



**North American Weather Consultants, Inc.**  
Applied Meteorology, Meteorological Research, Weather Modification

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December 4, 2024

Carl Mackley

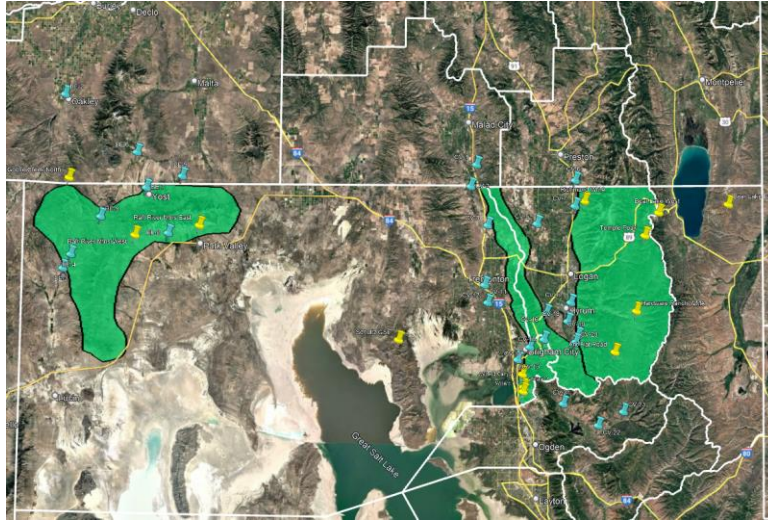
Bear River Water Conservancy District

102 West Forest Street

Brigham City, UT 84302

Dear Mr. Mackley:

This is a report of activities conducted in the Northern Utah Cloud Seeding Program during November 2024. This season the Utah Division of Water Resources (DWR) provided extra funds to extend the program so that the months of November and April would be included in the operational period. As such, the program became operational on November 1, 2024 and will remain operational through April 31, 2025. Additionally, 12 new remotely operated cloud seeding generators were added to the program this season. Figure 1 is a project map with the seeding site locations that have been established for the program. This includes 11 sites for the western portions (in northwestern Box Elder County) and 29 sites for eastern portions of the target area, in eastern Box Elder and Cache Counties. The blue pins denote manually operated cloud seeding generators and the yellow pins are remotely operated generators.



**Figure 1** Northern Utah seeding project map; colored pins represent seeding sites with approximate seeding target areas in green shading

Precipitation and snowpack so far this season have been near normal to slightly below normal across far northern Utah, while much of the state and western U.S. in general has observed above normal values. There were seven seeded storm periods in November 2024, summarized in Table 1. There have been 530.75 hours of seeding conducted from manually operated sites with an additional 229.25 hours of seeding being conducted from remotely operated sites.

