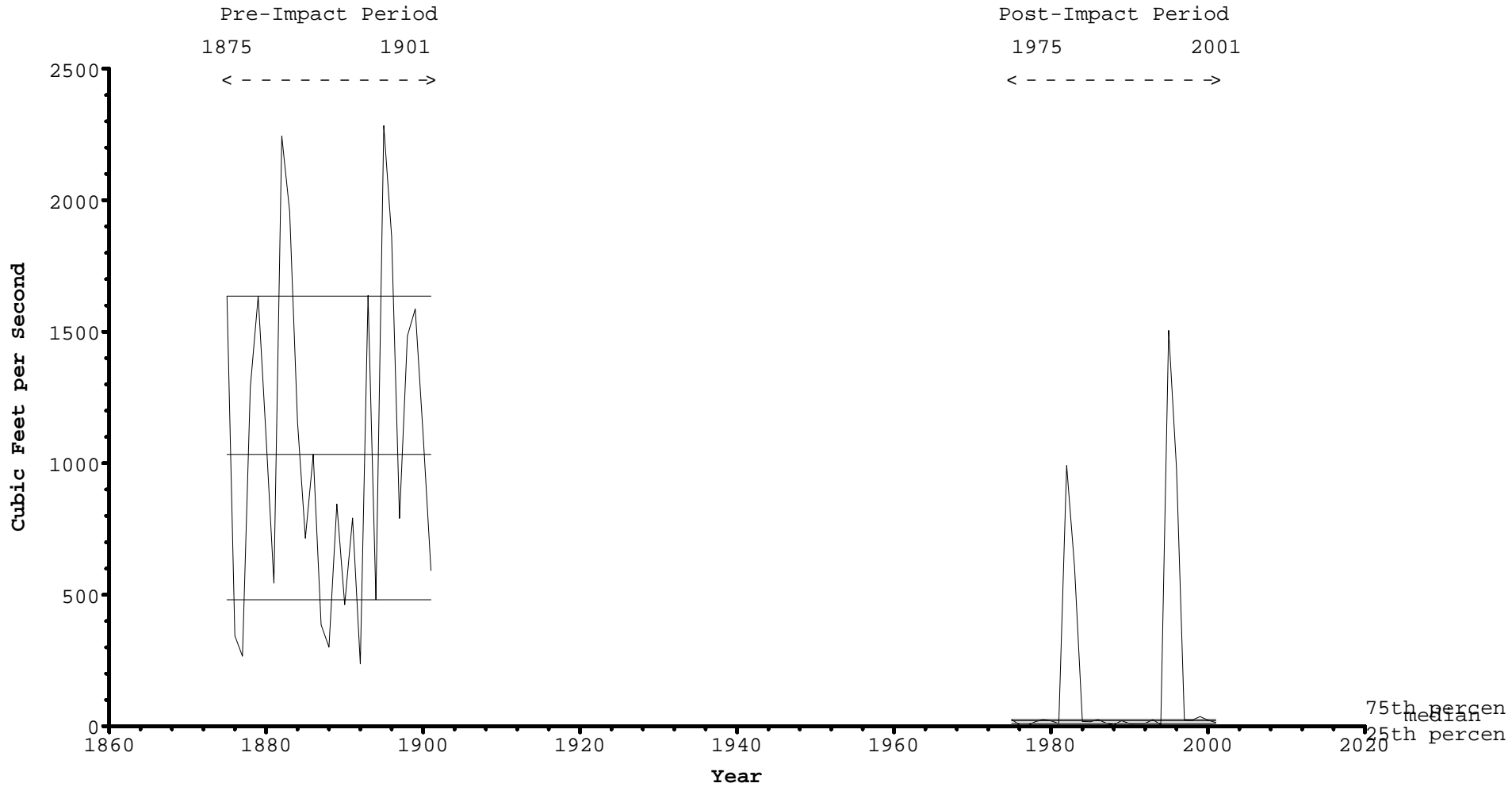


Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Average flow for April

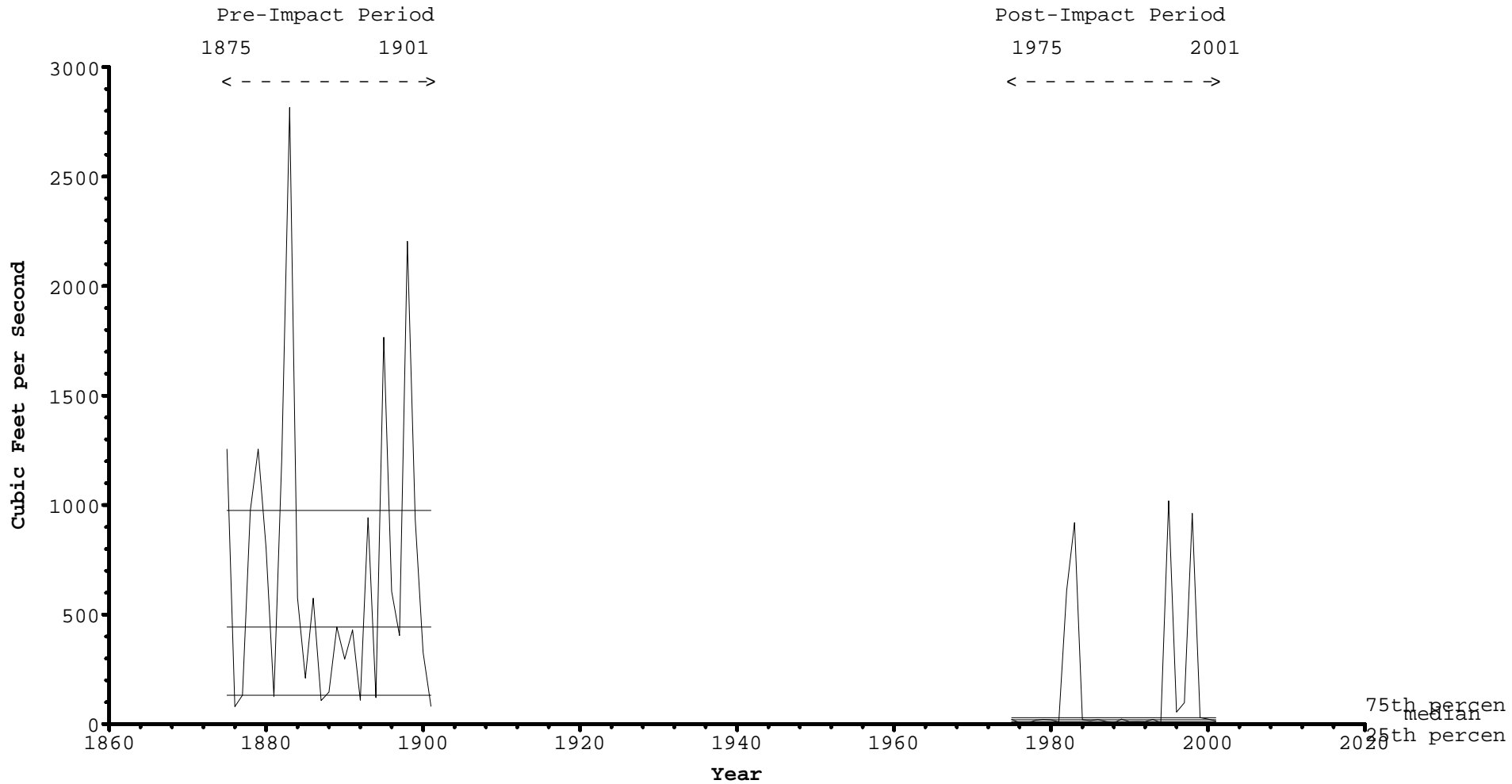


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Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Average flow for May

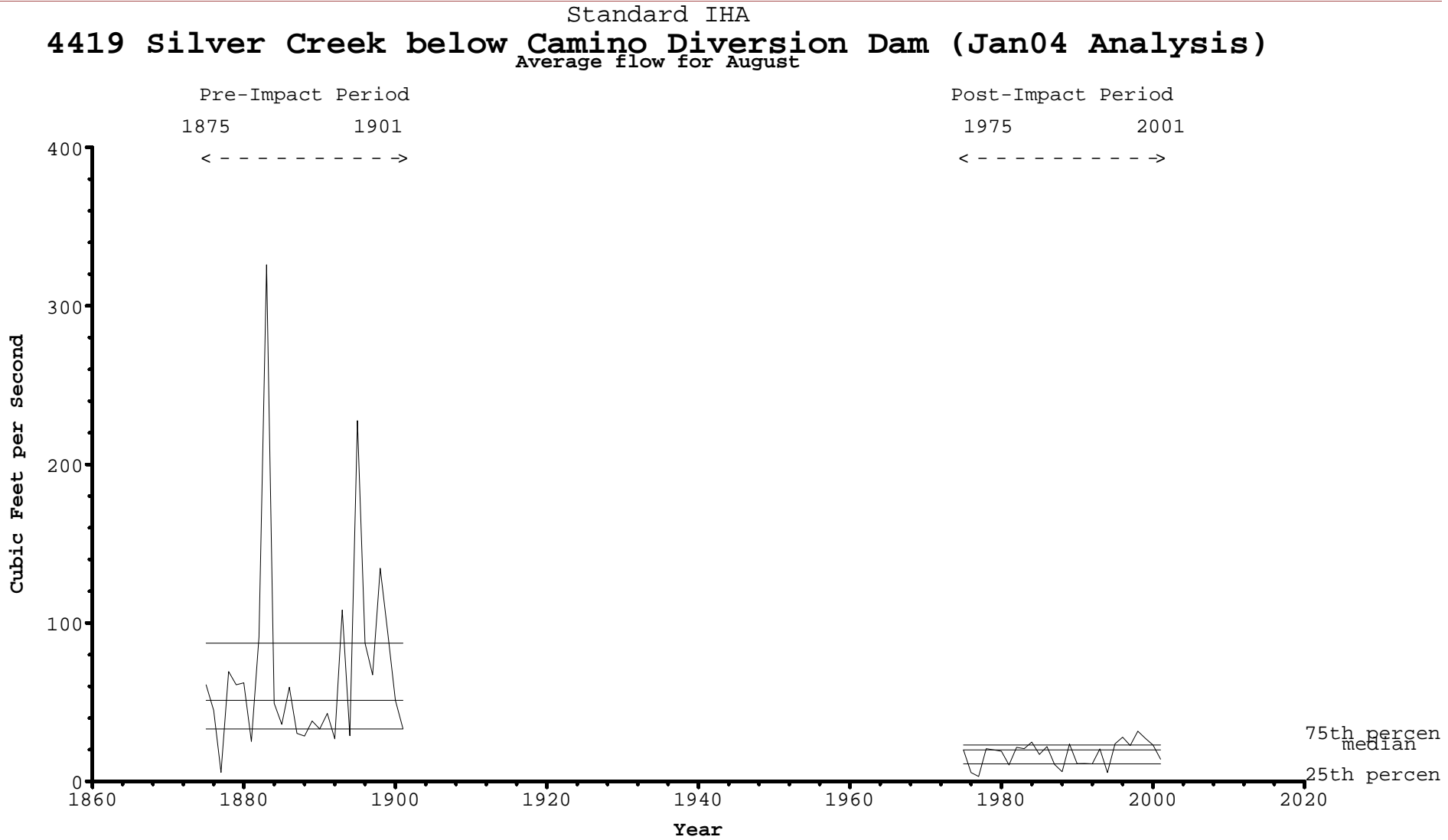


Standard IHA  
**4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)**  
Average flow for June



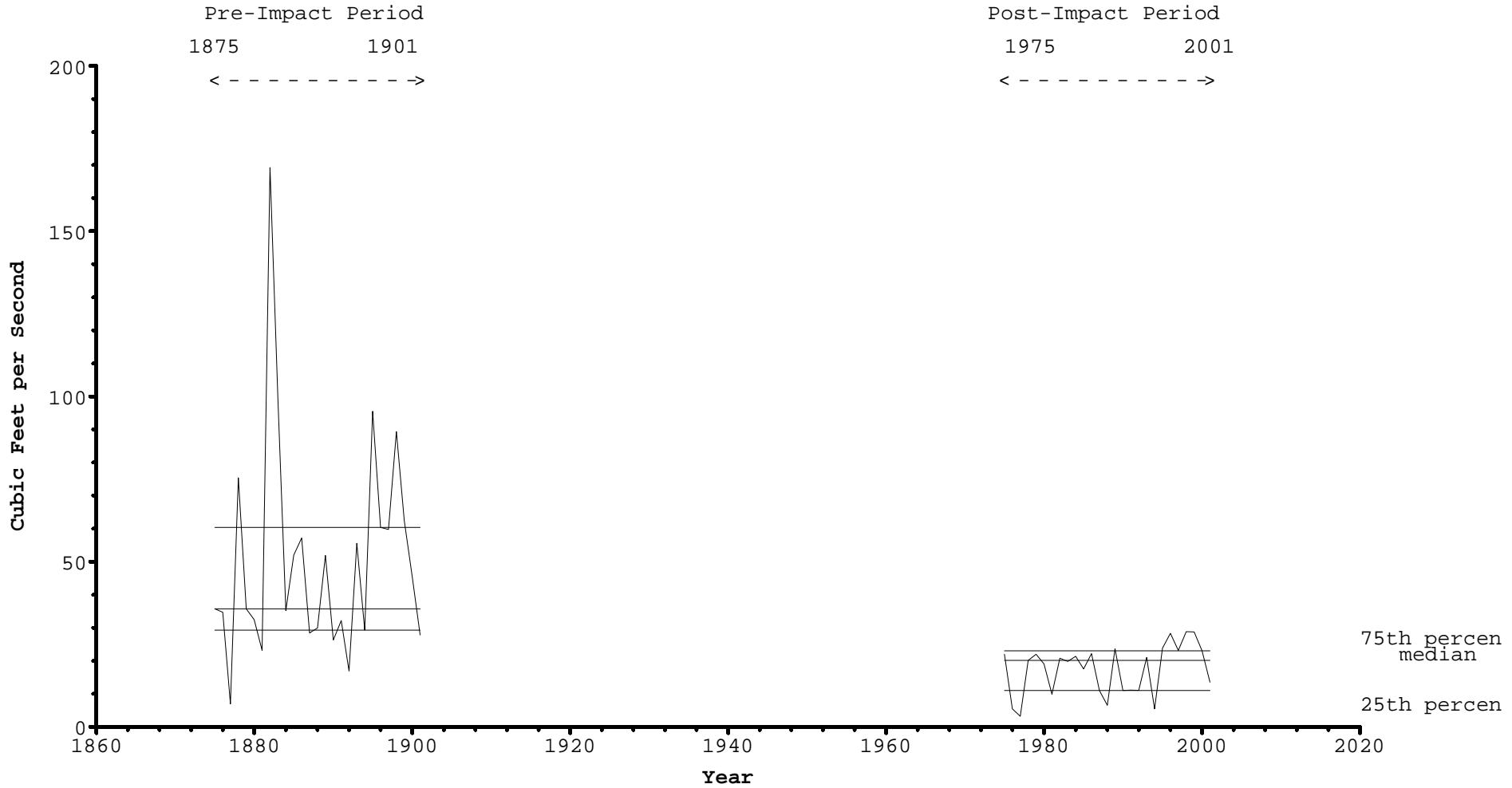




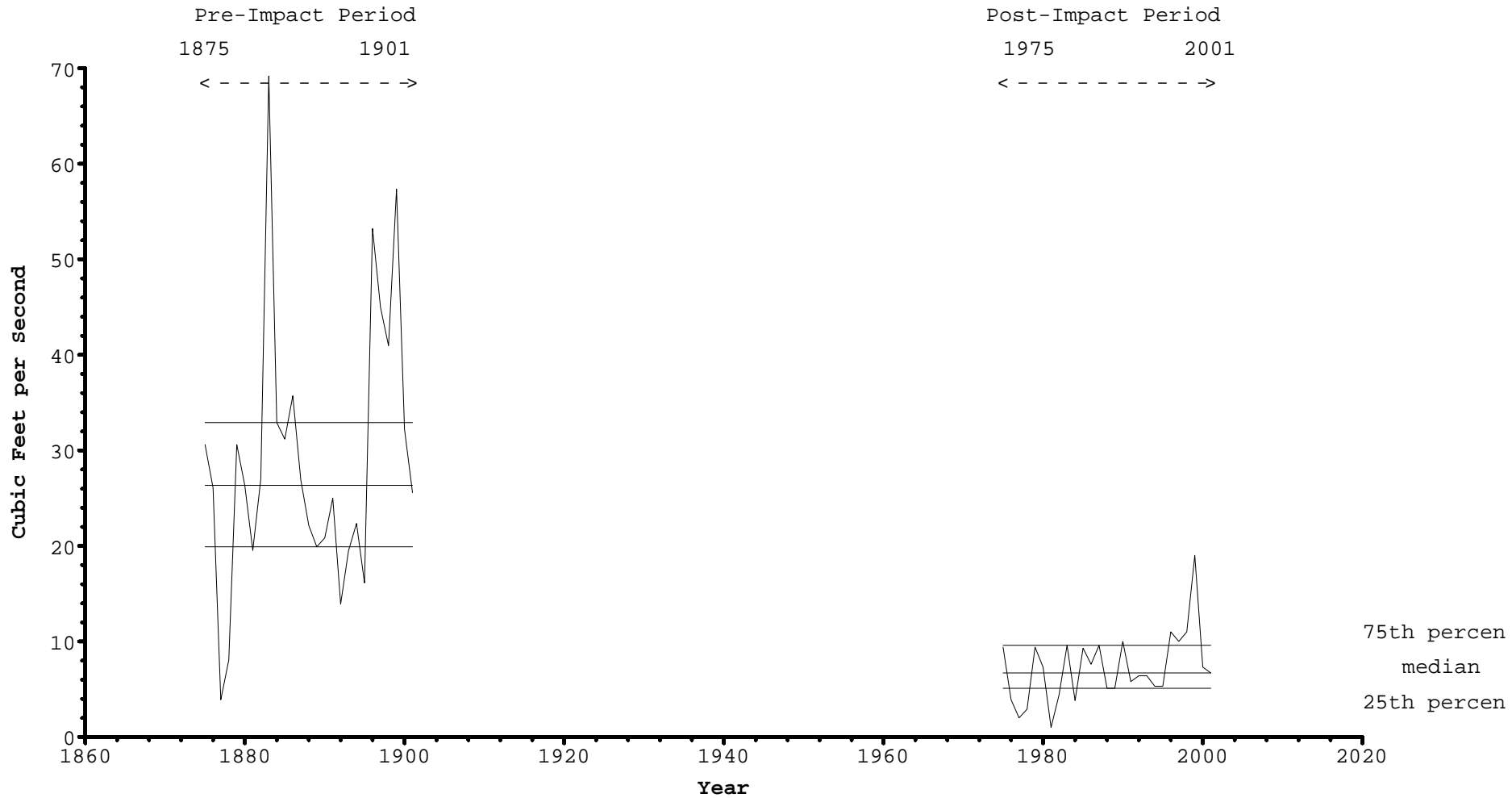


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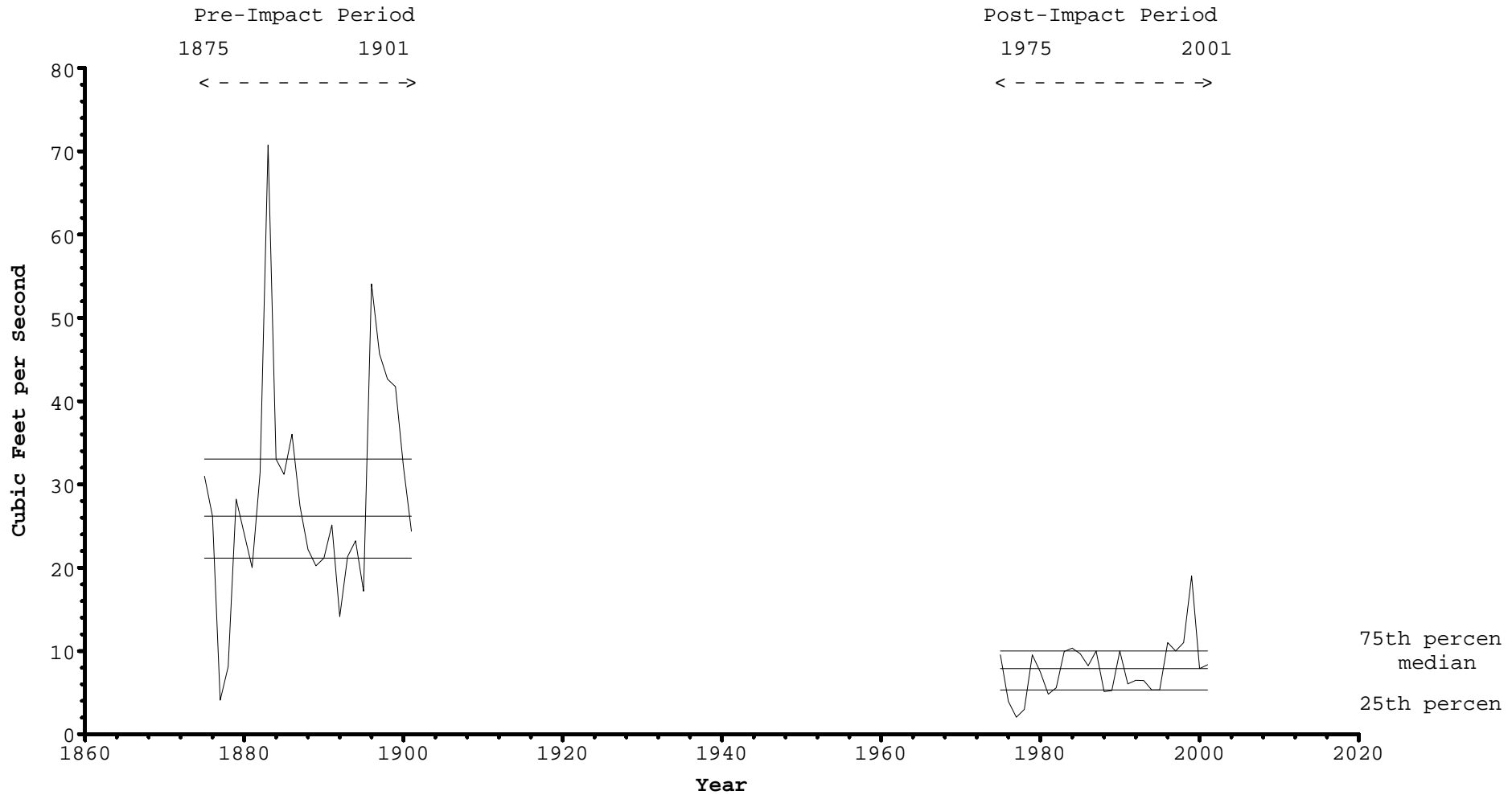
Standard IHA  
**4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)**  
Average flow for September



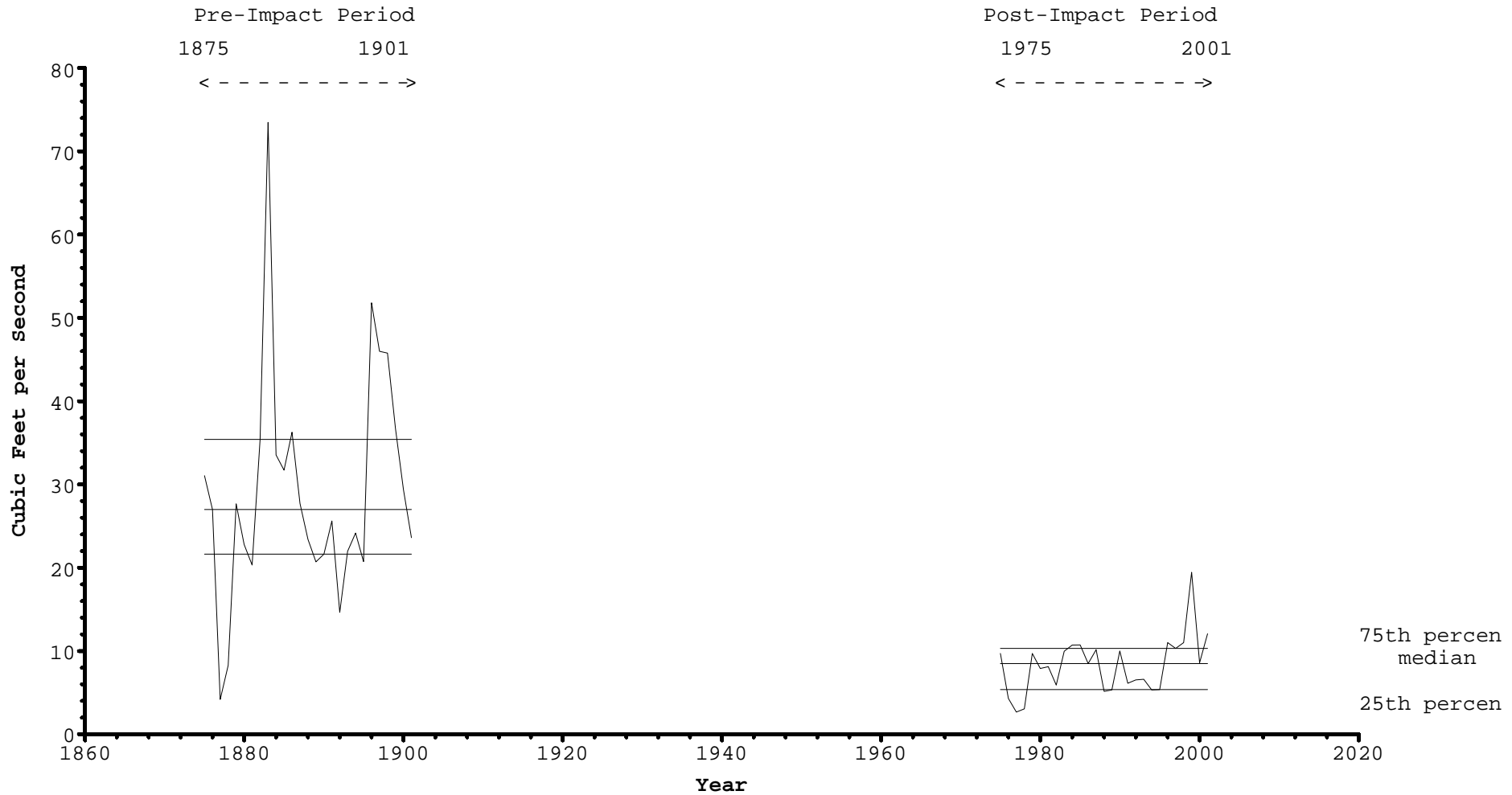
Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
1-day minimum streamflow



Standard IHA  
**4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)**  
3-day minimum streamflow

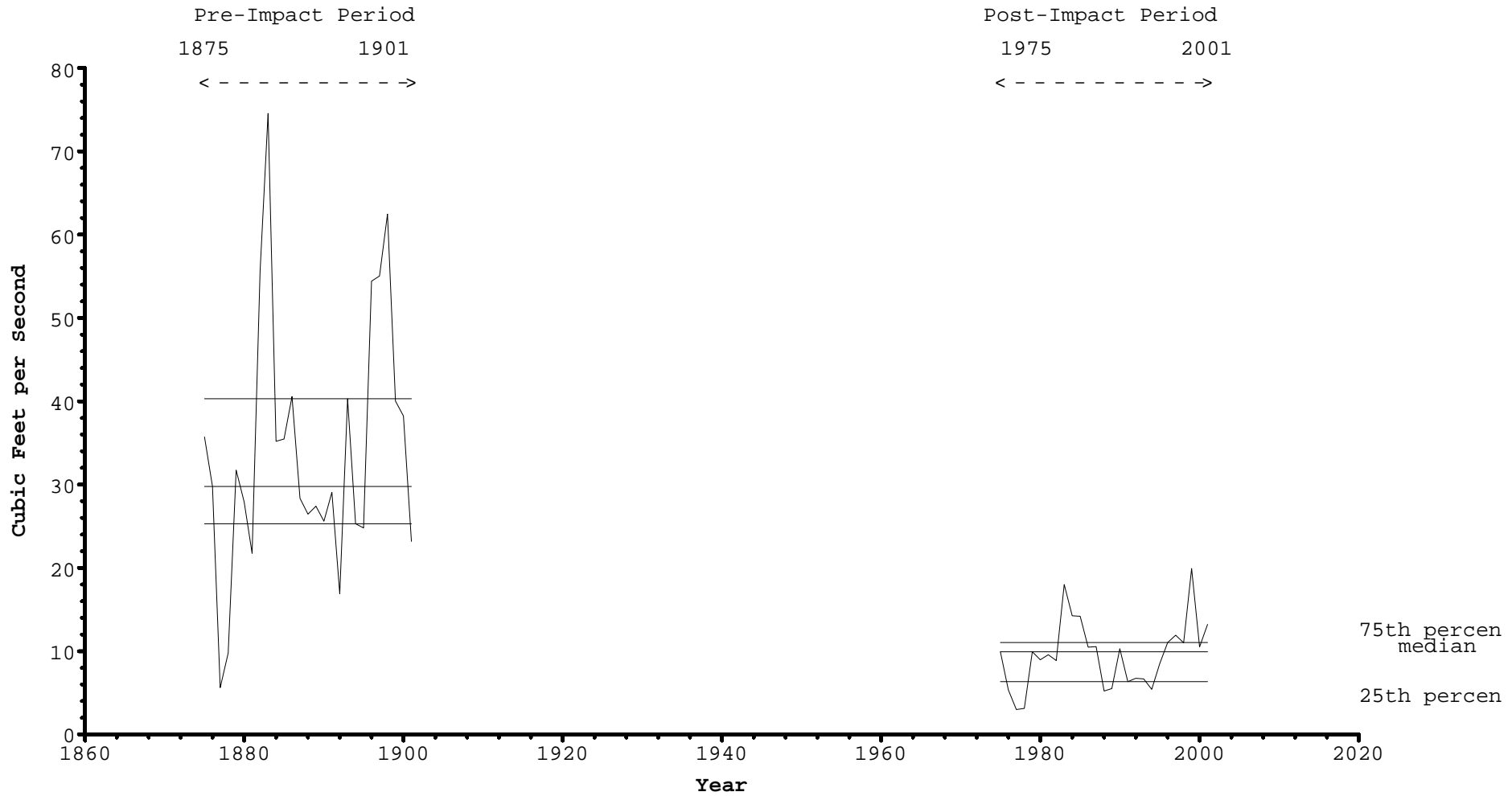


Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
7-day minimum streamflow

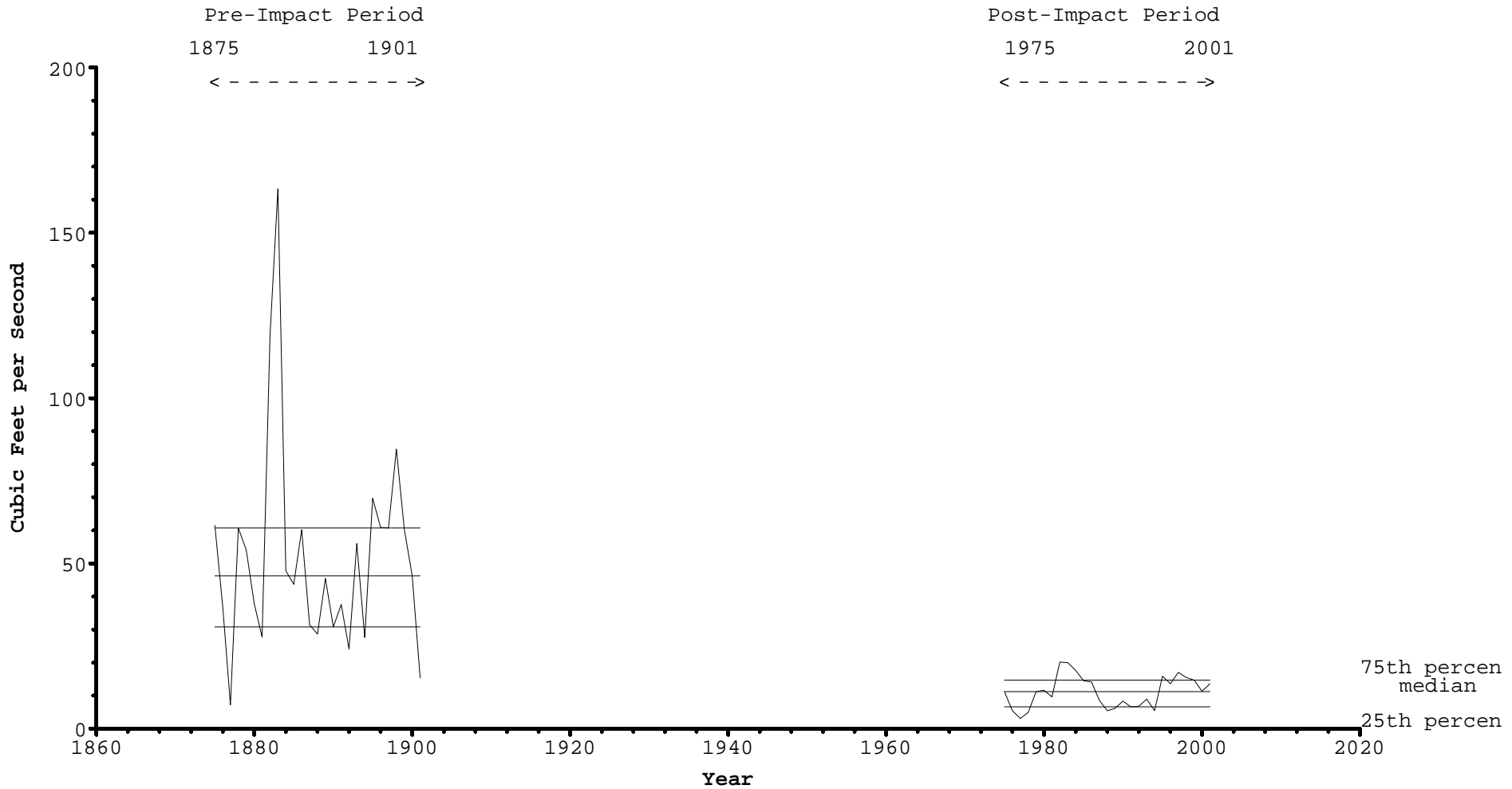


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Standard IHA  
**4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)**  
30-day minimum streamflow

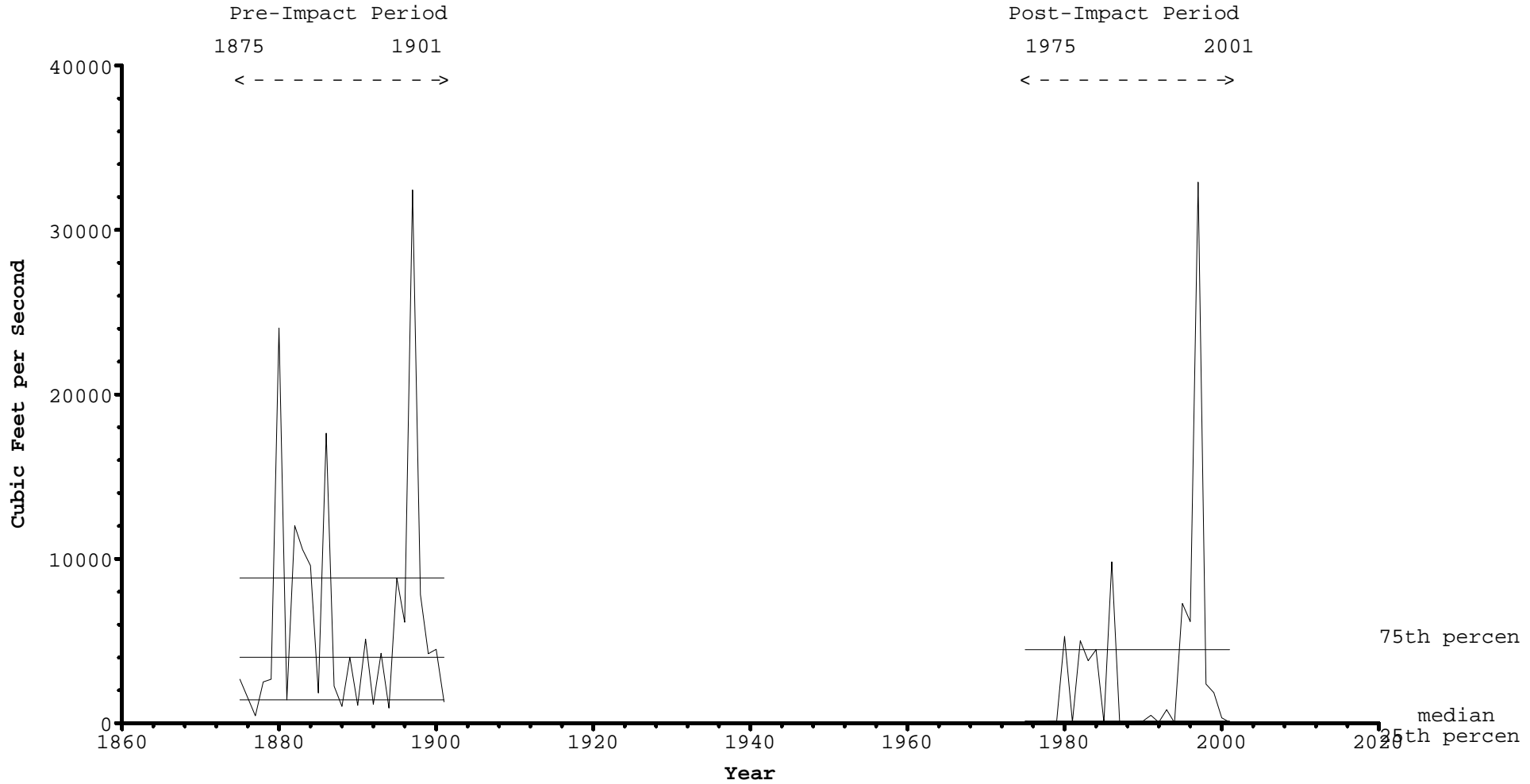


Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
90-day minimum streamflow

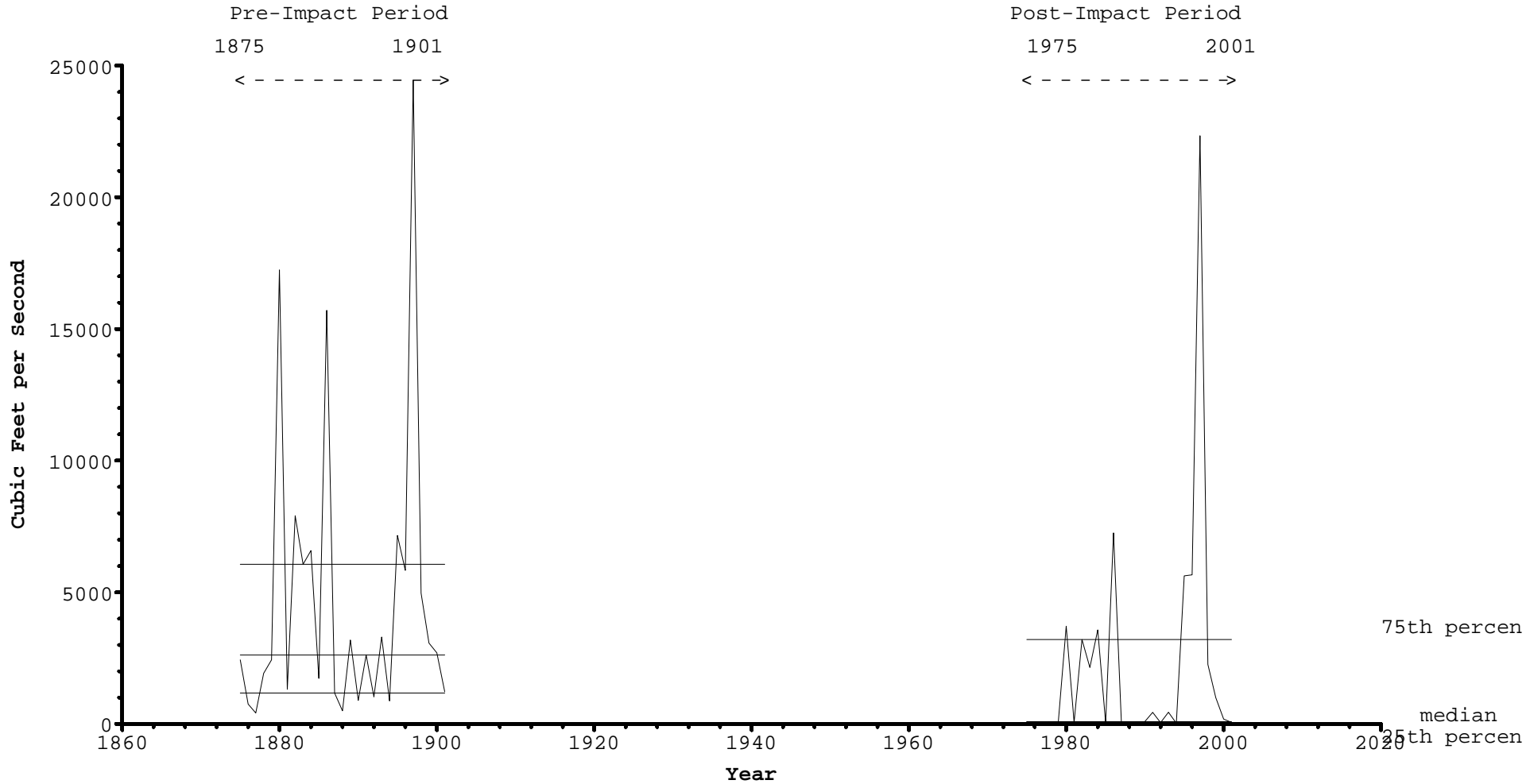


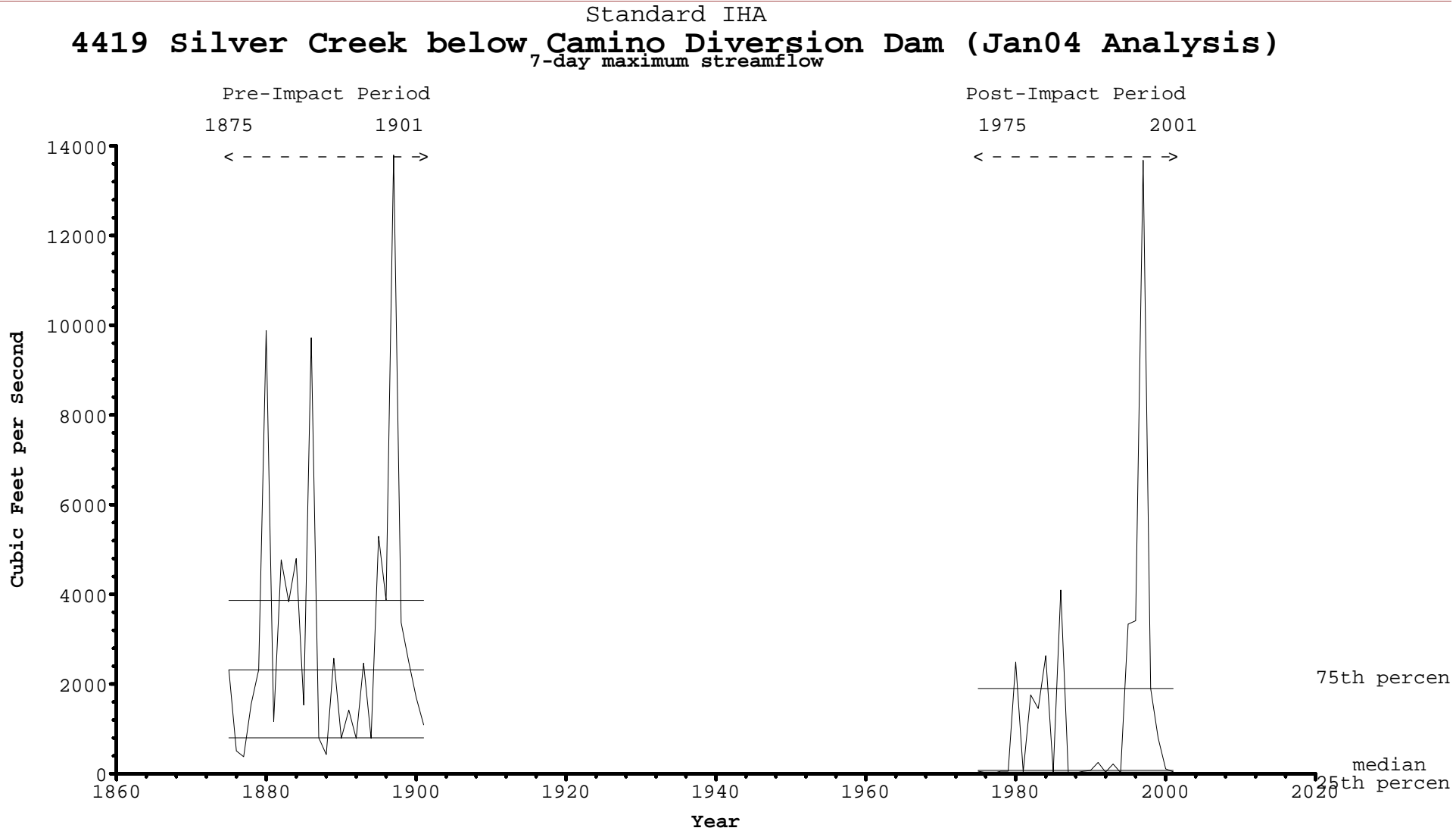


Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
1-day maximum streamflow

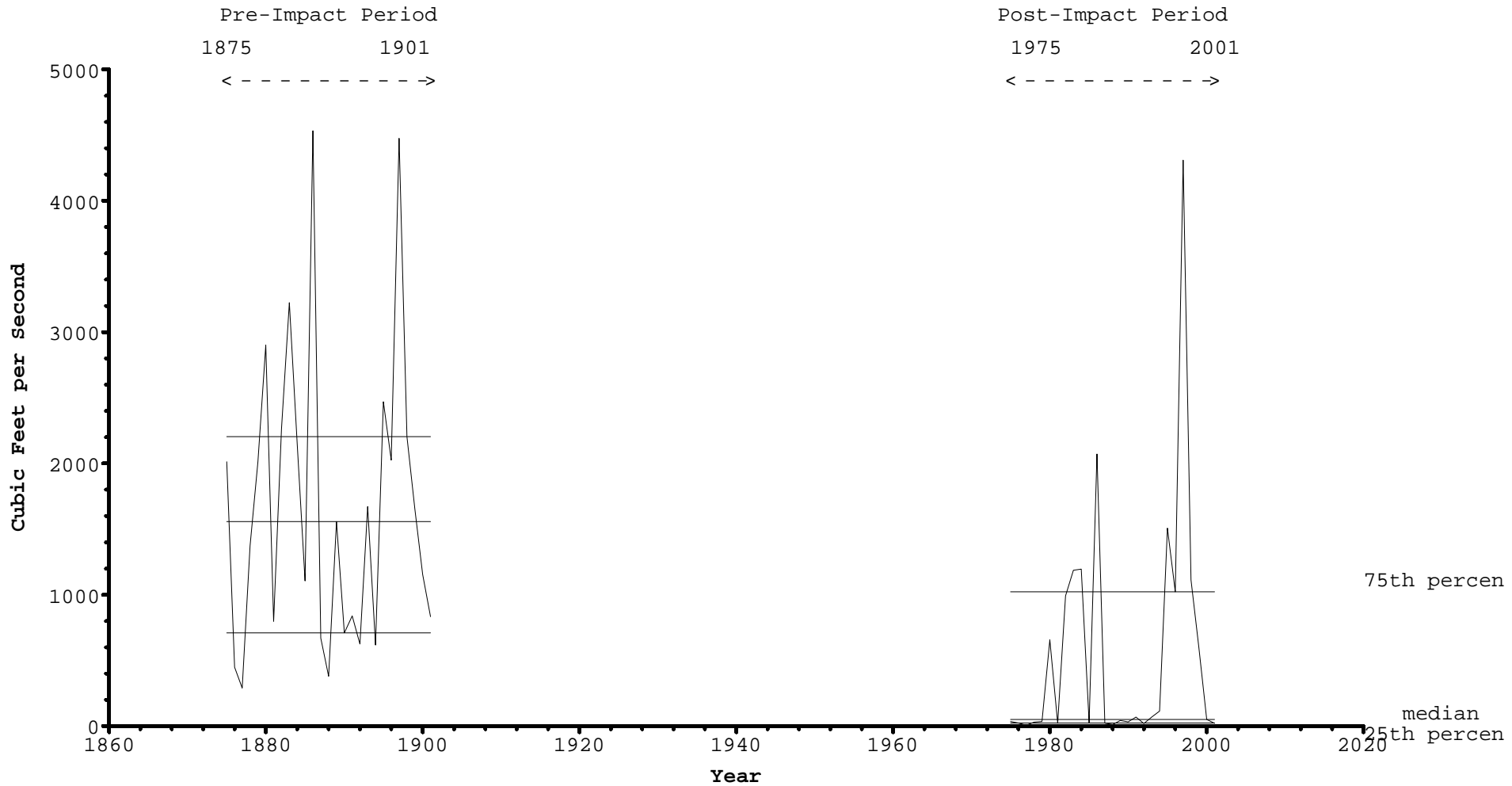


Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
3-day maximum streamflow

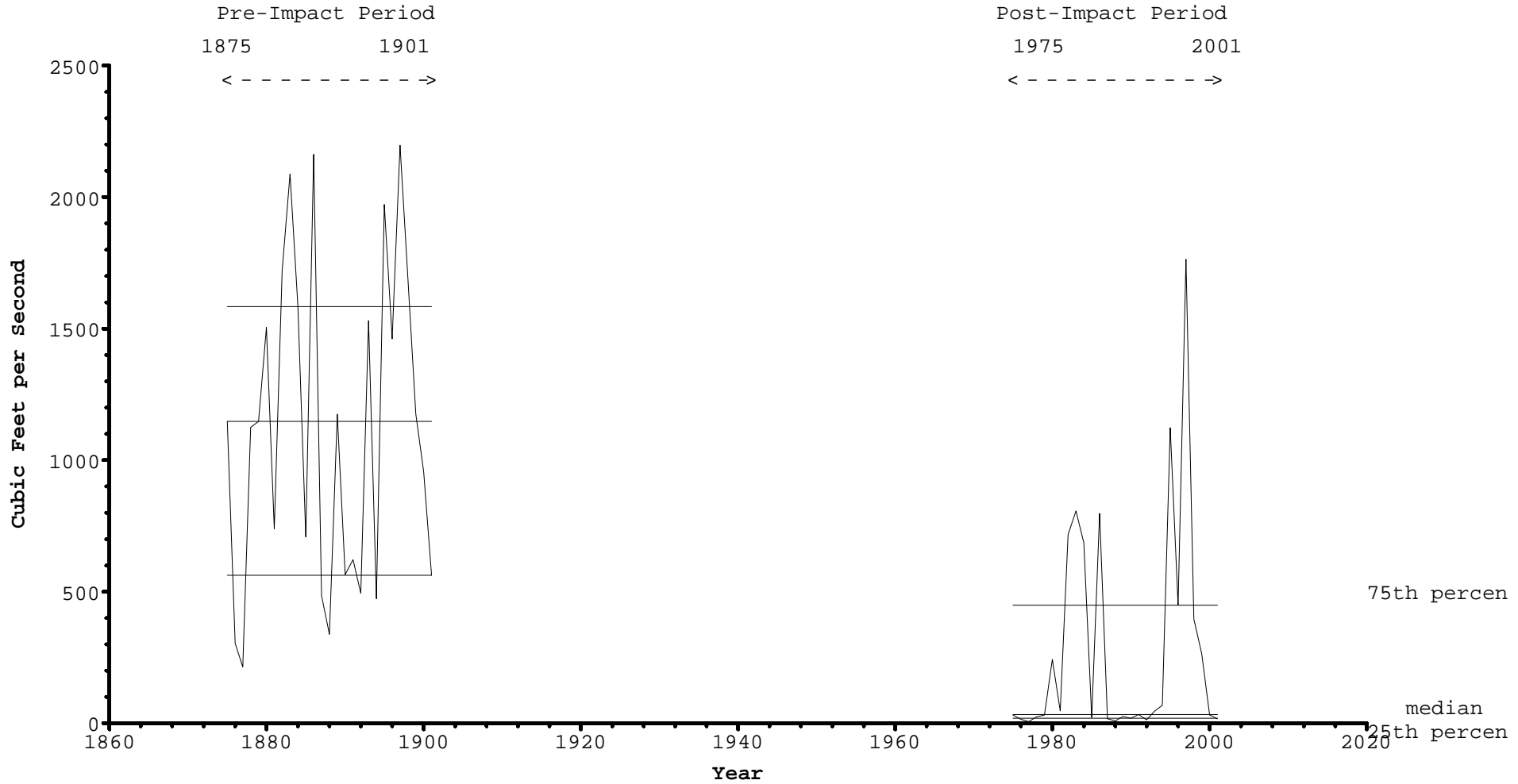




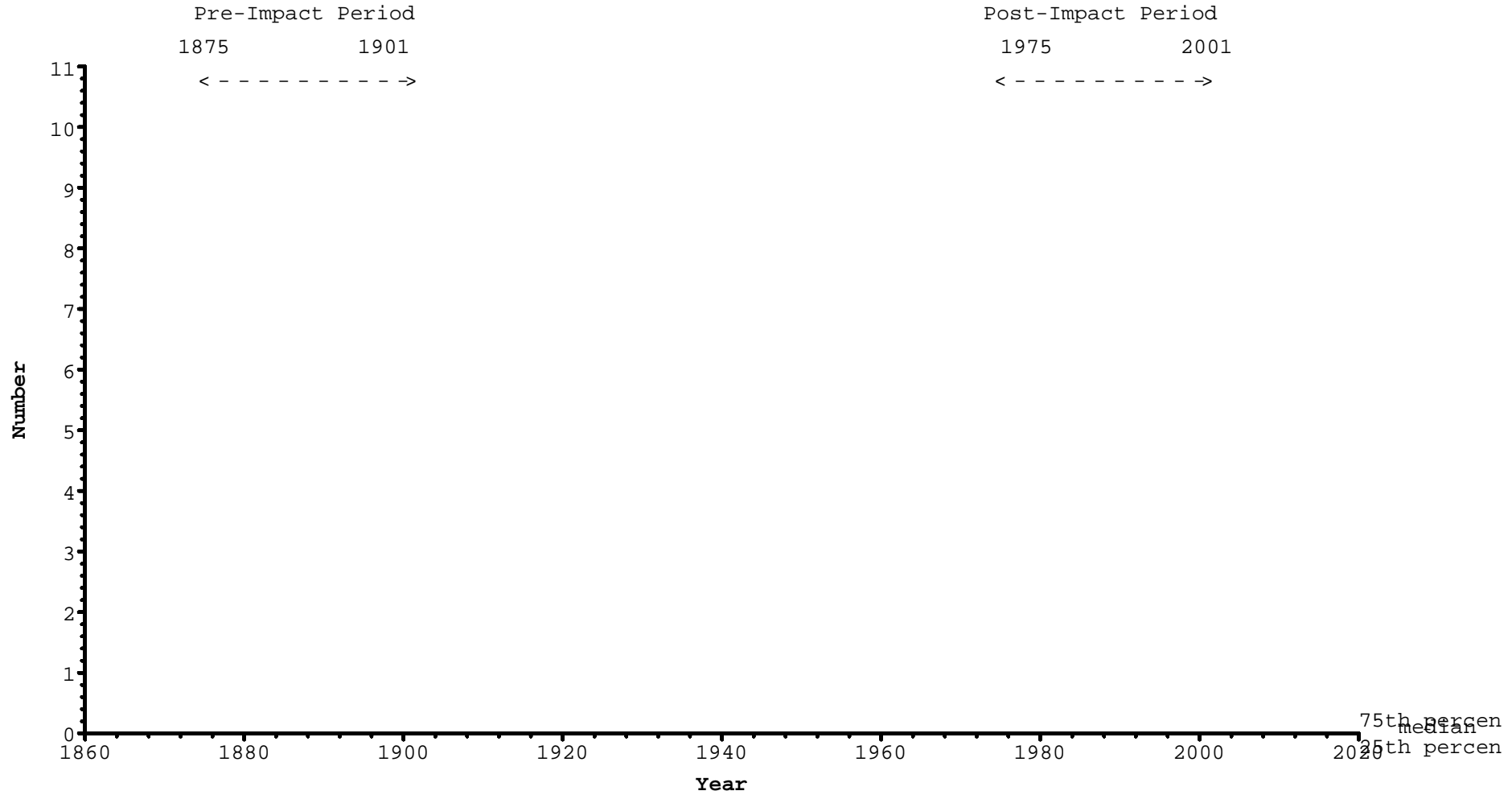
Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
30-day maximum streamflow



Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
90-day maximum streamflow

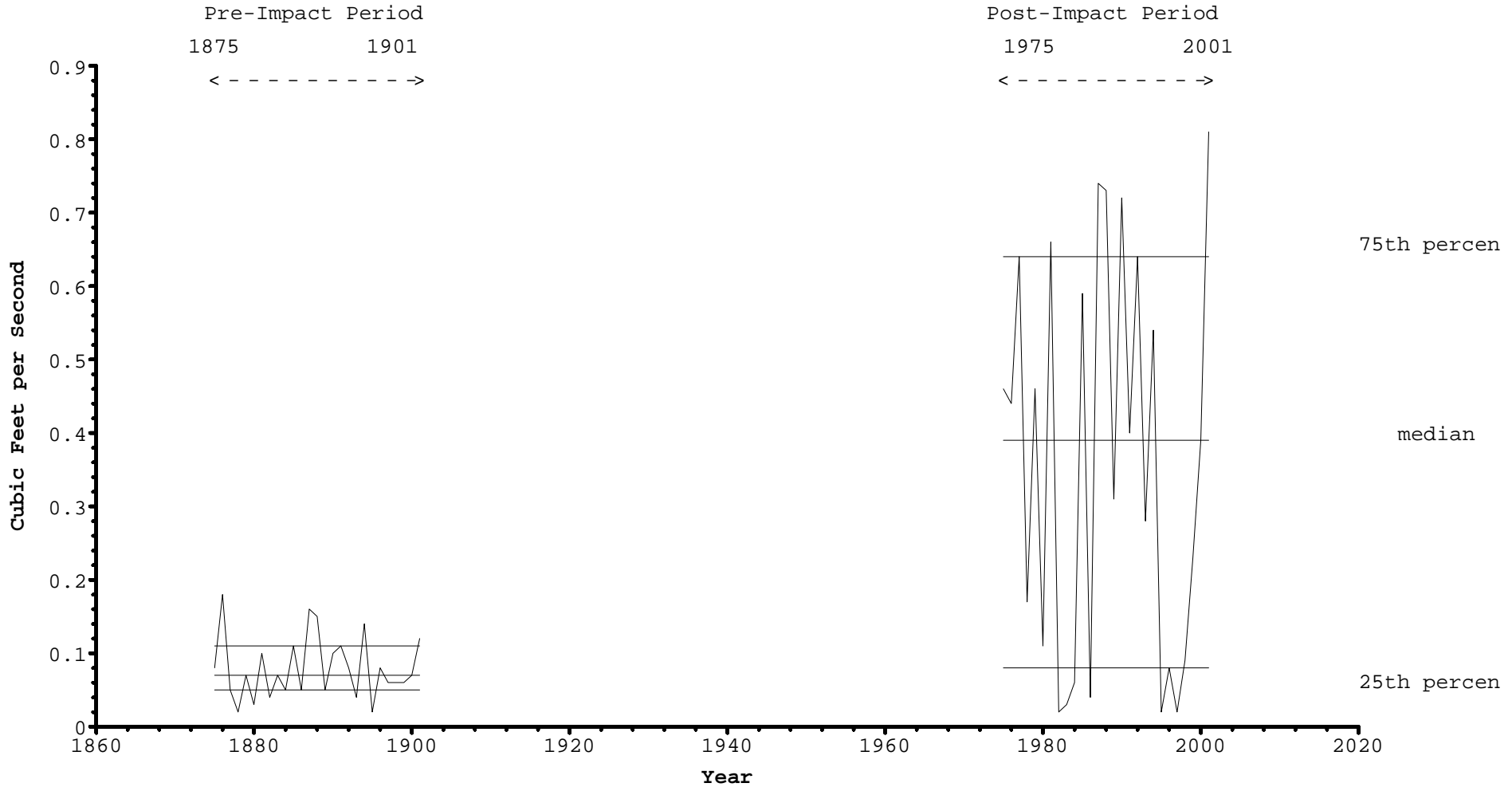


Standard IHA  
**4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)**  
 Zero streamflow days

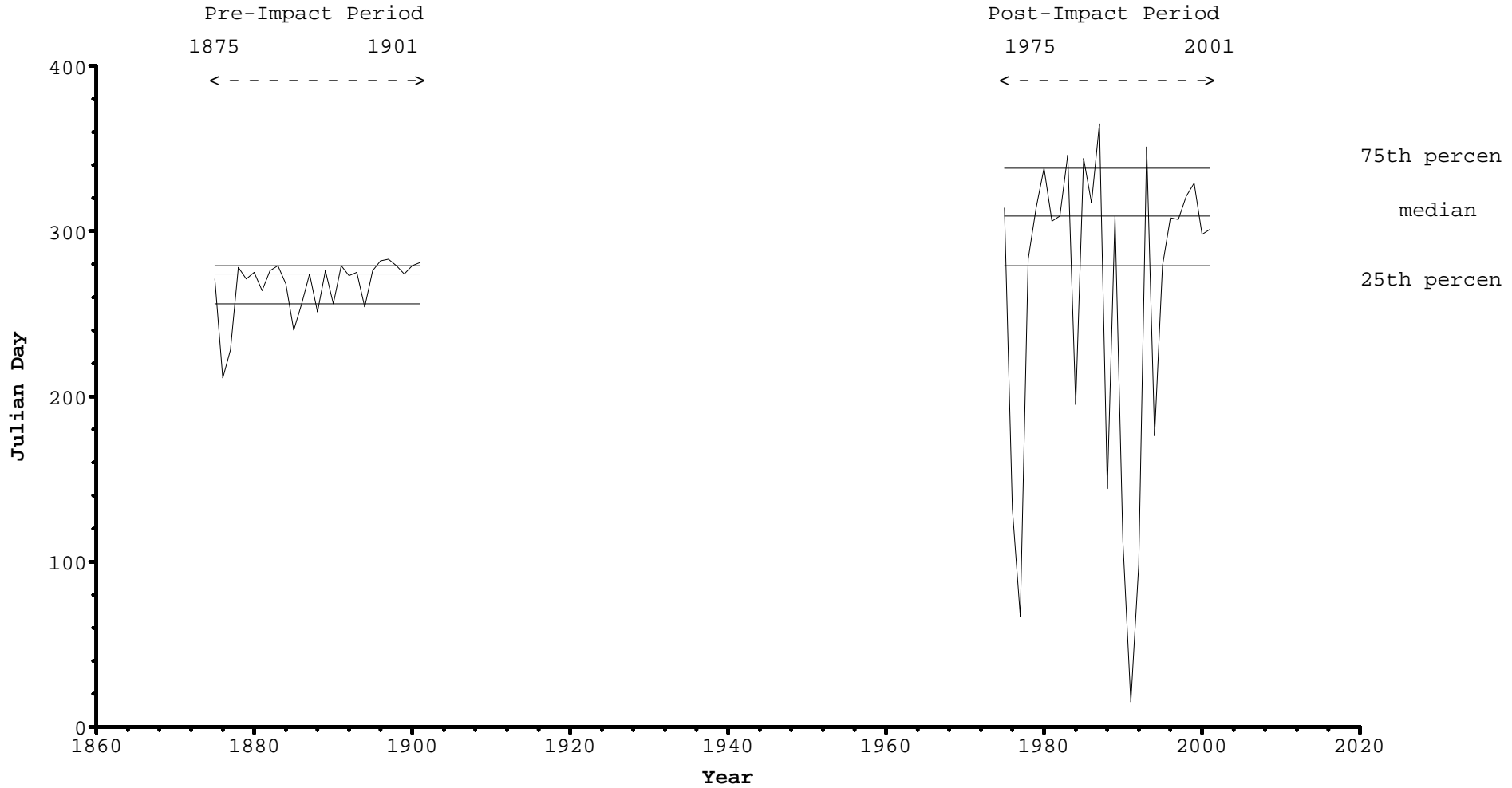


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Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Base Flow



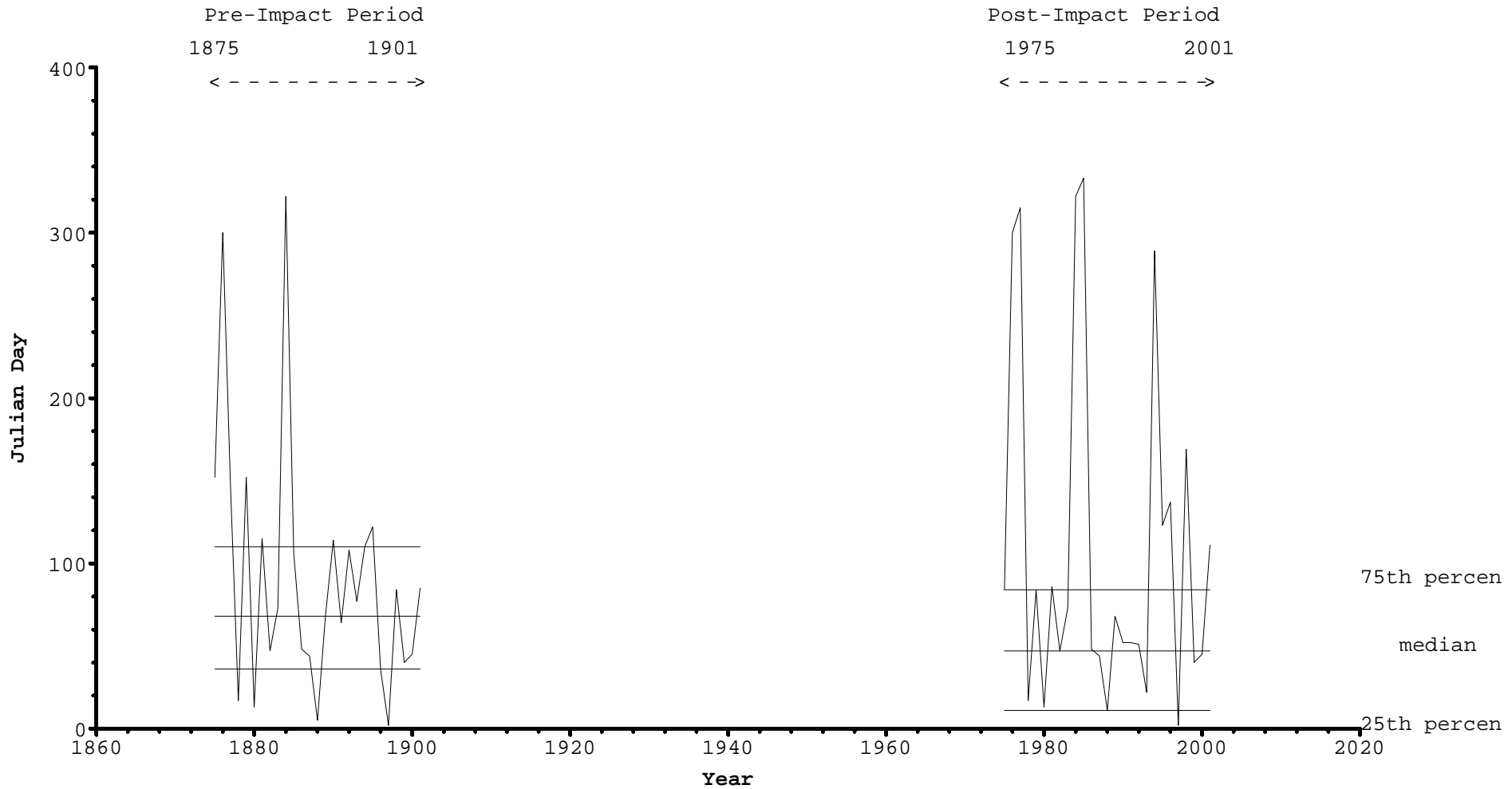
Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Date of minimum streamflow



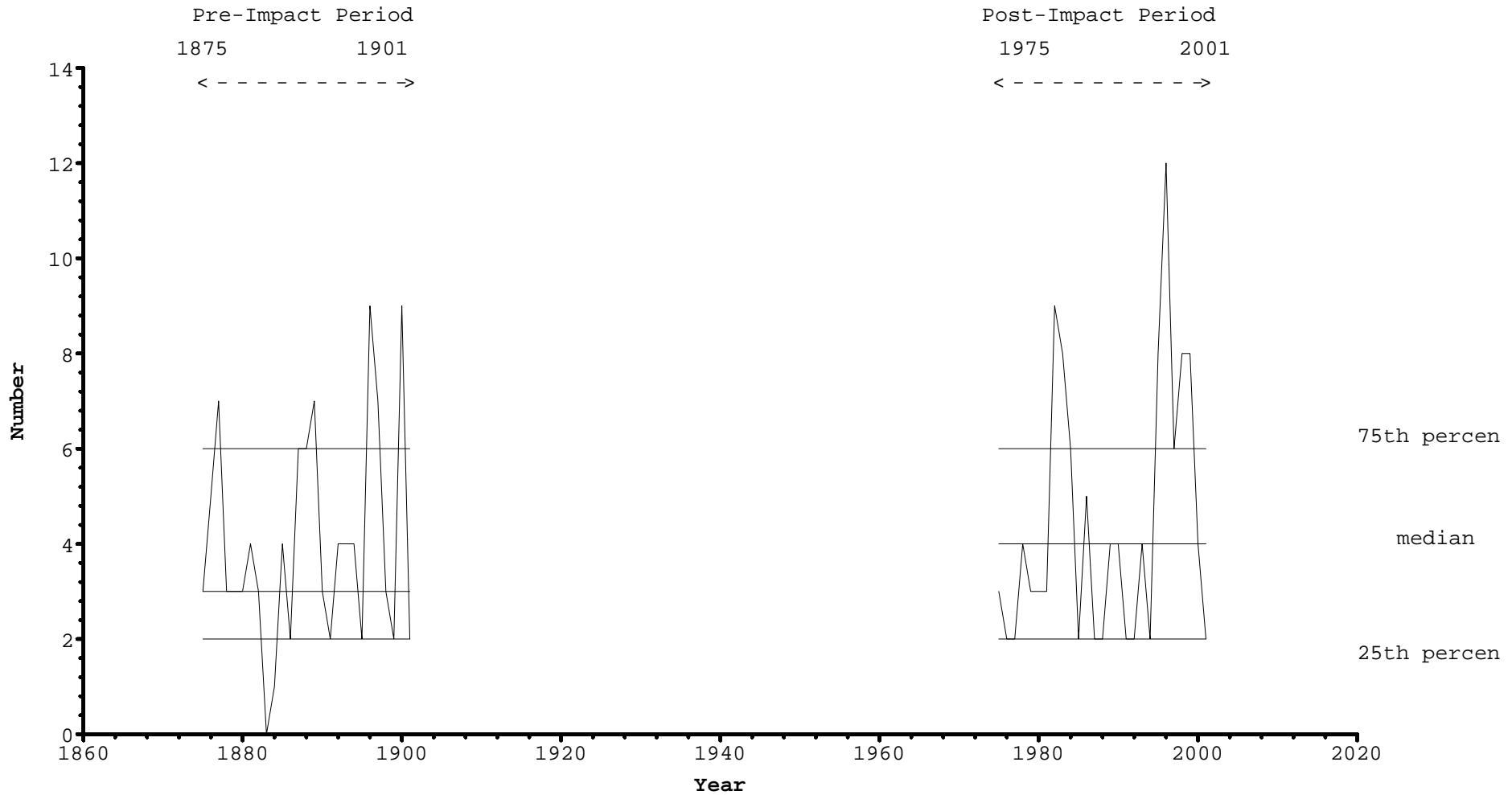
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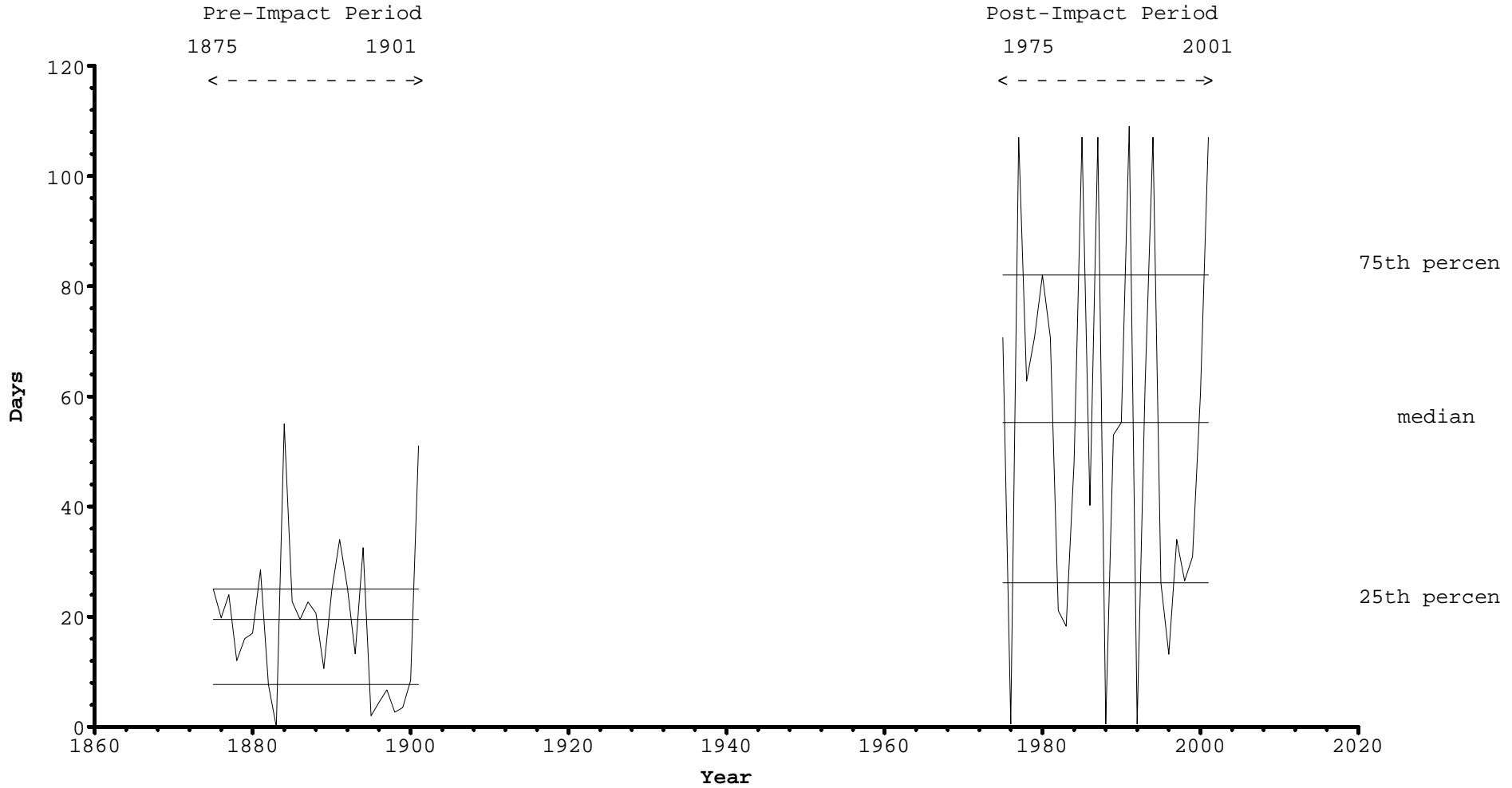
Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Date of maximum streamflow



Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Low Pulse Count

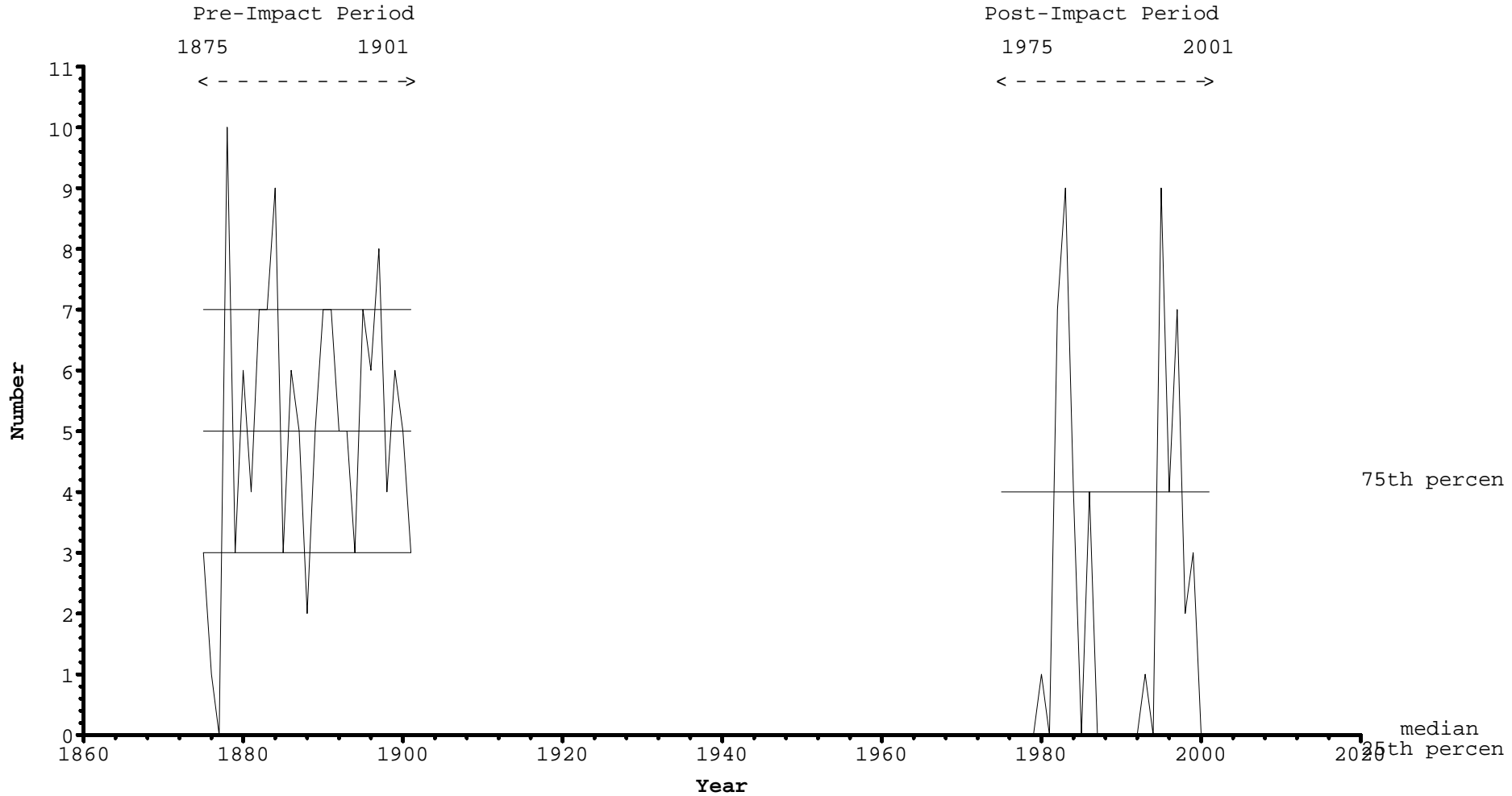


Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Low Pulse Duration

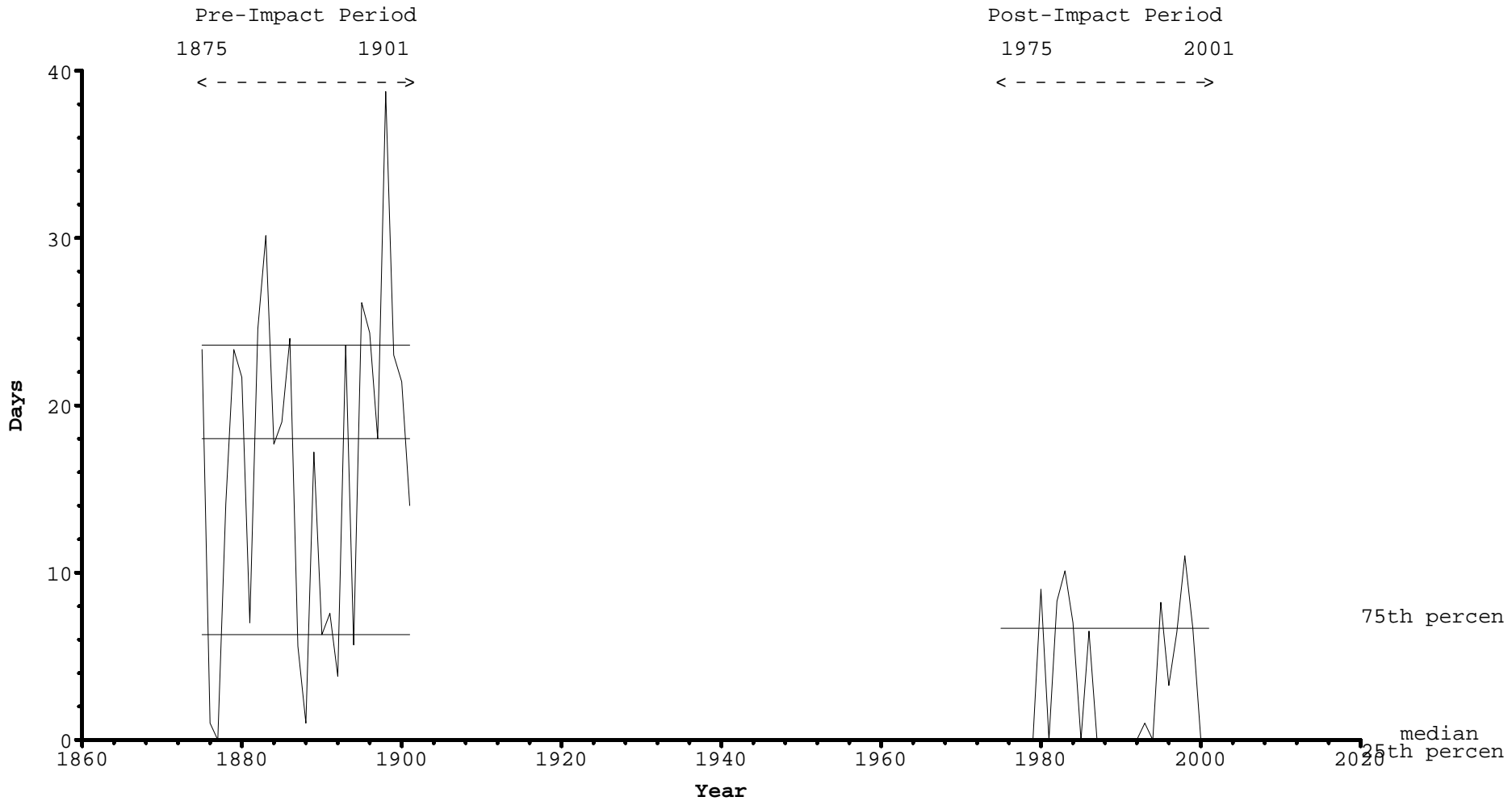


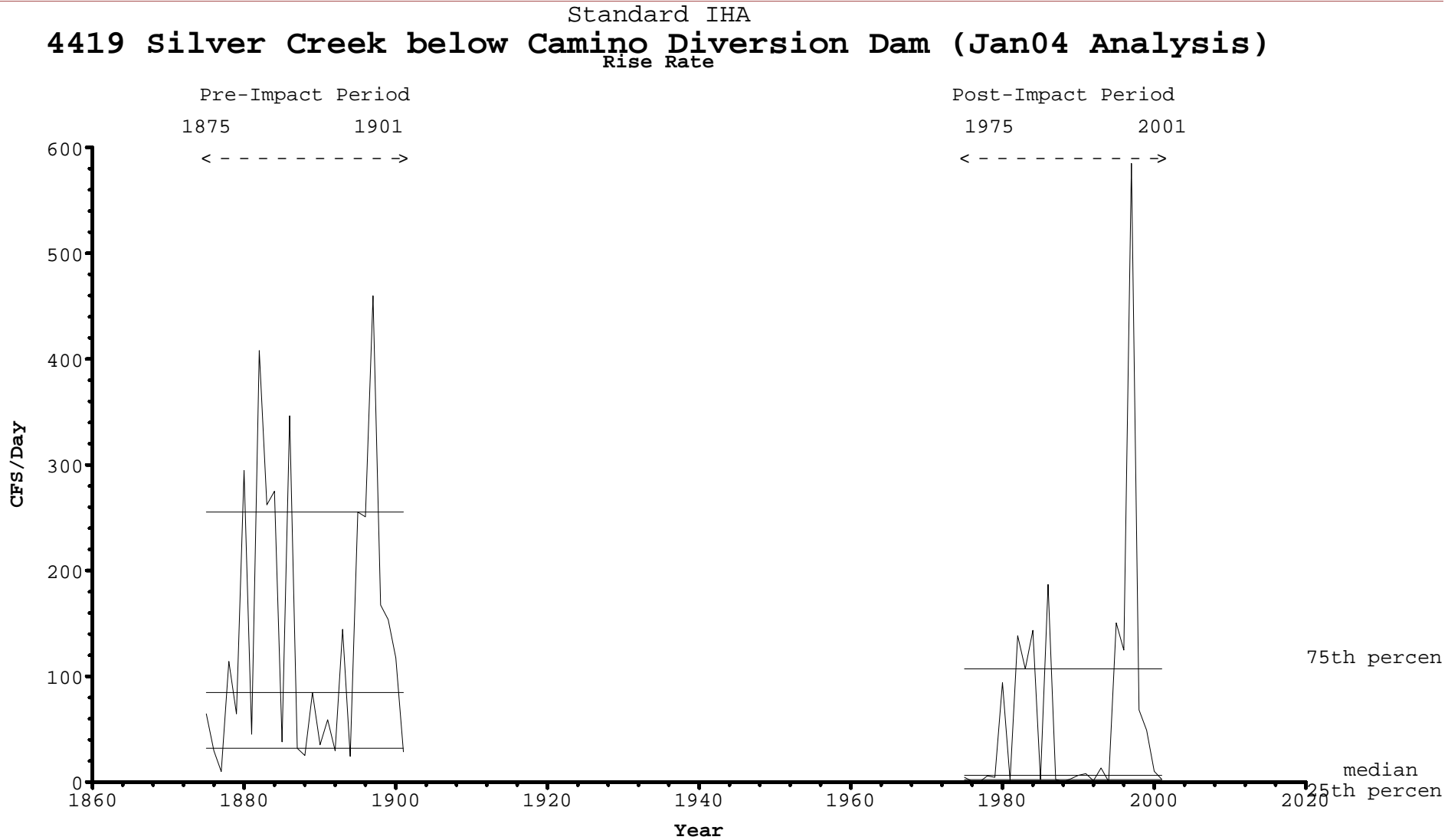
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Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
High Pulse Count



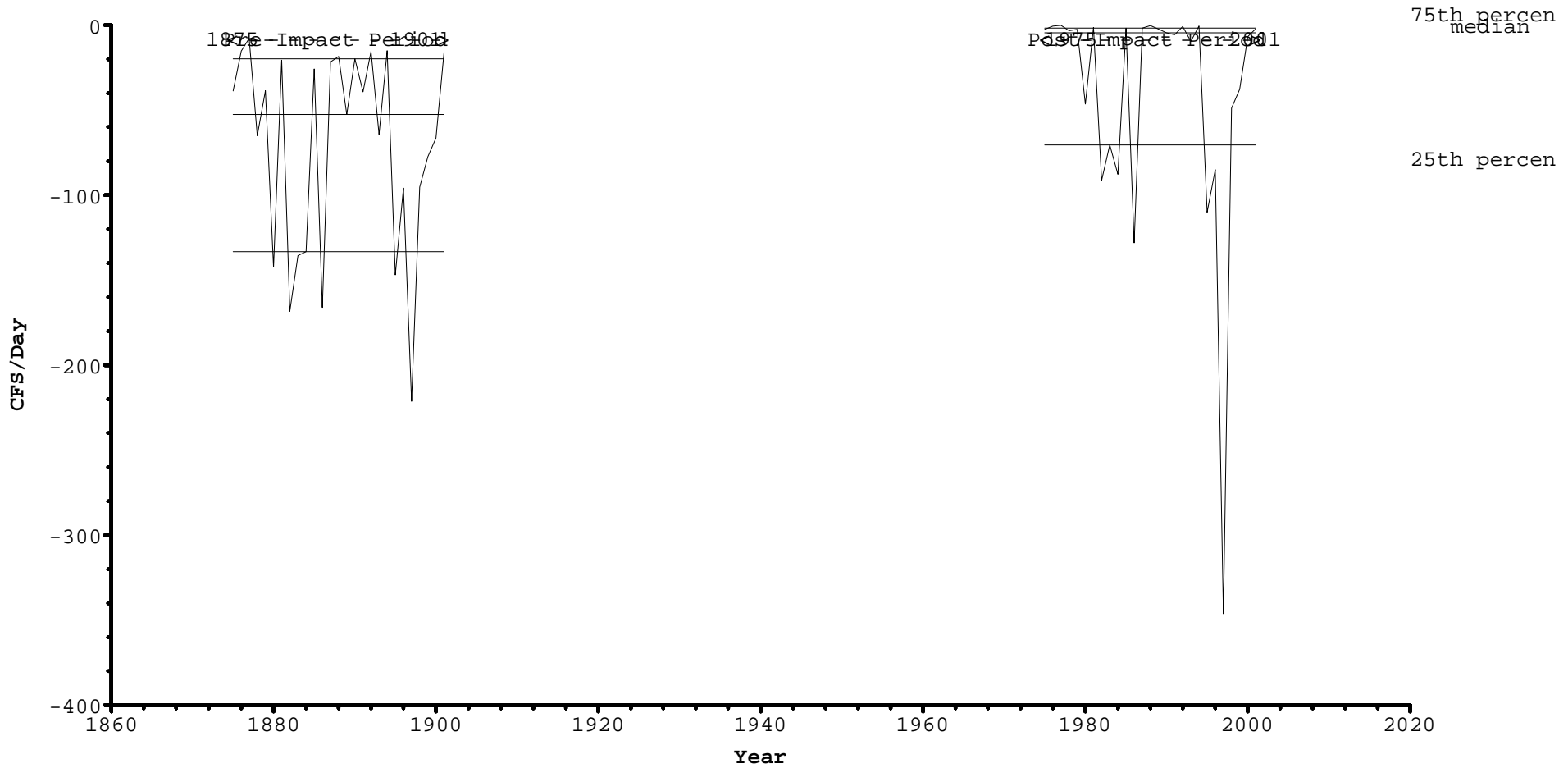
Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
High Pulse Duration



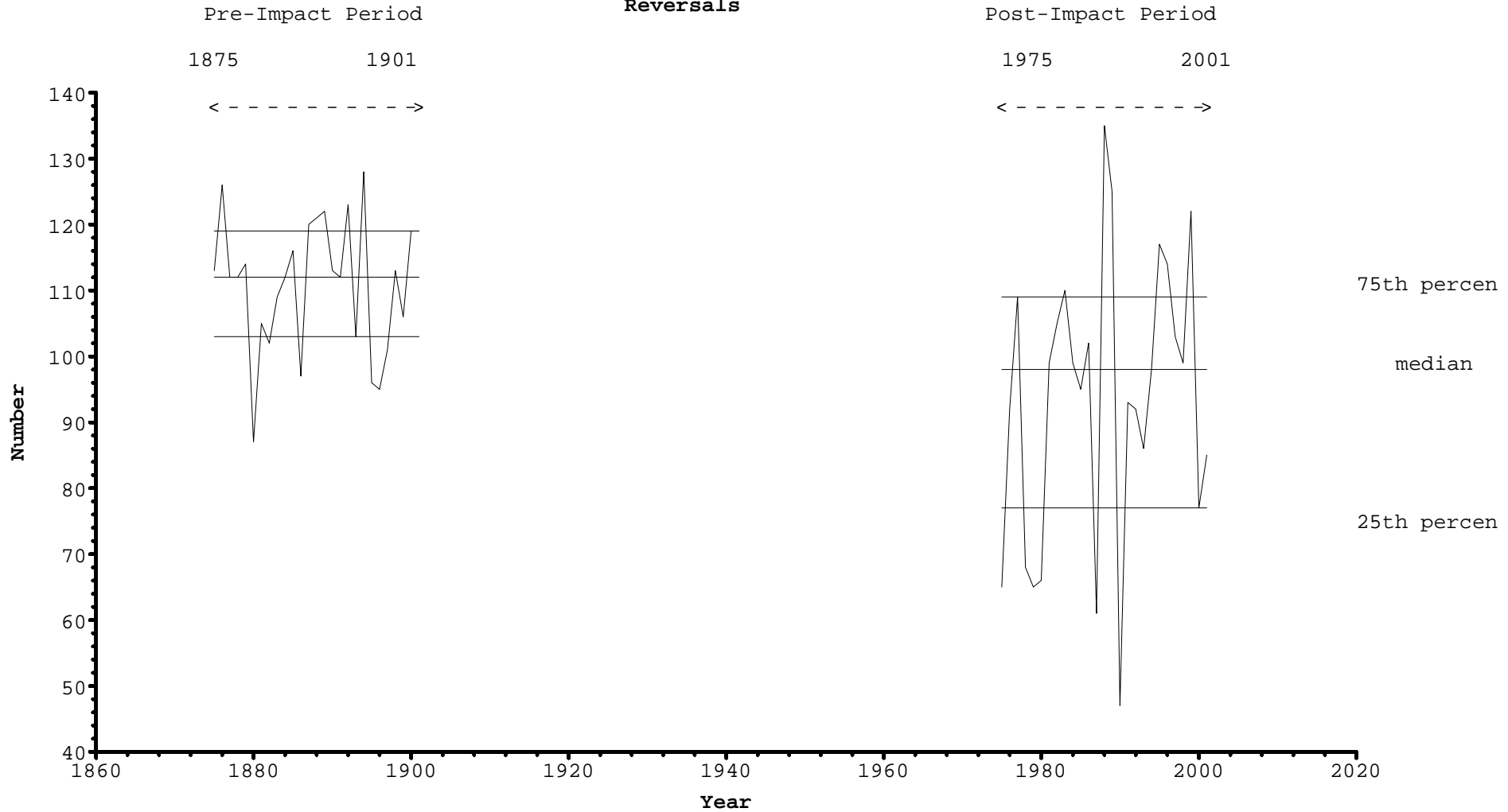


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Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Fall Rate

