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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	**Gunnison | North Platte | South Platte | Yampa/White**	**Colorado | Metro | Rio Grande | Southwest**
Ben Wade	Craig Godbout	Megan Holcomb
ben.wade@state.co.us	craig.godbout@state.co.us	megan.holcomb@state.co.us
303-866-3441 x3238	303-866-3441 x3210	303-866-3441 x3222

WSRF Submittal Checklist (Required)

X	I acknowledge this request was recommended for CWCB approval by the sponsoring roundtable.
X	I acknowledge I have read and understand the 2016 WSRF Criteria and Guidelines.
X	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract.(1)
Application Documents	
X	Exhibit A: Statement of Work(2) *(Word – see Template)*
X	Exhibit B: Budget & Schedule(2) *(Excel Spreadsheet – see Template)*
X	Letters of Matching and/or Pending 3rd Party Commitments(2)
	Map(2)
X	Photos/Drawings/Reports
X	Letters of Support
Contracting Documents(3)	
	Detailed/Itemized Budget(3) *(Excel Spreadsheet – see Template)*
	Certificate of Insurance(4) *(General, Auto, & Workers' Comp.)*
	Certificate of Good Standing(4)
	W-9 Form(4)
	Independent Contractor Form(4) *(If applicant is individual, not company/organization)*
	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.

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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:	March 2019
Desired Notice to Proceed Date:	June 2019

Water Activity Summary	
Name of Applicant	Southwest Basin Roundtable
Name of Water Activity	San Miguel Stream Management Plan: Stakeholder Engagement Process

Approving Roundtable(s)	Basin Account Request(s)(1)
Southwest Basin Roundtable	$12,530
Basin Account Request Subtotal	$12,530
Statewide Account Request(1)	$0
Total WSRF Funds Requested (Basin & Statewide)	$12,530
Total Project Costs	$50,122

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

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Grantee and Applicant Information	
Name of Grantee(s)	San Juan Resource Conservation and Development Council
Mailing Address	P.O. Box 1006, Durango, Colorado 81302
FEIN	74-2408579
Grantee's Organization Contact(1)	Carrie Padgett
Position/Title	Council Chair
Email	carrie@durangowater.com
Phone	970-259-5322
Grant Management Contact(2)	Thia Parry
Position/Title	Executive Director
Email	sjrcd@hotmail.com
Phone	970-382-9371
Name of Applicant (if different than grantee)	Southwest Basin Roundtable
Mailing Address	P.O. Box 1150, 60 S. Cactus, Cortez, Colorado 81321
Position/Title	Mike Preston, Roundtable Chair
Email	mpreston@frontier.net
Phone	970-565-7562

(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 project applicant is the Southwest Basin Roundtable. A fiscal agent, San Juan Resource Conservation and Development Council (SJRCD), will be used to manage the financial aspects of the grant. SJRCD was established in 1972 for the purpose of helping residents of southwest Colorado to use, protect and improve natural, cultural, historic and economic resources. SJRCD helps local groups realize their goals by providing support and sponsorship, including administrative support and fiscal management for those who do not have the capacity to pursue their own non-profit status, grant research, proposal writing and review, grant administration, and website design and development.

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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.
X	**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

Type of Water Activity (check one)	
X	Study
	Implementation

Category of Water Activity (check all that apply)		
X	Nonconsumptive (Environmental)	
X	Nonconsumptive (Recreational)	
X	Agricultural	
X	Municipal/Industrial	
	Needs Assessment	
X	Education & Outreach	
	Other	Explain:

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	San Miguel County
Latitude	San Miguel Watershed
Longitude	San Miguel Watershed

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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.
The San Miguel Stream Management Plan Stakeholder Engagement Process will include outreach efforts and site visits held throughout the basin. The objectives of the process are: (1) organize a stakeholder group that includes a diverse set of interests within the entire San Miguel River Basin with active participation from the West End's agricultural community; and (2) create a trusted space where potentials actions may be discussed as opportunities for multiple purpose projects. Existing technical work has been done in the basin under the San Miguel Pilot Project Phase 1. A draft report for the pilot project was completed in April of 2017. Based on feedback from the public meetings presenting the draft report, it was made clear that a more thorough stakeholder engagement process with leadership and robust participation from agricultural water users needs to occur to support the effort on the San Miguel River. This process aims to foster relationships up and down river. Through this relationship building process and review of the draft report, the outcome(s) would be identification of opportunities that meet multiple purpose water needs along the river. See the attached executive summary of the draft technical report, scope of work, and budget for further details.

Measurable Results		
To catalog measurable results achieved with WSRF funds please provide any of the following values.		
	New Storage Created (acre-feet)	
	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	
X	Other	Explain: Stakeholder Engagement Process

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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 [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 2016 WSRF Criteria and Guidelines).
The proposed Process addresses the following Southwest Basin Roundtable Implementation Plan Goals: ➢ Goal A2: Support specific and unique new IPPs important to maintaining the quality of life in the region and to address multiple purposes including municipal, industrial, environmental, recreational, agricultural…needs. ➢ Goad D1: Maintain, protect and enhance recreation values and economic values to local and statewide economies derived from recreation water uses such as fishing, boating, hunting, wildlife watching and hiking. [p. 15] ➢ Goal E2: Protect, maintain, monitor, and improve the condition and natural function of streams, lakes, wetlands, and riparian areas to promote self-sustaining fisheries, and to support native species and functional habitat in the long term, and adapt to changing conditions. [p. 16] This proposed Process addresses the following Colorado Water Plan Environmental and Recreation Goals: ➢ "Understand, protect, maintain, and improve conditions of streams, lakes, wetlands and riparian areas to promote self-sustaining fisheries and functional riparian and wetland habitats to promote long term sustainability and resiliency." [p.6-157] This proposed Process is consistent with the Southwest Basin Roundtable Identified Project and Process (IPP) multi-basin IPP No. 2-MB: ➢ 2-MB: Where environmental and/or recreational gaps are identified, a collaborative effort will be initiated to develop innovative tools to protect water identified as necessary to address these gaps.

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Water Activity Justification

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

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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 3rd 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)
Southwestern Water Conservation District (cash)	$6,265
The Nature Conservancy (cash)	$6,265
Total Match	$12,530
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 3rd party (cash, in-kind, or combination). The remaining 30% of the required match may be provided from any other source (Basin, applicant, or 3rd 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.

The applicant supported the San Miguel Stream Management Plan, Pilot Project. Phase 1 of this pilot project aimed to: (1) characterize existing and historical conditions, (2) enhance understanding of spatial and temporal patterns in environmental and recreational needs, and (3) identify opportunities for cooperative projects and processes to optimize support for existing uses and important environmental and/or recreation needs. This project was funded largely through the Watershed Restoration Program. The proposed process is complimentary to this technical work.

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

1. San Miguel Watershed Coalition & Trout Unlimited
2. San Miguel Stream Management Plan, Pilot Project
3. Southwest Basin Roundtable and Water Restoration Program
4. Winter 2015
5. POGG1 PDAA 20160000000000000800

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.

Not applicable.

