

BART Exemption Modeling Report:

Georgia Power Company Plant Scherer

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for Georgia Power Company

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1.0 Introduction

1.1 Objectives

The Regional Haze Rule requires Best Available Retrofit Technology (BART) for any BART-eligible source that “emits any air pollutant which may reasonably be anticipated to cause or contribute to any impairment of visibility” in any mandatory Class I federal area. Pursuant to federal regulations, states have the option of exempting a BART-eligible source from the BART requirements based on dispersion modeling demonstrating that the source cannot reasonably be anticipated to cause or contribute to visibility impairment in a Class I area. In addition, the Environmental Protection Agency (EPA) has promulgated a rule allowing states subject to the Clean Air Interstate Rule (CAIR) to determine that CAIR satisfies the BART requirements for SO₂ and NO_x for electric generating units (EGUs). Feedback from the Georgia Environmental Protection Division indicates that CAIR satisfies BART for SO₂ and NO_x for EGUs. Therefore, this modeling report focuses on performing the BART modeling analysis for particulate matter (PM) only.

Units 1, 2, 3, and 4 at Plant Scherer, located near Smyrna, which is operated by Georgia Power Company, has been identified as a BART-eligible source. The modeling procedures outlined in the source-specific BART modeling protocol for Plant Scherer were used to determine whether the source is subject to BART requirements (exemption modeling). The modeling procedures are consistent with those outlined in the updated final VISTAS common BART modeling protocol (dated December 22, 2005, revision 3 – July 18, 2006), available at http://www.vistas-sesarm.org/BART/BARTModelingProtocol_rev3_18Jul2006.pdf. This source-specific BART modeling protocol references relevant portions of the common VISTAS modeling protocol.

1.2 Location of source vs. relevant Class I Areas

The Georgia Environmental Protection Division, which is in charge of the state's BART program, has determined that Units 1, 2, 3, and 4 at Plant Scherer are BART-eligible for PM. Figure 1-1 shows a plot of Plant Scherer relative to nearby Class I Areas. There are six Class I areas within 300 km of the plant: Cohutta (211.8 km), Great Smoky Mountains (265.3 km), Joyce Kilmer (256.3 km), Okefenokee (263.1 km), Shining Rock (268.3 km), and Wolf Island (299.4 km). The BART exemption modeling was conducted for these Class I areas in accordance with the referenced VISTAS common BART modeling protocol and the procedures described in the source-specific BART modeling protocol.

Figure 1-1 Location of Class I Areas in Relation to Plant Scherer



2.0 Source description and emissions data

2.1 Unit-specific source data

The emissions data used to assess the visibility impacts at the Class I areas within 300 km of Plant Scherer are discussed in this section. The Georgia Environmental Protection Division has indicated that CAIR will satisfy BART for EGUs for SO₂ and NO_x. Therefore, this BART exemption modeling analysis focuses only on PM₁₀. Since various components of PM₁₀ emissions have different visibility extinction efficiencies, the PM₁₀ emissions are divided, or “speciated,” into several components (VISTAS common protocol Sections 4.3.3 and 4.4.2). The VISTAS protocol (Section 5) allows for the use of source-specific emissions and speciation factors and/or default values from AP-42. The PM₁₀ emissions and speciation approach that were used for the modeling is indicated below. Where default speciation values are used, the data represents a unit where current (baseline) emission controls include electrostatic precipitators (ESPs), but no post-combustion NO_x or SO₂ control equipment exists.

- Total PM₁₀ is comprised of filterable and condensable emissions.
- Baseline filterable PM₁₀ emissions are based on the highest stack test for the most recent 3-year period (2003-2005). This stack test is combined with the highest 24 hour heat input value for this period from CEMS data to calculate the “maximum 24 hour average emission rate” as required by the VISTAS protocol.
- Filterable PM₁₀ has been subdivided by size category consistent with the default approach from AP-42 Table 1-1.6, and as noted on pages 43 and 44 of the VISTAS common BART modeling protocol. The AP-42 Table 1-1.6 specifies for the emission controls indicated above that 55.6% of filterable PM₁₀ emissions is coarse (greater than 2.5 microns in size) and 44.4% is fine. Of the fine portion, 3.7% is elemental carbon and the remainder is inorganic fine particulates (soil).
- Condensable PM₁₀ consists of inorganic and organic compounds. The inorganic portion is by default assumed to be H₂SO₄, although other non-sulfate inorganic condensables could be present. The organic portion is modeled as organic aerosols.
- Baseline H₂SO₄ emissions are calculated consistent with the method used by Georgia Power to derive these emissions for TRI purposes. This approach assumes that the H₂SO₄ emissions released from the stack are proportional to SO₂ emissions from combustion and are dependent on the fuel type and the removal of H₂SO₄ by downstream equipment (i.e., ESP and air heater). For Powder River Basin (PRB) coal the baseline H₂SO₄ release rate is in the range of 0.1 to 0.3% of the SO₂ emissions. Appendix A of the site-specific modeling protocol provides the basis for the site-specific values used.
- Baseline emissions of condensable organics (the remaining portion of condensable PM₁₀) are derived based on the supporting field observational information in Appendix B of the site-specific modeling protocol and is estimated as 0.32% of SO₂ emitted.
- Coarse filterable particles (between 2.5 and 10 microns in size) will be modeled with a geometric mass mean diameter of 5 microns, while fine filterable and all condensable particles will be modeled with a geometric mass mean diameter of 0.48 microns, consistent with the CALPUFF default value for fine particles. The geometric standard deviation for both fine and coarse particles will be set to 2 microns, consistent with the CALPUFF default value. The 0.48 micron diameter value for fine particles comes from the default values in sample input files presented on the TRC web site. There is no default value presented for the coarse particles on the TRC web site. However, since 5 is the geometric mass mean diameter of 2.5 and 10 (the bounds of coarse particle sizes), it is a reasonable estimate for the geometric mass mean diameter for that class of particles.

In practice, CALPUFF allows for the user to input certain components of PM₁₀ as separate species and separate sizes, which will result in more accurate wet and dry deposition velocity results and also more

accurate effects on light scattering. As noted above, the particle size distribution information is provided in AP-42 Table 1-1.6, and will be used for the BART exemption modeling.

Table 2-1 provides a summary of the modeling emission parameters used in the BART CALPUFF modeling, consistent with the source emissions data presented in Appendices A and B of the site-specific modeling protocol for the baseline. All of the emissions in Table 2-1 were derived from CEMS data for the 2003 to 2005 period and represent the maximum 24-hour average lb/hr rates (excluding days where startup, shutdown, or malfunctions occurred). For NO_x and SO₂ the values are directly from CEMS. Filterable PM₁₀ emissions were calculated using the highest stack test over the 2003 to 2005 period and multiplying these values times the maximum 24-hour average heat input derived from CEMS. These values were then adjusted using AP-42 factors from Table 1.1-6 that indicate that PM₁₀ is 67% of total PM for a pulverized coal unit with an ESP. PM₁₀ speciation was then performed as indicated above such that total Filterable PM₁₀ is made up of Coarse Soil plus total Fine PM and total Fine PM is made up of Fine Soil plus Elemental Carbon (EC).

Table 2-1 Plant Scherer modeling emission parameters

Case	Source / Unit	Location UTM (Zone 17 NAD-83)		Actual Stack Ht	Base Elev.	Flue Dia- meter	Gas Exit Vel.	Stack Gas Exit Temp.	Emissions ¹			Particle Speciation ²							
		UTM East	UTM North						SO ₂	NO _x	PM ₁₀	Filt. PM ₁₀	Coarse Soil	Fine PM	Fine Soil	EC	Cond. PM ₁₀	H ₂ SO ₄	Organic
		m	m	m	m	m	m/s	deg K	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr
Baseline Data - Current Configuration (Unit Basis)																			
Baseline	Unit 1	237,891	3,661,258	308.4	142.3	8.2	23.2	409.7	8779.75	3557.33	169.67	117.62	65.39	52.22	50.29	1.93	52.06	23.96	28.10
Baseline	Unit 2	237,891	3,661,258	308.4	142.3	8.2	23.2	409.7	8716.33	2460.17	179.30	125.85	69.97	55.88	53.81	2.07	53.45	25.56	27.89
Baseline	Unit 3	237,891	3,661,258	308.4	142.3	8.2	24.2	400.8	8473.19	1471.92	111.32	76.03	42.28	33.76	32.51	1.25	35.29	8.18	27.11
Baseline	Unit 4	237,891	3,661,258	308.4	142.3	8.2	24.2	400.8	8662.50	1518.75	89.27	53.19	29.57	23.62	22.74	0.87	36.08	8.36	27.72
Baseline Data - Current Configuration (Stack Basis)																			
				Modeled Stk Ht ³		Eq. Dia.													
		m	m	m	m	m	m/s	deg K	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr
Stack 1	1&2	237,891	3,661,258	214.6	142.3	11.6	23.2	409.7	17496.08	6017.50	348.97	243.46	135.37	108.10	104.10	4.00	105.51	49.52	55.99
Stack 2	3&4	237,891	3,661,258	214.6	142.3	11.6	23.2	400.8	17135.69	2990.67	200.59	129.22	71.85	57.38	55.25	2.12	71.37	16.53	54.83
Stack Basis Emissions Converted to g/sec									g/sec	g/sec	g/sec	g/sec	g/sec	g/sec	g/sec	g/sec	g/sec	g/sec	g/sec
Stack 1	1&2	237,891	3,661,258	214.6	142.3	11.6	23.2	409.7	2204.51	758.21	43.97	30.68	17.06	13.62	13.12	0.50	13.29	6.24	7.05
Stack 2	3&4	237,891	3,661,258	214.6	142.3	11.6	23.2	400.8	2159.10	376.82	25.27	16.28	9.05	7.23	6.96	0.27	8.99	2.08	6.91

¹ SO₂ and NO_x emissions are not BART-applicable for EGU sources in CAIR states, if the state agency agrees with EPA's interpretation of the BART final rule. The emissions for SO₂ and NO_x are provided for information purposes, and for reference in the computation of certain particle species such as H₂SO₄.

