



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

# **LEGAL ASPECTS OF CREATING WEATHER MODIFICATION AUTHORITIES**

JEROME E. JOHNSON  
ROBERT E. BECK  
LYNN L. SCHLOESSER

JOINT AGRICULTURAL ECONOMICS - LAW RESEARCH REPORT

Department of Agricultural Economics  
North Dakota State University  
and  
School of Law  
University of North Dakota



## FOREWORD

The Agricultural Economics/Law Research program, a cooperative venture between the School of Law at the University of North Dakota and the Department of Agricultural Economics at North Dakota State University, has been in operation since 1960. The effort is funded by the North Dakota Agricultural Experiment Station Research Project No. ND 3319. Designed to research various aspects of North Dakota law and to report the findings in published form readily available to all North Dakotans, the program has been successful in producing numerous reports. Among those published as Department of Agricultural Economics Miscellaneous Reports are:

- 5 Drainage Law in North Dakota
- 6 Condemnation of Farmland for Highways
- 7 Farm Fence Laws
- 8 Wildlife and the North Dakota Farmer
- 12 North Dakota Noxious Weeds Law and Regulations
- 18 Severed Mineral Rights
- 19 Introduction to Easements
- 24 Coal Leasing Practices and Surface Owner Protection Acts
- 34 OSHA and the North Dakota Farmer
- 35 The Cooperative-Corporation as a Form of Business Organization
- 36 How the North Dakota Farmer/Rancher Acquires Water Rights (revised)

Soon to be available:

Family Estate Planning (revised)

# LEGAL ASPECTS OF CREATING WEATHER MODIFICATION AUTHORITIES

by  
JEROME E. JOHNSON, ROBERT E. BECK, and LYNN L. SCHLOESSER\*

The North Dakota Legislature has found that weather modification operations, properly conducted, can improve water quality and quantity, reduce losses from weather hazards, and provide economic benefits for the people of the state. Therefore, in the public interest, weather modification is subject to regulation and control, and research and development is encouraged. In order to minimize possible adverse effects, weather modification operations must be carried on with proper safeguards, and accurate information must be recorded concerning such operations and benefits.

Weather modification operations are conducted to enhance rainfall and/or reduce hail damage. Rainfall enhancement theoretically is accomplished by treating selected clouds with an artificial nucleating agent (particles around which raindrops form) to obtain increased cloud growth. Hail damage reduction theoretically is achieved by dispersing nucleating agents in somewhat greater amounts into certain portions of carefully selected clouds to increase the number of hailstone embryos. With more hailstone embryos, there is more competition for cloud water, resulting in reduced hailstone size. It is claimed that precipitation can be increased by 10 to 20 percent during a growing season and that hail damage can be reduced 30 to 60 percent.

The state of North Dakota has claimed its sovereign right to use the moisture contained in the atmosphere within the state boundaries: so the state may share to the fullest extent in the benefits claimed to be gained through research on means for controlling the weather; for the best interest, general welfare, health, and safety of all the people of the state; and to provide proper safeguards in applying measures thought to protect life and property. All water derived as a result of weather modification operations is considered a part of the North Dakota basic water supply; and all statutes, rules, and regulations applying to natural precipitation also apply to precipitation resulting from cloud seeding.

\*Johnson is Professor of Agricultural Economics, North Dakota State University; Beck is a former Professor of Law, School of Law, University of North Dakota; and Schloesser is Student Researcher, Agricultural Law Research Program, School of Law, University of North Dakota.

Several governmental bodies have been provided for under state law in order to promote and protect the proclaimed public interest in the right to use atmospheric moisture: County Weather Modification Authorities, Weather Modification Operations Districts, and the State Weather Modification Board.

A County Weather Modification Authority (WMA) is a unit of county government with the power to conduct business relating to weather modification according to the laws of the State of North Dakota and the regulations of the North Dakota Weather Modification Board (WMB), a state agency. A WMA is originally established by the board of county commissioners for an initial ten-year period extendable for five-year terms. Three ways to create and two to abolish a WMA are provided for under North Dakota statutes. Furthermore, state laws define the roles, powers, and duties of WMA's; Weather Modification Operations Districts (WMOD's); and the state WMB.

