Load Forecast Methodology

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ICAP WG
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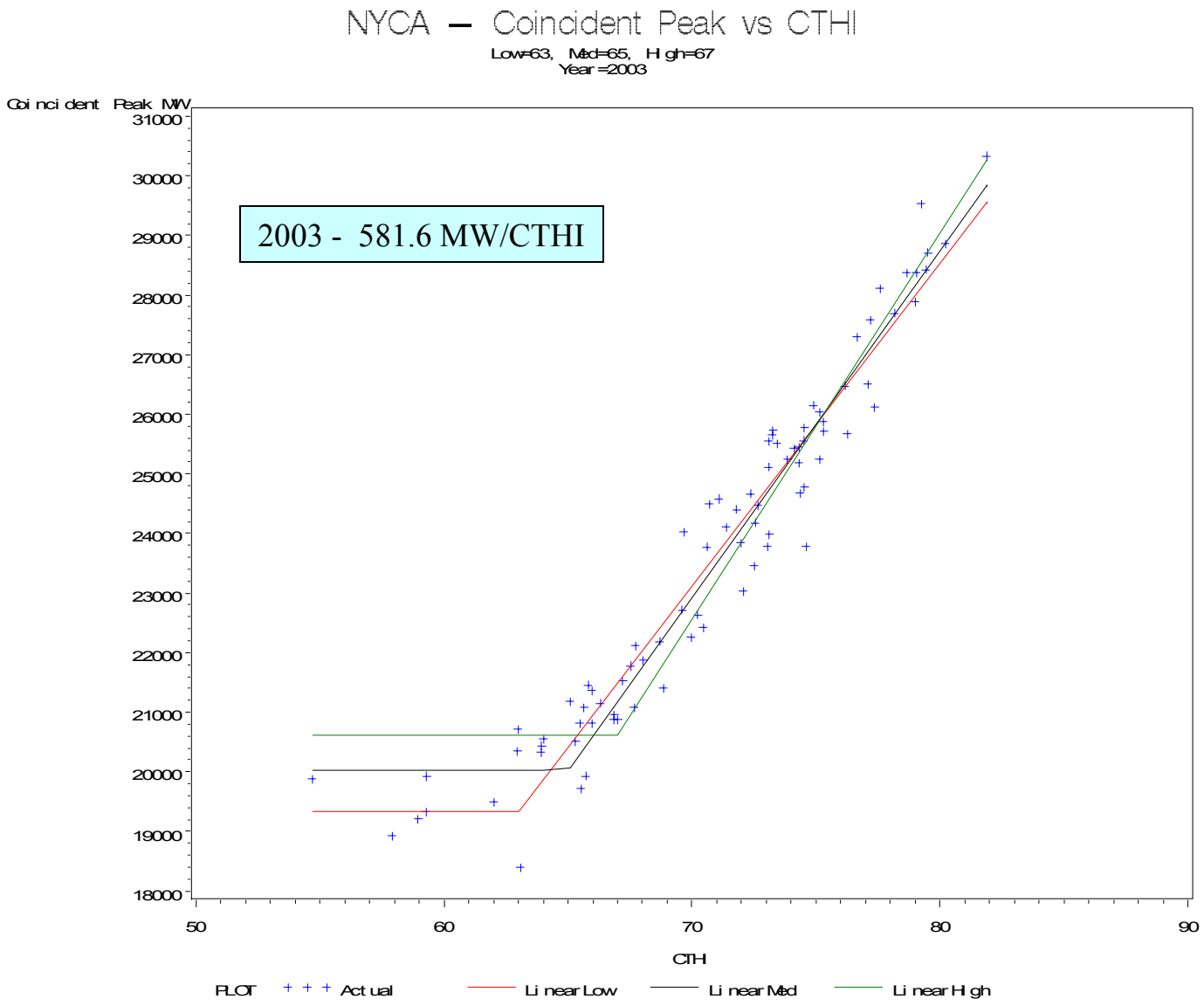