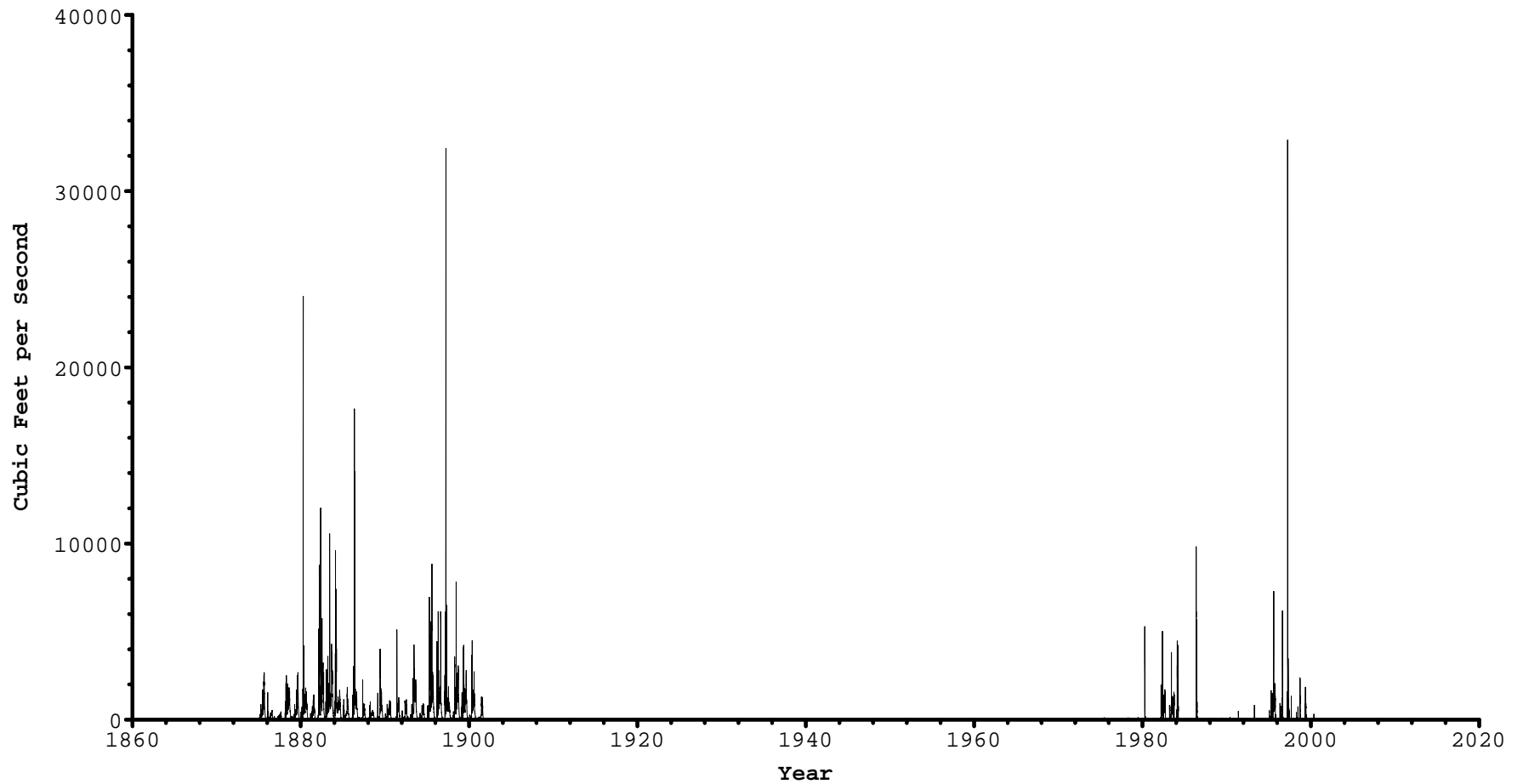


Standard IHA  
4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)  
Reversals





### 4419 Silver Creek below Camino Diversion Dam (Jan04 Analysis)



File(s) Used: C:\Documents and Settings\Administrator\Desktop\IHA\IHA Jan04 B\1-Camino\cam.dat

**(1) Gage A - South Fork American River at Slab Creek Res. Proposed Proj 184/UARP (Unregulated) versus 4435 South Fork American River Near Camino (Regulated)**

**Errors**

**No Errors**

(1) Gage A - South Fork American River at Slab Creek Res. Proposed Proj 184/UARP (Unregulated) versus 4435 South Fork American River Near Camino (Regulated)

IHA Annual Summary Statistics

Year	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
1875	171.7	227.0	245.7	368.8	563.1	1028.1	988.5	3864.3	3266.5	695.2	226.1	218.0	113.0	114.2	120.8	169.5	215.5
1876	394.2	427.2	364.6	266.6	294.4	440.5	628.3	771.9	189.6	96.6	97.2	94.4	54.3	55.3	57.0	68.6	91.2
1877	99.0	108.6	73.4	128.3	154.8	166.3	398.8	497.5	317.6	73.4	25.9	40.6	23.4	23.5	24.0	25.8	35.5
1878	41.6	126.3	639.9	1433.4	905.8	1978.0	2150.9	3155.4	2593.9	690.0	222.3	297.0	26.6	27.0	27.8	41.3	217.7
1879	175.1	227.0	245.7	368.8	563.1	1028.1	988.5	3864.3	3266.5	695.2	226.1	218.0	113.0	114.2	111.6	154.3	215.5
1880	224.5	384.6	378.9	4824.3	2700.7	1364.0	2039.6	2948.2	2209.6	961.4	253.5	212.2	94.2	94.5	94.8	139.5	170.4
1881	135.9	170.3	230.5	256.1	541.1	746.5	1437.0	1331.4	387.4	147.4	52.9	100.7	44.8	46.5	48.6	52.7	90.3
1882	167.9	1712.0	2384.9	1200.7	4060.6	2366.3	4003.7	5115.4	2808.6	891.9	303.5	449.8	61.8	68.8	89.1	164.7	368.1
1883	958.7	968.0	1753.3	1363.5	2403.2	4080.3	2321.3	4917.4	6576.2	2984.0	727.7	406.3	210.1	213.5	222.6	384.6	500.0
1884	455.3	3521.0	4030.3	1765.4	1218.1	1641.9	1535.2	3074.5	1639.8	454.6	189.9	187.0	127.6	128.4	128.9	144.3	195.8
1885	230.7	719.3	472.7	350.9	473.1	659.3	2169.1	1646.0	509.7	168.1	99.7	193.9	64.7	65.0	66.8	89.0	141.0
1886	164.9	289.7	589.3	1285.2	7620.4	4167.2	2191.8	2785.3	1738.9	409.6	211.9	238.8	89.1	90.8	101.8	165.4	167.0
1887	212.4	156.3	123.3	168.0	481.2	671.1	1126.5	832.5	224.6	120.6	54.3	90.1	53.2	53.3	53.4	54.1	72.7
1888	102.9	140.4	274.8	387.1	377.4	586.1	692.5	652.3	325.8	131.0	51.5	75.3	47.1	47.8	48.5	51.4	65.7
1889	70.7	274.3	211.9	199.8	386.0	2795.4	2589.7	1924.2	1081.4	244.5	150.9	192.3	43.9	44.4	45.9	70.9	155.7
1890	219.7	284.7	205.1	376.0	340.4	910.3	1404.2	964.1	610.5	178.2	83.0	128.2	58.3	59.7	60.4	69.8	96.2
1891	92.9	110.3	84.3	91.9	146.5	886.8	1091.9	1619.9	1040.2	248.0	112.2	140.0	52.8	53.7	55.1	76.8	91.7
1892	145.9	218.1	151.8	162.8	657.4	764.5	1173.3	553.9	197.1	135.8	52.5	97.1	49.2	49.6	50.0	52.4	72.3
1893	112.5	141.6	380.6	1243.1	1018.7	2737.0	2726.9	3874.6	2381.7	661.3	260.3	221.5	46.0	46.5	46.9	105.6	179.8
1894	168.9	175.7	215.0	217.4	305.9	699.9	916.3	949.8	296.4	139.0	53.6	80.3	50.4	51.3	52.2	53.6	72.4
1895	84.3	252.6	402.9	2528.0	1349.7	3908.6	3306.2	5176.2	4691.3	2568.1	559.6	319.0	46.8	54.1	56.8	84.2	245.7
1896	267.7	229.2	776.1	1051.0	3145.5	2367.9	2802.4	4344.5	1758.9	502.4	209.7	220.0	142.8	143.7	144.3	179.3	197.2
1897	182.5	809.5	3182.4	8147.1	1731.0	1753.6	2155.1	2657.8	1279.4	338.1	172.5	158.6	124.3	125.0	124.3	139.6	162.4
1898	166.7	255.7	278.6	1522.3	1789.8	2574.3	2473.0	3536.7	5552.4	2244.1	389.9	327.2	106.7	109.0	113.8	166.7	232.9
1899	252.6	470.4	573.4	1284.4	2445.8	1703.8	2104.9	3970.5	2779.0	599.2	256.8	227.3	159.9	162.4	149.0	164.7	202.2
1900	176.4	239.9	187.4	1056.4	1883.3	1552.6	2285.3	2906.2	1068.2	283.9	147.2	154.4	115.8	115.9	108.5	134.8	147.1
1901	149.8	206.5	221.7	208.1	320.2	879.1	1178.5	1589.8	258.5	146.6	61.8	95.0	57.9	58.3	47.2	40.2	27.3
1975	38.2	21.6	18.8	18.3	19.4	63.4	68.4	67.4	83.6	36.9	36.0	36.4	17.0	17.0	17.0	18.0	18.8
1976	36.1	19.5	19.3	19.7	18.7	15.7	24.9	24.4	26.4	24.9	23.5	24.3	15.0	15.0	15.4	15.7	18.0
1977	24.7	15.8	15.0	16.0	15.5	11.4	10.9	9.7	10.0	9.9	10.4	10.1	7.1	8.0	8.6	9.6	9.8
1978	10.0	10.3	10.7	10.3	14.3	21.7	75.1	74.8	78.5	36.6	35.0	35.1	9.2	9.4	9.5	10.0	10.3
1979	38.1	21.6	18.8	18.3	19.4	63.4	68.4	67.4	83.6	36.9	36.0	36.4	17.0	17.0	17.0	18.0	18.8
1980	29.8	16.4	16.3	1563.5	342.4	28.3	71.6	83.9	79.8	28.6	45.1	48.2	11.0	12.3	13.0	16.1	19.0
1981	37.5	21.3	21.0	20.5	20.9	13.8	24.7	25.7	19.0	19.0	19.0	19.0	12.0	12.0	12.3	13.6	16.3
1982	19.0	15.3	423.1	12.0	1189.5	26.6	1164.5	1415.0	77.3	38.6	39.0	39.0	5.8	5.8	9.8	11.0	38.2
1983	47.5	41.4	336.9	117.4	524.1	666.1	49.0	1243.9	2577.0	526.5	41.0	42.0	17.0	17.7	18.4	37.9	39.6
1984	38.2	917.6	1111.5	112.9	37.5	38.2	37.8	38.5	38.0	39.1	38.6	39.1	33.0	35.0	36.9	37.1	37.7
1985	38.7	40.0	37.5	37.0	38.0	38.0	38.5	38.9	37.3	38.1	37.5	37.2	36.0	36.0	36.3	37.0	37.2
1986	37.2	41.8	36.9	39.1	2709.3	1089.7	51.2	37.4	39.3	39.2	38.6	37.3	26.0	32.0	33.1	36.8	37.1
1987	37.3	37.3	37.0	37.2	37.1	12.7	12.2	11.7	36.8	36.0	36.0	36.0	11.0	11.0	11.0	11.3	11.8
1988	36.0	23.6	10.0	10.0	10.0	14.2	10.0	10.4	36.0	36.6	36.5	36.3	10.0	10.0	10.0	10.0	10.0
1989	36.0	23.3	10.0	10.3	10.6	17.6	33.6	37.8	36.0	36.0	36.0	36.0	10.0	10.0	10.0	10.0	10.3
1990	36.1	36.0	36.0	36.0	86.4	31.3	12.2	10.4	36.0	36.0	36.0	36.0	10.0	10.0	10.0	10.0	17.6
1991	36.0	23.4	10.0	10.1	10.2	20.9	10.7	10.7	37.3	36.8	36.8	37.1	10.0	10.0	10.0	10.0	10.0
1992	36.3	23.5	11.2	11.0	11.0	10.9	11.0	11.5	36.7	36.4	36.4	36.8	10.0	10.0	10.0	10.8	10.9
1993	36.8	23.8	10.0	74.2	10.0	30.1	36.3	36.1	36.1	36.0	36.0	36.0	10.0	10.0	10.0	10.0	17.3
1994	35.9	36.0	36.3	36.0	36.0	22.1	10.0	10.4	36.2	36.0	36.0	36.0	10.0	10.0	10.0	10.0	13.7
1995	36.0	23.4	10.0	252.7	10.0	542.7	321.3	2434.1	2619.0	936.5	36.1	36.0	10.0	10.0	10.0	10.0	20.3
1996	36.0	36.0	50.1	36.0	277.1	47.2	36.1	1658.0	173.0	36.7	36.3	36.7	36.0	36.0	36.0	36.0	36.4
1997	38.8	38.6	825.1	4836.1	524.2	37.9	40.1	38.5	129.3	37.9	29.9	36.0	29.0	29.0	29.0	29.0	34.4
1998	37.7	37.2	38.0	38.4	233.3	341.0	38.1	38.4	1730.9	140.9	39.9	40.6	36.0	36.3	36.7	37.0	37.6
1999	40.3	40.1	48.3	137.2	819.9	325.4	38.5	586.2	39.0	40.6	40.2	37.7	36.0	36.0	36.9	37.7	37.9
2000	37.7	38.6	39.3	39.4	63.8	38.9	39.0	39.4	39.5	39.7	39.2	39.4	36.0	36.0	36.1	37.2	38.5
2001	39.0	37.9	39.1	39.4	39.5	23.5	12.1	11.2	37.4	37.2	38.1	38.0	10.0	10.0	10.0	10.8	14.8

(1) Gage A - South Fork American River at Slab Creek Res. Proposed Proj 184/UARP (Unregulated) versus 4435 South Fork American River Near Camino (Regulated)

IHA Annual Summary Statistics (Cont)

Year	1-day max	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	LRise rate	Fall rate	Reversals
1875	6248.2	5935.3	5615.8	4879.5	2774.7	0.0	0.1	276.0	152.0	11.0	4.3	2.0	36.0	131.5	-90.0	124.0
1876	2735.2	1450.1	1075.7	938.2	623.2	0.0	0.2	226.0	300.0	7.0	15.4	1.0	1.0	57.4	-33.8	138.0
1877	727.2	685.6	660.9	571.3	416.0	0.0	0.1	228.0	148.0	9.0	27.3	0.0	0.0	20.8	-15.8	142.0
1878	4357.8	4208.2	3934.8	3435.8	2744.1	0.0	0.0	285.0	136.0	3.0	11.3	11.0	12.6	218.4	-137.8	114.0
1879	6248.2	5935.3	5615.8	4879.5	2774.7	0.0	0.1	276.0	152.0	11.0	4.2	2.0	36.0	131.5	-90.5	124.0
1880	39207.9	28042.9	16393.1	5007.3	3008.3	0.0	0.1	278.0	13.0	5.0	2.2	4.0	33.3	487.3	-275.5	97.0
1881	2902.6	2737.5	2353.7	1711.7	1346.8	0.0	0.1	243.0	122.0	10.0	14.1	5.0	5.0	80.7	-50.0	130.0
1882	30546.5	18888.7	11121.4	5331.8	4096.0	0.0	0.0	275.0	47.0	3.0	3.3	6.0	28.8	802.1	-362.2	105.0
1883	20841.1	12213.4	9211.7	7595.6	5004.0	0.0	0.1	287.0	73.0	0.0	0.0	8.0	26.1	564.5	-325.4	115.0
1884	15625.4	13870.5	9809.2	4419.1	3153.8	0.0	0.1	241.0	360.0	1.0	32.0	7.0	24.6	542.0	-274.7	109.0
1885	3622.7	3454.6	3114.6	2323.6	1532.1	0.0	0.1	240.0	105.0	7.0	10.9	4.0	13.5	81.5	-50.0	124.0
1886	41984.2	36104.9	22281.4	9469.4	4711.1	0.0	0.1	278.0	48.0	3.0	2.0	7.0	20.3	687.6	-344.1	97.0
1887	3607.5	1933.2	1488.8	1233.4	888.6	0.0	0.2	224.0	44.0	8.0	22.4	4.0	2.8	60.7	-40.6	134.0
1888	1358.9	962.6	898.5	721.0	647.7	0.0	0.2	240.0	5.0	6.0	19.7	1.0	1.0	42.4	-33.8	137.0
1889	6774.3	5409.6	4470.2	3134.6	2479.4	0.0	0.1	276.0	68.0	11.0	5.8	6.0	15.7	173.9	-109.3	138.0
1890	2041.3	1726.2	1566.0	1404.2	1131.1	0.0	0.1	227.0	152.0	6.0	15.3	7.0	4.6	72.5	-41.2	116.0
1891	7763.5	4132.3	2278.4	1749.2	1265.7	0.0	0.1	280.0	64.0	7.0	27.0	6.0	6.7	108.3	-73.9	122.0
1892	2267.5	1971.4	1455.6	1173.3	946.8	0.0	0.1	224.0	51.0	14.0	12.1	4.0	1.8	57.2	-38.5	149.0
1893	7593.9	5951.7	4649.7	3902.4	3391.6	0.0	0.0	278.0	77.0	4.0	10.8	7.0	18.3	285.2	-147.3	120.0
1894	1644.7	1577.7	1432.9	1142.7	862.7	0.0	0.2	228.0	110.0	7.0	18.1	3.0	3.3	41.5	-26.4	138.0
1895	17921.7	13632.3	10126.4	5381.9	4549.0	0.0	0.0	276.0	122.0	4.0	3.8	7.0	26.0	502.0	-317.6	108.0
1896	15323.7	12387.8	8469.0	4566.3	3256.4	0.0	0.1	282.0	137.0	6.0	6.8	7.0	21.0	456.0	-222.0	110.0
1897	67934.6	47378.3	26381.2	8996.9	4468.5	0.0	0.1	283.0	2.0	4.0	17.0	11.0	15.1	922.4	-496.1	126.0
1898	15245.6	9800.5	6722.5	5552.4	4121.4	0.0	0.1	279.0	84.0	5.0	4.4	5.0	32.0	348.9	-225.5	141.0
1899	9292.0	6800.2	5981.3	4133.8	2989.1	0.0	0.1	281.0	40.0	4.0	5.5	8.0	17.3	288.8	-183.0	136.0
1900	9954.4	5902.0	3799.8	2961.4	2287.0	0.0	0.1	279.0	45.0	8.0	13.3	6.0	19.5	271.7	-155.3	134.0
1901	2513.0	2409.9	2322.3	1948.5	1238.8	0.0	0.1	242.0	117.0	8.0	16.5	4.0	9.5	61.8	-39.3	127.0
1975	692.0	470.0	214.4	101.3	82.7	0.0	0.4	310.0	86.0	3.0	70.7	0.0	0.0	12.2	-15.5	46.0
1976	37.0	37.0	36.9	36.3	25.3	0.0	0.7	54.0	275.0	2.0	0.5	0.0	0.0	1.4	-1.6	73.0
1977	26.0	26.0	25.6	24.7	18.6	0.0	0.6	140.0	302.0	2.0	107.0	0.0	0.0	0.9	-0.9	43.0
1978	81.0	81.0	80.4	78.5	76.1	0.0	0.3	39.0	129.0	2.0	107.0	0.0	0.0	2.1	-1.7	73.0
1979	692.0	470.0	214.4	101.3	82.7	0.0	0.4	310.0	86.0	3.0	70.7	0.0	0.0	12.3	-15.5	46.0
1980	16800.0	11406.7	6802.9	1615.9	664.2	0.0	0.1	23.0	13.0	3.0	83.7	2.0	5.0	240.7	-225.6	83.0
1981	44.0	39.0	38.9	37.6	157.7	0.0	0.6	87.0	301.0	2.0	107.0	0.0	0.0	1.8	-1.9	48.0
1982	16900.0	9320.0	4534.4	1815.8	1005.9	0.0	0.0	322.0	47.0	5.0	44.0	5.0	5.6	886.5	-769.0	40.0
1983	8880.0	4923.3	3771.4	2923.7	1468.0	0.0	0.0	84.0	73.0	10.0	25.2	7.0	8.6	341.9	-275.4	75.0
1984	9920.0	7366.7	4790.0	1224.5	726.8	0.0	0.2	25.0	361.0	4.0	75.0	3.0	5.0	487.3	-344.0	69.0
1985	63.0	56.0	47.0	40.7	38.9	0.0	1.0	177.0	309.0	2.0	107.0	0.0	0.0	1.7	-1.8	43.0
1986	20200.0	18466.7	10450.0	3610.0	1235.9	0.0	0.1	182.0	48.0	4.0	51.3	2.0	6.5	542.5	-419.0	66.0
1987	52.0	43.3	39.3	37.4	37.2	0.0	0.4	64.0	156.0	2.0	107.0	0.0	0.0	3.4	-2.9	23.0
1988	50.0	41.3	38.3	37.0	36.5	0.0	0.4	322.0	202.0	2.0	0.5	0.0	0.0	5.5	-7.3	19.0
1989	157.0	84.3	44.1	38.3	36.8	0.0	0.4	322.0	68.0	2.0	107.0	0.0	0.0	12.4	-11.8	31.0
1990	406.0	350.0	234.7	83.0	51.7	0.0	0.3	87.0	52.0	2.0	109.5	0.0	0.0	29.5	-34.1	15.0
1991	297.0	118.0	56.3	37.4	37.1	0.0	0.4	322.0	64.0	3.0	71.0	0.0	0.0	10.7	-10.4	51.0
1992	50.0	43.7	39.3	36.9	36.8	0.0	0.4	322.0	168.0	2.0	0.5	0.0	0.0	2.1	-2.1	70.0
1993	1460.0	673.3	294.3	76.3	44.9	0.0	0.3	322.0	22.0	2.0	125.5	1.0	1.0	57.6	-62.4	45.0
1994	41.0	37.7	36.9	36.3	36.1	0.0	0.3	76.0	182.0	2.0	107.0	0.0	0.0	4.8	-4.8	11.0
1995	9270.0	8106.7	5415.7	2624.7	2121.1	0.0	0.0	322.0	123.0	8.0	21.6	6.0	11.3	576.8	-566.9	55.0
1996	12400.0	9110.0	5490.0	1830.5	644.1	0.0	0.2	275.0	137.0	9.0	29.2	3.0	4.3	720.8	-535.9	40.0
1997	48900.0	31833.3	18024.3	5299.2	2113.4	0.0	0.1	217.0	2.0	5.0	50.0	6.0	4.5	1366.3	-988.0	56.0
1998	4260.0	3470.0	3171.4	1825.3	638.4	0.0	0.2	25.0	85.0	4.0	47.8	3.0	7.7	182.6	-160.7	81.0
1999	5260.0	2738.0	2118.6	1064.5	414.7	0.0	0.2	139.0	40.0	7.0	37.6	6.0	2.5	223.7	-175.0	84.0
2000	469.0	275.0	140.3	62.5	47.2	0.0	0.9	312.0	44.0	2.0	114.0	0.0	0.0	11.8	-11.4	56.0
2001	40.0	40.0	40.0	39.7	39.4	0.0	0.3	139.0	275.0	2.0	107.0	0.0	0.0	1.7	-1.7	45.0

(1) Gage A - South Fork American River at Slab Creek Res. Proposed Proj 184/UARP (Unregulated) versus 4435 South Fork American River Near Camino (Regulated)

Non-Parametric IHA Scorecard

(1) Gage A - 4435 South Fork American River Near Camino (Unregulated), April 2004

Pre-impact period: 1875-1901 (27 years)

Post-impact period: 1975-2001 (27 years)

Watershed area	1.00	
Mean annual flow	1030.10	144.84
Mean flow/area	1030.10	144.84
Annual C. V.	.93	.01
Flow predictability	.40	.53
Constancy/predictability	.49	.83
% of floods in 60d period	.39	.39
flood-free season	54.00	127.00

	MEDIANS		COEFF. of DISP.		DEVIATION FACTOR		SIGNIFICANCE COUNT	
	Pre	Post	Pre	Post	Medians	C.V.	Medians	C.V.
Parameter Group #1								
October	168.9	36.8	.66	.06	.78	.91	.27	.26
November	239.9	23.8	1.07	.72	.90	.33	.25	.79
December	278.6	36.0	1.35	.78	.87	.42	.26	.63
January	387.1	36.0	2.96	1.62	.91	.45	.13	.61
February	657.4	37.1	2.29	7.09	.94	2.10	.06	.03
March	1364.0	30.1	1.19	1.52	.98	.28	.17	.67
April	2039.6	37.8	.60	1.03	.98	.71	.30	.67
May	2785.3	38.4	1.04	1.65	.99	.58	.19	.35
June	1279.3	38.0	1.92	1.25	.97	.35	.16	.58
July	338.1	36.8	1.62	.08	.89	.95	.20	.15
August	172.4	36.3	1.11	.07	.79	.94	.01	.09
September	192.3	36.4	.68	.05	.81	.92	.30	.12
Parameter Group #2								
1-day minimum	58.3	11.0	1.13	1.73	.81	.53	.01	.21
3-day minimum	59.7	12.0	1.08	1.83	.80	.69	.02	.12
7-day minimum	60.3	12.3	1.08	1.88	.80	.74	.02	.15
30-day minimum	89.0	13.6	1.25	1.97	.85	.58	.01	.23
90-day minimum	162.4	18.8	.77	1.35	.88	.75	.15	.09
1-day maximum	6774.3	469.0	1.90	19.66	.93	9.33	.19	.00
3-day maximum	5901.9	350.0	1.76	20.92	.94	10.86	.17	.00
7-day maximum	4470.2	214.4	1.71	20.96	.95	11.26	.19	.00
30-day maximum	3435.8	78.5	1.05	22.65	.98	20.59	.03	.00
90-day maximum	2744.1	76.1	.82	8.24	.97	9.00	.04	.00
Number of zero days	.0	.0	.00	.00	999999.00	999999.00	.00	.00
Base flow	.1	.3	.62	.91	1.90	.46	.00	.28
Parameter Group #3								
Date of minimum	276.0	322.0	.11	.36	.25	2.33	.02	.00
Date of maximum	73.0	68.0	.21	.31	.03	.47	.78	.10
Parameter Group #4								
Low pulse count	6.0	2.0	.67	1.00	.67	.50	.01	.11
Low pulse duration	11.3	71.0	1.12	.98	5.26	.13	.00	.79
High pulse count	6.0	.0	.50	.00	1.00	1.00	.06	.09
High pulse duration	15.7	.0	1.37	.00	1.00	1.00	.10	.07
The low pulse threshold is	179.68							
The high pulse level is	1319.25							
Parameter Group #5								
Rise rate	173.9	12.3	2.45	27.72	.93	10.33	.31	.00
Fall rate	-109.3	-15.5	-2.14	-17.61	.86	7.22	.32	.00
Number of reversals	124.0	48.0	.19	.63	.61	2.37	.01	.00

(1) Gage A - South Fork American River at Slab Creek Res. Proposed Proj 184/UARP (Unregulated) versus 4435 South Fork American River Near Camino (Regulated)

Variance Data, Box and Whisker Format

	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
<b>Pre-Impact Distribution</b>																	
1-day min	41.6	108.6	73.4	91.9	146.5	166.3	398.8	497.5	189.6	73.4	25.9	40.6	23.4	23.5	24.0	25.8	27.3
25 pctile	112.5	170.3	211.9	217.4	377.4	746.5	1091.9	964.1	325.8	146.6	61.8	97.1	47.1	49.6	48.6	53.6	90.3
Median	168.9	239.9	278.6	387.1	657.4	1364.0	2039.6	2785.3	1279.4	338.1	172.5	192.3	58.3	59.7	60.4	89.0	162.4
75 pctile	224.5	427.2	589.3	1363.5	1883.3	2367.9	2321.3	3864.3	2779.0	695.2	253.5	227.3	113.0	114.2	113.8	164.7	215.5
1-day max	958.7	3521.0	4030.3	8147.1	7620.4	4167.2	4003.7	5176.2	6576.2	2984.0	727.7	449.8	210.1	213.5	222.6	384.6	500.0
<b>Post-Impact Distribution</b>																	
1-day min	10.0	10.3	10.0	10.0	10.0	10.9	10.0	9.7	10.0	9.9	10.4	10.1	5.8	5.8	8.6	9.6	9.8
25 pctile	36.0	21.6	11.2	16.0	14.3	17.6	12.2	11.5	36.1	36.0	36.0	36.0	10.0	10.0	10.0	10.0	11.8
Median	36.8	23.8	36.0	36.0	37.1	30.1	37.8	38.4	38.0	36.8	36.3	36.4	11.0	12.0	12.3	13.6	18.8
75 pctile	38.2	38.6	39.3	74.2	277.1	63.4	51.2	74.8	83.6	39.1	38.6	38.0	29.0	32.0	33.1	36.8	37.2
1-day max	47.5	917.6	1111.5	4836.1	2709.3	1089.7	1164.5	2434.1	2619.0	936.5	45.1	48.2	36.0	36.3	36.9	37.9	39.6

	1-day max	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	LRise rate	Fall rate	Reversals
<b>Pre-Impact Distribution</b>																
1-day min	727.2	685.6	660.9	571.3	416.0	0.0	0.0	224.0	2.0	0.0	0.0	0.0	0.0	20.8	-496.1	97.0
25 pctile	2735.2	1971.4	1566.0	1404.2	1131.1	0.0	0.1	240.0	44.0	4.0	4.3	4.0	4.6	61.8	-274.7	114.0
Median	6774.3	5902.0	4470.2	3435.8	2744.1	0.0	0.1	276.0	73.0	6.0	11.3	6.0	15.7	173.9	-109.3	124.0
75 pctile	15625.4	12387.8	9211.7	5007.3	3391.6	0.0	0.1	279.0	122.0	8.0	17.0	7.0	26.0	487.3	-40.6	137.0
1-day max	67934.6	47378.3	26381.2	9469.4	5004.0	0.0	0.2	287.0	360.0	14.0	32.0	11.0	36.0	922.4	-15.8	149.0
<b>Post-Impact Distribution</b>																
1-day min	26.0	26.0	25.6	24.7	18.6	0.0	0.0	23.0	2.0	2.0	0.5	0.0	0.0	0.9	-988.0	11.0
25 pctile	50.0	43.3	39.3	37.4	37.1	0.0	0.2	275.0	22.0	2.0	37.6	0.0	0.0	2.1	-275.4	40.0
Median	469.0	350.0	214.4	78.5	76.1	0.0	0.3	322.0	68.0	2.0	71.0	0.0	0.0	12.3	-15.5	48.0
75 pctile	9270.0	7366.7	4534.4	1815.8	664.2	0.0	0.4	39.0	137.0	4.0	107.0	3.0	5.0	341.9	-2.1	70.0
1-day max	48900.0	31833.3	18024.3	5299.2	2121.1	0.0	1.0	322.0	361.0	10.0	125.5	7.0	11.3	1366.3	-0.9	84.0

(1) Gage A - South Fork American River at Slab Creek Res. Proposed Proj 184/UARP (Unregulated) versus 4435 South Fork American River Near Camino (Regulated)

IHA Percentile Data

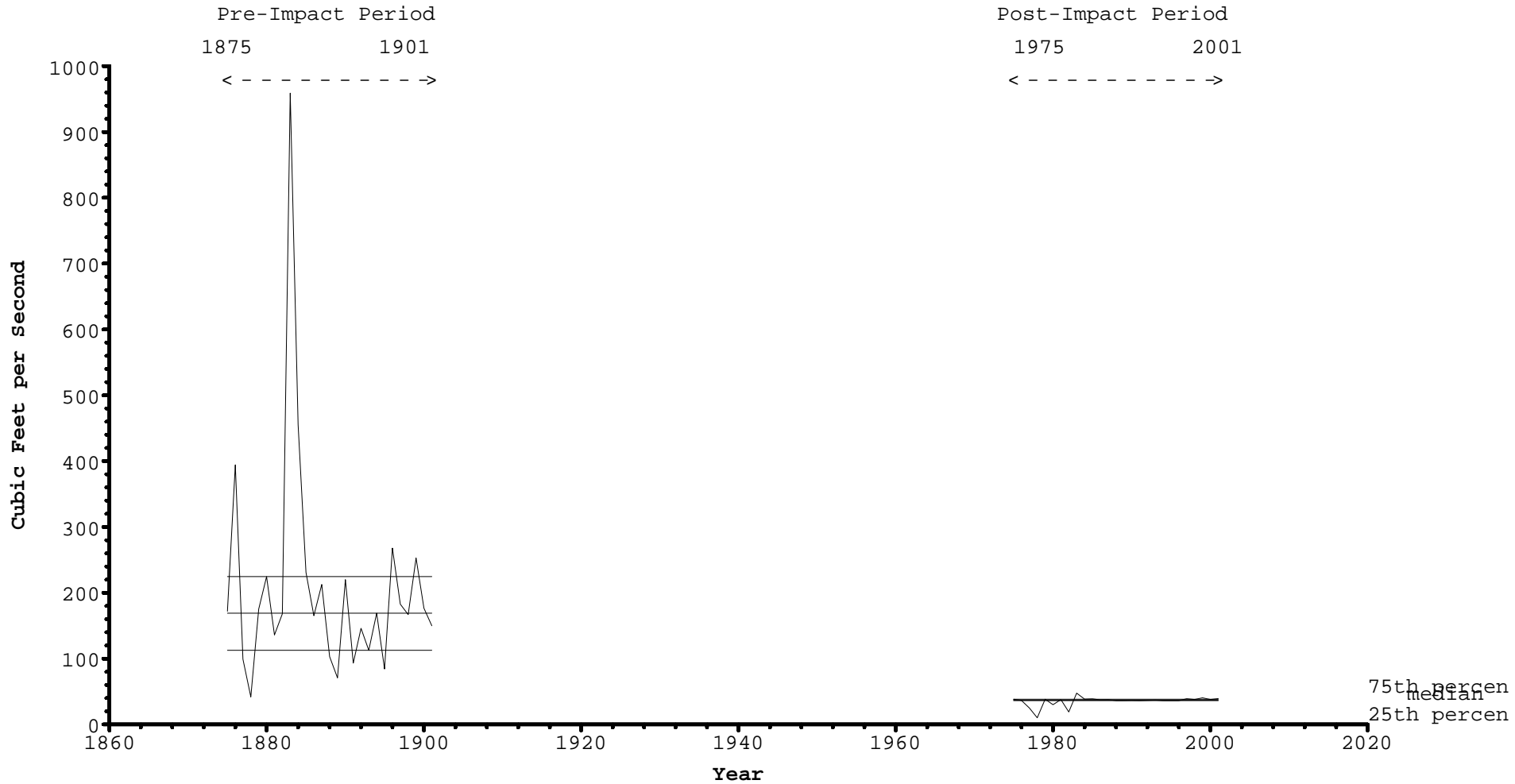
(1) Gage A - 4435 South Fork American River Near Camino (Unregulated), April 2004  
 Pre-impact period: 1875-1901 (27 years) Post-impact period: 1975-2001 (27 years)

	Pre-Impact					Post-Impact						
	10%	25%	50%	75%	90%	(75-25)/50	10%	25%	50%	75%	90%	(75-25)/50
Parameter Group #1												
October	81.56	112.54	168.89	224.47	406.45	.66	23.57	36.00	36.81	38.16	39.28	.06
November	123.09	170.33	239.93	427.21	1116.77	1.07	15.72	21.57	23.83	38.63	41.47	.72
December	115.47	211.88	278.60	589.32	2544.39	1.35	10.00	11.19	36.00	39.32	503.50	.78
January	155.88	217.44	387.13	1363.45	2987.22	2.96	10.25	15.97	36.00	74.19	514.87	1.62
February	266.46	377.39	657.36	1883.29	3328.53	2.29	10.00	14.29	37.07	277.14	893.81	7.09
March	556.94	746.47	1363.97	2367.85	3942.98	1.19	12.45	17.58	30.06	63.39	567.33	1.52
April	679.68	1091.91	2039.57	2321.27	2903.19	.60	10.56	12.20	37.77	51.17	124.35	1.03
May	632.65	964.07	2785.34	3864.27	4956.99	1.04	10.41	11.52	38.42	74.77	1463.60	1.65
June	219.07	325.82	1279.35	2779.03	4863.50	1.92	24.95	36.07	38.00	83.63	1900.09	1.25
July	115.83	146.56	338.06	695.19	2308.88	1.62	23.72	36.00	36.81	39.10	217.99	.08
August	52.28	61.79	172.45	253.50	423.86	1.11	22.61	36.00	36.26	38.58	40.33	.07
September	79.27	97.12	192.29	227.32	343.02	.68	23.21	36.00	36.43	38.00	40.86	.05
Parameter Group #2												
1-day minimum	40.43	47.06	58.32	112.95	146.22	1.13	8.78	10.00	11.00	29.00	36.00	1.73
3-day minimum	40.93	49.58	59.67	114.22	147.41	1.08	9.09	10.00	12.00	32.00	36.00	1.83
7-day minimum	42.30	48.55	60.35	113.79	145.24	1.08	9.72	10.00	12.29	33.14	36.74	1.88
30-day minimum	41.10	53.57	88.98	164.71	171.48	1.25	10.00	10.00	13.60	36.83	37.30	1.97
90-day minimum	59.65	90.30	162.40	215.48	270.17	.77	10.04	11.82	18.82	37.23	38.25	1.35
1-day maximum	1587.56	2735.24	6774.34	15625.44	39763.18	1.90	39.40	50.00	469.00	9270.00	17560.00	19.66
3-day maximum	1352.60	1971.42	5901.95	12387.76	29655.24	1.76	37.53	43.33	350.00	7366.67	12818.66	20.92
7-day maximum	1040.26	1565.97	4470.21	9211.69	17570.73	1.71	36.86	39.29	214.43	4534.43	7532.28	20.96
30-day maximum	894.78	1404.21	3435.77	5007.30	7875.86	1.05	36.27	37.40	78.53	1815.80	3060.93	22.65
90-day maximum	642.79	1131.11	2744.10	3391.63	4581.41	.82	33.95	37.10	76.13	664.21	1597.10	8.24
Number of zero days	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Base flow	.03	.06	.11	.13	.15	.62	.03	.16	.31	.44	.71	.91
Parameter Group #3												
Date of minimum	225.60	240.00	276.00	279.00	283.40	.11	139.80	275.00	322.00	39.00	84.60	.36
Date of maximum	.40	44.00	73.00	122.00	152.00	.21	307.60	22.00	68.00	137.00	216.60	.31
Parameter Group #4												
Low pulse count	2.60	4.00	6.00	8.00	11.00	.67	2.00	2.00	2.00	4.00	8.20	1.00
Low pulse duration	2.16	4.27	11.33	17.00	27.07	1.12	.50	37.57	71.00	107.00	110.40	.98
High pulse count	1.00	4.00	6.00	7.00	8.60	.50	.00	.00	.00	3.00	6.00	.00
High pulse duration	1.00	4.57	15.67	26.00	33.80	1.37	.00	.00	.00	5.00	7.85	.00
Parameter Group #5												
Rise rate	42.23	61.78	173.91	487.25	710.54	2.45	1.65	2.12	12.26	341.92	753.94	27.72
Fall rate	-347.71	-274.67	-109.26	-40.63	-32.29	-2.14	-607.31	-275.40	-15.52	-2.07	-1.66	-17.61
Number of reversals	103.40	114.00	124.00	137.00	141.20	.19	18.20	40.00	48.00	70.00	81.40	.63

Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

Average flow for October

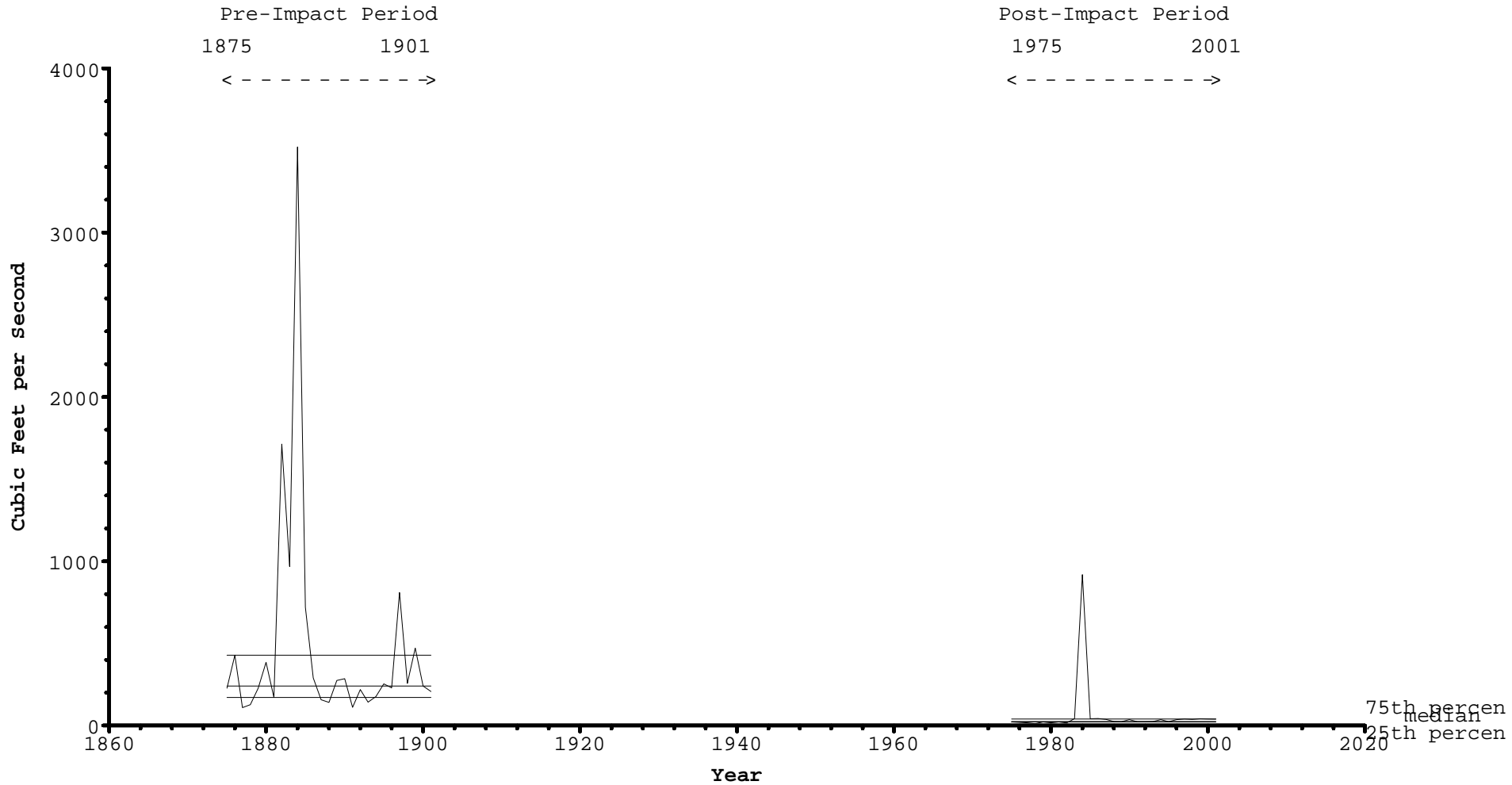




Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

Average flow for November

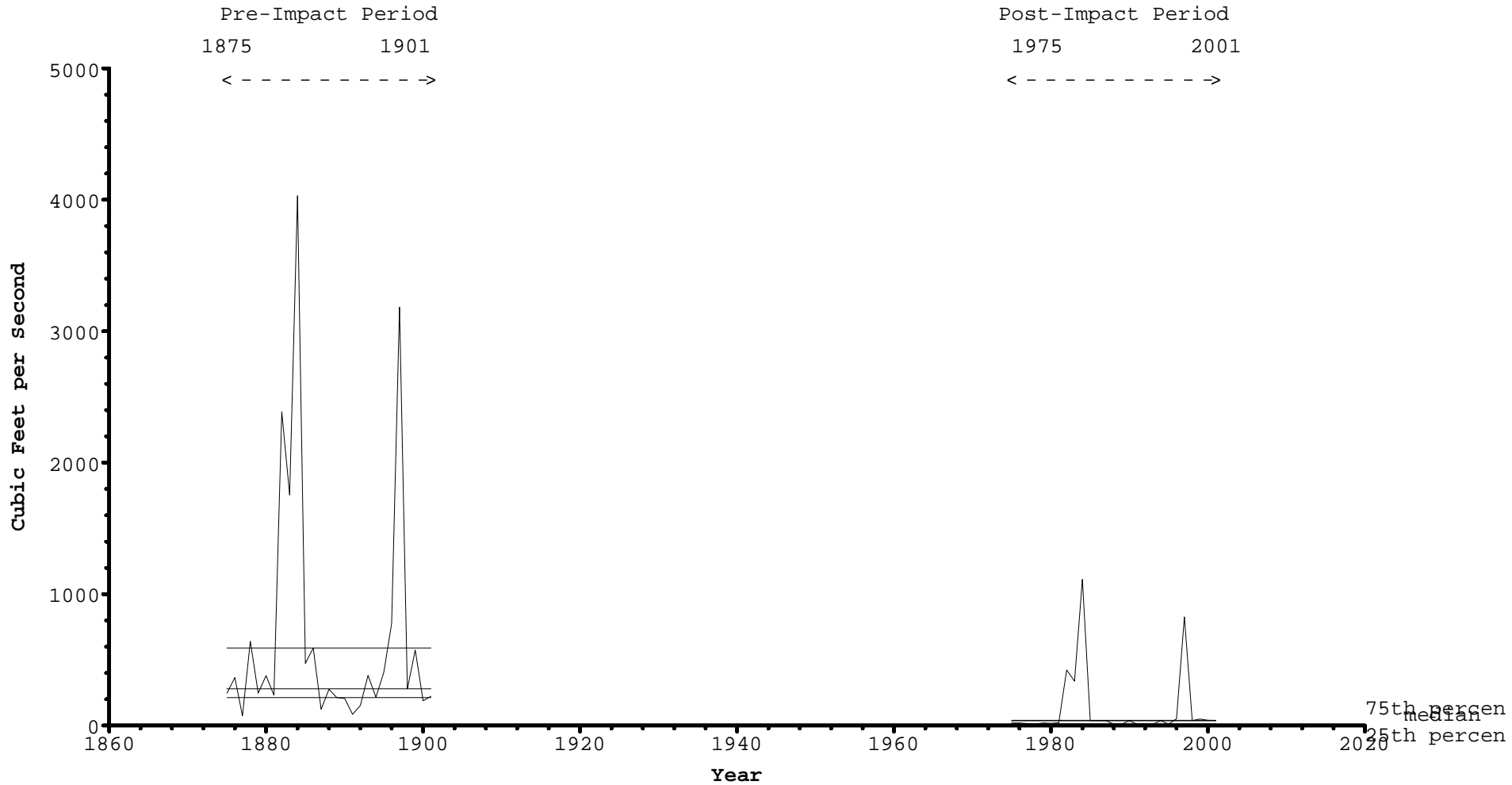


File(s) Used: P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.ann, P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.baw

Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

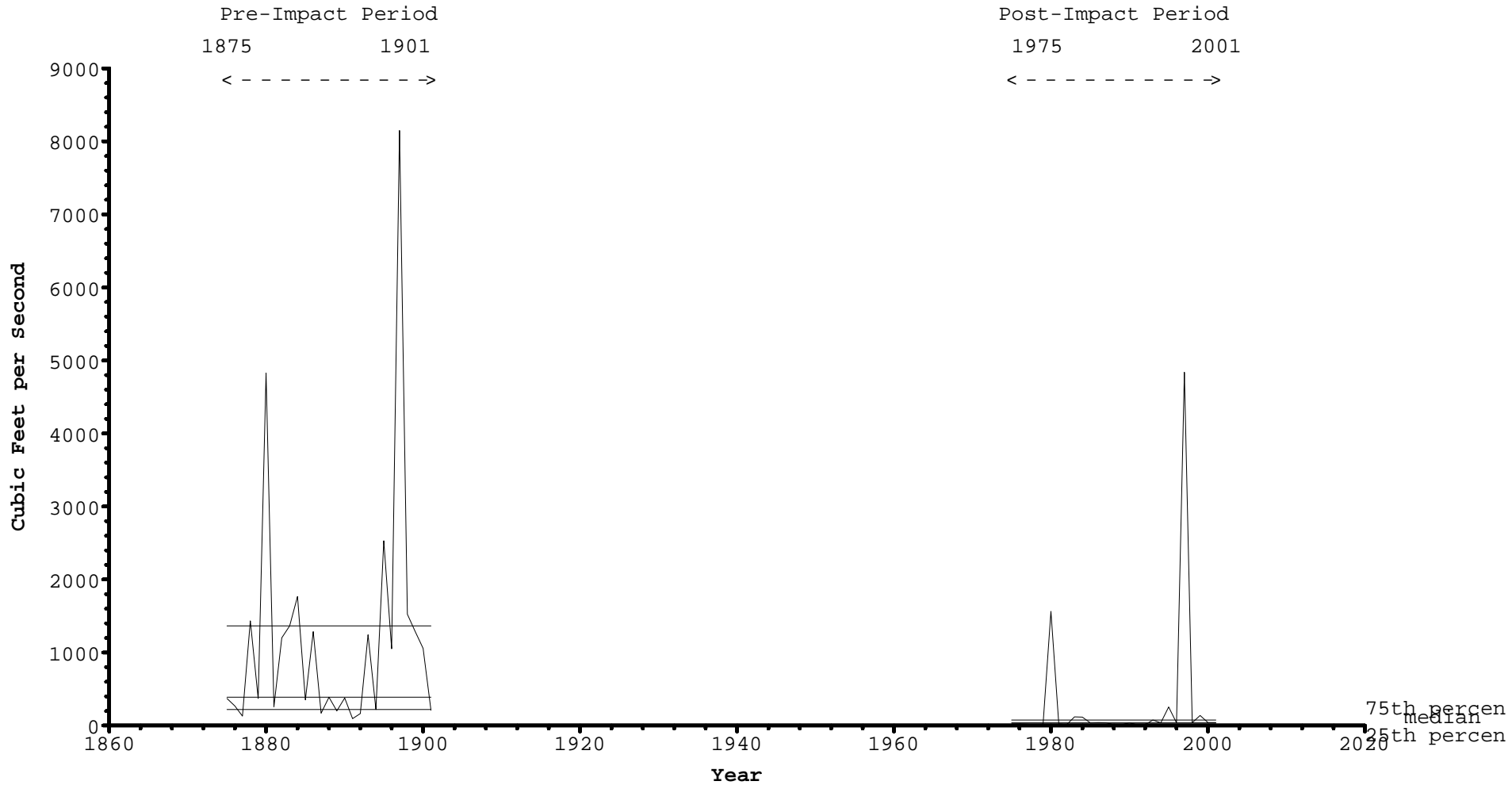
Average flow for December



Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

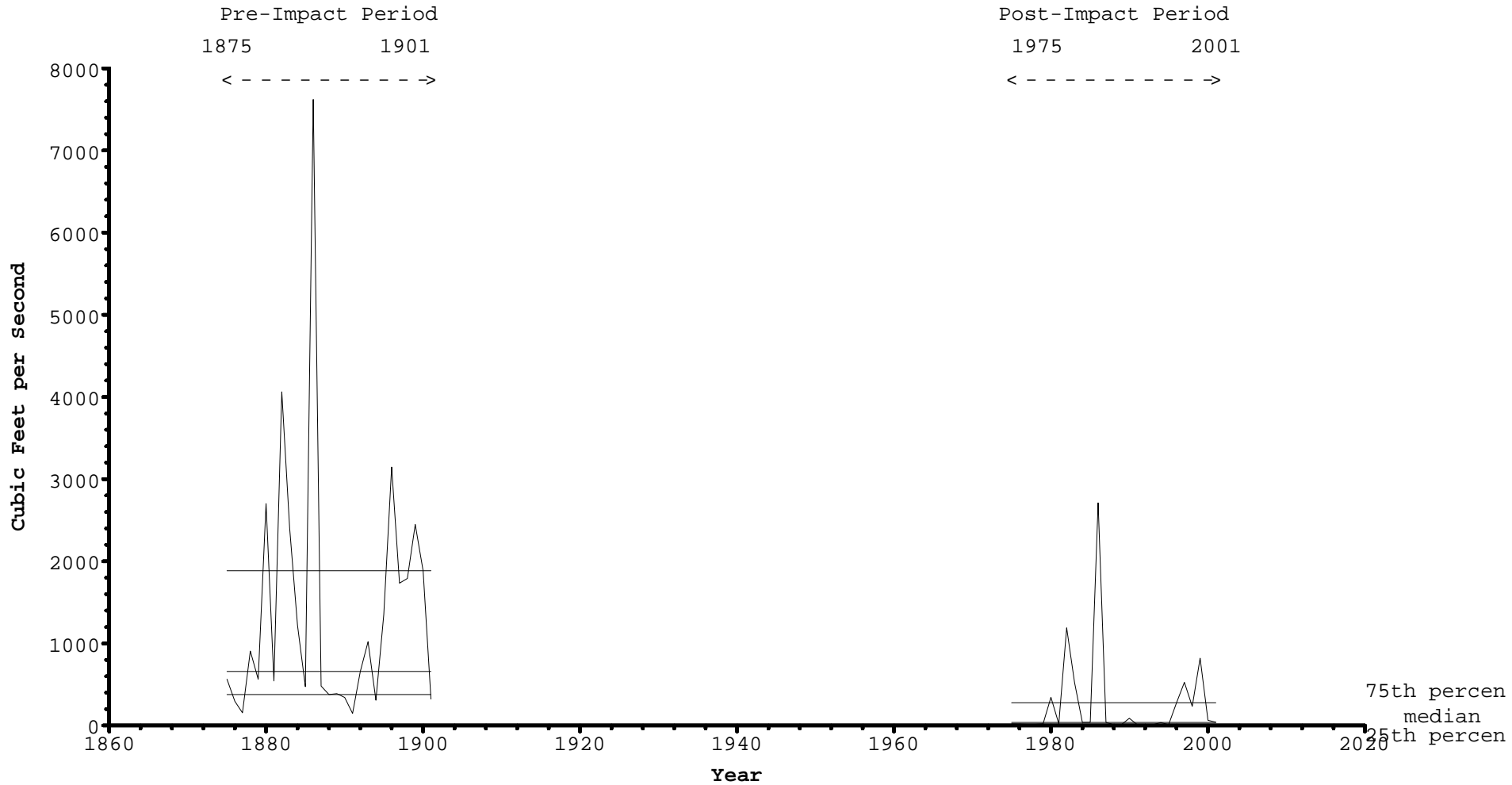
Average flow for January



Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

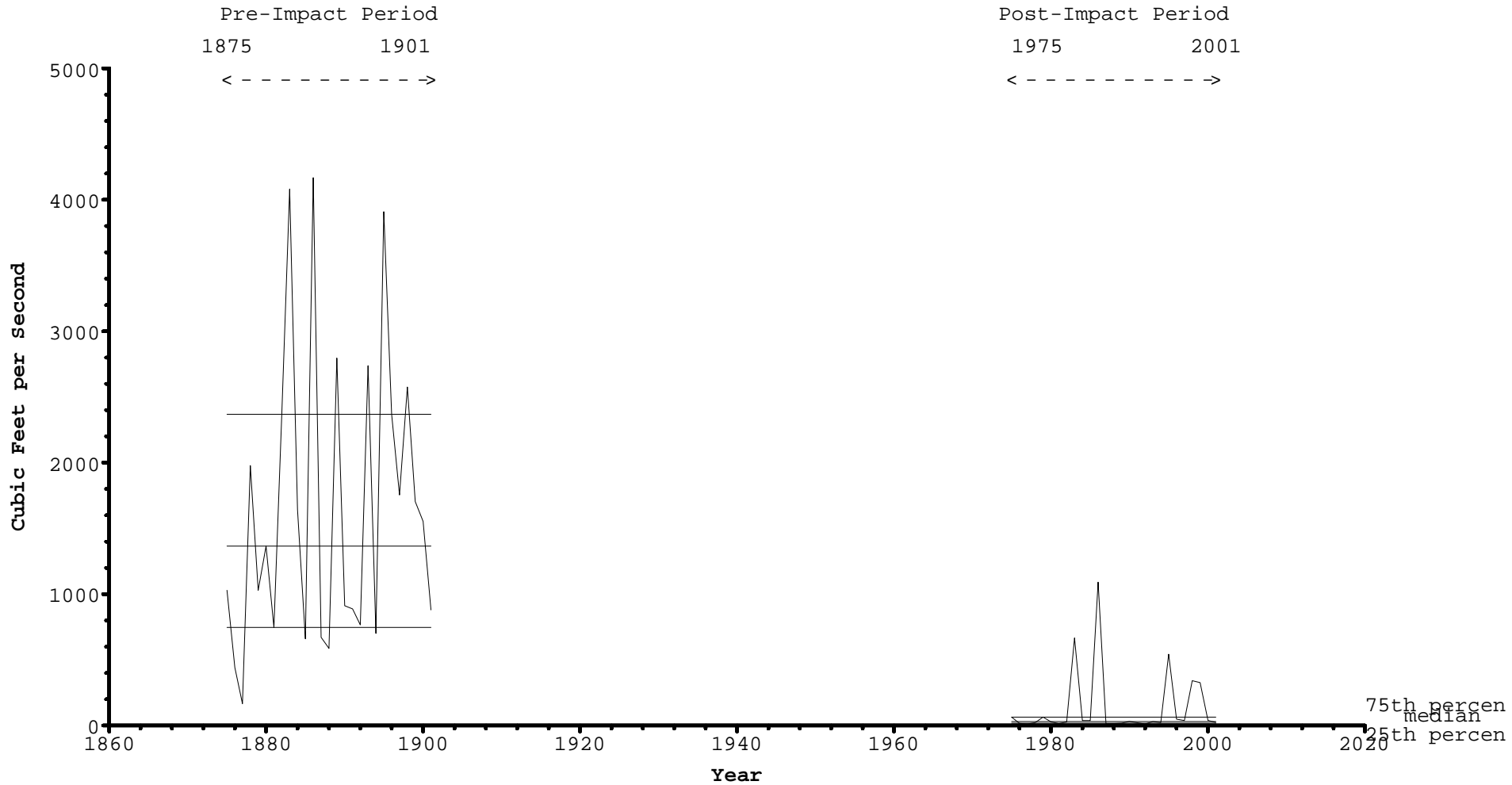
Average flow for February



Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

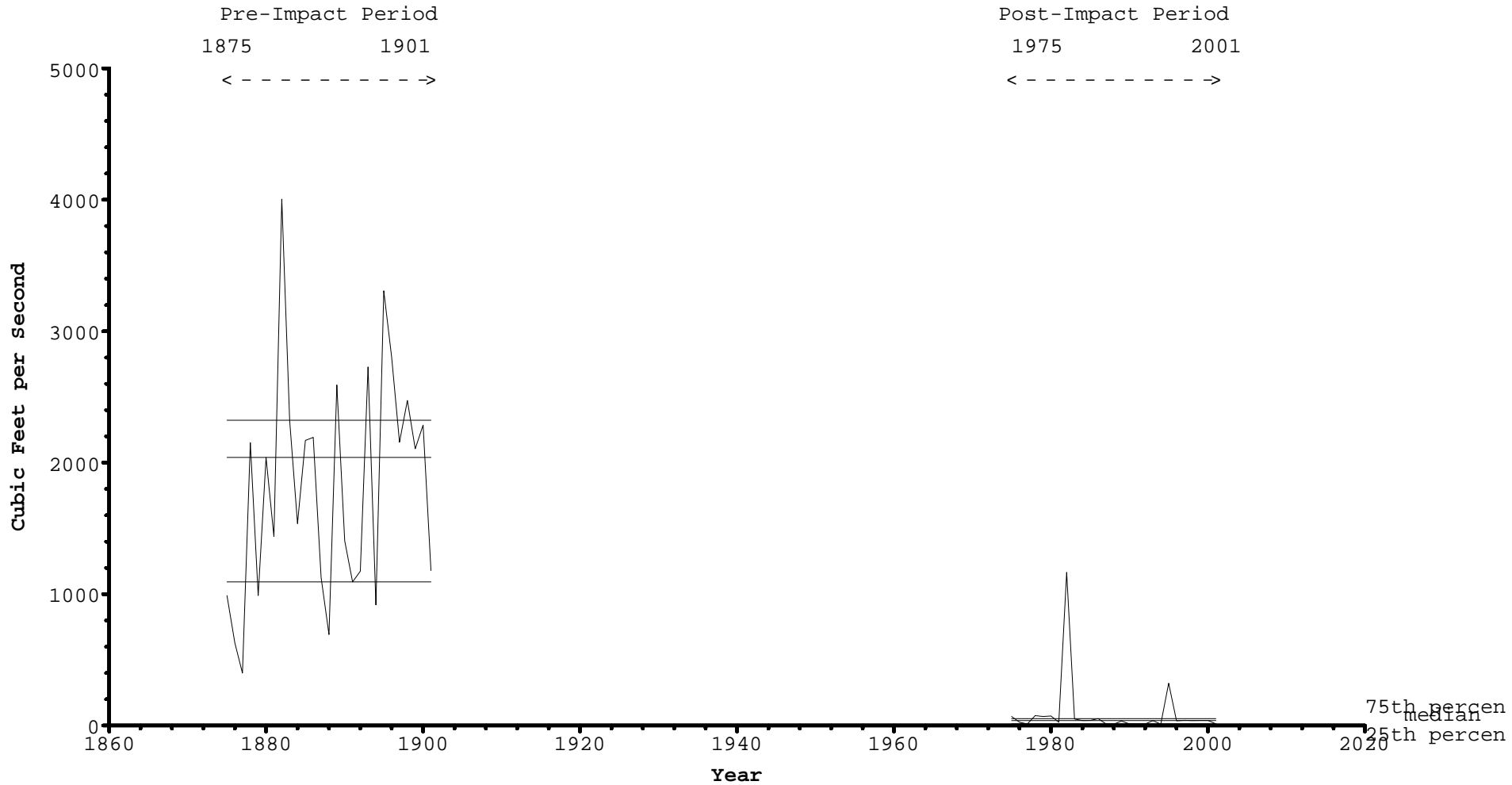
Average flow for March



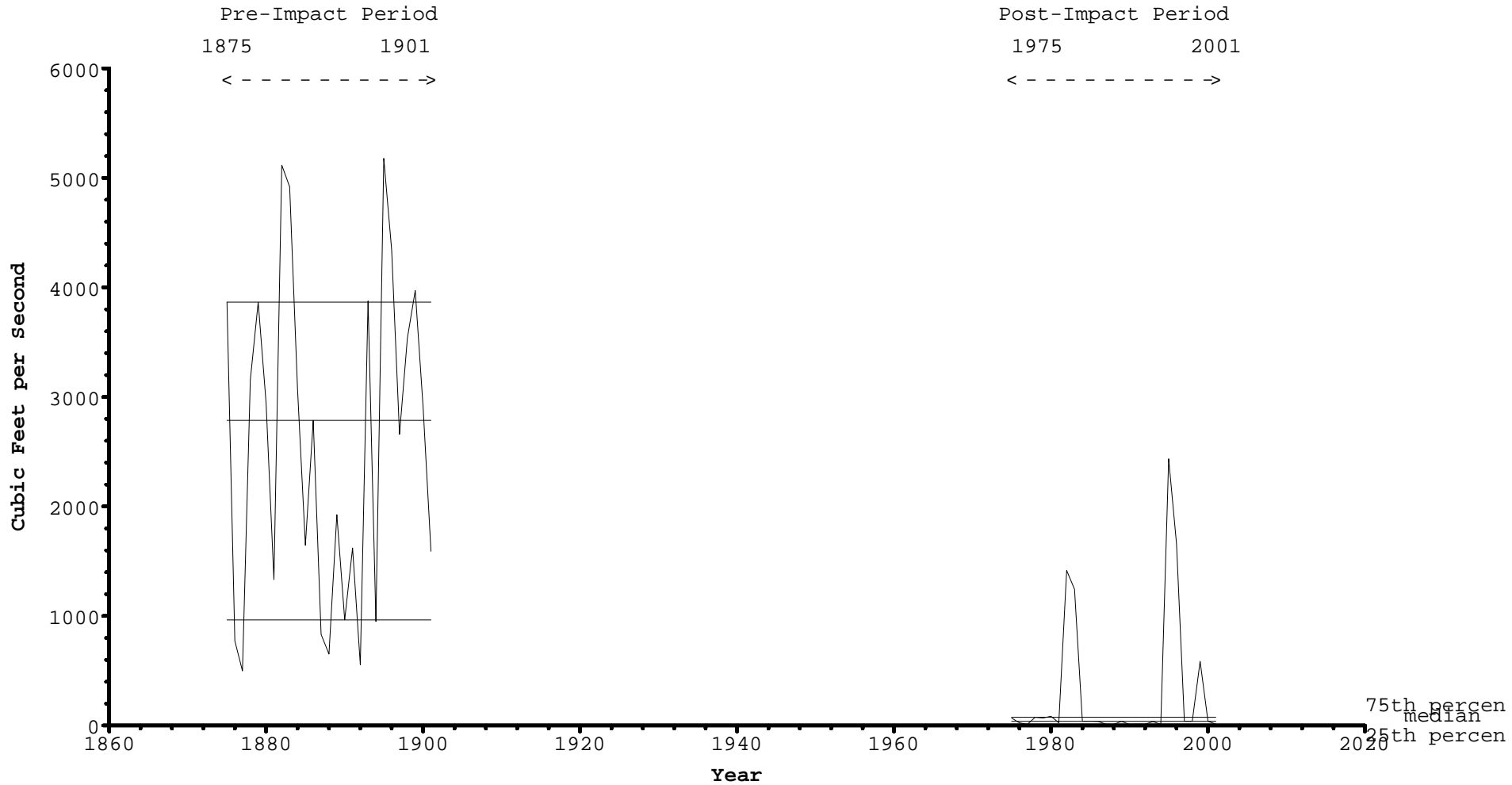
Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

Average flow for April



Standard IHA  
**A-4435 South Fork American River Near Camino (Unregulated), April 2004**  
Average flow for May

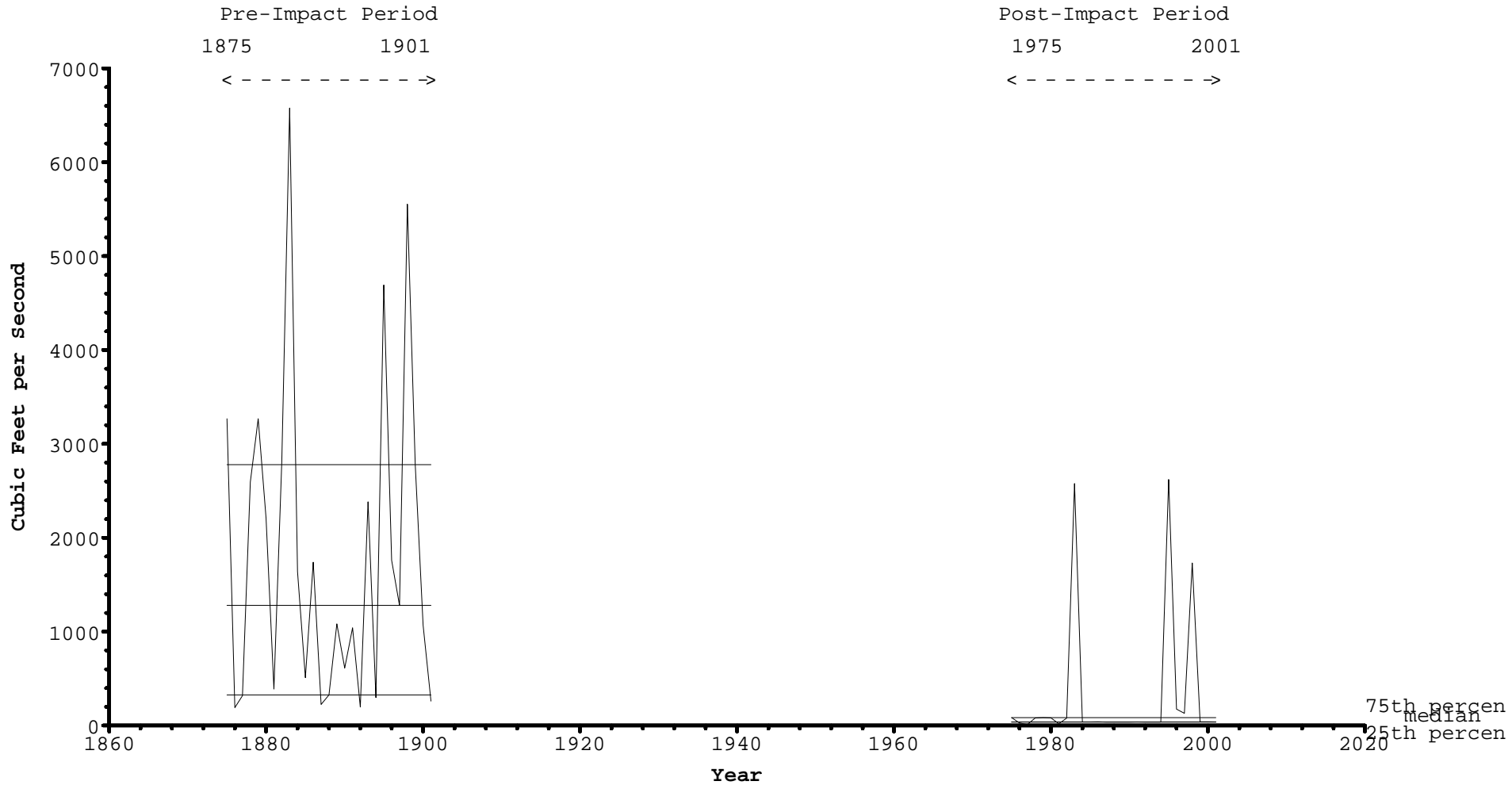


File(s) Used: P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.ann, P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.baw

Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

Average flow for June

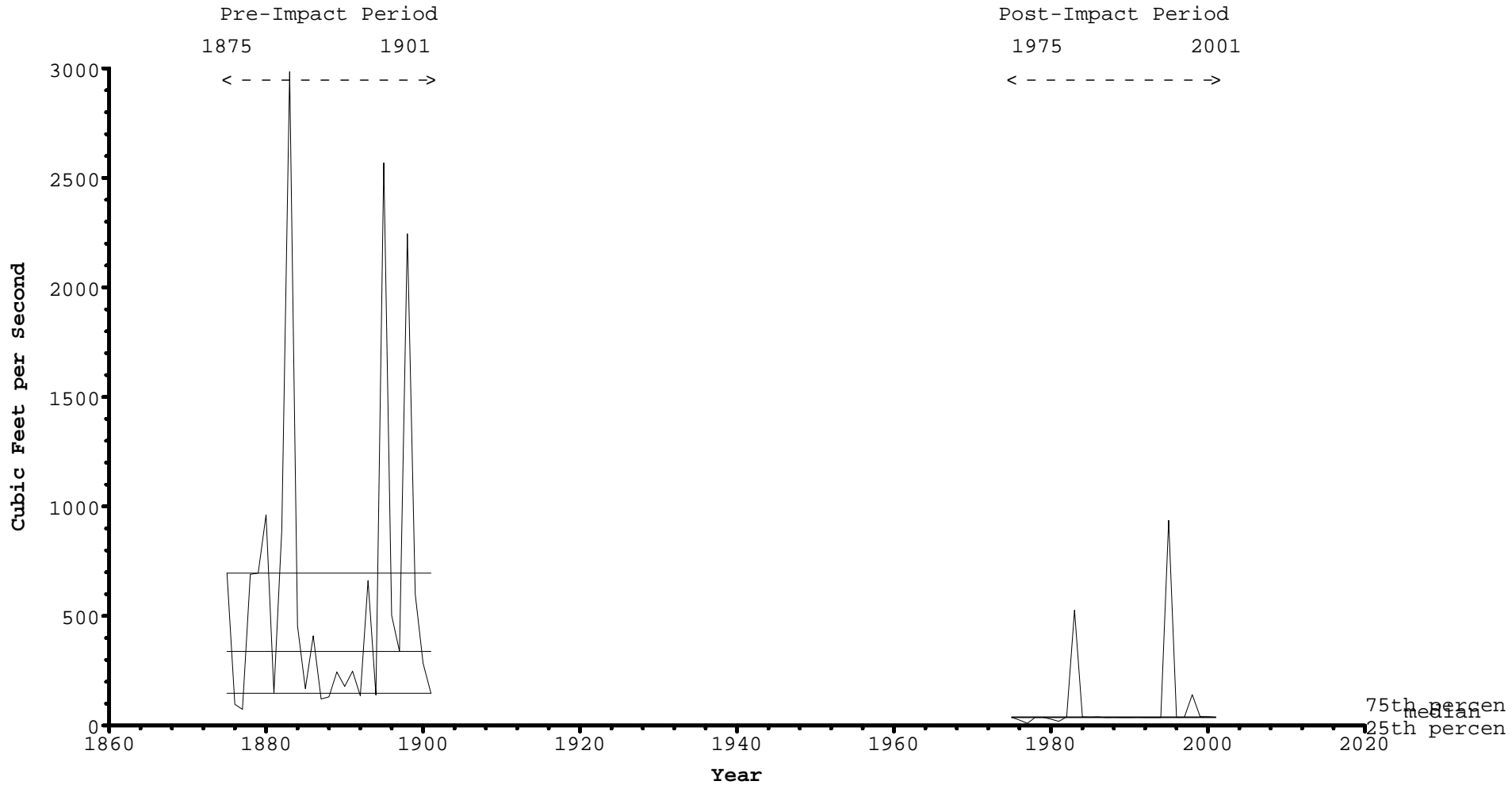




Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

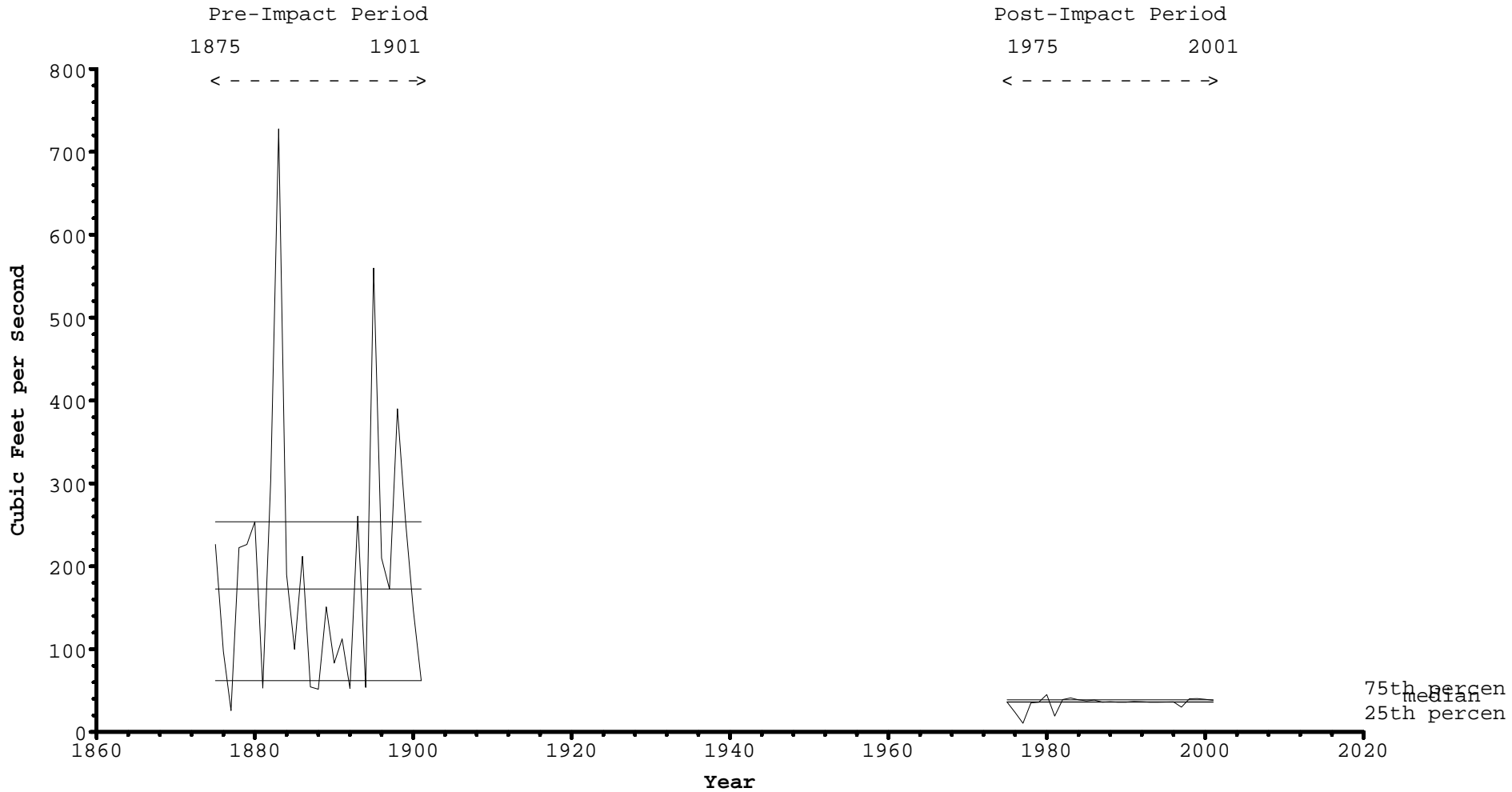
Average flow for July



Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

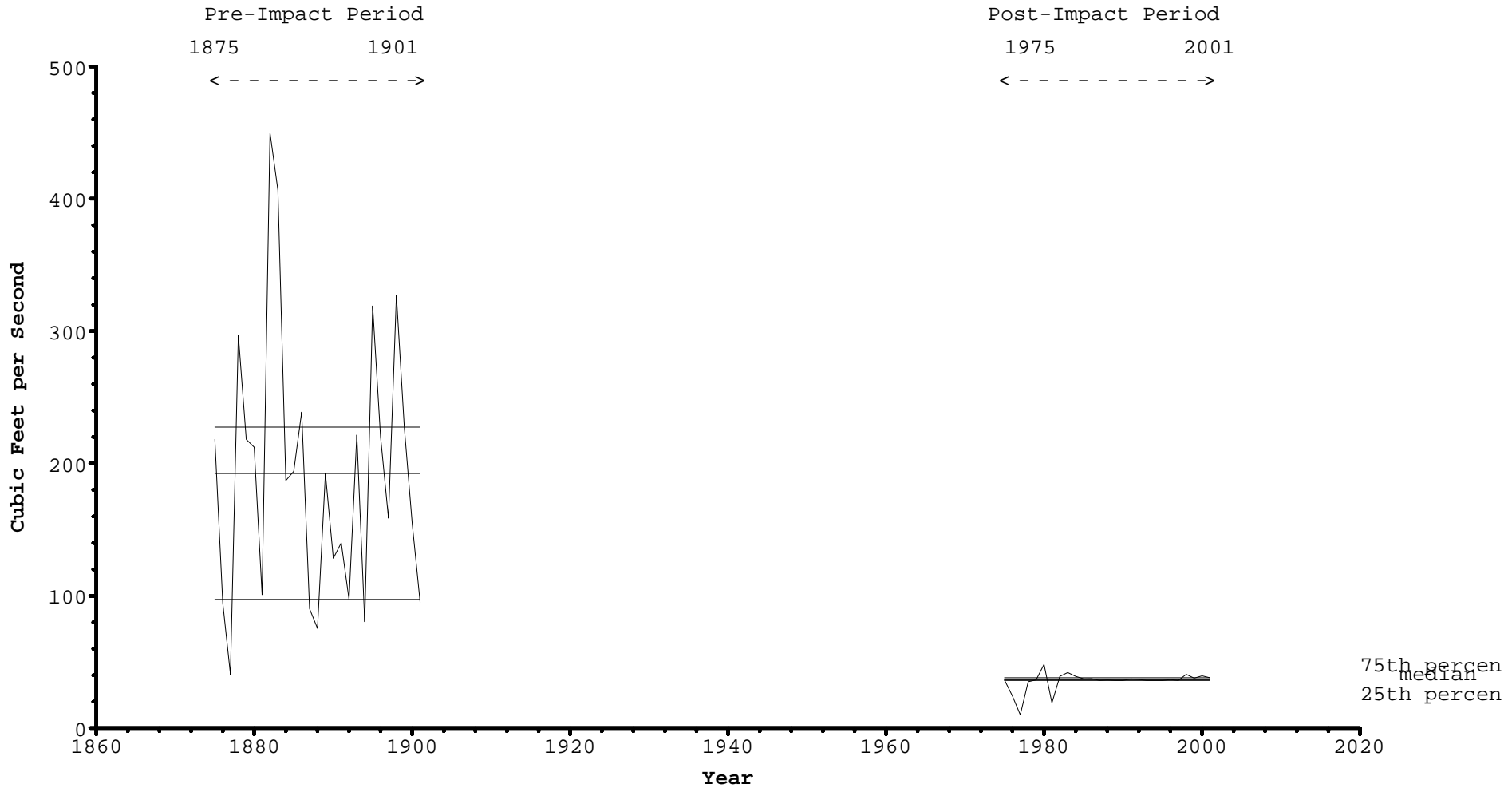
Average flow for August



Standard IHA

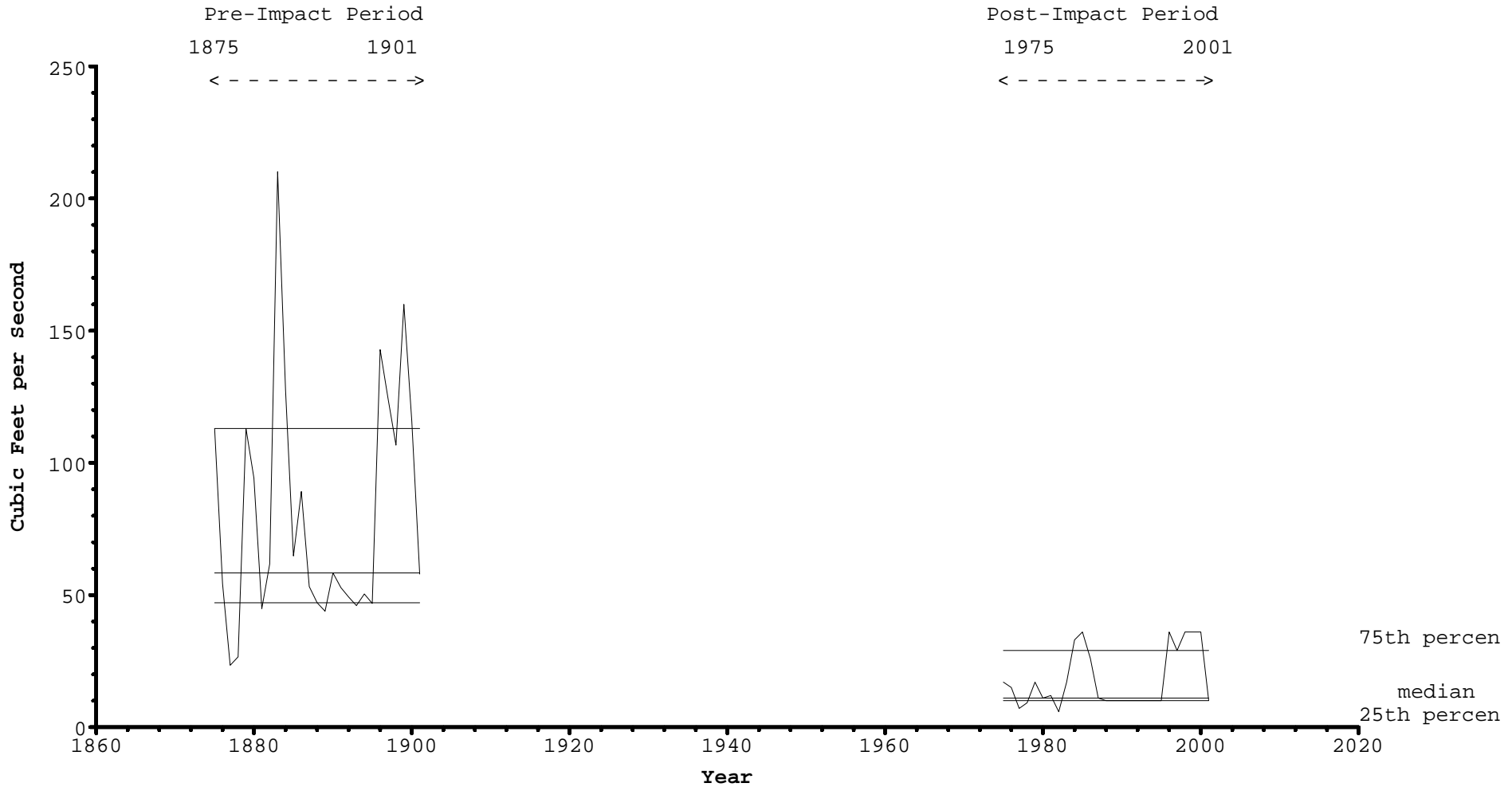
# A-4435 South Fork American River Near Camino (Unregulated), April 2004

Average flow for September



Standard IHA

A-4435 South Fork American River Near Camino (Unregulated), April 2004  
1-day minimum streamflow

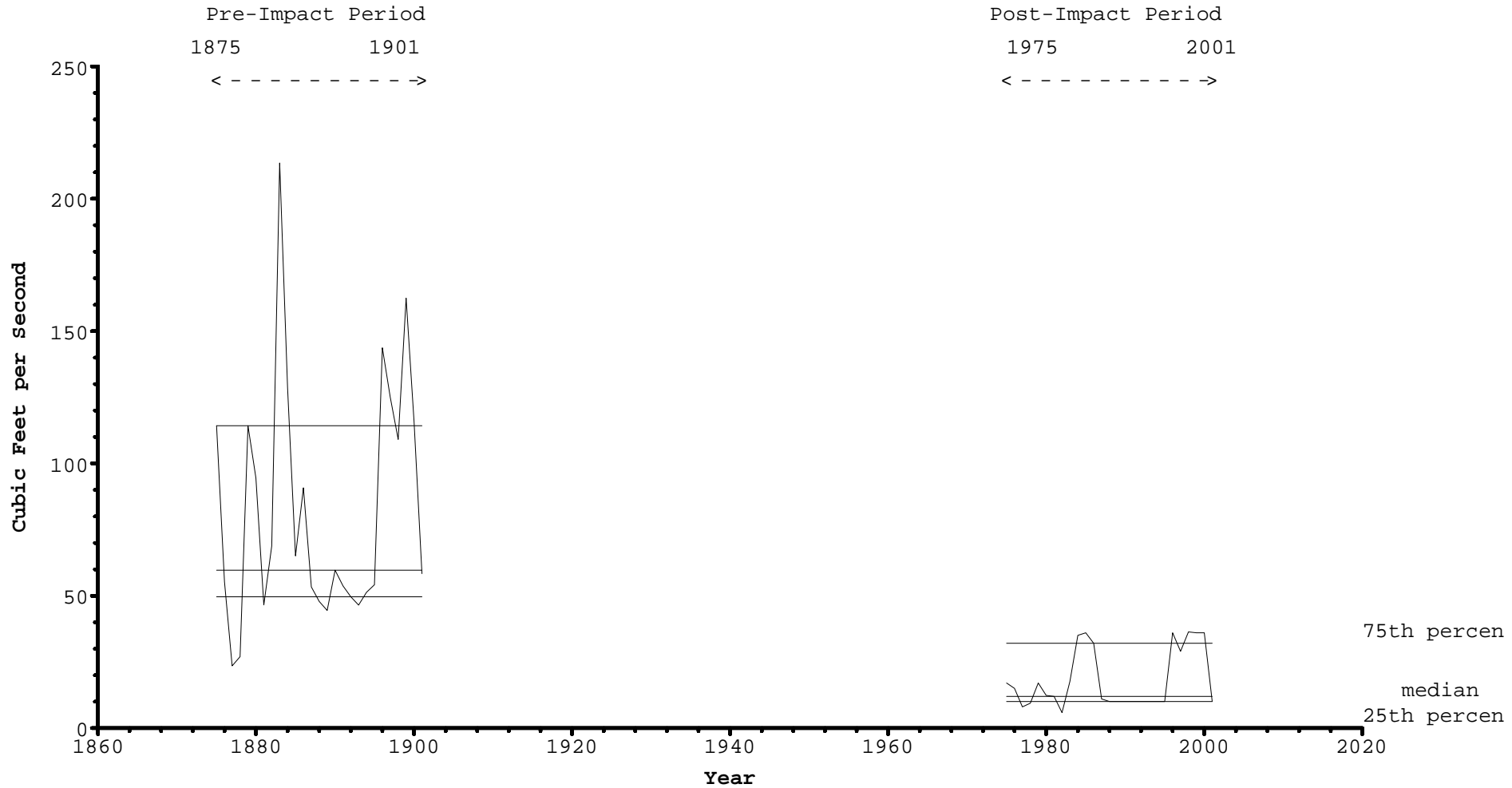


File(s) Used: P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.ann, P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.baw

Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

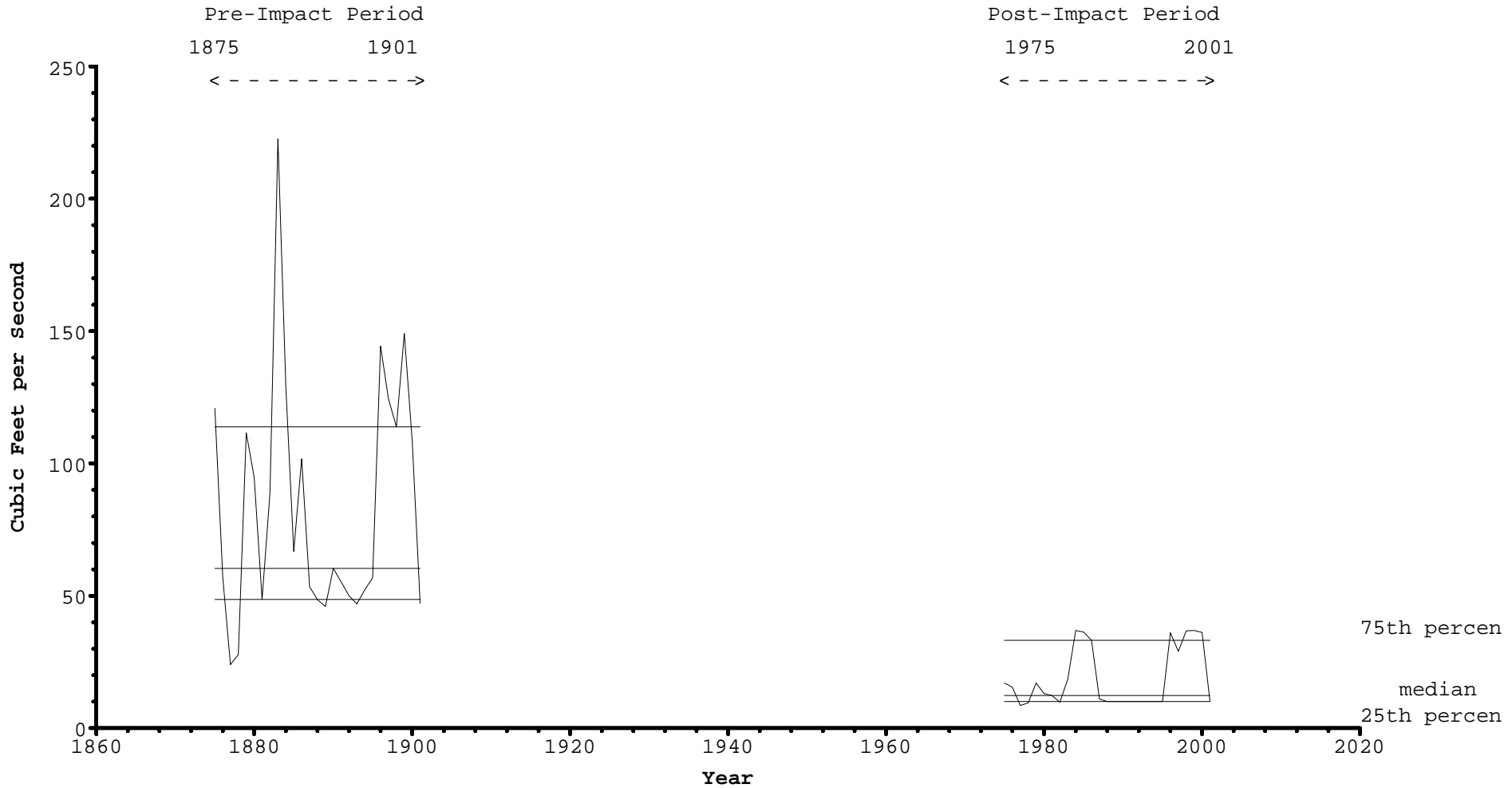
3-day minimum streamflow



File(s) Used: P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.ann, P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.baw

