



Last Update: May 19, 2017

## Colorado Water Conservation Board Water Supply Reserve Fund Grant Application

### Instructions

All WSRF grant applications shall conform to the current [2016 WSRF Criteria and Guidelines](#).

To receive funding from the WSRF, a proposed water activity must be approved by a Roundtable(s) **AND** the Colorado Water Conservation Board (CWCB). The process for Roundtable consideration and recommendation is outlined in the 2016 WSRF Criteria and Guidelines. The CWCB meets bimonthly according to the schedule on page 2 of this application.

If you have questions, please contact the current CWCB staff Roundtable liaison:

#### Arkansas

Ben Wade  
[ben.wade@state.co.us](mailto:ben.wade@state.co.us)  
303-866-3441 x3238

#### Gunnison | North Platte | South Platte | Yampa/White

Craig Godbout  
[craig.godbout@state.co.us](mailto:craig.godbout@state.co.us)  
303-866-3441 x3210

#### Colorado | Metro | Rio Grande | Southwest

Megan Holcomb  
[megan.holcomb@state.co.us](mailto:megan.holcomb@state.co.us)  
303-866-3441 x3222

### WSRF Submittal Checklist (Required)

	I acknowledge this request for funding was recommended for CWCB approval by the sponsoring Basin Roundtable(s).
X	I acknowledge I have read and understand the <a href="#">2016 WSRF Criteria and Guidelines</a> .
X	I acknowledge the Grantee will be able to contract with CWCB using the <a href="#">Standard Contract</a> . <sup>(1)</sup>
Exhibit A	
X	<a href="#">Statement of Work</a> <sup>(2)</sup> (Word – see Exhibit A Template)
X	<a href="#">Budget &amp; Schedule</a> <sup>(2)</sup> (Excel Spreadsheet – see Exhibit A Template)
X	Letters of Matching and/or Pending 3 <sup>rd</sup> Party Commitments <sup>(2)</sup>
Exhibit C	
X	Map <sup>(2)</sup>
	Photos/Drawings/Reports
	Letters of Support
	Certificate of Insurance <sup>(3)</sup> (General, Auto, & Workers' Comp.)
Contracting Documents	
	Certificate of Good Standing <sup>(3)</sup>
	W-9 <sup>(3)</sup>
	Independent Contractor Form <sup>(3)</sup> (If applicant is individual, not company/organization)
	Electronic Funds Transfer (ETF) Form <sup>(3)</sup>

(1) Click "Grant Agreements". For reference only/do not fill out or submit/required for contracting

(2) Required with application if applicable.

(3) Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.



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Schedule		
CWCB Meeting	Application Submittal Dates	Type of Request
January	December 1	Basin Account; BIP
March	February 1	Basin/Statewide Account; BIP
May	April 1	Basin Account; BIP
July	June 1	Basin Account; BIP
September	August 1	Basin/Statewide Account; BIP
November	October 1	Basin Account/BIP

Desired Timeline	
Desired CWCB Hearing Month:	May 2018
Desired Notice to Proceed Date:	August 2018


Water Activity Summary		
Name of Applicant	Jackson County Water Conservancy District	
Name of Water Activity	North Platte Basin Airborne Cloud Seeding Project	
Approving Roundtable(s)	Basin Account Request(s) <sup>(1)</sup>	
North Platte Basin Roundtable	\$150,000.00	
Basin Account Request Subtotal	\$150,000.00	
Statewide Account Request <sup>(1)</sup>	\$0.00	
Total WSRF Funds Requested (Basin & Statewide)	\$150,000.00	
Total Project Costs	\$269,500.00	

(1) Please indicate the amount recommended for approval by the Roundtable(s)



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**Grantee and Applicant Information**

Name of Grantee(s)	Jackson County Water Conservancy District
Mailing Address	P.O. Box 1019, Walden, CO 80480
FEIN	84-0934121
Grantee's Organization Contact <sup>(1)</sup>	Wm. Kent Crowder 
Position/Title	President
Email	kentcrowder47@gmail.com
Phone	(970) 723-4660 office (970) 218-4532 Cell Phone
Grant Management Contact <sup>(2)</sup>	Wm. Kent Crowder
Position/Title	President
Email	kentcrowder47@gmail.com
Phone	(970) 723-4660 office (970) 218-4532 Cell Phone
Name of Applicant (if different than grantee)	Same as Grantee
Mailing Address	
Position/Title	
Email	
Phone	

**(1)** Person with signatory authority**(2)** Person responsible for creating reimbursement invoices (Invoice for Services) and corresponding with CWCB staff.**Description of Grantee**

Provide a brief description of the grantee's organization (100 words or less).

