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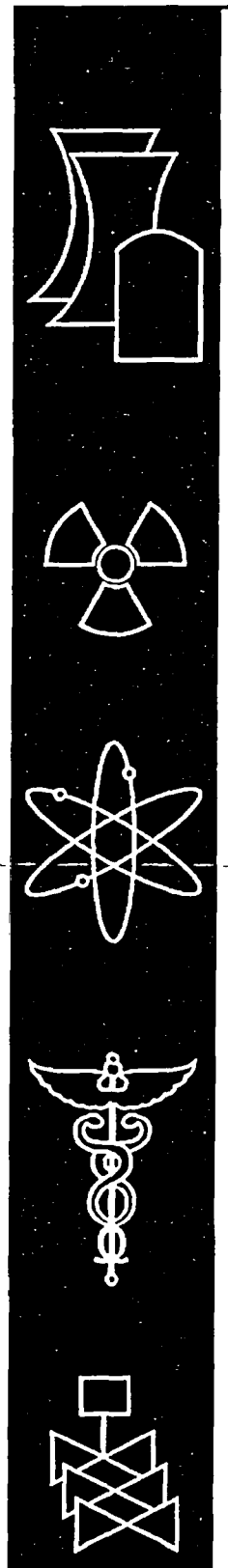

Tornado Climatology of the Contiguous United States

Pacific Northwest National Laboratory

U.S. Nuclear Regulatory Commission
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Abstract

Characteristics of tornadoes reported in the contiguous United States from January1950 through August 2003 have been used to determine tornado strike probabilities and maximum wind speeds for use in nuclear power plant design. Maps have been prepared that show the distribution of tornado events and design wind speeds. Appendices contain the number of tornadoes and estimates of strike probabilities and maximum wind speeds by 1°, 2°, and 4° latitude and longitude boxes.

The methods used in this analysis are similar to those used in the analysis leading to publication of the initial tornado climatology in 1986 with the addition of a term to account for finite dimensions of structures and consideration of the variation of wind speeds along and across the tornado footprint. The results of this analysis indicate that a maximum wind speed of about 300 mph is appropriate for tornadoes with a best estimate probability of 10^{-7} per year for the central portion of the United States; a maximum wind speed of 260 mph is appropriate for a large region of the United States along the east coast, the northern border, and the western great plains; and a maximum wind speed of 200 mph is appropriate for the western United States.

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Executive Summary

Tornado information reported for the contiguous United States were obtained from the National Climatic Data Center in Asheville, North Carolina, for the purpose of revising the *Tornado Climatology for the Contiguous United States* (NUREG/CR-4461), which was published in 1986. The tornado database used in the revision includes information for more than 46,800 tornado segments occurring from January 1, 1950, through August 2003. More than 39,600 of these segments had sufficient information on location, intensity, length, and width to be used in the analysis presented in this report.

Chapter 1 of the report contains introductory material. It sets the context for this report.

The characteristics of the tornadoes are summarized in detail in Chapter 2 of this report for the contiguous United States. The summary for the contiguous United States is followed by separate summaries are for western, central, and eastern regions of the United States. Each summary includes the number of events, and the median, average, and expected values for length, width, and area. In addition, the summaries include the lower and upper limits for the 90 percent confidence intervals for the expected values. Lognormal distributions were assumed for tornado event lengths, widths, and areas in calculation of the expected values and the confidence intervals for the expected values.

Chapter 3 of the report evaluates two potential adjustments to the data. The average number of tornadoes reported each year has been increasing since at least 1950. The NCDC data confirm this trend but indicate that the increase is limited to the least intense tornadoes, those with maximum wind speeds in the 40 to 72 mph range. Evaluation of the consequences of unreported tornadoes in Chapter 3 strongly suggests that the unreported tornadoes may be neglected without a significant effect on estimates of strike probabilities or maximum wind speeds. As a result, no attempt is made to account for unreported tornadoes. Variation of the maximum wind speed along and across the tornado footprint is discussed, and the method used to account for this variation is described.

Chapter 4 describes the methods of estimating the tornado strike probabilities and the conditional probability that the maximum wind speed will exceed a specified value assuming that a tornado strike occurs. Methods are described for point structures and for finite-sized structures. The methods used for point structures are the same as in the analysis leading to the initial version of NUREG/CR-4461. The methods for finite structures involve an additional term that includes a characteristic dimension of the structure.

Results of the wind speed are presented in Chapter 5 and in Appendices A, B, and C. The distribution of maximum wind speed estimates are presented for large regions and by 1°, 2°, and 4° latitude and longitude boxes. The wind speed patterns are similar to the patterns presented in the initial version of NUREG/CR-4461 but the maximum wind speeds are generally lower.

Chapter 6 compares current maximum wind speed estimates for 14 locations with estimates derived from the initial version of NUREG/CR-4461 analysis and from an analysis performed by staff at the Lawrence

Livermore National Laboratory (LLNL) for the U.S. Department of Energy. The average of wind speeds estimated in this analysis for a 10^{-7} yr^{-1} probability of occurrence for the 14 locations is about 23 mph lower than that estimated using the initial version of NUREG/CR-4461, and it is about 20 mph lower than the average of the wind speeds estimated in the LLNL analysis.

Chapter 7 discusses sources of uncertainty in the analysis. The first part of the chapter considers the uncertainty associated with the model used to characterize tornado footprints. The model assumes that the footprint is rectangular, which not likely to be the case. Next, the chapter discusses uncertainty in the estimation of tornado characteristics. The length, width, and intensity of a tornado are estimated subjectively from damage caused by the tornado and are all subject to error. Two methods for adjustment of data to account for potential errors in classification of tornado intensity are discussed. They are shown to alter some of the basic tornado statistics such as total area impacted by and total length of tornadoes, and are therefore rejected for this study. Four relationships between damage classification and maximum wind are discussed. Finally, the uncertainty associated with the statistical variation in tornado dimensions and intensity is discussed. The source of uncertainty is also dealt with in Chapter 2 and is considered in assigning confidence intervals to strike probabilities and maximum wind speeds.

Finally, Chapter 8 provides recommendations on design criteria for tornadoes. These recommendations are based on the maximum wind speeds for the 2° boxes, but also consider the number of tornadoes and population density. For the 10^{-7} yr^{-1} probability level, a design wind speed of 300 mph is recommended for a large region in the central United States; a design wind speed of 260 mph is recommended for the western portion of the Great Plains and for the east coast; and a design wind speed of 200 mph is recommended for the western United States.

Acronyms, Abbreviations, and Symbols

a_l	scale parameter for the Weibull distribution function for the conditional life-line strike probability
a_p	scale parameter for the Weibull distribution function for the conditional point strike probability
A_r	area of a region of interest, e.g., the contiguous United States, or the area of a 2° latitude and longitude box
A_t	total area impacted by tornadoes within a region of interest in N years
$A_{u \geq u_o}$	tornado impact area with wind speed, u, greater than some threshold speed, u_o
AEC	U.S. Atomic Energy Commission
b_l	shape parameter for the Weibull distribution function for the conditional life-line strike probability
b_p	shape parameter for the Weibull distribution function for the conditional point strike probability
E(x)	expected value of a variable x
Exp(x)	exponential of x, i.e., e^x
f(x)	probability density function for a variable x
ft	feet
$L_{u \geq u_o}$	total tornado path length in a region of interest with wind speed, u, greater than some threshold speed, u_o
L_t	total tornado path length in a region of interest regardless of wind speed
Lat.	latitude
Long.	longitude

LLNL	Lawrence Livermore National Laboratory
mi	miles
mph	miles per hour
N	number of years of tornado record used to determine A_t
NCDC	National Climatic Data Center
P_l	finite-structure strike probability for a tornado, regardless of wind speed
$P_l(u \geq u_o)$	finite-structure strike probability for a tornado with a wind speed, u, greater than some threshold speed, u_o
$P_l(u \geq u_o \mid s)$	conditional finite-structure strike probability for a tornado with a wind speed, u, greater than some threshold speed, u_o, assuming that a strike occurs
P_p	point-structure strike probability for a tornado, regardless of wind speed
$P_p(u \geq u_o)$	point-structure strike probability for a tornado with a wind speed, u, greater than some threshold speed, u_o
$P_p(u \geq u_o \mid s)$	conditional point-structure strike probability for a tornado with a wind speed, u, greater than some threshold speed, u_o, assuming that a strike occurs
TorBoxes	computer program used for regional tornado analyses
TorStrk	computer program used for site-specific tornado analyses
u_o	threshold wind speed or wind speed of interest
V[w]	variance of a variable w
w_s	characteristic horizontal dimension of a finite structure, assumed to be 200 ft for this analysis
yr	year

1.0 Introduction

Among the missions of the U.S. Nuclear Regulatory Commission (NRC) is the protection of public health and safety and the environment from the effects of radiation from nuclear reactors, materials, and waste facilities. In performing this mission, the NRC evaluates the consequences of events external to nuclear facilities that may lead to release of radioactive materials to the environment. Tornadoes are among the external events of interest.

Current NRC guidance on tornado characteristics for consideration in the design of nuclear power plants is found in Regulatory Guide 1.76 (AEC 1974). This guidance is based on a summary of information from a variety of sources called WASH-1300 (Markee et al. 1974). In the initial version of NUREG/CR-4461, Ramsdell and Andrews (1986) summarized data on tornadoes that occurred from January 1954 through December 1983 and were listed in a tornado database maintained by the National Severe Storms Forecast Center.

This report updates NUREG/CR-4461 based on tornado data collected from January 1, 1950, through August 2003. It contains statistics on tornado dimensions and wind speeds by region of the country, and estimates of strike probabilities and design wind speeds by boxes with sides of 1°, 2°, and 4° of latitude and longitude.

The characteristics of tornadoes in the contiguous United States are presented in Chapter 2, along with the particular characteristics of the western, central and eastern regions. Chapters 3 and 4 discuss methodological issues: Chapter 3 focuses on possible adjustments to data since those included in NUREG/CR-4461, and Chapter 4 describes methods used here for estimating strike probabilities and maximum wind speeds for point structures and structures of finite dimensions. Chapter 5 gives results of the analysis, and Chapter 6 compares maximum wind speeds estimated in the present study for 14 locations with estimates from previous studies. Chapter 7 discusses uncertainty in the data and the analysis. Finally, Chapter 8 recommends structural design criteria by region, considering the numbers of tornadoes, maximum wind speed estimates, and population densities.

2.0 Tornado Data

The tornado database used to prepare the initial version of NUREG/CR-4461 was maintained by the National Severe Storms Forecast Center in Kansas City, Missouri, which is operated by the National Weather Service. Since then, the responsibility for maintaining the list of tornadoes has been transferred to the National Climatic Data Center (NCDC) in Asheville, North Carolina. The statistics for tornadoes striking the contiguous United States are now included in the storm events data base maintained by the NCDC.

In February, 2004, a copy of the database was obtained from NCDC for use in updating NUREG/CR-4461. The database, which covers the period from January 1, 1950, through August 31, 2003, contains entries for 46,864 tornado segments. A tornado segment is the portion or all of a tornado. Prior to 1996, tornadoes were divided into segments when they entered or left a county in which there was an injury or fatality, or when they crossed a state boundary. Since 1996, tornadoes are now divided into segments when they cross a state or county line, when they are less than 2 miles or 4 minutes, and when they have a sharp change in direction. Only about 10 percent of the tornadoes have more than one segment. Division of tornadoes into segments does not have a significant effect on the results of the analysis that follows.

Among the statistics included in the database for tornadoes are date, time, location, length, width, and maximum intensity (wind speed). Of these statistics, the most useful are the location, length, width, and maximum intensity. If these four elements are present, data for the event can be used in all aspects of the analysis. If the location and intensity are listed, the tornado will not be used in estimating tornado dimensions, but it will be counted and used in estimating strike probabilities.

The area of the tornado footprint used in the analysis is the product of the path width and length. The widths reported for tornado segments prior to 1994 were the mean path width. These widths are the appropriate widths for use in estimating the footprint area. Since 1994, the maximum path width has been reported. This change in definition of the width results in overestimates of the footprint area for the more recent tornadoes. No corrections have been applied to the widths reported since 1994 to account for the change in definition. As a result, widths of recent tornadoes provide a conservative bias to the estimates of strike probability in this analysis.

The data contained in the database are made available by the NCDC without warrantee, i.e., the information compiled in the database comes from several of sources with varying levels of reliability and much of the information about the tornadoes is based on subjective judgement. In the course of working with the data for this report, several inconsistencies (fewer than 20) were noted. For example, in several instances the reported lengths of tornado segments were inconsistent with the reported positions of the beginning and end points of the tornado segments. Elsewhere, the latitude and longitude of tornado segments were not consistent with the reported county and state. In these instances, the latitude and longitude of the starting point of the tornado were generally assumed be correct, unless they were

unreasonable, e.g., in the middle of the Pacific Ocean. When the length of a tornado segment was inconsistent with distance between the beginning and end points of the segment, the latitude and longitude of the beginning point, and the length were assumed to be correct. Overall, the database is in reasonably good condition and acceptable for use in this climatology.

2.1 Tornado Intensities

Most of the statistics in the database related to tornadoes are self-explanatory. The exception is the tornado intensity. The tornado database does not include estimates of the maximum wind speeds in tornadoes. However, it does include an estimate of tornado intensity in the form of an intensity scale that is based on the damage caused by the tornado. The most common tornado intensity scale developed by Fujita (1971, 1978) classifies tornado intensity in six F-scale classes, F0 to F5. Wind speeds are rarely measured by meteorological instruments. Instead, they are estimated from damage associated with the tornado. The range of wind speeds assigned to classes by Fujita is listed in Table 2-1. This range been extended from F5 through F12, which has the speed of sound as its upper limit (NCDC 2004). However, no tornado has been assigned an intensity of F6 or greater, and, because of the imprecision in estimating F-scale and wind speeds in tornadoes, there is some question whether an F6 or greater tornado would be identified if it did occur. According to NCDC (2004), the strongest tornadoes are in the F5 range.

Table 2-1. Fujita Tornado F-scale Intensity Wind Speed Relationship

Intensity	Description	Fujita Scale (mph)
F0	Light damage	40 to 72
F1	Moderate damage	73 to 112
F2	Considerable damage	113 to 157
F3	Severe damage	158 to 206
F4	Devastating damage	207 to 260
F5	Incredible damage	261 to 318

It should be noted that the maximum wind speed associated with a tornado occurs for only a small fraction of the footprint and at any location for only a short period of time. Depending on the translational velocity of the tornado, a location might experience wind speeds near the maximum for 1 to 10 seconds.

The problems of tornado intensity from damage are well known. It is a subjective process. For example, damage estimates are limited by the nature of the area where the tornado strikes. If there is nothing to damage, there is no way to assign an F-scale. Similarly, where there are structures, the damage will depend on the nature of the construction.

2.2 United States Tornado Characteristics

The initial step in estimation of tornado strike probabilities and characteristics for use in design of structures is the characterization of the reported tornadoes. Tornado dimensions tend to increase with tornado intensity, and weak tornadoes are more common than strong tornadoes. As a result, the distributions of tornado dimensions are skewed. The modes (most frequent) and medians (50th percentile values) of the distributions are smaller than the means (averages). Mean tornado characteristics are important because they are used in estimating the probability of a tornado strike, and, along with the tornado intensities, they are used to estimate design wind speeds.

Using simple arithmetic averages to estimate mean tornado characteristics from tornado tracks tends to result in underestimates of the true values because of the skewed nature of the distributions. This bias decreases as the number of tornadoes considered increases.

Underestimation of tornado dimensions leads to underestimation of tornado strike probabilities and other design characteristics. Consequently, another statistic is frequently used to estimate mean characteristics: the expected value of the distribution. The expected value is essentially a weighted average rather than an arithmetic average. The expected value of a random variable x (any tornado dimension) is defined as

$$E(x) = \int_{-\infty}^{\infty} xf(x)dx \qquad (2\text{-}1)$$

where f(x) is the probability density function for x. For skewed distributions, the expected value is a better estimate of the true mean than an arithmetic average if the form of the distribution is known because information about the distribution is used in calculating the expected value. That is, the expected value converges to the true mean faster than the arithmetic average.

Following a suggestion by Thom (1963), the lognormal probability density function has been assumed to represent tornado characteristics (Markee et al. 1974; AEC 1974; Schreck and Sandusky 1982; Ramsdell and Andrews 1986). The data in the current tornado database suggest that this assumption is reasonable. Thus, the lognormal assumption is used for the analyses that follow.

Johnson et al. (1994) contains a detailed description of the properties of the lognormal distribution. To determine tornado characteristics, the reported values are transformed by taking logarithms of the values. Then, the mean and variance of the transformed values are computed using the usual statistical method. Finally, the desired statistics are calculated by reversing the transformation.

Given the average, u, of the transformed values and the variance, v, the following statistics of the distribution can be estimated directly:

Expected value	=	$\text{Exp}(u + v/2)$	(2-2)
Mode	=	$\text{Exp}(u - v)$	(2-3)
Median	=	$\text{Exp}(u)$	(2-4)
Lower limit (5%)	=	$\text{Exp}(u - 1.645\, v^{1/2})$	(2-5)
Upper limit (95%)	=	$\text{Exp}(u + 1.645\, v^{1/2})$	(2-6)

In addition, treating (u + v/2) as a random variable, w, the variance of w, V[w] is approximately

$$V[w] \approx v/n + \frac{v^2}{2(n-1)} \qquad (2\text{-}7)$$

where n is the number of tornado events used to estimate u and v. For sufficiently large n, perhaps as small as 20, the 90 percent confidence interval for the expected value is approximately

$$\exp\{w - 1.645(V[x])^{1/2}\} < E[x] < \exp\{w + 1.645(V[w])\} \qquad (2\text{-}8)$$

Equations 2-1 through 2-8 provide the bases for estimation of strike probabilities and the 5th and 95th percentile limits on the 90 percent confidence interval for the expected values.

Table 2-2 lists the characteristics of tornadoes segments in the contiguous United States, derived from the NCDC tornado data. The table shows that the 90 percent confidence interval in the expected values increases as the intensity increases. This increase is associated with the decrease in the number of segments as the intensity increases. Tables 2-3 through 2-5 list the distributions of tornado dimensions for all tornadoes and for tornadoes by reported tornado intensity.

The geographical distribution of tornado events in the United States between the beginning of 1950 and the end of August 2003 is shown in Figure 2-1. A tornado event is defined as a tornado occurrence within a defined area. A tornado segment in the NCDC database may be counted as an event in more than one area. However, for the boxes shown in Figure 2-1, fewer than 5 percent of the tornadoes contribute to events in more than one box. For larger boxes, this percentage decreases. For the 2° and 4° boxes that form the basis for the analysis in Chapter 5, the percentages of segments contributing to events in more than one box decrease to about 2.3 percent and 1.1 percent, respectively.

Each number in Figure 2-1 represents the number of tornado events occurring in a box that covers 1° of latitude by 1° of longitude. The latitude and longitude labels shown in the figure represent the latitude and longitude of the southeast corners of the boxes. The area covered by each box is a function of latitude. Along the southern border of the country, the area is approximately 4,000 mi^2; in the middle of the country, it is about 3,600 mi^2; and along the northern border, it is about 3,200 mi^2. Figures 2-2 and 2-3 show the geographical distributions of more intense tornadoes, with Figure 2-3 showing only the most intense tornadoes, i.e., those having F-scales of F4 and F5.

Table 2-2. Tornado Segment Statistics for the Contiguous United States

	Tornado Intensity					
	F0	**F1**	**F2**	**F3**	**F4**	**F5**
Total Number of Segments	17,554	16,076	9,145	2,903	1,005	130
Number of Segments With Length	14,876	13,437	7,680	2,678	956	120
Median (mi)	0.359	1.244	3.091	6.472	9.360	11.697
Average (mi)	1.140	3.376	6.633	10.495	13.442	14.945
5th Percentile (mi)[a]	0.830	3.489	7.791	11.728	13.563	13.726
Expected Value (mi)[b]	0.851	3.594	8.080	12.281	14.387	15.632
95th Percentile (mi)[a]	0.872	3.703	8.380	12.860	15.261	17.802
Number of Segments With Width	17,448	16,064	9,145	2,903	1,005	130
Median (ft)	80.6	147.2	241.4	471.9	763.9	958.5
Average (ft)	119.9	241.3	442.4	872.6	1426.8	1581.0
5th Percentile (ft)[a]	112.5	218.8	404.5	879.0	1513.2	1617.0
Expected Value (ft)[b]	113.8	221.8	413.5	920.0	1648.5	2047.8
95th Percentile (ft)[a]	115.2	225.0	422.8	962.9	1795.9	2593.4
Number of Segments With Areas	14,823	13,425	7,680	2,678	956	120
Median (mi^2)	0.0053	0.0371	0.1632	0.6433	1.4078	2.4248
Average (mi^2)	0.0458	0.2220	0.7366	2.1059	3.7797	4.6410
5th Percentile (mi^2)[a]	0.0292	0.2777	1.0458	2.8676	4.4162	4.5452
Expected Value (mi^2)[b]	0.0304	0.2921	1.1137	3.1408	5.0186	6.0152
95th Percentile (mi^2)[a]	0.0317	0.3072	1.1860	3.4402	5.7032	7.9605

(a) Estimated limit on expected value, assuming a lognormal distribution for tornado parameter.

(b) Assuming a lognormal distribution for tornado parameter.

Table 2-3. Distribution of Tornado Segment Lengths in the Contiguous United States

	Tornado Intensity						
Length (mi)	All	F0	F1	F2	F3	F4	F5
> 0.0	39,747	14,876	13,437	7,680	2,678	956	120
> 0.1	33,206	9,743	12,282	7,453	2,652	956	120
> 0.2	29,602	7,385	11,254	7,246	2,643	954	120
> 0.5	23,265	4,270	8,774	6,585	2,568	948	120
> 1.0	18,264	2,535	6,508	5,731	2,439	932	119
> 2.0	14,058	1,573	4,577	4,692	2,226	875	115
> 5.0	8,779	627	2,494	3,080	1,739	735	104
> 10.0	4,453	245	1,026	1,582	1,038	489	73
> 20.0	1,343	63	254	475	327	190	34
> 50.0	130	9	33	45	24	18	1
> 100.0	10	1	3	3	2	1	0

Table 2-4. Distribution of Tornado Segment Widths in the Contiguous United States

	Tornado Intensity						
Width (ft)	All	F0	F1	F2	F3	F4	F5
> 0.0	46,695	17,448	16,064	9,145	2,903	1,005	130
> 10.0	46,302	17,158	15,976	9,131	2,902	1,005	130
> 20.0	46,123	16,983	15,972	9,131	2,902	1,005	130
> 50.0	41,311	13,279	15,050	8,969	2,879	1,004	130
> 100.0	22,509	4,964	8,340	5,922	2,334	844	105
> 200.0	14,832	1,831	5,136	4,769	2,174	817	105
> 500.0	6,669	407	1,653	2,330	1,495	687	97
> 1,000.0	3,101	125	588	999	846	449	94
> 2,000.0	1,153	32	145	325	342	277	32
> 5,000.0	138	3	12	36	41	43	3
> 10,000.0	0	0	0	0	0	0	0

Table 2-5. Distribution of Tornado Segment Areas in the Contiguous United States

	Tornado Intensity						
Area (mi^2)	All	F0	F1	F2	F3	F4	F5
> 0.00	39,682	14,823	13,425	7,680	2,678	956	120
> 0.01	25,424	4,989	9,806	6,940	2,616	953	120
> 0.02	21,931	3,512	8,264	6,520	2,566	949	120
> 0.05	17,646	2,090	6,253	5,793	2,461	930	119
> 0.10	13,955	1,215	4,475	4,932	2,319	895	119
> 0.20	10,409	650	2,921	3,813	2,068	844	113
> 0.50	6,229	217	1,325	2,266	1,601	719	101
> 1.00	3,911	85	634	1,338	1,176	586	92
> 2.00	2,208	40	263	657	731	437	80
> 5.00	789	8	50	203	271	214	43
> 10.00	269	1	7	49	107	93	12
> 20.00	58	0	0	11	21	24	2
> 50.00	8	0	0	1	4	3	0

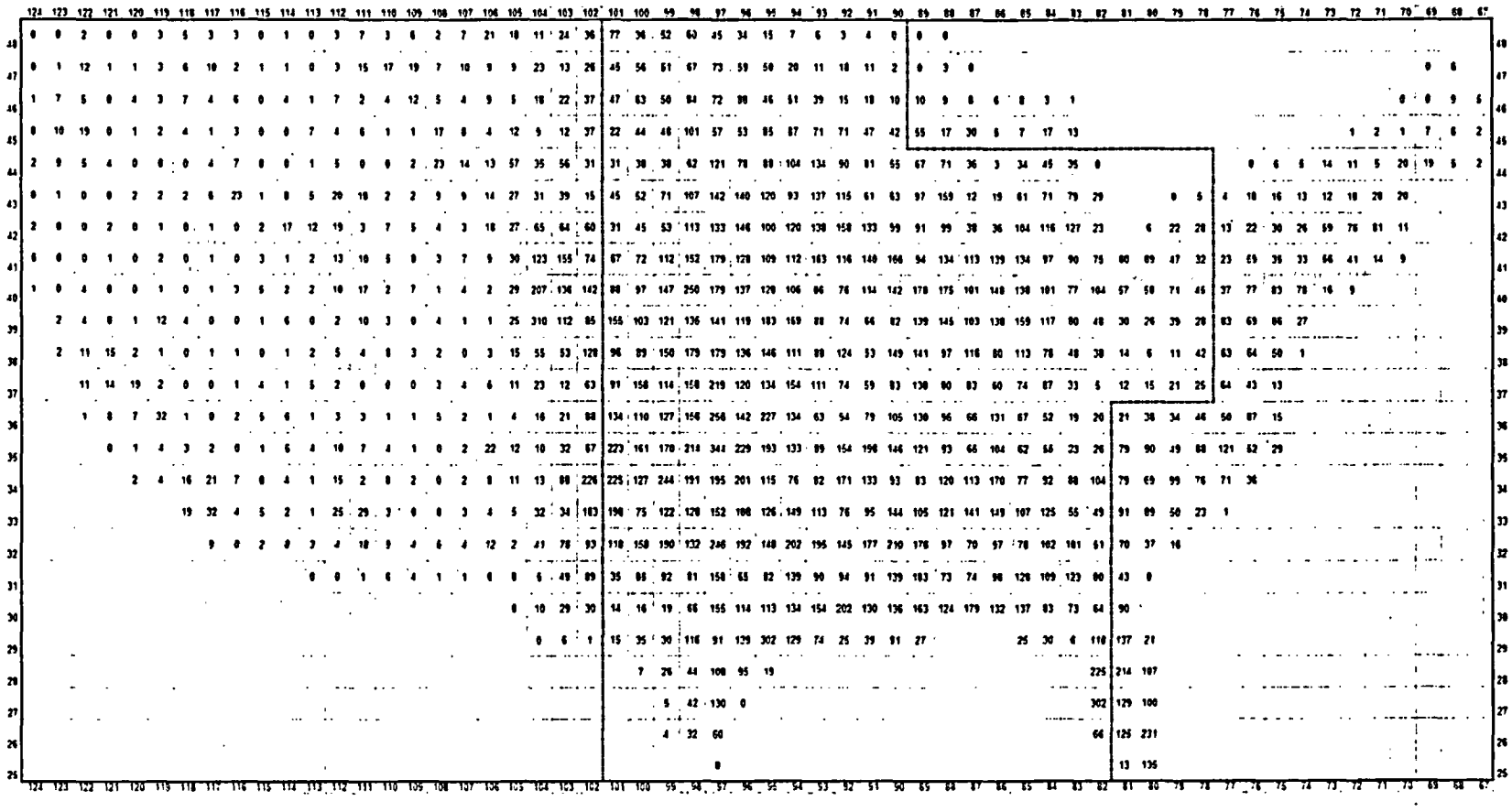

Figure 2-1. Distribution of Tornado Events in the Contiguous United States by 1° Latitude and Longitude Boxes (1950 through August 2003)

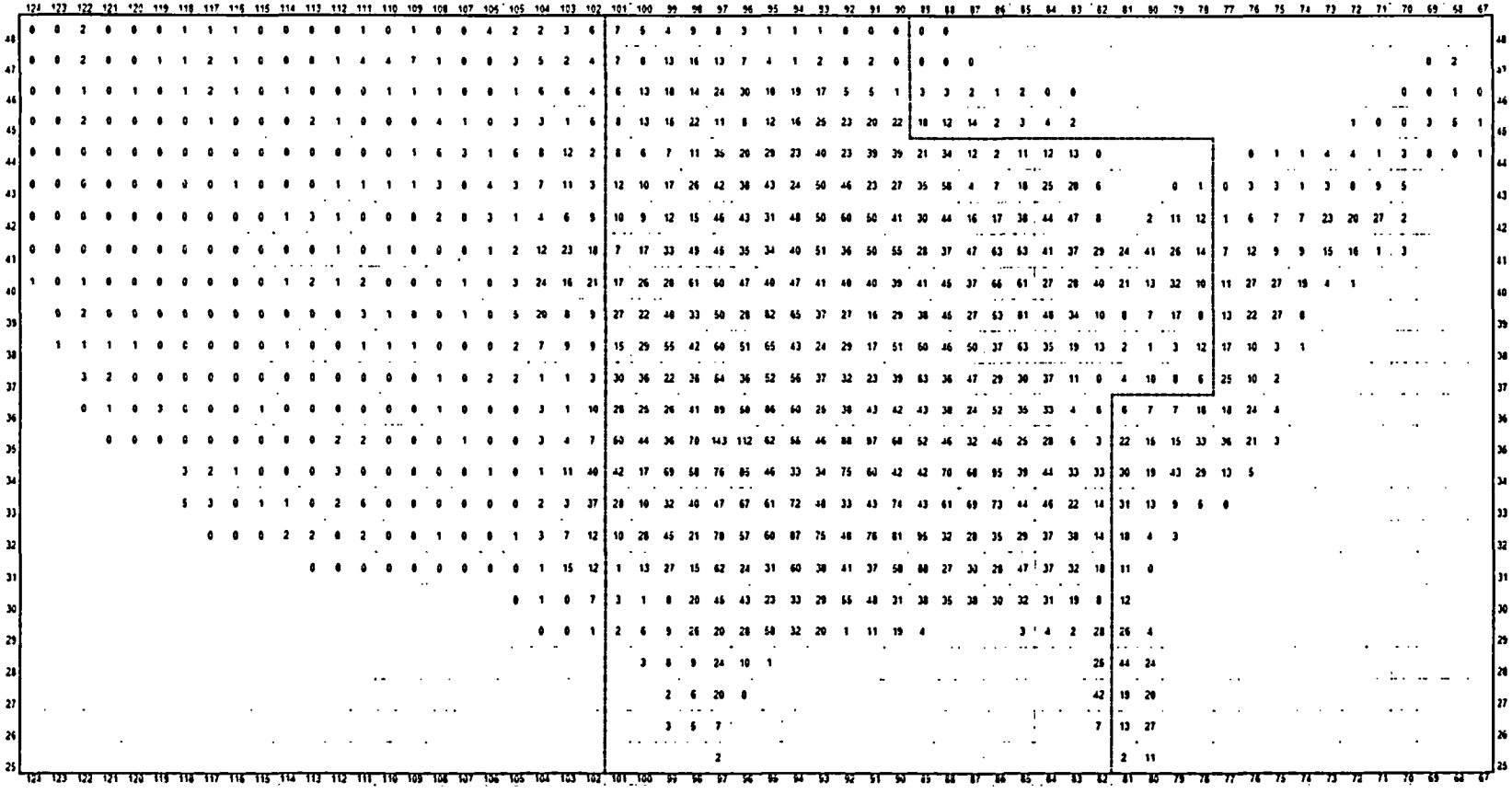

Figure 2-2. Distribution of Tornado Events with Intensities of F2 or Greater in the Contiguous United States by 1° Latitude and Longitude Boxes (1950 through August 2003)

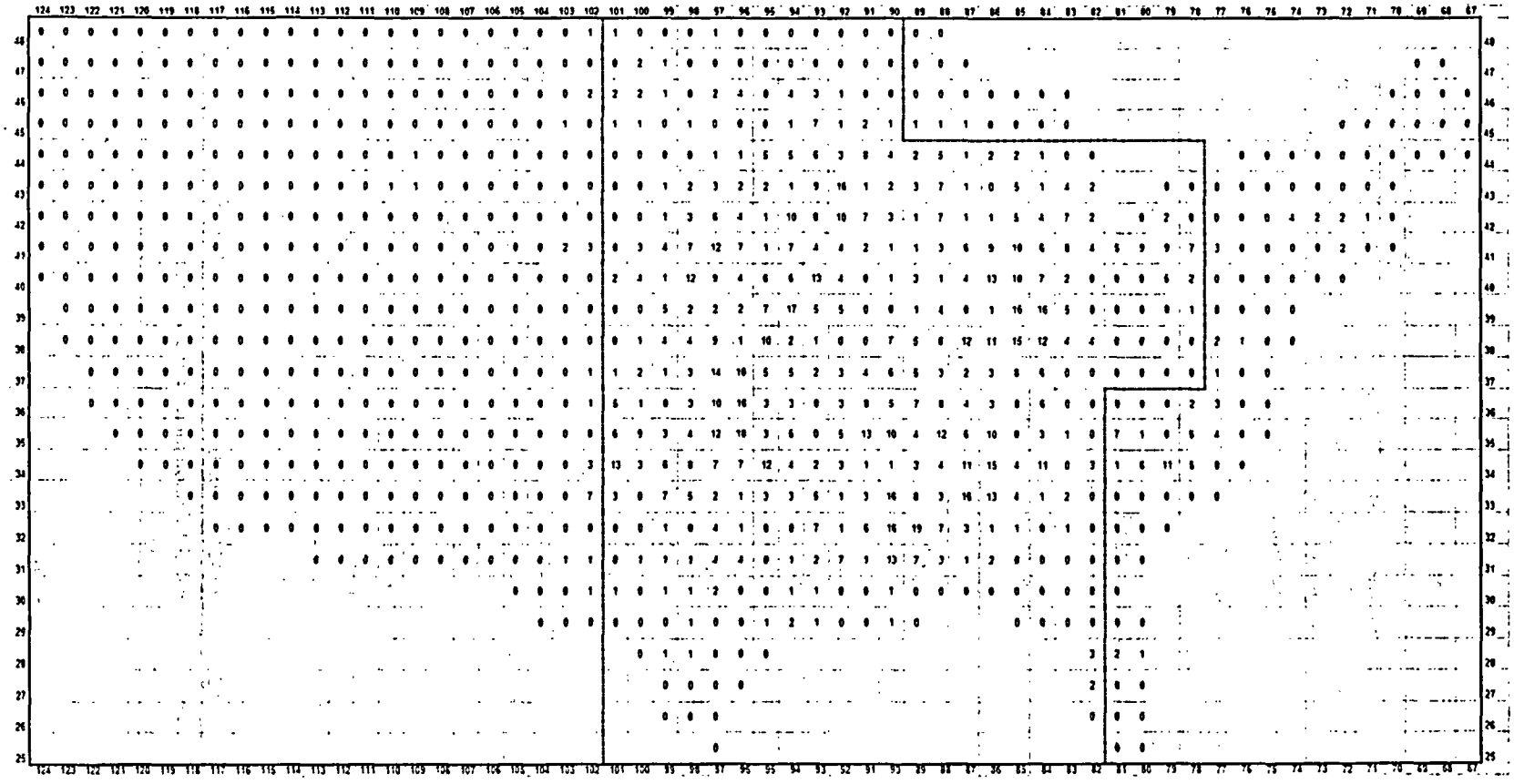

Figure 2-3. Distribution of Tornado Events with Intensities of F4 or Greater in the Contiguous United States by 1° Latitude and Longitude Boxes (1950 through August 2003)

2.3 Regional Tornado Characteristics

Previous studies have indicated that tornado characteristics vary across the country. Figures 2-1, 2-2, and 2-3 show the contiguous United States divided into three regions. The western region is the United States west of 102° west longitude. The central region covers most of the rest of the United States except for the eastern seaboard and a small area along the northern border of the United States just west of Lake Michigan. This remaining region is referred to as the eastern region. Tornado characteristics for each of the regions are listed in the tables presented in this section.

The characteristics of tornado segments in the western United States are listed in Tables 2-6 through 2-9. Tables 2-10 through 2-13 list the characteristics of tornado segments in the central United States, and Tables 2-14 through 2-17 list the characteristics of tornado segments in the eastern United States. Note that Table 2-6 lists three F5 tornado events in the western United States. These events are not included in calculations of design characteristics because there is no information on the tornado lengths.

Table 2-6. Tornado Segment Statistics for the Western United States.

	Tornado Intensity					
	F0	F1	F2	F3	F4	F5
Total Number of Segments	3,004	1,618	524	99	21	3
Number of Segments With Length	2,451	1,254	402	76	20	0
Median (mi)	0.293	0.901	2.243	2.902	13.721	0.000
Average (mi)	1.050	2.383	5.669	6.016	21.555	0.000
5th Percentile (mi)[a]	0.634	2.054	5.403	5.327	14.474	0.000
Expected Value (mi)[b]	0.672	2.240	6.406	7.737	23.081	0.000
95th Percentile (mi)[a]	0.712	2.442	7.595	11.236	36.807	0.000
Number of Segments With Width	2,969	1,615	524	99	21	3
Median (ft)	75.6	121.2	183.2	255.0	1189.9	134.6
Average	113.9	192.9	339.3	553.7	2045.0	149.0
5th Percentile (ft)[a]	104.0	165.1	271.7	388.0	1435.2	95.2
Expected Value (ft)[b]	107.1	171.8	296.1	496.7	2668.4	148.0
95th Percentile (ft)[a]	110.2	178.7	322.6	635.8	4961.3	230.1
Number of Segments With Area	2,438	1,251	402	76	20	0
Median (mi^2)	0.0040	0.0218	0.0918	0.1833	3.5015	0.0000
Average	0.0460	0.1254	0.5464	0.9515	9.3826	0.0000
5th Percentile (mi^2)[a]	0.0191	0.1070	0.5114	0.8513	5.1247	0.0000
Expected Value (mi^2)[b]	0.0211	0.1234	0.6799	1.7643	12.6667	0.0000
95th Percentile (mi^2)[a]	0.0233	0.1424	0.9039	3.6567	31.3085	0.0000

(a) Estimated limit on expected value, assuming a lognormal distribution for the tornado parameter.
(b) Assuming a lognormal distribution for the tornado parameter.

Table 2-7. Distribution of Tornado Segment Lengths in the Western United States

	Tornado Intensity						
Length (mi)	All	F0	F1	F2	F3	F4	F5
> 0.0	4,203	2,451	1,254	402	76	20	0
> 0.1	3,017	1,405	1,133	386	73	20	0
> 0.2	2,475	1,000	1,011	374	70	20	0
> 0.5	1,699	578	721	317	63	20	0
> 1.0	1,117	328	457	256	56	20	0
> 2.0	730	196	281	188	47	18	0
> 5.0	392	85	137	122	32	16	0
> 10.0	197	43	62	67	12	13	0
> 20.0	70	17	17	21	6	9	0
> 50.0	7	0	3	3	0	1	0
> 100.0	1	0	0	0	0	1	0

Table 2-8. Distribution of Tornado Segment Widths in the Western United States

	Tornado Intensity						
Width (ft)	All	F0	F1	F2	F3	F4	F5
> 0.0	5,231	2,969	1,615	524	99	21	3
> 10.0	5,164	2,914	1,604	523	99	21	3
> 20.0	5,136	2,888	1,602	523	99	21	3
> 50.0	4,249	2,125	1,489	513	98	21	3
> 100.0	1,810	798	670	266	57	18	1
> 200.0	841	234	338	202	48	18	1
> 500.0	305	58	105	96	30	16	0
> 1,000.0	124	19	34	39	18	14	0
> 2,000.0	52	8	12	15	5	12	0
> 5,000.0	4	1	2	0	0	1	0
> 10,000.0	0	0	0	0	0	0	0

Table 2-9. Distribution of Tornado Segment Areas in the Western United States

	Tornado Intensity						
Area (mi^2)	All	F0	F1	F2	F3	F4	F5
> 0.00	4,187	2,438	1,251	402	76	20	0
> 0.01	1,897	652	819	338	68	20	0
> 0.02	1,489	454	639	313	63	20	0
> 0.05	1,007	272	401	258	56	20	0
> 0.10	698	160	261	206	51	20	0
> 0.20	477	98	178	141	42	18	0
> 0.50	214	40	55	78	24	17	0
> 1.00	121	18	28	42	18	15	0
> 2.00	62	10	10	20	9	13	0
> 5.00	27	2	3	10	3	9	0
> 10.00	9	0	0	2	2	5	0
> 20.00	4	0	0	1	0	3	0
> 50.00	1	0	0	0	0	1	0

Table 2-10. Tornado Segment Statistics for the Central United States

	Tornado Intensity					
	F0	F1	F2	F3	F4	F5
Total Number of Segments	12,891	12,543	7,804	2,616	930	127
Number of Segments With Length	10,924	10,497	6,569	2,430	882	120
Median (mi)	0.376	1.327	3.273	6.665	9.316	11.697
Average (mi)	1.173	3.613	6.864	10.636	13.325	14.945
5th Percentile (mi)[a]	0.883	3.804	8.101	11.731	13.460	13.726
Expected Value (mi)[b]	0.909	3.936	8.423	12.294	14.312	15.632
95th Percentile (mi)[a]	0.935	4.073	8.757	12.884	15.218	17.802
Number of Segments With Width	12,825	12,537	7,804	2,616	930	127
Median (ft)	82.9	151.5	248.9	485.3	724.8	1,004.0
Average (ft)	122.1	248.6	456.1	887.4	1,337.0	1,614.9
5th Percentile (ft)[a]	114.9	225.7	417.8	894.3	1,411.0	1,649.2
Expected Value (ft)[b]	116.5	229.3	428.0	937.8	1,540.4	2,079.8
95th Percentile (ft)[a]	118.1	233.0	438.4	983.5	1,681.7	2,622.8
Number of Segments With Area	10,887	10,491	6,569	2,430	882	120
Median (mi^2)	0.0057	0.0409	0.1784	0.6759	1.3268	2.4248
Average (mi^2)	0.0474	0.2412	0.7751	2.1725	3.5260	4.6410
5th Percentile (mi^2)[a]	0.0325	0.3183	1.1020	2.8137	4.1374	4.5452
Expected Value (mi^2)[b]	0.0341	0.3374	1.1784	3.0857	4.7263	6.0152
95th Percentile (mi^2)[a]	0.0358	0.3576	1.2601	3.3841	5.3990	7.9605

(a) Estimated limit on expected value, assuming a lognormal distribution for tornado parameter.
(b) Assuming a lognormal distribution for tornado parameter.

Table 2-11. Distribution of Tornado Segment Lengths in the Central United States

	Tornado Intensity						
Length (mi)	All	F0	F1	F2	F3	F4	F5
> 0.0	31,422	10,924	10,497	6,569	2,430	882	120
> 0.1	26,703	7,278	9,628	6,387	2,408	882	120
> 0.2	24,071	5,615	8,836	6,217	2,403	880	120
> 0.5	19,312	3,291	6,991	5,692	2,344	874	120
> 1.0	15,496	1,990	5,296	5,001	2,231	859	119
> 2.0	12,188	1,254	3,820	4,154	2,038	807	115
> 5.0	7,771	499	2,124	2,760	1,604	680	104
> 10.0	3,970	183	879	1,427	956	452	73
> 20.0	1,185	40	217	427	298	169	34
> 50.0	111	7	27	37	23	16	1
> 100.0	8	0	3	3	2	0	0

Table 2-12. Distribution of Tornado Segment Widths in the Central United States

	Tornado Intensity						
Width (ft)	All	F0	F1	F2	F3	F4	F5
> 0.0	36,839	12,825	12,537	7,804	2,616	930	127
> 10.0	36,537	12,599	12,471	7,794	2,616	930	127
> 20.0	36,445	12,507	12,471	7,794	2,616	930	127
> 50.0	33,109	10,013	11,782	7,662	2,596	929	127
> 100.0	18,512	3,736	6,672	5,111	2,116	773	104
> 200.0	12,580	1,417	4,176	4,153	1,982	748	104
> 500.0	5,860	314	1,372	2,068	1,380	629	97
> 1,000.0	2,755	96	492	890	783	400	94
> 2,000.0	1,006	20	114	291	313	236	32
> 5,000.0	125	2	10	35	40	35	3
> 10,000.0	0	0	0	0	0	0	0

Table 2-13. Distribution of Tornado Segment Areas in the Central United States

	Tornado Intensity						
Area (mi^2)	All	F0	F1	F2	F3	F4	F5
> 0.00	31,379	10,887	10,491	6,569	2,430	882	120
> 0.01	21,026	3,857	7,807	5,980	2,383	879	120
> 0.02	18,392	2,763	6,646	5,643	2,345	875	120
> 0.05	15,107	1,650	5,152	5,077	2,253	856	119
> 0.10	12,128	956	3,748	4,358	2,125	822	119
> 0.20	9,167	504	2,476	3,408	1,892	774	113
> 0.50	5,566	163	1,139	2,036	1,474	653	101
> 1.00	3,522	60	551	1,210	1,080	529	92
> 2.00	2,001	28	228	598	677	390	80
> 5.00	717	5	42	184	256	187	43
> 10.00	249	1	7	45	103	81	12
> 20.00	52	0	0	10	21	19	2
> 50.00	6	0	0	1	4	1	0

Table 2-14. Tornado Segment Statistics for the Eastern United States

	Tornado Intensity					
	F0	**F1**	**F2**	**F3**	**F4**	**F5**
Total Number of Segments	1,659	1,915	817	188	54	0
Number of Segments With Length	1,501	1,686	709	172	54	0
Median (mi)	0.354	1.054	2.179	6.100	8.782	0.000
Average (mi)	1.051	2.636	5.033	10.488	12.341	0.000
5th Percentile (mi)[a]	0.692	2.517	5.012	10.443	10.172	0.000
Expected Value (mi)[b]	0.741	2.719	5.647	12.771	12.774	0.000
95th Percentile (mi)[a]	0.793	2.936	6.361	15.619	16.042	0.000
Number of Segments With Width	1,654	1,912	817	188	54	0
Median (ft)	73.1	143.5	215.0	440.9	1590.6	0.0
Average (ft)	113.4	234.2	376.8	834.8	2733.7	0.0
5th Percentile (ft)[a]	100.8	208.7	331.4	728.6	2243.0	0.0
Expected Value (ft)[b]	104.9	217.4	355.8	874.4	3156.1	0.0
95th Percentile (ft)[a]	109.2	226.5	381.9	1049.3	4440.8	0.0
Number of Segments With Area	1,498	1,683	709	172	54	0
Median (mi^2)	0.0048	0.0300	0.0990	0.5573	2.6456	0.0000
Average (mi^2)	0.0334	0.1745	0.4884	1.6746	5.8469	0.0000
5th Percentile (mi^2)[a]	0.0194	0.1690	0.5499	2.3732	4.2825	0.0000
Expected Value (mi^2)[b]	0.0219	0.1926	0.6764	3.5746	6.4821	0.0000
95th Percentile (mi^2)[a]	0.0246	0.2196	0.8320	5.3842	9.8116	0.0000

(a) Estimated limit on expected value, assuming a lognormal distribution for tornado parameter.
(b) Assuming a lognormal distribution for tornado parameter.

Table 2-15. Distribution of Tornado Segment Lengths in the Eastern United States

	Tornado Intensity						
Length (mi)	All	F0	F1	F2	F3	F4	F5
> 0.0	4,122	1,501	1,686	709	172	54	0
> 0.1	3,486	1,060	1,521	680	171	54	0
> 0.2	3,056	770	1,407	655	170	54	0
> 0.5	2,254	401	1,062	576	161	54	0
> 1.0	1,651	217	755	474	152	53	0
> 2.0	1,140	123	476	350	141	50	0
> 5.0	616	43	233	198	103	39	0
> 10.0	286	19	85	88	70	24	0
> 20.0	88	6	20	27	23	12	0
> 50.0	12	2	3	5	1	1	0
> 100.0	1	1	0	0	0	0	0

Table 2-16. Distribution of Tornado Segment Widths in the Eastern United States

	Tornado Intensity						
Width (ft)	All	F0	F1	F2	F3	F4	F5
> 0.0	4,625	1,654	1,912	817	188	54	0
> 10.0	4,601	1,645	1,901	814	187	54	0
> 20.0	4,542	1,588	1,899	814	187	54	0
> 50.0	3,953	1,141	1,779	794	185	54	0
> 100.0	2,187	430	998	545	161	53	0
> 200.0	1,411	180	622	414	144	51	0
> 500.0	504	35	176	166	85	42	0
> 1,000.0	222	10	62	70	45	35	0
> 2,000.0	95	4	19	19	24	29	0
> 5,000.0	9	0	0	1	1	7	0
> 10,000.0	0	0	0	0	0	0	0

Table 2-17. Distribution of Tornado Segment Areas in the Eastern United States

	Tornado Intensity						
Area (mi^2)	All	F0	F1	F2	F3	F4	F5
> 0.00	4,116	1,498	1,683	709	172	54	0
> 0.01	2,501	480	1,180	622	165	54	0
> 0.02	2,050	295	979	564	158	54	0
> 0.05	1,532	168	700	458	152	54	0
> 0.10	1,129	99	466	368	143	53	0
> 0.20	765	48	267	264	134	52	0
> 0.50	449	14	131	152	103	49	0
> 1.00	268	7	55	86	78	42	0
> 2.00	145	2	25	39	45	34	0
> 5.00	45	1	5	9	12	18	0
> 10.00	11	0	0	2	2	7	0
> 20.00	2	0	0	0	0	2	0
> 50.00	1	0	0	0	0	1	0

3.0 Adjustments to the Tornado Data

In the analysis in NUREG/CR-4461, tornado data were used as reported. No attempt was made to adjust or correct the data for potential errors in the subjective evaluation of characteristics of a specific tornado. However, there are two areas where potential adjustments to the data were considered. The first area is under-reporting of tornadoes, particularly the weaker tornadoes. The second area is the assumption that the tornado intensity is uniform over the entire area impacted by the tornado. Section 3.1 discusses the under-reported tornadoes, and Section 3.2 discusses the variation of tornado intensity within the footprint.

3.1 Unreported Tornadoes

Fujita (1978) discusses the history of tornado reports from 1912 through 1977. There was a gradual increase in the number of tornadoes reported annually until the early post-World War II era, when there was a large increase in the number of tornadoes reported. The increase in reported tornadoes has been attributed to increased efficiency in data collection and increased population density. Analysis of Fujita's data in the initial version of NUREG/CR-4461 (Ramsdell and Andrews 1986) indicated that most of the increase in the total number of tornadoes was due to increases in F0, F1, and F2 tornadoes. Any increase in the number of F3 through F5 tornadoes was statistically insignificant. Figure 3-1 shows that the trend in number of tornadoes each year has continued. However, statistical analysis of the number of tornadoes since January 1950 discloses that the only tornadoes with a statistically significant trend are

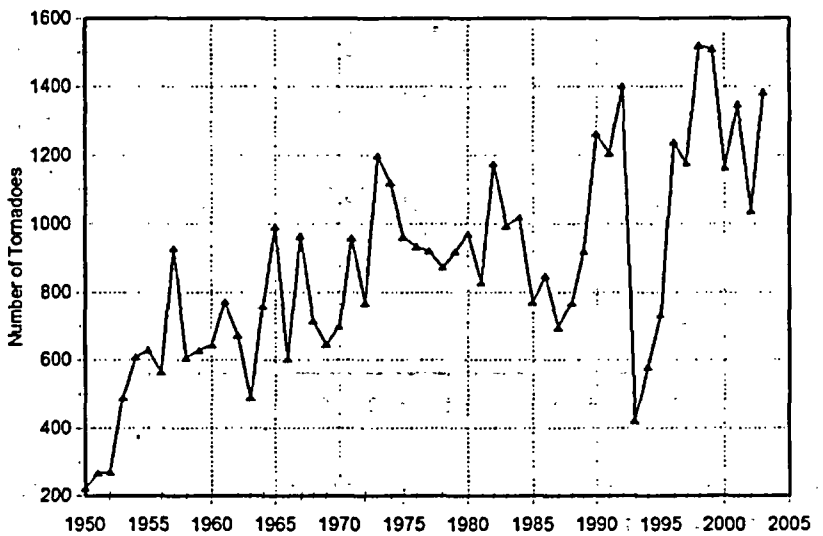

Figure 3-1. Annual Number of Reported Tornadoes 1950 through August 2003

the F0 tornadoes. Figure 3-2 shows the number of F0 tornadoes each year since January 1950 and the total number of more intense tornadoes. This figure shows that in 1950 there were almost no F0 tornadoes reported and that there has been a steady increase since then. In contrast, the figure shows that the number of F1 through F5 tornadoes, while highly variable, does not have an upward trend.

The potential impact of the F0 tornado trend has been evaluated by assuming that the trend is in the reporting of F0 tornadoes, not in the number of occurrences of F0 tornadoes, and that the average number of tornadoes per year over the last 8 years is representative of the true average for the full 53+ year period. Given these assumptions, there should have been about 43,400 F0 tornadoes during this period. Yet, there were only about 17,500 F0 tornadoes reported. The area impacted by the 17,500 reported F0 tornadoes is about 534 mi^2. Had all 43,600 F0 tornadoes been reported, it is estimated that the impacted area would increase to about 1,320 mi^2. This is an increase of about a factor of 2.5, which is significant. However, the increase in total area impacted by all tornadoes by accounting for unreported F0 tornadoes is much smaller. The total area would increase from about 30,400 mi^2 to 31,100 mi^2, an increase of less than 2.5 percent. Figure 3-3 shows that the addition of the missing F0 tornadoes has little impact on tornado strike probability for the more likely events and decreases the probability for low probability events. As a result, no adjustment was made to the data to account for unreported F0 tornadoes.

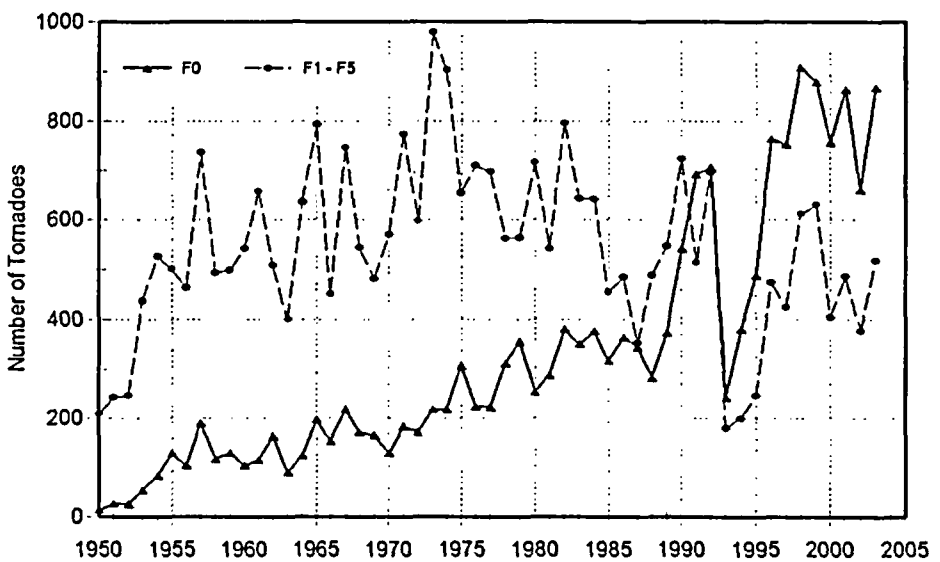

Figure 3-2. Number of F0 Tornadoes and Total Number of F1 through F5 Tornadoes by Year Since 1950

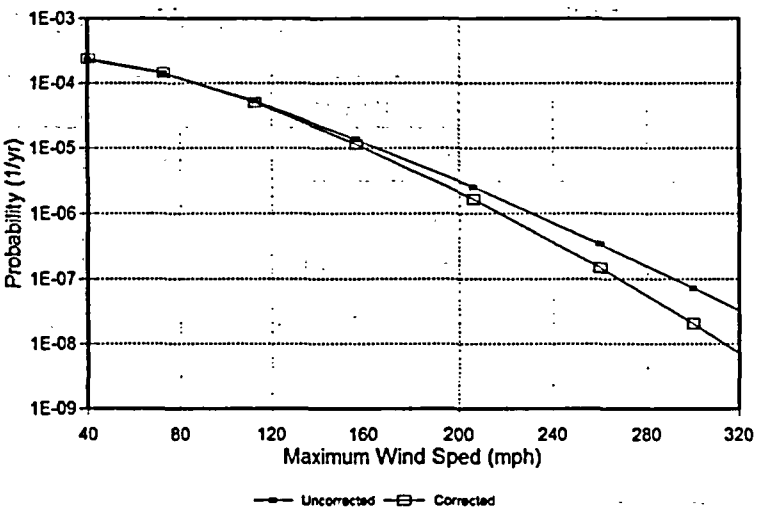

Figure 3-3. Wind Speed Probability With and Without Correction for Unreported F0 Tornadoes

3.2 Variation in Wind Speed Within the Impact Area

The analysis in the initial version of NUREG/CR-4461 (Ramsdell and Andrews 1986) assumed that intensity reported for each tornado represented the wind speed experienced by the entire area within the ground footprint of the tornado. This conservative assumption was consistent with assumptions made in previous analyses (Markee et al. 1974; Sandusky and Shreck 1982). Theoretical considerations and empirical evidence in tornado tracks indicate that the assumption is incorrect and that only a small fraction of the area of the footprint is impacted by the maximum wind speed in the tornado. Note that all segments of a tornado have the same intensity and the analyses presented in this report are based on total area and length. Therefore, segmentation of the tornadoes in the database does not affect either the adjustment or the results of the analysis.

Reinhold and Ellingwood (1982) present the results of several studies that have estimated the variation of maximum wind speeds along and across tornado paths. In addition, they have combined these results to estimate fractions of the impacted area associated with each wind speed class. Table 3-1 (Reinhold and Ellingwood 1982, Table 15d) lists the areal distribution of wind speeds used in this analysis to estimate the area associated with wind speed ranges from areas associated with reported F-scales. The conversion of total impact areas by F-scale to areas associated with wind-speed classes is performed on tornado statistics rather than on individual tornadoes.

Table 3-1 is based on variation of tornado wind speed along tornado paths given by Twisdale and Dunn (1981) and the variation of wind speeds across the paths based on a Rankine Vortex model with a translation speed of 10 times the maximum F-scale developed by Reinhold and Ellingwood (1982). The interpretation of Table 3-1 is as follows: 100 percent of the area impacted by F0 tornadoes has a wind speed in the 40 to 72 mph range. For F1 tornadoes, only 24.9 percent of the area has wind speeds in the 73 to 112 mph range, and 75.1 percent of the area has wind speeds in the 40 to 72 mph range. Similarly,

Table 3-1. Tornado Area Intensity Distribution for the Point Structure Design Wind-Speed Estimates

Intensity F-Scale	Wind-Speed Range (mph)	Recorded Tornado F-Scale					
		F0	F1	F2	F3	F4	F5
F0	40 - 72	1.000	0.751	0.484	0.316	0.315	0.293
F1	73 - 112		0.249	0.414	0.423	0.371	0.330
F2	113 - 157			0.102	0.205	0.199	0.201
F3	158 - 206				0.056	0.089	0.112
F4	207 - 260					0.026	0.050
F5	261 - 318						0.014

10.2 percent of the area impacted by F2 tornadoes has wind speeds in the 113 to 157 mph wind speed range, 41.4 percent has wind speeds in the 73 to 112 mph range, and the remaining 48.4 percent of the area has wind speeds in the 40 to 72 mph range.

Application of the adjustment of areas based on tornado event dimensions to areas associated with intensity (wind speed) is illustrated in Table 3-2. The first column in the table lists the reported F-scale, and the last column lists the range of maximum wind speeds associated with the F-scale. The total area impacted for tornadoes in each category is listed in the second column. The third column lists the area by wind-speed classes after adjustment to account for variation in wind speed within the impact area. For example, the total area impacted by winds from 40 through 72 mph is all of the area of F0 tornadoes, plus 75.1 percent of the area impacted by F1 tornadoes, plus 48.4 percent of the area impacted by F2 tornadoes, etc. Note that the areas in column 3 decrease monotonically with increasing wind speed, while the areas in column 2 do not. Note also that the total impact area for all tornadoes before and after the adjustment remains constant within limits of roundoff error; the adjustment does not affect the strike probability. The fourth column lists cumulative area based on wind speed. The F0 entry lists the total area for tornadoes of all classes. This is the area to be used in calculating the strike probability. The F1 entry lists the total area with wind speeds of 73 mph or greater. In this analysis, impacted areas used in calculation of strike probabilities and design characteristics have been adjusted for the variation in speed along and across tornado paths.

The analysis in the initial version of NUREG-4461 (Ramsdell and Andrews 1986) estimated only tornado strike probabilities and design wind speeds for point structures. That analysis was based entirely on the tornado impact areas. The impact area adjustment just described is appropriate for estimating strike probabilities and design speeds for point structures. This report considers both point structures and finite structures.

Table 3-2. Area Impacted by Tornadoes in the Contiguous United States

F-Scale	Total Area (mi^2) by F-Scale	Total Area (mi^2) by Wind-Speed Range	Cumulative Area (mi^2)	Probability of Wind Speed Exceeding Threshold	Wind-Speed Range (mph)
F0	533.6	13,688.7	30,357.6	1.00×10^{0}	40 - 72
F1	4,695.8	11,371.8	16,668.9	5.49×10^{-1}	73 - 112
F2	10,184.8	4,068.9	5,297.1	1.74×10^{-1}	113 - 156
F3	9,117.7	1,047.1	1,228.2	4.05×10^{-2}	157 - 205
F4	5,043.7	170.2	181.2	5.97×10^{-3}	206 - 259
F5	782.0	10.9	10.9	3.61×10^{-4}	≥ 260

Estimation of strike probabilities and design speeds for finite structures involves both tornado impact areas and tornado lengths. Consequently, it is necessary to estimate the total length of tornado paths associated with wind speeds. Table 3-3 presents estimates of the distribution of wind speeds by length for each F-scale made by Twisdale and Dunn (1981). These estimates are used in the same way as the information in Table 3-1. Reinhold and Ellingwood (1982) used the Twisdale and Dunn information presented in Table 3-3 in compilation of Table 3-1.

Tornado lengths used in the estimates of strike probability and design characteristics for finite-structures in this report have been adjusted to account for the variation of wind speed along tornado paths. This adjustment does not change the total path length for all tornadoes.

Note that all segments of a tornado have the same intensity, and the analyses presented in this report are based on total area and length. Therefore, segmentation of the tornadoes in the database does not affect either of the adjustments or the results of the analyses.

Table 3-3. Tornado Length Intensity Distribution for the Finite-Structure Design Wind-Speed Estimates

Intensity F-scale	Wind-Speed Range (mph)	Recorded Tornado F-scale					
		F0	F1	F2	F3	F4	F5
F0	40 - 72	1.000	0.572	0.280	0.116	0.142	0.133
F1	73 - 112		0.428	0.352	0.245	0.158	0.102
F2	113 - 157			0.368	0.318	0.278	0.189
F3	158 - 206				0.321	0.210	0.242
F4	207 - 260					0.212	0.185
F5	≥260						0.149

4.0 Tornado Model

The general approach used to evaluate tornado strike probabilities and design wind speeds follows the approach taken in the initial version of NUREG/CR-4461. However, two significant modifications have been made to that approach. The first modification is addition of a second term to the estimation of strike probabilities. In the initial version of NUREG/CR-4461, strike probabilities were estimated using a point strike calculation in which the structure dimensions were assumed to be negligible relative to tornado dimensions. The current analysis includes a term called the "life line" term to account for finite building dimensions (Garson et al. 1975). The second modification to the approach used in the initial version of NUREG/CR-4461 is to account for the variation of tornado intensity along and across the tornado path. The previous analysis assumed that the entire tornado footprint experienced wind speeds equaling or exceeding the minimum wind speed for the reported tornado intensity (Fujita F-scale). Section 3.2 describes the change in basis for area and length from the F-scale to wind speed. The calculations described in the following sections assume that areas and lengths associated with wind-speed ranges are used. Thus, they account for the variation of wind speed along and across the path.

The specification of a design basis wind speed has two parts: specification of an exceedence probability and specification of the appropriate wind speed for the exceedence probability. The approach followed in the past (Markee et al. 1974; AEC 1974; Shreck and Sandusky 1982; Ramsdell and Andrews 1986) has been to define the exceedence probability, to estimate the probability of a tornado striking a site, and to determine the conditional probability of exceeding specified wind speeds, assuming that a tornado strike occurs. The design exceedence probability and the strike probability are used to establish a conditional probability, which is converted to the design wind speed. This same general procedure is used in this analysis.

4.1 Point Structures

Consider, first, the point structure probability, P_p. The probability of the wind speed, u, exceeding some value u_o at a site is defined as the product of the probability that a tornado will strike the point structure and the conditional probability that the wind speed u will exceed u_o, assuming that a tornado strike, s, occurs:

$$P_p(u \geq u_o) = P_p \times P_p(u \geq u_o | s) \qquad (4\text{-}1)$$

The strike probability can now be defined without regard to the tornado intensity:

$$P_p = \frac{A_t}{NA_r} \qquad (4\text{-}2)$$

where A_t is the total area (mi^2) impacted by tornadoes in the region of interest, which has an area denoted by A_r (mi^2), and N is the number of years of record. For example, A_r the area of the contiguous United States, is about 3,050,000 mi^2, and the N is 53.67 years. The total tornado area is the product of the expected area for tornado events and the total number of tornado events that impacted the region of

interest in N years (~30,358 mi^2). Using these values, the expected strike probability is about 1.85×10^{-4} yr^{-1}. The same calculations can be made using the upper and lower limits of the 90 percent confidence interval for the expected area. The results of the calculations show that the limits are 1.70×10^{-4} yr^{-1} and 2.02×10^{-4} yr^{-1}, respectively. The number of events in these calculations include events that were not considered in the calculation of the expected values for the area because of missing information.

Equation (4-1) shows the probability of exceeding a given wind speed at a point as the product of two components. The first component is the probability of a tornado striking a point, and the second component is a conditional probability of exceeding a given wind speed assuming that a tornado strike occurs, $A_{u \geq u_o}$. As indicated above, the strike probability can be estimated from the total area impacted by tornadoes without regard to F-scale. The conditional probability of exceeding u_o given that a tornado has occurred is estimated as

$$P_p(u \geq u_o|s) = \frac{A_{u \geq u_o}}{A_t} \qquad (4\text{-}3)$$

where is the total area impacted by wind speeds greater than u_o. The next-to-last column in Table 3-2 lists the results of applying Eq. (4-3) to the areas in column 4 of Table 3-2. These values, with the lower bound wind speed in each range in the last column, provide up to six points on a curve that can be used to represent the conditional probability.

The probability of exceeding u_o may be represented by a Weibull distribution. In that distribution,

$$P_p(u \geq u_o|s) = \mathrm{Exp}\left[-\left(\frac{u_o - 40}{a_p}\right)^{b_p}\right] \qquad (4\text{-}4)$$

where 40 is the minimum tornado wind speed, and a and b are parameters of the Weibull distribution. Estimation of these parameters requires good estimates of $A_{u \geq u_o}$, which can only be obtained from considering a large number of tornadoes. An optimization procedure, for example, the Nelder-Mead Simplex algorithm (Nelder and Mead 1965), may be used to determine the parameter values that minimize the sum of squares of the errors between the probabilities estimated using the Weibull distribution and the observed probabilities.

The optimization algorithm requires impacted areas for at least three F-scales. Many areas of the west and some areas of the east do not have a reported F2 or stronger tornado. In addition, the confidence interval for the expected area and length of tornadoes increases rapidly as the number of tornadoes decreases. Therefore, the contiguous United States has been divided into three regions for the purpose of determining the conditional probability to ensure that there are sufficient tornadoes to adequately define the frequency of low probability events. Figures 2-1, 2-2, and 2-3 show the regions. The dividing line between the western and central regions was moved 3° east from the dividing line between the western and eastern United States in the initial version of NUREG/CR-4461 after considering the number of F2 or

greater tornadoes (Figures 2-2 and 2-3). The dividing line between the central and eastern United State was based on the number of F4 tornadoes (Figure 2-3).

4.2 Large Structures

Consider now the probability represented by the life-line term. If a structure is large, the probability of being struck by a tornado is greater than that based only on tornado dimensions. The additional probability is determined by a characteristic dimension of the structure and the expected length for tornadoes. This additional probability is estimated by the life-line term.

The process for estimating the life-line term is nearly identical to the process for estimating the point-structure term. The initial step is to separate the desired probability into a strike probability that is independent of intensity and a conditional probability that considers intensity:

$$P_l(u \geq u_o) = P_l \times P(u \geq u_o|s) \tag{4-5}$$

The initial definition of the strike probability is also the same.

$$P_l = \frac{A_t}{NA_r} = \frac{w_s L_t}{NA_r} \tag{4-6}$$

However, in this case, the impacted area is estimated as the product of a characteristic building dimension, w_s (mi), and the total length of tornado paths, L_t (mi). A characteristic dimension of 200 ft (0.0379 mi) has been assumed for this analysis. With this change, the conditional probability statement becomes:

$$P_l(u \geq u_o|s) = \frac{L_{u \geq u_o}}{L_t} \tag{4-7}$$

where $L_{u \geq u_o}$ is the total tornado path length with wind speeds equaling or exceeding u_o.

Continuing the analogy with the point-structure term, the conditional probability may be represented by a Weibull distribution, and the parameters of the distribution may be estimated using an optimization procedure:

$$P_l(u \geq u_o|s) = \text{Exp}\left[-\left(\frac{u_o - 40}{a_l}\right)^{b_l}\right] \tag{4-8}$$

4.3 Total Strike Probability and Design Wind Speed

The total probability of a structure being struck by a tornado with winds exceeding some value u is the sum of the point structure and life-line probabilities:

$$P(u \geq u_o) = P_p(u \geq u_o) + P_l(u \geq u_o)$$

$$= \frac{A_t}{NA_r} Exp\left[-\left(\frac{u_o - 40}{a_p}\right)^{b_p}\right] + \frac{w_s L_t}{NA_r} Exp\left[-\left(\frac{u_o - 40}{a_l}\right)^{b_l}\right] \qquad (4\text{-}9)$$

Equation (4-9) provides the means to estimate the probability of a tornado strike with wind speeds exceeding u_o, but it cannot be inverted to estimate the wind speed, u_o, associated with a given probability. Estimation of the wind speed associated with a given probability involves two steps. In the first step, strike probabilities are estimated for a range of wind speeds that is sufficiently large that the strike probability of interest is included within the range of calculated strike probabilities. Then, in the second step, the wind speed of interest, u_o, associated with the given probability is determined by interpolation.

5.0 Analytical Results

Two computer programs were written to analyze NCDC tornado data. One of the programs, TorBoxes, was used to calculate the descriptive tornado statistics presented in Chapter 2.0 and tornado statistics for 1°, 2°, and 4° boxes. The other program, TorStrk, was written to calculate tornado statistics for specific locations.

The results of manual analysis of the descriptive tornado statistics are presented in Section 5.1. These results include estimates of the strike probabilities and Weibull parameter values for the contiguous United States and the three regions of the United States shown in Figures 2-1, 2-2, and 2-3. Design statistics for the 1°, 2°, and 4° boxes based on local strike probabilities and conditional wind speed probabilities calculated using the appropriate regional Weibull parameter values are presented in Section 5.2.

5.1 Contiguous United States and Regions

Chapter 2.0 presents descriptive statistics for tornadoes in the contiguous United States and for the western, central, and eastern regions. These statistics have been used to estimate strike probabilities for the contiguous United States and each of the regions. They have also been used to estimate parameter values, a and b, for the Weibull distributions that are assumed to describe the conditional probability of the wind exceeding a specified speed if a tornado does strike. Table 5-1 contains the results of these calculations. Probabilities of exceeding specified wind speeds in the contiguous United States and the regions are compared in Figure 5-1.

Table 5-1. Calculated Tornado Model Parameters

		Point Structure			Finite Structure		
	Region	Strike Probability	a	b	Strike Probability	a	b
Expected Values	U.S.	1.86×10^{-4}	51.21	1.413	4.61×10^{-5}	67.97	1.582
	West	1.61×10^{-5}	44.36	1.224	5.90×10^{-6}	46.84	1.211
	Central	3.57×10^{-4}	50.64	1.396	8.70×10^{-5}	68.80	1.585
	East	9.11×10^{-5}	49.22	1.380	2.47×10^{-5}	60.28	1.491
5% Lower-Limit	U.S.	1.71×10^{-4}	51.19	1.429	4.43×10^{-5}	67.94	1.593
	West	1.05×10^{-5}	38.62	1.172	5.11×10^{-6}	43.76	1.203
	Central	3.27×10^{-4}	50.60	1.411	8.35×10^{-5}	68.79	1.596
	East	6.82×10^{-5}	47.01	1.349	2.19×10^{-5}	58.54	1.472
95% Upper-Limit	U.S.	2.02×10^{-4}	51.28	1.398	4.78×10^{-5}	68.01	1.572
	West	2.72×10^{-5}	50.31	1.286	6.88×10^{-6}	50.46	1.226
	Central	3.91×10^{-4}	50.74	1.381	9.06×10^{-5}	68.83	1.574
	East	1.23×10^{-4}	51.31	1.411	2.79×10^{-5}	62.08	1.510

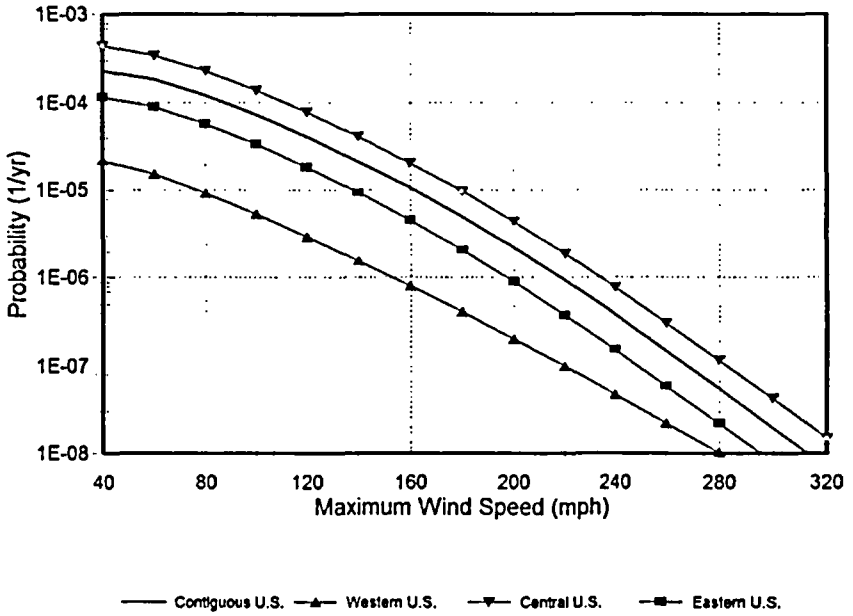

Figure 5-1. Comparison of Wind Speed Probabilities Calculated for the Contiguous United States and the Western, Central, and Eastern Regions

Figures 5-2 and 5-3 compare the conditional probabilities associated with the point-structure and life-line terms, respectively. The curves in these figures show the effects of the differences in the Weibull parameters listed in Table 5-1. Remember that these figures do not include the probability that an event will occur. Figure 5-2 shows that there are no significant regional differences in the conditional probabilities associated with the point-structure term for the most likely events (events with greater than 1×10^{-2} probability of occurrence). For events with less than a 1×10^{-2} probability of occurrence, higher wind speeds are more likely in the western region than in either the central or eastern region. Figure 5-3 shows that the regional differences in conditional probabilities associated with the life-line term are greater than those associated with the point-structure term. Even then, there is less than a factor-of-2 difference in probability of wind speeds as high as 280 mph.

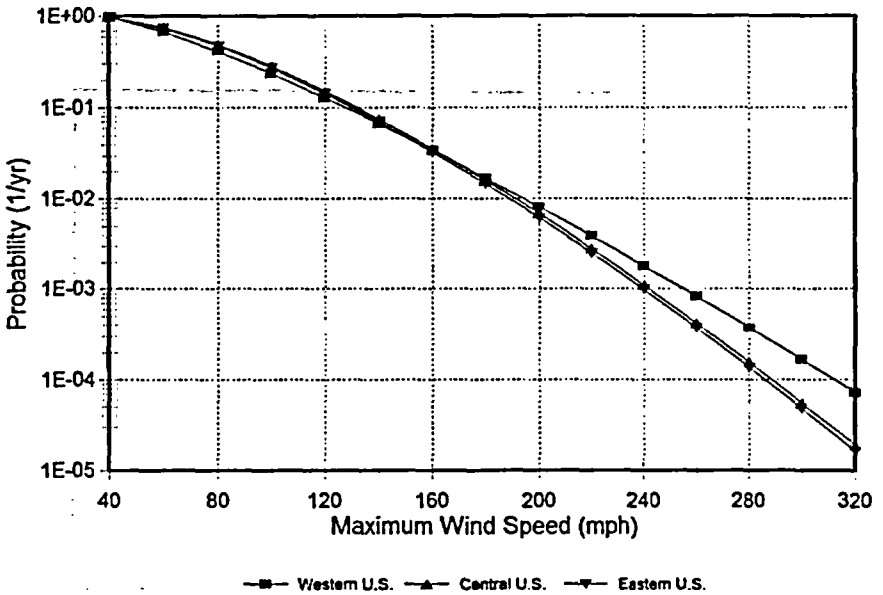

Figure 5-2. Comparison of Wind Speed Probabilities for Point Structures in the Western, Central, and Eastern Regions

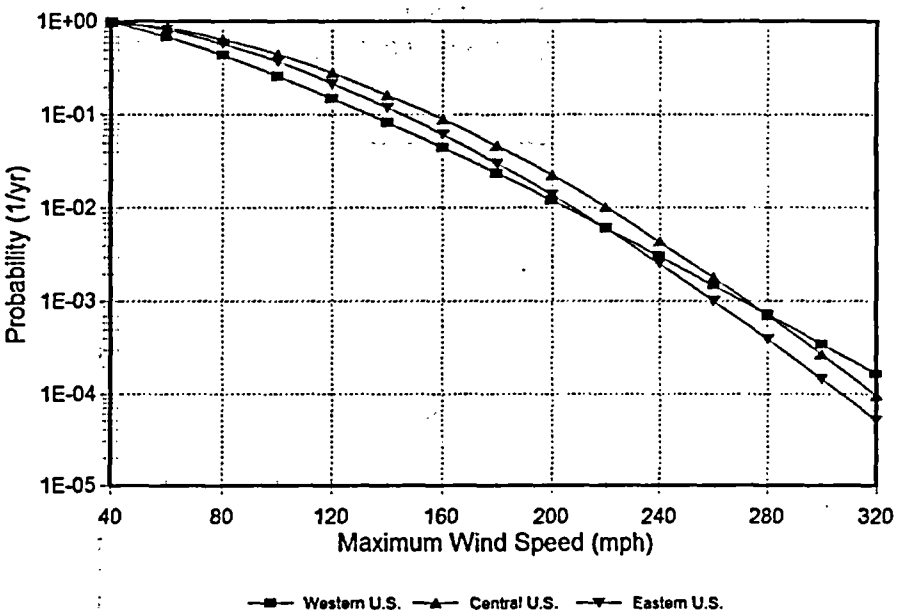

Figure 5-3. Comparison of Wind Speed Probabilities Associated with the Life-Line Term for Large Structures in the Western, Central, and Eastern Regions

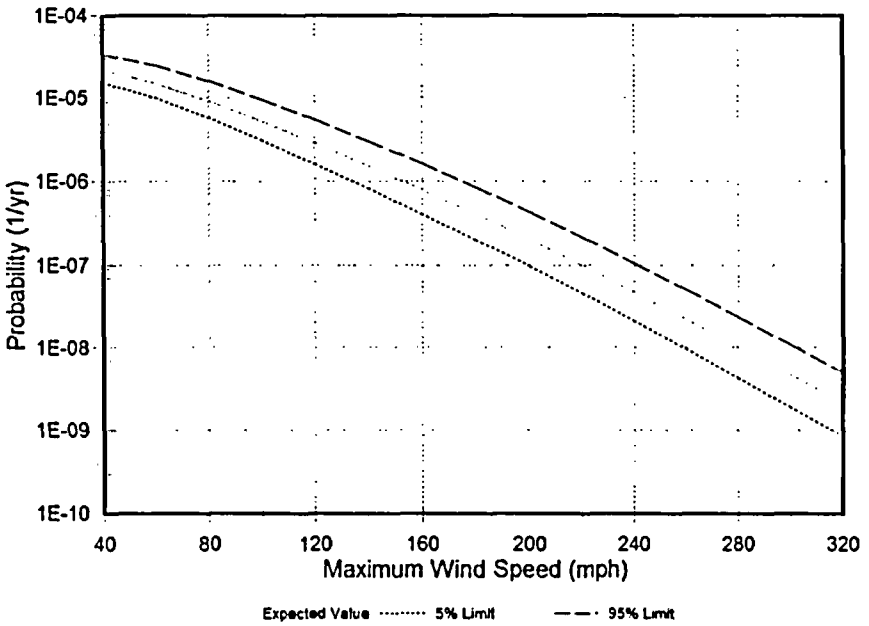

Figure 5-4. Maximum Wind Speed Probability for a 200-ft Structure in the Western United States Showing the 90 Percent Confidence Interval

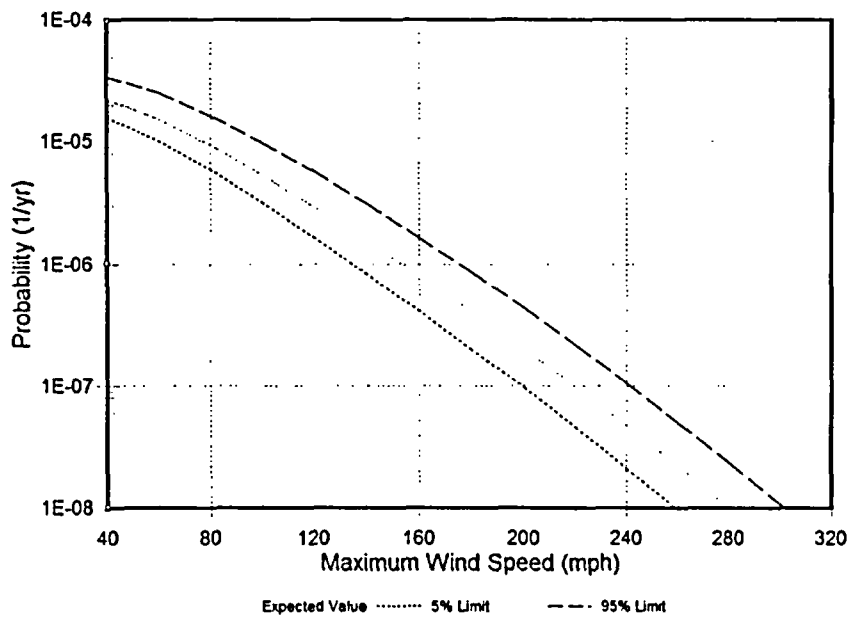

Figure 5-5. Maximum Wind Speed Probability for a 200-ft Structure in the Central United States Showing the 90 Percent Confidence Interval

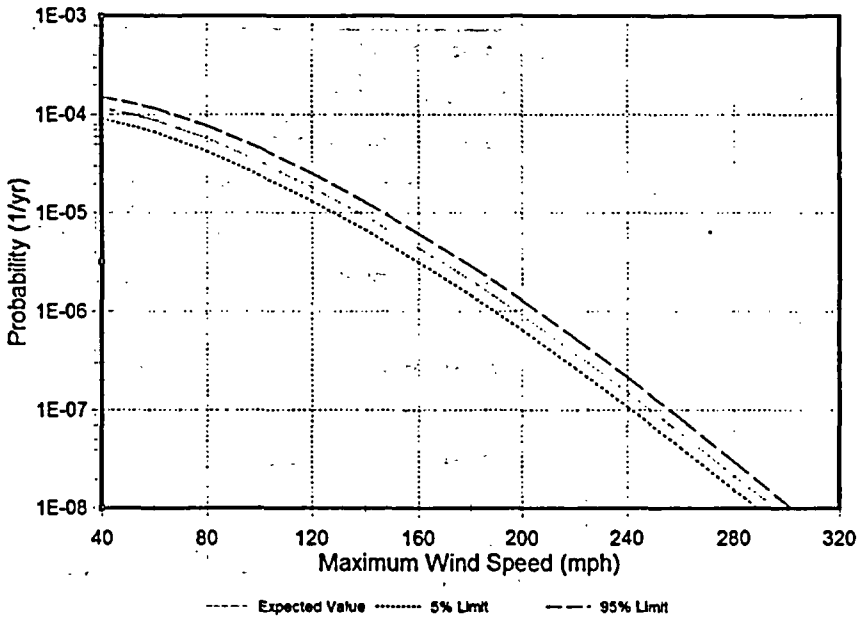

Figure 5-6. Maximum Wind Speed Probability for a 200-ft Structure in the Eastern United States Showing the 90 Percent Confidence Interval

5.2 Subregional Results

Tornado characteristics have been estimated for 1°, 2°, and 4° latitude and longitude boxes. These characteristics are listed in Appendices A, B, and C. Appendix A lists the characteristics for 2° boxes; Appendix B lists the characteristics for 4° boxes; and Appendix C lists the characteristics for 1° boxes. The characteristics for the 2° and 4° boxes are considered most reliable; those for 1° boxes should only be used if the number of events is large enough to ensure that the statistics are likely to be reliable. The appendices include the expected tornado impact area and length; the point-structure, finite-structure, and total strike probabilities; and design wind speeds at the 10^{-5}, 10^{-6}, and 10^{-7} yr^{-1} probability levels. The upper and lower limits for these characteristics are also included, as are the number of events and the land area within the box.

Figure 5-7 shows the distribution of tornadoes by 2° boxes. The design wind speeds for the 2° boxes are shown in Figures 5-8 through 5-13. Figures 5-8 and 5-9 show the expected and upper limit wind speeds, respectively, for the 10^{-5} yr^{-1} probability level. Figures 5-10 and 5-11 show the wind speeds for the 10^{-6} yr^{-1} probability level, and Figures 5-12 and 5-13 show the wind speeds for the 10^{-7} yr^{-1} probability level. In the figures showing design wind speeds, the number 0 indicates that there were no tornado events in the box; the number 38 indicates that there was a tornado, but the strike probability is less than 10^{-7} yr^{-1}; and the number 39 indicates that the strike probability is less than the probability for the figure, but greater than 10^{-7} yr^{-1}.