SCOPE OF WORK

GRANTEE AND FISCAL AGENT (IF DIFFERENT)

Grantee: Southwest Basin Roundtable

Fiscal Agent: San Juan Resource Conservation and Development Council (SJRCD)

PRIMARY CONTACT(S) INFORMATION

Grantee Contact:	Mike Preston, Southwest Basin Roundtable Chair mpreston@frontier.net (970) 565-7562
Project Manager:	Stacy Beaugh, Facilitator, Strategic By Nature stacybeaugh@gmail.com (630) 854-5129
Fiscal Agent Contact:	Thia Parry, Executive Director at SJRCD sjrcd@hotmail.com (970) 382-9371

PROJECT NAME

San Miguel Stream Management Plan: Stakeholder Engagement Process

TOTAL PROJECT COSTS

Grant Request Amount: $50,122

INTRODUCTION AND BACKGROUND

The San Miguel Pilot Project aimed to (1) characterize existing and historical conditions, (2) enhance understanding of spatial and temporal patterns in environmental and recreational needs, and (3) identify opportunities for cooperative projects and processes to optimize support for existing uses and important environmental and/or recreation needs. This pilot project was an outcome from the Southwest Basin's Roundtable expressed need to evaluate environmental and/or recreation gaps and where gaps are identified develop innovate tools to address these identified gaps. The pilot project completed its draft report in April of 2017.

Throughout the pilot project, a sub-committee of the Roundtable was periodically updated and provided input on the analysis of the identified needs and gaps. These meetings were technical in nature. A series of public stakeholder meetings were held while the draft report was being completed. Based on feedback from these public meetings, it was clear that a more thorough stakeholder engagement process with leadership and robust participation from agricultural water users needs to occur to support the effort on the San Miguel River. This stakeholder engagement proposal aims to foster relationships up and down the San Miguel River. Through this relationship building process and review of the draft report, the outcome would be identification of opportunities that meet multiple purpose water needs along the river. Below are the tasks, deliverables, budget, and timeline for the stakeholder engagement process is described.

OBJECTIVES

The objectives of the stakeholder engagement process are to: (1) Organize a stakeholder group that includes a diverse set of interests within the entire San Miguel River Basin with active participation from the West End's agricultural community; and (2) create a trusted space where potentials actions may be discussed as opportunities for multiple purpose projects.

TASK 1

Task 1 is to establish a stakeholder group with the appropriate level of participation from the agricultural community and users from the entire San Miguel River Basin. Stakeholder group establishment will build on outcomes achieved and lessons learned from Phase 1 of the pilot project. Participants of the group will identify their water values within the basin and expectations of the group.

Description of Task

- The purpose of this task to establish a stakeholder group with a wide variety of participants from the San Miguel River Basin. Two co-chairs for the stakeholder group have been identified: an environmental representative and agricultural representative. These co-chairs have created an initial list of entities and individuals that may be interested in participating in the work group. Task 1 will be to reach out to these identified parties and determine their level of interest as well as identify attributes and water-related values they find most important within the San Miguel River Basin.

Method/Procedure

With support from the co-chairs, the Project Facilitator, Strategic By Nature, will interview the identified parties. This will be done by phone or in-person to determine if parties are interested, what level of participation they would be able to commit to during the grant period, and their suggestions of other parties who should be involved in the stakeholder process. Based on these interviews, the facilitator will develop the group's structure and outline initial meeting objectives and agendas for the group. Initial objectives once convened are for the group to participate in establishing ground rules and laying the groundwork for relationship building by sharing their interests, water related values, and expectations for the process.

Deliverable

The deliverable for this task will be the establishment of a diverse stakeholder group with defined structure and common objectives. This group will meet bi-monthly or quarterly over an 18-month period.

TASK 2

Task 2 is to facilitate the review of Phase 1 draft technical report.

Description of Task

The purpose of this task is to review the draft technical report developed in Phase 1 of the project with the stakeholder group. The contractor charged with drafting the report, Lotic Hydrological, will participate in this task.

- Method/Procedure

  The review process of the draft technical report from Phase 1 will be guided by the stakeholder group. It is anticipated the review process will occur through a series of facilitated meetings. The contractor, Lotic Hydrologic, who drafted the report will participate in these meetings. The review process is expected to include discussions of the report's assumptions, existing and historical conditions used for the analysis, and enhance participants' understanding of spatial and temporal patterns for environmental and recreational needs. The stakeholder group may ask questions of the contractor that could lead to edits or additions to the draft report. If needed, the stakeholder group will conduct a public meeting to present their conclusions and assessment of the draft report.

- Deliverable

  The deliverable of Task 2 is for all members of the stakeholder group to have a common understanding of the Phase 1 technical report.

TASK 3

Task 3 is for the stakeholder group to identify projects or opportunities to meet multiple purposes within the San Miguel River Basin.

- Description of Task

  The purpose of this task is for the stakeholder group to collectively identify opportunities that will meet multiple purpose water needs within the basin.

- Method/Procedure

  The stakeholder group will guide this process. It is anticipated a series of meetings, including field trips, will be held to discuss and, if agreeable, identify projects or opportunities that meet multiple purpose water values within the river basin. The field trips will be to visit areas of potential multiple purpose projects. Common understanding from Task 2 will help inform these discussions as well as input from locals and water experts. The stakeholder group will conduct a public meeting to present any identified projects that meet multiple purposes.

- Deliverable

  The deliverable for this task will be to produce a report summarizing the stakeholder group's discussions. If multiple purpose opportunities are identified by the stakeholder group these projects will be summarized within the report.

REPORTING AND FINAL DELIVERABLE

REPORTING AND FINAL DELIVERABLE

The applicant shall provide the SWCD a written report and applicable supporting documentation of the work accomplished by the applicant no later than December 31, 2019. The written report will include accounting of how the funds were used as well as descriptions of the task(s) the funds supported implementing.

BUDGET AND TIMELINE

Task	Description	Target Start Date**	Target Completion Date**	CWCB WRP	Roundtable WSRF	TNC Cash Match	SWCD Grant	Total
1	Establish a stakeholder group and identify water related attributes and values in the San Miguel River Basin	1	4	$2,100	$1,050	$0	$1,050	$4,200
2	Facilitate Review of Phase 1 technical report in coordination with Lotic Hydrological	4	12	$7,475	$3,738	$0	$3,740	$14,950
3	Identify projects/opportunities that meet multiple purposes and water values	12	18	$6,588	$3,294	$3,294	$0	$13,175
	Associated Miscellaneous Expenses+ and SJRCD Admin. Costs	1	18	$8,898	$4,449	$2,971	$1,475	$17,797
	Totals			**$25,061**	**$12,530**	**$6,625**	**$6,625**	**$50,122**

*Assumed start date is the first month of when the first grant contract is awarded.

**Meeting dates and field trips may vary based on stakeholder availability and/or weather conditions.

+Miscellaneous expenses include mileage and travel costs, which support all tasks of the grant. Travel and mileage costs are budgeted for both the Project Facilitator and the Lotic Hydrological.

BUDGET BREAKDOWN

		Project Facilitator		Advisory Staff Support		Facilitator		Lotic Hydrological		
Labor Distribution		$175 per hour	Subtotal	$120 per hour	Subtotal	$75 per hour	Subtotal	$150 per hour	Subtotal	Subtotals
Task 1	Establish a stakeholder group and identify water related attributes and values in the San Miguel River Basin	0	$0	35	$4,200	0	$0	0	$0	$4,200
Task 2	Facilitate Review of Phase 1 technical report in coordination with Lotic Hydrological	40	$7,000	0	$0	26	$1,950	40	$6,000	$14,950
Task 3	Identify projects/opportunities that meet multiple purposes and water values	35	$6,125	40	$4,800	0	$0	15	$2,250	$13,175
	Associated Miscellaneous Expenses									$13,240
	Budget Total					Budget Sub-Total				$45,565
						SJRCD Administration. Costs (10%)				$4,557
								Grand Total		**$50,122**

Other Direct Costs		Cost	Quantity	Subtotal
Associated Miscellaneous Expenses	Photocopies	$0.15	650	$98
	Color Copies	$0.75	300	$225
	Mileage	$0.55	5,425	$2,957
	Travel Expenses	$995	8	$7,957
	Meeting Expenses	$250	8	$2,000
			Total	$13,240