² Elemental carbon (EC) and Fine PM are a part of Filterable PM₁₀ and H₂SO₄ and Organics are a part of Condensable PM₁₀. Note that H₂SO₄ is input to CALPUFF as SO₄. The molecular weights of H₂SO₄ and SO₄ are 98 and 96 respectively, therefore the conversion factor from H₂SO₄ to SO₄ is 96/98.

³ Stack credit is equal to GEP. GEP of 704 ft (214.6 m) is less than actual height therefore GEP height is used for modeling.

3.0 Modeling results

The exemption modeling results are provided in Table 3-1, and Appendix A lists delta-deciview results for the top 20 days for each year modeled and the top 25 days for the overall three years at each Class I area. The table indicates that both the 8th highest day's impacts for each year and the 22nd highest day's impacts over all three years are below 0.5 delta-dv. These results demonstrate that Plant Scherer's PM₁₀ emissions do not cause or contribute to visibility impairment. Therefore, the source is not subject to BART for PM₁₀, and no further BART analysis is required.

Electronic data related to this application are provided on the attached disk. They include all input (INP) and list (LST) files.

Table 3-1 Summary of Results – Plant Scherer Refined BART Exemption Modeling

		2001			2002			2003			Highest of 8 th Highest delta-dv for the 3- years	22 nd Highest delta-dv over 3- year period
Class I area	Distance from source to Class I area boundary	# of days and receptors beyond 98 th percentile with impact > 0.5 delta-dv		8 th Highest delta-dv	# of days and receptors beyond 98 th percentile with impact > 0.5 delta-dv		8 th Highest delta-dv	# of days and receptors beyond 98 th percentile with impact > 0.5 delta-dv		8 th Highest delta-dv		
	Km	Days	Rec	delta-dv	Days	Rec	delta-dv	Days	Rec	delta-dv	delta-dv	delta-dv
Cohutta	211.8	0	0	0.08	0	0	0.06	0	0	0.08	0.08	0.08
Great Smoky Mountains	265.3	0	0	0.06	0	0	0.05	0	0	0.07	0.07	0.06
Joyce Kilmer	256.3	0	0	0.05	0	0	0.05	0	0	0.07	0.07	0.06
Shining Rock	268.3	0	0	0.05	0	0	0.06	0	0	0.06	0.06	0.05
Okefenokee	263.1	0	0	0.07	0	0	0.08	0	0	0.06	0.08	0.07
Wolf Island	299.4	0	0	0.05	0	0	0.06	0	0	0.04	0.06	0.05

Appendix A

**Delta-Deciview Values for the Top 20 Days – for Each Year/Each
Class I Area and for the Top 25 Days – Over Three Years**

Ranked Daily Visibility Change for Cohutta (Top 20 Days for Each Year)

YEAR	DAY	REC	DV(Total)	DV(BKG)	DELTA DV	F(RH)	% of Modeled Extinction by Species						Ranking
							% SO4	% NO3	% OC	% EC	% PMC	% PMF	
2001	327	97	7.759	7.599	0.160	3.4	54.22	0.00	27.03	3.69	5.45	9.61	1
2001	123	97	7.703	7.599	0.105	3.4	55.20	0.00	27.07	3.73	4.28	9.72	2
2001	287	16	7.700	7.599	0.102	3.8	57.91	0.00	25.50	3.50	3.95	9.14	3
2001	129	9	7.697	7.599	0.099	3.4	54.52	0.00	26.70	3.68	5.51	9.59	4
2001	36	97	7.691	7.599	0.092	3.1	52.06	0.00	28.10	3.86	5.92	10.07	5
2001	30	97	7.687	7.599	0.088	3.3	54.71	0.00	27.69	3.81	3.86	9.93	6
2001	229	9	7.677	7.599	0.078	4.2	59.39	0.00	23.62	3.25	5.27	8.47	7
2001	328	16	7.675	7.599	0.077	3.4	55.23	0.00	26.61	3.70	4.80	9.66	8
2001	340	45	7.673	7.599	0.074	3.5	54.45	0.00	26.49	3.60	6.06	9.39	9
2001	286	3	7.672	7.599	0.073	3.8	58.22	0.00	25.88	3.54	3.14	9.22	10
2001	27	1	7.664	7.599	0.066	3.3	54.25	0.00	27.40	3.77	4.74	9.84	11
2001	198	3	7.664	7.599	0.065	4.0	59.60	0.00	24.90	3.42	3.15	8.93	12
2001	307	9	7.663	7.599	0.064	3.4	54.97	0.00	26.52	3.69	5.22	9.62	13
2001	113	54	7.656	7.599	0.058	2.8	50.69	0.00	29.77	4.13	4.63	10.78	14
2001	124	16	7.654	7.599	0.055	3.4	54.08	0.00	26.43	3.65	6.34	9.51	15
2001	358	214	7.650	7.599	0.052	3.5	55.93	0.00	26.64	3.67	4.19	9.57	16
2001	178	3	7.645	7.599	0.047	3.8	57.94	0.00	25.66	3.51	3.73	9.16	17
2001	121	115	7.645	7.599	0.047	2.8	50.96	0.00	30.12	4.17	3.90	10.86	18
2001	56	181	7.646	7.599	0.047	3.1	51.47	0.00	28.93	3.88	5.59	10.12	19
2001	199	97	7.644	7.599	0.046	4.0	59.49	0.00	25.04	3.43	3.10	8.94	20
2002	223	8	7.774	7.599	0.176	4.2	60.00	0.00	23.80	3.28	4.37	8.55	1
2002	51	181	7.762	7.599	0.163	3.1	52.21	0.00	28.75	3.90	4.96	10.18	2
2002	99	97	7.718	7.599	0.119	2.8	50.86	0.00	30.19	4.16	3.93	10.86	3
2002	276	25	7.688	7.599	0.089	3.8	57.45	0.00	25.11	3.46	4.94	9.04	4
2002	41	8	7.679	7.599	0.080	3.1	52.01	0.00	27.71	3.84	6.45	10.00	5
2002	235	113	7.673	7.599	0.075	4.2	59.76	0.00	23.85	3.27	4.59	8.54	6
2002	263	9	7.672	7.599	0.073	4.2	59.57	0.00	23.76	3.26	4.90	8.51	7
2002	298	9	7.662	7.599	0.064	3.8	56.12	0.00	25.97	3.47	5.42	9.03	8
2002	148	182	7.661	7.599	0.063	3.4	55.37	0.00	27.23	3.74	3.89	9.76	9
2002	226	179	7.657	7.599	0.058	4.2	60.95	0.00	24.06	3.32	3.00	8.67	10
2002	222	214	7.654	7.599	0.056	4.2	60.62	0.00	24.08	3.31	3.34	8.64	11
2002	115	214	7.653	7.599	0.054	2.8	50.24	0.00	30.14	4.13	4.72	10.77	12
2002	157	8	7.646	7.599	0.048	3.8	58.10	0.00	25.41	3.51	3.85	9.14	13
2002	47	9	7.647	7.599	0.048	3.1	51.63	0.00	28.00	3.84	6.53	10.00	14
2002	71	16	7.643	7.599	0.044	3.0	52.12	0.00	27.21	3.89	6.64	10.15	15
2002	225	3	7.642	7.599	0.043	4.2	61.20	0.00	24.25	3.34	2.50	8.72	16
2002	98	16	7.640	7.599	0.042	2.8	50.64	0.00	29.44	4.11	5.08	10.73	17
2002	227	214	7.639	7.599	0.040	4.2	61.21	0.00	24.17	3.34	2.58	8.71	18
2002	224	3	7.638	7.599	0.040	4.2	60.72	0.00	24.19	3.32	3.09	8.67	19
2002	79	97	7.637	7.599	0.038	3.0	53.55	0.00	29.84	4.10	1.82	10.70	20
2003	245	9	7.794	7.599	0.195	4.2	59.48	0.00	23.64	3.25	5.16	8.48	1
2003	244	3	7.759	7.599	0.160	4.2	60.30	0.00	23.94	3.30	3.87	8.60	2
2003	246	44	7.707	7.599	0.108	4.2	60.22	0.00	23.85	3.29	4.06	8.58	3
2003	363	16	7.698	7.599	0.100	3.5	54.92	0.00	25.64	3.57	6.55	9.32	4
2003	122	9	7.698	7.599	0.100	3.4	54.22	0.00	26.50	3.66	6.10	9.53	5
2003	331	44	7.690	7.599	0.091	3.4	53.69	0.00	26.50	3.63	6.71	9.48	6
2003	305	16	7.685	7.599	0.086	3.8	57.20	0.00	24.93	3.45	5.44	8.99	7
2003	270	3	7.681	7.599	0.082	4.2	61.06	0.00	24.45	3.35	2.41	8.73	8
2003	115	8	7.676	7.599	0.078	2.8	49.06	0.00	29.10	4.02	7.35	10.47	9
2003	316	1	7.672	7.599	0.073	3.4	53.71	0.00	26.50	3.64	6.68	9.48	10
2003	119	3	7.669	7.599	0.071	2.8	50.20	0.00	30.06	4.13	4.86	10.76	11
2003	304	9	7.669	7.599	0.070	3.8	58.55	0.00	25.08	3.50	3.73	9.14	12
2003	332	16	7.661	7.599	0.062	3.4	55.10	0.00	26.57	3.69	5.00	9.64	13
2003	226	195	7.659	7.599	0.061	4.2	59.49	0.00	23.73	3.26	5.04	8.49	14
2003	306	9	7.651	7.599	0.052	3.4	54.09	0.00	26.22	3.63	6.58	9.48	15
2003	271	44	7.649	7.599	0.051	4.2	59.79	0.00	24.01	3.28	4.35	8.56	16
2003	309	218	7.649	7.599	0.050	3.4	53.91	0.00	26.91	3.67	5.95	9.56	17
2003	64	3	7.648	7.599	0.049	3.0	52.43	0.00	29.00	4.00	4.12	10.44	18
2003	299	8	7.645	7.599	0.046	3.8	57.61	0.00	24.78	3.45	5.16	9.00	19
2003	106	97	7.644	7.599	0.046	2.8	50.72	0.00	30.33	4.17	3.93	10.86	20

