



Amended AGENDA

IDAHO WATER RESOURCE BOARD

Cloud Seeding Committee Meeting No. 2-25

October 20, 2025

1:00 p.m. Mountain Time / Noon Pacific Time

Brad Little
Governor

Jeff Raybould
Chairman
St. Anthony
At Large

Jo Ann Cole-Hansen
Vice Chair
Lewiston
At Large

Dean Stevenson
Secretary
Paul
District 3

Dale Van Stone
Hope
District 1

Albert Barker
Boise
District 2

Brian Olmstead
Twin Falls
At Large

Marcus Gibbs
Grace
District 4

Patrick McMahon
Sun Valley
At Large

Water Center
Conference Room 602 C & D
322 E. Front St.
BOISE

Livestream available at <https://www.youtube.com/@iwrbb>

1. Introductions and Attendance
2. Bear River Project Authorization *
3. High Country RC & D Funding Request *
2. Other Items
3. Adjourn

Committee Members: Chair Marc Gibbs, Jeff Raybould, Al Barker, and Pat McMahon.

* Action Item: A vote regarding this item may be made at 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 in person and online. 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.

Memorandum



To: Idaho Water Resource Committee
From: Nick Banish, Cloud Seeding Program Manager
Date: October 17, 2025
Re: Cloud Seeding Program | State of Utah Authorization Request

ACTION: Considering the State of Utah's Request to conduct 2025-2026 cloud seeding operations

On July 25, 2025, the Idaho Water Resource Board (IWRB) approved funding of a Bear River Basin 1-Year Collaborative Interstate Cloud Seeding Pilot Project (Project) proposed by the Utah Division of Water Resources (UDWR). Funding up to \$950,000 was approved in resolution 29-2025 by the IWRB for the Project. UDWR will contribute up to \$3,496,000 to the Project of which \$3,000,000 was mandated by the Utah legislature for the implementation of a Bear River Basin cloud seeding project. The Project will integrate Unmanned Aerial Systems (UAS) technology and advanced weather instrumentation in Idaho, remote ground-based generators in Utah, and utilize 3 remote ground generators in Idaho which are already authorized by the IWRB. The Project will also feature a third-party validation and evaluation (e.g. NCAR), in conjunction with internal validation services provided by Rainmaker Technologies.

Per the Authorization Criteria (May 2022) "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". Although the UDWR is not required to submit a request for authorization, UDWR has submitted a request to ensure the Project meets authorization requirements. The UDWR requests authorization to conduct precipitation enhancement via cloud seeding in southern Idaho as part of the Bear River Basin Project, with the season beginning November 1, and ending April 30. The request for authorization was submitted by Jonathan Jennings, Meteorologist, State of Utah Division of Water Resources on August 26th, 2025. Staff recommend approving the UDWR's request for authorization.

Project Details:

- Project Applicant: Utah Division of Water Resources
- Geographical Area of Operations: Bear River Basin (Figure 1)
- Seeding Agent: Silver Iodide (AgI)
- Method of Seeding: Unmanned Aerial Systems (UAS) in Idaho and Remote Ground-Based Generators in Utah (3 in Idaho)
 - o UAS (Drones): 32 Rainmaker Technology Corporation V2 Drone (3 grams/minute)
 - o Remote Ground Based Generators: 3 Remote Ground Based Generators (24 grams/hour)
- Planned Season of Operations: November 1 to April 30
- Operational Experience: UDWR has conducted winter cloud seeding operations since the 1950s utilizing both ground based and aerial methodologies with the more recent incorporation of UAS methodologies. Areas of operations include the Book Cliffs, Cache Valley, East Shore, High Uinta's, Northern Utah, Six Creeks, Western Uinta's, and Southern and Central Utah. Operational reports and seasonal operational hours can be found on UDWR's cloud seeding website ([Cloud Seeding – Utah Division of Water Resources](#)).
- Weather Instrumentation: 10 K-band Radars with specialized weather instrumentation and 1 X-band radar
- Number of Meteorologists Supporting Operations: 3, which possess over 13 years of experience operating and managing both wintertime and summertime cloud seeding programs across multiple states

Attachments: *Bear River Basin Operational Plan (Includes Suspension and Operation Criteria)*



Figure 1. Project Operational Area

Utah Operations Plan



RAINMAKER



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1.0 Project Description & Objectives

1.1 Executive Overview

Rainmaker Technology Corporation and North American Weather Consultants will be conducting precipitation enhancement operations via the use of aerial unmanned systems, ground generators, and validation sensors. Drone flights and ground generator operations are conducted on a daily basis depending on forecasted atmospheric conditions in compliance of Title 14 of Code of Federal Regulations, Part 107, Small Unmanned Aircraft Systems (sUAS).

1.2 Drone Operations Overview

Drone operations involve a command center, field research scientists, and drone operator crews. A quadcopter sUAS is the primary aircraft used, delivering seeding materials at altitudes determined by the command center meteorologist team. Sensors are employed during seeding operations to verify and analyze the effectiveness of each flight.

All sUAS flights utilize Rainmaker's proprietary software 'Prophet' for mission planning and forecasting, and 'Seraph' for fleet management and sUAS command and control (C2). In emergencies, Seraph autonomously commands immediate sUAS maneuvers, adhering to FAA guidelines.

