

Table 1. 2013 Site Specifications.

National Park Unit	Site Name	State	NPS Abbr.	CASTNET Abbr.	AQS ID Number	Latitude (degrees north)	Longitude (degrees west)	Elev. (m)	O ₃ Years ^a	SO ₂	CO	NO _x	PM	WS/WD	TMP	RH	RNF	SOL	Filter Pack ^b
Sites operated by the National Park Service (Gaseous Pollutant Monitoring Program)																			
Big Bend	K-Bar Ranch Road	TX	BIBE-KB	BBE401	48-043-0101	29.3027	103.1778	1057	24	---	---	---	---	X	X	X	X	X	X
Canyonlands	Island in the Sky	UT	CANY-IS	CAN407	49-037-0101	38.4583	109.8213	1794	22	---	---	---	---	X	X	X	X	X	X
<u>Carlsbad Caverns</u>	Maintenance Area	NM	CAVE-MA	---	35-015-3001	32.1792	104.4417	1310	8	---	---	---	---	X	X	X	X	X	---
Chiricahua	Entrance Station	AZ	CHIR-ES	CHA467	04-003-8001	32.0094	109.3891	1569	23	---	---	---	---	X	X	X	X	X	X
Craters of the Moon	Visitor Center	ID	CRMO-VC	---	16-023-0101	43.4606	113.5622	1815	22	---	---	---	---	X	X	X	---	X	---
<u>Cumberland Gap</u>	Hensley Settlement	TN	CUGA-HS	---	21-013-1002	36.6719	83.5264	1013	8	---	---	---	---	X	X	X	X	X	---
Denali	Headquarters	AK	DENA-HQ	DEN417	02-068-0003	63.7232	148.9676	663	27	---	---	---	---	X	X	X	X	X	X
Death Valley	Park Village	CA	DEVA-PV	---	06-027-0101	36.5092	116.8481	125	21	---	---	---	---	X	X	X	X	---	---
<u>Dinosaur</u>	West Entrance Housing	UT	DINO-WE	---	49-047-1002	40.4373	109.3046	2072	13	---	---	---	---	X	X	X	X	X	---
Everglades	Beard Center	FL	EVER-BC	EVE419	12-086-0030	25.3912	80.6808	1	---	---	---	---	---	X	X	X	X	X	X
Glacier	West Glacier Horse Stables	MT	GLAC-WG	GLR468	30-029-8001	48.5103	113.9968	964	22	---	---	---	---	X	X	X	X	X	X
Great Basin	Maintenance Yard	NV	GRBA-MY	GRB411	32-033-0101	39.0051	114.2159	2058	21	---	---	---	---	X	X	X	X	X	X
Grand Canyon	The Abyss	AZ	GRCA-AS	GRC474	04-005-8001	36.0586	112.1836	2070	21	---	---	---	---	X	X	X	X	X	X
Great Smoky Mountains	Clingmans Dome	TN	GRSM-CD	---	47-155-0102	35.5619	83.4981	2021	21	---	---	---	---	X	X	X	X	X	---
Great Smoky Mountains	Cove Mountain	TN	GRSM-CM	---	47-155-0101	35.6967	83.6086	1243	26	X	---	---	---	X	X	X	X	---	---
Great Smoky Mountains	Look Rock	TN	GRSM-LR	GRS420	47-009-0101	35.6335	83.9416	801	26	---	X	X	X	X	X	X	X	X	X
Grand Teton	Science School	WY	GRTE-SS	---	56-039-0008	43.6708	110.5994	2105	3	---	---	---	---	X	X	X	X	X	---
Hawaii Volcanoes	Observatory / Jaggar Museum	HI	HAVO-OB	---	15-001-0007	19.4203	155.2881	1123	---	X	---	---	X	X	X	X	X	---	---
Hawaii Volcanoes	Visitor Center	HI	HAVO-VC	---	15-001-0005	19.4308	155.2578	1215	---	X	---	---	---	X	X	X	X	X	---
Joshua Tree	Black Rock	CA	JOTR-BR	JOT403	06-071-9002	34.0696	116.3889	1243	21	---	---	---	---	X	X	X	X	X	X
Joshua Tree	Cottonwood Canyon	CA	JOTR-CC	---	06-065-0008	33.7411	115.8206	984	9	---	---	---	---	X	X	X	X	X	---
<u>Joshua Tree</u>	Pinto Wells	CA	JOTR-PW	---	06-065-1004	33.9397	115.4108	326	8	---	---	---	---	X	X	X	X	X	---
<u>Kings Mountain</u>	Brown's Mountain	SC	KIMO-BM	---	45-021-0003	35.1314	81.405	340	3	---	---	---	---	X	X	X	X	X	---
Lassen Volcanic	Manzanita Lake Fire Station	CA	LAVO-ML	LAV410	06-089-3003	40.5400	121.5765	1755	27	---	---	---	---	X	X	X	X	X	X
Mammoth Cave	Houchin Meadow	KY	MACA-HM	MAC426	21-061-0501	37.1318	86.1430	230	18	X	X	X	---	X	X	X	X	X	X
Mesa Verde	Resource Management Area	CO	MEVE-RM	MEV405	08-083-0101	37.1984	108.4905	2170	21	---	---	---	---	X	X	X	X	X	X

Table 1. 2013 Site Specifications (continued).

