



AGENDA

IDAHO WATER RESOURCE BOARD

Cloud Seeding Committee Meeting No. 3-22

Thursday, May 5, 2022

1:00 p.m. (MT)

Water Center

Conference Rooms 602 C&D / Online Zoom Meeting

322 E. Front St.

BOISE

Brad Little

Governor

Jeff Raybould

Chairman

St. Anthony

At Large

Roger W. Chase

Vice-Chairman

Pocatello

District 4

Board Members & the Public may participate via Zoom

[Click here to join our Zoom Meeting](#)

Dial in Option: 1(253) 215-8782

Meeting ID: 834 5569 3497 Passcode: 626688

Jo Ann Cole-Hansen

Secretary

Lewiston

At Large

Dale Van Stone

Hope

District 1

Albert Barker

Boise

District 2

Dean Stevenson

Paul

District 3

Peter Van Der Meulen

Hailey

At Large

Brian Olmstead

Twin Falls

At Large

1. Introductions and Attendance
2. Cloud Seeding Program Authorization*
3. Bear River Basin Cloud Seeding Update*
4. FY23 Budget Overview*
5. Other Items
6. Adjourn

Committee Members: Chair Roger Chase, Jeff Raybould, Pete Van Der Meulen, and Al Barker.

* Action Item: A vote regarding this item may be made this meeting. Identifying an item as an action item on the agenda does not require a vote to be taken on the item.

Americans with Disabilities

The meeting will be held telephonically. If you require special accommodations to attend, participate in, or understand the meeting, please make advance arrangements by contacting Department staff by email jennifer.strange@idwr.idaho.gov or by phone at (208) 287-4800.

322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098

Phone: (208) 287-4800 Fax: (208) 287-6700 Website: idwr.idaho.gov/IWRB/

Memorandum



To: Idaho Water Resource Board

From: Kala Golden

Date: May 5, 2022

Re: Authorization of Cloud Seeding Programs Operating in Idaho, Bear River Basin Update

REQUESTED ACTION: Consider a resolution to adopt criteria for authorization of local or statewide cloud seeding programs operating in Idaho.

Authorization of Cloud Seeding Programs

Cloud seeding activities have occurred in the State of Idaho for several decades. House Bill (HB) 266, passed by the 2021 Idaho Legislature, defines cloud seeding and acknowledges the Cloud Seeding Program (Program) developed by the Idaho Water Resource Board (Board) in cooperation with interested stakeholders is an innovative method of augmenting and sustaining water resources in the state. The legislation further recognizes that expansion of cloud seeding operations may benefit basins throughout the state that experience depleted or insufficient water supplies.

HB266 requires the Board to authorize local or statewide cloud seeding programs that operate within the state. Based on direction from the Board, a draft resolution with proposed criteria for the authorization of cloud seeding programs was developed.

Bear River Basin Update

A presentation will be given at the Board's upcoming Cloud Seeding Committee meeting with an update on cloud seeding in the Bear River Basin.

Attachments

1. House Bill 266
2. Draft Resolution to approve criteria
3. Draft criteria for the authorization cloud seeding programs

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.

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF CLOUD SEEDING IN THE
STATE OF IDAHO

RESOLUTION TO ADOPT CLOUD SEEDING
PROGRAM AUTHORIZATION CRITERIA

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 due to 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.

DATED this 20th day of May, 2022.

Jeff Raybould, Chairman
Idaho Water Resource Board

ATTEST _____

Jo Ann Cole-Hansen, Secretary

DRAFT

Idaho Water Resource Board | Cloud Seeding

Cloud Seeding Program Authorization Criteria

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 sponsored in whole or in part by the IWRB shall receive authorization by award of sponsorship or by participation in the program's funding, from the IWRB.
- 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 (*AgI, 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. Number of meteorologists that will support the operation of the project or program, with brief summary of qualifications.
 - vii. 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.

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 (local, state, federal) that may be applicable to the operation of the program.

Idaho Water Resource Board | Cloud Seeding

Cloud Seeding Program Authorization Criteria

- iii. Update the project or program's operational suspension criteria every 5 years in accordance with existing conditions and industry standard practice.
- iv. Submit an annual report on operations, or copies of NOAA Form 17-4 & 17-4A, to the IWRB by August 1. The annual report should 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
- v. Inform the IWRB, or its designated representative, through written or electronic communication of any changes to 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.