

Eagle River Integrated Water Management Plan (ER-IWMP)



Prepared by:

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Submitted to:

Colorado Water Conservation Board
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Project Proposal Summary Sheet

Project Title:	Eagle River Integrated Water Management Plan (ER-IWMP)
Project Location:	Eagle River, Eagle County, Colorado
Grant Type:	Watershed Restoration Program: Stream Management Planning
Grant Request Amount:	\$181,445
Cash Match Funding:	\$181,500
In-Kind Match Funding:	\$27,000
Project Sponsor:	Eagle River Watershed Council (ERWC)
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Brief Project Description:

The Eagle River Integrated Water Management Plan (ER-IWMP) intends to develop proactive water management recommendations that anticipate changes to local hydrology due to 1) population growth and increasing municipal demand for water in Eagle County, 2) climate change, and 3) projects related to the Eagle River MOU (ERMOU), an intergovernmental agreement for developing municipal water supplies in the upper Eagle River watershed.

The ER-IWMP will be developed through a stakeholder process with local conservation organizations, state and federal agencies, recreational users, ERMOU partners, commercial fishing/rafting guides, local municipalities, agricultural, and other local stakeholders to develop strategies that can respond to these changes in a way that helps meet municipal demands, while maintaining and improving ecological attributes in the Eagle River watershed. For example, the ER-IWMP will look at how the Western Slope's appropriated portion of the ERMOU waters can best be managed for the protection of Eagle County's water-dependent recreation-based economy (fishing, rafting, skiing, etc.) and ecosystem function.

Eagle River Watershed Council (ERWC) has a tradition of coordinating collaborative stakeholder processes. The Integrated Water Management Planning process will draw upon our extensive experience managing these types of projects. Although the IWMP process will not officially be underway until early 2018, ERWC has already initiated conversations with stakeholders. By meeting with the stakeholders early we have a strong understanding of the individual objectives of each. This understanding guided the goals, objectives and overall scope of work presented for this Colorado Watershed Restoration Program Grant Application.

While this ER-IWMP will be grounded in the complex interplay of biology, hydrology, channel morphology, and alternative water use and management strategies, it foresees the integration of both consumptive and non-consumptive uses to ensure that all existing and future uses are considered. The ER-IWMP will safeguard the interests of the community and extended stakeholders, which include the environmental and recreational use needs. ERWC will provide the opportunity for all interested parties to participate. Additionally, ERWC will educate the community so that the results of this plan are accepted as a fair and reasonable approach to managing our precious water resource.

1. Background and Statement of Need

The Eagle River watershed is a network of clear mountain streams that cover a drainage area of approximately 960 square miles. It has an average annual water flow of roughly 414,000 acre feet. Elevations in the watershed range from 6,100 feet at Dotsero to 14,003 feet at Mount of the Holy Cross. Fed by numerous ephemeral, intermittent and perennial streams, springs and seeps, the Eagle River originates near the eastern border of Eagle County at Tennessee Pass and flows west for about 77 miles to its confluence with the Colorado River at Dotsero. Unique among Colorado watersheds, approximately 98% of the drainage is located in a single jurisdictional boundary - Eagle County. Nearly 75% of the watershed is on public land managed by the US Forest Service and the Bureau of Land Management.

Although the natural flow regime of the main stem of the Eagle River is more intact than other Colorado rivers of comparable size, human settlement has influenced and impacted the natural cycle of the river. Roughly 75% of the average annual flow of the Eagle River occurs during the months of May, June and July, yet a minimum amount of water is necessary year round to support aquatic and other wildlife as well as community demands for affordable, clean and reliable water supplies during times of the year when natural water supply is the lowest (ERWP, 1996). The greatest consumptive use in the basin is transmountain diversion, which currently exports approximately 34,000 acre feet to the Front Range communities of Aurora and Colorado Springs annually. This water is never returned to the watershed and is therefore considered totally consumed. While these exports account for only 8% percent of the annual yield of the Eagle River, impacts on streamflows at the actual points of diversion in the headwaters are far greater. Transmountain diversions are taken in the headwaters during May-June peak flows, significantly reducing the annual peak and ‘flushing flows’ important to maintain the ecological and geomorphic health of the Upper Eagle.

The Colorado Water Plan (CWP) seeks to understand the state’s water needs, identify gaps and promote projects and processes to meet those needs. The Colorado Basin Roundtable (CBRT) identified basin-wide integrated water management planning (IWMP) as a top priority in its Basin Implementation Plan (BIP). Planning is a vital part of providing sufficient water for environmental and recreational needs in addition to satisfying the many other uses and demands for water. The CBRT planning goal articulates restoring and protecting ecological processes that connect land and water while ensuring that our rivers also serve the needs of human populations. Implementation of plan recommendations is intended to be voluntary and will only be successful with collaboration and cooperation among affected stakeholders and water rights holders.

The Colorado Basin Roundtable’s Basin Implementation Plan identifies the projects envisioned under the Eagle River MOU as important components of a secure water future for Colorado. Eagle River Watershed Council (ERWC) and other stakeholders in the Eagle River watershed recognize that the information necessary to understand environmental and recreational water needs and how these needs may be impacted by water development projects is lacking. This is highlighted in the Eagle River Watershed Plan, drafted by Eagle River Watershed Council in 2013, which states “where individual reaches of rivers or streams are identified as impaired or having inadequate flows, craft and implement Streamflow Management Plans that offer creative and cost effective strategies to address ecological, domestic, recreational and agricultural water needs.”

ERWC is keenly interested in developing a better understanding of river health and environmental and recreational (E&R) water needs within the Eagle River Basin and, subsequently, in assessing future water development and protection in the watershed. ERWC’s experience, knowledge, and proven track record will ensure that the ER-IWMP promotes projects envisioned by the CWP and the Colorado BIP.

2. Geographic Scope and Existing Information

The Eagle River Integrated Water Management Plan (ER-IWMP) will consider the Eagle River mainstem

from its headwaters to the confluence with the Colorado River. The effort will additionally include assessment of the East Fork of the Eagle River, Gore Creek from Black Lakes to the confluence with the Eagle River, and Homestake Creek from Homestake Reservoir to the confluence with the Eagle River. (See Attachment A: Project Area Map) Other tributaries to the Eagle River will not be explicitly assessed, but their impact on the hydrology of the Eagle River will be evaluated. The majority of the effort will be focused on the reaches of the Eagle River between its confluence with Homestake Creek and the Colorado River.