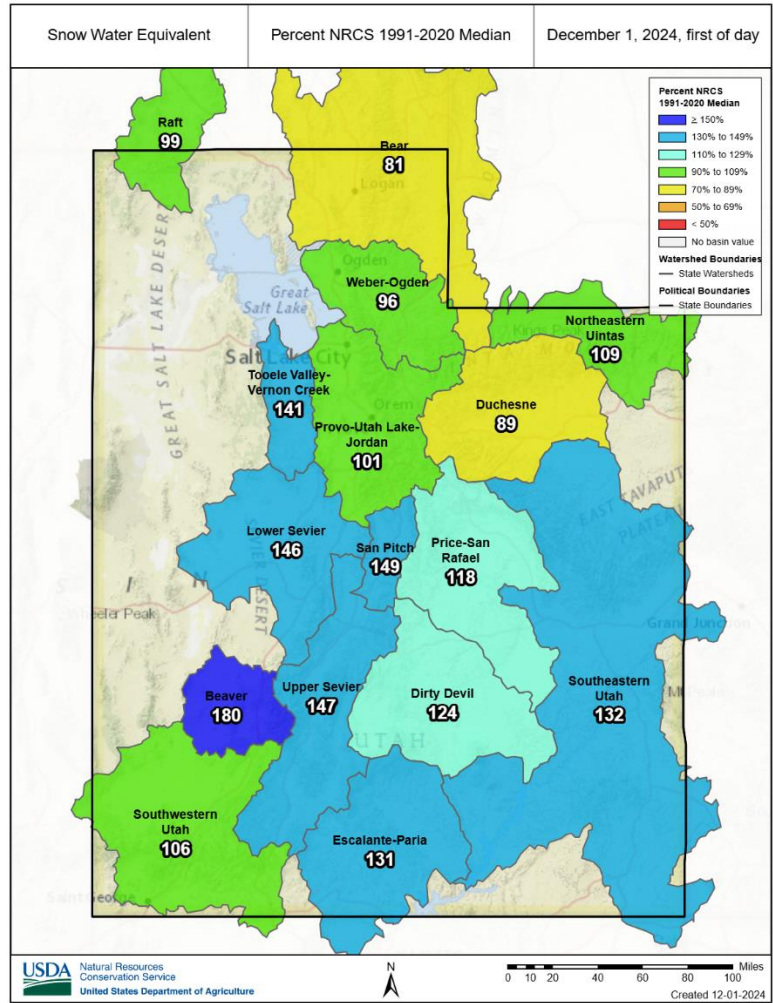
**Table 1**  
**Summary of Operations in Northern Utah Cloud Seeding Program, November 2024**

<b>Storm Number</b>	<b>Date</b>	<b>No. of Seeding Sites</b>	<b>No. of Manual Hours</b>	<b>No. of Remote Hours</b>
1	November 2-3	5	20.5	23.75
2	November 5-6	16	104.5	46.75
3	November 11-12	15	117.75	9
4	November 15-16	10	68.5	51
5	November 18	12	63.75	4
6	November 23-24	8	44.25	35
7	November 26-27	15	111.5	59.75
<b>November Total</b>	---	---	<b>530.75</b>	<b>229.25</b>
<b>Season to Date</b>	---	---	<b>530.75</b>	<b>229.25</b>

Table 2 contains current snow water content and water year precipitation information for stations in the Bear River Basin as of December 1, 2024. The Bear River Basin, as a whole, is currently sitting around 82% of the median snow water content, and 77% of the mean precipitation total accumulated since October 1. October was a dry and very mild month with the weather pattern turning active through November. Most of the precipitation that has fallen so far as been in the form of snow, resulting in somewhat higher snow water equivalent (SWE) percentages to date compared to precipitation. Figure 2 is a map of basin SWE for the state of Utah as of December 1, 2024.

**Table 2**  
**Snow Water Content and Water Year Precipitation as of December 1, 2024**

Measurement Site	Elevation (ft)	Snow Water Equivalent		Water Year Precipitation	
		Amount (in)	% of Median	Amount (in)	% of Median
Trial Lake	9992	3.5	76%	5.1	94%
Hayden Fork	9212	2.0	69%	6.1	105%
Lily Lake	9156	2.8	108%	5.3	110%
Monte Cristo	8960	3.6	72%	6.1	105%
Tony Grove Lake	8474	1.3	100%	2.8	61%
Franklin Basin	8170	3.8	79%	6.7	84%
Bug Lake	7950	2.5	78%	3.2	64%
Temple Fork	7406	2.6	87%	2.7	52%
Little Bear	6544	2.5	179%	4.4	73%
<b>Bear River Basin</b>	---	---	<b>82%</b>	---	<b>77%</b>



**Figure 2. Snow water equivalent (as a percentage of median values) across Utah basins as of December 1, 2024**

The Northern Utah Seeding Program is scheduled to continue through April 30, 2025, as specified in the contract. Please contact our office if you have any questions or comments.

Sincerely,

Cole Osborne

Meteorologist, North American Weather Consultants

cc: Jonthan Jennings, Division of Water Resources