Ranked Daily Visibility Change for Cohutta (Top 25 Days Over Three Years)

% of Modeled Extinction by Species													
<u>YEAR</u>	<u>DAY</u>	<u>REC</u>	<u>DV(Total)</u>	<u>DV(BKG)</u>	<u>DELTA DV</u>	<u>F(RH)</u>	<u>% SO4</u>	<u>% NO3</u>	<u>% OC</u>	<u>% EC</u>	<u>% PMC</u>	<u>% PMF</u>	<u>Ranking</u>
2003	245	9	7.794	7.599	0.195	4.2	59.48	0.00	23.64	3.25	5.16	8.48	1
2002	223	8	7.774	7.599	0.176	4.2	60.00	0.00	23.80	3.28	4.37	8.55	2
2002	51	181	7.762	7.599	0.163	3.1	52.21	0.00	28.75	3.90	4.96	10.18	3
2001	327	97	7.759	7.599	0.160	3.4	54.22	0.00	27.03	3.69	5.45	9.61	4
2003	244	3	7.759	7.599	0.160	4.2	60.30	0.00	23.94	3.30	3.87	8.60	5
2002	99	97	7.718	7.599	0.119	2.8	50.86	0.00	30.19	4.16	3.93	10.86	6
2003	246	44	7.707	7.599	0.108	4.2	60.22	0.00	23.85	3.29	4.06	8.58	7
2001	123	97	7.703	7.599	0.105	3.4	55.20	0.00	27.07	3.73	4.28	9.72	8
2001	287	16	7.700	7.599	0.102	3.8	57.91	0.00	25.50	3.50	3.95	9.14	9
2003	363	16	7.698	7.599	0.100	3.5	54.92	0.00	25.64	3.57	6.55	9.32	10
2003	122	9	7.698	7.599	0.100	3.4	54.22	0.00	26.50	3.66	6.10	9.53	11
2001	129	9	7.697	7.599	0.099	3.4	54.52	0.00	26.70	3.68	5.51	9.59	12
2001	36	97	7.691	7.599	0.092	3.1	52.06	0.00	28.10	3.86	5.92	10.07	13
2003	331	44	7.690	7.599	0.091	3.4	53.69	0.00	26.50	3.63	6.71	9.48	14
2002	276	25	7.688	7.599	0.089	3.8	57.45	0.00	25.11	3.46	4.94	9.04	15
2001	30	97	7.687	7.599	0.088	3.3	54.71	0.00	27.69	3.81	3.86	9.93	16
2003	305	16	7.685	7.599	0.086	3.8	57.20	0.00	24.93	3.45	5.44	8.99	17
2003	270	3	7.681	7.599	0.082	4.2	61.06	0.00	24.45	3.35	2.41	8.73	18
2002	41	8	7.679	7.599	0.080	3.1	52.01	0.00	27.71	3.84	6.45	10.00	19
2001	229	9	7.677	7.599	0.078	4.2	59.39	0.00	23.62	3.25	5.27	8.47	20
2003	115	8	7.676	7.599	0.078	2.8	49.06	0.00	29.10	4.02	7.35	10.47	21
2001	328	16	7.675	7.599	0.077	3.4	55.23	0.00	26.61	3.70	4.80	9.66	22
2002	235	113	7.673	7.599	0.075	4.2	59.76	0.00	23.85	3.27	4.59	8.54	23
2001	340	45	7.673	7.599	0.074	3.5	54.45	0.00	26.49	3.60	6.06	9.39	24
2001	286	3	7.672	7.599	0.073	3.8	58.22	0.00	25.88	3.54	3.14	9.22	25

Ranked Daily Visibility Change for Great Smoky Mountains (Top 20 Days for Each Year)

% of Modeled Extinction by Species													Ranking
YEAR	DAY	REC	DV(Total)	DV(BKG)	DELTA DV	F(RH)	% SO4	% NO3	% OC	% EC	% PMC	% PMF	
2001	40	361	7.777	7.599	0.178	3.0	51.93	0.00	29.04	3.98	4.65	10.39	1
2001	333	435	7.730	7.599	0.131	3.3	54.00	0.00	27.31	3.76	5.13	9.80	2
2001	327	514	7.686	7.599	0.087	3.3	55.12	0.00	27.39	3.81	3.75	9.93	3
2001	329	408	7.680	7.599	0.081	3.3	54.00	0.00	26.74	3.73	5.83	9.72	4
2001	179	366	7.672	7.599	0.073	3.9	58.96	0.00	25.13	3.47	3.41	9.04	5
2001	51	341	7.668	7.599	0.070	3.0	53.11	0.00	29.47	4.06	2.77	10.59	6
2001	334	399	7.664	7.599	0.065	3.3	54.46	0.00	27.42	3.78	4.48	9.87	7
2001	181	937	7.657	7.599	0.058	3.9	58.66	0.00	24.49	3.42	4.51	8.92	8
2001	347	999	7.653	7.599	0.055	3.4	54.08	0.00	26.63	3.66	6.10	9.54	9
2001	220	371	7.653	7.599	0.054	4.0	58.26	0.00	24.20	3.34	5.50	8.71	10
2001	30	349	7.648	7.599	0.050	3.3	54.16	0.00	27.47	3.77	4.76	9.84	11
2001	182	710	7.648	7.599	0.049	3.9	58.17	0.00	24.75	3.42	4.75	8.91	12
2001	114	371	7.648	7.599	0.049	2.7	48.83	0.00	30.06	4.15	6.15	10.81	13
2001	41	434	7.647	7.599	0.049	3.0	52.14	0.00	28.81	3.98	4.69	10.38	14
2001	36	474	7.644	7.599	0.045	3.0	52.69	0.00	28.99	4.02	3.83	10.47	15
2001	123	429	7.641	7.599	0.042	3.2	54.38	0.00	28.43	3.91	3.09	10.19	16
2001	199	322	7.636	7.599	0.037	3.8	58.65	0.00	25.83	3.55	2.72	9.25	17
2001	357	436	7.635	7.599	0.036	3.4	54.76	0.00	26.48	3.68	5.50	9.59	18
2001	198	324	7.635	7.599	0.036	3.8	58.23	0.00	25.72	3.53	3.32	9.20	19
2001	349	392	7.632	7.599	0.034	3.4	54.15	0.00	26.69	3.66	5.95	9.55	20
2002	320	357	7.775	7.599	0.177	3.3	54.27	0.00	27.33	3.77	4.80	9.83	1
2002	89	513	7.675	7.599	0.076	2.9	51.08	0.00	29.82	4.07	4.42	10.61	2
2002	51	609	7.669	7.599	0.071	3.0	52.89	0.00	28.40	3.99	4.32	10.41	3
2002	223	606	7.667	7.599	0.068	4.0	59.95	0.00	25.04	3.44	2.59	8.98	4
2002	227	323	7.663	7.599	0.064	4.0	59.53	0.00	24.88	3.42	3.25	8.92	5
2002	93	364	7.655	7.599	0.056	2.7	50.58	0.00	31.32	4.30	2.58	11.23	6
2002	293	419	7.648	7.599	0.049	3.8	57.48	0.00	25.14	3.47	4.87	9.04	7
2003	1	514	7.645	7.599	0.047	3.4	55.97	0.00	26.97	3.75	3.51	9.79	8
2002	229	323	7.645	7.599	0.046	4.0	59.79	0.00	24.98	3.44	2.83	8.96	9
2002	226	429	7.643	7.599	0.044	4.0	59.61	0.00	24.68	3.41	3.41	8.90	10
2002	137	513	7.643	7.599	0.044	3.2	54.02	0.00	28.67	3.91	3.22	10.18	11
2002	32	605	7.642	7.599	0.043	3.3	53.40	0.00	26.98	3.71	6.23	9.69	12
2002	354	705	7.639	7.599	0.040	3.4	54.61	0.00	26.11	3.65	6.11	9.52	13
2002	118	605	7.637	7.599	0.039	2.7	48.87	0.00	30.72	4.19	5.32	10.91	14
2002	75	556	7.638	7.599	0.039	2.9	50.56	0.00	28.67	3.98	6.41	10.38	15
2002	313	364	7.637	7.599	0.038	3.3	55.61	0.00	28.22	3.88	2.18	10.11	16
2002	278	338	7.634	7.599	0.036	3.8	58.63	0.00	25.60	3.53	3.01	9.22	17
2002	222	365	7.632	7.599	0.034	4.0	60.02	0.00	25.11	3.45	2.42	9.00	18
2002	74	419	7.633	7.599	0.034	2.9	50.49	0.00	29.44	4.02	5.58	10.48	19
2002	224	429	7.631	7.599	0.032	4.0	60.19	0.00	25.03	3.45	2.34	9.00	20
2003	351	330	7.756	7.599	0.157	3.4	55.85	0.00	27.15	3.76	3.44	9.80	1
2003	358	605	7.719	7.599	0.121	3.4	54.50	0.00	26.56	3.67	5.70	9.57	2
2003	328	652	7.691	7.599	0.092	3.3	53.35	0.00	27.22	3.73	5.99	9.72	3
2003	108	605	7.691	7.599	0.092	2.7	48.97	0.00	30.22	4.16	5.79	10.86	4
2003	291	513	7.671	7.599	0.073	3.8	56.87	0.00	25.45	3.46	5.18	9.03	5
2003	247	339	7.671	7.599	0.073	4.2	61.32	0.00	24.29	3.35	2.30	8.73	6
2003	364	514	7.664	7.599	0.066	3.4	55.49	0.00	26.99	3.73	4.05	9.74	7
2003	106	353	7.665	7.599	0.066	2.7	49.59	0.00	30.70	4.22	4.48	11.01	8
2003	107	351	7.661	7.599	0.063	2.7	49.10	0.00	30.23	4.17	5.62	10.87	9
2003	363	434	7.659	7.599	0.061	3.4	54.38	0.00	26.21	3.65	6.25	9.51	10
2003	122	431	7.660	7.599	0.061	3.2	53.68	0.00	27.85	3.84	4.60	10.03	11
2003	258	474	7.653	7.599	0.054	4.2	60.29	0.00	23.82	3.29	4.02	8.58	12
2003	331	513	7.651	7.599	0.052	3.3	53.81	0.00	27.37	3.75	5.28	9.79	13
2003	246	435	7.647	7.599	0.048	4.2	59.52	0.00	24.17	3.28	4.47	8.56	14
2003	242	513	7.647	7.599	0.048	4.0	58.83	0.00	24.78	3.39	4.15	8.84	15
2003	226	474	7.644	7.599	0.046	4.0	58.95	0.00	24.12	3.36	4.82	8.76	16
2003	304	435	7.641	7.599	0.042	3.8	58.40	0.00	25.47	3.52	3.43	9.18	17
2003	344	371	7.640	7.599	0.041	3.4	55.08	0.00	26.92	3.71	4.60	9.69	18
2003	271	435	7.639	7.599	0.040	4.2	60.05	0.00	24.06	3.29	4.01	8.59	19
2003	288	605	7.637	7.599	0.038	3.8	56.90	0.00	24.99	3.44	5.70	8.97	20