ERWC has begun its development of the ER-IWMP with a comprehensive search of literature specific to the Eagle River watershed. This information has informed stakeholder engagement and provides context for understanding multiple objective aspects of the watershed and how they relate. Sources of relevant information that will help to develop the ER-IWMP are not limited to, but include:

- Colorado Water Plan: serves as the foundation of the ER-IWMP by providing initiatives, connections, and values to meet Colorado's current and future consumptive, recreational, and environmental water needs. Section 7.1 recommends a collaborative approach to watershed planning; one that includes stakeholder involvement and management actions supported by sound science and it applies equally to stream management plans. An inclusive stakeholder approach expedites cooperative and integrated project planning, which leads to successful implementation of measures that will meet the needs the stream management plan identifies.
- Colorado Basin Roundtable Basin Implementation Plan (BIP): identifies a basin-wide stream management plan as a top priority in its BIP. The CBRT states that such planning is vital to providing sufficient water for environmental needs among the many competing uses and demands for water, thereby restoring and protecting ecological processes that connect land and water while ensuring that streams also serve the needs of human populations.
- Eagle River Watershed Council's Eagle River Watershed Plan (ERWP) (2013): provides information, goals, strategies and action items related to water and land management practices in the Eagle River basin. The 2013 document updates and replaces the 1996 version and includes significant new information and the vision for watersheds in Eagle County. Several issues and recommendations are discussed which provide relevant background to the development of an IWMP. The ERWP is organized around five water related topics (Quantity, Quality, Land Use, Wildlife and Recreation) all of which provide direction and insights for the ER-IWMP.
- The Eagle River Assembly Report (1994): The Eagle River Assembly (a group comprised of representatives from the County, Towns, water districts and the holders of out-of-basin water rights) was tasked with evaluating local water issues and identifying potential strategies that would 1) improve the condition of the river, and 2) assure adequate water supplies for future needs. The resulting assessment concluded that flows in the Eagle River were inadequate to meet existing environmental and water supply demands in average years and dryer than average years, principally in late summer and winter months. Environmental concerns were based on identified "stream flow deficits" where the amount of water in the stream was not adequate to meet recommended instream flow rights that had been implemented years earlier for the protection of fish. The ER-IWMP would complement this report by identifying the flow deficit, which the Assembly Report did not attempt to identify, but is an objective of the CWP.
- Eagle River Inventory and Assessment (ERIA) (2005): an inclusive, scientific baseline inventory and assessment of the Eagle River with a prioritized list of restoration and conservation projects, which ERWC has used to successfully complete numerous projects for over a decade. The nearly \$4million project along the Eagle River in Edwards was one such project, which was funded in part with CWCB grant dollars. The ERIA also measures public support for various prospective projects and other recommended actions. A very comprehensive list of ten watershed restoration principles from scientific literature and case studies to improve the likelihood of success was included for reference and subsequent work plans.

- Eagle River Memorandum of Understanding Project Alternatives Study (2016): provides evaluations of project alternatives to develop water storage and conveyance projects in the Eagle River basin for West Slope and East Slope interests. The ERMOU, executed in 1998, is comprised of cooperative partners and signatories. Numerous development alternatives are currently being considered and will have a bearing on water quantity in the Eagle River. For instance, trans-basin diversions can reduce the intensity of spring runoff flows that are important in the maintenance of aquatic habitat. Spring flows flush fine sediments from the channel substrate and provide the high-quality gravel beds needed by aquatic insects and fish for reproduction. High flows also maintain riparian communities through flooding of the banks and riparian zones adjacent to the river. Studies to determine how much of a “flushing” flow is actually needed on the Eagle River to maintain optimal habitat for aquatic life and bank recharge have not been conducted. The ER-IWMP would take this next step.

3. Goals and Objectives

ERWC, in partnership with River Network, began to engage the ER-IWMP stakeholders in the fall of 2017 to better understand their concerns, constraints and individual objectives. The intent was to build stakeholder engagement and buy-in for the planning effort and to create ER-IWMP goals that truly reflect the interests and concerns of the stakeholders and that of the broader community.

The ER-IWMPs goals are to build consensus about stakeholders’ needs and desires for the Eagle River, assess the current impairments and shortages on the Eagle River, and identify how those may change with future water supply development plans. The ER-IWMP will identify projects or management options that both protect existing water rights and provide opportunities to better balance river management for the mutual benefit of all stakeholders. The ER-IWMP does not intend, nor does it have the power, to impact water rights. The ER-IWMP will also increase community understanding of river health and current operations while providing the technical backbone needed to guide future river management decisions.

When the full ER-IWMP effort launches in the spring of 2018, it will further refine the purpose and scope detailed in this document and will conclude with the evaluation and prioritization of alternative actions. At a minimum, the objectives will include: 1) engage stakeholders and assess ecosystem conditions, developing environmental flow needs, and evaluating recreational use preferences, 2) characterizing the type and location of environmental and recreational attributes at risk and working with stakeholders to identify specific planning goals around them, 3) working with stakeholders to identify collaborative opportunities for projects and processes that may help meet the diversity of needs present in the basin, 4) evaluating the relative effectiveness and feasibility of each identified opportunity to prioritize them according to their anticipated implementation success, and 5) develop and implement a community engagement plan to raise community understanding surrounding river health. Implementation, monitoring, and adaptive management of planning recommendations are expected to occur after this effort is completed.

The objectives and tasks are further described in the attached Scope of Work (SOW).

4. Monitoring and Implementation

The project team will develop a conceptual level implementation plan for each of the high-priority actions. The implementation plan will identify project champions, affected stakeholders, recommendations for overcoming technical, financial, or legal constraints, anticipated outcomes, and a monitoring plan for assessing long-term effectiveness.

5. Organizational Capacity

The mission of ERWC is to advocate for the health and conservation of the Upper Colorado and Eagle River basins through education, research and projects. ERWC has a 13-year history of tackling complex

issues through consensus-building stakeholder processes and has coordinated numerous large-scale projects, such as the drafting of the Eagle River Watershed Plan and the Colorado River Inventory & Assessment, oversight of the Eagle Mine Committee (for technical review and oversight of the Eagle Mine Superfund Site cleanup), and coordination of the Urban Runoff Group (which was instrumental in drafting the Gore Creek Water Quality Improvement Plan, Eagle County Water Quality Action Plan and the current drafting of the Town of Avon Water Quality Action Plan).

ERWC will manage the project and provide fiscal oversight throughout the project period. Primary staff at ERWC working on the ER-IWMP are Holly Loff, executive director, and contract employee, Tim Thompson, PE. ERWC is committed to protecting ecological and environmental processes and recreational uses of land and water and intends to develop a plan using a multi-objective approach that protects all natural resources. As project manager, ERWC will incorporate broad-based involvement of diverse local and regional interests within the watershed, including relevant local, state, and federal governmental agencies. ERWC will ensure that the recommendations in this plan are data-driven with a high probability of protecting and enhancing environmental and recreational values in the Eagle River watershed.

ERWC will utilize Lotic Hydrological, LLC for technical expertise, water resource engineering services, field data collection, and quantitative analysis. Lotic Hydrological has a range of relevant experience, including: Yampa River Stream Management Plan, Upper Colorado River Basin Resource Guide, Upper Roaring Fork Management Plan, San Miguel Pilot Project, Crystal River Stream Management Plan, and more. Heather Bergman from Peak Facilitation will be contracted to support ERWC in stakeholder outreach, coordination, and meeting facilitation.

The ER-IWMP advisory committee is made up of major water rights owners, environmental interest groups, recreational user groups, local government, and state/federal agencies. The Advisory Committee's role will be to provide input on the goals, technical methodologies, and identification of high-priority planning issues and project/management options. The advisory committee will play a crucial role in the development of an effective plan. The advisory committee has already participated by assisting in crafting the plan's objectives. Through the expert assistance of River Network, ERWC took the first steps in engaging the stakeholders in initial advisory committee meetings by dividing them into six groups: transmountain diverters, Western Slope water interests, conservation groups and federal/state agencies, river guides, local government, and agriculture/private landowners. Each group had a separate initial meeting with Peak Facilitation to help the project team understand and identify concerns, opportunities and priorities for each group as it relates to flow and stream management planning.