The owners of the irrigated and non-irrigated lands within the limits of Jackson County, petitioned for the formation of the Jackson County Water Conservancy District under the provisions of Article VI of Chapter 149, Colorado Revised Statutes 1953, as amended, and the Jackson County Water Conservancy District was created by order of the District Court in and for the County of Jackson State of Colorado on the 7th day of November 1961. The board consists of 7 elected directors, 1 from each division. The Jackson County Water Conservancy District (JCWCD) was formed as a political subdivision of the State of Colorado and a body corporate with all the powers of a public corporation with the boundaries of the District being co-extensive with the exterior boundary lines of Jackson County, Colorado.





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**Type of Eligible Entity (check one)**

	<b>Public (Government):</b> municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
X	<b>Public (Districts):</b> authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises
	<b>Private Incorporated:</b> mutual ditch companies, homeowners associations, corporations
	<b>Private Individuals, Partnerships, and Sole Proprietors:</b> are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.
	<b>Non-governmental organizations:</b> broadly, any organization that is not part of the government
	<b>Covered Entity:</b> as defined in <a href="#">Section 37-60-126 Colorado Revised Statutes</a>

**Type of Water Activity (check one)**

	Study
X	Implementation

**Category of Water Activity (check all that apply)**

	Nonconsumptive (Environmental)	
	Nonconsumptive (Recreational)	
	Agricultural	
	Municipal/Industrial	
	Needs Assessment	
	Education & Outreach	
X	Other	Explain: Multipurpose – Increase water supply for all needs

**Location of Water Activity**

Please provide the general county and coordinates of the proposed activity below in **decimal degrees**. The Applicant shall also provide, in Exhibit C, a site map if applicable.

County/Countries	Jackson County
Latitude	
Longitude	



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### Water Activity Overview

Please provide a summary of the proposed water activity (200 words or less). Include a description of the activity and what the WSRF funding will be used for specifically (e.g. studies, permitting, construction). Provide a description of the water supply source to be utilized or the water body affected by the activity. Include details such as acres under irrigation, types of crops irrigated, number of residential and commercial taps, length of ditch improvements, length of pipe installed, area of habitat improvements. If this project addresses multiple purposes or spans multiple basins, please explain. The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, and Schedule.

WSRA funds will be expended to provide operational monies for a cooperative airborne cloud seeding project that is an extension into the North Platte Basin of the Wyoming Water Development Office cloud seeding project in the Sierra Madre/Medicine Bow Mountains of southern Wyoming. This airborne cloud seeding project would be planned for a period of three years, but depending on weather conditions and number of flights could extend for an additional period of time. Mr. Joe Busto, Colorado Water Conservation Board Weather Modification Coordinator and Scientist Researcher was of the opinion that a three year period of airborne cloud seeding will allow adequate time to fairly evaluate the benefits of airborne cloud seeding to snowpack augmentation and the North Platte Basin water supply. Collaboration and cooperation between cloud-seeding programs could result in significant savings. For example, if the general weather patterns and storm events have similar timing, and the same meteorological support established for one program might service both. The weather data used to predict, initiate, and terminate seeding events is readily available through the Internet, so utilizing meteorological support teams for forecast for more than one project and/or target area is reasonable. Aerial seeding will occur upwind of the target watershed along a path perpendicular to the wind direction, at distances related to the storm wind velocities and ice crystal growth times. Cloud seeding would be temporarily suspended or curtailed when snowpack snow water equivalent thresholds are exceeded, during emergencies in the target area and when high avalanche hazard levels warrant suspension. The additional snowpack is good for Colorado but thresholds are set on snow water equivalent to ensure that snowpack in a watershed stays within the realm of natural variability for the local climate.

### Measurable Results

To catalog measurable results achieved with WSRF funds please provide any of the following values.