## WAYS TO CREATE A COUNTY WEATHER MODIFICATION AUTHORITY

The three methods a WMB may be created are by petition, election, and vote-after-resolution-by-county-commissioners. A public hearing must be held to begin the vote-after-resolution-by-county-commissioners method. The county board of commissioners by resolution submits the question of forming a WMA to the electors for approval. Both petition and election methods are started by a petition addressed to the board of county commissioners. The board shall create an authority under the petition and election method when either (1) a 51 percent majority of the "qualified electors" sign a petition requesting its establishment, or (2) at least 20 percent of the qualified electors sign a petition causing the board to hold a countywide election at which a majority of the votes are cast in favor of establishing an authority.

"Qualified electors" are persons 18 years of age and older who have resided within the county at least 30 days and who are United States citizens. The 50 percent number is based on the vote cast for the office of governor in the last preceding general election.

The contents of the petition are specified in the law. A committee for petitioners, who are qualified electors of the county, initiate the petitions and represent those who sign the petitions before the board of county commissioners. The interested electors nominate and name in the petition five qualified electors to serve as the commissioners of the county WMA. The petition must state the mills to be levied by the county for the county weather modification fund.

#### **THE PETITION METHOD OF CREATING A WEATHER MODIFICATION AUTHORITY**

The board of county commissioners by resolution creates a county WMA upon being petitioned by 51 percent of the qualified electors in the county. The board appoints the five candidates named in the petition to be the county WMA commissioners. They must be residents of the county. The board of county commissioners may appoint its own candidate(s) if any candidate(s) on the petition refuses or is unable to accept the petition.

If more than one set of petitions is filed at or about the same time with the board of county commissioners, the one with the highest percent of qualified electors prevails as long as it has at least 40 percent of the qualified electors and together all petitions contain at least 60 percent of the qualified electors. An elector's name may not appear on more than one set of petitions.

#### **THE ELECTION METHOD OF CREATING A WEATHER MODIFICATION AUTHORITY**

Another method of establishing a county WMA is by election. The board of county commissioners must submit the question to the voters of the county if at least 20 percent of the qualified electors sign a petition requesting the establishment of a county WMA. If a majority of the votes cast are in favor, the board creates the county WMA by resolution.

#### **THE VOTE-AFTER-RESOLUTION-BY-COUNTY-COMMISSIONERS METHOD OF CREATING A WEATHER MODIFICATION AUTHORITY**

Under the third method of establishing a county WMA, the board of county commissioners after a public hearing, by resolution submits the question of creating a WMA to the electors of the county at the next countywide election. The board of county commissioners shall pass a resolution creating a WMA upon approval by a majority.

#### **THE WEATHER MODIFICATION AUTHORITY**

The county WMA is a legal entity of the state, is a unit of county government, and is operated by five commissioners appointed by the board of county commissioners. The initial WMA commissioners have a 10-year term of office. They have only five-year terms if the WMA is later extended for five-year periods by resolution of the board of county commissioners. Any vacancies among the commissioners is filled by the board of county commissioners. Each serves until his successor has been appointed and has qualified. The WMA commissioners serve without compensation but are entitled to expenses, such as travel.

The WMA commissioners elect a chairman, vice-chairman, and treasurer from their ranks. They may employ an executive director, secretary, and other personnel and establish their duties, qualifications, and compensation.

The WMA must obey all state laws concerning recording of minutes of actions, disbursements, and so forth. Its powers rest with its commissioners, with a majority constituting a quorum to conduct business, and all actions taken requiring a majority of all the commissioners.

Roles of the WMA may include: annual certification to the county board of a tax of up to two mills levied by the board of county commissioners upon net taxable valuation of property in the county for a county weather modification fund and contracting for weather modification operations with the state WMB. The weather modification fund shall be used only for weather modification activities in conjunction with the state of North Dakota. The tax certified by the WMA is limited to the period of existence of the WMA. Since operations in one county may be designed to alter weather in another county, a WMA may suspend only the county and state weather modification operations designed to alter weather in that county.