SOUTHWEST BASIN ROUNDTABLE'S EVALUATION QUESTIONNAIRE

To assist the Roundtable in determining whether and to what extent a proposed project and/or process meets the values set forth in the By-Laws and goals of the Basin Implementation Plan, the following questions should be addressed separately as can reasonably be answered by the applicant. *Note: this is not an exhaustive list and additional questions may be asked of the applicant.*

1. What benefit(s) does the project provide? Are there multiple purposes? *Note: this does not mean that a single purpose project would be rejected, but for major funding requests, addressing multiple use needs would be an advantage.*
   The proposed process will benefit multiple purposes by creating a diverse stakeholder group in the San Miguel River Basin. This process will encourage community engagement form a variety of backgrounds will creating a trusted space where potential actions may be discussed as opportunities for multiple purpose projects in the area.
2. Outline the steps needed for completion of the project. What permit issues must be overcome? How will funds acquired in this process be used to accomplish the final goal?
   No permits are necessary for this process. Three tasks are proposed to complete the process. These tasks include: (1) establish a stakeholder group and identify water related attributes and values in the San Miguel River Basin; (2) facilitate review of Phase 1 technical report in coordination with Lotic Hydrological; and (3) identify projects/opportunities that meet multiple purposes and water values. Funding will be used to pay for facilitator services and Lotic Hydrological.
3. For prioritization of different proposals and assessment of the merits of the plan, can this project be physically built with this funding? Are further studies needed before actual construction is commenced (if the project anticipates construction)? Will these studies or additional steps delay the completion of the project substantially?
   This study supports pervious effort on the San Miguel River under the San Miguel Stream Management Pilot Project. This funding will complement those technical efforts by supporting stakeholder engagement efforts. No physical construction will occur with this funding and no additional technical work needs to occur prior to the engagement efforts.
4. Does the proposal envision and anticipate financial or in-kind support from its beneficiaries or from other sources in addition to the funding requested here? Would a loan reasonably address the needs of the applicant or, with a grant, should a recommendation be added to assess the future project status for ability to repay a portion of the grant?
   While not quantified, in-kind support will be provided by all members of the stakeholder group. No other funding is envisioned besides the sources proposed in the attached budget. A loan is unnecessary to complete this work.
5. What is the ability of the sponsor to pay for the project? What actions have been taken to secure local funding? Are there supporting factors which overcome the sponsor's inability to pay? Please provide a summary of the sponsor's financial health such as customer fee structure, mill levy rate, or other applicable information that demonstrates the sponsor's ability to pay for the project. (These could be related to basin water needs and compact considerations).
   In addition to the Water Supply Reserve Fund, the applicant has requested funds from the Watershed Restoration Program, Southwestern Water Conservation District, and The Nature Conservancy. The process sponsor is the Southwest Basin Roundtable which has no
6. What alternative sources of water or alternative management ideas have you considered? Are there water rights conflicts involving the source of water for the project? If yes, please explain.

This is a non-consumptive use process, so no alternative sources are considered. This process is a collaborative effort to reduce water rights related conflicts in the watershed.

7. Has there been public input solicited and is there local support for the project? Have the beneficiaries solicited funding, letters or other documentation to demonstrate support?
   Yes, the public has been solicited and this grant process is a byproduct of the publics request for more engagement opportunities.
8. Is there opposition to the project? If there is opposition, how have those concerns been addressed? Identify any conflicts that may exist and how they will be addressed.
   No, this a project supported by the locals within the watershed that would like to have a forum to discuss and address concerns relating to work conduct under the pilot project.
9. Does this project affect the protection and conservation of the natural environment, including the protection of open space? If yes, please explain.
   No, not applicable.
10. Are there impacts of the proposed action on other non-decreed values of the stream or river? Non-decreed values may include things such as non-decreed water rights or uses, recreational uses and soil/land conservation practices.
    Not at this time. This is a non-consumptive use process with no proposed actions at this time.
11. Does this project relate to local land use plans? If yes, please explain.
    Not applicable.
12. Does the project depend on a conversion of an agricultural water right? If yes, please explain.
    Not at this time. This is a non-consumptive use process with no proposed actions at this time.
13. Does the project support agricultural development or protect the existing agricultural economy? If yes, please explain.
    Not at this time. This is a non-consumptive use process with no proposed actions at this time.
14. Does the project optimize existing water rights and/or existing infrastructure? If yes, please explain.
    Not at this time. This is a non-consumptive use process with no proposed actions at this time.
15. Does the applicant anticipate future funding requests to complete the additional components of this project? Does the applicant have a long term operation, maintenance and replacement plan? When was the last update of the plan?
    No, not at this time.
16. Does this project have an education component? If yes, please explain how it is consistent with the Roundtable's Education Action Plan.
    Not specifically as it relates to deliverables of the Roundtable's Education Action plan but in general this will be an educational process within the watershed to further understand the draft report of the pilot project and potential benefits or impacts from implementing any projects within the watershed.

The Nature Conservancy in Colorado
1109 Oak Drive
Durango, CO 81301

tel (970) 375-0183
cell (970) 739-8624

nature.org/colorado

November 1, 2018

Mike Preston
Southwest Basin Roundtable Chair

Dear Mr. Preston:

Please accept this letter from The Nature Conservancy supporting the Southwest Basin Roundtable's (Roundtable) San Miguel Stream Management Plan: Stakeholder Engagement Process project. The Nature Conservancy has worked on water management and river health issues in the San Miguel River basin for decades and is excited to continue that work in support of (and as a co-leader of) this important stakeholder engagement process project.

The Nature Conservancy understands that the Roundtable will be seeking funds from the Colorado Water Conservation Board's Watershed Restoration Program, the Southwest Basin Roundtable's Water Supply Reserve Fund, and from the Southwestern Water Conservation District. The Nature Conservancy supports all of those funding applications, and we anticipate that the Roundtable will submit a request to The Nature Conservancy for matching funds of up to $7,000, depending on the outcome of discussions with those potential funding entities.

Sincerely,

Celene Hawkins

Celene Hawkins
Western Colorado Water Project Manager
The Nature Conservancy

SAN MIGUEL PILOT PROJECT: ENVIRONMENTAL AND RECREATIONAL NEEDS ASSESSMENT

Trout Unlimited
San Miguel Watershed Coalition
Southwest Basin Roundtable

DRAFT LAST REVISED: 2017.04.01

lōtic hydrological

PO Box 1524

Carbondale, CO 81623

Executive Summary

ES.1 PURPOSE

The San Miguel Pilot Project responds to the call for environmental and recreational water use planning articulated in both the CWP and the 2015 Southwest Basin Implementation Plan (SWBIP). The CWP calls for broad application of *stream management planning* to streams with significant environmental or recreational value. These structured and collaborative planning efforts can help resolve conflict and realize optimized management of water for the benefit of consumptive, environmental and recreational uses. Similarly, the Southwest Basin Roundtable (SBRT) identified a significant gap in information necessary to understand environmental and recreational (E&R) water needs in the basin during development of the SWBIP.

> **"With respect to the Southwest Basin's Environmental and Recreational values and water needs, the Roundtable recognizes that there are significant gaps in the data and understanding regarding the flows and other conditions necessary to sustain these values. The Roundtable also recognizes that the tools currently available to help maintain those conditions are limited."[36]**

Understanding environmental and recreational water use needs in the Southwest Basin is particularly challenging given the size of the basin and diversity of the nine major sub-drainages that it encompasses. In 2010, the SBRT completed a basin-wide environmental and recreational needs assessment (NCNA) as part of the Statewide Water Supply Initiative (SWSI).[14] The NCNA provided information about the type and geographic location of environmental and recreational water uses throughout the basin, but did not quantify water supply needs for those uses. Responding to this gap in environmental and recreational water needs data and planning, the SBRT supported a pilot project to develop E&R needs information in the San Miguel watershed, with the hope that it could serve as a model for similar evaluation and planning efforts in the Southwest Basin.

