

## CHAPTER 89-07-02 WEATHER MODIFICATION OPERATIONS

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### **89-07-02-01. General provisions.**

This chapter applies to any weather modification operations conducted in North Dakota. This chapter must be applied in conjunction with North Dakota Century Code chapter 61-04.1.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-02, 61-04.1-08(3)

### **89-07-02-02. Definitions.**

The following definitions apply to this chapter and North Dakota Century Code chapter 61-04.1:

1. "Applicant" means any person who applies for a professional weather modification license or permit.
2. "Director" means the executive director of the atmospheric resource board.
3. "License" means a weather modification license.
4. "Licensee" means a person to whom a license has been issued.
5. "Operations area" means a geographic area where weather modification operations are conducted.
6. "Permit" means a weather modification permit.

7. "Permittee" means a person to whom a permit has been issued.
8. "Target area" means an area where the effects of weather modification are desired.
9. "Weather modification apparatus" means any device used to dispense any chemical material used to modify any weather condition.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-03

#### **89-07-02-03. Administration.**

Except as otherwise provided, the powers and duties of the board must be exercised by the director or the director's designee.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-08(3)

#### **89-07-02-04. Exempt activities.**

Any person intending to conduct any exempt activities under North Dakota Century Code section 61-04.1-12 must furnish notice of such intention to the board at least thirty days before the time such activities are to begin. Notice must consist of the following information and such other information as the board deems necessary:

1. The name and address of the person giving notice.
2. The name and address of the person who will conduct the activity.
3. A description of the procedures to be used in the operation or the research and development.
4. A description of the object of the activity.
5. The legal description and a map showing the operations area and target area, if any.
6. The approximate starting date of the activity and its anticipated duration.
7. A description of the equipment to be used in conducting the activity.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3), 61-04.1-12

**Law Implemented:** NDCC 61-04.1-12

#### **89-07-02-05. Approval of exempt activities.**

No weather modification activity intended to be conducted under North Dakota Century Code section 61-04.1-12 may begin without approval of the board if such activity is to be conducted outside with weather modification apparatus. The board may only approve those activities that provide for the protection of the health, safety, and welfare of those people who may be affected by such activities and that otherwise comply with North Dakota Century Code section 61-04.1-12.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-12, 61-04.1-16

**89-07-02-06. Field presence required.**

Every person intending to conduct operations in this state must designate to the board, on forms furnished by the board, at least one natural person who must at all times be physically present during all operations for which a permit is required and who will be the contractor's immediate point of contact in the field. The designated individual will be fully apprised of the status of the contractor's project equipment and personnel at all times and will coordinate the contractor's field activities.

**History:** Effective November 1, 1988; amended effective February 1, 1999; July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3), 61-04.1-14

**Law Implemented:** NDCC 61-04.1-11, 61-04.1-14

**89-07-02-07. Criteria for issuance of license.**

The competence of any applicant to engage in weather modification operations must be demonstrated to the board under North Dakota Century Code section 61-04.1-14. Applicants must show that any natural person designated by the applicant who will be in the full-time employment solely of the applicant during the project period and who will oversee the applicant's actions during the project has:

1. A minimum of one year of field experience in the management and control of weather modification operations or research; and
2. One of the following requirements:
  - a. Four additional years' experience in weather modification operations or research;
  - b. A degree in mathematics, engineering, or the physical sciences, plus two years' additional experience in weather modification operations or research;
  - c. A degree in meteorology; or
  - d. A degree in mathematics, engineering, or the physical sciences that includes at least twenty-five semester hours of coursework in meteorology.

In determining competency, the board may also consider any other items set forth in a license application under section 89-07-02-08.

At least one such natural person designated by the applicant and licensed by the board must be available for immediate consultation by the board, at a location made known to the board by the contractor, at all times while the project is ongoing.

