

Colorado Water Conservation Board

Water Supply Reserve Fund Grant Application

Instructions

All WSRF grant applications shall conform to the current 2020 WSRF Criteria and Guidelines.

To receive funding from the WSRF, a proposed water activity must be recommended for approval by a Roundtable(s) <u>AND</u> the approved by the Colorado Water Conservation Board (CWCB). The process for roundtable consideration and recommendation is outlined in the 2020 WSRF Criteria and Guidelines. The CWCB meets bimonthly.

If you have questions, please contact the WSRF Grant Program Manager (for all Roundtables) or your Roundtable Liaison:

Ben Wade ben.wade@state.co.us 303-866-3441 x3238 (office) Sam Stein
Sam.stein@state.co.us
303-866-3441(office)

WSRF Submittal Checklist (Required)			
YES□ NO□	This request was recommended for CWCB approval by the sponsoring roundtable.		
YES□ NO□	I have read and understand the 2020 WSRF Criteria and Guidelines.		
YES NO	Grantee will be able to contract with CWCB using the <u>Standard Contract</u> . ¹		
	Application Documents included:		
YES□ NO□	Exhibit A: Statement of Work ² (Word – see Template)		
YES□ NO□	Exhibit B: Budget & Schedule ² (Excel Spreadsheet – see Template)		
YES□ NO□	Letters of Matching and/or Pending 3 rd Party Commitments ²		
YES□ NO□	Map^2		
YES NO	Photos/Drawings/Reports		
YES NO	Letters of Support		
	Contracting Documents ³		
YES□ NO□	Detailed/Itemized Budget ³ (Excel Spreadsheet – see Template)		
YES□ NO□	Certificate of Insurance ⁴ (General, Auto, & Workers' Comp.)		
YES□ NO□	Certificate of Good Standing ⁽⁴⁾		
YES□ NO□	W-9 Form ⁴		
YES□ NO□	Independent Contractor Form ⁴ (If applicant is individual, not company/organization)		
YES□ NO□	Electronic Funds Transfer (ETF) Form ⁴		

 $^{^1}$ Click "Grant Agreements". For reference only/do not fill out or submit/required for contracting

² Required with application if applicable.

³ Additional documentation providing a Detailed/Itemized Budget maybe required for contracting. Applicants are encouraged to coordinate with the CWCB Project Manager to determine specifics.

⁴ Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.

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

¹ If either the basin or statewide match includes matching funds from a pending Water Plant Grant, both must be submitted by December 1st deadline for March Board meeting review.

Water Activity Summary			
Name of Applicant	JACKSON COUNTY WATER CONSERVANCY DISTRICT		
Name of Water Activity	NORTH PLATTE BA	SIN AIRBORNE CLOUD SEEDING PROJECT (B)	
Approving Roundtable	(s)	Basin Account Request(s) ¹	
NORTH PLATTE BASIN ROUNDTABLE		\$225,000	
Basin Account Request Subtotal		\$225,000	
Basin Account Request Subtotal Approved by Roundtable		\$225,000	
Statewide Account Request ⁽¹⁾		\$	
Total WSRF Funds Requested (Basin & Statewide)		\$225,000	
Total Project Costs		\$318,000	

 $^{^{\}rm 1}\,\mbox{Please}$ indicate the amount recommended for approval by the Roundtable(s)

Grantee and Applicant Information		
Name of Grantee(s)	JACKSON COUNTY WATER CONSERVANCY DISTRICT	
Mailing Address	PO BOX 1019, WALDEN, CO 80480	
FEIN	84-0934121	



	Grantee and Applicant Information
Grantee's Organization Contact ¹	JAMES A. BALLER JR.
Position/Title	PRESIDENT
Email	BALLERRANCH@YAHOO.COM
Phone	970-819-1382
Grant Management Contact ²	TY WATTENBERG
Position/Title	SECRETARY/TREASURER
Email	TNWATTENBERG@GMAIL.COM
Phone	970-846-8401
Name of Applicant (if different than grantee)	SAME AS GRANTEE
Mailing Address	
Position/Title	
Email	
Phone	

¹ Person with signatory authority

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 (JCWCD) under the provisions of Article VI of Chapter 149, Colorado Revised Statutes 1953, as amended, and the JCWCD 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 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.