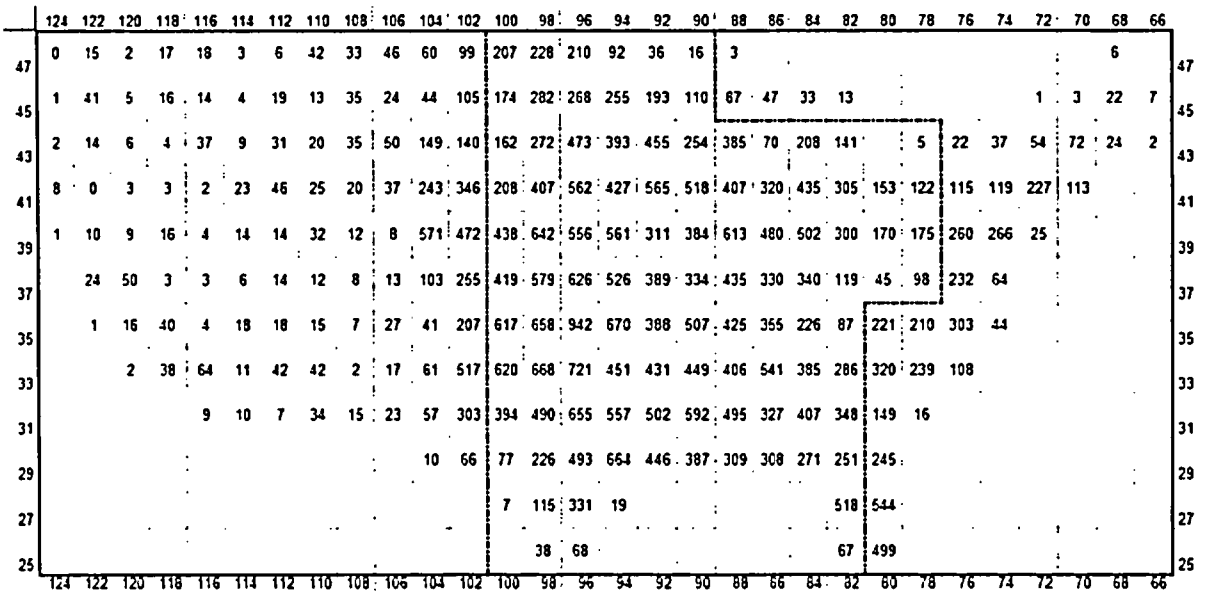

Figure 5-7. Number of Tornado Events in the United States From 1950 through August 2003 by 2° Boxes

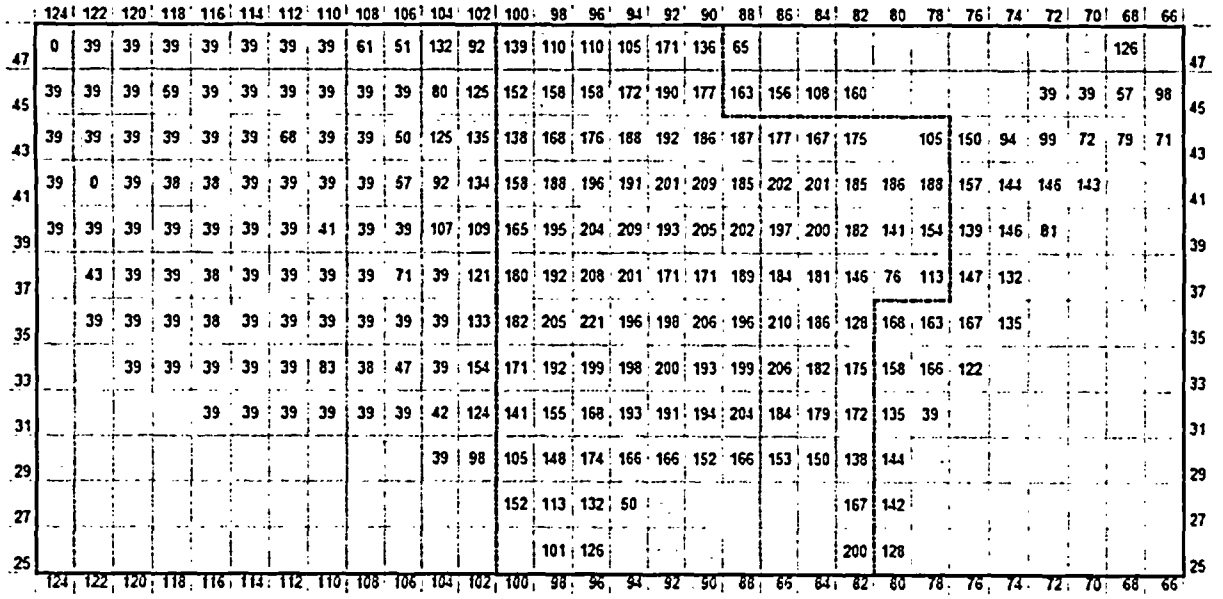

Figure 5-8. Expected Maximum Tornado Wind Speeds with a 10^{-5} yr^{-1} Probability of Occurrence by 2° Boxes

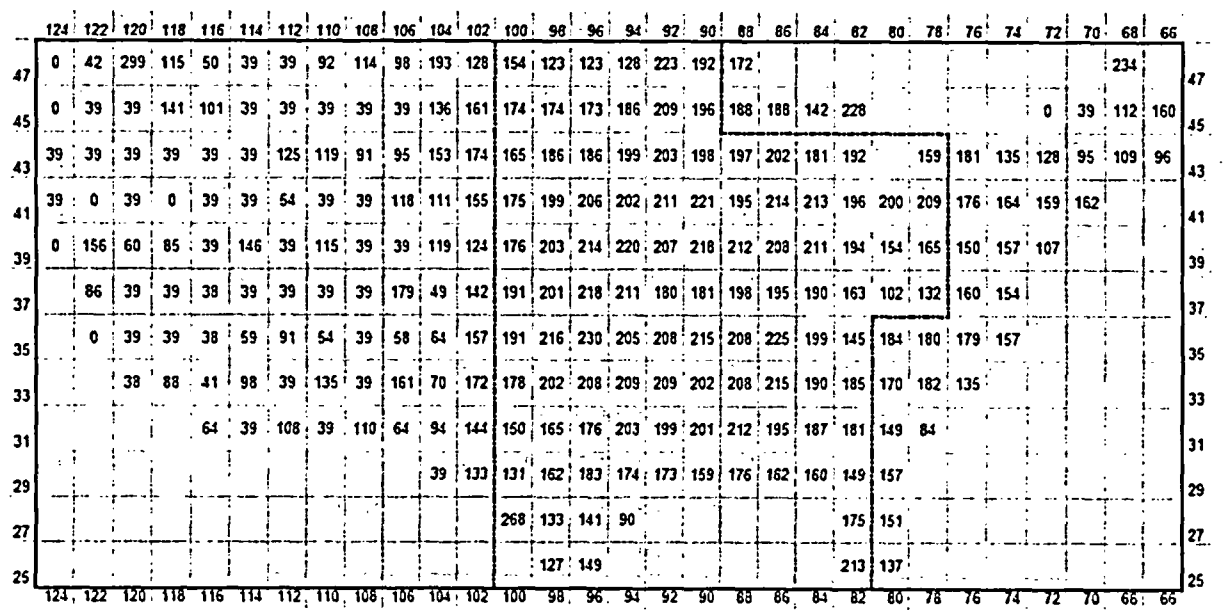

Figure 5-9. Upper Limit (95 Percent) on the Expected Maximum Tornado Wind Speeds with a 10^{-5} yr^{-1} Probability of Occurrence by 2° Boxes

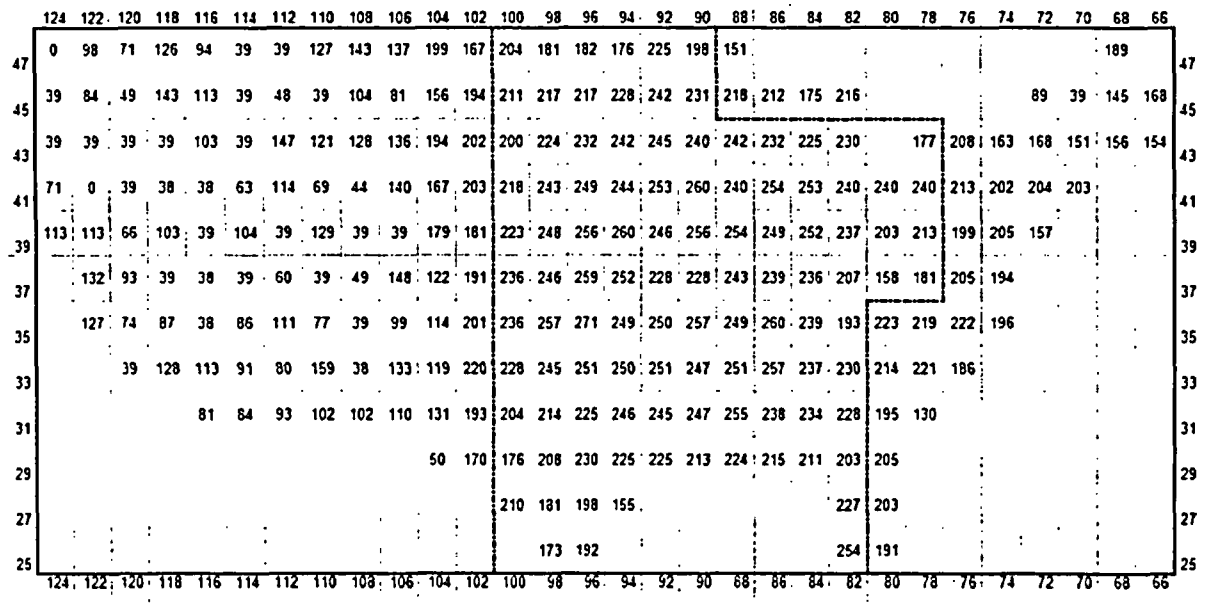

Figure 5-10. Expected Maximum Tornado Wind Speeds with a 10^{-6} yr^{-1} Probability of Occurrence by 2° Boxes

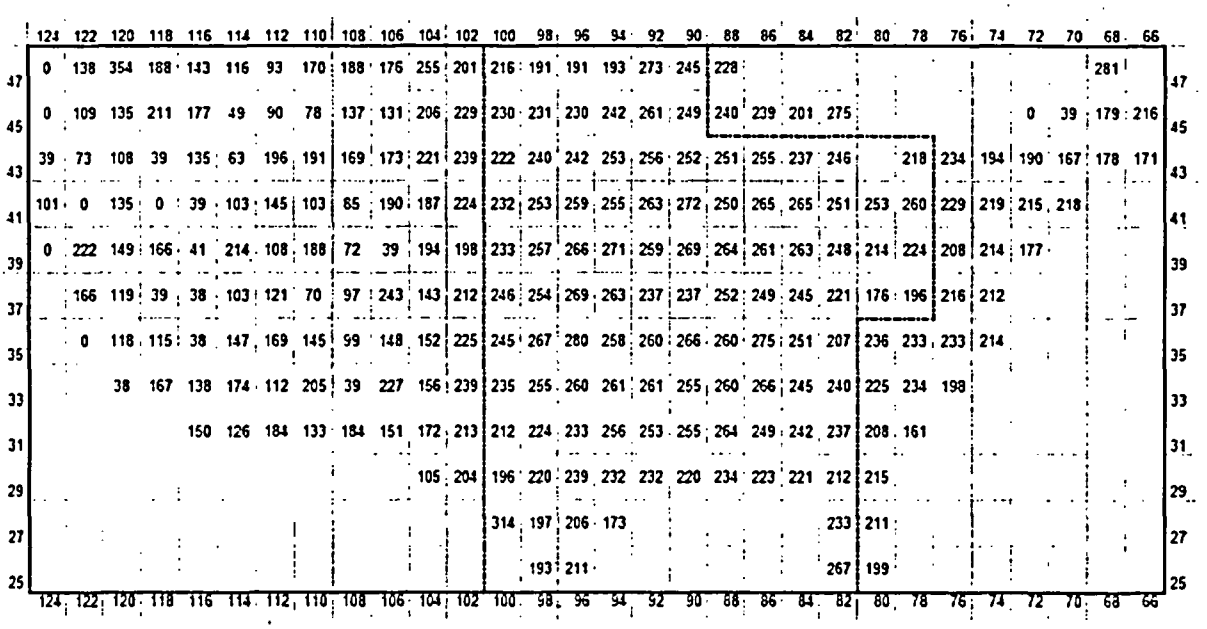

Figure 5-11. Upper Limit (95 Percent) on the Expected Maximum Tornado Wind Speeds with a 10^{-6} yr^{-1} Probability of Occurrence by 2° Boxes

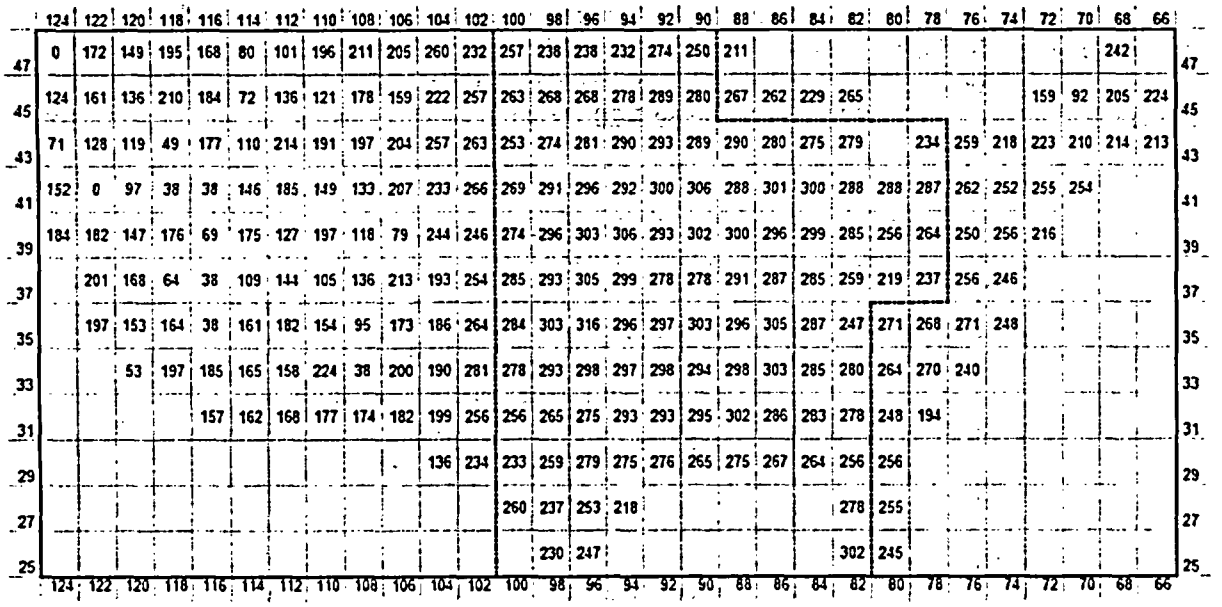

Figure 5-12. Expected Maximum Tornado Wind Speeds with a 10^{-7} yr^{-1} Probability of Occurrence by 2° Boxes

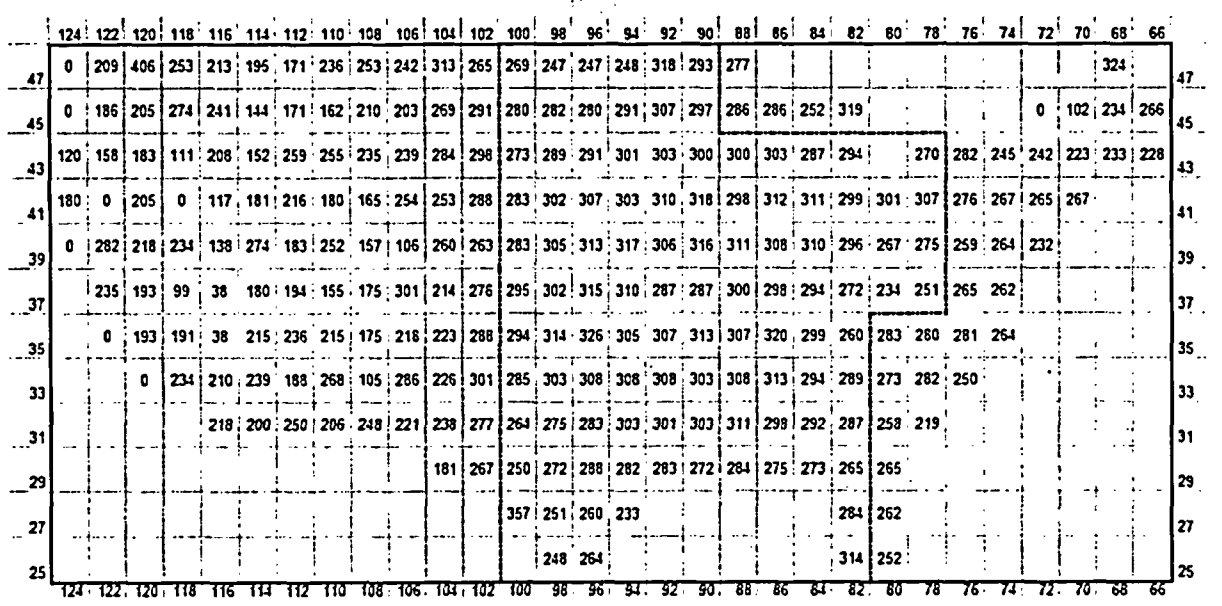

Figure 5-13. Upper Limit (95 Percent) on the Expected Maximum Tornado Wind Speeds with a 10^{-7} yr^{-1} Probability of Occurrence by 2° Boxes

Figure 5-14 shows the distribution of tornadoes by 4° boxes. The design wind speeds for the 4° boxes are shown in Figures 5-15 through 5-20. Figures 5-15 and 5-16 show the expected and upper bound wind speeds, respectively, for the 10^{-5} yr^{-1} probability level. Figures 5-17 and 5-18 show the wind speeds for the 10^{-6} yr^{-1} probability level, and Figures 5-19 and 5-20 show the wind speeds for the 10^{-7} yr^{-1} probability level.

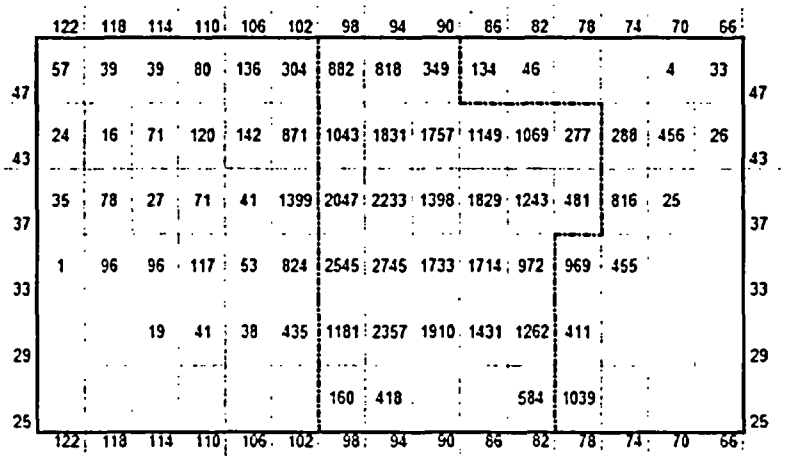

Figure 5-14. Number of Tornado Events in the United States From 1950 through August 2003 by 4° Boxes

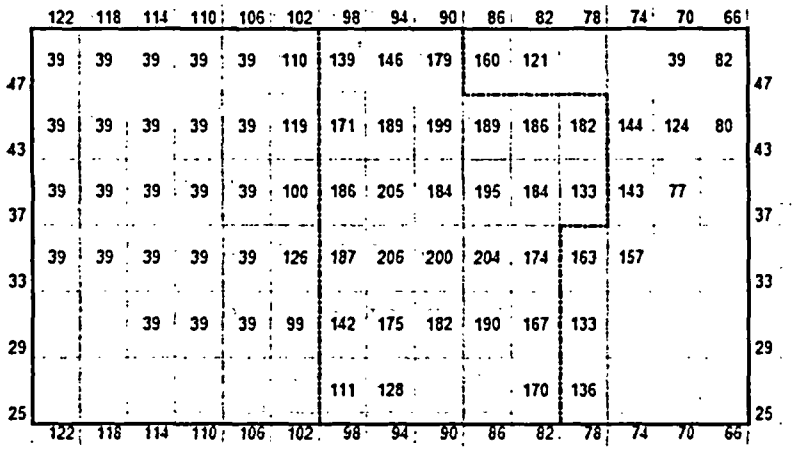

Figure 5-15. Expected Maximum Tornado Wind Speeds with a 10^{-5} yr-1 Probability of Occurrence by 4° Boxes

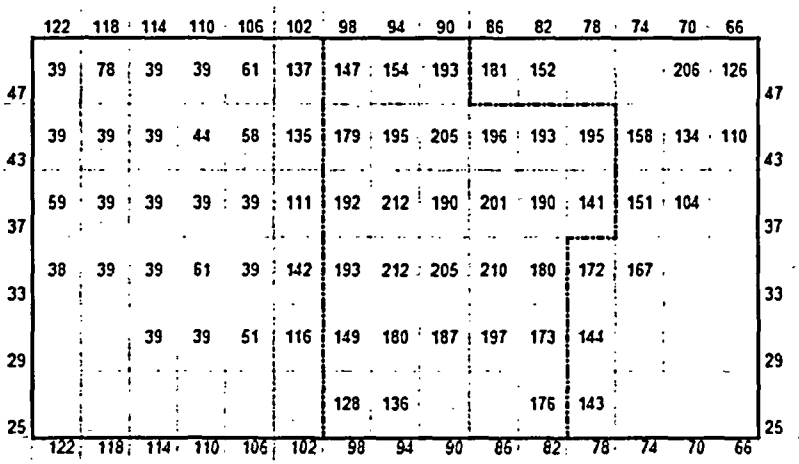

Figure 5-16. Upper Limit (95 Percent) on the Expected Maximum Tornado Wind Speeds with a 10^{-5} yr^{-1} Probability of Occurrence by 4° Boxes

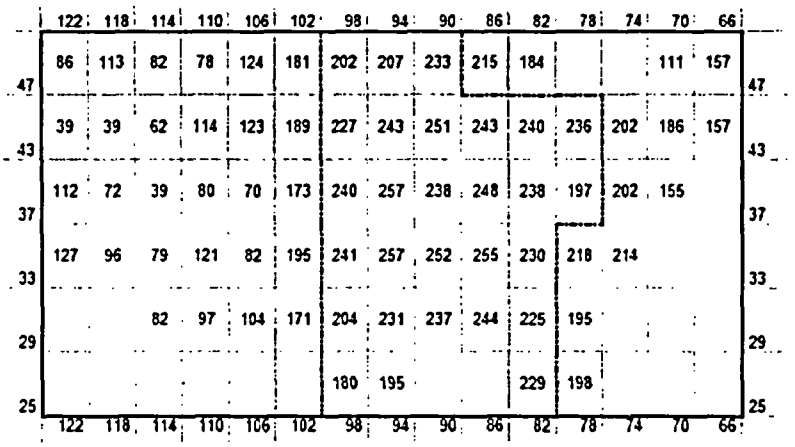

Figure 5-17. Expected Maximum Tornado Wind Speeds with a 10^{-6} yr^{-1} Probability of Occurrence by 4° Boxes

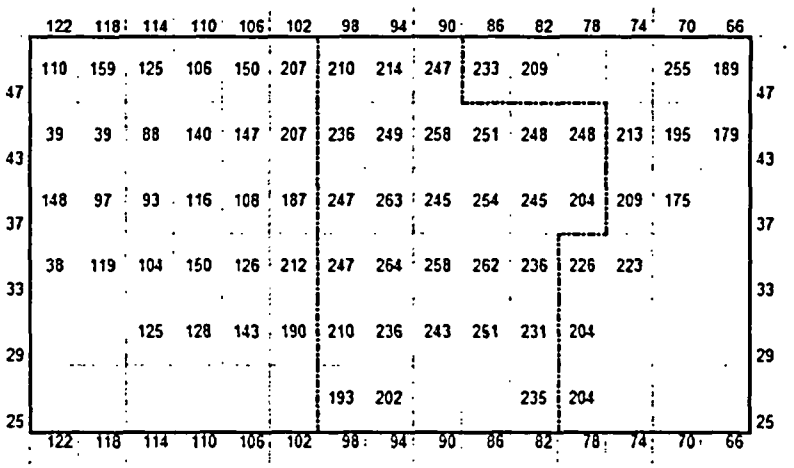

Figure 5-18. Upper Limit (95 Percent) on the Expected Maximum Tornado Wind Speeds with a 10^{-6} yr^{-1} Probability of Occurrence by 4° Boxes

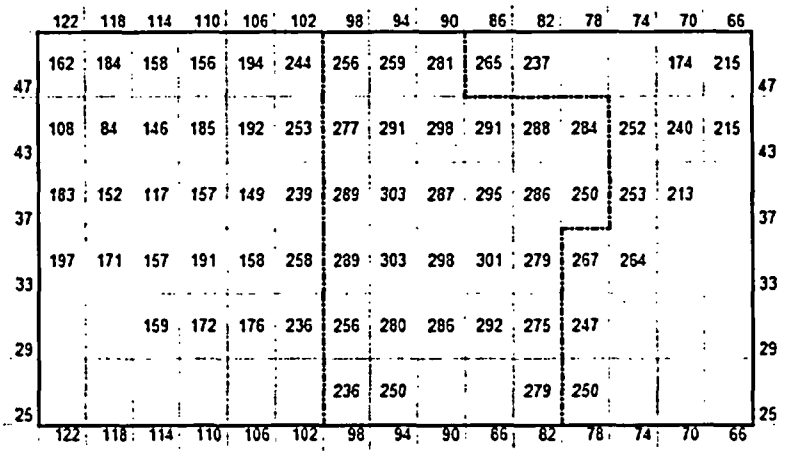

Figure 5-19. Expected Maximum Tornado Wind Speeds with a 10^{-7} yr^{-1} Probability of Occurrence by 4° Boxes

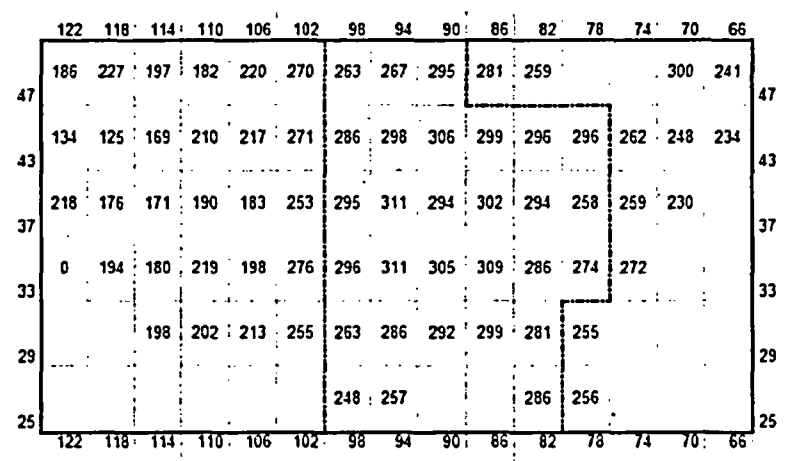

Figure 5-20. Upper Limit (95 Percent) on the Expected Maximum Tornado Wind Speeds with a 10^{-7} yr^{-1} Probability of Occurrence by 4° Boxes

6.0 Comparison of Results

A variety of methods have been used to estimate tornado design characteristics. The methods used in this analysis rely heavily on the analysis of available data on tornado location and footprint dimensions. They are similar to, but somewhat less conservative, than the methods used in the initial version of NUREG/CR-4461 (Ramsdell and Andrews 1986). In a study for the U.S. Department of Energy, Boissonnade et al. (2000) took a more probabilistic approach to estimating tornado wind speeds. This chapter compares wind speeds estimated in this study with wind speeds estimated in NUREG/CR-4461 and by Boissonnade et al. (2000).

The comparison is based on wind-speed estimates for 14 cities and DOE facility sites for which Boissonnade et al. made wind speed estimates. It is important to note that the data and assumptions in the other two studies are not identical to the data and assumptions used in this study. NUREG/CR-4461 wind speed estimates are based on a point structure and tornado data from 1954 through 1983. Boissonade et al. estimates are based on a 300-ft square structure, except for estimates for the Savannah River Site, for which a 200-ft by 800-ft building was assumed and model parameters derived from tornado data from 1950 through 1995.

Table 6-1 lists the 14 comparison locations and gives the latitude and longitude to the nearest 0.5°. Expected wind speeds for each location, extracted from the tables in Appendices A and B, are listed in the table under TorBoxes (2°) and TorBoxes (4°), respectively. Site-specific expected wind speed estimates made for a 2° box centered on the latitude and longitude using the TorStrk program developed for making site-specific estimates of tornado characteristics are also listed in the table. TorStrk uses the same methodology for making estimates of characteristics as TorBoxes, but it is not constrained by arbitrary box locations. The NUREG/CR-4461 wind speed estimates were extracted from Figures 28, 31, and 32.

Figures 6-1 and 6-2 compare the 10^{-7} yr^{-1} probability level wind speeds estimated in this study with those estimated in NUREG/CR-4461 and by Boissonade et al. (2000), respectively. These figures show that this analysis gives maximum wind speed estimates that tend to be lower than the estimates of either of the previous analyses. On average for the 14 comparison sites, the current analysis gives maximum wind speed estimates that are 23 mph lower than those estimated from the initial version of NUREG/CR-4461, and 20 mph lower that those estimated by Boissonade et al.

Table 6-1. Comparison of Tornado Design Wind Speeds (mph) Estimated in Other Analyses

				Probability (yr^{-1})		
Location	**Lat.**	**Long.**	**Model**	10^{-5}	10^{-6}	10^{-7}
Boston	42.5°	71.0°	TorBoxes (2°)	143	203	254
			TorBoxes (4°)	124	186	240
			TorStrk	135	196	248
			NUREG/CR-4461	196	250	285
			Boissonnade et al.	202	253	284
Detroit	42.5°	83.0°	TorBoxes (2°)	175	230	279
			TorBoxes (4°)	186	240	288
			TorStrk	180	235	295
			NUREG/CR-4461	251	285	312
			Boissonnade et al.	231	293	330
Livermore	37.5°	122.0°	TorBoxes (2°)	43	132	201
			TorBoxes (4°)	--	112	183
			TorStrk	--	114	185
			NUREG/CR-4461	--	142	183
			Boissonnade et al.	122	161	196
Los Alamos	36.0°	106.0°	TorBoxes (2°)	--	99	173
			TorBoxes (4°)	--	82	158
			TorStrk	--	94	169
			NUREG/CR-4461	--	137	180
			Boissonnade et al.	77	129	174
Nevada Test Site	37.0°	116.0°	TorBoxes (2°)	--	--	--
			TorBoxes (4°)	--	--	117
			TorStrk	--	71	150
			NUREG/CR-4461	--	131	177
			Boissonnade et al.	--	75	122

Table 6-1. (contd)

Location	Lat.	Long.	Model	Probability (yr^{-1})		
				10^{-5}	10^{-6}	10^{-7}
New Orleans	30.0°	90.0°	TorBoxes (2°)	152	213	265
			TorBoxes (4°)	182	237	286
			TorStrk	152	213	265
			NUREG/CR-4461	259	291	317
			Boissonnade et al.	185	228	269
Oak Ridge	36.0°	84.0°	TorBoxes (2°)	186	239	287
			TorBoxes (4°)	174	230	279
			TorStrk	164	221	271
			NUREG/CR-4461	246	282	309
			Boissonnade et al.	217	271	315
Oklahoma City	35.0°	97.5°	TorBoxes (2°)	221	271	316
			TorBoxes (4°)	206	257	303
			TorStrk	219	268	314
			NUREG/CR-4461	282	310	332
			Boissonnade et al.	239	298	330
Pantex	35.0°	102.0°	TorBoxes (2°)	133	201	264
			TorBoxes (4°)	126	195	258
			TorStrk	162	228	288
			NUREG/CR-4461	237	276	305
			Boissonnade et al.	211	263	304
Pierre	44.0°	100.5°	TorBoxes (2°)	138	200	253
			TorBoxes (4°)	171	227	277
			TorStrk	132	195	248
			NUREG/CR-4461	222	266	297
			Boissonnade et al.	179	244	310

Table 6-1. (contd)

Location	Lat.	Long.	Model	Probability (yr^{-1})		
				10^{-5}	10^{-6}	10^{-7}
Salt Lake City	41.0°	112.0°	TorBoxes (2°)	--	114	185
			TorBoxes (4°)	--	114	185
			TorStrk	--	104	177
			NUREG/CR-4461	--	63	153
			Boissonnade et al.	135	171	208
Sandia	35.0°	106.5°	TorBoxes (2°)	--	99	173
			TorBoxes (4°)	--	82	158
			TorStrk	53	138	206
			NUREG/CR-4461	--	137	180
			Boissonnade et al.	126	165	203
Savannah River	33.0°	81.5°	TorBoxes (2°)	158	214	264
			TorBoxes (4°)	163	218	267
			TorStrk	147	206	257
			NUREG/CR-4461	240	278	306
			Boissonnade et al.	183	228	271
Washington D.C.	39.0°	77.0°	TorBoxes (2°)	139	199	250
			TorBoxes (4°)	143	202	253
			TorStrk	139	200	251
			NUREG/CR-4461	224	267	298
			Boissonnade et al.	176	222	268

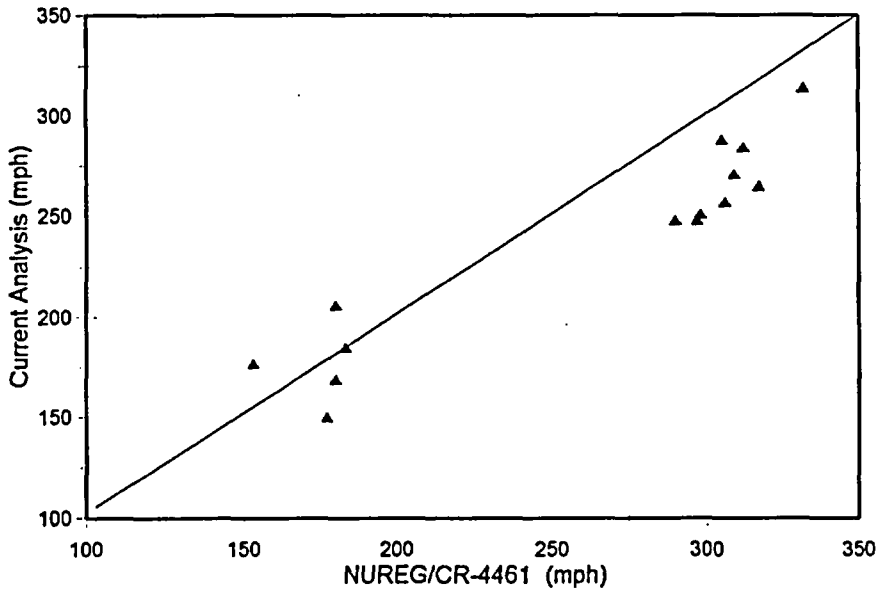

Figure 6-1. Comparison of 10^{-7} yr^{-1} Probability Level Wind Speeds Estimated in the Current Analysis for 14 Locations with Estimates from the Initial Version of NUREG/CR-4461

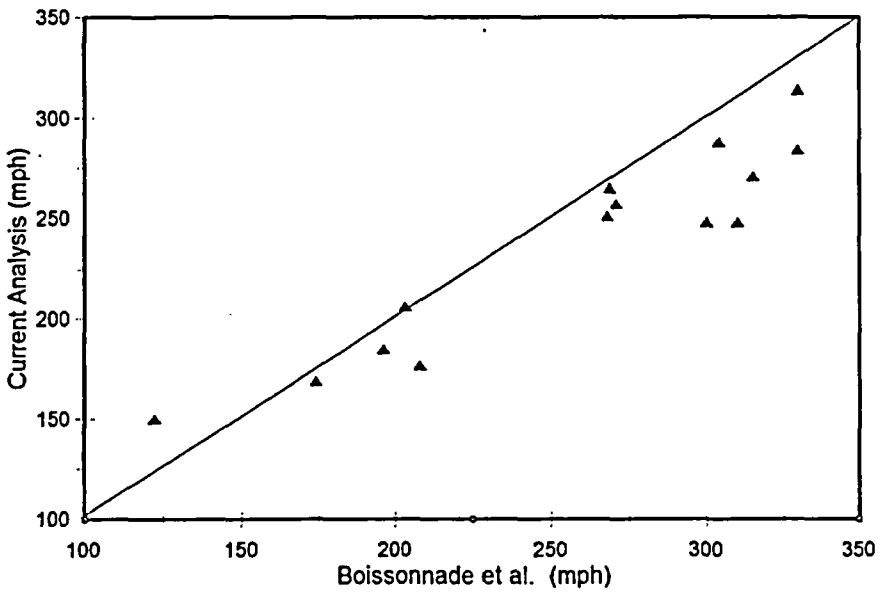

Figure 6-2. Comparison of 10^{-7} yr^{-1} Probability Level Wind Speeds Estimated in the Current Analysis for 14 Locations with Estimates from Boissonnade et al. (2000)

7.0 Uncertainty

This chapter addresses uncertainties associated with estimation of tornado strike probabilities and wind speeds. Many of the uncertainties arise from the subjective nature of determination of such fundamental characteristics as the length, width, and intensity of individual tornadoes. Other uncertainties arise from the models used to describe the tornado footprint and the probability distributions for the areas, lengths, and wind speeds of tornadoes.

7.1 Tornado Footprint Model

The basic model of a tornado footprint is a rectangle characterized by the width and length of the tornado path. Within the rectangle that defines the footprint there are smaller rectangles associated with various wind speed thresholds. It is unlikely that any footprint is truly rectangular. However, the information in the NCDC tornado database does not support a more complex footprint model. Segmentation of tornadoes on the basis of changes in direction of motion since 1996 provides for improved representation of tornado footprints. Nevertheless, a rectangular footprint is still assumed for each segment.

The area of each segment is estimated by the product of the segment length and width. Most likely, the typical tornado footprint is narrow on the ends and widest at some point in the middle; the area of the footprint thus will be correct only if the average width of the tornado is used in calculation of the area. Average footprints were recorded for tornadoes prior to 1994. Since then, the maximum tornado width has been recorded. As a result, the tornado footprint model will lead to overestimates of the average tornado event area and, therefore, to overestimates of strike probabilities for point structures.

The analysis presented in this report accounts for the variation of wind speeds within the rectangle, but it does not account for possible deviations of actual tornado footprint shapes from the assumed rectangular shape. Accounting for the variation of wind speed within the footprint in the current analysis represents an advance over the assumptions used in the analysis in the initial version of NUREG/CR-4461.

7.2 Length, Width, and Area

The fundamental characteristics of tornadoes are generally assessed after the fact from damage caused by the tornado. The damage depends on the intensity of the tornado and the nature of the surface where the tornado occurs. Guidelines exist for assessing the damage, but, ultimately, the characterization is subjective. It is necessary to distinguish the area damaged by the tornado from the area covered by debris scattered by the tornado.

Resolution of reported tornado lengths and widths in the NCDC database is sufficient to ensure that resolution of the lengths and widths is not a significant source of uncertainty.

Both tornado length and width tend to increase with increasing tornado intensity. It is likely that the more intense the tornado, the better the estimates of tornado dimensions. Less than 17 percent of the total footprint area in the contiguous United States during the study period was associated with F0 and F1 tornadoes. As a result, it seems unlikely that potential errors associated with estimation of the lengths and

widths of these tornadoes would significantly affect the estimation of strike probabilities for point structures. The evaluation of the effect of the unreported F0 tornadoes discussed in Section 3.1 supports the conclusion that uncertainty in the lengths and widths (areas) of F0 and F1 tornadoes is unlikely to be a significant source of uncertainty in the strike probabilities for point structures. Given the typical dimensions of F2, F3, F4, and F5 tornadoes, it seems unlikely that uncertainties in reported lengths and widths would result in more than a factor-of-2 uncertainty in the total footprint area or point-structure strike probabilities.

The life-line term used to account for finite structure size on strike probabilities depends on tornado length and a characteristic dimension for the structure. Of the fundamental tornado characteristics, the tornado length is likely to be the characteristic that can be estimated most accurately if it assumed that absolute errors in the estimation of length and width are about equal. Consequently, the uncertainty in the life-line term associated with uncertainty in the expected tornado length is likely to be less than the uncertainty in the point-structure strike probability. The characteristic structure dimension assumed in this analysis is 200 ft. This assumption will lead to under- or overestimates of the life-line term for structures that have larger or smaller characteristic dimensions. For structures that have larger characteristic dimensions, finite-structure corrections should be larger than those presented in the appendices, and for structures that have smaller characteristic dimensions, the finite-structure corrections should be smaller.

No effort has been made to make more quantitative estimates of the uncertainties in the reported tornado lengths and widths than those presented above or to account for these uncertainties in assessing expected values or confidence intervals. The results of the analyses presented in the appendices contain sufficient information to adjust the finite-structure corrections for differences in characteristic structure dimensions. The finite-structure strike probabilities may be scaled up or down for larger or smaller structures by multiplying the strike probabilities by the ratio of the characteristic dimension for the new building to the assumed characteristic dimension (200 ft).

7.3 F-scale

Classification of tornado intensities is subjective. It depends on assessment of damage to vegetation and structures, and in turn, the extent of the damage depends on the types of vegetation present and the types of construction of structures. As a result, it is likely that there are errors in the F-scales assigned to tornadoes in the NCDC database. Twisdale et al. (1978) and Twisdale and Dunn (1981) present information that may be used to compensate for potential classification errors. This information is included in Reinhold and Ellingwood (1982).

Summarized tornado area and length statistics were adjusted to account for potential errors in assigned F-scales using the information presented by and Twisdale et al. (1978) and Twisdale and Dunn (1981). The total area and length of tornado footprints were calculated following adjustment and compared with the statistic calculated without the adjustment. Table 7-1 shows the changes in dimensions. The increase in area is significant; the change in length may not be. In any case, compensation for potential classification errors using tornado statistics does not conserve the total dimensions.

Table 7-1. Changes in Tornado Impact Statistics Associated with Compensation for Potential Classification Errors

		With Compensation for Potential Classification Errors	
	Unmodified NCDC Tornado Data	Twisdale et al. (1978)	Twisdale and Dunn (1981)
Total Area (mi^2)	30,398	44,806	36,235
Total Length (mi)	198,750	197,013	199,975

A second effect of adjustment to account for potential classification errors is a large increase in the total area and length of the portion of tornado paths associated with wind speeds in excess of 207 mph (F4). The adjustment using information presented by Twisdale et al. (1978) results in an increase in area with wind speeds in excess of 207 mph by 20 percent and in length by 7 percent. Using the information from Twisdale and Dunn (1981), the increases in area and length were about 65 percent and 70 percent, respectively. When area and length associated with wind speeds in excess of 261 mph (F5) are considered, the increases are more pronounced. Using the information from Twisdale et al. increases the area by about 50 percent and the length by about 30 percent. The information from Twisdale and Dunn increases the area by more than a factor of 2 and the length by more than a factor of 3.

Considering 1) that the compensation matrices do not conserve total area or length when applied to tornado statistics and 2) that the matrices significantly increase the area and length associated with the highest wind speeds, no adjustment of tornado statistics for potential classification errors has been made in this update.

7.4 Association of Wind Speeds with F-scales

It has been suggested that the wind speeds associated with the Fujita F-scales are too high (e.g., Twisdale et al. 1978). Although Reinhold and Ellingwood (1982) use the Fujita wind speeds, they indicate that the speeds, particularly for stronger tornadoes, are likely to be too high. Wind speed ranges suggested by Twisdale et al. (1978) for F0 through F5 tornadoes are listed in Table 7-2. Experts evaluating these relationships for a Monte-Carlo tornado model (Boissonade et al. 2000) assigned weights to the Fujita, Twisdale-Uniform, Twisdale-Linear relationships of 0.6, 0.078, and 0.322, respectively. This indicates that experts in the field still tend to favor the Fujita relationships. The panel also proposed its own relationship, shown in the last column of Table 7-2. Note that the panel has extended the range of F-scales to F6. This was done to account for F-scale classification errors. The relationships are compared graphically in Figure 7-1. Considering that experts in the field still tend to favor the Fujita relationships, those relationships were used in the analyses in this report. This choice ensures a significant conservative bias in the design wind speed estimates.

Table 7-2. Tornado F-scale Intensity Wind Speed Relationships

Intensity	Description	Fujita Scale (mph)	Twisdale-Uniform (mph)	Twisdale-Linear (mph)	Expert Panel (mph)
F0	Light damage	40 to 72	40 to 65	40 to 73	40 to 75
F1	Moderate damage	73 to 112	65 to 96	73 to 103	75 to 105
F2	Considerable damage	113 to 157	96 to 114	103 to 135	105 to 135
F3	Severe damage	158 to 206	114 to 139	135 to 168	135 to 170
F4	Devastating damage	207 to 260	139 to 181	168 to 209	170 to 215
F5	Incredible damage	261 to 318	181 to 236	209 to 277	215 to 270
F6					270 to 330

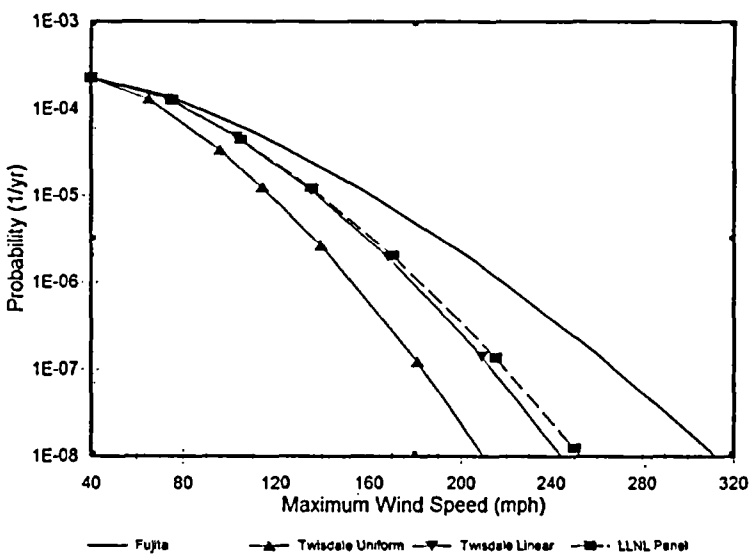

Figure 7-1. Comparison Tornado Maximum Wind Speed Probability Estimates Resulting from Use of Four Relationships Between F-Scale and Wind Speed

7.5 Natural Variation in Tornado Dimensions

The previous sections in this chapter deal with uncertainty associated with estimates of tornado dimensions. This section deals with uncertainty in the estimates of the expected area and length of tornadoes associated with the natural variability of tornado dimensions and the finite sample size used to estimate the expected values. This uncertainty is treated explicitly in these analyses by assuming that tornado path length and area have lognormal distribution. The details of estimation of the confidence intervals for the expected values for lognormal distributions are described in Section 2.2.

8.0 Recommendations

Information presented in Chapters 2.0, 5.0, and 6.0 is based on analysis of the tornado data using procedures described in Chapters 3.0 and 4.0. This chapter presents recommended tornado design characteristics for use in those instances where detailed analysis is not warranted. The recommendations are based on the results of the 2° box calculations.

The 2° box design wind speeds based on expected values show a good deal of spatial variation, particularly in the western United States. A nine-point low-pass filter was used to smooth out some of this variation. In the filter, the wind speed in each box away from a border was replaced by a weighted-average of the expected speeds for the box and eight adjacent boxes. The original speed for the box was given a weight of four and a weight of one was given to the speeds in each of the other boxes. The resulting speeds are shown in Figures 8-1 through 8-3. The speeds shown in boxes along the borders are the original speed estimates.

Each of the figures is divided into three regions, numbered 1 through 3 from west to east, as indicated by shading, and a design wind speed is suggested for each region. The suggested speed is based on the spatially averaged speeds in the region. However, other factors, such as number of reported tornadoes and population densities, have been considered in selecting the speeds and drawing the boundaries between regions. Table 8-1 lists the tornado design parameters for each region. These parameters are based on the recommended speeds and were calculated using the methods described in Chapter 4.0.

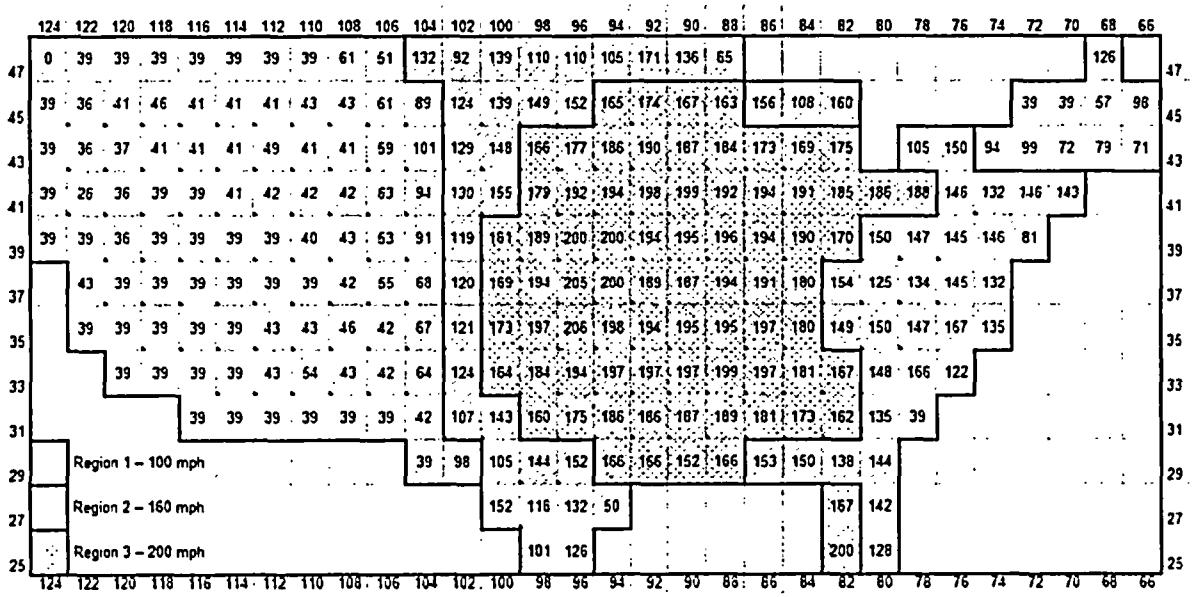

Figure 8-1. Recommended Tornado Design Wind Speeds for the 10^{-5} yr^{-1} Probability Level

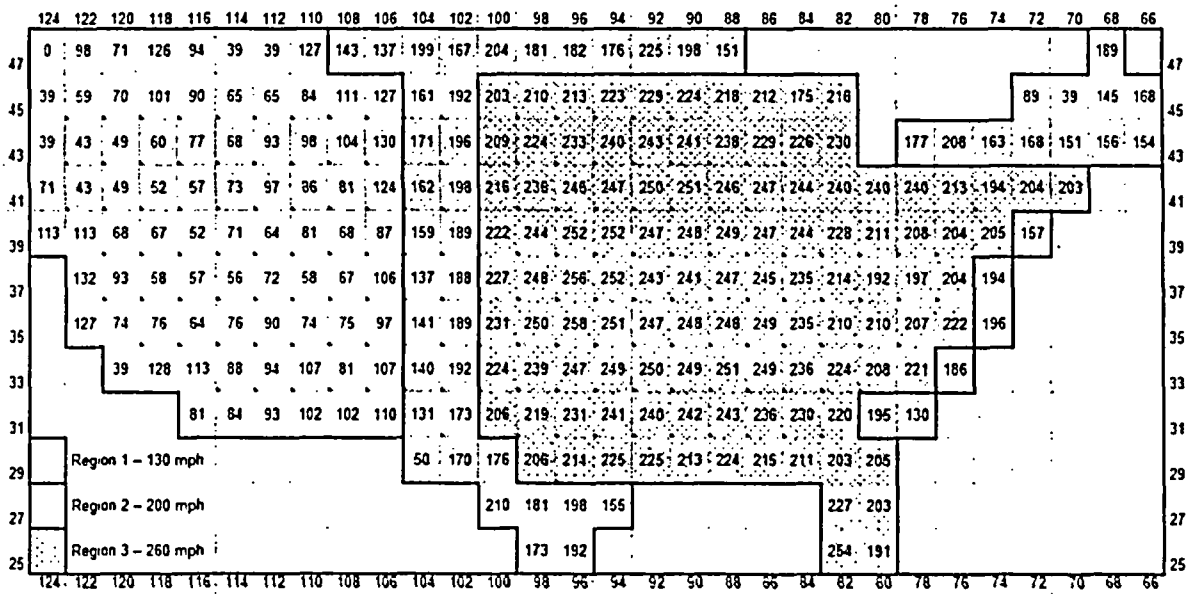

Figure 8-2. Recommended Tornado Design Wind Speeds for the 10^{-6} yr^{-1} Probability Level

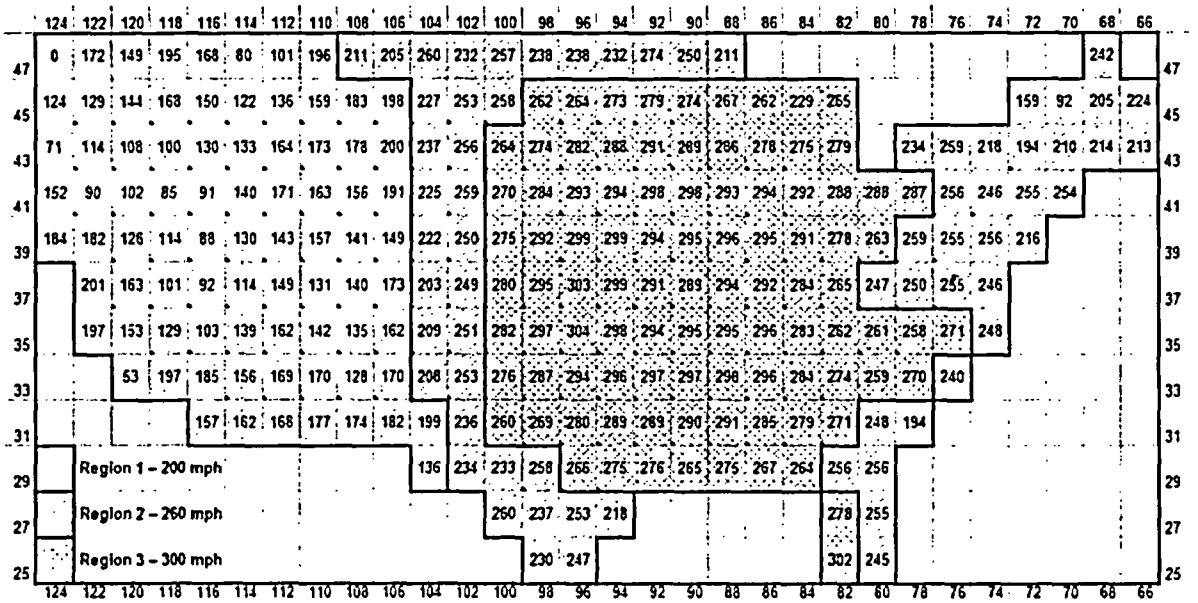

Figure 8-3. Recommended Tornado Design Wind Speeds for the 10^{-7} yr^{-1} Probability Level

Table 8-1. Recommended Tornado Design Wind Speeds

	Wind Speed (mph)		
Design Probability (yr^{-1})	**Region 1**	**Region 2**	**Region 3**
1.0×10^{-5}	100	160	200
1.0×10^{-6}	130	200	260
1.0×10^{-7}	200	260	300

9.0 References

American Nuclear Society (ANS). 1983. "Standard for Estimating Tornado and Extreme Wind Characteristics at Nuclear Power Sites." ANSI/ANS-2.3/1983, La Grange Park, Illinois.

Boissonnade, A., Q. Hossain, J. Kimball, R. Mensing, and J. Savy. 2000. *Development of a Probabilistic Tornado Hazard Model for the Continental United States Volume I: Main Report.* UCRL-ID-140922-Vol-1, Lawrence Livermore National Laboratory, Livermore, California.

Fujita, T. T. 1971. "A Proposed Characterization of Tornadoes and Hurricanes by Area and Intensity." Research Paper No. 91, Satellite and Mesometeorology Research Project, University of Chicago, Chicago, Illinois.

Fujita, T. T. 1978. *Workbook of Tornadoes and High Winds for Engineering Applications.* Research Paper No. 165, Satellite and Mesometeorology Research Project, University of Chicago, Chicago, Illinois.

Garson, R. C., J. M. Catalan, and C. A. Cornell. 1975. "Tornado Design Winds Based on Risk." *Journal of the Structural Division, Proceedings of the American Society of Civil Engineers* 101, ST9:1883-1897.

International Atomic Energy Agency (IAEA). 1981. *Extreme Meteorological Events in Nuclear Power Plant Siting, Excluding Tropical Cyclones.* Safety Series No. 50-SG-S11A, Vienna, Austria.

Johnson, N. L., S. Kotz, and N. Balakrishnan. 1994. *Continuous Univariate Distributions, Volume 1.* 2nd ed. John Wiley and Sons, Inc., New York.

Holton, J. R. 1972. *An Introduction to Dynamic Meteorology.* Academic Press, New York.

Markee, E. H., Jr., J. G. Beckerley, and K. E. Sanders. 1974. *Technical Basis for Interim Regional Tornado Criteria.* WASH-1300, U.S. Atomic Energy Commission, Washington, D.C.

National Climatic Data Center (NCDC). 2004. "The Fujita Tornado Scale" at http://www.ncdc.noaa.gov/oa/satellite/satelliteseye/educational/fujita. Accessed on the Internet 2/25/2004.

Nelder, J. A., and R. Mead. 1965. "A Simplex Method for Function Minimization." *Computer Journal* 7:308-313.

Ramsdell, J. V., and G. L. Andrews. 1986. *Tornado Climatography of the Contiguous United States.* NUREG/CR-4461, U.S. Nuclear Regulatory Commission, Washington, D.C.

Reinhold, T. A., and B. Ellingwood. 1982. *Tornado Damage Risk Assessment.* NUREG/CR-2944, U.S. Nuclear Regulatory Commission, Washington, D.C.

Shreck, R. I., and W. F. Sandusky. 1982. *Tornado: A Program to Compute Tornado Strike and Intensity Probabilities with Associated Wind Speeds and Pressure Drops at Nuclear Power Stations.* PNL-4483, Pacific Northwest Laboratory, Richland, Washington.

Simiu, E., and R. H. Scanlan. 1978. *Wind Effects on Structure: An Introduction to Wind Engineering.* John Wiley & Sons, New York.

Thom, H. C. S. 1963. "Tornado Probabilities." *Monthly Weather Review* **91**:730-736.

Twisdale, L. A., W. L. Dunn, and J. Chu. 1978. *Tornado Missile Risk Analysis, with Appendices.* EPRI NP-768 and 769, Electric Power Research Institute, Palo Alto, California.

Twisdale, L. A., and W. L. Dunn. 1981. *Tornado Missile Simulation and Design Methodology, Volumes 1 and 2.* EPRI NP-2005, Electric Power Research Institute, Palo Alto, California.

U.S. Atomic Energy Commission (AEC). 1974. "Design Basis Tornado for Nuclear Power Plants." Regulatory Guide 1.76, Washington, D.C.

Appendix A

Results for 2° Boxes

This appendix contains the detailed results of the analysis for the 2° boxes. The output for each box consists of seven lines. However, if there were no tornado events in the box or the information for the tornado events was insufficient to perform an analysis, there is only one line of output. The first line of output starts with the latitude and longitude of the southeast corner of the box. The next two entries in the line are the land area for the box assumed in the analysis and the fraction of the total box area assumed to be covered by land. The last three items in the first line are the number of total events observed and the number of events included in the calculation of expected values of area and length for events. For some boxes, this is the only line. Care should be taken when using strike probability and wind speed data from this appendix to ensure that the number of tornado events is sufficient to give reasonable results. As a minimum, there should be 10 events, and 20 or more events are desirable.

The second through seventh lines include the results of the calculations. Lines two and three contain the results of the strike probability calculations for the point-structure and life-line terms, respectively. In line two, the first number is the expected area, in square miles, for tornado events for the box; the second and third numbers are the lower and upper limits of the 90 percent confidence interval for the expected area. The last three numbers are the expected strike probability for a point structure and the lower and upper limits for the strike probability confidence interval. The format for the information in the third line is similar to that for the second line. The first three numbers are the expected length, in miles, for the life-line term and the lower and upper limits on the expected length. The last three numbers are the additional strike probability for finite structures, assuming a characteristic dimension of 200 ft for the structure.

The fourth line gives the expected total strike probability for the box and the lower and upper bounds of 90 percent confidence interval. These values are the sums of the values directly above in lines two and three. Lines five through seven give the maximum wind speeds, in miles per hour, for 10^{-5} yr^{-1}, 10^{-6} yr^{-1}, and 10^{-7} yr^{-1} design criteria. As before, the first number is the expected value, and the second and third numbers are the lower and upper limits of the 90 percent confidence interval.

If a strike probability is desired for a different size structure, the values in line three should be adjusted by the ratio of the characteristic dimension for the structure to 200 ft. The new life-line terms should be added to the point-structure terms to get the revised strike probabilities. The ratio of the new strike probability to the original strike probability may then be used to adjust the design criteria probability levels associated with the maximum wind speeds. For example, consider the box with its southeast corner at 25° N latitude, 80° W longitude. If the strike probability were desired for a larger structure, say, one with a characteristic dimension of 400 ft, then the expected value of the life-line term (3.473×10^{-5} yr^{-1}) should be multiplied by 2 and added to the point structure term (3.643×10^{-5} yr^{-1}) to get the new expected strike probability (1.059×10^{-4} yr^{-1}). With this new expected strike probability, the 10^{-5} yr^{-1} design criterion associated with the 128-mph expected maximum wind speed should be increased to

account for the change in strike probability. The new design criterion is the product of the old design criterion (10^{-5} yr^{-1}) and the ratio of the new strike probability (1.059×10^{-4} yr^{-1}) to the original strike probability (7.116×10^{-5} yr^{-1}). Carrying out the arithmetic, the new design criterion is 1.488×10^{-5} yr^{-1}.