Standard IHA

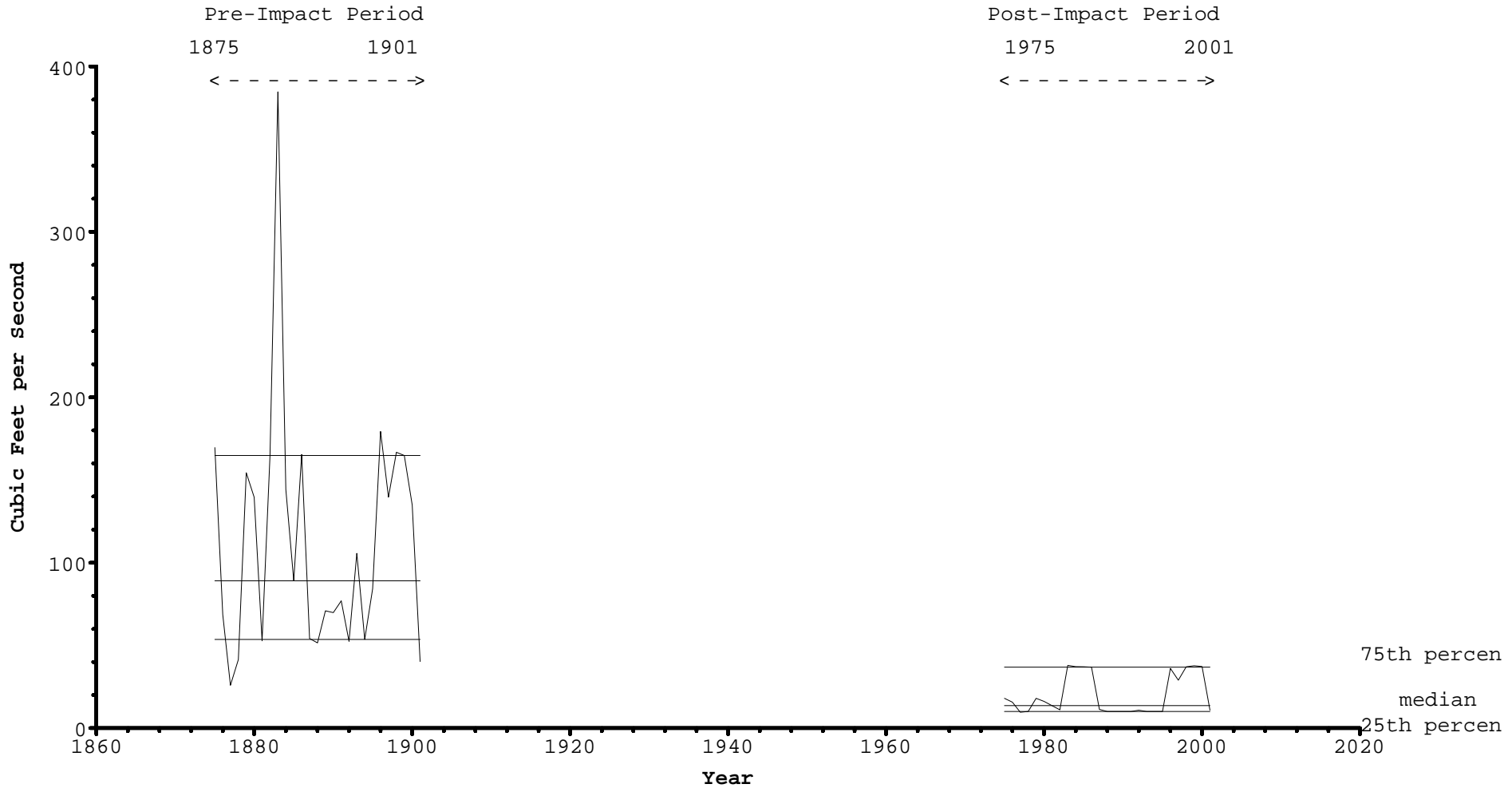
A-4435 South Fork American River Near Camino (Unregulated), April 2004  
7-day minimum streamflow



Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

30-day minimum streamflow

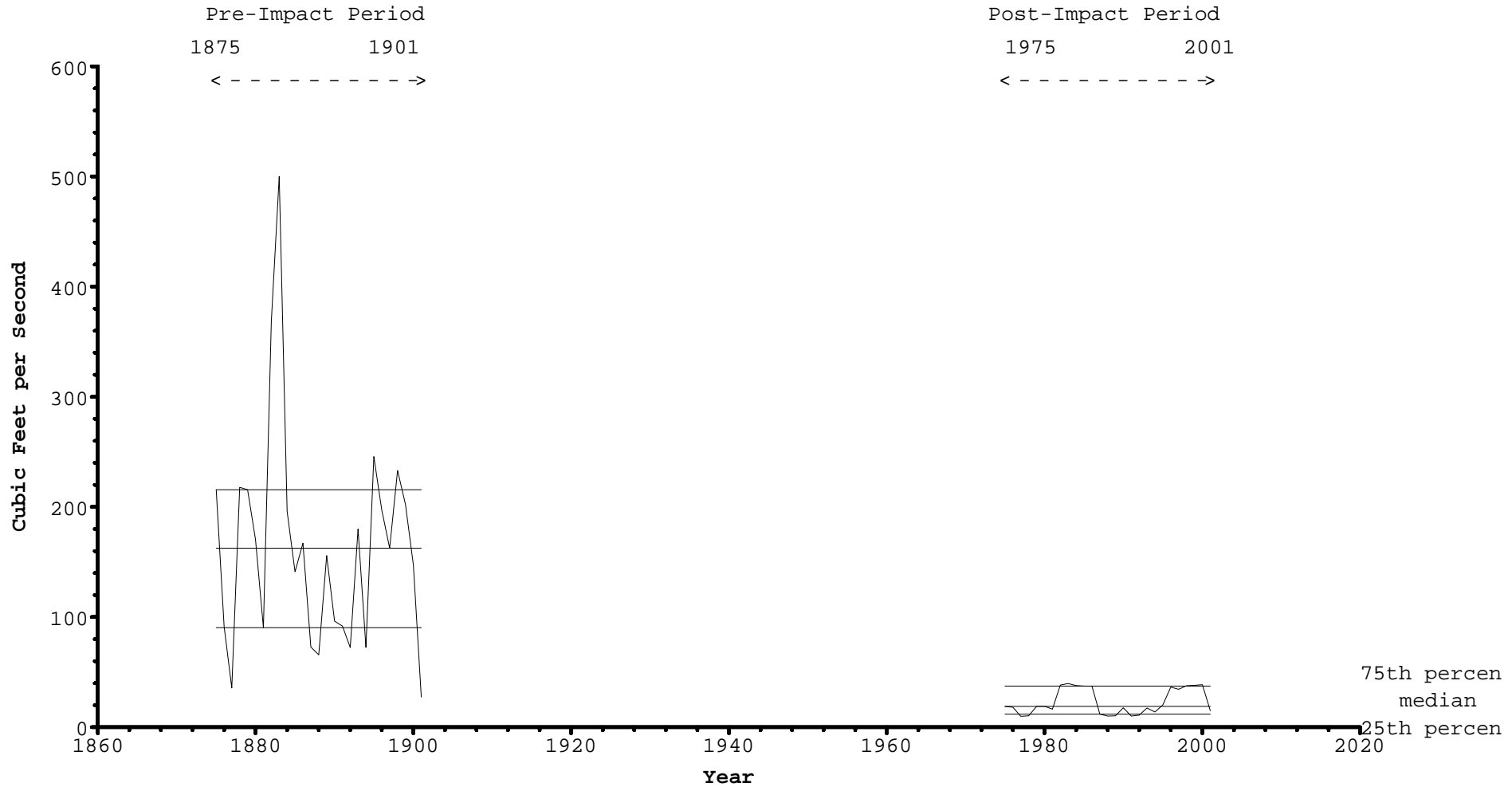


File(s) Used: P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.ann, P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.baw

Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

90-day minimum streamflow

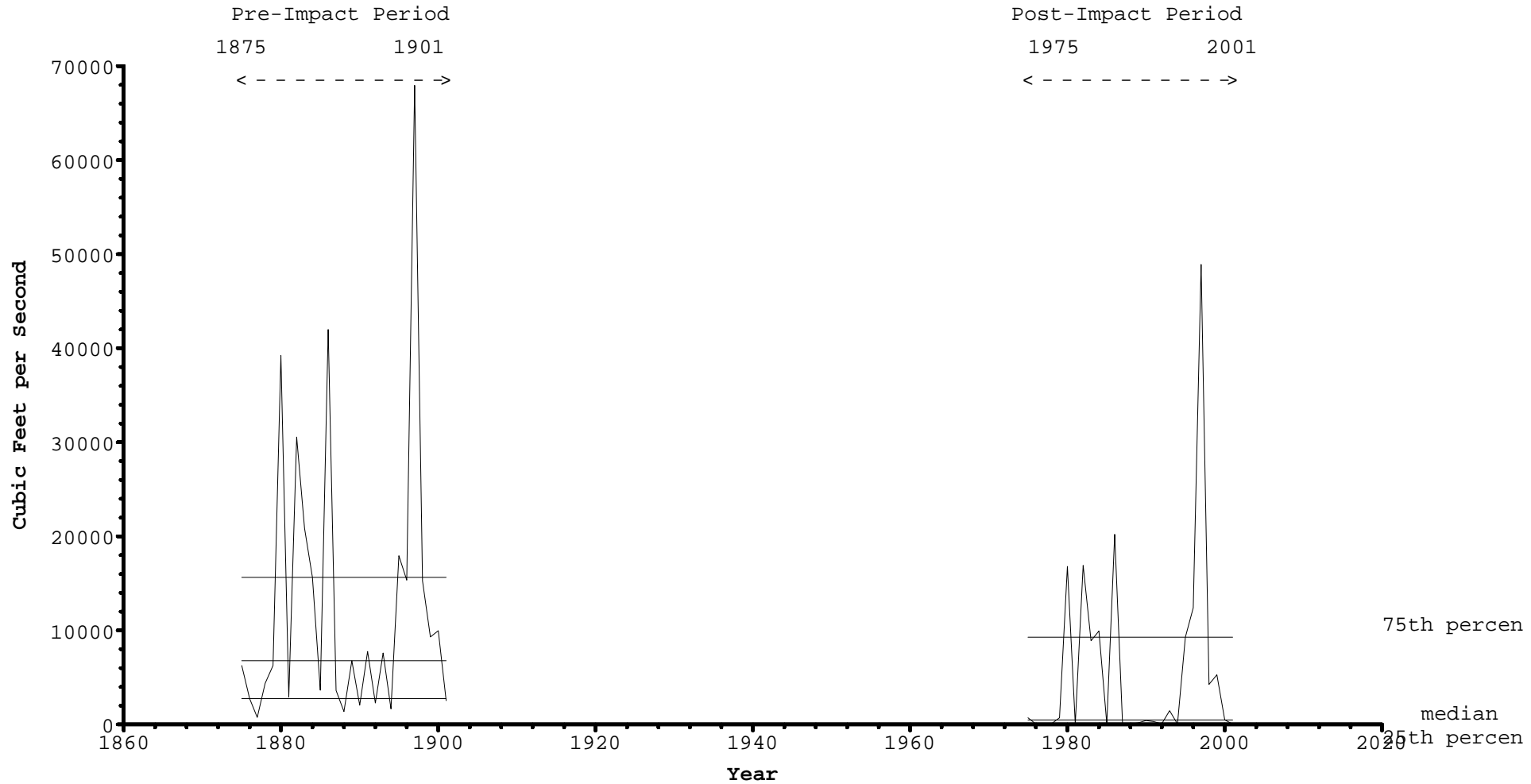




Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

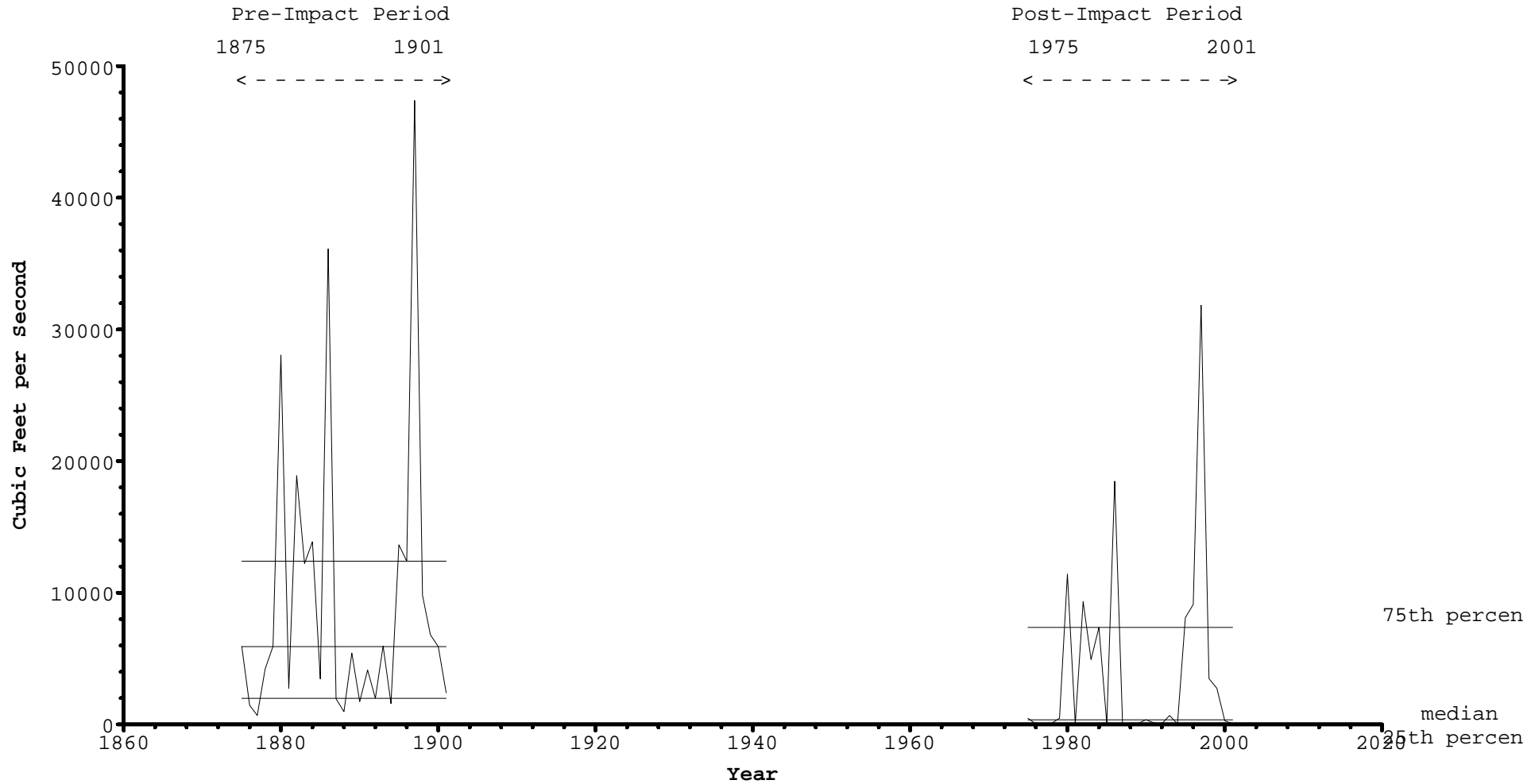
1-day maximum streamflow



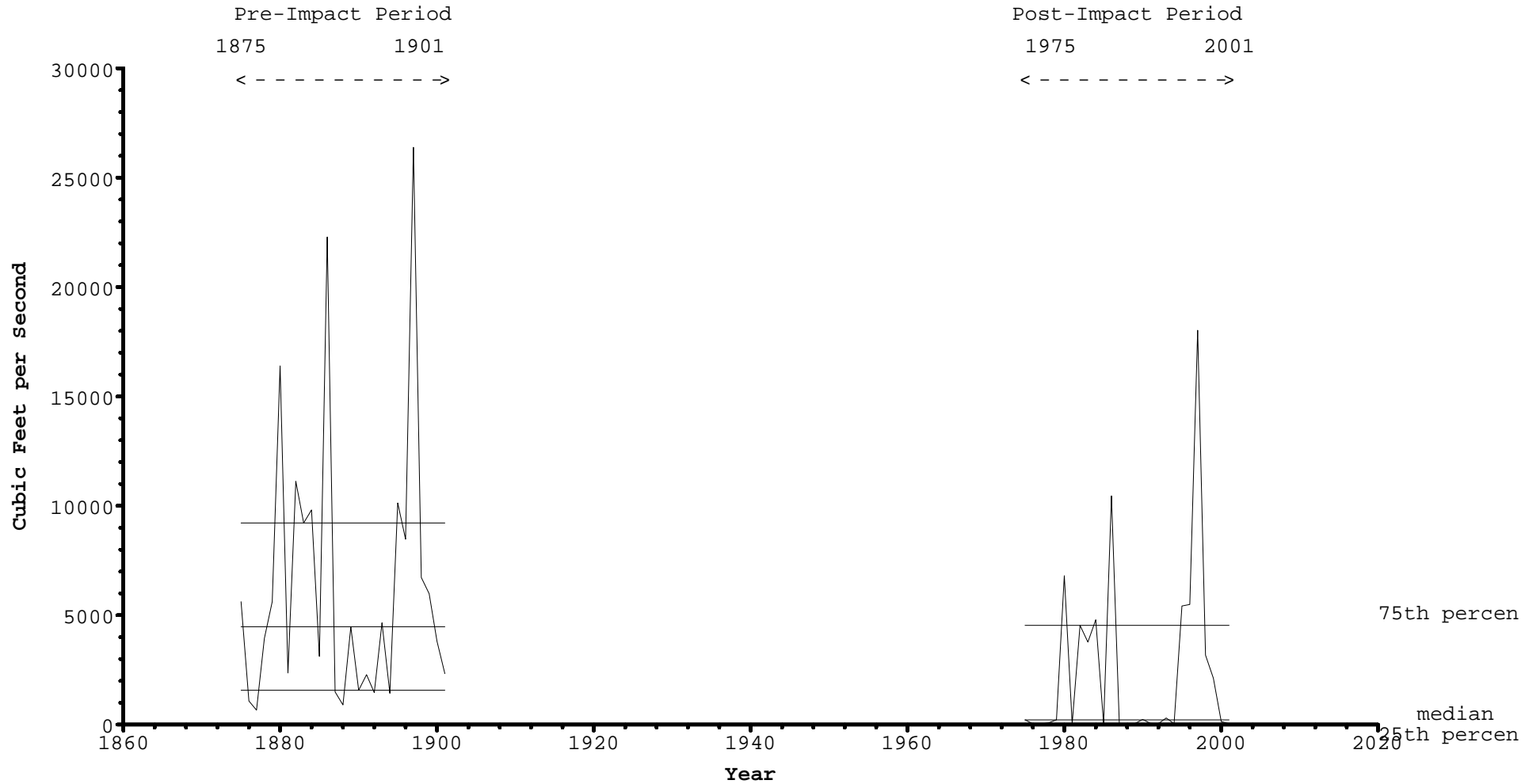
Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

3-day maximum streamflow



Standard IHA  
**A-4435 South Fork American River Near Camino (Unregulated), April 2004**  
7-day maximum streamflow

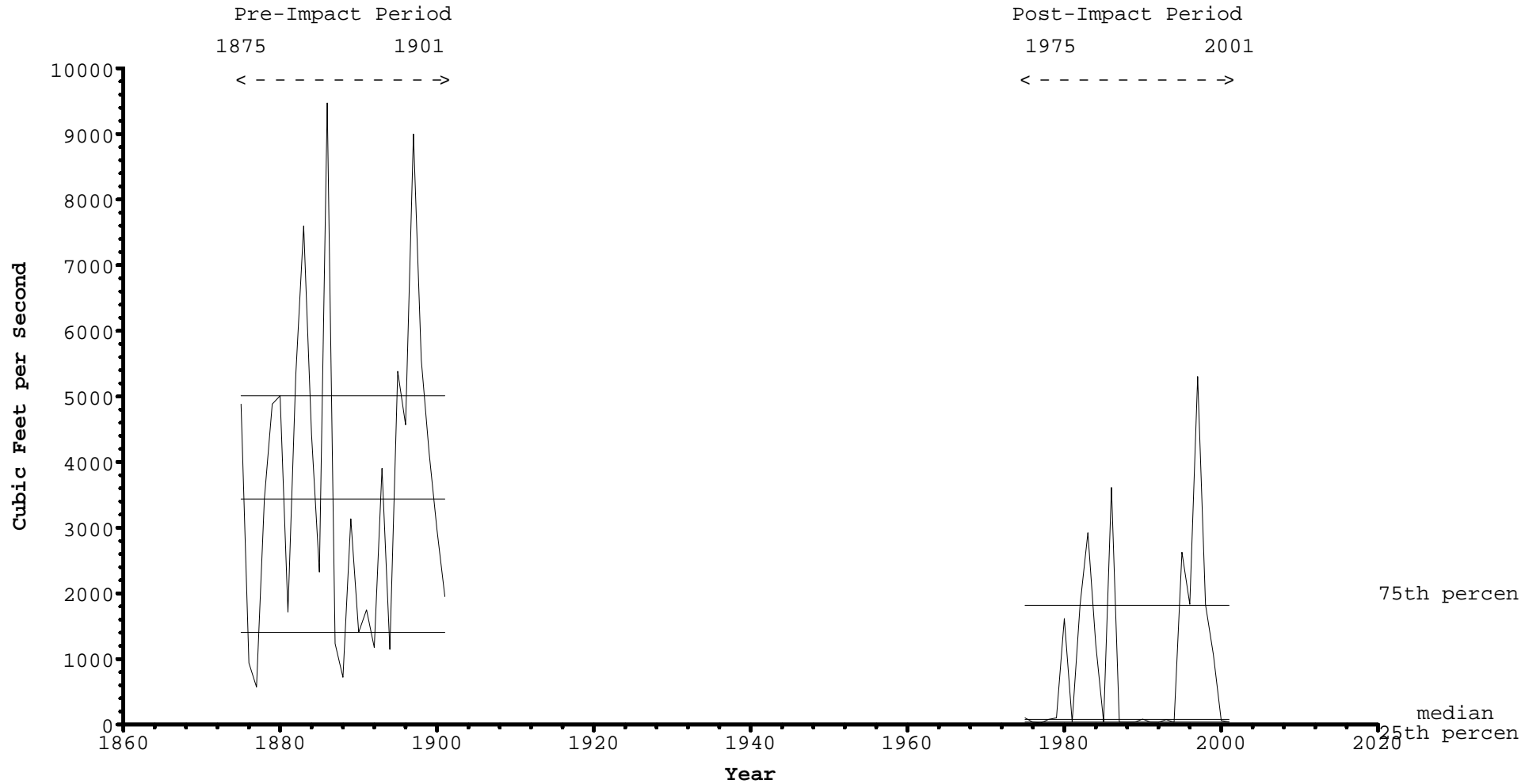


File(s) Used: P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.ann, P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.baw

Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

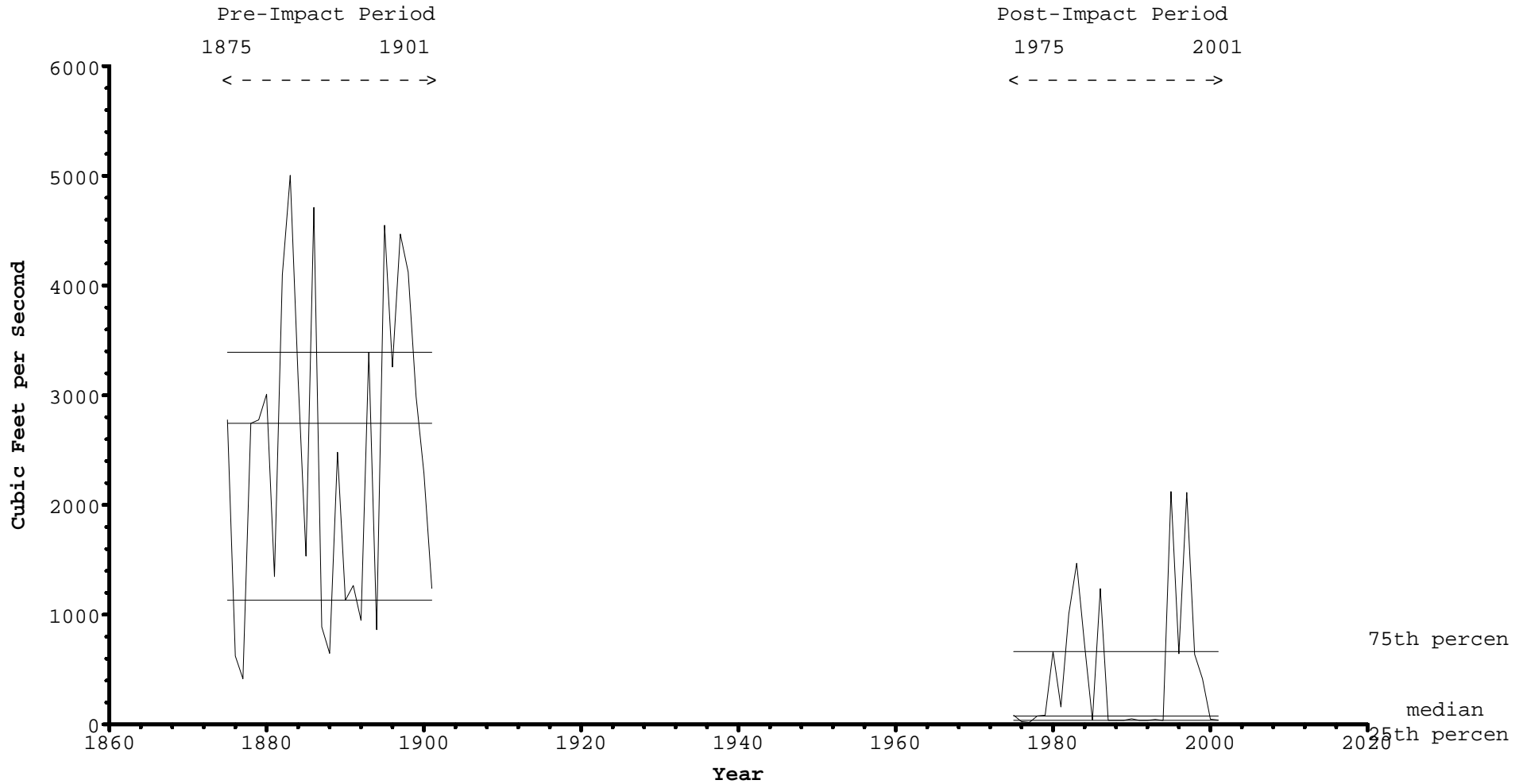
30-day maximum streamflow



Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

90-day maximum streamflow

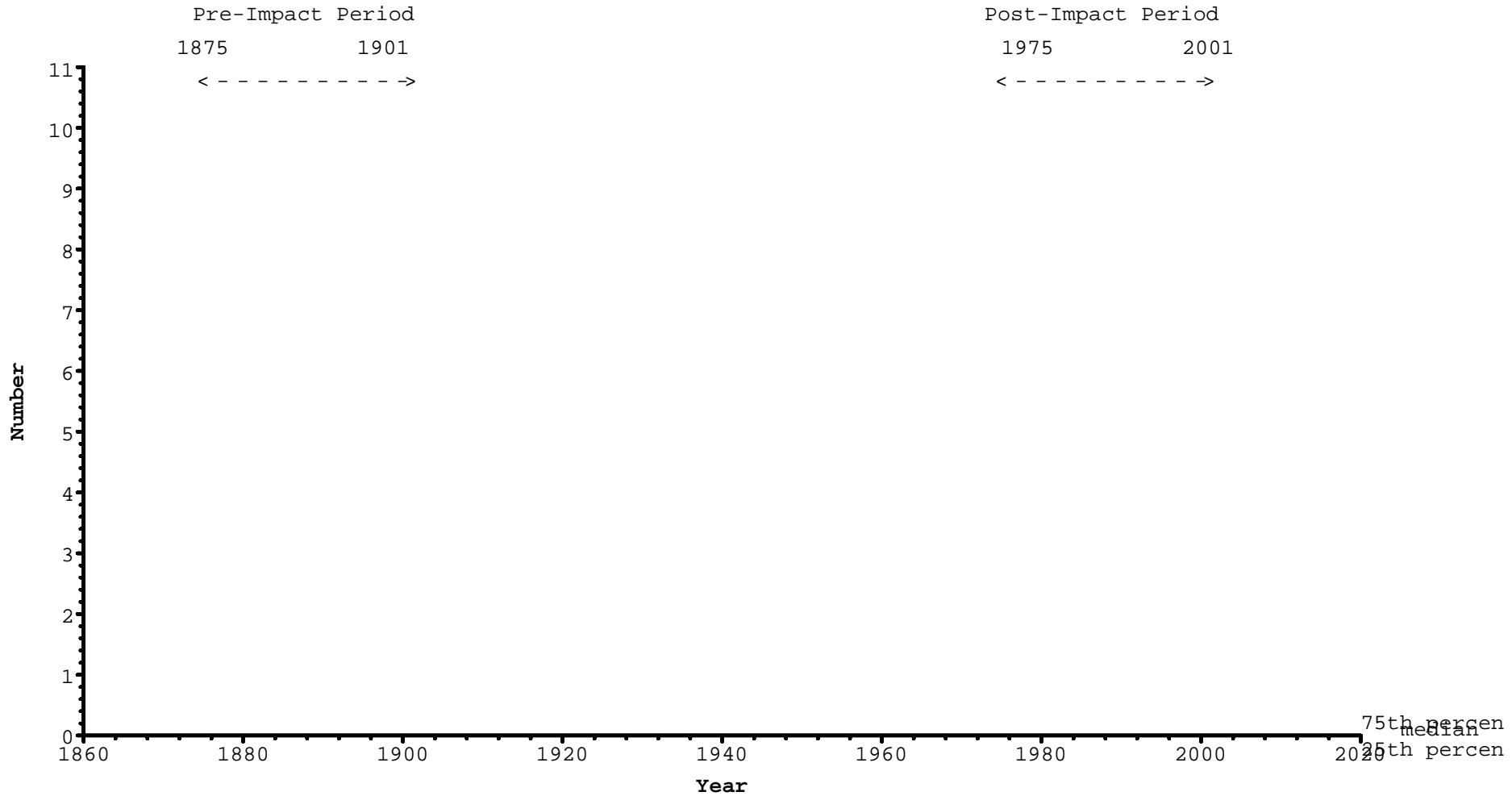


File(s) Used: P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.ann, P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.baw

Standard IHA

A-4435 South Fork American River Near Camino (Unregulated), April 2004

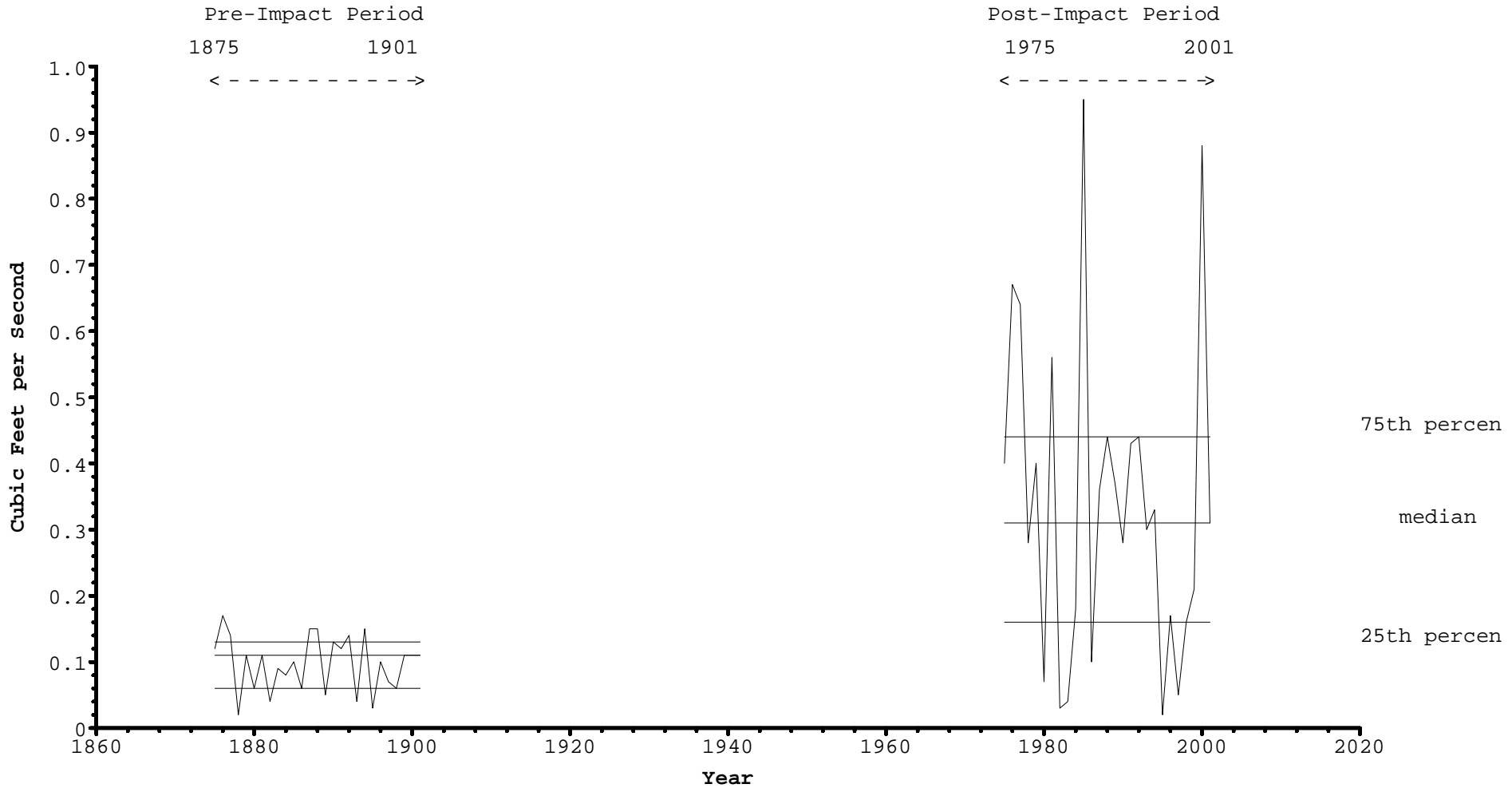
Zero streamflow days



Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

Base Flow

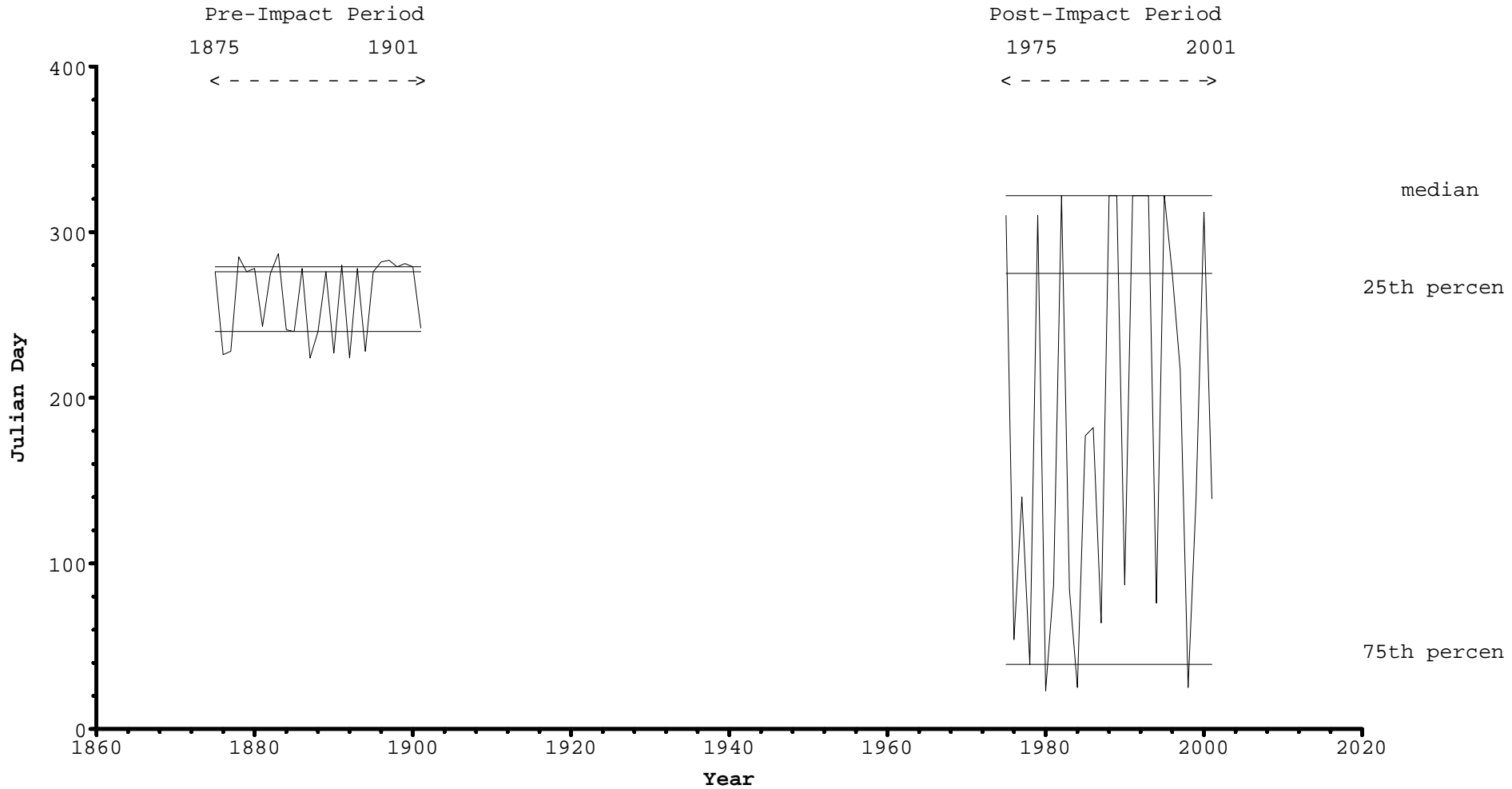


File(s) Used: P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.ann, P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.baw

Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

Date of minimum streamflow

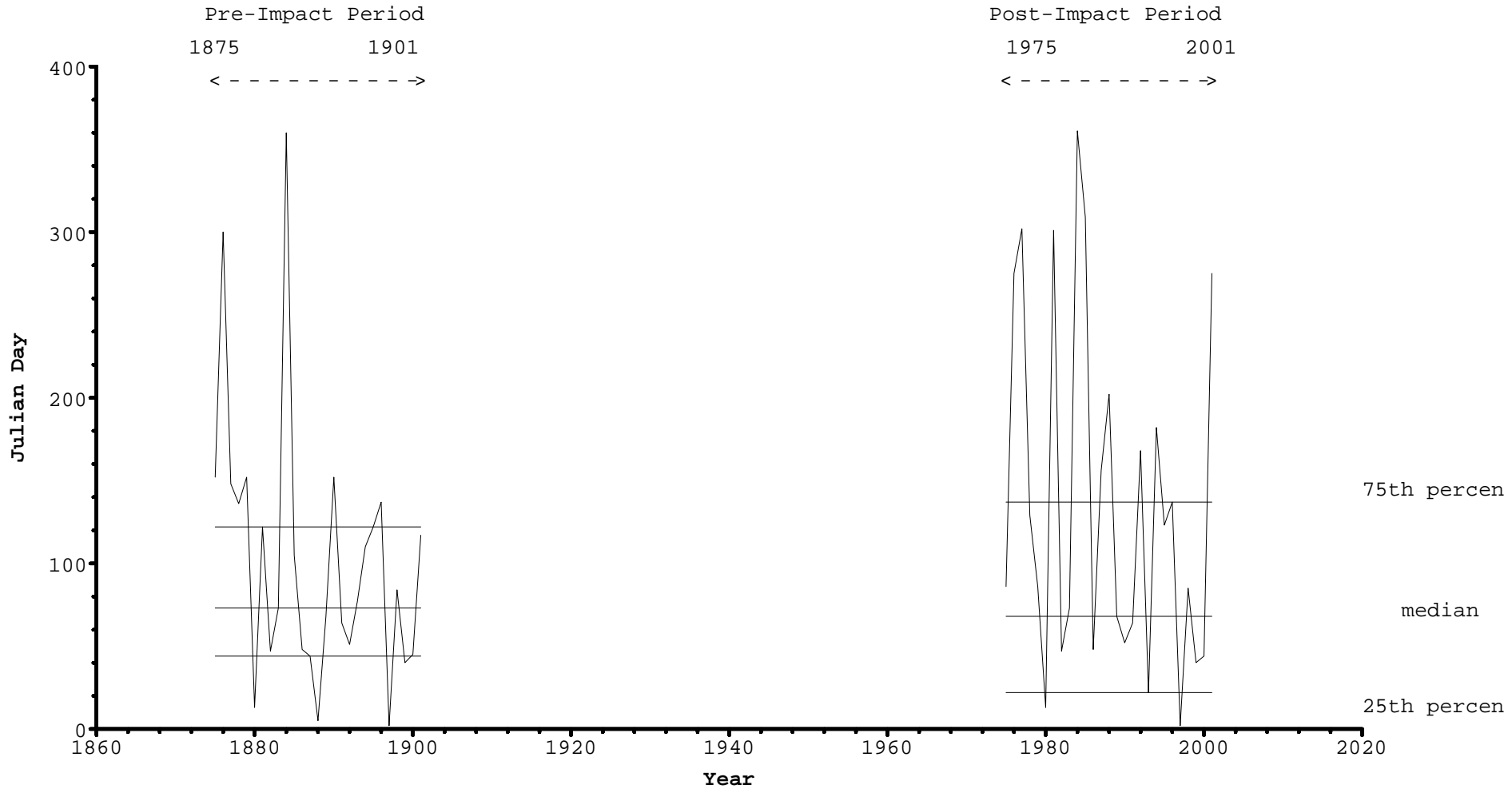




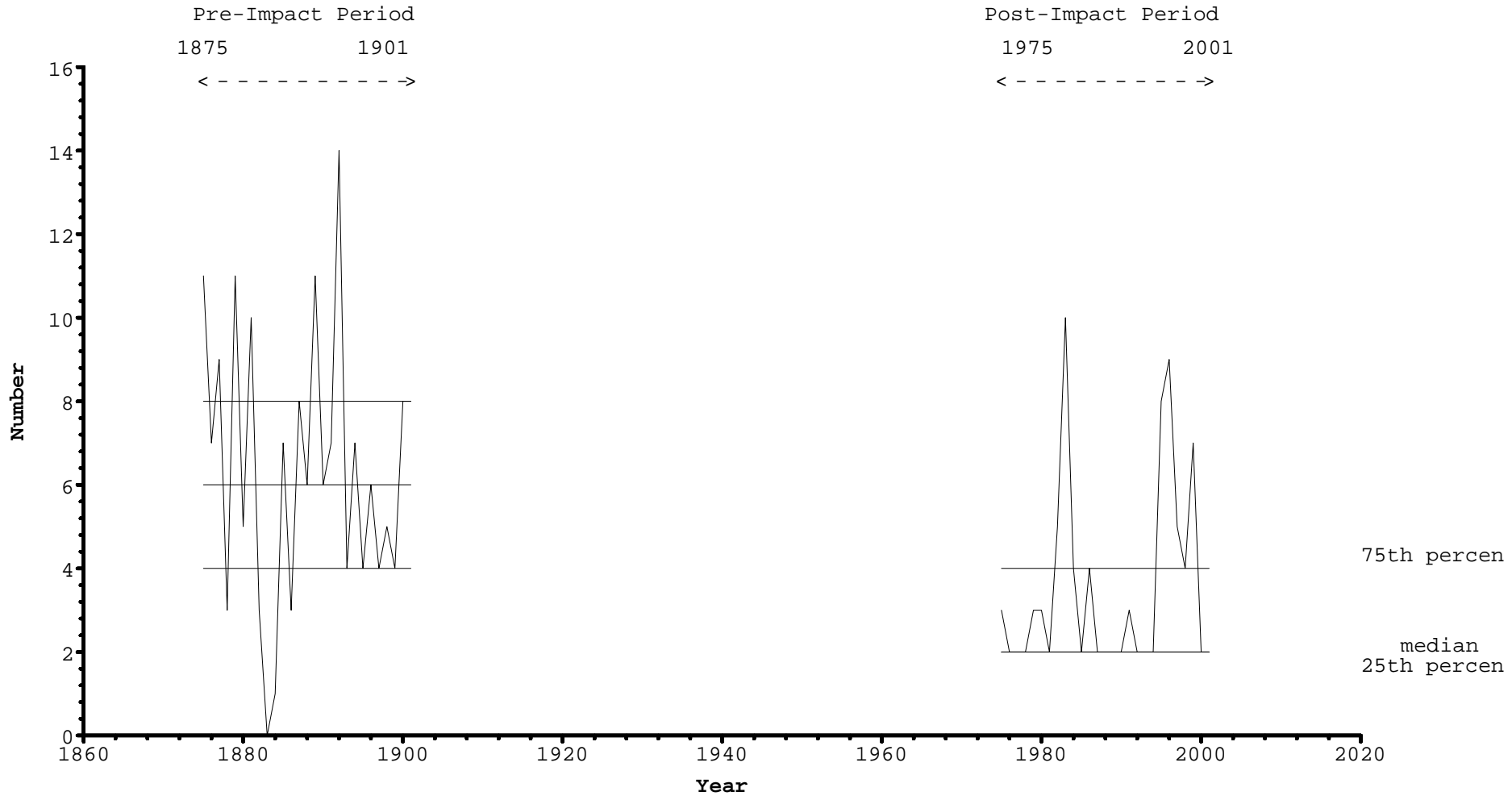
Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

Date of maximum streamflow

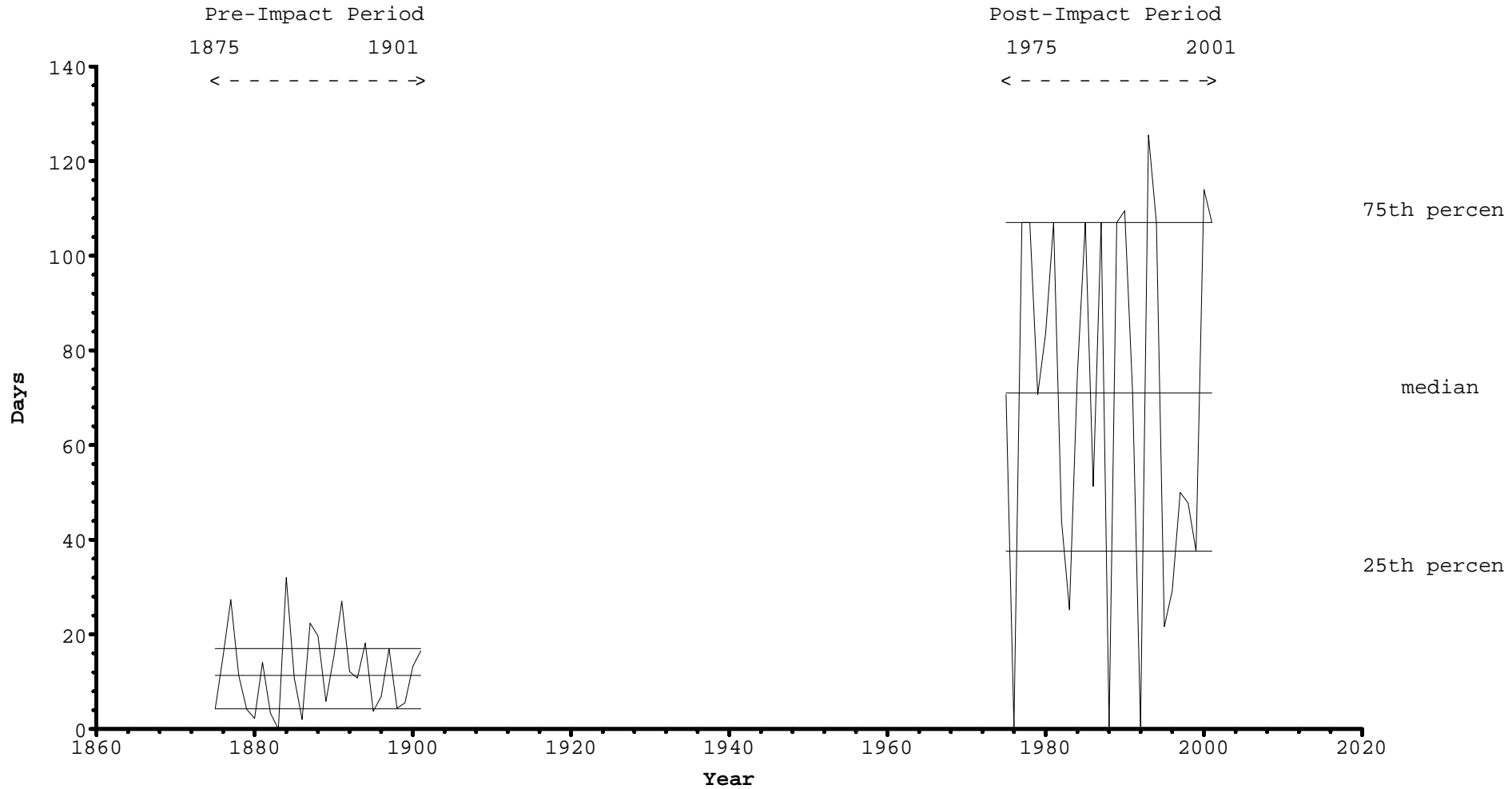


Standard IHA  
A-4435 South Fork American River Near Camino (Unregulated), April 2004  
Low Pulse Count



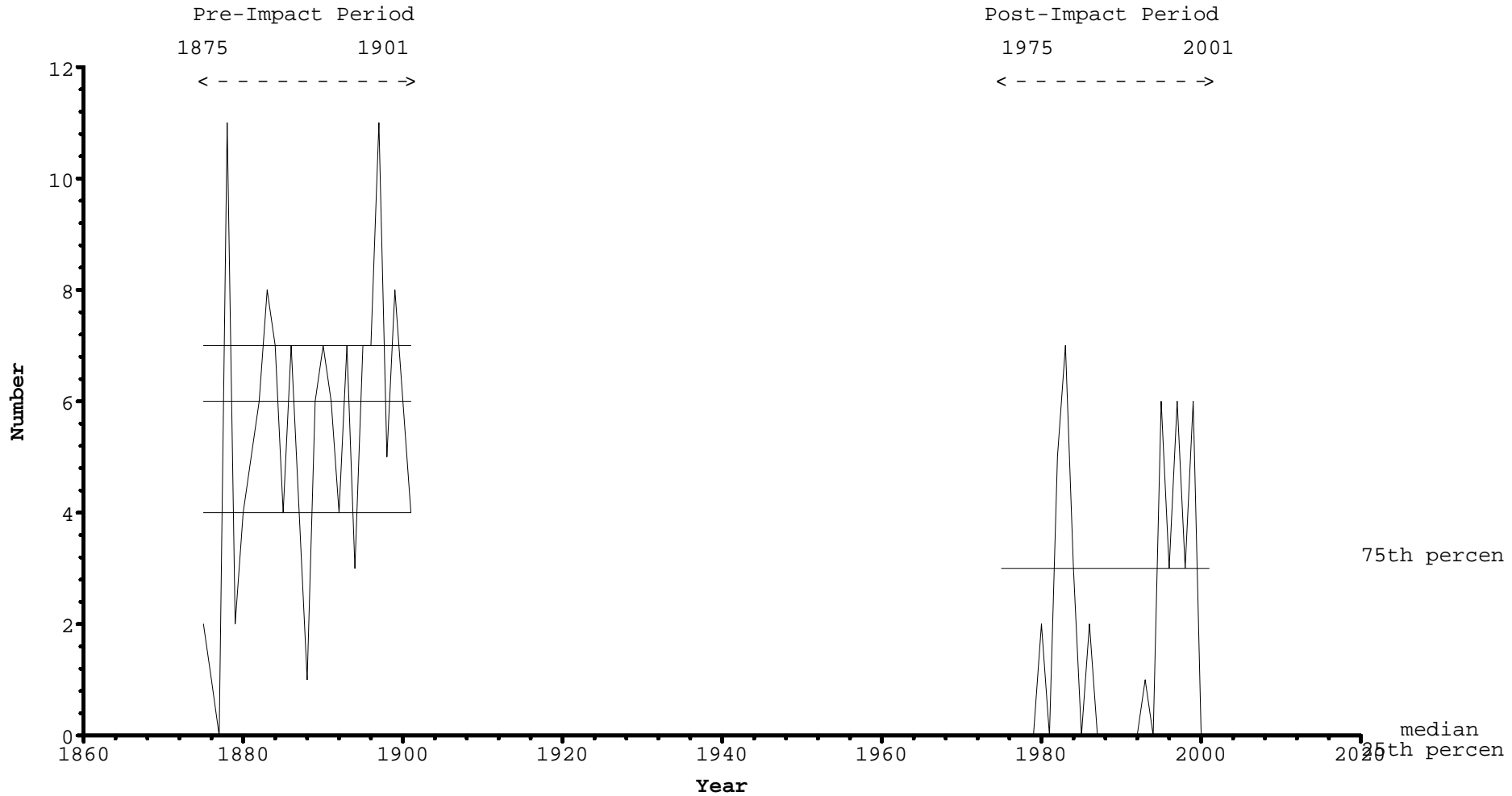
File(s) Used: P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.ann, P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.baw

Standard IHA  
A-4435 South Fork American River Near Camino (Unregulated), April 2004  
Low Pulse Duration

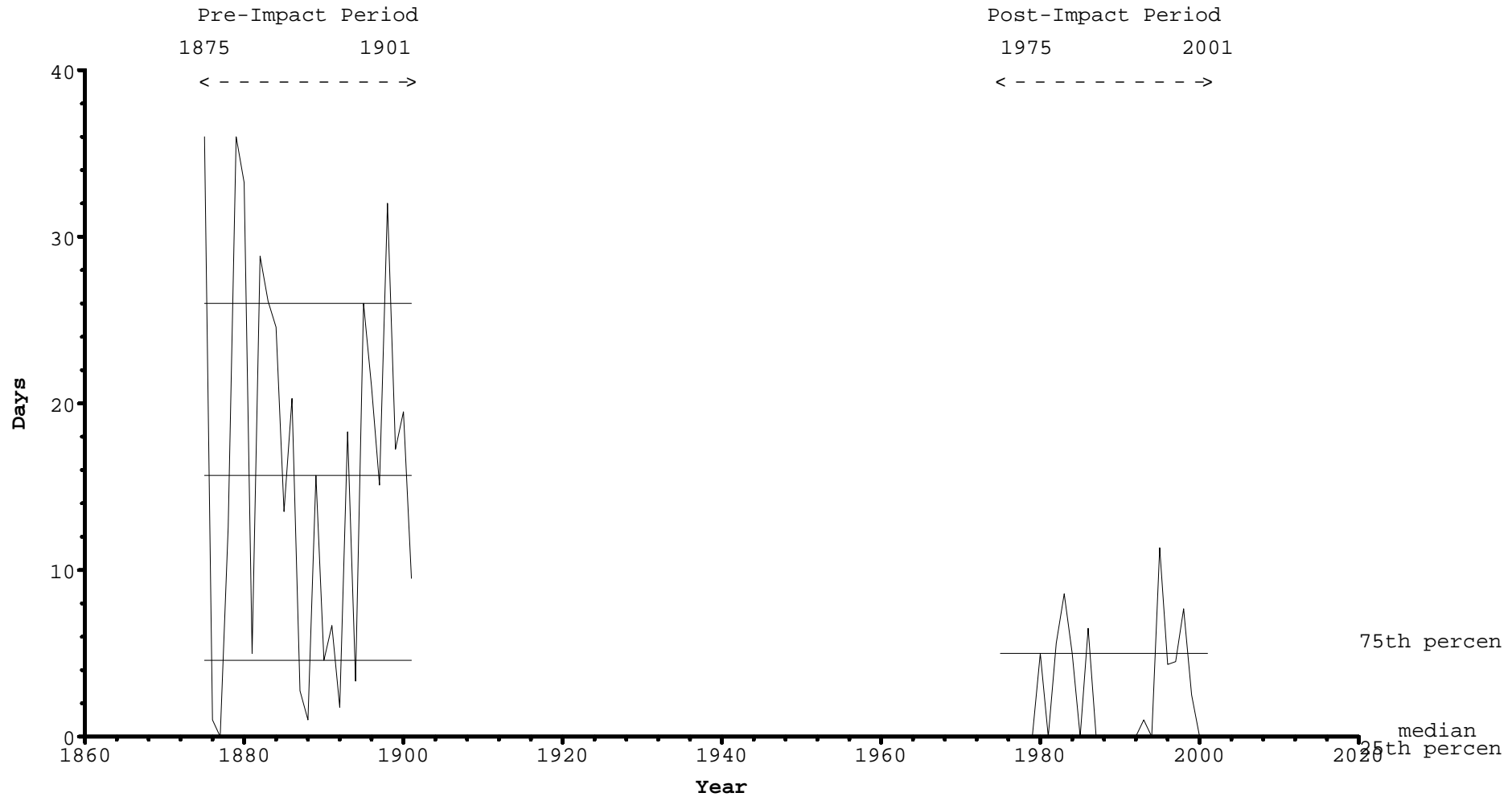


File(s) Used: P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.ann, P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.baw

Standard IHA  
A-4435 South Fork American River Near Camino (Unregulated), April 2004  
High Pulse Count



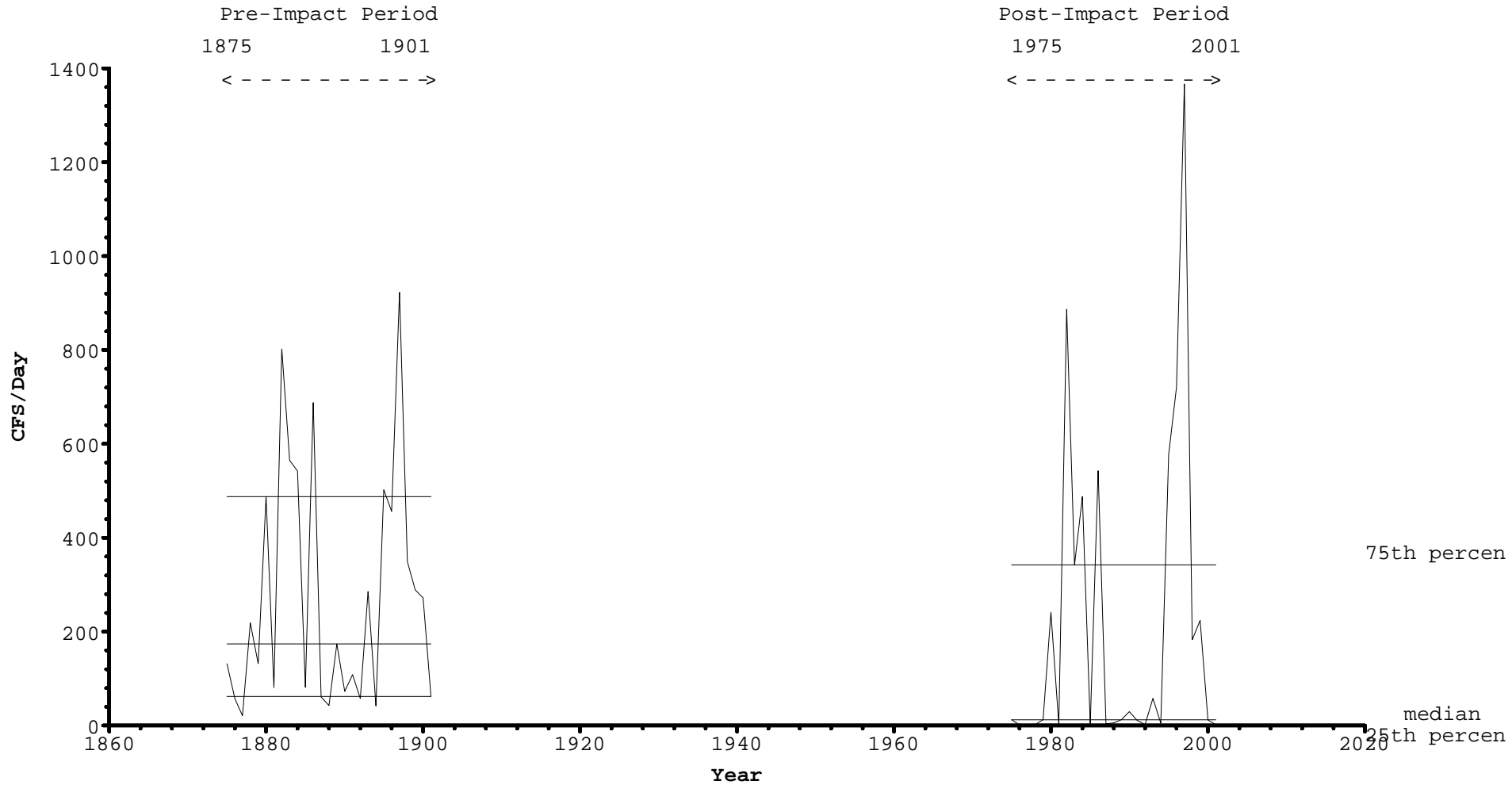
Standard IHA  
A-4435 South Fork American River Near Camino (Unregulated), April 2004  
High Pulse Duration



File(s) Used: P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.ann, P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.baw

Standard IHA

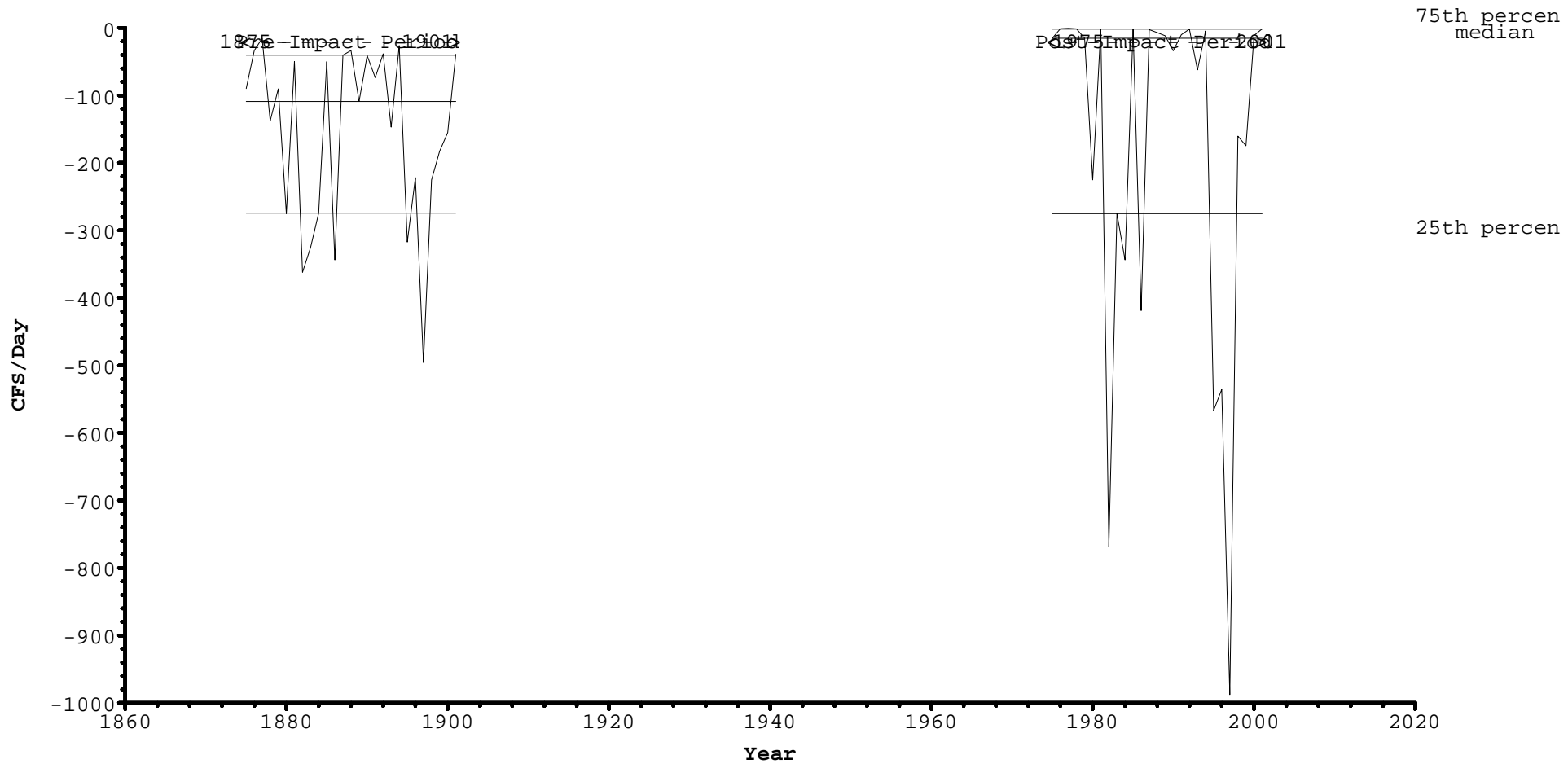
A-4435 South Fork American River Near Camino (Unregulated), April 2004  
Rise Rate



Standard IHA

# A-4435 South Fork American River Near Camino (Unregulated), April 2004

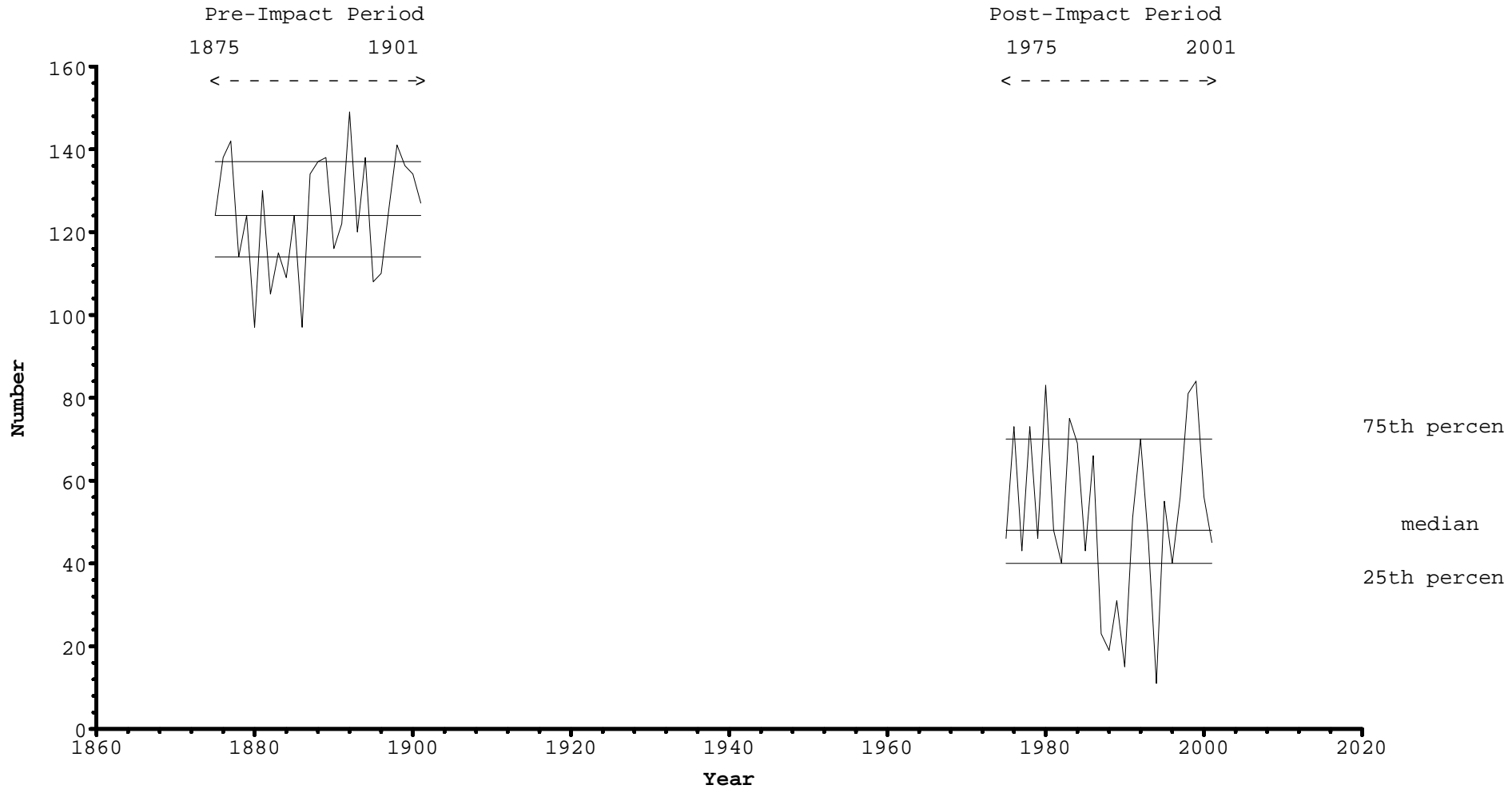
Fall Rate



Standard IHA

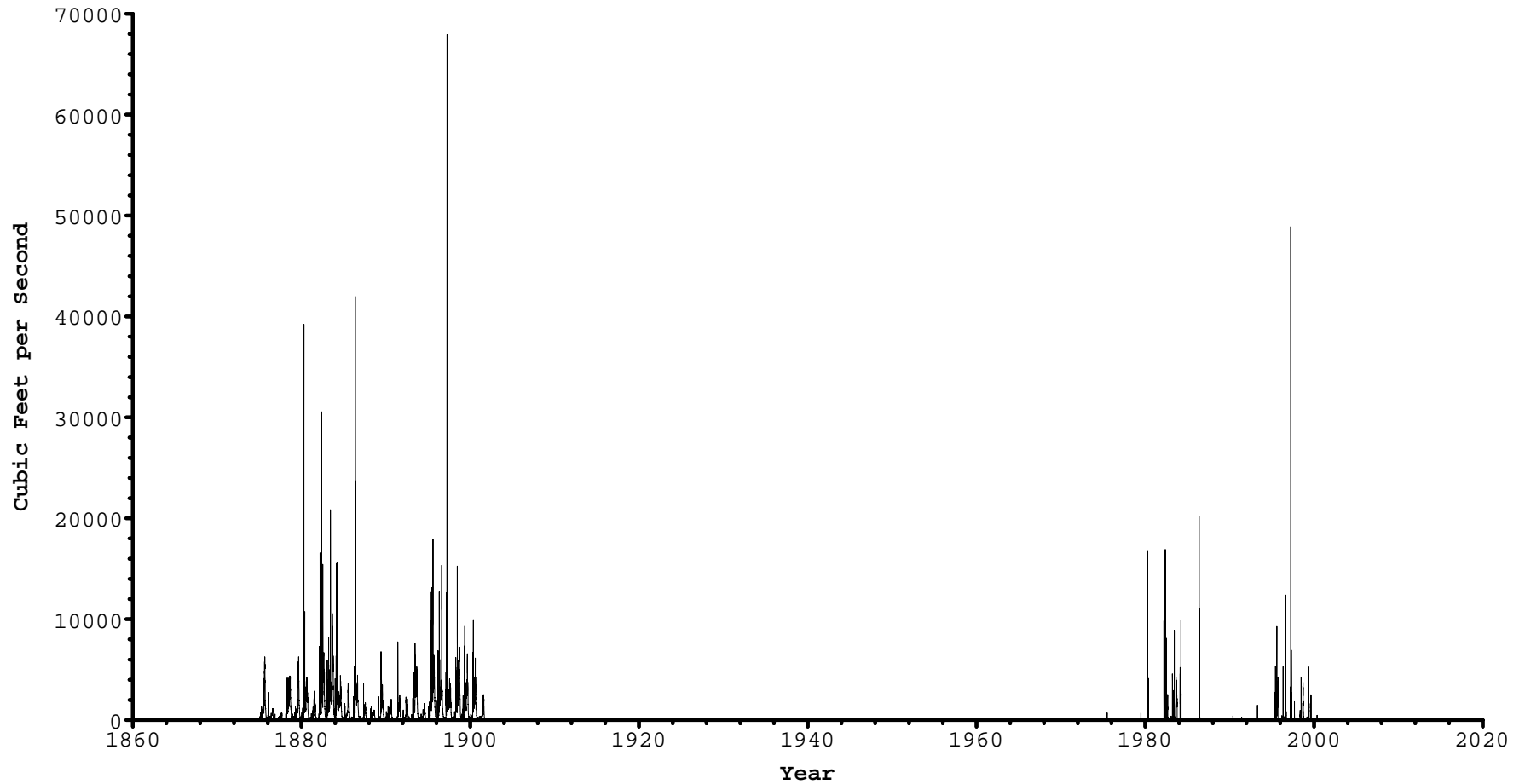
A-4435 South Fork American River Near Camino (Unregulated), April 2004

Reversals





### A-4435 South Fork American River Near Camino (Unregulated), April 2004



File(s) Used: P:\Framatome-IHA\IHA Apr04\1-GageA-Unreg\GA-U.dat

**(2) Gage A - South Fork American River at Slab Creek Reservoir (Natural) versus 4435 South Fork American River Near Camino (Regulated)**

**Errors**

**No Errors**

(2) Gage A - South Fork American River at Slab Creek Reservoir (Natural) versus 4435 South Fork American River Near Camino (Regulated)

IHA Annual Summary Statistics

Year	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
1875	113.7	179.9	231.9	356.5	547.0	1036.2	1014.1	4106.7	3532.3	742.0	193.7	103.9	76.2	78.2	80.1	101.1	173.8
1876	383.2	394.6	286.7	254.4	283.3	472.7	725.5	985.7	243.7	83.1	127.9	76.4	50.1	55.7	60.6	74.7	73.4
1877	74.4	75.9	73.4	131.7	157.3	185.0	489.7	620.3	435.7	61.3	17.2	23.3	11.4	12.3	14.2	15.8	21.0
1878	24.1	100.0	644.8	1426.9	896.1	1971.8	2204.5	3427.3	2802.6	736.0	188.1	221.7	18.6	19.5	20.1	23.7	162.4
1879	115.1	179.9	231.9	356.5	547.0	1036.2	1014.1	4106.7	3532.3	742.0	193.7	103.9	76.2	78.2	70.8	88.1	153.2
1880	171.4	332.3	364.9	4878.0	2679.7	1367.0	2225.1	3055.3	2285.1	1023.0	191.7	110.4	64.8	67.5	70.5	87.4	106.7
1881	88.8	123.7	218.0	246.2	532.9	760.5	1619.0	1543.6	467.9	101.2	54.3	50.3	36.2	38.6	43.4	48.5	62.7
1882	133.8	1765.7	2427.3	1215.4	4024.6	2345.5	4109.4	5189.3	2907.0	949.1	290.2	396.0	53.8	61.1	82.1	130.8	330.6
1883	928.0	955.5	1720.8	1350.9	2358.3	3996.7	2337.5	5077.7	6689.4	3041.8	778.2	368.0	211.7	213.8	215.2	264.2	443.8
1884	302.2	3532.6	3963.8	1756.2	1215.2	1642.4	1657.0	3187.6	1740.3	461.9	148.1	106.2	77.2	82.7	101.3	106.2	144.0
1885	186.8	715.6	403.0	335.5	465.1	683.1	2347.2	1874.8	612.5	130.1	80.1	118.9	64.6	66.7	69.1	78.2	102.1
1886	130.3	252.5	584.6	1317.9	7494.2	4175.1	2387.4	2885.9	1844.7	422.3	139.8	141.8	84.1	85.7	92.7	103.6	135.6
1887	160.0	120.5	121.1	172.3	477.1	687.0	1335.3	1050.4	274.0	81.7	47.8	47.6	41.7	42.5	42.7	44.3	51.6
1888	69.1	106.0	274.4	387.8	382.3	633.2	848.0	779.4	389.6	77.0	45.0	46.6	33.5	33.7	39.1	39.1	45.7
1889	46.5	250.6	225.7	216.8	402.1	2856.5	2807.5	2098.9	1202.8	219.0	83.9	118.8	35.9	36.1	37.5	46.3	99.4
1890	190.8	231.7	205.0	377.4	342.1	947.3	1632.3	1130.2	715.2	146.3	63.3	54.6	40.6	42.8	44.4	51.6	58.2
1891	58.5	75.6	84.4	95.4	149.7	912.1	1181.6	1849.8	1202.9	247.6	90.6	59.9	44.5	45.0	50.7	72.4	72.4
1892	111.4	180.7	152.0	166.1	669.3	786.5	1406.6	719.1	233.8	139.0	50.6	32.4	28.5	28.8	29.4	32.4	43.9
1893	78.3	107.1	373.1	1238.3	988.6	2710.2	2808.0	4131.4	2542.0	726.7	219.6	107.2	38.0	38.5	39.0	72.0	110.2
1894	110.7	119.6	197.6	207.0	307.4	721.7	1071.1	1125.0	325.1	82.1	47.5	49.6	38.9	40.6	42.0	44.9	51.3
1895	58.8	237.9	412.4	2509.4	1350.3	3895.7	3355.8	5326.6	4964.5	2626.1	594.7	216.5	37.8	41.1	47.7	58.3	162.2
1896	125.0	161.6	776.3	1067.4	3158.3	2357.3	2935.8	4501.4	1851.9	534.4	180.8	126.5	108.8	110.2	103.1	110.2	127.4
1897	124.3	797.4	3190.7	8067.6	1717.4	1767.3	2331.6	2749.3	1350.1	319.7	135.9	99.6	83.9	86.0	88.8	95.2	112.5
1898	120.1	205.2	265.3	1513.9	1775.7	2581.0	2559.0	3669.1	5791.1	2301.6	363.9	245.1	82.7	84.7	90.2	119.8	195.8
1899	169.3	393.9	550.3	1273.3	2415.9	1699.0	2172.3	4267.8	2912.8	609.3	230.1	138.4	113.7	110.0	101.2	100.4	137.5
1900	116.4	189.4	171.8	1046.6	1864.0	1560.4	2449.5	3148.6	1156.6	230.4	109.0	100.0	77.3	68.6	65.1	80.6	105.2
1901	122.2	165.7	209.9	199.0	309.5	931.6	1335.5	1851.2	253.4	82.6	51.7	57.8	38.6	38.8	39.7	39.3	27.0
1975	38.2	21.6	18.8	18.3	19.4	63.4	68.4	67.4	83.6	36.9	36.0	36.4	17.0	17.0	17.0	18.0	18.8
1976	36.1	19.5	19.3	19.7	18.7	15.7	24.9	24.4	26.4	24.9	23.5	24.3	15.0	15.0	15.4	15.7	18.0
1977	24.7	15.8	15.0	16.0	15.5	11.4	10.9	9.7	10.0	9.9	10.4	10.1	7.1	8.0	8.6	9.6	9.8
1978	10.0	10.3	10.7	10.3	14.3	21.7	75.1	74.8	78.5	36.6	35.0	35.1	9.2	9.4	9.5	10.0	10.3
1979	38.1	21.6	18.8	18.3	19.4	63.4	68.4	67.4	83.6	36.9	36.0	36.4	17.0	17.0	17.0	18.0	18.8
1980	29.8	16.4	16.3	1563.5	342.4	28.3	71.6	83.9	79.8	28.6	45.1	48.2	11.0	12.3	13.0	16.1	19.0
1981	37.5	21.3	21.0	20.5	20.9	13.8	24.7	25.7	19.0	19.0	19.0	19.0	12.0	12.0	12.3	13.6	16.3
1982	19.0	15.3	423.1	12.0	1189.5	26.6	1164.5	1415.0	77.3	38.6	39.0	39.0	5.8	5.8	9.8	11.0	38.2
1983	47.5	41.4	336.9	117.4	524.1	666.1	49.0	1243.9	2577.0	526.5	41.0	42.0	17.0	17.7	18.4	37.9	39.6
1984	38.2	917.6	1111.5	112.9	37.5	38.2	37.8	38.5	38.0	39.1	38.6	39.1	33.0	35.0	36.9	37.1	37.7
1985	38.7	40.0	37.5	37.0	38.0	38.0	38.5	38.9	37.3	38.1	37.5	37.2	36.0	36.0	36.3	37.0	37.2
1986	37.2	41.8	36.9	39.1	2709.3	1089.7	51.2	37.4	39.3	39.2	38.6	37.3	26.0	32.0	33.1	36.8	37.1
1987	37.3	37.3	37.0	37.2	37.1	12.7	12.2	11.7	36.8	36.0	36.0	36.0	11.0	11.0	11.0	11.3	11.8
1988	36.0	23.6	10.0	10.0	10.0	14.2	10.0	10.4	36.0	36.6	36.5	36.3	10.0	10.0	10.0	10.0	10.0
1989	36.0	23.3	10.0	10.3	10.6	17.6	33.6	37.8	36.0	36.0	36.0	36.0	10.0	10.0	10.0	10.0	10.3
1990	36.1	36.0	36.0	36.0	86.4	31.3	12.2	10.4	36.0	36.0	36.0	36.0	10.0	10.0	10.0	10.0	17.6
1991	36.0	23.4	10.0	10.1	10.2	20.9	10.7	10.7	37.3	36.8	36.8	37.1	10.0	10.0	10.0	10.0	10.0
1992	36.3	23.5	11.2	11.0	11.0	10.9	11.0	11.5	36.7	36.4	36.4	36.8	10.0	10.0	10.0	10.8	10.9
1993	36.8	23.8	10.0	74.2	10.0	30.1	36.3	36.1	36.1	36.0	36.0	36.0	10.0	10.0	10.0	10.0	17.3
1994	35.9	36.0	36.3	36.0	36.0	22.1	10.0	10.4	36.2	36.0	36.0	36.0	10.0	10.0	10.0	10.0	13.7
1995	36.0	23.4	10.0	252.7	10.0	542.7	321.3	2434.1	2619.0	936.5	36.1	36.0	10.0	10.0	10.0	10.0	20.3
1996	36.0	36.0	50.1	36.0	277.1	47.2	36.1	1658.0	173.0	36.7	36.3	36.7	36.0	36.0	36.0	36.0	36.4
1997	38.8	38.6	825.1	4836.1	524.2	37.9	40.1	38.5	129.3	37.9	29.9	36.0	29.0	29.0	29.0	29.0	34.4
1998	37.7	37.2	38.0	38.4	233.3	341.0	38.1	38.4	1730.9	140.9	39.9	40.6	36.0	36.3	36.7	37.0	37.6
1999	40.3	40.1	48.3	137.2	819.9	325.4	38.5	586.2	39.0	40.6	40.2	37.7	36.0	36.0	36.9	37.7	37.9
2000	37.7	38.6	39.3	39.4	63.8	38.9	39.0	39.4	39.5	39.7	39.2	39.4	36.0	36.0	36.1	37.2	38.5
2001	39.0	37.9	39.1	39.4	39.5	23.5	12.1	11.2	37.4	37.2	38.1	38.0	10.0	10.0	10.0	10.8	14.8

(2) Gage A - South Fork American River at Slab Creek Reservoir (Natural) versus 4435 South Fork American River Near Camino (Regulated)

IHA Annual Summary Statistics (Cont)

Year	1-day max	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	LRise rate	Fall rate	Reversals
1875	6689.2	6382.0	5990.9	5247.2	2962.3	0.0	0.1	268.0	152.0	4.0	14.3	3.0	23.3	142.7	-91.8	133.0
1876	3068.2	1619.1	1368.9	1157.8	736.5	0.0	0.2	210.0	300.0	5.0	18.0	2.0	1.0	61.6	-38.9	134.0
1877	953.9	914.7	882.7	749.3	526.1	0.0	0.1	259.0	152.0	10.0	22.5	0.0	0.0	23.8	-19.1	152.0
1878	4876.8	4622.6	4097.2	3714.1	2905.3	0.0	0.0	285.0	136.0	3.0	9.7	10.0	12.9	231.5	-142.3	120.0
1879	6689.2	6382.0	5990.9	5247.2	2962.3	0.0	0.1	268.0	152.0	4.0	13.0	3.0	23.3	143.7	-91.5	134.0
1880	39976.9	28643.2	16638.1	5062.1	3020.8	0.0	0.1	280.0	13.0	5.0	8.6	4.0	33.0	526.6	-274.2	101.0
1881	3369.7	3142.5	2706.3	1969.1	1368.2	0.0	0.1	268.0	115.0	4.0	26.8	6.0	5.8	83.9	-52.7	146.0
1882	30081.5	18665.7	10999.9	5452.3	4120.6	0.0	0.0	275.0	47.0	3.0	5.7	6.0	28.7	792.5	-373.4	113.0
1883	20147.1	11857.0	9560.4	7812.8	5111.6	0.0	0.1	291.0	73.0	0.0	0.0	7.0	29.4	579.7	-310.2	119.0
1884	15516.8	13558.5	9616.1	4345.5	3133.2	0.0	0.1	271.0	322.0	2.0	21.5	7.0	24.3	529.7	-262.2	109.0
1885	3986.7	3797.3	3400.7	2538.5	1697.6	0.0	0.1	239.0	106.0	4.0	20.5	2.0	28.0	86.5	-56.6	126.0
1886	40940.2	35452.2	21833.1	9357.4	4754.3	0.0	0.1	278.0	48.0	7.0	7.4	7.0	20.1	629.6	-361.7	103.0
1887	3552.5	2004.5	1841.4	1530.1	1039.3	0.0	0.1	245.0	44.0	7.0	24.1	7.0	3.4	65.3	-42.0	130.0
1888	1350.9	1064.0	1020.4	864.1	755.3	0.0	0.1	250.0	5.0	3.0	36.0	0.0	0.0	45.0	-35.4	149.0
1889	7025.3	5612.6	4615.6	3336.7	2639.3	0.0	0.0	276.0	68.0	6.0	11.3	6.0	16.0	169.5	-116.8	133.0
1890	2303.5	2014.6	1824.7	1632.3	1296.0	0.0	0.1	253.0	114.0	2.0	38.0	8.0	5.0	73.6	-45.5	113.0
1891	7976.5	4243.6	2489.7	1994.3	1425.4	0.0	0.1	279.0	64.0	4.0	19.0	8.0	5.5	120.0	-78.3	120.0
1892	2541.7	2018.1	1713.4	1406.6	1084.0	0.0	0.1	273.0	108.0	8.0	12.4	5.0	3.0	65.7	-42.6	149.0
1893	7543.9	5908.6	4777.7	4162.6	3533.0	0.0	0.0	278.0	77.0	3.0	21.7	7.0	17.9	273.3	-156.6	121.0
1894	1987.7	1902.7	1709.1	1347.2	983.5	0.0	0.1	251.0	110.0	4.0	34.3	3.0	4.7	46.8	-30.4	136.0
1895	18518.7	14001.7	10297.5	5525.9	4715.0	0.0	0.0	276.0	122.0	3.0	1.3	5.0	35.4	502.2	-328.7	108.0
1896	15636.7	12593.4	8620.7	4752.0	3365.5	0.0	0.1	274.0	137.0	5.0	11.0	7.0	20.9	468.9	-222.2	124.0
1897	67769.6	47261.6	26245.2	8917.7	4441.3	0.0	0.1	268.0	2.0	4.0	16.8	9.0	17.6	900.6	-512.7	125.0
1898	15418.6	9948.8	6918.8	5791.1	4282.9	0.0	0.1	279.0	84.0	2.0	14.5	5.0	31.2	353.0	-242.9	155.0
1899	9065.0	6967.4	6488.3	4472.3	3159.4	0.0	0.1	253.0	40.0	4.0	3.0	9.0	14.7	298.7	-187.5	144.0
1900	9780.4	5802.6	3953.1	3211.7	2444.9	0.0	0.1	274.0	45.0	9.0	8.1	7.0	16.1	278.7	-167.8	138.0
1901	3093.7	2911.3	2769.0	2262.8	1400.9	0.0	0.1	252.0	129.0	4.0	28.0	3.0	14.0	65.4	-48.0	140.0
1975	692.0	470.0	214.4	101.3	82.7	0.0	0.4	310.0	86.0	3.0	70.7	0.0	0.0	12.2	-15.5	46.0
1976	37.0	37.0	36.9	36.3	25.3	0.0	0.7	54.0	275.0	2.0	0.5	0.0	0.0	1.4	-1.6	73.0
1977	26.0	26.0	25.6	24.7	18.6	0.0	0.6	140.0	302.0	2.0	107.0	0.0	0.0	0.9	-0.9	43.0
1978	81.0	81.0	80.4	78.5	76.1	0.0	0.3	39.0	129.0	2.0	107.0	0.0	0.0	2.1	-1.7	73.0
1979	692.0	470.0	214.4	101.3	82.7	0.0	0.4	310.0	86.0	3.0	70.7	0.0	0.0	12.3	-15.5	46.0
1980	16800.0	11406.7	6802.9	1615.9	664.2	0.0	0.1	23.0	13.0	3.0	83.7	2.0	5.0	240.7	-225.6	83.0
1981	44.0	39.0	38.9	37.6	157.7	0.0	0.6	87.0	301.0	2.0	107.0	0.0	0.0	1.8	-1.9	48.0
1982	16900.0	9320.0	4534.4	1815.8	1005.9	0.0	0.0	322.0	47.0	5.0	44.0	5.0	5.6	886.5	-769.0	40.0
1983	8880.0	4923.3	3771.4	2923.7	1468.0	0.0	0.0	84.0	73.0	10.0	25.1	7.0	8.4	341.9	-275.4	75.0
1984	9920.0	7366.7	4790.0	1224.5	726.8	0.0	0.2	25.0	361.0	4.0	74.8	3.0	5.0	487.3	-344.0	69.0
1985	63.0	56.0	47.0	40.7	38.9	0.0	1.0	177.0	309.0	2.0	107.0	0.0	0.0	1.7	-1.8	43.0
1986	20200.0	18466.7	10450.0	3610.0	1235.9	0.0	0.1	182.0	48.0	4.0	51.3	2.0	6.5	542.5	-419.0	66.0
1987	52.0	43.3	39.3	37.4	37.2	0.0	0.4	64.0	156.0	2.0	107.0	0.0	0.0	3.4	-2.9	23.0
1988	50.0	41.3	38.3	37.0	36.5	0.0	0.4	322.0	202.0	2.0	0.5	0.0	0.0	5.5	-7.3	19.0
1989	157.0	84.3	44.1	38.3	36.8	0.0	0.4	322.0	68.0	3.0	71.0	0.0	0.0	12.4	-11.8	31.0
1990	406.0	350.0	234.7	83.0	51.7	0.0	0.3	87.0	52.0	2.0	109.5	0.0	0.0	29.5	-34.1	15.0
1991	297.0	118.0	56.3	37.4	37.1	0.0	0.4	322.0	64.0	3.0	71.0	0.0	0.0	10.7	-10.4	51.0
1992	50.0	43.7	39.3	36.9	36.8	0.0	0.4	322.0	168.0	2.0	0.5	0.0	0.0	2.1	-2.1	70.0
1993	1460.0	673.3	294.3	76.3	44.9	0.0	0.3	322.0	22.0	2.0	125.5	1.0	1.0	57.6	-62.4	45.0
1994	41.0	37.7	36.9	36.3	36.1	0.0	0.3	76.0	182.0	2.0	107.0	0.0	0.0	4.8	-4.8	11.0
1995	9270.0	8106.7	5415.7	2624.7	2121.1	0.0	0.0	322.0	123.0	9.0	19.1	6.0	11.2	576.8	-566.9	55.0
1996	12400.0	9110.0	5490.0	1830.5	644.1	0.0	0.2	275.0	137.0	9.0	29.1	2.0	5.5	720.8	-535.9	40.0
1997	48900.0	31833.3	18024.3	5299.2	2113.4	0.0	0.1	217.0	2.0	7.0	35.3	6.0	4.3	1366.3	-988.0	56.0
1998	4260.0	3470.0	3171.4	1825.3	638.4	0.0	0.2	25.0	85.0	4.0	47.3	4.0	5.0	182.6	-160.7	81.0
1999	5260.0	2738.0	2118.6	1064.5	414.7	0.0	0.2	139.0	40.0	6.0	43.5	5.0	2.8	223.7	-175.0	84.0
2000	469.0	275.0	140.3	62.5	47.2	0.0	0.9	312.0	44.0	2.0	114.0	0.0	0.0	11.8	-11.4	56.0
2001	40.0	40.0	40.0	39.7	39.4	0.0	0.3	139.0	275.0	2.0	107.0	0.0	0.0	1.7	-1.7	45.0

(2) Gage A - South Fork American River at Slab Creek Reservoir (Natural) versus 4435 South Fork American River Near Camino (Regulated)

Non-Parametric IHA Scorecard

(2) Gage A - 4435 South Fork American River Near Camino (Natural), April 2004

Pre-impact period: 1875-1901 (27 years)

Post-impact period: 1975-2001 (27 years)

Watershed area	1.00	
Mean annual flow	1049.88	144.84
Mean flow/area	1049.88	144.84
Annual C. V.	.99	.01
Flow predictability	.40	.53
Constancy/predictability	.43	.83
% of floods in 60d period	.43	.43
flood-free season	54.00	127.00