0	New Storage Created (acre-feet)
3,000 – 4,000	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
0	Existing Storage Preserved or Enhanced (acre-feet)
0	Length of Stream Restored or Protected (linear feet)
0	Efficiency Savings (indicate acre-feet/year OR dollars/year)
0	Area of Restored or Preserved Habitat (acres)
	Other Explain:





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### Water Activity Justification

Provide a description of how this water activity supports the goals of [Colorado's Water Plan](#), the most recent [Statewide Water Supply Initiative](#), and the respective [Roundtable Basin Implementation Plan and Education Action Plan](#)<sup>(1)</sup>. The Applicant is required to reference specific needs, goals, themes, or Identified Projects and Processes (IPPs), including citations (e.g. document, chapters, sections, or page numbers).

For applications that include a request for funds from the Statewide Account, the proposed water activity shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan criteria for state support (CWP, Section 9.4, pp. 9-43 to 9-44;) (Also listed pp. 4-5 in [2016 WSRF Criteria and Guidelines](#)).

Cloud Seeding is supported in Colorado's Water Plan – Chapter 4, page 18 - Weather modification, also known as cloud-seeding, increases available water supplies. The World Meteorological Organization has stated that well designed, well-executed weather modification programs have demonstrable results; furthermore, these programs have no documented, negative environmental effects from the use of silver iodide for cloud-seeding. With seven permitted, ground-based, wintertime cloud-seeding programs, Colorado is a leading state for weather modification activities. The goal of these programs is to increase snowpack and streamflow. In comparison to other sources of new water, cloudseeding is a relatively low-cost means of increasing system supplies.

On page 15 of the North Platte Basin Implementation Plan (NPBIP) and on page 7-1, Section 7.1 North Platte Basin Consumptive Uses: The Future of the SWSI 2010 North Platte basin Report Basinwide Consumptive and Nonconsumptive Water Supply Needs Assessment, June 2011 (2011 Report), Snowmaking as Water storage was identified as a potential future consumptive use and a possible strategic water development. On Page 19 of the NPBIP, a measurable outcome of the process to encourage the development of consumptive uses as prioritized by the roundtable in the 2011 Report was to develop 37,000 AF of additional storage (doubling of current storage) by 2050 and this project would increase annual stored water in the form of snow water equivalent in the increased snowpack. On Page 24 of the NPBIP, a measurable outcome of the process to identify instances where environmental and recreational needs are sustained and supported by agricultural water use was to complete at least two new multi-purpose water projects in the North Platte Basin by 2025 that meet multiple needs as identified in the NPBIP and other studies. An increased water supply from cloud seeding would also help reduce the average annual agricultural shortages which are currently 89,000 AF and projected to be 110,000 AF by 2050 as set forth on page 3. Section 2: Basin Needs of the NPBIP. An increased annual water supply would help meet the following North Platte Basin Goals set forth on page 2 of the NPBIP:

1. Maintain and maximize the consumptive use of water permitted in the Equitable Apportionment Decree and the baseline depletion allowance of the Three State Agreement.
2. Increase economic development and diversification through strategic water use and development



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**Matching Requirements: Basin Account Requests**

**Basin (only) Account** grant requests require a 25% match (cash and/or in-kind) from the Applicant or 3<sup>rd</sup> party and shall be accompanied by a **letter of commitment** as described in the 2016 WSRF Criteria and Guidelines (submitted on the contributing entity's letterhead). Attach additional sheet if necessary.

Contributing Entity	Amount and Form of Match (note cash or in-kind)
Jackson County Water Conservancy District	\$50,000.00 cash
Jackson County Water Conservancy District –Grant Management	\$12,000.00 In-kind
CWCB Weather Modification Program-Target/Control Evaluation	\$30,000.00 In-kind
CWCB Weather Modification Program –Use of radiometer	\$27,500.00 In-kind
Total Match	\$50,000 cash & \$69,500 In-Kind
If you requested a Waiver to the Basin Account matching requirements, indicate the percentage you wish waived.	

**Matching Requirements: Statewide Account Requests**

**Statewide Account** grant requests require a 50% match as described in the 2016 WSRF Criteria and Guidelines. A minimum of 10% match shall be from Basin Account funds (cash only). A minimum of 10% match shall be provided by the applicant or 3<sup>rd</sup> party (cash, in-kind, or combination). The remaining 30% of the required match may be provided from any other source (Basin, applicant, or 3<sup>rd</sup> party) and shall be accompanied by a **letter of commitment**. Attach additional sheet if necessary.