1.3 Ground Generator Overview

Ground generator operations are supported by a remote ground generator trailer, field technicians, and operational meteorologists. The remote ground generator trailer contains solar panels for power, a battery bank, solution and purge tanks, a control system, a burn head, and a cellular or satellite antenna.

Operational meteorologists will use Prophet by Rainmaker to control, monitor, and report ground generator use. Meteorologists will use Prophet's integrated forecasting tools as well as other tools to monitor weather and predict optimal seeding conditions.

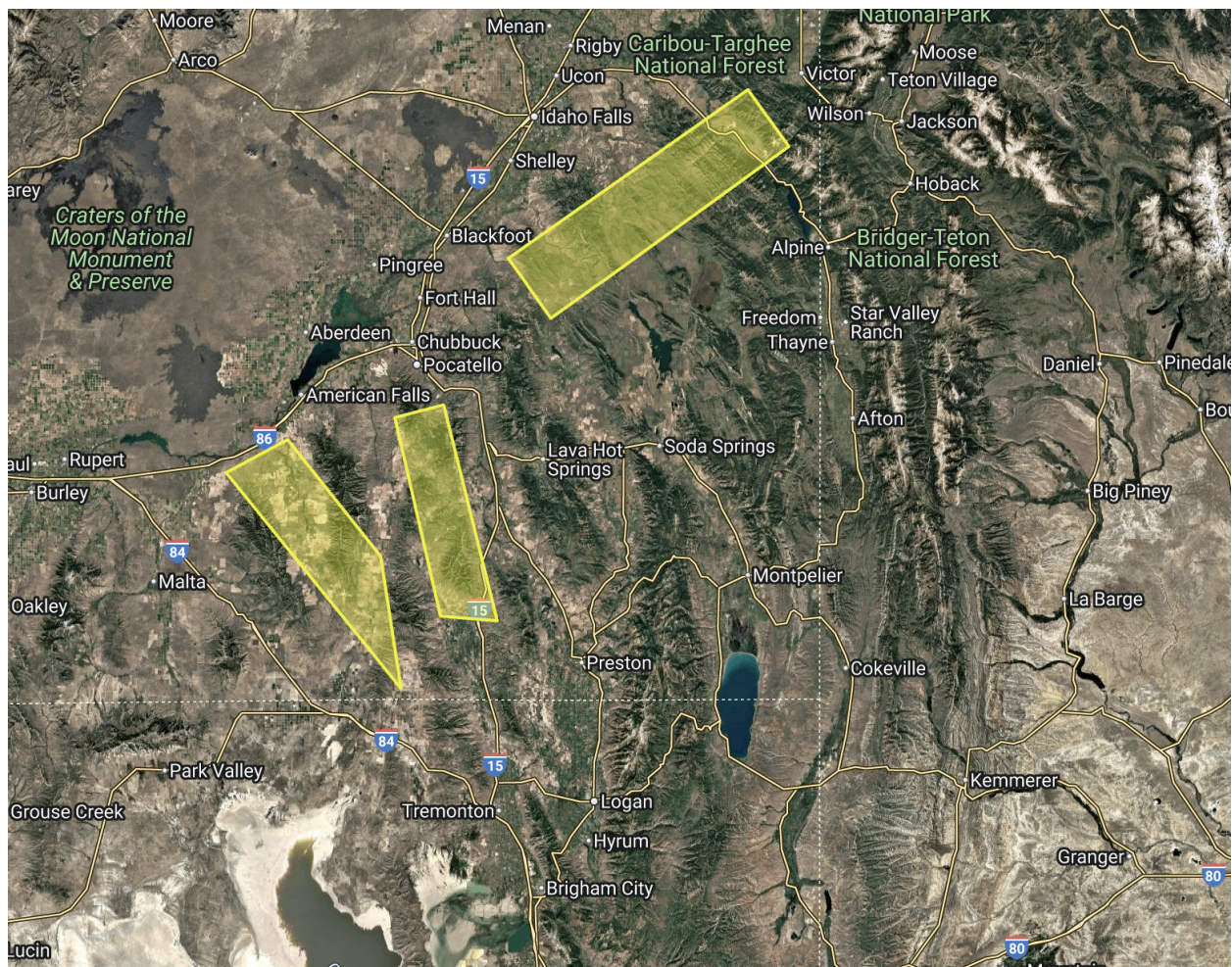
2.0 Airspace Evaluation

2.1 107 Waiver Approvals

All Rainmaker unmanned flights will be conducted under FAA Part 107 rules and regulations. Rainmaker has obtained two FAA operational waivers to allow beyond-visual-line-of-sight (BVLOS) and high altitude flights in the areas shown in Figure 1.

In accordance with the FAA and Salt Lake City Center, sUAS operations are permitted for three separate areas denoted in Figure 1 in yellow boxes. All sUAS operations shall remain within these areas with a maximum altitude of 15,000' MSL.

Figure 1. Overview of FAA Waiver Areas





2.1 Site Suitability Survey

Prior to all operations, drone land/launch sites will be assessed and published internally to Rainmaker operators and to the FAA. A Site Survey Checklist is used to properly assess each site with a bias for safety to ground personnel, operations, and users of the National Airspace System.

2.2 National Airspace System (NAS) Reporting

The Rainmaker Operations department will regularly communicate with the FAA, providing pre-mission schedules and 72/24-hour updates on launch locations and times.