	MEDIANS		COEFF. of DISP.		DEVIATION FACTOR		SIGNIFICANCE COUNT	
	Pre	Post	Pre	Post	Medians	C.V.	Medians	C.V.
Parameter Group #1								
October	120.1	36.8	.76	.06	.69	.92	.10	.01
November	189.4	23.8	1.44	.72	.87	.50	.23	.59
December	274.4	36.0	1.38	.78	.87	.44	.23	.59
January	387.8	36.0	2.92	1.62	.91	.45	.12	.61
February	669.3	37.1	2.21	7.09	.94	2.20	.05	.03
March	1367.0	30.1	1.17	1.52	.98	.30	.16	.65
April	2172.3	37.8	.58	1.03	.98	.77	.32	.66
May	2885.9	38.4	1.03	1.65	.99	.60	.12	.28
June	1350.1	38.0	1.83	1.25	.97	.32	.17	.61
July	319.7	36.8	2.00	.08	.88	.96	.14	.14
August	135.9	36.3	1.03	.07	.73	.93	.00	.12
September	103.9	36.4	.81	.05	.65	.93	.00	.03
Parameter Group #2								
1-day minimum	50.1	11.0	.79	1.73	.78	1.19	.02	.03
3-day minimum	55.7	12.0	.79	1.83	.78	1.31	.02	.02
7-day minimum	60.6	12.3	.81	1.88	.80	1.32	.02	.02
30-day minimum	74.7	13.6	.75	1.97	.82	1.62	.01	.00
90-day minimum	106.7	18.8	.89	1.35	.82	.52	.01	.09
1-day maximum	7025.3	469.0	1.79	19.66	.93	10.01	.15	.00
3-day maximum	5802.6	350.0	1.82	20.92	.94	10.48	.15	.00
7-day maximum	4615.6	214.4	1.67	20.96	.95	11.54	.11	.00
30-day maximum	3714.1	78.5	.97	22.65	.98	22.27	.02	.00
90-day maximum	2905.3	76.1	.77	8.24	.97	9.70	.04	.00
Number of zero days	.0	.0	.00	.00	999999.00	999999.00	.00	.00
Base flow	.1	.3	.59	.91	3.22	.53	.00	.15
Parameter Group #3								
Date of minimum	271.0	322.0	.07	.36	.28	4.20	.01	.00
Date of maximum	77.0	68.0	.21	.31	.05	.47	.72	.08
Parameter Group #4								
Low pulse count	4.0	3.0	.50	.67	.25	.33	.35	.44
Low pulse duration	14.5	71.0	.96	1.01	3.90	.05	.00	.89
High pulse count	6.0	.0	.67	.00	1.00	1.00	.07	.10
High pulse duration	16.1	.0	1.19	.00	1.00	1.00	.03	.03
The low pulse threshold is	137.15							
The high pulse level is	1397.80							
Parameter Group #5								
Rise rate	169.5	12.3	2.58	27.72	.93	9.76	.27	.00
Fall rate	-116.8	-15.5	-1.85	-17.61	.87	8.50	.26	.00
Number of reversals	130.0	48.0	.16	.63	.63	2.87	.02	.00

**(2) Gage A - South Fork American River at Slab Creek Reservoir (Natural) versus 4435 South Fork American River Near Camino (Regulated)**

Variance Data, Box and Whisker Format

	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
<b>Pre-Impact Distribution</b>																	
1-day min	24.1	75.6	73.4	95.4	149.7	185.0	489.7	620.3	233.8	61.3	17.2	23.3	11.4	12.3	14.2	15.8	21.0
25 pctile	78.3	120.5	205.0	216.8	382.3	760.5	1181.6	1130.2	435.7	101.2	54.3	54.6	37.8	38.6	39.7	44.9	58.2
Median	120.1	189.4	274.4	387.8	669.3	1367.0	2172.3	2885.9	1350.1	319.7	135.9	103.9	50.1	55.7	60.6	74.7	106.7
75 pctile	169.3	393.9	584.6	1350.9	1864.0	2357.3	2449.5	4106.7	2907.0	742.0	193.7	138.4	77.3	82.7	88.8	101.1	153.2
1-day max	928.0	3532.6	3963.8	8067.6	7494.2	4175.1	4109.4	5326.6	6689.4	3041.8	778.2	396.0	211.7	213.8	215.2	264.2	443.8
<b>Post-Impact Distribution</b>																	
1-day min	10.0	10.3	10.0	10.0	10.0	10.9	10.0	9.7	10.0	9.9	10.4	10.1	5.8	5.8	8.6	9.6	9.8
25 pctile	36.0	21.6	11.2	16.0	14.3	17.6	12.2	11.5	36.1	36.0	36.0	36.0	10.0	10.0	10.0	10.0	11.8
Median	36.8	23.8	36.0	36.0	37.1	30.1	37.8	38.4	38.0	36.8	36.3	36.4	11.0	12.0	12.3	13.6	18.8
75 pctile	38.2	38.6	39.3	74.2	277.1	63.4	51.2	74.8	83.6	39.1	38.6	38.0	29.0	32.0	33.1	36.8	37.2
1-day max	47.5	917.6	1111.5	4836.1	2709.3	1089.7	1164.5	2434.1	2619.0	936.5	45.1	48.2	36.0	36.3	36.9	37.9	39.6

	1-day max	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	LRise rate	Fall rate	Reversals
<b>Pre-Impact Distribution</b>																
1-day min	953.9	914.7	882.7	749.3	526.1	0.0	0.0	210.0	2.0	0.0	0.0	0.0	0.0	23.8	-512.7	101.0
25 pctile	3093.7	2018.1	1841.4	1632.3	1296.0	0.0	0.1	253.0	44.0	3.0	8.6	3.0	5.0	65.7	-262.2	119.0
Median	7025.3	5802.6	4615.6	3714.1	2905.3	0.0	0.1	271.0	77.0	4.0	14.5	6.0	16.1	169.5	-116.8	130.0
75 pctile	15636.7	12593.4	9560.4	5247.2	3533.0	0.0	0.1	278.0	122.0	5.0	22.5	7.0	24.3	502.2	-45.5	140.0
1-day max	67769.6	47261.6	26245.2	9357.4	5111.6	0.0	0.2	291.0	322.0	10.0	38.0	10.0	35.4	900.6	-19.1	155.0
<b>Post-Impact Distribution</b>																
1-day min	26.0	26.0	25.6	24.7	18.6	0.0	0.0	23.0	2.0	2.0	0.5	0.0	0.0	0.9	-988.0	11.0
25 pctile	50.0	43.3	39.3	37.4	37.1	0.0	0.2	275.0	22.0	2.0	35.3	0.0	0.0	2.1	-275.4	40.0
Median	469.0	350.0	214.4	78.5	76.1	0.0	0.3	322.0	68.0	3.0	71.0	0.0	0.0	12.3	-15.5	48.0
75 pctile	9270.0	7366.7	4534.4	1815.8	664.2	0.0	0.4	39.0	137.0	4.0	107.0	3.0	5.0	341.9	-2.1	70.0
1-day max	48900.0	31833.3	18024.3	5299.2	2121.1	0.0	1.0	322.0	361.0	10.0	125.5	7.0	11.2	1366.3	-0.9	84.0

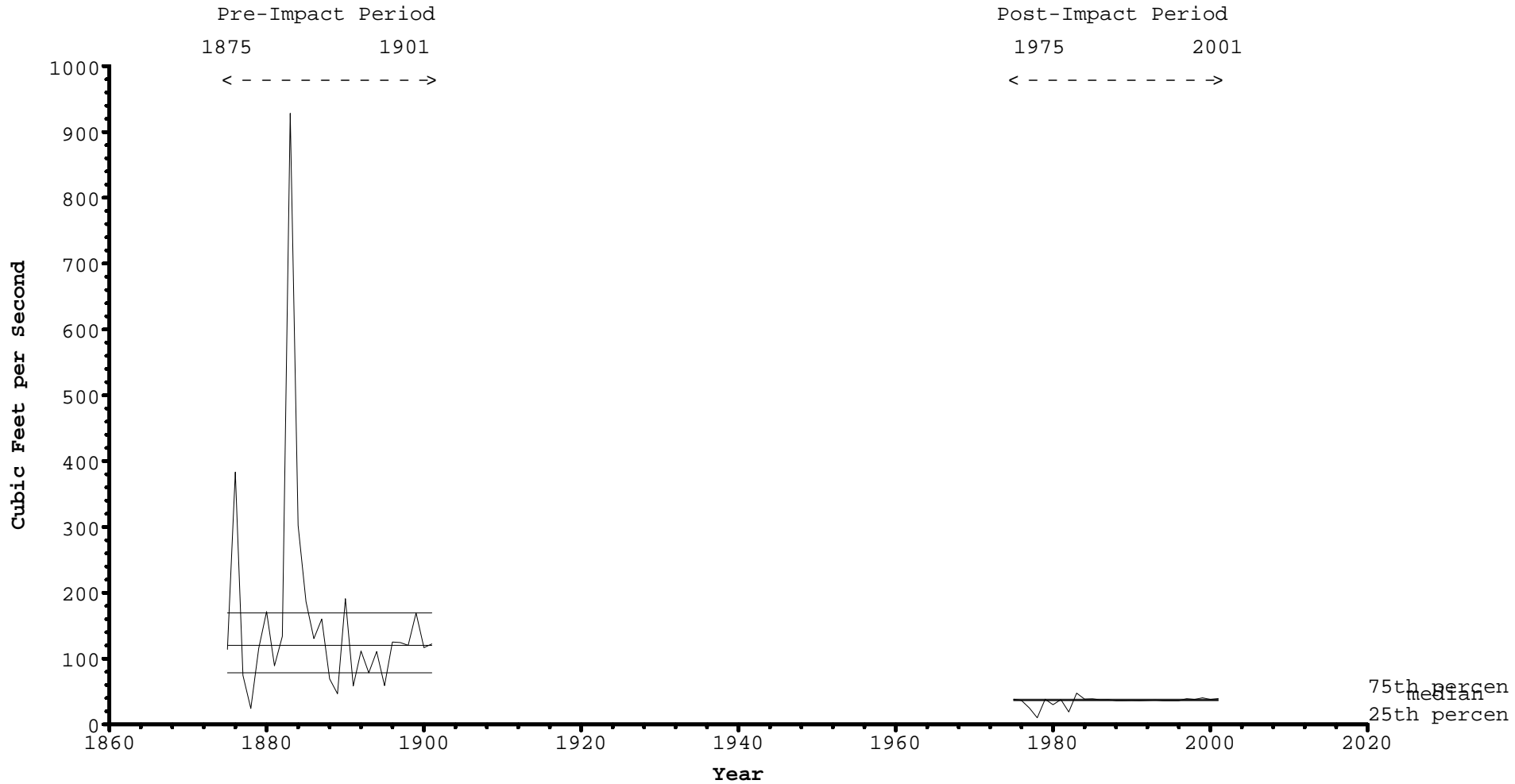
(2) Gage A - South Fork American River at Slab Creek Reservoir (Natural) versus 4435 South Fork American River Near Camino (Regulated)

IHA Percentile Data

(2) Gage A - 4435 South Fork American River Near Camino (Natural), April 2004  
 Pre-impact period: 1875-1901 (27 years) Post-impact period: 1975-2001 (27 years)

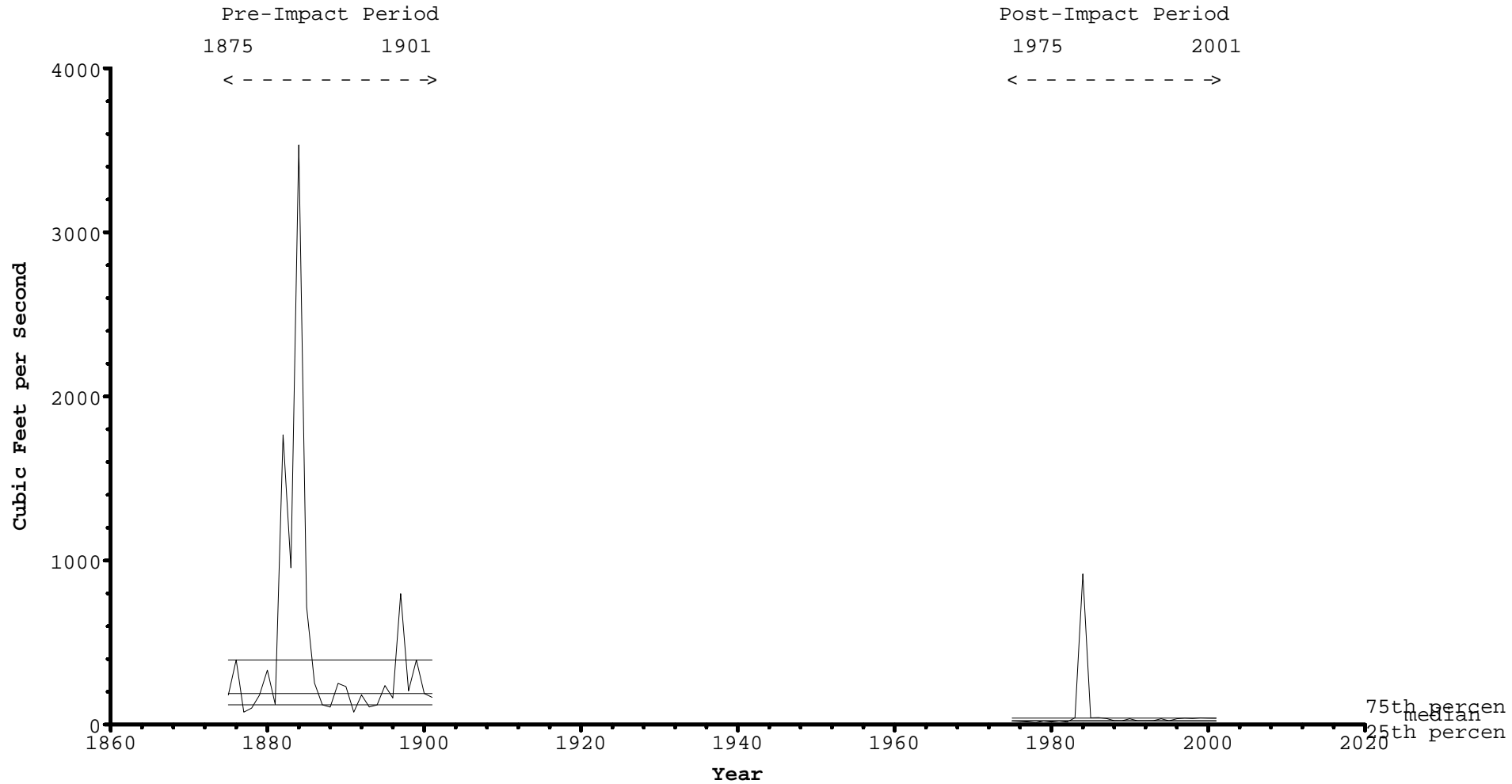
	Pre-Impact					Post-Impact						
	10%	25%	50%	75%	90%	(75-25)/50	10%	25%	50%	75%	90%	(75-25)/50
<b>Parameter Group #1</b>												
October	56.08	78.31	120.11	169.27	318.43	.76	23.57	36.00	36.81	38.16	39.28	.06
November	95.18	120.49	189.36	393.86	1117.54	1.44	15.72	21.57	23.83	38.63	41.47	.72
December	113.76	204.96	274.40	584.61	2579.96	1.38	10.00	11.19	36.00	39.32	503.50	.78
January	159.22	216.79	387.84	1350.91	2983.13	2.92	10.25	15.97	36.00	74.19	514.87	1.62
February	258.13	382.31	669.26	1864.01	3331.55	2.21	10.00	14.29	37.07	277.14	893.81	7.09
March	601.09	760.52	1367.04	2357.27	3915.85	1.17	12.45	17.58	30.06	63.39	567.33	1.52
April	823.52	1181.57	2172.32	2449.54	3019.76	.58	10.56	12.20	37.77	51.17	124.35	1.03
May	767.33	1130.16	2885.86	4106.73	5100.02	1.03	10.41	11.52	38.42	74.77	1463.60	1.65
June	251.42	435.66	1350.05	2906.96	5129.81	1.83	24.95	36.07	38.00	83.63	1900.09	1.25
July	80.78	101.19	319.68	741.97	2366.53	2.00	23.72	36.00	36.81	39.10	217.99	.08
August	46.98	54.29	135.90	193.69	410.06	1.03	22.61	36.00	36.26	38.58	40.33	.07
September	43.77	54.61	103.90	138.38	269.71	.81	23.21	36.00	36.43	38.00	40.86	.05
<b>Parameter Group #2</b>												
1-day minimum	26.52	37.80	50.10	77.30	109.78	.79	8.78	10.00	11.00	29.00	36.00	1.73
3-day minimum	26.91	38.60	55.70	82.73	110.04	.79	9.09	10.00	12.00	32.00	36.00	1.83
7-day minimum	27.55	39.66	60.56	88.81	101.65	.81	9.72	10.00	12.29	33.14	36.74	1.88
30-day minimum	30.68	44.94	74.70	101.10	121.97	.75	10.00	10.00	13.60	36.83	37.30	1.97
90-day minimum	40.55	58.19	106.72	153.20	222.71	.89	10.04	11.82	18.82	37.23	38.25	1.35
1-day maximum	1860.34	3093.70	7025.30	15636.70	40169.56	1.79	39.40	50.00	469.00	9270.00	17560.00	19.66
3-day maximum	1508.07	2018.13	5802.63	12593.40	30004.96	1.82	37.53	43.33	350.00	7366.67	12818.66	20.92
7-day maximum	1299.17	1841.40	4615.64	9560.40	17677.06	1.67	36.86	39.29	214.43	4534.43	7532.28	20.96
30-day maximum	1099.04	1632.32	3714.10	5247.20	8033.75	.97	36.27	37.40	78.53	1815.80	3060.93	22.65
90-day maximum	751.52	1295.98	2905.25	3533.04	4722.87	.77	33.95	37.10	76.13	664.21	1597.10	8.24
Number of zero days	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Base flow	.03	.05	.07	.09	.11	.59	.03	.16	.31	.44	.71	.91
<b>Parameter Group #3</b>												
Date of minimum	243.80	253.00	271.00	278.00	281.00	.07	139.80	275.00	322.00	39.00	84.60	.36
Date of maximum	358.80	44.00	77.00	122.00	152.00	.21	307.60	22.00	68.00	137.00	216.60	.31
<b>Parameter Group #4</b>												
Low pulse count	2.00	3.00	4.00	5.00	8.20	.50	2.00	2.00	3.00	4.00	9.00	.67
Low pulse duration	2.67	8.60	14.50	22.50	34.60	.96	.50	35.29	71.00	107.00	110.40	1.01
High pulse count	1.60	3.00	6.00	7.00	9.00	.67	.00	.00	.00	3.00	6.00	.00
High pulse duration	.80	5.00	16.14	24.29	31.56	1.19	.00	.00	.00	5.00	6.89	.00
<b>Parameter Group #5</b>												
Rise rate	46.46	65.70	169.50	502.20	662.18	2.58	1.65	2.12	12.26	341.92	753.94	27.72
Fall rate	-364.01	-262.20	-116.84	-45.49	-34.42	-1.85	-607.31	-275.40	-15.52	-2.07	-1.66	-17.61
Number of reversals	107.00	119.00	130.00	140.00	149.60	.16	18.20	40.00	48.00	70.00	81.40	.63

Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Average flow for October

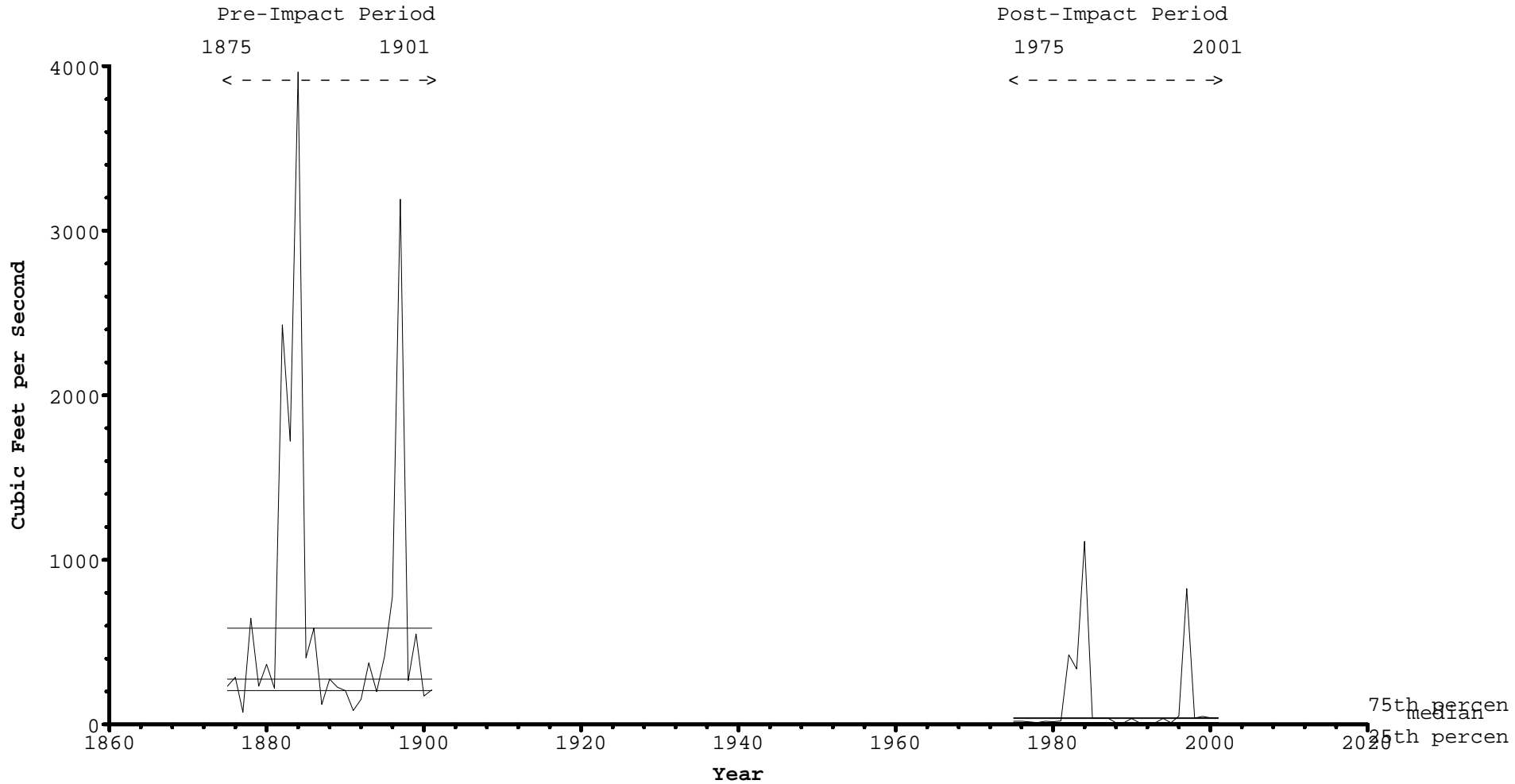




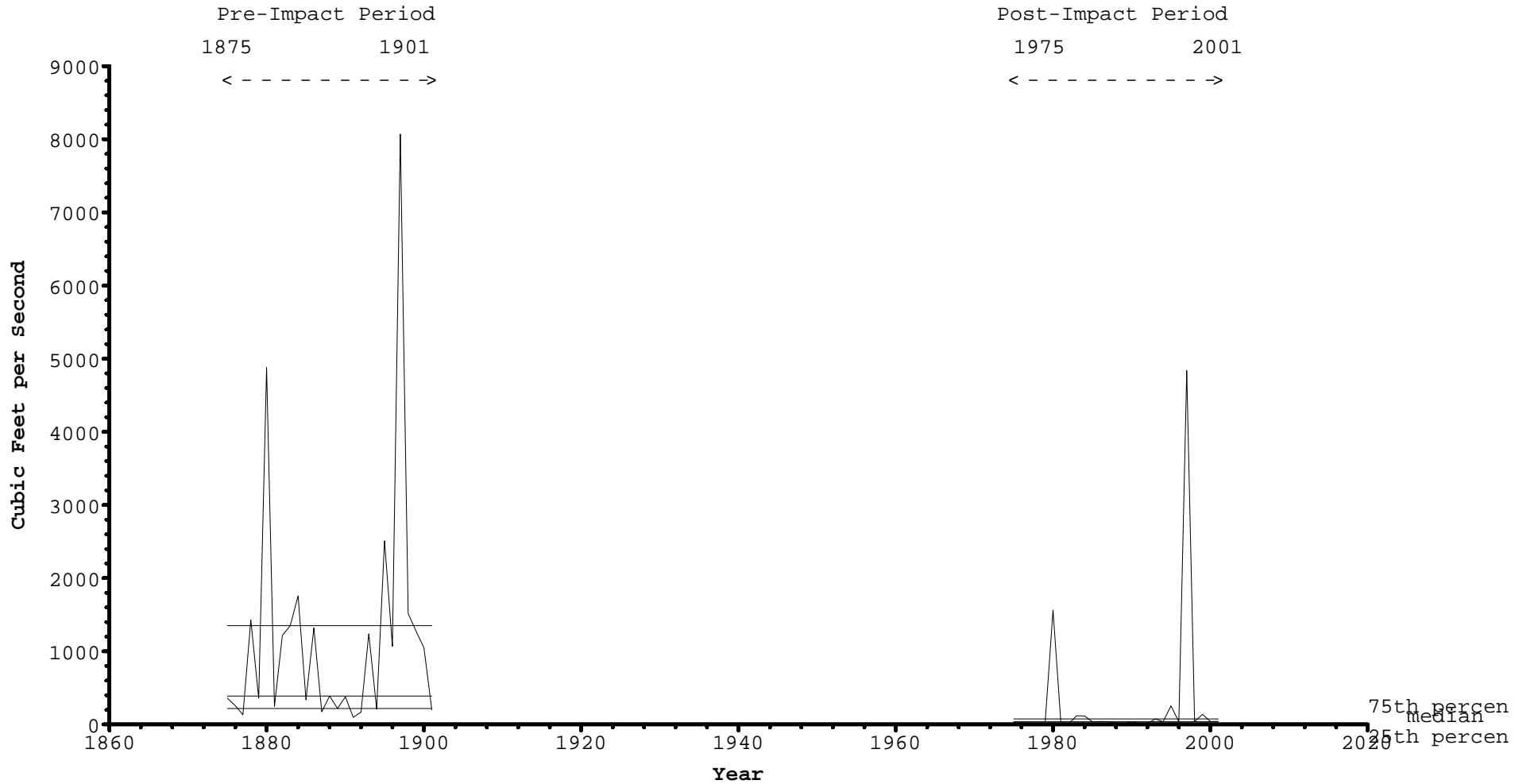
Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Average flow for November



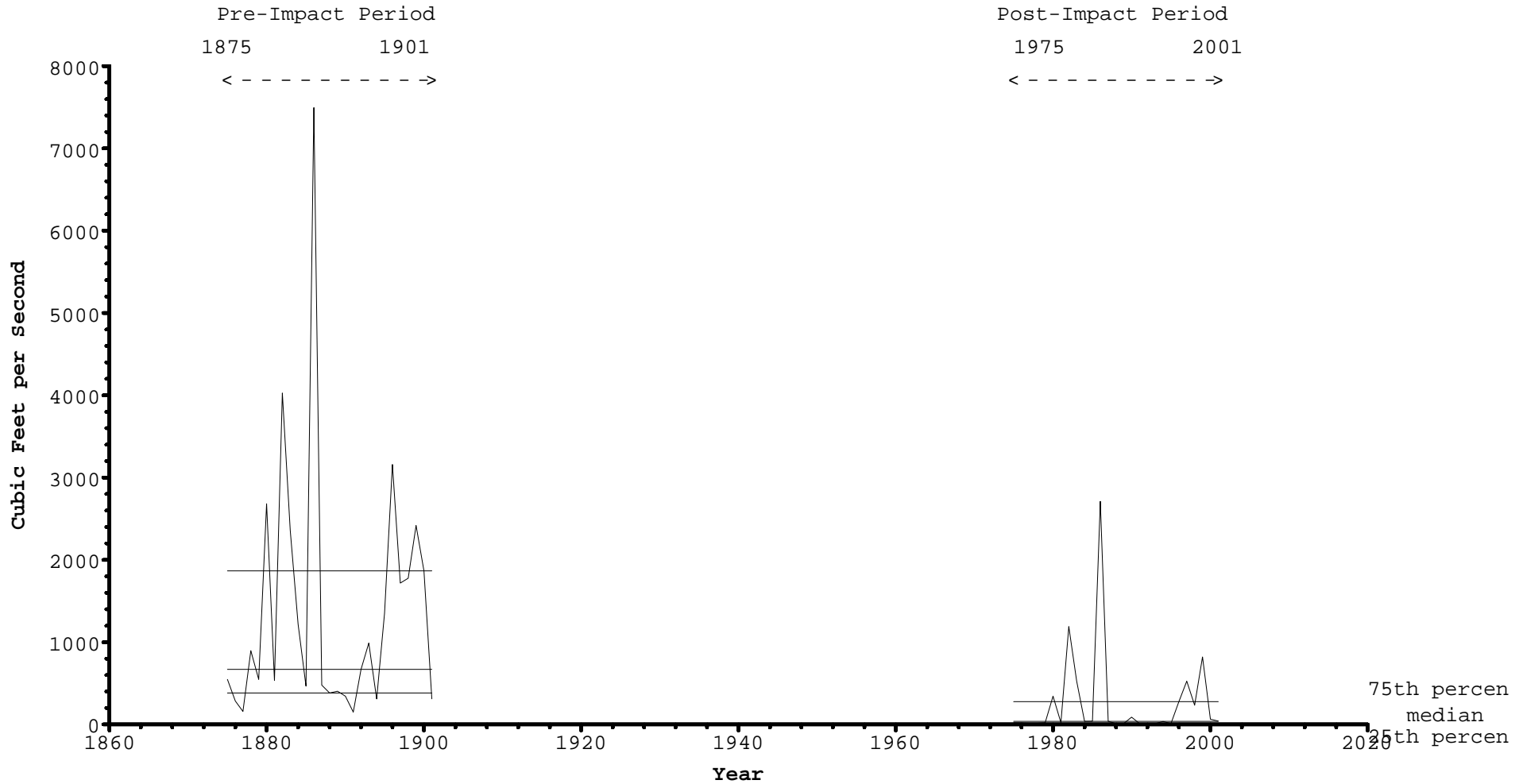
Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Average flow for December



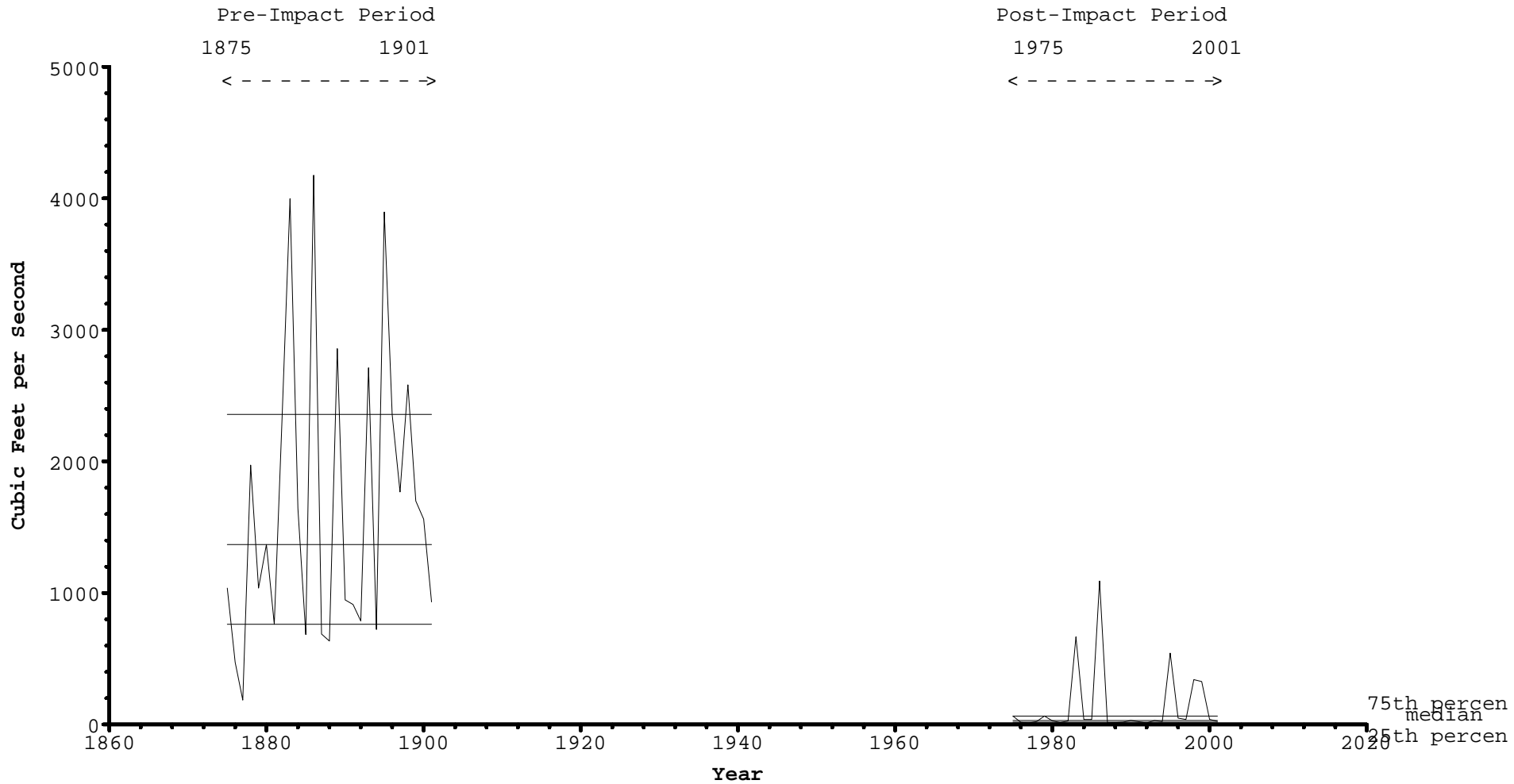
Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Average flow for January



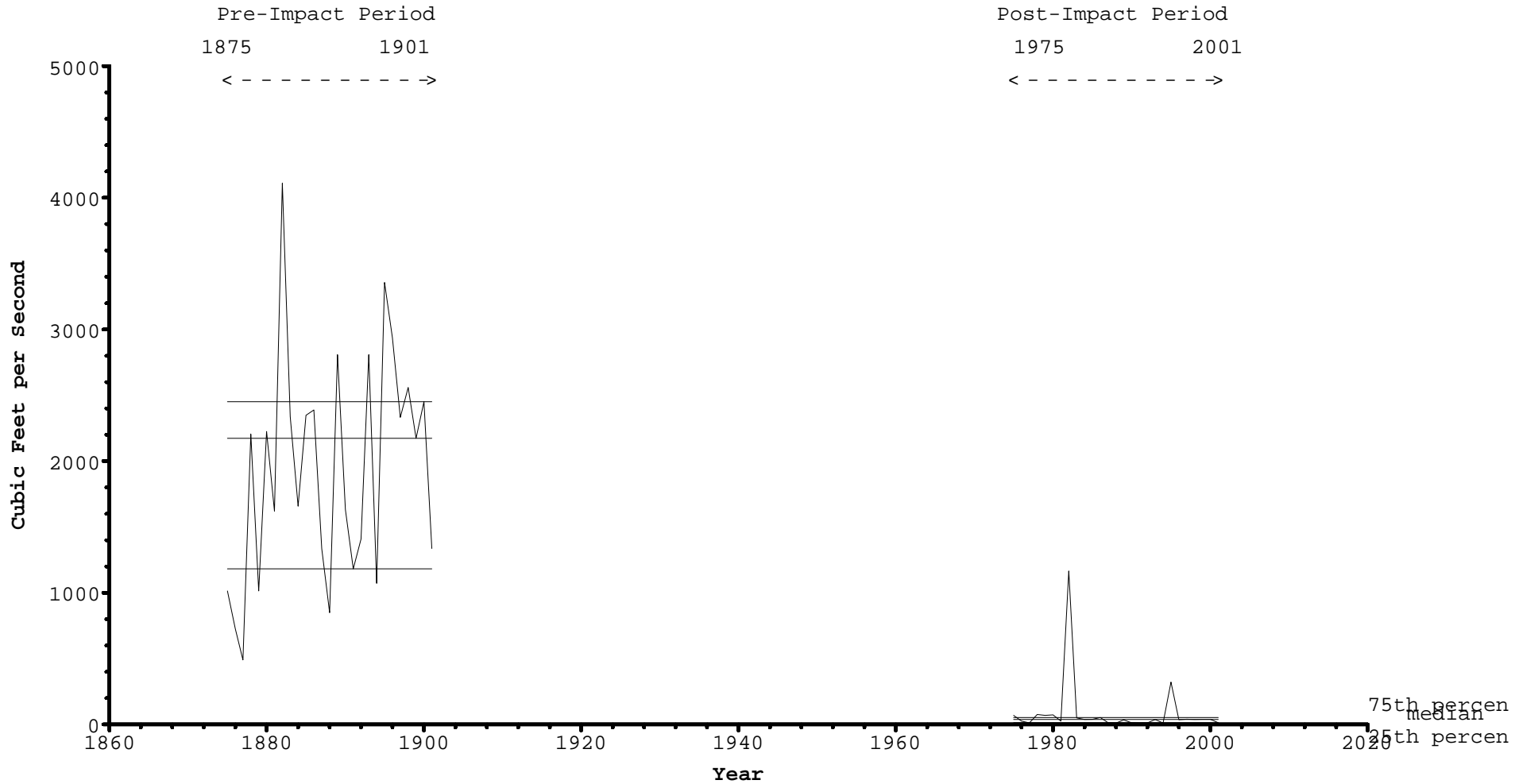
Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Average flow for February



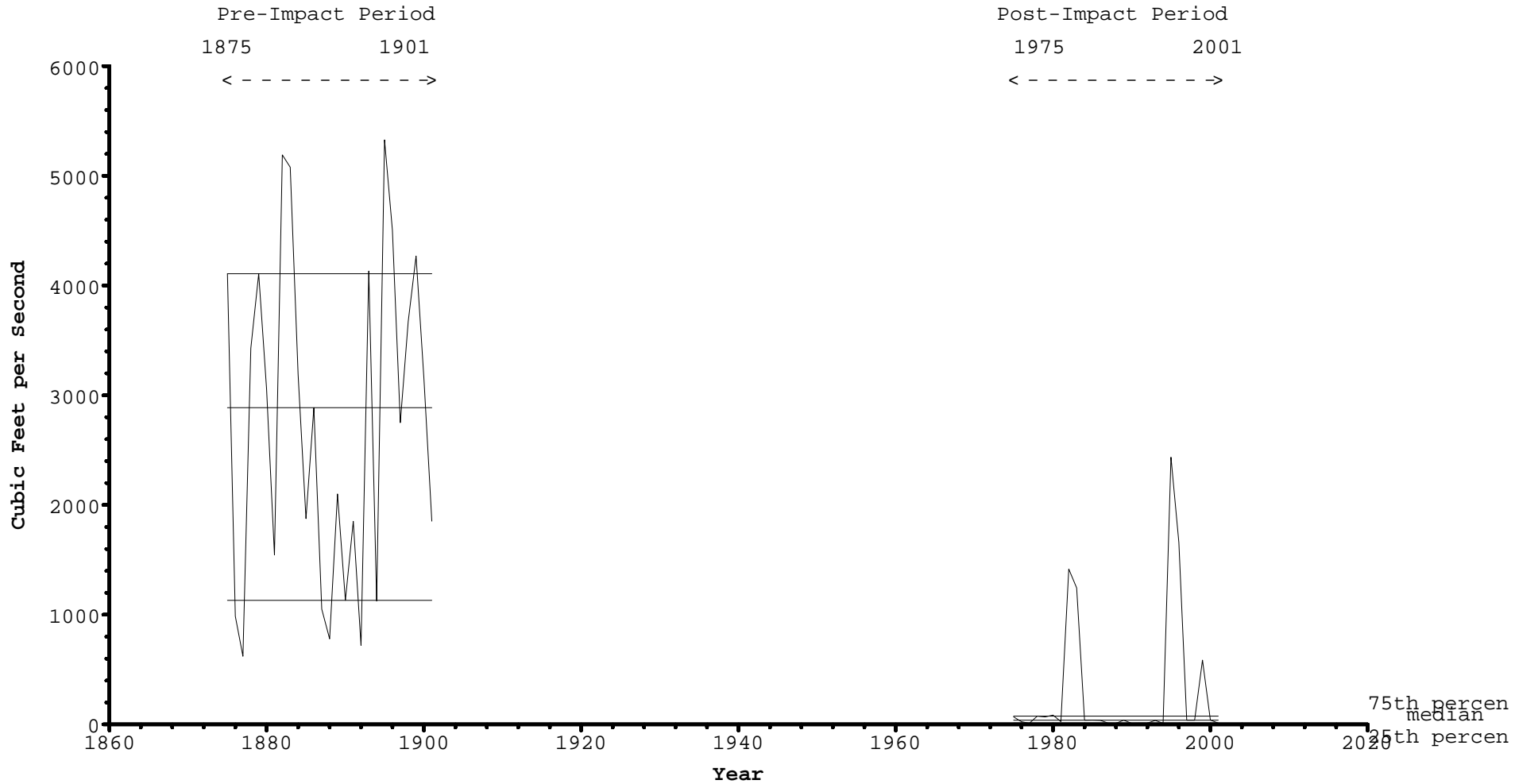
Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Average flow for March



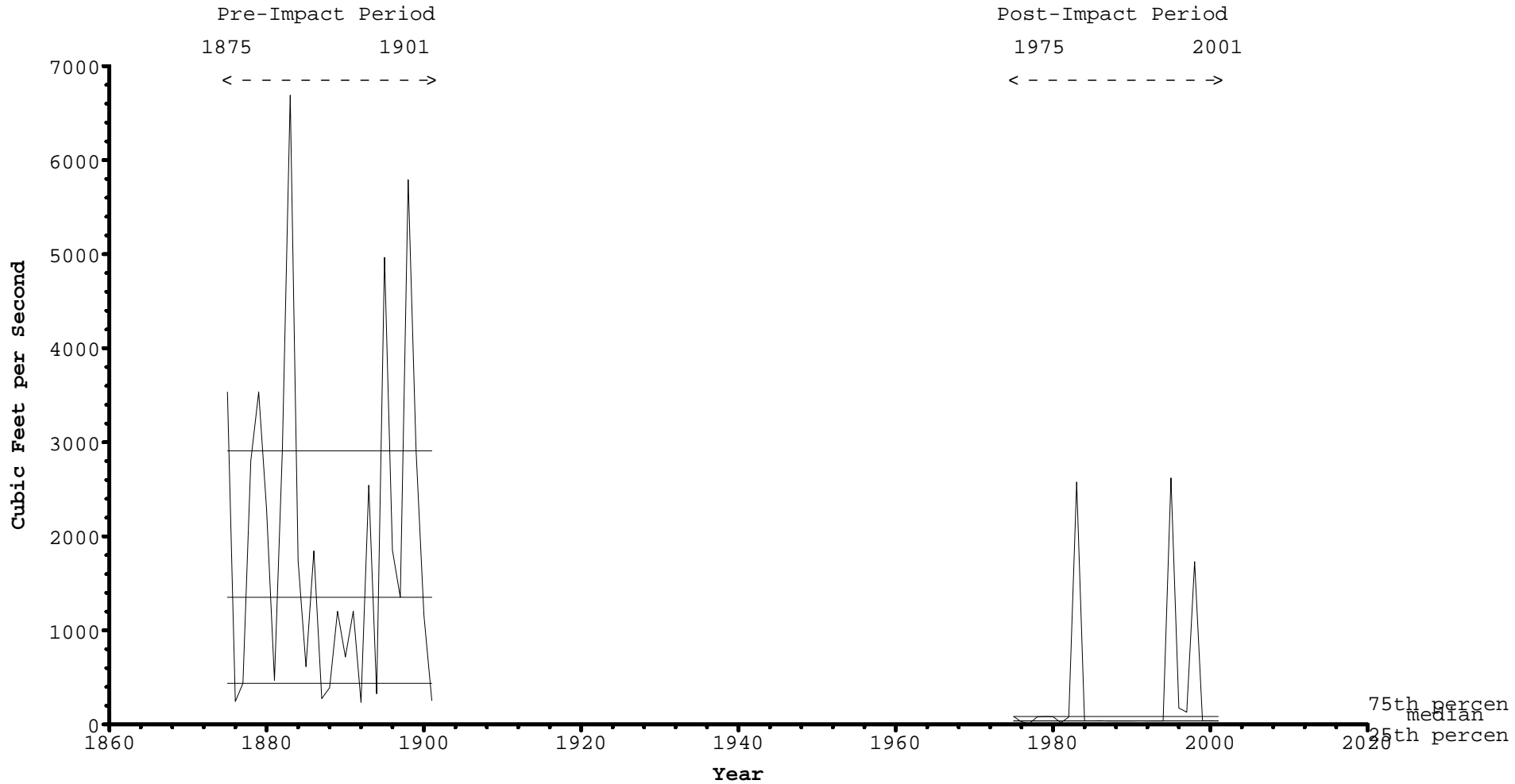
Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Average flow for April



Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Average flow for May

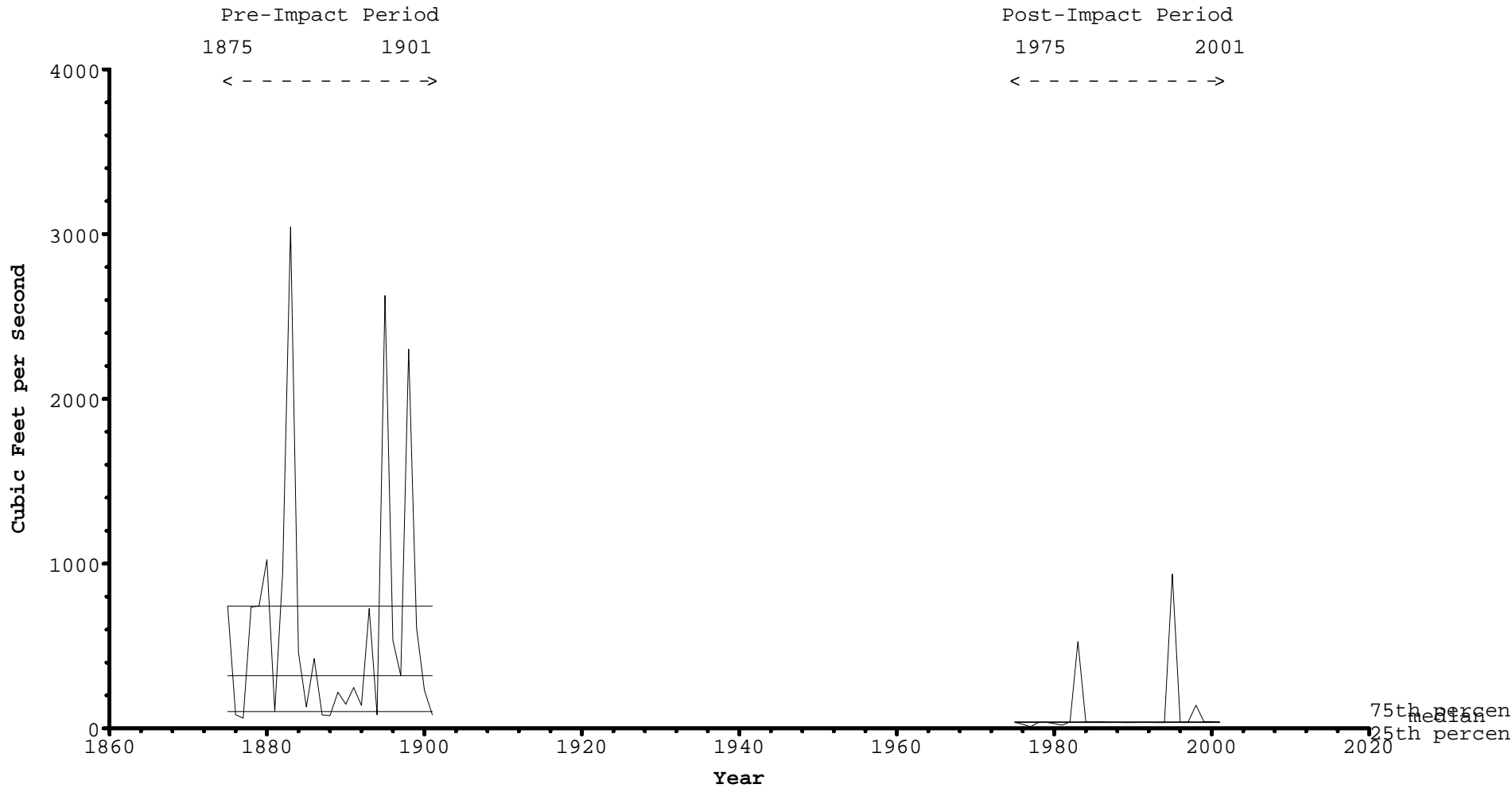


Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Average flow for June

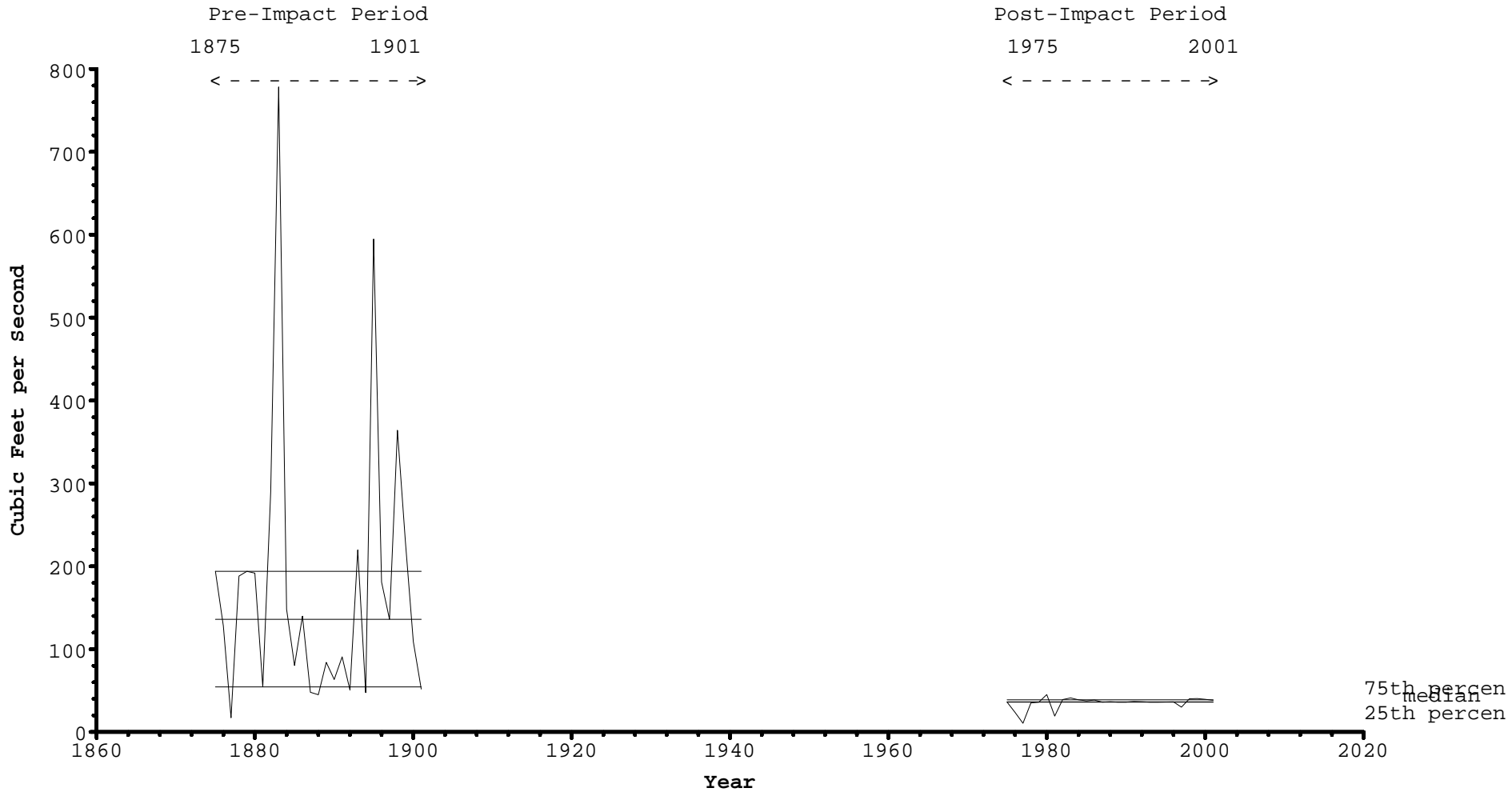




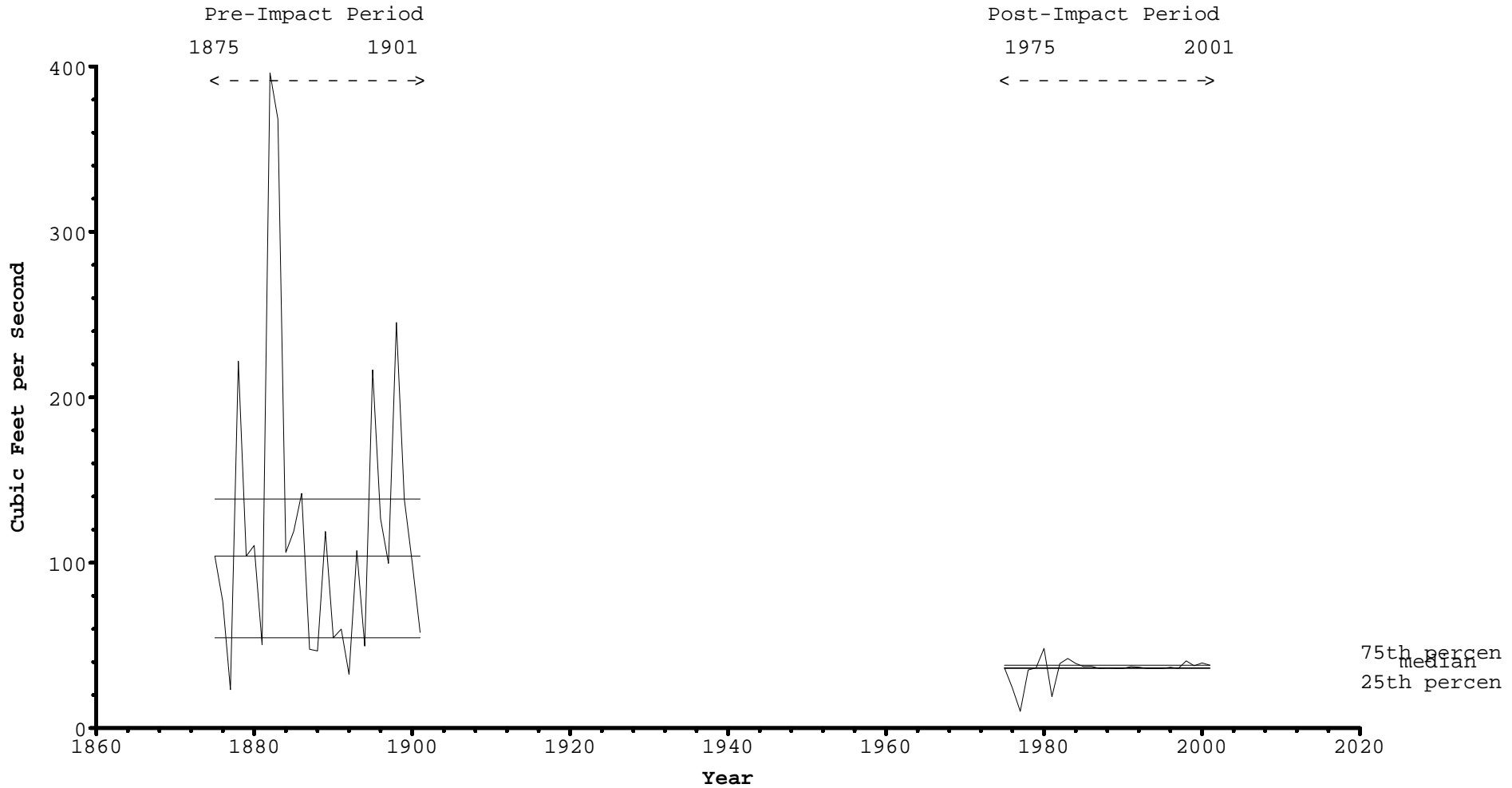
Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Average flow for July



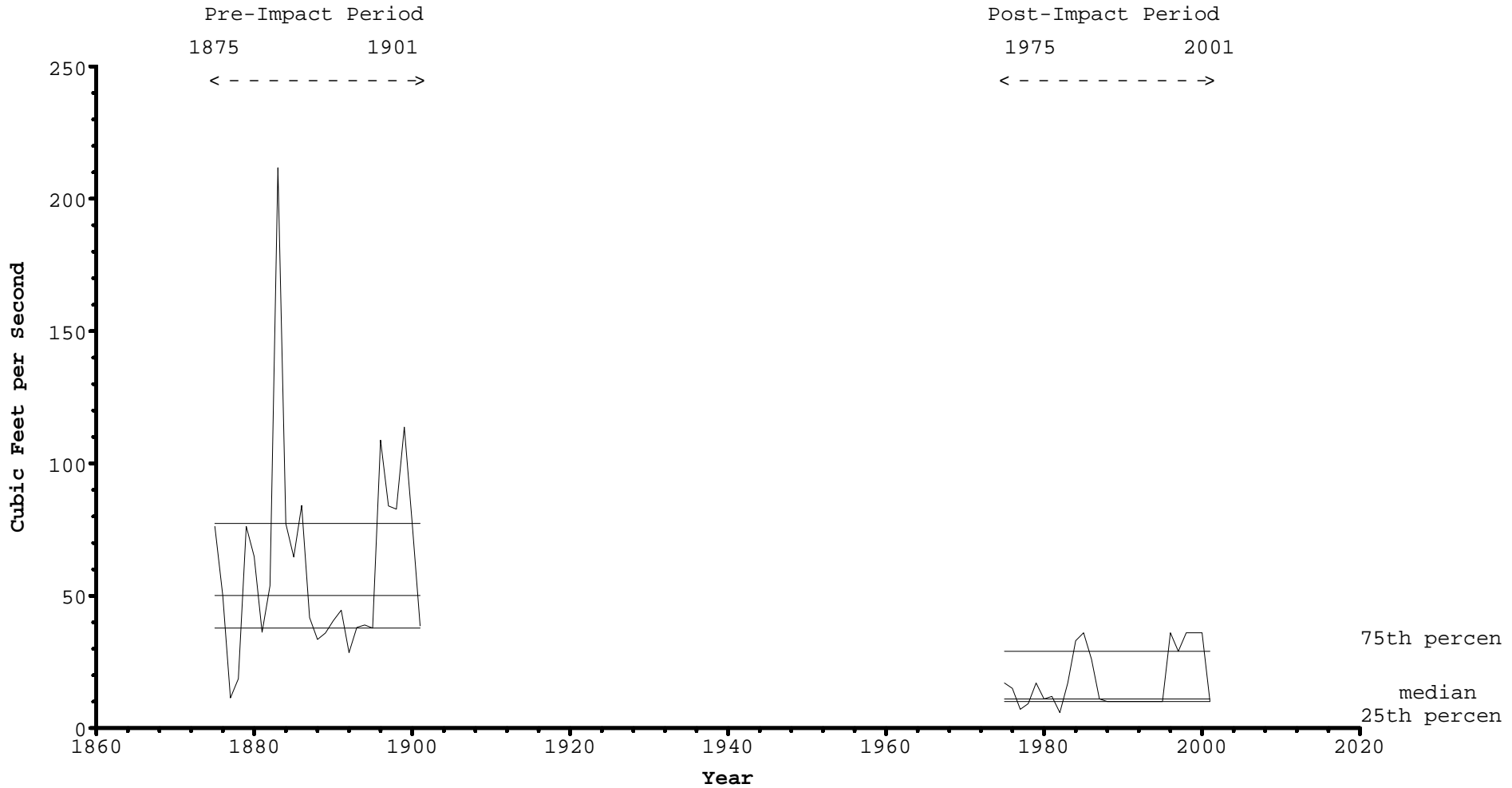
Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Average flow for August



Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Average flow for September

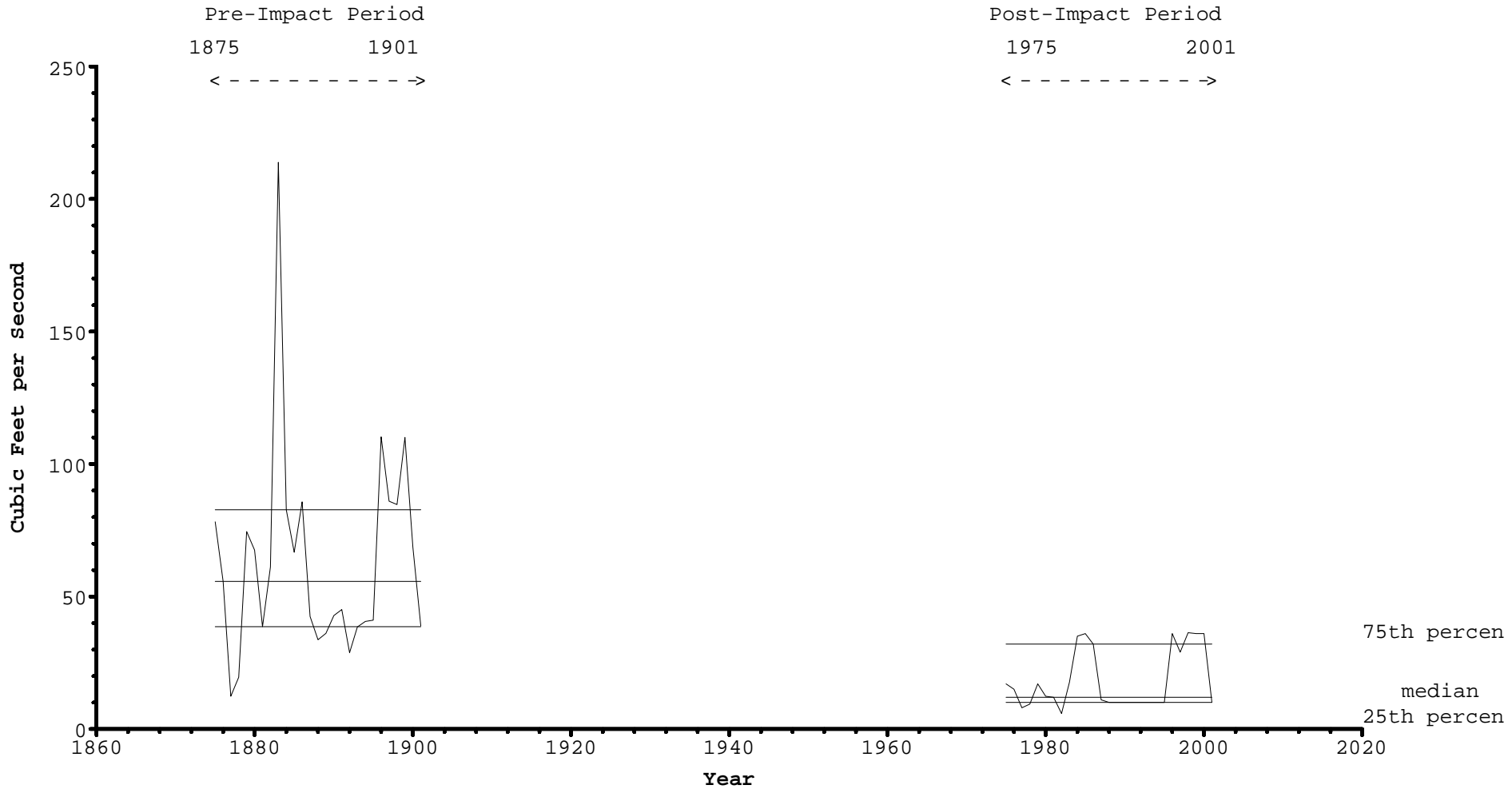


Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
1-day minimum streamflow

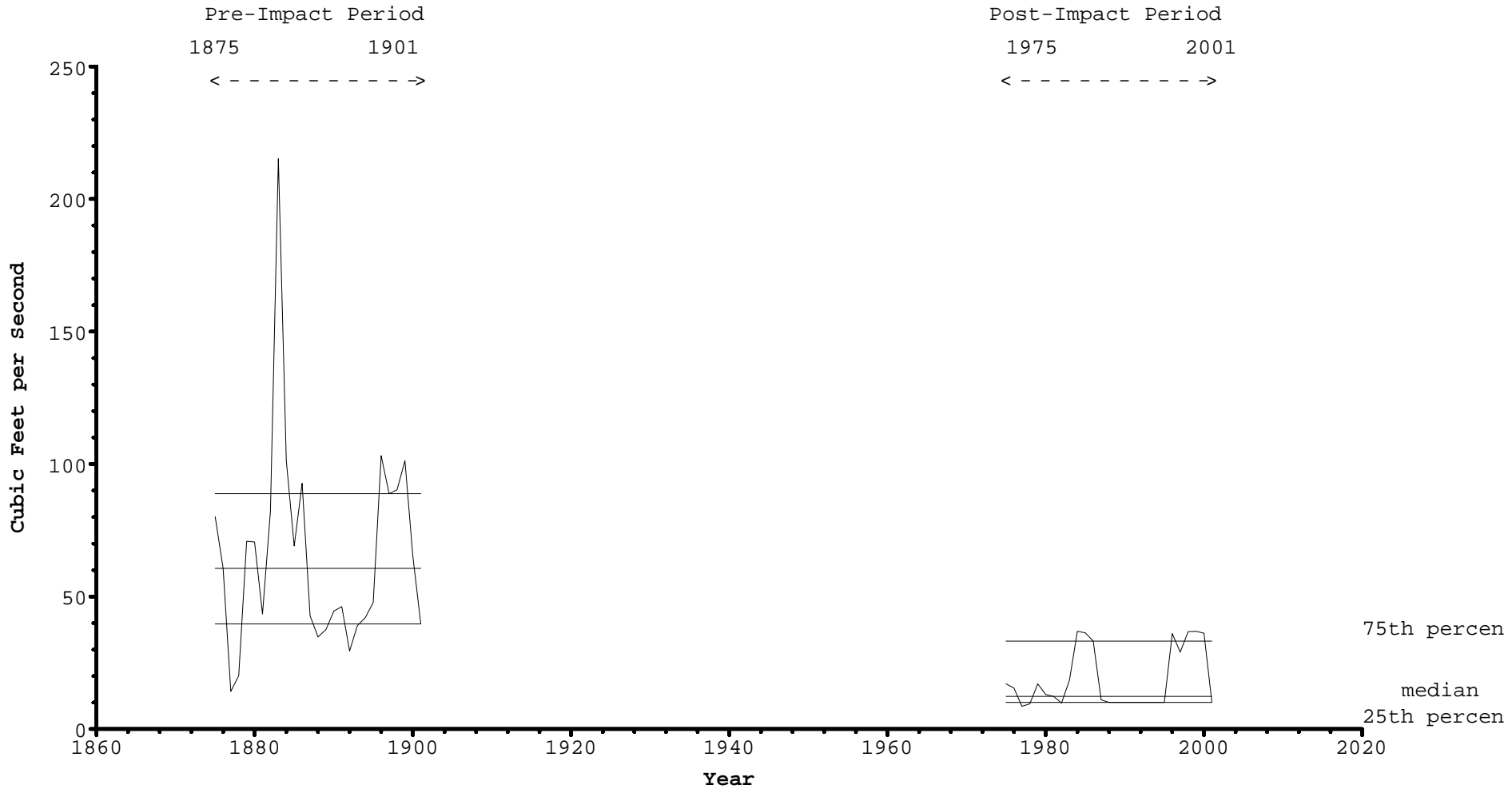


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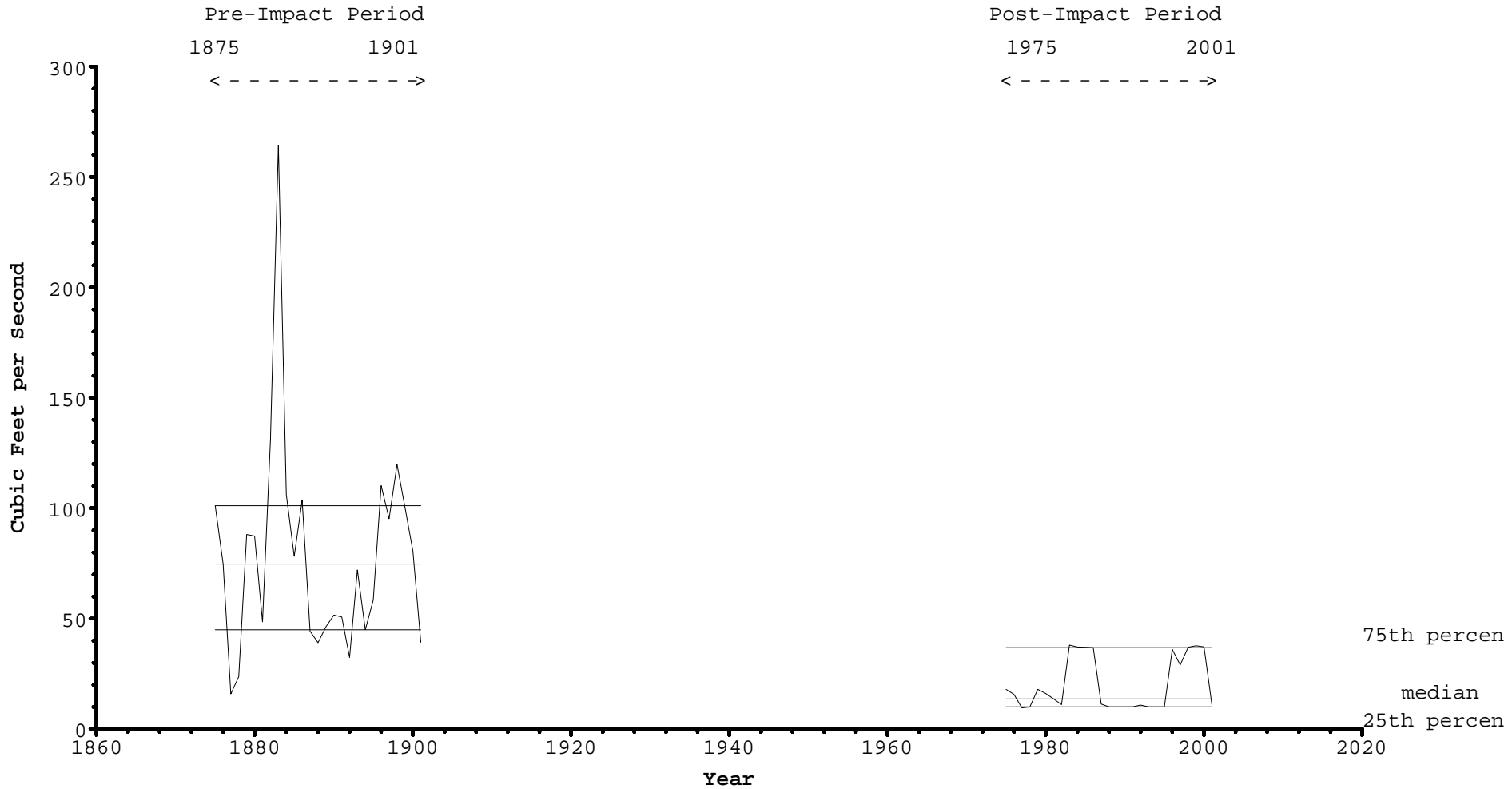
Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
3-day minimum streamflow



Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
7-day minimum streamflow

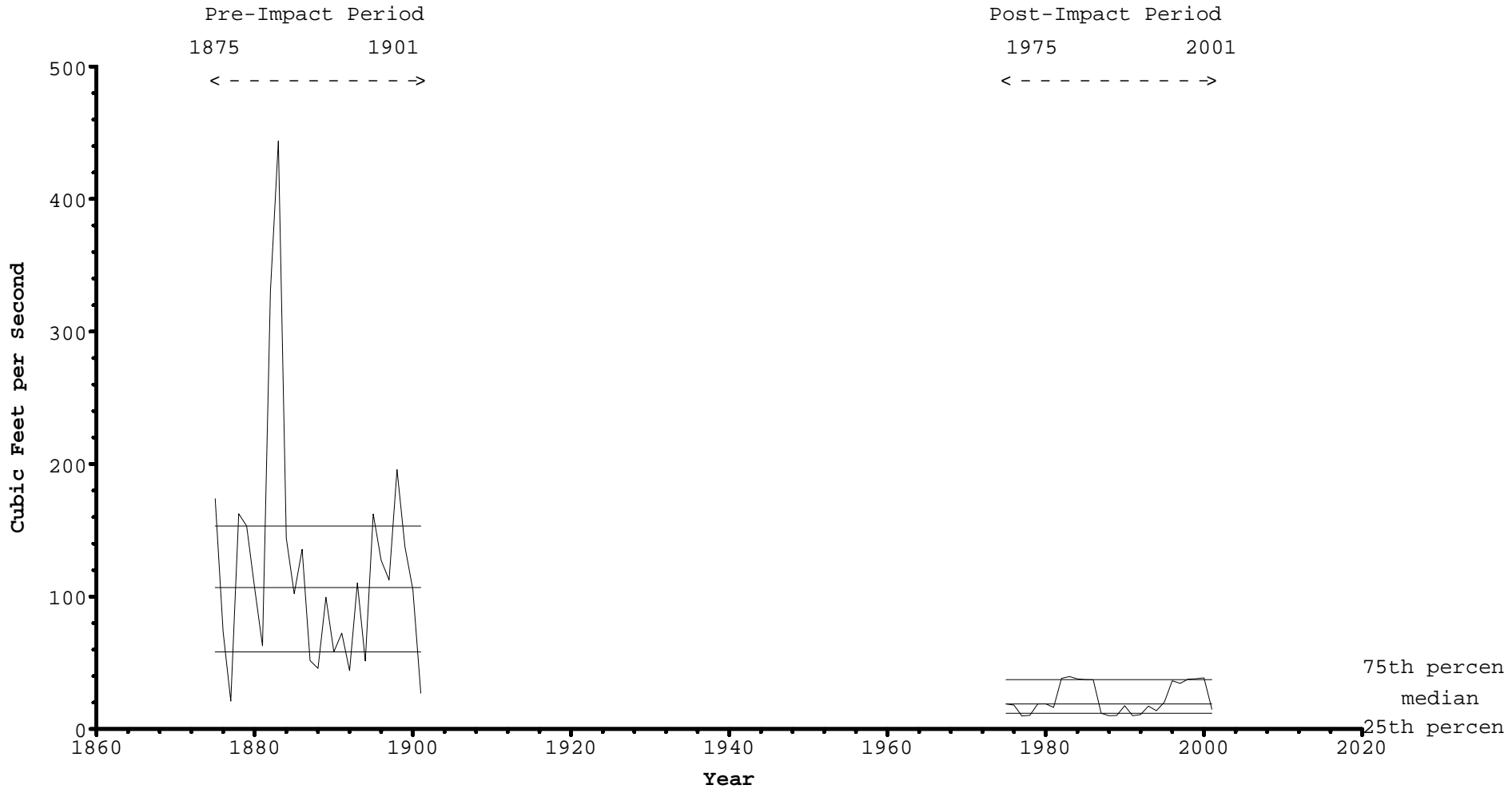


Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
30-day minimum streamflow



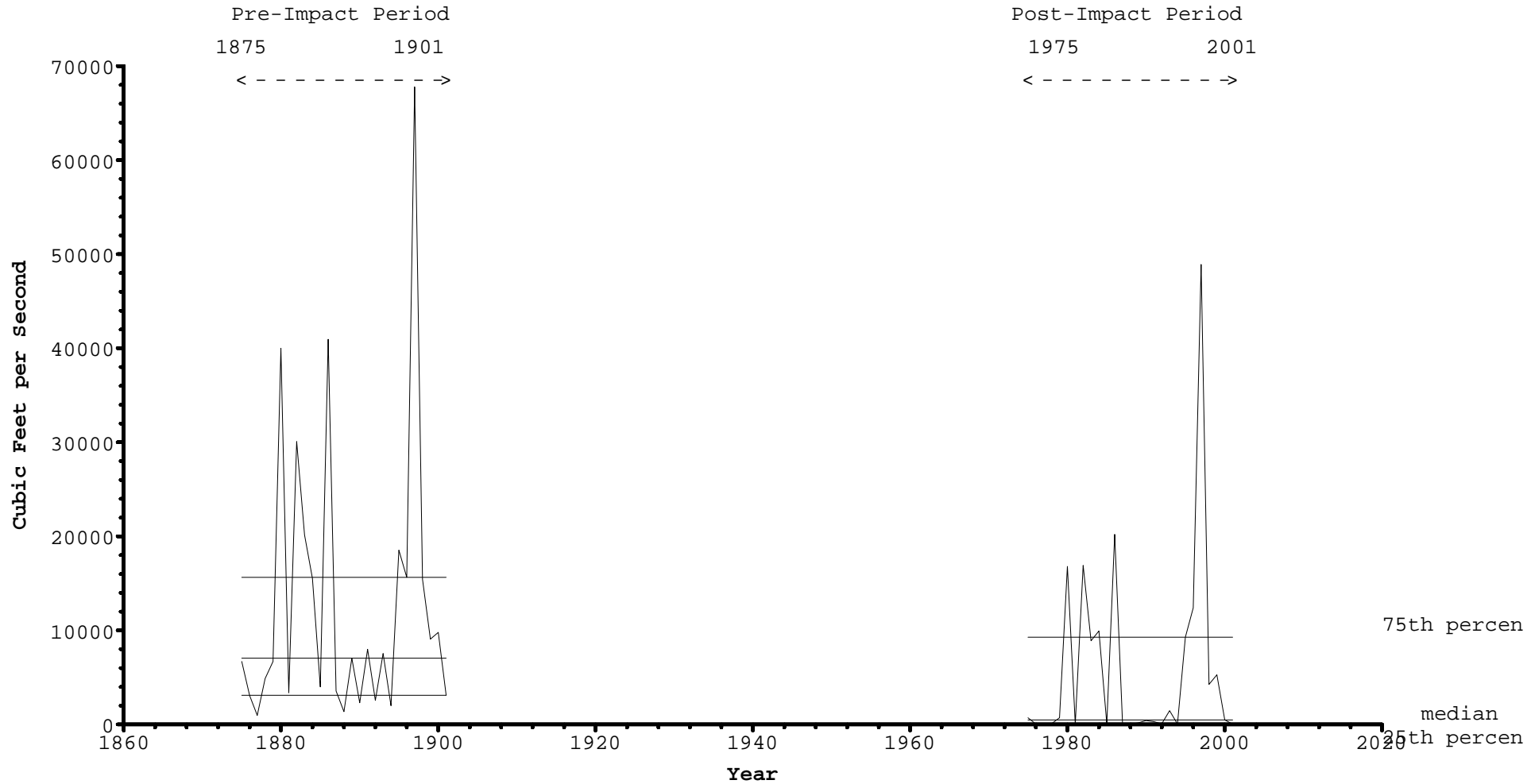
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Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
90-day minimum streamflow



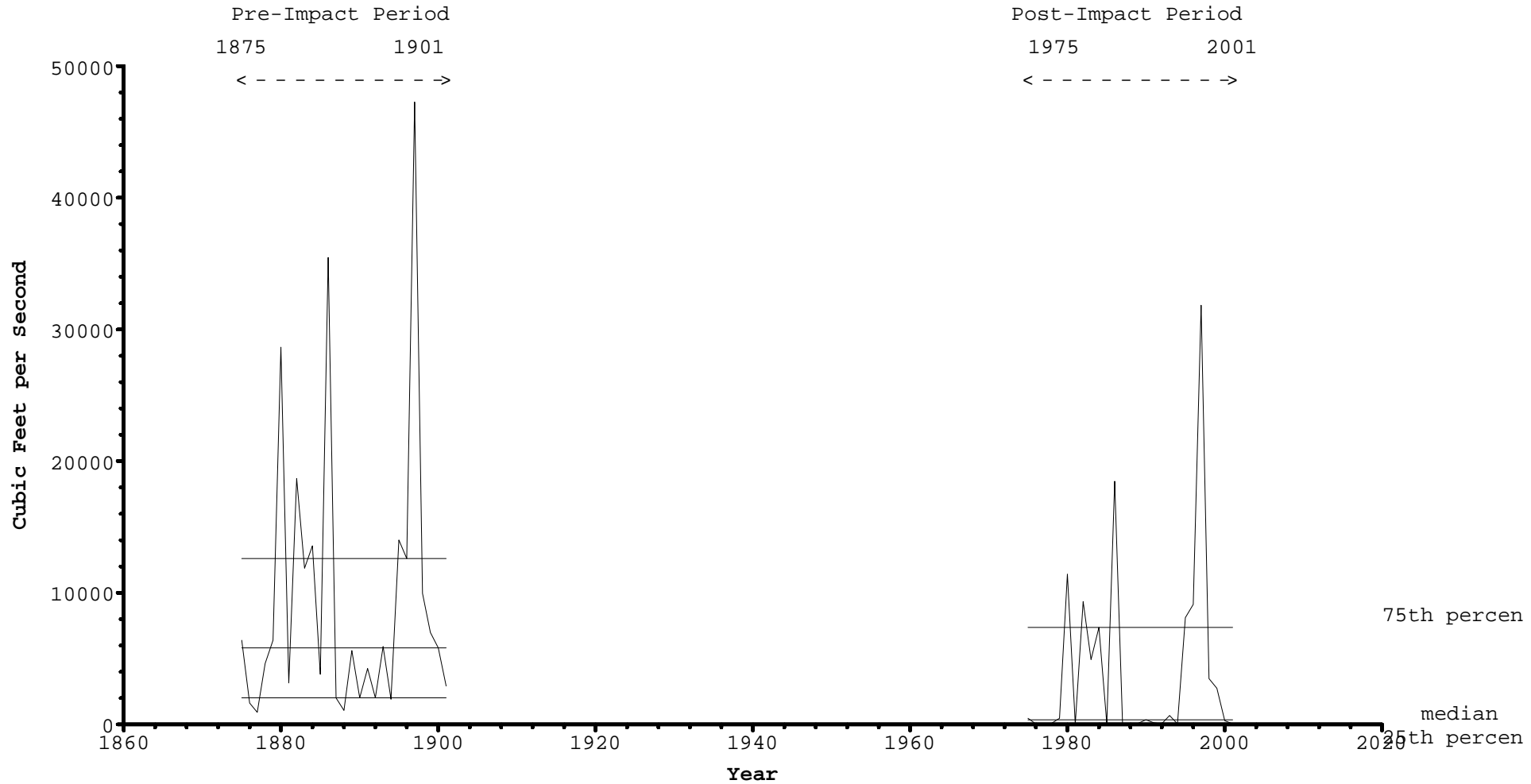


Standard IHA  
A-4435 South Fork American River Near Camino (Natural), April 2004  
1-day maximum streamflow



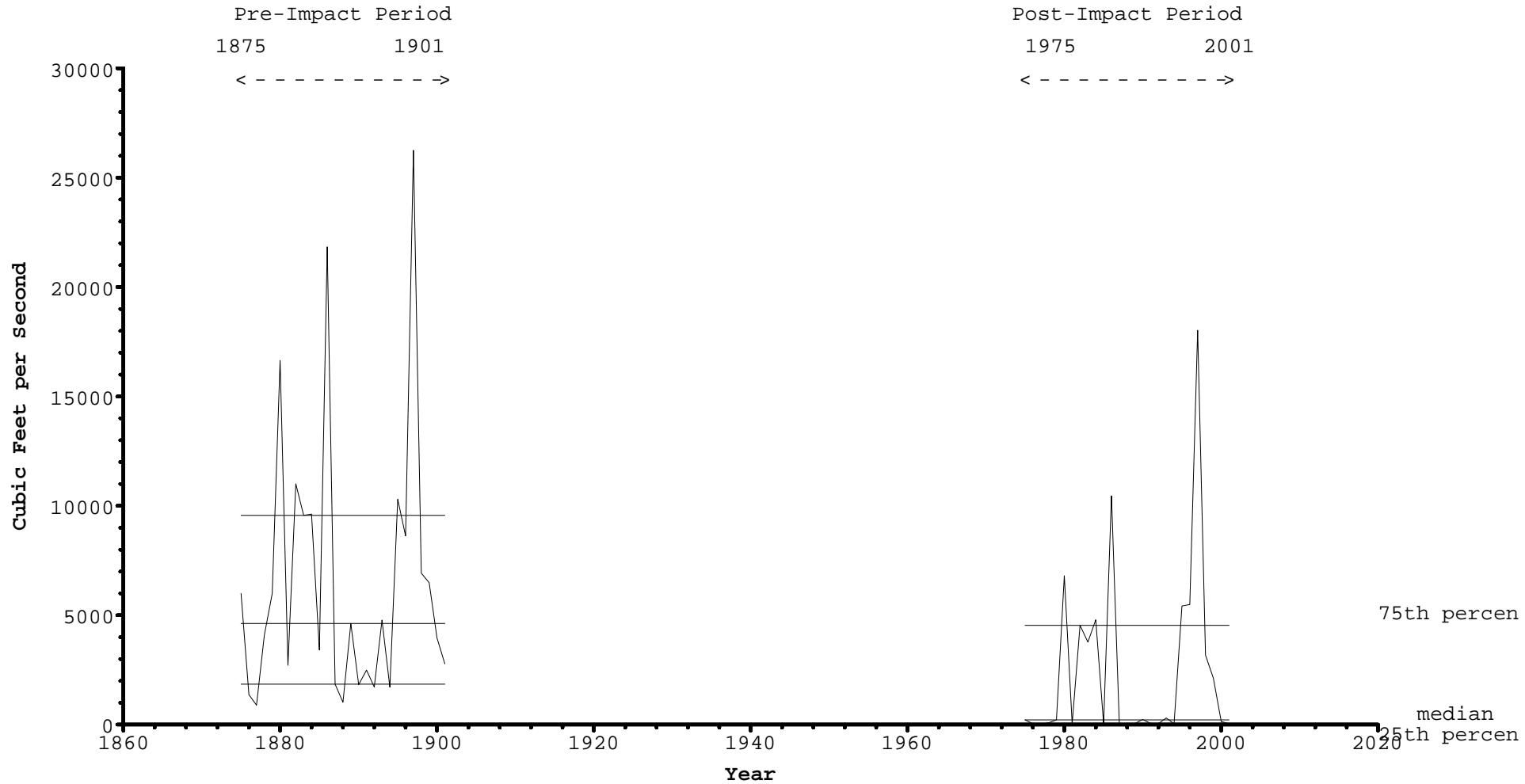
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Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
3-day maximum streamflow



File(s) Used: P:\Framatome-IHA\IHA Apr04\2-GageA-Nat\GA-N.ann, P:\Framatome-IHA\IHA Apr04\2-GageA-Nat\GA-N.baw

Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
 7-day maximum streamflow

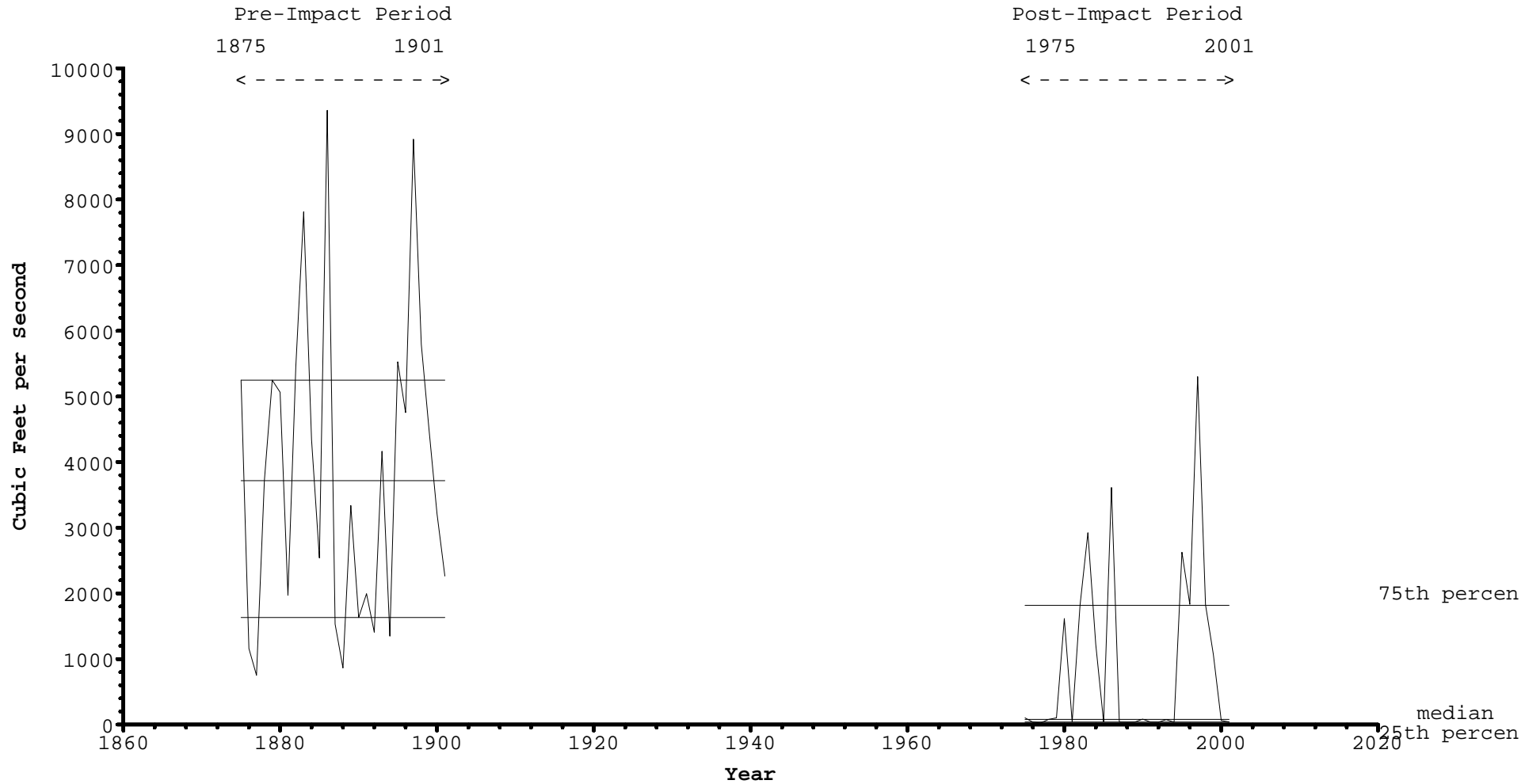


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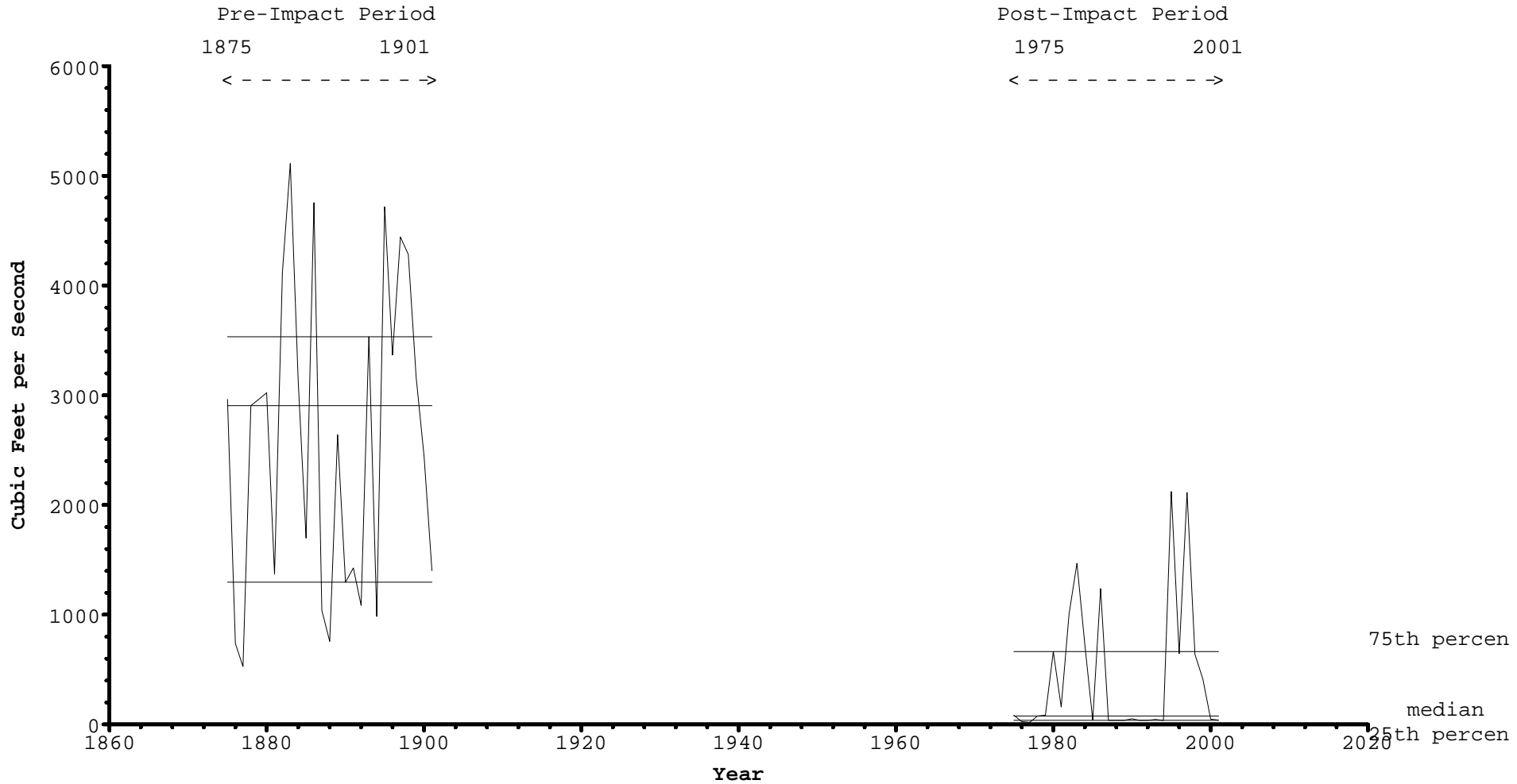
Standard IHA