The small group meetings were followed by a half-day meeting with all six groups to review what was learned in the initial meetings and establish overarching objectives for the groups as a whole. The participants in the before-mentioned meetings included representatives from: Colorado Springs Utilities, Aurora Water, Climax Mine, Eagle River Water & Sanitation District, Upper Eagle Regional Water Authority, Vail Resorts, Colorado River District, Eagle River Watershed Council, American Rivers, US Forest Service, Colorado Parks & Wildlife, Bureau of Land Management, local commercial fishing guides, local commercial raft, kayak, paddleboard guides, Eagle County, North West Colorado Council of Governments (NWCCOG), Towns of Vail, Avon, Minturn, Red Cliff, Eagle, and Gypsum, local ranchers and agricultural interests, private land owners, and the Eagle River Water Commissioner.

The goals and objectives outlined above were developed from these meetings. As members of the advisory committee, these stakeholders will be invited to continue participating in the process to develop the ER-IWMP and all have expressed interest in remaining engaged in the process as they see value in the goals and objectives they helped to develop. ERWC will work continuously to inform all of the interested parties of developments and progress so that they will remain engaged throughout the entire project.

6. Budget, Match and Schedule

Development of the ER-IWMP is projected to cost \$389,945 as outlined in the attached scope of work (Attachment B) and budget and timeline table (Attachment C).

ERWC has received commitments for cash and in-kind support from a number of the ER-IWMP advisory committee members. The cash support committed from the advisory committee totals \$106,500. Additionally, ERWC is applying for funding from the Colorado Basin Roundtable WSRF state funds in the amount of \$75,000.

In-kind support in the amount of \$27,000 is provided by the following:

- \$10,000 from Eagle River Water & Sanitation District for consultant time in running their StateMod hydrologic model
- \$5,000 from Eagle River Water & Sanitation District for staff time in presenting to the advisory committee and, as necessary, to the greater community on their StateMod hydrologic model
- \$12,000 from ERWC for staff time in developing the community engagement plan and tools

Work on this project is expected to commence in the spring of 2018 and continue for a period of approximately 36 months.

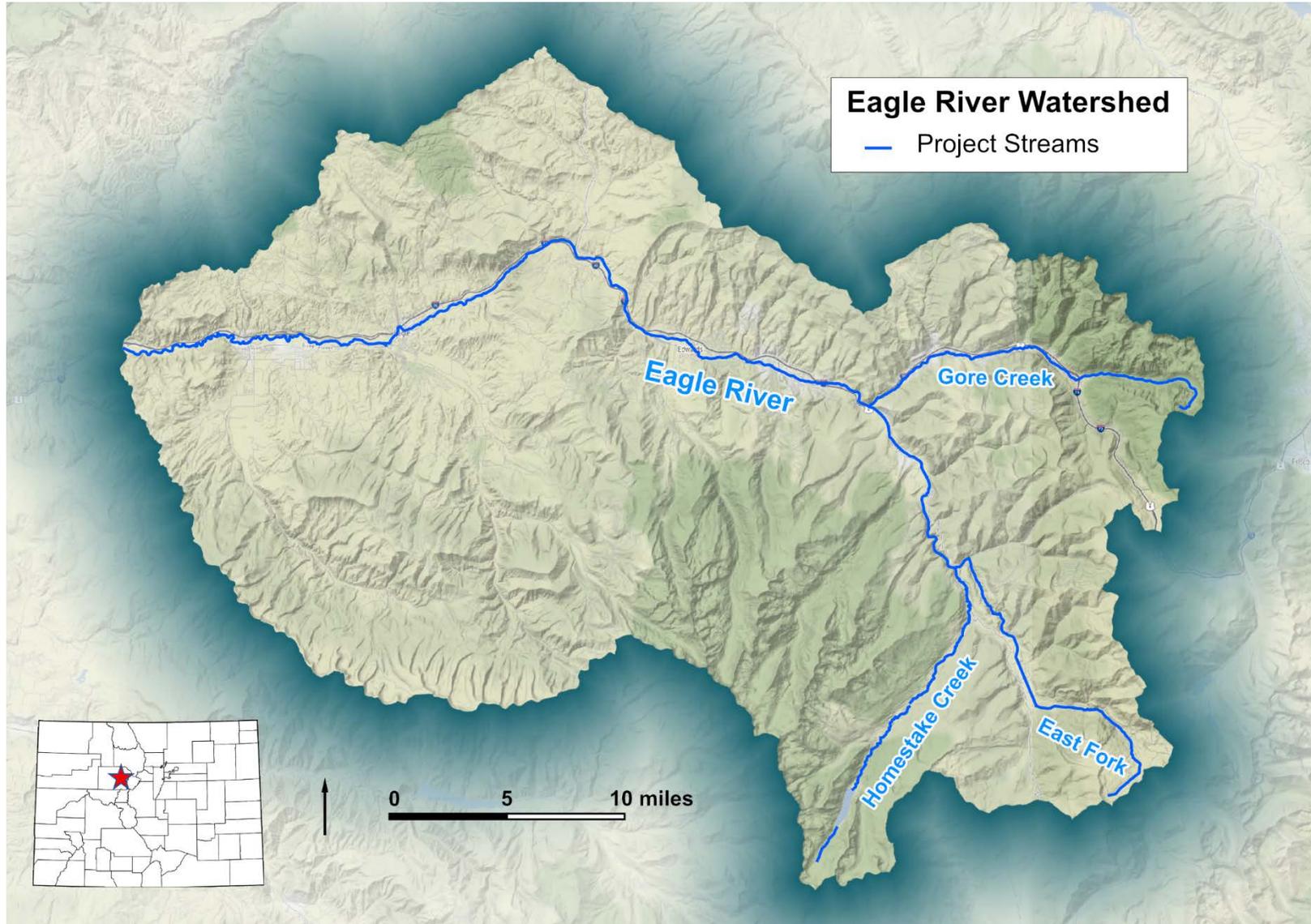
As is typical of successful projects, this IWMP will also be evaluated by whether it meets the fundamental criteria of quality, schedule and budget. With so many stakeholders involved, the leadership and management must be the responsibility of a single entity, ERWC knows the participants, has demonstrated ability to execute projects, and is respected within the community for successful projects and programs that protect and restore the Colorado River, the Eagle River and their tributaries. For these reasons, the ER-IWMP will be developed under the management of ERWC.

Successful completion of several of the tasks outlined in the SOW depends upon timely and continuous coordination, collaboration, and provision of in-kind services by local stakeholders. Therefore, the ability to meet the anticipated dates of completion associated with many of the deliverables is partially dictated by the stakeholders.