3.0 Proposed Flight Plan

3.1 General Timeline and Flight Profile

Flight operations will begin with the flight planning process three hours before the scheduled launch. During this briefing, flight crews will receive a weather briefing, discuss operational logistics, and review operational risk management (ORM) and crew resource management (CRM) checklists.

Flight crews are expected to arrive at their assigned launch site two hours prior to launch. This allows sufficient time to set up the sUAS and necessary ground equipment. An additional hour is allocated for preflight procedures, accounting for the possibility of the targeted storm arriving faster than forecasted.

Upon receiving clearance from the Command Center (CC) at launch time, the flight crew will launch the sUAS and commence flight operations. Prior to launch, proper communication will be established with Salt Lake City Center to ensure FAA Air Traffic Control (ATC) is appropriately monitoring Rainmaker flight operations. Following launch, the sUAS will perform a vertical climb to the target altitude, dispense seeding agents for approximately 30 minutes, and then land over the original launch spot. There is no intention for horizontal displacement exceeding 0.25 miles.

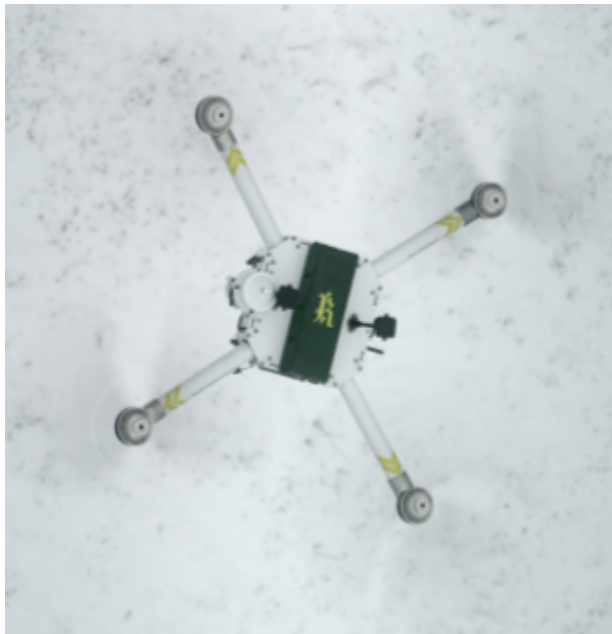
After a safe landing, the crew will pack up all equipment and return to base.

4.0 Equipment Overview

4.1 sUAS - Elijah

Figure 2. Elijah Details and Photos

sUAS type	Multi-rotor quadcopter
Battery	Lithium-ion battery
Maximum flight time	60 minutes
Maximum speed	35 mph
Maximum altitude	15,000 feet MSL
Dimensions (LxWxH, inches)	32" x 32" x 6.5"
Total aircraft weight (payload included)	50 lbs
Anti-collision lighting	2 strobe, flashing



The Rainmaker Elijah quadcopter is a high-altitude, weather-resistant unmanned platform with a maximum gross takeoff weight of 50 lbs. It features a proprietary anti-icing system, enabling it to carry various payloads, including seeding delivery systems and weather sensing probes.

The ground control station (GCS), named Seraph, offers autonomous features that enhance the Remote Pilot in Command's situational awareness. This allows for efficient direction of flight operations while ensuring maximum deconfliction with other aircraft. Seraph gathers data from multiple sources—the drone, ground, and satellite communication links—providing redundancy for high levels of safety and mission efficiency.

4.2 Ground Generators

Operation Method	Remote
Power	Solar
Agl Dispersion Rate	~24 g/hr
Operating Platform	Prophet
Hours before refill	~140 hours
Dimensions (LxWxH, inches)	8'x10'x15' (WxLxH)''



Each remote ground seeding site is equipped with a propane tank which fuels a small flame, into which the silver iodide seeding solution is sprayed and ignited. The combustion product contains very large numbers of microscopic silver iodide particles, which serve as the ice nuclei. The silver iodide seeding solution is composed of acetone, silver iodide, sodium iodide and paradichlorobenzene. This solution has been shown to produce more effective seeding particles at warmer temperatures (i.e. about -5 to -10° C) and to produce these crystals more quickly than



silver iodide and sodium iodide (Finnegan, 1999). Each generator will consume approximately 0.375 gallons per hour with an output of 24 g AgI per hour.

Remote ground generators are placed on mountains or upwind of mountains in order to allow orographic lift to carry ice nuclei into cloud layers. An operational meteorologist will monitor storm conditions and operate generators during favorable conditions using the Prophet software. Prophet allows meteorologists to operate remote ground generators from anywhere in the world.

5.0 Operations

5.2 Drone Seeding Operations Criteria

- Temperature at the 700 mb level (approximately 10,000 feet) is expected to be warmer than -15°C (5°F).
- Cloud top temperatures of the precipitating layer are $> -25^{\circ}\text{C}$.

5.2 Ground Generator Seeding Operations Criteria

- Cloud bases are near or below the mountain barrier crest.
- Low-level wind directions and speeds that would favor the movement of the silver iodide particles from their release points into the intended target area.
- No low-level atmospheric inversions or stable layers that would restrict the vertical movement of the silver iodide particles from the surface to at least the -5°C (23°F) level or colder.
- Temperature at mountain barrier crest height expected to be -5°C (23°F) or colder.
- Temperature at the 700 mb level (approximately 10,000 feet) expected to be warmer than -15°C (5°F).
- Cloud top temperatures of the precipitating layer are $> -25^{\circ}\text{C}$.