Ranked Daily Visibility Change for Great Smoky Mountains (Top 25 Days Over Three Years)

% of Modeled Extinction by Species													
<u>YEAR</u>	<u>DAY</u>	<u>REC</u>	<u>DV(Total)</u>	<u>DV(BKG)</u>	<u>DELTA DV</u>	<u>F(RH)</u>	<u>% SO4</u>	<u>% NO3</u>	<u>% OC</u>	<u>% EC</u>	<u>% PMC</u>	<u>% PMF</u>	<u>Ranking</u>
2001	40	361	7.777	7.599	0.178	3.0	51.93	0.00	29.04	3.98	4.65	10.39	1
2002	320	357	7.775	7.599	0.177	3.3	54.27	0.00	27.33	3.77	4.80	9.83	2
2003	351	330	7.756	7.599	0.157	3.4	55.85	0.00	27.15	3.76	3.44	9.80	3
2001	333	435	7.730	7.599	0.131	3.3	54.00	0.00	27.31	3.76	5.13	9.80	4
2003	358	605	7.719	7.599	0.121	3.4	54.50	0.00	26.56	3.67	5.70	9.57	5
2003	328	652	7.691	7.599	0.092	3.3	53.35	0.00	27.22	3.73	5.99	9.72	6
2003	108	605	7.691	7.599	0.092	2.7	48.97	0.00	30.22	4.16	5.79	10.86	7
2001	327	514	7.686	7.599	0.087	3.3	55.12	0.00	27.39	3.81	3.75	9.93	8
2001	329	408	7.680	7.599	0.081	3.3	54.00	0.00	26.74	3.73	5.83	9.72	9
2002	89	513	7.675	7.599	0.076	2.9	51.08	0.00	29.82	4.07	4.42	10.61	10
2001	179	366	7.672	7.599	0.073	3.9	58.96	0.00	25.13	3.47	3.41	9.04	11
2003	291	513	7.671	7.599	0.073	3.8	56.87	0.00	25.45	3.46	5.18	9.03	12
2003	247	339	7.671	7.599	0.073	4.2	61.32	0.00	24.29	3.35	2.30	8.73	13
2002	51	609	7.669	7.599	0.071	3.0	52.89	0.00	28.40	3.99	4.32	10.41	14
2001	51	341	7.668	7.599	0.070	3.0	53.11	0.00	29.47	4.06	2.77	10.59	15
2002	223	606	7.667	7.599	0.068	4.0	59.95	0.00	25.04	3.44	2.59	8.98	16
2003	364	514	7.664	7.599	0.066	3.4	55.49	0.00	26.99	3.73	4.05	9.74	17
2003	106	353	7.665	7.599	0.066	2.7	49.59	0.00	30.70	4.22	4.48	11.01	18
2001	334	399	7.664	7.599	0.065	3.3	54.46	0.00	27.42	3.78	4.48	9.87	19
2002	227	323	7.663	7.599	0.064	4.0	59.53	0.00	24.88	3.42	3.25	8.92	20
2003	107	351	7.661	7.599	0.063	2.7	49.10	0.00	30.23	4.17	5.62	10.87	21
2003	363	434	7.659	7.599	0.061	3.4	54.38	0.00	26.21	3.65	6.25	9.51	22
2003	122	431	7.660	7.599	0.061	3.2	53.68	0.00	27.85	3.84	4.60	10.03	23
2001	181	937	7.657	7.599	0.058	3.9	58.66	0.00	24.49	3.42	4.51	8.92	24
2002	93	364	7.655	7.599	0.056	2.7	50.58	0.00	31.32	4.30	2.58	11.23	25

Ranked Daily Visibility Change for Joyce Kilmer (Top 20 Days for Each Year)

% of Modeled Extinction by Species													
YEAR	DAY	REC	DV(Total)	DV(BKG)	DELTA DV	F(RH)	% SO4	% NO3	% OC	% EC	% PMC	% PMF	Ranking
2001	333	246	7.746	7.608	0.138	3.3	53.72	0.00	27.23	3.74	5.55	9.76	1
2001	327	270	7.718	7.608	0.110	3.3	54.73	0.00	27.28	3.79	4.32	9.88	2
2001	40	225	7.710	7.608	0.102	3.1	52.96	0.00	28.94	3.95	3.87	10.29	3
2001	51	225	7.691	7.608	0.083	3.1	53.69	0.00	28.88	3.98	3.08	10.37	4
2001	179	221	7.684	7.608	0.076	3.8	58.18	0.00	25.43	3.51	3.72	9.15	5
2001	334	225	7.673	7.608	0.065	3.3	54.17	0.00	27.44	3.77	4.77	9.84	6
2001	220	248	7.672	7.608	0.064	4.2	59.37	0.00	23.53	3.24	5.39	8.46	7
2001	114	222	7.661	7.608	0.053	2.7	48.59	0.00	30.06	4.13	6.44	10.78	8
2001	41	221	7.660	7.608	0.052	3.1	52.57	0.00	28.28	3.89	5.11	10.15	9
2001	36	286	7.659	7.608	0.051	3.1	53.35	0.00	28.37	3.93	4.09	10.26	10
2001	123	270	7.655	7.608	0.047	3.3	55.04	0.00	27.92	3.84	3.20	10.00	11
2001	30	225	7.655	7.608	0.047	3.3	54.32	0.00	27.42	3.78	4.63	9.85	12
2001	329	225	7.654	7.608	0.046	3.3	52.68	0.00	27.88	3.74	5.96	9.74	13
2001	198	225	7.652	7.608	0.044	4.0	59.49	0.00	24.92	3.42	3.25	8.92	14
2001	357	221	7.650	7.608	0.042	3.5	55.16	0.00	26.02	3.60	5.82	9.40	15
2001	229	239	7.649	7.608	0.041	4.2	60.91	0.00	24.11	3.33	2.98	8.67	16
2001	199	225	7.649	7.608	0.040	4.0	59.76	0.00	25.05	3.44	2.78	8.96	17
2001	340	239	7.645	7.608	0.036	3.5	55.72	0.00	26.19	3.63	4.98	9.48	18
2001	181	258	7.642	7.608	0.034	3.8	57.64	0.00	26.06	3.53	3.59	9.19	19
2001	27	270	7.642	7.608	0.034	3.3	55.70	0.00	27.98	3.87	2.36	10.08	20
2002	51	310	7.696	7.608	0.088	3.1	53.57	0.00	27.78	3.91	4.54	10.20	1
2002	223	317	7.675	7.608	0.067	4.2	61.13	0.00	24.32	3.34	2.49	8.72	2
2002	227	258	7.669	7.608	0.061	4.2	60.69	0.00	24.06	3.32	3.28	8.65	3
2003	1	286	7.661	7.608	0.053	3.5	56.50	0.00	26.45	3.68	3.77	9.60	4
2002	293	222	7.657	7.608	0.049	3.8	57.15	0.00	25.23	3.46	5.13	9.02	5
2002	226	278	7.656	7.608	0.048	4.2	60.83	0.00	23.87	3.31	3.36	8.63	6
2002	222	221	7.654	7.608	0.046	4.2	61.04	0.00	24.29	3.34	2.62	8.71	7
2002	320	225	7.653	7.608	0.045	3.3	53.70	0.00	27.87	3.78	4.80	9.85	8
2002	313	225	7.643	7.608	0.035	3.3	55.78	0.00	28.50	3.90	1.65	10.16	9
2002	224	270	7.643	7.608	0.035	4.2	61.34	0.00	24.30	3.35	2.27	8.74	10
2002	263	278	7.642	7.608	0.034	4.2	60.02	0.00	24.02	3.29	4.08	8.58	11
2002	235	239	7.642	7.608	0.034	4.2	60.72	0.00	24.01	3.31	3.31	8.64	12
2002	229	225	7.642	7.608	0.034	4.2	60.93	0.00	24.25	3.33	2.79	8.69	13
2002	93	225	7.640	7.608	0.032	2.7	50.42	0.00	31.55	4.31	2.48	11.24	14
2002	105	264	7.637	7.608	0.029	2.7	48.82	0.00	29.82	4.13	6.46	10.78	15
2002	115	239	7.636	7.608	0.028	2.7	50.05	0.00	30.64	4.24	4.01	11.06	16
2002	47	240	7.636	7.608	0.028	3.1	52.18	0.00	28.14	3.87	5.72	10.09	17
2002	319	225	7.635	7.608	0.027	3.3	56.40	0.00	28.22	3.91	1.28	10.19	18
2002	225	221	7.635	7.608	0.027	4.2	61.32	0.00	24.28	3.35	2.31	8.73	19
2002	148	270	7.635	7.608	0.027	3.3	55.43	0.00	27.57	3.83	3.16	9.99	20
2003	351	225	7.728	7.608	0.120	3.5	55.95	0.00	27.16	3.70	3.55	9.64	1
2003	364	270	7.691	7.608	0.083	3.5	56.00	0.00	26.44	3.66	4.36	9.54	2
2003	363	278	7.691	7.608	0.083	3.5	54.91	0.00	25.89	3.59	6.26	9.35	3
2003	122	278	7.681	7.608	0.073	3.3	54.28	0.00	27.22	3.76	4.91	9.82	4
2003	258	278	7.675	7.608	0.067	4.2	60.25	0.00	23.92	3.29	3.94	8.59	5
2003	106	225	7.675	7.608	0.067	2.7	49.49	0.00	30.71	4.22	4.58	10.99	6
2003	247	225	7.674	7.608	0.066	4.2	61.34	0.00	24.37	3.35	2.19	8.75	7
2003	246	241	7.673	7.608	0.065	4.2	59.59	0.00	24.09	3.28	4.47	8.56	8
2003	107	225	7.669	7.608	0.061	2.7	48.79	0.00	30.15	4.15	6.09	10.82	9
2003	328	253	7.668	7.608	0.060	3.3	54.00	0.00	27.06	3.74	5.42	9.76	10
2003	331	221	7.667	7.608	0.059	3.3	53.43	0.00	27.20	3.73	5.92	9.72	11
2003	226	278	7.663	7.608	0.055	4.2	59.85	0.00	23.46	3.25	4.95	8.49	12
2003	271	239	7.654	7.608	0.046	4.2	59.93	0.00	23.95	3.28	4.27	8.56	13
2003	344	222	7.653	7.608	0.045	3.5	55.67	0.00	26.43	3.65	4.74	9.51	14
2003	304	239	7.652	7.608	0.044	3.8	58.58	0.00	25.35	3.52	3.38	9.18	15
2003	270	239	7.648	7.608	0.040	4.2	60.71	0.00	24.35	3.33	2.92	8.69	16
2003	64	239	7.648	7.608	0.040	2.9	51.46	0.00	29.28	4.06	4.62	10.58	17
2003	316	221	7.647	7.608	0.039	3.3	53.70	0.00	27.02	3.73	5.82	9.73	18
2003	178	225	7.644	7.608	0.036	3.8	58.33	0.00	25.54	3.52	3.42	9.18	19
2003	329	239	7.643	7.608	0.035	3.3	54.46	0.00	27.38	3.78	4.53	9.86	20