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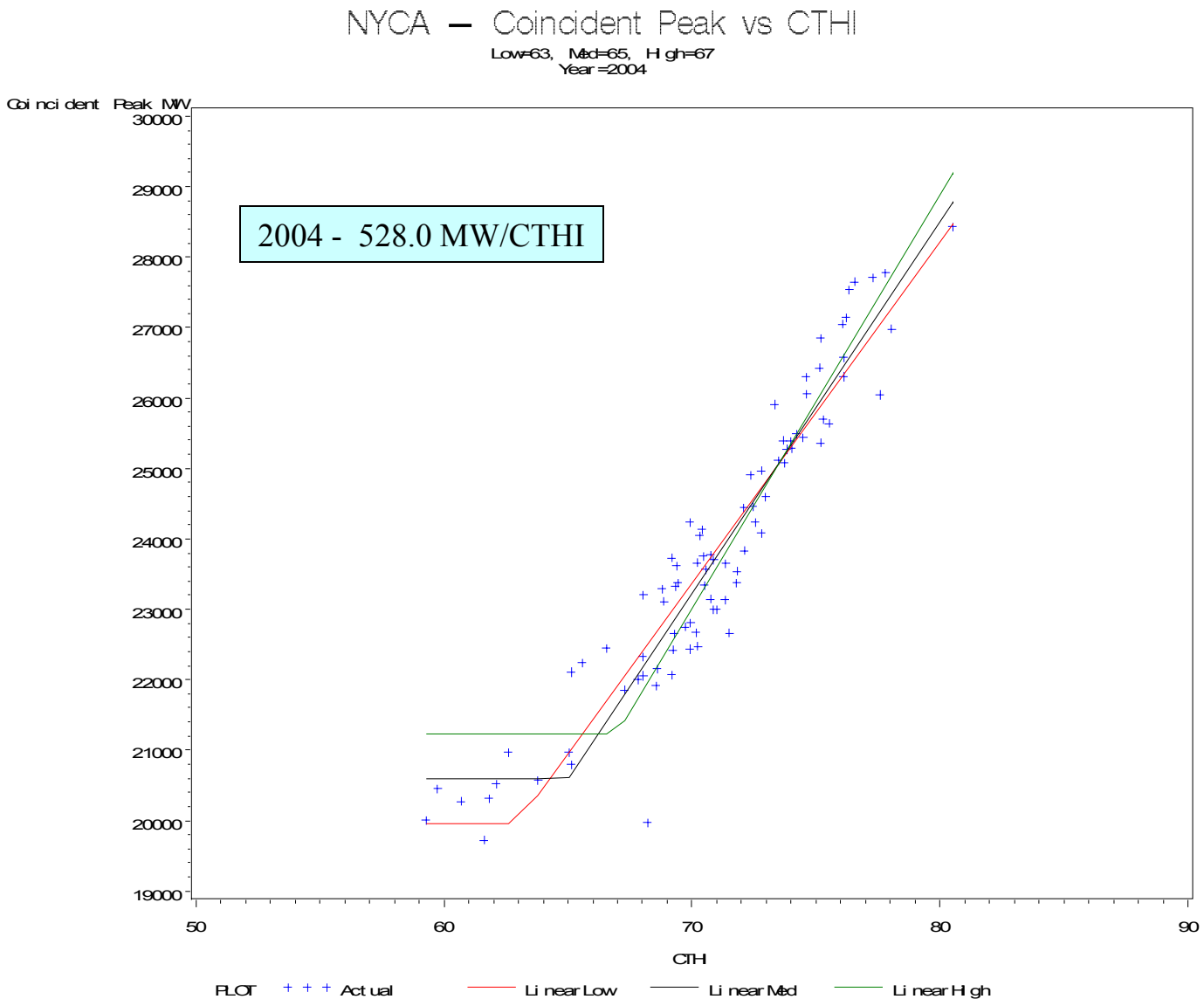