Type of Eligible Entity (check one)		
Public (Government): 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.		
Public (Districts): authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises		
Private Incorporated: mutual ditch companies, homeowners associations, corporations		
Private Individuals, Partnerships, and Sole Proprietors: are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.		
Non-governmental organizations: broadly, any organization that is not part of the government		
Covered Entity: as defined in Section 37-60-126 Colorado Revised Statutes		

 $^{^2\,}Person\,responsible\,for\,creating\,reimbursement\,invoices\,(Invoice\,for\,Services)\,and\,corresponding\,with\,CWCB\,staff.$



	Type of Water Activity (check one)		
	Study		
Χ	Implementation		

	Category of Water Activity (check all that apply)		
	Nonconsumptive (Environmental)		
	Nonconsumptive (Recreational)		
	Agricultural		
	Municipal/Industrial		
	Needs Assessment		
	Education & Outreach		
Х	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/Counties	Jackson County		
Latitude			
Longitude			

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.



Water Activity Overview

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 an extension of the current cloud seeding project that was started three years ago. There is positive evidence of water increase to encourage the board to try another round of cloud seeding. Please refer to attachment – Never Summer Cloud Seeding Validation Report. Collaboration and cooperation between cloud-seeding programs results in significant savings. 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 is temporarily suspended 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	To catalog measurable results achieved with WSRF funds please provide any of the following values.			
	New Sto	orage Created (acre-feet)		
3,000-4,000	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive			
	Existing Storage Preserved or Enhanced (acre-feet)			
	Length of Stream Restored or Protected (linear feet)			
	Efficiency Savings (indicate acre-feet/year OR dollars/year)			
	Area of Restored or Preserved Habitat (acres)			
	Length of Pipe/Canal Built or Improved (linear feet)			
	Other	Explain:		

Water Activity Justification

Provide a description of how this water activity supports the goals of <u>Colorado's Water Plan</u>, the most recent <u>Statewide Water Supply Initiative</u>, and the respective <u>roundtable Basin Implementation Plan and Education Action Plan</u> (1). 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 2020 WSRF Criteria and Guidelines).



Water Activity Justification

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 designs, well-executed weather medication 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 medication activities. The goal of these programs is to increase snowpack and streamflow. In comparison to other sources of new water, cloud-seeding 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 Basin wide Consumptive and Non-consumptive 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.

Matching Requirements: Basin Account Requests

Basin (only) Account grant requests require a 25% match (cash and/or in-kind) from the Applicant or 3rd party and shall be accompanied by a **letter of commitment** as described in the <u>2020 WSRF Criteria and Guidelines</u> (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	\$75,000 (Cash)

¹ Access Basin Implementation Plans or Education Action Plans from Basin drop down menu.

Matching Requirements: Basin Account Requests		
Jackson County Water Conservancy District – Grant Management	\$18,000 (In Kind)	
Total Match	\$75,000 Cash and \$18,000 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 2020 WSRF Criteria and Guidelines. At least of 10% of the required Statewide Account Grant request match shall be cash from Basin Account funds whether that is from one or multiple basins; and the remaining 40% of the required match may be provided from any source, including other grants, cash from the Basin Account, or any combination of cash, in-kind services, or in-kind materials. 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).	

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.

Related Studies

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 CWCD 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) Contract number or purchase order

Water Activity	Approving	CWCB	Amount	Amount	Expiration	Status
Name	RT	Meeting Date	Approved	Reimbursed	Date	
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 Aug Plan	North Platte	Sept 2015	\$161,000	\$93,310	10/19/2020	Extended
Jackson County Basin Augmentation Plan Extension	North Platte	January 2021	\$49945.88	\$0.00	12/31/21	In-Progress
North Platte Basin Airborne Cloud Seeding Project	North Platte	September 2018	\$150,000	94,822	6/30/22	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.

