



## Our Water. Our Future. Our Choice.

The purposes of the District include planning for and facilitating the long-term conservation, development, protection, distribution, management and stabilization of water rights and water supplies for domestic, irrigation, power, manufacturing, municipal, recreational and other beneficial uses, including the natural stream environment, in a cost-effective way to meet the needs of the residents and growing population of Cache County.

[www.cachewaterdistrict.com](http://www.cachewaterdistrict.com)

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# CACHE WATER DISTRICT BOARD OF TRUSTEES MEETING MINUTES

## October 5, 2020

The Cache Water District Board of Trustees convened for a regular meeting at the Cache Events Center located at 450 South 500 West, Logan, UT 84321

### **MEMBERS OF THE BOARD IN ATTENDANCE:**

Max Pierce – North Council District  
Kirt Lindley – At-Large Position  
Scott Clark - Logan #2 Council District  
David Erickson – At-Large Position  
Jared Clawson – At-Large Position  
Bret Randall – Northeast Council District  
Don Baldwin – Agricultural Representative  
Herm Olsen – Logan #3 Council District

### **MEMBERS OF THE BOARD ABSENT:**

Shaun Dustin – Southeast Council District  
Jonathan Hardman – South Council District  
Jeannie Simmonds – Logan #1 Council District

### **OTHERS IN ATTENDANCE:**

Nathan Daug (Manager), Stephanie Beall, Chris Slater, Mike Wilson, Jake Serago, Trevor Datwyler, Debbie Zilles

### **CALL TO ORDER**

The meeting was called to order by Vice-Chairman Clark at 5:30 p.m. Consideration for the minutes from September 14, 2020 and the agenda for October 5, 2020 with one minor correction.

**ACTION: Motion by Mr. Erickson to approve the agenda and the minutes as submitted. Seconded by Mr. Pierce. The motion was approved unanimously.**

## PUBLIC COMMENT

None

## FINANCIAL REPORT

Ms. Simmonds was excused from the meeting so she will send out the financial statements to the Board members for this month.

## CALENDAR EVENTS

- Oct. 10 – Board Fall Social @ Mr. Daug’s home at 6:00 p.m.
- Oct. 14 – Utah Water Task Force – Mr. Daugs will send out the link to the virtual meeting.
- Nov. 11 – Great Salt Lake Advisory – the full report has not been published yet. Mr. Daugs will send out the virtual link to the meeting.

## MANAGER’S REPORT

### Update on PL 566 Applications

Crockett – J-U-B Engineering and Franson Engineers submitted the proposal. Mr. Daugs is meeting with NRCS this Thursday and then a meeting with the engineering firms will be set up to plan a kick-off meeting.

Wellsville-Mendon – It may be a couple more months before any selections are made on which projects will be funded.

### Tax Increase Intent

Mr. Daugs said next year will be the first year of taxing, therefore, in order to meet those requirements, at this meeting, the objective is to state:

- The intent to raise taxes.
- The purpose is for Water District operations.
- The percentage is a 100% increase (currently there is no taxation)
- The amount will be \$275,000 for the first year.
- The Truth in Taxation hearing will begin at 6:00 p.m. on Monday, November 9, 2020 at the Cache Events Center located at 450 South 500 West, Logan, UT 84321.

Mr. Daugs there are still some questions on what the amount can be. He read from the resolution approved by the County Council (Cache County Resolution No 2016-12) “*WHEREAS the proposed local district will have taxing authority, but will not implement that authority until a majority of the members of the board of trustees of the district are officials elected by the voters.*” (that requirement will be met January 1, 2021). “*Whereas the Cache County Council intends to reduce the portion of the County-wide property tax that is utilized for water development by an amount equal to any property tax imposed by the new local district, which will result in a combined county and local district property tax*”

rate that is revenue neutral and will not increase the property tax burden on any property for at least four (4) years.” (See [Attachment 1](#) for entire Resolution)

Mr. Daugs said this can be interpreted different ways. For example, if the District increases the tax by a certain amount, the County should reduce by that same amount. The amount could be determined by the District’s budget (keeping it revenue neutral). The County Auditor and Finance Department do not think it should go above what the current amount is – which is \$275,000 per year. He pointed out that the thirteen (13) cities involved all have similar paragraphs within their respective resolutions that were approved. He wants to make sure taxpayers understand and agree with the intent.

