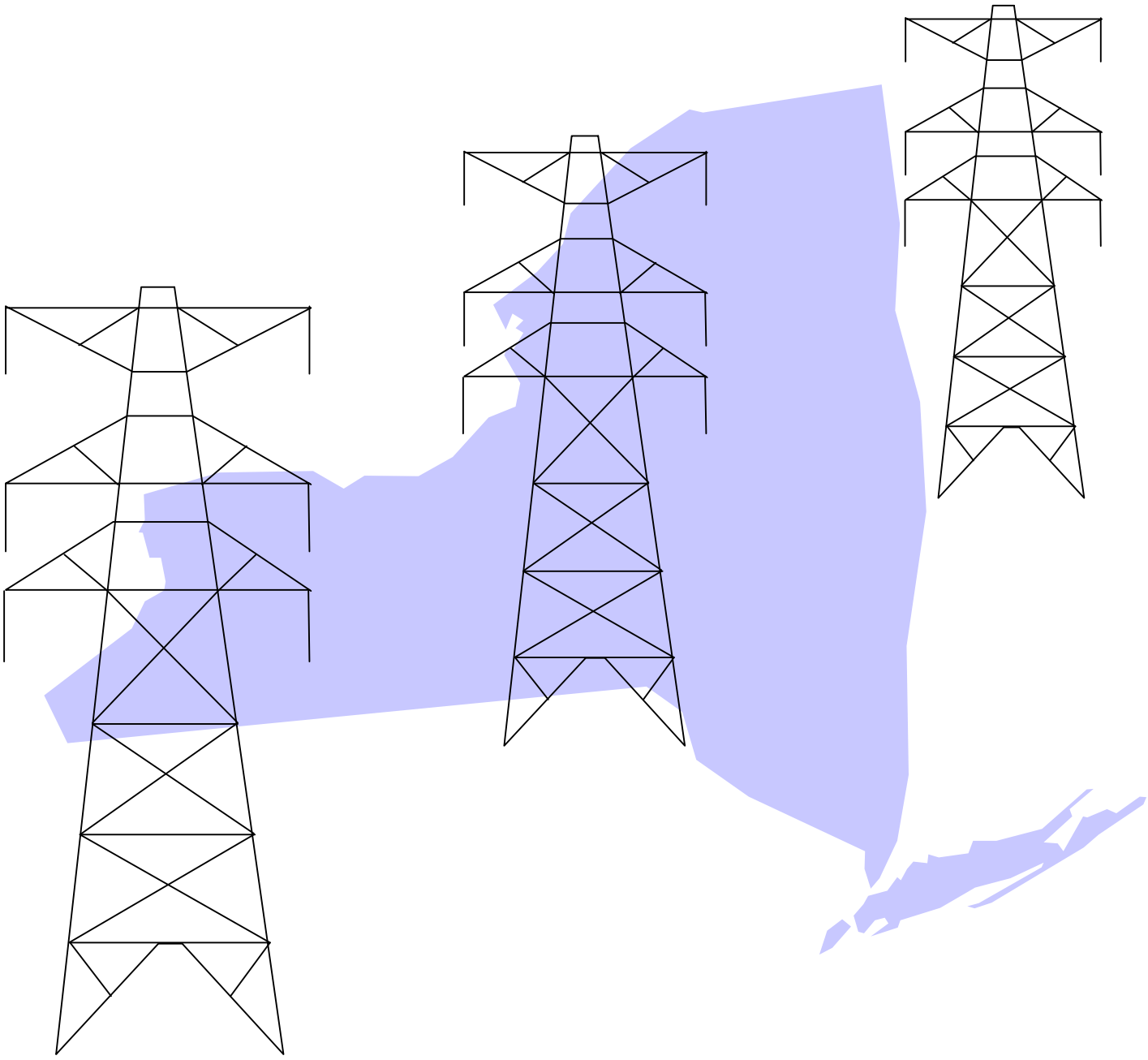
New York Power Pool

1998 Transmission Performance Report



March 1999

Prepared by:

Operations Engineering

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NYPP 1998 Transmission Performance

Introduction

This report summarizes NYPP transmission utilization during 1998 and compares this with transmission use in 1995, 1996, and 1997. Conclusions are made for major NYPP operating interfaces. Data is presented in a general format using histograms, cumulative distribution plots, and box plots. Further analysis can be made for specific purposes using the data in this report. Included are graphical depictions of power flows on:

- NYPP interfaces and OASIS Transmission paths, including both operating interfaces and several non-operating interfaces.
- selected individual transmission lines
- schedules with external pools.

There are also sections on power transfer margins and simultaneously constraining interfaces. The power transfer margins show the difference between the active real time power transfer limit and the actual power flow on the interface. The analysis of simultaneously constraining interfaces tallies the number of hours two or more interfaces were within 100 MW of their respective operating limits. These analyses are included only for NYPP operating interfaces.

The analysis is based on NYPP historical real time data sampled in 5 minute (nominal) intervals. The power flow values in each of the charts are hourly averages of the scan data. The data is presented in three graphical formats; histograms (frequency bar charts), flow duration curves, and box plots (showing monthly average flows through time).

Conclusions

Transmission utilization on most internal NYPP operating interfaces is lower in 1998 than in 1997. Transmission utilization on Sprain Brook - Dunwoodie South, New England, Long Island, and Y49: Sprain Brook - East Garden City is higher in 1998 than in 1997. Central East is the only interface consistently operating near limits, however the margin to limit is greater in 1998 than in previous years.

The Open Access Same time Information System (OASIS) transmission paths became active in 1997. The flow data presented in this report is informational for 1995 through 1998. Only paths that have the same definition as an existing operating interface would have potential limitations or operating significance.

Schedules and power flows from external systems are varied. NYPP was importing from PJM about 65% of the time in 1998 compared to 55% of the time in 1995; 70% of the time in 1996 and 1997 Imports from PJM were greater in magnitude in 1998 than 1997, while exports from NYPP to PJM

were about the same. The largest exports to PJM occurred from June through September in 1998. During the summer capability months the average NYPP exports to PJM were higher in 1998 as in 1997. OH-NYPP scheduled imports were lower in 1998 than in 1997. OH imports at the median or less are about the same for 1995 through 1997. Exports to OH increased both in magnitude and duration. NY exported to OH 45% of the time in 1998, compared with 25% in 1997. Exports to NEPEX increased in 1998 over 1997, while imports from NEPEX decreased to nearly zero.

Total East power flows were lower in 1998 compared to 1997. The Total East Stability Limit was increased from 5450 MW to 6500 MW in January 1995. Total East flows from 1995 through 1998 were not near limits. Total East power flows were above the previous limit of 5450 MW about 12% of the time in 1998, 40% of the time in 1997, 30% of the time in 1996, and about 21% of the time in 1995.

The table below compares minimum flows that occurred 75% of the time (above the lower quartile) and the percent of time the respective flows were within 200 MW of their active limits. For example, in 1995 the Total East flow was greater than 4475 MW 75% of the time and operated to within 200 MW of its active operating limits 8% of the time. The increase in the Total East limit yielded a larger transfer margin in 1995. Central East is operating further from limits in 1998 than in 1997 or 1996. 1996 was the first full year the voltage collapse limits were in effect.

Year	Central East		Total East	
	Flow >75% of the time	% of time within 200 MW of limit	Flow > 75% of the time	% of time within 200 MW of limit
1998	1549 MW	35%	3493 MW	3%
1997	2285 MW	85%	4800 MW	7%
1996	2365 MW	90%	4800 MW	2%
1995	2400 MW	75%	4475 MW	8%

Flows toward New York City and Long Island increased on Sprain Brook-Dunwoodie South. Median flows are about 250 MW higher with the upper and lower quartile flows about 200 MW higher. UPNY-Con Ed (Capital/Mid Hudson-Westchester) flows were lower in 1998 than in 1997. UPNY-Con Ed flows were within 500 MW of the active limit only about 1% of the time, compared with 2% in 1997 and 3% in 1995. Sprain Brook-Dunwoodie South flows were within 200 MW of the active limit about 4% of the time, compared to 3% in 1997.

Moses South (Adirondack-Central Transmission Path) flows were significantly less in 1998 than 1997. Flows north increased from about 3% to 25% of the time.

Flows from HQ are lower in 1998 than in 1996 and 1995. The amount of time there are imports is about 45% compared with 60% in 1997. Imports are below 1000 MW about 40% of the time and below 700 MW 30% of the time. Exports to HQ increased to 45% of the time in 1998 from 25% in 1997. Flows were zero approximately 10% of the time.

Results

The three graphical formats, histograms, flow duration curves, and box plots, present the data in different ways to show statistical distribution and comparisons of flows from year to year. The following describes each of the graphical formats. An explanation of the transfer margin calculation is also included.

Histograms

These show the statistical distribution of flows over the observed operating range for the year. The data is presented for the current year (1998). The values along the ordinate are midpoints of a preselected range. For example, two consecutive midpoints of 300 and 600 represent all the flows with values of 300 MW ±150 and 600 MW ±150. The length of the bars represent the frequency, or the number of times a flow is within the range around the midpoint.

In the case of unrestricted operation on a facility there would be a random distribution of flows leading to a statistically normal distribution. In practical cases the distribution is skewed in one direction or there may be certain ranges that have"spikes". The flows may skew towards a certain level for several reasons: an economic optimum may exist for a while that inclines the flow to a certain value, an interface or facility may be operating at or near its limit, or a nearby facility may be limited and consequently limits the facility in question.

An example of spikes in the histogram is a transmission line out of service. The line may have a normal distribution of flows from 200 to 600 MW and a large spike at zero representing the time the facility was out of service. Unfortunately the raw data does not distinguish between O/S conditions or actual zero flow, although the latter is fairly uncommon for most facilities.

Flow Duration Curves

In a continuous monotonically decreasing curve, this shows the percentage of time a facility or interface was operating at or above a certain value in its observed operating range. The graphs include the current year, 1998, and the previous three years (1995, 1996, and 1997). Overlaying the curves for each year gives a visual comparison on how the utilization of the particular facility is changing.

Box Plots

Box and whisker plots give a through time graphic view of statistical distributions of data at each discrete time or time period. The plots in this report include four years of data, the current year (1998) and the previous three years (1995-1997). The time axis (abscissa) represents each month during the four year analysis period. The boxes and whiskers represent all the flows observed during a month.

The heavy solid line on the plots in this report connects the monthly average (MW flow) values. The "box" represents the inter-quartile range, in which 50% of the data values lie. The bar in the middle of the box is the (statistical) median. The median cuts the box into two parts, each contains 25% of the data values. The long vertical lines extending from the boxes, whiskers, represent the higher and lower 25% (quartiles) of the data values. These whiskers extend to the absolute minimum and maximum value observed in the respective time period (1 month in this case). The tick marks on the whiskers are place at distance not exceeding 1.5 times the length of the box (inter-quartile range), from each edge of the box. This highlights extreme minimums and maximums that may have occurred and separates the extremes from the rest of the data values.

Transfer Margins

A supplementary section is included showing transfer margins on NYPP operating interfaces. The transfer margin is the MW transfer capability remaining from the instantaneous flow to the active transfer limit. These values are calculating by taking the active directional transfer limit and subtracting the real time flow at each (5 minute) scan.

$$\text{Transfer Margin} = \text{Transfer Limit}_{\text{directional}} - \text{ABS(Actual Flow)}$$

The transfer margin is mostly a positive number. Negative numbers represent flows exceeding transfer limits. The plotted values are the hourly averages of the calculated differences. The transfer margins are presented in the same graphical format as the flows and schedules; histograms, duration curves, and box plots.

It is important to keep in mind that the bars on the histograms represent the frequency of occurrence in a range around the midpoint. Using the Total East margin as an example, the histogram 1998 has midpoints at -100 and 200 MW. The bar at 350 means that Total East was operating within 400 MW of its active limit 6.25% of the time during 1998. The bar at -100 means that Total East was operating at levels potentially up to 300 MW above its active limit .93% of the time during 1997. Except in the case of unusually high overloads on an interface (i.e., spikes, contingencies), the margins are generally zero or greater.

There are two sets of charts for Central East Transfer Margins. One for pre-contingency flows and the second for post-contingency flows and limits. The Central East post-contingency transfer margin is calculated by taking the minimum margin, or difference, of the three post contingency voltage collapse limits and their respectively calculated post contingency flows.

Interfaces Simultaneously Constraining Transfers

The table in Appendix D summarizes the combinations of interfaces as they were simultaneously constraining during 1995, 1996, 1997, and 1998. Interfaces were considered constraining if the actual flow was within 100 MW of the respective interface's limit. This limit was the active transfer limit in the real-time system at the time of the sampling.

The results are summarized as hourly values. These are derived from 5 minute real time samples. In the four year time period sampled, we found 100 unique combinations of NYPP operating interfaces that were constraining at various times. These combinations range from two to five interfaces at a time. Some of the combinations are recurring over each of the years, others occurred in only one year. Several combinations occurred only once.

For the circumstances analyzed, two or more interfaces were constraining from 11% to 45% of the time in a given year between 1995 and 1998. Only the Central East/Total East combination appeared regularly more than 5% of the time. Most of the rest of the simultaneous constraints occurred 3% of the time or less. This indicates the total percentage is an accumulation of many combinations, that may occur for a variety of reasons, rather than a few that may occur for some common phenomenon. Central East and Total East are closely related. If this combination is removed, the percentages are still significant. The annual totals with and without the Total East/Central East combination are summarized in the table below.

Year	All Combinations		Central East/Total East Excluded	
	Hours	Percent of Year	Hours	Percent of Year
1995	1484	16.9%	916	10.5%
1996	956	10.9%	859	9.8%
1997	1378	15.7%	643	7.3%
1998	333	4.0%	106	1.7%

Further restrictions are also likely by virtue of individual line constraints. The analysis presented here only used interface flow related data. Interfaces, or Transmission Paths (to use the new terminology) are often implicitly limited by a single element for some contingency (e.g., the loss of one Leeds-Pleasant Valley 345 kV circuit on the parallel Leeds-Pleasant Valley 345 kV circuit). This contingency will implicitly limit both Central East and UPNY-Con Ed. This is not reflected as an explicit interface limit and outside the context of this analysis. The trend from 1995 to 1998 is decreased simultaneous interface limits, this may be due, in part, to Central East singularly limiting so often.

Appendix A – Power Flows

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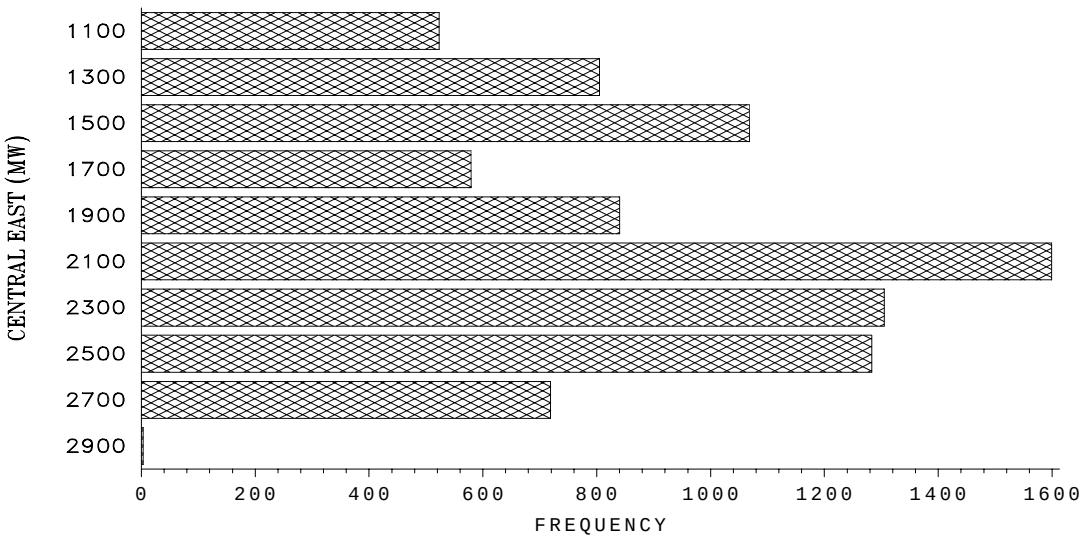
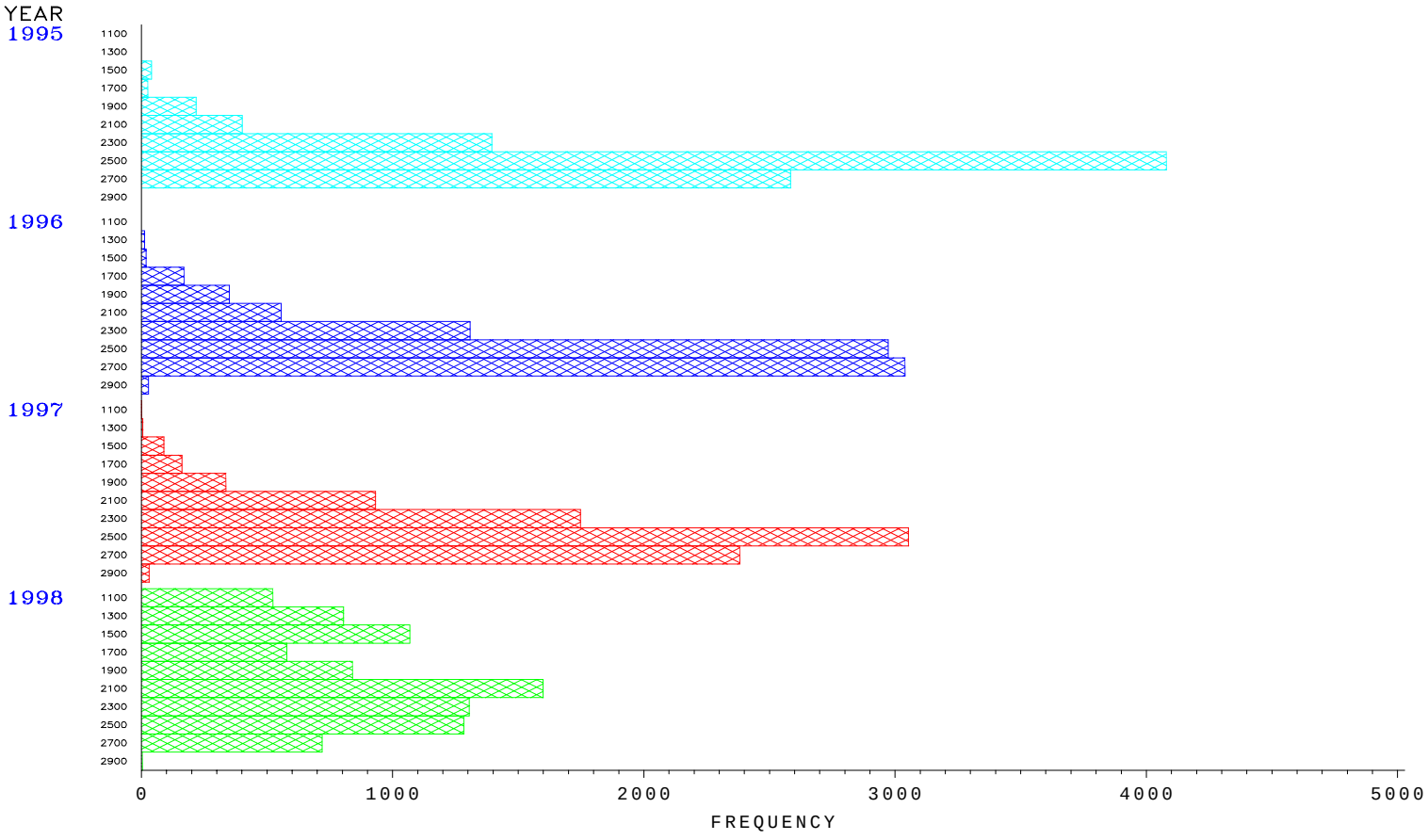
NYPP Transmission Use Statistics For January–December 1998

CENTRAL EAST

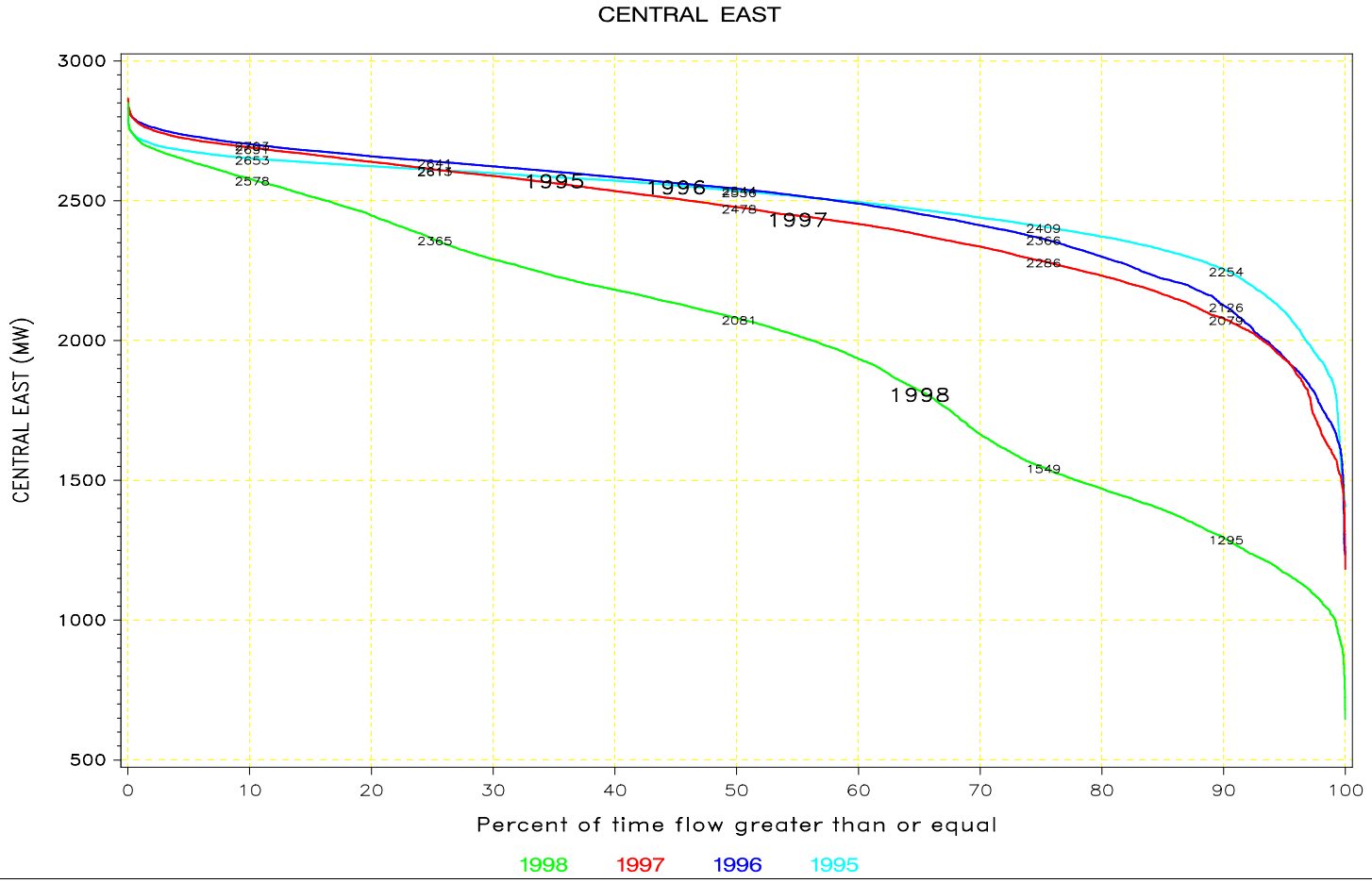


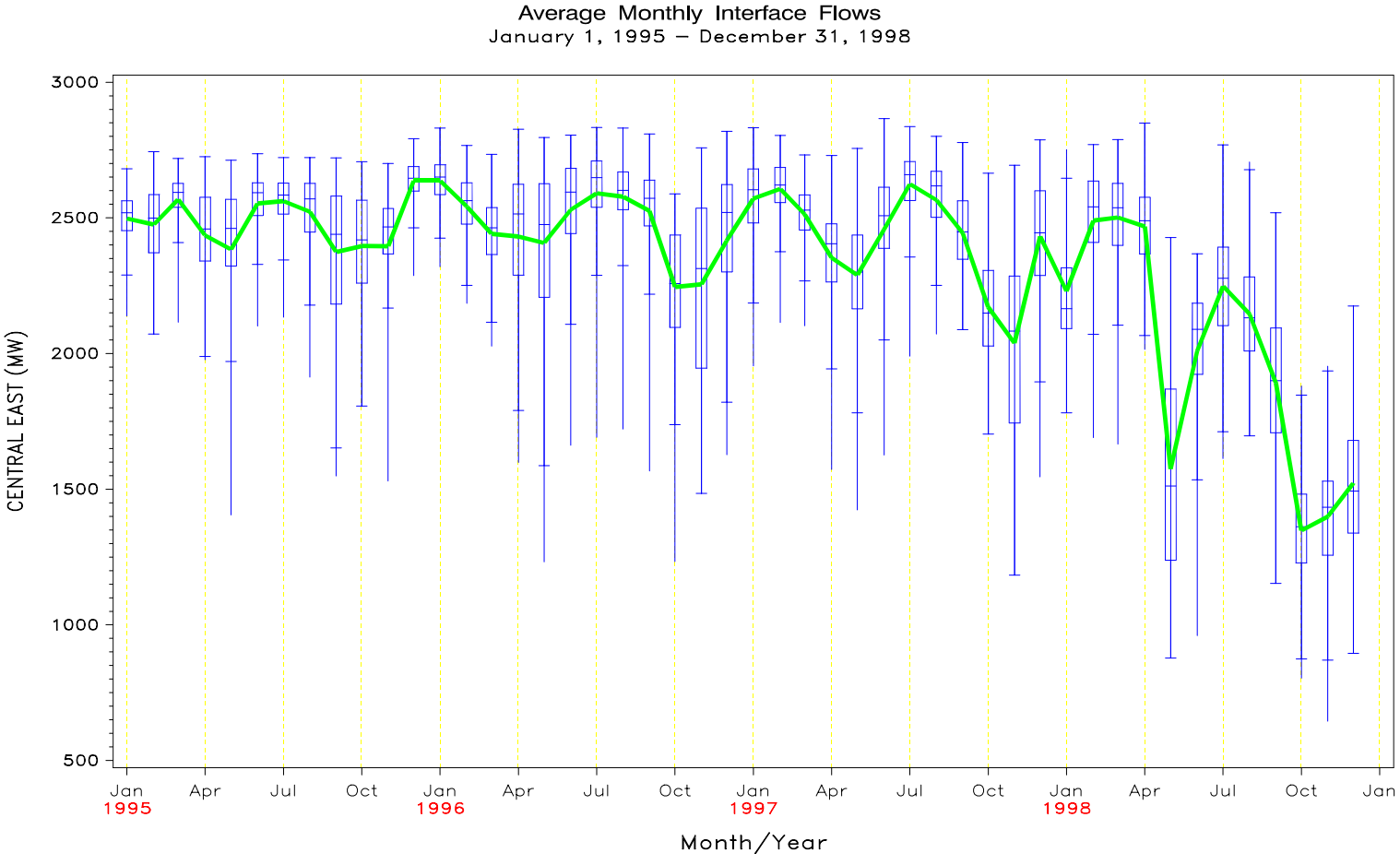
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1100	523	523	5.99	5.99
1300	805	1328	9.23	15.22
1500	1068	2396	12.24	27.46
1700	579	2975	6.64	34.10
1900	840	3815	9.63	43.73
2100	1599	5414	18.33	62.06
2300	1305	6719	14.96	77.02
2500	1283	8002	14.71	91.72
2700	719	8721	8.24	99.97
2900	3	8724	0.03	100.00

CENTRAL EAST



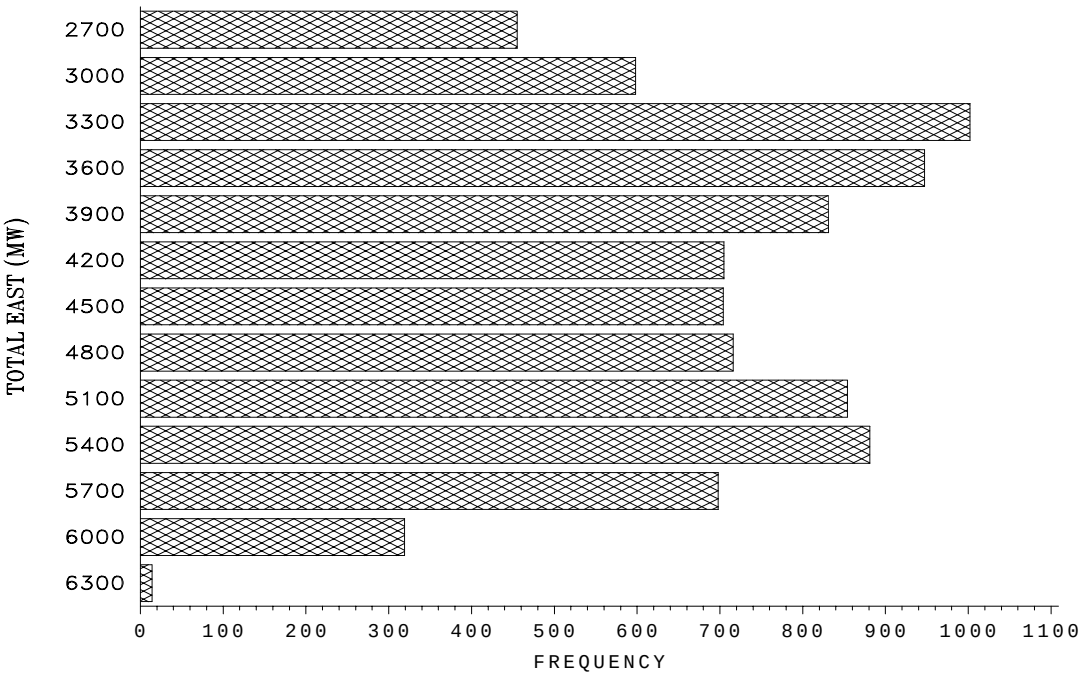
FLOW DURATION CURVE
FOR 1995 through 1998





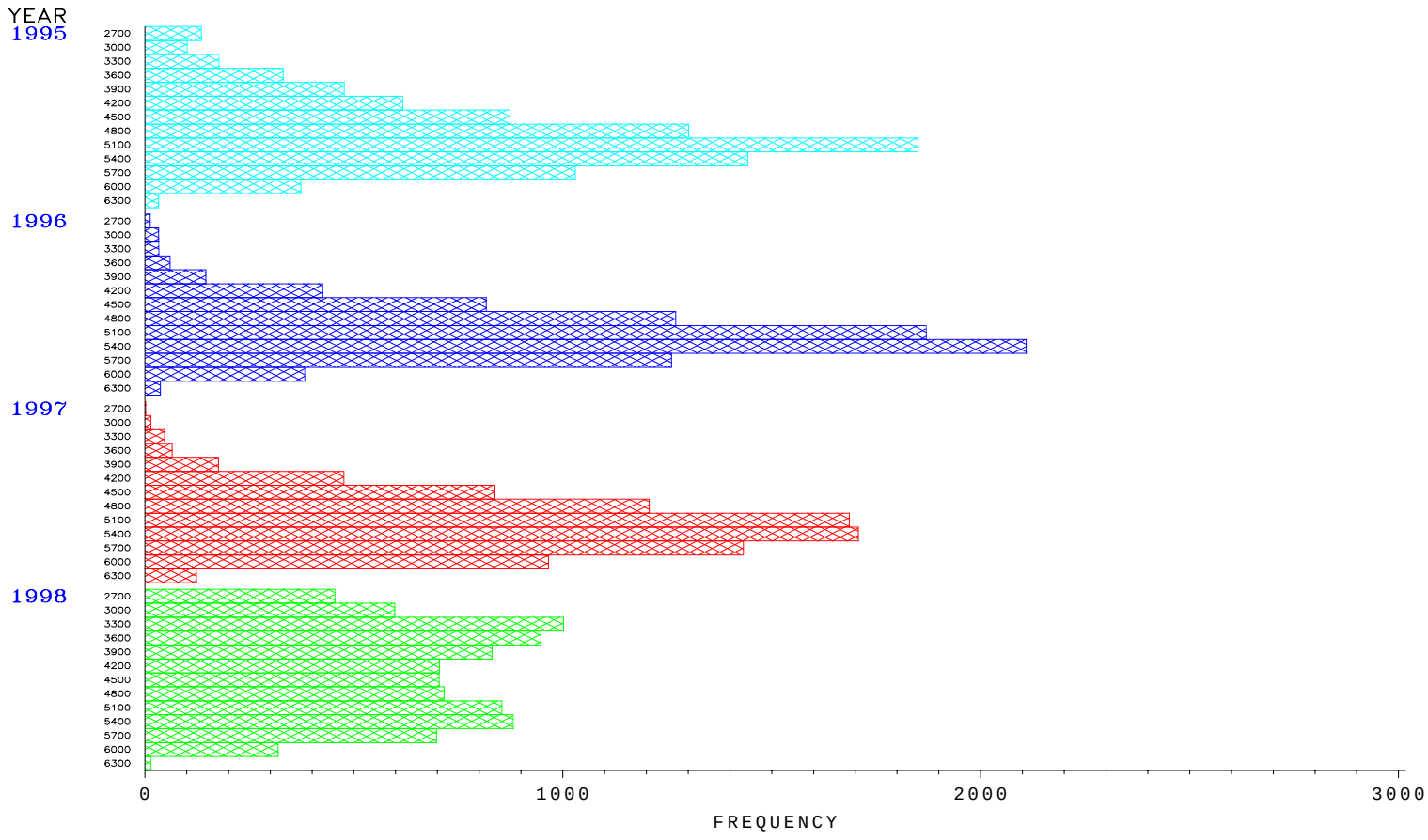
NYPP Transmission Use Statistics For January–December 1998

TOTAL EAST

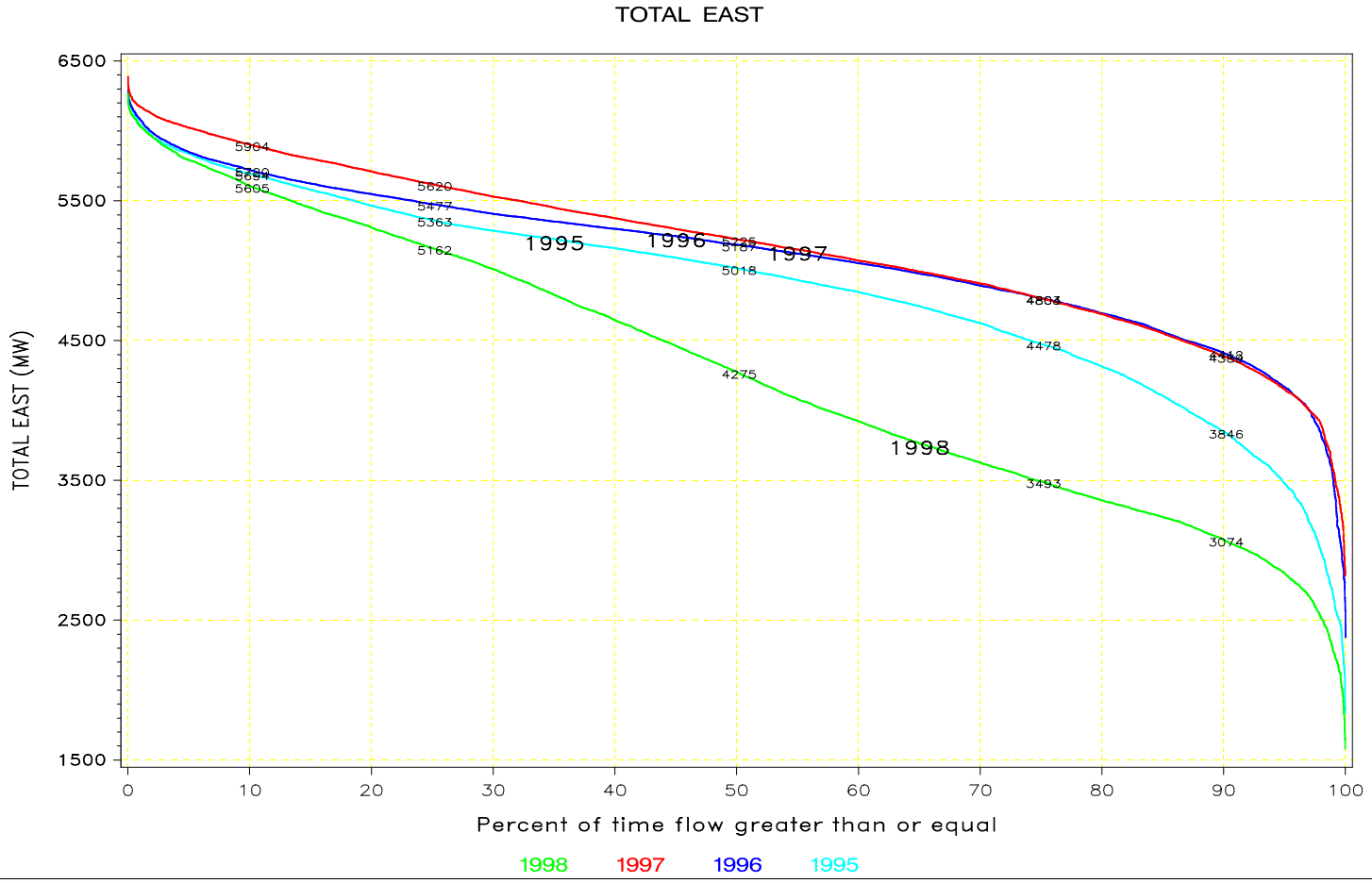


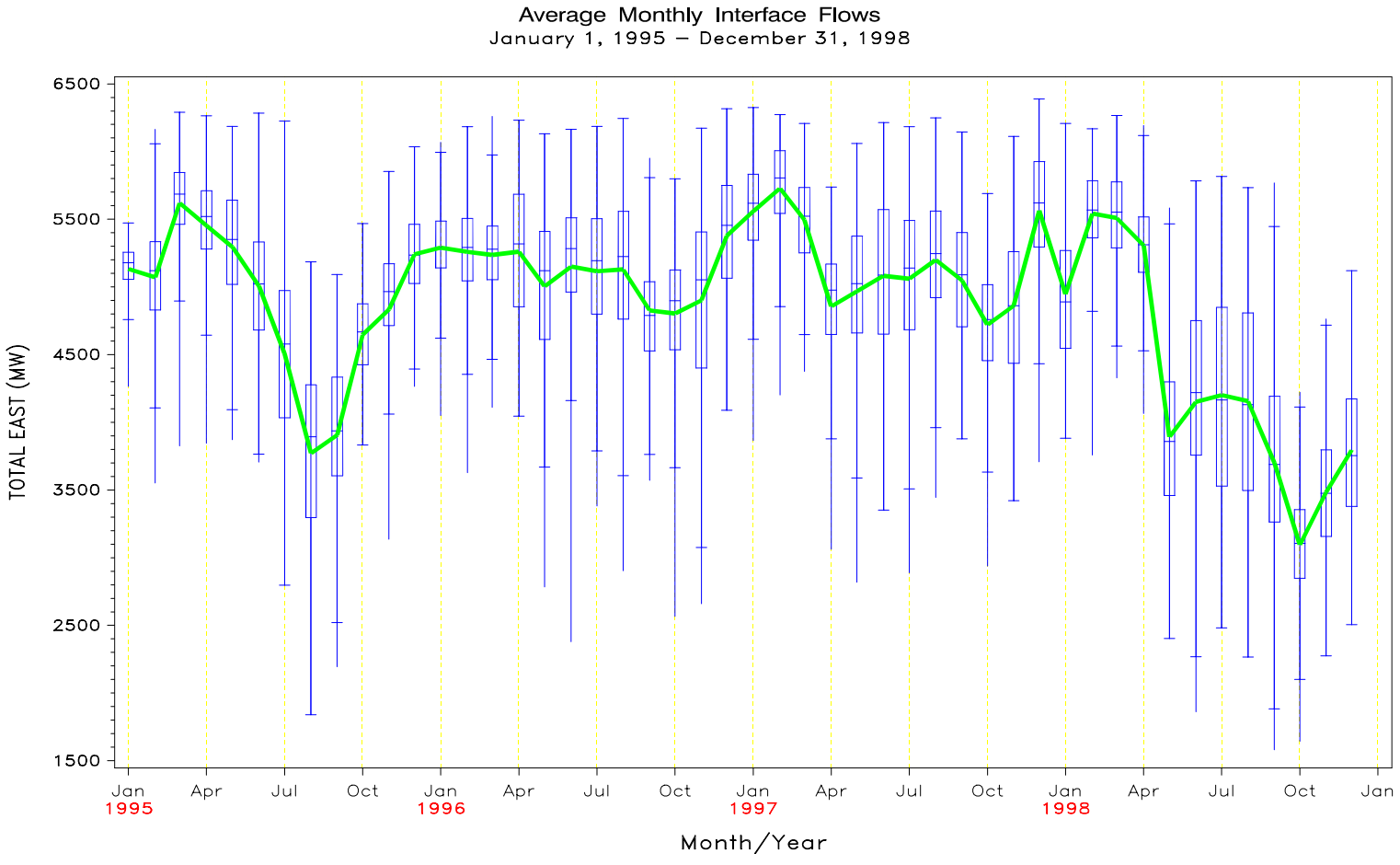
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
2700	455	455	5.22	5.22
3000	598	1053	6.85	12.07
3300	1002	2055	11.49	23.56
3600	947	3002	10.86	34.41
3900	831	3833	9.53	43.94
4200	705	4538	8.08	52.02
4500	704	5242	8.07	60.09
4800	716	5958	8.21	68.29
5100	854	6812	9.79	78.08
5400	881	7693	10.10	88.18
5700	698	8391	8.00	96.18
6000	319	8710	3.66	99.84
6300	14	8724	0.16	100.00

TOTAL EAST



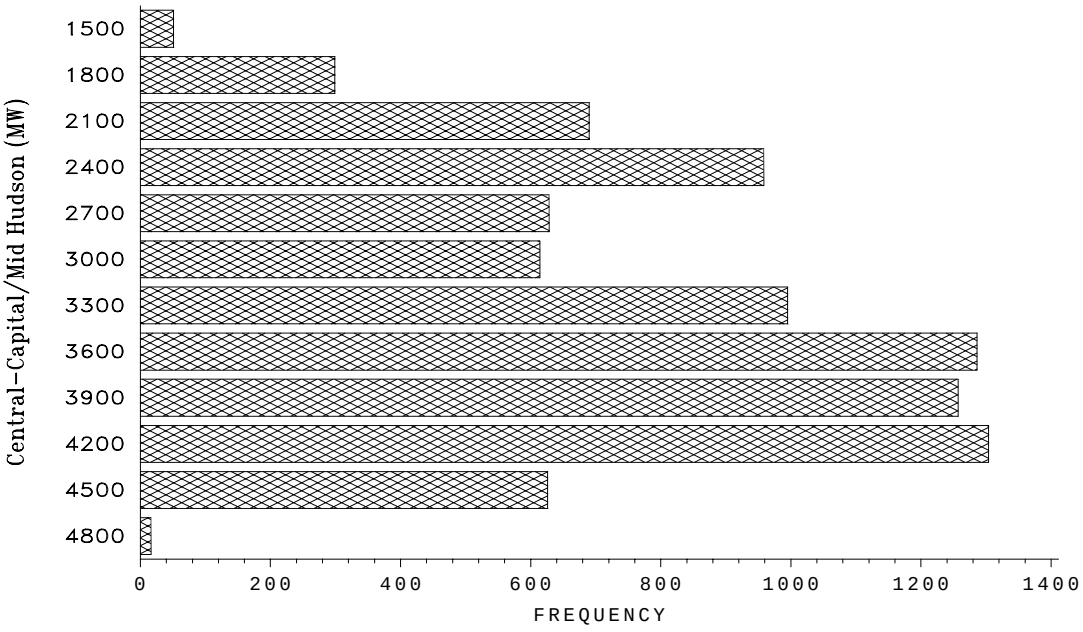
FLOW DURATION CURVE
FOR 1995 through 1998





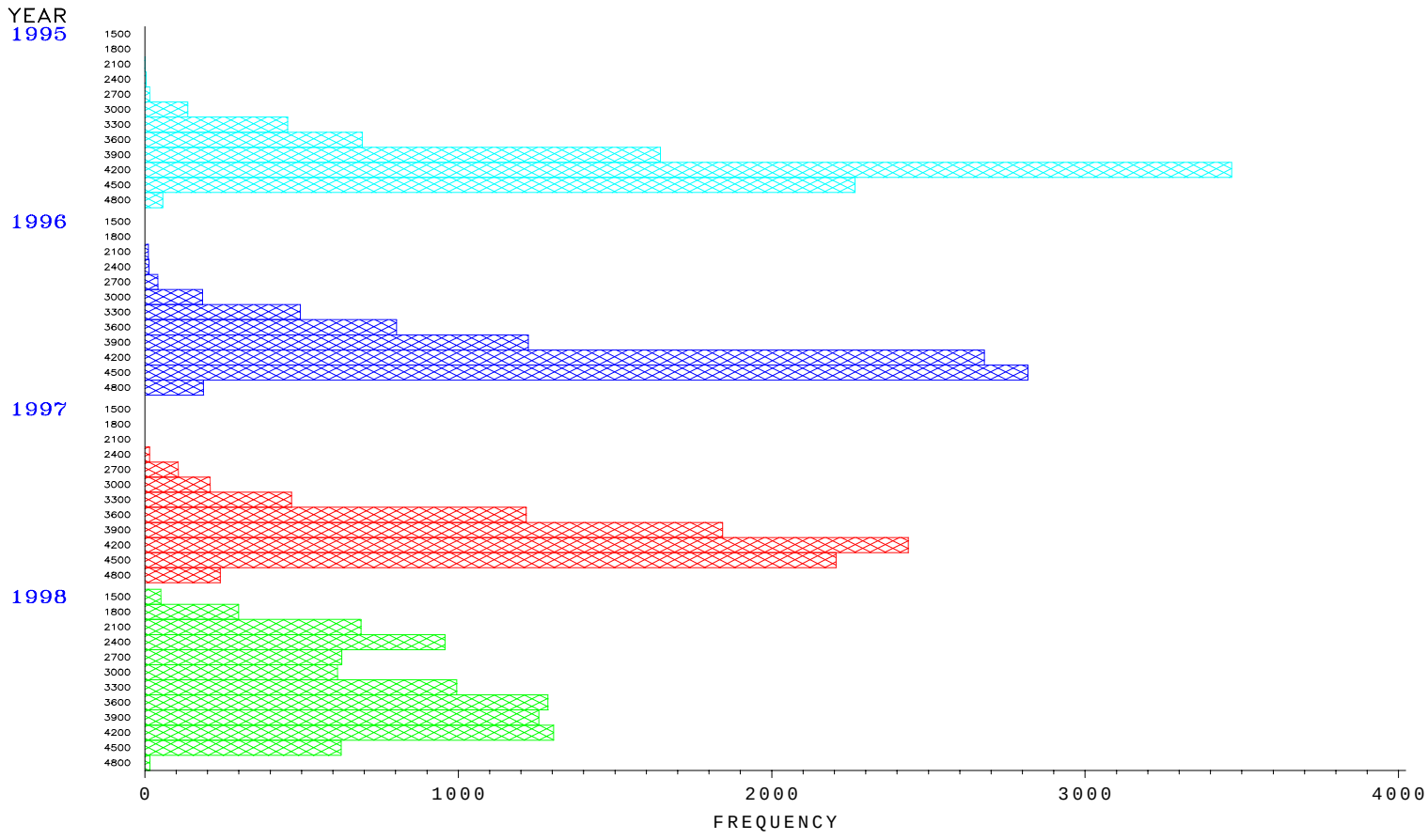
NYPP Transmission Use Statistics For January–December 1998

Central – Capital/Mid Hudson

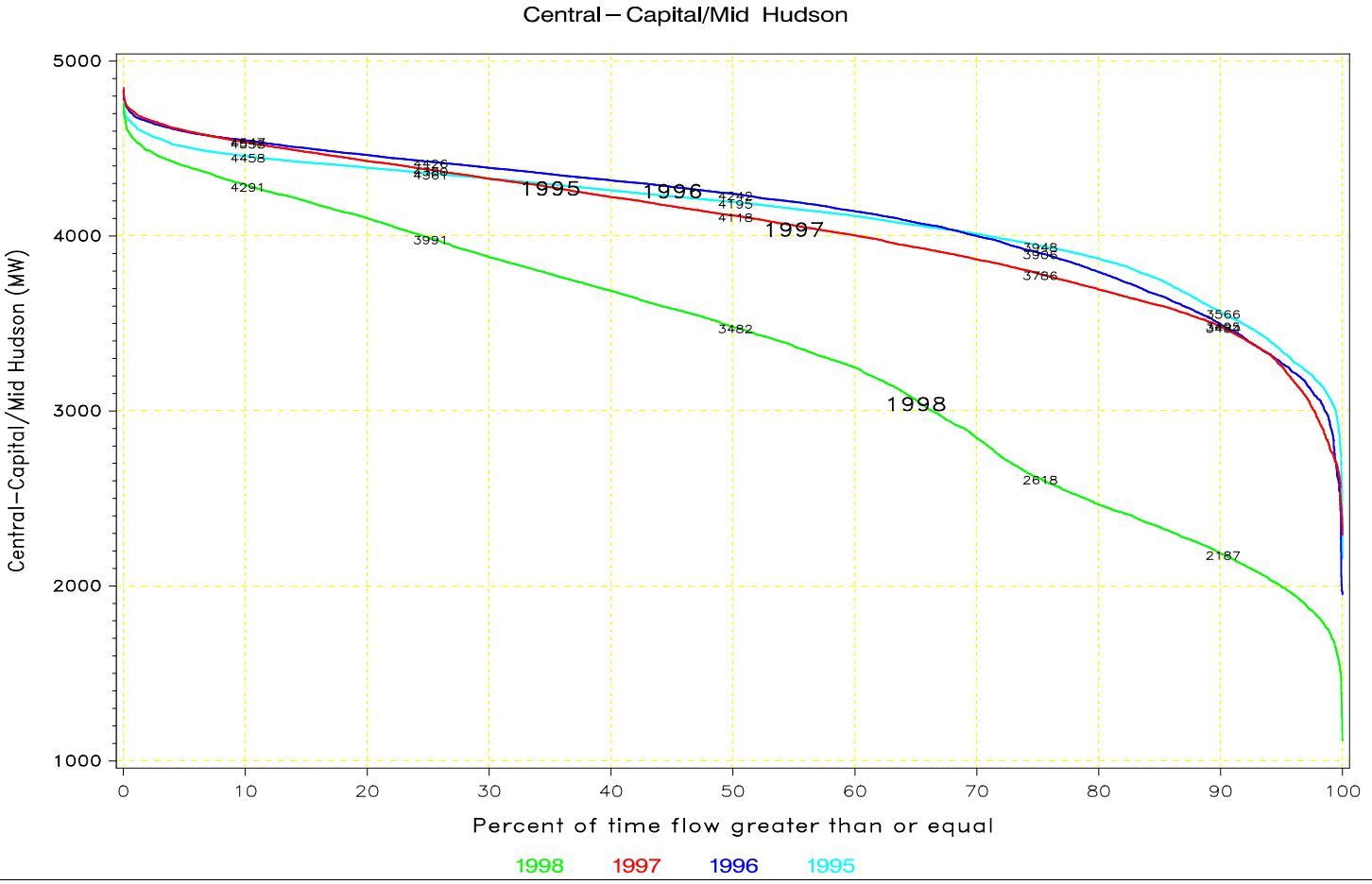


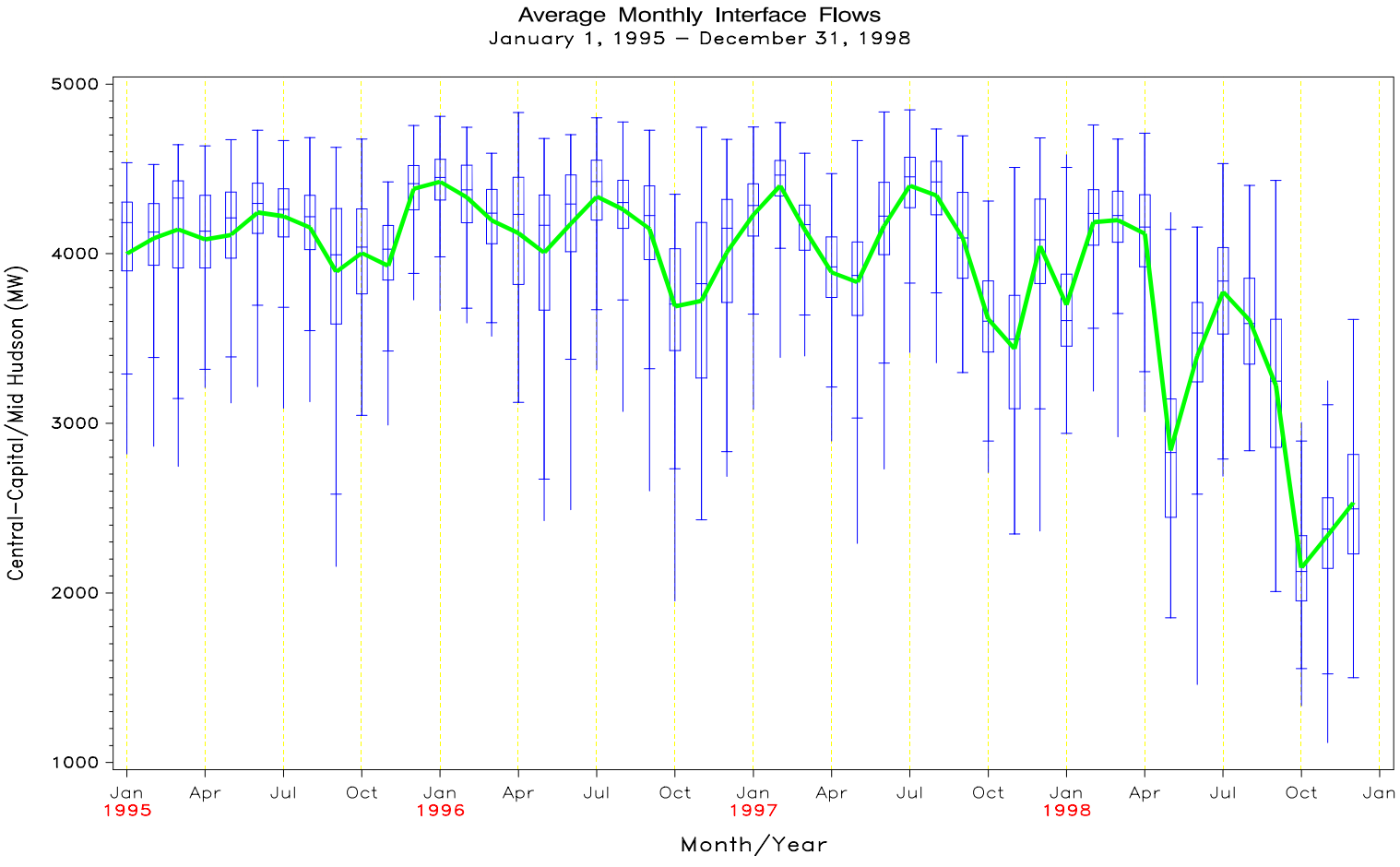
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1500	51	51	0.58	0.58
1800	299	350	3.43	4.01
2100	690	1040	7.91	11.92
2400	958	1998	10.98	22.90
2700	628	2626	7.20	30.10
3000	614	3240	7.04	37.14
3300	995	4235	11.41	48.54
3600	1286	5521	14.74	63.29
3900	1257	6778	14.41	77.69
4200	1304	8082	14.95	92.64
4500	626	8708	7.18	99.82
4800	16	8724	0.18	100.00

Central – Capital/Mid Hudson



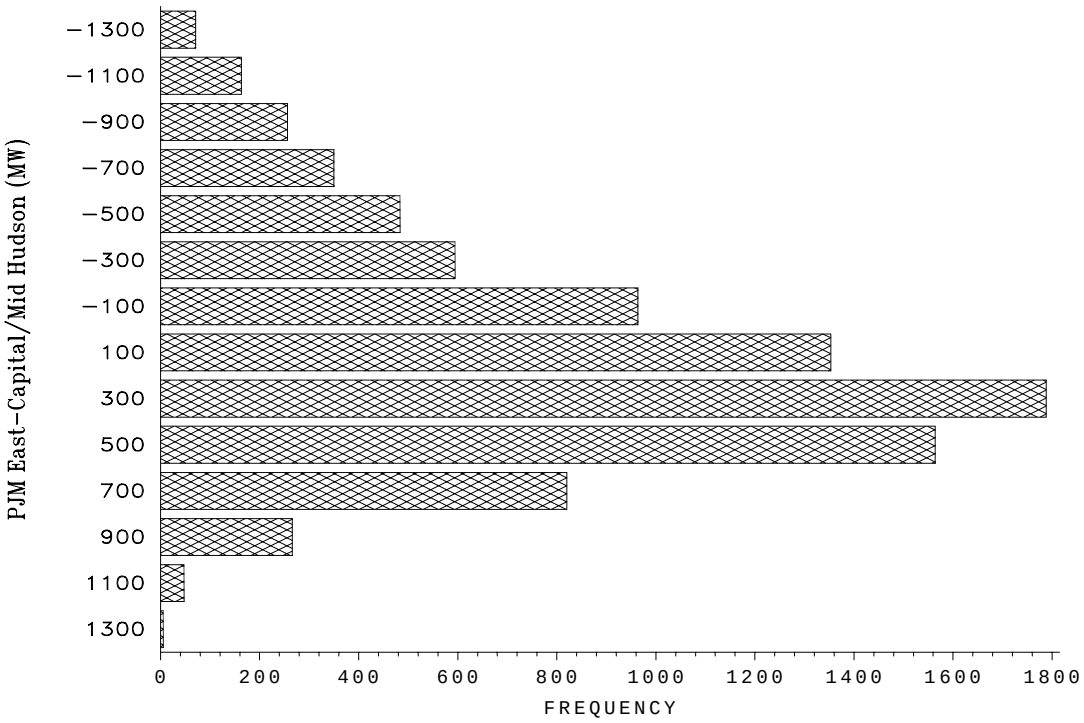
FLOW DURATION CURVE
FOR 1995 through 1998





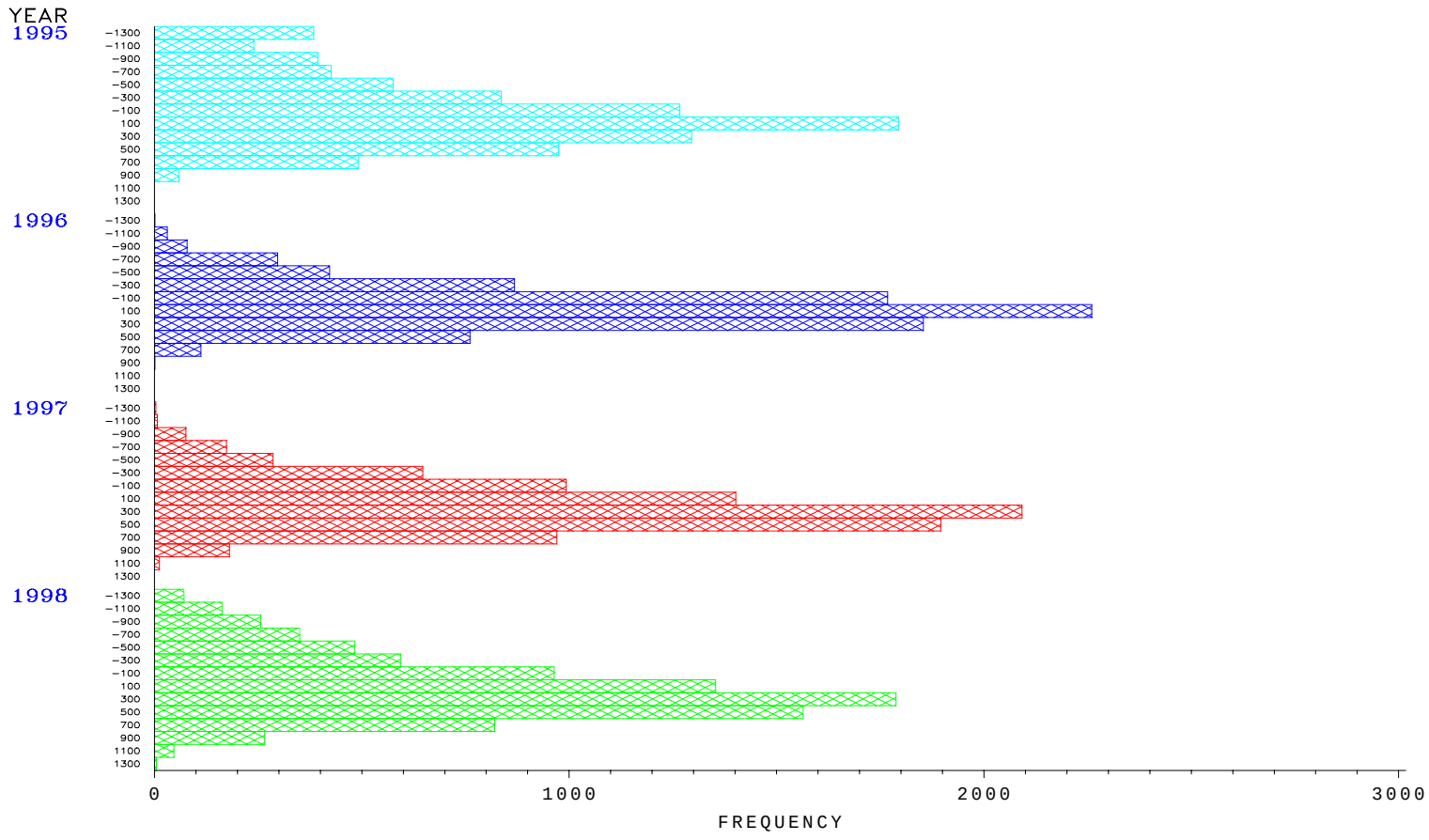
NYPP Transmission Use Statistics For January–December 1998

PJM East – Capital/Mid Hudson



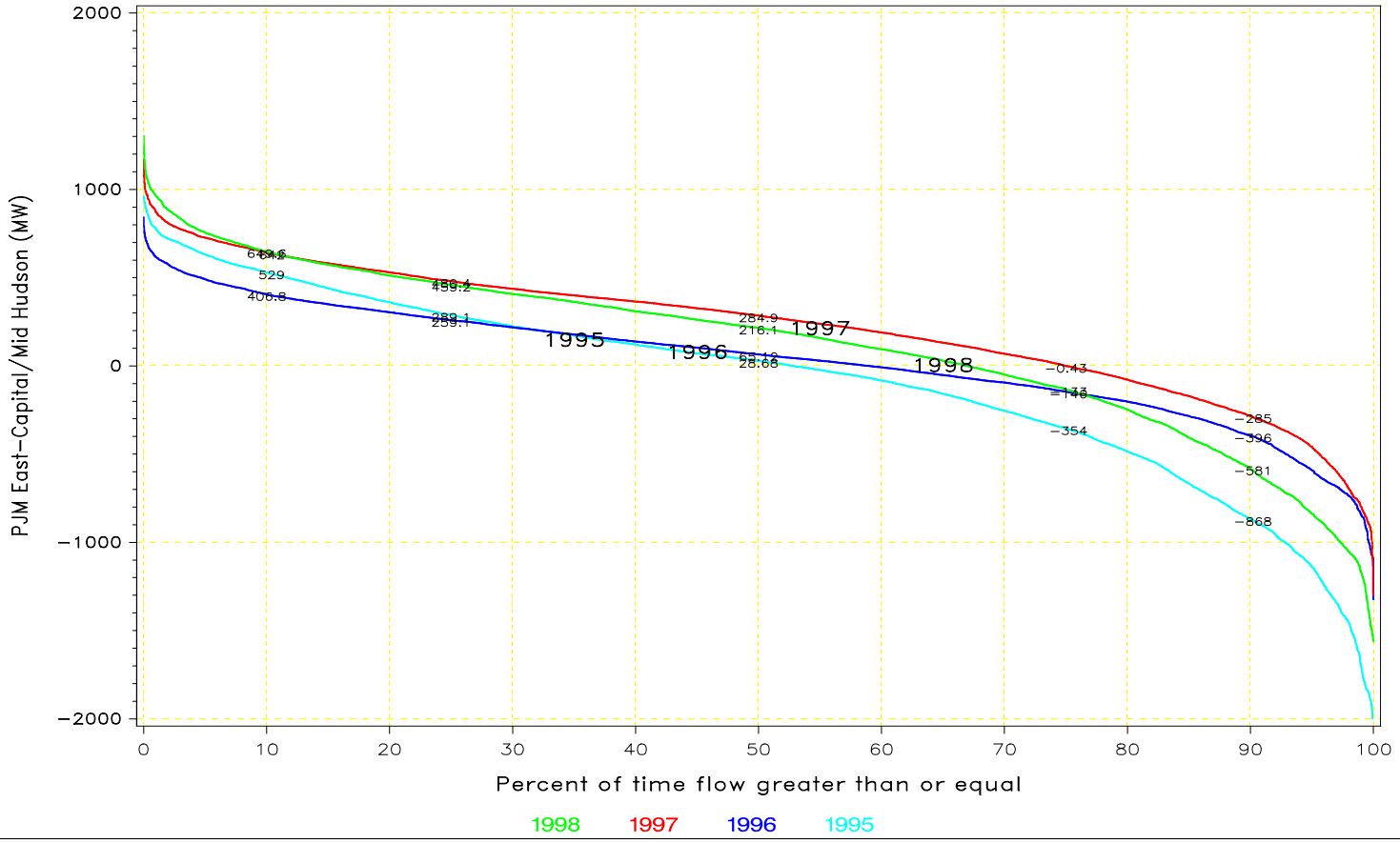
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−1300	71	71	0.81	0.81
−1100	163	234	1.87	2.68
−900	256	490	2.93	5.62
−700	350	840	4.01	9.63
−500	483	1323	5.54	15.17
−300	594	1917	6.81	21.97
−100	964	2881	11.05	33.02
100	1353	4234	15.51	48.53
300	1788	6022	20.50	69.03
500	1564	7586	17.93	86.96
700	820	8406	9.40	96.35
900	266	8672	3.05	99.40
1100	47	8719	0.54	99.94
1300	5	8724	0.06	100.00

PJM East – Capital/Mid Hudson

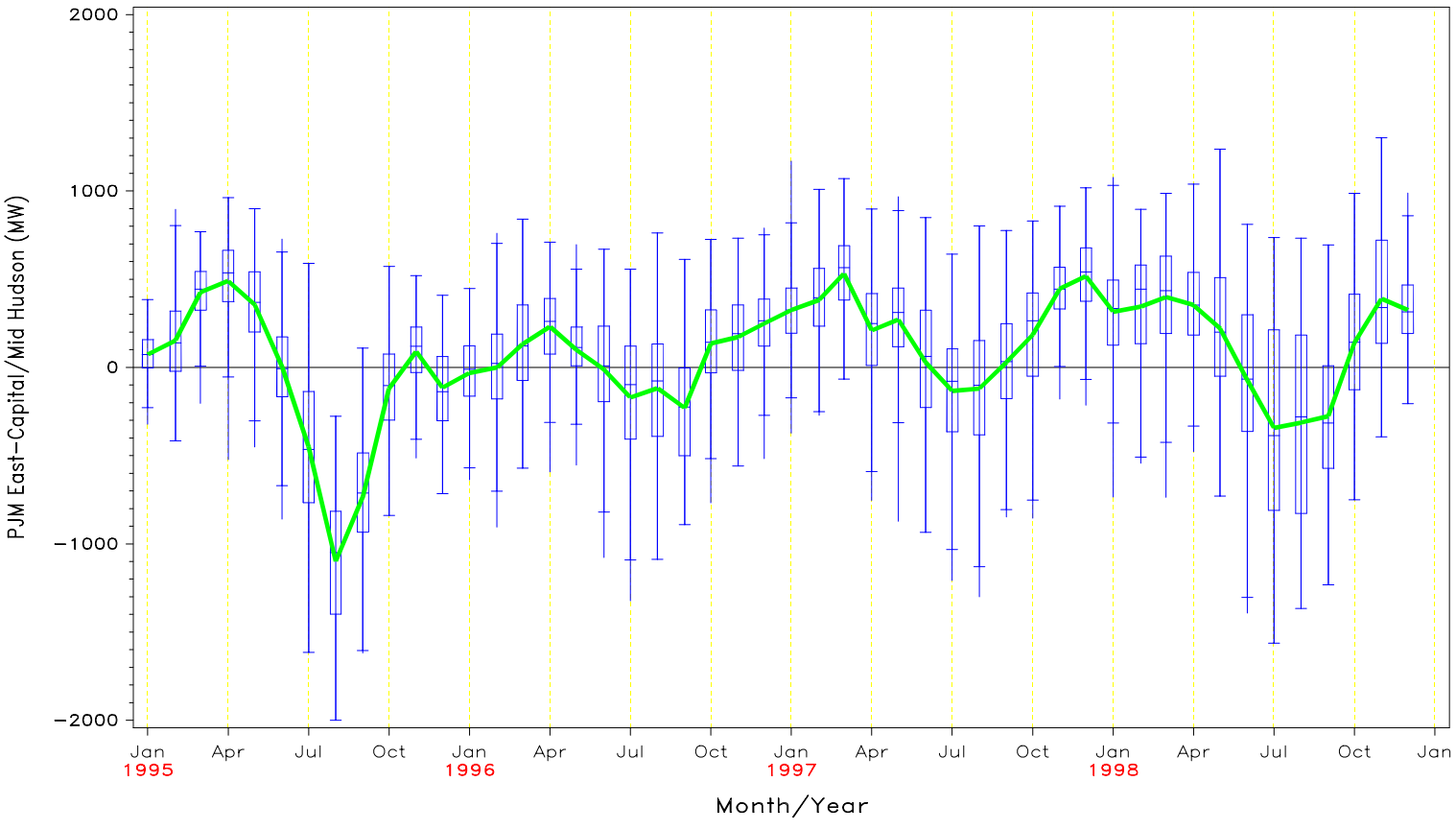


FLOW DURATION CURVE
FOR 1995 through 1998

PJM East – Capital/Mid Hudson

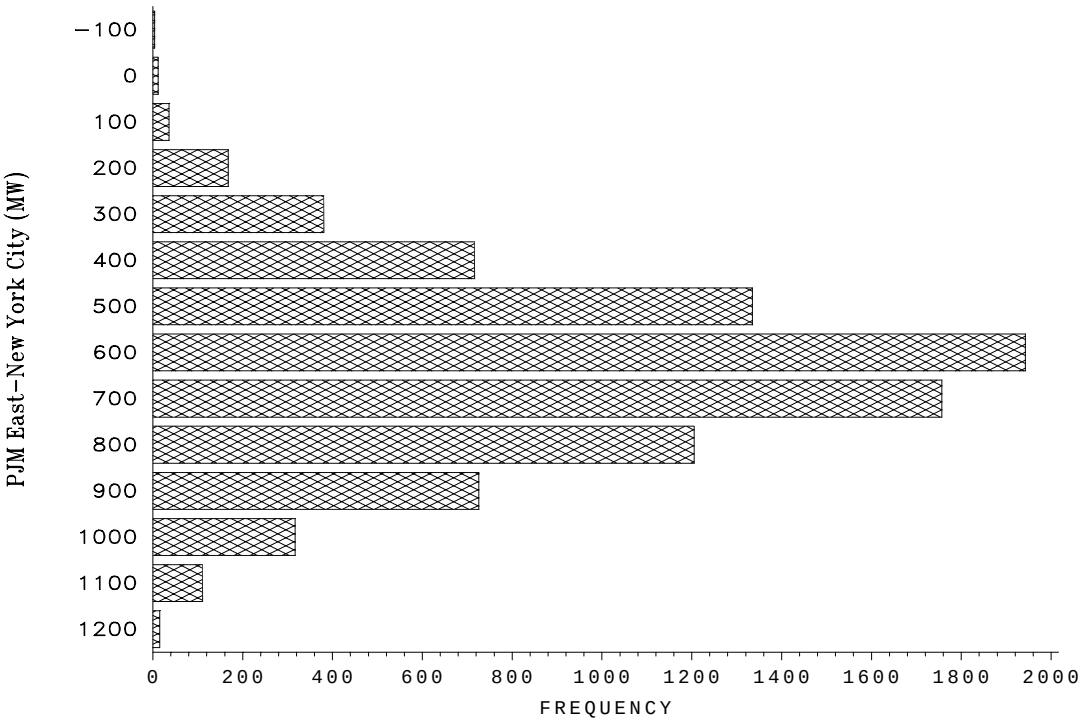


Average Monthly Interface Flows
January 1, 1995 – December 31, 1998



NYPP Transmission Use Statistics For January–December 1998

PJM East – New York City



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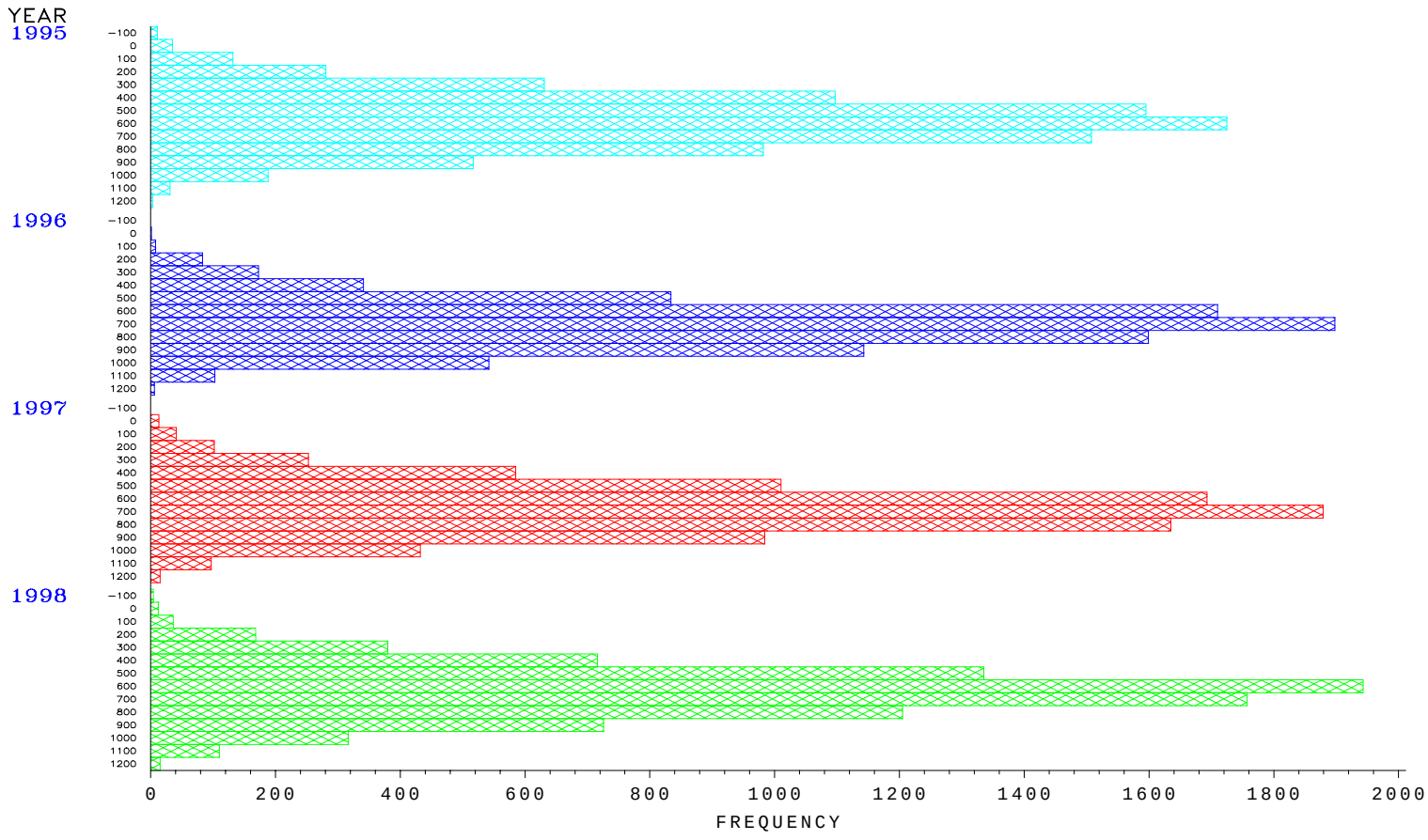
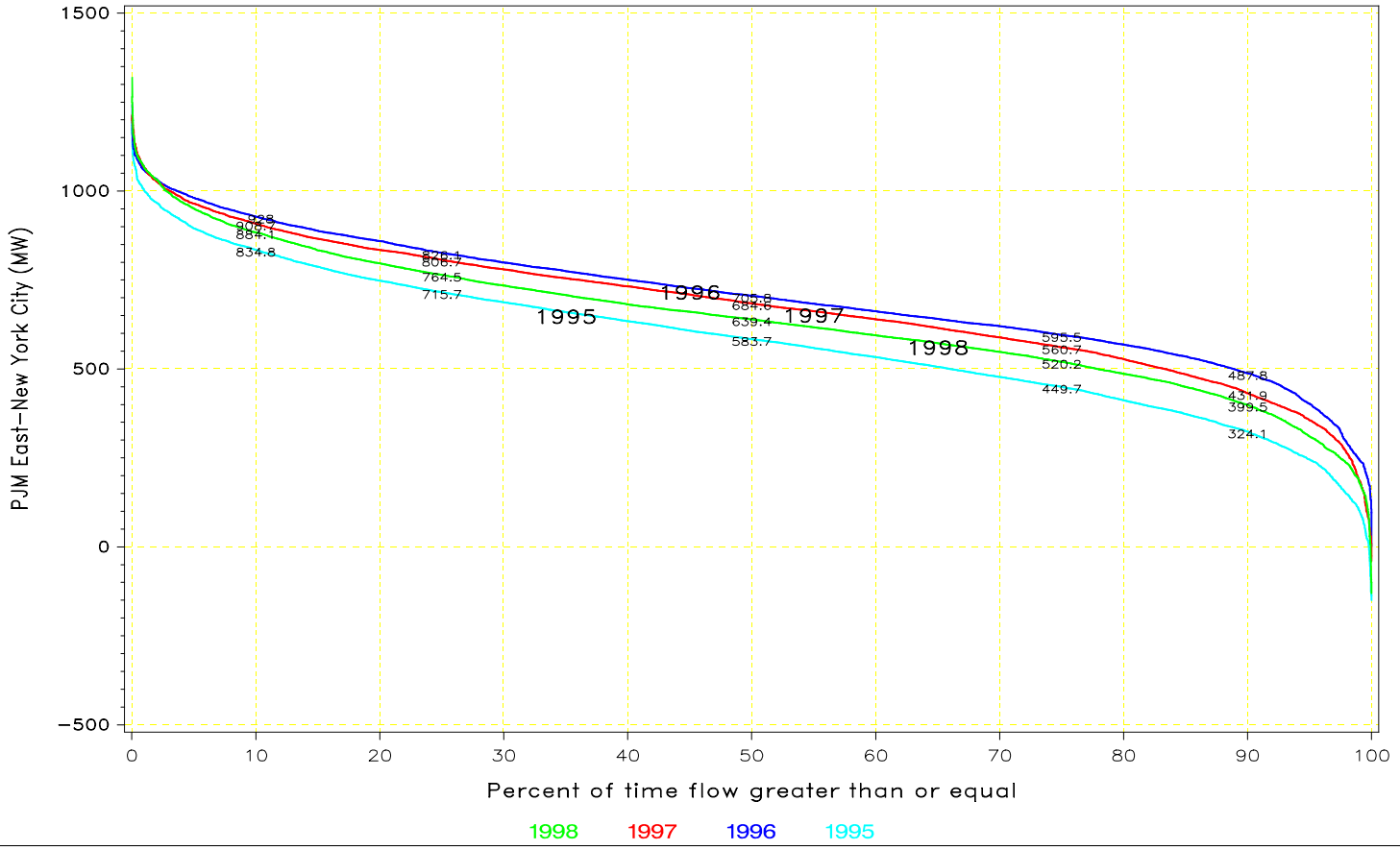
−100	4	4	0.05	0.05
0	12	16	0.14	0.18
100	36	52	0.41	0.60
200	168	220	1.93	2.52
300	380	600	4.36	6.88
400	716	1316	8.21	15.08
500	1335	2651	15.30	30.39
600	1943	4594	22.27	52.66
700	1757	6351	20.14	72.80
800	1205	7556	13.81	86.61
900	726	8282	8.32	94.93
1000	317	8599	3.63	98.57
1100	110	8709	1.26	99.83
1200	15	8724	0.17	100.00

PJM East – New York City



FLOW DURATION CURVE
FOR 1995 through 1998

PJM East – New York City



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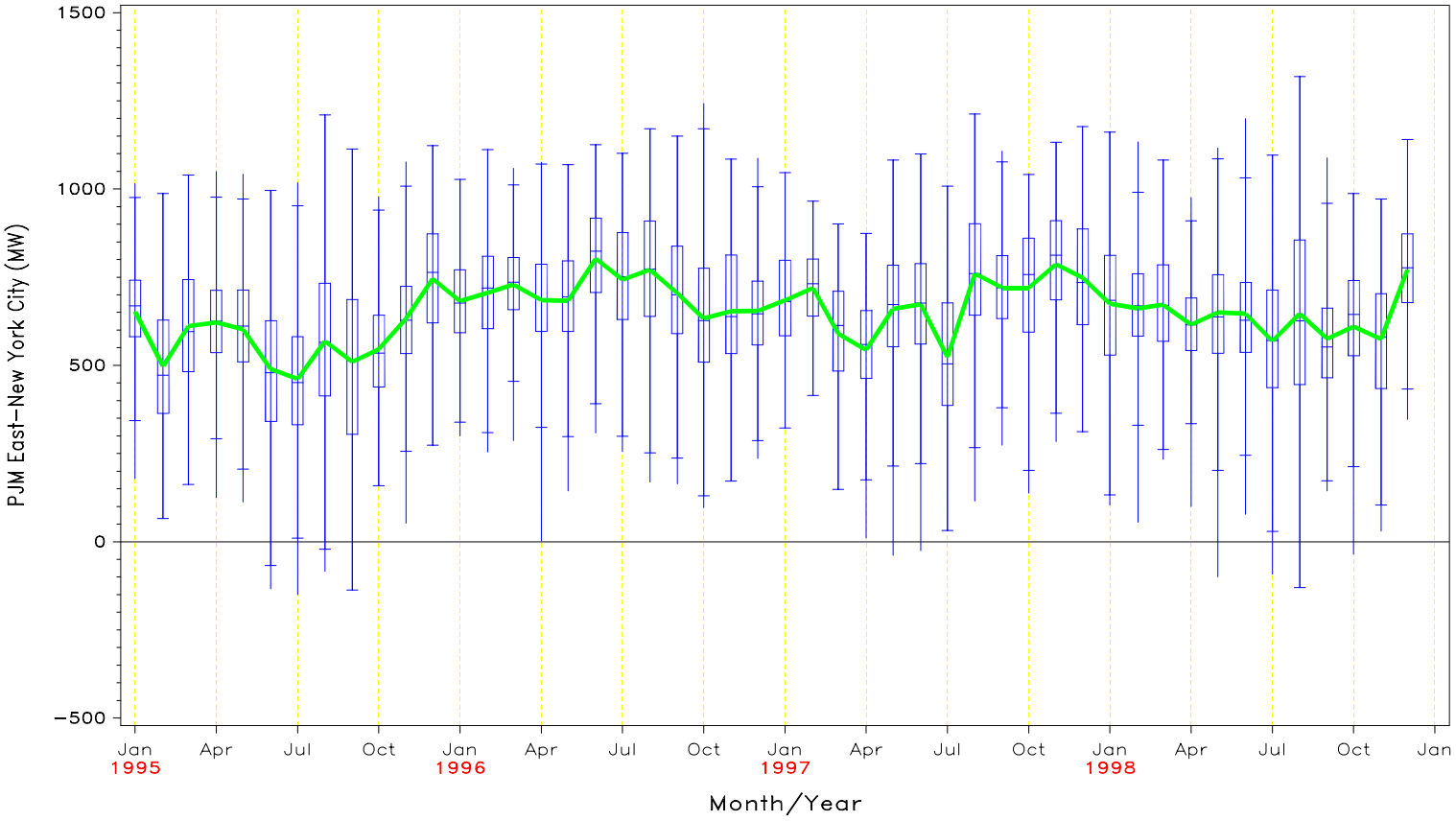
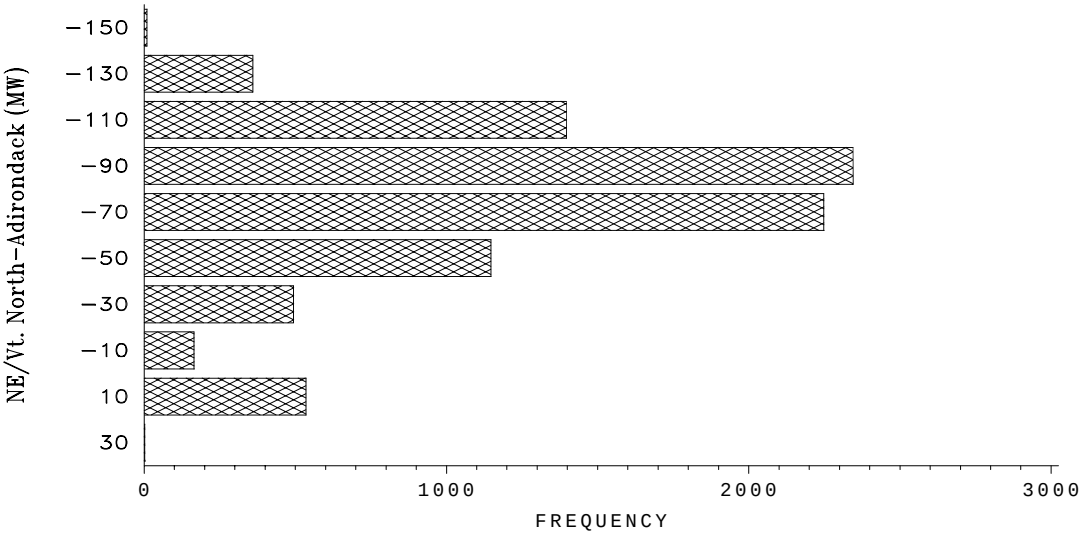


NYPP Transmission Use Statistics For January–December 1998

NE/Vt. North – Adirondack

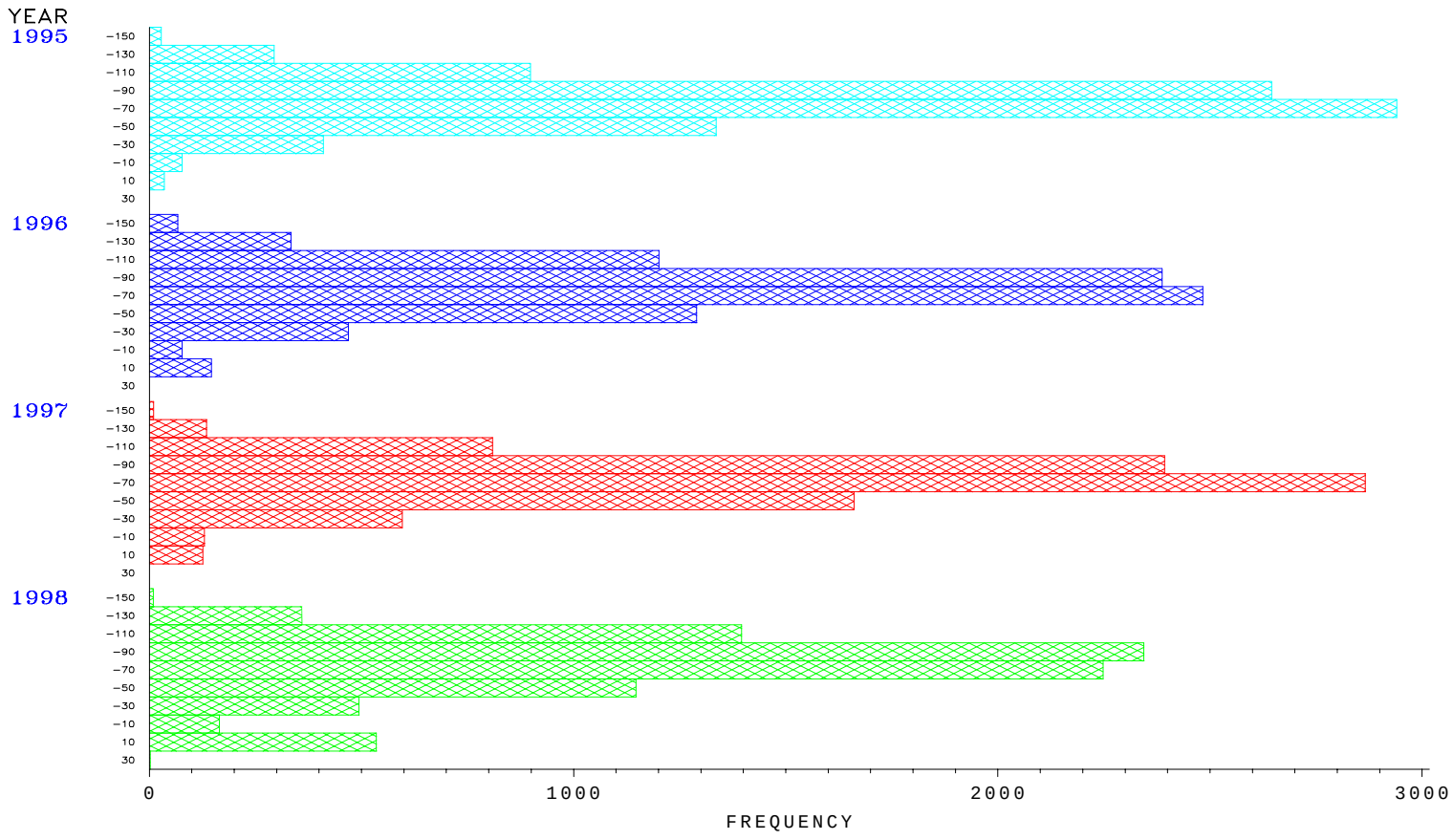
PV–20 Grand Isle–Plattsburgh



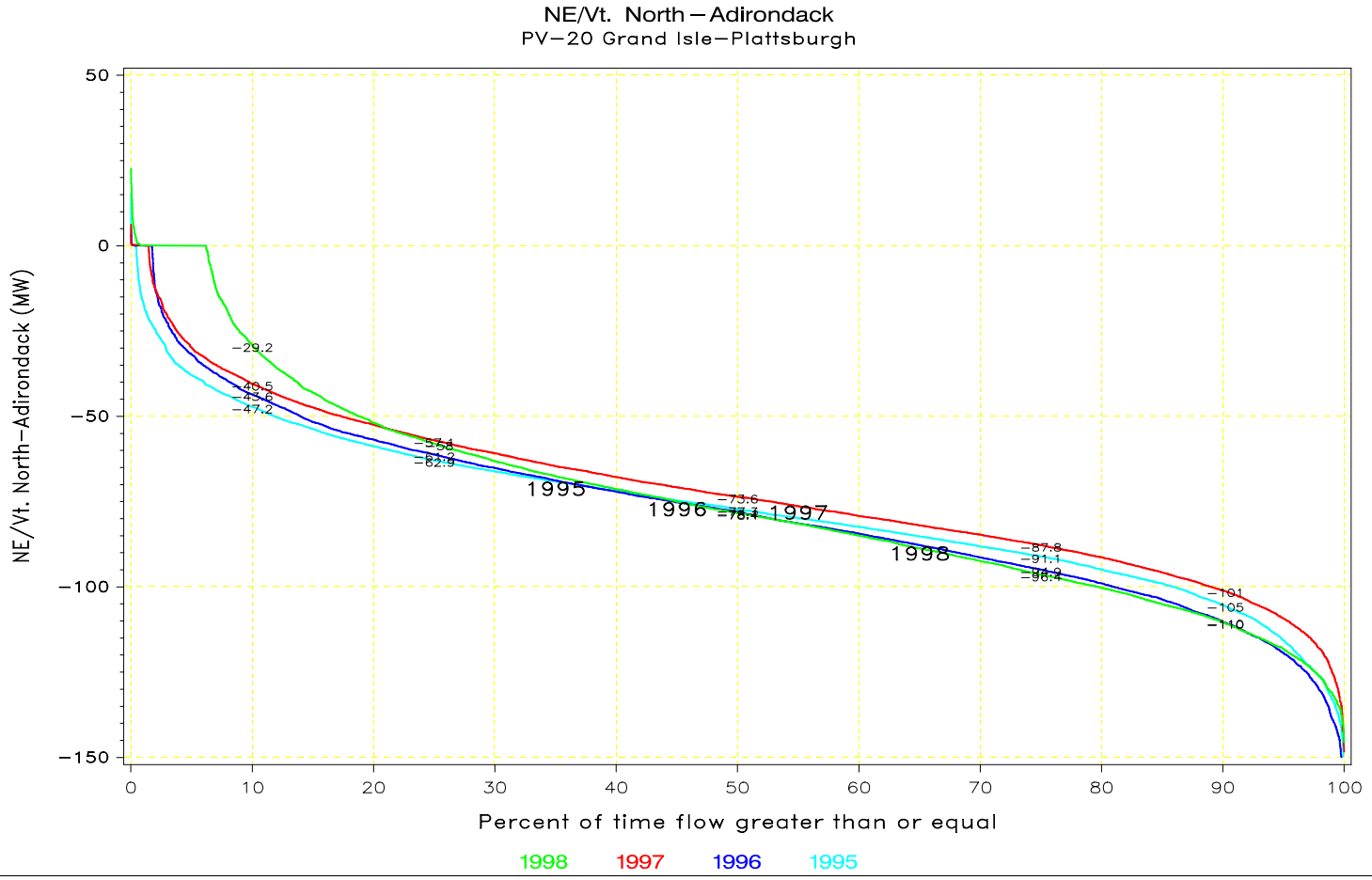
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−150	9	9	0.10	0.10
−130	359	368	4.13	4.23
−110	1396	1764	16.05	20.28
−90	2344	4108	26.95	47.22
−70	2248	6356	25.84	73.07
−50	1147	7503	13.19	86.25
−30	494	7997	5.68	91.93
−10	165	8162	1.90	93.83
10	535	8697	6.15	99.98
30	2	8699	0.02	100.00

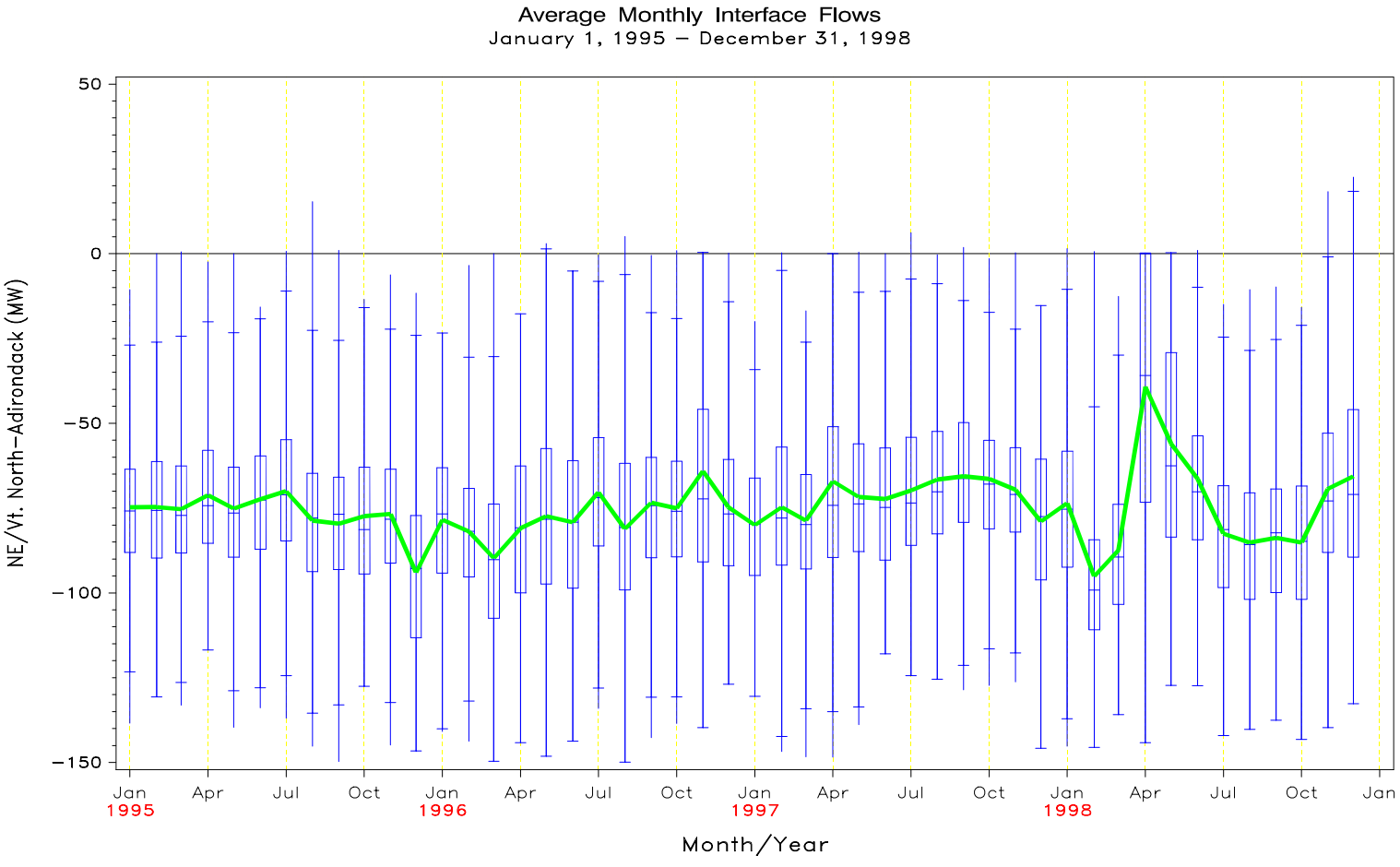
NE/Vt. North – Adirondack

PV–20 Grand Isle–Plattsburgh

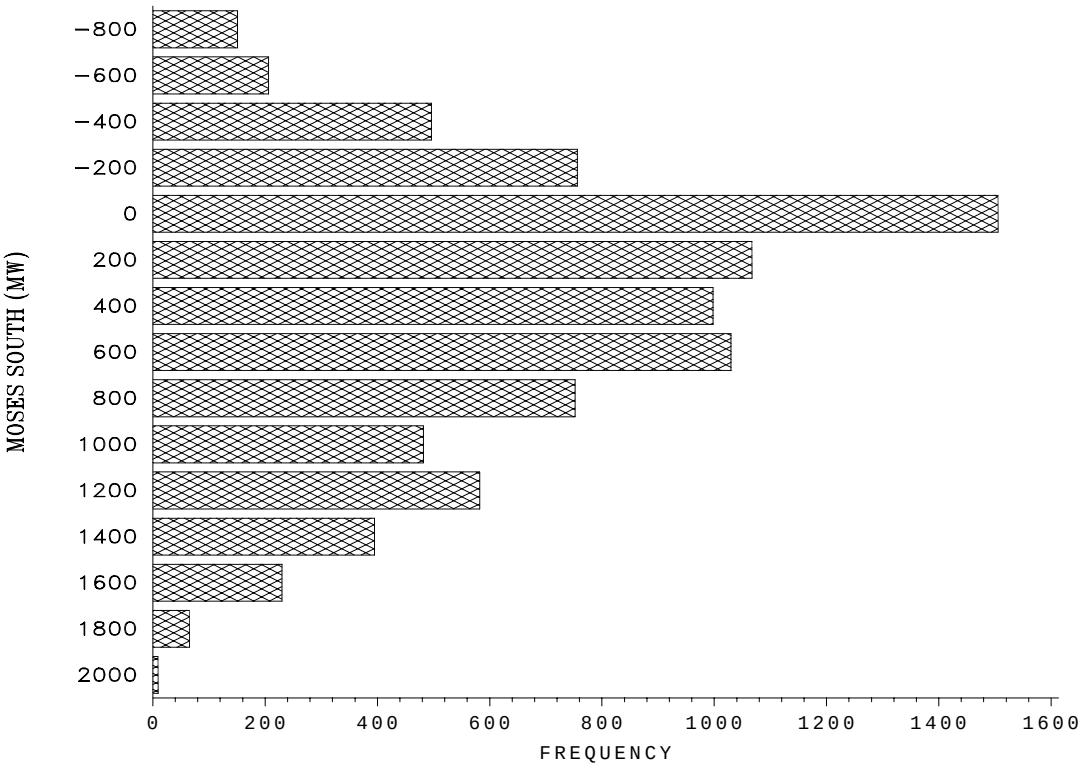


FLOW DURATION CURVE
FOR 1995 through 1998





MOSES SOUTH
Adirondack–Central



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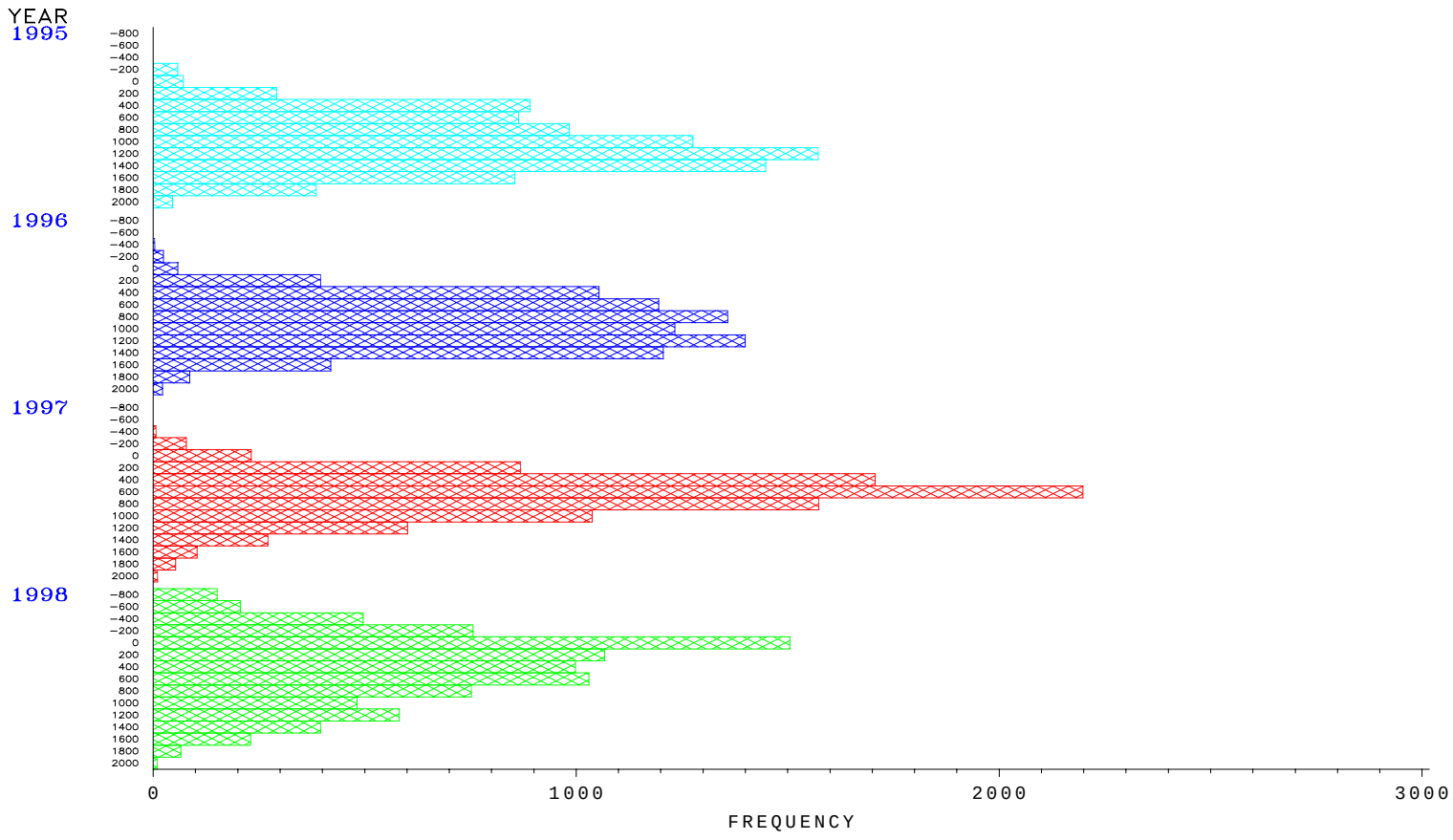
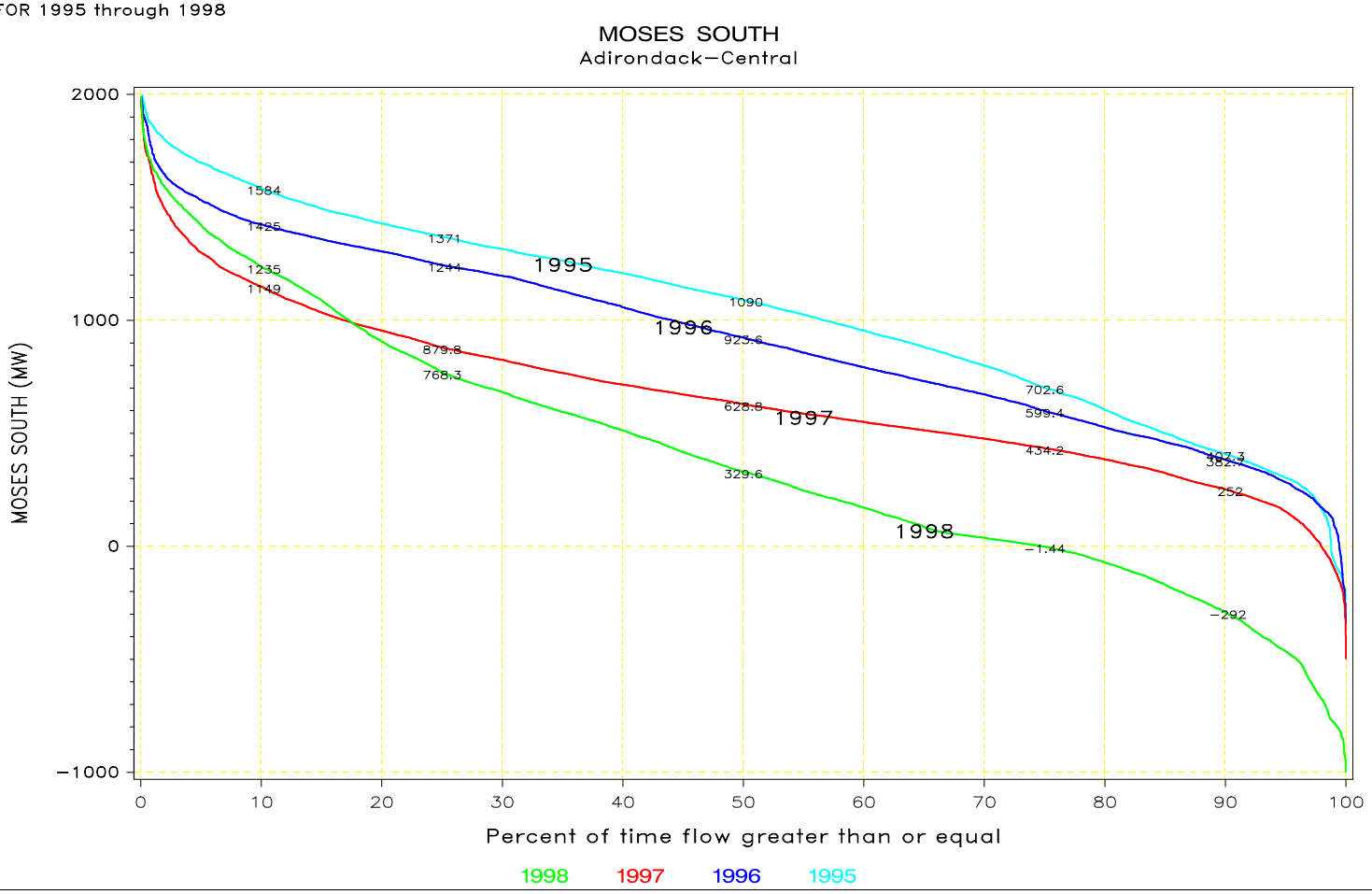
−800	151	151	1.73	1.73
−600	206	357	2.36	4.09
−400	496	853	5.69	9.78
−200	756	1609	8.67	18.44
0	1505	3114	17.25	35.69
200	1067	4181	12.23	47.93
400	998	5179	11.44	59.36
600	1030	6209	11.81	71.17
800	752	6961	8.62	79.79
1000	482	7443	5.52	85.32
1200	582	8025	6.67	91.99
1400	395	8420	4.53	96.52
1600	230	8650	2.64	99.15
1800	65	8715	0.75	99.90
2000	9	8724	0.10	100.00

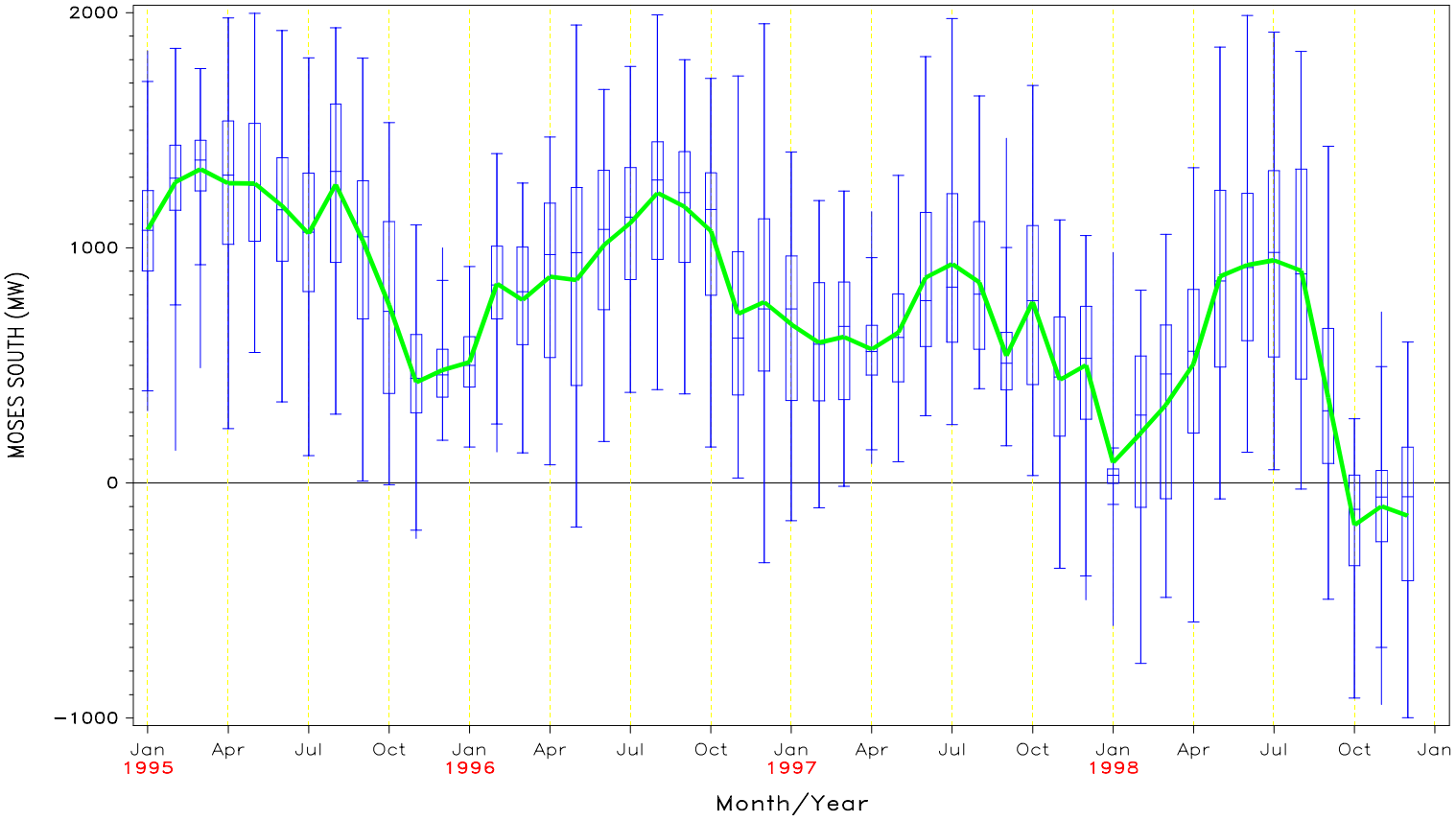
MOSES SOUTH
Adirondack–Central



FLOW DURATION CURVE
FOR 1995 through 1998



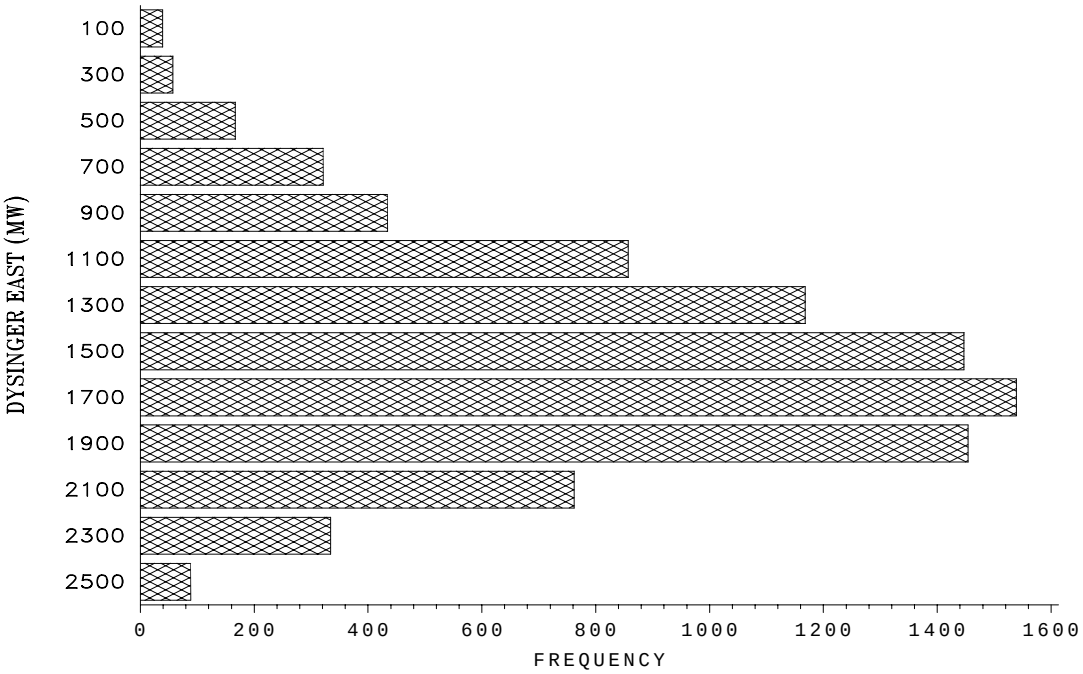
Average Monthly Interface Flows
January 1, 1995 – December 31, 1998



NYPP Transmission Use Statistics For January–December 1998

DYSINGER EAST

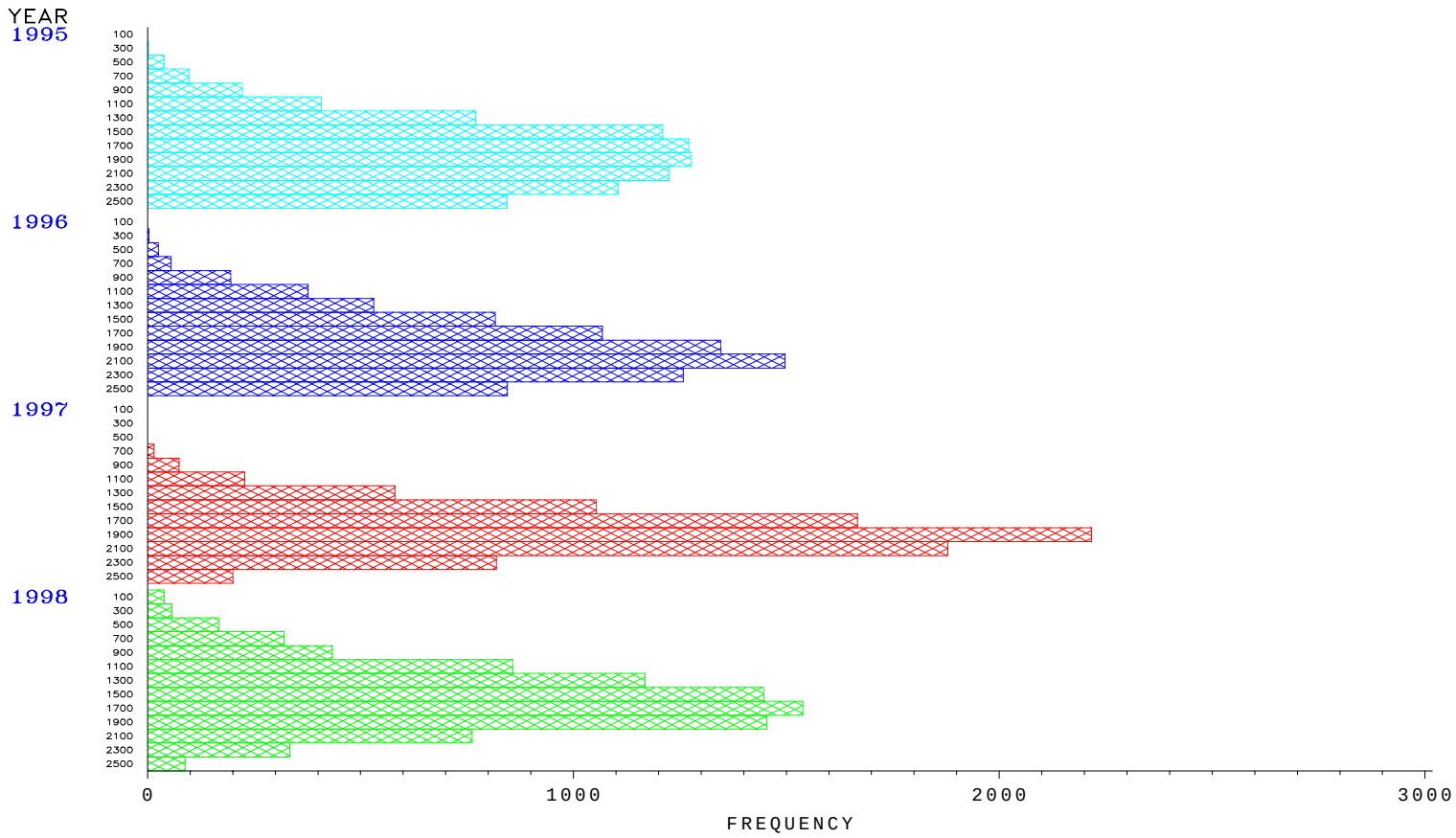
Frontier–Genesee



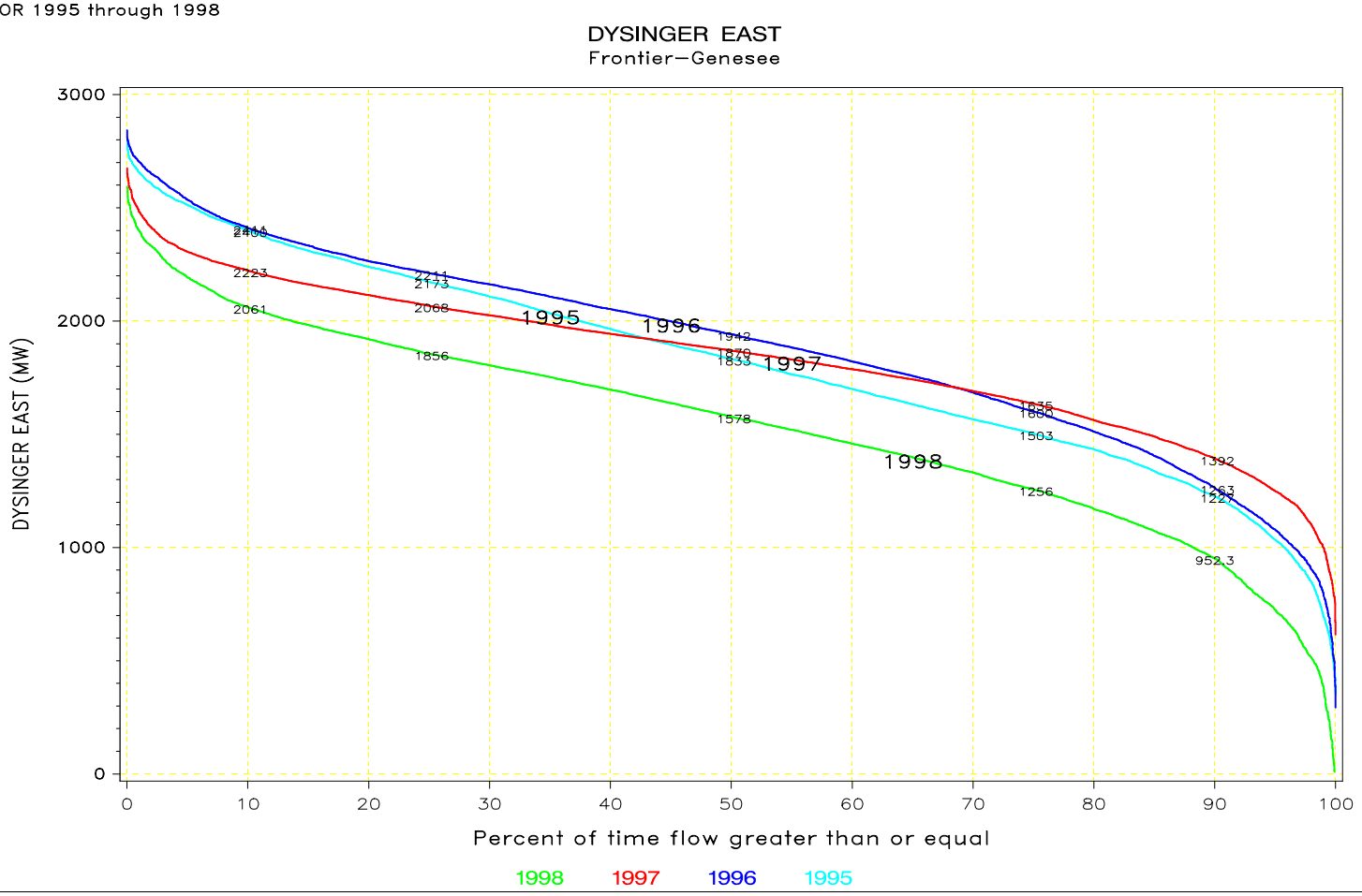
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
100	39	39	0.45	0.45
300	57	96	0.66	1.11
500	167	263	1.93	3.03
700	321	584	3.70	6.74
900	434	1018	5.01	11.75
1100	857	1875	9.89	21.63
1300	1168	3043	13.48	35.11
1500	1447	4490	16.70	51.81
1700	1539	6029	17.76	69.56
1900	1454	7483	16.78	86.34
2100	762	8245	8.79	95.13
2300	334	8579	3.85	98.98
2500	88	8667	1.02	100.00

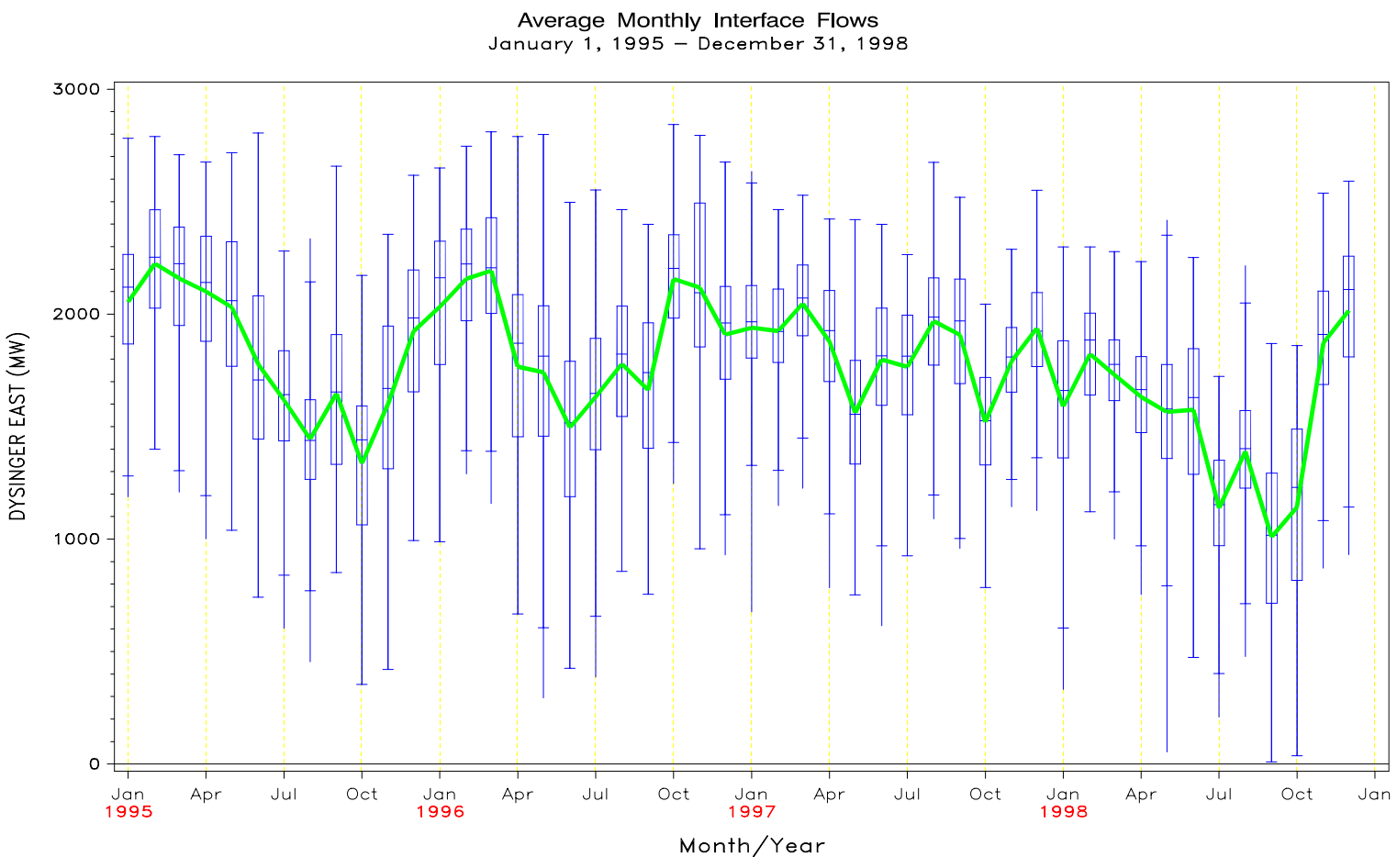
DYSINGER EAST

Frontier–Genesee

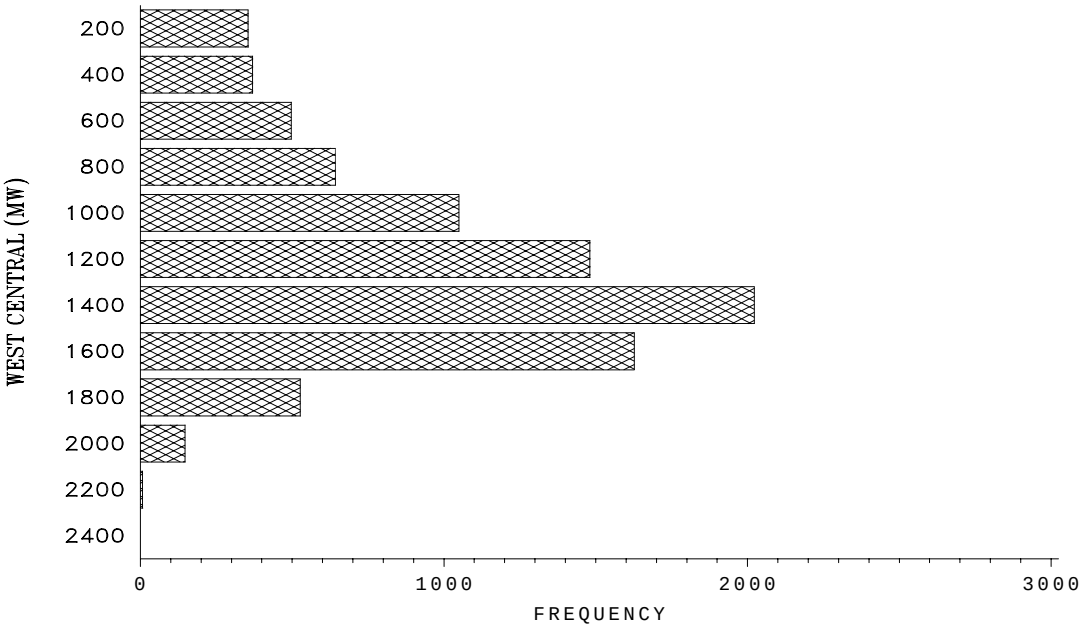


FLOW DURATION CURVE
FOR 1995 through 1998



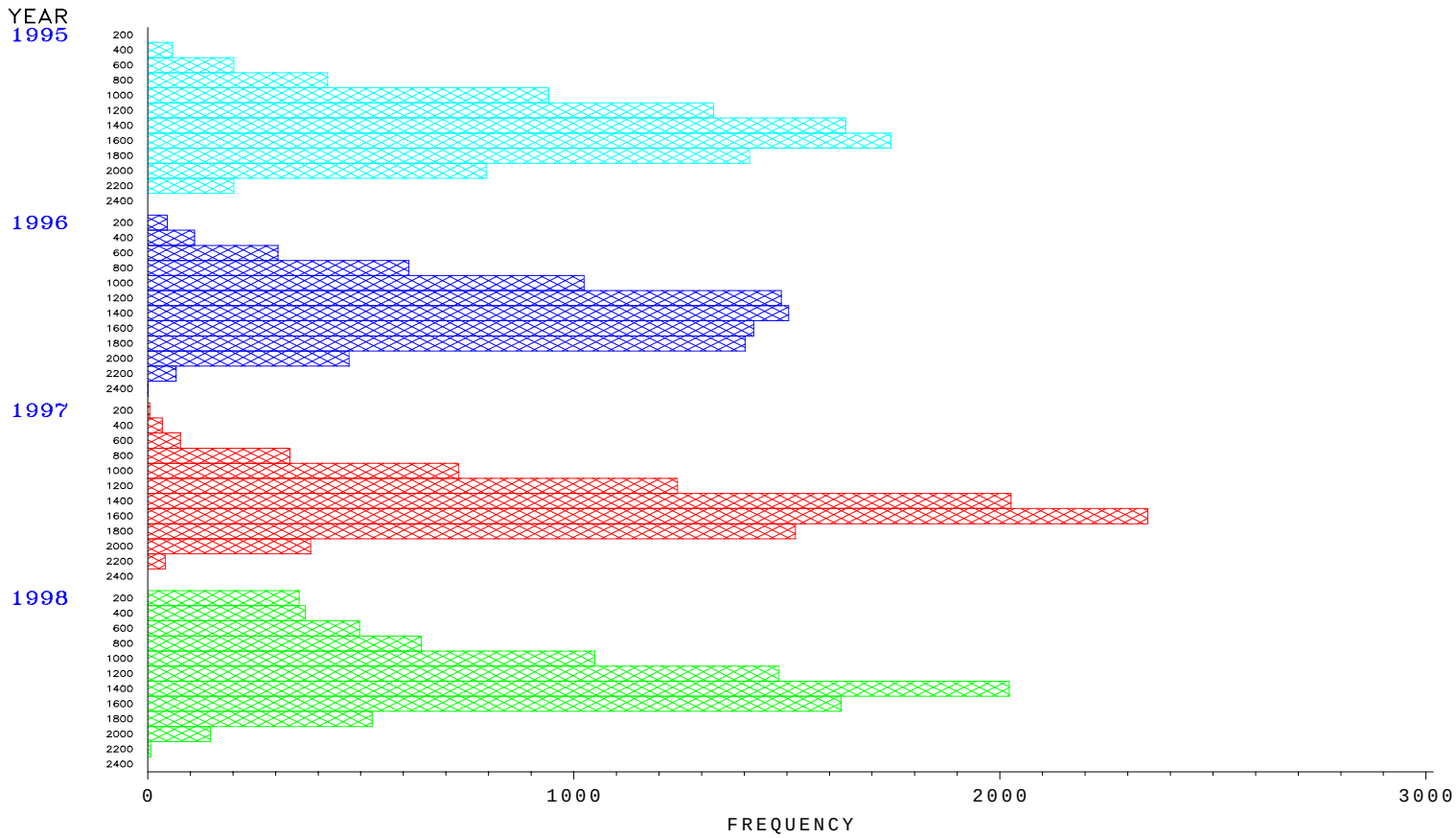


WEST CENTRAL
Genesee–Central

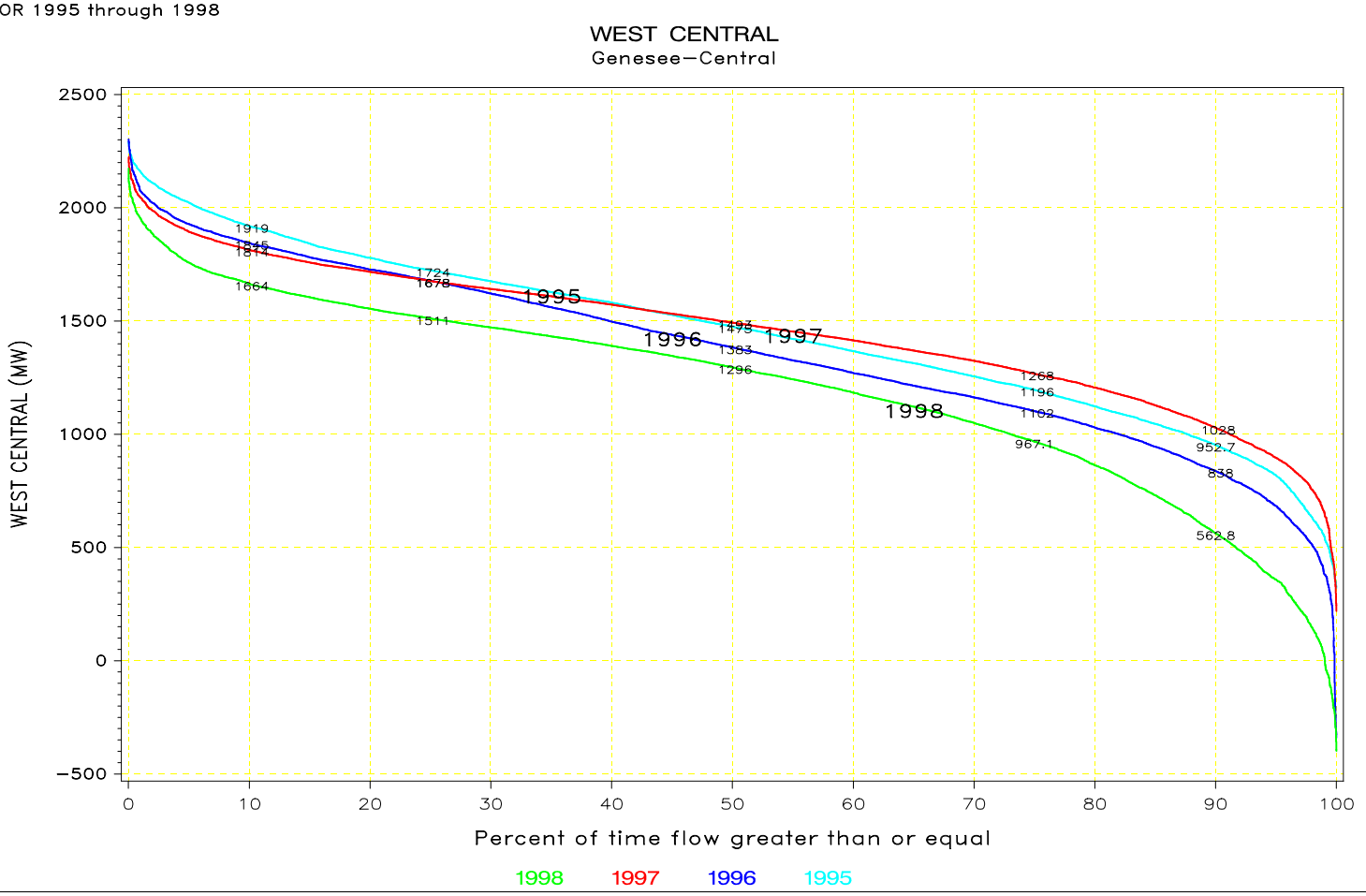


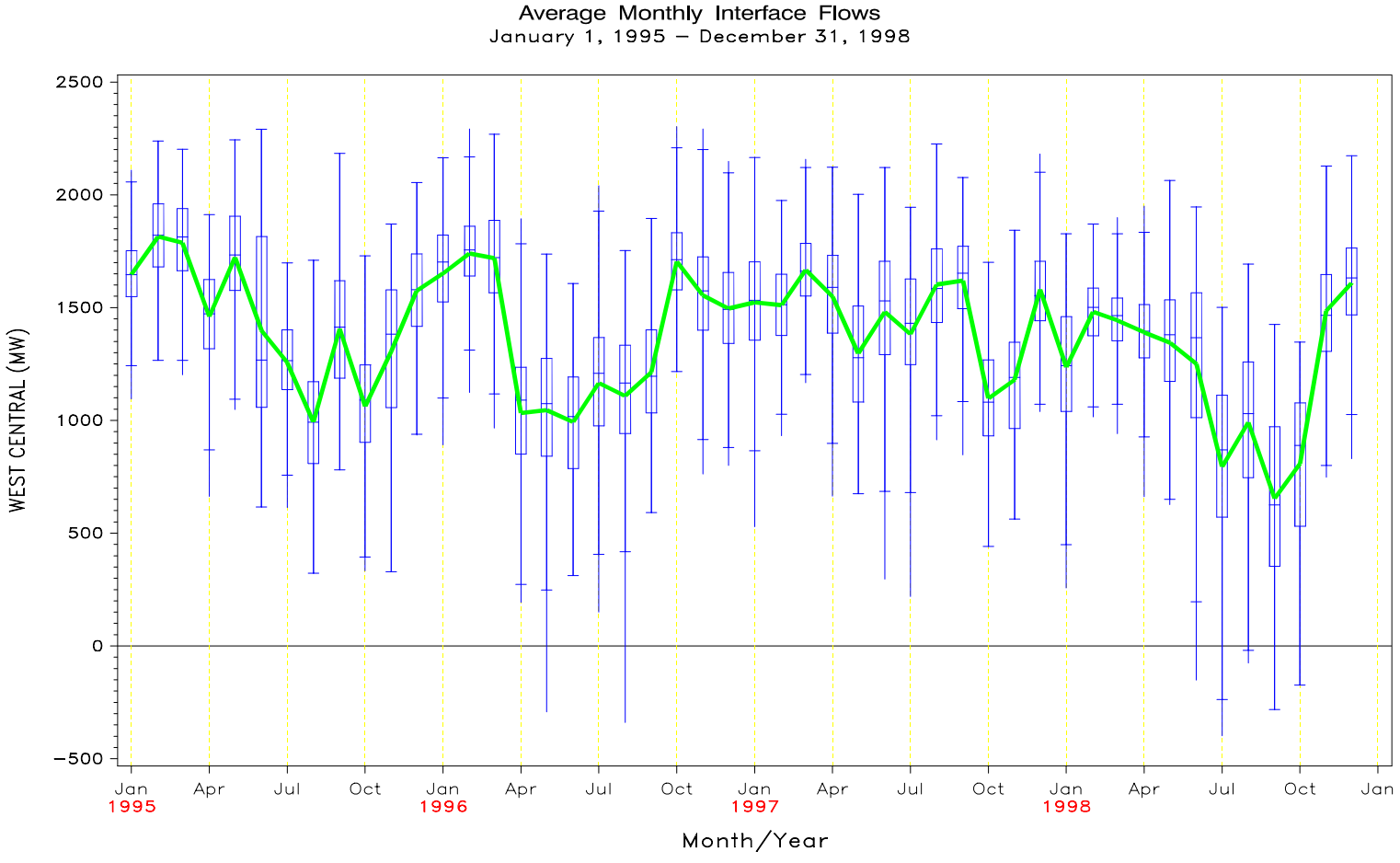
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
200	355	355	4.07	4.07
400	370	725	4.24	8.31
600	497	1222	5.70	14.01
800	642	1864	7.36	21.37
1000	1049	2913	12.02	33.39
1200	1481	4394	16.98	50.37
1400	2022	6416	23.18	73.54
1600	1627	8043	18.65	92.19
1800	527	8570	6.04	98.23
2000	147	8717	1.69	99.92
2200	7	8724	0.08	100.00
2400	0	8724	0.00	100.00