The San Miguel Pilot Project aims to 1) characterize existing and historical conditions, 2) enhance understanding of spatial and temporal patterns in environmental and recreational needs, and 3) identify

opportunities for cooperative projects and processes to optimize support for existing uses and important environmental and/or recreational needs. This project specifically responds to recommendations included in the 2015 Southwest Basin Implementation Plan (SWBIP):

> **"1. Evaluation of environmental and/or recreation gaps is planned to be conducted for improvement of nonconsumptive resources and/or in collaborative efforts with development of consumptive IPPs. The evaluations may be conducted by a subgroup of the Roundtable or by individuals, groups, or organizations with input from the Roundtable. The evaluation may utilize methodologies such as the southwest attribute map, flow evaluation tool, R2 Cross, and any other tools that may be available.**
>
> **2. Where environmental and/or recreational gaps are identified, a collaborative effort will be initiated to develop innovative tools to protect water identified as necessary to address these gaps."[36]**

ES.2 ASSESSMENT APPROACH

The diversity of, and competition among, various water uses in the San Miguel watershed produces gaps between existing supply—both in time and in place—and the supply needed to satisfy consumptive, environmental and recreational use needs. Quantification of consumptive use needs is well-understood and extensively practiced in the State of Colorado by water planners and engineers. Conversely, a single or universal approach for characterizing environmental and recreational use needs in streams and rivers across the State does not exist. This is largely a result of complexity involved in characterizing the bi-directional and/or synergistic behaviors of the physical and biological components of riverine ecosystems and in articulating recreational user preferences nuanced by hydrological behavior and the wide ranges of recreational interactions with streams and rivers. A somewhat comprehensive approach was, therefore, required for characterizing environmental and recreational use needs and any gaps that existed between those needs and existing conditions across the San Miguel watershed.

Successful characterization of environmental and recreational use needs gaps relies upon clearly defined expectations for ecosystem structure/function and recreational user experiences. While local

communities, federal and state agencies, and the SWBRT each present these expectations in various documents and policy statements relevant to streams and rivers in the Southwest Basin, some need existed to aggregate this information for the San Miguel River and its major tributaries to ensure that planning activities aligned well with local and regional perspectives. The Southwest Basin Roundtable E&R Subcommittee, Colorado Parks and Wildlife, Trout Unlimited, American Whitewater, San Miguel Watershed Coalition and other stakeholders participated in an interactive and iterative process designed to review existing summaries of environmental and recreational attributes for the San Miguel and its tributaries. Existing information was assessed for completeness and new information was provided where necessary to ensure that 1) the selection of specific attributes, 2) the methodologies selected to assess them, and 3) the geographic area each attribute was assessed over. This process and the work that followed after produced an appraisal level assessment of E&R needs aligned with stakeholder perspectives.

CHARACTERIZING HYDROLOGY

The structural form and functional integrity of a riverine system is described by a suite of hydrological, physiochemical, biological, geomorphological, and hydraulic processes. Complex bi-directional interactions occur between each process, complicating evaluation of any one component of the system in isolation from the others. However, the overall form and function of a river is primarily influenced by the interplay of climate, geology, and hydrology. In turn, fluvial ecologists often treat the flow regime as the "master variable" exerting the largest influence on riverine ecosystem form and function.[37] The Natural Flow Paradigm[37] postulates that hydrology represents the key driver of riverine structure and function. Due to a relative dearth of observed streamflow data on many tributary streams in the San Miguel watershed, hydrological simulations for the San Miguel River and tributaries were produced by modifying the State of Colorado Stream Simulation Model (StateMOD). This model was initially developed by the Colorado Water Conservation Board (CWCB) for the Southwest Basin[12] and was refined for this project. Aggregated simulation nodes were disaggregated (or split apart into separate objects) and the simulation time step was refined from monthly to daily. Hydrological simulations were run over a 30-year period (1974-2013) and outputs used to statistically define streamflow time series representing wet, average, and dry year types. These modelling results were combined with other assessment tools to help stakeholders understand how existing water management activities impact a variety of attributes including channel dynamics, riparian health, aquatic habitat, and recreational use opportunities.

CHARACTERIZING CHANNEL DYNAMICS NEEDS AND GAPS

Channel dynamics encompass the fluvial and geomorphological processes that interact to control channel form and evolution across a range of spatial and temporal scales. Channel dynamics respond to interactions between patterns of rainfall and runoff, catchment-scale physical attributes (e.g. surficial geology, topography), riparian community structure, and local use practices (e.g. transportation corridor alignment, grazing practices). In a preferred state, channel dynamics maintain aquatic habitat quality and provide the disturbance template upon which riparian vegetation thrives. Modification of the hydrological regime, altered patterns of erosion, adjustments to the structure of the channel bed, or changes in riparian community composition and extent may yield fundamental shifts in the geometry and behavior of the stream channel. Changes in sediment supply, channel forming flows, or streambank vegetation may lead to complex interactive effects that may result in reduced resiliency of local channel forms, changes in sediment transport capacity, or altered connectivity between the stream and the floodplain. These changes may, in turn, impact the stability and reliability of local infrastructure (e.g. surface water diversion structures, bridges, roadways).

Assessments of channel dynamics on the mainstem San Miguel River relied on, reviews of existing reaserach, visual assessments of channel form and application of the sediment transport frequency analysis approach outlined by Schmidt and Potyondy.[67] Conclusions provided by previous USGS investigations into sediment transport on the San Miguel River[1] were verified and augmented through collection of new data in 2016. Bed sediment particle size distributions were assessed using the Wolman Pebble Count method.[64] Hydraulic models were created through use of cross sectional channel geometry information from CWCB, CPW, or BLM or collection of new channel geometry data where necessary. Hydrological time series from the simulation model were used to drive the hydraulic models. The Meyer-Peter Muller method[65] was used to calculate rates of sediment transport and calculate effective discharges at numerous locations along the mainstem San Miguel River. Water supply needs developed by the U.S. Army Corps of Engineers and others[20,66] for minimizing the impacts of ice floes were included here as well.

Channel Health Water Supply Needs

- Channel maintenance flows sufficient to transport sediment down the alluvial sections of the mainstem San Miguel River at a frequency of 2-4 years to maintain historical patterns and rates of channel evolution (Table ES.1).

- Year-round minimum 3 cfs outflow on the South Fork of the San Miguel River below Trout Lake to limit ice floe formation. [41,20]

- Year-round minimum 13 cfs outflow on the South Fork of the San Miguel River below the Ames powerhouse to limit ice floe formation. [41,20]

Table ES.1: Channel maintenance flow recommendations for unconfined reaches in the San Miguel watershed. The upper and lower bound flow recommendations correspond to the 90% confidence intervals associated with hydrological simulation model results.

Reach	Recurrence Interval (yr)	Lower Bound (cfs)	Upper Bound (cfs)
San Miguel River below Bear Creek	2-4	488	577
Lower South Fork San Miguel River	2-4	575	712
San Miguel River near Placerville	2-4	1173	1483
San Miguel River below Leopard Creek	2-4	1490	1807
San Miguel River below Cottonwood Creek	2-4	2236	2689
San Miguel River near Uravan	2-4	3358	4598
Lower Naturita Creek	2-4	166	238

Channel Health Water Supply Gaps

No water supply gaps between existing conditions and channel health needs were identified. As assessed by this investigation, existing hydrological conditions support channel dynamics on alluvial reaches of the San Miguel River. However, some sections of the San Miguel River near Telluride exist in a modified geomorphic state that restricts connections with the floodplain and elevates rates of sediment transport.