Ranked Daily Visibility Change for Joyce Kilmer (Top 25 Days Over Three Years)

% of Modeled Extinction by Species													
<u>YEAR</u>	<u>DAY</u>	<u>REC</u>	<u>DV(Total)</u>	<u>DV(BKG)</u>	<u>DELTA DV</u>	<u>F(RH)</u>	<u>% SO4</u>	<u>% NO3</u>	<u>% OC</u>	<u>% EC</u>	<u>% PMC</u>	<u>% PMF</u>	<u>Ranking</u>
2001	333	246	7.746	7.608	0.138	3.3	53.72	0.00	27.23	3.74	5.55	9.76	1
2003	351	225	7.728	7.608	0.120	3.5	55.95	0.00	27.16	3.70	3.55	9.64	2
2001	327	270	7.718	7.608	0.110	3.3	54.73	0.00	27.28	3.79	4.32	9.88	3
2001	40	225	7.710	7.608	0.102	3.1	52.96	0.00	28.94	3.95	3.87	10.29	4
2002	51	310	7.696	7.608	0.088	3.1	53.57	0.00	27.78	3.91	4.54	10.20	5
2001	51	225	7.691	7.608	0.083	3.1	53.69	0.00	28.88	3.98	3.08	10.37	6
2003	364	270	7.691	7.608	0.083	3.5	56.00	0.00	26.44	3.66	4.36	9.54	7
2003	363	278	7.691	7.608	0.083	3.5	54.91	0.00	25.89	3.59	6.26	9.35	8
2001	179	221	7.684	7.608	0.076	3.8	58.18	0.00	25.43	3.51	3.72	9.15	9
2003	122	278	7.681	7.608	0.073	3.3	54.28	0.00	27.22	3.76	4.91	9.82	10
2002	223	317	7.675	7.608	0.067	4.2	61.13	0.00	24.32	3.34	2.49	8.72	11
2003	258	278	7.675	7.608	0.067	4.2	60.25	0.00	23.92	3.29	3.94	8.59	12
2003	106	225	7.675	7.608	0.067	2.7	49.49	0.00	30.71	4.22	4.58	10.99	13
2003	247	225	7.674	7.608	0.066	4.2	61.34	0.00	24.37	3.35	2.19	8.75	14
2001	334	225	7.673	7.608	0.065	3.3	54.17	0.00	27.44	3.77	4.77	9.84	15
2003	246	241	7.673	7.608	0.065	4.2	59.59	0.00	24.09	3.28	4.47	8.56	16
2001	220	248	7.672	7.608	0.064	4.2	59.37	0.00	23.53	3.24	5.39	8.46	17
2002	227	258	7.669	7.608	0.061	4.2	60.69	0.00	24.06	3.32	3.28	8.65	18
2003	107	225	7.669	7.608	0.061	2.7	48.79	0.00	30.15	4.15	6.09	10.82	19
2003	328	253	7.668	7.608	0.060	3.3	54.00	0.00	27.06	3.74	5.42	9.76	20
2003	331	221	7.667	7.608	0.059	3.3	53.43	0.00	27.20	3.73	5.92	9.72	21
2003	226	278	7.663	7.608	0.055	4.2	59.85	0.00	23.46	3.25	4.95	8.49	22
2001	114	222	7.661	7.608	0.053	2.7	48.59	0.00	30.06	4.13	6.44	10.78	23
2003	1	286	7.661	7.608	0.053	3.5	56.50	0.00	26.45	3.68	3.77	9.60	24
2001	41	221	7.660	7.608	0.052	3.1	52.57	0.00	28.28	3.89	5.11	10.15	25

Ranked Daily Visibility Change for Shining Rock (Top 20 Days for Each Year)