WEST CENTRAL
Genesee–Central

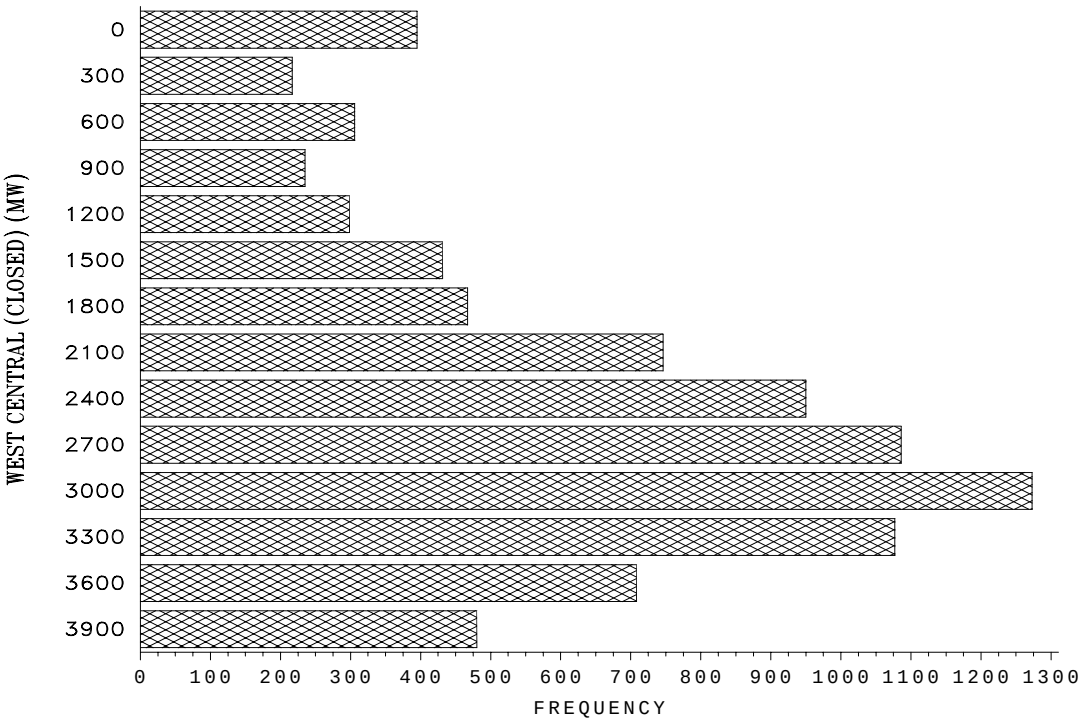


FLOW DURATION CURVE
FOR 1995 through 1998



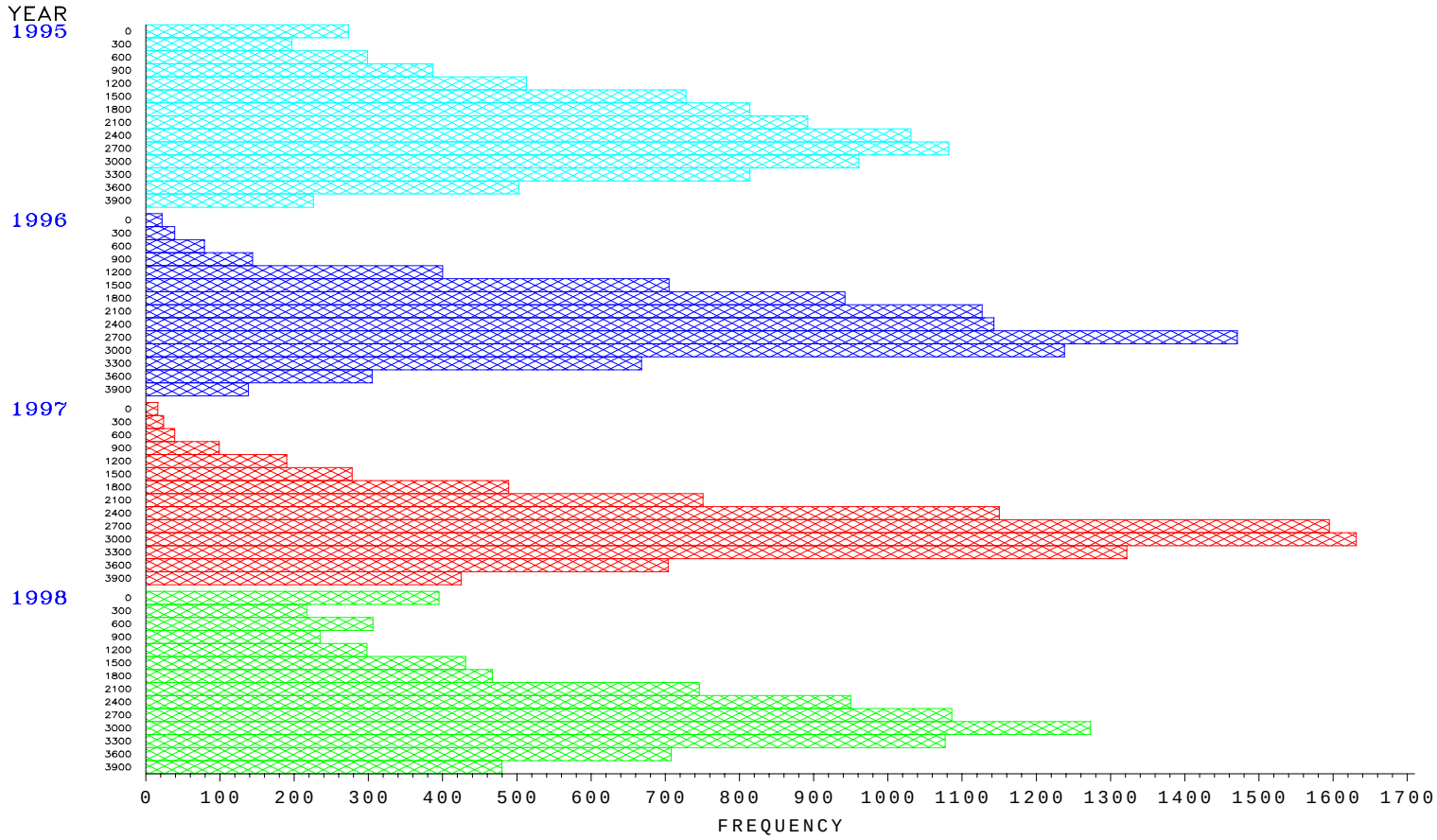


WEST CENTRAL (CLOSED)

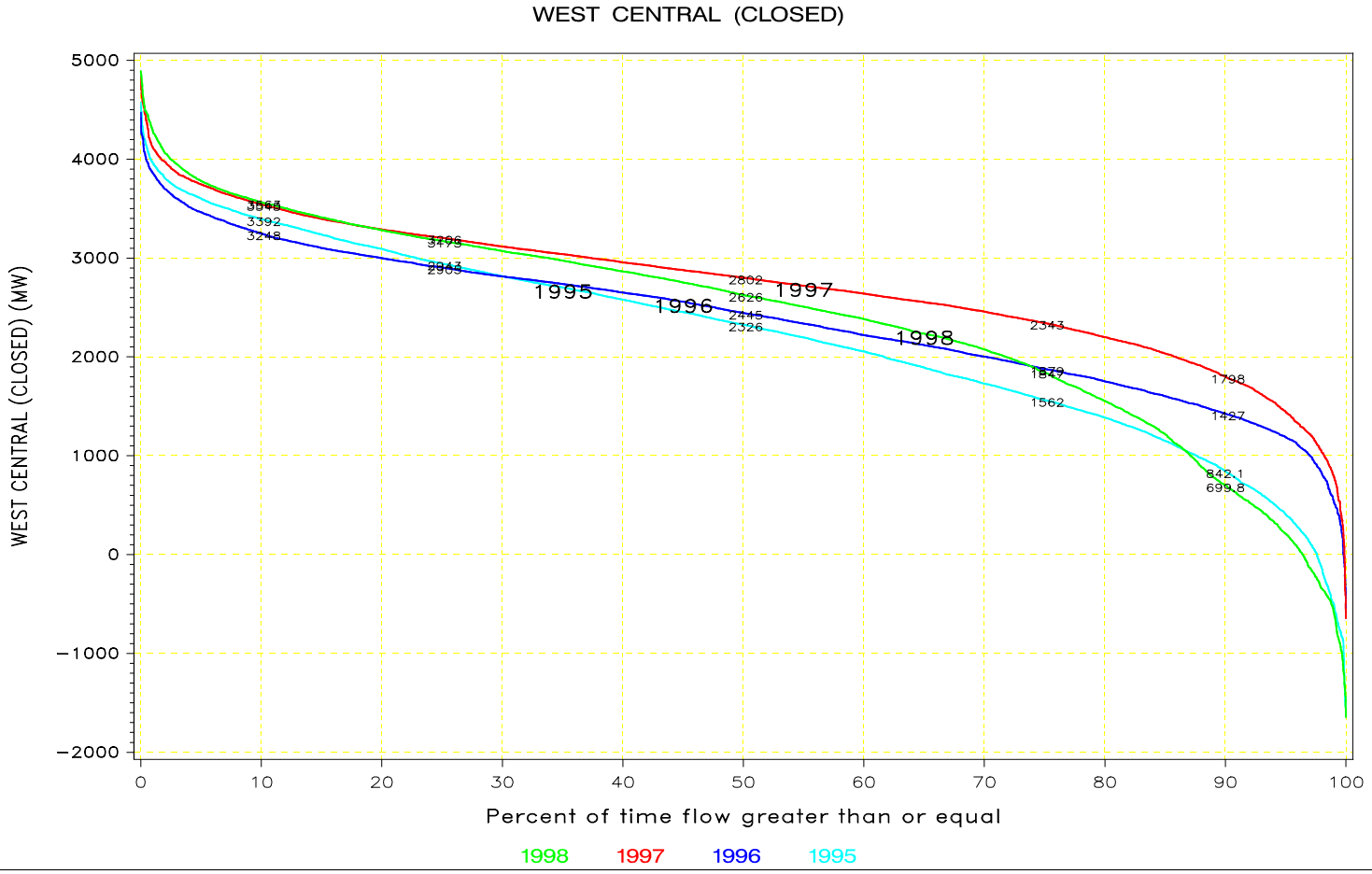


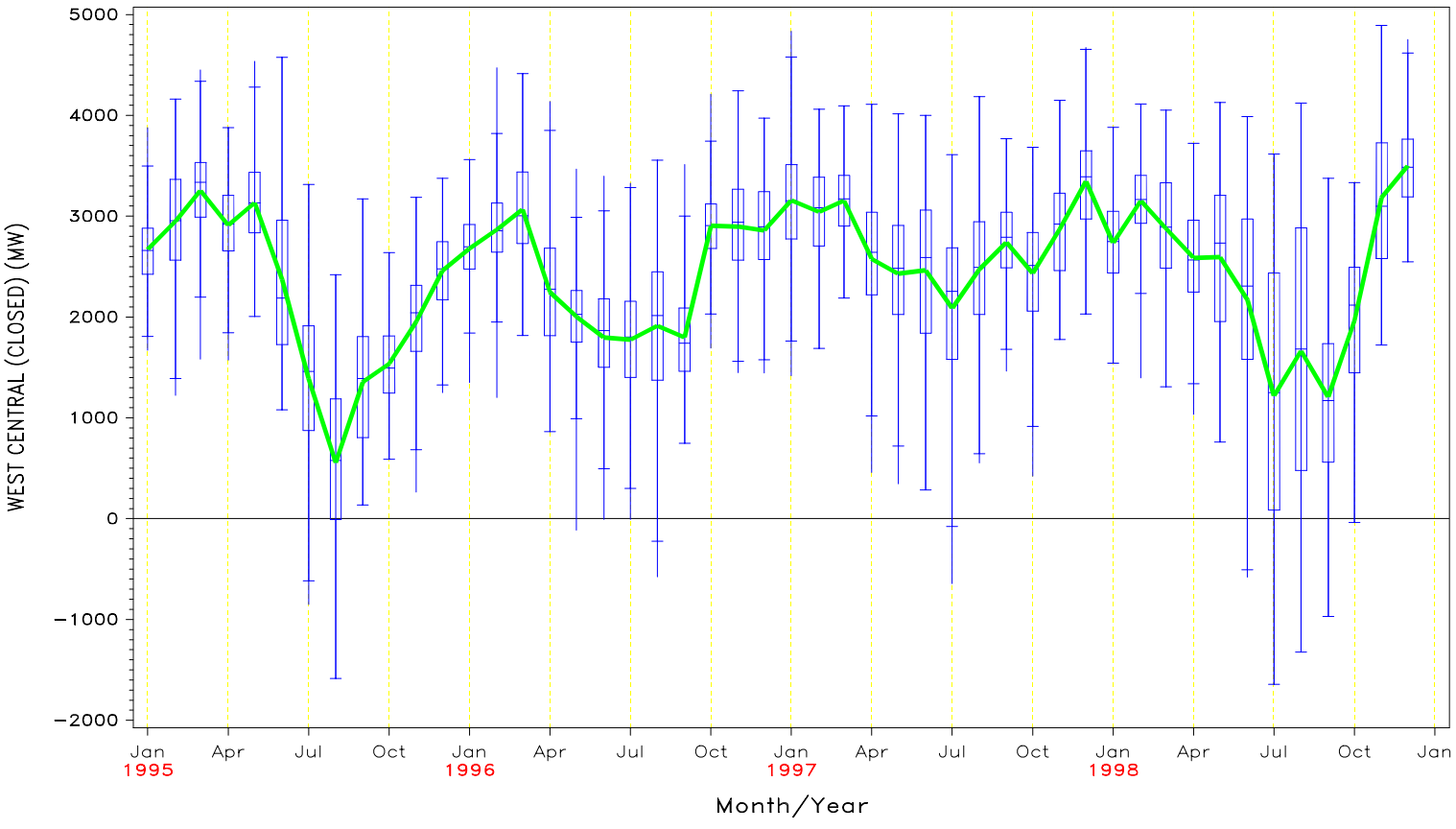
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
0	395	395	4.56	4.56
300	217	612	2.50	7.06
600	306	918	3.53	10.59
900	235	1153	2.71	13.30
1200	298	1451	3.44	16.74
1500	431	1882	4.97	21.71
1800	467	2349	5.39	27.10
2100	746	3095	8.61	35.70
2400	950	4045	10.96	46.66
2700	1086	5131	12.53	59.19
3000	1273	6404	14.68	73.87
3300	1077	7481	12.42	86.30
3600	708	8189	8.17	94.46
3900	480	8669	5.54	100.00

WEST CENTRAL (CLOSED)



FLOW DURATION CURVE
FOR 1995 through 1998

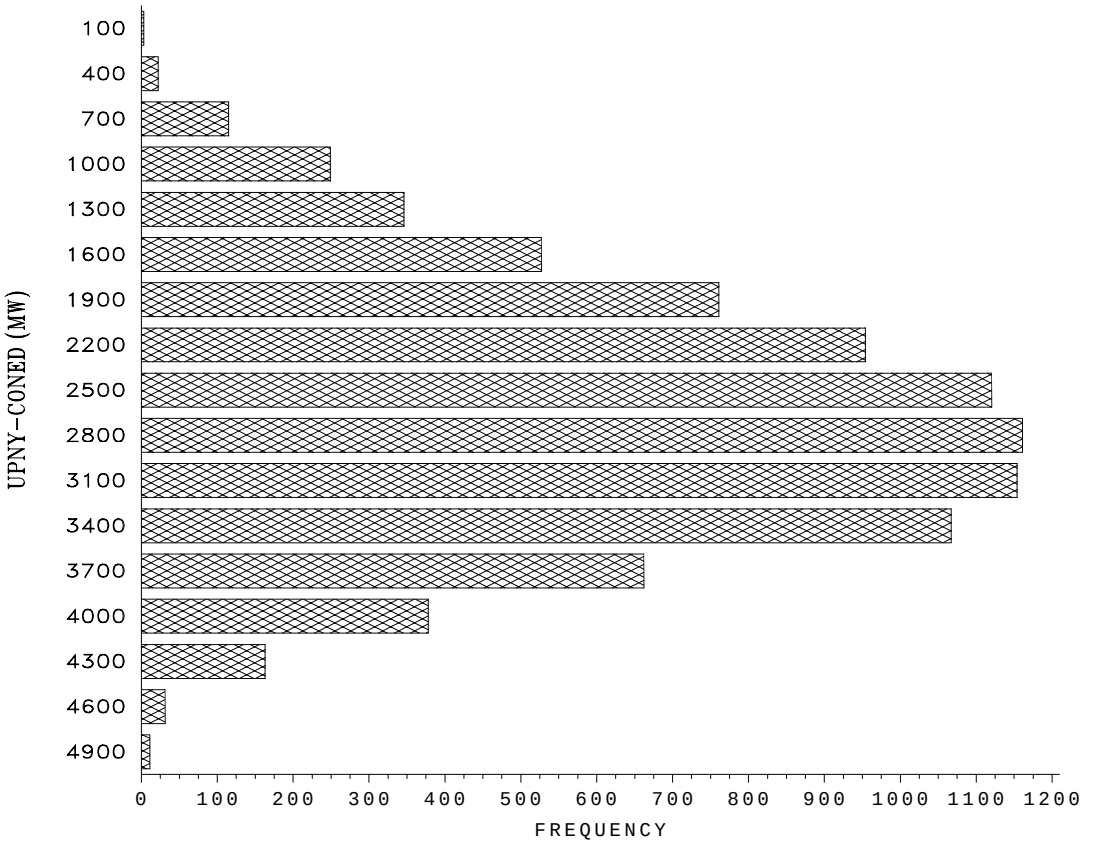




NYPP Transmission Use Statistics For January–December 1998

UPNY – CONED

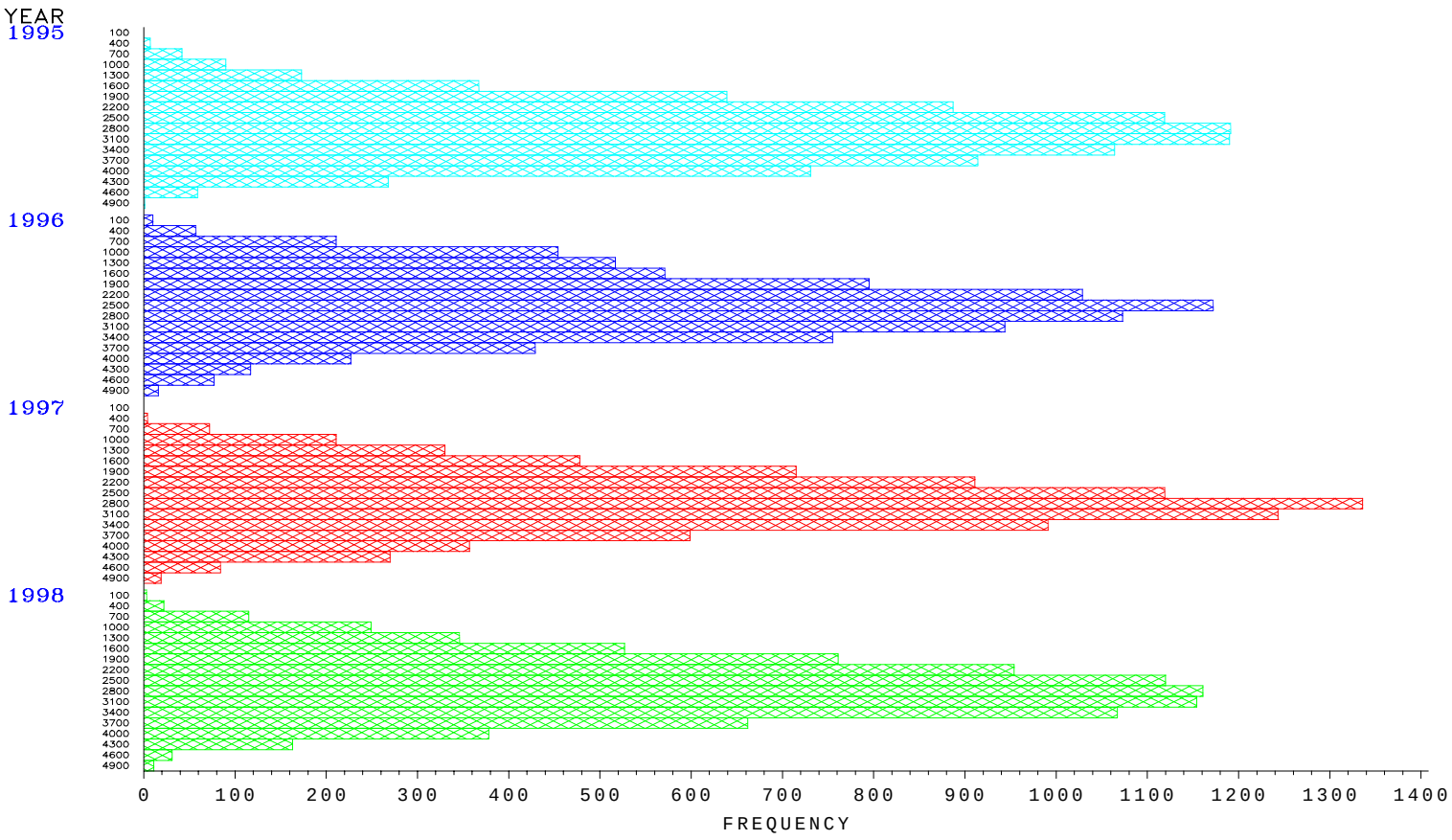
Capital/Mid Hudson–Westchester



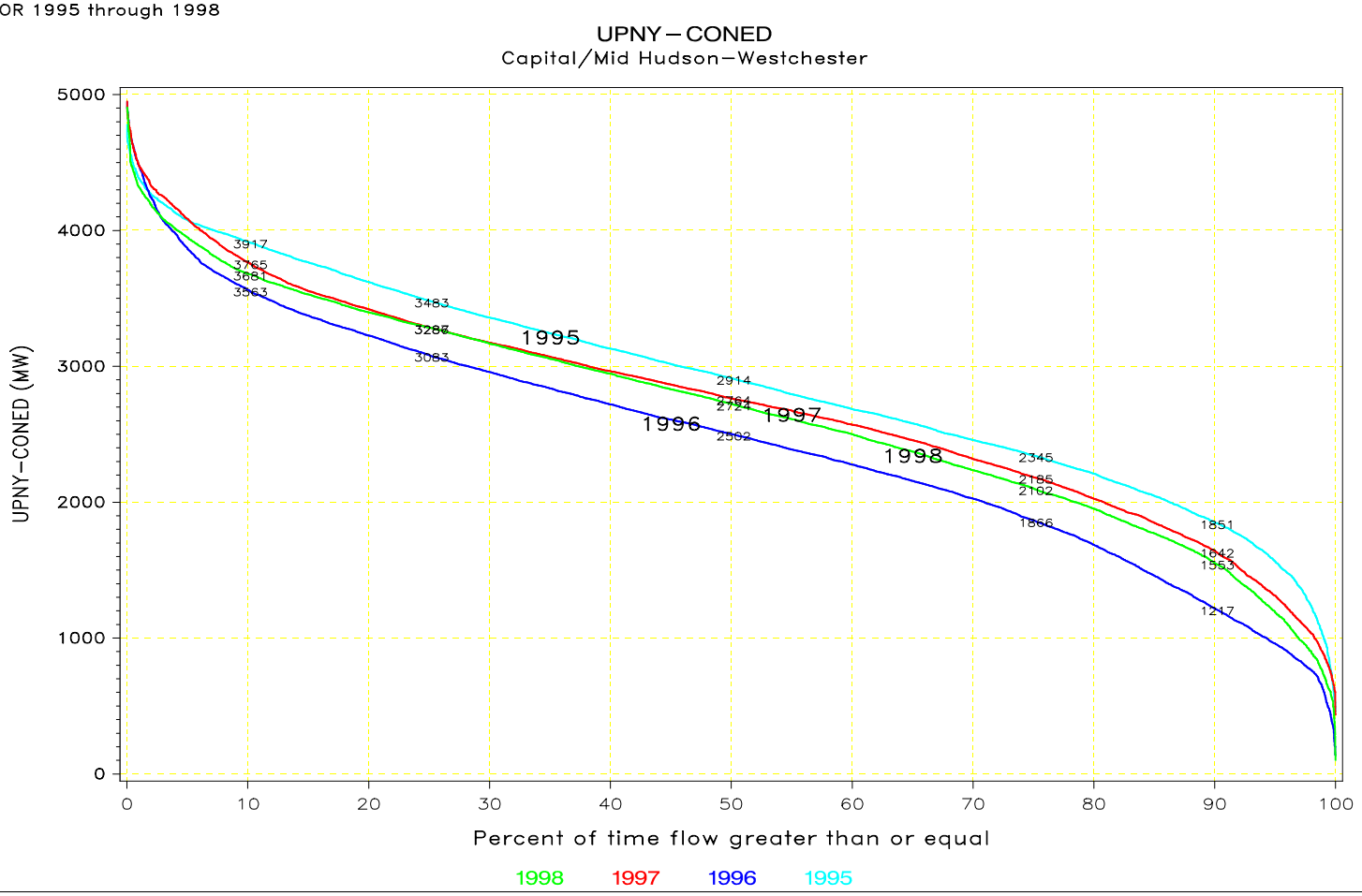
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
100	3	3	0.03	0.03
400	22	25	0.25	0.29
700	115	140	1.32	1.60
1000	249	389	2.85	4.46
1300	346	735	3.97	8.43
1600	527	1262	6.04	14.47
1900	761	2023	8.72	23.19
2200	954	2977	10.94	34.12
2500	1120	4097	12.84	46.96
2800	1161	5258	13.31	60.27
3100	1154	6412	13.23	73.50
3400	1067	7479	12.23	85.73
3700	662	8141	7.59	93.32
4000	378	8519	4.33	97.65
4300	163	8682	1.87	99.52
4600	31	8713	0.36	99.87
4900	11	8724	0.13	100.00

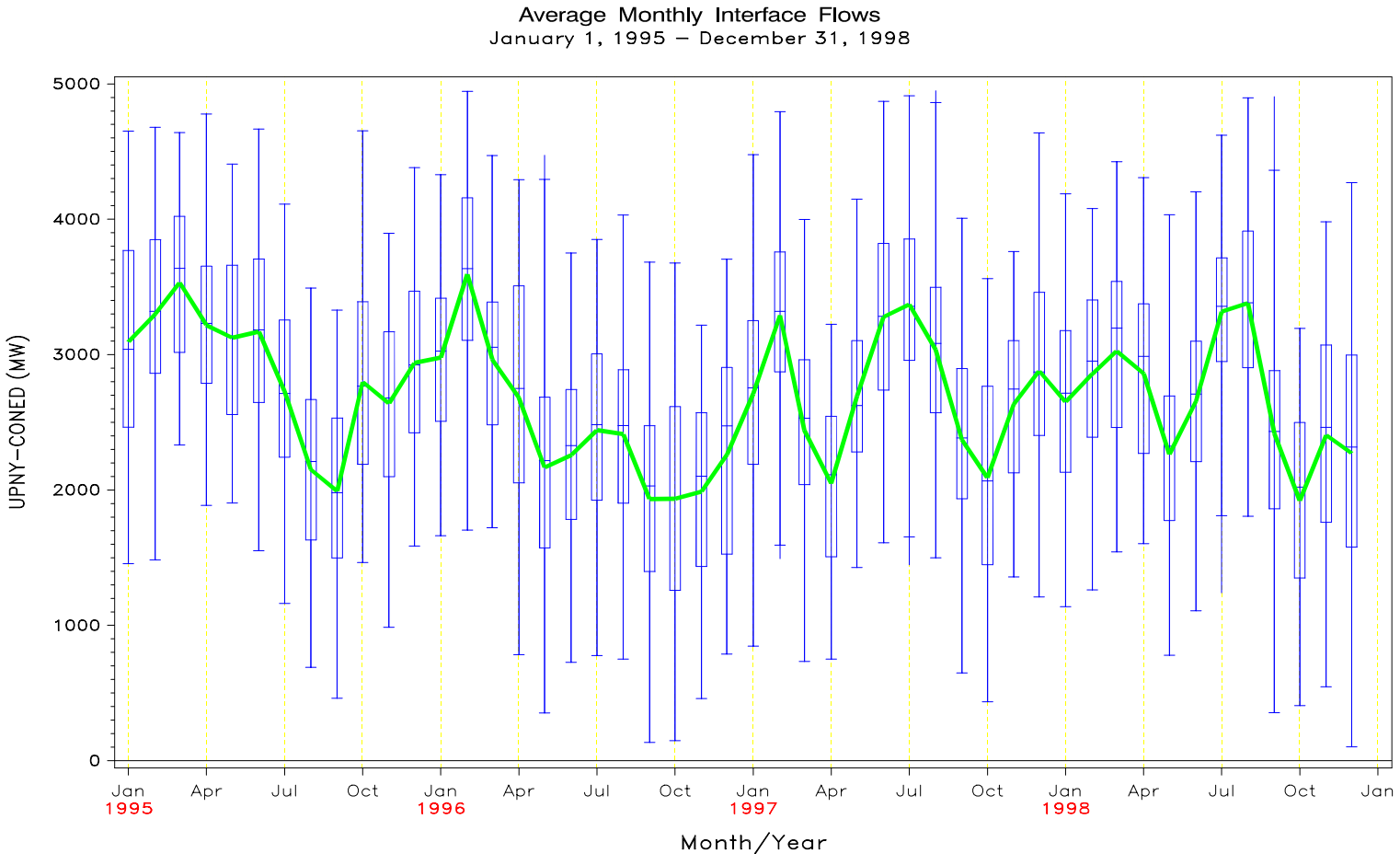
UPNY – CONED

Capital/Mid Hudson–Westchester

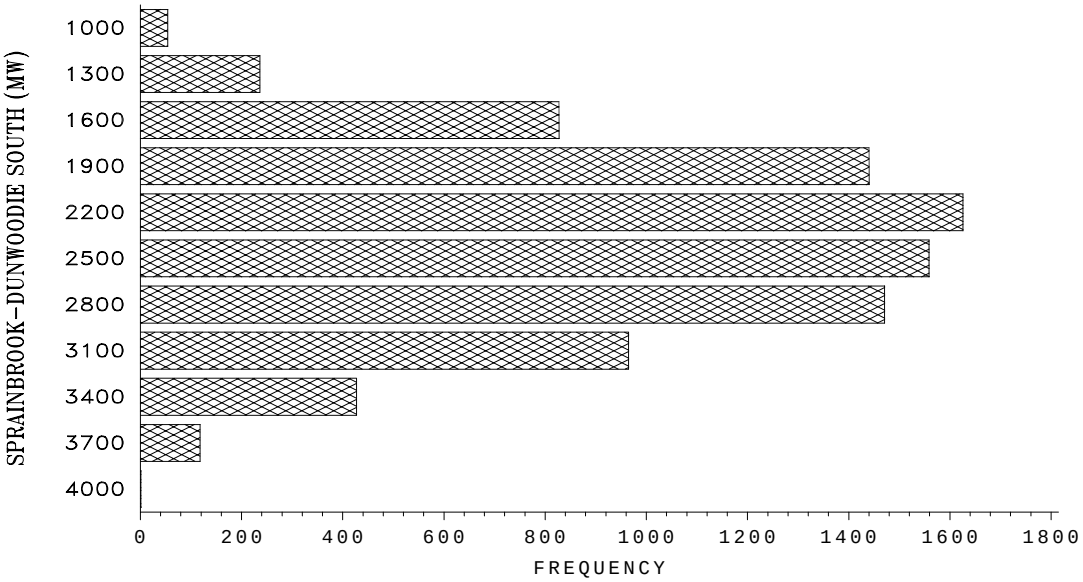


FLOW DURATION CURVE
FOR 1995 through 1998



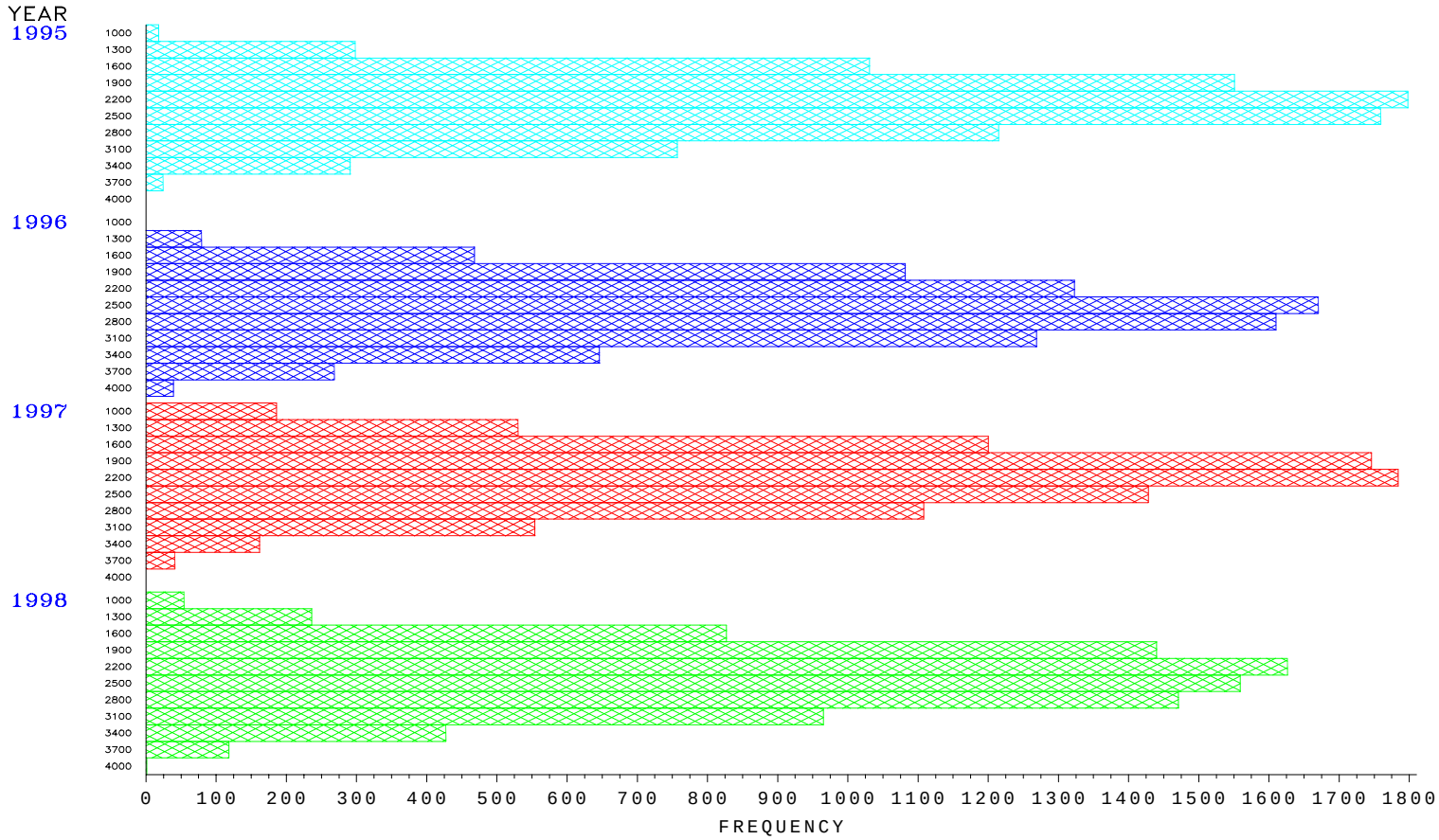


SPRAINBROOK – DUNWOODIE SOUTH



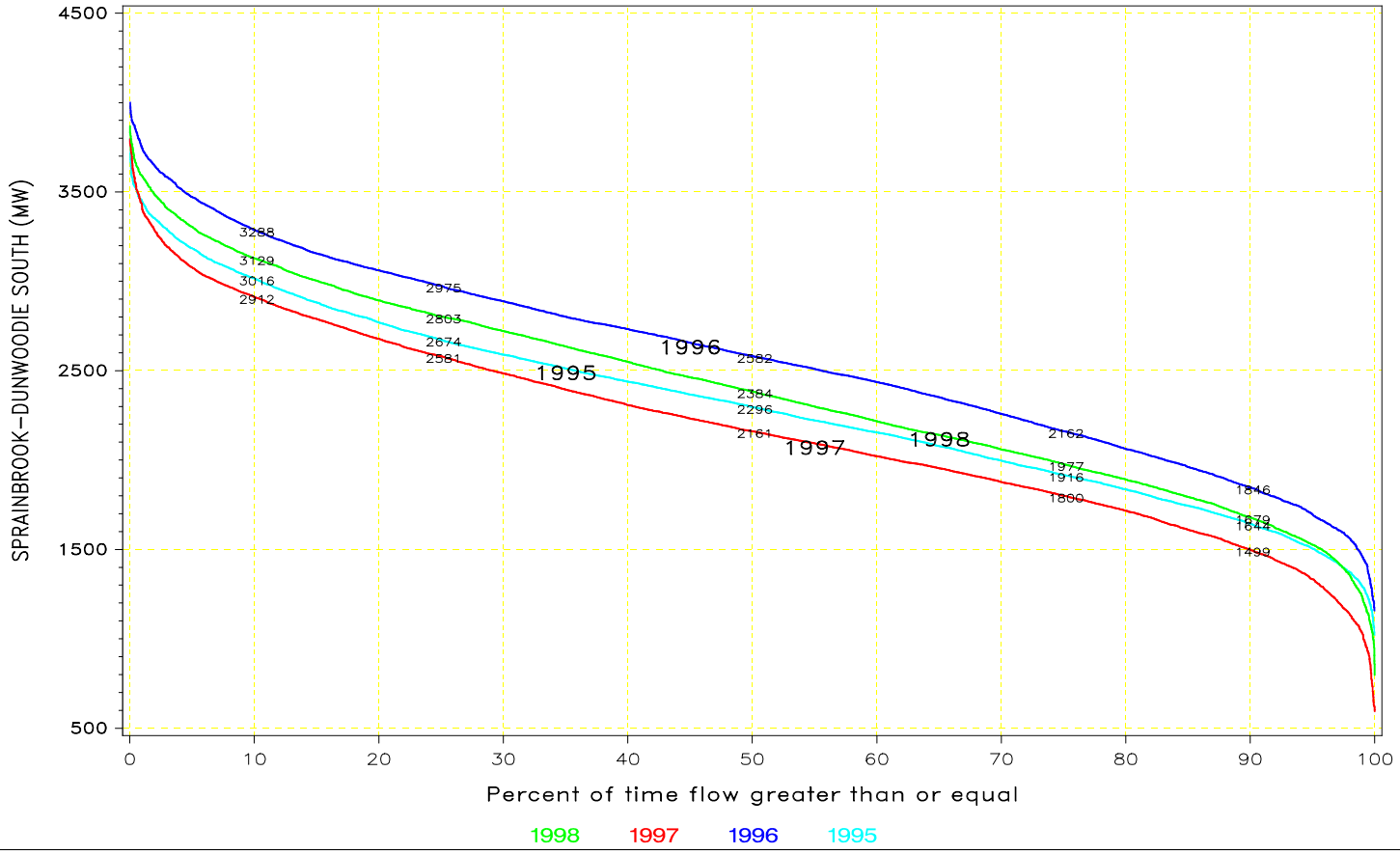
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1000	54	54	0.62	0.62
1300	236	290	2.71	3.32
1600	827	1117	9.48	12.80
1900	1440	2557	16.51	29.31
2200	1626	4183	18.64	47.95
2500	1559	5742	17.87	65.82
2800	1471	7213	16.86	82.68
3100	965	8178	11.06	93.74
3400	427	8605	4.89	98.64
3700	118	8723	1.35	99.99
4000	1	8724	0.01	100.00

SPRAINBROOK – DUNWOODIE SOUTH

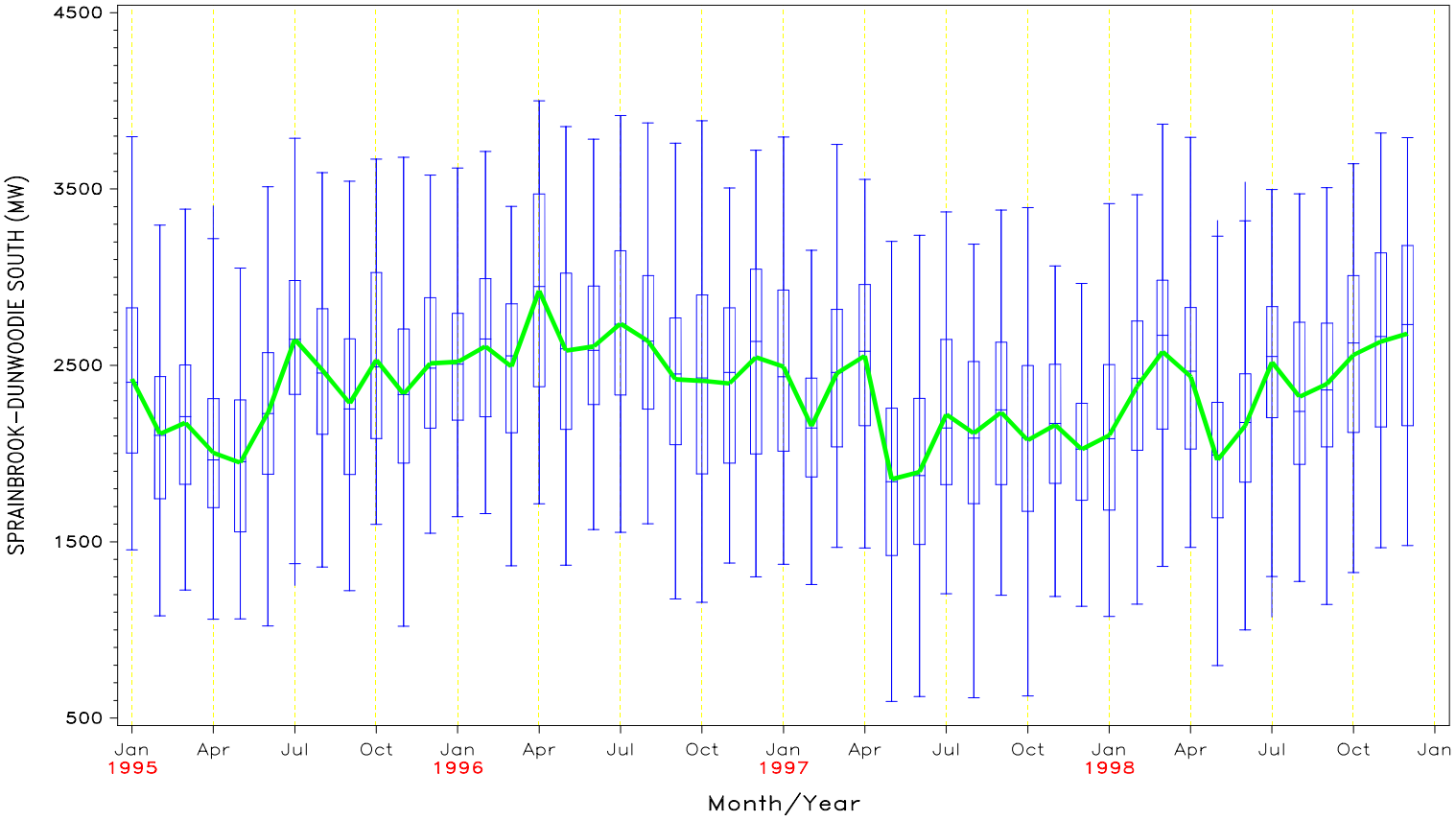


FLOW DURATION CURVE
FOR 1995 through 1998

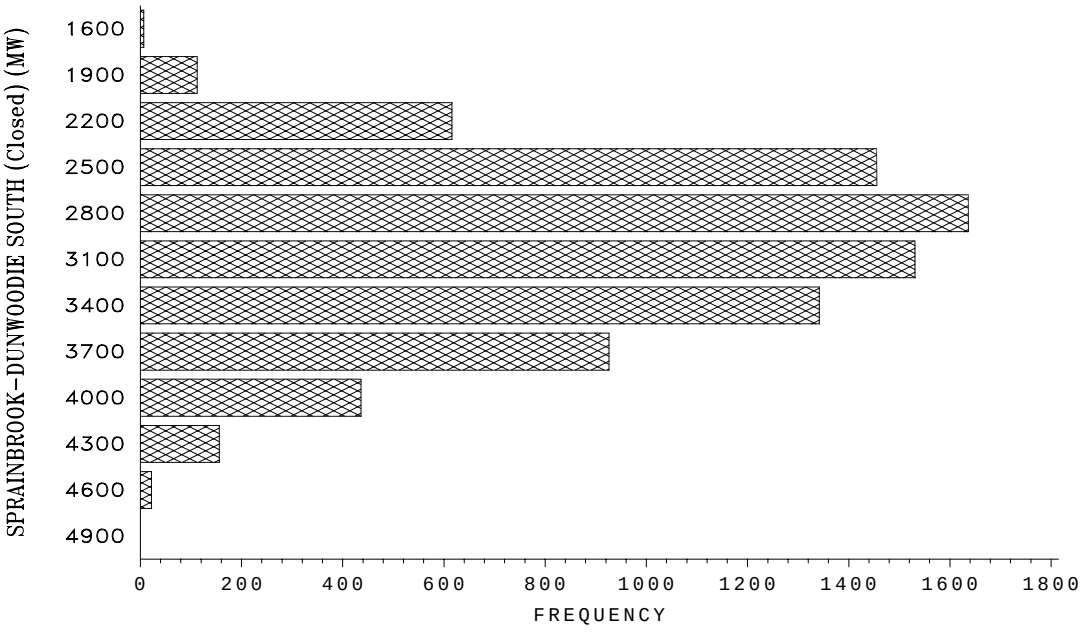
SPRAINBROOK – DUNWOODIE SOUTH



Average Monthly Interface Flows
January 1, 1995 – December 31, 1998

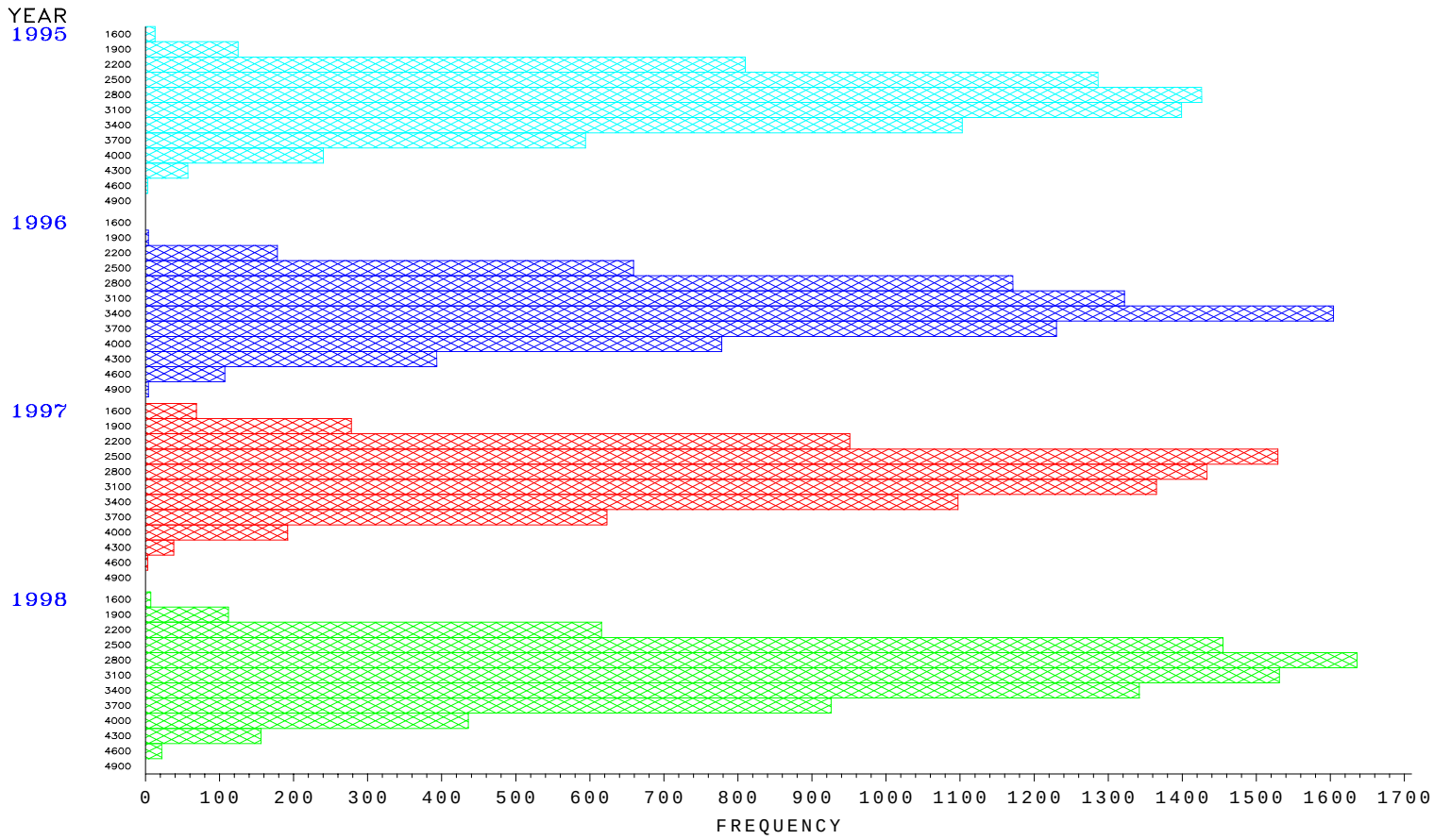


SPRAINBROOK – DUNWOODIE SOUTH (Closed)



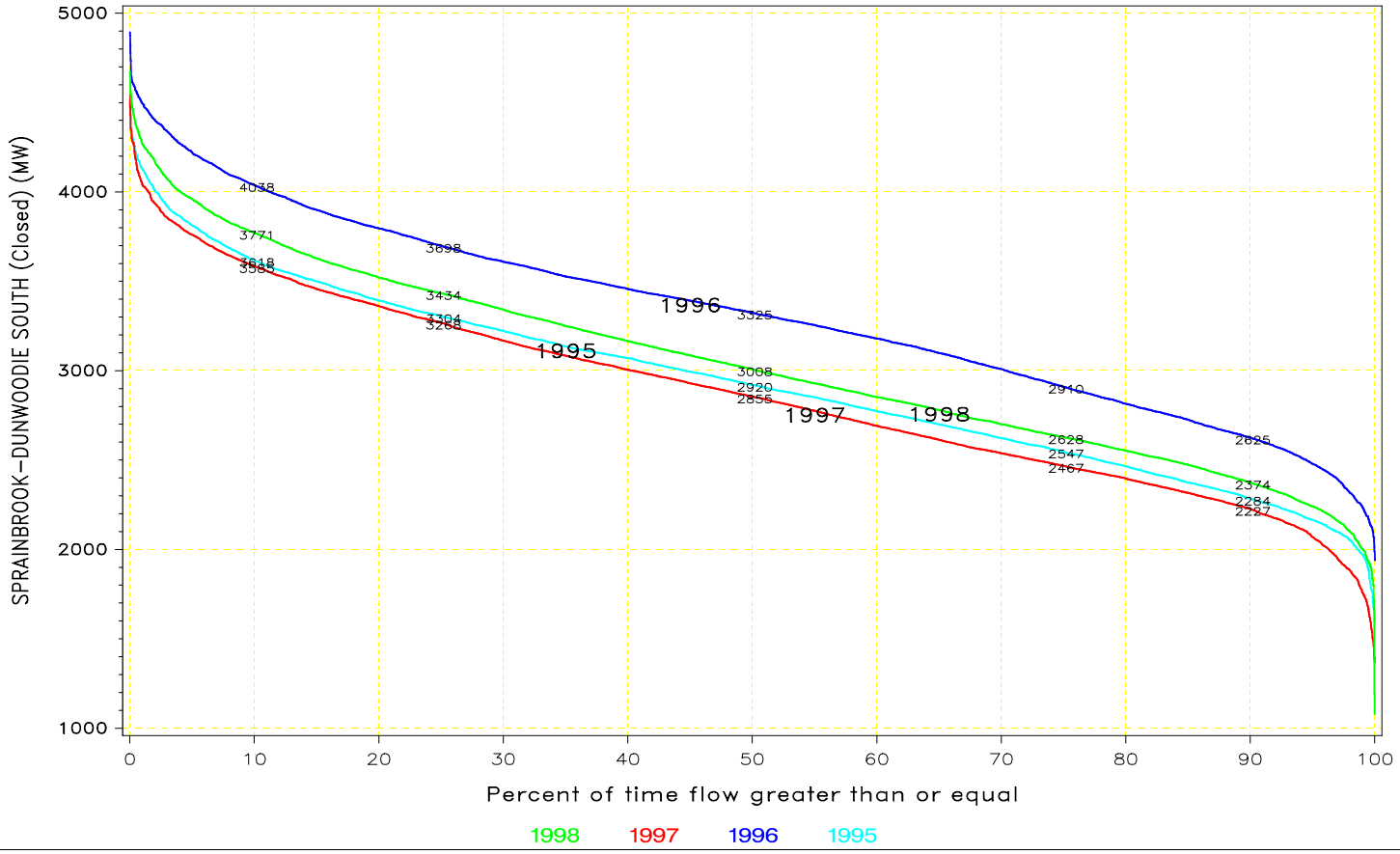
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1600	7	7	0.08	0.08
1900	112	119	1.36	1.44
2200	616	735	7.48	8.92
2500	1455	2190	17.66	26.58
2800	1636	3826	19.86	46.44
3100	1531	5357	18.58	65.02
3400	1342	6699	16.29	81.31
3700	926	7625	11.24	92.55
4000	436	8061	5.29	97.84
4300	156	8217	1.89	99.73
4600	22	8239	0.27	100.00
4900	0	8239	0.00	100.00

SPRAINBROOK – DUNWOODIE SOUTH (Closed)



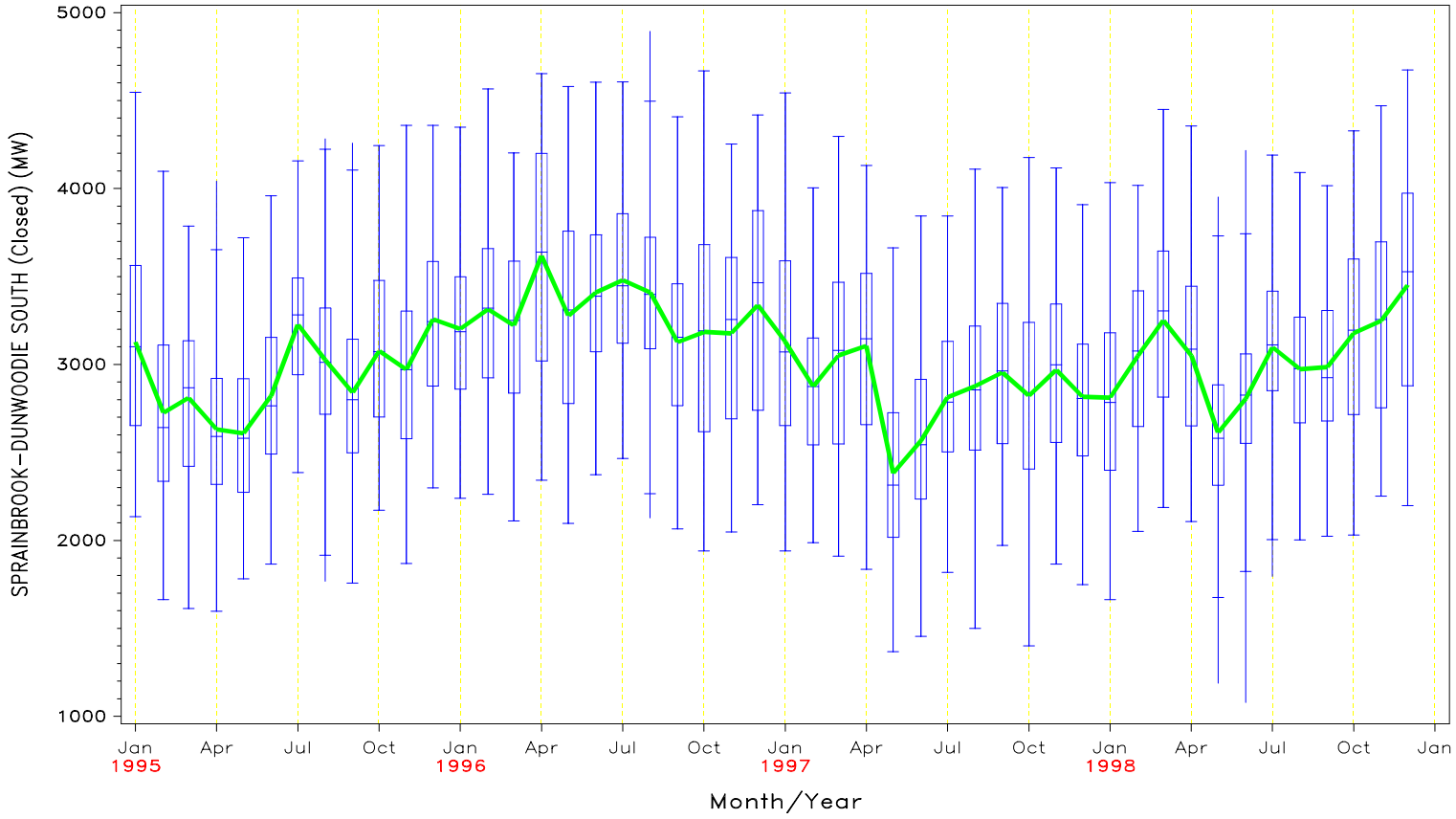
FLOW DURATION CURVE
FOR 1995 through 1998

SPRAINBROOK – DUNWOODIE SOUTH (Closed)



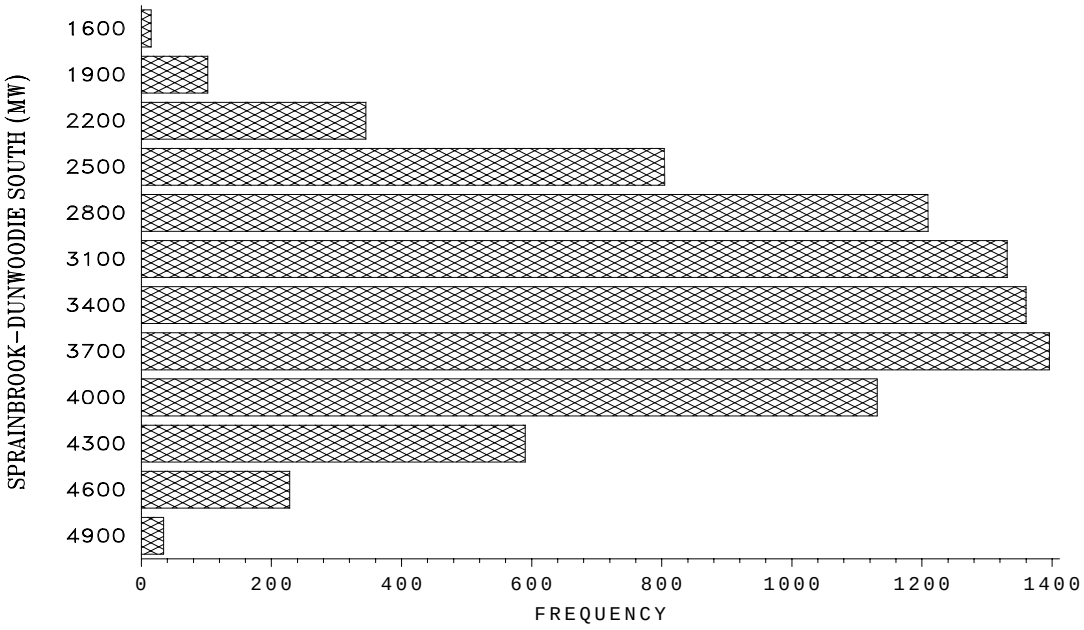
Average Monthly Interface Flows

January 1, 1995 – December 31, 1998



SPRAINBROOK – DUNWOODIE SOUTH

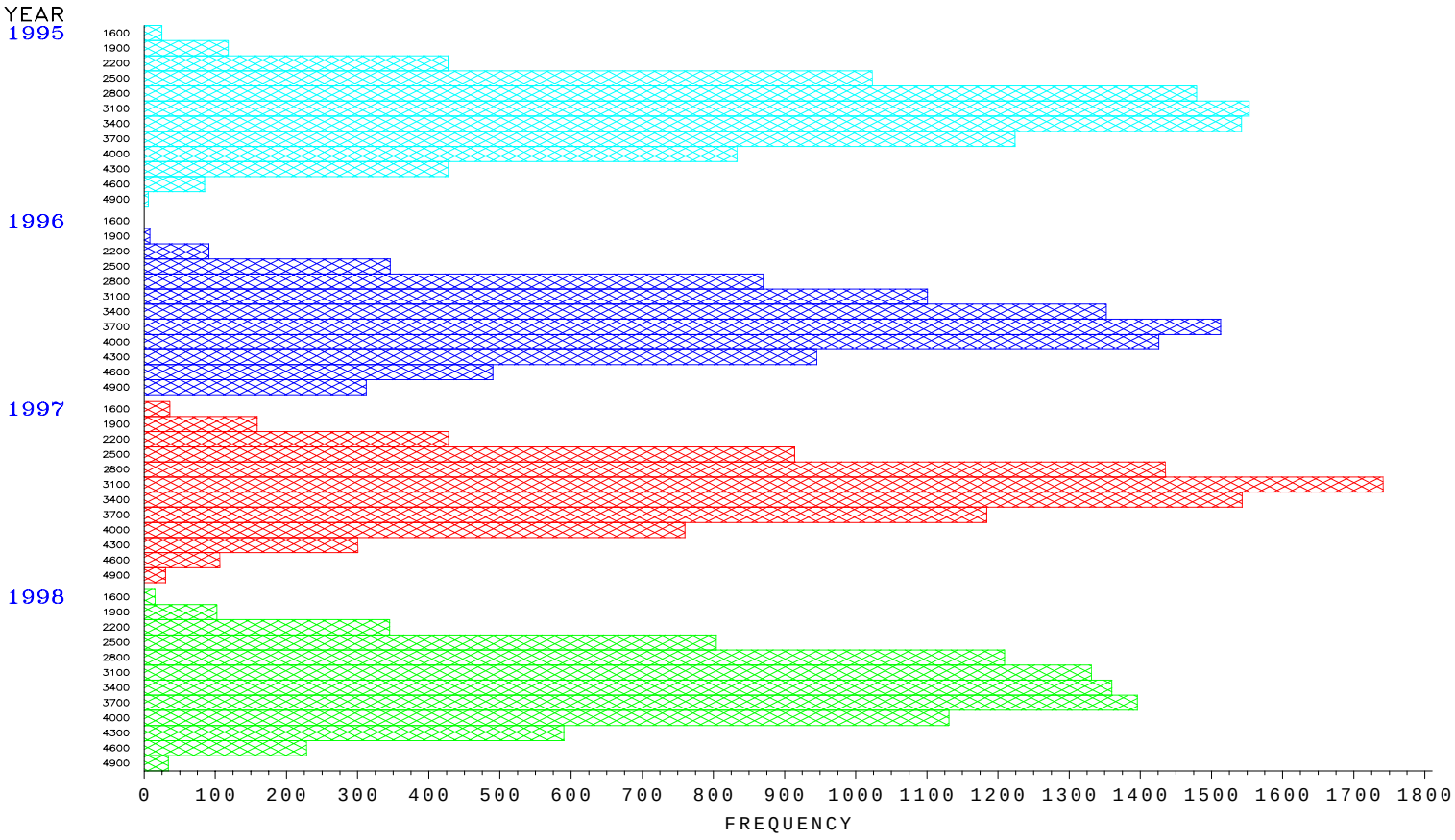
Old (Pre–Sept 1994) Definition



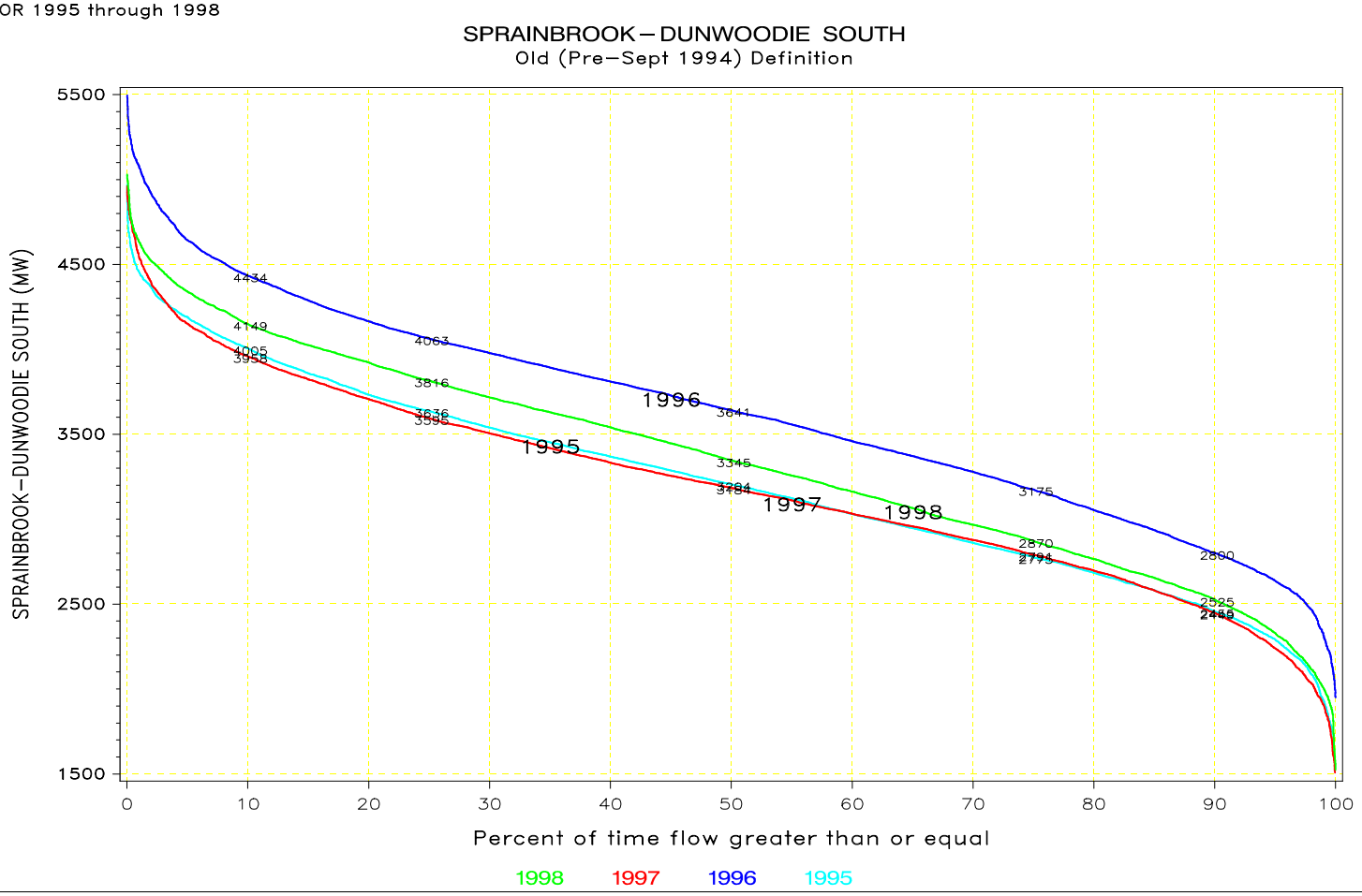
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1600	15	15	0.18	0.18
1900	102	117	1.19	1.37
2200	345	462	4.04	5.41
2500	804	1266	9.41	14.82
2800	1209	2475	14.15	28.96
3100	1331	3806	15.58	44.54
3400	1360	5166	15.92	60.46
3700	1396	6562	16.34	76.79
4000	1131	7693	13.24	90.03
4300	590	8283	6.90	96.93
4600	228	8511	2.67	99.60
4900	34	8545	0.40	100.00

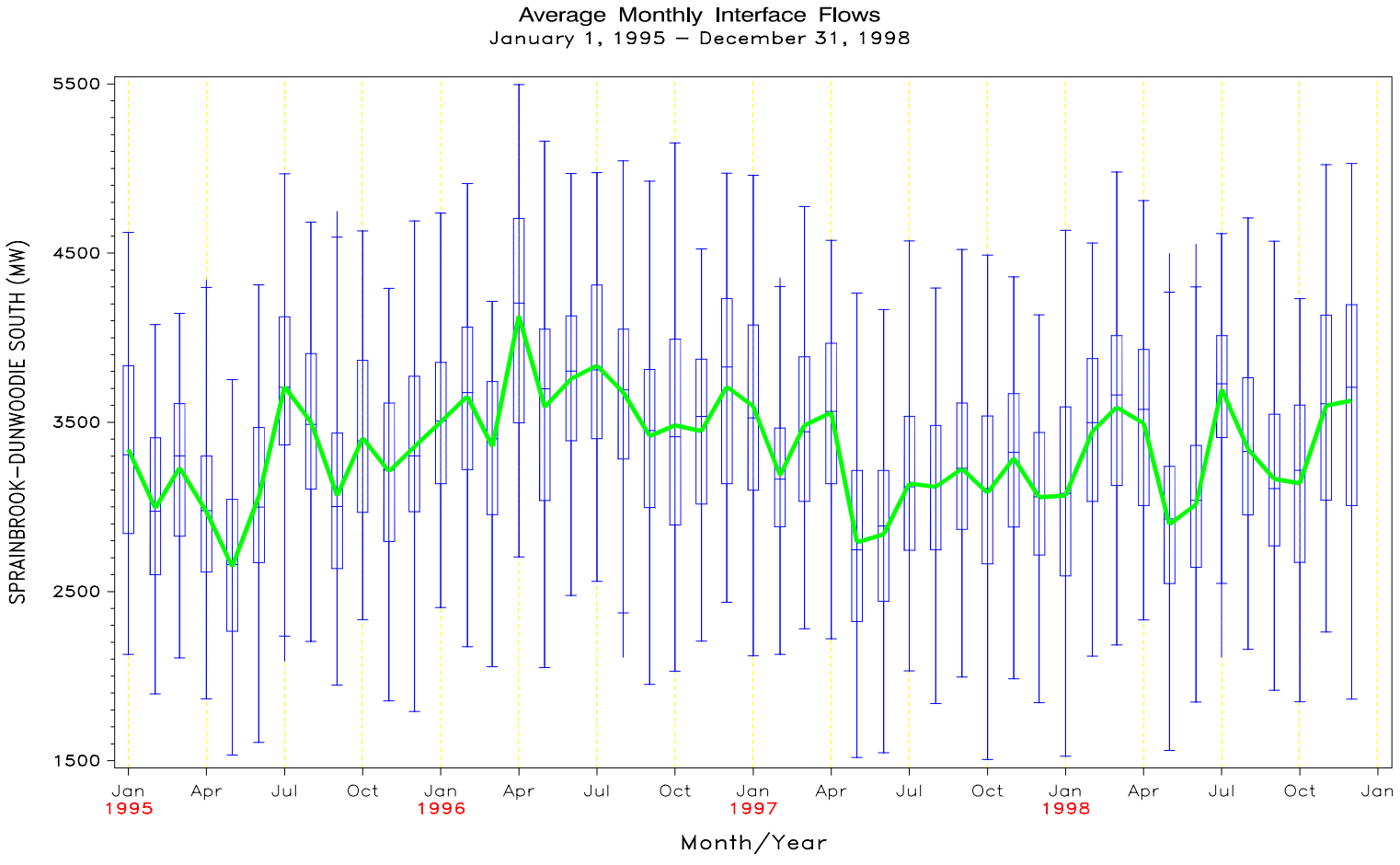
SPRAINBROOK – DUNWOODIE SOUTH

Old (Pre–Sept 1994) Definition



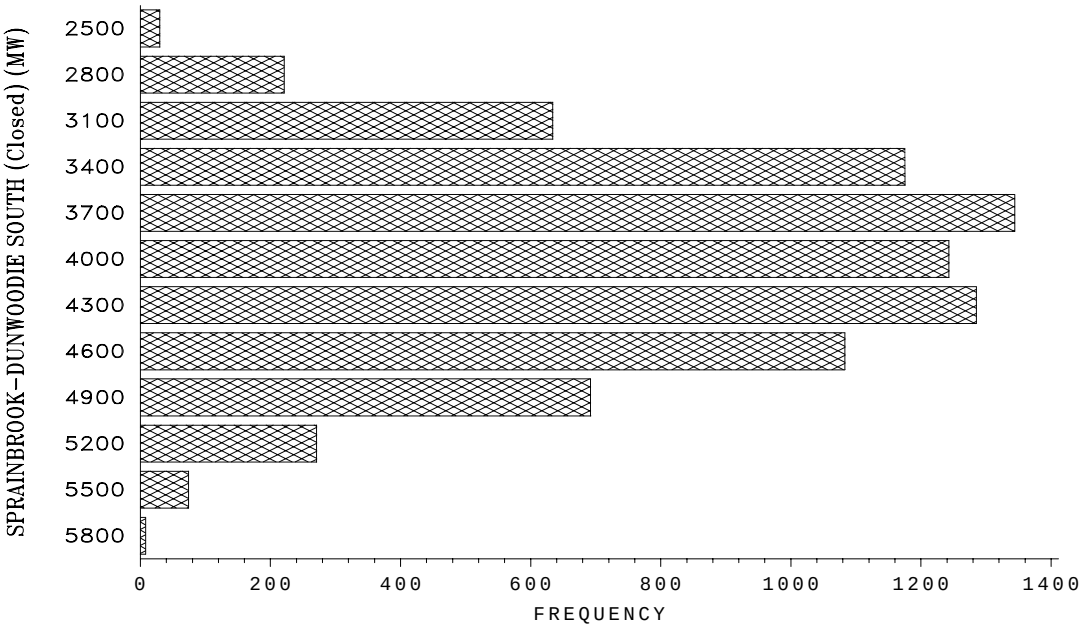
FLOW DURATION CURVE
FOR 1995 through 1998





SPRAINBROOK – DUNWOODIE SOUTH (Closed)

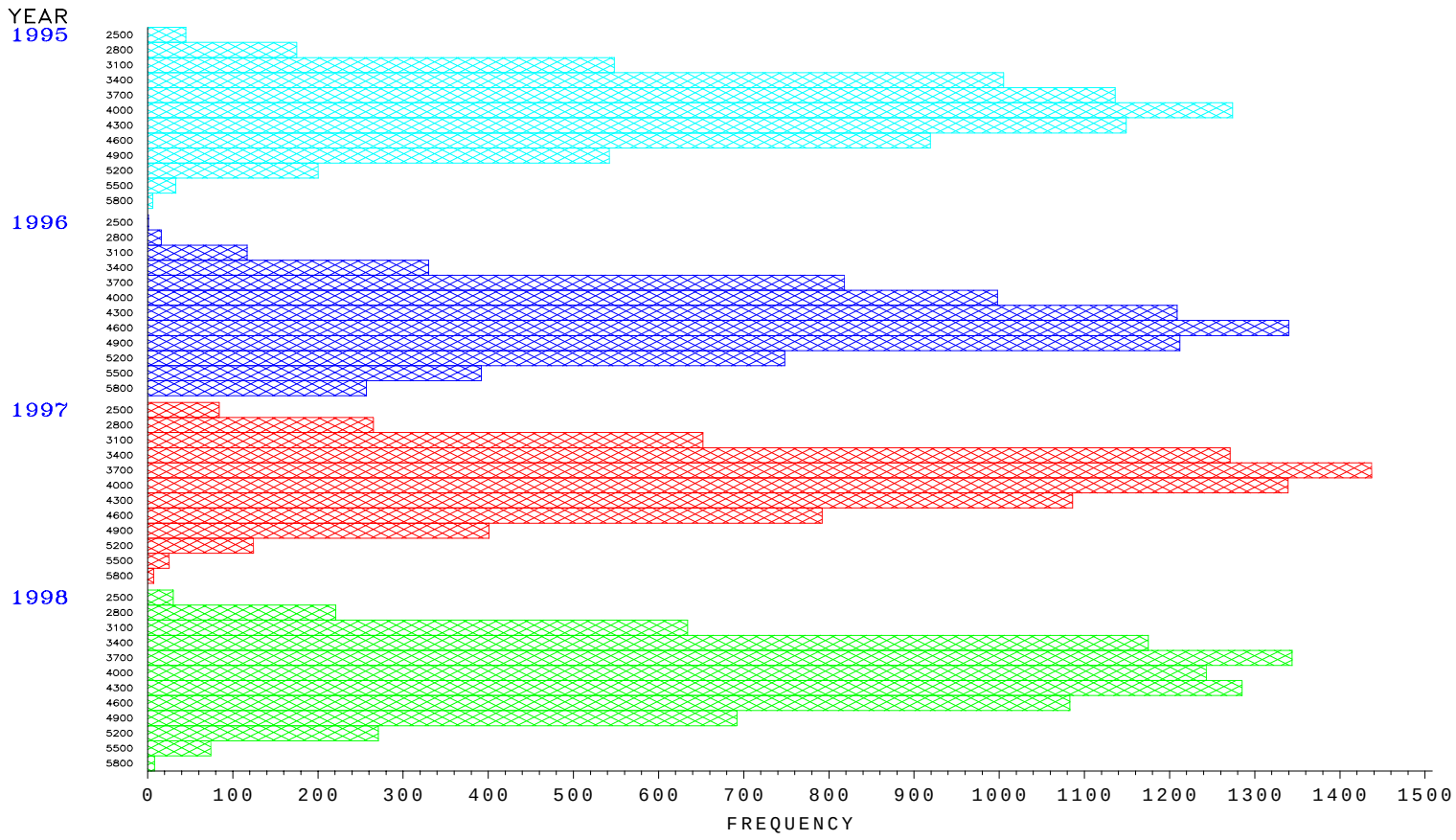
Old (Pre–Sept 1994) Definition



	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
2500	30	30	0.37	0.37
2800	221	251	2.74	3.11
3100	634	885	7.87	10.98
3400	1175	2060	14.58	25.56
3700	1344	3404	16.67	42.23
4000	1243	4647	15.42	57.66
4300	1285	5932	15.94	73.60
4600	1083	7015	13.44	87.03
4900	692	7707	8.59	95.62
5200	271	7978	3.36	98.98
5500	74	8052	0.92	99.90
5800	8	8060	0.10	100.00

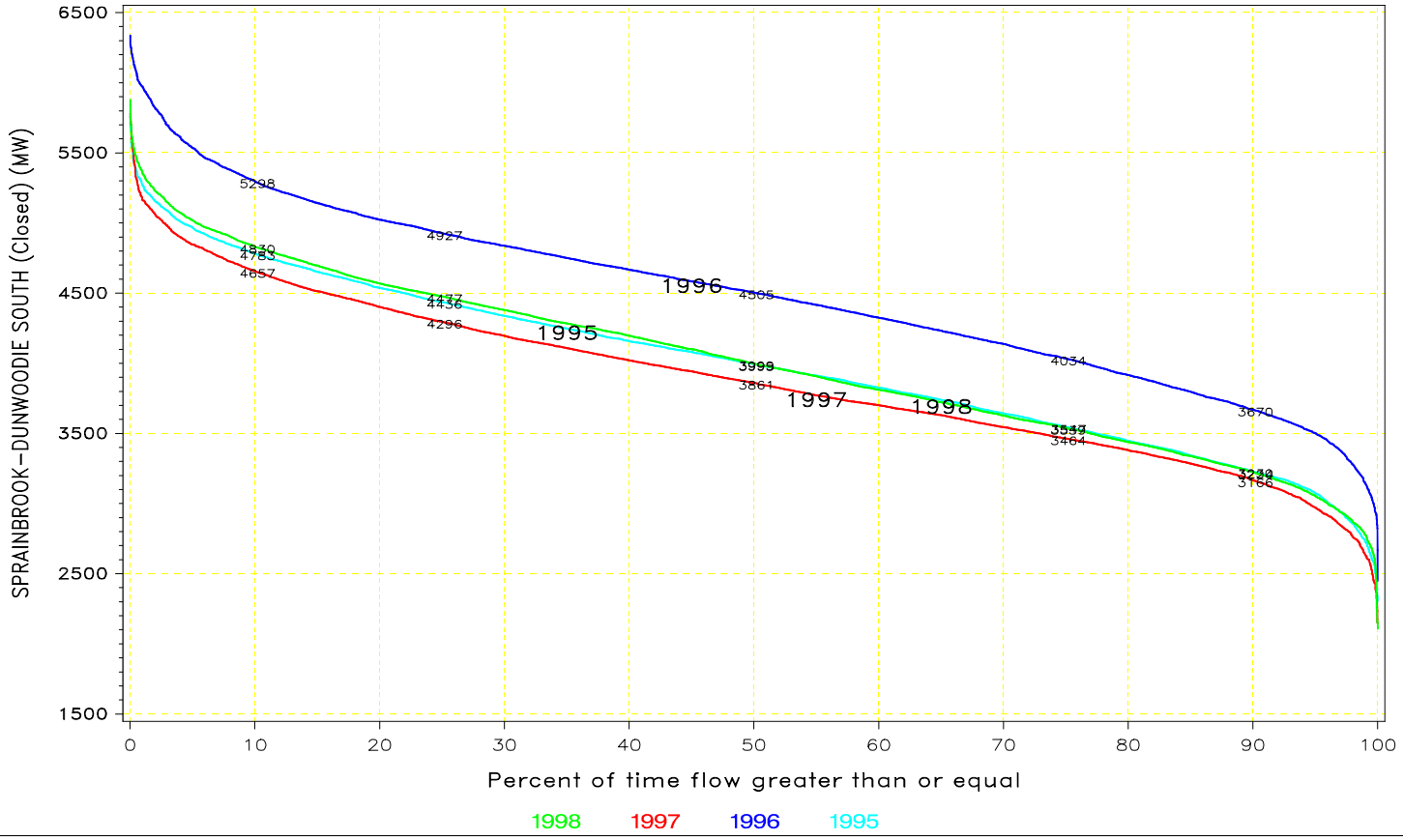
SPRAINBROOK – DUNWOODIE SOUTH (Closed)

Old (Pre–Sept 1994) Definition

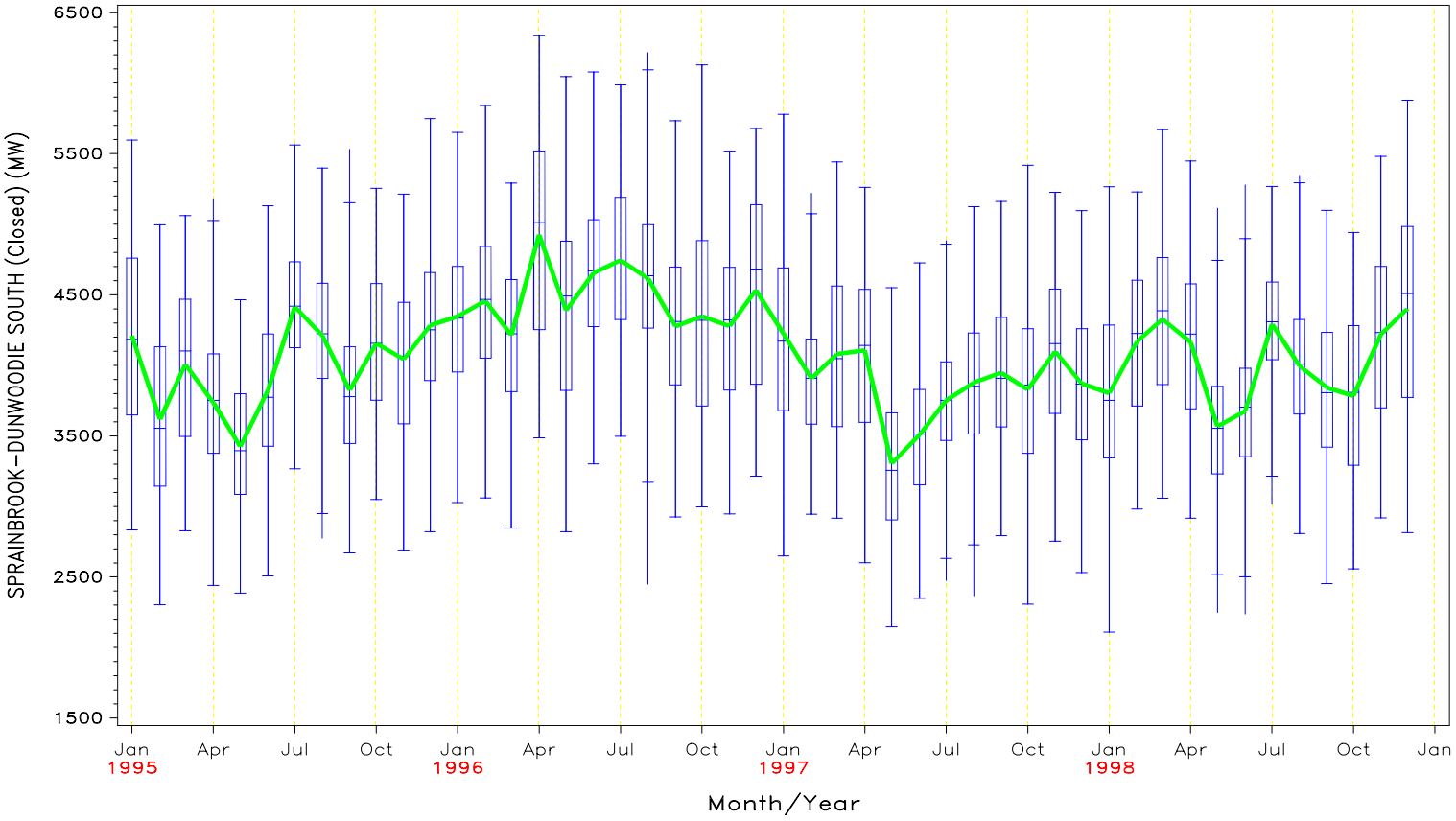


FLOW DURATION CURVE
FOR 1995 through 1998

SPRAINBROOK – DUNWOODIE SOUTH (Closed)
Old (Pre–Sept 1994) Definition

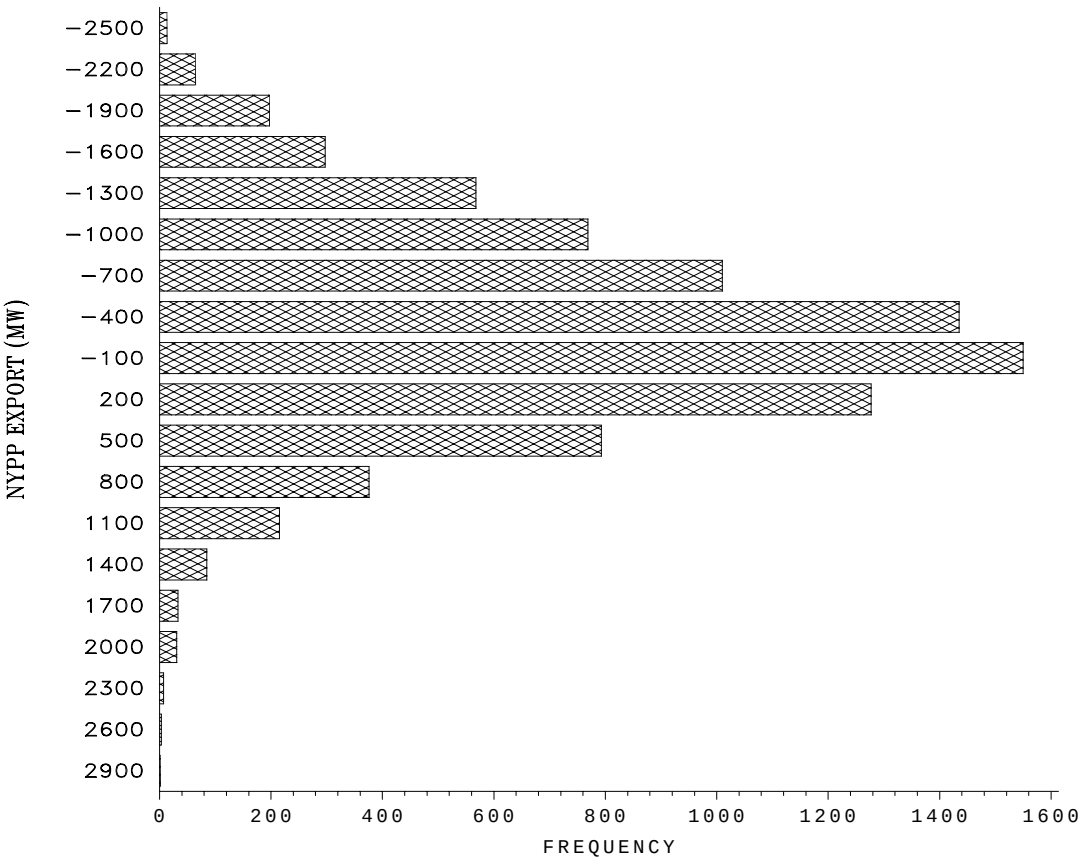


Average Monthly Interface Flows
January 1, 1995 – December 31, 1998



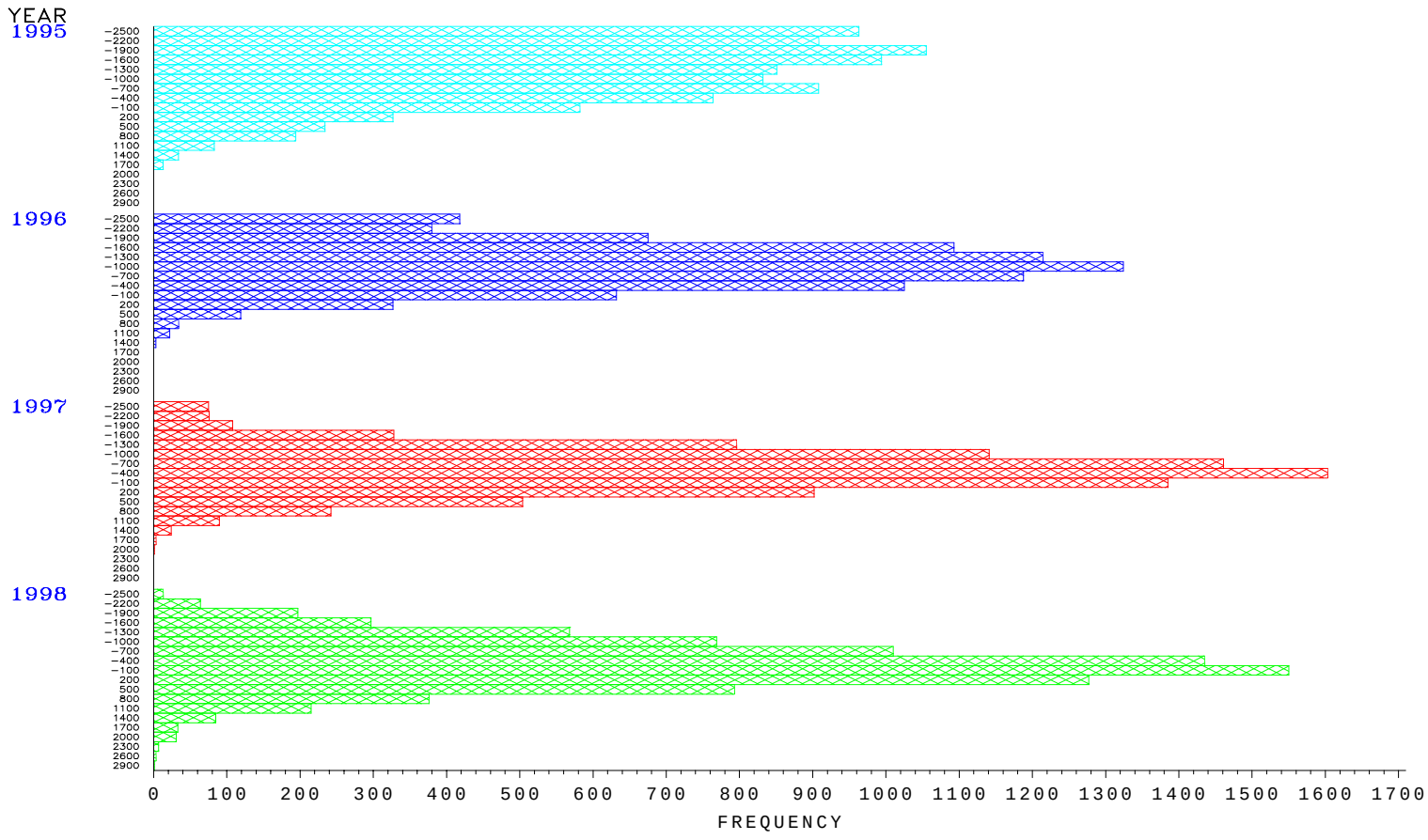
NYPP Transmission Use Statistics For January–December 1998

NYPP EXPORT

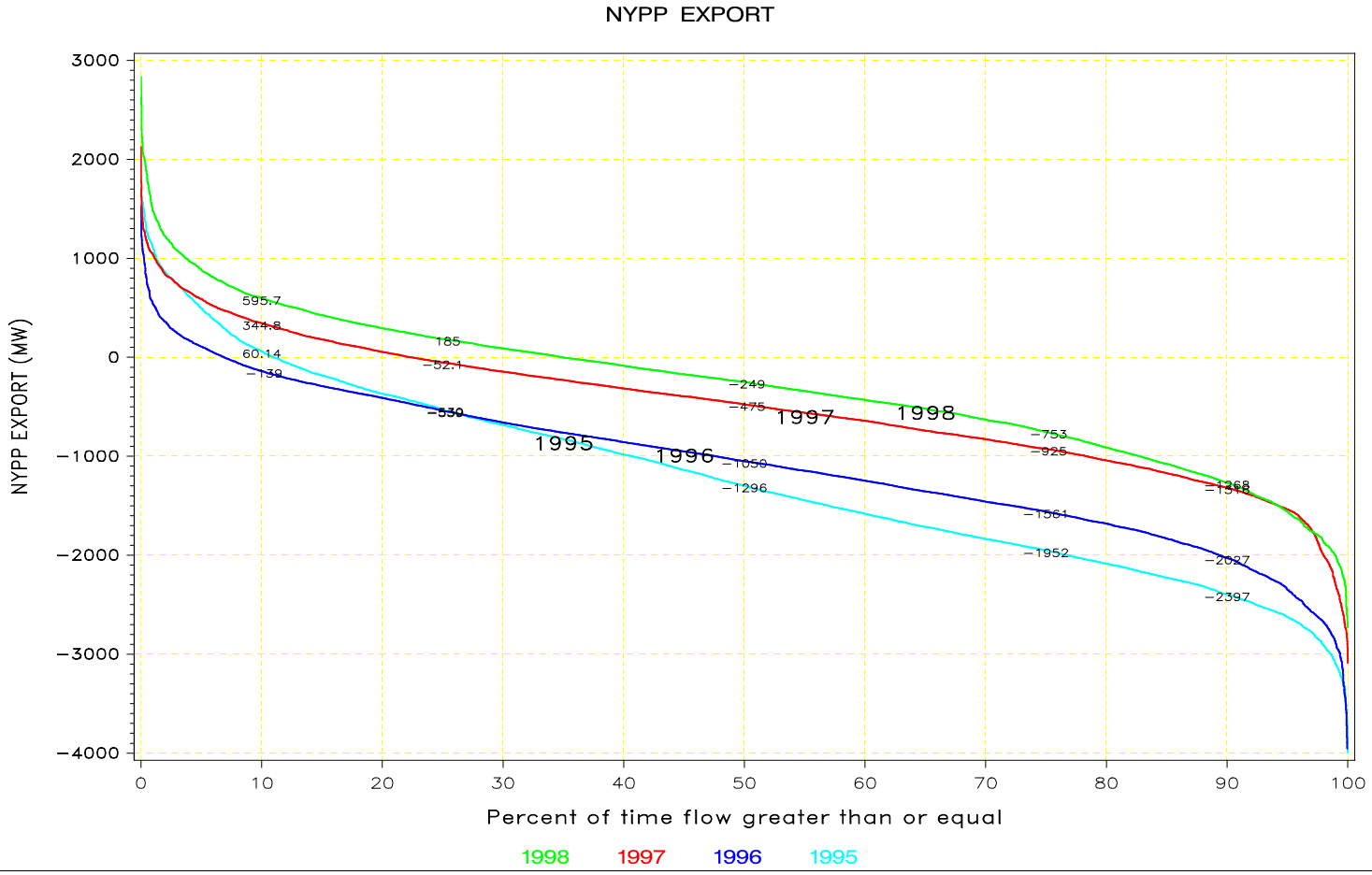


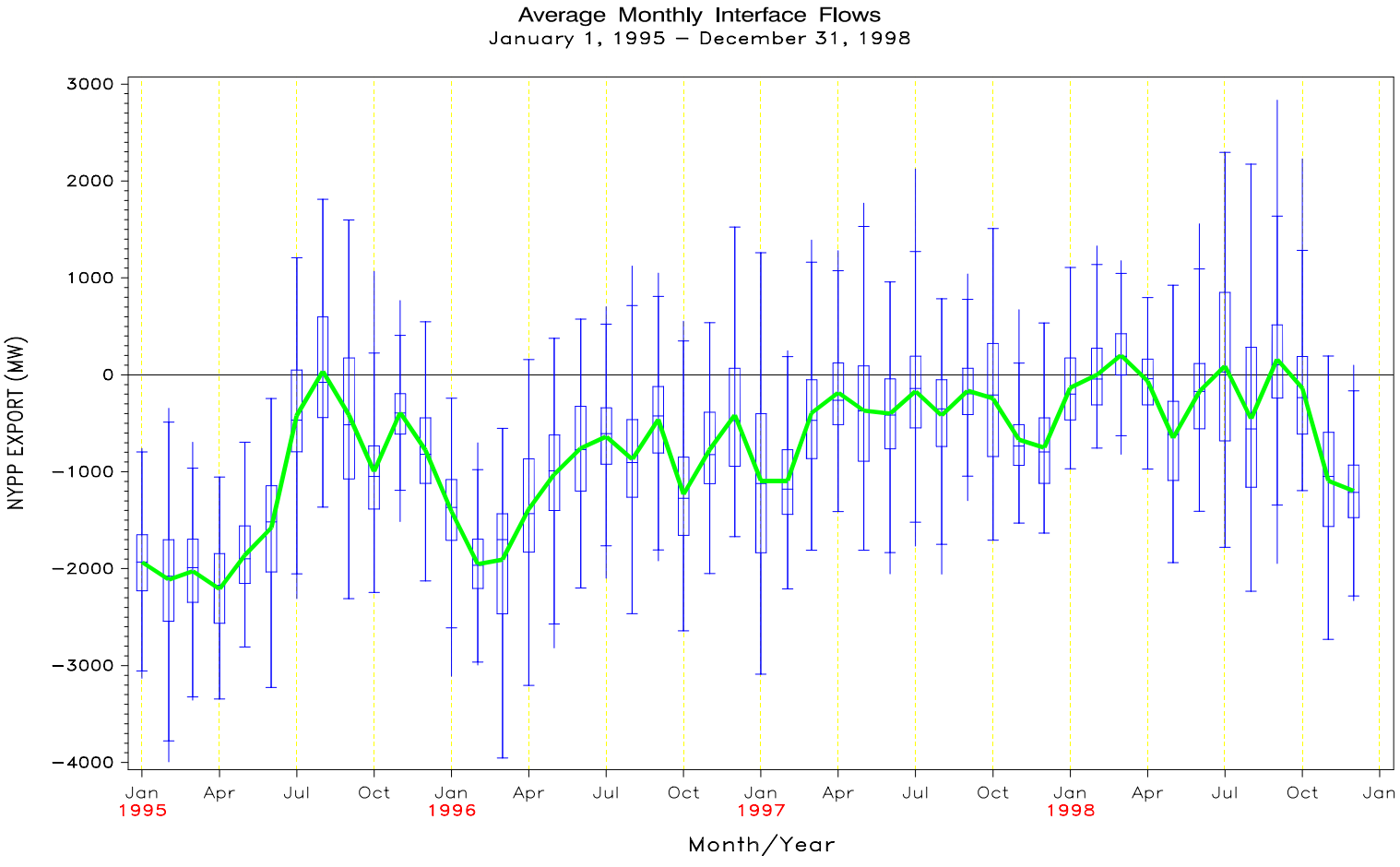
NYPP EXPORT (MW)	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−2500	13	13	0.15	0.15
−2200	64	77	0.73	0.88
−1900	197	274	2.26	3.14
−1600	297	571	3.40	6.55
−1300	568	1139	6.51	13.06
−1000	769	1908	8.81	21.87
−700	1010	2918	11.58	33.45
−400	1435	4353	16.45	49.90
−100	1550	5903	17.77	67.66
200	1277	7180	14.64	82.30
500	793	7973	9.09	91.39
800	376	8349	4.31	95.70
1100	215	8564	2.46	98.17
1400	85	8649	0.97	99.14
1700	33	8682	0.38	99.52
2000	31	8713	0.36	99.87
2300	7	8720	0.08	99.95
2600	3	8723	0.03	99.99
2900	1	8724	0.01	100.00

NYPP EXPORT



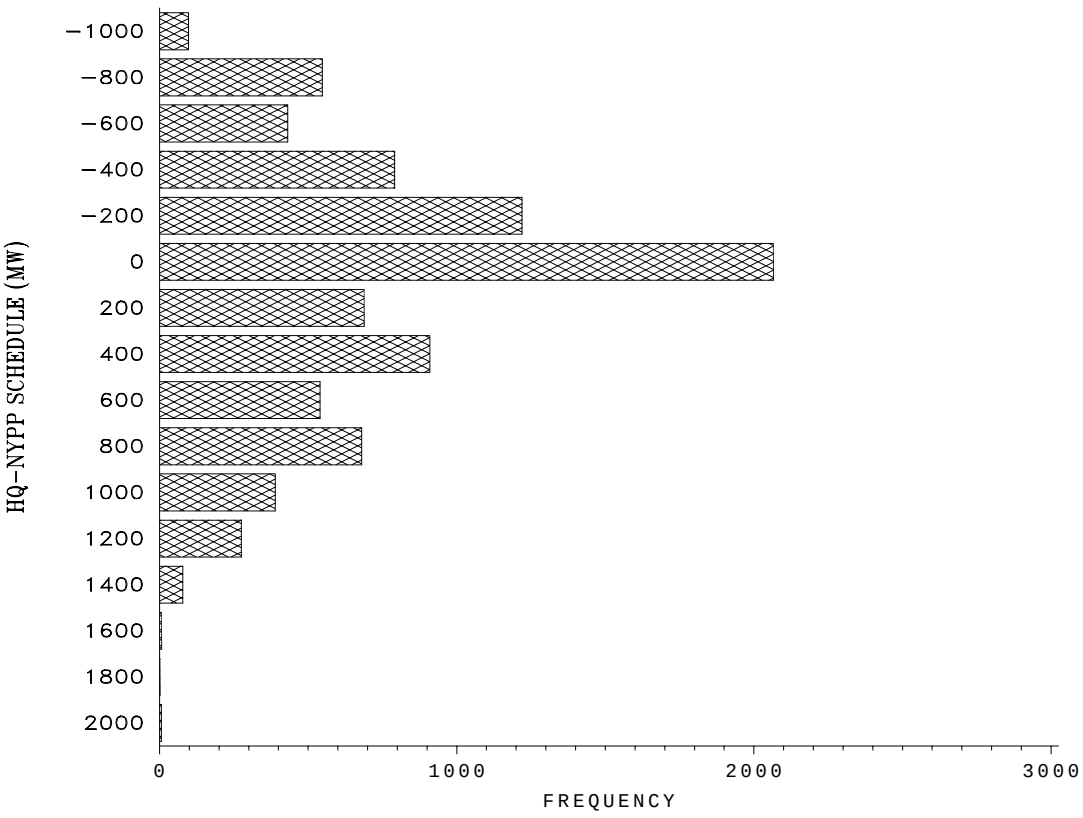
FLOW DURATION CURVE
FOR 1995 through 1998





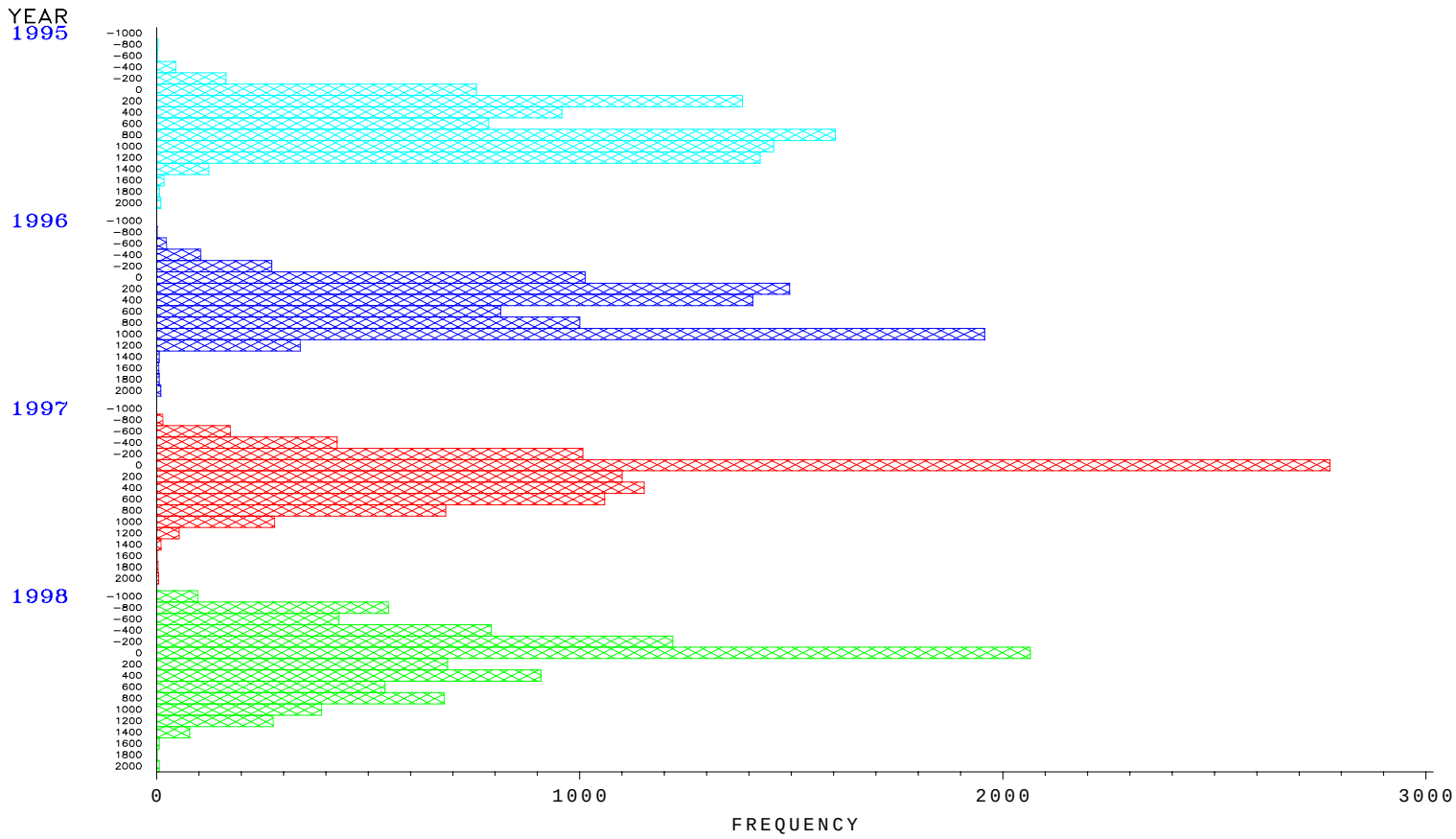
NYPP Transmission Use Statistics For January–December 1998

HQ – NYPP SCHEDULE
Chateauguay–Massena

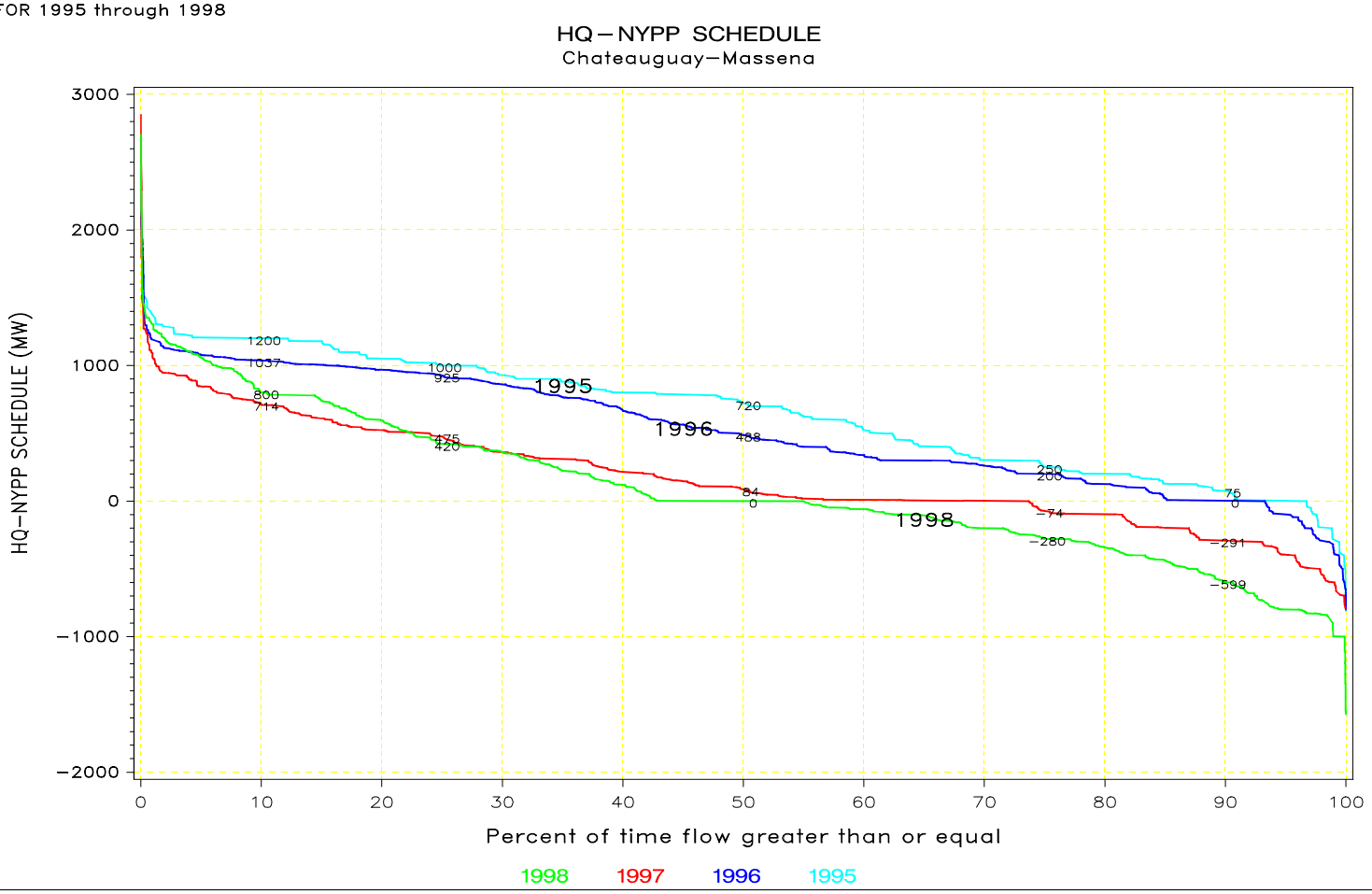


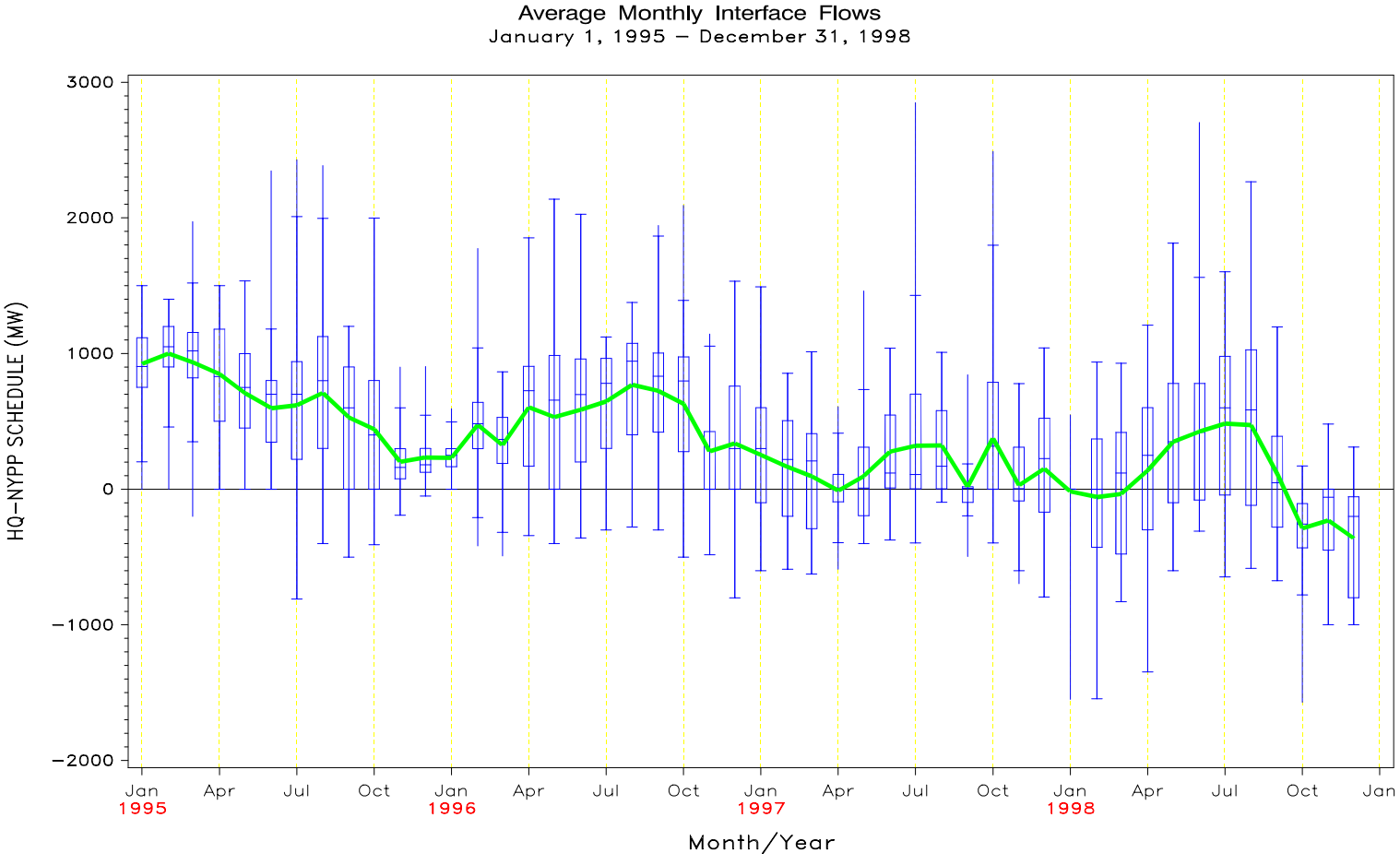
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−1000	97	97	1.11	1.11
−800	548	645	6.28	7.39
−600	431	1076	4.94	12.33
−400	791	1867	9.07	21.40
−200	1220	3087	13.98	35.39
0	2065	5152	23.67	59.06
200	688	5840	7.89	66.94
400	909	6749	10.42	77.36
600	540	7289	6.19	83.55
800	680	7969	7.79	91.35
1000	389	8358	4.46	95.80
1200	275	8633	3.15	98.96
1400	78	8711	0.89	99.85
1600	6	8717	0.07	99.92
1800	1	8718	0.01	99.93
2000	6	8724	0.07	100.00

HQ – NYPP SCHEDULE
Chateauguay–Massena



FLOW DURATION CURVE
FOR 1995 through 1998

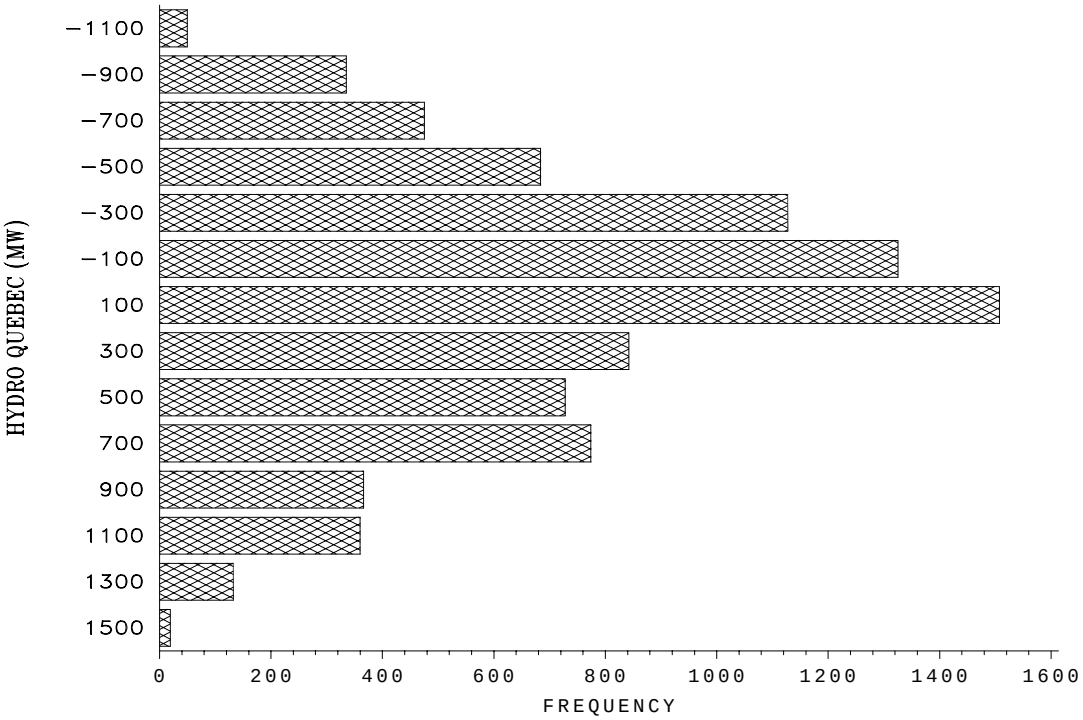




NYPP Transmission Use Statistics For January–December 1998

HYDRO QUEBEC

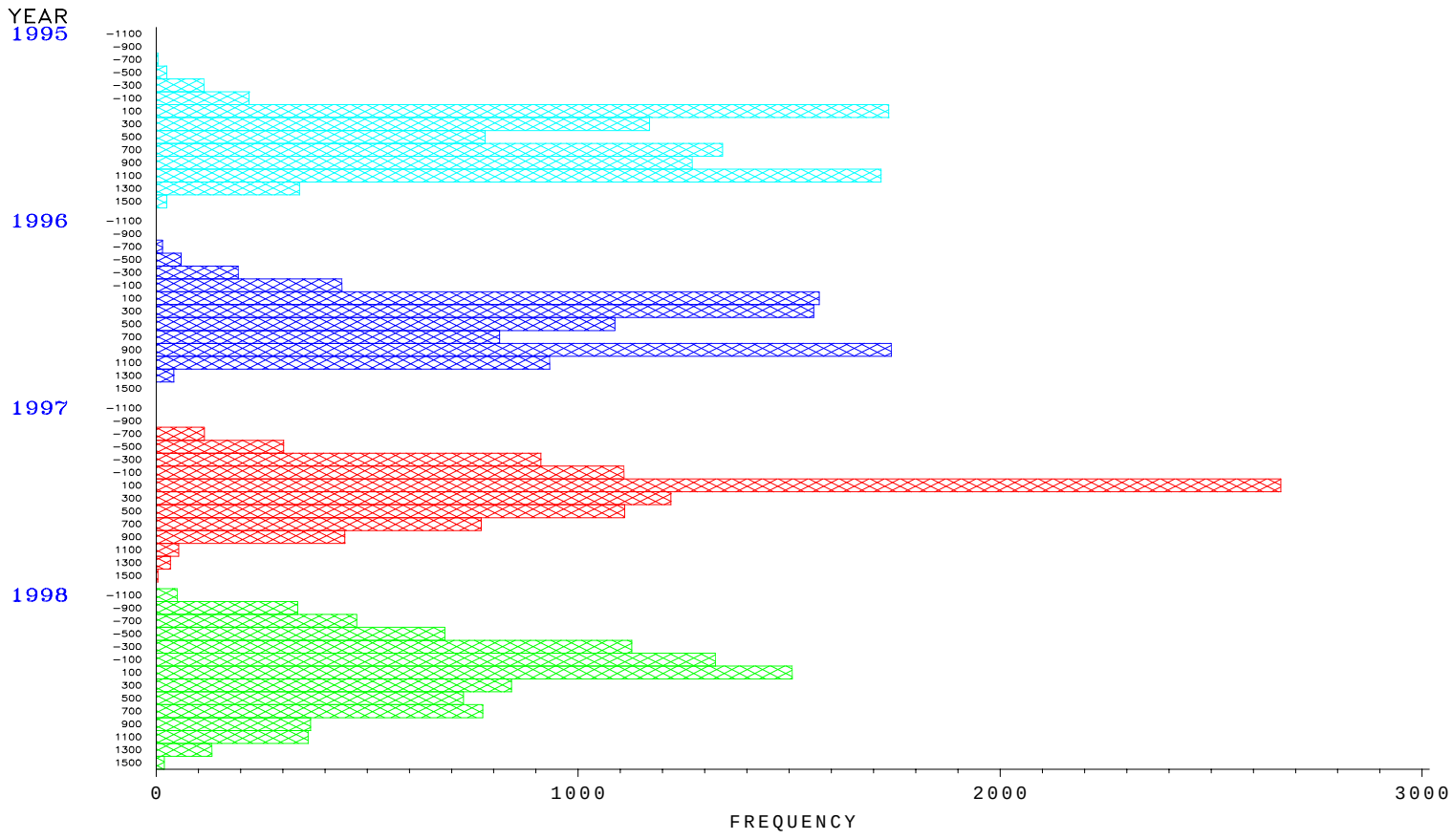
Chateauguay–Massena



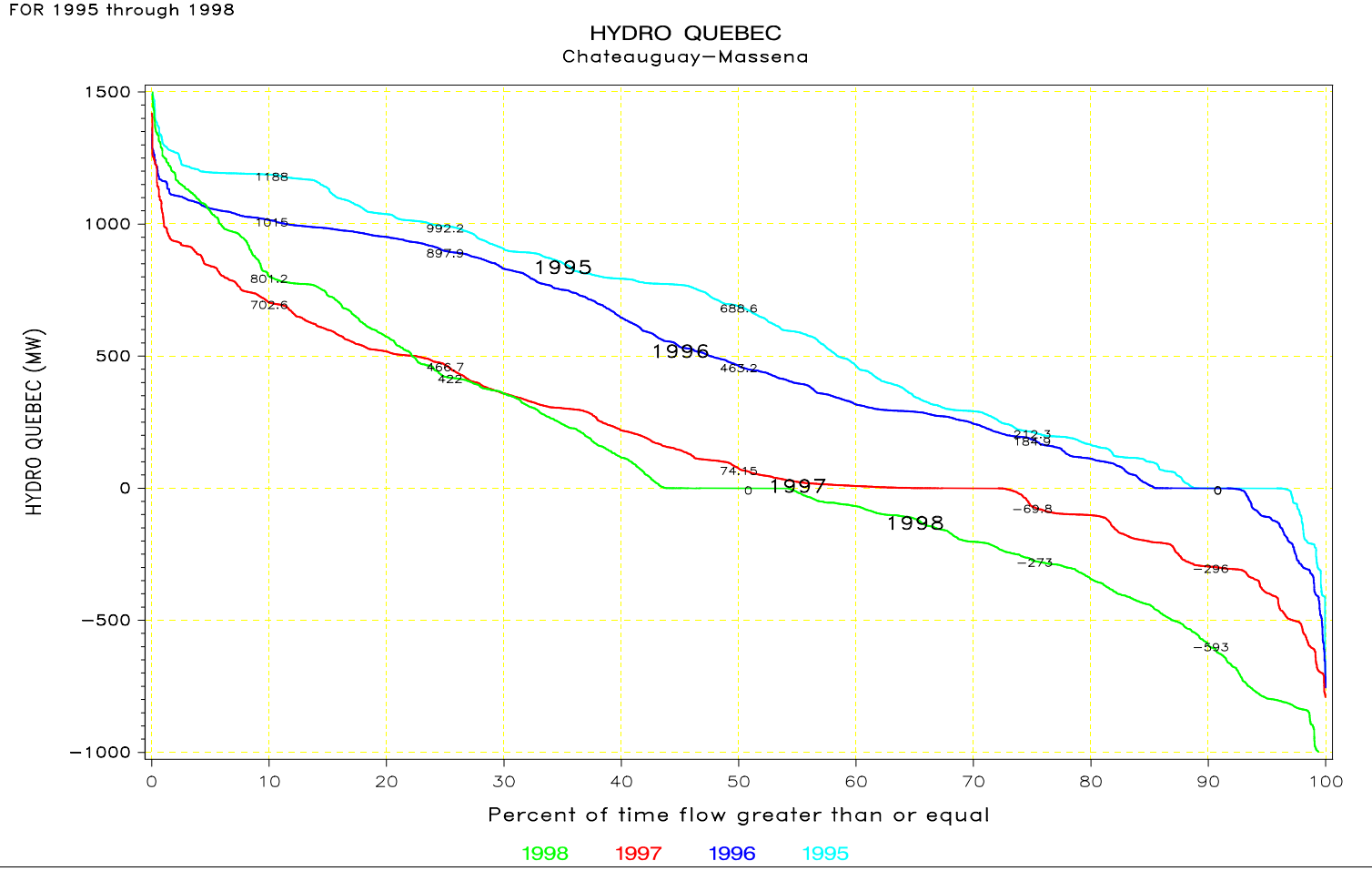
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−1100	50	50	0.57	0.57
−900	335	385	3.84	4.41
−700	475	860	5.44	9.86
−500	684	1544	7.84	17.70
−300	1127	2671	12.92	30.62
−100	1325	3996	15.19	45.80
100	1507	5503	17.27	63.08
300	842	6345	9.65	72.73
500	728	7073	8.34	81.08
700	774	7847	8.87	89.95
900	366	8213	4.20	94.14
1100	360	8573	4.13	98.27
1300	132	8705	1.51	99.78
1500	19	8724	0.22	100.00

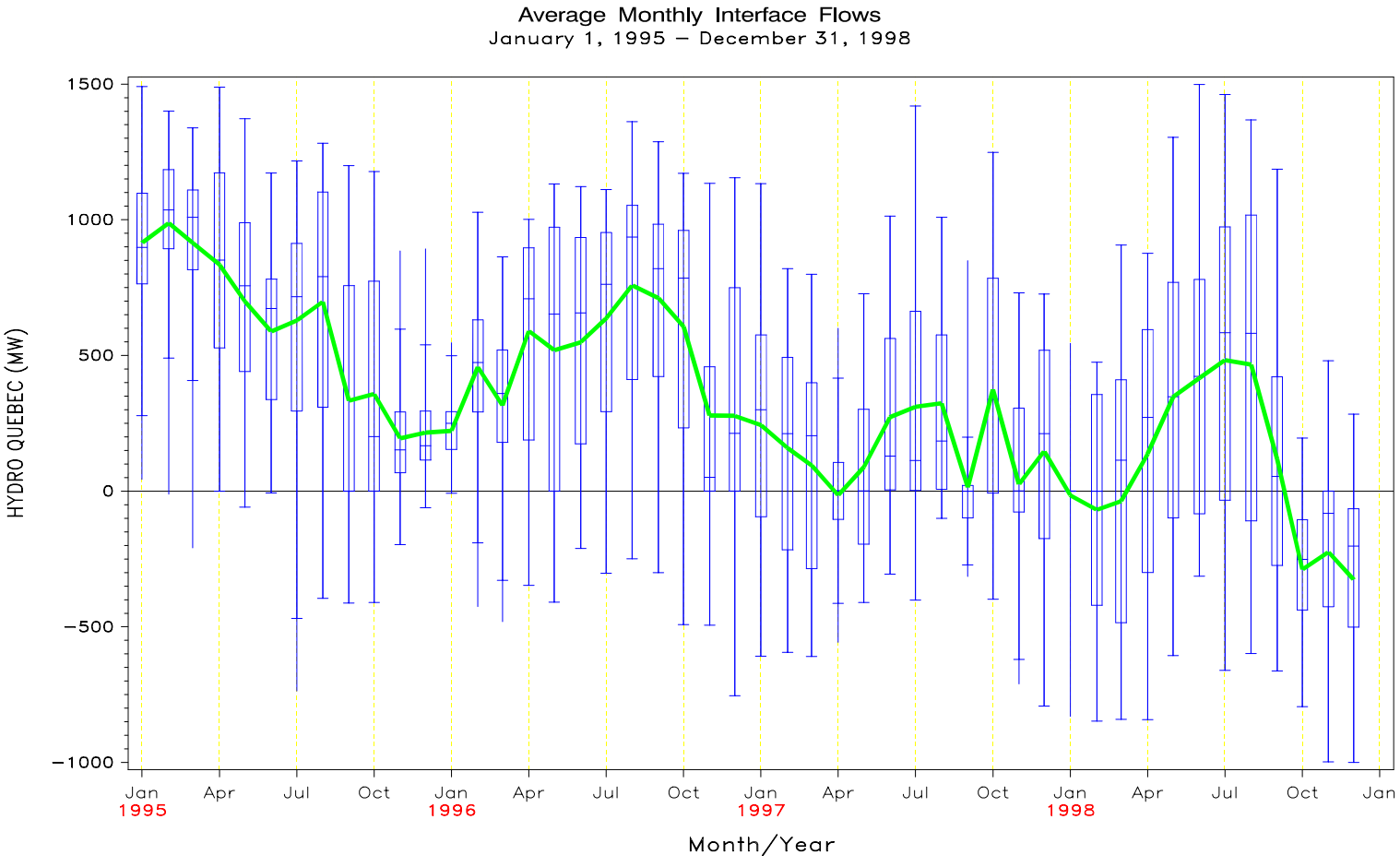
HYDRO QUEBEC

Chateauguay–Massena



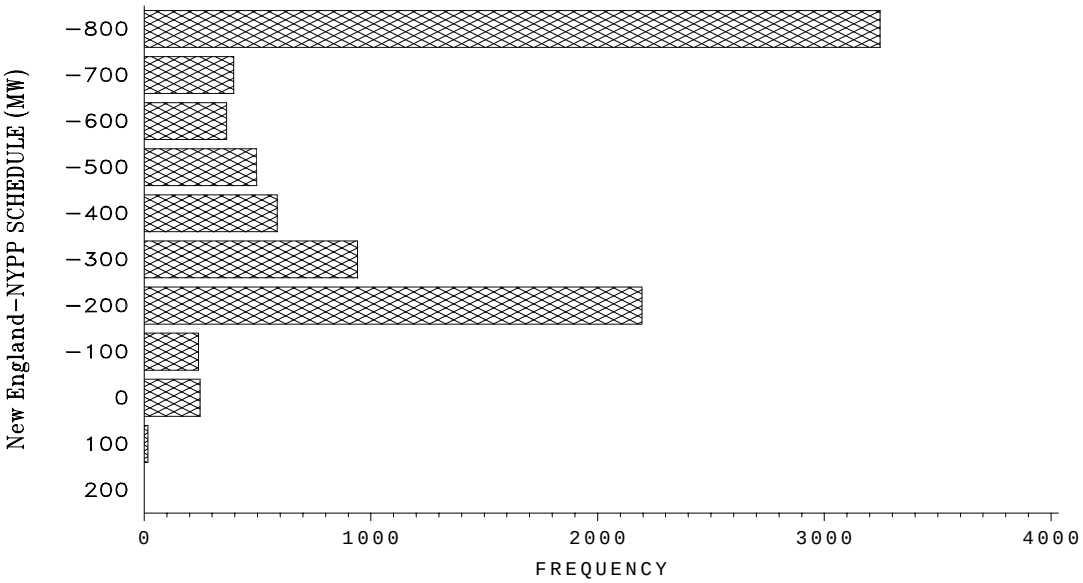
FLOW DURATION CURVE
FOR 1995 through 1998





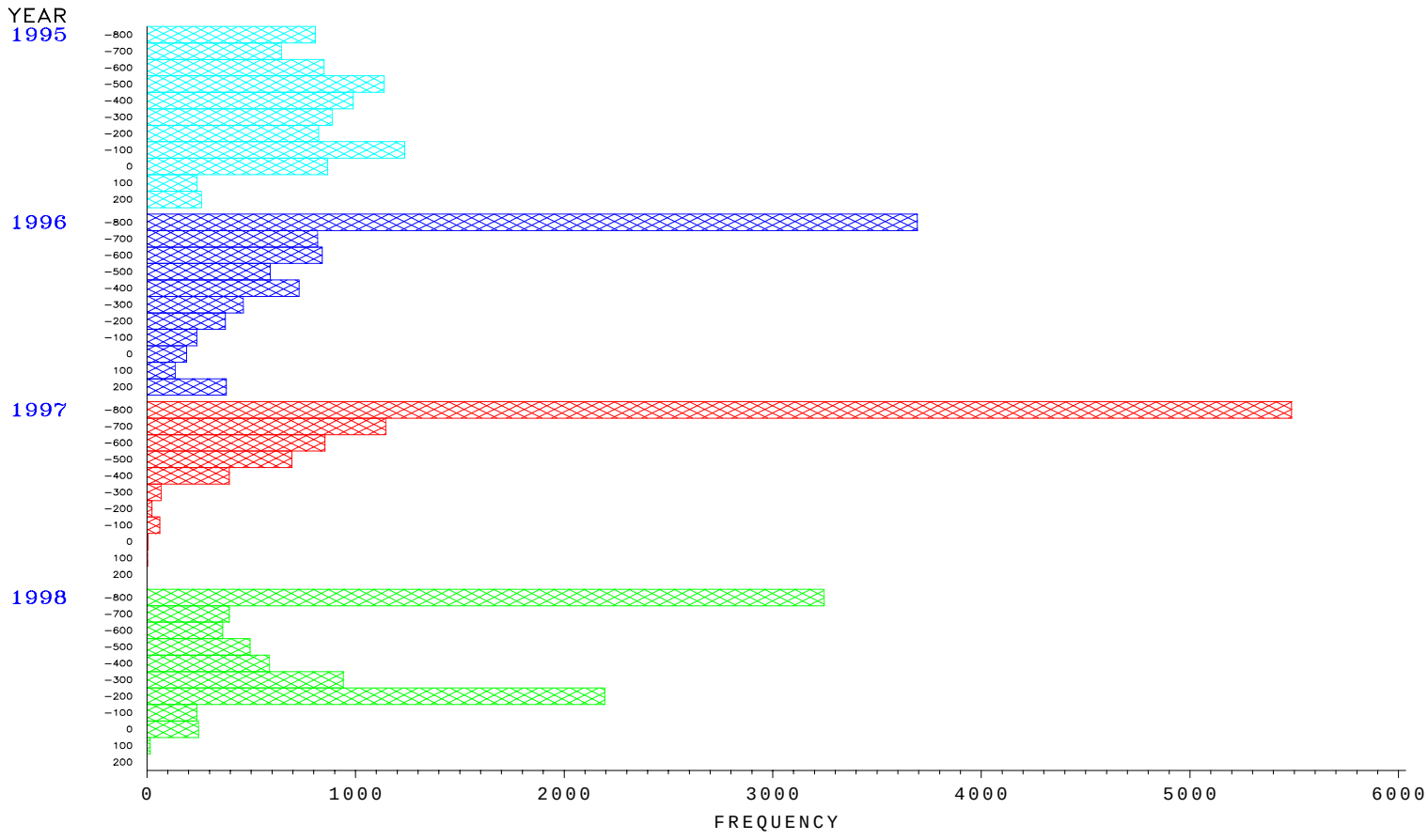
NYPP Transmission Use Statistics For January–December 1998

