

National Park Service
U.S. Department of the Interior

Air Resources Division

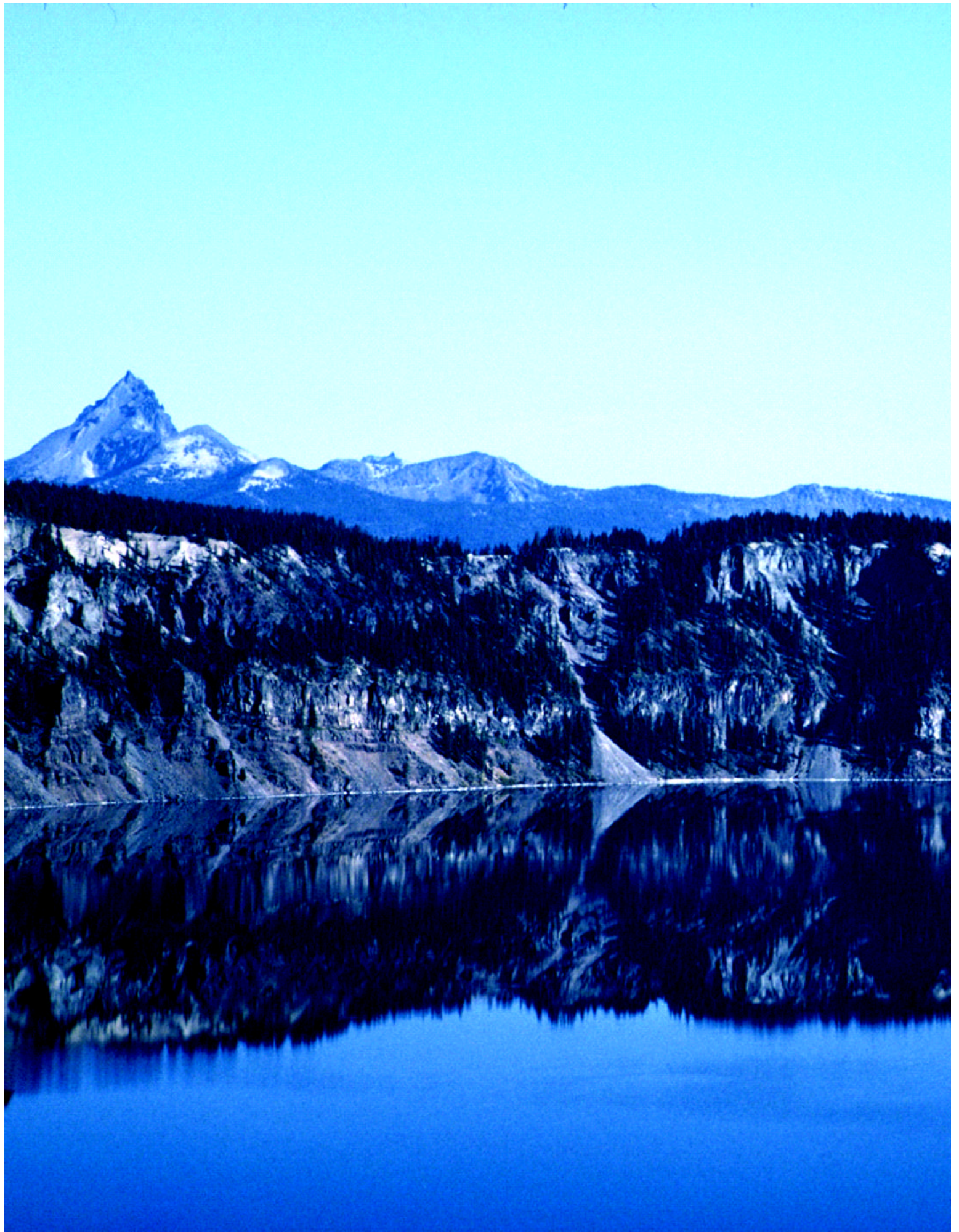


Air Quality in the National Parks

Second Edition

Air Quality in the National Parks - Second Edition





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National Park Service Air Resources Division
Lakewood, Colorado