**History:** Effective November 1, 1988; amended effective February 1, 1999; July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3), 61-04.1-14

**Law Implemented:** NDCC 61-04.1-14

**89-07-02-08. Application procedure.**

An applicant for a license must apply to the board on forms furnished by the board. The forms may require relevant information about the knowledge and experience of the applicant and the natural person designated under section 89-07-02-06 and must include:

1. Educational background, at the college and graduate level, of both the natural person designated by the applicant and the other employees of the applicant. This includes the dates of attendance and graduation; the major and minor subjects studied, including the number of semester hours of meteorological coursework; the degrees received; and the titles of any thesis or dissertation.

2. Experience in weather modification or related activities of both the natural person designated by the applicant and the other employees of the applicant. Attention should be given to experience with reference to meteorological conditions typical of North Dakota. The applicant should list the dates of each position held by the natural person designated under section 89-07-02-06, the title of position (indicate whether it was of subprofessional or professional level), the name and address of the employer, a description of the work done (indicate both the magnitude and complexity of the work and the duties and degree of responsibility for the work), and the name and address of the supervisor.
3. Scientific or engineering society affiliations of the natural person designated by the applicant and the grade of membership in and certification by each society.
4. Publications, patents, and reports of the natural person designated by the applicant.
5. Three references who will attest to the natural person's character, knowledge, and experience.
6. A list of all jurisdictions where the applicant has previously filed an application for a professional weather modification license. The result of the applications should be indicated.
7. Indication whether a professional weather modification license issued to the applicant in any jurisdiction has ever been suspended or revoked or whether there has been refusal to renew such a license by any jurisdiction. Such circumstances must be explained in detail.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3), 61-04.1-14

**Law Implemented:** NDCC 61-04.1-14

#### **89-07-02-09. Procedure for issuance.**

The board must evaluate the applications, including responses from any references given by the applicant. On the basis of all such information the board, within thirty days of receipt of an application, must determine whether the natural person designated by the license applicant under section 89-07-02-06 meets the education and experience criteria established by section 89-07-02-07 and whether the natural person and the applicant possess the knowledge and experience necessary to engage in weather modification operations. The board must issue a license to the applicant who satisfies the requirements of this chapter and North Dakota Century Code section 61-04.1-14. If an applicant for a license or the natural person designated by the applicant does not satisfy the requirements, the board must deny the license.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3), 61-04.1-14

**Law Implemented:** NDCC 61-04.1-14

#### **89-07-02-10. Renewal of license.**

Forty-five days before expiration of licenses, the board must provide license application forms to all licensees and request each licensee to complete the form and file the original with the board. The board must evaluate the available data about the licensee and the natural person, designated by the license applicant under section 89-07-02-06, and must issue a renewal license within thirty days of receipt of the application to each applicant who pays the license fee established by subsection 1 of North Dakota Century Code section 61-04.1-14 and who has the qualifications necessary for issuance of an original license. The board must deny a renewal license within thirty days of receipt of the application of each applicant who does not pay the renewal fee, who does not possess the qualifications necessary for issuance of an original license, or who does not designate a natural person, under section 89-07-02-06, who satisfies the requirements of section 89-07-02-07.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3), 61-04.1-14

**Law Implemented:** NDCC 61-04.1-14

**89-07-02-11. Responsibility of controller.**

The natural person designated by the license applicant under section 89-07-02-06 is deemed by the board to be in control of and primarily responsible for operations conducted under the terms of any permit. However, nothing in this section may be construed to prevent appropriate enforcement of any regulation, limitation, permit condition, or order against either the permittee or licensee, whether or not such licensee is a natural person.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-18, 61-04.1-37

**89-07-02-12. Suspension, revocation, refusal to renew a license.**

In addition to the reasons cited in North Dakota Century Code section 61-04.1-15, the board may suspend, revoke, or refuse to renew a license for violation of any permit.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-14, 61-04.1-15