New England – NYPP SCHEDULE

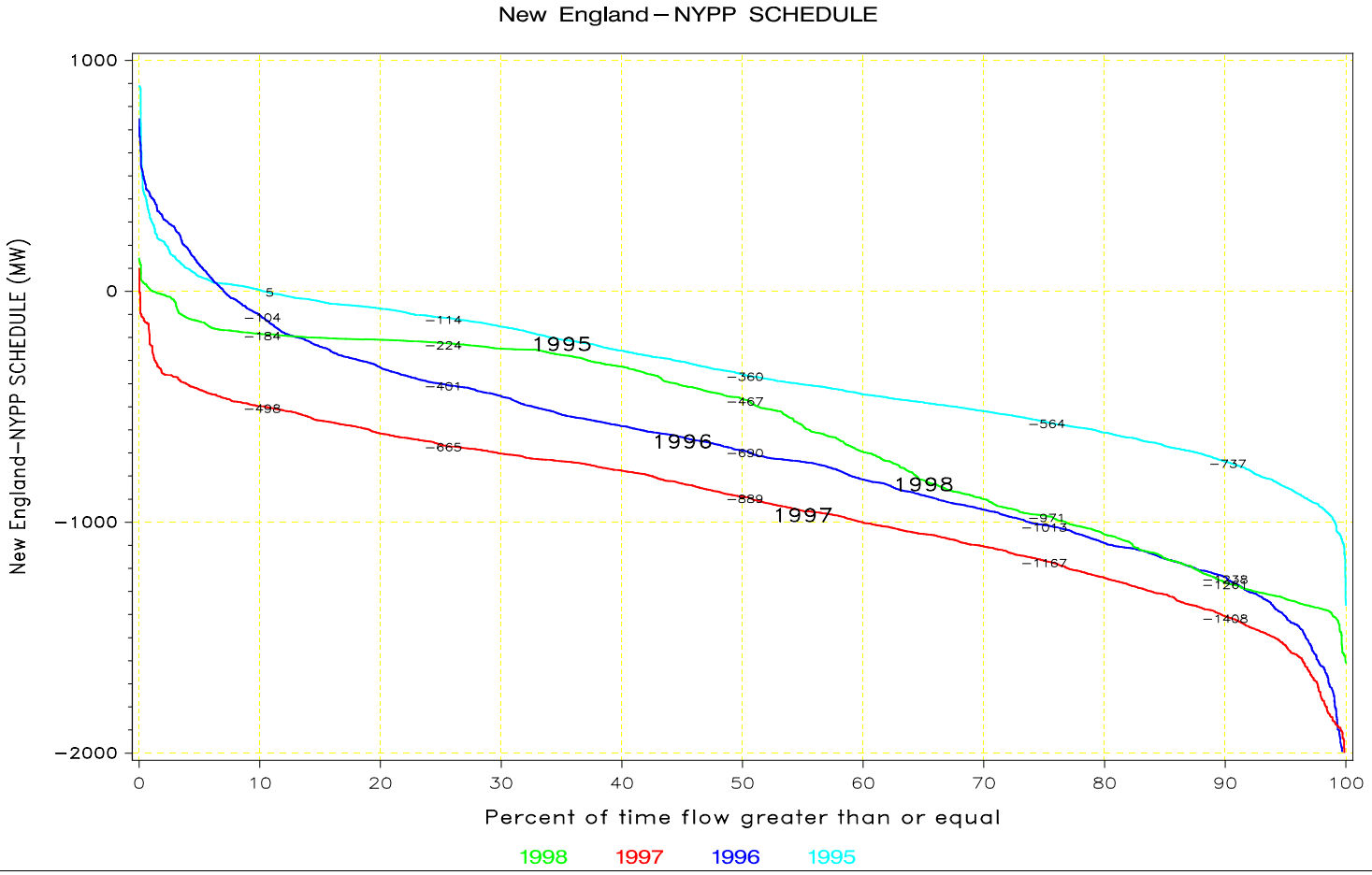


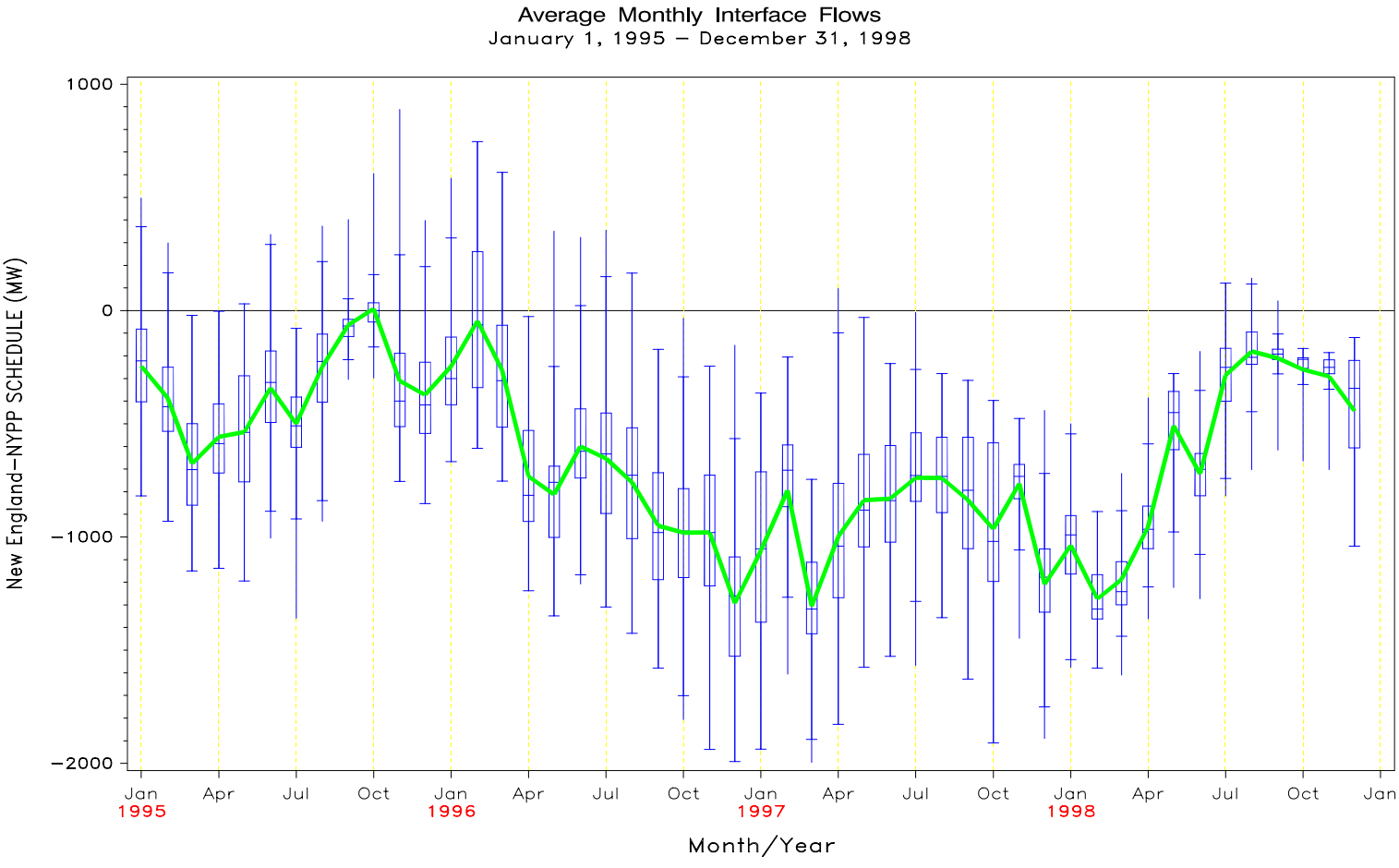
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−800	3246	3246	37.21	37.21
−700	395	3641	4.53	41.74
−600	363	4004	4.16	45.90
−500	495	4499	5.67	51.57
−400	587	5086	6.73	58.30
−300	941	6027	10.79	69.09
−200	2195	8222	25.16	94.25
−100	239	8461	2.74	96.99
0	247	8708	2.83	99.82
100	16	8724	0.18	100.00
200	0	8724	0.00	100.00

New England – NYPP SCHEDULE



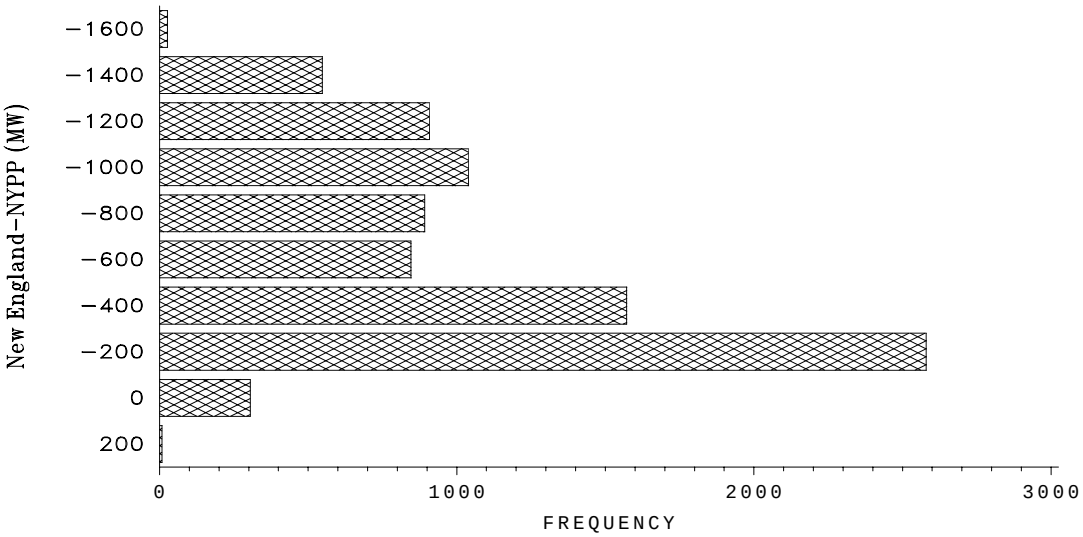
FLOW DURATION CURVE
FOR 1995 through 1998





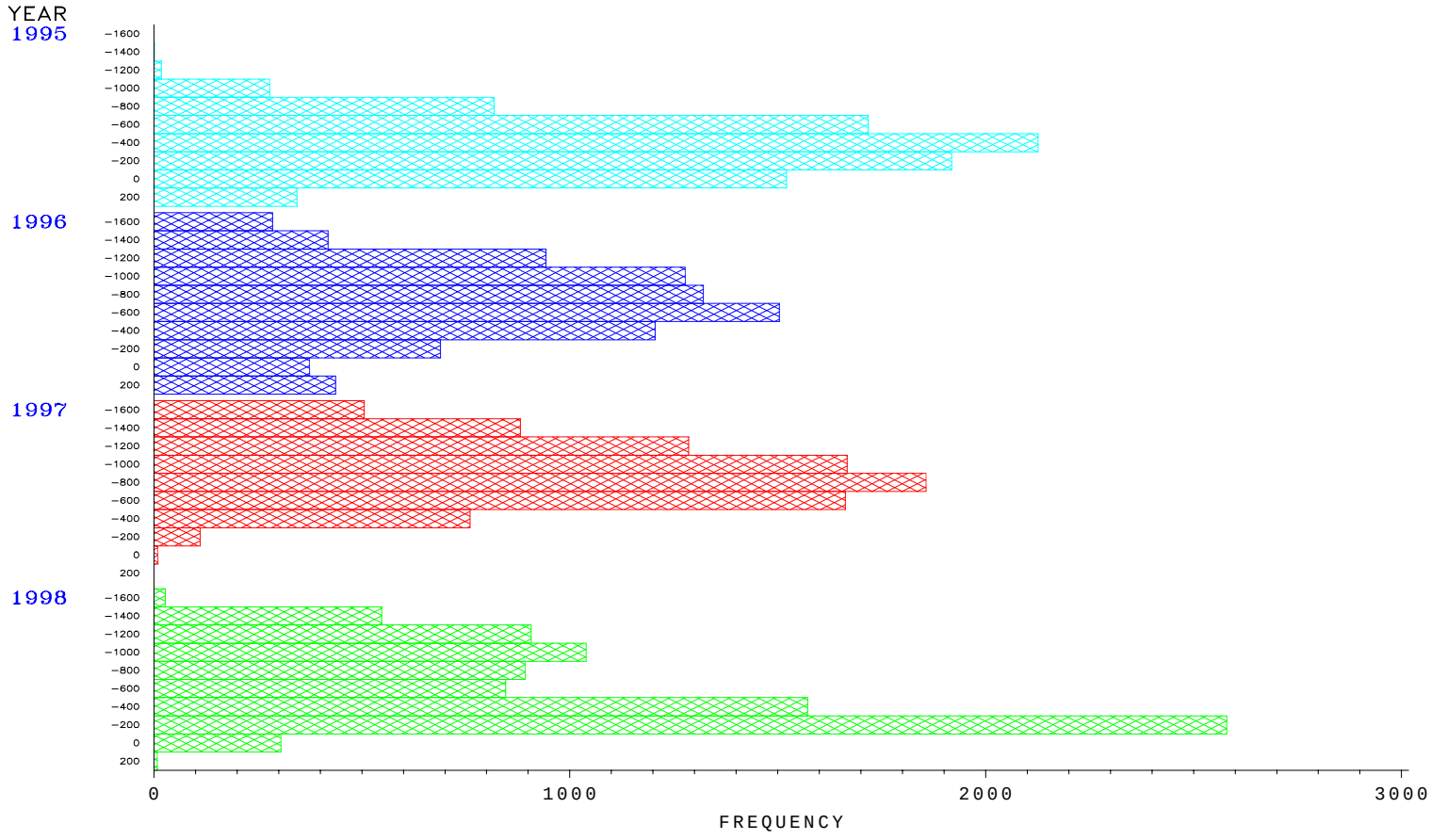
NYPP Transmission Use Statistics For January–December 1998

New England – NYPP

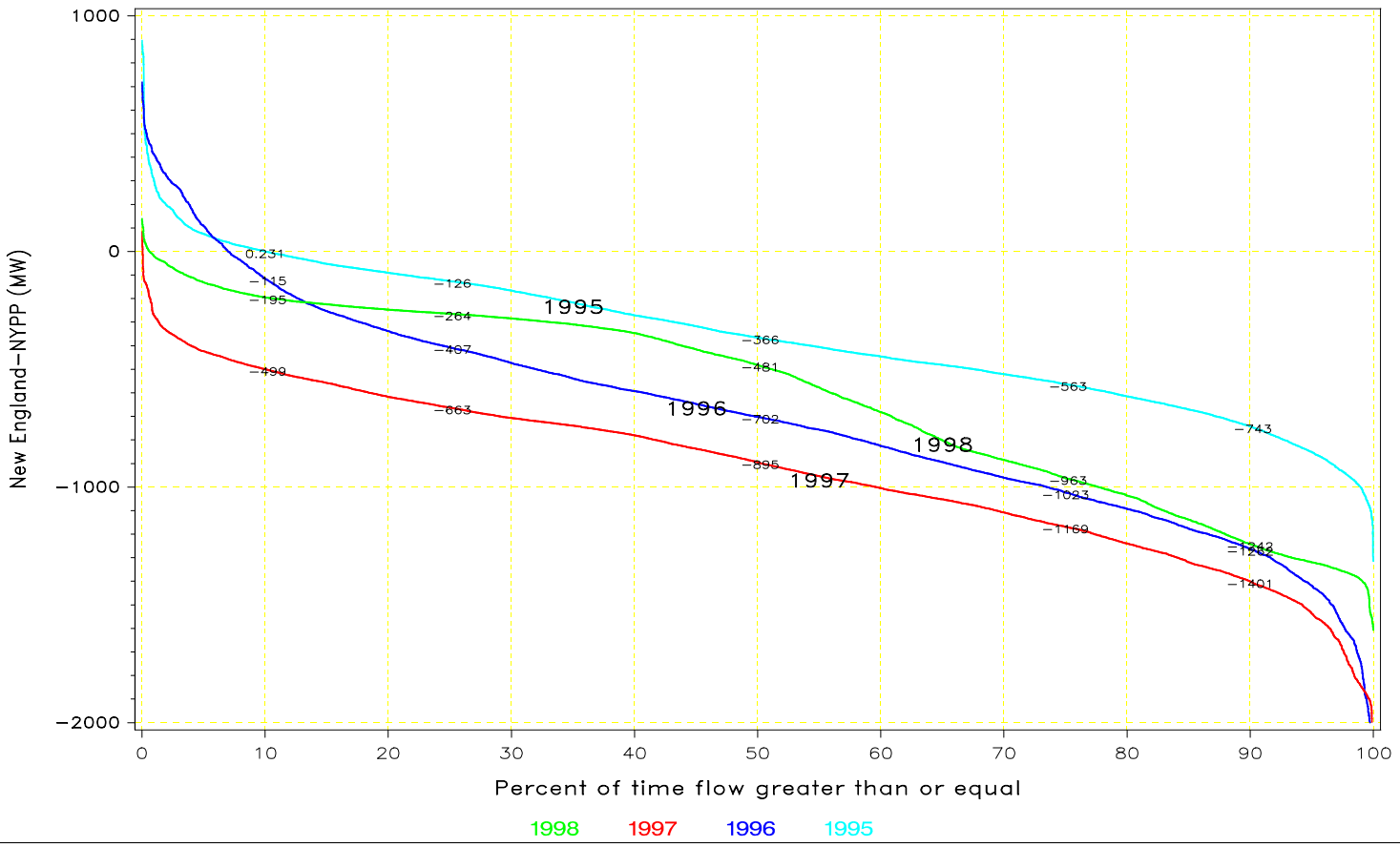


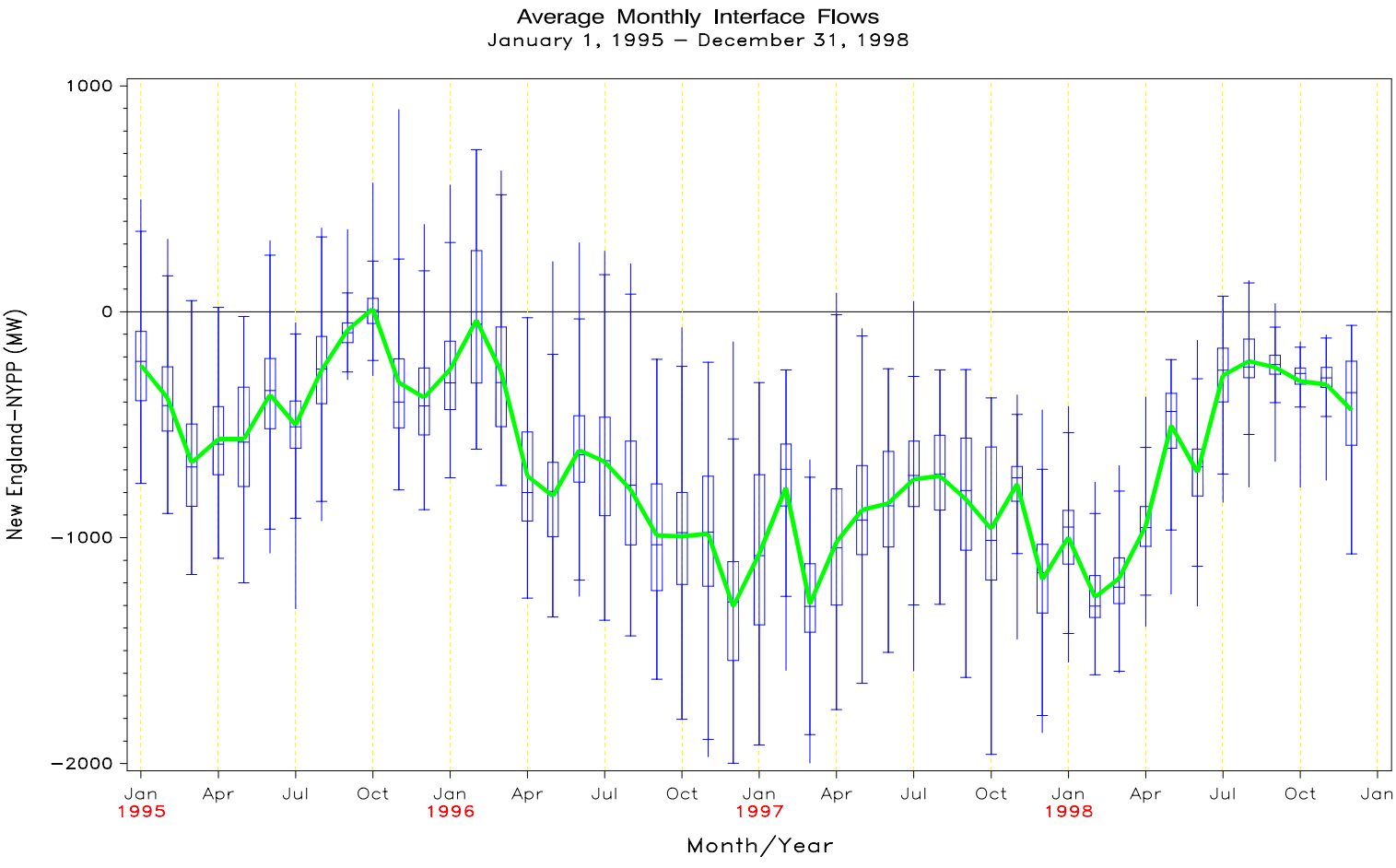
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
-1600	27	27	0.31	0.31
-1400	548	575	6.28	6.59
-1200	907	1482	10.40	16.99
-1000	1039	2521	11.91	28.90
-800	892	3413	10.22	39.12
-600	846	4259	9.70	48.82
-400	1572	5831	18.02	66.84
-200	2580	8411	29.57	96.41
0	305	8716	3.50	99.91
200	8	8724	0.09	100.00

New England – NYPP

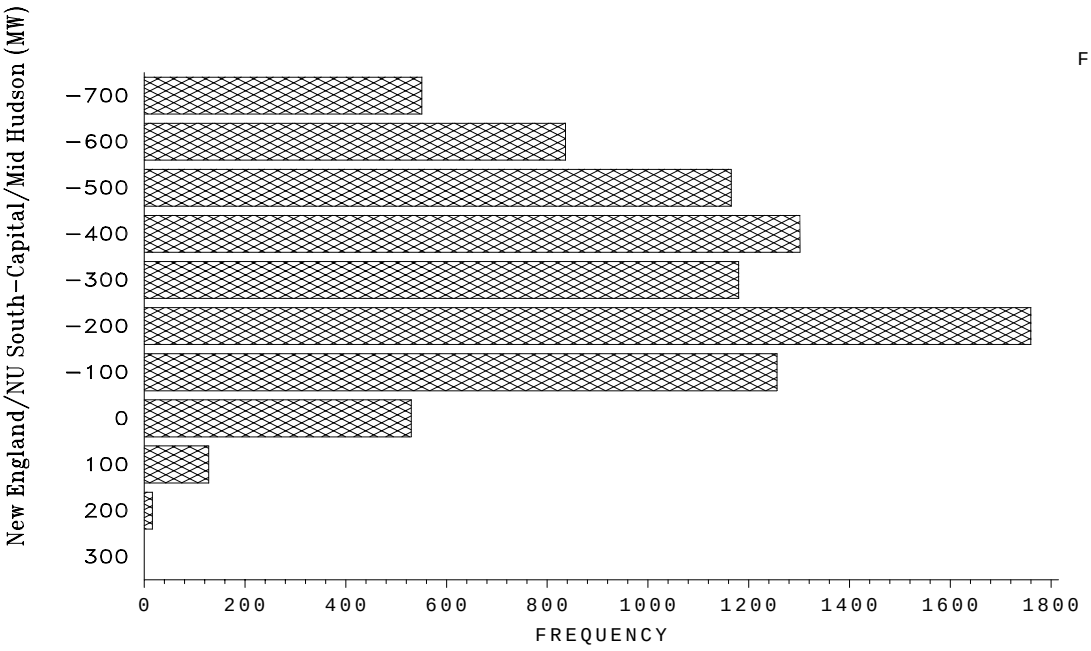


FLOW DURATION CURVE
FOR 1995 through 1998



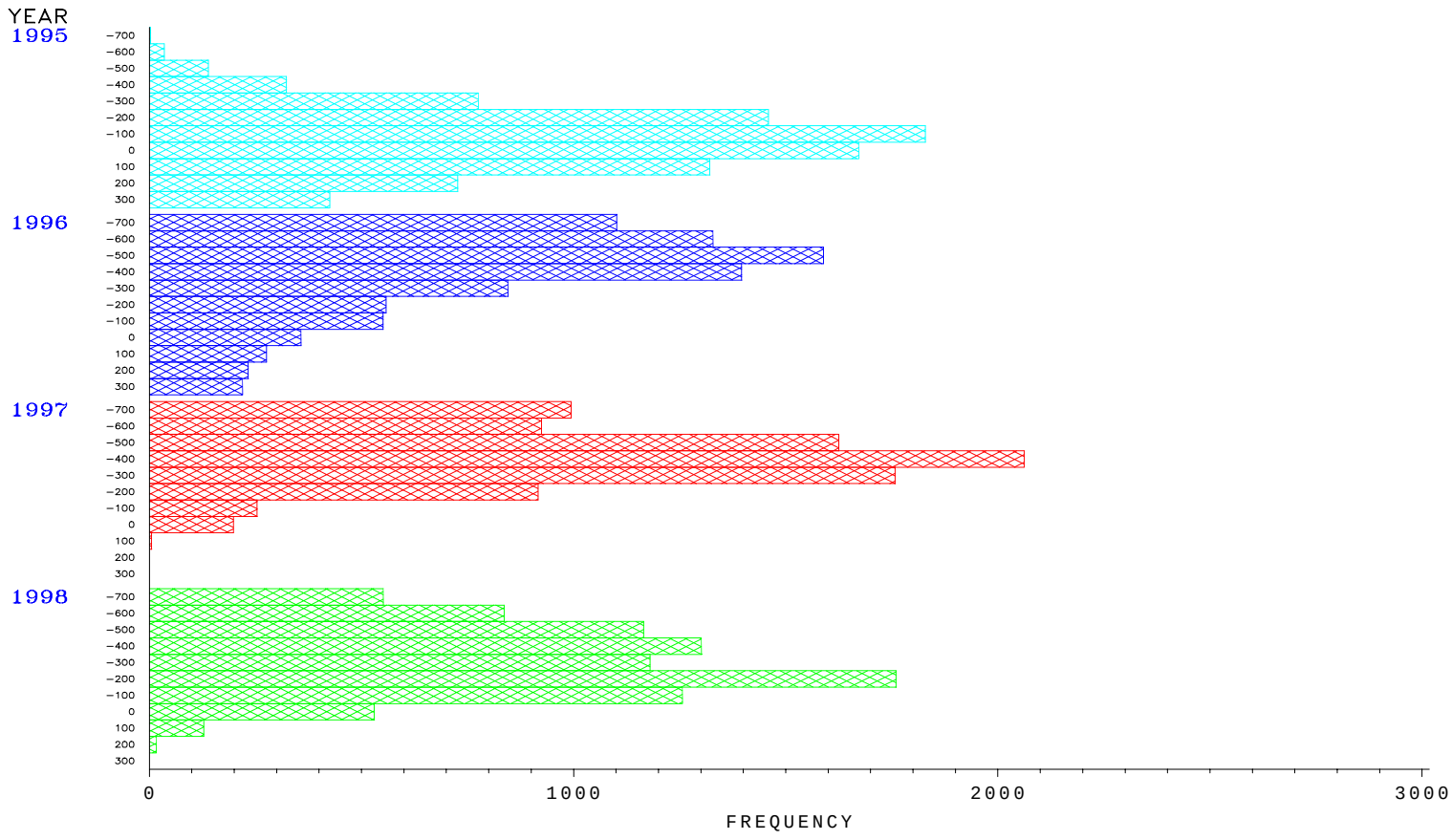


New England/NU South – Capital/Mid Hudson
398 Long Mt. – Pleasant Valley

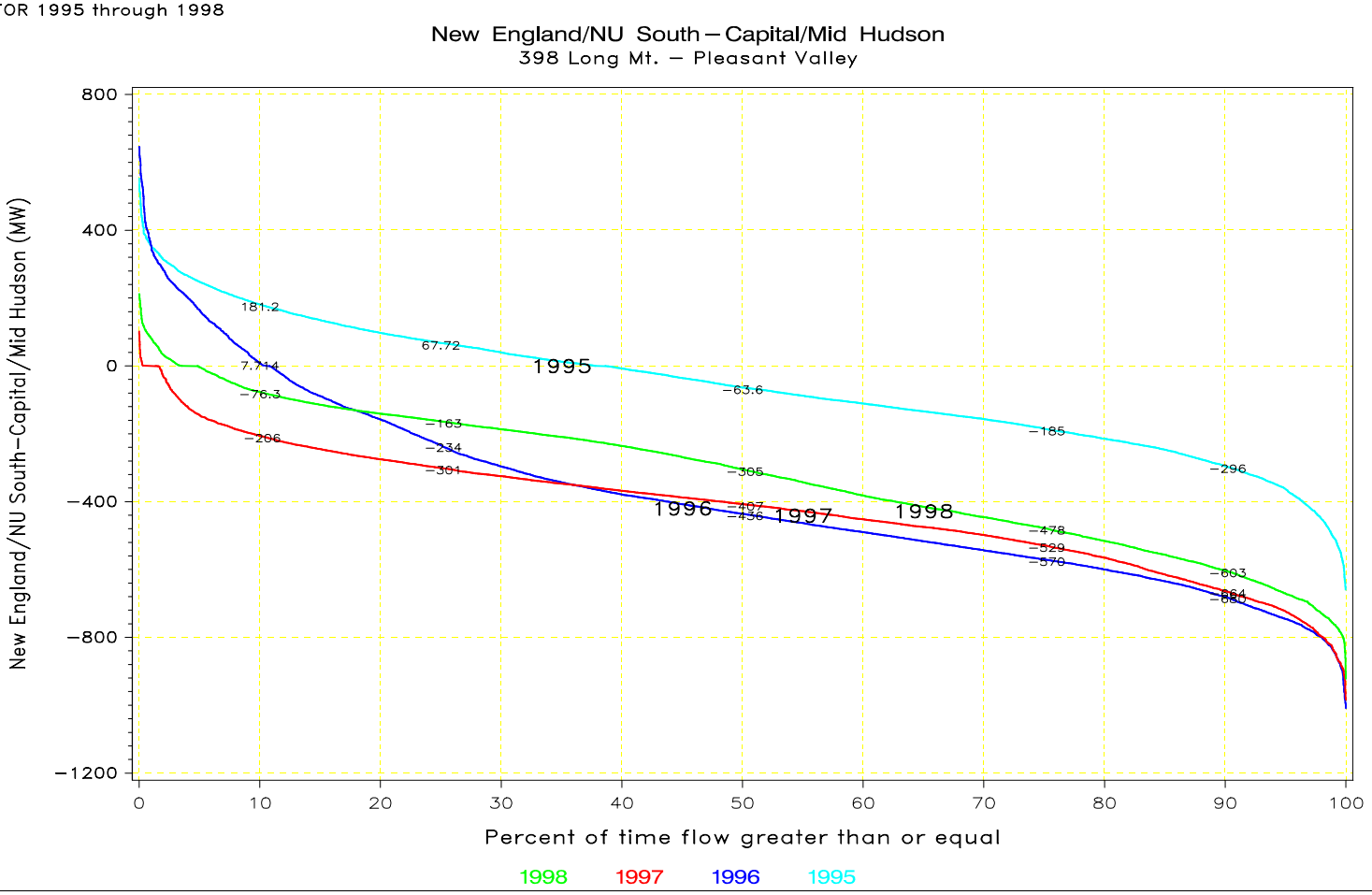


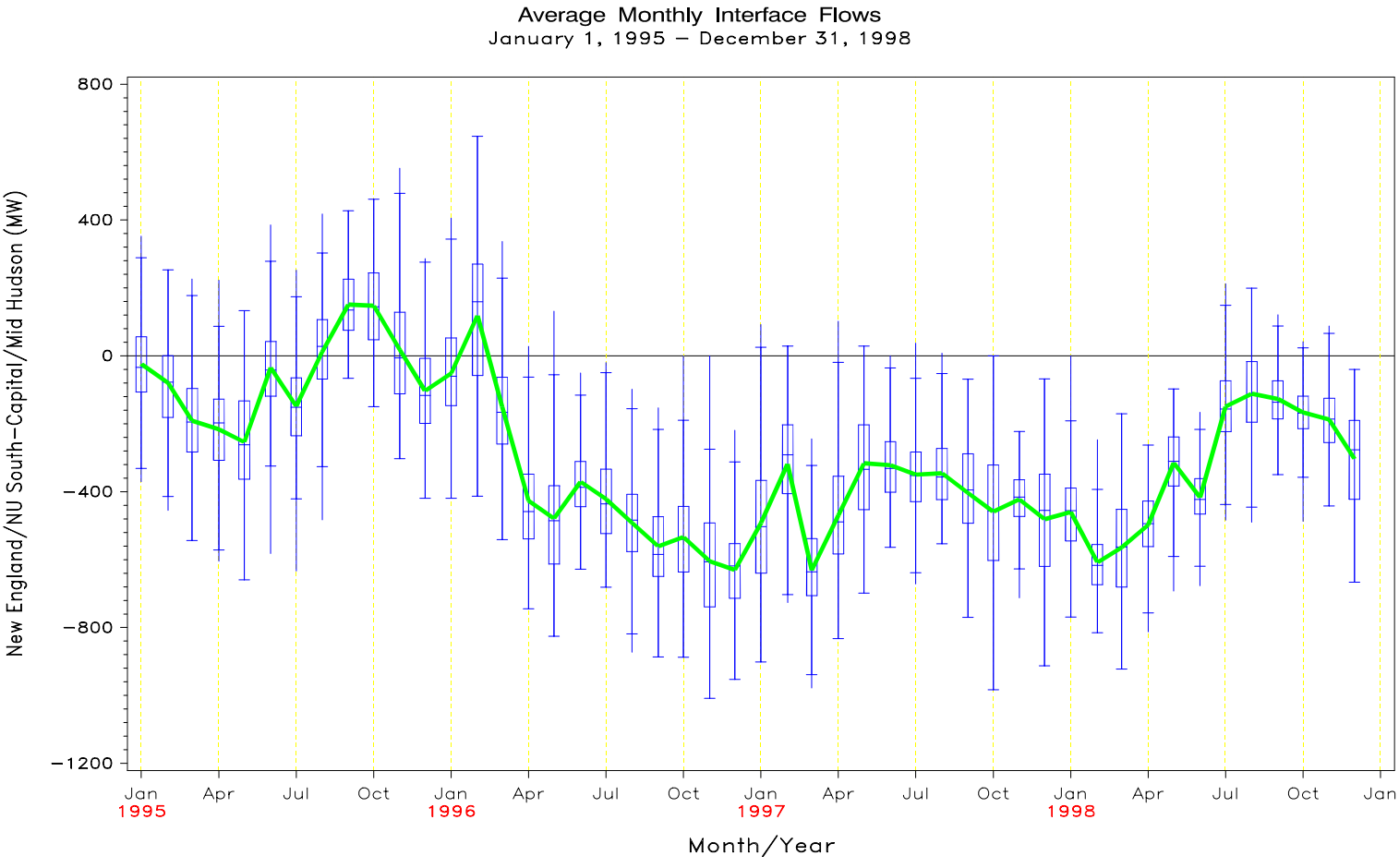
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−700	551	551	6.32	6.32
−600	836	1387	9.58	15.90
−500	1165	2552	13.36	29.26
−400	1301	3853	14.91	44.17
−300	1180	5033	13.53	57.70
−200	1760	6793	20.18	77.87
−100	1256	8049	14.40	92.27
0	530	8579	6.08	98.35
100	128	8707	1.47	99.82
200	16	8723	0.18	100.00
300	0	8723	0.00	100.00

New England/NU South – Capital/Mid Hudson
398 Long Mt. – Pleasant Valley



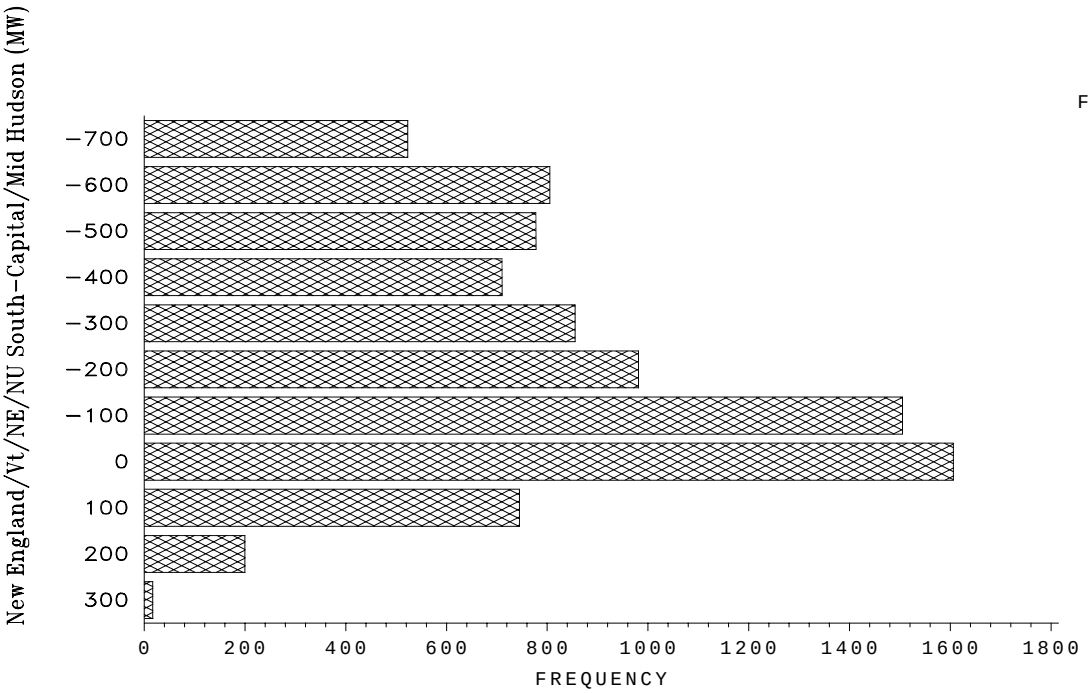
FLOW DURATION CURVE
FOR 1995 through 1998





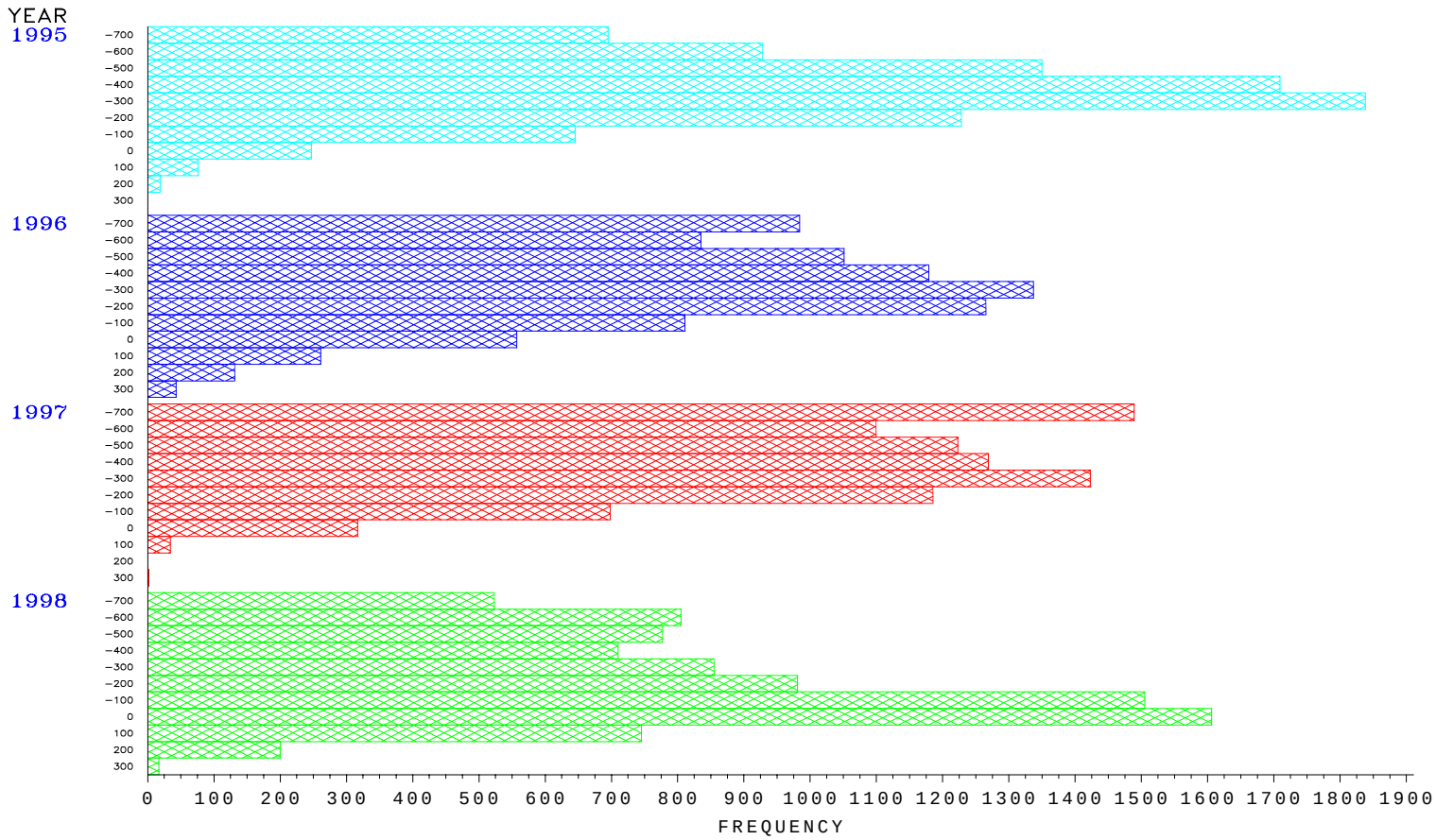
NYPP Transmission Use Statistics For January–December 1998

New England/Vt/NE/NU South – Capital/Mid Hudson

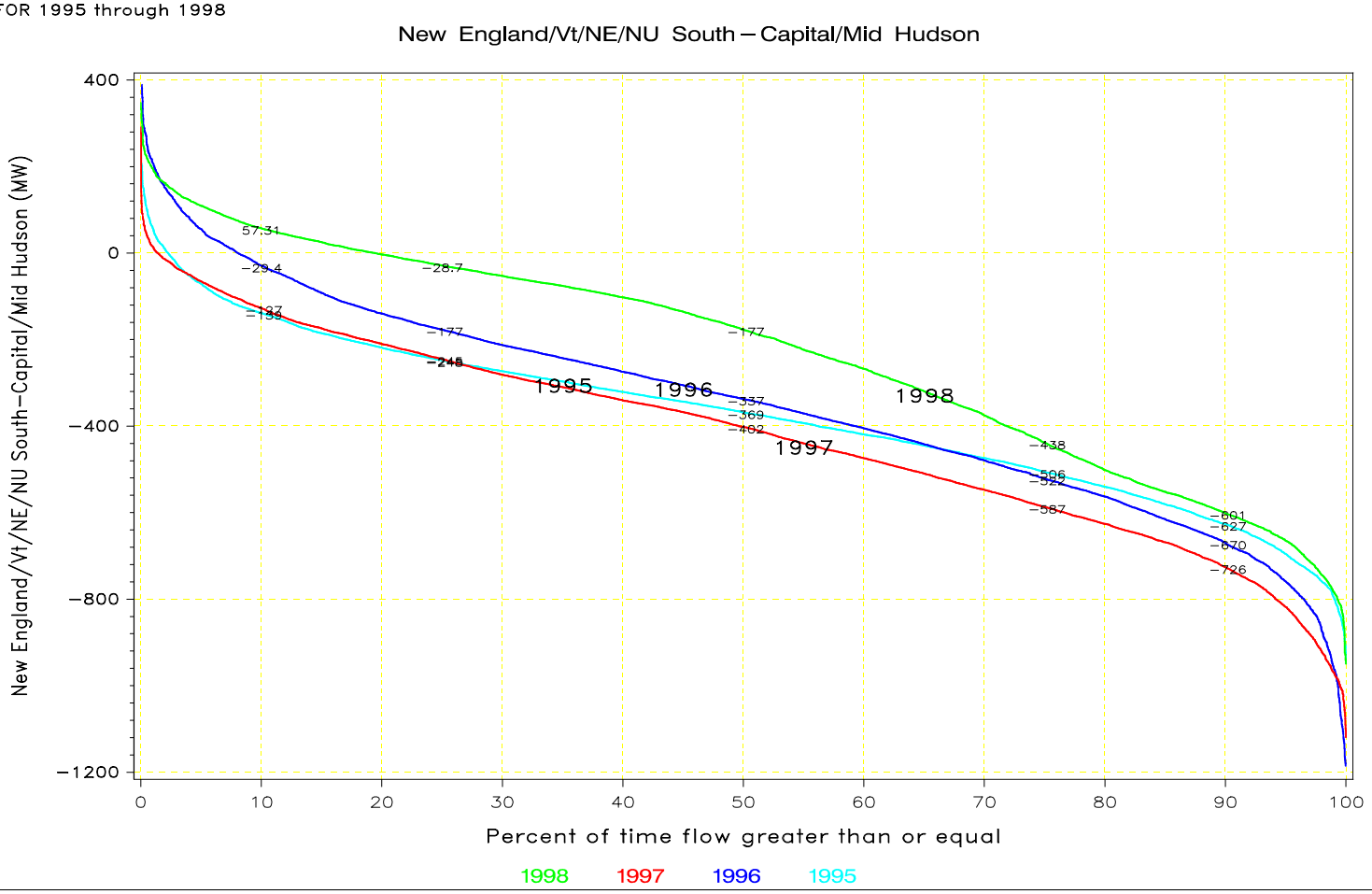


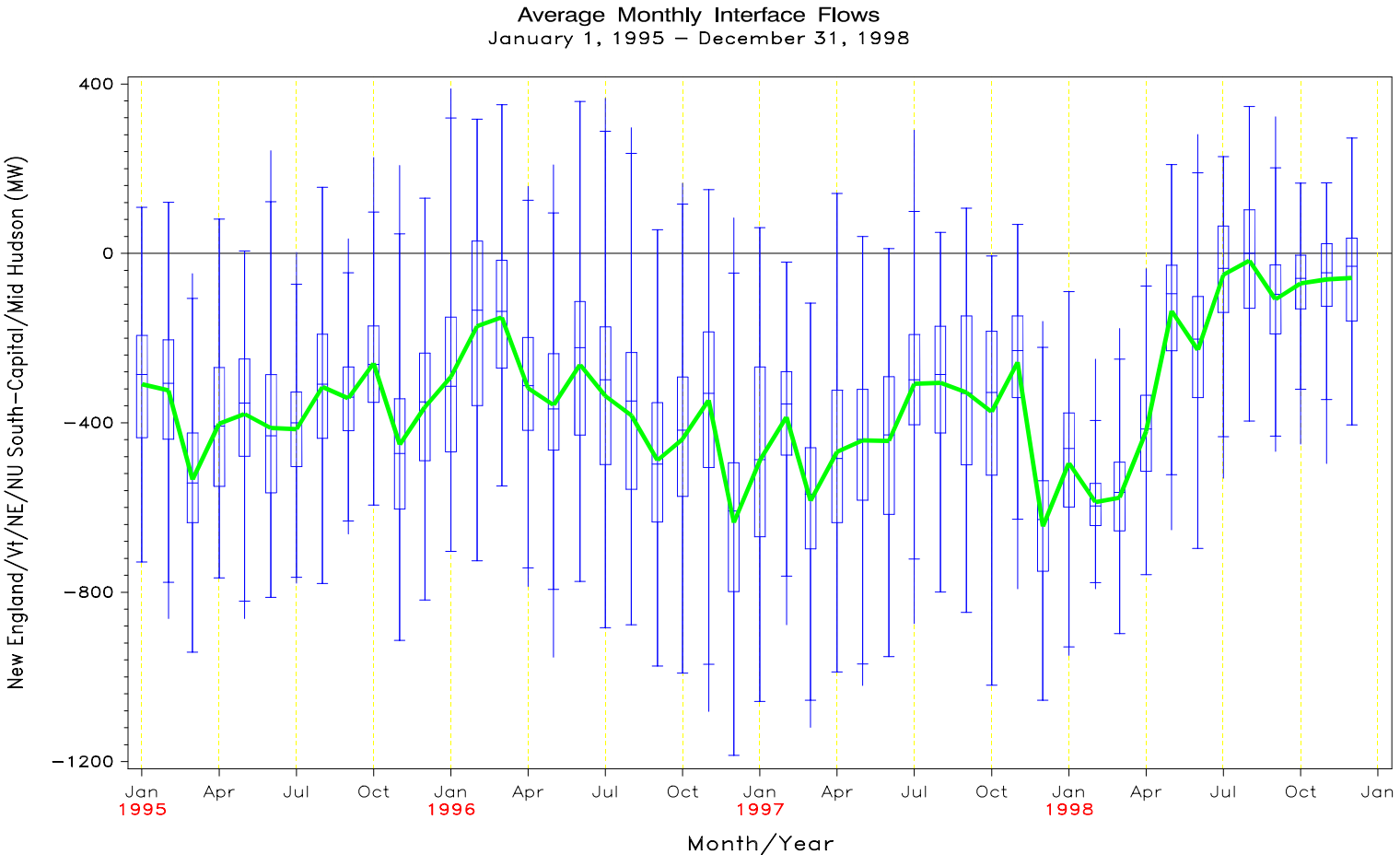
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−700	523	523	5.99	5.99
−600	805	1328	9.23	15.22
−500	777	2105	8.91	24.13
−400	710	2815	8.14	32.27
−300	855	3670	9.80	42.07
−200	981	4651	11.24	53.31
−100	1505	6156	17.25	70.56
0	1606	7762	18.41	88.97
100	745	8507	8.54	97.51
200	200	8707	2.29	99.81
300	17	8724	0.19	100.00

New England/Vt/NE/NU South – Capital/Mid Hudson



FLOW DURATION CURVE
FOR 1995 through 1998

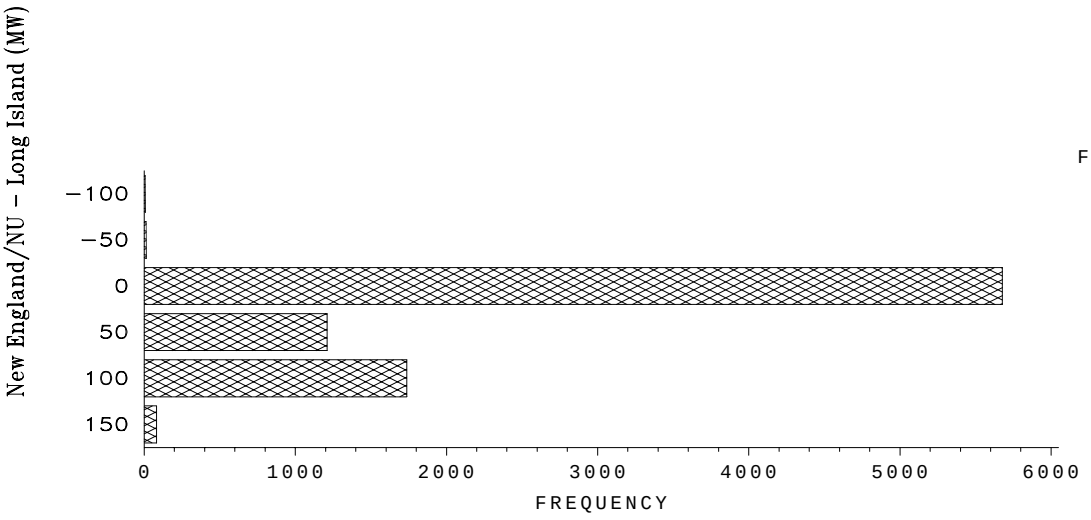




NYPP Transmission Use Statistics For January–December 1998

New England/NU – Long Island

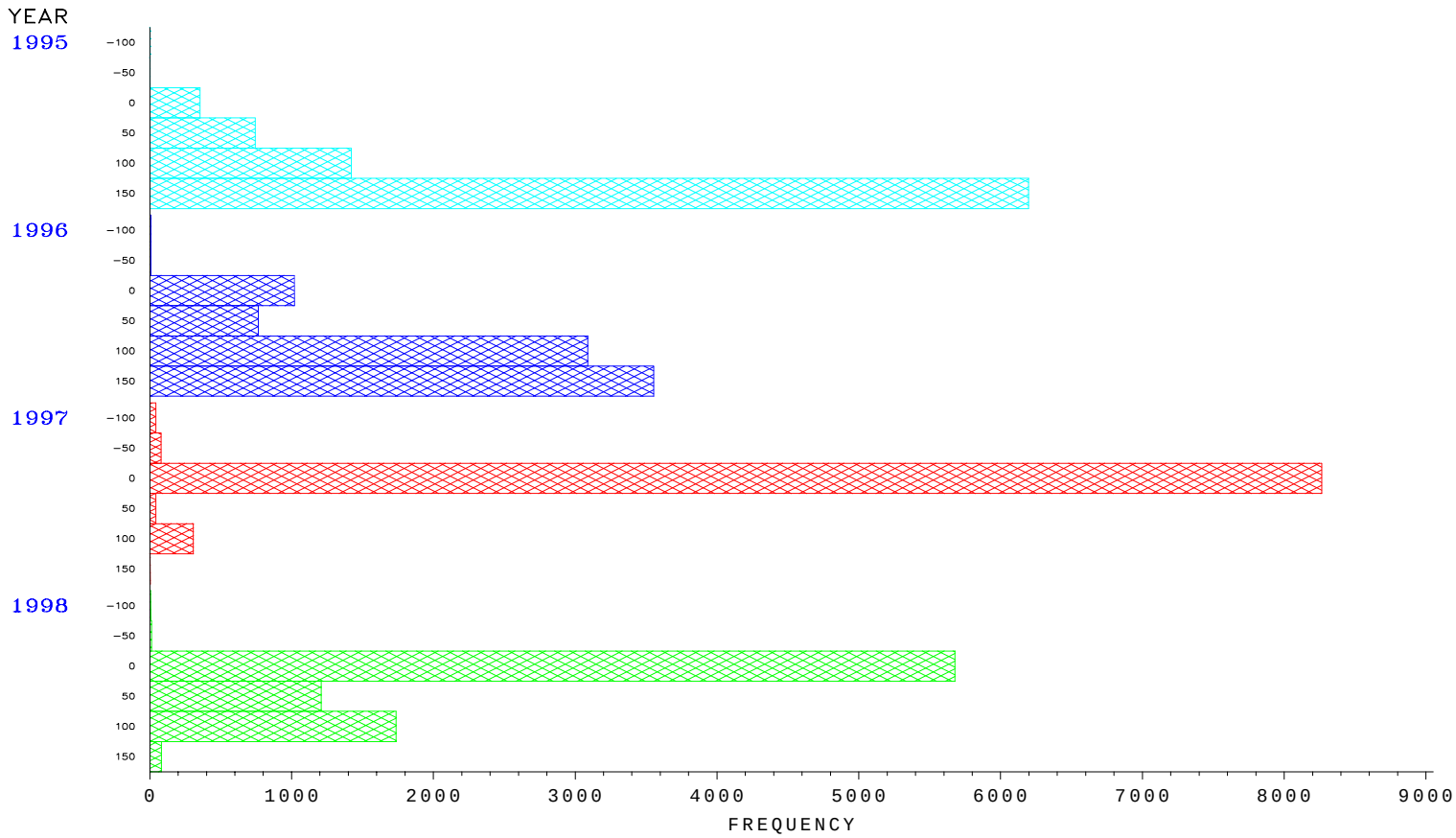
1385 Northport – Norwalk Harbor (Long Island Sound Cable)



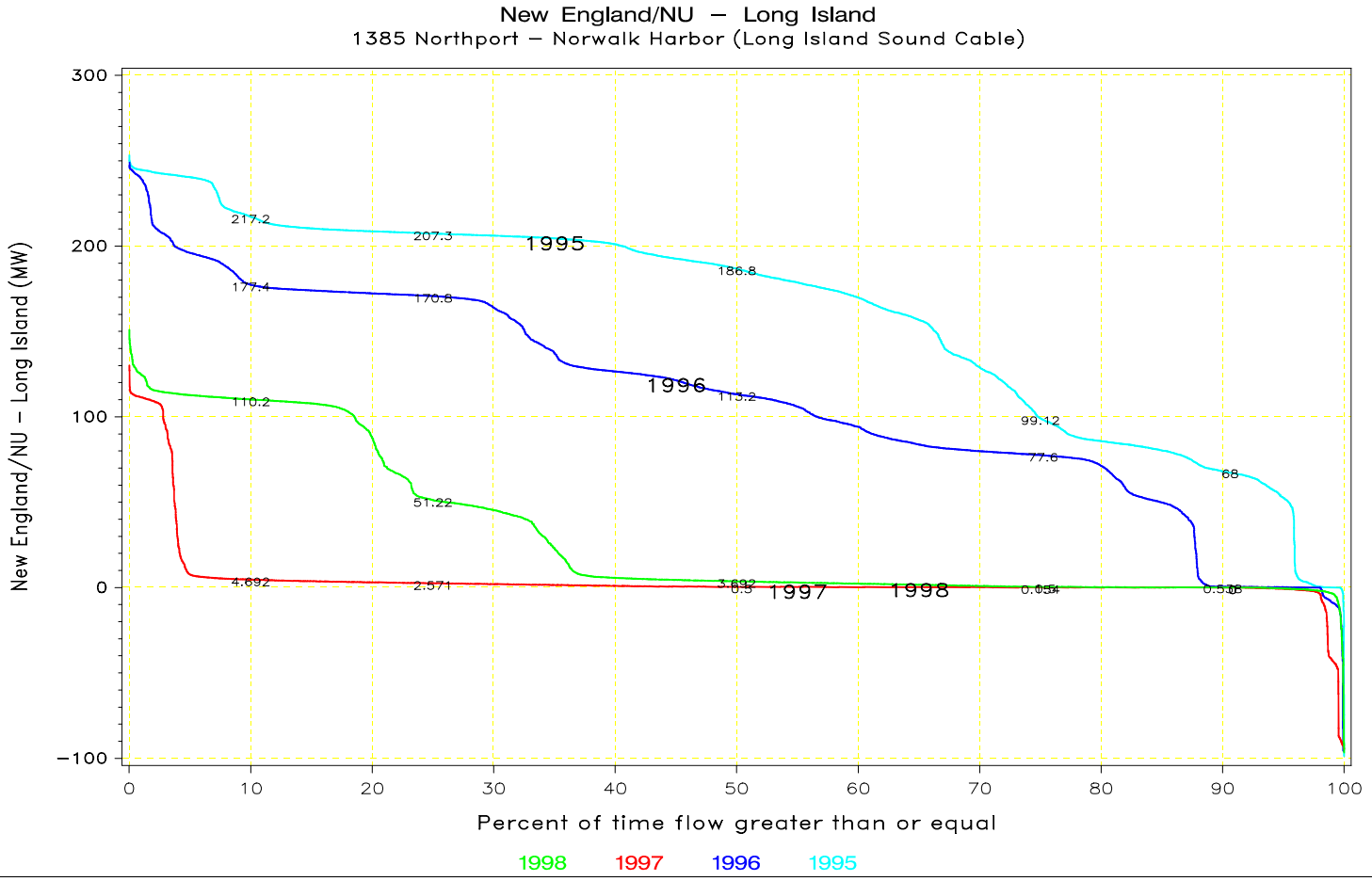
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−100	6	6	0.07	0.07
−50	12	18	0.14	0.21
0	5678	5696	65.08	65.29
50	1210	6906	13.87	79.16
100	1737	8643	19.91	99.07
150	81	8724	0.93	100.00

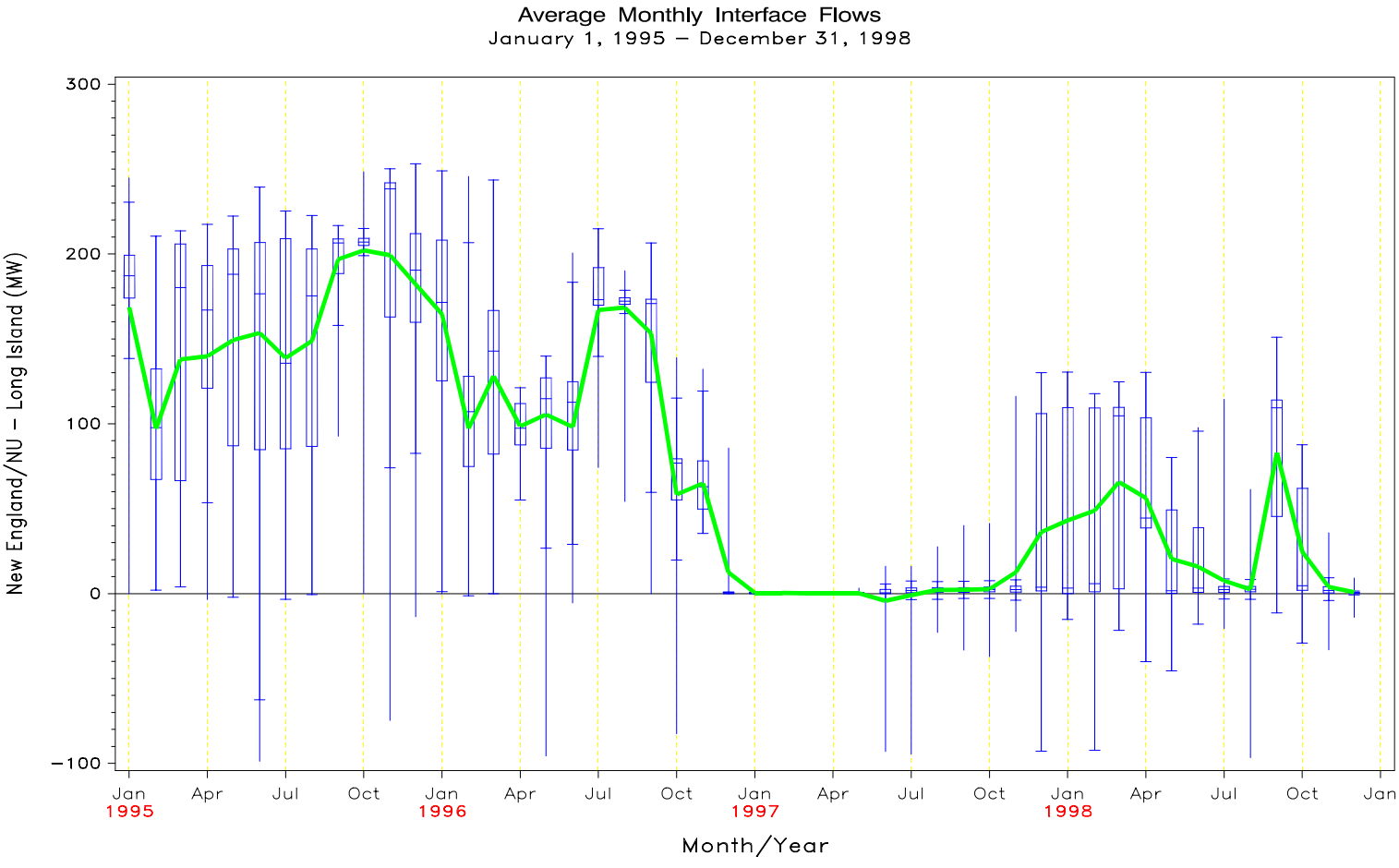
New England/NU – Long Island

1385 Northport – Norwalk Harbor (Long Island Sound Cable)



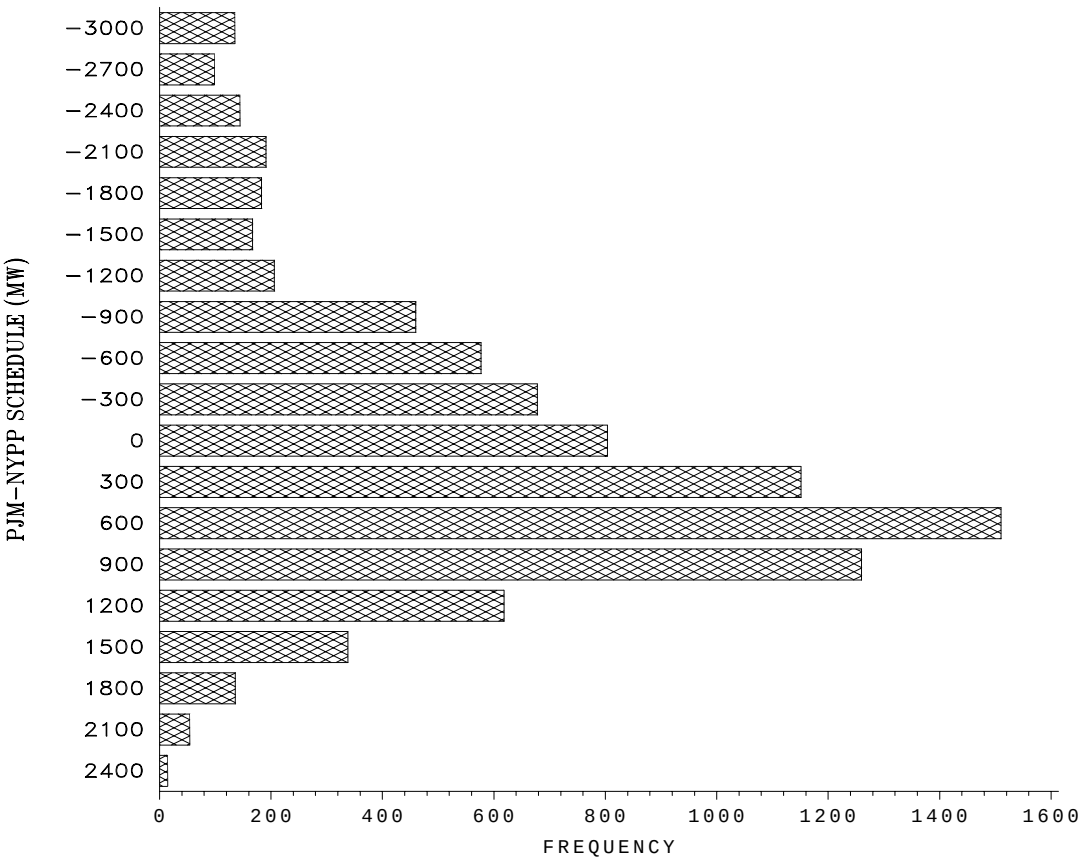
FLOW DURATION CURVE
FOR 1995 through 1998





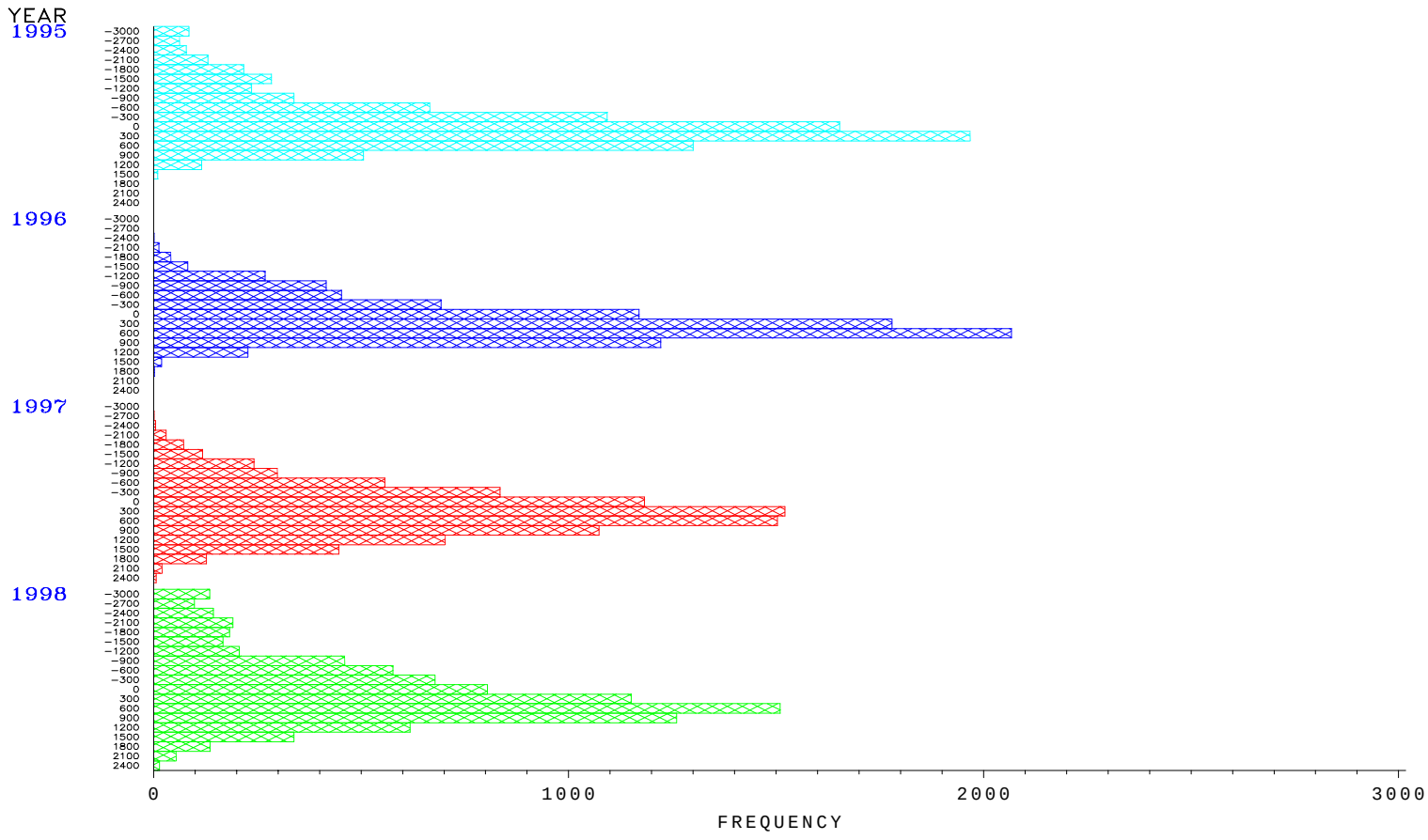
NYPP Transmission Use Statistics For January–December 1998

PJM – NYPP SCHEDULE



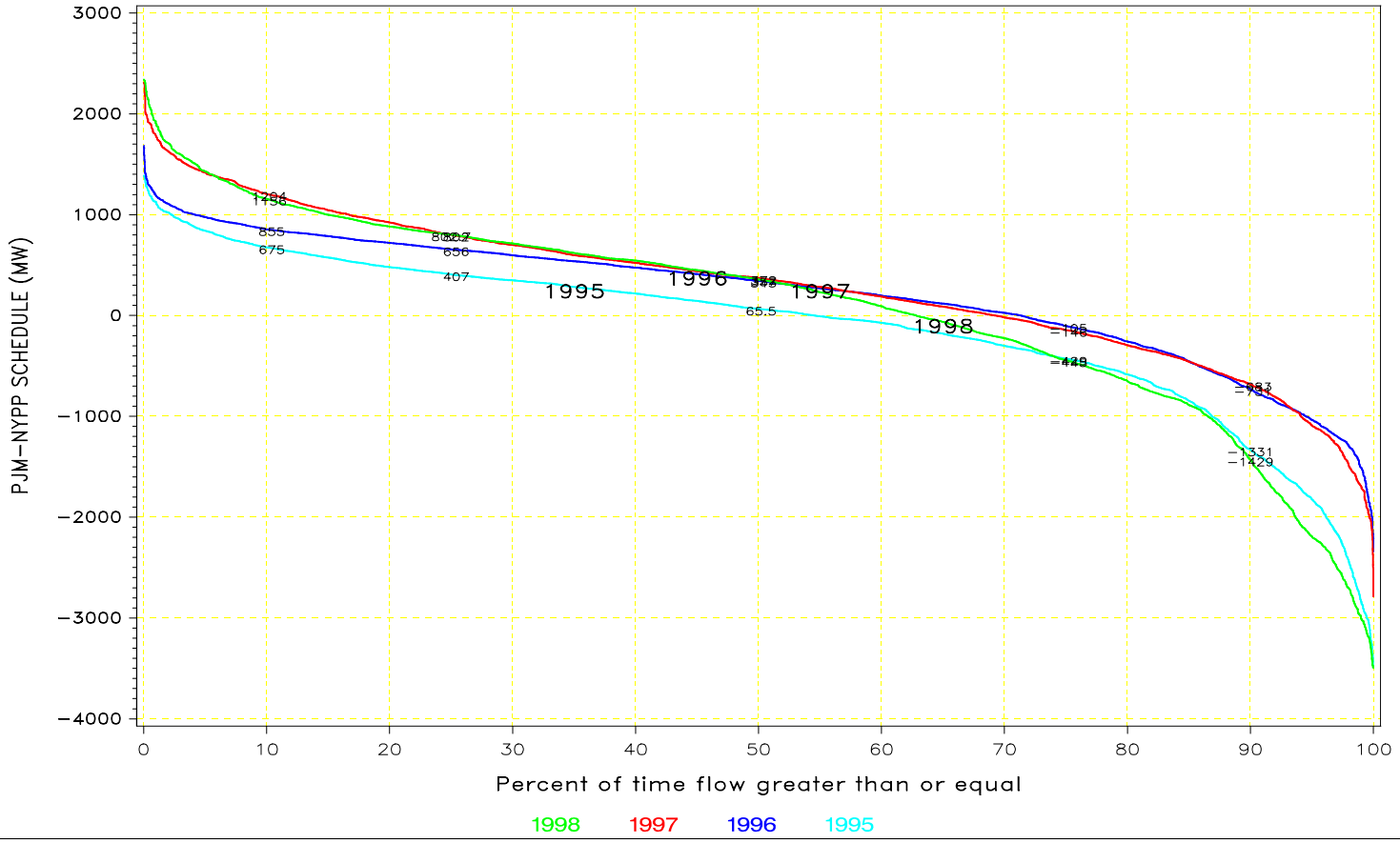
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−3000	135	135	1.55	1.55
−2700	98	233	1.12	2.67
−2400	144	377	1.65	4.32
−2100	191	568	2.19	6.51
−1800	183	751	2.10	8.61
−1500	167	918	1.91	10.52
−1200	206	1124	2.36	12.88
−900	460	1584	5.27	18.16
−600	577	2161	6.61	24.77
−300	678	2839	7.77	32.54
0	804	3643	9.22	41.76
300	1151	4794	13.19	54.95
600	1510	6304	17.31	72.26
900	1260	7564	14.44	86.70
1200	618	8182	7.08	93.79
1500	338	8520	3.87	97.66
1800	136	8656	1.56	99.22
2100	54	8710	0.62	99.84
2400	14	8724	0.16	100.00

PJM – NYPP SCHEDULE

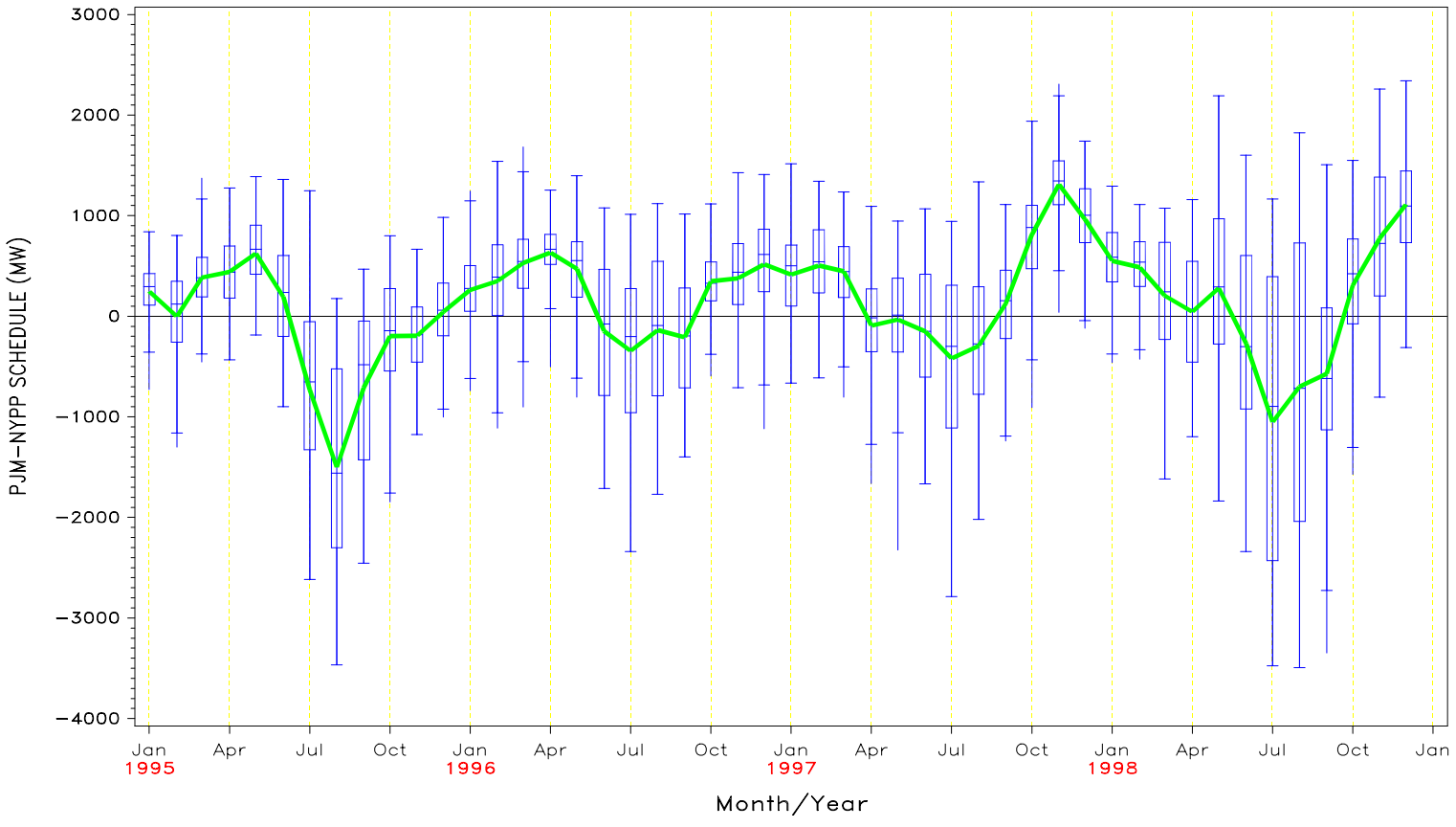


FLOW DURATION CURVE
FOR 1995 through 1998

PJM – NYPP SCHEDULE

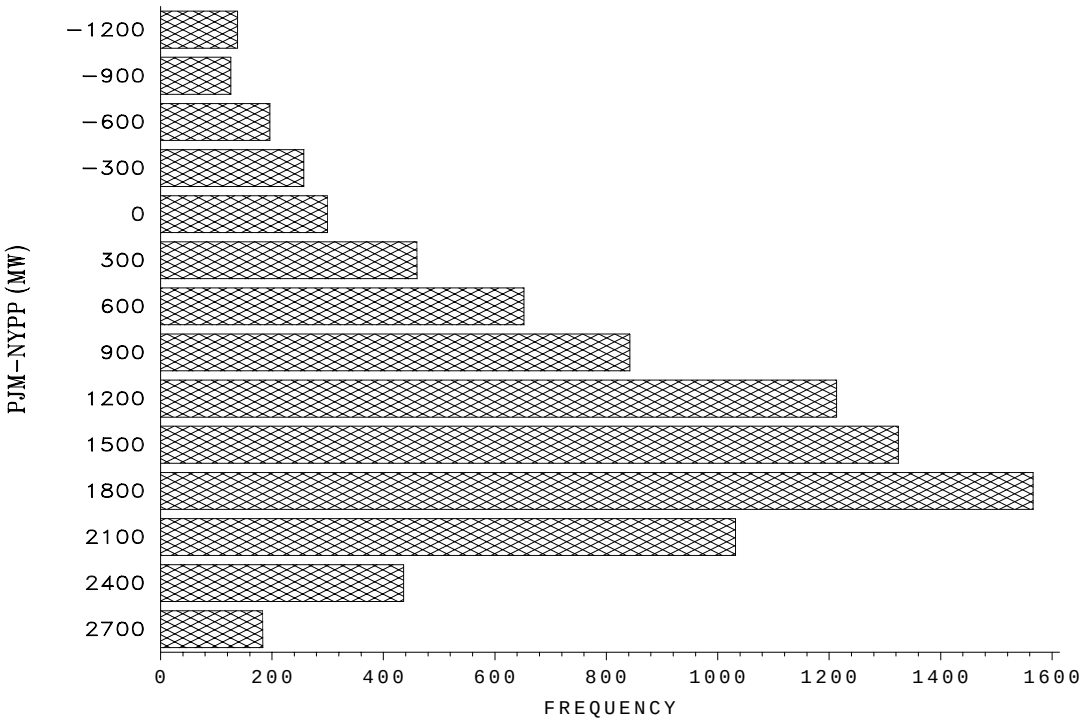


Average Monthly Interface Flows
January 1, 1995 – December 31, 1998



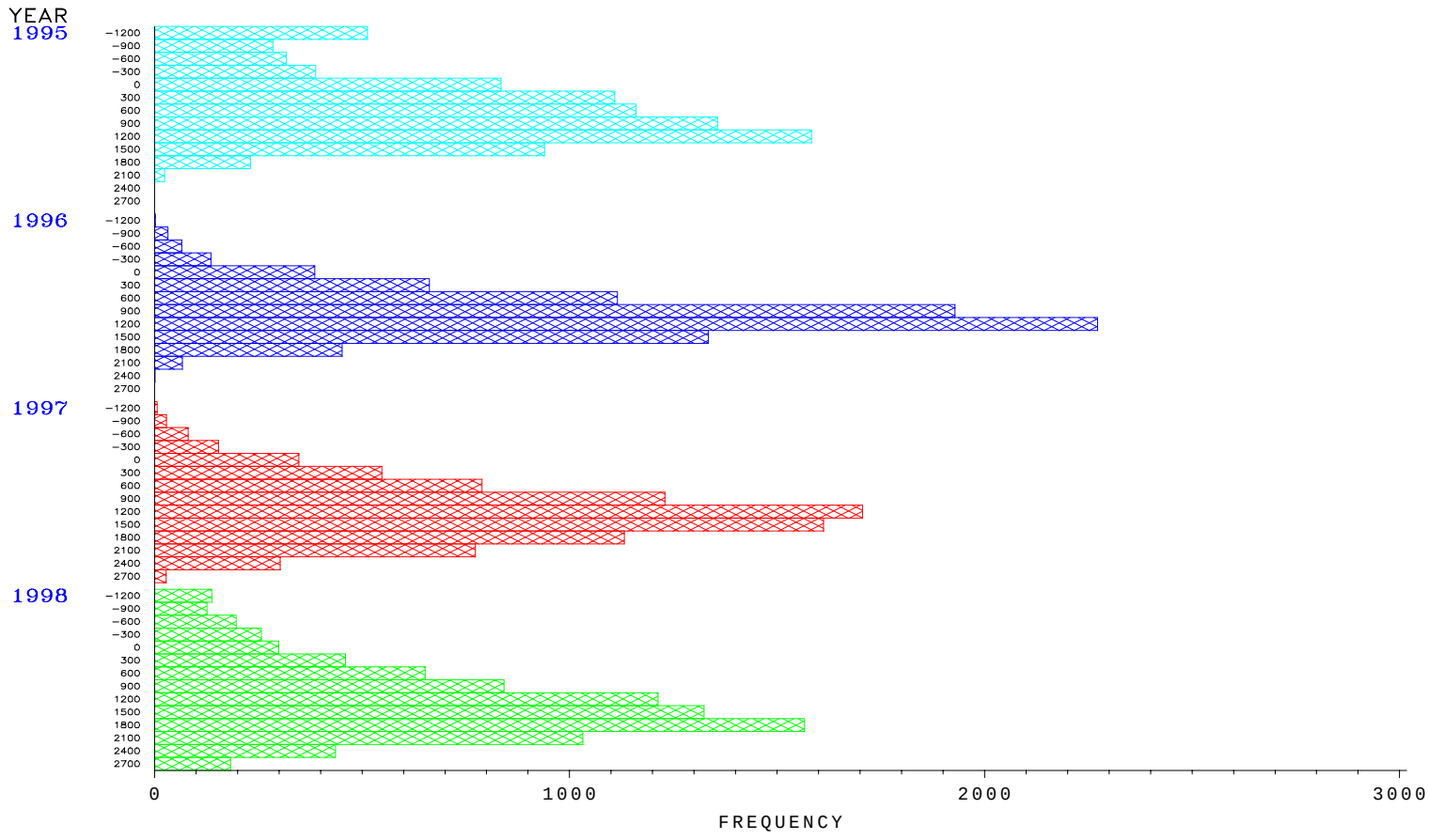
NYPP Transmission Use Statistics For January–December 1998

PJM – NYPP



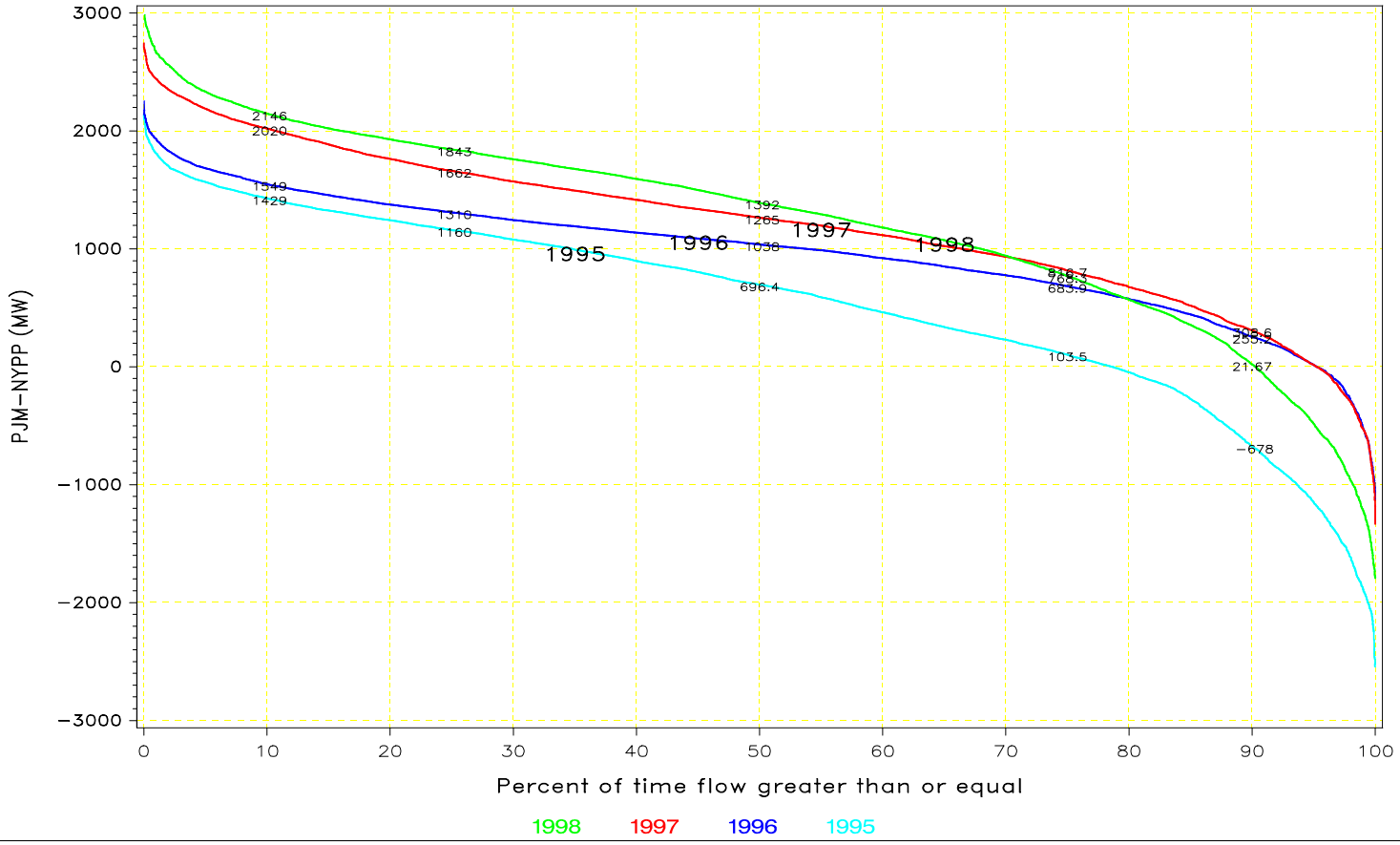
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−1200	138	138	1.58	1.58
−900	126	264	1.44	3.03
−600	196	460	2.25	5.27
−300	257	717	2.95	8.22
0	299	1016	3.43	11.65
300	460	1476	5.27	16.92
600	652	2128	7.47	24.39
900	842	2970	9.65	34.04
1200	1213	4183	13.90	47.95
1500	1324	5507	15.18	63.12
1800	1566	7073	17.95	81.08
2100	1032	8105	11.83	92.90
2400	436	8541	5.00	97.90
2700	183	8724	2.10	100.00

PJM – NYPP

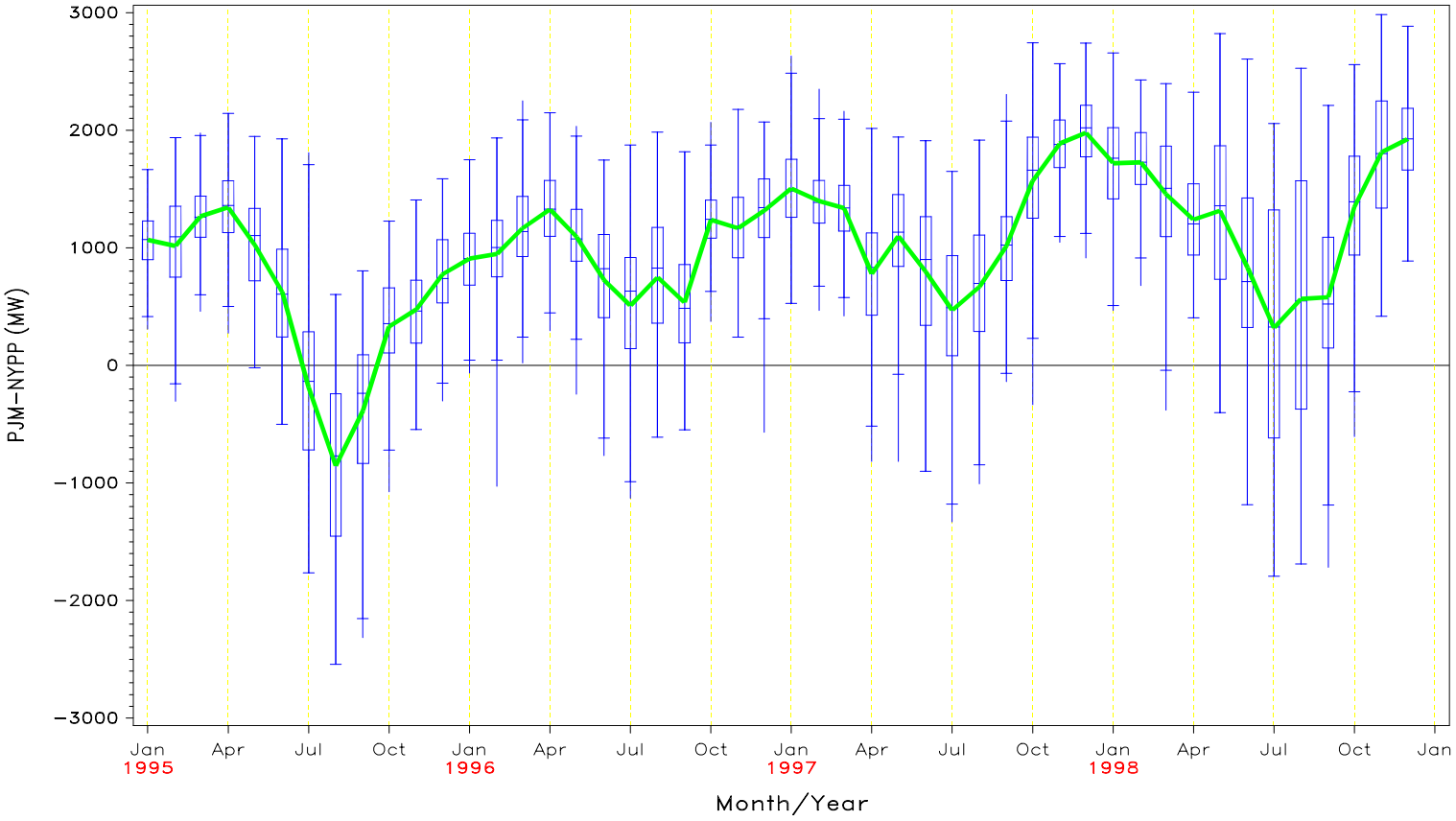


FLOW DURATION CURVE
FOR 1995 through 1998

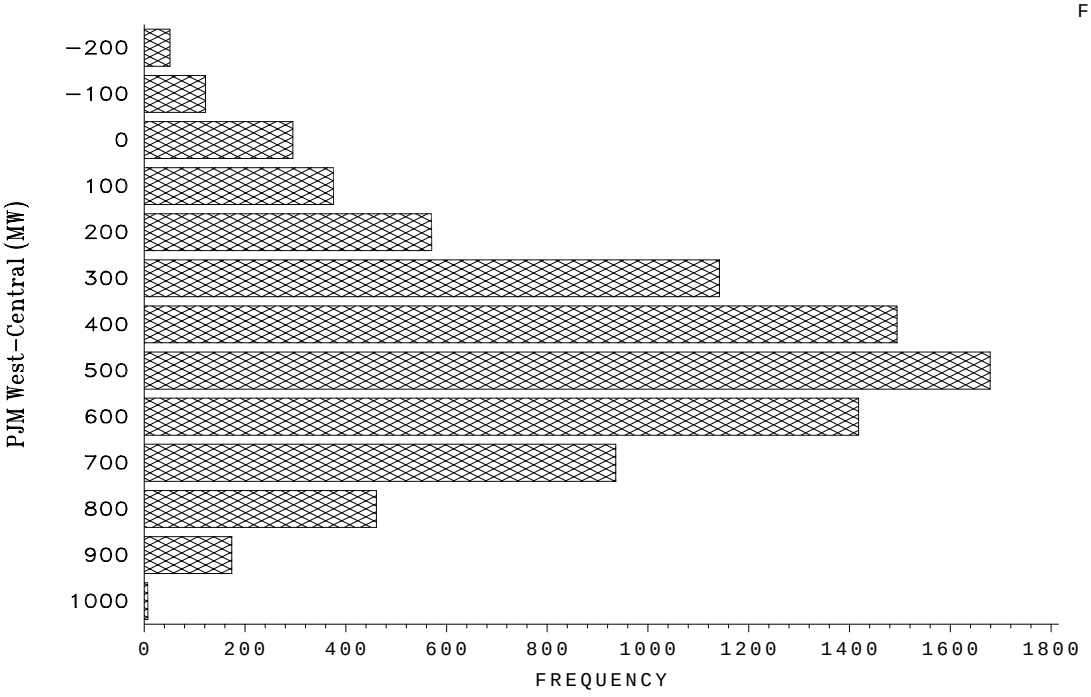
PJM – NYPP



Average Monthly Interface Flows
January 1, 1995 – December 31, 1998

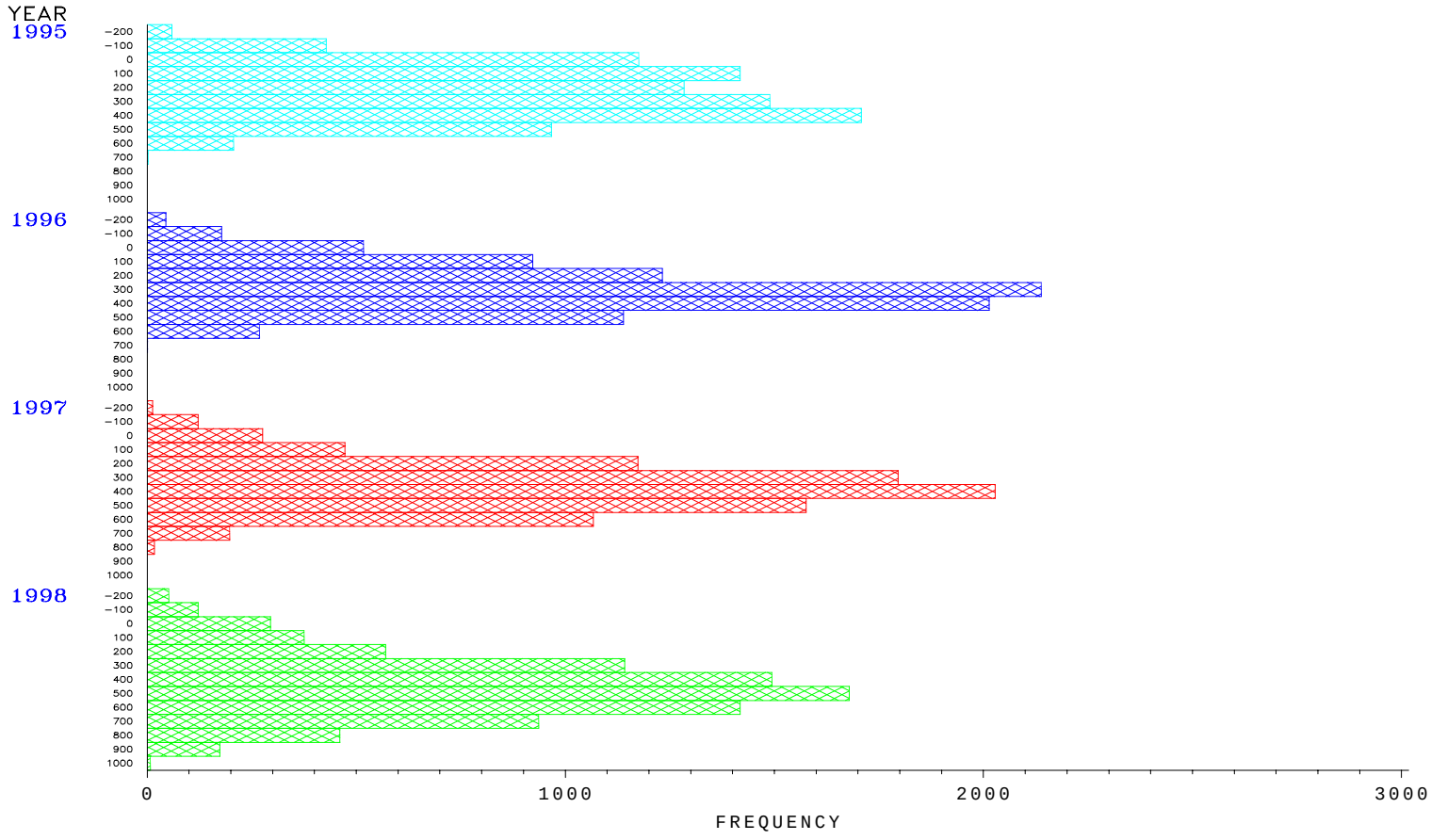


PJM West – Central

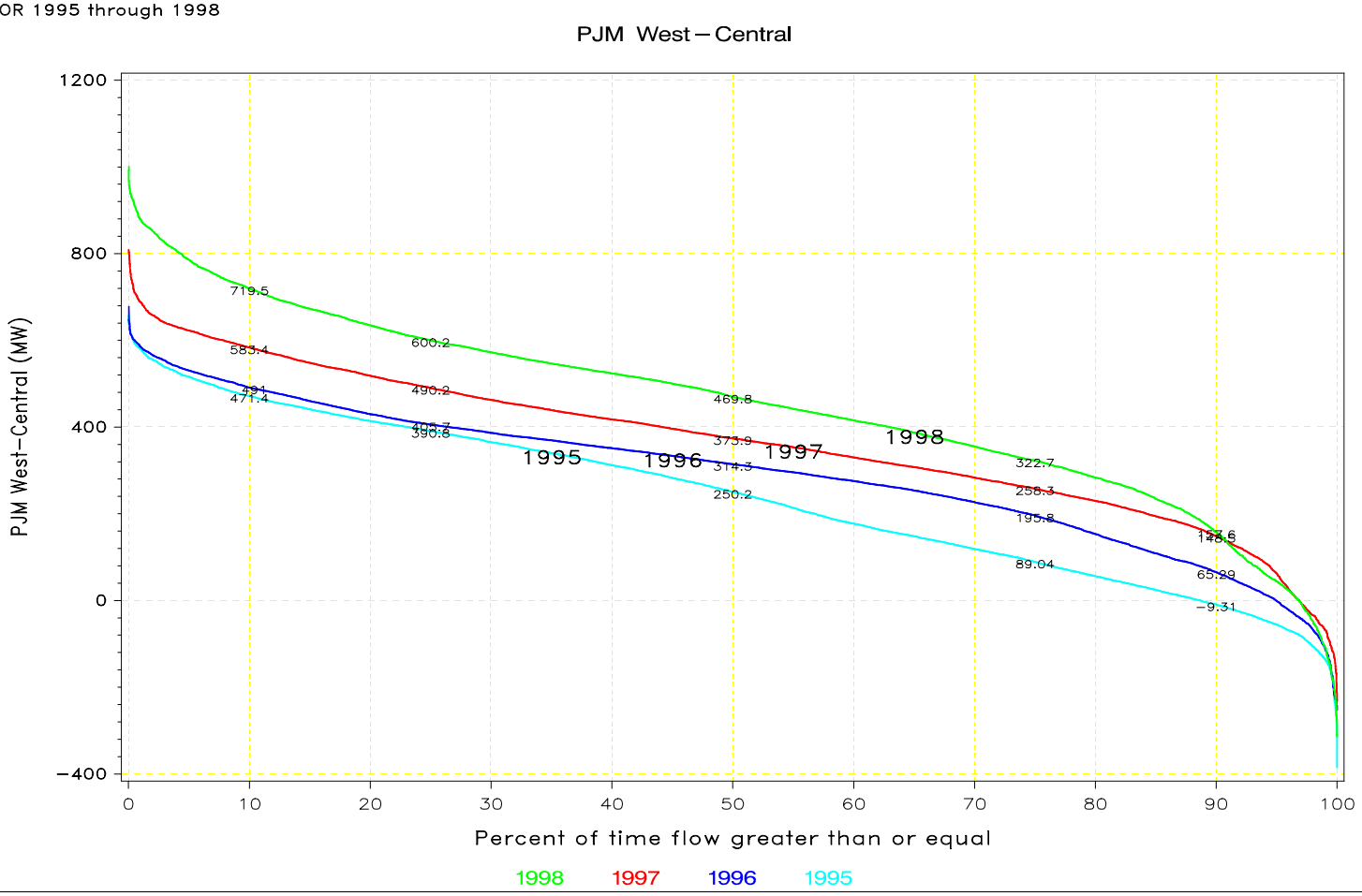


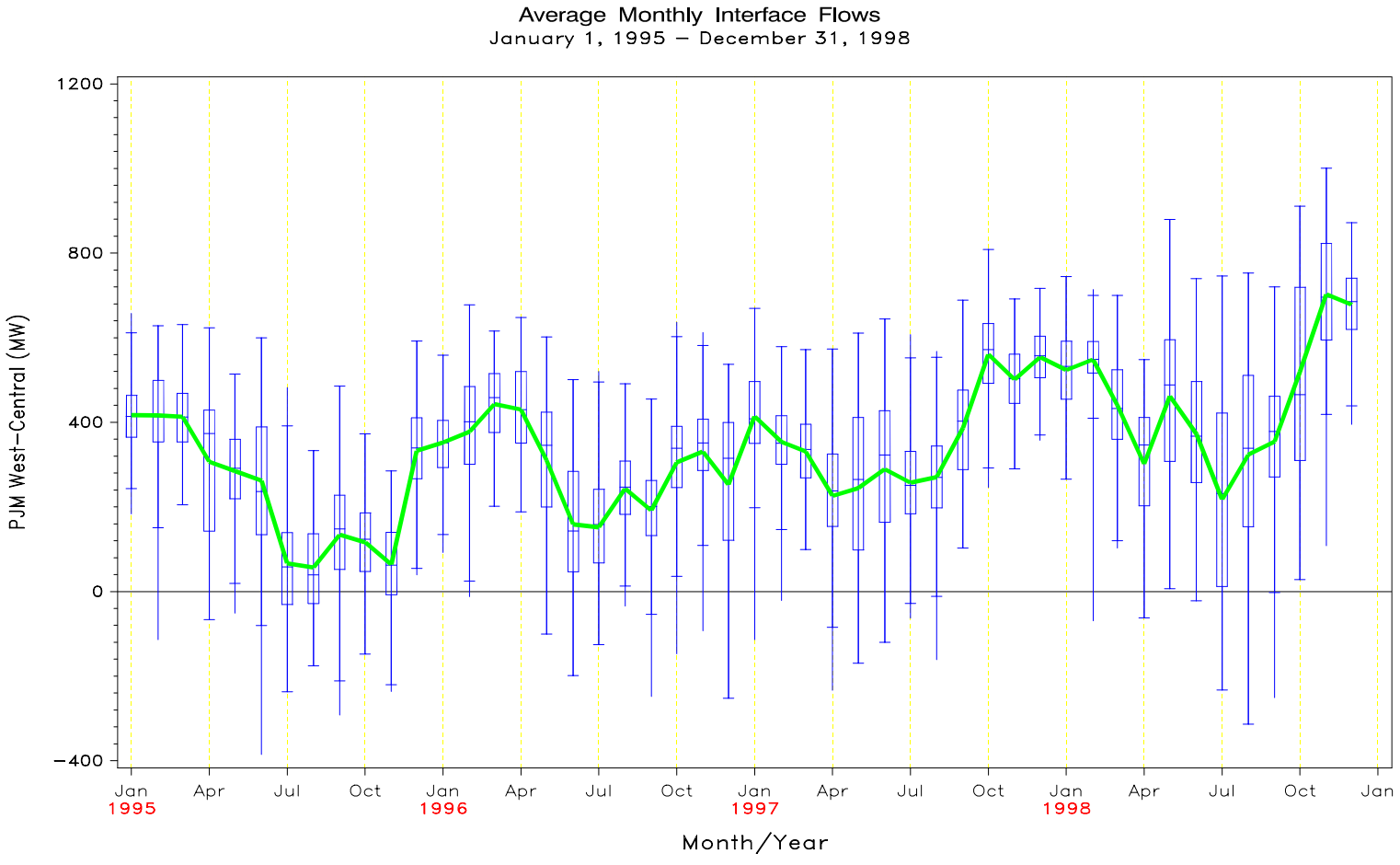
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−200	51	51	0.58	0.58
−100	122	173	1.40	1.98
0	295	468	3.38	5.36
100	375	843	4.30	9.66
200	570	1413	6.53	16.20
300	1142	2555	13.09	29.29
400	1494	4049	17.13	46.41
500	1679	5728	19.25	65.66
600	1418	7146	16.25	81.91
700	936	8082	10.73	92.64
800	461	8543	5.28	97.93
900	174	8717	1.99	99.92
1000	7	8724	0.08	100.00

PJM West – Central



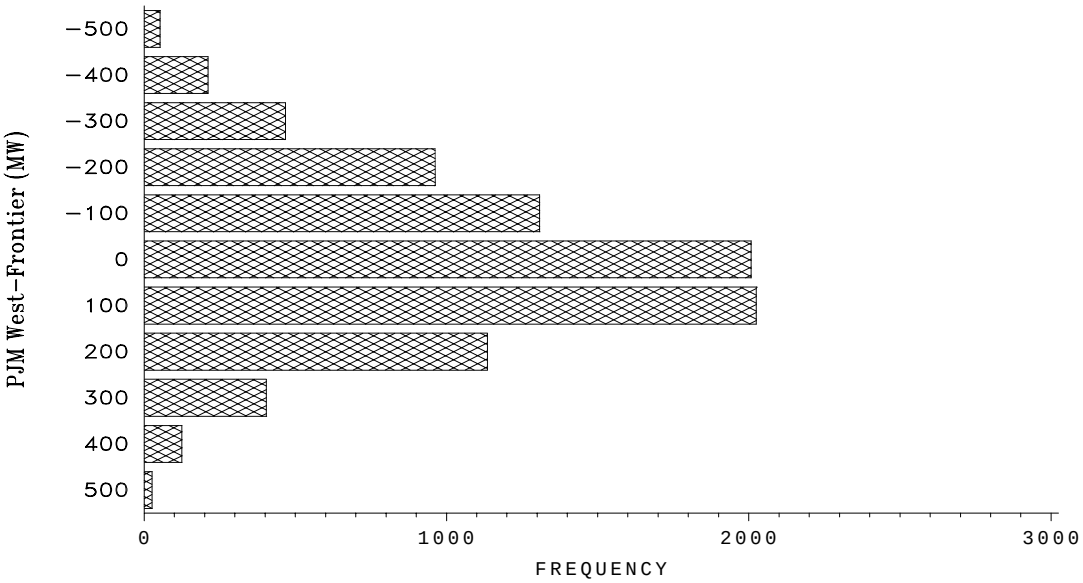
FLOW DURATION CURVE
FOR 1995 through 1998





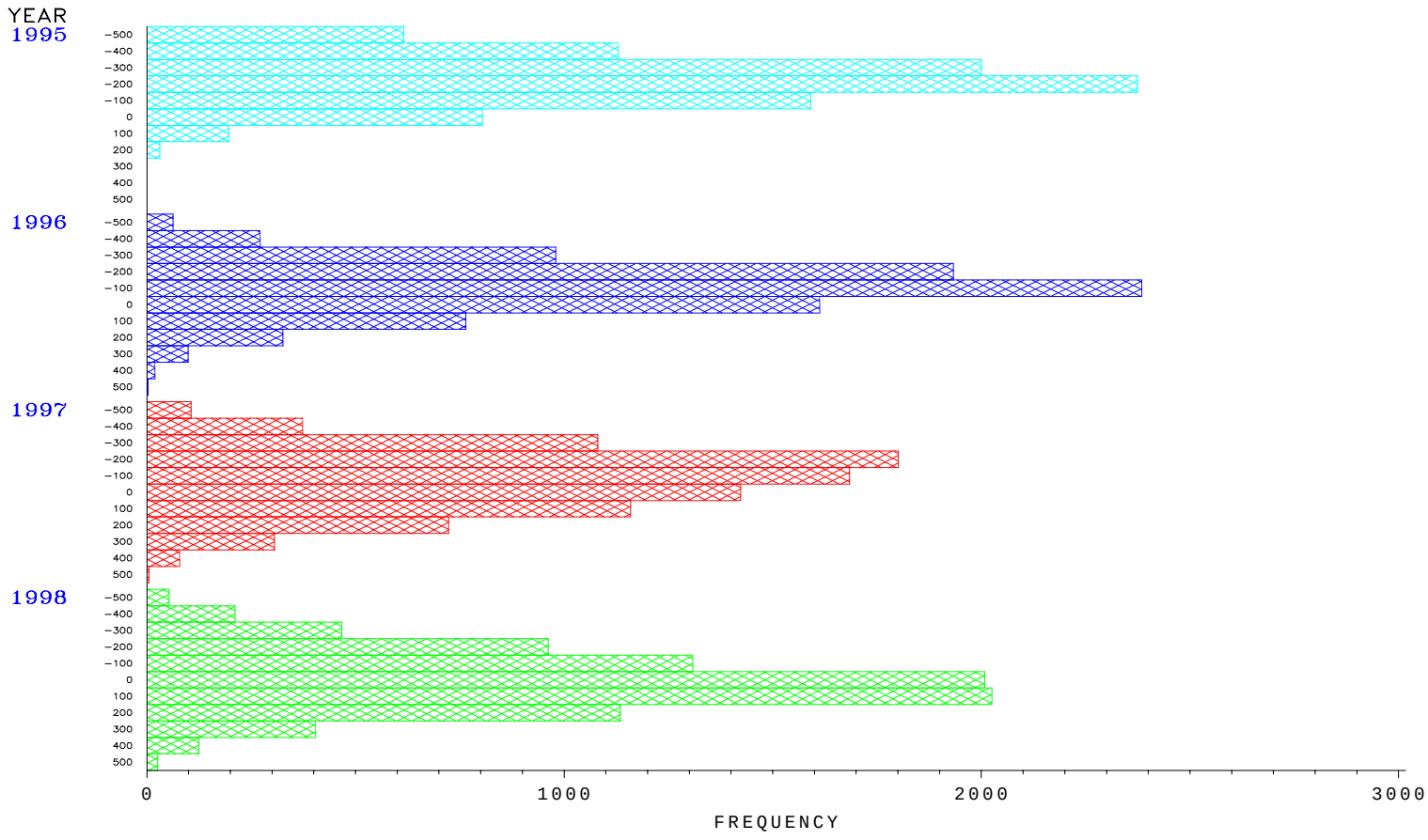
NYPP Transmission Use Statistics For January–December 1998

PJM West – Frontier



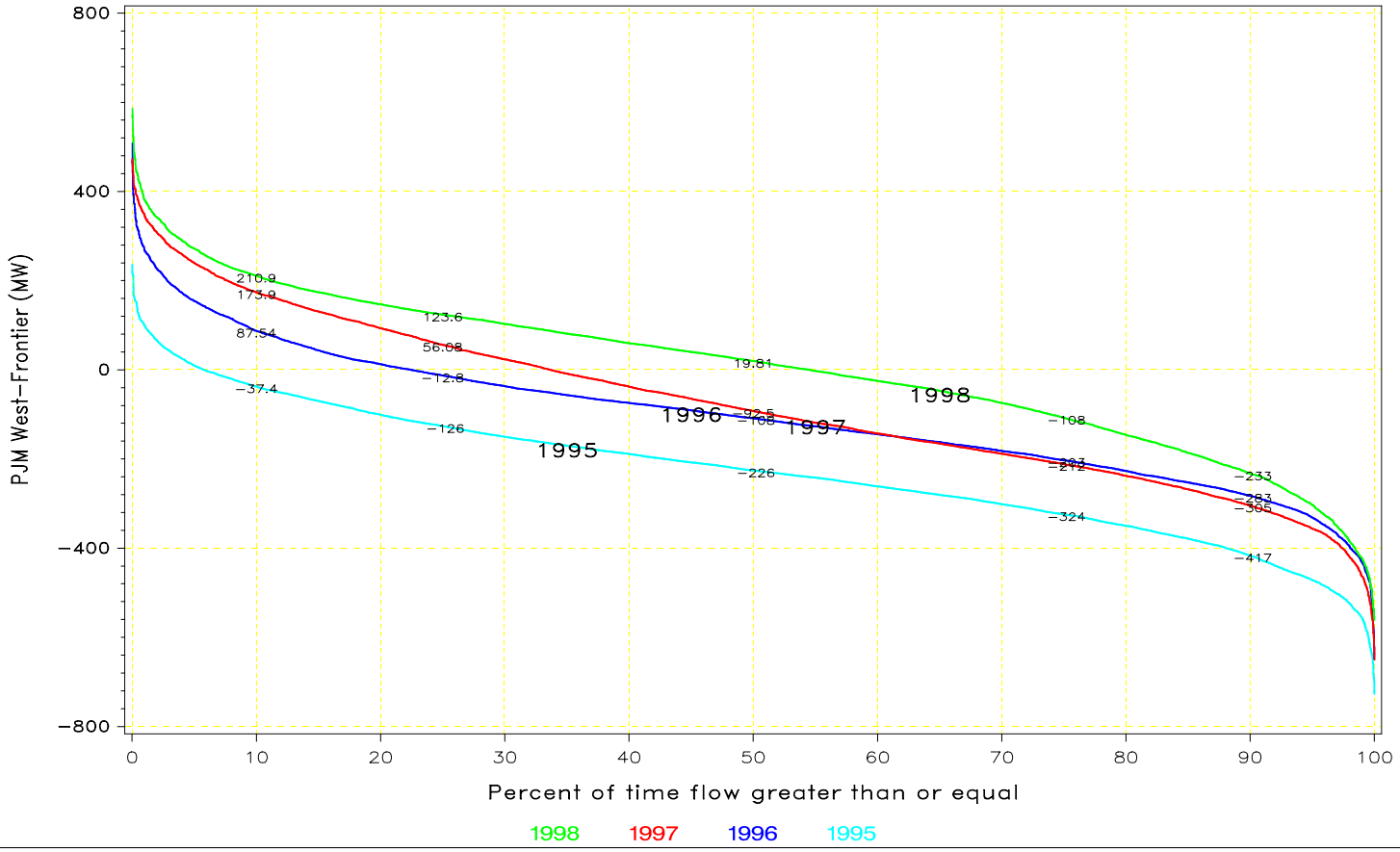
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−500	53	53	0.61	0.61
−400	211	264	2.42	3.03
−300	467	731	5.35	8.38
−200	962	1693	11.03	19.41
−100	1308	3001	14.99	34.40
0	2008	5009	23.02	57.42
100	2025	7034	23.21	80.63
200	1135	8169	13.01	93.64
300	404	8573	4.63	98.27
400	125	8698	1.43	99.70
500	26	8724	0.30	100.00

PJM West – Frontier

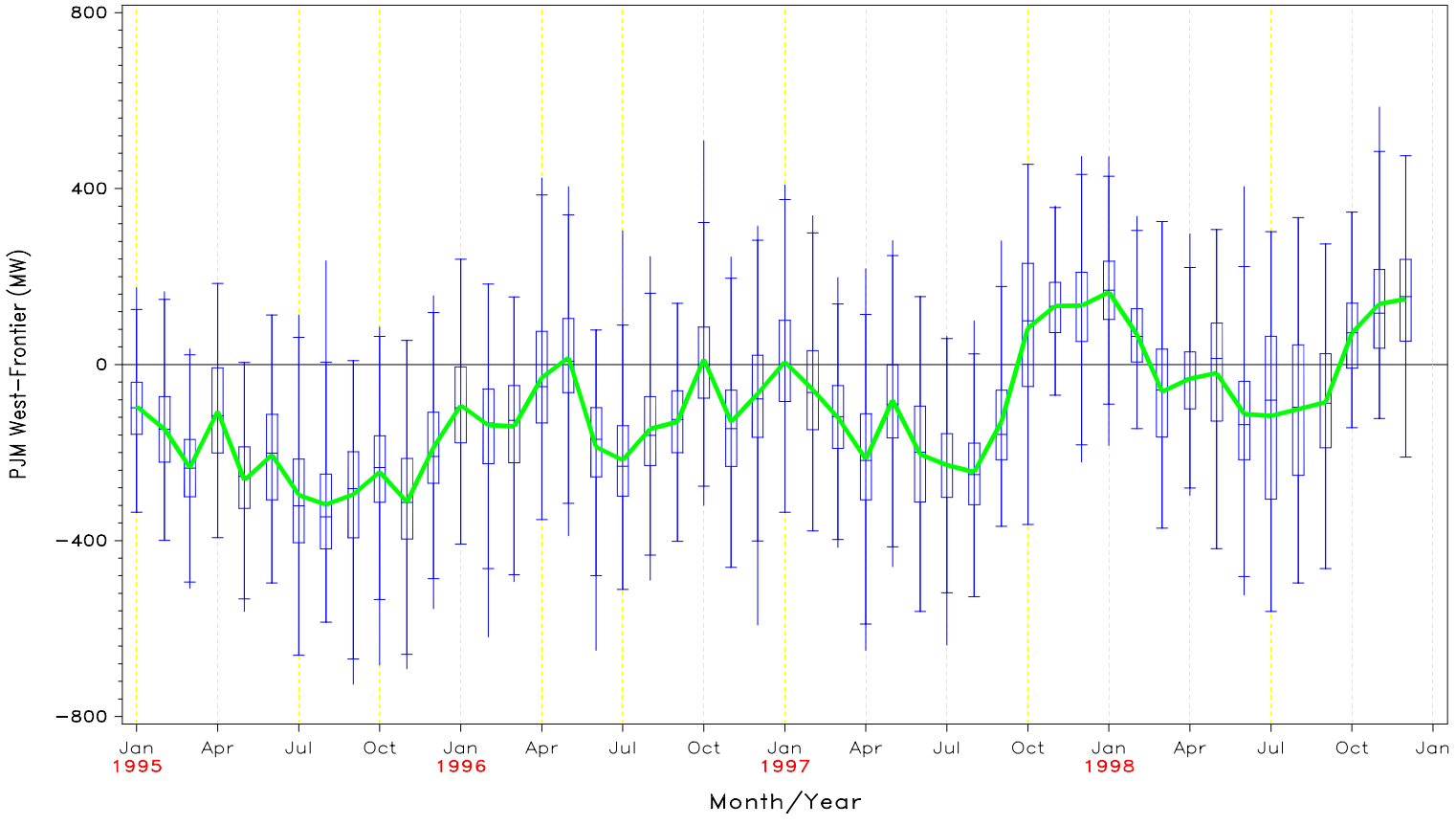


FLOW DURATION CURVE
FOR 1995 through 1998

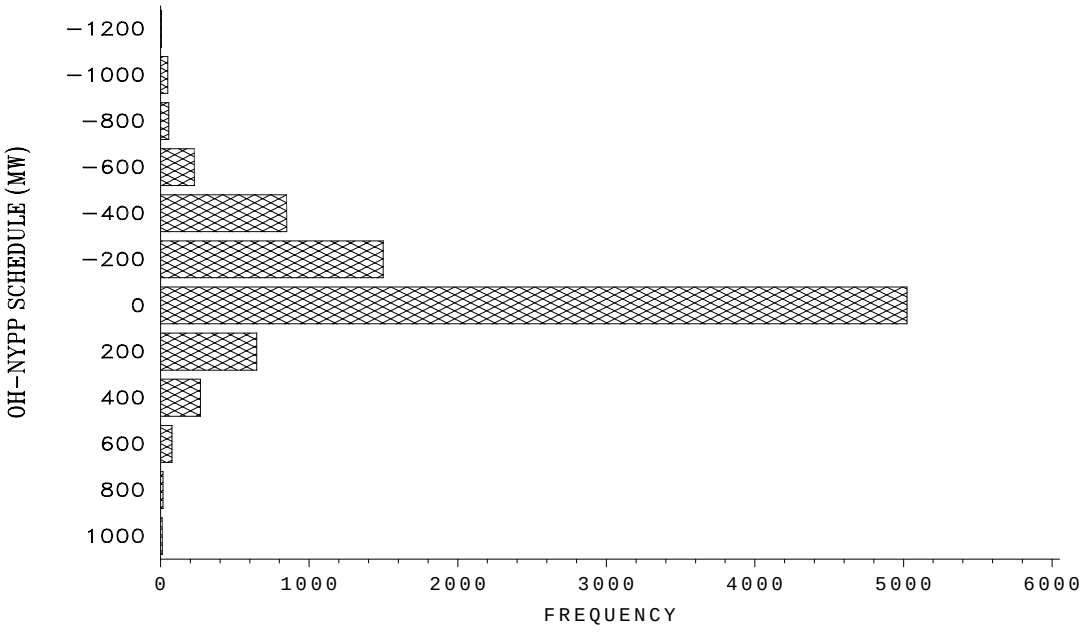
PJM West – Frontier



Average Monthly Interface Flows
January 1, 1995 – December 31, 1998

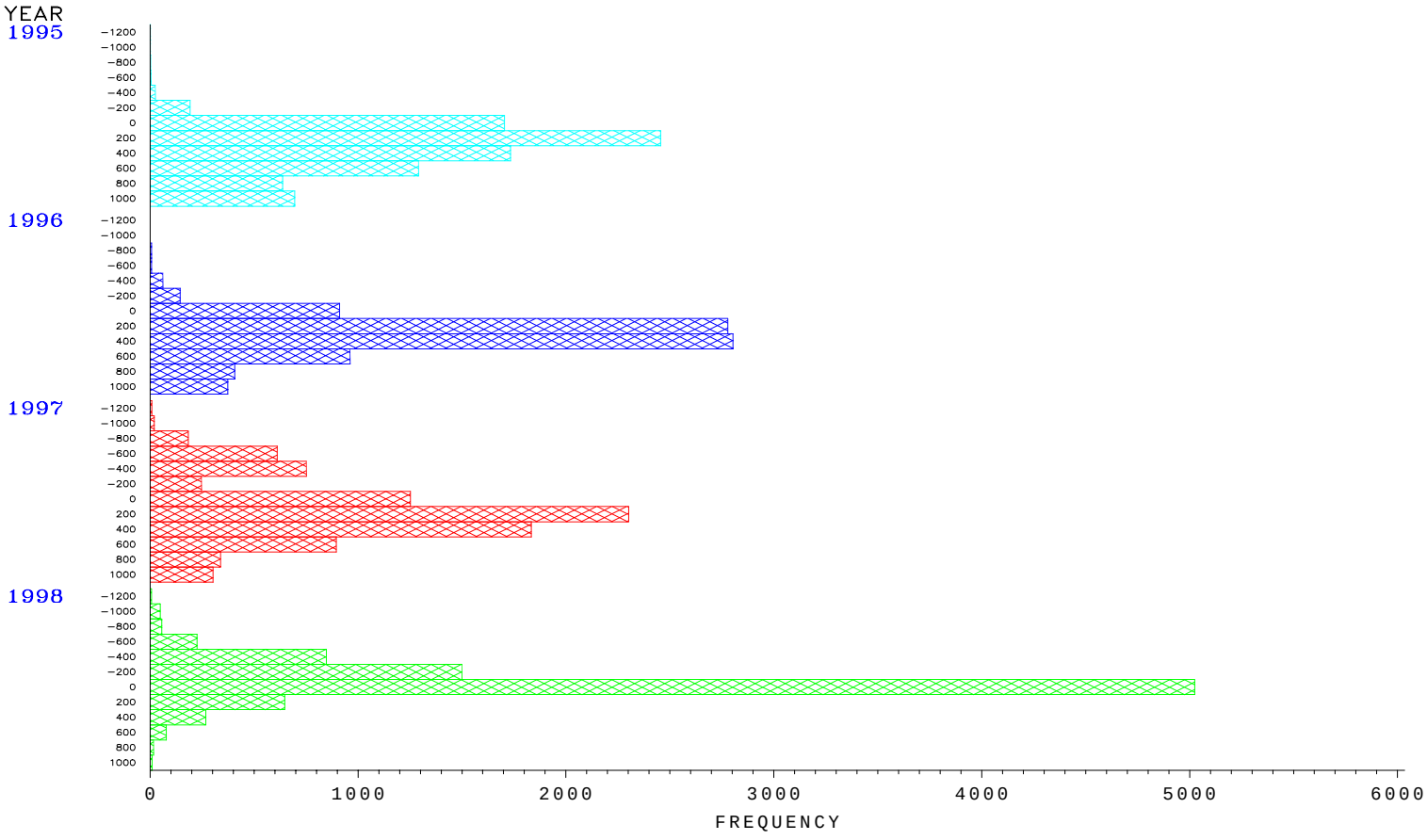


OH – NYPP SCHEDULE



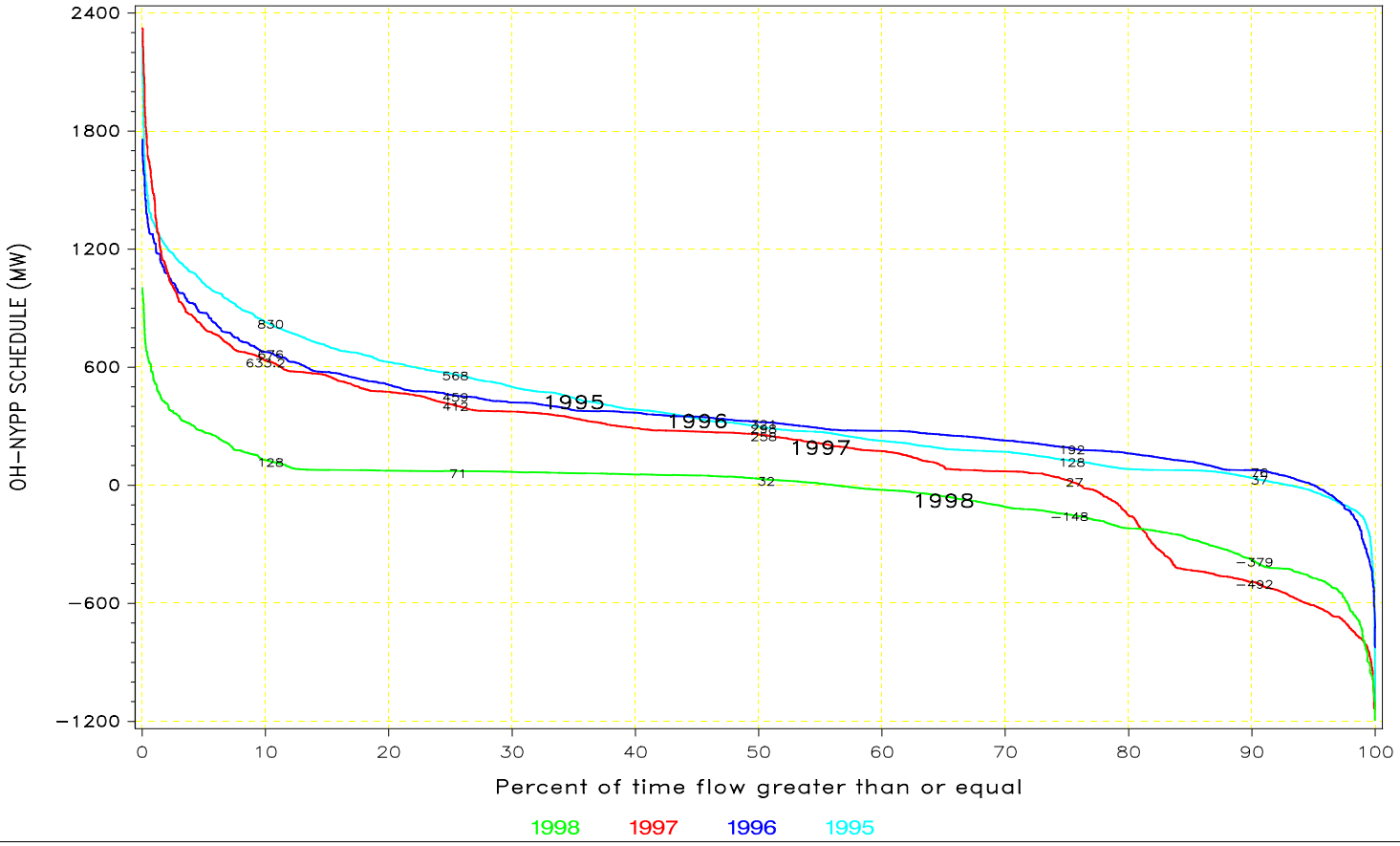
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−1200	6	6	0.07	0.07
−1000	48	54	0.55	0.62
−800	56	110	0.64	1.26
−600	226	336	2.59	3.85
−400	847	1183	9.71	13.56
−200	1499	2682	17.18	30.74
0	5024	7706	57.59	88.33
200	647	8353	7.42	95.75
400	268	8621	3.07	98.82
600	77	8698	0.88	99.70
800	16	8714	0.18	99.89
1000	10	8724	0.11	100.00

OH – NYPP SCHEDULE



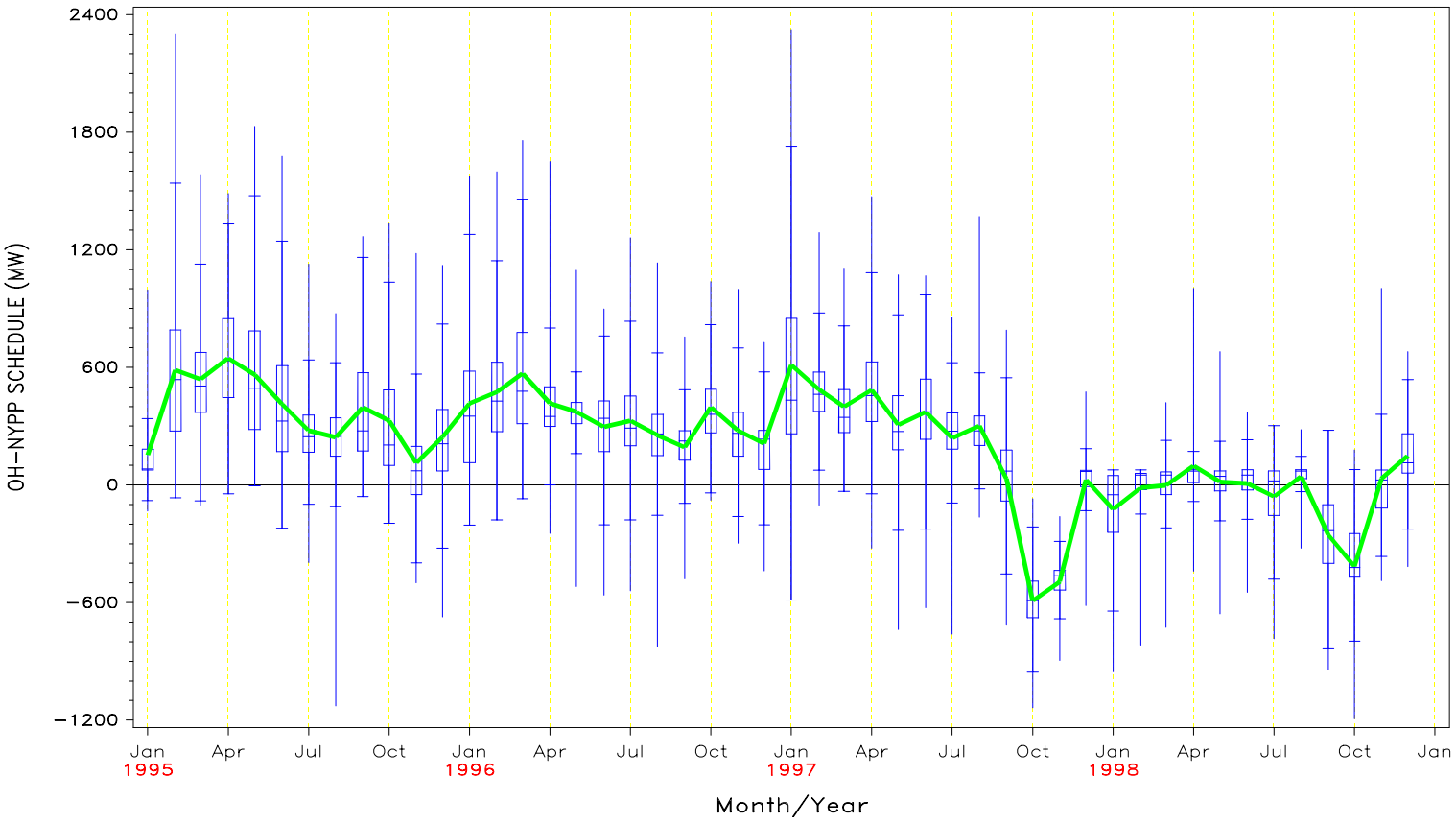
FLOW DURATION CURVE
FOR 1995 through 1998

OH – NYPP SCHEDULE



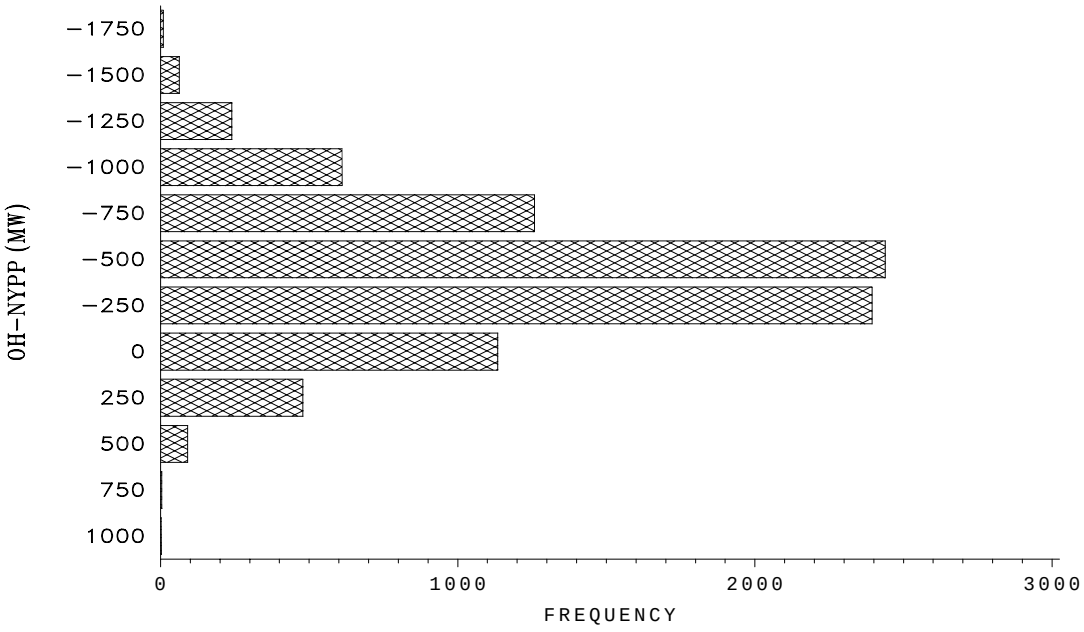
Average Monthly Interface Flows

January 1, 1995 – December 31, 1998



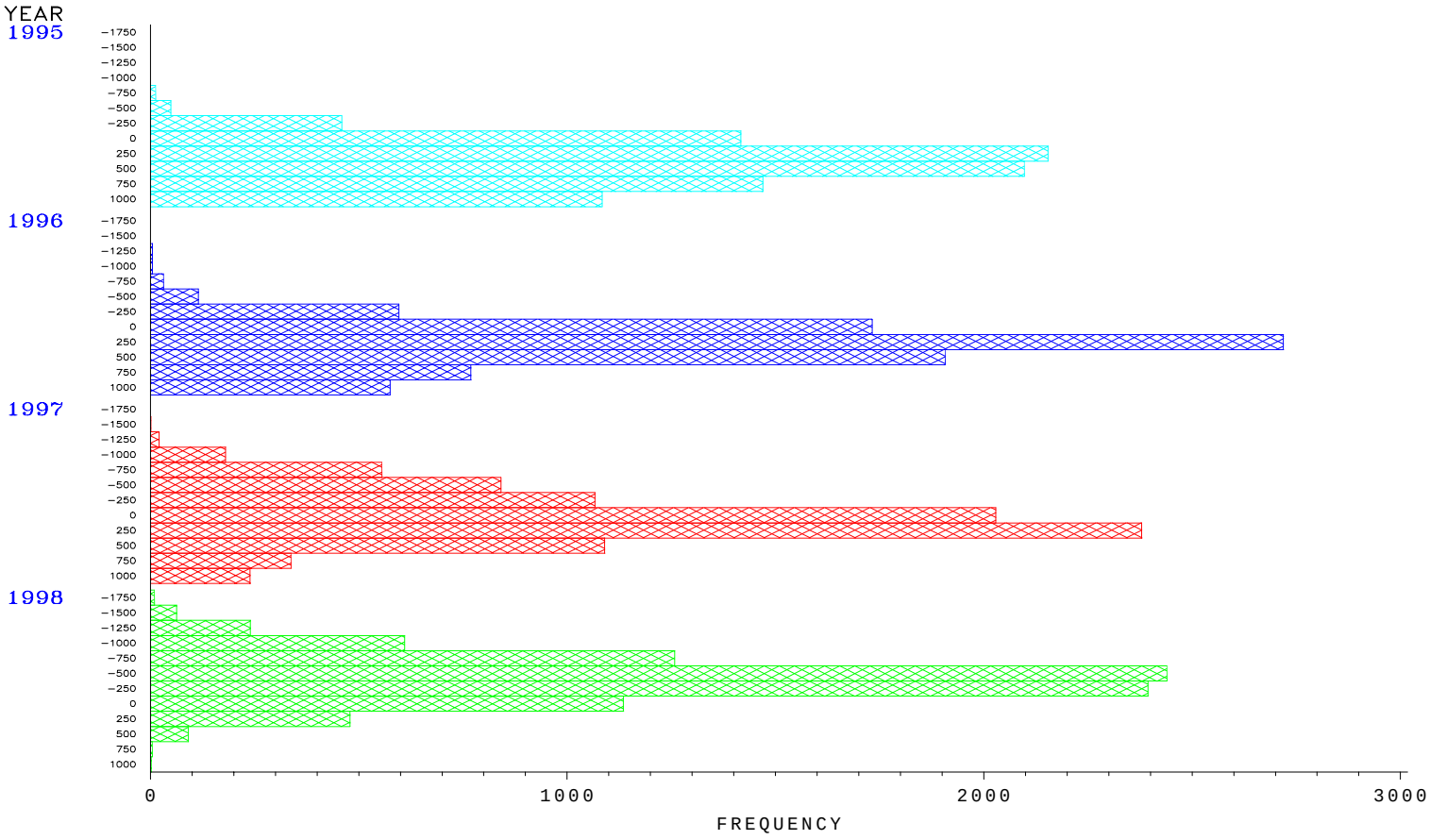
NYPP Transmission Use Statistics For January–December 1998