7. Attachment Overview

- Attachment A: Project Area Map
- Attachment B: Scope of Work
- Attachment C: Budget & Timeline Table
- Attachment D: Project Team Resumes
 1. Seth Mason, Lotic Hydrological
 2. Jessica Mason, Lotic Hydrological
 3. Heather Bergman, Peak Facilitation
 4. Holly Loff, ERWC
 5. Tim Thompson, PE, contractor
- Attachment E: Letters of Support
 1. Bureau of Land Management
 2. Climax Mine/Freeport McMoRan
 3. Colorado Basin Roundtable
 4. Colorado Parks & Wildlife
 5. Colorado River District
 6. Eagle County Board of Commissioners
 7. Eagle River Water and Sanitation District
 8. Fly Fishing Outfitters
 9. Homestake Water Project Partners
 10. Middle Colorado Watershed Council
 11. Town of Avon
 12. Town of Gypsum
 13. Town of Minturn
 14. Town of Vail
 15. Trout Unlimited
 16. US Forest Service
 17. Vail Valley Anglers
 18. Vail Resorts
 19. Water Center at Colorado Mesa University

Eagle River Integrated Water Management Plan (ER-IWMP)
Attachment A: Project Area Map



*Eagle River Integrated Water Management Plan
Attachment A: Project Area Map*

Eagle River Integrated Water Management Plan (ER-IWMP)
Attachment B: Scope of Work

GRANTEE and FISCAL AGENT

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PROJECT NAME

Eagle River Integrated Water Management Plan (ER-IWMP)

GRANT AMOUNT

\$181,500

INTRODUCTION AND BACKGROUND

The ER-IWMP's goal is to build consensus about stakeholders' needs and desires for the Eagle River, assess the current impairments and shortages on the Eagle River and how those may change with future water supply development plans. The ER-IWMP will identify projects or management options that both protect existing water rights and provide opportunities to better balance river management for the mutual benefit of all stakeholders. The ER-IWMP does not intend, nor does it have the power, to impact water rights. The ER-IWMP will also increase community understanding of river health and current operations while providing the technical backbone needed to guide future river management decisions.

ERWC has a tradition of coordinating collaborative stakeholder processes. The Integrated Water Management Planning process will be no different. Although the IWMP process will not officially be underway until early 2018, ERWC has already initiated conversations with key stakeholders, such as Eagle River Water & Sanitation District, Upper Eagle Regional Water Authority, Aurora Water, Colorado Springs Utilities, and Eagle County. By meeting with these entities early we have a primary understanding of the individual objectives of each. This understanding guided the scope of work and provided an opportunity to build consensus around the overall objectives of the IWMP.

The ER-IWMP intends to develop proactive water management recommendations that anticipate changes to local hydrology due to 1) population growth and increasing municipal demand for water in Eagle County, 2) climate change, and 3) projects related to the Eagle River MOU (ERMOU), an intergovernmental agreement for developing municipal water supplies in the upper Eagle River watershed. The ER-IWMP will work with local conservation organizations, state and federal agencies, recreational users, ERMOU partners, and other local stakeholders to develop strategies that can respond to these changes in a way that helps meet municipal demands, while maintaining and even improving ecological attributes in the Eagle River watershed. For example, the ER-IWMP will look at how the Western Slope's appropriated portion of the ERMOU waters can best be managed for the protection of Eagle County's water-dependent recreation-based economy (fishing, rafting, skiing, etc.) and environment.

OBJECTIVES

Planning activities will focus on the mainstem Eagle River from its source on the East Fork Eagle River below Eagle Park Reservoir to the confluence with the Colorado River. Homestake Creek and Gore Creek will also be included in the assessment effort. The anticipated tasks associated with this project are summarized through extension of the Rational Planning Model (Taylor, 1998) This effort will begin with refinement of the purpose and scope detailed in this document and will conclude with the evaluation and prioritization of alternative actions. Peak Facilitation and ERWC will be responsible for convening and managing the stakeholder group that will help inform and guide the process. At a minimum, the remaining tasks and objectives will include: 1) assessing ecosystem condition, developing environmental flow needs, and evaluating recreational use preferences, 2) characterizing the type and location of environmental and recreational attributes at risk and working with stakeholders to identify specific planning goals around them, 3) working with stakeholders to identify collaborative opportunities for projects and processes that may help meet the diversity of use needs present in the basin, 4) evaluating the relative effectiveness and feasibility of each identified opportunity to prioritize them according to their anticipated implementation success, and 5) develop and implement a community engagement plan to raise community understanding surrounding river health. The specific tasks associated with each planning phase listed above may require supplementation, modification or removal prior to completion of the proposed work. Implementation, monitoring, and adaptive management of planning recommendations are expected to occur after this effort is completed.

TASKS

TASK 1: Engaging Stakeholders

Subtask 1.1 Advisory Committee

ERWC will work with Lotic and Peak Facilitation to engage key stakeholders in an Advisory Committee to develop the ER-IWMP. Key stakeholders include major water rights owners, environmental interest groups, recreational user groups local government, and state/federal agencies. The Advisory Committee's role will be to provide input on the goals, technical methodologies, and identification of high-priority planning issues and project/management options. At the first Kickoff Meeting, the Advisory Committee will have an opportunity to refine the scope and help shape the timeline and guiding principles for the project.

Deliverables:

- Coordinate and provide minutes for 10 meetings throughout the 36 month ER-IWMP planning process
- Memorandum defining the collective, purpose statement and guiding principles for the planning effort, including roles and responsibilities of each member.

Subtask 1.2 Community Engagement Plan

Peak Facilitation and ERWC will develop a community engagement plan for keeping members of the general public informed on ER-IWMP processes and outcomes and on opportunities and concerns for protecting/improving river health. Additionally the community engagement plan will outline activities for increasing community understanding of how the current (and potential) water system of the Eagle River watershed is operated. This plan will include a timeline for community engagement, the topics to be covered at key points in the process, needed supporting documentation or educational material, and strategies for soliciting public comment/feedback and using it to inform the ER-IWMP effort. The ER-IWMP Advisory Committee will be engaged in developing the community engagement plan, and ERWC will implement its recommendations during the project timeline. ERWC's education and outreach coordinator will assist in the development of the community engagement plan as well as the engagement tools, which is an in-kind match by ERWC.

Deliverables:

- A community engagement plan with timeline for implementation by ERWC

- Community engagement tools (to be determined in subtask 1.2, but may include (but not be limited to) videos, a website or webpage, flyers, posters, articles or advertisements, public meetings)

TASK 2: Assess Conditions & Identify Risks

Subtask 2.1 Review Existing Data and Information

Local organizations, federal and state agencies, the CBRT and others have produced information and data relevant to characterizing ecological integrity and the delivery of ecosystem goods and services on streams and rivers throughout the Eagle River watershed. Some need exists to aggregate this information for the planning reaches to ensure that planning activities are informed by and grounded in the rich historical context of assessment activities.

Deliverables:

- Technical report summarizing the availability of data relevant to environmental and recreational needs assessments. Report will also summarize findings of existing reports or studies that relate land and water use activities to conditions of ecological or recreational attributes on stream reaches in the planning area

Subtask 2.2 Characterize Hydrological Regimes

River systems subject to hydrological change under human management are vulnerable to shifts in the composition and resiliency of both structural and biological components of the ecosystem. The Natural Flow Paradigm (Poff et al., 1997) postulates that streamflows represent the key driver of riverine structure and function. Changes in the timing and magnitude of various elements of the hydrological regime can produce cascading effects (or positive feedback loops) between: 1) the availability and quality of aquatic habitat, 2) the condition and extent of riparian zones, and 3) the dynamics and evolutionary trajectory of channel structure. Therefore, a detailed understanding of the hydrological regime at various locations throughout a watershed provides important context for understanding changes to other ecosystem components. Critically, in order to provide this understanding in Colorado, it is necessary to characterize the administrative and operational conditions that govern the way that water is stored, diverted, consumed, and returned to river systems in time and place. Lotic will utilize results from a StateMod simulation model developed by the Eagle River Water and Sanitation District for the Eagle River watershed to characterize daily streamflow behavior at all major tributary confluences and surface water diversion points in the project area.