Mr. Erickson said the Cache County Council has fulfilled the obligation of keeping it revenue neutral for the past four (4) years. Mr. Daugs suggested possibly contacting the County to get more clear direction and/or revise the resolution if necessary. Mr. Lindley said it was explained to Wellsville City that the County would fund the Board for the first four (4) years until the appointed members became elected members, at which time taxing could begin. Mr. Daugs said the County Treasurer’s Office is showing \$275,000. The question is if the District needs more, would the County be willing to reduce the taxation accordingly and/or change the resolution to allow for more latitude. Staying at \$275,000 would be a reduction from this year’s budget so some of the programs would have to be scaled back. The deadline is October 16, 2020 so the amount needs to be stated at today’s meeting. Two public notices will be sent out regarding the truth in taxation hearing for November 9, 2020 (the next scheduled meeting – changed from November 2).

Mr. Erickson suggested being very clear about the tax increase and the explanation for it in the public noticing.

Mr. Clawson asked if the \$275,000 for the first year could be increased if needed next year, or whether it would be another four years before any changes could be made. Mr. Daugs said over the next year, he can work with the County Council and County Attorney to see how this issue could be addressed. Keeping it at \$275,000 for the first year seems to be the most straightforward approach at this point.

**MOTION:** Mr. Clawson moved to accept taxation based on \$275,000 for 2021. Mr. Randall seconded the motion. **The motion was approved (8-0).**

**Aye:** Baldwin, Clark, Clawson, Erickson, Lindley, Olsen, Pierce, Randall

**Nay:**

**Absent:** Dustin, Hardman, Simmonds

Mr. Daugs confirmed for Mr. Erickson that Cloud Seeding is included in the \$275,000.

Mr. Randall said cities and county's mill levy goes down annually with growth and asked whether this would be similar. Mr. Daugs said, per the auditor’s office, special districts increase with growth.

### **Water Banking Update**

Mr. Daugs has been meeting with interested parties throughout the County. It looks like the pilot project will include the canals on the south end of the valley. This may include just the three that come out of Porcupine Dam and/or it may also include the ones from Hyrum Dam. It may be the Little Bear River Water Bank moving forward.

Mr. Daugs explained that the three canals coming out of Porcupine all divert in essentially the same place and then split off. There are many producers with water in all three canals. If it were a bank, and a percentage of the shares were put into the bank, it would be easier to move water between the canals. The canals below Hyrum Dam may benefit from extra water from Porcupine. Mr. Daugs answered for Mr. Clark that there could potentially be banking between the two reservoirs. There are still many questions and discussions to address how this will work out.

Mr. Pierce asked if any others had expressed interest. Mr. Daugs said has been some other interest, but none are to a point to become a pilot project at this time. If this project can show success, there could be more possibilities throughout the valley.

### **Master Plan Water Supply Approval**

The updated chapters were sent out to members for review prior to the meeting. There were no concerns.

**MOTION:** Mr. Randall moved to accept the final two chapters of the Water Master Plan as submitted for finalization of the Plan. Mr. Olsen seconded the motion. **The motion was approved (8-0).**

**Aye:** Baldwin, Clark, Clawson, Erickson, Lindley, Olsen, Pierce, Randall

**Nay:**

**Absent:** Dustin, Hardman, Simmonds

### **November Meeting Date for Budget Hearings**

Due to public noticing requirements related to noticing for the Truth in Taxation Hearing, the November meeting will be held on November 9, 2020 at 5:30 p.m. with the hearing to begin at 6:00 p.m. The meeting will be held at the Cache Events Center located at 450 South 50 West, Logan, UT 84321.

## **APO REPORTS**

### **Bear River Development**

Mr. Clark encouraged members to carefully review the Great Salt Lake Advisory report that Mr. Daugs had sent out. There was discussion on getting some outside help to evaluate some of the information before the District takes a position. Mr. Clark is concerned that there could be significant impact with Utah Water Law. Mr. Baldwin agreed and said the Cub River Attorney (TJ Budge) reviewed it and Mr. Baldwin forwarded his email to the members. Many of the members did not receive the email so Mr. Baldwin will forward it to Mr. Daugs to send out. He said junior rights would become senior rights. Mr. Clark said the state engineer in the last Water Task Force meeting expressed some concern. Mr. Daugs said Emily Lewis would be willing to come to a meeting to help explain and discuss

it. Mr. Clark emphasized the need to become educated on the report because it could have a great impact on Cache Valley.