National Park Unit	Site Name	State	NPS Abbr.	CASTNet Abbr.	AQS ID Number	Latitude (degrees north)	Longitude (degrees west)	Elev. (m)	O ₃ Years ^a	SO ₂	CO	NO _x	PM	WS/WD	TMP	RH	RNF	SOL	Filter Pack ^b
Sites operated by the National Park Service (Gaseous Pollutant Monitoring Program)																			
<u>Mojave</u>	Kelso Mountains	CA	MOJA-KM	---	06-071-1001	35.1019	115.7767	1212	11	---	---	---	---	X	X	X	X	X	---
Mount Rainier	Tahoma Woods	WA	MORA-TW	MOR409	53-053-1010	46.7584	122.1243	420	23	---	---	---	---	X	X	X	X	X	X
<u>Ninety-Six Historical Park</u>	Bumble Bee Hill	SC	NISI-BB	---	---	34.1481	82.0128	151	1	---	---	---	---	X	X	X	---	---	---
Petrified Forest	South Entrance	AZ	PEFO-SE	PET427	04-017-0119	34.8225	109.8925	1712	12	---	---	---	---	X	X	X	X	X	X
Pinnacles	SW of East Entrance Station	CA	PINN-ES	PIN414	06-069-0003	36.4832	121.1569	317	27	---	---	---	---	X	X	X	X	X	X
Rocky Mountain	Long's Peak	CO	ROMO-LP	ROM406	08-069-0007	40.2781	105.5456	2742	29	---	---	---	---	X	X	X	X	X	X
Sequoia and Kings Canyon	Ash Mountain	CA	SEKI-AS	SEK430	06-107-0009	36.4895	118.8292	510	15	---	---	---	X	X	X	X	X	X	X
Sequoia and Kings Canyon	Lower Kaweah	CA	SEKI-LK	---	06-107-0006	36.5658	118.7772	1890	30	---	---	---	---	X	X	X	X	X	---
Shenandoah	Big Meadows	VA	SHEN-BM	SHN418	51-113-0003	38.5231	78.4347	1068	31	---	---	---	---	X	X	X	X	X	X
Voyageurs	Sullivan Bay	MN	VOYA-SB	VOY413	27-137-0034	48.4125	92.8292	427	18	---	---	---	---	X	X	X	X	X	X
Yellowstone	Old Faithful Snow Lodge	WY	YELL-OS	---	56-039-1013	44.3731	110.8308	2230	---	---	X	---	X	X	X	X	---	---	---
Yellowstone	Water Tank	WY	YELL-WT	YEL408	56-039-1011	44.5654	110.4003	2430	19	---	---	---	---	X	X	X	X	X	X
Yosemite	Turtleback Dome	CA	YOSE-TD	YOS404	06-043-0003	37.7133	119.7062	1599	21	---	---	---	---	X	X	X	X	X	X
Zion	Dalton's Wash	UT	ZION-DW	---	49-053-0130	37.1983	113.1506	1213	10	---	---	---	X	X	X	X	X	X	---
# active park units: 33		# active park sites: 40																	
Sites operated by the NPS for the Bureau of Land Management																			
Meeker	Plant Science Center	CO	MEEK-PS	---	08-103-0005	40.0039	107.8475	1994	4	---	---	X	X	X	X	X	X	X	---
Rangely	Golf Course	CO	RANG-GC	---	08-103-0006	40.0869	108.7614	1655	4	---	---	X	X	X	X	X	X	X	---
# active units: 2		# active sites: 2																	
Sites operated by the NPS for the U.S. Forest Service																			
Escalante	Visitor Center	UT	ESCA-VC	---	49-017-0044	37.7756	111.6147	1789	3	---	---	---	---	X	X	X	X	X	---
Walden	Chandler Ranch	CO	WALD-CR	---	08-057-0003	40.8822	106.3061	2417	3	---	X	X	---	X	X	X	---	X	---
# active units: 2		# active sites: 2																	
Sites operated by cooperating state agencies																			
<i>Acadia</i>	Cadillac Mountain	ME	ACAD-CM	---	23-009-0102	44.4083	68.2461	37	19	---	---	---	---	X	X	X	---	---	---
<i>Acadia</i>	McFarland Hill	ME	ACAD-MH	ACA416	23-009-0103	44.3771	68.2608	153	16	---	---	---	X	X	X	X	X	X	X
<i>Badlands</i>	Visitor Center	SD	BADL-VC	---	46-071-0001	43.7436	101.9414	739	12	---	---	X	X	---	---	---	---	---	---
<i>Cape Cod</i>	Cape Cod	MA	CACO-XX	---	25-001-0002	41.9758	70.0247	41	27	---	---	---	---	X	X	X	---	X	---
<i>Chamizal</i>	Chamizal	TX	CHAM-XX	---	48-141-0044	31.7656	106.455	1128	22	---	---	---	---	X	X	X	---	X	---

Table 1. 2013 Site specifications (continued).

National Park Unit	Site Name	State	NPS Abbr.	CASTNet Abbr.	AQS ID Number	Latitude (degrees north)	Longitude (degrees west)	Elev. (m)	O ₃ Years ^a	SO ₂	CO	NO _x	PM	WS/WD	TMP	RH	RNF	SOL	Filter Pack ^b
Sites operated by cooperating state agencies																			
<i>Congaree</i>	Congaree Bluff	SC	COSW-BL	---	45-079-0021	33.8147	80.7811	34	14	X	---	---	---	---	---	---	---	---	---
<i>Cowpens</i>	State Monitor	SC	COWP-SM	---	45-021-0002	35.1304	81.8166	297	26	---	---	---	---	---	---	---	---	---	---
<i>Everglades</i>	Cutler Road	FL	EVER-CR	---	12-086-0029	25.5861	80.3269	4	29	---	---	---	---	---	---	---	---	---	---
<i>Great Smoky Mountains</i>	Cades Cove	TN	GRSM-CC	---	47-009-0102	35.6042	83.7831	564	21	---	---	---	---	X	X	X	X	X	---
<i>Great Smoky Mountains</i>	Purchase Knob	NC	GRSM-PK	---	37-087-0036	35.59	83.0775	1500	15	---	---	---	---	---	---	---	---	---	---
<i>Indiana Dunes</i>	Ammunition Bunker	IN	INDU-AB	---	18-089-0022	41.7169	86.9075	187	21	---	---	---	X	X	X	X	---	X	---
<i>Mount Rainier</i>	Jackson Visitor's Center	WA	MORA-JV	---	53-053-0012	46.7853	121.7378	1615	17	---	---	---	---	---	---	---	---	---	---
<i>Saguaro</i>	East	AZ	SAGU-EA	---	04-019-0021	32.1744	110.7364	938	22	---	---	---	---	---	---	---	---	---	---
<i>Theodore Roosevelt</i>	Painted Canyon Visitor Cntr	ND	THRO-VC	THR422	38-007-0002	46.8948	103.3777	840	16	X	---	---	X	X	X	X	X	X	X
<i>Wind Cave</i>	Visitor Center	SD	WICA-VC	WNC429	46-033-0132	43.5576	103.4839	1288	10	---	---	---	X	X	X	X	X	X	X
<i>Yellowstone</i>	West Yellowstone	MT	YELL-WS	---	30-031-0017	44.6569	111.0894	2030	---	---	X	X	X	X	X	---	---	---	---
<i>Yosemite</i>	Village	CA	YOSE-VI	---	06-043-1001	37.7458	119.6028	1216	---	---	---	---	X	---	---	---	---	---	---
# active park units: 15		# active park sites: 17																	

^a The values in this column represent the number of years an ozone analyzer has been operational at the site.

^b A filter pack is a part of the CASTNET network and is used to measure dry deposition using the "inferential method." This method combines air quality concentration data with meteorological measurements and land use functions to compute deposition velocities. Ambient air is drawn across the filter at either 3.0 or 1.5 liters per minute. The filter is then analyzed in a lab to yield weekly average concentrations of particulate sulfate (SO₄²⁻), particulate nitrate (NO₃⁻), particulate ammonium (NH₄⁺), sulfur dioxide (SO₂), and nitric acid (HNO₃). In some cases, the positive ions Na⁺, K⁺, Ca²⁺, and Mg²⁺ are also measured from the filter samples.