Deliverables:

- Data tables containing statistical characterizations of hydrological regime behavior at major tributary junctions and surface water diversions throughout the study area. Simulated conditions may include:
 - 1) natural conditions,
 - 2) existing conditions,
 - 3) maximum in-basin demand projections (no change in climate),
 - 4) moderate-dry climate change future conditions (no change in demand),
 - 5) maximum in-basin demand and moderate-dry climate change future conditions,
 - 6) ERMOU project development (no change in climate or demand),
 - 7) ERMOU development with maximum in-basin demand (no change in climate),
 - 8) ERMOU development with maximum in-basin demand and moderate-dry climate change future conditions
- Graphics characterizing typical hydrographs under wet, average, and dry conditions at major tributary junctions, reservoirs, and surface water diversions throughout the study area for the selected scenarios.
- Technical memorandum describing the hydrological simulation results and characterizing the scenarios producing the greatest changes in hydrological regime behavior.

Subtask 2.3 Classify Fluvial Geomorphological Forms and Processes

Classifying river channel types provides a useful framework to understand the dominant physical

processes at a position in the stream network. This process based understanding of channel form is useful for contextualizing historical impacts to riverine ecosystem function or for anticipating future shifts in ecosystem function following some altered condition. In this way, river classification not only simplifies communication about the ways that dynamic physical processes manifest themselves across the landscape, but also aids in natural resource use decision-making. The River Styles framework is an example of an appropriate approach for channel classification in the project area, as it encourages process level understanding of channel forms. River Styles or a similar framework could be used for Task 2.3 of the ER-IWMP. Rapid field assessment methodologies will be applied to assess the geomorphic condition of each channel segment and the natural recovery potential of impaired segments will be characterized.

Deliverables:

- Map of channels classified down to the level of the floodplain and instream geomorphic features for reaches in the study area.
- Map of geomorphic condition assessment results for reaches in the study area.
- Technical report discussing the geomorphic condition and natural recovery potential of segments for reaches in the study area.

Subtask 2.4 Characterize Water Quality

Lotic will evaluate historical stream temperature and water chemistry data against State of Colorado water quality standards for streams and rivers in the project area to develop an index of water quality concern. This index will be based on nonparametric statistical characterizations that identify multiple impairment thresholds (e.g., satisfactory, concern, poor, impaired) for each water quality parameter relevant to aquatic life or recreational use. Particular attention will be paid to water quality parameters that are somewhat controlled by use and management of water (e.g. water temperature, suspended sediment, selenium). Results from this assessment will provide important context for understanding the dominant climatic, land cover, and land use controls on a suite of water quality parameters that constrain ecological function or recreational use opportunities.

Deliverables:

- Table of water quality impairment thresholds for all historical water quality data collection locations throughout the project area.

Subtask 2.5 Characterize Ecological Integrity

Lotic will apply desktop assessment methods (e.g. GIS and aerial photography analysis, hydrological time series evaluation, etc.) and rapid assessment field techniques to corroborate and supplement existing information regarding the hydrological conditions necessary for supporting resilient ecological systems. Lotic anticipates data reviews and field assessments in the summer of 2018 will allow for adequate characterization of aquatic habitat quality, stream network connectivity for aquatic organism passage, floodplain inundation and riparian recruitment, channel maintenance and flushing flows, and other ecosystem attributes. A significant focus of this planning effort will be on water management and use. Therefore, Lotic will use the hydrological assessment performed in Task 2.2 to understand relationships between changes in the flow regime and other components of the ecosystem. Assessment results will inform the selection of specific management goals and objectives. The specific type and number of methods applied will be based on data availability, refinement of project geographic scope and scale (see Task 1), and preferences expressed by stakeholders. In addition to characterizing ecological integrity on each stream reach in the project area, Lotic will map the type and location of ecological attributes with particularly high ecological value and Lotic will evaluate the natural recovery potential of ecologically impaired reaches. Mapped attributes may include, but will not be limited to, Colorado Natural Heritage Program (CNHP) Potential Conservation Areas, native trout and non-native sport fish ranges, presence of threatened and endangered species, location of rare or significant plant communities, etc.

Deliverables:

- Technical report summarizing ecological integrity assessment methodologies and results.
- Map of known high-value aquatic biota attributes throughout the project area.

- Map of known high-value riparian attributes throughout the project area.

Subtask 2.6 Characterize Ecosystem Services Delivery

Lotic will work with local stakeholders to characterize and prioritize the ecosystem goods and services that local communities derive from the riverine landscape. Relevant categories of ecosystem services include regulating services (e.g. flood abatement, groundwater recharge, water purification), provisioning services (e.g. agricultural production, drinking water supply, capture fisheries), and cultural services (e.g. boating recreation, angling recreation, aesthetic values). Lotic will evaluate qualitative information (e.g. local perceptions and anecdotal evidence) in addition to quantitative data (e.g. StateMOD hydrological simulation results, proximity of infrastructure to floodplains) to characterize the relative demand for ecosystem goods and services on stream reaches throughout the project area. American Whitewater (AW) will be contracted to conduct recreational use and flow preference surveys for stream segments in the planning area. Lotic will work with USFS, BLM and CPW to aggregate similar information describing preferred conditions for anglers. Lotic will subsequently work with stakeholders to characterize perceptions about the primary constraints on recreational use opportunity on each reach. Identified constraints may include: streamflow variability, access, structural impediments, etc.

Deliverables:

- Tables indicating the type and relative demand for ecosystem goods and services on stream segments throughout the project area.
- Map of known high-value recreational attributes on the priority stream reaches.
- Map of existing and contemplated river access points and other recreational features.
- Memorandum detailing the results from whitewater boating surveys and the “boatable days” assessment.
- Memorandum detailing the results from angler surveys and the “fishable days” assessment and discussing the primary constraint(s) on recreational use on various reaches.

Subtask 2.7 Develop Conceptual Models

Lotic will use the assessment results produced above to develop conceptual models that describe the biophysical setting and the primary direction and strength of bi-directional interactions between different ecosystem components (e.g. hydrology and riparian recruitment, sediment transport and aquatic habitat quality, etc.) that contribute to overall ecosystem integrity, the ecosystem services that local communities receive from riverine landscapes, and the capacity for stream reaches in the project area to deliver these services. Lotic will, additionally, identify the primary anthropogenic and/or natural sources for degraded ecological integrity or constraints on delivery of ecosystem services on a given stream reach. Finally, Lotic will consider the potential vulnerability of ecological integrity or delivery of ecosystem services to changes in hydrology contemplated in Subtask 2.2. These conceptual models will help inform subsequent discussions regarding specific planning goals and objectives and identification of collaborative projects and processes to help meet those goals. Output from this assessment effort will be compiled in color-coded ranking tables that promote discussion about critical relationships between ecological integrity and the high-value ecosystem services that local communities derive from rivers and riparian areas. This output may be organized around the FACStream framework or a similar framework under development by Colorado Mesa University and the CBRT.