5.2 Target Areas

- Bear River
- Northern Utah
- East Shore
- Western Uintas
- High Uintas
- Central Utah
- Southern Utah



5.3 Suspension Criteria

Certain situations require temporary or longer-term suspension of precipitation enhancement activities, with reference to well-considered criteria for consideration of possible suspensions, to minimize either an actual or apparent contribution of seeding to a potentially hazardous situation. The ability to forecast (anticipate) and judiciously avoid hazardous conditions is very important in limiting any potential liability associated with weather modification and to maintain a positive public image.

There are three primary hazardous situations around which suspension criteria have been developed. These are:

- Excess snowpack accumulation
- Rain-induced winter flooding
- Severe weather

Excess Snowpack Accumulation

Snowpack begins to accumulate in the mountainous areas of Utah in November and continues through April. The heaviest average accumulations normally occur from January through March. Excessive snowpack water content becomes a potential hazard during the resultant snowmelt. The Natural Resources Conservation Service (NRCS) maintains a network of high elevation snowpack measurement sites in the State of Utah, known as the SNOTEL network. SNOTEL automated observations are now readily available, updated as often as hourly. The following set of criteria, based upon observations from these SNOTEL site observations, has been developed as a guide for potential suspension of operations for most Utah programs. Other seeded areas may not have such specific SWE criteria, or may have other criteria defined by state agencies or program sponsors.



Project & Basin	Critical Streamflow Volume (Acft) & USGS Streamgage	SNOTEL Station	SWE Value Corresponding to the Critical Flow								Ranking of SNOTEL Stations
			Jan 1 (in.)	Jan 1 (%)	Feb 1 (in.)	Feb 1 (in %)	March 1 (in.)	March 1 (in %)	April 1 (in.)	April 1 (in %)	
1. Northern Utah	185,208	Franklin Basin, Idaho	19.50	190.84	27.14	165.31	34.35	154.71	41.56	151.60	1
Logan at Logan	USGS 10109000	Tommy Grove	28.73	205.94	39.44	175.56	48.06	160.38	56.34	156.56	2
		Bug Lake	17.08	218.82	21.91	180.34	26.72	165.25	31.65	162.70	3
		Average	21.80	205.20	29.50	173.70	36.40	160.10	43.20	157.60	
Weber near Oakley	176,179	USGS 10128500	10.09	173.33	14.73	153.66	28.77	149.85	34.15	143.41	1
		Trail Lake	20.15	207.44	26.33	180.55	33.55	173.27	38.54	162.28	2
		Smith Morehouse	10.06	186.54	13.69	157.60	17.36	146.52	21.17	160.26	3
		Hayden Fork	12.19	194.16	16.69	172.11	20.71	158.56	21.79	164.64	4
	Average	13.10	190.30	17.90	166.00	28.10	167.10	28.90	167.70		
Dunn Creek near the Park Valley	5,733	USGS 10172952	17.84	187.75	18.32	143.81	28.93	163.43	34.63	153.77	1
		Howell Canyon, Idaho	28.71	279.96	38	223.24	44.59	205.98	50.46	191.65	2
		Average	23.30	233.90	28.20	183.60	36.80	184.70	42.60	172.70	
2. Western & High Uintah	166,861	Lily Lake	11.38	202.70	16.40	194.06	17.69	147.37	28.93	139.19	1
Bear River near Utah - Wyoming state line	USGS 10011500	Trail Lake	20.07	206.54	26.56	182.26	33.68	173.94	38.49	162.05	2
		Hayden Fork	12.41	197.65	17.06	175.83	21.03	160.98	20.90	146.02	3
		Average	14.60	202.30	20.00	184.10	24.10	160.80	29.40	149.10	
Duchesne near Tabiona	140,976	USGS 09277500	4.92	239.23	10.87	199.23	26.77	178.78	29.75	179.95	1
		Daniels-stoneberry	16.07	248.12	21.59	202.44	37.83	190.54	50.89	182.75	2
		Smith Morehouse	10.61	196.64	14.95	172.41	18.82	158.83	22.22	168.26	3
		Rock Creek	8.76	230.02	12.31	219.65	15.88	205.68	16.41	209.06	4
		Average	10.60	218.50	14.90	198.50	22.30	183.50	24.60	187.30	
Provo near woodland	183,845	USGS 09277500	22.98	236.53	27.78	190.63	35.23	181.59	31.44	132.39	1
		Beaver Divide	10.29	210.39	14.11	179.49	17.45	170.83	20.18	200.3	2
		Average	16.70	223.50	20.90	185.10	26.30	176.20	25.80	166.40	
3. Central & Southern	120,473	Castle Valley	12.23	244.05	16.96	203.04	22.22	187.68	26.30	180.00	1
Sevier near Hatch	USGS 10171500	Harris Flat	8.71	298.76	15.25	273.59	24.16	222.99	21.15	209.77	2
		Farnsworth Lake	17.25	218.10	20.66	185.95	27.05	182.24	32.93	167.03	3
		Average	12.80	253.70	17.70	220.90	24.50	197.70	26.80	185.60	
Coal Creek near Cedar City	38,533	USGS 10242000	20.89	215.65	29.12	194.04	35.89	176.99	42.29	167.97	1
		Webster Flat	13.57	232.46	18.70	197.95	24.30	184.64	24.93	181.12	2
	Average	17.20	224.10	23.90	196.00	30.10	180.90	33.60	174.60		
South Willow near Oranaville	5,426	USGS 10172800	19.09	205.33	23.75	174.14	32.11	171.39	40.01	167.51	1
		Mining Fork	16.31	243.66	20.74	177.04	27.81	171.79	32.19	168.74	2
		Average	17.70	224.60	22.30	175.60	30.00	171.60	36.10	168.10	
Virgin River at Virgin	151,286	USGS 09406000	23.11	229.25	29.08	220.78	36.51	197.43	43.71	194.21	1
		Harris Flat	9.71	377.00	15.69	304.18	21.46	300.00	20.11	370.00	2
		Midway Valley	24.76	256.17	34.56	238.40	41.44	209.68	51.05	211.06	3
		Long Flat	9.38	265.88	13.54	286.16	19.20	286.18	18.91	187.00	4
		Average	16.70	282.10	23.20	262.40	29.70	248.40	33.40	241.10	
Santa Clara above Baker Reservoir	11,620	USGS 09409100	13.00	293.90	16.82	172.15	21.70	167.36	24.45	163.95	1
		Average	13.00	293.90	16.80	172.10	21.70	167.40	24.50	164.00	
Utah State Average (%)				230		197		183		178	
Standard Deviation				47		38		35		42	
Upper 95%				248		213		199		196	
Lower 95%				212		180		168		160	