Last Update: September 18, 2020
NO ISSUES

Water Supply Reserve Fund Water Activity Summary Sheet July 21-22, 2021 Agenda Item 16(a)

Applicant & Grantee: Jackson County Water Conservancy District

Water Activity Name: North Platte Basin Airborne Cloud Seeding Project

Water Activity Purpose: Other - Implementation

County: Jackson County

Drainage Basin: North Platte River
Water Source: North Fork River

Amount Requested: \$225,000 North Platte Basin Account

\$225,000 Total Request

Matching Funds: Basin Account Match = \$93,000 (\$75,000 cash & \$18,000

In-kind)

• 29.25% of Total Project Cost (meets 25% min)

Staff Recommendation:

Staff recommends approval of up to \$225,000 from the North Platte Basin Account to help fund the project: North Platte Basin Airborne Cloud Seeding Project

Water Activity Summary: If approved, WSRF 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 an extension of the current cloud seeding project that was started three years ago and is the only airborne cloud seeding project currently in Colorado. The applicant states the "Never Summer Cloud Seeding Validation Report" provided with their application has shown positive evidence of water increase to encourage the CWCB Board to try another round of cloud seeding.

Collaboration and cooperation between cloud-seeding programs results in significant savings. 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 is temporarily suspended when snowpack snow water equivalent thresholds are exceeded, during emergencies in the target area and when high avalanche hazard levels warrant suspension. The applicant states while additional snowpack is good for Colorado, there are thresholds that are set on snow water equivalent to ensure that snowpack in a watershed stays within the realm of natural variability for the local climate.

The applicant states this proposal will result in 3,000-4,000 acre feet of new water supplies developed or conserved.

Discussion: The proposal is consistent with the North Platte Roundtable's Basin Implementation Plan, in particular, an increase in annual water supply would help meet the following North Platte Basin Goals set forth in their BIP: Maintain and maximize the consumptive use of water permitted in the Equitable Apportionment Decree and the baseline depletion allowance of the Three State Agreement; and Increase economic development and diversification through strategic water use and development.

Issues/Additional Needs: No issues have been identified.

Eligibility Requirements: The application meets requirements of all eligibility components.

Evaluation Criteria: Staff has determined this activity satisfies the Evaluation Criteria.

Funding Sources/Match	Cash	In-Kind	Total	Status
Jackson County Water Conservancy District	\$75,000	\$18,000	\$93,000	Secured
Sub-Total Matching Funds	\$75,000	\$18,000	\$93,000	
WSRF North Platte Basin Account	\$225,000	\$0	\$225,000	Secured
Total Project Costs	\$300,000	\$18,000	\$318,000	

CWCB Project Manager: Andrew Rickert



Colorado Water Conservation Board

Water Supply Reserve Fund Grant Application

Instructions

All WSRF grant applications shall conform to the current 2020 WSRF Criteria and Guidelines.

To receive funding from the WSRF, a proposed water activity must be recommended for approval by a Roundtable(s) <u>AND</u> the approved by the Colorado Water Conservation Board (CWCB). The process for roundtable consideration and recommendation is outlined in the 2020 WSRF Criteria and Guidelines. The CWCB meets bimonthly.

If you have questions, please contact the WSRF Grant Program Manager (for all Roundtables) or your Roundtable Liaison:

Ben Wade ben.wade@state.co.us 303-866-3441 x3238 (office) Sam Stein
Sam.stein@state.co.us
303-866-3441(office)