Operating agency key: plain text = site operated by the National Park Service, Bureau of Land Management, or U.S. Forest Service
italics = site operated by a state agency
underline = site operated by the National Park Service, but consisting of non-EPA certified portable instrumentation

Parameter key: O₃ = ozone (ppb)
 SO₂ = sulfur dioxide (ppb)
 CO = carbon monoxide (ppm)
 NO_x = oxides of nitrogen (ppb)
 PM = particulate matter (µg/m³)
 WS = wind speed (m/s)
 WD = wind direction (degrees)
 TMP = ambient temperature (degrees C)
 RH = relative humidity (%)
 RNF = precipitation (mm/hr)
 SOL = solar radiation (watts/m²)

Note: Dashed lines indicate parameter not measured at that site.

Table 2. 2013 Summary of 8-hour average ozone concentrations (ppb).

National Park Unit	Site Name	Valid Number of Days	1 st Highest	2 nd Highest	3 rd Highest	4 th Highest ^a	5 th Highest	# Days with 8-Hour Average O ₃ Values ≥76 ppb ^a
Sites operated by the National Park Service (Gaseous Pollutant Monitoring Program)								
Big Bend	K-Bar Ranch Road	354	67	67	67	66	66	0
Canyonlands	Island in the Sky	332	69	68	67	66	66	0
Chiricahua	Entrance Station	355	75	74	73	72	70	0
Craters of the Moon	Visitor Center	356	60	60	60	60	60	0
Denali	Headquarters	356	55	52	52	52	51	0
Death Valley	Park Village	348	74	73	73	70	70	0
Glacier	West Glacier Horse Stables	335	55	55	55	54	54	0
Grand Canyon	The Abyss	359	75	71	69	69	69	0
Grand Teton	Science School	363	62	62	61	60	59	0
Great Basin	Maintenance Yard	358	76	76	76	74	72	3
Great Smoky Mountains	Clingmans Dome	177	68	66	64	64	64	0
Great Smoky Mountains	Cove Mountain	362	70	67	66	66	65	0
Great Smoky Mountains	Look Rock	359	72	68	65	64	63	0
Joshua Tree	Black Rock	361	91	89	87	85	85	26
Joshua Tree	Cottonwood Canyon	190	86	83	78	77	74	4
Lassen Volcanic	Manzanita Lake Fire Station	327	72	71	70	68	65	0
Mammoth Cave	Houchin Meadow	359	72	68	67	63	63	0
Mesa Verde	Resource Management Area	357	70	70	70	69	69	0
Mount Rainier	Tahoma Woods	270	53	53	49	48	47	0
Petrified Forest	South Entrance	347	70	69	69	69	68	0
Pinnacles	SW of East Entrance Station	352	74	71	71	71	71	0
Rocky Mountain	Long's Peak	361	82	82	79	74	74	3
Sequoia and Kings Canyon	Ash Mountain	332	106	104	92	90	89	56
Sequoia and Kings Canyon	Lower Kaweah	295	89	88	88	87	87	38
Shenandoah	Big Meadows	344	64	64	63	63	63	0
Voyageurs	Sullivan Bay	361	60	58	58	57	57	0
Yellowstone	Water Tank	342	64	64	63	63	63	0
Yosemite	Turtleback Dome	347	77	77	74	73	73	2
Zion	Dalton's Wash	360	74	71	70	70	70	0
Sites operated by the NPS for the Bureau of Land Management								
Meeker	Plant Science Center	344	65	65	64	64	63	0
Rangely	Golf Course	329	106	102	91	91	90	9
Sites operated by the NPS for the U.S. Forest Service								
Escalante	Visitor Center	334	72	71	68	67	66	0
Walden	Chandler Ranch	346	74	64	64	64	64	0
Sites operated by cooperating state agencies								
Acadia	Cadillac Mountain	206	78	73	69	68	68	1
Acadia	McFarland Hill	357	79	72	71	69	69	1
Badlands	Visitor Center	355	68	63	62	62	61	0
Cape Cod	Cape Cod	301	79	76	72	71	66	2
Chamizal	Chamizal	363	75	73	71	69	68	0
Congaree	Congaree Bluff	245	59	58	56	55	54	0
Cowpens	State Monitor	237	68	66	61	60	60	0

Table 2. 2013 Summary of 8-hour average ozone concentrations (ppb) (continued).

National Park Unit	Site Name	Valid Number of Days	1 st Highest	2 nd Highest	3 rd Highest	4 th Highest ^a	5 th Highest	# Days with 8-Hour Average O ₃ Values ≥76 ppb ^a
Sites operated by cooperating state agencies								
<i>Everglades</i>	Cutler Road	344	71	70	69	68	68	0
<i>Great Smoky Mountains</i>	Cades Cove	243	67	61	60	59	58	0
<i>Great Smoky Mountains</i>	Purchase Knob	210	69	69	65	65	65	0
<i>Indiana Dunes</i>	Ammunition Bunker	170	68	67	65	64	62	0
<i>Mount Rainier</i>	Jackson Visitor's Center	332	62	61	59	59	58	0
<i>Saguaro</i>	East	362	76	75	74	74	69	1
<i>Theodore Roosevelt</i>	Painted Canyon Visitor Cntr	364	63	59	58	57	57	0
<i>Wind Cave</i>	Visitor Center	364	62	62	61	61	60	0
Portable ozone monitoring systems (POMS)^b								
<u>Carlsbad Caverns</u>	Maintenance Area	142	75	68	68	67	66	0
<u>Cumberland Gap</u>	Hensley Settlement	145	64	63	62	60	59	0
<u>Dinosaur</u>	West Entrance Housing	323	126	120	120	114	109	31
<u>Joshua Tree</u>	Pinto Wells	218	79	75	75	73	71	1
<u>Kings Mountain</u>	Brown's Mountain	126	71	69	66	63	63	0
<u>Mojave</u>	Kelso Mountains	130	93	86	83	79	77	7
<u>Ninety Six Historical Park</u>	Bumble Bee Hill	180	61	49	47	45	45	0

^a The primary and secondary National Ambient Air Quality Standard for ozone is 0.075 ppm over an 8-hour period. (An exceedance of the standard occurs when an 8-hour average ozone concentration is greater than or equal to 76 ppb. A violation of the standard occurs when the 3-year average of the fourth highest daily maximum 8-hour average ozone concentration equals or exceeds 76 ppb.) Exceedances of the standard are highlighted here in orange or red.

^b The Gaseous Pollutant Monitoring Program Portable Ozone Monitoring Systems (POMS) do not meet EPA standards for regulatory monitoring. However, ozone summary statistics from portable systems can be compared to EPA standards for reference purposes.

Note: The color coding break points follow the color categories used on the EPA's AIRNow Web Site (<http://www.airnow.gov>).

Operating agency key: plain text = site operated by the National Park Service, Bureau of Land Management, or U.S. Forest Service
italics = site operated by a state agency
underline = site operated by the National Park Service, but consisting of non-EPA certified portable instrumentation

Bold = Ozone summary statistics for POMS are highlighted bold where exceedances occurred. These sites should be compared to EPA standards for reference purposes only.





Color shading key: 4th highest 8-hour average  = 76 - 104 ppb ozone concentration # days with 8-hour average ≥76 ppb  = 4 - 10 days
 ≥ 105 ppb ozone concentration  > 10 days

Table 3. 2013 Ozone violation summary - primary standard^{a,b}.

