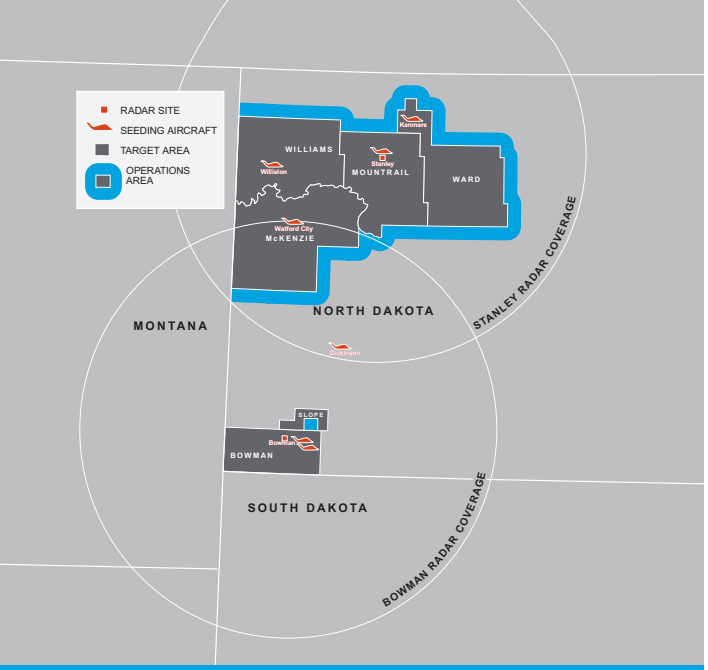


ND PROJECT MAP

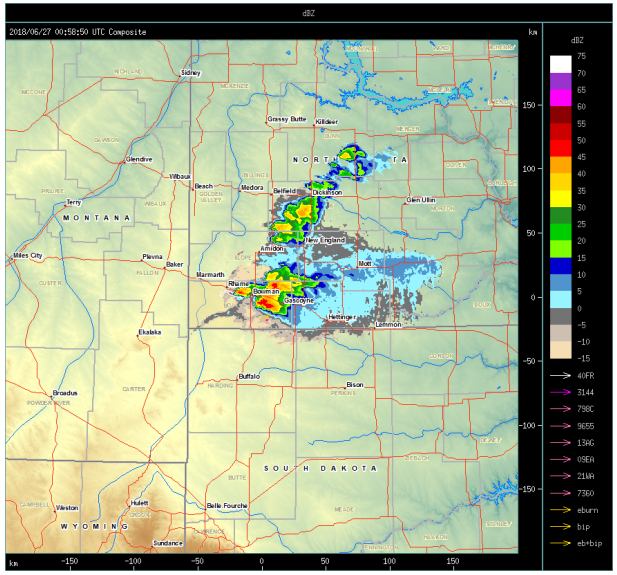
North Dakota Cloud Modification Project (NDCMP) Participants

- Bowman
- McKenzie
- Mountrail
- Ward
- Williams
- Part Of Slope County

North Dakota has conducted cloud seeding operations annually since 1961.

The NDCMP is the longest running aerial hail suppression project in the world.

RADARS



The above image, taken from Bowman Radar, displays storm location, intensity, aircraft positions, and seeding tracks during cloud seeding operations.

Stanley and Bowman radar images are available online from June through August and updated every five minutes at http://swc.nd.gov/arb.

The Bowman radar runs year-round through funding by eight regional counties and provides residents with improved radar coverage.