YEAR	DAY	REC	DV(Total)	DV(BKG)	DELTA DV	F(RH)	% of Modeled Extinction by Species						Ranking
							% SO4	% NO3	% OC	% EC	% PMC	% PMF	
2001	182	1064	7.678	7.608	0.07	3.9	58.17	0	24.85	3.42	4.64	8.93	1
2001	297	1068	7.672	7.608	0.064	3.8	57.53	0	25.1	3.47	4.86	9.04	2
2001	333	1061	7.664	7.608	0.056	3.3	53.55	0	26.94	3.72	6.09	9.7	3
2001	41	1061	7.664	7.608	0.056	3	52.33	0	28.62	3.98	4.7	10.38	4
2001	347	1060	7.661	7.608	0.053	3.4	53.48	0	27.21	3.67	6.08	9.56	5
2001	51	1062	7.66	7.608	0.052	3	50.89	0	28.3	3.89	6.76	10.16	6
2001	180	1068	7.659	7.608	0.051	3.9	58.67	0	24.97	3.45	3.92	8.99	7
2001	40	1118	7.657	7.608	0.049	3	52.58	0	28.36	3.97	4.72	10.37	8
2001	71	1062	7.651	7.608	0.043	2.9	50.72	0	29.51	4.03	5.21	10.52	9
2001	264	1062	7.648	7.608	0.04	4.4	60.76	0	22.6	3.15	5.28	8.21	10
2001	332	1062	7.647	7.608	0.039	3.3	53.22	0	26.68	3.69	6.78	9.62	11
2001	114	1087	7.647	7.608	0.039	2.7	49.36	0	30.31	4.19	5.22	10.92	12
2001	141	1062	7.645	7.608	0.037	3.4	55.11	0	26.74	3.7	4.77	9.66	13
2001	199	1063	7.643	7.608	0.035	4.1	60.62	0	24.69	3.4	2.43	8.86	14
2001	181	1154	7.64	7.608	0.032	3.9	58.71	0	24.81	3.44	4.06	8.97	15
2001	123	1062	7.638	7.608	0.03	3.4	56.12	0	27.25	3.77	3	9.84	16
2001	113	1062	7.637	7.608	0.029	2.7	49.71	0	31.64	4.28	3.21	11.16	17
2001	340	1068	7.634	7.608	0.026	3.4	54.05	0	25.83	3.61	7.08	9.42	18
2001	263	1062	7.634	7.608	0.026	4.4	62.08	0	23.41	3.23	2.84	8.43	19
2001	198	1103	7.632	7.608	0.024	4.1	60.13	0	24.67	3.38	3	8.81	20
2002	15	1062	7.715	7.608	0.107	3.3	53.34	0	26.96	3.71	6.31	9.68	1
2002	89	1117	7.696	7.608	0.088	2.9	51.63	0	28.98	4.05	4.78	10.56	2
2002	228	1087	7.684	7.608	0.076	4.5	62.28	0	23.04	3.17	3.23	8.28	3
2002	315	1062	7.68	7.608	0.072	3.3	54.03	0	27.21	3.75	5.21	9.79	4
2002	57	1062	7.676	7.608	0.068	3	51.76	0	28.97	3.97	4.94	10.36	5
2002	314	1062	7.676	7.608	0.067	3.3	53.08	0	27.15	3.71	6.38	9.68	6
2002	86	1087	7.674	7.608	0.066	2.9	49.92	0	29.05	3.97	6.69	10.36	7
2002	137	1118	7.664	7.608	0.056	3.4	56.33	0	27.07	3.77	2.99	9.84	8
2002	293	1087	7.663	7.608	0.054	3.8	58.5	0	25.58	3.53	3.18	9.2	9
2002	227	1063	7.66	7.608	0.052	4.5	62.19	0	23.1	3.18	3.25	8.28	10
2002	32	1087	7.658	7.608	0.049	3.3	52.87	0	26.99	3.69	6.82	9.63	11
2002	313	1068	7.652	7.608	0.044	3.3	54.68	0	27.54	3.8	4.08	9.91	12
2002	93	1118	7.651	7.608	0.043	2.7	49.93	0	30.75	4.24	4.02	11.06	13
2002	133	1062	7.647	7.608	0.039	3.4	54.78	0	27.55	3.74	4.19	9.74	14
2002	67	1087	7.646	7.608	0.038	2.9	52.67	0	30.19	4.16	2.11	10.86	15
2002	118	1118	7.645	7.608	0.037	2.7	49.66	0	29.92	4.18	5.33	10.9	16
2002	226	1063	7.644	7.608	0.036	4.5	62.57	0	23.05	3.18	2.89	8.3	17
2002	229	1063	7.643	7.608	0.035	4.5	62.12	0	22.98	3.17	3.47	8.26	18
2002	22	1117	7.631	7.608	0.023	3.3	53.83	0	26.95	3.73	5.76	9.73	19
2002	230	1062	7.63	7.608	0.022	4.5	63.32	0	23.35	3.22	1.7	8.41	20
2003	291	1064	7.711	7.608	0.103	3.8	56.72	0	25.53	3.46	5.26	9.03	1
2003	328	1066	7.682	7.608	0.074	3.3	53.59	0	26.97	3.72	6.01	9.71	2
2003	358	1117	7.68	7.608	0.072	3.4	54.15	0	26.39	3.65	6.3	9.51	3
2003	242	1065	7.673	7.608	0.065	4.5	62.1	0	22.93	3.16	3.56	8.25	4
2003	108	1117	7.672	7.608	0.064	2.7	48.95	0	29.99	4.15	6.1	10.82	5
2003	106	1068	7.67	7.608	0.062	2.7	48.95	0	30.45	4.17	5.53	10.89	6
2003	247	1117	7.665	7.608	0.057	4.4	62.22	0	23.44	3.24	2.65	8.45	7
2003	331	1118	7.664	7.608	0.056	3.3	53.98	0	27.22	3.75	5.26	9.78	8
2003	321	1062	7.654	7.608	0.046	3.3	53.13	0	27	3.71	6.5	9.66	9
2003	288	1068	7.653	7.608	0.044	3.8	56.64	0	24.95	3.43	6.04	8.94	10
2003	351	1063	7.649	7.608	0.041	3.4	54.91	0	26.53	3.68	5.26	9.61	11
2003	344	1087	7.646	7.608	0.038	3.4	55.18	0	27.58	3.76	3.69	9.79	12
2003	142	1058	7.646	7.608	0.038	3.4	54.43	0	26.06	3.64	6.38	9.49	13
2003	178	1063	7.645	7.608	0.036	3.9	58.75	0	25.19	3.46	3.56	9.03	14
2003	216	1087	7.642	7.608	0.034	4.5	60.62	0	22.72	3.11	5.44	8.1	15
2003	111	1166	7.641	7.608	0.033	2.7	49.11	0	29.82	4.15	6.1	10.82	16
2003	271	1066	7.64	7.608	0.032	4.4	61.24	0	23.16	3.19	4.08	8.33	17
2003	107	1117	7.64	7.608	0.032	2.7	49.47	0	30.54	4.21	4.81	10.97	18
2003	225	1087	7.637	7.608	0.029	4.5	62.5	0	22.95	3.18	3.08	8.29	19
2003	46	1117	7.632	7.608	0.024	3	51.98	0	28.37	3.95	5.4	10.3	20

Ranked Daily Visibility Change for Shining Rock (Top 25 Days Over Three Years)

% of Modeled Extinction by Species													Ranking
<u>YEAR</u>	<u>DAY</u>	<u>REC</u>	<u>DV(Total)</u>	<u>DV(BKG)</u>	<u>DELTA DV</u>	<u>F(RH)</u>	<u>% SO4</u>	<u>% NO3</u>	<u>% OC</u>	<u>% EC</u>	<u>% PMC</u>	<u>% PMF</u>	
2002	15	1062	7.715	7.608	0.107	3.3	53.34	0.00	26.96	3.71	6.31	9.68	1
2003	291	1064	7.711	7.608	0.103	3.8	56.72	0.00	25.53	3.46	5.26	9.03	2
2002	89	1117	7.696	7.608	0.088	2.9	51.63	0.00	28.98	4.05	4.78	10.56	3
2002	228	1087	7.684	7.608	0.076	4.5	62.28	0.00	23.04	3.17	3.23	8.28	4
2003	328	1066	7.682	7.608	0.074	3.3	53.59	0.00	26.97	3.72	6.01	9.71	5
2002	315	1062	7.680	7.608	0.072	3.3	54.03	0.00	27.21	3.75	5.21	9.79	6
2003	358	1117	7.680	7.608	0.072	3.4	54.15	0.00	26.39	3.65	6.30	9.51	7
2001	182	1064	7.678	7.608	0.070	3.9	58.17	0.00	24.85	3.42	4.64	8.93	8
2002	57	1062	7.676	7.608	0.068	3.0	51.76	0.00	28.97	3.97	4.94	10.36	9
2002	314	1062	7.676	7.608	0.067	3.3	53.08	0.00	27.15	3.71	6.38	9.68	10
2002	86	1087	7.674	7.608	0.066	2.9	49.92	0.00	29.05	3.97	6.69	10.36	11
2003	242	1065	7.673	7.608	0.065	4.5	62.10	0.00	22.93	3.16	3.56	8.25	12
2001	297	1068	7.672	7.608	0.064	3.8	57.53	0.00	25.10	3.47	4.86	9.04	13
2003	108	1117	7.672	7.608	0.064	2.7	48.95	0.00	29.99	4.15	6.10	10.82	14
2003	106	1068	7.670	7.608	0.062	2.7	48.95	0.00	30.45	4.17	5.53	10.89	15
2003	247	1117	7.665	7.608	0.057	4.4	62.22	0.00	23.44	3.24	2.65	8.45	16
2001	333	1061	7.664	7.608	0.056	3.3	53.55	0.00	26.94	3.72	6.09	9.70	17
2001	41	1061	7.664	7.608	0.056	3.0	52.33	0.00	28.62	3.98	4.70	10.38	18
2002	137	1118	7.664	7.608	0.056	3.4	56.33	0.00	27.07	3.77	2.99	9.84	19
2003	331	1118	7.664	7.608	0.056	3.3	53.98	0.00	27.22	3.75	5.26	9.78	20
2002	293	1087	7.663	7.608	0.054	3.8	58.50	0.00	25.58	3.53	3.18	9.20	21
2001	347	1060	7.661	7.608	0.053	3.4	53.48	0.00	27.21	3.67	6.08	9.56	22
2001	51	1062	7.660	7.608	0.052	3.0	50.89	0.00	28.30	3.89	6.76	10.16	23
2002	227	1063	7.660	7.608	0.052	4.5	62.19	0.00	23.10	3.18	3.25	8.28	24
2001	180	1068	7.659	7.608	0.051	3.9	58.67	0.00	24.97	3.45	3.92	8.99	25

Ranked Daily Visibility Change for Okefenokee (Top 20 Days for Each Year)