National Park Unit	Site Name	2011-2013	2010-2012	2009-2011	2008-2010	2007-2009	2006-2008	2005-2007	2004-2006
Sites operated by the National Park Service (Gaseous Pollutant Monitoring Program)									
Big Bend	K-Bar Ranch Road	71	70	69	64	66	66	66	63
Canyonlands	Island in the Sky	69	69	68	69	70	71	70	70
Chiricahua	Entrance Station	73	73	70	68	66	69	71	72
Craters of the Moon	Visitor Center	63	63	61	62	(64)	(67)	(67)	---
Death Valley	Park Village	72	72	71	72	77	81	84	82
Denali	Headquarters	52	52	53	58	58	58	52	52
Glacier	West Glacier Horse Stables	54	55	55	55	55	56	56	56
Grand Canyon	The Abyss	72	72	69	68	68	70	72	73
Grand Teton	Science School	(60)	(60)	(54)	---	---	---	---	---
Great Basin	Maintenance Yard	74	72	70	69	71	72	73	72
Great Smoky Mountains	Clingmans Dome	(71)	(75)	(75)	(76)	(79)	(84)	(83)	(80)
Great Smoky Mountains	Cove Mountain	72	76	75	76	79	82	82	77
Great Smoky Mountains	Look Rock	74	79	77	77	79	85	86	84
Joshua Tree	Black Rock	90	94	93	98	100	104	103	103
Joshua Tree	Cottonwood Canyon	(76)	(76)	(78)	(81)	(80)	(79)	(66)	(62)
Lassen Volcanic	Manzanita Lake Fire Station	68	67	64	70	74	77	72	69
Mammoth Cave	Houchin Meadow	71	75	70	70	72	74	76	72
Mesa Verde	Resource Management Area	69	68	68	68	69	71	73	73
Mount Rainier	Tahoma Woods	52	54	54	55	56	58	(56)	(58)
Petrified Forest	South Entrance	70	70	66	67	(67)	(70)	(70)	(70)
Pinnacles	SW of East Entrance Station	70	70	70	76	77	79	74	75
Rocky Mountain	Long's Peak	76	77	74	73	74	76	76	74
Sequoia and Kings Canyon	Ash Mountain	93	95	96	(101)	(103)	(105)	(103)	(103)
Sequoia and Kings Canyon	Lower Kaweah	85	81	79	86	90	96	95	96
Shenandoah	Big Meadows	69	72	71	73	73	75	76	77
Voyageurs	Sullivan Bay	59	63	62	(62)	(61)	(61)	(65)	64
Yellowstone	Water Tank	65	66	65	64	64	66	64	63
Yosemite	Turtleback Dome	77	78	77	83	86	(88)	85	86
Zion	Dalton's Wash	72	73	70	70	70	71	78	79
# park units with violations (0.08 ppm standard):						3	4	4	3
# sites with violations:						4	5	5	4
# park units with violations (0.075 ppm standard):						4	5	4	5
# sites with violations:						6	8	6	9
Sites operated by the NPS for the Bureau of Land Management									
Meeker	Plant Science Center	63	64	(64)	(66)	---	---	---	---
Rangely	Golf Course	77	66	(65)	(58)	---	---	---	---
# units with violations (0.08 ppm standard):						---	---	---	---
# sites with violations:						---	---	---	---
# units with violations (0.075 ppm standard):						1	0	0	0
# sites with violations:						1	0	0	0
Sites operated by the NPS for the U.S. Forest Service									
Escalante	Visitor Center	(67)	(68)	---	---	---	---	---	---
Walden	Chandler Ranch	(61)	(59)	---	---	---	---	---	---
# units with violations (0.08 ppm standard):						---	---	---	---
# sites with violations:						---	---	---	---
# units with violations (0.075 ppm standard):						0	0	0	---
# sites with violations:						0	0	0	---

Table 3. 2013 Ozone violation summary - primary standard^{a,b} (continued).




National Park Unit	Site Name	2011-2013	2010-2012	2009-2011	2008-2010	2007-2009	2006-2008	2005-2007	2004-2006
Sites operated by cooperating state agencies									
<i>Acadia</i>	Cadillac Mountain	69	72	74	74	78	80	83	81
<i>Acadia</i>	McFarland Hill	65	65	69	69	73	72	74	71
<i>Badlands</i>	Visitor Center	59	58	54	55	57	62	68	67
<i>Cape Cod</i>	Cape Cod	72	75	72	74	76	79	84	84
<i>Chamizal</i>	Chamizal	69	70	69	70	71	75	74	73
<i>Congaree</i>	Congaree Bluff	57	61	62	65	67	71	73	72
<i>Cowpens</i>	State Monitor	67	71	66	69	67	74	73	74
<i>Everglades</i>	Cutler Road	64	63	63	67	69	72	69	68
<i>Great Smoky Mountains</i>	Cades Cove	63	68	68	69	69	72	70	67
<i>Great Smoky Mountains</i>	Purchase Knob	67	69	67	72	74	77	77	75
<i>Indiana Dunes</i>	Ammunition Bunker	69	69	62	61	(68)	73	82	75
<i>Mount Rainier</i>	Jackson Visitor's Center	58	56	54	(52)	(56)	(59)	61	61
<i>Saguaro</i>	East	73	71	70	69	71	74	76	76
<i>Theodore Roosevelt</i>	Painted Canyon Visitor Cntr	57	58	58	59	60	63	63	60
<i>Wind Cave</i>	Visitor Center	63	62	60	(59)	63	67	70	(71)
# park units with violations (0.08 ppm standard):						0	0	0	0
# sites with violations:						0	0	0	0
# park units with violations (0.075 ppm standard):						0	0	0	0
# sites with violations:						0	0	0	0

^a The new primary and secondary National Ambient Air Quality Standard for ozone is 0.075 ppm over an 8-hour period. (An exceedance of the standard occurs when an 8-hour average ozone concentration is greater than or equal to 76 ppb. A violation of the standard occurs when the 3-year average of the fourth highest daily maximum 8-hour average ozone concentration equals or exceeds 76 ppb.) For reference, values that would violate the new standard are outlined with a black box. The first 3-year period that the new standard will apply to is 2008-2010.

^b The old primary and secondary National Ambient Air Quality Standard for ozone is 0.08 ppm over an 8-hour period. (An exceedance of the standard occurs when an 8-hour average ozone concentration is greater than or equal to 85 ppb. A violation of the standard occurs when the 3-year average of the fourth highest daily maximum 8-hour average ozone concentration equals or exceeds 85 ppb.) Violations of the old standard are highlighted here in orange and red. The old standard applies to all 3-year periods prior to 2008-2010.

Note: The color coding break points follow the color categories used on the EPA's AIRNow Web Site (<http://www.airnow.gov>).