Mr. Randall asked if there was any legislation at this point. Mr. Daugs said the report is not final yet, but there could be. Mr. Clark said the report indicates water laws should change. Mr. Baldwin explained that from an agricultural perspective, the notion that as conservation, methods and equipment are improved, water that is saved would be available to go to the Great Salt Lake. He said the conserved water in agriculture is still being used to help produce more local food. The water itself is not available to move somewhere else.

Mr. Clark again encouraged all members to review and let local water users know.

**Local Outreach** -

The discussion was related to future USU Extension and educational opportunities.

The next APO subcommittee meetings for Conservation (Jared, Bret, Herm) & Irrigation Delivery (Jared, Kirt, Don) will be held Monday, October 19, 2020 at 5:30 p.m.

**CLOUD SEEDING PRESENTATION – Stephanie Beall from North American Weather Consultants**

([Attachment 2](#))

**ADJOURN**

The meeting adjourned at 7:05 p.m.

# **-Attachment 1-**

## **CACHE COUNTY RESOLUTION NO. 2016 - 12**

### **A RESOLUTION TO INITIATE THE CREATION OF THE CACHE WATER DISTRICT**

WHEREAS, Cache County is referred to herein as the “County”; and

WHEREAS, Amalga Town, Clarkston Town, Cornish Town, Hyde Park City, Hyrum City, Lewiston City, Logan City, Mendon City, Millville City, Newton Town, Nibley City, North Logan City, Paradise Town, Providence City, Richmond City, River Heights City, Smithfield City, Trenton Town, and Wellsville City are referred to herein collectively as the “Municipalities”; and

WHEREAS, pursuant to the Bear River Development Act, Utah Code Ann. § 73-26-101, *et seq.* (the “Act”), the Utah Division of Water Resources is directed to develop the surface waters of the Bear River and its tributaries through the planning and construction of reservoirs and associated facilities that are authorized and funded by the Legislature; and

WHEREAS, water resources developed by the Division of Water Resources pursuant to the Act may be made available by contract exclusively to the existing water conservancy districts that serve Box Elder, Salt Lake, and Weber Counties, as well as to Cache County and any water conservancy district that may be formed in Cache County—by law, this developed water cannot be made directly available to municipalities in Cache County, and there is currently no water conservancy district in Cache County whose mission is to serve all of the municipalities and unincorporated areas within the County; and

WHEREAS, the creation of a water conservancy district in Cache County will allow for the full implementation of the Cache County Water Master Plan prepared by J-U-B Engineers, Inc. dated August 2013 and will allow the district to plan and manage a system that protects and conserves the County’s long-term agricultural, environmental, and municipal water interests with an emphasis on securing its Bear River allocation entitlements pursuant to the Act; and

WHEREAS, the County and some or all of the Municipalities desire to create a local district under the Water Conservancy District Act, Utah Code Ann. § 17B-2a-1001 *et seq.*, as provided in this Resolution, to plan for and facilitate the long-term conservation, development protection, distribution, management and stabilization of water rights and water resources for domestic, irrigation, power, manufacturing, municipal, recreation and other beneficial uses at a reasonable cost to meet the needs of the residents and growing population of Cache County and to provide any services enumerated in the Water Conservancy District Act; and

WHEREAS, once created, the local district will be governed by an eleven member board of trustees, ten of whom will be elected by the voters of Cache County; and

WHEREAS, to have a functioning board of trustees pending elections, the Cache County Council will appoint trustees who will serve until their successors are elected by the voters; and

WHEREAS, Cache County currently imposes a property tax that is budgeted and utilized for the development of water resources; and

WHEREAS, the proposed local district will have taxing authority, but will not implement that authority until a majority of the members of the board of trustees of the district are officials elected by the voters; and

