



## FINDING AID

# **Weather and Climate Records 1909-2011(bulk dates: 1970-2011)**

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National Park Service

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***TABLE OF CONTENTS***

Copyright and Restrictions .....	ii
History .....	1
Scope and Content .....	2
Hierarchy .....	3
Series Descriptions .....	4
Container List .....	5

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## ***HISTORY***

Because of its elevation, its slopes, and exposure, weather patterns at Rocky Mountain National Park can be extreme. In winter, blizzards, high winds, and snowpacks are common and most often occur in higher elevations and on the park's east side. In spring, the park can expect alternative days of warm and cold. Summer, of course, brings warmth as well as thunderstorms and occasional high winds. Fall invites clean and crisp air and dryness.

The park's climate is greatly impacted by the northwest to southeast run of the Continental Divide which cuts through the park's high peaks. Consequently, the park experiences a climate that is colder and more unpredictable on the east side near Estes Park and more moderate on the west side nearer to Grand Lake.

This collection documents the efforts by the park to compile, collect, and disseminate records as they relate to the park's day-to-day experiences of weather and its climatic patterns over time.

***SCOPE AND CONTENT*****WEATHER AND CLIMATE RECORDS  
1909-2011 (bulk dates: 1970-2011)**

*CATALOG NUMBER* ROMO 23716

*VOLUME* 2.5 LF

*DESCRIPTION*

This collection contains correspondence, reports, presentations, data, news releases, and standard operating procedures. Also included: research documentation and permits regarding studies, projects, research, and data gathering for weather and climate related issues within and affecting the park.

*ORGANIZATION*

This collection is organized into five series: Series 1. Management, Policy, and Planning, Series 2. Weather and Climate Stations, Series 3. Weather and Climate Data, Series 4. Reports, and Series 5, Public Outreach.

*PROVENANCE*

Field collection of Rocky Mountain National Park

*RESTRICTIONS*

NO

## ***HIERARCHY***

- 1. Management, Policy, and Planning documents, 1973-2010 (bulk dates: 1973-2010)***
- 2. Weather and Climate Stations documents, 1963-2010 (bulk dates: 1963-2010)***
- 3. Weather and Climate Data documents, 1909-2011 (bulk dates: 1909-2011)***
- 4. Reports and Research Permit documents, 1973-2011 (bulk dates: 1973-2011)***
- 5. Public Outreach documents, 2001-2009 (bulk dates: 2001-2009)***

## ***SERIES DESCRIPTIONS***

### ***1. Management, Policy, and Planning documents, 1973-2010 (bulk dates: 1973-2010)***

This series contains seven file units (seven folders) and is arranged by year in ascending chronological order.

Document types include: correspondence, news releases, reports, and standard operating procedures of ROMO.

### ***2. Weather and Climate Stations documents, 1963-2010 (bulk dates: 1963-2010)***

This series contains 10 file units (10 folders) and is arranged by year in ascending chronological order.

Document types include: correspondence, data charts, reports, strip charts, maps, project proposals, and assessments regarding ROMO.

### ***3. Weather and Climate Data documents, 1909-2011 (bulk dates: 1909-2011)***

This series contains 15 file units (25 folders) within and is arranged by year in ascending chronological order.

Document types include: meteorological charts, data graphs, maps, correspondence and reports that record snow accumulation (snowpack), temperatures, precipitation, particulates, global changes, and ozone concentrations. Areas mentioned include Estes Park, Grand Lake, Lower Hidden Valley, Bear Lake, park-wide, Kawuneeche VC, and the Colorado River District. Projects include the Farsite Weather Project and the NCWCD Cloud Seeding Program.

### ***4. Reports and Research Permit documents, 1973-2011 (bulk dates: 1973-2011)***

This series contains 26 file units (31 folders) is arranged alphabetically by major report title or file unit name.

Document types include: reports, data sheets, press releases, permits, project proposals, and published articles. Subjects include various aspects of climate change including but not limited to human migration, indicators, monitoring, dendroclimatic reconstructions, alpine changes, quantify mass balance, Rocky Mountain National Park, evolution of winter about tree-line, and workshops.

### **5. Public Outreach documents, 2001-2009 (bulk dates: 2001-2009)**

This series contains four file units (four folders) arranged alphabetically by title of file unit.

Document types include lesson plans, example data sheets and permits, and PowerPoint presentations concerning public outreach initiatives.

## **CONTAINER LIST**

### **Series Nbr Series Title**

01 Management, Policy, and Planning documents

#### **File Unit Title**

#### **Box 1:**

01	Comments on wilderness issue correspondence, 1973
02	Weather modification policy correspondence, 1974
03	News releases, 2005-2010
04	ROMO winter dismissal or closure policy and procedures office order, 2008
05	Impacts on climate change on national parks statement, 2009
06	Rocky Mountain Climate Protocol natural resources report, 2010
07	Standard operating procedures for the Rocky Mountain Climate Protocol report, 2010

### **Series Nbr Series Title**

02 Weather and Climate Stations documents

#### **File Unit Title**

#### **Box 1 cont.:**

01	Fire weather stations correspondence, 1963 & 1985
02	Project Skywater correspondence, 1968
03	Fire weather teletype correspondence and telephone record, 1974-1975
04	Photovoltaic project documents, 1976-1978
05	Automated weather station correspondence, 1979
06	Wind monitoring stations documents, 1979