Snowpack-related suspension considerations will be assessed on a geographical division or sub-division basis. The NRCS has divided the State of Utah into 13 such divisions as follows: Bear River, Weber-Ogden Rivers, Provo River-Utah Lake-Jordan River, Tooele Valley-Vernon Creek, Green River, Duchesne River, Price-San Rafael, Dirty Devil, Southeastern Utah, Sevier River, Beaver River, Escalante River, and Virgin River. Since SNOTEL observations are available on a daily basis, suspensions (and cancellation of suspensions) can be made on a daily basis using linear interpolation of the first of month criteria. There are a number of SNOTEL stations in the various basins of central and southern Utah on which these criteria are based. These include Castle Valley, Harris Flat, and Farnsworth Lake in the Sevier Basin; Midway Valley, Kolob, Harris Flat, Webster Flat, and Long Flat in southwestern Utah; and Rocky Basin Settlement and Mining Fork in eastern Tooele County.



Streamflow forecasts, reservoir storage levels, soil moisture content and amounts of precipitation in prior seasons are other factors which need to be considered when the potential for suspending seeding operations due to excess snowpack water content exists.

Rain-induced Winter Floods

The potential for wintertime flooding from rainfall on low elevation snowpack is fairly high in some (especially the more southern) target areas during the late winter/early spring period. Every precaution must be taken to ensure accurate forecasting and timely suspension of operations during these potential flood-producing situations. The objective of suspension under these conditions is to eliminate both the real and/or perceived impact of weather modification when any increase in precipitation has the potential of creating a flood hazard.

Severe Weather

During periods of hazardous weather associated with both winter orographic and convective precipitation systems it is sometimes necessary or advisable for the National Weather Service (NWS) to issue special weather bulletins advising the public of the weather phenomena and the attendant hazards. Each phenomenon is described in terms of criteria used by the NWS in issuing special weather bulletins. Those which may be relevant in the conduct of winter precipitation enhancement programs include the following:

Winter Storm Warning - This is issued by the NWS when it expects heavy snow warning criteria to be met, along with strong winds/wind chill or freezing precipitation.

Flash Flood Warning - This is issued by the NWS when flash flooding is imminent or in progress. In the Intermountain West, these warnings are generally issued relative to, but are not limited to, fall or spring convective systems.

Severe Thunderstorm Warning – This is issued by the NWS when thunderstorms producing winds of 58 mph or higher and/or 1" or larger hail.

Seeding operations may be suspended whenever the NWS issues a weather warning for or adjacent to any target area. Since the objective of the precipitation enhancement program is to increase winter snowfall in the mountainous areas of the state, operations will typically not be suspended when Winter Storm Warnings are issued, unless there are special considerations (e.g., a heavy storm that impacts Christmas Eve travel).

Flash Flood and Severe Thunderstorm Warnings are usually issued when intense convective activity causing heavy rainfall/strong winds/hail is expected or is occurring. Although the probability of this situation occurring during our core operational seeding periods is low, the potential does exist, especially over southern sections of the state during late March and April. The type of storm that may cause problems is one that has the potential of producing 1-2 inches



(or greater) of rainfall in approximately a 24-hour period, combined with high freezing levels (e.g., > 8,000 feet MSL). Seeding operations will be suspended for the duration of the warning period in the affected areas.

Rainmaker's project meteorologists have the authority to temporarily suspend localized seeding operations due to development of hazardous severe weather conditions even if the NWS has not issued a warning. This would be a rare event, but it is important for the operator to have this latitude.