# A-4435 South Fork American River Near Camino (Natural), April 2004

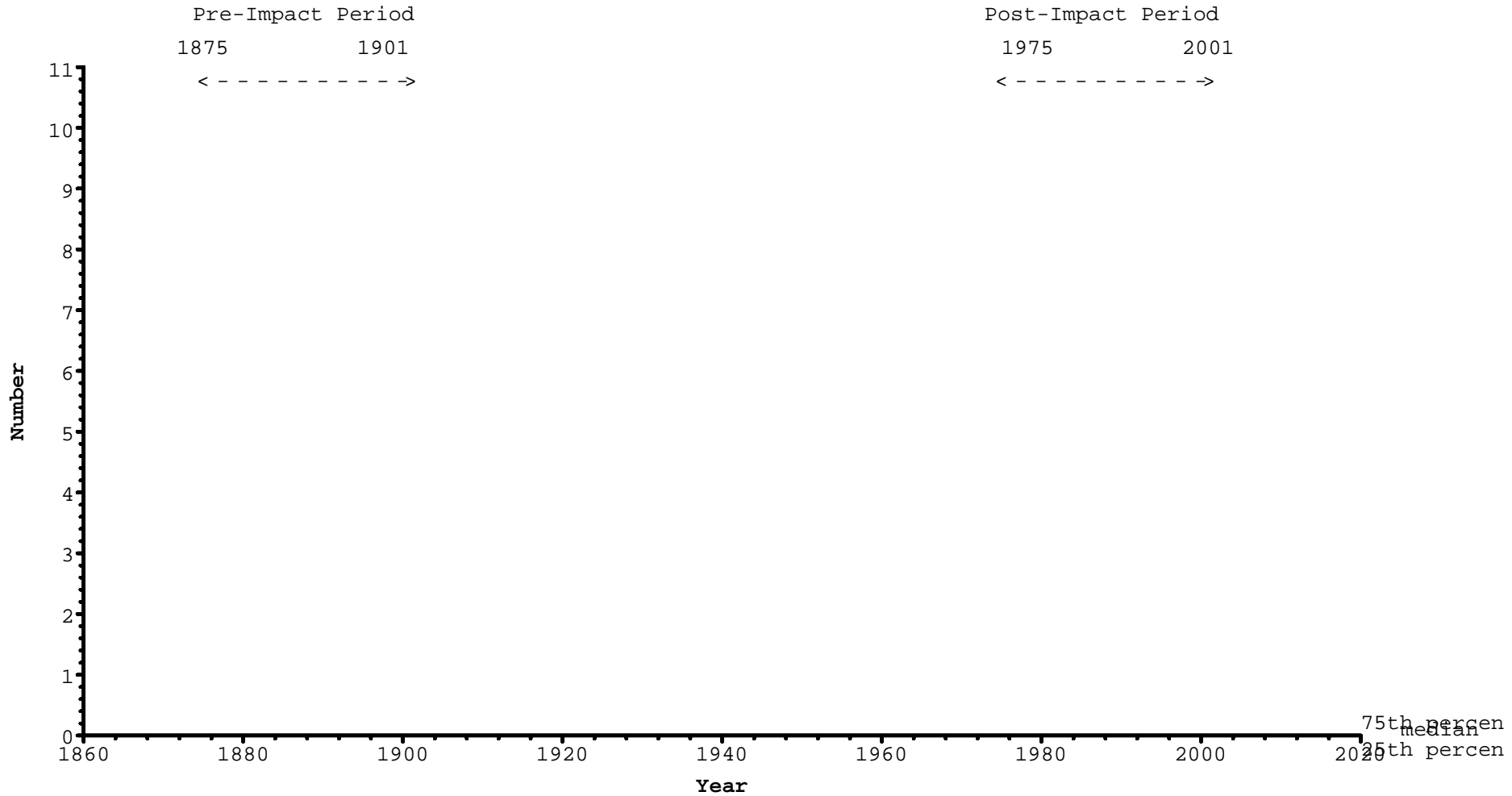
30-day maximum streamflow



Standard IHA  
A-4435 South Fork American River Near Camino (Natural), April 2004  
90-day maximum streamflow

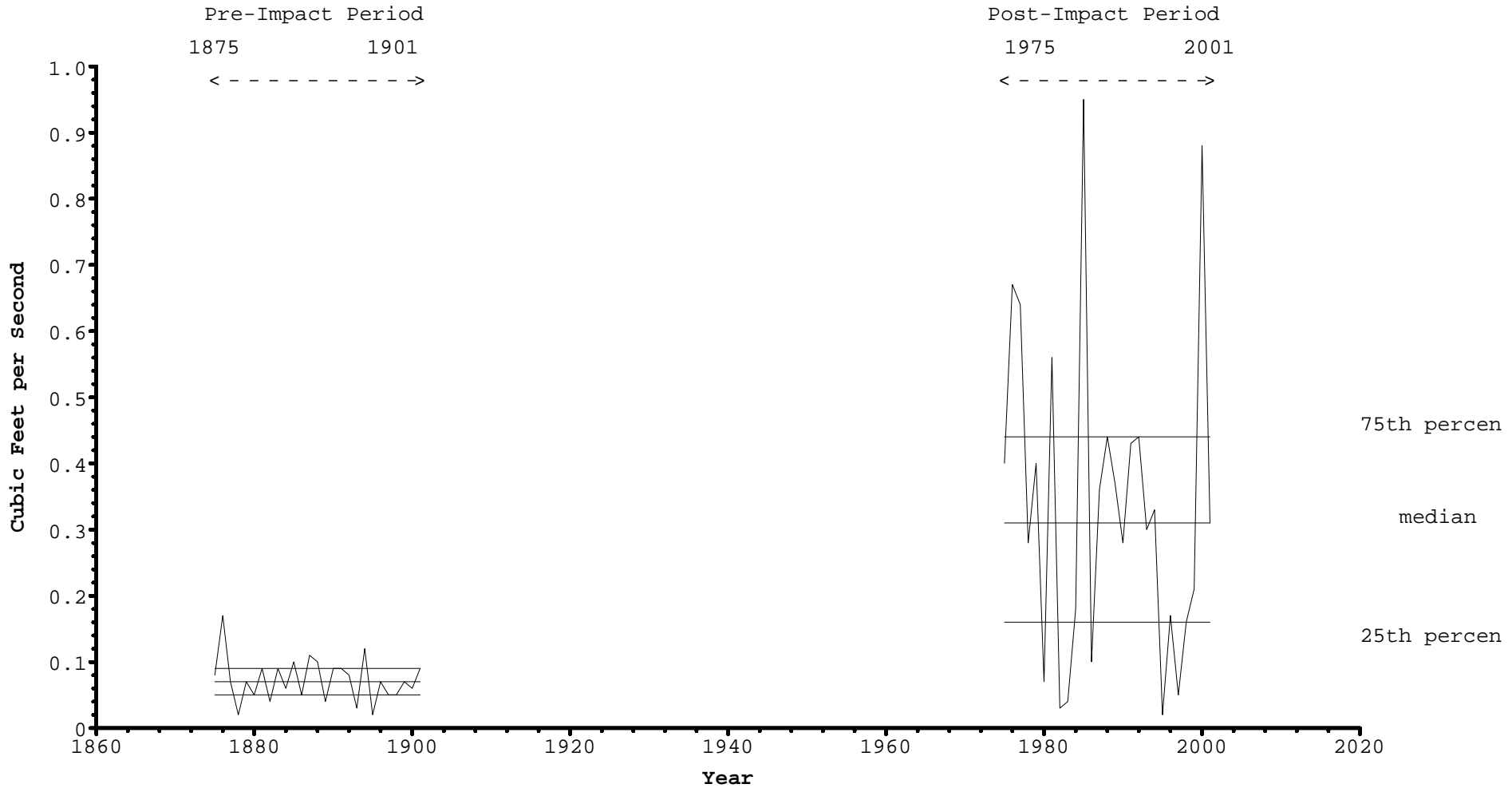


Standard IHA  
A-4435 South Fork American River Near Camino (Natural), April 2004  
Zero streamflow days



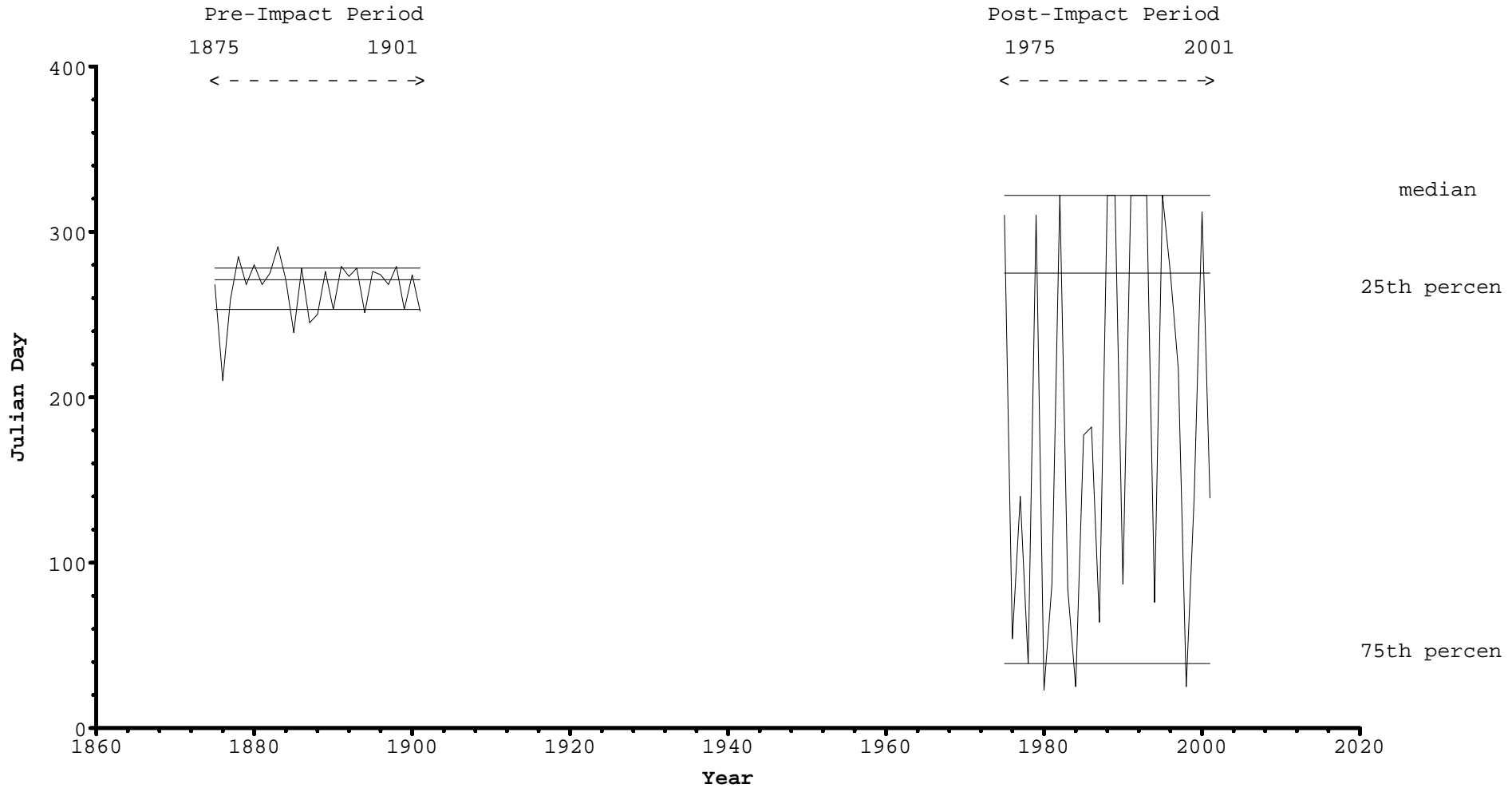
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Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Base Flow



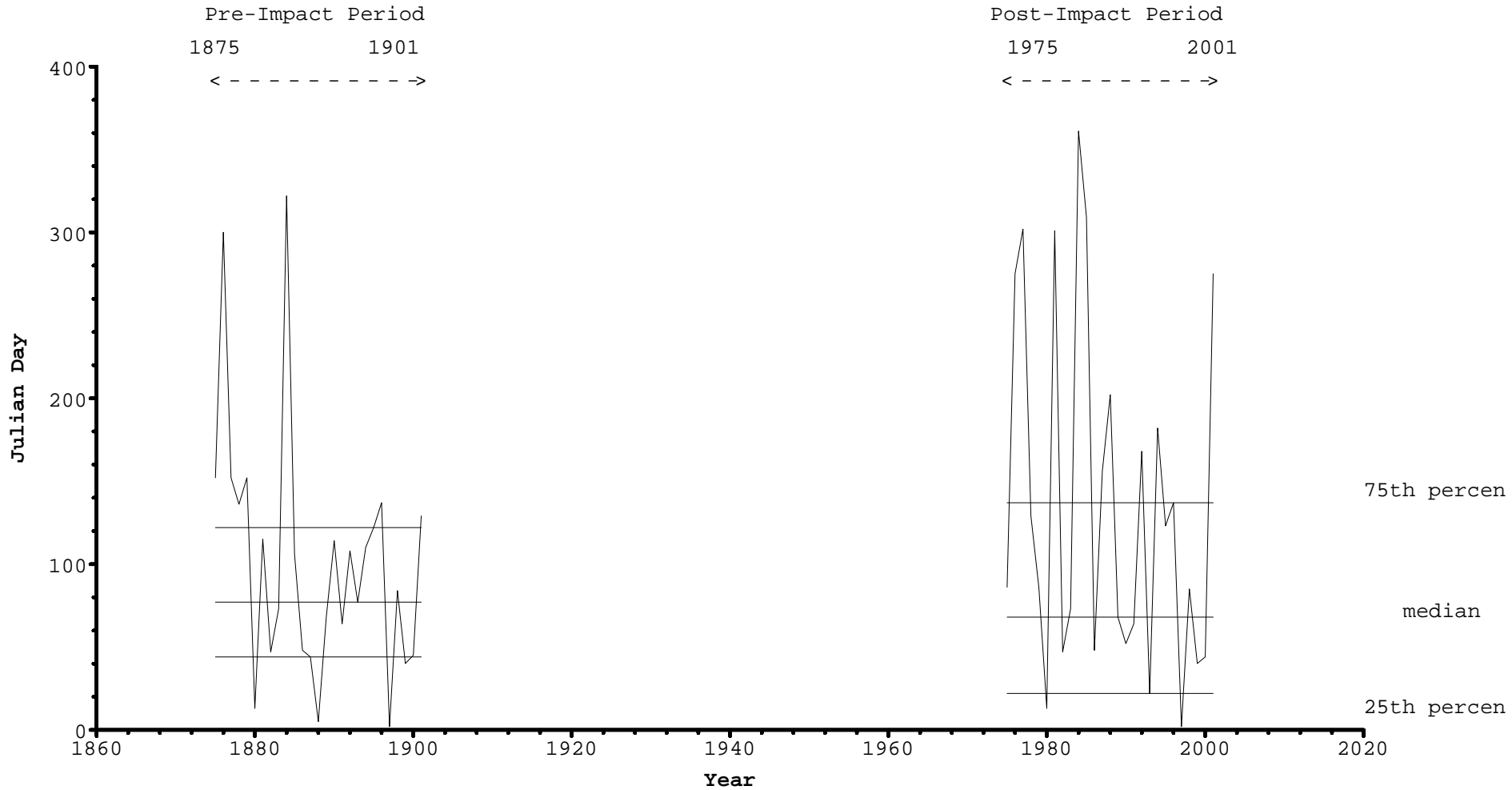
File(s) Used: P:\Framatome-IHA\IHA Apr04\2-GageA-Nat\GA-N.ann, P:\Framatome-IHA\IHA Apr04\2-GageA-Nat\GA-N.baw

Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Date of minimum streamflow

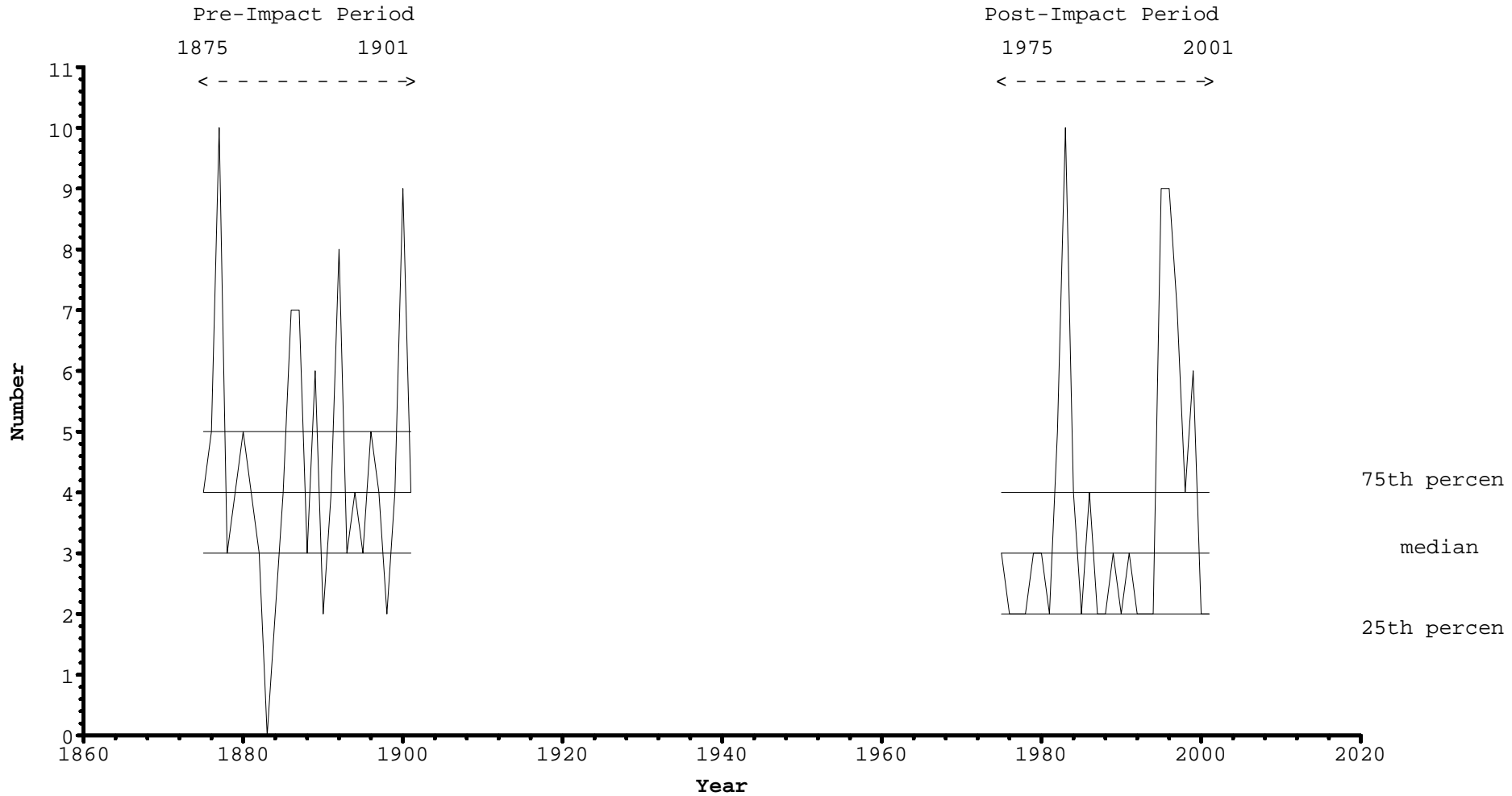




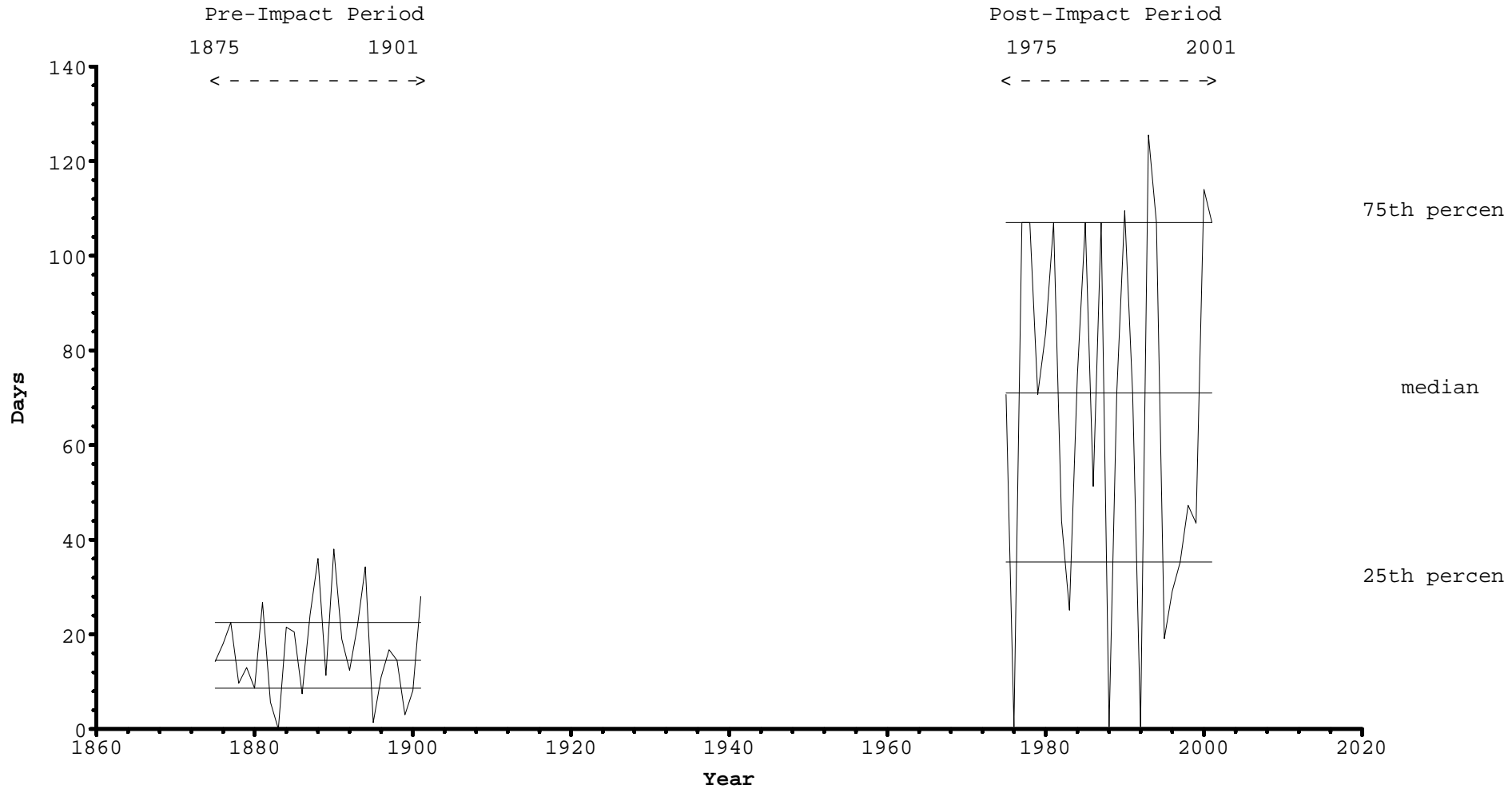
Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Date of maximum streamflow



Standard IHA  
A-4435 South Fork American River Near Camino (Natural), April 2004  
Low Pulse Count

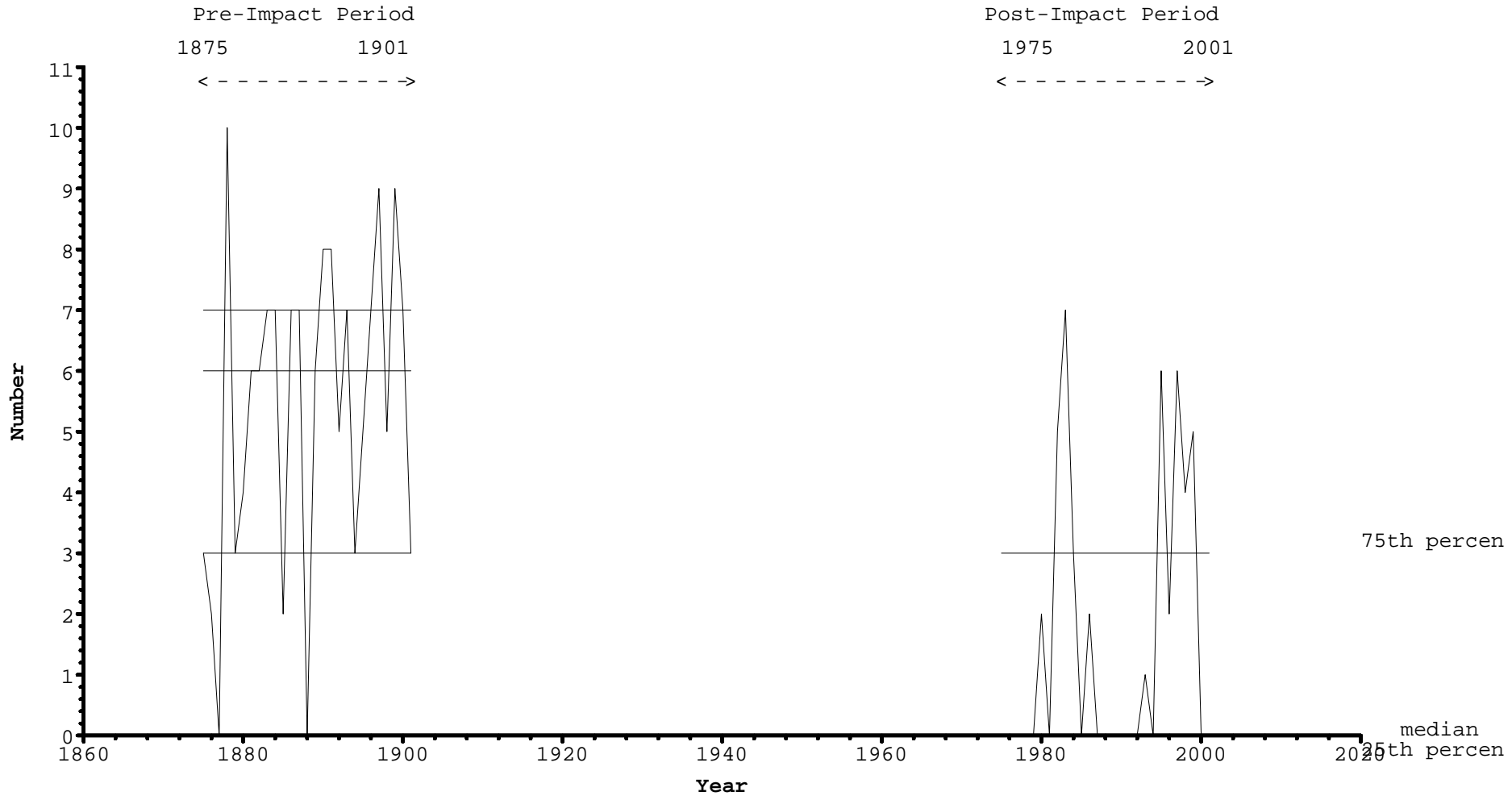


Standard IHA  
**A-4435 South Fork American River Near Camino (Natural), April 2004**  
Low Pulse Duration

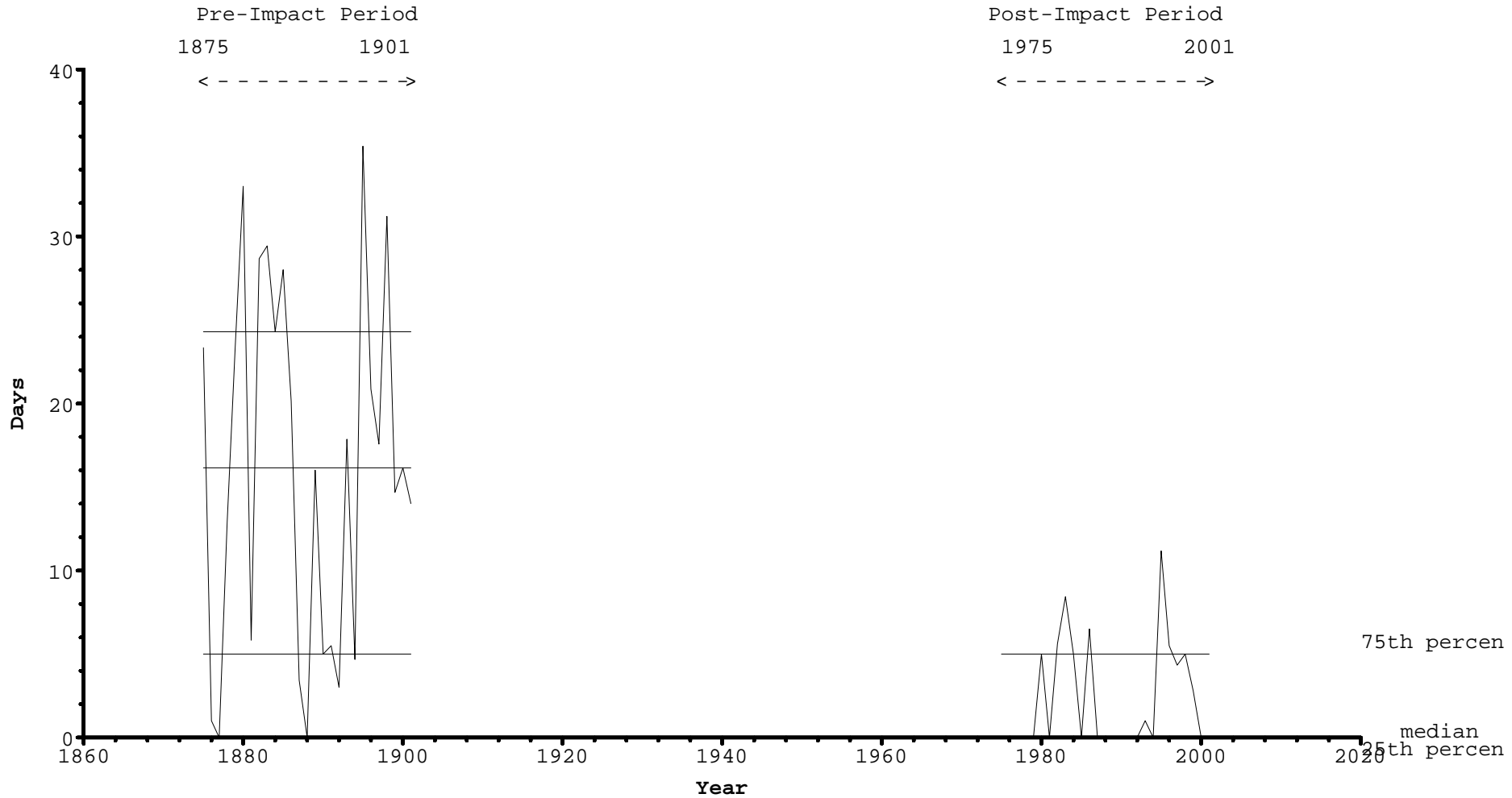


File(s) Used: P:\Framatome-IHA\IHA Apr04\2-GageA-Nat\GA-N.ann, P:\Framatome-IHA\IHA Apr04\2-GageA-Nat\GA-N.baw

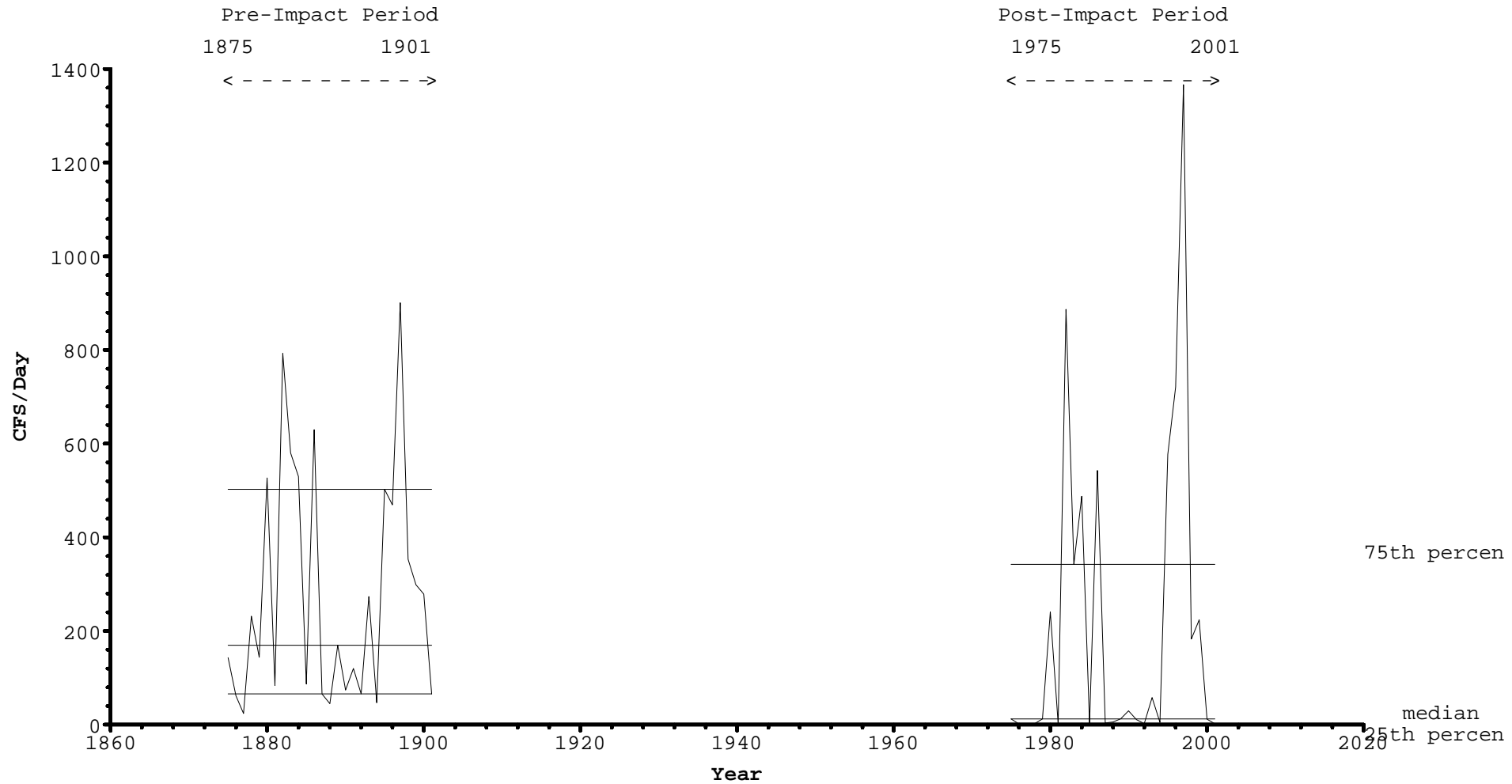
Standard IHA  
A-4435 South Fork American River Near Camino (Natural), April 2004  
High Pulse Count



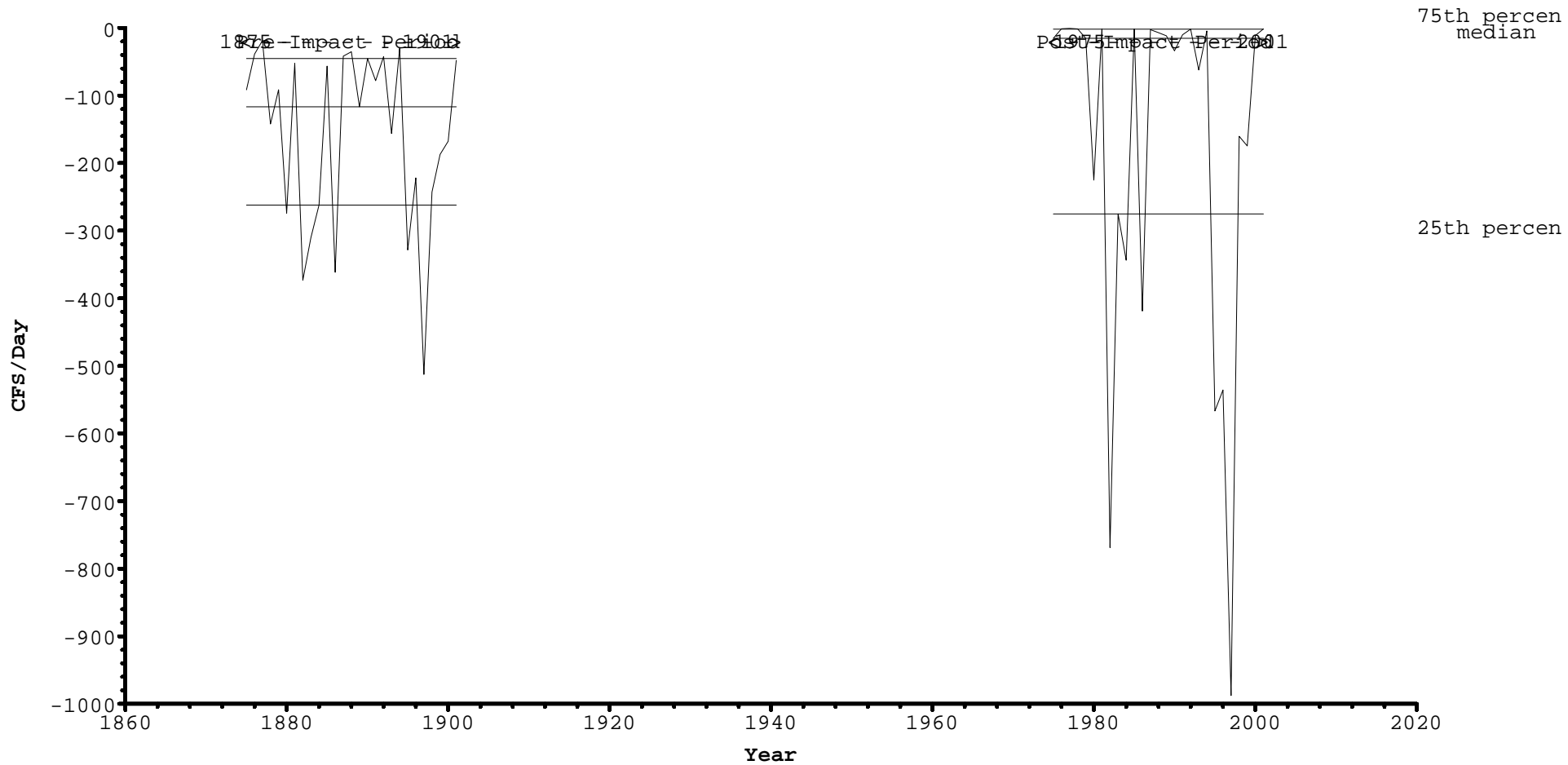
Standard IHA  
A-4435 South Fork American River Near Camino (Natural), April 2004  
High Pulse Duration



Standard IHA  
A-4435 South Fork American River Near Camino (Natural), April 2004  
Rise Rate

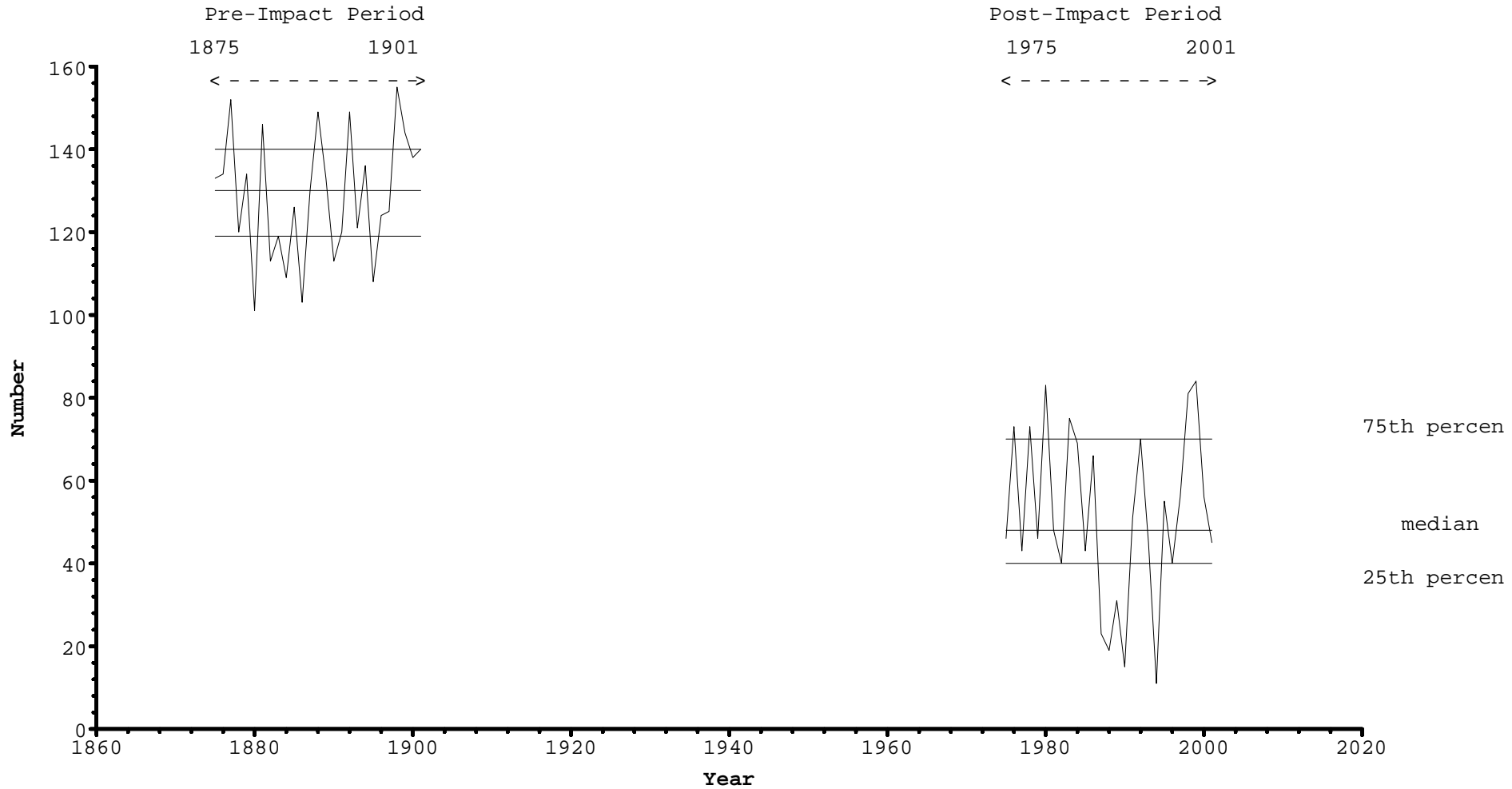


Standard IHA  
A-4435 South Fork American River Near Camino (Natural), April 2004  
Fall Rate



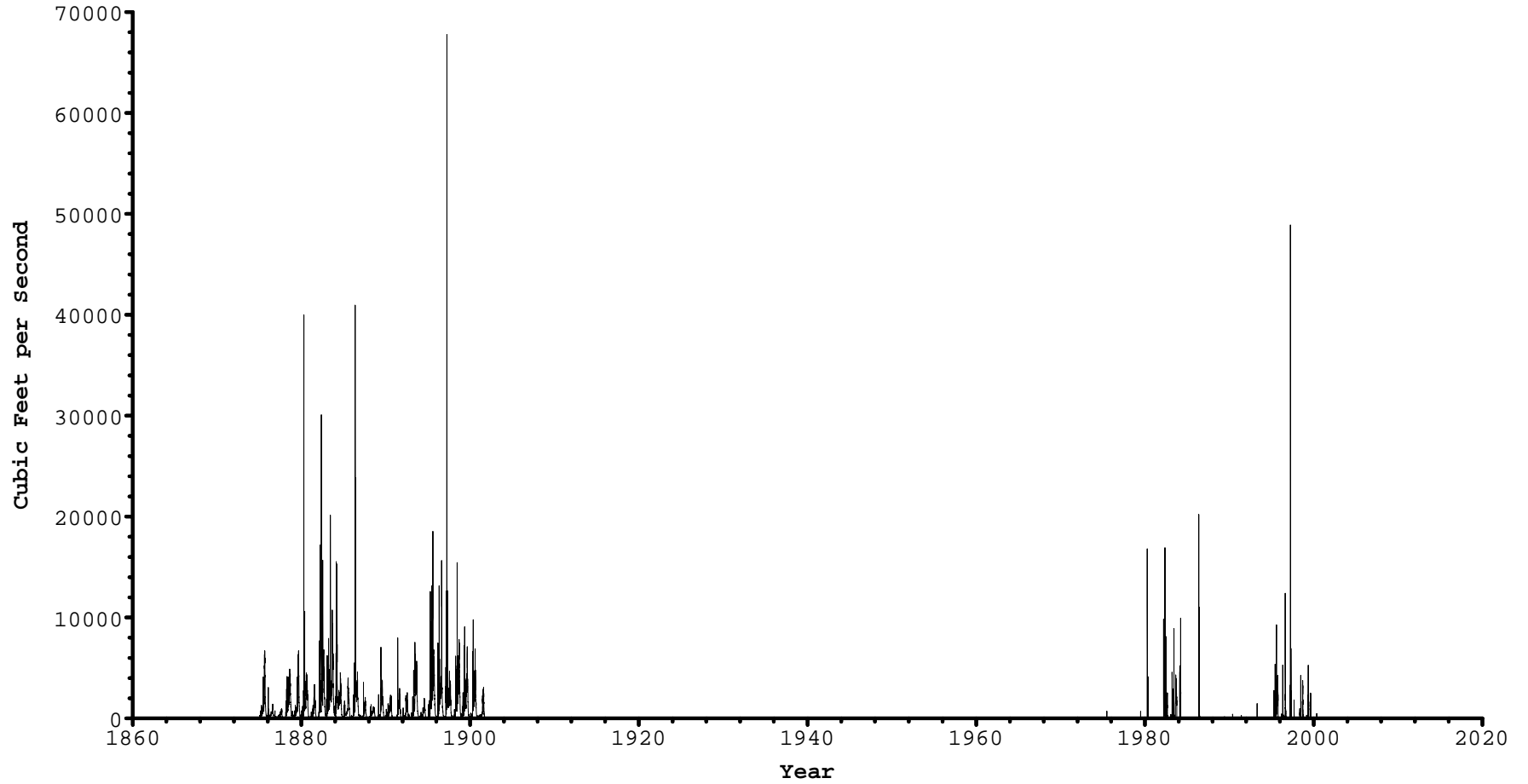
File(s) Used: P:\Framatome-IHA\IHA Apr04\2-GageA-Nat\GA-N.ann, P:\Framatome-IHA\IHA Apr04\2-GageA-Nat\GA-N.baw

Standard IHA  
A-4435 South Fork American River Near Camino (Natural), April 2004  
Reversals





### A-4435 South Fork American River Near Camino (Natural), April 2004



File(s) Used: P:\Framatome-IHA\IHA Apr04\2-GageA-Nat\GA-N.dat

**(3) Gage B - South Fork American River at Chili Bar Res. Proposed Proj 184/UARP (Unregulated) versus 4445 South Fork American River Near Placerville (Regulated)**

**Errors**

No Errors

(3) Gage B - South Fork American River at Chili Bar Res. Proposed Proj 184/UARP (Unregulated) versus 4445 South Fork American River Near Placerville (Regulated)

IHA Annual Summary Statistics

Year	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
1875	202.1	269.6	307.0	452.6	725.6	1299.2	1160.6	4084.3	3350.1	735.4	263.1	242.4	136.7	138.2	147.0	199.5	260.4
1876	439.0	474.3	413.2	312.7	340.6	469.1	655.6	791.1	200.4	102.9	112.8	100.5	59.7	63.1	66.7	76.2	100.7
1877	105.7	117.5	86.0	149.3	174.8	187.2	413.9	516.6	328.8	76.7	28.2	44.9	24.2	24.4	25.3	28.2	38.2
1878	42.2	143.5	723.5	1710.3	1134.7	2316.1	2516.2	3305.0	2647.7	721.2	246.2	327.5	26.6	27.1	28.0	41.9	252.9
1879	205.5	269.6	307.0	452.6	725.6	1299.2	1160.6	4084.3	3350.1	735.4	263.1	242.4	136.7	138.2	128.4	173.2	246.5
1880	249.6	425.9	433.3	5306.2	3822.6	1628.8	2139.5	3037.0	2252.0	991.2	275.1	237.3	110.0	110.3	110.7	163.0	195.2
1881	159.4	195.3	271.2	337.6	616.5	837.4	1501.4	1367.1	408.5	159.4	63.7	112.1	47.9	52.3	56.9	63.5	101.7
1882	186.8	1815.0	2651.1	1426.4	5070.3	2765.6	4920.1	5436.6	2903.0	949.8	340.6	484.7	73.0	81.7	103.7	183.5	404.7
1883	1022.9	1113.9	2185.3	1670.1	3391.0	5286.0	2976.2	5382.6	6722.2	3064.4	776.3	449.4	243.8	247.0	256.5	428.0	548.0
1884	503.0	3910.2	5016.5	2060.7	1440.0	1847.5	1628.0	3146.0	1689.0	488.3	217.6	211.8	148.3	149.9	151.1	168.9	225.2
1885	268.1	811.4	567.0	421.0	563.2	746.3	2268.2	1689.4	536.1	182.9	115.6	216.7	77.2	78.1	80.8	105.1	159.9
1886	187.1	326.5	660.5	1412.2	9493.6	4666.8	2334.0	2863.5	1779.9	447.3	234.2	263.3	106.0	107.6	120.7	187.7	199.7
1887	244.5	188.7	156.8	216.9	563.2	789.7	1167.2	859.9	239.8	129.0	58.0	96.5	56.4	56.5	56.7	57.9	78.2
1888	112.7	161.4	319.9	481.3	406.5	615.5	729.6	678.8	342.9	136.4	56.0	80.7	49.8	51.3	52.3	55.9	71.7
1889	79.2	307.7	253.1	252.7	445.6	3133.7	2666.5	1957.4	1099.2	251.4	159.3	205.1	51.5	52.4	54.6	79.3	165.7
1890	243.8	324.1	222.0	434.1	422.6	1012.7	1441.0	1004.3	637.0	190.0	90.6	135.5	64.9	66.5	67.2	77.2	105.3
1891	101.0	123.1	106.0	111.1	167.7	1087.8	1149.9	1661.8	1069.0	265.7	122.3	147.7	59.9	60.6	62.2	92.2	109.4
1892	160.6	240.1	172.1	196.9	812.9	845.4	1207.8	573.0	207.9	142.6	56.0	100.3	52.1	52.3	52.8	56.0	75.8
1893	120.3	152.0	490.2	1665.4	1353.1	2985.6	2890.1	3927.7	2430.2	680.5	270.5	236.3	49.7	50.7	50.9	112.9	201.8
1894	187.6	205.2	257.6	253.1	417.7	750.4	944.4	979.1	315.8	147.9	57.0	85.3	53.8	54.9	56.0	79.5	159.9
1895	98.5	307.6	532.9	3121.3	1486.0	4710.6	3597.8	5533.5	4840.8	2654.1	603.7	354.9	53.9	62.5	65.7	98.1	303.2
1896	307.0	270.7	866.5	1375.3	3602.2	2675.4	3006.8	4532.3	1862.1	554.6	243.0	249.5	177.9	179.2	178.6	208.0	228.1
1897	212.5	893.7	3925.4	9484.0	2030.9	1902.3	2268.7	2742.0	1332.4	367.6	193.3	175.6	143.3	145.1	144.4	158.7	183.3
1898	191.4	295.2	330.5	1932.8	2520.1	2858.9	2882.1	3831.8	5736.5	2354.2	445.1	370.8	125.2	128.2	134.4	191.4	271.9
1899	294.6	533.3	661.8	1565.9	3153.6	2023.2	2346.0	4110.7	2869.4	658.9	323.2	264.8	200.4	202.6	184.6	200.9	242.3
1900	215.0	287.6	240.2	1241.1	2452.3	1807.2	2392.6	3028.3	1127.9	323.9	176.3	186.0	151.4	151.5	136.1	164.7	179.9
1901	197.1	247.5	270.9	275.9	463.4	986.3	1273.3	1636.2	286.3	164.7	74.3	106.8	69.1	69.5	70.7	72.9	113.8
1975	591.6	706.5	992.9	1180.2	1064.8	1406.1	1874.0	3506.5	2784.8	1182.6	1041.4	1054.3	114.0	371.0	505.4	531.5	756.3
1976	579.4	784.4	1105.0	748.7	647.7	530.6	522.2	733.7	492.6	938.5	958.6	576.6	108.0	109.6	246.6	407.6	331.2
1977	400.9	271.3	320.0	188.3	124.7	123.9	255.1	294.7	228.1	88.2	141.5	244.0	15.0	15.0	19.9	45.3	131.8
1978	275.3	106.2	485.3	1340.7	887.8	2023.8	2833.3	3367.4	2226.1	986.3	736.5	541.8	27.0	29.0	30.4	102.5	264.0
1979	593.6	706.5	992.9	1180.2	1064.8	1406.1	1874.0	3506.5	2784.8	1182.6	1041.4	1054.3	114.0	371.0	505.4	572.5	613.5
1980	588.0	477.0	798.8	4027.5	3299.7	2343.2	2706.3	3075.2	1964.4	1584.5	965.3	1327.6	109.0	119.3	281.4	443.0	604.1
1981	657.5	638.6	885.0	760.2	810.0	993.2	987.6	907.7	583.1	849.5	841.9	758.5	98.0	127.3	293.9	426.2	609.6
1982	430.6	1275.5	2330.6	2388.7	4370.0	3413.9	5381.7	5166.8	3511.0	1723.1	1310.6	1134.2	110.0	111.0	200.0	394.1	1058.4
1983	877.9	1846.8	2601.9	2221.0	3790.4	5561.3	4278.7	5443.9	6496.0	3648.4	1483.4	1122.6	324.0	397.3	456.0	845.1	1120.1
1984	934.9	3806.0	4632.6	2974.5	2209.0	2363.6	2491.0	2410.0	1482.7	866.5	1107.6	1003.5	396.0	568.0	695.1	658.3	813.4
1985	645.9	942.8	842.0	743.7	1318.4	1017.8	1533.3	1231.7	582.6	963.0	917.6	888.7	250.0	339.0	419.3	455.3	585.1
1986	452.9	452.8	1082.6	1461.2	6612.9	5067.4	2993.3	3074.5	2686.0	1182.7	1078.9	1052.3	125.0	135.0	273.1	376.3	629.9
1987	522.9	639.2	729.0	409.6	846.4	646.8	878.3	859.7	774.2	760.8	722.5	447.4	108.0	152.0	334.9	223.5	198.1
1988	204.3	107.4	464.2	554.0	743.3	650.3	546.1	474.3	432.6	409.3	408.2	453.9	101.0	101.0	102.6	107.4	251.7
1989	216.3	290.8	414.7	415.8	539.1	2329.5	1836.4	1258.2	1059.4	1012.1	1021.6	948.3	107.0	118.0	121.9	184.4	304.6
1990	306.2	323.2	499.2	582.6	869.7	930.8	772.9	666.8	932.8	916.9	680.4	680.4	98.0	110.7	127.7	291.2	373.2
1991	516.2	498.2	524.7	426.1	425.1	862.5	874.0	1103.1	811.2	622.8	712.0	721.8	114.0	154.0	325.3	379.0	450.0
1992	532.7	360.8	527.9	568.2	822.2	661.7	873.6	670.0	457.2	456.7	521.4	411.0	111.0	111.0	111.7	330.7	386.0
1993	388.3	373.4	631.5	1609.4	1369.0	2552.6	2712.7	3371.9	2731.3	1175.5	985.2	843.6	133.0	207.7	232.4	356.0	464.0
1994	480.6	581.3	702.8	506.8	656.2	596.3	733.0	716.4	531.6	460.4	459.9	462.2	165.0	243.0	334.3	430.4	423.4
1995	443.3	365.4	465.7	2743.8	1971.8	4452.9	3805.0	6159.4	5547.3	3240.3	1387.2	1401.3	156.0	160.3	160.9	422.6	422.6
1996	850.6	595.7	738.4	1214.9	2811.8	3121.0	3142.0	4824.8	2151.1	953.4	831.7	865.0	328.0	392.0	482.7	540.4	697.4
1997	740.1	812.0	3563.1	9672.6	3550.4	2649.7	1831.7	1814.8	1698.0	912.4	915.5	1260.3	198.0	230.3	284.3	590.6	631.5
1998	694.2	489.8	667.4	1943.9	3078.2	3161.3	3338.3	3728.1	5472.0	3163.2	1719.0	1369.0	145.0	177.7	397.9	466.6	603.9
1999	554.4	657.3	1071.5	1240.8	3261.4	3012.6	2921.7	3515.5	2536.0	1242.7	1502.7	1164.6	154.0	275.0	354.1	553.7	742.9
2000	677.7	711.5	777.0	1148.2	2242.2	2124.7	1851.4	2399.0	1588.8	1037.1	1371.5	1196.7	154.0	186.7	238.7	324.7	622.4
2001	404.4	1092.9	1217.9	543.1	477.4	726.0	943.7	1072.9	353.3	344.7	298.2	205.9	128.0	129.0	129.3	205.9	273.0

(3) Gage B - South Fork American River at Chili Bar Res. Proposed Proj 184/UARP (Unregulated) versus 4445 South Fork American River Near Placerville (Regulated)

IHA Annual Summary Statistics (Cont)

Year	1-day max	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	LRise rate	Fall rate	Reversals
1875	6565.4	6099.7	5778.2	5065.6	2953.7	0.0	0.1	276.0	85.0	8.0	4.9	4.0	19.3	160.3	-108.6	128.0
1876	2866.3	1553.9	1096.5	961.6	649.5	0.0	0.2	223.0	300.0	6.0	17.7	1.0	1.0	63.2	-36.0	134.0
1877	746.6	703.0	677.9	588.1	432.8	0.0	0.1	227.0	148.0	8.0	22.1	0.0	0.0	21.4	-17.3	146.0
1878	5288.6	4479.4	4002.5	3544.7	2966.9	0.0	0.0	285.0	116.0	3.0	11.3	11.0	12.8	255.4	-157.3	110.0
1879	6565.4	6099.7	5778.2	5065.6	2953.7	0.0	0.1	276.0	85.0	8.0	4.8	4.0	19.3	160.3	-109.1	128.0
1880	41800.1	30182.7	17834.6	5505.5	3628.1	0.0	0.1	279.0	13.0	4.0	2.5	4.0	34.0	545.4	-312.1	99.0
1881	2956.0	2788.5	2408.3	1761.7	1463.3	0.0	0.1	243.0	122.0	5.0	26.6	5.0	4.4	83.3	-55.7	134.0
1882	40158.7	24683.3	14262.4	6281.7	4899.7	0.0	0.0	275.0	47.0	3.0	4.0	5.0	35.2	944.6	-437.5	107.0
1883	24065.8	14478.4	9585.3	7849.7	5338.9	0.0	0.1	287.0	73.0	0.0	0.0	9.0	23.7	704.2	-383.8	113.0
1884	18906.8	17083.1	12100.0	5423.7	3730.3	0.0	0.1	238.0	360.0	1.0	32.0	8.0	21.3	620.7	-306.1	111.0
1885	3738.0	3567.2	3229.1	2415.5	1603.7	0.0	0.1	240.0	105.0	8.0	9.9	5.0	10.6	89.3	-55.8	120.0
1886	52166.6	45680.8	28507.2	11441.8	5508.7	0.0	0.1	278.0	48.0	5.0	2.2	6.0	23.8	801.0	-397.5	103.0
1887	4065.6	2206.2	1523.0	1266.3	964.1	0.0	0.2	224.0	44.0	5.0	34.0	5.0	1.8	71.6	-46.0	132.0
1888	1577.5	989.2	925.1	763.0	678.9	0.0	0.2	240.0	5.0	7.0	17.1	1.0	1.0	49.7	-39.7	130.0
1889	7099.7	5675.1	4746.9	3440.3	2622.7	0.0	0.1	276.0	68.0	7.0	10.3	5.0	16.6	198.5	-128.6	136.0
1890	2170.1	1803.6	1606.8	1441.0	1174.1	0.0	0.1	227.0	152.0	6.0	16.7	8.0	2.1	85.8	-48.2	122.0
1891	8475.2	4520.3	2471.8	1790.3	1335.2	0.0	0.1	280.0	64.0	7.0	29.0	6.0	5.2	127.4	-81.0	120.0
1892	3164.0	2446.5	1722.7	1207.8	1028.2	0.0	0.1	233.0	51.0	13.0	13.2	3.0	2.0	71.3	-46.8	139.0
1893	7885.4	6245.1	4878.5	3955.7	3533.1	0.0	0.0	286.0	77.0	4.0	12.5	7.0	19.1	340.1	-179.3	116.0
1894	1663.4	1595.8	1469.7	1172.8	901.2	0.0	0.2	228.0	110.0	7.0	18.1	2.0	3.5	49.8	-3.0	132.0
1895	19304.5	14511.9	10770.1	5760.7	4934.8	0.0	0.0	276.0	122.0	5.0	2.8	5.0	36.0	574.2	-362.4	114.0
1896	16093.5	12921.7	8791.0	4753.3	3461.4	0.0	0.1	279.0	137.0	5.0	7.0	6.0	24.8	515.1	-263.6	120.0
1897	75832.0	52347.5	29219.6	10394.9	5282.2	0.0	0.1	258.0	2.0	4.0	17.8	10.0	16.7	1060.8	-593.9	134.0
1898	16057.4	10524.4	7129.5	5736.5	4350.5	0.0	0.1	275.0	84.0	5.0	4.4	7.0	23.6	455.6	-294.8	151.0
1899	12367.9	9131.6	6098.3	4263.2	3141.7	0.0	0.1	238.0	40.0	5.0	2.6	9.0	16.2	381.8	-241.4	136.0
1900	12732.0	7739.7	4903.3	3083.7	2510.7	0.0	0.1	278.0	45.0	6.0	15.2	7.0	17.7	340.4	-187.0	138.0
1901	2608.4	2513.9	2373.1	2013.8	1319.0	0.0	0.1	242.0	118.0	9.0	13.2	2.0	16.5	76.9	-45.8	133.0
1975	4020.0	3946.7	3940.0	3820.0	2835.4	0.0	0.4	302.0	85.0	1.0	1.0	23.0	4.8	270.8	-260.9	182.0
1976	3010.0	1495.3	1191.4	1111.3	911.5	0.0	0.3	290.0	301.0	1.0	5.0	2.0	1.0	202.0	-197.3	204.0
1977	1290.0	913.0	500.0	410.2	331.1	0.0	0.1	247.0	291.0	61.0	3.6	0.0	0.0	239.5	-215.4	158.0
1978	4730.0	4196.7	4014.3	3595.7	2920.0	0.0	0.0	331.0	17.0	15.0	4.0	15.0	8.7	328.0	-281.5	176.0
1979	4020.0	3946.7	3940.0	3820.0	2835.4	0.0	0.4	302.0	85.0	1.0	1.0	23.0	4.8	270.4	-260.9	182.0
1980	19300.0	15876.7	10504.3	4342.3	3348.2	0.0	0.2	289.0	14.0	7.0	1.9	17.0	11.9	429.8	-419.9	177.0
1981	3630.0	2413.3	1599.9	1155.9	1285.9	0.0	0.4	25.0	86.0	5.0	1.8	6.0	2.3	260.3	-255.3	181.0
1982	21700.0	14510.0	9117.1	5896.7	4875.1	0.0	0.1	305.0	47.0	3.0	2.7	17.0	13.8	563.7	-488.9	157.0
1983	15800.0	10810.0	7755.7	6826.3	5542.1	0.0	0.1	282.0	73.0	0.0	0.0	12.0	23.5	517.3	-370.5	140.0
1984	15500.0	12853.3	9974.3	5239.7	3934.7	0.0	0.3	165.0	361.0	0.0	0.0	13.0	16.7	471.7	-446.5	195.0
1985	3420.0	2563.3	2114.3	1575.0	1332.0	0.0	0.4	317.0	39.0	0.0	0.0	11.0	3.4	200.7	-191.1	199.0
1986	28200.0	26733.3	17341.4	8532.7	4975.8	0.0	0.1	310.0	48.0	5.0	1.6	9.0	17.8	491.2	-405.9	168.0
1987	2010.0	1730.0	1265.1	999.1	846.3	0.0	0.5	261.0	73.0	9.0	1.6	3.0	1.7	200.8	-204.5	216.0
1988	1540.0	1356.7	956.6	764.5	669.8	0.0	0.2	325.0	350.0	6.0	11.2	1.0	1.0	133.5	-121.8	185.0
1989	5420.0	3990.0	3528.6	2601.7	1833.4	0.0	0.1	13.0	85.0	14.0	2.9	11.0	5.9	282.1	-293.4	208.0
1990	1790.0	1463.3	1345.7	975.0	863.7	0.0	0.2	29.0	219.0	16.0	2.4	4.0	1.3	224.0	-241.8	208.0
1991	2950.0	2152.0	1372.7	1164.2	961.9	0.0	0.5	283.0	65.0	10.0	1.5	6.0	1.2	220.6	-218.6	216.0
1992	2580.0	1933.3	1486.1	931.4	834.8	0.0	0.2	308.0	52.0	16.0	2.3	5.0	1.2	203.3	-198.9	229.0
1993	6330.0	5176.7	3832.9	3408.7	3099.8	0.0	0.2	279.0	22.0	5.0	1.2	10.0	15.0	285.3	-263.0	202.0
1994	1210.0	1032.3	893.6	782.6	691.9	0.0	0.6	278.0	132.0	1.0	2.0	0.0	0.0	148.3	-146.2	221.0
1995	14800.0	13066.7	9830.0	6201.3	5395.1	0.0	0.1	363.0	123.0	10.0	2.4	18.0	13.2	438.1	-398.4	178.0
1996	16900.0	13400.0	8890.0	4883.7	3745.8	0.0	0.3	6.0	137.0	0.0	0.0	9.0	16.6	390.7	-325.7	185.0
1997	57100.0	40300.0	24671.4	10351.0	5759.0	0.0	0.1	313.0	2.0	1.0	1.0	18.0	10.6	691.8	-637.0	183.0
1998	7260.0	6690.0	6531.4	5647.7	4342.2	0.0	0.2	324.0	85.0	4.0	1.5	12.0	19.6	386.3	-331.1	203.0
1999	8510.0	5873.3	4430.0	3701.0	3141.9	0.0	0.2	275.0	40.0	2.0	0.5	16.0	11.8	386.9	-371.3	208.0
2000	6480.0	5450.0	4035.7	2727.7	2234.0	0.0	0.2	9.0	45.0	2.0	2.0	28.0	5.5	362.5	-370.9	187.0
2001	2330.0	1973.3	1614.3	1278.2	973.5	0.0	0.2	268.0	347.0	19.0	3.4	14.0	1.8	245.7	-231.7	187.0

(3) Gage B - South Fork American River at Chili Bar Res. Proposed Proj 184/UARP (Unregulated) versus 4445 South Fork American River Near Placerville (Regulated)

Non-Parametric IHA Scorecard

(3) Gage B - 4445 South Fork American River Near Placerville (Unregulated), April 2004

Pre-impact period: 1875-1901 (27 years)

Post-impact period: 1975-2001 (27 years)

Watershed area	1.00	
Mean annual flow	1199.96	1432.95
Mean flow/area	1199.96	1432.95
Annual C. V.	.88	.58
Flow predictability	.40	.42
Constancy/predictability	.50	.71
% of floods in 60d period	.39	.39
flood-free season	56.00	18.00

	MEDIAN		COEFF. of DISP.		DEVIATION FACTOR		SIGNIFICANCE COUNT	
	Pre	Post	Pre	Post	Medians	C.V.	Medians	C.V.
Parameter Group #1								
October	197.1	532.7	.66	.48	1.70	.28	.00	.47
November	287.6	595.7	.97	.70	1.07	.28	.00	.39
December	330.5	777.0	1.24	.72	1.35	.42	.00	.24
January	481.3	1180.2	2.90	1.18	1.45	.59	.02	.17
February	812.9	1064.8	2.55	2.27	.31	.11	.56	.76
March	1628.8	2023.8	1.18	1.13	.24	.05	.67	.91
April	2139.4	1851.4	.70	1.10	.13	.57	.58	.06
May	2863.4	2399.0	1.08	1.10	.16	.03	.81	.96
June	1332.4	1588.8	1.90	1.35	.19	.29	.73	.54
July	367.6	963.0	1.57	.44	1.62	.72	.00	.10
August	193.3	958.5	1.01	.40	3.96	.60	.00	.28
September	211.8	888.7	.74	.67	3.20	.10	.00	.82
Parameter Group #2								
1-day minimum	69.1	114.0	1.22	.42	.65	.66	.00	.06
3-day minimum	69.5	154.0	1.23	1.06	1.21	.14	.00	.72
7-day minimum	70.7	281.4	1.13	.95	2.98	.16	.00	.60
30-day minimum	105.1	394.1	1.14	.61	2.75	.47	.00	.10
90-day minimum	183.3	585.1	.79	.51	2.19	.35	.00	.27
1-day maximum	7099.7	4730.0	2.25	2.73	.33	.22	.40	.54
3-day maximum	6099.7	3990.0	1.97	2.74	.35	.39	.28	.30
7-day maximum	4878.5	3940.0	1.61	1.91	.19	.18	.39	.54
30-day maximum	3544.7	3408.7	1.15	1.21	.04	.06	.85	.82
90-day maximum	2953.7	2835.4	.87	1.07	.04	.23	.85	.50
Number of zero days	.0	.0	.00	.00	999999.00	999999.00	.00	.00
Base flow	.1	.2	.62	1.16	.64	.89	.00	.17
Parameter Group #3								
Date of minimum	275.0	305.0	.11	.14	.16	.30	.01	.51
Date of maximum	73.0	48.0	.20	.19	.14	.01	.22	.97
Parameter Group #4								
Low pulse count	5.0	5.0	.60	1.80	.00	2.00	.49	.00
Low pulse duration	12.5	1.8	1.07	.93	.86	.13	.05	.78
High pulse count	5.0	11.0	.60	1.09	1.20	.82	.00	.06
High pulse duration	16.6	5.5	1.21	2.29	.67	.89	.19	.27
The low pulse threshold is	206.90							
The high pulse level is	1471.20							
Parameter Group #5								
Rise rate	198.5	282.1	2.36	.74	.42	.69	.10	.05
Fall rate	-128.6	-263.0	-2.02	-.59	1.05	.71	.00	.07
Number of reversals	128.0	187.0	.16	.16	.46	.03	.00	.94

(3) Gage B - South Fork American River at Chili Bar Res. Proposed Proj 184/UARP (Unregulated) versus 4445 South Fork American River Near Placerville (Regulated)

Variance Data, Box and Whisker Format

	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
<b>Pre-Impact Distribution</b>																	
1-day min	42.2	117.5	86.0	111.1	167.7	187.2	413.9	516.6	200.4	76.7	28.2	44.9	24.2	24.4	25.3	28.2	38.2
25 pctile	120.3	195.3	253.1	275.9	445.6	837.4	1160.6	1004.3	342.9	159.4	74.3	106.8	52.1	52.4	56.0	63.5	101.7
Median	197.1	287.6	330.5	481.3	812.9	1628.8	2139.5	2863.5	1332.4	367.6	193.3	211.8	69.1	69.5	70.7	105.1	183.3
75 pctile	249.6	474.3	661.8	1670.1	2520.1	2765.6	2666.5	4084.3	2869.4	735.4	270.5	263.3	136.7	138.2	136.1	183.5	246.5
1-day max	1022.9	3910.2	5016.5	9484.0	9493.6	5286.0	4920.1	5533.5	6722.2	3064.4	776.3	484.7	243.8	247.0	256.5	428.0	548.0
<b>Post-Impact Distribution</b>																	
1-day min	204.3	106.2	320.0	188.3	124.7	123.9	255.1	294.7	228.1	88.2	141.5	205.9	15.0	15.0	19.9	45.3	131.8
25 pctile	404.4	365.4	524.7	554.0	656.2	726.0	878.3	859.7	582.6	760.8	722.5	541.8	108.0	111.0	129.3	291.2	331.2
Median	532.7	595.7	777.0	1180.2	1064.8	2023.8	1851.4	2399.0	1588.8	963.0	958.6	888.7	114.0	154.0	281.4	394.1	585.1
75 pctile	657.5	784.4	1082.6	1943.9	3078.2	3012.6	2921.7	3506.5	2731.3	1182.7	1107.6	1134.2	156.0	275.0	397.9	531.5	631.5
1-day max	934.9	3806.0	4632.6	9672.6	6612.9	5561.3	5381.7	6159.4	6496.0	3648.4	1719.0	1401.3	396.0	568.0	695.1	845.1	1120.1

	1-day max	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	LRise rate	Fall rate	Reversals
<b>Pre-Impact Distribution</b>																
1-day min	746.6	703.0	677.9	588.1	432.8	0.0	0.0	223.0	2.0	0.0	0.0	0.0	0.0	21.4	-593.9	99.0
25 pctile	2956.0	2446.5	1722.7	1441.0	1174.1	0.0	0.1	238.0	44.0	4.0	4.4	4.0	3.5	76.9	-306.1	114.0
Median	7099.7	6099.7	4878.5	3544.7	2953.7	0.0	0.1	275.0	73.0	5.0	12.5	5.0	16.6	198.5	-128.6	128.0
75 pctile	18906.8	14478.4	9585.3	5505.5	3730.3	0.0	0.1	278.0	116.0	7.0	17.8	7.0	23.6	545.4	-46.8	134.0
1-day max	75832.0	52347.5	29219.6	11441.8	5508.7	0.0	0.2	287.0	360.0	13.0	34.0	11.0	36.0	1060.8	-17.3	151.0
<b>Post-Impact Distribution</b>																
1-day min	1210.0	913.0	500.0	410.2	331.1	0.0	0.0	6.0	2.0	0.0	0.0	0.0	0.0	133.5	-637.0	140.0
25 pctile	2580.0	1933.3	1372.7	1111.3	911.5	0.0	0.1	279.0	14.0	1.0	1.0	5.0	1.3	220.6	-371.3	178.0
Median	4730.0	3990.0	3940.0	3408.7	2835.4	0.0	0.2	305.0	48.0	5.0	1.8	11.0	5.5	282.1	-263.0	187.0
75 pctile	15500.0	12853.3	8890.0	5239.7	3934.7	0.0	0.4	331.0	85.0	10.0	2.7	17.0	13.8	429.8	-215.4	208.0
1-day max	57100.0	40300.0	24671.4	10351.0	5759.0	0.0	0.6	363.0	361.0	61.0	11.2	28.0	23.5	691.8	-121.8	229.0

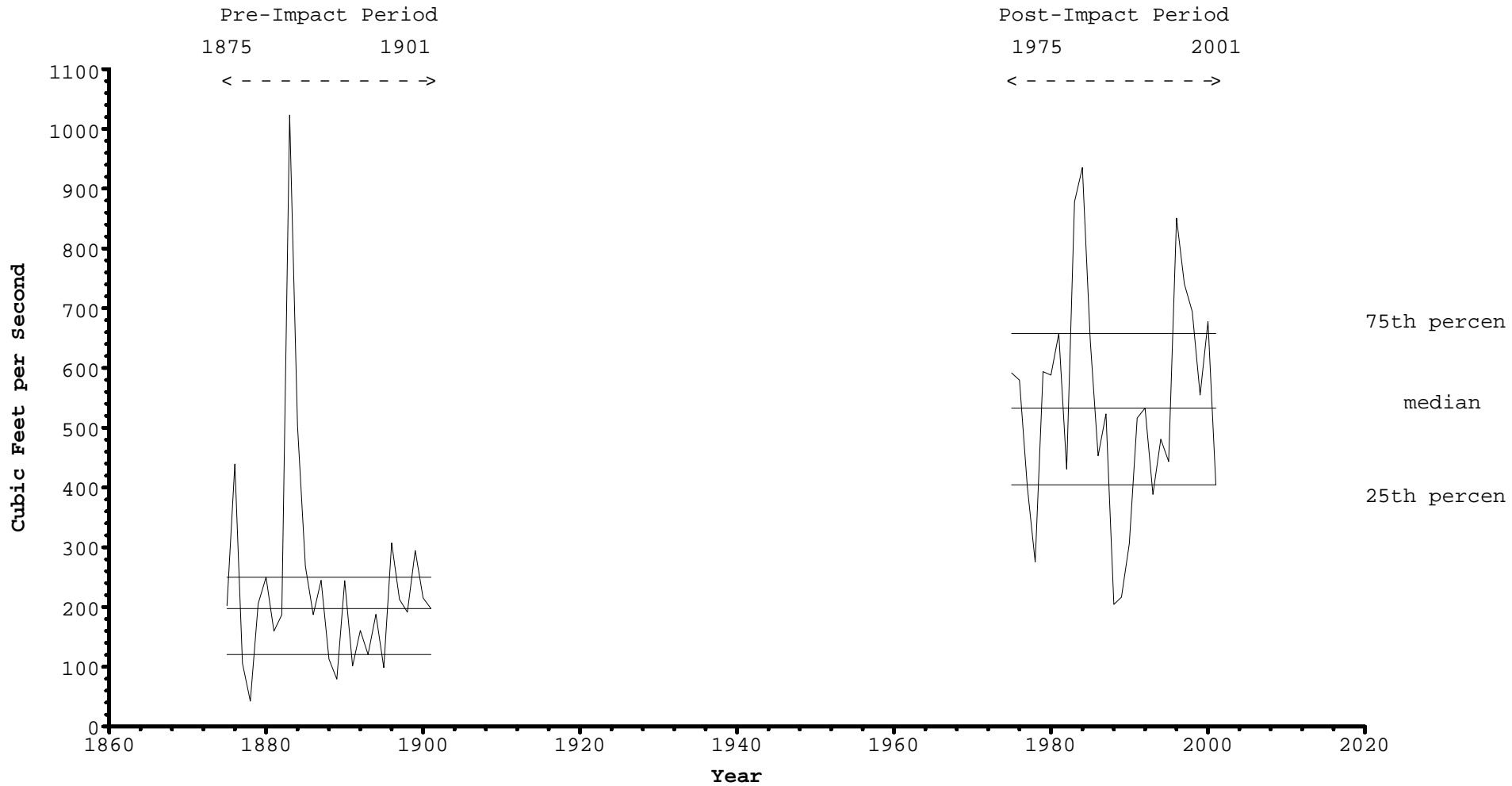
(3) Gage B - South Fork American River at Chili Bar Res. Proposed Proj 184/UARP (Unregulated) versus 4445 South Fork American River Near Placerville (Regulated)

IHA Percentile Data

(3) Gage B - 4445 South Fork American River Near Placerville (Unregulated), April 2004  
 Pre-impact period: 1875-1901 (27 years)      Post-impact period: 1975-2001 (27 years)

	Pre-Impact					Post-Impact						
	10%	25%	50%	75%	90%	(75-25)/50	10%	25%	50%	75%	90%	(75-25)/50
<b>Parameter Group #1</b>												
October	94.62	120.33	197.11	249.62	451.80	.66	263.46	404.35	532.71	657.52	856.04	.48
November	139.46	195.25	287.58	474.27	1254.15	.97	238.54	365.40	595.73	784.37	1389.75	.70
December	146.66	253.05	330.54	661.82	2905.96	1.24	454.28	524.74	777.03	1082.58	2794.17	.72
January	187.40	275.93	481.29	1670.09	3558.22	2.90	414.59	553.97	1180.16	1943.94	3185.11	1.18
February	307.41	445.59	812.92	2520.13	4072.15	2.55	466.94	656.21	1064.75	3078.21	3906.29	2.27
March	586.24	837.38	1628.79	2765.56	4675.52	1.18	583.15	726.00	2023.81	3012.58	4575.81	1.13
April	714.80	1160.61	2139.45	2666.50	3125.02	.70	541.29	878.33	1851.40	2921.67	3899.73	1.10
May	657.63	1004.25	2863.45	4084.30	5393.40	1.08	630.84	859.74	2399.03	3506.45	5222.19	1.10
June	233.45	342.86	1332.39	2869.41	5019.93	1.90	416.77	582.57	1588.80	2731.33	5487.07	1.35
July	123.76	159.41	367.63	735.42	2414.14	1.57	396.36	760.84	963.00	1182.71	3178.65	.44
August	55.99	74.25	193.34	270.48	476.82	1.01	386.23	722.52	958.55	1107.61	1487.24	.40
September	84.36	106.83	211.80	263.26	386.48	.74	377.61	541.83	888.73	1134.17	1335.89	.67
<b>Parameter Group #2</b>												
1-day minimum	43.64	52.10	69.10	136.70	182.40	1.22	83.80	108.00	114.00	156.00	324.80	.42
3-day minimum	45.97	52.43	69.53	138.17	183.90	1.23	86.60	111.00	154.00	275.00	393.07	1.06
7-day minimum	46.34	56.01	70.71	136.09	179.80	1.13	88.14	129.29	281.43	397.86	505.43	.95
30-day minimum	53.11	63.47	105.13	183.45	202.32	1.14	106.40	291.23	394.13	531.53	604.14	.61
90-day minimum	75.02	101.72	183.29	246.53	323.52	.79	241.00	331.20	585.06	631.52	862.39	.51
1-day maximum	1646.22	2956.00	7099.70	18906.80	43873.39	2.25	1490.00	2580.00	4730.00	15500.00	22999.99	2.73
3-day maximum	1440.95	2446.50	6099.67	14478.40	33282.28	1.97	1291.80	1933.33	3990.00	12853.33	18047.99	2.74
7-day maximum	1062.25	1722.66	4878.50	9585.33	19969.13	1.61	943.97	1372.71	3940.00	8890.00	11871.71	1.91
30-day maximum	921.88	1441.00	3544.70	5505.51	8358.73	1.15	779.01	1111.27	3408.67	5239.67	7167.60	1.21
90-day maximum	672.99	1174.13	2953.74	3730.33	5293.55	.87	687.45	911.50	2835.44	3934.67	5424.51	1.07
Number of zero days	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Base flow	.03	.06	.12	.14	.15	.62	.07	.13	.19	.35	.48	1.16
<b>Parameter Group #3</b>												
Date of minimum	226.40	238.00	275.00	278.00	285.20	.11	258.20	279.00	305.00	331.00	15.40	.14
Date of maximum	.40	44.00	73.00	116.00	139.20	.20	337.80	14.00	48.00	85.00	133.00	.19
<b>Parameter Group #4</b>												
Low pulse count	2.60	4.00	5.00	7.00	8.20	.60	.00	1.00	5.00	10.00	16.60	1.80
Low pulse duration	2.44	4.40	12.50	17.75	29.60	1.07	.00	1.00	1.80	2.67	4.20	.93
High pulse count	1.00	4.00	5.00	7.00	9.20	.60	.80	5.00	11.00	17.00	23.00	1.09
High pulse duration	1.00	3.50	16.60	23.57	34.24	1.21	.80	1.25	5.50	13.82	18.14	2.29
<b>Parameter Group #5</b>												
Rise rate	49.75	76.89	198.47	545.38	829.68	2.36	190.20	220.57	282.12	429.81	526.55	.74
Fall rate	-405.52	-306.13	-128.61	-46.80	-34.83	-2.02	-454.94	-371.33	-263.03	-215.42	-182.15	-.59
Number of reversals	106.20	114.00	128.00	134.00	140.40	.16	157.80	178.00	187.00	208.00	217.00	.16

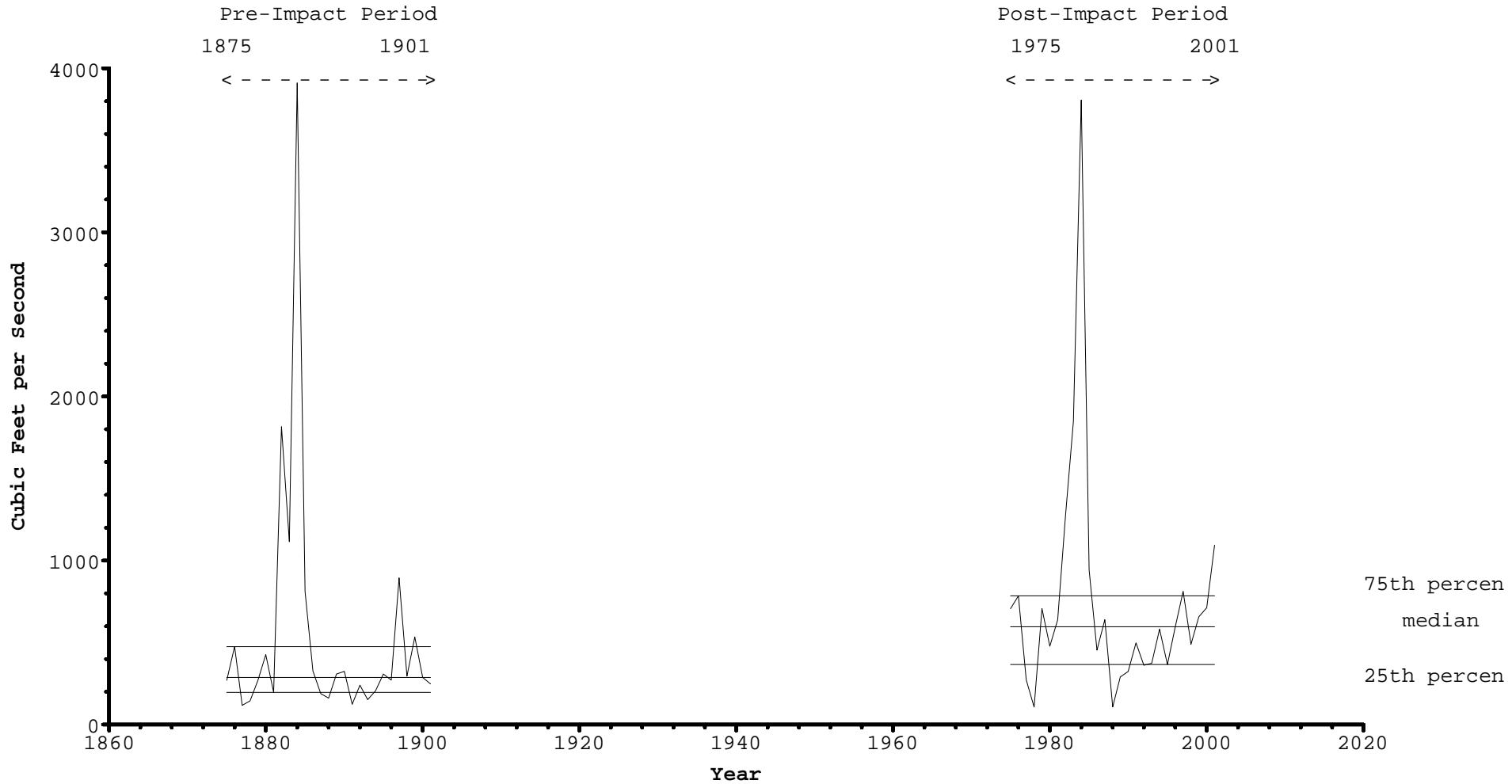
Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
Average flow for October



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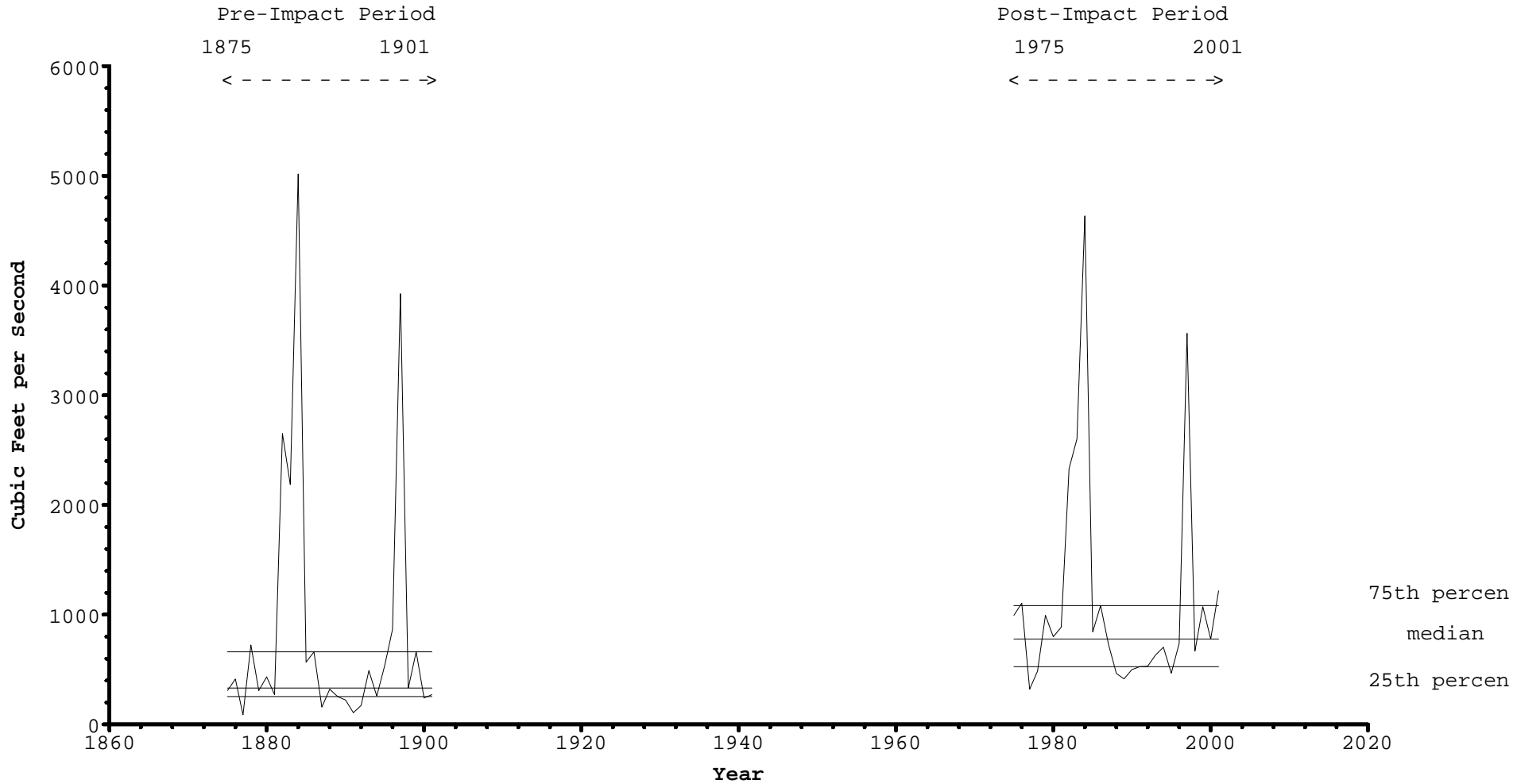


Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
Average flow for November



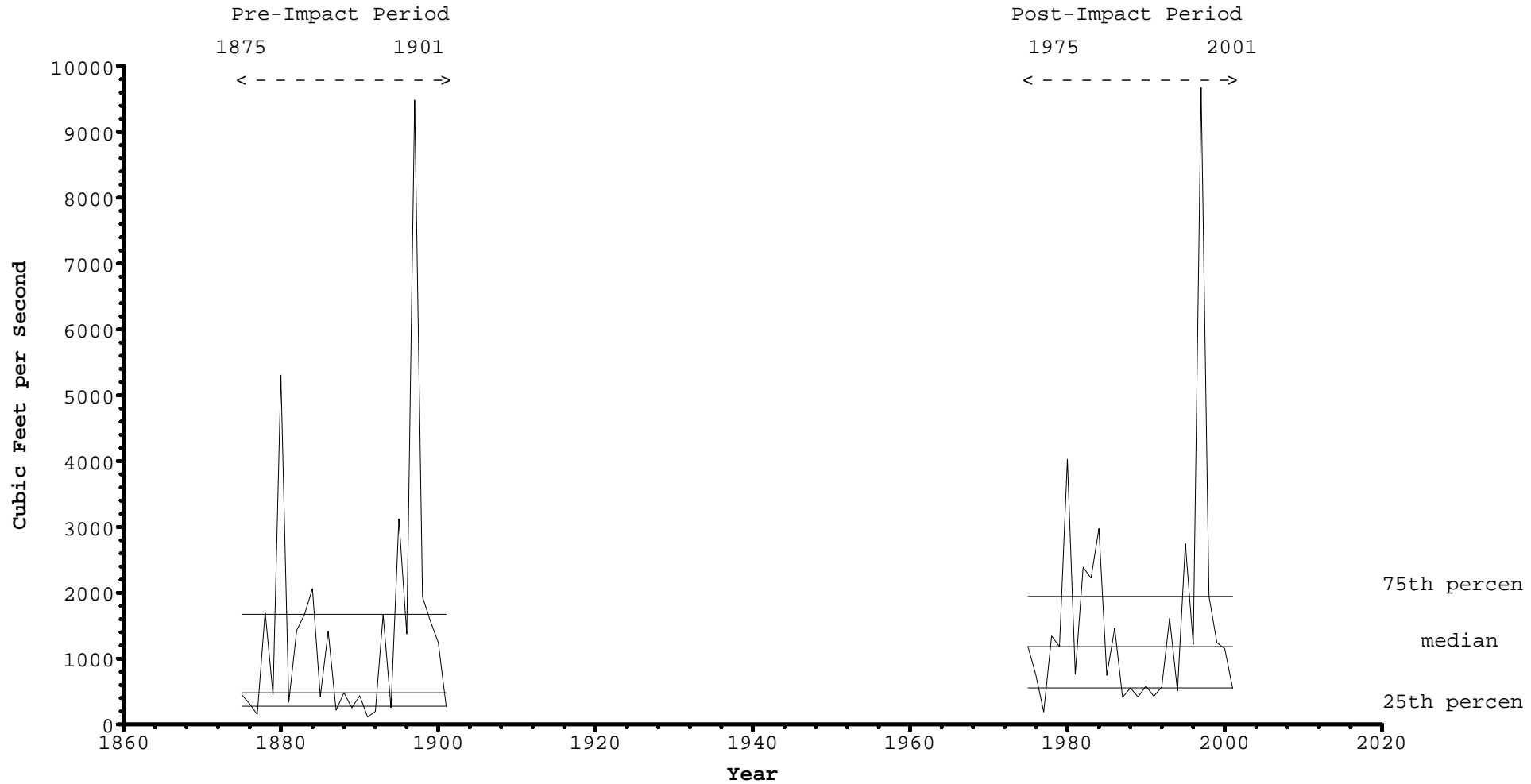
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Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
Average flow for December



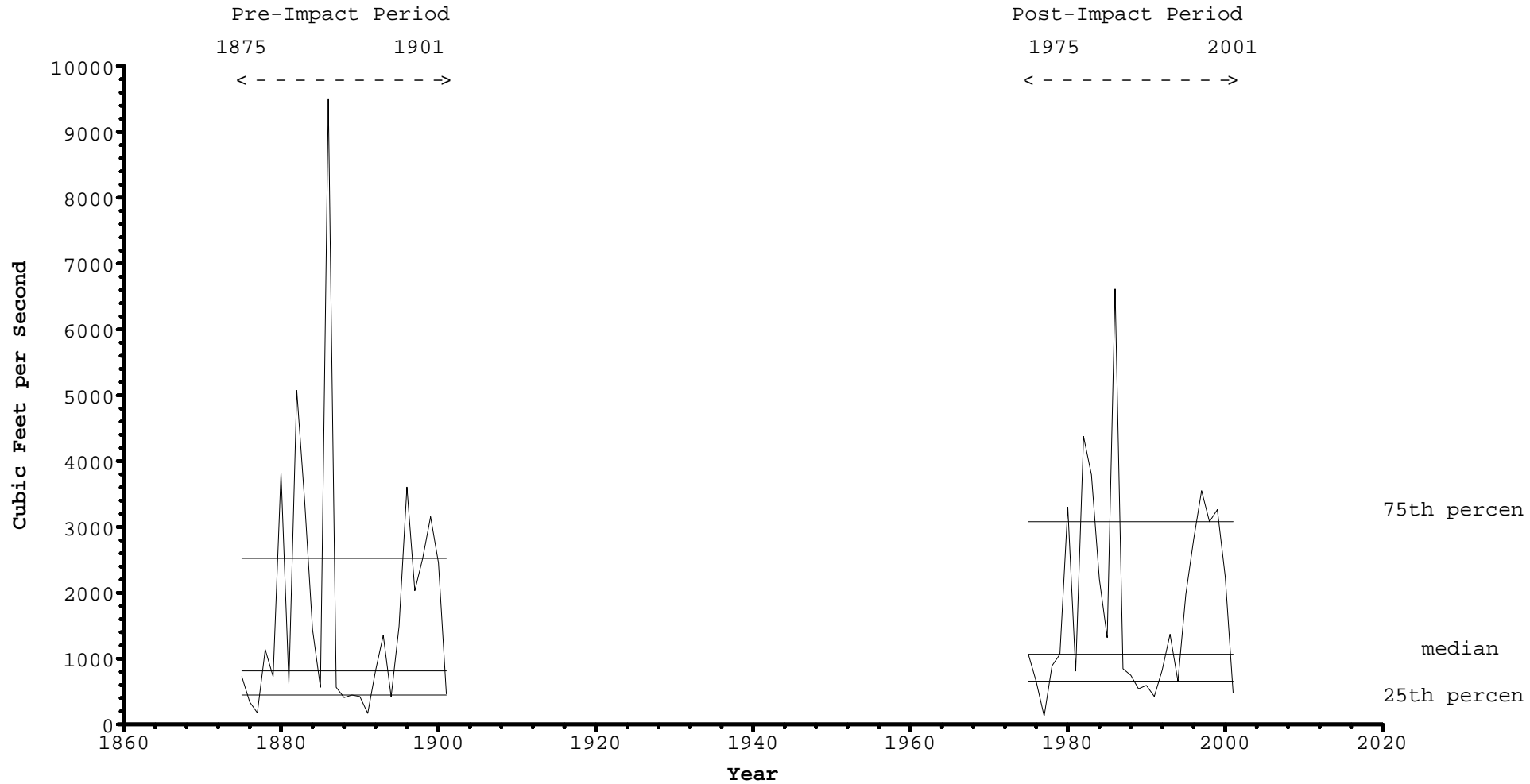
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Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
Average flow for January



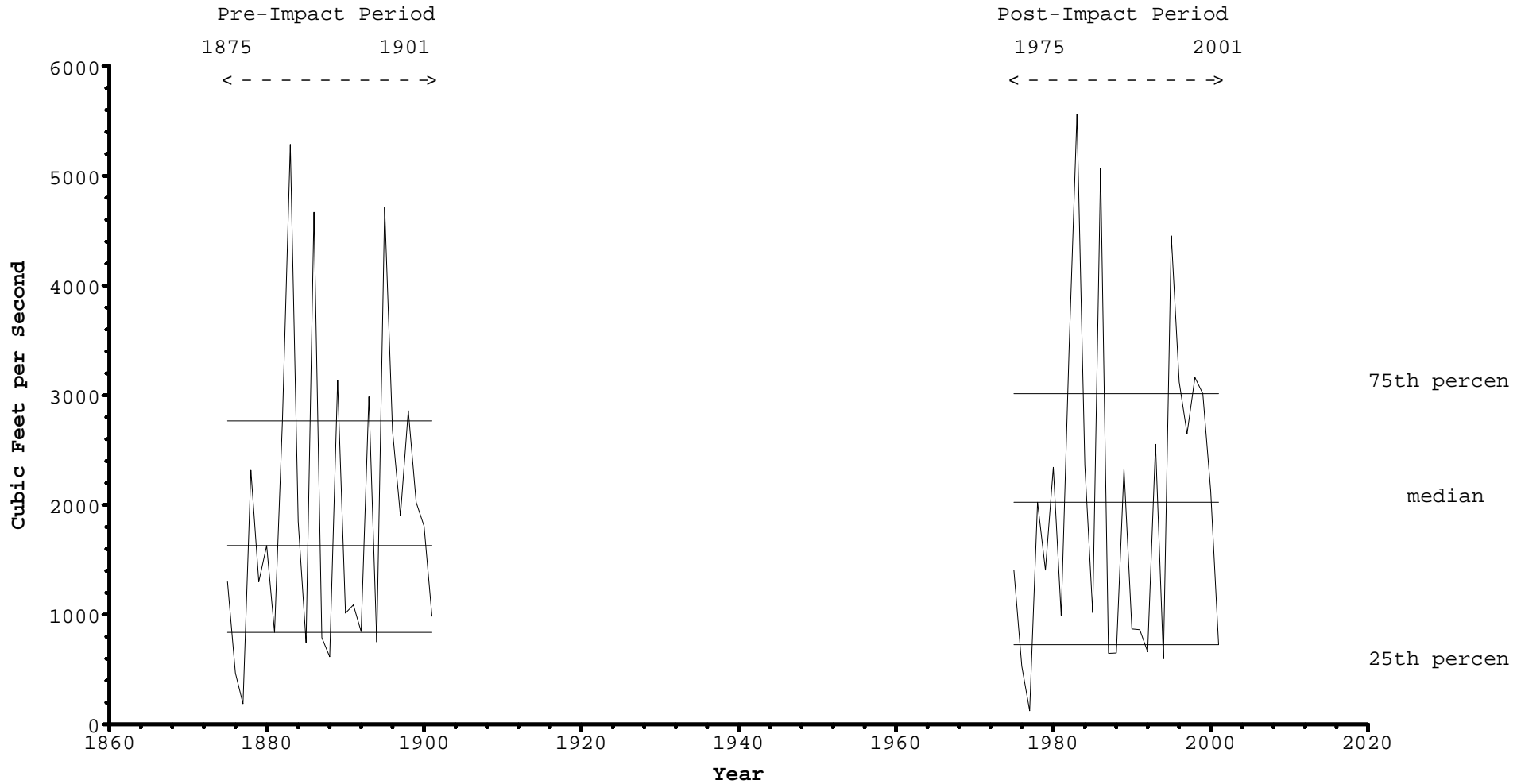
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Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
Average flow for February



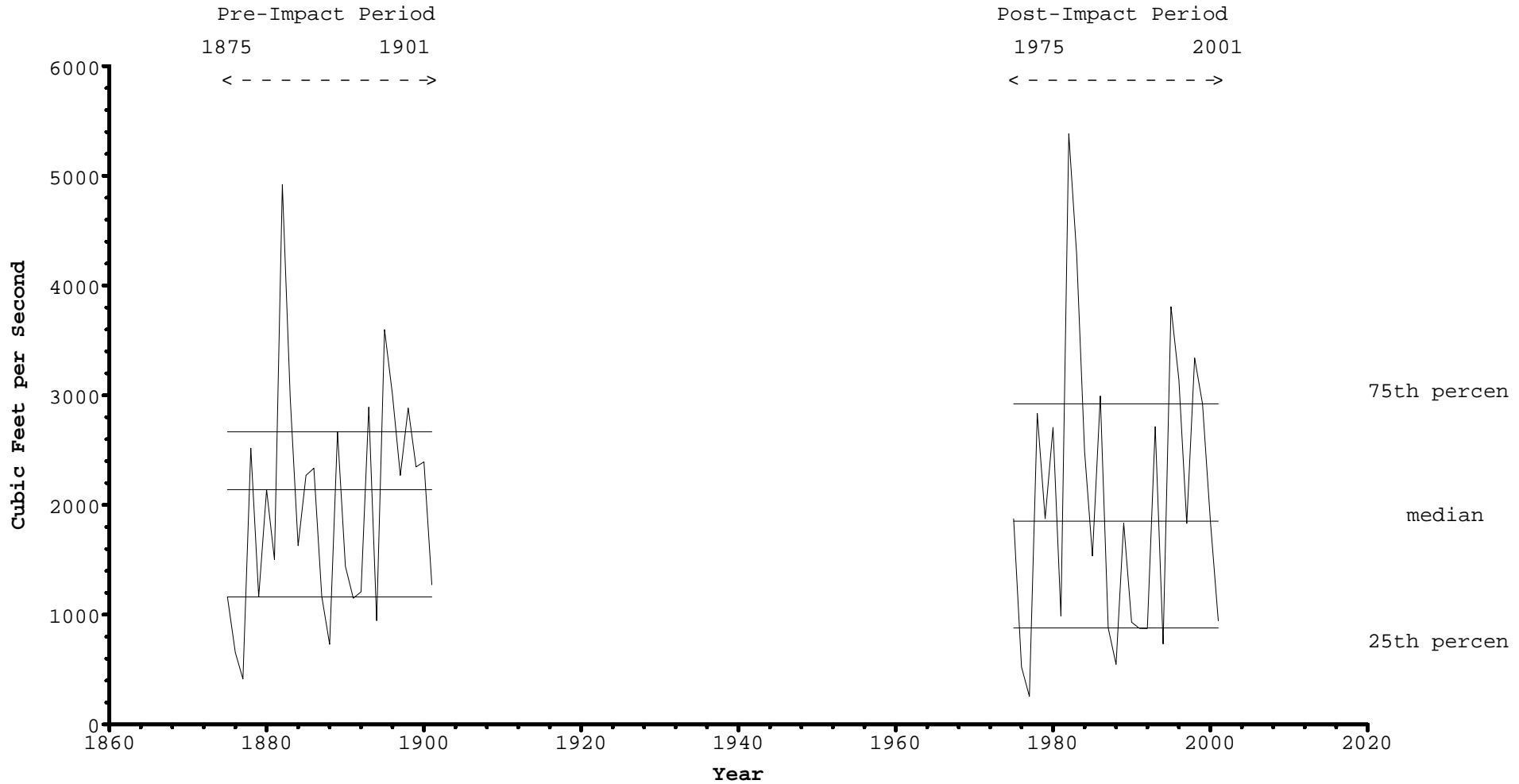
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Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
Average flow for March



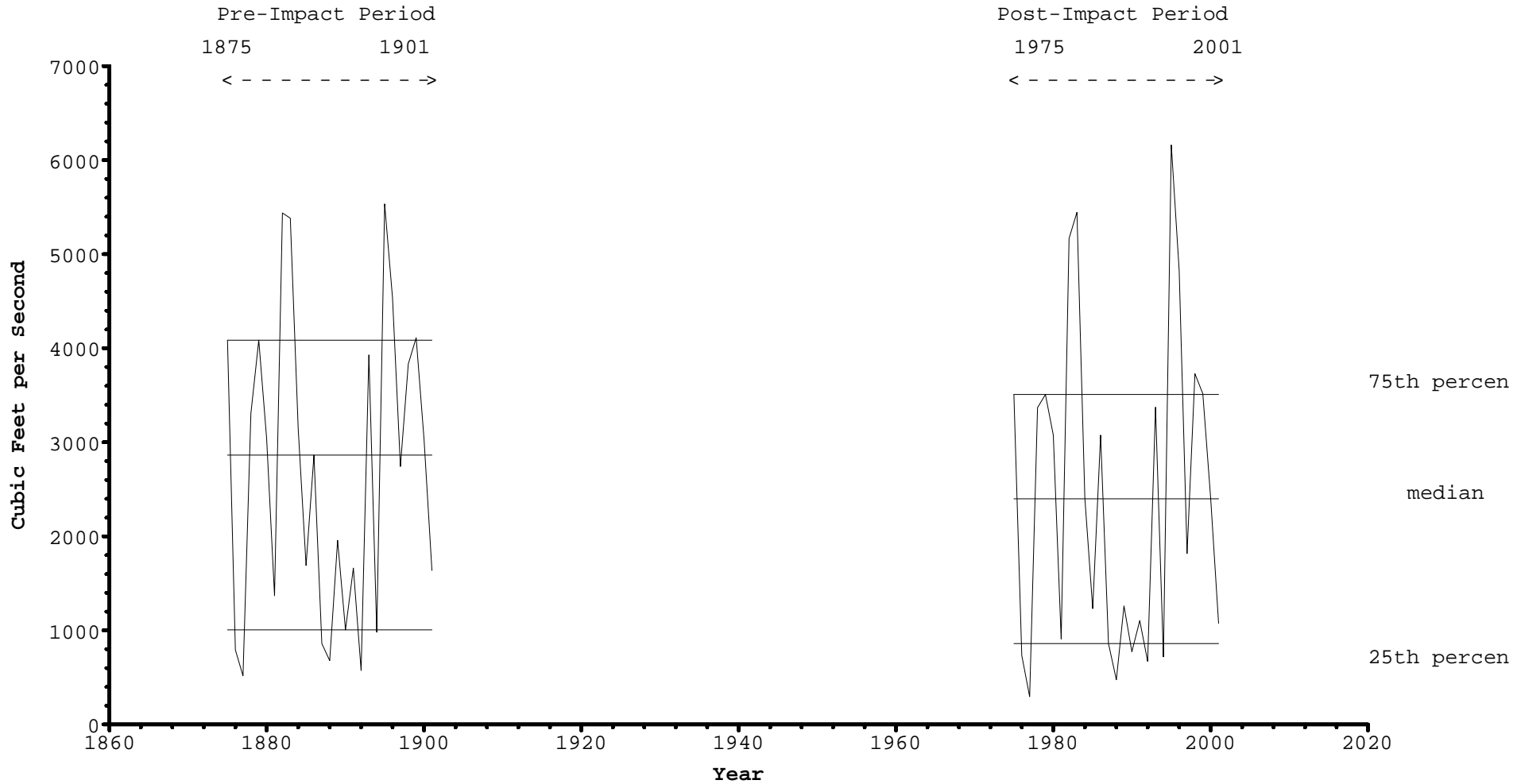
File(s) Used: P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.ann, P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.baw

Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
Average flow for April



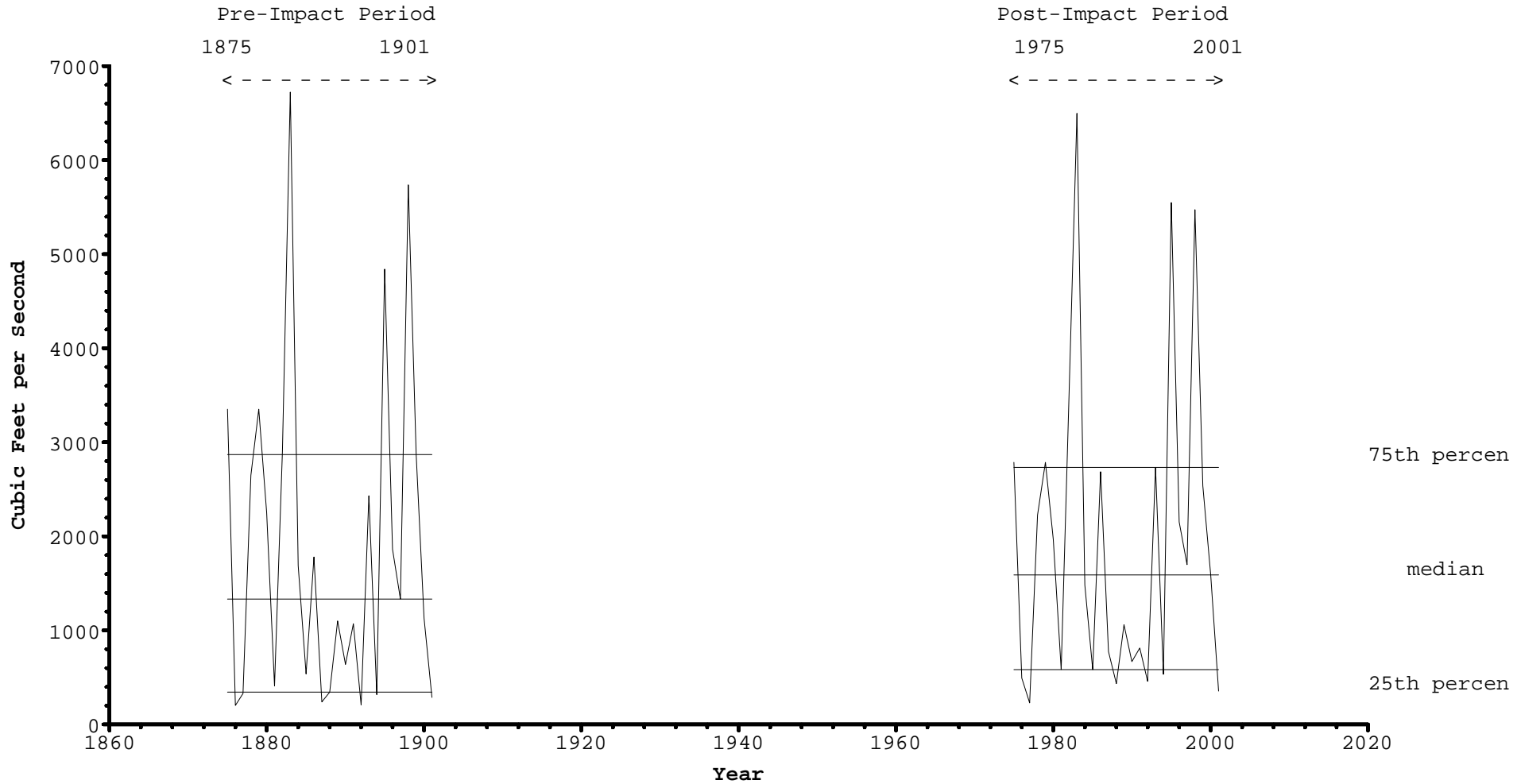
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Standard IHA  
B-4445 South Fork American River Near Placerville (Unregulated), April 2004  
Average flow for May



File(s) Used: P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.ann, P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.baw

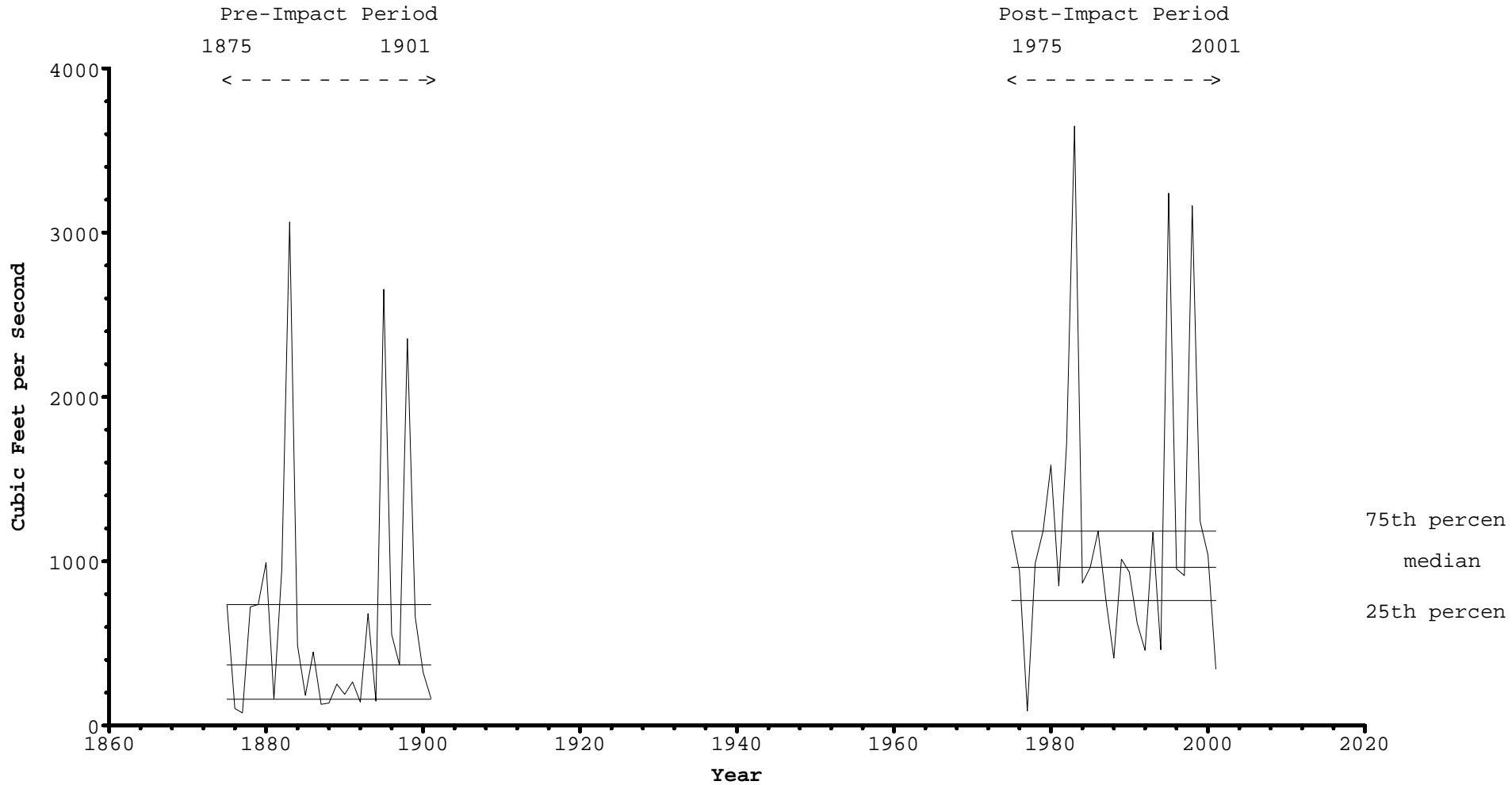
Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
Average flow for June



File(s) Used: P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.ann, P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.baw

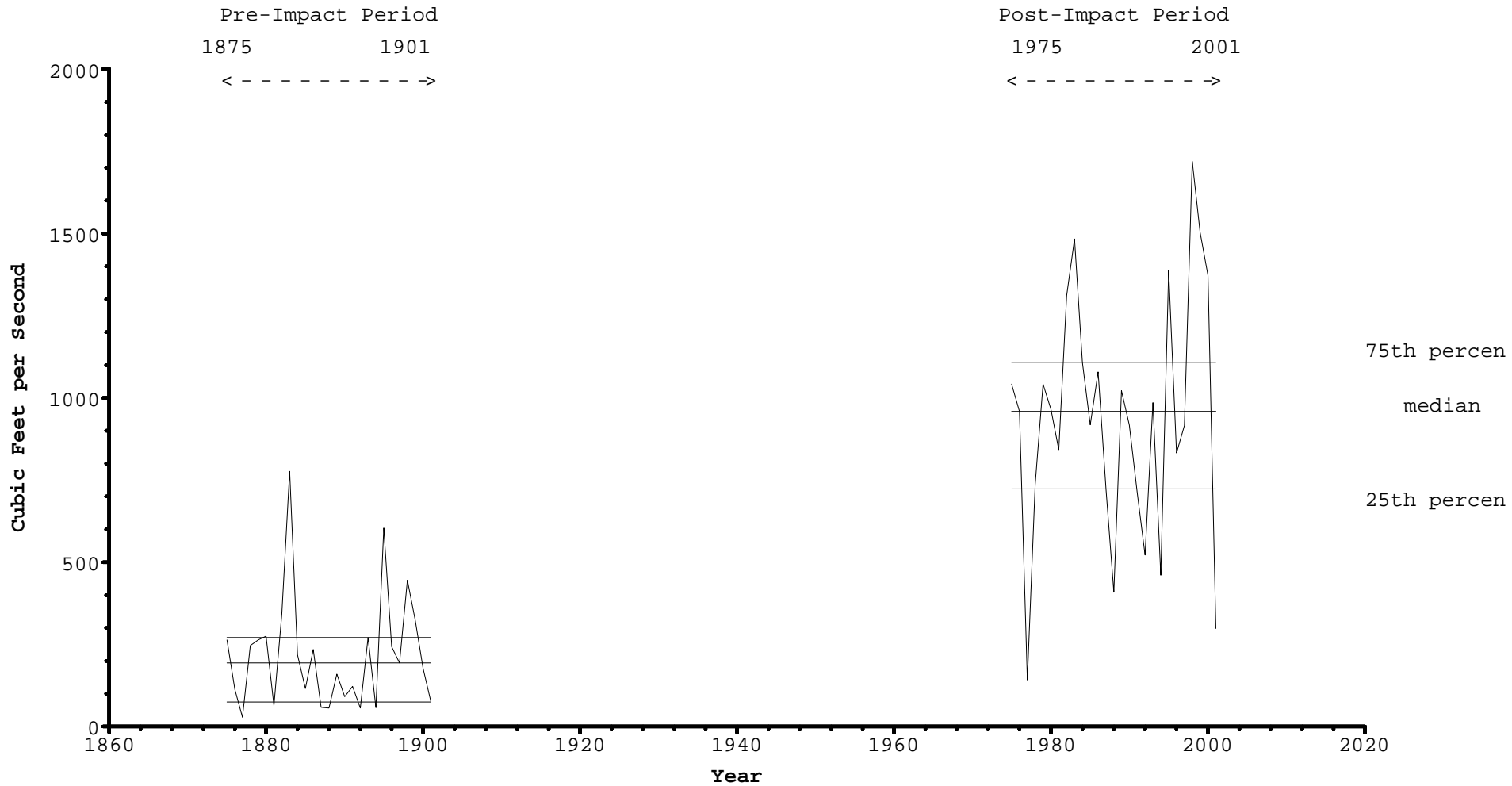


Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
Average flow for July



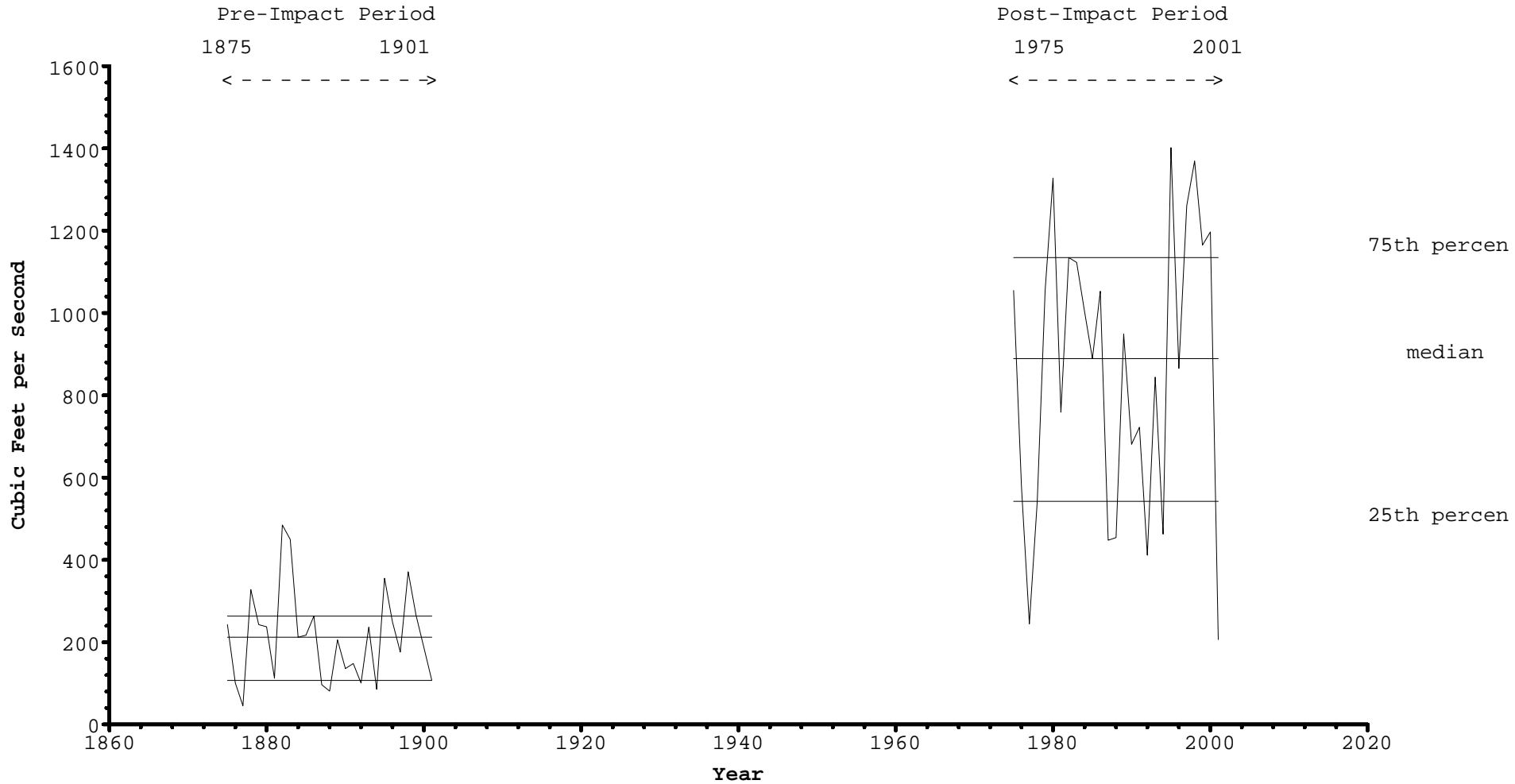
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Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
Average flow for August



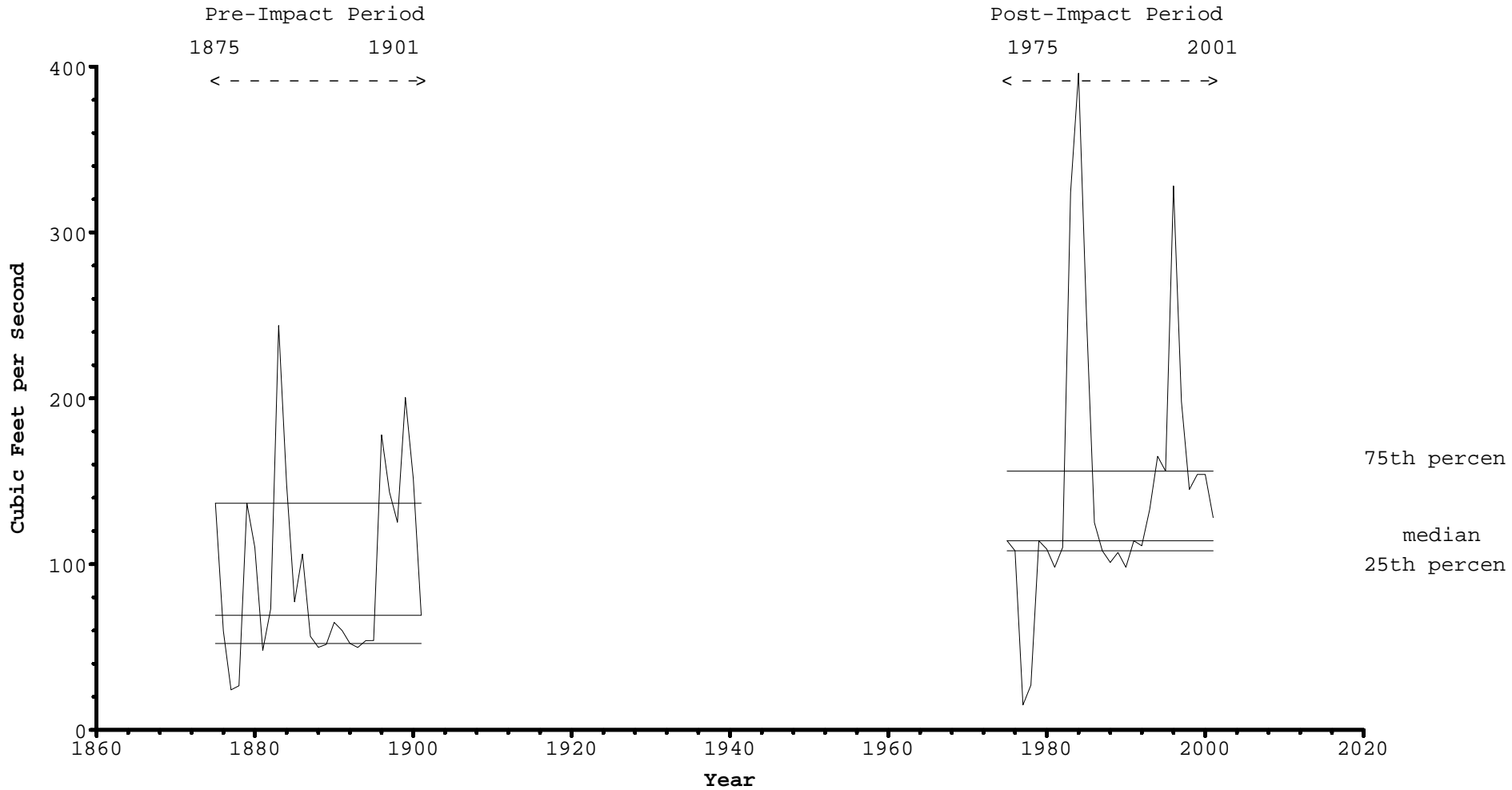
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Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
Average flow for September



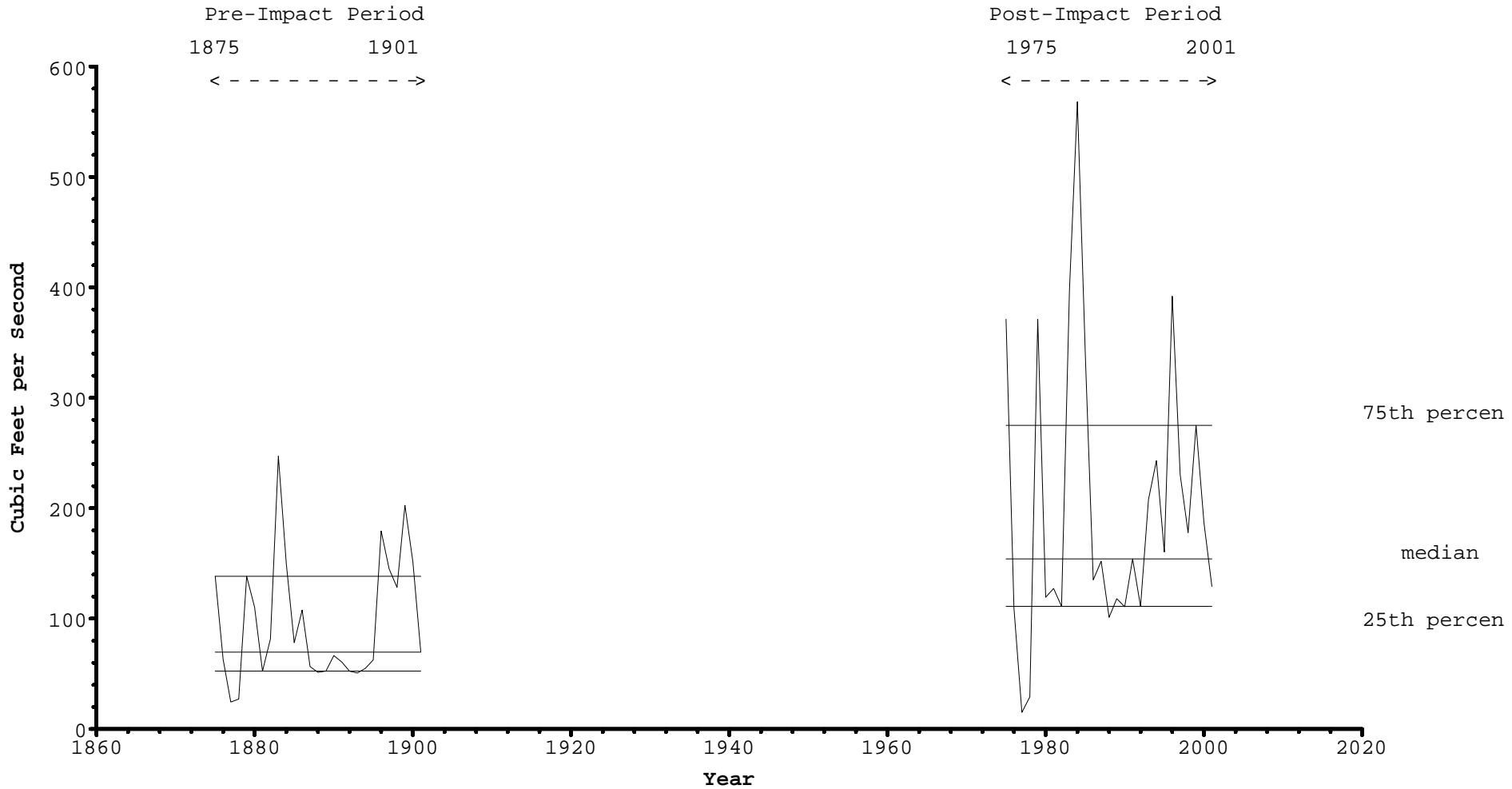
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Standard IHA  
B-4445 South Fork American River Near Placerville (Unregulated), April 2004  
1-day minimum streamflow



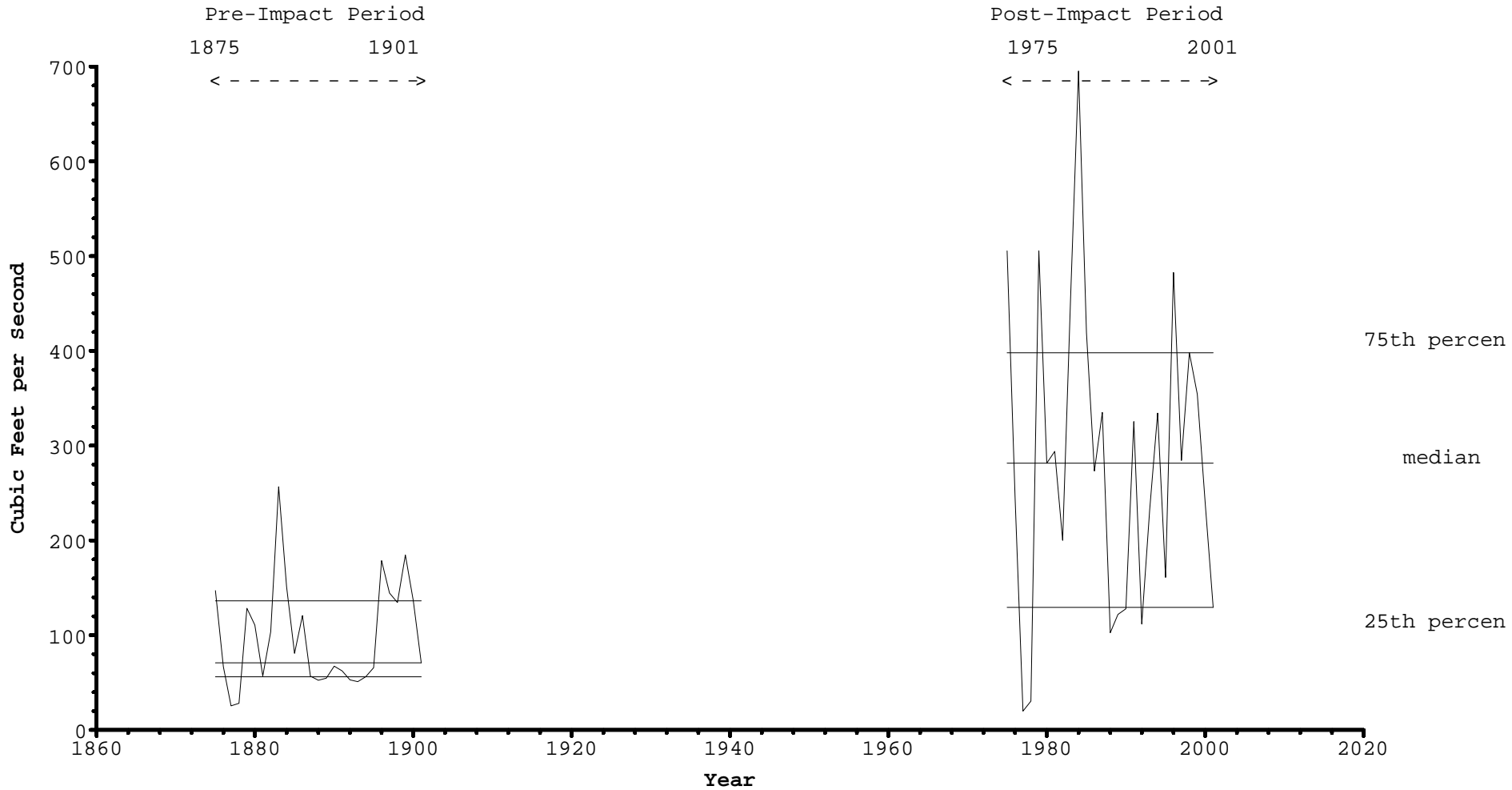
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Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
3-day minimum streamflow



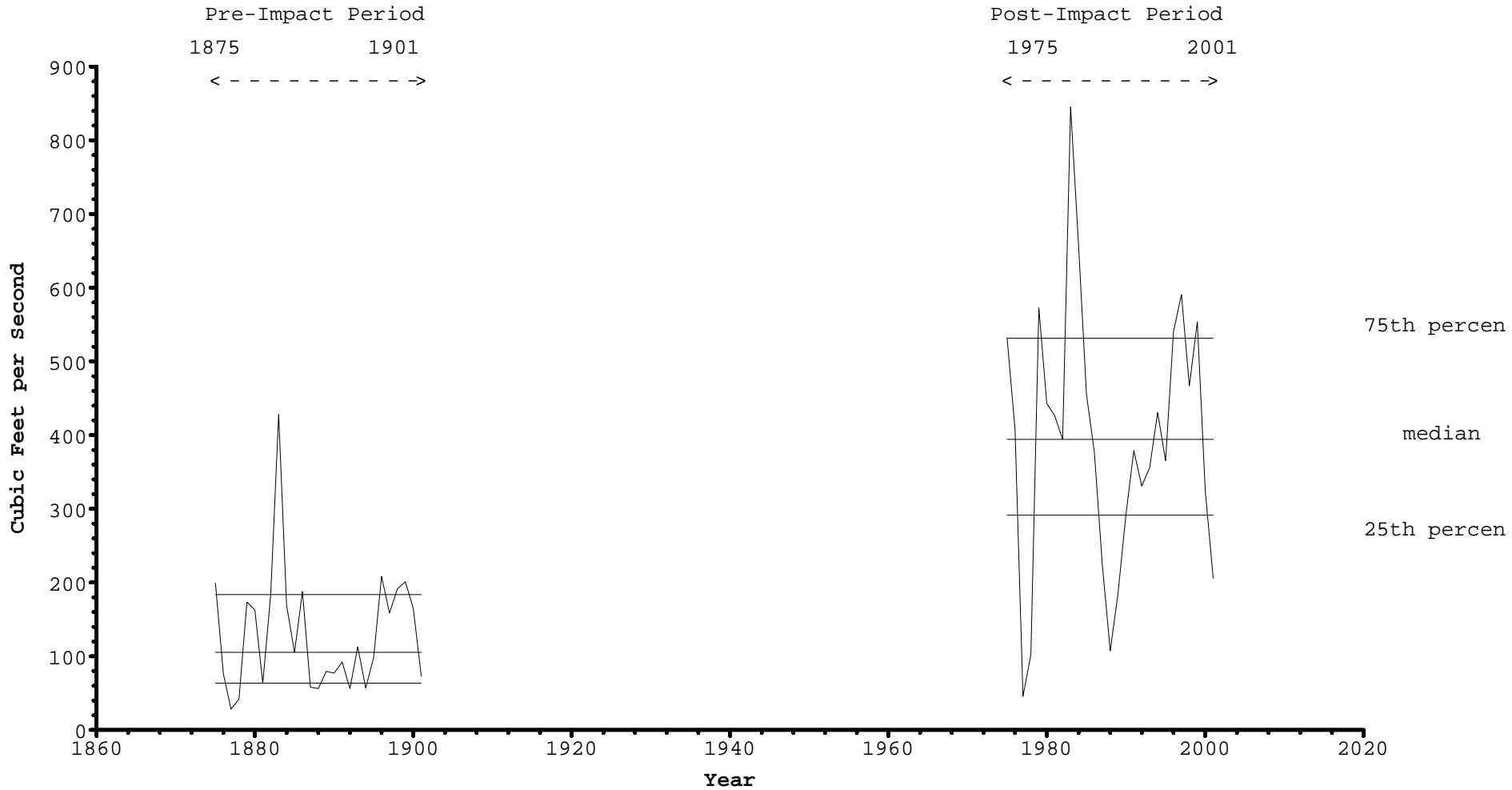
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Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
7-day minimum streamflow



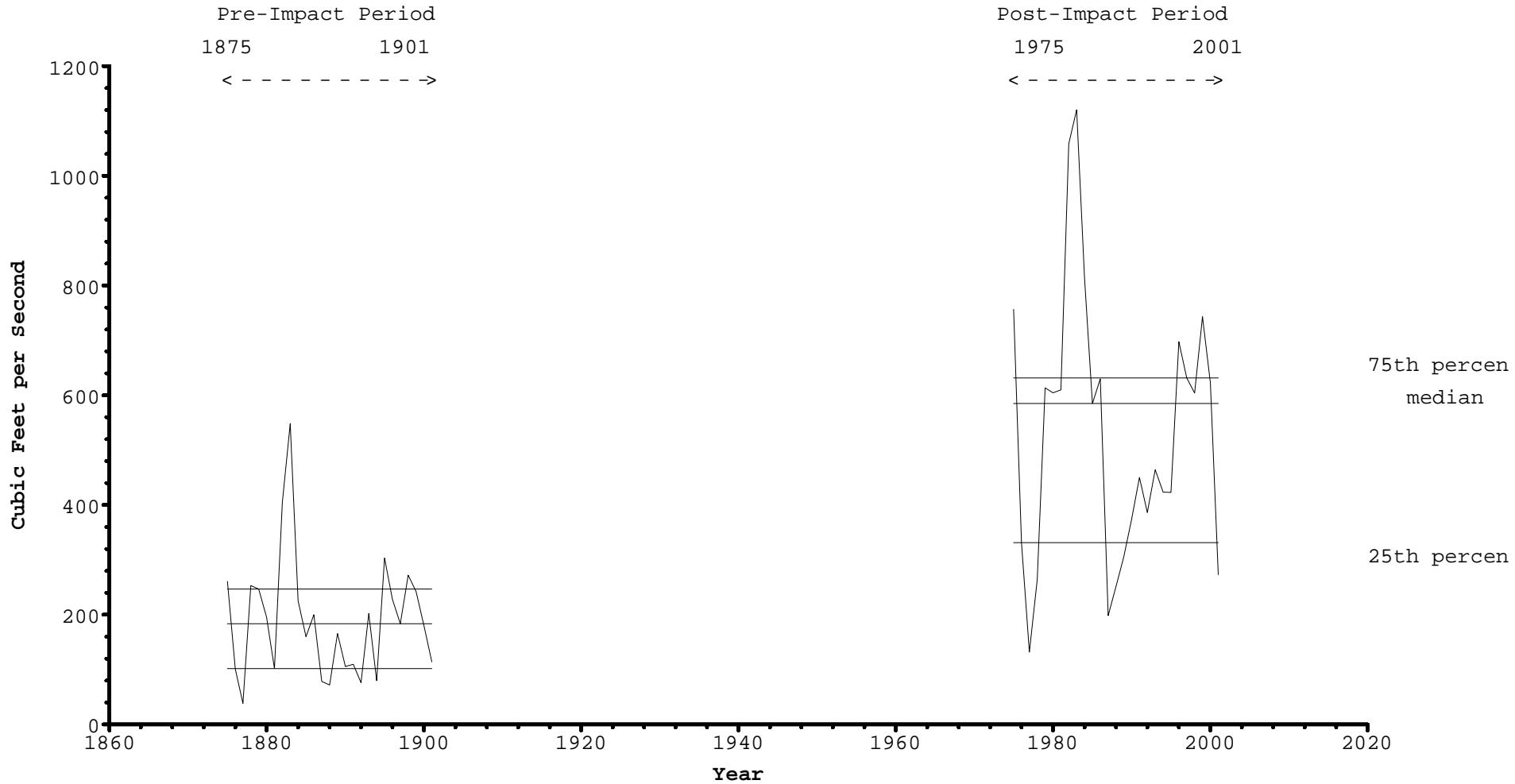
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Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
30-day minimum streamflow



File(s) Used: P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.ann, P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.baw

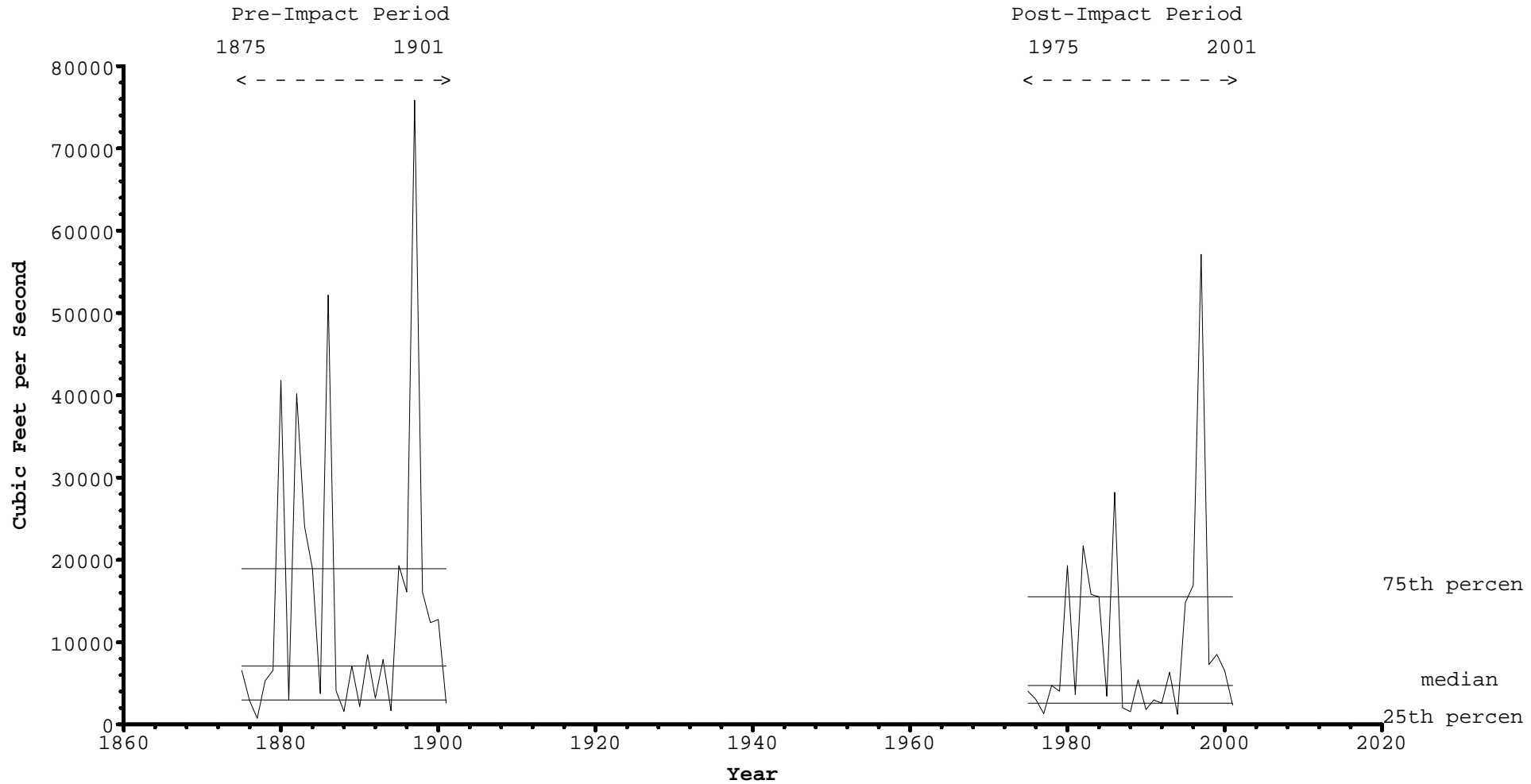
Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
90-day minimum streamflow



File(s) Used: P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.ann, P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.baw

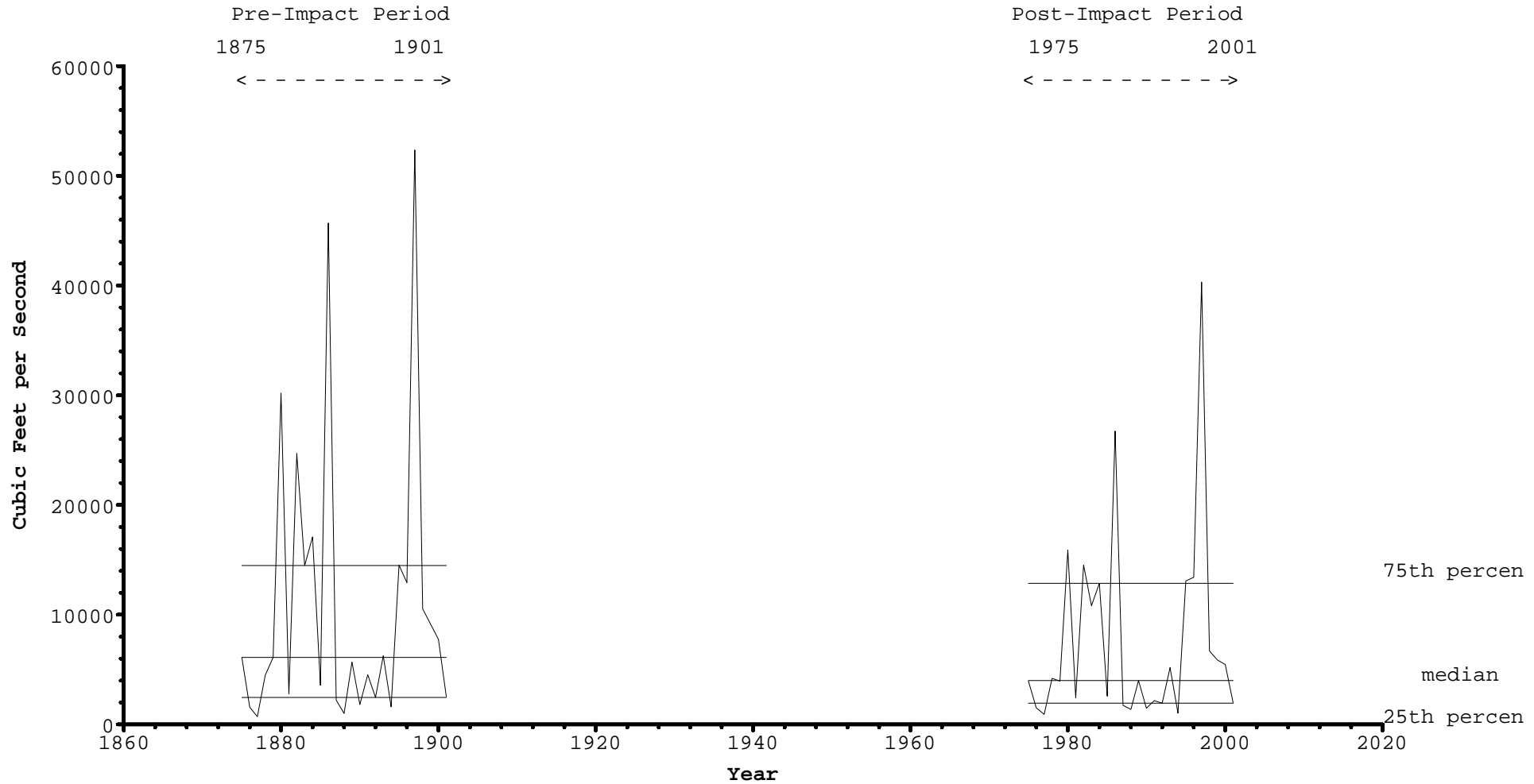


Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
1-day maximum streamflow



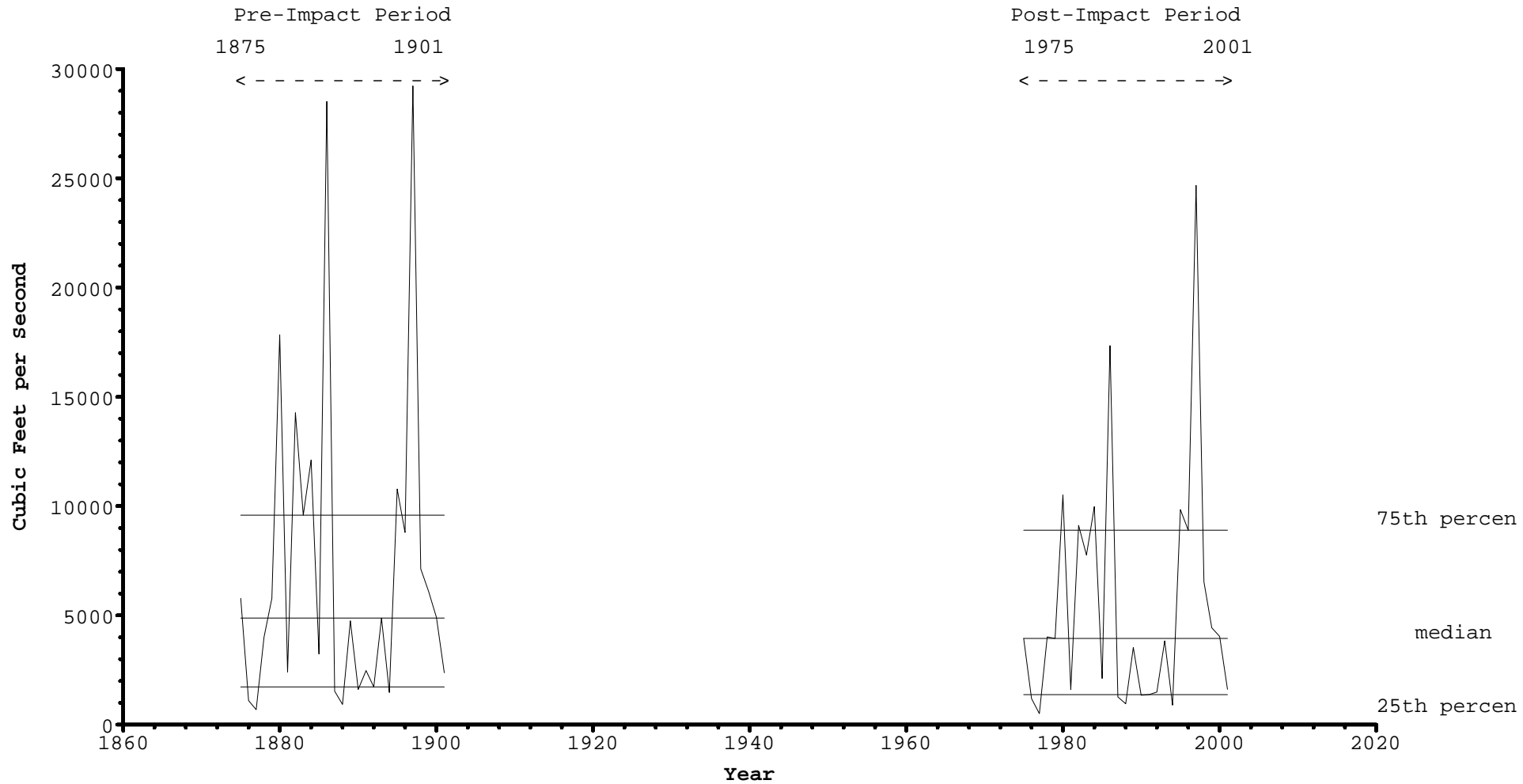
File(s) Used: P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.ann, P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.baw

Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
3-day maximum streamflow



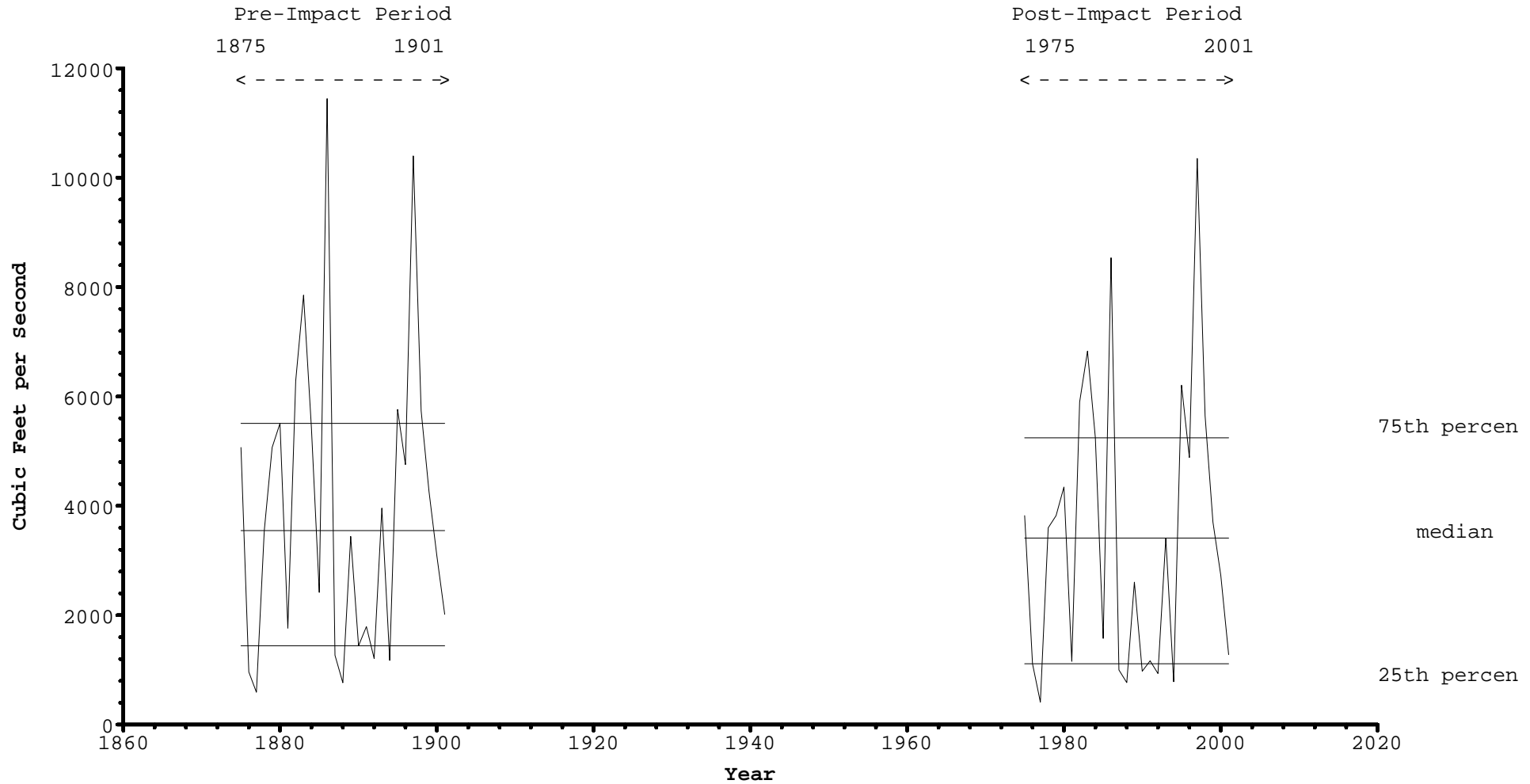
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Standard IHA  
B-4445 South Fork American River Near Placerville (Unregulated), April 2004  
7-day maximum streamflow



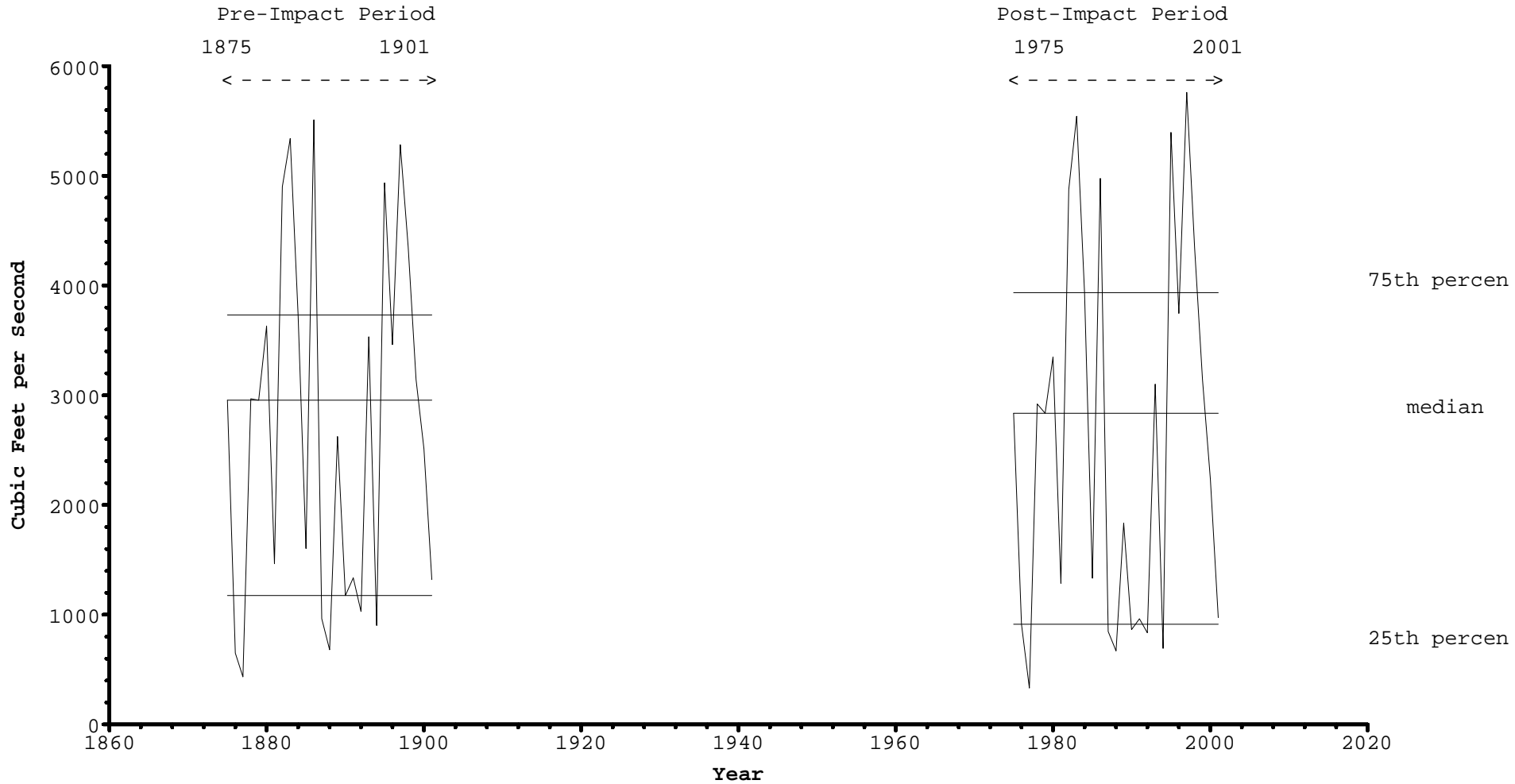
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Standard IHA  
B-4445 South Fork American River Near Placerville (Unregulated), April 2004  
30-day maximum streamflow



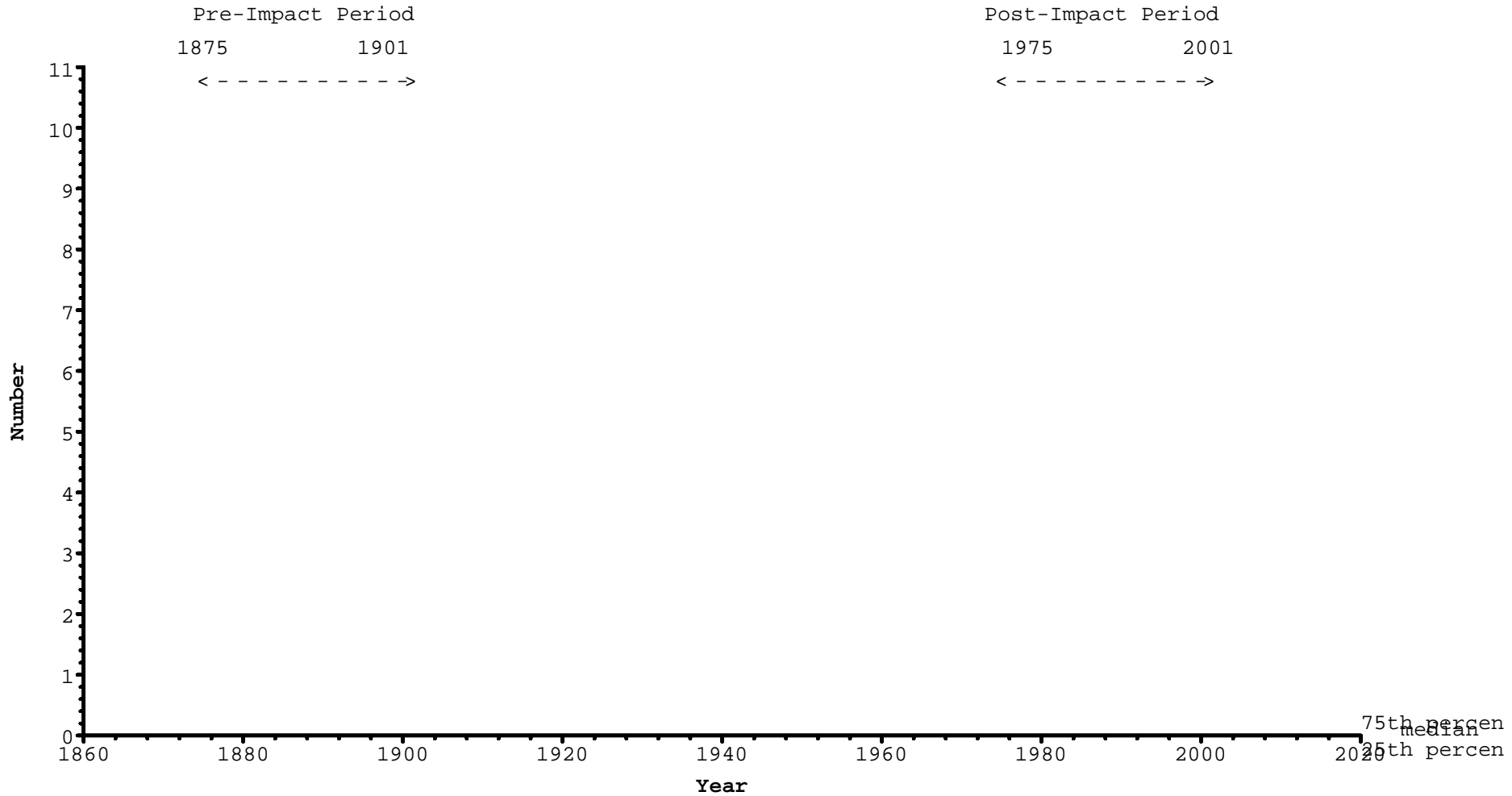
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Standard IHA  
B-4445 South Fork American River Near Placerville (Unregulated), April 2004  
90-day maximum streamflow

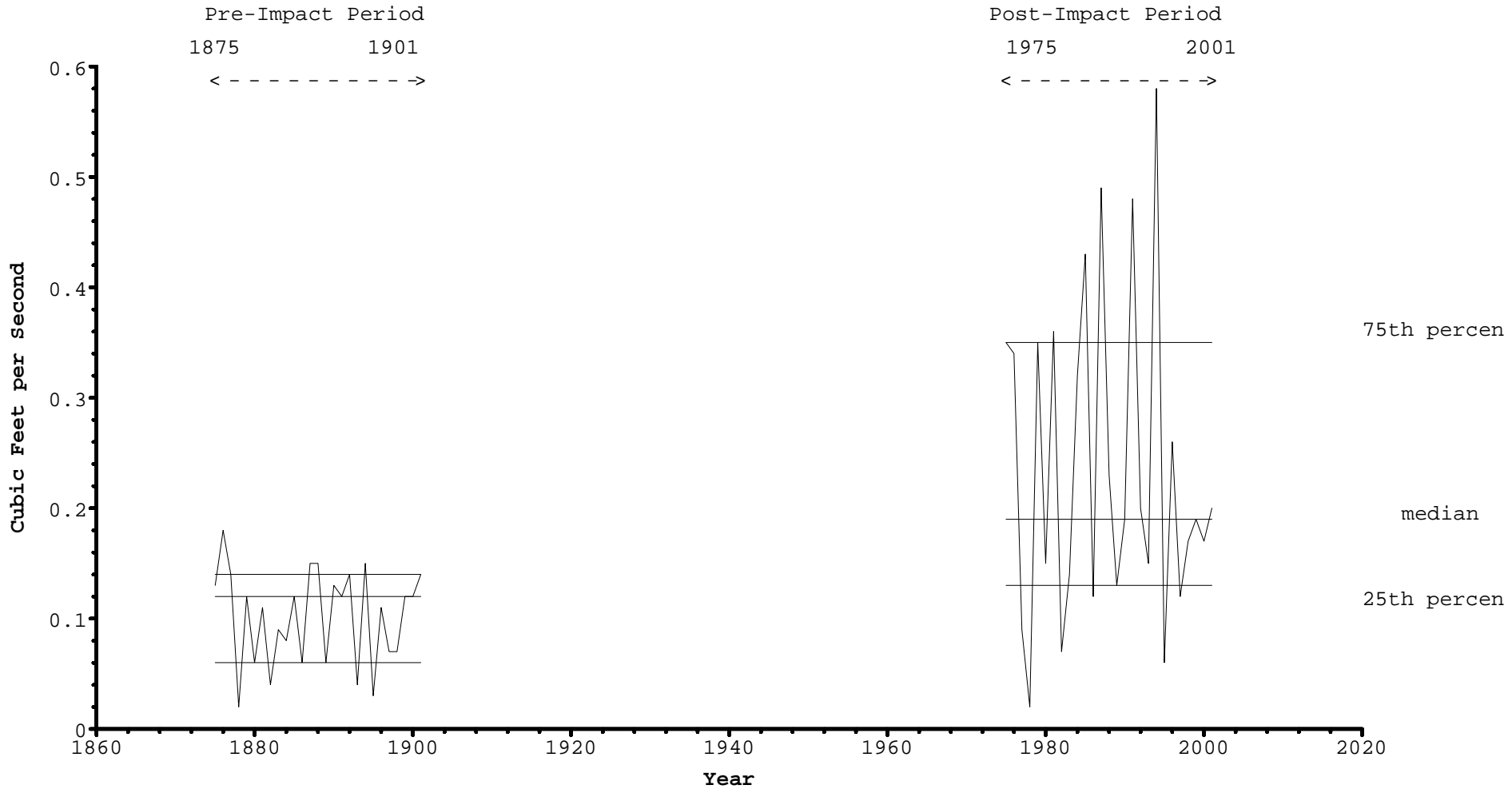


File(s) Used: P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.ann, P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.baw

Standard IHA  
B-4445 South Fork American River Near Placerville (Unregulated), April 2004  
Zero streamflow days

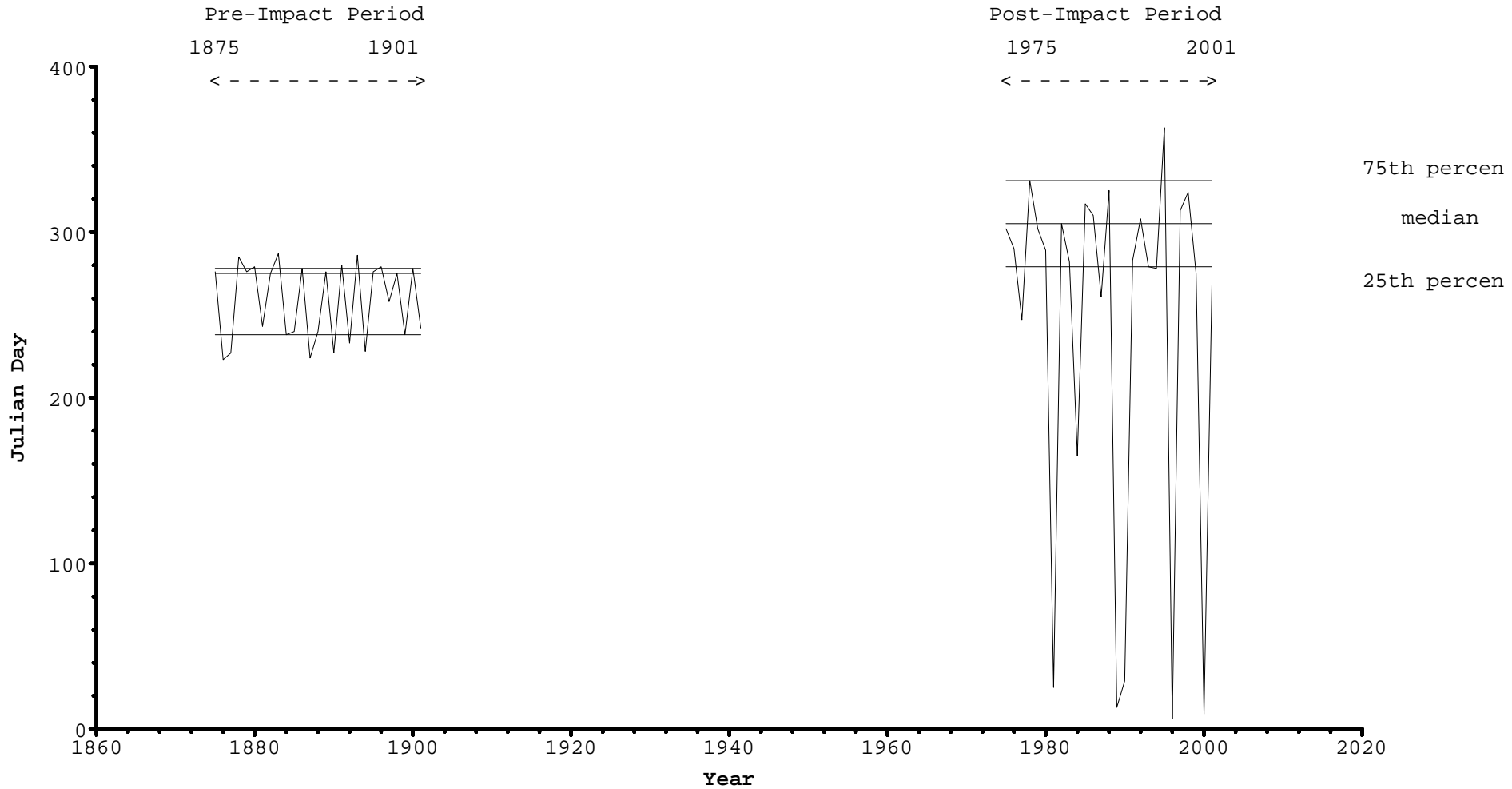


Standard IHA  
B-4445 South Fork American River Near Placerville (Unregulated), April 2004  
Base Flow



File(s) Used: P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.ann, P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.baw

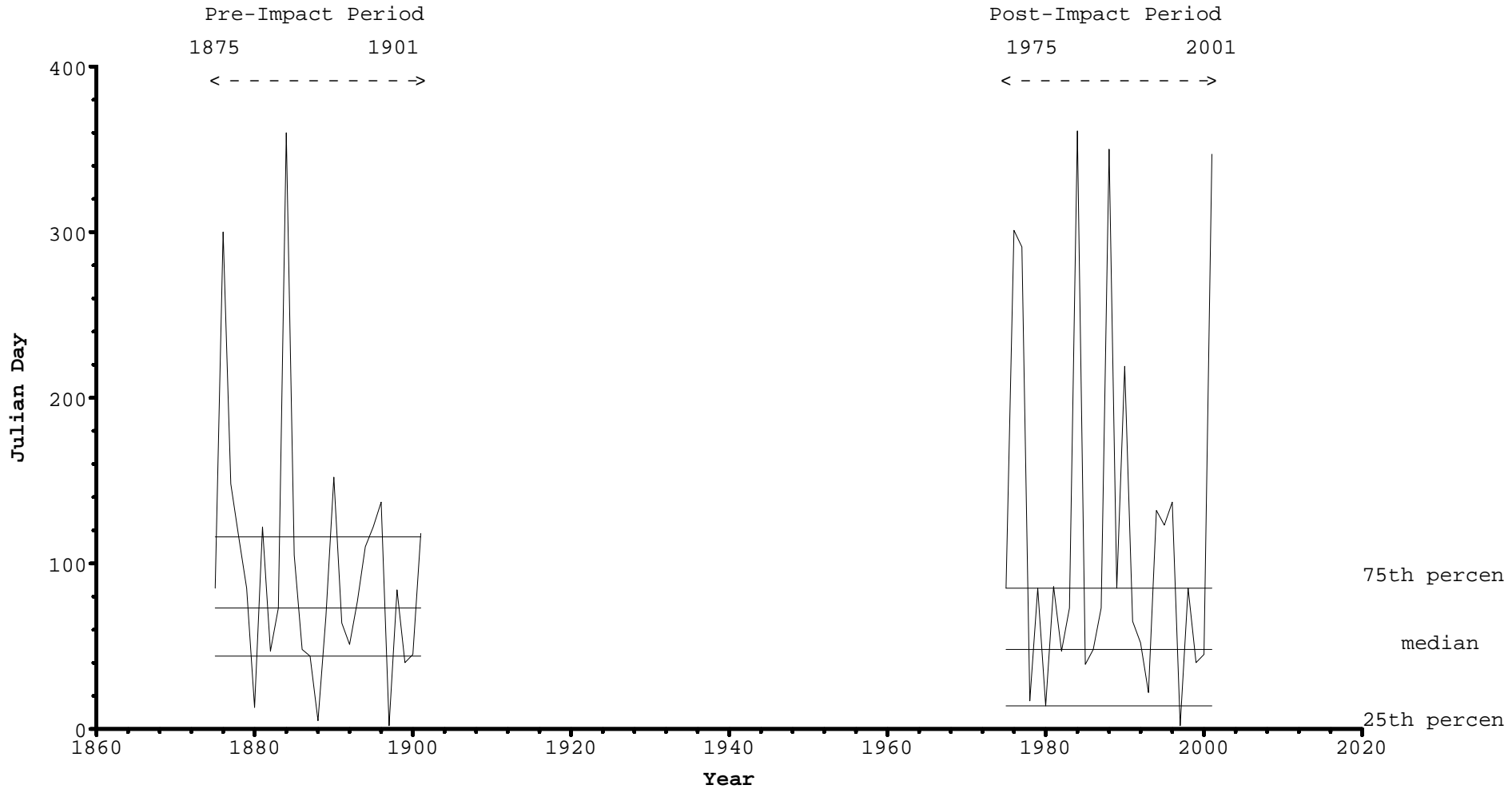
Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
Date of minimum streamflow



File(s) Used: P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.ann, P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.baw

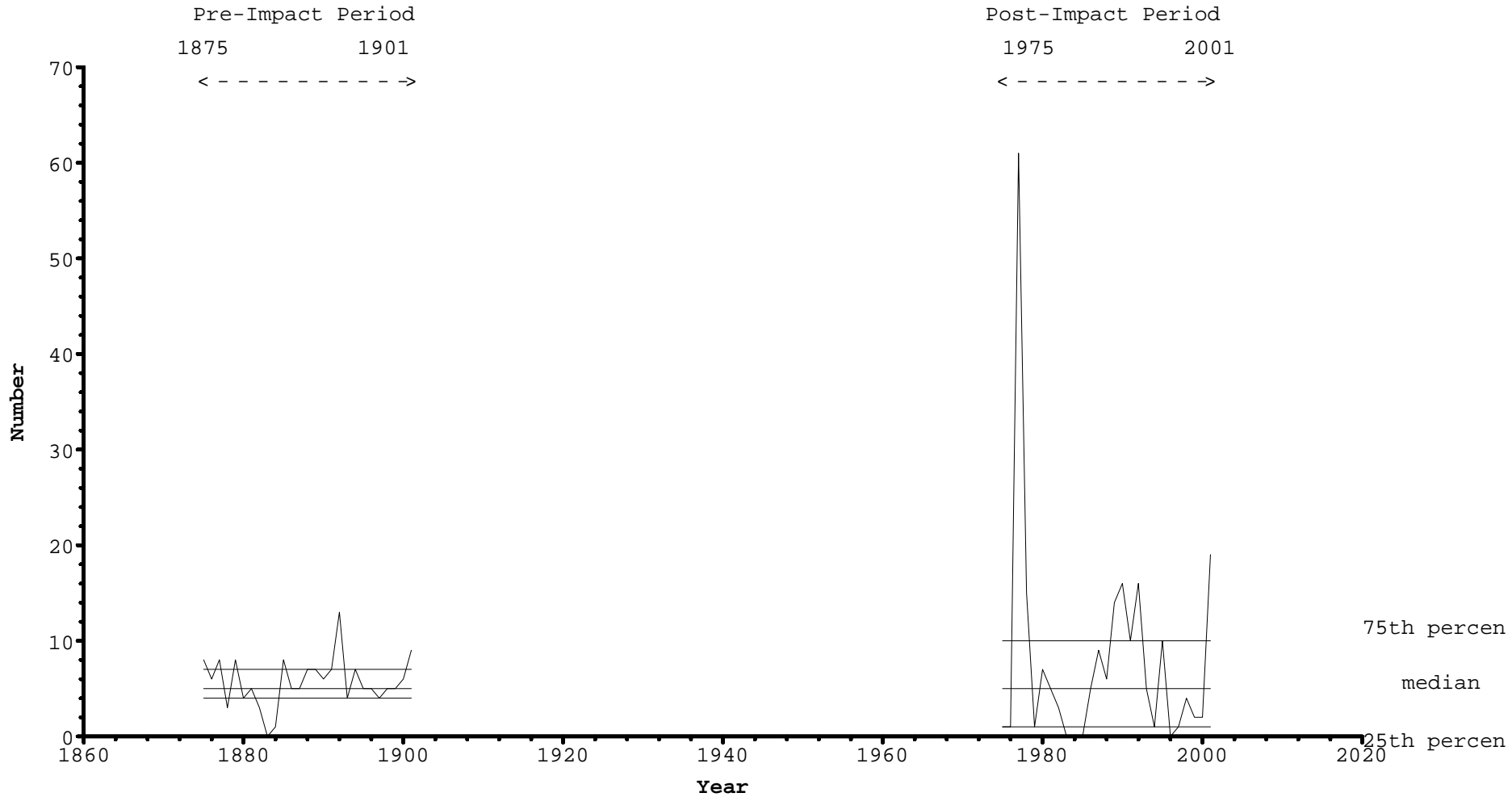


Standard IHA  
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**  
Date of maximum streamflow



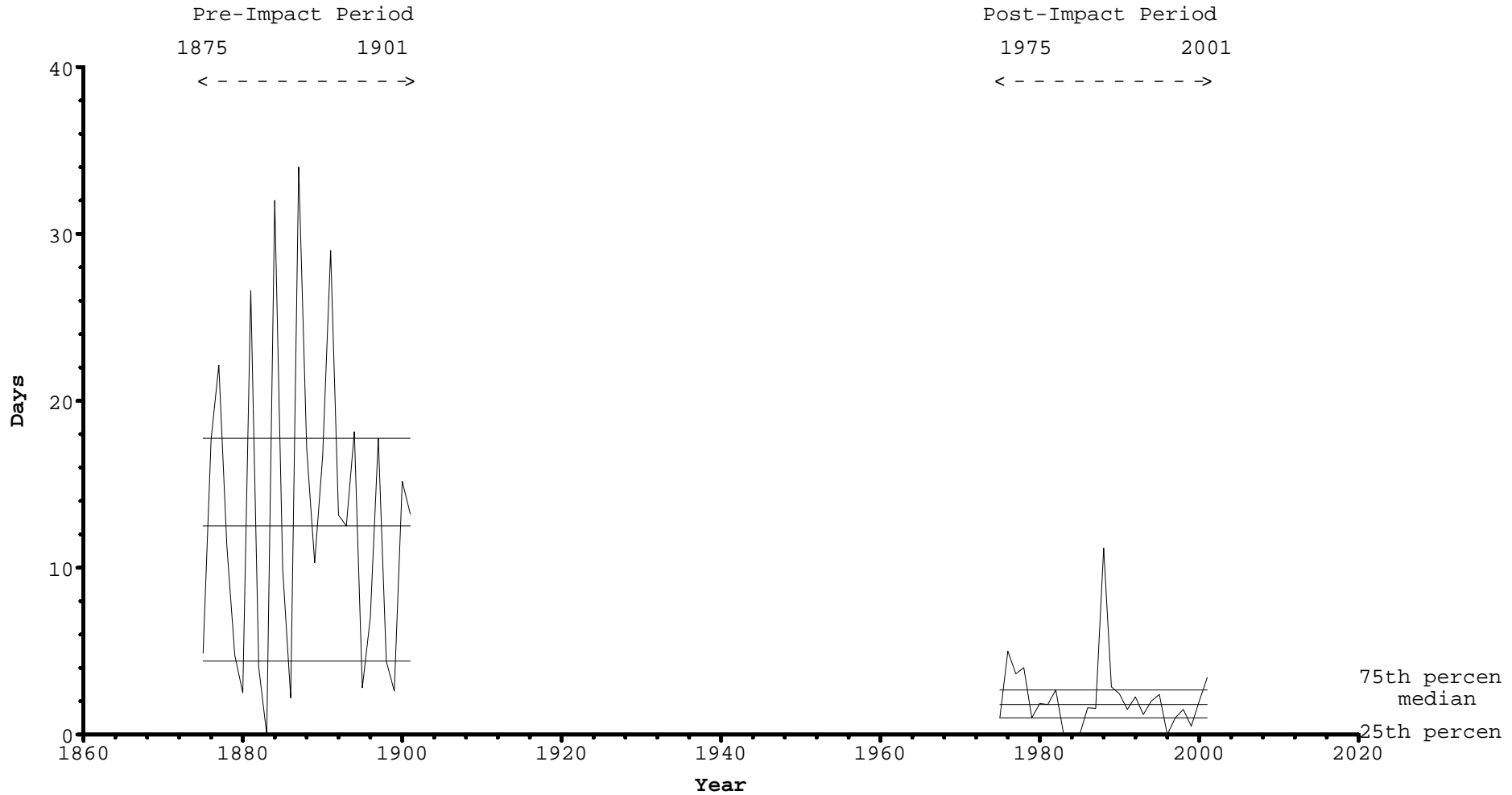
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Standard IHA  
B-4445 South Fork American River Near Placerville (Unregulated), April 2004  
Low Pulse Count