**89-07-02-13. Restoration of license.**

At any time after the suspension or revocation of a license or after refusal to renew a license, the board may restore the license to the licensee or renew it upon a finding that the licensee has met the requirements for issuance of an original license.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-14

**89-07-02-14. Application for permit.**

Application for a weather modification permit must be made on forms furnished by the board. Every applicant must submit a properly executed application to the board. The application may contain such information as the board deems necessary, and must include the following information:

1. Name and address of the applicant.
2. Whether a weather modification operational permit issued to the applicant in any jurisdiction has ever been suspended or revoked or whether there has been refusal to renew a permit by any jurisdiction. Such circumstances must be explained in detail.
3. If the applicant is a corporation, whether it is licensed to do business in North Dakota.
4. Whether a license has been issued under North Dakota Century Code section 61-04.1-14, and if so, the names, addresses, and professional license numbers of the controllers.
5. Whether professional weather modification licenses issued to the license applicant in any jurisdiction have ever been suspended or revoked or whether there has been refusal to renew a license by any jurisdiction. Such circumstances must be explained in detail.
6. Whether proof of financial responsibility has been furnished under section 89-07-02-22 and North Dakota Century Code section 61-04.1-19.

7. If the operation will be conducted under a contract, the value of the contract.
8. If the operation will not be conducted under a contract, an estimate of the costs of the operation and information as to how the estimate was made.
9. Whether the applicant has paid the application fee.
10. Whether the applicant has North Dakota workforce safety and insurance coverage.
11. A copy of any promotional and advertising material used in connection with negotiations for the contract, if any.
12. Whether the applicant has furnished a performance bond, as required by subsection 3 of section 89-07-02-26.
13. Whether the applicant has furnished the bid bond, as required by North Dakota Century Code section 61-04.1-35.
14. Whether the applicant has registered with the North Dakota aeronautics commission all aircraft to be used in the operation for which the permit is sought.
15. A complete and detailed operational plan for the operation that includes:
  - a. The nature and object of the operation.
  - b. The legal description and a map showing the operations area and the target area.
  - c. The approximate starting date of the operation and its anticipated duration.
  - d. The kind of seeding agents intended for use and the anticipated rate of their use.
  - e. A list of equipment that will be used and the methods of seeding for which they will be used.
  - f. An emergency shutdown procedure that states conditions under which operations will be suspended because of possible danger to the public health, safety, and welfare or to the environment.
  - g. The means by which the operation plans will be implemented and carried out such as:
    - (1) The location of the main operational office and any other offices used in connection with the operation;
    - (2) The location of such ground equipment as seeding generators, radar, and evaluation instrumentation;
    - (3) The number and kinds of aircraft that will be used;
    - (4) The extent to which weather data will be made available to the licensees; and
    - (5) Other other personnel carrying out the project.
  - h. How conduct of the operation will interact with or affect other weather modification operations.
16. Such additional information that will assist the board in deciding whether to issue the permit.

**History:** Effective November 1, 1988; amended effective July 1, 2006; July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-16

**89-07-02-15. Procedure for issuance.**

1. **Notice.** The board must give notice of its consideration of an application under North Dakota Century Code section 61-04.1-17. Notice must be given once a week for two consecutive weeks. The notice must:
  - a. Describe the primary target area.
  - b. Describe the operations area.
  - c. Specify the period of operation, including starting and ending dates.
  - d. Describe the general method of operation.
  - e. Describe the intended effect of the operation.
  - f. State the name of the proposed permittee.
2. **Hearings.** The board must allow twenty days for public comment, under North Dakota Century Code section 61-04.1-17, from the date of the last publication of the notice. Any hearing held upon objection received by the board or any hearing held upon the board's own motion must be held upon at least ten days' notice in the county newspaper where notice of consideration of the application was published. At the hearing, the board must make a brief record of testimony received, and must consider all such testimony in its decision on the permit application.
3. **Director's recommendation.** At the close of the public comment period provided for in North Dakota Century Code section 61-04.1-17, the director of the board must review all applications for permits that have been received and must recommend approval or disapproval of such applications and the reasons therefor.
4. **Final action by board.** The board must take final action on all applications for permits for which notice of consideration was published, under North Dakota Century Code section 61-04.1-17, within forty-five days of the close of the public comment period. Approval of applications considered must be by majority vote. In acting on any such applications, the board must consider any recommendations made by the director of the board and all testimony received at any hearing under North Dakota Century Code section 61-04.1-17. The board may issue a permit only if it determines that the requirements of subsection 2 of North Dakota Century Code section 61-04.1-16 have been met.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-16, 61-04.1-17