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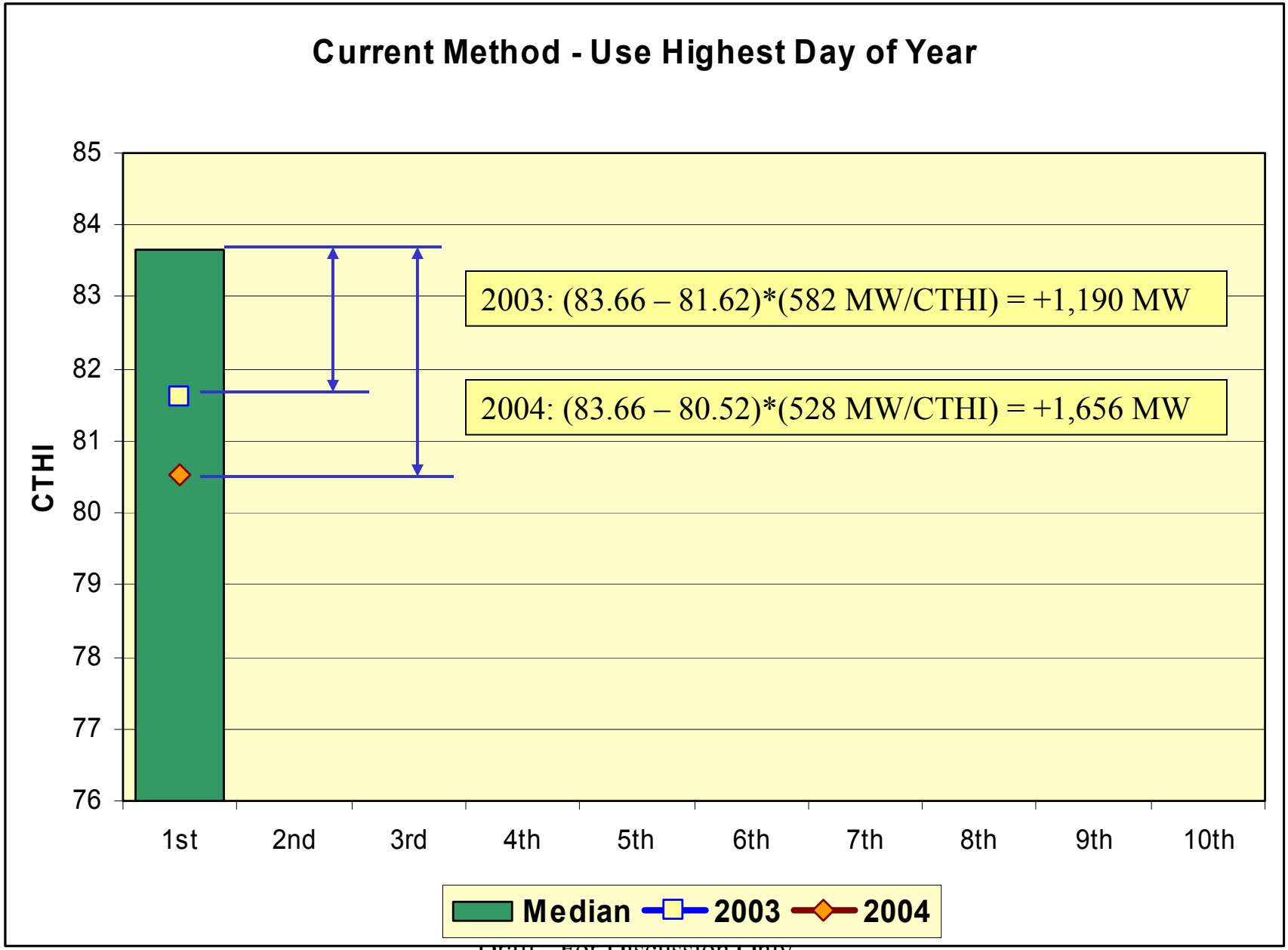