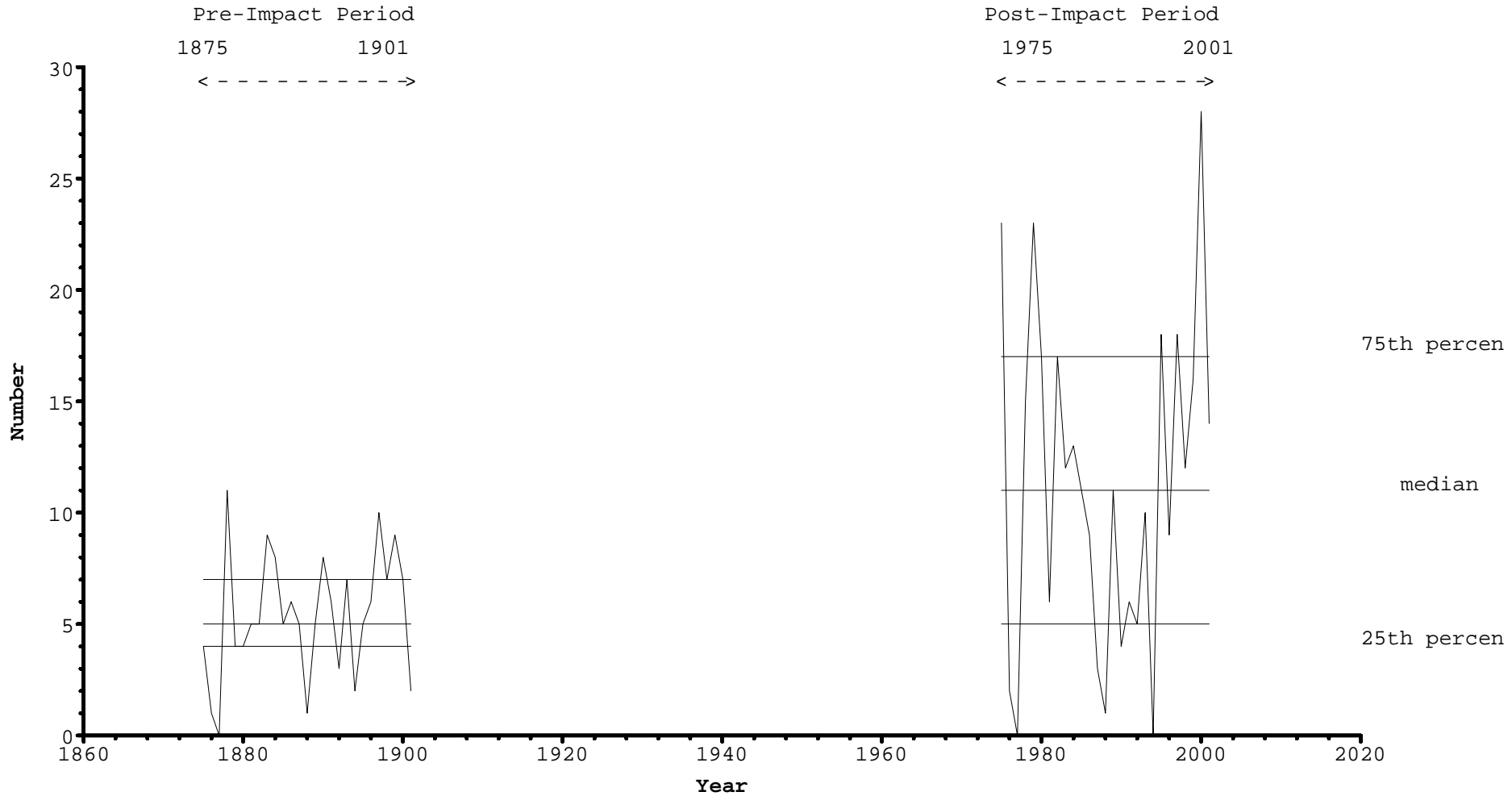
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Standard IHA  
B-4445 South Fork American River Near Placerville (Unregulated), April 2004  
Low Pulse Duration



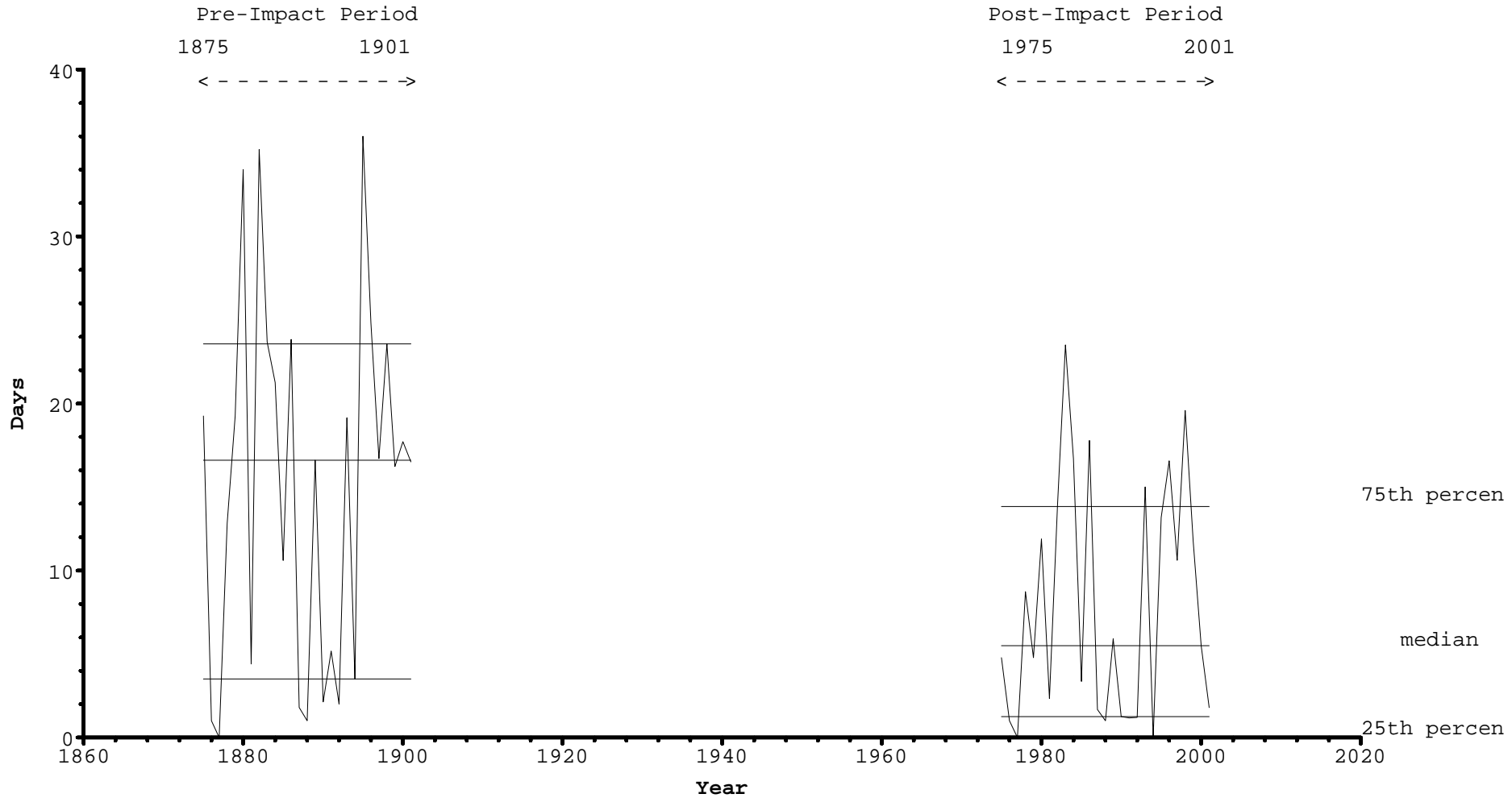
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Standard IHA  
B-4445 South Fork American River Near Placerville (Unregulated), April 2004  
High Pulse Count



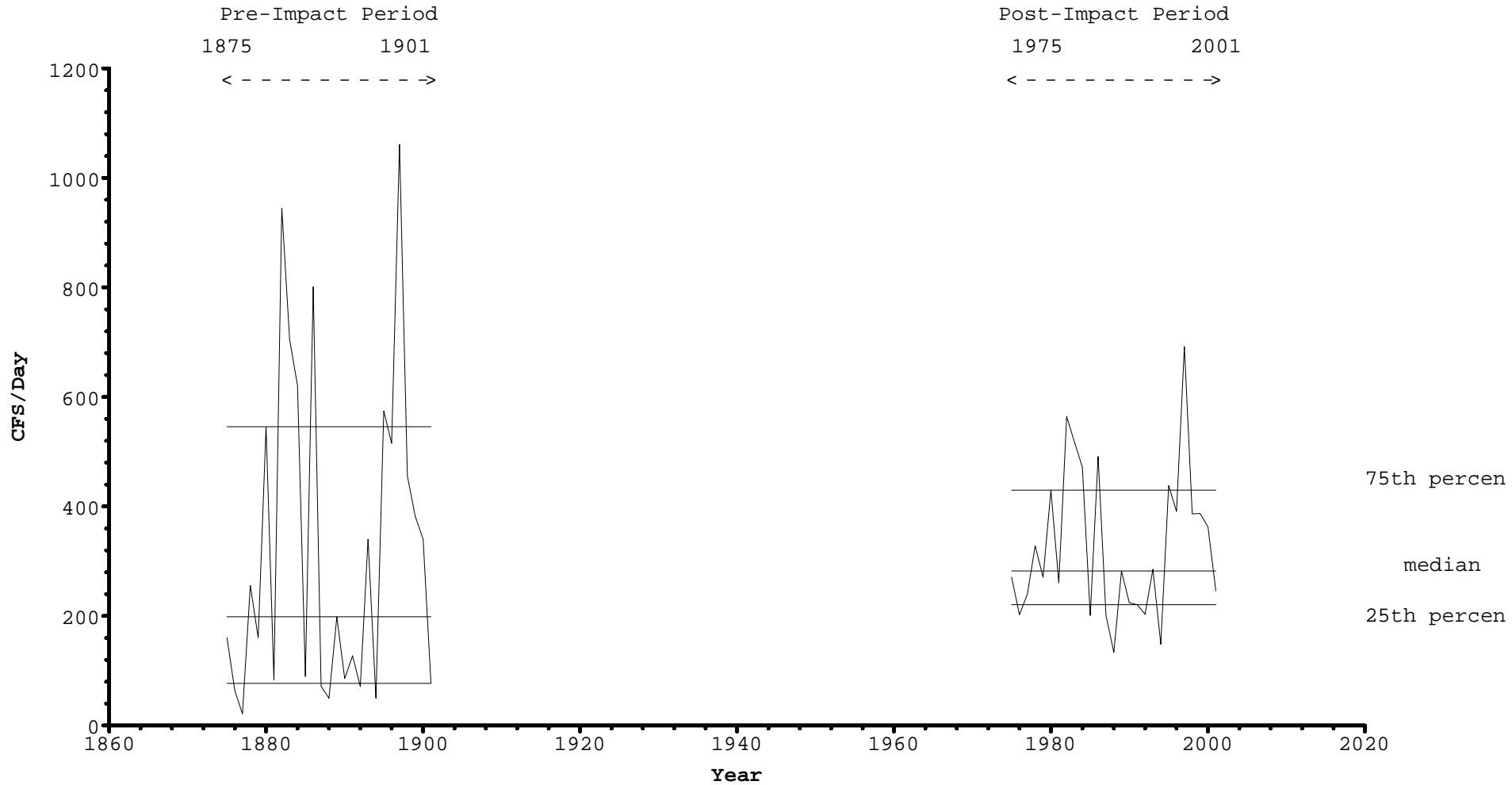
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Standard IHA  
B-4445 South Fork American River Near Placerville (Unregulated), April 2004  
High Pulse Duration



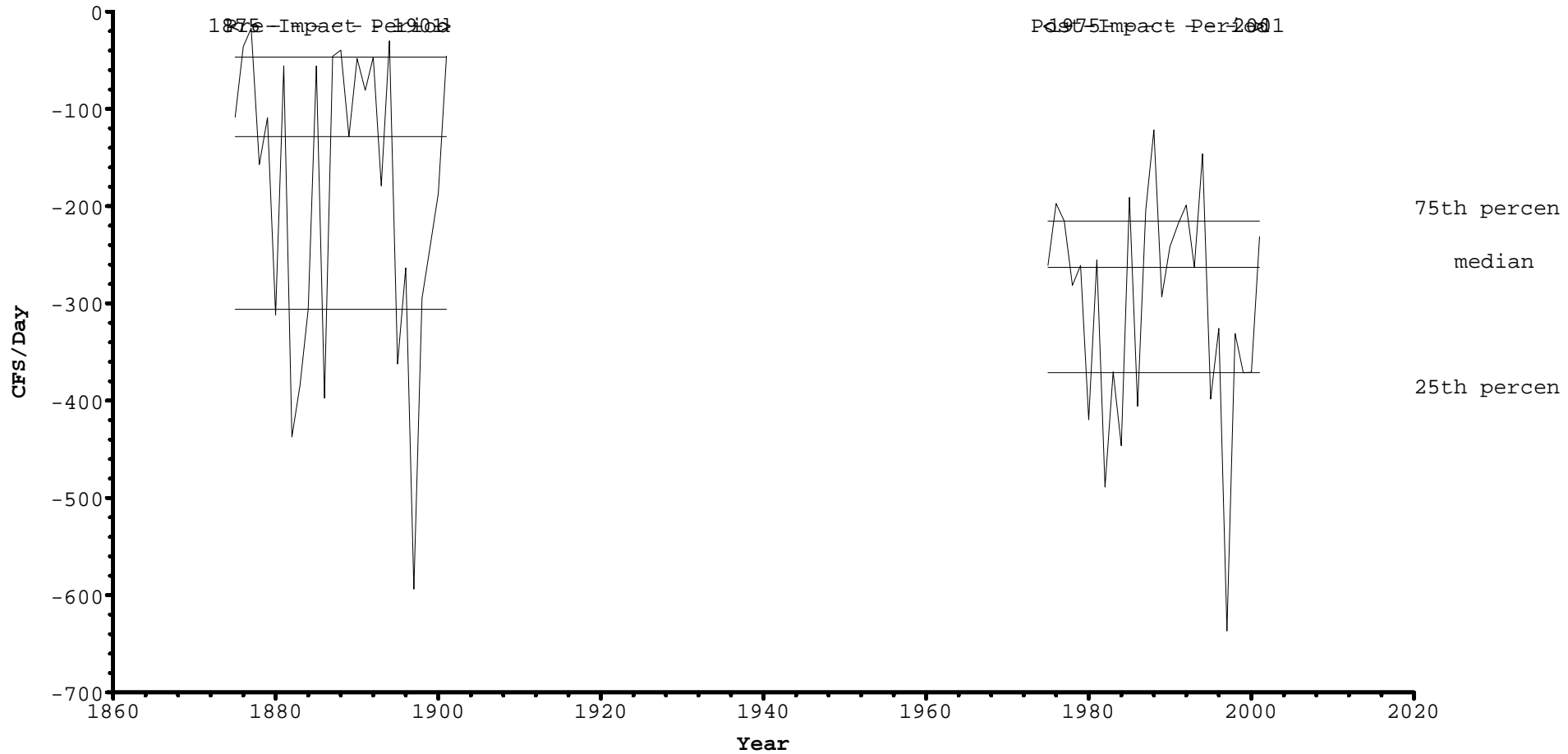
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Standard IHA  
B-4445 South Fork American River Near Placerville (Unregulated), April 2004  
Rise Rate



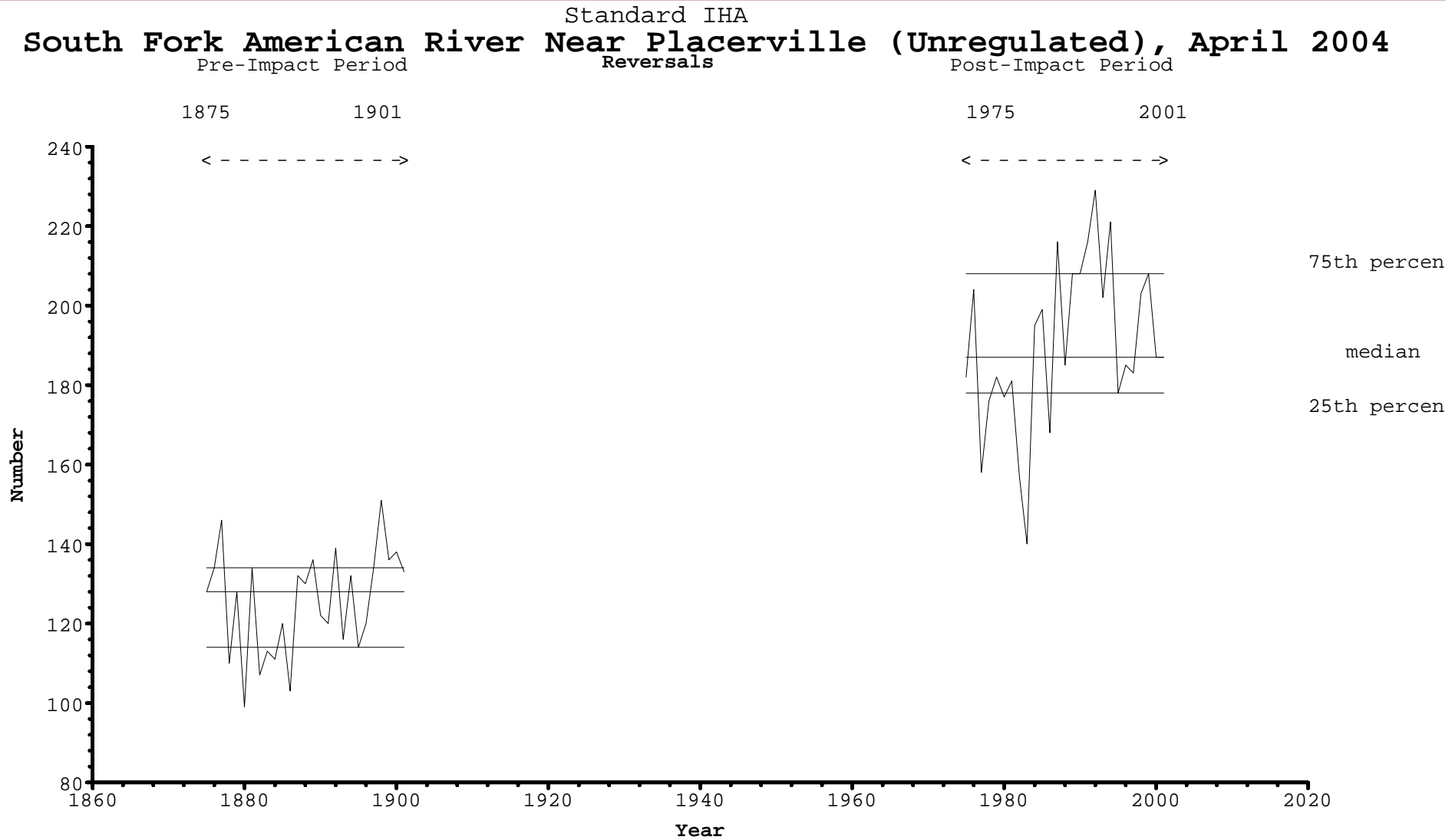
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Standard IHA  
B-4445 South Fork American River Near Placerville (Unregulated), April 2004  
Fall Rate



File(s) Used: P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.ann, P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.baw

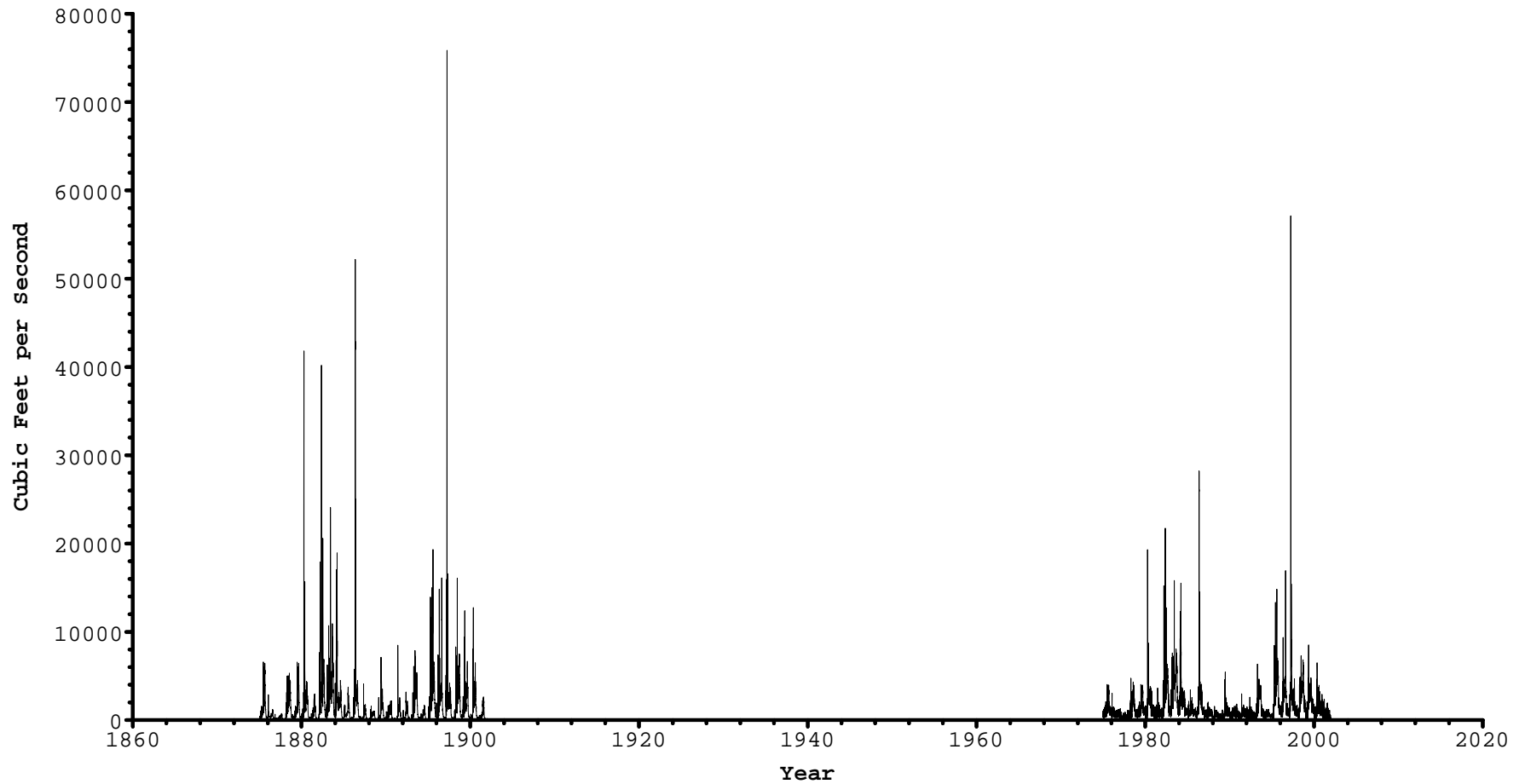
**B-4445 South Fork American River Near Placerville (Unregulated), April 2004**



File(s) Used: P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.ann, P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.baw



### B-4445 South Fork American River Near Placerville (Unregulated), April 2004



File(s) Used: P:\Framatome-IHA\IHA Apr04\3-GageB-Unreg\GB-U.dat

**(4) Gage B - South Fork American River at Chili Bar Reservoir (Natural) versus 4445 South Fork American River Near Placerville (Regulated)**

**Errors**

No Errors

(4) Gage B - South Fork American River at Chili Bar Reservoir (Natural) versus 4445 South Fork American River Near Placerville (Regulated)

IHA Annual Summary Statistics

Year	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
1875	144.2	222.5	293.3	440.3	709.5	1307.3	1186.1	4326.8	3615.9	782.2	230.7	128.2	97.3	99.0	101.9	124.2	205.6
1876	428.0	441.7	335.2	300.5	329.5	501.4	752.7	1004.9	254.5	89.3	143.5	82.5	55.2	61.2	65.0	81.5	82.3
1877	81.1	84.8	86.1	152.7	177.3	205.9	504.8	639.3	446.8	64.6	19.5	27.6	13.1	13.7	16.4	18.0	23.5
1878	24.6	117.3	728.4	1703.9	1125.0	2310.0	2569.9	3576.9	2856.4	767.1	212.0	252.2	18.6	19.7	20.4	24.3	193.2
1879	145.4	222.5	293.3	440.3	709.5	1307.3	1186.1	4326.8	3615.9	782.2	230.7	128.2	97.3	92.2	87.6	106.5	181.8
1880	196.6	373.5	419.2	5359.9	3801.7	1631.9	2325.0	3144.1	2327.6	1052.7	213.3	135.6	80.4	83.3	86.4	110.8	131.1
1881	112.3	148.6	258.7	327.7	608.3	851.5	1683.4	1579.3	489.0	113.3	65.1	61.7	47.2	49.4	54.2	58.4	74.1
1882	152.8	1868.7	2693.5	1441.2	5034.3	2744.8	5025.8	5510.5	3001.4	1007.0	327.3	430.9	65.0	74.0	96.7	149.6	367.1
1883	992.3	1101.5	2152.7	1657.5	3346.2	5202.3	2992.5	5542.9	6835.4	3122.2	826.8	411.1	245.4	247.9	249.4	311.6	491.8
1884	349.9	3921.7	4949.9	2051.5	1437.1	1848.0	1749.9	3259.1	1789.4	495.7	175.8	131.0	102.3	107.8	125.9	131.0	173.5
1885	224.1	807.7	497.2	405.6	555.2	770.1	2446.3	1918.2	638.9	144.9	95.9	141.7	78.8	83.1	93.7	120.5	120.5
1886	152.5	289.3	655.8	1444.9	9367.4	4674.6	2529.6	2964.0	1885.7	460.0	162.1	166.3	101.0	102.6	110.6	122.5	163.9
1887	192.1	152.9	154.7	221.1	559.1	805.6	1375.9	1077.9	289.2	90.1	51.6	54.0	42.4	44.2	46.8	49.0	57.2
1888	79.0	127.0	319.5	482.0	411.5	662.7	885.1	805.9	406.6	82.4	49.5	52.0	36.1	36.6	37.9	43.0	51.8
1889	55.0	284.0	266.9	269.7	461.7	3194.9	2884.3	2132.1	1220.5	225.9	92.3	131.6	43.5	44.1	46.2	54.7	109.7
1890	214.9	271.1	221.9	435.4	424.3	1049.6	1669.1	1170.3	741.7	158.1	70.8	61.9	47.0	49.1	50.8	58.7	65.8
1891	66.5	88.4	106.1	114.6	170.9	1113.1	1239.5	1891.8	1231.6	265.3	100.7	67.6	51.3	52.0	53.3	58.5	83.1
1892	126.1	202.7	172.3	200.3	824.8	867.3	1441.1	738.1	244.6	145.8	54.1	35.6	31.5	31.8	32.5	35.6	47.7
1893	86.1	117.5	482.8	1660.5	1322.9	2958.9	2971.2	4184.5	2590.5	745.9	229.8	122.0	41.7	42.9	43.1	79.3	129.5
1894	129.4	149.1	240.2	242.7	419.2	772.2	1099.2	1154.3	344.5	91.0	50.8	54.6	41.5	43.2	44.5	47.7	57.3
1895	73.0	292.9	542.4	3102.7	1486.6	4697.6	3647.4	5683.9	5114.0	2712.2	638.8	252.4	44.9	48.5	56.7	72.2	201.6
1896	164.4	203.1	866.7	1391.7	3614.9	2664.8	3140.2	4689.2	1955.1	586.6	214.0	156.1	134.2	135.9	130.5	137.9	158.2
1897	154.3	881.6	3933.7	9404.5	2017.3	1916.0	2445.2	2833.6	1403.1	349.3	156.8	116.7	99.7	102.4	103.6	113.1	133.8
1898	144.8	244.7	317.2	1924.4	2506.0	2865.5	2968.1	3964.2	5975.2	2411.7	419.1	288.7	101.2	103.9	110.8	144.4	234.7
1899	211.3	456.7	638.7	1554.9	3123.7	2018.3	2413.5	4408.0	3003.2	669.0	296.5	175.8	151.0	145.6	136.8	136.6	176.6
1900	155.0	237.0	224.6	1231.3	2433.0	1815.0	2556.8	3270.7	1216.2	270.4	138.1	131.6	104.4	95.7	92.7	109.4	137.7
1901	169.5	206.8	259.1	266.8	452.7	1038.8	1430.3	1897.7	281.1	100.7	64.1	69.6	47.9	48.4	49.9	59.0	77.0
1975	591.6	706.5	992.9	1180.2	1064.8	1406.1	1874.0	3506.5	2784.8	1182.6	1041.4	1054.3	114.0	371.0	505.4	531.5	756.3
1976	579.4	784.4	1105.0	748.7	647.7	530.6	522.2	733.7	492.6	938.5	958.6	576.6	108.0	109.6	246.6	407.6	331.2
1977	400.9	271.3	320.0	188.3	124.7	123.9	255.1	294.7	228.1	88.2	141.5	244.0	15.0	15.0	19.9	45.3	131.8
1978	275.3	106.2	485.3	1340.7	887.8	2023.8	2833.3	3367.4	2226.1	986.3	736.5	541.8	27.0	29.0	30.4	102.5	264.0
1979	593.6	706.5	992.9	1180.2	1064.8	1406.1	1874.0	3506.5	2784.8	1182.6	1041.4	1054.3	114.0	371.0	505.4	572.5	613.5
1980	588.0	477.0	798.8	4027.5	3299.7	2343.2	2706.3	3075.2	1964.4	1584.5	965.3	1327.6	109.0	119.3	281.4	443.0	604.1
1981	657.5	638.6	885.0	760.2	810.0	993.2	987.6	907.7	583.1	849.5	841.9	758.5	98.0	127.3	293.9	426.2	609.6
1982	430.6	1275.5	2330.6	2388.7	4370.0	3413.9	5381.7	5166.8	3511.0	1723.1	1310.6	1134.2	110.0	111.0	200.0	394.1	1058.4
1983	877.9	1846.8	2601.9	2221.0	3790.4	5561.3	4278.7	5443.9	6496.0	3648.4	1483.4	1122.6	324.0	397.3	456.0	845.1	1120.1
1984	934.9	3806.0	4632.6	2974.5	2209.0	2363.6	2491.0	2410.0	1482.7	866.5	1107.6	1003.5	396.0	568.0	695.1	658.3	813.4
1985	645.9	942.8	842.0	743.7	1318.4	1017.8	1533.3	1231.7	582.6	963.0	917.6	888.7	250.0	339.0	419.3	455.3	585.1
1986	452.9	452.8	1082.6	1461.2	6612.9	5067.4	2993.3	3074.5	2686.0	1182.7	1078.9	1052.3	125.0	135.0	273.1	376.3	629.9
1987	522.9	639.2	729.0	409.6	846.4	646.8	878.3	859.7	774.2	760.8	722.5	447.4	108.0	152.0	334.9	223.5	198.1
1988	204.3	107.4	464.2	554.0	743.3	650.3	546.1	474.3	432.6	409.3	408.2	453.9	101.0	101.0	102.6	107.4	251.7
1989	216.3	290.8	414.7	415.8	539.1	2329.5	1836.4	1258.2	1059.4	1012.1	1021.6	948.3	107.0	118.0	121.9	184.4	304.6
1990	306.2	323.2	499.2	582.6	869.7	930.8	772.9	666.8	932.8	916.9	680.4	680.4	98.0	110.7	127.7	291.2	373.2
1991	516.2	498.2	524.7	426.1	425.1	862.5	874.0	1103.1	811.2	622.8	712.0	721.8	114.0	154.0	325.3	379.0	450.0
1992	532.7	360.8	527.9	568.2	822.2	661.7	873.6	670.0	457.2	456.7	521.4	411.0	111.0	111.0	111.7	330.7	386.0
1993	388.3	373.4	631.5	1609.4	1369.0	2552.6	2712.7	3371.9	2731.3	1175.5	985.2	843.6	133.0	207.7	232.4	356.0	464.0
1994	480.6	581.3	702.8	506.8	656.2	596.3	733.0	716.4	531.6	460.4	459.9	462.2	165.0	243.0	334.3	430.4	423.4
1995	443.3	365.4	465.7	2743.8	1971.8	4452.9	3805.0	6159.4	5547.3	3240.3	1387.2	1401.3	156.0	160.3	160.9	422.6	422.6
1996	850.6	595.7	738.4	1214.9	2811.8	3121.0	3142.0	4824.8	2151.1	953.4	831.7	865.0	328.0	392.0	482.7	540.4	697.4
1997	740.1	812.0	3563.1	9672.6	3550.4	2649.7	1831.7	1814.8	1698.0	912.4	915.5	1260.3	198.0	230.3	284.3	590.6	631.5
1998	694.2	489.8	667.4	1943.9	3078.2	3161.3	3338.3	3728.1	5472.0	3163.2	1719.0	1369.0	145.0	177.7	397.9	466.6	603.9
1999	554.4	657.3	1071.5	1240.8	3261.4	3012.6	2921.7	3515.5	2536.0	1242.7	1502.7	1164.6	154.0	275.0	354.1	553.7	742.9
2000	677.7	711.5	777.0	1148.2	2242.2	2124.7	1851.4	2399.0	1588.8	1037.1	1371.5	1196.7	154.0	186.7	238.7	324.7	622.4
2001	404.4	1092.9	1217.9	543.1	477.4	726.0	943.7	1072.9	353.3	344.7	298.2	205.9	128.0	129.0	129.3	205.9	273.0

(4) Gage B - South Fork American River at Chili Bar Reservoir (Natural) versus 4445 South Fork American River Near Placerville (Regulated)

IHA Annual Summary Statistics (Cont)

Year	1-day max	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	LRise rate	Fall rate	Reversals
1875	6857.0	6538.6	6158.4	5430.3	3126.1	0.0	0.1	268.0	152.0	4.0	14.3	2.0	36.0	170.6	-109.3	139.0
1876	3199.3	1722.9	1389.7	1181.1	762.5	0.0	0.2	210.0	300.0	5.0	18.6	1.0	1.0	66.2	-41.3	140.0
1877	968.3	930.7	899.1	766.1	542.8	0.0	0.1	259.0	152.0	9.0	25.7	0.0	0.0	24.9	-19.5	148.0
1878	5406.6	4782.8	4260.4	3823.0	3126.5	0.0	0.0	285.0	116.0	3.0	9.7	10.0	13.9	267.4	-162.2	118.0
1879	6857.0	6538.6	6158.4	5430.3	3126.1	0.0	0.1	268.0	152.0	4.0	13.0	2.0	36.0	171.8	-108.9	140.0
1880	42569.1	30783.0	18079.6	5560.3	3640.6	0.0	0.1	280.0	13.0	4.0	8.5	5.0	26.6	573.5	-313.4	105.0
1881	3426.9	3193.5	2761.5	2019.1	1484.7	0.0	0.1	268.0	115.0	4.0	27.3	7.0	4.1	89.9	-56.6	144.0
1882	39693.7	24460.3	14140.9	6402.2	4924.3	0.0	0.0	275.0	47.0	3.0	6.0	5.0	35.0	955.6	-442.8	109.0
1883	23371.8	14122.1	9934.0	8066.9	5446.5	0.0	0.1	291.0	73.0	0.0	0.0	7.0	29.6	719.7	-370.7	117.0
1884	18561.8	16771.1	11906.9	5350.1	3709.7	0.0	0.1	271.0	360.0	2.0	21.5	8.0	20.9	612.0	-290.5	109.0
1885	4099.3	3909.9	3515.3	2628.5	1768.2	0.0	0.1	239.0	106.0	5.0	16.6	5.0	11.2	92.0	-63.0	128.0
1886	51122.6	45028.2	28058.9	11329.8	5551.9	0.0	0.1	278.0	48.0	7.0	8.0	7.0	20.1	718.1	-415.5	109.0
1887	4010.6	2188.8	1875.5	1562.5	1101.7	0.0	0.1	274.0	44.0	9.0	17.6	6.0	3.3	75.2	-46.9	124.0
1888	1569.5	1090.5	1047.0	902.9	785.3	0.0	0.1	250.0	5.0	4.0	27.5	1.0	1.0	51.7	-40.7	146.0
1889	7350.7	5878.1	4892.4	3561.5	2778.7	0.0	0.1	276.0	68.0	6.0	12.2	6.0	14.5	194.2	-133.9	137.0
1890	2408.6	2044.0	1856.4	1669.1	1336.8	0.0	0.1	253.0	114.0	3.0	26.3	8.0	3.9	86.3	-52.7	115.0
1891	8688.2	4631.7	2556.3	2035.4	1491.9	0.0	0.1	279.0	64.0	4.0	20.5	6.0	6.3	132.8	-85.3	124.0
1892	3151.0	2469.8	1756.3	1441.1	1158.2	0.0	0.1	273.0	51.0	7.0	15.4	6.0	1.8	79.2	-50.7	141.0
1893	7835.4	6172.7	4838.6	4215.8	3674.5	0.0	0.0	286.0	77.0	3.0	23.3	9.0	14.6	332.3	-185.7	119.0
1894	2006.4	1920.8	1727.5	1377.3	1016.5	0.0	0.1	251.0	110.0	4.0	34.8	2.0	5.0	52.5	-34.3	140.0
1895	19901.5	14881.2	10920.3	5904.3	5025.3	0.0	0.0	276.0	122.0	3.0	1.7	5.0	35.6	577.4	-369.2	110.0
1896	16406.5	13127.4	8942.7	4938.9	3570.5	0.0	0.1	274.0	137.0	6.0	6.2	6.0	24.5	514.2	-262.6	134.0
1897	75667.0	52157.8	29083.6	10315.7	5255.0	0.0	0.1	268.0	2.0	4.0	16.3	9.0	17.6	997.3	-618.4	139.0
1898	16230.4	10567.4	7191.8	5975.2	4511.6	0.0	0.1	275.0	84.0	2.0	14.5	6.0	27.0	454.5	-307.4	165.0
1899	12140.9	9015.9	6605.3	4601.7	3312.0	0.0	0.1	253.0	40.0	1.0	2.0	11.0	12.8	380.3	-249.1	150.0
1900	12558.0	7664.4	4851.9	3334.1	2596.1	0.0	0.1	274.0	45.0	5.0	12.6	9.0	13.2	330.7	-202.1	136.0
1901	3146.3	2963.3	2819.9	2323.4	1480.7	0.0	0.1	252.0	129.0	4.0	27.5	4.0	9.8	81.9	-52.8	136.0
1975	4020.0	3946.7	3940.0	3820.0	2835.4	0.0	0.4	302.0	85.0	1.0	1.0	18.0	5.5	270.8	-260.9	182.0
1976	3010.0	1495.3	1191.4	1111.3	911.5	0.0	0.3	290.0	301.0	1.0	4.0	1.0	1.0	202.0	-197.3	204.0
1977	1290.0	913.0	500.0	410.2	331.1	0.0	0.1	247.0	291.0	60.0	3.6	0.0	0.0	239.5	-215.4	158.0
1978	4730.0	4196.7	4014.3	3595.7	2920.0	0.0	0.0	331.0	17.0	15.0	3.9	14.0	9.1	328.0	-281.5	176.0
1979	4020.0	3946.7	3940.0	3820.0	2835.4	0.0	0.4	302.0	85.0	1.0	1.0	18.0	5.5	270.4	-260.9	182.0
1980	19300.0	15876.7	10504.3	4342.3	3348.2	0.0	0.2	289.0	14.0	4.0	1.8	17.0	11.7	429.8	-419.9	177.0
1981	3630.0	2413.3	1599.9	1155.9	1285.9	0.0	0.4	25.0	86.0	3.0	1.7	5.0	2.2	260.3	-255.3	181.0
1982	21700.0	14510.0	9117.1	5896.7	4875.1	0.0	0.1	305.0	47.0	3.0	2.7	15.0	15.3	563.7	-488.9	157.0
1983	15800.0	10810.0	7755.7	6826.3	5542.1	0.0	0.1	282.0	73.0	0.0	0.0	11.0	25.6	517.3	-370.5	140.0
1984	15500.0	12853.3	9974.3	5239.7	3934.7	0.0	0.3	165.0	361.0	0.0	0.0	15.0	14.2	471.7	-446.5	195.0
1985	3420.0	2563.3	2114.3	1575.0	1332.0	0.0	0.4	317.0	39.0	0.0	0.0	10.0	3.1	200.7	-191.1	199.0
1986	28200.0	26733.3	17341.4	8532.7	4975.8	0.0	0.1	310.0	48.0	5.0	1.6	7.0	22.1	491.2	-405.9	168.0
1987	2010.0	1730.0	1265.1	999.1	846.3	0.0	0.5	261.0	73.0	8.0	1.4	2.0	2.0	200.8	-204.5	216.0
1988	1540.0	1356.7	956.6	764.5	669.8	0.0	0.2	325.0	350.0	7.0	9.4	0.0	0.0	133.5	-121.8	185.0
1989	5420.0	3990.0	3528.6	2601.7	1833.4	0.0	0.1	13.0	85.0	16.0	2.3	11.0	5.4	282.1	-293.4	208.0
1990	1790.0	1463.3	1345.7	975.0	863.7	0.0	0.2	29.0	219.0	12.0	2.8	3.0	1.0	224.0	-241.8	208.0
1991	2950.0	2152.0	1372.7	1164.2	961.9	0.0	0.5	283.0	65.0	4.0	1.5	2.0	1.5	220.6	-218.6	216.0
1992	2580.0	1933.3	1486.1	931.4	834.8	0.0	0.2	308.0	52.0	15.0	2.2	3.0	1.3	203.3	-198.9	229.0
1993	6330.0	5176.7	3832.9	3408.7	3099.8	0.0	0.2	279.0	22.0	2.0	1.5	9.0	15.9	285.3	-263.0	202.0
1994	1210.0	1032.3	893.6	782.6	691.9	0.0	0.6	278.0	132.0	0.0	0.0	0.0	0.0	148.3	-146.2	221.0
1995	14800.0	13066.7	9830.0	6201.3	5395.1	0.0	0.1	363.0	123.0	4.0	3.3	15.0	15.2	438.1	-398.4	178.0
1996	16900.0	13400.0	8890.0	4883.7	3745.8	0.0	0.3	6.0	137.0	0.0	0.0	10.0	14.7	390.7	-325.7	185.0
1997	57100.0	40300.0	24671.4	10351.0	5759.0	0.0	0.1	313.0	2.0	0.0	0.0	19.0	9.3	691.8	-637.0	183.0
1998	7260.0	6690.0	6531.4	5647.7	4342.2	0.0	0.2	324.0	85.0	2.0	1.0	13.0	17.3	386.3	-331.1	203.0
1999	8510.0	5873.3	4430.0	3701.0	3141.9	0.0	0.2	275.0	40.0	1.0	0.0	15.0	12.1	386.9	-371.3	208.0
2000	6480.0	5450.0	4035.7	2727.7	2234.0	0.0	0.2	9.0	45.0	2.0	1.0	25.0	5.9	362.5	-370.9	187.0
2001	2330.0	1973.3	1614.3	1278.2	973.5	0.0	0.2	268.0	347.0	14.0	3.1	10.0	1.9	245.7	-231.7	187.0

(4) Gage B - South Fork American River at Chili Bar Reservoir (Natural) versus 4445 South Fork American River Near Placerville (Regulated)

Non-Parametric IHA Scorecard

(4) Gage B - 4445 South Fork American River Near Placerville (Natural), April 2004

Pre-impact period: 1875-1901 (27 years)

Post-impact period: 1975-2001 (27 years)

Watershed area	1.00	
Mean annual flow	1219.74	1432.95
Mean flow/area	1219.74	1432.95
Annual C. V.	.93	.58
Flow predictability	.39	.42
Constancy/predictability	.43	.71
% of floods in 60d period	.42	.42
flood-free season	59.00	18.00

	MEDIANS		COEFF. of DISP.		DEVIATION FACTOR		SIGNIFICANCE COUNT	
	Pre	Post	Pre	Post	Medians	C.V.	Medians	C.V.
Parameter Group #1								
October	152.5	532.7	.72	.48	2.49	.34	.00	.55
November	237.0	595.7	1.23	.70	1.51	.43	.00	.18
December	319.5	777.0	1.30	.72	1.43	.45	.00	.22
January	482.0	1180.2	2.89	1.18	1.45	.59	.04	.17
February	824.8	1064.8	2.49	2.27	.29	.09	.61	.78
March	1631.9	2023.8	1.16	1.13	.24	.03	.65	.95
April	2325.0	1851.4	.71	1.10	.20	.56	.52	.08
May	2964.0	2399.0	1.06	1.10	.19	.04	.75	.93
June	1403.1	1588.8	1.82	1.35	.13	.26	.81	.51
July	349.2	963.0	1.92	.44	1.76	.77	.00	.10
August	156.8	958.5	1.06	.40	5.11	.62	.00	.31
September	128.2	888.7	.81	.67	5.93	.18	.00	.78
Parameter Group #2								
1-day minimum	55.2	114.0	1.06	.42	1.07	.60	.00	.08
3-day minimum	61.2	154.0	.95	1.06	1.52	.12	.00	.84
7-day minimum	65.0	281.4	.91	.95	3.33	.04	.00	.86
30-day minimum	81.5	394.1	.85	.61	3.84	.28	.00	.50
90-day minimum	131.1	585.1	.82	.51	3.46	.37	.00	.30
1-day maximum	7350.7	4730.0	2.09	2.73	.36	.31	.37	.39
3-day maximum	6172.7	3990.0	1.89	2.74	.35	.45	.31	.24
7-day maximum	4851.9	3940.0	1.66	1.91	.19	.15	.39	.61
30-day maximum	3823.0	3408.7	1.02	1.21	.11	.19	.59	.49
90-day maximum	3126.1	2835.4	.76	1.07	.09	.40	.68	.28
Number of zero days	.0	.0	.00	.00	999999.00	999999.00	.00	.00
Base flow	.1	.2	.61	1.16	1.37	.89	.00	.10
Parameter Group #3								
Date of minimum	273.0	305.0	.06	.14	.17	1.26	.00	.05
Date of maximum	73.0	48.0	.20	.19	.14	.01	.21	.98
Parameter Group #4								
Low pulse count	4.0	3.0	.50	2.33	.25	3.67	.12	.00
Low pulse duration	15.4	1.5	.96	1.83	.90	.91	.20	.21
High pulse count	6.0	10.0	.67	1.20	.67	.80	.01	.08
High pulse duration	13.9	5.5	1.62	2.40	.60	.49	.20	.34
The low pulse threshold is	163.90							
The high pulse level is	1551.30							
Parameter Group #5								
Rise rate	194.2	282.1	2.53	.74	.45	.71	.08	.06
Fall rate	-133.9	-263.0	-1.90	-.59	.96	.69	.00	.07
Number of reversals	136.0	187.0	.17	.16	.38	.05	.00	.87

(4) Gage B - South Fork American River at Chili Bar Reservoir (Natural) versus 4445 South Fork American River Near Placerville (Regulated)

Variance Data, Box and Whisker Format

	October	November	December	January	February	March	April	May	June	July	August	September	1-day min	3-day min	7-day min	30-day min	90-day min
<b>Pre-Impact Distribution</b>																	
1-day min	24.6	84.8	86.1	114.6	170.9	205.9	504.8	639.3	244.6	64.6	19.5	27.6	13.1	13.7	16.4	18.0	23.5
25 pctile	86.1	149.1	240.2	269.7	452.7	851.5	1239.5	1170.3	446.8	113.3	65.1	61.9	42.4	44.1	46.2	54.7	74.1
Median	152.5	237.0	319.5	482.0	824.8	1631.9	2325.0	2964.0	1403.1	349.3	156.8	128.2	55.2	61.2	65.0	81.5	131.1
75 pctile	196.6	441.7	655.8	1660.5	2506.0	2744.8	2884.3	4326.8	3001.4	782.2	230.7	166.3	101.0	102.4	105.6	124.2	181.8
1-day max	992.3	3921.7	4949.9	9404.5	9367.4	5202.3	5025.8	5683.9	6835.4	3122.2	826.8	430.9	245.4	247.9	249.4	311.6	491.8
<b>Post-Impact Distribution</b>																	
1-day min	204.3	106.2	320.0	188.3	124.7	123.9	255.1	294.7	228.1	88.2	141.5	205.9	15.0	15.0	19.9	45.3	131.8
25 pctile	404.4	365.4	524.7	554.0	656.2	726.0	878.3	859.7	582.6	760.8	722.5	541.8	108.0	111.0	129.3	291.2	331.2
Median	532.7	595.7	777.0	1180.2	1064.8	2023.8	1851.4	2399.0	1588.8	963.0	958.6	888.7	114.0	154.0	281.4	394.1	585.1
75 pctile	657.5	784.4	1082.6	1943.9	3078.2	3012.6	2921.7	3506.5	2731.3	1182.7	1107.6	1134.2	156.0	275.0	397.9	531.5	631.5
1-day max	934.9	3806.0	4632.6	9672.6	6612.9	5561.3	5381.7	6159.4	6496.0	3648.4	1719.0	1401.3	396.0	568.0	695.1	845.1	1120.1

	1-day max	3-day max	7-day max	30-day max	90-day max	Zero days	Base flow	Date min	Date max	Lo pulse	#Lo pulse	LHi pulse	#Hi pulse	LRise rate	Fall rate	Reversals
<b>Pre-Impact Distribution</b>																
1-day min	968.3	930.7	899.1	766.1	542.8	0.0	0.0	210.0	2.0	0.0	0.0	0.0	0.0	24.9	-618.4	105.0
25 pctile	3199.3	2469.8	1875.5	1669.1	1336.8	0.0	0.1	253.0	44.0	3.0	8.5	4.0	4.1	81.9	-307.4	117.0
Median	7350.7	6172.7	4851.9	3823.0	3126.1	0.0	0.1	273.0	73.0	4.0	15.4	6.0	13.9	194.2	-133.9	136.0
75 pctile	18561.8	14122.1	9934.0	5560.3	3709.7	0.0	0.1	276.0	116.0	5.0	23.3	8.0	26.6	573.5	-52.7	140.0
1-day max	75667.0	52157.8	29083.6	11329.8	5551.9	0.0	0.2	291.0	360.0	9.0	34.8	11.0	36.0	997.3	-19.5	165.0
<b>Post-Impact Distribution</b>																
1-day min	1210.0	913.0	500.0	410.2	331.1	0.0	0.0	6.0	2.0	0.0	0.0	0.0	0.0	133.5	-637.0	140.0
25 pctile	2580.0	1933.3	1372.7	1111.3	911.5	0.0	0.1	279.0	14.0	1.0	0.0	3.0	1.5	220.6	-371.3	178.0
Median	4730.0	3990.0	3940.0	3408.7	2835.4	0.0	0.2	305.0	48.0	3.0	1.5	10.0	5.5	282.1	-263.0	187.0
75 pctile	15500.0	12853.3	8890.0	5239.7	3934.7	0.0	0.4	331.0	85.0	8.0	2.8	15.0	14.7	429.8	-215.4	208.0
1-day max	57100.0	40300.0	24671.4	10351.0	5759.0	0.0	0.6	363.0	361.0	60.0	9.4	25.0	25.6	691.8	-121.8	229.0

(4) Gage B - South Fork American River at Chili Bar Reservoir (Natural) versus 4445 South Fork American River Near Placerville (Regulated)

IHA Percentile Data

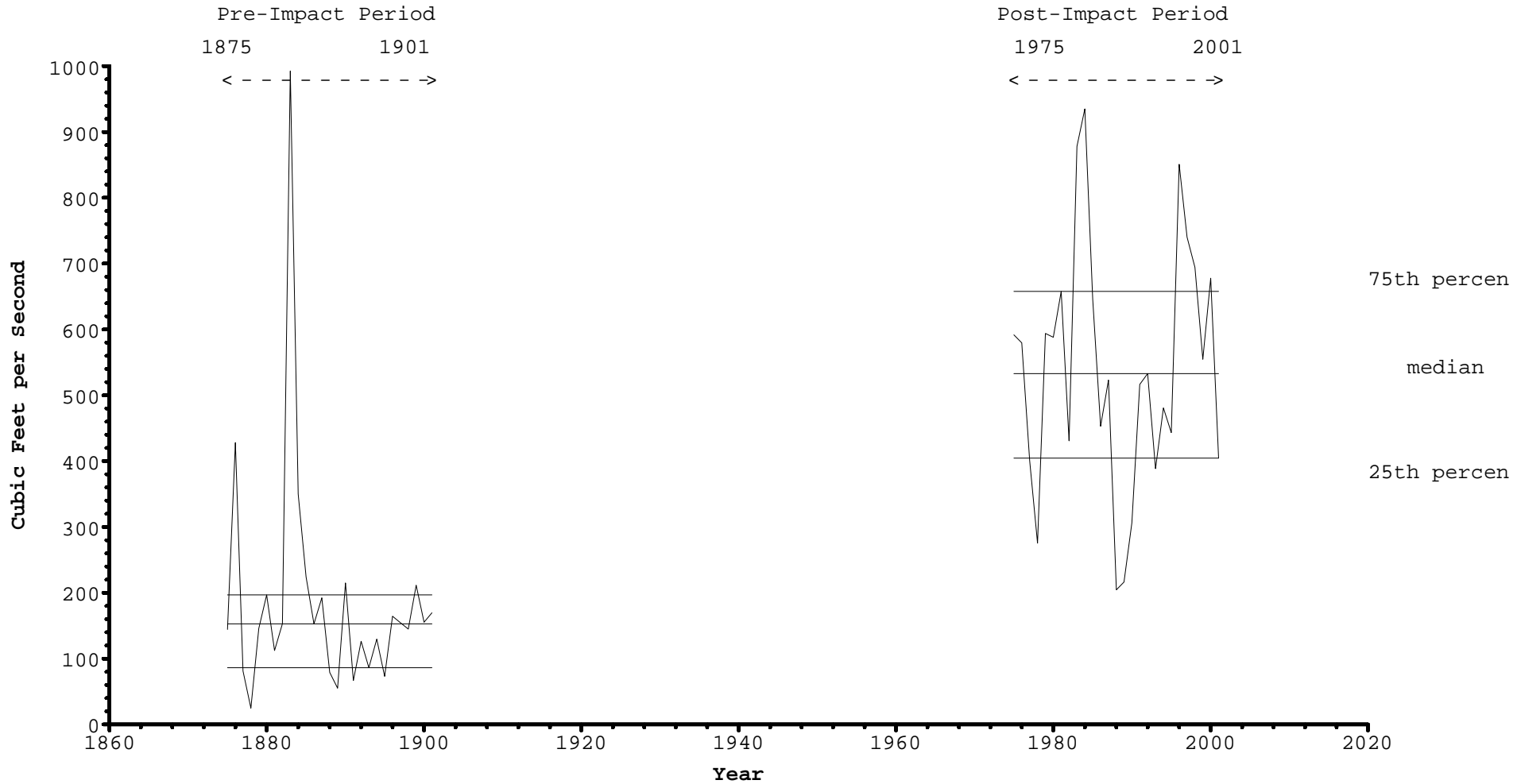
(4) Gage B - 4445 South Fork American River Near Placerville (Natural), April 2004  
 Pre-impact period: 1875-1901 (27 years) Post-impact period: 1975-2001 (27 years)

	Pre-Impact					(75-25)/50	Post-Impact					(75-25)/50
	10%	25%	50%	75%	90%		10%	25%	50%	75%	90%	
<b>Parameter Group #1</b>												
October	64.21	86.10	152.48	196.56	365.49	.72	263.46	404.35	532.71	657.52	856.04	.48
November	111.50	149.10	237.01	441.70	1254.92	1.23	238.54	365.40	595.73	784.37	1389.75	.70
December	144.94	240.15	319.51	655.79	2941.53	1.30	454.28	524.74	777.03	1082.58	2794.17	.72
January	190.74	269.70	482.00	1660.51	3554.13	2.89	414.59	553.97	1180.16	1943.94	3185.11	1.18
February	299.08	452.67	824.82	2505.99	4048.19	2.49	466.94	656.21	1064.75	3078.21	3906.29	2.27
March	630.40	851.45	1631.85	2744.75	4679.19	1.16	583.15	726.00	2023.81	3012.58	4575.81	1.13
April	858.62	1239.53	2325.02	2884.33	3241.60	.71	541.29	878.33	1851.40	2921.67	3899.73	1.10
May	792.31	1170.34	2963.96	4326.75	5516.97	1.06	630.84	859.74	2399.03	3506.45	5222.19	1.10
June	275.81	446.84	1403.09	3001.39	5286.25	1.82	416.77	582.57	1588.80	2731.33	5487.07	1.35
July	87.93	113.25	349.25	782.19	2471.80	1.92	396.36	760.84	963.00	1182.71	3178.65	.44
August	50.56	65.05	156.79	230.71	463.03	1.06	386.23	722.52	958.55	1107.61	1487.24	.40
September	48.75	61.89	128.24	166.33	313.16	.81	377.61	541.83	888.73	1134.17	1335.89	.67
<b>Parameter Group #2</b>												
1-day minimum	28.92	42.40	55.20	101.00	137.56	1.06	83.80	108.00	114.00	156.00	324.80	.42
3-day minimum	29.41	44.10	61.20	102.40	137.87	.95	86.60	111.00	154.00	275.00	393.07	1.06
7-day minimum	30.10	46.16	64.97	105.59	131.72	.91	88.14	129.29	281.43	397.86	505.43	.95
30-day minimum	33.30	54.67	81.51	124.16	145.46	.85	106.40	291.23	394.13	531.53	604.14	.61
90-day minimum	50.98	74.05	131.13	181.75	261.16	.82	241.00	331.20	585.06	631.52	862.39	.51
1-day maximum	1919.02	3199.30	7350.70	18561.80	44279.79	2.09	1490.00	2580.00	4730.00	15500.00	22999.99	2.73
3-day maximum	1596.42	2469.83	6172.73	14122.07	33632.02	1.89	1291.80	1933.33	3990.00	12853.33	18047.99	2.74
7-day maximum	1321.14	1875.54	4851.86	9934.04	20075.47	1.66	943.97	1372.71	3940.00	8890.00	11871.71	1.91
30-day maximum	1125.47	1669.10	3823.04	5560.27	8516.62	1.02	779.01	1111.27	3408.67	5239.67	7167.60	1.21
90-day maximum	780.74	1336.76	3126.07	3709.72	5293.32	.76	687.45	911.50	2835.44	3934.67	5424.51	1.07
Number of zero days	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Base flow	.03	.05	.08	.10	.11	.61	.07	.13	.19	.35	.48	1.16
<b>Parameter Group #3</b>												
Date of minimum	247.80	253.00	273.00	276.00	285.20	.06	258.20	279.00	305.00	331.00	15.40	.14
Date of maximum	.40	44.00	73.00	116.00	152.00	.20	337.80	14.00	48.00	85.00	133.00	.19
<b>Parameter Group #4</b>												
Low pulse count	1.80	3.00	4.00	5.00	7.40	.50	.00	1.00	3.00	8.00	15.20	2.33
Low pulse duration	1.93	8.50	15.43	23.33	27.50	.96	.00	.00	1.50	2.75	3.95	1.83
High pulse count	1.00	4.00	6.00	8.00	9.20	.67	.00	3.00	10.00	15.00	18.20	1.20
High pulse duration	1.00	4.14	13.90	26.60	35.68	1.62	.00	1.50	5.50	14.70	18.27	2.40
<b>Parameter Group #5</b>												
Rise rate	52.33	81.85	194.19	573.53	766.89	2.53	190.20	220.57	282.12	429.81	526.55	.74
Fall rate	-420.96	-307.36	-133.94	-52.66	-39.42	-1.90	-454.94	-371.33	-263.03	-215.42	-182.15	-.59
Number of reversals	109.00	117.00	136.00	140.00	148.40	.17	157.80	178.00	187.00	208.00	217.00	.16

Standard IHA

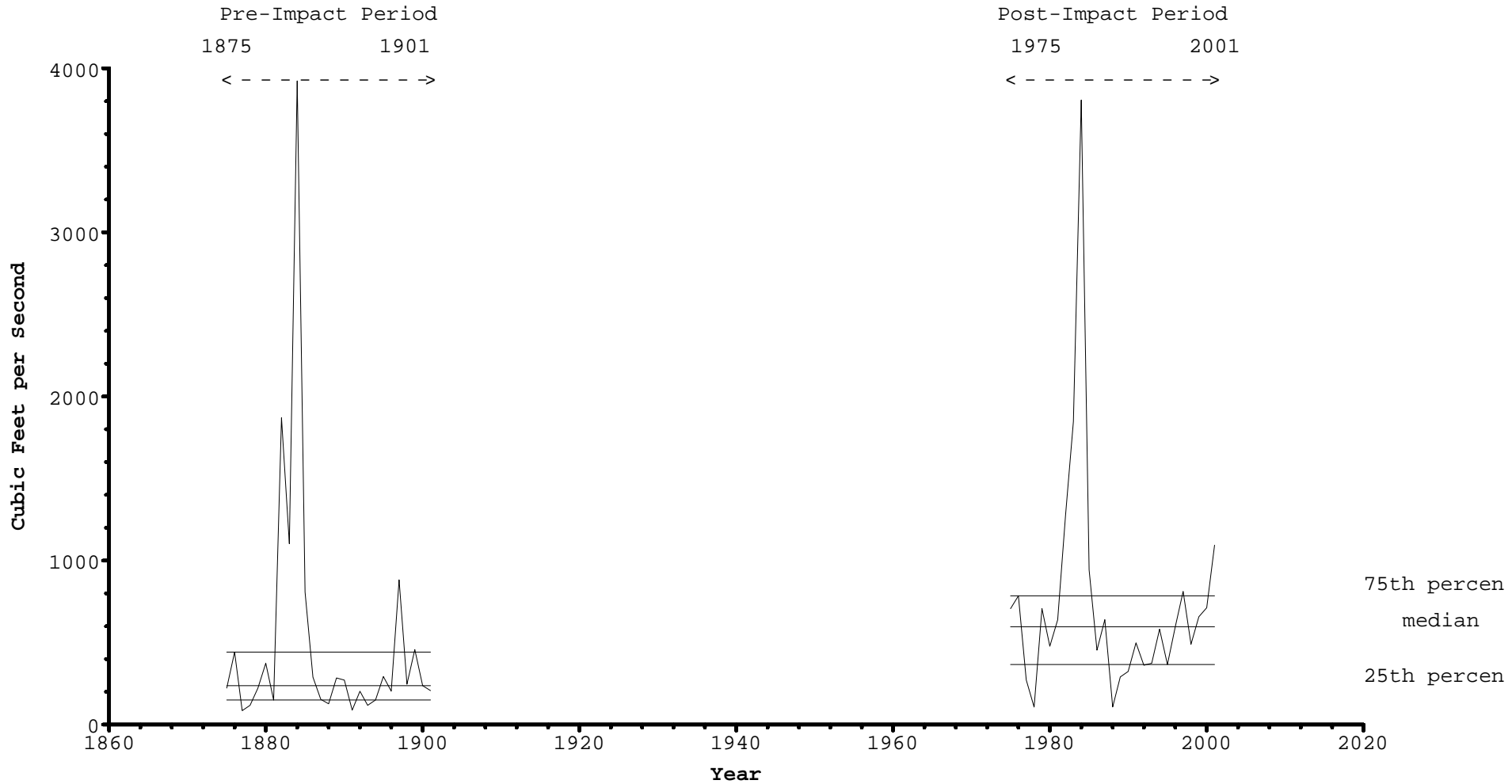
# B-4445 South Fork American River Near Placerville (Natural), April 2004

Average flow for October





Standard IHA  
**B-4445 South Fork American River Near Placerville (Natural), April 2004**  
Average flow for November

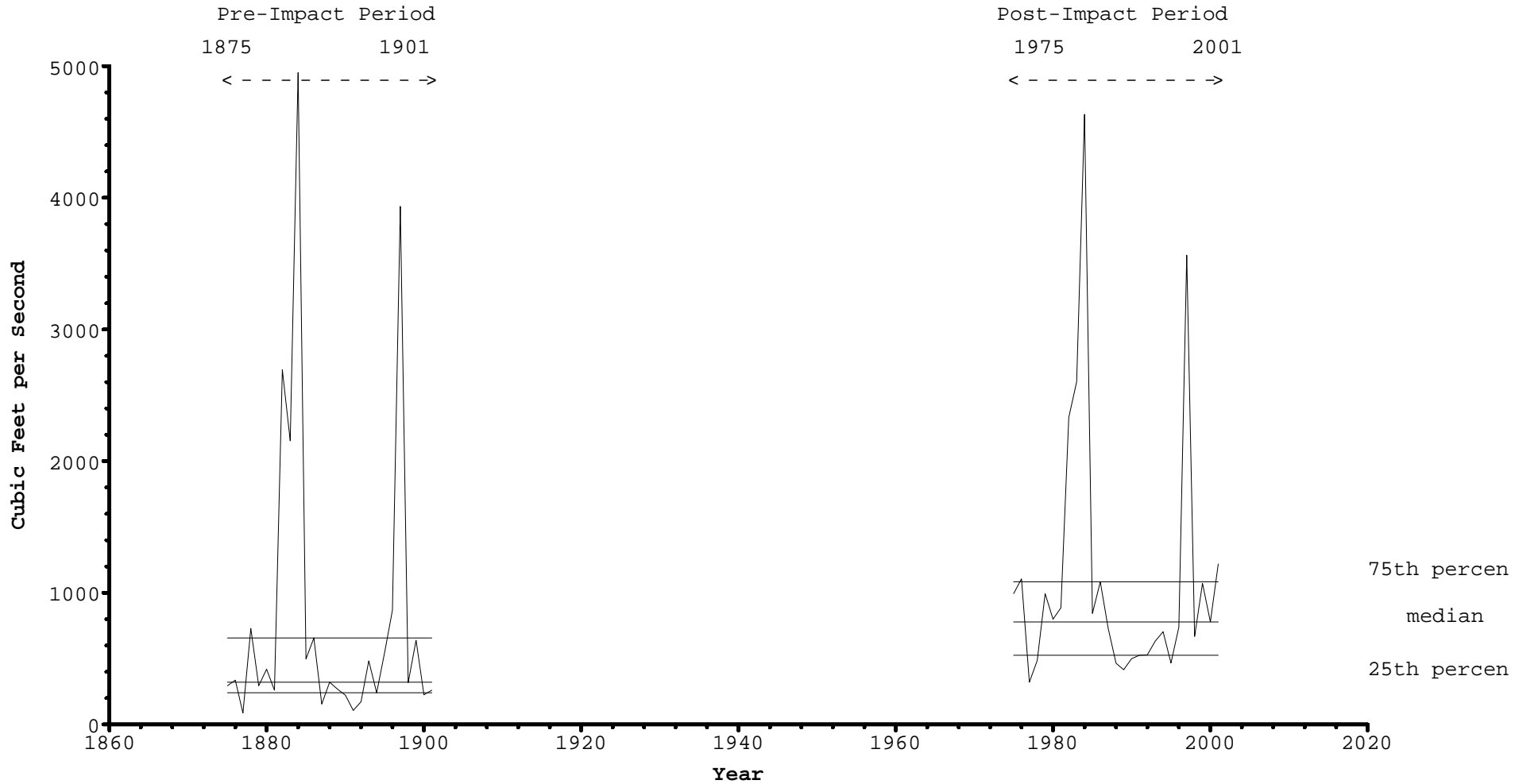


File(s) Used: P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.ann, P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.baw

Standard IHA

# B-4445 South Fork American River Near Placerville (Natural), April 2004

Average flow for December

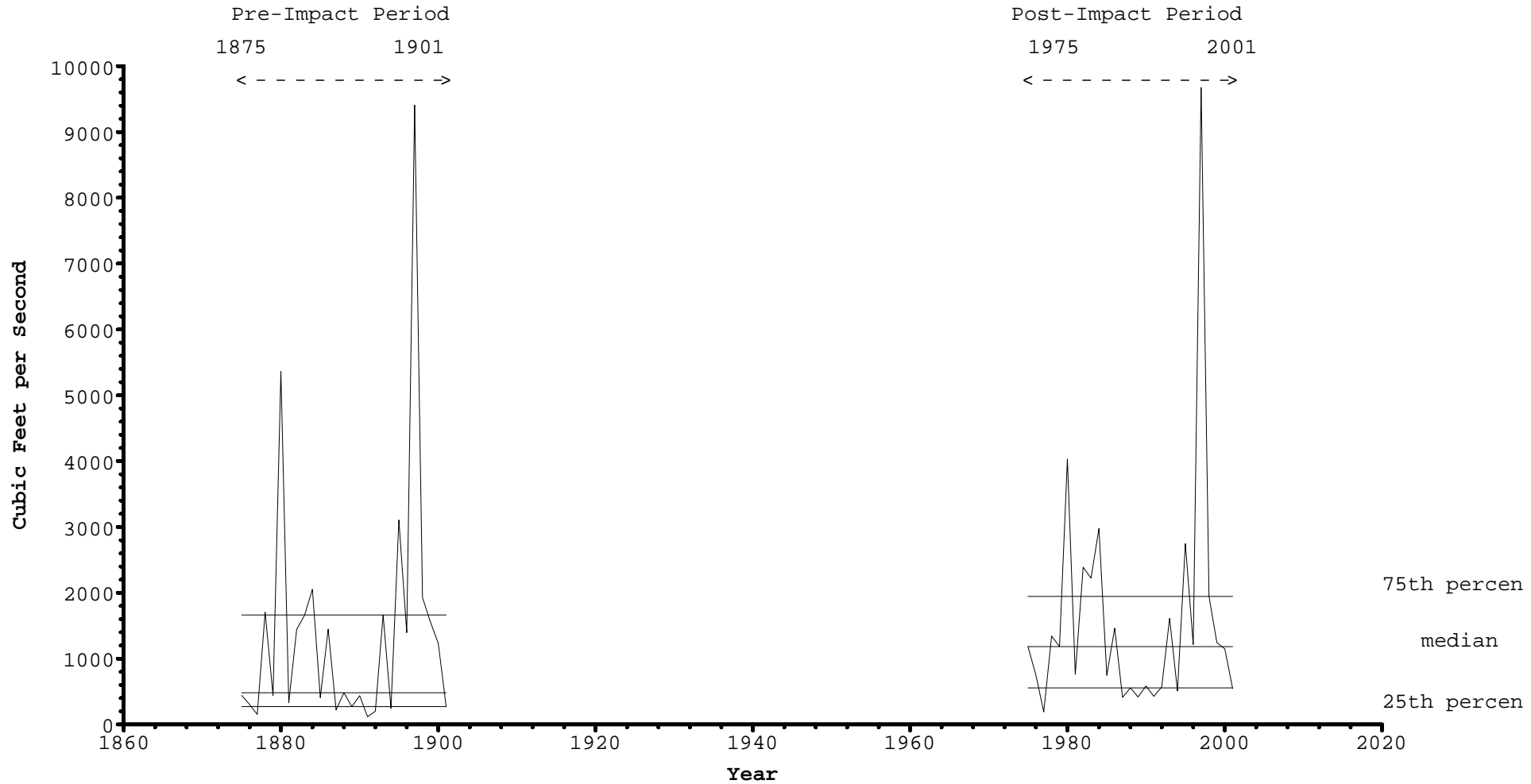


File(s) Used: P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.ann, P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.baw

Standard IHA

# B-4445 South Fork American River Near Placerville (Natural), April 2004

Average flow for January

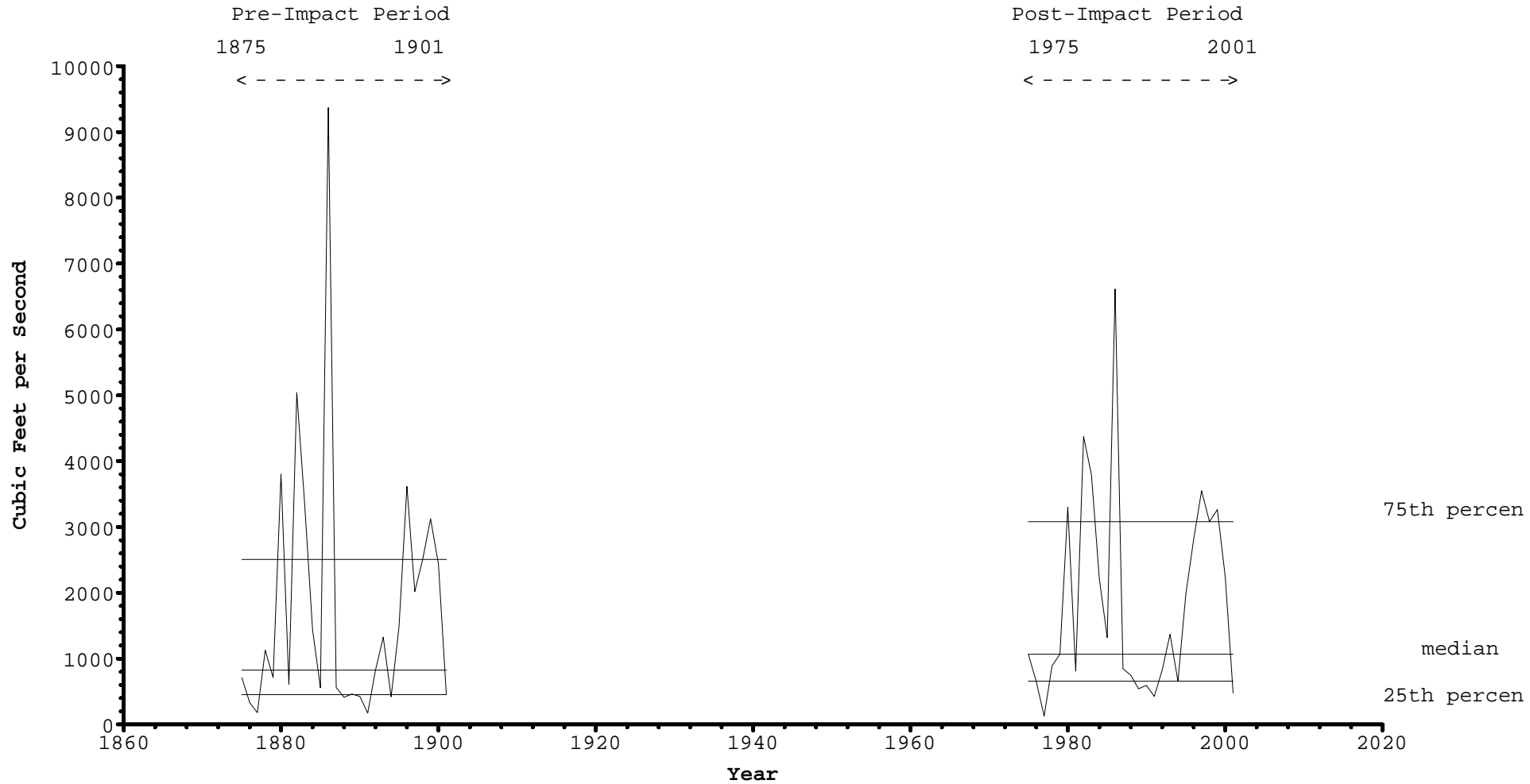


File(s) Used: P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.ann, P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.baw

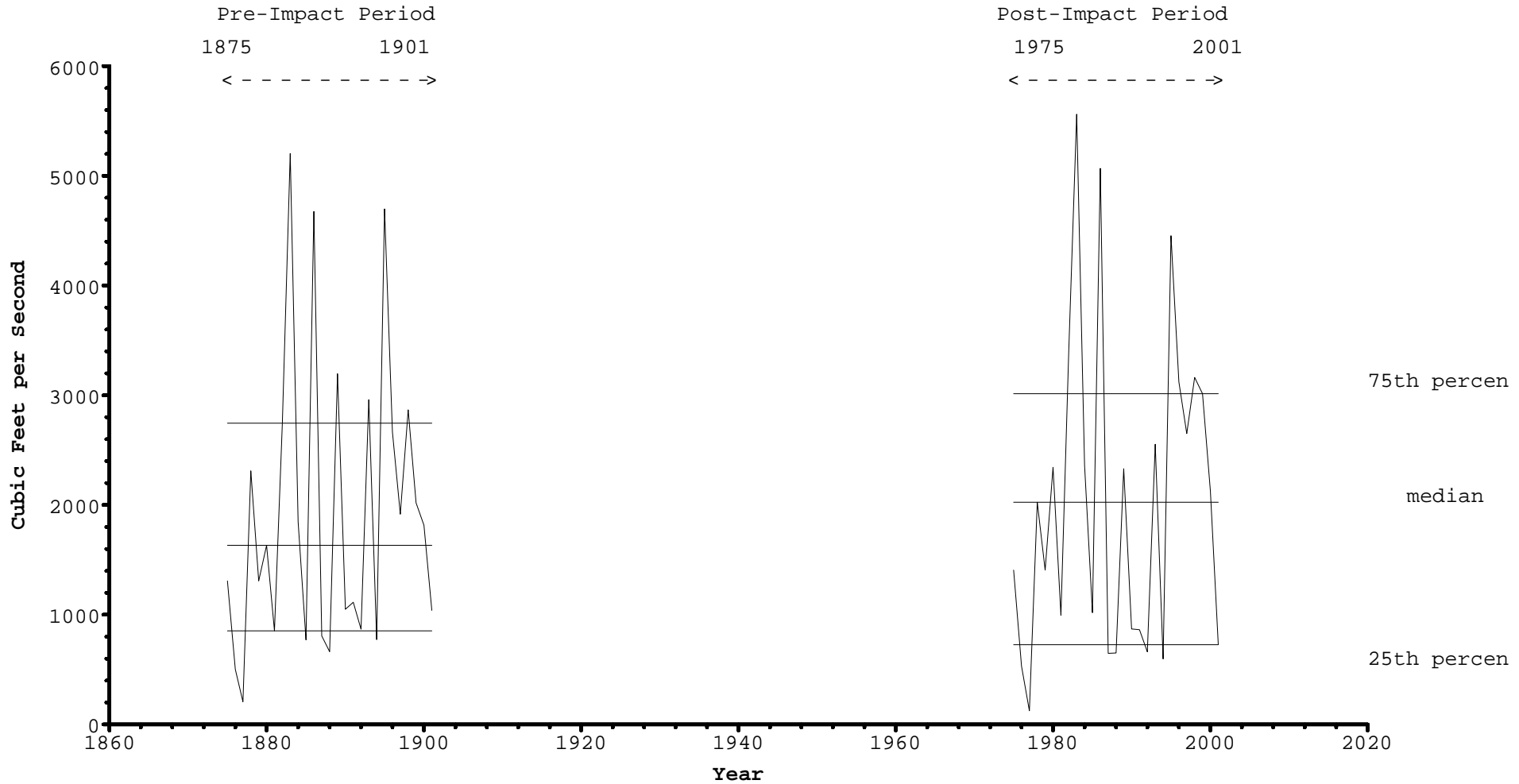
Standard IHA

# B-4445 South Fork American River Near Placerville (Natural), April 2004

Average flow for February



Standard IHA  
**B-4445 South Fork American River Near Placerville (Natural), April 2004**  
Average flow for March

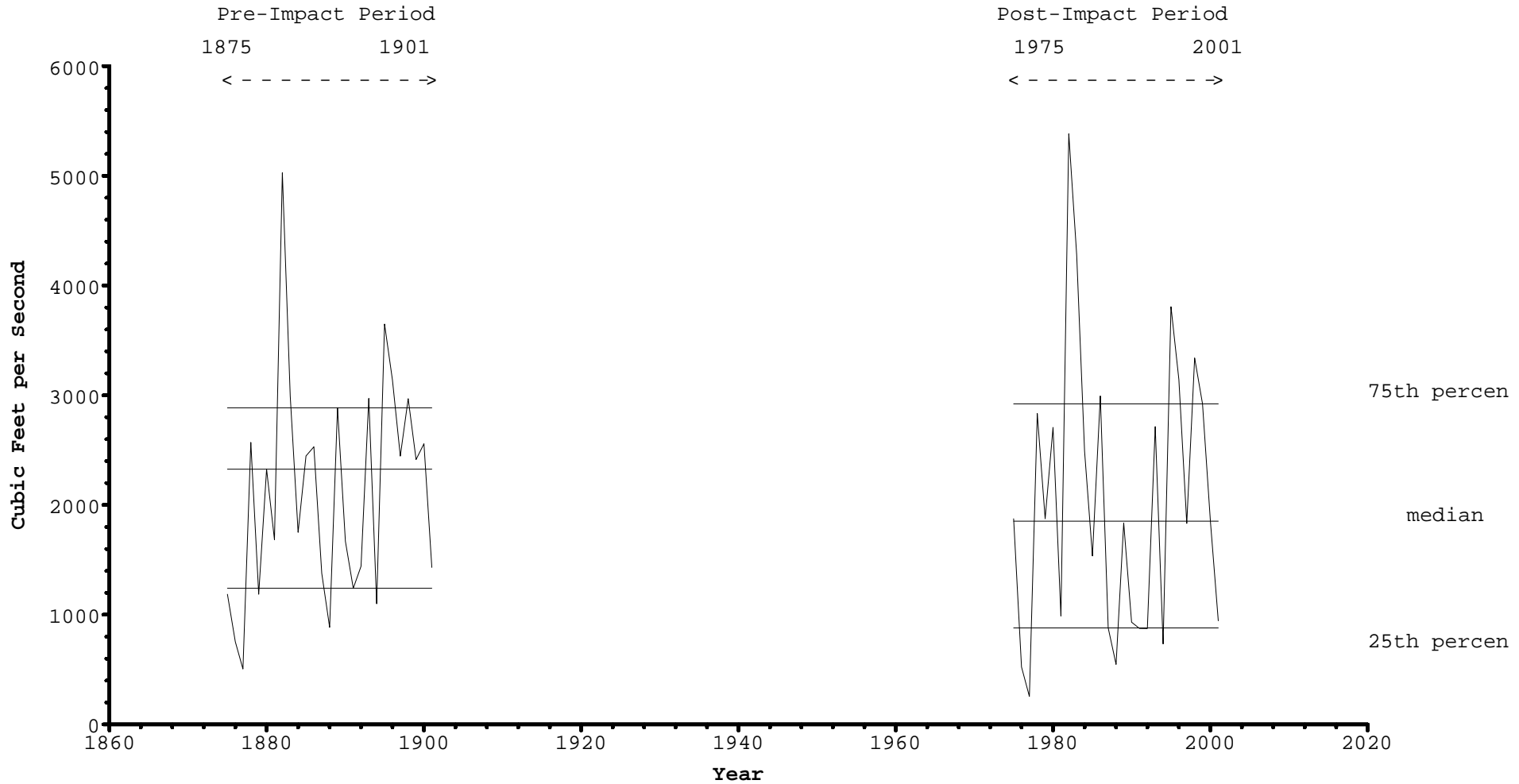


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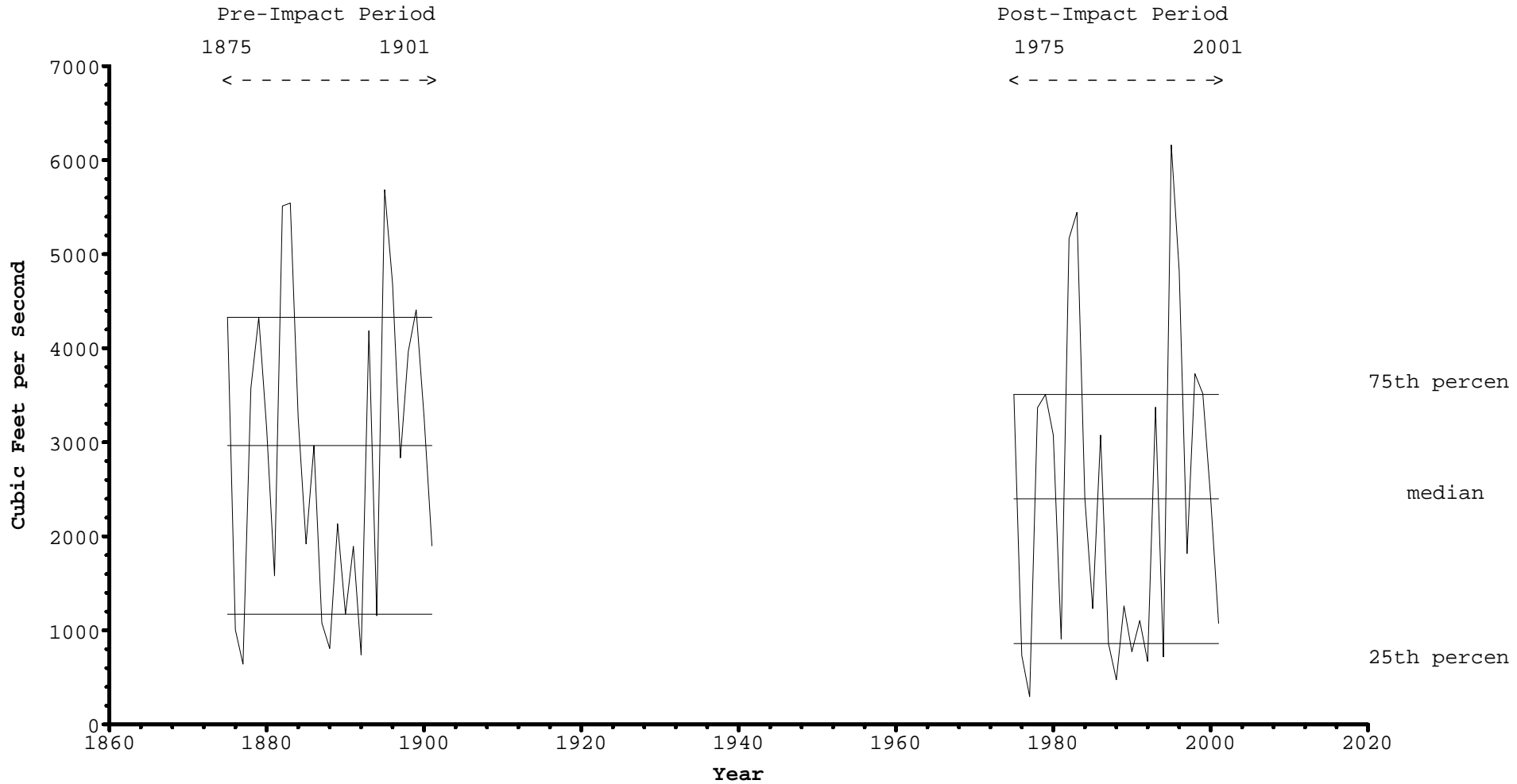
Standard IHA

# B-4445 South Fork American River Near Placerville (Natural), April 2004

Average flow for April

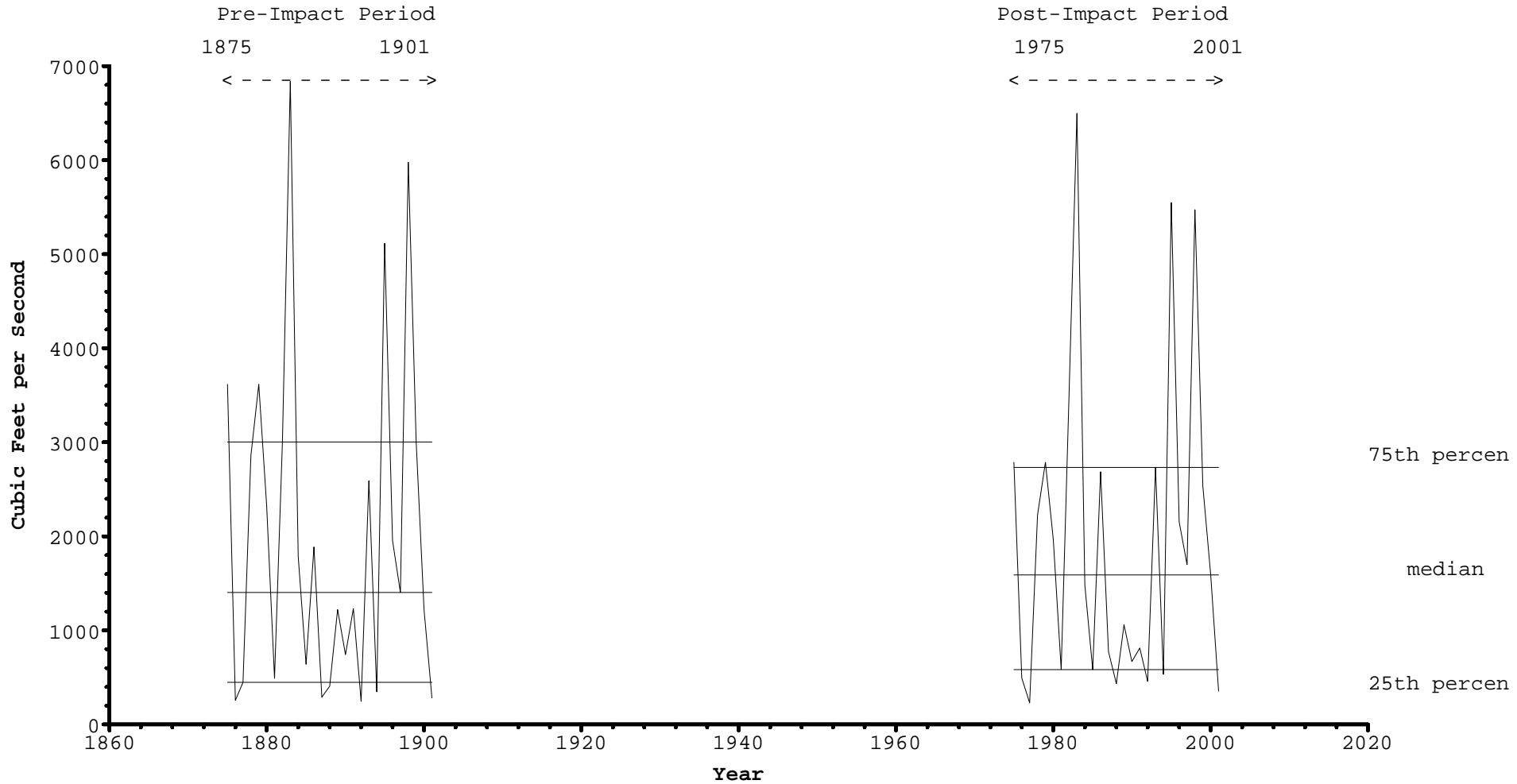


Standard IHA  
**B-4445 South Fork American River Near Placerville (Natural), April 2004**  
Average flow for May



File(s) Used: P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.ann, P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.baw

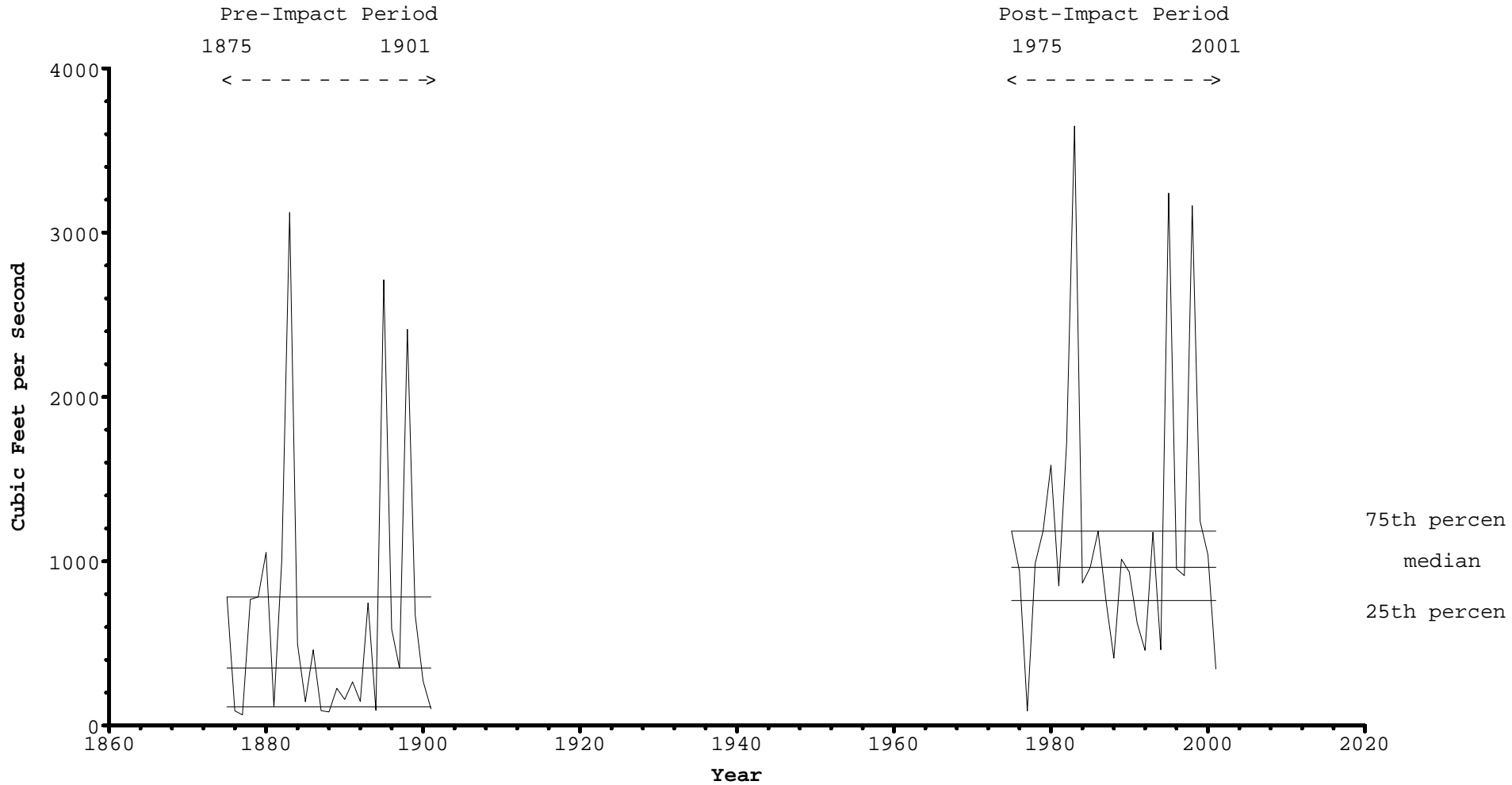
Standard IHA  
**B-4445 South Fork American River Near Placerville (Natural), April 2004**  
Average flow for June