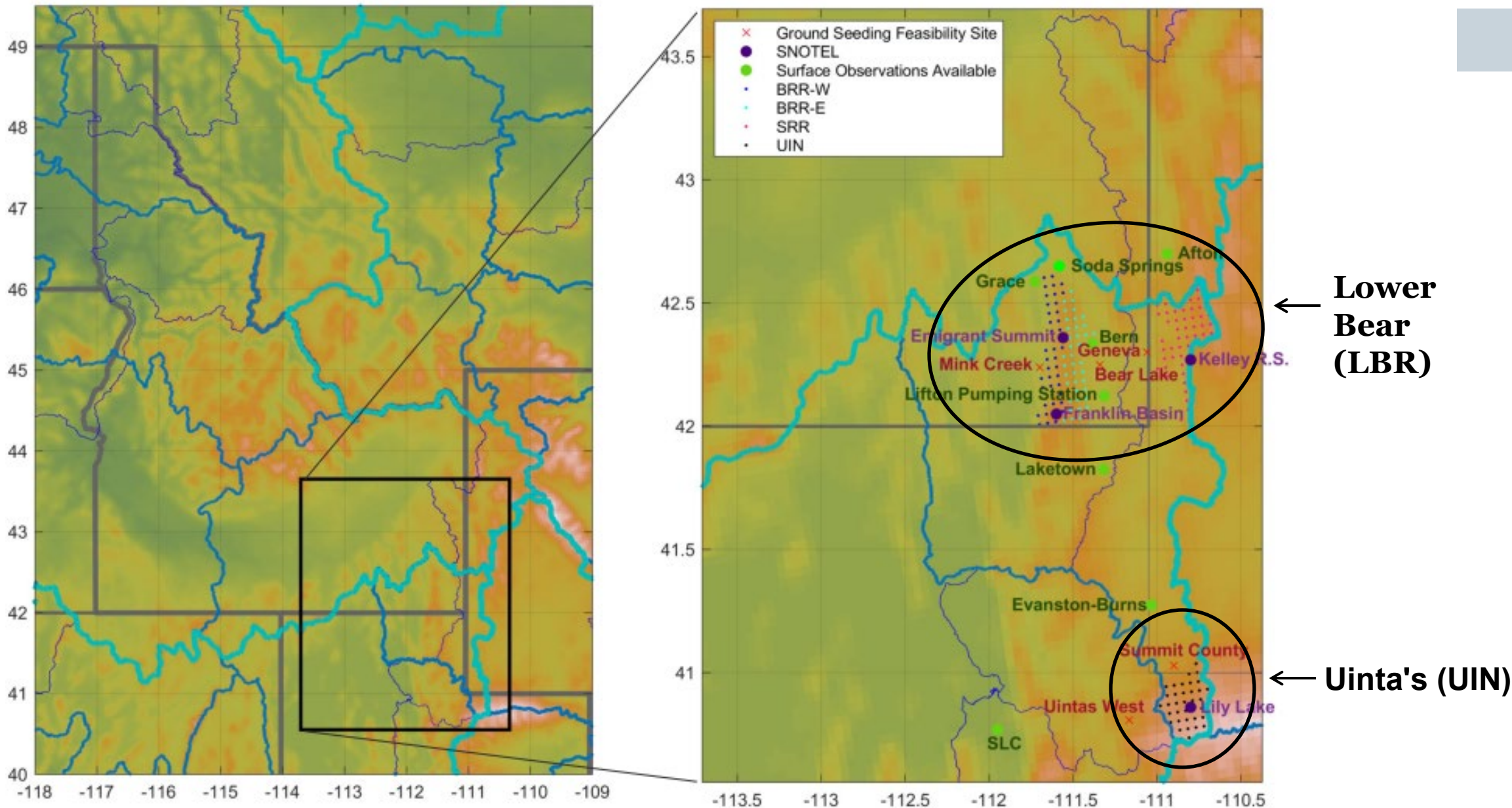
Bear River Basin 1-Year Collaborative Pilot Project



