



# IDAHO WATER RESOURCE BOARD

October 17, 2022

**Brad Little**  
*Governor*

High Country Research Conservation & Development  
101 N. Bridge St  
St. Anthony, ID 83445

**Jeff Raybould**  
*Chairman*  
St. Anthony  
At Large

RE: Request for Authorization to Cloud Seed

**Roger W. Chase**  
*Vice-Chairman*  
Pocatello  
District 4

To Whom It May Concern:

In accordance with §42-4301 of the Idaho Code, any organization or individual who conducts cloud seeding operations in the State of Idaho, shall first obtain authorization from the Idaho Water Resource Board (IWRB).

**Jo Ann Cole-Hansen**  
*Secretary*  
Lewiston  
At Large

The High Country Research Conservation & Development (HCRCDD) submitted a request to conduct cloud seed operations in the Upper Snake River Basin watershed of Idaho. Based on the information received, your organization is hereby granted authorization to conduct cloud seeding operations, as outlined in its request, and subject to the IWRB's approved authorization criteria. This authorization shall remain in effect unless revoked by the IWRB, for non-compliance with the approved authorization criteria.

**Dale Van Stone**  
Hope  
District 1

A copy of the approved criteria for the authorization of cloud seeding, the IWRB resolution approving the criteria, and §42-4301 are included for your records. Should you have any questions or concerns regarding this authorization, please contact IWRB staff.

**Albert Barker**  
Boise  
District 2

**Dean Stevenson**  
Paul  
District 3

**Peter Van Der Meulen**  
Hailey  
At Large

Sincerely,

**Brian Olmstead**  
Twin Falls  
At Large

Brian Patton, P.E.  
*Executive Officer*  
Idaho Water Resource Board

# Idaho Water Resource Board | Cloud Seeding

## Cloud Seeding Program Authorization Criteria

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### I. Request for Authorization & Program Criteria

- a. Either a program's sponsor or its operator may submit a Request for Authorization to the Idaho Water Resource Board (IWRB), or its designated representative, in written or electronic format.
- b. A program that receives funding or is otherwise sponsored in whole or in part by the IWRB (IWRB Sponsored Program) is not required to submit a Request for Authorization. However, IWRB Sponsored Programs must comply with the Terms of Authorization referenced in Part II.
- c. A Request for Authorization shall include a summary of the proposed program operations, including, at a minimum, the following information:
  1. Name and contact information of program sponsor(s), and operator
  - ii. The geographic area(s) of operation
    1. Target watershed(s)
    2. Map of program infrastructure, including general flight path(s) and/or approximate location of ground equipment.
  - iii. Seeding agent(s) proposed (*Agl, liquid propane, dry ice, other*)
  - iv. Method(s) of seeding
    1. Quantity and type of [each] ground generator, including rate of output for the disbursed material
    2. Quantity and type of [each] aircraft
      - a. Quantity, type, and amount of primary seeding agent for [each] pyrotechnic used
      - b. Description including quantity, type, and amount of primary seeding agent or rate of dispersion, for any other type of airborne seeding proposed
    3. Description and quantity of any other seeding devices proposed
  - v. Planned season of operations
  - vi. Operational experience
    1. Number of years the operator has provided cloud seeding services
    2. Geographic location(s) of operation
    3. Type of seeding operated
      - a. Winter or summer
      - b. Seeding equipment used (ground based, airborne, other)
      - c. Average number of seeded hours per season for each type of seeding equipment operated
  - vii. Number of meteorologists that will support the operation of the project or program, with summary of qualifications.
  - viii. Proposed criteria for the suspension of operations to prevent flooding, mitigate for avalanche risk, or any other risk that may be applicable to the area of operations.