WHEREAS, the Cache County Council intends to reduce the portion of the County-wide property tax that is utilized for water development by an amount equal to any property tax imposed by the new local district, which will result in a combined county and local district property tax rate that is revenue neutral and will not increase the property tax burden on any property for at least four (4) years; and

WHEREAS, Utah Code Ann. § 17B-1-203 provides that the process to create a local district may be initiated by a resolution adopted by the legislative body of each county whose unincorporated area includes and each municipality whose boundaries include any of the proposed local district; and

WHEREAS, the proposed local district will be created only after its creation has been approved by the voters residing within the district; and

WHEREAS, Cache County desires to join with the Municipalities in formally proposing the creation of the local district.

NOW THEREFORE, be it resolved and enacted by the Cache County Council as follows:

1. In order to allow the citizens of the unincorporated portions of Cache County to vote on the creation of a water conservancy district, Cache County, concurrently with some or all of the Municipalities, proposes the creation of a local district under the Water Conservancy District Act, Utah Code Ann. § 17B-2a-1001 *et seq.*, which may include all of the incorporated and unincorporated areas within the boundary of Cache County, Utah, as depicted in the map which is attached as Exhibit “A” to and incorporated as part of this Resolution, conditioned upon each Municipality located within the proposed boundary of the district passing a similar Resolution. If the legislative body of any Municipality fails to adopt a similar Resolution, that Municipality may be excluded from the district.

2. The district that is proposed to be created will be known as the “Cache Water District,” a water conservancy district located in a county of the third class.

3. The service proposed to be provided by the Cache Water District is the operation of a system, or one or more components of a system, for the collection, storage, retention, control, conservation, treatment, supplying, distribution, or reclamation of water, including storm, flood, irrigation, and culinary water, whether the system is operated on a wholesale or retail level or both, as provided in Utah Code Ann. § 17B-1-202(1)(a)(xii).

4. The type of specialized local district that is proposed to be created is a water conservancy district, as provided in the Water Conservancy District Act, Utah Code Ann. § 17B-2a-1001 *et seq.*

5. The anticipated method of paying the costs of providing the proposed service is through the collection of ad valorem property taxes, service fees and charges, and/or levied assessments. It may be some time before the district will be able to provide water service and collect fees and charges for that service. Consequently, the district initially will be funded

through Cache County, until the district establishes its own property tax assessment, at which time Cache County is to reduce its property tax rate by an equivalent amount as stated in the foregoing recitals.

6. The maximum property tax levy a water conservancy district can impose is 0.0001 per dollar before certain activities are commenced, 0.0002 per dollar after certain activities are commenced, and 0.0003 per dollar if an additional levy is necessary to pay maturing bonds or debts. The average home value in Cache County is \$201,182, but the fair market value of residential property is allowed an exemption equal to a 45% reduction in the value of the property for property tax purposes. Taking these factors into consideration, the estimated average annual financial impact on a household within the proposed district will be as follows: the tax on a \$201,182 residence would be \$11.07 using a tax rate of 0.0001, \$22.13 using a tax rate of 0.0002, and \$33.20 using a tax rate of 0.0003. However, for at least the first four (4) years after the creation of the District, the net financial impact on a household may be zero if Cache County reduces its property tax rate by an amount equal to the new rate assessed by the district. Service fees and levied assessments cannot be estimated, and will be charged based upon actual water deliveries or contractually agreed upon amounts.

7. The number of members of the board of trustees of the proposed water conservancy district, consistent with Utah Code Ann. § 17B-1-302(2), will be eleven. The board of trustees will consist of ten elected trustees and one appointed trustee who will be elected or appointed, respectively, pursuant to the procedures set forth in Utah Code Ann. Title 17B, Chapter 1, Part 3 and § 17B-2a-1005. Seven of the elected Trustees will be elected from districts, with one trustee to be elected to represent each of the seven Cache County Council districts, as those districts may be established and modified from time-to-time pursuant to applicable law. The three remaining elected trustees will be elected County-wide. The one Trustee who is appointed by the Cache County Council will, pursuant to Utah Code Ann. § 17B-2a-1005(2)(d), be a person who owns irrigation rights and uses those rights as part of that person's livelihood. Regarding the ten elected trustee positions, the initial trustees will be appointed by the Cache County Council pursuant to Utah Code Ann. §§ 17B-1-303 and 20A-1-512, with staggered terms and subsequent trustees to otherwise be elected as provided herein.