U.S. Department of the Interior
Washington, DC

(Cover) Grand Canyon National Park, Arizona

(Left) Crater Lake National Park, Oregon

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“Mount Rainier is the undisputed icon of the Pacific Northwest and the public is passionate about ‘their’ park and its protection. Mount Rainier dominates the horizon and can be seen daily by millions of people. When the mountain is out, the people come and they expect clean air and panoramic vistas. The views, however, are often tarnished by the haze generated in the Puget Sound area. Because of this unique position, the quality of the air around Mount Rainier National Park serves to galvanize support among all the interest groups, governments, and the general public into actions that protect the entire region.”

*Jon Jarvis, Superintendent
Mount Rainier National Park, Washington*

Contents

Executive Summary vi

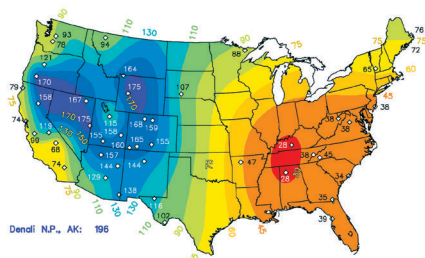
Chapter One Preserving Air Quality in National Parks 1

Our mandate	1
Air pollution effects	1
Management policies	2
Understanding the impact of air pollution on national parks	2
<i>Pollutants of concern, their impact, and resources at risk</i>	3
<i>Sources of air pollutants</i>	4
<i>Measuring air pollutant levels in parks</i>	4
<i>Visibility monitoring</i>	4
<i>Atmospheric deposition monitoring</i>	4
<i>Gaseous pollutant and meteorological monitoring</i>	5
<i>Pollutant transport</i>	5
Meeting our affirmative responsibilities	6
<i>Communication</i>	6
<i>Consultation</i>	6
<i>Motor vehicle standards</i>	7
<i>Eastern states nitrogen oxides state implementation plan order</i>	7
<i>Regional haze regulations</i>	7
<i>Air quality related value restoration and protection rulemaking</i>	8
<i>Cooperation</i>	8
<i>Conservation</i>	8



Chapter Two Current Air Quality Conditions and Trends 9

Visibility	9
<i>Current visibility conditions</i>	9
<i>Causes of visibility impairment</i>	10
<i>Visibility trends</i>	13
Atmospheric deposition	16
<i>Critical loads and target loads</i>	16
<i>Atmospheric deposition levels</i>	17
<i>Sulfate, nitrate, and ammonium in precipitation</i>	17
<i>Trends in sulfate and nitrogen concentrations in precipitation</i>	19
Ozone and its effects	21
<i>Ozone and its ecological effects</i>	21
<i>Ozone and visitor and employee health</i>	23
<i>Ozone trends</i>	24
Other gaseous pollutants	26



Chapter Three Measuring Air Quality in National Parks 27

Visibility monitoring	28
Acid precipitation and deposition monitoring	29
Ecosystem monitoring	30
Lake, stream, and watershed monitoring	31
Gaseous pollutant and meteorological monitoring	31
<i>Ozone passive sampling</i>	31
Air pollution special studies	32
<i>Big Bend Regional Aerosol and Visibility Observational Study (BRAVO)</i>	32
<i>Winter Haze Intensive Tracer Experiment (WHITEX)</i>	33
<i>Measurement of Haze and Visual Effects (MOHAVE)</i>	33
<i>Pacific Northwest Regional Visibility Experiment Using Natural Tracers (PREVENT)</i>	33
<i>Centralia Power Plant Collaborative Decision-Making Process</i>	33
Human perception and values	34
Gaseous pollutant special studies	34



Chapter Four Great Smoky Mountains National Park -- Threatened by Air Pollution 35