OH – NYPP

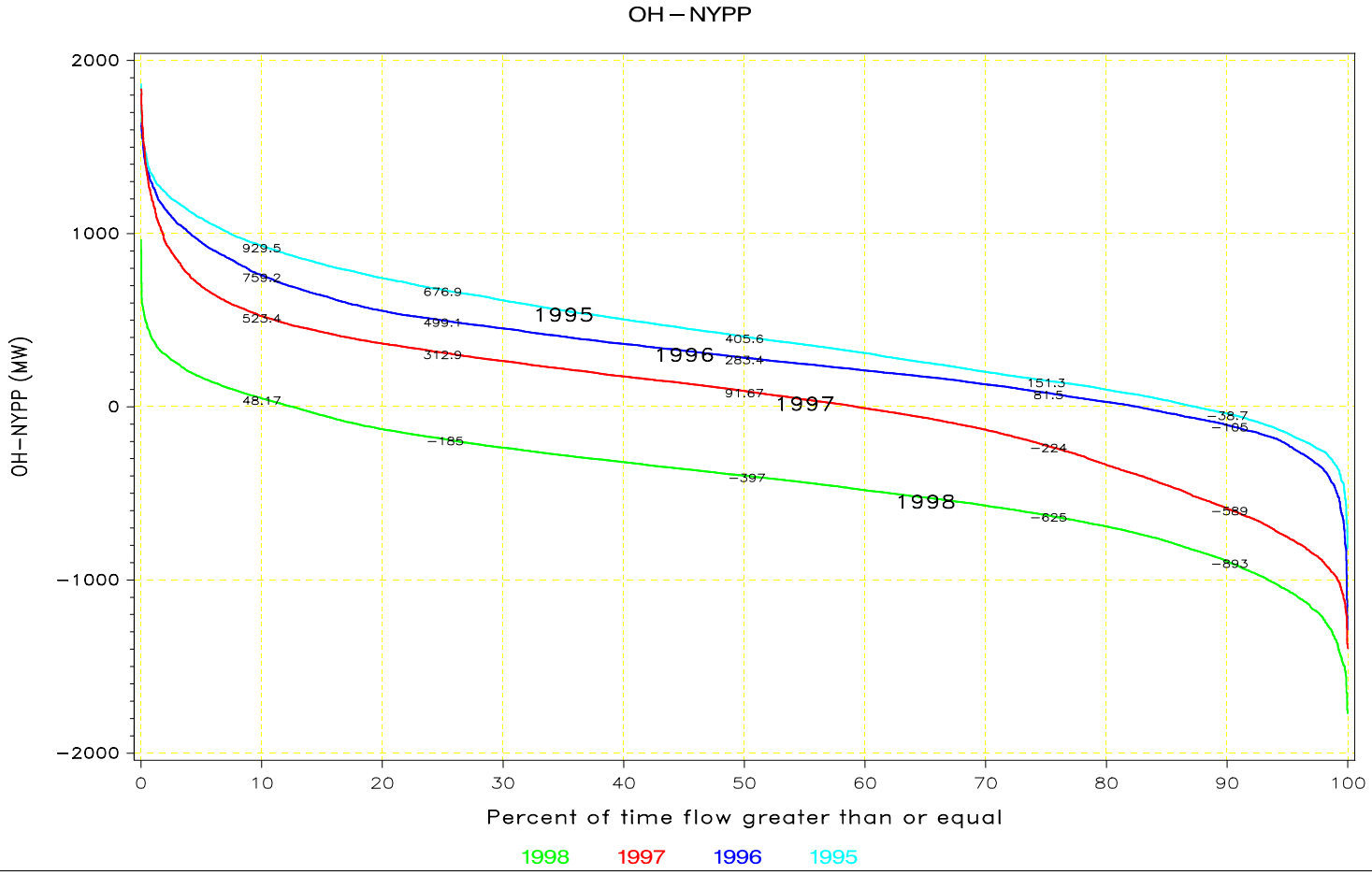


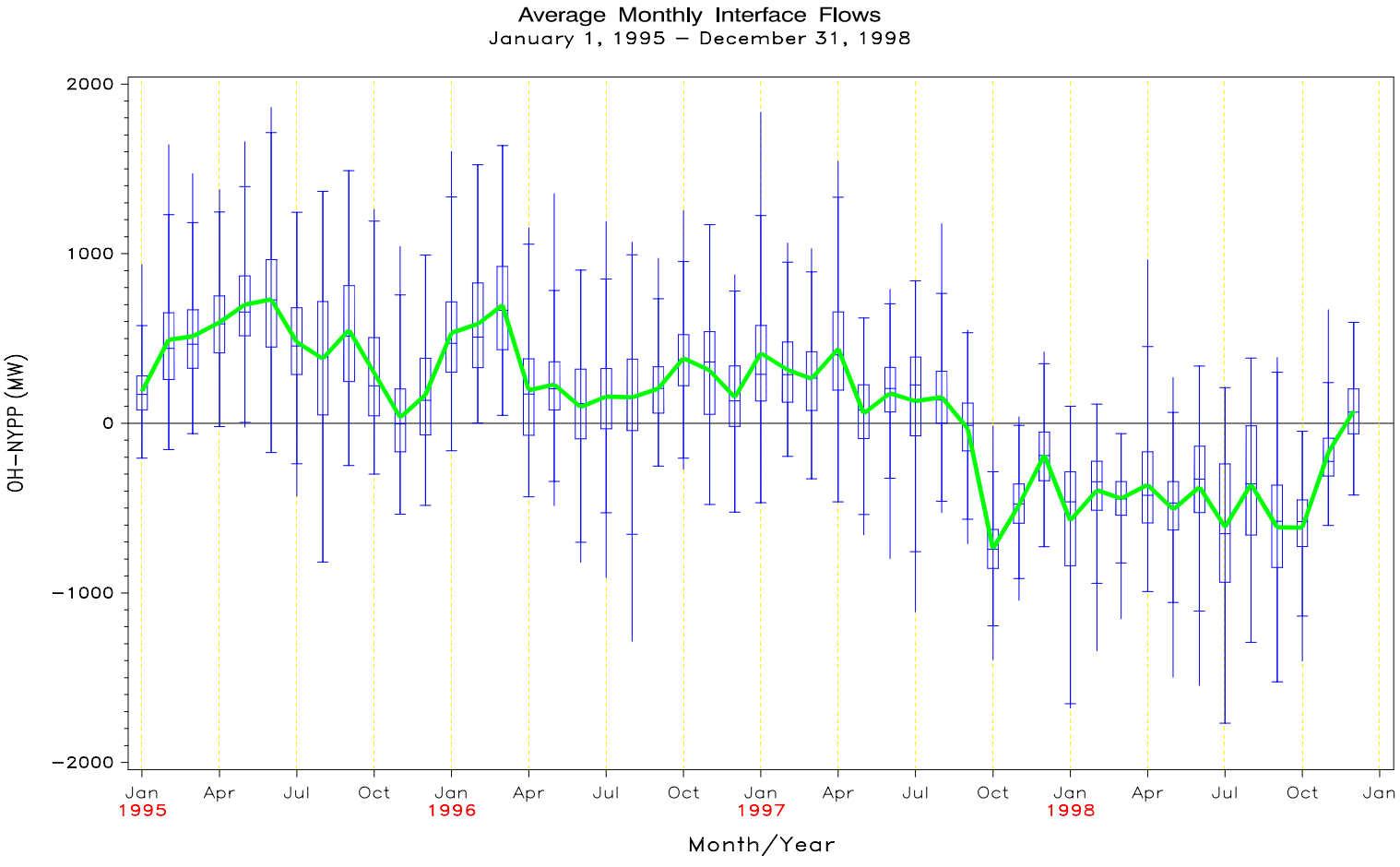
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−1750	9	9	0.10	0.10
−1500	63	72	0.72	0.83
−1250	240	312	2.75	3.58
−1000	610	922	6.99	10.57
−750	1258	2180	14.42	24.99
−500	2439	4619	27.96	52.95
−250	2394	7013	27.44	80.39
0	1135	8148	13.01	93.40
250	479	8627	5.49	98.89
500	91	8718	1.04	99.93
750	4	8722	0.05	99.98
1000	2	8724	0.02	100.00

OH – NYPP



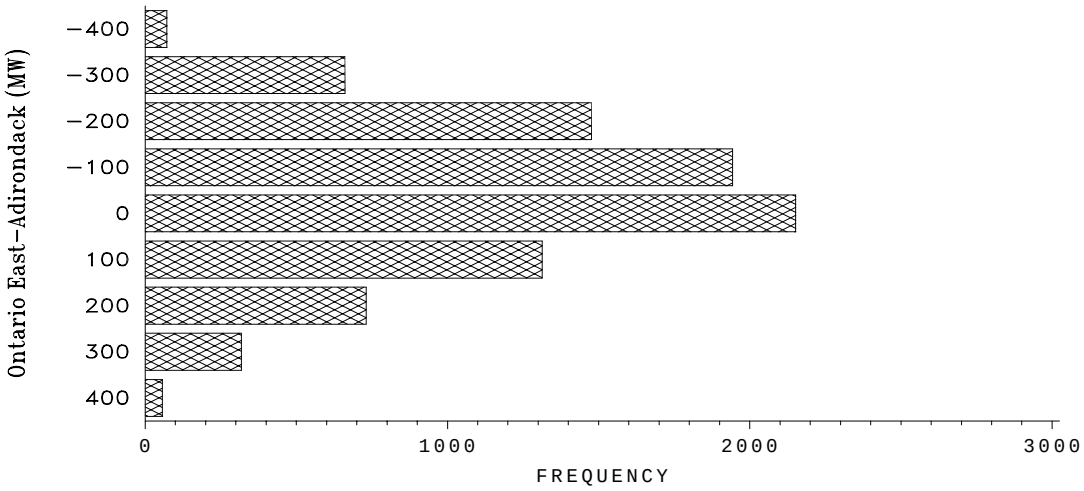
FLOW DURATION CURVE
FOR 1995 through 1998





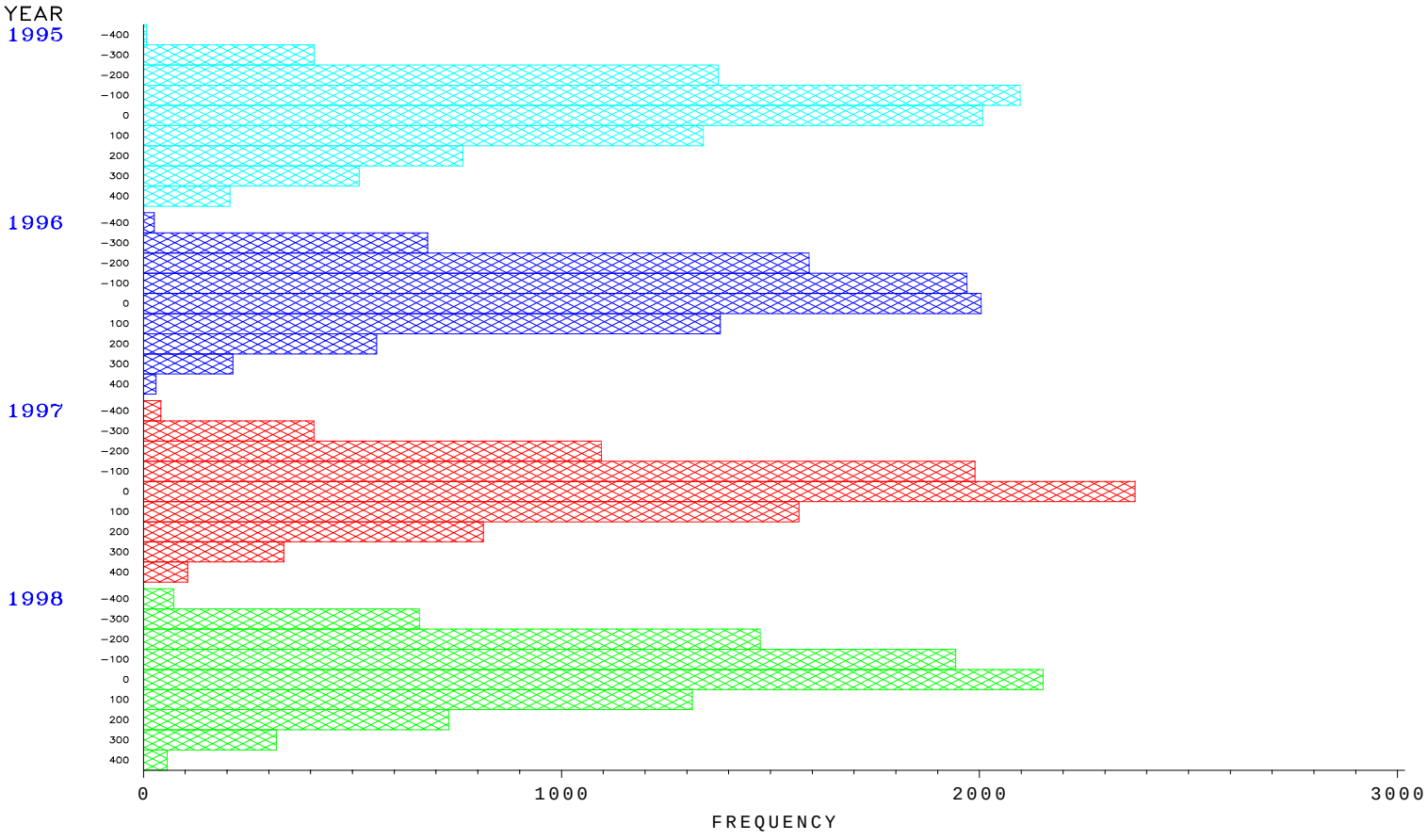
NYPP Transmission Use Statistics For January–December 1998

Ontario East – Adirondack



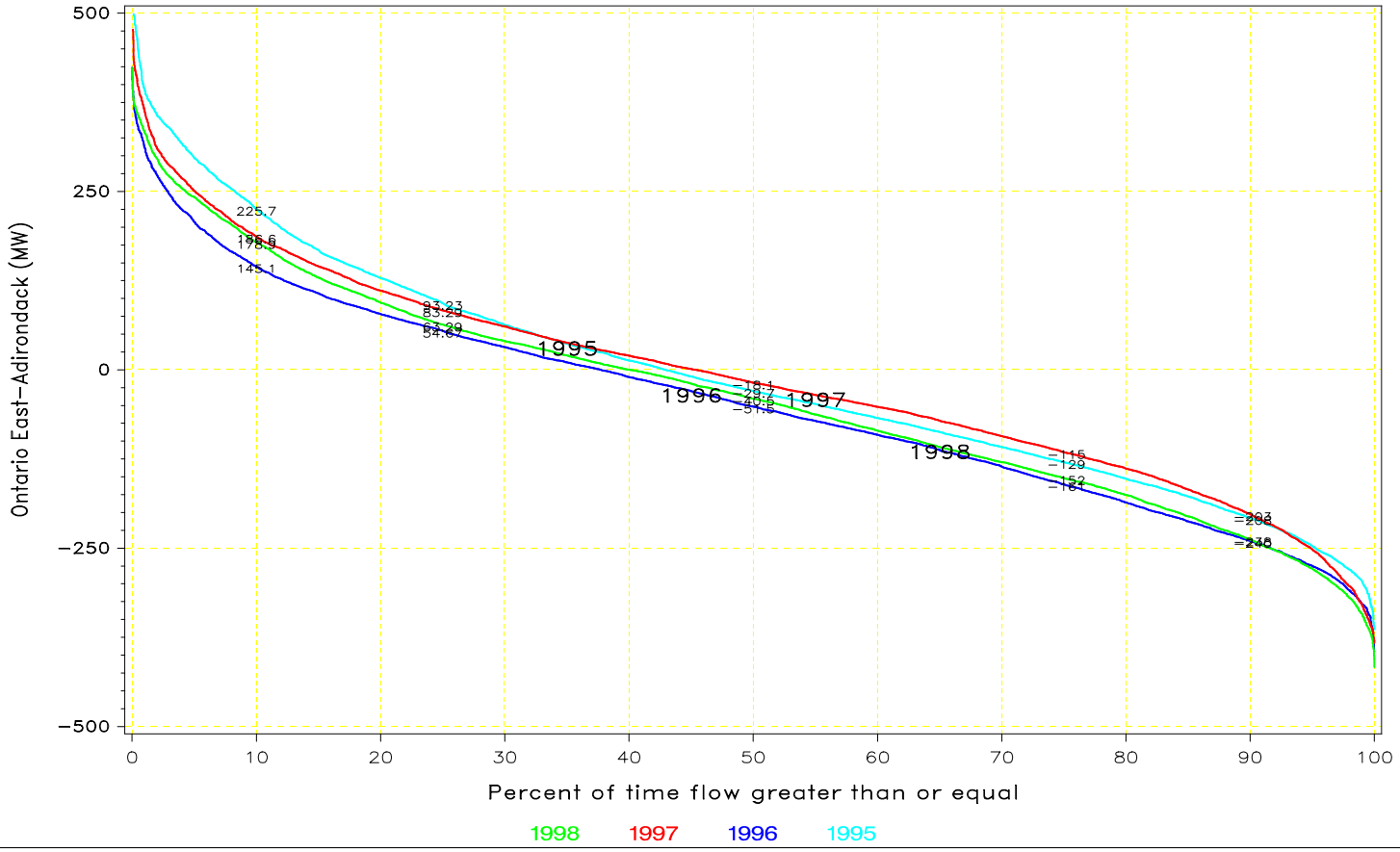
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−400	72	72	0.83	0.83
−300	660	732	7.57	8.39
−200	1475	2207	16.91	25.31
−100	1943	4150	22.28	47.59
0	2152	6302	24.68	72.26
100	1313	7615	15.06	87.32
200	731	8346	8.38	95.70
300	318	8664	3.65	99.35
400	57	8721	0.65	100.00

Ontario East – Adirondack

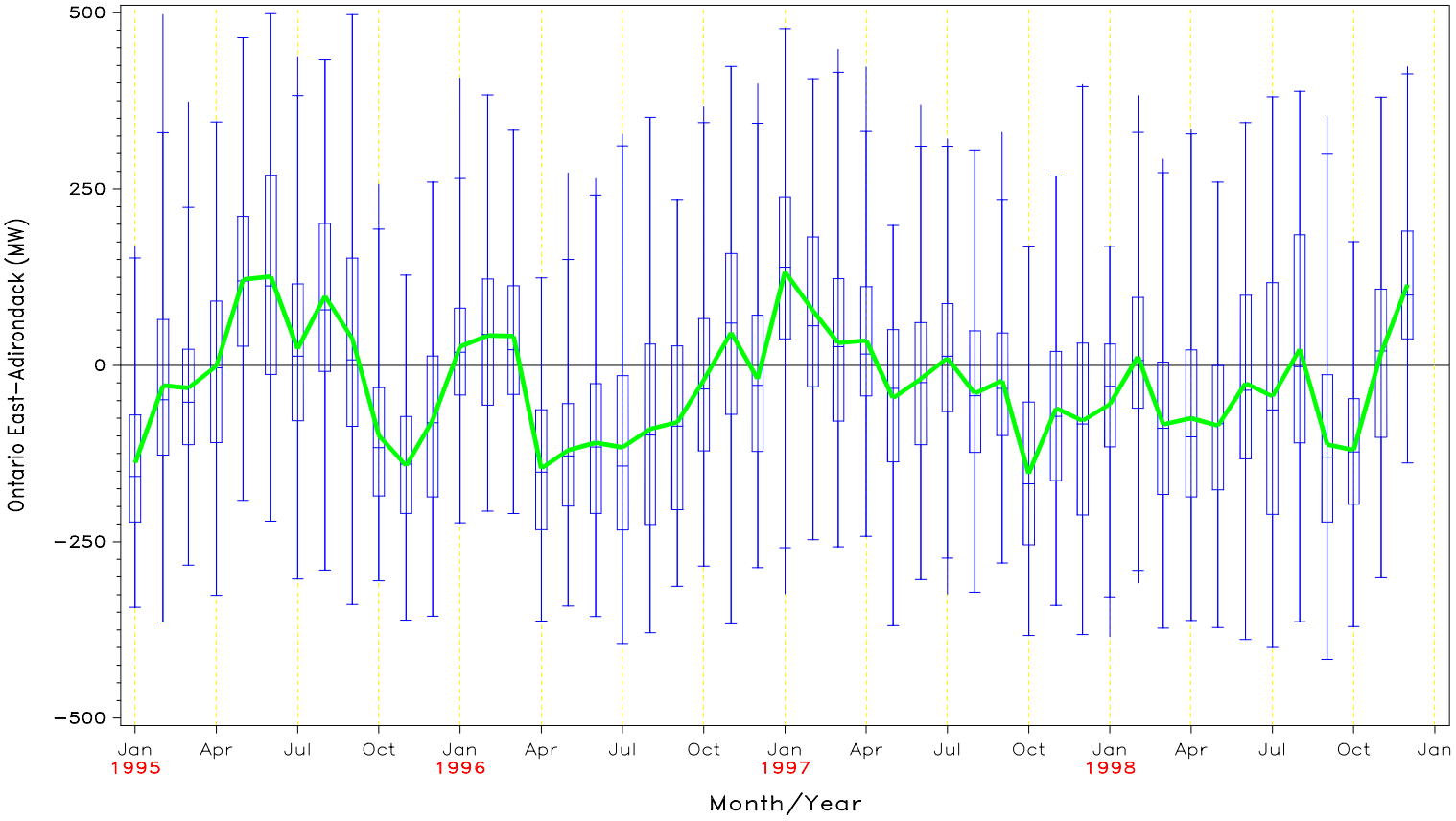


FLOW DURATION CURVE
FOR 1995 through 1998

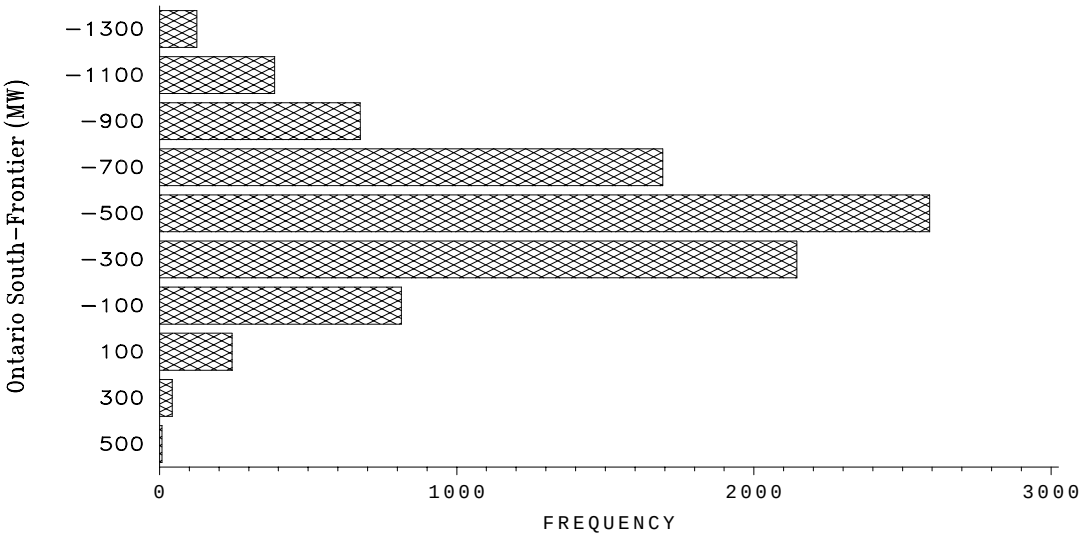
Ontario East – Adirondack



Average Monthly Interface Flows
January 1, 1995 – December 31, 1998

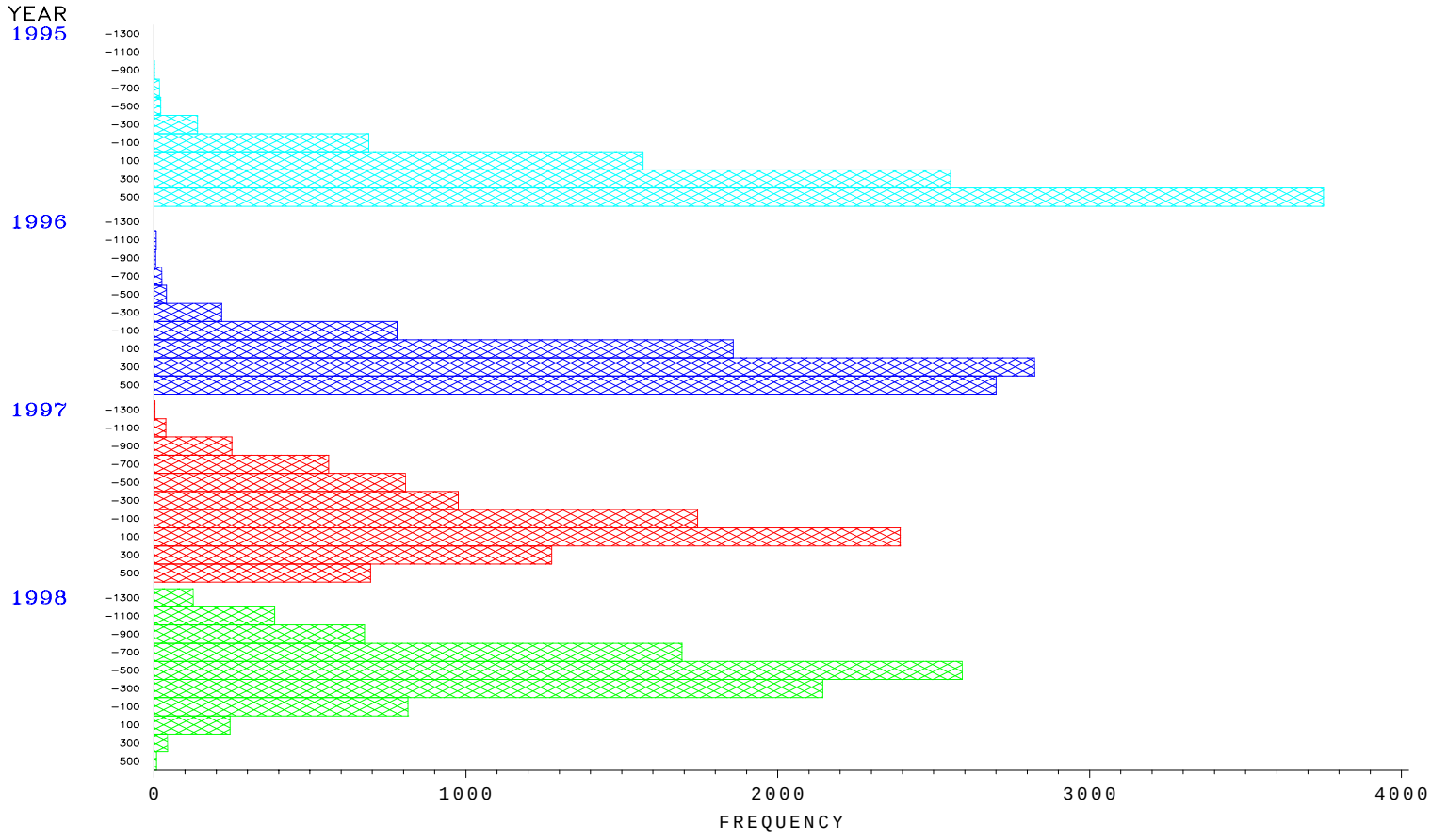


Ontario South – Frontier

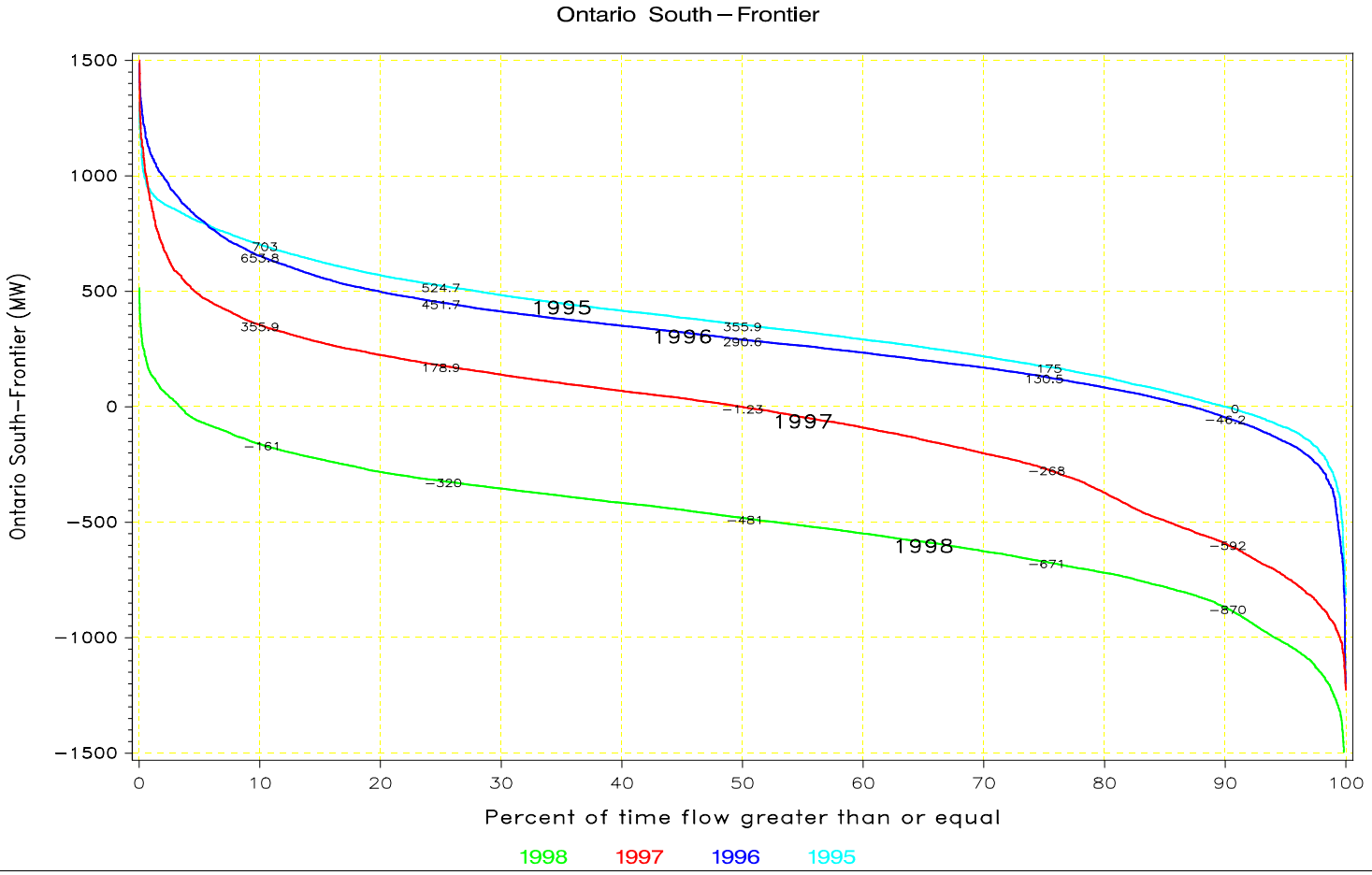


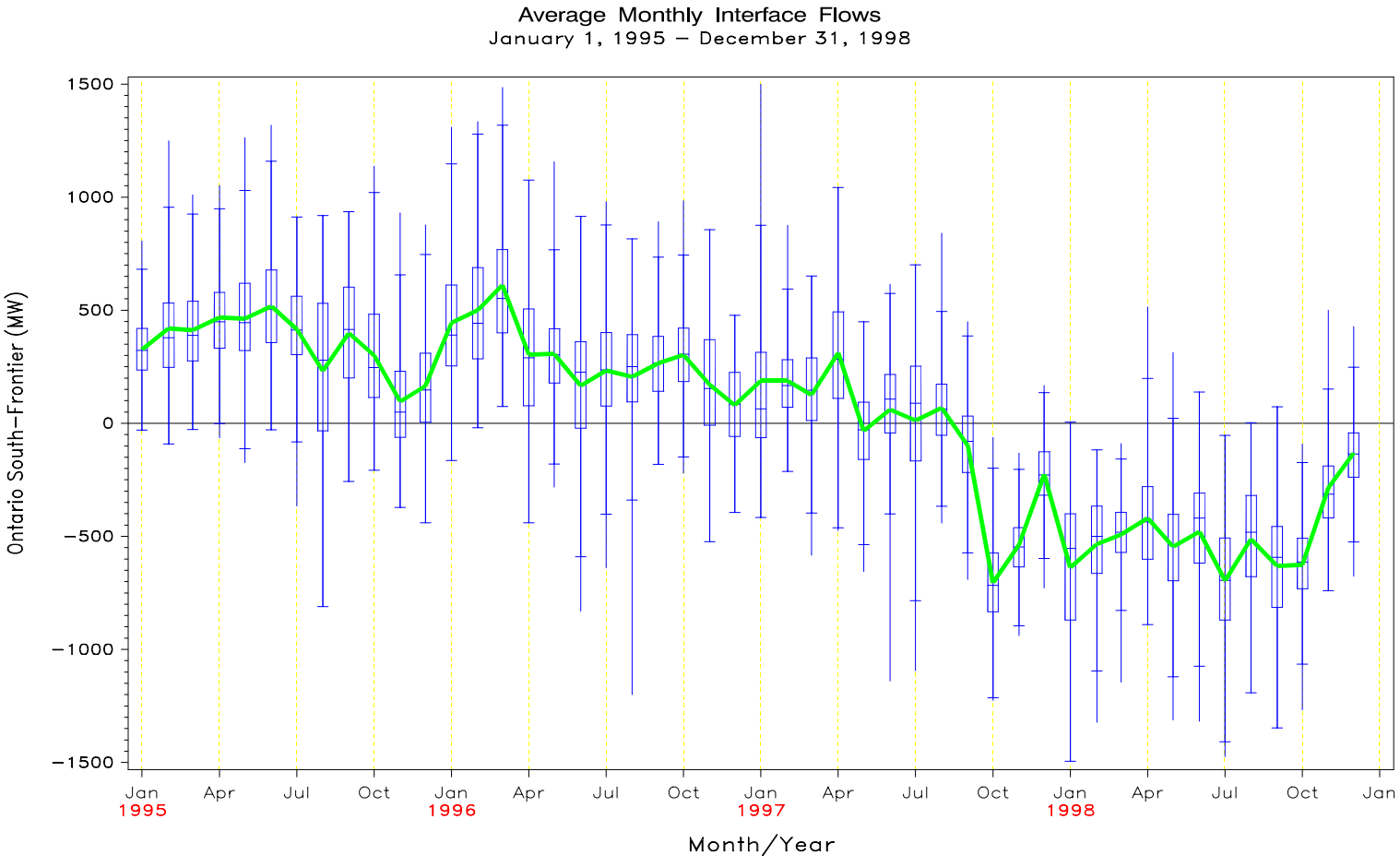
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−1300	125	125	1.43	1.43
−1100	387	512	4.44	5.87
−900	675	1187	7.74	13.61
−700	1693	2880	19.41	33.01
−500	2591	5471	29.70	62.71
−300	2144	7615	24.58	87.29
−100	814	8429	9.33	96.62
100	244	8673	2.80	99.42
300	43	8716	0.49	99.91
500	8	8724	0.09	100.00

Ontario South – Frontier



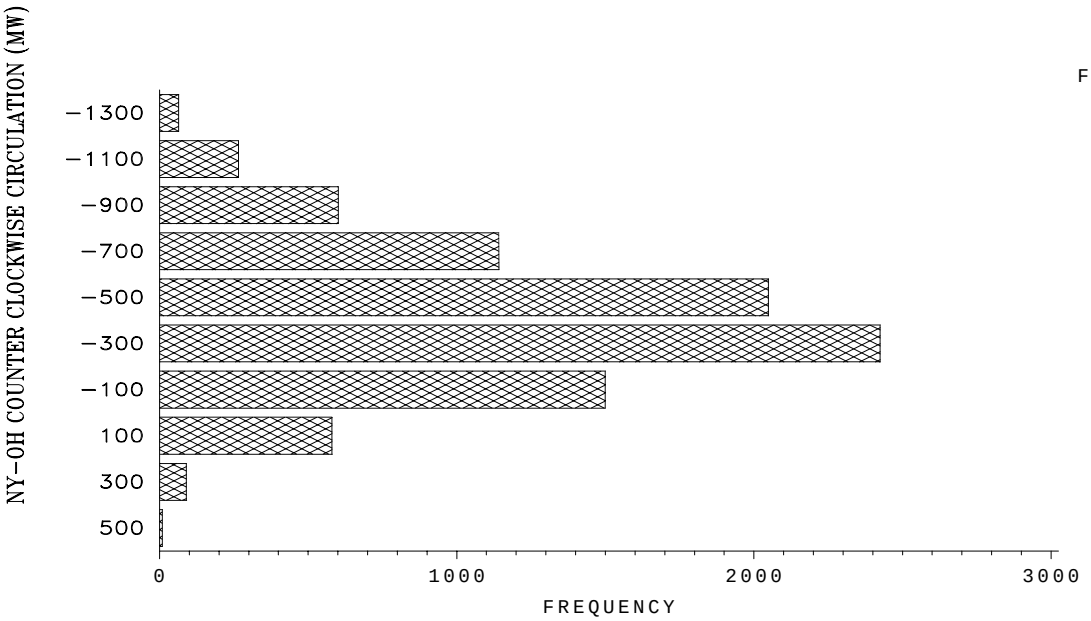
FLOW DURATION CURVE
FOR 1995 through 1998





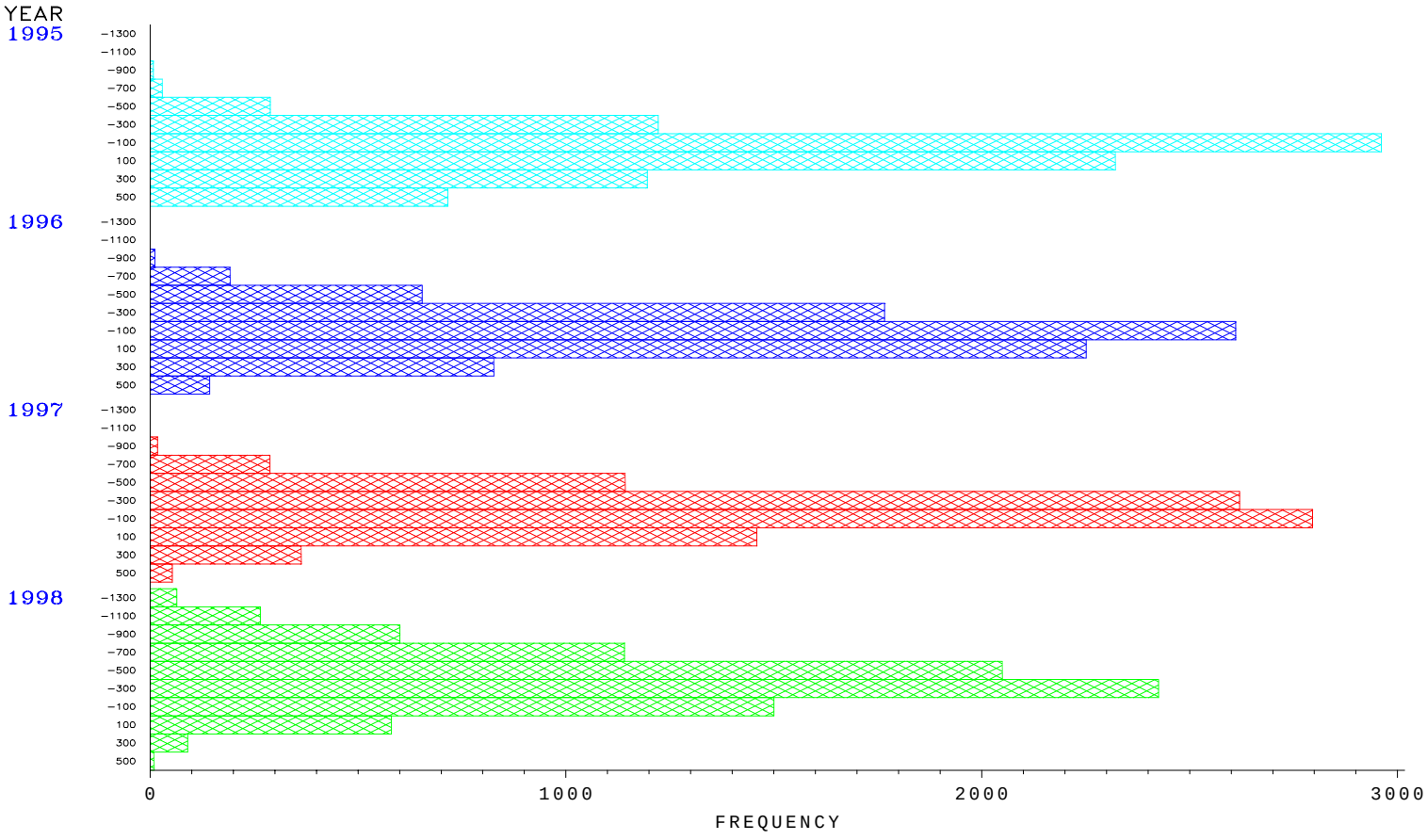
NYPP Transmission Use Statistics For January–December 1998

NY – OH COUNTER CLOCKWISE CIRCULATION



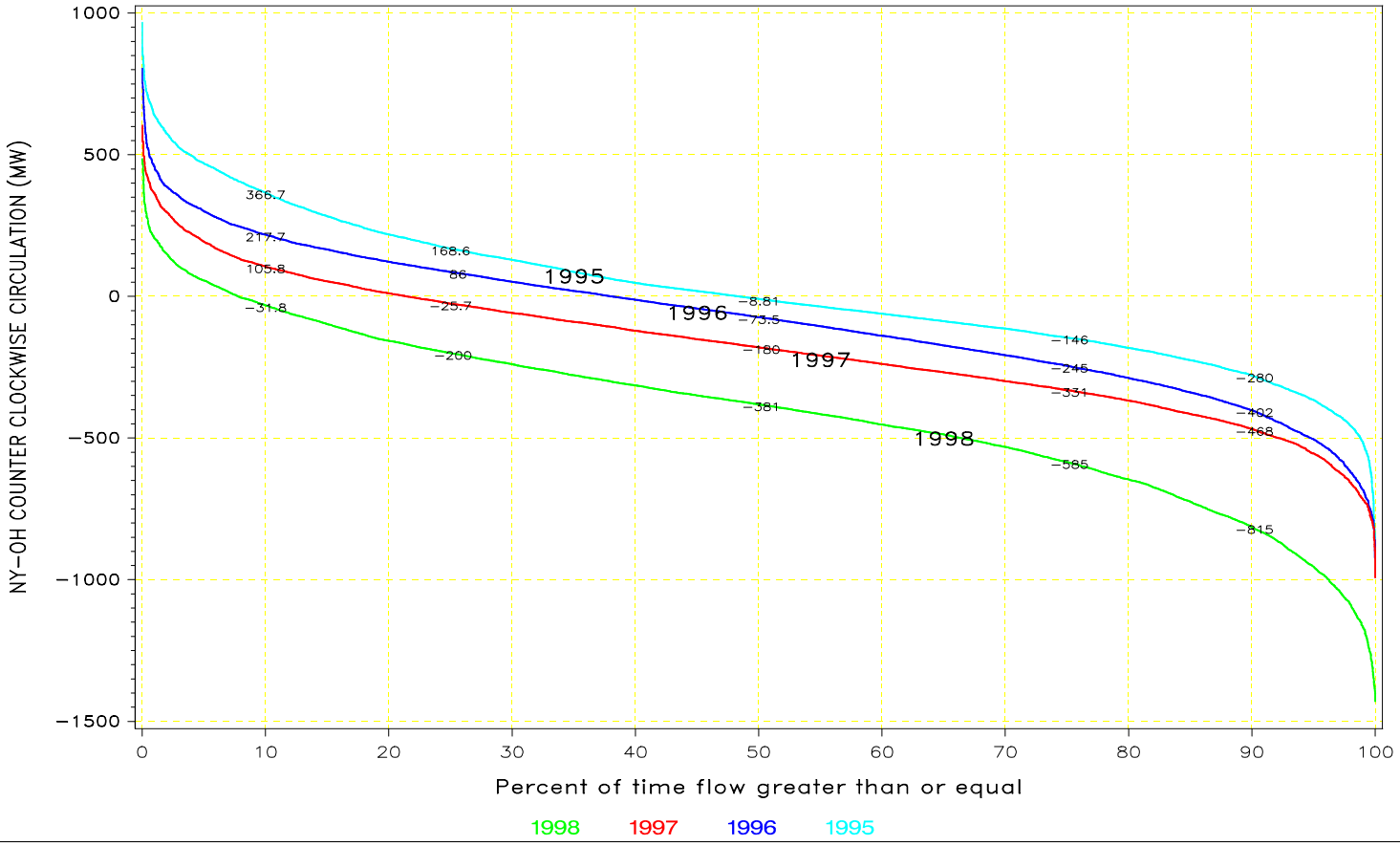
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−1300	64	64	0.73	0.73
−1100	265	329	3.04	3.77
−900	601	930	6.89	10.66
−700	1141	2071	13.08	23.74
−500	2049	4120	23.49	47.23
−300	2425	6545	27.80	75.02
−100	1500	8045	17.19	92.22
100	580	8625	6.65	98.87
300	90	8715	1.03	99.90
500	9	8724	0.10	100.00

NY – OH COUNTER CLOCKWISE CIRCULATION

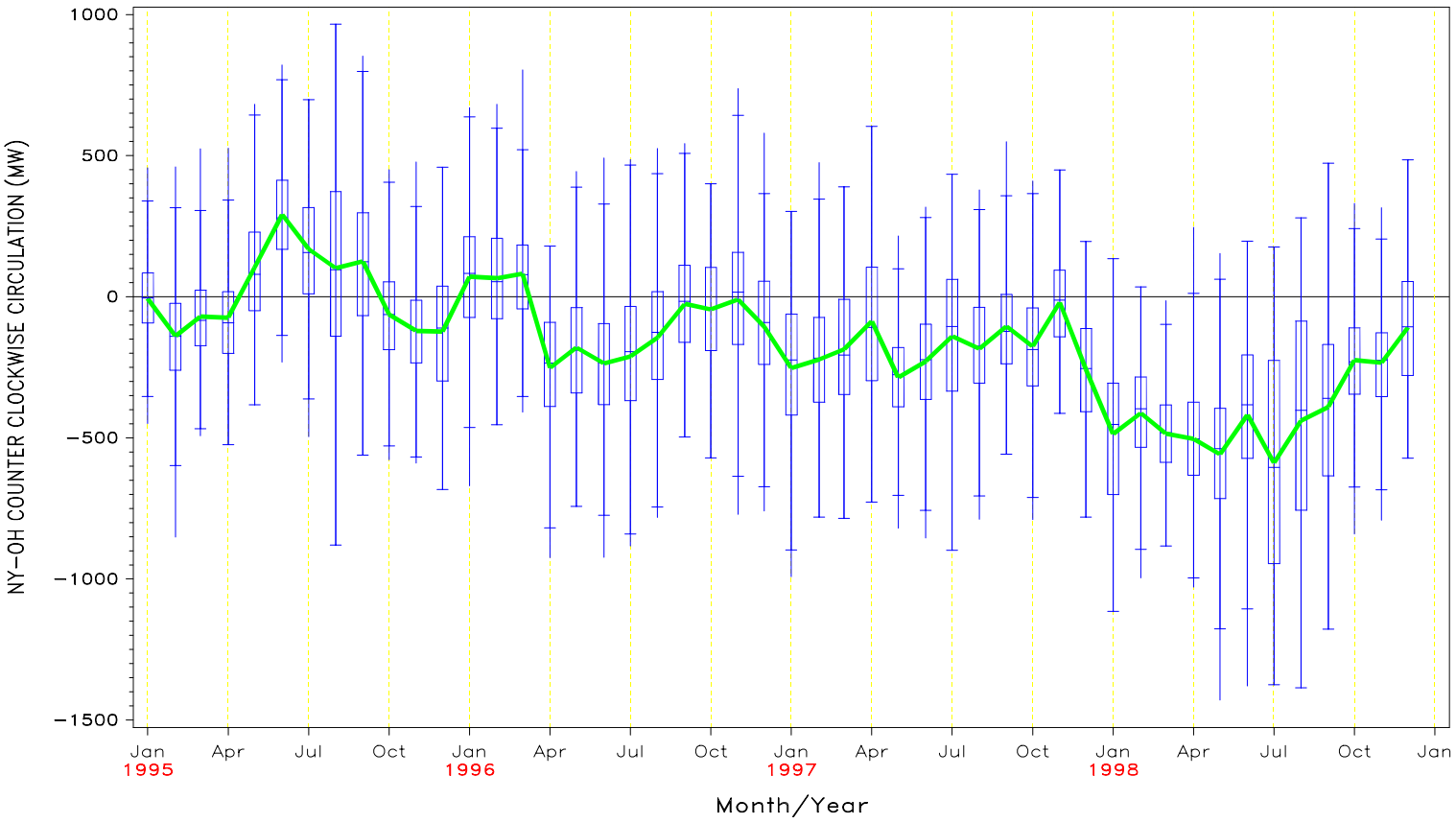


FLOW DURATION CURVE
FOR 1995 through 1998

NY – OH COUNTER CLOCKWISE CIRCULATION

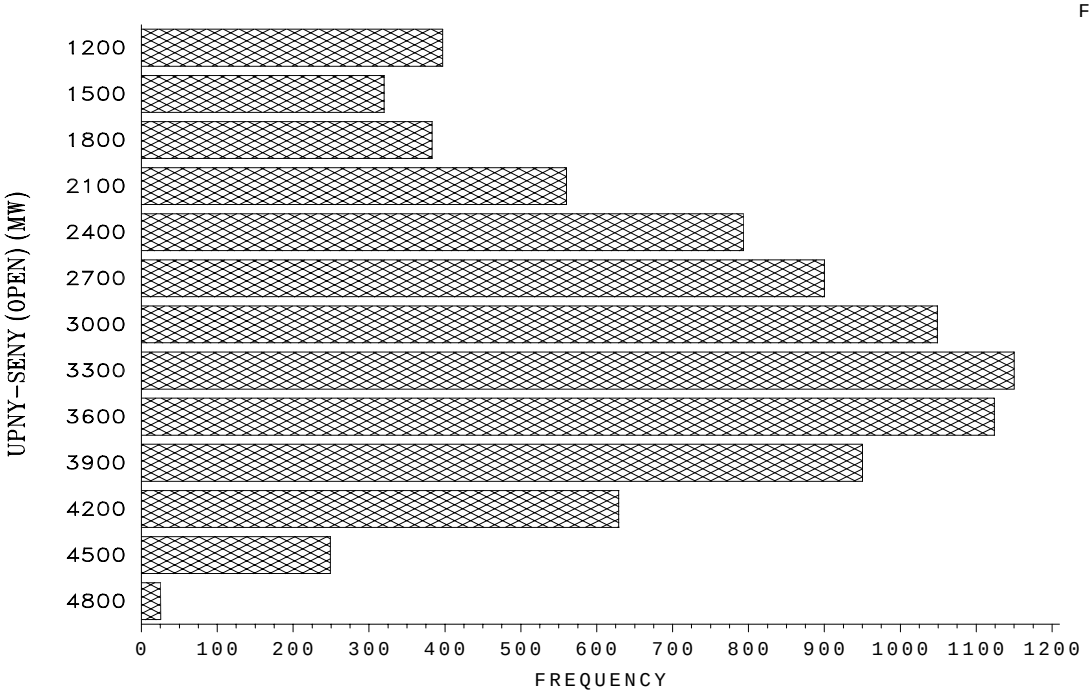


Average Monthly Interface Flows
January 1, 1995 – December 31, 1998



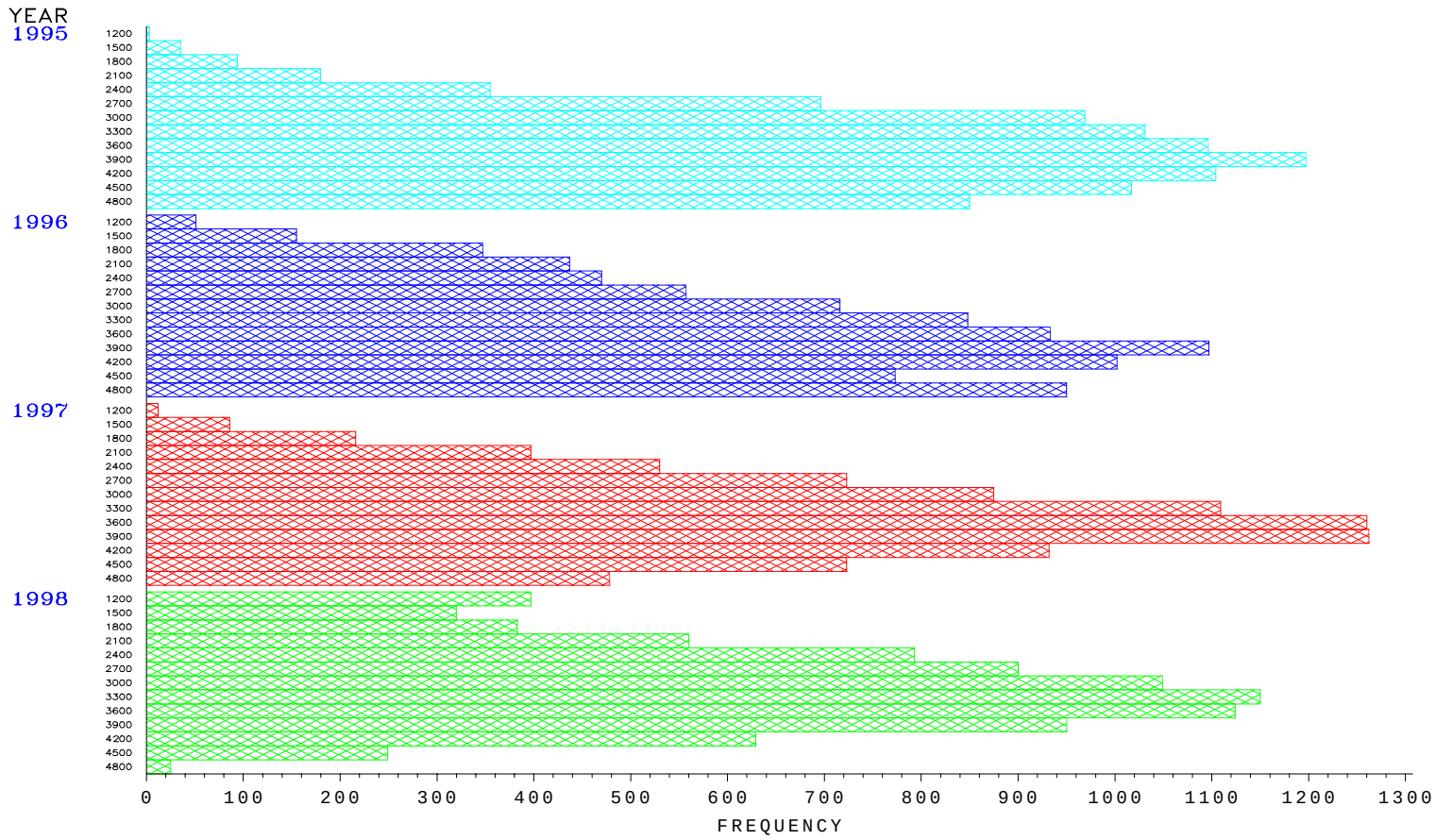
NYPP Transmission Use Statistics For January–December 1998

UPNY – SENY (OPEN)

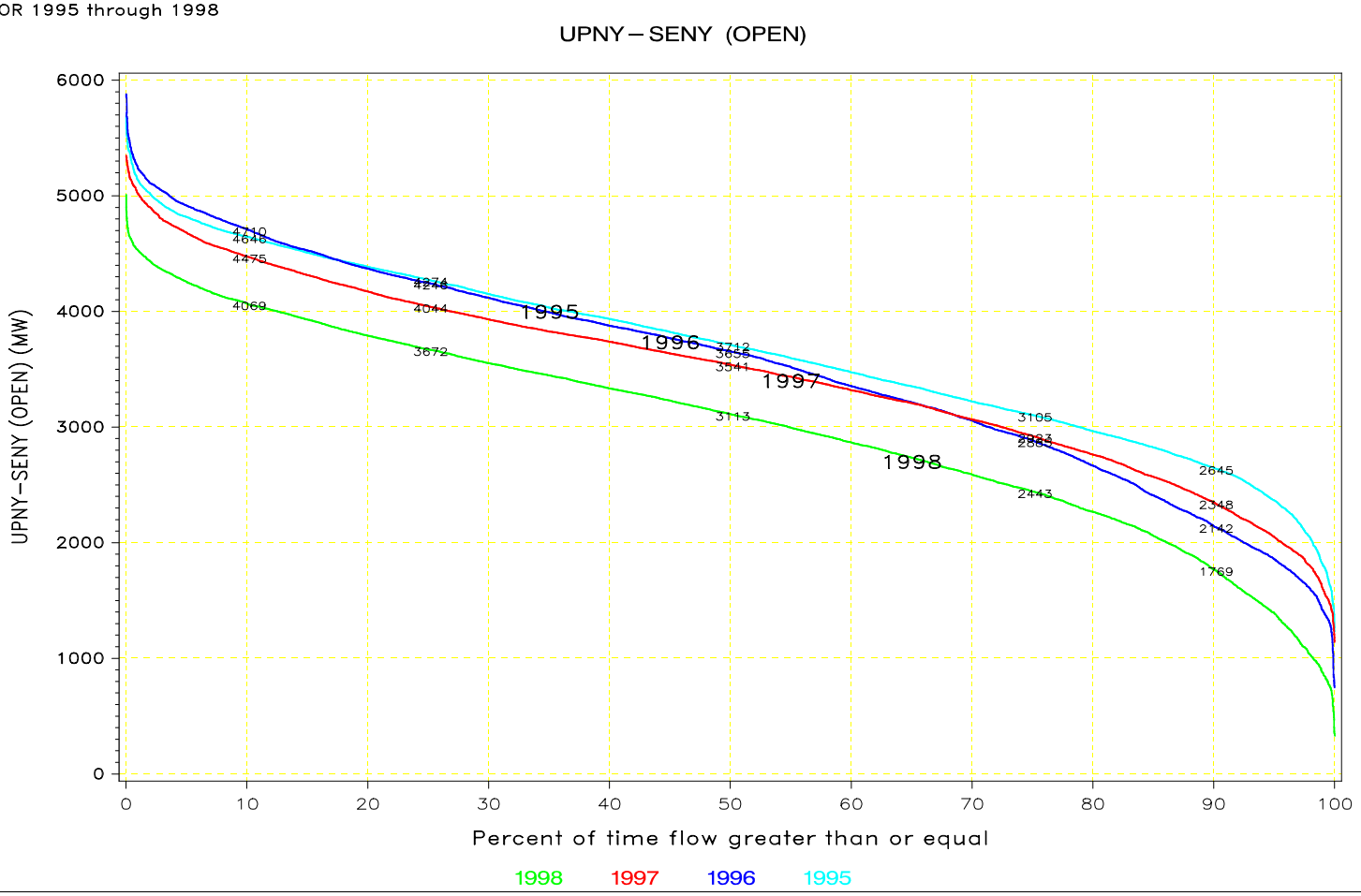


	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1200	397	397	4.65	4.65
1500	320	717	3.75	8.41
1800	383	1100	4.49	12.90
2100	560	1660	6.57	19.46
2400	793	2453	9.30	28.76
2700	900	3353	10.55	39.31
3000	1049	4402	12.30	51.61
3300	1150	5552	13.48	65.10
3600	1124	6676	13.18	78.27
3900	950	7626	11.14	89.41
4200	629	8255	7.37	96.79
4500	249	8504	2.92	99.71
4800	25	8529	0.29	100.00

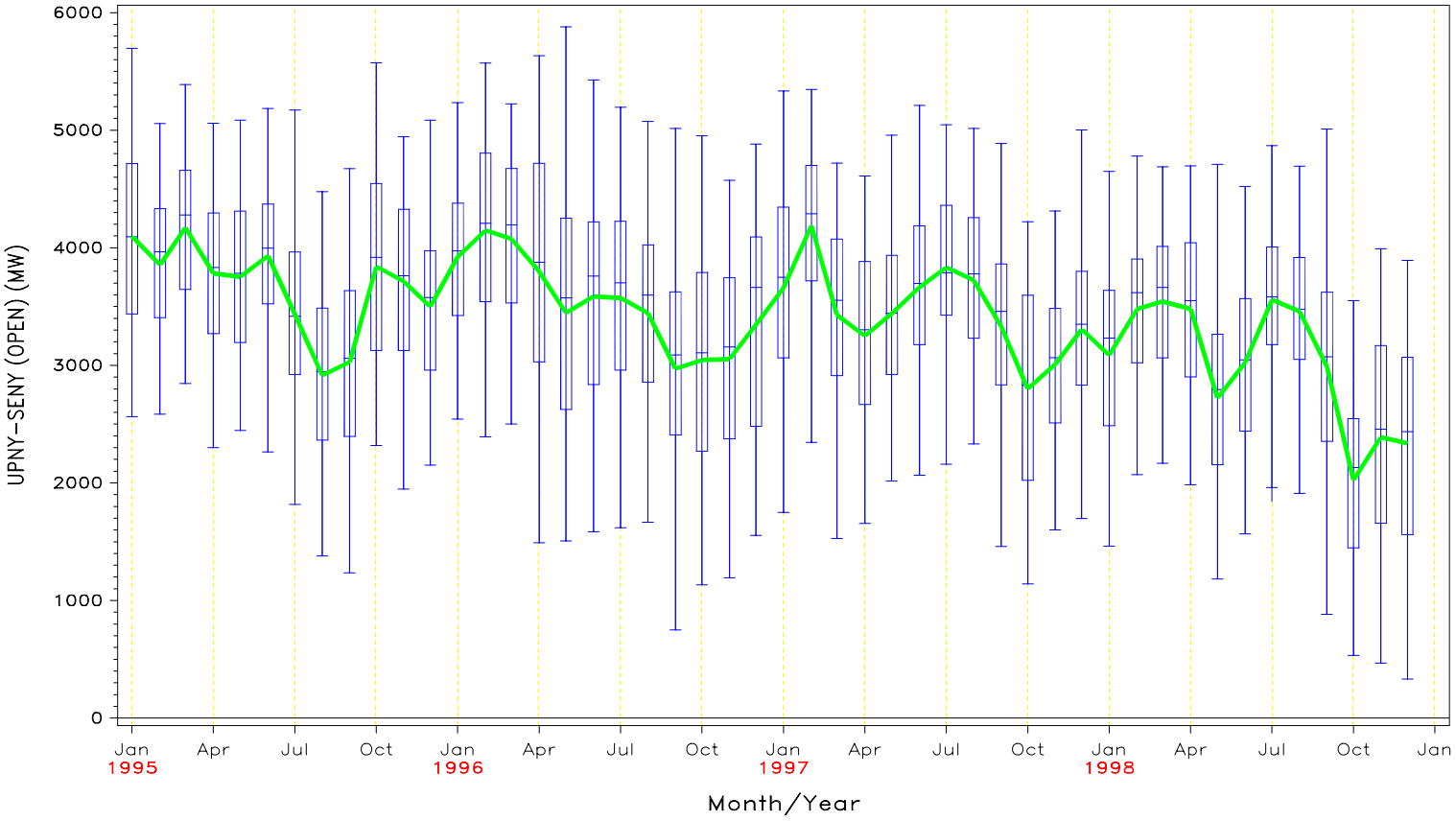
UPNY – SENY (OPEN)



FLOW DURATION CURVE
FOR 1995 through 1998

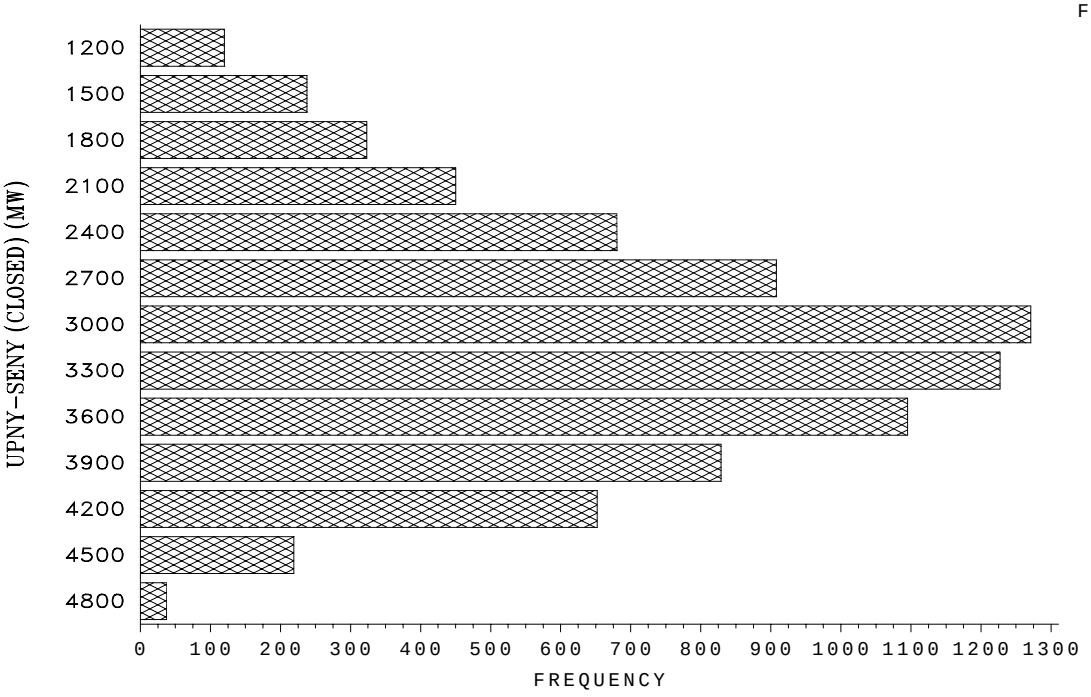


Average Monthly Interface Flows
January 1, 1995 – December 31, 1998



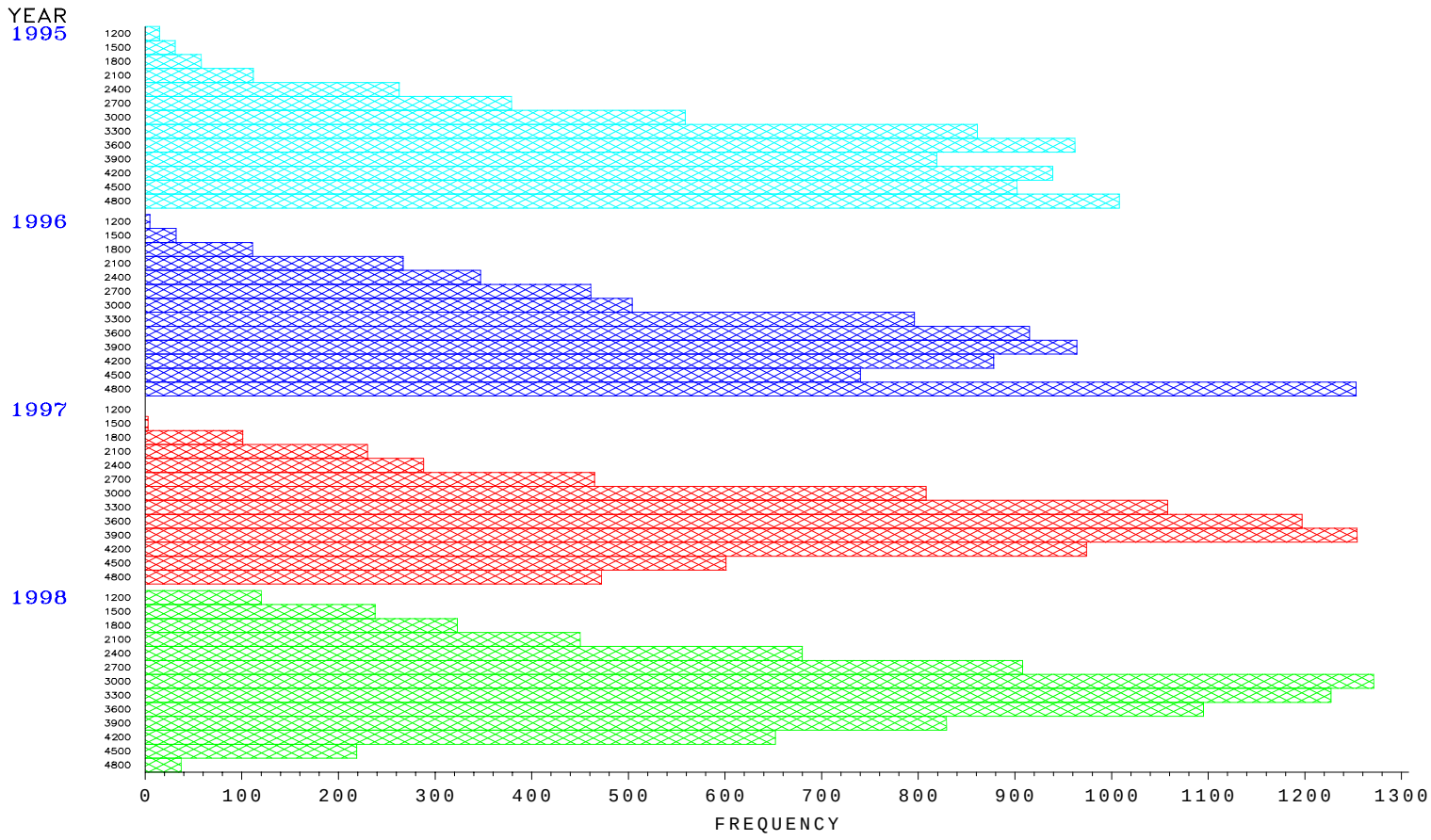
NYPP Transmission Use Statistics For January–December 1998

UPNY – SENY (CLOSED)

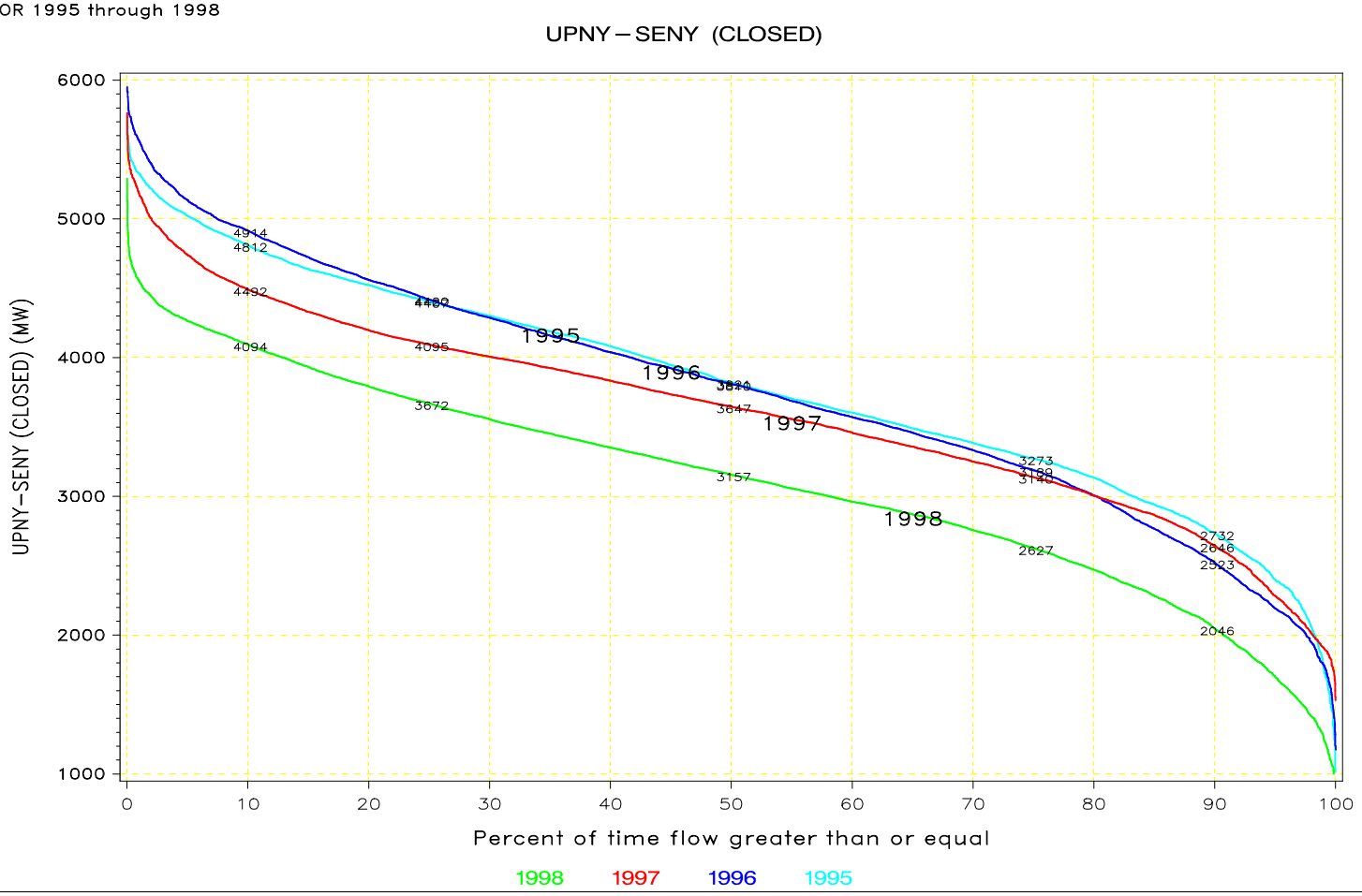


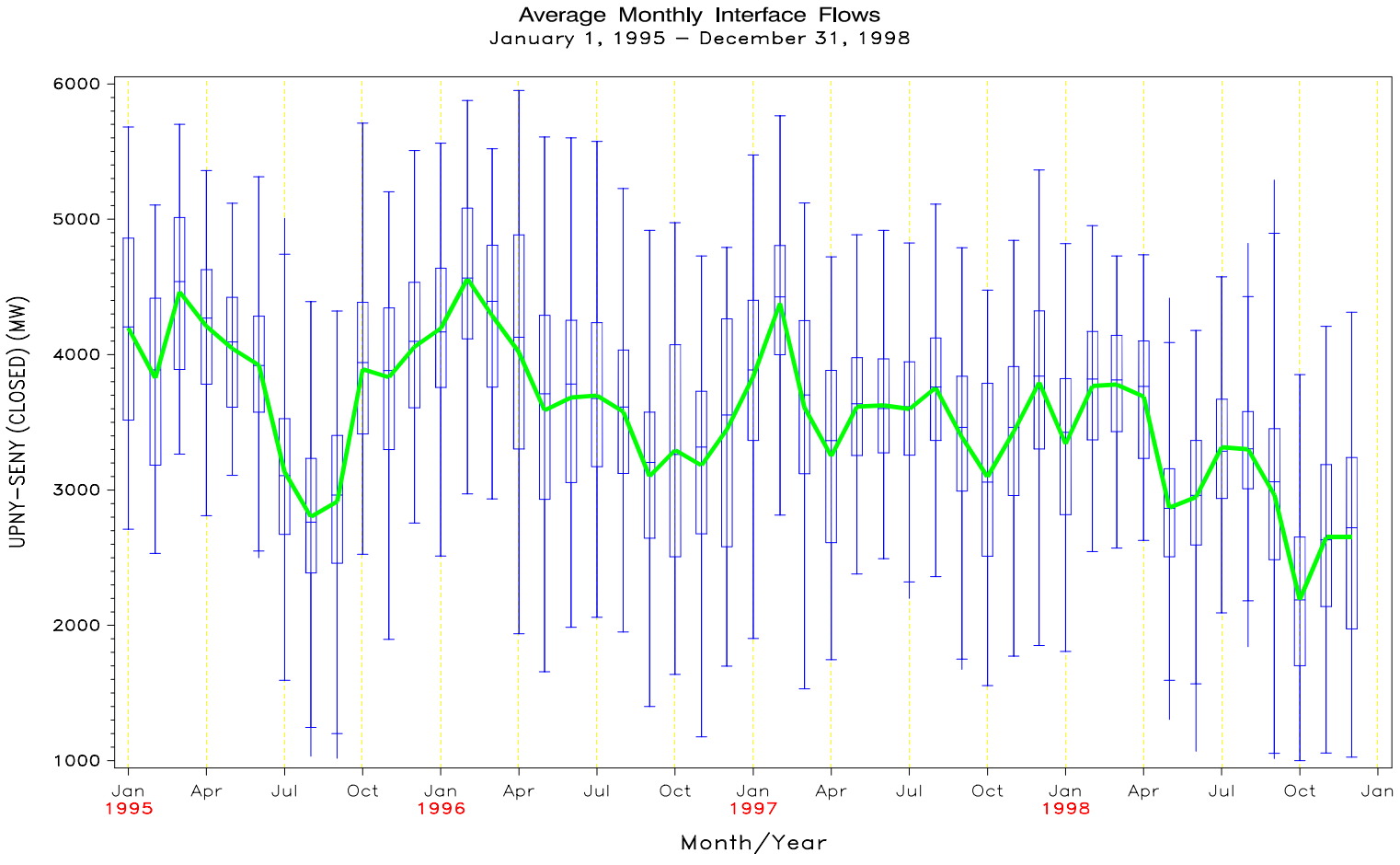
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1200	120	120	1.49	1.49
1500	238	358	2.96	4.45
1800	323	681	4.01	8.46
2100	450	1131	5.59	14.05
2400	680	1811	8.45	22.50
2700	908	2719	11.28	33.78
3000	1271	3990	15.79	49.57
3300	1227	5217	15.24	64.82
3600	1095	6312	13.60	78.42
3900	829	7141	10.30	88.72
4200	652	7793	8.10	96.82
4500	219	8012	2.72	99.54
4800	37	8049	0.46	100.00

UPNY – SENY (CLOSED)



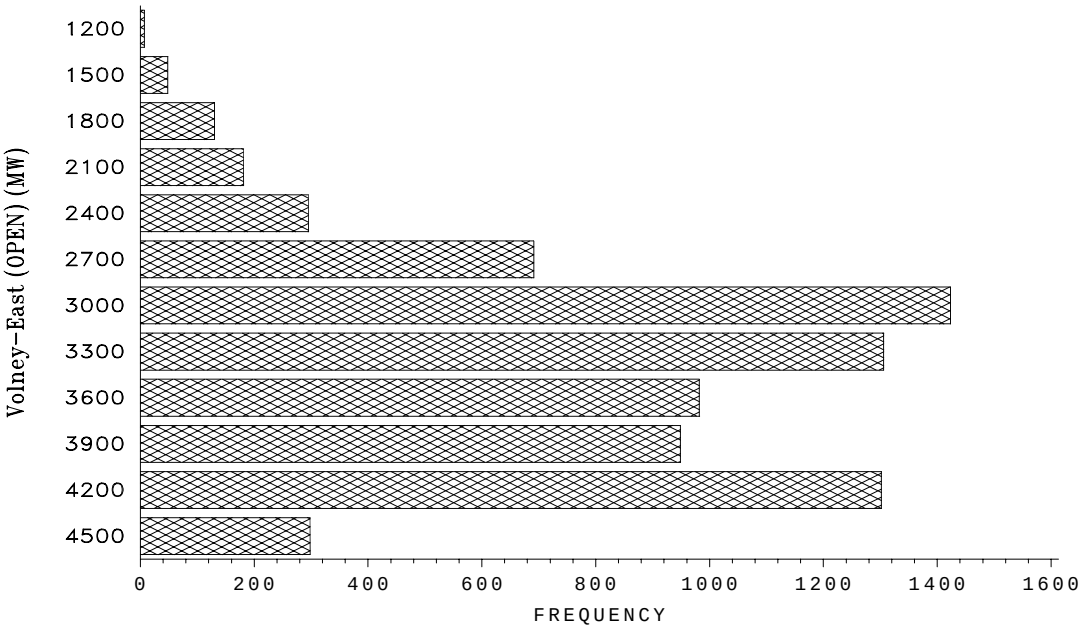
FLOW DURATION CURVE
FOR 1995 through 1998





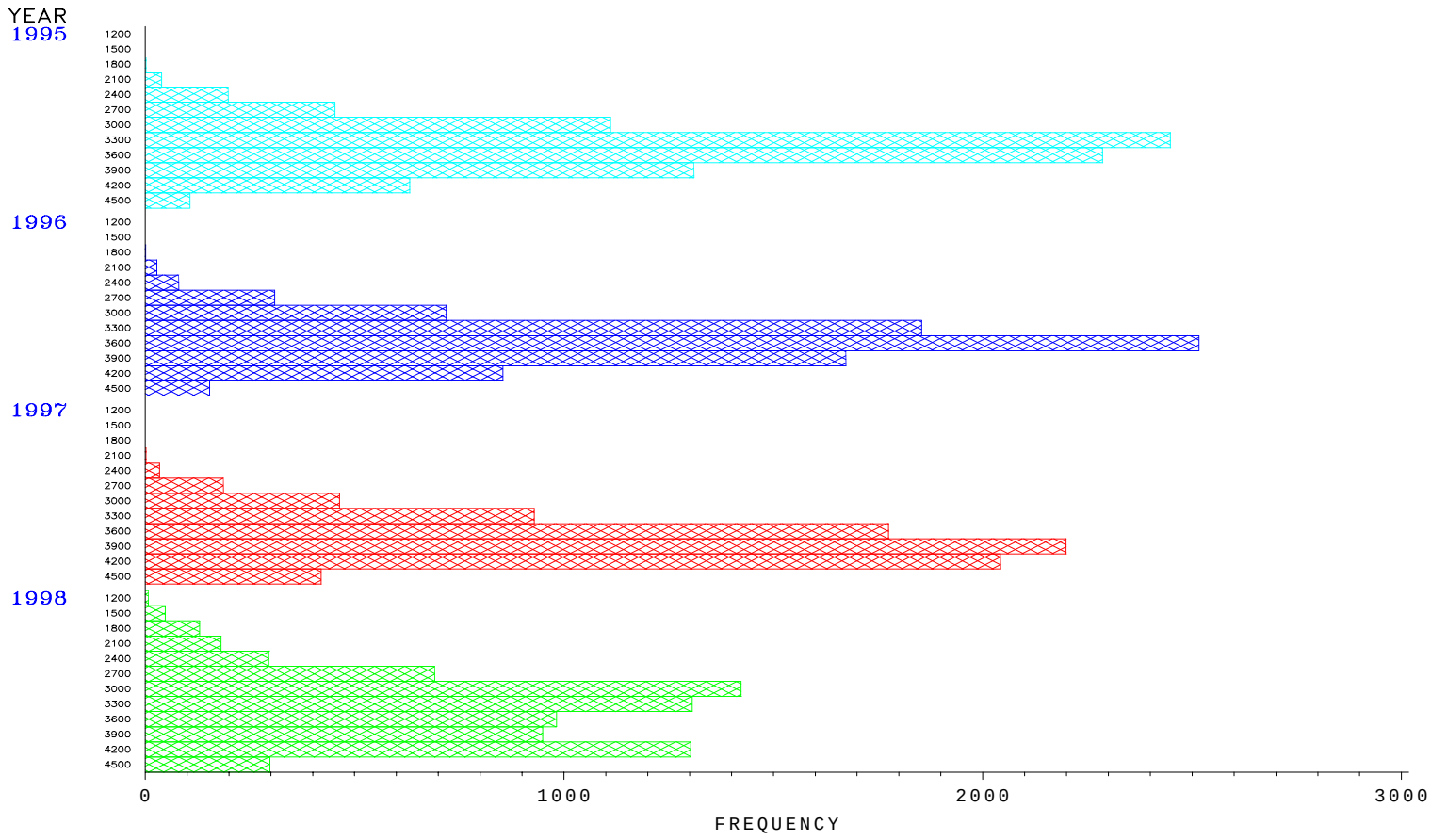
NYPP Transmission Use Statistics For January–December 1998

Volney – East (OPEN)

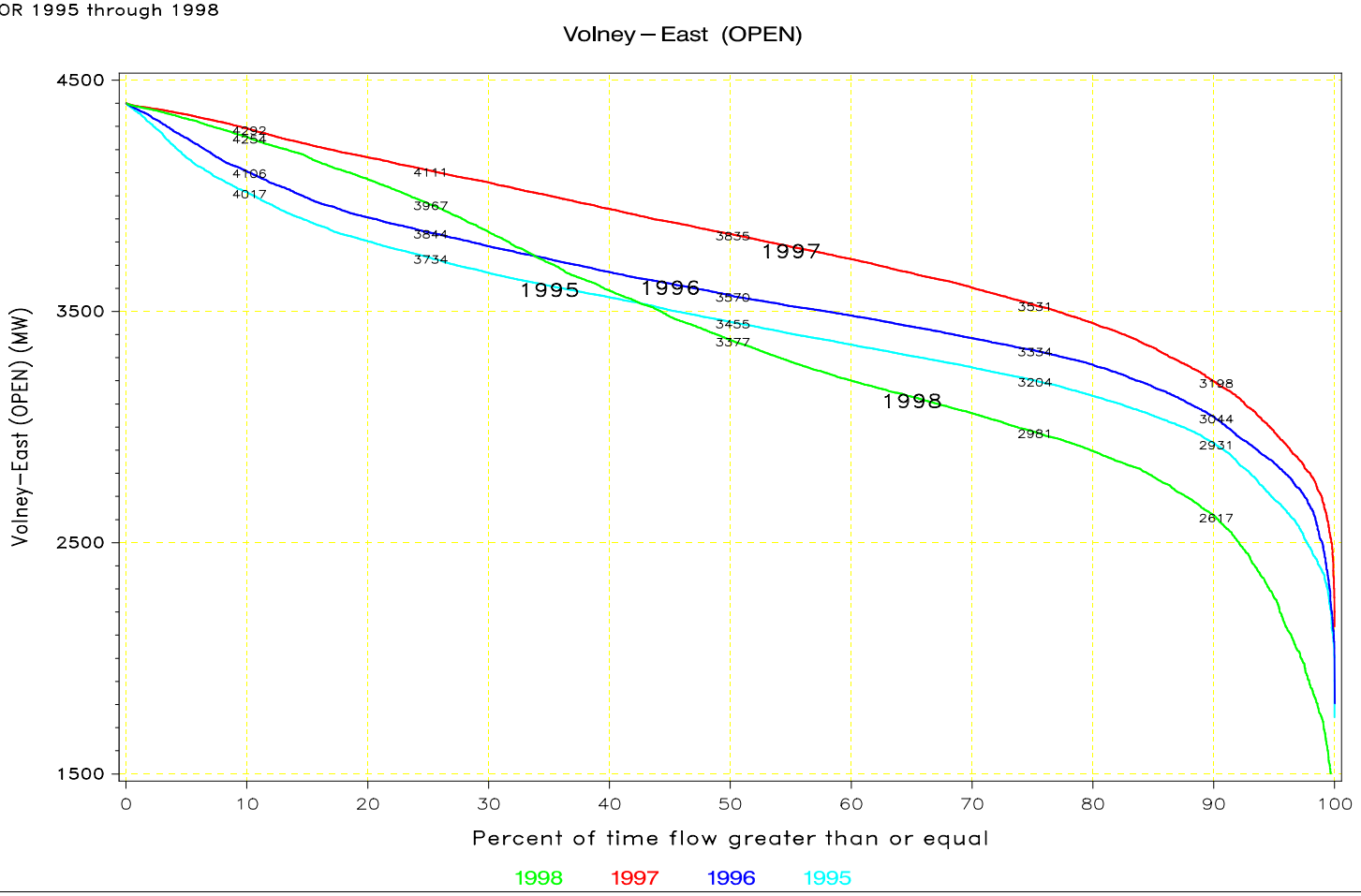


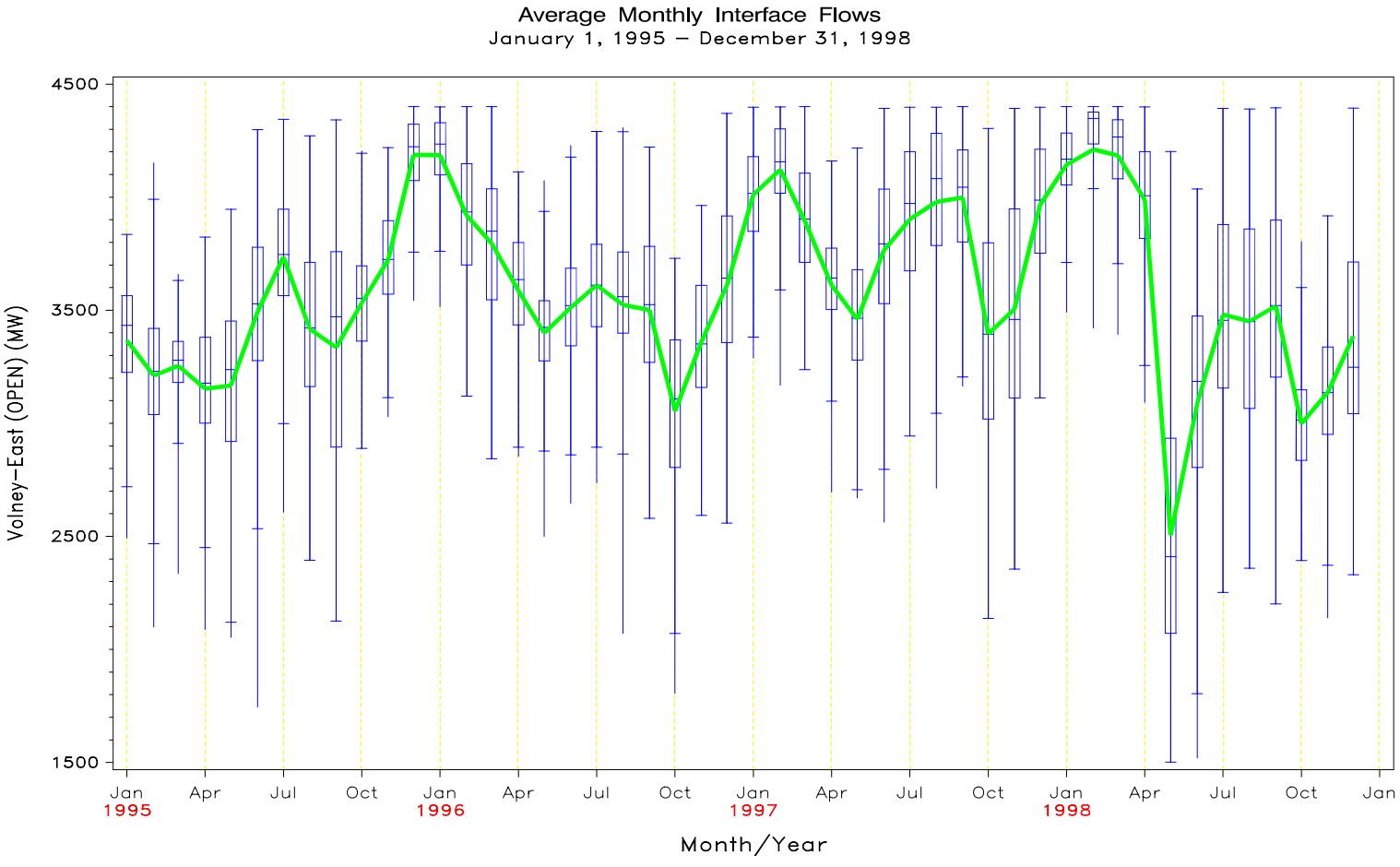
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1200	7	7	0.09	0.09
1500	48	55	0.63	0.72
1800	130	185	1.71	2.43
2100	181	366	2.38	4.81
2400	295	661	3.88	8.68
2700	691	1352	9.08	17.76
3000	1423	2775	18.69	36.46
3300	1306	4081	17.16	53.61
3600	982	5063	12.90	66.51
3900	949	6012	12.47	78.98
4200	1302	7314	17.10	96.09
4500	298	7612	3.91	100.00

Volney – East (OPEN)



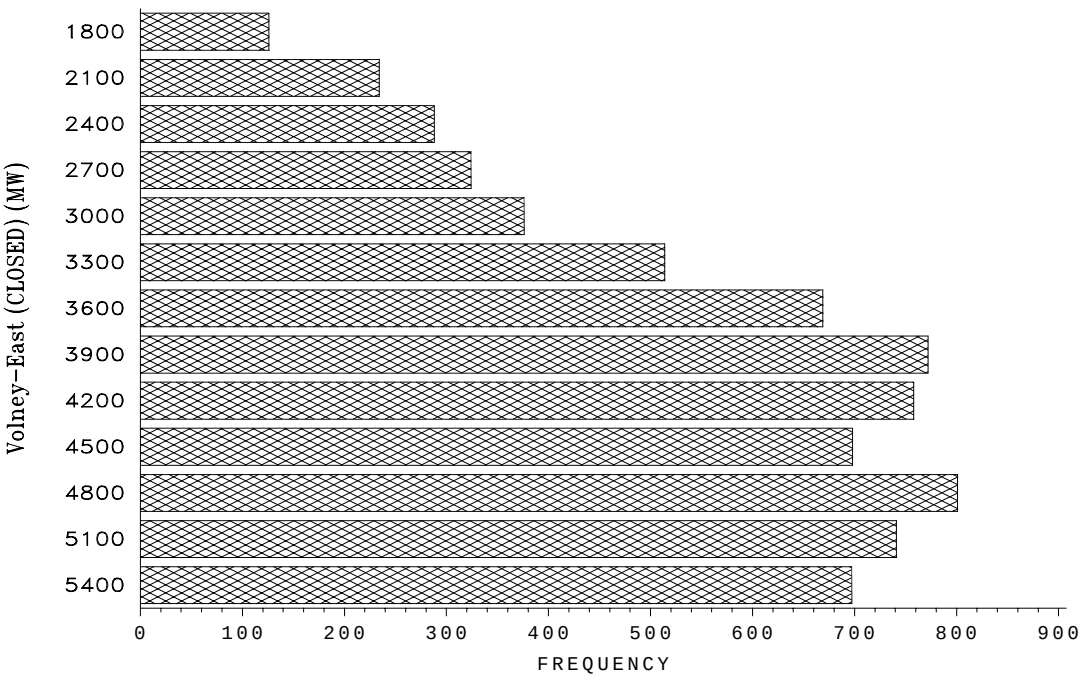
FLOW DURATION CURVE
FOR 1995 through 1998





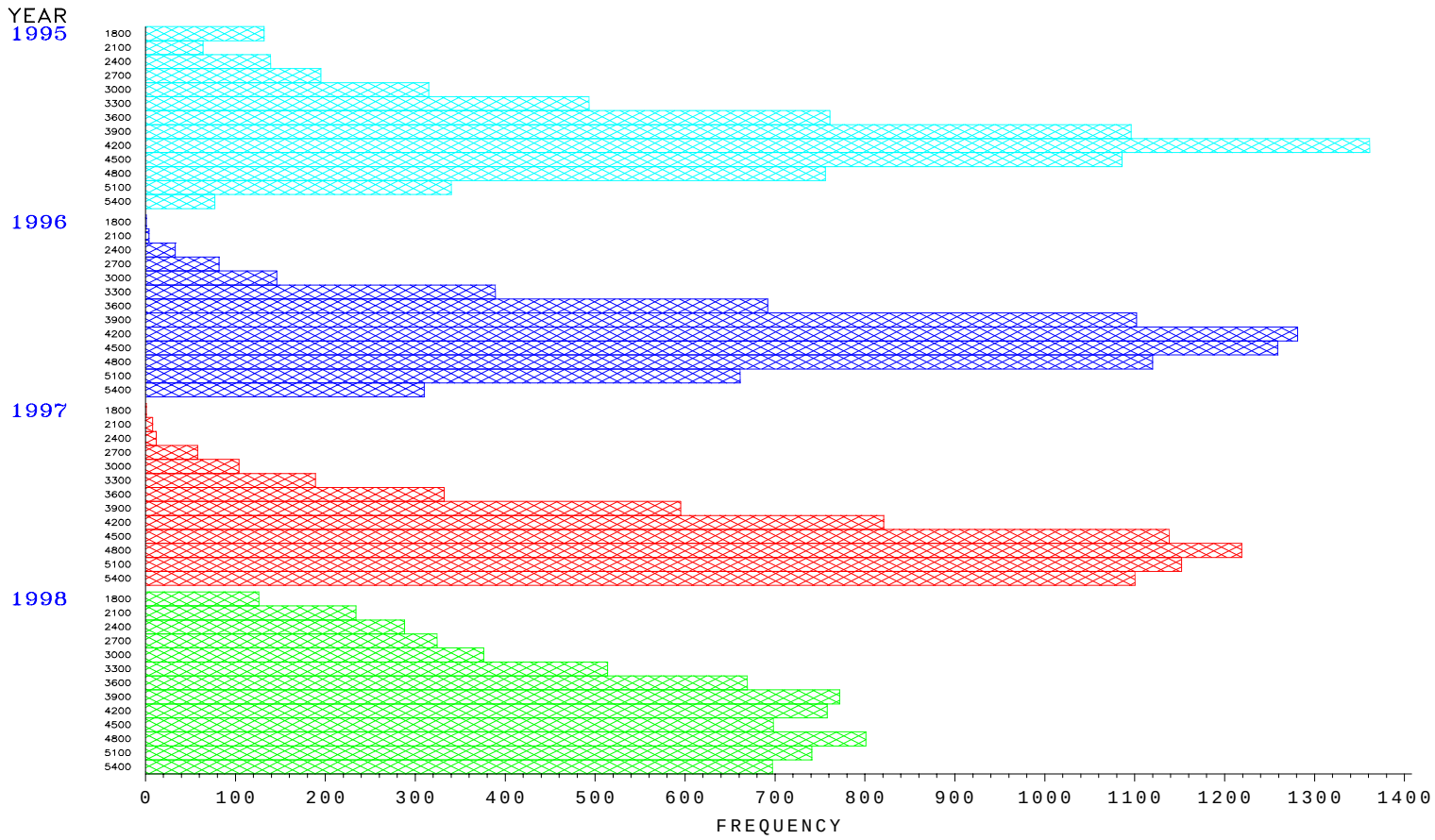
NYPP Transmission Use Statistics For January–December 1998

Volney – East (CLOSED)

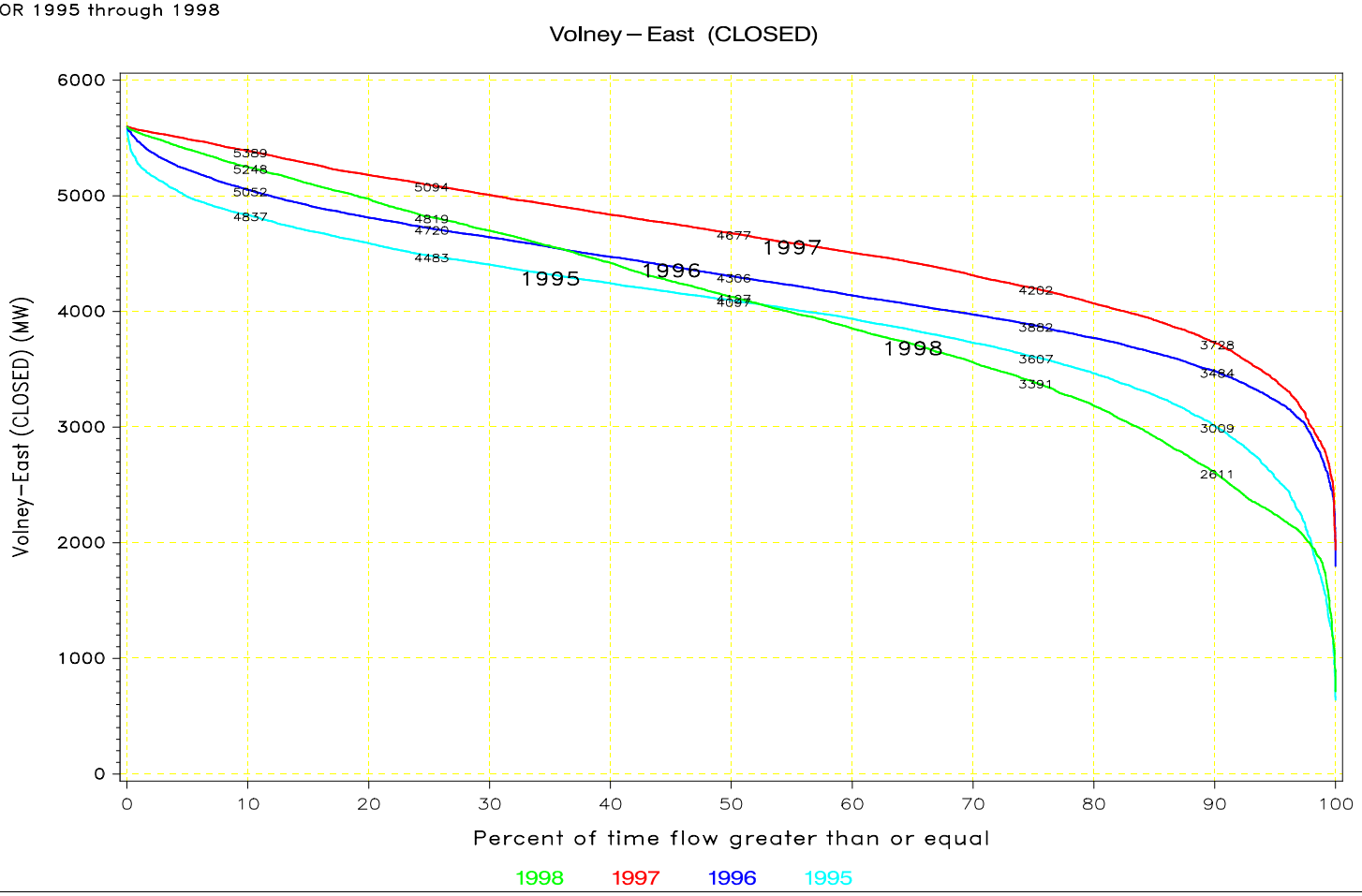


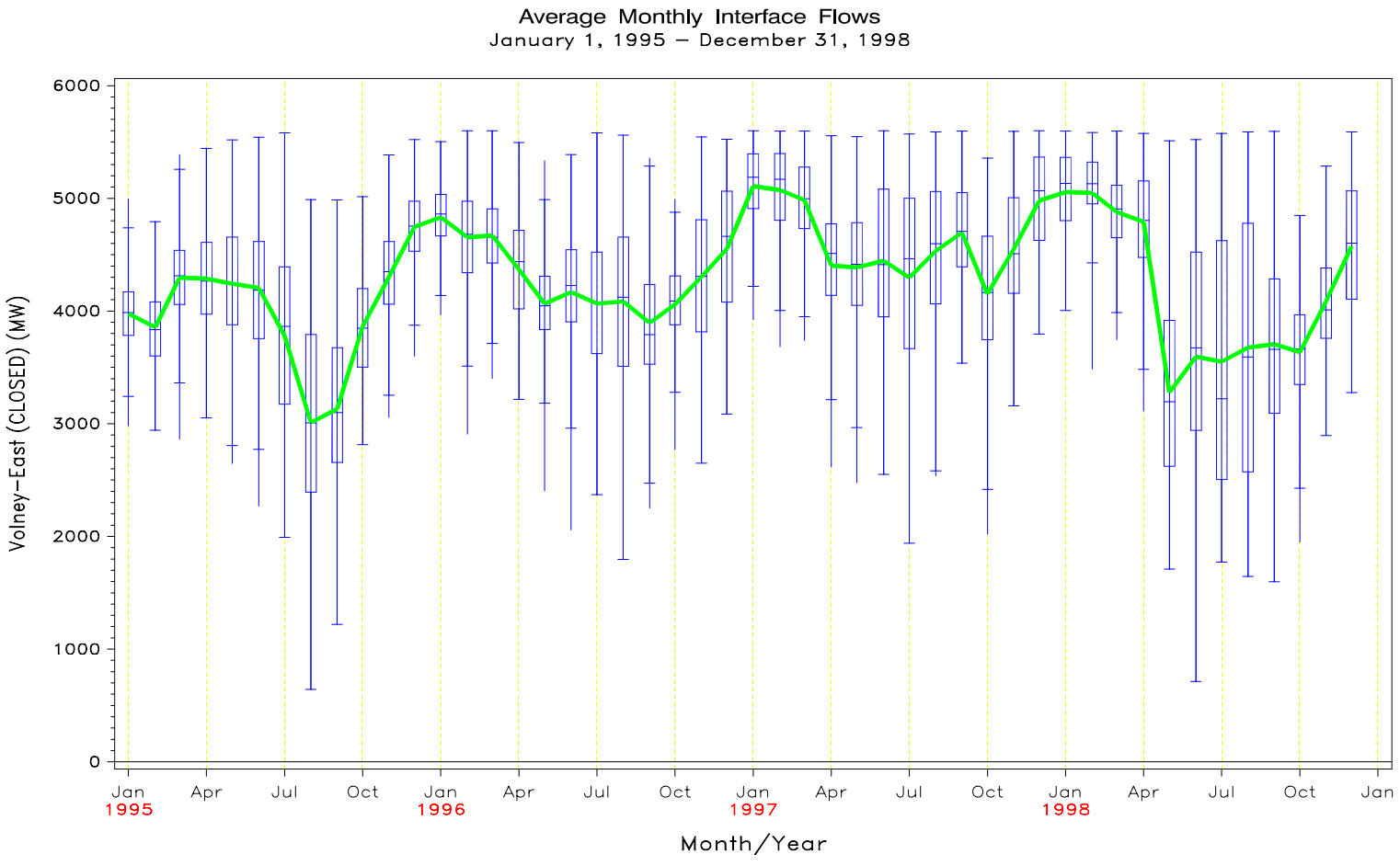
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1800	126	126	1.80	1.80
2100	234	360	3.34	5.14
2400	288	648	4.12	9.26
2700	324	972	4.63	13.89
3000	376	1348	5.37	19.26
3300	514	1862	7.34	26.61
3600	669	2531	9.56	36.17
3900	772	3303	11.03	47.20
4200	758	4061	10.83	58.03
4500	698	4759	9.97	68.01
4800	801	5560	11.45	79.45
5100	741	6301	10.59	90.04
5400	697	6998	9.96	100.00

Volney – East (CLOSED)

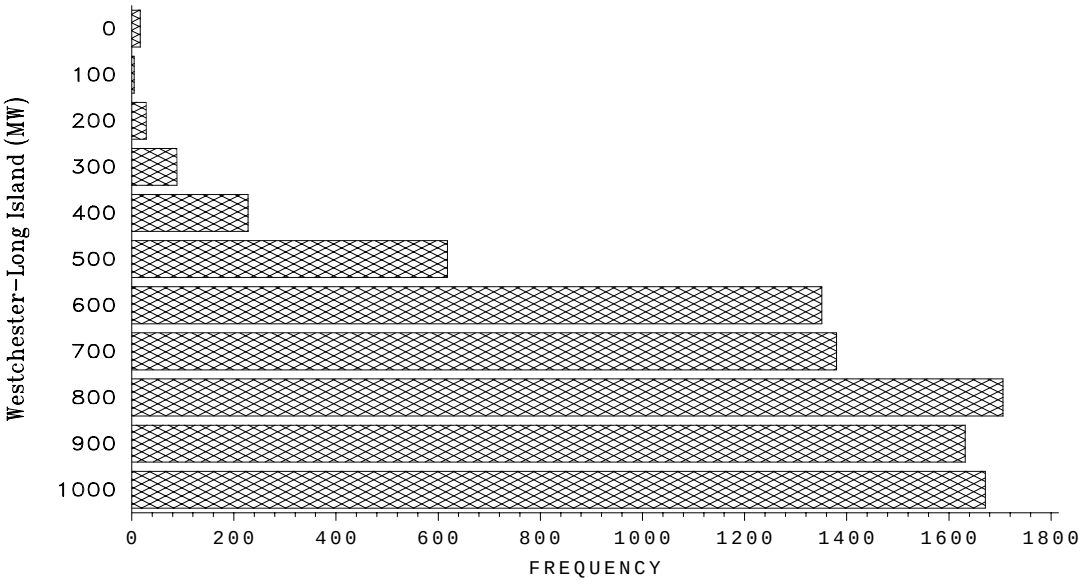


FLOW DURATION CURVE
FOR 1995 through 1998



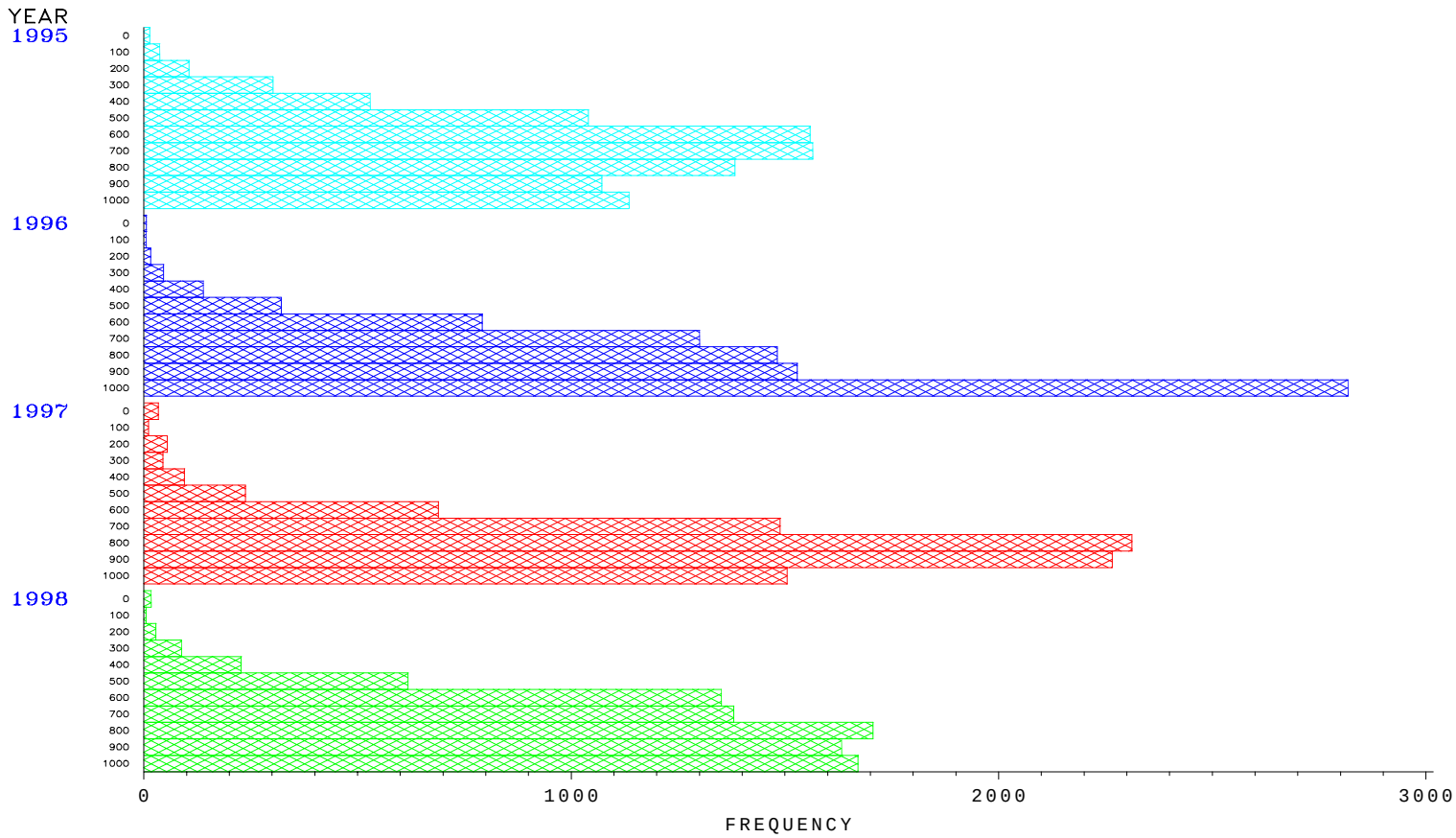


Westchester – Long Island
Y49 + Y50

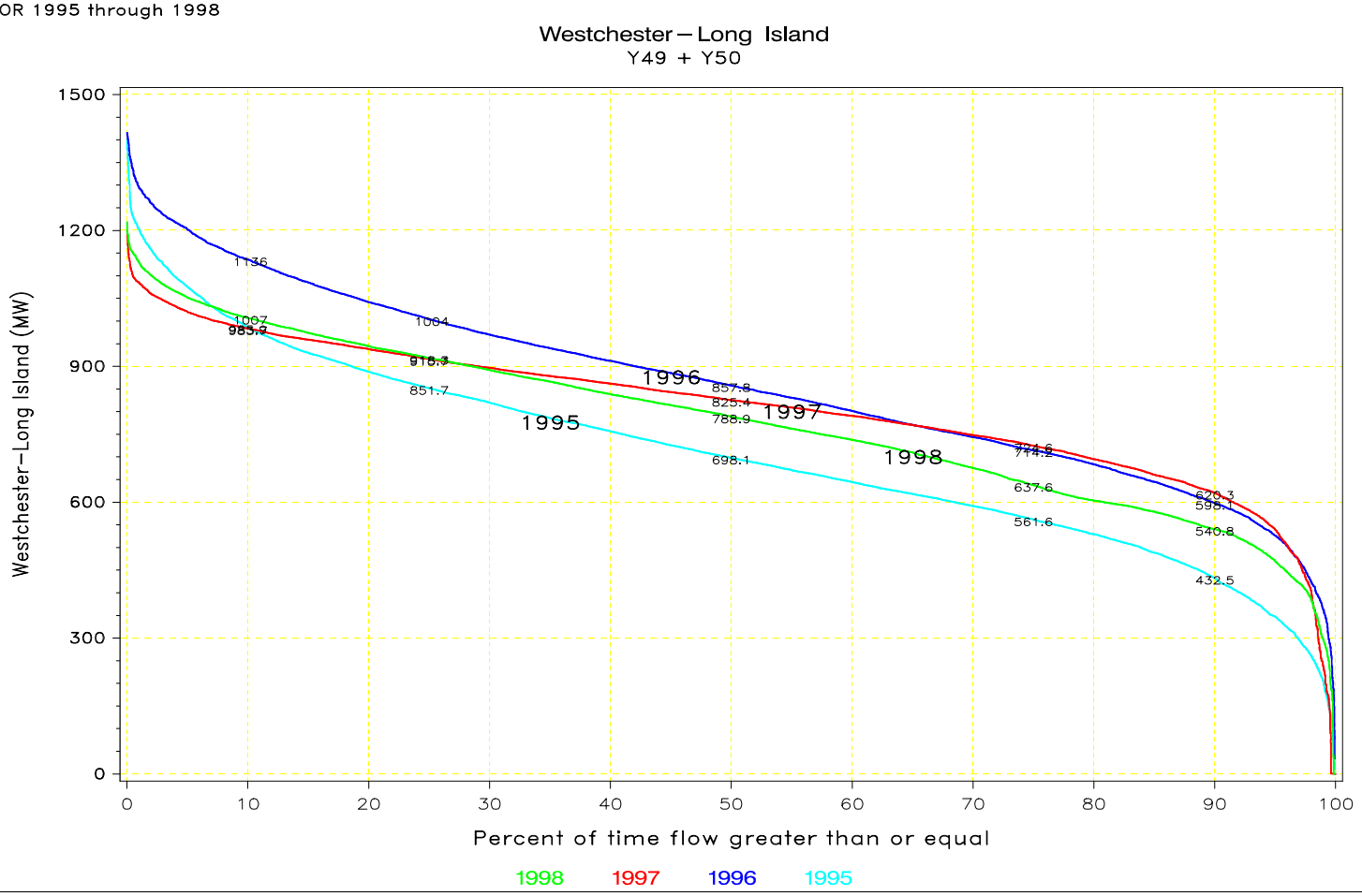


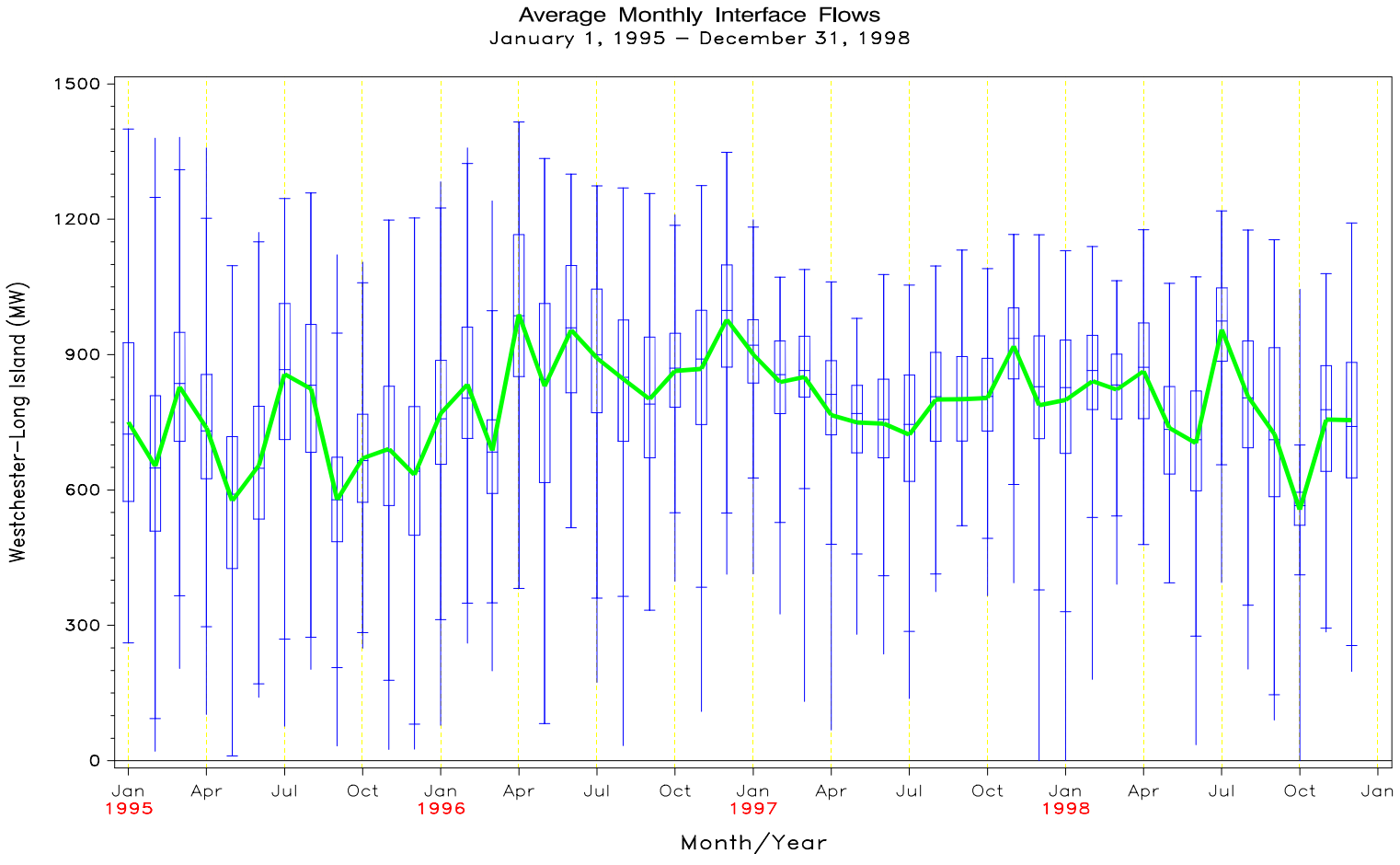
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
0	17	17	0.19	0.19
100	5	22	0.06	0.25
200	28	50	0.32	0.57
300	88	138	1.01	1.58
400	228	366	2.61	4.20
500	618	984	7.08	11.28
600	1351	2335	15.49	26.77
700	1380	3715	15.82	42.58
800	1706	5421	19.56	62.14
900	1632	7053	18.71	80.85
1000	1671	8724	19.15	100.00

Westchester – Long Island
Y49 + Y50



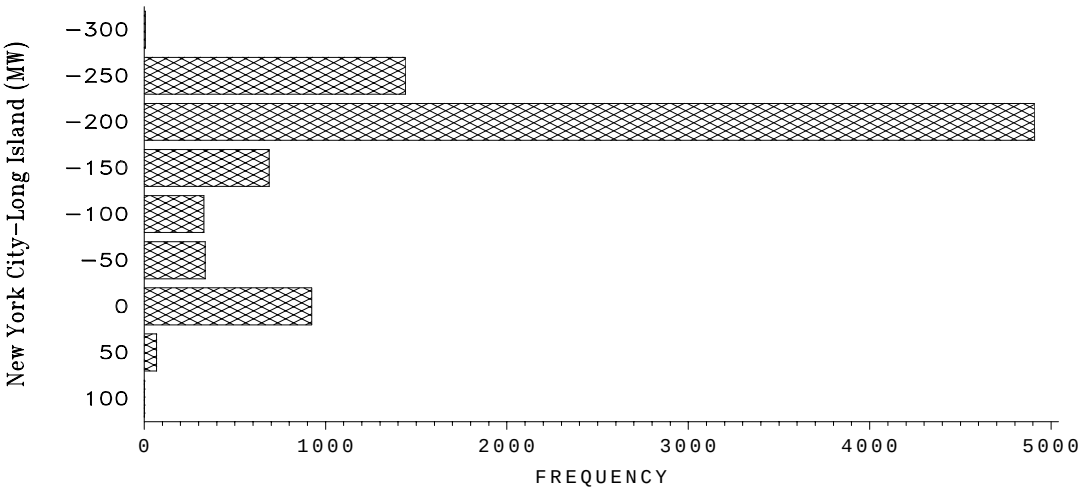
FLOW DURATION CURVE
FOR 1995 through 1998





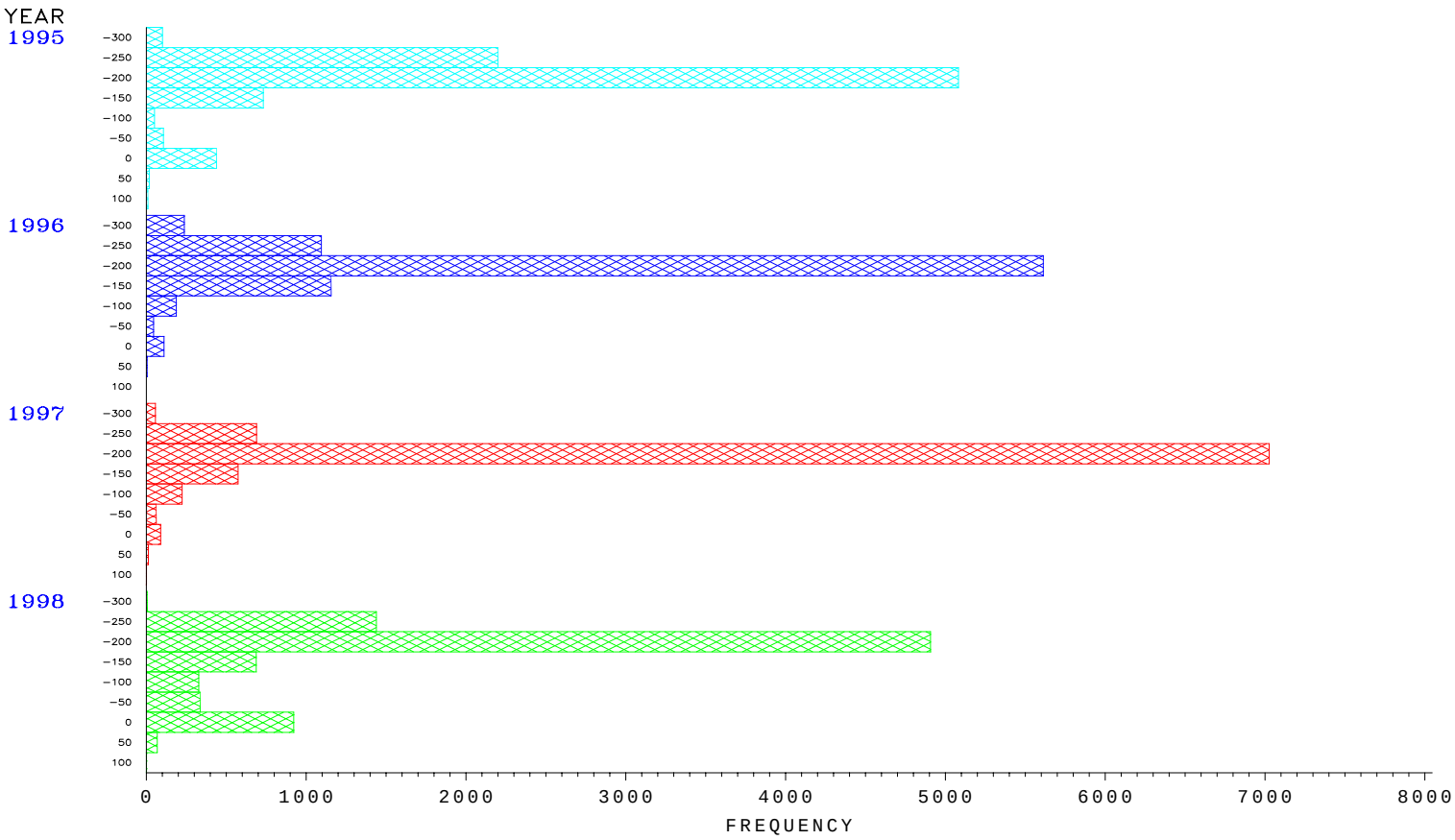
NYPP Transmission Use Statistics For January–December 1998

New York City – Long Island
901 + 903

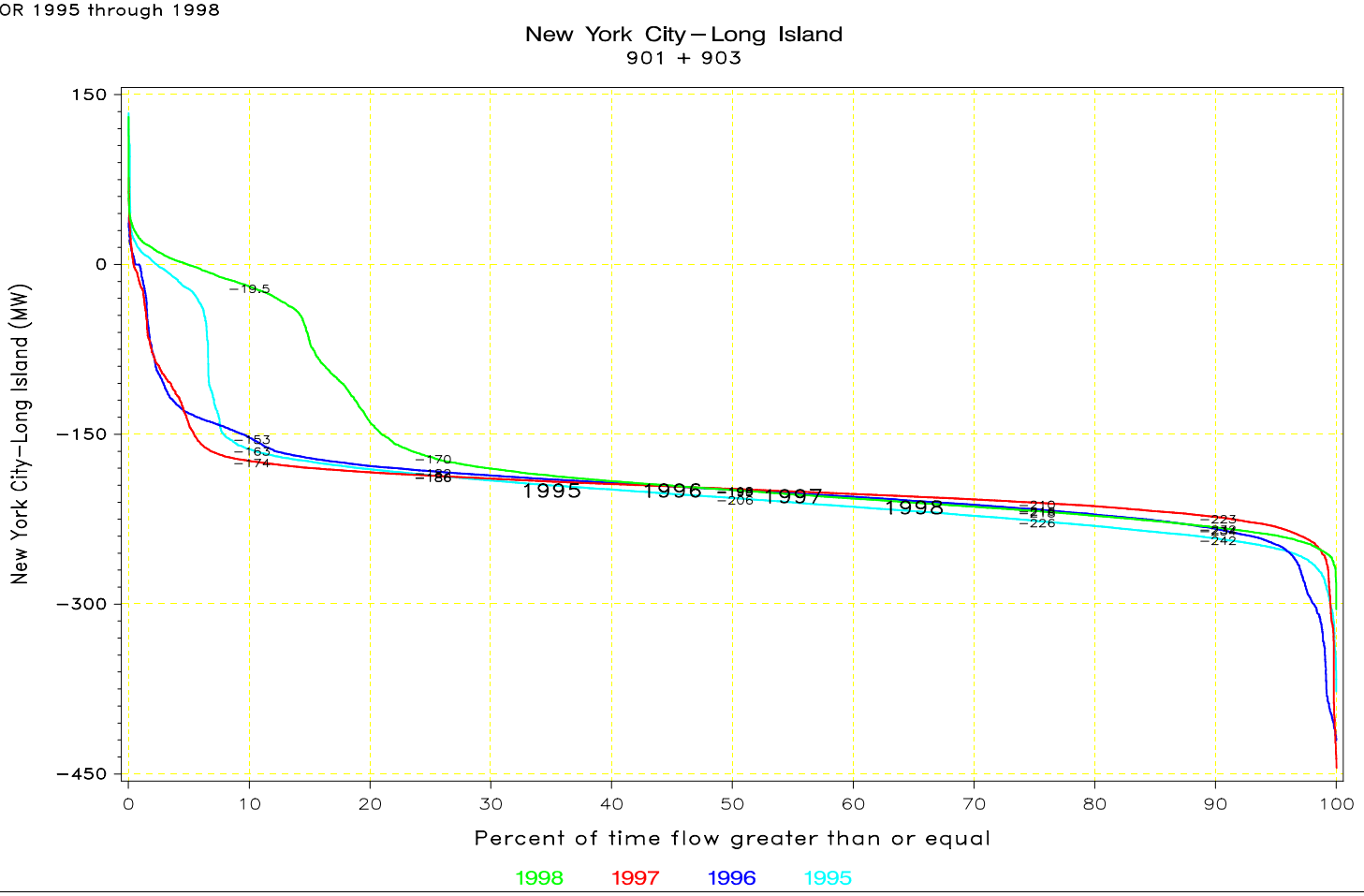


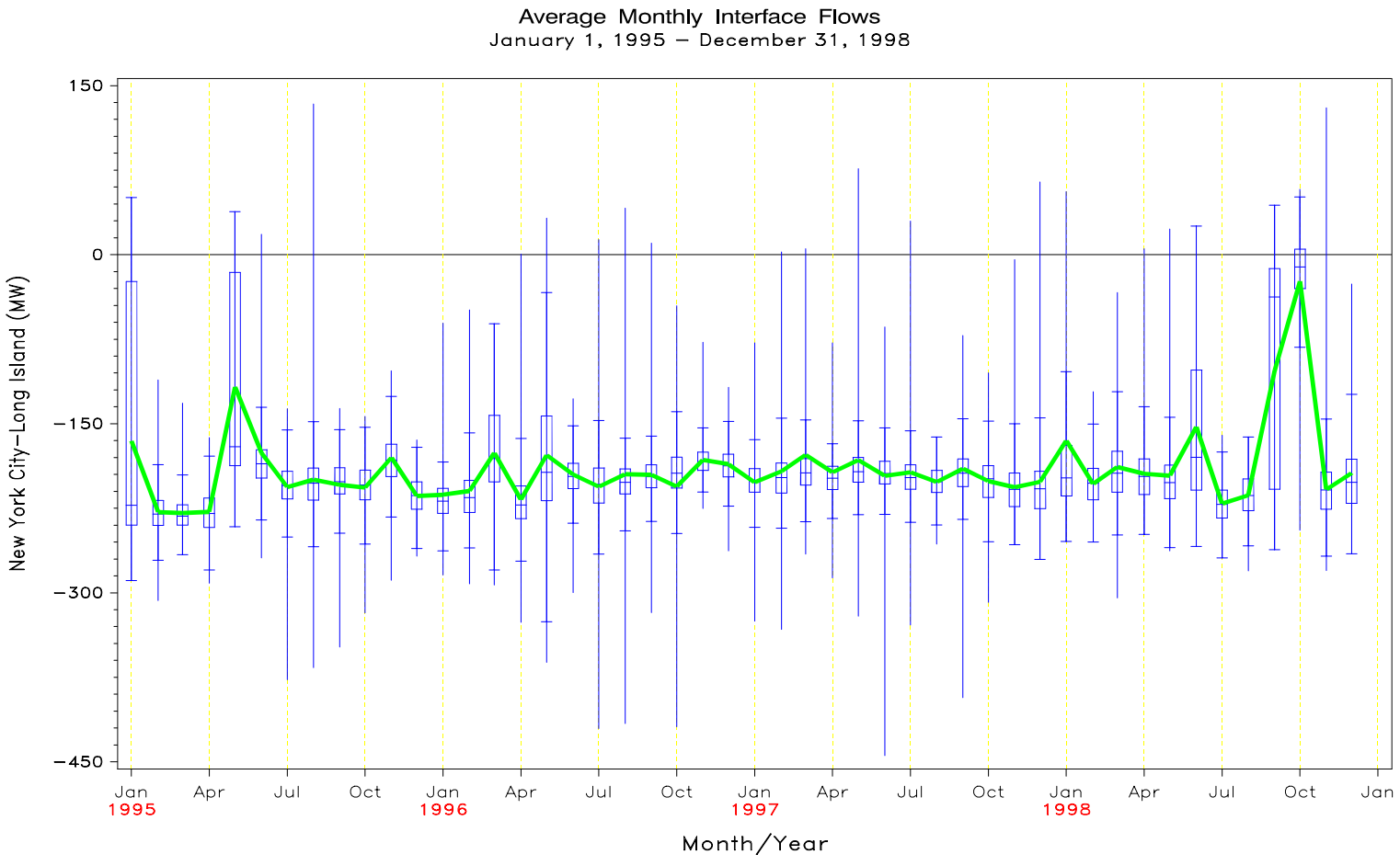
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−300	6	6	0.07	0.07
−250	1439	1445	16.54	16.61
−200	4907	6352	56.40	73.01
−150	689	7041	7.92	80.93
−100	329	7370	3.78	84.71
−50	337	7707	3.87	88.59
0	923	8630	10.61	99.20
50	69	8699	0.79	99.99
100	1	8700	0.01	100.00

New York City – Long Island
901 + 903

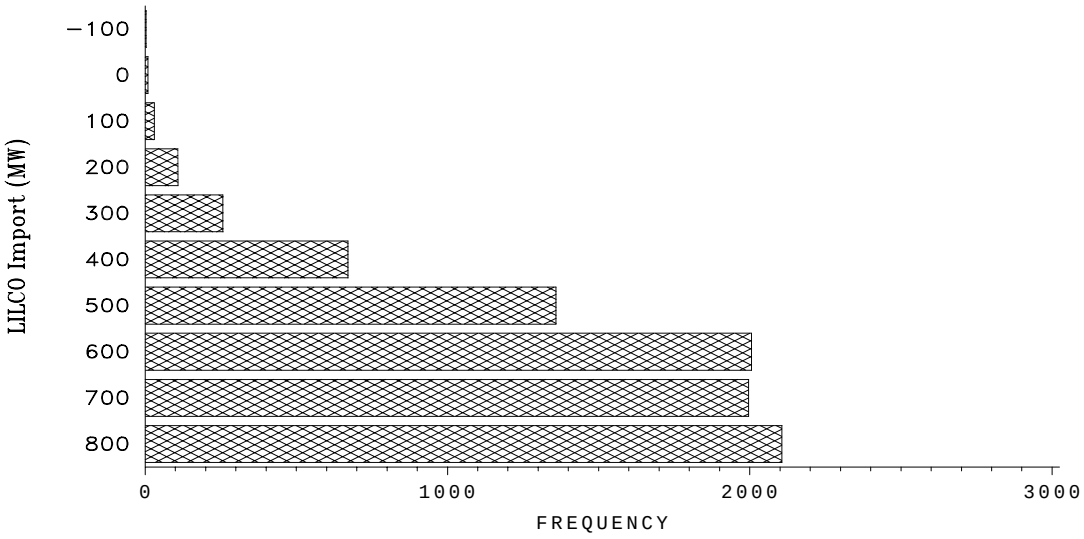


FLOW DURATION CURVE
FOR 1995 through 1998



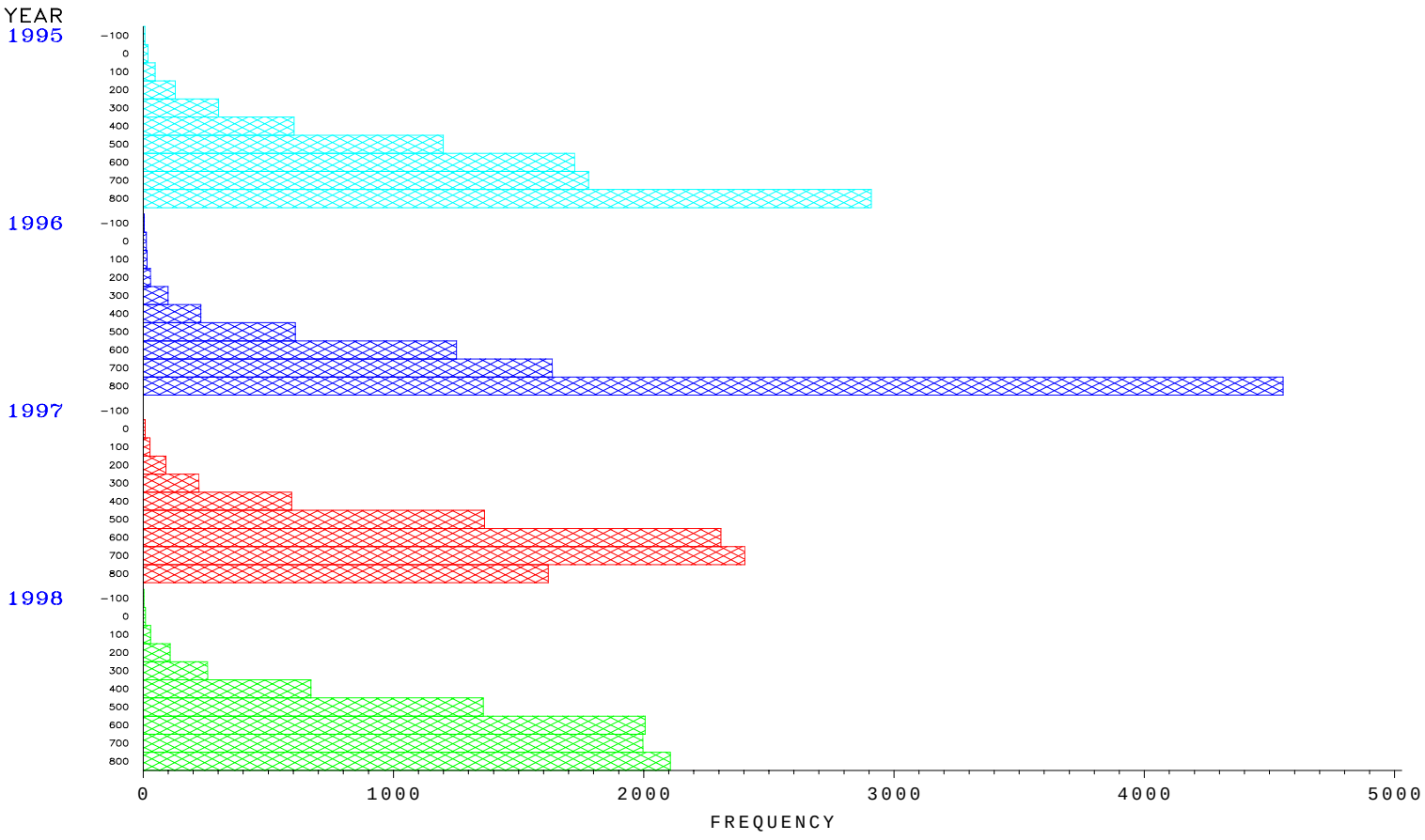


LILCO Import

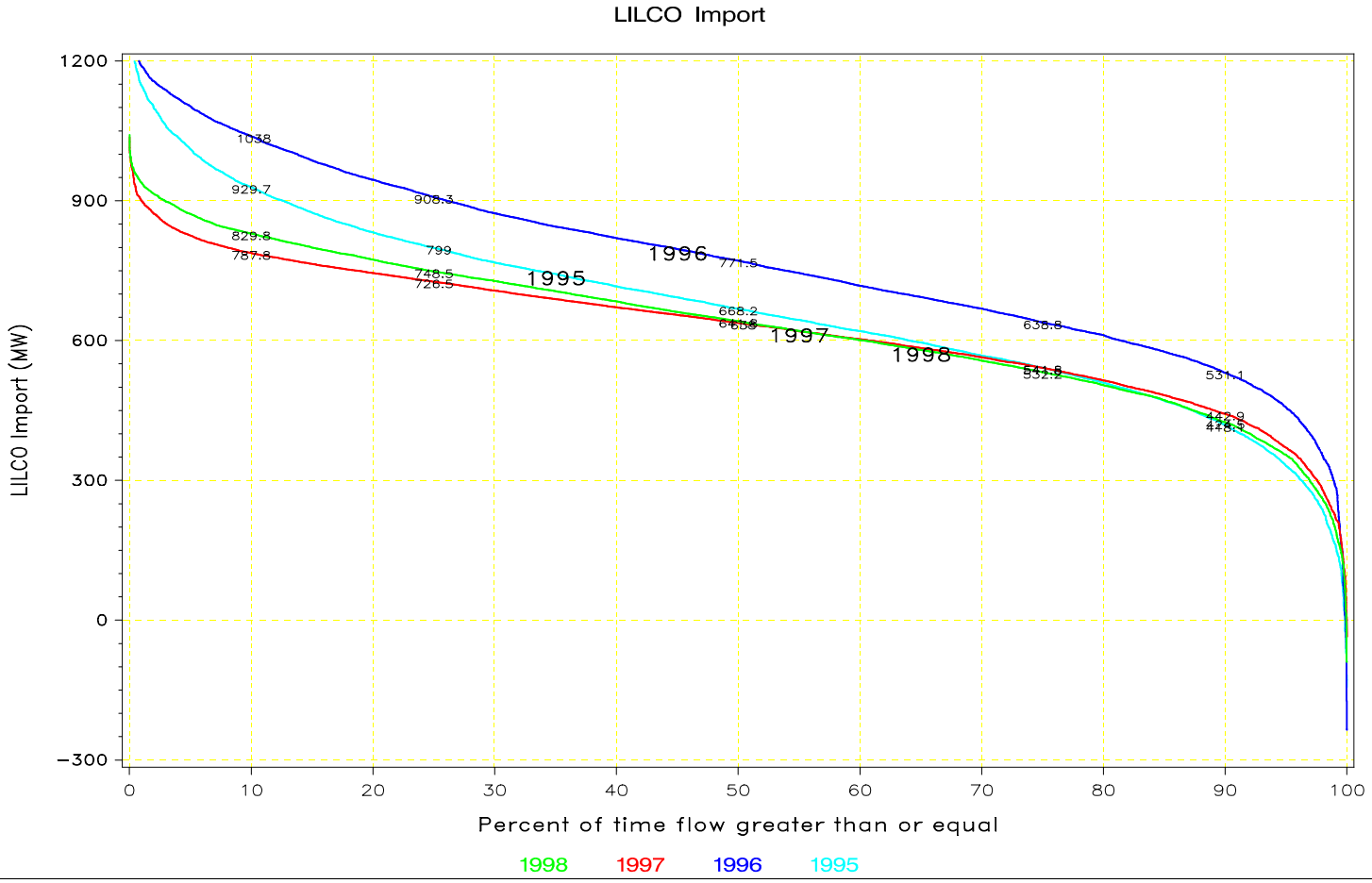


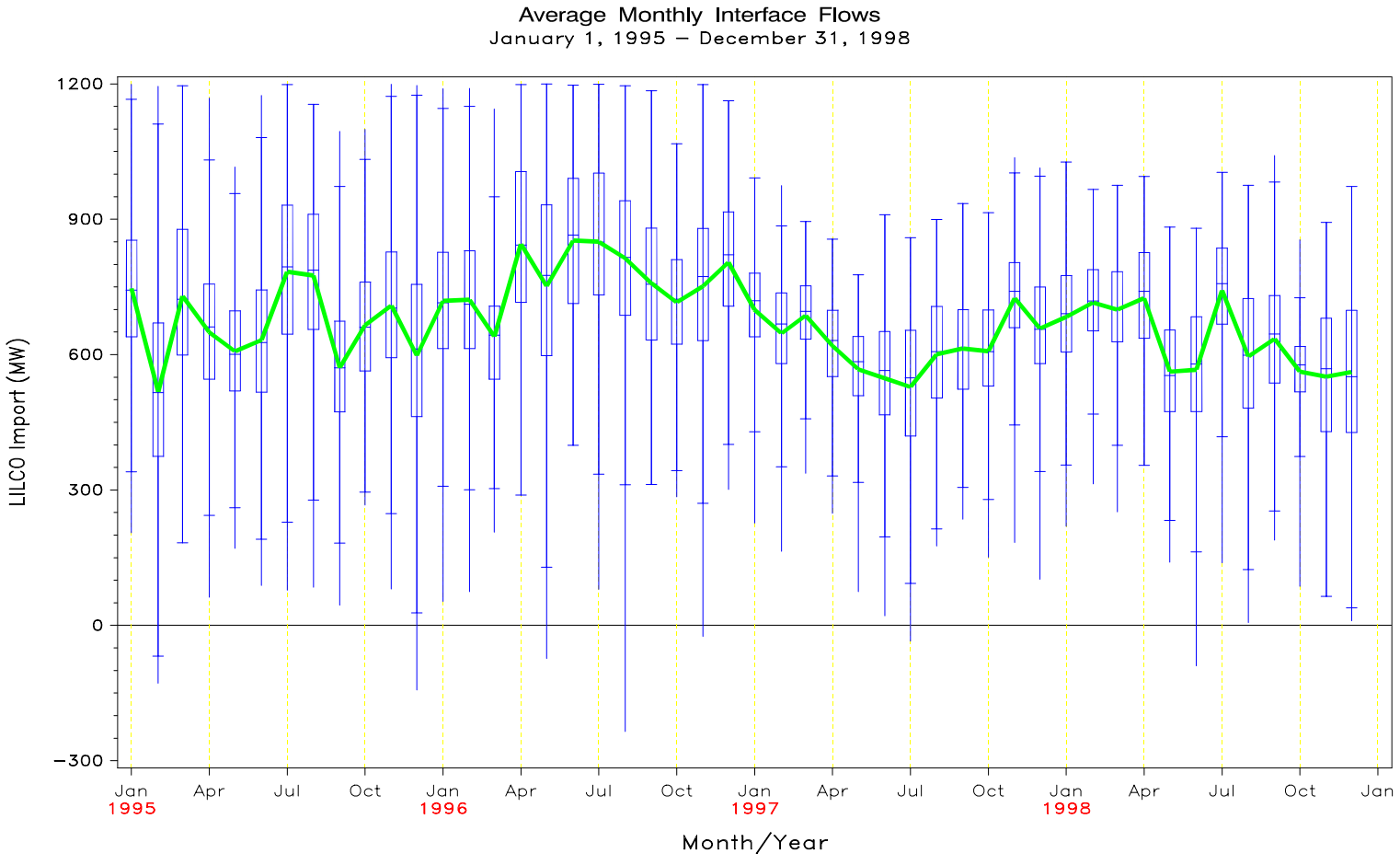
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−100	3	3	0.04	0.04
0	9	12	0.11	0.14
100	30	42	0.35	0.49
200	108	150	1.26	1.76
300	257	407	3.01	4.76
400	671	1078	7.85	12.62
500	1359	2437	15.90	28.52
600	2006	4443	23.48	52.00
700	1996	6439	23.36	75.35
800	2106	8545	24.65	100.00