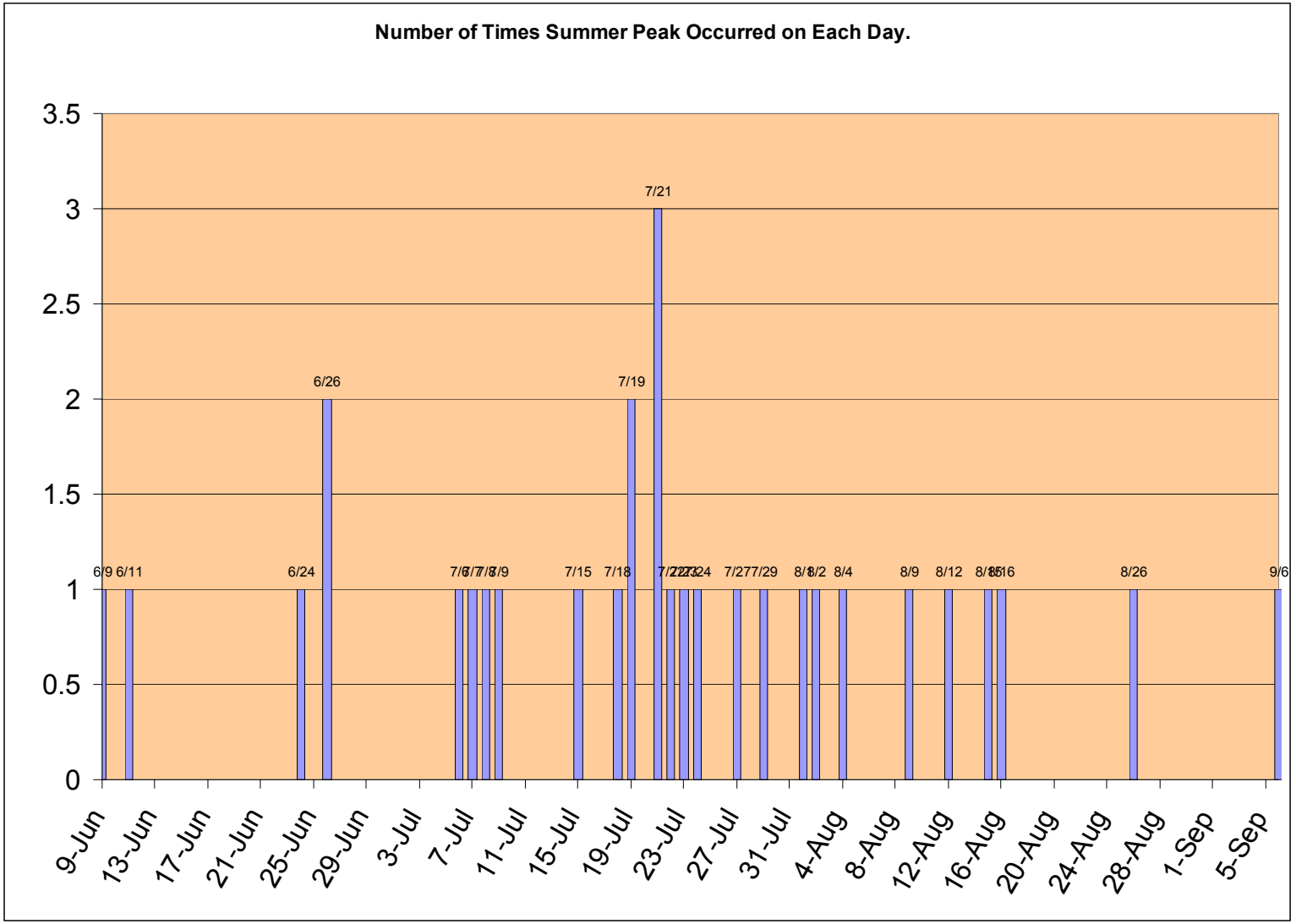
Dates of NYCA Peaks 1975 - 2005

Year	Peak	Mon	Day
1975	20,001	8	1
1976	19,262	6	24
1977	21,214	7	21
1978	20,418	8	16
1979	20,402	8	2
1980	21,742	7	21
1981	21,437	7	9
1982	21,444	7	19
1983	21,842	9	6
1984	21,870	6	11
1985	22,926	8	15
1986	22,942	7	7
1987	24,427	7	24
1988	25,720	8	12
1989	25,390	7	27
1990	24,985	7	19
1991	26,839	7	23
1992	24,951	8	26
1993	27,139	7	8
1994	27,065	7	21
1995	27,206	8	4
1996	25,585	7	18
1997	28,699	7	15
1998	28,161	7	22
1999	30,311	7	6
2000	28,138	6	26
2001	30,982	8	9
2002	30,664	7	29
2003	30,333	6	26
2004	28,433	6	9
2005	32,075	7	26