Idaho Water Resource Board Work Session Meeting
October 20, 2025

Photo Courtesy of Idaho Power Company

Bear River Basin Project Area



Figures Courtesy of National Center for Atmospheric Research



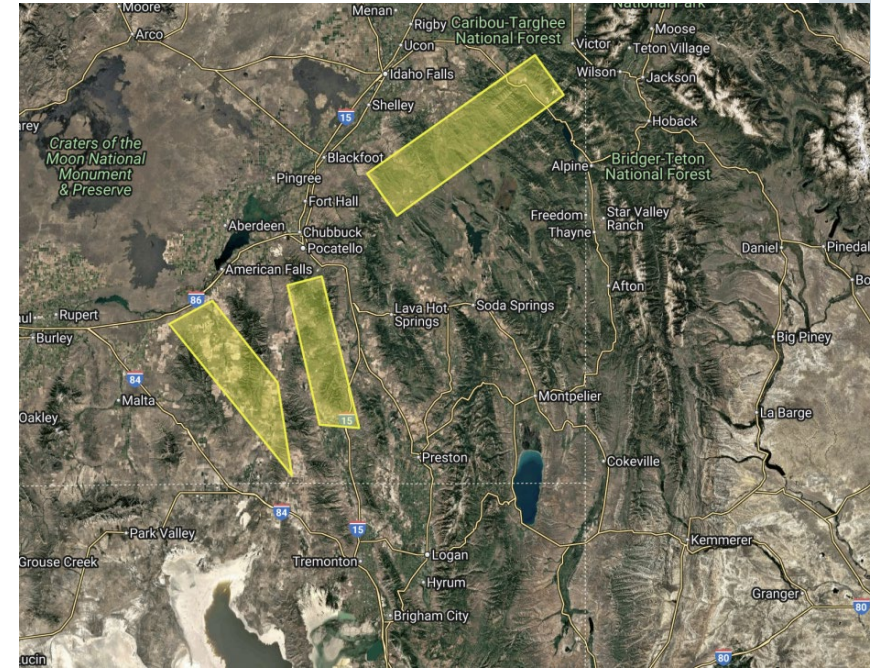
Bear River Basin (BRB) Project

- Utah Division of Water Resources (UDWR) proposed a Bear River Basin 1-Yr Collaborative Interstate Pilot Project
- Utah legislature mandated Utah contribute \$3M to the BRB Project
- IWRB approved \$950K in resolution for the BRB Project on July 25th, 2025
 - \$450k: Support operational costs
 - \$500K: Third party evaluation (NCAR)
- UDWR is requesting authorization to conduct operations in the BRB in Idaho



Bear River Basin Project

- **Applicant:** Utah Division of Water Resources
- **Operational Area:** Bear River Basin
- **Operational Period:** November 1 to April 30
- **Seeding Agent:** Silver Iodide (AgI)
- **Method of Seeding:** Unmanned Aerial Systems (UAS) and Remote Ground-Based Generators
 - 32 UAS's (Drones)
 - Remote Based Ground Generators (3 Already Authorized in Idaho)
- **Weather Instrumentation (Forecasting and Validation)**
 - 10 K-band Radars and Wx Instrumentation
 - 1 X-Band Radar
- **3rd Party Evaluation from NCAR**



Photo's Courtesy of Rainmaker Technology Corporation



Questions?

Cloud Seeding Program



cloudseedingprogram@idwr.idaho.gov



[+1.208.287.4852](tel:+12082874852)



<https://idwr.idaho.gov/iwrb/programs/cloud-seeding-program/>

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF CLOUD SEEDING IN THE
STATE OF IDAHO

RESOLUTION FOR AUTHORIZATION OF STATE
OF UTAH'S NORTHERN UTAH/BEAR RIVER
BASIN PROGRAM

1 WHEREAS, House Bill 266 (HB 266), passed and approved by the 2021 legislature, recognized that
2 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
4 agency responsible for authorization of cloud seeding programs within the State; and
5

6 WHEREAS, Idaho Code § 42-4301 states that augmenting water supplies through cloud seeding is
7 in the public interest and provides the IWRB with the authority to authorize cloud seeding
8 programs and
9

10 WHEREAS, the Idaho Water Resource Board (IWRB) completed a feasibility and design study in
11 2022 of the Bear River Basin conducted by the National Center for Atmospheric Research (NCAR),
12 which informed the design of a 1-year collaborative interstate cloud seeding pilot project in the
13 Bear River Basin; and
14

15 WHEREAS, in 2025 Utah Legislature approved a total of \$3,000,000 to advance a cloud seeding
16 program in the Bear River Basin with goals to replenish the Great Salt Lake and enhance water
17 resources of the Bear River and Northern Utah; and
18

19 WHEREAS, the State of Utah Division of Water Resources has proposed to the State of Idaho a 1-
20 year collaborative interstate cloud seeding pilot project in the Bear River Basin which will
21 integrate Unmanned Aerial Systems (UAS) technology, advanced weather instrumentation, a
22 third-party evaluation and validation, alongside internal validation services; and
23

24 WHEREAS, based on insufficiency of existing water supplies, the IWRB is collaborating with the
25 State of Utah to develop a 1- year interstate cloud seeding pilot project in the Bear River Basin
26 from November of 2025 to April of 2026;
27

28 NOW, THEREFORE BE IT RESOLVED that, the IWRB hereby approves the State of Utah's
29 Department of Water Resources Request for Authorization to Conduct Cloud Seeding Operations
30 during the 2025-2026 cloud seeding season.

DATED this 31st day of October 2025.

Jeff Raybould, Chairman
Idaho Water Resource Board

ATTEST _____
Dean Stevenson, Secretary

DRAFT

Memorandum

To: IWRB Cloud Seeding Committee
From: Nick Banish, Cloud Seeding Program Manager
Date: October 15, 2025
Re: Cloud Seeding Program | *HCRC D Funding Request*



ACTION: Recommendation for funding – HCRC D 2025-2026 operations

The High-Country Resource Conservation & Development (HCRC D) cloud seeding program in the Upper Snake River Basin is making a request to the Idaho Water Resource Board (IWRB) for funding support for its manual ground program cloud seeding operations for the winter 2025-2026 season.

Background

The HCRC D program is operated by Let it Snow, Inc, and operates 25 manual ground generators in the Upper Snake basin. Idaho Power Company (IPC) provides forecasting support for the HCRC D program. The HCRC D program began its initial operation in the late 1990s and has been continually operational since 2001. Prior to the 2024-2025 season, the program was funded 100% by local stakeholders. The IWRB received a funding support request and awarded \$60,000 to HCRC D to fund operations for the 2024-2025 season. This award comprised 29% of HCRC D's 2024-2025 Cloud Seeding budget and was mainly used to cover the costs of silver iodide, ammonium iodide and acetone.