# Idaho Water Resource Board | Cloud Seeding

## Cloud Seeding Program Authorization Criteria

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### II. Terms of Authorization

- a. An authorized cloud seeding project or program shall meet the following criteria:
  - i. Maintain accurate records of all seeding operations, including periods of operation, location(s) of operation, number of seeding hours by device, and description of any periods of suspension.
  - ii. Follow all current and future regulations (state, federal) that may be applicable to the operation of the program.
  - iii. Review and/or update the project or program's operational suspension criteria at least every 5 years in accordance with existing conditions and industry standard practice.
  - iv. Program operator shall maintain insurance that covers a reasonable estimate of potential liability, for the duration of operations, with an insurance company properly licensed to do business in Idaho and shall provide the IWRB with a copy of its certificate of insurance or certified endorsements as applicable.
  - v. Submit an annual report on operations, or copies of NOAA Form 17-4 & 17-4A, to the IWRB by August 1. The annual report shall include, at a minimum:
    1. Period(s) of seeding operation
    2. Location(s) of seeding operation
    3. Number of seeding hours by device
    4. Description of any periods of suspension
    5. Copies of all required state or federal reporting documents
  - vi. Inform the IWRB, or its designated representative, through written or electronic communication of any changes to the program's operator, the general area(s) of operation, proposed period of operation, type of seeding device(s) used, or type of seeding agent(s) used in the operation of the program.

**BEFORE THE IDAHO WATER RESOURCE BOARD**

IN THE MATTER OF CLOUD SEEDING IN THE  
STATE OF IDAHO

RESOLUTION TO ADOPT CRITERIA FOR THE  
AUTHORIZATION OF CLOUD SEEDING  
PROGRAMS

1           WHEREAS, House Bill 266 (HB 266), passed and approved by the 2021 legislature, recognized  
2 that cloud seeding has provided a unique and innovative opportunity to support sustainable water  
3 supplies for the State of Idaho, and designated the Idaho Water Resource Board (IWRB) as the agency  
4 responsible for authorization of cloud seeding programs within the State; and

5  
6           WHEREAS, HB 266 defines “cloud seeding” as all acts undertaken to artificially distribute or create  
7 nuclei in cloud masses for the purposes of inducing precipitation, cloud forms, or other meteorological  
8 parameters.

9  
10           WHEREAS, HB 266 further requires the IWRB authorize local or statewide cloud seeding programs  
11 within the State of Idaho, excluding cloud seeding for the suppression of fog and frost prevention  
12 measures; and

13  
14           WHEREAS, cloud seeding activities have occurred in the State of Idaho for several decades; and

15  
16           WHEREAS, to comply with HB 266, the IWRB approved a temporary one-year authorization of  
17 existing cloud seeding programs for the 2021-2022 cloud seeding season; and

18  
19           WHEREAS, recent scientific findings have validated the efficacy of cloud seeding, and cloud  
20 seeding operational practices continue to improve due to technological and analytical developments; and

21  
22           WHEREAS, the 2021 Idaho Legislature acknowledged additional research and analysis are  
23 necessary to determine the extent of water supply increases resulting from cloud seeding and the IWRB  
24 recognizes the need for cloud seeding programs to be implemented using current and developing industry  
25 operational and reporting standards; and

26  
27           WHEREAS, the IWRB defined general program authorization criteria to ensure cloud seeding  
28 programs operating within the state of Idaho meet basic industry standards; and

29  
30           BE IT FUTHER RESOLVED that the IWRB hereby approves the attached criteria for the  
31 authorization of cloud seeding programs operating within the State of Idaho but recognizes these criteria  
32 may be updated based on new information or industry standards.

33  
34           BE IT FUTHER RESOLVED that the IWRB authorizes its chairman or designated representative to  
35 authorize cloud seeding programs within the state of Idaho based on the established criteria.

36  
37           BE IT FURTHER RESOLVED that, the authorization of a cloud seeding program will remain in effect  
38 unless revoked by the IWRB for noncompliance with the approved authorization criteria.

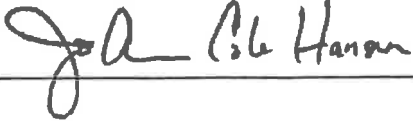
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DATED this 20<sup>th</sup> day of May, 2022.



A handwritten signature in black ink, appearing to read "Jeff Raybould", written over a horizontal line.

Jeff Raybould, Chairman  
Idaho Water Resource Board

ATTEST 

The word "ATTEST" is followed by a horizontal line and a handwritten signature in black ink that appears to read "Jo Ann Cole-Hansen".