Approved and passed as of the date set forth below.

CACHE COUNTY

Dated: 4-12-2016

By: Gregory Merrill  
Gregory Merrill, County Council Chair



Attest: Jill N. Zollinger  
Jill N. Zollinger, County Clerk / Auditor



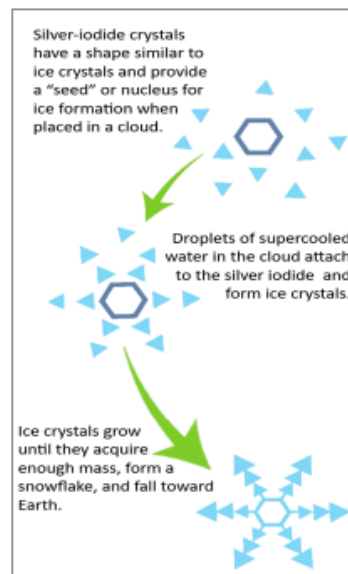
## -Attachment 2-

# Cloud Seeding in Cache County, Utah

Stephanie Beall – Program Meteorologist/Manager  
North American Weather Consultants, Inc.

## How does cloud seeding work?

- The cloud seeding process helps to enhance snowfall production in clouds. When the seeding agent and super cooled liquid water combine, they become snowflakes, become too heavy and start to fall to the ground.
- Silver iodide mimics naturally occurring ice crystals and adds additional material for the cloud to start forming snowflakes.
- Both ground based and airborne technologies can be used to add silver iodide particles to an already precipitation cloud.
- The state of Utah uses ground-based seeding exclusively.

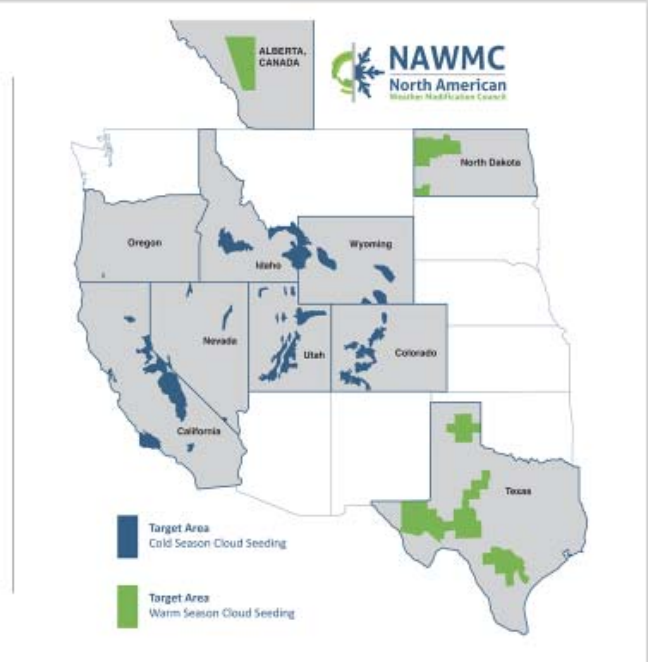
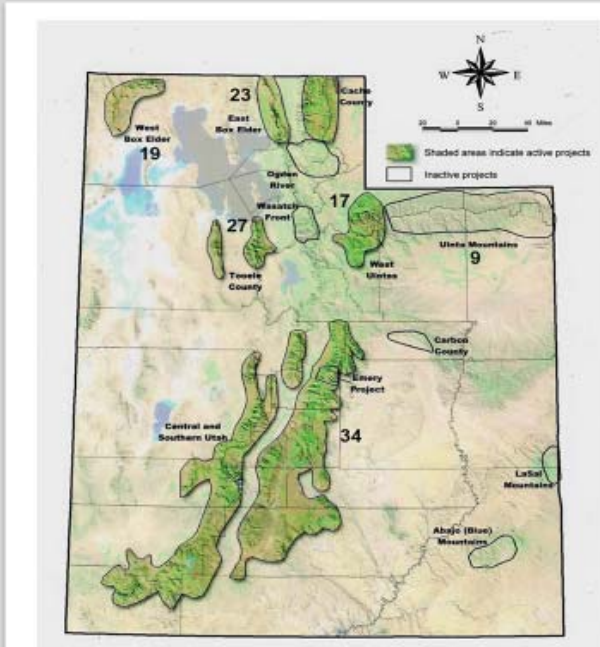