The lower limit for the maximum wind speed in a tornado is 40 mph. Two wind speeds less than 40 mph are used to provide information when the design wind speed would be less than 40 mph. A design wind speed of 38 mph indicates that the tornado strike probability for the box is less than 10^{-7} yr^{-1}. A design wind speed of 39 mph indicates that the design wind speed for the design probability specified at the beginning of the line is less than 40 mph, but that the design wind speed at the 10^{-7} yr^{-1} probability level exceeds 40 mph.

```
   25   80    1.200E+04 0.6991    499    420    420
Point  4.702E-02  3.458E-02  6.394E-02  3.643E-05  2.679E-05  4.954E-05
Line   1.183E+00  1.007E+00  1.391E+00  3.473E-05  2.955E-05  4.082E-05
Strike Probability, 1/yr                7.116E-05  5.634E-05  9.036E-05
1.0E-5 1/yr design speed                     128.       118.       137.
1.0E-6 1/yr design speed                     191.       183.       199.
1.0E-7 1/yr design speed                     245.       237.       252.

   25   82    2.136E+02 0.0124     67     64     64
Point  3.185E-02  1.674E-02  6.061E-02  1.861E-04  9.780E-05  3.542E-04
Line   1.745E+00  1.130E+00  2.696E+00  3.862E-04  2.500E-04  5.966E-04
Strike Probability, 1/yr                5.724E-04  3.478E-04  9.508E-04
1.0E-5 1/yr design speed                     200.       186.       213.
1.0E-6 1/yr design speed                     254.       242.       267.
1.0E-7 1/yr design speed                     302.       291.       314.

   25   96    3.206E+03 0.1868     68     58     58
Point  9.867E-02  3.876E-02  2.512E-01  3.899E-05  1.532E-05  9.924E-05
Line   1.444E+00  8.941E-01  2.333E+00  2.162E-05  1.338E-05  3.492E-05
Strike Probability, 1/yr                6.060E-05  2.870E-05  1.342E-04
1.0E-5 1/yr design speed                     126.       101.       149.
1.0E-6 1/yr design speed                     192.       175.       211.
1.0E-7 1/yr design speed                     247.       232.       264.

   25   98    4.700E+03 0.2738     38     34     34
Point  1.474E-01  6.133E-02  3.540E-01  2.220E-05  9.239E-06  5.333E-05
Line   1.638E+00  9.953E-01  2.697E+00  9.349E-06  5.679E-06  1.539E-05
Strike Probability, 1/yr                3.155E-05  1.492E-05  6.873E-05
1.0E-5 1/yr design speed                     101.        69.       127.
1.0E-6 1/yr design speed                     173.       154.       193.
1.0E-7 1/yr design speed                     230.       214.       248.

   27   80    1.307E+04 0.7753    544    458    458
Point  8.353E-02  6.253E-02  1.116E-01  6.476E-05  4.848E-05  8.652E-05
Line   1.818E+00  1.535E+00  2.153E+00  5.338E-05  4.507E-05  6.324E-05
Strike Probability, 1/yr                1.181E-04  9.354E-05  1.498E-04
1.0E-5 1/yr design speed                     142.       133.       151.
1.0E-6 1/yr design speed                     203.       195.       211.
1.0E-7 1/yr design speed                     255.       248.       262.
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27	94	8.392E+02	0.0498	19	16	17	
Point		6.724E-03	3.076E-03	1.470E-02	2.836E-06	1.298E-06	6.199E-06
Line		5.204E-01	3.011E-01	8.994E-01	8.315E-06	4.811E-06	1.437E-05
Strike Probability, 1/yr					1.115E-05	6.109E-06	2.057E-05
1.0E-5 1/yr design speed					50.	39.	90.
1.0E-6 1/yr design speed					155.	135.	173.
1.0E-7 1/yr design speed					218.	203.	233.
27	96	9.254E+03	0.5488	331	244	247	
Point		5.589E-02	3.934E-02	7.942E-02	3.725E-05	2.622E-05	5.292E-05
Line		1.228E+00	1.009E+00	1.495E+00	3.101E-05	2.548E-05	3.773E-05
Strike Probability, 1/yr					6.826E-05	5.170E-05	9.066E-05
1.0E-5 1/yr design speed					132.	123.	141.
1.0E-6 1/yr design speed					198.	191.	206.
1.0E-7 1/yr design speed					253.	246.	260.
27	98	1.559E+04	0.9247	115	98	98	
Point		2.389E-01	1.163E-01	4.905E-01	3.283E-05	1.599E-05	6.741E-05
Line		2.186E+00	1.526E+00	3.133E+00	1.138E-05	7.943E-06	1.631E-05
Strike Probability, 1/yr					4.421E-05	2.393E-05	8.372E-05
1.0E-5 1/yr design speed					113.	91.	133.
1.0E-6 1/yr design speed					181.	166.	197.
1.0E-7 1/yr design speed					237.	223.	251.
27	100	2.098E+03	0.1244	7	6	6	
Point		2.797E+00	1.708E-02	4.579E+02	1.739E-04	1.062E-06	2.847E-02
Line		6.350E+00	7.503E-01	5.375E+01	1.495E-05	1.767E-06	1.266E-04
Strike Probability, 1/yr					1.888E-04	2.829E-06	2.859E-02
1.0E-5 1/yr design speed					152.	39.	268.
1.0E-6 1/yr design speed					210.	103.	314.
1.0E-7 1/yr design speed					260.	178.	357.
29	80	6.000E+03	0.3628	245	212	212	
Point		9.321E-02	5.948E-02	1.461E-01	7.092E-05	4.525E-05	1.111E-04
Line		1.968E+00	1.522E+00	2.543E+00	5.671E-05	4.387E-05	7.329E-05
Strike Probability, 1/yr					1.276E-04	8.913E-05	1.844E-04
1.0E-5 1/yr design speed					144.	132.	157.
1.0E-6 1/yr design speed					205.	194.	215.
1.0E-7 1/yr design speed					256.	247.	265.
29	82	1.405E+04	0.8492	251	227	228	
Point		1.452E-01	9.395E-02	2.243E-01	4.833E-05	3.128E-05	7.468E-05
Line		2.829E+00	2.178E+00	3.674E+00	3.568E-05	2.748E-05	4.634E-05
Strike Probability, 1/yr					8.402E-05	5.876E-05	1.210E-04
1.0E-5 1/yr design speed					138.	127.	149.
1.0E-6 1/yr design speed					203.	194.	212.
1.0E-7 1/yr design speed					256.	248.	265.

29	84	8.647E+03	0.5229	271	230	233		
Point		1.456E-01	9.658E-02	2.195E-01	8.502E-05	5.639E-05	1.282E-04	
Line		2.092E+00	1.660E+00	2.636E+00	4.627E-05	3.672E-05	5.830E-05	
Strike Probability, 1/yr					1.313E-04	9.311E-05	1.865E-04	
1.0E-5 1/yr design speed					150.	140.	160.	
1.0E-6 1/yr design speed					211.	203.	221.	
1.0E-7 1/yr design speed					264.	255.	273.	
29	86	5.759E+03	0.3482	308	261	263		
Point		8.181E-02	5.572E-02	1.201E-01	8.152E-05	5.552E-05	1.197E-04	
Line		1.512E+00	1.213E+00	1.884E+00	5.706E-05	4.579E-05	7.111E-05	
Strike Probability, 1/yr					1.386E-04	1.013E-04	1.908E-04	
1.0E-5 1/yr design speed					153.	144.	162.	
1.0E-6 1/yr design speed					215.	207.	223.	
1.0E-7 1/yr design speed					267.	259.	275.	
29	88	7.421E+03	0.4487	309	262	262		
Point		2.023E-01	1.331E-01	3.075E-01	1.570E-04	1.033E-04	2.385E-04	
Line		2.562E+00	2.014E+00	3.260E+00	7.529E-05	5.917E-05	9.580E-05	
Strike Probability, 1/yr					2.322E-04	1.624E-04	3.344E-04	
1.0E-5 1/yr design speed					166.	156.	176.	
1.0E-6 1/yr design speed					224.	215.	234.	
1.0E-7 1/yr design speed					275.	266.	284.	
29	90	1.446E+04	0.8744	387	367	367		
Point		1.794E-01	1.316E-01	2.446E-01	8.947E-05	6.562E-05	1.220E-04	
Line		2.553E+00	2.142E+00	3.043E+00	4.823E-05	4.046E-05	5.748E-05	
Strike Probability, 1/yr					1.377E-04	1.061E-04	1.795E-04	
1.0E-5 1/yr design speed					152.	144.	159.	
1.0E-6 1/yr design speed					213.	206.	220.	
1.0E-7 1/yr design speed					265.	258.	272.	
29	92	1.031E+04	0.6231	446	420	420		
Point		1.833E-01	1.365E-01	2.461E-01	1.478E-04	1.101E-04	1.984E-04	
Line		2.652E+00	2.266E+00	3.104E+00	8.100E-05	6.921E-05	9.481E-05	
Strike Probability, 1/yr					2.288E-04	1.793E-04	2.933E-04	
1.0E-5 1/yr design speed					166.	159.	173.	
1.0E-6 1/yr design speed					225.	218.	232.	
1.0E-7 1/yr design speed					276.	269.	283.	
29	94	1.405E+04	0.8492	664	588	592		
Point		2.019E-01	1.501E-01	2.715E-01	1.778E-04	1.323E-04	2.391E-04	
Line		2.132E+00	1.837E+00	2.475E+00	7.113E-05	6.129E-05	8.257E-05	
Strike Probability, 1/yr					2.490E-04	1.935E-04	3.217E-04	
1.0E-5 1/yr design speed					166.	159.	174.	
1.0E-6 1/yr design speed					225.	218.	232.	
1.0E-7 1/yr design speed					275.	268.	282.	

29	96	1.654E+04	1.0000	493	443	443		
Point		5.249E-01	3.560E-01	7.741E-01	2.916E-04	1.977E-04	4.299E-04	
Line		3.380E+00	2.788E+00	4.097E+00	7.110E-05	5.865E-05	8.619E-05	
Strike Probability, 1/yr					3.627E-04	2.564E-04	5.161E-04	
1.0E-5 1/yr design speed					174.	164.	183.	
1.0E-6 1/yr design speed					230.	221.	239.	
1.0E-7 1/yr design speed					279.	270.	288.	
29	98	1.654E+04	1.0000	226	196	196		
Point		4.582E-01	2.611E-01	8.041E-01	1.167E-04	6.649E-05	2.047E-04	
Line		2.753E+00	2.108E+00	3.595E+00	2.655E-05	2.033E-05	3.468E-05	
Strike Probability, 1/yr					1.432E-04	8.682E-05	2.394E-04	
1.0E-5 1/yr design speed					148.	134.	162.	
1.0E-6 1/yr design speed					208.	196.	220.	
1.0E-7 1/yr design speed					259.	248.	272.	
29	100	1.363E+04	0.8241	77	75	75		
Point		2.357E-01	9.465E-02	5.870E-01	2.481E-05	9.963E-06	6.179E-05	
Line		2.581E+00	1.575E+00	4.230E+00	1.029E-05	6.280E-06	1.687E-05	
Strike Probability, 1/yr					3.510E-05	1.624E-05	7.866E-05	
1.0E-5 1/yr design speed					105.	75.	131.	
1.0E-6 1/yr design speed					176.	156.	196.	
1.0E-7 1/yr design speed					233.	216.	250.	
29	102	1.363E+04	0.8241	66	63	63		
Point		3.487E-01	1.401E-01	8.678E-01	3.146E-05	1.264E-05	7.830E-05	
Line		2.385E+00	1.521E+00	3.740E+00	8.151E-06	5.199E-06	1.278E-05	
Strike Probability, 1/yr					3.962E-05	1.784E-05	9.108E-05	
1.0E-5 1/yr design speed					98.	64.	133.	
1.0E-6 1/yr design speed					170.	138.	204.	
1.0E-7 1/yr design speed					234.	202.	267.	
29	104	5.776E+03	0.3492	10	6	6		
Point		2.428E-02	5.625E-03	1.048E-01	7.832E-07	1.815E-07	3.381E-06	
Line		3.607E-01	2.315E-01	5.621E-01	4.407E-07	2.828E-07	6.868E-07	
Strike Probability, 1/yr					1.224E-06	4.643E-07	4.067E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					50.	39.	105.	
1.0E-7 1/yr design speed					136.	100.	181.	
31	78	4.429E+03	0.2735	16	15	15		
Point		4.647E-02	1.371E-02	1.575E-01	3.127E-06	9.225E-07	1.060E-05	
Line		1.691E+00	7.563E-01	3.780E+00	4.311E-06	1.928E-06	9.637E-06	
Strike Probability, 1/yr					7.438E-06	2.851E-06	2.024E-05	
1.0E-5 1/yr design speed					39.	39.	84.	
1.0E-6 1/yr design speed					130.	96.	161.	
1.0E-7 1/yr design speed					194.	168.	219.	

31	80	1.050E+04	0.6486	149	141	142	
Point		2.702E-01	1.633E-01	4.473E-01	7.142E-05	4.315E-05	1.182E-04
Line		2.837E+00	2.145E+00	3.752E+00	2.840E-05	2.147E-05	3.756E-05
Strike Probability, 1/yr					9.982E-05	6.462E-05	1.558E-04
1.0E-5 1/yr design speed					135.	120.	149.
1.0E-6 1/yr design speed					195.	183.	208.
1.0E-7 1/yr design speed					248.	236.	258.
31	82	1.620E+04	1.0000	348	334	337	
Point		6.576E-01	4.498E-01	9.615E-01	2.633E-04	1.801E-04	3.850E-04
Line		4.584E+00	3.723E+00	5.645E+00	6.952E-05	5.646E-05	8.561E-05
Strike Probability, 1/yr					3.328E-04	2.365E-04	4.706E-04
1.0E-5 1/yr design speed					172.	163.	181.
1.0E-6 1/yr design speed					228.	220.	237.
1.0E-7 1/yr design speed					278.	269.	287.
31	84	1.620E+04	1.0000	407	368	371	
Point		6.791E-01	4.977E-01	9.265E-01	3.180E-04	2.330E-04	4.339E-04
Line		5.471E+00	4.533E+00	6.603E+00	9.704E-05	8.041E-05	1.171E-04
Strike Probability, 1/yr					4.150E-04	3.135E-04	5.510E-04
1.0E-5 1/yr design speed					179.	171.	187.
1.0E-6 1/yr design speed					234.	227.	242.
1.0E-7 1/yr design speed					283.	276.	292.
31	86	1.620E+04	1.0000	327	297	297	
Point		1.172E+00	7.373E-01	1.864E+00	4.410E-04	2.774E-04	7.011E-04
Line		6.910E+00	5.312E+00	8.989E+00	9.847E-05	7.570E-05	1.281E-04
Strike Probability, 1/yr					5.395E-04	3.531E-04	8.292E-04
1.0E-5 1/yr design speed					184.	173.	195.
1.0E-6 1/yr design speed					238.	228.	249.
1.0E-7 1/yr design speed					286.	276.	298.
31	88	1.620E+04	1.0000	495	438	438	
Point		1.857E+00	1.324E+00	2.604E+00	1.058E-03	7.541E-04	1.483E-03
Line		9.240E+00	7.667E+00	1.114E+01	1.993E-04	1.654E-04	2.402E-04
Strike Probability, 1/yr					1.257E-03	9.195E-04	1.723E-03
1.0E-5 1/yr design speed					204.	195.	212.
1.0E-6 1/yr design speed					255.	247.	264.
1.0E-7 1/yr design speed					302.	293.	311.
31	90	1.620E+04	1.0000	592	537	537	
Point		8.554E-01	6.565E-01	1.115E+00	5.826E-04	4.471E-04	7.592E-04
Line		6.714E+00	5.778E+00	7.801E+00	1.732E-04	1.491E-04	2.013E-04
Strike Probability, 1/yr					7.558E-04	5.962E-04	9.605E-04
1.0E-5 1/yr design speed					194.	187.	201.
1.0E-6 1/yr design speed					247.	241.	255.
1.0E-7 1/yr design speed					295.	288.	303.

31	92	1.620E+04	1.0000	502	479	479	
Point	8.955E-01	6.552E-01	1.224E+00	5.172E-04	3.784E-04	7.070E-04	
Line	7.153E+00	5.982E+00	8.553E+00	1.565E-04	1.309E-04	1.871E-04	
Strike Probability, 1/yr				6.737E-04	5.092E-04	8.941E-04	
1.0E-5 1/yr design speed				191.	183.	199.	
1.0E-6 1/yr design speed				245.	238.	253.	
1.0E-7 1/yr design speed				293.	285.	301.	
31	94	1.620E+04	1.0000	557	466	469	
Point	1.117E+00	7.418E-01	1.681E+00	7.155E-04	4.754E-04	1.077E-03	
Line	4.765E+00	3.941E+00	5.760E+00	1.157E-04	9.567E-05	1.398E-04	
Strike Probability, 1/yr				8.312E-04	5.711E-04	1.217E-03	
1.0E-5 1/yr design speed				193.	183.	203.	
1.0E-6 1/yr design speed				246.	236.	256.	
1.0E-7 1/yr design speed				293.	284.	303.	
31	96	1.620E+04	1.0000	655	562	565	
Point	2.900E-01	2.061E-01	4.080E-01	2.185E-04	1.553E-04	3.075E-04	
Line	2.146E+00	1.828E+00	2.519E+00	6.125E-05	5.217E-05	7.191E-05	
Strike Probability, 1/yr				2.798E-04	2.075E-04	3.794E-04	
1.0E-5 1/yr design speed				168.	159.	176.	
1.0E-6 1/yr design speed				225.	217.	233.	
1.0E-7 1/yr design speed				275.	267.	283.	
31	98	1.620E+04	1.0000	490	432	434	
Point	2.416E-01	1.622E-01	3.597E-01	1.362E-04	9.147E-05	2.028E-04	
Line	1.894E+00	1.578E+00	2.272E+00	4.044E-05	3.370E-05	4.853E-05	
Strike Probability, 1/yr				1.766E-04	1.252E-04	2.513E-04	
1.0E-5 1/yr design speed				155.	146.	165.	
1.0E-6 1/yr design speed				214.	206.	224.	
1.0E-7 1/yr design speed				265.	257.	275.	
31	100	1.620E+04	1.0000	394	366	367	
Point	1.603E-01	1.133E-01	2.269E-01	7.268E-05	5.137E-05	1.028E-04	
Line	1.760E+00	1.475E+00	2.099E+00	3.021E-05	2.532E-05	3.605E-05	
Strike Probability, 1/yr				1.029E-04	7.669E-05	1.389E-04	
1.0E-5 1/yr design speed				141.	132.	150.	
1.0E-6 1/yr design speed				204.	196.	212.	
1.0E-7 1/yr design speed				256.	249.	264.	
31	102	1.620E+04	1.0000	303	255	255	
Point	1.731E-01	1.121E-01	2.674E-01	6.034E-05	3.907E-05	9.320E-05	
Line	1.825E+00	1.471E+00	2.265E+00	2.410E-05	1.942E-05	2.990E-05	
Strike Probability, 1/yr				8.444E-05	5.849E-05	1.231E-04	
1.0E-5 1/yr design speed				124.	105.	144.	
1.0E-6 1/yr design speed				193.	172.	213.	
1.0E-7 1/yr design speed				256.	234.	277.	

31	104	1.579E+04	0.9749	57	41	41		
Point		1.084E-01	3.180E-02	3.695E-01	7.292E-06	2.139E-06	2.485E-05	
Line		1.230E+00	6.929E-01	2.184E+00	3.134E-06	1.766E-06	5.564E-06	
Strike Probability, 1/yr					1.043E-05	3.905E-06	3.042E-05	
1.0E-5 1/yr design speed					42.	39.	94.	
1.0E-6 1/yr design speed					131.	93.	172.	
1.0E-7 1/yr design speed					199.	163.	238.	
31	106	1.009E+04	0.6230	23	16	16		
Point		7.299E-02	2.164E-02	2.462E-01	3.100E-06	9.192E-07	1.046E-05	
Line		1.483E+00	7.347E-01	2.994E+00	2.386E-06	1.182E-06	4.817E-06	
Strike Probability, 1/yr					5.487E-06	2.101E-06	1.528E-05	
1.0E-5 1/yr design speed					39.	39.	64.	
1.0E-6 1/yr design speed					110.	72.	151.	
1.0E-7 1/yr design speed					182.	146.	221.	
31	108	1.294E+04	0.7989	15	8	8		
Point		1.517E-01	1.161E-02	1.983E+00	3.277E-06	2.507E-07	4.283E-05	
Line		1.340E+00	3.992E-01	4.498E+00	1.096E-06	3.266E-07	3.681E-06	
Strike Probability, 1/yr					4.373E-06	5.773E-07	4.651E-05	
1.0E-5 1/yr design speed					39.	39.	110.	
1.0E-6 1/yr design speed					102.	39.	184.	
1.0E-7 1/yr design speed					174.	106.	248.	
31	110	1.335E+04	0.8240	34	25	25		
Point		3.423E-02	1.427E-02	8.213E-02	1.625E-06	6.774E-07	3.899E-06	
Line		1.487E+00	8.371E-01	2.641E+00	2.674E-06	1.505E-06	4.750E-06	
Strike Probability, 1/yr					4.299E-06	2.183E-06	8.648E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					102.	74.	133.	
1.0E-7 1/yr design speed					177.	148.	206.	
31	112	8.668E+03	0.5353	7	5	5		
Point		1.215E-01	7.801E-03	1.893E+00	1.828E-06	1.174E-07	2.848E-05	
Line		2.732E+00	2.905E-01	2.568E+01	1.557E-06	1.656E-07	1.464E-05	
Strike Probability, 1/yr					3.385E-06	2.830E-07	4.312E-05	
1.0E-5 1/yr design speed					39.	39.	108.	
1.0E-6 1/yr design speed					93.	39.	184.	
1.0E-7 1/yr design speed					168.	83.	250.	
31	114	3.624E+03	0.2238	10	5	5		
Point		1.437E-02	3.471E-03	5.946E-02	7.386E-07	1.785E-07	3.057E-06	
Line		9.687E-01	4.646E-01	2.020E+00	1.887E-06	9.049E-07	3.933E-06	
Strike Probability, 1/yr					2.625E-06	1.083E-06	6.990E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					84.	44.	126.	
1.0E-7 1/yr design speed					162.	129.	200.	

31	116	2.013E+03	0.1243	9	7	7
Point	2.009E-02	2.425E-03	1.665E-01	1.674E-06	2.020E-07	1.387E-05
Line	2.470E-01	1.292E-01	4.721E-01	7.792E-07	4.076E-07	1.490E-06
Strike Probability, 1/yr				2.453E-06	6.096E-07	1.536E-05
1.0E-5 1/yr design speed				39.	39.	64.
1.0E-6 1/yr design speed				81.	39.	150.
1.0E-7 1/yr design speed				157.	109.	218.

33	76	3.347E+03	0.2114	108	99	99
Point	5.317E-02	3.327E-02	8.497E-02	3.197E-05	2.001E-05	5.109E-05
Line	1.221E+00	9.279E-01	1.606E+00	2.781E-05	2.113E-05	3.659E-05
Strike Probability, 1/yr				5.978E-05	4.114E-05	8.768E-05
1.0E-5 1/yr design speed				122.	107.	135.
1.0E-6 1/yr design speed				186.	175.	198.
1.0E-7 1/yr design speed				240.	230.	250.

33	78	1.225E+04	0.7737	239	220	220
Point	7.834E-01	4.369E-01	1.405E+00	2.848E-04	1.588E-04	5.107E-04
Line	4.126E+00	3.103E+00	5.486E+00	5.682E-05	4.273E-05	7.555E-05
Strike Probability, 1/yr				3.416E-04	2.016E-04	5.862E-04
1.0E-5 1/yr design speed				166.	151.	182.
1.0E-6 1/yr design speed				221.	207.	234.
1.0E-7 1/yr design speed				270.	258.	282.

33	80	1.583E+04	1.0000	320	310	311
Point	5.015E-01	3.333E-01	7.546E-01	1.889E-04	1.255E-04	2.842E-04
Line	3.646E+00	2.934E+00	4.532E+00	5.201E-05	4.185E-05	6.465E-05
Strike Probability, 1/yr				2.409E-04	1.674E-04	3.488E-04
1.0E-5 1/yr design speed				158.	146.	170.
1.0E-6 1/yr design speed				214.	204.	225.
1.0E-7 1/yr design speed				264.	255.	273.

33	82	1.583E+04	1.0000	286	278	279
Point	9.383E-01	6.277E-01	1.403E+00	3.158E-04	2.113E-04	4.721E-04
Line	5.439E+00	4.381E+00	6.752E+00	6.934E-05	5.585E-05	8.609E-05
Strike Probability, 1/yr				3.852E-04	2.671E-04	5.582E-04
1.0E-5 1/yr design speed				175.	165.	185.
1.0E-6 1/yr design speed				230.	221.	240.
1.0E-7 1/yr design speed				280.	270.	289.

33	84	1.583E+04	1.0000	385	374	374
Point	8.942E-01	6.543E-01	1.222E+00	4.052E-04	2.965E-04	5.538E-04
Line	5.546E+00	4.685E+00	6.564E+00	9.518E-05	8.040E-05	1.127E-04
Strike Probability, 1/yr				5.003E-04	3.769E-04	6.664E-04
1.0E-5 1/yr design speed				182.	174.	190.
1.0E-6 1/yr design speed				237.	229.	245.
1.0E-7 1/yr design speed				285.	278.	294.

33	86	1.583E+04	1.0000	541	493	493	
Point		1.979E+00	1.419E+00	2.761E+00	1.260E-03	9.033E-04	1.758E-03
Line		7.830E+00	6.608E+00	9.279E+00	1.888E-04	1.594E-04	2.238E-04
Strike Probability, 1/yr					1.449E-03	1.063E-03	1.981E-03
1.0E-5 1/yr design speed					206.	198.	215.
1.0E-6 1/yr design speed					257.	249.	266.
1.0E-7 1/yr design speed					303.	295.	313.
33	88	1.583E+04	1.0000	406	354	354	
Point		1.807E+00	1.242E+00	2.628E+00	8.634E-04	5.936E-04	1.256E-03
Line		8.846E+00	7.307E+00	1.071E+01	1.601E-04	1.322E-04	1.938E-04
Strike Probability, 1/yr					1.023E-03	7.258E-04	1.450E-03
1.0E-5 1/yr design speed					199.	189.	208.
1.0E-6 1/yr design speed					251.	242.	260.
1.0E-7 1/yr design speed					298.	289.	308.
33	90	1.583E+04	1.0000	449	397	397	
Point		1.166E+00	8.485E-01	1.602E+00	6.161E-04	4.484E-04	8.466E-04
Line		7.791E+00	6.525E+00	9.303E+00	1.559E-04	1.306E-04	1.862E-04
Strike Probability, 1/yr					7.720E-04	5.790E-04	1.033E-03
1.0E-5 1/yr design speed					193.	185.	202.
1.0E-6 1/yr design speed					247.	239.	255.
1.0E-7 1/yr design speed					294.	286.	303.
33	92	1.583E+04	1.0000	431	399	399	
Point		2.004E+00	1.380E+00	2.910E+00	1.016E-03	6.999E-04	1.476E-03
Line		6.728E+00	5.611E+00	8.067E+00	1.293E-04	1.078E-04	1.550E-04
Strike Probability, 1/yr					1.146E-03	8.077E-04	1.631E-03
1.0E-5 1/yr design speed					200.	190.	209.
1.0E-6 1/yr design speed					251.	242.	261.
1.0E-7 1/yr design speed					298.	289.	308.
33	94	1.583E+04	1.0000	451	382	382	
Point		1.770E+00	1.138E+00	2.753E+00	9.396E-04	6.042E-04	1.461E-03
Line		6.434E+00	5.222E+00	7.927E+00	1.294E-04	1.050E-04	1.594E-04
Strike Probability, 1/yr					1.069E-03	7.092E-04	1.621E-03
1.0E-5 1/yr design speed					198.	188.	209.
1.0E-6 1/yr design speed					250.	240.	261.
1.0E-7 1/yr design speed					297.	287.	308.
33	96	1.583E+04	1.0000	721	615	616	
Point		1.077E+00	7.421E-01	1.564E+00	9.141E-04	6.297E-04	1.327E-03
Line		4.525E+00	3.797E+00	5.392E+00	1.454E-04	1.221E-04	1.733E-04
Strike Probability, 1/yr					1.060E-03	7.518E-04	1.500E-03
1.0E-5 1/yr design speed					199.	190.	208.
1.0E-6 1/yr design speed					251.	242.	260.
1.0E-7 1/yr design speed					298.	289.	308.

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   33   98    1.583E+04 1.0000    668    526    526
Point  8.525E-01  5.725E-01  1.269E+00  6.702E-04  4.501E-04  9.979E-04
Line   4.062E+00  3.347E+00  4.930E+00  1.210E-04  9.966E-05  1.468E-04
Strike Probability, 1/yr                7.911E-04  5.497E-04  1.145E-03
1.0E-5 1/yr design speed                     192.       183.       202.
1.0E-6 1/yr design speed                     245.       236.       255.
1.0E-7 1/yr design speed                     293.       283.       303.

   33  100    1.583E+04 1.0000    620    575    575
Point  3.035E-01  2.212E-01  4.163E-01  2.214E-04  1.614E-04  3.038E-04
Line   2.779E+00  2.363E+00  3.268E+00  7.680E-05  6.531E-05  9.031E-05
Strike Probability, 1/yr                2.982E-04  2.267E-04  3.941E-04
1.0E-5 1/yr design speed                     171.       163.       178.
1.0E-6 1/yr design speed                     228.       221.       235.
1.0E-7 1/yr design speed                     278.       270.       285.

   33  102    1.583E+04 1.0000    517    439    439
Point  2.556E-01  1.802E-01  3.624E-01  1.555E-04  1.097E-04  2.205E-04
Line   2.883E+00  2.376E+00  3.497E+00  6.644E-05  5.477E-05  8.059E-05
Strike Probability, 1/yr                2.219E-04  1.644E-04  3.011E-04
1.0E-5 1/yr design speed                     154.       136.       172.
1.0E-6 1/yr design speed                     220.       201.       239.
1.0E-7 1/yr design speed                     281.       260.       301.

   33  104    1.583E+04 1.0000     61     41     41
Point  4.018E-02  1.330E-02  1.214E-01  2.885E-06  9.548E-07  8.716E-06
Line   1.494E+00  7.215E-01  3.093E+00  4.062E-06  1.962E-06  8.411E-06
Strike Probability, 1/yr                6.947E-06  2.917E-06  1.713E-05
1.0E-5 1/yr design speed                      39.        39.        70.
1.0E-6 1/yr design speed                     119.        84.       156.
1.0E-7 1/yr design speed                     190.       157.       226.

   33  106    1.583E+04 1.0000     17      9      9
Point  4.971E-01  2.334E-02  1.059E+01  9.945E-06  4.670E-07  2.118E-04
Line   2.124E+00  6.162E-01  7.320E+00  1.609E-06  4.670E-07  5.547E-06
Strike Probability, 1/yr                1.155E-05  9.340E-07  2.173E-04
1.0E-5 1/yr design speed                      47.        39.       161.
1.0E-6 1/yr design speed                     133.        39.       227.
1.0E-7 1/yr design speed                     200.       121.       286.

   33  108    1.583E+04 1.0000      2      2      2
Point  1.723E-02  3.225E-03  9.209E-02  4.056E-08  7.590E-09  2.168E-07
Line   6.182E-01  1.859E-01  2.056E+00  5.512E-08  1.658E-08  1.833E-07
Strike Probability, 1/yr                9.568E-08  2.417E-08  4.000E-07
1.0E-5 1/yr design speed                      38.        38.        39.
1.0E-6 1/yr design speed                      38.        38.        39.
1.0E-7 1/yr design speed                      38.        38.       105.
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33	110	1.583E+04	1.0000	42	31	31	
Point		3.883E-01	9.074E-02	1.662E+00	1.919E-05	4.485E-06	8.213E-05
Line		3.773E+00	2.037E+00	6.987E+00	7.064E-06	3.814E-06	1.308E-05
Strike	Probability, 1/yr				2.626E-05	8.299E-06	9.522E-05
1.0E-5	1/yr design speed				83.	39.	135.
1.0E-6	1/yr design speed				159.	117.	205.
1.0E-7	1/yr design speed				224.	184.	268.
33	112	1.583E+04	1.0000	42	25	25	
Point		2.293E-02	8.799E-03	5.973E-02	1.133E-06	4.349E-07	2.953E-06
Line		6.574E-01	4.154E-01	1.040E+00	1.231E-06	7.778E-07	1.948E-06
Strike	Probability, 1/yr				2.364E-06	1.213E-06	4.900E-06
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				80.	48.	112.
1.0E-7	1/yr design speed				158.	130.	188.
33	114	1.583E+04	1.0000	11	8	8	
Point		1.940E-01	1.556E-02	2.418E+00	2.511E-06	2.014E-07	3.130E-05
Line		1.565E+00	5.217E-01	4.697E+00	7.676E-07	2.558E-07	2.303E-06
Strike	Probability, 1/yr				3.279E-06	4.572E-07	3.361E-05
1.0E-5	1/yr design speed				39.	39.	98.
1.0E-6	1/yr design speed				91.	39.	174.
1.0E-7	1/yr design speed				165.	99.	239.
33	116	1.464E+04	0.9246	64	52	52	
Point		3.332E-02	1.672E-02	6.641E-02	2.715E-06	1.362E-06	5.410E-06
Line		1.026E+00	6.794E-01	1.549E+00	3.165E-06	2.096E-06	4.779E-06
Strike	Probability, 1/yr				5.880E-06	3.459E-06	1.019E-05
1.0E-5	1/yr design speed				39.	39.	41.
1.0E-6	1/yr design speed				113.	90.	138.
1.0E-7	1/yr design speed				185.	161.	210.
33	118	7.087E+03	0.4476	38	34	34	
Point		6.213E-02	1.924E-02	2.006E-01	6.207E-06	1.922E-06	2.004E-05
Line		8.853E-01	5.131E-01	1.527E+00	3.350E-06	1.942E-06	5.780E-06
Strike	Probability, 1/yr				9.557E-06	3.864E-06	2.582E-05
1.0E-5	1/yr design speed				39.	39.	88.
1.0E-6	1/yr design speed				128.	93.	167.
1.0E-7	1/yr design speed				197.	163.	234.
33	120	1.180E+03	0.0746	2	2	2	
Point		3.513E-04	1.056E-04	1.168E-03	1.109E-08	3.335E-09	3.687E-08
Line		1.000E-01	0.000E+00	0.000E+00	1.196E-07	0.000E+00	0.000E+00
Strike	Probability, 1/yr				1.307E-07	3.335E-09	3.687E-08
1.0E-5	1/yr design speed				39.	38.	38.
1.0E-6	1/yr design speed				39.	38.	38.
1.0E-7	1/yr design speed				53.	38.	38.

35	74	7.725E+02	0.0500	44	39	39	
Point		5.988E-02	2.472E-02	1.451E-01	6.355E-05	2.623E-05	1.540E-04
Line		8.342E-01	5.466E-01	1.273E+00	3.354E-05	2.197E-05	5.119E-05
Strike	Probability, 1/yr				9.709E-05	4.821E-05	2.052E-04
1.0E-5	1/yr design speed				135.	112.	157.
1.0E-6	1/yr design speed				196.	178.	214.
1.0E-7	1/yr design speed				248.	233.	264.
35	76	1.429E+04	0.9248	303	273	273	
Point		6.670E-01	4.258E-01	1.045E+00	2.635E-04	1.682E-04	4.128E-04
Line		4.888E+00	3.833E+00	6.233E+00	7.315E-05	5.736E-05	9.329E-05
Strike	Probability, 1/yr				3.367E-04	2.256E-04	5.061E-04
1.0E-5	1/yr design speed				167.	154.	179.
1.0E-6	1/yr design speed				222.	211.	233.
1.0E-7	1/yr design speed				271.	261.	281.
35	78	1.545E+04	1.0000	210	183	186	
Point		1.017E+00	5.500E-01	1.879E+00	2.574E-04	1.393E-04	4.758E-04
Line		5.197E+00	3.847E+00	7.020E+00	4.985E-05	3.690E-05	6.735E-05
Strike	Probability, 1/yr				3.073E-04	1.762E-04	5.431E-04
1.0E-5	1/yr design speed				163.	147.	180.
1.0E-6	1/yr design speed				219.	204.	233.
1.0E-7	1/yr design speed				268.	255.	280.
35	80	1.545E+04	1.0000	221	188	189	
Point		1.193E+00	6.578E-01	2.162E+00	3.178E-04	1.753E-04	5.762E-04
Line		5.636E+00	4.183E+00	7.594E+00	5.690E-05	4.223E-05	7.666E-05
Strike	Probability, 1/yr				3.747E-04	2.175E-04	6.529E-04
1.0E-5	1/yr design speed				168.	152.	184.
1.0E-6	1/yr design speed				223.	209.	236.
1.0E-7	1/yr design speed				271.	259.	283.
35	82	1.545E+04	1.0000	87	78	78	
Point		4.630E-01	2.416E-01	8.874E-01	4.858E-05	2.535E-05	9.311E-05
Line		4.758E+00	3.235E+00	6.998E+00	1.891E-05	1.286E-05	2.781E-05
Strike	Probability, 1/yr				6.749E-05	3.820E-05	1.209E-04
1.0E-5	1/yr design speed				128.	109.	145.
1.0E-6	1/yr design speed				193.	179.	207.
1.0E-7	1/yr design speed				247.	234.	260.
35	84	1.545E+04	1.0000	226	221	221	
Point		2.113E+00	1.259E+00	3.547E+00	5.759E-04	3.431E-04	9.668E-04
Line		7.094E+00	5.640E+00	8.923E+00	7.324E-05	5.822E-05	9.213E-05
Strike	Probability, 1/yr				6.492E-04	4.013E-04	1.059E-03
1.0E-5	1/yr design speed				186.	173.	199.
1.0E-6	1/yr design speed				239.	228.	251.
1.0E-7	1/yr design speed				287.	276.	299.

35	86	1.545E+04	1.0000	355	333	333	
Point	4.434E+00	2.456E+00	8.007E+00	1.899E-03	1.052E-03	3.428E-03	
Line	6.703E+00	5.264E+00	8.535E+00	1.087E-04	8.536E-05	1.384E-04	
Strike Probability, 1/yr				2.007E-03	1.137E-03	3.566E-03	
1.0E-5 1/yr design speed				210.	196.	225.	
1.0E-6 1/yr design speed				260.	246.	275.	
1.0E-7 1/yr design speed				305.	292.	320.	
35	88	1.545E+04	1.0000	425	408	408	
Point	1.672E+00	1.062E+00	2.633E+00	8.571E-04	5.443E-04	1.350E-03	
Line	6.366E+00	5.128E+00	7.902E+00	1.236E-04	9.956E-05	1.534E-04	
Strike Probability, 1/yr				9.807E-04	6.439E-04	1.503E-03	
1.0E-5 1/yr design speed				196.	185.	208.	
1.0E-6 1/yr design speed				249.	238.	260.	
1.0E-7 1/yr design speed				296.	285.	307.	
35	90	1.545E+04	1.0000	507	481	481	
Point	2.162E+00	1.498E+00	3.121E+00	1.322E-03	9.157E-04	1.909E-03	
Line	7.123E+00	6.032E+00	8.410E+00	1.650E-04	1.397E-04	1.948E-04	
Strike Probability, 1/yr				1.487E-03	1.055E-03	2.103E-03	
1.0E-5 1/yr design speed				206.	197.	215.	
1.0E-6 1/yr design speed				257.	248.	266.	
1.0E-7 1/yr design speed				303.	294.	313.	
35	92	1.545E+04	1.0000	388	368	368	
Point	1.945E+00	1.336E+00	2.831E+00	9.100E-04	6.250E-04	1.325E-03	
Line	7.629E+00	6.308E+00	9.227E+00	1.352E-04	1.118E-04	1.635E-04	
Strike Probability, 1/yr				1.045E-03	7.369E-04	1.488E-03	
1.0E-5 1/yr design speed				198.	189.	208.	
1.0E-6 1/yr design speed				250.	241.	260.	
1.0E-7 1/yr design speed				297.	288.	307.	
35	94	1.545E+04	1.0000	670	571	571	
Point	9.520E-01	6.855E-01	1.322E+00	7.693E-04	5.539E-04	1.068E-03	
Line	4.995E+00	4.200E+00	5.941E+00	1.529E-04	1.285E-04	1.818E-04	
Strike Probability, 1/yr				9.221E-04	6.825E-04	1.250E-03	
1.0E-5 1/yr design speed				196.	188.	205.	
1.0E-6 1/yr design speed				249.	241.	258.	
1.0E-7 1/yr design speed				296.	288.	305.	
35	96	1.545E+04	1.0000	942	745	745	
Point	2.381E+00	1.706E+00	3.321E+00	2.704E-03	1.939E-03	3.773E-03	
Line	7.032E+00	5.991E+00	8.253E+00	3.026E-04	2.578E-04	3.552E-04	
Strike Probability, 1/yr				3.007E-03	2.196E-03	4.128E-03	
1.0E-5 1/yr design speed				221.	213.	230.	
1.0E-6 1/yr design speed				271.	262.	280.	
1.0E-7 1/yr design speed				316.	307.	326.	

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   35   98    1.545E+04 1.0000     658    479    479
Point  1.623E+00  1.058E+00  2.492E+00  1.288E-03  8.394E-04  1.977E-03
Line   5.706E+00  4.626E+00  7.040E+00  1.715E-04  1.390E-04  2.116E-04
Strike Probability, 1/yr                 1.460E-03  9.784E-04  2.189E-03
1.0E-5 1/yr design speed                      205.       195.       216.
1.0E-6 1/yr design speed                      257.       247.       267.
1.0E-7 1/yr design speed                      303.       293.       314.

   35  100    1.545E+04 1.0000     617    537    537
Point  6.134E-01  4.266E-01  8.820E-01  4.564E-04  3.174E-04  6.563E-04
Line   2.753E+00  2.338E+00  3.241E+00  7.759E-05  6.591E-05  9.134E-05
Strike Probability, 1/yr                 5.340E-04  3.833E-04  7.477E-04
1.0E-5 1/yr design speed                      182.       173.       191.
1.0E-6 1/yr design speed                      236.       228.       245.
1.0E-7 1/yr design speed                      284.       276.       294.

   35  102    1.545E+04 1.0000     207    156    156
Point  3.236E-01  1.838E-01  5.699E-01  8.079E-05  4.587E-05  1.423E-04
Line   3.459E+00  2.503E+00  4.780E+00  3.271E-05  2.367E-05  4.520E-05
Strike Probability, 1/yr                 1.135E-04  6.954E-05  1.875E-04
1.0E-5 1/yr design speed                      133.       111.       157.
1.0E-6 1/yr design speed                      201.       177.       225.
1.0E-7 1/yr design speed                      264.       238.       288.

   35  104    1.545E+04 1.0000      41     28     28
Point  5.335E-02  1.795E-02  1.585E-01  2.638E-06  8.878E-07  7.837E-06
Line   1.839E+00  8.250E-01  4.099E+00  3.444E-06  1.545E-06  7.676E-06
Strike Probability, 1/yr                 6.082E-06  2.433E-06  1.551E-05
1.0E-5 1/yr design speed                       39.        39.        64.
1.0E-6 1/yr design speed                      114.        78.       152.
1.0E-7 1/yr design speed                      186.       151.       223.

   35  106    1.545E+04 1.0000      27     15     15
Point  6.812E-02  1.529E-02  3.035E-01  2.218E-06  4.979E-07  9.882E-06
Line   1.411E+00  6.084E-01  3.272E+00  1.740E-06  7.504E-07  4.036E-06
Strike Probability, 1/yr                 3.958E-06  1.248E-06  1.392E-05
1.0E-5 1/yr design speed                       39.        39.        58.
1.0E-6 1/yr design speed                       99.        50.       148.
1.0E-7 1/yr design speed                      173.       131.       218.

   35  108    1.545E+04 1.0000       7      5      5
Point  2.353E-02  1.633E-03  3.391E-01  1.986E-07  1.379E-08  2.862E-06
Line   4.761E-01  1.312E-01  1.728E+00  1.522E-07  4.195E-08  5.525E-07
Strike Probability, 1/yr                 3.509E-07  5.574E-08  3.415E-06
1.0E-5 1/yr design speed                       39.        38.        39.
1.0E-6 1/yr design speed                       39.        38.        99.
1.0E-7 1/yr design speed                       95.        38.       175.
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35	110	1.545E+04	1.0000	15	10	10		
Point		6.986E-02	9.238E-03	5.283E-01	1.264E-06	1.671E-07	9.556E-06	
Line		1.332E+00	3.653E-01	4.856E+00	9.126E-07	2.503E-07	3.327E-06	
Strike Probability, 1/yr					2.176E-06	4.174E-07	1.288E-05	
1.0E-5 1/yr design speed					39.	39.	54.	
1.0E-6 1/yr design speed					77.	39.	145.	
1.0E-7 1/yr design speed					154.	96.	215.	
35	112	1.545E+04	1.0000	18	15	15		
Point		1.678E-01	2.811E-02	1.002E+00	3.644E-06	6.102E-07	2.176E-05	
Line		2.516E+00	8.773E-01	7.213E+00	2.068E-06	7.214E-07	5.931E-06	
Strike Probability, 1/yr					5.712E-06	1.332E-06	2.769E-05	
1.0E-5 1/yr design speed					39.	39.	91.	
1.0E-6 1/yr design speed					111.	52.	169.	
1.0E-7 1/yr design speed					182.	132.	236.	
35	114	1.545E+04	1.0000	18	15	15		
Point		9.965E-02	1.696E-02	5.856E-01	2.163E-06	3.681E-07	1.271E-05	
Line		8.427E-01	4.347E-01	1.634E+00	6.929E-07	3.574E-07	1.343E-06	
Strike Probability, 1/yr					2.856E-06	7.255E-07	1.405E-05	
1.0E-5 1/yr design speed					39.	39.	59.	
1.0E-6 1/yr design speed					86.	39.	147.	
1.0E-7 1/yr design speed					161.	113.	215.	
35	116	1.545E+04	1.0000	4	4	4		
Point		8.533E-04	6.345E-04	1.147E-03	4.116E-09	3.061E-09	5.535E-09	
Line		1.502E-01	1.117E-01	2.020E-01	2.744E-08	2.041E-08	3.690E-08	
Strike Probability, 1/yr					3.156E-08	2.347E-08	4.244E-08	
1.0E-5 1/yr design speed					38.	38.	38.	
1.0E-6 1/yr design speed					38.	38.	38.	
1.0E-7 1/yr design speed					38.	38.	38.	
35	118	1.545E+04	1.0000	40	40	40		
Point		2.274E-02	1.009E-02	5.126E-02	1.097E-06	4.866E-07	2.473E-06	
Line		9.560E-01	6.059E-01	1.509E+00	1.747E-06	1.107E-06	2.757E-06	
Strike Probability, 1/yr					2.844E-06	1.594E-06	5.229E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					87.	60.	115.	
1.0E-7 1/yr design speed					164.	139.	191.	
35	120	1.118E+04	0.7239	16	15	15		
Point		3.436E-02	9.602E-03	1.230E-01	9.160E-07	2.559E-07	3.278E-06	
Line		1.099E+00	5.034E-01	2.398E+00	1.109E-06	5.083E-07	2.421E-06	
Strike Probability, 1/yr					2.025E-06	7.643E-07	5.699E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					74.	39.	118.	
1.0E-7 1/yr design speed					153.	116.	193.	

35	122	1.919E+02	0.0124	1	1	1	
Point		5.682E-02	0.000E+00	0.000E+00	5.517E-06	0.000E+00	0.000E+00
Line		1.000E+00	0.000E+00	0.000E+00	3.678E-06	0.000E+00	0.000E+00
Strike Probability, 1/yr					9.195E-06	0.000E+00	0.000E+00
1.0E-5 1/yr design speed					39.	0.	0.
1.0E-6 1/yr design speed					127.	0.	0.
1.0E-7 1/yr design speed					197.	0.	0.
37	74	3.928E+03	0.2611	64	59	59	
Point		1.839E-01	8.133E-02	4.156E-01	5.581E-05	2.469E-05	1.262E-04
Line		2.712E+00	1.672E+00	4.398E+00	3.118E-05	1.923E-05	5.056E-05
Strike Probability, 1/yr					8.699E-05	4.392E-05	1.767E-04
1.0E-5 1/yr design speed					132.	109.	154.
1.0E-6 1/yr design speed					194.	175.	212.
1.0E-7 1/yr design speed					246.	230.	262.
37	76	1.429E+04	0.9497	232	204	204	
Point		4.061E-01	2.627E-01	6.277E-01	1.228E-04	7.946E-05	1.899E-04
Line		3.217E+00	2.579E+00	4.013E+00	3.686E-05	2.955E-05	4.598E-05
Strike Probability, 1/yr					1.597E-04	1.090E-04	2.358E-04
1.0E-5 1/yr design speed					147.	134.	160.
1.0E-6 1/yr design speed					205.	194.	216.
1.0E-7 1/yr design speed					256.	246.	265.
37	78	1.505E+04	1.0000	98	86	86	
Point		2.646E-01	1.348E-01	5.194E-01	3.210E-05	1.635E-05	6.302E-05
Line		2.589E+00	1.817E+00	3.690E+00	1.190E-05	8.349E-06	1.696E-05
Strike Probability, 1/yr					4.400E-05	2.470E-05	7.998E-05
1.0E-5 1/yr design speed					113.	92.	132.
1.0E-6 1/yr design speed					181.	167.	196.
1.0E-7 1/yr design speed					237.	224.	251.
37	80	1.505E+04	1.0000	45	34	34	
Point		1.728E-01	8.645E-02	3.453E-01	9.626E-06	4.817E-06	1.924E-05
Line		3.244E+00	1.940E+00	5.426E+00	6.847E-06	4.094E-06	1.145E-05
Strike Probability, 1/yr					1.647E-05	8.910E-06	3.069E-05
1.0E-5 1/yr design speed					76.	39.	102.
1.0E-6 1/yr design speed					158.	140.	176.
1.0E-7 1/yr design speed					219.	204.	234.
37	82	1.505E+04	1.0000	119	112	112	
Point		7.110E-01	3.707E-01	1.364E+00	1.048E-04	5.462E-05	2.009E-04
Line		4.916E+00	3.480E+00	6.945E+00	2.744E-05	1.942E-05	3.876E-05
Strike Probability, 1/yr					1.322E-04	7.404E-05	2.397E-04
1.0E-5 1/yr design speed					146.	130.	163.
1.0E-6 1/yr design speed					207.	193.	221.
1.0E-7 1/yr design speed					259.	246.	272.

37	84	1.505E+04	1.0000	340	306	306		
Point		8.577E-01	5.953E-01	1.236E+00	3.611E-04	2.506E-04	5.202E-04	
Line		6.537E+00	5.320E+00	8.031E+00	1.042E-04	8.484E-05	1.281E-04	
Strike Probability, 1/yr					4.653E-04	3.354E-04	6.483E-04	
1.0E-5 1/yr design speed					181.	173.	190.	
1.0E-6 1/yr design speed					236.	228.	245.	
1.0E-7 1/yr design speed					285.	277.	294.	
37	86	1.505E+04	1.0000	330	282	282		
Point		1.157E+00	7.370E-01	1.815E+00	4.726E-04	3.011E-04	7.417E-04	
Line		6.150E+00	4.887E+00	7.738E+00	9.518E-05	7.564E-05	1.198E-04	
Strike Probability, 1/yr					5.678E-04	3.768E-04	8.614E-04	
1.0E-5 1/yr design speed					184.	174.	195.	
1.0E-6 1/yr design speed					239.	229.	249.	
1.0E-7 1/yr design speed					287.	277.	298.	
37	88	1.505E+04	1.0000	435	383	384		
Point		9.627E-01	6.702E-01	1.383E+00	5.185E-04	3.610E-04	7.447E-04	
Line		6.405E+00	5.269E+00	7.787E+00	1.307E-04	1.075E-04	1.589E-04	
Strike Probability, 1/yr					6.492E-04	4.685E-04	9.036E-04	
1.0E-5 1/yr design speed					189.	180.	198.	
1.0E-6 1/yr design speed					243.	235.	252.	
1.0E-7 1/yr design speed					291.	282.	300.	
37	90	1.505E+04	1.0000	334	316	316		
Point		5.780E-01	3.994E-01	8.365E-01	2.390E-04	1.652E-04	3.459E-04	
Line		4.745E+00	3.845E+00	5.857E+00	7.433E-05	6.023E-05	9.175E-05	
Strike Probability, 1/yr					3.134E-04	2.254E-04	4.377E-04	
1.0E-5 1/yr design speed					171.	162.	181.	
1.0E-6 1/yr design speed					228.	220.	237.	
1.0E-7 1/yr design speed					278.	269.	287.	
37	92	1.505E+04	1.0000	389	376	376		
Point		5.078E-01	3.538E-01	7.287E-01	2.446E-04	1.704E-04	3.510E-04	
Line		4.028E+00	3.314E+00	4.896E+00	7.349E-05	6.046E-05	8.932E-05	
Strike Probability, 1/yr					3.181E-04	2.309E-04	4.403E-04	
1.0E-5 1/yr design speed					171.	163.	180.	
1.0E-6 1/yr design speed					228.	220.	237.	
1.0E-7 1/yr design speed					278.	270.	287.	
37	94	1.505E+04	1.0000	526	442	442		
Point		1.589E+00	1.052E+00	2.400E+00	1.035E-03	6.849E-04	1.563E-03	
Line		5.803E+00	4.768E+00	7.063E+00	1.432E-04	1.176E-04	1.742E-04	
Strike Probability, 1/yr					1.178E-03	8.025E-04	1.738E-03	
1.0E-5 1/yr design speed					201.	191.	211.	
1.0E-6 1/yr design speed					252.	243.	263.	
1.0E-7 1/yr design speed					299.	289.	310.	

37	96	1.505E+04	1.0000	626	478	478		
Point		1.749E+00	1.165E+00	2.628E+00	1.356E-03	9.026E-04	2.037E-03	
Line		6.937E+00	5.655E+00	8.510E+00	2.037E-04	1.660E-04	2.498E-04	
Strike	Probability, 1/yr				1.559E-03	1.069E-03	2.286E-03	
1.0E-5	1/yr design speed				208.	198.	218.	
1.0E-6	1/yr design speed				259.	249.	269.	
1.0E-7	1/yr design speed				305.	295.	315.	
37	98	1.505E+04	1.0000	579	438	438		
Point		8.020E-01	5.732E-01	1.122E+00	5.750E-04	4.109E-04	8.045E-04	
Line		5.601E+00	4.656E+00	6.738E+00	1.521E-04	1.264E-04	1.830E-04	
Strike	Probability, 1/yr				7.271E-04	5.373E-04	9.875E-04	
1.0E-5	1/yr design speed				192.	184.	201.	
1.0E-6	1/yr design speed				246.	238.	254.	
1.0E-7	1/yr design speed				293.	285.	302.	
37	100	1.505E+04	1.0000	419	326	326		
Point		6.292E-01	4.011E-01	9.870E-01	3.264E-04	2.081E-04	5.120E-04	
Line		5.445E+00	4.227E+00	7.015E+00	1.070E-04	8.307E-05	1.378E-04	
Strike	Probability, 1/yr				4.334E-04	2.911E-04	6.499E-04	
1.0E-5	1/yr design speed				180.	170.	191.	
1.0E-6	1/yr design speed				236.	226.	246.	
1.0E-7	1/yr design speed				285.	275.	295.	
37	102	1.505E+04	1.0000	255	208	208		
Point		1.671E-01	1.052E-01	2.654E-01	5.275E-05	3.321E-05	8.380E-05	
Line		2.028E+00	1.556E+00	2.643E+00	2.426E-05	1.861E-05	3.161E-05	
Strike	Probability, 1/yr				7.701E-05	5.182E-05	1.154E-04	
1.0E-5	1/yr design speed				121.	102.	142.	
1.0E-6	1/yr design speed				191.	169.	212.	
1.0E-7	1/yr design speed				254.	231.	276.	
37	104	1.505E+04	1.0000	103	85	85		
Point		3.271E-02	1.978E-02	5.409E-02	4.172E-06	2.523E-06	6.898E-06	
Line		7.642E-01	5.747E-01	1.016E+00	3.692E-06	2.776E-06	4.909E-06	
Strike	Probability, 1/yr				7.864E-06	5.299E-06	1.181E-05	
1.0E-5	1/yr design speed				39.	39.	49.	
1.0E-6	1/yr design speed				122.	103.	143.	
1.0E-7	1/yr design speed				193.	172.	214.	
37	106	1.505E+04	1.0000	13	12	13		
Point		1.089E+00	4.808E-02	2.468E+01	1.753E-05	7.738E-07	3.972E-04	
Line		2.666E+00	8.151E-01	8.719E+00	1.625E-06	4.969E-07	5.316E-06	
Strike	Probability, 1/yr				1.916E-05	1.271E-06	4.025E-04	
1.0E-5	1/yr design speed				71.	39.	179.	
1.0E-6	1/yr design speed				148.	50.	243.	
1.0E-7	1/yr design speed				213.	129.	301.	

37	108	1.505E+04	1.0000	8	7	7		
Point	5.572E-02	1.857E-02	1.672E-01	5.519E-07	1.839E-07	1.656E-06		
Line	1.714E+00	7.158E-01	4.106E+00	6.432E-07	2.686E-07	1.540E-06		
Strike Probability, 1/yr				1.195E-06	4.525E-07	3.196E-06		
1.0E-5 1/yr design speed				39.	39.	39.		
1.0E-6 1/yr design speed				49.	39.	97.		
1.0E-7 1/yr design speed				136.	99.	175.		
37	110	1.505E+04	1.0000	12	7	7		
Point	1.343E-02	2.417E-03	7.460E-02	1.995E-07	3.591E-08	1.108E-06		
Line	4.758E-01	2.121E-01	1.067E+00	2.678E-07	1.194E-07	6.006E-07		
Strike Probability, 1/yr				4.673E-07	1.553E-07	1.709E-06		
1.0E-5 1/yr design speed				39.	39.	39.		
1.0E-6 1/yr design speed				39.	39.	70.		
1.0E-7 1/yr design speed				105.	59.	155.		
37	112	1.505E+04	1.0000	14	13	13		
Point	4.776E-02	8.773E-03	2.600E-01	8.279E-07	1.521E-07	4.507E-06		
Line	1.065E+00	4.355E-01	2.604E+00	6.993E-07	2.860E-07	1.710E-06		
Strike Probability, 1/yr				1.527E-06	4.380E-07	6.217E-06		
1.0E-5 1/yr design speed				39.	39.	39.		
1.0E-6 1/yr design speed				60.	39.	121.		
1.0E-7 1/yr design speed				144.	98.	194.		
37	114	1.505E+04	1.0000	6	4	5		
Point	2.237E-02	1.683E-03	2.972E-01	1.662E-07	1.250E-08	2.208E-06		
Line	1.263E+00	2.871E-01	5.560E+00	3.555E-07	8.079E-08	1.564E-06		
Strike Probability, 1/yr				5.217E-07	9.330E-08	3.773E-06		
1.0E-5 1/yr design speed				39.	38.	39.		
1.0E-6 1/yr design speed				39.	38.	103.		
1.0E-7 1/yr design speed				109.	38.	180.		
37	116	1.505E+04	1.0000	3	3	3		
Point	6.515E-04	2.650E-04	1.602E-03	2.420E-09	9.842E-10	5.951E-09		
Line	1.329E-01	9.626E-02	1.835E-01	1.870E-08	1.354E-08	2.582E-08		
Strike Probability, 1/yr				2.112E-08	1.453E-08	3.177E-08		
1.0E-5 1/yr design speed				38.	38.	38.		
1.0E-6 1/yr design speed				38.	38.	38.		
1.0E-7 1/yr design speed				38.	38.	38.		
37	118	1.505E+04	1.0000	3	2	2		
Point	1.599E-02	5.352E-03	4.778E-02	5.940E-08	1.988E-08	1.775E-07		
Line	7.509E-01	4.901E-01	1.150E+00	1.056E-07	6.895E-08	1.619E-07		
Strike Probability, 1/yr				1.650E-07	8.884E-08	3.393E-07		
1.0E-5 1/yr design speed				39.	38.	39.		
1.0E-6 1/yr design speed				39.	38.	39.		
1.0E-7 1/yr design speed				64.	38.	99.		

37	120	1.505E+04	1.0000	50	41	41		
Point		2.740E-02	1.346E-02	5.576E-02	1.696E-06	8.332E-07	3.452E-06	
Line		7.005E-01	4.858E-01	1.010E+00	1.643E-06	1.139E-06	2.369E-06	
Strike Probability, 1/yr					3.339E-06	1.972E-06	5.821E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					93.	69.	119.	
1.0E-7 1/yr design speed					168.	144.	193.	
37	122	6.367E+03	0.4231	24	23	23		
Point		7.819E-02	2.947E-02	2.075E-01	5.491E-06	2.069E-06	1.457E-05	
Line		1.900E+00	9.714E-01	3.718E+00	5.056E-06	2.584E-06	9.891E-06	
Strike Probability, 1/yr					1.055E-05	4.654E-06	2.446E-05	
1.0E-5 1/yr design speed					43.	39.	86.	
1.0E-6 1/yr design speed					132.	100.	166.	
1.0E-7 1/yr design speed					201.	169.	235.	
39	72	1.999E+03	0.1367	25	22	22		
Point		4.298E-02	2.111E-02	8.751E-02	1.001E-05	4.917E-06	2.039E-05	
Line		1.086E+00	6.158E-01	1.917E+00	9.587E-06	5.434E-06	1.691E-05	
Strike Probability, 1/yr					1.960E-05	1.035E-05	3.730E-05	
1.0E-5 1/yr design speed					81.	42.	107.	
1.0E-6 1/yr design speed					157.	137.	177.	
1.0E-7 1/yr design speed					216.	198.	232.	
39	74	1.316E+04	0.8993	266	248	248		
Point		3.006E-01	2.064E-01	4.376E-01	1.132E-04	7.777E-05	1.649E-04	
Line		2.691E+00	2.214E+00	3.272E+00	3.840E-05	3.159E-05	4.669E-05	
Strike Probability, 1/yr					1.516E-04	1.094E-04	2.116E-04	
1.0E-5 1/yr design speed					146.	135.	157.	
1.0E-6 1/yr design speed					205.	195.	214.	
1.0E-7 1/yr design speed					256.	247.	264.	
39	76	1.463E+04	1.0000	260	229	229		
Point		2.576E-01	1.778E-01	3.730E-01	8.529E-05	5.889E-05	1.235E-04	
Line		2.467E+00	2.045E+00	2.976E+00	3.095E-05	2.565E-05	3.733E-05	
Strike Probability, 1/yr					1.162E-04	8.455E-05	1.609E-04	
1.0E-5 1/yr design speed					139.	128.	150.	
1.0E-6 1/yr design speed					199.	189.	208.	
1.0E-7 1/yr design speed					250.	242.	259.	
39	78	1.463E+04	1.0000	175	146	146		
Point		5.861E-01	3.653E-01	9.403E-01	1.306E-04	8.142E-05	2.096E-04	
Line		4.480E+00	3.489E+00	5.751E+00	3.782E-05	2.946E-05	4.856E-05	
Strike Probability, 1/yr					1.685E-04	1.109E-04	2.582E-04	
1.0E-5 1/yr design speed					154.	142.	165.	
1.0E-6 1/yr design speed					213.	203.	224.	
1.0E-7 1/yr design speed					264.	255.	275.	

39	80	1.463E+04	1.0000	170	139	139		
Point		3.835E-01	2.303E-01	6.387E-01	8.303E-05	4.985E-05	1.383E-04	
Line		3.159E+00	2.433E+00	4.103E+00	2.591E-05	1.996E-05	3.365E-05	
Strike Probability, 1/yr					1.089E-04	6.981E-05	1.719E-04	
1.0E-5 1/yr design speed					141.	128.	154.	
1.0E-6 1/yr design speed					203.	192.	214.	
1.0E-7 1/yr design speed					256.	246.	267.	
39	82	1.463E+04	1.0000	300	249	249		
Point		1.144E+00	7.231E-01	1.811E+00	4.373E-04	2.763E-04	6.919E-04	
Line		6.071E+00	4.720E+00	7.808E+00	8.786E-05	6.831E-05	1.130E-04	
Strike Probability, 1/yr					5.251E-04	3.446E-04	8.050E-04	
1.0E-5 1/yr design speed					182.	171.	194.	
1.0E-6 1/yr design speed					237.	227.	248.	
1.0E-7 1/yr design speed					285.	275.	296.	
39	84	1.463E+04	1.0000	502	393	394		
Point		1.579E+00	1.023E+00	2.437E+00	1.010E-03	6.542E-04	1.558E-03	
Line		6.024E+00	4.876E+00	7.442E+00	1.459E-04	1.181E-04	1.802E-04	
Strike Probability, 1/yr					1.155E-03	7.723E-04	1.738E-03	
1.0E-5 1/yr design speed					200.	190.	211.	
1.0E-6 1/yr design speed					252.	242.	263.	
1.0E-7 1/yr design speed					299.	289.	310.	
39	86	1.463E+04	1.0000	480	362	362		
Point		1.376E+00	8.467E-01	2.237E+00	8.414E-04	5.176E-04	1.368E-03	
Line		5.769E+00	4.537E+00	7.336E+00	1.336E-04	1.051E-04	1.699E-04	
Strike Probability, 1/yr					9.750E-04	6.227E-04	1.537E-03	
1.0E-5 1/yr design speed					197.	185.	208.	
1.0E-6 1/yr design speed					249.	238.	261.	
1.0E-7 1/yr design speed					296.	285.	308.	
39	88	1.463E+04	1.0000	613	505	505		
Point		1.260E+00	8.159E-01	1.947E+00	9.840E-04	6.370E-04	1.520E-03	
Line		6.094E+00	4.887E+00	7.599E+00	1.802E-04	1.445E-04	2.247E-04	
Strike Probability, 1/yr					1.164E-03	7.815E-04	1.745E-03	
1.0E-5 1/yr design speed					202.	191.	212.	
1.0E-6 1/yr design speed					254.	244.	264.	
1.0E-7 1/yr design speed					300.	290.	311.	
39	90	1.463E+04	1.0000	384	330	330		
Point		2.572E+00	1.470E+00	4.503E+00	1.258E-03	7.187E-04	2.202E-03	
Line		9.030E+00	6.862E+00	1.188E+01	1.673E-04	1.271E-04	2.202E-04	
Strike Probability, 1/yr					1.425E-03	8.458E-04	2.422E-03	
1.0E-5 1/yr design speed					205.	192.	218.	
1.0E-6 1/yr design speed					256.	244.	269.	
1.0E-7 1/yr design speed					302.	290.	316.	

39	92	1.463E+04	1.0000	311	290	290		
Point		1.893E+00	1.075E+00	3.335E+00	7.500E-04	4.258E-04	1.321E-03	
Line		7.413E+00	5.673E+00	9.686E+00	1.112E-04	8.512E-05	1.453E-04	
Strike Probability, 1/yr					8.612E-04	5.109E-04	1.466E-03	
1.0E-5 1/yr design speed					193.	180.	207.	
1.0E-6 1/yr design speed					246.	234.	259.	
1.0E-7 1/yr design speed					293.	281.	306.	
39	94	1.463E+04	1.0000	561	479	483		
Point		2.183E+00	1.424E+00	3.348E+00	1.560E-03	1.018E-03	2.392E-03	
Line		7.216E+00	5.877E+00	8.859E+00	1.953E-04	1.591E-04	2.398E-04	
Strike Probability, 1/yr					1.755E-03	1.177E-03	2.632E-03	
1.0E-5 1/yr design speed					209.	199.	220.	
1.0E-6 1/yr design speed					260.	250.	271.	
1.0E-7 1/yr design speed					306.	296.	317.	
39	96	1.463E+04	1.0000	556	464	464		
Point		1.395E+00	9.289E-01	2.096E+00	9.882E-04	6.578E-04	1.484E-03	
Line		8.788E+00	6.974E+00	1.107E+01	2.357E-04	1.871E-04	2.970E-04	
Strike Probability, 1/yr					1.224E-03	8.449E-04	1.781E-03	
1.0E-5 1/yr design speed					204.	195.	214.	
1.0E-6 1/yr design speed					256.	247.	266.	
1.0E-7 1/yr design speed					303.	294.	313.	
39	98	1.463E+04	1.0000	642	536	536		
Point		7.745E-01	5.430E-01	1.105E+00	6.333E-04	4.440E-04	9.032E-04	
Line		5.457E+00	4.503E+00	6.612E+00	1.690E-04	1.395E-04	2.048E-04	
Strike Probability, 1/yr					8.023E-04	5.835E-04	1.108E-03	
1.0E-5 1/yr design speed					195.	186.	203.	
1.0E-6 1/yr design speed					248.	240.	257.	
1.0E-7 1/yr design speed					296.	287.	305.	
39	100	1.463E+04	1.0000	438	338	338		
Point		3.229E-01	2.118E-01	4.922E-01	1.801E-04	1.182E-04	2.746E-04	
Line		3.004E+00	2.388E+00	3.779E+00	6.348E-05	5.046E-05	7.986E-05	
Strike Probability, 1/yr					2.436E-04	1.686E-04	3.544E-04	
1.0E-5 1/yr design speed					165.	155.	176.	
1.0E-6 1/yr design speed					223.	214.	233.	
1.0E-7 1/yr design speed					274.	265.	283.	
39	102	1.463E+04	1.0000	472	379	379		
Point		5.305E-02	3.990E-02	7.056E-02	3.189E-05	2.398E-05	4.242E-05	
Line		9.546E-01	8.080E-01	1.128E+00	2.174E-05	1.840E-05	2.568E-05	
Strike Probability, 1/yr					5.363E-05	4.238E-05	6.810E-05	
1.0E-5 1/yr design speed					109.	96.	124.	
1.0E-6 1/yr design speed					181.	165.	198.	
1.0E-7 1/yr design speed					246.	227.	263.	

39	104	1.463E+04	1.0000	571	513	513		
Point		3.792E-02	3.053E-02	4.711E-02	2.758E-05	2.220E-05	3.426E-05	
Line		7.940E-01	7.020E-01	8.980E-01	2.187E-05	1.934E-05	2.474E-05	
Strike	Probability, 1/yr				4.945E-05	4.154E-05	5.900E-05	
1.0E-5	1/yr design speed				107.	95.	119.	
1.0E-6	1/yr design speed				179.	165.	194.	
1.0E-7	1/yr design speed				244.	227.	260.	

39	106	1.463E+04	1.0000	8	7	7		
Point		9.276E-03	4.367E-03	1.970E-02	9.451E-08	4.449E-08	2.008E-07	
Line		3.413E-01	2.139E-01	5.445E-01	1.317E-07	8.255E-08	2.101E-07	
Strike	Probability, 1/yr				2.262E-07	1.270E-07	4.109E-07	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				39.	39.	39.	
1.0E-7	1/yr design speed				79.	50.	106.	

39	108	1.463E+04	1.0000	12	10	11		
Point		1.821E-02	5.737E-03	5.777E-02	2.783E-07	8.768E-08	8.830E-07	
Line		7.024E-01	3.131E-01	1.576E+00	4.067E-07	1.813E-07	9.122E-07	
Strike	Probability, 1/yr				6.849E-07	2.690E-07	1.795E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				39.	39.	72.	
1.0E-7	1/yr design speed				118.	81.	157.	

39	110	1.463E+04	1.0000	32	23	23		
Point		1.935E-01	3.120E-02	1.200E+00	7.887E-06	1.272E-06	4.892E-05	
Line		1.455E+00	6.888E-01	3.074E+00	2.247E-06	1.063E-06	4.746E-06	
Strike	Probability, 1/yr				1.013E-05	2.335E-06	5.366E-05	
1.0E-5	1/yr design speed				41.	39.	115.	
1.0E-6	1/yr design speed				129.	76.	188.	
1.0E-7	1/yr design speed				197.	148.	252.	

39	112	1.463E+04	1.0000	14	11	11		
Point		2.833E-02	4.266E-03	1.881E-01	5.051E-07	7.607E-08	3.354E-06	
Line		5.852E-01	2.391E-01	1.432E+00	3.952E-07	1.615E-07	9.671E-07	
Strike	Probability, 1/yr				9.004E-07	2.376E-07	4.321E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				39.	39.	108.	
1.0E-7	1/yr design speed				127.	77.	183.	

39	114	1.463E+04	1.0000	14	9	11		
Point		2.346E-01	7.259E-03	7.584E+00	4.184E-06	1.294E-07	1.352E-04	
Line		9.030E-01	3.114E-01	2.619E+00	6.099E-07	2.103E-07	1.769E-06	
Strike	Probability, 1/yr				4.794E-06	3.397E-07	1.370E-04	
1.0E-5	1/yr design speed				39.	39.	146.	
1.0E-6	1/yr design speed				104.	39.	214.	
1.0E-7	1/yr design speed				175.	89.	274.	

39	116	1.463E+04	1.0000	4	3	3		
Point		1.324E-02	1.390E-03	1.261E-01	6.745E-08	7.079E-09	6.426E-07	
Line		5.866E-01	1.778E-01	1.935E+00	1.132E-07	3.431E-08	3.734E-07	
Strike Probability, 1/yr					1.806E-07	4.139E-08	1.016E-06	
1.0E-5 1/yr design speed					39.	38.	39.	
1.0E-6 1/yr design speed					39.	38.	41.	
1.0E-7 1/yr design speed					69.	38.	138.	
39	118	1.463E+04	1.0000	16	11	11		
Point		9.851E-02	1.374E-02	7.062E-01	2.007E-06	2.800E-07	1.439E-05	
Line		3.051E+00	7.569E-01	1.230E+01	2.355E-06	5.843E-07	9.493E-06	
Strike Probability, 1/yr					4.363E-06	8.643E-07	2.388E-05	
1.0E-5 1/yr design speed					39.	39.	85.	
1.0E-6 1/yr design speed					103.	39.	166.	
1.0E-7 1/yr design speed					176.	120.	234.	
39	120	1.463E+04	1.0000	9	7	7		
Point		7.839E-02	6.570E-03	9.354E-01	8.986E-07	7.531E-08	1.072E-05	
Line		1.886E+00	4.181E-01	8.503E+00	8.187E-07	1.816E-07	3.692E-06	
Strike Probability, 1/yr					1.717E-06	2.569E-07	1.441E-05	
1.0E-5 1/yr design speed					39.	39.	60.	
1.0E-6 1/yr design speed					66.	39.	149.	
1.0E-7 1/yr design speed					147.	80.	218.	
39	122	1.426E+04	0.9748	10	6	7		
Point		4.207E-01	1.261E-02	1.403E+01	5.497E-06	1.648E-07	1.834E-04	
Line		1.447E+00	4.920E-01	4.255E+00	7.161E-07	2.435E-07	2.106E-06	
Strike Probability, 1/yr					6.213E-06	4.083E-07	1.855E-04	
1.0E-5 1/yr design speed					39.	39.	156.	
1.0E-6 1/yr design speed					113.	39.	222.	
1.0E-7 1/yr design speed					182.	95.	282.	
39	124	9.103E+02	0.0622	1	1	1		
Point		2.273E-01	0.000E+00	0.000E+00	4.652E-06	0.000E+00	0.000E+00	
Line		2.000E+00	0.000E+00	0.000E+00	1.551E-06	0.000E+00	0.000E+00	
Strike Probability, 1/yr					6.203E-06	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					39.	0.	0.	
1.0E-6 1/yr design speed					113.	0.	0.	
1.0E-7 1/yr design speed					184.	0.	0.	
41	70	6.012E+03	0.4236	113	106	106		
Point		2.840E-01	1.434E-01	5.625E-01	9.945E-05	5.020E-05	1.970E-04	
Line		2.790E+00	1.911E+00	4.074E+00	3.701E-05	2.535E-05	5.404E-05	
Strike Probability, 1/yr					1.365E-04	7.555E-05	2.510E-04	
1.0E-5 1/yr design speed					143.	125.	162.	
1.0E-6 1/yr design speed					203.	187.	218.	
1.0E-7 1/yr design speed					254.	240.	267.	

41	72	1.312E+04	0.9244	227	203	203		
Point		3.331E-01	2.110E-01	5.258E-01	1.074E-04	6.804E-05	1.695E-04	
Line		3.264E+00	2.538E+00	4.197E+00	3.985E-05	3.099E-05	5.125E-05	
Strike Probability, 1/yr					1.472E-04	9.903E-05	2.208E-04	
1.0E-5 1/yr design speed					146.	132.	159.	
1.0E-6 1/yr design speed					204.	193.	215.	
1.0E-7 1/yr design speed					255.	245.	265.	
41	74	1.419E+04	1.0000	119	111	111		
Point		8.583E-01	4.199E-01	1.755E+00	1.341E-04	6.560E-05	2.741E-04	
Line		3.118E+00	2.273E+00	4.279E+00	1.845E-05	1.345E-05	2.532E-05	
Strike Probability, 1/yr					1.526E-04	7.905E-05	2.994E-04	
1.0E-5 1/yr design speed					144.	123.	164.	
1.0E-6 1/yr design speed					202.	184.	219.	
1.0E-7 1/yr design speed					252.	237.	267.	
41	76	1.419E+04	1.0000	115	109	109		
Point		1.537E+00	7.621E-01	3.100E+00	2.321E-04	1.151E-04	4.680E-04	
Line		4.103E+00	3.105E+00	5.422E+00	2.346E-05	1.776E-05	3.101E-05	
Strike Probability, 1/yr					2.555E-04	1.328E-04	4.990E-04	
1.0E-5 1/yr design speed					157.	137.	176.	
1.0E-6 1/yr design speed					213.	196.	229.	
1.0E-7 1/yr design speed					262.	247.	276.	
41	78	1.173E+04	0.8264	122	108	108		
Point		3.642E+00	1.518E+00	8.737E+00	7.059E-04	2.943E-04	1.693E-03	
Line		7.106E+00	4.952E+00	1.020E+01	5.217E-05	3.636E-05	7.487E-05	
Strike Probability, 1/yr					7.581E-04	3.306E-04	1.768E-03	
1.0E-5 1/yr design speed					188.	167.	209.	
1.0E-6 1/yr design speed					240.	222.	260.	
1.0E-7 1/yr design speed					287.	270.	307.	
41	80	5.540E+03	0.3903	153	127	127		
Point		9.497E-01	5.168E-01	1.745E+00	4.887E-04	2.659E-04	8.982E-04	
Line		5.383E+00	3.946E+00	7.343E+00	1.049E-04	7.691E-05	1.431E-04	
Strike Probability, 1/yr					5.936E-04	3.428E-04	1.041E-03	
1.0E-5 1/yr design speed					186.	172.	200.	
1.0E-6 1/yr design speed					240.	228.	253.	
1.0E-7 1/yr design speed					288.	276.	301.	
41	82	9.225E+03	0.6500	305	264	264		
Point		6.720E-01	4.235E-01	1.066E+00	4.140E-04	2.609E-04	6.569E-04	
Line		5.271E+00	4.052E+00	6.856E+00	1.230E-04	9.455E-05	1.600E-04	
Strike Probability, 1/yr					5.370E-04	3.554E-04	8.169E-04	
1.0E-5 1/yr design speed					185.	175.	196.	
1.0E-6 1/yr design speed					240.	230.	251.	
1.0E-7 1/yr design speed					288.	279.	299.	

41	84	1.419E+04	1.0000	435	354	354		
Point		1.864E+00	1.153E+00	3.013E+00	1.064E-03	6.584E-04	1.721E-03	
Line		6.909E+00	5.523E+00	8.641E+00	1.495E-04	1.195E-04	1.869E-04	
Strike Probability, 1/yr					1.214E-03	7.778E-04	1.908E-03	
1.0E-5 1/yr design speed					201.	190.	213.	
1.0E-6 1/yr design speed					253.	242.	265.	
1.0E-7 1/yr design speed					300.	289.	311.	
41	86	7.839E+03	0.5524	320	238	238		
Point		1.281E+00	7.730E-01	2.124E+00	9.746E-04	5.879E-04	1.616E-03	
Line		6.445E+00	5.020E+00	8.273E+00	1.857E-04	1.446E-04	2.384E-04	
Strike Probability, 1/yr					1.160E-03	7.326E-04	1.854E-03	
1.0E-5 1/yr design speed					202.	190.	214.	
1.0E-6 1/yr design speed					254.	243.	265.	
1.0E-7 1/yr design speed					301.	290.	312.	
41	88	1.419E+04	1.0000	407	344	345		
Point		7.856E-01	5.124E-01	1.205E+00	4.198E-04	2.738E-04	6.437E-04	
Line		5.989E+00	4.739E+00	7.570E+00	1.212E-04	9.592E-05	1.532E-04	
Strike Probability, 1/yr					5.410E-04	3.697E-04	7.969E-04	
1.0E-5 1/yr design speed					185.	175.	195.	
1.0E-6 1/yr design speed					240.	231.	250.	
1.0E-7 1/yr design speed					288.	279.	298.	
41	90	1.419E+04	1.0000	518	442	444		
Point		2.249E+00	1.376E+00	3.678E+00	1.530E-03	9.355E-04	2.501E-03	
Line		7.516E+00	5.965E+00	9.469E+00	1.936E-04	1.537E-04	2.439E-04	
Strike Probability, 1/yr					1.723E-03	1.089E-03	2.745E-03	
1.0E-5 1/yr design speed					209.	198.	221.	
1.0E-6 1/yr design speed					260.	249.	272.	
1.0E-7 1/yr design speed					306.	295.	318.	
41	92	1.419E+04	1.0000	565	488	488		
Point		1.286E+00	8.572E-01	1.929E+00	9.539E-04	6.358E-04	1.431E-03	
Line		6.210E+00	5.065E+00	7.615E+00	1.745E-04	1.423E-04	2.140E-04	
Strike Probability, 1/yr					1.128E-03	7.782E-04	1.645E-03	
1.0E-5 1/yr design speed					201.	191.	211.	
1.0E-6 1/yr design speed					253.	244.	263.	
1.0E-7 1/yr design speed					300.	290.	310.	
41	94	1.419E+04	1.0000	427	373	373		
Point		1.087E+00	6.966E-01	1.697E+00	6.095E-04	3.905E-04	9.515E-04	
Line		5.881E+00	4.669E+00	7.408E+00	1.249E-04	9.915E-05	1.573E-04	
Strike Probability, 1/yr					7.344E-04	4.896E-04	1.109E-03	
1.0E-5 1/yr design speed					191.	180.	202.	
1.0E-6 1/yr design speed					244.	234.	255.	
1.0E-7 1/yr design speed					292.	282.	303.	

41	96	1.419E+04	1.0000	562	451	451		
Point		9.520E-01	6.254E-01	1.449E+00	7.025E-04	4.614E-04	1.069E-03	
Line		6.005E+00	4.756E+00	7.583E+00	1.678E-04	1.329E-04	2.119E-04	
Strike	Probability, 1/yr				8.703E-04	5.944E-04	1.281E-03	
1.0E-5	1/yr design speed				196.	186.	206.	
1.0E-6	1/yr design speed				249.	240.	259.	
1.0E-7	1/yr design speed				296.	287.	307.	
41	98	1.419E+04	1.0000	407	335	335		
Point		7.830E-01	4.823E-01	1.271E+00	4.184E-04	2.577E-04	6.792E-04	
Line		7.469E+00	5.607E+00	9.950E+00	1.512E-04	1.135E-04	2.014E-04	
Strike	Probability, 1/yr				5.696E-04	3.712E-04	8.806E-04	
1.0E-5	1/yr design speed				188.	177.	199.	
1.0E-6	1/yr design speed				243.	232.	253.	
1.0E-7	1/yr design speed				291.	281.	302.	
41	100	1.419E+04	1.0000	208	165	165		
Point		4.774E-01	2.410E-01	9.456E-01	1.304E-04	6.582E-05	2.582E-04	
Line		5.249E+00	3.474E+00	7.930E+00	5.429E-05	3.593E-05	8.203E-05	
Strike	Probability, 1/yr				1.847E-04	1.017E-04	3.403E-04	
1.0E-5	1/yr design speed				158.	142.	175.	
1.0E-6	1/yr design speed				218.	204.	232.	
1.0E-7	1/yr design speed				269.	256.	283.	
41	102	1.419E+04	1.0000	346	267	267		
Point		1.474E-01	9.276E-02	2.344E-01	6.698E-05	4.214E-05	1.065E-04	
Line		2.697E+00	2.009E+00	3.622E+00	4.641E-05	3.457E-05	6.232E-05	
Strike	Probability, 1/yr				1.134E-04	7.671E-05	1.688E-04	
1.0E-5	1/yr design speed				134.	114.	155.	
1.0E-6	1/yr design speed				203.	181.	224.	
1.0E-7	1/yr design speed				266.	243.	288.	
41	104	1.419E+04	1.0000	243	190	190		
Point		5.632E-02	3.585E-02	8.848E-02	1.797E-05	1.144E-05	2.823E-05	
Line		1.219E+00	9.568E-01	1.554E+00	1.474E-05	1.156E-05	1.878E-05	
Strike	Probability, 1/yr				3.270E-05	2.300E-05	4.701E-05	
1.0E-5	1/yr design speed				92.	75.	111.	
1.0E-6	1/yr design speed				167.	148.	187.	
1.0E-7	1/yr design speed				233.	212.	253.	
41	106	1.419E+04	1.0000	37	29	29		
Point		2.455E-01	5.388E-02	1.118E+00	1.192E-05	2.617E-06	5.432E-05	
Line		1.367E+00	8.402E-01	2.225E+00	2.516E-06	1.546E-06	4.094E-06	
Strike	Probability, 1/yr				1.444E-05	4.163E-06	5.842E-05	
1.0E-5	1/yr design speed				57.	39.	118.	
1.0E-6	1/yr design speed				140.	95.	190.	
1.0E-7	1/yr design speed				207.	163.	254.	

41	108	1.419E+04	1.0000	20	18	18		
Point		2.385E-02	8.849E-03	6.430E-02	6.264E-07	2.324E-07	1.688E-06	
Line		4.623E-01	3.045E-01	7.020E-01	4.598E-07	3.028E-07	6.982E-07	
Strike Probability, 1/yr					1.086E-06	5.352E-07	2.387E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					44.	39.	85.	
1.0E-7 1/yr design speed					133.	104.	165.	
41	110	1.419E+04	1.0000	25	22	22		
Point		2.741E-02	1.080E-02	6.956E-02	8.995E-07	3.544E-07	2.283E-06	
Line		7.319E-01	4.348E-01	1.232E+00	9.099E-07	5.405E-07	1.532E-06	
Strike Probability, 1/yr					1.809E-06	8.949E-07	3.815E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					69.	39.	103.	
1.0E-7 1/yr design speed					149.	121.	180.	
41	112	1.419E+04	1.0000	46	38	39		
Point		5.796E-02	2.372E-02	1.416E-01	3.500E-06	1.433E-06	8.551E-06	
Line		1.159E+00	7.158E-01	1.877E+00	2.652E-06	1.638E-06	4.294E-06	
Strike Probability, 1/yr					6.152E-06	3.070E-06	1.284E-05	
1.0E-5 1/yr design speed					39.	39.	54.	
1.0E-6 1/yr design speed					114.	85.	145.	
1.0E-7 1/yr design speed					185.	157.	216.	
41	114	1.419E+04	1.0000	23	19	19		
Point		2.339E-02	7.696E-03	7.111E-02	7.064E-07	2.324E-07	2.147E-06	
Line		7.995E-01	4.351E-01	1.469E+00	9.144E-07	4.977E-07	1.680E-06	
Strike Probability, 1/yr					1.621E-06	7.300E-07	3.827E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					63.	39.	103.	
1.0E-7 1/yr design speed					146.	115.	181.	
41	116	1.419E+04	1.0000	2	2	2		
Point		3.486E-03	4.523E-04	2.687E-02	9.153E-09	1.188E-09	7.055E-08	
Line		6.135E-01	7.960E-02	4.729E+00	6.102E-08	7.917E-09	4.703E-07	
Strike Probability, 1/yr					7.017E-08	9.105E-09	5.409E-07	
1.0E-5 1/yr design speed					38.	38.	39.	
1.0E-6 1/yr design speed					38.	38.	39.	
1.0E-7 1/yr design speed					38.	38.	117.	
41	118	1.419E+04	1.0000	3	2	2		
Point		1.136E-03	0.000E+00	0.000E+00	4.476E-09	0.000E+00	0.000E+00	
Line		2.000E-01	0.000E+00	0.000E+00	2.984E-08	0.000E+00	0.000E+00	
Strike Probability, 1/yr					3.431E-08	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					38.	0.	0.	
1.0E-6 1/yr design speed					38.	0.	0.	
1.0E-7 1/yr design speed					38.	0.	0.	

41	120	1.419E+04	1.0000	3	3	3		
Point		4.676E-02	1.034E-03	2.115E+00	1.842E-07	4.072E-09	8.329E-06	
Line		1.269E+00	1.782E-01	9.029E+00	1.893E-07	2.659E-08	1.347E-06	
Strike Probability, 1/yr					3.734E-07	3.066E-08	9.676E-06	
1.0E-5 1/yr design speed					39.	38.	39.	
1.0E-6 1/yr design speed					39.	38.	135.	
1.0E-7 1/yr design speed					97.	38.	205.	
41	122	1.419E+04	1.0000	0	0	0		
41	124	1.414E+03	0.0996	8	6	7		
Point		6.181E-03	2.697E-03	1.417E-02	6.517E-07	2.843E-07	1.494E-06	
Line		3.132E-01	1.878E-01	5.225E-01	1.251E-06	7.501E-07	2.087E-06	
Strike Probability, 1/yr					1.903E-06	1.034E-06	3.581E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					71.	41.	101.	
1.0E-7 1/yr design speed					152.	126.	180.	
43	66	1.873E+03	0.1363	2	2	2		
Point		2.484E-01	1.333E-01	4.629E-01	4.942E-06	2.651E-06	9.211E-06	
Line		1.402E+01	8.718E+00	2.256E+01	1.057E-05	6.570E-06	1.700E-05	
Strike Probability, 1/yr					1.551E-05	9.222E-06	2.621E-05	
1.0E-5 1/yr design speed					71.	39.	96.	
1.0E-6 1/yr design speed					154.	136.	171.	
1.0E-7 1/yr design speed					213.	199.	228.	
43	68	6.135E+03	0.4466	24	23	23		
Point		1.430E-01	6.147E-02	3.326E-01	1.042E-05	4.480E-06	2.424E-05	
Line		3.152E+00	1.720E+00	5.775E+00	8.702E-06	4.749E-06	1.594E-05	
Strike Probability, 1/yr					1.912E-05	9.229E-06	4.018E-05	
1.0E-5 1/yr design speed					79.	39.	109.	
1.0E-6 1/yr design speed					156.	133.	178.	
1.0E-7 1/yr design speed					214.	195.	233.	
43	70	1.270E+04	0.9244	72	67	67		
Point		9.533E-02	5.169E-02	1.758E-01	1.007E-05	5.460E-06	1.858E-05	
Line		1.614E+00	1.124E+00	2.318E+00	6.459E-06	4.497E-06	9.276E-06	
Strike Probability, 1/yr					1.653E-05	9.958E-06	2.785E-05	
1.0E-5 1/yr design speed					72.	39.	95.	
1.0E-6 1/yr design speed					151.	135.	167.	
1.0E-7 1/yr design speed					210.	196.	223.	
43	72	1.374E+04	1.0000	54	46	46		
Point		3.185E-01	1.242E-01	8.165E-01	2.333E-05	9.098E-06	5.981E-05	
Line		3.408E+00	2.005E+00	5.792E+00	9.455E-06	5.564E-06	1.607E-05	
Strike Probability, 1/yr					3.278E-05	1.466E-05	7.587E-05	
1.0E-5 1/yr design speed					99.	63.	128.	
1.0E-6 1/yr design speed					168.	145.	190.	
1.0E-7 1/yr design speed					223.	204.	242.	

43	74	1.272E+04	0.9256	37	33	33	
Point		4.611E-01	1.222E-01	1.740E+00	2.500E-05	6.625E-06	9.436E-05
Line		2.490E+00	1.395E+00	4.446E+00	5.114E-06	2.864E-06	9.130E-06
Strike	Probability, 1/yr				3.012E-05	9.489E-06	1.035E-04
1.0E-5	1/yr design speed				94.	39.	135.
1.0E-6	1/yr design speed				163.	131.	194.
1.0E-7	1/yr design speed				218.	192.	245.
43	76	2.248E+03	0.1637	22	19	19	
Point		6.696E-01	1.793E-01	2.501E+00	1.221E-04	3.268E-05	4.561E-04
Line		7.180E+00	3.663E+00	1.407E+01	4.959E-05	2.530E-05	9.720E-05
Strike	Probability, 1/yr				1.717E-04	5.798E-05	5.533E-04
1.0E-5	1/yr design speed				150.	118.	181.
1.0E-6	1/yr design speed				208.	182.	234.
1.0E-7	1/yr design speed				259.	236.	282.
43	78	1.212E+03	0.0882	5	4	4	
Point		2.861E-01	3.570E-02	2.294E+00	2.199E-05	2.743E-06	1.763E-04
Line		4.042E+00	1.348E+00	1.212E+01	1.177E-05	3.924E-06	3.529E-05
Strike	Probability, 1/yr				3.376E-05	6.668E-06	2.116E-04
1.0E-5	1/yr design speed				105.	39.	159.
1.0E-6	1/yr design speed				177.	134.	218.
1.0E-7	1/yr design speed				234.	200.	270.
43	82	7.056E+03	0.5137	141	127	127	
Point		8.968E-01	4.347E-01	1.850E+00	3.339E-04	1.618E-04	6.889E-04
Line		4.390E+00	3.120E+00	6.178E+00	6.191E-05	4.400E-05	8.713E-05
Strike	Probability, 1/yr				3.958E-04	2.058E-04	7.761E-04
1.0E-5	1/yr design speed				175.	158.	192.
1.0E-6	1/yr design speed				230.	215.	246.
1.0E-7	1/yr design speed				279.	265.	294.
43	84	1.340E+04	0.9752	208	185	185	
Point		6.797E-01	3.854E-01	1.199E+00	1.966E-04	1.115E-04	3.468E-04
Line		6.168E+00	4.446E+00	8.557E+00	6.759E-05	4.872E-05	9.376E-05
Strike	Probability, 1/yr				2.642E-04	1.602E-04	4.405E-04
1.0E-5	1/yr design speed				167.	154.	181.
1.0E-6	1/yr design speed				225.	213.	237.
1.0E-7	1/yr design speed				275.	264.	287.
43	86	4.121E+03	0.3000	70	51	51	
Point		1.156E+00	3.802E-01	3.515E+00	3.658E-04	1.203E-04	1.112E-03
Line		5.385E+00	2.986E+00	9.711E+00	6.455E-05	3.579E-05	1.164E-04
Strike	Probability, 1/yr				4.304E-04	1.561E-04	1.229E-03
1.0E-5	1/yr design speed				177.	151.	202.
1.0E-6	1/yr design speed				232.	210.	255.
1.0E-7	1/yr design speed				280.	260.	303.

43	88	1.374E+04	1.0000	385	350	350		
Point		8.589E-01	5.701E-01	1.294E+00	4.485E-04	2.977E-04	6.757E-04	
Line		6.689E+00	5.260E+00	8.506E+00	1.323E-04	1.040E-04	1.682E-04	
Strike Probability, 1/yr					5.808E-04	4.018E-04	8.439E-04	
1.0E-5 1/yr design speed					187.	177.	197.	
1.0E-6 1/yr design speed					242.	232.	251.	
1.0E-7 1/yr design speed					290.	281.	300.	
43	90	1.374E+04	1.0000	254	229	229		
Point		1.402E+00	8.674E-01	2.265E+00	4.829E-04	2.988E-04	7.803E-04	
Line		8.534E+00	6.535E+00	1.114E+01	1.114E-04	8.528E-05	1.454E-04	
Strike Probability, 1/yr					5.943E-04	3.841E-04	9.258E-04	
1.0E-5 1/yr design speed					186.	175.	198.	
1.0E-6 1/yr design speed					240.	230.	252.	
1.0E-7 1/yr design speed					289.	278.	300.	
43	92	1.374E+04	1.0000	455	416	416		
Point		1.058E+00	6.875E-01	1.627E+00	6.526E-04	4.243E-04	1.004E-03	
Line		5.281E+00	4.217E+00	6.613E+00	1.234E-04	9.857E-05	1.546E-04	
Strike Probability, 1/yr					7.761E-04	5.229E-04	1.158E-03	
1.0E-5 1/yr design speed					192.	182.	203.	
1.0E-6 1/yr design speed					245.	235.	256.	
1.0E-7 1/yr design speed					293.	283.	303.	
43	94	1.374E+04	1.0000	393	351	351		
Point		9.954E-01	6.246E-01	1.586E+00	5.306E-04	3.329E-04	8.455E-04	
Line		5.619E+00	4.373E+00	7.220E+00	1.135E-04	8.829E-05	1.458E-04	
Strike Probability, 1/yr					6.440E-04	4.212E-04	9.913E-04	
1.0E-5 1/yr design speed					188.	177.	199.	
1.0E-6 1/yr design speed					242.	231.	253.	
1.0E-7 1/yr design speed					290.	280.	301.	
43	96	1.374E+04	1.0000	473	346	346		
Point		4.351E-01	2.844E-01	6.657E-01	2.792E-04	1.825E-04	4.271E-04	
Line		3.693E+00	2.904E+00	4.696E+00	8.974E-05	7.058E-05	1.141E-04	
Strike Probability, 1/yr					3.689E-04	2.531E-04	5.412E-04	
1.0E-5 1/yr design speed					176.	166.	186.	
1.0E-6 1/yr design speed					232.	223.	242.	
1.0E-7 1/yr design speed					281.	272.	291.	
43	98	1.374E+04	1.0000	272	176	176		
Point		7.101E-01	3.363E-01	1.499E+00	2.620E-04	1.241E-04	5.532E-04	
Line		3.236E+00	2.281E+00	4.590E+00	4.522E-05	3.187E-05	6.415E-05	
Strike Probability, 1/yr					3.072E-04	1.559E-04	6.173E-04	
1.0E-5 1/yr design speed					168.	150.	186.	
1.0E-6 1/yr design speed					224.	209.	240.	
1.0E-7 1/yr design speed					274.	259.	289.	

43	100	1.374E+04	1.0000	162	100	101		
Point	3.895E-01	1.325E-01	1.145E+00	8.558E-05	2.912E-05	2.515E-04		
Line	2.279E+00	1.472E+00	3.530E+00	1.897E-05	1.225E-05	2.938E-05		
Strike Probability, 1/yr				1.046E-04	4.137E-05	2.809E-04		
1.0E-5 1/yr design speed				138.	111.	165.		
1.0E-6 1/yr design speed				200.	179.	222.		
1.0E-7 1/yr design speed				253.	234.	273.		
43	102	1.374E+04	1.0000	140	87	89		
Point	5.446E-01	1.895E-01	1.565E+00	1.034E-04	3.598E-05	2.972E-04		
Line	2.730E+00	1.735E+00	4.296E+00	1.964E-05	1.248E-05	3.090E-05		
Strike Probability, 1/yr				1.230E-04	4.846E-05	3.281E-04		
1.0E-5 1/yr design speed				135.	99.	174.		
1.0E-6 1/yr design speed				202.	166.	239.		
1.0E-7 1/yr design speed				263.	228.	298.		
43	104	1.374E+04	1.0000	149	119	120		
Point	3.179E-01	1.566E-01	6.454E-01	6.424E-05	3.164E-05	1.304E-04		
Line	3.182E+00	2.251E+00	4.499E+00	2.436E-05	1.723E-05	3.444E-05		
Strike Probability, 1/yr				8.860E-05	4.887E-05	1.649E-04		
1.0E-5 1/yr design speed				125.	100.	153.		
1.0E-6 1/yr design speed				194.	168.	221.		
1.0E-7 1/yr design speed				257.	230.	284.		
43	106	1.374E+04	1.0000	50	34	34		
Point	1.157E-01	4.039E-02	3.317E-01	7.849E-06	2.739E-06	2.249E-05		
Line	1.727E+00	9.477E-01	3.148E+00	4.437E-06	2.434E-06	8.086E-06		
Strike Probability, 1/yr				1.229E-05	5.173E-06	3.058E-05		
1.0E-5 1/yr design speed				50.	39.	95.		
1.0E-6 1/yr design speed				136.	102.	173.		
1.0E-7 1/yr design speed				204.	171.	239.		
43	108	1.374E+04	1.0000	35	28	28		
Point	1.485E-01	4.535E-02	4.860E-01	7.047E-06	2.153E-06	2.307E-05		
Line	1.511E+00	9.002E-01	2.535E+00	2.717E-06	1.619E-06	4.559E-06		
Strike Probability, 1/yr				9.764E-06	3.771E-06	2.763E-05		
1.0E-5 1/yr design speed				39.	39.	91.		
1.0E-6 1/yr design speed				128.	92.	169.		
1.0E-7 1/yr design speed				197.	161.	235.		
43	110	1.374E+04	1.0000	20	17	17		
Point	2.151E-01	2.279E-02	2.031E+00	5.835E-06	6.181E-07	5.508E-05		
Line	1.966E+00	7.935E-01	4.873E+00	2.021E-06	8.154E-07	5.008E-06		
Strike Probability, 1/yr				7.856E-06	1.433E-06	6.009E-05		
1.0E-5 1/yr design speed				39.	39.	119.		
1.0E-6 1/yr design speed				121.	55.	191.		
1.0E-7 1/yr design speed				191.	135.	255.		

43	112	1.374E+04	1.0000	31	26	27	
Point		3.307E-01	7.420E-02	1.474E+00	1.391E-05	3.120E-06	6.197E-05
Line		2.646E+00	1.313E+00	5.331E+00	4.214E-06	2.092E-06	8.491E-06
Strike	Probability, 1/yr				1.812E-05	5.212E-06	7.046E-05
1.0E-5	1/yr design speed				68.	39.	125.
1.0E-6	1/yr design speed				147.	102.	196.
1.0E-7	1/yr design speed				214.	170.	259.

43	114	1.374E+04	1.0000	9	8	8	
Point		1.364E-02	3.572E-03	5.209E-02	1.665E-07	4.360E-08	6.358E-07
Line		7.796E-01	3.169E-01	1.918E+00	3.605E-07	1.465E-07	8.869E-07
Strike	Probability, 1/yr				5.270E-07	1.901E-07	1.523E-06
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				39.	39.	63.
1.0E-7	1/yr design speed				110.	68.	152.

43	116	1.374E+04	1.0000	37	33	33	
Point		3.562E-02	1.425E-02	8.909E-02	1.788E-06	7.149E-07	4.471E-06
Line		1.372E+00	7.572E-01	2.486E+00	2.608E-06	1.439E-06	4.725E-06
Strike	Probability, 1/yr				4.396E-06	2.154E-06	9.196E-06
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				103.	73.	135.
1.0E-7	1/yr design speed				177.	148.	208.

43	118	1.374E+04	1.0000	4	4	4	
Point		1.262E-02	2.222E-03	7.170E-02	6.848E-08	1.206E-08	3.890E-07
Line		2.490E-01	1.482E-01	4.184E-01	5.118E-08	3.046E-08	8.599E-08
Strike	Probability, 1/yr				1.197E-07	4.251E-08	4.750E-07
1.0E-5	1/yr design speed				39.	38.	39.
1.0E-6	1/yr design speed				39.	38.	39.
1.0E-7	1/yr design speed				49.	38.	111.

43	120	1.374E+04	1.0000	6	6	6	
Point		4.622E-02	5.117E-03	4.174E-01	3.761E-07	4.164E-08	3.397E-06
Line		1.061E+00	3.566E-01	3.157E+00	3.270E-07	1.099E-07	9.730E-07
Strike	Probability, 1/yr				7.031E-07	1.516E-07	4.370E-06
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				39.	39.	108.
1.0E-7	1/yr design speed				119.	58.	183.

43	122	1.374E+04	1.0000	14	12	12	
Point		1.662E-02	7.137E-03	3.870E-02	3.156E-07	1.355E-07	7.348E-07
Line		8.373E-01	4.693E-01	1.494E+00	6.022E-07	3.376E-07	1.074E-06
Strike	Probability, 1/yr				9.178E-07	4.731E-07	1.809E-06
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				39.	39.	73.
1.0E-7	1/yr design speed				128.	101.	158.

43	124	1.033E+03	0.0752	2	2	2		
Point		1.440E-03	1.224E-04	1.694E-02	5.193E-08	4.415E-09	6.109E-07	
Line		1.000E-01	0.000E+00	0.000E+00	1.366E-07	0.000E+00	0.000E+00	
Strike Probability, 1/yr					1.886E-07	4.415E-09	6.109E-07	
1.0E-5 1/yr design speed					39.	38.	39.	
1.0E-6 1/yr design speed					39.	38.	39.	
1.0E-7 1/yr design speed					71.	38.	120.	
45	66	1.996E+03	0.1505	7	7	7		
Point		3.058E-01	3.219E-02	2.906E+00	1.998E-05	2.103E-06	1.899E-04	
Line		4.646E+00	1.107E+00	1.949E+01	1.150E-05	2.741E-06	4.824E-05	
Strike Probability, 1/yr					3.148E-05	4.844E-06	2.381E-04	
1.0E-5 1/yr design speed					98.	39.	160.	
1.0E-6 1/yr design speed					168.	114.	216.	
1.0E-7 1/yr design speed					224.	180.	266.	
45	68	1.327E+04	1.0000	22	19	19		
Point		2.299E-01	5.891E-02	8.972E-01	7.104E-06	1.820E-06	2.772E-05	
Line		5.077E+00	1.853E+00	1.391E+01	5.943E-06	2.169E-06	1.628E-05	
Strike Probability, 1/yr					1.305E-05	3.989E-06	4.401E-05	
1.0E-5 1/yr design speed					57.	39.	112.	
1.0E-6 1/yr design speed					145.	107.	179.	
1.0E-7 1/yr design speed					205.	175.	234.	
45	70	3.006E+03	0.2266	3	2	2		
Point		3.580E-03	3.386E-03	3.784E-03	6.657E-08	6.297E-08	7.036E-08	