Jo Ann Cole-Hansen, Secretary

IN THE HOUSE OF REPRESENTATIVES

HOUSE BILL NO. 266

BY RESOURCES AND CONSERVATION COMMITTEE

AN ACT

1 RELATING TO WATER; AMENDING TITLE 42, IDAHO CODE, BY THE ADDITION OF A NEW  
2 CHAPTER 43, TITLE 42, IDAHO CODE, TO PROVIDE FOR CLOUD SEEDING, TO PRO-  
3 VIDE LEGISLATIVE FINDINGS, TO DEFINE A TERM AND TO PROVIDE EXCEPTIONS,  
4 TO PROVIDE FOR PROGRAMS AND CONTRACTING, TO PROVIDE FOR THE USE OF STATE  
5 FUNDS, TO PROVIDE FOR DISTRIBUTION OF WATER GENERATED THROUGH CLOUD  
6 SEEDING, TO PROHIBIT CERTAIN CLAIMS OF LIABILITY, AND TO PROVIDE THAT  
7 CERTAIN PERMITS SHALL NOT BE REQUIRED.  
8

9 Be It Enacted by the Legislature of the State of Idaho:

10 SECTION 1. That Title 42, Idaho Code, be, and the same is hereby amended  
11 by the addition thereto of a NEW CHAPTER, to be known and designated as Chap-  
12 ter 43, Title 42, Idaho Code, and to read as follows:

13 CHAPTER 43  
14 CLOUD SEEDING

15 42-4301. CLOUD SEEDING. (1) The legislature finds that:

16 (a) Idaho's economy and the welfare of its citizens depend upon a reli-  
17 able and sustainable water supply. It is essential, therefore, that the  
18 state continues to identify, develop, and implement projects that aug-  
19 ment and sustain the state's water resources.

20 (b) The cloud seeding program developed and implemented by the Idaho  
21 water resource board, in cooperation with interested stakeholders,  
22 presents a unique and innovative opportunity to augment and sustain the  
23 water resources of the state.

24 (c) Augmenting water supplies through cloud seeding is in the public  
25 interest. Public benefits of cloud seeding include drought mitigation,  
26 protection of water rights, protection of municipal and business ac-  
27 tivities dependent on water, water quality, recreation, and fish and  
28 wildlife.

29 (d) Data accumulated and analysis undertaken since the initiation of  
30 the cloud seeding program demonstrates that cloud seeding has resulted  
31 in an annual increase in the water supplies in the basins in which cloud  
32 seeding has been performed. However, additional research and analy-  
33 sis is necessary to determine the precise nature and extent of those in-  
34 creases. The legislature recommends that such research be continued as  
35 the cloud seeding program progresses and that annual reports on such re-  
36 search be provided to the legislature.

37 (e) The legislature recognizes that expansion of the cloud seeding pro-  
38 gram may benefit basins throughout the state that experience depleted  
39 or insufficient water supplies, and the legislature recommends that  
40 the water resource board complete an assessment of basins and work with

1 affected stakeholders to implement the cloud seeding program in basins  
2 that would benefit from the program.

3 (2) As used in this chapter, "cloud seeding" means all acts undertaken  
4 to artificially distribute or create nuclei in cloud masses for the purposes  
5 of inducing precipitation, cloud forms, or other meteorological parameters.  
6 Cloud seeding for the suppression of fog and frost prevention measures for  
7 the protection of orchards and crops are excluded from the coverage of this  
8 chapter.

9 (3) The water resource board shall authorize, and may sponsor or de-  
10 velop, local or statewide cloud seeding programs and may contract any indi-  
11 vidual or organization for consultation and assistance in developing cloud  
12 seeding programs or in furthering research related to cloud seeding.

13 (4) State funds may be used or expended on cloud seeding programs only  
14 in basins where the water resource board finds that existing water supplies  
15 are not sufficient to support existing water rights, water quality, recre-  
16 ation, or fish and wildlife uses dependent on those water supplies. Water  
17 generated through cloud seeding shall be distributed in accordance with the  
18 prior appropriation doctrine.

19 (5) The act of cloud seeding pursuant to a project funded in whole or  
20 in part by the state of Idaho or authorized by the state water resource board  
21 shall not be the basis of any claim of liability, including but not limited  
22 to trespass or public or private nuisance, and shall not require any state or  
23 local permits.