LILCO Import



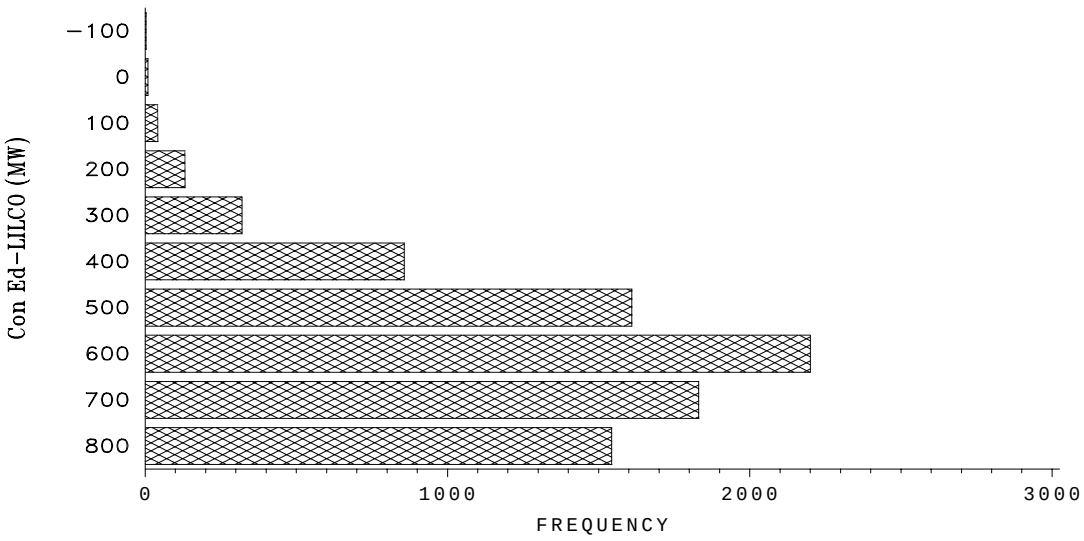
FLOW DURATION CURVE
FOR 1995 through 1998





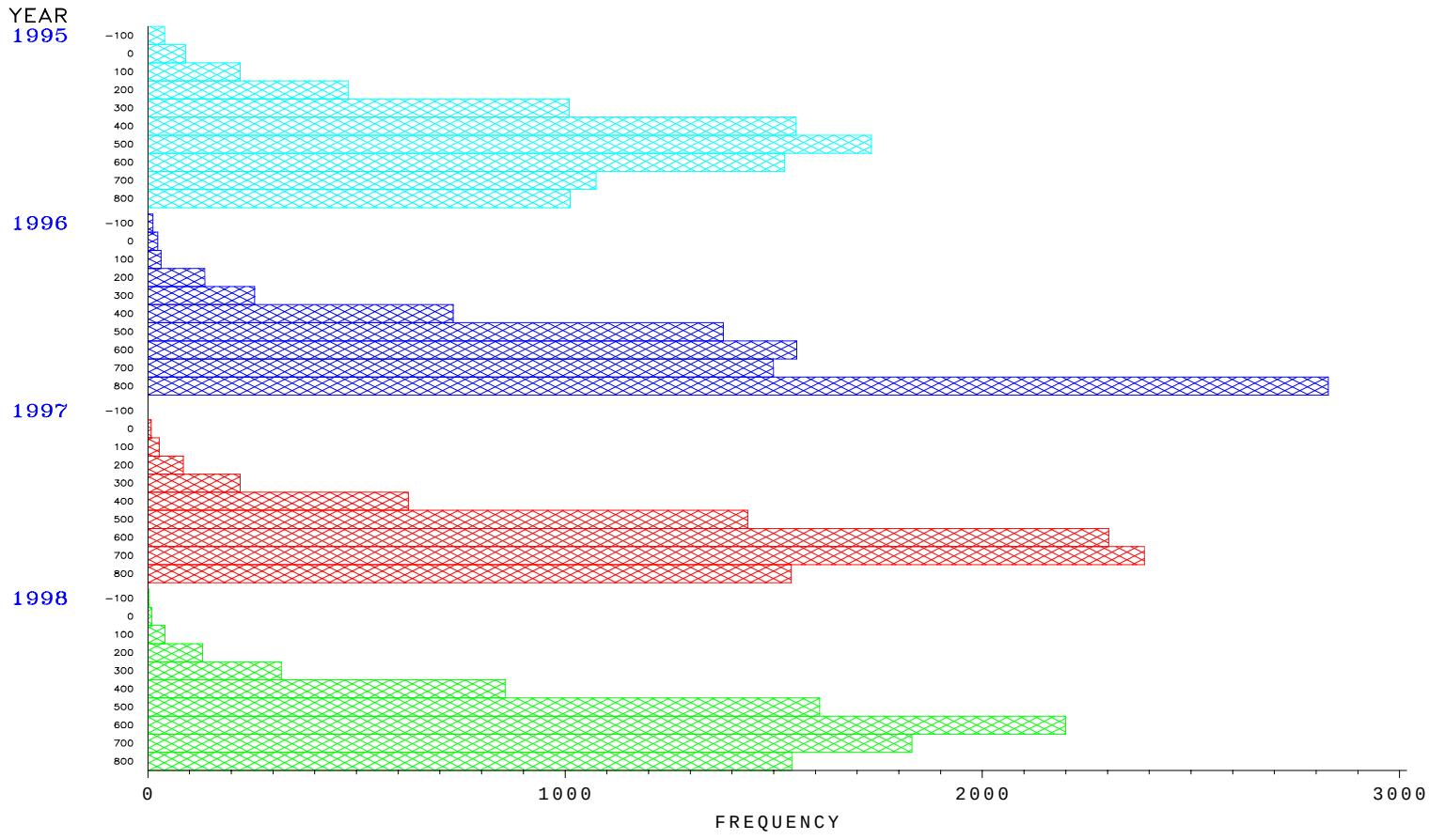
NYPP Transmission Use Statistics For January–December 1998

Con Ed – LILCO

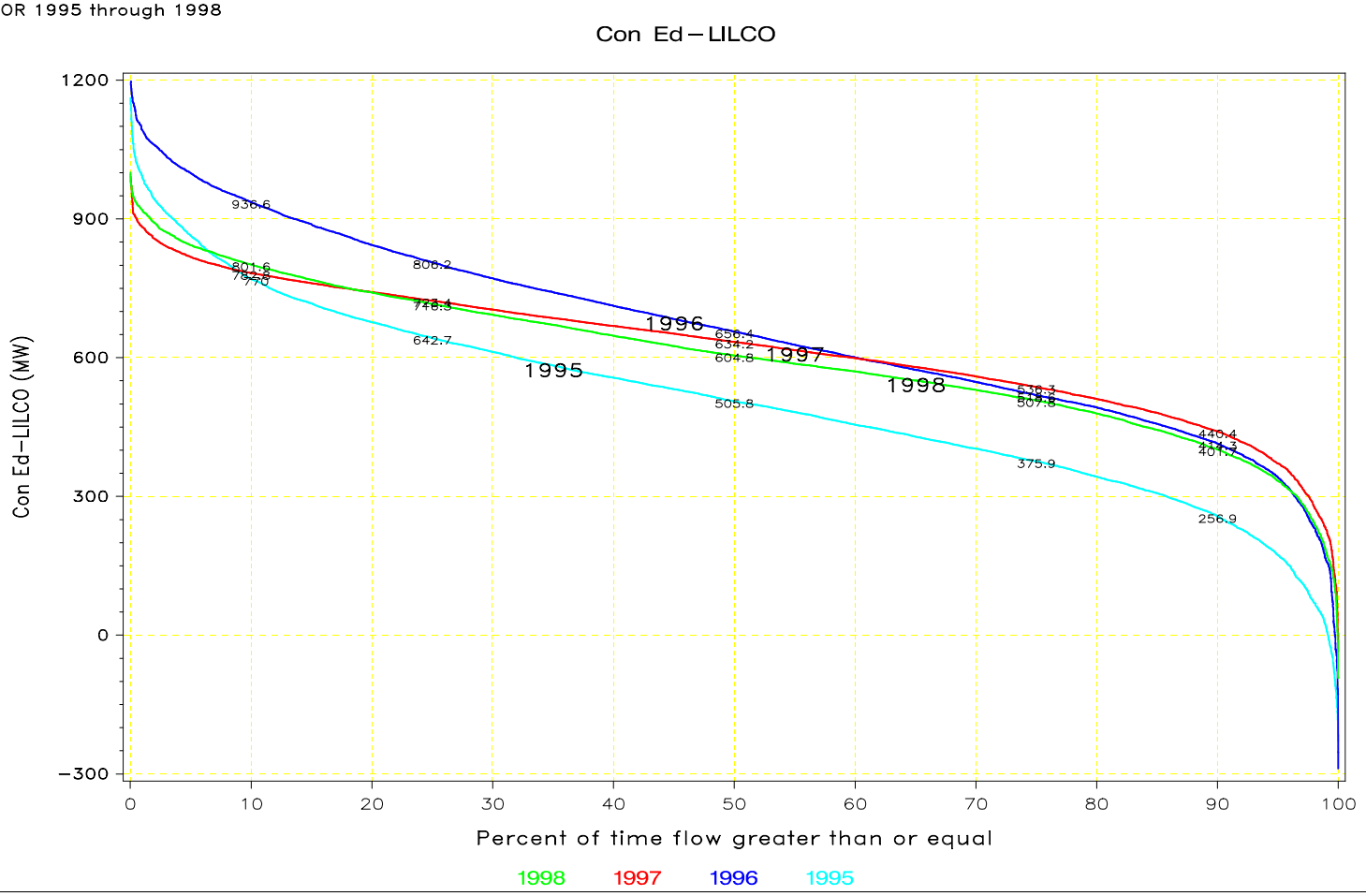


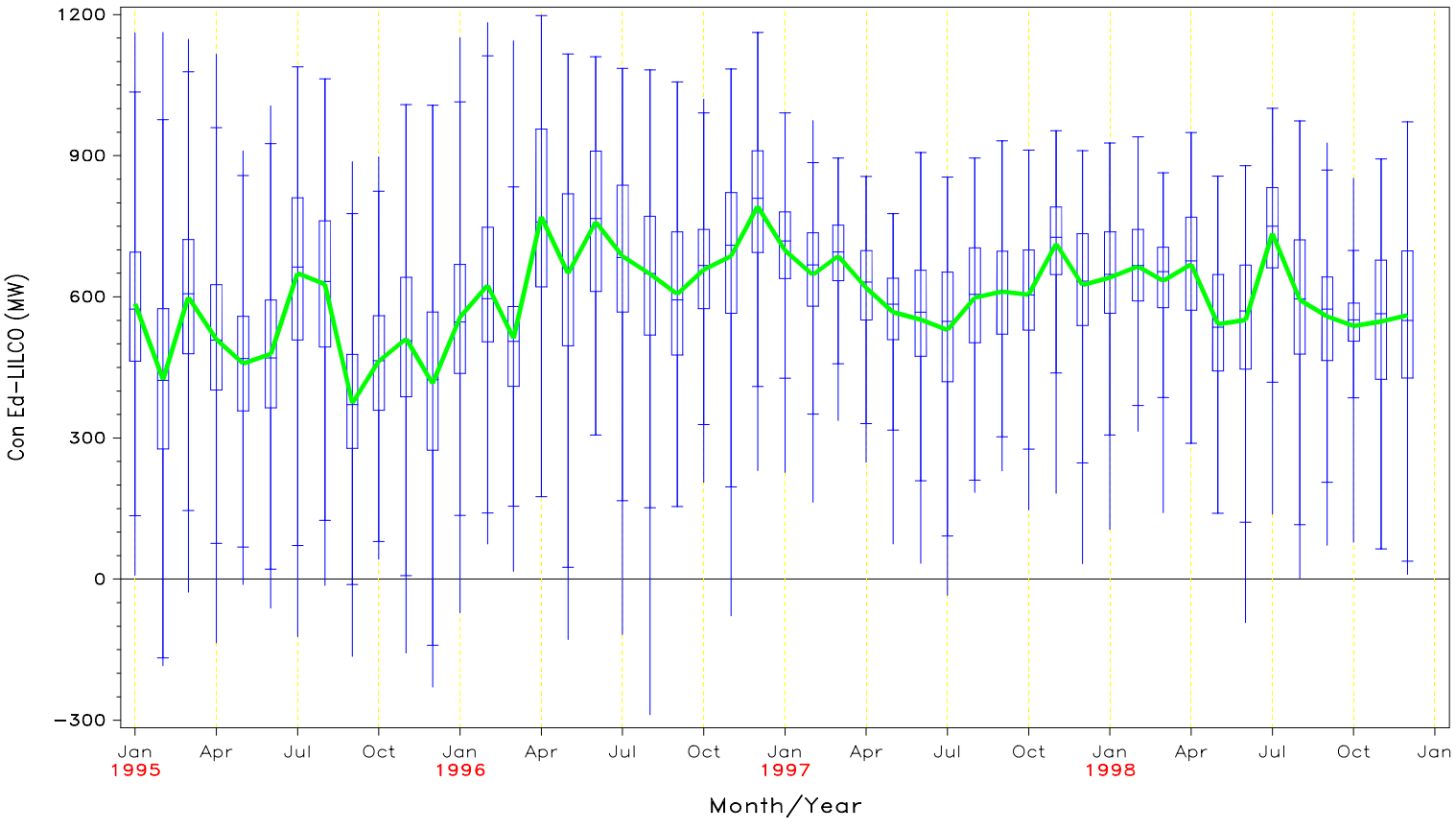
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−100	3	3	0.04	0.04
0	9	12	0.11	0.14
100	41	53	0.48	0.62
200	131	184	1.53	2.15
300	320	504	3.74	5.90
400	857	1361	10.03	15.93
500	1610	2971	18.84	34.77
600	2200	5171	25.75	60.51
700	1831	7002	21.43	81.94
800	1543	8545	18.06	100.00

Con Ed – LILCO

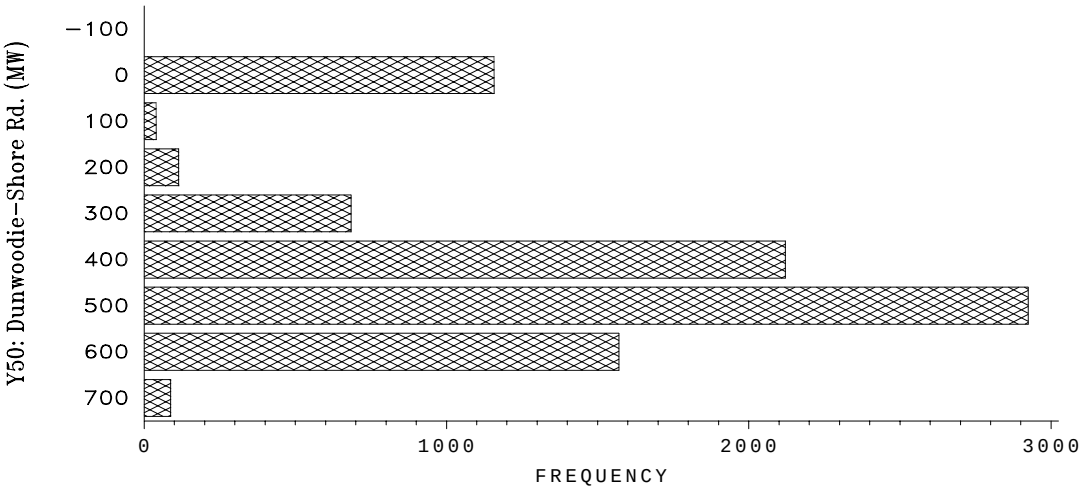


FLOW DURATION CURVE
FOR 1995 through 1998



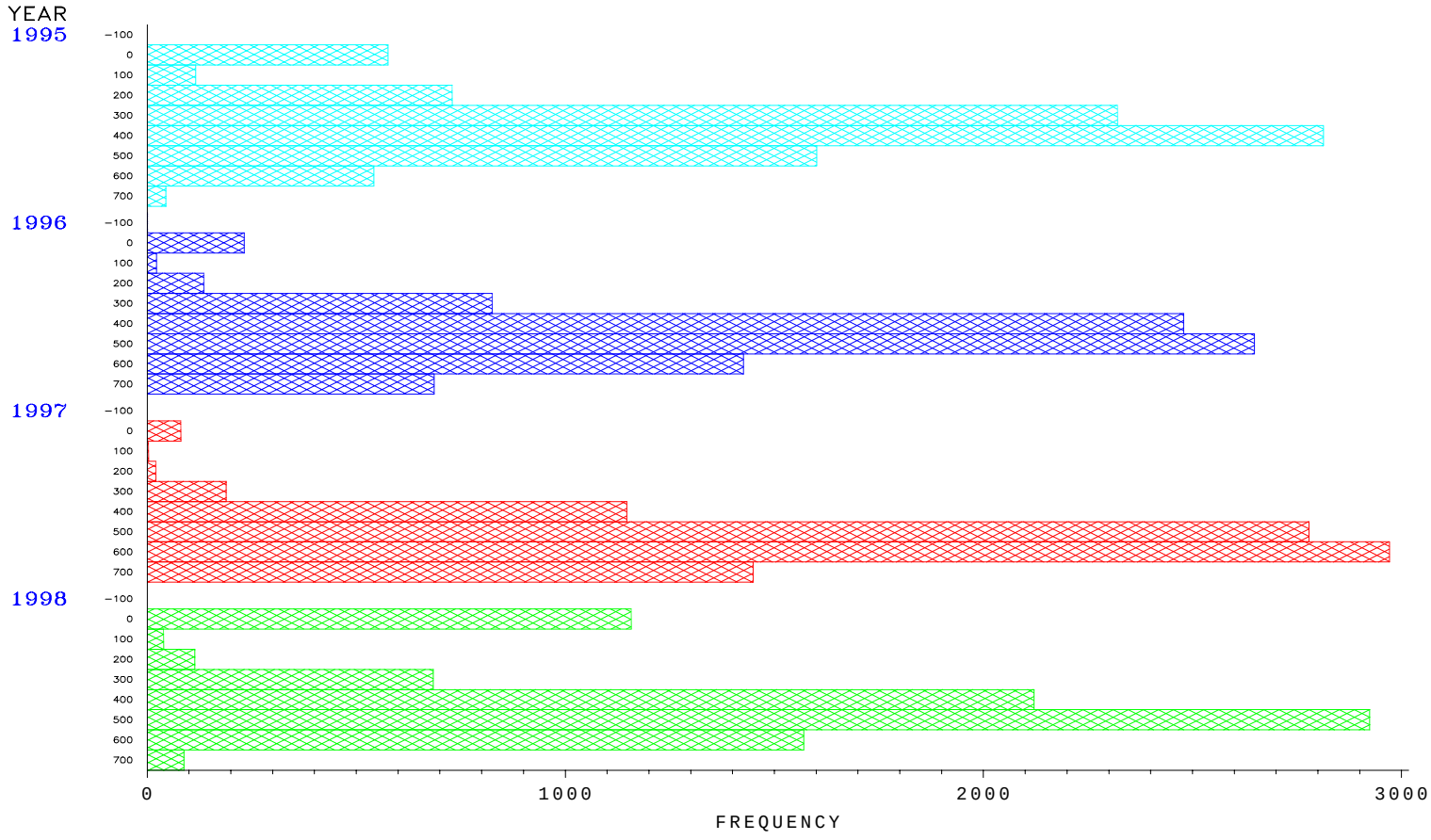


Y50: Dunwoodie – Shore Rd.



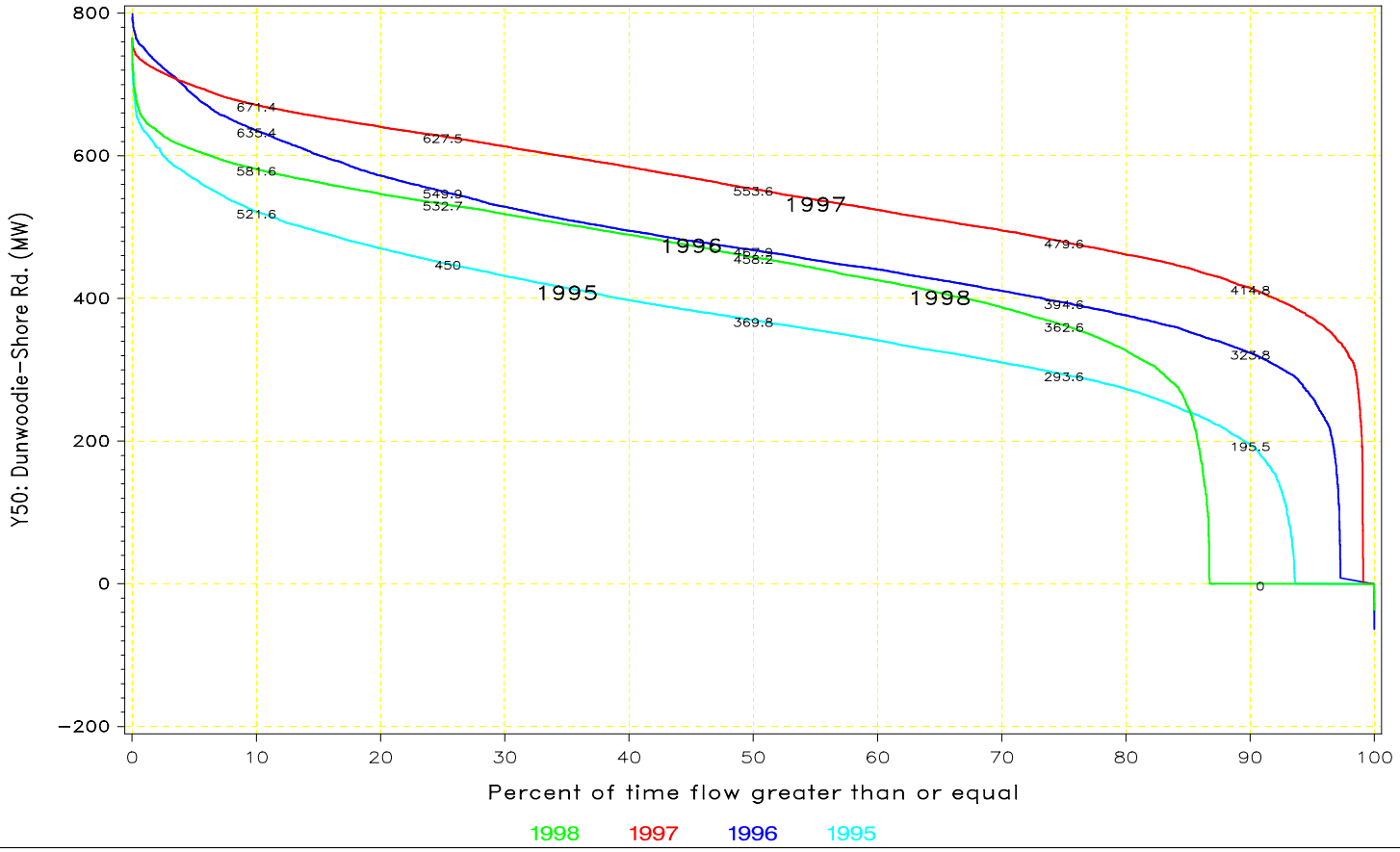
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−100	0	0	0.00	0.00
0	1157	1157	13.30	13.30
100	39	1196	0.45	13.75
200	114	1310	1.31	15.06
300	684	1994	7.86	22.93
400	2121	4115	24.39	47.32
500	2924	7039	33.62	80.94
600	1570	8609	18.05	98.99
700	88	8697	1.01	100.00

Y50: Dunwoodie – Shore Rd.



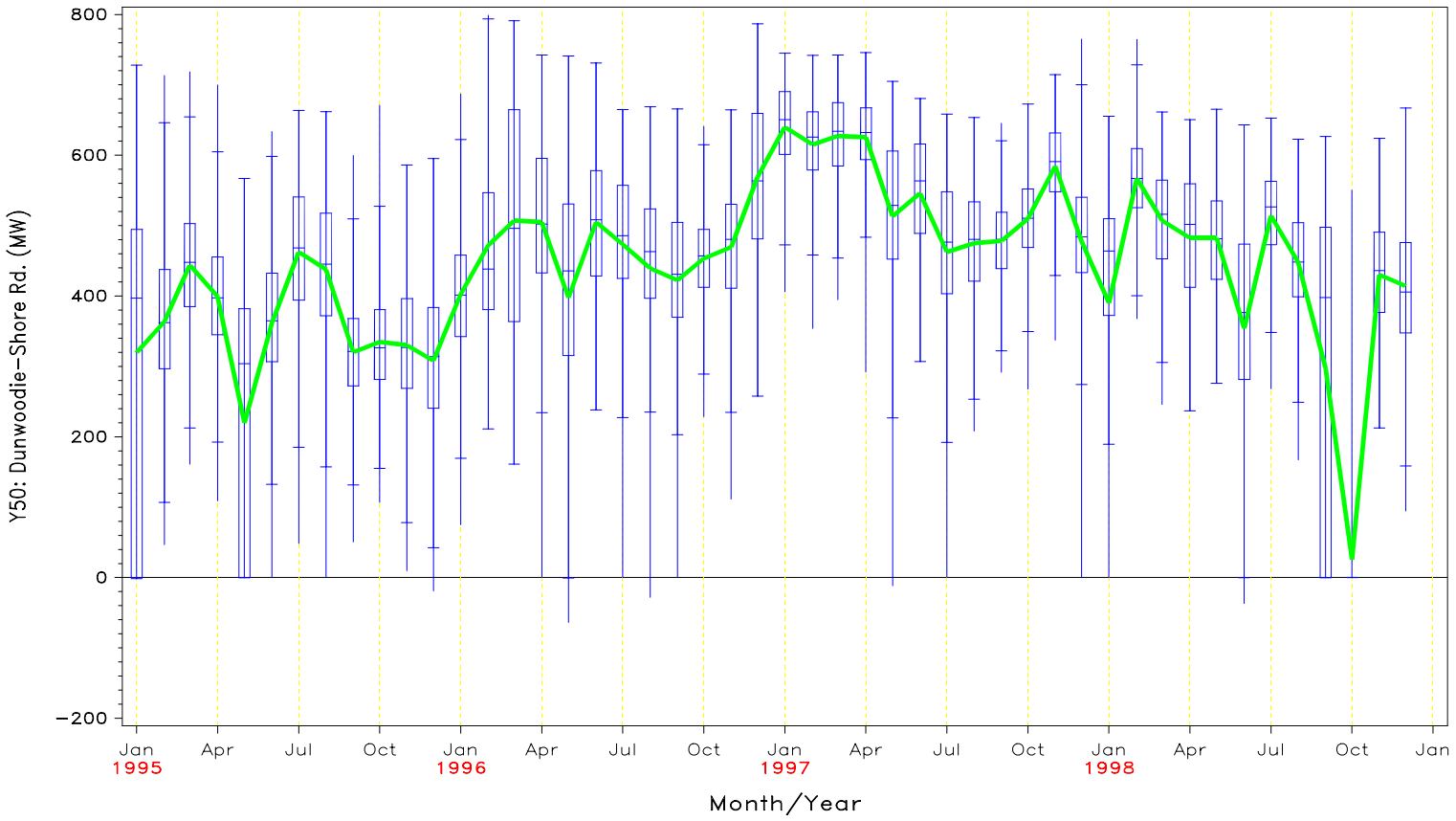
FLOW DURATION CURVE
FOR 1995 through 1998

Y50: Dunwoodie – Shore Rd.

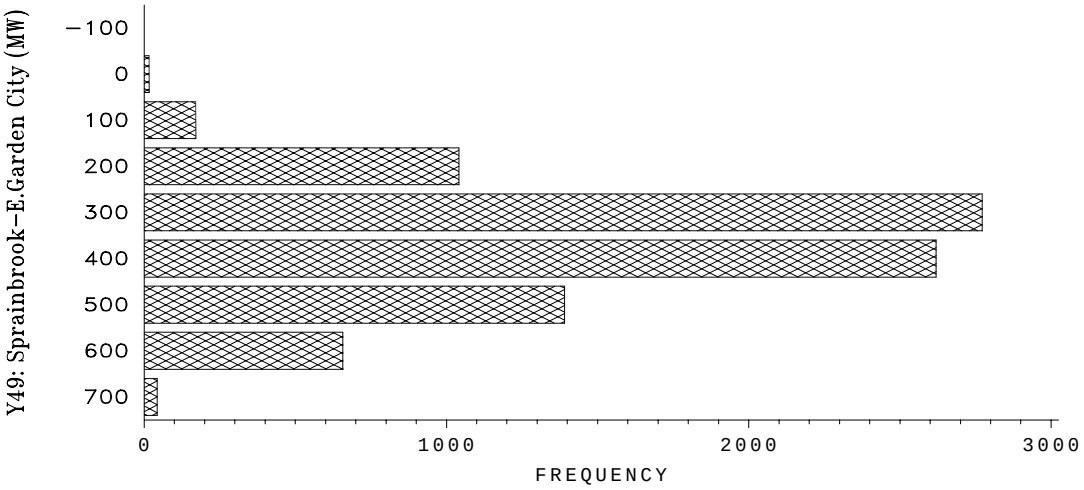


Average Monthly Interface Flows

January 1, 1995 – December 31, 1998

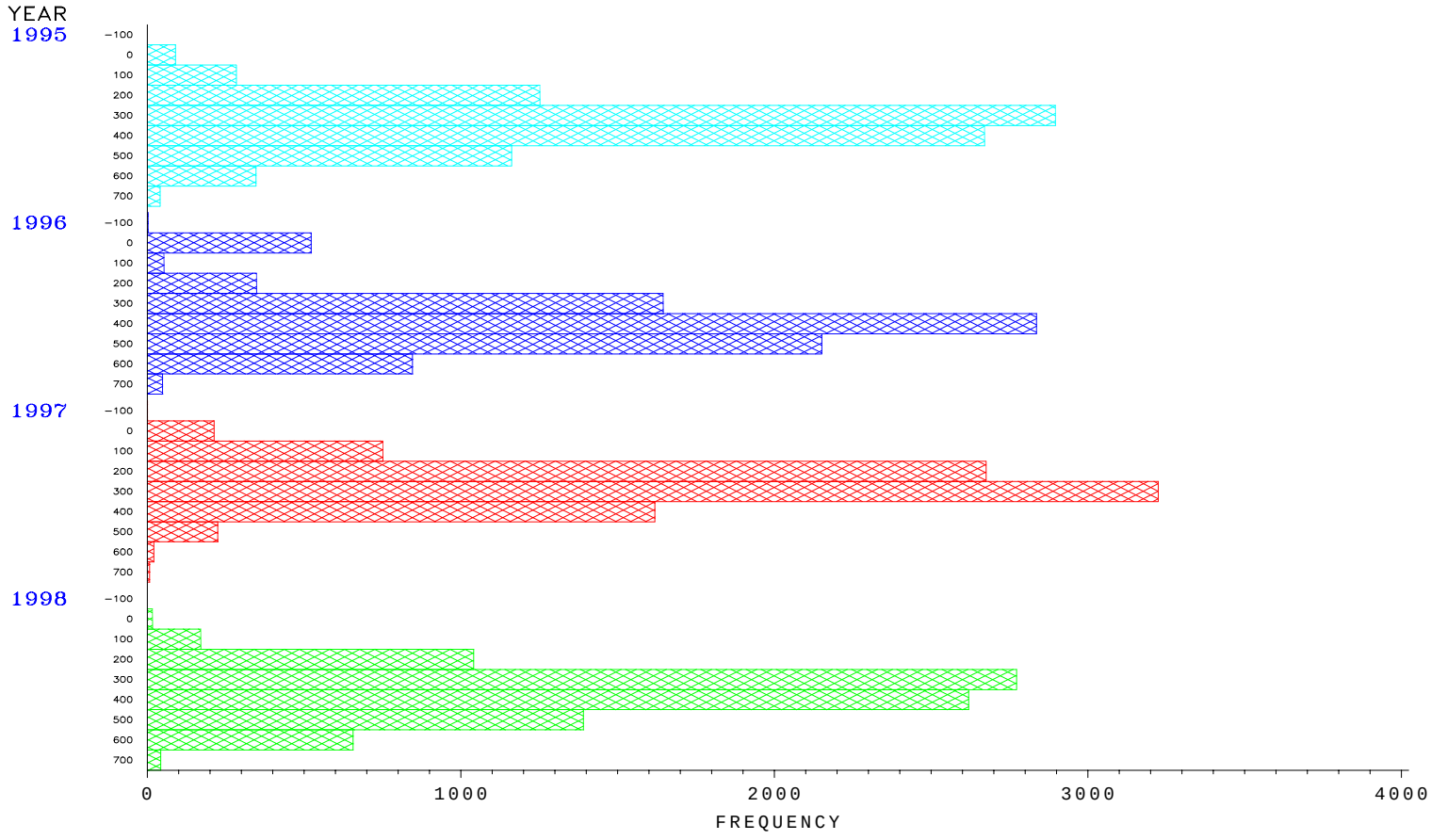


Y49: Sprainbrook – E.Garden City



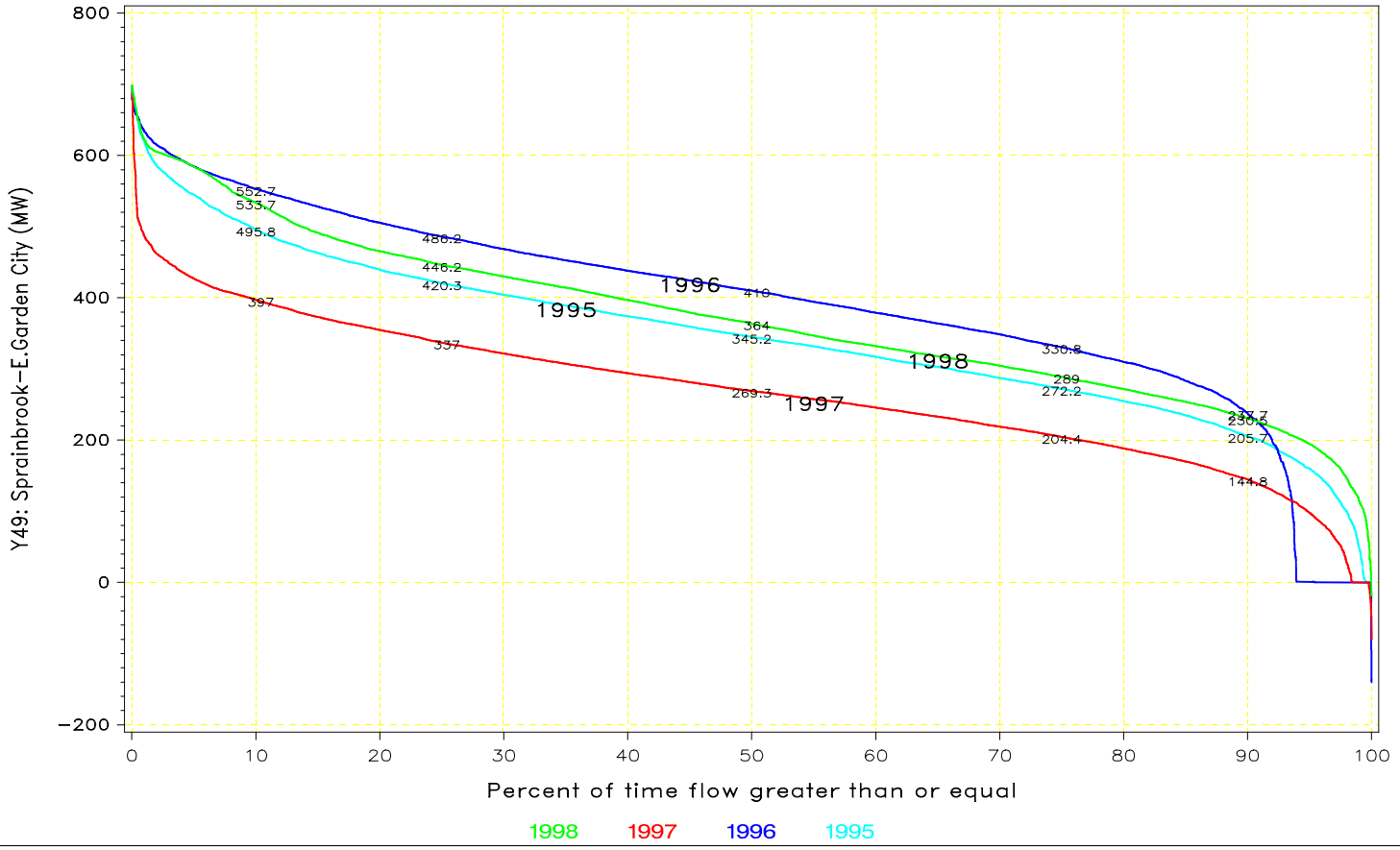
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−100	0	0	0.00	0.00
0	16	16	0.18	0.18
100	170	186	1.95	2.14
200	1041	1227	11.95	14.09
300	2772	3999	31.83	45.91
400	2620	6619	30.08	75.99
500	1391	8010	15.97	91.96
600	657	8667	7.54	99.51
700	43	8710	0.49	100.00

Y49: Sprainbrook – E.Garden City



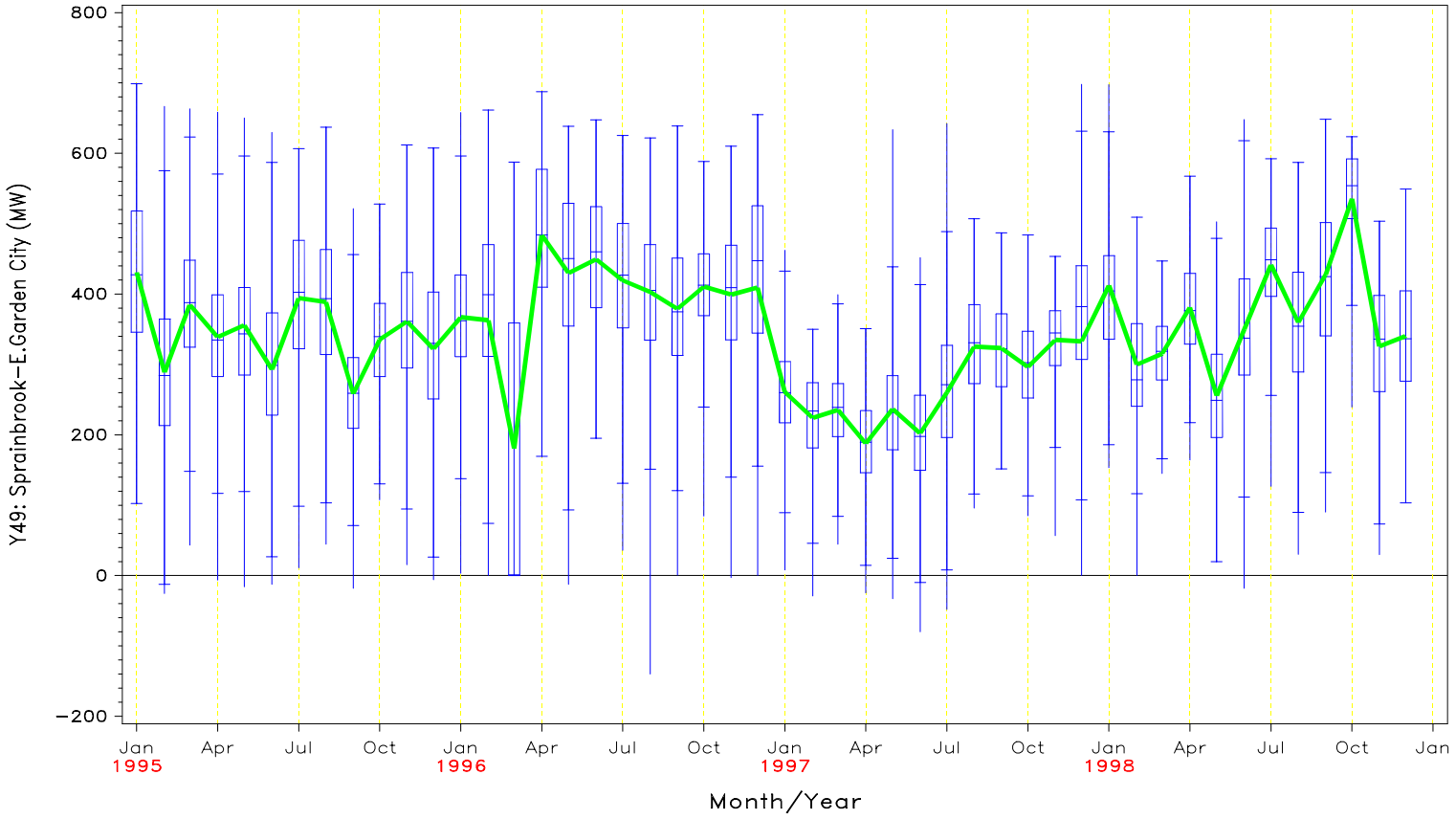
FLOW DURATION CURVE
FOR 1995 through 1998

Y49: Sprainbrook – E.Garden City



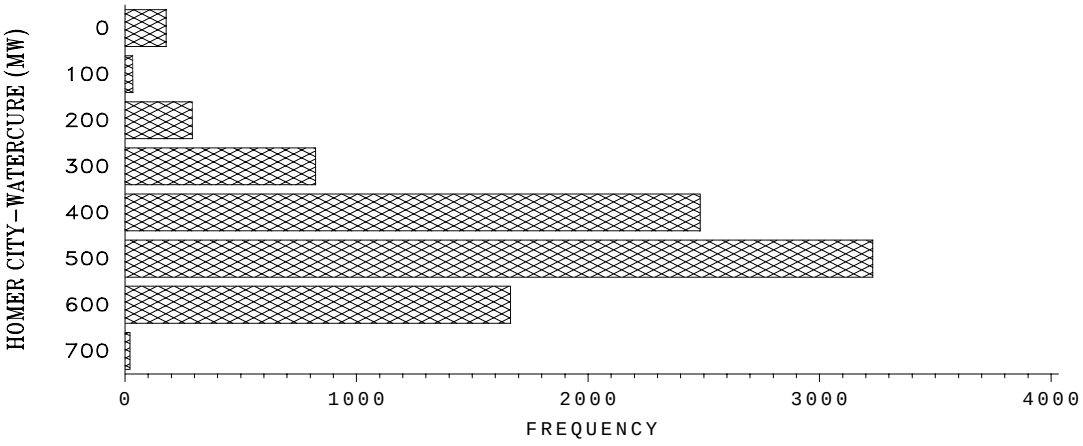
Average Monthly Interface Flows

January 1, 1995 – December 31, 1998



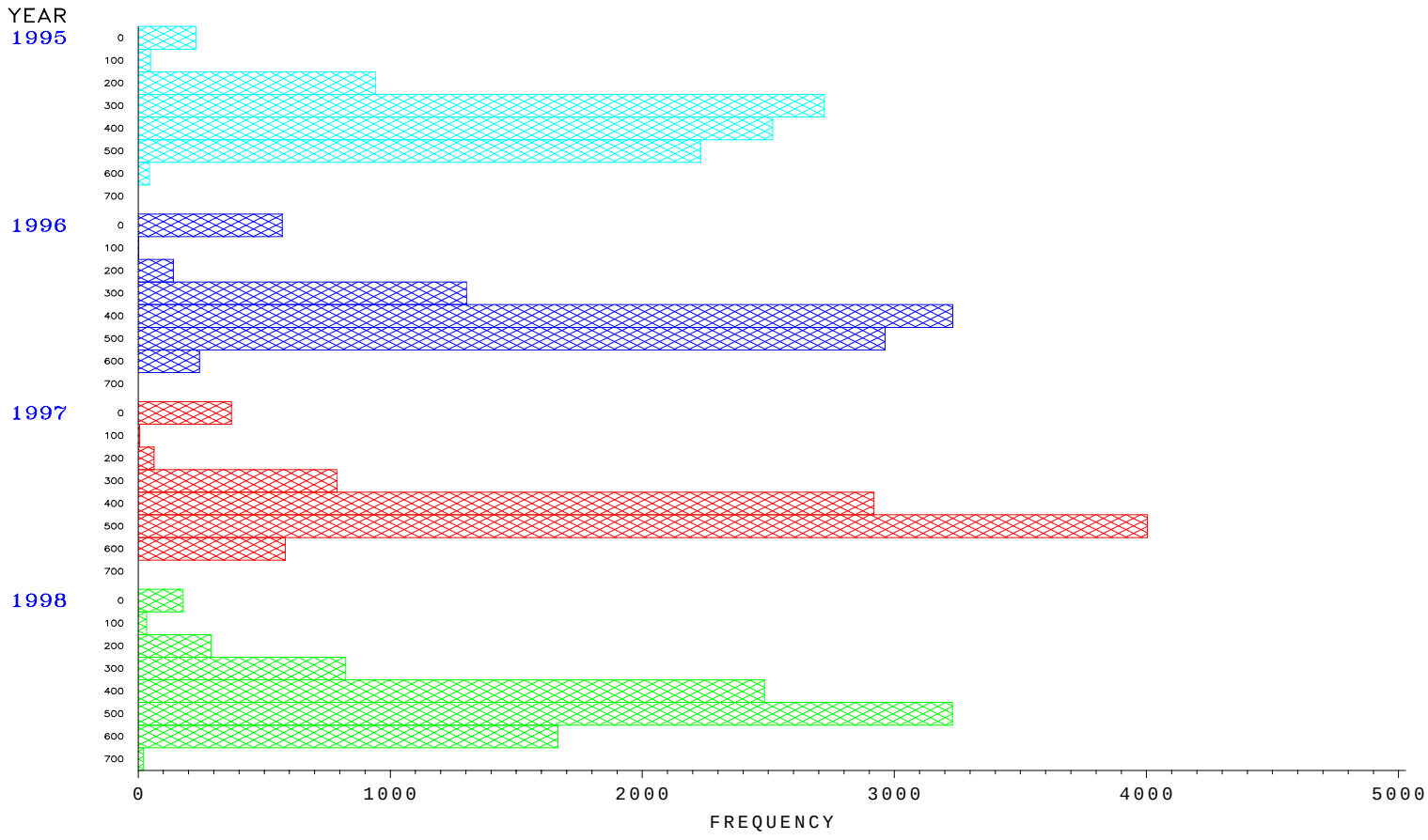
NYPP Transmission Use Statistics For January–December 1998

HOMER CITY – WATERCURE



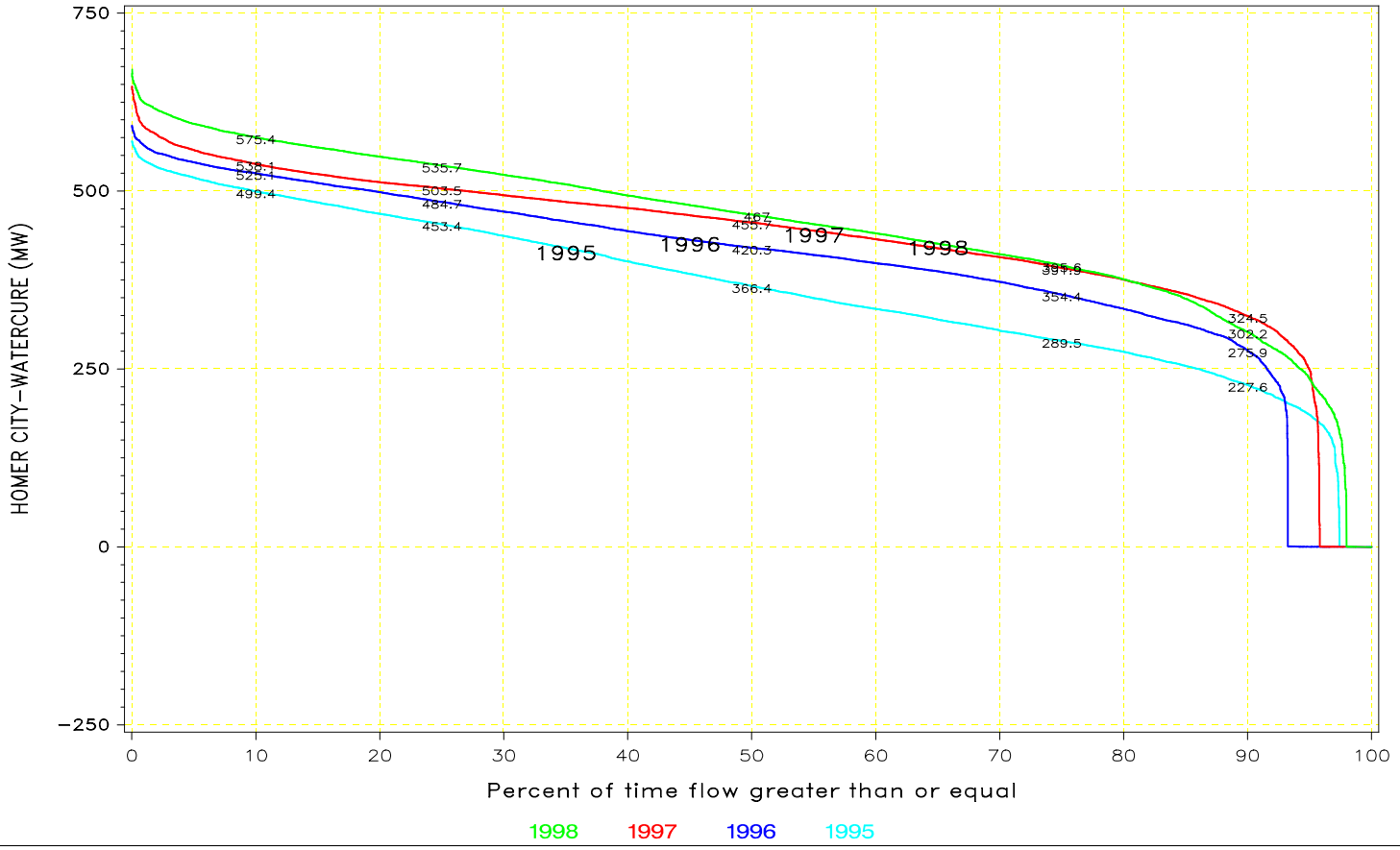
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
0	178	178	2.04	2.04
100	33	211	0.38	2.42
200	290	501	3.32	5.74
300	823	1324	9.43	15.18
400	2484	3808	28.47	43.65
500	3230	7038	37.02	80.67
600	1665	8703	19.09	99.76
700	21	8724	0.24	100.00

HOMER CITY – WATERCURE

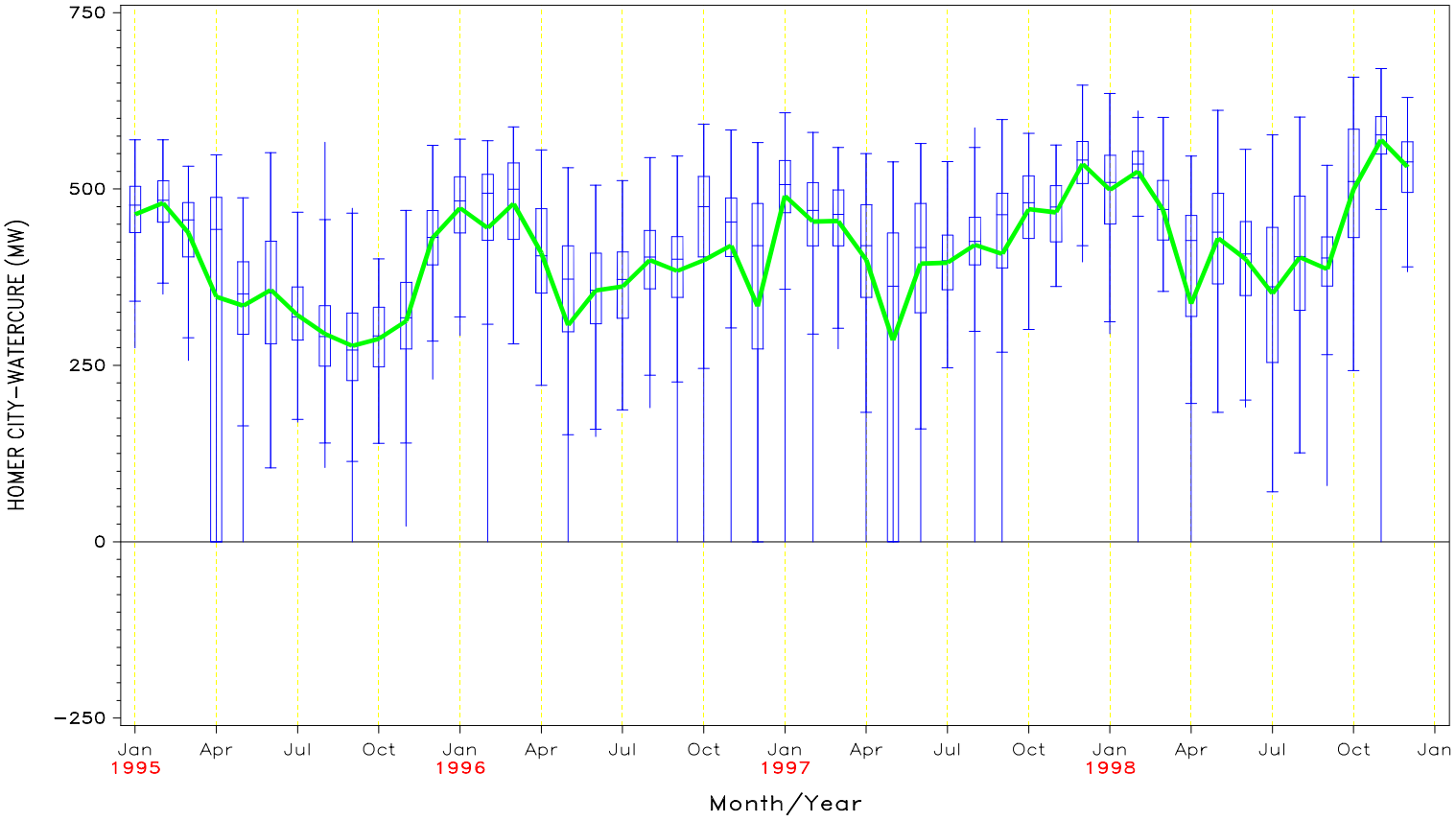


FLOW DURATION CURVE
FOR 1995 through 1998

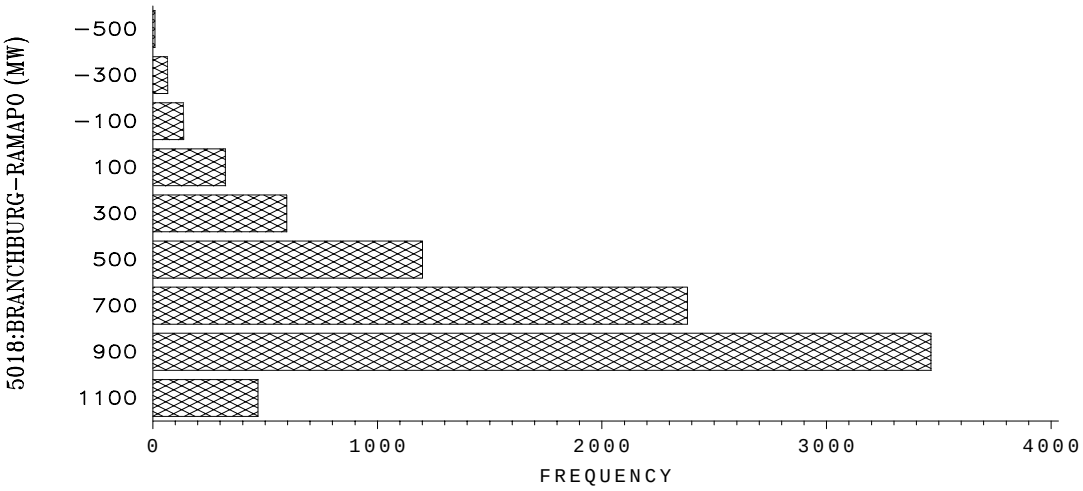
HOMER CITY – WATERCURE



Average Monthly Interface Flows
January 1, 1995 – December 31, 1998

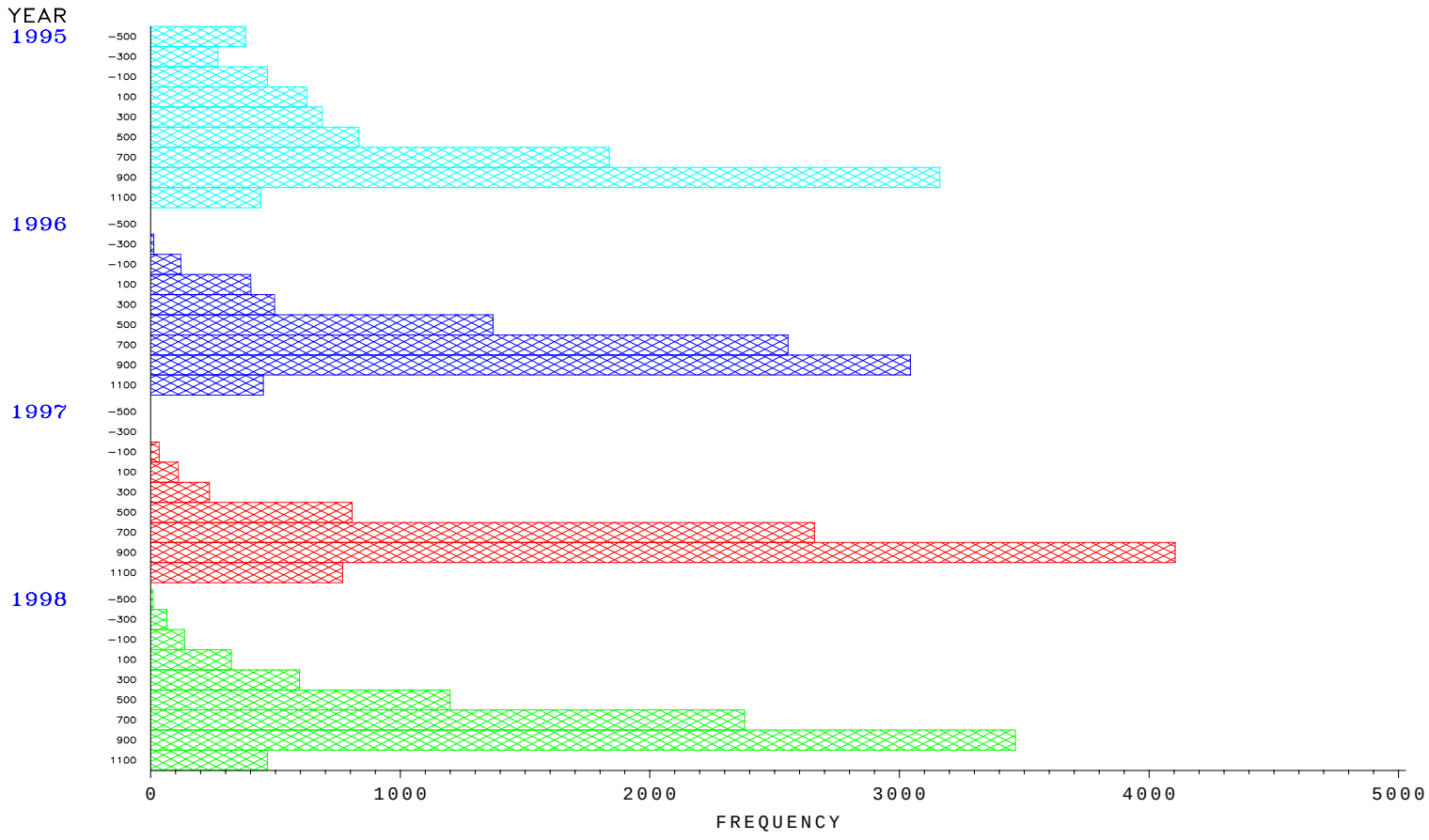


5018:BRANCHBURG – RAMAPO



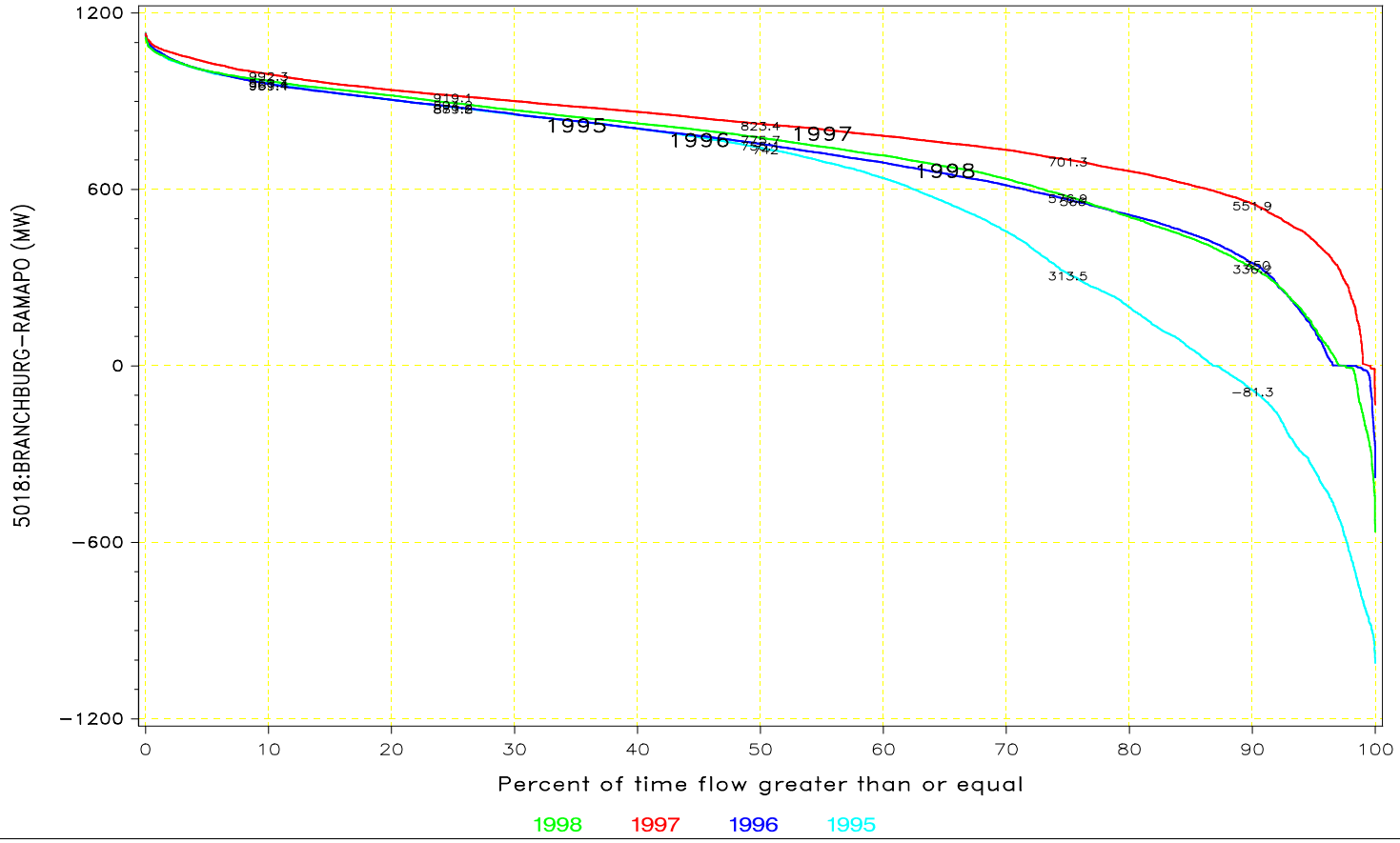
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−500	9	9	0.10	0.10
−300	65	74	0.75	0.86
−100	136	210	1.57	2.43
100	323	533	3.74	6.17
300	596	1129	6.90	13.06
500	1200	2329	13.89	26.95
700	2380	4709	27.54	54.49
900	3465	8174	40.09	94.58
1100	468	8642	5.42	100.00

5018:BRANCHBURG – RAMAPO



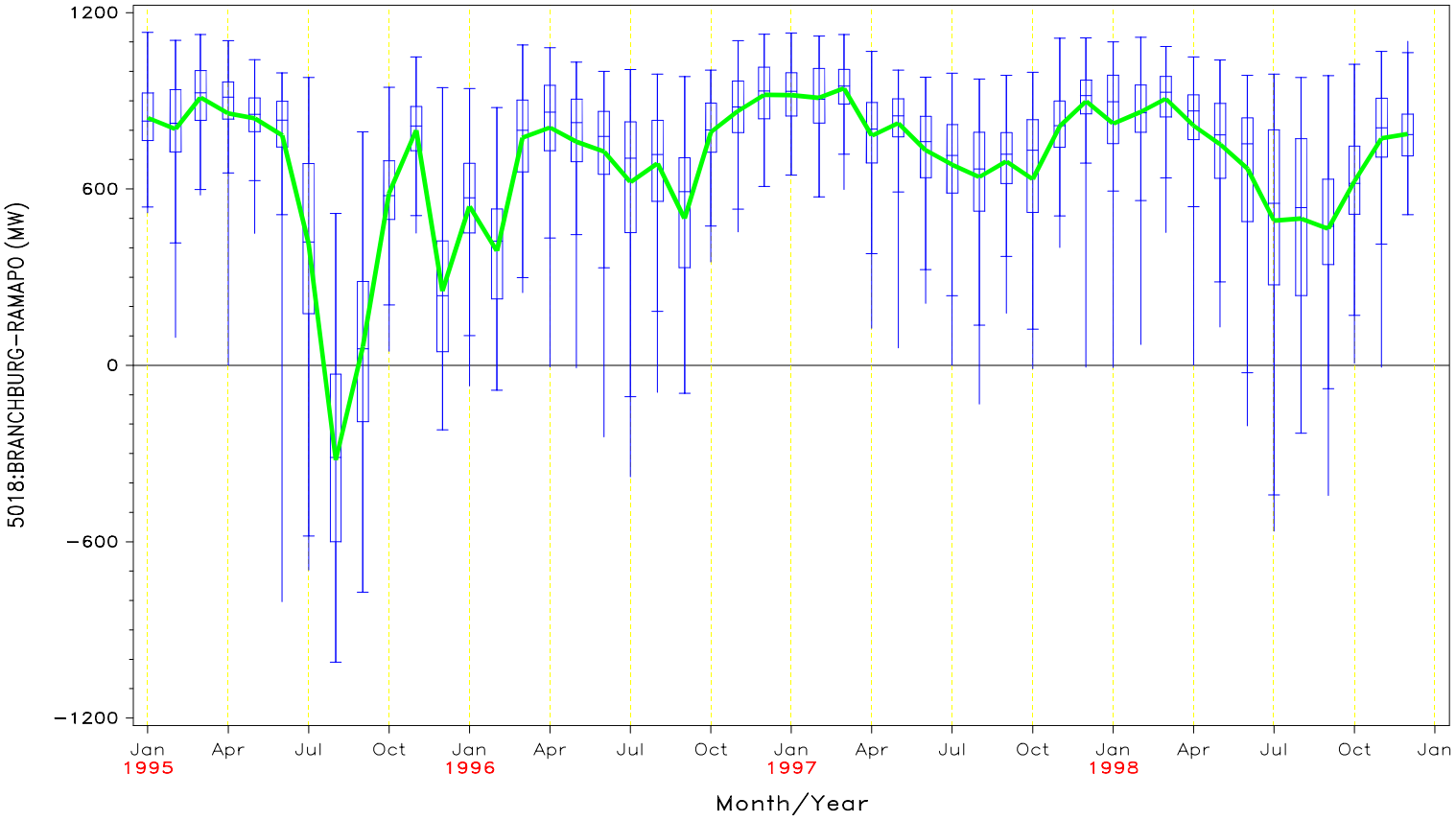
FLOW DURATION CURVE
FOR 1995 through 1998

5018:BRANCHBURG – RAMAPO



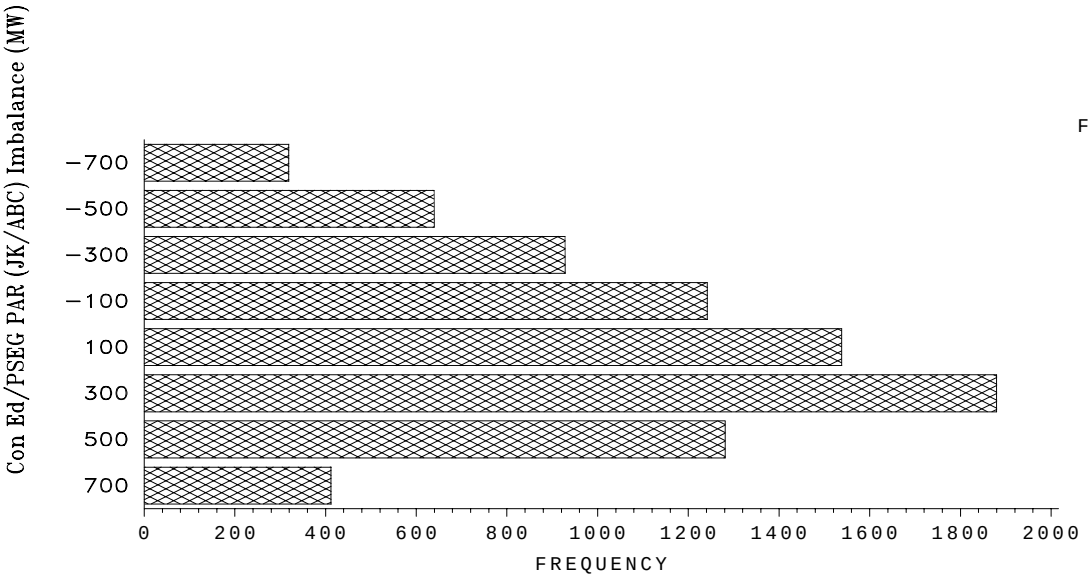
1998 1997 1996 1995

Average Monthly Interface Flows
January 1, 1995 – December 31, 1998



Con Ed/PSEG PAR (JK/ABC) Imbalance

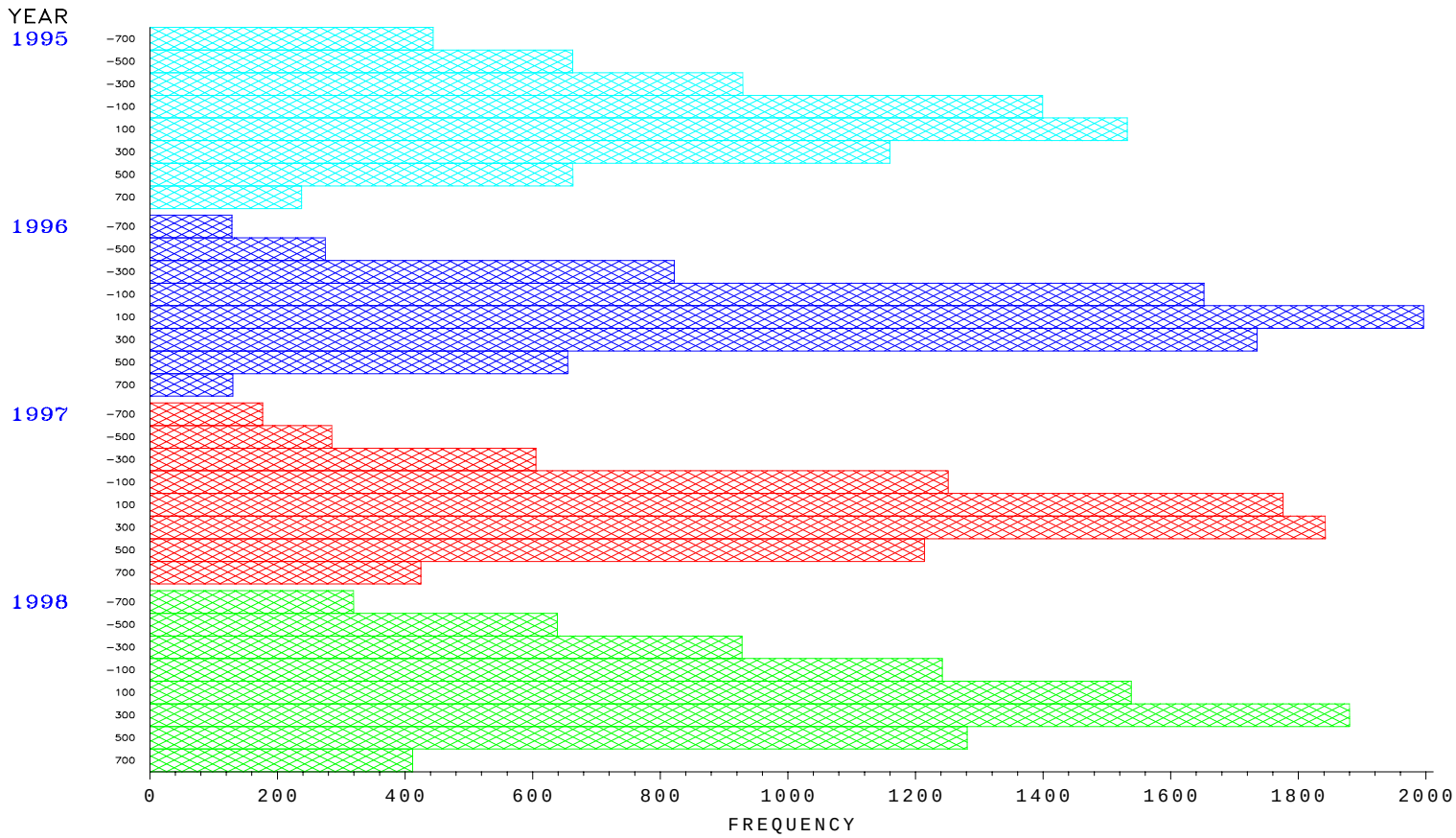
Schedule is NYPP–>PJM === + is CCW : – is CW



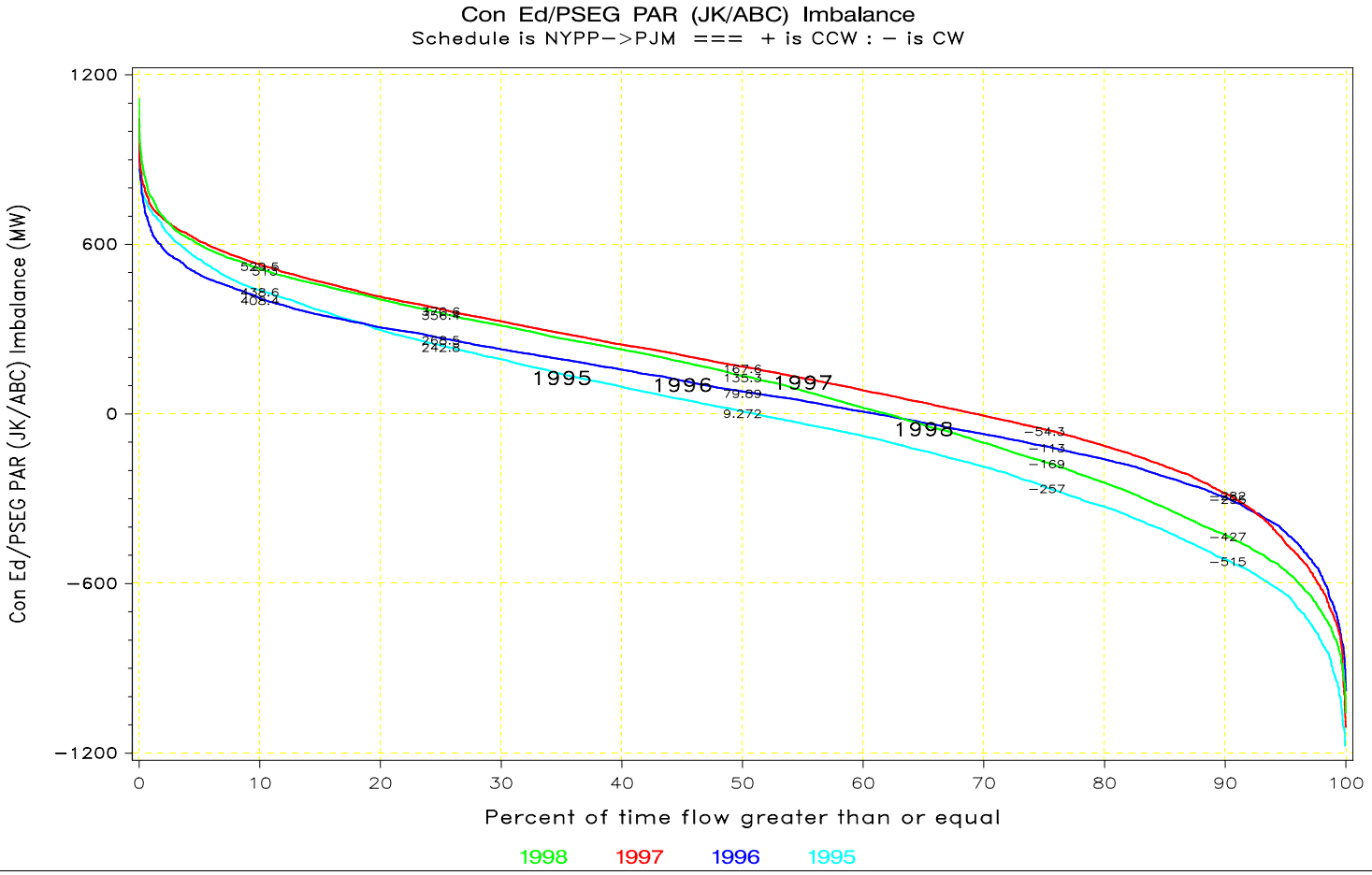
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
–700	319	319	3.87	3.87
–500	639	958	7.76	11.63
–300	928	1886	11.26	22.89
–100	1242	3128	15.07	37.97
100	1538	4666	18.67	56.63
300	1880	6546	22.82	79.45
500	1281	7827	15.55	95.00
700	412	8239	5.00	100.00

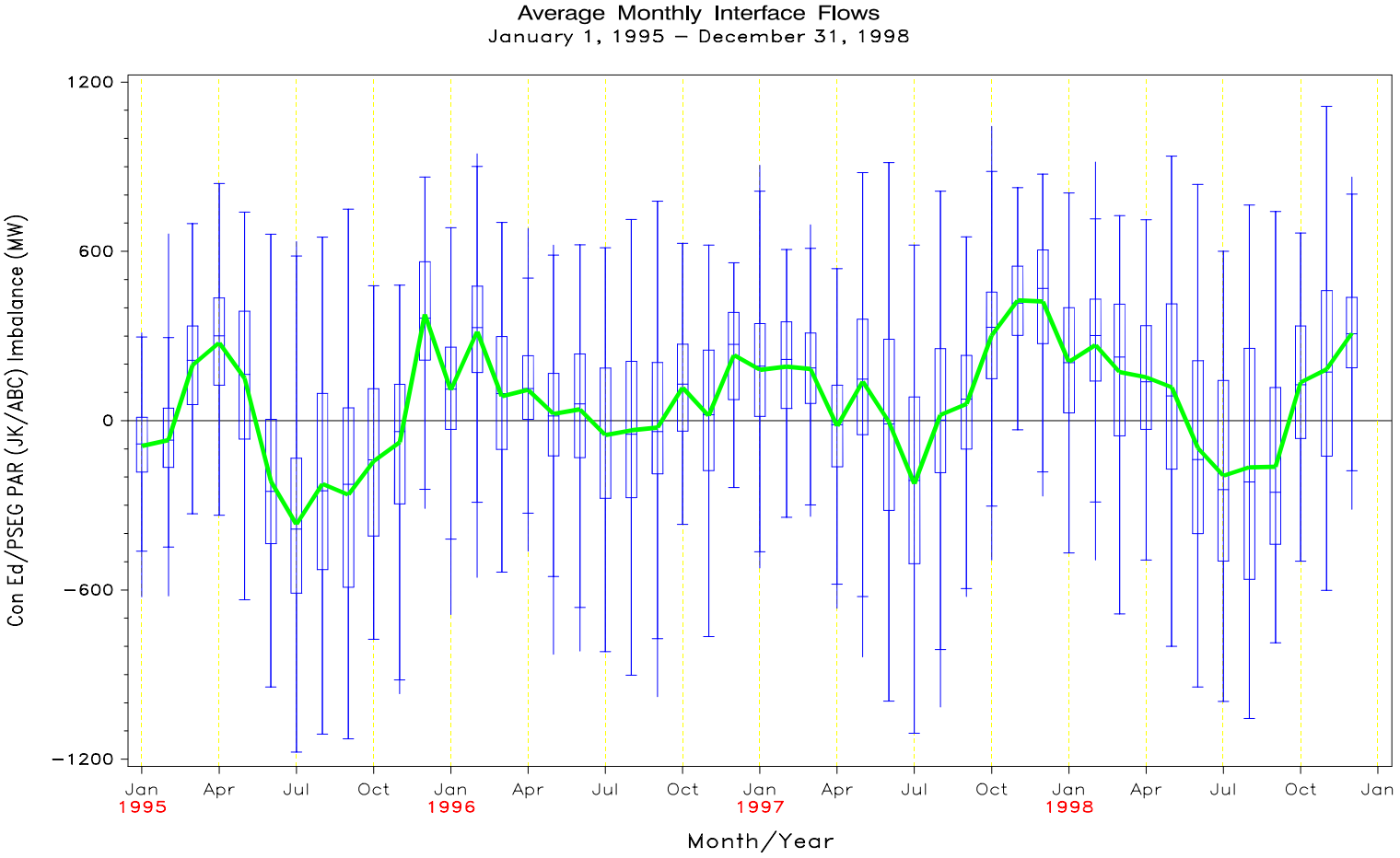
Con Ed/PSEG PAR (JK/ABC) Imbalance

Schedule is NYPP–>PJM === + is CCW : – is CW

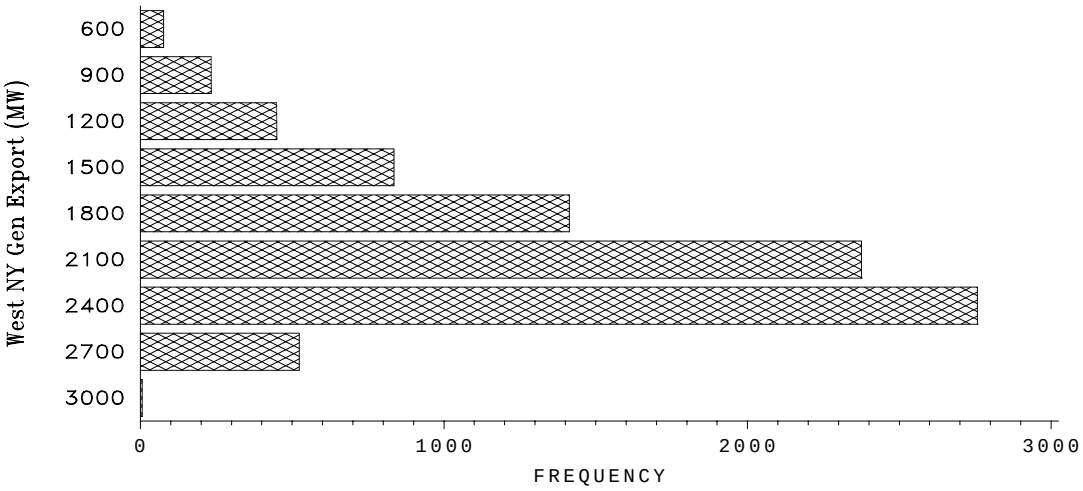


FLOW DURATION CURVE
FOR 1995 through 1998



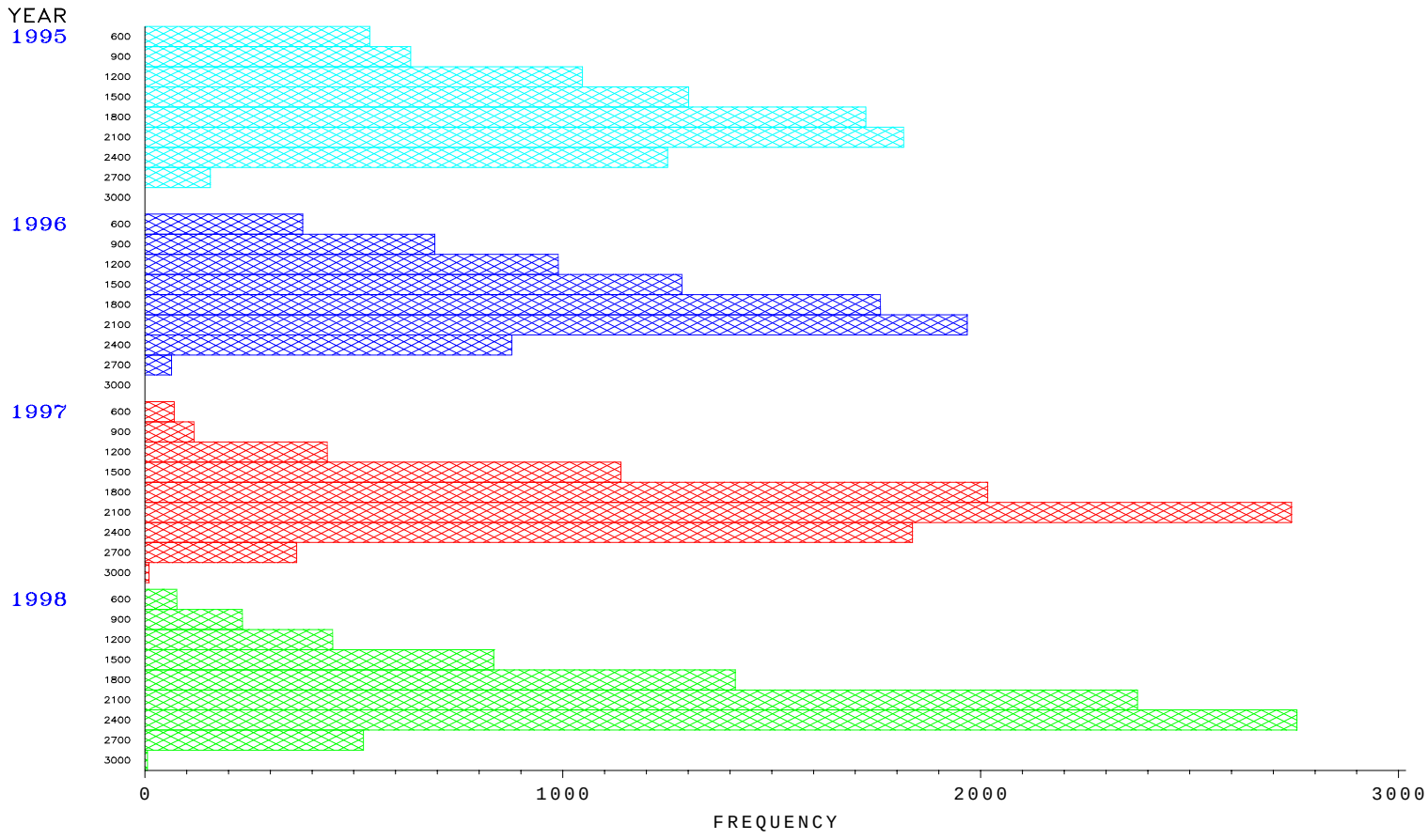


West NY Gen Export

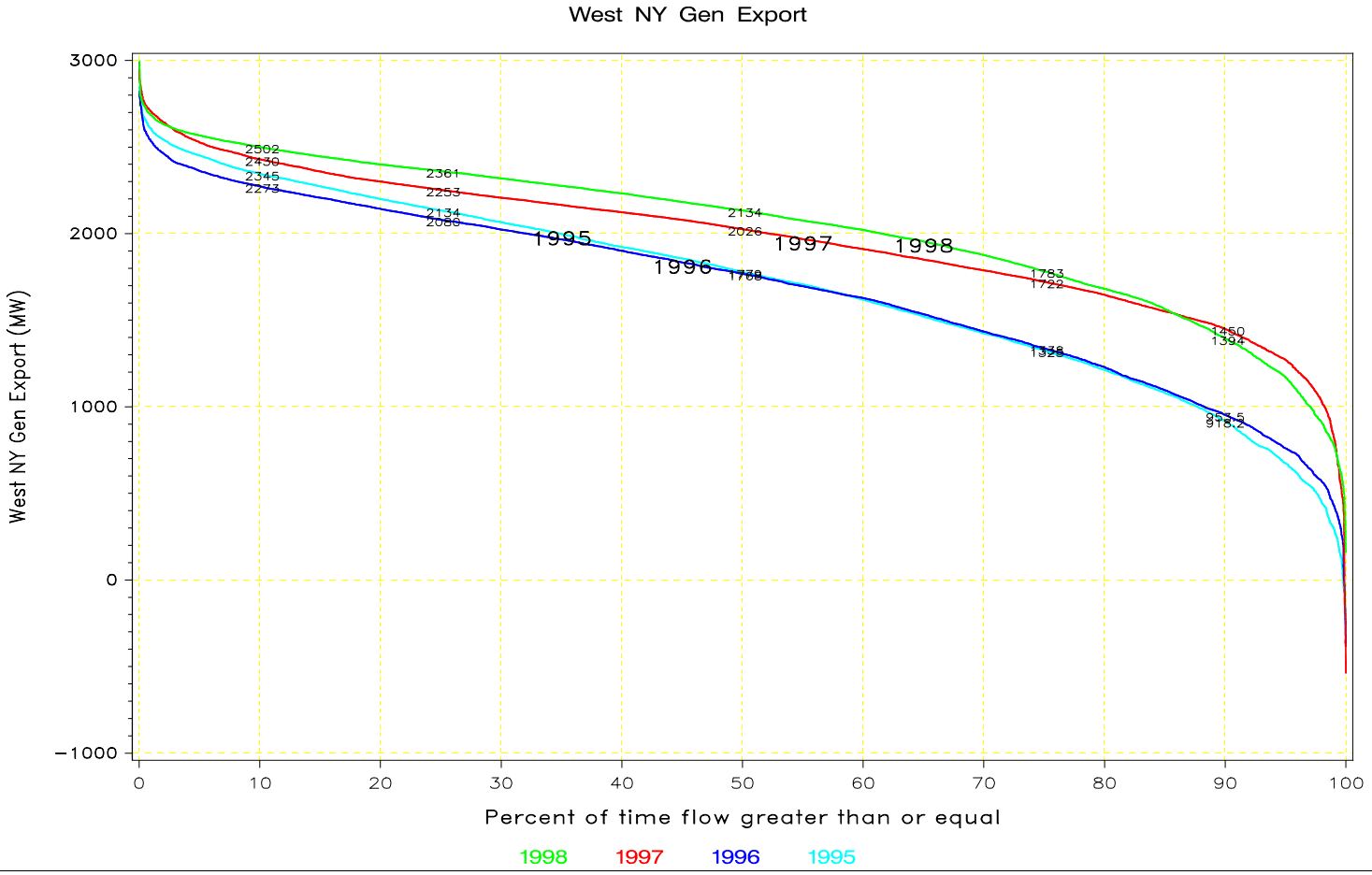


	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
600	76	76	0.88	0.88
900	233	309	2.69	3.57
1200	449	758	5.18	8.75
1500	835	1593	9.63	18.38
1800	1413	3006	16.30	34.68
2100	2375	5381	27.40	62.09
2400	2757	8138	31.81	93.90
2700	523	8661	6.03	99.93
3000	6	8667	0.07	100.00

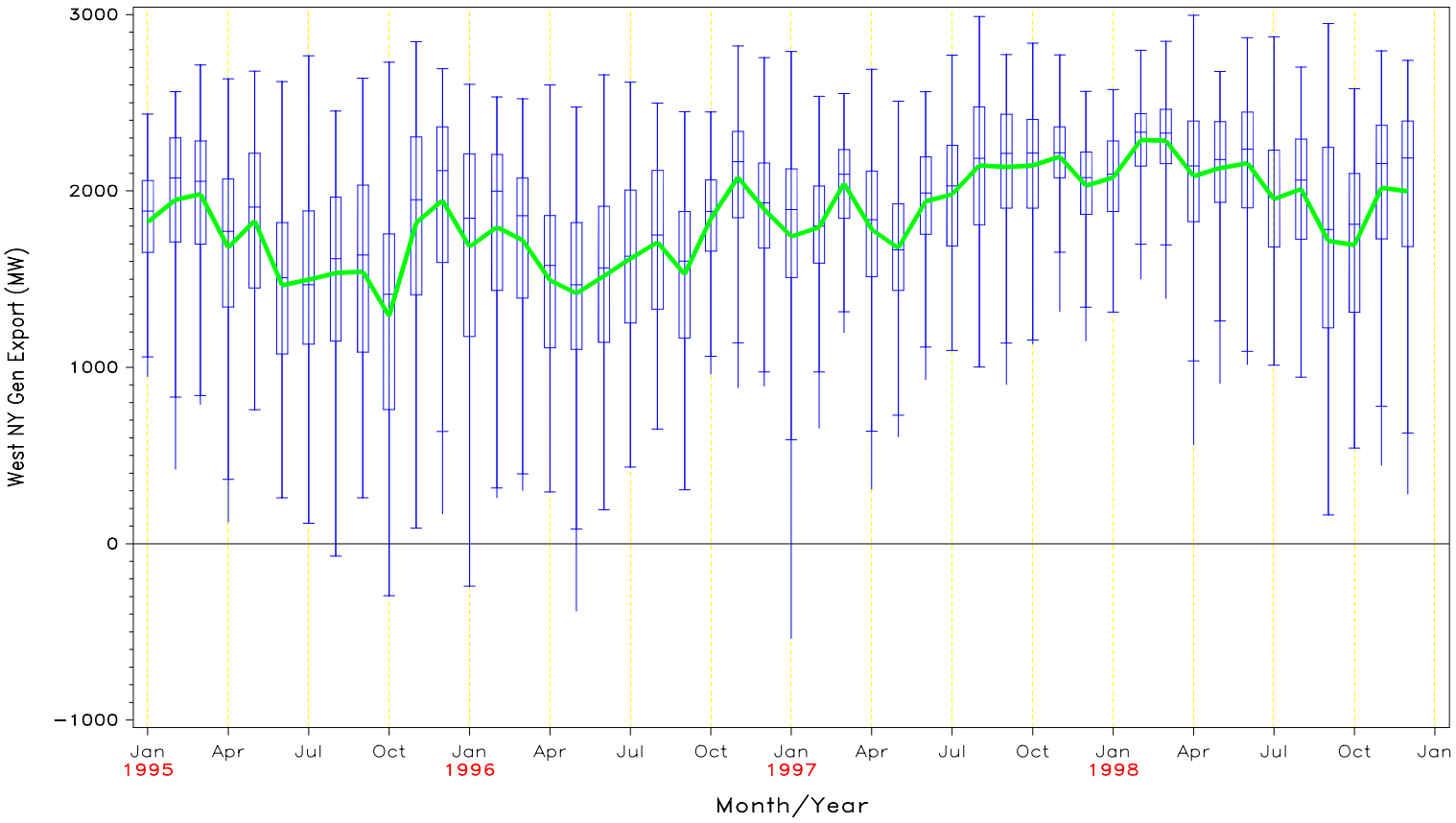
West NY Gen Export



FLOW DURATION CURVE
FOR 1995 through 1998



Average Monthly Interface Flows
January 1, 1995 – December 31, 1998



Appendix B – Margins to Limits

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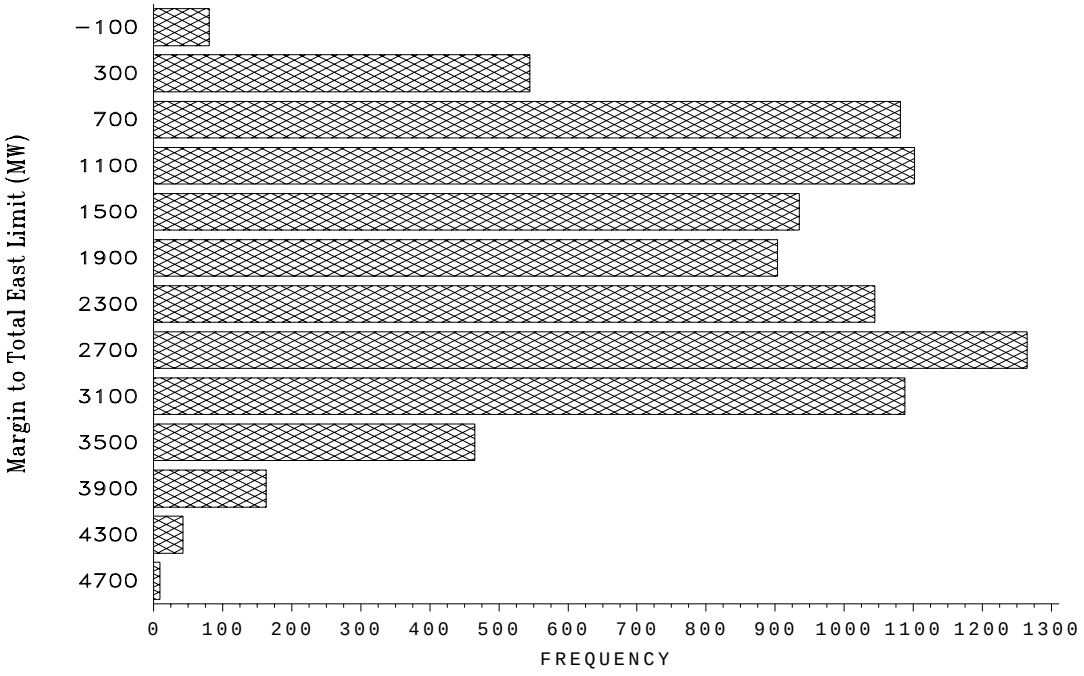
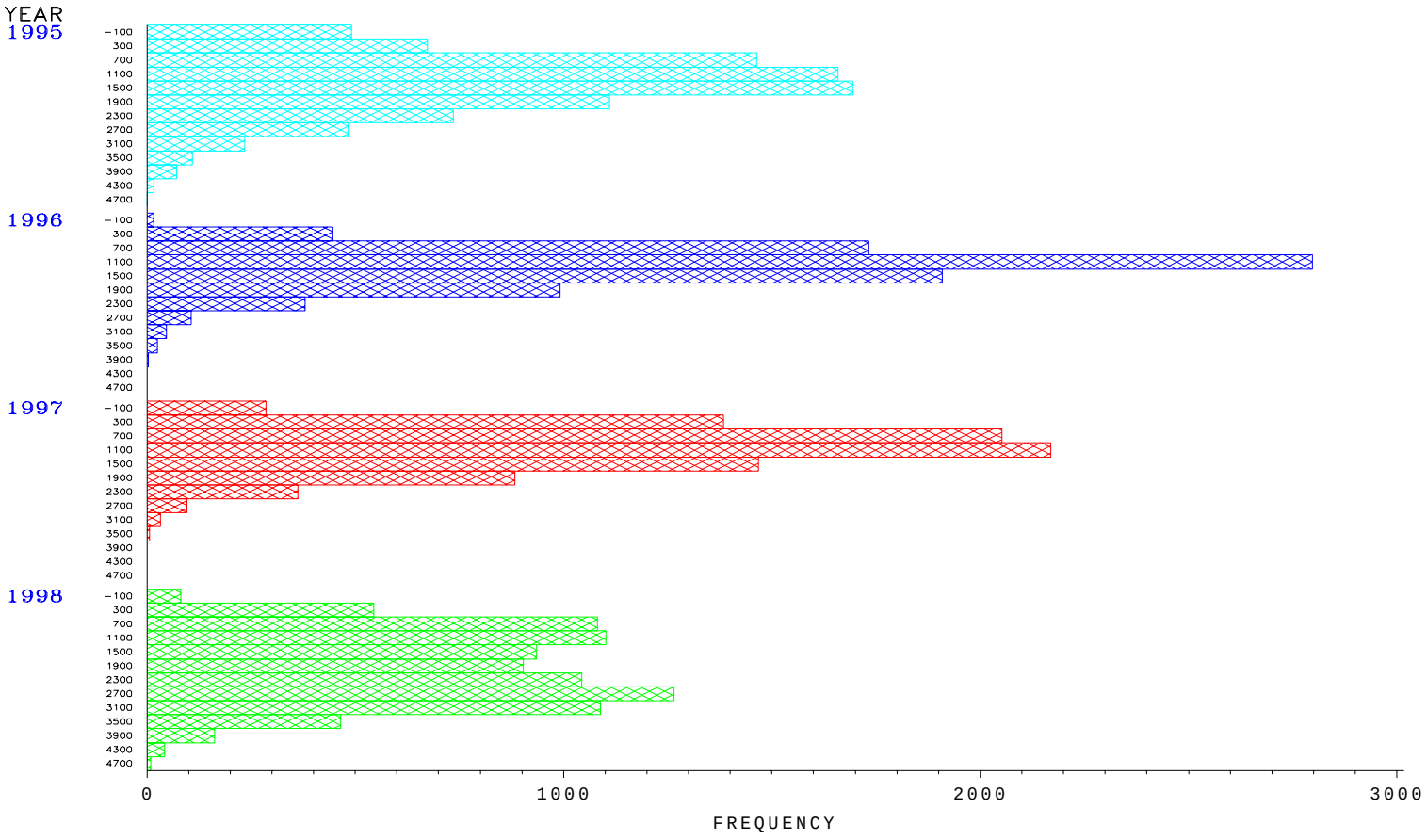
NYPP Transmission Use Statistics For January–December 1998

Margin to Total East Limit

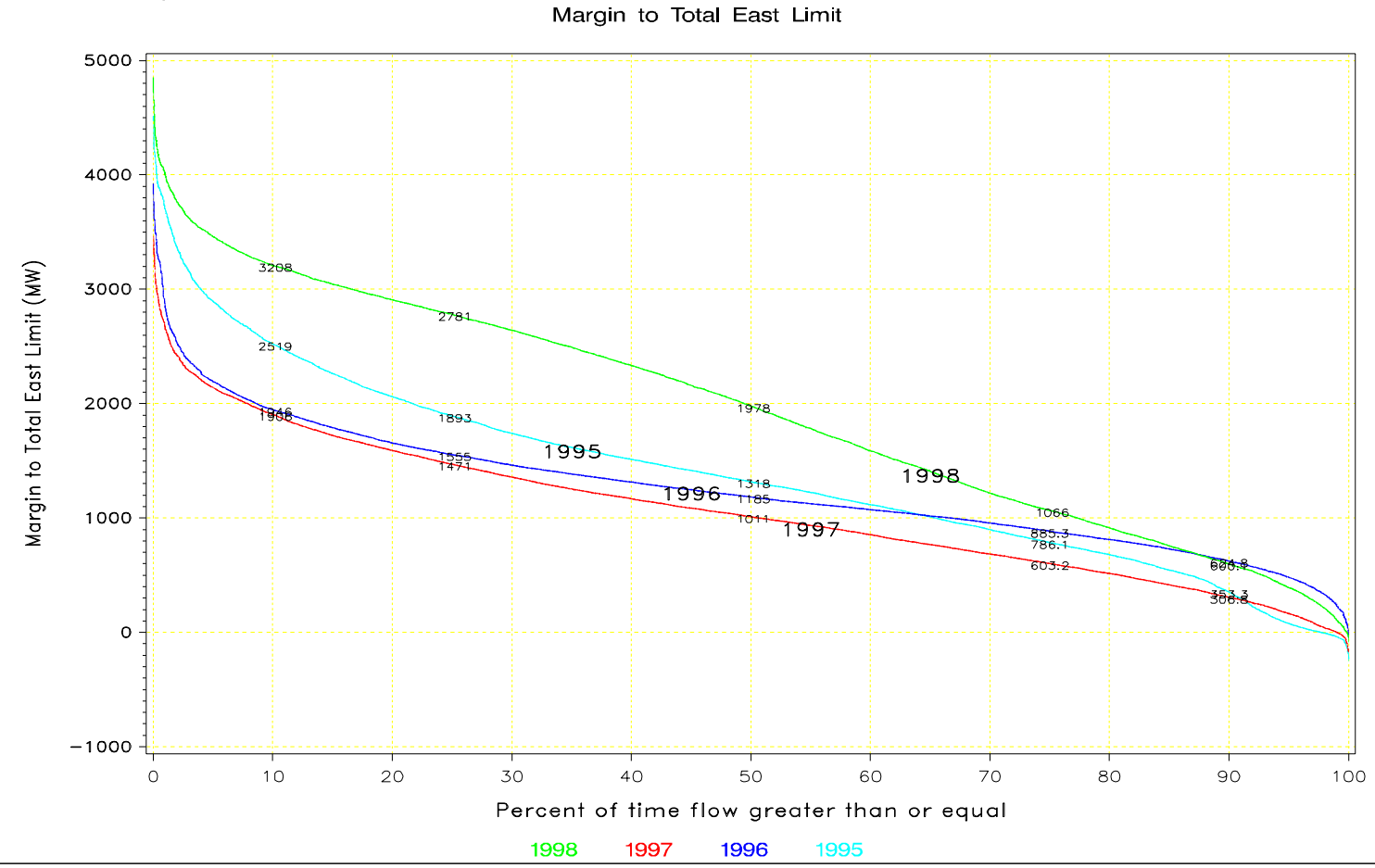


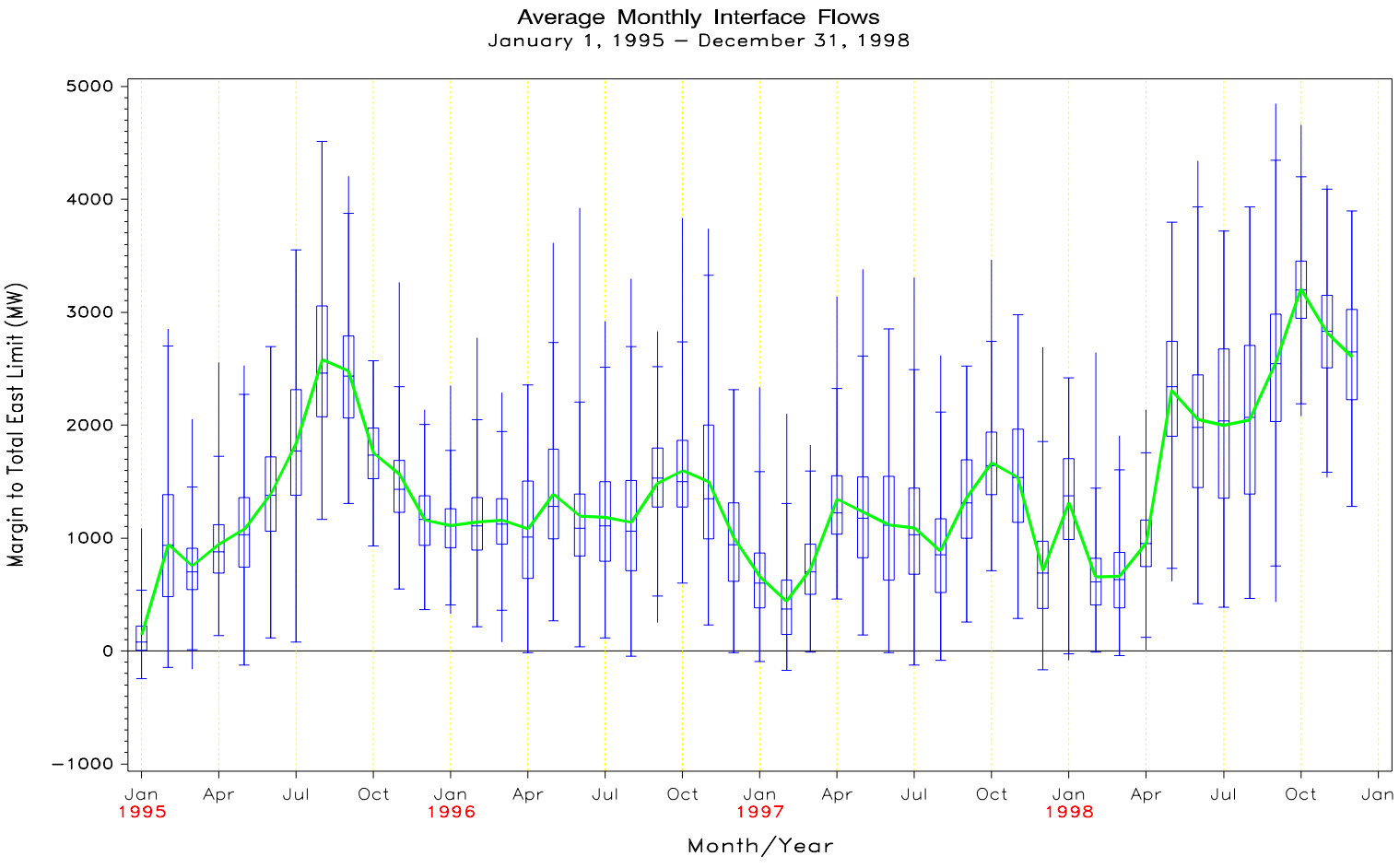
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
-100	81	81	0.93	0.93
300	545	626	6.25	7.18
700	1081	1707	12.39	19.57
1100	1102	2809	12.63	32.20
1500	935	3744	10.72	42.92
1900	903	4647	10.35	53.27
2300	1044	5691	11.97	65.23
2700	1265	6956	14.50	79.73
3100	1088	8044	12.47	92.21
3500	465	8509	5.33	97.54
3900	163	8672	1.87	99.40
4300	43	8715	0.49	99.90
4700	9	8724	0.10	100.00

Margin to Total East Limit



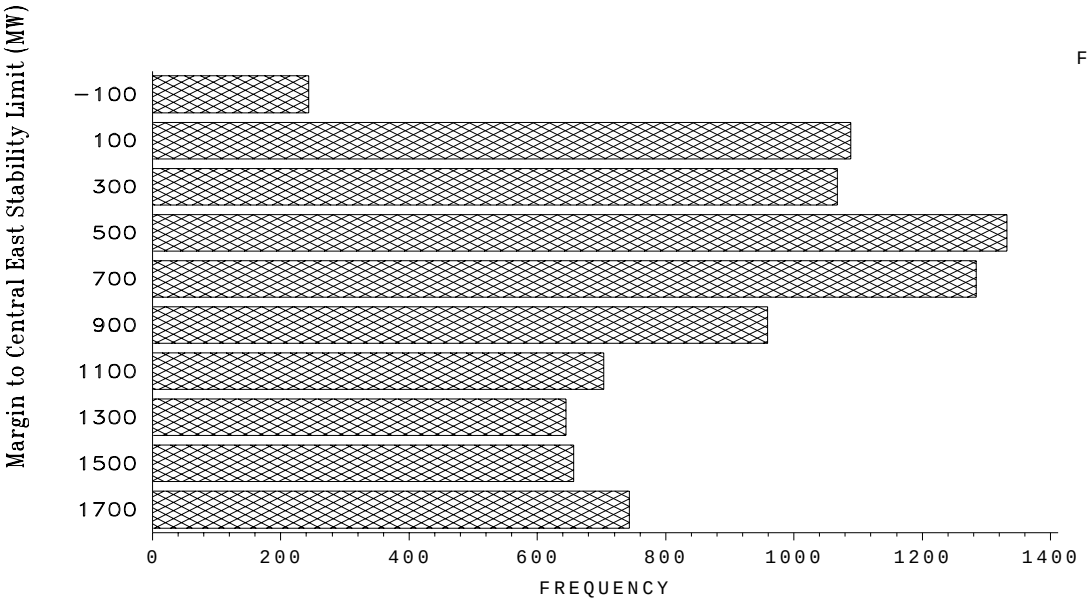
FLOW DURATION CURVE
FOR 1995 through 1998





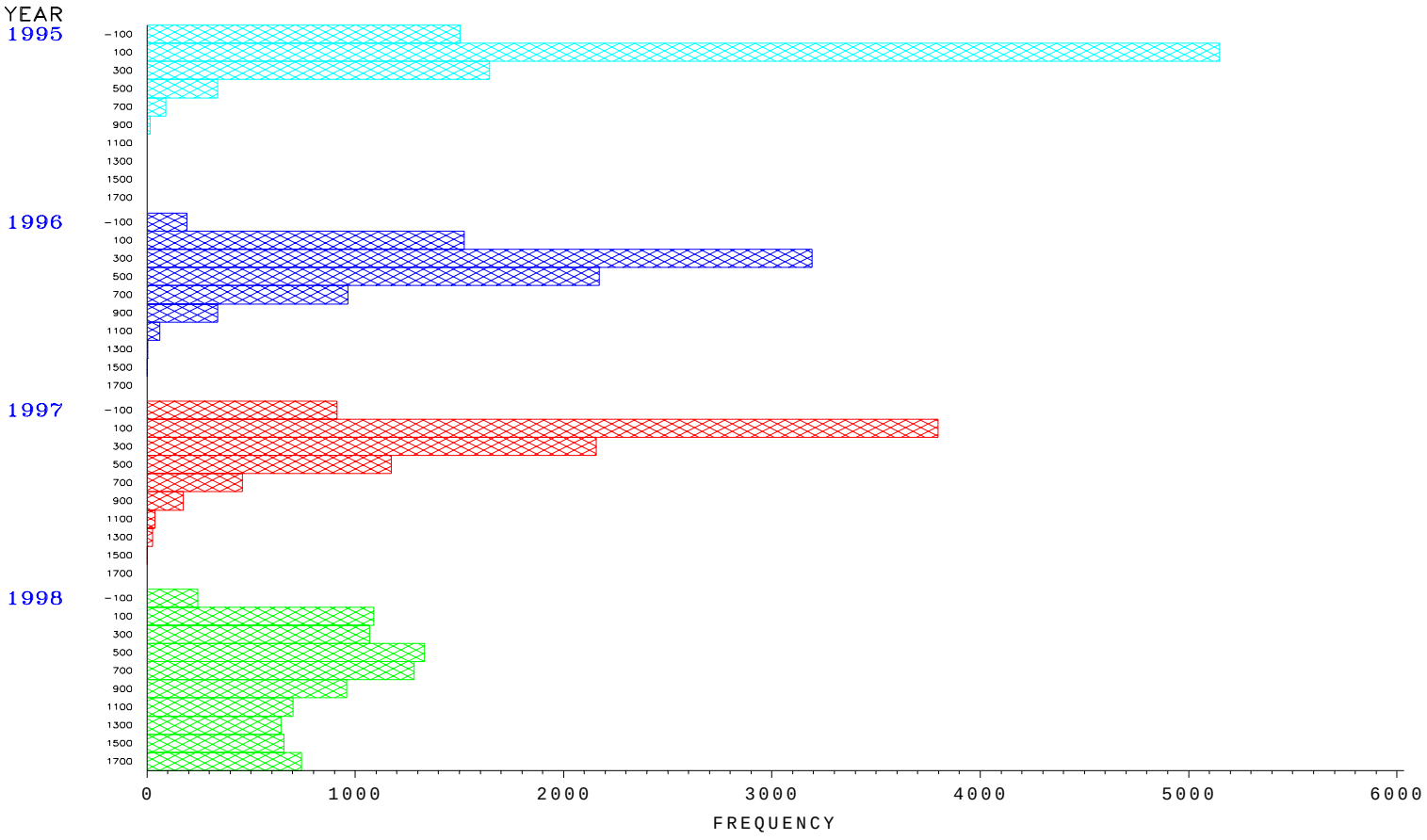
NYPP Transmission Use Statistics For January–December 1998

Margin to Central East Stability Limit

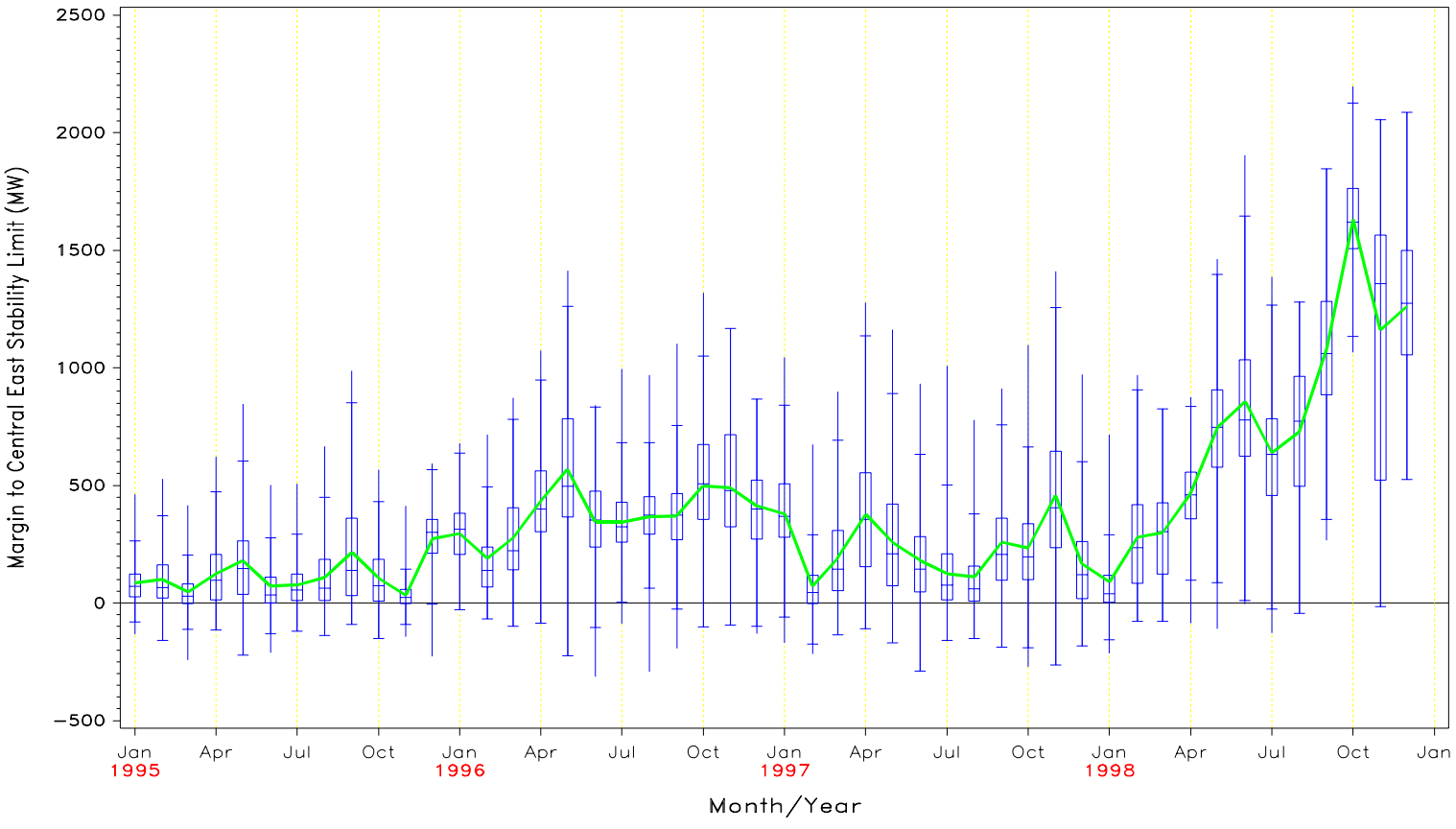


	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
-100	244	244	2.80	2.80
100	1089	1333	12.48	15.28
300	1068	2401	12.24	27.52
500	1332	3733	15.27	42.79
700	1284	5017	14.72	57.51
900	959	5976	10.99	68.50
1100	703	6679	8.06	76.56
1300	645	7324	7.39	83.95
1500	657	7981	7.53	91.48
1700	743	8724	8.52	100.00

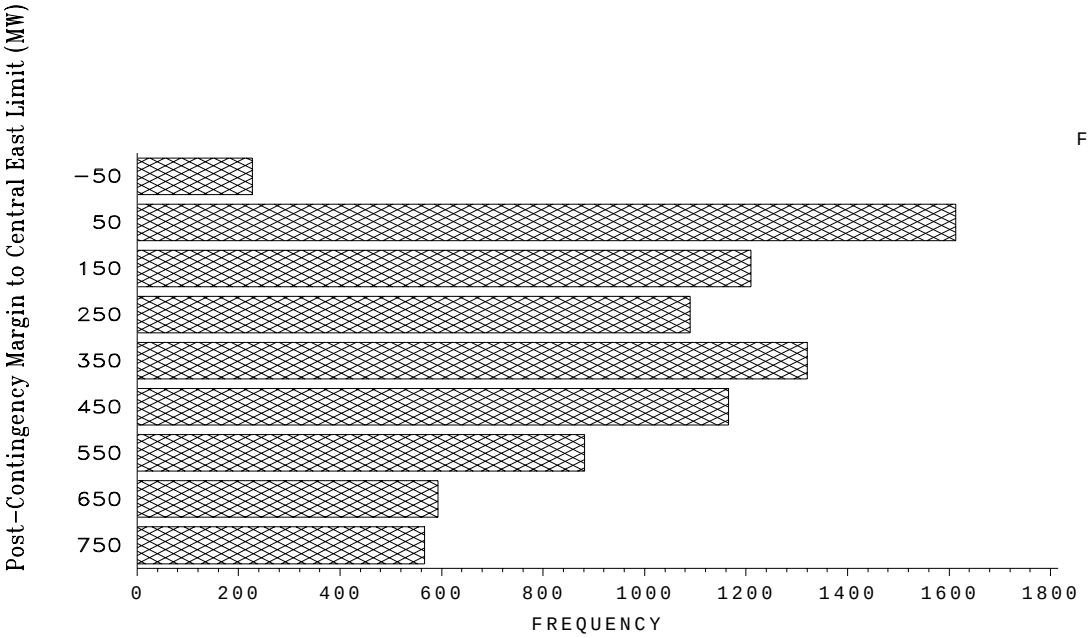
Margin to Central East Stability Limit



FLOW DURATION CURVE
FOR 1995 through 1998

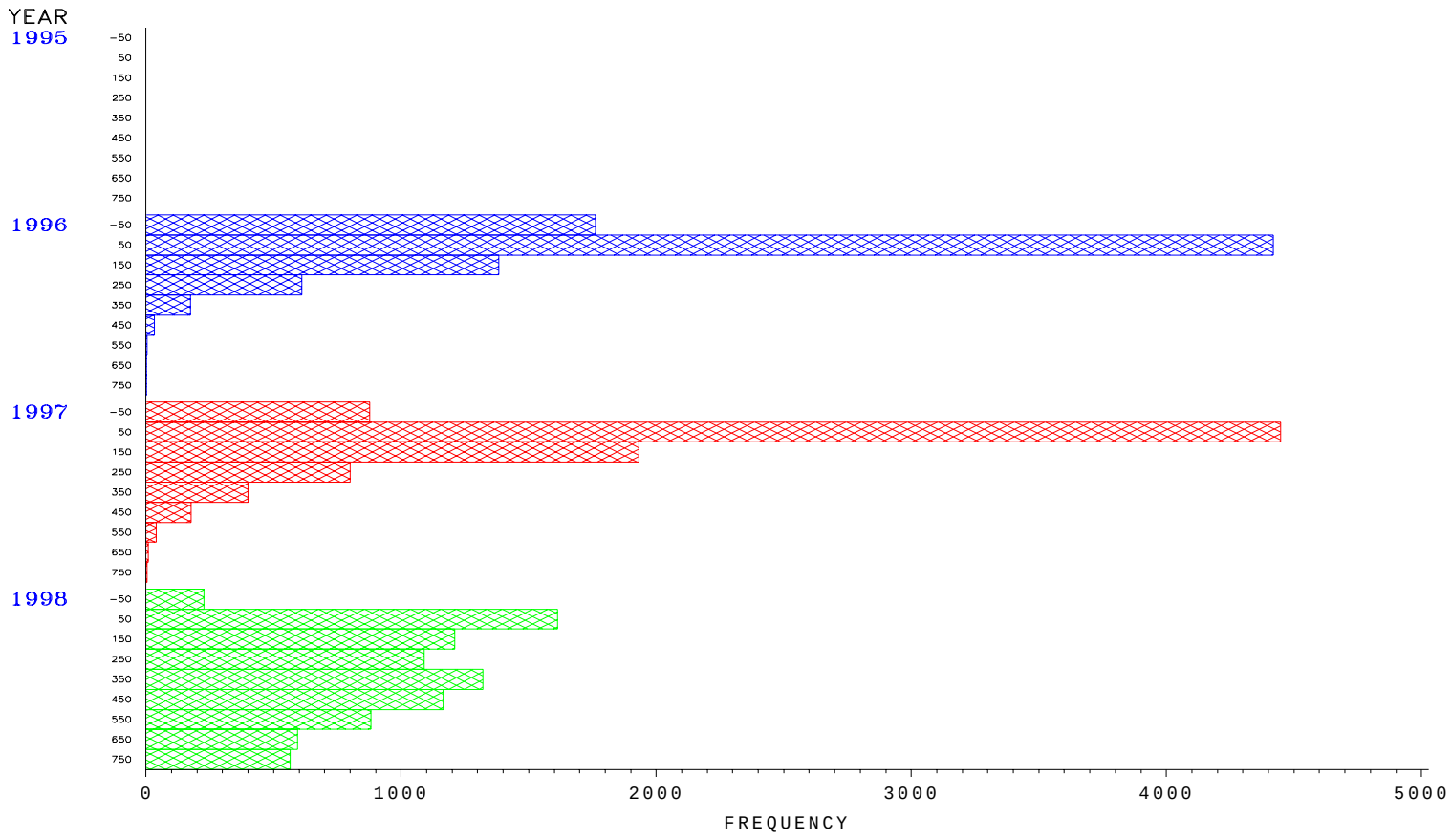


Post–Contingency Margin to Central East Limit
Minimum of 3 Most Limiting Voltage Collapse Limits

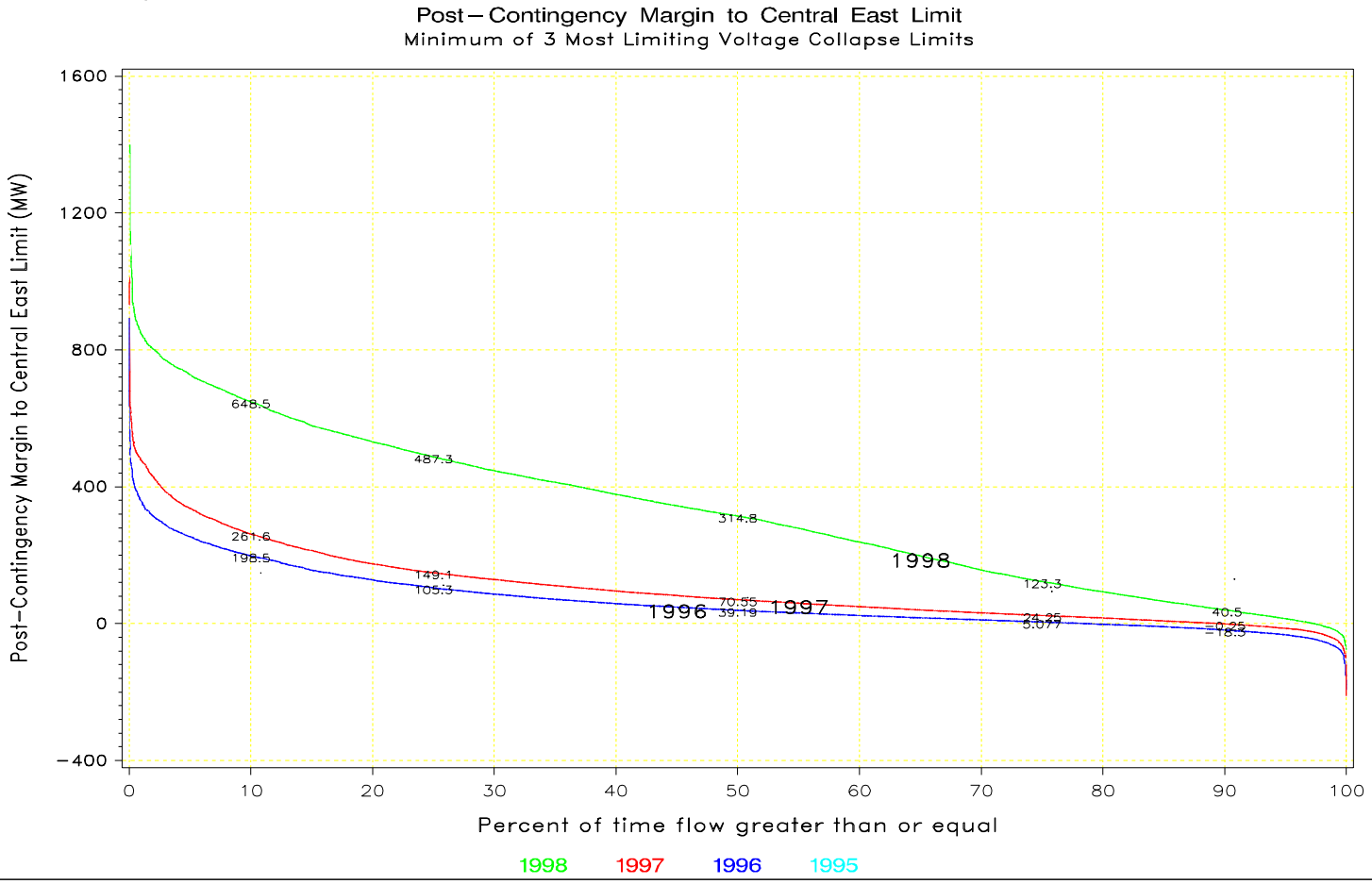


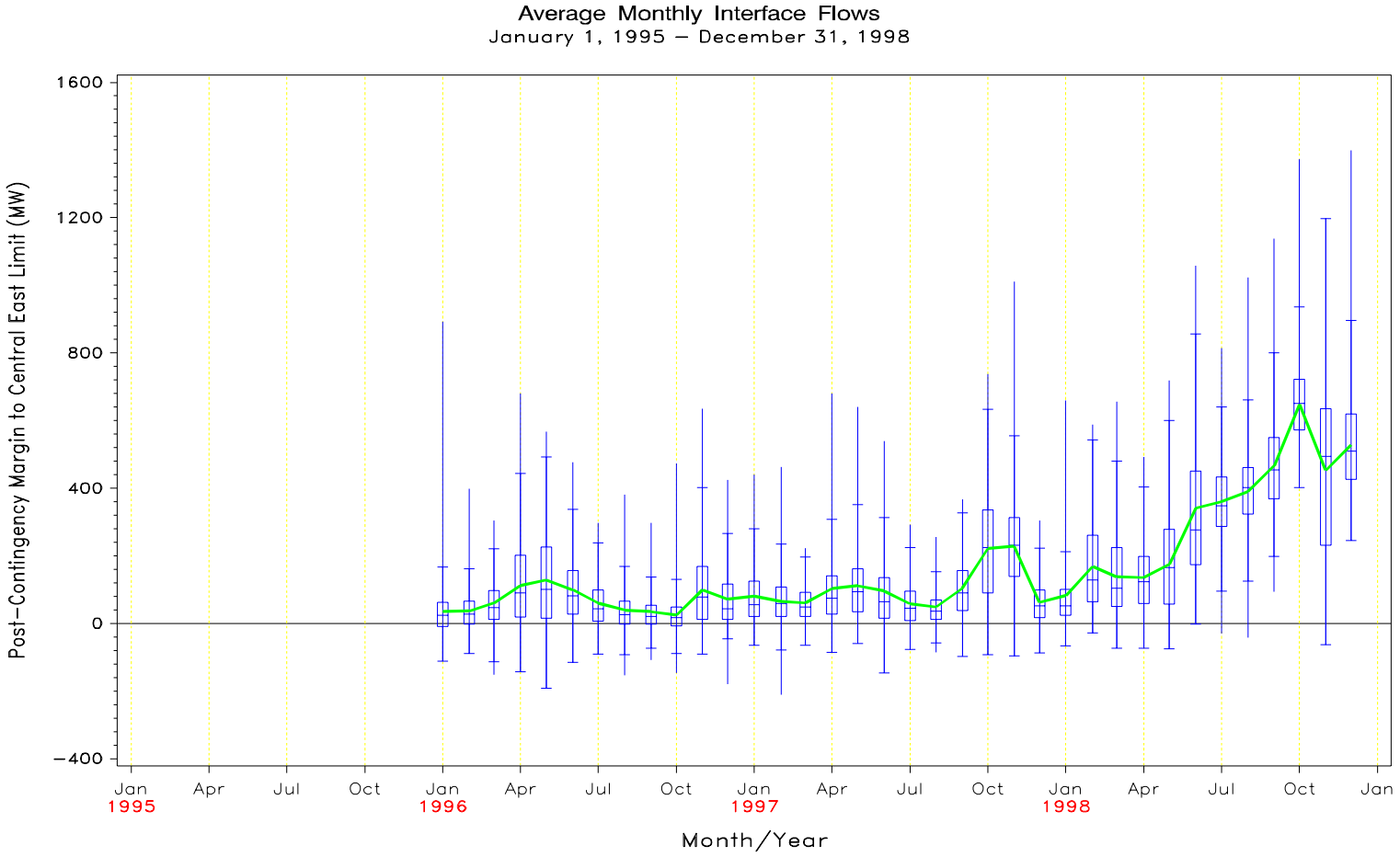
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
-50	227	227	2.62	2.62
50	1613	1840	18.61	21.23
150	1210	3050	13.96	35.19
250	1090	4140	12.58	47.77
350	1321	5461	15.24	63.01
450	1165	6626	13.44	76.45
550	882	7508	10.18	86.63
650	593	8101	6.84	93.47
750	566	8667	6.53	100.00

Post–Contingency Margin to Central East Limit
Minimum of 3 Most Limiting Voltage Collapse Limits