Line		2.500E-01	1.966E-01	3.181E-01	1.761E-07	1.385E-07	2.240E-07	
Strike Probability, 1/yr					2.427E-07	2.014E-07	2.944E-07	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					39.	39.	39.	
1.0E-7 1/yr design speed					92.	82.	102.	
45	72	6.693E+03	0.5045	1	1	1		
Point		8.523E-01	0.000E+00	0.000E+00	2.373E-06	0.000E+00	0.000E+00	
Line		3.000E+00	0.000E+00	0.000E+00	3.164E-07	0.000E+00	0.000E+00	
Strike Probability, 1/yr					2.689E-06	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					39.	0.	0.	
1.0E-6 1/yr design speed					89.	0.	0.	
1.0E-7 1/yr design speed					159.	0.	0.	
45	82	8.336E+02	0.0628	13	10	10		
Point		7.608E-01	3.587E-02	1.614E+01	2.211E-04	1.042E-05	4.689E-03	
Line		4.342E+00	9.913E-01	1.902E+01	4.779E-05	1.091E-05	2.094E-04	
Strike Probability, 1/yr					2.689E-04	2.133E-05	4.899E-03	
1.0E-5 1/yr design speed					160.	83.	228.	
1.0E-6 1/yr design speed					216.	157.	275.	
1.0E-7 1/yr design speed					265.	215.	319.	

45	84	5.964E+03	0.4495	33	29	29		
Point		2.874E-01	8.724E-02	9.471E-01	2.964E-05	8.995E-06	9.765E-05	
Line		3.335E+00	1.764E+00	6.308E+00	1.303E-05	6.887E-06	2.464E-05	
Strike	Probability, 1/yr				4.266E-05	1.588E-05	1.223E-04	
1.0E-5	1/yr design speed				108.	68.	142.	
1.0E-6	1/yr design speed				175.	148.	201.	
1.0E-7	1/yr design speed				229.	207.	252.	
45	86	6.944E+03	0.5234	47	43	43		
Point		1.596E+00	4.412E-01	5.770E+00	2.012E-04	5.565E-05	7.277E-04	
Line		7.074E+00	3.690E+00	1.356E+01	3.379E-05	1.763E-05	6.477E-05	
Strike	Probability, 1/yr				2.350E-04	7.328E-05	7.925E-04	
1.0E-5	1/yr design speed				156.	122.	188.	
1.0E-6	1/yr design speed				212.	184.	239.	
1.0E-7	1/yr design speed				262.	237.	286.	
45	88	1.261E+04	0.9505	87	76	76		
Point		2.047E+00	7.561E-01	5.540E+00	2.631E-04	9.721E-05	7.122E-04	
Line		9.156E+00	5.374E+00	1.560E+01	4.459E-05	2.617E-05	7.598E-05	
Strike	Probability, 1/yr				3.077E-04	1.234E-04	7.882E-04	
1.0E-5	1/yr design speed				163.	137.	188.	
1.0E-6	1/yr design speed				218.	196.	240.	
1.0E-7	1/yr design speed				267.	248.	286.	
45	90	1.162E+04	0.8761	110	103	103		
Point		2.255E+00	1.029E+00	4.945E+00	3.977E-04	1.814E-04	8.720E-04	
Line		8.135E+00	5.457E+00	1.213E+01	5.434E-05	3.645E-05	8.101E-05	
Strike	Probability, 1/yr				4.521E-04	2.178E-04	9.530E-04	
1.0E-5	1/yr design speed				177.	158.	196.	
1.0E-6	1/yr design speed				231.	215.	249.	
1.0E-7	1/yr design speed				280.	264.	297.	
45	92	1.327E+04	1.0000	193	176	178		
Point		2.864E+00	1.302E+00	6.299E+00	7.763E-04	3.530E-04	1.707E-03	
Line		5.828E+00	4.191E+00	8.103E+00	5.984E-05	4.304E-05	8.320E-05	
Strike	Probability, 1/yr				8.361E-04	3.960E-04	1.791E-03	
1.0E-5	1/yr design speed				190.	172.	209.	
1.0E-6	1/yr design speed				242.	226.	261.	
1.0E-7	1/yr design speed				289.	273.	307.	
45	94	1.327E+04	1.0000	255	224	224		
Point		7.769E-01	4.278E-01	1.411E+00	2.783E-04	1.532E-04	5.053E-04	
Line		4.877E+00	3.565E+00	6.671E+00	6.616E-05	4.836E-05	9.050E-05	
Strike	Probability, 1/yr				3.444E-04	2.016E-04	5.958E-04	
1.0E-5	1/yr design speed				172.	158.	186.	
1.0E-6	1/yr design speed				228.	216.	242.	
1.0E-7	1/yr design speed				278.	266.	291.	

45	96	1.327E+04	1.0000	268	188	188		
Point		3.924E-01	2.123E-01	7.253E-01	1.477E-04	7.990E-05	2.730E-04	
Line		3.264E+00	2.448E+00	4.350E+00	4.653E-05	3.491E-05	6.202E-05	
Strike Probability, 1/yr					1.942E-04	1.148E-04	3.350E-04	
1.0E-5 1/yr design speed					158.	144.	173.	
1.0E-6 1/yr design speed					217.	205.	230.	
1.0E-7 1/yr design speed					268.	257.	280.	
45	98	1.327E+04	1.0000	282	171	171		
Point		3.727E-01	1.852E-01	7.502E-01	1.476E-04	7.334E-05	2.971E-04	
Line		3.060E+00	2.190E+00	4.277E+00	4.591E-05	3.285E-05	6.416E-05	
Strike Probability, 1/yr					1.935E-04	1.062E-04	3.613E-04	
1.0E-5 1/yr design speed					158.	142.	174.	
1.0E-6 1/yr design speed					217.	203.	231.	
1.0E-7 1/yr design speed					268.	255.	282.	
45	100	1.327E+04	1.0000	174	98	98		
Point		4.879E-01	1.906E-01	1.249E+00	1.192E-04	4.658E-05	3.053E-04	
Line		3.859E+00	2.498E+00	5.961E+00	3.572E-05	2.312E-05	5.519E-05	
Strike Probability, 1/yr					1.550E-04	6.970E-05	3.605E-04	
1.0E-5 1/yr design speed					152.	129.	174.	
1.0E-6 1/yr design speed					211.	194.	230.	
1.0E-7 1/yr design speed					263.	247.	280.	
45	102	1.327E+04	1.0000	105	60	60		
Point		4.057E-01	1.448E-01	1.136E+00	5.983E-05	2.136E-05	1.676E-04	
Line		4.769E+00	2.702E+00	8.415E+00	2.664E-05	1.510E-05	4.701E-05	
Strike Probability, 1/yr					8.647E-05	3.645E-05	2.146E-04	
1.0E-5 1/yr design speed					125.	90.	161.	
1.0E-6 1/yr design speed					194.	160.	229.	
1.0E-7 1/yr design speed					257.	223.	291.	
45	104	1.327E+04	1.0000	44	35	35		
Point		2.769E-01	5.620E-02	1.364E+00	1.711E-05	3.473E-06	8.428E-05	
Line		2.820E+00	1.295E+00	6.141E+00	6.602E-06	3.032E-06	1.438E-05	
Strike Probability, 1/yr					2.371E-05	6.505E-06	9.865E-05	
1.0E-5 1/yr design speed					80.	39.	136.	
1.0E-6 1/yr design speed					156.	109.	206.	
1.0E-7 1/yr design speed					222.	177.	269.	
45	106	1.327E+04	1.0000	24	20	20		
Point		3.135E-02	6.464E-03	1.521E-01	1.057E-06	2.179E-07	5.126E-06	
Line		1.064E+00	4.598E-01	2.462E+00	1.358E-06	5.870E-07	3.144E-06	
Strike Probability, 1/yr					2.415E-06	8.049E-07	8.270E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					81.	39.	131.	
1.0E-7 1/yr design speed					159.	118.	203.	

45	108	1.327E+04	1.0000	35	28	28	
Point		3.278E-02	1.184E-02	9.075E-02	1.611E-06	5.820E-07	4.461E-06
Line		1.512E+00	7.882E-01	2.902E+00	2.816E-06	1.468E-06	5.404E-06
Strike Probability, 1/yr					4.428E-06	2.050E-06	9.865E-06
1.0E-5 1/yr design speed					39.	39.	39.
1.0E-6 1/yr design speed					104.	71.	137.
1.0E-7 1/yr design speed					178.	147.	210.
45	110	1.327E+04	1.0000	13	10	10	
Point		8.245E-03	2.498E-03	2.721E-02	1.505E-07	4.562E-08	4.968E-07
Line		8.149E-01	3.032E-01	2.190E+00	5.636E-07	2.097E-07	1.515E-06
Strike Probability, 1/yr					7.142E-07	2.553E-07	2.012E-06
1.0E-5 1/yr design speed					39.	39.	39.
1.0E-6 1/yr design speed					39.	39.	78.
1.0E-7 1/yr design speed					121.	80.	162.
45	112	1.327E+04	1.0000	19	14	14	
Point		1.574E-02	5.603E-03	4.420E-02	4.200E-07	1.495E-07	1.180E-06
Line		7.511E-01	3.675E-01	1.535E+00	7.593E-07	3.714E-07	1.552E-06
Strike Probability, 1/yr					1.179E-06	5.210E-07	2.732E-06
1.0E-5 1/yr design speed					39.	39.	39.
1.0E-6 1/yr design speed					48.	39.	90.
1.0E-7 1/yr design speed					136.	104.	171.
45	114	1.327E+04	1.0000	4	3	3	
Point		4.411E-03	7.176E-04	2.712E-02	2.478E-08	4.032E-09	1.523E-07
Line		7.764E-01	1.263E-01	4.772E+00	1.652E-07	2.688E-08	1.016E-06
Strike Probability, 1/yr					1.900E-07	3.091E-08	1.168E-06
1.0E-5 1/yr design speed					39.	38.	39.
1.0E-6 1/yr design speed					39.	38.	49.
1.0E-7 1/yr design speed					72.	38.	144.
45	116	1.327E+04	1.0000	14	12	12	
Point		2.270E-01	3.181E-02	1.620E+00	4.464E-06	6.255E-07	3.186E-05
Line		2.233E+00	8.905E-01	5.600E+00	1.663E-06	6.633E-07	4.171E-06
Strike Probability, 1/yr					6.127E-06	1.289E-06	3.603E-05
1.0E-5 1/yr design speed					39.	39.	101.
1.0E-6 1/yr design speed					113.	51.	177.
1.0E-7 1/yr design speed					184.	131.	241.
45	118	1.327E+04	1.0000	16	15	15	
Point		4.014E-01	4.083E-02	3.945E+00	9.020E-06	9.177E-07	8.866E-05
Line		7.008E+00	1.670E+00	2.940E+01	5.965E-06	1.422E-06	2.503E-05
Strike Probability, 1/yr					1.498E-05	2.339E-06	1.137E-04
1.0E-5 1/yr design speed					59.	39.	141.
1.0E-6 1/yr design speed					143.	76.	211.
1.0E-7 1/yr design speed					210.	150.	274.

45	120	1.327E+04	1.0000	5	4	4		
Point		1.099E-01	1.031E-02	1.171E+00	7.715E-07	7.241E-08	8.221E-06	
Line		1.672E+00	5.240E-01	5.338E+00	4.449E-07	1.394E-07	1.420E-06	
Strike	Probability, 1/yr				1.216E-06	2.118E-07	9.641E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				49.	39.	135.	
1.0E-7	1/yr design speed				136.	73.	205.	
45	122	1.327E+04	1.0000	41	38	38		
Point		1.981E-02	9.698E-03	4.046E-02	1.141E-06	5.584E-07	2.330E-06	
Line		6.672E-01	4.532E-01	9.823E-01	1.455E-06	9.886E-07	2.143E-06	
Strike	Probability, 1/yr				2.596E-06	1.547E-06	4.473E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				84.	59.	109.	
1.0E-7	1/yr design speed				161.	138.	186.	
45	124	3.316E+02	0.0250	1	1	1		
Point		2.557E-03	0.000E+00	0.000E+00	1.436E-07	0.000E+00	0.000E+00	
Line		3.000E-01	0.000E+00	0.000E+00	6.384E-07	0.000E+00	0.000E+00	
Strike	Probability, 1/yr				7.821E-07	0.000E+00	0.000E+00	
1.0E-5	1/yr design speed				39.	0.	0.	
1.0E-6	1/yr design speed				39.	0.	0.	
1.0E-7	1/yr design speed				124.	0.	0.	
47	68	1.290E+03	0.1010	6	6	6		
Point		6.121E-01	5.068E-03	7.392E+01	5.303E-05	4.391E-07	6.405E-03	
Line		6.740E+00	5.873E-01	7.735E+01	2.212E-05	1.928E-06	2.539E-04	
Strike	Probability, 1/yr				7.516E-05	2.367E-06	6.659E-03	
1.0E-5	1/yr design speed				126.	39.	234.	
1.0E-6	1/yr design speed				189.	90.	281.	
1.0E-7	1/yr design speed				242.	165.	324.	
47	88	6.420E+02	0.0502	3	3	3		
Point		5.473E-02	1.352E-03	2.215E+00	4.765E-06	1.177E-07	1.929E-04	
Line		2.880E+00	2.115E-01	3.921E+01	9.496E-06	6.974E-07	1.293E-04	
Strike	Probability, 1/yr				1.426E-05	8.152E-07	3.222E-04	
1.0E-5	1/yr design speed				65.	39.	172.	
1.0E-6	1/yr design speed				151.	39.	228.	
1.0E-7	1/yr design speed				211.	135.	277.	
47	90	4.820E+03	0.3772	16	14	14		
Point		1.348E+00	1.379E-01	1.318E+01	8.339E-05	8.527E-06	8.154E-04	
Line		6.732E+00	2.363E+00	1.918E+01	1.577E-05	5.535E-06	4.494E-05	
Strike	Probability, 1/yr				9.916E-05	1.406E-05	8.604E-04	
1.0E-5	1/yr design speed				136.	65.	192.	
1.0E-6	1/yr design speed				198.	153.	245.	
1.0E-7	1/yr design speed				250.	213.	293.	

47	92	9.615E+03	0.7524	36	31	31	
Point		5.622E+00	6.379E-01	4.955E+01	3.922E-04	4.451E-05	3.457E-03
Line		6.609E+00	2.818E+00	1.550E+01	1.747E-05	7.446E-06	4.097E-05
Strike	Probability, 1/yr				4.097E-04	5.195E-05	3.498E-03
1.0E-5	1/yr design speed				171.	115.	223.
1.0E-6	1/yr design speed				225.	180.	273.
1.0E-7	1/yr design speed				274.	233.	318.
47	94	1.215E+04	0.9505	92	85	85	
Point		1.892E-01	8.429E-02	4.248E-01	2.671E-05	1.190E-05	5.996E-05
Line		1.747E+00	1.216E+00	2.509E+00	9.338E-06	6.499E-06	1.341E-05
Strike	Probability, 1/yr				3.605E-05	1.840E-05	7.337E-05
1.0E-5	1/yr design speed				105.	80.	128.
1.0E-6	1/yr design speed				176.	159.	193.
1.0E-7	1/yr design speed				232.	218.	248.
47	96	1.278E+04	1.0000	210	169	169	
Point		7.379E-02	4.688E-02	1.161E-01	2.259E-05	1.435E-05	3.556E-05
Line		1.339E+00	1.054E+00	1.703E+00	1.553E-05	1.222E-05	1.975E-05
Strike	Probability, 1/yr				3.813E-05	2.657E-05	5.531E-05
1.0E-5	1/yr design speed				110.	98.	123.
1.0E-6	1/yr design speed				182.	172.	191.
1.0E-7	1/yr design speed				238.	230.	247.
47	98	1.278E+04	1.0000	228	162	162	
Point		6.565E-02	4.069E-02	1.059E-01	2.183E-05	1.353E-05	3.522E-05
Line		1.227E+00	9.678E-01	1.557E+00	1.546E-05	1.219E-05	1.960E-05
Strike	Probability, 1/yr				3.728E-05	2.571E-05	5.482E-05
1.0E-5	1/yr design speed				110.	96.	123.
1.0E-6	1/yr design speed				181.	172.	191.
1.0E-7	1/yr design speed				238.	229.	247.
47	100	1.278E+04	1.0000	207	152	152	
Point		1.723E-01	9.276E-02	3.200E-01	5.200E-05	2.800E-05	9.659E-05
Line		3.201E+00	2.255E+00	4.544E+00	3.659E-05	2.578E-05	5.195E-05
Strike	Probability, 1/yr				8.859E-05	5.377E-05	1.485E-04
1.0E-5	1/yr design speed				139.	124.	154.
1.0E-6	1/yr design speed				204.	192.	216.
1.0E-7	1/yr design speed				257.	246.	269.
47	102	1.278E+04	1.0000	99	57	57	
Point		1.304E-01	4.736E-02	3.590E-01	1.882E-05	6.837E-06	5.182E-05
Line		2.539E+00	1.430E+00	4.507E+00	1.388E-05	7.820E-06	2.464E-05
Strike	Probability, 1/yr				3.271E-05	1.466E-05	7.646E-05
1.0E-5	1/yr design speed				92.	56.	128.
1.0E-6	1/yr design speed				167.	135.	201.
1.0E-7	1/yr design speed				232.	200.	265.

47	104	1.278E+04	1.0000	60	45	45		
Point	1.163E+00	1.910E-01	7.083E+00	1.018E-04	1.671E-05	6.196E-04		
Line	3.214E+00	1.573E+00	6.567E+00	1.065E-05	5.212E-06	2.176E-05		
Strike Probability, 1/yr				1.124E-04	2.192E-05	6.414E-04		
1.0E-5 1/yr design speed				132.	72.	193.		
1.0E-6 1/yr design speed				199.	144.	255.		
1.0E-7 1/yr design speed				260.	207.	313.		
47	106	1.278E+04	1.0000	46	37	37		
Point	1.129E-01	3.604E-02	3.536E-01	7.572E-06	2.417E-06	2.372E-05		
Line	1.962E+00	1.005E+00	3.832E+00	4.985E-06	2.553E-06	9.736E-06		
Strike Probability, 1/yr				1.256E-05	4.971E-06	3.345E-05		
1.0E-5 1/yr design speed				51.	39.	98.		
1.0E-6 1/yr design speed				137.	101.	176.		
1.0E-7 1/yr design speed				205.	170.	242.		
47	108	1.278E+04	1.0000	33	31	31		
Point	2.142E-01	5.298E-02	8.658E-01	1.031E-05	2.549E-06	4.166E-05		
Line	2.868E+00	1.403E+00	5.864E+00	5.228E-06	2.557E-06	1.069E-05		
Strike Probability, 1/yr				1.553E-05	5.107E-06	5.235E-05		
1.0E-5 1/yr design speed				61.	39.	114.		
1.0E-6 1/yr design speed				143.	102.	188.		
1.0E-7 1/yr design speed				211.	171.	253.		
47	110	1.278E+04	1.0000	42	26	26		
Point	1.000E-01	2.720E-02	3.679E-01	6.127E-06	1.666E-06	2.253E-05		
Line	1.362E+00	7.406E-01	2.506E+00	3.160E-06	1.718E-06	5.814E-06		
Strike Probability, 1/yr				9.287E-06	3.384E-06	2.835E-05		
1.0E-5 1/yr design speed				39.	39.	92.		
1.0E-6 1/yr design speed				127.	88.	170.		
1.0E-7 1/yr design speed				196.	159.	236.		
47	112	1.278E+04	1.0000	6	4	4		
Point	2.060E-02	1.700E-03	2.496E-01	1.802E-07	1.488E-08	2.184E-06		
Line	7.020E-01	2.162E-01	2.279E+00	2.326E-07	7.165E-08	7.553E-07		
Strike Probability, 1/yr				4.129E-07	8.653E-08	2.939E-06		
1.0E-5 1/yr design speed				39.	38.	39.		
1.0E-6 1/yr design speed				39.	38.	93.		
1.0E-7 1/yr design speed				101.	38.	171.		
47	114	1.278E+04	1.0000	3	1	2		
Point	3.977E-04	0.000E+00	0.000E+00	1.740E-09	0.000E+00	0.000E+00		
Line	1.373E+00	5.956E-02	3.166E+01	2.275E-07	9.868E-09	5.245E-06		
Strike Probability, 1/yr				2.293E-07	9.868E-09	5.245E-06		
1.0E-5 1/yr design speed				39.	38.	39.		
1.0E-6 1/yr design speed				39.	38.	116.		
1.0E-7 1/yr design speed				80.	38.	195.		

47	116	1.278E+04	1.0000	18	13	14		
Point		7.923E-02	1.837E-02	3.417E-01	2.079E-06	4.822E-07	8.968E-06	
Line		1.407E+00	6.325E-01	3.130E+00	1.399E-06	6.288E-07	3.112E-06	
Strike Probability, 1/yr					3.478E-06	1.111E-06	1.208E-05	
1.0E-5 1/yr design speed					39.	39.	50.	
1.0E-6 1/yr design speed					94.	45.	143.	
1.0E-7 1/yr design speed					168.	127.	213.	
47	118	1.278E+04	1.0000	17	10	11		
Point		2.444E-01	3.395E-02	1.759E+00	6.058E-06	8.416E-07	4.361E-05	
Line		2.983E+00	9.012E-01	9.875E+00	2.801E-06	8.462E-07	9.272E-06	
Strike Probability, 1/yr					8.859E-06	1.688E-06	5.288E-05	
1.0E-5 1/yr design speed					39.	39.	115.	
1.0E-6 1/yr design speed					126.	62.	188.	
1.0E-7 1/yr design speed					195.	139.	253.	
47	120	1.278E+04	1.0000	2	2	2		
Point		5.743E-01	2.542E-05	1.297E+04	1.675E-06	7.414E-11	3.784E-02	
Line		2.326E+00	4.696E-02	1.152E+02	2.569E-07	5.187E-09	1.272E-05	
Strike Probability, 1/yr					1.932E-06	5.262E-09	3.785E-02	
1.0E-5 1/yr design speed					39.	38.	299.	
1.0E-6 1/yr design speed					71.	38.	354.	
1.0E-7 1/yr design speed					149.	38.	406.	
47	122	8.659E+03	0.6777	15	11	12		
Point		7.000E-02	2.103E-02	2.330E-01	2.259E-06	6.787E-07	7.520E-06	
Line		1.311E+00	7.591E-01	2.266E+00	1.603E-06	9.280E-07	2.770E-06	
Strike Probability, 1/yr					3.862E-06	1.607E-06	1.029E-05	
1.0E-5 1/yr design speed					39.	39.	42.	
1.0E-6 1/yr design speed					98.	60.	138.	
1.0E-7 1/yr design speed					172.	138.	209.	
47	124	1.284E+03	0.1005	0	0	0		

Appendix B

Design Information by 4° Boxes

This appendix contains the detailed results of the analysis for the 4° boxes. The output for each box consists seven lines. However, if there were no tornado events in the box or the information for the tornado events was insufficient to perform an analysis, there is only one line of output. The first line of output starts with the latitude and longitude of the southeast corner of the box. The next two entries in the line are the land area for the box assumed in the analysis and the fraction of the total box area assumed to be covered by land. The last three items in the first line are the number of total events observed and the number of events included in the calculation of expected values of area and length for events. For some boxes, this is the only line. Care should be taken when using strike probability and wind speed data from this appendix to ensure that the number of tornado events is sufficient to give reasonable results. As a minimum, there should be 10 events, and 20 or more events are desirable.

The second through seventh lines include the results of the calculations. Lines two and three contain the results of the strike probability calculations for the point-structure and life-line terms, respectively. In line two, the first number is the expected area, in square miles, for tornado events for the box; the second and third numbers are the lower and upper limits of the 90 percent confidence interval for the expected area. The last three numbers are the expected strike probability for a point structure and the lower and upper limits for the strike probability confidence interval. The format for the information in the third line is similar to that for the second line. The first three numbers are the expected length, in miles, for the life-line term and the lower and upper limits on the expected length. The last three numbers are the additional strike probability for finite structures, assuming a characteristic dimension of 200 ft for the structure.

The fourth line gives the expected total strike probability for the box and the lower and upper bounds of 90 percent confidence interval. These values are the sums of the values directly above in lines two and three. Lines five through seven give the maximum wind speeds, in miles per hour, for 10^{-5} yr^{-1}, 10^{-6} yr^{-1}, and 10^{-7} yr^{-1} design criteria. As before, the first number is the expected value, and the second and third numbers are the lower and upper limits of the 90 percent confidence interval.

The lower limit for the maximum wind speed in a tornado is 40 mph. Two wind speeds less than 40 mph are used to provide information when the design wind speed would be less than 40 mph. A design wind speed of 38 mph indicates that the tornado strike probability for the box is less than 10^{-7} yr^{-1}. A design wind speed of 39 mph indicates that the design wind speed for the design probability specified at the beginning of the line is less than 40 mph, but that the design wind speed at the 10^{-7} yr^{-1} probability level exceeds 40 mph.

25	78	2.507E+04	0.3685	1039	874	874	
Point		6.546E-02	5.281E-02	8.113E-02	5.054E-05	4.078E-05	6.264E-05
Line		1.494E+00	1.326E+00	1.682E+00	4.368E-05	3.879E-05	4.918E-05
Strike	Probability, 1/yr				9.422E-05	7.957E-05	1.118E-04
1.0E-5	1/yr design speed				136.	129.	143.
1.0E-6	1/yr design speed				198.	191.	204.
1.0E-7	1/yr design speed				250.	244.	256.
25	82	5.692E+03	0.0836	584	527	527	
Point		6.196E-02	4.658E-02	8.241E-02	1.185E-04	8.905E-05	1.576E-04
Line		1.518E+00	1.299E+00	1.773E+00	1.099E-04	9.410E-05	1.284E-04
Strike	Probability, 1/yr				2.284E-04	1.832E-04	2.859E-04
1.0E-5	1/yr design speed				170.	163.	176.
1.0E-6	1/yr design speed				229.	223.	235.
1.0E-7	1/yr design speed				279.	273.	286.
25	94	1.330E+04	0.1954	418	318	322	
Point		5.743E-02	4.165E-02	7.919E-02	3.363E-05	2.439E-05	4.637E-05
Line		1.217E+00	1.021E+00	1.451E+00	2.699E-05	2.264E-05	3.219E-05
Strike	Probability, 1/yr				6.062E-05	4.703E-05	7.856E-05
1.0E-5	1/yr design speed				128.	120.	136.
1.0E-6	1/yr design speed				195.	188.	202.
1.0E-7	1/yr design speed				250.	243.	257.
25	98	2.239E+04	0.3290	160	138	138	
Point		2.401E-01	1.340E-01	4.303E-01	3.197E-05	1.784E-05	5.730E-05
Line		2.143E+00	1.595E+00	2.880E+00	1.081E-05	8.043E-06	1.452E-05
Strike	Probability, 1/yr				4.278E-05	2.588E-05	7.183E-05
1.0E-5	1/yr design speed				111.	94.	128.
1.0E-6	1/yr design speed				180.	167.	193.
1.0E-7	1/yr design speed				236.	225.	248.
29	78	2.093E+04	0.3198	411	369	370	
Point		1.650E-01	1.164E-01	2.338E-01	6.035E-05	4.259E-05	8.553E-05
Line		2.318E+00	1.920E+00	2.798E+00	3.211E-05	2.660E-05	3.877E-05
Strike	Probability, 1/yr				9.247E-05	6.919E-05	1.243E-04
1.0E-5	1/yr design speed				133.	123.	144.
1.0E-6	1/yr design speed				195.	186.	204.
1.0E-7	1/yr design speed				247.	239.	255.
29	82	5.508E+04	0.8414	1262	1144	1154	
Point		4.771E-01	3.869E-01	5.883E-01	2.037E-04	1.652E-04	2.511E-04
Line		4.058E+00	3.616E+00	4.555E+00	6.562E-05	5.847E-05	7.365E-05
Strike	Probability, 1/yr				2.693E-04	2.237E-04	3.248E-04
1.0E-5	1/yr design speed				167.	162.	173.
1.0E-6	1/yr design speed				225.	219.	231.
1.0E-7	1/yr design speed				275.	269.	281.

29	86	4.557E+04	0.6961	1431	1250	1252	
Point		1.008E+00	7.932E-01	1.282E+00	5.900E-04	4.641E-04	7.501E-04
Line		5.708E+00	5.021E+00	6.490E+00	1.265E-04	1.113E-04	1.438E-04
Strike Probability, 1/yr					7.165E-04	5.754E-04	8.940E-04
1.0E-5 1/yr design speed					190.	184.	197.
1.0E-6 1/yr design speed					244.	238.	251.
1.0E-7 1/yr design speed					292.	285.	299.
29	90	5.716E+04	0.8731	1910	1786	1786	
Point		5.584E-01	4.749E-01	6.566E-01	3.477E-04	2.957E-04	4.089E-04
Line		4.934E+00	4.516E+00	5.390E+00	1.164E-04	1.065E-04	1.271E-04
Strike Probability, 1/yr					4.640E-04	4.022E-04	5.360E-04
1.0E-5 1/yr design speed					182.	178.	187.
1.0E-6 1/yr design speed					237.	233.	243.
1.0E-7 1/yr design speed					286.	281.	292.
29	94	6.297E+04	0.9619	2357	2047	2057	
Point		4.302E-01	3.589E-01	5.157E-01	3.000E-04	2.503E-04	3.596E-04
Line		2.907E+00	2.664E+00	3.173E+00	7.680E-05	7.037E-05	8.381E-05
Strike Probability, 1/yr					3.768E-04	3.207E-04	4.435E-04
1.0E-5 1/yr design speed					175.	170.	180.
1.0E-6 1/yr design speed					231.	226.	236.
1.0E-7 1/yr design speed					280.	275.	286.
29	98	6.256E+04	0.9556	1181	1063	1066	
Point		2.435E-01	1.923E-01	3.084E-01	8.565E-05	6.764E-05	1.085E-04
Line		2.030E+00	1.812E+00	2.273E+00	2.704E-05	2.415E-05	3.029E-05
Strike Probability, 1/yr					1.127E-04	9.179E-05	1.388E-04
1.0E-5 1/yr design speed					142.	136.	149.
1.0E-6 1/yr design speed					204.	198.	210.
1.0E-7 1/yr design speed					256.	251.	263.
29	102	5.139E+04	0.7850	435	364	364	
Point		1.836E-01	1.265E-01	2.666E-01	2.896E-05	1.995E-05	4.204E-05
Line		1.806E+00	1.503E+00	2.170E+00	1.079E-05	8.981E-06	1.296E-05
Strike Probability, 1/yr					3.975E-05	2.893E-05	5.501E-05
1.0E-5 1/yr design speed					99.	82.	116.
1.0E-6 1/yr design speed					171.	152.	190.
1.0E-7 1/yr design speed					236.	215.	255.
29	106	2.303E+04	0.3517	38	24	24	
Point		9.348E-02	2.995E-02	2.917E-01	2.874E-06	9.209E-07	8.970E-06
Line		1.450E+00	7.846E-01	2.680E+00	1.689E-06	9.138E-07	3.121E-06
Strike Probability, 1/yr					4.563E-06	1.835E-06	1.209E-05
1.0E-5 1/yr design speed					39.	39.	51.
1.0E-6 1/yr design speed					104.	66.	143.
1.0E-7 1/yr design speed					176.	141.	213.

29	110	2.201E+04	0.3363	41	30	30		
Point		4.373E-02	1.861E-02	1.028E-01	1.518E-06	6.457E-07	3.567E-06	
Line		1.648E+00	9.210E-01	2.948E+00	2.166E-06	1.211E-06	3.875E-06	
Strike Probability, 1/yr					3.684E-06	1.856E-06	7.442E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					97.	67.	128.	
1.0E-7 1/yr design speed					172.	143.	202.	
29	114	5.637E+03	0.0861	19	12	12		
Point		1.830E-02	4.857E-03	6.898E-02	1.149E-06	3.050E-07	4.332E-06	
Line		5.531E-01	2.829E-01	1.081E+00	1.316E-06	6.730E-07	2.573E-06	
Strike Probability, 1/yr					2.465E-06	9.780E-07	6.904E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					82.	39.	125.	
1.0E-7 1/yr design speed					159.	124.	198.	
33	74	1.841E+04	0.2942	455	411	411		
Point		3.633E-01	2.558E-01	5.159E-01	1.673E-04	1.178E-04	2.376E-04	
Line		3.293E+00	2.725E+00	3.980E+00	5.745E-05	4.753E-05	6.943E-05	
Strike Probability, 1/yr					2.247E-04	1.653E-04	3.070E-04	
1.0E-5 1/yr design speed					157.	146.	167.	
1.0E-6 1/yr design speed					214.	205.	223.	
1.0E-7 1/yr design speed					264.	256.	272.	
33	78	5.898E+04	0.9427	969	880	885		
Point		8.021E-01	6.098E-01	1.055E+00	2.455E-04	1.867E-04	3.229E-04	
Line		4.522E+00	3.936E+00	5.195E+00	5.243E-05	4.563E-05	6.024E-05	
Strike Probability, 1/yr					2.980E-04	2.323E-04	3.832E-04	
1.0E-5 1/yr design speed					163.	154.	172.	
1.0E-6 1/yr design speed					218.	210.	226.	
1.0E-7 1/yr design speed					267.	260.	274.	
33	82	6.256E+04	1.0000	972	939	940		
Point		1.090E+00	8.763E-01	1.355E+00	3.155E-04	2.537E-04	3.923E-04	
Line		5.909E+00	5.278E+00	6.615E+00	6.479E-05	5.787E-05	7.253E-05	
Strike Probability, 1/yr					3.803E-04	3.115E-04	4.649E-04	
1.0E-5 1/yr design speed					174.	168.	180.	
1.0E-6 1/yr design speed					230.	224.	236.	
1.0E-7 1/yr design speed					279.	273.	286.	
33	86	6.256E+04	1.0000	1714	1575	1575		
Point		2.433E+00	1.952E+00	3.032E+00	1.242E-03	9.966E-04	1.548E-03	
Line		7.737E+00	6.971E+00	8.586E+00	1.496E-04	1.348E-04	1.660E-04	
Strike Probability, 1/yr					1.392E-03	1.131E-03	1.714E-03	
1.0E-5 1/yr design speed					204.	198.	210.	
1.0E-6 1/yr design speed					255.	249.	262.	
1.0E-7 1/yr design speed					301.	294.	309.	

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   33   90    6.256E+04 1.0000   1733   1603   1603
Point  1.875E+00  1.557E+00  2.257E+00  9.675E-04  8.035E-04  1.165E-03
Line   7.579E+00  6.910E+00  8.313E+00  1.482E-04  1.351E-04  1.625E-04
Strike Probability, 1/yr                1.116E-03  9.386E-04  1.328E-03
1.0E-5 1/yr design speed                     200.       194.       205.
1.0E-6 1/yr design speed                     252.       246.       258.
1.0E-7 1/yr design speed                     298.       292.       305.

   33   94    6.256E+04 1.0000   2745   2274   2275
Point  1.584E+00  1.312E+00  1.912E+00  1.295E-03  1.073E-03  1.563E-03
Line   5.862E+00  5.349E+00  6.423E+00  1.815E-04  1.656E-04  1.989E-04
Strike Probability, 1/yr                1.476E-03  1.238E-03  1.762E-03
1.0E-5 1/yr design speed                     206.       201.       212.
1.0E-6 1/yr design speed                     257.       251.       264.
1.0E-7 1/yr design speed                     303.       297.       311.

   33   98    6.256E+04 1.0000   2545   2099   2099
Point  7.066E-01  5.844E-01  8.543E-01  5.355E-04  4.429E-04  6.475E-04
Line   3.620E+00  3.303E+00  3.968E+00  1.039E-04  9.483E-05  1.139E-04
Strike Probability, 1/yr                6.395E-04  5.378E-04  7.614E-04
1.0E-5 1/yr design speed                     187.       182.       193.
1.0E-6 1/yr design speed                     241.       235.       247.
1.0E-7 1/yr design speed                     289.       283.       296.

   33  102    6.256E+04 1.0000    824    662    662
Point  2.544E-01  1.903E-01  3.400E-01  6.243E-05  4.671E-05  8.342E-05
Line   2.919E+00  2.482E+00  3.432E+00  2.713E-05  2.308E-05  3.190E-05
Strike Probability, 1/yr                8.956E-05  6.979E-05  1.153E-04
1.0E-5 1/yr design speed                     126.       111.       142.
1.0E-6 1/yr design speed                     195.       177.       212.
1.0E-7 1/yr design speed                     258.       238.       276.

   33  106    6.256E+04 1.0000     53     31     31
Point  1.083E-01  3.227E-02  3.634E-01  1.709E-06  5.093E-07  5.737E-06
Line   1.358E+00  7.449E-01  2.478E+00  8.122E-07  4.453E-07  1.481E-06
Strike Probability, 1/yr                2.522E-06  9.547E-07  7.218E-06
1.0E-5 1/yr design speed                      39.        39.        39.
1.0E-6 1/yr design speed                      82.        39.       126.
1.0E-7 1/yr design speed                     158.       121.       198.

   33  110    6.256E+04 1.0000    117     81     81
Point  1.365E-01  6.252E-02  2.980E-01  4.756E-06  2.179E-06  1.038E-05
Line   2.127E+00  1.414E+00  3.199E+00  2.807E-06  1.866E-06  4.223E-06
Strike Probability, 1/yr                7.563E-06  4.045E-06  1.461E-05
1.0E-5 1/yr design speed                      39.        39.        61.
1.0E-6 1/yr design speed                     121.        94.       150.
1.0E-7 1/yr design speed                     191.       164.       219.
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   33  114    6.137E+04 0.9809     96     78     78
Point  4.307E-02  2.300E-02  8.065E-02  1.255E-06  6.704E-07  2.351E-06
Line   9.690E-01  6.970E-01  1.347E+00  1.070E-06  7.695E-07  1.487E-06
Strike Probability, 1/yr                2.325E-06  1.440E-06  3.838E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     79.        56.       104.
1.0E-7 1/yr design speed                    157.       134.       180.

   33  118    3.490E+04 0.5579     96     91     91
Point  3.620E-02  1.951E-02  6.716E-02  1.855E-06  1.000E-06  3.442E-06
Line   9.286E-01  6.765E-01  1.275E+00  1.803E-06  1.313E-06  2.474E-06
Strike Probability, 1/yr                3.658E-06  2.313E-06  5.916E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     96.        76.       119.
1.0E-7 1/yr design speed                    171.       149.       194.

   33  122    1.919E+02 0.0031      1      1      1
Point  5.682E-02  0.000E+00  0.000E+00  5.517E-06  0.000E+00  0.000E+00
Line   1.000E+00  0.000E+00  0.000E+00  3.678E-06  0.000E+00  0.000E+00
Strike Probability, 1/yr                9.195E-06  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     39.        38.        38.
1.0E-6 1/yr design speed                    127.        38.        38.
1.0E-7 1/yr design speed                    197.        38.        38.

   37   70    2.181E+03 0.0367     25     22     22
Point  4.298E-02  2.111E-02  8.751E-02  9.179E-06  4.508E-06  1.869E-05
Line   1.086E+00  6.158E-01  1.917E+00  8.789E-06  4.982E-06  1.551E-05
Strike Probability, 1/yr                1.797E-05  9.490E-06  3.420E-05
1.0E-5 1/yr design speed                     77.        39.       104.
1.0E-6 1/yr design speed                    155.       134.       175.
1.0E-7 1/yr design speed                    213.       196.       230.

   37   74    4.600E+04 0.7751    816    734    734
Point  3.016E-01  2.419E-01  3.761E-01  9.968E-05  7.994E-05  1.243E-04
Line   2.764E+00  2.465E+00  3.100E+00  3.460E-05  3.086E-05  3.880E-05
Strike Probability, 1/yr                1.343E-04  1.108E-04  1.631E-04
1.0E-5 1/yr design speed                    143.       135.       151.
1.0E-6 1/yr design speed                    202.       195.       209.
1.0E-7 1/yr design speed                    253.       247.       259.

   37   78    5.936E+04 1.0000    481    398    398
Point  4.118E-01  3.054E-01  5.554E-01  6.218E-05  4.611E-05  8.385E-05
Line   3.563E+00  3.036E+00  4.181E+00  2.038E-05  1.736E-05  2.391E-05
Strike Probability, 1/yr                8.256E-05  6.347E-05  1.078E-04
1.0E-5 1/yr design speed                    133.       125.       141.
1.0E-6 1/yr design speed                    197.       189.       204.
1.0E-7 1/yr design speed                    250.       243.       258.
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37	82	5.936E+04	1.0000	1243	1042	1043		
Point		1.179E+00	9.323E-01	1.492E+00	4.601E-04	3.638E-04	5.821E-04	
Line		6.230E+00	5.505E+00	7.050E+00	9.208E-05	8.137E-05	1.042E-04	
Strike Probability, 1/yr					5.522E-04	4.451E-04	6.863E-04	
1.0E-5 1/yr design speed					184.	177.	190.	
1.0E-6 1/yr design speed					238.	232.	245.	
1.0E-7 1/yr design speed					286.	279.	294.	
37	86	5.936E+04	1.0000	1829	1503	1504		
Point		1.286E+00	1.025E+00	1.615E+00	7.386E-04	5.884E-04	9.271E-04	
Line		6.349E+00	5.652E+00	7.131E+00	1.381E-04	1.229E-04	1.551E-04	
Strike Probability, 1/yr					8.766E-04	7.113E-04	1.082E-03	
1.0E-5 1/yr design speed					195.	189.	201.	
1.0E-6 1/yr design speed					248.	241.	254.	
1.0E-7 1/yr design speed					295.	288.	302.	
37	90	5.936E+04	1.0000	1398	1292	1292		
Point		1.051E+00	8.349E-01	1.323E+00	4.613E-04	3.664E-04	5.807E-04	
Line		5.824E+00	5.179E+00	6.549E+00	9.681E-05	8.609E-05	1.089E-04	
Strike Probability, 1/yr					5.581E-04	4.525E-04	6.896E-04	
1.0E-5 1/yr design speed					184.	178.	190.	
1.0E-6 1/yr design speed					238.	232.	245.	
1.0E-7 1/yr design speed					287.	280.	294.	
37	94	5.936E+04	1.0000	2233	1827	1831		
Point		1.722E+00	1.395E+00	2.125E+00	1.207E-03	9.778E-04	1.489E-03	
Line		7.256E+00	6.518E+00	8.077E+00	1.927E-04	1.731E-04	2.145E-04	
Strike Probability, 1/yr					1.399E-03	1.151E-03	1.704E-03	
1.0E-5 1/yr design speed					205.	200.	212.	
1.0E-6 1/yr design speed					257.	251.	263.	
1.0E-7 1/yr design speed					303.	296.	311.	
37	98	5.936E+04	1.0000	2047	1607	1607		
Point		6.808E-01	5.571E-01	8.319E-01	4.374E-04	3.580E-04	5.345E-04	
Line		5.082E+00	4.553E+00	5.673E+00	1.237E-04	1.108E-04	1.381E-04	
Strike Probability, 1/yr					5.612E-04	4.688E-04	6.726E-04	
1.0E-5 1/yr design speed					186.	181.	192.	
1.0E-6 1/yr design speed					240.	235.	247.	
1.0E-7 1/yr design speed					289.	283.	295.	
37	102	5.936E+04	1.0000	1399	1183	1183		
Point		5.575E-02	4.753E-02	6.538E-02	2.448E-05	2.087E-05	2.871E-05	
Line		1.009E+00	9.202E-01	1.106E+00	1.678E-05	1.531E-05	1.839E-05	
Strike Probability, 1/yr					4.126E-05	3.618E-05	4.710E-05	
1.0E-5 1/yr design speed					100.	90.	111.	
1.0E-6 1/yr design speed					173.	160.	187.	
1.0E-7 1/yr design speed					239.	223.	253.	

37	106	5.936E+04	1.0000	41	36	38		
Point		9.577E-02	3.522E-02	2.604E-01	1.233E-06	4.533E-07	3.351E-06	
Line		1.279E+00	7.658E-01	2.135E+00	6.233E-07	3.733E-07	1.041E-06	
Strike	Probability, 1/yr				1.856E-06	8.267E-07	4.392E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				70.	39.	108.	
1.0E-7	1/yr design speed				149.	117.	183.	
37	110	5.936E+04	1.0000	71	53	53		
Point		6.934E-02	2.597E-02	1.851E-01	1.545E-06	5.788E-07	4.126E-06	
Line		1.001E+00	6.382E-01	1.570E+00	8.450E-07	5.387E-07	1.325E-06	
Strike	Probability, 1/yr				2.390E-06	1.118E-06	5.452E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				80.	45.	116.	
1.0E-7	1/yr design speed				157.	126.	190.	
37	114	5.936E+04	1.0000	27	19	22		
Point		5.153E-02	9.132E-03	2.908E-01	4.367E-07	7.740E-08	2.464E-06	
Line		7.684E-01	3.995E-01	1.478E+00	2.467E-07	1.283E-07	4.745E-07	
Strike	Probability, 1/yr				6.834E-07	2.057E-07	2.939E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				39.	39.	93.	
1.0E-7	1/yr design speed				117.	71.	171.	
37	118	5.936E+04	1.0000	78	61	61		
Point		3.929E-02	2.062E-02	7.485E-02	9.620E-07	5.050E-07	1.833E-06	
Line		1.060E+00	7.259E-01	1.547E+00	9.827E-07	6.732E-07	1.435E-06	
Strike	Probability, 1/yr				1.945E-06	1.178E-06	3.267E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				72.	47.	97.	
1.0E-7	1/yr design speed				152.	129.	176.	
37	122	2.154E+04	0.3629	35	30	31		
Point		1.267E-01	4.639E-02	3.461E-01	3.837E-06	1.405E-06	1.048E-05	
Line		1.822E+00	1.048E+00	3.166E+00	2.089E-06	1.202E-06	3.631E-06	
Strike	Probability, 1/yr				5.926E-06	2.606E-06	1.411E-05	
1.0E-5	1/yr design speed				39.	39.	59.	
1.0E-6	1/yr design speed				112.	79.	148.	
1.0E-7	1/yr design speed				183.	151.	218.	
41	66	8.187E+03	0.1466	26	25	25		
Point		1.667E-01	7.369E-02	3.773E-01	9.867E-06	4.360E-06	2.233E-05	
Line		4.281E+00	2.248E+00	8.153E+00	9.595E-06	5.038E-06	1.827E-05	
Strike	Probability, 1/yr				1.946E-05	9.399E-06	4.060E-05	
1.0E-5	1/yr design speed				80.	39.	110.	
1.0E-6	1/yr design speed				157.	134.	179.	
1.0E-7	1/yr design speed				215.	196.	234.	

41	70	4.557E+04	0.8158	456	412	412	
Point	2.606E-01	1.895E-01	3.582E-01	4.858E-05	3.534E-05	6.679E-05	
Line	2.844E+00	2.377E+00	3.404E+00	2.009E-05	1.679E-05	2.404E-05	
Strike Probability, 1/yr				6.867E-05	5.213E-05	9.083E-05	
1.0E-5 1/yr design speed				124.	113.	134.	
1.0E-6 1/yr design speed				186.	177.	195.	
1.0E-7 1/yr design speed				240.	231.	248.	
41	74	4.335E+04	0.7760	288	267	267	
Point	1.088E+00	6.831E-01	1.733E+00	1.347E-04	8.456E-05	2.145E-04	
Line	3.823E+00	3.122E+00	4.682E+00	1.793E-05	1.464E-05	2.196E-05	
Strike Probability, 1/yr				1.526E-04	9.920E-05	2.365E-04	
1.0E-5 1/yr design speed				144.	129.	158.	
1.0E-6 1/yr design speed				202.	189.	213.	
1.0E-7 1/yr design speed				252.	241.	262.	
41	78	1.848E+04	0.3308	277	236	236	
Point	1.758E+00	1.050E+00	2.942E+00	4.909E-04	2.933E-04	8.217E-04	
Line	6.130E+00	4.839E+00	7.766E+00	6.485E-05	5.119E-05	8.216E-05	
Strike Probability, 1/yr				5.558E-04	3.445E-04	9.038E-04	
1.0E-5 1/yr design speed				182.	170.	195.	
1.0E-6 1/yr design speed				236.	225.	248.	
1.0E-7 1/yr design speed				284.	273.	296.	
41	82	4.387E+04	0.7854	1069	910	910	
Point	1.078E+00	8.172E-01	1.422E+00	4.895E-04	3.710E-04	6.458E-04	
Line	6.085E+00	5.272E+00	7.024E+00	1.047E-04	9.067E-05	1.208E-04	
Strike Probability, 1/yr				5.942E-04	4.617E-04	7.666E-04	
1.0E-5 1/yr design speed				186.	179.	193.	
1.0E-6 1/yr design speed				240.	233.	248.	
1.0E-7 1/yr design speed				288.	281.	296.	
41	86	3.989E+04	0.7141	1149	950	951	
Point	9.888E-01	7.626E-01	1.282E+00	5.307E-04	4.093E-04	6.880E-04	
Line	6.534E+00	5.666E+00	7.535E+00	1.328E-04	1.152E-04	1.532E-04	
Strike Probability, 1/yr				6.635E-04	5.245E-04	8.412E-04	
1.0E-5 1/yr design speed				189.	183.	196.	
1.0E-6 1/yr design speed				243.	237.	251.	
1.0E-7 1/yr design speed				291.	284.	299.	
41	90	5.586E+04	1.0000	1757	1540	1542	
Point	1.527E+00	1.206E+00	1.933E+00	8.950E-04	7.070E-04	1.133E-03	
Line	6.845E+00	6.075E+00	7.714E+00	1.520E-04	1.349E-04	1.712E-04	
Strike Probability, 1/yr				1.047E-03	8.419E-04	1.304E-03	
1.0E-5 1/yr design speed				199.	192.	205.	
1.0E-6 1/yr design speed				251.	244.	258.	
1.0E-7 1/yr design speed				298.	291.	306.	

41	94	5.586E+04	1.0000	1831	1497	1497		
Point		8.658E-01	6.914E-01	1.084E+00	5.288E-04	4.223E-04	6.622E-04	
Line		5.415E+00	4.789E+00	6.122E+00	1.253E-04	1.108E-04	1.416E-04	
Strike Probability, 1/yr					6.541E-04	5.331E-04	8.038E-04	
1.0E-5 1/yr design speed					189.	183.	195.	
1.0E-6 1/yr design speed					243.	237.	249.	
1.0E-7 1/yr design speed					291.	284.	298.	
41	98	5.586E+04	1.0000	1043	770	771		
Point		7.060E-01	4.993E-01	9.982E-01	2.456E-04	1.737E-04	3.473E-04	
Line		5.158E+00	4.286E+00	6.206E+00	6.797E-05	5.648E-05	8.179E-05	
Strike Probability, 1/yr					3.136E-04	2.302E-04	4.291E-04	
1.0E-5 1/yr design speed					171.	162.	179.	
1.0E-6 1/yr design speed					227.	219.	236.	
1.0E-7 1/yr design speed					277.	269.	286.	
41	102	5.586E+04	1.0000	871	656	659		
Point		1.628E-01	1.206E-01	2.198E-01	4.730E-05	3.505E-05	6.385E-05	
Line		2.314E+00	1.960E+00	2.731E+00	2.546E-05	2.157E-05	3.005E-05	
Strike Probability, 1/yr					7.277E-05	5.662E-05	9.390E-05	
1.0E-5 1/yr design speed					119.	104.	135.	
1.0E-6 1/yr design speed					189.	172.	207.	
1.0E-7 1/yr design speed					253.	234.	271.	
41	106	5.586E+04	1.0000	142	109	109		
Point		1.220E-01	6.574E-02	2.265E-01	5.780E-06	3.114E-06	1.073E-05	
Line		1.313E+00	9.961E-01	1.730E+00	2.355E-06	1.787E-06	3.103E-06	
Strike Probability, 1/yr					8.135E-06	4.901E-06	1.383E-05	
1.0E-5 1/yr design speed					39.	39.	58.	
1.0E-6 1/yr design speed					123.	100.	147.	
1.0E-7 1/yr design speed					192.	168.	217.	
41	110	5.586E+04	1.0000	120	101	103		
Point		1.007E-01	5.228E-02	1.941E-01	4.033E-06	2.093E-06	7.771E-06	
Line		1.458E+00	1.055E+00	2.014E+00	2.210E-06	1.600E-06	3.054E-06	
Strike Probability, 1/yr					6.243E-06	3.692E-06	1.083E-05	
1.0E-5 1/yr design speed					39.	39.	44.	
1.0E-6 1/yr design speed					114.	91.	140.	
1.0E-7 1/yr design speed					185.	161.	210.	
41	114	5.586E+04	1.0000	71	62	62		
Point		2.635E-02	1.418E-02	4.895E-02	6.241E-07	3.359E-07	1.159E-06	
Line		1.061E+00	7.215E-01	1.561E+00	9.522E-07	6.473E-07	1.401E-06	
Strike Probability, 1/yr					1.576E-06	9.832E-07	2.560E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					62.	39.	88.	
1.0E-7 1/yr design speed					146.	124.	169.	

41	118	5.586E+04	1.0000	16	15	15		
Point	2.438E-02	7.178E-03	8.282E-02	1.301E-07	3.831E-08	4.420E-07		
Line	6.614E-01	3.618E-01	1.209E+00	1.337E-07	7.315E-08	2.444E-07		
Strike Probability, 1/yr				2.638E-07	1.115E-07	6.864E-07		
1.0E-5 1/yr design speed				39.	39.	39.		
1.0E-6 1/yr design speed				39.	39.	39.		
1.0E-7 1/yr design speed				84.	45.	125.		
41	122	3.038E+04	0.5438	24	20	21		
Point	1.263E-02	6.014E-03	2.653E-02	1.859E-07	8.854E-08	3.905E-07		
Line	5.669E-01	3.630E-01	8.853E-01	3.161E-07	2.024E-07	4.937E-07		
Strike Probability, 1/yr				5.020E-07	2.909E-07	8.842E-07		
1.0E-5 1/yr design speed				39.	39.	39.		
1.0E-6 1/yr design speed				39.	39.	39.		
1.0E-7 1/yr design speed				108.	84.	134.		
45	66	1.671E+04	0.3209	33	30	30		
Point	3.506E-01	9.006E-02	1.365E+00	1.290E-05	3.313E-06	5.022E-05		
Line	5.605E+00	2.379E+00	1.321E+01	7.811E-06	3.315E-06	1.841E-05		
Strike Probability, 1/yr				2.071E-05	6.628E-06	6.863E-05		
1.0E-5 1/yr design speed				82.	39.	126.		
1.0E-6 1/yr design speed				157.	123.	189.		
1.0E-7 1/yr design speed				215.	187.	241.		
45	70	9.699E+03	0.1862	4	3	3		
Point	6.193E-01	1.534E-03	2.501E+02	4.759E-06	1.178E-08	1.922E-03		
Line	1.150E+00	2.257E-01	5.858E+00	3.347E-07	6.568E-08	1.705E-06		
Strike Probability, 1/yr				5.094E-06	7.747E-08	1.924E-03		
1.0E-5 1/yr design speed				39.	38.	206.		
1.0E-6 1/yr design speed				111.	38.	255.		
1.0E-7 1/yr design speed				174.	38.	300.		
45	82	6.797E+03	0.1305	46	39	39		
Point	3.715E-01	1.177E-01	1.173E+00	4.684E-05	1.484E-05	1.479E-04		
Line	3.582E+00	1.972E+00	6.506E+00	1.711E-05	9.421E-06	3.107E-05		
Strike Probability, 1/yr				6.395E-05	2.426E-05	1.789E-04		
1.0E-5 1/yr design speed				121.	86.	152.		
1.0E-6 1/yr design speed				184.	159.	209.		
1.0E-7 1/yr design speed				237.	216.	259.		
45	86	2.036E+04	0.3908	134	119	119		
Point	1.896E+00	8.500E-01	4.228E+00	2.325E-04	1.043E-04	5.186E-04		
Line	8.340E+00	5.484E+00	1.268E+01	3.875E-05	2.548E-05	5.893E-05		
Strike Probability, 1/yr				2.713E-04	1.297E-04	5.775E-04		
1.0E-5 1/yr design speed				160.	138.	181.		
1.0E-6 1/yr design speed				215.	197.	233.		
1.0E-7 1/yr design speed				265.	248.	281.		

45	90	3.932E+04	0.7549	349	318	320		
Point		2.939E+00	1.682E+00	5.135E+00	4.861E-04	2.782E-04	8.492E-04	
Line		6.901E+00	5.390E+00	8.837E+00	4.323E-05	3.376E-05	5.535E-05	
Strike Probability, 1/yr					5.293E-04	3.120E-04	9.045E-04	
1.0E-5 1/yr design speed					179.	165.	193.	
1.0E-6 1/yr design speed					233.	220.	247.	
1.0E-7 1/yr design speed					281.	269.	295.	
45	94	5.146E+04	0.9879	818	659	659		
Point		3.135E-01	2.294E-01	4.284E-01	9.285E-05	6.794E-05	1.269E-04	
Line		2.829E+00	2.420E+00	3.307E+00	3.174E-05	2.715E-05	3.711E-05	
Strike Probability, 1/yr					1.246E-04	9.510E-05	1.640E-04	
1.0E-5 1/yr design speed					146.	138.	154.	
1.0E-6 1/yr design speed					207.	200.	214.	
1.0E-7 1/yr design speed					259.	252.	267.	
45	98	5.209E+04	1.0000	882	574	574		
Point		1.975E-01	1.415E-01	2.756E-01	6.230E-05	4.464E-05	8.694E-05	
Line		2.558E+00	2.159E+00	3.031E+00	3.057E-05	2.580E-05	3.623E-05	
Strike Probability, 1/yr					9.287E-05	7.044E-05	1.232E-04	
1.0E-5 1/yr design speed					139.	131.	147.	
1.0E-6 1/yr design speed					202.	195.	210.	
1.0E-7 1/yr design speed					256.	249.	263.	
45	102	5.209E+04	1.0000	304	193	193		
Point		3.792E-01	1.941E-01	7.407E-01	4.123E-05	2.111E-05	8.054E-05	
Line		3.436E+00	2.467E+00	4.786E+00	1.415E-05	1.016E-05	1.971E-05	
Strike Probability, 1/yr					5.538E-05	3.127E-05	1.003E-04	
1.0E-5 1/yr design speed					110.	85.	137.	
1.0E-6 1/yr design speed					181.	155.	207.	
1.0E-7 1/yr design speed					244.	217.	270.	
45	106	5.209E+04	1.0000	136	114	114		
Point		9.904E-02	5.023E-02	1.953E-01	4.818E-06	2.444E-06	9.500E-06	
Line		1.955E+00	1.346E+00	2.840E+00	3.602E-06	2.480E-06	5.232E-06	
Strike Probability, 1/yr					8.420E-06	4.923E-06	1.473E-05	
1.0E-5 1/yr design speed					39.	39.	61.	
1.0E-6 1/yr design speed					124.	101.	150.	
1.0E-7 1/yr design speed					194.	170.	220.	
45	110	5.209E+04	1.0000	80	54	54		
Point		3.931E-02	1.862E-02	8.299E-02	1.125E-06	5.328E-07	2.375E-06	
Line		1.036E+00	6.914E-01	1.552E+00	1.123E-06	7.494E-07	1.682E-06	
Strike Probability, 1/yr					2.248E-06	1.282E-06	4.057E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					78.	51.	106.	
1.0E-7 1/yr design speed					156.	131.	182.	

45	114	5.209E+04	1.0000	39	29	31		
Point		1.175E-01	3.521E-02	3.919E-01	1.639E-06	4.912E-07	5.467E-06	
Line		1.657E+00	9.368E-01	2.932E+00	8.757E-07	4.950E-07	1.549E-06	
Strike Probability, 1/yr					2.514E-06	9.862E-07	7.016E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					82.	39.	125.	
1.0E-7 1/yr design speed					158.	123.	197.	
45	118	5.209E+04	1.0000	39	30	31		
Point		2.752E-01	6.995E-02	1.083E+00	3.839E-06	9.758E-07	1.510E-05	
Line		4.133E+00	1.808E+00	9.445E+00	2.184E-06	9.555E-07	4.991E-06	
Strike Probability, 1/yr					6.023E-06	1.931E-06	2.009E-05	
1.0E-5 1/yr design speed					39.	39.	78.	
1.0E-6 1/yr design speed					113.	68.	159.	
1.0E-7 1/yr design speed					184.	143.	227.	
45	122	2.354E+04	0.4519	57	50	51		
Point		3.039E-02	1.568E-02	5.891E-02	1.371E-06	7.072E-07	2.658E-06	
Line		8.245E-01	5.883E-01	1.155E+00	1.409E-06	1.005E-06	1.974E-06	
Strike Probability, 1/yr					2.780E-06	1.713E-06	4.632E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					86.	63.	110.	
1.0E-7 1/yr design speed					162.	140.	186.	

Appendix C

Strike Probabilities for 1° Boxes

This appendix contains the detailed results of the analysis for the 1° boxes. The output for each box consists seven lines. However, if there were no tornado events in the box or the information for the tornado events was insufficient to perform an analysis, there is only one line of output. The first line of output starts with the latitude and longitude of the southeast corner of the box. The next two entries in the line are the land area for the box assumed in the analysis and the fraction of the total box area assumed to be covered by land. The last three items in the first line are the number of total events observed and the number of events included in the calculation of expected values of area and length for events. For some boxes, this is the only line. Care should be taken when using strike probability and wind speed data from this appendix to ensure that the number of tornado events is sufficient to give reasonable results. As a minimum, there should be 10 events, and 20 or more events are desirable.

The second through seventh lines include the results of the calculations. Lines two and three contain the results of the strike probability calculations for the point-structure and life-line terms, respectively. In line two, the first number is the expected area, in square miles, for tornado events for the box; the second and third numbers are the lower and upper limits of the 90 percent confidence interval for the expected area. The last three numbers are the expected strike probability for a point structure and the lower and upper limits for the strike probability confidence interval. The format for the information in the third line is similar to that for the second line. The first three numbers are the expected length, in miles, for the life-line term and the lower and upper limits on the expected length. The last three numbers are the additional strike probability for finite structures, assuming a characteristic dimension of 200 ft for the structure.

The fourth line gives the expected total strike probability for the box and the lower and upper bounds of 90 percent confidence interval. These values are the sums of the values directly above in lines two and three. Lines five through seven give the maximum wind speeds, in miles per hour, for 10^{-5} yr^{-1}, 10^{-6} yr^{-1}, and 10^{-7} yr^{-1} design criteria. As before, the first number is the expected value, and the second and third numbers are the lower and upper limits of the 90 percent confidence interval.

The lower limit for the maximum wind speed in a tornado is 40 mph. Two wind speeds less than 40 mph are used to provide information when the design wind speed would be less than 40 mph. A design wind speed of 38 mph indicates that the tornado strike probability for the box is less than 10^{-7} yr^{-1}. A design wind speed of 39 mph indicates that the design wind speed for the design probability specified at the beginning of the line is less than 40 mph, but that the design wind speed at the 10^{-7} yr^{-1} probability level exceeds 40 mph.

25	80	3.017E+03	0.7000	135	115	115	
Point		1.351E-01	6.332E-02	2.882E-01	1.126E-04	5.280E-05	2.403E-04
Line		2.019E+00	1.373E+00	2.970E+00	6.377E-05	4.336E-05	9.379E-05
Strike Probability, 1/yr					1.764E-04	9.616E-05	3.341E-04
1.0E-5 1/yr design speed					152.	134.	171.
1.0E-6 1/yr design speed					211.	195.	226.
1.0E-7 1/yr design speed					261.	248.	275.
25	81	1.293E+03	0.3000	13	11	11	
Point		6.839E-03	3.909E-03	1.196E-02	1.281E-06	7.324E-07	2.242E-06
Line		4.393E-01	3.004E-01	6.426E-01	3.118E-06	2.132E-06	4.560E-06
Strike Probability, 1/yr					4.399E-06	2.864E-06	6.802E-06
1.0E-5 1/yr design speed					39.	39.	39.
1.0E-6 1/yr design speed					114.	97.	131.
1.0E-7 1/yr design speed					183.	169.	196.
25	97	2.155E+02	0.0500	8	7	7	
Point		2.460E-01	3.059E-02	1.978E+00	1.702E-04	2.116E-05	1.368E-03
Line		2.303E+00	8.142E-01	6.515E+00	6.035E-05	2.134E-05	1.707E-04
Strike Probability, 1/yr					2.305E-04	4.250E-05	1.539E-03
1.0E-5 1/yr design speed					164.	116.	208.
1.0E-6 1/yr design speed					222.	186.	261.
1.0E-7 1/yr design speed					272.	242.	308.
26	80	3.846E+03	0.9000	231	186	186	
Point		3.372E-02	2.198E-02	5.174E-02	3.774E-05	2.460E-05	5.791E-05
Line		9.194E-01	7.394E-01	1.143E+00	3.898E-05	3.135E-05	4.847E-05
Strike Probability, 1/yr					7.672E-05	5.595E-05	1.064E-04
1.0E-5 1/yr design speed					130.	118.	142.
1.0E-6 1/yr design speed					193.	184.	203.
1.0E-7 1/yr design speed					247.	238.	255.
26	81	3.846E+03	0.9000	125	113	113	
Point		3.562E-02	2.081E-02	6.099E-02	2.158E-05	1.260E-05	3.694E-05
Line		1.146E+00	8.511E-01	1.543E+00	2.629E-05	1.952E-05	3.540E-05
Strike Probability, 1/yr					4.787E-05	3.213E-05	7.234E-05
1.0E-5 1/yr design speed					115.	100.	130.
1.0E-6 1/yr design speed					182.	170.	194.
1.0E-7 1/yr design speed					237.	226.	248.
26	82	2.136E+02	0.0500	66	63	63	
Point		3.294E-02	1.709E-02	6.351E-02	1.896E-04	9.835E-05	3.656E-04
Line		1.788E+00	1.148E+00	2.782E+00	3.898E-04	2.504E-04	6.066E-04
Strike Probability, 1/yr					5.794E-04	3.488E-04	9.722E-04
1.0E-5 1/yr design speed					200.	186.	213.
1.0E-6 1/yr design speed					255.	242.	267.
1.0E-7 1/yr design speed					303.	291.	315.

26	97	2.991E+03	0.7000	60	51	51		
Point		6.972E-02	2.673E-02	1.818E-01	2.606E-05	9.992E-06	6.796E-05	
Line		1.279E+00	7.675E-01	2.130E+00	1.810E-05	1.087E-05	3.016E-05	
Strike Probability, 1/yr					4.416E-05	2.086E-05	9.812E-05	
1.0E-5 1/yr design speed					116.	88.	141.	
1.0E-6 1/yr design speed					186.	167.	205.	
1.0E-7 1/yr design speed					242.	226.	259.	
26	98	3.846E+03	0.9000	32	28	28		
Point		9.910E-02	4.033E-02	2.435E-01	1.537E-05	6.253E-06	3.775E-05	
Line		1.385E+00	8.178E-01	2.347E+00	8.136E-06	4.803E-06	1.378E-05	
Strike Probability, 1/yr					2.350E-05	1.106E-05	5.154E-05	
1.0E-5 1/yr design speed					90.	47.	119.	
1.0E-6 1/yr design speed					167.	146.	187.	
1.0E-7 1/yr design speed					225.	208.	243.	
26	99	8.546E+02	0.2000	4	4	4		
Point		1.140E-01	1.435E-02	9.051E-01	9.939E-06	1.251E-06	7.894E-05	
Line		4.840E+00	5.973E-01	3.922E+01	1.599E-05	1.973E-06	1.296E-04	
Strike Probability, 1/yr					2.593E-05	3.225E-06	2.085E-04	
1.0E-5 1/yr design speed					100.	39.	171.	
1.0E-6 1/yr design speed					177.	108.	232.	
1.0E-7 1/yr design speed					235.	182.	283.	
27	80	2.964E+03	0.7000	100	75	75		
Point		4.082E-02	2.194E-02	7.595E-02	2.566E-05	1.379E-05	4.774E-05	
Line		1.248E+00	8.493E-01	1.834E+00	2.971E-05	2.022E-05	4.367E-05	
Strike Probability, 1/yr					5.537E-05	3.401E-05	9.141E-05	
1.0E-5 1/yr design speed					120.	102.	137.	
1.0E-6 1/yr design speed					186.	171.	200.	
1.0E-7 1/yr design speed					240.	227.	252.	
27	81	4.235E+03	1.0000	129	105	105		
Point		3.848E-02	2.292E-02	6.460E-02	2.184E-05	1.301E-05	3.666E-05	
Line		1.599E+00	1.162E+00	2.200E+00	3.437E-05	2.498E-05	4.729E-05	
Strike Probability, 1/yr					5.621E-05	3.799E-05	8.396E-05	
1.0E-5 1/yr design speed					122.	107.	136.	
1.0E-6 1/yr design speed					187.	176.	199.	
1.0E-7 1/yr design speed					242.	231.	252.	
27	82	2.541E+03	0.6000	302	271	271		
Point		6.241E-02	4.196E-02	9.282E-02	1.382E-04	9.292E-05	2.055E-04	
Line		1.307E+00	1.067E+00	1.601E+00	1.096E-04	8.948E-05	1.343E-04	
Strike Probability, 1/yr					2.478E-04	1.824E-04	3.399E-04	
1.0E-5 1/yr design speed					171.	163.	179.	
1.0E-6 1/yr design speed					229.	222.	237.	
1.0E-7 1/yr design speed					280.	272.	288.	

27	97	2.541E+03	0.6000	130	106	107		
Point		4.706E-02	2.859E-02	7.747E-02	4.486E-05	2.725E-05	7.385E-05	
Line		1.321E+00	9.757E-01	1.788E+00	4.769E-05	3.523E-05	6.455E-05	
Strike Probability, 1/yr					9.255E-05	6.248E-05	1.384E-04	
1.0E-5 1/yr design speed					143.	131.	155.	
1.0E-6 1/yr design speed					208.	198.	218.	
1.0E-7 1/yr design speed					261.	252.	271.	
27	98	4.235E+03	1.0000	42	36	36		
Point		5.384E-02	2.171E-02	1.336E-01	9.949E-06	4.011E-06	2.468E-05	
Line		8.853E-01	5.704E-01	1.374E+00	6.197E-06	3.992E-06	9.619E-06	
Strike Probability, 1/yr					1.615E-05	8.003E-06	3.430E-05	
1.0E-5 1/yr design speed					74.	39.	104.	
1.0E-6 1/yr design speed					157.	138.	176.	
1.0E-7 1/yr design speed					218.	202.	234.	
27	99	2.964E+03	0.7000	5	3	3		
Point		7.736E-01	7.247E-03	8.258E+01	2.431E-05	2.277E-07	2.595E-03	
Line		1.706E+00	5.472E-01	5.319E+00	2.031E-06	6.513E-07	6.332E-06	
Strike Probability, 1/yr					2.634E-05	8.791E-07	2.601E-03	
1.0E-5 1/yr design speed					90.	39.	216.	
1.0E-6 1/yr design speed					161.	39.	266.	
1.0E-7 1/yr design speed					217.	146.	312.	
28	80	1.678E+03	0.4000	107	95	95		
Point		1.488E-01	7.605E-02	2.911E-01	1.768E-04	9.034E-05	3.458E-04	
Line		2.146E+00	1.455E+00	3.165E+00	9.656E-05	6.547E-05	1.424E-04	
Strike Probability, 1/yr					2.733E-04	1.558E-04	4.882E-04	
1.0E-5 1/yr design speed					164.	147.	181.	
1.0E-6 1/yr design speed					221.	206.	235.	
1.0E-7 1/yr design speed					270.	257.	283.	
28	81	4.196E+03	1.0000	214	189	189		
Point		1.431E-01	8.668E-02	2.362E-01	1.360E-04	8.237E-05	2.245E-04	
Line		2.196E+00	1.658E+00	2.908E+00	7.903E-05	5.967E-05	1.047E-04	
Strike Probability, 1/yr					2.150E-04	1.420E-04	3.292E-04	
1.0E-5 1/yr design speed					158.	145.	171.	
1.0E-6 1/yr design speed					215.	204.	227.	
1.0E-7 1/yr design speed					265.	255.	276.	
28	82	2.937E+03	0.7000	225	203	203		
Point		8.607E-02	5.221E-02	1.419E-01	1.228E-04	7.453E-05	2.025E-04	
Line		1.910E+00	1.453E+00	2.510E+00	1.033E-04	7.857E-05	1.357E-04	
Strike Probability, 1/yr					2.261E-04	1.531E-04	3.382E-04	
1.0E-5 1/yr design speed					169.	158.	179.	
1.0E-6 1/yr design speed					228.	218.	237.	
1.0E-7 1/yr design speed					278.	269.	288.	

28	95	8.392E+02	0.2000	19	16	17	
Point		6.724E-03	3.076E-03	1.470E-02	2.836E-06	1.298E-06	6.199E-06
Line		5.204E-01	3.011E-01	8.994E-01	8.315E-06	4.811E-06	1.437E-05
Strike	Probability, 1/yr				1.115E-05	6.109E-06	2.057E-05
1.0E-5	1/yr design speed				50.	39.	90.
1.0E-6	1/yr design speed				155.	135.	173.
1.0E-7	1/yr design speed				218.	203.	233.
28	96	2.518E+03	0.6000	95	65	66	
Point		5.537E-02	2.600E-02	1.179E-01	3.893E-05	1.828E-05	8.292E-05
Line		1.327E+00	8.551E-01	2.060E+00	3.534E-05	2.277E-05	5.485E-05
Strike	Probability, 1/yr				7.428E-05	4.105E-05	1.378E-04
1.0E-5	1/yr design speed				135.	116.	154.
1.0E-6	1/yr design speed				201.	187.	216.
1.0E-7	1/yr design speed				255.	242.	269.
28	97	4.196E+03	1.0000	108	75	76	
Point		8.060E-02	4.236E-02	1.534E-01	3.866E-05	2.032E-05	7.355E-05
Line		1.072E+00	7.962E-01	1.444E+00	1.948E-05	1.446E-05	2.623E-05
Strike	Probability, 1/yr				5.813E-05	3.478E-05	9.978E-05
1.0E-5	1/yr design speed				124.	107.	140.
1.0E-6	1/yr design speed				191.	178.	204.
1.0E-7	1/yr design speed				245.	235.	257.
28	98	4.196E+03	1.0000	44	39	39	
Point		4.295E-01	1.229E-01	1.501E+00	8.391E-05	2.402E-05	2.932E-04
Line		2.663E+00	1.474E+00	4.812E+00	1.971E-05	1.091E-05	3.562E-05
Strike	Probability, 1/yr				1.036E-04	3.492E-05	3.288E-04
1.0E-5	1/yr design speed				138.	105.	169.
1.0E-6	1/yr design speed				200.	176.	226.
1.0E-7	1/yr design speed				253.	231.	277.
28	99	4.196E+03	1.0000	26	22	22	
Point		4.662E-01	1.054E-01	2.062E+00	5.383E-05	1.217E-05	2.381E-04
Line		4.720E+00	2.074E+00	1.074E+01	2.064E-05	9.071E-06	4.697E-05
Strike	Probability, 1/yr				7.447E-05	2.124E-05	2.851E-04
1.0E-5	1/yr design speed				131.	87.	167.
1.0E-6	1/yr design speed				195.	165.	225.
1.0E-7	1/yr design speed				249.	224.	276.
28	100	2.098E+03	0.5000	7	6	6	
Point		2.797E+00	1.708E-02	4.579E+02	1.739E-04	1.062E-06	2.847E-02
Line		6.350E+00	7.503E-01	5.375E+01	1.495E-05	1.767E-06	1.266E-04
Strike	Probability, 1/yr				1.888E-04	2.829E-06	2.859E-02
1.0E-5	1/yr design speed				152.	39.	268.
1.0E-6	1/yr design speed				210.	103.	314.
1.0E-7	1/yr design speed				260.	178.	357.

29	80	2.078E+02	0.0500	21	20	20		
Point		1.167E-01	3.192E-02	4.268E-01	2.198E-04	6.011E-05	8.038E-04	
Line		1.797E+00	9.047E-01	3.569E+00	1.282E-04	6.454E-05	2.546E-04	
Strike Probability, 1/yr					3.480E-04	1.247E-04	1.058E-03	
1.0E-5 1/yr design speed					171.	142.	199.	
1.0E-6 1/yr design speed					226.	203.	250.	
1.0E-7 1/yr design speed					275.	255.	297.	
29	81	3.324E+03	0.8000	137	124	124		
Point		1.042E-01	5.631E-02	1.929E-01	8.004E-05	4.324E-05	1.481E-04	
Line		2.134E+00	1.502E+00	3.032E+00	6.207E-05	4.369E-05	8.818E-05	
Strike Probability, 1/yr					1.421E-04	8.693E-05	2.363E-04	
1.0E-5 1/yr design speed					148.	131.	163.	
1.0E-6 1/yr design speed					207.	194.	220.	
1.0E-7 1/yr design speed					258.	246.	270.	
29	82	4.155E+03	1.0000	110	98	99		
Point		1.311E-01	6.635E-02	2.589E-01	6.465E-05	3.272E-05	1.277E-04	
Line		2.726E+00	1.830E+00	4.061E+00	5.094E-05	3.420E-05	7.587E-05	
Strike Probability, 1/yr					1.156E-04	6.692E-05	2.036E-04	
1.0E-5 1/yr design speed					149.	132.	164.	
1.0E-6 1/yr design speed					211.	198.	225.	
1.0E-7 1/yr design speed					264.	252.	276.	
29	83	1.662E+03	0.4000	6	5	5		
Point		2.969E-02	3.049E-03	2.891E-01	1.997E-06	2.051E-07	1.944E-05	
Line		1.293E+00	3.491E-01	4.787E+00	3.294E-06	8.894E-07	1.220E-05	
Strike Probability, 1/yr					5.290E-06	1.095E-06	3.164E-05	
1.0E-5 1/yr design speed					39.	39.	103.	
1.0E-6 1/yr design speed					127.	48.	177.	
1.0E-7 1/yr design speed					196.	155.	235.	
29	84	4.155E+02	0.1000	30	24	24		
Point		4.038E-02	1.424E-02	1.145E-01	5.431E-05	1.916E-05	1.540E-04	
Line		1.264E+00	6.146E-01	2.598E+00	6.439E-05	3.132E-05	1.324E-04	
Strike Probability, 1/yr					1.187E-04	5.047E-05	2.864E-04	
1.0E-5 1/yr design speed					152.	125.	177.	
1.0E-6 1/yr design speed					214.	194.	235.	
1.0E-7 1/yr design speed					267.	249.	286.	
29	85	4.155E+02	0.1000	25	18	20		
Point		1.003E-02	5.738E-03	1.754E-02	1.125E-05	6.433E-06	1.966E-05	
Line		5.813E-01	3.895E-01	8.675E-01	2.468E-05	1.654E-05	3.684E-05	
Strike Probability, 1/yr					3.593E-05	2.297E-05	5.650E-05	
1.0E-5 1/yr design speed					114.	96.	130.	
1.0E-6 1/yr design speed					187.	175.	200.	
1.0E-7 1/yr design speed					244.	233.	256.	

29	89	1.662E+03	0.4000	27	27	27	
Point		5.199E-02	2.035E-02	1.328E-01	1.574E-05	6.159E-06	4.021E-05
Line		1.217E+00	6.935E-01	2.134E+00	1.395E-05	7.951E-06	2.447E-05
Strike Probability, 1/yr					2.968E-05	1.411E-05	6.467E-05
1.0E-5 1/yr design speed					102.	67.	129.
1.0E-6 1/yr design speed					177.	157.	196.
1.0E-7 1/yr design speed					234.	218.	252.
29	90	3.740E+03	0.9000	91	90	90	
Point		5.396E-02	3.173E-02	9.177E-02	2.446E-05	1.438E-05	4.160E-05
Line		1.413E+00	1.015E+00	1.966E+00	2.426E-05	1.743E-05	3.376E-05
Strike Probability, 1/yr					4.872E-05	3.181E-05	7.537E-05
1.0E-5 1/yr design speed					121.	106.	136.
1.0E-6 1/yr design speed					191.	180.	202.
1.0E-7 1/yr design speed					246.	236.	257.
29	91	2.493E+03	0.6000	39	35	35	
Point		1.184E-01	5.433E-02	2.581E-01	3.451E-05	1.583E-05	7.522E-05
Line		2.317E+00	1.466E+00	3.660E+00	2.558E-05	1.619E-05	4.041E-05
Strike Probability, 1/yr					6.009E-05	3.202E-05	1.156E-04
1.0E-5 1/yr design speed					127.	106.	147.
1.0E-6 1/yr design speed					194.	179.	210.
1.0E-7 1/yr design speed					249.	235.	263.
29	92	1.247E+03	0.3000	25	24	24	
Point		2.652E-01	5.588E-02	1.258E+00	9.909E-05	2.088E-05	4.702E-04
Line		2.054E+00	1.118E+00	3.776E+00	2.908E-05	1.582E-05	5.344E-05
Strike Probability, 1/yr					1.282E-04	3.670E-05	5.237E-04
1.0E-5 1/yr design speed					146.	109.	181.
1.0E-6 1/yr design speed					207.	180.	236.
1.0E-7 1/yr design speed					259.	236.	286.
29	93	8.311E+02	0.2000	74	62	62	
Point		8.245E-02	4.123E-02	1.649E-01	1.368E-04	6.839E-05	2.736E-04
Line		1.659E+00	1.124E+00	2.447E+00	1.042E-04	7.065E-05	1.538E-04
Strike Probability, 1/yr					2.410E-04	1.390E-04	4.273E-04
1.0E-5 1/yr design speed					170.	155.	185.
1.0E-6 1/yr design speed					229.	216.	242.
1.0E-7 1/yr design speed					279.	267.	291.
29	94	2.078E+03	0.5000	129	113	113	
Point		1.031E-01	5.692E-02	1.866E-01	1.192E-04	6.585E-05	2.158E-04
Line		1.634E+00	1.194E+00	2.235E+00	7.159E-05	5.232E-05	9.795E-05
Strike Probability, 1/yr					1.908E-04	1.182E-04	3.138E-04
1.0E-5 1/yr design speed					162.	149.	175.
1.0E-6 1/yr design speed					221.	210.	233.
1.0E-7 1/yr design speed					272.	262.	284.

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   29   95    3.740E+03 0.9000    302    269    273
Point  1.831E-01  1.199E-01  2.794E-01  2.754E-04  1.804E-04  4.204E-04
Line   1.773E+00  1.445E+00  2.176E+00  1.010E-04  8.235E-05  1.240E-04
Strike Probability, 1/yr                 3.765E-04  2.628E-04  5.444E-04
1.0E-5 1/yr design speed                      177.       168.       187.
1.0E-6 1/yr design speed                      233.       225.       243.
1.0E-7 1/yr design speed                      283.       274.       292.

   29   96    4.155E+03 1.0000    139    126    126
Point  8.722E-02  5.294E-02  1.437E-01  5.436E-05  3.300E-05  8.956E-05
Line   1.408E+00  1.075E+00  1.844E+00  3.324E-05  2.537E-05  4.354E-05
Strike Probability, 1/yr                 8.760E-05  5.836E-05  1.331E-04
1.0E-5 1/yr design speed                      138.       126.       151.
1.0E-6 1/yr design speed                      203.       192.       213.
1.0E-7 1/yr design speed                      256.       247.       266.

   29   97    4.155E+03 1.0000     91     72     72
Point  2.342E-01  1.006E-01  5.453E-01  9.555E-05  4.103E-05  2.225E-04
Line   2.142E+00  1.408E+00  3.260E+00  3.311E-05  2.176E-05  5.038E-05
Strike Probability, 1/yr                 1.287E-04  6.279E-05  2.729E-04
1.0E-5 1/yr design speed                      147.       126.       167.
1.0E-6 1/yr design speed                      208.       192.       225.
1.0E-7 1/yr design speed                      260.       245.       276.

   29   98    4.155E+03 1.0000    116    100    100
Point  2.582E-01  1.208E-01  5.517E-01  1.343E-04  6.284E-05  2.870E-04
Line   2.116E+00  1.457E+00  3.073E+00  4.169E-05  2.870E-05  6.054E-05
Strike Probability, 1/yr                 1.760E-04  9.154E-05  3.475E-04
1.0E-5 1/yr design speed                      155.       137.       173.
1.0E-6 1/yr design speed                      215.       200.       230.
1.0E-7 1/yr design speed                      266.       252.       281.

   29   99    4.155E+03 1.0000     30     27     27
Point  7.955E-01  1.931E-01  3.277E+00  1.070E-04  2.598E-05  4.408E-04
Line   2.170E+00  1.295E+00  3.636E+00  1.106E-05  6.599E-06  1.853E-05
Strike Probability, 1/yr                 1.181E-04  3.257E-05  4.593E-04
1.0E-5 1/yr design speed                      139.       101.       176.
1.0E-6 1/yr design speed                      199.       170.       231.
1.0E-7 1/yr design speed                      251.       226.       280.

   29  100    3.740E+03 0.9000     35     33     33
Point  5.088E-01  1.299E-01  1.994E+00  8.873E-05  2.265E-05  3.476E-04
Line   5.325E+00  2.438E+00  1.163E+01  3.517E-05  1.610E-05  7.682E-05
Strike Probability, 1/yr                 1.239E-04  3.875E-05  4.245E-04
1.0E-5 1/yr design speed                      146.       111.       179.
1.0E-6 1/yr design speed                      208.       181.       235.
1.0E-7 1/yr design speed                      260.       237.       285.
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   29  101    1.662E+03 0.4000      15      15      15
Point  8.227E-02  1.285E-02  5.265E-01  1.383E-05  2.161E-06  8.853E-05
Line   9.408E-01  4.183E-01  2.116E+00  5.992E-06  2.664E-06  1.348E-05
Strike Probability, 1/yr                1.982E-05  4.826E-06  1.020E-04
1.0E-5 1/yr design speed                     82.        39.       137.
1.0E-6 1/yr design speed                    161.       122.       199.
1.0E-7 1/yr design speed                    220.       191.       253.

   29  102    1.662E+03 0.4000       1       1       1
Point  1.136E-02  0.000E+00  0.000E+00  1.274E-07  0.000E+00  0.000E+00
Line   2.000E-01  0.000E+00  0.000E+00  8.492E-08  0.000E+00  0.000E+00
Strike Probability, 1/yr                2.123E-07  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     39.        38.        38.
1.0E-6 1/yr design speed                     39.        38.        38.
1.0E-7 1/yr design speed                     76.        38.        38.

   29  103    3.740E+03 0.9000       6       6       6
Point  3.897E-01  3.720E-02  4.082E+00  1.165E-05  1.112E-06  1.220E-04
Line   3.556E+00  9.620E-01  1.314E+01  4.026E-06  1.089E-06  1.488E-05
Strike Probability, 1/yr                1.568E-05  2.201E-06  1.369E-04
1.0E-5 1/yr design speed                     61.        39.       147.
1.0E-6 1/yr design speed                    143.        73.       215.
1.0E-7 1/yr design speed                    210.       147.       277.

   29  104    1.662E+03 0.4000       0       0       0

   30   81    2.468E+03 0.6000      90      71      71
Point  6.773E-02  3.333E-02  1.376E-01  4.602E-05  2.265E-05  9.351E-05
Line   1.712E+00  1.129E+00  2.594E+00  4.404E-05  2.906E-05  6.676E-05
Strike Probability, 1/yr                9.006E-05  5.170E-05  1.603E-04
1.0E-5 1/yr design speed                    135.       116.       153.
1.0E-6 1/yr design speed                    197.       182.       212.
1.0E-7 1/yr design speed                    250.       236.       263.

   30   82    4.114E+03 1.0000      64      60      60
Point  8.414E-02  3.876E-02  1.827E-01  2.439E-05  1.124E-05  5.295E-05
Line   2.613E+00  1.555E+00  4.390E+00  2.869E-05  1.708E-05  4.820E-05
Strike Probability, 1/yr                5.308E-05  2.831E-05  1.012E-04
1.0E-5 1/yr design speed                    126.       103.       146.
1.0E-6 1/yr design speed                    194.       178.       210.
1.0E-7 1/yr design speed                    250.       235.       264.

   30   83    4.114E+03 1.0000      73      66      66
Point  2.298E-01  1.073E-01  4.921E-01  7.599E-05  3.549E-05  1.627E-04
Line   3.279E+00  2.051E+00  5.244E+00  4.107E-05  2.568E-05  6.568E-05
Strike Probability, 1/yr                1.171E-04  6.117E-05  2.284E-04
1.0E-5 1/yr design speed                    147.       127.       165.
1.0E-6 1/yr design speed                    209.       193.       225.
1.0E-7 1/yr design speed                    261.       247.       276.
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30	84	4.114E+03	1.0000	83	73	74		
Point		1.754E-01	8.524E-02	3.608E-01	6.592E-05	3.204E-05	1.356E-04	
Line		1.871E+00	1.297E+00	2.699E+00	2.664E-05	1.847E-05	3.843E-05	
Strike	Probability, 1/yr				9.257E-05	5.051E-05	1.741E-04	
1.0E-5	1/yr design speed				138.	119.	155.	
1.0E-6	1/yr design speed				201.	187.	216.	
1.0E-7	1/yr design speed				254.	241.	268.	
30	85	3.702E+03	0.9000	137	119	119		
Point		2.111E-01	1.157E-01	3.851E-01	1.455E-04	7.978E-05	2.655E-04	
Line		2.834E+00	2.002E+00	4.013E+00	7.402E-05	5.228E-05	1.048E-04	
Strike	Probability, 1/yr				2.196E-04	1.321E-04	3.703E-04	
1.0E-5	1/yr design speed				164.	151.	178.	
1.0E-6	1/yr design speed				223.	211.	236.	
1.0E-7	1/yr design speed				274.	263.	286.	
30	86	2.880E+03	0.7000	132	116	118		
Point		5.284E-02	3.206E-02	8.708E-02	4.513E-05	2.738E-05	7.437E-05	
Line		1.493E+00	1.070E+00	2.085E+00	4.831E-05	3.461E-05	6.745E-05	
Strike	Probability, 1/yr				9.344E-05	6.199E-05	1.418E-04	
1.0E-5	1/yr design speed				144.	131.	156.	
1.0E-6	1/yr design speed				208.	198.	219.	
1.0E-7	1/yr design speed				261.	251.	272.	
30	87	2.880E+03	0.7000	179	148	148		
Point		1.154E-01	6.607E-02	2.017E-01	1.337E-04	7.652E-05	2.337E-04	
Line		1.614E+00	1.204E+00	2.164E+00	7.080E-05	5.281E-05	9.492E-05	
Strike	Probability, 1/yr				2.045E-04	1.293E-04	3.286E-04	
1.0E-5	1/yr design speed				163.	151.	176.	
1.0E-6	1/yr design speed				222.	211.	233.	
1.0E-7	1/yr design speed				273.	263.	284.	
30	88	2.468E+03	0.6000	124	102	102		
Point		2.526E-01	1.245E-01	5.125E-01	2.364E-04	1.166E-04	4.797E-04	
Line		2.471E+00	1.662E+00	3.674E+00	8.762E-05	5.894E-05	1.303E-04	
Strike	Probability, 1/yr				3.241E-04	1.755E-04	6.099E-04	
1.0E-5	1/yr design speed				173.	157.	189.	
1.0E-6	1/yr design speed				230.	216.	245.	
1.0E-7	1/yr design speed				280.	267.	294.	
30	89	3.291E+03	0.8000	163	138	138		
Point		2.427E-01	1.349E-01	4.364E-01	2.240E-04	1.245E-04	4.028E-04	
Line		2.950E+00	2.121E+00	4.102E+00	1.031E-04	7.415E-05	1.434E-04	
Strike	Probability, 1/yr				3.271E-04	1.987E-04	5.462E-04	
1.0E-5	1/yr design speed				175.	162.	188.	
1.0E-6	1/yr design speed				232.	220.	244.	
1.0E-7	1/yr design speed				281.	271.	293.	

30	90	4.114E+03	1.0000	136	128	128		
Point	2.027E-01	1.195E-01	3.437E-01	1.248E-04	7.363E-05	2.117E-04		
Line	2.629E+00	1.943E+00	3.557E+00	6.134E-05	4.534E-05	8.300E-05		
Strike Probability, 1/yr				1.862E-04	1.190E-04	2.947E-04		
1.0E-5 1/yr design speed				160.	147.	172.		
1.0E-6 1/yr design speed				219.	208.	230.		
1.0E-7 1/yr design speed				270.	260.	281.		
30	91	4.114E+03	1.0000	130	123	123		
Point	3.105E-01	1.819E-01	5.299E-01	1.828E-04	1.071E-04	3.120E-04		
Line	3.332E+00	2.514E+00	4.416E+00	7.432E-05	5.608E-05	9.849E-05		
Strike Probability, 1/yr				2.571E-04	1.632E-04	4.105E-04		
1.0E-5 1/yr design speed				167.	155.	180.		
1.0E-6 1/yr design speed				226.	215.	237.		
1.0E-7 1/yr design speed				276.	265.	287.		
30	92	4.114E+03	1.0000	202	194	194		
Point	2.188E-01	1.421E-01	3.369E-01	2.001E-04	1.300E-04	3.082E-04		
Line	3.021E+00	2.394E+00	3.812E+00	1.047E-04	8.298E-05	1.321E-04		
Strike Probability, 1/yr				3.048E-04	2.129E-04	4.403E-04		
1.0E-5 1/yr design speed				174.	164.	184.		
1.0E-6 1/yr design speed				231.	223.	240.		
1.0E-7 1/yr design speed				281.	273.	290.		
30	93	4.114E+03	1.0000	154	149	149		
Point	1.801E-01	1.125E-01	2.885E-01	1.256E-04	7.845E-05	2.012E-04		
Line	2.710E+00	2.105E+00	3.490E+00	7.161E-05	5.562E-05	9.220E-05		
Strike Probability, 1/yr				1.973E-04	1.341E-04	2.934E-04		
1.0E-5 1/yr design speed				162.	152.	173.		
1.0E-6 1/yr design speed				222.	212.	231.		
1.0E-7 1/yr design speed				273.	264.	282.		
30	94	4.114E+03	1.0000	134	114	114		
Point	3.747E-01	1.785E-01	7.865E-01	2.274E-04	1.083E-04	4.773E-04		
Line	3.394E+00	2.302E+00	5.003E+00	7.802E-05	5.293E-05	1.150E-04		
Strike Probability, 1/yr				3.054E-04	1.613E-04	5.924E-04		
1.0E-5 1/yr design speed				171.	155.	188.		
1.0E-6 1/yr design speed				228.	214.	243.		
1.0E-7 1/yr design speed				278.	265.	292.		
30	95	4.114E+03	1.0000	113	106	106		
Point	3.376E-01	1.582E-01	7.205E-01	1.728E-04	8.098E-05	3.688E-04		
Line	2.422E+00	1.726E+00	3.398E+00	4.696E-05	3.347E-05	6.588E-05		
Strike Probability, 1/yr				2.198E-04	1.144E-04	4.346E-04		
1.0E-5 1/yr design speed				161.	144.	178.		
1.0E-6 1/yr design speed				219.	205.	234.		
1.0E-7 1/yr design speed				269.	256.	284.		

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  30   96    4.114E+03 1.0000    114    106    106
Point  1.390E+00  5.840E-01  3.310E+00  7.179E-04  3.016E-04  1.709E-03
Line   5.684E+00  3.757E+00  8.599E+00  1.112E-04  7.349E-05  1.682E-04
Strike Probability, 1/yr                8.291E-04  3.750E-04  1.877E-03
1.0E-5 1/yr design speed                     192.       174.       212.
1.0E-6 1/yr design speed                     245.       228.       264.
1.0E-7 1/yr design speed                     293.       277.       311.

  30   97    4.114E+03 1.0000    155    145    145
Point  1.102E+00  5.187E-01  2.339E+00  7.733E-04  3.641E-04  1.642E-03
Line   4.973E+00  3.449E+00  7.172E+00  1.323E-04  9.171E-05  1.907E-04
Strike Probability, 1/yr                9.056E-04  4.559E-04  1.833E-03
1.0E-5 1/yr design speed                     195.       179.       212.
1.0E-6 1/yr design speed                     248.       233.       264.
1.0E-7 1/yr design speed                     295.       281.       311.

  30   98    4.114E+03 1.0000     66     59     59
Point  4.951E-01  2.085E-01  1.176E+00  1.480E-04  6.232E-05  3.514E-04
Line   3.790E+00  2.443E+00  5.879E+00  4.291E-05  2.766E-05  6.657E-05
Strike Probability, 1/yr                1.909E-04  8.998E-05  4.180E-04
1.0E-5 1/yr design speed                     157.       137.       178.
1.0E-6 1/yr design speed                     216.       199.       234.
1.0E-7 1/yr design speed                     267.       252.       284.

  30   99    4.114E+03 1.0000     19     15     15
Point  2.344E+00  9.991E-02  5.500E+01  2.017E-04  8.598E-06  4.733E-03
Line   3.056E+00  9.154E-01  1.020E+01  9.960E-06  2.984E-06  3.325E-05
Strike Probability, 1/yr                2.117E-04  1.158E-05  4.766E-03
1.0E-5 1/yr design speed                     154.        50.       230.
1.0E-6 1/yr design speed                     211.       143.       279.
1.0E-7 1/yr design speed                     260.       204.       324.

  30  100    4.114E+03 1.0000     16     16     16
Point  9.034E-02  1.415E-02  5.769E-01  6.547E-06  1.025E-06  4.181E-05
Line   1.725E+00  6.012E-01  4.951E+00  4.736E-06  1.650E-06  1.359E-05
Strike Probability, 1/yr                1.128E-05  2.675E-06  5.540E-05
1.0E-5 1/yr design speed                      49.        39.       121.
1.0E-6 1/yr design speed                     147.       101.       188.
1.0E-7 1/yr design speed                     210.       177.       244.

  30  101    4.114E+03 1.0000     14     14     14
Point  1.664E-01  2.682E-02  1.032E+00  1.055E-05  1.701E-06  6.544E-05
Line   1.187E+00  5.261E-01  2.677E+00  2.850E-06  1.264E-06  6.430E-06
Strike Probability, 1/yr                1.340E-05  2.964E-06  7.187E-05
1.0E-5 1/yr design speed                      59.        39.       125.
1.0E-6 1/yr design speed                     147.       102.       189.
1.0E-7 1/yr design speed                     207.       175.       243.
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30	102	4.114E+03	1.0000	30	29	29		
Point		5.608E-01	1.280E-01	2.457E+00	7.620E-05	1.739E-05	3.338E-04	
Line		2.754E+00	1.301E+00	5.830E+00	1.417E-05	6.696E-06	3.001E-05	
Strike	Probability, 1/yr				9.037E-05	2.409E-05	3.638E-04	
1.0E-5	1/yr design speed				125.	76.	177.	
1.0E-6	1/yr design speed				193.	147.	241.	
1.0E-7	1/yr design speed				255.	210.	301.	
30	103	4.114E+03	1.0000	29	27	27		
Point		1.927E-01	5.241E-02	7.087E-01	2.531E-05	6.883E-06	9.308E-05	
Line		1.899E+00	1.041E+00	3.464E+00	9.449E-06	5.180E-06	1.723E-05	
Strike	Probability, 1/yr				3.476E-05	1.206E-05	1.103E-04	
1.0E-5	1/yr design speed				94.	48.	140.	
