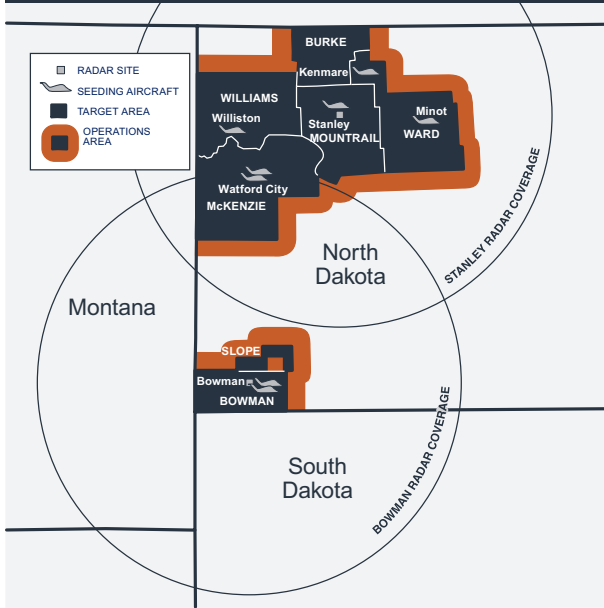


ND PROJECT MAP



North Dakota Cloud Modification Project (NDCMP) Participants:

Bowman

Burke

McKenzie

Mountrail

Ward

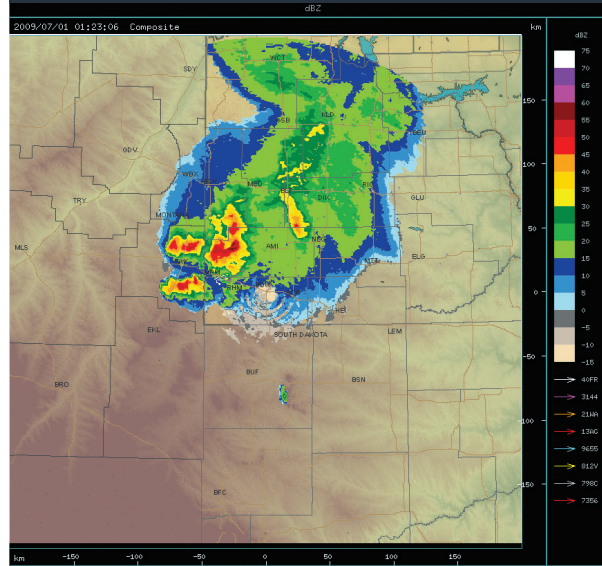
Williams

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 the storm location, intensity, and aircraft positions during cloud seeding operations.

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

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



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>

FACTS



THE FACTS

Operational cloud seeding programs in the United States cover approximately 150,000 square miles, or more than twice the area of North Dakota.

A 2009 economic study of the NDCMP by Bangsund and Leistriz of NDSU found benefit to cost ratios of 25 to 1 for summer season agricultural production.

2014 NDCMP rain enhancement and hail suppression operations cost only \$.16/acre. Participating counties pay approximately 2/3 of the cost, while the state pays the remaining 1/3.

The NDCMP has provided 343 UND aviation students and 47 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.

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.

WEATHER MODIFICATION PROGRAMS IN WESTERN US & CANADA

Cloud Seeding Target Areas

Cold-Season

Warm-Season

WARM SEASON CLOUD

- ▲ Super-Cooled Water
- Silver-Iodide Crystal
- * Ice Crystal