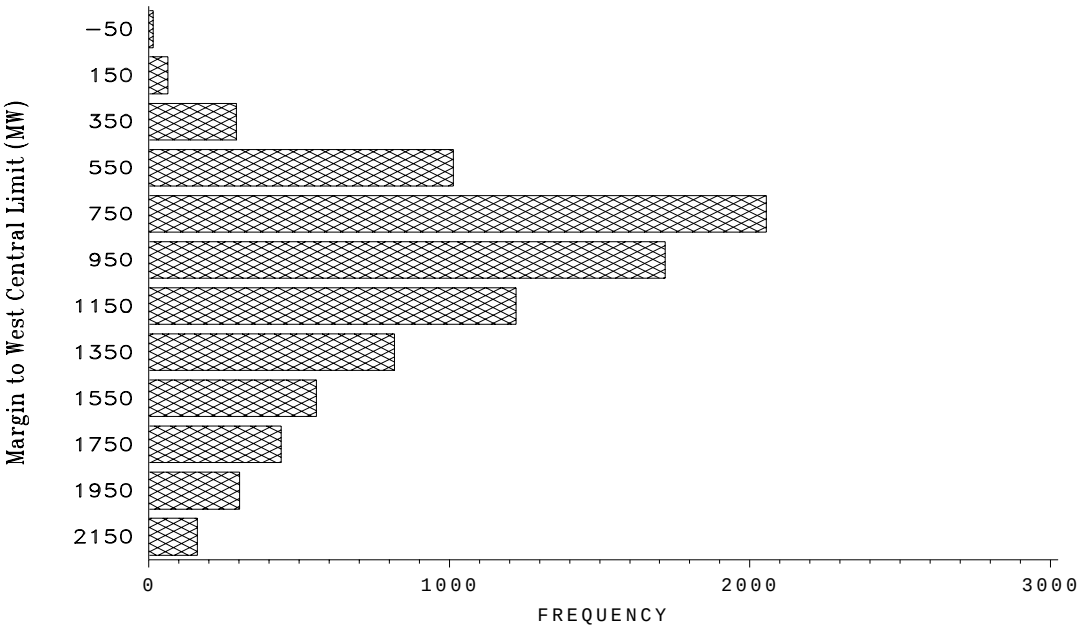


FLOW DURATION CURVE
FOR 1995 through 1998



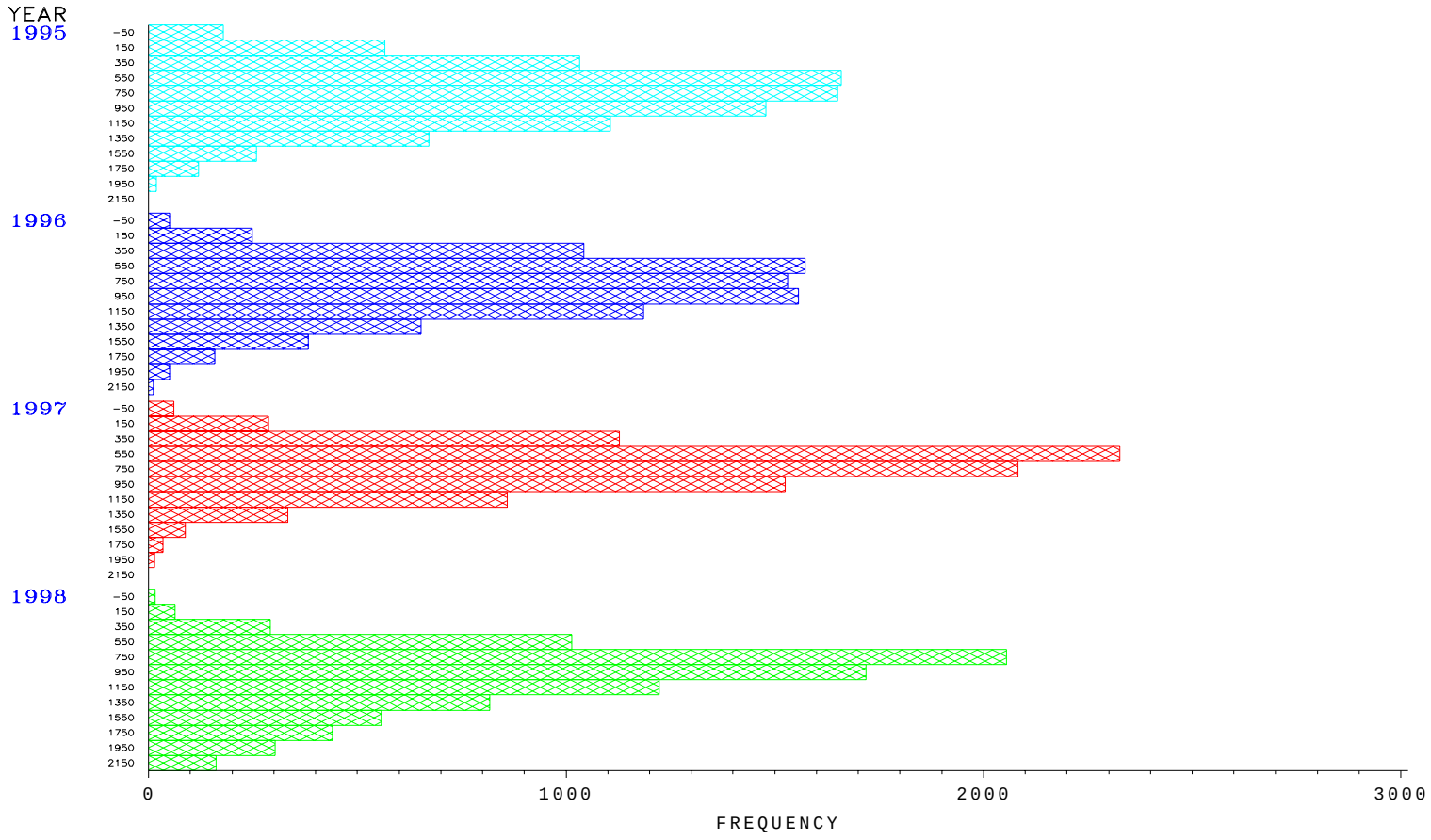


Margin to West Central Limit



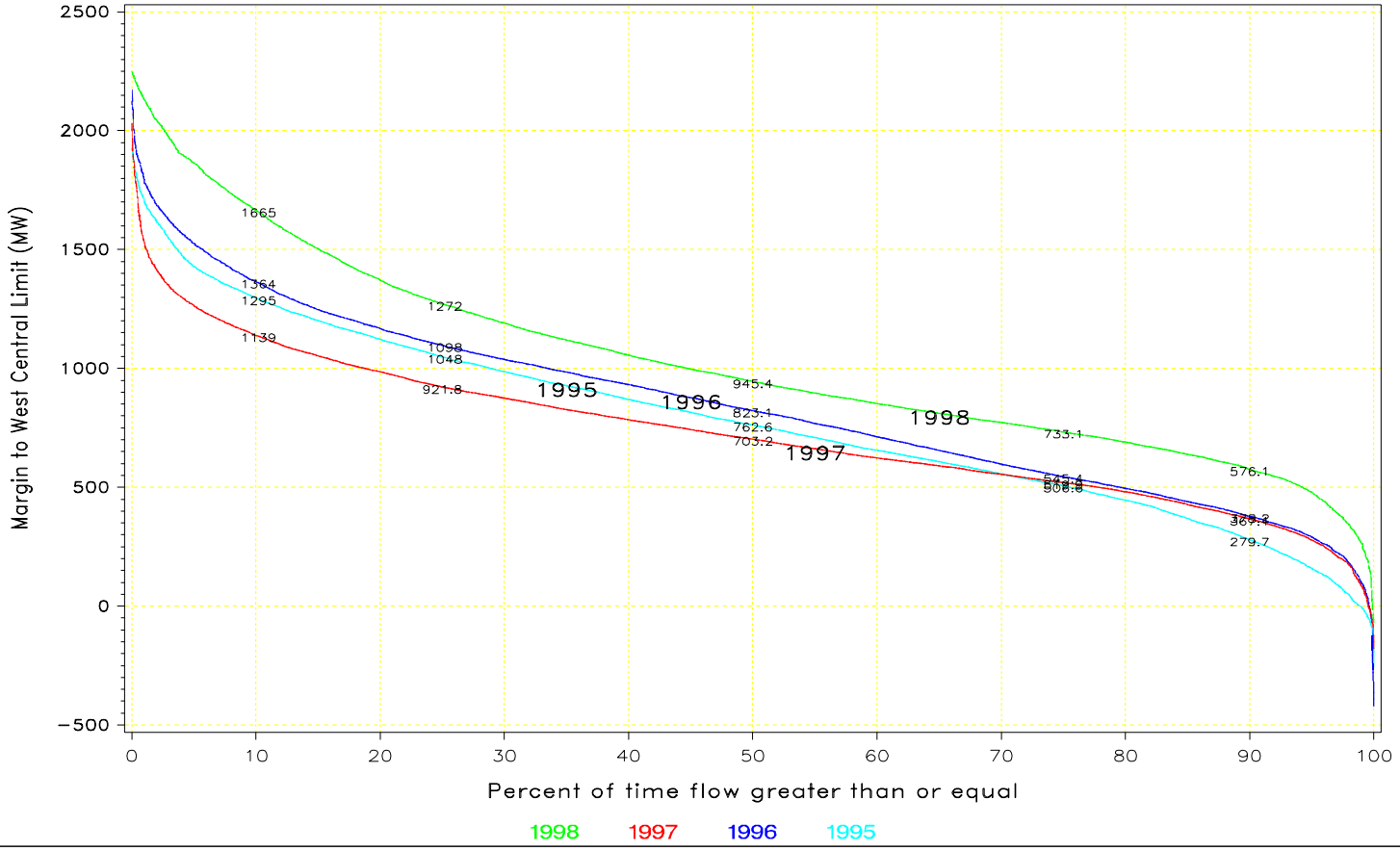
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−50	16	16	0.18	0.18
150	63	79	0.73	0.91
350	292	371	3.37	4.28
550	1014	1385	11.70	15.99
750	2055	3440	23.72	39.71
950	1719	5159	19.84	59.55
1150	1223	6382	14.12	73.67
1350	818	7200	9.44	83.11
1550	558	7758	6.44	89.55
1750	440	8198	5.08	94.63
1950	303	8501	3.50	98.13
2150	162	8663	1.87	100.00

Margin to West Central Limit



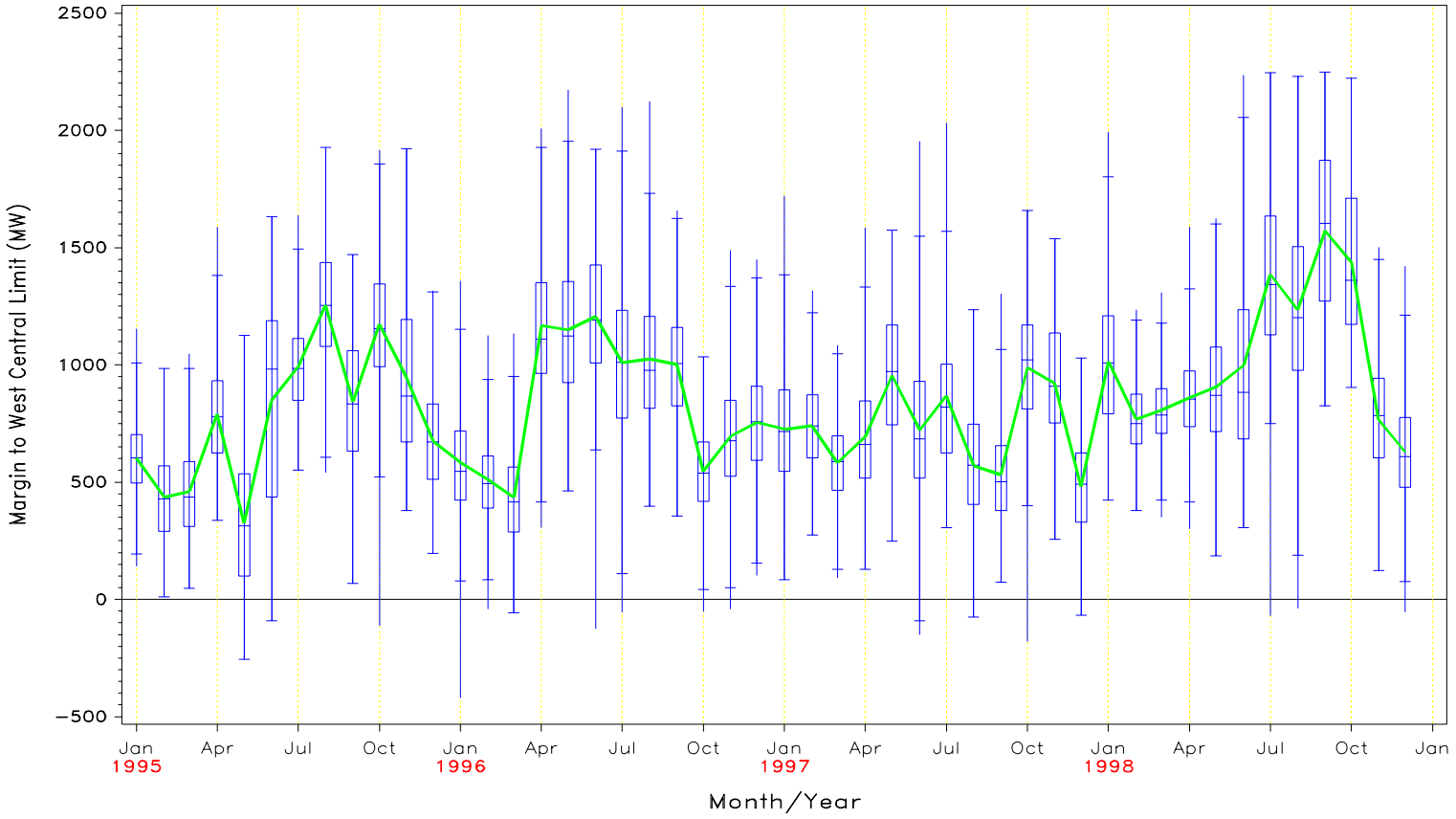
FLOW DURATION CURVE
FOR 1995 through 1998

Margin to West Central Limit

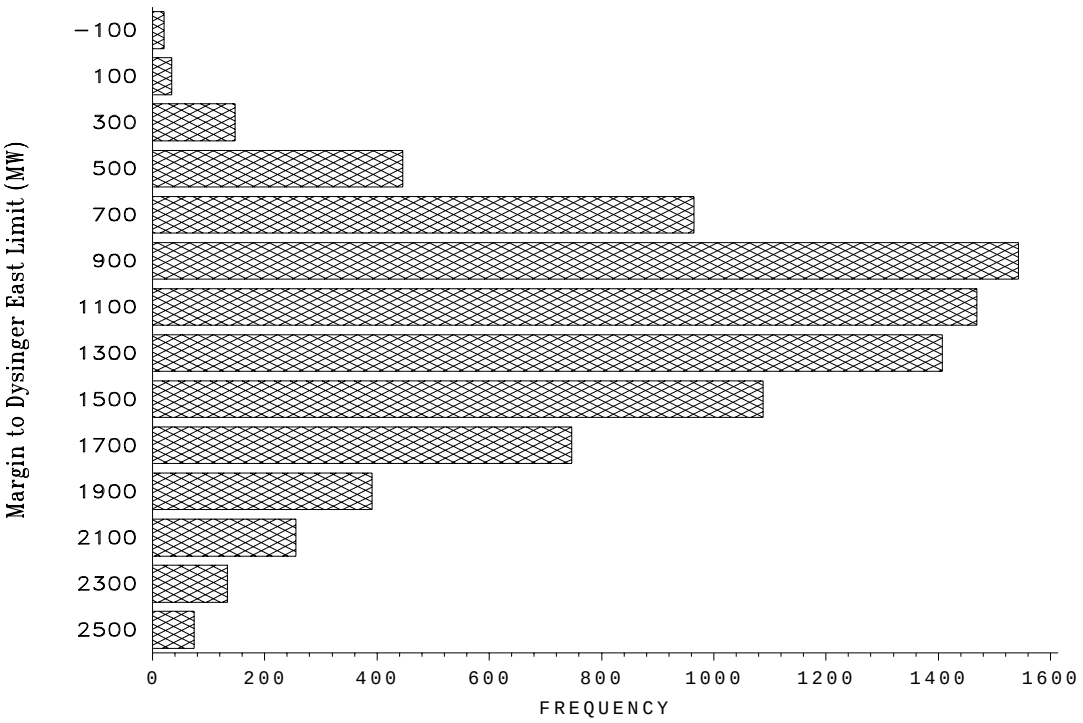


Average Monthly Interface Flows

January 1, 1995 – December 31, 1998

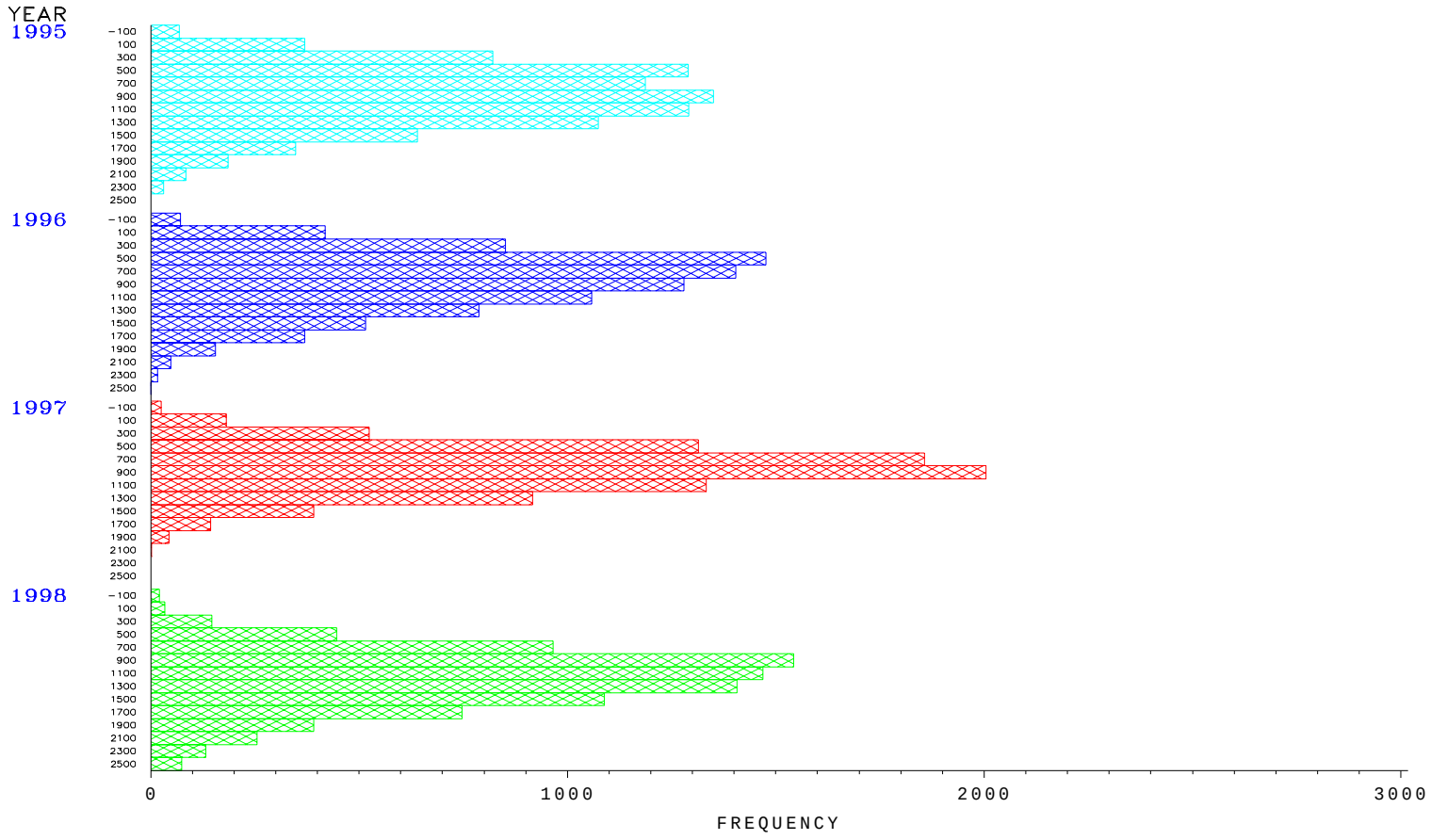


Margin to Dysinger East Limit

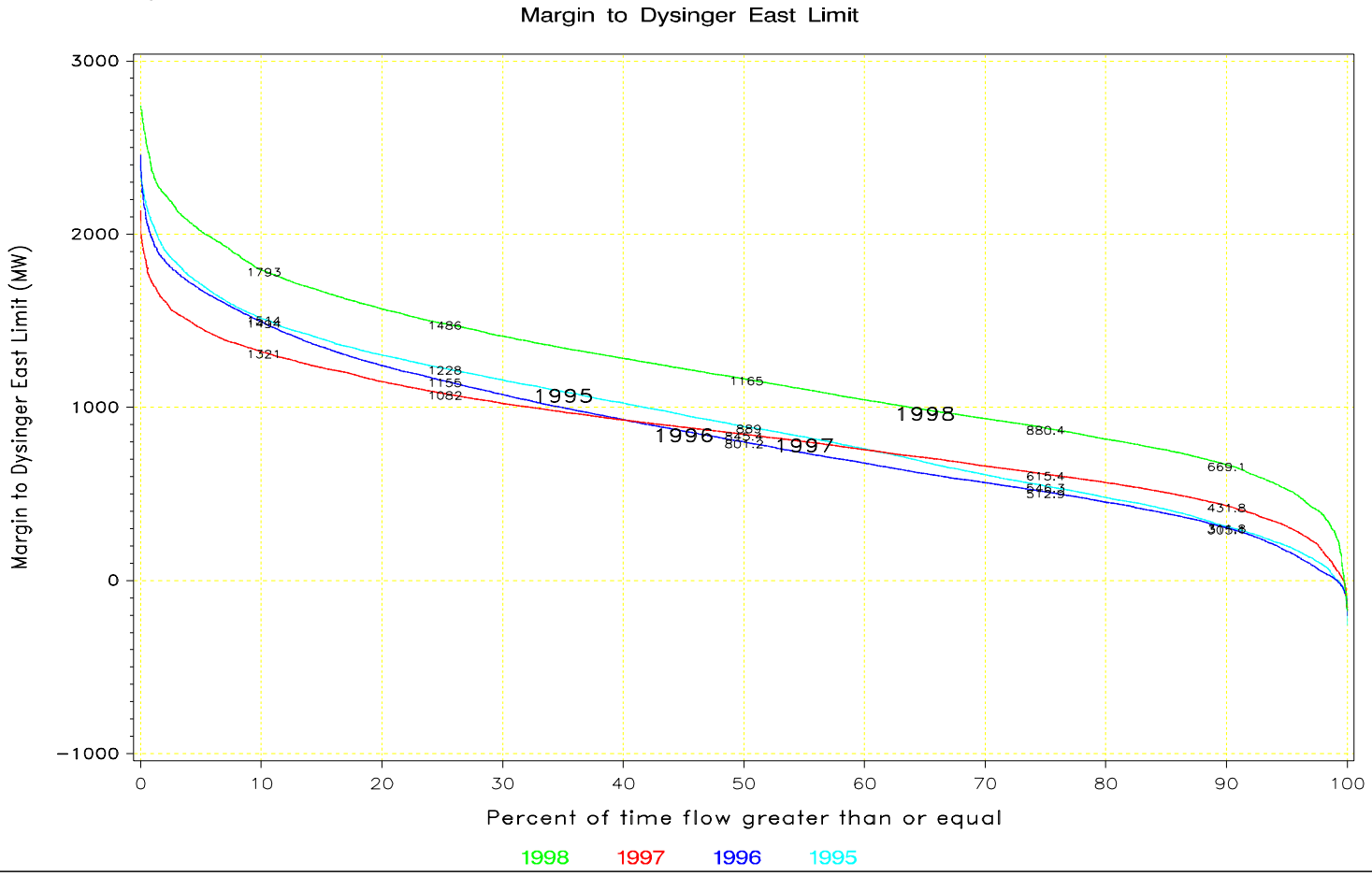


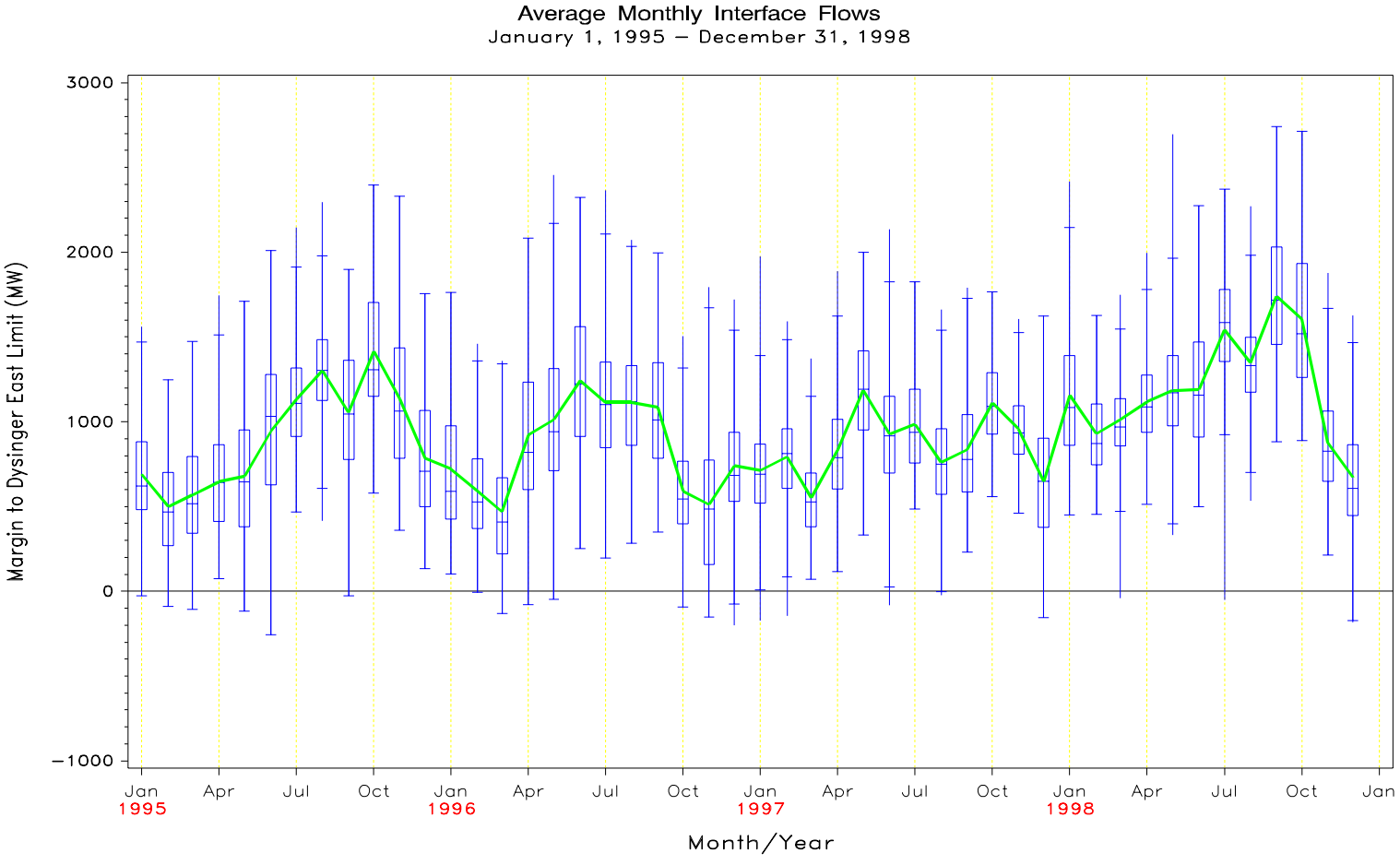
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−100	21	21	0.24	0.24
100	34	55	0.39	0.63
300	147	202	1.69	2.32
500	446	648	5.11	7.43
700	965	1613	11.07	18.50
900	1543	3156	17.69	36.19
1100	1469	4625	16.84	53.03
1300	1407	6032	16.13	69.17
1500	1088	7120	12.48	81.64
1700	747	7867	8.57	90.21
1900	391	8258	4.48	94.69
2100	256	8514	2.94	97.63
2300	133	8647	1.53	99.15
2500	74	8721	0.85	100.00

Margin to Dysinger East Limit

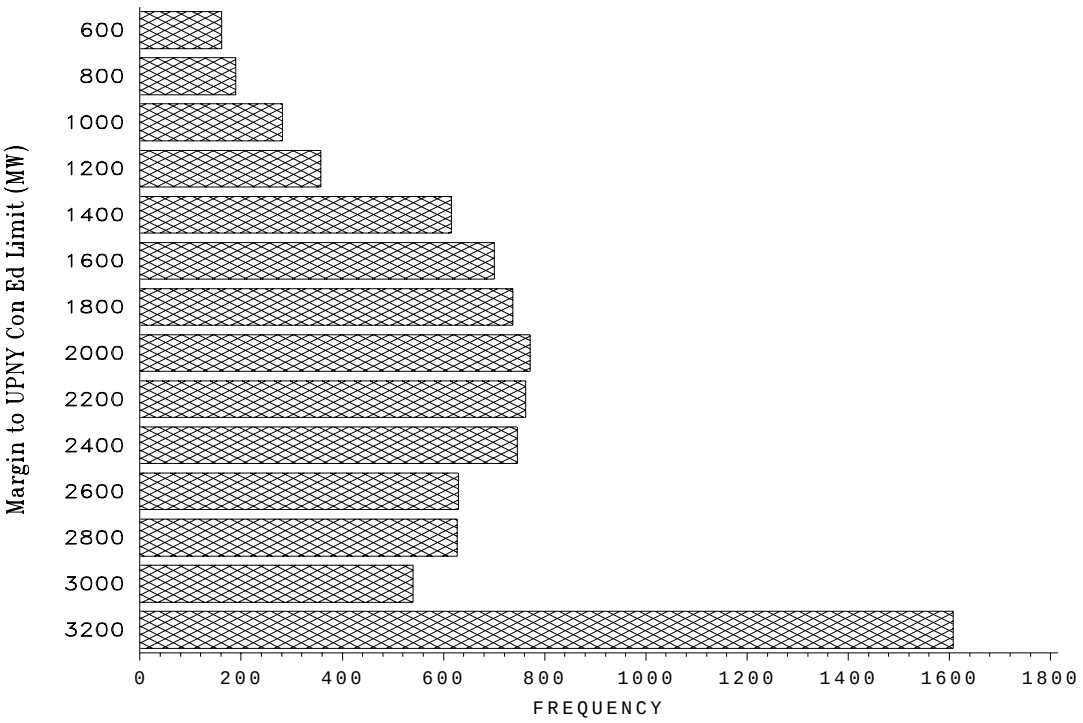


FLOW DURATION CURVE
FOR 1995 through 1998



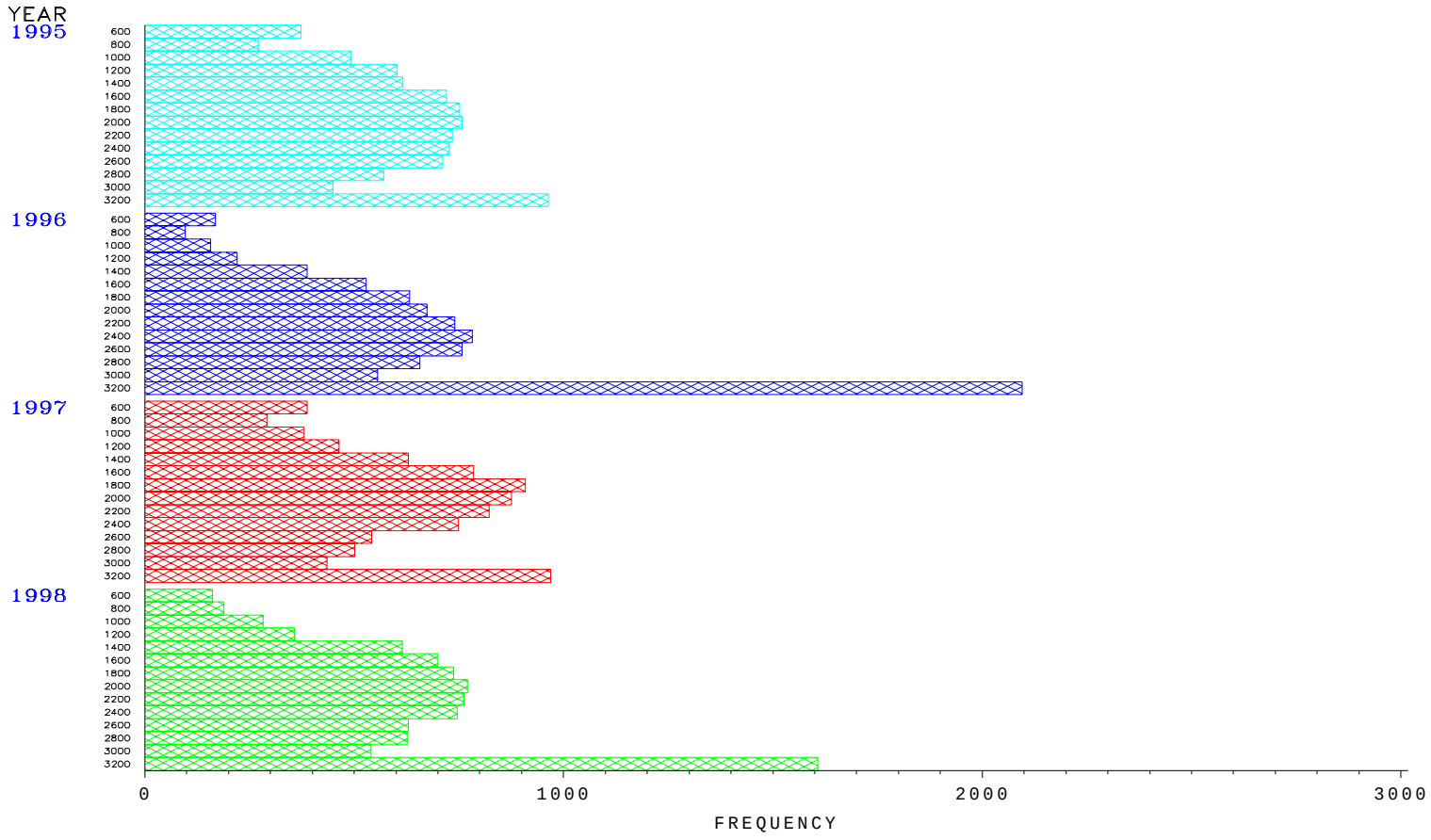


Margin to UPNY Con Ed Limit

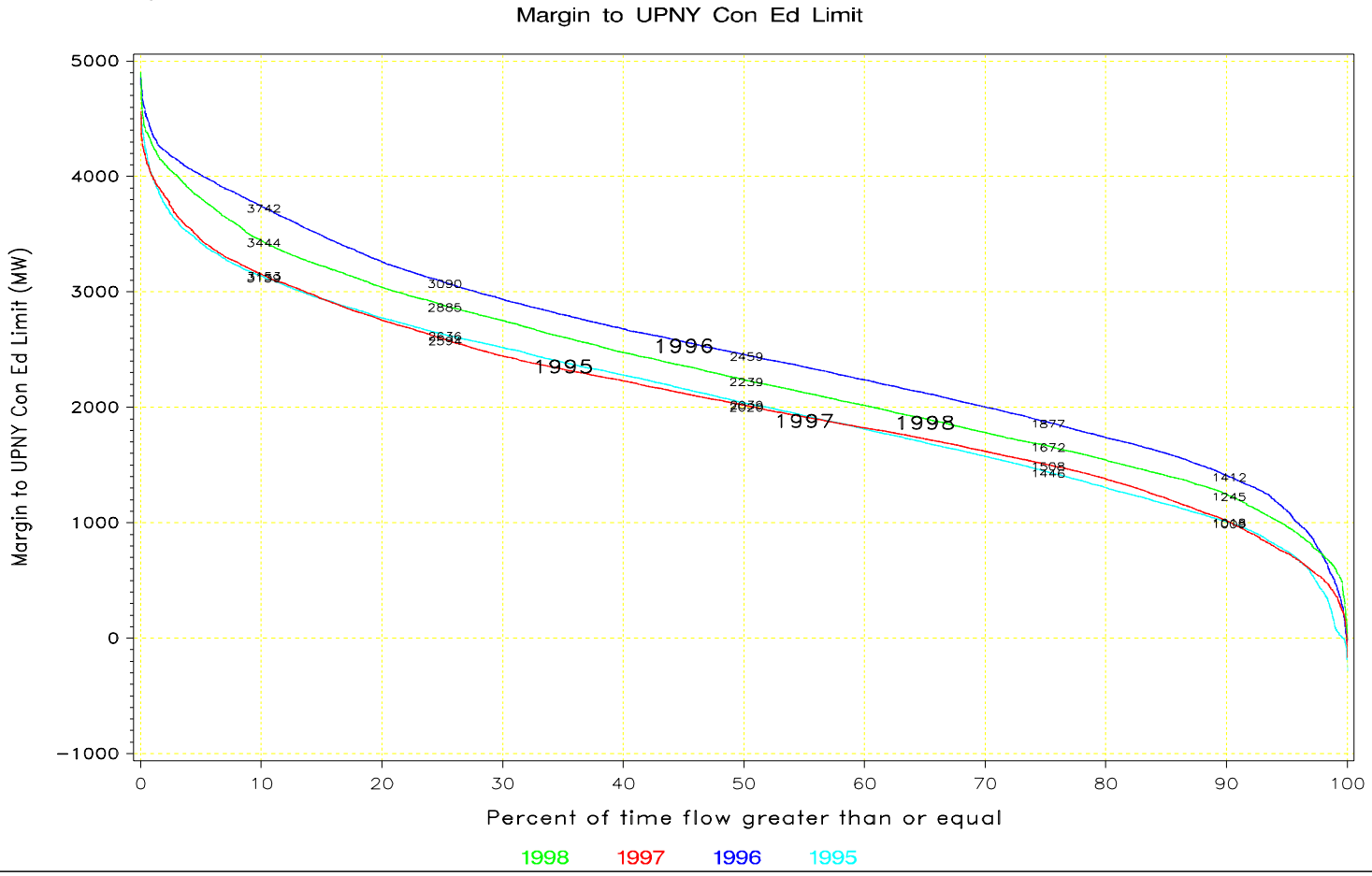


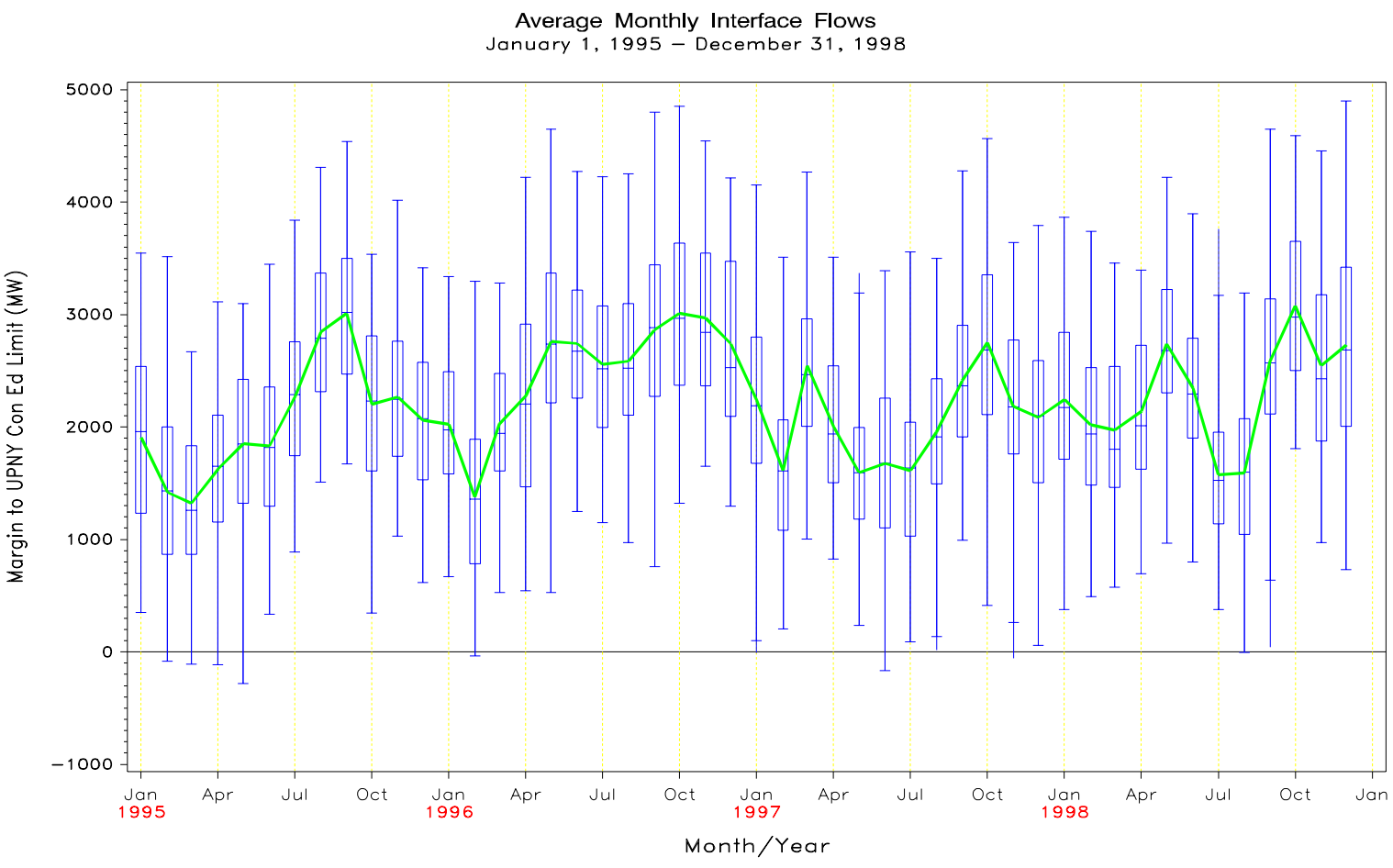
Margin to UPNY Con Ed Limit (MW)	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
600	161	161	1.85	1.85
800	189	350	2.17	4.01
1000	282	632	3.23	7.24
1200	358	990	4.10	11.35
1400	615	1605	7.05	18.40
1600	700	2305	8.02	26.42
1800	737	3042	8.45	34.87
2000	771	3813	8.84	43.71
2200	762	4575	8.73	52.44
2400	746	5321	8.55	60.99
2600	629	5950	7.21	68.20
2800	627	6577	7.19	75.39
3000	540	7117	6.19	81.58
3200	1607	8724	18.42	100.00

Margin to UPNY Con Ed Limit

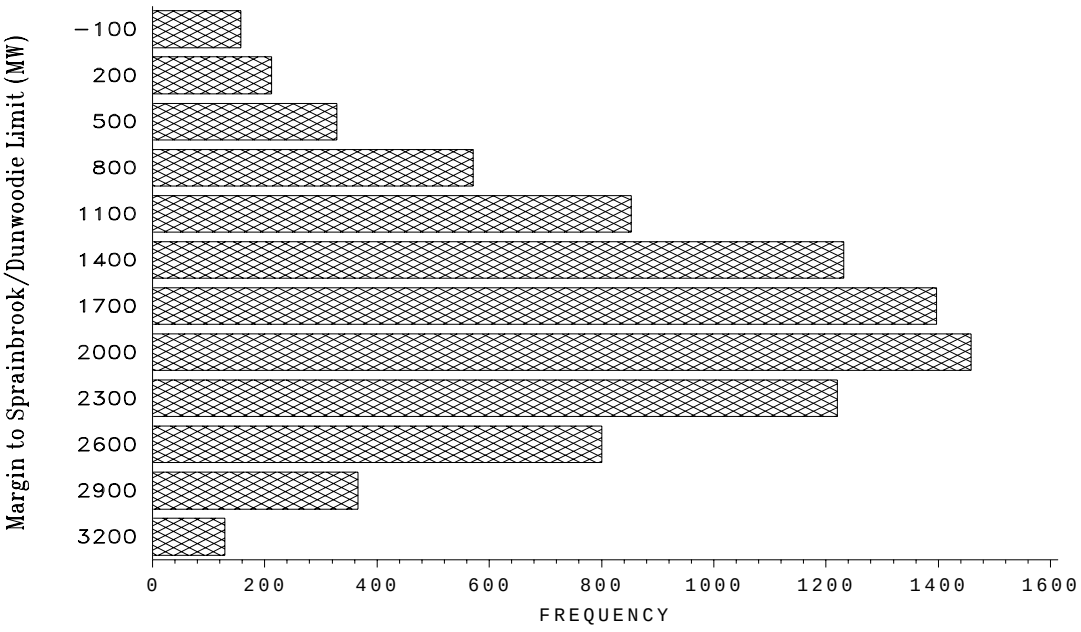


FLOW DURATION CURVE
FOR 1995 through 1998



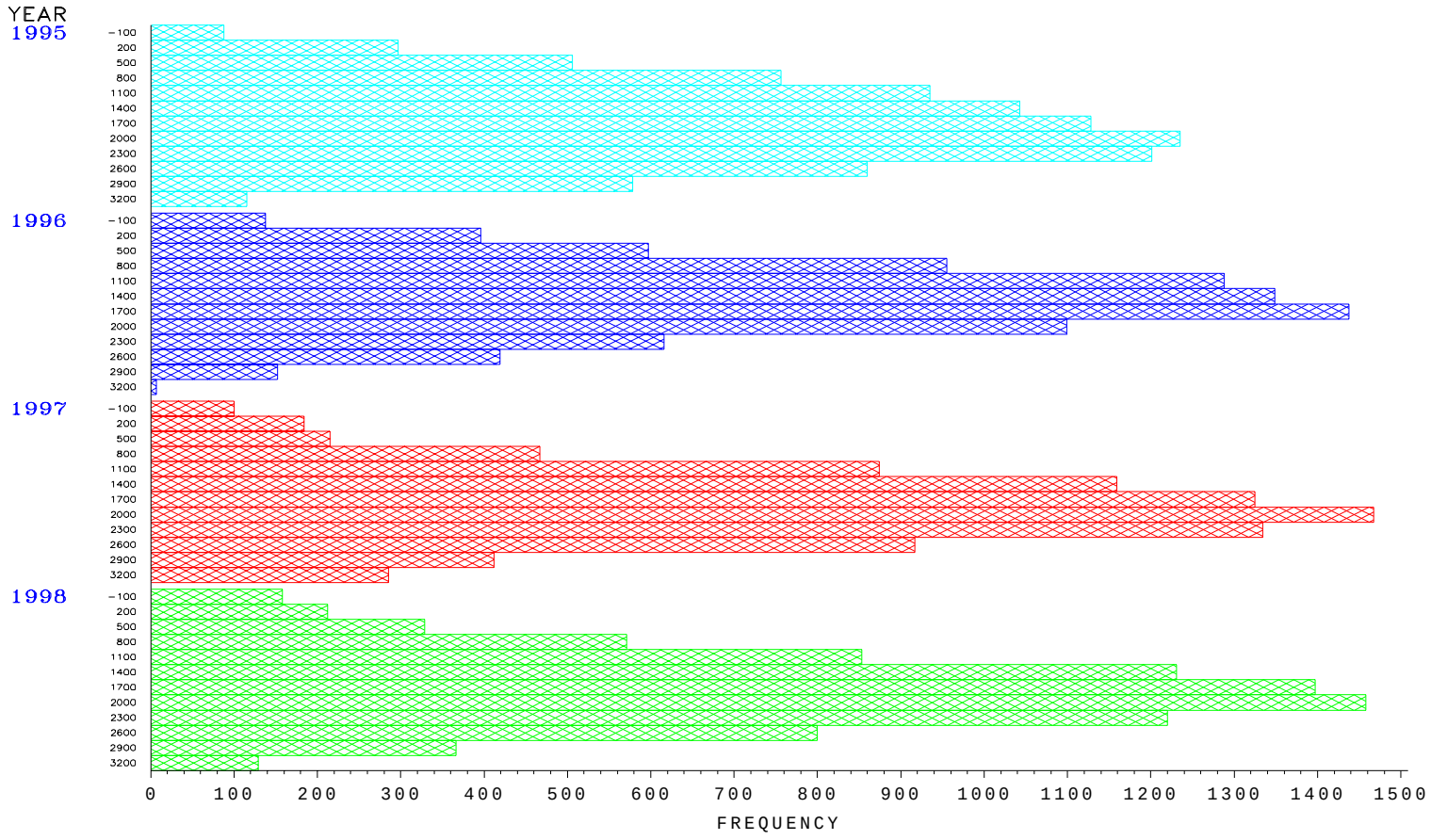


Margin to Sprainbrook/Dunwoodie Limit

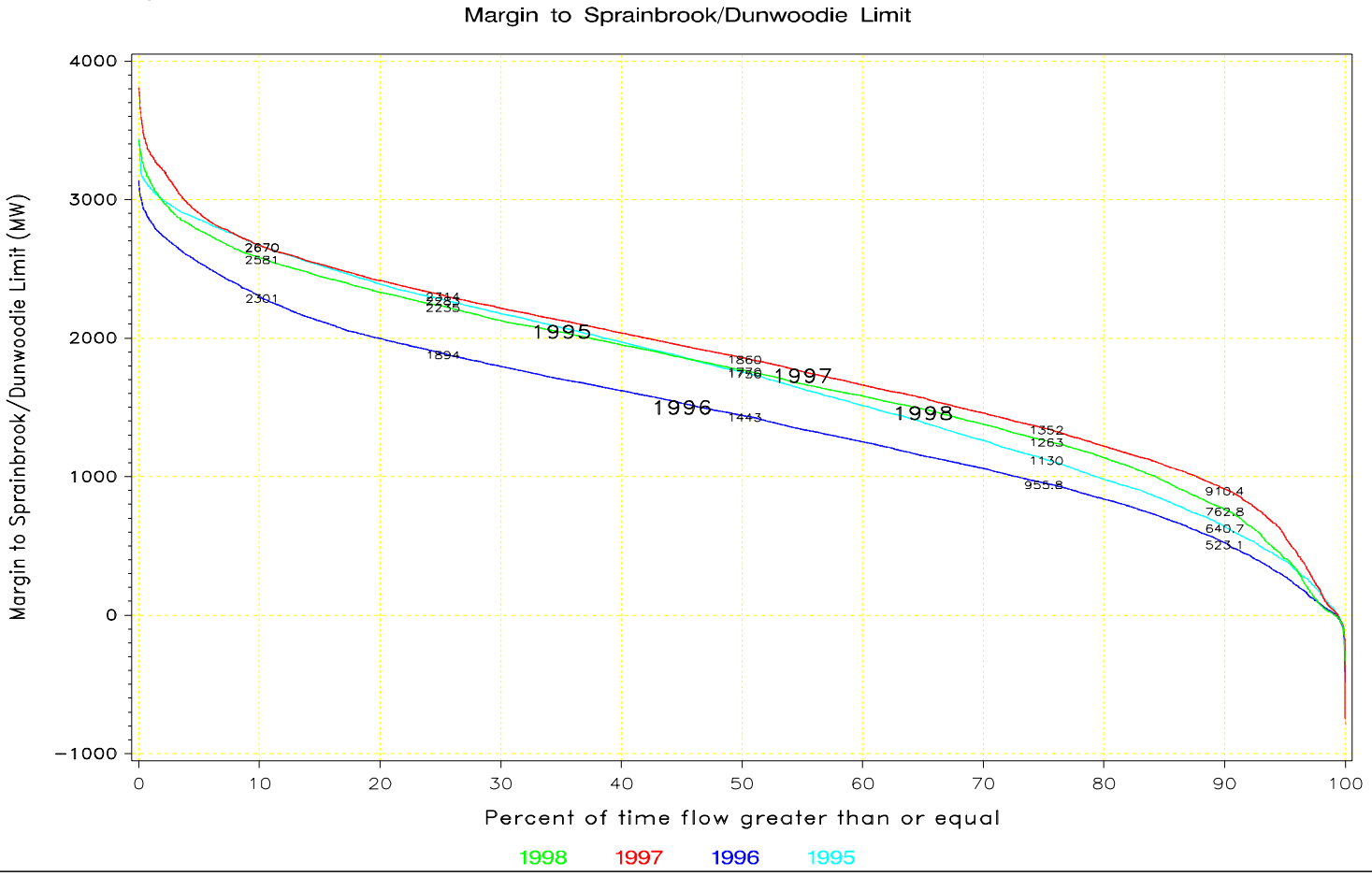


	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
-100	158	158	1.81	1.81
200	212	370	2.43	4.24
500	329	699	3.77	8.01
800	571	1270	6.55	14.56
1100	853	2123	9.78	24.34
1400	1231	3354	14.11	38.45
1700	1397	4751	16.01	54.46
2000	1458	6209	16.71	71.17
2300	1220	7429	13.98	85.16
2600	800	8229	9.17	94.33
2900	366	8595	4.20	98.52
3200	129	8724	1.48	100.00

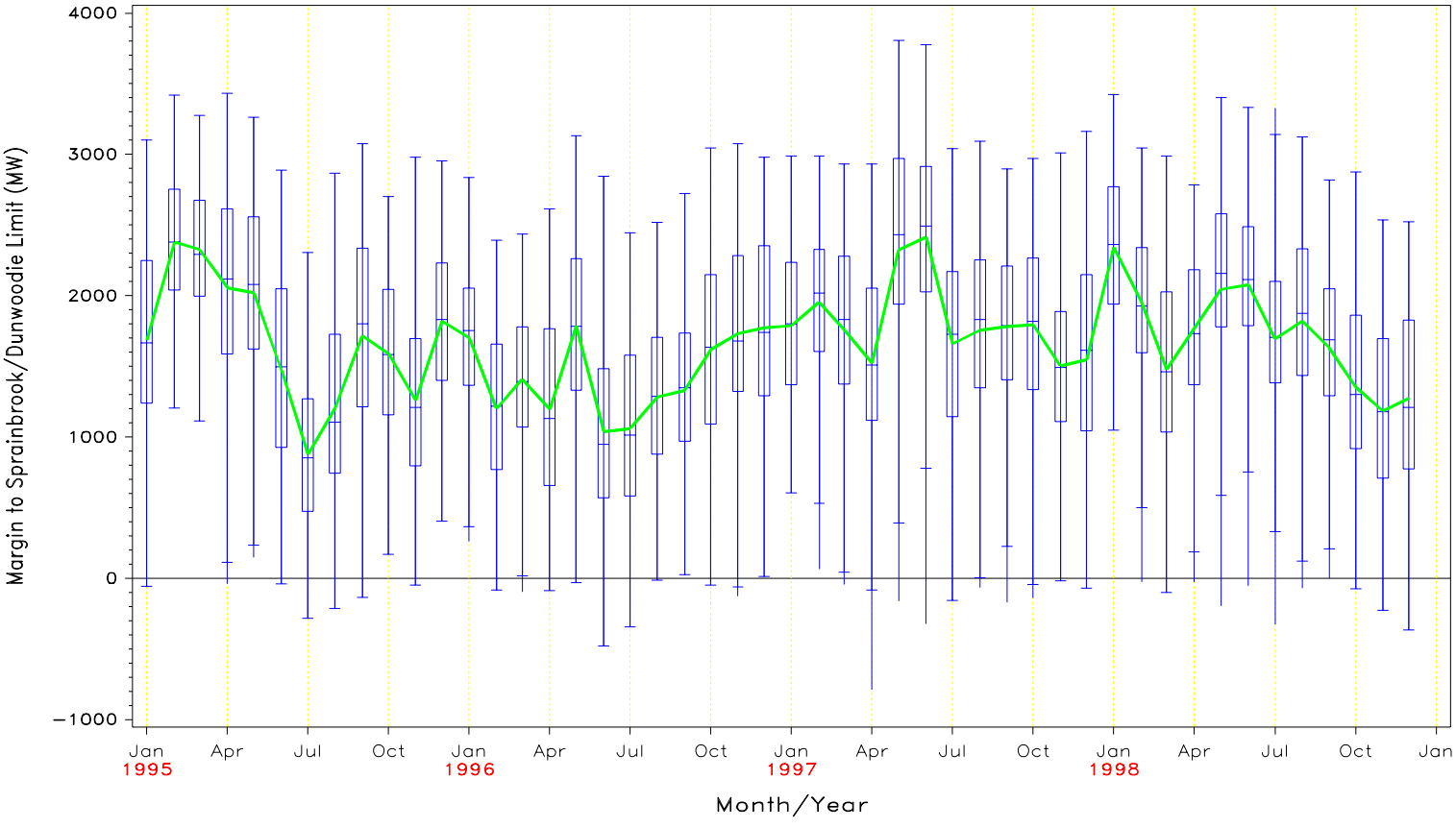
Margin to Sprainbrook/Dunwoodie Limit



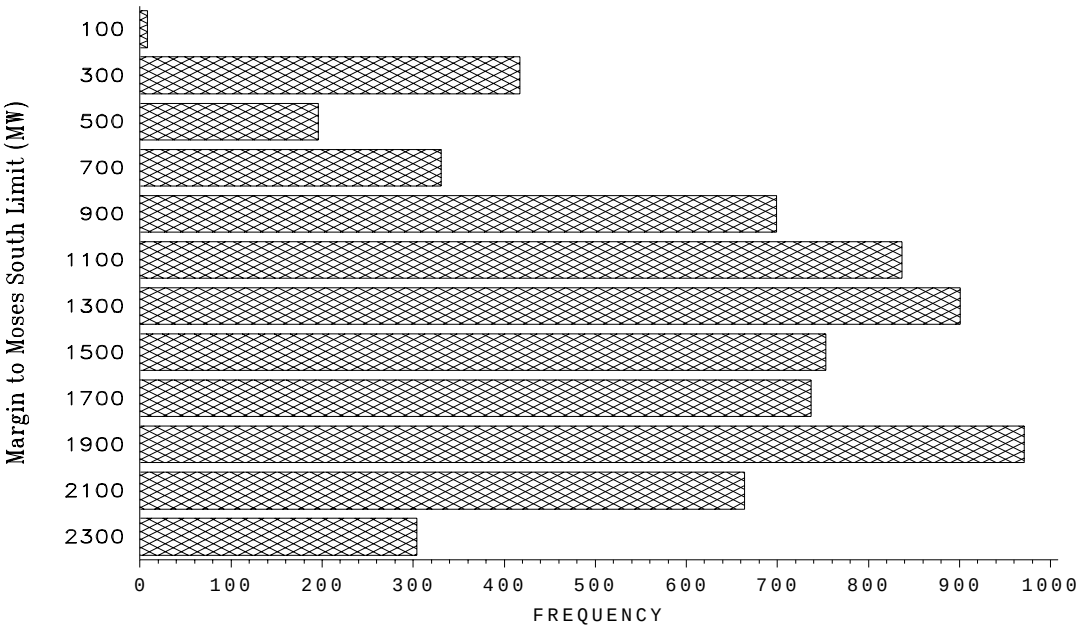
FLOW DURATION CURVE
FOR 1995 through 1998



Average Monthly Interface Flows
January 1, 1995 – December 31, 1998

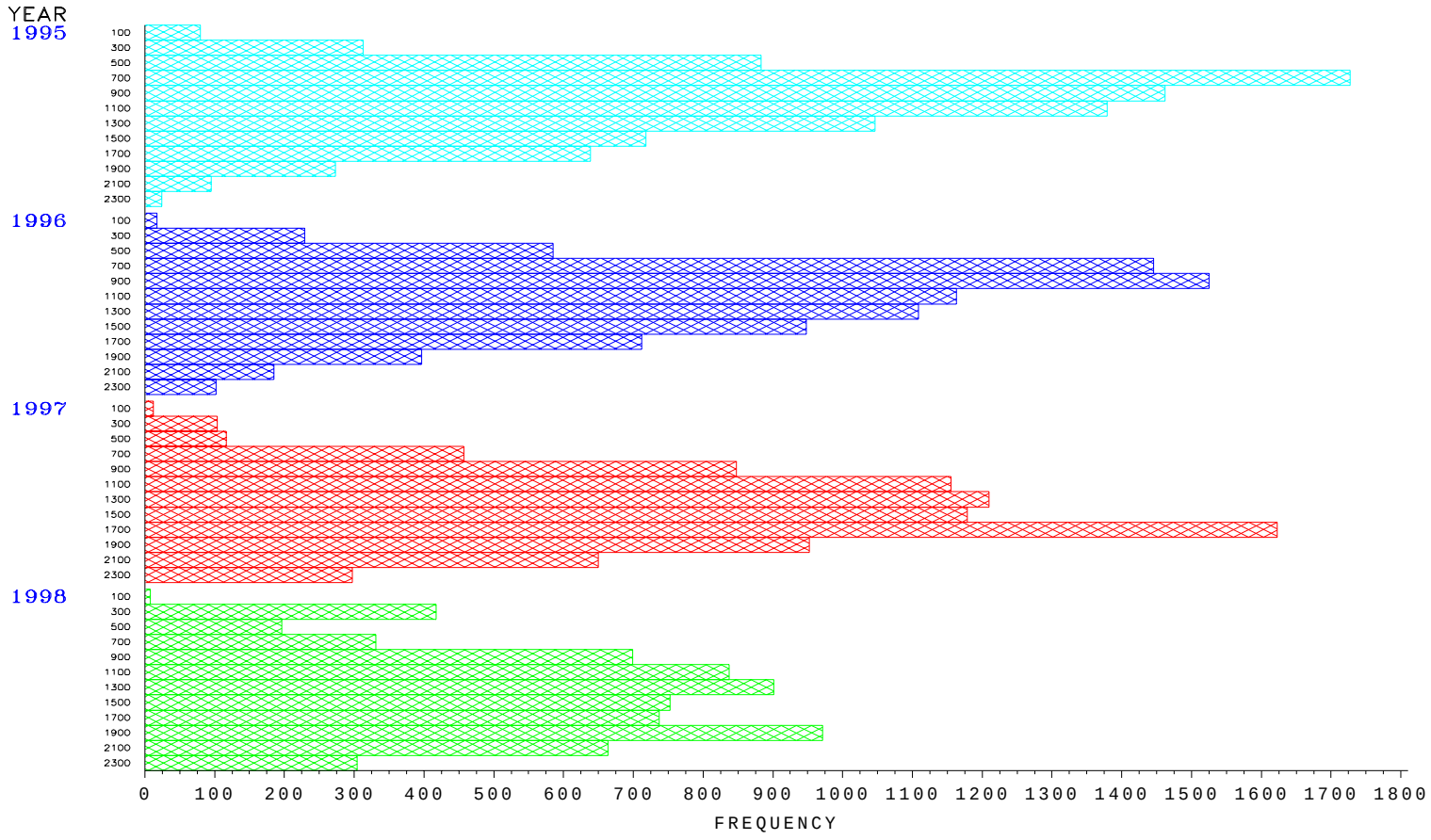


Margin to Moses South Limit

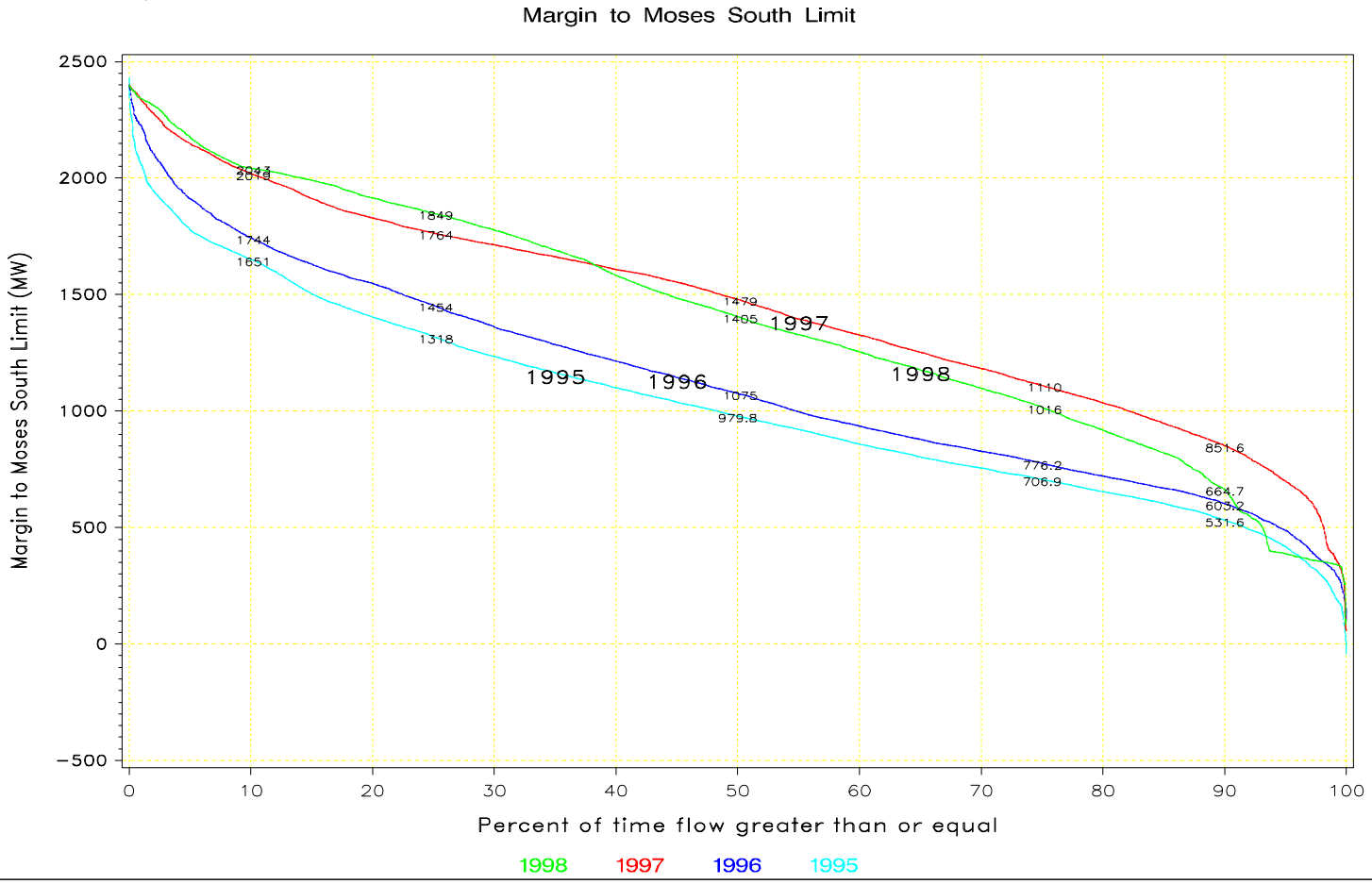


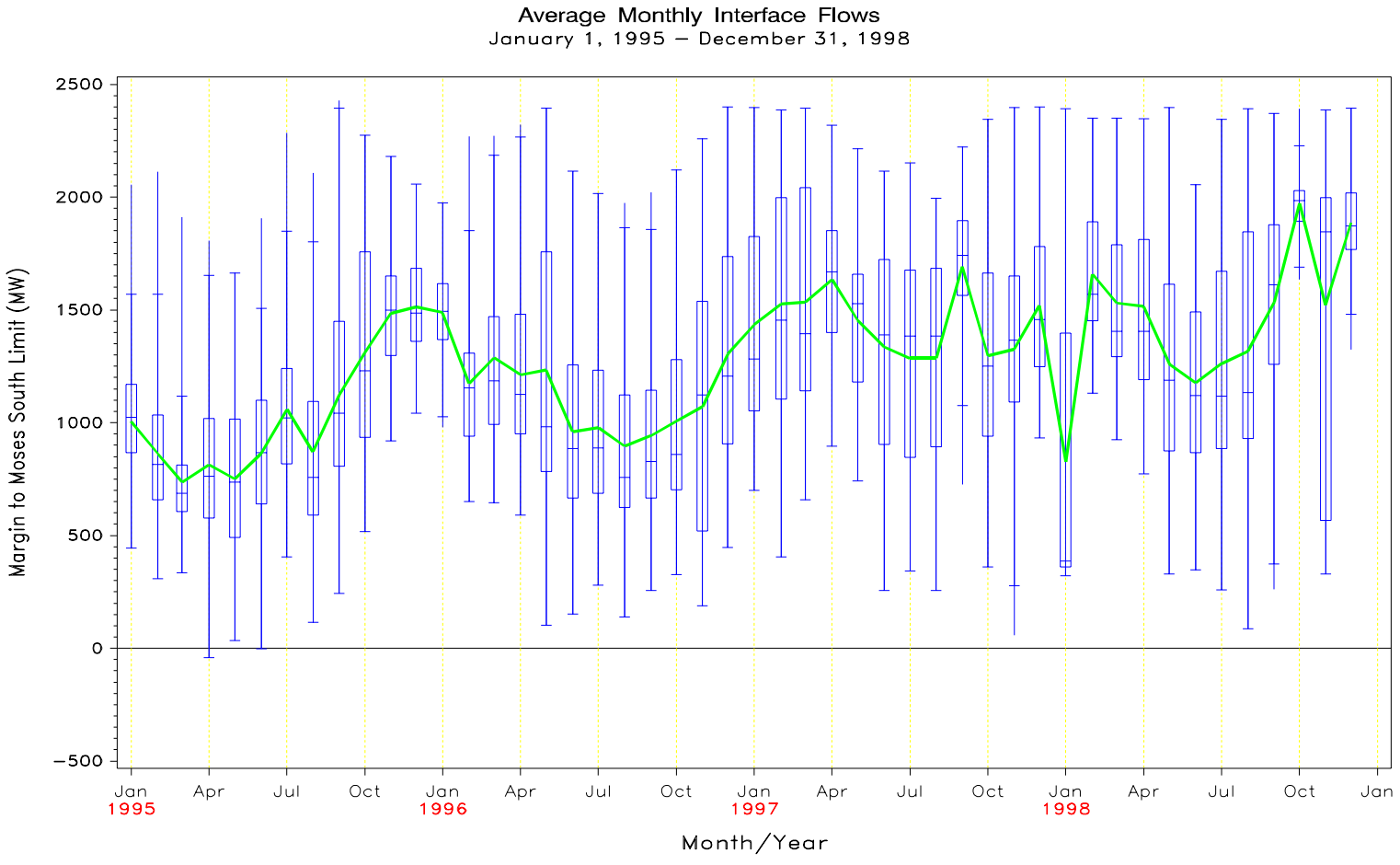
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
100	8	8	0.12	0.12
300	417	425	6.12	6.23
500	196	621	2.87	9.11
700	331	952	4.85	13.96
900	699	1651	10.25	24.22
1100	837	2488	12.28	36.49
1300	901	3389	13.22	49.71
1500	753	4142	11.04	60.75
1700	737	4879	10.81	71.56
1900	971	5850	14.24	85.80
2100	664	6514	9.74	95.54
2300	304	6818	4.46	100.00

Margin to Moses South Limit



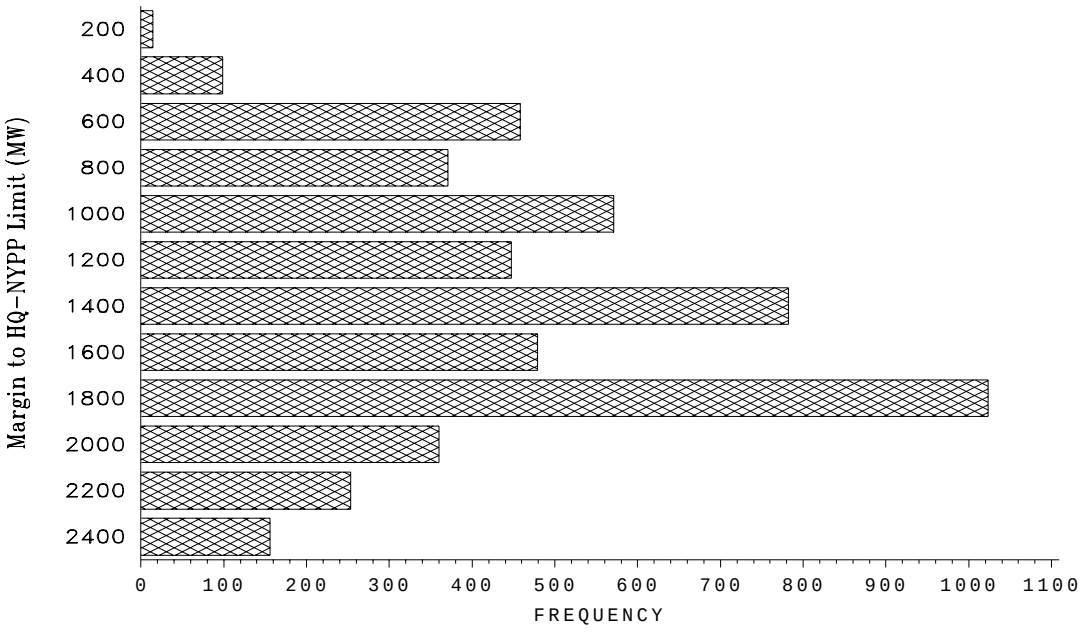
FLOW DURATION CURVE
FOR 1995 through 1998





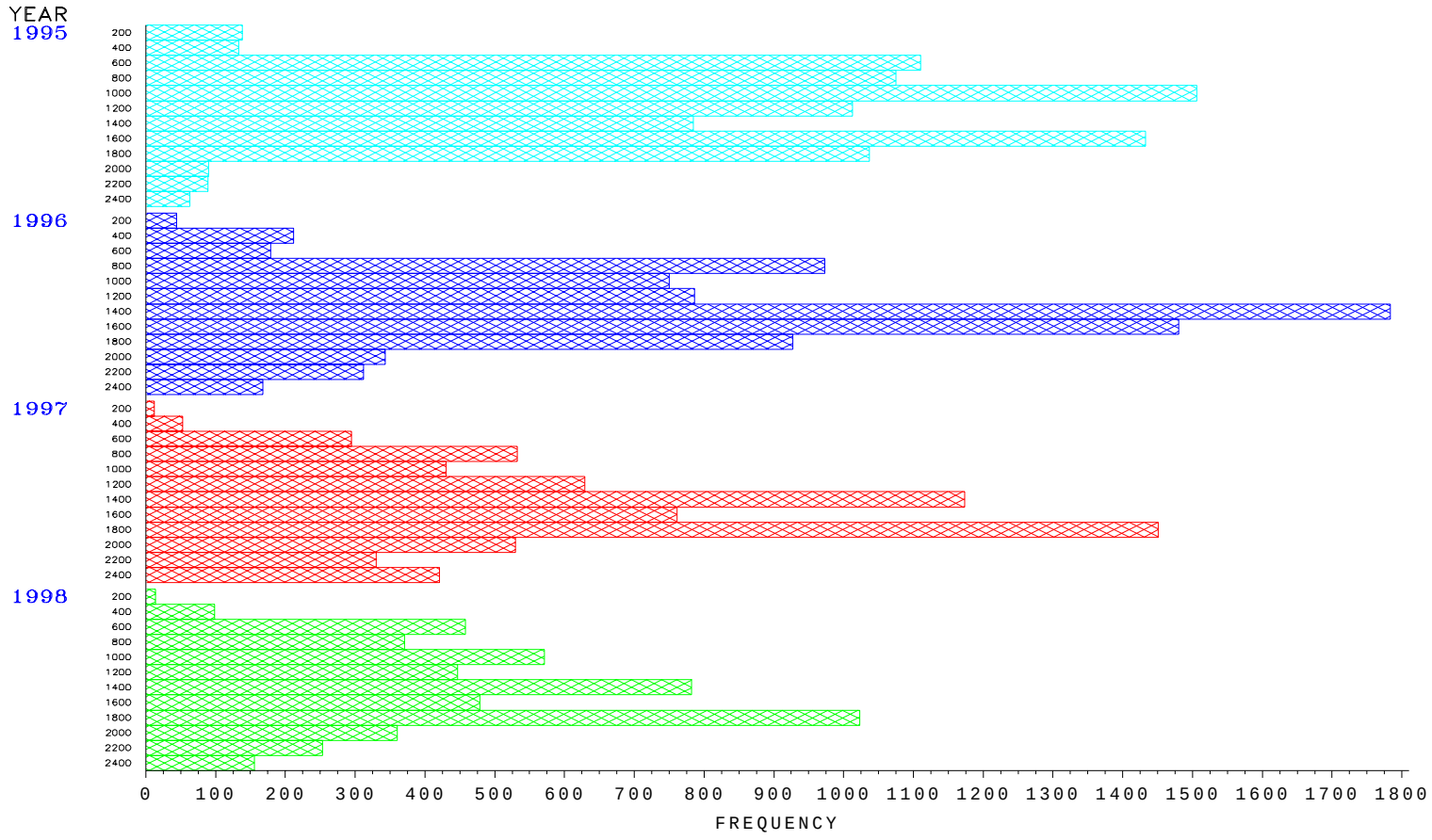
NYPP Transmission Use Statistics For January–December 1998

Margin to HQ – NYPP Limit

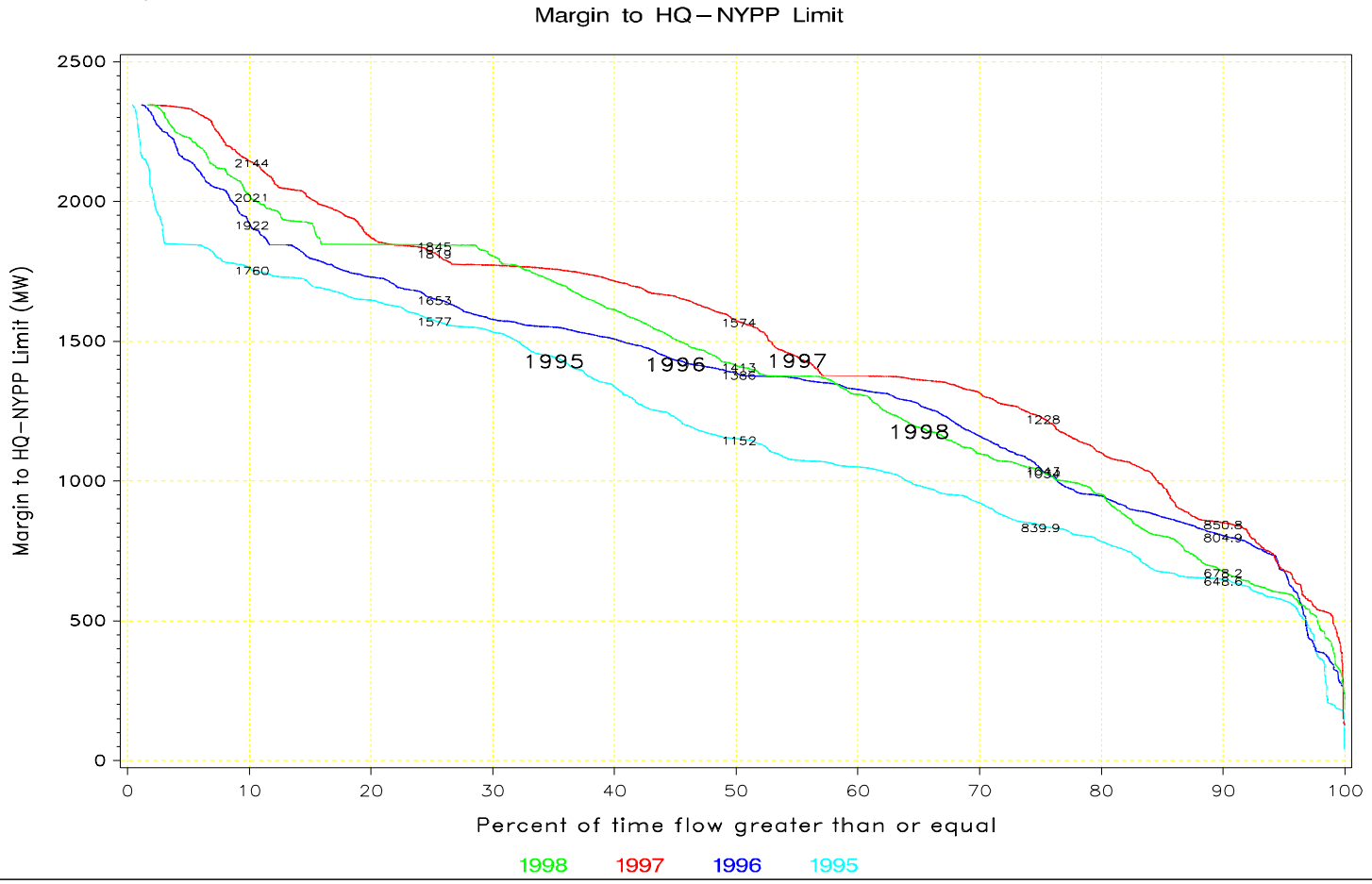


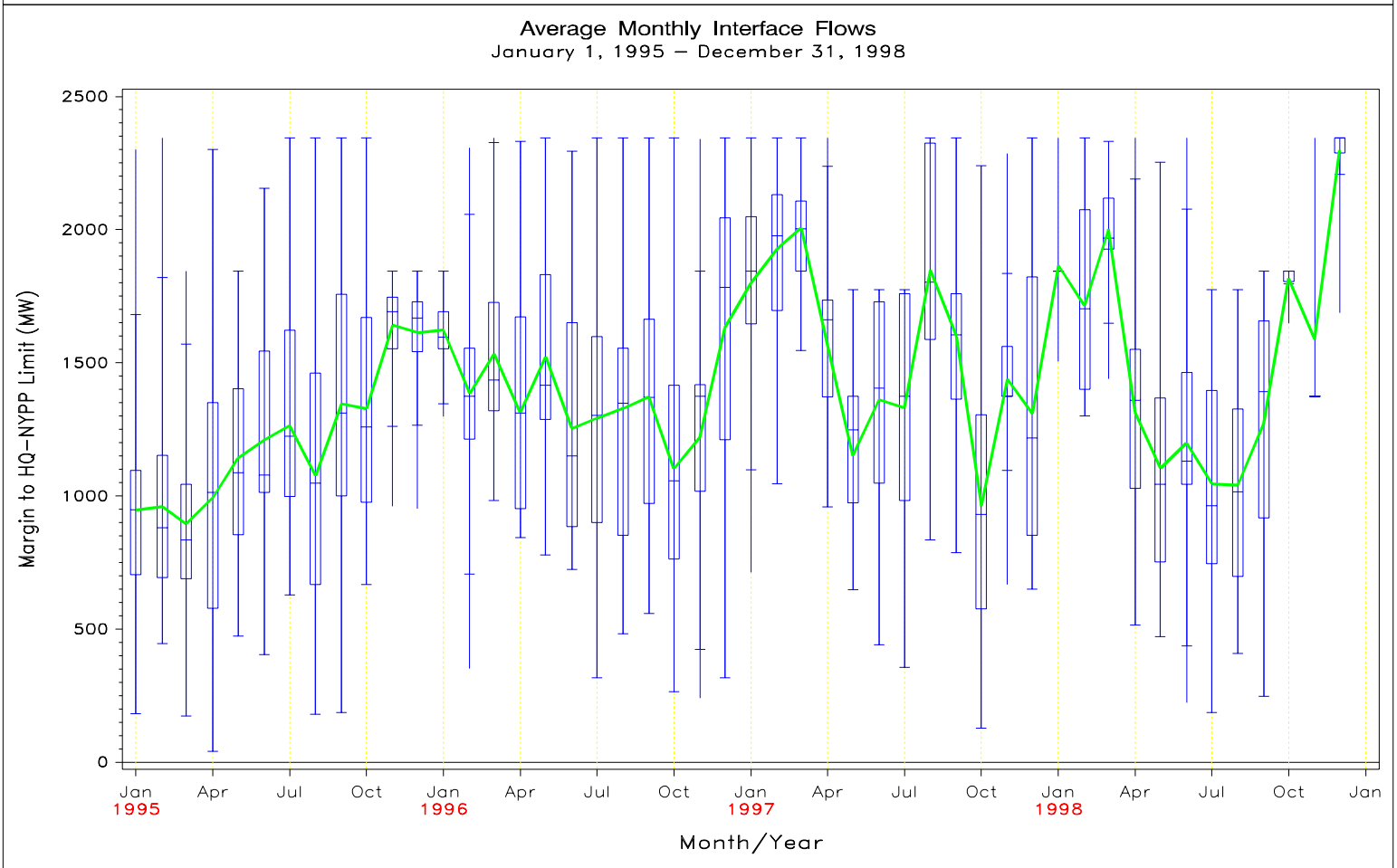
Margin to HQ–NYPP Limit (MW)	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
200	14	14	0.28	0.28
400	99	113	1.97	2.25
600	458	571	9.14	11.39
800	371	942	7.40	18.79
1000	571	1513	11.39	30.18
1200	447	1960	8.92	39.10
1400	782	2742	15.60	54.70
1600	479	3221	9.56	64.25
1800	1023	4244	20.41	84.66
2000	360	4604	7.18	91.84
2200	253	4857	5.05	96.89
2400	156	5013	3.11	100.00

Margin to HQ – NYPP Limit



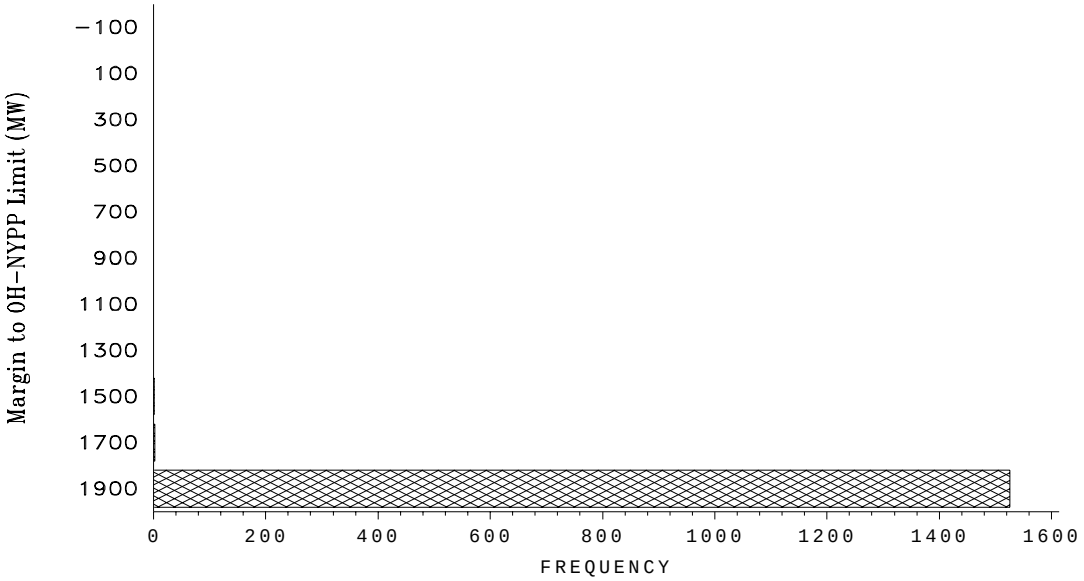
FLOW DURATION CURVE
FOR 1995 through 1998





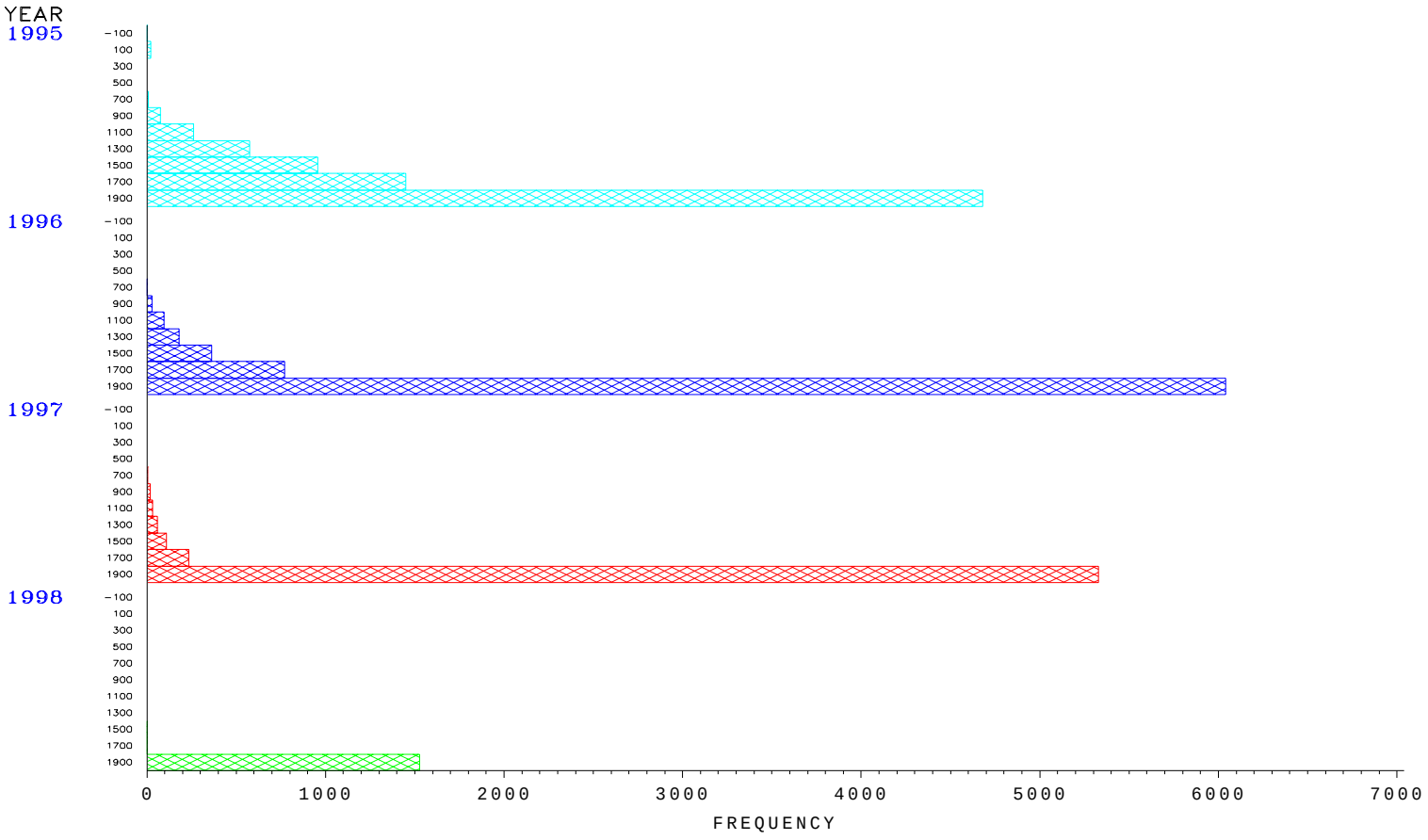
NYPP Transmission Use Statistics For January–December 1998

Margin to OH–NYPP Limit

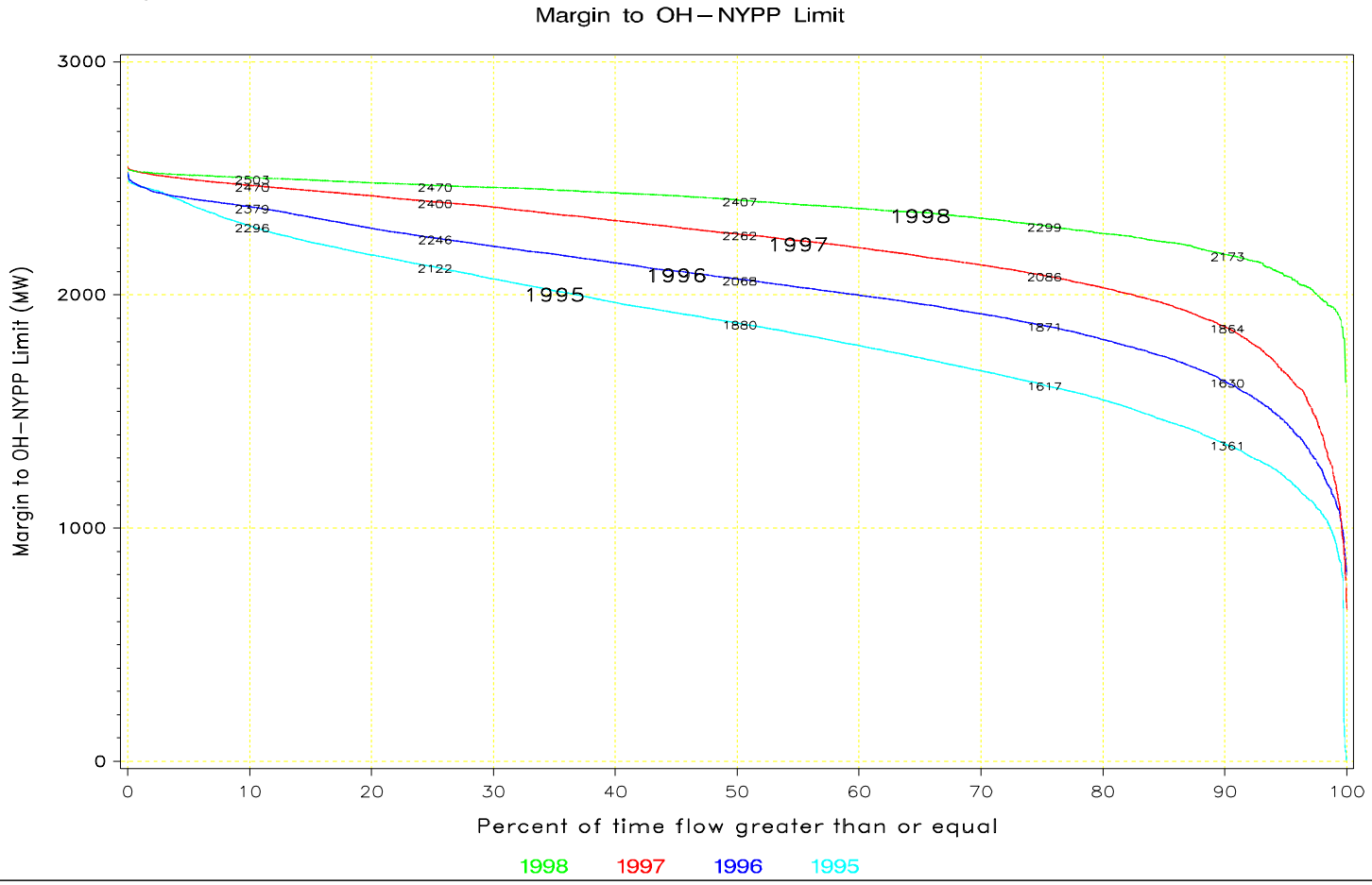


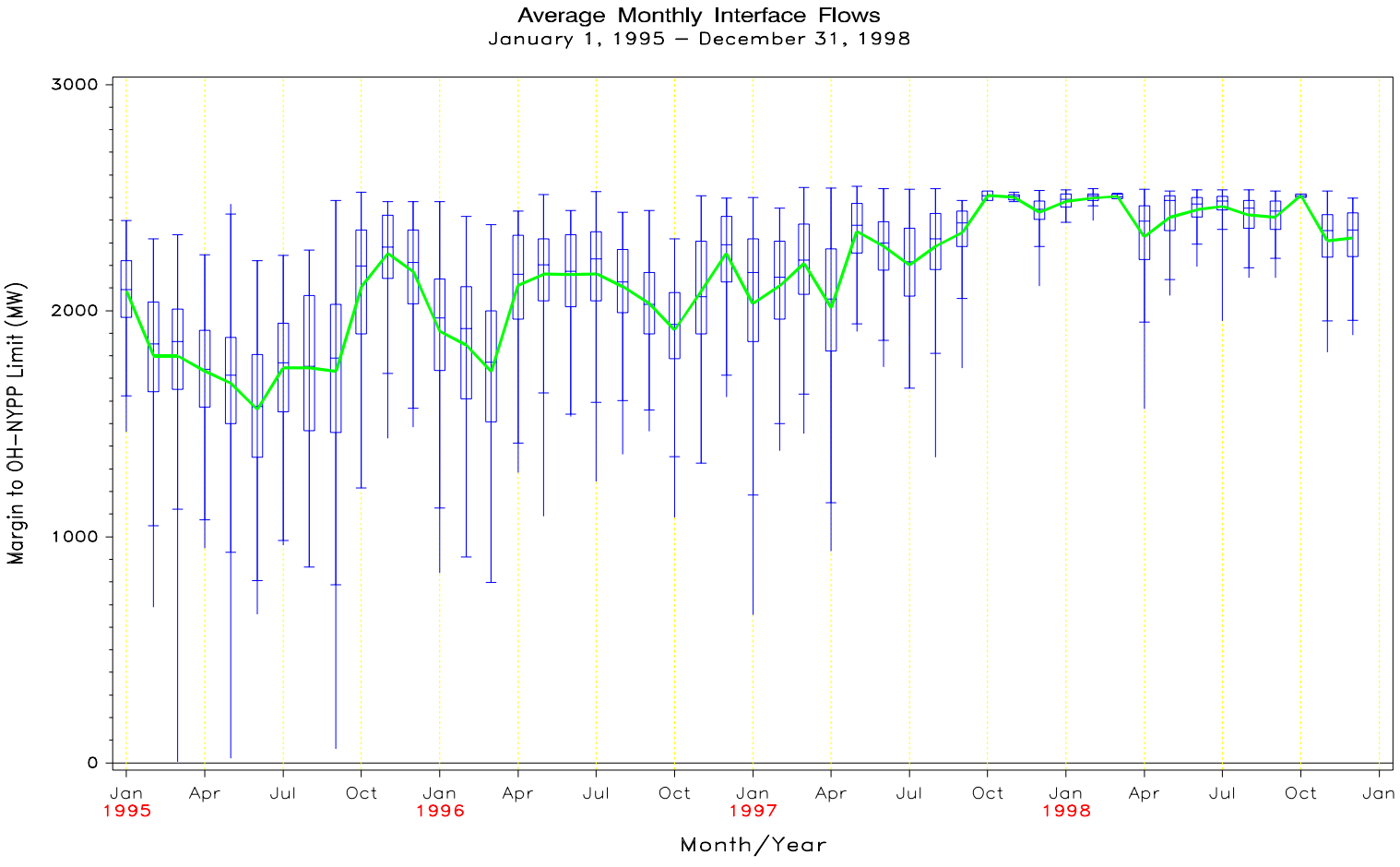
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
-100	0	0	0.00	0.00
100	0	0	0.00	0.00
300	0	0	0.00	0.00
500	0	0	0.00	0.00
700	0	0	0.00	0.00
900	0	0	0.00	0.00
1100	0	0	0.00	0.00
1300	0	0	0.00	0.00
1500	1	1	0.07	0.07
1700	2	3	0.13	0.20
1900	1526	1529	99.80	100.00

Margin to OH–NYPP Limit



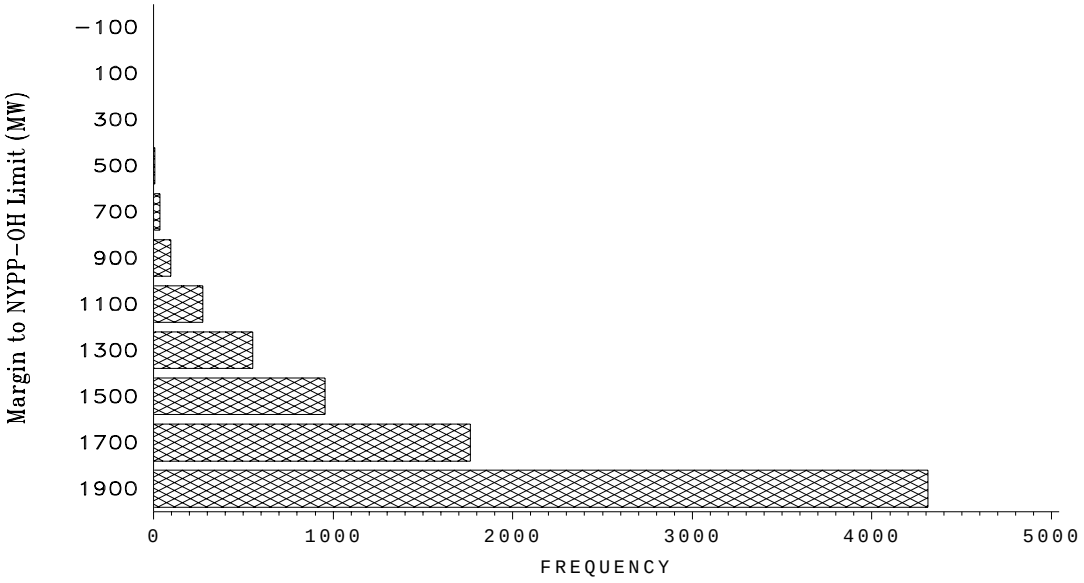
FLOW DURATION CURVE
FOR 1995 through 1998





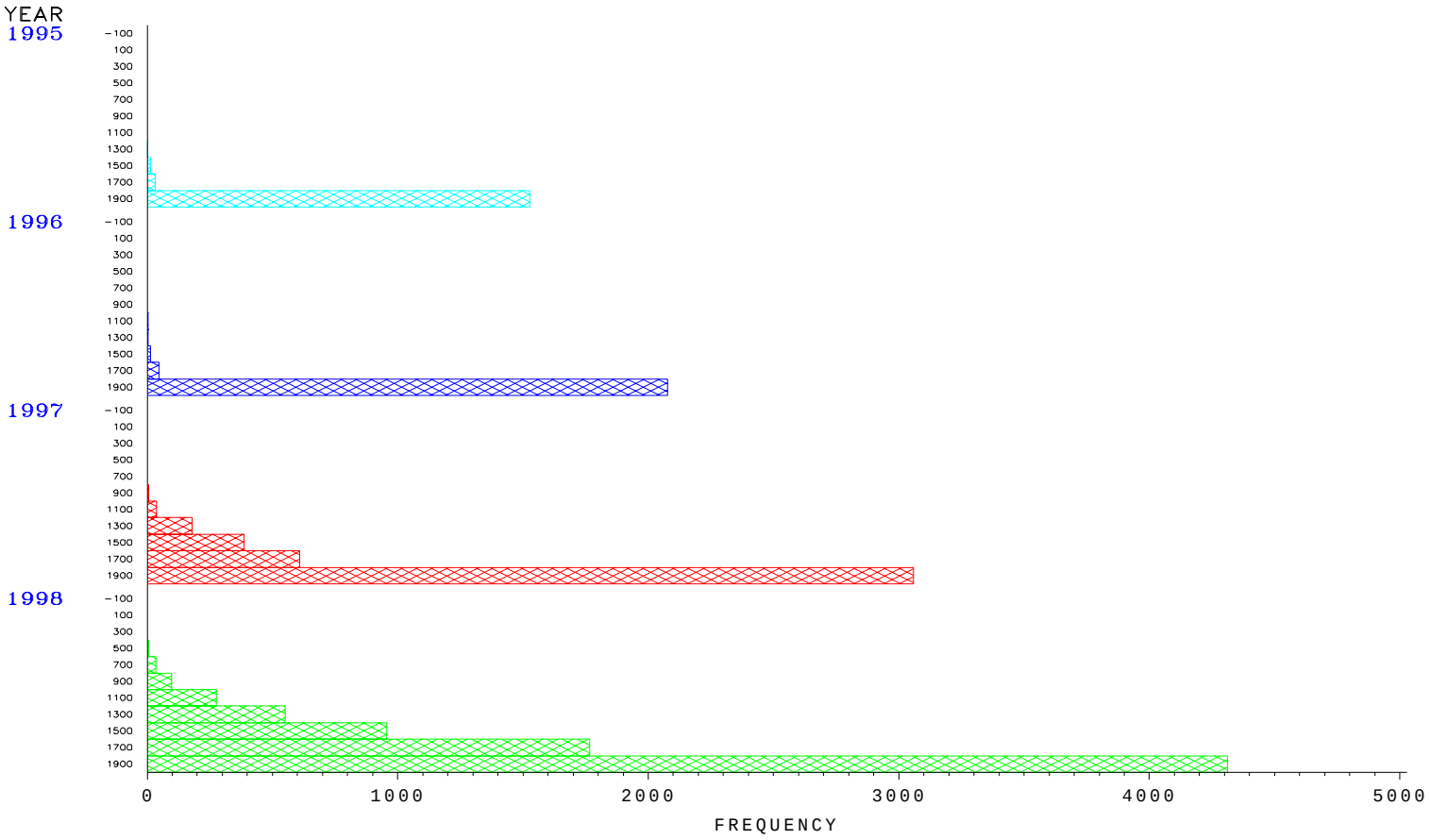
NYPP Transmission Use Statistics For January–December 1998

Margin to NYPP–OH Limit

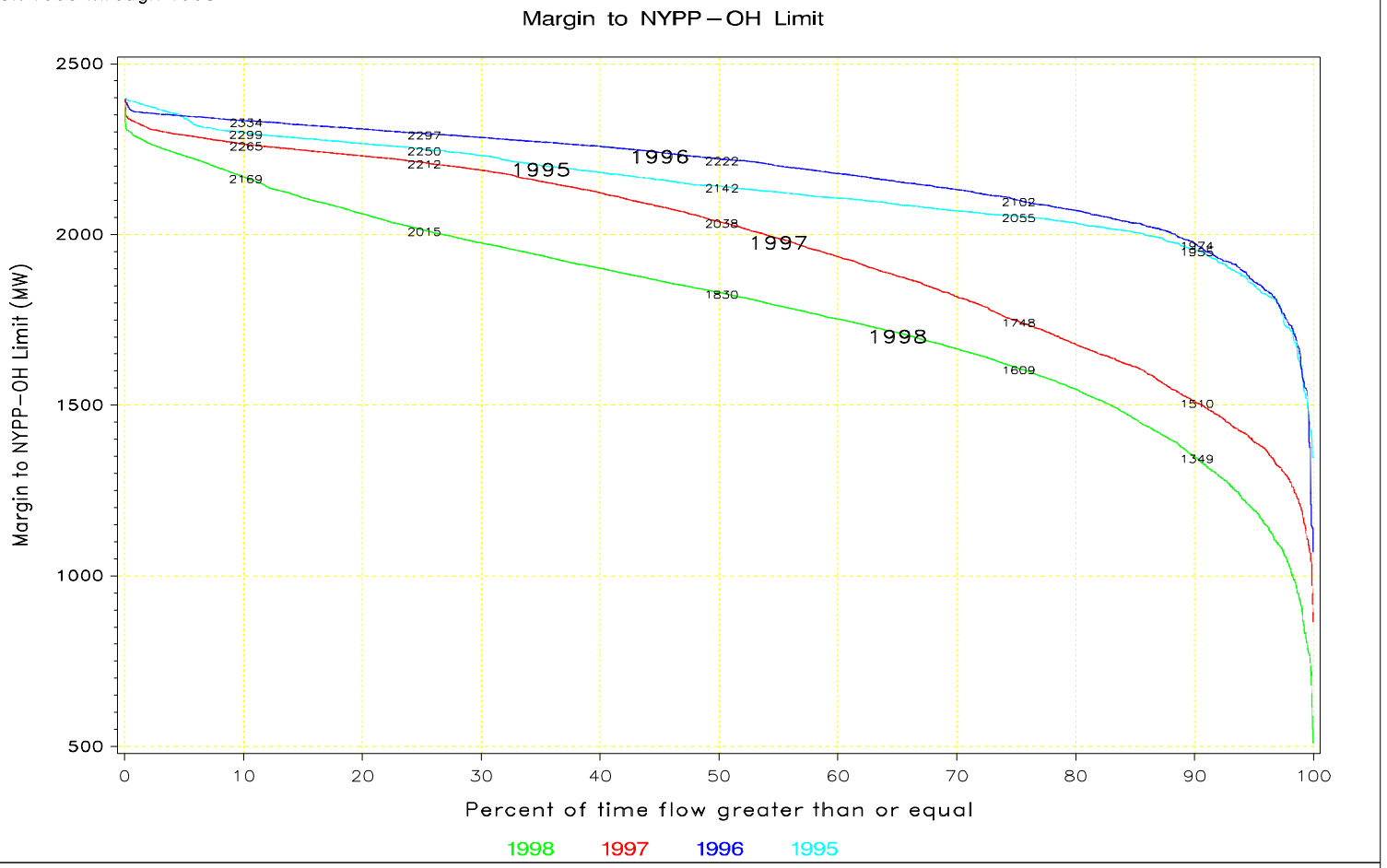


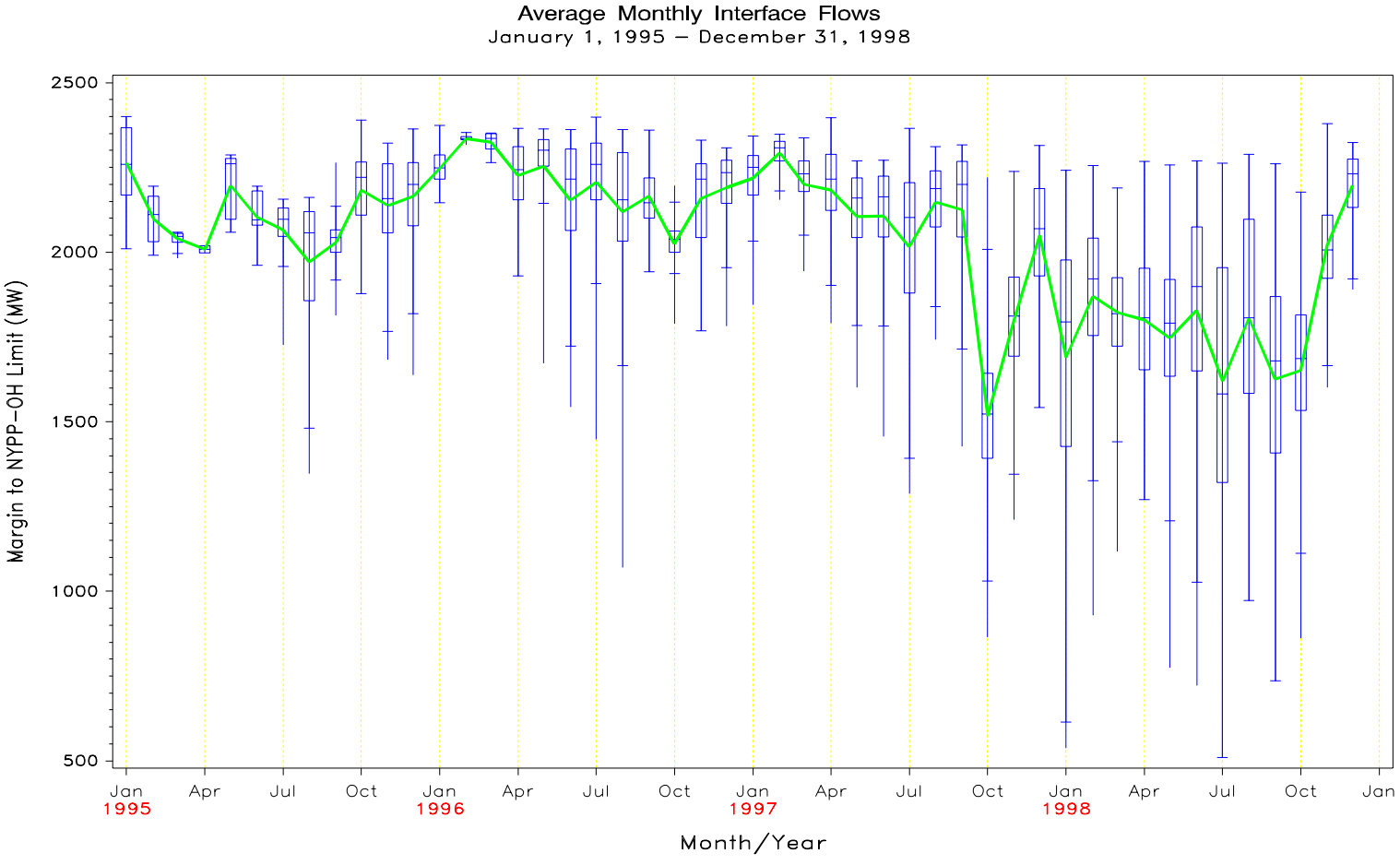
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
-100	0	0	0.00	0.00
100	0	0	0.00	0.00
300	0	0	0.00	0.00
500	7	7	0.09	0.09
700	36	43	0.45	0.54
900	98	141	1.22	1.76
1100	275	416	3.44	5.20
1300	551	967	6.89	12.09
1500	957	1924	11.96	24.05
1700	1765	3689	22.06	46.11
1900	4312	8001	53.89	100.00

Margin to NYPP–OH Limit



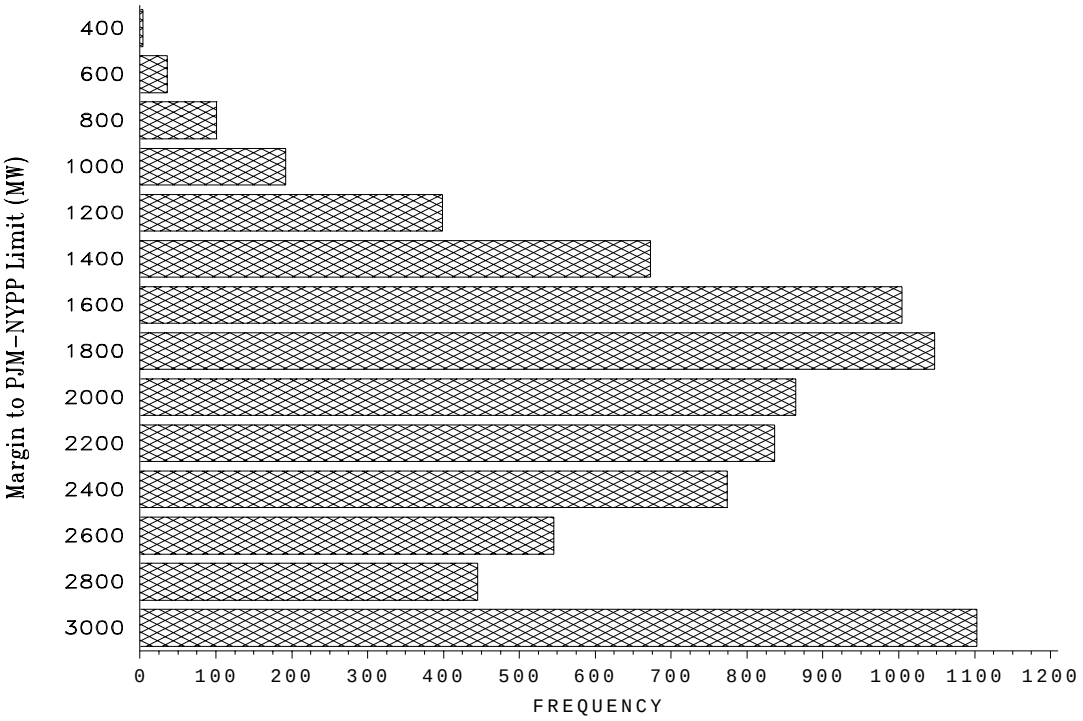
FLOW DURATION CURVE
FOR 1995 through 1998





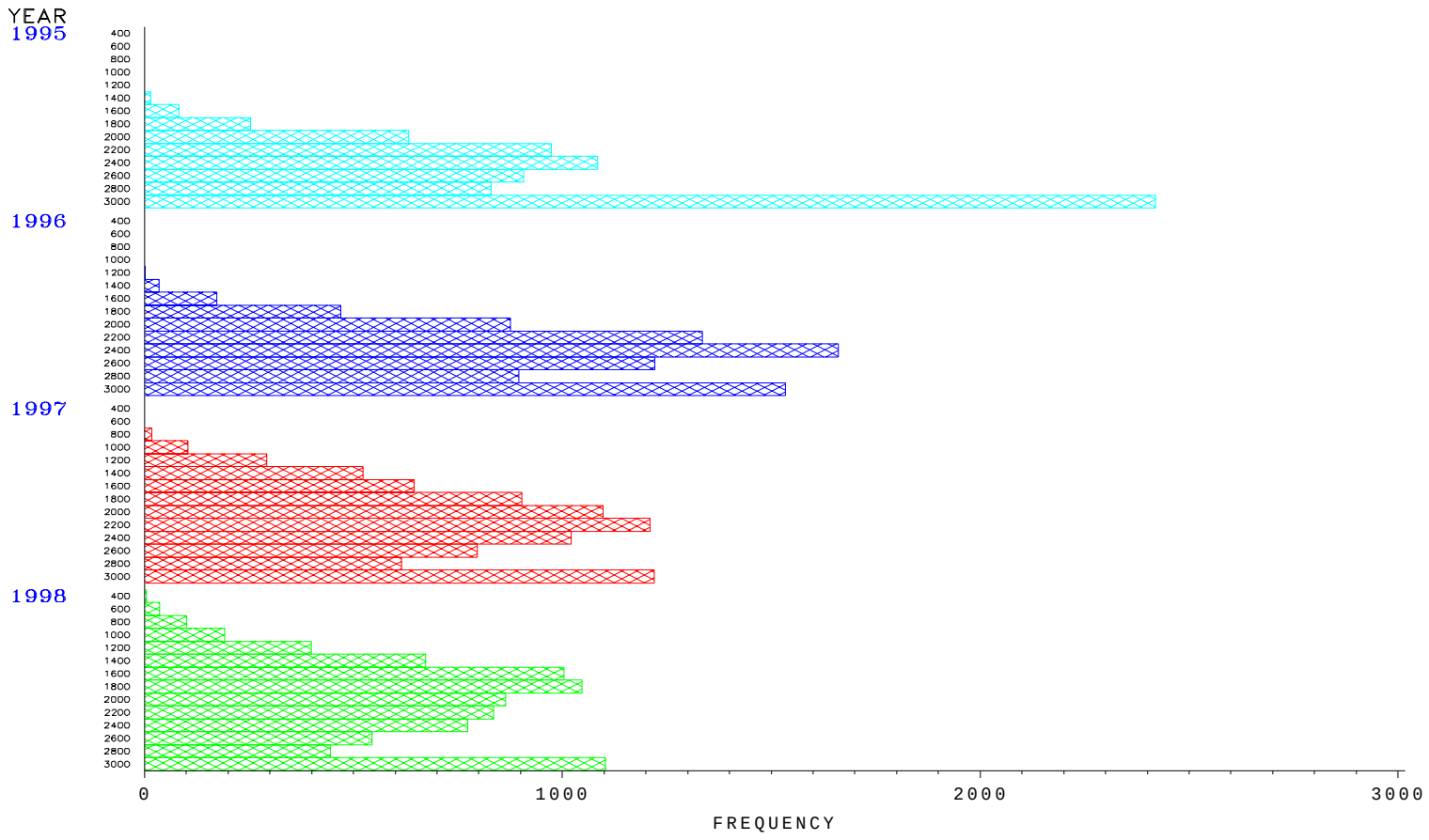
NYPP Transmission Use Statistics For January–December 1998

Margin to PJM – NYPP Limit

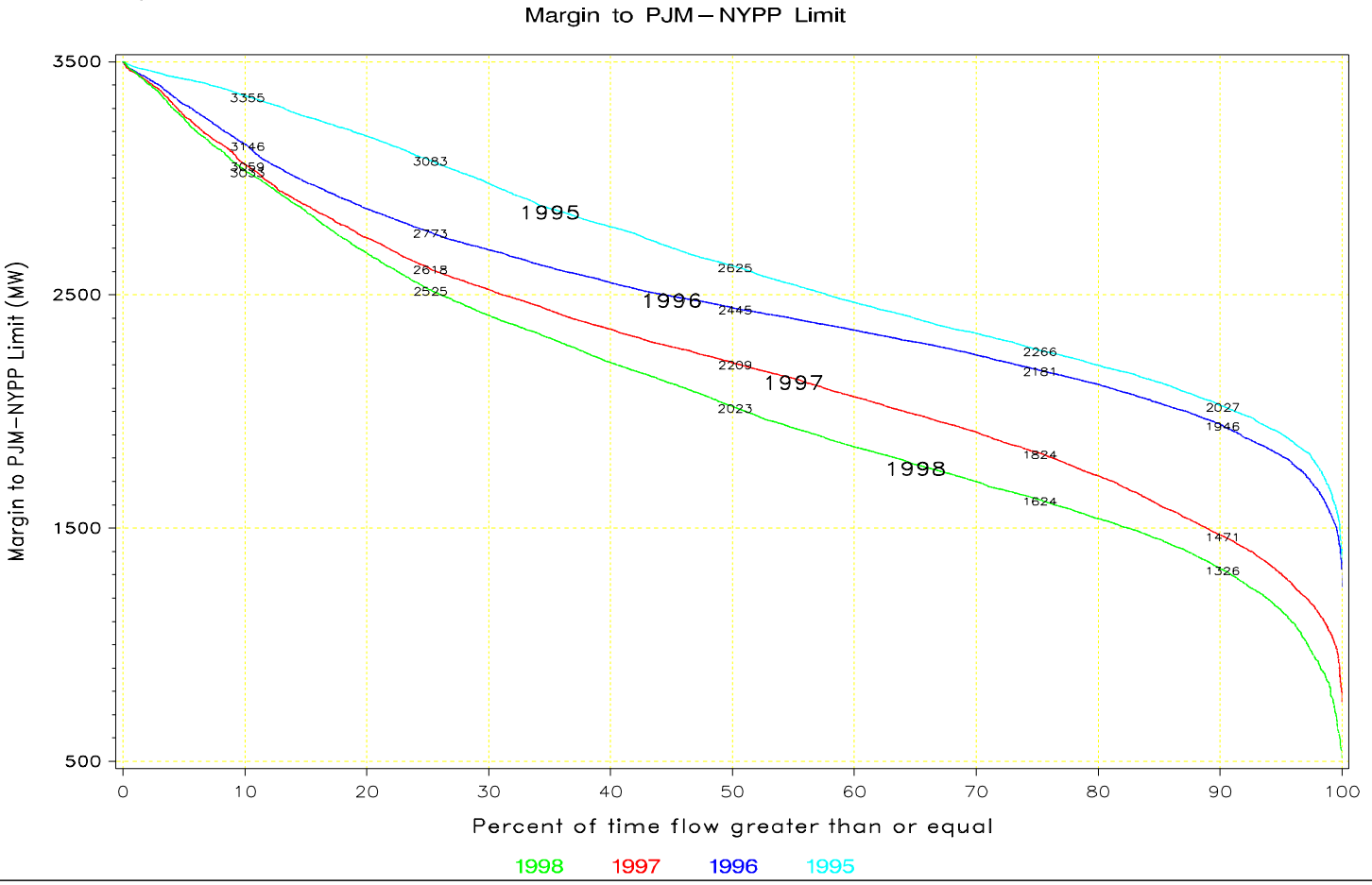


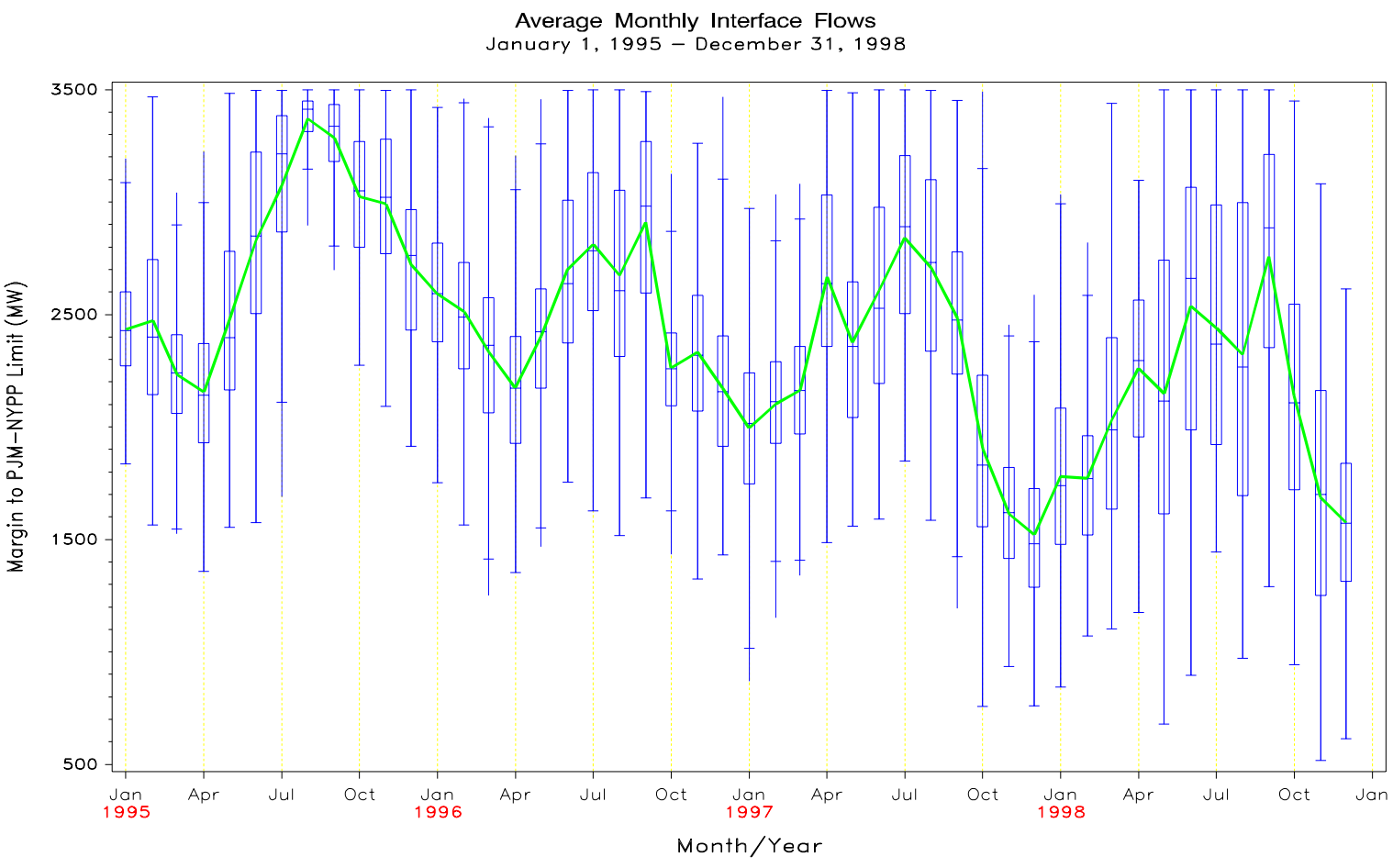
Margin to PJM–NYPP Limit (MW)	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
400	4	4	0.05	0.05
600	36	40	0.45	0.50
800	101	141	1.26	1.76
1000	192	333	2.39	4.15
1200	399	732	4.97	9.12
1400	673	1405	8.39	17.51
1600	1004	2409	12.51	30.03
1800	1047	3456	13.05	43.08
2000	864	4320	10.77	53.85
2200	836	5156	10.42	64.27
2400	774	5930	9.65	73.91
2600	545	6475	6.79	80.71
2800	445	6920	5.55	86.25
3000	1103	8023	13.75	100.00

Margin to PJM – NYPP Limit



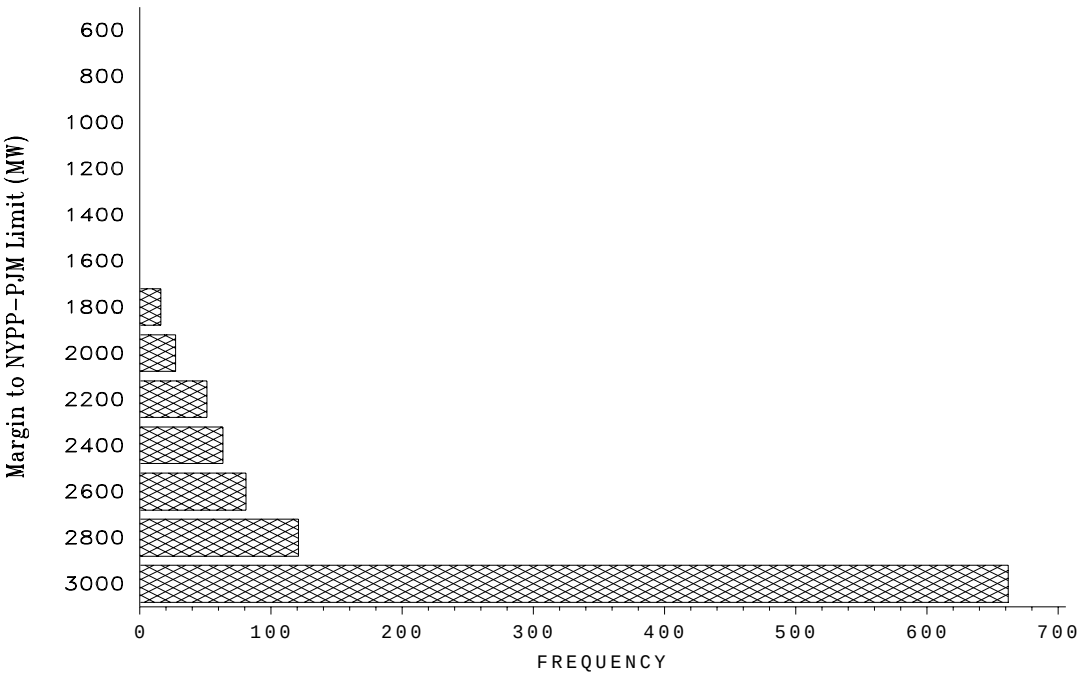
FLOW DURATION CURVE
FOR 1995 through 1998





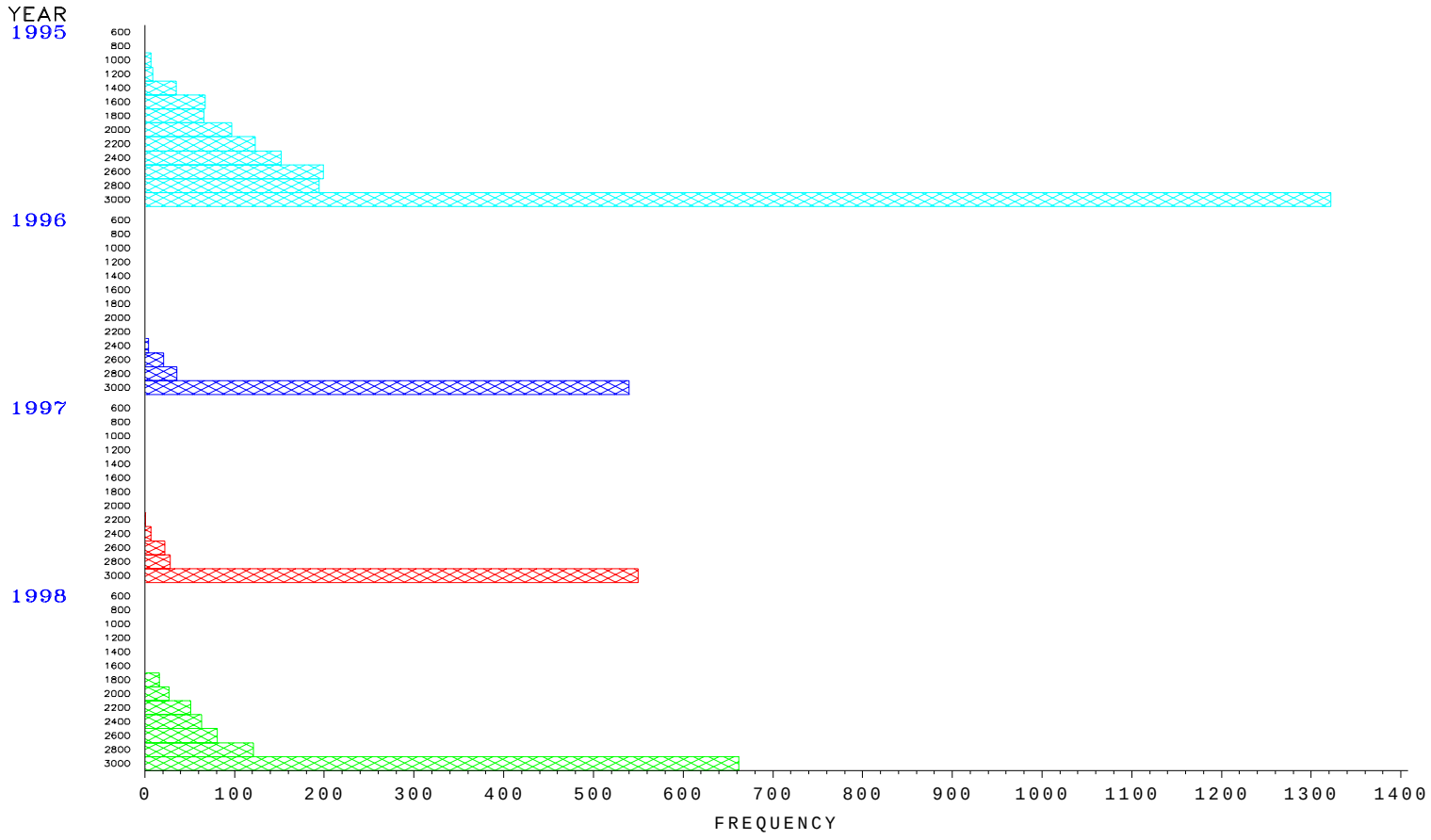
NYPP Transmission Use Statistics For January–December 1998

Margin to NYPP – PJM Limit

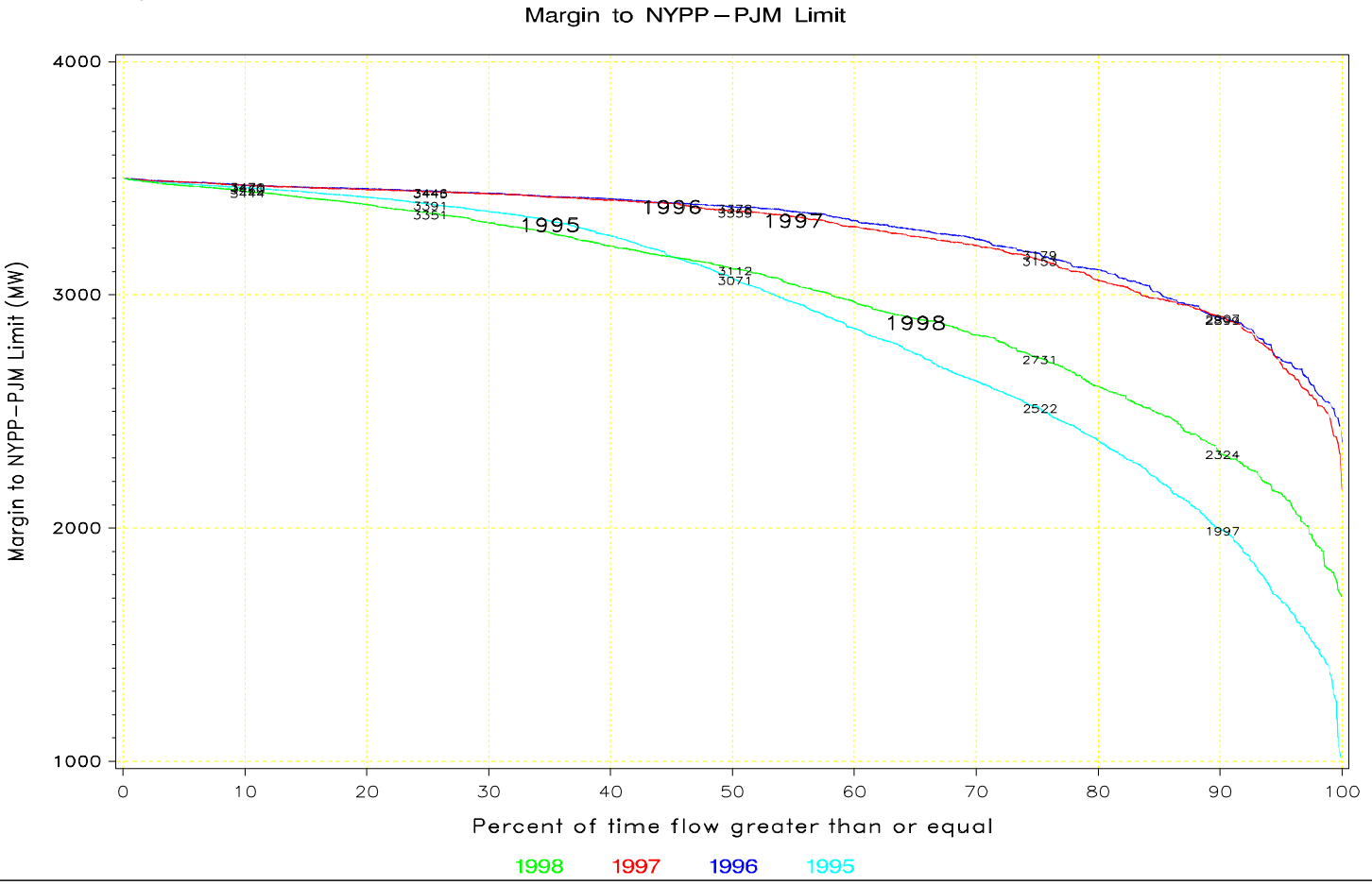


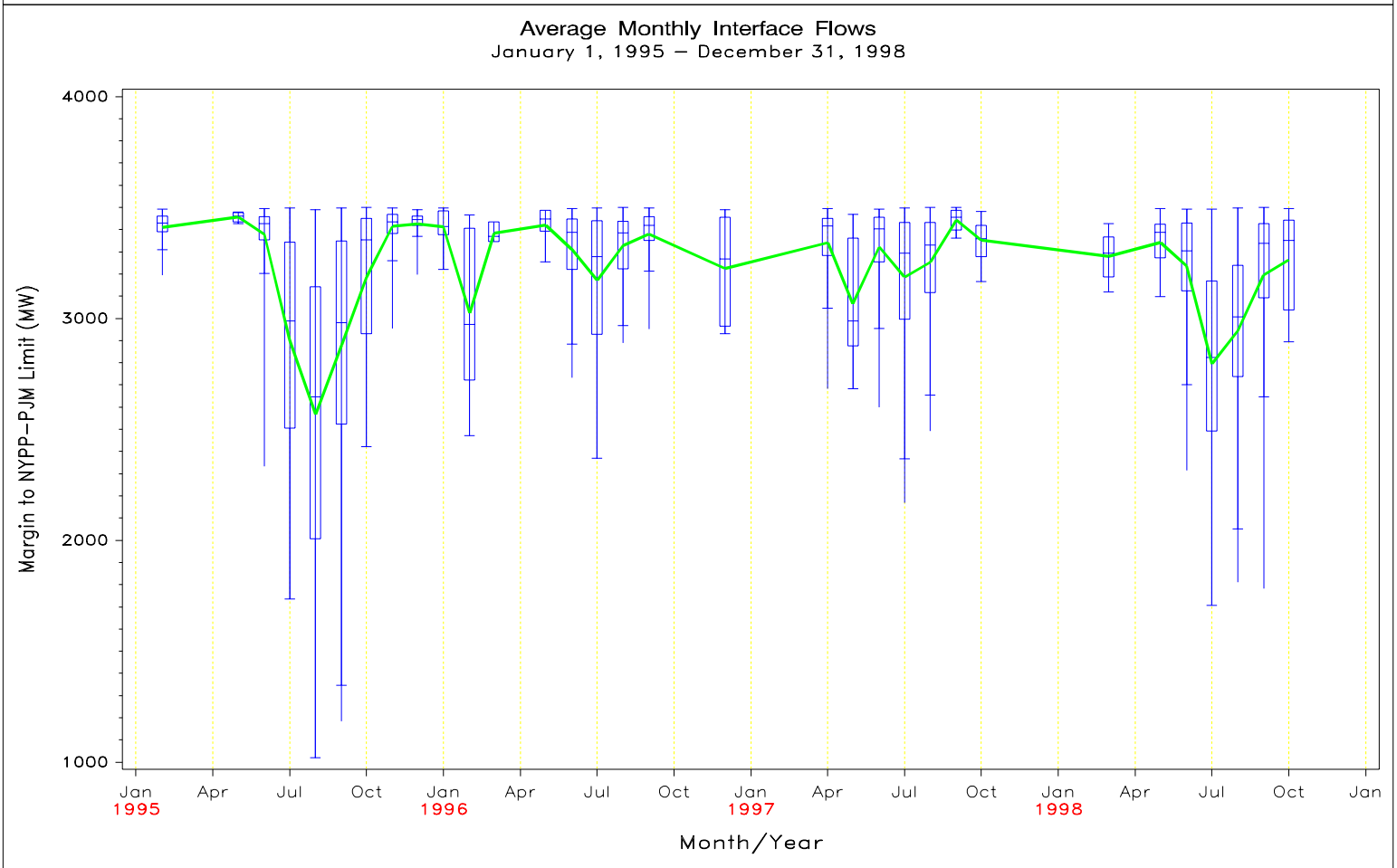
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
600	0	0	0.00	0.00
800	0	0	0.00	0.00
1000	0	0	0.00	0.00
1200	0	0	0.00	0.00
1400	0	0	0.00	0.00
1600	0	0	0.00	0.00
1800	16	16	1.57	1.57
2000	27	43	2.64	4.21
2200	51	94	5.00	9.21
2400	63	157	6.17	15.38
2600	81	238	7.93	23.31
2800	121	359	11.85	35.16
3000	662	1021	64.84	100.00