#### **TERMINATING A COUNTY WEATHER MODIFICATION AUTHORITY**

A county WMA has an initial life of 10 years. The board of county commissioners may extend its life by five-year periods by resolution creating an authority as long as the resolution is passed before the authority terminates and as long as the authority has not been recalled.

A county WMA will terminate after its initial 10-year life if not recreated by the board of county commissioners. A WMA created by the 51 percent



initiated petition method can be recalled before the end of its 10-year life only by a petition, signed by 51 percent of the qualified electors. Similarly, a petition signed by at least 20 percent of the qualified electors and a favorable vote at a countywide election is required for early termination of WMA established by the 20 percent petition/election method.

### **ROLE OF THE BOARD OF COUNTY COMMISSIONERS**

Duties of the board of county commissioners include creating the county WMA by resolution, ordering a countywide election upon approval of a petition signed by at least 20 percent of the qualified electors, and appointing commissioners and their replacements for the WMA.

The board may extend the life of the authority for five years by creating a resolution before the termination date of the authority, as long as the authority has not been recalled. Thus, authorities do not have to repeat the petition and/or election method to remain in existence, but may if they desire.

The board has two financing roles with the authority. First, the authority may certify annually to the board a tax of up to two mills upon the net taxable valuation of the property within the county. This tax is then levied by the board of county commissioners. The levy may exceed the mill limit fixed for general purpose county levies. Second, after the board has established an authority and the authority has certified a mill levy for its initial funding, the board may (at its discretion) appropriate to the authority monies from the general fund not otherwise appropriated, up to an amount equal to the two-mill levy. This is a one-time appropriation.

The board may remove any WMA commissioner from office when competent evidence at a hearing shows such commissioner to be guilty of misconduct, malfeasance, crime in office, neglect of duty in office, or habitual drunkenness or gross incompetency.

### **THE ROLE OF THE WEATHER MODIFICATION OPERATIONS DISTRICT**

The state WMB has the authority to place any county contracting with the state for weather modification operations in an operational district to best provide the county with the benefits of weather modification. Each operations district has a district operations advisory committee. The committee is composed of one commissioner of the WMA and one member of the board of county

commissioners from each county in the operations district. The WMB may assign any county which has not created a WMA to an operating district so it can be represented on the district operations advisory committee. The committee must evaluate weather modification operations within the district and make recommendations and proposals to the state WMB concerning such operations.

### **THE ROLE OF THE NORTH DAKOTA WEATHER MODIFICATION BOARD**

The Board is a division of the state aeronautics commission. It is composed of the director of the State Aeronautics Commission; a representative of the environmental section of the State Department of Health; state engineer of the State Water Conservation Commission; and seven other Board members—one member from each of seven districts appointed by the Governor to serve for a four-year term. These districts need not be the same as the operations districts.

The districts are composed of the following counties:

- District I - Burke, Divide, McKenzie, Mountrail, and Williams;
- District II - Bottineau, McHenry, McLean, Renville, Sheridan, and Ward;
- District III - Benson, Cavalier, Eddy, Foster, Griggs, Nelson, Pierce, Ramsey, Rolette, Steele, Towner, and Wells;
- District IV - Cass, Grand Forks, Pembina, Richland, Traill, and Walsh;
- District V - Barnes, Dickey, Kidder, LaMoure, Logan, McIntosh, Ransom, Sargent, and Stutsman;
- District VI - Burleigh, Emmons, Grant, Mercer, Morton, Oliver, and Sioux;
- District VII - Adams, Billings, Bowman, Dunn, Golden Valley, Hettinger, Slope, and Stark.

The WMB establishes the procedures, requirements, conditions, qualifications, and professional standards under which licenses to conduct weather modification operations may be issued. Unless specifically exempt for such reasons as research or emergency operation, it is unlawful to engage in any weather modification operations without a license and a permit from WMB. However, even exempt persons and operations must meet certain requirements. Persons desiring to modify weather must apply in writing. Licensed controllers (persons engaged in weather modification operations) must comply with the rules, regulations, and standards established by the WMB. Licenses are issued annually and expire on December 31 unless previously revoked.