CHARACTERIZING RIPARIAN HEALTH NEEDS AND GAPS

Riparian zones are disturbance-mediated ecosystems that exist adjacent to streams and rivers as transitional gradients to drier uplands. Riparian areas provide important habitat for terrestrial and aquatic wildlife and buffers impacts from physical and chemical inputs originating in hillslopes and overbank areas. Riparian area extent and function is largely a function of landscape position, local hydrology and moisture gradients, alluvial and colluvial disturbance magnitude and frequency, and development activities in the floodplain. Despite their relatively small total land coverage in the San Miguel watershed, riparian zones produce outsized contributions to biological diversity and abundance, as well as strong controls on water quality, aquatic habitat, and physical channel dynamics.

Riparian vegetation communities exist in a dynamic state governed by the local geometry of the channel/floodplain system and the inter-annual pattern of flood flows and baseflows. Occasional scouring of overbank areas provides the necessary habitat for germination of many riparian plant species. Following germination, seedlings require a relatively slow reduction in water table height over the progression of the growing season. Rapid water table elevation reductions or late season water table heights that drop below the rooting depth of cottonwoods and other riparian plants stress vegetation and can lead to seedling mortality. Changes in channel and floodplain structure or adjustments in the magnitude, timing or frequency of peak flows and baseflows may, therefore, limit riparian recruitment and produce decadent stands of vegetation exhibiting little or no regeneration. The "Recruitment Box" model[32] was used to evaluate the relationships between the hydrological regime, local channel structure, and riparian recruitment potential. This approach assumed that strong channel controls on floodplain groundwater elevations exist and that overbank flows and groundwater elevations represent critical mediators of the recruitment success for riparian vegetation. Recent investigations conducted by the BLM on segments of the mainstem San Miguel considered relationships btween river flows, floodplain

groundwater elevations, and vegetation stress. The study also identified important low flow criteria necessary for maintaining healthy riparian zones on the San Miguel River at Placerville.[16] Those findings were incorporated into this assessment.

Riparian Health Water Supply Needs

- Overbank flood frequency and magnitudes sufficient to recruit new vegetation on a range of elevation surfaces on the floodplain (Table ES.2).
- Rates of hydrograph recession and stage decline above critical growth thresholds for woody riparian species (Table ES.3).
- Growing season baseflows at or above 85 cfs on the San Miguel River near Placerville to reduce stress to woody species.

Table ES.2: Peak streamflow ranges necessary to support riparian vegetation on alluvial reaches of the San Miguel River where flood disturbance exerts a strong control on riparian zone extent. The upper and lower bound flow recommendations correspond to the 90% confidence intervals associated with hydrological simulation model results.

Location	Recurrence Interval (yr)	Lower Peak Discharge (cfs)	Upper Peak Discharge (cfs)	Minimum Discharge (cfs)
San Miguel River near Placerville	1.5	1078	1286	85
	2	1279	1528	85
	4	1729	2087	85
	5	1861	2263	85
San Miguel River below Cottonwood Creek	1.5	1071	1668	
	2	1335	2020	
	4	1871	2714	
	5	2018	2908	
San Miguel River near Naturita	1.5	1797	2508	
	2	2325	3190	
	4	3517	4743	
	5	3863	5213	

Location	Recurrence Interval (yr)	Lower Peak Discharge (cfs)	Upper Peak Discharge (cfs)	Minimum Discharge (cfs)
San Miguel River near Uravan	1.5	2074	2748	
	2	2564	3373	
	4	3655	4810	
	5	3971	5255	

Table ES.3: Maximum rates of stage decline required for successful recruitment of various species of woody riparian vegetation.

Acceptable Stage Decline per Day (mm)	Riparian Species	Common Name
6.0 - 13.0	Populus fremontii	Fremont's cottonwood
4.0	Populus deltoides	Rio Grande cottonwood
3.0	Populus angustifolia	Narrowleaf cottonwood

Riparian Health Water Supply Gaps

No water supply gaps affecting the recruitment of woody riparian vegetation were identified in this study. Periodic water supply gaps affecting late season vegetation stress near Placerville exist in low water years (Table ES.4). Potential for water supply gaps relating to vegetation stress exist on lower reaches of the San Miguel River as well, but water supply needs on those reaches have yet to be quantified.

Table ES.4: Riparian health water supply gaps assessed across the growing season (April – September) during dry conditions on the San Miguel near Placerville.

Flow Deficit Volume (af)	Flow Deficit Duration (days)	Median Flow During Deficit (cfs)
125	8	77

CHARACTERIZING AQUATIC HABITAT NEEDS AND GAPS

The mainstem San Miguel River exhibits insect abundance and high-quality spring and summer habitat capable of supporting robust fisheries. Various aquatic species/life-stages exhibit preferences for certain habitat types, as described by several hydraulic characteristics (e.g., water depth and velocity in riffles). Where optimal conditions exist, aquatic biota can utilize local habitat for feeding, reproducing, etc. Localized changes in streamflow (in timing, magnitude, and frequency) impact channel hydraulics. Changes in hydraulics may preclude use of local habitat and create barriers to passage that limit utilization of some upstream or downstream portion(s) of the stream network. In recognition of the value of both cold and warmwater fisheries (native and sport) throughout the San Miguel watershed, stakeholders elected to evaluate relationships between local channel structure, the hydrological regime, and aquatic habitat quality and extent on the San Miguel River and major tributaries where fisheries were documented and where sufficient data existed to complete an analysis.

Several methodologies exist for assessing local hydraulic conditions against the preferred conditions for various aquatic species. The State of Colorado relies on the R2Cross methodology[19] to describe minimum flow needs for assemblages of fish as support for development of Instream Flow (ISF) water rights. The methodology uses quickly obtainable hydraulic geometry data and assumes that streamflows sufficient to maintain aquatic habitat in critical riffle segments will also maintain habitat quality in other channel segments such as runs and pools. The R2Cross methodology evaluates streamflow against three hydraulic parameters: mean depth, percent bankfull wetted perimeter, and mean velocity. Importantly, existing ISF filings were not used as the benchmark for describing optimal minimum aquatic habitat flow needs in the San Miguel watershed, as many of these filings reflect adjustments to account for water availability and do not necessarily reflect the biological needs assessed for a particular stream reach. Rather, this project primarily utilized the biological basis for ISF filings to define optimal low-flow thresholds for aquatic habitat health. Where R2Cross modeling results were available, simulated hydrological records were used to assess the frequency and magnitude of flows falling below recommended flows.

Primary Aquatic Habitat Water Supply Needs

- Acceptable minimum low flows indicated by satisfaction of 2-of-3 criteria in R2Cross analysis on stream segments throughout the watershed (Table ES.5).
- Optimal minimum low flows indicated by satisfaction of 3-of-3 criteria in R2Cross analysis on stream segments throughout the watershed (Table ES.5).

Table ES.5: Minimum flow recommendations derived from R2Cross analysis. Acceptable flow recommendations are typically used to set winter ISF rights by CWCB. Optimal flow recommendations are typically used to set summer ISF rights by CWCB. Reach start and end points correspond to points of origin, tributary junctions, and other well-known geographical locations.