# How does cloud seeding work?

⬡ - Silver Iodide

▲ - Supercooled Liquid Water (SLW)

❄️ - Ice Crystals / Snowflakes





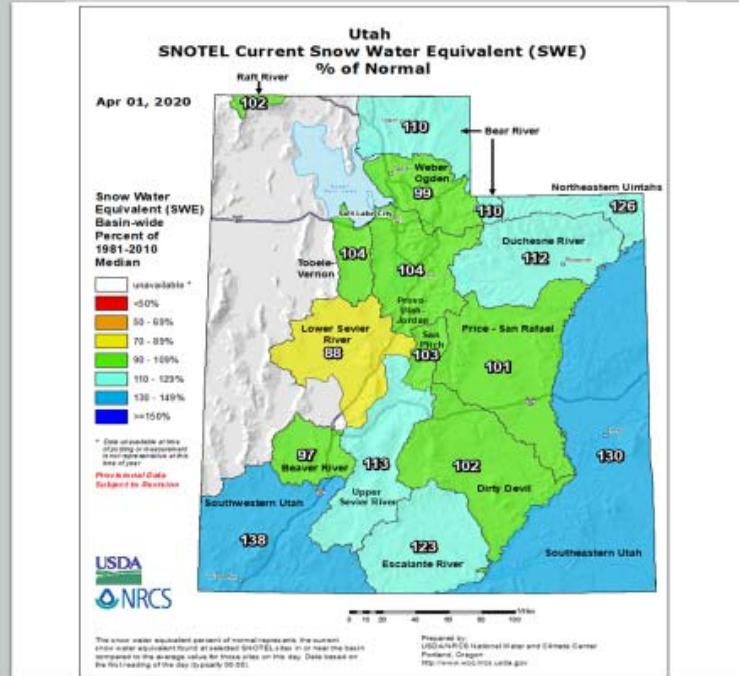
## Historical Cache County Cloud Seeding Program

- Program started in 1989. Cloud seeding generator array has changed throughout the years, but still aims to increase water in the higher terrain.
- Referred to as Northern Utah Program, includes both ranges to the east and west of Logan, as well as a portion of NW Box Elder County.
- Evaluations shows a 5-15% over a long-term period, with the cost of the water produced from enhanced snowpack around \$10-15 per acre-foot.
- NAWC, in cooperation with USU and Utah DWR, has developed additional tools to assist in the guidance of cloud seeding operations.



## 2019-2020 Cache County Cloud Seeding Program

- Program was operational from December 1, 2019 to March 31, 2020.
- 18 operations periods on portions of 28 days.
- Three storms in December, six in January, three in February and six in March.
- Near to above normal precipitation in December and January and March. February was 70-80% of normal.
- April 1 SWE percent of normal resulted in 110% above normal.
- Suspension criteria - for extreme weather and snowpack accumulations.