Operating agency key: plain text = site operated by the National Park Service, Bureau of Land Management, or U.S. Forest Service
italics = site operated by a state agency
underline = site operated by the National Park Service, but consisting of non-EPA certified portable instrumentation

Color shading key: 4th highest 8-hour average
 = 85 - 104 ppb ozone concentration
 ≥ 105 ppb ozone concentration
 ≥ 76 ppb ozone concentration

Note: A number in parenthesis () indicates that data completeness was not met. The primary standard requires 90 percent data completeness, on average, during the 3-year period, with no single year within the period having less than 75 percent data completeness. This data completeness requirement would have to be satisfied in order to determine that the standard has been met at a monitoring site. However, calendar years with less than 75 percent data completeness are included in the computation if the annual fourth-highest daily maximum 8-hour concentration is greater than the level of the standard. A site could be found not to have met the standard with less than complete data.

Dashed lines represent no data available at that site.

Table 4. 2013 Summary of indices for resource injury (SUM06 and W126).

National Park Unit	Site Name	O ₃ % Valid	SUM06 ^a (ppm-hr)	W126 ^b (ppm-hr)	Period
Sites operated by the National Park Service (Gaseous Pollutant Monitoring Program)					
Big Bend	K-Bar Ranch Road	98.9	11.7	11.0	March-May
Canyonlands	Island in the Sky	92.4	15.3	12.3	April-June
Chiricahua	Entrance Station	98.3	27.7	17.0	May-July
Craters of the Moon	Visitor Center	98.3	2.4	6.0	July-September
Denali	Headquarters	97.7	0.0	2.3	March-May
Death Valley	Park Village	97.5	20.3	14.8	May-July
Glacier	West Glacier Horse Stables	94.2	0.0	2.2	March-May
Great Basin	Maintenance Yard	98.8	17.3	14.3	May-July
Grand Canyon	The Abyss	99.3	16.7	13.3	April-June
Great Smoky Mountains	Clingmans Dome	95.5	1.8	3.3	May-July
Great Smoky Mountains	Cove Mountain	99.9	2.5	5.4	March-May
Great Smoky Mountains	Look Rock	99.5	4.3	6.1	March-May
Grand Teton	Science School	99.7	3.2	6.4	March-May
Joshua Tree	Black Rock	99.5	54.6	35.7	May-July
Joshua Tree	Cottonwood Canyon	68.7	29.8	17.9	April-June
Lassen Volcanic	Manzanita Lake Fire Station	90.6	9.1	8.1	May-July
Mammoth Cave	Houchin Meadow	99.5	4.8	5.8	April-June
Mesa Verde	Resource Management Area	98.4	22.4	16.0	May-July
Mount Rainier	Tahoma Woods	99.6	0.1	0.6	March-May
Petrified Forest	South Entrance	97.3	26.7	16.8	May-July
Pinnacles	SW of East Entrance Station	97.0	9.4	8.0	May-July
Rocky Mountain	Long's Peak	99.4	21.8	16.7	May-July
Sequoia and Kings Canyon	Ash Mountain	91.2	61.3	44.4	June-August
Sequoia and Kings Canyon	Lower Kaweah	97.6	54.5	38.1	June-August
Shenandoah	Big Meadows	95.5	4.2	6.6	March-May
Voyageurs	Sullivan Bay	99.5	0.6	2.9	March-May
Yellowstone	Water Tank	96.0	4.9	6.5	May-July
Yosemite	Turtleback Dome	96.1	25.9	17.4	June-August
Zion	Dalton's Wash	99.4	22.8	15.4	May-July
Sites operated by the NPS for the Bureau of Land Management					
Meeker	Plant Science Center	96.9	9.3	9.4	May-July
Rangely	Golf Course	95.1	14.2	12.5	January-March
Sites operated by the NPS for the U.S. Forest Service					
Escalante	Visitor Center	92.6	12.4	10.3	May-July
Walden	Chandler Ranch	95.4	6.0	7.5	June-August
Sites operated by cooperating state agencies					
<i>Acadia</i>	Cadillac Mountain	99.5	3.7	4.2	April-June
<i>Acadia</i>	McFarland Hill	98.0	4.3	4.5	April-June
<i>Badlands</i>	Visitor Center	96.5	4.9	4.9	July-September
<i>Cape Cod</i>	Cape Cod	94.4	4.2	4.5	April-June
<i>Chamizal</i>	Chamizal	99.5	13.0	10.3	May-July
<i>Congaree</i>	Congaree Bluff	98.3	0.5	1.3	April-June
<i>Cowpens</i>	State Monitor	98.6	1.9	3.1	April-June
<i>Everglades</i>	Cutler Road	96.9	5.0	4.9	March-May

Table 4. 2013 Summary of indices for resource injury (SUM06 and W126) (continued).

National Park Unit	Site Name	O ₃ % Valid	SUM06 ^a (ppm-hr)	W126 ^b (ppm-hr)	Period
Sites operated by cooperating state agencies					
<i>Great Smoky Mountains</i>	Cades Cove	99.8	1.5	3.4	March-May
<i>Great Smoky Mountains</i>	Purchase Knob	98.8	3.9	5.6	April-June
<i>Indiana Dunes</i>	Ammunition Bunker	96.7	5.2	4.9	June-August
<i>Mount Rainier</i>	Jackson Visitor's Center	92.6	0.5	3.0	March-May
<i>Saguaro</i>	East	99.1	20.7	14.1	May-July
<i>Theodore Roosevelt</i>	Painted Canyon Visitor Center	99.1	0.8	4.4	April-June
<i>Wind Cave</i>	Visitor Center	97.8	5.1	5.9	July-September
Portable ozone monitoring systems (POMS)					
<u>Carlsbad Caverns</u>	Maintenance Area	94.4	13.0	11.2	May-July
<u>Cumberland Gap</u>	Hensley Settlement	96.7	1.3	1.9	May-July
<u>Dinosaur</u>	West Entrance Housing	92.6	39.5	34.2	January-March
<u>Joshua Tree</u>	Pinto Wells	99.6	17.8	13.5	April-June
<u>Kings Mountain</u>	Brown's Mountain	71.2	3.1	2.9	May-July
<u>Mojave</u>	Kelso Mountains	64.7	18.7	13.2	May-July
<u>Ninety Six Historical Park</u>	Bumble Bee Hill	95.8	0.3	0.4	May-July

^a SUM06 exposure index represents the 0800-2000 hourly ozone concentrations equaling or exceeding 0.06 ppm. The value reported here represents a three-month maximum value during the ozone season. Units are ppm-hr.

^b W126 exposure index represents 0800-2000 hourly ozone concentrations where each concentration is weighted by a function that gives greater emphasis to the higher hourly concentrations while still including the lower ones. The value reported here represents a three-month maximum value during the ozone season. Units are ppm-hr. For more information on the W126 exposure index go to <http://www.nature.nps.gov/air/aqbasics/glossary.cfm>.

Note: The SUM06 and W126 are described in further detail on pages 3-4 of this report. For more information see the section titled "Resource Injury Indices."