1.0E-6	1/yr design speed				167.	128.	209.	
1.0E-7	1/yr design speed				232.	194.	272.	
30	104	3.702E+03	0.9000	10	6	6		
Point		2.428E-02	5.625E-03	1.048E-01	1.222E-06	2.831E-07	5.274E-06	
Line		3.607E-01	2.315E-01	5.621E-01	6.876E-07	4.412E-07	1.071E-06	
Strike	Probability, 1/yr				1.909E-06	7.243E-07	6.345E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				71.	39.	121.	
1.0E-7	1/yr design speed				150.	114.	194.	
30	105	4.114E+02	0.1000	0	0	0		
31	81	3.257E+03	0.8000	43	40	41		
Point		4.659E-01	1.282E-01	1.693E+00	1.146E-04	3.154E-05	4.164E-04	
Line		3.036E+00	1.542E+00	5.981E+00	2.830E-05	1.437E-05	5.573E-05	
Strike	Probability, 1/yr				1.429E-04	4.591E-05	4.721E-04	
1.0E-5	1/yr design speed				143.	108.	176.	
1.0E-6	1/yr design speed				202.	174.	229.	
1.0E-7	1/yr design speed				253.	229.	277.	
31	82	4.071E+03	1.0000	80	75	78		
Point		7.192E-01	2.511E-01	2.060E+00	2.633E-04	9.194E-05	7.542E-04	
Line		4.657E+00	2.672E+00	8.117E+00	6.459E-05	3.706E-05	1.126E-04	
Strike	Probability, 1/yr				3.279E-04	1.290E-04	8.667E-04	
1.0E-5	1/yr design speed				171.	147.	195.	
1.0E-6	1/yr design speed				228.	207.	249.	
1.0E-7	1/yr design speed				277.	259.	297.	
31	83	4.071E+03	1.0000	123	120	120		
Point		7.326E-01	4.100E-01	1.309E+00	4.124E-04	2.308E-04	7.370E-04	
Line		5.685E+00	4.039E+00	8.003E+00	1.212E-04	8.612E-05	1.707E-04	
Strike	Probability, 1/yr				5.337E-04	3.169E-04	9.076E-04	
1.0E-5	1/yr design speed				185.	172.	199.	
1.0E-6	1/yr design speed				240.	228.	253.	
1.0E-7	1/yr design speed				288.	277.	301.	

31	84	4.071E+03	1.0000	109	103	103		
Point		6.905E-01	3.755E-01	1.270E+00	3.445E-04	1.873E-04	6.335E-04	
Line		4.296E+00	3.045E+00	6.060E+00	8.117E-05	5.754E-05	1.145E-04	
Strike	Probability, 1/yr				4.257E-04	2.449E-04	7.480E-04	
1.0E-5	1/yr design speed				178.	163.	192.	
1.0E-6	1/yr design speed				233.	220.	247.	
1.0E-7	1/yr design speed				282.	270.	295.	
31	85	4.071E+03	1.0000	128	110	113		
Point		7.024E-01	4.203E-01	1.174E+00	4.115E-04	2.462E-04	6.876E-04	
Line		6.791E+00	4.860E+00	9.490E+00	1.507E-04	1.078E-04	2.106E-04	
Strike	Probability, 1/yr				5.622E-04	3.541E-04	8.982E-04	
1.0E-5	1/yr design speed				188.	176.	200.	
1.0E-6	1/yr design speed				242.	231.	254.	
1.0E-7	1/yr design speed				291.	280.	302.	
31	86	4.071E+03	1.0000	98	84	84		
Point		6.408E-01	2.950E-01	1.392E+00	2.874E-04	1.323E-04	6.244E-04	
Line		5.192E+00	3.266E+00	8.254E+00	8.821E-05	5.549E-05	1.402E-04	
Strike	Probability, 1/yr				3.756E-04	1.878E-04	7.646E-04	
1.0E-5	1/yr design speed				176.	158.	194.	
1.0E-6	1/yr design speed				232.	216.	249.	
1.0E-7	1/yr design speed				281.	267.	297.	
31	87	4.071E+03	1.0000	74	67	67		
Point		1.226E+00	4.205E-01	3.574E+00	4.152E-04	1.424E-04	1.211E-03	
Line		7.666E+00	4.174E+00	1.408E+01	9.835E-05	5.355E-05	1.806E-04	
Strike	Probability, 1/yr				5.136E-04	1.960E-04	1.391E-03	
1.0E-5	1/yr design speed				183.	158.	207.	
1.0E-6	1/yr design speed				237.	217.	259.	
1.0E-7	1/yr design speed				286.	267.	307.	
31	88	4.071E+03	1.0000	73	67	67		
Point		4.613E+00	1.319E+00	1.613E+01	1.541E-03	4.407E-04	5.390E-03	
Line		9.499E+00	5.148E+00	1.753E+01	1.202E-04	6.515E-05	2.219E-04	
Strike	Probability, 1/yr				1.661E-03	5.058E-04	5.612E-03	
1.0E-5	1/yr design speed				206.	179.	235.	
1.0E-6	1/yr design speed				257.	232.	284.	
1.0E-7	1/yr design speed				303.	279.	329.	
31	89	4.071E+03	1.0000	183	158	158		
Point		1.134E+00	7.157E-01	1.796E+00	9.495E-04	5.994E-04	1.504E-03	
Line		7.052E+00	5.481E+00	9.073E+00	2.237E-04	1.739E-04	2.879E-04	
Strike	Probability, 1/yr				1.173E-03	7.733E-04	1.792E-03	
1.0E-5	1/yr design speed				203.	193.	214.	
1.0E-6	1/yr design speed				255.	245.	266.	
1.0E-7	1/yr design speed				302.	292.	313.	

31	90	4.071E+03	1.0000	139	128	128	
Point	1.186E+00	6.985E-01	2.012E+00	7.543E-04	4.444E-04	1.280E-03	
Line	6.397E+00	4.866E+00	8.410E+00	1.542E-04	1.173E-04	2.027E-04	
Strike Probability, 1/yr				9.084E-04	5.616E-04	1.483E-03	
1.0E-5 1/yr design speed				196.	184.	209.	
1.0E-6 1/yr design speed				249.	238.	261.	
1.0E-7 1/yr design speed				296.	285.	308.	
31	91	4.071E+03	1.0000	91	86	86	
Point	5.296E-01	2.837E-01	9.888E-01	2.206E-04	1.182E-04	4.118E-04	
Line	4.604E+00	3.266E+00	6.492E+00	7.264E-05	5.152E-05	1.024E-04	
Strike Probability, 1/yr				2.932E-04	1.697E-04	5.143E-04	
1.0E-5 1/yr design speed				170.	155.	184.	
1.0E-6 1/yr design speed				227.	214.	240.	
1.0E-7 1/yr design speed				277.	265.	290.	
31	92	4.071E+03	1.0000	94	93	93	
Point	1.493E+00	6.397E-01	3.485E+00	6.424E-04	2.752E-04	1.499E-03	
Line	6.745E+00	4.560E+00	9.976E+00	1.099E-04	7.432E-05	1.626E-04	
Strike Probability, 1/yr				7.523E-04	3.496E-04	1.662E-03	
1.0E-5 1/yr design speed				190.	172.	210.	
1.0E-6 1/yr design speed				244.	228.	262.	
1.0E-7 1/yr design speed				291.	276.	309.	
31	93	4.071E+03	1.0000	90	84	84	
Point	4.425E-01	2.498E-01	7.841E-01	1.823E-04	1.029E-04	3.230E-04	
Line	5.409E+00	3.902E+00	7.499E+00	8.440E-05	6.088E-05	1.170E-04	
Strike Probability, 1/yr				2.667E-04	1.638E-04	4.400E-04	
1.0E-5 1/yr design speed				169.	156.	182.	
1.0E-6 1/yr design speed				227.	216.	239.	
1.0E-7 1/yr design speed				277.	267.	289.	
31	94	4.071E+03	1.0000	139	122	122	
Point	2.986E+00	1.193E+00	7.472E+00	1.900E-03	7.591E-04	4.753E-03	
Line	7.622E+00	5.116E+00	1.135E+01	1.837E-04	1.233E-04	2.736E-04	
Strike Probability, 1/yr				2.083E-03	8.824E-04	5.027E-03	
1.0E-5 1/yr design speed				212.	193.	233.	
1.0E-6 1/yr design speed				262.	244.	283.	
1.0E-7 1/yr design speed				308.	291.	328.	
31	95	4.071E+03	1.0000	82	68	70	
Point	1.054E+00	3.337E-01	3.330E+00	3.957E-04	1.253E-04	1.250E-03	
Line	3.948E+00	2.388E+00	6.526E+00	5.613E-05	3.396E-05	9.278E-05	
Strike Probability, 1/yr				4.518E-04	1.592E-04	1.343E-03	
1.0E-5 1/yr design speed				177.	151.	203.	
1.0E-6 1/yr design speed				232.	210.	256.	
1.0E-7 1/yr design speed				280.	260.	303.	

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   31   96    4.071E+03 1.0000     65     58     58
Point  8.906E-01  2.412E-01  3.288E+00  2.650E-04  7.176E-05  9.783E-04
Line   3.133E+00  1.812E+00  5.415E+00  3.530E-05  2.042E-05  6.102E-05
Strike Probability, 1/yr                3.003E-04  9.219E-05  1.039E-03
1.0E-5 1/yr design speed                     166.       135.       197.
1.0E-6 1/yr design speed                     222.       197.       250.
1.0E-7 1/yr design speed                     272.       249.       297.

   31   97    4.071E+03 1.0000    158    137    138
Point  2.350E-01  1.242E-01  4.447E-01  1.699E-04  8.981E-05  3.216E-04
Line   2.282E+00  1.647E+00  3.162E+00  6.252E-05  4.512E-05  8.662E-05
Strike Probability, 1/yr                2.325E-04  1.349E-04  4.082E-04
1.0E-5 1/yr design speed                     164.       150.       179.
1.0E-6 1/yr design speed                     222.       210.       235.
1.0E-7 1/yr design speed                     273.       261.       285.

   31   98    4.071E+03 1.0000     81     65     67
Point  6.454E-01  1.930E-01  2.159E+00  2.393E-04  7.153E-05  8.003E-04
Line   2.760E+00  1.656E+00  4.600E+00  3.876E-05  2.326E-05  6.460E-05
Strike Probability, 1/yr                2.780E-04  9.479E-05  8.649E-04
1.0E-5 1/yr design speed                     165.       137.       193.
1.0E-6 1/yr design speed                     221.       199.       246.
1.0E-7 1/yr design speed                     271.       251.       295.

   31   99    4.071E+03 1.0000     92     80     80
Point  3.700E-01  1.443E-01  9.487E-01  1.558E-04  6.076E-05  3.995E-04
Line   2.141E+00  1.424E+00  3.219E+00  3.415E-05  2.271E-05  5.134E-05
Strike Probability, 1/yr                1.899E-04  8.348E-05  4.508E-04
1.0E-5 1/yr design speed                     156.       133.       178.
1.0E-6 1/yr design speed                     214.       196.       234.
1.0E-7 1/yr design speed                     265.       249.       283.

   31  100    4.071E+03 1.0000     85     78     79
Point  2.049E-01  9.077E-02  4.625E-01  7.972E-05  3.531E-05  1.799E-04
Line   1.875E+00  1.253E+00  2.807E+00  2.764E-05  1.847E-05  4.136E-05
Strike Probability, 1/yr                1.074E-04  5.378E-05  2.213E-04
1.0E-5 1/yr design speed                     141.       121.       161.
1.0E-6 1/yr design speed                     204.       188.       220.
1.0E-7 1/yr design speed                     256.       242.       272.

   31  101    4.071E+03 1.0000     35     34     34
Point  2.422E-01  6.374E-02  9.207E-01  3.881E-05  1.021E-05  1.475E-04
Line   1.672E+00  9.158E-01  3.051E+00  1.014E-05  5.557E-06  1.851E-05
Strike Probability, 1/yr                4.895E-05  1.577E-05  1.660E-04
1.0E-5 1/yr design speed                     115.        72.       151.
1.0E-6 1/yr design speed                     182.       155.       210.
1.0E-7 1/yr design speed                     237.       214.       262.
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31	102	4.071E+03	1.0000	89	75	75	
Point		1.914E-01	8.968E-02	4.084E-01	7.796E-05	3.653E-05	1.664E-04
Line		2.055E+00	1.385E+00	3.048E+00	3.171E-05	2.138E-05	4.704E-05
Strike	Probability, 1/yr				1.097E-04	5.791E-05	2.134E-04
1.0E-5	1/yr design speed				132.	105.	161.
1.0E-6	1/yr design speed				200.	173.	229.
1.0E-7	1/yr design speed				263.	234.	291.
31	103	4.071E+03	1.0000	49	42	42	
Point		1.843E-01	8.727E-02	3.891E-01	4.133E-05	1.957E-05	8.727E-05
Line		2.080E+00	1.384E+00	3.126E+00	1.767E-05	1.176E-05	2.656E-05
Strike	Probability, 1/yr				5.900E-05	3.133E-05	1.138E-04
1.0E-5	1/yr design speed				112.	85.	141.
1.0E-6	1/yr design speed				183.	155.	211.
1.0E-7	1/yr design speed				247.	218.	274.
31	104	4.071E+03	1.0000	6	6	6	
Point		8.463E-02	6.662E-03	1.075E+00	2.324E-06	1.830E-07	2.952E-05
Line		1.879E+00	2.969E-01	1.189E+01	1.954E-06	3.089E-07	1.236E-05
Strike	Probability, 1/yr				4.278E-06	4.918E-07	4.189E-05
1.0E-5	1/yr design speed				39.	39.	107.
1.0E-6	1/yr design speed				102.	39.	182.
1.0E-7	1/yr design speed				175.	102.	249.
31	105	3.664E+03	0.9000	8	6	6	
Point		1.102E+00	6.191E-02	1.961E+01	4.482E-05	2.519E-06	7.977E-04
Line		5.283E+00	1.796E+00	1.554E+01	8.142E-06	2.768E-06	2.395E-05
Strike	Probability, 1/yr				5.297E-05	5.286E-06	8.217E-04
1.0E-5	1/yr design speed				108.	39.	200.
1.0E-6	1/yr design speed				178.	103.	262.
1.0E-7	1/yr design speed				241.	172.	319.
31	106	1.221E+03	0.3000	6	5	5	
Point		5.535E-02	1.623E-02	1.888E-01	5.067E-06	1.486E-06	1.728E-05
Line		9.248E-01	4.678E-01	1.828E+00	3.207E-06	1.622E-06	6.339E-06
Strike	Probability, 1/yr				8.274E-06	3.108E-06	2.362E-05
1.0E-5	1/yr design speed				39.	39.	84.
1.0E-6	1/yr design speed				124.	86.	165.
1.0E-7	1/yr design speed				193.	157.	232.
31	107	8.142E+02	0.2000	1	0	0	
31	108	2.035E+03	0.5000	1	1	1	
Point		1.591E-01	0.000E+00	0.000E+00	1.456E-06	0.000E+00	0.000E+00
Line		1.000E+00	0.000E+00	0.000E+00	3.467E-07	0.000E+00	0.000E+00
Strike	Probability, 1/yr				1.803E-06	0.000E+00	0.000E+00
1.0E-5	1/yr design speed				39.	38.	38.
1.0E-6	1/yr design speed				68.	38.	38.
1.0E-7	1/yr design speed				147.	38.	38.

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   31  109    2.850E+03 0.7000      4      3      3
Point  5.475E-02  2.261E-03  1.326E+00  1.432E-06  5.914E-08  3.468E-05
Line   7.798E-01  3.293E-01  1.847E+00  7.726E-07  3.262E-07  1.830E-06
Strike Probability, 1/yr                 2.205E-06  3.853E-07  3.651E-05
1.0E-5 1/yr design speed                      39.        39.        101.
1.0E-6 1/yr design speed                      77.        39.        176.
1.0E-7 1/yr design speed                     154.        95.        241.

   31  110    3.257E+03 0.8000      6      3      3
Point  7.089E-03  4.631E-04  1.085E-01  2.434E-07  1.590E-08  3.725E-06
Line   3.883E-01  9.434E-02  1.598E+00  5.049E-07  1.227E-07  2.078E-06
Strike Probability, 1/yr                 7.483E-07  1.386E-07  5.803E-06
1.0E-5 1/yr design speed                      39.        39.         39.
1.0E-6 1/yr design speed                      39.        39.        118.
1.0E-7 1/yr design speed                     122.        55.        193.

   31  111    2.035E+03 0.5000      1      1      1
Point  8.523E-03  0.000E+00  0.000E+00  7.802E-08  0.000E+00  0.000E+00
Line   5.000E-01  0.000E+00  0.000E+00  1.734E-07  0.000E+00  0.000E+00
Strike Probability, 1/yr                 2.514E-07  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                      39.        38.         38.
1.0E-6 1/yr design speed                      39.        38.         38.
1.0E-7 1/yr design speed                      83.        38.         38.

   31  112    8.142E+02 0.2000      0      0      0

   31  113    2.035E+02 0.0500      0      0      0

   32   79    4.027E+02 0.1000     16     15     15
Point  4.647E-02  1.371E-02  1.575E-01  3.440E-05  1.015E-05  1.166E-04
Line   1.691E+00  7.563E-01  3.780E+00  4.742E-05  2.121E-05  1.060E-04
Strike Probability, 1/yr                 8.182E-05  3.136E-05  2.226E-04
1.0E-5 1/yr design speed                     133.       100.        163.
1.0E-6 1/yr design speed                     196.       171.        221.
1.0E-7 1/yr design speed                     249.       227.        271.

   32   80    3.221E+03 0.8000     37     35     35
Point  9.380E-02  4.480E-02  1.964E-01  2.007E-05  9.588E-06  4.203E-05
Line   1.671E+00  1.081E+00  2.584E+00  1.355E-05  8.760E-06  2.095E-05
Strike Probability, 1/yr                 3.362E-05  1.835E-05  6.297E-05
1.0E-5 1/yr design speed                     101.        76.        124.
1.0E-6 1/yr design speed                     170.       153.        188.
1.0E-7 1/yr design speed                     226.       211.        241.

   32   81    4.027E+03 1.0000     70     67     67
Point  2.792E-01  1.495E-01  5.213E-01  9.042E-05  4.842E-05  1.688E-04
Line   3.183E+00  2.257E+00  4.489E+00  3.905E-05  2.770E-05  5.507E-05
Strike Probability, 1/yr                 1.295E-04  7.612E-05  2.239E-04
1.0E-5 1/yr design speed                     142.       125.        159.
1.0E-6 1/yr design speed                     202.       188.        216.
1.0E-7 1/yr design speed                     253.       241.        266.
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32	82	4.027E+03	1.0000	51	47	47	
Point		3.156E-01	1.416E-01	7.037E-01	7.448E-05	3.341E-05	1.661E-04
Line		3.056E+00	1.955E+00	4.776E+00	2.732E-05	1.748E-05	4.269E-05
Strike Probability, 1/yr					1.018E-04	5.089E-05	2.088E-04
1.0E-5 1/yr design speed					140.	119.	160.
1.0E-6 1/yr design speed					203.	186.	220.
1.0E-7 1/yr design speed					255.	241.	271.
32	83	4.027E+03	1.0000	101	99	99	
Point		5.899E-01	3.285E-01	1.059E+00	2.757E-04	1.535E-04	4.950E-04
Line		3.884E+00	2.869E+00	5.257E+00	6.875E-05	5.079E-05	9.306E-05
Strike Probability, 1/yr					3.444E-04	2.043E-04	5.881E-04
1.0E-5 1/yr design speed					173.	159.	186.
1.0E-6 1/yr design speed					229.	217.	242.
1.0E-7 1/yr design speed					278.	267.	291.
32	84	4.027E+03	1.0000	102	100	100	
Point		5.281E-01	3.034E-01	9.190E-01	2.492E-04	1.432E-04	4.338E-04
Line		4.287E+00	3.098E+00	5.932E+00	7.664E-05	5.539E-05	1.061E-04
Strike Probability, 1/yr					3.259E-04	1.986E-04	5.398E-04
1.0E-5 1/yr design speed					172.	159.	186.
1.0E-6 1/yr design speed					229.	217.	241.
1.0E-7 1/yr design speed					278.	267.	291.
32	85	4.027E+03	1.0000	78	65	65	
Point		7.228E-01	3.256E-01	1.604E+00	2.609E-04	1.175E-04	5.791E-04
Line		6.016E+00	3.739E+00	9.679E+00	8.224E-05	5.111E-05	1.323E-04
Strike Probability, 1/yr					3.431E-04	1.686E-04	7.114E-04
1.0E-5 1/yr design speed					174.	155.	192.
1.0E-6 1/yr design speed					230.	214.	247.
1.0E-7 1/yr design speed					280.	265.	296.
32	86	4.027E+03	1.0000	97	89	89	
Point		1.584E+00	7.033E-01	3.567E+00	7.109E-04	3.156E-04	1.601E-03
Line		7.621E+00	4.963E+00	1.170E+01	1.296E-04	8.437E-05	1.990E-04
Strike Probability, 1/yr					8.405E-04	4.000E-04	1.800E-03
1.0E-5 1/yr design speed					194.	176.	212.
1.0E-6 1/yr design speed					247.	230.	264.
1.0E-7 1/yr design speed					294.	279.	311.
32	87	4.027E+03	1.0000	70	69	69	
Point		1.175E+00	4.666E-01	2.960E+00	3.807E-04	1.511E-04	9.588E-04
Line		6.585E+00	3.878E+00	1.118E+01	8.079E-05	4.757E-05	1.372E-04
Strike Probability, 1/yr					4.614E-04	1.987E-04	1.096E-03
1.0E-5 1/yr design speed					179.	158.	201.
1.0E-6 1/yr design speed					234.	216.	254.
1.0E-7 1/yr design speed					283.	266.	302.

32	88	4.027E+03	1.0000	97	90	90		
Point	9.175E-01	4.839E-01	1.739E+00	4.118E-04	2.172E-04	7.808E-04		
Line	6.992E+00	4.819E+00	1.015E+01	1.189E-04	8.193E-05	1.725E-04		
Strike Probability, 1/yr				5.307E-04	2.991E-04	9.532E-04		
1.0E-5 1/yr design speed				185.	170.	200.		
1.0E-6 1/yr design speed				239.	226.	253.		
1.0E-7 1/yr design speed				288.	275.	301.		
32	89	4.027E+03	1.0000	176	157	157		
Point	1.853E+00	1.132E+00	3.033E+00	1.509E-03	9.221E-04	2.470E-03		
Line	1.098E+01	8.251E+00	1.460E+01	3.386E-04	2.545E-04	4.505E-04		
Strike Probability, 1/yr				1.848E-03	1.177E-03	2.921E-03		
1.0E-5 1/yr design speed				214.	203.	226.		
1.0E-6 1/yr design speed				265.	254.	276.		
1.0E-7 1/yr design speed				310.	300.	322.		
32	90	4.027E+03	1.0000	210	181	181		
Point	7.414E-01	4.925E-01	1.116E+00	7.204E-04	4.786E-04	1.084E-03		
Line	6.854E+00	5.385E+00	8.724E+00	2.523E-04	1.982E-04	3.211E-04		
Strike Probability, 1/yr				9.727E-04	6.768E-04	1.406E-03		
1.0E-5 1/yr design speed				201.	192.	211.		
1.0E-6 1/yr design speed				254.	245.	264.		
1.0E-7 1/yr design speed				301.	292.	311.		
32	91	4.027E+03	1.0000	177	167	167		
Point	7.876E-01	4.815E-01	1.288E+00	6.451E-04	3.944E-04	1.055E-03		
Line	6.947E+00	5.219E+00	9.246E+00	2.155E-04	1.619E-04	2.868E-04		
Strike Probability, 1/yr				8.606E-04	5.563E-04	1.342E-03		
1.0E-5 1/yr design speed				198.	187.	209.		
1.0E-6 1/yr design speed				251.	241.	262.		
1.0E-7 1/yr design speed				299.	288.	309.		
32	92	4.027E+03	1.0000	145	136	136		
Point	5.898E-01	3.620E-01	9.611E-01	3.957E-04	2.429E-04	6.448E-04		
Line	7.655E+00	5.517E+00	1.062E+01	1.945E-04	1.402E-04	2.699E-04		
Strike Probability, 1/yr				5.903E-04	3.831E-04	9.148E-04		
1.0E-5 1/yr design speed				191.	180.	203.		
1.0E-6 1/yr design speed				246.	235.	257.		
1.0E-7 1/yr design speed				294.	284.	305.		
32	93	4.027E+03	1.0000	195	188	188		
Point	1.242E+00	7.291E-01	2.115E+00	1.121E-03	6.579E-04	1.909E-03		
Line	7.220E+00	5.359E+00	9.728E+00	2.468E-04	1.832E-04	3.325E-04		
Strike Probability, 1/yr				1.367E-03	8.411E-04	2.241E-03		
1.0E-5 1/yr design speed				206.	195.	219.		
1.0E-6 1/yr design speed				258.	247.	270.		
1.0E-7 1/yr design speed				305.	293.	317.		

32	94	4.027E+03	1.0000	202	171	171		
Point		9.336E-01	5.029E-01	1.733E+00	8.727E-04	4.701E-04	1.620E-03	
Line		4.355E+00	3.257E+00	5.822E+00	1.542E-04	1.153E-04	2.061E-04	
Strike Probability, 1/yr					1.027E-03	5.854E-04	1.826E-03	
1.0E-5 1/yr design speed					198.	185.	213.	
1.0E-6 1/yr design speed					251.	238.	264.	
1.0E-7 1/yr design speed					298.	285.	311.	
32	95	4.027E+03	1.0000	148	119	120		
Point		5.536E-01	2.722E-01	1.126E+00	3.792E-04	1.864E-04	7.711E-04	
Line		3.310E+00	2.359E+00	4.646E+00	8.587E-05	6.119E-05	1.205E-04	
Strike Probability, 1/yr					4.650E-04	2.476E-04	8.916E-04	
1.0E-5 1/yr design speed					180.	164.	196.	
1.0E-6 1/yr design speed					235.	221.	250.	
1.0E-7 1/yr design speed					284.	270.	298.	
32	96	4.027E+03	1.0000	192	156	158		
Point		3.643E-01	1.755E-01	7.564E-01	3.237E-04	1.559E-04	6.720E-04	
Line		1.875E+00	1.387E+00	2.534E+00	6.309E-05	4.668E-05	8.526E-05	
Strike Probability, 1/yr					3.868E-04	2.026E-04	7.573E-04	
1.0E-5 1/yr design speed					174.	158.	191.	
1.0E-6 1/yr design speed					230.	216.	245.	
1.0E-7 1/yr design speed					279.	266.	294.	
32	97	4.027E+03	1.0000	246	217	217		
Point		2.358E-01	1.425E-01	3.901E-01	2.684E-04	1.623E-04	4.440E-04	
Line		2.104E+00	1.634E+00	2.709E+00	9.071E-05	7.045E-05	1.168E-04	
Strike Probability, 1/yr					3.591E-04	2.327E-04	5.608E-04	
1.0E-5 1/yr design speed					176.	164.	187.	
1.0E-6 1/yr design speed					232.	222.	243.	
1.0E-7 1/yr design speed					281.	271.	292.	
32	98	4.027E+03	1.0000	132	118	118		
Point		1.677E-01	8.617E-02	3.266E-01	1.025E-04	5.263E-05	1.995E-04	
Line		2.188E+00	1.541E+00	3.106E+00	5.062E-05	3.566E-05	7.186E-05	
Strike Probability, 1/yr					1.531E-04	8.829E-05	2.713E-04	
1.0E-5 1/yr design speed					154.	139.	169.	
1.0E-6 1/yr design speed					215.	202.	228.	
1.0E-7 1/yr design speed					266.	255.	279.	
32	99	4.027E+03	1.0000	190	174	174		
Point		1.824E-01	9.730E-02	3.420E-01	1.604E-04	8.554E-05	3.007E-04	
Line		1.362E+00	1.040E+00	1.784E+00	4.535E-05	3.462E-05	5.940E-05	
Strike Probability, 1/yr					2.057E-04	1.202E-04	3.601E-04	
1.0E-5 1/yr design speed					159.	145.	174.	
1.0E-6 1/yr design speed					218.	206.	231.	
1.0E-7 1/yr design speed					268.	257.	281.	

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   32  100    4.027E+03 1.0000    158    149    149
Point  1.489E-01  8.465E-02  2.620E-01  1.089E-04  6.189E-05  1.916E-04
Line   1.644E+00  1.236E+00  2.188E+00  4.553E-05  3.422E-05  6.058E-05
Strike Probability, 1/yr                1.544E-04  9.611E-05  2.522E-04
1.0E-5 1/yr design speed                    153.       140.       166.
1.0E-6 1/yr design speed                    214.       203.       225.
1.0E-7 1/yr design speed                    265.       255.       277.

   32  101    4.027E+03 1.0000    118    107    107
Point  1.213E-01  7.224E-02  2.038E-01  6.626E-05  3.944E-05  1.113E-04
Line   1.802E+00  1.353E+00  2.400E+00  3.727E-05  2.799E-05  4.964E-05
Strike Probability, 1/yr                1.035E-04  6.743E-05  1.609E-04
1.0E-5 1/yr design speed                    143.       130.       156.
1.0E-6 1/yr design speed                    206.       196.       217.
1.0E-7 1/yr design speed                    259.       249.       269.

   32  102    4.027E+03 1.0000     93     86     86
Point  1.209E-01  6.230E-02  2.346E-01  5.202E-05  2.681E-05  1.009E-04
Line   1.850E+00  1.258E+00  2.719E+00  3.015E-05  2.051E-05  4.433E-05
Strike Probability, 1/yr                8.217E-05  4.732E-05  1.453E-04
1.0E-5 1/yr design speed                    123.        99.       149.
1.0E-6 1/yr design speed                    193.       168.       219.
1.0E-7 1/yr design speed                    256.       230.       282.

   32  103    4.027E+03 1.0000     76     56     56
Point  1.019E-01  3.475E-02  2.985E-01  3.582E-05  1.222E-05  1.050E-04
Line   1.241E+00  7.827E-01  1.968E+00  1.653E-05  1.043E-05  2.622E-05
Strike Probability, 1/yr                5.235E-05  2.265E-05  1.312E-04
1.0E-5 1/yr design speed                    108.        74.       146.
1.0E-6 1/yr design speed                    180.       147.       215.
1.0E-7 1/yr design speed                    244.       211.       277.

   32  104    4.027E+03 1.0000     41     29     29
Point  2.347E-02  7.857E-03  7.010E-02  4.452E-06  1.491E-06  1.330E-05
Line   5.214E-01  3.217E-01  8.448E-01  3.747E-06  2.312E-06  6.071E-06
Strike Probability, 1/yr                8.199E-06  3.803E-06  1.937E-05
1.0E-5 1/yr design speed                     39.        39.        76.
1.0E-6 1/yr design speed                    124.        93.       159.
1.0E-7 1/yr design speed                    194.       164.       227.

   32  105    4.027E+03 1.0000      2      0      0

   32  106    4.027E+03 1.0000     12      8      8
Point  6.810E-02  8.092E-03  5.731E-01  3.781E-06  4.493E-07  3.182E-05
Line   1.045E+00  4.221E-01  2.587E+00  2.198E-06  8.877E-07  5.441E-06
Strike Probability, 1/yr                5.979E-06  1.337E-06  3.726E-05
1.0E-5 1/yr design speed                     39.        39.       102.
1.0E-6 1/yr design speed                    113.        53.       178.
1.0E-7 1/yr design speed                    184.       133.       243.
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32	107	4.027E+03	1.0000	4	3	3		
Point		7.212E-02	5.098E-03	1.020E+00	1.335E-06	9.436E-08	1.888E-05	
Line		6.297E+00	2.704E-01	1.466E+02	4.415E-06	1.896E-07	1.028E-04	
Strike Probability, 1/yr					5.749E-06	2.840E-07	1.217E-04	
1.0E-5 1/yr design speed					39.	39.	146.	
1.0E-6 1/yr design speed					113.	39.	220.	
1.0E-7 1/yr design speed					187.	83.	287.	
32	108	4.027E+03	1.0000	6	2	2		
Point		5.618E-01	8.451E-05	3.735E+03	1.560E-05	2.346E-09	1.037E-01	
Line		7.179E+00	7.549E-02	6.827E+02	7.550E-06	7.939E-08	7.180E-04	
Strike Probability, 1/yr					2.315E-05	8.174E-08	1.044E-01	
1.0E-5 1/yr design speed					79.	38.	324.	
1.0E-6 1/yr design speed					155.	38.	378.	
1.0E-7 1/yr design speed					222.	38.	0.	
32	109	4.027E+03	1.0000	4	2	2		
Point		1.321E-02	2.668E-04	6.544E-01	2.446E-07	4.939E-09	1.211E-05	
Line		1.000E-01	0.000E+00	0.000E+00	7.011E-08	0.000E+00	0.000E+00	
Strike Probability, 1/yr					3.147E-07	4.939E-09	1.211E-05	
1.0E-5 1/yr design speed					39.	38.	51.	
1.0E-6 1/yr design speed					39.	38.	142.	
1.0E-7 1/yr design speed					90.	38.	210.	
32	110	4.027E+03	1.0000	9	6	6		
Point		3.039E-02	4.176E-03	2.211E-01	1.265E-06	1.739E-07	9.208E-06	
Line		2.371E+00	3.497E-01	1.608E+01	3.741E-06	5.517E-07	2.536E-05	
Strike Probability, 1/yr					5.006E-06	7.256E-07	3.457E-05	
1.0E-5 1/yr design speed					39.	39.	100.	
1.0E-6 1/yr design speed					108.	39.	180.	
1.0E-7 1/yr design speed					182.	115.	250.	
32	111	4.027E+03	1.0000	18	15	15		
Point		3.938E-02	1.483E-02	1.046E-01	3.280E-06	1.235E-06	8.714E-06	
Line		1.448E+00	8.661E-01	2.421E+00	4.569E-06	2.732E-06	7.639E-06	
Strike Probability, 1/yr					7.849E-06	3.967E-06	1.635E-05	
1.0E-5 1/yr design speed					39.	39.	67.	
1.0E-6 1/yr design speed					123.	95.	154.	
1.0E-7 1/yr design speed					194.	166.	224.	
32	112	4.027E+03	1.0000	4	3	3		
Point		1.618E-02	1.341E-03	1.952E-01	2.995E-07	2.482E-08	3.614E-06	
Line		5.866E-01	1.778E-01	1.935E+00	4.113E-07	1.247E-07	1.357E-06	
Strike Probability, 1/yr					7.107E-07	1.495E-07	4.970E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					39.	39.	113.	
1.0E-7 1/yr design speed					120.	58.	187.	

32	113	3.624E+03	0.9000	3	2	2		
Point		1.407E-01	4.710E-02	4.205E-01	2.171E-06	7.265E-07	6.485E-06	
Line		1.922E+01	1.402E-02	2.636E+04	1.123E-05	8.192E-09	1.540E-02	
Strike Probability, 1/yr					1.340E-05	7.347E-07	1.541E-02	
1.0E-5 1/yr design speed					54.	39.	296.	
1.0E-6 1/yr design speed					142.	39.	360.	
1.0E-7 1/yr design speed					212.	110.	422.	
32	114	2.416E+03	0.6000	8	3	3		
Point		1.407E-02	2.628E-03	7.532E-02	8.680E-07	1.621E-07	4.647E-06	
Line		9.826E-01	4.816E-01	2.005E+00	2.296E-06	1.125E-06	4.686E-06	
Strike Probability, 1/yr					3.164E-06	1.288E-06	9.333E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					92.	51.	135.	
1.0E-7 1/yr design speed					168.	134.	208.	
32	115	1.208E+03	0.3000	2	2	2		
Point		1.440E-02	6.996E-04	2.965E-01	4.443E-07	2.158E-08	9.147E-06	
Line		9.098E-01	1.724E-01	4.802E+00	1.063E-06	2.014E-07	5.611E-06	
Strike Probability, 1/yr					1.507E-06	2.230E-07	1.476E-05	
1.0E-5 1/yr design speed					39.	39.	62.	
1.0E-6 1/yr design speed					60.	39.	150.	
1.0E-7 1/yr design speed					145.	76.	220.	
32	116	1.611E+03	0.4000	0	0	0		
32	117	4.027E+02	0.1000	9	7	7		
Point		2.009E-02	2.425E-03	1.665E-01	8.368E-06	1.010E-06	6.934E-05	
Line		2.470E-01	1.292E-01	4.721E-01	3.896E-06	2.038E-06	7.448E-06	
Strike Probability, 1/yr					1.226E-05	3.048E-06	7.679E-05	
1.0E-5 1/yr design speed					50.	39.	128.	
1.0E-6 1/yr design speed					136.	86.	198.	
1.0E-7 1/yr design speed					204.	158.	261.	
33	77	1.991E+02	0.0500	1	1	1		
Point		3.068E-02	0.000E+00	0.000E+00	2.872E-06	0.000E+00	0.000E+00	
Line		2.000E+00	0.000E+00	0.000E+00	7.091E-06	0.000E+00	0.000E+00	
Strike Probability, 1/yr					9.963E-06	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					39.	38.	38.	
1.0E-6 1/yr design speed					141.	38.	38.	
1.0E-7 1/yr design speed					203.	38.	38.	
33	78	7.963E+02	0.2000	23	21	21		
Point		6.634E-02	2.002E-02	2.198E-01	3.570E-05	1.078E-05	1.183E-04	
Line		1.393E+00	6.795E-01	2.858E+00	2.841E-05	1.385E-05	5.825E-05	
Strike Probability, 1/yr					6.411E-05	2.463E-05	1.765E-04	
1.0E-5 1/yr design speed					124.	89.	154.	
1.0E-6 1/yr design speed					188.	162.	212.	
1.0E-7 1/yr design speed					241.	219.	263.	

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   33   79    3.583E+03 0.9000      50      50      50
Point  9.580E-02  5.196E-02  1.766E-01  2.491E-05  1.351E-05  4.592E-05
Line   1.961E+00  1.344E+00  2.861E+00  1.931E-05  1.323E-05  2.818E-05
Strike Probability, 1/yr                 4.422E-05  2.674E-05  7.410E-05
1.0E-5 1/yr design speed                     111.        91.       130.
1.0E-6 1/yr design speed                     178.       163.       193.
1.0E-7 1/yr design speed                     233.       220.       246.

   33   80    3.981E+03 1.0000      89      86      86
Point  1.720E-01  9.259E-02  3.195E-01  7.164E-05  3.856E-05  1.331E-04
Line   2.756E+00  1.851E+00  4.103E+00  4.348E-05  2.920E-05  6.473E-05
Strike Probability, 1/yr                 1.151E-04  6.777E-05  1.978E-04
1.0E-5 1/yr design speed                     140.       123.       157.
1.0E-6 1/yr design speed                     201.       186.       215.
1.0E-7 1/yr design speed                     253.       240.       265.

   33   81    3.981E+03 1.0000      91      86      86
Point  7.156E-01  3.304E-01  1.550E+00  3.047E-04  1.407E-04  6.600E-04
Line   4.416E+00  2.891E+00  6.746E+00  7.124E-05  4.663E-05  1.088E-04
Strike Probability, 1/yr                 3.760E-04  1.873E-04  7.689E-04
1.0E-5 1/yr design speed                     169.       149.       189.
1.0E-6 1/yr design speed                     224.       207.       241.
1.0E-7 1/yr design speed                     273.       257.       287.

   33   82    3.981E+03 1.0000      49      49      49
Point  5.766E-01  2.424E-01  1.372E+00  1.322E-04  5.558E-05  3.146E-04
Line   2.769E+00  1.950E+00  3.930E+00  2.405E-05  1.694E-05  3.414E-05
Strike Probability, 1/yr                 1.563E-04  7.252E-05  3.487E-04
1.0E-5 1/yr design speed                     149.       128.       171.
1.0E-6 1/yr design speed                     209.       191.       227.
1.0E-7 1/yr design speed                     260.       244.       277.

   33   83    3.981E+03 1.0000      55      55      55
Point  2.456E+00  7.491E-01  8.051E+00  6.321E-04  1.928E-04  2.072E-03
Line   6.438E+00  3.784E+00  1.095E+01  6.277E-05  3.689E-05  1.068E-04
Strike Probability, 1/yr                 6.949E-04  2.297E-04  2.179E-03
1.0E-5 1/yr design speed                     186.       159.       214.
1.0E-6 1/yr design speed                     239.       216.       265.
1.0E-7 1/yr design speed                     287.       265.       311.

   33   84    3.981E+03 1.0000     125     122     122
Point  8.662E-01  4.685E-01  1.601E+00  5.067E-04  2.741E-04  9.368E-04
Line   4.655E+00  3.358E+00  6.454E+00  1.032E-04  7.441E-05  1.430E-04
Strike Probability, 1/yr                 6.099E-04  3.485E-04  1.080E-03
1.0E-5 1/yr design speed                     186.       172.       201.
1.0E-6 1/yr design speed                     240.       228.       254.
1.0E-7 1/yr design speed                     288.       276.       302.
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33	85	3.981E+03	1.0000	107	102	102		
Point		7.456E-01	4.290E-01	1.296E+00	3.733E-04	2.148E-04	6.489E-04	
Line		5.874E+00	4.268E+00	8.083E+00	1.114E-04	8.096E-05	1.533E-04	
Strike Probability, 1/yr					4.848E-04	2.958E-04	8.022E-04	
1.0E-5 1/yr design speed					182.	170.	196.	
1.0E-6 1/yr design speed					238.	226.	250.	
1.0E-7 1/yr design speed					286.	275.	298.	
33	86	3.981E+03	1.0000	149	129	129		
Point		1.424E+00	7.807E-01	2.598E+00	9.931E-04	5.444E-04	1.812E-03	
Line		6.026E+00	4.467E+00	8.129E+00	1.592E-04	1.180E-04	2.147E-04	
Strike Probability, 1/yr					1.152E-03	6.624E-04	2.026E-03	
1.0E-5 1/yr design speed					201.	187.	215.	
1.0E-6 1/yr design speed					253.	240.	266.	
1.0E-7 1/yr design speed					299.	287.	313.	
33	87	3.981E+03	1.0000	141	135	135		
Point		1.949E+00	9.970E-01	3.808E+00	1.286E-03	6.579E-04	2.513E-03	
Line		5.549E+00	4.071E+00	7.563E+00	1.387E-04	1.018E-04	1.890E-04	
Strike Probability, 1/yr					1.425E-03	7.597E-04	2.702E-03	
1.0E-5 1/yr design speed					204.	189.	220.	
1.0E-6 1/yr design speed					255.	241.	271.	
1.0E-7 1/yr design speed					301.	287.	317.	
33	88	3.981E+03	1.0000	121	107	107		
Point		2.375E+00	1.201E+00	4.699E+00	1.345E-03	6.800E-04	2.661E-03	
Line		9.590E+00	6.782E+00	1.356E+01	2.057E-04	1.455E-04	2.908E-04	
Strike Probability, 1/yr					1.551E-03	8.255E-04	2.952E-03	
1.0E-5 1/yr design speed					207.	192.	223.	
1.0E-6 1/yr design speed					259.	245.	274.	
1.0E-7 1/yr design speed					305.	291.	320.	
33	89	3.981E+03	1.0000	105	89	89		
Point		1.416E+00	7.335E-01	2.735E+00	6.960E-04	3.604E-04	1.344E-03	
Line		6.552E+00	4.860E+00	8.834E+00	1.220E-04	9.046E-05	1.644E-04	
Strike Probability, 1/yr					8.180E-04	4.509E-04	1.509E-03	
1.0E-5 1/yr design speed					193.	178.	208.	
1.0E-6 1/yr design speed					246.	233.	260.	
1.0E-7 1/yr design speed					293.	280.	307.	
33	90	3.981E+03	1.0000	144	129	129		
Point		6.464E-01	4.253E-01	9.822E-01	4.356E-04	2.866E-04	6.619E-04	
Line		7.256E+00	5.578E+00	9.438E+00	1.852E-04	1.424E-04	2.409E-04	
Strike Probability, 1/yr					6.208E-04	4.290E-04	9.029E-04	
1.0E-5 1/yr design speed					191.	181.	201.	
1.0E-6 1/yr design speed					246.	236.	255.	
1.0E-7 1/yr design speed					294.	285.	304.	

33	91	3.981E+03	1.0000	95	85	85		
Point	1.681E+00	8.083E-01	3.494E+00	7.472E-04	3.594E-04	1.553E-03		
Line	7.534E+00	5.170E+00	1.098E+01	1.269E-04	8.706E-05	1.849E-04		
Strike Probability, 1/yr				8.740E-04	4.464E-04	1.738E-03		
1.0E-5 1/yr design speed				194.	178.	211.		
1.0E-6 1/yr design speed				247.	232.	263.		
1.0E-7 1/yr design speed				294.	280.	310.		
33	92	3.981E+03	1.0000	76	71	71		
Point	1.420E+00	6.244E-01	3.228E+00	5.049E-04	2.221E-04	1.148E-03		
Line	7.142E+00	4.624E+00	1.103E+01	9.623E-05	6.229E-05	1.486E-04		
Strike Probability, 1/yr				6.012E-04	2.844E-04	1.297E-03		
1.0E-5 1/yr design speed				185.	167.	205.		
1.0E-6 1/yr design speed				239.	223.	257.		
1.0E-7 1/yr design speed				288.	272.	305.		
33	93	3.981E+03	1.0000	113	106	106		
Point	1.490E+00	8.033E-01	2.765E+00	7.881E-04	4.248E-04	1.462E-03		
Line	6.409E+00	4.627E+00	8.878E+00	1.284E-04	9.268E-05	1.778E-04		
Strike Probability, 1/yr				9.165E-04	5.175E-04	1.640E-03		
1.0E-5 1/yr design speed				195.	181.	210.		
1.0E-6 1/yr design speed				248.	235.	262.		
1.0E-7 1/yr design speed				295.	282.	309.		
33	94	3.981E+03	1.0000	149	126	126		
Point	1.260E+00	6.426E-01	2.469E+00	8.784E-04	4.481E-04	1.722E-03		
Line	6.531E+00	4.736E+00	9.007E+00	1.725E-04	1.251E-04	2.379E-04		
Strike Probability, 1/yr				1.051E-03	5.732E-04	1.960E-03		
1.0E-5 1/yr design speed				200.	185.	215.		
1.0E-6 1/yr design speed				252.	239.	266.		
1.0E-7 1/yr design speed				299.	286.	313.		
33	95	3.981E+03	1.0000	126	104	104		
Point	8.152E-01	3.315E-01	2.004E+00	4.807E-04	1.955E-04	1.182E-03		
Line	3.358E+00	2.298E+00	4.907E+00	7.500E-05	5.133E-05	1.096E-04		
Strike Probability, 1/yr				5.557E-04	2.468E-04	1.292E-03		
1.0E-5 1/yr design speed				183.	163.	203.		
1.0E-6 1/yr design speed				237.	219.	256.		
1.0E-7 1/yr design speed				285.	269.	303.		
33	96	3.981E+03	1.0000	188	159	160		
Point	6.144E-01	3.130E-01	1.206E+00	5.405E-04	2.754E-04	1.061E-03		
Line	3.996E+00	2.875E+00	5.553E+00	1.332E-04	9.582E-05	1.851E-04		
Strike Probability, 1/yr				6.737E-04	3.712E-04	1.246E-03		
1.0E-5 1/yr design speed				190.	175.	205.		
1.0E-6 1/yr design speed				244.	231.	258.		
1.0E-7 1/yr design speed				291.	279.	305.		

33	97	3.981E+03	1.0000	152	132	132	
Point		5.543E-01	2.482E-01	1.238E+00	3.943E-04	1.766E-04	8.803E-04
Line		3.157E+00	2.170E+00	4.592E+00	8.507E-05	5.848E-05	1.237E-04
Strike Probability, 1/yr					4.793E-04	2.351E-04	1.004E-03
1.0E-5 1/yr design speed					180.	163.	199.
1.0E-6 1/yr design speed					235.	220.	252.
1.0E-7 1/yr design speed					284.	269.	300.
33	98	3.981E+03	1.0000	128	114	114	
Point		8.529E-01	3.330E-01	2.184E+00	5.109E-04	1.995E-04	1.309E-03
Line		3.026E+00	2.022E+00	4.528E+00	6.866E-05	4.588E-05	1.028E-04
Strike Probability, 1/yr					5.796E-04	2.454E-04	1.411E-03
1.0E-5 1/yr design speed					183.	162.	205.
1.0E-6 1/yr design speed					237.	218.	257.
1.0E-7 1/yr design speed					285.	268.	304.
33	99	3.981E+03	1.0000	122	104	104	
Point		3.766E-01	1.785E-01	7.944E-01	2.150E-04	1.019E-04	4.536E-04
Line		3.014E+00	2.121E+00	4.285E+00	6.519E-05	4.586E-05	9.266E-05
Strike Probability, 1/yr					2.802E-04	1.478E-04	5.462E-04
1.0E-5 1/yr design speed					168.	152.	185.
1.0E-6 1/yr design speed					225.	211.	240.
1.0E-7 1/yr design speed					275.	262.	290.
33	100	3.981E+03	1.0000	75	72	72	
Point		2.300E-01	8.686E-02	6.089E-01	8.072E-05	3.049E-05	2.137E-04
Line		2.795E+00	1.611E+00	4.851E+00	3.716E-05	2.142E-05	6.449E-05
Strike Probability, 1/yr					1.179E-04	5.191E-05	2.782E-04
1.0E-5 1/yr design speed					146.	122.	169.
1.0E-6 1/yr design speed					208.	189.	227.
1.0E-7 1/yr design speed					260.	243.	278.
33	101	3.981E+03	1.0000	198	182	182	
Point		1.753E-01	1.080E-01	2.845E-01	1.624E-04	1.001E-04	2.636E-04
Line		2.673E+00	2.025E+00	3.529E+00	9.384E-05	7.108E-05	1.239E-04
Strike Probability, 1/yr					2.562E-04	1.711E-04	3.875E-04
1.0E-5 1/yr design speed					170.	159.	181.
1.0E-6 1/yr design speed					228.	218.	238.
1.0E-7 1/yr design speed					278.	269.	288.
33	102	3.981E+03	1.0000	183	166	166	
Point		3.936E-01	2.145E-01	7.223E-01	3.371E-04	1.837E-04	6.186E-04
Line		3.185E+00	2.340E+00	4.336E+00	1.033E-04	7.591E-05	1.407E-04
Strike Probability, 1/yr					4.404E-04	2.596E-04	7.592E-04
1.0E-5 1/yr design speed					174.	149.	199.
1.0E-6 1/yr design speed					238.	212.	263.
1.0E-7 1/yr design speed					298.	271.	322.

33	103	3.981E+03	1.0000	34	20	20	
Point	3.250E-02	1.232E-02	8.576E-02	5.172E-06	1.960E-06	1.365E-05	
Line	1.495E+00	7.307E-01	3.060E+00	9.012E-06	4.404E-06	1.844E-05	
Strike Probability, 1/yr				1.418E-05	6.364E-06	3.209E-05	
1.0E-5 1/yr design speed				57.	39.	97.	
1.0E-6 1/yr design speed				142.	110.	176.	
1.0E-7 1/yr design speed				212.	179.	245.	
33	104	3.981E+03	1.0000	32	22	22	
Point	2.668E-03	1.579E-03	4.509E-03	3.996E-07	2.365E-07	6.753E-07	
Line	2.249E-01	1.602E-01	3.157E-01	1.276E-06	9.088E-07	1.791E-06	
Strike Probability, 1/yr				1.675E-06	1.145E-06	2.466E-06	
1.0E-5 1/yr design speed				39.	39.	39.	
1.0E-6 1/yr design speed				65.	46.	86.	
1.0E-7 1/yr design speed				149.	130.	169.	
33	105	3.981E+03	1.0000	5	4	4	
Point	2.254E-01	2.098E-03	2.420E+01	5.273E-06	4.910E-08	5.664E-04	
Line	2.077E+00	2.460E-01	1.754E+01	1.841E-06	2.181E-07	1.554E-05	
Strike Probability, 1/yr				7.114E-06	2.672E-07	5.819E-04	
1.0E-5 1/yr design speed				39.	39.	190.	
1.0E-6 1/yr design speed				118.	39.	253.	
1.0E-7 1/yr design speed				188.	82.	311.	
33	106	3.981E+03	1.0000	4	2	2	
Point	2.557E-03	1.096E-03	5.965E-03	4.786E-08	2.052E-08	1.117E-07	
Line	2.500E-01	1.966E-01	3.181E-01	1.773E-07	1.394E-07	2.255E-07	
Strike Probability, 1/yr				2.252E-07	1.599E-07	3.372E-07	
1.0E-5 1/yr design speed				39.	39.	39.	
1.0E-6 1/yr design speed				39.	39.	39.	
1.0E-7 1/yr design speed				79.	61.	99.	
33	107	3.981E+03	1.0000	3	2	2	
Point	1.582E+00	1.402E-06	1.786E+06	2.221E-05	1.968E-11	2.508E+01	
Line	2.014E-01	9.716E-02	4.175E-01	1.071E-07	5.167E-08	2.220E-07	
Strike Probability, 1/yr				2.232E-05	5.169E-08	2.508E+01	
1.0E-5 1/yr design speed				77.	38.	0.	
1.0E-6 1/yr design speed				152.	38.	0.	
1.0E-7 1/yr design speed				216.	38.	0.	
33	108	3.981E+03	1.0000	0	0	0	
33	109	3.981E+03	1.0000	0	0	0	
33	110	3.981E+03	1.0000	3	1	1	
Point	1.534E-03	0.000E+00	0.000E+00	2.154E-08	0.000E+00	0.000E+00	
Line	1.000E-01	0.000E+00	0.000E+00	5.318E-08	0.000E+00	0.000E+00	
Strike Probability, 1/yr				7.472E-08	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed				38.	38.	38.	
1.0E-6 1/yr design speed				38.	38.	38.	
1.0E-7 1/yr design speed				38.	38.	38.	

33	111	3.981E+03	1.0000	29	24	24		
Point		2.821E-01	8.705E-02	9.144E-01	3.829E-05	1.181E-05	1.241E-04	
Line		4.555E+00	2.303E+00	9.007E+00	2.342E-05	1.184E-05	4.630E-05	
Strike	Probability, 1/yr				6.171E-05	2.366E-05	1.704E-04	
1.0E-5	1/yr design speed				114.	76.	154.	
1.0E-6	1/yr design speed				185.	149.	223.	
1.0E-7	1/yr design speed				249.	213.	286.	
33	112	3.981E+03	1.0000	25	17	17		
Point		1.653E-02	6.921E-03	3.949E-02	1.934E-06	8.097E-07	4.620E-06	
Line		7.103E-01	4.249E-01	1.187E+00	3.148E-06	1.883E-06	5.262E-06	
Strike	Probability, 1/yr				5.082E-06	2.693E-06	9.882E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				108.	82.	137.	
1.0E-7	1/yr design speed				182.	155.	210.	
33	113	3.981E+03	1.0000	1	0	0		
33	114	3.981E+03	1.0000	2	1	1		
Point		2.273E-03	0.000E+00	0.000E+00	2.127E-08	0.000E+00	0.000E+00	
Line		2.000E-01	0.000E+00	0.000E+00	7.091E-08	0.000E+00	0.000E+00	
Strike	Probability, 1/yr				9.218E-08	0.000E+00	0.000E+00	
1.0E-5	1/yr design speed				38.	38.	38.	
1.0E-6	1/yr design speed				38.	38.	38.	
1.0E-7	1/yr design speed				38.	38.	38.	
33	115	3.981E+03	1.0000	5	4	4		
Point		1.441E-01	5.533E-03	3.755E+00	3.373E-06	1.295E-07	8.786E-05	
Line		2.091E+00	4.272E-01	1.024E+01	1.854E-06	3.787E-07	9.074E-06	
Strike	Probability, 1/yr				5.226E-06	5.082E-07	9.693E-05	
1.0E-5	1/yr design speed				39.	39.	135.	
1.0E-6	1/yr design speed				108.	39.	205.	
1.0E-7	1/yr design speed				180.	104.	267.	
33	116	3.981E+03	1.0000	4	4	4		
Point		3.674E-03	1.512E-03	8.924E-03	6.877E-08	2.831E-08	1.671E-07	
Line		2.923E-01	1.015E-01	8.416E-01	2.073E-07	7.200E-08	5.968E-07	
Strike	Probability, 1/yr				2.761E-07	1.003E-07	7.638E-07	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				39.	39.	39.	
1.0E-7	1/yr design speed				86.	40.	129.	
33	117	2.787E+03	0.7000	32	30	30		
Point		3.303E-02	1.451E-02	7.521E-02	7.066E-06	3.103E-06	1.609E-05	
Line		1.101E+00	6.279E-01	1.930E+00	8.921E-06	5.089E-06	1.564E-05	
Strike	Probability, 1/yr				1.599E-05	8.192E-06	3.173E-05	
1.0E-5	1/yr design speed				63.	39.	96.	
1.0E-6	1/yr design speed				146.	118.	175.	
1.0E-7	1/yr design speed				214.	186.	244.	

33	118	3.981E+02	0.1000	19	18	18		
Point	1.129E-01	2.224E-02	5.728E-01	1.004E-04	1.978E-05	5.093E-04		
Line	1.276E+00	5.844E-01	2.788E+00	4.299E-05	1.968E-05	9.390E-05		
Strike Probability, 1/yr				1.434E-04	3.946E-05	6.032E-04		
1.0E-5 1/yr design speed				141.	94.	192.		
1.0E-6 1/yr design speed				208.	163.	256.		
1.0E-7 1/yr design speed				270.	226.	315.		
34	76	3.935E+02	0.1000	36	34	34		
Point	4.760E-02	2.183E-02	1.038E-01	8.114E-05	3.722E-05	1.769E-04		
Line	1.183E+00	7.127E-01	1.964E+00	7.640E-05	4.602E-05	1.268E-04		
Strike Probability, 1/yr				1.575E-04	8.324E-05	3.037E-04		
1.0E-5 1/yr design speed				151.	131.	171.		
1.0E-6 1/yr design speed				210.	193.	227.		
1.0E-7 1/yr design speed				261.	247.	276.		
34	77	2.754E+03	0.7000	71	64	64		
Point	5.639E-02	3.099E-02	1.026E-01	2.709E-05	1.489E-05	4.928E-05		
Line	1.211E+00	8.743E-01	1.678E+00	2.204E-05	1.591E-05	3.053E-05		
Strike Probability, 1/yr				4.912E-05	3.079E-05	7.982E-05		
1.0E-5 1/yr design speed				115.	97.	132.		
1.0E-6 1/yr design speed				181.	167.	195.		
1.0E-7 1/yr design speed				236.	224.	248.		
34	78	3.935E+03	1.0000	76	63	63		
Point	3.147E+00	7.330E-01	1.351E+01	1.132E-03	2.638E-04	4.862E-03		
Line	5.129E+00	2.805E+00	9.378E+00	6.992E-05	3.824E-05	1.278E-04		
Strike Probability, 1/yr				1.202E-03	3.020E-04	4.990E-03		
1.0E-5 1/yr design speed				195.	159.	228.		
1.0E-6 1/yr design speed				245.	214.	275.		
1.0E-7 1/yr design speed				291.	264.	318.		
34	79	3.935E+03	1.0000	99	95	95		
Point	1.486E+00	5.834E-01	3.786E+00	6.967E-04	2.735E-04	1.775E-03		
Line	6.339E+00	4.000E+00	1.004E+01	1.126E-04	7.104E-05	1.784E-04		
Strike Probability, 1/yr				8.093E-04	3.445E-04	1.953E-03		
1.0E-5 1/yr design speed				187.	164.	209.		
1.0E-6 1/yr design speed				239.	220.	259.		
1.0E-7 1/yr design speed				286.	269.	304.		
34	80	3.935E+03	1.0000	69	68	68		
Point	2.663E-01	1.278E-01	5.550E-01	8.701E-05	4.175E-05	1.813E-04		
Line	2.373E+00	1.612E+00	3.494E+00	2.937E-05	1.995E-05	4.325E-05		
Strike Probability, 1/yr				1.164E-04	6.170E-05	2.246E-04		
1.0E-5 1/yr design speed				138.	118.	158.		
1.0E-6 1/yr design speed				199.	182.	215.		
1.0E-7 1/yr design speed				250.	235.	264.		

34	81	3.935E+03	1.0000	79	78	79		
Point	1.846E+00	6.437E-01	5.297E+00	6.907E-04	2.408E-04	1.982E-03		
Line	5.471E+00	3.468E+00	8.630E+00	7.753E-05	4.915E-05	1.223E-04		
Strike Probability, 1/yr				7.683E-04	2.899E-04	2.104E-03		
1.0E-5 1/yr design speed				185.	159.	210.		
1.0E-6 1/yr design speed				237.	215.	259.		
1.0E-7 1/yr design speed				284.	264.	304.		
34	82	3.935E+03	1.0000	104	98	99		
Point	7.215E-01	3.943E-01	1.320E+00	3.553E-04	1.942E-04	6.503E-04		
Line	5.666E+00	3.964E+00	8.098E+00	1.057E-04	7.395E-05	1.511E-04		
Strike Probability, 1/yr				4.610E-04	2.681E-04	8.014E-04		
1.0E-5 1/yr design speed				181.	167.	195.		
1.0E-6 1/yr design speed				236.	224.	250.		
1.0E-7 1/yr design speed				285.	273.	298.		
34	83	3.935E+03	1.0000	88	86	86		
Point	7.281E-01	3.827E-01	1.385E+00	3.034E-04	1.595E-04	5.773E-04		
Line	5.615E+00	3.765E+00	8.375E+00	8.864E-05	5.943E-05	1.322E-04		
Strike Probability, 1/yr				3.921E-04	2.189E-04	7.095E-04		
1.0E-5 1/yr design speed				177.	161.	192.		
1.0E-6 1/yr design speed				233.	219.	247.		
1.0E-7 1/yr design speed				282.	269.	296.		
34	84	3.935E+03	1.0000	92	91	91		
Point	6.851E-01	4.016E-01	1.169E+00	2.985E-04	1.750E-04	5.091E-04		
Line	4.916E+00	3.681E+00	6.566E+00	8.113E-05	6.074E-05	1.084E-04		
Strike Probability, 1/yr				3.796E-04	2.357E-04	6.175E-04		
1.0E-5 1/yr design speed				176.	163.	188.		
1.0E-6 1/yr design speed				231.	220.	243.		
1.0E-7 1/yr design speed				281.	270.	292.		
34	85	3.935E+03	1.0000	77	75	75		
Point	1.207E+00	6.278E-01	2.321E+00	4.401E-04	2.289E-04	8.462E-04		
Line	5.483E+00	4.149E+00	7.245E+00	7.572E-05	5.730E-05	1.001E-04		
Strike Probability, 1/yr				5.158E-04	2.862E-04	9.463E-04		
1.0E-5 1/yr design speed				181.	166.	196.		
1.0E-6 1/yr design speed				235.	223.	250.		
1.0E-7 1/yr design speed				284.	271.	298.		
34	86	3.935E+03	1.0000	170	156	156		
Point	2.011E+00	1.147E+00	3.526E+00	1.619E-03	9.230E-04	2.838E-03		
Line	8.784E+00	6.575E+00	1.174E+01	2.678E-04	2.005E-04	3.578E-04		
Strike Probability, 1/yr				1.886E-03	1.123E-03	3.196E-03		
1.0E-5 1/yr design speed				212.	200.	226.		
1.0E-6 1/yr design speed				263.	251.	276.		
1.0E-7 1/yr design speed				309.	297.	322.		

34	87	3.935E+03	1.0000	113	105	105		
Point	2.041E+00	1.043E+00	3.993E+00	1.092E-03	5.582E-04	2.136E-03		
Line	8.277E+00	5.931E+00	1.155E+01	1.678E-04	1.202E-04	2.342E-04		
Strike Probability, 1/yr				1.260E-03	6.784E-04	2.371E-03		
1.0E-5 1/yr design speed				203.	188.	218.		
1.0E-6 1/yr design speed				254.	240.	269.		
1.0E-7 1/yr design speed				301.	287.	316.		
34	88	3.935E+03	1.0000	120	110	110		
Point	1.272E+00	6.892E-01	2.349E+00	7.229E-04	3.916E-04	1.335E-03		
Line	8.333E+00	6.034E+00	1.151E+01	1.794E-04	1.299E-04	2.477E-04		
Strike Probability, 1/yr				9.023E-04	5.215E-04	1.582E-03		
1.0E-5 1/yr design speed				197.	184.	211.		
1.0E-6 1/yr design speed				250.	238.	263.		
1.0E-7 1/yr design speed				297.	285.	310.		
34	89	3.935E+03	1.0000	83	71	71		
Point	1.588E+00	6.461E-01	3.901E+00	6.240E-04	2.540E-04	1.533E-03		
Line	7.878E+00	5.022E+00	1.236E+01	1.173E-04	7.476E-05	1.840E-04		
Strike Probability, 1/yr				7.413E-04	3.287E-04	1.717E-03		
1.0E-5 1/yr design speed				191.	171.	211.		
1.0E-6 1/yr design speed				244.	227.	263.		
1.0E-7 1/yr design speed				292.	275.	310.		
34	90	3.935E+03	1.0000	93	84	84		
Point	7.938E-01	3.958E-01	1.592E+00	3.496E-04	1.743E-04	7.011E-04		
Line	5.926E+00	4.074E+00	8.619E+00	9.885E-05	6.796E-05	1.438E-04		
Strike Probability, 1/yr				4.484E-04	2.423E-04	8.449E-04		
1.0E-5 1/yr design speed				180.	165.	196.		
1.0E-6 1/yr design speed				235.	222.	250.		
1.0E-7 1/yr design speed				284.	271.	299.		
34	91	3.935E+03	1.0000	133	115	115		
Point	1.741E+00	8.962E-01	3.384E+00	1.097E-03	5.644E-04	2.131E-03		
Line	8.224E+00	5.779E+00	1.170E+01	1.962E-04	1.379E-04	2.792E-04		
Strike Probability, 1/yr				1.293E-03	7.023E-04	2.411E-03		
1.0E-5 1/yr design speed				204.	189.	219.		
1.0E-6 1/yr design speed				256.	242.	270.		
1.0E-7 1/yr design speed				302.	289.	317.		
34	92	3.935E+03	1.0000	171	160	160		
Point	2.374E+00	1.280E+00	4.403E+00	1.922E-03	1.036E-03	3.565E-03		
Line	6.423E+00	4.872E+00	8.467E+00	1.970E-04	1.494E-04	2.597E-04		
Strike Probability, 1/yr				2.119E-03	1.186E-03	3.825E-03		
1.0E-5 1/yr design speed				213.	199.	228.		
1.0E-6 1/yr design speed				263.	250.	278.		
1.0E-7 1/yr design speed				309.	296.	323.		

34	93	3.935E+03	1.0000	82	73	73		
Point		2.885E+00	1.087E+00	7.654E+00	1.120E-03	4.222E-04	2.972E-03	
Line		6.192E+00	3.984E+00	9.626E+00	9.108E-05	5.859E-05	1.416E-04	
Strike	Probability, 1/yr				1.211E-03	4.808E-04	3.114E-03	
1.0E-5	1/yr design speed				199.	177.	222.	
1.0E-6	1/yr design speed				251.	230.	272.	
1.0E-7	1/yr design speed				297.	278.	318.	
34	94	3.935E+03	1.0000	76	67	67		
Point		4.105E+00	1.300E+00	1.296E+01	1.477E-03	4.680E-04	4.665E-03	
Line		9.200E+00	5.266E+00	1.607E+01	1.254E-04	7.178E-05	2.191E-04	
Strike	Probability, 1/yr				1.603E-03	5.398E-04	4.884E-03	
1.0E-5	1/yr design speed				206.	180.	232.	
1.0E-6	1/yr design speed				257.	233.	281.	
1.0E-7	1/yr design speed				303.	281.	327.	
34	95	3.935E+03	1.0000	115	100	100		
Point		1.110E+00	6.049E-01	2.037E+00	6.045E-04	3.294E-04	1.109E-03	
Line		6.333E+00	4.456E+00	9.001E+00	1.306E-04	9.192E-05	1.857E-04	
Strike	Probability, 1/yr				7.351E-04	4.213E-04	1.295E-03	
1.0E-5	1/yr design speed				191.	177.	206.	
1.0E-6	1/yr design speed				245.	232.	258.	
1.0E-7	1/yr design speed				292.	280.	306.	
34	96	3.935E+03	1.0000	201	172	172		
Point		1.290E+00	6.549E-01	2.542E+00	1.228E-03	6.234E-04	2.419E-03	
Line		4.599E+00	3.328E+00	6.356E+00	1.658E-04	1.200E-04	2.292E-04	
Strike	Probability, 1/yr				1.394E-03	7.434E-04	2.649E-03	
1.0E-5	1/yr design speed				204.	189.	220.	
1.0E-6	1/yr design speed				256.	242.	271.	
1.0E-7	1/yr design speed				302.	288.	317.	
34	97	3.935E+03	1.0000	195	167	167		
Point		1.851E+00	9.100E-01	3.766E+00	1.709E-03	8.403E-04	3.477E-03	
Line		5.817E+00	4.208E+00	8.041E+00	2.035E-04	1.472E-04	2.813E-04	
Strike	Probability, 1/yr				1.913E-03	9.875E-04	3.759E-03	
1.0E-5	1/yr design speed				211.	196.	228.	
1.0E-6	1/yr design speed				262.	247.	278.	
1.0E-7	1/yr design speed				307.	293.	323.	
34	98	3.935E+03	1.0000	191	147	147		
Point		1.147E+00	5.573E-01	2.360E+00	1.037E-03	5.040E-04	2.135E-03	
Line		5.502E+00	3.748E+00	8.077E+00	1.885E-04	1.284E-04	2.767E-04	
Strike	Probability, 1/yr				1.226E-03	6.324E-04	2.412E-03	
1.0E-5	1/yr design speed				203.	187.	219.	
1.0E-6	1/yr design speed				255.	240.	270.	
1.0E-7	1/yr design speed				301.	287.	317.	

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   34   99    3.935E+03 1.0000    244    178    178
Point  1.117E+00  5.508E-01  2.265E+00  1.291E-03  6.364E-04  2.617E-03
Line   4.522E+00  3.196E+00  6.398E+00  1.979E-04  1.399E-04  2.800E-04
Strike Probability, 1/yr                 1.488E-03  7.763E-04  2.897E-03
1.0E-5 1/yr design speed                      207.       191.       223.
1.0E-6 1/yr design speed                      258.       243.       273.
1.0E-7 1/yr design speed                      304.       290.       319.

   34  100    3.935E+03 1.0000    127    116    116
Point  4.518E-01  2.082E-01  9.804E-01  2.717E-04  1.252E-04  5.896E-04
Line   2.533E+00  1.783E+00  3.598E+00  5.770E-05  4.062E-05  8.195E-05
Strike Probability, 1/yr                 3.294E-04  1.658E-04  6.715E-04
1.0E-5 1/yr design speed                      170.       153.       188.
1.0E-6 1/yr design speed                      227.       212.       243.
1.0E-7 1/yr design speed                      276.       262.       292.

   34  101    3.935E+03 1.0000    225    210    210
Point  4.250E-01  2.500E-01  7.224E-01  4.528E-04  2.664E-04  7.697E-04
Line   2.891E+00  2.242E+00  3.728E+00  1.167E-04  9.049E-05  1.504E-04
Strike Probability, 1/yr                 5.695E-04  3.569E-04  9.202E-04
1.0E-5 1/yr design speed                      186.       174.       198.
1.0E-6 1/yr design speed                      240.       230.       252.
1.0E-7 1/yr design speed                      288.       278.       300.

   34  102    3.935E+03 1.0000    226    215    215
Point  2.622E-01  1.616E-01  4.254E-01  2.806E-04  1.730E-04  4.553E-04
Line   2.954E+00  2.268E+00  3.846E+00  1.197E-04  9.195E-05  1.559E-04
Strike Probability, 1/yr                 4.003E-04  2.649E-04  6.112E-04
1.0E-5 1/yr design speed                      172.       150.       193.
1.0E-6 1/yr design speed                      236.       213.       258.
1.0E-7 1/yr design speed                      297.       273.       319.

   34  103    3.935E+03 1.0000     88     52     52
Point  3.312E-01  1.038E-01  1.056E+00  1.380E-04  4.327E-05  4.402E-04
Line   3.414E+00  1.682E+00  6.933E+00  5.389E-05  2.654E-05  1.094E-04
Strike Probability, 1/yr                 1.919E-04  6.981E-05  5.496E-04
1.0E-5 1/yr design speed                      150.       111.       190.
1.0E-6 1/yr design speed                      216.       178.       254.
1.0E-7 1/yr design speed                      277.       239.       314.

   34  104    3.935E+03 1.0000     13      8      8
Point  1.079E+00  3.832E-02  3.037E+01  6.642E-05  2.359E-06  1.870E-03
Line   2.988E+01  2.436E+00  3.666E+02  6.968E-05  5.679E-06  8.548E-04
Strike Probability, 1/yr                 1.361E-04  8.038E-06  2.724E-03
1.0E-5 1/yr design speed                      140.        39.       237.
1.0E-6 1/yr design speed                      209.       118.       299.
1.0E-7 1/yr design speed                      272.       186.       359.
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   34  105    3.935E+03 1.0000     11      7      7
Point  8.659E-03  9.521E-04  7.876E-02  4.511E-07  4.959E-08  4.102E-06
Line   4.463E-01  1.303E-01  1.529E+00  8.806E-07  2.570E-07  3.017E-06
Strike Probability, 1/yr                1.332E-06  3.066E-07  7.119E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     54.        39.       126.
1.0E-7 1/yr design speed                    141.        87.       199.

   34  106    3.935E+03 1.0000      8      4      4
Point  1.487E-01  1.989E-02  1.112E+00  5.633E-06  7.535E-07  4.211E-05
Line   2.729E+00  6.331E-01  1.176E+01  3.916E-06  9.085E-07  1.688E-05
Strike Probability, 1/yr                9.549E-06  1.662E-06  5.899E-05
1.0E-5 1/yr design speed                     39.        39.       119.
1.0E-6 1/yr design speed                    128.        62.       193.
1.0E-7 1/yr design speed                    198.       139.       258.

   34  107    3.935E+03 1.0000      2      1      1
Point  4.489E-01  0.000E+00  0.000E+00  4.251E-06  0.000E+00  0.000E+00
Line   7.900E+00  0.000E+00  0.000E+00  2.834E-06  0.000E+00  0.000E+00
Strike Probability, 1/yr                7.085E-06  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     39.        38.        38.
1.0E-6 1/yr design speed                    119.        38.        38.
1.0E-7 1/yr design speed                    189.        38.        38.

   34  108    3.935E+03 1.0000      0      0      0

   34  109    3.935E+03 1.0000      2      2      2
Point  1.723E-02  3.225E-03  9.209E-02  1.632E-07  3.054E-08  8.721E-07
Line   6.182E-01  1.859E-01  2.056E+00  2.218E-07  6.670E-08  7.374E-07
Strike Probability, 1/yr                3.850E-07  9.724E-08  1.610E-06
1.0E-5 1/yr design speed                     39.        38.        39.
1.0E-6 1/yr design speed                     39.        38.        66.
1.0E-7 1/yr design speed                     98.        38.       153.

   34  110    3.935E+03 1.0000      8      5      5
Point  6.141E-02  1.886E-03  2.000E+00  2.326E-06  7.144E-08  7.575E-05
Line   1.510E+00  9.082E-01  2.512E+00  2.167E-06  1.303E-06  3.604E-06
Strike Probability, 1/yr                4.494E-06  1.375E-06  7.936E-05
1.0E-5 1/yr design speed                     39.        39.       129.
1.0E-6 1/yr design speed                    104.        54.       199.
1.0E-7 1/yr design speed                    177.       137.       261.

   34  111    3.935E+03 1.0000      2      1      1
Point  5.682E-05  0.000E+00  0.000E+00  5.381E-10  0.000E+00  0.000E+00
Line   1.000E-01  0.000E+00  0.000E+00  3.587E-08  0.000E+00  0.000E+00
Strike Probability, 1/yr                3.641E-08  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     38.        38.        38.
1.0E-6 1/yr design speed                     38.        38.        38.
1.0E-7 1/yr design speed                     38.        38.        38.
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34	112	3.935E+03	1.0000	15	7	7	
Point		4.096E-02	2.081E-03	8.064E-01	2.910E-06	1.478E-07	5.728E-05
Line		5.052E-01	1.803E-01	1.416E+00	1.359E-06	4.851E-07	3.809E-06
Strike	Probability, 1/yr				4.269E-06	6.329E-07	6.109E-05
1.0E-5	1/yr design speed				39.	39.	120.
1.0E-6	1/yr design speed				101.	39.	192.
1.0E-7	1/yr design speed				174.	111.	255.
34	113	3.935E+03	1.0000	1	1	1	
Point		1.420E-02	0.000E+00	0.000E+00	6.726E-08	0.000E+00	0.000E+00
Line		5.000E-01	0.000E+00	0.000E+00	8.968E-08	0.000E+00	0.000E+00
Strike	Probability, 1/yr				1.569E-07	0.000E+00	0.000E+00
1.0E-5	1/yr design speed				39.	38.	38.
1.0E-6	1/yr design speed				39.	38.	38.
1.0E-7	1/yr design speed				62.	38.	38.
34	114	3.935E+03	1.0000	4	3	3	
Point		5.658E-01	2.451E-03	1.306E+02	1.072E-05	4.642E-08	2.474E-03
Line		1.576E+00	2.171E-01	1.144E+01	1.131E-06	1.558E-07	8.205E-06
Strike	Probability, 1/yr				1.185E-05	2.022E-07	2.482E-03
1.0E-5	1/yr design speed				48.	39.	230.
1.0E-6	1/yr design speed				133.	39.	289.
1.0E-7	1/yr design speed				200.	71.	344.
34	115	3.935E+03	1.0000	0	0	0	
34	116	3.935E+03	1.0000	7	6	6	
Point		9.035E-03	1.815E-03	4.498E-02	2.995E-07	6.016E-08	1.491E-06
Line		6.225E-01	2.903E-01	1.335E+00	7.817E-07	3.645E-07	1.676E-06
Strike	Probability, 1/yr				1.081E-06	4.247E-07	3.167E-06
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				44.	39.	96.
1.0E-7	1/yr design speed				134.	98.	176.
34	117	3.935E+03	1.0000	21	12	12	
Point		9.423E-02	1.216E-02	7.301E-01	9.370E-06	1.209E-06	7.260E-05
Line		1.425E+00	5.587E-01	3.635E+00	5.368E-06	2.104E-06	1.369E-05
Strike	Probability, 1/yr				1.474E-05	3.314E-06	8.629E-05
1.0E-5	1/yr design speed				59.	39.	132.
1.0E-6	1/yr design speed				142.	88.	202.
1.0E-7	1/yr design speed				210.	160.	266.
34	118	3.935E+03	1.0000	16	14	14	
Point		3.937E-02	7.166E-03	2.163E-01	2.983E-06	5.430E-07	1.639E-05
Line		6.736E-01	3.207E-01	1.415E+00	1.933E-06	9.203E-07	4.061E-06
Strike	Probability, 1/yr				4.916E-06	1.463E-06	2.045E-05
1.0E-5	1/yr design speed				39.	39.	78.
1.0E-6	1/yr design speed				106.	56.	160.
1.0E-7	1/yr design speed				178.	136.	227.

34	119	2.754E+03	0.7000	4	3	3		
Point		9.529E-04	4.871E-04	1.864E-03	2.579E-08	1.318E-08	5.045E-08	
Line		1.000E-01	0.000E+00	0.000E+00	1.025E-07	0.000E+00	0.000E+00	
Strike Probability, 1/yr					1.283E-07	1.318E-08	5.045E-08	
1.0E-5 1/yr design speed					39.	38.	38.	
1.0E-6 1/yr design speed					39.	38.	38.	
1.0E-7 1/yr design speed					52.	38.	38.	
34	120	1.180E+03	0.3000	2	2	2		
Point		3.513E-04	1.056E-04	1.168E-03	1.109E-08	3.335E-09	3.687E-08	
Line		1.000E-01	0.000E+00	0.000E+00	1.196E-07	0.000E+00	0.000E+00	
Strike Probability, 1/yr					1.307E-07	3.335E-09	3.687E-08	
1.0E-5 1/yr design speed					39.	38.	38.	
1.0E-6 1/yr design speed					39.	38.	38.	
1.0E-7 1/yr design speed					53.	38.	38.	
35	75	3.887E+02	0.1000	29	27	27		
Point		5.568E-02	1.948E-02	1.591E-01	7.740E-05	2.708E-05	2.212E-04	
Line		9.469E-01	5.334E-01	1.681E+00	4.986E-05	2.809E-05	8.853E-05	
Strike Probability, 1/yr					1.273E-04	5.516E-05	3.098E-04	
1.0E-5 1/yr design speed					143.	117.	169.	
1.0E-6 1/yr design speed					204.	182.	225.	
1.0E-7 1/yr design speed					255.	237.	274.	
35	76	3.110E+03	0.8000	52	51	51		
Point		4.885E-01	1.652E-01	1.445E+00	1.522E-04	5.148E-05	4.501E-04	
Line		5.153E+00	2.752E+00	9.648E+00	6.082E-05	3.248E-05	1.139E-04	
Strike Probability, 1/yr					2.130E-04	8.396E-05	5.640E-04	
1.0E-5 1/yr design speed					156.	129.	182.	
1.0E-6 1/yr design speed					213.	190.	236.	
1.0E-7 1/yr design speed					263.	243.	283.	
35	77	3.887E+03	1.0000	121	108	108		
Point		9.487E-01	4.351E-01	2.069E+00	5.502E-04	2.523E-04	1.200E-03	
Line		5.269E+00	3.557E+00	7.806E+00	1.158E-04	7.814E-05	1.715E-04	
Strike Probability, 1/yr					6.660E-04	3.305E-04	1.371E-03	
1.0E-5 1/yr design speed					183.	164.	202.	
1.0E-6 1/yr design speed					236.	219.	252.	
1.0E-7 1/yr design speed					284.	269.	298.	
35	78	3.887E+03	1.0000	88	81	81		
Point		1.726E+00	6.446E-01	4.624E+00	7.283E-04	2.719E-04	1.950E-03	
Line		6.196E+00	3.847E+00	9.980E+00	9.901E-05	6.147E-05	1.595E-04	
Strike Probability, 1/yr					8.273E-04	3.334E-04	2.110E-03	
1.0E-5 1/yr design speed					187.	163.	210.	
1.0E-6 1/yr design speed					239.	218.	260.	
1.0E-7 1/yr design speed					286.	267.	304.	

35	79	3.887E+03	1.0000	49	38	40		
Point	1.397E+00	3.437E-01	5.678E+00	3.282E-04	8.074E-05	1.334E-03		
Line	6.330E+00	3.285E+00	1.220E+01	5.632E-05	2.922E-05	1.085E-04		
Strike Probability, 1/yr				3.845E-04	1.100E-04	1.442E-03		
1.0E-5 1/yr design speed				169.	134.	202.		
1.0E-6 1/yr design speed				223.	195.	252.		
1.0E-7 1/yr design speed				272.	246.	297.		
35	80	3.887E+03	1.0000	90	74	75		
Point	9.732E-01	3.721E-01	2.545E+00	4.199E-04	1.605E-04	1.098E-03		
Line	4.804E+00	2.984E+00	7.735E+00	7.851E-05	4.877E-05	1.264E-04		
Strike Probability, 1/yr				4.984E-04	2.093E-04	1.225E-03		
1.0E-5 1/yr design speed				176.	152.	199.		
1.0E-6 1/yr design speed				229.	209.	249.		
1.0E-7 1/yr design speed				277.	259.	295.		
35	81	3.887E+03	1.0000	79	70	70		
Point	1.651E+00	6.601E-01	4.131E+00	6.254E-04	2.500E-04	1.565E-03		
Line	6.609E+00	4.149E+00	1.053E+01	9.480E-05	5.951E-05	1.510E-04		
Strike Probability, 1/yr				7.202E-04	3.095E-04	1.716E-03		
1.0E-5 1/yr design speed				184.	161.	206.		
1.0E-6 1/yr design speed				237.	217.	256.		
1.0E-7 1/yr design speed				284.	266.	301.		
35	82	3.887E+03	1.0000	26	24	24		
Point	1.930E-01	7.486E-02	4.975E-01	2.405E-05	9.330E-06	6.200E-05		
Line	5.373E+00	2.434E+00	1.186E+01	2.537E-05	1.149E-05	5.600E-05		
Strike Probability, 1/yr				4.942E-05	2.082E-05	1.180E-04		
1.0E-5 1/yr design speed				122.	88.	151.		
1.0E-6 1/yr design speed				191.	168.	214.		
1.0E-7 1/yr design speed				247.	227.	268.		
35	83	3.887E+03	1.0000	23	20	20		
Point	1.309E-01	5.275E-02	3.251E-01	1.444E-05	5.815E-06	3.584E-05		
Line	4.563E+00	2.178E+00	9.561E+00	1.906E-05	9.094E-06	3.993E-05		
Strike Probability, 1/yr				3.349E-05	1.491E-05	7.577E-05		
1.0E-5 1/yr design speed				109.	72.	138.		
1.0E-6 1/yr design speed				182.	160.	204.		
1.0E-7 1/yr design speed				240.	220.	259.		
35	84	3.887E+03	1.0000	55	54	54		
Point	1.301E+00	6.207E-01	2.727E+00	3.430E-04	1.637E-04	7.190E-04		
Line	6.313E+00	4.463E+00	8.928E+00	6.304E-05	4.458E-05	8.916E-05		
Strike Probability, 1/yr				4.061E-04	2.082E-04	8.081E-04		
1.0E-5 1/yr design speed				175.	158.	193.		
1.0E-6 1/yr design speed				231.	216.	247.		
1.0E-7 1/yr design speed				279.	266.	295.		

35	85	3.887E+03	1.0000	62	61	61	
Point		1.519E+00	5.002E-01	4.615E+00	4.516E-04	1.487E-04	1.372E-03
Line		4.543E+00	2.854E+00	7.233E+00	5.115E-05	3.213E-05	8.143E-05
Strike	Probability, 1/yr				5.027E-04	1.808E-04	1.453E-03
1.0E-5	1/yr design speed				179.	153.	205.
1.0E-6	1/yr design speed				233.	211.	257.
1.0E-7	1/yr design speed				281.	261.	304.
35	86	3.887E+03	1.0000	104	100	100	
Point		3.130E+00	1.254E+00	7.809E+00	1.560E-03	6.252E-04	3.893E-03
Line		7.179E+00	4.790E+00	1.076E+01	1.356E-04	9.046E-05	2.032E-04
Strike	Probability, 1/yr				1.696E-03	7.157E-04	4.096E-03
1.0E-5	1/yr design speed				207.	187.	229.
1.0E-6	1/yr design speed				258.	239.	278.
1.0E-7	1/yr design speed				304.	286.	324.
35	87	3.887E+03	1.0000	65	65	65	
Point		1.148E+01	2.221E+00	5.931E+01	3.576E-03	6.922E-04	1.848E-02
Line		6.710E+00	3.728E+00	1.208E+01	7.920E-05	4.400E-05	1.426E-04
Strike	Probability, 1/yr				3.656E-03	7.362E-04	1.862E-02
1.0E-5	1/yr design speed				222.	185.	259.
1.0E-6	1/yr design speed				270.	236.	306.
1.0E-7	1/yr design speed				314.	282.	350.
35	88	3.887E+03	1.0000	93	92	92	
Point		5.512E+00	1.763E+00	1.723E+01	2.457E-03	7.860E-04	7.681E-03
Line		9.429E+00	5.695E+00	1.561E+01	1.592E-04	9.617E-05	2.636E-04
Strike	Probability, 1/yr				2.616E-03	8.822E-04	7.945E-03
1.0E-5	1/yr design speed				216.	191.	242.
1.0E-6	1/yr design speed				266.	243.	291.
1.0E-7	1/yr design speed				311.	289.	335.
35	89	3.887E+03	1.0000	121	115	115	
Point		3.672E+00	1.380E+00	9.770E+00	2.130E-03	8.003E-04	5.667E-03
Line		6.361E+00	4.341E+00	9.322E+00	1.398E-04	9.537E-05	2.048E-04
Strike	Probability, 1/yr				2.269E-03	8.956E-04	5.872E-03
1.0E-5	1/yr design speed				213.	192.	236.
1.0E-6	1/yr design speed				263.	243.	285.
1.0E-7	1/yr design speed				308.	289.	330.
35	90	3.887E+03	1.0000	146	137	137	
Point		2.463E+00	1.093E+00	5.552E+00	1.724E-03	7.647E-04	3.886E-03
Line		7.158E+00	4.970E+00	1.031E+01	1.897E-04	1.318E-04	2.732E-04
Strike	Probability, 1/yr				1.913E-03	8.964E-04	4.159E-03
1.0E-5	1/yr design speed				211.	193.	230.
1.0E-6	1/yr design speed				261.	245.	279.
1.0E-7	1/yr design speed				307.	291.	325.

35	91	3.887E+03	1.0000	198	190	190		
Point		1.735E+00	1.106E+00	2.723E+00	1.647E-03	1.050E-03	2.584E-03	
Line		6.585E+00	5.347E+00	8.110E+00	2.367E-04	1.922E-04	2.916E-04	
Strike	Probability, 1/yr				1.884E-03	1.242E-03	2.876E-03	
1.0E-5	1/yr design speed				212.	201.	223.	
1.0E-6	1/yr design speed				262.	252.	273.	
1.0E-7	1/yr design speed				308.	298.	320.	
35	92	3.887E+03	1.0000	154	149	149		
Point		1.727E+00	1.078E+00	2.767E+00	1.275E-03	7.954E-04	2.043E-03	
Line		7.622E+00	5.989E+00	9.701E+00	2.131E-04	1.675E-04	2.713E-04	
Strike	Probability, 1/yr				1.488E-03	9.629E-04	2.314E-03	
1.0E-5	1/yr design speed				207.	196.	218.	
1.0E-6	1/yr design speed				258.	248.	270.	
1.0E-7	1/yr design speed				305.	294.	316.	
35	93	3.887E+03	1.0000	89	78	78		
Point		1.908E+00	8.271E-01	4.400E+00	8.139E-04	3.528E-04	1.877E-03	
Line		7.743E+00	5.005E+00	1.198E+01	1.251E-04	8.089E-05	1.936E-04	
Strike	Probability, 1/yr				9.390E-04	4.337E-04	2.071E-03	
1.0E-5	1/yr design speed				196.	177.	215.	
1.0E-6	1/yr design speed				248.	231.	266.	
1.0E-7	1/yr design speed				295.	279.	313.	
35	94	3.887E+03	1.0000	133	113	113		
Point		1.190E+00	5.644E-01	2.509E+00	7.586E-04	3.598E-04	1.599E-03	
Line		5.461E+00	3.718E+00	8.020E+00	1.319E-04	8.980E-05	1.937E-04	
Strike	Probability, 1/yr				8.905E-04	4.496E-04	1.793E-03	
1.0E-5	1/yr design speed				195.	178.	212.	
1.0E-6	1/yr design speed				248.	232.	264.	
1.0E-7	1/yr design speed				295.	280.	311.	
35	95	3.887E+03	1.0000	193	164	164		
Point		6.930E-01	3.813E-01	1.260E+00	6.412E-04	3.528E-04	1.165E-03	
Line		3.736E+00	2.731E+00	5.111E+00	1.309E-04	9.572E-05	1.791E-04	
Strike	Probability, 1/yr				7.721E-04	4.485E-04	1.345E-03	
1.0E-5	1/yr design speed				192.	179.	206.	
1.0E-6	1/yr design speed				245.	233.	259.	
1.0E-7	1/yr design speed				293.	281.	306.	
35	96	3.887E+03	1.0000	229	185	185		
Point		3.999E+00	2.036E+00	7.852E+00	4.389E-03	2.235E-03	8.619E-03	
Line		8.242E+00	6.086E+00	1.116E+01	3.427E-04	2.531E-04	4.641E-04	
Strike	Probability, 1/yr				4.732E-03	2.488E-03	9.083E-03	
1.0E-5	1/yr design speed				230.	215.	246.	
1.0E-6	1/yr design speed				278.	264.	294.	
1.0E-7	1/yr design speed				323.	308.	339.	

35	97	3.887E+03	1.0000	344	285	285		
Point		1.521E+00	9.558E-01	2.420E+00	2.508E-03	1.576E-03	3.991E-03	
Line		6.176E+00	4.925E+00	7.745E+00	3.858E-04	3.077E-04	4.838E-04	
Strike Probability, 1/yr					2.894E-03	1.884E-03	4.475E-03	
1.0E-5 1/yr design speed					222.	211.	233.	
1.0E-6 1/yr design speed					272.	261.	283.	
1.0E-7 1/yr design speed					317.	306.	328.	
35	98	3.887E+03	1.0000	214	165	165		
Point		1.252E+00	6.313E-01	2.482E+00	1.284E-03	6.476E-04	2.546E-03	
Line		5.291E+00	3.793E+00	7.380E+00	2.056E-04	1.474E-04	2.868E-04	
Strike Probability, 1/yr					1.490E-03	7.950E-04	2.833E-03	
1.0E-5 1/yr design speed					207.	192.	223.	
1.0E-6 1/yr design speed					258.	244.	273.	
1.0E-7 1/yr design speed					304.	291.	319.	
35	99	3.887E+03	1.0000	170	119	119		
Point		1.785E+00	7.766E-01	4.104E+00	1.455E-03	6.329E-04	3.344E-03	
Line		6.815E+00	4.414E+00	1.052E+01	2.104E-04	1.363E-04	3.247E-04	
Strike Probability, 1/yr					1.665E-03	7.692E-04	3.669E-03	
1.0E-5 1/yr design speed					209.	191.	228.	
1.0E-6 1/yr design speed					260.	243.	278.	
1.0E-7 1/yr design speed					306.	290.	324.	
35	100	3.887E+03	1.0000	161	147	147		
Point		1.713E+00	7.903E-01	3.712E+00	1.322E-03	6.100E-04	2.865E-03	
Line		4.213E+00	3.017E+00	5.884E+00	1.232E-04	8.820E-05	1.720E-04	
Strike Probability, 1/yr					1.445E-03	6.982E-04	3.037E-03	
1.0E-5 1/yr design speed					204.	186.	222.	
1.0E-6 1/yr design speed					255.	239.	272.	
1.0E-7 1/yr design speed					301.	285.	318.	
35	101	3.887E+03	1.0000	223	210	210		
Point		2.018E-01	1.231E-01	3.310E-01	2.158E-04	1.316E-04	3.538E-04	
Line		2.011E+00	1.548E+00	2.613E+00	8.144E-05	6.270E-05	1.058E-04	
Strike Probability, 1/yr					2.972E-04	1.943E-04	4.596E-04	
1.0E-5 1/yr design speed					171.	160.	182.	
1.0E-6 1/yr design speed					228.	218.	239.	
1.0E-7 1/yr design speed					278.	268.	289.	
35	102	3.887E+03	1.0000	67	58	58		
Point		1.070E-01	5.411E-02	2.114E-01	3.435E-05	1.738E-05	6.790E-05	
Line		2.241E+00	1.433E+00	3.506E+00	2.727E-05	1.743E-05	4.265E-05	
Strike Probability, 1/yr					6.162E-05	3.481E-05	1.106E-04	
1.0E-5 1/yr design speed					114.	89.	141.	
1.0E-6 1/yr design speed					185.	160.	212.	
1.0E-7 1/yr design speed					250.	223.	277.	

35	103	3.887E+03	1.0000	32	16	16	
Point		2.491E-01	4.322E-02	1.436E+00	3.821E-05	6.630E-06	2.202E-04
Line		1.983E+00	8.031E-01	4.898E+00	1.152E-05	4.667E-06	2.846E-05
Strike Probability, 1/yr					4.974E-05	1.130E-05	2.487E-04
1.0E-5 1/yr design speed					106.	45.	165.
1.0E-6 1/yr design speed					177.	126.	231.
1.0E-7 1/yr design speed					241.	192.	292.
35	104	3.887E+03	1.0000	10	6	6	
Point		3.003E-02	7.668E-03	1.176E-01	1.440E-06	3.676E-07	5.637E-06
Line		1.031E+00	3.968E-01	2.677E+00	1.871E-06	7.205E-07	4.860E-06
Strike Probability, 1/yr					3.311E-06	1.088E-06	1.050E-05
1.0E-5 1/yr design speed					39.	39.	43.
1.0E-6 1/yr design speed					93.	44.	139.
1.0E-7 1/yr design speed					168.	127.	211.
35	105	3.887E+03	1.0000	12	7	7	
Point		2.511E-02	2.400E-03	2.627E-01	1.444E-06	1.381E-07	1.511E-05
Line		9.833E-01	2.438E-01	3.965E+00	2.142E-06	5.313E-07	8.639E-06
Strike Probability, 1/yr					3.587E-06	6.694E-07	2.375E-05
1.0E-5 1/yr design speed					39.	39.	84.
1.0E-6 1/yr design speed					96.	39.	165.
1.0E-7 1/yr design speed					171.	113.	234.
35	106	3.887E+03	1.0000	22	11	11	
Point		7.692E-02	1.153E-02	5.132E-01	8.112E-06	1.216E-06	5.412E-05
Line		1.492E+00	5.713E-01	3.898E+00	5.961E-06	2.282E-06	1.557E-05
Strike Probability, 1/yr					1.407E-05	3.498E-06	6.970E-05
1.0E-5 1/yr design speed					56.	39.	125.
1.0E-6 1/yr design speed					141.	90.	197.
1.0E-7 1/yr design speed					209.	162.	261.
35	107	3.887E+03	1.0000	2	1	1	
Point		1.136E-01	0.000E+00	0.000E+00	1.089E-06	0.000E+00	0.000E+00
Line		2.000E+00	0.000E+00	0.000E+00	7.263E-07	0.000E+00	0.000E+00
Strike Probability, 1/yr					1.816E-06	0.000E+00	0.000E+00
1.0E-5 1/yr design speed					39.	38.	38.
1.0E-6 1/yr design speed					69.	38.	38.
1.0E-7 1/yr design speed					149.	38.	38.
35	108	3.887E+03	1.0000	0	0	0	
35	109	3.887E+03	1.0000	1	0	0	
35	110	3.887E+03	1.0000	4	3	3	
Point		7.375E-03	2.730E-03	1.993E-02	1.414E-07	5.234E-08	3.821E-07
Line		3.090E-01	1.478E-01	6.462E-01	2.244E-07	1.073E-07	4.693E-07
Strike Probability, 1/yr					3.658E-07	1.597E-07	8.514E-07
1.0E-5 1/yr design speed					39.	39.	39.
1.0E-6 1/yr design speed					39.	39.	39.
1.0E-7 1/yr design speed					97.	60.	132.

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   35  111    3.887E+03 1.0000      7      4      4
Point  4.405E-01  1.821E-03  1.066E+02  1.478E-05  6.111E-08  3.576E-03
Line   1.370E+00  1.836E-01  1.022E+01  1.741E-06  2.334E-07  1.298E-05
Strike Probability, 1/yr                 1.652E-05  2.945E-07  3.589E-03
1.0E-5 1/yr design speed                       64.        39.        240.
1.0E-6 1/yr design speed                      144.        39.        298.
1.0E-7 1/yr design speed                      209.        85.        353.

   35  112    3.887E+03 1.0000     10      8      8
Point  1.767E-01  9.740E-03  3.207E+00  8.472E-06  4.669E-07  1.537E-04
Line   3.724E+00  5.198E-01  2.668E+01  6.762E-06  9.439E-07  4.845E-05
Strike Probability, 1/yr                 1.523E-05  1.411E-06  2.022E-04
1.0E-5 1/yr design speed                       60.        39.        160.
1.0E-6 1/yr design speed                      143.        55.        227.
1.0E-7 1/yr design speed                      211.       135.        290.

   35  113    3.887E+03 1.0000      4      4      4
Point  3.427E-01  4.529E-03  2.593E+01  6.571E-06  8.685E-08  4.972E-04
Line   1.816E+00  4.123E-01  7.996E+00  1.319E-06  2.995E-07  5.808E-06
Strike Probability, 1/yr                 7.890E-06  3.863E-07  5.030E-04
1.0E-5 1/yr design speed                       39.        39.        185.
1.0E-6 1/yr design speed                      121.        39.        249.
1.0E-7 1/yr design speed                      190.        95.        307.

   35  114    3.887E+03 1.0000      6      5      5
Point  1.151E-01  6.619E-03  2.002E+00  3.311E-06  1.904E-07  5.758E-05
Line   8.043E-01  2.049E-01  3.158E+00  8.763E-07  2.232E-07  3.440E-06
Strike Probability, 1/yr                 4.187E-06  4.136E-07  6.102E-05
1.0E-5 1/yr design speed                       39.        39.        120.
1.0E-6 1/yr design speed                      100.        39.        191.
1.0E-7 1/yr design speed                      172.        95.        254.

   35  115    3.887E+03 1.0000      1      1      1
Point  1.136E-02  0.000E+00  0.000E+00  5.447E-08  0.000E+00  0.000E+00
Line   1.000E+00  0.000E+00  0.000E+00  1.816E-07  0.000E+00  0.000E+00
Strike Probability, 1/yr                 2.360E-07  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                       39.        38.        38.
1.0E-6 1/yr design speed                       39.        38.        38.
1.0E-7 1/yr design speed                       81.        38.        38.

   35  116    3.887E+03 1.0000      0      0      0

   35  117    3.887E+03 1.0000      2      2      2
Point  8.533E-04  5.569E-04  1.307E-03  8.180E-09  5.339E-09  1.253E-08
Line   1.502E-01  9.802E-02  2.301E-01  5.454E-08  3.560E-08  8.356E-08
Strike Probability, 1/yr                 6.272E-08  4.093E-08  9.609E-08
1.0E-5 1/yr design speed                       38.        38.        38.
1.0E-6 1/yr design speed                       38.        38.        38.
1.0E-7 1/yr design speed                       38.        38.        38.