Contributing Entity	Amount and Form of Match (note cash or in-kind):
Total Match	\$
If you requested a Waiver to the Statewide Account matching, indicate % you wish waived. (Max 50% reduction of requirement).	





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### Related Studies

Please provide a list of any related studies, including if the water activity is complimentary to or assists in the implementation of other CWCB programs.

Weather Modification-Medicine Bow/Sierra Madre Ranges Final Design and Permitting Study, Final Report by National Center for Atmospheric Research, Research Applications Laboratory, Boulder, Phase II Report to the Wyoming Water Development Office Contract 05SC0296808SE

Airborne Cloud Seeding in Northern Colorado as an Extension of Seeding Operations Conducted for Southern Wyoming prepared by Weather Modification International 3802 20th Street North Fargo, ND 58102 , for Wyoming Water Development Commission, State of Wyoming, February 2018.

Compliments CWCB cloud seeding program, compact compliance and Three State Agreement

### Previous CWCB Grants

List all previous or current CWCB grants (including WSRF) awarded to both the Applicant and Grantee. Include: 1) Applicant name; 2) Water activity name; 3) Approving RT(s); 4) CWCB board meeting date; 5) Amount Approved and Reimbursed; 6) Expiration Date; 7) Status

#### WSRF Grants

##### Applicant - Jackson County Water Conservancy District

Water Activity Name	Approving RT	CWCB Meeting Date	Amount Approved	Amount Reimbursed	Expiration Date	Status
Structures for Water Control: Headgates and Diversion	North Platte	Sept. 2011	\$183,883	\$140,040.88	12/13/2013	Completed
North Platte Basin Implementation Plan	North Platte	October 2013	\$107,500	\$107,500	11/30/2017	Completed
Jackson County Basin Augmentation Plan	North Platte	Sept. 2015	\$161,000	\$93,310	10/19/2020	In-progress

### Tax Payer Bill of Rights

The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.

NO ISSUES



**Water Supply Reserve Fund – Grant and Loan Program**  
**Water Activity Summary Sheet**  
**May 23-24, 2018**  
**Agenda Item 29(c)**

**Applicant & Grantee:** Jackson County Water Conservancy District  
**Water Activity Name:** North Platte Basin Airborne Cloud Seeding Project  
**Water Activity Purpose:** Multipurpose  
**County:** Jackson  
**Drainage Basin:** North Platte  
**Water Source:** Atmosphere  
**Amount Requested:** \$150,000 North Platte Basin Account  
**Matching Funds:** Applicant & 3<sup>rd</sup> Party Match (cash & in-kind) = \$119,500  
• 80% of the Basin Account request (meets 10% min)

<b>Staff Recommendation:</b>
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Staff recommends approval of up to \$150,000 from the North Platte Basin Account to help fund the project titled: North Platte Basin Airborne Cloud Seeding Project.
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**Water Activity Summary:** WSRF grant funds, if approved, will assist the Jackson County Water Conservancy District to provide operational monies for a cooperative airborne cloud seeding project that is an extension into the North Platte Basin of the Wyoming Water Development Office cloud seeding project in the Sierra Madre/Medicine Bow Mountains of southern Wyoming. This cloud seeding program is planned for a period of three years, however depending on weather conditions and number of flights could be extended for an additional period of time. Aerial seeding will occur upwind of the target watershed along a path perpendicular to the wind direction, at distances related to the storm wind velocities and ice crystal growth times. Cloud seeding would be temporarily suspended or curtailed when snowpack snow water equivalent thresholds are exceeded, during emergencies in the target area and when high avalanche hazard levels warrant suspension. The additional snowpack is good for Colorado but thresholds are set on snow water equivalents to ensure the snowpack in a water shed stays within the realm of natural variability for the local climate.

**Discussion:** As pointed out in the application, this project assists the Gunnison Basin Roundtable in meeting the Goals of the North Platte Basin Implementation Plan as outlined in Section 7.1.

In addition, this effort helps the state achieve water supply Goals of Colorado's Water Plan, as outlined in Chapter 4, page 4-18.

**Issues/Additional Needs:** No issues or additional needs have been identified.

**Eligibility Requirements:** The application meets requirements of all eligibility components: General Eligibility, Entity Eligibility, Water Activity Eligibility, and Eligibility Based on Match Requirements.

**Evaluation Criteria:** This activity has undergone review and evaluation and staff has determined that it satisfies the Evaluation Criteria. Please refer to Basin Roundtable Chair's Recommendation Letter and the WSRF Grant Application for applicant's detailed response.