Operating agency key: plain text = site operated by the National Park Service, Bureau of Land Management, or U.S. Forest Service
 italics = site operated by a state agency
 underline = site operated by the National Park Service, but consisting of non-EPA certified portable instrumentation

Table 5. 2013 Summary of sulfur dioxide data.

National Park Unit	Site Name	Highest Daily Maximum 1-Hour Average Concentration ^a (ppb)					No. of Days with 1-Hr Average ≥ 76 ppb	Highest Daily Maximum 3-Hour Average Concentration ^b (ppb)				
		1 st Highest	2 nd Highest	3 rd Highest	4 th Highest	99 th Percentile Value		1 st Highest	2 nd Highest	3 rd Highest	4 th Highest	No. of Days with 3-Hr Maximum ≥ 550 ppb
Sites operated by the National Park Service (Gaseous Pollutant Monitoring Program)												
Great Smoky Mountains	Cove Mountain	4	2	2	2	4	0	3	2	2	2	0
Hawaii Volcanoes *	Observatory / Jaggar Museum	2071	1968	1154	1122	1122	115	1659	1380	824	593	6
Hawaii Volcanoes *	Visitor Center	1809	1788	1399	1219	1219	89	1430	1155	1003	717	6
Mammoth Cave	Houchin Meadow	25	13	11	11	11	0	12	10	8	6	0
Sites operated by cooperating state agencies												
<i>Badlands</i>	Visitor Center	4	4	3	2	2	0	2	2	2	2	0
<i>Congaree</i>	Congaree Bluff	68	34	22	22	22	0	24	23	17	16	0
<i>Indiana Dunes</i>	Ammunition Bunker	74	52	49	43	43	0	60	43	36	30	0
<i>Theodore Roosevelt</i>	Painted Canyon Visitor Ctr	8	8	4	4	4	0	5	5	5	3	0

^a The primary hourly National Ambient Air Quality Standard for sulfur dioxide is a daily maximum 1-hour average of 75 ppb. (An exceedance of the Standard occurs when a daily maximum 1-hour average exceeds 75 ppb. A violation of the Standard occurs when the 3-year average of the 99th percentile of the daily maximum 1-hour average exceeds 75 ppb.)

^b The secondary National Ambient Air Quality Standard for sulfur dioxide is 0.5 ppm over a 3-hour period not to be exceeded more than once per year. (A value greater than 0.5 ppm, 549 ppb, or 1300 µg/m³ exceeds the standard.) (40 CFR 50.5.)

* This site collected sulfur dioxide data using an instrument or a range that is not an EPA reference method.

Operating agency key: plain text = site operated by the National Park Service, Bureau of Land Management, or U.S. Forest Service
italics = site operated by a state agency

Color shading key: >34 ppb annual arithmetic mean, > 75 ppb 99th percentile value, or >549 ppb 3-hour average

Table 6. 2013 Summary of carbon monoxide data.

National Park Unit	Site Name	Highest Daily Maximum 1-Hour Average Concentration ^a (ppm)					Highest Daily Maximum 8-Hour Average Concentration ^b (ppm)				
		1 st Highest	2 nd Highest	3 rd Highest	4 th Highest	No. of Days with 1-Hr Average ≥ 35 ppm	1 st Highest	2 nd Highest	3 rd Highest	4 th Highest	No. of Days with 8-Hr Average ≥ 9 ppm
Sites operated by the National Park Service (Gaseous Pollutant Monitoring Program)											
Great Smoky Mountains	Look Rock	0.4	0.3	0.3	0.3	0	0.2	0.2	0.2	0.2	0
Mammoth Cave	Houchin Meadow	0.3	0.3	0.3	0.3	0	0.2	0.2	0.2	0.2	0
Walden	Chandler Ranch	0.4	0.3	0.3	0.3	0	0.2	0.2	0.2	0.2	0
Yellowstone	Old Faithful Snow Lodge	2.0	1.6	1.2	1.2	0	0.8	0.6	0.6	0.6	0
Sites operated by cooperating state agencies											
<i>Yellowstone</i>	West Yellowstone	12.6	6.1	5.3	4.1	0	1.9	1.1	1.0	0.9	0

^a The primary hourly National Ambient Air Quality Standard for carbon monoxide is a daily maximum 1-hour average of 35 ppm. (An exceedance of the Standard occurs when a daily maximum 1-hour average exceeds 35 ppm. A violation of the Standard occurs when a daily maximum 1-hour average exceeds 35 ppm more than once in a calendar year.)

^b The primary National Ambient Air Quality Standard for carbon monoxide is 9 ppm over an 8-hour period. (An exceedance of the Standard occurs when an 8-hour average exceeds 9 ppm. A violation of the Standard occurs when a daily maximum 8-hour average exceeds 9 ppm more than once in a calendar year.) (40 CFR 50.8.)

Operating agency key: plain text = site operated by the National Park Service, Bureau of Land Management, or U.S. Forest Service
italics = site operated by a state agency


Color shading key:  >35 ppm 1-hour average or >9 ppm 8-hour average

Table 7. 2013 Summary of nitrogen dioxide data.

National Park Unit	Site Name	Highest Daily Maximum 1-Hour Average Concentrations ^{ab} (ppb)						No. of Days with 1-Hour Average \geq 100 ppb	Annual Arithmetic Mean
		1 st Highest	2 nd Highest	3 rd Highest	4 th Highest	98 th Percentile Value			
Sites operated by the National Park Service (Gaseous Pollutant Monitoring Program)									
Great Smoky Mountains	Look Rock	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mammoth Cave	Houchin Meadow	24.1	20.0	19.8	19.7	18.8	0	3.1	
Sites operated by the NPS for the Bureau of Land Management									
Meeker	Plant Science Center	6.5	6.3	5.3	5.0	4.2	0	0.7	
Rangely	Golf Course	32.7	27.4	27.3	26.0	24.2	0	3.2	
Sites operated by the NPS for the U.S. Forest Service									
Walden	Chandlers Ranch	8.1	6.8	6.7	6.6	6.1	0	1.4	
Sites operated by cooperating state agencies									
Yellowstone	West Yellowstone	49.0	39.0	38.0	36.0	33.0	0	2.0	

Table 8. 2013 Summary of oxides of nitrogen data.

National Park Unit	Site Name	Highest Daily Maximum 1-Hour Average Concentrations (ppb)				No. of Days with 1-Hour Average \geq 100 ppb
		1 st Highest	2 nd Highest	3 rd Highest	4 th Highest	
Sites operated by the National Park Service (Gaseous Pollutant Monitoring Program)						
Great Smoky Mountains	Look Rock	12.4	11.2	8.0	8.0	0
Mammoth Cave	Houchin Meadow	24.6	21.1	20.0	20.0	0
Sites operated by the NPS for the Bureau of Land Management						
Meeker	Plant Science Center	10.7	9.2	7.6	7.3	0
Rangely	Golf Course	33.2	29.5	29.5	28.8	0
Sites operated by the NPS for the U.S. Forest Service						
Walden	Chandler Ranch	18.5	10.9	10.8	10.4	0
Sites operated by cooperating state agencies						
Yellowstone	West Yellowstone	205.0	137.0	137.0	126.0	6

Table 9. 2013 Summary of PM_{2.5} data from reference and equivalency methods.

