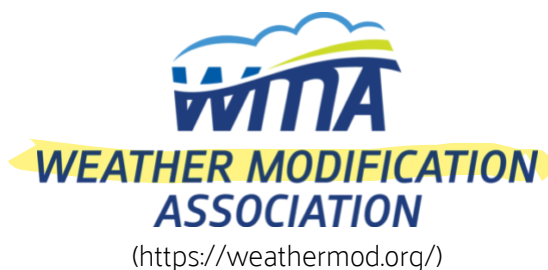


MEMBER LOGIN (https://weathermod.org/?page_id=7667)

 (<https://www.facebook.com/Weather-Modification-Association-143547775716425/>)



‘ Free exchange of accurate information regarding the efficacy, safety, methodology and cost-effectiveness of weather modification activities. ’

OUR VISION

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BECOME A MEMBER (<https://weathermod.org/become-a-member/>)

News & Upcoming Events

Read the Latest Industry, See Our Locations & Plan to Attend the Conference



Recent Industry News

9News.com: October 25, 2022

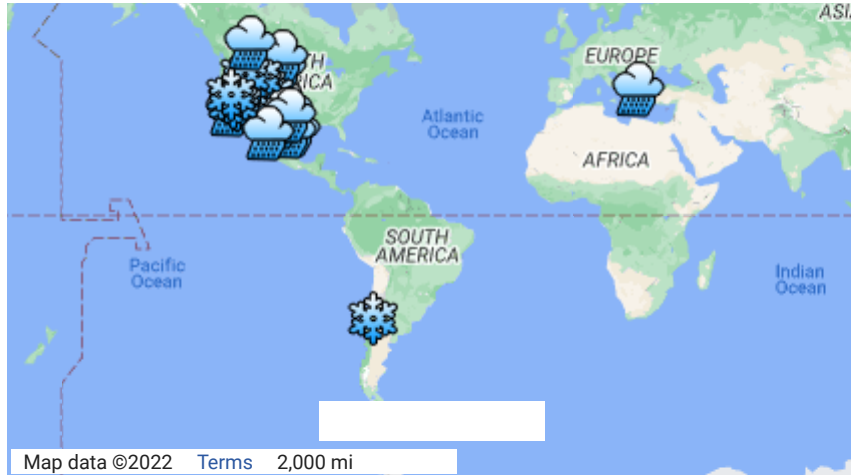
Cloud seeding gaining momentum in the State of Colorado

(<https://www.9news.com/video/news/state/colorado-climate/cloud-seeding-gaining-momentum-in-the-state-of-colorado/73-4cad2781-7b7a-4e6b-8fdb-8abbbf279807>)

NEWS ARCHIVES (<https://weathermod.org/industry-news/>)

Weather Modification Ass... ☆

About



PROJECTS WORLDWIDE (<https://weathermod.org/project-locations/>)



Upcoming Association Meetings

Join us in Denver, CO, **April 18-20, 2023** at the Denver Marriott Westminster for the 2023 Annual Weather Modification Association Conference. See our **Meetings** (<https://weathermod.org/meetings/>) page for full details. We are looking forward to seeing you there!

What is Cloud Seeding?

A few of Our Most Popular Questions

Weather Modification can be both planned, as is the case in cloud seeding, or inadvertent, for example, when pollution affects visibility. Planned (deliberate) weather modification is also commonly known as cloud seeding, cloud modification, or atmospheric water management.



How Does It Work?

Cloud seeding, or commonly referred to as weather modification, is the treatment of individual clouds or cloud systems in an attempt to achieve a desired beneficial effect, including fog and hail mitigation, and additional precipitation in the form of either rain or snow. Cloud seeding is conducted from the ground or via aircraft by pyrotechnic flares and/or liquid fuel generators. Please visit the FAQ page for more information on seeding concepts and materials.

Frequently Asked Questions (<https://weathermod.org/faq/>)



Is It Effective?

Yes, it can be very successful. Seeding agent and methodologies used in present day operations have been developed and refined over 60 years. Studies have shown certain clouds or stages of cloud development are susceptible to seeding while others are not. Various analysis show that cloud seeding technologies can increase area-wide seasonal precipitation by 5-15% and suppress damaging hail by 25-75% when effectively applied to suitable clouds. Advances in radar data processing and evaluation techniques are helping to provide additional insight into the effectiveness of cloud seeding.

