

January 29, 2025

Chair Patten and Members of the Senate Energy and Natural Resources Committee,

I provide this testimony in opposition to SB 2106 as currently drafted, specifically concerning the weather modification program. I understand there may be some anecdotal evidence that led to this bill, but I wanted to weigh in on the overall effectiveness of the program. As you may know, this program originally started within UND's John D. Odegard School of Aerospace Sciences before transitioning to its current location in Fargo. For many years, our Aviation and Atmospheric Science students have participated in the project as interns and many stayed with the company for continued work after that. Each year a report is submitted describing their efforts as well as scientific proof of its effectiveness across the entire state of North Dakota. Several of the anecdotes that led to the bill's creation are not backed by scientific proof or a connection to this program.

As this bill is currently written, there are several changes to existing code that remove or restrict current approval authorities for weather modification. The current arrangements for reviews, funding, and approvals are all in place and have worked successfully for many years and the annual reports justify the public benefits of the programs.

Here are some additional talking points:

1. The program provides significant direct benefits as described in their annual reports. Not only does cloud seeding provide significant direct benefits by suppressing hail and enhancing rain in the participating counties, but there are also additional economic benefits to our entire state, including the eastern part of the state. Among the indirect benefits:
  - a. Weather Modification International, located in Fargo, is a world leader in cloud seeding and atmospheric resources.
  - b. ICE Crystal Engineering is a sodium iodide plant located north of Kindred in District 22, which material is used in cloud seeding operations.
  - c. The UND Aviation program is one of the top aviation programs in the country. Over 400 pilot interns and 70 meteorologists have received training from the program.
  - d. Each participating county has improved economic activity because there are additional pilots and planes using county facilities and businesses.
2. Funding for all water projects is derived by the Resources Trust Fund, which receives 20.5% of the Oil and Gas Extraction Tax. The five counties which participate in cloud seeding are big producers of oil and gas. Those counties do not request significant cost share dollars from the

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Resources Trust Fund for flood control or drainage. Eastern counties opposing cost share for cloud seeding would be akin to western counties opposing cost share for drainage.

3. The water community has always supported cloud seeding, even though the funding for cloud seeding reduces funding for other water projects.
4. There is no evidence of negative impacts downwind of cloud seeding activity.

We stand in support of the Weather Modification program, but the current bill draft does not adequately address the needs of the state. If you have any additional questions, please contact me at robert.j.kraus@und.edu or (701) 777-3196.

Sincerely,



Robert J. Kraus, PhD, PfMP  
Dean