% of Modeled Extinction by Species													Ranking
YEAR	DAY	REC	DV(Total)	DV(BKG)	DELTA DV	F(RH)	% SO4	% NO3	% OC	% EC	% PMC	% PMF	
2001	269	1218	7.776	7.608	0.168	4.0	60.06	0.00	24.91	3.44	2.62	8.97	1
2001	22	1561	7.741	7.608	0.133	3.5	56.93	0.00	26.96	3.73	2.66	9.72	2
2001	270	1491	7.707	7.608	0.099	4.0	60.43	0.00	25.13	3.46	1.94	9.03	3
2001	67	1667	7.707	7.608	0.099	3.1	52.56	0.00	28.21	3.89	5.19	10.14	4
2001	355	1581	7.683	7.608	0.075	3.6	57.36	0.00	26.48	3.65	2.98	9.53	5
2001	35	1667	7.683	7.608	0.075	3.2	53.97	0.00	28.18	3.87	3.87	10.10	6
2001	301	1539	7.682	7.608	0.074	3.8	57.88	0.00	25.50	3.50	3.99	9.13	7
2001	77	1200	7.676	7.608	0.068	3.1	52.55	0.00	28.31	3.89	5.09	10.15	8
2001	353	1631	7.674	7.608	0.066	3.6	58.14	0.00	26.84	3.70	1.66	9.66	9
2001	74	1644	7.664	7.608	0.056	3.1	52.27	0.00	28.01	3.87	5.77	10.08	10
2001	234	1667	7.660	7.608	0.052	4.1	59.91	0.00	24.47	3.36	3.50	8.76	11
2001	17	1661	7.659	7.608	0.050	3.5	55.58	0.00	26.64	3.65	4.59	9.53	12
2001	300	1218	7.656	7.608	0.048	3.8	59.07	0.00	25.61	3.55	2.50	9.26	13
2001	29	1667	7.657	7.608	0.048	3.5	55.61	0.00	26.53	3.65	4.69	9.52	14
2001	299	1466	7.655	7.608	0.047	3.8	60.00	0.00	26.10	3.61	0.86	9.42	15
2001	365	1466	7.654	7.608	0.046	3.6	56.93	0.00	25.94	3.61	4.11	9.41	16
2001	326	1644	7.654	7.608	0.045	3.5	56.25	0.00	27.55	3.73	2.74	9.73	17
2001	33	1645	7.653	7.608	0.045	3.2	53.33	0.00	27.76	3.82	5.10	9.97	18
2001	5	1631	7.652	7.608	0.044	3.5	57.43	0.00	26.93	3.74	2.14	9.76	19
2001	26	1667	7.651	7.608	0.043	3.5	56.22	0.00	26.73	3.68	3.76	9.61	20
2002	336	1600	7.729	7.608	0.121	3.6	57.37	0.00	26.50	3.65	2.94	9.53	1
2002	361	1466	7.725	7.608	0.117	3.6	57.79	0.00	26.73	3.68	2.20	9.60	2
2002	291	1631	7.712	7.608	0.104	3.8	58.97	0.00	25.84	3.56	2.34	9.29	3
2002	154	1667	7.710	7.608	0.102	3.7	57.40	0.00	25.87	3.56	3.87	9.29	4
2002	43	1491	7.700	7.608	0.092	3.2	55.13	0.00	28.65	3.95	1.96	10.30	5
2002	14	1600	7.694	7.608	0.086	3.5	55.37	0.00	26.34	3.63	5.19	9.47	6
2002	350	1667	7.689	7.608	0.081	3.6	56.10	0.00	25.90	3.57	5.10	9.32	7
2002	2	1421	7.687	7.608	0.079	3.5	55.43	0.00	26.57	3.65	4.84	9.50	8
2002	60	1617	7.685	7.608	0.077	3.2	53.74	0.00	27.94	3.85	4.42	10.04	9
2002	219	1631	7.673	7.608	0.065	4.1	60.17	0.00	24.36	3.36	3.33	8.77	10
2002	323	1581	7.670	7.608	0.062	3.5	55.93	0.00	26.58	3.67	4.26	9.56	11
2002	363	1631	7.669	7.608	0.061	3.6	56.66	0.00	26.23	3.61	4.08	9.42	12
2002	338	1666	7.666	7.608	0.058	3.6	57.86	0.00	26.77	3.69	2.06	9.62	13
2002	199	1200	7.664	7.608	0.056	3.7	57.76	0.00	26.01	3.58	3.31	9.34	14
2002	95	1218	7.661	7.608	0.053	3.0	53.09	0.00	29.46	4.06	2.80	10.59	15
2002	45	1421	7.661	7.608	0.053	3.2	53.05	0.00	27.70	3.81	5.50	9.93	16
2002	36	1631	7.661	7.608	0.053	3.2	54.30	0.00	28.26	3.89	3.39	10.15	17
2002	332	1631	7.660	7.608	0.052	3.5	57.63	0.00	26.83	3.74	2.03	9.77	18
2002	82	1218	7.660	7.608	0.052	3.1	53.69	0.00	28.87	3.98	3.10	10.37	19
2002	201	1560	7.659	7.608	0.051	3.7	57.28	0.00	25.80	3.55	4.10	9.26	20
2003	360	1661	7.771	7.608	0.163	3.6	56.51	0.00	26.39	3.62	4.06	9.43	1
2003	12	1543	7.755	7.608	0.147	3.5	56.69	0.00	26.99	3.72	2.91	9.69	2
2003	40	1581	7.729	7.608	0.121	3.2	53.79	0.00	28.08	3.86	4.19	10.07	3
2003	336	1667	7.697	7.608	0.089	3.6	57.16	0.00	26.53	3.65	3.15	9.51	4
2003	5	1631	7.694	7.608	0.086	3.5	57.24	0.00	27.12	3.75	2.13	9.77	5
2003	15	1253	7.687	7.608	0.079	3.5	55.93	0.00	26.62	3.67	4.21	9.56	6
2003	355	1666	7.680	7.608	0.072	3.6	56.89	0.00	26.39	3.63	3.62	9.47	7
2003	343	1666	7.668	7.608	0.060	3.6	57.04	0.00	26.04	3.62	3.87	9.43	8
2003	153	1667	7.668	7.608	0.060	3.7	57.81	0.00	26.05	3.59	3.19	9.35	9
2003	341	1421	7.663	7.608	0.055	3.6	57.23	0.00	26.72	3.66	2.84	9.55	10
2003	63	1387	7.654	7.608	0.046	3.1	52.98	0.00	28.38	3.92	4.51	10.21	11
2003	135	1667	7.650	7.608	0.042	3.6	55.70	0.00	26.23	3.58	5.17	9.32	12
2003	6	1404	7.650	7.608	0.042	3.5	57.38	0.00	27.24	3.76	1.82	9.80	13
2003	318	1491	7.649	7.608	0.041	3.5	56.96	0.00	27.18	3.74	2.36	9.75	14
2003	296	1560	7.649	7.608	0.041	3.8	57.31	0.00	25.23	3.47	4.95	9.04	15
2003	103	1421	7.648	7.608	0.040	3.0	51.82	0.00	28.72	3.96	5.16	10.33	16
2003	91	1538	7.647	7.608	0.039	3.1	52.51	0.00	28.39	3.90	5.05	10.16	17
2003	41	1214	7.647	7.608	0.039	3.2	54.60	0.00	28.56	3.92	2.68	10.23	18
2003	347	1168	7.646	7.608	0.038	3.6	57.77	0.00	26.70	3.68	2.25	9.60	19
2003	154	1667	7.645	7.608	0.037	3.7	58.35	0.00	26.29	3.62	2.30	9.44	20

Ranked Daily Visibility Change for Okefenokee (Top 25 Days Over Three Years)

YEAR	DAY	REC	DV(Total)	DV(BKG)	DELTA DV	F(RH)	% of Modeled Extinction by Species						Ranking
							% SO4	% NO3	% OC	% EC	% PMC	% PMF	
2001	269	1218	7.776	7.608	0.168	4.0	60.06	0.00	24.91	3.44	2.62	8.97	1
2003	360	1661	7.771	7.608	0.163	3.6	56.51	0.00	26.39	3.62	4.06	9.43	2
2003	12	1543	7.755	7.608	0.147	3.5	56.69	0.00	26.99	3.72	2.91	9.69	3
2001	22	1561	7.741	7.608	0.133	3.5	56.93	0.00	26.96	3.73	2.66	9.72	4
2002	336	1600	7.729	7.608	0.121	3.6	57.37	0.00	26.50	3.65	2.94	9.53	5
2003	40	1581	7.729	7.608	0.121	3.2	53.79	0.00	28.08	3.86	4.19	10.07	6
2002	361	1466	7.725	7.608	0.117	3.6	57.79	0.00	26.73	3.68	2.20	9.60	7
2002	291	1631	7.712	7.608	0.104	3.8	58.97	0.00	25.84	3.56	2.34	9.29	8
2002	154	1667	7.710	7.608	0.102	3.7	57.40	0.00	25.87	3.56	3.87	9.29	9
2001	270	1491	7.707	7.608	0.099	4.0	60.43	0.00	25.13	3.46	1.94	9.03	10
2001	67	1667	7.707	7.608	0.099	3.1	52.56	0.00	28.21	3.89	5.19	10.14	11
2002	43	1491	7.700	7.608	0.092	3.2	55.13	0.00	28.65	3.95	1.96	10.30	12
2003	336	1667	7.697	7.608	0.089	3.6	57.16	0.00	26.53	3.65	3.15	9.51	13
2002	14	1600	7.694	7.608	0.086	3.5	55.37	0.00	26.34	3.63	5.19	9.47	14
2003	5	1631	7.694	7.608	0.086	3.5	57.24	0.00	27.12	3.75	2.13	9.77	15
2002	350	1667	7.689	7.608	0.081	3.6	56.10	0.00	25.90	3.57	5.10	9.32	16
2002	2	1421	7.687	7.608	0.079	3.5	55.43	0.00	26.57	3.65	4.84	9.50	17
2003	15	1253	7.687	7.608	0.079	3.5	55.93	0.00	26.62	3.67	4.21	9.56	18
2002	60	1617	7.685	7.608	0.077	3.2	53.74	0.00	27.94	3.85	4.42	10.04	19
2001	355	1581	7.683	7.608	0.075	3.6	57.36	0.00	26.48	3.65	2.98	9.53	20
2001	35	1667	7.683	7.608	0.075	3.2	53.97	0.00	28.18	3.87	3.87	10.10	21
2001	301	1539	7.682	7.608	0.074	3.8	57.88	0.00	25.50	3.50	3.99	9.13	22
2003	355	1666	7.680	7.608	0.072	3.6	56.89	0.00	26.39	3.63	3.62	9.47	23
2001	77	1200	7.676	7.608	0.068	3.1	52.55	0.00	28.31	3.89	5.09	10.15	24
2001	353	1631	7.674	7.608	0.066	3.6	58.14	0.00	26.84	3.70	1.66	9.66	25

Ranked Daily Visibility Change for Wolf Island (Top 20 Days for Each Year)