Margin to NYPP – PJM Limit

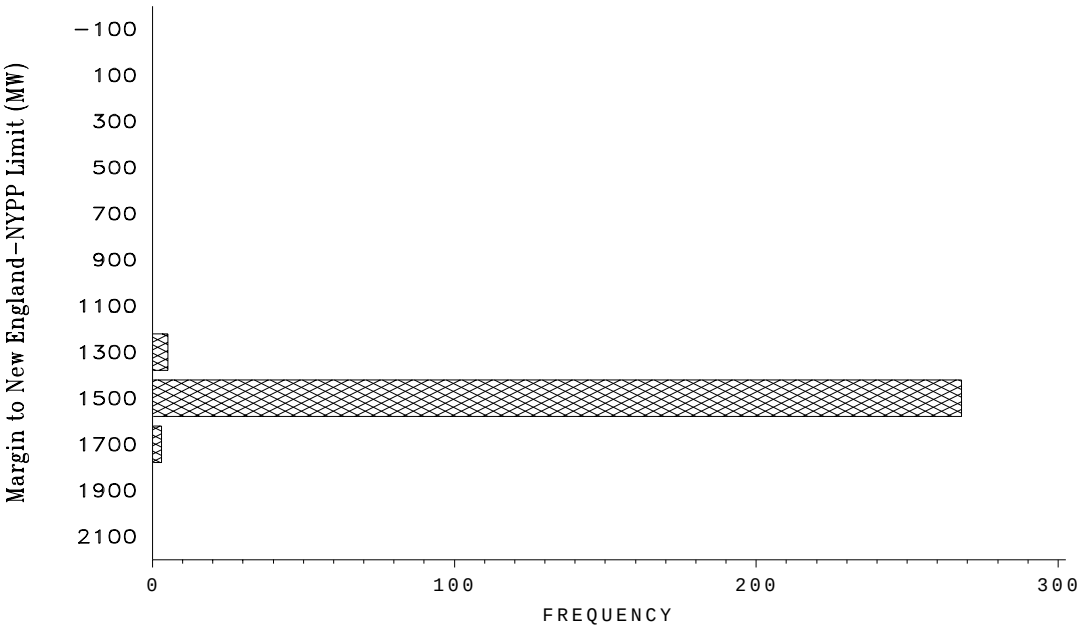


FLOW DURATION CURVE
FOR 1995 through 1998



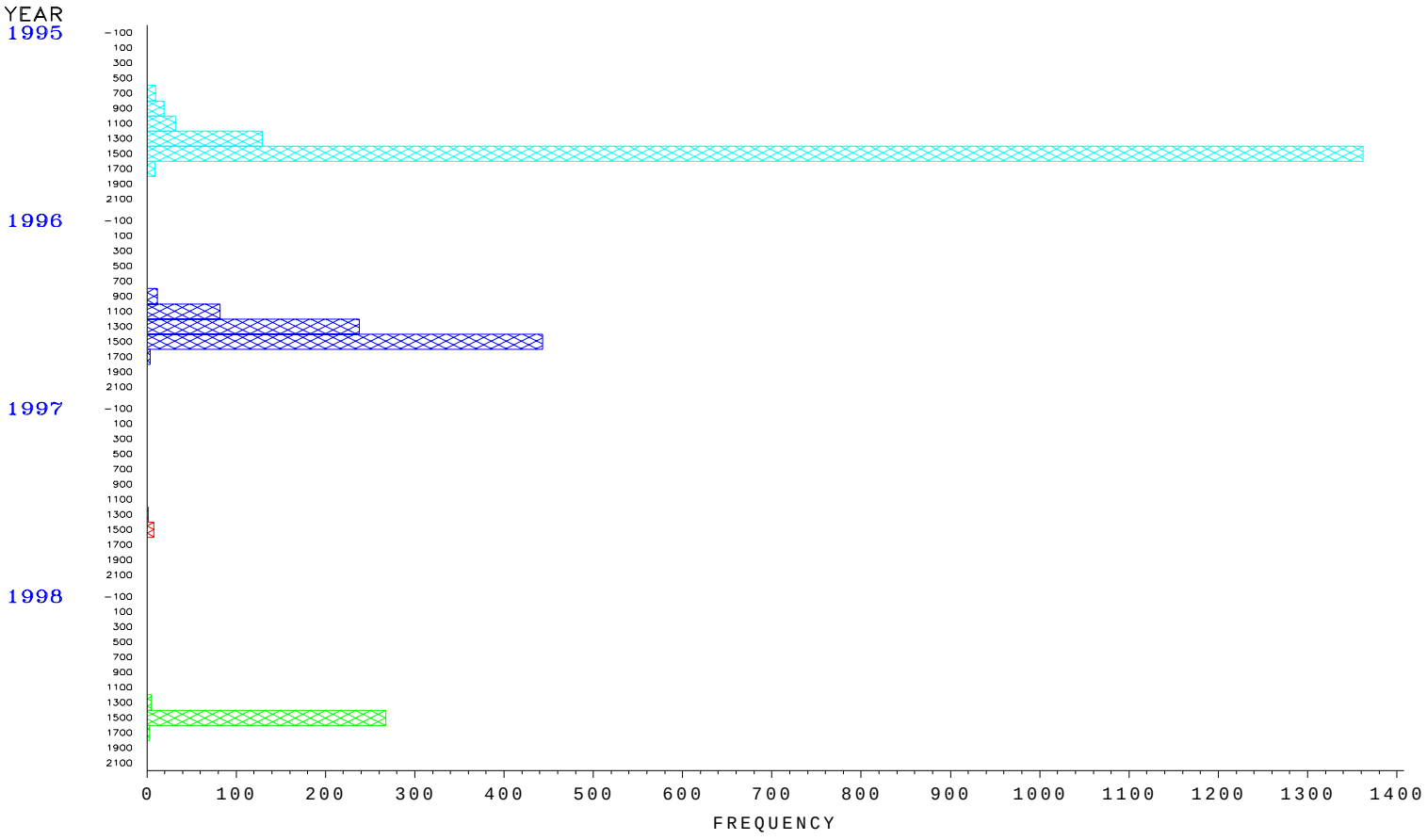


Margin to New England – NYPP Limit

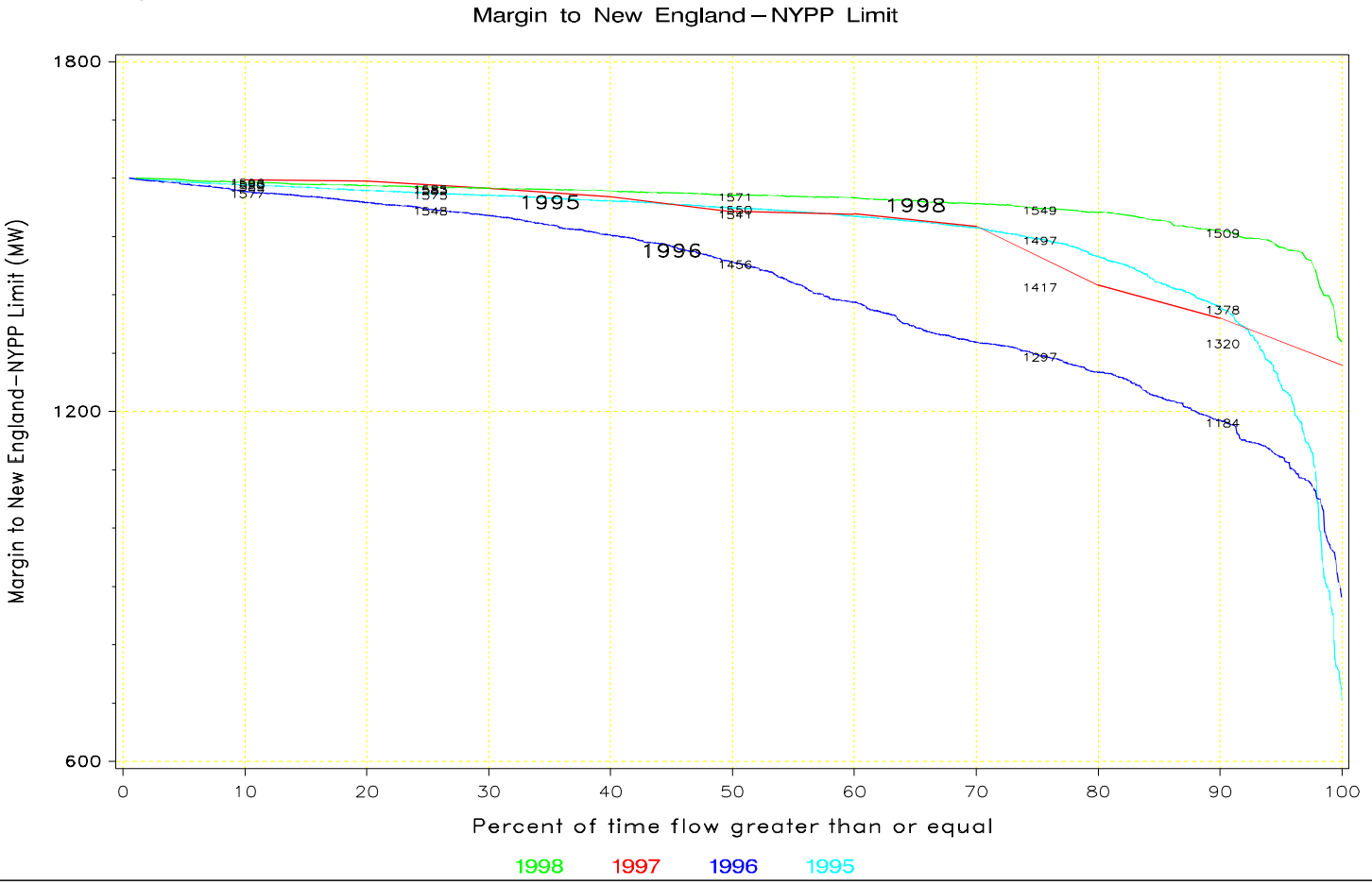


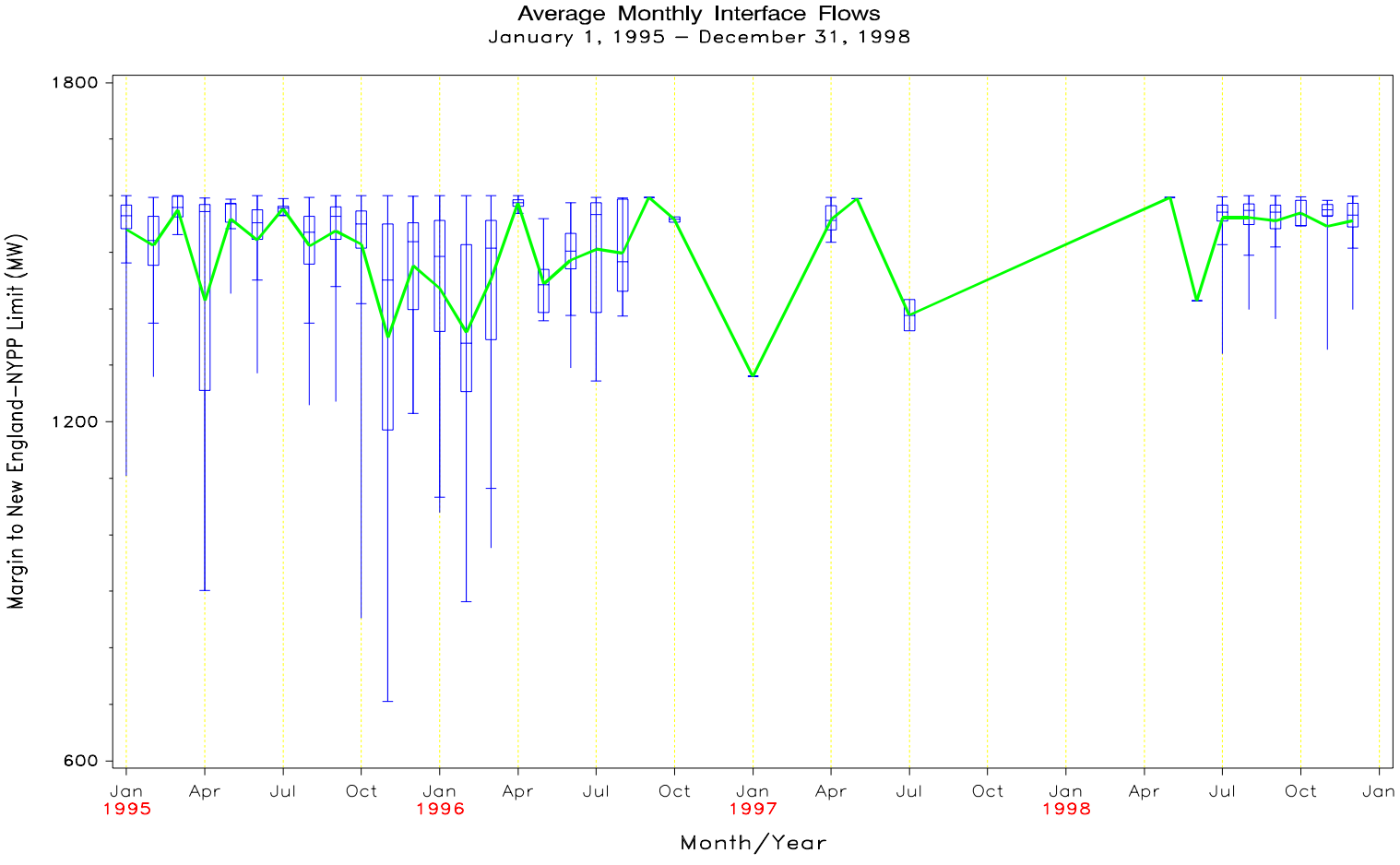
Margin to New England–NYPP Limit (MW)	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
−100	0	0	0.00	0.00
100	0	0	0.00	0.00
300	0	0	0.00	0.00
500	0	0	0.00	0.00
700	0	0	0.00	0.00
900	0	0	0.00	0.00
1100	0	0	0.00	0.00
1300	5	5	1.81	1.81
1500	268	273	97.10	98.91
1700	3	276	1.09	100.00
1900	0	276	0.00	100.00
2100	0	276	0.00	100.00

Margin to New England – NYPP Limit

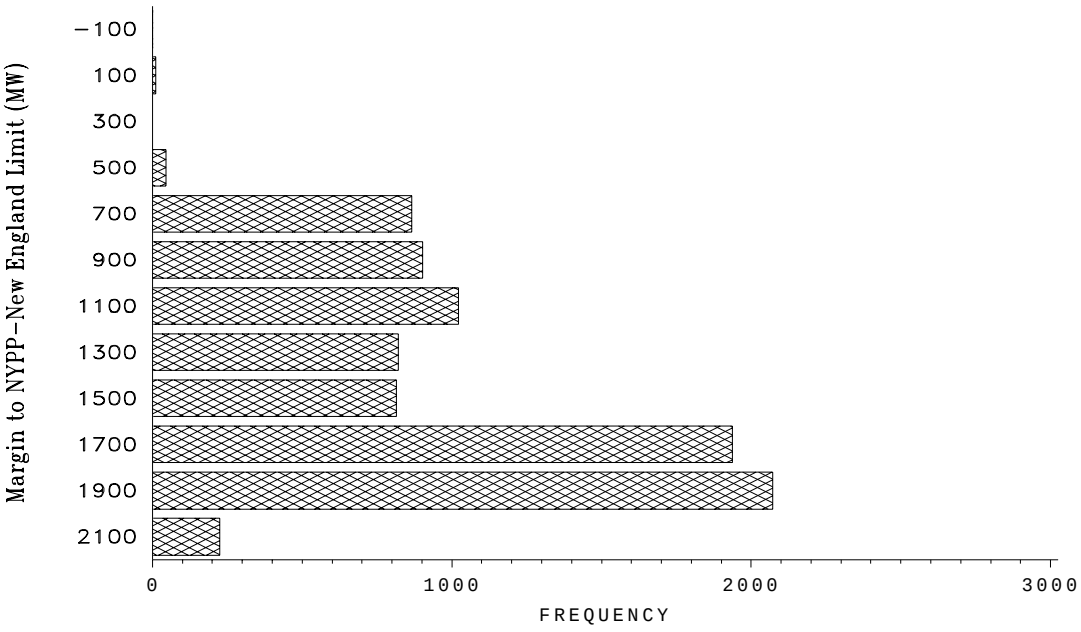


FLOW DURATION CURVE
FOR 1995 through 1998



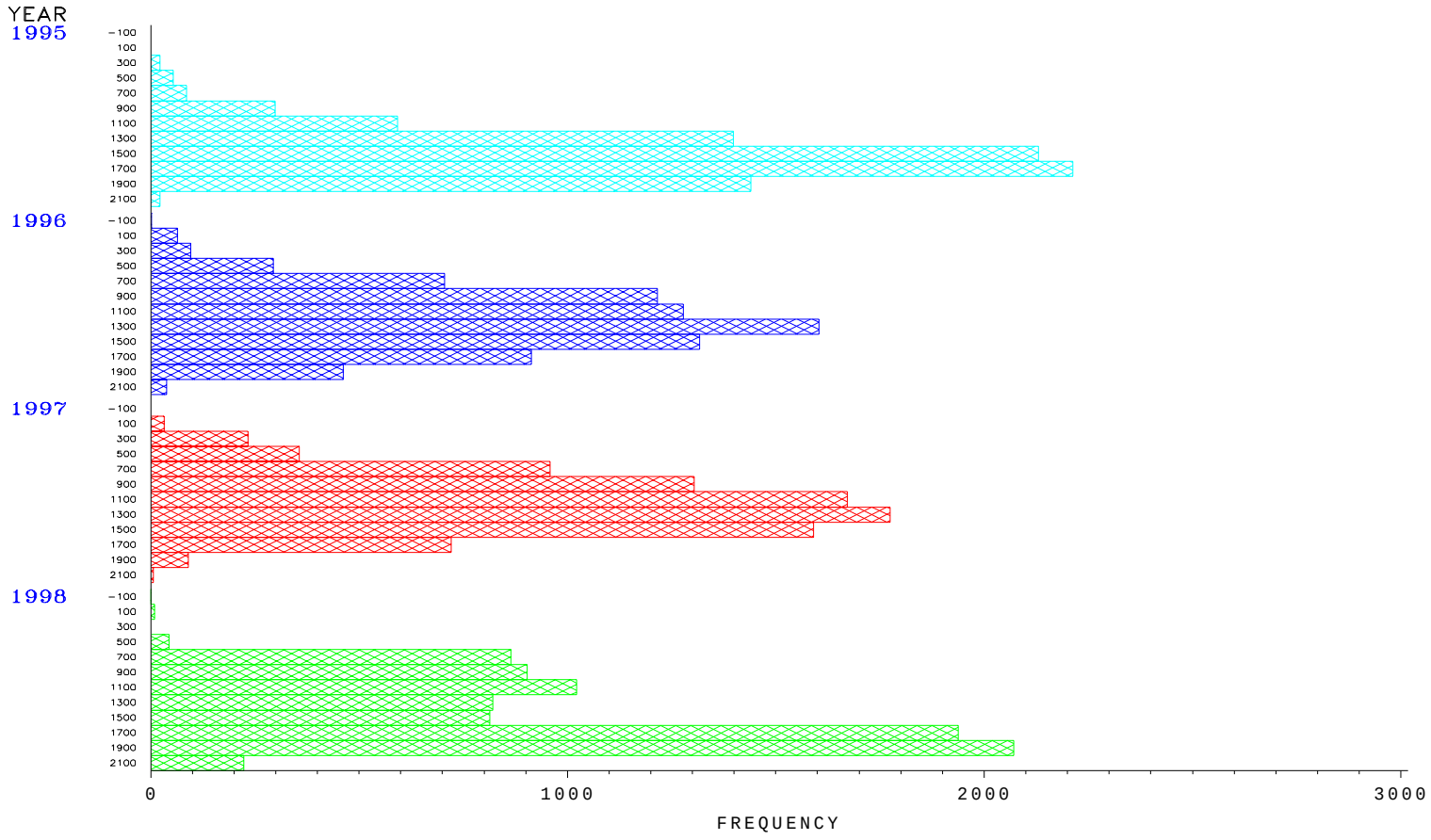


Margin to NYPP – New England Limit

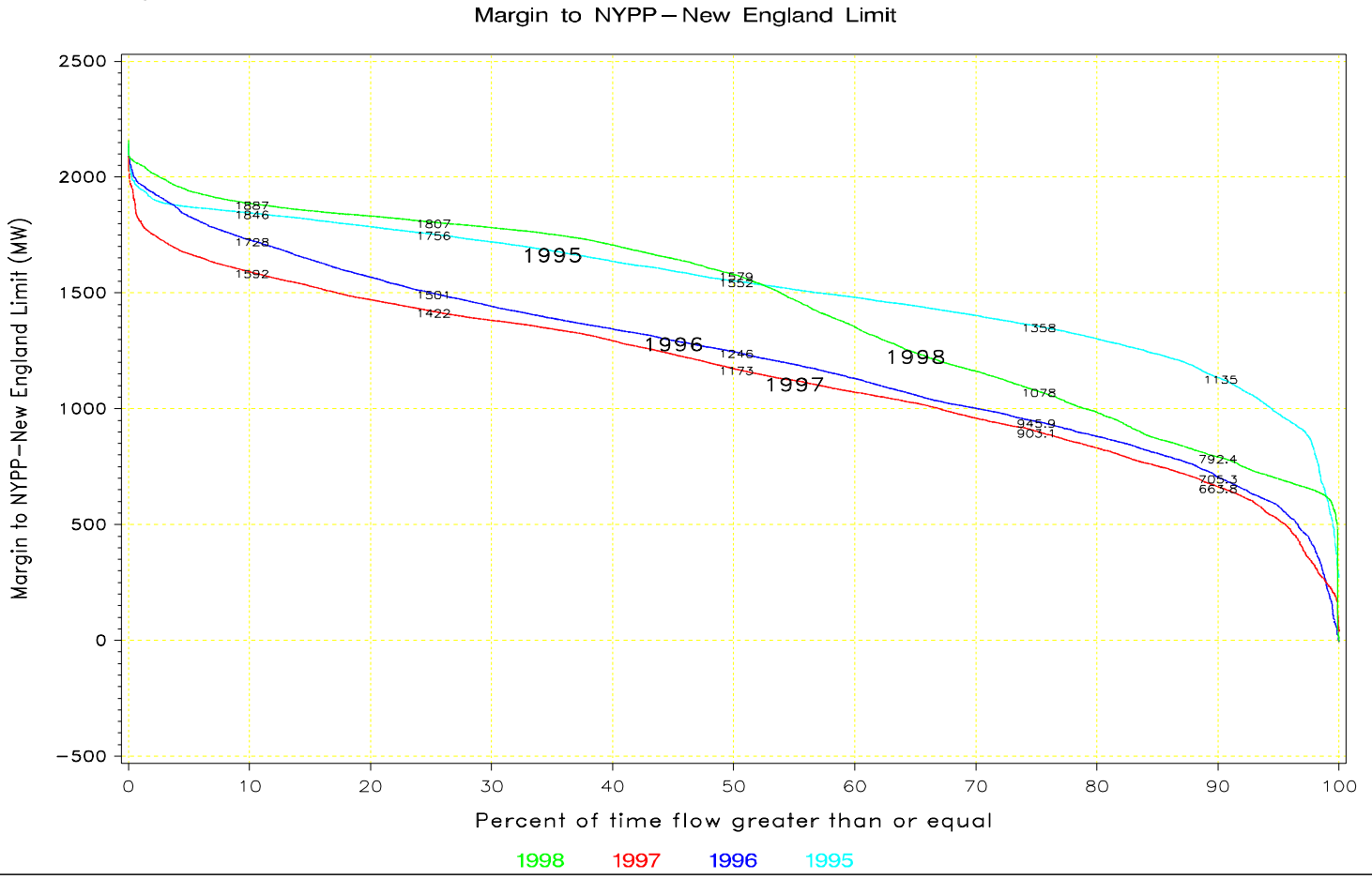


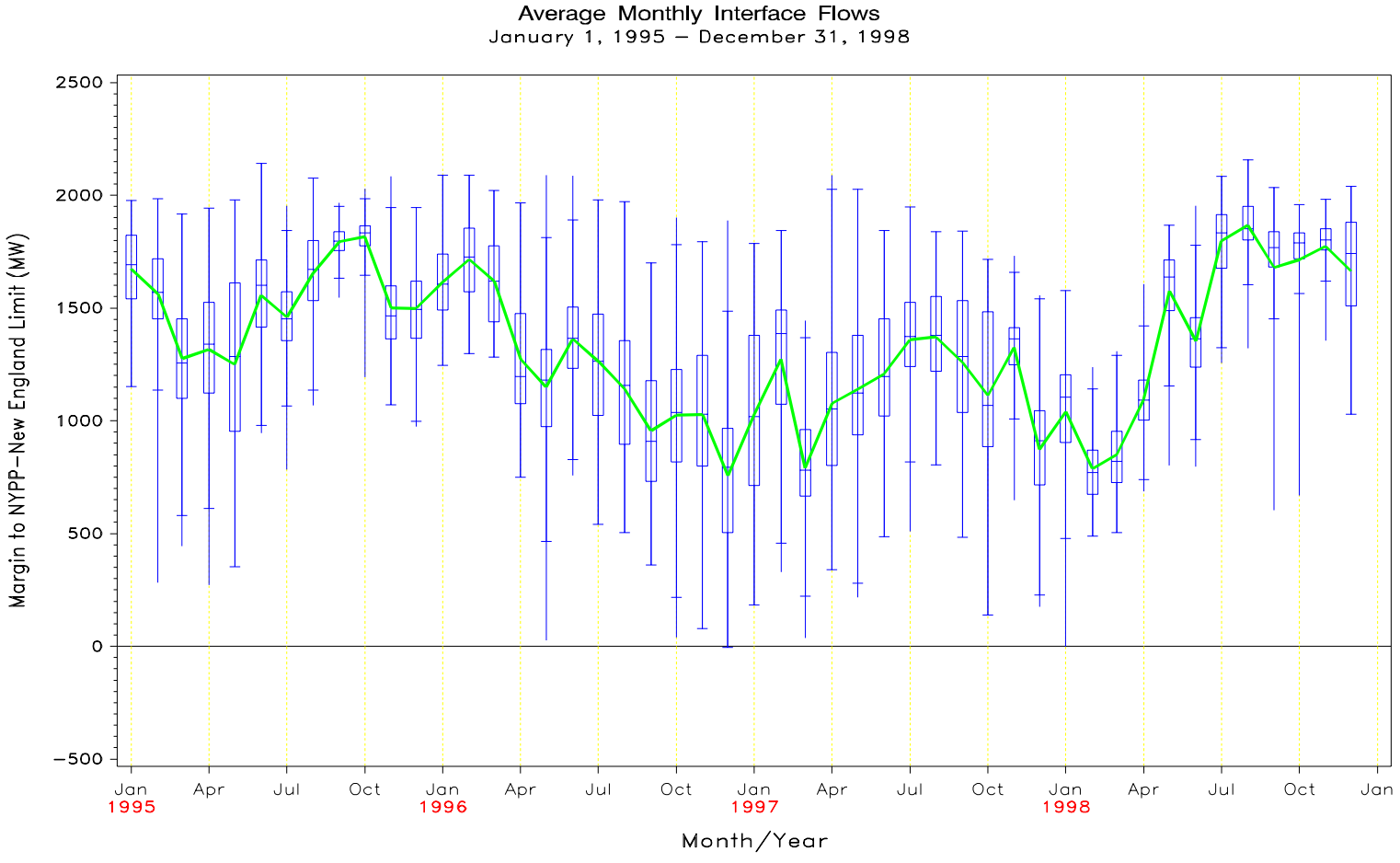
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
-100	1	1	0.01	0.01
100	10	11	0.11	0.13
300	0	11	0.00	0.13
500	44	55	0.50	0.63
700	865	920	9.93	10.56
900	903	1823	10.36	20.92
1100	1022	2845	11.73	32.65
1300	821	3666	9.42	42.08
1500	814	4480	9.34	51.42
1700	1938	6418	22.24	73.66
1900	2071	8489	23.77	97.43
2100	224	8713	2.57	100.00

Margin to NYPP – New England Limit



FLOW DURATION CURVE
FOR 1995 through 1998



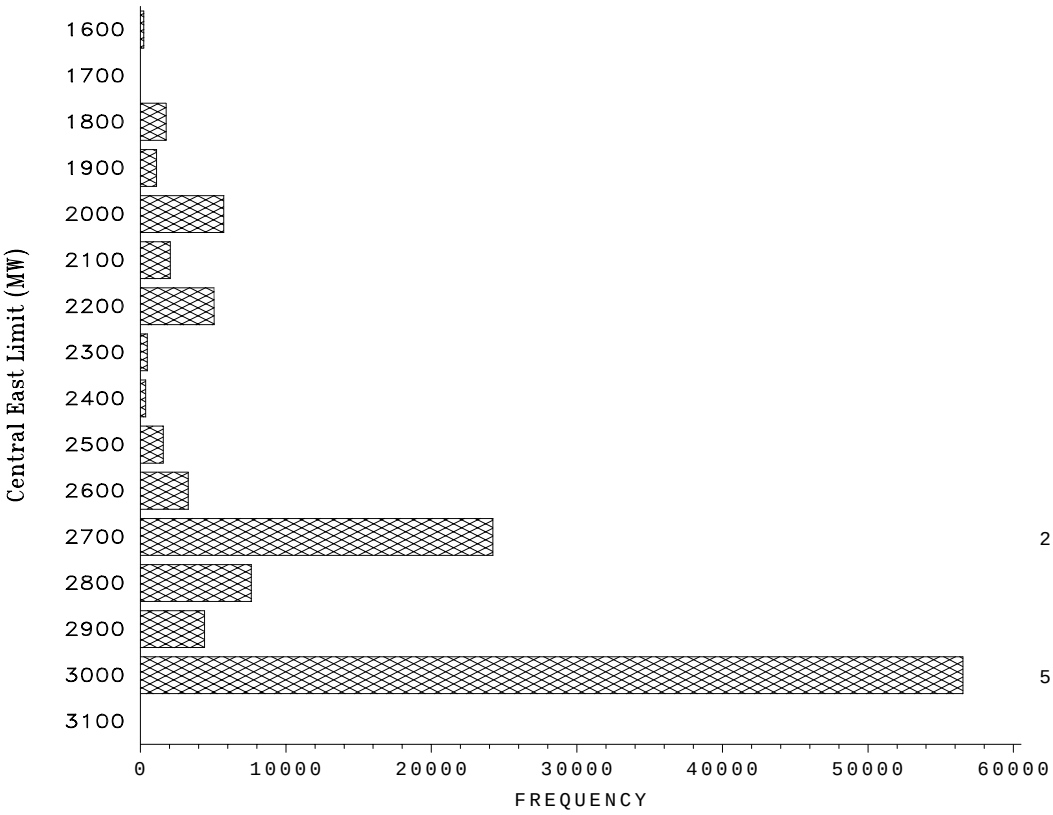


Appendix C - Interface Limits

TABLE OF CONTENTS

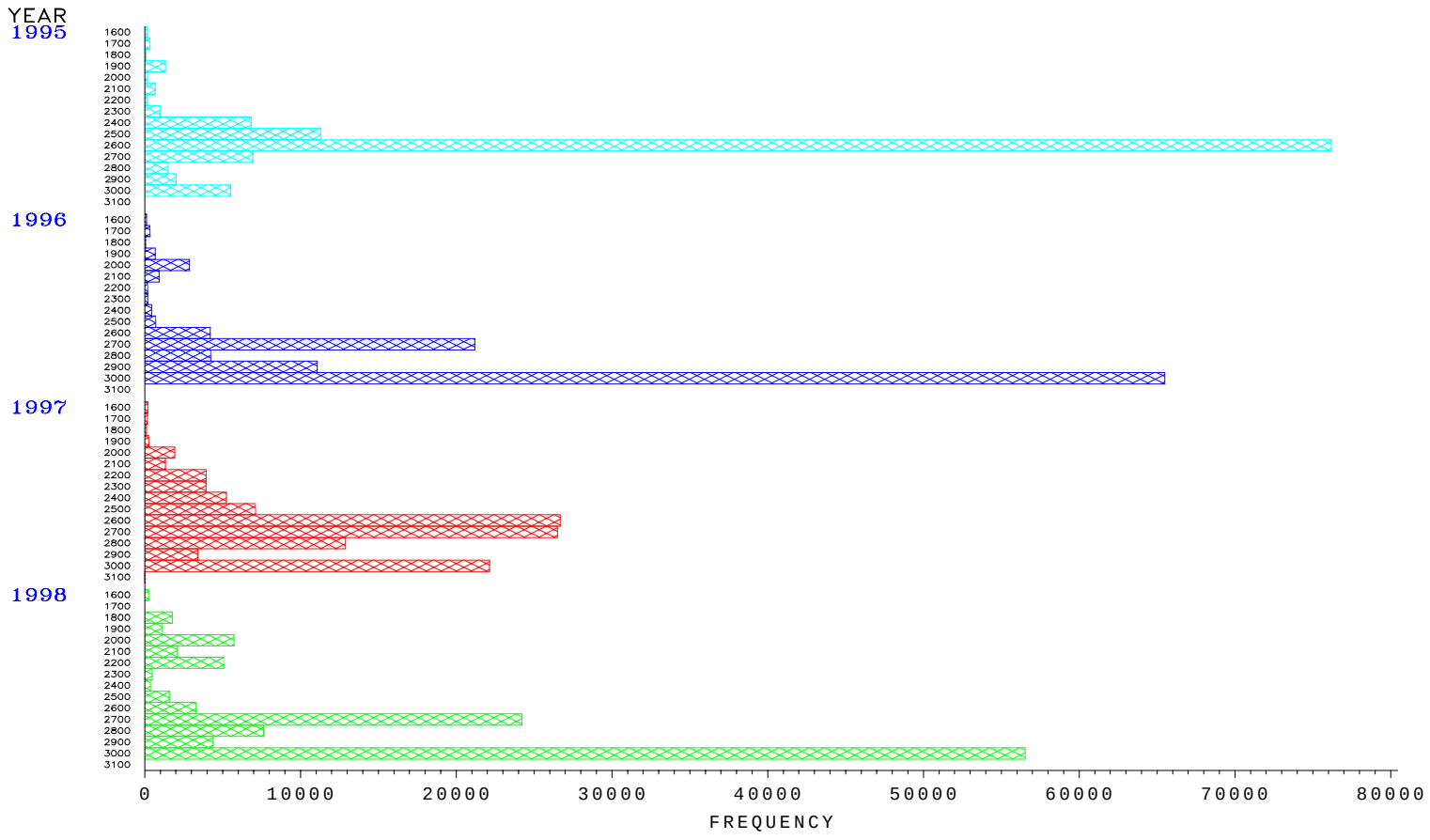
NYPP Transmission Use Statistics For January–December 1998

Central East Limit

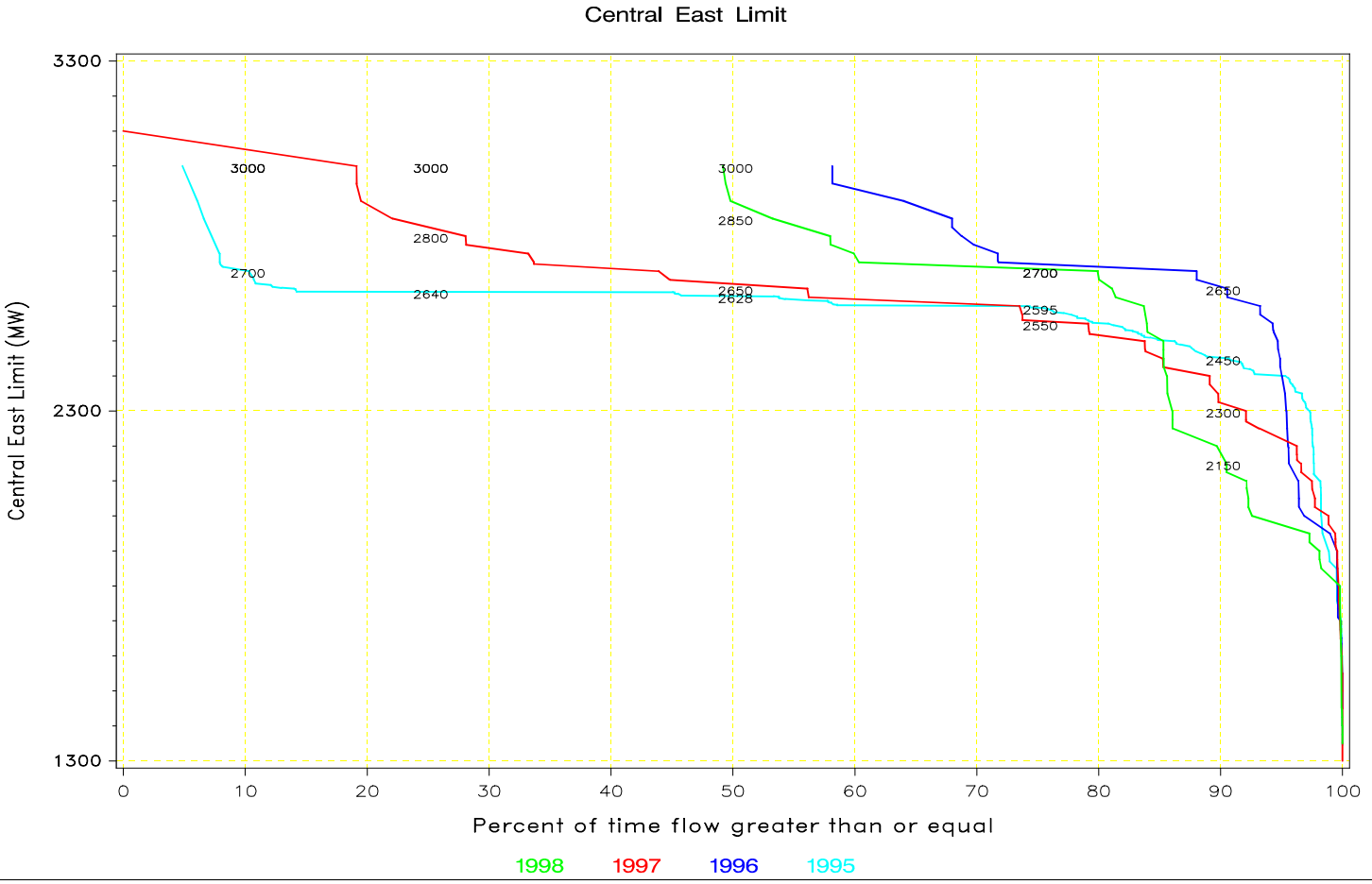


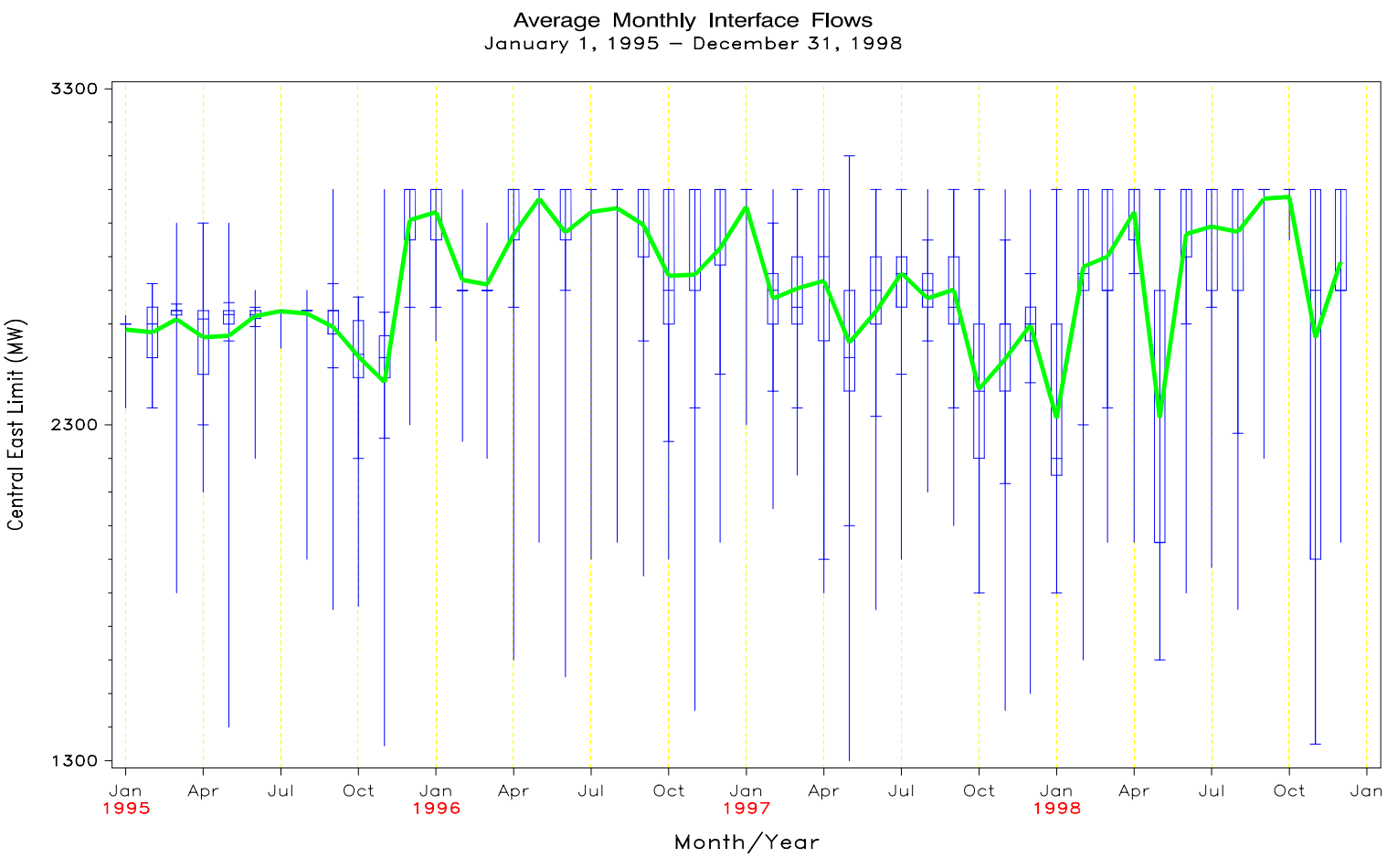
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1600	237	237	0.21	0.21
1700	0	237	0.00	0.21
1800	1764	2001	1.54	1.75
1900	1111	3112	0.97	2.72
2000	5730	8842	5.01	7.73
2100	2051	10893	1.79	9.52
2200	5052	15945	4.41	13.93
2300	485	16430	0.42	14.36
2400	358	16788	0.31	14.67
2500	1574	18362	1.38	16.05
2600	3296	21658	2.88	18.93
2700	24223	45881	21.17	40.09
2800	7625	53506	6.66	46.76
2900	4404	57910	3.85	50.61
3000	56522	114432	49.39	100.00
3100	0	114432	0.00	100.00

Central East Limit



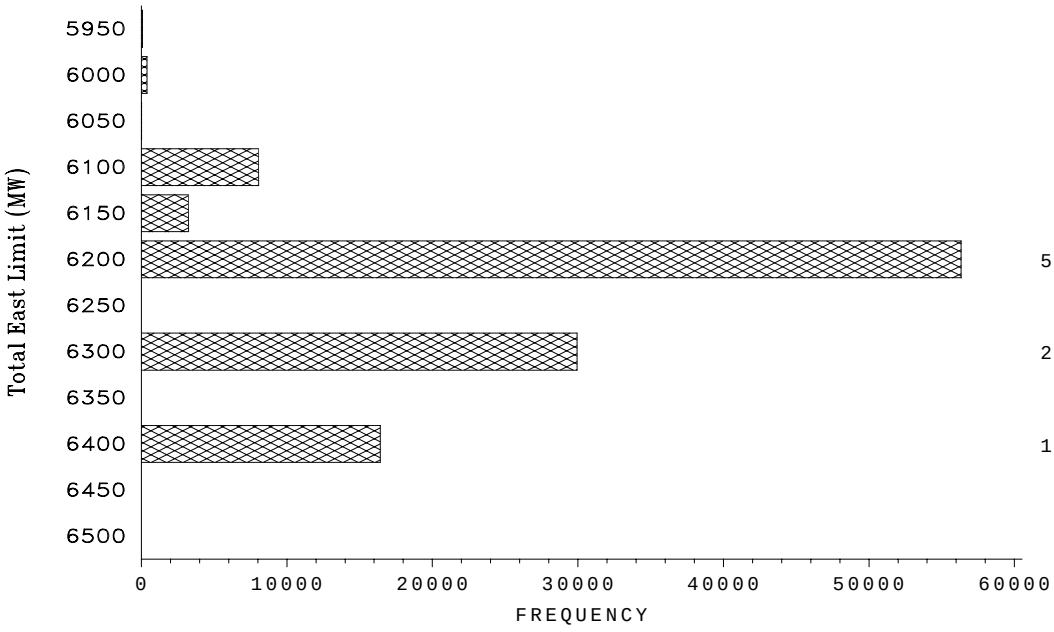
FLOW DURATION CURVE
FOR 1995 through 1998





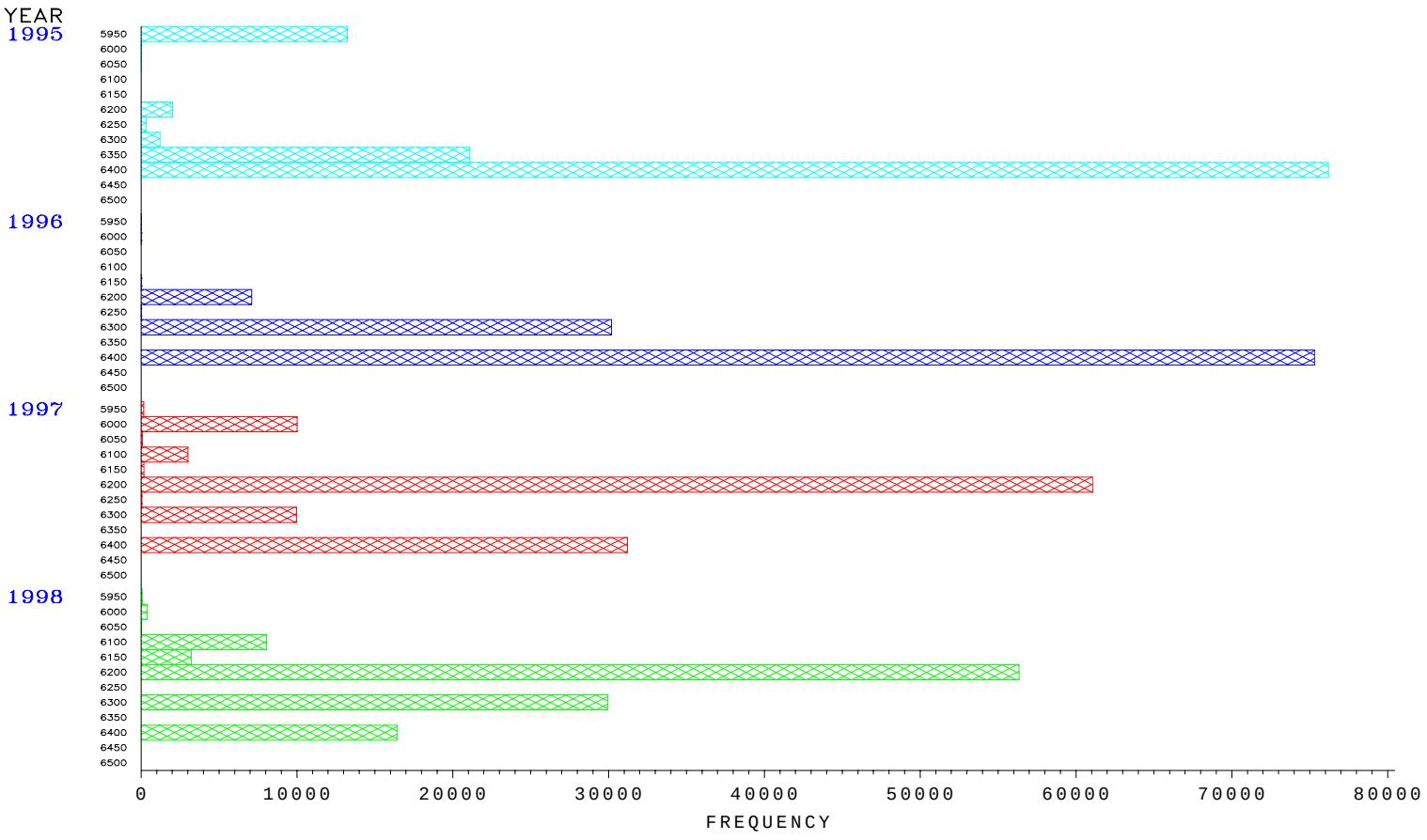
NYPP Transmission Use Statistics For January–December 1998

Total East Limit

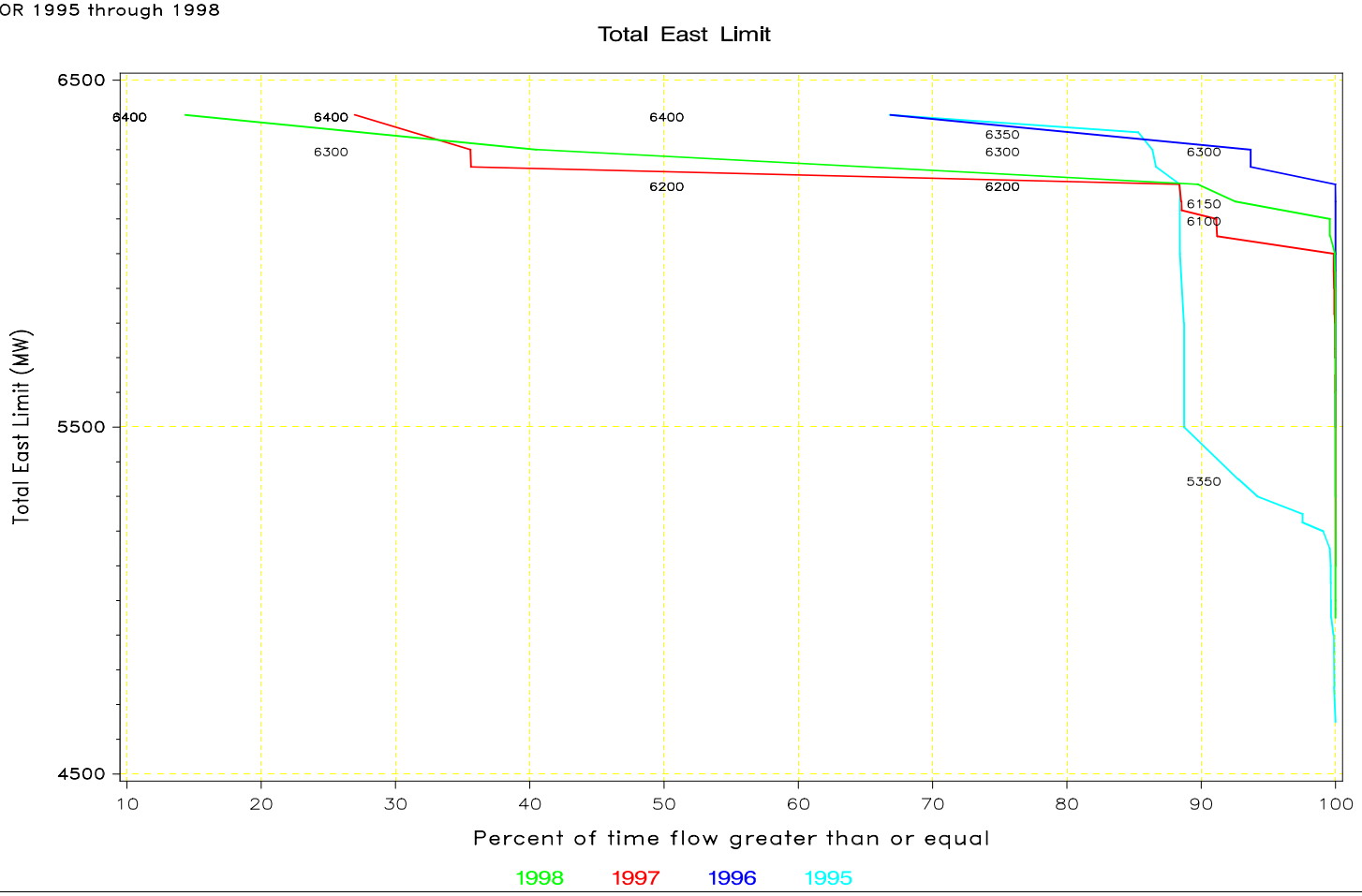


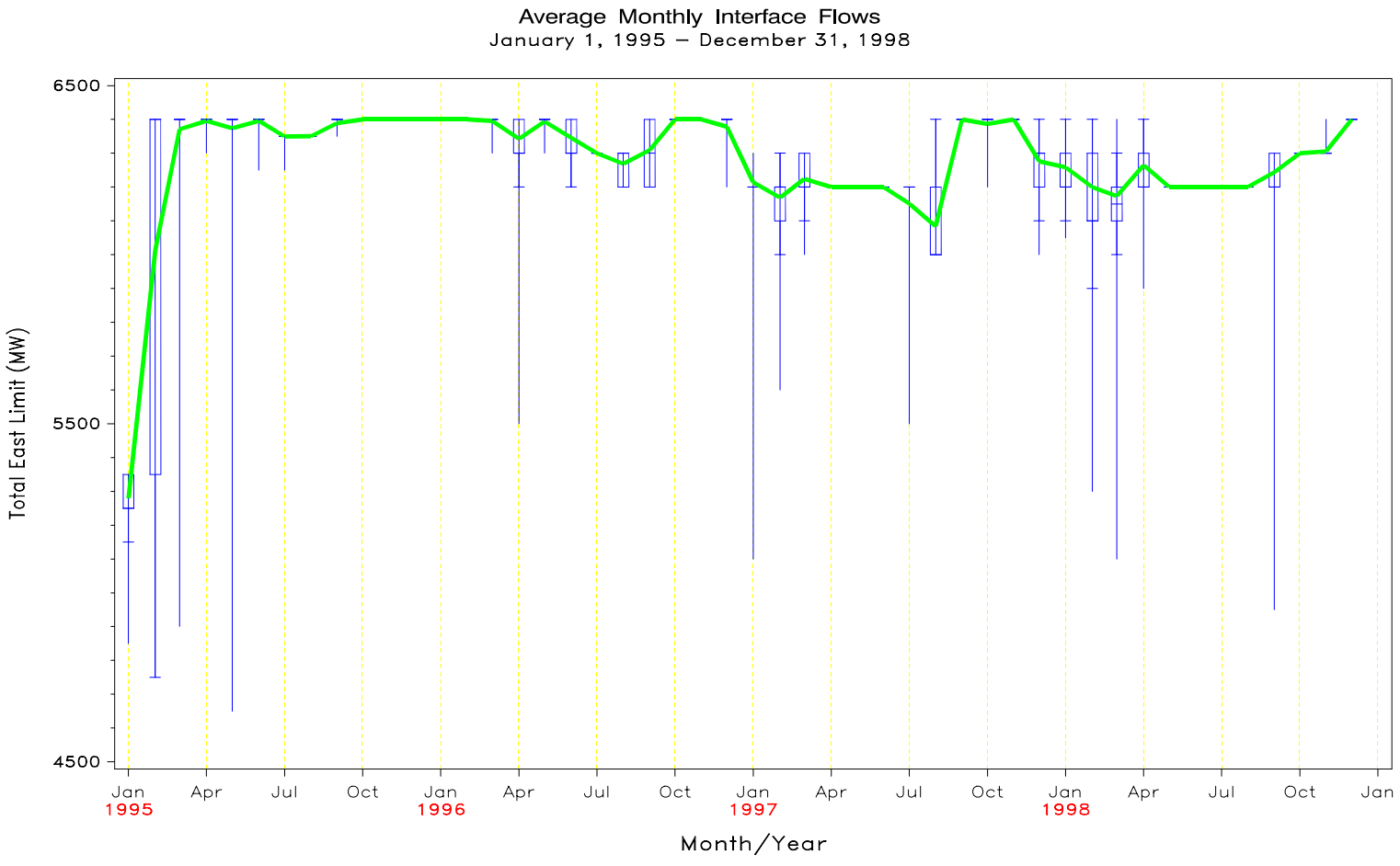
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
5950	78	78	0.07	0.07
6000	386	464	0.34	0.41
6050	23	487	0.02	0.43
6100	8038	8525	7.02	7.45
6150	3219	11744	2.81	10.26
6200	56336	68080	49.23	59.49
6250	0	68080	0.00	59.49
6300	29936	98016	26.16	85.65
6350	0	98016	0.00	85.65
6400	16416	114432	14.35	100.00
6450	0	114432	0.00	100.00
6500	0	114432	0.00	100.00

Total East Limit



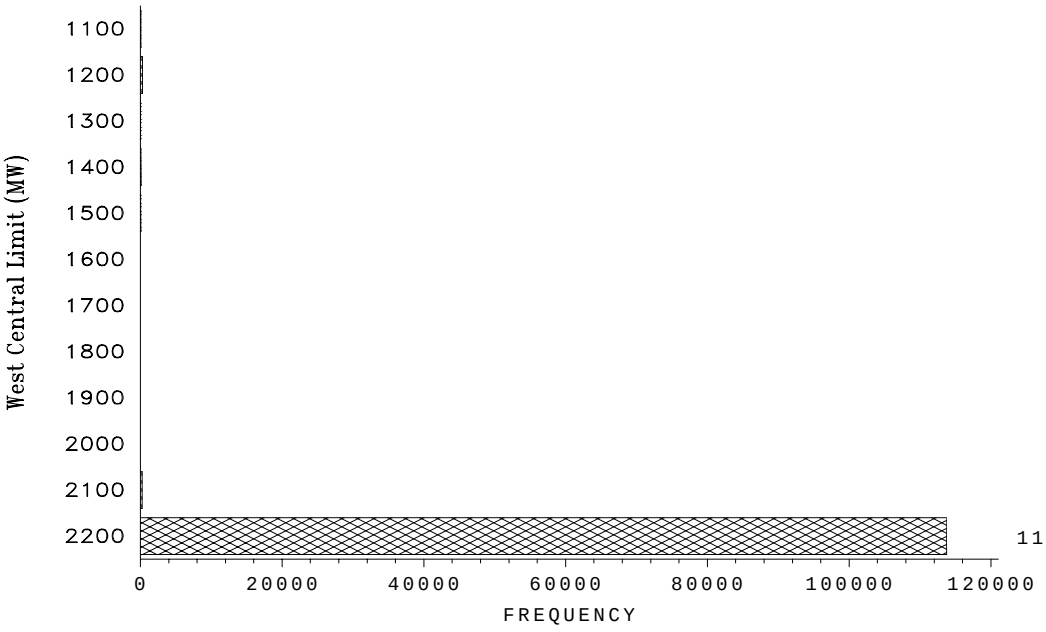
FLOW DURATION CURVE
FOR 1995 through 1998





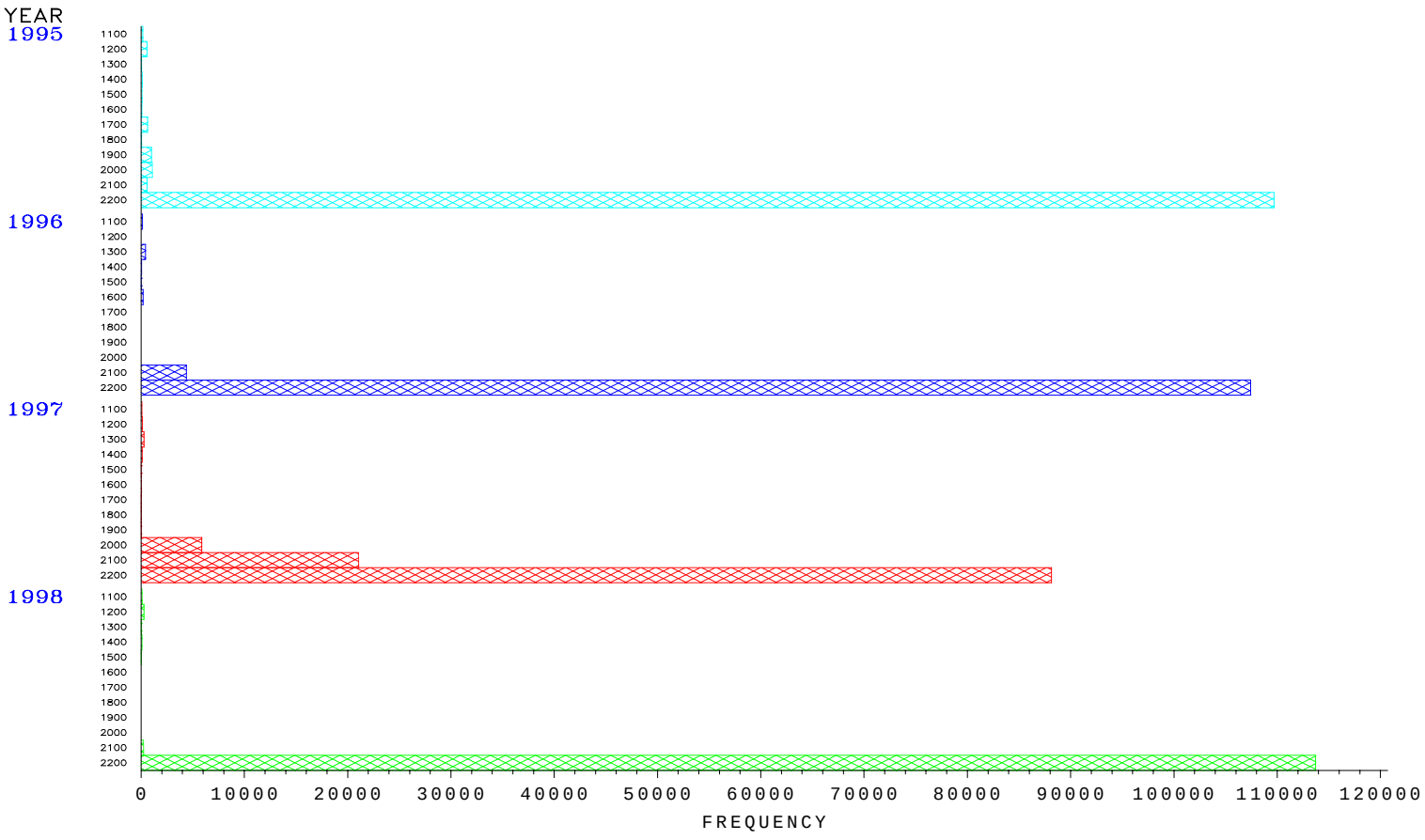
NYPP Transmission Use Statistics For January—December 1998

West Central Limit

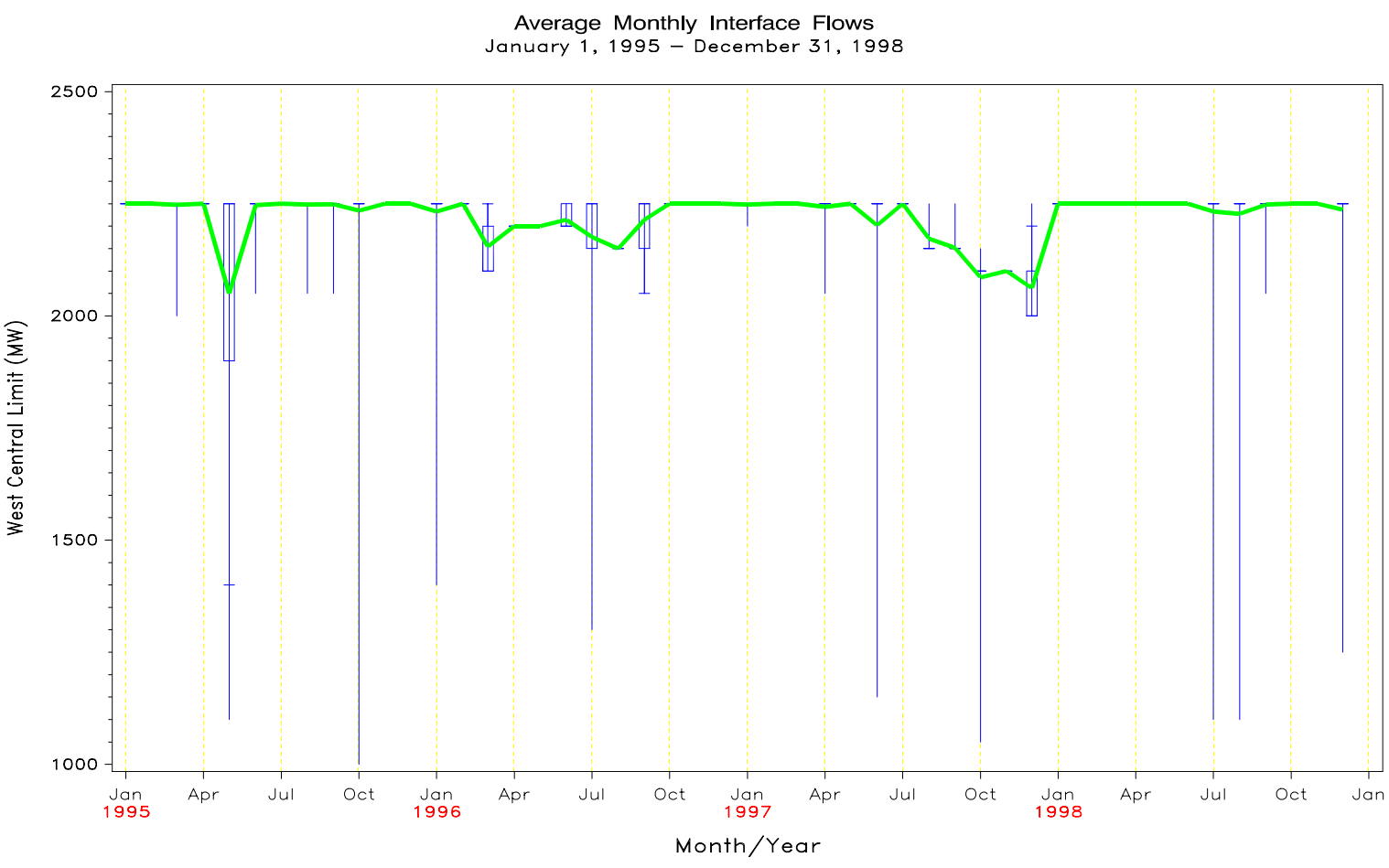


	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1100	78	78	0.07	0.07
1200	280	358	0.24	0.31
1300	10	368	0.00	0.32
1400	88	456	0.08	0.40
1500	21	477	0.02	0.42
1600	0	477	0.00	0.42
1700	0	477	0.00	0.42
1800	0	477	0.00	0.42
1900	0	477	0.00	0.42
2000	0	477	0.00	0.42
2100	233	710	0.20	0.62
2200	113722	114432	99.38	100.00

West Central Limit

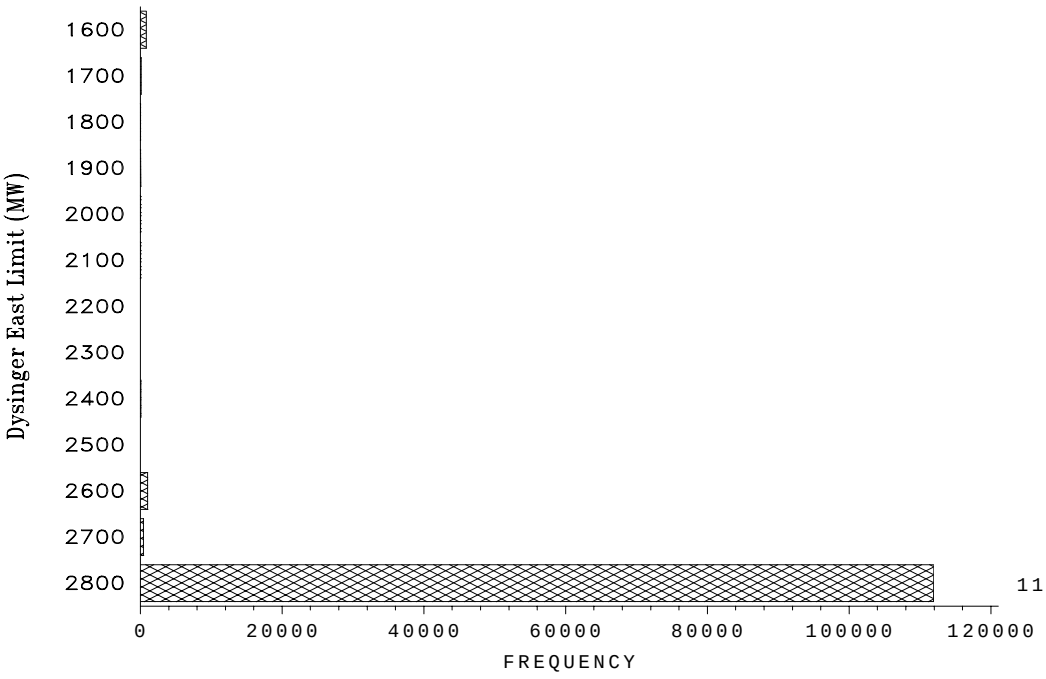


FLOW DURATION CURVE
FOR 1995 through 1998



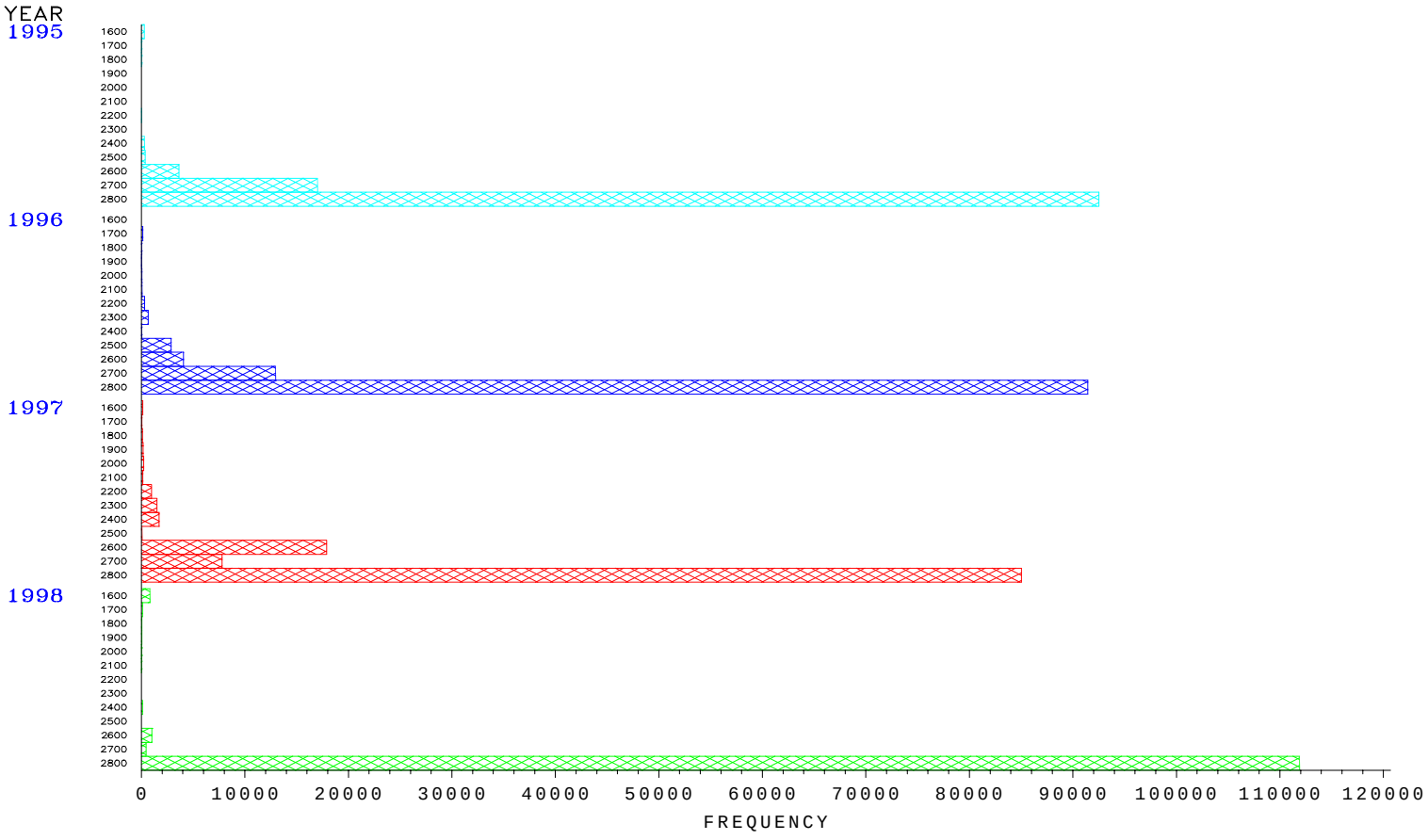
NYPP Transmission Use Statistics For January—December 1998

Dysinger East Limit

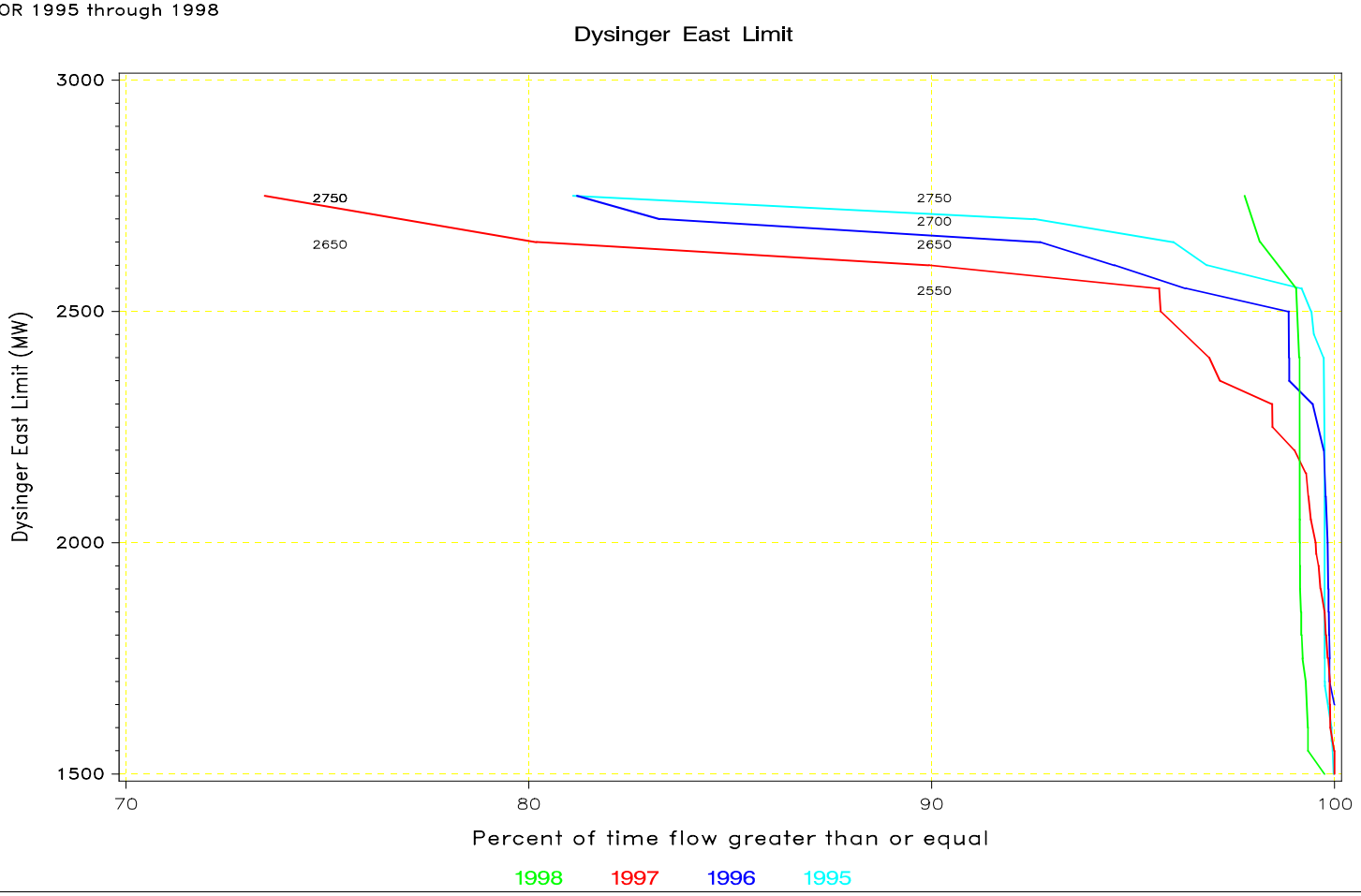


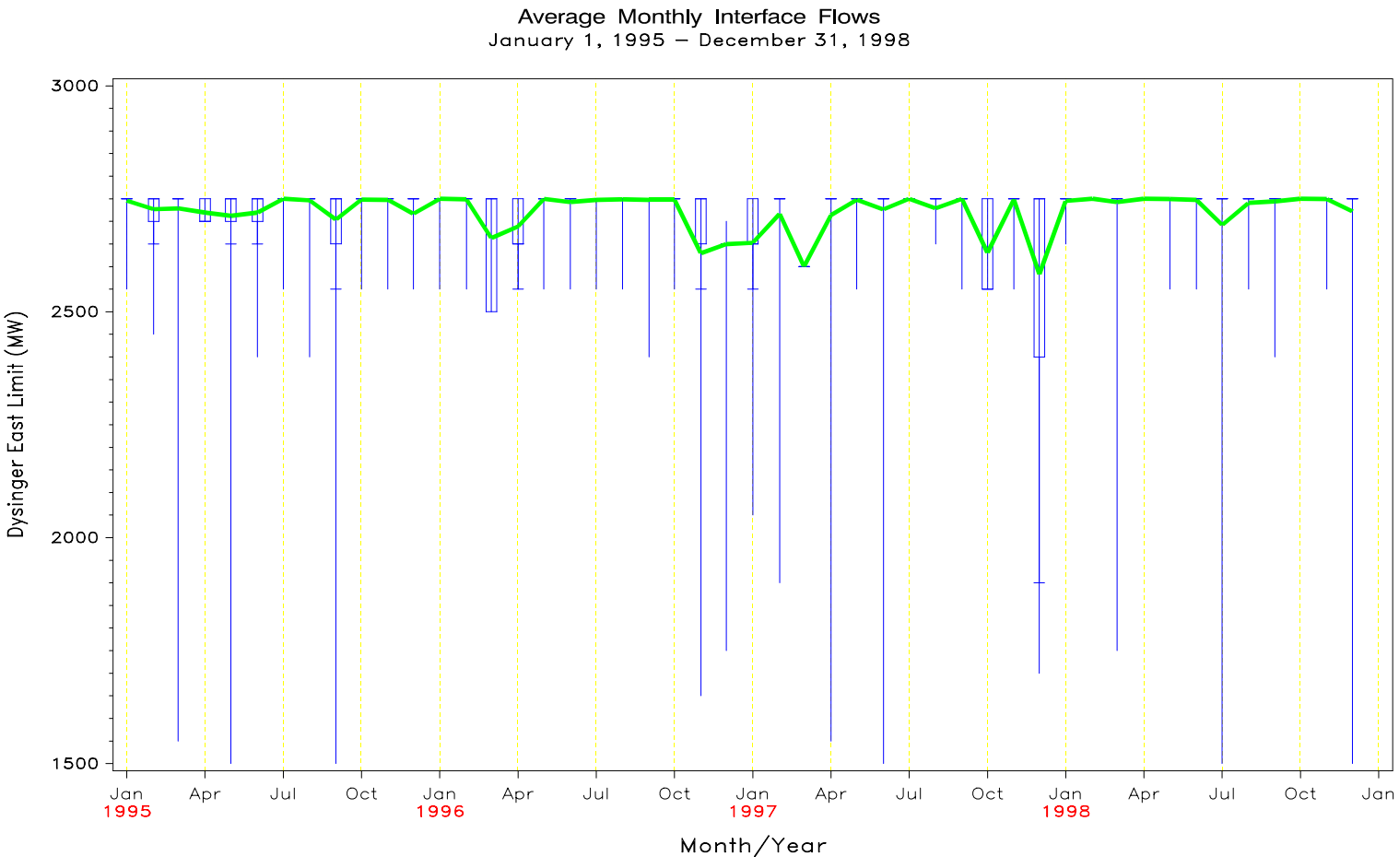
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1600	817	817	0.71	0.71
1700	94	911	0.08	0.80
1800	38	949	0.03	0.83
1900	36	985	0.03	0.86
2000	5	990	0.00	0.87
2100	7	997	0.00	0.87
2200	0	997	0.00	0.87
2300	0	997	0.00	0.87
2400	93	1090	0.08	0.95
2500	0	1090	0.00	0.95
2600	1022	2112	0.89	1.85
2700	442	2554	0.39	2.23
2800	111878	114432	97.77	100.00

Dysinger East Limit

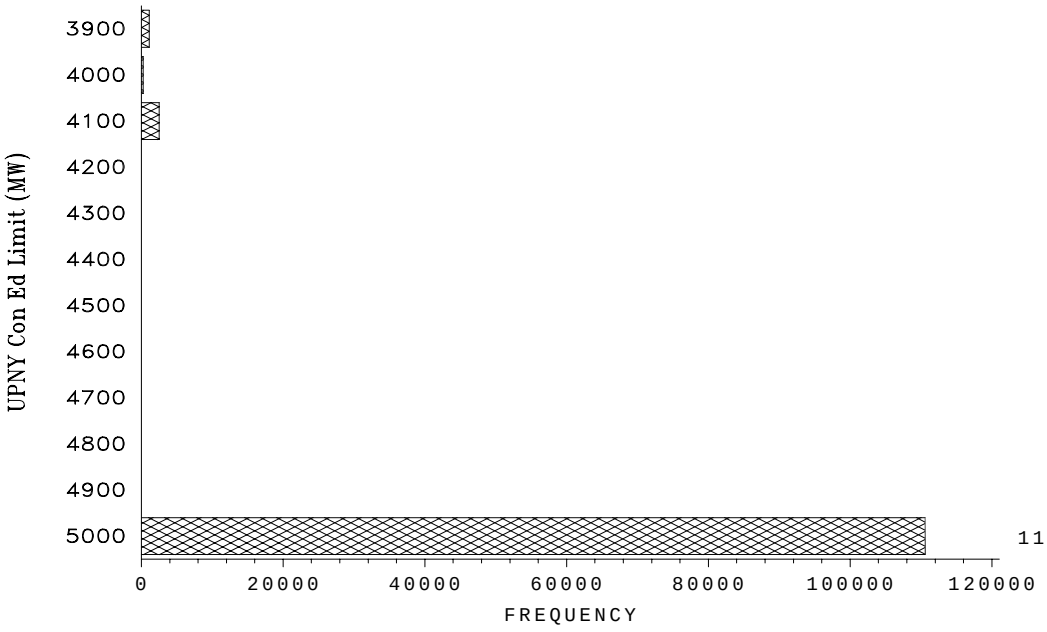


FLOW DURATION CURVE
FOR 1995 through 1998



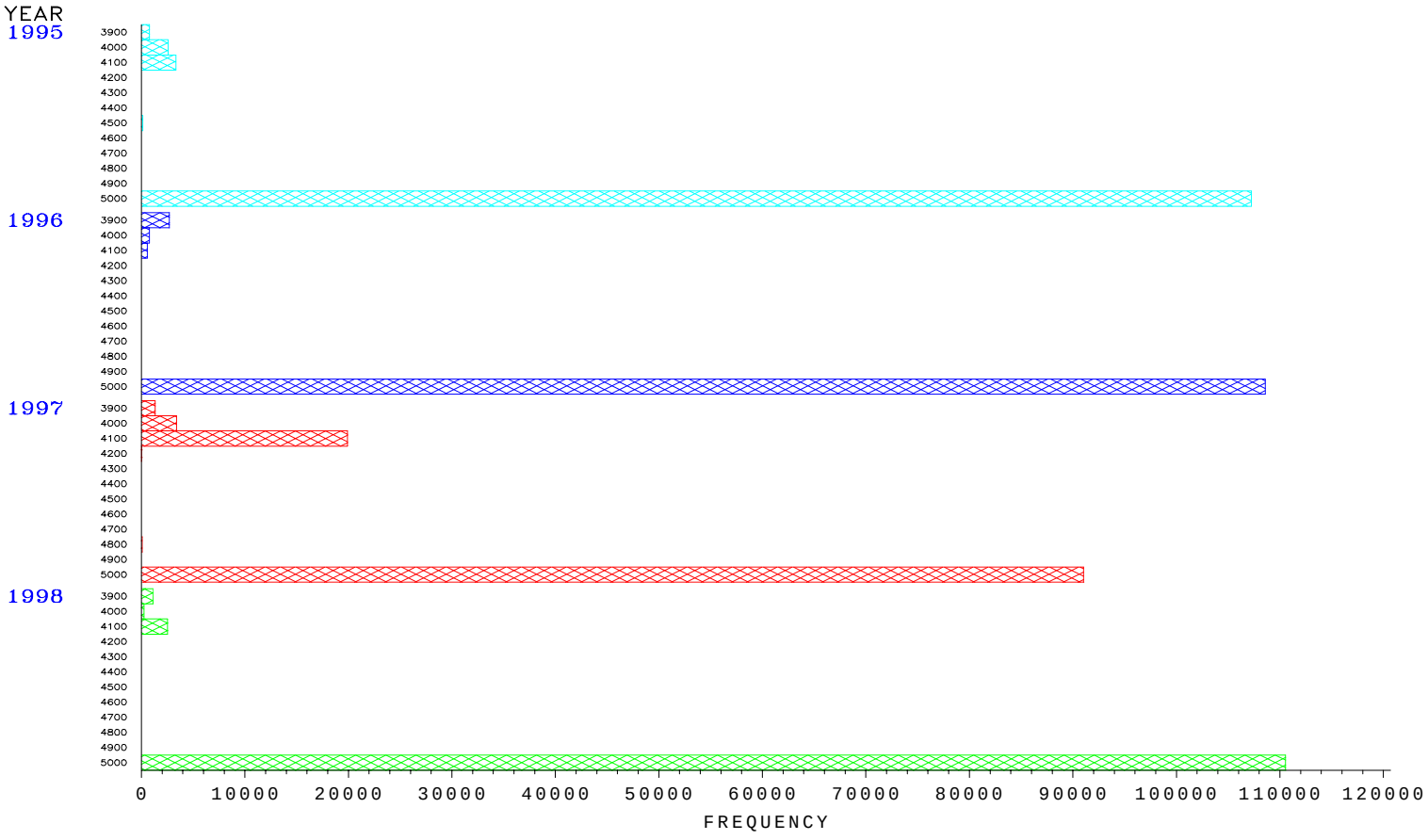


UPNY Con Ed Limit

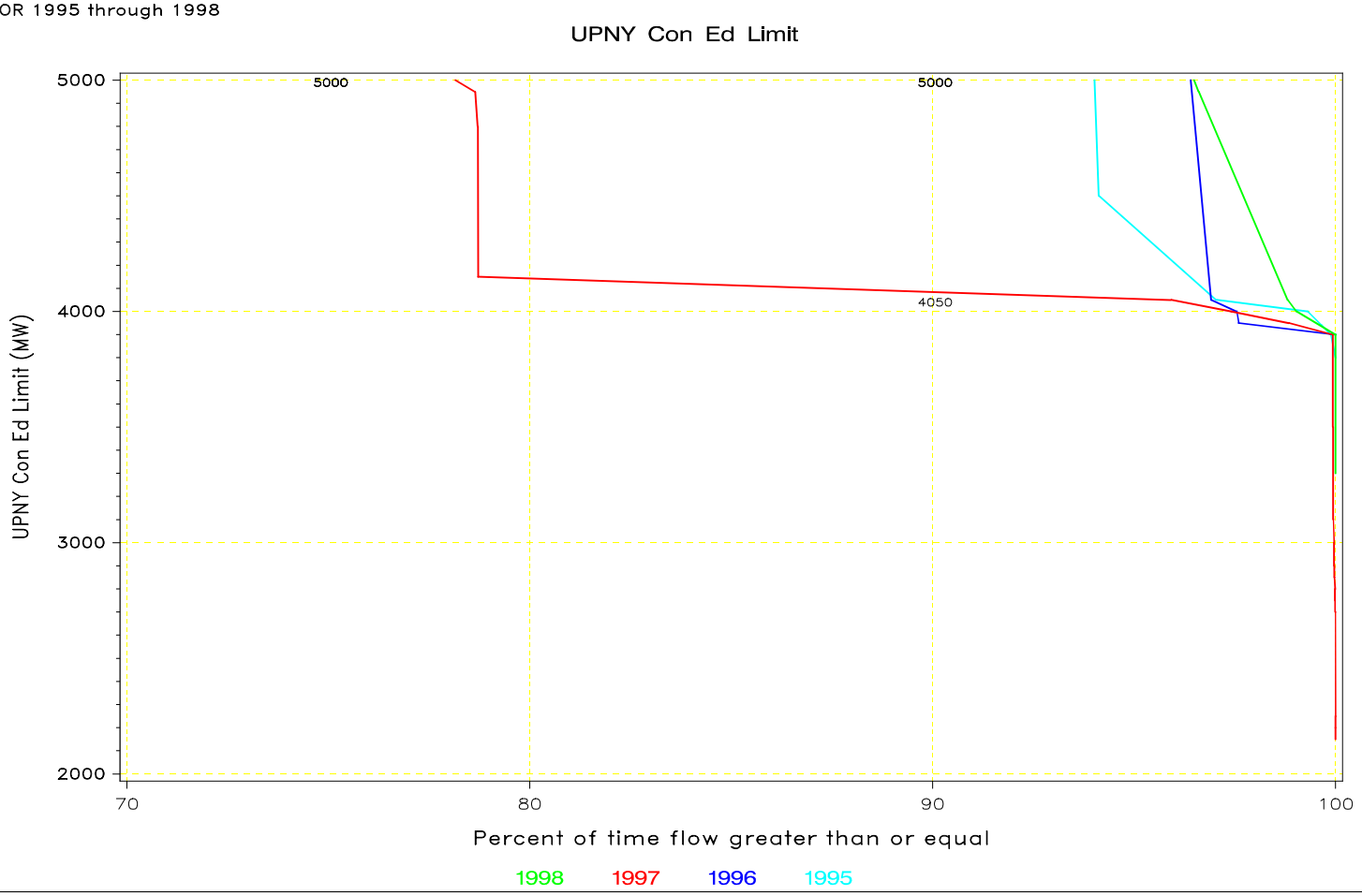


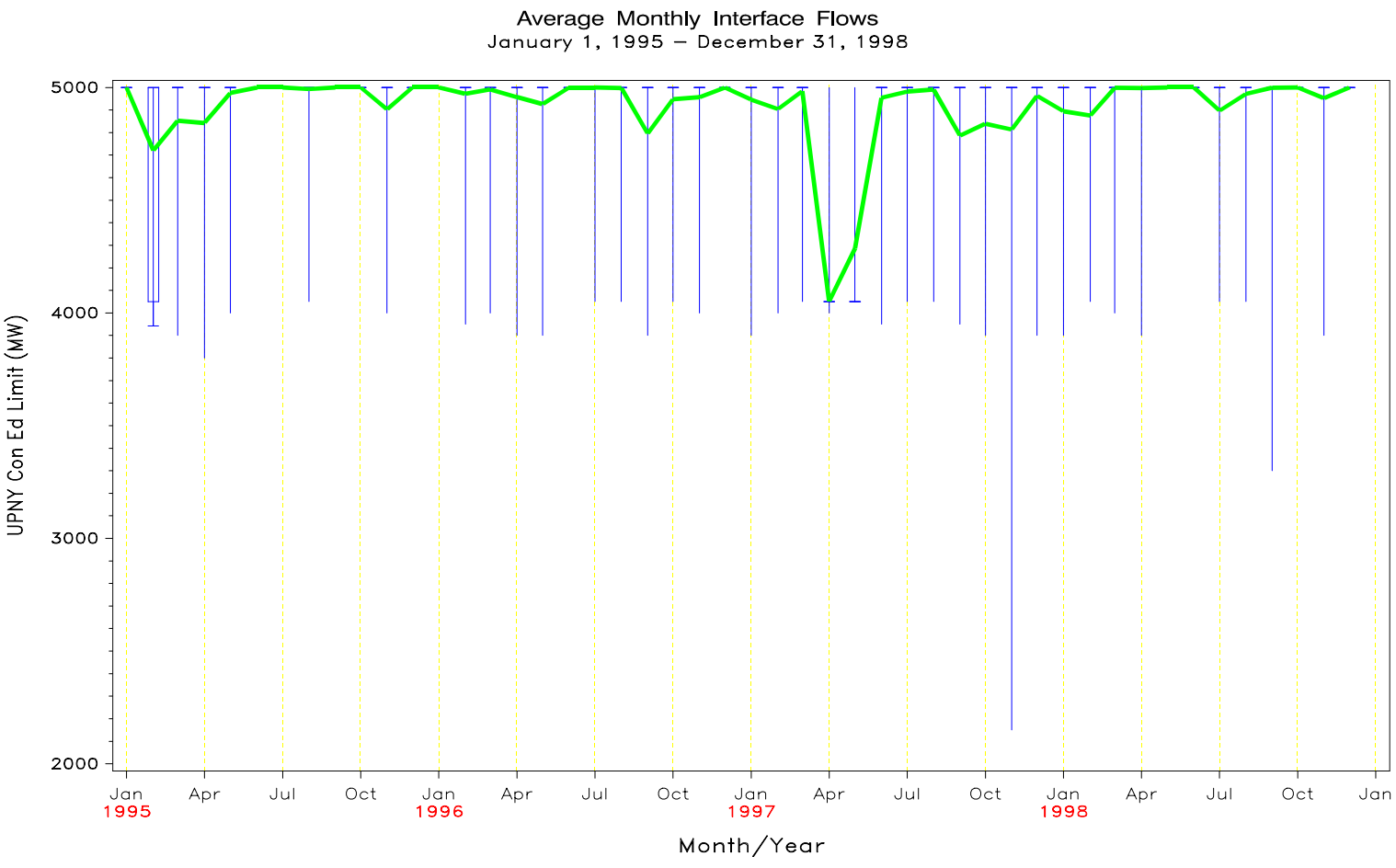
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
3900	1108	1108	0.97	0.97
4000	252	1360	0.22	1.19
4100	2526	3886	2.21	3.40
4200	0	3886	0.00	3.40
4300	0	3886	0.00	3.40
4400	0	3886	0.00	3.40
4500	0	3886	0.00	3.40
4600	0	3886	0.00	3.40
4700	0	3886	0.00	3.40
4800	0	3886	0.00	3.40
4900	0	3886	0.00	3.40
5000	110546	114432	96.60	100.00

UPNY Con Ed Limit



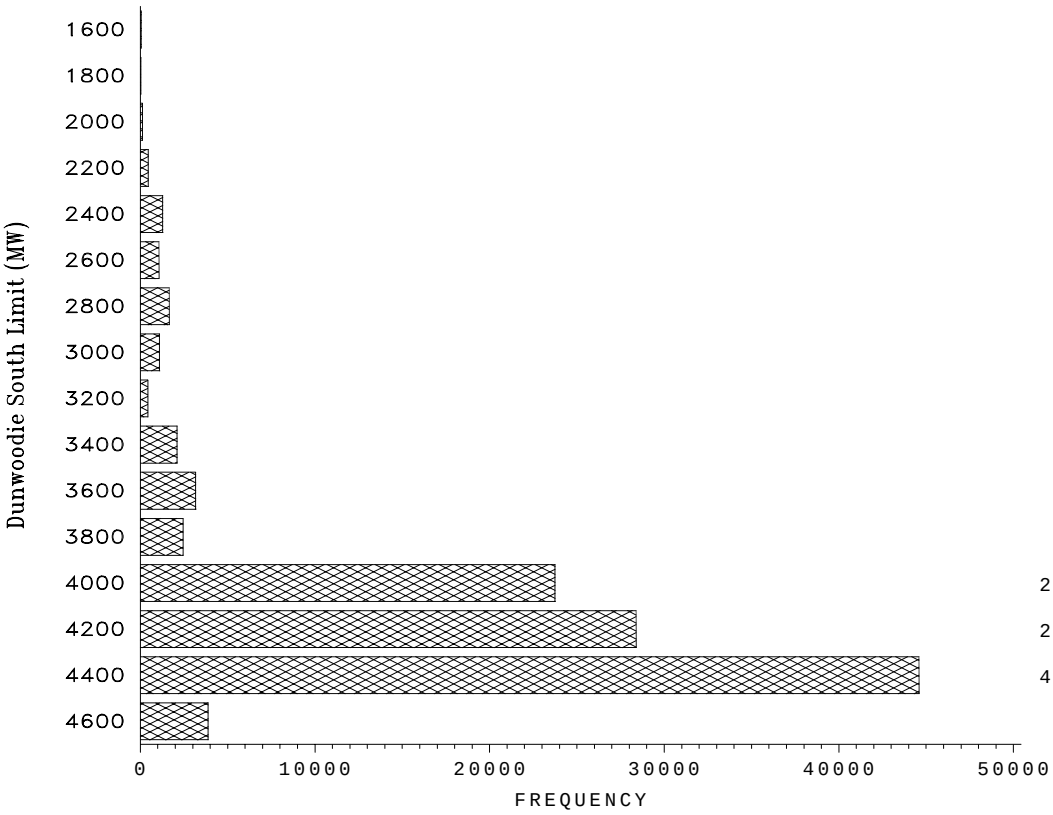
FLOW DURATION CURVE
FOR 1995 through 1998





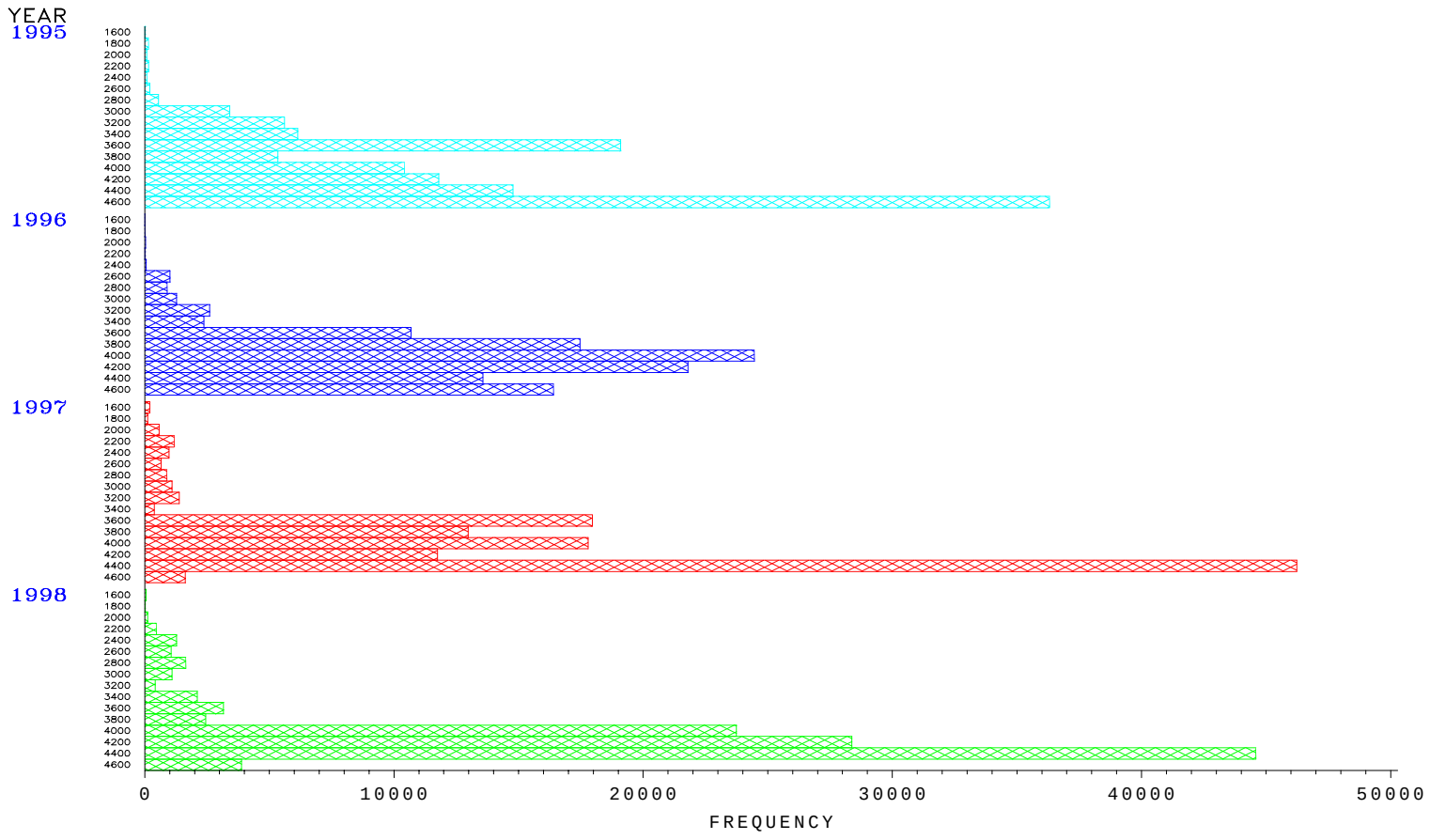
NYPP Transmission Use Statistics For January–December 1998

Dunwoodie South Limit



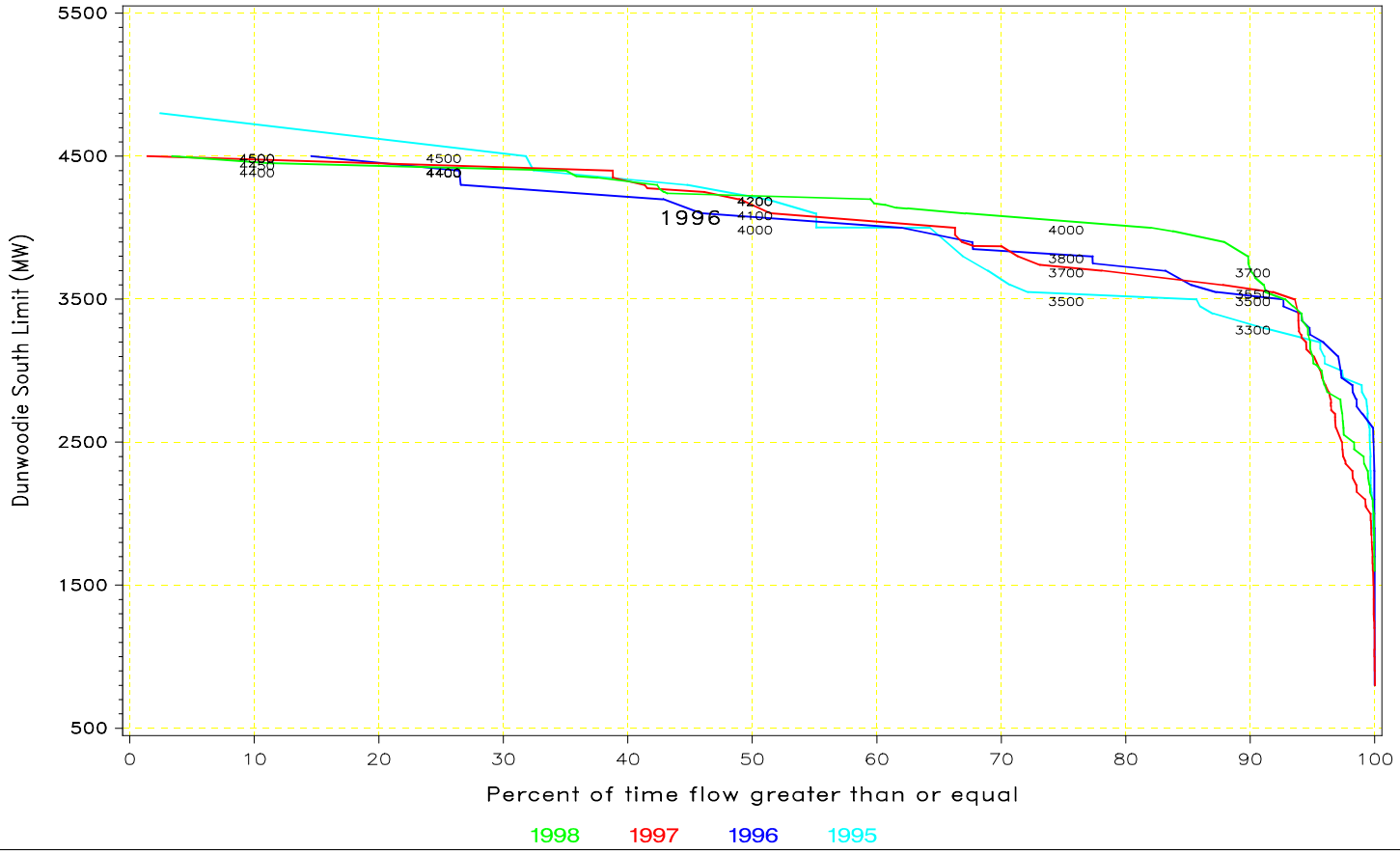
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1600	51	51	0.04	0.04
1800	22	73	0.02	0.06
2000	120	193	0.10	0.17
2200	451	644	0.39	0.56
2400	1278	1922	1.12	1.68
2600	1054	2976	0.92	2.60
2800	1642	4618	1.43	4.04
3000	1092	5710	0.95	4.99
3200	424	6134	0.37	5.36
3400	2105	8239	1.84	7.20
3600	3163	11402	2.76	9.96
3800	2442	13844	2.13	12.10
4000	23745	37589	20.75	32.85
4200	28379	65968	24.80	57.65
4400	44582	110550	38.96	96.61
4600	3882	114432	3.39	100.00

Dunwoodie South Limit



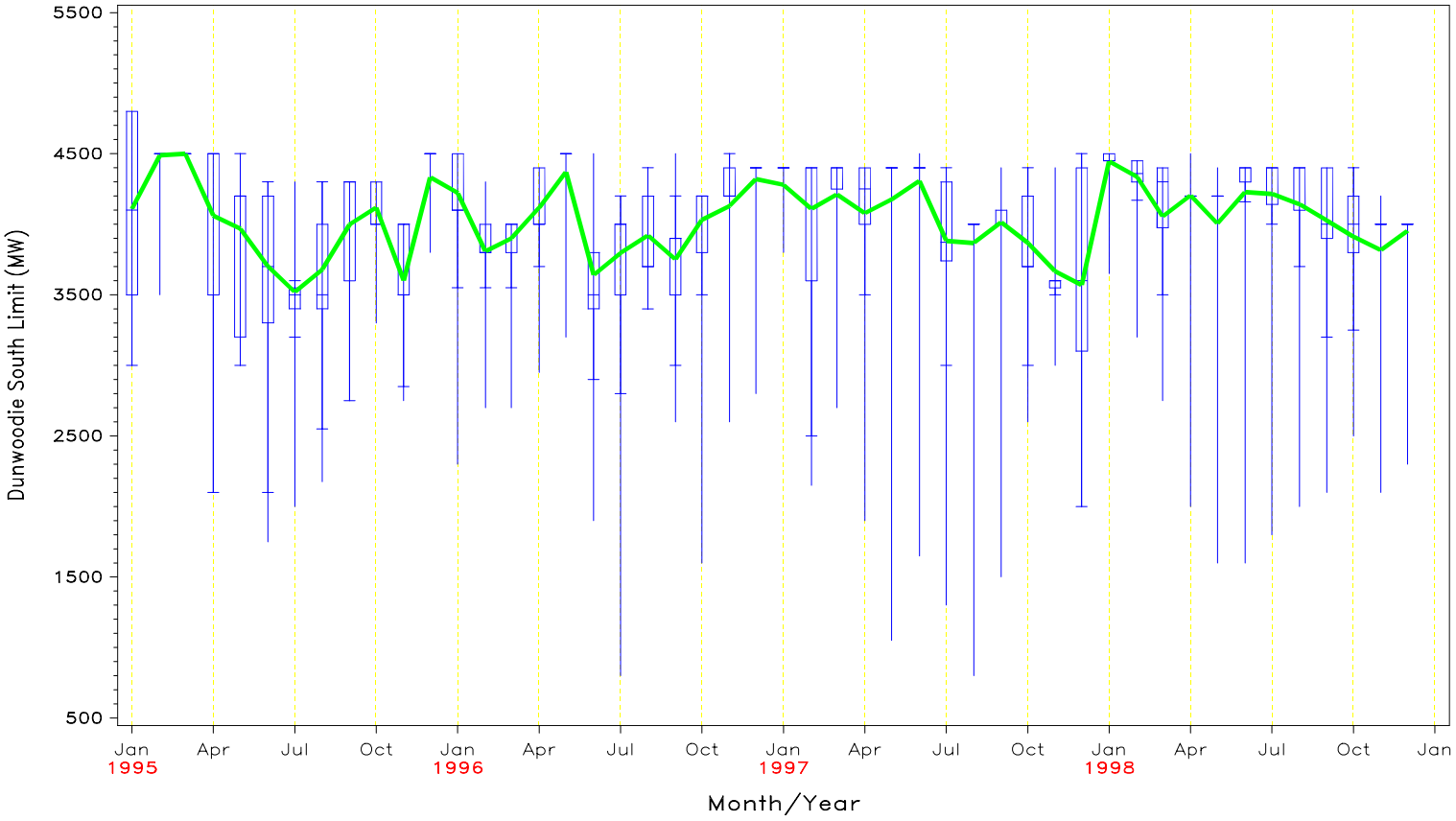
FLOW DURATION CURVE
FOR 1995 through 1998

Dunwoodie South Limit



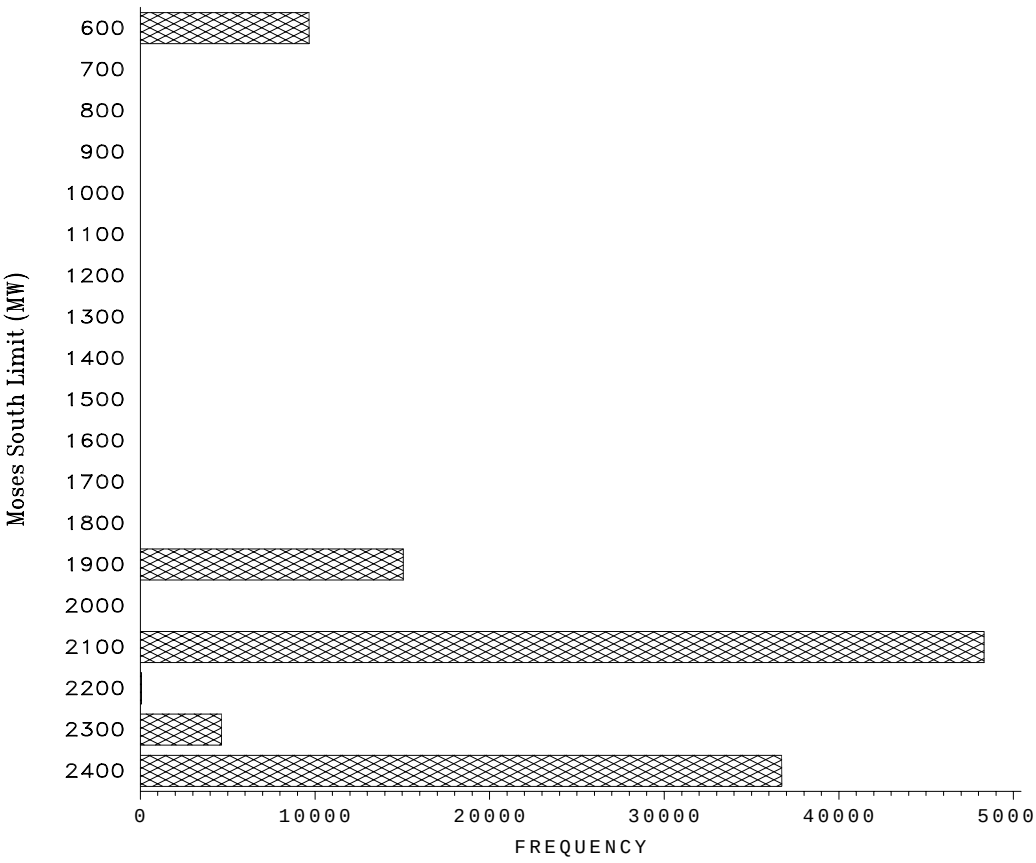
Average Monthly Interface Flows

January 1, 1995 – December 31, 1998



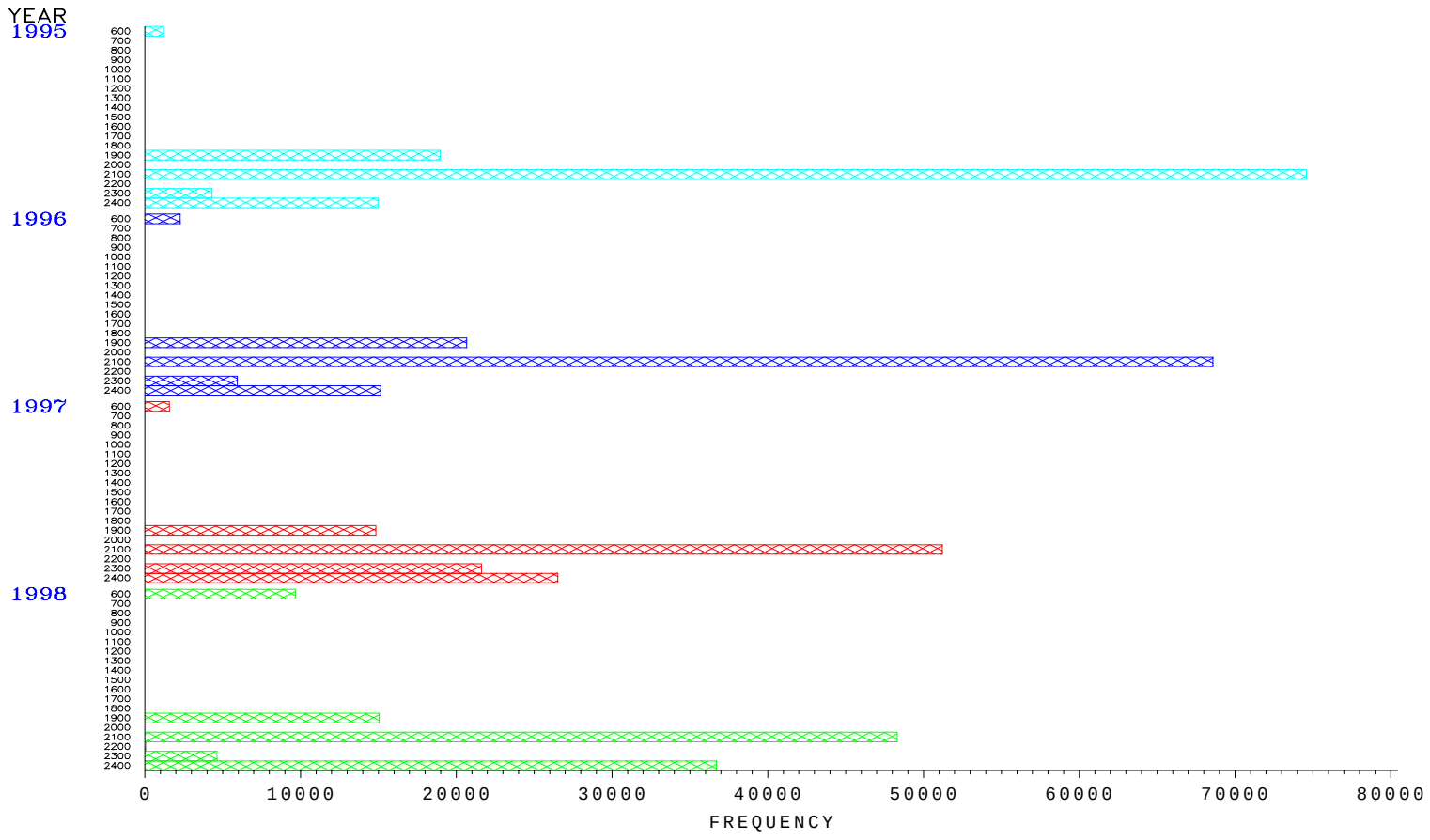
NYPP Transmission Use Statistics For January—December 1998

Moses South Limit

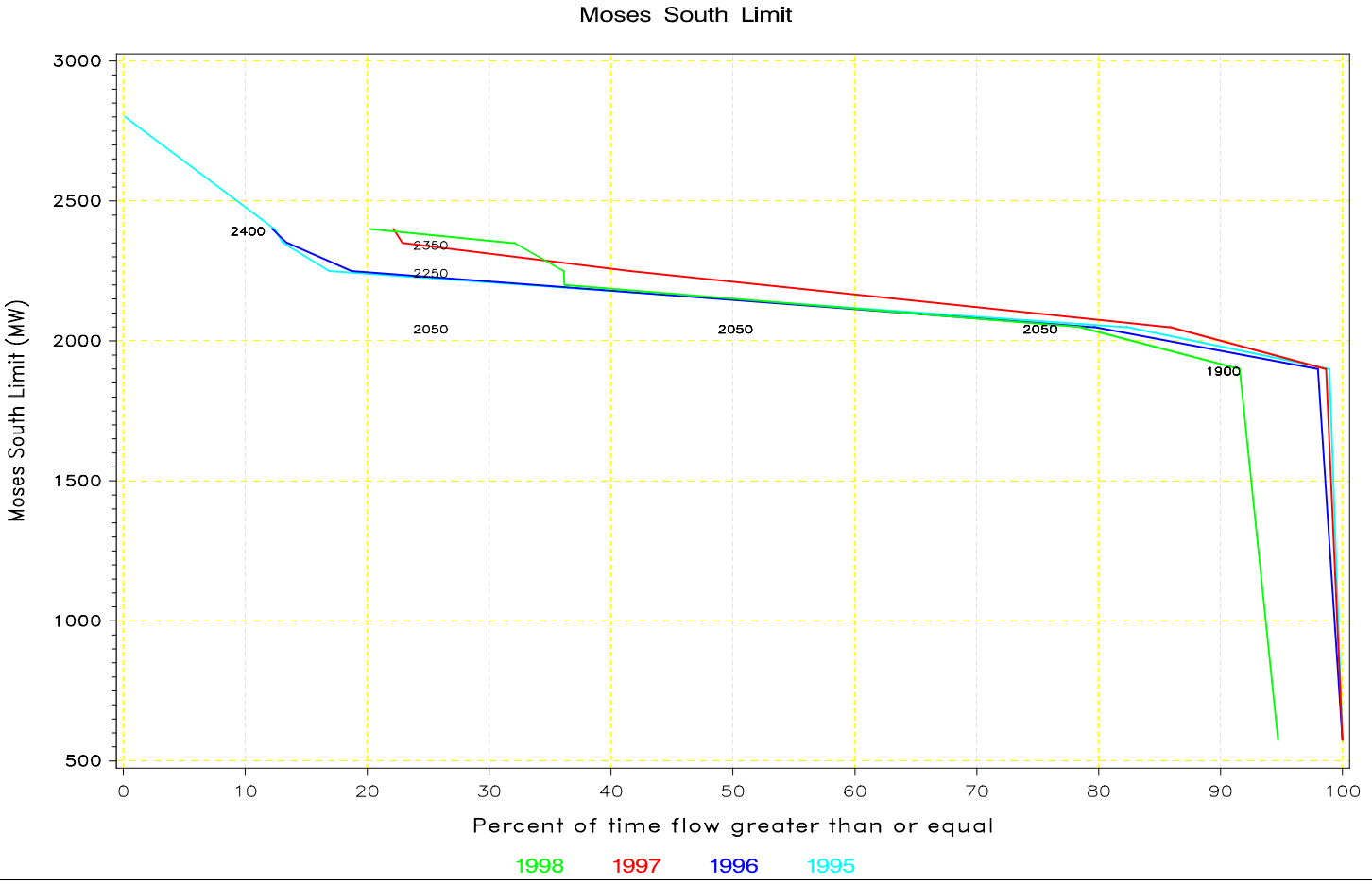


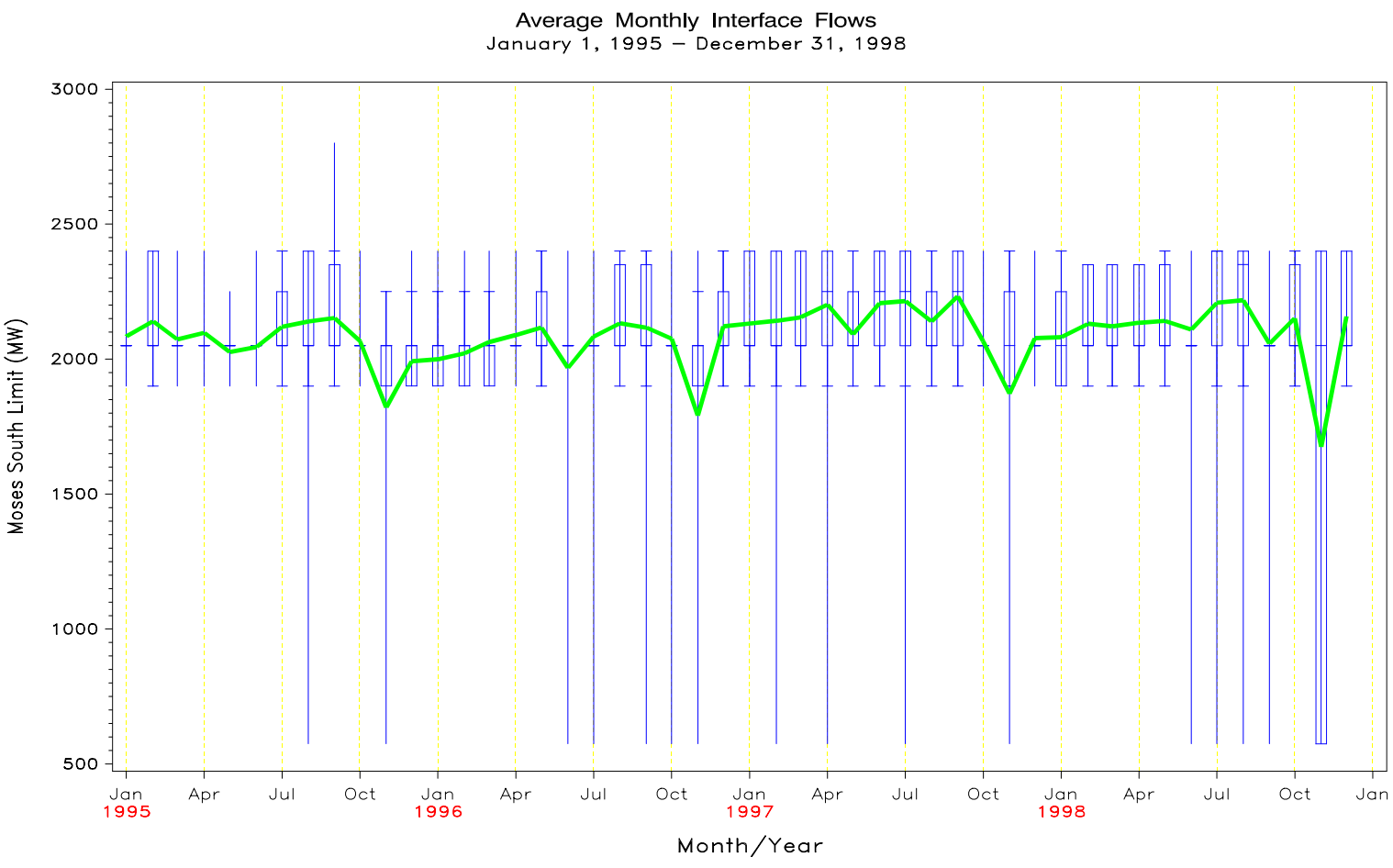
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
600	9656	9656	8.44	8.44
700	0	9656	0.00	8.44
800	0	9656	0.00	8.44
900	0	9656	0.00	8.44
1000	0	9656	0.00	8.44
1100	0	9656	0.00	8.44
1200	0	9656	0.00	8.44
1300	0	9656	0.00	8.44
1400	0	9656	0.00	8.44
1500	0	9656	0.00	8.44
1600	0	9656	0.00	8.44
1700	0	9656	0.00	8.44
1800	0	9656	0.00	8.44
1900	15049	24705	13.15	21.59
2000	0	24705	0.00	21.59
2100	48309	73014	42.22	63.81
2200	65	73079	0.06	63.86
2300	4636	77715	4.05	67.91
2400	36717	114432	32.09	100.00

Moses South Limit



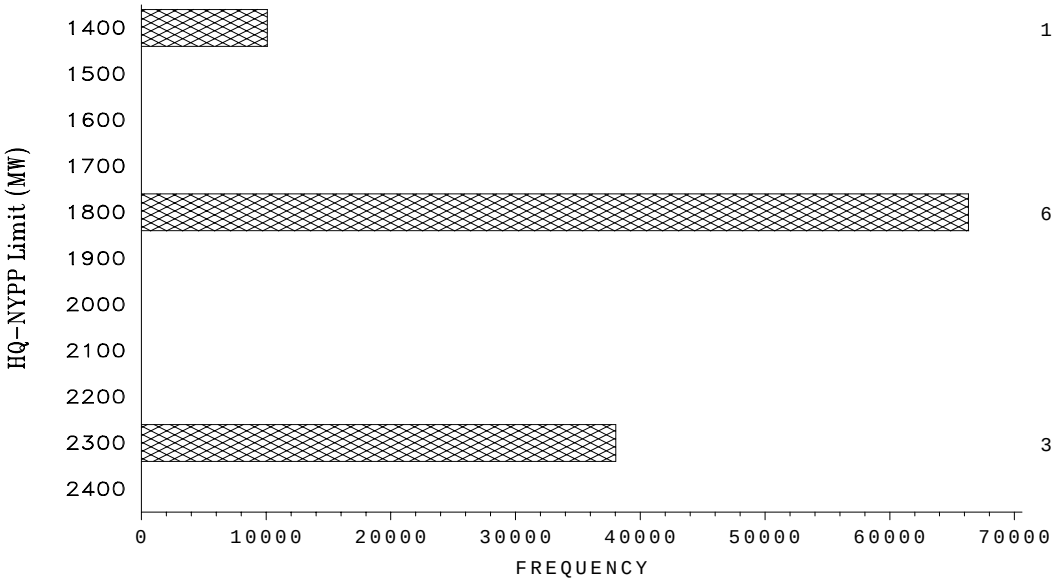
FLOW DURATION CURVE
FOR 1995 through 1998





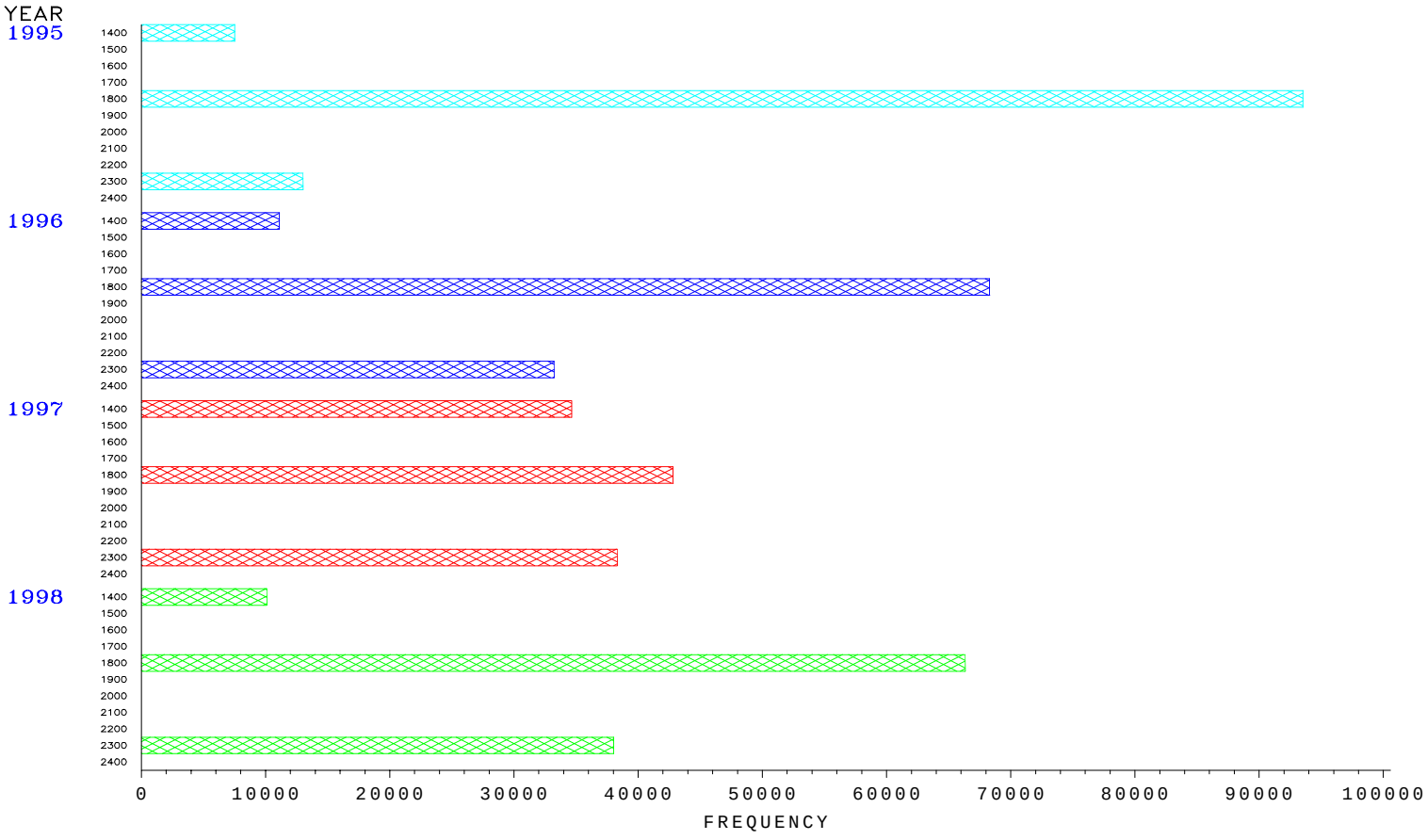
NYPP Transmission Use Statistics For January–December 1998

HQ – NYPP Limit

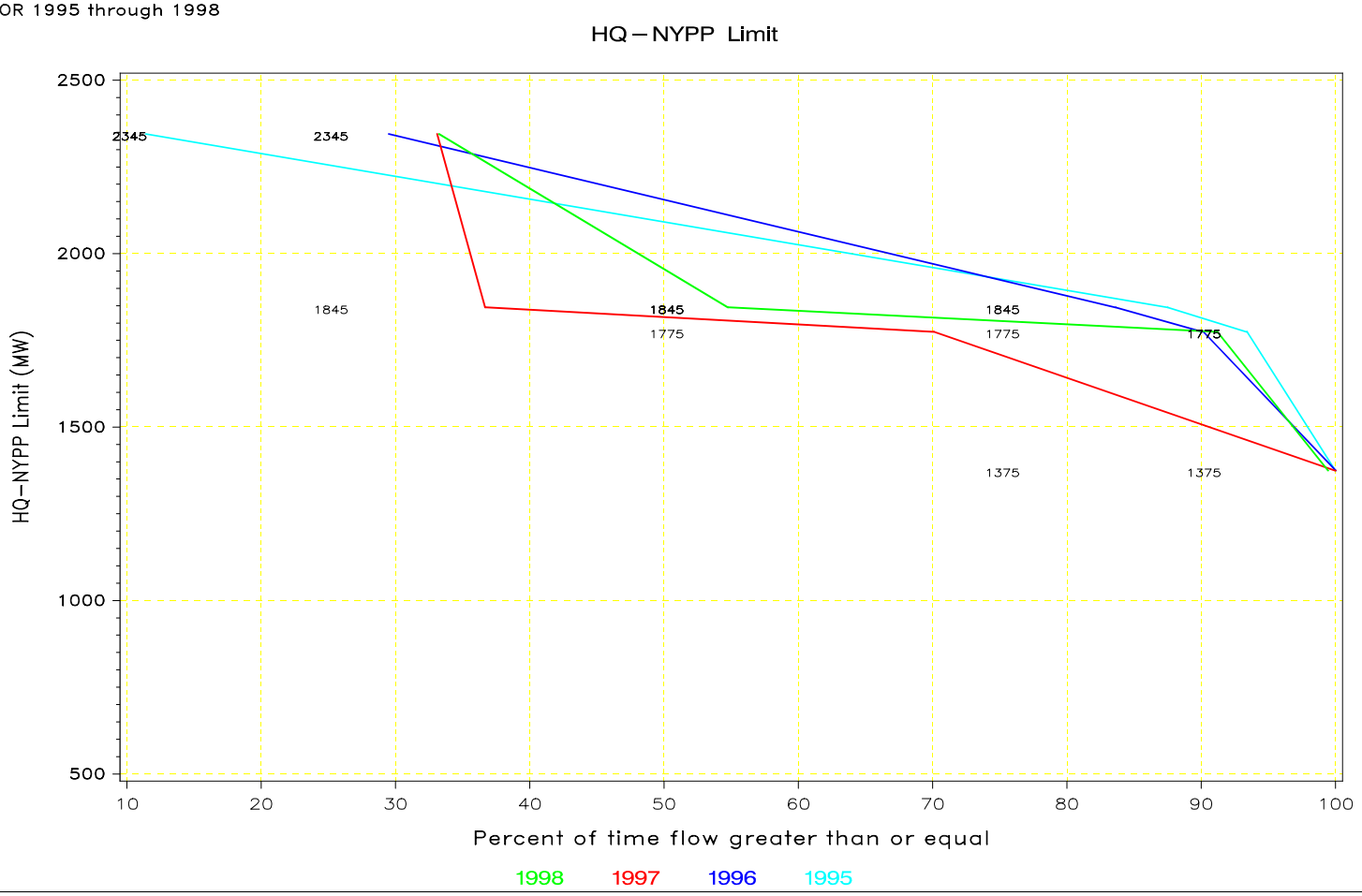


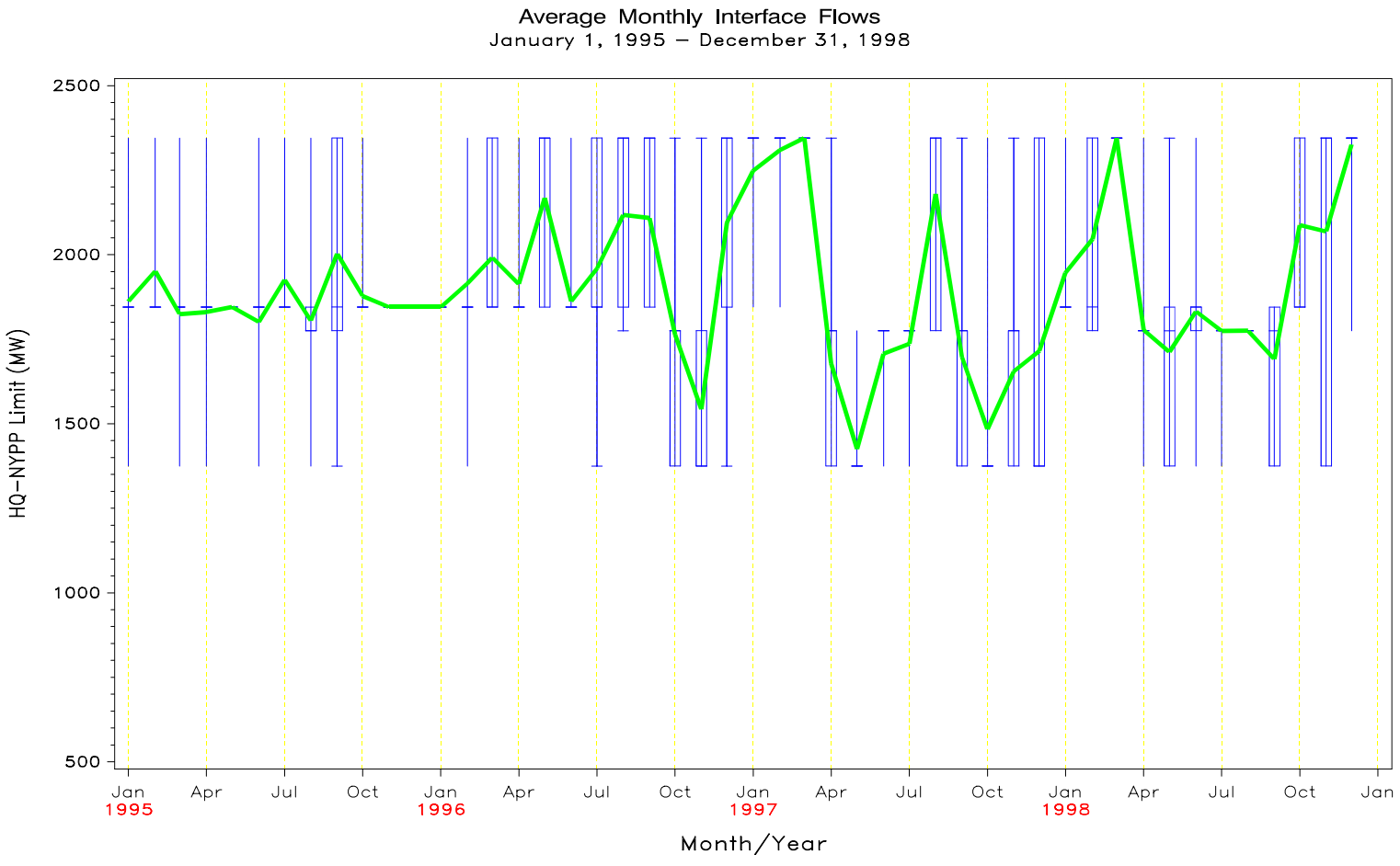
HQ–NYPP Limit (MW)	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1400	10091	10091	8.82	8.82
1500	0	10091	0.00	8.82
1600	0	10091	0.00	8.82
1700	0	10091	0.00	8.82
1800	66312	76403	57.95	66.77
1900	0	76403	0.00	66.77
2000	0	76403	0.00	66.77
2100	0	76403	0.00	66.77
2200	0	76403	0.00	66.77
2300	38029	114432	33.23	100.00
2400	0	114432	0.00	100.00

HQ – NYPP Limit



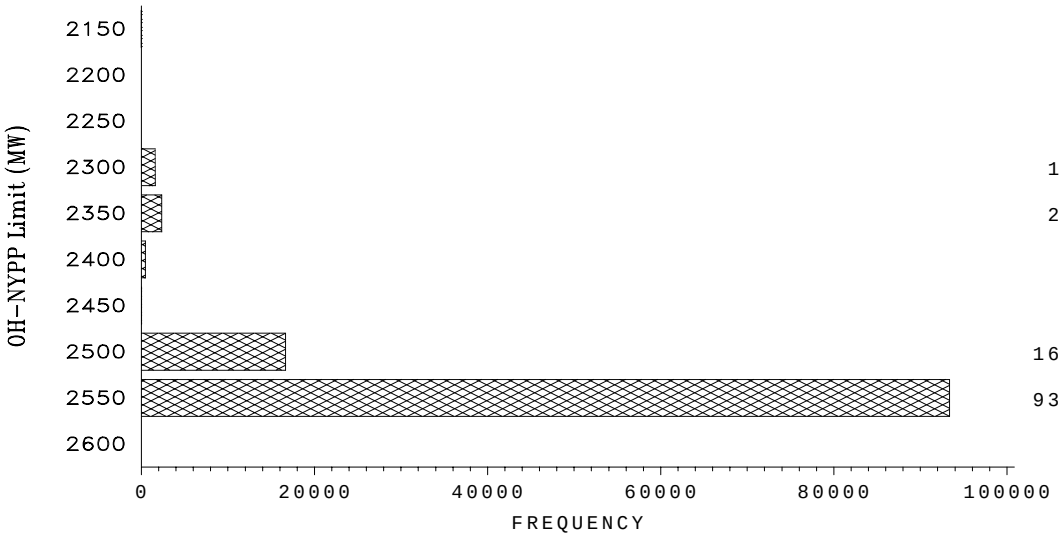
FLOW DURATION CURVE
FOR 1995 through 1998





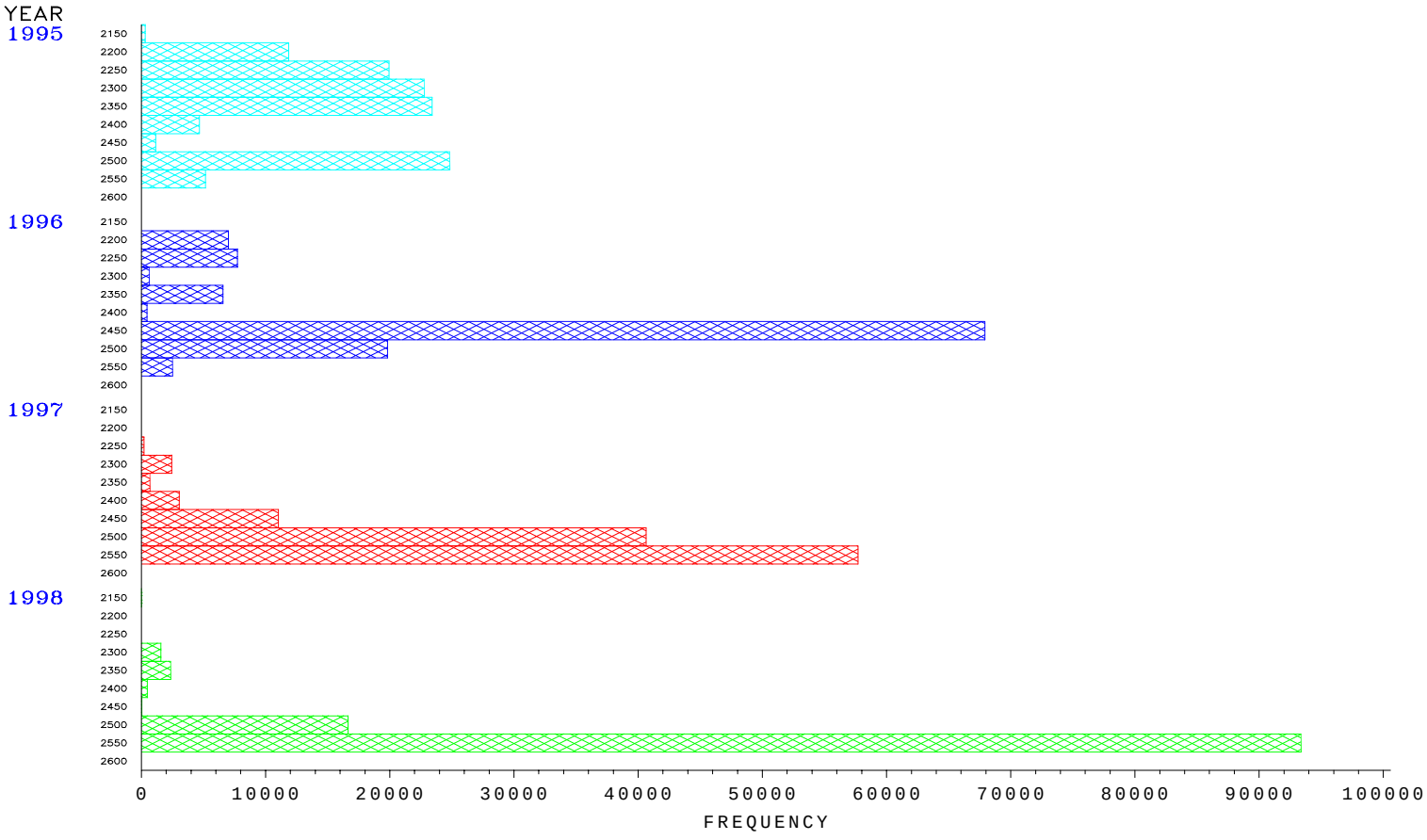
NYPP Transmission Use Statistics For January–December 1998