**89-07-02-16. Permit form.**

Each permit must set forth the permit number, effective period of the permit, name of the permittee, name of the licensee and the license number, location of the operation, and such other information, terms, or conditions as the board deems appropriate.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-16

#### **89-07-02-17. Permit conditions.**

The board may attach conditions to any permit as it deems appropriate, including any conditions concerning method and time of operation, target and operation areas, safety precautions, and recordkeeping. Permittee must submit an operations plan that includes the types of seeding agents to be used, the methods and equipment to be employed in seeding operations, and the emergency shutdown procedures, including the conditions under which operations will be suspended. Violation of any permit may result in permit revocation, suspension, or other appropriate enforcement action by the board.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-16(2)

#### **89-07-02-18. Permit expiration.**

All permits that have expired under North Dakota Century Code section 61-04.1-16 are nonrenewable.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-16

#### **89-07-02-19. Suspension - Revocation - Modification.**

In addition to the reasons cited in North Dakota Century Code section 61-04.1-18, the board may suspend, revoke, or modify any permit or any provision or condition of a permit if it appears to the board that the permittee has violated the North Dakota Century Code or the terms or conditions of any permit held by the permittee.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-16, 61-04.1-18

#### **89-07-02-20. Automatic suspension of permit.**

Any permit issued under this chapter is automatically suspended if the person's weather modification license expires or is suspended, revoked, or not renewed by the board. In the case of a permit issued to a corporation, partnership, or other business association, if the natural person designated as being in control of the operation in such business association's application for a weather modification license becomes incapacitated, leaves the business association's employment, or is in any way unable to continue in control of the operation, automatic suspension of the permit will result. A permit of a business association suspended under such circumstances may be reinstated by the nomination of replacement personnel under section 89-07-02-08.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-16, 61-04.1-18

#### **89-07-02-21. Restoration of permit.**

At any time after the suspension, revocation, or modification of a permit, the board may restore it to the permittee or delete any modification thereof upon a finding that the requirements for issuance of an original permit have been met by the permittee or that the conditions requiring modification no longer exist.

**History:** Effective November 1, 1988; amended effective July 1, 2014.



**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-16, 61-04.1-18

**89-07-02-22. Proof of financial responsibility.**

Proof of financial responsibility is made by showing to the satisfaction of the board that the permittee has the ability to respond to liability that might reasonably result from the operation for which the permit is sought. Such proof of financial responsibility may be shown by any of the following:

1. Presentation to the board or proof of purchase of a prepaid noncancelable insurance policy or a corporate surety bond, issued by a company against whom service of legal process may be made in North Dakota, against liabilities in an amount five times the value of an operation conducted under contract or in an amount five times the estimated costs of an operation not conducted under contract.
2. Depositing with the board cash or negotiable securities in an amount five times the value of an operation conducted under contract or in an amount five times the estimated costs of an operation not conducted under contract.
3. Any other manner approved by the board.