June Peaks	**5**
July Peaks	**17**
August Peaks	**8**
September Peaks	**1**
	31

2004 Forecast = 31,800 MW

W/N = 31,400 MW



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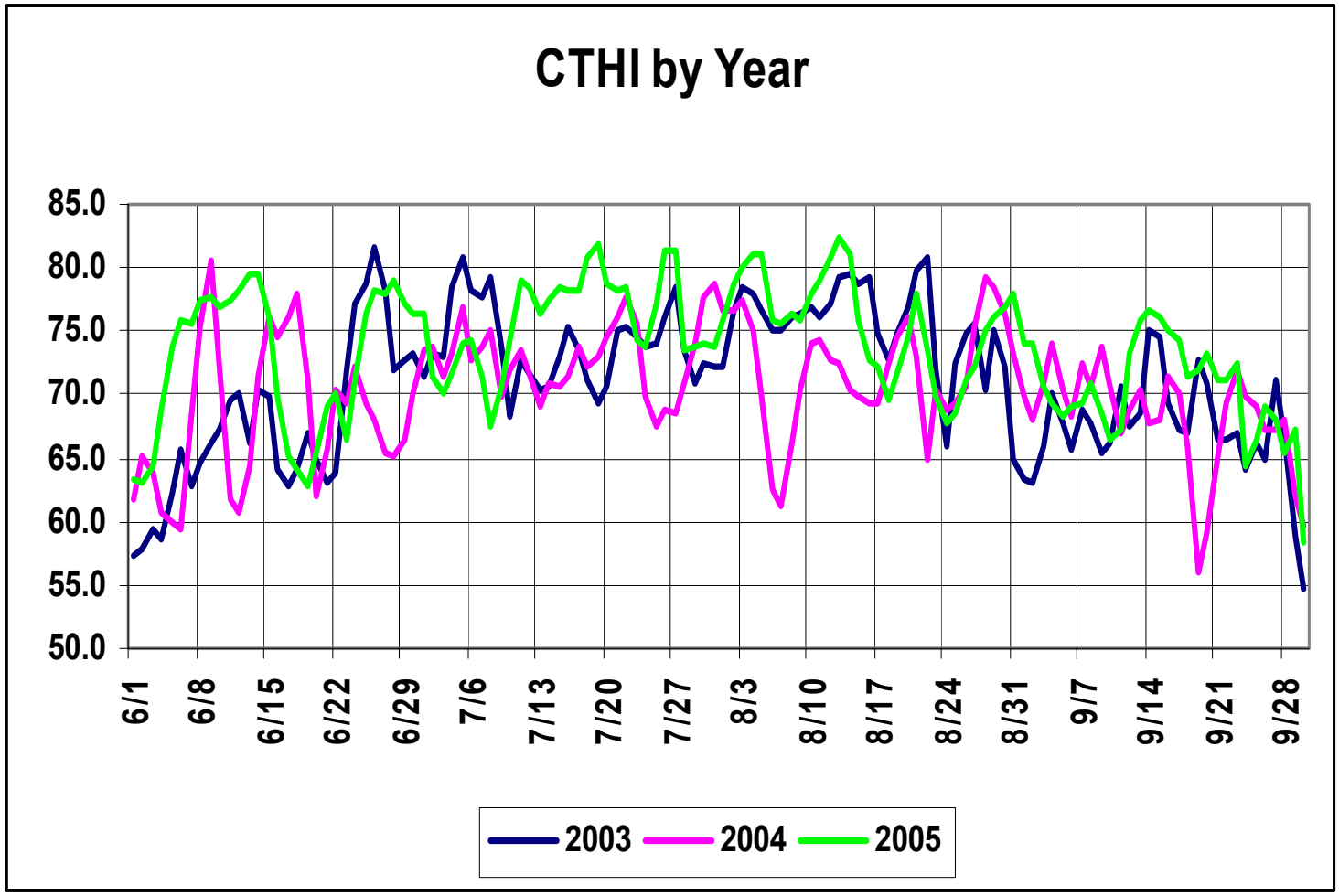