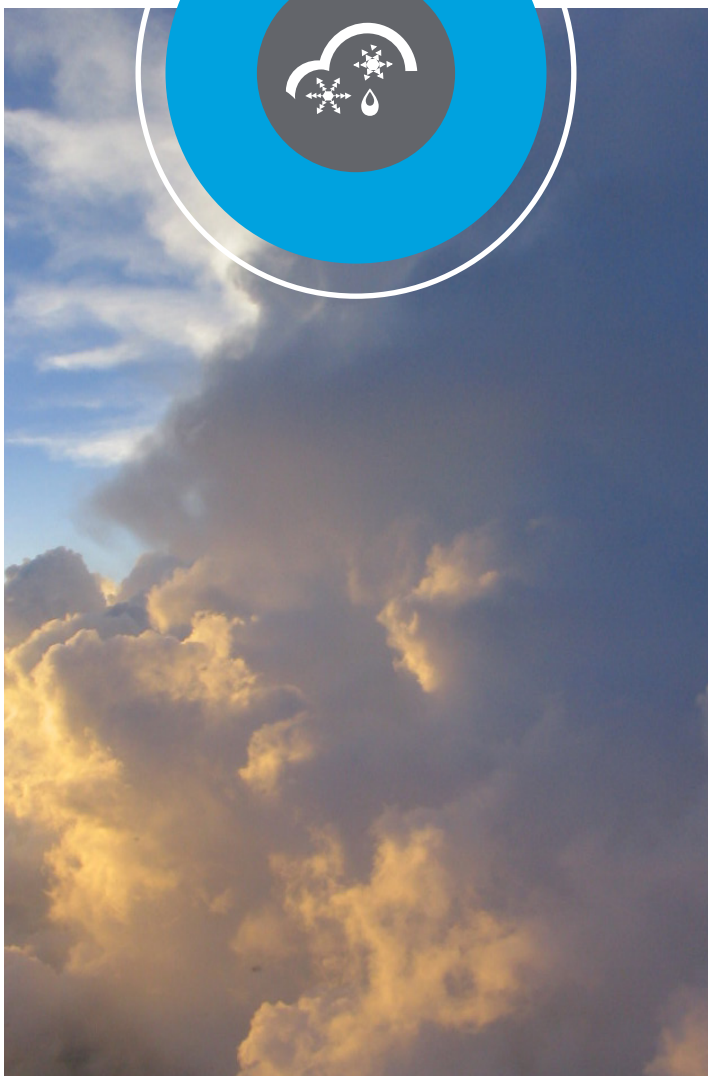
NORTH Dakota Be Legendary.™ | Atmospheric Resource Board WATER COMMISSION

Atmospheric Resource Board
North Dakota State Water Commission
900 East Boulevard Ave., Dept. 770
Bismarck, ND 58505