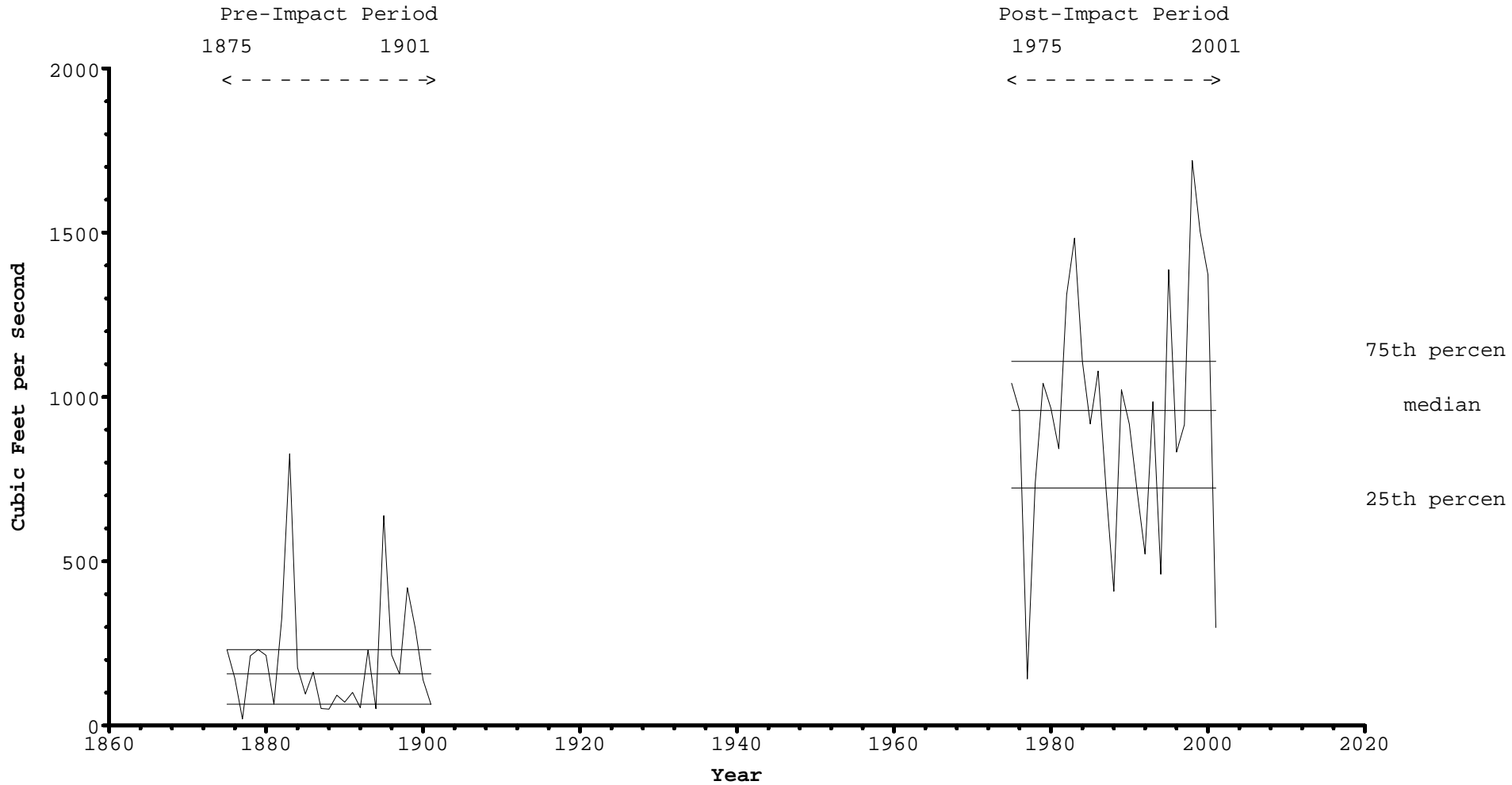
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Standard IHA  
**B-4445 South Fork American River Near Placerville (Natural), April 2004**  
Average flow for July



Standard IHA  
**B-4445 South Fork American River Near Placerville (Natural), April 2004**  
Average flow for August

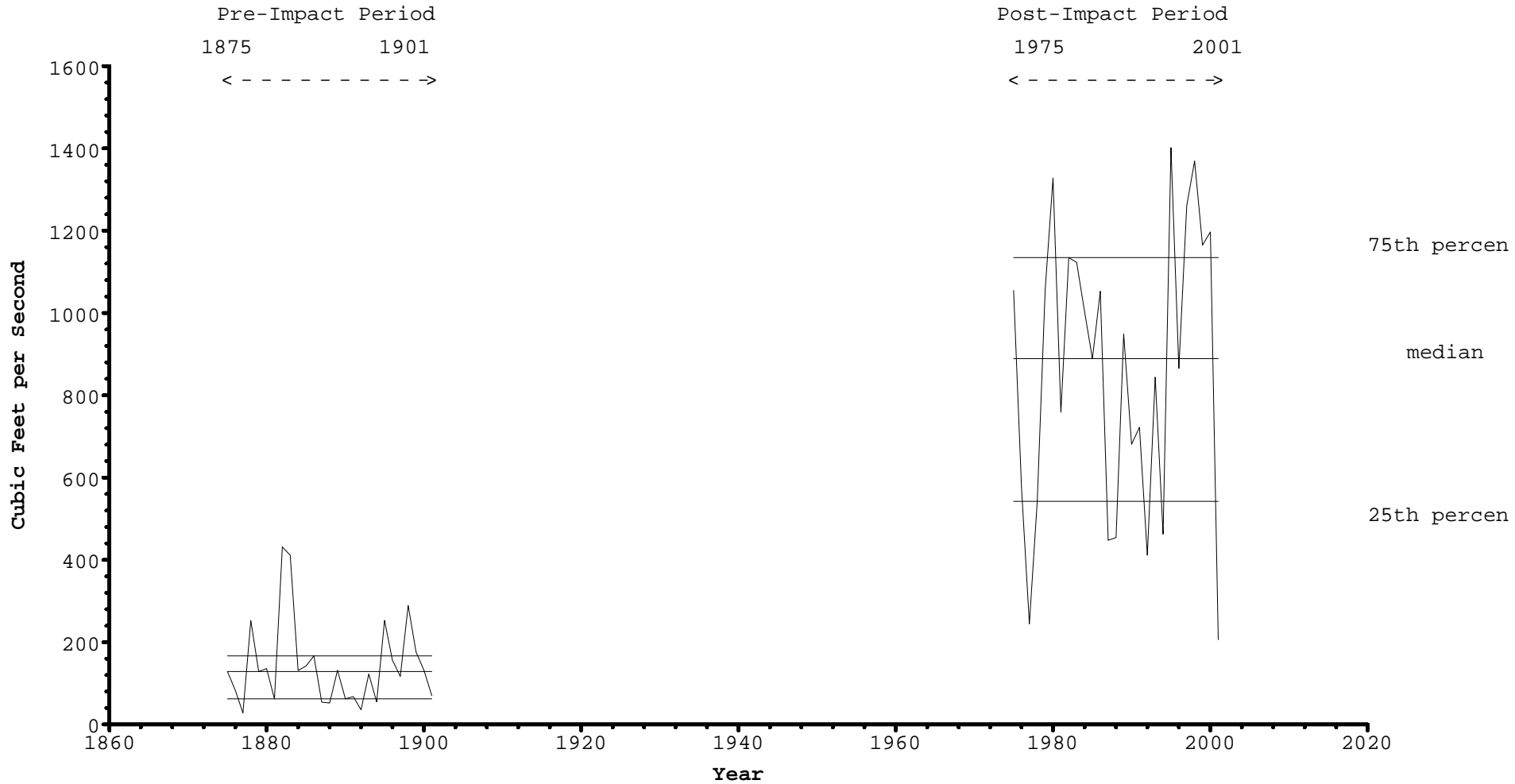


File(s) Used: P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.ann, P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.baw

Standard IHA

# B-4445 South Fork American River Near Placerville (Natural), April 2004

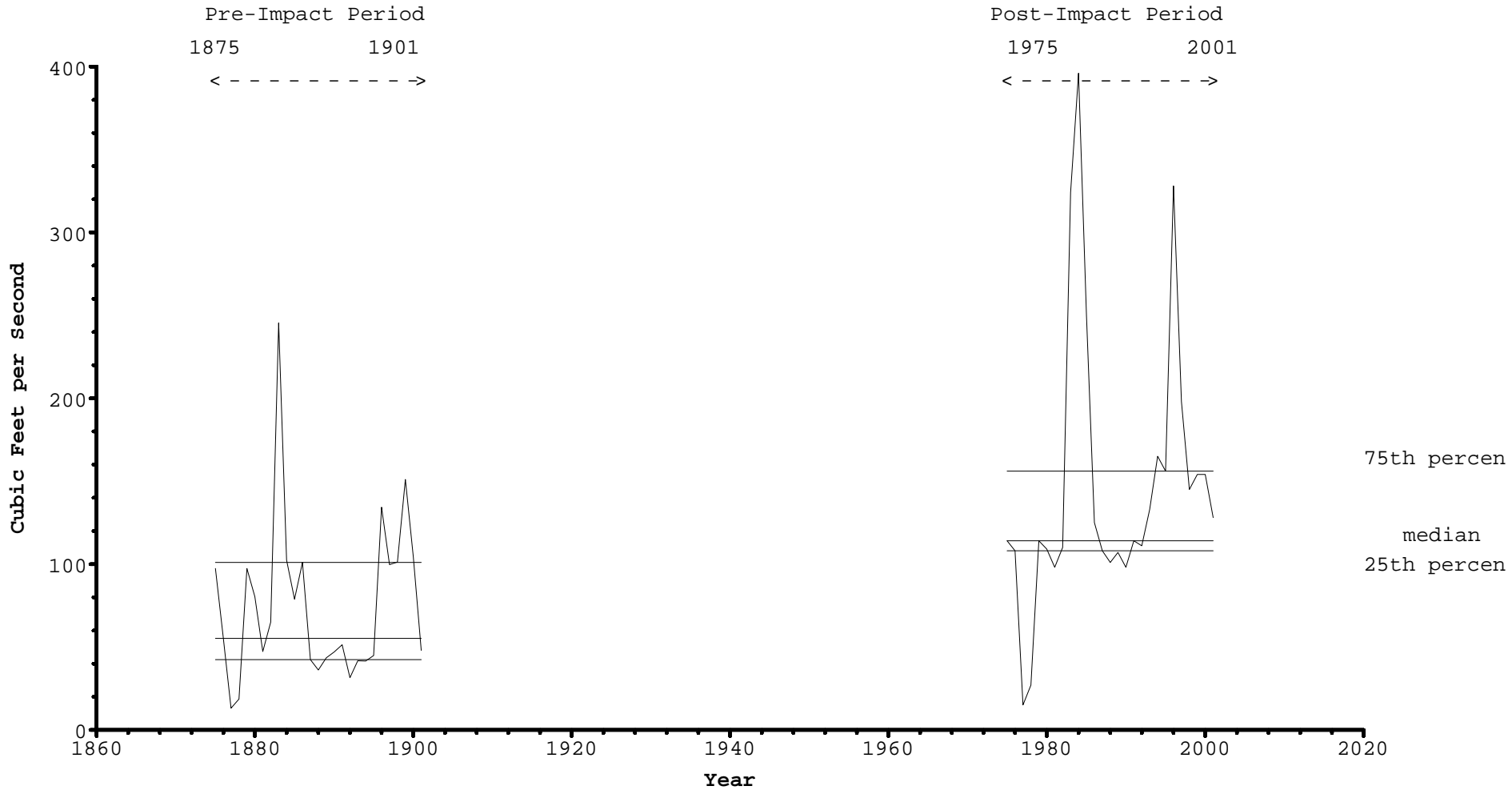
Average flow for September



Standard IHA

# B-4445 South Fork American River Near Placerville (Natural), April 2004

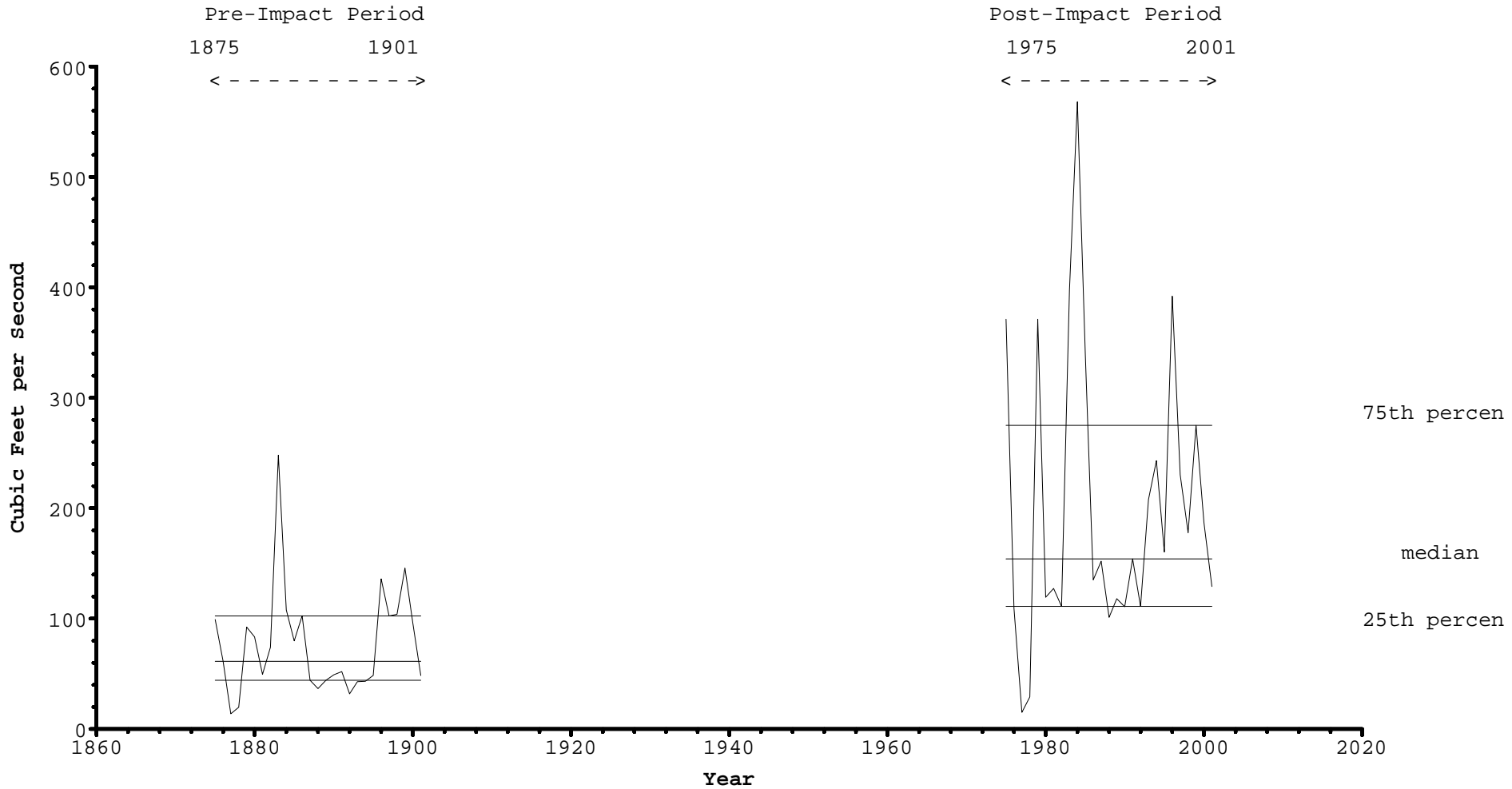
1-day minimum streamflow



Standard IHA

# B-4445 South Fork American River Near Placerville (Natural), April 2004

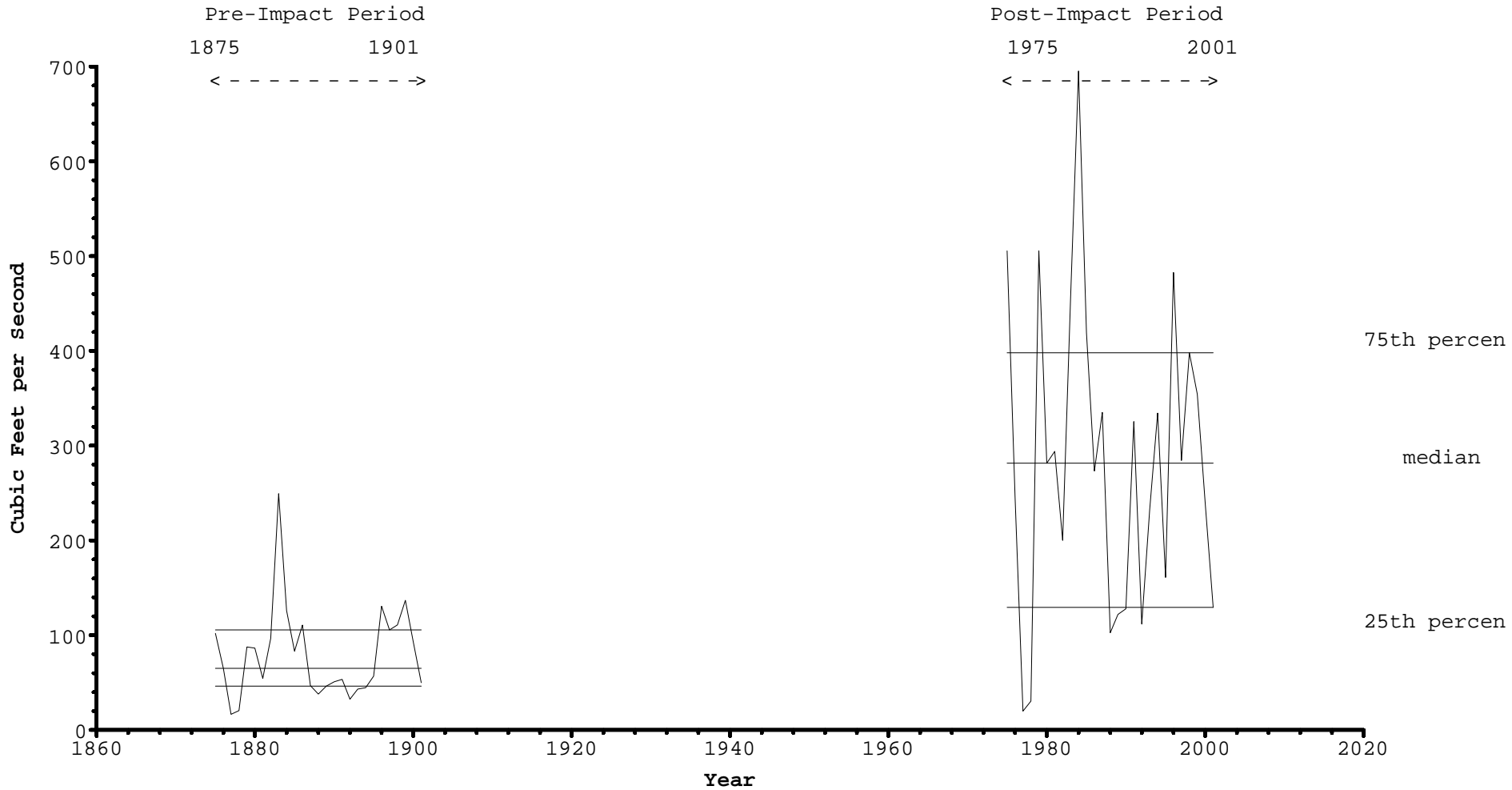
3-day minimum streamflow



Standard IHA

# B-4445 South Fork American River Near Placerville (Natural), April 2004

7-day minimum streamflow

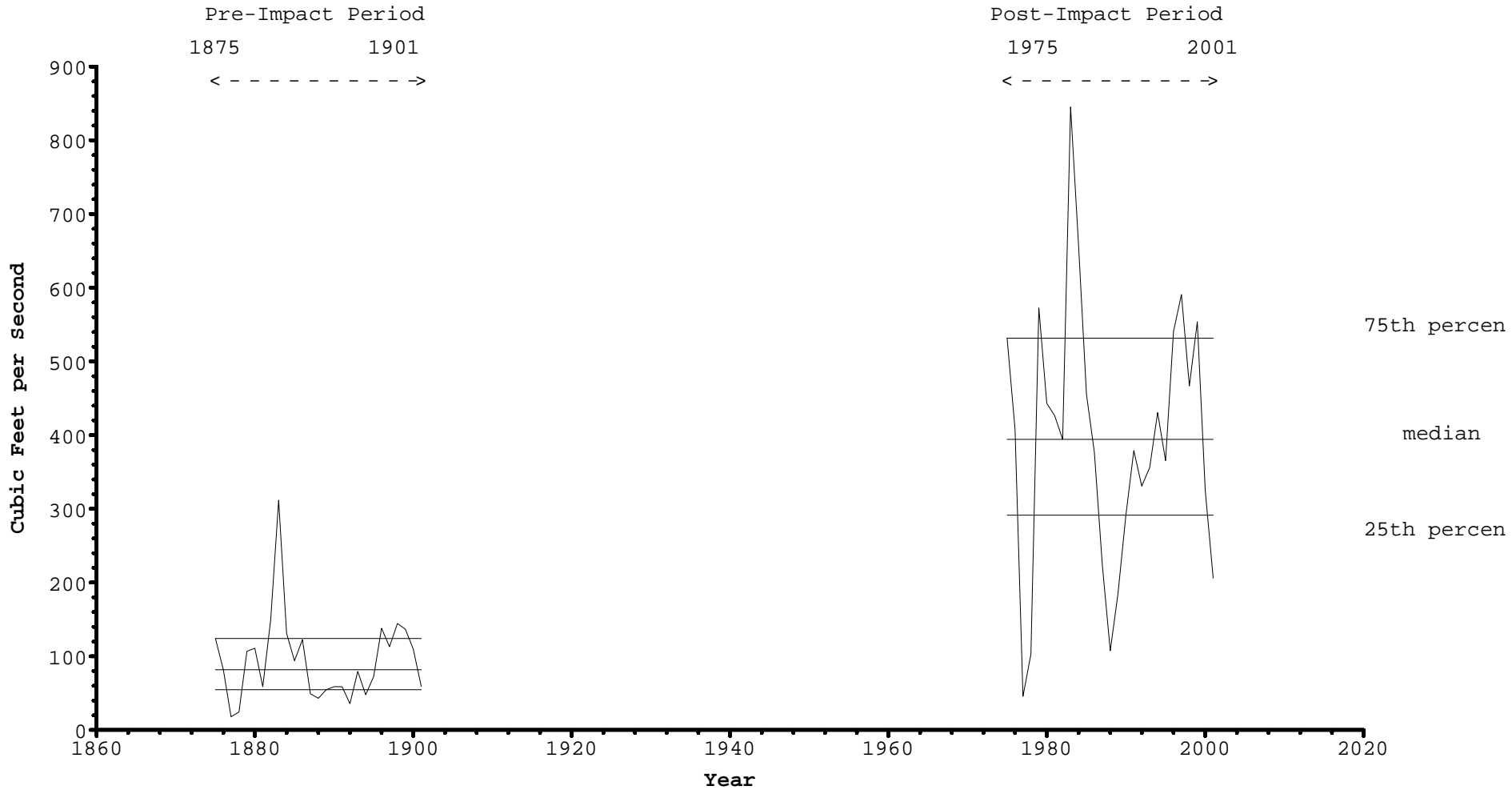


File(s) Used: P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.ann, P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.baw

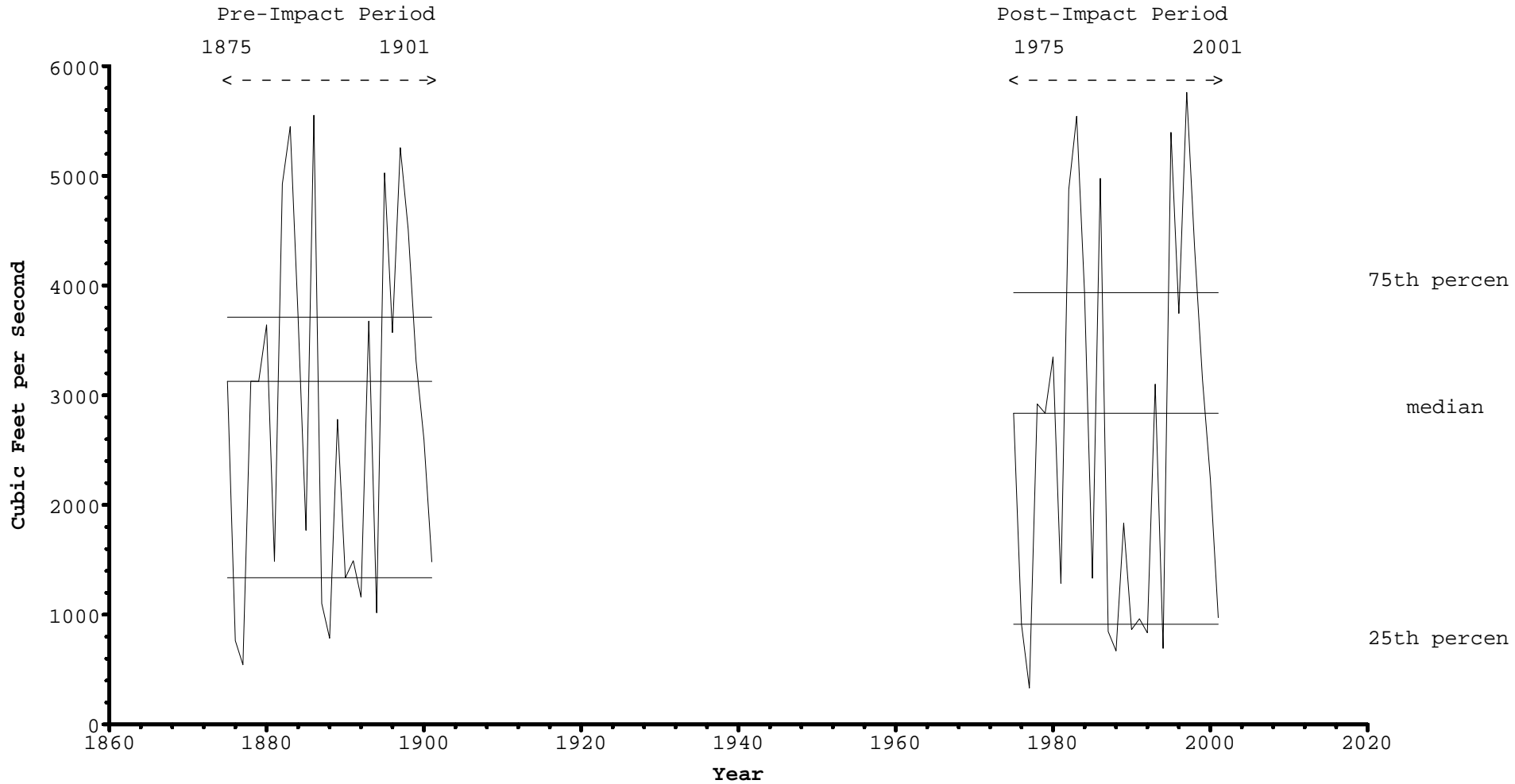
Standard IHA

# B-4445 South Fork American River Near Placerville (Natural), April 2004

30-day minimum streamflow



Standard IHA  
**B-4445 South Fork American River Near Placerville (Natural), April 2004**  
90-day maximum streamflow

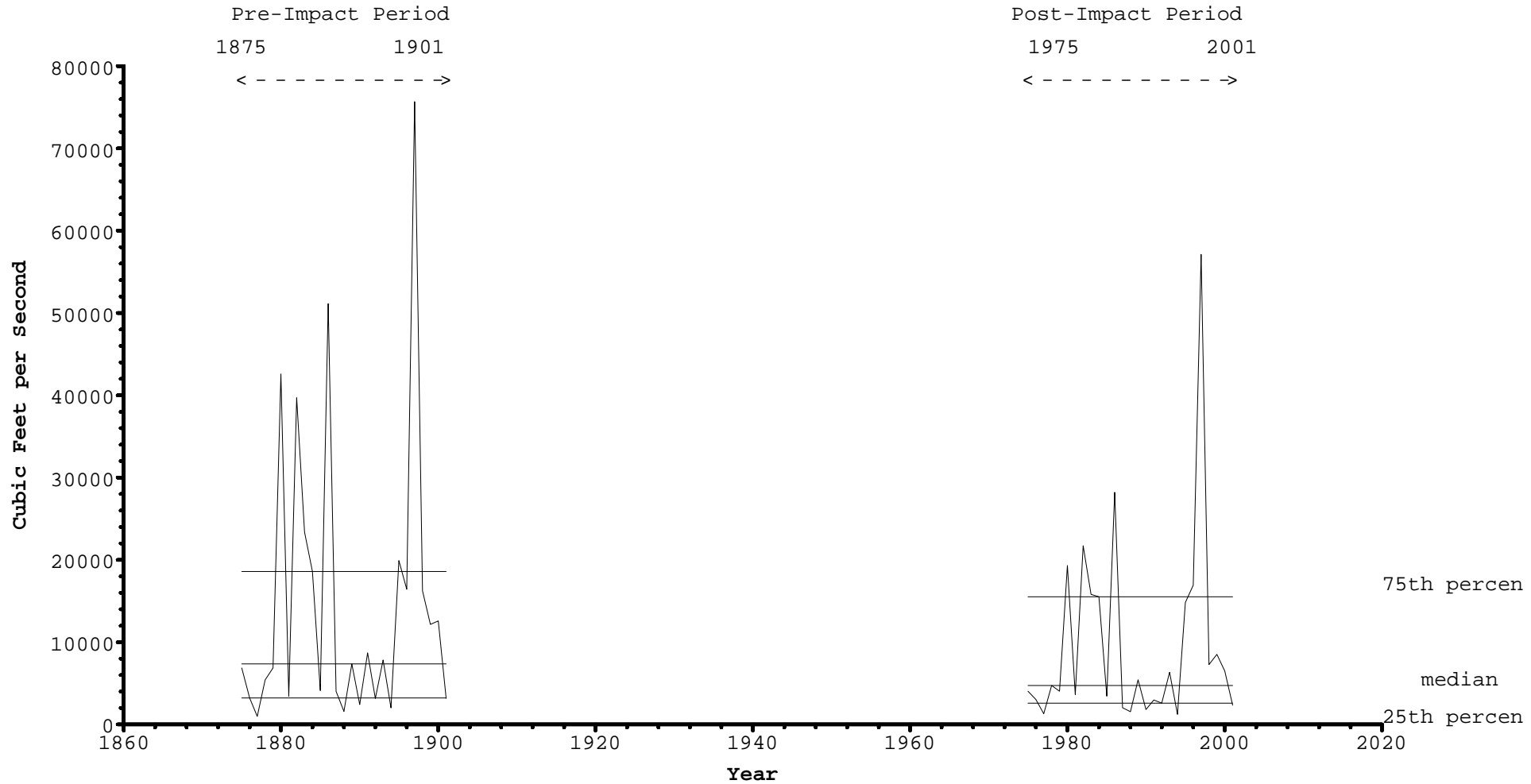




Standard IHA

# B-4445 South Fork American River Near Placerville (Natural), April 2004

1-day maximum streamflow

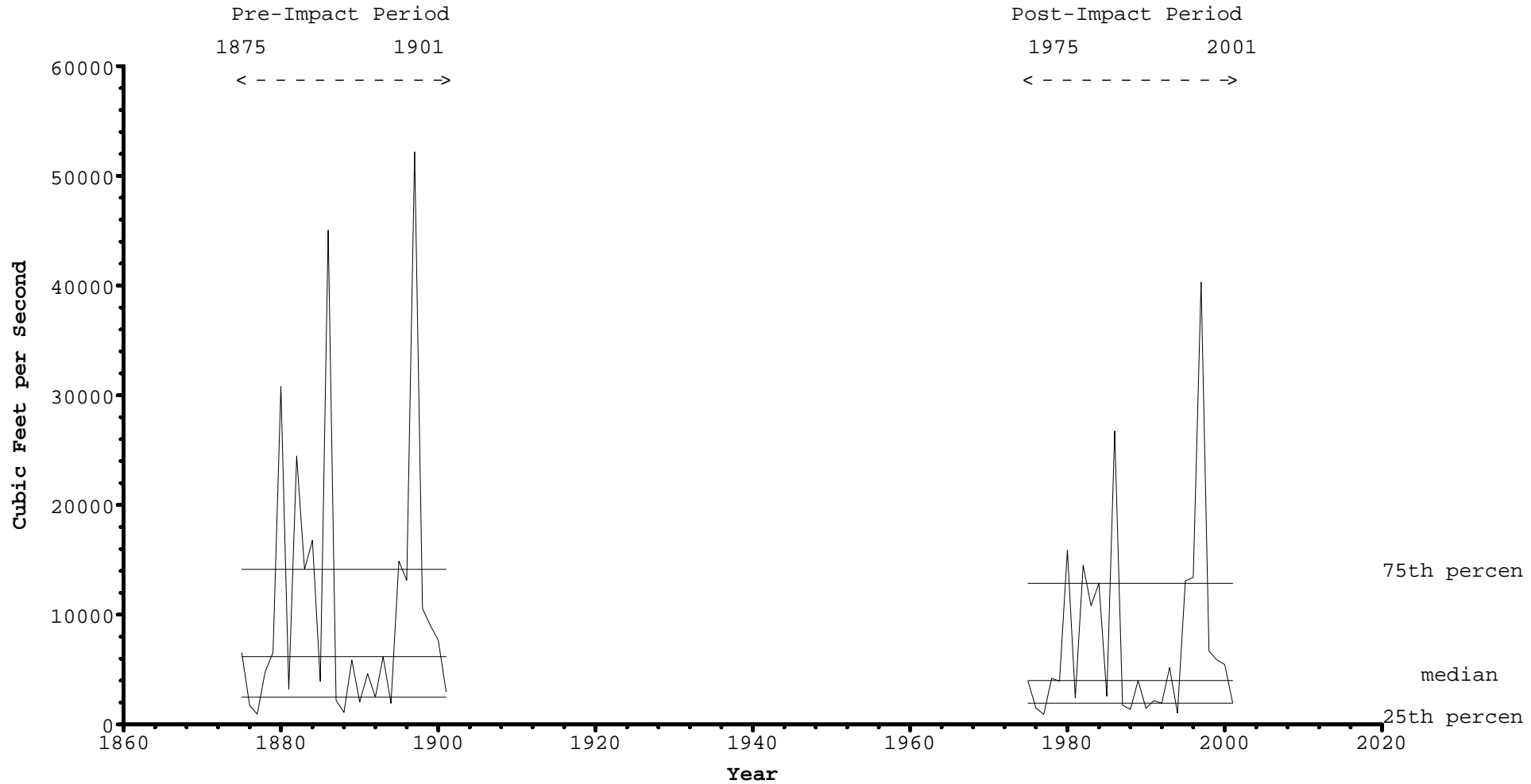


File(s) Used: P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.ann, P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.baw

Standard IHA

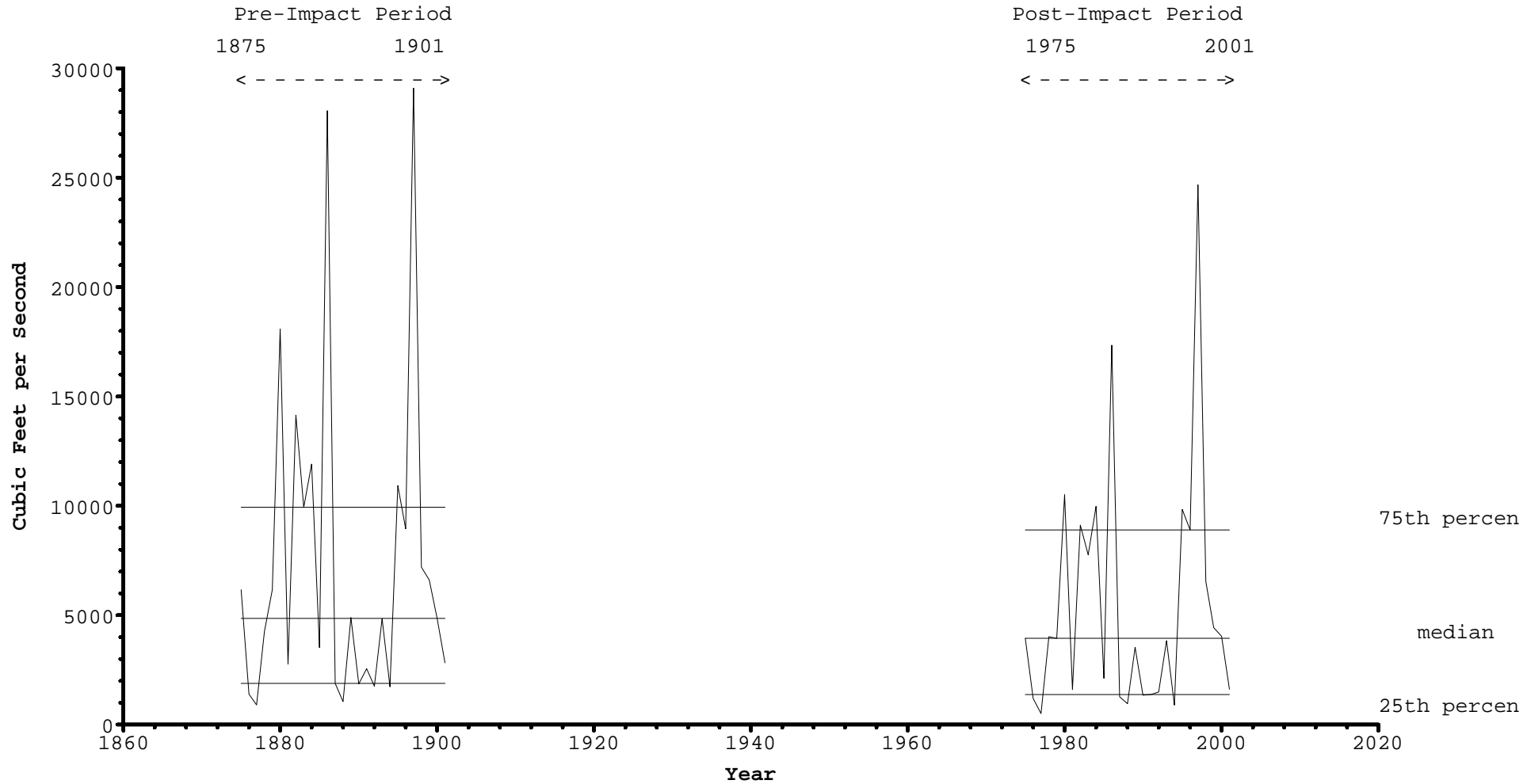
# B-4445 South Fork American River Near Placerville (Natural), April 2004

3-day maximum streamflow



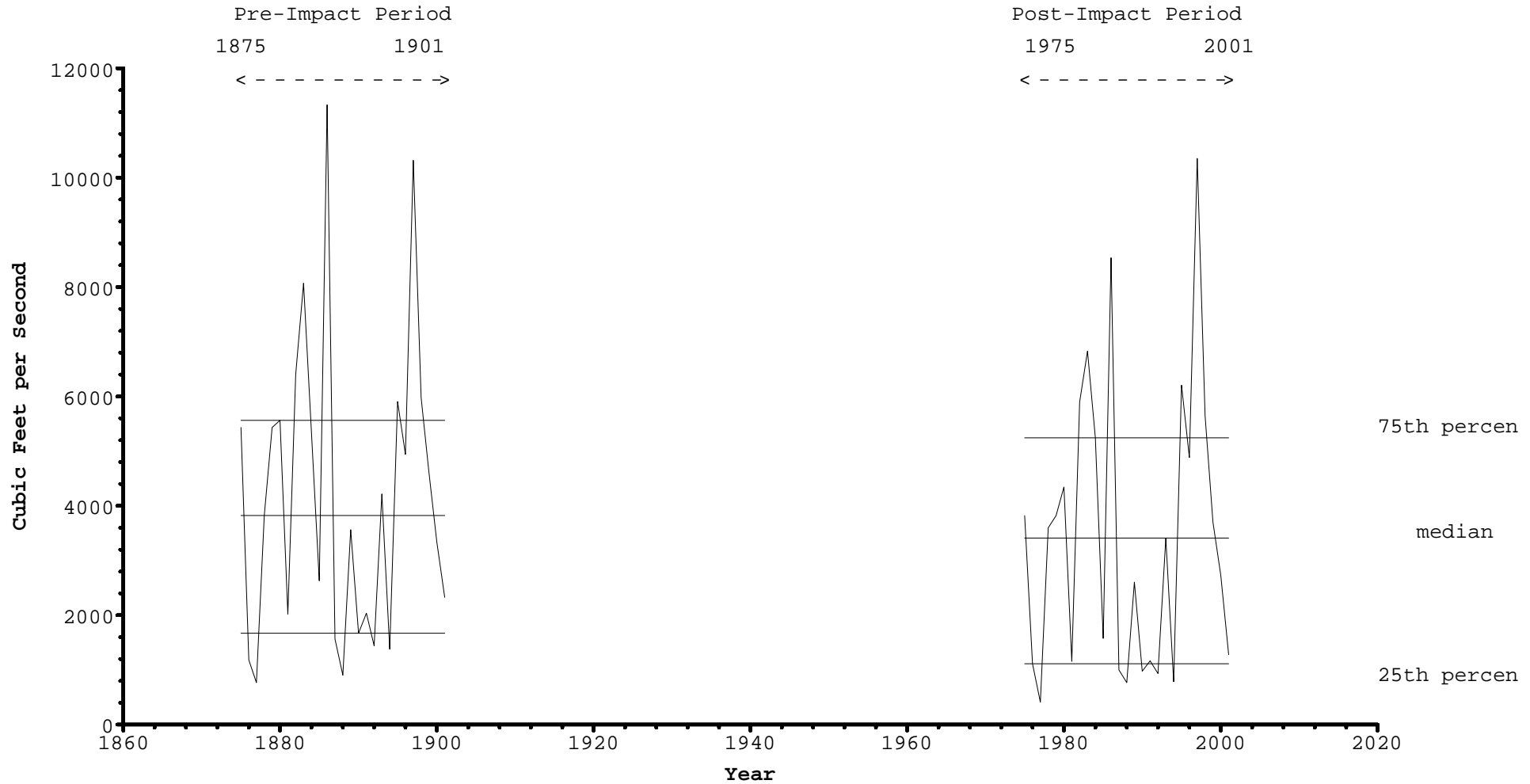
File(s) Used: P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.ann, P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.baw

Standard IHA  
**B-4445 South Fork American River Near Placerville (Natural), April 2004**  
7-day maximum streamflow



File(s) Used: P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.ann, P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.baw

Standard IHA  
**B-4445 South Fork American River Near Placerville (Natural), April 2004**  
30-day maximum streamflow

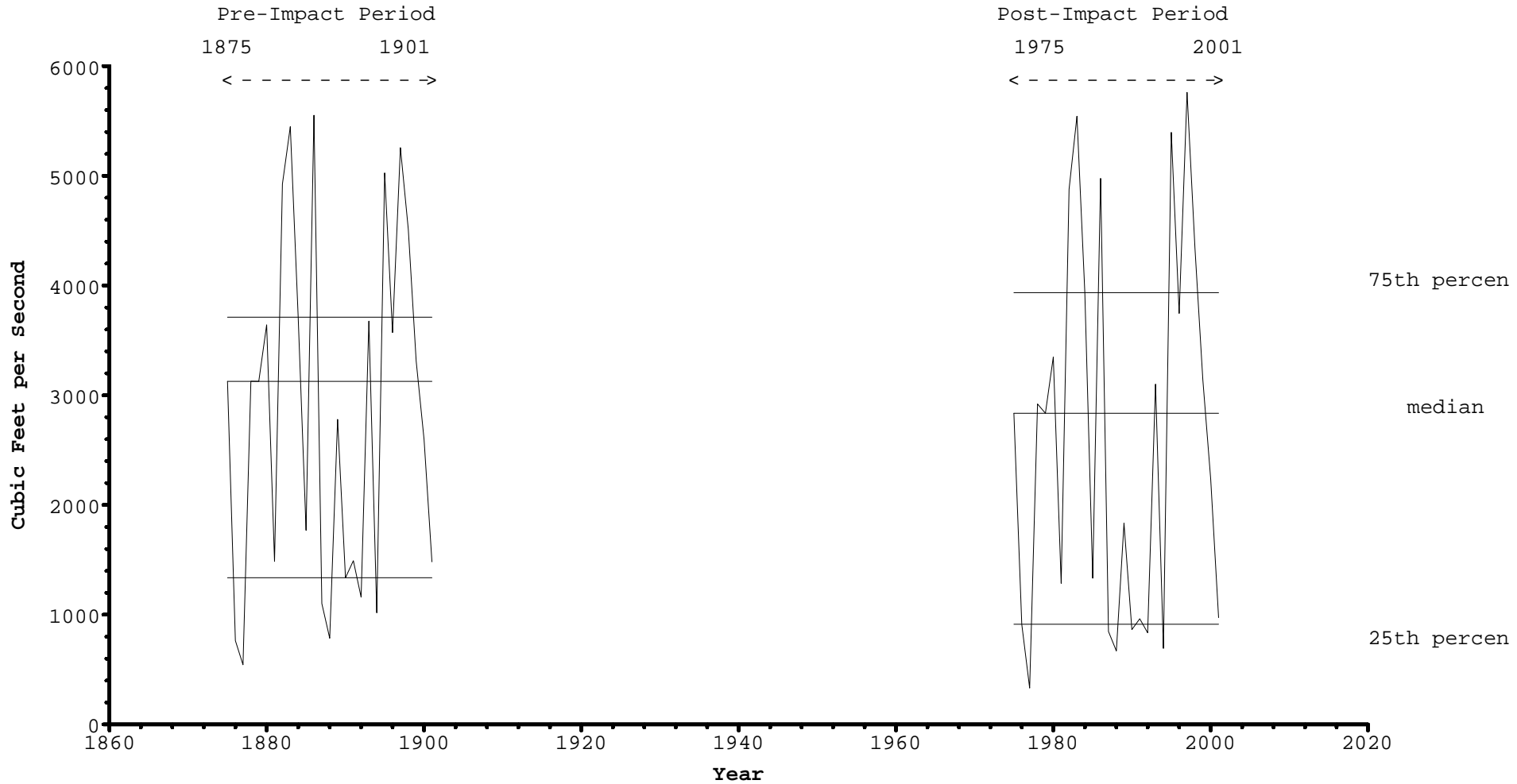


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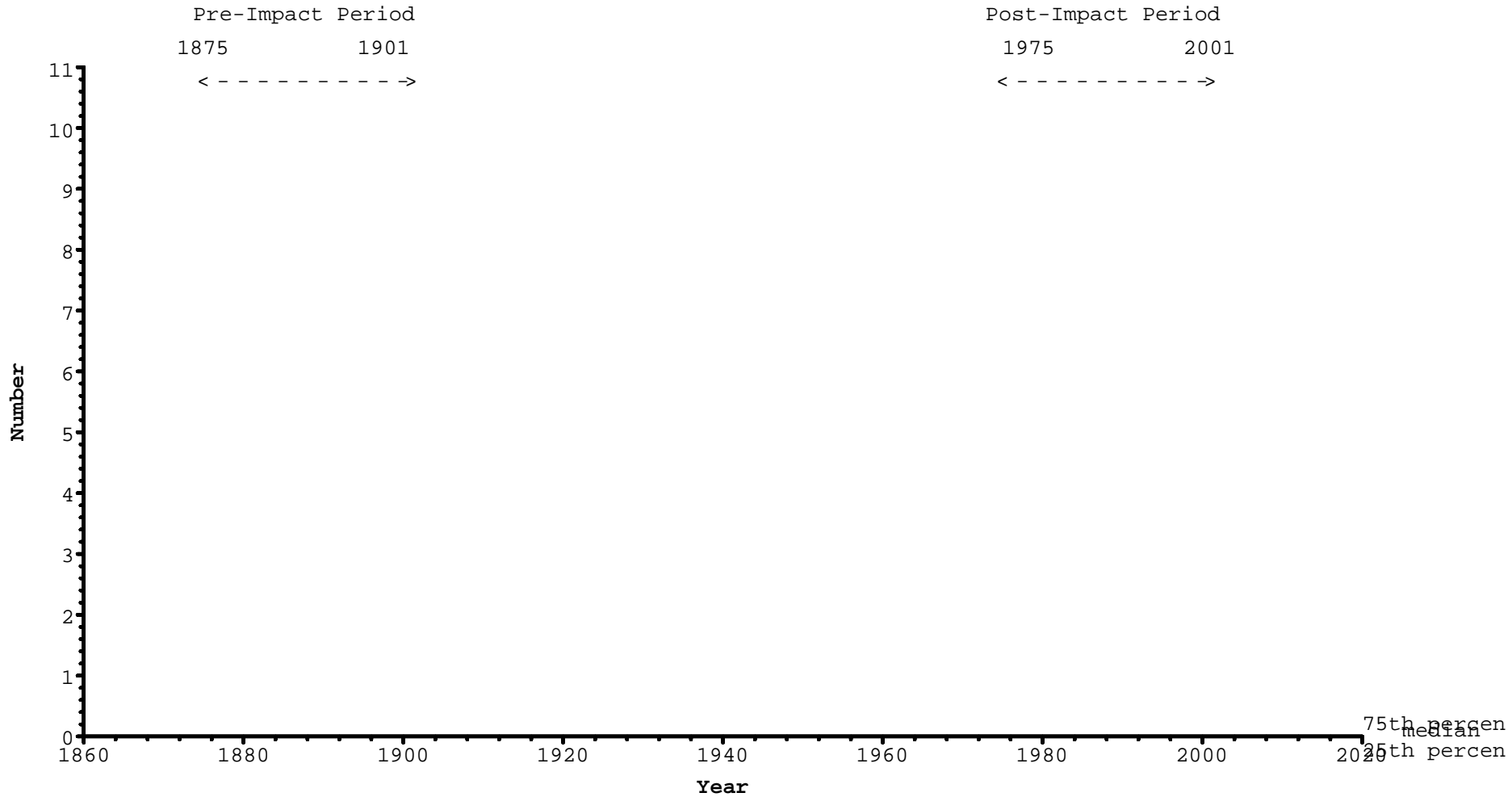
Standard IHA

# B-4445 South Fork American River Near Placerville (Natural), April 2004

90-day maximum streamflow



Standard IHA  
**B-4445 South Fork American River Near Placerville (Natural), April 2004**  
 Zero streamflow days

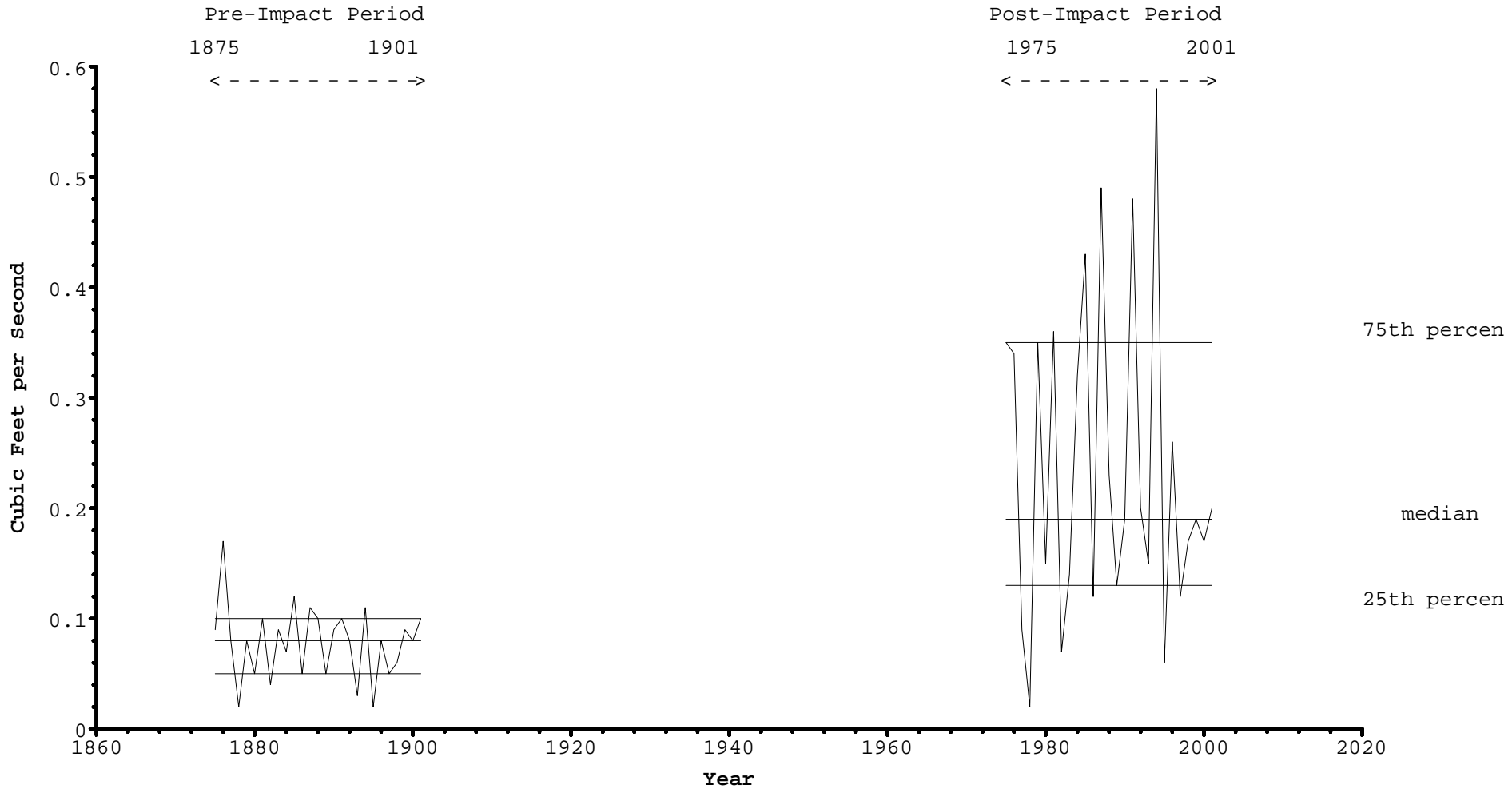


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Standard IHA

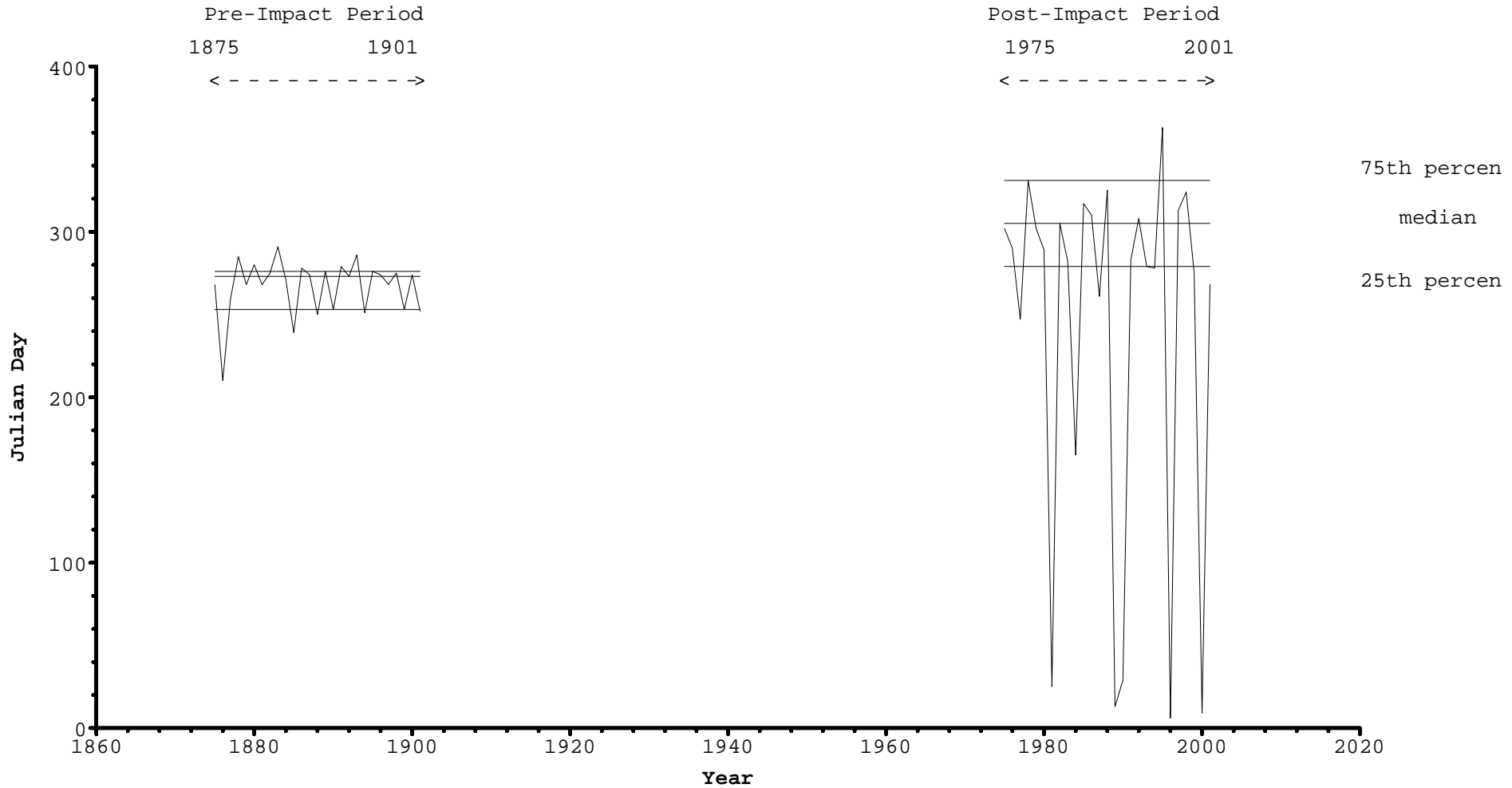
# B-4445 South Fork American River Near Placerville (Natural), April 2004

Base Flow



Standard IHA

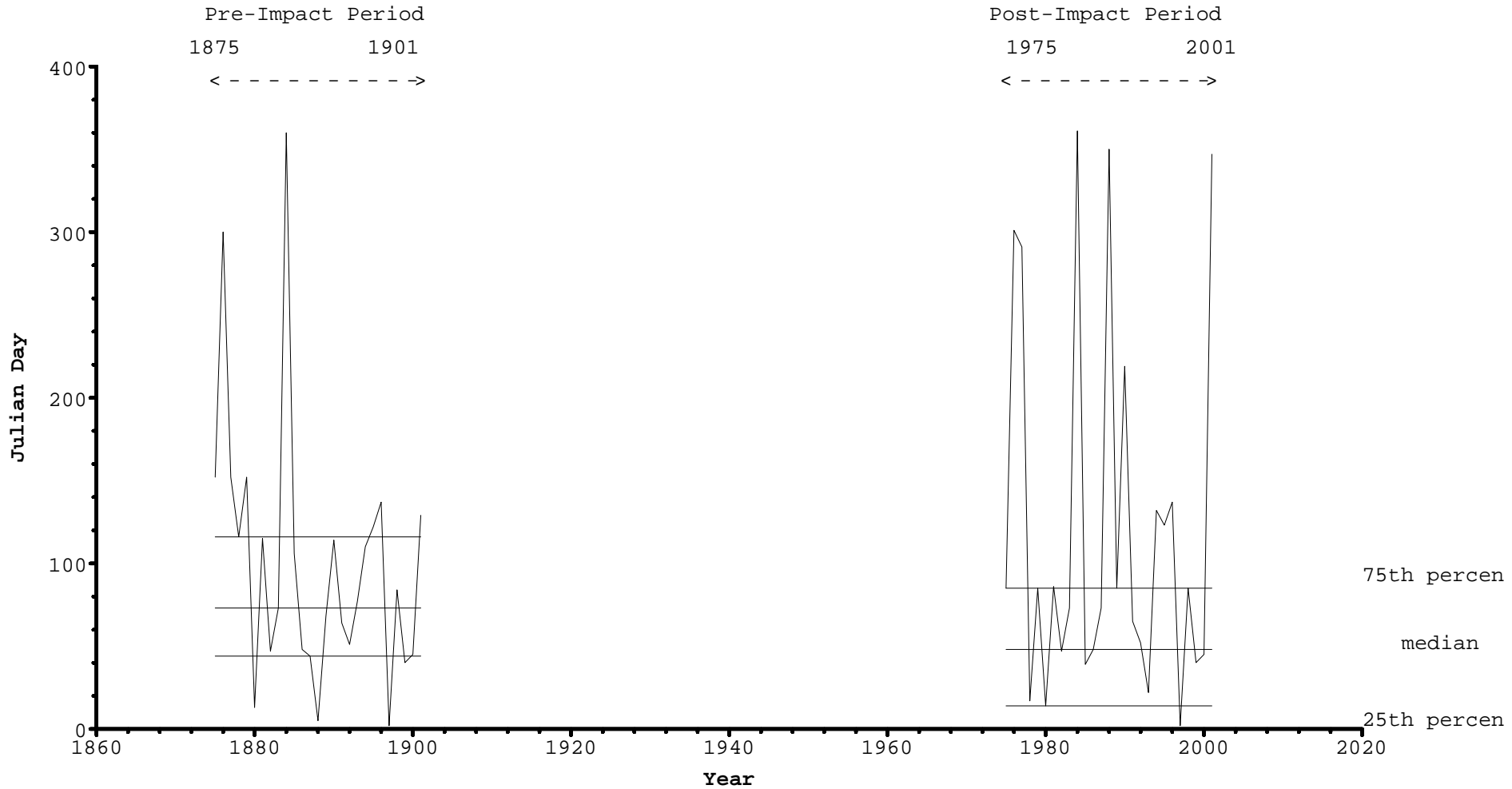
**B-4445 South Fork American River Near Placerville (Natural), April 2004**  
Date of minimum streamflow



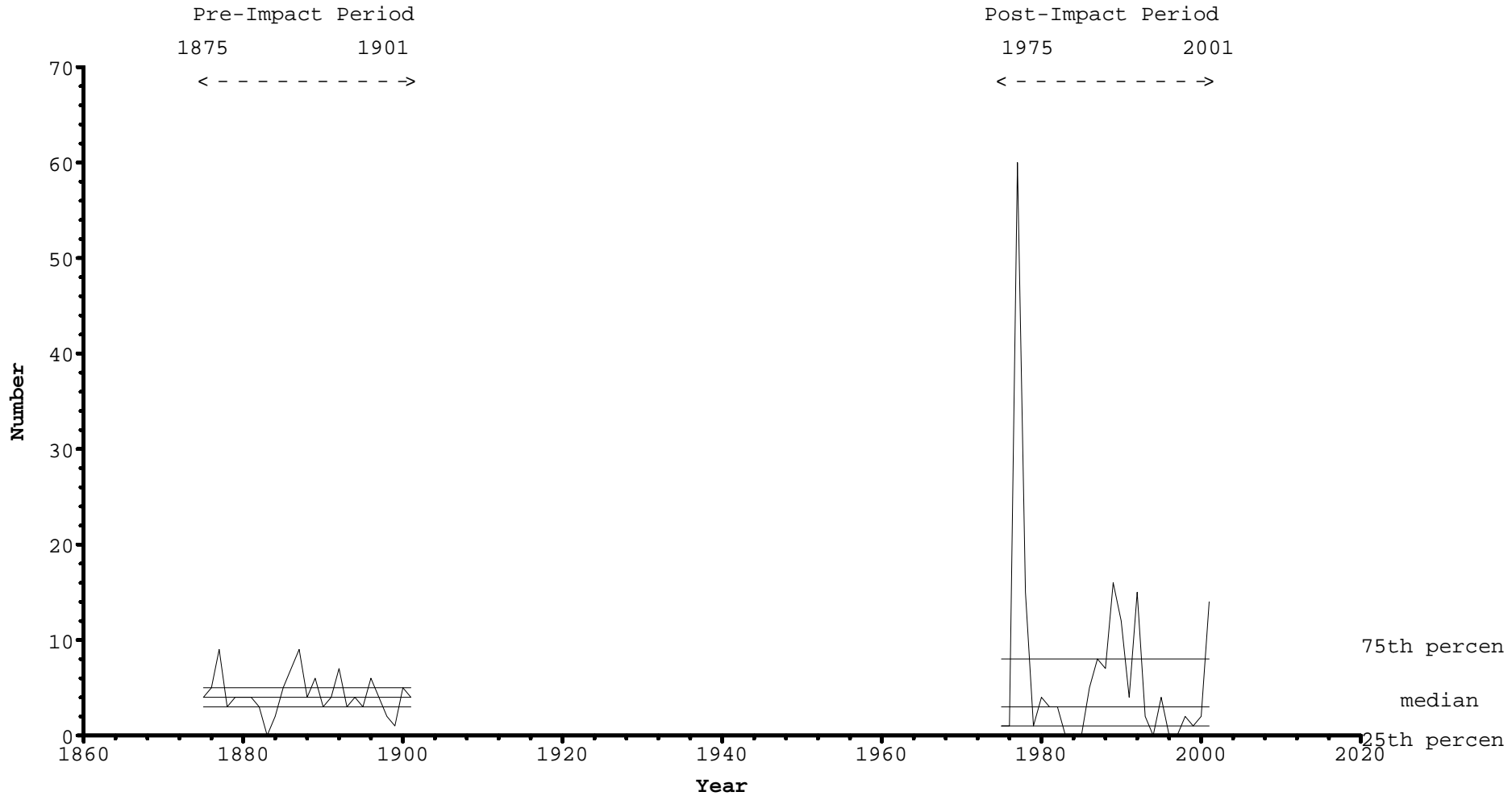


Standard IHA

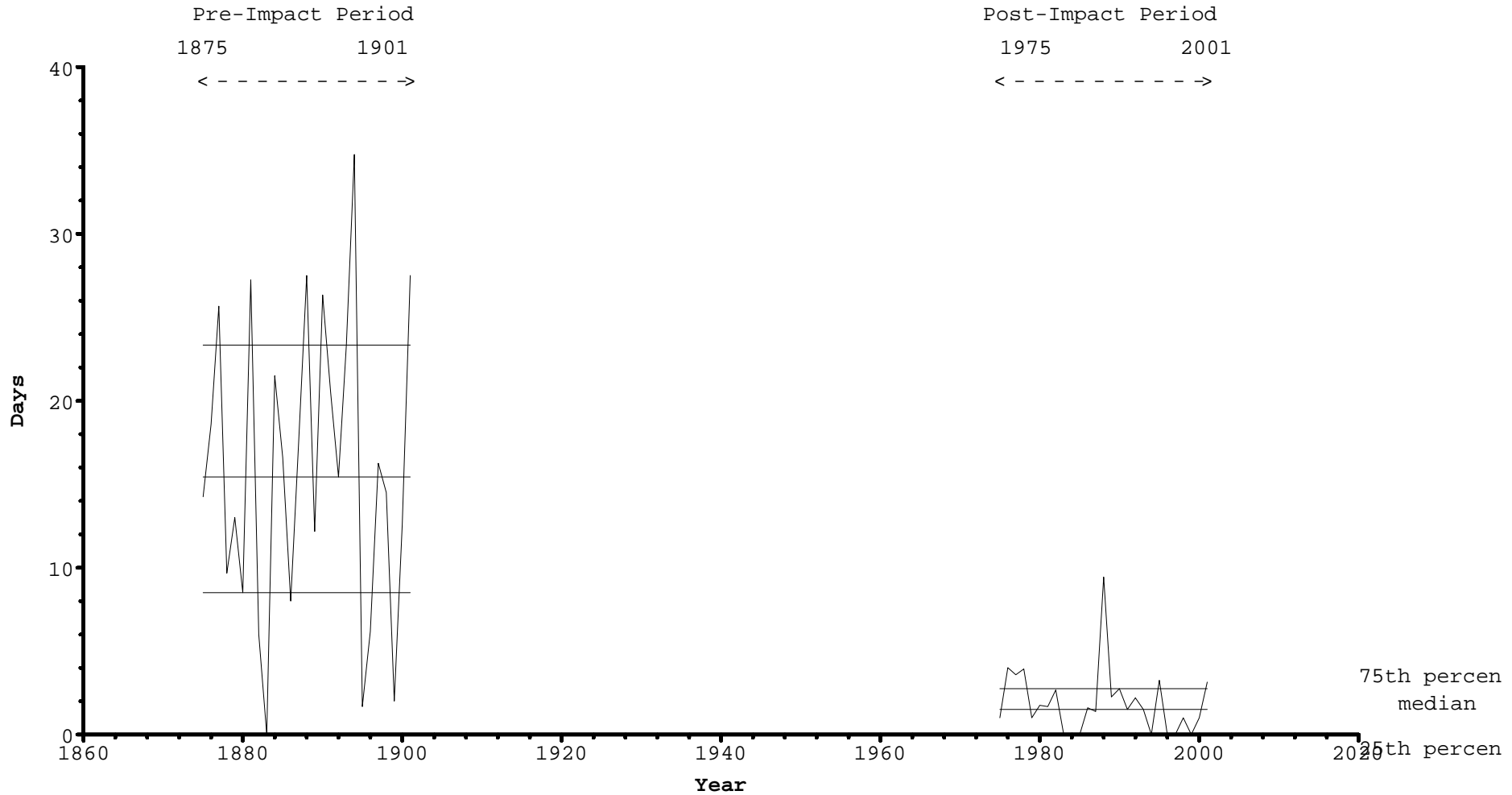
**B-4445 South Fork American River Near Placerville (Natural), April 2004**  
Date of maximum streamflow



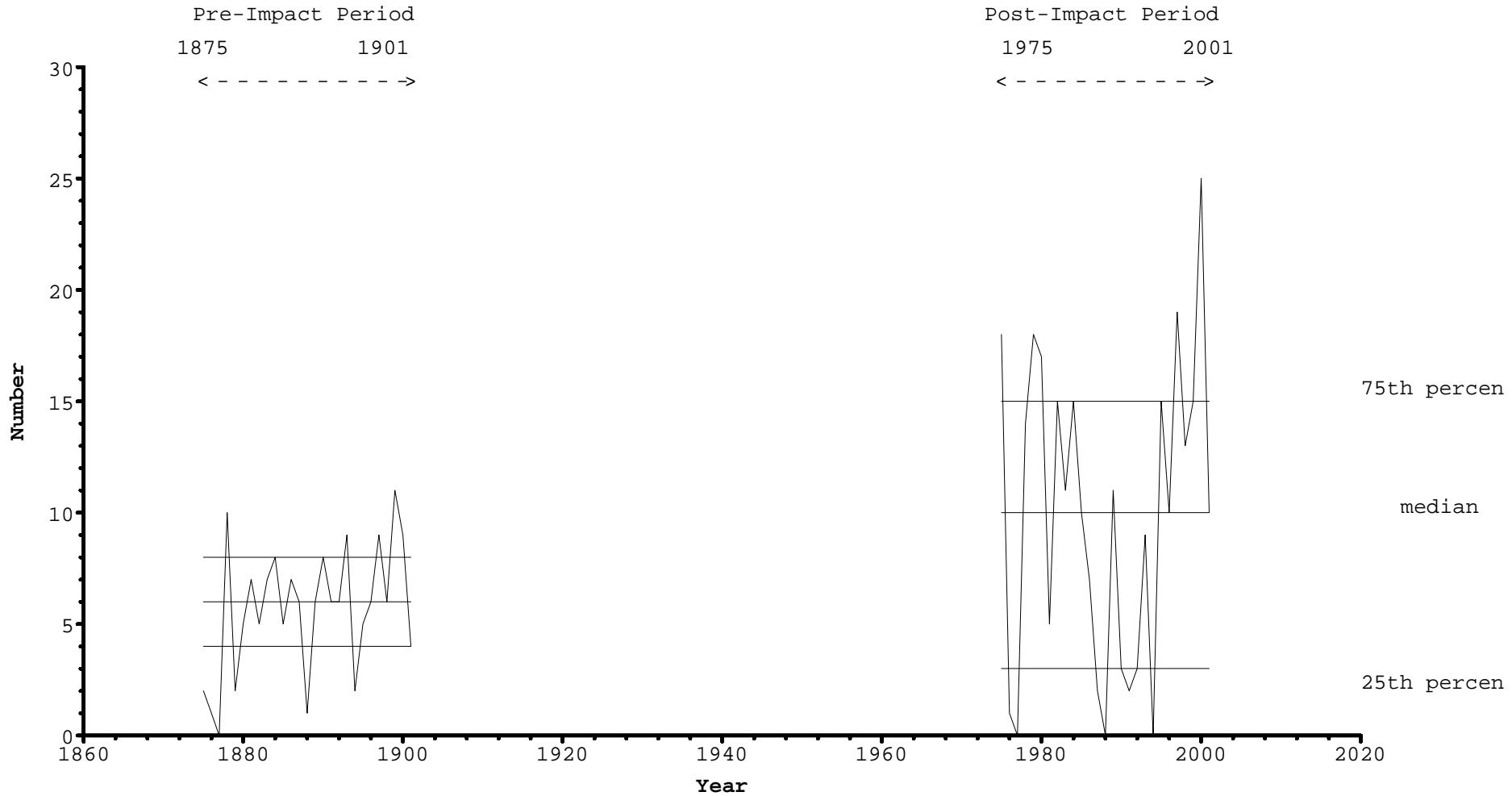
Standard IHA  
B-4445 South Fork American River Near Placerville (Natural), April 2004  
Low Pulse Count



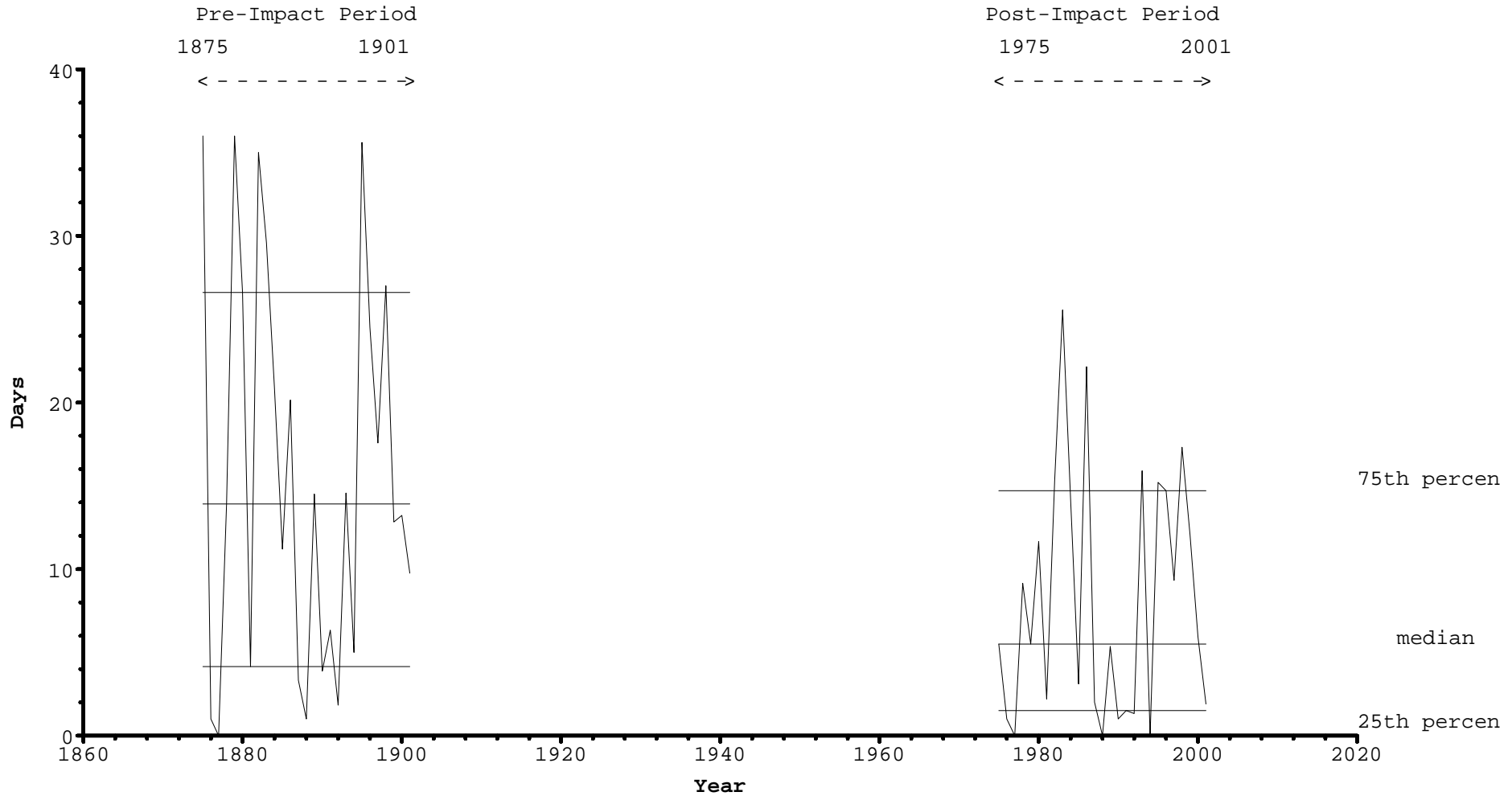
Standard IHA  
B-4445 South Fork American River Near Placerville (Natural), April 2004  
Low Pulse Duration



Standard IHA  
B-4445 South Fork American River Near Placerville (Natural), April 2004  
High Pulse Count

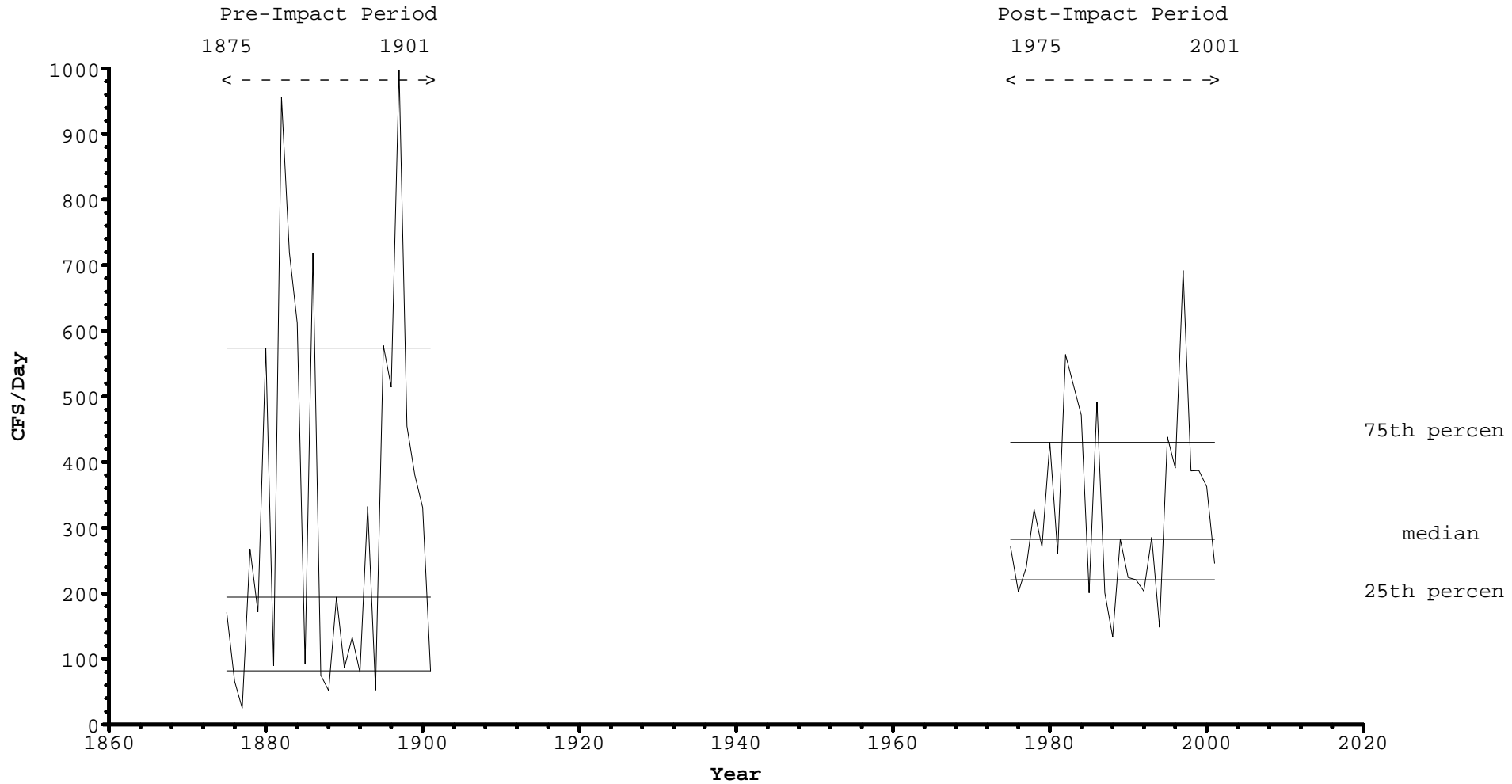


Standard IHA  
B-4445 South Fork American River Near Placerville (Natural), April 2004  
High Pulse Duration



File(s) Used: P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.ann, P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.baw

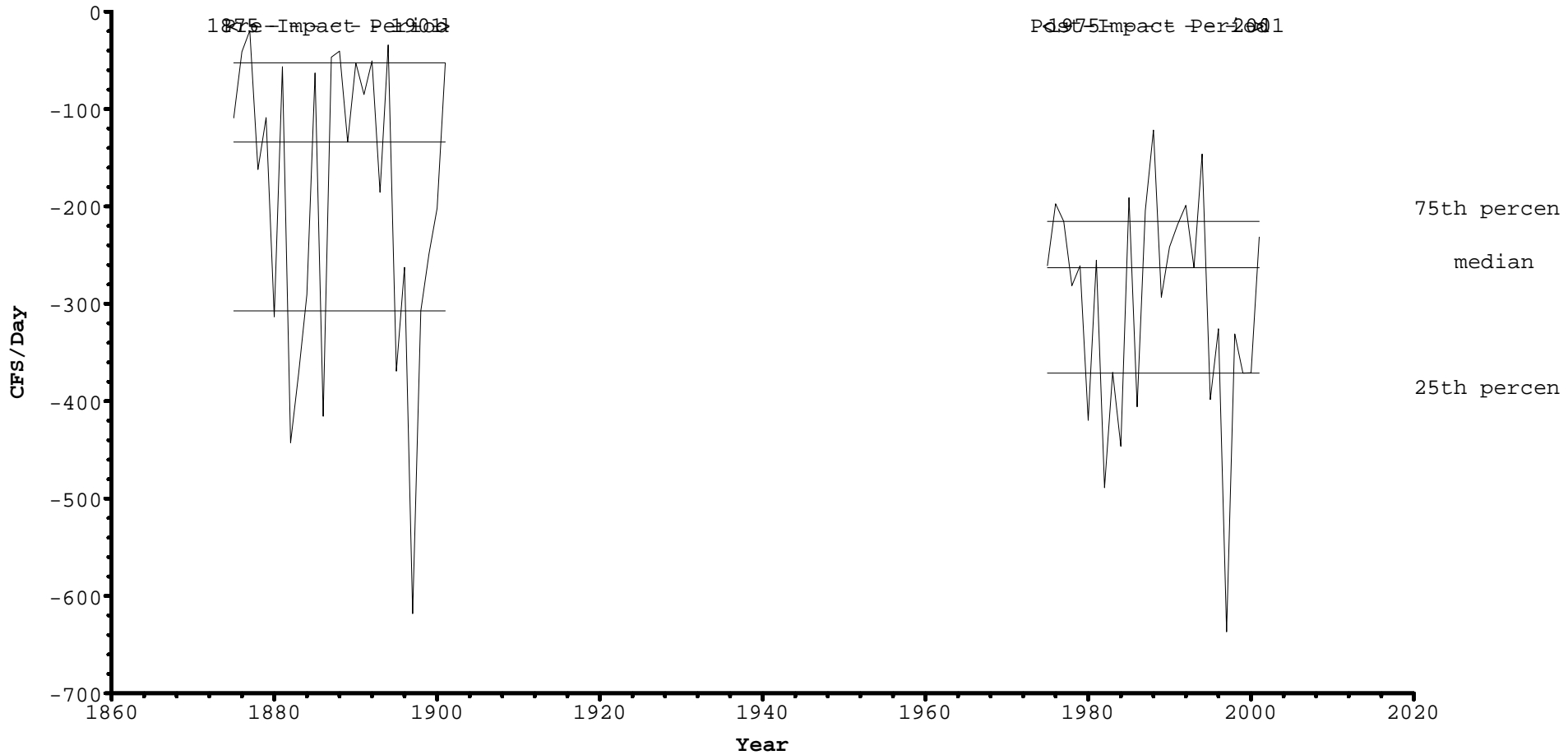
Standard IHA  
B-4445 South Fork American River Near Placerville (Natural), April 2004  
Rise Rate



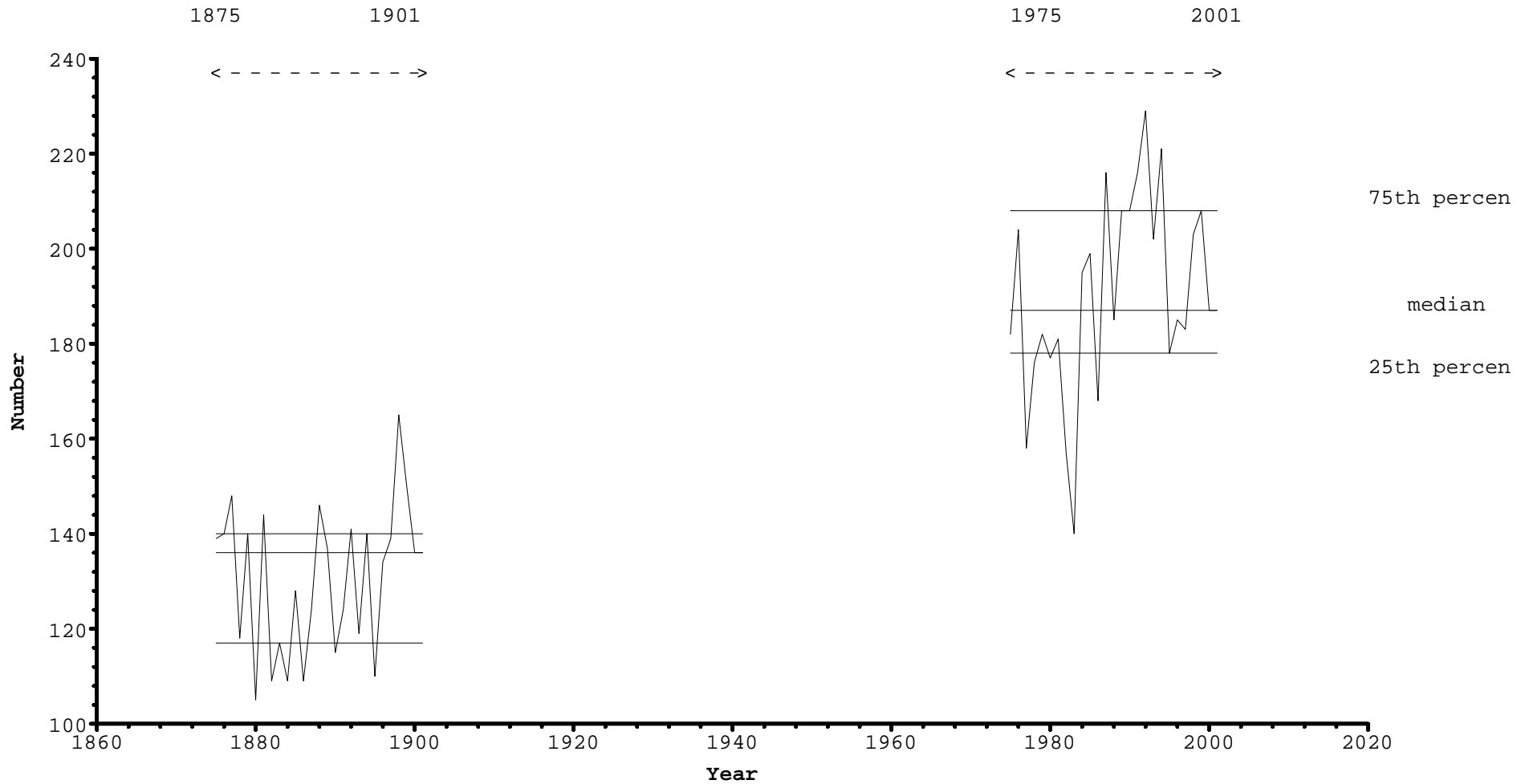
Standard IHA

# B-4445 South Fork American River Near Placerville (Natural), April 2004

Fall Rate

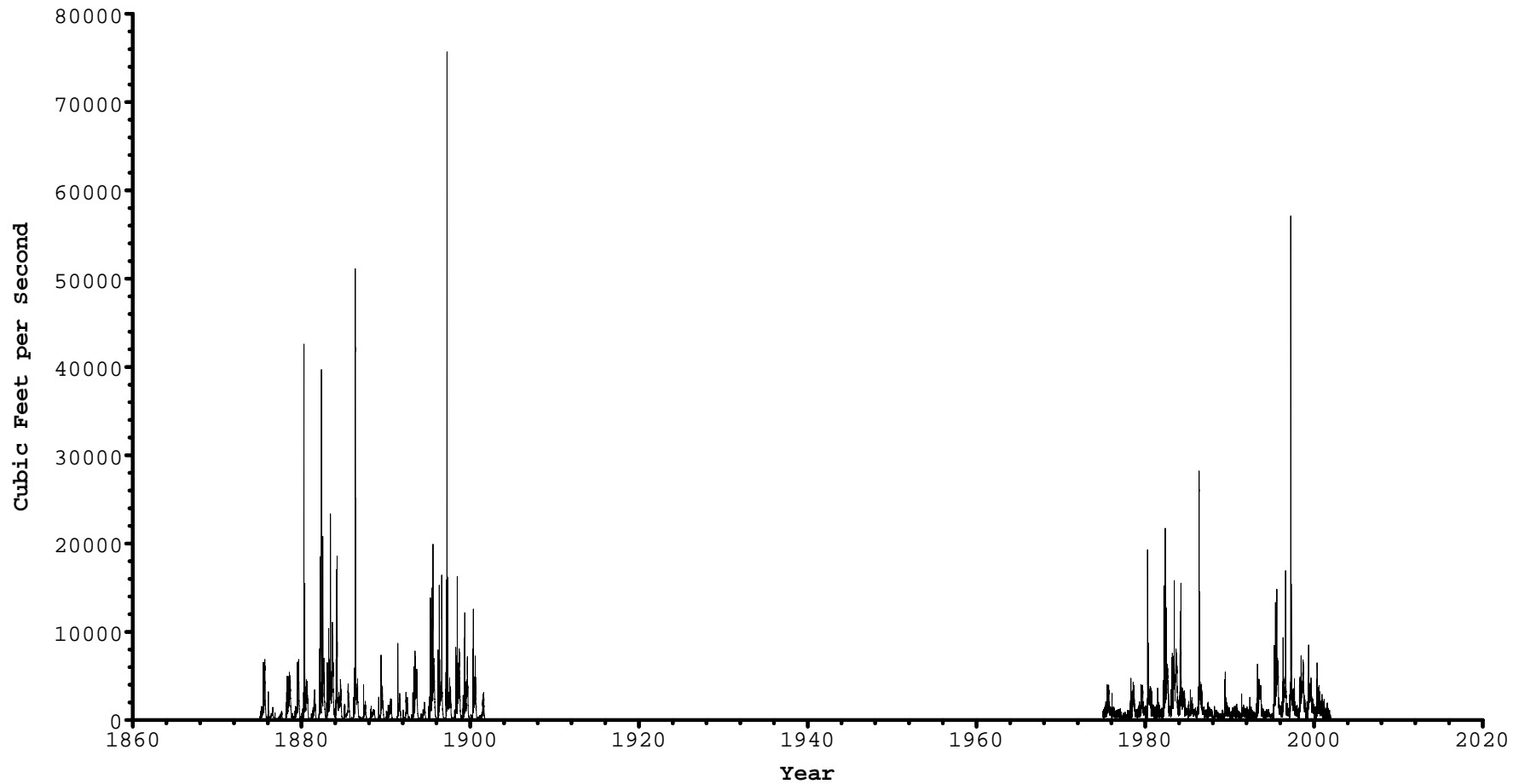


Standard IHA  
B-4445 South Fork American River Near Placerville (Natural), April 2004  
Pre-Impact Period Reversals Post-Impact Period





### B-4445 South Fork American River Near Placerville (Natural), April 2004



File(s) Used: P:\Framatome-IHA\IHA Apr04\4-GageB-Nat\GB-N.dat