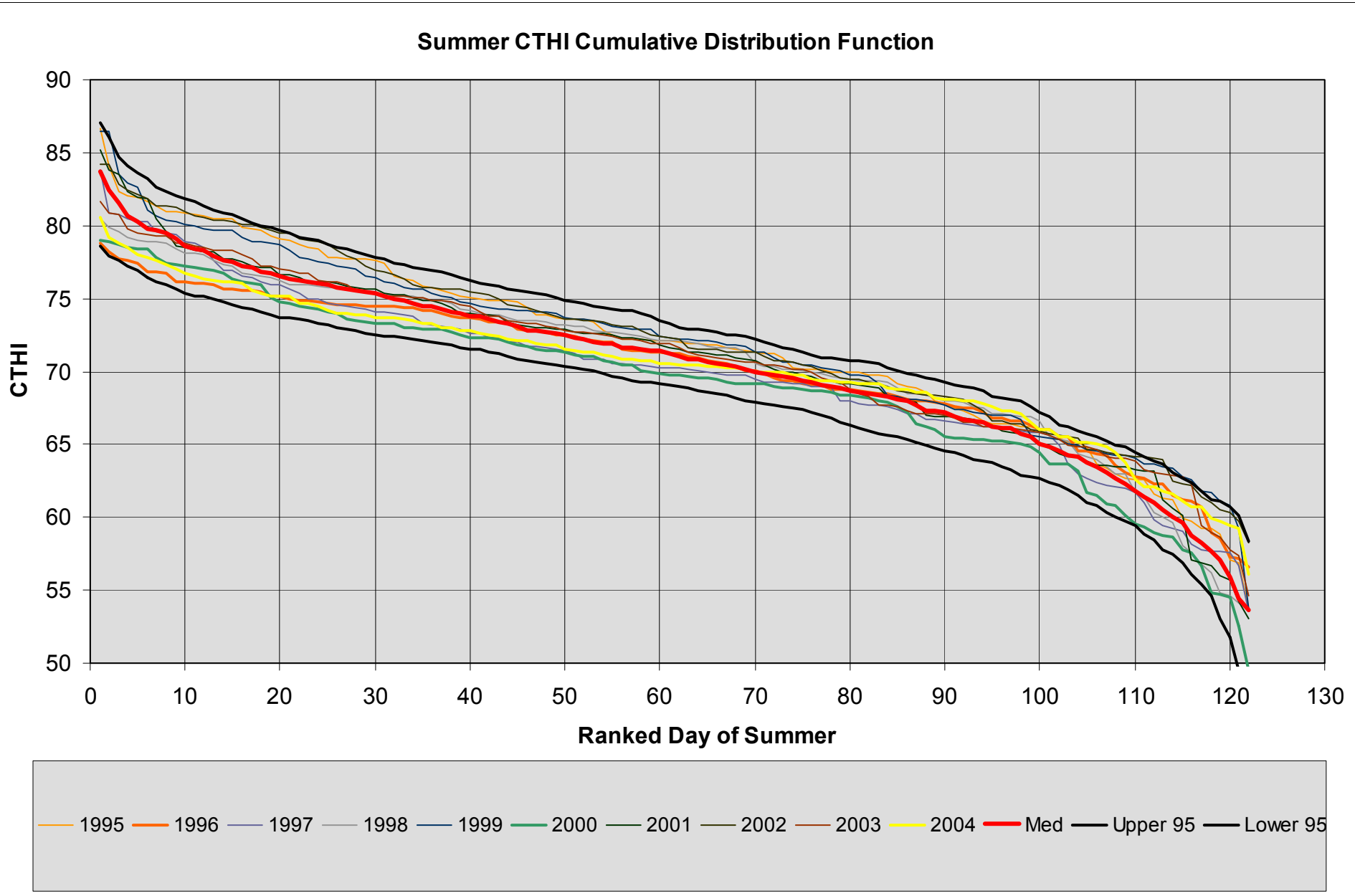
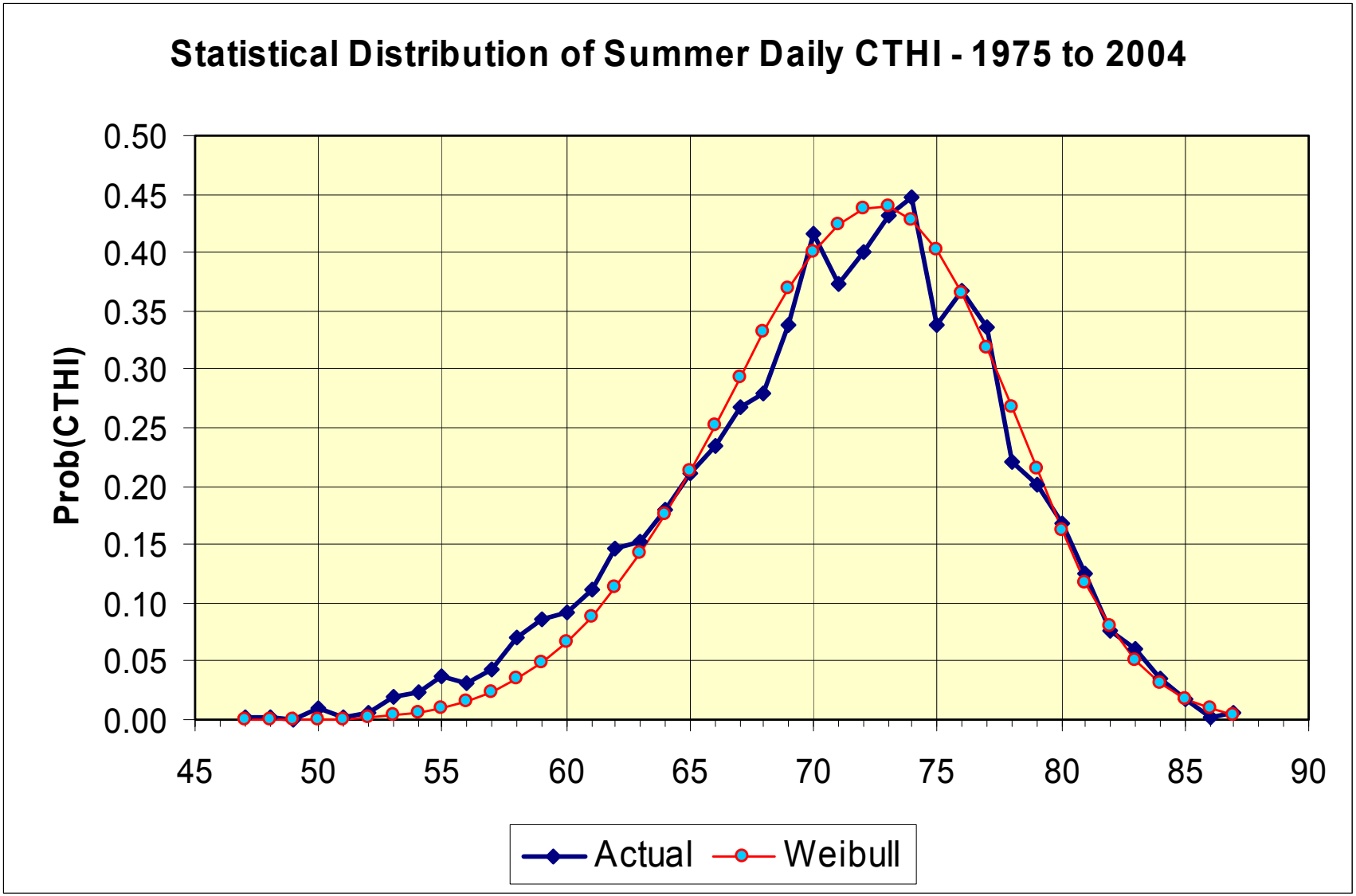
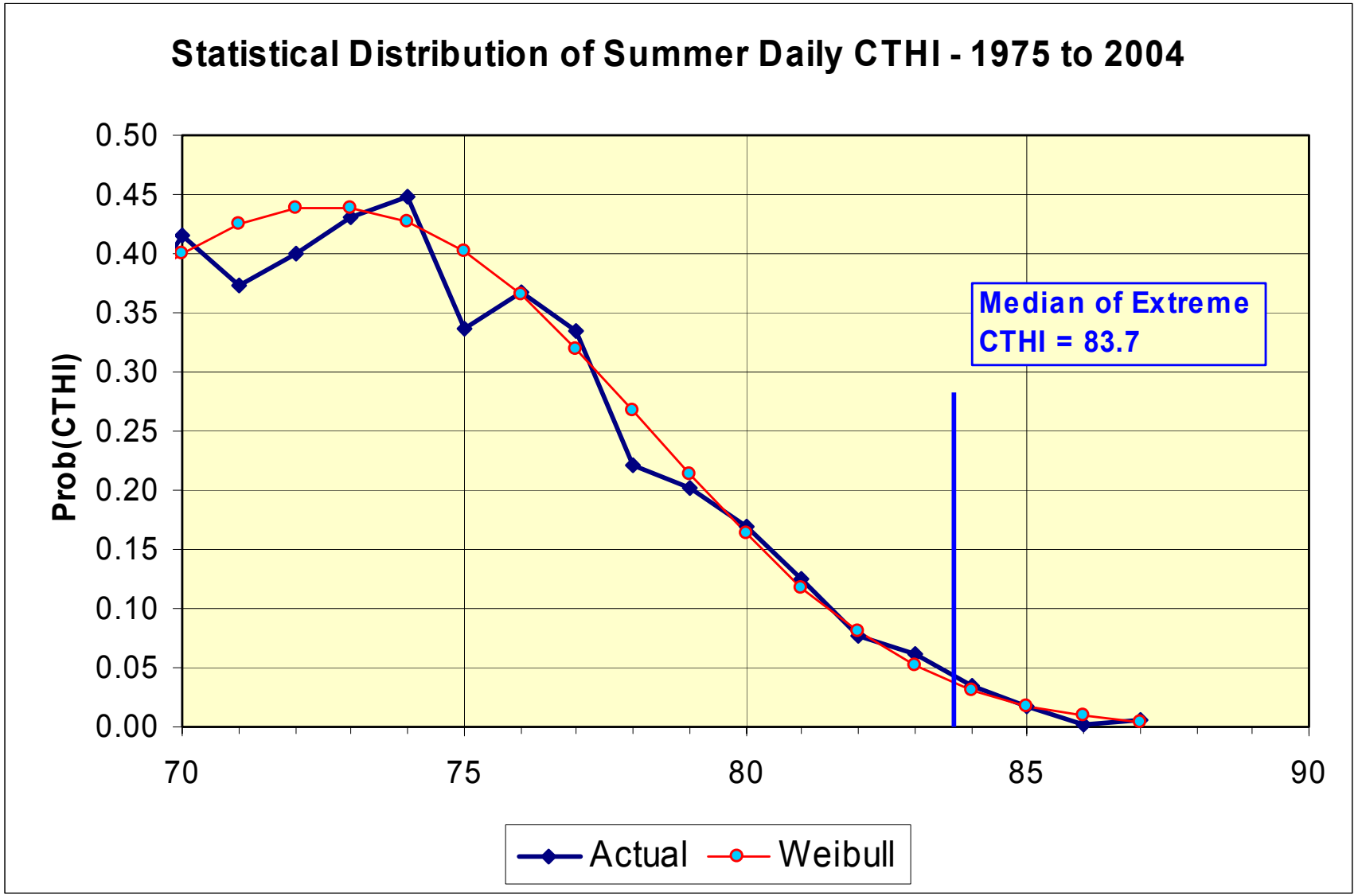