The WMB must determine that the applicant has protected his employees according to North Dakota Workmen's Compensation Law.

The WMB must cooperate with the federal government and its agencies and contractors; other states; North Dakota state agencies; and counties in weather modification research, experiments, studies, and operations.

The WMB receives all state funds related to weather modification and expends them (except for license fees) in pursuit of its statutory goals. The funds are turned over to the state treasurer and held in a "State Weather Modification Fund."

Any WMA which has contracted with the state WMB for weather modification operations must appropriate to the state weather modification fund such amount as is determined by the WMB to be necessary to provide such county with weather modification operations. The WMB may expend, from the state weather modification fund, such funds as it deems necessary to provide contracting counties with weather modification operations.

The WMB has the power to hold hearings; administer oaths; take and record testimony; subpoena witnesses; and make findings, orders, and determinations that will have the force and effect of law and which are subject to review by state courts.

The powers and duties of the North Dakota Weather Modification Board include, but are not limited to:

1. appointment of an executive director to perform duties assigned by the board;
2. authorization to employ whatever staff deemed necessary;
3. making reasonable rules and regulations concerning: qualifications, procedures and conditions for issuance, revocation, suspension, and modification of licenses and permits; standards and instructions governing weather modification operations; and all other reasonable rules and regulations necessary;
4. contracting with any person, business entity, the federal government, and with any county or group of counties, to carry out weather modification operations;
5. advertising for proposals and bids when any contract with any person licensed to modify weather (called a "controller") exceeds \$10,000 in any one year;
6. requiring, before contract, the controller to furnish a surety bond for the faithful performance of the contract in an amount as determined by the Board;
7. requiring that all bids submitted to the WMB for operations are accompanied by a bidder's bond of 5 percent of the amount of the bid;

8. ordering any person conducting weather modification operations in violation of state law, or any rules and regulations, to cease and desist from such operations;
9. administration and enforcement of state law concerning weather modifications;
10. issuing weather modification licenses to each applicant who: pays a license fee of \$50.00, demonstrates competence, and designates an agent for purposes of service of process;
11. issuing permits for each geographical area as set out in an operational plan, to applicants holding a valid weather modification license, who (among other things) have paid a \$25.00 application fee;
12. revocation or suspension of licenses and permits, and the modification of permits for various reasons;
13. giving public notice, in the official county newspaper or newspapers in the area of the state reasonably expected to be affected by operations conducted under a permit, that is considering an application for such permit, and, if objection to the issuance of the permit is received by the WMB within 20 days, the board may hold a public hearing for the purpose of obtaining information from the public concerning the effects of issuing the permit.

## LIABILITY

The state of North Dakota, any of its agencies, any state officials, state employees, or WMA's by statute are not responsible or liable for any injury caused by weather modification operations by any person or licensed controller. However, a controller may be liable for damages to any person adversely affected by a weather modification operation resulting from negligent or intentionally harmful conduct.

## WEATHER MODIFICATION ASSOCIATIONS

The North Dakota Weather Modification Association was created in 1971 by the seven county weather modification authorities then in existence as a statewide voluntary association. Its board of directors is composed of the chairmen of the county weather modification authorities. Its present membership structure and activities are informal.

In the summer of 1973 local voluntary weather modification associations were formed to obtain financial contributions and to contract for cloud seeding. These associations were voluntary groups of farmers and businessmen in parts of one county (Stutsman) or two-county (Burleigh/Emmons and

Foster/Eddy) areas, and were considered temporary, short-term expediency or emergency arrangements. They contracted for planes and pilots to attempt to increase rainfall, reduce hail, or both.

---

For more information contact:

North Dakota Weather Modification Board  
1302 Basin Avenue  
Post Office Box 1833  
Bismarck, North Dakota 58505  
Telephone Number - 224-2788