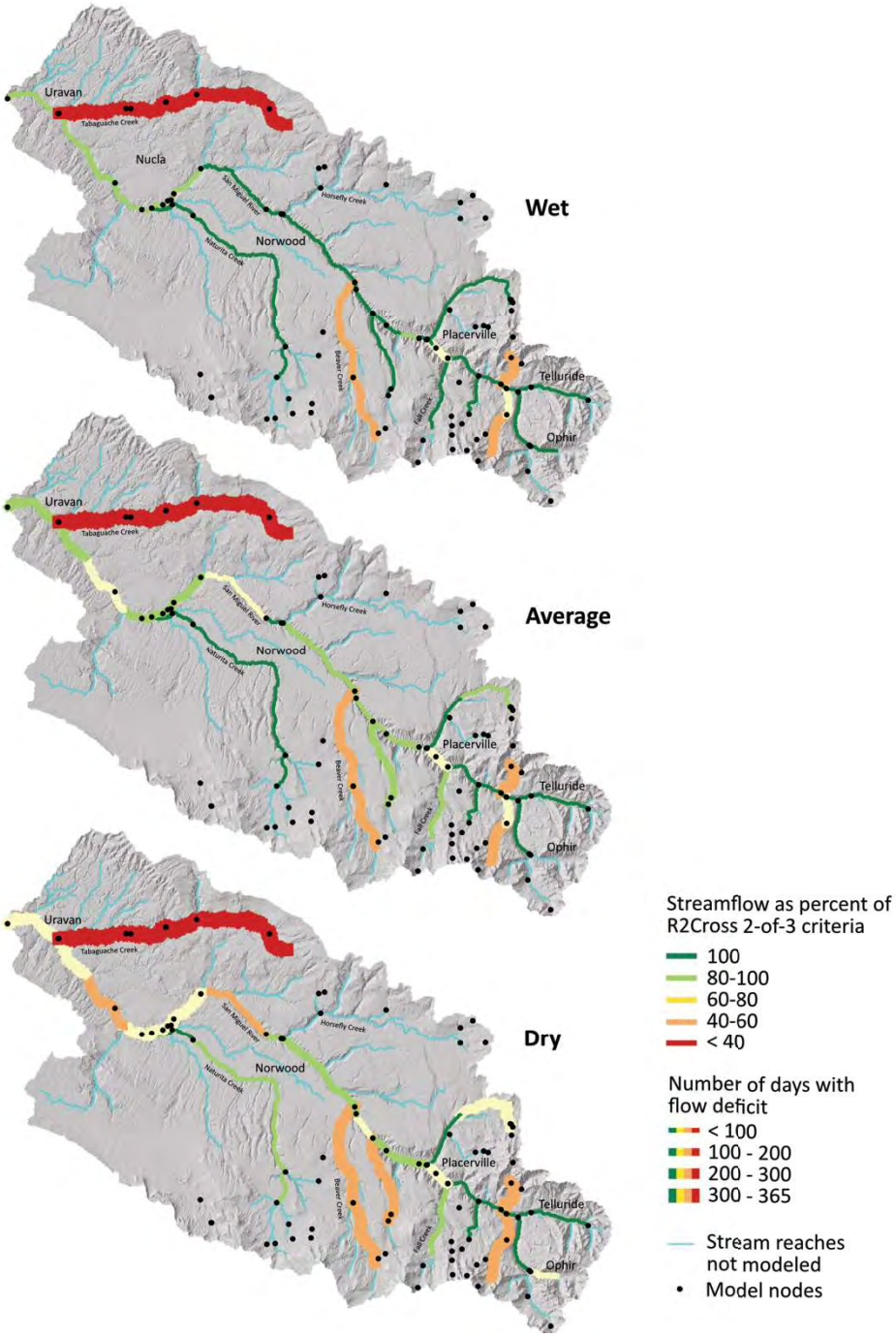
Stream	Reach Start	Reach End	Acceptable Flow (cfs)	Optimal Flow (cfs)
Big Bear Creek	Headwaters	San Miguel River	1.4	2.3
Bilk Creek	Headwaters	San Miguel River	5.3	9.5
Bear Creek	Headwaters	San Miguel River	2	4.2
Beaver Creek	Headwaters	Gurley Ditch	1.5	1.5
Beaver Creek	Gurley Ditch	San Miguel River	2.5	4.8
Cottonwood Creek	Headwaters	San Miguel River	3	6
Deep Creek	Headwaters	San Miguel River	4	4
Dry Creek	Headwaters	San Miguel River	2.5	2.5
East Beaver	Headwaters	Gurley Ditch	0.8	0.8
Elk Creek	Headwaters	Fall Creek	2.5	2.5
Fall Creek	Headwaters	San Miguel River	4.4	6.4
Horsefly Creek	Sheep Creek	San Miguel River	13	13
Howards Fork	Headwaters	Waterfall Creek	1.5	5.6
Howards Fork	Waterfall Creek	South Fork San Miguel River	3	8.3
Lake Fork	Headwaters	Trout Lake	2.5	2.5

Stream	Reach Start	Reach End	Acceptable Flow (cfs)	Optimal Flow (cfs)
Lake Fork	Trout Lake	South Fork San Miguel River	5	5
Leopard Creek	Headwaters	San Miguel River	1	4
Naturita Creek	Headwaters	MIramonte Reservoir	0.3	0.5
Naturita Creek	MIramonte Reservoir	San Miguel River	0.9	4.7
North Fork Tabeguache Creek	Headwaters	Tabeguache Creek	1.7	2.3
South Fork San Miguel River	Lake Fork	San Miguel River	9	9
San Miguel River	Bridal Veil Creek	Bear Creek	3.5	6.5
San Miguel River	Bear Creek	Prospect Creek	6.5	10.5
San Miguel River	Prospect Creek	South Fork San Miguel River	6.5	10.5
San Miguel River	South Fork San Miguel River	Bilk Creek	19.5	47.5
San Miguel River	Bilk Creek	Deep Creek	19.5	47.5
San Miguel River	Deep Creek	Fall Creek	19.5	47.5
San Miguel River	Fall Creek	Leopard Creek	75.1	129
San Miguel River	Leopard Creek	Specie Creek	55.2	85.6
San Miguel River	Specie Creek	Saltado Creek	55.2	85.6
San Miguel River	Saltado Creek	Beaver Creek	60.4	84.8
San Miguel River	Beaver Creek	Horsefly Creek	60.4	84.8
San Miguel River	Horsefly Creek	Cottonwood Creek	53.9	78.5
San Miguel River	Cottonwood Creek	Naturita Creek	83	311
San Miguel River	Naturita Creek	Dry Creek	83	311
San Miguel River	Dry Creek	Tabeguache Creek	115	325
San Miguel River	Tabeguache Creek	Dolores River	115	325