## 2019-2020 Seasonal Summary of Cloud Seeding Activities for the Northern Utah Program

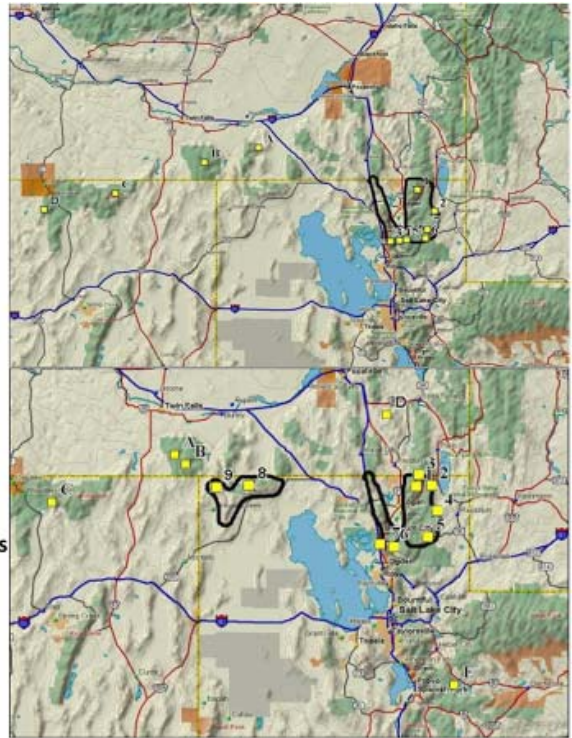
Storm No.	Date(s)	No. of Generators Used	No. of Hours
1	December 8-9	6	84.25
2	December 12-13	15	186.5
3	December 14	11	89.5
4	January 1-2	18	355.5
5	January 8	6	18.25
6	January 12-13	12	127.75
7	January 14	15	68.25
8	January 16-17	10	96
9	January 28-29	14	136.5
10	February 2-3	4	39
11	February 16-17	8	109.75
12	February 29 - March 1	1	10
13	March 14-15	1	22
14	March 18	5	19
15	March 21	3	9
16	March 24-25	20	352
17	March 30	5	12.75
18	March 31	8	61.5
<b>Season Total</b>	---	---	<b>1,797.5</b>

## Target/Control Analysis

- Target verses control analysis conducted every season to determine the benefit from cloud seeding.
- Target sites are within in the target area and are compared with sites upwind of any seeding projects to make sure sample is purely based on natural precipitation.
- Target and control sites are checked for similarly to make sure regression R values makes sense.

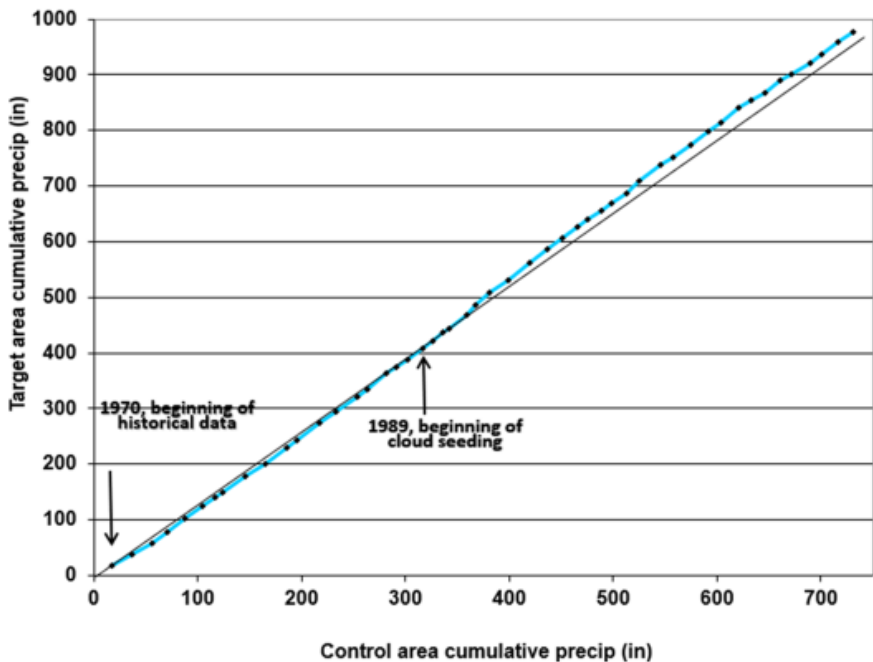
Precipitation evaluation target/control sites