National Park Unit	Site Name	Sampler Type*	% Valid ^a	Annual Arithmetic Mean ^b (µg/m ³)	Highest Daily 24-Hour Average Concentrations ^c (µg/m ³)					
					1 st Highest	2 nd Highest	3 rd Highest	4 th Highest	98 th Percentile Value	No. of Days with 24-Hour Average >35 µg/m ³
Sites operated by the National Park Service (Gaseous Pollutant Monitoring Program)										
Great Smoky Mountains	Look Rock	TEOM	98.9	9.0	24	23	23	21	20	0
Hawaii Volcanoes	Observatory / Jaggar Museum	SHARP	87.3	7.0	41	35	31	30	27	1
Sequoia and Kings Canyon	Ash Mountain	BAM	77.2	7.8	25	20	19	19	18	0
Shenandoah	Big Meadows	TEOM	48.3	3.3	16	16	13	13	13	0
Yellowstone	Old Faithful Snow Lodge	BAM	68.9	1.5	8	6	5	5	5	0
Zion	Dalton's Wash	FRM or FEM	80.3	5.7	19	17	16	12	12	0
Sites operated by the NPS for the Bureau of Land Management										
Meeker	Plant Science Center	TEOM	75.3	4.5	11	11	10	10	9	0
Rangely	Golf Course	FRM or FEM	86.8	8.5	21	20	20	18	16	0
Sites operated by cooperating state agencies										
<i>Acadia</i>	McFarland Hill	TEOM	98.1	1.8	17	15	13	13	11	0
<i>Badlands</i>	Visitor Center	FRM or FEM	95.4	4.8	17	17	16	15	14	0
<i>Indiana Dunes</i>	Ammunition Bunker	FRM or FEM	95.0	11.0	34	32	30	27	25	0
<i>Theodore Roosevelt</i>	Painted Canyon Visitor Ctr	TEOM	99.7	5.0	22	15	14	13	11	0
<i>Wind Cave</i>	Visitor Center	FRM or FEM	97.9	2.8	15	11	11	11	9	0
<i>Yellowstone</i>	W. Yellowstone State Site	BAM	97.0	4.0	15	15	15	14	11	0
<i>Yosemite</i>	Village	BAM	81.7	11.5	180	33	30	28	25	1

^a At sites operated by an agency other than the National Park Service, the primary responsibility for the operation and data reporting of particulate matter belongs to the operating agency.

^b The primary annual National Ambient Air Quality Standard for PM_{2.5} is an annual arithmetic mean of 15.0 µg/m³. (An exceedance of the standard occurs when an annual arithmetic mean of PM_{2.5} concentrations is greater than 15.0 µg/m³. A violation of the standard occurs when the 3-year average of the weighted annual mean PM_{2.5} concentrations is greater than 15.0 µg/m³ (40 CFR 50.7.)

^c The primary daily National Ambient Air Quality Standard for PM_{2.5} is a 24-hour average concentration of 35 µg/m³. (An exceedance of the standard occurs when a 24-hour average PM_{2.5} concentration is greater than 35 µg/m³. A violation of the standard occurs when the 3-year average of the annual 98th percentile of 24-hour PM_{2.5} concentrations is greater than 35 µg/m³.) (40 CFR 50.7.)

- * TEOM = tapered element oscillating microbalance
- BAM = beta attenuation monitor
- SHARP = synchronized hybrid ambient real-time particulate monitor
- FRM = federal reference method monitor
- FEM = federal equivalent method monitor

Operating agency key: plain text = site operated by the National Park Service, Bureau of Land Management, or U.S. Forest Service
 italics = site operated by a state agency

Color shading key: Annual arithmetic mean > 15 µg/m³
 98th percentile value > 35 µg/m³

Table 10. 2013 Summary of PM₁₀ data from reference and equivalency methods.

National Park Unit	Site Name	Sampler Type*	% Valid ^a	Annual Arithmetic Mean ^b (µg/m ³)	Highest Daily 24-Hour Average Concentrations ^c (µg/m ³)				No. of Days with 24-Hour Average >150 µg/m ³
					1 st Highest	2 nd Highest	3 rd Highest	4 th Highest	
Sites operated by cooperating state agencies									
<i>Badlands</i>	Visitor Center	BAM	95.000	9	40	40	30	30	0
<i>Wind Cave</i>	Visitor Center	BAM	95.900	7	40	30	20	20	0

^a At sites operated by an agency other than the National Park Service, the primary responsibility for the operation and data reporting of particulate matter belongs to the operating agency.

^b The primary annual National Ambient Air Quality Standard for PM₁₀ is an annual arithmetic mean of 50 µg/m³. (An exceedance of the standard occurs when an annual arithmetic mean of PM₁₀ concentrations is greater than 50 µg/m³. A violation of the standard occurs when the 3-year average of the weighted annual mean PM₁₀ concentrations is greater than 50 µg/m³ (40 CFR 50.6.)

^c The primary daily National Ambient Air Quality Standard for PM₁₀ is a 24-hour average concentration of 150 µg/m³. (An exceedance of the standard occurs when a 24-hour average PM₁₀ concentration is greater than 150 µg/m³. A violation of the standard occurs when a 24-hour average concentration greater than 150 µg/m³ occurs more than once in a calendar year.) (40 CFR 50.6.)

* TEOM = tapered element oscillating microbalance
 BAM = beta attenuation monitor

Color shading key: >50 µg/m³ annual arithmetic mean, >150 µg/m³ 24-hour average

italics = site operated by a state agency

Table 11. 2013 PM₁₀ summary - maximum daily 24-hour average concentration in 2010-2012 (µg/m³)^a.

National Park Unit	Site Name	Sampler Type*	2012	2011	2010
Sites operated by cooperating state agencies					
<i>Badlands</i>	Visitor Center	BAM	40	60	50
<i>Wind Cave</i>	Visitor Center	BAM	40	50	40

^a The primary daily National Ambient Air Quality Standard for PM₁₀ is a 24-hour average concentration of 150 µg/m³. (An exceedance of the standard occurs when a 24-hour average PM₁₀ concentration is greater than 150 µg/m³. A violation of the standard occurs when a 24-hour average concentration greater than 150 µg/m³ occurs more than once in a calendar year.) (40 CFR 50.6.)

* TEOM = tapered element oscillating microbalance
 BAM = beta attenuation monitor

Color shading key: > 1 24-hour average concentration >150 µg/m³

italics = site operated by a state agency

Table 12. 2013 Annual summary of selected meteorological data.