Additional funding for the HCRC D cloud seeding program comes from a variety of stakeholder groups, including several cities, counties, conservation and recreation groups, Water District 1 (WD1) and the Idaho Ground Water Appropriators (IGWA).

Per conversation with representatives from HCRC D funding is proposed to cover the increasing costs of the materials named above and highlighted in the included table.

A copy of the HCRC D's request for \$60,000 (roughly 24% of the proposed 2025-2026) in funding support is attached for the IWRB's consideration.

2025-2026 HCRC D Cloud Seeding Budget

Expenses	Proposed
Postage	200.00
Steering Committee Meeting Expenses	250.00
Silver Iodide	103,836.25
Ammonium Iodide	4,350.67
Acetone	17,996.67
Propane	6,644.27
Freight (Chemical/Propane)	650.00
Rental Equipment	56,100.00
Tank Rent	472.00
Repairs and Maintenance	2,925.00
Payroll Wages, Taxes, Workman's Comp	35,073.14
Labor to run Generators	26,756.25
Mileage	14,175.00
Hours Outside Labor	1,650.00
Miscellaneous	1,450.00
Annual Report to Donators	250.00
High Country RC&D Fundraising/Tech Assist.	2,500.00
Clark County Administration	1,250.00
High Country RC&D Adm. Fee	13,603.96
TOTALS	\$ 290,133.21

Attachments:

- *HCRC D Request for Support Letter for 2025-2026 Season*



"From Dreams to Reality: helping communities improve quality of life one project at a time."

**HIGH COUNTRY RESOURCE
CONSERVATION and DEVELOPMENT AREA, INC**

Serving Bonneville, Jefferson, Madison, Fremont, Clark, Butte, Lemhi, Custer, Teton ID, and Teton WY Counties

October 9, 2025

Idaho Department of Water Resources
Nick Banish, Cloud Seeding Program Manager
322 East Front Street
P.O. Box 83720
Boise, Idaho 83720-0098

Dear Nick,

On behalf of the High Country RC&D and Upper Snake River Cloud Seeding Steering Committee, thank you for supporting our Cloud Seeding program in 2024-2025. IDWR support helped us purchase additional materials to allow us to operate through the full cloud seeding season.

The Steering Committee just set their budget for the 2025-2026 season. Costs for operating materials and expenses continue to increase each year. While we expect strong support from our 50 sponsors, we are requesting \$60,000 in support from IDWR to be able to operate for the full season.

I will be including our proposed 2025-2026 season budget to the email forwarding this letter. If you have any questions, please contact me at (208) 624-3381 or Tammy Egbert, High Country, at (208) 624-3200.

Thank you,

A handwritten signature in black ink, which appears to read 'Aaron Dalling', is written over a light blue horizontal line.

Aaron Dalling
Chairman
Upper Snake River Cloud Seeding Steering Committee

P.O. Box 501, 101 North Bridge Street, St. Anthony, ID 83445

Phone & Fax: (208) 624-3200

Email: hcountrysrcd@gmail.com

Website: <http://highcountryrcd.weebly.com>

"An equal opportunity provider and employer"

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF CLOUD SEEDING IN THE
STATE OF IDAHO

RESOLUTION TO APPROVE FUNDS FOR THE
HCRCD 2025-2026 CLOUD SEEDING
PROGRAM

1 WHEREAS, Idaho Code §42-4301 recognizes that cloud seeding provides a unique and innovative
2 opportunity to support sustainable water supplies for the State of Idaho, and identifies the Idaho Water
3 Resource Board (IWRB) as the agency responsible for authorization of cloud seeding programs within the
4 State; and
5

6 WHEREAS, Idaho Code §42-4301 further provides the IWRB the authority to expend state funds
7 for cloud seeding programs in basins where the IWRB finds that existing water supplies are not sufficient
8 to support existing water rights, water quality, recreation, or fish and wildlife uses dependent on those
9 water supplies; and
10

11 WHEREAS, the High Country Resource and Conservation Development (HCRCD) has continuously
12 operated a manual ground cloud seeding program in the Upper Snake River Basin since the 1990's and
13 operational costs have continued to rise over the years to the point where funding donations to the
14 program no longer cover full cost of the program; and
15

16 WHEREAS, the HCRCD has requested funding support of \$60,000 from the IWRB to support its
17 2025-2026 cloud seeding operations; and
18

19 WHEREAS, on May 23, 2025, the IWRB adopted the Secondary Aquifer Fund for Fiscal Year 2026
20 (Resolution 18-2025), which included \$60,000 for the Cloud Seeding Program Operations & Maintenance
21 category for the HCRCD Program.
22

23 NOW, THEREFORE BE IT RESOLVED that, the IWRB authorizes expenditures not to exceed \$60,000
24 from the Secondary Aquifer Planning, Management, and Implementation Fund for O&M costs to support
25 the HCRCD cloud seeding program for the 2025-2026 season.
26

27 BE IT FURTHER RESOLVED that the IWRB authorizes its chairman or designee, Brian Patton,
28 Executive Manager to the IWRB, to execute the necessary agreements or contracts to complete the
29 proposed modeling effort.
30

DATED this 31st day of October, 2025.

Jeff Raybould, Chairman
Idaho Water Resource Board

ATTEST _____
Dean Stevenson, Secretary

DRAFT