	WSRF Submittal Checklist (Required)
YES□ NO□	This request was recommended for CWCB approval by the sponsoring roundtable.
YES□ NO□	I have read and understand the 2020 WSRF Criteria and Guidelines.
YES NO	Grantee will be able to contract with CWCB using the <u>Standard Contract</u> . ¹
	Application Documents included:
YES□ NO□	Exhibit A: Statement of Work ² (Word – see Template)
YES□ NO□	Exhibit B: Budget & Schedule ² (Excel Spreadsheet – see Template)
YES□ NO□	Letters of Matching and/or Pending 3 rd Party Commitments ²
YES□ NO□	Map^2
YES NO	Photos/Drawings/Reports
YES NO	Letters of Support
	Contracting Documents ³
YES□ NO□	Detailed/Itemized Budget ³ (Excel Spreadsheet – see Template)
YES□ NO□	Certificate of Insurance ⁴ (General, Auto, & Workers' Comp.)
YES□ NO□	Certificate of Good Standing ⁽⁴⁾
YES□ NO□	W-9 Form ⁴
YES□ NO□	Independent Contractor Form ⁴ (If applicant is individual, not company/organization)
YES□ NO□	Electronic Funds Transfer (ETF) Form ⁴

 $^{^1}$ Click "Grant Agreements". For reference only/do not fill out or submit/required for contracting

² Required with application if applicable.

³ Additional documentation providing a Detailed/Itemized Budget maybe required for contracting. Applicants are encouraged to coordinate with the CWCB Project Manager to determine specifics.

⁴ Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.

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

¹ If either the basin or statewide match includes matching funds from a pending Water Plant Grant, both must be submitted by December 1st deadline for March Board meeting review.

Water Activity Summary		
Name of Applicant	JACKSON COUNTY WATER CONSERVANCY DISTRICT	
Name of Water Activity	NORTH PLATTE BA	SIN AIRBORNE CLOUD SEEDING PROJECT (B)
Approving Roundtable	(s)	Basin Account Request(s) ¹
NORTH PLATTE BASIN ROUNDTABLE		\$225,000
Basin Account Request Subtotal		\$225,000
Basin Account Request Subtotal Approved by Roundtable		\$225,000
Statewide Account Request ⁽¹⁾		\$
Total WSRF Funds Requested (Basin & Statewide)		\$225,000
Total Project Costs		\$318,000

 $^{^{\}rm 1}\,{\rm Please}$ indicate the amount recommended for approval by the Roundtable(s)

	Grantee and Applicant Information
Name of Grantee(s)	JACKSON COUNTY WATER CONSERVANCY DISTRICT
Mailing Address	PO BOX 1019, WALDEN, CO 80480
FEIN	84-0934121



	Grantee and Applicant Information
Grantee's Organization Contact ¹	JAMES A. BALLER JR.
Position/Title	PRESIDENT
Email	BALLERRANCH@YAHOO.COM
Phone	970-819-1382
Grant Management Contact ²	TY WATTENBERG
Position/Title	SECRETARY/TREASURER
Email	TNWATTENBERG@GMAIL.COM
Phone	970-846-8401
Name of Applicant (if different than grantee)	SAME AS GRANTEE
Mailing Address	
Position/Title	
Email	
Phone	

¹ Person with signatory authority

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 (JCWCD) under the provisions of Article VI of Chapter 149, Colorado Revised Statutes 1953, as amended, and the JCWCD 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 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.

Type of Eligible Entity (check one)
Public (Government): 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.
Public (Districts): authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises
Private Incorporated: mutual ditch companies, homeowners associations, corporations
Private Individuals, Partnerships, and Sole Proprietors: are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.
Non-governmental organizations: broadly, any organization that is not part of the government
Covered Entity: as defined in <u>Section 37-60-126 Colorado Revised Statutes</u>

 $^{^2\,}Person\,responsible\,for\,creating\,reimbursement\,invoices\,(Invoice\,for\,Services)\,and\,corresponding\,with\,CWCB\,staff.$



	Type of Water Activity (check one)		
	Study		
Χ	Implementation		

	Category of Water Activity (check all that apply)		
	Nonconsum	ptive (Environmental)	
	Nonconsumptive (Recreational)		
	Agricultural		
	Municipal/Industrial		
	Needs Assessment		
	Education & Outreach		
Х	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/Counties	Jackson County		
Latitude			
Longitude			

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.



