

TESTIMONY OF

Darin Langerud, Director, Atmospheric Resources Division

Chairman Beltz, and members of the House Agriculture Committee, I am Darin Langerud, the Director of the Atmospheric Resources Division of the Department of Water Resources. I'm here today to provide testimony in opposition of HB 1514.

The Atmospheric Resources Division of the Department of Water Resources is vested with regulatory oversight of cloud seeding operations and research in North Dakota. These regulations require licensing of qualified contractors and permitting of operational cloud seeding programs. Detailed record keeping is required of all aircraft and ground-based seeding activities for any operational program in the state.

All airborne seeding operations are conducted by aircraft licensed by the North Dakota Aeronautics Commission and under flight rules promulgated and enforced by the Federal Aviation Administration (FAA). No "unmarked" or "unidentified" aircraft are or have been utilized for permitted cloud seeding in North Dakota. Cloud seeding aircraft are tracked and displayed in real time, with those data available on the Department of Water Resources website during operations. HB 1514 would also potentially restrict the operation of weather radars and air traffic control radars, which are legally operating under Federal Communication Commission (FCC) guidelines.

One of the common concerns raised by the public is the environmental safety of the materials used in cloud seeding. Silver iodide is not soluble in water; thus, it is not freely bioavailable in the environment. Because it is such an effective ice nucleus, silver iodide is used in very small quantities. Based on the average rate of seeding material used in North Dakota each summer, only one one-hundredth of a gram (0.01g) would be expected to be deposited per acre of land in the operations area during the summer project, a nearly undetectable amount, far below any existing safety thresholds. Published scientific literature from both domestic and international programs clearly shows no environmentally harmful effects from cloud seeding with silver iodide aerosols.

HB 1514 would criminalize legally permitted cloud seeding operations in the state and prohibit research and development of this technology. I respectfully request the committee give HB 1514 a "do not pass" recommendation.

Thank you for the opportunity to testify, and I'm happy to answer any questions.