National Park Unit	Site Name	Wind Speed (m/s)	Ambient Temperature (degrees C)			Relative Humidity (%)			Precipitation (mm)
		Average	Average	Maximum	Minimum	Average	Maximum	Minimum	Annual Accumulation
Sites operated by the National Park Service (Gaseous Pollutant Monitoring Program)									
Big Bend	K-Bar Ranch Road	3.6	20.1	38.9	-4.2	43	100	2	296.6
Canyonlands	Island in the Sky	2.7	11.3	36.5	-16.3	43	98	3	205.9
Chiricahua	Entrance Station	3.0	15.8	36.4	-12.6	42	99	6	352.4
Craters of the Moon	Visitor Center	3.1	6.4	36.1	-23.6	33	99	5	---
Death Valley	Park Village	3.8	26.3	49.9	1.1	16	99	3	18.1
Denali	Headquarters	1.3	-1.1	28.4	-34.5	60	93	11	79.6
Everglades	Beard Center	2.8	22.9	32.7	5.5	79	100	20	1062.2
Glacier	West Glacier Horse Stables	0.8	5.9	32.9	-26.4	75	100	17	366.1
Grand Canyon	The Abyss	2.7	11.0	33.1	-14.2	43	100	3	323.5
Grand Teton	Science School	2.4	2.1	29.7	-28.6	69	100	10	343.6
Great Basin	Maintenance Yard	2.4	9.1	36.6	-22.4	45	94	5	372.5
Great Smoky Mountains	Cades Cove	1.2	13.3	30.9	-12.1	81	100	20	1760.5
Great Smoky Mountains	Clingmans Dome	3.6	10.7	19.0	-11.2	88	100	4	1254.5
Great Smoky Mountains	Cove Mountain	4.4	10.3	24.9	-13.5	77	100	2	1712.0
Great Smoky Mountains	Look Rock	2.3	12.4	29.8	-16.8	73	100	17	1801.4
Hawaii Volcanoes	Observatory / Jaggar Museum	4.6	15.8	27.9	8.8	88	100	9	1009.6
Hawaii Volcanoes	Visitor Center	3.3	15.2	24.2	7.4	94	100	16	1448.3
Joshua Tree	Black Rock	3.6	16.6	38.6	-7.8	32	100	2	70.6
Joshua Tree	Cottonwood Canyon	3.4	21.5	40.5	-1.8	29	100	5	3.9
Lassen Volcanic	Manzanita Lake Fire Station	1.7	7.2	31.7	-19.9	56	98	7	485.6
Mammoth Cave	Houchin Meadow	1.8	13.5	32.7	-11.5	73	96	20	1431.6
Mesa Verde	Resource Management Area	3.1	9.8	33.1	-16.4	45	99	4	366.6
Mount Rainier	Tahoma Woods	0.9	10.3	33.3	-8.6	85	95	12	978.2
Petrified Forest	South Entrance	4.1	12.3	36.5	-16.8	34	100	-13	106.6
Pinnacles	SW of East Entrance Station	2.4	14.5	41.2	-9.3	57	100	6	54.6
Rocky Mountain	Long's Peak	2.6	3.8	25.5	-26.5	51	100	3	800.9
Sequoia and Kings Canyon	Ash Mountain	2.6	17.8	41.0	-2.9	46	100	8	142.0
Sequoia and Kings Canyon	Lower Kaweah	1.9	10.9	29.9	-11.9	57	95	6	231.1
Shenandoah	Big Meadows	2.0	7.9	26.9	-17.3	74	100	10	1670.5
Voyageurs	Sullivan Bay	2.6	3.0	32.3	-32.5	78	100	22	738.4
Yellowstone	Old Faithful Snow Lodge	1.7	1.5	29.5	-36.3	68	100	9	---
Yellowstone	Water Tank	1.6	-0.6	27.6	-27.5	67	99	8	341.7
Yosemite	Turtleback Dome	4.1	11.9	31.5	-10.2	45	96	6	286.6
Zion	Dalton's Wash	3.9	15.5	42.3	-15.2	33	95	3	63.4
Sites operated by the NPS for the Bureau of Land Management									
Meeker	Plant Science Center	3.2	6.1	33.2	-28.8	59	100	7	426.5
Rangely	Golf Course	2.8	7.1	35.5	-31.0	57	100	5	266.4
Sites operated by the NPS for the U.S. Forest Service									
Escalante	Visitor Center	2.9	11.1	35.6	-18.4	41	100	5	322.5
Walden	Chandler Ranch	3.4	2.6	29.7	-39.4	65	99	7	---
Sites operated by cooperating state agencies									
Acadia	Cadillac Mountain	5.0	13.7	29.9	-2.8	82	100	13	---
Acadia	McFarland Hill	2.7	7.3	31.5	-21.2	76	100	16	1229.4

Table 12. 2013 Annual summary of selected meteorological data (continued).

National Park Unit	Site Name	Wind Speed (m/s)	Ambient Temperature (degrees C)			Relative Humidity (%)			Precipitation (mm)
		Average	Average	Maximum	Minimum	Average	Maximum	Minimum	Annual Accumulation
Sites operated by cooperating state agencies									
<i>Cape Cod</i>	Cape Cod	2.5	10.7	33.9	-12.2	71	93	24	----
<i>Chamizal</i>	Chamizal	3.5	19.3	40.8	-5.7	32	96	4	----
<i>Great Smoky Mountains</i>	Cades Cove	1.2	13.3	30.9	-12.1	81	100	20	1760.5
<i>Indiana Dunes</i>	Ammunition Bunker	3.5	9.4	37.4	-20.7	73	100	18	----
<i>Saguaro</i>	East	---	21.5	41.2	-4.7	31	99	2	----
<i>Theodore Roosevelt</i>	Painted Canyon Visitor Cntr	4.8	5.7	34.1	-30.8	68	100	14	459.1
<i>Wind Cave</i>	Visitor Center	3.4	8.6	34.1	-24.5	57	98	10	267.7
Portable ozone monitoring systems (POMS) (seasonal)									
<u>Carlsbad Caverns</u>	Maintenance Area	4.5	24.8	38.9	2.6	43	100	6	160.6
<u>Cumberland Gap</u>	Hensley Settlement	2.1	17.1	26.7	2.0	86	100	36	556.1
<u>Dinosaur</u>	West Entrance Housing	1.3	7.4	38.0	-31.2	53	99	7	68.5
<u>Joshua Tree</u>	Pinto Wells	3.2	25.7	48.1	-2.1	26	96	3	28.3
<u>Kings Mountain</u>	Brown's Mountain	1.5	20.5	32.1	0.9	74	99	18	255.8
<u>Mojave</u>	Kelso Mountains	3.6	22.9	39.5	2.7	26	100	5	22.5
<u>Ninety-Six Historical Park</u>	Bumble Bee Hill	1.1	21.2	34.5	-1.9	83	99	24	----

Note: Dashed lines represent no data available for that particular parameter at that site.

Operating agency key: plain text = site operated by the National Park Service, Bureau of Land Management, or U.S. Forest Service
italics = site operated by a state agency
underline = site operated by the National Park Service, but consisting of non-EPA certified portable instrumentation