Water Activity Overview

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 an extension of the current cloud seeding project that was started three years ago. There is positive evidence of water increase to encourage the board to try another round of cloud seeding. Please refer to attachment – Never Summer Cloud Seeding Validation Report. Collaboration and cooperation between cloud-seeding programs results in significant savings. 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 is temporarily suspended 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.						
	New Sto	New Storage Created (acre-feet)				
3,000-4,000	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive					
	Existing Storage Preserved or Enhanced (acre-feet)					
	Length of Stream Restored or Protected (linear feet)					
	Efficiency Savings (indicate acre-feet/year OR dollars/year)					
	Area of Restored or Preserved Habitat (acres)					
	Length of Pipe/Canal Built or Improved (linear feet)					
	Other	Explain:				

Water Activity Justification

Provide a description of how this water activity supports the goals of <u>Colorado's Water Plan</u>, the most recent <u>Statewide Water Supply Initiative</u>, and the respective <u>roundtable Basin Implementation Plan and Education Action Plan</u> (1). 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 2020 WSRF Criteria and Guidelines).



Water Activity Justification

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 designs, well-executed weather medication 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 medication activities. The goal of these programs is to increase snowpack and streamflow. In comparison to other sources of new water, cloud-seeding 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 Basin wide Consumptive and Non-consumptive 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.

Matching Requirements: Basin Account Requests

Basin (only) Account grant requests require a 25% match (cash and/or in-kind) from the Applicant or 3rd party and shall be accompanied by a **letter of commitment** as described in the <u>2020 WSRF Criteria and Guidelines</u> (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	\$75,000 (Cash)		

¹ Access Basin Implementation Plans or Education Action Plans from Basin drop down menu.

Matching Requirements: Basin Account R	equests
Jackson County Water Conservancy District – Grant Management	\$18,000 (In Kind)
Total Match	\$75,000 Cash and \$18,000 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 2020 WSRF Criteria and Guidelines. At least of 10% of the required Statewide Account Grant request match shall be cash from Basin Account funds whether that is from one or multiple basins; and the remaining 40% of the required match may be provided from any source, including other grants, cash from the Basin Account, or any combination of cash, in-kind services, or in-kind materials. 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).				

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.

Related Studies

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 CWCD 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) Contract number or purchase order

Water Activity	Approving	CWCB	Amount	Amount	Expiration	Status
Name	RT	Meeting Date	Approved	Reimbursed	Date	
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 Aug Plan	North Platte	Sept 2015	\$161,000	\$93,310	10/19/2020	Extended
Jackson County Basin Augmentation Plan Extension	North Platte	January 2021	\$49945.88	\$0.00	12/31/21	In-Progress
North Platte Basin Airborne Cloud Seeding Project	North Platte	September 2018	\$150,000	94,822	6/30/22	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.

March 24, 2021
Mr. Ben Wade
CWCB
Water Supply Planning Section
Ben,
The North Platte Basin Roundtable voted to approve Jackson County Water Conservancy District's application to continue to fund the Cloud Seeding Program for the amount of \$225,000, to come from the North Platte Basin Account funds. The application received eight votes in support, zero votes opposing the proposal and five Roundtable members recused themselves from the vote.
This project is in alignment with Water Plan and BIP goals and objectives and will help increase water supply for the basin.
If you have any questions please call me at 970-723-4498.
Sincerely,
Ty Wattenberg
North Platte Basin Roundtable Chair

JACKSON COUNTY WATER CONSERVANCY DISTRICT

WALDEN, COLORADO 80480

Directors

DIVISION 1 Ty Wattenberg SR Box 797 Walden, CO 80480 970-723-4498

DIVISION 2 Randy Miller P.O. Box Walden, CO 80480 970-218-4974

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

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

DIVISION 6 Carl Trick, II P_{*}O. Box 15 Cowdrey, CO 80434 970-723-4925

DIVISION 7 Pat VanValkenburg 11853 Highway 14 Walden, CO 80480 970-846-5153 March 8, 2021

North Platte Basin Roundtable

And

Ben Wade

Program Manager

Water Supply Planning Section

Colorado Water Conservation Board

1313 Sherman Street, Room 718

Denver, Co 80203

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

Dear Ben and North Platte Basin Roundtable:

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 \$75,000 in cash match to the North Platte Basin Airborne Cloud Seeding Project. In addition the Jackson County Water Conservancy District will commit an addition in kind match of \$18,000 for Grant Administration of this WSRF project. This grant administration in kind match is based on 6% of a total project cash expenditure of \$300,000.