**History:** Effective November 1, 1988; amended effective July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-16, 61-04.1-19

**89-07-02-23. Records.**

1. **Daily log.** Each permittee must retain a daily log of weather modification activities for each unit of weather modification apparatus used during an operation that includes:
  - a. Date of the weather modification activity.
  - b. Each aircraft flight track and location of each radar unit during each modification mission. Maps may be used.
  - c. Local time when modification activity began and ended. For intermittent operations, the beginning and ending time of the total sequence are acceptable.
  - d. Duration of operation of each unit of weather modification apparatus, in hours and minutes.
  - e. Description of type of modification agents used.
  - f. Rate of dispersal of agent during the period of actual operation of weather modification apparatus, by hour or other appropriate time period.
  - g. Total amount of modification agent used. If more than one agent was used, report total for each type separately.
  - h. Local time when any radar monitoring operations were turned on and turned off.
  - i. Type of clouds modified, that is, whether they were stratiform, isolated cumuliform, organized cumuliform, or other types of clouds.
  - j. Remarks indicating operational problems, including equipment failure, weather conditions not conducive to successful performance of the operation, or personnel problems.
2. **Monthly totals.** Monthly totals must be kept on the basis of the daily logs, listing the total:

- a. Days during month in which operation conducted.
  - b. Time of operation.
  - c. Amount of each kind of agent used.
  - d. Average rate of dispersal of each kind of agent used.
  - e. Days of each type of operation.
  - f. Duration of operation of each unit of weather modification apparatus, in hours and minutes.
3. **Addresses of participants.** Each permittee must keep a roster of the names and North Dakota addresses of all employees participating in the state on an operation.
  4. **Inspection.** Duly authorized agents of the board have the authority to enter and inspect any equipment and to inspect or copy any records required by this section.
  5. **Exempted weather modification activities.** All people conducting weather modification activities exempted by the board under North Dakota Century Code section 61-04.1-12 must record and maintain all of the records required of any permittee by this section.

**History:** Effective November 1, 1988; amended effective July 1, 2006; July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-08(3)

#### **89-07-02-24. Reports.**

1. **Final.** Within sixty days after final completion of any operation, each permittee must file with the board a final report on the operation that must include:
  - a. Copies of the daily logs prepared under subsection 1 of section 89-07-02-23, copies of the monthly totals for the entire operational period from the monthly summary records prepared under subsection 2 of section 89-07-02-23, and a narrative summary of permittee activities during the operational period.
  - b. A copy of the federal final activity report form filed with the national oceanic and atmospheric administration under the rules adopted under Public Law 92-205 [85 Stat. 735].
  - c. A narrative account of the manner in which the operation did not conform to the operational plan filed under subsections 1 through 16 of section 89-07-02-14.
2. **Exempted weather modification activities.** The board may require people operating weather modification activities exempted under sections 89-07-02-04 and 89-07-02-05, but who have been required to keep records under subsection 5 of section 89-07-02-23, to file any part of such records with the board.

**History:** Effective November 1, 1988; amended effective July 1, 2006; July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 61-04.1-08(3)

#### **89-07-02-25. Bid procedure.**

Repealed effective July 1, 2014.

**89-07-02-26. Award of contracts.**

1. **Deviation from technical requirements.** Any or all bids may be rejected by the board on the basis of technical inadequacy or other failure to comply with the specifications included in the request for bids.
2. **Contractor's bond.** Before the board awards any contract, it must require the contractor to furnish a surety bond for the faithful performance of the contract in an amount up to twenty-five percent of the contract price, conditioned that the contractor and the contractor's agents will in all respects faithfully perform all weather modification contracts undertaken with the board and will comply with North Dakota Century Code chapter 61-04.1, this chapter, and the contract between the board and the contractor. If the contract involves the erection, repair, or alteration of any public improvement, the surety bond must be in the full amount of the contract price.

**History:** Effective November 1, 1988; amended effective July 1, 2006; July 1, 2014.

**General Authority:** NDCC 28-32-02, 61-04.1-08(3)

**Law Implemented:** NDCC 44-08-01, 61-04.1-33, 61-04.1-34, 61-04.1-35