(701) 328-2788
http://swc.nd.gov/arb

NORTH DAKOTA

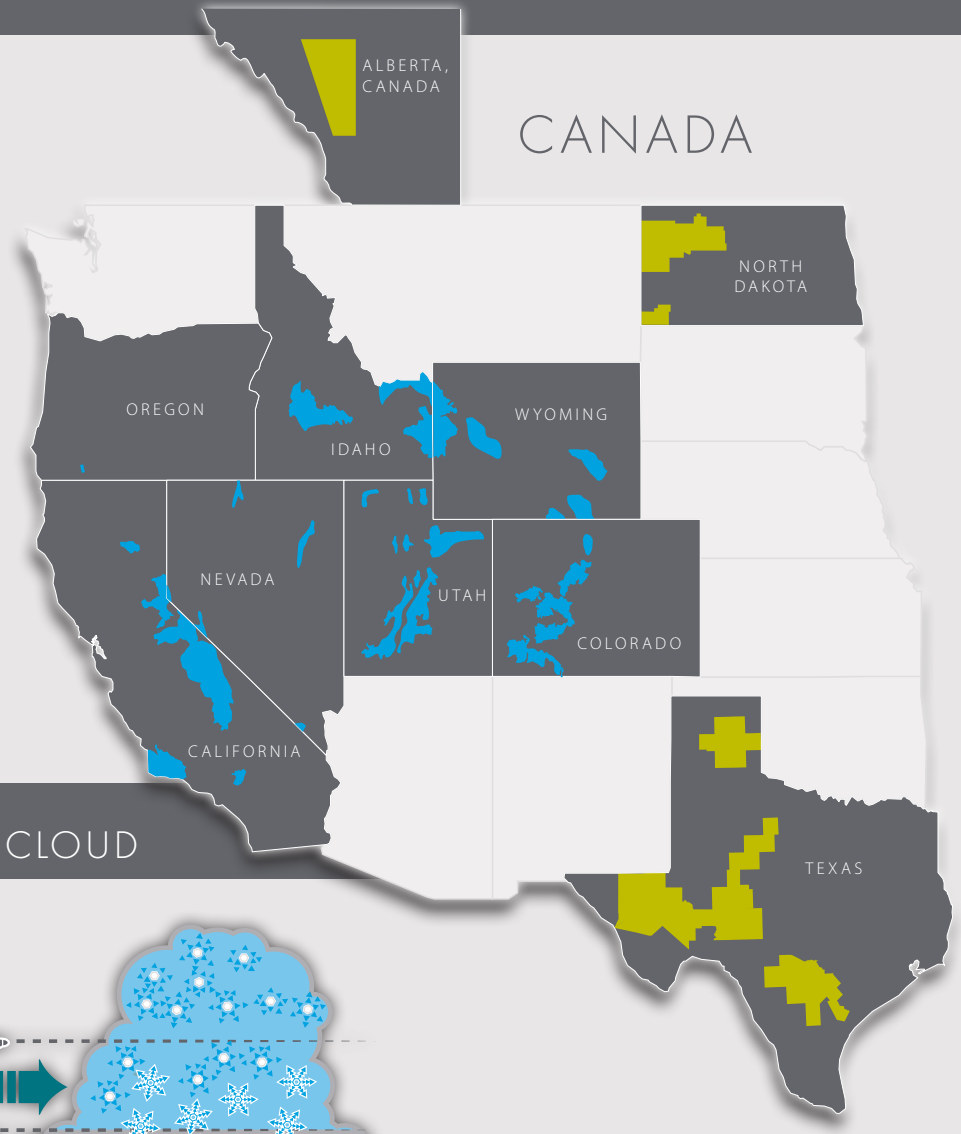
CLOUD SEEDING



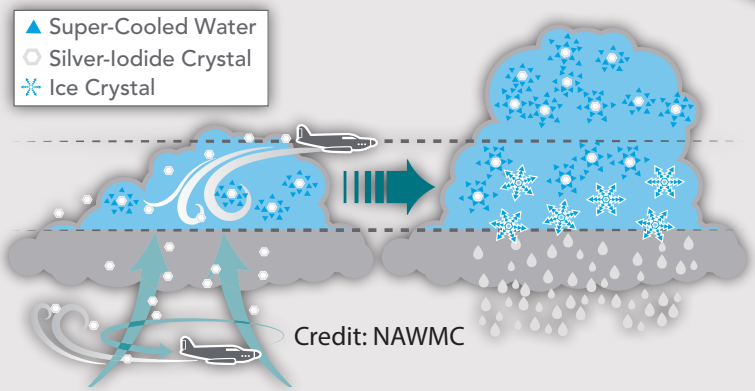
WEATHER MODIFICATION
PROGRAMS IN WESTERN US & CANADA

THE FACTS

- A 2019 economic study of the NDCMP by Bangsund and Hodur at NDSU found benefit to cost ratios of 31-53 to 1 for summer season agricultural production.
- 2019 NDCMP rain enhancement and hail suppression operations cost only $.40/acre. Participating counties pay approximately 2/3 of the cost, while the state pays the remaining 1/3.
- Cloud seeding produces an estimated 5-10% in additional rainfall for farmers and ranchers in western North Dakota's project area.
- Cloud seeding studies in North Dakota indicate a 45% reduction in crop hail losses.
- As of 2019, the NDCMP has provided 387 UND aviation students and 62 meteorology students with internships.
- Since 1996, insurance companies in Alberta, Canada have solely funded a hail suppression project to reduce property damage from hail.
- Cloud seeding agents, including silver iodide and dry ice, meet all National Environmental Policy Act (NEPA) regulations and are safe for the environment.
- Operational cloud seeding programs in the United States cover approximately 150,000 square miles, or more than twice the area of North Dakota.



WARM SEASON CLOUD



Credit: NAWMC