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|----|--|
| 07 | Station strip charts, 2000   |
| 08 | Weather stations – general- documents, maps, and photographs, 2002 & 2008-2010 |
| 09 | Remote Automated Weather Stations data and Davis cheat sheet, 2006             |
| 10 | East Inlet SNOTEL installation proposal and documents, 2010                    |

**Series Nbr    Series Title**

03            Weather and Climate Data documents

**File Unit Title****Box 1 cont.:**

- |    |   |
|----|---|
| 01 | Meteorological summaries and temperatures summaries and charts, 1909-1928                           |
| 02 | Snow data correspondence and charts, 1954-1977  |
| 03 | Weather charts of evaporation and climatological observations - Estes Park, 1966-1987, four folders |
| 04 | Weather charts of evaporation and climatological observations - Grand Lake, 1966-1987               |

**Box 2:**

- |    |   |
|----|---|
| 05 | Precipitation (annual data) memorandum - Lower Hidden Valley, 1971-1972                 |
| 06 | Particulate and meteorological monitoring reports, tables, and charts, 1982 & 1990-1995 |
| 07 | Snowfall charts - Bear Lake, 1983-2010  |
| 08 | Global change maps, 1990  |
| 09 | Monthly temperature averages - park-wide charts, 1991-2001                              |
| 10 | NCWCD cloud seeding program documentation, 1992-1993                                    |
| 11 | Precipitation (monthly and annual data) - Kawuneeche Visitor Center- charts, 1992-1011  |
| 12 | Summary of weather data gathered for the Farsite Weather Project report, 1998           |
| 13 | Maximum Hourly Average Concentration (ozone) Verification forms, 2000                   |
| 14 | Monthly precipitation averages - Colorado River District- graphs, 2000-2010             |
| 15 | Snowpack documents and Loch Vale meteorological data charts, 2000                       |

**Series Nbr Series Title**

04 Reports and Research Permit documents

**File Unit Title****Box 3:**

- 01 Climate Change and Prehistoric Human Migration summary, undated
- 02 Climatic Change in the Colorado Rocky Mountains: Bounding Projected Changed in Regional Climate. Kittel, Timothy. Permit documents; 1991
- 03 Climate Change Indicators in Rocky Mountain National Park by J. Dahlkemper, S. Esser, D. Harden, G.C. Miller, and C. Whitten report, 2010
- 04 Climate and Terrestrial Ecosystem Change in the U.S. Rocky Mountains and Upper Columbia Basin, 2010
- 05 Continental Divide Research Learning Center press releases, 2008
- 06 Developing biophysical models for ecological forecasting correspondence, undated
- 07 Drought Reconstructions from Tree-Ring Chronologies 300-1000 Years - Kaye, Margot- study number ROMO-01025, permit documents, 2001-2007
- 08 Enhanced Monitoring to Better Address Rapid Climate Change in High-Elevation Parks report, 2011
- 09 Expanded and lengthened dendroclimatic reconstructions, N2219, research permit documents, 1999
- 10 Future Impacts of Global Climate on Rocky Mountain National Park: Its Ecosystems, Visitors, and the Economy of Its Gateway Community - Estes Park report, undated
- 11 Global Change Research Program documents, 1991-2001, five folders

**Box 4:**

- 12 Global climate change plan project of Biogeographic Area documents, 1991
- 13 Global Climate Change Alpine Consortium documents, 1990-1991
- 14 Global Change Initiative of Biogeographic Area documents, 1989-1991
- 15 Global warming and greenback cutthroat trout recovery proposal, undated
- 16 Impact of climate change on alpine plants and insect diversity (Number ROMO-2001-SCI-0037) - Martin, Andrew- permit documents, undated
- 17 Integrated assessment of climate change on ROMO and gateway community (ROMO-2001-SCI-0016) - Loomis, John- permit documents and articles, 2001

- 18 Issue file: an integrated assessment of the effects of climate change on ROMO and its gateway community – Hobbs- documents, 1999-2001
- 19 Observed and Projected Ecological Response to Climate Change in the Rocky Mountains and Upper Columbia Basin: A Synthesis of Current Scientific Literature report, 2010
- 20 Quantify mass balance correspondence and decision guide, 2010
- 21 Rocky Mountain Snowpack Chemistry at Selected Sites report, 2002
- 22 Weather and Climate Inventory, National Park Service, Rocky Mountain Network technical report, 2007
- 23 Weather and Climate Summary report, 2006 & prototype, 2007

**Box 5:**

- 24 Wind studies in Rocky Mountain National Park - Glidden, Dave, 1973-2004, two folders
- 25 Winter evolution of above tree line snow cover articles, reports and permit documents (Permit Numbers ROMO1998LIST, ROMO1999LIST, and ROMO1997AUIW), 1997-2007
- 26 Workshop to develop NCWCD (Cooperative Agreement Number: H12000040001 distribution list and project cover sheet, 1997-2007

**Series Nbr    Series Title**

05            Public Outreach documents

**File Unit Title**

**Box 5 cont.:**

- 01 Climate change in Rocky Mountain National Park: Preservation in the Face of Uncertainty workshop documents, 2007-2008
- 02 Elementary and middle school programs, 2001-2009
- 03 Weather and fire PowerPoint presentations, 2009
- 04 Weather and climate change PowerPoint presentations, 2007