If there are any question, please contact us.

Sincerely,

James A. Baller, Jr.
President, JCWCD

Cc: file



https://cwcb.colorado.gov/

Colorado Water Conservation Board				
Water Supply Reserve Fund				
Exhibit A - Statement of Work				
Date:	March 2, 2021			
Water Activity Name:	North Platte Basin Airborne Cloud Seeding Project (B)			
Grant Recipient:	Jackson County Water Conservancy District			
Funding Source:	Water Supply Reserve Fund – Basin Account \$225,000 District Cash Match - \$75,000 and \$18,000 In-Kind			

Water Activity Overview: (Please provide brief description of the proposed water activity (no more than 200 words). Include a description of the overall water activity and specifically what the WSRF funding will be used for. (PLEASE DEFINE ALL ACRONYMS).

WSRA funds will be expended to provide operational monies for a cooperative airborne cloud seeing 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 an extension of the current cloud seeding project that was started three years ago. Please refer to attachment titled Never Summer Cloud Seeding Validation Water Year 2020. There is positive evidence of water increase to encourage the board to try another round of cloud seeding. Collaboration and cooperation between cloud-seeding programs results in significant savings. 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 is temporarily suspended 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.

Objectives: (List the objectives of the project. (PLEASE DEFINE ACRONYMS).

- 1. Snowpack augmentation by airborne cloud seeding to increase annual North Platte Basin water supply for consumptive and non-consumptive uses
- 2. Evaluate the cost/benefit of airborne cloud seeding to the North Platte Basin
- 3. Demonstrate that a cooperative airborne cloud seeding project can be economically beneficial and effective to all parties participating in the project



https://cwcb.colorado.gov/

Tasks

Provide a detailed description of each task using the following format: (PLEASE DEFINE ACRONYMS)

Task 1 - (Name) Permitting & Fees

Description of Task:

Payment of costs to obtain weather modification permit to conduct airborne cloud seeding in the North Platte River Basin. Includes cost for legal notifications, holding public hearings, permit fees, commercial permit fees (2% of the contract cost), and consulting costs to assist in completion of permit application.

Method/Procedure:

Payment of invoiced expenses

Grantee Deliverable: (Describe the deliverable the grantee expects from this task)

Information on public comments received regarding project and copy of weather modification permit issued to contractor

CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)

Copies of invoices received for legal notices, public hearing costs and permitting costs and fees and copy of approved weather modification permit issues to contractor

Tasks

Provide a detailed description of each task using the following format: (PLEASE DEFINE ACRONYMS)

Task 2 - (Name) Target/Control Analysis and annual Evaluation

Description of Task:

Target/Control Analysis using Snotel Data to obtain permit and annual reports in accordance §36-20-117(3) C.R.S.

Method/Procedure:

WSRF funding will pay invoiced costs for annual evaluations

Grantee Deliverable: (Describe the deliverable the grantee expects from this task)

Documentation that costs have been incurred and paid.



https://cwcb.colorado.gov/

Tasks

CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)

Copies of invoices received for annual evaluations and evidence that Target/Control Analysis was completed

Tasks

Provide a detailed description of each task using the following format: (PLEASE DEFINE ACRONYMS)

Task 3 - (Name) Cloud seeding Operations

Description of Task:

Aircraft flight hours, aircraft fuel, Burn in place pyrotechnics and ejectable pyrotechnics (seeding agents)

Method/Procedure:

Pay Invoices Received for Operational Costs

Grantee Deliverable: (Describe the deliverable the grantee expects from this task)

Documentation that costs have been incurred and paid.

CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)

Copies of invoices received for cloud seeding operations

Tasks

Provide a detailed description of each task using the following format: (PLEASE DEFINE ACRONYMS)

<u>Task 4 - (Name)</u> Grant Management (In Kind contribution from JCWCD)

Description of Task:

Prepare progress reports and reimbursement requests to CWCB

Method/Procedure:

Use volunteer time to prepare reports and reimbursement requests

Grantee Deliverable: (Describe the deliverable the grantee expects from this task)

Reports and Reimbursement Records

CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)

Copies of invoiced incurred and paid.

Repeat for Task 3, Task 4, Task 5, etc.



https://cwcb.colorado.gov/

Budget and Schedule

Exhibit B - Budget and Schedule: This Statement of Work shall be accompanied by a combined **Budget** and **Schedule** that reflects the Tasks identified in the Statement of Work and shall be submitted to CWCB in <u>excel format</u>. A separate <u>excel formatted</u> Budget is required for engineering costs to include rate and unit costs.

Reporting Requirements

Progress Reports: The grantee shall provide the CWCB a progress report every 6 months, beginning from the date of issuance of a purchase order, or the execution of a contract. The progress report shall describe the status of the tasks identified in the statement of work, including a description of any major issues that have occurred and any corrective action taken to address these issues. The CWCB may withhold reimbursement until satisfactory progress reports have been submitted.

Final Report: At completion of the project, the grantee shall provide the CWCB a Final Report on the grantee's letterhead that:

- Summarizes the project and how the project was completed.
- Describes any obstacles encountered, and how these obstacles were overcome.
- · Confirms that all matching commitments have been fulfilled.
- Includes photographs, summaries of meetings and engineering reports/designs.

Payments

Payment will be made based on actual expenditures, must include invoices for all work completed and must be on grantee's letterhead. The request for payment must include a description of the work accomplished by task, an estimate of the percent completion for individual tasks and the entire Project in relation to the percentage of budget spent, identification of any major issues, and proposed or implemented corrective actions.

The CWCB will pay the last 10% of the <u>entire</u> water activity budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the water activity and purchase order or contract will be closed without any further payment. Any entity that fails to complete a satisfactory Final Report and submit to CWCB within 90 days of the expiration of a purchase order or contract may be denied consideration for future funding of any type from CWCB.

Performance Requirements

Performance measures for this contract shall include the following:

- (a) Performance standards and evaluation: Grantee will produce detailed deliverables for each task as specified. Grantee shall maintain receipts for all project expenses and documentation of the minimum inkind contributions (if applicable) per the budget in Exhibit B. Per Grant Guidelines, the CWCB will pay out the last 10% of the budget when the final deliverable is completed to the satisfaction of CWCB staff. Once the final deliverable has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.
- (b) Accountability: Per the Grant Guidelines full documentation of project progress must be submitted with each invoice for reimbursement. Grantee must confirm that all grant conditions have been complied with on each invoice. In addition, per the Grant Guidelines, Progress Reports must be submitted at least once every 6 months. A Final Report must be submitted and approved before final project payment.
- (c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A. Progress shall be detailed in each invoice and in each Progress Report, as detailed above. Additional inspections or field consultations will be arranged as may be necessary.
- (d) Noncompliance Resolution: Payment will be withheld if grantee is not current on all grant conditions. Flagrant disregard for grant conditions will result in a stop work order and cancellation of the Grant Agreement.



https://cwcb.colorado.gov/



Colorado Water Conservation Board

Water Supply Reserve Fund

EXHIBIT B - BUDGET AND SCHEDULE - Direct & Indirect (Administrative) Costs

Date: 3/2/21

Water Activity Name: North Platte Basin Airborne Cloud Seeding Project (B)