Deliverables:

- Color-coded ranking tables illustrating the relationships between concepts like ecosystem integrity, the capacity for delivering ecosystem services, and the demand for those services on stream segments in the project area.
- Map of at-risk riparian and aquatic biota attributes.
- Map of at-risk recreational attributes.
- Technical report detailing conceptual models developed for stream reaches with at-risk environmental and/or recreational attributes.

TASK 3: Articulate Planning Objectives and Measureable Results

Subtask 3.1 Identify High-Priority Management Issues and Locations

Lotic will work with stakeholders to prioritize river segments and management issues for subsequent planning steps. Lotic will rely heavily on the deliverables produced in Subtask 2.7 to support these conversations. Lotic will consider management issues that anticipate some altered future hydrological condition brought about by climate change, in-basin demand growth, development of water storage projects under the ERMOU, or some combination of the three. Throughout the issue identification process, Lotic and Peak Facilitation will work with stakeholders to refine and/or expand the planning considerations listed above to ensure they sufficiently reflect local concerns and perspectives.

Deliverables:

- Memorandum detailing high-priority planning issues identified by stakeholders.
- Map of high-priority stream reaches.

Subtask 3.2 Select Objectives and Measureable Results

Lotic will work with stakeholders to select specific management objectives and describe measureable results that respond to the high-priority issues identified previously. This effort will include discussions of morphologically-based, biologically-based, or flow-based management targets used as a direct or indirect measure of riparian area health, health of aquatic biota recreational use opportunity, or receipt of ecosystem services. Management targets may focus on a specific component of the aquatic or riparian ecosystem (e.g. trout biomass), a measure/indicator of whole ecosystem integrity (e.g. Multi-Metric scores for aquatic macroinvertebrates), or on the quality and quantity of ecosystem goods and services received by local communities (e.g. number of “boatable days” available to recreational users). The characterization of planning objectives is necessary to identify and evaluate the feasibility and effectiveness of alternative management actions or projects.

Deliverables:

- Memorandum detailing planning objectives and measureable results identified by stakeholders.

TASK 4: Identify Potential Alternatives

Lotic will identify several candidate structural projects, collaborative processes or management actions that respond to the planning objectives. Candidate actions will be drawn from several sources. Lotic will initially identify alternatives through internal assessment of hydrological conditions, water use and administration, and ecological needs. Discussions with local stakeholders may also point to some unique local opportunities not apparent to us. While there may be significantly more than ten candidate projects suggested or identified, Lotic will use a high-level, expert assessment of feasibility and effectiveness to limit the list to only those actions that have the greatest chance of occurring and/or succeeding.

Deliverables:

- Table identifying candidate structural projects, collaborative processes or management actions that respond to the planning goals and objectives. Table will reference candidate actions against high-priority planning reaches and the management issues present on those reaches.

TASK 5: Evaluate & Prioritize Actions

Subtask 5.1 Identify and assemble relevant stakeholders

It is important to identify stakeholders with the greatest ability to exert control on outcomes or who are likely to be impacted by the direct or indirect effects of the proposed alternatives. Peak Facilitation will work with Lotic and ERWC to ensure that the assembled stakeholder group includes all parties that should be engaged in discussions about the relative merits of the identified alternatives. In cases where all stakeholders are not appropriately engaged, Peak Facilitation will conduct outreach and engagement activities.

Deliverables:

- Memorandum listing the stakeholders critical to successful evaluation of effectiveness and feasibility of each alternative action.

Subtask 5.2 Characterize Effectiveness

Lotic will utilize process-based conceptual models (see Subtask 2.7) to predict ecological and recreational use outcomes of each candidate alternative action. Where identified alternatives are expected to impact hydrology (e.g. reservoir release schedules), Lotic will use the hydrological simulation tools developed in Subtask 2.2 to assess the likely hydrological effects. For structural projects (e.g. diversion structure improvements), Lotic will use conceptual level engineering assessments and/or 1D hydraulic models to evaluate effects. Predicted outcomes will be assessed against stakeholder-identified management objectives. Actions will then be ranked against each other based on their predicted ability to meet those objectives.

Deliverables:

- Expansion of the table developed in TASK 4 to include the relative effectiveness rank assigned to each alternative.
- Technical report discussing the employed methodologies and assessment results characterizing the effectiveness of each proposed alternative.

Subtask 5.3 Characterize Feasibility

The characterization of feasibility for each alternative is a social exercise that requires careful evaluation of administrative, legal, financial, and institutional constraints. Lotic will initially utilize streamflow records, hydrological simulation products, records from the Colorado Department of Water Resources, existing engineering reports, and/or discussions with local water users to characterize the demands, efficiencies, and use shortages associated with various uses of water from the high-priority reaches. Lotic will utilize available engineering assessments or secure new conceptual level assessments to provide important information about the costs of structural projects. Lotic will work with the local Water Commissioner to identify critical administrative constraints on water management alternatives. Lotic will also work with stakeholders to further characterize land ownership and institutional constraints and understand local perceptions of equitable cost allocation for E&R use projects. Through this process, we hope to identify likely proponents/champions for specific issues and areas of broad stakeholder interest and support. Lotic will subsequently work with the stakeholders to rank alternatives according to their relative feasibility.

Deliverables:

- Expansion of the table developed in Subtask 5.2 to include the relative feasibility rank assigned to each alternative.
- Technical report discussing the employed methodologies and stakeholder discussions characterizing the feasibility of each proposed alternative.

Subtask 5.4 Prioritize Actions

Lotic will integrate the results from the effectiveness and feasibility assessments above to identify high-priority actions for protecting or improving environmental and/or recreational flows. Lotic will identify a conceptual level implementation plan for each action. The implementation plan will identify project champions, affected stakeholders, recommendations for overcoming technical, financial, or legal constraints, anticipated outcomes, and a monitoring plan for assessing long-term effectiveness.

Deliverables:

- Technical report integrating all previous maps, graphics, memoranda, and technical reports. Report will additionally include identification of high-priority management recommendations and corresponding discussions for implementation and monitoring of each.

REFERENCES

- Mahoney and Rood, 1998. A device for studying the influence of declining water table on poplar growth and survival. *Tree Physiology* 8:305–314.
- Poff, N.L., J.D. Allan, M. B. Bain, J.R. Karr, K.L. Prestegard, B. Richter, R. Sparks, and J. Stromberg. 1997. The natural flow regime: a new paradigm for riverine conservation and restoration. *BioScience* 47:769-784.

Schmidt, L.J. and J.P. Potyondy, 2004, Quantifying channel maintenance instream flows: An approach for gravel-bed streams in the western United States, General Technical Report RMRS-GTR-128, Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, pp. 33

Taylor, N., 1998. *Urban Planning Theory since 1945*. London: Sage Publications. pp. 67–68.

REPORTING AND FINAL DELIVERABLE

ERWC will provide the CWCB with brief progress reports every 6 months, beginning from the date of the executed contract. The progress reports will describe the completion or partial completion of the tasks identified above, including a description of any major issues that have occurred and any corrective action taken to address these issues as well as any adjustment to the tasks that must occur to address those corrective actions.

At completion of the project, ERWC will provide the CWCB with a final report summarizing the project. Additionally, the final report will briefly document how the project was completed.