YEAR	DAY	REC	DV(Total)	DV(BKG)	DELTA DV	F(RH)	% of Modeled Extinction by Species						Ranking
							%_SO4	%_NO3	%_OC	%_EC	%_PMC	%_PMF	
2001	191	1697	7.667	7.580	0.087	3.7	57.66	0.00	25.95	3.58	3.49	9.32	1
2001	189	1697	7.667	7.580	0.087	3.7	57.33	0.00	26.35	3.59	3.39	9.35	2
2001	192	1696	7.655	7.580	0.075	3.7	57.55	0.00	25.93	3.57	3.64	9.31	3
2001	34	1697	7.652	7.580	0.072	3.1	53.54	0.00	28.75	3.96	3.41	10.33	4
2001	360	1674	7.650	7.580	0.070	3.5	54.91	0.00	27.04	3.65	4.88	9.52	5
2001	10	1674	7.647	7.580	0.067	3.4	54.66	0.00	26.83	3.69	5.20	9.63	6
2001	66	1668	7.638	7.580	0.058	3.1	53.99	0.00	29.06	4.00	2.51	10.43	7
2001	61	1697	7.634	7.580	0.054	3.1	52.66	0.00	28.37	3.90	4.88	10.18	8
2001	337	1697	7.630	7.580	0.050	3.5	56.25	0.00	26.88	3.69	3.54	9.63	9
2001	110	1697	7.629	7.580	0.049	3.0	52.81	0.00	29.36	4.04	3.24	10.54	10
2001	359	1696	7.621	7.580	0.041	3.5	56.24	0.00	27.33	3.72	3.02	9.70	11
2001	270	1668	7.613	7.580	0.034	4.0	60.48	0.00	25.04	3.46	1.99	9.03	12
2001	234	1697	7.613	7.580	0.033	4.1	59.84	0.00	24.28	3.35	3.80	8.73	13
2001	147	1668	7.613	7.580	0.033	3.3	55.56	0.00	27.97	3.86	2.55	10.06	14
2001	176	1697	7.612	7.580	0.032	3.7	57.61	0.00	25.82	3.57	3.71	9.30	15
2001	195	1697	7.611	7.580	0.031	3.7	56.86	0.00	25.81	3.54	4.55	9.23	16
2001	237	1697	7.609	7.580	0.029	4.1	60.47	0.00	24.21	3.36	3.18	8.77	17
2001	344	1697	7.608	7.580	0.028	3.5	55.31	0.00	26.45	3.63	5.13	9.47	18
2001	190	1697	7.608	7.580	0.028	3.7	57.58	0.00	26.96	3.63	2.36	9.46	19
2001	7	1696	7.607	7.580	0.027	3.4	55.54	0.00	27.21	3.75	3.72	9.78	20
2002	332	1668	7.664	7.580	0.084	3.5	56.05	0.00	26.70	3.68	3.98	9.59	1
2002	64	1697	7.664	7.580	0.084	3.1	54.06	0.00	29.05	4.00	2.45	10.44	2
2002	16	1697	7.653	7.580	0.073	3.4	56.13	0.00	27.80	3.81	2.35	9.92	3
2002	198	1697	7.644	7.580	0.064	3.7	57.53	0.00	25.90	3.57	3.70	9.30	4
2002	350	1675	7.639	7.580	0.059	3.5	57.06	0.00	27.14	3.74	2.31	9.75	5
2002	351	1696	7.638	7.580	0.058	3.5	55.84	0.00	26.47	3.66	4.50	9.53	6
2002	17	1668	7.638	7.580	0.058	3.4	54.01	0.00	28.15	3.74	4.34	9.75	7
2002	111	1696	7.634	7.580	0.055	3.0	52.20	0.00	29.03	4.00	4.36	10.42	8
2002	290	1668	7.633	7.580	0.053	3.7	57.31	0.00	26.11	3.57	3.70	9.31	9
2002	338	1691	7.631	7.580	0.051	3.5	56.04	0.00	26.57	3.67	4.15	9.57	10
2002	4	1668	7.627	7.580	0.047	3.4	55.32	0.00	27.06	3.73	4.15	9.73	11
2002	201	1685	7.626	7.580	0.046	3.7	58.78	0.00	26.36	3.64	1.73	9.49	12
2002	327	1668	7.623	7.580	0.043	3.5	56.98	0.00	27.00	3.73	2.56	9.73	13
2002	36	1668	7.621	7.580	0.041	3.1	53.37	0.00	28.73	3.95	3.64	10.31	14
2002	291	1668	7.613	7.580	0.033	3.7	56.34	0.00	26.52	3.56	4.29	9.28	15
2002	154	1668	7.613	7.580	0.033	3.7	58.23	0.00	26.17	3.61	2.58	9.41	16
2002	59	1696	7.610	7.580	0.030	3.1	53.45	0.00	28.98	3.97	3.24	10.36	17
2002	363	1669	7.608	7.580	0.028	3.5	56.28	0.00	26.83	3.69	3.57	9.63	18
2002	18	1697	7.606	7.580	0.026	3.4	55.73	0.00	27.54	3.77	3.12	9.84	19
2002	255	1697	7.604	7.580	0.024	4.0	60.09	0.00	24.84	3.44	2.67	8.96	20
2003	43	1669	7.655	7.580	0.075	3.1	53.00	0.00	28.57	3.93	4.25	10.24	1
2003	7	1696	7.634	7.580	0.054	3.4	54.81	0.00	27.19	3.72	4.60	9.69	2
2003	5	1697	7.633	7.580	0.053	3.4	55.26	0.00	26.86	3.72	4.47	9.70	3
2003	104	1674	7.631	7.580	0.051	3.0	52.42	0.00	29.24	4.02	3.85	10.47	4
2003	18	1691	7.631	7.580	0.051	3.4	54.92	0.00	27.24	3.73	4.40	9.71	5
2003	33	1691	7.628	7.580	0.048	3.1	53.70	0.00	28.85	3.97	3.10	10.37	6
2003	296	1691	7.627	7.580	0.047	3.7	58.29	0.00	26.27	3.62	2.39	9.43	7
2003	154	1668	7.617	7.580	0.038	3.7	58.63	0.00	26.15	3.62	2.15	9.45	8
2003	346	1696	7.616	7.580	0.036	3.5	57.35	0.00	26.82	3.73	2.36	9.74	9
2003	41	1691	7.612	7.580	0.032	3.1	54.13	0.00	28.84	3.99	2.63	10.41	10
2003	135	1668	7.611	7.580	0.031	3.3	55.12	0.00	27.77	3.83	3.28	9.99	11
2003	34	1696	7.611	7.580	0.031	3.1	53.02	0.00	28.52	3.93	4.29	10.24	12
2003	151	1685	7.610	7.580	0.030	3.3	54.98	0.00	27.67	3.82	3.57	9.96	13
2003	334	1674	7.609	7.580	0.029	3.5	55.35	0.00	26.28	3.63	5.28	9.46	14
2003	102	1668	7.609	7.580	0.029	3.0	51.69	0.00	28.99	3.97	5.00	10.35	15
2003	336	1668	7.607	7.580	0.027	3.5	55.64	0.00	26.42	3.64	4.79	9.50	16
2003	153	1668	7.606	7.580	0.026	3.7	57.94	0.00	25.92	3.58	3.20	9.35	17
2003	330	1669	7.605	7.580	0.025	3.5	57.70	0.00	27.17	3.77	1.53	9.82	18
2003	343	1691	7.604	7.580	0.024	3.5	56.38	0.00	26.72	3.69	3.58	9.62	19
2003	312	1668	7.604	7.580	0.024	3.5	55.38	0.00	26.13	3.62	5.44	9.44	20

Ranked Daily Visibility Change for Wolf Island (Top 25 Days Over Three Years)

YEAR	DAY	REC	DV(Total)	DV(BKG)	DELTA DV	F(RH)	% of Modeled Extinction by Species						Ranking
							%_SO4	%_NO3	%_OC	%_EC	%_PMC	%_PMF	
2001	191	1697	7.667	7.580	0.087	3.7	57.66	0.00	25.95	3.58	3.49	9.32	1
2001	189	1697	7.667	7.580	0.087	3.7	57.33	0.00	26.35	3.59	3.39	9.35	2
2002	332	1668	7.664	7.580	0.084	3.5	56.05	0.00	26.70	3.68	3.98	9.59	3
2002	64	1697	7.664	7.580	0.084	3.1	54.06	0.00	29.05	4.00	2.45	10.44	4
2001	192	1696	7.655	7.580	0.075	3.7	57.55	0.00	25.93	3.57	3.64	9.31	5
2003	43	1669	7.655	7.580	0.075	3.1	53.00	0.00	28.57	3.93	4.25	10.24	6
2002	16	1697	7.653	7.580	0.073	3.4	56.13	0.00	27.80	3.81	2.35	9.92	7
2001	34	1697	7.652	7.580	0.072	3.1	53.54	0.00	28.75	3.96	3.41	10.33	8
2001	360	1674	7.650	7.580	0.070	3.5	54.91	0.00	27.04	3.65	4.88	9.52	9
2001	10	1674	7.647	7.580	0.067	3.4	54.66	0.00	26.83	3.69	5.20	9.63	10
2002	198	1697	7.644	7.580	0.064	3.7	57.53	0.00	25.90	3.57	3.70	9.30	11
2002	350	1675	7.639	7.580	0.059	3.5	57.06	0.00	27.14	3.74	2.31	9.75	12
2001	66	1668	7.638	7.580	0.058	3.1	53.99	0.00	29.06	4.00	2.51	10.43	13
2002	351	1696	7.638	7.580	0.058	3.5	55.84	0.00	26.47	3.66	4.50	9.53	14
2002	17	1668	7.638	7.580	0.058	3.4	54.01	0.00	28.15	3.74	4.34	9.75	15
2002	111	1696	7.634	7.580	0.055	3.0	52.20	0.00	29.03	4.00	4.36	10.42	16
2001	61	1697	7.634	7.580	0.054	3.1	52.66	0.00	28.37	3.90	4.88	10.18	17
2003	7	1696	7.634	7.580	0.054	3.4	54.81	0.00	27.19	3.72	4.60	9.69	18
2002	290	1668	7.633	7.580	0.053	3.7	57.31	0.00	26.11	3.57	3.70	9.31	19
2003	5	1697	7.633	7.580	0.053	3.4	55.26	0.00	26.86	3.72	4.47	9.70	20
2002	338	1691	7.631	7.580	0.051	3.5	56.04	0.00	26.57	3.67	4.15	9.57	21
2003	104	1674	7.631	7.580	0.051	3.0	52.42	0.00	29.24	4.02	3.85	10.47	22
2003	18	1691	7.631	7.580	0.051	3.4	54.92	0.00	27.24	3.73	4.40	9.71	23
2001	337	1697	7.630	7.580	0.050	3.5	56.25	0.00	26.88	3.69	3.54	9.63	24
2001	110	1697	7.629	7.580	0.049	3.0	52.81	0.00	29.36	4.04	3.24	10.54	25