OH – NYPP Limit

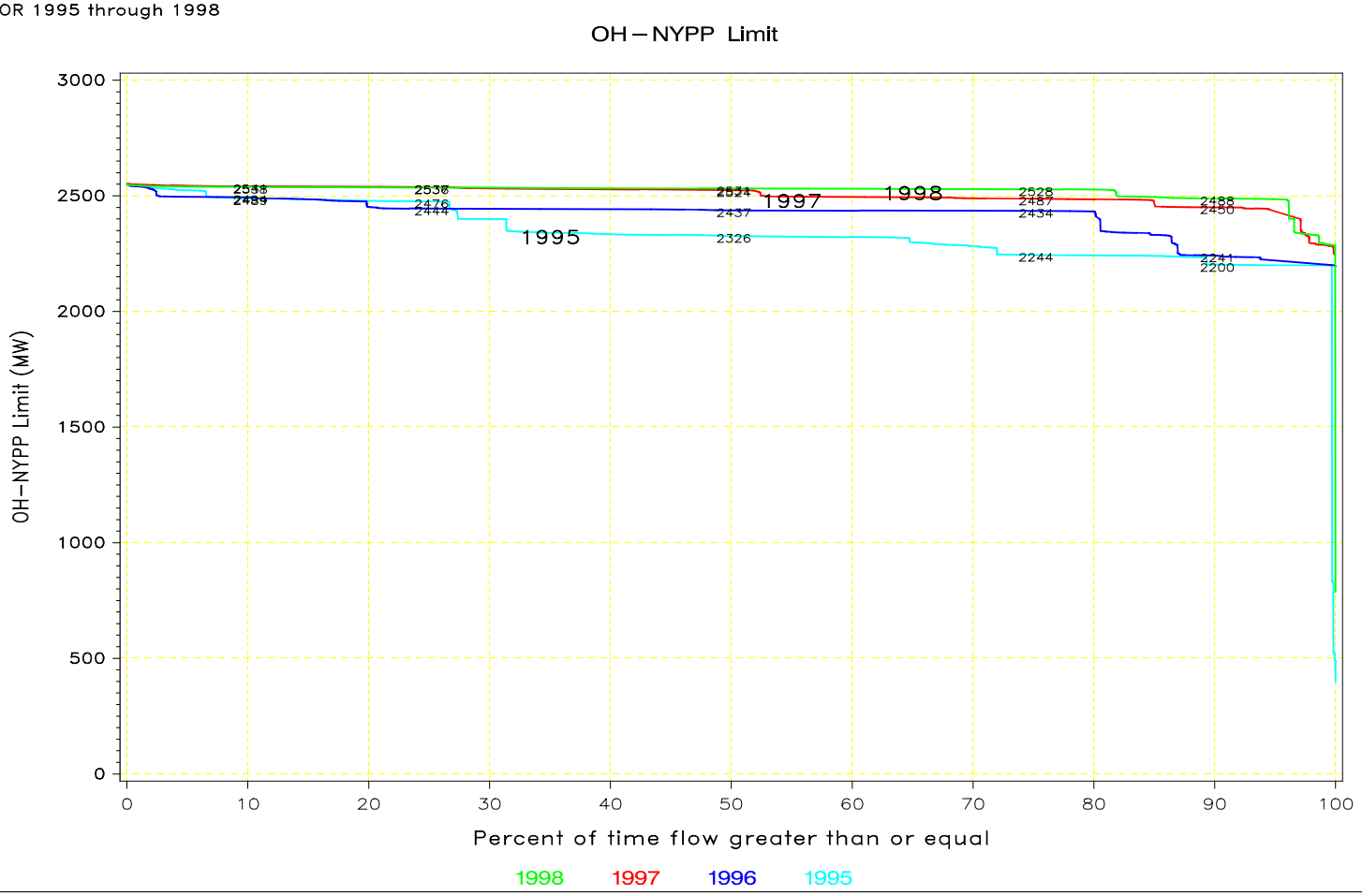


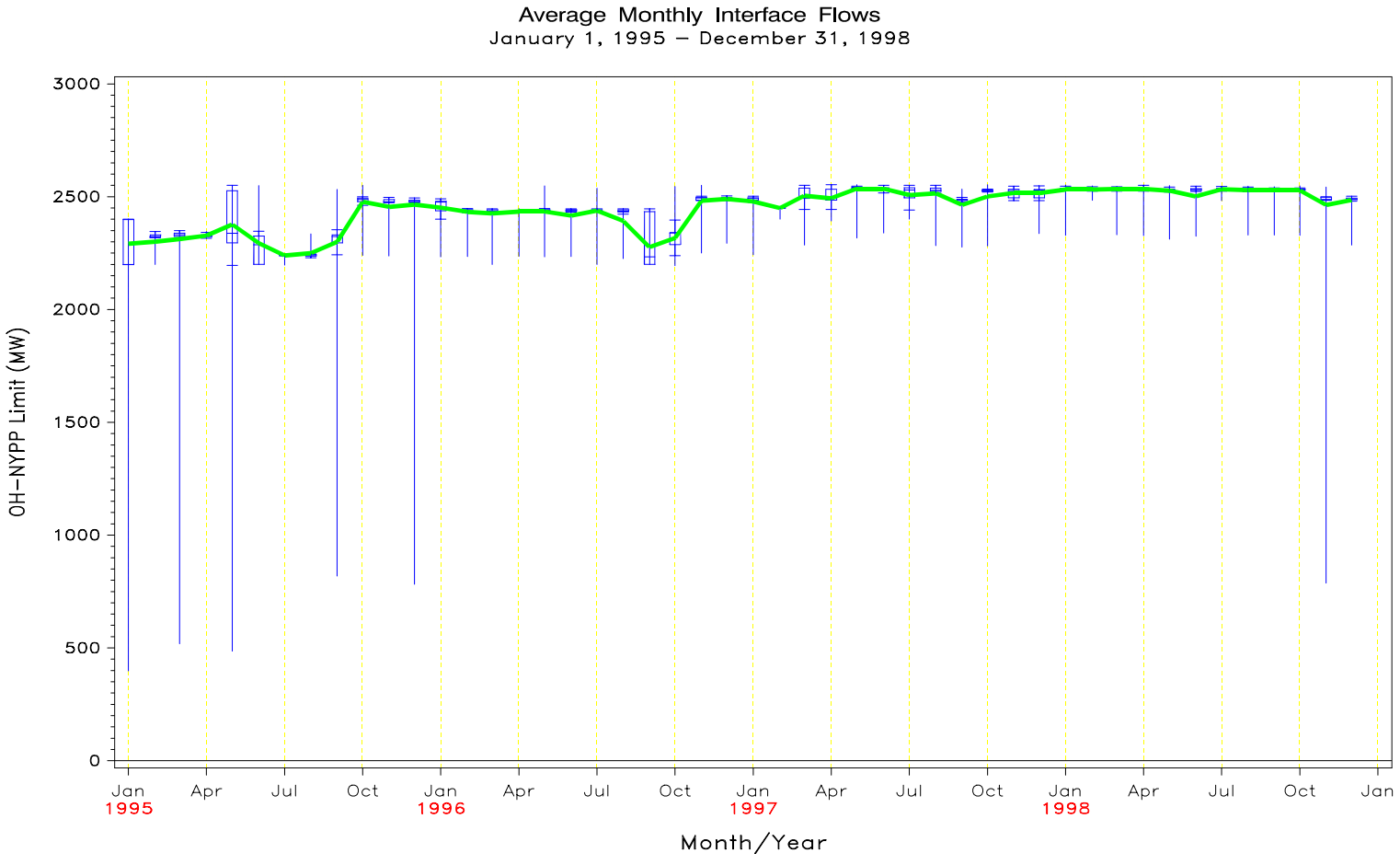
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
2150	1	1	0.00	0.00
2200	0	1	0.00	0.00
2250	0	1	0.00	0.00
2300	1580	1581	1.38	1.38
2350	2340	3921	2.04	3.43
2400	478	4399	0.42	3.84
2450	38	4437	0.03	3.88
2500	16642	21079	14.54	18.42
2550	93353	114432	81.58	100.00
2600	0	114432	0.00	100.00

OH – NYPP Limit



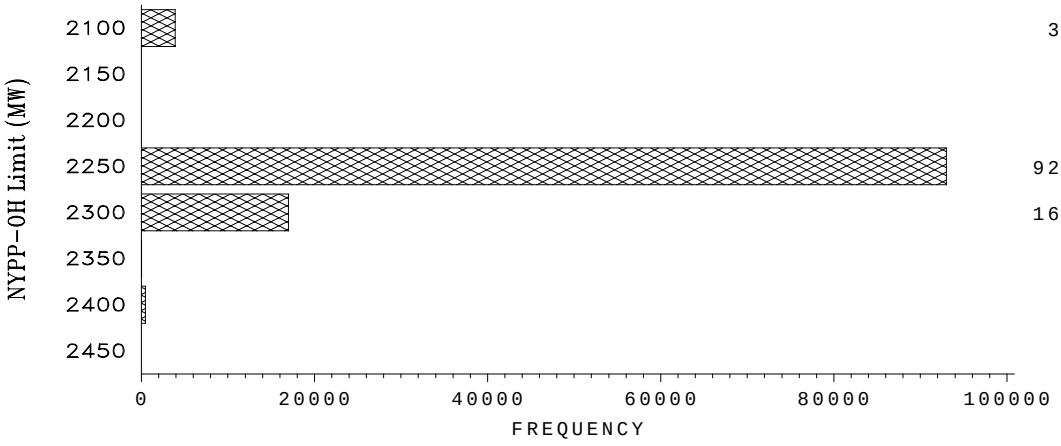
FLOW DURATION CURVE
FOR 1995 through 1998





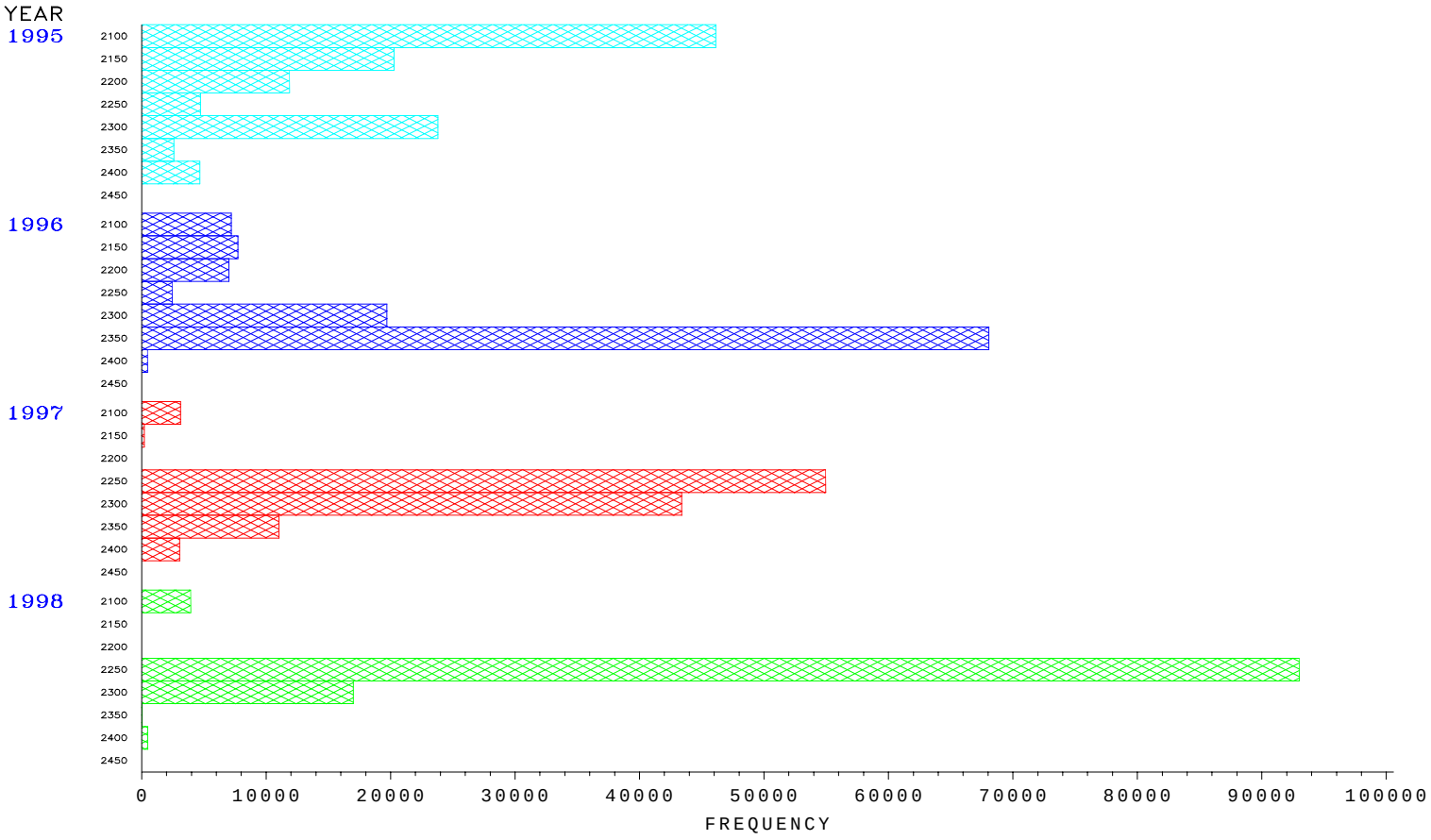
NYPP Transmission Use Statistics For January–December 1998

NYPP – OH Limit

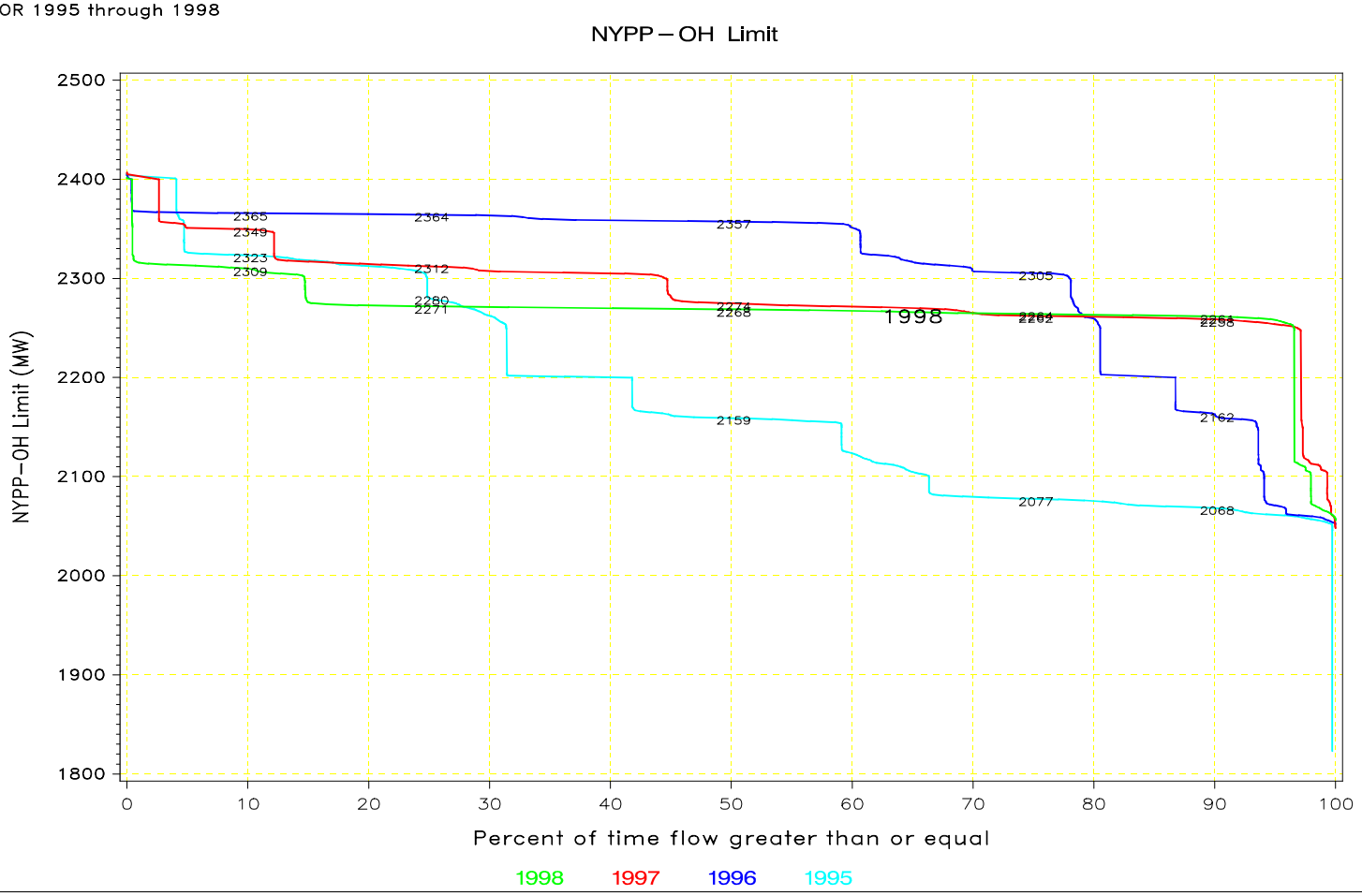


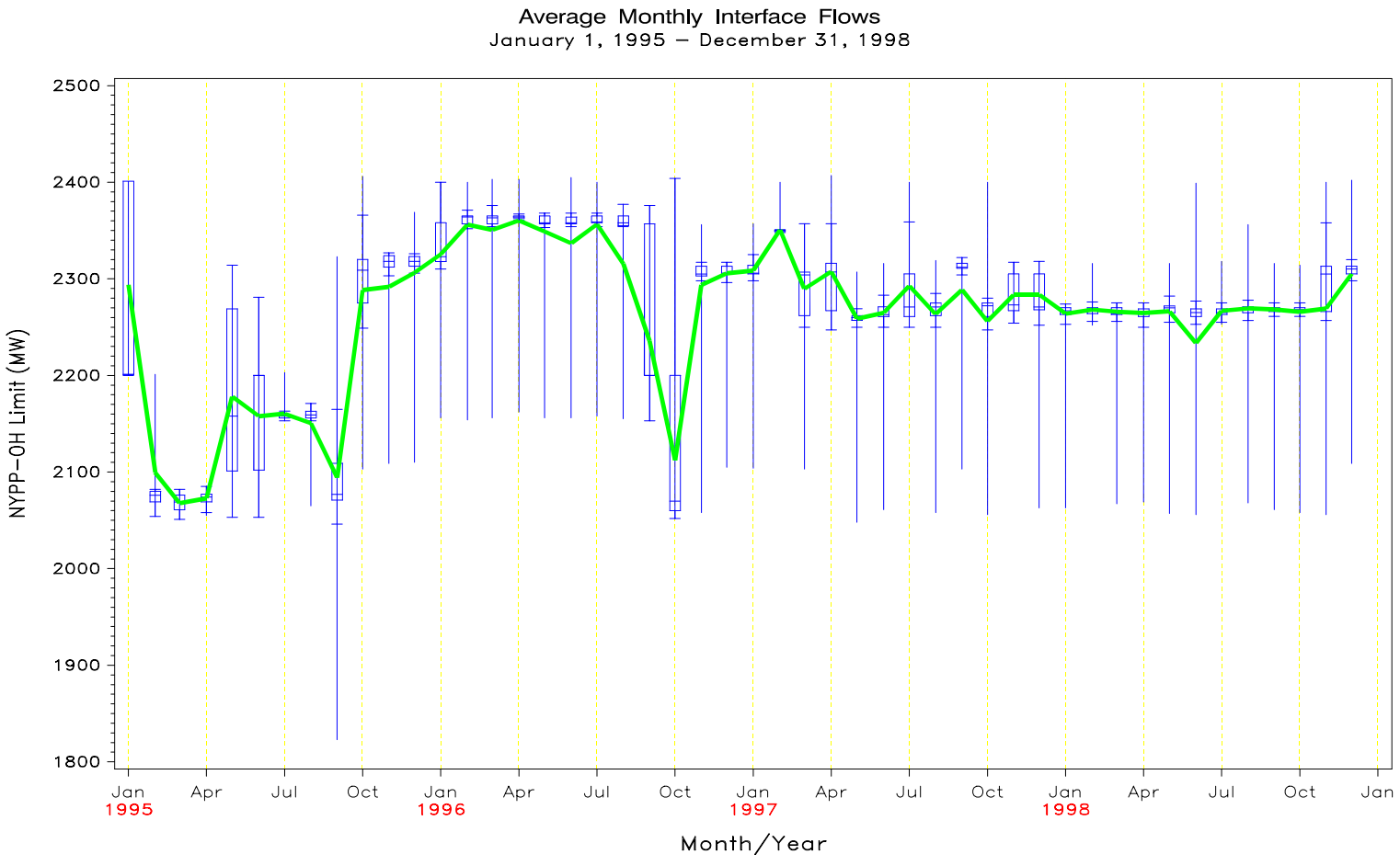
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
2100	3921	3921	3.43	3.43
2150	0	3921	0.00	3.43
2200	0	3921	0.00	3.43
2250	92998	96919	81.27	84.70
2300	16997	113916	14.85	99.55
2350	38	113954	0.03	99.58
2400	478	114432	0.42	100.00
2450	0	114432	0.00	100.00

NYPP – OH Limit



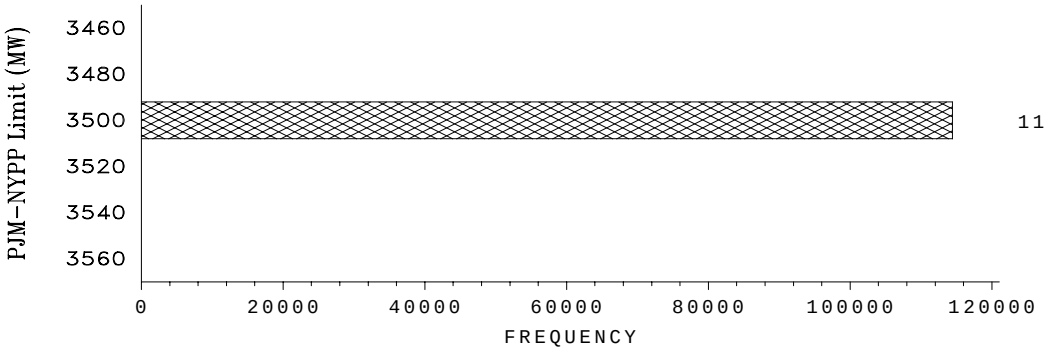
FLOW DURATION CURVE
FOR 1995 through 1998





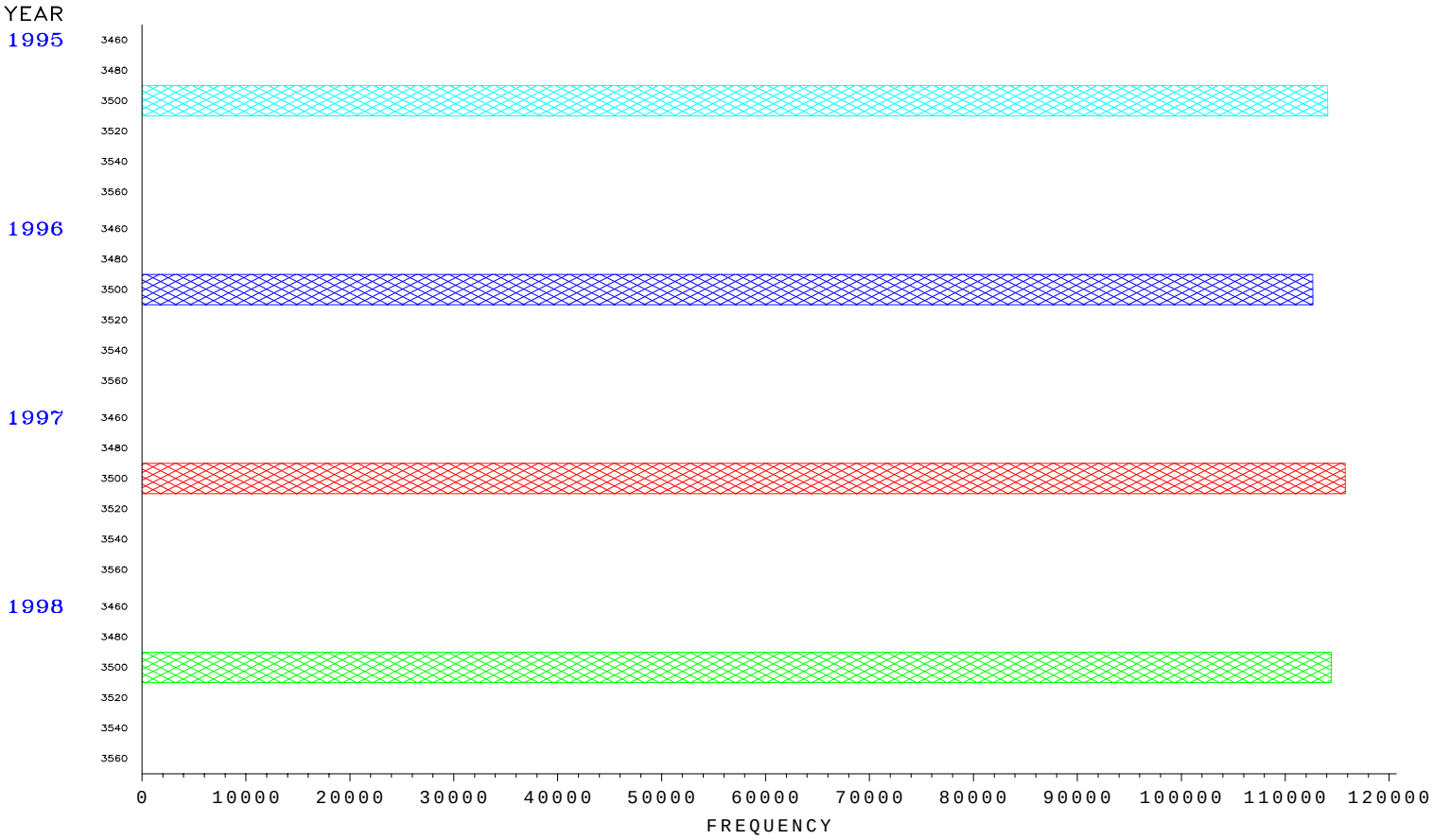
NYPP Transmission Use Statistics For January–December 1998

PJM – NYPP Limit

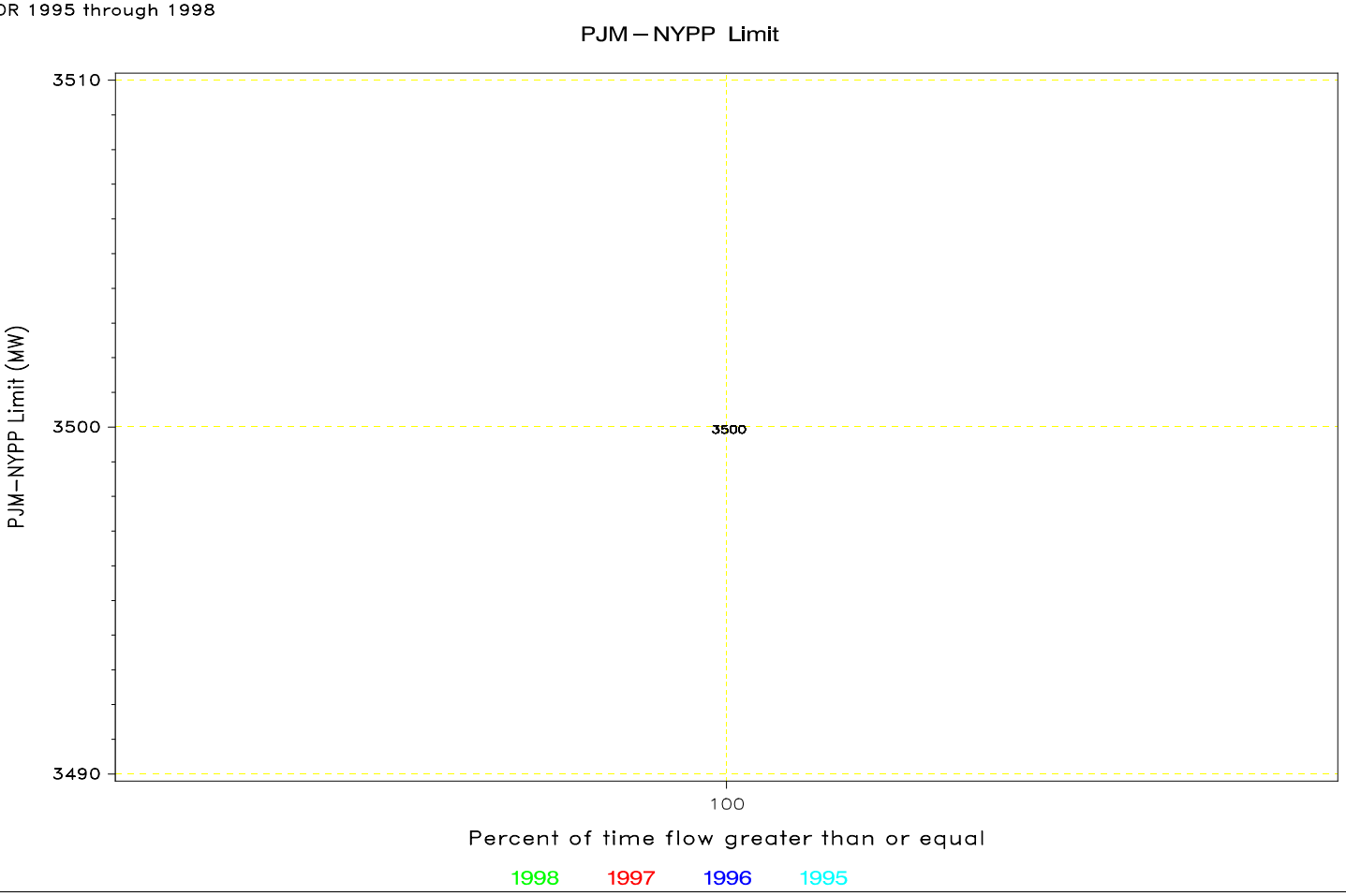


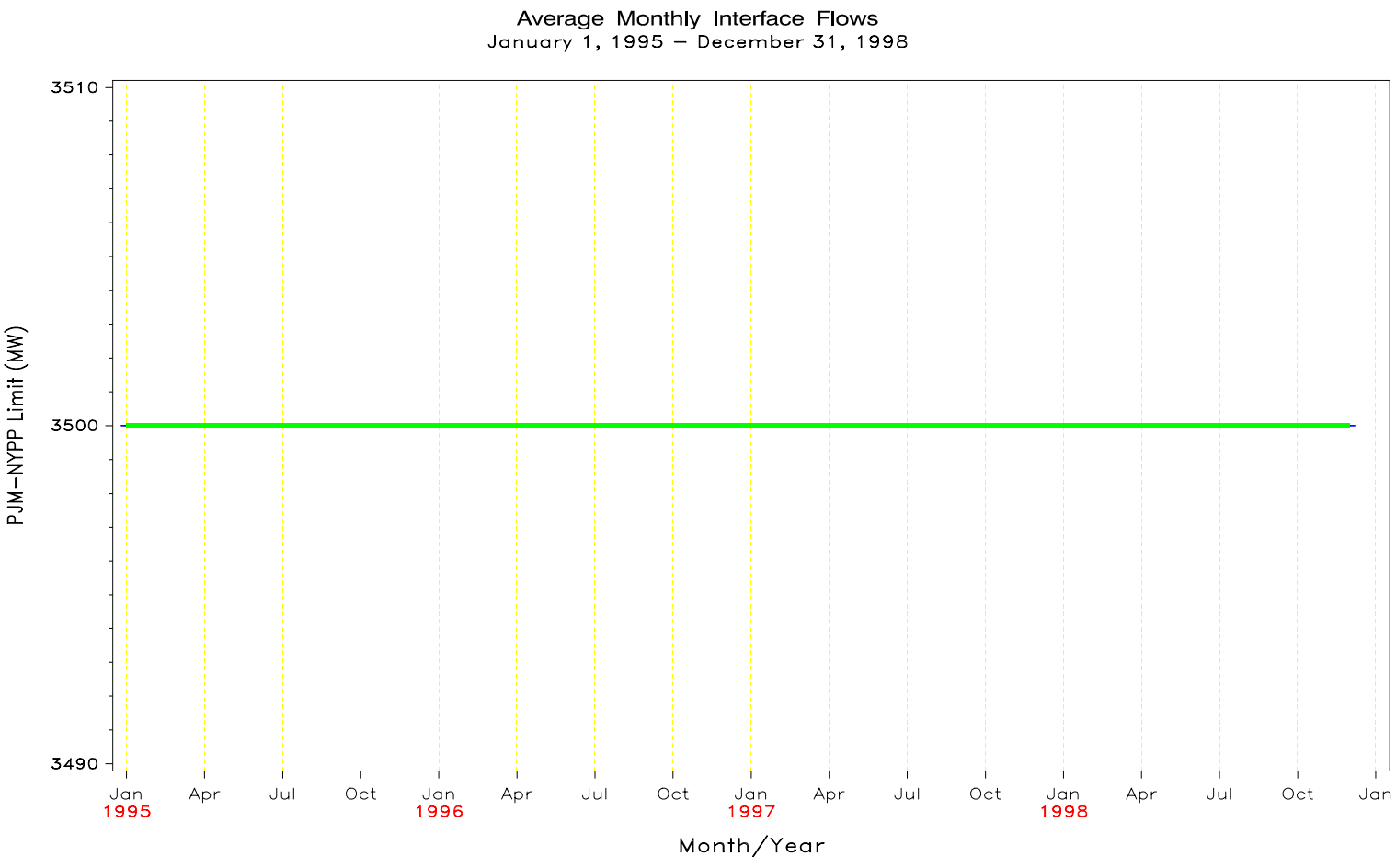
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
3460	0	0	0	0
3480	0	0	0	0
3500	114432	114432	100	100
3520	0	114432	0	100
3540	0	114432	0	100
3560	0	114432	0	100

PJM – NYPP Limit



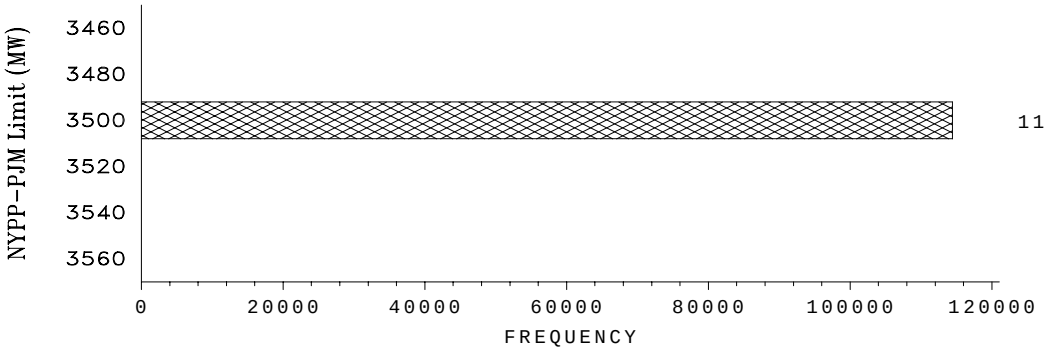
FLOW DURATION CURVE
FOR 1995 through 1998





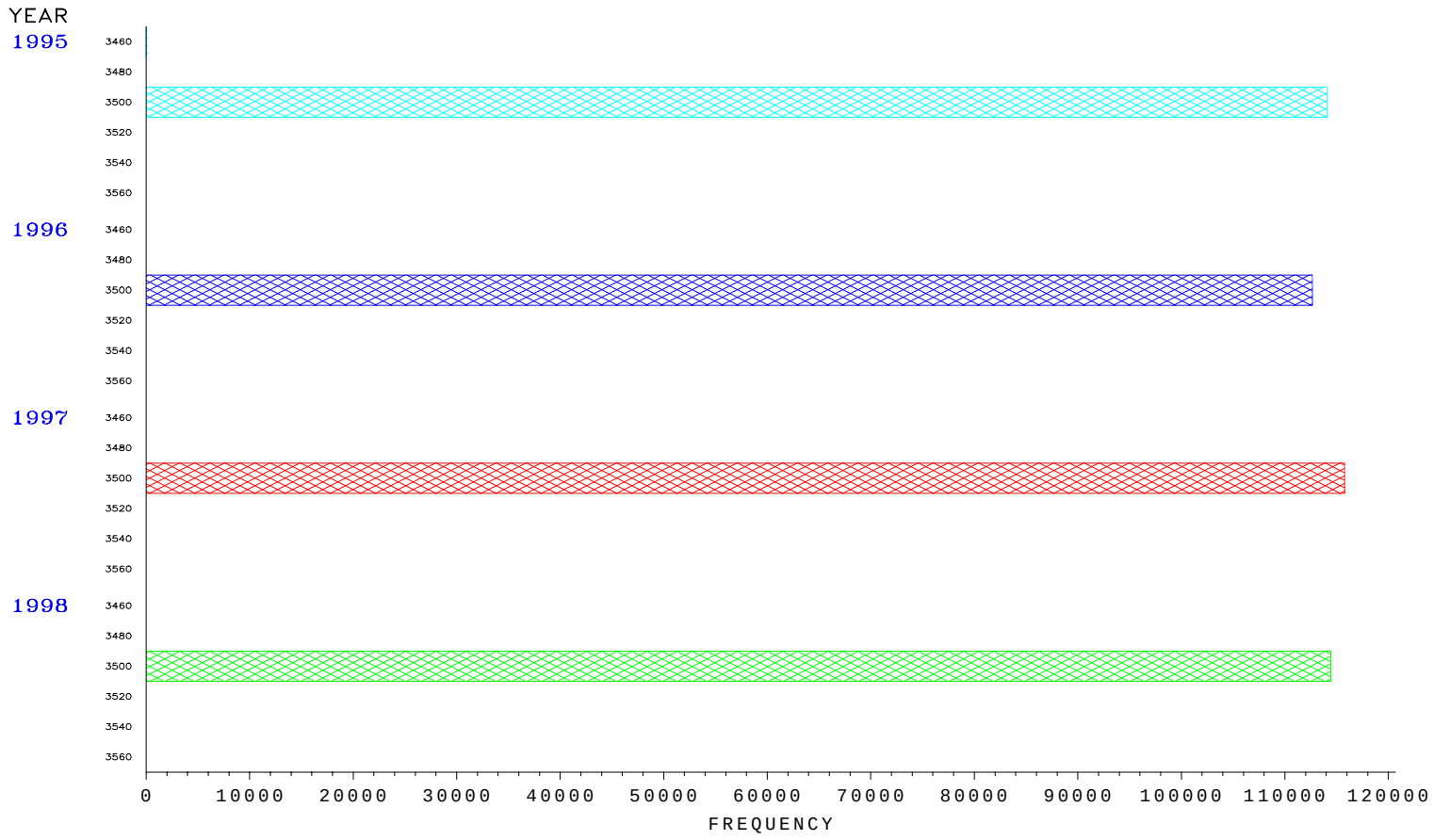
NYPP Transmission Use Statistics For January–December 1998

NYPP – PJM Limit

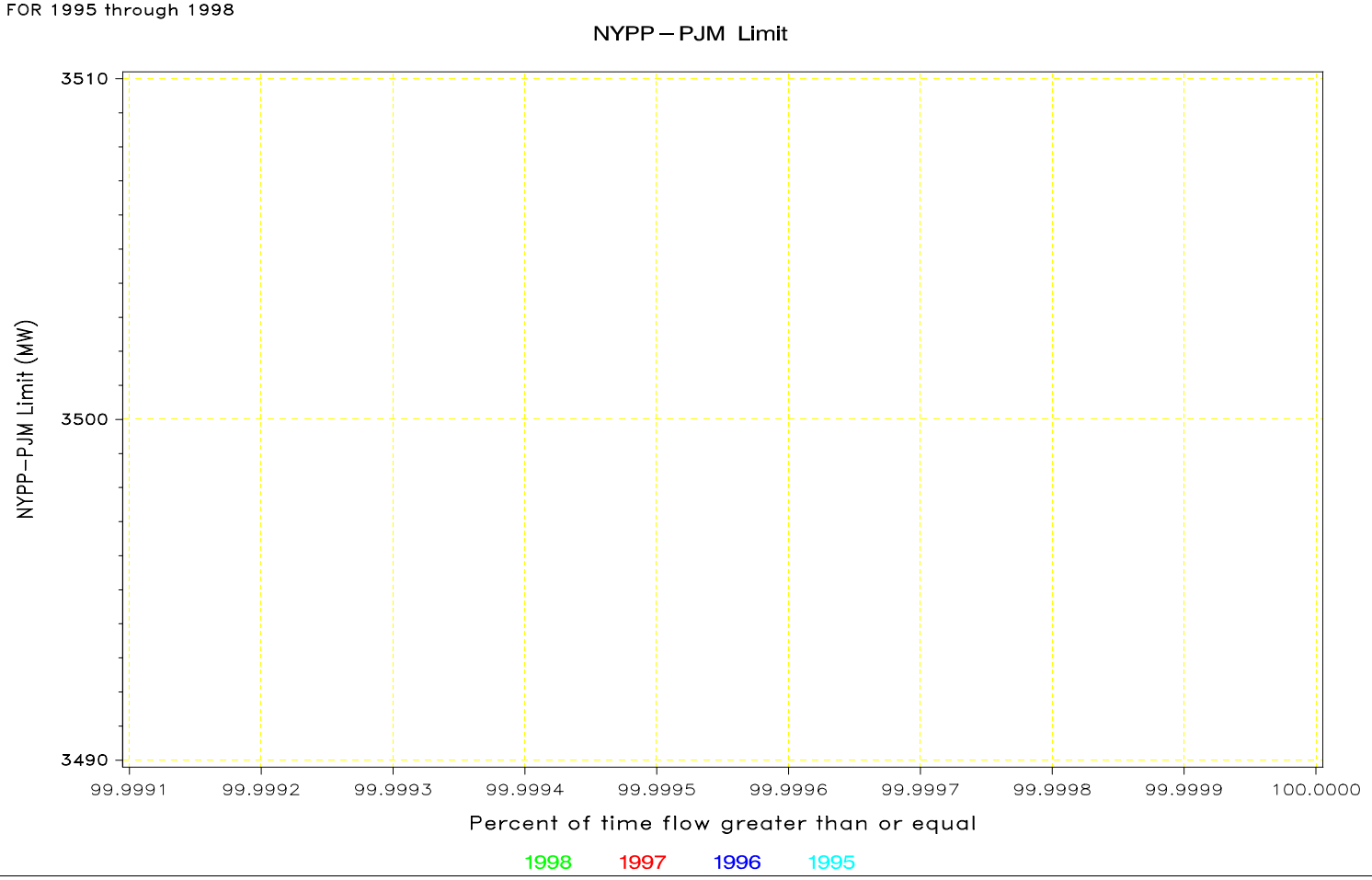


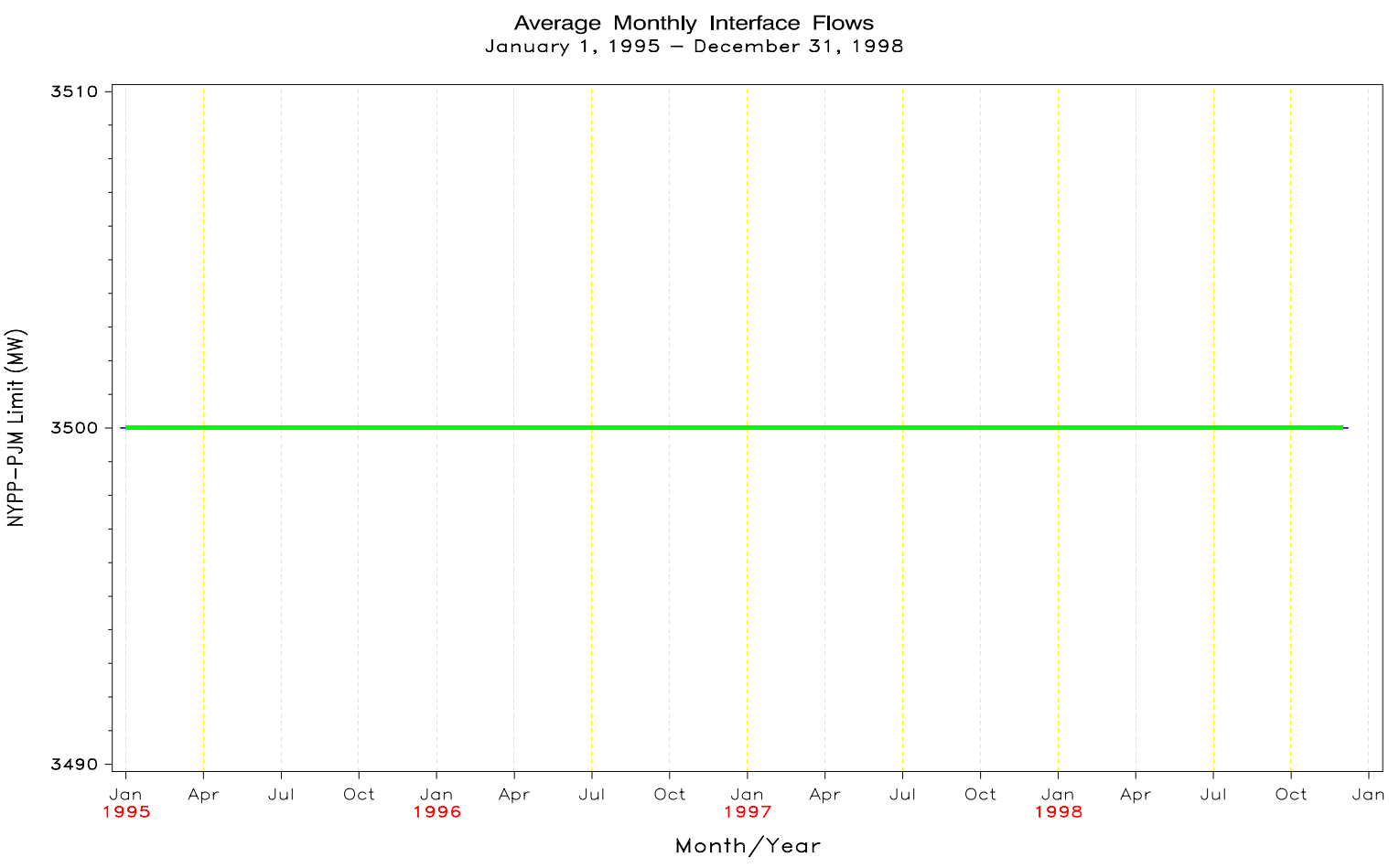
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
3460	0	0	0	0
3480	0	0	0	0
3500	114432	114432	100	100
3520	0	114432	0	100
3540	0	114432	0	100
3560	0	114432	0	100

NYPP – PJM Limit



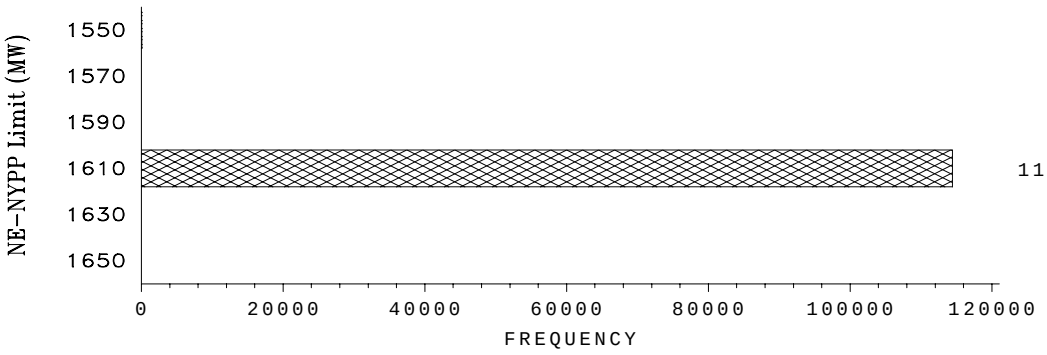
FLOW DURATION CURVE
FOR 1995 through 1998





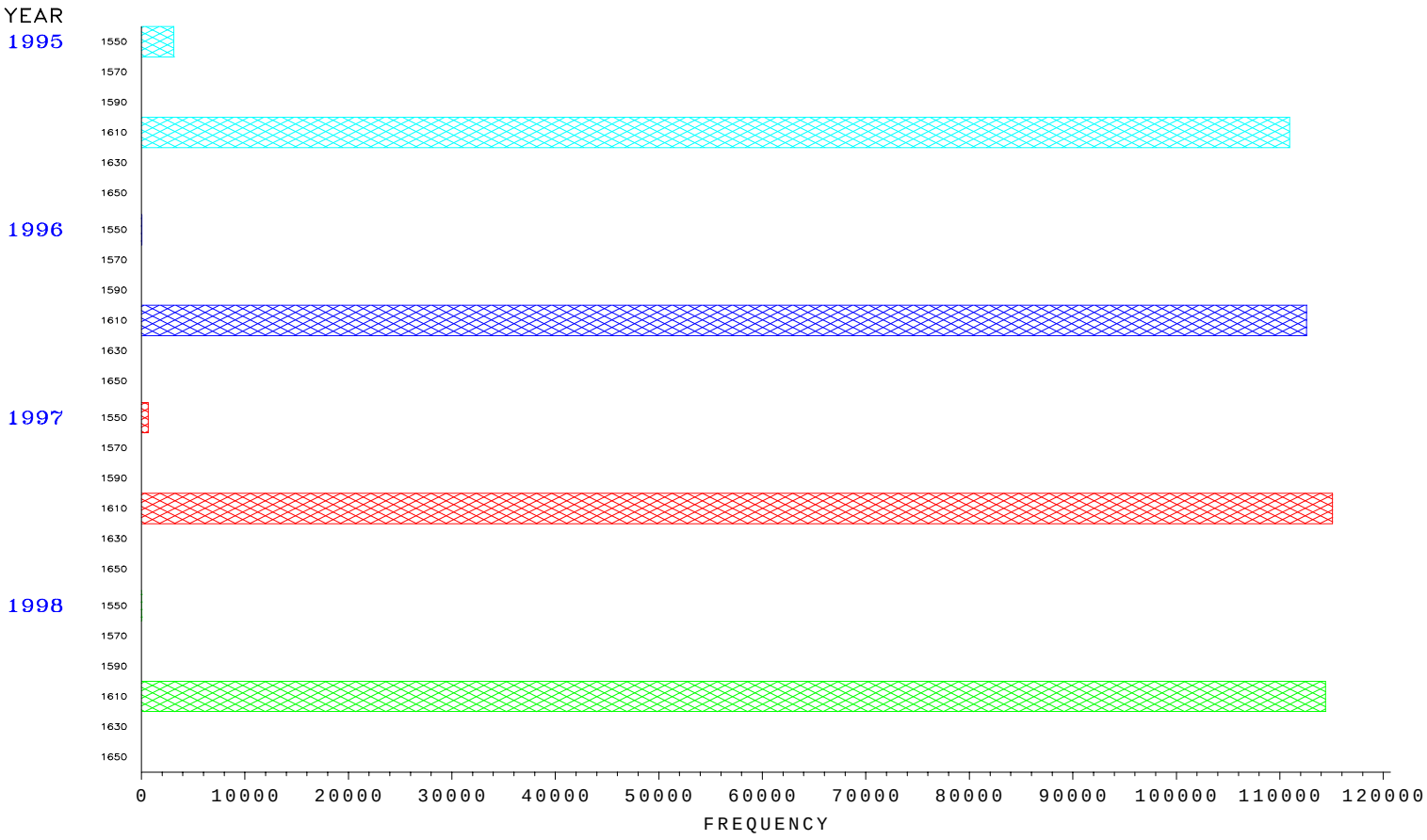
NYPP Transmission Use Statistics For January–December 1998

NE – NYPP Limit

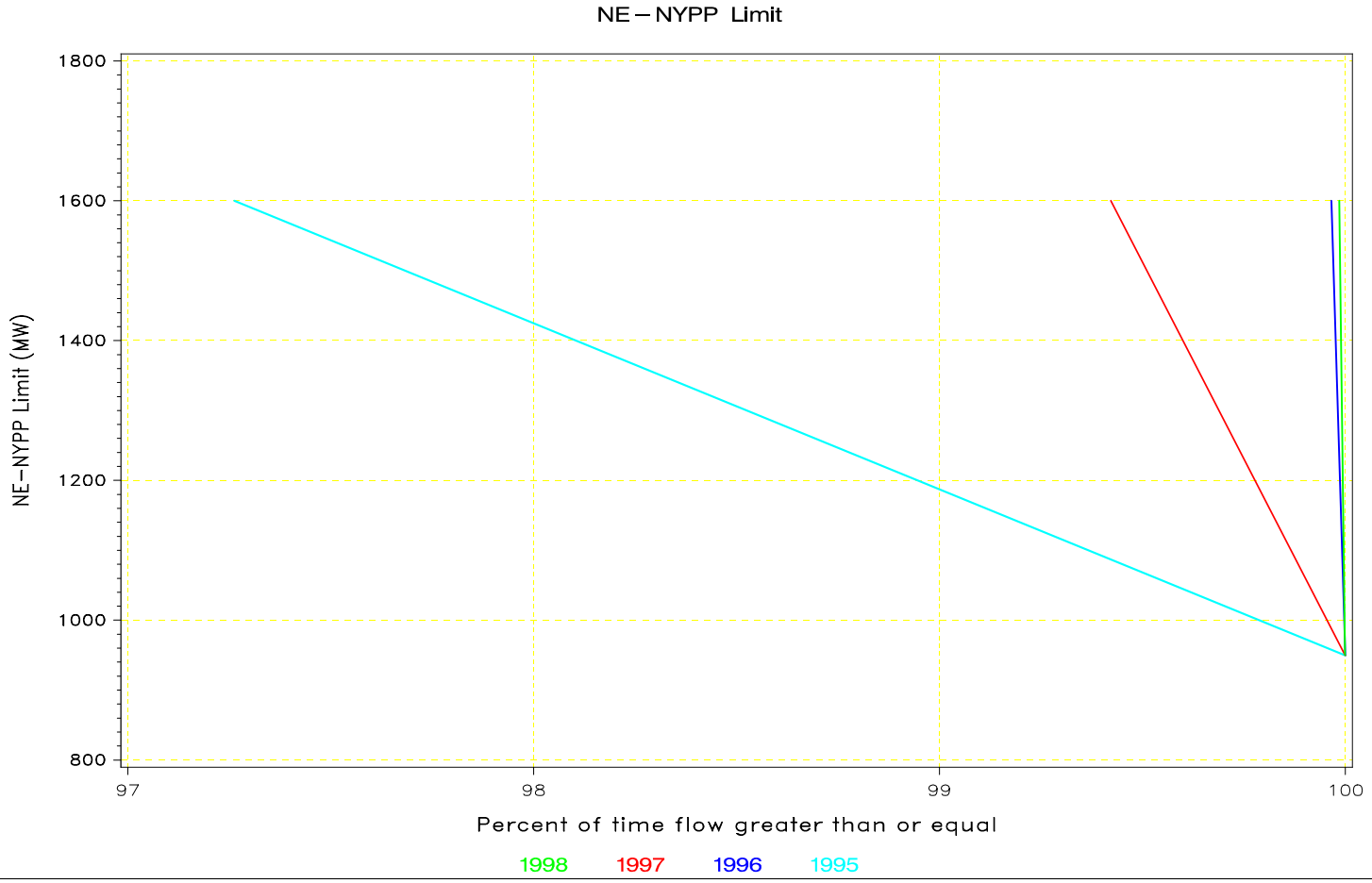


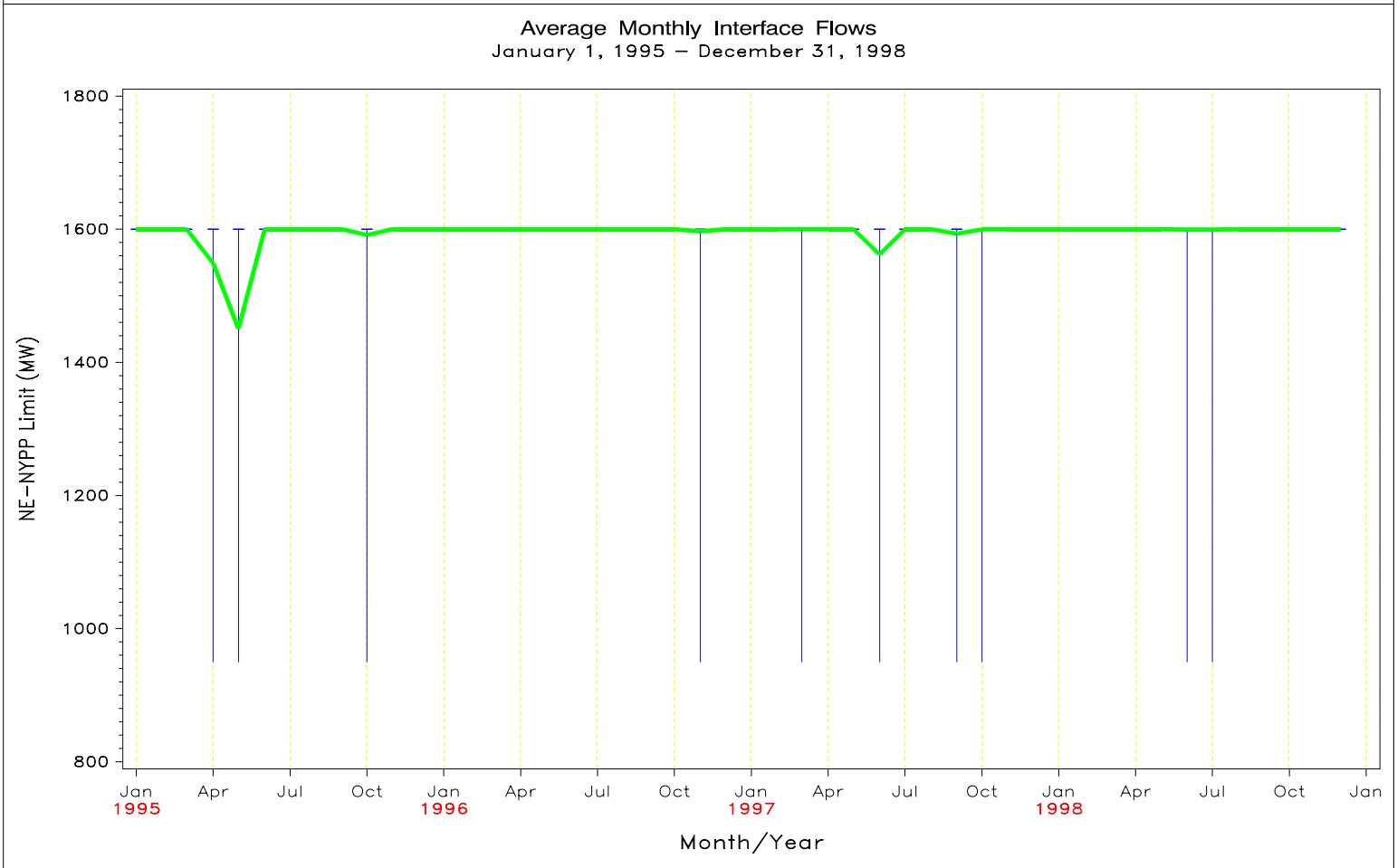
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1550	17	17	0.01	0.01
1570	0	17	0.00	0.01
1590	0	17	0.00	0.01
1610	114415	114432	99.99	100.00
1630	0	114432	0.00	100.00
1650	0	114432	0.00	100.00

NE – NYPP Limit



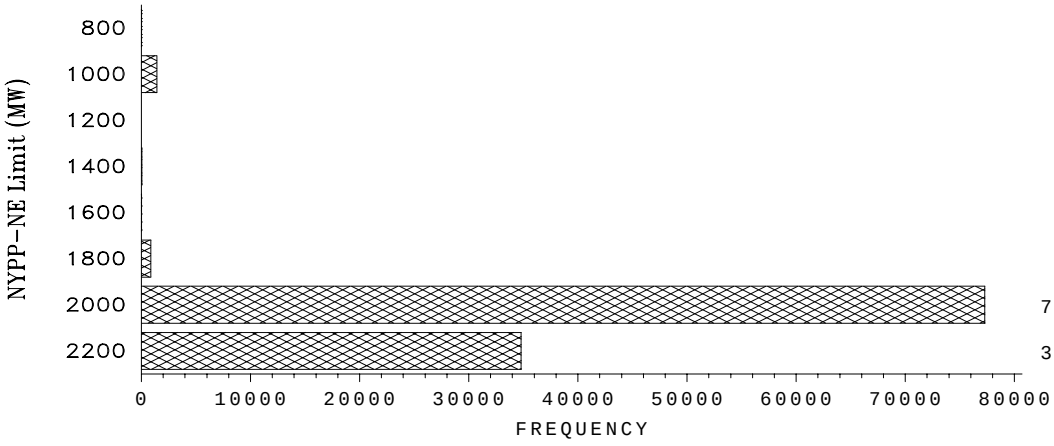
FLOW DURATION CURVE
FOR 1995 through 1998





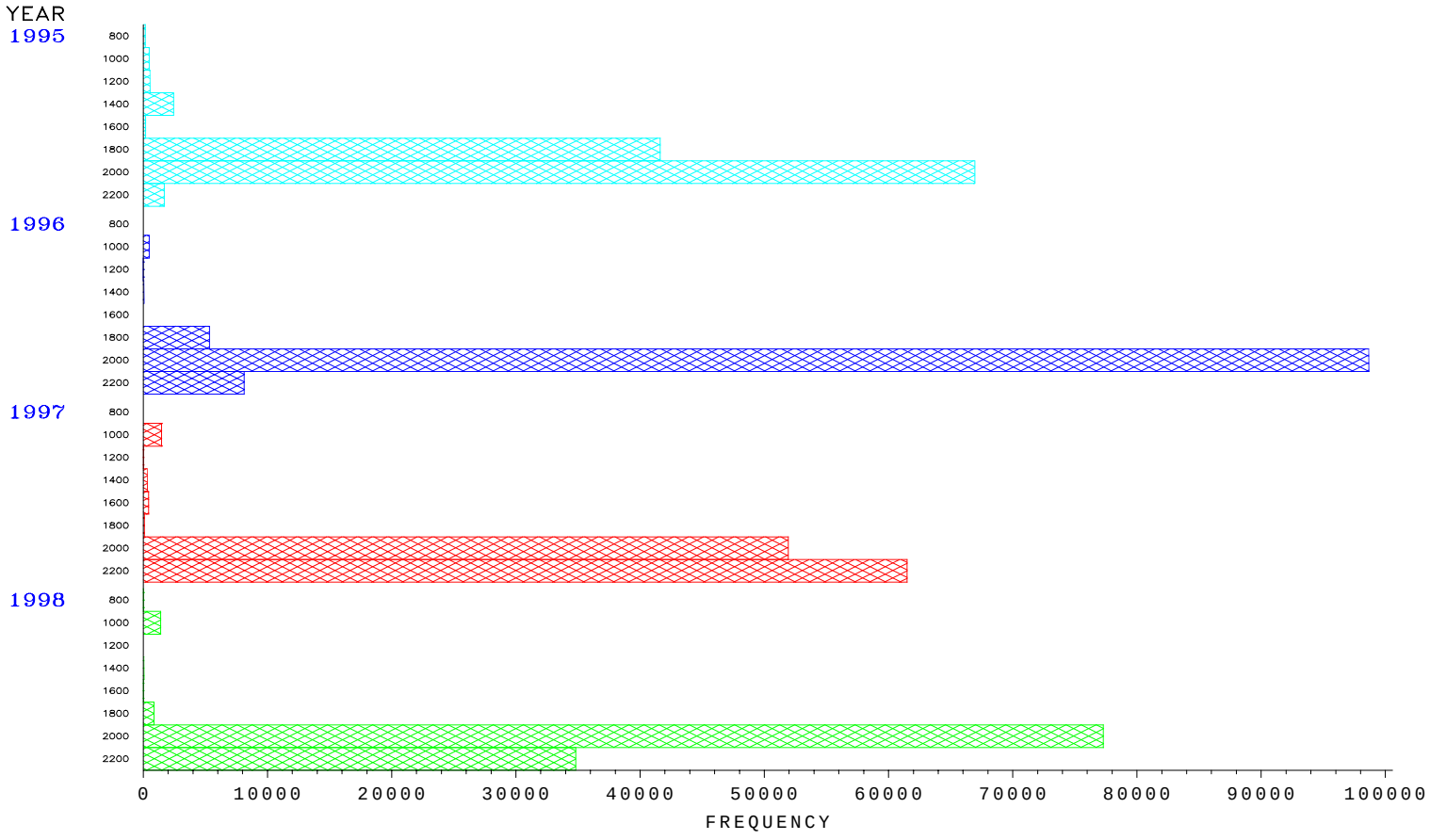
NYPP Transmission Use Statistics For January–December 1998

NYPP – NE Limit

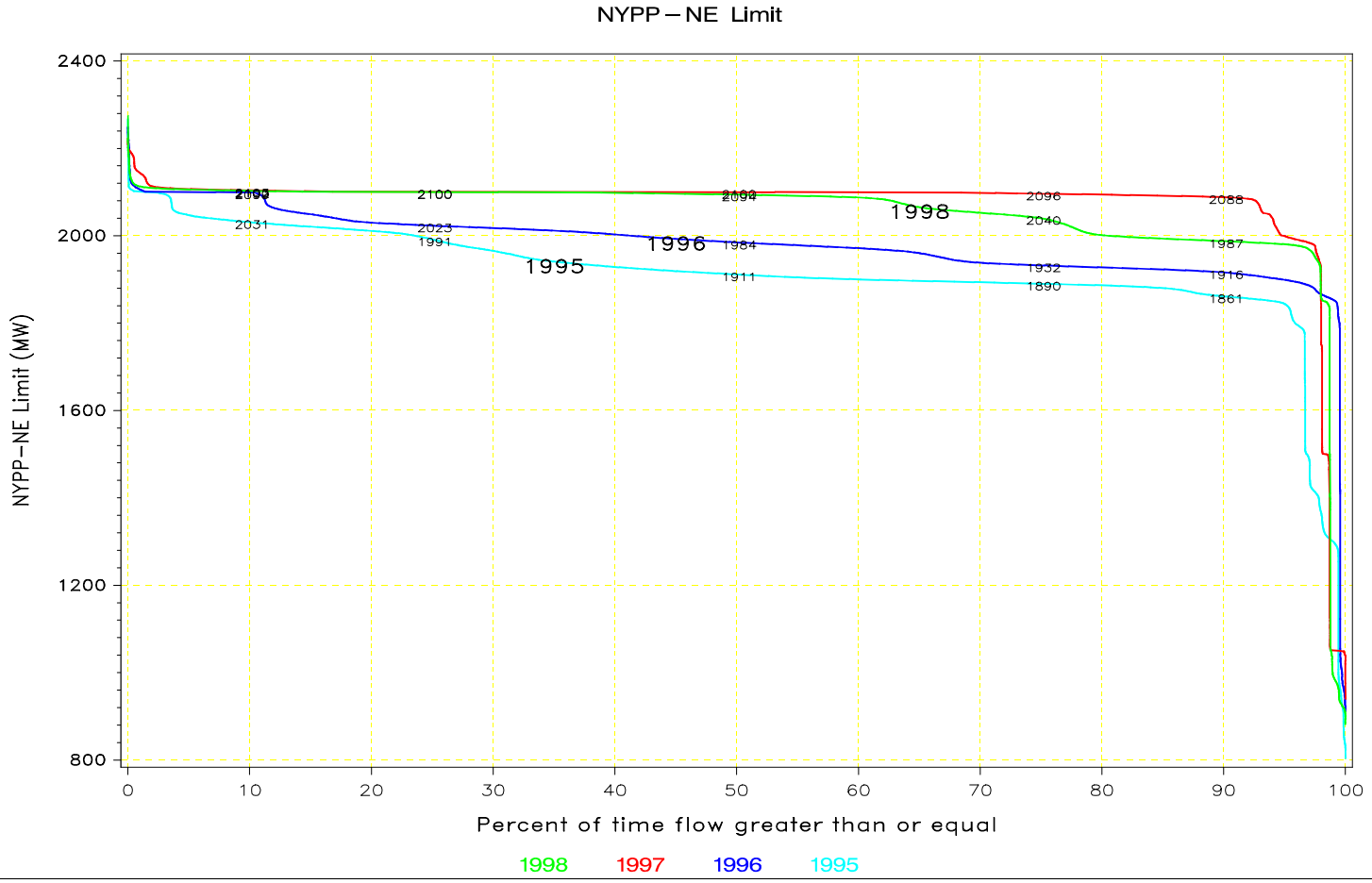


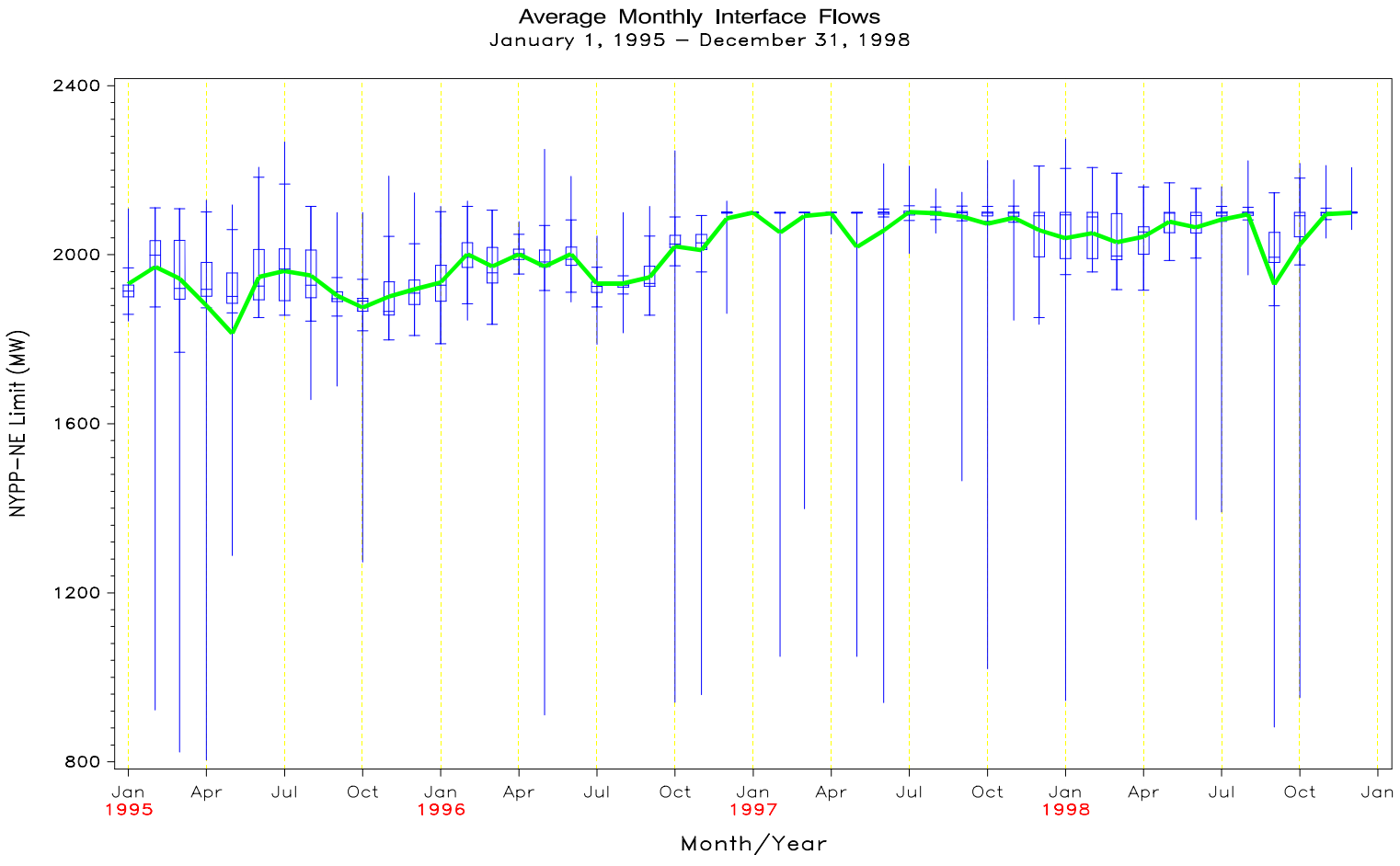
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
800	7	7	0.00	0.01
1000	1411	1418	1.23	1.24
1200	0	1418	0.00	1.24
1400	49	1467	0.04	1.28
1600	8	1475	0.01	1.29
1800	859	2334	0.75	2.04
2000	77292	79626	67.54	69.58
2200	34806	114432	30.42	100.00

NYPP – NE Limit

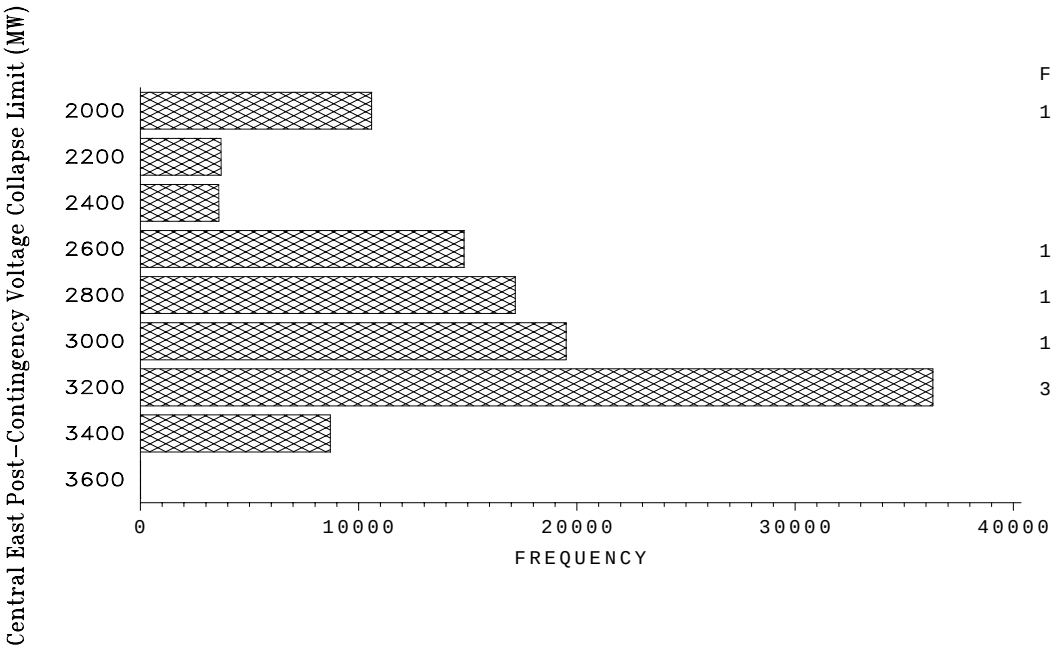


FLOW DURATION CURVE
FOR 1995 through 1998



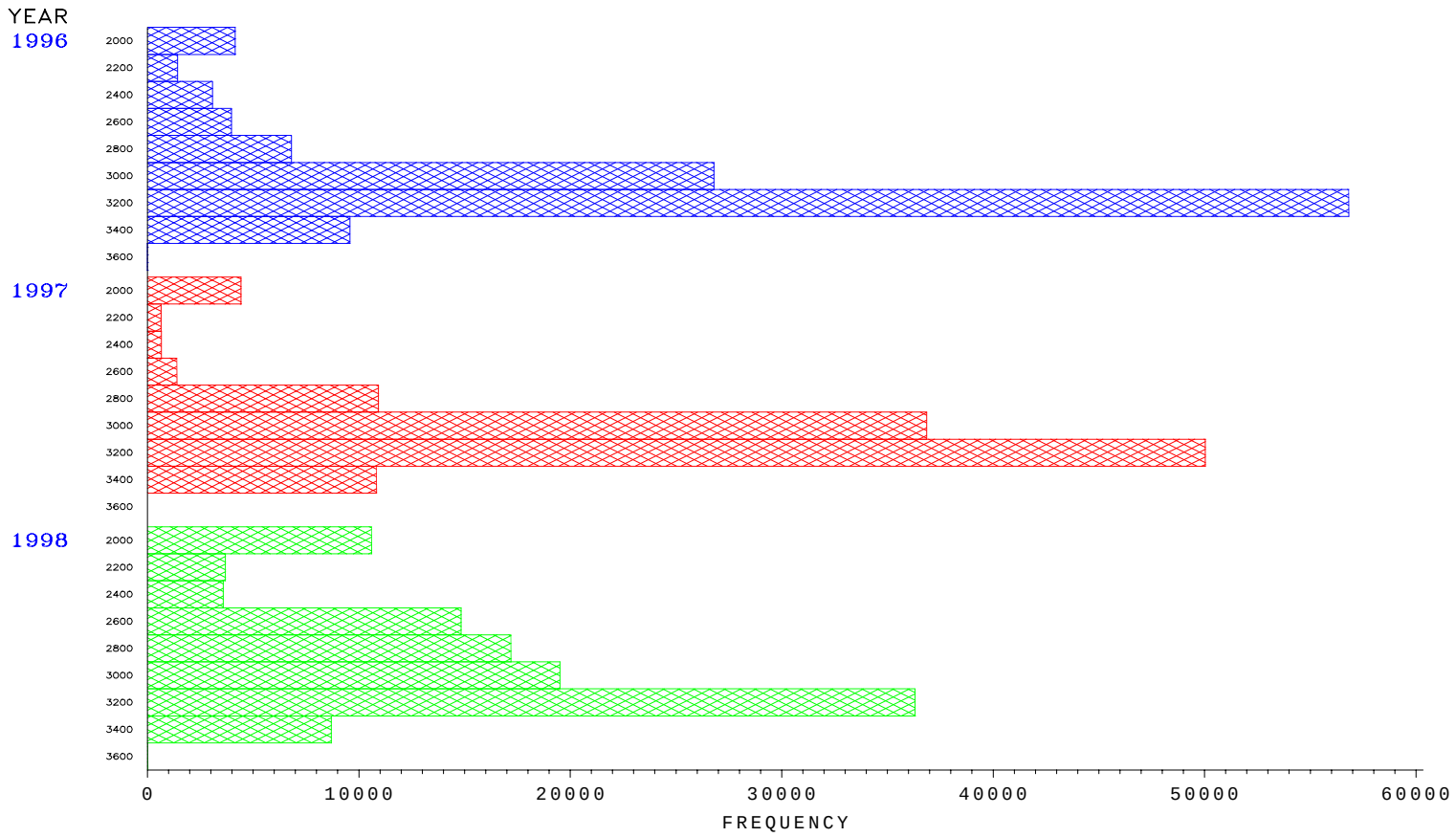


Central East Post – Contingency Voltage Collapse Limit
I/o New England Generation

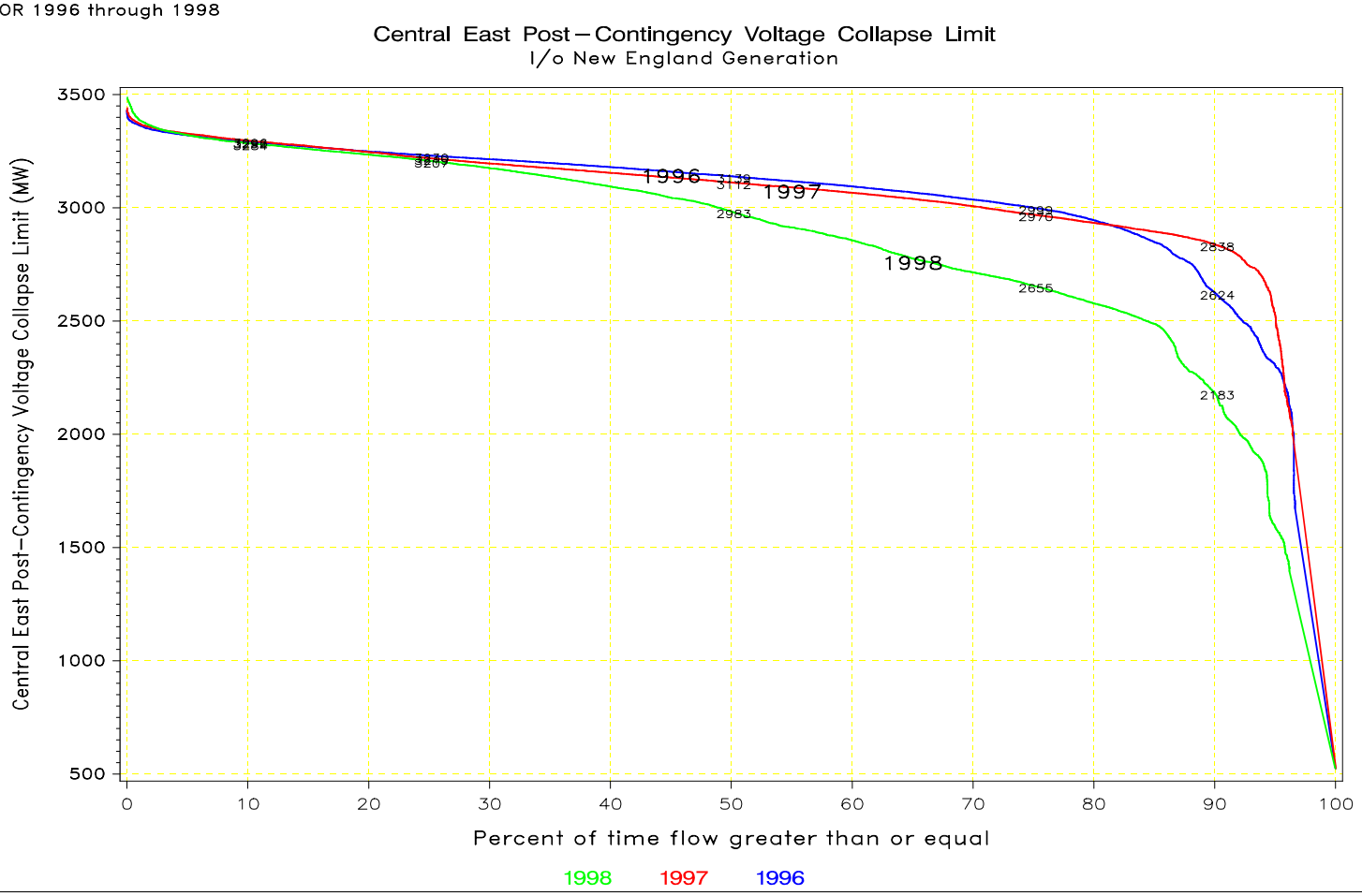


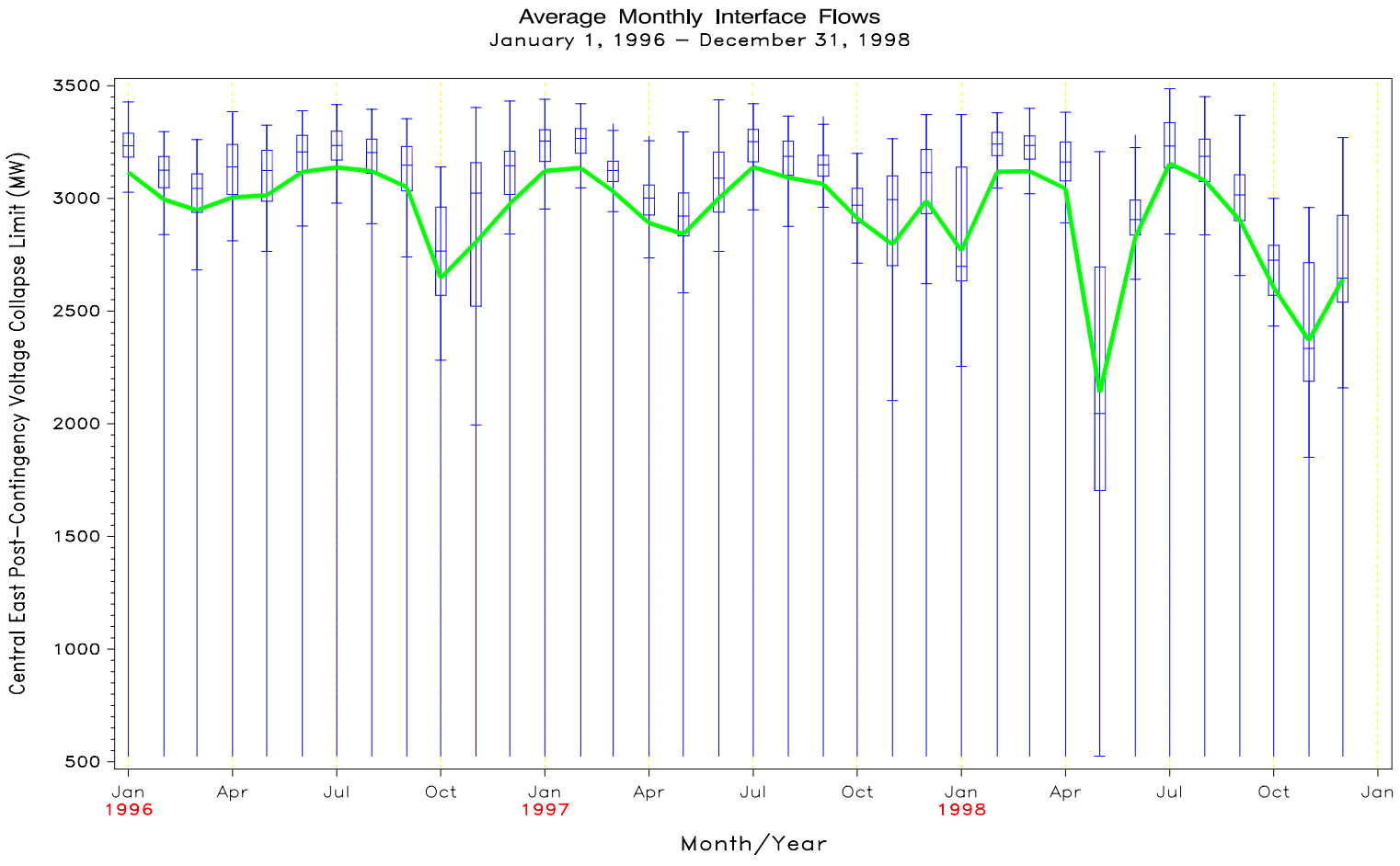
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
2000	10598	10598	9.26	9.26
2200	3692	14290	3.23	12.49
2400	3591	17881	3.14	15.63
2600	14837	32718	12.97	28.59
2800	17182	49900	15.02	43.61
3000	19508	69408	17.05	60.65
3200	36311	105719	31.73	92.39
3400	8703	114422	7.61	99.99
3600	10	114432	0.01	100.00

Central East Post – Contingency Voltage Collapse Limit
I/o New England Generation

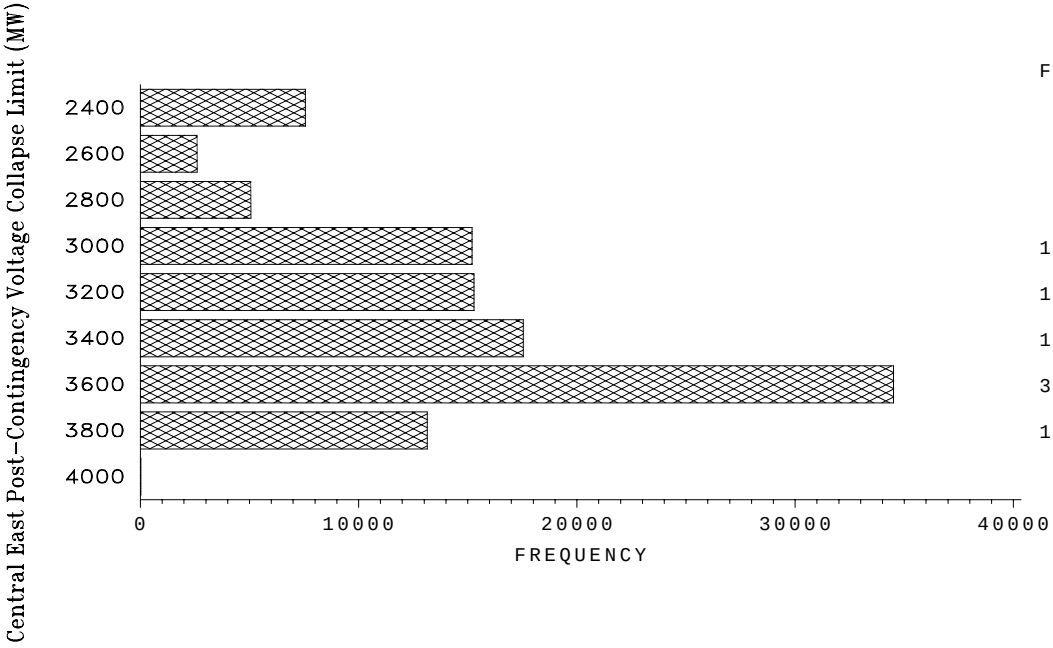


FLOW DURATION CURVE
FOR 1996 through 1998



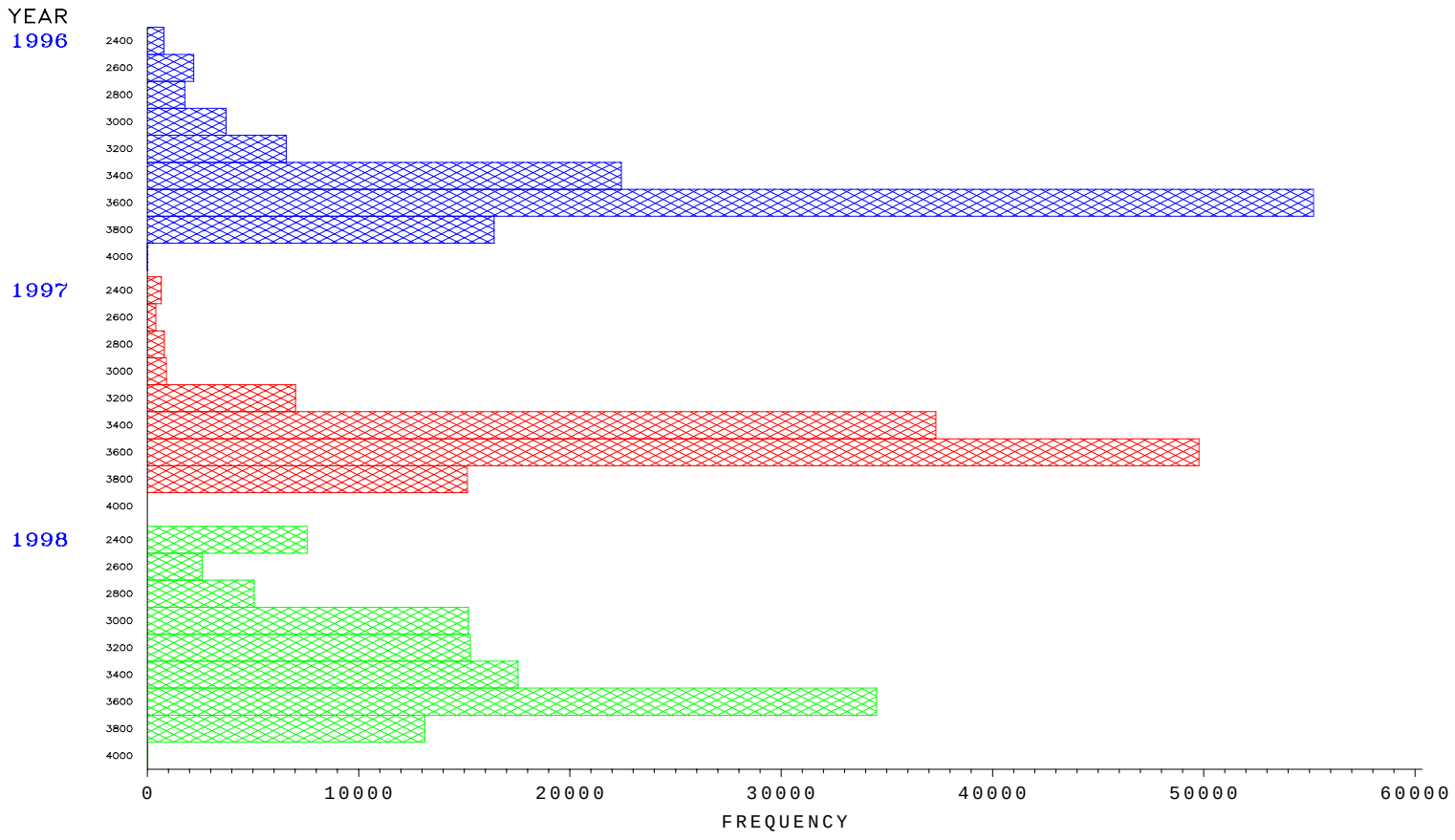


Central East Post – Contingency Voltage Collapse Limit
I/o Marcy South Tower

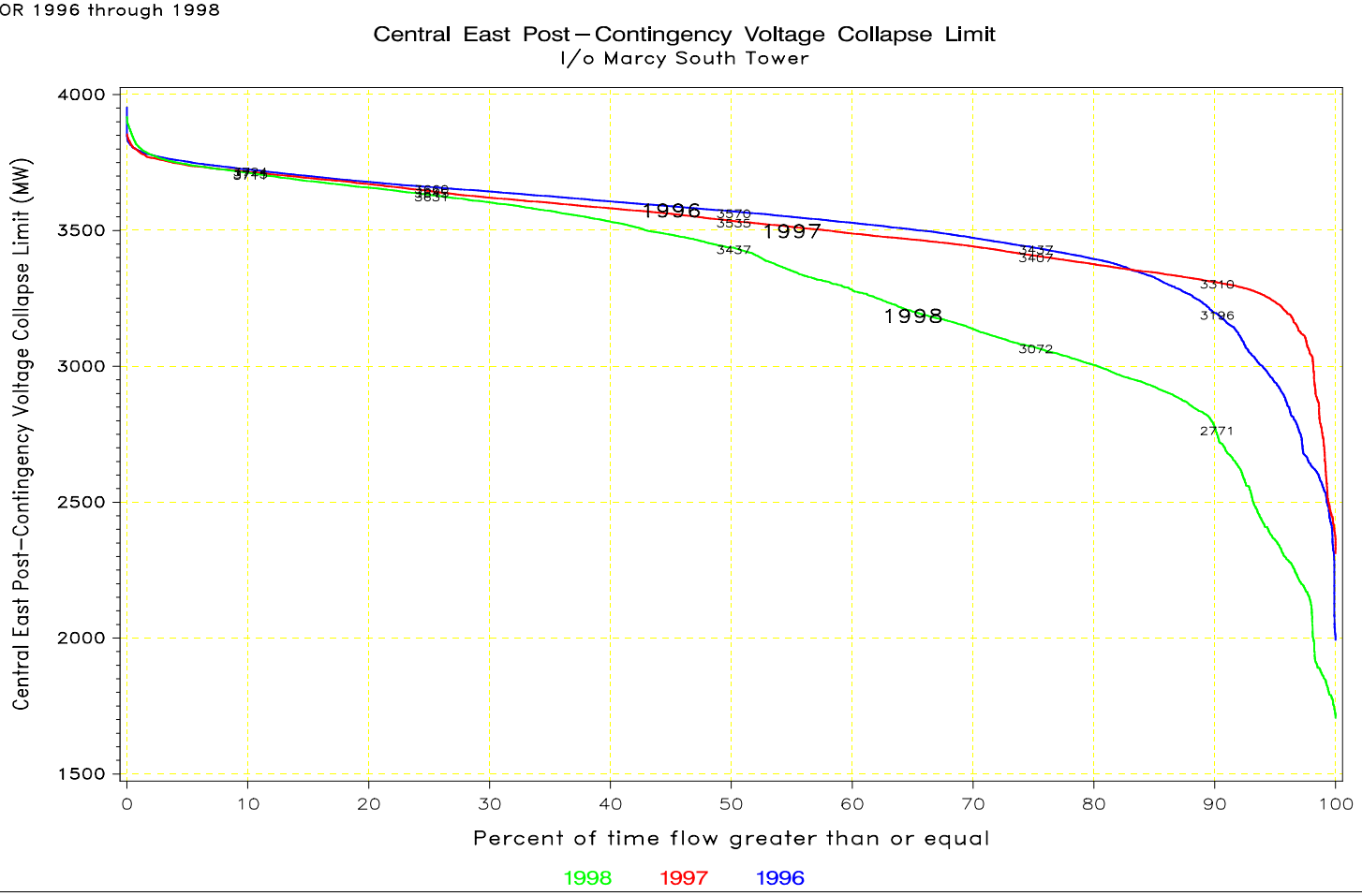


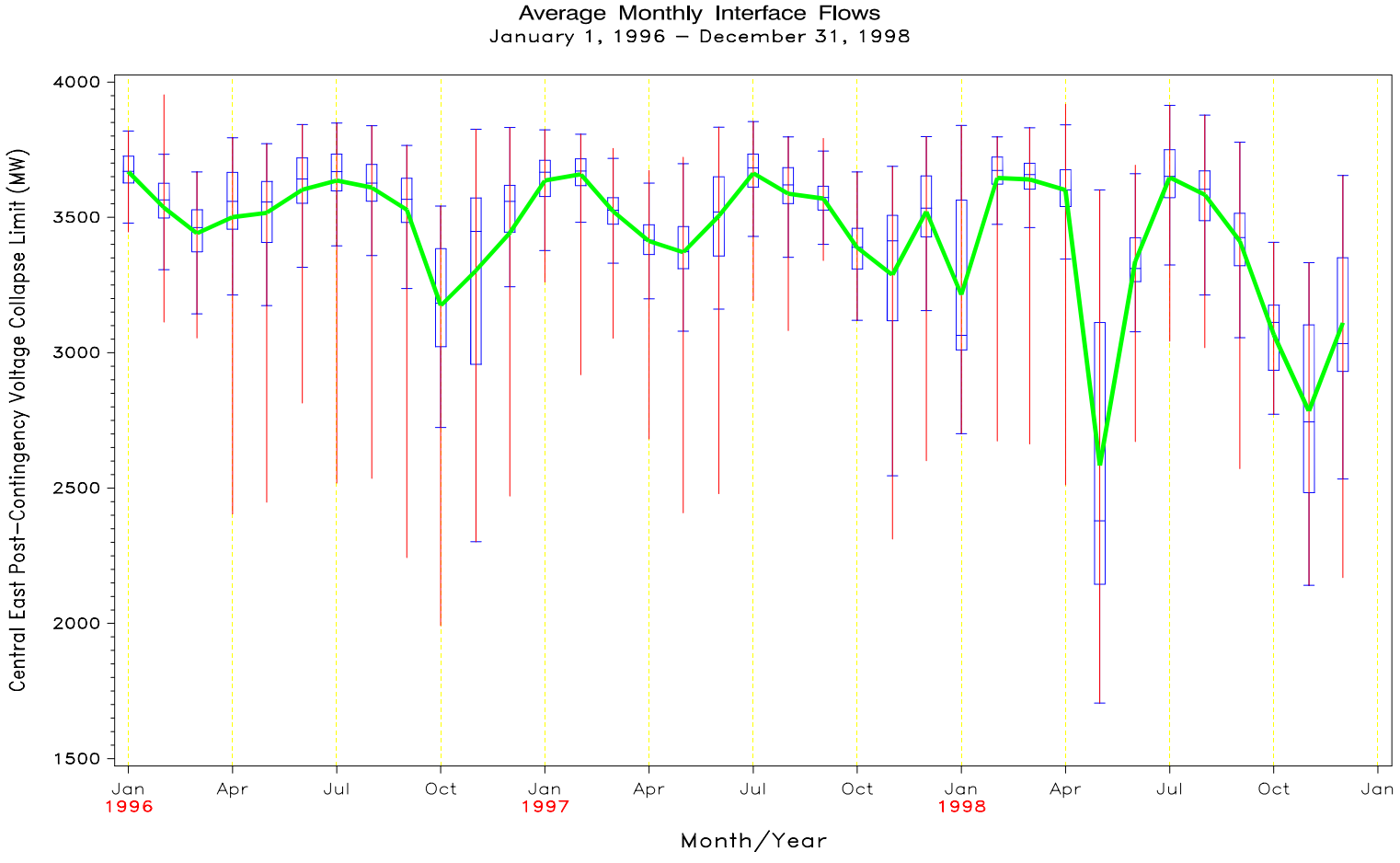
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
2400	7565	7565	6.82	6.82
2600	2596	10161	2.34	9.16
2800	5056	15217	4.56	13.72
3000	15203	30420	13.71	27.42
3200	15285	45705	13.78	41.20
3400	17547	63252	15.82	57.02
3600	34511	97763	31.11	88.14
3800	13141	110904	11.85	99.98
4000	18	110922	0.02	100.00

Central East Post – Contingency Voltage Collapse Limit
I/o Marcy South Tower



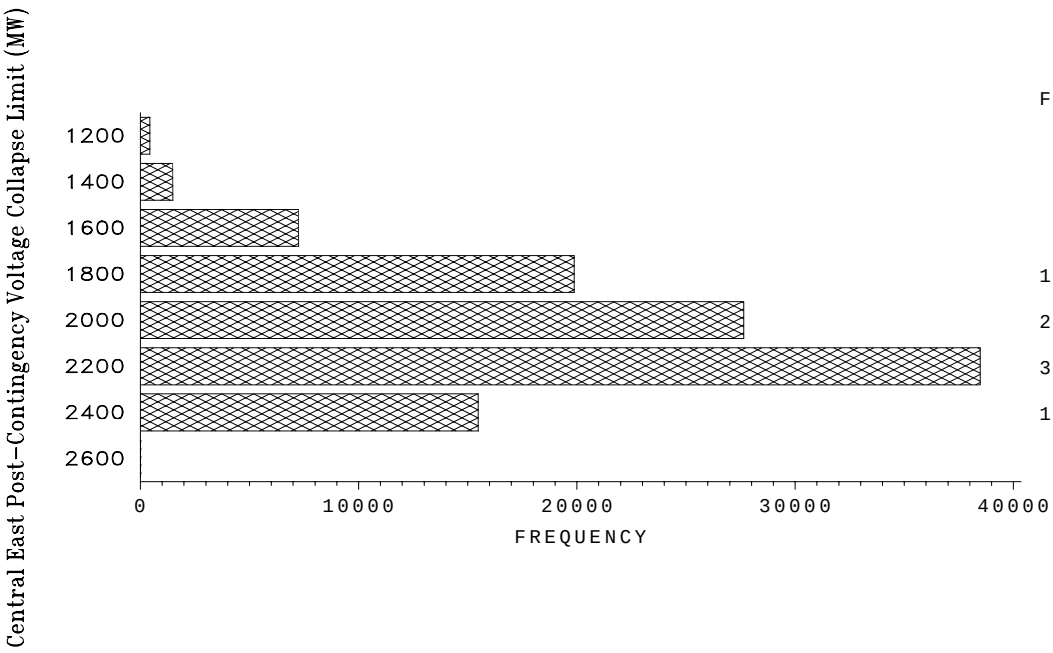
FLOW DURATION CURVE
FOR 1996 through 1998





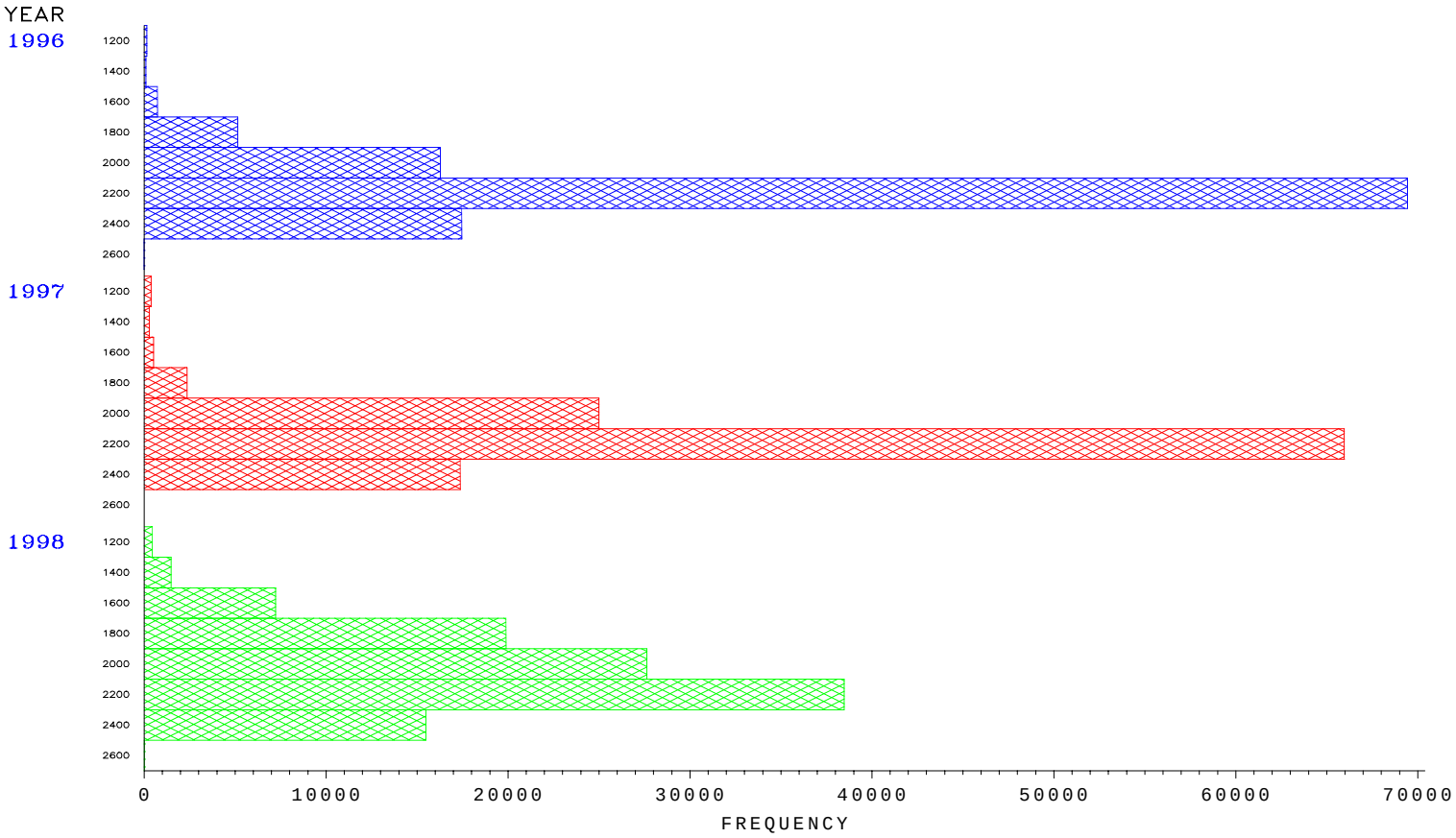
NYPP Transmission Use Statistics For January–December 1998

Central East Post – Contingency Voltage Collapse Limit
I/o New Scotland 99 Bus

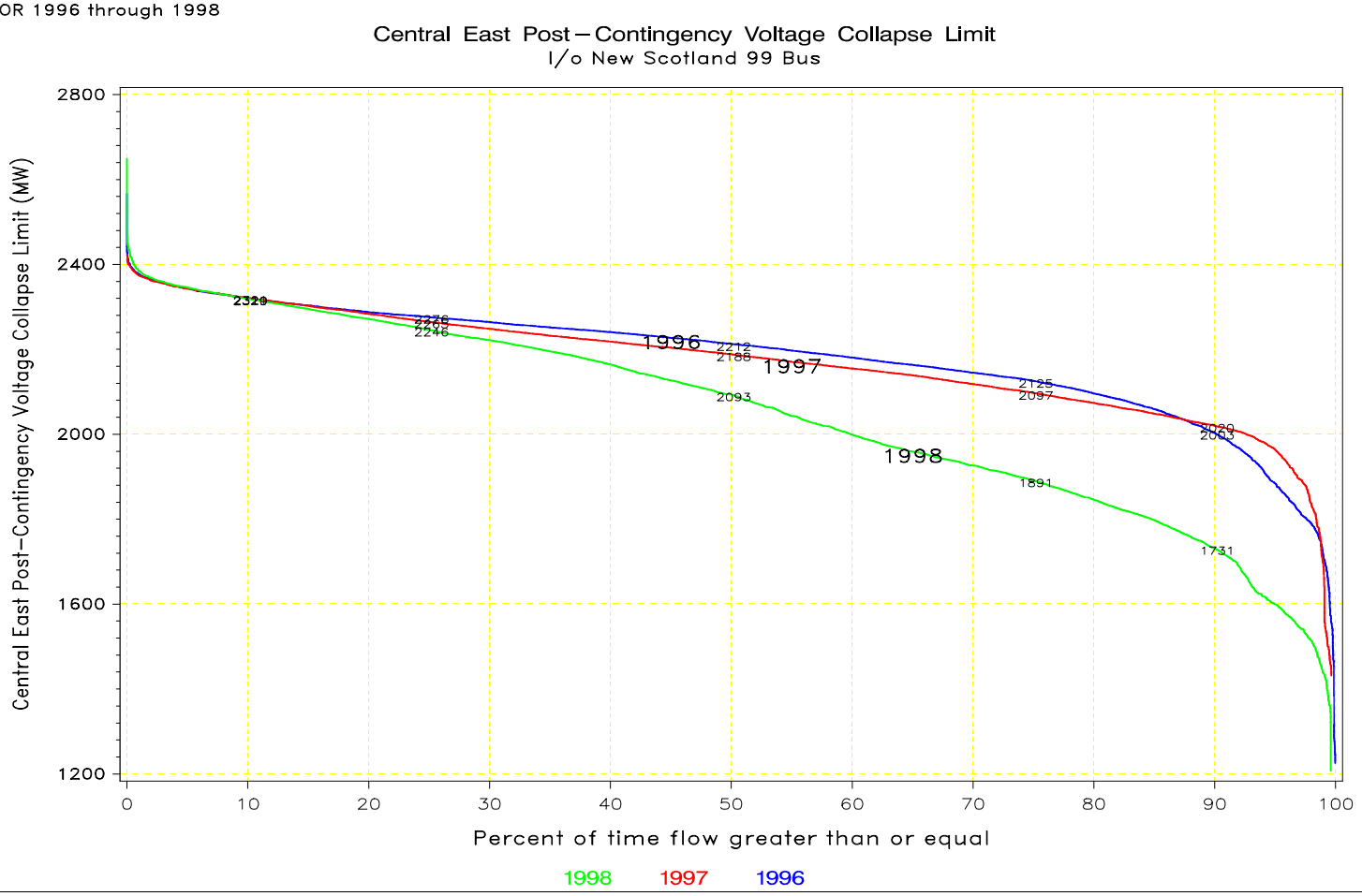


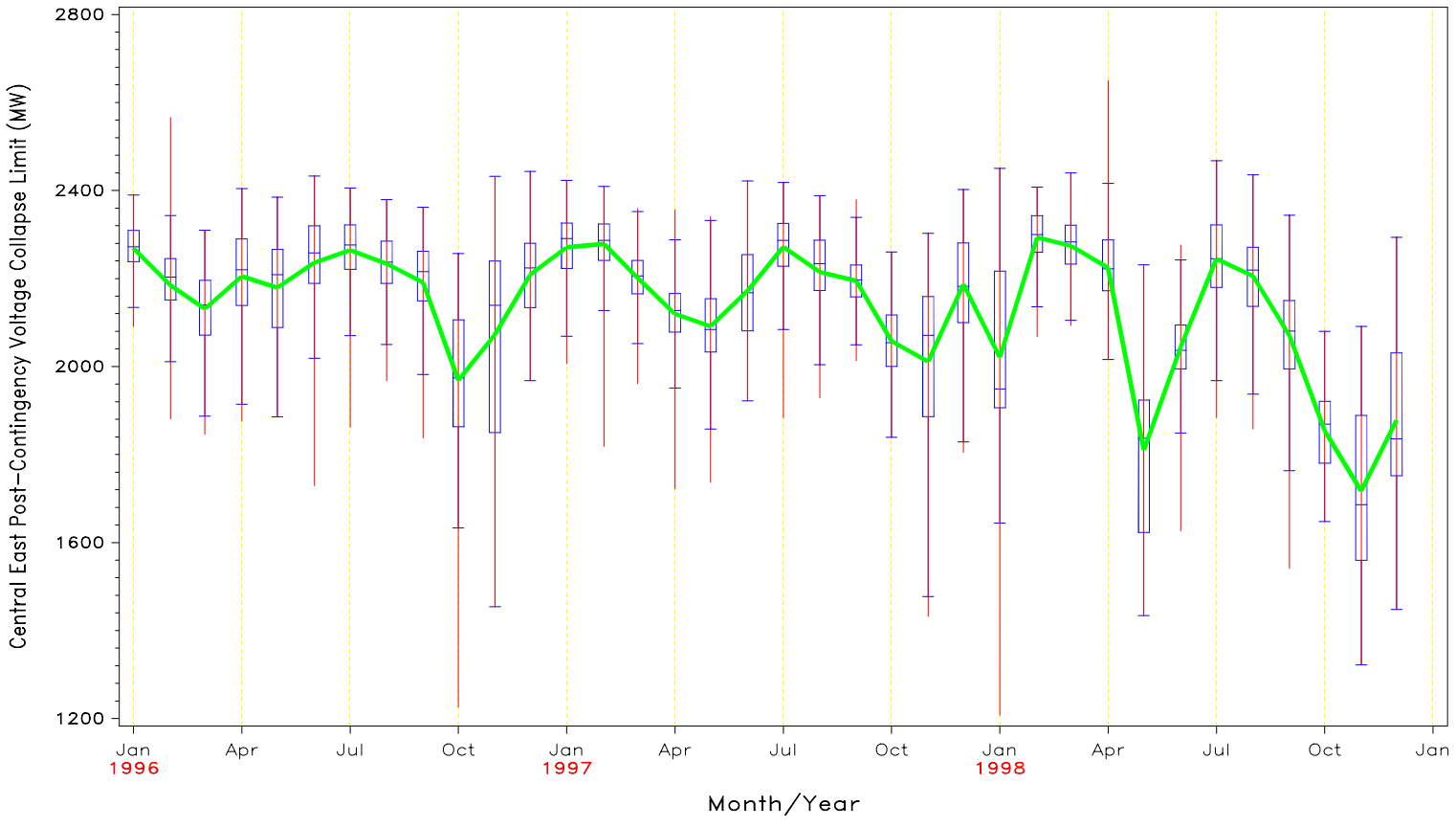
	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
1200	440	440	0.40	0.40
1400	1478	1918	1.34	1.73
1600	7232	9150	6.54	8.27
1800	19878	29028	17.97	26.24
2000	27637	56665	24.98	51.22
2200	38476	95141	34.78	86.01
2400	15476	110617	13.99	100.00
2600	3	110620	0.00	100.00

Central East Post – Contingency Voltage Collapse Limit
I/o New Scotland 99 Bus



FLOW DURATION CURVE
FOR 1996 through 1998





Appendix D

Interfaces

Simultaneously

Constraining

Interfaces Simultaneously Constraining	1995		1996		1997		1998	
	Nr.of Hours	Percent of Year	Nr.of Hours	Percent of Year	Nr.of Hours	Percent of Year	Nr.of Hours	Percent of Year
CENTRAL EAST NET P/C, DYSINGER EAST	.	.	248	3%	70	0.80%	4	0.00%
CENTRAL EAST NET P/C, MOSES SOUTH	.	.	2	0.00%	9	0.10%	1	0.00%
CENTRAL EAST NET P/C, MOSES SOUTH, DYSINGER EAST	.	.	1	0.00%	.	.	.	.
CENTRAL EAST NET P/C, SPRN/DUNWOODIE	.	.	244	3%	115	1%	37	0.40%
CENTRAL EAST NET P/C, SPRN/DUNWOODIE, DYSINGER EAST	.	.	12	0.10%	1	0.00%		
CENTRAL EAST NET P/C, TOTAL EAST	.	.	84	1%	222	3%	79	0.90%
CENTRAL EAST NET P/C, TOTAL EAST, DYSINGER EAST	.	.	2	0.00%	6	0.10%		
CENTRAL EAST NET P/C, TOTAL EAST, UPNY CON ED	.	.	.	.	1	0.00%		
CENTRAL EAST NET P/C, UPNY CON ED	.	.	10	0.10%	13	0.10%	2	0.00%
CENTRAL EAST NET P/C, UPNY CON ED, DYSINGER EAST	.	.	1	0.00%	.	.	.	.
CENTRAL EAST, CENTRAL EAST NET P/C, DYSINGER EAST	.	.	46	0.50%	61	0.70%		
CENTRAL EAST, CENTRAL EAST NET P/C, MOSES SOUTH	.	.	2	0.00%	2	0.00%	1	0.00%
CENTRAL EAST, CENTRAL EAST NET P/C, MOSES SOUTH, DYSINGER EAST	.	.	1	0.00%	.	.	.	.
CENTRAL EAST, CENTRAL EAST NET P/C, SPRN/DUNWOODIE	.	.	46	0.50%	66	0.80%	27	0.30%
CENTRAL EAST, CENTRAL EAST NET P/C, SPRN/DUNWOODIE, DYSINGER EAST	.	.	4	0.00%	1	0.00%		
CENTRAL EAST, CENTRAL EAST NET P/C, TOTAL EAST	.	.	12	0.10%	380	4%	113	1%
CENTRAL EAST, CENTRAL EAST NET P/C, TOTAL EAST, DYSINGER EAST	.	.	.	.	17	0.20%		
CENTRAL EAST, CENTRAL EAST NET P/C, TOTAL EAST, SPRN/DUNWOODIE	.	.	.	.	7	0.10%	4	0.00%
CENTRAL EAST, CENTRAL EAST NET P/C, UPNY CON ED	.	.	16	0.20%	14	0.20%		
CENTRAL EAST, CENTRAL EAST NET P/C, UPNY CON ED, SPRN/DUNWOODIE	.	.	1	0.00%	.	.	.	.
CENTRAL EAST, DYSINGER EAST	159	2%	7	0.10%	27	0.30%	4	0.00%
CENTRAL EAST, HQ-NYPP	3	0.00%	.	.	.	.	.	.
CENTRAL EAST, HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
CENTRAL EAST, MOSES SOUTH	5	0.10%	1	0.00%	1	0.00%	9	0.10%
CENTRAL EAST, MOSES SOUTH, DYSINGER EAST	4	0.00%	.	.	.	.	.	.
CENTRAL EAST, MOSES SOUTH, HQ-NYPP	.	.	.	.	.	.	.	.
CENTRAL EAST, MOSES SOUTH, HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
CENTRAL EAST, OH-NYPP	7	0.10%	.	.	.	.	.	.
CENTRAL EAST, OH-NYPP, DYSINGER EAST	3	0.00%	.	.	.	.	.	.
CENTRAL EAST, OH-NYPP, HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
CENTRAL EAST, SPRN/DUNWOODIE	183	2%	9	0.10%	31	0.40%	2	0.00%
CENTRAL EAST, SPRN/DUNWOODIE, DYSINGER EAST	.	.	1	0.00%	.	.	.	.
CENTRAL EAST, SPRN/DUNWOODIE, HQ-NYPP	.	.	.	.	.	.	.	.
CENTRAL EAST, TOTAL EAST	568	6%	1	0.00%	133	2%	35	0%
CENTRAL EAST, TOTAL EAST, DYSINGER EAST	1	0.00%	.	.	13	0.10%		
CENTRAL EAST, TOTAL EAST, HQ-NYPP	.	.	.	.	.	.	.	.
CENTRAL EAST, TOTAL EAST, HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
CENTRAL EAST, TOTAL EAST, MOSES SOUTH, HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
CENTRAL EAST, TOTAL EAST, SPRN/DUNWOODIE	9	0.10%	.	.	1	0.00%		
CENTRAL EAST, TOTAL EAST, SPRN/DUNWOODIE, HQ-NYPP	.	.	.	.	.	.	.	.
CENTRAL EAST, TOTAL EAST, UPNY CON ED	11	0.10%	.	.	.	.	.	.
CENTRAL EAST, TOTAL EAST, UPNY CON ED, DYSINGER EAST	.	.	.	.	.	.	.	.
CENTRAL EAST, TOTAL EAST, UPNY CON ED, HQ-NYPP	.	.	.	.	.	.	.	.
CENTRAL EAST, TOTAL EAST, UPNY CON ED, HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
CENTRAL EAST, TOTAL EAST, UPNY CON ED, SPRN/DUNWOODIE	.	.	.	.	.	.	.	.
CENTRAL EAST, UPNY CON ED	80	0.90%	2	0.00%	2	0.00%		
CENTRAL EAST, UPNY CON ED, DYSINGER EAST	13	0.10%	1	0.00%	.	.	.	.
CENTRAL EAST, UPNY CON ED, HQ-NYPP	.	.	.	.	.	.	.	.
CENTRAL EAST, UPNY CON ED, HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
CENTRAL EAST, UPNY CON ED, SPRN/DUNWOODIE	.	.	.	.	.	.	.	.
CENTRAL EAST, UPNY CON ED, SPRN/DUNWOODIE, HQ-NYPP	.	.	.	.	.	.	.	.
HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
MOSES SOUTH, DYSINGER EAST	2	0.00%	.	.	.	.	.	.
MOSES SOUTH, HQ-NYPP	.	.	.	.	.	.	.	.
MOSES SOUTH, HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
MOSES SOUTH, SPRN/DUNWOODIE	3	0.00%	.	.	.	.	.	.
OH-NYPP, DYSINGER EAST	5	0.10%	.	.	.	.	.	.
SPRN/DUNWOODIE, DYSINGER EAST	.	.	12	0.10%	.	.	.	.
SPRN/DUNWOODIE, HQ-NYPP	.	.	.	.	.	.	.	.
TOTAL EAST, DYSINGER EAST	8	0.10%	.	.	3	0.00%	3	0.00%
TOTAL EAST, HQ-NYPP	.	.	.	.	.	.	.	.
TOTAL EAST, HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
TOTAL EAST, MOSES SOUTH, HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
TOTAL EAST, SPRN/DUNWOODIE	1	0.00%	.	.	.	.	3	0.00%
TOTAL EAST, SPRN/DUNWOODIE, HQ-NYPP	.	.	.	.	.	.	.	.
TOTAL EAST, UPNY CON ED	1	0.00%	.	.	.	.	.	.
TOTAL EAST, UPNY CON ED, DYSINGER EAST	.	.	.	.	.	.	.	.
UPNY CON ED, DYSINGER EAST	9	0.10%	1	0.00%	.	.	.	.
UPNY CON ED, HQ-NYPP	.	.	.	.	.	.	.	.
UPNY CON ED, HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
UPNY CON ED, SPRN/DUNWOODIE	.	.	.	.	.	.	3	0.00%
WEST CENTRAL, CENTRAL EAST	181	2%	13	0.10%	8	0.10%		
WEST CENTRAL, CENTRAL EAST NET P/C	.	.	65	0.70%	88	1%		
WEST CENTRAL, CENTRAL EAST NET P/C, DYSINGER EAST	.	.	65	0.70%	20	0.20%		
WEST CENTRAL, CENTRAL EAST NET P/C, TOTAL EAST	.	.	1	0.00%	3	0.00%		
WEST CENTRAL, CENTRAL EAST NET P/C, TOTAL EAST, DYSINGER EAST	.	.	1	0.00%	.	.	.	

Interfaces Simultaneously Constraining	1995		1996		1997		1998	
	Nr.of Hours	Percent of Year	Nr.of Hours	Percent of Year	Nr.of Hours	Percent of Year	Nr.of Hours	Percent of Year
WEST CENTRAL, CENTRAL EAST, CENTRAL EAST NET P/C	.	.	23	0.30%	24	0.30%		
WEST CENTRAL, CENTRAL EAST, CENTRAL EAST NET P/C, DYSINGER EAST	.	.	12	0.10%	7	0.10%		
WEST CENTRAL, CENTRAL EAST, CENTRAL EAST NET P/C, TOTAL EAST	.	.	1	0.00%	4	0.00%		
WEST CENTRAL, CENTRAL EAST, DYSINGER EAST	100	1%	.	.	2	0.00%		
WEST CENTRAL, CENTRAL EAST, HQ-NYPP	.	.	.	.	.	.	.	.
WEST CENTRAL, CENTRAL EAST, HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
WEST CENTRAL, CENTRAL EAST, MOSES SOUTH	3	0.00%	.	.	.	.	.	.
WEST CENTRAL, CENTRAL EAST, MOSES SOUTH, DYSINGER EAST	3	0.00%	.	.	.	.	.	.
WEST CENTRAL, CENTRAL EAST, SPRN/DUNWOODIE	4	0.00%	.	.	.	.	.	.
WEST CENTRAL, CENTRAL EAST, TOTAL EAST	8	0.10%	.	.	1	0.00%	1	0.00%
WEST CENTRAL, CENTRAL EAST, TOTAL EAST, DYSINGER EAST	.	.	.	.	.	.	.	.
WEST CENTRAL, CENTRAL EAST, TOTAL EAST, HQ-NYPP, DYSINGER EAST	.	.	.	.	.	.	.	.
WEST CENTRAL, CENTRAL EAST, UPNY CON ED	4	0.00%	.	.	.	.	.	.
WEST CENTRAL, CENTRAL EAST, UPNY CON ED, DYSINGER EAST	8	0.10%	.	.	.	.	.	.
WEST CENTRAL, DYSINGER EAST	61	0.70%	8	0.10%	25	0.30%	4	0.00%
WEST CENTRAL, MOSES SOUTH	6	0.10%	.	.	.	.	.	.
WEST CENTRAL, OH-NYPP	3	0.00%	.	.	.	.	.	.
WEST CENTRAL, SPRN/DUNWOODIE	2	0.00%	.	.	.	.	1	0.00%
WEST CENTRAL, SPRN/DUNWOODIE, DYSINGER EAST	1	0.00%	.	.	.	.	.	.
WEST CENTRAL, TOTAL EAST	14	0.20%	.	.	.	.	.	.
WEST CENTRAL, TOTAL EAST, DYSINGER EAST	3	0.00%	.	.	.	.	.	.
WEST CENTRAL, UPNY CON ED	5	0.10%	.	.	.	.	.	.
WEST CENTRAL, UPNY CON ED, DYSINGER EAST	3	0.00%	.	.	.	.	.	.
Total	1484	17%	956	11%	1378	16%	333	4%

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Appendix E - NYPP Operating

Interfaces & OASIS Transmission Paths

Page

INTERFACE & TRANSMISSION PATH SUMMARY

INTERFACE	PAGE NO.	TRANSMISSION PATH	PAGE NO.
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		Adirondack-NEPEX VT N	**Page 11**
MOSES SOUTH	**Page 13**	**Adirondack-Central**	
DYSINGER EAST	**Page15**	**Frontier-Genessee**	
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UPNY-CONED	**Page 21**	**Capital/MidHudson-Westchester**	
SPRAINBROOK-DUNWOODIE SOUTH	**Page 23**		
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PJM-NYPP	**Page 49**	**PJM East-New York City**	**Page 9**
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HQ-NYPP *note: HQ-NYPP is MSC7040 line flow alone*	**Page 35**	**HQ-Adirondack**	
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NYPP-OH CIRCULATION	**Page 65**		
UPNY-SENY - (not an operating interface)	**Page 67**		
SENY - IMPORT/UPNY - SENY CLOSED -(not an operating interface)	**Page 69**		
WEST-CENTRAL CLOSED - (not an operating interface)	**Page 19**		
SPRAINBROOK -DUNWOODIE SOUTH CLOSED -(not an operating interface)	**Page 25**		

NYPP OPERATING INTERFACES & OASIS TRANSMISSION PATHS

CENTRAL EAST		
Name	**Line ID**	**Voltage(kV)**
Edic-New Scotland*	14	345
Marcy-New Scotland*	UNS-18	345
Porter-Rotterdam*	30	230
Porter-Rotterdam*	31	230
Grand Isle (Vermont)-	PV-20	115
Inghams-Richfield Springs	942	115
Inghams CE*PAR	PAR	115
Inghams CE*	R81 (N.O.)	115

TOTAL EAST		
Central-Capital/MidHudson		
Name	**Line ID**	**Voltage(kV)**
Coopers-Rock Tavern*	CCRT-34	345
Coopers-Rock Tavern*	CCRT-42	345
Edic-New Scotland*	14	345
*Fraser-Gilboa	35	345
Marcy-New Scotland*	UNS-18	345
Porter-Rotterdam*	30	230
Porter-Rotterdam*	31	230
*Inghams-E. Springfield	941	115
Inghams Bus Tie Breaker	R81	115
West Woodbourne*115/69	T152	BK
PJM East-Capital/MidHudson		
Branchburg-Ramapo*	5018	500
S. Mahwah-Waldwick*	J3410	345
S. Mahwah-Waldwick*	K3411	345
PJM East-New York City		
Hudson-Farragut*	C3403	345
Hudson-Farragut*	B3402	345
Linden-Goethals*	A2253	230
Adirondack-NEPEX VT N		
*Plattsburg-Grand Isle	PV-20/B	115

NYPP OPERATING INTERFACES & OASIS TRANSMISSION PATHS

MOSES SOUTH

Adirondack-Central

Name	Line ID	Voltage (kV)
*Massena-Marcy	MSU1	765
*Moses Adirondack	MA-1	230
*Moses Adirondack	MA-2	230
*Dennison-Colton	4	115
*Dennison-Colton	5	115
*Alcoa-N. Ogdensburg	13	115
*Colton-Malone	3	115

DYSINGER EAST

Frontier-Genessee

Name	Line ID	Voltage (kV)
*Kintigh-Rochester (Sta 80)	SR-1/39	345
Niagara-Rochester*	NR2	345
*Stolle-Meyer	67	230
*Bennett-Palmiter-NMPC	932	115
*Lockport-Batavia	107	115
*Lockport-N. Akron	108	115
*Lockport-Oakfield	112	115
*Lockport-Sweden 1	111	115
*Lockport-Sweden 3	113	115
*Lockport-Telegraph	114	115

WEST CENTRAL

Genessee-Central

Name	Line ID	Voltage(kV)
Pannell*Road-Clay	PC-1	345
Pannell Road-Clay*	PC-2	345
Stolle-Meyer	67	230
*Bennett-Palmiter-NMPC	932	115
Macedon-Quaker*	930	115
*Mortimer-Elbridge	1	115
*Mortimer-Elbridge	2	115
*Pannell-Farmington	4	115
*Quaker Road-Sleight Road	980	115
St. 162 - S. Perry	906	115
*Clyde 199(RG&E) - Sleight Rd (NYS)		115
(Clyde 199 - Clinton Corn)		115
*Farmington (RG&E) NMPC		115
(Farmngtn 34.5 - Farmgtn 115)		34.5/115
(Farmngtn 34.5 - Farmgtn-4 115)		34.5/115

NYPP OPERATING INTERFACES & OASIS TRANSMISSION PATHS

UPNY-CONED

Capital/MidHudson-Westchester

Name	Line ID	Voltage(kV)
Ladentown-Buchanan*	Y88	345
*Pleasant Valley-Wood St.	F30	345
*Pleasant Valley-E. Fishkill	F36	345
*Pleasant Valley-E. Fishkill	F37	345
*Pleasant Valley-Millwood	F31	345
*Ramapo-Buchanan	Y94	345
Roseton-E. Fishkill*	305	345
*Fishkill Plaine-Sylvan Lake	A/990	115
East Fishkill 345/115*	Bank	345/115

SPRAINBROOK-DUNWOODIE SOUTH

Name	Line ID	Voltage(kV)
*Dunwoodie-Rainey	71	345
*Dunwoodie-Rainey	72	345
Sprainbrook-Tremont*	28	345
*Sprainbrook-West 49th Street	M51	345
*Sprainbrook-West 49th Street	M52	345
Lake Success - Jamaica	903	138
Valley Stream - Jamaica	901	138
*Dunwoodie-Sherman Creek	31	138
Dunwoodie-Sherman Creek*	32	138
*Dunwoodie-East 179th Street		138

NEW ENGLAND - NYPP

Adirondack-NEPEX VT N

Name	Line ID	Voltage (kV)
*Plattsburg-Grand Isle	PV-20/B	115

Capital/MidHudson-NEPEX VT/NE/NU

*Alps-Berkshire	393	345
*Pleasant Valley-Long Mnt.	398	345
Rotterdam-Bear Swamp*	E205W	230
North Troy-*Hoosick-Bennington	6	115
*Whitehall-Rutland (Velco)	7/K37	115

Long Island-NEPEX NUS.

*Northport-Norwalk	1385A&B	138

NYPP OPERATING INTERFACES & OASIS TRANSMISSION PATHS

PJM-NYPP

PJM East-New York City

Name	Line ID	Voltage (kV)
Hudson-Farragut*	C3403	345
Hudson-Farragut*	B3402	345
Linden-Goethals*	A2253	230

PJM West-Central

*Homer City-Watercure	30	345
E. Towanda-Hillside*	70	230
Goudey-Tiffany (Penelec)	952	115
*E. Sayre-N. Waverly	956	115

PJM West-Frontier

*Homer City-Stolle Road	37	345
Erie South-South Ripley*	69	230
Falconer-Warren (Penelec)*	171	115

PJM East-Capital/MidHudson

Branchburg-Ramapo*	5018	500
S. Mahwah-Waldwick*	J3410	345
S. Mahwah-Waldwick*	K3411	345

OH-NYPP

Ontario East-Adirondack

Name	Line ID	Voltage (kV)
*Moses-St. Lawrence	L33P	240
*Moses-St. Lawrence	L34P	230

Ontario South-Frontier

Beck-Niagara*	PA301	345
Beck-Niagara*	PA302	345
Beck-Niagara*	PA27	230
*Beck-Packard	BP76	230

Westchester - Long Island

Name	Line ID	Voltage (kV)
*Dunwoodie-Shore Road	Y50	345
*Sprainbrook-East Garden City	Y49	345

New York City - Long Island

Name	Line ID	Voltage (kV)
Jamaica-Valley Stream*	901L&M	138
Jamaica-Lake Success*	903	138

NYPP NON-OPERATING INTERFACES & MISC. FLOWS

NYPP-OH CIRCULATION
NAME
(OH-NY) Schedule
OH-NY Actual (Negative)
*Beck-TSC 105 (Negative)
*Beck-TSC 106 (Negative)

UPNY-SENY - (not an operating interface)		
NAME	**LINE ID**	**VOLTAGE (kV)**
*Leeds-Pleasant Valley	91	345
*Leeds-Pleasant Valley	92	345
*Leeds-Hurley	301	345
Long Mtn-Pleasant Valley*	398	345
Unionville-N. Catskill*		115
NMPC-Pleasant Valley* 8, 12, 13		
Hudson-Pleasant Valley *	12	115
Blue Stores-Pl Valley*	8	115
Blue Stores-Pl Valley*	13	115
W. Woodbourne	115/69*	115/69
Branchburg-Ramapo*	5018	500
*Coopers Corners-Rock Tavern	CCRT-34	345
*Coopers Corners-Rock Tavern	CCRT-42	345

SENY - IMPORT/UPNY - SENY CLOSED - (not an operating interface)		
NAME	**LINE ID**	**VOLTAGE (kV)**
UPNY-SENY Plus the following:		
*Waldwick-South Mahwah	K3411	345
*Waldwick-South Mahwah	J3410	345
Hudson-Farragut*	B3402	345
Hudson-Farragut*	C3403	345
Linden-Goethals*	A2253	230
*Norwalk-Northport	1385	138

NYPP NON-OPERATING INTERFACES & MISC. FLOWS

WEST-CENTRAL CLOSED - (not an operating interface)		
NAME	**LINE ID**	**VOLTAGE (kV)**
All West-Central Ties plus the following:		
St. Lawrence-Moses	L33P*	230
St. Lawrence-Moses	L34P*	230
All PJM - NYPP Ties except:		
*Homer City - Stolle Road	37	345
Erie South-South Ripley*	69	230
*Warren-Falconer	171	115

SPRAINBROOK -DUNWOODIE SOUTH CLOSED -(not an operating interface)		
NAME	**LINE ID**	**VOLTAGE (kV)**
All Sprainbrook-Dunwoodie South Ties plus the following:		
Hudson - Farragut	B3402	345
Hudson -Farragut	C3403	345
Linden - Goethals	A2253	230

VOLNEY EAST OPEN		
NAME	**LINE ID**	**VOLTAGE (kV)**
Oakdale - Fraser	32	345
Oakdale -Delhi	919	115
Wilet - E. Norwich	945	115
Katel - Jenn	943	115
Clay - Edic	1-16	345
Clay - Edic	2-15	345
JA Fitzp - Edic	FE1	345
Lighthouse HL - Black River	6	115
Lighthouse HL - E. Watertown	5	115
Teall - Oneida	2	115
Teall - Bridgeport	5	115
Whitman - Oneida	5	115
Volney - Marcy T1	19	345

NYPP NON-OPERATING INTERFACES & MISC. FLOWS

VOLNEY EAST CLOSED		
NAME	**LINE ID**	**VOLTAGE (kV)**
All Volney East Open Ties plus the following:		
Branchburg - Ramapo	5018	500
Hudson 1 - Farragut	B3402	345
Hudson 2 - Farragut 2	C3403	345
Linden 9 - Goethals	A336	230
Waldwick - Smahwah1	K3411	345
Waldwick - Smahwah2	J3410	345
St, Lawrence - Moses E	L34P	230
St. Lawrence - Moses E	L33P	230

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Sprainbrook/Dunwoodie South - Con Ed Cable Interface Definitions

Line Name	Id	Voltage	I	II	III	IV
Dunwoodie - Rainey	71	345	X	X	X	X
Dunwoodie - Rainey	72	345	X	X	X	X
Sprainbrook - W. 49 St.	M51	345	X	X	X	X
Sprainbrook - W. 49 St.	M52	345	X	X	X	X
Sprainbrook - Tremont	X28	345	X	X	X	X
Dunwoodie So. - E. 179 St.	99153	138	X	X	X	X
Dunwoodie No. - Sherman Creek	99031	138	X	X	X	X
Dunwoodie No. - Sherman Creek	99032	138	X	X	X	X
Lake Success - Jamaica	903	138	X	X		
Valley Stream - Jamaica	901	138	X	X		
Hudson - Farragut	B2402	345		X	X	
Hudson - Farragut	C3403	345		X	X	
Linden - Goethals	A2253	230		X	X	
Sprainbrook - E.G.C.	Y49	345			X	X
Dunwoodie - Shore Rd.	Y50	345			X	X
Norwalk - Northport	1385	138			X	

	Interface Definitions	Dept.
I	Sprainbrook/Dunwoodie So. & Con Edison Cable Interface	Oper
II	Con Ed NYC Cable Interface & Con Edison Cable Interface - Closed	ConEd Oper
III	Sprainbrook/Dunwoodie So. - Closed	Plan
IV	Sprainbrook/Dunwoodie So. (Old - Previous to Fall 94)	Oper/Plan

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NEW YORK POWER POOL
OASIS Area & Transmission Paths & Interfaces