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35	118	3.887E+03	1.0000	3	3	3		
Point		4.411E-03	7.176E-04	2.712E-02	6.344E-08	1.032E-08	3.899E-07	
Line		7.764E-01	1.263E-01	4.772E+00	4.229E-07	6.880E-08	2.600E-06	
Strike Probability, 1/yr					4.863E-07	7.912E-08	2.990E-06	
1.0E-5 1/yr design speed					39.	38.	39.	
1.0E-6 1/yr design speed					39.	38.	94.	
1.0E-7 1/yr design speed					108.	38.	176.	
35	119	3.887E+03	1.0000	4	4	4		
Point		7.392E-03	1.673E-03	3.267E-02	1.417E-07	3.207E-08	6.264E-07	
Line		3.949E-01	1.717E-01	9.084E-01	2.868E-07	1.247E-07	6.597E-07	
Strike Probability, 1/yr					4.285E-07	1.567E-07	1.286E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					39.	39.	54.	
1.0E-7 1/yr design speed					103.	60.	146.	
35	120	3.498E+03	0.9000	1	1	1		
Point		2.557E-03	0.000E+00	0.000E+00	1.362E-08	0.000E+00	0.000E+00	
Line		3.000E-01	0.000E+00	0.000E+00	6.053E-08	0.000E+00	0.000E+00	
Strike Probability, 1/yr					7.414E-08	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					38.	38.	38.	
1.0E-6 1/yr design speed					38.	38.	38.	
1.0E-7 1/yr design speed					38.	38.	38.	
35	121	7.774E+02	0.2000	0	0	0		
36	76	3.454E+03	0.9000	87	78	78		
Point		2.549E-01	1.334E-01	4.872E-01	1.196E-04	6.259E-05	2.286E-04	
Line		3.059E+00	2.089E+00	4.480E+00	5.438E-05	3.713E-05	7.963E-05	
Strike Probability, 1/yr					1.740E-04	9.972E-05	3.083E-04	
1.0E-5 1/yr design speed					151.	133.	168.	
1.0E-6 1/yr design speed					209.	194.	224.	
1.0E-7 1/yr design speed					260.	247.	273.	
36	77	3.838E+03	1.0000	50	43	43		
Point		1.002E+00	3.854E-01	2.604E+00	2.432E-04	9.356E-05	6.320E-04	
Line		6.096E+00	3.654E+00	1.017E+01	5.605E-05	3.360E-05	9.350E-05	
Strike Probability, 1/yr					2.992E-04	1.272E-04	7.255E-04	
1.0E-5 1/yr design speed					163.	139.	187.	
1.0E-6 1/yr design speed					219.	198.	239.	
1.0E-7 1/yr design speed					268.	250.	286.	
36	78	3.838E+03	1.0000	46	41	41		
Point		2.136E-01	8.373E-02	5.452E-01	4.771E-05	1.870E-05	1.217E-04	
Line		2.833E+00	1.664E+00	4.823E+00	2.397E-05	1.408E-05	4.080E-05	
Strike Probability, 1/yr					7.168E-05	3.278E-05	1.625E-04	
1.0E-5 1/yr design speed					126.	99.	151.	
1.0E-6 1/yr design speed					188.	167.	209.	
1.0E-7 1/yr design speed					241.	224.	259.	

36	79	3.838E+03	1.0000	34	30	31		
Point		7.715E-01	1.894E-01	3.143E+00	1.273E-04	3.125E-05	5.189E-04	
Line		4.938E+00	2.513E+00	9.704E+00	3.088E-05	1.571E-05	6.067E-05	
Strike Probability, 1/yr					1.582E-04	4.697E-05	5.795E-04	
1.0E-5 1/yr design speed					146.	109.	181.	
1.0E-6 1/yr design speed					204.	175.	233.	
1.0E-7 1/yr design speed					255.	230.	281.	
36	80	3.838E+03	1.0000	38	35	35		
Point		1.276E+00	2.777E-01	5.861E+00	2.353E-04	5.123E-05	1.081E-03	
Line		6.311E+00	3.025E+00	1.317E+01	4.410E-05	2.114E-05	9.201E-05	
Strike Probability, 1/yr					2.794E-04	7.236E-05	1.173E-03	
1.0E-5 1/yr design speed					161.	123.	197.	
1.0E-6 1/yr design speed					216.	185.	248.	
1.0E-7 1/yr design speed					266.	238.	293.	
36	81	3.838E+03	1.0000	21	16	16		
Point		1.897E-01	6.268E-02	5.741E-01	1.934E-05	6.391E-06	5.853E-05	
Line		2.588E+00	1.364E+00	4.909E+00	9.994E-06	5.269E-06	1.896E-05	
Strike Probability, 1/yr					2.933E-05	1.166E-05	7.749E-05	
1.0E-5 1/yr design speed					95.	49.	129.	
1.0E-6 1/yr design speed					166.	139.	191.	
1.0E-7 1/yr design speed					222.	200.	244.	
36	82	3.838E+03	1.0000	20	17	17		
Point		2.199E+00	3.601E-01	1.343E+01	2.135E-04	3.496E-05	1.304E-03	
Line		5.121E+00	2.141E+00	1.225E+01	1.883E-05	7.876E-06	4.505E-05	
Strike Probability, 1/yr					2.323E-04	4.284E-05	1.349E-03	
1.0E-5 1/yr design speed					158.	110.	202.	
1.0E-6 1/yr design speed					215.	177.	254.	
1.0E-7 1/yr design speed					264.	231.	301.	
36	83	3.838E+03	1.0000	19	18	18		
Point		6.000E-01	1.496E-01	2.407E+00	5.535E-05	1.380E-05	2.220E-04	
Line		3.672E+00	1.978E+00	6.815E+00	1.283E-05	6.911E-06	2.381E-05	
Strike Probability, 1/yr					6.818E-05	2.071E-05	2.458E-04	
1.0E-5 1/yr design speed					126.	85.	161.	
1.0E-6 1/yr design speed					190.	162.	219.	
1.0E-7 1/yr design speed					243.	220.	270.	
36	84	3.838E+03	1.0000	52	51	51		
Point		1.725E+00	6.017E-01	4.947E+00	4.355E-04	1.519E-04	1.249E-03	
Line		9.621E+00	5.706E+00	1.622E+01	9.200E-05	5.456E-05	1.551E-04	
Strike Probability, 1/yr					5.276E-04	2.065E-04	1.404E-03	
1.0E-5 1/yr design speed					183.	160.	206.	
1.0E-6 1/yr design speed					237.	218.	259.	
1.0E-7 1/yr design speed					286.	267.	306.	

36	85	3.838E+03	1.0000	67	65	65		
Point	2.389E+00	9.994E-01	5.710E+00	7.770E-04	3.251E-04	1.857E-03		
Line	6.186E+00	4.397E+00	8.704E+00	7.622E-05	5.417E-05	1.072E-04		
Strike Probability, 1/yr				8.533E-04	3.792E-04	1.965E-03		
1.0E-5 1/yr design speed				191.	172.	212.		
1.0E-6 1/yr design speed				244.	226.	263.		
1.0E-7 1/yr design speed				291.	274.	310.		
36	86	3.838E+03	1.0000	131	118	118		
Point	3.711E+00	1.434E+00	9.603E+00	2.360E-03	9.120E-04	6.107E-03		
Line	7.091E+00	4.759E+00	1.057E+01	1.708E-04	1.146E-04	2.546E-04		
Strike Probability, 1/yr				2.531E-03	1.027E-03	6.362E-03		
1.0E-5 1/yr design speed				216.	195.	238.		
1.0E-6 1/yr design speed				265.	246.	286.		
1.0E-7 1/yr design speed				311.	292.	332.		
36	87	3.838E+03	1.0000	66	61	61		
Point	2.256E+00	6.169E-01	8.252E+00	7.229E-04	1.977E-04	2.644E-03		
Line	3.698E+00	2.225E+00	6.147E+00	4.488E-05	2.700E-05	7.460E-05		
Strike Probability, 1/yr				7.678E-04	2.247E-04	2.719E-03		
1.0E-5 1/yr design speed				187.	157.	218.		
1.0E-6 1/yr design speed				240.	213.	268.		
1.0E-7 1/yr design speed				287.	263.	314.		
36	88	3.838E+03	1.0000	96	92	92		
Point	7.544E-01	3.752E-01	1.517E+00	3.516E-04	1.749E-04	7.068E-04		
Line	5.946E+00	4.035E+00	8.760E+00	1.050E-04	7.124E-05	1.546E-04		
Strike Probability, 1/yr				4.565E-04	2.461E-04	8.615E-04		
1.0E-5 1/yr design speed				181.	165.	197.		
1.0E-6 1/yr design speed				236.	223.	251.		
1.0E-7 1/yr design speed				285.	272.	299.		
36	89	3.838E+03	1.0000	130	124	124		
Point	4.581E-01	2.357E-01	8.901E-01	2.891E-04	1.488E-04	5.617E-04		
Line	4.090E+00	2.825E+00	5.921E+00	9.777E-05	6.752E-05	1.416E-04		
Strike Probability, 1/yr				3.869E-04	2.163E-04	7.033E-04		
1.0E-5 1/yr design speed				177.	162.	193.		
1.0E-6 1/yr design speed				233.	220.	247.		
1.0E-7 1/yr design speed				283.	270.	296.		
36	90	3.838E+03	1.0000	105	98	98		
Point	6.713E-01	3.369E-01	1.337E+00	3.422E-04	1.718E-04	6.818E-04		
Line	5.265E+00	3.633E+00	7.631E+00	1.017E-04	7.015E-05	1.473E-04		
Strike Probability, 1/yr				4.439E-04	2.419E-04	8.291E-04		
1.0E-5 1/yr design speed				180.	165.	196.		
1.0E-6 1/yr design speed				236.	222.	250.		
1.0E-7 1/yr design speed				284.	272.	299.		

36	91	3.838E+03	1.0000	79	77	77			
Point	3.325E+00	1.321E+00	8.369E+00	1.275E-03	5.067E-04	3.210E-03			
Line	7.849E+00	5.329E+00	1.156E+01	1.140E-04	7.741E-05	1.680E-04			
Strike Probability, 1/yr				1.389E-03	5.841E-04	3.378E-03			
1.0E-5 1/yr design speed				203.	182.	224.			
1.0E-6 1/yr design speed				254.	235.	274.			
1.0E-7 1/yr design speed				300.	282.	320.			
36	92	3.838E+03	1.0000	94	93	93			
Point	2.082E+00	9.155E-01	4.736E+00	9.502E-04	4.178E-04	2.161E-03			
Line	6.627E+00	4.511E+00	9.737E+00	1.146E-04	7.797E-05	1.683E-04			
Strike Probability, 1/yr				1.065E-03	4.957E-04	2.330E-03			
1.0E-5 1/yr design speed				198.	179.	217.			
1.0E-6 1/yr design speed				250.	233.	268.			
1.0E-7 1/yr design speed				296.	280.	314.			
36	93	3.838E+03	1.0000	63	60	60			
Point	7.661E-01	3.164E-01	1.855E+00	2.343E-04	9.676E-05	5.674E-04			
Line	5.718E+00	3.434E+00	9.521E+00	6.624E-05	3.978E-05	1.103E-04			
Strike Probability, 1/yr				3.006E-04	1.365E-04	6.777E-04			
1.0E-5 1/yr design speed				170.	149.	190.			
1.0E-6 1/yr design speed				227.	209.	245.			
1.0E-7 1/yr design speed				276.	260.	294.			
36	94	3.838E+03	1.0000	134	125	125			
Point	1.159E+00	5.933E-01	2.262E+00	7.537E-04	3.859E-04	1.472E-03			
Line	5.764E+00	4.012E+00	8.282E+00	1.420E-04	9.886E-05	2.041E-04			
Strike Probability, 1/yr				8.957E-04	4.848E-04	1.676E-03			
1.0E-5 1/yr design speed				195.	180.	211.			
1.0E-6 1/yr design speed				248.	234.	263.			
1.0E-7 1/yr design speed				295.	282.	310.			
36	95	3.838E+03	1.0000	227	186	186			
Point	8.507E-01	4.841E-01	1.495E+00	9.375E-04	5.335E-04	1.647E-03			
Line	5.029E+00	3.754E+00	6.738E+00	2.099E-04	1.567E-04	2.813E-04			
Strike Probability, 1/yr				1.147E-03	6.902E-04	1.929E-03			
1.0E-5 1/yr design speed				202.	190.	215.			
1.0E-6 1/yr design speed				255.	243.	267.			
1.0E-7 1/yr design speed				301.	290.	314.			
36	96	3.838E+03	1.0000	142	110	110			
Point	1.465E+00	5.919E-01	3.626E+00	1.010E-03	4.080E-04	2.500E-03			
Line	4.762E+00	3.059E+00	7.414E+00	1.244E-04	7.988E-05	1.936E-04			
Strike Probability, 1/yr				1.134E-03	4.879E-04	2.693E-03			
1.0E-5 1/yr design speed				199.	179.	220.			
1.0E-6 1/yr design speed				251.	233.	271.			
1.0E-7 1/yr design speed				298.	280.	317.			

36	97	3.838E+03	1.0000	256	194	194		
Point		2.367E+00	1.211E+00	4.627E+00	2.942E-03	1.505E-03	5.750E-03	
Line		6.808E+00	4.951E+00	9.361E+00	3.205E-04	2.331E-04	4.407E-04	
Strike Probability, 1/yr					3.263E-03	1.738E-03	6.191E-03	
1.0E-5 1/yr design speed					223.	208.	239.	
1.0E-6 1/yr design speed					272.	258.	288.	
1.0E-7 1/yr design speed					317.	303.	333.	
36	98	3.838E+03	1.0000	156	123	123		
Point		1.884E+00	7.998E-01	4.439E+00	1.427E-03	6.057E-04	3.362E-03	
Line		5.498E+00	3.682E+00	8.211E+00	1.577E-04	1.056E-04	2.356E-04	
Strike Probability, 1/yr					1.585E-03	7.113E-04	3.598E-03	
1.0E-5 1/yr design speed					207.	188.	226.	
1.0E-6 1/yr design speed					257.	240.	276.	
1.0E-7 1/yr design speed					303.	287.	322.	
36	99	3.838E+03	1.0000	127	81	81		
Point		1.132E+00	3.916E-01	3.271E+00	6.978E-04	2.414E-04	2.017E-03	
Line		4.189E+00	2.515E+00	6.976E+00	9.783E-05	5.875E-05	1.629E-04	
Strike Probability, 1/yr					7.956E-04	3.002E-04	2.180E-03	
1.0E-5 1/yr design speed					191.	168.	215.	
1.0E-6 1/yr design speed					244.	223.	266.	
1.0E-7 1/yr design speed					291.	272.	313.	
36	100	3.838E+03	1.0000	110	83	83		
Point		7.759E-01	3.190E-01	1.887E+00	4.143E-04	1.703E-04	1.008E-03	
Line		3.471E+00	2.320E+00	5.192E+00	7.021E-05	4.693E-05	1.050E-04	
Strike Probability, 1/yr					4.845E-04	2.173E-04	1.113E-03	
1.0E-5 1/yr design speed					179.	160.	200.	
1.0E-6 1/yr design speed					234.	217.	253.	
1.0E-7 1/yr design speed					283.	266.	301.	
36	101	3.838E+03	1.0000	134	108	108		
Point		7.199E-01	3.140E-01	1.650E+00	4.683E-04	2.043E-04	1.074E-03	
Line		2.387E+00	1.688E+00	3.375E+00	5.881E-05	4.159E-05	8.316E-05	
Strike Probability, 1/yr					5.271E-04	2.458E-04	1.157E-03	
1.0E-5 1/yr design speed					180.	161.	200.	
1.0E-6 1/yr design speed					234.	218.	253.	
1.0E-7 1/yr design speed					283.	267.	300.	
36	102	3.838E+03	1.0000	88	71	71		
Point		7.647E-01	2.769E-01	2.112E+00	3.267E-04	1.183E-04	9.023E-04	
Line		4.826E+00	2.832E+00	8.225E+00	7.810E-05	4.583E-05	1.331E-04	
Strike Probability, 1/yr					4.048E-04	1.641E-04	1.035E-03	
1.0E-5 1/yr design speed					171.	136.	207.	
1.0E-6 1/yr design speed					235.	200.	270.	
1.0E-7 1/yr design speed					295.	259.	328.	

36	103	3.838E+03	1.0000	21	12	12	
Point		2.971E-01	4.880E-02	1.809E+00	3.029E-05	4.975E-06	1.844E-04
Line		5.455E+00	1.663E+00	1.790E+01	2.107E-05	6.421E-06	6.911E-05
Strike	Probability, 1/yr				5.136E-05	1.140E-05	2.535E-04
1.0E-5	1/yr design speed				108.	46.	167.
1.0E-6	1/yr design speed				180.	128.	234.
1.0E-7	1/yr design speed				245.	194.	296.
36	104	3.838E+03	1.0000	16	13	13	
Point		1.223E-01	2.061E-02	7.260E-01	9.502E-06	1.601E-06	5.639E-05
Line		4.679E+00	1.025E+00	2.136E+01	1.377E-05	3.016E-06	6.286E-05
Strike	Probability, 1/yr				2.327E-05	4.617E-06	1.192E-04
1.0E-5	1/yr design speed				80.	39.	144.
1.0E-6	1/yr design speed				158.	100.	216.
1.0E-7	1/yr design speed				225.	170.	281.
36	105	3.838E+03	1.0000	4	3	3	
Point		3.277E-03	1.594E-03	6.738E-03	6.364E-08	3.095E-08	1.309E-07
Line		1.674E-01	1.213E-01	2.312E-01	1.232E-07	8.921E-08	1.700E-07
Strike	Probability, 1/yr				1.868E-07	1.202E-07	3.009E-07
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				39.	39.	39.
1.0E-7	1/yr design speed				70.	48.	94.
36	106	3.838E+03	1.0000	1	1	1	
Point		1.705E-03	0.000E+00	0.000E+00	8.275E-09	0.000E+00	0.000E+00
Line		1.000E-01	0.000E+00	0.000E+00	1.839E-08	0.000E+00	0.000E+00
Strike	Probability, 1/yr				2.666E-08	0.000E+00	0.000E+00
1.0E-5	1/yr design speed				38.	38.	38.
1.0E-6	1/yr design speed				38.	38.	38.
1.0E-7	1/yr design speed				38.	38.	38.
36	107	3.838E+03	1.0000	2	2	2	
Point		1.724E-02	2.269E-03	1.310E-01	1.674E-07	2.203E-08	1.272E-06
Line		9.686E-01	6.836E-02	1.373E+01	3.562E-07	2.514E-08	5.048E-06
Strike	Probability, 1/yr				5.237E-07	4.717E-08	6.320E-06
1.0E-5	1/yr design speed				39.	38.	39.
1.0E-6	1/yr design speed				39.	38.	123.
1.0E-7	1/yr design speed				109.	38.	199.
36	108	3.838E+03	1.0000	5	4	4	
Point		1.319E-03	1.100E-03	1.580E-03	3.201E-08	2.670E-08	3.836E-08
Line		1.244E-01	9.648E-02	1.604E-01	1.144E-07	8.871E-08	1.475E-07
Strike	Probability, 1/yr				1.464E-07	1.154E-07	1.858E-07
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				39.	39.	39.
1.0E-7	1/yr design speed				59.	46.	74.

36	109	3.838E+03	1.0000	1	1	1	
Point		1.705E-01	0.000E+00	0.000E+00	8.275E-07	0.000E+00	0.000E+00
Line		2.500E+00	0.000E+00	0.000E+00	4.597E-07	0.000E+00	0.000E+00
Strike	Probability, 1/yr				1.287E-06	0.000E+00	0.000E+00
1.0E-5	1/yr design speed				39.	38.	38.
1.0E-6	1/yr design speed				52.	38.	38.
1.0E-7	1/yr design speed				138.	38.	38.
36	110	3.838E+03	1.0000	1	1	1	
Point		2.841E-03	0.000E+00	0.000E+00	1.379E-08	0.000E+00	0.000E+00
Line		1.000E-01	0.000E+00	0.000E+00	1.839E-08	0.000E+00	0.000E+00
Strike	Probability, 1/yr				3.218E-08	0.000E+00	0.000E+00
1.0E-5	1/yr design speed				38.	38.	38.
1.0E-6	1/yr design speed				38.	38.	38.
1.0E-7	1/yr design speed				38.	38.	38.
36	111	3.838E+03	1.0000	3	2	2	
Point		1.401E-01	3.025E-04	6.488E+01	2.040E-06	4.405E-09	9.449E-04
Line		1.417E+01	1.703E-02	1.178E+04	7.816E-06	9.396E-09	6.501E-03
Strike	Probability, 1/yr				9.856E-06	1.380E-08	7.446E-03
1.0E-5	1/yr design speed				39.	38.	274.
1.0E-6	1/yr design speed				132.	38.	338.
1.0E-7	1/yr design speed				203.	38.	400.
36	112	3.838E+03	1.0000	3	2	2	
Point		3.513E-02	1.056E-02	1.168E-01	5.116E-07	1.539E-07	1.701E-06
Line		4.500E-01	3.949E-01	5.128E-01	2.483E-07	2.179E-07	2.829E-07
Strike	Probability, 1/yr				7.598E-07	3.717E-07	1.984E-06
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				39.	39.	77.
1.0E-7	1/yr design speed				121.	92.	158.
36	113	3.838E+03	1.0000	1	1	1	
Point		3.409E-02	0.000E+00	0.000E+00	1.655E-07	0.000E+00	0.000E+00
Line		3.000E+00	0.000E+00	0.000E+00	5.517E-07	0.000E+00	0.000E+00
Strike	Probability, 1/yr				7.172E-07	0.000E+00	0.000E+00
1.0E-5	1/yr design speed				39.	38.	38.
1.0E-6	1/yr design speed				39.	38.	38.
1.0E-7	1/yr design speed				121.	38.	38.
36	114	3.838E+03	1.0000	6	5	5	
Point		5.773E-03	7.853E-04	4.244E-02	1.682E-07	2.288E-08	1.236E-06
Line		2.170E-01	1.341E-01	3.512E-01	2.394E-07	1.479E-07	3.875E-07
Strike	Probability, 1/yr				4.076E-07	1.708E-07	1.624E-06
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				39.	39.	67.
1.0E-7	1/yr design speed				101.	64.	153.

36	115	3.838E+03	1.0000	5	4	4		
Point		1.681E-01	1.721E-02	1.642E+00	4.081E-06	4.178E-07	3.986E-05	
Line		1.512E+00	8.261E-01	2.769E+00	1.391E-06	7.596E-07	2.546E-06	
Strike Probability, 1/yr					5.472E-06	1.177E-06	4.241E-05	
1.0E-5 1/yr design speed					39.	39.	107.	
1.0E-6 1/yr design speed					109.	47.	181.	
1.0E-7 1/yr design speed					180.	129.	245.	
36	116	3.838E+03	1.0000	2	2	2		
Point		8.533E-04	5.569E-04	1.307E-03	8.285E-09	5.407E-09	1.269E-08	
Line		1.502E-01	9.802E-02	2.301E-01	5.523E-08	3.605E-08	8.462E-08	
Strike Probability, 1/yr					6.352E-08	4.146E-08	9.732E-08	
1.0E-5 1/yr design speed					38.	38.	38.	
1.0E-6 1/yr design speed					38.	38.	38.	
1.0E-7 1/yr design speed					38.	38.	38.	
36	117	3.838E+03	1.0000	0	0	0		
36	118	3.838E+03	1.0000	1	1	1		
Point		8.523E-02	0.000E+00	0.000E+00	4.138E-07	0.000E+00	0.000E+00	
Line		6.000E-01	0.000E+00	0.000E+00	1.103E-07	0.000E+00	0.000E+00	
Strike Probability, 1/yr					5.241E-07	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					39.	38.	38.	
1.0E-6 1/yr design speed					39.	38.	38.	
1.0E-7 1/yr design speed					108.	38.	38.	
36	119	3.838E+03	1.0000	32	32	32		
Point		2.464E-02	9.543E-03	6.360E-02	3.827E-06	1.483E-06	9.880E-06	
Line		1.088E+00	6.321E-01	1.871E+00	6.400E-06	3.719E-06	1.101E-05	
Strike Probability, 1/yr					1.023E-05	5.202E-06	2.089E-05	
1.0E-5 1/yr design speed					41.	39.	79.	
1.0E-6 1/yr design speed					132.	104.	162.	
1.0E-7 1/yr design speed					202.	174.	232.	
36	120	3.838E+03	1.0000	7	6	6		
Point		5.117E-02	4.079E-03	6.419E-01	1.739E-06	1.386E-07	2.181E-05	
Line		1.453E+00	4.460E-01	4.736E+00	1.871E-06	5.742E-07	6.096E-06	
Strike Probability, 1/yr					3.610E-06	7.128E-07	2.791E-05	
1.0E-5 1/yr design speed					39.	39.	91.	
1.0E-6 1/yr design speed					96.	39.	169.	
1.0E-7 1/yr design speed					170.	115.	236.	
36	121	3.070E+03	0.8000	8	8	8		
Point		3.300E-02	6.482E-03	1.680E-01	1.602E-06	3.147E-07	8.157E-06	
Line		9.640E-01	3.006E-01	3.091E+00	1.773E-06	5.528E-07	5.684E-06	
Strike Probability, 1/yr					3.375E-06	8.675E-07	1.384E-05	
1.0E-5 1/yr design speed					39.	39.	58.	
1.0E-6 1/yr design speed					93.	39.	148.	
1.0E-7 1/yr design speed					168.	120.	219.	

36	122	1.919E+02	0.0500	1	1	1		
Point		5.682E-02	0.000E+00	0.000E+00	5.517E-06	0.000E+00	0.000E+00	
Line		1.000E+00	0.000E+00	0.000E+00	3.678E-06	0.000E+00	0.000E+00	
Strike Probability, 1/yr					9.195E-06	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					39.	38.	38.	
1.0E-6 1/yr design speed					127.	38.	38.	
1.0E-7 1/yr design speed					197.	38.	38.	
37	68	0.000E+00	0.0000	0	0	0		
Point		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Line		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Strike Probability, 1/yr					0.000E+00	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					0.	0.	0.	
1.0E-6 1/yr design speed					0.	0.	0.	
1.0E-7 1/yr design speed					0.	0.	0.	
37	69	0.000E+00	0.0000	0	0	0		
Point		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Line		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Strike Probability, 1/yr					0.000E+00	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					0.	0.	0.	
1.0E-6 1/yr design speed					0.	0.	0.	
1.0E-7 1/yr design speed					0.	0.	0.	
37	75	3.788E+02	0.1000	13	10	10		
Point		5.129E-02	1.410E-02	1.866E-01	3.280E-05	9.014E-06	1.193E-04	
Line		9.191E-01	4.943E-01	1.709E+00	2.226E-05	1.197E-05	4.140E-05	
Strike Probability, 1/yr					5.506E-05	2.099E-05	1.607E-04	
1.0E-5 1/yr design speed					118.	83.	151.	
1.0E-6 1/yr design speed					183.	158.	209.	
1.0E-7 1/yr design speed					237.	216.	259.	
37	76	3.030E+03	0.8000	43	35	35		
Point		2.942E-01	1.103E-01	7.847E-01	7.778E-05	2.916E-05	2.075E-04	
Line		2.617E+00	1.587E+00	4.315E+00	2.621E-05	1.590E-05	4.321E-05	
Strike Probability, 1/yr					1.040E-04	4.505E-05	2.507E-04	
1.0E-5 1/yr design speed					135.	108.	161.	
1.0E-6 1/yr design speed					196.	174.	217.	
1.0E-7 1/yr design speed					248.	229.	266.	
37	77	3.788E+03	1.0000	64	49	49		
Point		1.337E+00	4.206E-01	4.250E+00	4.209E-04	1.324E-04	1.338E-03	
Line		3.839E+00	2.397E+00	6.149E+00	4.578E-05	2.858E-05	7.332E-05	
Strike Probability, 1/yr					4.667E-04	1.610E-04	1.411E-03	
1.0E-5 1/yr design speed					173.	144.	201.	
1.0E-6 1/yr design speed					226.	202.	251.	
1.0E-7 1/yr design speed					274.	252.	296.	

37	78	3.788E+03	1.0000	25	23	23		
Point	5.486E-01	1.566E-01	1.921E+00	6.746E-05	1.926E-05	2.362E-04		
Line	3.077E+00	1.807E+00	5.239E+00	1.433E-05	8.418E-06	2.440E-05		
Strike Probability, 1/yr				8.179E-05	2.768E-05	2.606E-04		
1.0E-5 1/yr design speed				131.	96.	163.		
1.0E-6 1/yr design speed				194.	169.	220.		
1.0E-7 1/yr design speed				247.	226.	271.		
37	79	3.788E+03	1.0000	21	19	19		
Point	2.163E-01	3.796E-02	1.233E+00	2.235E-05	3.921E-06	1.274E-04		
Line	2.080E+00	8.684E-01	4.980E+00	8.137E-06	3.398E-06	1.948E-05		
Strike Probability, 1/yr				3.049E-05	7.319E-06	1.469E-04		
1.0E-5 1/yr design speed				100.	39.	148.		
1.0E-6 1/yr design speed				171.	134.	208.		
1.0E-7 1/yr design speed				229.	199.	261.		
37	80	3.788E+03	1.0000	15	12	12		
Point	1.964E-01	1.058E-01	3.647E-01	1.449E-05	7.805E-06	2.691E-05		
Line	4.218E+00	2.210E+00	8.047E+00	1.179E-05	6.178E-06	2.249E-05		
Strike Probability, 1/yr				2.628E-05	1.398E-05	4.940E-05		
1.0E-5 1/yr design speed				97.	65.	121.		
1.0E-6 1/yr design speed				173.	154.	191.		
1.0E-7 1/yr design speed				231.	214.	248.		
37	81	3.788E+03	1.0000	12	9	9		
Point	9.682E-02	6.196E-02	1.513E-01	5.715E-06	3.657E-06	8.931E-06		
Line	2.977E+00	1.824E+00	4.860E+00	6.657E-06	4.078E-06	1.087E-05		
Strike Probability, 1/yr				1.237E-05	7.735E-06	1.980E-05		
1.0E-5 1/yr design speed				56.	39.	86.		
1.0E-6 1/yr design speed				153.	137.	168.		
1.0E-7 1/yr design speed				215.	202.	229.		
37	82	3.788E+03	1.0000	5	5	5		
Point	3.214E-02	4.171E-03	2.476E-01	7.905E-07	1.026E-07	6.090E-06		
Line	1.635E+00	2.797E-01	9.552E+00	1.523E-06	2.606E-07	8.899E-06		
Strike Probability, 1/yr				2.313E-06	3.632E-07	1.499E-05		
1.0E-5 1/yr design speed				39.	39.	72.		
1.0E-6 1/yr design speed				95.	39.	161.		
1.0E-7 1/yr design speed				175.	115.	223.		
37	83	3.788E+03	1.0000	33	33	33		
Point	3.444E-01	1.188E-01	9.983E-01	5.590E-05	1.928E-05	1.621E-04		
Line	2.847E+00	1.641E+00	4.940E+00	1.751E-05	1.009E-05	3.037E-05		
Strike Probability, 1/yr				7.341E-05	2.937E-05	1.924E-04		
1.0E-5 1/yr design speed				129.	100.	156.		
1.0E-6 1/yr design speed				193.	172.	216.		
1.0E-7 1/yr design speed				247.	228.	267.		

37	84	3.788E+03	1.0000	87	81	81		
Point		6.266E-01	3.116E-01	1.260E+00	2.682E-04	1.334E-04	5.393E-04	
Line		7.195E+00	4.667E+00	1.109E+01	1.166E-04	7.565E-05	1.798E-04	
Strike	Probability, 1/yr				3.848E-04	2.090E-04	7.191E-04	
1.0E-5	1/yr design speed				179.	163.	195.	
1.0E-6	1/yr design speed				235.	221.	250.	
1.0E-7	1/yr design speed				284.	271.	298.	
37	85	3.788E+03	1.0000	74	68	68		
Point		6.066E-01	2.946E-01	1.249E+00	2.208E-04	1.072E-04	4.547E-04	
Line		4.665E+00	3.090E+00	7.041E+00	6.432E-05	4.261E-05	9.708E-05	
Strike	Probability, 1/yr				2.851E-04	1.499E-04	5.518E-04	
1.0E-5	1/yr design speed				168.	151.	185.	
1.0E-6	1/yr design speed				226.	211.	241.	
1.0E-7	1/yr design speed				275.	262.	290.	
37	86	3.788E+03	1.0000	60	53	53		
Point		1.729E+00	5.922E-01	5.046E+00	5.102E-04	1.748E-04	1.489E-03	
Line		7.549E+00	4.462E+00	1.277E+01	8.439E-05	4.988E-05	1.428E-04	
Strike	Probability, 1/yr				5.946E-04	2.247E-04	1.632E-03	
1.0E-5	1/yr design speed				184.	161.	209.	
1.0E-6	1/yr design speed				238.	218.	261.	
1.0E-7	1/yr design speed				286.	267.	308.	
37	87	3.788E+03	1.0000	83	69	69		
Point		2.445E+00	8.270E-01	7.231E+00	9.984E-04	3.377E-04	2.952E-03	
Line		7.655E+00	4.706E+00	1.245E+01	1.184E-04	7.278E-05	1.926E-04	
Strike	Probability, 1/yr				1.117E-03	4.104E-04	3.145E-03	
1.0E-5	1/yr design speed				199.	175.	223.	
1.0E-6	1/yr design speed				250.	230.	273.	
1.0E-7	1/yr design speed				297.	278.	319.	
37	88	3.788E+03	1.0000	80	67	68		
Point		6.897E-01	2.995E-01	1.588E+00	2.714E-04	1.179E-04	6.250E-04	
Line		4.920E+00	3.138E+00	7.715E+00	7.334E-05	4.677E-05	1.150E-04	
Strike	Probability, 1/yr				3.447E-04	1.646E-04	7.400E-04	
1.0E-5	1/yr design speed				173.	154.	192.	
1.0E-6	1/yr design speed				229.	213.	247.	
1.0E-7	1/yr design speed				279.	264.	295.	
37	89	3.788E+03	1.0000	138	126	126		
Point		7.448E-01	3.807E-01	1.457E+00	5.056E-04	2.584E-04	9.892E-04	
Line		4.450E+00	3.222E+00	6.146E+00	1.144E-04	8.285E-05	1.580E-04	
Strike	Probability, 1/yr				6.200E-04	3.413E-04	1.147E-03	
1.0E-5	1/yr design speed				187.	173.	203.	
1.0E-6	1/yr design speed				241.	228.	255.	
1.0E-7	1/yr design speed				289.	277.	303.	

37	90	3.788E+03	1.0000	83	81	81					
Point	9.833E-01	4.800E-01	2.014E+00	4.015E-04	1.960E-04	8.224E-04					
Line	5.780E+00	3.913E+00	8.539E+00	8.940E-05	6.051E-05	1.321E-04					
Strike Probability, 1/yr				4.909E-04	2.565E-04	9.545E-04					
1.0E-5 1/yr design speed				181.	165.	198.					
1.0E-6 1/yr design speed				236.	221.	252.					
1.0E-7 1/yr design speed				284.	271.	300.					
37	91	3.788E+03	1.0000	59	58	58					
Point	5.462E-01	2.054E-01	1.452E+00	1.585E-04	5.962E-05	4.214E-04					
Line	2.968E+00	1.881E+00	4.685E+00	3.263E-05	2.068E-05	5.150E-05					
Strike Probability, 1/yr				1.911E-04	8.030E-05	4.729E-04					
1.0E-5 1/yr design speed				156.	132.	179.					
1.0E-6 1/yr design speed				214.	195.	235.					
1.0E-7 1/yr design speed				265.	248.	284.					
37	92	3.788E+03	1.0000	74	71	71					
Point	9.097E-01	3.863E-01	2.142E+00	3.311E-04	1.406E-04	7.797E-04					
Line	5.296E+00	3.465E+00	8.095E+00	7.302E-05	4.777E-05	1.116E-04					
Strike Probability, 1/yr				4.042E-04	1.884E-04	8.914E-04					
1.0E-5 1/yr design speed				176.	157.	196.					
1.0E-6 1/yr design speed				232.	215.	250.					
1.0E-7 1/yr design speed				281.	265.	298.					
37	93	3.788E+03	1.0000	111	108	108					
Point	8.488E-01	4.081E-01	1.766E+00	4.635E-04	2.228E-04	9.640E-04					
Line	4.354E+00	3.049E+00	6.217E+00	9.005E-05	6.306E-05	1.286E-04					
Strike Probability, 1/yr				5.535E-04	2.859E-04	1.093E-03					
1.0E-5 1/yr design speed				183.	167.	201.					
1.0E-6 1/yr design speed				238.	223.	254.					
1.0E-7 1/yr design speed				286.	272.	301.					
37	94	3.788E+03	1.0000	154	137	137					
Point	2.036E+00	9.011E-01	4.599E+00	1.542E-03	6.826E-04	3.484E-03					
Line	5.331E+00	3.724E+00	7.631E+00	1.530E-04	1.069E-04	2.190E-04					
Strike Probability, 1/yr				1.695E-03	7.895E-04	3.703E-03					
1.0E-5 1/yr design speed				208.	190.	227.					
1.0E-6 1/yr design speed				258.	242.	277.					
1.0E-7 1/yr design speed				304.	288.	322.					
37	95	3.788E+03	1.0000	134	114	114					
Point	2.103E+00	1.012E+00	4.372E+00	1.386E-03	6.670E-04	2.882E-03					
Line	6.894E+00	4.797E+00	9.908E+00	1.721E-04	1.198E-04	2.474E-04					
Strike Probability, 1/yr				1.559E-03	7.868E-04	3.129E-03					
1.0E-5 1/yr design speed				207.	190.	224.					
1.0E-6 1/yr design speed				258.	242.	274.					
1.0E-7 1/yr design speed				304.	289.	320.					

37	96	3.788E+03	1.0000	120	98	98		
Point	1.976E+00	7.662E-01	5.094E+00	1.166E-03	4.523E-04	3.007E-03		
Line	6.863E+00	4.377E+00	1.076E+01	1.535E-04	9.786E-05	2.406E-04		
Strike Probability, 1/yr				1.320E-03	5.501E-04	3.248E-03		
1.0E-5 1/yr design speed				203.	182.	225.		
1.0E-6 1/yr design speed				254.	236.	275.		
1.0E-7 1/yr design speed				301.	283.	321.		
37	97	3.788E+03	1.0000	219	170	170		
Point	1.441E+00	7.496E-01	2.771E+00	1.553E-03	8.076E-04	2.985E-03		
Line	6.054E+00	4.306E+00	8.511E+00	2.470E-04	1.757E-04	3.473E-04		
Strike Probability, 1/yr				1.800E-03	9.833E-04	3.332E-03		
1.0E-5 1/yr design speed				211.	197.	226.		
1.0E-6 1/yr design speed				262.	249.	277.		
1.0E-7 1/yr design speed				308.	295.	323.		
37	98	3.788E+03	1.0000	158	130	130		
Point	6.519E-01	3.520E-01	1.207E+00	5.067E-04	2.736E-04	9.382E-04		
Line	5.035E+00	3.586E+00	7.069E+00	1.482E-04	1.056E-04	2.081E-04		
Strike Probability, 1/yr				6.549E-04	3.792E-04	1.146E-03		
1.0E-5 1/yr design speed				190.	177.	204.		
1.0E-6 1/yr design speed				244.	232.	257.		
1.0E-7 1/yr design speed				292.	280.	305.		
37	99	3.788E+03	1.0000	114	92	92		
Point	9.892E-01	4.243E-01	2.306E+00	5.547E-04	2.379E-04	1.293E-03		
Line	8.225E+00	5.054E+00	1.339E+01	1.747E-04	1.074E-04	2.843E-04		
Strike Probability, 1/yr				7.294E-04	3.453E-04	1.578E-03		
1.0E-5 1/yr design speed				193.	175.	212.		
1.0E-6 1/yr design speed				247.	231.	264.		
1.0E-7 1/yr design speed				295.	280.	311.		
37	100	3.788E+03	1.0000	158	121	121		
Point	4.427E-01	2.488E-01	7.877E-01	3.440E-04	1.933E-04	6.122E-04		
Line	5.627E+00	3.927E+00	8.063E+00	1.657E-04	1.156E-04	2.374E-04		
Strike Probability, 1/yr				5.097E-04	3.090E-04	8.496E-04		
1.0E-5 1/yr design speed				187.	174.	200.		
1.0E-6 1/yr design speed				242.	231.	254.		
1.0E-7 1/yr design speed				291.	280.	303.		
37	101	3.788E+03	1.0000	91	71	71		
Point	7.935E-01	3.139E-01	2.006E+00	3.552E-04	1.405E-04	8.979E-04		
Line	5.885E+00	3.407E+00	1.016E+01	9.978E-05	5.777E-05	1.723E-04		
Strike Probability, 1/yr				4.550E-04	1.983E-04	1.070E-03		
1.0E-5 1/yr design speed				180.	159.	202.		
1.0E-6 1/yr design speed				236.	218.	255.		
1.0E-7 1/yr design speed				285.	268.	303.		

37	102	3.788E+03	1.0000	63	53	53		
Point		2.671E-01	9.561E-02	7.464E-01	8.278E-05	2.963E-05	2.313E-04	
Line		3.026E+00	1.689E+00	5.421E+00	3.552E-05	1.983E-05	6.364E-05	
Strike Probability, 1/yr					1.183E-04	4.946E-05	2.949E-04	
1.0E-5 1/yr design speed					135.	100.	171.	
1.0E-6 1/yr design speed					203.	169.	238.	
1.0E-7 1/yr design speed					265.	231.	299.	
37	103	3.788E+03	1.0000	12	7	7		
Point		7.764E-01	4.735E-02	1.273E+01	4.583E-05	2.795E-06	7.514E-04	
Line		5.863E+00	1.434E+00	2.397E+01	1.311E-05	3.206E-06	5.360E-05	
Strike Probability, 1/yr					5.894E-05	6.001E-06	8.050E-04	
1.0E-5 1/yr design speed					112.	39.	200.	
1.0E-6 1/yr design speed					182.	107.	262.	
1.0E-7 1/yr design speed					245.	176.	320.	
37	104	3.788E+03	1.0000	23	18	18		
Point		1.060E-02	4.761E-03	2.360E-02	1.199E-06	5.386E-07	2.670E-06	
Line		3.955E-01	2.556E-01	6.121E-01	1.695E-06	1.095E-06	2.623E-06	
Strike Probability, 1/yr					2.894E-06	1.634E-06	5.293E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					88.	61.	115.	
1.0E-7 1/yr design speed					164.	140.	191.	
37	105	3.788E+03	1.0000	11	9	9		
Point		2.646E-02	8.428E-03	8.305E-02	1.432E-06	4.560E-07	4.494E-06	
Line		8.511E-01	4.052E-01	1.787E+00	1.744E-06	8.306E-07	3.663E-06	
Strike Probability, 1/yr					3.176E-06	1.287E-06	8.157E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					91.	51.	131.	
1.0E-7 1/yr design speed					167.	132.	204.	
37	106	3.788E+03	1.0000	6	6	6		
Point		2.104E+00	5.725E-02	7.732E+01	6.209E-05	1.690E-06	2.282E-03	
Line		5.511E+00	1.055E+00	2.878E+01	6.161E-06	1.180E-06	3.218E-05	
Strike Probability, 1/yr					6.825E-05	2.869E-06	2.314E-03	
1.0E-5 1/yr design speed					116.	39.	228.	
1.0E-6 1/yr design speed					185.	82.	287.	
1.0E-7 1/yr design speed					247.	153.	343.	
37	107	3.788E+03	1.0000	4	3	4		
Point		3.718E-03	1.321E-03	1.046E-02	7.316E-08	2.599E-08	2.059E-07	
Line		2.783E-01	1.626E-01	4.762E-01	2.074E-07	1.212E-07	3.549E-07	
Strike Probability, 1/yr					2.806E-07	1.472E-07	5.608E-07	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					39.	39.	39.	
1.0E-7 1/yr design speed					87.	57.	118.	

37	108	3.788E+03	1.0000	3	3	3		
Point		3.415E-02	9.302E-03	1.254E-01	5.040E-07	1.373E-07	1.850E-06	
Line		7.620E-01	3.644E-01	1.594E+00	4.260E-07	2.037E-07	8.908E-07	
Strike Probability, 1/yr					9.300E-07	3.410E-07	2.741E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					39.	39.	90.	
1.0E-7 1/yr design speed					128.	89.	170.	
37	109	3.788E+03	1.0000	0	0	0		
37	110	3.788E+03	1.0000	0	0	0		
37	111	3.788E+03	1.0000	0	0	0		
37	112	3.788E+03	1.0000	2	2	2		
Point		1.380E-02	2.410E-03	7.896E-02	1.357E-07	2.371E-08	7.769E-07	
Line		1.272E+00	4.767E-01	3.391E+00	4.738E-07	1.777E-07	1.264E-06	
Strike Probability, 1/yr					6.096E-07	2.014E-07	2.041E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					39.	39.	78.	
1.0E-7 1/yr design speed					115.	71.	162.	
37	113	3.788E+03	1.0000	5	5	5		
Point		1.601E-01	3.368E-03	7.614E+00	3.939E-06	8.284E-08	1.873E-04	
Line		7.478E-01	2.030E-01	2.754E+00	6.967E-07	1.891E-07	2.566E-06	
Strike Probability, 1/yr					4.635E-06	2.720E-07	1.898E-04	
1.0E-5 1/yr design speed					39.	39.	156.	
1.0E-6 1/yr design speed					103.	39.	223.	
1.0E-7 1/yr design speed					174.	82.	283.	
37	114	3.788E+03	1.0000	1	1	1		
Point		1.136E-03	0.000E+00	0.000E+00	5.590E-09	0.000E+00	0.000E+00	
Line		1.000E-01	0.000E+00	0.000E+00	1.863E-08	0.000E+00	0.000E+00	
Strike Probability, 1/yr					2.422E-08	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					38.	38.	38.	
1.0E-6 1/yr design speed					38.	38.	38.	
1.0E-7 1/yr design speed					38.	38.	38.	
37	115	3.788E+03	1.0000	4	2	3		
Point		1.321E-02	2.668E-04	6.544E-01	2.600E-07	5.250E-09	1.288E-05	
Line		1.828E+00	2.170E-01	1.539E+01	1.362E-06	1.617E-07	1.147E-05	
Strike Probability, 1/yr					1.622E-06	1.670E-07	2.435E-05	
1.0E-5 1/yr design speed					39.	39.	85.	
1.0E-6 1/yr design speed					64.	39.	167.	
1.0E-7 1/yr design speed					148.	63.	236.	
37	116	3.788E+03	1.0000	1	1	1		
Point		5.682E-04	0.000E+00	0.000E+00	2.795E-09	0.000E+00	0.000E+00	
Line		1.000E-01	0.000E+00	0.000E+00	1.863E-08	0.000E+00	0.000E+00	
Strike Probability, 1/yr					2.143E-08	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					38.	38.	38.	
1.0E-6 1/yr design speed					38.	38.	38.	
1.0E-7 1/yr design speed					38.	38.	38.	

37	117	3.788E+03	1.0000	0	0	0		
37	118	3.788E+03	1.0000	0	0	0		
37	119	3.788E+03	1.0000	2	1	1		
Point		2.557E-02	0.000E+00	0.000E+00	2.515E-07	0.000E+00	0.000E+00	
Line		5.000E-01	0.000E+00	0.000E+00	1.863E-07	0.000E+00	0.000E+00	
Strike	Probability, 1/yr				4.379E-07	0.000E+00	0.000E+00	
1.0E-5	1/yr design speed				39.	38.	38.	
1.0E-6	1/yr design speed				39.	38.	38.	
1.0E-7	1/yr design speed				102.	38.	38.	
37	120	3.788E+03	1.0000	19	18	18		
Point		6.862E-02	1.556E-02	3.026E-01	6.414E-06	1.455E-06	2.828E-05	
Line		1.100E+00	6.261E-01	1.933E+00	3.895E-06	2.217E-06	6.842E-06	
Strike	Probability, 1/yr				1.031E-05	3.671E-06	3.512E-05	
1.0E-5	1/yr design speed				41.	39.	100.	
1.0E-6	1/yr design speed				131.	92.	176.	
1.0E-7	1/yr design speed				200.	163.	242.	
37	121	3.788E+03	1.0000	14	9	9		
Point		1.302E-02	4.727E-03	3.586E-02	8.966E-07	3.255E-07	2.469E-06	
Line		3.626E-01	2.003E-01	6.565E-01	9.459E-07	5.225E-07	1.713E-06	
Strike	Probability, 1/yr				1.842E-06	8.480E-07	4.182E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				70.	39.	107.	
1.0E-7	1/yr design speed				150.	119.	183.	
37	122	1.136E+03	0.3000	11	11	11		
Point		2.880E-02	8.388E-03	9.886E-02	5.194E-06	1.513E-06	1.783E-05	
Line		6.526E-01	3.185E-01	1.337E+00	4.458E-06	2.176E-06	9.135E-06	
Strike	Probability, 1/yr				9.652E-06	3.689E-06	2.696E-05	
1.0E-5	1/yr design speed				39.	39.	90.	
1.0E-6	1/yr design speed				129.	92.	169.	
1.0E-7	1/yr design speed				199.	163.	237.	
38	74	1.868E+02	0.0500	1	1	1		
Point		1.359E-01	0.000E+00	0.000E+00	1.355E-05	0.000E+00	0.000E+00	
Line		5.979E+00	0.000E+00	0.000E+00	2.259E-05	0.000E+00	0.000E+00	
Strike	Probability, 1/yr				3.614E-05	0.000E+00	0.000E+00	
1.0E-5	1/yr design speed				106.	38.	38.	
1.0E-6	1/yr design speed				176.	38.	38.	
1.0E-7	1/yr design speed				232.	38.	38.	
38	75	3.363E+03	0.9000	50	48	48		
Point		2.296E-01	8.684E-02	6.071E-01	6.361E-05	2.406E-05	1.682E-04	
Line		3.160E+00	1.775E+00	5.626E+00	3.316E-05	1.863E-05	5.904E-05	
Strike	Probability, 1/yr				9.677E-05	4.268E-05	2.272E-04	
1.0E-5	1/yr design speed				135.	108.	160.	
1.0E-6	1/yr design speed				196.	175.	217.	
1.0E-7	1/yr design speed				248.	230.	266.	

38	76	3.737E+03	1.0000	64	61	61	
Point	2.238E-01	1.122E-01	4.461E-01	7.142E-05	3.582E-05	1.424E-04	
Line	2.398E+00	1.659E+00	3.468E+00	2.899E-05	2.005E-05	4.192E-05	
Strike Probability, 1/yr				1.004E-04	5.588E-05	1.843E-04	
1.0E-5 1/yr design speed				135.	115.	154.	
1.0E-6 1/yr design speed				196.	180.	211.	
1.0E-7 1/yr design speed				248.	234.	261.	
38	77	3.737E+03	1.0000	63	61	61	
Point	4.003E-01	1.863E-01	8.604E-01	1.258E-04	5.851E-05	2.703E-04	
Line	4.116E+00	2.691E+00	6.293E+00	4.898E-05	3.203E-05	7.489E-05	
Strike Probability, 1/yr				1.747E-04	9.054E-05	3.452E-04	
1.0E-5 1/yr design speed				151.	130.	170.	
1.0E-6 1/yr design speed				209.	192.	225.	
1.0E-7 1/yr design speed				259.	244.	274.	
38	78	3.737E+03	1.0000	42	36	36	
Point	1.854E-01	7.286E-02	4.717E-01	3.883E-05	1.526E-05	9.878E-05	
Line	2.513E+00	1.448E+00	4.361E+00	1.994E-05	1.149E-05	3.460E-05	
Strike Probability, 1/yr				5.876E-05	2.675E-05	1.334E-04	
1.0E-5 1/yr design speed				125.	97.	149.	
1.0E-6 1/yr design speed				191.	172.	211.	
1.0E-7 1/yr design speed				246.	229.	264.	
38	79	3.737E+03	1.0000	11	9	9	
Point	4.088E-02	1.632E-02	1.024E-01	2.242E-06	8.954E-07	5.615E-06	
Line	2.001E+00	7.690E-01	5.208E+00	4.158E-06	1.598E-06	1.082E-05	
Strike Probability, 1/yr				6.400E-06	2.493E-06	1.644E-05	
1.0E-5 1/yr design speed				39.	39.	79.	
1.0E-6 1/yr design speed				134.	98.	165.	
1.0E-7 1/yr design speed				202.	175.	227.	
38	80	3.737E+03	1.0000	6	4	4	
Point	6.453E-02	5.917E-03	7.038E-01	1.931E-06	1.770E-07	2.106E-05	
Line	1.669E+00	2.654E-01	1.049E+01	1.891E-06	3.008E-07	1.189E-05	
Strike Probability, 1/yr				3.822E-06	4.778E-07	3.295E-05	
1.0E-5 1/yr design speed				39.	39.	104.	
1.0E-6 1/yr design speed				112.	39.	178.	
1.0E-7 1/yr design speed				184.	124.	236.	
38	81	3.737E+03	1.0000	14	11	11	
Point	6.605E-02	1.787E-02	2.442E-01	4.611E-06	1.247E-06	1.705E-05	
Line	1.392E+00	6.110E-01	3.170E+00	3.681E-06	1.616E-06	8.384E-06	
Strike Probability, 1/yr				8.292E-06	2.863E-06	2.543E-05	
1.0E-5 1/yr design speed				39.	39.	93.	
1.0E-6 1/yr design speed				138.	103.	169.	
1.0E-7 1/yr design speed				203.	177.	229.	

38	82	3.737E+03	1.0000	38	34	34		
Point		8.379E-01	2.683E-01	2.617E+00	1.588E-04	5.083E-05	4.959E-04	
Line		5.019E+00	2.648E+00	9.513E+00	3.602E-05	1.901E-05	6.828E-05	
Strike Probability, 1/yr					1.948E-04	6.984E-05	5.642E-04	
1.0E-5 1/yr design speed					156.	128.	184.	
1.0E-6 1/yr design speed					215.	192.	239.	
1.0E-7 1/yr design speed					266.	245.	288.	
38	83	3.737E+03	1.0000	48	45	45		
Point		1.014E+00	3.643E-01	2.824E+00	2.428E-04	8.719E-05	6.759E-04	
Line		6.177E+00	3.774E+00	1.011E+01	5.600E-05	3.422E-05	9.167E-05	
Strike Probability, 1/yr					2.988E-04	1.214E-04	7.675E-04	
1.0E-5 1/yr design speed					168.	145.	192.	
1.0E-6 1/yr design speed					225.	206.	246.	
1.0E-7 1/yr design speed					275.	257.	294.	
38	84	3.737E+03	1.0000	78	70	70		
Point		5.488E-01	2.893E-01	1.041E+00	2.135E-04	1.125E-04	4.050E-04	
Line		6.248E+00	4.224E+00	9.243E+00	9.206E-05	6.223E-05	1.362E-04	
Strike Probability, 1/yr					3.055E-04	1.747E-04	5.412E-04	
1.0E-5 1/yr design speed					173.	158.	187.	
1.0E-6 1/yr design speed					230.	217.	243.	
1.0E-7 1/yr design speed					280.	267.	293.	
38	85	3.737E+03	1.0000	113	99	99		
Point		1.394E+00	7.092E-01	2.740E+00	7.856E-04	3.996E-04	1.544E-03	
Line		6.471E+00	4.630E+00	9.045E+00	1.381E-04	9.882E-05	1.931E-04	
Strike Probability, 1/yr					9.237E-04	4.985E-04	1.737E-03	
1.0E-5 1/yr design speed					196.	181.	211.	
1.0E-6 1/yr design speed					248.	235.	263.	
1.0E-7 1/yr design speed					296.	282.	310.	
38	86	3.737E+03	1.0000	80	69	69		
Point		6.232E-01	2.853E-01	1.361E+00	2.486E-04	1.138E-04	5.431E-04	
Line		4.865E+00	3.178E+00	7.446E+00	7.351E-05	4.803E-05	1.125E-04	
Strike Probability, 1/yr					3.221E-04	1.618E-04	6.556E-04	
1.0E-5 1/yr design speed					172.	154.	190.	
1.0E-6 1/yr design speed					228.	213.	245.	
1.0E-7 1/yr design speed					278.	264.	294.	
38	87	3.737E+03	1.0000	116	100	100		
Point		7.088E-01	3.622E-01	1.387E+00	4.100E-04	2.095E-04	8.024E-04	
Line		4.945E+00	3.439E+00	7.110E+00	1.083E-04	7.535E-05	1.558E-04	
Strike Probability, 1/yr					5.184E-04	2.849E-04	9.582E-04	
1.0E-5 1/yr design speed					183.	168.	199.	
1.0E-6 1/yr design speed					238.	225.	253.	
1.0E-7 1/yr design speed					287.	274.	301.	

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   38   88    3.737E+03 1.0000     97     85     85
Point  1.412E+00  6.702E-01  2.975E+00  6.830E-04  3.242E-04  1.439E-03
Line   8.883E+00  5.818E+00  1.356E+01  1.627E-04  1.066E-04  2.485E-04
Strike Probability, 1/yr                 8.457E-04  4.308E-04  1.688E-03
1.0E-5 1/yr design speed                      195.       179.       212.
1.0E-6 1/yr design speed                      248.       233.       264.
1.0E-7 1/yr design speed                      296.       282.       311.

   38   89    3.737E+03 1.0000    141    126    126
Point  7.636E-01  4.625E-01  1.261E+00  5.369E-04  3.252E-04  8.864E-04
Line   7.107E+00  5.244E+00  9.631E+00  1.893E-04  1.397E-04  2.565E-04
Strike Probability, 1/yr                 7.261E-04  4.648E-04  1.143E-03
1.0E-5 1/yr design speed                      194.       182.       206.
1.0E-6 1/yr design speed                      248.       237.       259.
1.0E-7 1/yr design speed                      296.       285.       307.

   38   90    3.737E+03 1.0000    149    135    135
Point  4.406E-01  2.578E-01  7.528E-01  3.273E-04  1.916E-04  5.593E-04
Line   4.556E+00  3.314E+00  6.264E+00  1.282E-04  9.327E-05  1.763E-04
Strike Probability, 1/yr                 4.556E-04  2.848E-04  7.356E-04
1.0E-5 1/yr design speed                      183.       170.       195.
1.0E-6 1/yr design speed                      238.       227.       250.
1.0E-7 1/yr design speed                      287.       276.       299.

   38   91    3.737E+03 1.0000     53     52     52
Point  3.169E-01  1.513E-01  6.636E-01  8.376E-05  4.000E-05  1.754E-04
Line   4.387E+00  2.676E+00  7.191E+00  4.392E-05  2.679E-05  7.199E-05
Strike Probability, 1/yr                 1.277E-04  6.679E-05  2.474E-04
1.0E-5 1/yr design speed                      149.       130.       168.
1.0E-6 1/yr design speed                      211.       195.       227.
1.0E-7 1/yr design speed                      263.       249.       278.

   38   92    3.737E+03 1.0000    124    117    117
Point  2.164E-01  1.235E-01  3.792E-01  1.338E-04  7.634E-05  2.345E-04
Line   2.713E+00  1.948E+00  3.778E+00  6.354E-05  4.562E-05  8.850E-05
Strike Probability, 1/yr                 1.973E-04  1.220E-04  3.230E-04
1.0E-5 1/yr design speed                      161.       148.       175.
1.0E-6 1/yr design speed                      220.       209.       232.
1.0E-7 1/yr design speed                      271.       260.       283.

   38   93    3.737E+03 1.0000     88     88     88
Point  3.776E-01  1.907E-01  7.477E-01  1.657E-04  8.367E-05  3.281E-04
Line   3.937E+00  2.643E+00  5.866E+00  6.545E-05  4.393E-05  9.750E-05
Strike Probability, 1/yr                 2.311E-04  1.276E-04  4.256E-04
1.0E-5 1/yr design speed                      164.       148.       180.
1.0E-6 1/yr design speed                      223.       209.       237.
1.0E-7 1/yr design speed                      273.       260.       287.
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38	94	3.737E+03	1.0000	111	96	96	
Point	7.467E-01	3.343E-01	1.668E+00	4.133E-04	1.850E-04	9.232E-04	
Line	4.356E+00	2.968E+00	6.394E+00	9.134E-05	6.223E-05	1.341E-04	
Strike Probability, 1/yr				5.046E-04	2.473E-04	1.057E-03	
1.0E-5 1/yr design speed				182.	164.	200.	
1.0E-6 1/yr design speed				236.	221.	253.	
1.0E-7 1/yr design speed				285.	271.	301.	
38	95	3.737E+03	1.0000	146	114	114	
Point	1.974E+00	8.346E-01	4.670E+00	1.437E-03	6.076E-04	3.400E-03	
Line	8.068E+00	5.064E+00	1.285E+01	2.225E-04	1.397E-04	3.544E-04	
Strike Probability, 1/yr				1.660E-03	7.473E-04	3.754E-03	
1.0E-5 1/yr design speed				209.	190.	229.	
1.0E-6 1/yr design speed				260.	243.	279.	
1.0E-7 1/yr design speed				306.	290.	324.	
38	96	3.737E+03	1.0000	136	103	103	
Point	1.704E+00	7.651E-01	3.797E+00	1.156E-03	5.189E-04	2.575E-03	
Line	7.468E+00	5.083E+00	1.097E+01	1.919E-04	1.306E-04	2.819E-04	
Strike Probability, 1/yr				1.348E-03	6.495E-04	2.857E-03	
1.0E-5 1/yr design speed				205.	187.	223.	
1.0E-6 1/yr design speed				256.	241.	273.	
1.0E-7 1/yr design speed				303.	288.	319.	
38	97	3.737E+03	1.0000	179	135	135	
Point	1.480E+00	7.145E-01	3.066E+00	1.321E-03	6.378E-04	2.737E-03	
Line	6.047E+00	4.245E+00	8.613E+00	2.044E-04	1.435E-04	2.912E-04	
Strike Probability, 1/yr				1.526E-03	7.813E-04	3.028E-03	
1.0E-5 1/yr design speed				207.	191.	224.	
1.0E-6 1/yr design speed				258.	244.	274.	
1.0E-7 1/yr design speed				305.	290.	320.	
38	98	3.737E+03	1.0000	179	130	130	
Point	6.674E-01	3.999E-01	1.114E+00	5.957E-04	3.569E-04	9.944E-04	
Line	4.113E+00	3.150E+00	5.371E+00	1.391E-04	1.065E-04	1.816E-04	
Strike Probability, 1/yr				7.348E-04	4.634E-04	1.176E-03	
1.0E-5 1/yr design speed				192.	180.	204.	
1.0E-6 1/yr design speed				245.	234.	257.	
1.0E-7 1/yr design speed				293.	282.	305.	
38	99	3.737E+03	1.0000	150	108	108	
Point	8.804E-01	4.680E-01	1.656E+00	6.585E-04	3.500E-04	1.239E-03	
Line	7.107E+00	4.893E+00	1.032E+01	2.014E-04	1.386E-04	2.925E-04	
Strike Probability, 1/yr				8.599E-04	4.887E-04	1.531E-03	
1.0E-5 1/yr design speed				197.	183.	212.	
1.0E-6 1/yr design speed				251.	238.	264.	
1.0E-7 1/yr design speed				298.	285.	311.	

38	100	3.737E+03	1.0000	89	72	72	
Point	9.084E-01	3.396E-01	2.430E+00	4.031E-04	1.507E-04	1.078E-03	
Line	5.902E+00	3.642E+00	9.566E+00	9.922E-05	6.122E-05	1.608E-04	
Strike Probability, 1/yr				5.024E-04	2.119E-04	1.239E-03	
1.0E-5 1/yr design speed				182.	161.	204.	
1.0E-6 1/yr design speed				237.	219.	257.	
1.0E-7 1/yr design speed				286.	269.	304.	
38	101	3.737E+03	1.0000	96	77	77	
Point	2.788E-01	1.048E-01	7.419E-01	1.335E-04	5.016E-05	3.551E-04	
Line	2.788E+00	1.655E+00	4.696E+00	5.055E-05	3.000E-05	8.515E-05	
Strike Probability, 1/yr				1.840E-04	8.016E-05	4.403E-04	
1.0E-5 1/yr design speed				158.	135.	180.	
1.0E-6 1/yr design speed				217.	199.	236.	
1.0E-7 1/yr design speed				268.	252.	286.	
38	102	3.737E+03	1.0000	128	106	106	
Point	8.229E-02	4.738E-02	1.429E-01	5.252E-05	3.024E-05	9.122E-05	
Line	1.177E+00	8.732E-01	1.586E+00	2.846E-05	2.111E-05	3.836E-05	
Strike Probability, 1/yr				8.098E-05	5.136E-05	1.296E-04	
1.0E-5 1/yr design speed				123.	102.	146.	
1.0E-6 1/yr design speed				192.	170.	216.	
1.0E-7 1/yr design speed				256.	232.	279.	
38	103	3.737E+03	1.0000	53	43	43	
Point	3.247E-01	1.045E-01	1.009E+00	8.582E-05	2.761E-05	2.668E-04	
Line	3.216E+00	1.592E+00	6.497E+00	3.220E-05	1.594E-05	6.504E-05	
Strike Probability, 1/yr				1.180E-04	4.355E-05	3.318E-04	
1.0E-5 1/yr design speed				134.	96.	175.	
1.0E-6 1/yr design speed				202.	165.	241.	
1.0E-7 1/yr design speed				264.	227.	301.	
38	104	3.737E+03	1.0000	55	48	48	
Point	5.126E-02	2.395E-02	1.098E-01	1.406E-05	6.567E-06	3.010E-05	
Line	9.959E-01	6.483E-01	1.530E+00	1.035E-05	6.735E-06	1.589E-05	
Strike Probability, 1/yr				2.441E-05	1.330E-05	4.599E-05	
1.0E-5 1/yr design speed				81.	52.	110.	
1.0E-6 1/yr design speed				158.	132.	186.	
1.0E-7 1/yr design speed				224.	197.	252.	
38	105	3.737E+03	1.0000	15	11	11	
Point	2.568E-02	7.629E-03	8.641E-02	1.921E-06	5.707E-07	6.464E-06	
Line	5.251E-01	2.810E-01	9.814E-01	1.488E-06	7.961E-07	2.780E-06	
Strike Probability, 1/yr				3.408E-06	1.367E-06	9.244E-06	
1.0E-5 1/yr design speed				39.	39.	39.	
1.0E-6 1/yr design speed				93.	53.	134.	
1.0E-7 1/yr design speed				168.	133.	206.	

38	106	3.737E+03	1.0000	3	3	3	
Point		4.201E-01	2.411E-04	7.321E+02	6.285E-06	3.606E-09	1.095E-02
Line		2.686E+00	1.045E-01	6.901E+01	1.522E-06	5.923E-08	3.911E-05
Strike	Probability, 1/yr				7.807E-06	6.284E-08	1.099E-02
1.0E-5	1/yr design speed				39.	38.	269.
1.0E-6	1/yr design speed				121.	38.	325.
1.0E-7	1/yr design speed				190.	38.	379.
38	107	3.737E+03	1.0000	0	0	0	
38	108	3.737E+03	1.0000	2	2	2	
Point		2.114E-01	4.269E-03	1.047E+01	2.109E-06	4.258E-08	1.044E-04
Line		5.492E+00	2.382E-01	1.266E+02	2.075E-06	9.000E-08	4.784E-05
Strike	Probability, 1/yr				4.184E-06	1.326E-07	1.523E-04
1.0E-5	1/yr design speed				39.	39.	151.
1.0E-6	1/yr design speed				101.	39.	220.
1.0E-7	1/yr design speed				175.	52.	284.
38	109	3.737E+03	1.0000	3	2	2	
Point		2.167E-02	8.126E-03	5.781E-02	3.242E-07	1.216E-07	8.648E-07
Line		1.272E+00	4.767E-01	3.391E+00	7.205E-07	2.701E-07	1.922E-06
Strike	Probability, 1/yr				1.045E-06	3.917E-07	2.787E-06
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				42.	39.	91.
1.0E-7	1/yr design speed				133.	95.	172.
38	110	3.737E+03	1.0000	8	5	5	
Point		7.673E-03	1.304E-03	4.515E-02	3.061E-07	5.202E-08	1.801E-06
Line		3.480E-01	1.691E-01	7.163E-01	5.259E-07	2.555E-07	1.082E-06
Strike	Probability, 1/yr				8.319E-07	3.075E-07	2.883E-06
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				39.	39.	92.
1.0E-7	1/yr design speed				125.	87.	172.
38	111	3.737E+03	1.0000	4	2	2	
Point		3.594E-02	4.580E-04	2.821E+00	7.170E-07	9.135E-09	5.627E-05
Line		9.686E-01	6.836E-02	1.373E+01	7.318E-07	5.165E-08	1.037E-05
Strike	Probability, 1/yr				1.449E-06	6.078E-08	6.664E-05
1.0E-5	1/yr design speed				39.	38.	123.
1.0E-6	1/yr design speed				58.	38.	195.
1.0E-7	1/yr design speed				142.	38.	259.
38	112	3.737E+03	1.0000	5	4	4	
Point		1.121E-02	1.315E-03	9.553E-02	2.795E-07	3.279E-08	2.382E-06
Line		4.789E-01	1.400E-01	1.639E+00	4.523E-07	1.322E-07	1.548E-06
Strike	Probability, 1/yr				7.318E-07	1.650E-07	3.930E-06
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				39.	39.	104.
1.0E-7	1/yr design speed				121.	62.	181.

38	113	3.737E+03	1.0000	2	2	2	
Point		8.050E-02	9.677E-05	6.696E+01	8.028E-07	9.651E-10	6.678E-04
Line		4.789E+00	3.233E-02	7.096E+02	1.809E-06	1.221E-08	2.680E-04
Strike	Probability, 1/yr				2.612E-06	1.318E-08	9.358E-04
1.0E-5	1/yr design speed				39.	38.	206.
1.0E-6	1/yr design speed				84.	38.	270.
1.0E-7	1/yr design speed				162.	38.	331.
38	114	3.737E+03	1.0000	1	1	1	
Point		3.977E-02	0.000E+00	0.000E+00	1.983E-07	0.000E+00	0.000E+00
Line		1.000E+00	0.000E+00	0.000E+00	1.889E-07	0.000E+00	0.000E+00
Strike	Probability, 1/yr				3.872E-07	0.000E+00	0.000E+00
1.0E-5	1/yr design speed				39.	38.	38.
1.0E-6	1/yr design speed				39.	38.	38.
1.0E-7	1/yr design speed				98.	38.	38.
38	115	3.737E+03	1.0000	0	0	0	
38	116	3.737E+03	1.0000	1	1	1	
Point		1.705E-04	0.000E+00	0.000E+00	8.500E-10	0.000E+00	0.000E+00
Line		1.000E-01	0.000E+00	0.000E+00	1.889E-08	0.000E+00	0.000E+00
Strike	Probability, 1/yr				1.974E-08	0.000E+00	0.000E+00
1.0E-5	1/yr design speed				38.	38.	38.
1.0E-6	1/yr design speed				38.	38.	38.
1.0E-7	1/yr design speed				38.	38.	38.
38	117	3.737E+03	1.0000	1	1	1	
Point		1.136E-03	0.000E+00	0.000E+00	5.667E-09	0.000E+00	0.000E+00
Line		2.000E-01	0.000E+00	0.000E+00	3.778E-08	0.000E+00	0.000E+00
Strike	Probability, 1/yr				4.344E-08	0.000E+00	0.000E+00
1.0E-5	1/yr design speed				38.	38.	38.
1.0E-6	1/yr design speed				38.	38.	38.
1.0E-7	1/yr design speed				38.	38.	38.
38	118	3.737E+03	1.0000	0	0	0	
38	119	3.737E+03	1.0000	1	1	1	
Point		5.682E-03	0.000E+00	0.000E+00	2.833E-08	0.000E+00	0.000E+00
Line		1.000E+00	0.000E+00	0.000E+00	1.889E-07	0.000E+00	0.000E+00
Strike	Probability, 1/yr				2.172E-07	0.000E+00	0.000E+00
1.0E-5	1/yr design speed				39.	38.	38.
1.0E-6	1/yr design speed				39.	38.	38.
1.0E-7	1/yr design speed				78.	38.	38.
38	120	3.737E+03	1.0000	2	0	0	
38	121	3.737E+03	1.0000	15	14	14	
Point		1.278E-02	5.349E-03	3.054E-02	9.560E-07	4.001E-07	2.284E-06
Line		4.777E-01	2.732E-01	8.350E-01	1.353E-06	7.742E-07	2.366E-06
Strike	Probability, 1/yr				2.309E-06	1.174E-06	4.650E-06
1.0E-5	1/yr design speed				39.	39.	39.
1.0E-6	1/yr design speed				79.	47.	111.
1.0E-7	1/yr design speed				157.	129.	187.

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   38  122    3.737E+03 1.0000      11      11      11
Point  1.428E-01  3.805E-02  5.356E-01  7.831E-06  2.087E-06  2.938E-05
Line   3.534E+00  1.484E+00  8.415E+00  7.342E-06  3.083E-06  1.749E-05
Strike Probability, 1/yr                1.517E-05  5.171E-06  4.687E-05
1.0E-5 1/yr design speed                      60.        39.       111.
1.0E-6 1/yr design speed                     144.       103.       186.
1.0E-7 1/yr design speed                     212.       172.       253.

   38  123    1.495E+03 0.4000       2       1       1
Point  1.420E-02  0.000E+00  0.000E+00  3.542E-07  0.000E+00  0.000E+00
Line   5.000E-01  0.000E+00  0.000E+00  4.722E-07  0.000E+00  0.000E+00
Strike Probability, 1/yr                8.264E-07  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                      39.        38.        38.
1.0E-6 1/yr design speed                      39.        38.        38.
1.0E-7 1/yr design speed                     125.        38.        38.

   39   73    1.842E+02 0.0500       0       0       0

   39   74    2.210E+03 0.6000      27      26      26
Point  2.463E-01  7.365E-02  8.240E-01  5.606E-05  1.676E-05  1.875E-04
Line   3.208E+00  1.461E+00  7.040E+00  2.765E-05  1.260E-05  6.069E-05
Strike Probability, 1/yr                8.372E-05  2.936E-05  2.482E-04
1.0E-5 1/yr design speed                     130.        94.       162.
1.0E-6 1/yr design speed                     192.       165.       218.
1.0E-7 1/yr design speed                     245.       221.       268.

   39   75    3.684E+03 1.0000      86      79      79
Point  2.957E-01  1.446E-01  6.048E-01  1.286E-04  6.288E-05  2.630E-04
Line   2.195E+00  1.554E+00  3.101E+00  3.617E-05  2.561E-05  5.108E-05
Strike Probability, 1/yr                1.648E-04  8.849E-05  3.141E-04
1.0E-5 1/yr design speed                     148.       129.       167.
1.0E-6 1/yr design speed                     206.       190.       222.
1.0E-7 1/yr design speed                     256.       242.       270.

   39   76    3.684E+03 1.0000      69      60      60
Point  3.894E-01  1.603E-01  9.458E-01  1.359E-04  5.596E-05  3.301E-04
Line   2.672E+00  1.738E+00  4.106E+00  3.531E-05  2.298E-05  5.428E-05
Strike Probability, 1/yr                1.712E-04  7.893E-05  3.843E-04
1.0E-5 1/yr design speed                     149.       125.       171.
1.0E-6 1/yr design speed                     206.       187.       226.
1.0E-7 1/yr design speed                     257.       240.       274.

   39   77    3.684E+03 1.0000      83      78      78
Point  1.258E-01  7.842E-02  2.020E-01  5.283E-05  3.292E-05  8.478E-05
Line   1.906E+00  1.462E+00  2.485E+00  3.031E-05  2.324E-05  3.952E-05
Strike Probability, 1/yr                8.313E-05  5.616E-05  1.243E-04
1.0E-5 1/yr design speed                     130.       116.       144.
1.0E-6 1/yr design speed                     193.       181.       204.
1.0E-7 1/yr design speed                     245.       235.       255.
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39	78	3.684E+03	1.0000	28	26	26		
Point		2.564E-01	1.240E-01	5.303E-01	3.631E-05	1.756E-05	7.509E-05	
Line		2.627E+00	1.837E+00	3.759E+00	1.409E-05	9.851E-06	2.016E-05	
Strike Probability, 1/yr					5.041E-05	2.741E-05	9.525E-05	
1.0E-5 1/yr design speed					118.	97.	137.	
1.0E-6 1/yr design speed					185.	170.	201.	
1.0E-7 1/yr design speed					240.	227.	254.	
39	79	3.684E+03	1.0000	39	33	33		
Point		2.352E+00	5.746E-01	9.628E+00	4.639E-04	1.133E-04	1.899E-03	
Line		6.653E+00	3.746E+00	1.181E+01	4.970E-05	2.799E-05	8.827E-05	
Strike Probability, 1/yr					5.136E-04	1.413E-04	1.987E-03	
1.0E-5 1/yr design speed					179.	147.	212.	
1.0E-6 1/yr design speed					233.	206.	263.	
1.0E-7 1/yr design speed					281.	257.	309.	
39	80	3.684E+03	1.0000	26	19	19		
Point		2.694E-01	7.219E-02	1.006E+00	3.543E-05	9.492E-06	1.322E-04	
Line		2.739E+00	1.326E+00	5.660E+00	1.364E-05	6.604E-06	2.819E-05	
Strike Probability, 1/yr					4.907E-05	1.610E-05	1.604E-04	
1.0E-5 1/yr design speed					117.	75.	152.	
1.0E-6 1/yr design speed					184.	157.	212.	
1.0E-7 1/yr design speed					240.	217.	264.	
39	81	3.684E+03	1.0000	30	25	25		
Point		1.641E-01	8.022E-02	3.356E-01	2.489E-05	1.217E-05	5.092E-05	
Line		2.683E+00	1.733E+00	4.154E+00	1.542E-05	9.960E-06	2.387E-05	
Strike Probability, 1/yr					4.031E-05	2.213E-05	7.479E-05	
1.0E-5 1/yr design speed					112.	89.	132.	
1.0E-6 1/yr design speed					182.	167.	198.	
1.0E-7 1/yr design speed					239.	225.	253.	
39	82	3.684E+03	1.0000	48	36	36		
Point		1.330E+00	4.073E-01	4.345E+00	3.229E-04	9.887E-05	1.055E-03	
Line		7.075E+00	3.607E+00	1.388E+01	6.506E-05	3.317E-05	1.276E-04	
Strike Probability, 1/yr					3.880E-04	1.320E-04	1.182E-03	
1.0E-5 1/yr design speed					175.	147.	202.	
1.0E-6 1/yr design speed					230.	207.	255.	
1.0E-7 1/yr design speed					279.	258.	303.	
39	83	3.684E+03	1.0000	80	67	67		
Point		1.584E+00	6.671E-01	3.763E+00	6.410E-04	2.699E-04	1.522E-03	
Line		6.866E+00	4.446E+00	1.060E+01	1.052E-04	6.814E-05	1.625E-04	
Strike Probability, 1/yr					7.463E-04	3.381E-04	1.685E-03	
1.0E-5 1/yr design speed					190.	171.	210.	
1.0E-6 1/yr design speed					243.	226.	262.	
1.0E-7 1/yr design speed					291.	275.	309.	

39	84	3.684E+03	1.0000	117	99	99		
Point		1.524E+00	6.902E-01	3.365E+00	9.018E-04	4.084E-04	1.991E-03	
Line		4.298E+00	2.997E+00	6.166E+00	9.635E-05	6.717E-05	1.382E-04	
Strike Probability, 1/yr					9.981E-04	4.756E-04	2.129E-03	
1.0E-5 1/yr design speed					195.	178.	214.	
1.0E-6 1/yr design speed					248.	231.	265.	
1.0E-7 1/yr design speed					294.	279.	312.	
39	85	3.684E+03	1.0000	159	125	125		
Point		1.917E+00	8.860E-01	4.150E+00	1.542E-03	7.124E-04	3.337E-03	
Line		6.454E+00	4.423E+00	9.416E+00	1.966E-04	1.347E-04	2.868E-04	
Strike Probability, 1/yr					1.739E-03	8.472E-04	3.624E-03	
1.0E-5 1/yr design speed					209.	192.	227.	
1.0E-6 1/yr design speed					260.	244.	277.	
1.0E-7 1/yr design speed					306.	291.	323.	
39	86	3.684E+03	1.0000	138	99	99		
Point		9.875E-01	4.781E-01	2.039E+00	6.892E-04	3.337E-04	1.423E-03	
Line		7.162E+00	4.682E+00	1.096E+01	1.893E-04	1.238E-04	2.896E-04	
Strike Probability, 1/yr					8.785E-04	4.575E-04	1.713E-03	
1.0E-5 1/yr design speed					197.	181.	213.	
1.0E-6 1/yr design speed					250.	236.	265.	
1.0E-7 1/yr design speed					298.	284.	312.	
39	87	3.684E+03	1.0000	103	91	91		
Point		3.396E-01	1.406E-01	8.207E-01	1.769E-04	7.322E-05	4.275E-04	
Line		2.710E+00	1.737E+00	4.228E+00	5.348E-05	3.428E-05	8.342E-05	
Strike Probability, 1/yr					2.304E-04	1.075E-04	5.110E-04	
1.0E-5 1/yr design speed					163.	142.	183.	
1.0E-6 1/yr design speed					221.	204.	239.	
1.0E-7 1/yr design speed					271.	256.	288.	
39	88	3.684E+03	1.0000	145	118	118		
Point		1.744E+00	7.011E-01	4.337E+00	1.279E-03	5.142E-04	3.180E-03	
Line		5.928E+00	3.827E+00	9.182E+00	1.647E-04	1.063E-04	2.550E-04	
Strike Probability, 1/yr					1.443E-03	6.205E-04	3.435E-03	
1.0E-5 1/yr design speed					205.	185.	226.	
1.0E-6 1/yr design speed					256.	238.	276.	
1.0E-7 1/yr design speed					302.	285.	322.	
39	89	3.684E+03	1.0000	139	117	117		
Point		1.065E+00	4.574E-01	2.478E+00	7.484E-04	3.216E-04	1.742E-03	
Line		6.743E+00	4.309E+00	1.055E+01	1.796E-04	1.147E-04	2.810E-04	
Strike Probability, 1/yr					9.280E-04	4.363E-04	2.023E-03	
1.0E-5 1/yr design speed					198.	180.	216.	
1.0E-6 1/yr design speed					251.	234.	268.	
1.0E-7 1/yr design speed					298.	282.	314.	

39	90	3.684E+03	1.0000	82	76	76		
Point	7.121E-01	3.266E-01	1.553E+00	2.953E-04	1.354E-04	6.440E-04		
Line	6.850E+00	4.202E+00	1.116E+01	1.076E-04	6.601E-05	1.754E-04		
Strike Probability, 1/yr				4.029E-04	2.014E-04	8.194E-04		
1.0E-5 1/yr design speed				179.	161.	197.		
1.0E-6 1/yr design speed				235.	219.	251.		
1.0E-7 1/yr design speed				284.	269.	300.		
39	91	3.684E+03	1.0000	66	64	64		
Point	3.517E-01	1.737E-01	7.121E-01	1.174E-04	5.799E-05	2.377E-04		
Line	4.783E+00	3.024E+00	7.564E+00	6.048E-05	3.824E-05	9.564E-05		
Strike Probability, 1/yr				1.779E-04	9.623E-05	3.333E-04		
1.0E-5 1/yr design speed				159.	141.	176.		
1.0E-6 1/yr design speed				218.	204.	233.		
1.0E-7 1/yr design speed				270.	256.	284.		
39	92	3.684E+03	1.0000	74	68	68		
Point	2.873E+00	7.571E-01	1.090E+01	1.075E-03	2.833E-04	4.080E-03		
Line	6.516E+00	3.636E+00	1.168E+01	9.238E-05	5.155E-05	1.655E-04		
Strike Probability, 1/yr				1.168E-03	3.349E-04	4.246E-03		
1.0E-5 1/yr design speed				199.	169.	229.		
1.0E-6 1/yr design speed				250.	224.	278.		
1.0E-7 1/yr design speed				296.	272.	324.		
39	93	3.684E+03	1.0000	88	83	83		
Point	1.405E+00	4.873E-01	4.050E+00	6.253E-04	2.169E-04	1.803E-03		
Line	6.321E+00	3.842E+00	1.040E+01	1.066E-04	6.478E-05	1.753E-04		
Strike Probability, 1/yr				7.318E-04	2.817E-04	1.978E-03		
1.0E-5 1/yr design speed				190.	167.	213.		
1.0E-6 1/yr design speed				243.	223.	265.		
1.0E-7 1/yr design speed				291.	272.	312.		
39	94	3.684E+03	1.0000	159	146	150		
Point	8.322E-01	4.334E-01	1.598E+00	6.692E-04	3.485E-04	1.285E-03		
Line	5.172E+00	3.691E+00	7.247E+00	1.576E-04	1.124E-04	2.208E-04		
Strike Probability, 1/yr				8.268E-04	4.610E-04	1.506E-03		
1.0E-5 1/yr design speed				195.	180.	209.		
1.0E-6 1/yr design speed				248.	235.	262.		
1.0E-7 1/yr design speed				295.	283.	309.		
39	95	3.684E+03	1.0000	183	140	140		
Point	3.916E+00	1.741E+00	8.809E+00	3.625E-03	1.611E-03	8.153E-03		
Line	9.616E+00	6.511E+00	1.420E+01	3.371E-04	2.283E-04	4.979E-04		
Strike Probability, 1/yr				3.962E-03	1.840E-03	8.651E-03		
1.0E-5 1/yr design speed				227.	209.	246.		
1.0E-6 1/yr design speed				276.	259.	294.		
1.0E-7 1/yr design speed				320.	304.	338.		

39	96	3.684E+03	1.0000	119	95	95		
Point		1.181E+00	5.164E-01	2.703E+00	7.110E-04	3.108E-04	1.627E-03	
Line		6.515E+00	4.212E+00	1.008E+01	1.485E-04	9.603E-05	2.297E-04	
Strike	Probability, 1/yr				8.596E-04	4.069E-04	1.856E-03	
1.0E-5	1/yr design speed				195.	177.	213.	
1.0E-6	1/yr design speed				248.	232.	265.	
1.0E-7	1/yr design speed				295.	280.	312.	

39	97	3.684E+03	1.0000	141	118	118		
Point		1.830E+00	8.380E-01	3.998E+00	1.305E-03	5.976E-04	2.851E-03	
Line		7.588E+00	5.159E+00	1.116E+01	2.050E-04	1.394E-04	3.015E-04	
Strike	Probability, 1/yr				1.510E-03	7.369E-04	3.153E-03	
1.0E-5	1/yr design speed				207.	190.	225.	
1.0E-6	1/yr design speed				258.	243.	275.	
1.0E-7	1/yr design speed				304.	290.	321.	

39	98	3.684E+03	1.0000	135	118	118		
Point		1.031E+00	5.390E-01	1.973E+00	7.041E-04	3.680E-04	1.347E-03	
Line		5.816E+00	4.291E+00	7.884E+00	1.504E-04	1.110E-04	2.039E-04	
Strike	Probability, 1/yr				8.546E-04	4.790E-04	1.551E-03	
1.0E-5	1/yr design speed				195.	181.	209.	
1.0E-6	1/yr design speed				248.	235.	262.	
1.0E-7	1/yr design speed				295.	283.	309.	

39	99	3.684E+03	1.0000	121	100	100		
Point		3.235E+00	1.169E+00	8.955E+00	1.980E-03	7.152E-04	5.480E-03	
Line		6.376E+00	3.995E+00	1.018E+01	1.478E-04	9.262E-05	2.359E-04	
Strike	Probability, 1/yr				2.128E-03	8.078E-04	5.716E-03	
1.0E-5	1/yr design speed				212.	189.	236.	
1.0E-6	1/yr design speed				262.	241.	284.	
1.0E-7	1/yr design speed				307.	288.	330.	

39	100	3.684E+03	1.0000	103	77	77		
Point		3.792E-01	1.609E-01	8.936E-01	1.975E-04	8.381E-05	4.655E-04	
Line		2.905E+00	1.891E+00	4.464E+00	5.733E-05	3.731E-05	8.808E-05	
Strike	Probability, 1/yr				2.548E-04	1.211E-04	5.536E-04	
1.0E-5	1/yr design speed				165.	146.	185.	
1.0E-6	1/yr design speed				223.	207.	240.	
1.0E-7	1/yr design speed				273.	258.	290.	

39	101	3.684E+03	1.0000	155	118	118		
Point		2.246E-01	1.128E-01	4.472E-01	1.761E-04	8.845E-05	3.506E-04	
Line		1.684E+00	1.207E+00	2.348E+00	4.999E-05	3.584E-05	6.972E-05	
Strike	Probability, 1/yr				2.261E-04	1.243E-04	4.203E-04	
1.0E-5	1/yr design speed				162.	146.	178.	
1.0E-6	1/yr design speed				220.	206.	234.	
1.0E-7	1/yr design speed				270.	258.	284.	

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   39  102    3.684E+03 1.0000     85     65     65
Point  7.198E-02  3.509E-02  1.477E-01  3.094E-05  1.508E-05  6.348E-05
Line   1.369E+00  9.047E-01  2.072E+00  2.229E-05  1.473E-05  3.374E-05
Strike Probability, 1/yr                5.324E-05  2.981E-05  9.722E-05
1.0E-5 1/yr design speed                    109.        84.       136.
1.0E-6 1/yr design speed                    181.       155.       208.
1.0E-7 1/yr design speed                    246.       219.       272.

   39  103    3.684E+03 1.0000    112    100    100
Point  5.918E-02  3.240E-02  1.081E-01  3.352E-05  1.835E-05  6.123E-05
Line   7.877E-01  5.832E-01  1.064E+00  1.690E-05  1.251E-05  2.283E-05
Strike Probability, 1/yr                5.042E-05  3.087E-05  8.406E-05
1.0E-5 1/yr design speed                    107.        85.       131.
1.0E-6 1/yr design speed                    179.       155.       203.
1.0E-7 1/yr design speed                    243.       218.       267.

   39  104    3.684E+03 1.0000    310    280    280
Point  3.623E-02  2.700E-02  4.862E-02  5.681E-05  4.233E-05  7.622E-05
Line   7.154E-01  6.111E-01  8.374E-01  4.248E-05  3.629E-05  4.973E-05
Strike Probability, 1/yr                9.929E-05  7.863E-05  1.260E-04
1.0E-5 1/yr design speed                    130.       115.       145.
1.0E-6 1/yr design speed                    199.       182.       216.
1.0E-7 1/yr design speed                    263.       244.       280.

   39  105    3.684E+03 1.0000     25     19     19
Point  1.558E-02  6.383E-03  3.805E-02  1.970E-06  8.070E-07  4.811E-06
Line   3.416E-01  2.297E-01  5.079E-01  1.636E-06  1.100E-06  2.432E-06
Strike Probability, 1/yr                3.606E-06  1.907E-06  7.244E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     96.        68.       126.
1.0E-7 1/yr design speed                    170.       143.       199.

   39  106    3.684E+03 1.0000      1      1      1
Point  1.875E-03  0.000E+00  0.000E+00  9.483E-09  0.000E+00  0.000E+00
Line   1.000E-01  0.000E+00  0.000E+00  1.916E-08  0.000E+00  0.000E+00
Strike Probability, 1/yr                2.864E-08  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     38.        38.        38.
1.0E-6 1/yr design speed                     38.        38.        38.
1.0E-7 1/yr design speed                     38.        38.        38.

   39  107    3.684E+03 1.0000      1      1      1
Point  2.841E-02  0.000E+00  0.000E+00  1.437E-07  0.000E+00  0.000E+00
Line   5.000E-01  0.000E+00  0.000E+00  9.579E-08  0.000E+00  0.000E+00
Strike Probability, 1/yr                2.395E-07  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     39.        38.        38.
1.0E-6 1/yr design speed                     39.        38.        38.
1.0E-7 1/yr design speed                     80.        38.        38.
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39	108	3.684E+03	1.0000	4	3	4		
Point		5.722E-03	3.602E-03	9.089E-03	1.158E-07	7.286E-08	1.839E-07	
Line		2.212E-01	1.193E-01	4.100E-01	1.695E-07	9.142E-08	3.142E-07	
Strike	Probability, 1/yr				2.852E-07	1.643E-07	4.981E-07	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				39.	39.	39.	
1.0E-7	1/yr design speed				87.	61.	113.	
39	109	3.684E+03	1.0000	0	0	0		
39	110	3.684E+03	1.0000	3	3	3		
Point		3.010E-01	6.628E-04	1.367E+02	4.567E-06	1.006E-08	2.074E-03	
Line		3.911E+00	1.543E-01	9.913E+01	2.248E-06	8.867E-08	5.697E-05	
Strike	Probability, 1/yr				6.814E-06	9.873E-08	2.131E-03	
1.0E-5	1/yr design speed				39.	38.	226.	
1.0E-6	1/yr design speed				117.	38.	286.	
1.0E-7	1/yr design speed				187.	38.	342.	
39	111	3.684E+03	1.0000	10	6	6		
Point		5.385E-01	8.640E-03	3.356E+01	2.724E-05	4.370E-07	1.697E-03	
Line		1.636E+00	4.151E-01	6.447E+00	3.134E-06	7.952E-07	1.235E-05	
Strike	Probability, 1/yr				3.037E-05	1.232E-06	1.710E-03	
1.0E-5	1/yr design speed				88.	39.	220.	
1.0E-6	1/yr design speed				162.	49.	280.	
1.0E-7	1/yr design speed				226.	131.	336.	
39	112	3.684E+03	1.0000	2	2	2		
Point		1.707E-03	1.114E-03	2.615E-03	1.726E-08	1.127E-08	2.645E-08	
Line		2.000E-01	0.000E+00	0.000E+00	7.663E-08	0.000E+00	0.000E+00	
Strike	Probability, 1/yr				9.389E-08	1.127E-08	2.645E-08	
1.0E-5	1/yr design speed				38.	38.	38.	
1.0E-6	1/yr design speed				38.	38.	38.	
1.0E-7	1/yr design speed				38.	38.	38.	
39	113	3.684E+03	1.0000	0	0	0		
39	114	3.684E+03	1.0000	6	2	4		
Point		1.707E-03	1.114E-03	2.615E-03	5.179E-08	3.380E-08	7.934E-08	
Line		1.759E-01	1.364E-01	2.268E-01	2.022E-07	1.568E-07	2.607E-07	
Strike	Probability, 1/yr				2.540E-07	1.906E-07	3.401E-07	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				39.	39.	39.	
1.0E-7	1/yr design speed				83.	69.	99.	
39	115	3.684E+03	1.0000	1	0	0		
39	116	3.684E+03	1.0000	0	0	0		
39	117	3.684E+03	1.0000	0	0	0		

39	118	3.684E+03	1.0000	4	2	2
Point	3.578E-02	1.575E-04	8.125E+00	7.238E-07	3.187E-09	1.644E-04
Line	2.326E+00	4.696E-02	1.152E+02	1.782E-06	3.599E-08	8.826E-05
Strike Probability, 1/yr				2.506E-06	3.917E-08	2.526E-04
1.0E-5 1/yr design speed				39.	38.	167.
1.0E-6 1/yr design speed				83.	38.	235.
1.0E-7 1/yr design speed				161.	38.	298.

39	119	3.684E+03	1.0000	12	9	9
Point	8.187E-02	1.173E-02	5.715E-01	4.969E-06	7.119E-07	3.468E-05
Line	2.369E+00	6.106E-01	9.192E+00	5.446E-06	1.404E-06	2.113E-05
Strike Probability, 1/yr				1.042E-05	2.116E-06	5.581E-05
1.0E-5 1/yr design speed				42.	39.	117.
1.0E-6 1/yr design speed				132.	73.	192.
1.0E-7 1/yr design speed				202.	147.	258.

39	120	3.684E+03	1.0000	1	1	1
Point	5.682E-04	0.000E+00	0.000E+00	2.874E-09	0.000E+00	0.000E+00
Line	1.000E-01	0.000E+00	0.000E+00	1.916E-08	0.000E+00	0.000E+00
Strike Probability, 1/yr				2.203E-08	0.000E+00	0.000E+00
1.0E-5 1/yr design speed				38.	38.	38.
1.0E-6 1/yr design speed				38.	38.	38.
1.0E-7 1/yr design speed				38.	38.	38.

39	121	3.684E+03	1.0000	8	6	6
Point	8.725E-02	8.392E-03	9.071E-01	3.530E-06	3.395E-07	3.670E-05
Line	2.305E+00	4.905E-01	1.084E+01	3.533E-06	7.517E-07	1.661E-05
Strike Probability, 1/yr				7.063E-06	1.091E-06	5.331E-05
1.0E-5 1/yr design speed				39.	39.	115.
1.0E-6 1/yr design speed				119.	44.	190.
1.0E-7 1/yr design speed				190.	128.	255.

39	122	3.684E+03	1.0000	4	3	4
Point	5.866E-02	1.411E-02	2.439E-01	1.187E-06	2.855E-07	4.933E-06
Line	1.227E+00	3.345E-01	4.501E+00	9.403E-07	2.563E-07	3.449E-06
Strike Probability, 1/yr				2.127E-06	5.418E-07	8.382E-06
1.0E-5 1/yr design speed				39.	39.	39.
1.0E-6 1/yr design speed				76.	39.	131.
1.0E-7 1/yr design speed				154.	104.	204.

39	123	3.316E+03	0.9000	2	2	2
Point	2.068E-01	4.221E-02	1.013E+00	2.325E-06	4.744E-07	1.139E-05
Line	1.850E+00	1.683E+00	2.034E+00	7.876E-07	7.163E-07	8.659E-07
Strike Probability, 1/yr				3.112E-06	1.191E-06	1.225E-05
1.0E-5 1/yr design speed				39.	39.	51.
1.0E-6 1/yr design speed				90.	48.	143.
1.0E-7 1/yr design speed				164.	129.	211.

39	124	1.842E+02	0.0500	0	0	0
Point		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Line		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Strike Probability, 1/yr					0.000E+00	0.000E+00	0.000E+00
1.0E-5 1/yr design speed					0.	0.	0.
1.0E-6 1/yr design speed					0.	0.	0.
1.0E-7 1/yr design speed					0.	0.	0.
40	71	1.815E+02	0.0500	0	0	0
40	72	7.261E+02	0.2000	9	8	8
Point		6.666E-03	4.471E-03	9.939E-03	1.540E-06	1.033E-06	2.295E-06
Line		6.305E-01	2.720E-01	1.461E+00	5.516E-06	2.380E-06	1.279E-05
Strike Probability, 1/yr					7.055E-06	3.412E-06	1.508E-05
1.0E-5 1/yr design speed					39.	39.	72.
1.0E-6 1/yr design speed					131.	103.	158.
1.0E-7 1/yr design speed					196.	173.	218.
40	73	1.089E+03	0.3000	16	14	14
Point		7.568E-02	3.162E-02	1.812E-01	2.072E-05	8.654E-06	4.959E-05
Line		1.370E+00	6.732E-01	2.788E+00	1.420E-05	6.980E-06	2.891E-05
Strike Probability, 1/yr					3.492E-05	1.563E-05	7.850E-05
1.0E-5 1/yr design speed					103.	67.	131.
1.0E-6 1/yr design speed					172.	148.	194.
1.0E-7 1/yr design speed					227.	207.	247.
40	74	3.631E+03	1.0000	78	74	74
Point		3.554E-01	1.771E-01	7.131E-01	1.423E-04	7.089E-05	2.854E-04
Line		2.762E+00	1.944E+00	3.926E+00	4.188E-05	2.947E-05	5.953E-05
Strike Probability, 1/yr					1.841E-04	1.004E-04	3.450E-04
1.0E-5 1/yr design speed					151.	132.	169.
1.0E-6 1/yr design speed					209.	193.	224.
1.0E-7 1/yr design speed					259.	245.	273.
40	75	3.631E+03	1.0000	83	77	77
Point		2.703E-01	1.531E-01	4.770E-01	1.151E-04	6.523E-05	2.032E-04
Line		2.705E+00	2.053E+00	3.564E+00	4.365E-05	3.313E-05	5.751E-05
Strike Probability, 1/yr					1.588E-04	9.836E-05	2.607E-04
1.0E-5 1/yr design speed					148.	132.	163.
1.0E-6 1/yr design speed					206.	193.	219.
1.0E-7 1/yr design speed					257.	246.	268.
40	76	3.631E+03	1.0000	77	67	67
Point		2.751E-01	1.431E-01	5.286E-01	1.087E-04	5.656E-05	2.089E-04
Line		2.834E+00	1.988E+00	4.040E+00	4.242E-05	2.976E-05	6.047E-05
Strike Probability, 1/yr					1.511E-04	8.632E-05	2.694E-04
1.0E-5 1/yr design speed					147.	129.	164.
1.0E-6 1/yr design speed					205.	190.	220.
1.0E-7 1/yr design speed					256.	243.	269.

40	77	3.631E+03	1.0000	37	30	30	
Point	5.556E-01	1.579E-01	1.955E+00	1.055E-04	2.998E-05	3.712E-04	
Line	2.383E+00	1.543E+00	3.681E+00	1.714E-05	1.110E-05	2.648E-05	
Strike Probability, 1/yr				1.226E-04	4.108E-05	3.977E-04	
1.0E-5 1/yr design speed				138.	104.	171.	
1.0E-6 1/yr design speed				197.	170.	224.	
1.0E-7 1/yr design speed				248.	225.	272.	
40	78	3.631E+03	1.0000	45	37	37	
Point	2.685E-01	1.412E-01	5.105E-01	6.201E-05	3.261E-05	1.179E-04	
Line	3.419E+00	2.303E+00	5.076E+00	2.991E-05	2.015E-05	4.441E-05	
Strike Probability, 1/yr				9.192E-05	5.276E-05	1.623E-04	
1.0E-5 1/yr design speed				138.	121.	155.	
1.0E-6 1/yr design speed				202.	188.	216.	
1.0E-7 1/yr design speed				255.	243.	268.	
40	79	3.631E+03	1.0000	71	58	58	
Point	6.091E-01	2.692E-01	1.378E+00	2.219E-04	9.810E-05	5.021E-04	
Line	4.160E+00	2.710E+00	6.385E+00	5.742E-05	3.741E-05	8.812E-05	
Strike Probability, 1/yr				2.793E-04	1.355E-04	5.902E-04	
1.0E-5 1/yr design speed				167.	148.	186.	
1.0E-6 1/yr design speed				224.	208.	241.	
1.0E-7 1/yr design speed				274.	259.	290.	
40	80	3.631E+03	1.0000	58	50	50	
Point	4.381E-01	1.627E-01	1.180E+00	1.304E-04	4.842E-05	3.512E-04	
Line	3.311E+00	2.048E+00	5.354E+00	3.733E-05	2.309E-05	6.037E-05	
Strike Probability, 1/yr				1.677E-04	7.151E-05	4.115E-04	
1.0E-5 1/yr design speed				154.	130.	177.	
1.0E-6 1/yr design speed				213.	194.	233.	
1.0E-7 1/yr design speed				264.	247.	283.	
40	81	3.631E+03	1.0000	57	46	46	
Point	5.248E-01	2.131E-01	1.292E+00	1.535E-04	6.235E-05	3.781E-04	
Line	3.317E+00	2.102E+00	5.235E+00	3.676E-05	2.329E-05	5.800E-05	
Strike Probability, 1/yr				1.903E-04	8.564E-05	4.361E-04	
1.0E-5 1/yr design speed				156.	134.	178.	
1.0E-6 1/yr design speed				215.	197.	234.	
1.0E-7 1/yr design speed				266.	250.	283.	
40	82	3.631E+03	1.0000	104	89	89	
Point	9.209E-01	4.443E-01	1.909E+00	4.915E-04	2.371E-04	1.019E-03	
Line	5.973E+00	3.970E+00	8.986E+00	1.208E-04	8.026E-05	1.817E-04	
Strike Probability, 1/yr				6.123E-04	3.174E-04	1.200E-03	
1.0E-5 1/yr design speed				187.	171.	204.	
1.0E-6 1/yr design speed				241.	227.	257.	
1.0E-7 1/yr design speed				290.	276.	305.	

40	83	3.631E+03	1.0000	77	66	66		
Point		7.983E-01	3.300E-01	1.931E+00	3.155E-04	1.304E-04	7.631E-04	
Line		3.824E+00	2.396E+00	6.103E+00	5.724E-05	3.587E-05	9.136E-05	
Strike Probability, 1/yr					3.727E-04	1.663E-04	8.545E-04	
1.0E-5 1/yr design speed					173.	152.	194.	
1.0E-6 1/yr design speed					229.	211.	248.	
1.0E-7 1/yr design speed					278.	261.	296.	
40	84	3.631E+03	1.0000	101	83	84		
Point		1.048E+00	4.203E-01	2.611E+00	5.430E-04	2.179E-04	1.353E-03	
Line		5.858E+00	3.639E+00	9.430E+00	1.150E-04	7.145E-05	1.851E-04	
Strike Probability, 1/yr					6.580E-04	2.893E-04	1.538E-03	
1.0E-5 1/yr design speed					188.	168.	209.	
1.0E-6 1/yr design speed					242.	225.	261.	
1.0E-7 1/yr design speed					290.	274.	308.	
40	85	3.631E+03	1.0000	138	98	98		
Point		1.347E+00	5.441E-01	3.337E+00	9.543E-04	3.854E-04	2.363E-03	
Line		7.056E+00	4.498E+00	1.107E+01	1.893E-04	1.207E-04	2.969E-04	
Strike Probability, 1/yr					1.144E-03	5.061E-04	2.660E-03	
1.0E-5 1/yr design speed					202.	183.	222.	
1.0E-6 1/yr design speed					254.	237.	272.	
1.0E-7 1/yr design speed					301.	284.	319.	
40	86	3.631E+03	1.0000	148	103	103		
Point		2.321E+00	9.496E-01	5.673E+00	1.763E-03	7.213E-04	4.309E-03	