**Funding Summary/Matching Funds:**

<b><u>Funding Source</u></b>	<b><u>Cash</u></b>	<b><u>In-kind</u></b>	<b><u>Total</u></b>	<b><u>Status</u></b>
Jackson County Water Conservancy District	\$50,000	\$12,000	\$62,000	Secured
CWCB Weather Modification Program (Target/Control Evaluation)	\$0	\$30,000	\$30,000	Secured
CWCB Weather Modification Program (Radiometer)	\$0	\$27,500	\$27,500	Secured
Sub-total	\$50,000	\$69,500	\$119,500	
WSRF Gunnison Basin Account	\$150,000	n/a	\$150,000	Secured
<b>Total</b>	<b>\$200,000</b>	<b>\$69,500</b>	<b>\$269,500</b>	

**CWCB Project Manager:** Joe Busto



# JACKSON COUNTY WATER CONSERVANCY DISTRICT

P.O Box 1019  
WALDEN, COLORADO 80480

## Directors

DIVISION 1  
Ty Wattenberg  
P.O. Box 797  
Walden, CO 80480  
970-723-4498

March 2, 2018

DIVISION 2  
Kent Crowder  
P.O. Box 1019  
Walden, CO 80480  
970-723-4628

North Platte Basin Roundtable  
and  
Craig Godbout  
Program Manager  
Water Supply Planning Section  
Colorado Water Conservation Board  
1313 Sherman Street, Room 718  
Denver, CO 80203

DIVISION 3  
Richard F. Wyatt  
P.O. Box 1052  
Walden, CO 80480  
970-723-4471

DIVISION 4  
James A. Baller Jr.  
48725 State Hwy 14  
Walden, CO 80480  
970-723-4439

RE: Letter of Match Commitment from Jackson County Water Conservancy District  
For WSRF Application: North Platte Basin Airborne Cloud Seeding Project

Dear Craig and North Platte Basin Roundtable:

DIVISION 5  
Scott C. Fischer  
P.O. Box 51  
Walden, CO 80480  
970-723-8308

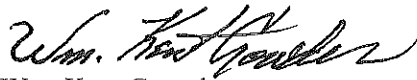
Please consider this letter as written confirmation that the Board of Directors of the Jackson County Water Conservancy District has taken official action to commit \$50,000.00 in cash match to the North Platte Basin Airborne Cloud Seeding Project. In addition the Jackson County Water Conservancy District will commit an additional in-kind match of \$12,000.00 for Grant Administration of this WSRF project. This grant administration in-kind match is based on 6% of a total project cash expenditure of \$200,000.

DIVISION 6  
Carl Trick, II  
P.O. Box 15  
Cowdrey, CO 80434  
970-723-4925

If there are any questions, please contact us.

DIVISION 7  
Pat VanValkenburg  
11853 St. Hwy 14  
Walden, CO 80480  
970-723-4774

Sincerely,



Wm. Kent Crowder  
President, JCWCD

cc: file



COLORADO

Colorado Water  
Conservation Board

Department of Natural Resources  
1313 Sherman Street, Room 718  
Denver, CO 80203

February 27, 2018

Re: CWCB Matching Contribution Commitment

To Whom It May Concern:

The Colorado Water Conservation Board (CWCB) administers Colorado's Weather Modification (WM) Program, which issues WM permits, monitors WM activities and keeps the public informed about the state's WM activities.

The CWCB commits to provide the following matching contributions to the North Platte Basin Airborne Cloud Seeding Project application submitted by the Jackson County Water Conservancy District for the North Platte Basin Roundtable's Basin Account funds:

- \$30,000 in CWCB Weather Modification Grant Program funding to assist the weather modification contractor to perform a target control evaluation analysis, which is required by state rule of any Colorado weather modification permit holder
- Use of CWCB's radiometer for the full winter of 2018-19 to have additional observational tools to support the new cloud seeding program in the North Platte watershed, valued at \$27,500

Please let me know if you need any additional information regarding our match commitment.

Regards,

Kevin Houck, P.E., CFM  
Chief, Watershed and Flood Protection  
Colorado Water Conservation Board  
1313 Sherman Street, Room 721  
Denver, CO 80203





# NORTH PLATTE BASIN CLOUD SEEDING PROJECT