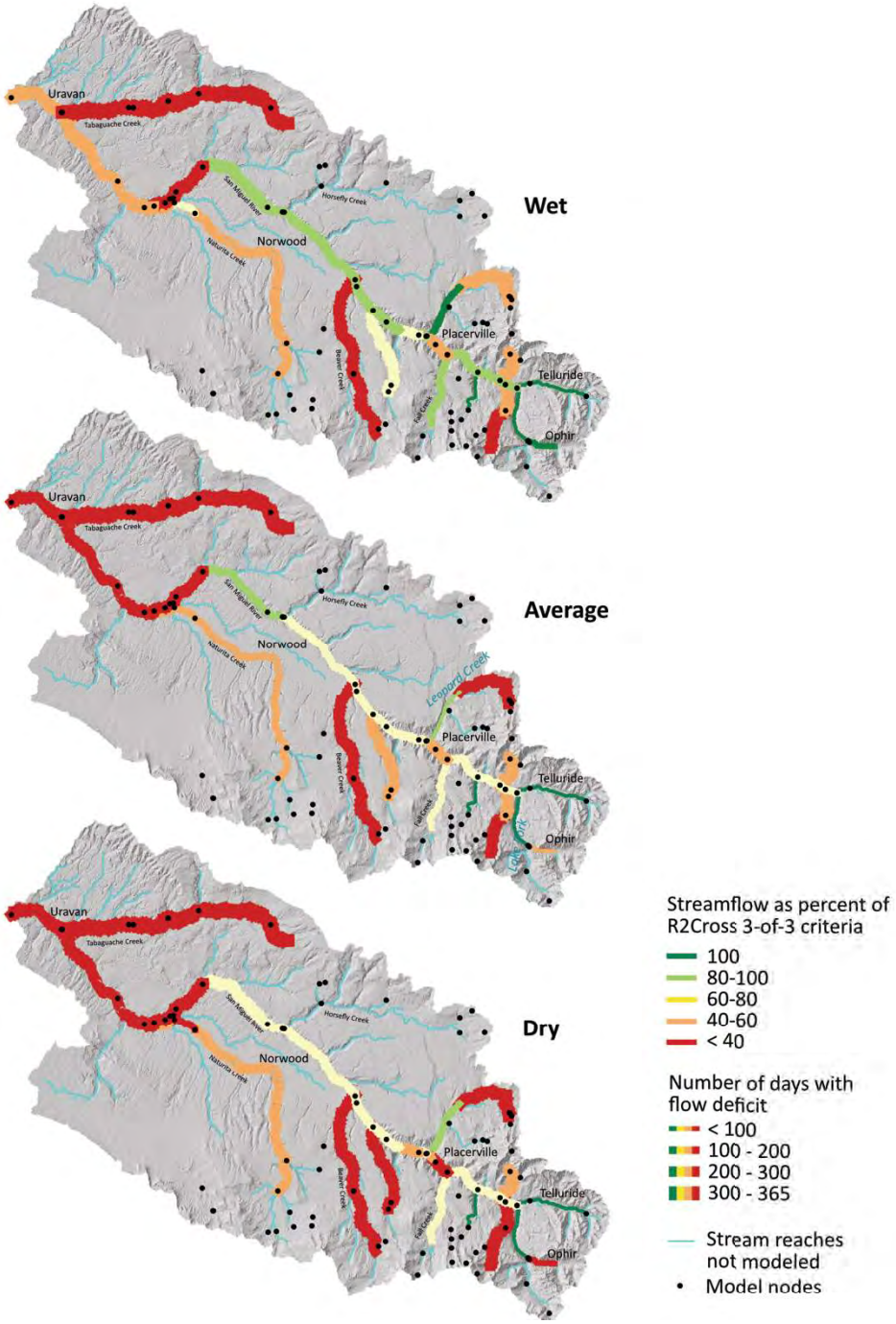
Stream	Reach Start	Reach End	Acceptable Flow (cfs)	Optimal Flow (cfs)
Specie Creek	Headwaters	San Miguel River	1.6	4.3
Saltado Creek	Headwaters	San Miguel River	1	2
Tabeguache Creek	North Fork Tabeguache	Forty-Seven Creek	2	3.5
Tabeguache Creek	Forty-Seven Creek	Templeton Ditch	2.3	4.8
Tabeguache Creek	Templeton Ditch	San Miguel River	4.7	4.7
West Beaver Creek	Headwaters	Beaver Highline Ditch	1.5	1.5

Primary Aquatic Habitat Water Supply Gaps

Water supply gaps, as assessed by this investigation, exist on numerous stream reaches throughout the watershed (Figure ES.1, ES.2). These gaps vary in magnitude and duration depending on hydrological year type. Water supply gaps are most apparent across year types on the San Miguel River mainstem below Cottonwood Creek, on Tabeguache Creek, and on Beaver Creek.



ES.1. Simulated streamflows relative to 2-of-3 R2Cross criteria under *Wet, Average,* and *Dry* conditions. Colors are proportional to the percentage of mean daily flow below the recommended minimum flow. Warmer colors represent larger flow deficits. Line thickness is relative to the number of days spent below the recommended flow. Thicker lines represent longer time periods below the recommended flow.



ES.2. Simulated streamflows relative to 3-of-3 R2Cross criteria under *Wet, Average,* and *Dry* conditions. Colors are proportional to the percentage of mean daily flow below the recommended minimum flow. Warmer colors represent larger flow deficits. Line thickness is relative to the number of days spent below the recommended flow. Thicker lines represent longer time periods below the recommended flow.

CHARACTERIZING WHITEWATER BOATING USE NEEDS AND GAPS

Recreational users enjoy whitewater boating along the San Miguel River in a variety of crafts: canoes, kayaks, duckies, rafts, and stand-up paddle boards. The enjoyment and challenges experienced by users at different flow levels can vary significantly by skill level and by craft. User flow preference thresholds for whitewater boating utilized by this study came from a recreational flow-needs assessment conducted by American Whitewater (AW). AW's user preference assessment involved collecting user feedback through an online flow evaluation survey. Participants responded to a series of questions for various river segments, that, when compiled, describe how flows affect recreation quality and identify the range of flows that provide optimal and suboptimal whitewater recreation opportunities. The availability of recreational use potential was quantified by calculating a Boatable Days metric originally developed by AW. This metric reflects the number of days that optimal, acceptable, and unacceptable use conditions exist under different hydrological conditions.

Primary Whitewater Boating Water Supply Needs

- Current number and distribution of optimal and acceptable boatable days on mainstem San Miguel River segments between Bilk Creek and the Dolores River (Table ES.5).

Table ES.5: Boatable days available on segments of the San Miguel River under different hydrological conditions.

Reach Start	Reach End	User Preference Threshold	Total Days		
			Wet	Average	Dry
Bilk Creek	Fall Creek	Lower Acceptable	28	31	8
		Optimal	25	0	0
Fall Creek	Leopard Creek	Lower Acceptable	32	40	11
		Optimal	31	1	0
Leopard Creek	Specie Creek	Lower Acceptable	33	38	13
		Optimal	34	5	0
Saltado Creek	Beaver Creek	Lower Acceptable	32	39	30
		Optimal	48	13	0
Beaver Creek	Horsefly Creek	Lower Acceptable	29	41	17

Reach Start	Reach End	User Preference Threshold	Total Days		
			Wet	Average	Dry
		Optimal	46	4	0
Horsefly Creek	Cottonwood Creek	Lower Acceptable	31	27	27
		Optimal	54	28	0
Cottonwood Creek	Naturita Creek	Lower Acceptable	42	51	11
		Optimal	45	1	0
Naturita Creek	Dry Creek	Lower Acceptable	21	53	20
		Optimal	74	16	0
Dry Creek	Tabeguache Creek	Lower Acceptable	19	54	26
		Optimal	77	21	0
Tabeguache Creek	Dolores River	Lower Acceptable	18	50	26
		Optimal	77	26	1

Primary Whitewater Boating Water Supply Gaps

No water supply gaps effecting whitewater boating recreation were identified through this analysis.

CHARACTERIZING RIVER ANGLING USE NEEDS AND GAPS

Anglers in the San Miguel watershed engage in bank- and wade-fishing. The degree of enjoyment derived by each method at a given location reflects local flow levels, riparian vegetation density, and aquatic habitat quality. In the 1990's the BLM spearheaded an assessment of instream flow (ISF) needs throughout the San Miguel watershed. [6] The assessment stayed in draft form and multiple ISF rights were decreed by the Colorado Water Conservation Board (CWCB) throughout the watershed before the assessment was finished. However, the effort included an assessment of recreational flow needs, including whitewater boating and fishing. The assessment utilized a flow preference study conducted by EDAW Inc.[18] that relied on interviews with local guides to identify a range of preferred flows for both wade- and bank-fishing. Angler preferences reported by BLM reflected bank accessibility, riparian vegetation, safety accessing appropriate fish habitat, and ability to catch fish. BLM subsequently

developed flow preference curves to define optimum and acceptable flow ranges for angling in each of these reaches.[6] The availability of recreational use potential on various segments of the San Miguel River was quantified by calculating a Fishable Days metric. This metric reflects the number of days that optimal, acceptable, and unacceptable use conditions exist under different hydrological conditions.