Snow water content evaluation target/control sites



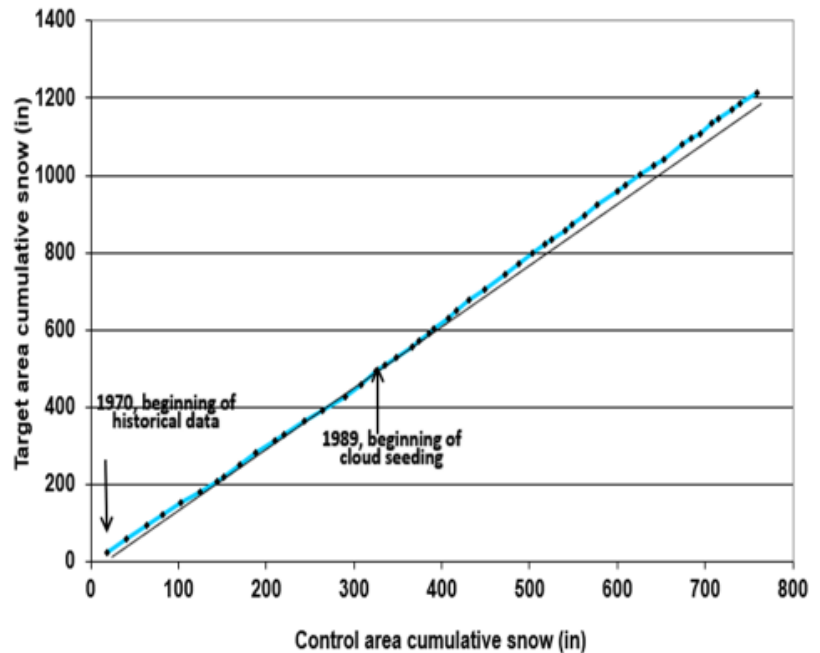
## Precipitation Target/Control Evaluation

- Double mass plot showing cumulative Dec-Mar precipitation for eastern Box Elder and Cache County target and control areas, water years 1970-2020.
- Blue line is target area precipitation; black line is control area precipitation.
- A change in the relationship between target verses control is noted over time.



## Snow Water Content Target/Control Evaluation

- Double mass plot showing cumulative Dec-Mar snow water content for eastern Box Elder and Cache County target and control areas, water years 1970-2020.
- Blue line is target area snow water content; black line is control area snow water content.
- A change in the relationship between target versus control is noted over time.

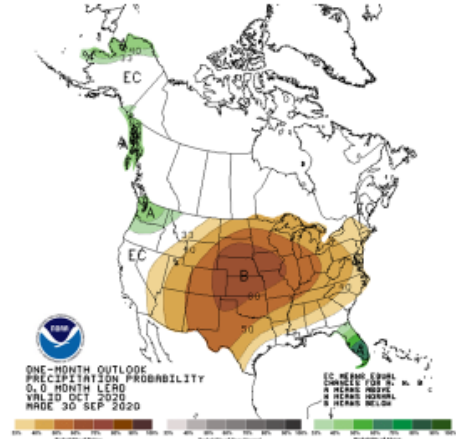
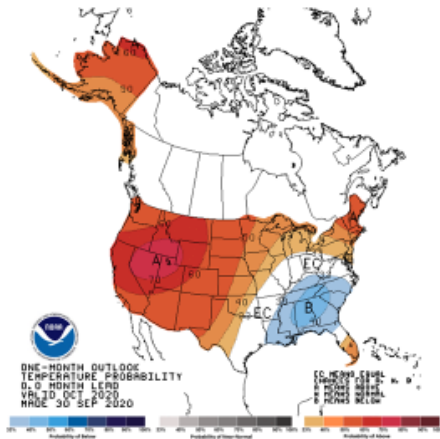


### Summary of Results 2019-2020 Season and Historically Seeded Period

Area	Ratio Observed/Predicted		Excess Water (inches)	
	Linear	Multiple Linear	Linear	Multiple Linear
Cache/E. Box Elder Dec-Mar Precip.	2020: 0.91 <b>31 yrs: 1.06</b>	2020: 0.95 <b>31 yrs: 1.07</b>	2020: -1.8 <b>31 yrs: +1.0</b>	2020: -0.9 <b>31 yrs: +1.2</b>
Cache/E. Box Elder April 1 Snowpack	2020: 0.98 <b>31 yrs: 1.07</b>	2020: 1.10 <b>31 yrs: 1.12</b>	2020: -0.4 <b>31 yrs: +1.5</b>	2020: 2.3 <b>31 yrs: +2.5</b>

- The long-term results indicate average increases for the 31 seeded seasons of +12% (linear) and +7% (multiple linear), which is equivalent to about 1.5 – 2.5 inches of additional snow water content.

# October 2020 Outlook



# October-November-December 2020 Outlook