CTHI by Year
85.0
80.0
75.0
70.0
65.0
60.0
55.0
50.0
6/1
6/8
6/15
6/22
6/29
7/6
7/13
7/20
7/27
8/3
8/10
8/17
8/24
8/31
9/7
9/14
9/21
9/28
2003
2004
2005

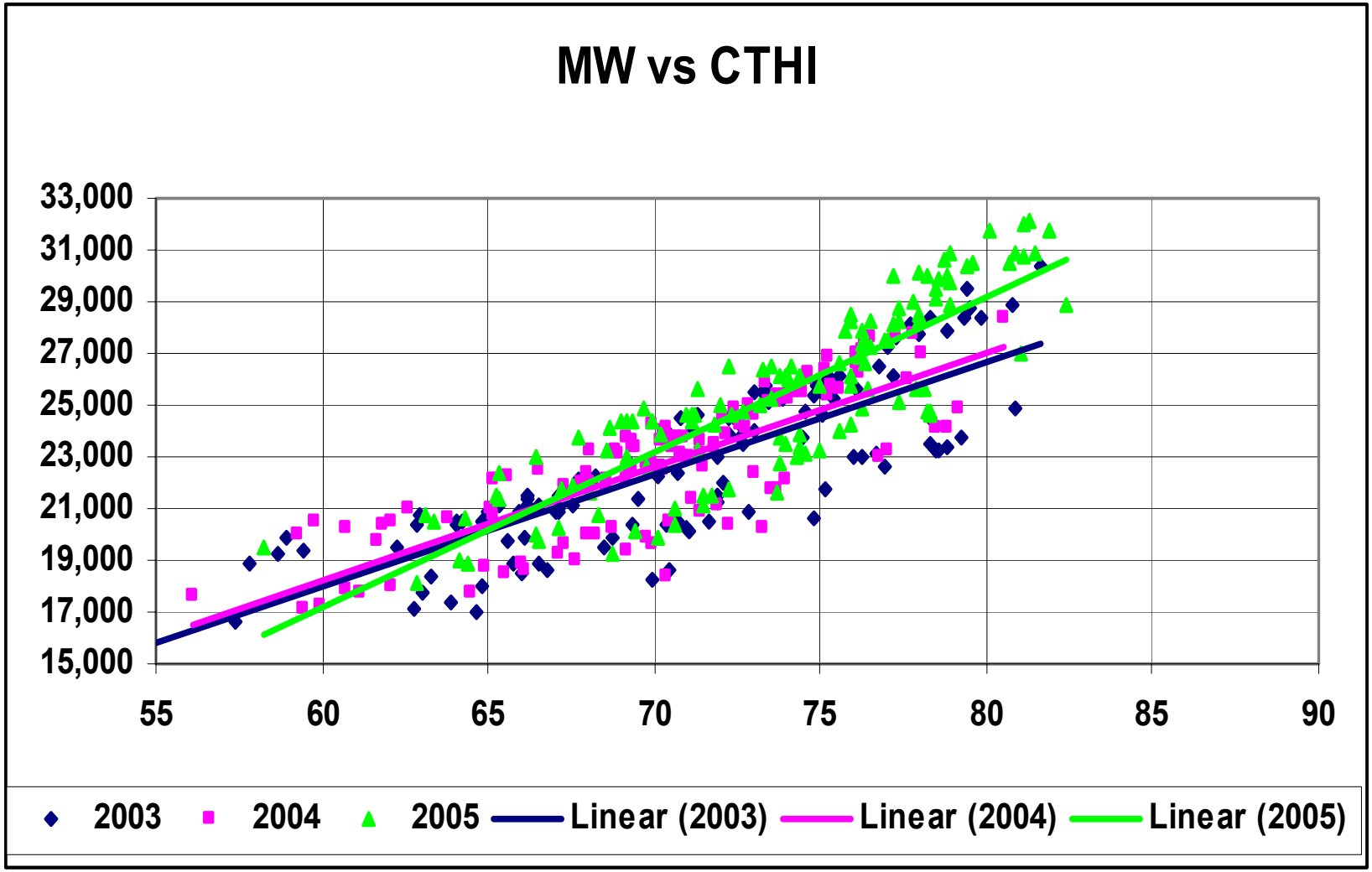



Statistical Distribution of Summer Daily CTHI - 1975 to 2004
Prob(CTHI)
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
45
50
55
60
65
70
75
80
85
90
Actual
Weibull


Statistical Distribution of Summer Daily CTHI - 1975 to 2004
Prob(CTHI)
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
70
75
80
85
90
Median of Extreme
CTHI = 83.7
Actual
Weibull

Would 2004 “July” Peak Have Been Higher than June 9 Peak?

- Determine Most Likely Peak Period
- Estimate effect of MLPP vs. non-MLPP occurrence


MW vs CTHI
33,000
31,000
29,000
27,000
25,000
23,000
21,000
19,000
17,000
15,000
55
60
65
70
75
80
85
90
2003
2004
2005
Linear (2003)
Linear (2004)
Linear (2005)

Coefficients of Peak vs. CTHI Regressions

Summary of Regressions of Peak vs CTHI

	2003	2004	2005
Jul 11 - Aug 16	74.14338	-144.63983	615.0131
DayofWeek	3217.909	3049.1329	3286.402
4-Jul	-4172.525	-3464.6791	-3432.028
CTHI <=65	117.1702	84.630351	189.1414
CTHI > 65	403.9754	404.79266	377.1632
Blackout	-1805.339	-	-

Regressions Through the Origin

Jul 11 - Aug 16	61.6515	-160.79597	627.9806
DayofWeek	3261.497	2994.336	3294.006
4-Jul	-4123.008	-3342.6753	-3449.834
CTHI <=65	267.1154	279.48608	275.3053
CTHI > 65	234.8994	177.45693	286.2719
Blackout	-1730.715	-	-

Total MW/Degree

- 2003: 502.0 – 521.2
- 2004: 457.0 – 490.0
- 2005: 561.9 – 566.3

- Jul11 – Aug6 insignificant for 2003
- weakly significant for 2004
- significant for 2005

Would 2004 "July" Peak Have Been Higher than June 9 Peak?

- Probably not. The low 2004 peak was most likely caused by the absence of hot weather in the Most Likely Peak Period.
- Normalization for 2003 and 2004 did not reveal any additional load associated with peaks occurring in the Most Likely Peak Period
- Any additional load in the MLPP is most likely associated with more extreme CTHI's, longer heat waves, and/or seasonal heat wave build up effects.
- Also aggravated by extreme difference between actual (28,433 MW) and W/N (31,400 MW)