Primary River Angling Water Supply Needs

- Current number and distribution of optimal and acceptable fishable days on mainstem San Miguel River segments between Deep Creek and Pinion Bridge (Table ES.6).

Table ES.6: Fishable days available for wade fishing on segments of the San Miguel River under different hydrological conditions.

Reach Start	Reach End	User Preference Threshold	Total Days		
			Wet	Average	Dry
Deep Creek	Fall Creek	Lower Acceptable	71	115	158
		Optimal	242	220	200
		Upper Acceptable	21	30	8
Fall Creek	Leopard Creek	Lower Acceptable	2	89	136
		Optimal	301	236	219
		Upper Acceptable	28	27	11
Leopard Creek	Specie Creek	Lower Acceptable	0	1	66
		Optimal	286	318	276
		Upper Acceptable	24	15	22
Saltado Creek	Beaver Creek	Lower Acceptable	0	0	64
		Optimal	286	314	272
		Upper Acceptable	22	13	27
Beaver Creek	Horsefly Creek	Lower Acceptable	0	0	58
		Optimal	281	309	275
		Upper Acceptable	22	16	28
Horsefly Creek	Cottonwood Creek	Lower Acceptable	0	0	13
		Optimal	271	303	314
		Upper Acceptable	21	16	23

Primary River Angling Water Supply Gaps

No water supply gaps effecting river angling recreation were identified through this analysis.

ES.2 NEXT STEPS

The second phase of the San Miguel Pilot Project includes an effort to identify projects, processes, and collaborative management opportunities for meeting E&R needs in the San Miguel watershed. This phase of work will begin with an identification of high priority stream reaches. Prioritization of stream reaches for consideration during future planning processes should carefully consider this understanding of feasibility in concert with the knowledge of environmental and/or recreational attributes most highly valued by local communities or at the greatest risk of degradation due to existing patterns of land and water management or future water development projects.

Once priority reaches are identified, a specific set of management goals or targets should be articulated to guide both the selection of management alternatives and provide a mechanism for evaluating progress toward or away from desired outcomes. Where possible, these goals should be quantitative and should reflect the behavior or function of the primary attribute(s) of interest. A stakeholder-oriented process should then guide the identification of projects and processes that may be effective at meeting selected goals. Proposed projects and processes should respond to the overlapping themes and management prospects that emerge from reviews of water use patterns, consideration of legal and administrative constraints, and evaluations of ecosystem function. Alternatives may include market-based water use/conservation programs, efficiency measures, water supply projects, and channel modifications. It is unlikely that any single management alternative will represent a panacea for optimizing water use and management between consumptive and environmental and recreational water needs. Rather, each alternative will likely represent a unique set of environmental, capital, and social costs and benefits. A guided process should help local stakeholders consider these factors and prioritize actions over the short and long-term. Stakeholders groups that should be involved in the cost-benefit analysis process include: agricultural producers, water administrators, local municipalities, natural resource agencies, local and national environmental or conservation organizations, recreational advocates, and other water rights holders.

Water Supply Reserve Fund
Water Activity Summary Sheet
March 21, 2019
Agenda Item 24(p)

Applicant:	Southwest Basin Roundtable
Fiscal Agent:	San Juan Resource Conservation and Development Council
Water Activity Name:	San Miguel Stream Management Plan: Stakeholder Engagement Process
Water Activity Purpose:	Multi-use Study
County:	San Miguel
Drainage Basin:	Southwest
Water Source:	San Miguel
Amount Requested:	$12,530 Southwest Basin Account
Matching Funds:	Applicant Match (cash & in-kind) = $12,530 • 100% of the Basin Account request (meets 25% min) • 25% of the total project cost of $50,122

Staff Recommendation:
Staff recommends approval of up to $12,530 from the Southwest Basin Account to help fund the project titled: San Miguel Stream Management Plan: Stakeholder Engagement Process.

Water Activity Summary: WSRF grant funds, if approved, will support the Southwest basin roundtable's San Miguel Stream Management Plan Stakeholder Engagement Process. The objectives of the process are as to: (1) organize a stakeholder group that includes a diverse set of interests within the entire San Miguel River Basin with active participation from the West End's agricultural community; and (2) create a trusted space where potential actions for multiple purpose projects may be discussed.

Existing technical work has been done in the southwest basin under the San Miguel Pilot Project Phase 1. The Pilot Project stemmed from the Southwest Basin's Roundtable expressed need to evaluate and address environmental and/or recreation gaps. A draft report for the pilot project was completed in April 2017. Based on feedback from the public meetings presenting the draft report, it was made clear that a more thorough stakeholder engagement process with defined leadership and robust participation from agricultural water users needs to occur to achieve broader support on the San Miguel River effort. This process aims to serve as that relationship building effort and will include reviews of the draft report and outcome(s), and serve as a committee to collectively identify opportunities that will meet multiple purpose water needs within the basin.

Discussion: As described in the Southwest Basin Roundtable chair's recommendation letter, this project was supported and recommended for approval by the roundtable on January 9, 2019. The project squarely meets the Southwest Basin Plan IPP 2-MB: collaborative efforts to address environmental/recreational water gaps.

Issues/Additional Needs: Staff will work with the applicant and roundtable to secure the remaining but unidentified funds of $25,062 to meet the full project cost of $50,122.

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

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

Funding Summary / Matching Funds:

Funding Source	**Cash**	**In-Kind**	**Total**
Southwestern Water Conservation District	$6,265	$0	$6,265
The Nature Conservancy	$6,265	$0	$6,265
Undefined	*$25,062*	*$0*	*$25,062*
WSRF Southwest Basin Account	$12,530	n/a	$12,530
Totals	**$25,060**	**$0**	**$50,122**

CWCB Project Manager: Chris Sturm

SOUTHWEST BASINS ROUNDTABLE
Michael Preston, Chair
c/o Dolores Water Conservancy District
P.O. Box 1150
Cortez, Colorado 81321
970-565-7562

January 17, 2019

Megan Holcomb
Water Supply Management Section
Colorado Water Conservation Board
1580 Logan Street, Suite 600
Denver, Colorado 80203

SUBJECT: San Miguel Stream Management Plan: Stakeholder Engagement Process - $12,530 from the Southwest Basin Fund

Dear Megan:

The Southwest Basin Roundtable has approved funding in the amount of $12,500 from the Southwest Basin Fund for the San Miguel Stream Management Plan: Stakeholder Engagement Process. The application was considered in detail at the January 9, 2019 meeting of the Southwest Basin Roundtable. There was a quorum of Roundtable members present.

The Project addresses Southwest Basin IPP 2-MB: Collaborative Efforts to Address Environmental and/or Recreational Water Gaps and BIP Measurable Goals and Outcomes A2: Maintain Quality of Life with Multi-Purpose Projects, D1: Protect and Enhance Recreation and Economic Values, E2: Meet Environmental Water Needs, and Colorado Water Plan Goal Environmental and Recreational Goals, Page 6-157.

The completed Grant Application will be forwarded directly to you by the applicant. Please contact the applicant directly or me at 970-565-7562, mpreston@frontier.net, if you have questions or wish to discuss this application in more detail.

Sincerely,

Michael Preston
Southwest Basin Roundtable Chair