Line		7.227E+00	4.768E+00	1.095E+01	2.079E-04	1.372E-04	3.152E-04	
Strike Probability, 1/yr					1.971E-03	8.585E-04	4.624E-03	
1.0E-5 1/yr design speed					212.	193.	232.	
1.0E-6 1/yr design speed					262.	245.	282.	
1.0E-7 1/yr design speed					308.	291.	327.	
40	87	3.631E+03	1.0000	101	79	79		
Point		1.669E+00	5.440E-01	5.121E+00	8.652E-04	2.820E-04	2.655E-03	
Line		4.886E+00	2.951E+00	8.090E+00	9.594E-05	5.795E-05	1.588E-04	
Strike Probability, 1/yr					9.611E-04	3.399E-04	2.814E-03	
1.0E-5 1/yr design speed					195.	170.	220.	
1.0E-6 1/yr design speed					247.	225.	271.	
1.0E-7 1/yr design speed					294.	274.	317.	
40	88	3.631E+03	1.0000	175	146	146		
Point		1.035E+00	4.726E-01	2.266E+00	9.294E-04	4.244E-04	2.035E-03	
Line		5.656E+00	3.788E+00	8.445E+00	1.924E-04	1.289E-04	2.873E-04	
Strike Probability, 1/yr					1.122E-03	5.533E-04	2.323E-03	
1.0E-5 1/yr design speed					201.	185.	219.	
1.0E-6 1/yr design speed					254.	238.	270.	
1.0E-7 1/yr design speed					300.	286.	316.	

40	89	3.631E+03	1.0000	178	148	148		
Point	1.583E+00	6.853E-01	3.659E+00	1.447E-03	6.260E-04	3.342E-03		
Line	5.514E+00	3.719E+00	8.176E+00	1.908E-04	1.287E-04	2.829E-04		
Strike Probability, 1/yr				1.637E-03	7.547E-04	3.625E-03		
1.0E-5 1/yr design speed				208.	190.	227.		
1.0E-6 1/yr design speed				259.	242.	277.		
1.0E-7 1/yr design speed				305.	289.	323.		
40	90	3.631E+03	1.0000	142	115	115		
Point	7.106E+00	2.156E+00	2.342E+01	5.179E-03	1.571E-03	1.707E-02		
Line	9.697E+00	6.086E+00	1.545E+01	2.677E-04	1.680E-04	4.265E-04		
Strike Probability, 1/yr				5.447E-03	1.739E-03	1.750E-02		
1.0E-5 1/yr design speed				232.	207.	259.		
1.0E-6 1/yr design speed				280.	256.	306.		
1.0E-7 1/yr design speed				324.	301.	350.		
40	91	3.631E+03	1.0000	114	95	95		
Point	4.694E+00	1.496E+00	1.473E+01	2.747E-03	8.751E-04	8.620E-03		
Line	1.358E+01	7.532E+00	2.450E+01	3.010E-04	1.669E-04	5.429E-04		
Strike Probability, 1/yr				3.048E-03	1.042E-03	9.163E-03		
1.0E-5 1/yr design speed				222.	198.	247.		
1.0E-6 1/yr design speed				271.	249.	295.		
1.0E-7 1/yr design speed				316.	295.	339.		
40	92	3.631E+03	1.0000	76	73	73		
Point	1.103E+00	4.778E-01	2.544E+00	4.300E-04	1.864E-04	9.922E-04		
Line	7.382E+00	4.900E+00	1.112E+01	1.091E-04	7.240E-05	1.643E-04		
Strike Probability, 1/yr				5.391E-04	2.588E-04	1.157E-03		
1.0E-5 1/yr design speed				184.	166.	203.		
1.0E-6 1/yr design speed				239.	223.	256.		
1.0E-7 1/yr design speed				287.	273.	304.		
40	93	3.631E+03	1.0000	86	79	79		
Point	2.396E+00	7.865E-01	7.296E+00	1.057E-03	3.472E-04	3.220E-03		
Line	7.569E+00	4.530E+00	1.265E+01	1.265E-04	7.573E-05	2.115E-04		
Strike Probability, 1/yr				1.184E-03	4.229E-04	3.432E-03		
1.0E-5 1/yr design speed				200.	176.	225.		
1.0E-6 1/yr design speed				252.	230.	275.		
1.0E-7 1/yr design speed				298.	278.	321.		
40	94	3.631E+03	1.0000	106	95	95		
Point	3.452E+00	1.261E+00	9.447E+00	1.878E-03	6.861E-04	5.139E-03		
Line	7.770E+00	4.985E+00	1.211E+01	1.601E-04	1.027E-04	2.496E-04		
Strike Probability, 1/yr				2.038E-03	7.888E-04	5.389E-03		
1.0E-5 1/yr design speed				211.	189.	234.		
1.0E-6 1/yr design speed				261.	241.	283.		
1.0E-7 1/yr design speed				307.	288.	329.		

40	95	3.631E+03	1.0000	128	113	113		
Point		1.585E+00	6.673E-01	3.766E+00	1.041E-03	4.384E-04	2.474E-03	
Line		5.695E+00	3.786E+00	8.565E+00	1.417E-04	9.421E-05	2.131E-04	
Strike	Probability, 1/yr				1.183E-03	5.326E-04	2.687E-03	
1.0E-5	1/yr design speed				201.	182.	220.	
1.0E-6	1/yr design speed				252.	235.	271.	
1.0E-7	1/yr design speed				299.	283.	317.	
40	96	3.631E+03	1.0000	137	118	118		
Point		6.789E-01	3.242E-01	1.422E+00	4.773E-04	2.279E-04	9.995E-04	
Line		7.969E+00	4.989E+00	1.273E+01	2.122E-04	1.329E-04	3.390E-04	
Strike	Probability, 1/yr				6.896E-04	3.608E-04	1.339E-03	
1.0E-5	1/yr design speed				194.	178.	210.	
1.0E-6	1/yr design speed				248.	234.	263.	
1.0E-7	1/yr design speed				296.	282.	311.	
40	97	3.631E+03	1.0000	179	153	153		
Point		1.450E+00	7.095E-01	2.963E+00	1.332E-03	6.518E-04	2.722E-03	
Line		1.059E+01	6.818E+00	1.645E+01	3.685E-04	2.372E-04	5.723E-04	
Strike	Probability, 1/yr				1.700E-03	8.890E-04	3.294E-03	
1.0E-5	1/yr design speed				213.	198.	229.	
1.0E-6	1/yr design speed				264.	250.	279.	
1.0E-7	1/yr design speed				310.	297.	325.	
40	98	3.631E+03	1.0000	250	207	207		
Point		4.551E-01	2.685E-01	7.714E-01	5.839E-04	3.444E-04	9.897E-04	
Line		5.464E+00	3.978E+00	7.507E+00	2.656E-04	1.933E-04	3.648E-04	
Strike	Probability, 1/yr				8.494E-04	5.378E-04	1.355E-03	
1.0E-5	1/yr design speed				200.	188.	211.	
1.0E-6	1/yr design speed				253.	242.	264.	
1.0E-7	1/yr design speed				301.	290.	312.	
40	99	3.631E+03	1.0000	147	122	122		
Point		1.811E-01	1.003E-01	3.271E-01	1.367E-04	7.567E-05	2.468E-04	
Line		3.219E+00	2.191E+00	4.729E+00	9.198E-05	6.260E-05	1.351E-04	
Strike	Probability, 1/yr				2.286E-04	1.383E-04	3.820E-04	
1.0E-5	1/yr design speed				167.	154.	181.	
1.0E-6	1/yr design speed				226.	214.	239.	
1.0E-7	1/yr design speed				277.	266.	289.	
40	100	3.631E+03	1.0000	97	82	82		
Point		5.996E-01	2.470E-01	1.456E+00	2.985E-04	1.230E-04	7.246E-04	
Line		4.959E+00	3.024E+00	8.135E+00	9.352E-05	5.701E-05	1.534E-04	
Strike	Probability, 1/yr				3.920E-04	1.800E-04	8.780E-04	
1.0E-5	1/yr design speed				177.	157.	197.	
1.0E-6	1/yr design speed				233.	216.	251.	
1.0E-7	1/yr design speed				282.	267.	300.	

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   40  101    3.631E+03 1.0000     88     66     66
Point  3.456E-01  1.204E-01  9.924E-01  1.561E-04  5.436E-05  4.482E-04
Line   4.003E+00  2.166E+00  7.398E+00  6.848E-05  3.706E-05  1.266E-04
Strike Probability, 1/yr                2.246E-04  9.141E-05  5.748E-04
1.0E-5 1/yr design speed                     164.       140.       188.
1.0E-6 1/yr design speed                     223.       203.       244.
1.0E-7 1/yr design speed                     273.       255.       293.

   40  102    3.631E+03 1.0000    142    110    110
Point  4.302E-02  2.616E-02  7.075E-02  3.135E-05  1.906E-05  5.156E-05
Line   1.001E+00  7.285E-01  1.376E+00  2.764E-05  2.011E-05  3.799E-05
Strike Probability, 1/yr                5.899E-05  3.917E-05  8.955E-05
1.0E-5 1/yr design speed                     113.        93.       134.
1.0E-6 1/yr design speed                     184.       163.       206.
1.0E-7 1/yr design speed                     249.       226.       272.

   40  103    3.631E+03 1.0000    136    107    107
Point  4.837E-02  2.922E-02  8.008E-02  3.376E-05  2.039E-05  5.589E-05
Line   8.586E-01  6.296E-01  1.171E+00  2.270E-05  1.665E-05  3.096E-05
Strike Probability, 1/yr                5.646E-05  3.704E-05  8.685E-05
1.0E-5 1/yr design speed                     111.        91.       132.
1.0E-6 1/yr design speed                     183.       161.       205.
1.0E-7 1/yr design speed                     247.       224.       269.

   40  104    3.631E+03 1.0000    207    186    186
Point  4.478E-02  3.067E-02  6.540E-02  4.758E-05  3.258E-05  6.947E-05
Line   9.505E-01  7.592E-01  1.190E+00  3.825E-05  3.055E-05  4.788E-05
Strike Probability, 1/yr                8.582E-05  6.313E-05  1.174E-04
1.0E-5 1/yr design speed                     125.       109.       143.
1.0E-6 1/yr design speed                     195.       177.       214.
1.0E-7 1/yr design speed                     259.       238.       279.

   40  105    3.631E+03 1.0000     29     28     28
Point  3.127E-02  1.564E-02  6.253E-02  4.654E-06  2.328E-06  9.307E-06
Line   1.066E+00  6.167E-01  1.842E+00  6.009E-06  3.477E-06  1.039E-05
Strike Probability, 1/yr                1.066E-05  5.804E-06  1.969E-05
1.0E-5 1/yr design speed                      43.        39.        77.
1.0E-6 1/yr design speed                     133.       107.       160.
1.0E-7 1/yr design speed                     203.       176.       230.

   40  106    3.631E+03 1.0000      2      2      2
Point  7.075E-03  5.527E-03  9.056E-03  7.262E-08  5.674E-08  9.295E-08
Line   3.000E-01  0.000E+00  0.000E+00  1.166E-07  0.000E+00  0.000E+00
Strike Probability, 1/yr                1.893E-07  5.674E-08  9.295E-08
1.0E-5 1/yr design speed                      39.        38.        38.
1.0E-6 1/yr design speed                      39.        38.        38.
1.0E-7 1/yr design speed                      71.        38.        38.
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   40  107    3.631E+03 1.0000      4      3      3
Point  6.586E-03  2.222E-03  1.952E-02  1.352E-07  4.561E-08  4.008E-07
Line   3.899E-01  1.646E-01  9.235E-01  3.032E-07  1.280E-07  7.181E-07
Strike Probability, 1/yr                4.384E-07  1.736E-07  1.119E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     39.        39.        46.
1.0E-7 1/yr design speed                    103.        64.       142.

   40  108    3.631E+03 1.0000      1      1      1
Point  5.682E-03  0.000E+00  0.000E+00  2.916E-08  0.000E+00  0.000E+00
Line   2.000E-01  0.000E+00  0.000E+00  3.888E-08  0.000E+00  0.000E+00
Strike Probability, 1/yr                6.804E-08  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     38.        38.        38.
1.0E-6 1/yr design speed                     38.        38.        38.
1.0E-7 1/yr design speed                     38.        38.        38.

   40  109    3.631E+03 1.0000      7      6      6
Point  3.904E-02  4.134E-03  3.686E-01  1.402E-06  1.485E-07  1.324E-05
Line   1.399E+00  3.776E-01  5.181E+00  1.903E-06  5.138E-07  7.050E-06
Strike Probability, 1/yr                3.306E-06  6.623E-07  2.029E-05
1.0E-5 1/yr design speed                     39.        39.        78.
1.0E-6 1/yr design speed                     93.        39.       160.
1.0E-7 1/yr design speed                    168.       112.       229.

   40  110    3.631E+03 1.0000      2      1      1
Point  7.955E-04  0.000E+00  0.000E+00  8.165E-09  0.000E+00  0.000E+00
Line   2.000E-01  0.000E+00  0.000E+00  7.776E-08  0.000E+00  0.000E+00
Strike Probability, 1/yr                8.593E-08  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     38.        38.        38.
1.0E-6 1/yr design speed                     38.        38.        38.
1.0E-7 1/yr design speed                     38.        38.        38.

   40  111    3.631E+03 1.0000     17     13     13
Point  1.193E-01  1.232E-02  1.155E+00  1.041E-05  1.075E-06  1.008E-04
Line   1.183E+00  4.512E-01  3.102E+00  3.910E-06  1.491E-06  1.025E-05
Strike Probability, 1/yr                1.432E-05  2.566E-06  1.110E-04
1.0E-5 1/yr design speed                     57.        39.       140.
1.0E-6 1/yr design speed                    140.        79.       209.
1.0E-7 1/yr design speed                    208.       152.       271.

   40  112    3.631E+03 1.0000     10      9      9
Point  4.938E-02  4.300E-03  5.671E-01  2.534E-06  2.207E-07  2.911E-05
Line   7.375E-01  2.332E-01  2.333E+00  1.434E-06  4.533E-07  4.535E-06
Strike Probability, 1/yr                3.968E-06  6.740E-07  3.364E-05
1.0E-5 1/yr design speed                     39.        39.        98.
1.0E-6 1/yr design speed                     99.        39.       175.
1.0E-7 1/yr design speed                    172.       112.       240.

   40  113    3.631E+03 1.0000      2      0      0
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   40  114    3.631E+03 1.0000      2      2      2
Point  1.017E+01  3.321E-05  3.115E+06  1.044E-04  3.408E-10  3.197E+01
Line   4.342E+00  9.706E-02  1.942E+02  1.688E-06  3.774E-08  7.551E-05
Strike Probability, 1/yr                1.061E-04  3.808E-08  3.197E+01
1.0E-5 1/yr design speed                      129.        38.        0.
1.0E-6 1/yr design speed                      196.        38.        0.
1.0E-7 1/yr design speed                      257.        38.        0.

   40  115    3.631E+03 1.0000      5      5      5
Point  8.016E-02  1.228E-03  5.233E+00  2.057E-06  3.151E-08  1.343E-04
Line   1.131E+00  1.685E-01  7.588E+00  1.099E-06  1.638E-07  7.375E-06
Strike Probability, 1/yr                3.156E-06  1.953E-07  1.417E-04
1.0E-5 1/yr design speed                       39.        39.       148.
1.0E-6 1/yr design speed                       90.        39.       215.
1.0E-7 1/yr design speed                      165.        70.       276.

   40  116    3.631E+03 1.0000      3      3      3
Point  1.324E-02  1.390E-03  1.261E-01  2.038E-07  2.139E-08  1.942E-06
Line   5.866E-01  1.778E-01  1.935E+00  3.421E-07  1.037E-07  1.129E-06
Strike Probability, 1/yr                5.459E-07  1.251E-07  3.071E-06
1.0E-5 1/yr design speed                       39.        39.        39.
1.0E-6 1/yr design speed                       39.        39.        95.
1.0E-7 1/yr design speed                      111.        50.       173.

   40  117    3.631E+03 1.0000      1      0      0

   40  118    3.631E+03 1.0000      0      0      0

   40  119    3.631E+03 1.0000      1      1      1
Point  2.300E-01  0.000E+00  0.000E+00  1.181E-06  0.000E+00  0.000E+00
Line   1.227E+01  0.000E+00  0.000E+00  2.385E-06  0.000E+00  0.000E+00
Strike Probability, 1/yr                3.566E-06  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                       39.        38.        38.
1.0E-6 1/yr design speed                       96.        38.        38.
1.0E-7 1/yr design speed                      171.        38.        38.

   40  120    3.631E+03 1.0000      0      0      0

   40  121    3.631E+03 1.0000      0      0      0

   40  122    3.631E+03 1.0000      4      1      1
Point  1.705E-04  0.000E+00  0.000E+00  3.499E-09  0.000E+00  0.000E+00
Line   1.000E-01  0.000E+00  0.000E+00  7.776E-08  0.000E+00  0.000E+00
Strike Probability, 1/yr                8.126E-08  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                       38.        38.        38.
1.0E-6 1/yr design speed                       38.        38.        38.
1.0E-7 1/yr design speed                       38.        38.        38.

   40  123    3.631E+03 1.0000      0      0      0
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40	124	7.261E+02	0.2000	1	1	1
Point	2.273E-01	0.000E+00	0.000E+00	5.832E-06	0.000E+00	0.000E+00
Line	2.000E+00	0.000E+00	0.000E+00	1.944E-06	0.000E+00	0.000E+00
Strike Probability, 1/yr				7.776E-06	0.000E+00	0.000E+00
1.0E-5 1/yr design speed				39.	38.	38.
1.0E-6 1/yr design speed				121.	38.	38.
1.0E-7 1/yr design speed				190.	38.	38.
41	69	1.788E+02	0.0500	0	0	0
41	70	3.576E+02	0.1000	9	8	8
Point	2.241E-02	3.159E-03	1.590E-01	1.051E-05	1.482E-06	7.454E-05
Line	7.567E-01	2.304E-01	2.486E+00	1.344E-05	4.093E-06	4.415E-05
Strike Probability, 1/yr				2.395E-05	5.574E-06	1.187E-04
1.0E-5 1/yr design speed				90.	39.	144.
1.0E-6 1/yr design speed				164.	121.	204.
1.0E-7 1/yr design speed				222.	186.	256.
41	71	1.430E+03	0.4000	14	14	14
Point	4.364E-01	6.988E-02	2.725E+00	7.958E-05	1.274E-05	4.970E-04
Line	1.985E+00	9.022E-01	4.367E+00	1.371E-05	6.233E-06	3.017E-05
Strike Probability, 1/yr				9.330E-05	1.898E-05	5.272E-04
1.0E-5 1/yr design speed				130.	77.	177.
1.0E-6 1/yr design speed				191.	151.	230.
1.0E-7 1/yr design speed				243.	209.	277.
41	72	2.861E+03	0.8000	41	33	33
Point	4.837E-01	1.244E-01	1.880E+00	1.292E-04	3.323E-05	5.021E-04
Line	3.286E+00	1.614E+00	6.689E+00	3.324E-05	1.633E-05	6.766E-05
Strike Probability, 1/yr				1.624E-04	4.956E-05	5.697E-04
1.0E-5 1/yr design speed				147.	111.	181.
1.0E-6 1/yr design speed				205.	176.	234.
1.0E-7 1/yr design speed				256.	231.	281.
41	73	3.218E+03	0.9000	56	51	51
Point	1.483E-01	7.150E-02	3.075E-01	4.807E-05	2.318E-05	9.970E-05
Line	2.657E+00	1.631E+00	4.326E+00	3.263E-05	2.004E-05	5.313E-05
Strike Probability, 1/yr				8.070E-05	4.322E-05	1.528E-04
1.0E-5 1/yr design speed				130.	108.	151.
1.0E-6 1/yr design speed				193.	175.	210.
1.0E-7 1/yr design speed				246.	230.	260.
41	74	3.576E+03	1.0000	33	30	30
Point	4.576E-01	1.768E-01	1.184E+00	7.869E-05	3.040E-05	2.037E-04
Line	3.492E+00	1.964E+00	6.208E+00	2.275E-05	1.280E-05	4.044E-05
Strike Probability, 1/yr				1.014E-04	4.320E-05	2.441E-04
1.0E-5 1/yr design speed				134.	106.	160.
1.0E-6 1/yr design speed				195.	172.	216.
1.0E-7 1/yr design speed				246.	227.	265.

41	75	3.576E+03	1.0000	35	33	33	
Point		5.759E-01	1.677E-01	1.978E+00	1.050E-04	3.059E-05	3.607E-04
Line		2.595E+00	1.481E+00	4.547E+00	1.792E-05	1.023E-05	3.141E-05
Strike	Probability, 1/yr				1.230E-04	4.081E-05	3.921E-04
1.0E-5	1/yr design speed				138.	104.	171.
1.0E-6	1/yr design speed				197.	170.	224.
1.0E-7	1/yr design speed				248.	225.	272.
41	76	3.576E+03	1.0000	59	55	55	
Point		1.001E+00	3.999E-01	2.504E+00	3.076E-04	1.229E-04	7.698E-04
Line		4.187E+00	2.762E+00	6.347E+00	4.876E-05	3.216E-05	7.392E-05
Strike	Probability, 1/yr				3.564E-04	1.551E-04	8.437E-04
1.0E-5	1/yr design speed				167.	143.	189.
1.0E-6	1/yr design speed				221.	201.	241.
1.0E-7	1/yr design speed				270.	252.	287.
41	77	3.576E+03	1.0000	23	23	23	
Point		3.747E+00	7.381E-01	1.902E+01	4.490E-04	8.846E-05	2.279E-03
Line		5.367E+00	2.940E+00	9.795E+00	2.436E-05	1.335E-05	4.447E-05
Strike	Probability, 1/yr				4.734E-04	1.018E-04	2.324E-03
1.0E-5	1/yr design speed				172.	130.	211.
1.0E-6	1/yr design speed				225.	189.	260.
1.0E-7	1/yr design speed				273.	241.	304.
41	78	3.576E+03	1.0000	32	29	29	
Point		6.796E+00	1.333E+00	3.465E+01	1.133E-03	2.223E-04	5.777E-03
Line		6.989E+00	3.700E+00	1.320E+01	4.414E-05	2.337E-05	8.337E-05
Strike	Probability, 1/yr				1.177E-03	2.456E-04	5.861E-03
1.0E-5	1/yr design speed				197.	159.	235.
1.0E-6	1/yr design speed				248.	214.	283.
1.0E-7	1/yr design speed				294.	263.	328.
41	79	3.576E+03	1.0000	47	40	40	
Point		2.206E+00	7.253E-01	6.710E+00	5.403E-04	1.776E-04	1.643E-03
Line		6.087E+00	3.825E+00	9.688E+00	5.647E-05	3.548E-05	8.987E-05
Strike	Probability, 1/yr				5.967E-04	2.131E-04	1.733E-03
1.0E-5	1/yr design speed				183.	157.	209.
1.0E-6	1/yr design speed				236.	214.	260.
1.0E-7	1/yr design speed				284.	264.	307.
41	80	3.218E+03	0.9000	89	74	74	
Point		1.754E+00	7.118E-01	4.323E+00	9.039E-04	3.668E-04	2.228E-03
Line		6.998E+00	4.591E+00	1.067E+01	1.366E-04	8.960E-05	2.082E-04
Strike	Probability, 1/yr				1.040E-03	4.564E-04	2.436E-03
1.0E-5	1/yr design speed				198.	179.	218.
1.0E-6	1/yr design speed				250.	233.	269.
1.0E-7	1/yr design speed				297.	281.	316.

41	81	2.146E+03	0.6000	60	51	51	
Point	3.885E-01	1.858E-01	8.123E-01	2.024E-04	9.681E-05	4.233E-04	
Line	3.466E+00	2.262E+00	5.311E+00	6.841E-05	4.464E-05	1.048E-04	
Strike Probability, 1/yr				2.708E-04	1.415E-04	5.281E-04	
1.0E-5 1/yr design speed				168.	151.	185.	
1.0E-6 1/yr design speed				225.	210.	241.	
1.0E-7 1/yr design speed				275.	262.	290.	
41	82	1.430E+03	0.4000	75	65	65	
Point	7.831E-01	3.074E-01	1.995E+00	7.651E-04	3.003E-04	1.949E-03	
Line	5.865E+00	3.400E+00	1.012E+01	2.171E-04	1.258E-04	3.745E-04	
Strike Probability, 1/yr				9.821E-04	4.261E-04	2.324E-03	
1.0E-5 1/yr design speed				200.	180.	220.	
1.0E-6 1/yr design speed				253.	235.	272.	
1.0E-7 1/yr design speed				300.	283.	318.	
41	83	3.218E+03	0.9000	90	79	79	
Point	7.236E-01	3.048E-01	1.718E+00	3.770E-04	1.588E-04	8.950E-04	
Line	5.643E+00	3.424E+00	9.300E+00	1.114E-04	6.758E-05	1.836E-04	
Strike Probability, 1/yr				4.884E-04	2.264E-04	1.079E-03	
1.0E-5 1/yr design speed				183.	163.	202.	
1.0E-6 1/yr design speed				238.	221.	256.	
1.0E-7 1/yr design speed				286.	271.	303.	
41	84	3.576E+03	1.0000	97	77	77	
Point	1.956E+00	7.749E-01	4.939E+00	9.888E-04	3.917E-04	2.496E-03	
Line	6.973E+00	4.579E+00	1.062E+01	1.335E-04	8.767E-05	2.033E-04	
Strike Probability, 1/yr				1.122E-03	4.793E-04	2.699E-03	
1.0E-5 1/yr design speed				199.	179.	220.	
1.0E-6 1/yr design speed				251.	233.	271.	
1.0E-7 1/yr design speed				298.	281.	317.	
41	85	3.576E+03	1.0000	134	101	101	
Point	2.646E+00	9.825E-01	7.125E+00	1.847E-03	6.860E-04	4.975E-03	
Line	7.392E+00	4.729E+00	1.155E+01	1.955E-04	1.251E-04	3.056E-04	
Strike Probability, 1/yr				2.043E-03	8.111E-04	5.281E-03	
1.0E-5 1/yr design speed				212.	191.	235.	
1.0E-6 1/yr design speed				262.	243.	284.	
1.0E-7 1/yr design speed				308.	290.	329.	
41	86	3.218E+03	0.9000	139	95	95	
Point	2.633E+00	9.680E-01	7.161E+00	2.119E-03	7.790E-04	5.763E-03	
Line	6.067E+00	3.939E+00	9.345E+00	1.849E-04	1.201E-04	2.849E-04	
Strike Probability, 1/yr				2.304E-03	8.991E-04	6.048E-03	
1.0E-5 1/yr design speed				214.	193.	237.	
1.0E-6 1/yr design speed				264.	244.	286.	
1.0E-7 1/yr design speed				309.	291.	331.	

41	87	2.861E+03	0.8000	113	81	81	
Point		8.661E-01	4.239E-01	1.770E+00	6.375E-04	3.120E-04	1.302E-03
Line		6.664E+00	4.517E+00	9.832E+00	1.858E-04	1.259E-04	2.741E-04
Strike Probability, 1/yr					8.233E-04	4.379E-04	1.577E-03
1.0E-5 1/yr design speed					196.	181.	212.
1.0E-6 1/yr design speed					249.	235.	264.
1.0E-7 1/yr design speed					297.	283.	311.
41	88	3.576E+03	1.0000	134	114	114	
Point		4.329E-01	2.495E-01	7.510E-01	3.022E-04	1.742E-04	5.244E-04
Line		4.804E+00	3.465E+00	6.661E+00	1.271E-04	9.164E-05	1.762E-04
Strike Probability, 1/yr					4.293E-04	2.658E-04	7.006E-04
1.0E-5 1/yr design speed					181.	169.	194.
1.0E-6 1/yr design speed					237.	226.	249.
1.0E-7 1/yr design speed					286.	276.	298.
41	89	3.576E+03	1.0000	94	77	77	
Point		1.165E+00	3.590E-01	3.779E+00	5.705E-04	1.758E-04	1.851E-03
Line		7.313E+00	3.928E+00	1.362E+01	1.357E-04	7.288E-05	2.526E-04
Strike Probability, 1/yr					7.062E-04	2.487E-04	2.104E-03
1.0E-5 1/yr design speed					191.	166.	216.
1.0E-6 1/yr design speed					244.	223.	268.
1.0E-7 1/yr design speed					292.	272.	314.
41	90	3.576E+03	1.0000	166	138	138	
Point		8.888E-01	4.106E-01	1.924E+00	7.688E-04	3.551E-04	1.664E-03
Line		5.318E+00	3.582E+00	7.895E+00	1.742E-04	1.174E-04	2.587E-04
Strike Probability, 1/yr					9.430E-04	4.725E-04	1.923E-03
1.0E-5 1/yr design speed					198.	181.	215.
1.0E-6 1/yr design speed					250.	236.	266.
1.0E-7 1/yr design speed					298.	283.	313.
41	91	3.576E+03	1.0000	140	117	119	
Point		2.004E+00	8.558E-01	4.695E+00	1.462E-03	6.243E-04	3.425E-03
Line		9.465E+00	6.132E+00	1.461E+01	2.615E-04	1.695E-04	4.037E-04
Strike Probability, 1/yr					1.724E-03	7.937E-04	3.829E-03
1.0E-5 1/yr design speed					211.	193.	230.
1.0E-6 1/yr design speed					262.	245.	280.
1.0E-7 1/yr design speed					308.	292.	325.
41	92	3.576E+03	1.0000	116	98	98	
Point		1.020E+00	4.189E-01	2.482E+00	6.163E-04	2.532E-04	1.500E-03
Line		6.247E+00	3.919E+00	9.957E+00	1.430E-04	8.973E-05	2.280E-04
Strike Probability, 1/yr					7.593E-04	3.429E-04	1.728E-03
1.0E-5 1/yr design speed					192.	173.	212.
1.0E-6 1/yr design speed					246.	229.	264.
1.0E-7 1/yr design speed					293.	278.	311.

41	93	3.576E+03	1.0000	163	143	143		
Point	1.539E+00	6.822E-01	3.472E+00	1.307E-03	5.794E-04	2.949E-03		
Line	7.468E+00	4.906E+00	1.137E+01	2.402E-04	1.578E-04	3.657E-04		
Strike Probability, 1/yr				1.547E-03	7.373E-04	3.315E-03		
1.0E-5 1/yr design speed				208.	191.	227.		
1.0E-6 1/yr design speed				260.	244.	277.		
1.0E-7 1/yr design speed				306.	291.	323.		
41	94	3.576E+03	1.0000	112	97	97		
Point	1.714E+00	6.450E-01	4.555E+00	1.000E-03	3.764E-04	2.658E-03		
Line	5.200E+00	3.375E+00	8.012E+00	1.149E-04	7.460E-05	1.771E-04		
Strike Probability, 1/yr				1.115E-03	4.510E-04	2.835E-03		
1.0E-5 1/yr design speed				198.	177.	221.		
1.0E-6 1/yr design speed				250.	231.	271.		
1.0E-7 1/yr design speed				297.	279.	317.		
41	95	3.576E+03	1.0000	109	93	93		
Point	6.071E-01	2.830E-01	1.303E+00	3.448E-04	1.607E-04	7.398E-04		
Line	5.734E+00	3.711E+00	8.860E+00	1.234E-04	7.983E-05	1.906E-04		
Strike Probability, 1/yr				4.682E-04	2.406E-04	9.304E-04		
1.0E-5 1/yr design speed				183.	166.	200.		
1.0E-6 1/yr design speed				238.	224.	254.		
1.0E-7 1/yr design speed				287.	273.	302.		
41	96	3.576E+03	1.0000	128	107	107		
Point	7.172E-01	3.172E-01	1.622E+00	4.784E-04	2.116E-04	1.082E-03		
Line	4.755E+00	3.058E+00	7.393E+00	1.201E-04	7.726E-05	1.868E-04		
Strike Probability, 1/yr				5.985E-04	2.888E-04	1.268E-03		
1.0E-5 1/yr design speed				187.	169.	205.		
1.0E-6 1/yr design speed				241.	225.	258.		
1.0E-7 1/yr design speed				289.	275.	306.		
41	97	3.576E+03	1.0000	179	143	143		
Point	1.141E+00	5.494E-01	2.370E+00	1.064E-03	5.124E-04	2.210E-03		
Line	5.468E+00	3.787E+00	7.894E+00	1.932E-04	1.338E-04	2.789E-04		
Strike Probability, 1/yr				1.257E-03	6.462E-04	2.489E-03		
1.0E-5 1/yr design speed				203.	188.	220.		
1.0E-6 1/yr design speed				255.	241.	271.		
1.0E-7 1/yr design speed				302.	288.	317.		
41	98	3.576E+03	1.0000	152	127	127		
Point	5.175E-01	2.649E-01	1.011E+00	4.099E-04	2.098E-04	8.008E-04		
Line	7.650E+00	4.942E+00	1.184E+01	2.295E-04	1.483E-04	3.552E-04		
Strike Probability, 1/yr				6.394E-04	3.581E-04	1.156E-03		
1.0E-5 1/yr design speed				194.	179.	209.		
1.0E-6 1/yr design speed				248.	235.	262.		
1.0E-7 1/yr design speed				296.	284.	310.		

41	99	3.576E+03	1.0000	112	90	90		
Point		2.313E+00	8.033E-01	6.660E+00	1.350E-03	4.688E-04	3.887E-03	
Line		1.064E+01	6.129E+00	1.846E+01	2.352E-04	1.355E-04	4.082E-04	
Strike	Probability, 1/yr				1.585E-03	6.043E-04	4.295E-03	
1.0E-5	1/yr design speed				209.	187.	232.	
1.0E-6	1/yr design speed				260.	240.	281.	
1.0E-7	1/yr design speed				306.	287.	327.	
41	100	3.576E+03	1.0000	72	57	57		
Point		9.083E-01	2.614E-01	3.156E+00	3.408E-04	9.806E-05	1.184E-03	
Line		8.681E+00	4.022E+00	1.874E+01	1.234E-04	5.715E-05	2.663E-04	
Strike	Probability, 1/yr				4.641E-04	1.552E-04	1.450E-03	
1.0E-5	1/yr design speed				183.	155.	210.	
1.0E-6	1/yr design speed				238.	214.	262.	
1.0E-7	1/yr design speed				287.	265.	310.	
41	101	3.576E+03	1.0000	67	58	58		
Point		7.600E-02	3.180E-02	1.816E-01	2.653E-05	1.110E-05	6.341E-05	
Line		1.177E+00	7.399E-01	1.874E+00	1.557E-05	9.785E-06	2.478E-05	
Strike	Probability, 1/yr				4.210E-05	2.089E-05	8.819E-05	
1.0E-5	1/yr design speed				113.	87.	136.	
1.0E-6	1/yr design speed				183.	166.	201.	
1.0E-7	1/yr design speed				239.	225.	255.	
41	102	3.576E+03	1.0000	74	51	51		
Point		1.833E-01	6.564E-02	5.120E-01	7.069E-05	2.531E-05	1.974E-04	
Line		3.943E+00	1.962E+00	7.925E+00	5.759E-05	2.865E-05	1.158E-04	
Strike	Probability, 1/yr				1.283E-04	5.396E-05	3.132E-04	
1.0E-5	1/yr design speed				138.	104.	174.	
1.0E-6	1/yr design speed				207.	173.	242.	
1.0E-7	1/yr design speed				270.	235.	304.	
41	103	3.576E+03	1.0000	155	115	115		
Point		2.073E-01	9.462E-02	4.540E-01	1.674E-04	7.642E-05	3.666E-04	
Line		3.104E+00	1.922E+00	5.014E+00	9.497E-05	5.880E-05	1.534E-04	
Strike	Probability, 1/yr				2.624E-04	1.352E-04	5.200E-04	
1.0E-5	1/yr design speed				159.	132.	189.	
1.0E-6	1/yr design speed				226.	197.	254.	
1.0E-7	1/yr design speed				287.	257.	316.	
41	104	3.576E+03	1.0000	123	98	98		
Point		5.754E-02	3.142E-02	1.054E-01	3.688E-05	2.014E-05	6.754E-05	
Line		1.556E+00	1.074E+00	2.255E+00	3.778E-05	2.607E-05	5.476E-05	
Strike	Probability, 1/yr				7.466E-05	4.621E-05	1.223E-04	
1.0E-5	1/yr design speed				121.	99.	144.	
1.0E-6	1/yr design speed				192.	169.	216.	
1.0E-7	1/yr design speed				256.	232.	281.	

41	105	3.576E+03	1.0000	30	21	21		
Point		4.226E-02	1.038E-02	1.720E-01	6.606E-06	1.622E-06	2.689E-05	
Line		8.137E-01	4.080E-01	1.623E+00	4.818E-06	2.416E-06	9.609E-06	
Strike Probability, 1/yr					1.142E-05	4.038E-06	3.650E-05	
1.0E-5 1/yr design speed					46.	39.	102.	
1.0E-6 1/yr design speed					134.	95.	178.	
1.0E-7 1/yr design speed					203.	165.	244.	
41	106	3.576E+03	1.0000	9	7	7		
Point		1.462E+01	3.388E-02	6.306E+03	6.855E-04	1.589E-06	2.957E-01	
Line		2.669E+00	6.484E-01	1.099E+01	4.742E-06	1.152E-06	1.952E-05	
Strike Probability, 1/yr					6.903E-04	2.741E-06	2.958E-01	
1.0E-5 1/yr design speed					184.	39.	348.	
1.0E-6 1/yr design speed					246.	81.	401.	
1.0E-7 1/yr design speed					303.	152.	0.	
41	107	3.576E+03	1.0000	7	4	4		
Point		8.762E-02	3.683E-04	2.085E+01	3.196E-06	1.343E-08	7.603E-04	
Line		6.135E-01	1.673E-01	2.250E+00	8.476E-07	2.311E-07	3.109E-06	
Strike Probability, 1/yr					4.043E-06	2.445E-07	7.634E-04	
1.0E-5 1/yr design speed					39.	39.	197.	
1.0E-6 1/yr design speed					99.	39.	259.	
1.0E-7 1/yr design speed					171.	79.	316.	
41	108	3.576E+03	1.0000	3	2	2		
Point		1.420E-02	0.000E+00	0.000E+00	2.220E-07	0.000E+00	0.000E+00	
Line		5.000E-01	0.000E+00	0.000E+00	2.961E-07	0.000E+00	0.000E+00	
Strike Probability, 1/yr					5.181E-07	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					39.	38.	38.	
1.0E-6 1/yr design speed					39.	38.	38.	
1.0E-7 1/yr design speed					109.	38.	38.	
41	109	3.576E+03	1.0000	8	7	7		
Point		1.695E-02	3.750E-03	7.662E-02	7.066E-07	1.563E-07	3.194E-06	
Line		3.585E-01	1.851E-01	6.945E-01	5.661E-07	2.922E-07	1.097E-06	
Strike Probability, 1/yr					1.273E-06	4.485E-07	4.291E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					52.	39.	107.	
1.0E-7 1/yr design speed					138.	99.	183.	
41	110	3.576E+03	1.0000	5	4	4		
Point		8.160E-02	2.159E-02	3.083E-01	2.126E-06	5.626E-07	8.033E-06	
Line		2.027E+00	7.248E-01	5.671E+00	2.001E-06	7.153E-07	5.597E-06	
Strike Probability, 1/yr					4.127E-06	1.278E-06	1.363E-05	
1.0E-5 1/yr design speed					39.	39.	57.	
1.0E-6 1/yr design speed					101.	50.	148.	
1.0E-7 1/yr design speed					174.	131.	218.	

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   41  111    3.576E+03 1.0000      10       9       9
Point  1.188E-02  3.357E-03  4.205E-02  6.190E-07  1.749E-07  2.191E-06
Line   3.648E-01  2.180E-01  6.103E-01  7.200E-07  4.303E-07  1.205E-06
Strike Probability, 1/yr                1.339E-06  6.052E-07  3.396E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     54.        39.        99.
1.0E-7 1/yr design speed                    140.       109.       176.

   41  112    3.576E+03 1.0000      13      11      11
Point  2.239E-02  5.490E-03  9.134E-02  1.517E-06  3.719E-07  6.187E-06
Line   1.023E+00  4.244E-01  2.464E+00  2.624E-06  1.089E-06  6.321E-06
Strike Probability, 1/yr                4.141E-06  1.461E-06  1.251E-05
1.0E-5 1/yr design speed                     39.        39.        52.
1.0E-6 1/yr design speed                    101.        57.       145.
1.0E-7 1/yr design speed                    176.       137.       217.

   41  113    3.576E+03 1.0000       2       0       0

   41  114    3.576E+03 1.0000       1       1       1
Point  8.523E-03  0.000E+00  0.000E+00  4.441E-08  0.000E+00  0.000E+00
Line   1.000E+00  0.000E+00  0.000E+00  1.974E-07  0.000E+00  0.000E+00
Strike Probability, 1/yr                2.418E-07  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     39.        38.        38.
1.0E-6 1/yr design speed                     39.        38.        38.
1.0E-7 1/yr design speed                     82.        38.        38.

   41  115    3.576E+03 1.0000       3       1       1
Point  2.273E-01  0.000E+00  0.000E+00  3.553E-06  0.000E+00  0.000E+00
Line   8.000E+00  0.000E+00  0.000E+00  4.737E-06  0.000E+00  0.000E+00
Strike Probability, 1/yr                8.290E-06  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     39.        38.        38.
1.0E-6 1/yr design speed                    125.        38.        38.
1.0E-7 1/yr design speed                    195.        38.        38.

   41  116    3.576E+03 1.0000       0       0       0

   41  117    3.576E+03 1.0000       1       1       1
Point  5.682E-04  0.000E+00  0.000E+00  2.961E-09  0.000E+00  0.000E+00
Line   1.000E-01  0.000E+00  0.000E+00  1.974E-08  0.000E+00  0.000E+00
Strike Probability, 1/yr                2.270E-08  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     38.        38.        38.
1.0E-6 1/yr design speed                     38.        38.        38.
1.0E-7 1/yr design speed                     38.        38.        38.

   41  118    3.576E+03 1.0000       0       0       0

   41  119    3.576E+03 1.0000       2       2       2
Point  1.136E-03  0.000E+00  0.000E+00  1.184E-08  0.000E+00  0.000E+00
Line   2.000E-01  0.000E+00  0.000E+00  7.895E-08  0.000E+00  0.000E+00
Strike Probability, 1/yr                9.079E-08  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     38.        38.        38.
1.0E-6 1/yr design speed                     38.        38.        38.
1.0E-7 1/yr design speed                     38.        38.        38.
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41	120	3.576E+03	1.0000	0	0	0		
41	121	3.576E+03	1.0000	1	1	1		
Point		7.670E-02	0.000E+00	0.000E+00	3.997E-07	0.000E+00	0.000E+00	
Line		2.700E+00	0.000E+00	0.000E+00	5.329E-07	0.000E+00	0.000E+00	
Strike Probability, 1/yr					9.326E-07	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					39.	38.	38.	
1.0E-6 1/yr design speed					39.	38.	38.	
1.0E-7 1/yr design speed					129.	38.	38.	
41	122	3.576E+03	1.0000	0	0	0		
41	123	3.576E+03	1.0000	0	0	0		
41	124	3.576E+02	0.1000	6	5	5		
Point		7.145E-03	2.559E-03	1.995E-02	2.234E-06	8.002E-07	6.237E-06	
Line		3.144E-01	1.778E-01	5.559E-01	3.723E-06	2.105E-06	6.583E-06	
Strike Probability, 1/yr					5.957E-06	2.906E-06	1.282E-05	
1.0E-5 1/yr design speed					39.	39.	54.	
1.0E-6 1/yr design speed					114.	84.	146.	
1.0E-7 1/yr design speed					186.	157.	218.	
42	70	7.040E+02	0.2000	11	10	10		
Point		1.417E-01	3.628E-02	5.536E-01	4.126E-05	1.056E-05	1.612E-04	
Line		2.003E+00	8.007E-01	5.013E+00	2.209E-05	8.829E-06	5.528E-05	
Strike Probability, 1/yr					6.335E-05	1.939E-05	2.165E-04	
1.0E-5 1/yr design speed					122.	78.	158.	
1.0E-6 1/yr design speed					186.	154.	216.	
1.0E-7 1/yr design speed					239.	212.	265.	
42	71	3.520E+03	1.0000	81	76	76		
Point		3.255E-01	1.430E-01	7.408E-01	1.395E-04	6.131E-05	3.176E-04	
Line		3.261E+00	2.053E+00	5.179E+00	5.295E-05	3.333E-05	8.412E-05	
Strike Probability, 1/yr					1.925E-04	9.464E-05	4.017E-04	
1.0E-5 1/yr design speed					153.	132.	174.	
1.0E-6 1/yr design speed					211.	193.	228.	
1.0E-7 1/yr design speed					261.	245.	277.	
42	72	3.520E+03	1.0000	76	69	69		
Point		2.230E-01	1.040E-01	4.785E-01	8.972E-05	4.182E-05	1.925E-04	
Line		2.900E+00	1.913E+00	4.396E+00	4.418E-05	2.915E-05	6.698E-05	
Strike Probability, 1/yr					1.339E-04	7.097E-05	2.595E-04	
1.0E-5 1/yr design speed					144.	124.	163.	
1.0E-6 1/yr design speed					203.	187.	220.	
1.0E-7 1/yr design speed					255.	240.	269.	
42	73	3.520E+03	1.0000	59	55	55		
Point		7.627E-01	3.250E-01	1.790E+00	2.382E-04	1.015E-04	5.589E-04	
Line		4.261E+00	2.733E+00	6.643E+00	5.040E-05	3.232E-05	7.858E-05	
Strike Probability, 1/yr					2.886E-04	1.338E-04	6.375E-04	
1.0E-5 1/yr design speed					162.	140.	184.	
1.0E-6 1/yr design speed					218.	199.	236.	
1.0E-7 1/yr design speed					267.	250.	283.	

42	74	3.520E+03	1.0000	26	24	24		
Point	5.403E+00	4.785E-01	6.101E+01	7.436E-04	6.585E-05	8.396E-03		
Line	3.652E+00	1.888E+00	7.065E+00	1.904E-05	9.840E-06	3.683E-05		
Strike Probability, 1/yr				7.626E-04	7.569E-05	8.433E-03		
1.0E-5 1/yr design speed				183.	121.	238.		
1.0E-6 1/yr design speed				235.	182.	284.		
1.0E-7 1/yr design speed				282.	235.	327.		
42	75	3.520E+03	1.0000	30	28	28		
Point	4.578E-01	1.397E-01	1.500E+00	7.269E-05	2.218E-05	2.382E-04		
Line	2.435E+00	1.305E+00	4.544E+00	1.465E-05	7.850E-06	2.733E-05		
Strike Probability, 1/yr				8.734E-05	3.003E-05	2.656E-04		
1.0E-5 1/yr design speed				129.	93.	161.		
1.0E-6 1/yr design speed				190.	162.	216.		
1.0E-7 1/yr design speed				242.	218.	265.		
42	76	3.520E+03	1.0000	22	21	21		
Point	2.503E+00	5.373E-01	1.166E+01	2.914E-04	6.257E-05	1.357E-03		
Line	4.448E+00	2.555E+00	7.744E+00	1.962E-05	1.127E-05	3.416E-05		
Strike Probability, 1/yr				3.111E-04	7.384E-05	1.392E-03		
1.0E-5 1/yr design speed				162.	121.	200.		
1.0E-6 1/yr design speed				216.	182.	249.		
1.0E-7 1/yr design speed				265.	235.	295.		
42	77	3.520E+03	1.0000	13	12	12		
Point	1.450E-01	3.455E-02	6.082E-01	9.975E-06	2.378E-06	4.185E-05		
Line	1.320E+00	8.238E-01	2.116E+00	3.441E-06	2.147E-06	5.516E-06		
Strike Probability, 1/yr				1.342E-05	4.525E-06	4.737E-05		
1.0E-5 1/yr design speed				58.	39.	111.		
1.0E-6 1/yr design speed				143.	110.	176.		
1.0E-7 1/yr design speed				202.	177.	230.		
42	78	3.520E+03	1.0000	28	27	27		
Point	9.737E-01	2.226E-01	4.259E+00	1.443E-04	3.299E-05	6.313E-04		
Line	6.546E+00	2.965E+00	1.445E+01	3.675E-05	1.665E-05	8.113E-05		
Strike Probability, 1/yr				1.811E-04	4.963E-05	7.124E-04		
1.0E-5 1/yr design speed				155.	118.	190.		
1.0E-6 1/yr design speed				214.	185.	244.		
1.0E-7 1/yr design speed				265.	240.	293.		
42	79	1.056E+03	0.3000	22	19	19		
Point	2.952E+00	2.545E-01	3.424E+01	1.146E-03	9.878E-05	1.329E-02		
Line	6.862E+00	2.504E+00	1.880E+01	1.009E-04	3.682E-05	2.765E-04		
Strike Probability, 1/yr				1.247E-03	1.356E-04	1.357E-02		
1.0E-5 1/yr design speed				200.	148.	253.		
1.0E-6 1/yr design speed				251.	208.	301.		
1.0E-7 1/yr design speed				298.	259.	345.		

42	80	1.760E+02	0.0500	6	4	4	
Point		5.741E-02	6.458E-03	5.104E-01	3.647E-05	4.102E-06	3.242E-04
Line		1.502E+00	3.696E-01	6.104E+00	3.614E-05	8.894E-06	1.469E-04
Strike Probability, 1/yr					7.261E-05	1.300E-05	4.711E-04
1.0E-5 1/yr design speed					135.	62.	186.
1.0E-6 1/yr design speed					201.	157.	242.
1.0E-7 1/yr design speed					255.	219.	292.
42	82	1.056E+03	0.3000	23	21	21	
Point		1.223E+00	2.090E-01	7.156E+00	4.963E-04	8.483E-05	2.904E-03
Line		4.782E+00	2.300E+00	9.943E+00	7.351E-05	3.535E-05	1.528E-04
Strike Probability, 1/yr					5.698E-04	1.202E-04	3.057E-03
1.0E-5 1/yr design speed					183.	145.	222.
1.0E-6 1/yr design speed					237.	206.	272.
1.0E-7 1/yr design speed					285.	257.	318.
42	83	3.520E+03	1.0000	127	109	109	
Point		4.703E-01	2.430E-01	9.099E-01	3.161E-04	1.634E-04	6.117E-04
Line		4.592E+00	3.125E+00	6.748E+00	1.169E-04	7.958E-05	1.718E-04
Strike Probability, 1/yr					4.331E-04	2.430E-04	7.835E-04
1.0E-5 1/yr design speed					181.	166.	196.
1.0E-6 1/yr design speed					237.	224.	251.
1.0E-7 1/yr design speed					286.	273.	299.
42	84	3.520E+03	1.0000	116	102	102	
Point		1.040E+00	4.497E-01	2.404E+00	6.384E-04	2.761E-04	1.476E-03
Line		5.736E+00	3.849E+00	8.548E+00	1.334E-04	8.951E-05	1.988E-04
Strike Probability, 1/yr					7.718E-04	3.656E-04	1.675E-03
1.0E-5 1/yr design speed					192.	175.	211.
1.0E-6 1/yr design speed					246.	230.	263.
1.0E-7 1/yr design speed					293.	278.	310.
42	85	3.520E+03	1.0000	104	90	90	
Point		1.956E+00	8.004E-01	4.780E+00	1.077E-03	4.406E-04	2.631E-03
Line		6.442E+00	4.278E+00	9.700E+00	1.343E-04	8.920E-05	2.023E-04
Strike Probability, 1/yr					1.211E-03	5.298E-04	2.833E-03
1.0E-5 1/yr design speed					201.	181.	221.
1.0E-6 1/yr design speed					252.	235.	272.
1.0E-7 1/yr design speed					299.	282.	318.
42	86	1.056E+03	0.3000	36	34	34	
Point		9.354E-01	2.957E-01	2.959E+00	5.941E-04	1.878E-04	1.879E-03
Line		7.270E+00	4.029E+00	1.312E+01	1.749E-04	9.693E-05	3.156E-04
Strike Probability, 1/yr					7.690E-04	2.848E-04	2.195E-03
1.0E-5 1/yr design speed					194.	171.	218.
1.0E-6 1/yr design speed					248.	228.	270.
1.0E-7 1/yr design speed					295.	277.	316.

42	87	7.040E+02	0.2000	38	34	34		
Point		3.446E-01	1.366E-01	8.692E-01	3.466E-04	1.374E-04	8.741E-04	
Line		4.450E+00	2.585E+00	7.661E+00	1.695E-04	9.847E-05	2.919E-04	
Strike Probability, 1/yr					5.161E-04	2.359E-04	1.166E-03	
1.0E-5 1/yr design speed					187.	168.	207.	
1.0E-6 1/yr design speed					243.	226.	260.	
1.0E-7 1/yr design speed					291.	276.	308.	
42	88	3.520E+03	1.0000	99	84	84		
Point		6.690E-01	3.199E-01	1.399E+00	3.506E-04	1.676E-04	7.333E-04	
Line		5.801E+00	3.830E+00	8.788E+00	1.152E-04	7.602E-05	1.744E-04	
Strike Probability, 1/yr					4.657E-04	2.436E-04	9.077E-04	
1.0E-5 1/yr design speed					182.	166.	199.	
1.0E-6 1/yr design speed					237.	223.	253.	
1.0E-7 1/yr design speed					286.	273.	301.	
42	89	3.520E+03	1.0000	91	80	81		
Point		1.008E+00	3.890E-01	2.611E+00	4.855E-04	1.874E-04	1.258E-03	
Line		6.050E+00	3.621E+00	1.011E+01	1.104E-04	6.607E-05	1.844E-04	
Strike Probability, 1/yr					5.959E-04	2.534E-04	1.442E-03	
1.0E-5 1/yr design speed					186.	165.	208.	
1.0E-6 1/yr design speed					240.	222.	260.	
1.0E-7 1/yr design speed					288.	272.	307.	
42	90	3.520E+03	1.0000	99	89	89		
Point		1.679E+00	7.230E-01	3.900E+00	8.799E-04	3.789E-04	2.044E-03	
Line		6.164E+00	4.212E+00	9.019E+00	1.223E-04	8.361E-05	1.790E-04	
Strike Probability, 1/yr					1.002E-03	4.625E-04	2.223E-03	
1.0E-5 1/yr design speed					197.	178.	216.	
1.0E-6 1/yr design speed					249.	232.	267.	
1.0E-7 1/yr design speed					296.	280.	314.	
42	91	3.520E+03	1.0000	133	118	118		
Point		7.340E+00	2.029E+00	2.655E+01	5.167E-03	1.428E-03	1.869E-02	
Line		8.370E+00	4.993E+00	1.403E+01	2.232E-04	1.331E-04	3.742E-04	
Strike Probability, 1/yr					5.391E-03	1.562E-03	1.907E-02	
1.0E-5 1/yr design speed					231.	204.	260.	
1.0E-6 1/yr design speed					279.	253.	307.	
1.0E-7 1/yr design speed					323.	298.	351.	
42	92	3.520E+03	1.0000	158	138	138		
Point		1.478E+00	6.869E-01	3.182E+00	1.236E-03	5.745E-04	2.661E-03	
Line		5.295E+00	3.733E+00	7.510E+00	1.677E-04	1.183E-04	2.379E-04	
Strike Probability, 1/yr					1.404E-03	6.928E-04	2.899E-03	
1.0E-5 1/yr design speed					205.	188.	222.	
1.0E-6 1/yr design speed					256.	241.	273.	
1.0E-7 1/yr design speed					302.	287.	319.	

42	93	3.520E+03	1.0000	138	119	119		
Point		1.193E+00	5.738E-01	2.480E+00	8.713E-04	4.192E-04	1.811E-03	
Line		5.929E+00	4.083E+00	8.611E+00	1.641E-04	1.130E-04	2.382E-04	
Strike Probability, 1/yr					1.035E-03	5.321E-04	2.050E-03	
1.0E-5 1/yr design speed					199.	183.	216.	
1.0E-6 1/yr design speed					251.	237.	267.	
1.0E-7 1/yr design speed					298.	284.	314.	
42	94	3.520E+03	1.0000	120	108	108		
Point		9.929E-01	4.467E-01	2.207E+00	6.307E-04	2.838E-04	1.402E-03	
Line		6.059E+00	3.964E+00	9.261E+00	1.458E-04	9.536E-05	2.228E-04	
Strike Probability, 1/yr					7.764E-04	3.791E-04	1.624E-03	
1.0E-5 1/yr design speed					193.	176.	211.	
1.0E-6 1/yr design speed					246.	231.	263.	
1.0E-7 1/yr design speed					294.	279.	310.	
42	95	3.520E+03	1.0000	100	89	89		
Point		1.198E+00	4.869E-01	2.950E+00	6.344E-04	2.577E-04	1.562E-03	
Line		6.125E+00	3.776E+00	9.935E+00	1.228E-04	7.570E-05	1.992E-04	
Strike Probability, 1/yr					7.572E-04	3.334E-04	1.761E-03	
1.0E-5 1/yr design speed					191.	171.	212.	
1.0E-6 1/yr design speed					245.	227.	264.	
1.0E-7 1/yr design speed					292.	276.	311.	
42	96	3.520E+03	1.0000	146	124	124		
Point		4.107E-01	2.076E-01	8.123E-01	3.174E-04	1.604E-04	6.278E-04	
Line		4.225E+00	2.752E+00	6.486E+00	1.237E-04	8.056E-05	1.899E-04	
Strike Probability, 1/yr					4.410E-04	2.410E-04	8.176E-04	
1.0E-5 1/yr design speed					182.	166.	198.	
1.0E-6 1/yr design speed					237.	224.	252.	
1.0E-7 1/yr design speed					286.	273.	300.	
42	97	3.520E+03	1.0000	133	101	101		
Point		1.696E+00	6.417E-01	4.481E+00	1.194E-03	4.517E-04	3.155E-03	
Line		9.588E+00	5.676E+00	1.620E+01	2.557E-04	1.514E-04	4.319E-04	
Strike Probability, 1/yr					1.449E-03	6.031E-04	3.587E-03	
1.0E-5 1/yr design speed					208.	187.	229.	
1.0E-6 1/yr design speed					259.	241.	279.	
1.0E-7 1/yr design speed					306.	288.	325.	
42	98	3.520E+03	1.0000	113	94	94		
Point		3.151E-01	1.508E-01	6.586E-01	1.885E-04	9.018E-05	3.939E-04	
Line		5.153E+00	3.222E+00	8.240E+00	1.167E-04	7.301E-05	1.867E-04	
Strike Probability, 1/yr					3.052E-04	1.632E-04	5.806E-04	
1.0E-5 1/yr design speed					175.	158.	192.	
1.0E-6 1/yr design speed					232.	218.	247.	
1.0E-7 1/yr design speed					282.	269.	297.	

42	99	3.520E+03	1.0000	53	47	47	
Point	8.849E-01	1.899E-01	4.122E+00	2.482E-04	5.329E-05	1.156E-03	
Line	4.836E+00	2.206E+00	1.060E+01	5.139E-05	2.345E-05	1.126E-04	
Strike Probability, 1/yr				2.996E-04	7.673E-05	1.269E-03	
1.0E-5 1/yr design speed				168.	132.	203.	
1.0E-6 1/yr design speed				225.	195.	255.	
1.0E-7 1/yr design speed				274.	248.	303.	
42	100	3.520E+03	1.0000	45	35	35	
Point	5.296E-01	1.567E-01	1.789E+00	1.261E-04	3.734E-05	4.262E-04	
Line	6.598E+00	3.172E+00	1.372E+01	5.953E-05	2.862E-05	1.238E-04	
Strike Probability, 1/yr				1.857E-04	6.596E-05	5.500E-04	
1.0E-5 1/yr design speed				159.	130.	187.	
1.0E-6 1/yr design speed				219.	196.	243.	
1.0E-7 1/yr design speed				270.	249.	292.	
42	101	3.520E+03	1.0000	31	22	22	
Point	1.042E+00	1.418E-01	7.654E+00	1.709E-04	2.327E-05	1.256E-03	
Line	1.445E+01	3.766E+00	5.547E+01	8.984E-05	2.341E-05	3.448E-04	
Strike Probability, 1/yr				2.608E-04	4.667E-05	1.601E-03	
1.0E-5 1/yr design speed				170.	120.	213.	
1.0E-6 1/yr design speed				228.	189.	266.	
1.0E-7 1/yr design speed				278.	244.	313.	
42	102	3.520E+03	1.0000	60	53	53	
Point	2.912E-01	9.477E-02	8.947E-01	9.248E-05	3.010E-05	2.842E-04	
Line	2.991E+00	1.581E+00	5.656E+00	3.598E-05	1.902E-05	6.804E-05	
Strike Probability, 1/yr				1.285E-04	4.912E-05	3.522E-04	
1.0E-5 1/yr design speed				137.	100.	176.	
1.0E-6 1/yr design speed				205.	168.	242.	
1.0E-7 1/yr design speed				267.	230.	303.	
42	103	3.520E+03	1.0000	64	55	55	
Point	4.803E-02	2.210E-02	1.044E-01	1.627E-05	7.488E-06	3.535E-05	
Line	1.596E+00	9.131E-01	2.790E+00	2.048E-05	1.172E-05	3.580E-05	
Strike Probability, 1/yr				3.675E-05	1.920E-05	7.115E-05	
1.0E-5 1/yr design speed				97.	68.	126.	
1.0E-6 1/yr design speed				171.	144.	200.	
1.0E-7 1/yr design speed				237.	209.	267.	
42	104	3.520E+03	1.0000	65	52	52	
Point	4.469E-02	1.945E-02	1.026E-01	1.537E-05	6.693E-06	3.531E-05	
Line	8.610E-01	5.898E-01	1.257E+00	1.122E-05	7.687E-06	1.638E-05	
Strike Probability, 1/yr				2.660E-05	1.438E-05	5.169E-05	
1.0E-5 1/yr design speed				84.	55.	114.	
1.0E-6 1/yr design speed				160.	134.	189.	
1.0E-7 1/yr design speed				227.	200.	255.	

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   42  105    3.520E+03 1.0000     27     21     21
Point  1.333E-01  2.471E-02  7.187E-01  1.905E-05  3.532E-06  1.027E-04
Line   1.532E+00  7.320E-01  3.207E+00  8.295E-06  3.963E-06  1.736E-05
Strike Probability, 1/yr                2.734E-05  7.495E-06  1.201E-04
1.0E-5 1/yr design speed                     85.        39.       142.
1.0E-6 1/yr design speed                    160.       114.       212.
1.0E-7 1/yr design speed                    226.       182.       274.

   42  106    3.520E+03 1.0000     18     15     15
Point  4.006E-02  1.408E-02  1.140E-01  3.817E-06  1.341E-06  1.086E-05
Line   1.156E+00  6.515E-01  2.051E+00  4.171E-06  2.351E-06  7.401E-06
Strike Probability, 1/yr                7.988E-06  3.692E-06  1.826E-05
1.0E-5 1/yr design speed                     39.        39.        73.
1.0E-6 1/yr design speed                    123.        92.       157.
1.0E-7 1/yr design speed                    194.       163.       227.

   42  107    3.520E+03 1.0000      3      3      3
Point  1.793E-02  9.163E-03  3.510E-02  2.848E-07  1.455E-07  5.574E-07
Line   1.141E+00  6.434E-01  2.022E+00  6.860E-07  3.870E-07  1.216E-06
Strike Probability, 1/yr                9.708E-07  5.325E-07  1.774E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     39.        39.        72.
1.0E-7 1/yr design speed                    131.       105.       158.

   42  108    3.520E+03 1.0000      4      4      4
Point  3.526E-02  1.278E-02  9.726E-02  7.466E-07  2.707E-07  2.059E-06
Line   8.467E-01  4.886E-01  1.467E+00  6.791E-07  3.918E-07  1.177E-06
Strike Probability, 1/yr                1.426E-06  6.625E-07  3.236E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     57.        39.        97.
1.0E-7 1/yr design speed                    142.       111.       175.

   42  109    3.520E+03 1.0000      5      5      5
Point  8.820E-03  1.138E-03  6.837E-02  2.334E-07  3.012E-08  1.809E-06
Line   2.389E-01  1.275E-01  4.475E-01  2.395E-07  1.278E-07  4.486E-07
Strike Probability, 1/yr                4.729E-07  1.580E-07  2.258E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     39.        39.        82.
1.0E-7 1/yr design speed                    105.        60.       163.

   42  110    3.520E+03 1.0000      7      6      6
Point  2.588E-02  3.772E-03  1.775E-01  9.588E-07  1.398E-07  6.578E-06
Line   6.004E-01  1.999E-01  1.803E+00  8.427E-07  2.806E-07  2.531E-06
Strike Probability, 1/yr                1.802E-06  4.204E-07  9.109E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     68.        39.       134.
1.0E-7 1/yr design speed                    149.        97.       205.
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   42  111    3.520E+03 1.0000      3      3      3
Point  5.127E-03  2.472E-03  1.063E-02  8.141E-08  3.925E-08  1.689E-07
Line   6.648E-01  1.795E-01  2.462E+00  3.999E-07  1.080E-07  1.481E-06
Strike Probability, 1/yr                4.813E-07  1.472E-07  1.650E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     39.        39.        67.
1.0E-7 1/yr design speed                    107.        57.       156.

   42  112    3.520E+03 1.0000     19     18     18
Point  1.537E-01  3.020E-02  7.820E-01  1.546E-05  3.038E-06  7.865E-05
Line   2.179E+00  8.714E-01  5.448E+00  8.300E-06  3.319E-06  2.075E-05
Strike Probability, 1/yr                2.376E-05  6.357E-06  9.940E-05
1.0E-5 1/yr design speed                     80.        39.       137.
1.0E-6 1/yr design speed                    156.       109.       207.
1.0E-7 1/yr design speed                    223.       177.       270.

   42  113    3.520E+03 1.0000     12      9     10
Point  1.791E-02  6.381E-03  5.026E-02  1.138E-06  4.053E-07  3.192E-06
Line   3.570E-01  2.624E-01  4.856E-01  8.589E-07  6.314E-07  1.168E-06
Strike Probability, 1/yr                1.996E-06  1.037E-06  4.361E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     73.        42.       108.
1.0E-7 1/yr design speed                    152.       125.       183.

   42  114    3.520E+03 1.0000     17     15     15
Point  1.049E-02  3.673E-03  2.996E-02  9.440E-07  3.305E-07  2.696E-06
Line   3.944E-01  2.468E-01  6.302E-01  1.344E-06  8.414E-07  2.148E-06
Strike Probability, 1/yr                2.288E-06  1.172E-06  4.844E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     79.        47.       112.
1.0E-7 1/yr design speed                    157.       130.       188.

   42  115    3.520E+03 1.0000      2      2      2
Point  1.847E-02  1.395E-02  2.446E-02  1.955E-07  1.477E-07  2.589E-07
Line   1.272E+00  4.767E-01  3.391E+00  5.099E-07  1.912E-07  1.360E-06
Strike Probability, 1/yr                7.054E-07  3.388E-07  1.619E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     39.        39.        66.
1.0E-7 1/yr design speed                    120.        89.       155.

   42  116    3.520E+03 1.0000      0      0      0

   42  117    3.520E+03 1.0000      1      1      1
Point  5.682E-03  0.000E+00  0.000E+00  3.007E-08  0.000E+00  0.000E+00
Line   1.000E+00  0.000E+00  0.000E+00  2.005E-07  0.000E+00  0.000E+00
Strike Probability, 1/yr                2.306E-07  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     39.        38.        38.
1.0E-6 1/yr design speed                     39.        38.        38.
1.0E-7 1/yr design speed                     80.        38.        38.

   42  118    3.520E+03 1.0000      0      0      0

   42  119    3.520E+03 1.0000      1      0      0
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   42  120    3.520E+03 1.0000      0      0      0

   42  121    3.520E+03 1.0000      2      2      2
Point  3.486E-03  4.523E-04  2.687E-02  3.690E-08  4.788E-09  2.844E-07
Line   3.091E-01  9.296E-02  1.028E+00  1.239E-07  3.728E-08  4.121E-07
Strike Probability, 1/yr                 1.609E-07  4.207E-08  6.966E-07
1.0E-5 1/yr design speed                      39.        38.        39.
1.0E-6 1/yr design speed                      39.        38.        39.
1.0E-7 1/yr design speed                      63.        38.       126.

   42  122    3.520E+03 1.0000      0      0      0

   42  123    3.520E+03 1.0000      0      0      0

   42  124    1.056E+03 0.3000      2      1      2
Point  2.841E-03  0.000E+00  0.000E+00  1.002E-07  0.000E+00  0.000E+00
Line   3.091E-01  9.296E-02  1.028E+00  4.132E-07  1.243E-07  1.374E-06
Strike Probability, 1/yr                 5.134E-07  1.243E-07  1.374E-06
1.0E-5 1/yr design speed                      39.        39.        39.
1.0E-6 1/yr design speed                      39.        39.        57.
1.0E-7 1/yr design speed                     109.        50.       151.

   43   69    3.463E+02 0.1000      0      0      0

   43   70    2.424E+03 0.7000     20     19     19
Point  6.914E-02  2.303E-02  2.075E-01  1.063E-05  3.540E-06  3.190E-05
Line   1.564E+00  7.829E-01  3.123E+00  9.105E-06  4.559E-06  1.819E-05
Strike Probability, 1/yr                 1.973E-05  8.099E-06  5.009E-05
1.0E-5 1/yr design speed                      81.        39.       117.
1.0E-6 1/yr design speed                     157.       130.       183.
1.0E-7 1/yr design speed                     215.       193.       237.

   43   71    3.463E+03 1.0000     28     25     25
Point  8.684E-02  3.619E-02  2.084E-01  1.308E-05  5.452E-06  3.139E-05
Line   1.989E+00  1.073E+00  3.689E+00  1.135E-05  6.120E-06  2.105E-05
Strike Probability, 1/yr                 2.443E-05  1.157E-05  5.244E-05
1.0E-5 1/yr design speed                      89.        49.       119.
1.0E-6 1/yr design speed                     163.       140.       184.
1.0E-7 1/yr design speed                     220.       201.       239.

   43   72    3.463E+03 1.0000     18     17     17
Point  1.725E-01  5.197E-02  5.727E-01  1.671E-05  5.032E-06  5.546E-05
Line   4.399E+00  1.784E+00  1.085E+01  1.614E-05  6.545E-06  3.978E-05
Strike Probability, 1/yr                 3.284E-05  1.158E-05  9.524E-05
1.0E-5 1/yr design speed                     102.        49.       138.
1.0E-6 1/yr design speed                     171.       141.       200.
1.0E-7 1/yr design speed                     228.       202.       252.
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43	73	3.463E+03	1.0000	12	9	9		
Point	1.051E-01	1.458E-02	7.576E-01	6.784E-06	9.410E-07	4.891E-05		
Line	1.679E+00	4.857E-01	5.801E+00	4.105E-06	1.188E-06	1.419E-05		
Strike Probability, 1/yr				1.089E-05	2.129E-06	6.310E-05		
1.0E-5 1/yr design speed				45.	39.	122.		
1.0E-6 1/yr design speed				139.	83.	186.		
1.0E-7 1/yr design speed				200.	158.	239.		
43	74	3.463E+03	1.0000	13	11	11		
Point	1.052E+00	7.768E-02	1.424E+01	7.357E-05	5.433E-06	9.962E-04		
Line	2.691E+00	1.012E+00	7.158E+00	7.130E-06	2.681E-06	1.896E-05		
Strike Probability, 1/yr				8.070E-05	8.114E-06	1.015E-03		
1.0E-5 1/yr design speed				125.	39.	192.		
1.0E-6 1/yr design speed				186.	127.	243.		
1.0E-7 1/yr design speed				238.	188.	288.		
43	75	3.463E+03	1.0000	16	15	15		
Point	3.167E-01	6.522E-02	1.538E+00	2.726E-05	5.614E-06	1.324E-04		
Line	2.522E+00	1.064E+00	5.977E+00	8.223E-06	3.470E-06	1.949E-05		
Strike Probability, 1/yr				3.548E-05	9.084E-06	1.518E-04		
1.0E-5 1/yr design speed				101.	39.	147.		
1.0E-6 1/yr design speed				169.	131.	204.		
1.0E-7 1/yr design speed				224.	192.	255.		
43	76	1.385E+03	0.4000	18	15	15		
Point	6.878E-01	1.320E-01	3.583E+00	1.665E-04	3.197E-05	8.674E-04		
Line	6.874E+00	3.037E+00	1.556E+01	6.304E-05	2.785E-05	1.427E-04		
Strike Probability, 1/yr				2.296E-04	5.981E-05	1.010E-03		
1.0E-5 1/yr design speed				158.	119.	195.		
1.0E-6 1/yr design speed				215.	184.	246.		
1.0E-7 1/yr design speed				265.	238.	293.		
43	77	6.926E+02	0.2000	4	4	4		
Point	3.847E-01	1.190E-01	1.243E+00	4.140E-05	1.281E-05	1.338E-04		
Line	7.283E+00	3.062E+00	1.732E+01	2.968E-05	1.248E-05	7.060E-05		
Strike Probability, 1/yr				7.108E-05	2.529E-05	2.044E-04		
1.0E-5 1/yr design speed				127.	89.	159.		
1.0E-6 1/yr design speed				190.	162.	216.		
1.0E-7 1/yr design speed				243.	219.	266.		
43	78	1.039E+03	0.3000	5	4	4		
Point	2.861E-01	3.570E-02	2.294E+00	2.566E-05	3.201E-06	2.057E-04		
Line	4.042E+00	1.348E+00	1.212E+01	1.373E-05	4.579E-06	4.117E-05		
Strike Probability, 1/yr				3.939E-05	7.779E-06	2.468E-04		
1.0E-5 1/yr design speed				110.	39.	164.		
1.0E-6 1/yr design speed				181.	139.	222.		
1.0E-7 1/yr design speed				237.	204.	273.		

43	82	1.732E+03	0.5000	29	24	24		
Point		1.332E+00	1.820E-01	9.743E+00	4.156E-04	5.680E-05	3.040E-03	
Line		4.224E+00	1.669E+00	1.069E+01	4.992E-05	1.972E-05	1.264E-04	
Strike	Probability, 1/yr				4.655E-04	7.653E-05	3.166E-03	
1.0E-5	1/yr design speed				177.	130.	222.	
1.0E-6	1/yr design speed				231.	194.	272.	
1.0E-7	1/yr design speed				280.	246.	318.	
43	83	2.771E+03	0.8000	79	72	72		
Point		8.126E-01	3.069E-01	2.152E+00	4.317E-04	1.630E-04	1.143E-03	
Line		3.895E+00	2.487E+00	6.099E+00	7.838E-05	5.006E-05	1.227E-04	
Strike	Probability, 1/yr				5.101E-04	2.131E-04	1.266E-03	
1.0E-5	1/yr design speed				181.	160.	203.	
1.0E-6	1/yr design speed				236.	217.	256.	
1.0E-7	1/yr design speed				284.	267.	303.	
43	84	3.463E+03	1.0000	71	62	62		
Point		4.389E-01	1.873E-01	1.028E+00	1.676E-04	7.156E-05	3.927E-04	
Line		5.997E+00	3.593E+00	1.001E+01	8.677E-05	5.199E-05	1.448E-04	
Strike	Probability, 1/yr				2.544E-04	1.236E-04	5.375E-04	
1.0E-5	1/yr design speed				169.	150.	188.	
1.0E-6	1/yr design speed				227.	211.	244.	
1.0E-7	1/yr design speed				277.	262.	293.	
43	85	3.463E+03	1.0000	61	55	55		
Point		8.119E-01	2.722E-01	2.422E+00	2.665E-04	8.933E-05	7.948E-04	
Line		6.048E+00	3.254E+00	1.124E+01	7.519E-05	4.045E-05	1.398E-04	
Strike	Probability, 1/yr				3.416E-04	1.298E-04	9.346E-04	
1.0E-5	1/yr design speed				173.	148.	198.	
1.0E-6	1/yr design speed				229.	208.	252.	
1.0E-7	1/yr design speed				279.	260.	300.	
43	86	1.385E+03	0.4000	19	11	11		
Point		2.597E-01	4.484E-02	1.504E+00	6.636E-05	1.146E-05	3.843E-04	
Line		2.118E+00	8.365E-01	5.364E+00	2.050E-05	8.098E-06	5.192E-05	
Strike	Probability, 1/yr				8.686E-05	1.956E-05	4.362E-04	
1.0E-5	1/yr design speed				134.	83.	177.	
1.0E-6	1/yr design speed				198.	162.	233.	
1.0E-7	1/yr design speed				251.	221.	283.	
43	87	6.926E+02	0.2000	12	10	10		
Point		8.827E-01	4.237E-02	1.839E+01	2.849E-04	1.368E-05	5.936E-03	
Line		5.264E+00	9.707E-01	2.854E+01	6.436E-05	1.187E-05	3.490E-04	
Strike	Probability, 1/yr				3.493E-04	2.555E-05	6.285E-03	
1.0E-5	1/yr design speed				172.	96.	238.	
1.0E-6	1/yr design speed				228.	171.	287.	
1.0E-7	1/yr design speed				278.	229.	332.	

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   43   88    3.463E+03 1.0000    159    144    144
Point  6.221E-01  3.400E-01  1.138E+00  5.322E-04  2.908E-04  9.739E-04
Line   5.621E+00  3.909E+00  8.084E+00  1.821E-04  1.267E-04  2.619E-04
Strike Probability, 1/yr                7.143E-04  4.175E-04  1.236E-03
1.0E-5 1/yr design speed                     193.       180.       207.
1.0E-6 1/yr design speed                     247.       235.       260.
1.0E-7 1/yr design speed                     295.       283.       308.

   43   89    3.463E+03 1.0000     97     89     89
Point  7.994E-01  3.354E-01  1.905E+00  4.172E-04  1.750E-04  9.942E-04
Line   6.083E+00  3.743E+00  9.886E+00  1.202E-04  7.398E-05  1.954E-04
Strike Probability, 1/yr                5.374E-04  2.490E-04  1.190E-03
1.0E-5 1/yr design speed                     185.       166.       204.
1.0E-6 1/yr design speed                     240.       223.       257.
1.0E-7 1/yr design speed                     288.       273.       305.

   43   90    3.463E+03 1.0000     63     54     54
Point  1.233E+00  5.493E-01  2.769E+00  4.180E-04  1.862E-04  9.385E-04
Line   7.414E+00  5.023E+00  1.094E+01  9.518E-05  6.449E-05  1.405E-04
Strike Probability, 1/yr                5.132E-04  2.507E-04  1.079E-03
1.0E-5 1/yr design speed                     182.       165.       201.
1.0E-6 1/yr design speed                     237.       222.       254.
1.0E-7 1/yr design speed                     286.       271.       302.

   43   91    3.463E+03 1.0000     61     53     53
Point  6.830E-01  2.564E-01  1.819E+00  2.242E-04  8.416E-05  5.970E-04
Line   7.960E+00  4.219E+00  1.502E+01  9.895E-05  5.245E-05  1.867E-04
Strike Probability, 1/yr                3.231E-04  1.366E-04  7.837E-04
1.0E-5 1/yr design speed                     174.       152.       197.
1.0E-6 1/yr design speed                     231.       212.       251.
1.0E-7 1/yr design speed                     281.       263.       300.

   43   92    3.463E+03 1.0000    115    106    106
Point  1.283E+00  5.607E-01  2.937E+00  7.940E-04  3.469E-04  1.817E-03
Line   4.813E+00  3.271E+00  7.080E+00  1.128E-04  7.666E-05  1.659E-04
Strike Probability, 1/yr                9.068E-04  4.236E-04  1.983E-03
1.0E-5 1/yr design speed                     194.       176.       213.
1.0E-6 1/yr design speed                     247.       230.       265.
1.0E-7 1/yr design speed                     294.       278.       311.

   43   93    3.463E+03 1.0000    137    123    123
Point  9.237E-01  4.479E-01  1.905E+00  6.809E-04  3.301E-04  1.404E-03
Line   5.952E+00  4.008E+00  8.839E+00  1.662E-04  1.119E-04  2.468E-04
Strike Probability, 1/yr                8.470E-04  4.420E-04  1.651E-03
1.0E-5 1/yr design speed                     195.       180.       212.
1.0E-6 1/yr design speed                     249.       234.       264.
1.0E-7 1/yr design speed                     296.       282.       311.
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   43   94    3.463E+03 1.0000     93     79     79
Point  8.996E-01  3.592E-01  2.253E+00  4.501E-04  1.797E-04  1.127E-03
Line   6.740E+00  4.087E+00  1.112E+01  1.277E-04  7.746E-05  2.107E-04
Strike Probability, 1/yr                5.778E-04  2.572E-04  1.338E-03
1.0E-5 1/yr design speed                     187.       167.       207.
1.0E-6 1/yr design speed                     241.       224.       260.
1.0E-7 1/yr design speed                     289.       273.       307.

   43   95    3.463E+03 1.0000    120    107    107
Point  1.145E+00  5.058E-01  2.590E+00  7.390E-04  3.266E-04  1.672E-03
Line   5.556E+00  3.539E+00  8.725E+00  1.359E-04  8.653E-05  2.134E-04
Strike Probability, 1/yr                8.749E-04  4.131E-04  1.886E-03
1.0E-5 1/yr design speed                     195.       177.       213.
1.0E-6 1/yr design speed                     248.       231.       265.
1.0E-7 1/yr design speed                     295.       279.       312.

   43   96    3.463E+03 1.0000    140    112    112
Point  3.543E-01  1.850E-01  6.787E-01  2.669E-04  1.393E-04  5.112E-04
Line   3.007E+00  2.063E+00  4.382E+00  8.579E-05  5.887E-05  1.250E-04
Strike Probability, 1/yr                3.527E-04  1.982E-04  6.362E-04
1.0E-5 1/yr design speed                     175.       159.       190.
1.0E-6 1/yr design speed                     231.       218.       245.
1.0E-7 1/yr design speed                     280.       268.       294.

   43   97    3.463E+03 1.0000    142    102    102
Point  7.372E-01  3.257E-01  1.669E+00  5.632E-04  2.488E-04  1.275E-03
Line   4.062E+00  2.686E+00  6.143E+00  1.175E-04  7.773E-05  1.778E-04
Strike Probability, 1/yr                6.808E-04  3.265E-04  1.453E-03
1.0E-5 1/yr design speed                     189.       171.       208.
1.0E-6 1/yr design speed                     243.       227.       260.
1.0E-7 1/yr design speed                     291.       276.       307.

   43   98    3.463E+03 1.0000    107     72     72
Point  9.579E-01  2.927E-01  3.135E+00  5.514E-04  1.685E-04  1.805E-03
Line   3.602E+00  2.123E+00  6.110E+00  7.854E-05  4.630E-05  1.332E-04
Strike Probability, 1/yr                6.300E-04  2.148E-04  1.938E-03
1.0E-5 1/yr design speed                     185.       159.       212.
1.0E-6 1/yr design speed                     239.       217.       263.
1.0E-7 1/yr design speed                     287.       266.       310.

   43   99    3.463E+03 1.0000     71     50     50
Point  1.868E+00  3.572E-01  9.771E+00  7.136E-04  1.364E-04  3.732E-03
Line   4.813E+00  2.206E+00  1.050E+01  6.964E-05  3.191E-05  1.520E-04
Strike Probability, 1/yr                7.832E-04  1.684E-04  3.884E-03
1.0E-5 1/yr design speed                     189.       152.       227.
1.0E-6 1/yr design speed                     242.       210.       276.
1.0E-7 1/yr design speed                     289.       260.       322.
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43	100	3.463E+03	1.0000	52	35	36	
Point	1.405E-01	2.380E-02	8.289E-01	3.929E-05	6.658E-06	2.319E-04	
Line	1.151E+00	6.199E-01	2.137E+00	1.220E-05	6.569E-06	2.264E-05	
Strike Probability, 1/yr				5.149E-05	1.323E-05	2.545E-04	
1.0E-5 1/yr design speed				117.	61.	162.	
1.0E-6 1/yr design speed				184.	153.	219.	
1.0E-7 1/yr design speed				239.	214.	270.	
43	101	3.463E+03	1.0000	45	29	29	
Point	2.279E+00	2.048E-01	2.536E+01	5.518E-04	4.958E-05	6.140E-03	
Line	6.250E+00	2.260E+00	1.728E+01	5.732E-05	2.073E-05	1.585E-04	
Strike Probability, 1/yr				6.091E-04	7.031E-05	6.299E-03	
1.0E-5 1/yr design speed				183.	129.	237.	
1.0E-6 1/yr design speed				237.	193.	285.	
1.0E-7 1/yr design speed				284.	246.	330.	
43	102	3.463E+03	1.0000	15	11	11	
Point	5.617E+00	1.246E-01	2.532E+02	4.533E-04	1.006E-05	2.043E-02	
Line	6.600E+00	1.721E+00	2.531E+01	2.017E-05	5.261E-06	7.736E-05	
Strike Probability, 1/yr				4.735E-04	1.532E-05	2.051E-02	
1.0E-5 1/yr design speed				174.	58.	284.	
1.0E-6 1/yr design speed				237.	134.	340.	
1.0E-7 1/yr design speed				295.	199.	393.	
43	103	3.463E+03	1.0000	39	22	24	
Point	2.388E-01	3.865E-02	1.476E+00	5.011E-05	8.109E-06	3.097E-04	
Line	2.259E+00	9.698E-01	5.261E+00	1.795E-05	7.708E-06	4.181E-05	
Strike Probability, 1/yr				6.806E-05	1.582E-05	3.515E-04	
1.0E-5 1/yr design speed				117.	59.	176.	
1.0E-6 1/yr design speed				187.	137.	241.	
1.0E-7 1/yr design speed				250.	202.	301.	
43	104	3.463E+03	1.0000	31	26	27	
Point	3.824E-01	8.789E-02	1.664E+00	6.378E-05	1.466E-05	2.775E-04	
Line	4.554E+00	2.112E+00	9.823E+00	2.877E-05	1.334E-05	6.206E-05	
Strike Probability, 1/yr				9.255E-05	2.800E-05	3.396E-04	
1.0E-5 1/yr design speed				127.	82.	175.	
1.0E-6 1/yr design speed				196.	153.	241.	
1.0E-7 1/yr design speed				259.	217.	302.	
43	105	3.463E+03	1.0000	27	26	26	
Point	3.654E-01	7.171E-02	1.862E+00	5.308E-05	1.042E-05	2.705E-04	
Line	3.855E+00	1.618E+00	9.183E+00	2.121E-05	8.905E-06	5.053E-05	
Strike Probability, 1/yr				7.429E-05	1.932E-05	3.210E-04	
1.0E-5 1/yr design speed				120.	68.	173.	
1.0E-6 1/yr design speed				189.	142.	239.	
1.0E-7 1/yr design speed				253.	207.	300.	

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   43  106    3.463E+03 1.0000     14     10     10
Point  3.442E-01  3.611E-02  3.281E+00  2.593E-05  2.720E-06  2.471E-04
Line   4.834E+00  1.141E+00  2.049E+01  1.379E-05  3.254E-06  5.846E-05
Strike Probability, 1/yr               3.972E-05  5.974E-06  3.056E-04
1.0E-5 1/yr design speed                     99.        39.       172.
1.0E-6 1/yr design speed                    172.       107.       238.
1.0E-7 1/yr design speed                    237.       176.       299.

   43  107    3.463E+03 1.0000      9      6      6
Point  3.423E-02  9.105E-03  1.287E-01  1.658E-06  4.408E-07  6.232E-06
Line   7.918E-01  3.522E-01  1.780E+00  1.452E-06  6.459E-07  3.265E-06
Strike Probability, 1/yr               3.110E-06  1.087E-06  9.497E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     90.        44.       135.
1.0E-7 1/yr design speed                    165.       127.       207.

   43  108    3.463E+03 1.0000      9      7      7
Point  6.928E-02  1.607E-02  2.987E-01  3.354E-06  7.779E-07  1.446E-05
Line   2.250E+00  8.500E-01  5.953E+00  4.126E-06  1.559E-06  1.092E-05
Strike Probability, 1/yr               7.480E-06  2.337E-06  2.538E-05
1.0E-5 1/yr design speed                     39.        39.        87.
1.0E-6 1/yr design speed                    121.        77.       168.
1.0E-7 1/yr design speed                    192.       150.       236.

   43  109    3.463E+03 1.0000      2      2      2
Point  8.089E-01  8.617E-03  7.593E+01  8.704E-06  9.272E-08  8.171E-04
Line   1.330E+00  6.200E-01  2.855E+00  5.422E-07  2.527E-07  1.164E-06
Strike Probability, 1/yr               9.246E-06  3.454E-07  8.182E-04
1.0E-5 1/yr design speed                     39.        39.       199.
1.0E-6 1/yr design speed                    126.        39.       261.
1.0E-7 1/yr design speed                    193.        90.       318.

   43  110    3.463E+03 1.0000      2      1      1
Point  1.668E+01  0.000E+00  0.000E+00  1.795E-04  0.000E+00  0.000E+00
Line   1.151E+01  0.000E+00  0.000E+00  4.692E-06  0.000E+00  0.000E+00
Strike Probability, 1/yr               1.841E-04  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                    146.        38.        38.
1.0E-6 1/yr design speed                    211.        38.        38.
1.0E-7 1/yr design speed                    271.        38.        38.

   43  111    3.463E+03 1.0000     18     16     16
Point  2.209E-02  6.474E-03  7.539E-02  2.139E-06  6.270E-07  7.301E-06
Line   1.325E+00  5.938E-01  2.957E+00  4.861E-06  2.178E-06  1.085E-05
Strike Probability, 1/yr               7.000E-06  2.805E-06  1.815E-05
1.0E-5 1/yr design speed                     39.        39.        73.
1.0E-6 1/yr design speed                    120.        83.       158.
1.0E-7 1/yr design speed                    192.       157.       229.
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   43  112    3.463E+03 1.0000      20      17      17
Point  4.600E-01  1.094E-01  1.934E+00  4.950E-05  1.177E-05  2.081E-04
Line   3.581E+00  1.926E+00  6.661E+00  1.460E-05  7.848E-06  2.715E-05
Strike Probability, 1/yr                 6.409E-05  1.962E-05  2.353E-04
1.0E-5 1/yr design speed                     114.        68.       164.
1.0E-6 1/yr design speed                     184.       142.       230.
1.0E-7 1/yr design speed                     248.       206.       291.

   43  113    3.463E+03 1.0000       5       4       5
Point  7.135E-03  3.448E-03  1.476E-02  1.919E-07  9.276E-08  3.972E-07
Line   7.071E-01  1.998E-01  2.502E+00  7.205E-07  2.036E-07  2.550E-06
Strike Probability, 1/yr                 9.124E-07  2.964E-07  2.947E-06
1.0E-5 1/yr design speed                      39.        39.        39.
1.0E-6 1/yr design speed                      39.        39.        93.
1.0E-7 1/yr design speed                     129.        85.       175.

   43  114    3.463E+03 1.0000       8       8       8
Point  1.364E-02  3.572E-03  5.209E-02  5.871E-07  1.537E-07  2.242E-06
Line   7.796E-01  3.169E-01  1.918E+00  1.271E-06  5.166E-07  3.127E-06
Strike Probability, 1/yr                 1.858E-06  6.704E-07  5.369E-06
1.0E-5 1/yr design speed                      39.        39.        39.
1.0E-6 1/yr design speed                      70.        39.       116.
1.0E-7 1/yr design speed                     151.       113.       192.

   43  115    3.463E+03 1.0000       1       0       0

   43  116    3.463E+03 1.0000      23      21      21
Point  1.615E-02  5.987E-03  4.358E-02  1.999E-06  7.409E-07  5.392E-06
Line   6.467E-01  3.609E-01  1.159E+00  3.031E-06  1.691E-06  5.433E-06
Strike Probability, 1/yr                 5.030E-06  2.432E-06  1.083E-05
1.0E-5 1/yr design speed                      39.        39.        44.
1.0E-6 1/yr design speed                     108.        78.       140.
1.0E-7 1/yr design speed                     181.       152.       213.

   43  117    3.463E+03 1.0000       6       6       6
Point  2.568E-01  1.680E-02  3.923E+00  8.288E-06  5.424E-07  1.266E-04
Line   3.178E+00  8.231E-01  1.227E+01  3.886E-06  1.006E-06  1.500E-05
Strike Probability, 1/yr                 1.217E-05  1.549E-06  1.416E-04
1.0E-5 1/yr design speed                      49.        39.       148.
1.0E-6 1/yr design speed                     136.        59.       216.
1.0E-7 1/yr design speed                     204.       138.       277.

   43  118    3.463E+03 1.0000       2       2       2
Point  3.486E-03  4.523E-04  2.687E-02  3.751E-08  4.867E-09  2.891E-07
Line   1.502E-01  9.802E-02  2.301E-01  6.121E-08  3.995E-08  9.378E-08
Strike Probability, 1/yr                 9.872E-08  4.482E-08  3.829E-07
1.0E-5 1/yr design speed                      38.        38.        39.
1.0E-6 1/yr design speed                      38.        38.        39.
1.0E-7 1/yr design speed                      38.        38.       103.
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   43  119    3.463E+03 1.0000      2      2      2
Point  1.756E-02  5.282E-03  5.840E-02  1.890E-07  5.683E-08  6.284E-07
Line   3.512E-01  1.954E-01  6.312E-01  1.431E-07  7.966E-08  2.573E-07
Strike Probability, 1/yr                3.321E-07  1.365E-07  8.856E-07
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     39.        39.        39.
1.0E-7 1/yr design speed                     92.        53.       133.

   43  120    3.463E+03 1.0000      2      2      2
Point  4.266E-02  2.785E-02  6.537E-02  4.591E-07  2.996E-07  7.033E-07
Line   1.502E+00  9.802E-01  2.301E+00  6.121E-07  3.995E-07  9.378E-07
Strike Probability, 1/yr                1.071E-06  6.991E-07  1.641E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     43.        39.        67.
1.0E-7 1/yr design speed                    133.       113.       155.

   43  121    3.463E+03 1.0000      0      0      0

   43  122    3.463E+03 1.0000      0      0      0

   43  123    3.463E+03 1.0000      1      1      1
Point  3.267E-02  0.000E+00  0.000E+00  1.758E-07  0.000E+00  0.000E+00
Line   2.300E+00  0.000E+00  0.000E+00  4.687E-07  0.000E+00  0.000E+00
Strike Probability, 1/yr                6.445E-07  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     39.        38.        38.
1.0E-6 1/yr design speed                     39.        38.        38.
1.0E-7 1/yr design speed                    117.        38.        38.

   43  124    6.926E+02 0.2000      0      0      0

   44   66    1.703E+02 0.0500      0      0      0

   44   67    1.703E+03 0.5000      2      2      2
Point  2.484E-01  1.333E-01  4.629E-01  5.436E-06  2.917E-06  1.013E-05
Line   1.402E+01  8.718E+00  2.256E+01  1.163E-05  7.227E-06  1.870E-05
Strike Probability, 1/yr                1.706E-05  1.014E-05  2.883E-05
1.0E-5 1/yr design speed                     77.        41.       101.
1.0E-6 1/yr design speed                    157.       139.       173.
1.0E-7 1/yr design speed                    216.       201.       230.

   44   68    2.384E+03 0.7000      5      5      5
Point  4.155E-02  1.378E-02  1.253E-01  1.624E-06  5.384E-07  4.898E-06
Line   1.012E+00  4.908E-01  2.088E+00  1.499E-06  7.266E-07  3.091E-06
Strike Probability, 1/yr                3.123E-06  1.265E-06  7.990E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                    100.        55.       132.
1.0E-7 1/yr design speed                    170.       144.       195.
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44	69	3.405E+03	1.0000	19	18	18		
Point		1.900E-01	6.780E-02	5.325E-01	1.975E-05	7.049E-06	5.535E-05	
Line		4.016E+00	1.945E+00	8.290E+00	1.581E-05	7.659E-06	3.265E-05	
Strike Probability, 1/yr					3.557E-05	1.471E-05	8.800E-05	
1.0E-5 1/yr design speed					104.	64.	135.	