Grantee Name: Jackson County Water Conservancy District

Task No. (1)	<u>Description</u>	<u>Start Date⁽²⁾</u>	End Date	Matching Funds (cash & in-kind) ⁽³⁾	WSRF Funds (Basin & Statewide combined) ⁽³⁾	<u>Total</u>
<u>1</u>	Permitting & Fees	<u>Sept 21</u>	<u>June 25</u>	\$4,250	\$12,750	\$17,000
<u>2</u>	Target/Control Analysis & Annual Evaluations	<u>Sept 21</u>	<u>June 25</u>	\$7,500	\$22,500	\$30,000
<u>3</u>	Cloud Seeding Operations	<u>Sept 21</u>	March 24	\$63,250	\$189,750	\$253,000
<u>5</u>	Grant Management	<u>Sept 21</u>	<u>June 25</u>	\$18,000 in kind	\$0	\$18,000
						\$0
	Total			\$93,000	\$225,000	\$318,000

⁽¹⁾ The single task that include costs for Grant Administration must provide a labor breakdown (see Indirect Costs tab below) where the total WSRF Grant contribution towards that task does not exceed 15% of the total WSRF Grant amount.

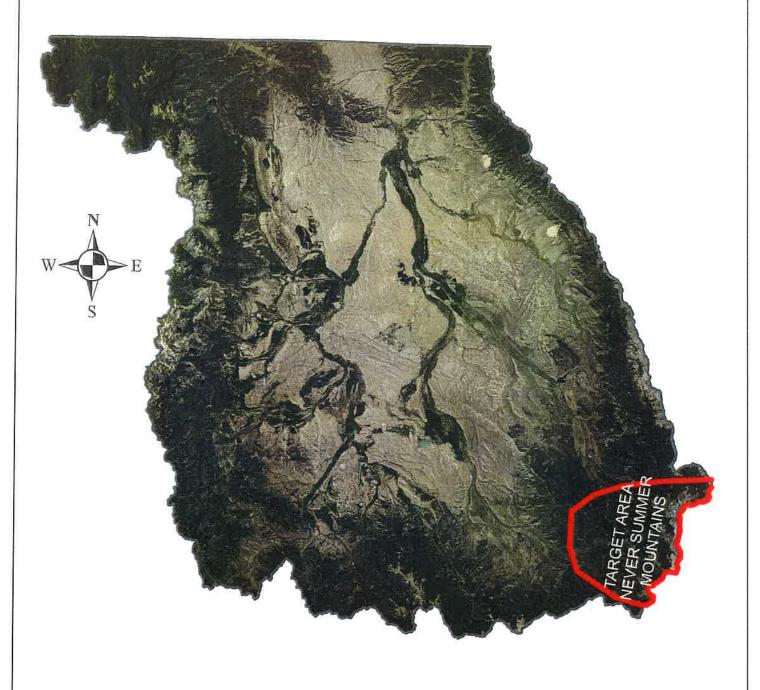
The CWCB will pay the last 10% of the entire water activity budget when the Final Report is completed to the satisfaction of the CWCB staff project manager. Once the Final Report has been accepted, the final payment has been issued, the water activity and purchase order (PO) or contract will be closed without any futher payment. Any entity that fails to complete a satisfactory Final Report and submit to the CWCB with 90 days of the expiration of the PO or contract may be denied consideration for future funding of any type from the CWCB.

• Additionally, the applicant shall provide a progress report every 6 months, beginning from the date of contract execution

⁽²⁾ Round values up to the nearest hundred dollars.

[•] Additional documentation providing a Detailed/Itemized Budget may be required for contracting. Applicants are encouraged to coordinate with the CWCB Project Manager to determine specifics.

NORTH PLATTE BASIN CLOUD SEEDING PROJECT



0 2.25 4.5 9 13.5 18 Miles

March 24, 2021
Mr. Ben Wade
CWCB
Water Supply Planning Section
Ben,
The North Platte Basin Roundtable voted to approve Jackson County Water Conservancy District's application to continue to fund the Cloud Seeding Program for the amount of \$225,000, to come from the North Platte Basin Account funds. The application received eight votes in support, zero votes opposing the proposal and five Roundtable members recused themselves from the vote.
This project is in alignment with Water Plan and BIP goals and objectives and will help increase water supply for the basin.
If you have any questions please call me at 970-723-4498.
Sincerely,
Ty Wattenberg
North Platte Basin Roundtable Chair