- Resources under stress 36
 - Visibility impairment from regional haze 36
 - Atmospheric deposition impacts to terrestrial and aquatic ecosystems 37
- Ozone pollution and its impacts 39
- Air quality monitoring and research activities 42
 - Southeastern Aerosol and Visibility Study (SEAVS) 42
 - Park Research and Intensive Monitoring of Ecosystems Network (PRIMENet) 42
 - Research on ozone damage to the growth and physiology of native trees and wildflowers 42
 - Southern Appalachian Mountains Initiative (SAMI) 43
- Public awareness: a key to success 43
- Partnerships 43
- Public awareness and education: "keep telling the story" 43



Chapter Five The Future of Air Quality in Our National Parks 45

- Background 45
- Future air quality challenges 45
- Challenges 45
 - Visibility 46
 - Atmospheric deposition 46
 - Ozone and other criteria pollutants 46
 - Smoke management 46
 - Toxic air pollutants 46
 - Park emissions 47
 - Legislation and regulations 47
 - Cap and trade programs 47
 - Science and research 47
 - Education and outreach 47
- A strategy for the future 48
 - Communicating our message 48
 - Working with others to improve air quality 48
 - Environmental leadership 49
 - In-park emissions 49
 - Mobile emissions 50
 - Fire management air issues 50
 - Energy conservation 50
- Responding to the challenge 50



Appendix A Data Tables 51

Haziness Index in U.S. National Parks for the Clearest Days, 1990 - 1999: Average of Best 20 percent days, in deciviews (dv) 52

Haziness Index in U.S. National Parks for the Haziest Days, 1990 - 1999: Average of Worst 20 percent days, in deciviews (dv) 53

Precipitation-Weighted Mean Sulfate Ion Concentration in U.S. National Parks, 1990 - 1999: Annual Average in $\mu\text{eq/liter}$ 54

Sulfate Ion Wet Deposition in U.S. National Parks, 1990 - 1999: Annual Average in kilograms/hectare 55

Precipitation-Weighted Mean Nitrate Ion Concentration in U.S. National Parks, 1990 - 1999: Annual Average in $\mu\text{eq/liter}$ 56

Inorganic Nitrogen Wet Deposition From Nitrate and Ammonium in U.S. National Parks, 1990 - 1999: Annual Average in kilograms/hectare 57

Ozone Levels in U.S. National Parks, 1990 - 1999: Average of the Daily 1-hour Maximum, May-September, in ppb 58

Ozone Levels in U.S. National Parks, 1990 - 1999: Annual 4th Highest 8-hour Average, in ppb 59