1.0E-6 1/yr design speed					173.	147.	197.	
1.0E-7 1/yr design speed					228.	207.	249.	
44	70	3.405E+03	1.0000	20	19	19		
Point		9.725E-02	3.012E-02	3.139E-01	1.064E-05	3.296E-06	3.435E-05	
Line		1.123E+00	6.473E-01	1.947E+00	4.653E-06	2.683E-06	8.069E-06	
Strike Probability, 1/yr					1.529E-05	5.980E-06	4.242E-05	
1.0E-5 1/yr design speed					66.	39.	109.	
1.0E-6 1/yr design speed					147.	119.	175.	
1.0E-7 1/yr design speed					206.	183.	229.	
44	71	3.405E+03	1.0000	5	5	5		
Point		2.720E-01	6.277E-03	1.179E+01	7.441E-06	1.717E-07	3.225E-04	
Line		1.544E+00	2.876E-01	8.296E+00	1.600E-06	2.980E-07	8.597E-06	
Strike Probability, 1/yr					9.042E-06	4.697E-07	3.311E-04	
1.0E-5 1/yr design speed					39.	39.	165.	
1.0E-6 1/yr design speed					130.	39.	219.	
1.0E-7 1/yr design speed					191.	113.	267.	
44	72	3.405E+03	1.0000	11	10	10		
Point		2.574E-01	1.024E-01	6.468E-01	1.549E-05	6.165E-06	3.893E-05	
Line		2.827E+00	1.768E+00	4.519E+00	6.445E-06	4.031E-06	1.030E-05	
Strike Probability, 1/yr					2.194E-05	1.020E-05	4.923E-05	
1.0E-5 1/yr design speed					83.	41.	114.	
1.0E-6 1/yr design speed					157.	134.	179.	
1.0E-7 1/yr design speed					214.	195.	233.	
44	73	3.405E+03	1.0000	14	11	11		
Point		1.092E+00	5.045E-02	2.363E+01	8.364E-05	3.865E-06	1.810E-03	
Line		2.811E+00	8.745E-01	9.037E+00	8.157E-06	2.537E-06	2.622E-05	
Strike Probability, 1/yr					9.180E-05	6.402E-06	1.836E-03	
1.0E-5 1/yr design speed					129.	39.	206.	
1.0E-6 1/yr design speed					189.	120.	255.	
1.0E-7 1/yr design speed					240.	184.	300.	
44	74	3.405E+03	1.0000	5	4	4		
Point		3.144E-01	2.602E-02	3.799E+00	8.601E-06	7.118E-07	1.039E-04	
Line		1.828E+00	9.099E-01	3.671E+00	1.894E-06	9.429E-07	3.804E-06	
Strike Probability, 1/yr					1.049E-05	1.655E-06	1.077E-04	
1.0E-5 1/yr design speed					43.	39.	135.	
1.0E-6 1/yr design speed					134.	72.	194.	
1.0E-7 1/yr design speed					194.	151.	244.	

44	75	2.384E+03	0.7000	6	6	6		
Point		6.684E-02	4.172E-03	1.071E+00	3.135E-06	1.956E-07	5.022E-05	
Line		1.839E+00	4.773E-01	7.087E+00	3.267E-06	8.479E-07	1.259E-05	
Strike Probability, 1/yr					6.402E-06	1.044E-06	6.281E-05	
1.0E-5 1/yr design speed					39.	39.	122.	
1.0E-6 1/yr design speed					125.	43.	185.	
1.0E-7 1/yr design speed					189.	142.	238.	
44	76	1.703E+02	0.0500	0	0	0		
44	82	1.703E+02	0.0500	0	0	0		
44	83	2.384E+03	0.7000	35	33	33		
Point		6.564E-01	2.219E-01	1.942E+00	1.796E-04	6.072E-05	5.311E-04	
Line		4.661E+00	2.797E+00	7.770E+00	4.831E-05	2.898E-05	8.052E-05	
Strike Probability, 1/yr					2.279E-04	8.970E-05	6.117E-04	
1.0E-5 1/yr design speed					162.	137.	186.	
1.0E-6 1/yr design speed					220.	200.	241.	
1.0E-7 1/yr design speed					270.	252.	290.	
44	84	3.405E+03	1.0000	45	42	42		
Point		3.595E-01	1.173E-01	1.102E+00	8.852E-05	2.888E-05	2.714E-04	
Line		4.289E+00	2.170E+00	8.477E+00	4.000E-05	2.024E-05	7.906E-05	
Strike Probability, 1/yr					1.285E-04	4.912E-05	3.504E-04	
1.0E-5 1/yr design speed					148.	120.	175.	
1.0E-6 1/yr design speed					210.	187.	232.	
1.0E-7 1/yr design speed					262.	242.	283.	
44	85	3.065E+03	0.9000	34	29	29		
Point		1.734E+00	3.481E-01	8.640E+00	3.585E-04	7.196E-05	1.786E-03	
Line		8.239E+00	3.636E+00	1.867E+01	6.451E-05	2.847E-05	1.461E-04	
Strike Probability, 1/yr					4.230E-04	1.004E-04	1.932E-03	
1.0E-5 1/yr design speed					176.	139.	212.	
1.0E-6 1/yr design speed					231.	201.	264.	
1.0E-7 1/yr design speed					280.	253.	311.	
44	86	6.811E+02	0.2000	3	3	3		
Point		1.820E+00	2.918E-01	1.135E+01	1.494E-04	2.395E-05	9.316E-04	
Line		1.013E+01	7.079E+00	1.450E+01	3.150E-05	2.201E-05	4.508E-05	
Strike Probability, 1/yr					1.809E-04	4.596E-05	9.766E-04	
1.0E-5 1/yr design speed					154.	119.	195.	
1.0E-6 1/yr design speed					213.	187.	248.	
1.0E-7 1/yr design speed					264.	243.	295.	
44	87	1.362E+03	0.4000	36	27	27		
Point		1.247E+00	2.898E-01	5.368E+00	6.142E-04	1.427E-04	2.643E-03	
Line		5.526E+00	2.569E+00	1.189E+01	1.031E-04	4.792E-05	2.217E-04	
Strike Probability, 1/yr					7.172E-04	1.906E-04	2.865E-03	
1.0E-5 1/yr design speed					189.	157.	222.	
1.0E-6 1/yr design speed					243.	215.	272.	
1.0E-7 1/yr design speed					290.	265.	318.	

44	88	3.405E+03	1.0000	71	61	61		
Point		8.064E-01	3.514E-01	1.850E+00	3.133E-04	1.365E-04	7.189E-04	
Line		6.397E+00	3.933E+00	1.040E+01	9.413E-05	5.787E-05	1.531E-04	
Strike Probability, 1/yr					4.074E-04	1.944E-04	8.720E-04	
1.0E-5 1/yr design speed					178.	159.	197.	
1.0E-6 1/yr design speed					234.	217.	251.	
1.0E-7 1/yr design speed					283.	267.	300.	
44	89	3.405E+03	1.0000	67	65	65		
Point		1.517E+00	5.705E-01	4.034E+00	5.561E-04	2.091E-04	1.479E-03	
Line		9.204E+00	5.176E+00	1.637E+01	1.278E-04	7.188E-05	2.273E-04	
Strike Probability, 1/yr					6.839E-04	2.810E-04	1.706E-03	
1.0E-5 1/yr design speed					190.	168.	212.	
1.0E-6 1/yr design speed					243.	224.	264.	
1.0E-7 1/yr design speed					291.	273.	311.	
44	90	3.405E+03	1.0000	65	63	63		
Point		1.398E+00	5.932E-01	3.293E+00	4.970E-04	2.110E-04	1.171E-03	
Line		6.902E+00	4.399E+00	1.083E+01	9.298E-05	5.926E-05	1.459E-04	
Strike Probability, 1/yr					5.900E-04	2.702E-04	1.317E-03	
1.0E-5 1/yr design speed					185.	166.	205.	
1.0E-6 1/yr design speed					239.	222.	257.	
1.0E-7 1/yr design speed					287.	271.	305.	
44	91	3.405E+03	1.0000	81	75	75		
Point		1.532E+00	6.709E-01	3.499E+00	6.790E-04	2.974E-04	1.551E-03	
Line		8.242E+00	5.216E+00	1.302E+01	1.384E-04	8.757E-05	2.186E-04	
Strike Probability, 1/yr					8.174E-04	3.849E-04	1.769E-03	
1.0E-5 1/yr design speed					193.	175.	212.	
1.0E-6 1/yr design speed					247.	230.	264.	
1.0E-7 1/yr design speed					294.	279.	311.	
44	92	3.405E+03	1.0000	90	82	82		
Point		5.394E-01	2.391E-01	1.216E+00	2.656E-04	1.178E-04	5.990E-04	
Line		4.098E+00	2.571E+00	6.532E+00	7.644E-05	4.795E-05	1.218E-04	
Strike Probability, 1/yr					3.420E-04	1.657E-04	7.209E-04	
1.0E-5 1/yr design speed					173.	154.	192.	
1.0E-6 1/yr design speed					230.	213.	247.	
1.0E-7 1/yr design speed					279.	264.	295.	
44	93	3.405E+03	1.0000	134	125	125		
Point		1.296E+00	5.405E-01	3.105E+00	9.499E-04	3.963E-04	2.277E-03	
Line		4.470E+00	2.939E+00	6.799E+00	1.241E-04	8.161E-05	1.888E-04	
Strike Probability, 1/yr					1.074E-03	4.779E-04	2.466E-03	
1.0E-5 1/yr design speed					198.	179.	218.	
1.0E-6 1/yr design speed					250.	233.	269.	
1.0E-7 1/yr design speed					297.	280.	315.	

44	94	3.405E+03	1.0000	104	97	97		
Point	1.397E+00	5.094E-01	3.830E+00	7.948E-04	2.899E-04	2.179E-03		
Line	4.244E+00	2.646E+00	6.808E+00	9.148E-05	5.703E-05	1.467E-04		
Strike Probability, 1/yr				8.863E-04	3.469E-04	2.326E-03		
1.0E-5 1/yr design speed				193.	170.	216.		
1.0E-6 1/yr design speed				245.	225.	267.		
1.0E-7 1/yr design speed				292.	274.	313.		
44	95	3.405E+03	1.0000	88	80	80		
Point	6.475E-01	2.683E-01	1.563E+00	3.118E-04	1.292E-04	7.526E-04		
Line	5.887E+00	3.568E+00	9.714E+00	1.074E-04	6.507E-05	1.772E-04		
Strike Probability, 1/yr				4.192E-04	1.942E-04	9.298E-04		
1.0E-5 1/yr design speed				180.	160.	199.		
1.0E-6 1/yr design speed				235.	219.	253.		
1.0E-7 1/yr design speed				284.	269.	301.		
44	96	3.405E+03	1.0000	78	56	56		
Point	1.929E-01	8.258E-02	4.504E-01	8.230E-05	3.524E-05	1.922E-04		
Line	5.133E+00	2.679E+00	9.836E+00	8.298E-05	4.331E-05	1.590E-04		
Strike Probability, 1/yr				1.653E-04	7.855E-05	3.512E-04		
1.0E-5 1/yr design speed				161.	138.	182.		
1.0E-6 1/yr design speed				222.	203.	240.		
1.0E-7 1/yr design speed				273.	256.	290.		
44	97	3.405E+03	1.0000	121	84	84		
Point	3.798E-01	1.427E-01	1.010E+00	2.514E-04	9.451E-05	6.689E-04		
Line	3.073E+00	1.827E+00	5.170E+00	7.706E-05	4.581E-05	1.296E-04		
Strike Probability, 1/yr				3.285E-04	1.403E-04	7.986E-04		
1.0E-5 1/yr design speed				172.	151.	194.		
1.0E-6 1/yr design speed				229.	211.	249.		
1.0E-7 1/yr design speed				279.	262.	297.		
44	98	3.405E+03	1.0000	62	37	37		
Point	9.722E-01	1.950E-01	4.849E+00	3.298E-04	6.613E-05	1.645E-03		
Line	3.976E+00	1.910E+00	8.274E+00	5.109E-05	2.455E-05	1.063E-04		
Strike Probability, 1/yr				3.809E-04	9.068E-05	1.751E-03		
1.0E-5 1/yr design speed				173.	136.	209.		
1.0E-6 1/yr design speed				228.	198.	261.		
1.0E-7 1/yr design speed				277.	251.	308.		
44	99	3.405E+03	1.0000	38	23	23		
Point	4.172E-02	1.191E-02	1.461E-01	8.674E-06	2.477E-06	3.037E-05		
Line	7.231E-01	4.137E-01	1.264E+00	5.695E-06	3.258E-06	9.955E-06		
Strike Probability, 1/yr				1.437E-05	5.735E-06	4.033E-05		
1.0E-5 1/yr design speed				66.	39.	109.		
1.0E-6 1/yr design speed				154.	128.	180.		
1.0E-7 1/yr design speed				215.	196.	236.		

44	100	3.405E+03	1.0000	38	22	22	
Point	1.370E-01	2.237E-02	8.386E-01	2.848E-05	4.650E-06	1.744E-04	
Line	1.489E+00	6.326E-01	3.503E+00	1.172E-05	4.982E-06	2.759E-05	
Strike Probability, 1/yr				4.020E-05	9.633E-06	2.020E-04	
1.0E-5 1/yr design speed				110.	39.	157.	
1.0E-6 1/yr design speed				180.	144.	216.	
1.0E-7 1/yr design speed				236.	207.	268.	
44	101	3.405E+03	1.0000	31	18	18	
Point	9.995E-02	2.412E-02	4.141E-01	1.695E-05	4.092E-06	7.024E-05	
Line	1.621E+00	8.613E-01	3.049E+00	1.041E-05	5.534E-06	1.959E-05	
Strike Probability, 1/yr				2.737E-05	9.626E-06	8.983E-05	
1.0E-5 1/yr design speed				97.	39.	135.	
1.0E-6 1/yr design speed				172.	146.	200.	
1.0E-7 1/yr design speed				230.	209.	253.	
44	102	3.405E+03	1.0000	31	19	19	
Point	4.174E-02	6.913E-03	2.520E-01	7.080E-06	1.172E-06	4.275E-05	
Line	9.510E-01	4.295E-01	2.106E+00	6.110E-06	2.759E-06	1.353E-05	
Strike Probability, 1/yr				1.319E-05	3.932E-06	5.628E-05	
1.0E-5 1/yr design speed				53.	39.	117.	
1.0E-6 1/yr design speed				139.	95.	191.	
1.0E-7 1/yr design speed				208.	166.	256.	
44	103	3.405E+03	1.0000	56	36	36	
Point	4.819E-01	1.255E-01	1.850E+00	1.477E-04	3.846E-05	5.669E-04	
Line	3.226E+00	1.620E+00	6.421E+00	3.744E-05	1.881E-05	7.452E-05	
Strike Probability, 1/yr				1.851E-04	5.727E-05	6.415E-04	
1.0E-5 1/yr design speed				148.	104.	193.	
1.0E-6 1/yr design speed				214.	172.	257.	
1.0E-7 1/yr design speed				275.	233.	316.	
44	104	3.405E+03	1.0000	35	29	29	
Point	9.902E-01	1.465E-01	6.692E+00	1.896E-04	2.806E-05	1.282E-03	
Line	2.840E+00	1.426E+00	5.657E+00	2.060E-05	1.034E-05	4.103E-05	
Strike Probability, 1/yr				2.102E-04	3.840E-05	1.323E-03	
1.0E-5 1/yr design speed				151.	91.	213.	
1.0E-6 1/yr design speed				216.	160.	274.	
1.0E-7 1/yr design speed				276.	222.	331.	
44	105	3.405E+03	1.0000	57	39	39	
Point	1.434E-01	5.349E-02	3.846E-01	4.473E-05	1.668E-05	1.199E-04	
Line	2.461E+00	1.445E+00	4.193E+00	2.908E-05	1.707E-05	4.953E-05	
Strike Probability, 1/yr				7.381E-05	3.375E-05	1.695E-04	
1.0E-5 1/yr design speed				120.	88.	154.	
1.0E-6 1/yr design speed				190.	159.	223.	
1.0E-7 1/yr design speed				254.	222.	286.	

44	106	3.405E+03	1.0000	13	8	8	
Point	4.093E-02	8.740E-03	1.917E-01	2.911E-06	6.217E-07	1.363E-05	
Line	7.751E-01	3.441E-01	1.746E+00	2.088E-06	9.272E-07	4.704E-06	
Strike Probability, 1/yr				5.000E-06	1.549E-06	1.834E-05	
1.0E-5 1/yr design speed				39.	39.	74.	
1.0E-6 1/yr design speed				107.	59.	157.	
1.0E-7 1/yr design speed				179.	137.	225.	
44	107	3.405E+03	1.0000	14	10	10	
Point	1.157E-01	1.011E-02	1.325E+00	8.866E-06	7.745E-07	1.015E-04	
Line	1.397E+00	4.256E-01	4.587E+00	4.054E-06	1.235E-06	1.331E-05	
Strike Probability, 1/yr				1.292E-05	2.009E-06	1.148E-04	
1.0E-5 1/yr design speed				52.	39.	141.	
1.0E-6 1/yr design speed				137.	70.	210.	
1.0E-7 1/yr design speed				205.	145.	272.	
44	108	3.405E+03	1.0000	23	18	18	
Point	4.399E-02	1.534E-02	1.261E-01	5.535E-06	1.931E-06	1.587E-05	
Line	7.705E-01	4.689E-01	1.266E+00	3.673E-06	2.235E-06	6.035E-06	
Strike Probability, 1/yr				9.208E-06	4.166E-06	2.191E-05	
1.0E-5 1/yr design speed				39.	39.	81.	
1.0E-6 1/yr design speed				127.	96.	162.	
1.0E-7 1/yr design speed				197.	165.	230.	
44	109	3.405E+03	1.0000	2	2	2	
Point	1.019E+03	3.966E-06	2.616E+11	1.115E-02	4.340E-11	2.863E+06	
Line	7.601E+00	7.443E-01	7.762E+01	3.151E-06	3.085E-07	3.217E-05	
Strike Probability, 1/yr				1.115E-02	3.086E-07	2.863E+06	
1.0E-5 1/yr design speed				258.	39.	0.	
1.0E-6 1/yr design speed				315.	39.	0.	
1.0E-7 1/yr design speed				369.	88.	0.	
44	110	3.405E+03	1.0000	0	0	0	
44	111	3.405E+03	1.0000	0	0	0	
44	112	3.405E+03	1.0000	5	4	4	
Point	1.110E-02	9.313E-04	1.323E-01	3.036E-07	2.548E-08	3.618E-06	
Line	3.291E-01	1.241E-01	8.730E-01	3.411E-07	1.286E-07	9.046E-07	
Strike Probability, 1/yr				6.447E-07	1.541E-07	4.523E-06	
1.0E-5 1/yr design speed				39.	39.	39.	
1.0E-6 1/yr design speed				39.	39.	109.	
1.0E-7 1/yr design speed				116.	59.	184.	
44	113	3.405E+03	1.0000	1	1	1	
Point	3.977E-04	0.000E+00	0.000E+00	2.176E-09	0.000E+00	0.000E+00	
Line	1.000E-01	0.000E+00	0.000E+00	2.073E-08	0.000E+00	0.000E+00	
Strike Probability, 1/yr				2.290E-08	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed				38.	38.	38.	
1.0E-6 1/yr design speed				38.	38.	38.	
1.0E-7 1/yr design speed				38.	38.	38.	
44	114	3.405E+03	1.0000	0	0	0	

44	115	3.405E+03	1.0000	0	0	0		
44	116	3.405E+03	1.0000	7	7	7		
Point		5.767E-02	1.183E-02	2.811E-01	2.209E-06	4.533E-07	1.076E-05	
Line		3.232E+00	8.554E-01	1.221E+01	4.689E-06	1.241E-06	1.772E-05	
Strike Probability, 1/yr					6.898E-06	1.694E-06	2.848E-05	
1.0E-5 1/yr design speed					39.	39.	92.	
1.0E-6 1/yr design speed					119.	63.	173.	
1.0E-7 1/yr design speed					191.	141.	242.	
44	117	3.405E+03	1.0000	4	2	2		
Point		7.802E-03	3.384E-04	1.799E-01	1.707E-07	7.406E-09	3.937E-06	
Line		6.135E-01	7.960E-02	4.729E+00	5.086E-07	6.599E-08	3.920E-06	
Strike Probability, 1/yr					6.794E-07	7.340E-08	7.857E-06	
1.0E-5 1/yr design speed					39.	38.	39.	
1.0E-6 1/yr design speed					39.	38.	130.	
1.0E-7 1/yr design speed					119.	38.	203.	
44	118	3.405E+03	1.0000	0	0	0		
44	119	3.405E+03	1.0000	0	0	0		
44	120	3.405E+03	1.0000	0	0	0		
44	121	3.405E+03	1.0000	4	4	4		
Point		1.843E-02	1.327E-03	2.561E-01	4.034E-07	2.903E-08	5.606E-06	
Line		6.135E-01	1.673E-01	2.250E+00	5.086E-07	1.387E-07	1.866E-06	
Strike Probability, 1/yr					9.120E-07	1.677E-07	7.471E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					39.	39.	127.	
1.0E-7 1/yr design speed					128.	63.	199.	
44	122	3.405E+03	1.0000	5	5	5		
Point		1.273E-02	3.622E-03	4.472E-02	3.482E-07	9.909E-08	1.223E-06	
Line		7.514E-01	3.491E-01	1.617E+00	7.787E-07	3.618E-07	1.676E-06	
Strike Probability, 1/yr					1.127E-06	4.609E-07	2.899E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					46.	39.	93.	
1.0E-7 1/yr design speed					135.	101.	173.	
44	123	3.405E+03	1.0000	9	7	7		
Point		1.357E-02	5.279E-03	3.489E-02	6.683E-07	2.600E-07	1.718E-06	
Line		5.403E-01	3.046E-01	9.583E-01	1.008E-06	5.682E-07	1.788E-06	
Strike Probability, 1/yr					1.676E-06	8.282E-07	3.506E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					65.	39.	100.	
1.0E-7 1/yr design speed					148.	119.	179.	

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   44  124    3.405E+02 0.1000      2      2      2
Point  1.440E-03  1.224E-04  1.694E-02  1.576E-07  1.339E-08  1.853E-06
Line   1.000E-01  0.000E+00  0.000E+00  4.145E-07  0.000E+00  0.000E+00
Strike Probability, 1/yr                 5.721E-07  1.339E-08  1.853E-06
1.0E-5 1/yr design speed                      39.        38.        39.
1.0E-6 1/yr design speed                      39.        38.        74.
1.0E-7 1/yr design speed                     113.        38.       156.

   45   67    1.339E+03 0.4000      2      2      2
Point  2.445E-01  3.517E-02  1.700E+00  6.808E-06  9.792E-07  4.733E-05
Line   6.152E+00  4.615E+00  8.200E+00  6.487E-06  4.866E-06  8.647E-06
Strike Probability, 1/yr                 1.329E-05  5.846E-06  5.598E-05
1.0E-5 1/yr design speed                      59.        39.       117.
1.0E-6 1/yr design speed                     146.       124.       181.
1.0E-7 1/yr design speed                     206.       189.       234.

   45   68    3.346E+03 1.0000      6      6      6
Point  2.508E-01  2.103E-02  2.991E+00  8.379E-06  7.026E-07  9.993E-05
Line   6.212E+00  1.321E+00  2.921E+01  7.861E-06  1.672E-06  3.696E-05
Strike Probability, 1/yr                 1.624E-05  2.375E-06  1.369E-04
1.0E-5 1/yr design speed                      72.        39.       146.
1.0E-6 1/yr design speed                     152.        89.       205.
1.0E-7 1/yr design speed                     211.       163.       256.

   45   69    3.346E+03 1.0000      7      5      5
Point  1.135E-02  2.834E-03  4.544E-02  4.423E-07  1.105E-07  1.771E-06
Line   2.980E-01  1.417E-01  6.268E-01  4.399E-07  2.091E-07  9.254E-07
Strike Probability, 1/yr                 8.822E-07  3.196E-07  2.696E-06
1.0E-5 1/yr design speed                      39.        39.        39.
1.0E-6 1/yr design speed                      39.        39.        94.
1.0E-7 1/yr design speed                     134.       101.       166.

   45   70    2.343E+03 0.7000      1      1      1
Point  3.409E-03  0.000E+00  0.000E+00  2.712E-08  0.000E+00  0.000E+00
Line   3.000E-01  0.000E+00  0.000E+00  9.039E-08  0.000E+00  0.000E+00
Strike Probability, 1/yr                 1.175E-07  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                      39.        38.        38.
1.0E-6 1/yr design speed                      39.        38.        38.
1.0E-7 1/yr design speed                      52.        38.        38.

   45   71    3.346E+02 0.1000      2      1      1
Point  3.750E-03  0.000E+00  0.000E+00  4.176E-07  0.000E+00  0.000E+00
Line   2.000E-01  0.000E+00  0.000E+00  8.436E-07  0.000E+00  0.000E+00
Strike Probability, 1/yr                 1.261E-06  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                      39.        38.        38.
1.0E-6 1/yr design speed                      56.        38.        38.
1.0E-7 1/yr design speed                     148.        38.        38.
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45	72	3.346E+03	1.0000	1	1	1			
Point		8.523E-01	0.000E+00	0.000E+00	4.745E-06	0.000E+00	0.000E+00		
Line		3.000E+00	0.000E+00	0.000E+00	6.327E-07	0.000E+00	0.000E+00		
Strike	Probability, 1/yr				5.378E-06	0.000E+00	0.000E+00		
1.0E-5	1/yr design speed				39.	38.	38.		
1.0E-6	1/yr design speed				113.	38.	38.		
1.0E-7	1/yr design speed				177.	38.	38.		
45	83	6.693E+02	0.2000	13	10	10			
Point		6.889E-01	3.400E-02	1.396E+01	2.493E-04	1.231E-05	5.051E-03		
Line		3.926E+00	9.403E-01	1.639E+01	5.382E-05	1.289E-05	2.247E-04		
Strike	Probability, 1/yr				3.031E-04	2.520E-05	5.276E-03		
1.0E-5	1/yr design speed				163.	89.	230.		
1.0E-6	1/yr design speed				219.	162.	277.		
1.0E-7	1/yr design speed				268.	219.	320.		
45	84	2.343E+03	0.7000	17	15	15			
Point		8.927E-02	4.826E-02	1.651E-01	1.207E-05	6.525E-06	2.233E-05		
Line		2.543E+00	1.710E+00	3.781E+00	1.302E-05	8.756E-06	1.937E-05		
Strike	Probability, 1/yr				2.509E-05	1.528E-05	4.170E-05		
1.0E-5	1/yr design speed				91.	67.	112.		
1.0E-6	1/yr design speed				165.	149.	180.		
1.0E-7	1/yr design speed				222.	208.	235.		
45	85	3.346E+02	0.1000	7	7	7			
Point		3.785E-01	3.013E-02	4.756E+00	1.475E-04	1.174E-05	1.854E-03		
Line		4.324E+00	7.655E-01	2.442E+01	6.384E-05	1.130E-05	3.606E-04		
Strike	Probability, 1/yr				2.114E-04	2.304E-05	2.214E-03		
1.0E-5	1/yr design speed				156.	86.	214.		
1.0E-6	1/yr design speed				213.	159.	263.		
1.0E-7	1/yr design speed				264.	217.	308.		
45	86	3.346E+02	0.1000	5	5	5			
Point		9.376E-01	2.254E-02	3.901E+01	2.610E-04	6.275E-06	1.086E-02		
Line		8.815E+00	8.576E-01	9.061E+01	9.296E-05	9.044E-06	9.555E-04		
Strike	Probability, 1/yr				3.540E-04	1.532E-05	1.181E-02		
1.0E-5	1/yr design speed				169.	67.	248.		
1.0E-6	1/yr design speed				224.	150.	294.		
1.0E-7	1/yr design speed				273.	209.	336.		
45	87	2.008E+03	0.6000	30	28	28			
Point		1.914E+00	4.466E-01	8.202E+00	5.328E-04	1.243E-04	2.283E-03		
Line		8.974E+00	4.298E+00	1.873E+01	9.463E-05	4.533E-05	1.976E-04		
Strike	Probability, 1/yr				6.274E-04	1.697E-04	2.481E-03		
1.0E-5	1/yr design speed				181.	147.	214.		
1.0E-6	1/yr design speed				234.	205.	263.		
1.0E-7	1/yr design speed				282.	256.	308.		

45	88	3.346E+03	1.0000	17	16	16		
Point		1.400E+00	5.258E-01	3.729E+00	1.326E-04	4.977E-05	3.530E-04	
Line		8.910E+00	4.985E+00	1.593E+01	3.195E-05	1.787E-05	5.710E-05	
Strike Probability, 1/yr					1.645E-04	6.765E-05	4.101E-04	
1.0E-5 1/yr design speed					147.	120.	173.	
1.0E-6 1/yr design speed					205.	183.	227.	
1.0E-7 1/yr design speed					256.	236.	275.	
45	89	3.346E+03	1.0000	55	49	49		
Point		1.286E+00	3.743E-01	4.415E+00	3.937E-04	1.146E-04	1.352E-03	
Line		6.060E+00	3.259E+00	1.127E+01	7.029E-05	3.780E-05	1.307E-04	
Strike Probability, 1/yr					4.640E-04	1.524E-04	1.483E-03	
1.0E-5 1/yr design speed					174.	143.	203.	
1.0E-6 1/yr design speed					228.	202.	253.	
1.0E-7 1/yr design speed					276.	253.	298.	
45	90	3.346E+03	1.0000	42	40	40		
Point		2.943E+00	8.682E-01	9.977E+00	6.883E-04	2.030E-04	2.333E-03	
Line		7.366E+00	4.256E+00	1.275E+01	6.525E-05	3.770E-05	1.129E-04	
Strike Probability, 1/yr					7.535E-04	2.407E-04	2.446E-03	
1.0E-5 1/yr design speed					188.	160.	217.	
1.0E-6 1/yr design speed					241.	217.	267.	
1.0E-7 1/yr design speed					288.	266.	314.	
45	91	3.346E+03	1.0000	47	44	44		
Point		2.079E+00	7.280E-01	5.938E+00	5.441E-04	1.905E-04	1.554E-03	
Line		8.581E+00	4.853E+00	1.517E+01	8.506E-05	4.811E-05	1.504E-04	
Strike Probability, 1/yr					6.292E-04	2.386E-04	1.704E-03	
1.0E-5 1/yr design speed					186.	162.	210.	
1.0E-6 1/yr design speed					239.	218.	262.	
1.0E-7 1/yr design speed					287.	268.	309.	
45	92	3.346E+03	1.0000	71	63	63		
Point		6.340E-01	2.304E-01	1.745E+00	2.506E-04	9.109E-05	6.897E-04	
Line		4.909E+00	2.759E+00	8.737E+00	7.351E-05	4.131E-05	1.308E-04	
Strike Probability, 1/yr					3.242E-04	1.324E-04	8.205E-04	
1.0E-5 1/yr design speed					172.	149.	195.	
1.0E-6 1/yr design speed					228.	209.	249.	
1.0E-7 1/yr design speed					278.	260.	298.	
45	93	3.346E+03	1.0000	71	65	67		
Point		3.171E+00	8.816E-01	1.140E+01	1.253E-03	3.485E-04	4.508E-03	
Line		4.357E+00	2.852E+00	6.658E+00	6.525E-05	4.270E-05	9.970E-05	
Strike Probability, 1/yr					1.319E-03	3.912E-04	4.607E-03	
1.0E-5 1/yr design speed					200.	171.	230.	
1.0E-6 1/yr design speed					251.	225.	279.	
1.0E-7 1/yr design speed					297.	273.	324.	

45	94	3.346E+03	1.0000	87	76	76	
Point	3.817E-01	1.477E-01	9.865E-01	1.849E-04	7.156E-05	4.778E-04	
Line	2.573E+00	1.601E+00	4.135E+00	4.721E-05	2.938E-05	7.586E-05	
Strike Probability, 1/yr				2.321E-04	1.009E-04	5.537E-04	
1.0E-5 1/yr design speed				162.	140.	184.	
1.0E-6 1/yr design speed				220.	202.	239.	
1.0E-7 1/yr design speed				270.	254.	289.	
45	95	3.346E+03	1.0000	85	80	80	
Point	6.199E-01	2.343E-01	1.640E+00	2.934E-04	1.109E-04	7.763E-04	
Line	4.380E+00	2.660E+00	7.213E+00	7.853E-05	4.769E-05	1.293E-04	
Strike Probability, 1/yr				3.719E-04	1.586E-04	9.056E-04	
1.0E-5 1/yr design speed				175.	153.	197.	
1.0E-6 1/yr design speed				231.	213.	251.	
1.0E-7 1/yr design speed				280.	263.	299.	
45	96	3.346E+03	1.0000	53	39	39	
Point	1.468E-01	5.843E-02	3.690E-01	4.333E-05	1.724E-05	1.089E-04	
Line	2.838E+00	1.702E+00	4.732E+00	3.172E-05	1.902E-05	5.289E-05	
Strike Probability, 1/yr				7.505E-05	3.626E-05	1.618E-04	
1.0E-5 1/yr design speed				134.	111.	156.	
1.0E-6 1/yr design speed				200.	183.	218.	
1.0E-7 1/yr design speed				254.	239.	270.	
45	97	3.346E+03	1.0000	57	39	39	
Point	1.012E-01	3.260E-02	3.140E-01	3.211E-05	1.035E-05	9.966E-05	
Line	1.558E+00	9.369E-01	2.589E+00	1.872E-05	1.126E-05	3.113E-05	
Strike Probability, 1/yr				5.083E-05	2.161E-05	1.308E-04	
1.0E-5 1/yr design speed				120.	89.	148.	
1.0E-6 1/yr design speed				188.	168.	209.	
1.0E-7 1/yr design speed				244.	227.	262.	
45	98	3.346E+03	1.0000	101	56	56	
Point	8.453E-01	1.995E-01	3.582E+00	4.754E-04	1.122E-04	2.014E-03	
Line	3.288E+00	1.852E+00	5.838E+00	7.003E-05	3.944E-05	1.243E-04	
Strike Probability, 1/yr				5.454E-04	1.516E-04	2.139E-03	
1.0E-5 1/yr design speed				182.	151.	214.	
1.0E-6 1/yr design speed				236.	210.	265.	
1.0E-7 1/yr design speed				284.	261.	312.	
45	99	3.346E+03	1.0000	48	32	32	
Point	5.611E-01	1.116E-01	2.821E+00	1.500E-04	2.983E-05	7.539E-04	
Line	4.286E+00	1.882E+00	9.759E+00	4.339E-05	1.905E-05	9.880E-05	
Strike Probability, 1/yr				1.933E-04	4.888E-05	8.527E-04	
1.0E-5 1/yr design speed				157.	119.	194.	
1.0E-6 1/yr design speed				216.	187.	248.	
1.0E-7 1/yr design speed				267.	241.	296.	

45	100	3.346E+03	1.0000	44	24	24		
Point		8.811E-01	1.331E-01	5.834E+00	2.159E-04	3.260E-05	1.429E-03	
Line		3.881E+00	1.836E+00	8.204E+00	3.601E-05	1.703E-05	7.613E-05	
Strike Probability, 1/yr					2.519E-04	4.963E-05	1.505E-03	
1.0E-5 1/yr design speed					162.	118.	205.	
1.0E-6 1/yr design speed					219.	186.	257.	
1.0E-7 1/yr design speed					269.	240.	304.	
45	101	3.346E+03	1.0000	22	10	10		
Point		3.549E-01	1.213E-02	1.038E+01	4.348E-05	1.486E-06	1.272E-03	
Line		3.785E+00	7.295E-01	1.964E+01	1.756E-05	3.385E-06	9.113E-05	
Strike Probability, 1/yr					6.104E-05	4.871E-06	1.363E-03	
1.0E-5 1/yr design speed					125.	39.	204.	
1.0E-6 1/yr design speed					190.	126.	256.	
1.0E-7 1/yr design speed					245.	195.	303.	
45	102	3.346E+03	1.0000	37	14	14		
Point		1.072E-01	2.533E-02	4.535E-01	2.208E-05	5.219E-06	9.342E-05	
Line		2.070E+00	8.653E-01	4.953E+00	1.616E-05	6.753E-06	3.865E-05	
Strike Probability, 1/yr					3.824E-05	1.197E-05	1.321E-04	
1.0E-5 1/yr design speed					98.	48.	146.	
1.0E-6 1/yr design speed					171.	129.	216.	
1.0E-7 1/yr design speed					237.	195.	280.	
45	103	3.346E+03	1.0000	12	8	8		
Point		1.779E-01	2.365E-02	1.338E+00	1.188E-05	1.580E-06	8.938E-05	
Line		1.999E+00	1.044E+00	3.827E+00	5.059E-06	2.642E-06	9.685E-06	
Strike Probability, 1/yr					1.694E-05	4.222E-06	9.907E-05	
1.0E-5 1/yr design speed					65.	39.	136.	
1.0E-6 1/yr design speed					146.	97.	206.	
1.0E-7 1/yr design speed					213.	167.	268.	
45	104	3.346E+03	1.0000	9	6	6		
Point		1.638E-02	1.511E-03	1.775E-01	8.208E-07	7.573E-08	8.896E-06	
Line		8.843E-01	2.126E-01	3.679E+00	1.679E-06	4.035E-07	6.983E-06	
Strike Probability, 1/yr					2.499E-06	4.792E-07	1.588E-05	
1.0E-5 1/yr design speed					39.	39.	66.	
1.0E-6 1/yr design speed					82.	39.	153.	
1.0E-7 1/yr design speed					160.	102.	223.	
45	105	3.346E+03	1.0000	12	11	11		
Point		6.044E-02	8.235E-03	4.436E-01	4.039E-06	5.502E-07	2.964E-05	
Line		1.531E+00	5.468E-01	4.287E+00	3.875E-06	1.384E-06	1.085E-05	
Strike Probability, 1/yr					7.913E-06	1.934E-06	4.049E-05	
1.0E-5 1/yr design speed					39.	39.	105.	
1.0E-6 1/yr design speed					123.	69.	181.	
1.0E-7 1/yr design speed					193.	145.	247.	

45	106	3.346E+03	1.0000	4	4	4	
Point	1.508E-02	6.880E-04	3.304E-01	3.358E-07	1.532E-08	7.358E-06	
Line	5.359E-01	1.277E-01	2.249E+00	4.521E-07	1.078E-07	1.897E-06	
Strike Probability, 1/yr				7.879E-07	1.231E-07	9.255E-06	
1.0E-5 1/yr design speed				39.	39.	39.	
1.0E-6 1/yr design speed				39.	39.	134.	
1.0E-7 1/yr design speed				123.	49.	205.	
45	107	3.346E+03	1.0000	8	5	5	
Point	9.731E-03	1.390E-03	6.814E-02	4.334E-07	6.189E-08	3.035E-06	
Line	1.083E+00	2.153E-01	5.448E+00	1.827E-06	3.632E-07	9.192E-06	
Strike Probability, 1/yr				2.261E-06	4.251E-07	1.223E-05	
1.0E-5 1/yr design speed				39.	39.	51.	
1.0E-6 1/yr design speed				79.	39.	146.	
1.0E-7 1/yr design speed				158.	98.	219.	
45	108	3.346E+03	1.0000	17	13	13	
Point	5.612E-02	8.994E-03	3.501E-01	5.312E-06	8.513E-07	3.314E-05	
Line	1.415E+00	5.508E-01	3.633E+00	5.072E-06	1.975E-06	1.303E-05	
Strike Probability, 1/yr				1.038E-05	2.826E-06	4.617E-05	
1.0E-5 1/yr design speed				42.	39.	110.	
1.0E-6 1/yr design speed				132.	83.	185.	
1.0E-7 1/yr design speed				201.	156.	251.	
45	109	3.346E+03	1.0000	1	1	1	
Point	9.659E-04	0.000E+00	0.000E+00	5.378E-09	0.000E+00	0.000E+00	
Line	1.000E-01	0.000E+00	0.000E+00	2.109E-08	0.000E+00	0.000E+00	
Strike Probability, 1/yr				2.647E-08	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed				38.	38.	38.	
1.0E-6 1/yr design speed				38.	38.	38.	
1.0E-7 1/yr design speed				38.	38.	38.	
45	110	3.346E+03	1.0000	1	1	1	
Point	2.812E-02	0.000E+00	0.000E+00	1.566E-07	0.000E+00	0.000E+00	
Line	1.500E+00	0.000E+00	0.000E+00	3.164E-07	0.000E+00	0.000E+00	
Strike Probability, 1/yr				4.729E-07	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed				39.	38.	38.	
1.0E-6 1/yr design speed				39.	38.	38.	
1.0E-7 1/yr design speed				106.	38.	38.	
45	111	3.346E+03	1.0000	6	6	6	
Point	2.325E-03	9.420E-04	5.741E-03	7.768E-08	3.147E-08	1.918E-07	
Line	2.675E-01	1.226E-01	5.834E-01	3.385E-07	1.552E-07	7.382E-07	
Strike Probability, 1/yr				4.162E-07	1.867E-07	9.300E-07	
1.0E-5 1/yr design speed				39.	39.	39.	
1.0E-6 1/yr design speed				39.	39.	39.	
1.0E-7 1/yr design speed				102.	68.	136.	

45	112	3.346E+03	1.0000	4	2	2	
Point	1.173E-02	2.503E-03	5.494E-02	2.612E-07	5.575E-08	1.224E-06	
Line	1.373E+00	5.956E-02	3.166E+01	1.158E-06	5.024E-08	2.671E-05	
Strike Probability, 1/yr				1.420E-06	1.060E-07	2.793E-05	
1.0E-5 1/yr design speed				39.	39.	91.	
1.0E-6 1/yr design speed				57.	39.	174.	
1.0E-7 1/yr design speed				144.	42.	246.	
45	113	3.346E+03	1.0000	7	5	5	
Point	1.313E-02	2.053E-03	8.402E-02	5.119E-07	8.001E-08	3.275E-06	
Line	7.192E-01	2.201E-01	2.349E+00	1.062E-06	3.250E-07	3.468E-06	
Strike Probability, 1/yr				1.574E-06	4.050E-07	6.743E-06	
1.0E-5 1/yr design speed				39.	39.	39.	
1.0E-6 1/yr design speed				62.	39.	124.	
1.0E-7 1/yr design speed				146.	96.	199.	
45	114	3.346E+03	1.0000	0	0	0	
45	115	3.346E+03	1.0000	0	0	0	
45	116	3.346E+03	1.0000	3	3	3	
Point	3.259E-02	1.437E-02	7.391E-02	5.443E-07	2.400E-07	1.235E-06	
Line	6.645E-01	4.813E-01	9.174E-01	4.204E-07	3.045E-07	5.805E-07	
Strike Probability, 1/yr				9.648E-07	5.445E-07	1.815E-06	
1.0E-5 1/yr design speed				39.	39.	39.	
1.0E-6 1/yr design speed				39.	39.	73.	
1.0E-7 1/yr design speed				129.	105.	157.	
45	117	3.346E+03	1.0000	1	1	1	
Point	4.800E+00	0.000E+00	0.000E+00	2.673E-05	0.000E+00	0.000E+00	
Line	9.600E+00	0.000E+00	0.000E+00	2.025E-06	0.000E+00	0.000E+00	
Strike Probability, 1/yr				2.875E-05	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed				86.	38.	38.	
1.0E-6 1/yr design speed				160.	38.	38.	
1.0E-7 1/yr design speed				224.	38.	38.	
45	118	3.346E+03	1.0000	4	4	4	
Point	9.821E-03	8.739E-04	1.104E-01	2.187E-07	1.946E-08	2.458E-06	
Line	2.531E+00	1.260E-01	5.082E+01	2.135E-06	1.063E-07	4.287E-05	
Strike Probability, 1/yr				2.354E-06	1.258E-07	4.533E-05	
1.0E-5 1/yr design speed				39.	39.	110.	
1.0E-6 1/yr design speed				81.	39.	190.	
1.0E-7 1/yr design speed				160.	50.	260.	
45	119	3.346E+03	1.0000	2	2	2	
Point	3.849E+00	3.388E-04	4.372E+04	4.286E-05	3.772E-09	4.869E-01	
Line	7.601E+00	7.443E-01	7.761E+01	3.206E-06	3.140E-07	3.274E-05	
Strike Probability, 1/yr				4.606E-05	3.177E-07	4.869E-01	
1.0E-5 1/yr design speed				103.	39.	360.	
1.0E-6 1/yr design speed				174.	39.	412.	
1.0E-7 1/yr design speed				236.	89.	0.	

45	120	3.346E+03	1.0000	1	1	1		
Point		4.602E-01	0.000E+00	0.000E+00	2.563E-06	0.000E+00	0.000E+00	
Line		4.050E+00	0.000E+00	0.000E+00	8.542E-07	0.000E+00	0.000E+00	
Strike Probability, 1/yr					3.417E-06	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					39.	38.	38.	
1.0E-6 1/yr design speed					93.	38.	38.	
1.0E-7 1/yr design speed					166.	38.	38.	
45	121	3.346E+03	1.0000	0	0	0		
45	122	3.346E+03	1.0000	19	18	18		
Point		4.626E-02	1.176E-02	1.820E-01	4.894E-06	1.244E-06	1.925E-05	
Line		9.032E-01	4.327E-01	1.885E+00	3.619E-06	1.734E-06	7.554E-06	
Strike Probability, 1/yr					8.513E-06	2.978E-06	2.680E-05	
1.0E-5 1/yr design speed					39.	39.	89.	
1.0E-6 1/yr design speed					125.	84.	169.	
1.0E-7 1/yr design speed					195.	156.	236.	
45	123	3.346E+03	1.0000	10	10	10		
Point		5.966E-03	2.835E-03	1.256E-02	3.322E-07	1.578E-07	6.991E-07	
Line		5.149E-01	3.337E-01	7.944E-01	1.086E-06	7.038E-07	1.675E-06	
Strike Probability, 1/yr					1.418E-06	8.617E-07	2.374E-06	
1.0E-5 1/yr design speed					39.	39.	39.	
1.0E-6 1/yr design speed					57.	39.	84.	
1.0E-7 1/yr design speed					143.	121.	167.	
45	124	1.673E+02	0.0500	0	0	0		
46	67	6.573E+02	0.2000	5	5	5		
Point		2.329E-01	1.226E-02	4.426E+00	3.301E-05	1.737E-06	6.273E-04	
Line		2.412E+00	4.811E-01	1.209E+01	1.295E-05	2.583E-06	6.492E-05	
Strike Probability, 1/yr					4.596E-05	4.320E-06	6.922E-04	
1.0E-5 1/yr design speed					110.	39.	185.	
1.0E-6 1/yr design speed					176.	110.	237.	
1.0E-7 1/yr design speed					231.	178.	284.	
46	68	3.286E+03	1.0000	9	8	8		
Point		2.961E-01	6.879E-02	1.274E+00	1.511E-05	3.510E-06	6.502E-05	
Line		6.774E+00	2.063E+00	2.224E+01	1.309E-05	3.988E-06	4.298E-05	
Strike Probability, 1/yr					2.820E-05	7.498E-06	1.080E-04	
1.0E-5 1/yr design speed					95.	39.	141.	
1.0E-6 1/yr design speed					167.	127.	202.	
1.0E-7 1/yr design speed					224.	190.	254.	
46	69	3.286E+03	1.0000	0	0	0		
Point		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Line		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Strike Probability, 1/yr					0.000E+00	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					0.	0.	0.	
1.0E-6 1/yr design speed					0.	0.	0.	
1.0E-7 1/yr design speed					0.	0.	0.	

46	70	3.286E+02	0.1000	0	0	0			
Point	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00			
Line	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00			
Strike Probability, 1/yr				0.000E+00	0.000E+00	0.000E+00			
1.0E-5 1/yr design speed				0.	0.	0.			
1.0E-6 1/yr design speed				0.	0.	0.			
1.0E-7 1/yr design speed				0.	0.	0.			
46	83	1.643E+02	0.0500	1	1	1			
Point	3.864E-02	0.000E+00	0.000E+00	4.381E-06	0.000E+00	0.000E+00			
Line	1.700E+00	0.000E+00	0.000E+00	7.301E-06	0.000E+00	0.000E+00			
Strike Probability, 1/yr				1.168E-05	0.000E+00	0.000E+00			
1.0E-5 1/yr design speed				51.	38.	38.			
1.0E-6 1/yr design speed				145.	38.	38.			
1.0E-7 1/yr design speed				206.	38.	38.			
46	84	9.859E+02	0.3000	3	1	1			
Point	5.682E-04	0.000E+00	0.000E+00	3.221E-08	0.000E+00	0.000E+00			
Line	1.000E-01	0.000E+00	0.000E+00	2.147E-07	0.000E+00	0.000E+00			
Strike Probability, 1/yr				2.470E-07	0.000E+00	0.000E+00			
1.0E-5 1/yr design speed				39.	38.	38.			
1.0E-6 1/yr design speed				39.	38.	38.			
1.0E-7 1/yr design speed				94.	38.	38.			
46	85	2.301E+03	0.7000	8	8	8			
Point	1.443E+00	2.714E-02	7.676E+01	9.352E-05	1.758E-06	4.974E-03			
Line	3.368E+00	7.782E-01	1.458E+01	8.266E-06	1.910E-06	3.578E-05			
Strike Probability, 1/yr				1.018E-04	3.668E-06	5.009E-03			
1.0E-5 1/yr design speed				132.	39.	227.			
1.0E-6 1/yr design speed				191.	104.	274.			
1.0E-7 1/yr design speed				242.	172.	318.			
46	86	1.972E+03	0.6000	6	5	5			
Point	1.375E+00	8.681E-03	2.179E+02	7.798E-05	4.921E-07	1.236E-02			
Line	3.773E+00	5.870E-01	2.425E+01	8.102E-06	1.261E-06	5.207E-05			
Strike Probability, 1/yr				8.608E-05	1.753E-06	1.241E-02			
1.0E-5 1/yr design speed				127.	39.	246.			
1.0E-6 1/yr design speed				187.	77.	292.			
1.0E-7 1/yr design speed				239.	155.	334.			
46	87	2.629E+03	0.8000	8	7	7			
Point	2.350E-01	2.015E-02	2.742E+00	1.333E-05	1.142E-06	1.554E-04			
Line	1.263E+00	4.700E-01	3.396E+00	2.713E-06	1.009E-06	7.293E-06			
Strike Probability, 1/yr				1.604E-05	2.152E-06	1.627E-04			
1.0E-5 1/yr design speed				68.	39.	147.			
1.0E-6 1/yr design speed				146.	83.	204.			
1.0E-7 1/yr design speed				204.	157.	253.			

46	88	2.958E+03	0.9000	9	6	6	
Point		2.295E-02	6.656E-03	7.912E-02	1.301E-06	3.774E-07	4.486E-06
Line		6.462E-01	2.579E-01	1.619E+00	1.388E-06	5.538E-07	3.478E-06
Strike Probability, 1/yr					2.689E-06	9.312E-07	7.964E-06
1.0E-5 1/yr design speed					39.	39.	39.
1.0E-6 1/yr design speed					94.	39.	133.
1.0E-7 1/yr design speed					166.	135.	196.
46	89	2.958E+03	0.9000	10	9	9	
Point		2.280E+00	2.566E-01	2.026E+01	1.436E-04	1.616E-05	1.276E-03
Line		1.964E+01	6.071E+00	6.353E+01	4.686E-05	1.449E-05	1.516E-04
Strike Probability, 1/yr					1.905E-04	3.065E-05	1.428E-03
1.0E-5 1/yr design speed					152.	97.	202.
1.0E-6 1/yr design speed					210.	166.	253.
1.0E-7 1/yr design speed					260.	223.	298.
46	90	2.301E+03	0.7000	10	10	10	
Point		8.932E-02	2.455E-02	3.250E-01	7.234E-06	1.988E-06	2.632E-05
Line		3.187E+00	9.883E-01	1.028E+01	9.778E-06	3.032E-06	3.154E-05
Strike Probability, 1/yr					1.701E-05	5.020E-06	5.786E-05
1.0E-5 1/yr design speed					79.	39.	129.
1.0E-6 1/yr design speed					163.	125.	198.
1.0E-7 1/yr design speed					224.	193.	254.
46	91	2.629E+03	0.8000	18	16	16	
Point		2.352E+00	2.287E-01	2.418E+01	3.000E-04	2.917E-05	3.084E-03
Line		8.200E+00	2.665E+00	2.523E+01	3.962E-05	1.288E-05	1.219E-04
Strike Probability, 1/yr					3.396E-04	4.205E-05	3.206E-03
1.0E-5 1/yr design speed					169.	112.	222.
1.0E-6 1/yr design speed					225.	180.	272.
1.0E-7 1/yr design speed					274.	235.	318.
46	92	3.286E+03	1.0000	15	13	13	
Point		5.551E+00	2.151E-01	1.432E+02	4.721E-04	1.829E-05	1.218E-02
Line		9.644E+00	2.460E+00	3.781E+01	3.107E-05	7.924E-06	1.218E-04
Strike Probability, 1/yr					5.031E-04	2.622E-05	1.230E-02
1.0E-5 1/yr design speed					177.	94.	251.
1.0E-6 1/yr design speed					231.	167.	298.
1.0E-7 1/yr design speed					279.	225.	342.
46	93	3.286E+03	1.0000	39	38	38	
Point		1.550E+01	1.742E+00	1.380E+02	3.427E-03	3.851E-04	3.050E-02
Line		9.343E+00	4.021E+00	2.171E+01	7.825E-05	3.368E-05	1.818E-04
Strike Probability, 1/yr					3.506E-03	4.188E-04	3.069E-02
1.0E-5 1/yr design speed					221.	172.	270.
1.0E-6 1/yr design speed					269.	225.	316.
1.0E-7 1/yr design speed					314.	273.	359.

46	94	3.286E+03	1.0000	51	45	45	
Point	1.397E+00	3.489E-01	5.596E+00	4.040E-04	1.009E-04	1.618E-03	
Line	7.873E+00	3.679E+00	1.685E+01	8.623E-05	4.030E-05	1.845E-04	
Strike Probability, 1/yr				4.902E-04	1.412E-04	1.803E-03	
1.0E-5 1/yr design speed				181.	150.	212.	
1.0E-6 1/yr design speed				236.	209.	264.	
1.0E-7 1/yr design speed				284.	260.	311.	
46	95	3.286E+03	1.0000	46	37	37	
Point	1.204E+00	2.965E-01	4.890E+00	3.141E-04	7.734E-05	1.275E-03	
Line	6.901E+00	3.396E+00	1.402E+01	6.817E-05	3.355E-05	1.385E-04	
Strike Probability, 1/yr				3.822E-04	1.109E-04	1.414E-03	
1.0E-5 1/yr design speed				175.	143.	206.	
1.0E-6 1/yr design speed				230.	204.	258.	
1.0E-7 1/yr design speed				279.	256.	306.	
46	96	3.286E+03	1.0000	88	69	69	
Point	1.641E+00	4.290E-01	6.276E+00	8.186E-04	2.140E-04	3.131E-03	
Line	4.151E+00	2.405E+00	7.165E+00	7.845E-05	4.545E-05	1.354E-04	
Strike Probability, 1/yr				8.971E-04	2.595E-04	3.267E-03	
1.0E-5 1/yr design speed				192.	163.	223.	
1.0E-6 1/yr design speed				245.	219.	273.	
1.0E-7 1/yr design speed				292.	268.	319.	
46	97	3.286E+03	1.0000	72	43	43	
Point	3.051E-01	9.973E-02	9.333E-01	1.245E-04	4.071E-05	3.810E-04	
Line	4.495E+00	2.436E+00	8.297E+00	6.951E-05	3.766E-05	1.283E-04	
Strike Probability, 1/yr				1.940E-04	7.837E-05	5.093E-04	
1.0E-5 1/yr design speed				162.	137.	186.	
1.0E-6 1/yr design speed				221.	201.	242.	
1.0E-7 1/yr design speed				272.	254.	291.	
46	98	3.286E+03	1.0000	84	49	49	
Point	9.566E-02	3.307E-02	2.767E-01	4.556E-05	1.575E-05	1.318E-04	
Line	2.173E+00	1.172E+00	4.031E+00	3.920E-05	2.113E-05	7.271E-05	
Strike Probability, 1/yr				8.475E-05	3.688E-05	2.045E-04	
1.0E-5 1/yr design speed				139.	112.	164.	
1.0E-6 1/yr design speed				204.	184.	224.	
1.0E-7 1/yr design speed				258.	240.	276.	
46	99	3.286E+03	1.0000	50	35	35	
Point	3.337E-01	8.322E-02	1.338E+00	9.460E-05	2.359E-05	3.794E-04	
Line	3.317E+00	1.602E+00	6.867E+00	3.562E-05	1.720E-05	7.374E-05	
Strike Probability, 1/yr				1.302E-04	4.079E-05	4.531E-04	
1.0E-5 1/yr design speed				148.	113.	180.	
1.0E-6 1/yr design speed				209.	183.	236.	
1.0E-7 1/yr design speed				261.	238.	286.	

46	100	3.286E+03	1.0000	63	37	37	
Point	2.578E-01	6.489E-02	1.024E+00	9.209E-05	2.318E-05	3.659E-04	
Line	2.576E+00	1.392E+00	4.767E+00	3.485E-05	1.884E-05	6.449E-05	
Strike Probability, 1/yr				1.269E-04	4.201E-05	4.304E-04	
1.0E-5 1/yr design speed				147.	115.	178.	
1.0E-6 1/yr design speed				208.	184.	234.	
1.0E-7 1/yr design speed				260.	240.	284.	
46	101	3.286E+03	1.0000	47	29	29	
Point	7.625E-01	1.199E-01	4.848E+00	2.032E-04	3.196E-05	1.292E-03	
Line	6.117E+00	2.414E+00	1.550E+01	6.174E-05	2.437E-05	1.565E-04	
Strike Probability, 1/yr				2.649E-04	5.632E-05	1.448E-03	
1.0E-5 1/yr design speed				166.	125.	207.	
1.0E-6 1/yr design speed				224.	191.	259.	
1.0E-7 1/yr design speed				274.	246.	306.	
46	102	3.286E+03	1.0000	37	23	23	
Point	7.132E-01	1.344E-01	3.785E+00	1.496E-04	2.819E-05	7.940E-04	
Line	6.844E+00	2.831E+00	1.654E+01	5.438E-05	2.250E-05	1.314E-04	
Strike Probability, 1/yr				2.040E-04	5.069E-05	9.254E-04	
1.0E-5 1/yr design speed				151.	101.	204.	
1.0E-6 1/yr design speed				217.	170.	267.	
1.0E-7 1/yr design speed				279.	232.	326.	
46	103	3.286E+03	1.0000	22	18	18	
Point	3.148E-01	3.709E-02	2.671E+00	3.926E-05	4.627E-06	3.332E-04	
Line	5.365E+00	1.458E+00	1.975E+01	2.535E-05	6.886E-06	9.331E-05	
Strike Probability, 1/yr				6.461E-05	1.151E-05	4.265E-04	
1.0E-5 1/yr design speed				115.	46.	182.	
1.0E-6 1/yr design speed				186.	128.	248.	
1.0E-7 1/yr design speed				251.	195.	308.	
46	104	3.286E+03	1.0000	18	15	15	
Point	1.973E+00	9.791E-02	3.975E+01	2.013E-04	9.991E-06	4.056E-03	
Line	7.829E+00	1.805E+00	3.396E+01	3.026E-05	6.977E-06	1.313E-04	
Strike Probability, 1/yr				2.316E-04	1.697E-05	4.187E-03	
1.0E-5 1/yr design speed				154.	62.	244.	
1.0E-6 1/yr design speed				219.	138.	303.	
1.0E-7 1/yr design speed				279.	203.	358.	
46	105	3.286E+03	1.0000	5	3	3	
Point	9.514E-04	6.891E-04	1.313E-03	2.697E-08	1.953E-08	3.723E-08	
Line	1.674E-01	1.213E-01	2.312E-01	1.798E-07	1.302E-07	2.482E-07	
Strike Probability, 1/yr				2.068E-07	1.498E-07	2.855E-07	
1.0E-5 1/yr design speed				39.	39.	39.	
1.0E-6 1/yr design speed				39.	39.	39.	
1.0E-7 1/yr design speed				76.	58.	92.	

46	106	3.286E+03	1.0000	9	8	8		
Point		3.022E-03	8.576E-04	1.065E-02	1.542E-07	4.376E-08	5.432E-07	
Line		2.349E-01	1.403E-01	3.934E-01	4.541E-07	2.712E-07	7.603E-07	
Strike	Probability, 1/yr				6.083E-07	3.150E-07	1.304E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				39.	39.	55.	
1.0E-7	1/yr design speed				115.	88.	147.	
46	107	3.286E+03	1.0000	4	4	4		
Point		1.157E+00	5.244E-03	2.552E+02	2.623E-05	1.189E-07	5.787E-03	
Line		7.228E+00	6.561E-01	7.963E+01	6.209E-06	5.636E-07	6.840E-05	
Strike	Probability, 1/yr				3.244E-05	6.825E-07	5.855E-03	
1.0E-5	1/yr design speed				91.	39.	253.	
1.0E-6	1/yr design speed				164.	39.	310.	
1.0E-7	1/yr design speed				229.	114.	365.	
46	108	3.286E+03	1.0000	5	4	4		
Point		1.913E-03	8.138E-04	4.496E-03	5.422E-08	2.307E-08	1.274E-07	
Line		1.244E-01	9.648E-02	1.604E-01	1.336E-07	1.036E-07	1.722E-07	
Strike	Probability, 1/yr				1.878E-07	1.267E-07	2.997E-07	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				39.	39.	39.	
1.0E-7	1/yr design speed				71.	51.	94.	
46	109	3.286E+03	1.0000	12	10	10		
Point		3.572E-02	9.502E-03	1.343E-01	2.430E-06	6.465E-07	9.135E-06	
Line		2.369E+00	1.048E+00	5.358E+00	6.106E-06	2.700E-06	1.381E-05	
Strike	Probability, 1/yr				8.536E-06	3.346E-06	2.294E-05	
1.0E-5	1/yr design speed				39.	39.	83.	
1.0E-6	1/yr design speed				126.	90.	166.	
1.0E-7	1/yr design speed				198.	162.	236.	
46	110	3.286E+03	1.0000	4	1	1		
Point		2.614E-02	0.000E+00	0.000E+00	5.927E-07	0.000E+00	0.000E+00	
Line		2.000E+00	0.000E+00	0.000E+00	1.718E-06	0.000E+00	0.000E+00	
Strike	Probability, 1/yr				2.311E-06	0.000E+00	0.000E+00	
1.0E-5	1/yr design speed				39.	38.	38.	
1.0E-6	1/yr design speed				80.	38.	38.	
1.0E-7	1/yr design speed				159.	38.	38.	
46	111	3.286E+03	1.0000	2	2	2		
Point		3.486E-03	4.523E-04	2.687E-02	3.953E-08	5.128E-09	3.046E-07	
Line		1.373E+00	5.956E-02	3.166E+01	5.898E-07	2.558E-08	1.360E-05	
Strike	Probability, 1/yr				6.293E-07	3.071E-08	1.390E-05	
1.0E-5	1/yr design speed				39.	38.	58.	
1.0E-6	1/yr design speed				39.	38.	151.	
1.0E-7	1/yr design speed				117.	38.	225.	

46	112	3.286E+03	1.0000	7	6	6	
Point	1.335E-02	2.396E-03	7.438E-02	5.298E-07	9.510E-08	2.952E-06	
Line	3.937E-01	1.785E-01	8.681E-01	5.918E-07	2.684E-07	1.305E-06	
Strike Probability, 1/yr				1.122E-06	3.635E-07	4.257E-06	
1.0E-5 1/yr design speed				39.	39.	39.	
1.0E-6 1/yr design speed				46.	39.	107.	
1.0E-7 1/yr design speed				134.	92.	183.	
46	113	3.286E+03	1.0000	1	1	1	
Point	2.614E-02	0.000E+00	0.000E+00	1.482E-07	0.000E+00	0.000E+00	
Line	2.000E+00	0.000E+00	0.000E+00	4.295E-07	0.000E+00	0.000E+00	
Strike Probability, 1/yr				5.777E-07	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed				39.	38.	38.	
1.0E-6 1/yr design speed				39.	38.	38.	
1.0E-7 1/yr design speed				113.	38.	38.	
46	114	3.286E+03	1.0000	4	3	3	
Point	4.411E-03	7.176E-04	2.712E-02	1.000E-07	1.627E-08	6.149E-07	
Line	7.764E-01	1.263E-01	4.772E+00	6.669E-07	1.085E-07	4.099E-06	
Strike Probability, 1/yr				7.669E-07	1.248E-07	4.714E-06	
1.0E-5 1/yr design speed				39.	39.	39.	
1.0E-6 1/yr design speed				39.	39.	112.	
1.0E-7 1/yr design speed				124.	50.	190.	
46	115	3.286E+03	1.0000	0	0	0	
46	116	3.286E+03	1.0000	6	5	5	
Point	7.195E-02	4.697E-03	1.102E+00	2.448E-06	1.598E-07	3.749E-05	
Line	3.311E+00	3.648E-01	3.005E+01	4.266E-06	4.700E-07	3.873E-05	
Strike Probability, 1/yr				6.714E-06	6.298E-07	7.622E-05	
1.0E-5 1/yr design speed				39.	39.	129.	
1.0E-6 1/yr design speed				118.	39.	202.	
1.0E-7 1/yr design speed				190.	111.	269.	
46	117	3.286E+03	1.0000	4	3	3	
Point	1.336E-02	5.669E-03	3.149E-02	3.030E-07	1.286E-07	7.140E-07	
Line	8.372E-01	6.064E-01	1.156E+00	7.192E-07	5.209E-07	9.929E-07	
Strike Probability, 1/yr				1.022E-06	6.495E-07	1.707E-06	
1.0E-5 1/yr design speed				39.	39.	39.	
1.0E-6 1/yr design speed				41.	39.	70.	
1.0E-7 1/yr design speed				132.	112.	156.	
46	118	3.286E+03	1.0000	7	6	6	
Point	3.243E-01	9.509E-03	1.106E+01	1.287E-05	3.774E-07	4.390E-04	
Line	9.419E+00	6.834E-01	1.298E+02	1.416E-05	1.027E-06	1.951E-04	
Strike Probability, 1/yr				2.703E-05	1.405E-06	6.342E-04	
1.0E-5 1/yr design speed				85.	39.	195.	
1.0E-6 1/yr design speed				162.	55.	260.	
1.0E-7 1/yr design speed				229.	136.	321.	

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   46  119    3.286E+03 1.0000      3      3      3
Point  2.236E-01  1.692E-02  2.953E+00  3.802E-06  2.878E-07  5.023E-05
Line   3.954E+00  6.304E-01  2.480E+01  2.547E-06  4.061E-07  1.597E-05
Strike Probability, 1/yr                6.349E-06  6.940E-07  6.620E-05
1.0E-5 1/yr design speed                     39.        39.       123.
1.0E-6 1/yr design speed                    115.        39.       196.
1.0E-7 1/yr design speed                    186.       112.       260.

   46  120    3.286E+03 1.0000      4      3      3
Point  1.109E-02  7.305E-03  1.683E-02  2.515E-07  1.657E-07  3.817E-07
Line   7.798E-01  3.293E-01  1.847E+00  6.699E-07  2.828E-07  1.586E-06
Strike Probability, 1/yr                9.213E-07  4.485E-07  1.968E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     39.        39.        77.
1.0E-7 1/yr design speed                    129.        99.       162.

   46  121    3.286E+03 1.0000      0      0      0

   46  122    3.286E+03 1.0000      5      3      3
Point  1.073E-02  3.709E-03  3.106E-02  3.042E-07  1.051E-07  8.804E-07
Line   7.459E-01  2.853E-01  1.950E+00  8.009E-07  3.064E-07  2.094E-06
Strike Probability, 1/yr                1.105E-06  4.115E-07  2.974E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     45.        39.        94.
1.0E-7 1/yr design speed                    135.        97.       175.

   46  123    3.286E+03 1.0000      7      7      7
Point  1.161E-02  2.321E-03  5.806E-02  4.607E-07  9.211E-08  2.304E-06
Line   3.748E-01  1.812E-01  7.753E-01  5.634E-07  2.724E-07  1.165E-06
Strike Probability, 1/yr                1.024E-06  3.645E-07  3.470E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     41.        39.       100.
1.0E-7 1/yr design speed                    131.        92.       177.

   46  124    1.643E+02 0.0500      1      1      1
Point  2.557E-03  0.000E+00  0.000E+00  2.899E-07  0.000E+00  0.000E+00
Line   3.000E-01  0.000E+00  0.000E+00  1.288E-06  0.000E+00  0.000E+00
Strike Probability, 1/yr                1.578E-06  0.000E+00  0.000E+00
1.0E-5 1/yr design speed                     39.        38.        38.
1.0E-6 1/yr design speed                     62.        38.        38.
1.0E-7 1/yr design speed                    147.        38.        38.

   47   67    1.613E+02 0.0500      0      0      0

   47   68    6.451E+02 0.2000      6      6      6
Point  6.121E-01  5.068E-03  7.392E+01  1.061E-04  8.782E-07  1.281E-02
Line   6.740E+00  5.873E-01  7.735E+01  4.425E-05  3.855E-06  5.078E-04
Strike Probability, 1/yr                1.503E-04  4.734E-06  1.332E-02
1.0E-5 1/yr design speed                    147.        39.       249.
1.0E-6 1/yr design speed                    205.       116.       294.
1.0E-7 1/yr design speed                    256.       184.       337.

   47   69    6.451E+02 0.2000      0      0      0
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   47   87    1.613E+02 0.0500      0      0      0

   47   88    3.226E+02 0.1000      3      3      3
Point  5.473E-02  1.352E-03  2.215E+00  9.484E-06  2.343E-07  3.839E-04
Line   2.880E+00  2.115E-01  3.921E+01  1.890E-05  1.388E-06  2.574E-04
Strike Probability, 1/yr                 2.839E-05  1.623E-06  6.412E-04
1.0E-5 1/yr design speed                       98.        39.       190.
1.0E-6 1/yr design speed                      170.        74.       243.
1.0E-7 1/yr design speed                      227.       155.       291.

   47   89    1.613E+02 0.0500      0      0      0

   47   90    1.290E+03 0.4000      2      2      2
Point  3.264E-02  4.810E-04  2.215E+00  9.428E-07  1.389E-08  6.398E-05
Line   6.182E-01  1.859E-01  2.056E+00  6.763E-07  2.034E-07  2.249E-06
Strike Probability, 1/yr                 1.619E-06  2.173E-07  6.623E-05
1.0E-5 1/yr design speed                       39.        39.       121.
1.0E-6 1/yr design speed                       75.        39.       185.
1.0E-7 1/yr design speed                      158.        97.       238.

   47   91    2.580E+03 0.8000     11      9      9
Point  1.195E+00  9.917E-02  1.441E+01  9.495E-05  7.877E-06  1.145E-03
Line   6.274E+00  2.002E+00  1.966E+01  1.887E-05  6.023E-06  5.915E-05
Strike Probability, 1/yr                 1.138E-04  1.390E-05  1.204E-03
1.0E-5 1/yr design speed                      140.        64.       200.
1.0E-6 1/yr design speed                      202.       153.       252.
1.0E-7 1/yr design speed                      254.       214.       300.

   47   92    3.226E+03 1.0000     18     15     15
Point  5.430E+00  6.158E-01  4.787E+01  5.646E-04  6.403E-05  4.978E-03
Line   8.284E+00  3.388E+00  2.026E+01  3.263E-05  1.334E-05  7.978E-05
Strike Probability, 1/yr                 5.972E-04  7.738E-05  5.057E-03
1.0E-5 1/yr design speed                      181.       129.       231.
1.0E-6 1/yr design speed                      234.       191.       280.
1.0E-7 1/yr design speed                      282.       243.       326.

   47   93    3.226E+03 1.0000     11     11     11
Point  3.692E-01  2.845E-02  4.793E+00  2.346E-05  1.807E-06  3.045E-04
Line   1.191E+00  5.275E-01  2.690E+00  2.867E-06  1.270E-06  6.475E-06
Strike Probability, 1/yr                 2.633E-05  3.077E-06  3.110E-04
1.0E-5 1/yr design speed                       91.        39.       165.
1.0E-6 1/yr design speed                      162.       103.       221.
1.0E-7 1/yr design speed                      219.       175.       271.

   47   94    3.226E+03 1.0000     20     18     18
Point  5.894E-01  7.418E-02  4.683E+00  6.809E-05  8.570E-06  5.410E-04
Line   2.273E+00  1.016E+00  5.081E+00  9.946E-06  4.448E-06  2.224E-05
Strike Probability, 1/yr                 7.804E-05  1.302E-05  5.633E-04
1.0E-5 1/yr design speed                      128.        58.       181.
1.0E-6 1/yr design speed                      191.       149.       235.
1.0E-7 1/yr design speed                      244.       209.       284.
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47	95	3.226E+03	1.0000	50	46	46	
Point	1.114E-01	4.401E-02	2.822E-01	3.219E-05	1.271E-05	8.151E-05	
Line	1.830E+00	1.118E+00	2.997E+00	2.002E-05	1.223E-05	3.279E-05	
Strike Probability, 1/yr				5.221E-05	2.494E-05	1.143E-04	
1.0E-5 1/yr design speed				121.	95.	145.	
1.0E-6 1/yr design speed				189.	172.	208.	
1.0E-7 1/yr design speed				245.	229.	261.	
47	96	3.226E+03	1.0000	59	50	50	
Point	1.105E-01	4.732E-02	2.580E-01	3.766E-05	1.613E-05	8.792E-05	
Line	1.694E+00	1.073E+00	2.674E+00	2.186E-05	1.385E-05	3.452E-05	
Strike Probability, 1/yr				5.952E-05	2.997E-05	1.224E-04	
1.0E-5 1/yr design speed				126.	103.	147.	
1.0E-6 1/yr design speed				192.	176.	209.	
1.0E-7 1/yr design speed				247.	233.	262.	
47	97	3.226E+03	1.0000	73	53	53	
Point	3.856E-02	1.904E-02	7.808E-02	1.626E-05	8.029E-06	3.292E-05	
Line	1.132E+00	7.463E-01	1.717E+00	1.808E-05	1.192E-05	2.743E-05	
Strike Probability, 1/yr				3.434E-05	1.995E-05	6.035E-05	
1.0E-5 1/yr design speed				109.	87.	128.	
1.0E-6 1/yr design speed				182.	168.	197.	
1.0E-7 1/yr design speed				239.	227.	252.	
47	98	3.226E+03	1.0000	67	55	55	
Point	3.667E-02	1.895E-02	7.098E-02	1.419E-05	7.333E-06	2.747E-05	
Line	9.624E-01	6.925E-01	1.338E+00	1.411E-05	1.015E-05	1.961E-05	
Strike Probability, 1/yr				2.830E-05	1.749E-05	4.708E-05	
1.0E-5 1/yr design speed				101.	81.	119.	
1.0E-6 1/yr design speed				176.	164.	189.	
1.0E-7 1/yr design speed				234.	223.	246.	
47	99	3.226E+03	1.0000	51	33	33	
Point	6.278E-01	1.328E-01	2.969E+00	1.850E-04	3.911E-05	8.747E-04	
Line	3.066E+00	1.666E+00	5.643E+00	3.422E-05	1.859E-05	6.297E-05	
Strike Probability, 1/yr				2.192E-04	5.770E-05	9.376E-04	
1.0E-5 1/yr design speed				159.	123.	195.	
1.0E-6 1/yr design speed				217.	189.	248.	
1.0E-7 1/yr design speed				267.	243.	296.	
47	100	3.226E+03	1.0000	56	40	40	
Point	2.981E-01	8.771E-02	1.013E+00	9.643E-05	2.837E-05	3.278E-04	
Line	4.829E+00	2.383E+00	9.783E+00	5.917E-05	2.921E-05	1.199E-04	
Strike Probability, 1/yr				1.556E-04	5.758E-05	4.476E-04	
1.0E-5 1/yr design speed				156.	127.	183.	
1.0E-6 1/yr design speed				216.	194.	240.	
1.0E-7 1/yr design speed				268.	249.	289.	

47	101	3.226E+03	1.0000	45	29	29		
Point	1.902E-01	4.765E-02	7.590E-01	4.944E-05	1.239E-05	1.973E-04		
Line	3.848E+00	1.662E+00	8.908E+00	3.789E-05	1.636E-05	8.771E-05		
Strike Probability, 1/yr				8.732E-05	2.875E-05	2.850E-04		
1.0E-5 1/yr design speed				139.	103.	172.		
1.0E-6 1/yr design speed				204.	178.	231.		
1.0E-7 1/yr design speed				257.	235.	281.		
47	102	3.226E+03	1.0000	26	10	10		
Point	2.295E-03	1.489E-03	3.537E-03	3.447E-07	2.236E-07	5.312E-07		
Line	2.483E-01	1.760E-01	3.502E-01	1.412E-06	1.001E-06	1.992E-06		
Strike Probability, 1/yr				1.757E-06	1.225E-06	2.524E-06		
1.0E-5 1/yr design speed				39.	39.	39.		
1.0E-6 1/yr design speed				68.	49.	87.		
1.0E-7 1/yr design speed				150.	132.	170.		
47	103	3.226E+03	1.0000	13	9	9		
Point	4.602E-01	3.092E-02	6.848E+00	3.456E-05	2.322E-06	5.143E-04		
Line	5.372E+00	1.399E+00	2.063E+01	1.528E-05	3.979E-06	5.867E-05		
Strike Probability, 1/yr				4.984E-05	6.302E-06	5.729E-04		
1.0E-5 1/yr design speed				106.	39.	190.		
1.0E-6 1/yr design speed				178.	110.	254.		
1.0E-7 1/yr design speed				242.	178.	313.		
47	104	3.226E+03	1.0000	23	18	18		
Point	1.819E+00	8.318E-02	3.980E+01	2.417E-04	1.105E-05	5.287E-03		
Line	4.466E+00	1.295E+00	1.540E+01	2.247E-05	6.517E-06	7.750E-05		
Strike Probability, 1/yr				2.642E-04	1.757E-05	5.365E-03		
1.0E-5 1/yr design speed				157.	63.	250.		
1.0E-6 1/yr design speed				222.	139.	308.		
1.0E-7 1/yr design speed				281.	203.	363.		
47	105	3.226E+03	1.0000	9	7	7		
Point	1.169E+02	4.089E-02	3.339E+05	6.075E-03	2.126E-06	1.736E+01		
Line	5.867E+00	6.105E-01	5.638E+01	1.155E-05	1.202E-06	1.110E-04		
Strike Probability, 1/yr				6.086E-03	3.328E-06	1.736E+01		
1.0E-5 1/yr design speed				242.	39.	0.		
1.0E-6 1/yr design speed				300.	87.	0.		
1.0E-7 1/yr design speed				355.	157.	0.		
47	106	3.226E+03	1.0000	9	6	6		
Point	3.231E-01	2.022E-02	5.165E+00	1.680E-05	1.051E-06	2.685E-04		
Line	4.658E+00	7.033E-01	3.085E+01	9.173E-06	1.385E-06	6.076E-05		
Strike Probability, 1/yr				2.597E-05	2.436E-06	3.293E-04		
1.0E-5 1/yr design speed				83.	39.	174.		
1.0E-6 1/yr design speed				159.	78.	240.		
1.0E-7 1/yr design speed				225.	150.	301.		

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   47  107    3.226E+03 1.0000     10      9      9
Point  2.918E-01  2.723E-02  3.127E+00  1.686E-05  1.573E-06  1.806E-04
Line   5.077E+00  9.843E-01  2.618E+01  1.111E-05  2.154E-06  5.729E-05
Strike Probability, 1/yr                2.796E-05  3.727E-06  2.379E-04
1.0E-5 1/yr design speed                     86.        39.       165.
1.0E-6 1/yr design speed                    162.        92.       232.
1.0E-7 1/yr design speed                    228.       163.       294.

   47  108    3.226E+03 1.0000      7      6      6
Point  2.529E-02  2.735E-03  2.338E-01  1.022E-06  1.106E-07  9.452E-06
Line   1.340E+00  3.341E-01  5.377E+00  2.053E-06  5.117E-07  8.236E-06
Strike Probability, 1/yr                3.075E-06  6.223E-07  1.769E-05
1.0E-5 1/yr design speed                     39.        39.        72.
1.0E-6 1/yr design speed                     90.        39.       156.
1.0E-7 1/yr design speed                    167.       111.       227.

   47  109    3.226E+03 1.0000     19     18     18
Point  3.865E-01  5.861E-02  2.548E+00  4.241E-05  6.432E-06  2.797E-04
Line   3.452E+00  1.378E+00  8.646E+00  1.435E-05  5.728E-06  3.595E-05
Strike Probability, 1/yr                5.676E-05  1.216E-05  3.156E-04
1.0E-5 1/yr design speed                    110.        48.       173.
1.0E-6 1/yr design speed                    181.       129.       238.
1.0E-7 1/yr design speed                    245.       194.       298.

   47  110    3.226E+03 1.0000     17     14     14
Point  5.415E-02  1.351E-02  2.170E-01  5.318E-06  1.327E-06  2.131E-05
Line   1.271E+00  6.259E-01  2.580E+00  4.727E-06  2.328E-06  9.598E-06
Strike Probability, 1/yr                1.004E-05  3.655E-06  3.091E-05
1.0E-5 1/yr design speed                     40.        39.        95.
1.0E-6 1/yr design speed                    130.        92.       173.
1.0E-7 1/yr design speed                    200.       163.       240.

   47  111    3.226E+03 1.0000     15      8      8
Point  4.414E-01  2.565E-02  7.594E+00  3.824E-05  2.223E-06  6.580E-04
Line   2.587E+00  6.455E-01  1.037E+01  8.492E-06  2.119E-06  3.403E-05
Strike Probability, 1/yr                4.673E-05  4.341E-06  6.920E-04
1.0E-5 1/yr design speed                    104.        39.       195.
1.0E-6 1/yr design speed                    175.        97.       258.
1.0E-7 1/yr design speed                    238.       166.       316.

   47  112    3.226E+03 1.0000      3      2      2
Point  2.543E-02  2.245E-02  2.880E-02  4.406E-07  3.890E-07  4.991E-07
Line   1.151E+00  7.845E-01  1.688E+00  7.555E-07  5.150E-07  1.108E-06
Strike Probability, 1/yr                1.196E-06  9.040E-07  1.607E-06
1.0E-5 1/yr design speed                     39.        39.        39.
1.0E-6 1/yr design speed                     49.        39.        66.
1.0E-7 1/yr design speed                    137.       121.       154.

   47  113    3.226E+03 1.0000      0      0      0
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47	114	3.226E+03	1.0000	1	1	1		
Point		3.977E-04	0.000E+00	0.000E+00	2.297E-09	0.000E+00	0.000E+00	
Line		1.000E-01	0.000E+00	0.000E+00	2.188E-08	0.000E+00	0.000E+00	
Strike	Probability, 1/yr				2.418E-08	0.000E+00	0.000E+00	
1.0E-5	1/yr design speed				38.	38.	38.	
1.0E-6	1/yr design speed				38.	38.	38.	
1.0E-7	1/yr design speed				38.	38.	38.	
47	115	3.226E+03	1.0000	1	0	0		
47	116	3.226E+03	1.0000	2	2	2		
Point		4.060E-01	3.262E-05	5.052E+03	4.690E-06	3.768E-10	5.837E-02	
Line		4.789E+00	3.233E-02	7.096E+02	2.096E-06	1.415E-08	3.105E-04	
Strike	Probability, 1/yr				6.786E-06	1.452E-08	5.868E-02	
1.0E-5	1/yr design speed				39.	38.	310.	
1.0E-6	1/yr design speed				117.	38.	364.	
1.0E-7	1/yr design speed				187.	38.	416.	
47	117	3.226E+03	1.0000	10	7	8		
Point		2.996E-02	1.281E-02	7.008E-02	1.731E-06	7.401E-07	4.048E-06	
Line		1.260E+00	5.293E-01	2.998E+00	2.756E-06	1.158E-06	6.559E-06	
Strike	Probability, 1/yr				4.487E-06	1.898E-06	1.061E-05	
1.0E-5	1/yr design speed				39.	39.	43.	
1.0E-6	1/yr design speed				104.	68.	140.	
1.0E-7	1/yr design speed				178.	143.	213.	
47	118	3.226E+03	1.0000	6	2	2		
Point		3.279E-01	2.171E-03	4.951E+01	1.136E-05	7.525E-08	1.716E-03	
Line		7.952E+00	4.503E-01	1.404E+02	1.044E-05	5.911E-07	1.844E-04	
Strike	Probability, 1/yr				2.180E-05	6.664E-07	1.900E-03	
1.0E-5	1/yr design speed				77.	39.	224.	
1.0E-6	1/yr design speed				155.	39.	285.	
1.0E-7	1/yr design speed				222.	113.	342.	
47	119	3.226E+03	1.0000	3	0	1		
Point		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Line		1.000E-01	0.000E+00	0.000E+00	6.564E-08	0.000E+00	0.000E+00	
Strike	Probability, 1/yr				6.564E-08	0.000E+00	0.000E+00	
1.0E-5	1/yr design speed				38.	38.	38.	
1.0E-6	1/yr design speed				38.	38.	38.	
1.0E-7	1/yr design speed				38.	38.	38.	
47	120	3.226E+03	1.0000	1	1	1		
Point		5.682E-04	0.000E+00	0.000E+00	3.282E-09	0.000E+00	0.000E+00	
Line		1.000E-01	0.000E+00	0.000E+00	2.188E-08	0.000E+00	0.000E+00	
Strike	Probability, 1/yr				2.516E-08	0.000E+00	0.000E+00	
1.0E-5	1/yr design speed				38.	38.	38.	
1.0E-6	1/yr design speed				38.	38.	38.	
1.0E-7	1/yr design speed				38.	38.	38.	

47	121	3.226E+03	1.0000	1	1	1		
Point		1.705E-01	0.000E+00	0.000E+00	9.846E-07	0.000E+00	0.000E+00	
Line		3.000E+00	0.000E+00	0.000E+00	6.564E-07	0.000E+00	0.000E+00	
Strike Probability, 1/yr					1.641E-06	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					39.	38.	38.	
1.0E-6 1/yr design speed					64.	38.	38.	
1.0E-7 1/yr design speed					145.	38.	38.	
47	122	2.903E+03	0.9000	12	8	9		
Point		1.171E-01	2.752E-02	4.986E-01	9.023E-06	2.120E-06	3.840E-05	
Line		1.703E+00	9.247E-01	3.137E+00	4.969E-06	2.698E-06	9.151E-06	
Strike Probability, 1/yr					1.399E-05	4.817E-06	4.755E-05	
1.0E-5 1/yr design speed					56.	39.	111.	
1.0E-6 1/yr design speed					140.	101.	185.	
1.0E-7 1/yr design speed					208.	170.	250.	
47	123	3.226E+03	1.0000	1	1	1		
Point		5.682E-03	0.000E+00	0.000E+00	3.282E-08	0.000E+00	0.000E+00	
Line		5.000E-01	0.000E+00	0.000E+00	1.094E-07	0.000E+00	0.000E+00	
Strike Probability, 1/yr					1.422E-07	0.000E+00	0.000E+00	
1.0E-5 1/yr design speed					39.	38.	38.	
1.0E-6 1/yr design speed					39.	38.	38.	
1.0E-7 1/yr design speed					57.	38.	38.	
47	124	9.677E+02	0.3000	0	0	0		
48	89	1.582E+02	0.0500	0	0	0		
48	90	3.164E+02	0.1000	0	0	0		
48	91	6.327E+02	0.2000	4	4	4		
Point		1.773E+00	2.769E-02	1.135E+02	2.088E-04	3.262E-06	1.337E-02	
Line		9.835E+00	1.615E+00	5.989E+01	4.388E-05	7.205E-06	2.672E-04	
Strike Probability, 1/yr					2.527E-04	1.047E-05	1.363E-02	
1.0E-5 1/yr design speed					163.	44.	253.	
1.0E-6 1/yr design speed					221.	151.	301.	
1.0E-7 1/yr design speed					271.	214.	345.	
48	92	1.265E+03	0.4000	3	3	3		
Point		6.778E-01	1.309E-04	3.509E+03	2.994E-05	5.784E-09	1.550E-01	
Line		1.448E+00	7.936E-02	2.642E+01	2.423E-06	1.328E-07	4.420E-05	
Strike Probability, 1/yr					3.236E-05	1.386E-07	1.550E-01	
1.0E-5 1/yr design speed					98.	39.	302.	
1.0E-6 1/yr design speed					166.	39.	346.	
1.0E-7 1/yr design speed					222.	73.	387.	
48	93	1.898E+03	0.6000	6	4	4		
Point		9.697E+00	3.412E-03	2.756E+04	5.711E-04	2.010E-07	1.623E+00	
Line		1.827E+01	7.374E-01	4.527E+02	4.076E-05	1.645E-06	1.010E-03	
Strike Probability, 1/yr					6.119E-04	1.846E-06	1.624E+00	
1.0E-5 1/yr design speed					182.	39.	347.	
1.0E-6 1/yr design speed					235.	88.	388.	
1.0E-7 1/yr design speed					283.	172.	0.	

48	94	2.531E+03	0.8000	7	6	6	
Point	7.001E-01	6.006E-03	8.163E+01	3.608E-05	3.095E-07	4.206E-03	
Line	2.117E+00	4.460E-01	1.004E+01	4.132E-06	8.707E-07	1.961E-05	
Strike Probability, 1/yr				4.021E-05	1.180E-06	4.226E-03	
1.0E-5 1/yr design speed				106.	39.	227.	
1.0E-6 1/yr design speed				173.	54.	276.	
1.0E-7 1/yr design speed				228.	156.	322.	
48	95	3.164E+03	1.0000	15	15	15	
Point	9.473E-02	1.402E-02	6.399E-01	8.369E-06	1.239E-06	5.654E-05	
Line	8.740E-01	4.198E-01	1.819E+00	2.925E-06	1.405E-06	6.088E-06	
Strike Probability, 1/yr				1.129E-05	2.644E-06	6.262E-05	
1.0E-5 1/yr design speed				48.	39.	121.	
1.0E-6 1/yr design speed				143.	99.	186.	
1.0E-7 1/yr design speed				205.	174.	240.	
48	96	3.164E+03	1.0000	34	33	33	
Point	1.128E-01	3.473E-02	3.663E-01	2.258E-05	6.954E-06	7.334E-05	
Line	1.704E+00	9.312E-01	3.116E+00	1.292E-05	7.063E-06	2.364E-05	
Strike Probability, 1/yr				3.551E-05	1.402E-05	9.698E-05	
1.0E-5 1/yr design speed				107.	66.	138.	
1.0E-6 1/yr design speed				179.	155.	202.	
1.0E-7 1/yr design speed				235.	216.	256.	
48	97	3.164E+03	1.0000	45	34	34	
Point	6.035E-02	2.268E-02	1.606E-01	1.599E-05	6.012E-06	4.255E-05	
Line	9.328E-01	5.940E-01	1.465E+00	9.364E-06	5.963E-06	1.470E-05	
Strike Probability, 1/yr				2.536E-05	1.198E-05	5.726E-05	
1.0E-5 1/yr design speed				94.	54.	122.	
1.0E-6 1/yr design speed				169.	151.	189.	
1.0E-7 1/yr design speed				228.	212.	245.	
48	98	3.164E+03	1.0000	60	44	44	
Point	3.392E-02	1.530E-02	7.518E-02	1.198E-05	5.406E-06	2.657E-05	
Line	9.740E-01	6.269E-01	1.513E+00	1.304E-05	8.392E-06	2.025E-05	
Strike Probability, 1/yr				2.502E-05	1.380E-05	4.682E-05	
1.0E-5 1/yr design speed				96.	66.	119.	
1.0E-6 1/yr design speed				173.	157.	189.	
1.0E-7 1/yr design speed				232.	218.	246.	
48	99	3.164E+03	1.0000	52	32	32	
Point	2.184E-02	9.757E-03	4.888E-02	6.688E-06	2.988E-06	1.497E-05	
Line	6.766E-01	4.250E-01	1.077E+00	7.848E-06	4.930E-06	1.249E-05	
Strike Probability, 1/yr				1.454E-05	7.918E-06	2.746E-05	
1.0E-5 1/yr design speed				69.	39.	99.	
1.0E-6 1/yr design speed				158.	140.	175.	
1.0E-7 1/yr design speed				219.	205.	234.	

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   48  100    3.164E+03 1.0000     36     30     30
Point  3.710E-01  8.076E-02  1.705E+00  7.867E-05  1.712E-05  3.615E-04
Line   3.140E+00  1.640E+00  6.013E+00  2.522E-05  1.317E-05  4.829E-05
Strike Probability, 1/yr                 1.039E-04  3.029E-05  4.097E-04
1.0E-5 1/yr design speed                      140.       102.       176.
1.0E-6 1/yr design speed                      202.       175.       232.
1.0E-7 1/yr design speed                      255.       232.       282.

   48  101    3.164E+03 1.0000     77     60     60
Point  4.008E-02  1.902E-02  8.445E-02  1.817E-05  8.625E-06  3.830E-05
Line   1.541E+00  9.581E-01  2.480E+00  2.648E-05  1.646E-05  4.259E-05
Strike Probability, 1/yr                 4.465E-05  2.508E-05  8.089E-05
1.0E-5 1/yr design speed                      120.        99.       140.
1.0E-6 1/yr design speed                      191.       176.       206.
1.0E-7 1/yr design speed                      247.       234.       261.

   48  102    3.164E+03 1.0000     36     25     25
Point  3.459E-01  6.500E-02  1.841E+00  7.334E-05  1.378E-05  3.903E-04
Line   4.177E+00  1.715E+00  1.017E+01  3.354E-05  1.377E-05  8.171E-05
Strike Probability, 1/yr                 1.069E-04  2.755E-05  4.720E-04
1.0E-5 1/yr design speed                      131.        81.       185.
1.0E-6 1/yr design speed                      200.       153.       250.
1.0E-7 1/yr design speed                      263.       217.       310.

   48  103    3.164E+03 1.0000     24     13     13
Point  1.741E-02  3.887E-03  7.795E-02  2.460E-06  5.495E-07  1.102E-05
Line   1.059E+00  3.548E-01  3.159E+00  5.668E-06  1.900E-06  1.691E-05
Strike Probability, 1/yr                 8.129E-06  2.449E-06  2.793E-05
1.0E-5 1/yr design speed                       39.        39.        91.
1.0E-6 1/yr design speed                      125.        79.       172.
1.0E-7 1/yr design speed                      196.       153.       242.

   48  104    3.164E+03 1.0000     11      9      9
Point  7.151E-02  5.026E-03  1.018E+00  4.633E-06  3.256E-07  6.592E-05
Line   1.015E+00  3.547E-01  2.904E+00  2.490E-06  8.703E-07  7.127E-06
Strike Probability, 1/yr                 7.123E-06  1.196E-06  7.305E-05
1.0E-5 1/yr design speed                       39.        39.       126.
1.0E-6 1/yr design speed                      118.        48.       197.
1.0E-7 1/yr design speed                      189.       131.       260.

   48  105    3.164E+03 1.0000     18     12     12
Point  7.381E-01  3.341E-02  1.631E+01  7.825E-05  3.542E-06  1.729E-03
Line   3.779E+00  9.252E-01  1.543E+01  1.517E-05  3.715E-06  6.197E-05
Strike Probability, 1/yr                 9.342E-05  7.257E-06  1.791E-03
1.0E-5 1/yr design speed                      126.        39.       221.
1.0E-6 1/yr design speed                      194.       113.       282.
1.0E-7 1/yr design speed                      256.       181.       338.
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48	106	3.164E+03	1.0000	21	17	17		
Point		4.996E-02	1.092E-02	2.285E-01	6.179E-06	1.351E-06	2.826E-05	
Line		1.106E+00	4.867E-01	2.513E+00	5.181E-06	2.280E-06	1.177E-05	
Strike	Probability, 1/yr				1.136E-05	3.631E-06	4.004E-05	
1.0E-5	1/yr design speed				46.	39.	105.	
1.0E-6	1/yr design speed				134.	92.	181.	
1.0E-7	1/yr design speed				203.	163.	247.	
48	107	3.164E+03	1.0000	7	6	6		
Point		1.696E-02	2.481E-03	1.160E-01	6.992E-07	1.023E-07	4.780E-06	
Line		4.589E-01	1.906E-01	1.105E+00	7.166E-07	2.976E-07	1.725E-06	
Strike	Probability, 1/yr				1.416E-06	3.999E-07	6.506E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				57.	39.	122.	
1.0E-7	1/yr design speed				141.	96.	195.	
48	108	3.164E+03	1.0000	2	2	2		
Point		2.575E-02	1.117E-03	5.936E-01	3.033E-07	1.315E-08	6.992E-06	
Line		1.373E+00	5.956E-02	3.166E+01	6.127E-07	2.657E-08	1.412E-05	
Strike	Probability, 1/yr				9.159E-07	3.973E-08	2.112E-05	
1.0E-5	1/yr design speed				39.	38.	80.	
1.0E-6	1/yr design speed				39.	38.	163.	
1.0E-7	1/yr design speed				128.	38.	234.	
48	109	3.164E+03	1.0000	6	6	6		
Point		4.698E-01	8.070E-03	2.735E+01	1.660E-05	2.852E-07	9.664E-04	
Line		3.398E+00	6.096E-01	1.894E+01	4.549E-06	8.160E-07	2.536E-05	
Strike	Probability, 1/yr				2.115E-05	1.101E-06	9.918E-04	
1.0E-5	1/yr design speed				75.	39.	205.	
1.0E-6	1/yr design speed				152.	44.	266.	
1.0E-7	1/yr design speed				218.	128.	324.	
48	110	3.164E+03	1.0000	3	1	1		
Point		1.136E-03	0.000E+00	0.000E+00	2.008E-08	0.000E+00	0.000E+00	
Line		2.000E-01	0.000E+00	0.000E+00	1.339E-07	0.000E+00	0.000E+00	
Strike	Probability, 1/yr				1.539E-07	0.000E+00	0.000E+00	
1.0E-5	1/yr design speed				39.	38.	38.	
1.0E-6	1/yr design speed				39.	38.	38.	
1.0E-7	1/yr design speed				61.	38.	38.	
48	111	3.164E+03	1.0000	7	3	3		
Point		2.206E-03	5.360E-04	9.081E-03	9.096E-08	2.210E-08	3.744E-07	
Line		2.280E-01	9.628E-02	5.400E-01	3.561E-07	1.504E-07	8.433E-07	
Strike	Probability, 1/yr				4.470E-07	1.725E-07	1.218E-06	
1.0E-5	1/yr design speed				39.	39.	39.	
1.0E-6	1/yr design speed				39.	39.	51.	
1.0E-7	1/yr design speed				104.	64.	145.	

48	112	3.164E+03	1.0000	3	2	2	
Point		8.533E-04	5.569E-04	1.307E-03	1.508E-08	9.840E-09	2.310E-08
Line		1.502E-01	9.802E-02	2.301E-01	1.005E-07	6.560E-08	1.540E-07
Strike Probability, 1/yr					1.156E-07	7.544E-08	1.771E-07
1.0E-5 1/yr design speed					39.	38.	39.
1.0E-6 1/yr design speed					39.	38.	39.
1.0E-7 1/yr design speed					47.	38.	71.
48	113	3.164E+03	1.0000	0	0	0	
48	114	3.164E+03	1.0000	1	0	1	
Point		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Line		2.000E+00	0.000E+00	0.000E+00	4.462E-07	0.000E+00	0.000E+00
Strike Probability, 1/yr					4.462E-07	0.000E+00	0.000E+00
1.0E-5 1/yr design speed					39.	38.	38.
1.0E-6 1/yr design speed					39.	38.	38.
1.0E-7 1/yr design speed					105.	38.	38.
48	115	3.164E+03	1.0000	0	0	0	
48	116	3.164E+03	1.0000	3	3	3	
Point		2.870E-01	2.905E-03	2.836E+01	5.071E-06	5.132E-08	5.011E-04
Line		1.278E+00	2.155E-01	7.582E+00	8.555E-07	1.442E-07	5.075E-06
Strike Probability, 1/yr					5.927E-06	1.956E-07	5.062E-04
1.0E-5 1/yr design speed					39.	39.	186.
1.0E-6 1/yr design speed					111.	39.	249.
1.0E-7 1/yr design speed					181.	69.	307.
48	117	3.164E+03	1.0000	3	1	1	
Point		1.136E-03	0.000E+00	0.000E+00	2.008E-08	0.000E+00	0.000E+00
Line		2.000E-01	0.000E+00	0.000E+00	1.339E-07	0.000E+00	0.000E+00
Strike Probability, 1/yr					1.539E-07	0.000E+00	0.000E+00
1.0E-5 1/yr design speed					39.	38.	38.
1.0E-6 1/yr design speed					39.	38.	38.
1.0E-7 1/yr design speed					61.	38.	38.
48	118	3.164E+03	1.0000	5	5	5	
Point		1.476E-01	7.451E-02	2.924E-01	4.346E-06	2.194E-06	8.609E-06
Line		2.598E+00	1.311E+00	5.145E+00	2.898E-06	1.463E-06	5.739E-06
Strike Probability, 1/yr					7.244E-06	3.657E-06	1.435E-05
1.0E-5 1/yr design speed					39.	39.	60.
1.0E-6 1/yr design speed					119.	90.	150.
1.0E-7 1/yr design speed					190.	160.	220.
48	119	3.164E+03	1.0000	3	3	3	
Point		4.000E-03	1.023E-03	1.564E-02	7.067E-08	1.807E-08	2.764E-07
Line		3.883E-01	9.434E-02	1.598E+00	2.599E-07	6.314E-08	1.070E-06
Strike Probability, 1/yr					3.306E-07	8.121E-08	1.346E-06
1.0E-5 1/yr design speed					39.	38.	39.
1.0E-6 1/yr design speed					39.	38.	56.
1.0E-7 1/yr design speed					93.	38.	149.

48	120	3.164E+03	1.0000	0	0	0		
48	121	3.164E+03	1.0000	0	0	0		
48	122	2.215E+03	0.7000	2	2	2		
Point		5.369E-03	5.079E-03	5.676E-03	9.035E-08	8.547E-08	9.551E-08	
Line		3.000E-01	0.000E+00	0.000E+00	1.912E-07	0.000E+00	0.000E+00	
Strike Probability, 1/yr					2.816E-07	8.547E-08	9.551E-08	
1.0E-5 1/yr design speed					39.	38.	38.	
1.0E-6 1/yr design speed					39.	38.	38.	
1.0E-7 1/yr design speed					87.	38.	38.	
48	123	3.164E+02	0.1000	0	0	0		
48	124	3.164E+02	0.1000	0	0	0		

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11. ABSTRACT *(200 words or less)*

Characteristics of tornadoes reported in the contiguous United States from January1950 through August 2003 are used to determine tornado strike probabilities and maximum wind speeds for use in nuclear power plant design. Maps show the distribution of tornado events and design wind speeds. Appendices contain the number of tornadoes and estimates of strike probabilities and maximum wind speeds by 1°, 2°, and 4° latitude and longitude boxes. The methods used in this analysis are similar to those used in the analysis leading to publication of the initial tornado climatology in 1986 with the addition of a term to account for finite dimensions of structures and consideration of the variation of wind speeds along and across the tornado footprint. The results indicate that a maximum wind speed of about 300 mph is appropriate for tornadoes with a best estimate probability of 10^{-7} per year for the central portion of the United States; a maximum wind speed of 260 mph is appropriate for a large region of the United States along the east coast, the northern border, and the western great plains; and a maximum wind speed of 200 mph is appropriate for the western United States.

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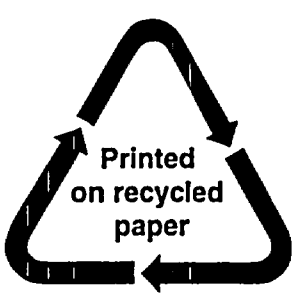

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