Eagle River Integrated Water Management Plan (ER-IWMP)

Attachment C: Budget & Timeline Table

Task	Sub-Task	Description	Month Following Contract Initiation		CWCB Funds	WSRF- cash (projected)	Stakeholders- cash (committed)	ERWC- In-Kind	Eagle Park Reservoir Co.- In-Kind	Total
			Target Start Date	Target Completion Date						
Engaging Stakeholders	1.1	Advisory Committee	Month 1	Month 36	\$ 24,078.00	\$ 9,000.00	\$ 12,780.00	\$ 12,000.00		\$ 57,858.00
	1.2	Community Engagement Plan	Month 1	Month 36						
Assess Conditions & Identify Risks	2.1	Review Existing Data and Information	Month 2	Month 3	\$ 90,318.00	\$ 39,750.00	\$ 56,445.00		\$ 15,000.00	\$ 201,513.00
	2.2	Characterize Hydrological Regimes	Month 2	Month 4						
	2.3	Classify Fluvial Geomorphological Forms and Processes	Month 4	Month 7						
	2.4	Characterize Water Quality	Month 6	Month 6						
	2.5	Characterize Ecological Integrity	Month 5	Month 11						
	2.6	Characterize Ecosystem Services Delivery	Month 8	Month 12						
	2.7	Develop Conceptual Models	Month 12	Month 16						
Articulate Planning Objectives & Measurable Results	3.1	Identify High-Priority Management Issues and Locations	Month 17	Month 19	\$ 19,008.00	\$ 6,750.00	\$ 9,585.00			\$ 35,343.00
	3.2	Select Objectives and Measureable Results	Month 19	Month 21						
Identify Potential Alternatives	4.1	Identify Potential Alternatives	Month 21	Month 23	\$ 16,233.00	\$ 6,750.00	\$ 9,585.00			\$ 32,568.00
Evaluate & Prioritize Actions	5.1	Identify and assemble relevant stakeholders	Month 24	Month 25	\$ 31,808.00	\$ 12,750.00	\$ 18,105.00			\$ 62,663.00
	5.2	Characterize Effectiveness	Month 25	Month 28						
	5.3	Characterize Feasibility	Month 27	Month 31						
	5.4	Prioritize Actions	Month 31	Month 36						
					\$ 181,445.00	\$ 75,000.00	\$ 106,500.00	\$ 12,000.00	\$ 15,000.00	\$ 389,945.00

Stakeholders did not stipulate which tasks their cash support could be spent on. Stakeholder funds were totaled and spread throughout the tasks as necessary. The actual funding provided by each stakeholder is presented below.

Stakeholder	Level of support
Homestake Water Project Partners	\$ 20,000
Eagle Park Reservoir Company	\$ 15,000
Vail Resorts (pending)	\$ 15,000
Climax Mine (Freeport McMoRan)	\$ 11,000
Colorado River District	\$ 10,000
Eagle County (pending)	\$ 10,000
Town of Vail	\$ 10,000
Town of Avon	\$ 10,000
Town of Gypsum	\$ 5,000
Town of Minturn	\$ 500
Total Stakeholder cash support	\$ 106,500

Homestake Water Project Partners includes Aurora Water and Colorado Springs Utilities
Eagle Park Reservoir Co. includes Eagle River Water & Sanitation District & Upper Eagle Regional Water Authority

Background

Seth built a career in hydrological research, watershed sciences, and water resource planning over the past decade. He specializes in hydrological modeling; stream characterization; deployment and operation of data collection and management systems; GIS data analysis and visualization, coordination of water quality monitoring and assessment activities, and development of water quality and water quantity planning documents. He works extensively with city and county governments, federal agencies, and 501(c)3 organizations. Seth currently serves on the Board of Directors of Eagle Mine Ltd., a non-profit organization established to monitor and disseminate information about the Superfund cleanup efforts at the Eagle Mine Site near Red Cliff, Colorado.

Education

M.S., Land Resources and Environmental Sciences, Montana State University, 2010

B.A., Environmental Studies (Water Resources Track), University of Colorado, 2005

Recent Project Experience***Yampa River Stream Management Plan, City of Steamboat Springs***

Implemented the Stream Health Assessment Framework to identify and prioritize constraints on ecological function in the section of the Yampa River that flows through Steamboat Springs. Evaluated conditions for channel morphology, hydrologic regime behavior, riparian health and extent, water quality, and aquatic biota. Worked with city staff, NGOs, water resource management agencies, and other stakeholders to identify alternative projects and processes that may help alleviate problematic conditions. Assessed likely outcomes of each alternative to develop a prioritized restoration, conservation, and water management plan for the City of Steamboat Springs.

Upper Colorado River Basin Resource Guide, Colorado Mesa University

Developed a data visualization dashboard for presenting diverse hydrological, water quality, water rights, and aquatic biota in an interactive web application. Worked with stakeholders from the Colorado Basin Roundtable to determine likely user workflows and data needs. Leveraged existing Colorado Decision Support Tools (CDSS) and simulation modeling projects to support efforts to identify locations in the basin in need of focused planning around environmental and/or recreational needs.

Upper Roaring Fork River Stream Management Plan, City of Aspen and Pitkin County

Synthesized existing research, characterized environmental and recreational use needs, and evaluated management opportunities for meeting those needs on the Upper Roaring Fork River near Aspen. Considered channel maintenance flows, riparian conditions, aquatic habitat quality and connectivity, and recreational use preferences. Managed a team of consultants, including aquatic biologists, water rights experts, and a dialog facilitation organization to implement the planning effort. Planning outcomes will inform management of City and County owned properties and water rights, development of policy and regulations, and participation in other regional water planning efforts (e.g. Twin Lakes Exchange) with diverse groups of stakeholders.

San Miguel Pilot Project, Trout Unlimited

Prototyped an approach for assessing non-consumptive use needs and evaluating management opportunities for meeting those needs in Colorado's Southwest Basin using the San Miguel watershed as a test-case.

Considered channel maintenance flows, riparian conditions, aquatic habitat quality and connectivity, and recreational use preferences. Use field data to develop and refine hydrological and hydraulic simulation models that characterize existing conditions and enable evaluation of 'what-if' scenarios. Engaged stakeholders to guide selection of management opportunities for evaluation in the assessment framework. Planning outcomes intend to instruct future water planning, granting and approval processes.

Crystal River Stream Management Plan, Roaring Fork Conservancy

Produced a guidance document for implementing high-priority projects and executing feasible water resource management alternatives in the Crystal River watershed aimed at addressing late season low-flow conditions that impair stream health. This work responded to questions articulated by a diverse group of stakeholders in the Crystal River watershed by conducting six interdisciplinary evaluations of existing physical, biological, and resource management conditions and developing a structured decision support framework for guiding management decisions. The resulting decision support system explicitly simulated watershed hydrology; allocation and administration of water under Colorado's water rights system; 2-dimensional channel hydraulics along 8 miles of the lower Crystal River; and the interplay between channel form, changes in streamflow, and the quality and availability of aquatic habitat. Results from this effort identified, prioritized, and provided initial project scoping for alternative management actions and/or structural solutions available to improve ecological conditions and functions in the Crystal River while recognizing the management constraints imposed by the competing objectives of various local stakeholder groups.