Park	Haziness Index in U.S. National Parks for the Clearest Days 1990 - 1999: Average of Best 20 percent days, in deciviews (dv)										Avg	Status	Trend	Slope (dv/yr)
	Year	1990	1991	1992	1993	1994	1995	1996	1997	1998				
Acadia, ME	10.6	10.7	10.2	10.6	9.8	8.6	9.1	9.7	9.3	8.7	8.8	○	↓	-0.20
Badlands, ND	7.6	7.4	7.2	7.4	7.9	6.6	7.9	7.1	7.4	6.6	7.3	○	↓	-0.07
Bandelier, NM	-	-	-	7	6.7	5.9	6.0	6.3	4.8	6.7	6.5	○	↑	+0.00
Big Bend, TX	8.4	8.2	7.5	7.7	8.5	7.8	-	6.9	9.3	8.8	8.1	○	↓	+0.06
Bryce Canyon, UT	4.9	5.0	5.7	4.8	4.5	4.3	4.1	4.6	4.5	4.7	4.7	●	↓	-0.07
Canyonlands, UT	5.9	6.2	6.3	6	6.5	6.7	4.9	6.0	5.8	5.8	5.9	○	↓	-0.04
Chiricahua, AZ	-	6.8	6.6	6.4	6.6	6.6	6.4	6.7	6.6	6.6	6.6	○	↓	-0.02
Custer Latta, OR	-	-	5.1	5.1	-	3.7	4.3	4.3	4.1	4.1	4.4	○	↓	-0.14
Denali, AK	-	3.5	3.4	3.7	3.4	3.2	3.7	4.1	3.1	3.2	3.5	○	↓	-0.03
Glacier, MT	8.0	9.8	8.9	9.0	8.5	7.9	8	7.9	8.3	7.5	8.4	○	↓	-0.20
Grand Canyon, AZ	-	-	-	5.7	5.3	3.9	4.0	4.4	4.8	5.2	5.1	●	-	+0.00
Great Basin, NV	5.1	5.5	-	5.1	4.9	5.0	5.1	5.0	5.0	5.3	4.9	●	↓	-0.02
Great Sand Dunes, CO	6.6	6.7	6.3	6.1	5.4	4.8	4.9	5.3	6.6	5.5	5.8	○	↓	-0.17
Great Smoky Mts., TN/NC	15.3	13.8	13.6	14.4	13.8	13.5	15.3	15.1	14.4	15.2	14.4	●	↑	+0.09
Guadalupe Mts., TX	-	-	7.3	8.0	7.5	8.3	7.5	7.2	7.5	7.6	7.7	○	↓	-0.01
Lassen Volcanic, CA	4.5	4.3	4.7	5.1	4.4	3.9	4.0	4.4	4.3	4.1	4.4	○	↓	-0.06
Mammoth Cave, KY	-	-	10.3	10.3	-	10.5	16	10.8	10.2	10.1	10.3	●	↓	-0.03
Mesa Verde, CO	5.5	6.1	5.6	5.7	6.3	4.9	5.0	-	5.9	5.7	5.6	○	↑	+0.01
ML Rainier, WA	-	7.0	7.2	7.5	6.3	5.0	5.4	5.5	5.0	5.3	6.0	○	↓	-0.28
Petrified Forest, AZ	-	8.0	7.6	6.2	6.2	6.2	6.1	6.9	6.8	6.7	6.7	○	↓	-0.10
Pinnacles, CA	9.4	9.3	9.1	8.7	9.4	8.3	8.0	8.9	-	8.7	8.9	○	↓	-0.12
Point Reyes, CA	9.1	8.8	8.6	8.5	8.1	7.9	8.1	-	8.7	8.9	8.8	○	↓	-0.08
Redwood, CA	6.7	6.8	6.9	6.7	6.3	6.6	5.3	6.1	5.5	6.2	6.3	○	↓	-0.10
Rocky Mountain, CO	4.3	4.1	3.9	4.5	5.0	4.3	3.9	4.2	4.8	3.9	4.3	○	-	+0.00
Shenandoah, VA	14.1	13.4	12.6	14.2	12.3	12.8	14.2	13.5	11.8	11.9	13.1	○	↓	-0.15
Tonto, AZ	-	8.2	-	7.7	7.2	7.7	7.7	7.6	7.6	8.1	7.7	○	↓	-0.04
Yellowstone, WY	-	-	5.9	5.2	4.7	4.6	5	-	3.8	4.9	4.9	○	↓	-0.23
Yosemite, CA	8.4	5.6	4.8	4.8	4.5	5.3	4.5	5.5	4.7	5.0	5.0	○	↓	-0.02
Average	7.7	7.5	7.6	7.5	6.9	6.8	6.8	7.2	7.1	7.0	7.2	-	-	-

Symbols: "—" indicates insufficient or no data, or no trend

Park Air Quality Status

- Much Worse than NPS Average
- Worse than NPS Average
- NPS Average
- Better than NPS Average
- Much Better than NPS Average

Trends

- ↑ Significant Improvement
- ↓ Improvement
- Degradation
- ↑ Significant Degradation
- No Trend

* Statistically significant at $\alpha=0.15$