Learn More (<https://weathermod.org/publications/>)



Is it Environmentally Safe?

Published scientific literature clearly shows no environmentally harmful effects arising from cloud seeding with silver iodide (AgI) aerosols have been observed, nor would they be expected to occur. Based on this work, the WMA finds silver iodide is environmentally safe as it is currently being used in the conduct of cloud seeding

programs. Click the link below to see the complete WMA Environmental Impact Statement on this topic and for a bibliography of accredited sources.

[Download Environmental Statement](https://weathermod.org/wp-content/uploads/2018/03/Environmentallmpa) (<https://weathermod.org/wp-content/uploads/2018/03/Environmentallmpa>)

Current Executive Officers

The Industry's Best Meteorologists, Pilots, Scientists & Researchers

Andrew Detwiler

PRESIDENT

Andrew Detwiler has spent more than 30 years studying the formation of precipitation and the electrification of convective storms, including the effects of cloud seeding. Most of this work was done at the South Dakota School of Mines and Technology (SDSMT) working with the armored T-28 storm research aircraft. While at SDSMT he also taught in the Atmospheric Sciences and Physics programs, and supervised more than 20 graduate students. More recently he has been affiliated with the University of North Dakota where he has continued to do research with collaborators there and taught several courses in the Atmospheric Sciences Department.

Dan Breed

PRESIDENT-ELECT

After graduating from the Atmospheric Science Department at Colorado State University, Daniel Breed worked as a research meteorologist at the National Center for Atmospheric Research (NCAR). During his 41-year career at NCAR, he participated in more than 40 field projects on convective storms, precipitation development, early electrification, boundary layer studies, and weather modification (hail formation, convective clouds, winter storms). He has flown more than 1000 hours as the on-board scientist during research flights, and managed the NCAR sailplane program for 10 years. During his time at NCAR and continuing today, Breed has lectured at numerous universities in the U.S. and South Africa, supervising both undergraduates and graduate students.

Jonathan Jennings

SECRETARY

Jonathan Jennings is the meteorologist for the West Texas Weather Modification Association out of San Angelo, Texas. Since joining the program in 2011, Jonathan has also contracted work with the Trans-Pecos Weather Modification Association and North American Weather Consultants. Jonathan has a B.S. degree in Earth Science/Meteorology from California University of Pennsylvania (2004) and became a licensed meteorologist in the State of Texas in late 2011. Jonathan is involved in several research and development projects and has helped in flare development and testing with the Texas Weather Modification Association. Over the last 5 years, he has also been highly involved in government relations between the Texas programs and state legislatures.

Derek Blestrud

PAST PRESIDENT

Derek Blestrud has been involved in weather modification since 2003 and is currently a Senior Atmospheric Scientist for the Idaho Power Company. His primary focus is on the research and operations of cloud seeding in southern Idaho. He was heavily involved in the success of the SNOWIE (Seeded and Natural Orographic Wintertime Clouds: the Idaho Experiment) research project. Derek has worked on cloud seeding projects in North Dakota, Wyoming, India, Alberta, and Idaho. He is currently serving as Past President for the North American Weather Modification Council.

BOARDS & COMMITTEES (<https://weathermod.org/boards-committees/>)

Weather Modification Certified Operators & Managers

Why Does It Matter? What are the Benefits?

WMA Operator and Manager certifications are based on criteria that are intended to ensure the meteorological and technical understanding, as well as commitment to ethical principles, of those conducting and managing cloud seeding operations. These principles are outlined in the ASCE guidelines for weather modification. The utilization of certified operators and managers for seeding programs is of benefit to the public, both in helping to recognize and take advantage of seeding opportunities during storm events, as well as recognizing and responding to potentially hazardous situations where seeding may not be desirable. Certification is based on criteria that include education, experience in the field of weather modification, and in-depth knowledge of the corresponding meteorological processes.

If you are interested in becoming a certified operator or manager, click the Qualifications & Procedures button below. **In order to become certified, you must be a member of the Weather Modification Association.**

CERTIFIED MEMBERS (<https://weathermod.org/wp-content/uploads/2021/06>)

QUALIFICATIONS & PROCEDURES (<https://weathermod.org/wp-content/upl>)

BECOME A MEMBER (<https://weathermod.org/become-a-member/>)

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