Learning By Doing, Northwest Colorado Council of Governments

Participated in an adaptive management program to operate Denver Water's Moffat transmountain diversion system in a manner that mitigates and enhances environmental conditions in the Fraser and upper Colorado River basins. Developed annual operating plans, reviewed stream condition monitoring results and prioritized restoration projects.

Water Quality Sampling and Analysis Plan, City of Aspen

Developed a guidance document and set of standard operating procedures for assessing long-term water quality trends on the Roaring Fork River, estimating event mean concentrations for various pollutants in stormwater discharges, and identifying illicit discharges and other water quality impairments within the City of Aspen.

Gore Creek Strategic Action Plan, Town of Vail

Developed a strategic action plan for addressing observed water quality impairments on Gore Creek near the Town of Vail. Evaluated and prioritized an array of tasks that fell within five primary categories: education and outreach campaigns, regulatory changes, implementation of best management practices, streambank restoration and structural BMP projects, and ongoing data collection and study.

Water Quality Monitoring and Assessment Program, Eagle River Watershed Council

Coordinated water quality monitoring and assessment activities, provided data interpretation and technical assistance to local governments and resource managers, identified data gaps, and suggested actions to remedy perceived water quality impairments in the Eagle River watershed. Compiled annual technical reports assessing current water quality conditions and trends. Coordinated watershed-wide data collection efforts among multiple agencies to maximize efficiency and fill data gaps. Engaged stakeholders and the general public to enhance community-wide understanding of water quality issues. Developed a long-term water quality monitoring plan for data collection entities within the watershed.

Snapshot Assessment of Two Distressed Rivers, Roaring Fork Conservancy

Collected synoptic measurements of streamflow and water quality on the Roaring Fork River through the City of Aspen and the Lower Crystal River near Carbondale over several dates in late summer during severe drought conditions. Analyzed data to elucidate relationships between longitudinal changes in streamflow, water temperature, and other easily measured water quality parameters during late-summer baseflow. Identified several dates/locations on both study segments where existing management decisions severely deplete streamflows during drought. Assessment results provided the foundation for discussions regarding needs and opportunities for alternative management of water resources on the Roaring Fork and Crystal River.

Lower Crystal River Assessment, Roaring Fork Conservancy

Constructed a water rights allocation and accounting simulation model for surface water in the Lower Crystal River. Simulated daily streamflow conditions during average, moderate drought, and severe drought conditions in association with several alternative water conservation scenarios. Identified longitudinal patterns in stream discharge produced by each environmental condition and management scenario pairing. Formatted results for input into framework for assessing ecological benefits of alternative water management scenarios.

Presentations and Publications

Ward, A.S., Kelleher, C.A., Mason, S.J.K., Wagener, T. McIntyre, N., McGlynn, B., Runkel, R. (2017) A software tool to assess uncertainty in transient storage model parameters using Monte Carlo simulations. *Freshwater Science*. 36 (1): 195-217.

Mason, S.J.K., Cleveland, S., Izurieta, C. Llovet, P., Poole, G.C. (2014) A Centralized Tool for Managing, Archiving, and Serving Point-In-Time Data in Ecological Research Laboratories. *Environmental Modelling and Software*. 51: 59-69. <http://dx.doi.org/10.1016/j.envsoft.2013.09.008>

Mason, S.J.K., B.L. McGlynn, and G.C. Poole, (2012) Hydrologic response to channel reconfiguration on Silver Bow Creek, Montana. *Journal of Hydrology* 438-439: 125-136.
<http://dx.doi.org/10.1016/j.jhydrol.2012.03.010>

Mason, S.J.K., Cleveland, S., Izurieta, C., Llovet, P., Poole, G.C. (2012) The Virtual Observatory and Ecological Informatics System (VOEIS): Using RESTful architecture and an extensible data model to provide a unique data management solution. Spring Runoff Conference (April 3-4, Logan, UT)

Mason, S.J.K., B.L. McGlynn, and G.C. Poole, (2010). Hydrologic behavior in restored streambeds: Does function follow form? Montana Section AWRA Conference (October 14-15, Helena, MT).

Mason, S.J.K., B.L. McGlynn, and G.C. Poole, (2010). Assessing hydrologic response to channel reconfiguration. RRNW Annual Symposium (February 1-4, Stevenson, WA).

Technical Qualifications

Field Proficiencies

Solar array and battery bank setup
Meteorological tower set-up
Radio telemetry communication systems
Bathymetric mapping
Acoustic Doppler Current Profilers
Survey-grade GPS equipment
Mapping-grade GPS equipment

Methodological Proficiencies

Stream discharge measurements (ADCP, dilution gauging, velocity-area techniques)
Stream tracer experiments (NaCl, Rhodamine WT)
Synoptic stream temperature gauging

Stream metabolism experiments
Numerical solute transport modeling
Geostatistical analysis
Benthic macroinvertebrate sampling

Programming and Computing Proficiencies

Python
ArcGIS / QGIS
Matlab
Javascript / HTML
R
Loggernet, CR-Basic, and Edlog (Campbell Scientific)
Microsoft Office (Word, Excel, Access)

Background

Jessica has over ten years of experience in water resource engineering, watershed sciences, and water resource planning. She specializes in hydrological and hydraulic modeling; stream characterization; deployment and operation of data collection and management systems; water rights modeling; and development and coordination of water quality monitoring and assessment activities. Jessica works extensively with city and county governments, federal agencies, and 501(c)3 organizations.

Education

M.S., Civil Engineering,
Montana State University,
2009

B.S., Civil Engineering,
University of Virginia, 2001

Recent Project Experience

Crystal River Stream Management Plan, Roaring Fork Conservancy

Produced a guidance document for implementing high-priority projects and executing feasible water resource management alternatives in the Crystal River watershed aimed at addressing late season low-flow conditions that impair stream health. This work responded to questions articulated by a diverse group of stakeholders in the Crystal River watershed by conducting six interdisciplinary evaluations of existing physical, biological, and resource management conditions and developing a structured decision support framework for guiding management decisions. The resulting decision support system explicitly simulated watershed hydrology; allocation and administration of water under Colorado's water rights system; 2-dimensional channel hydraulics along 8 miles of the lower Crystal River; and the interplay between channel form, changes in streamflow, and the quality and availability of aquatic habitat. Results from this effort identified, prioritized, and provided initial project scoping for alternative management actions and/or structural solutions available to improve ecological conditions and functions in the Crystal River while recognizing the management constraints imposed by the competing objectives of various local stakeholder groups.

Water Quality Sampling and Analysis Plan, City of Aspen

Developed a guidance document and set of standard operating procedures for assessing long-term water quality trends on the Roaring Fork River, estimating event mean concentrations for various pollutants in stormwater discharges, and identifying illicit discharges and other water quality impairments within the City of Aspen.

Water Quality Monitoring and Assessment Program, Eagle River Watershed Council

Developed water quality report card for the Eagle River watershed. Maintain database for water quality data collected throughout the watershed.

Lower Crystal River Assessment, Roaring Fork Conservancy

Constructed a water rights allocation and accounting simulation model for surface water in the Lower Crystal River. Simulated daily streamflow conditions during average, moderate drought, and severe drought conditions in association with several alternative water conservation scenarios. Identified longitudinal patterns in stream discharge produced by each environmental condition and management scenario pairing. Formatted results for input into framework for assessing ecological benefits of alternative water management scenarios.

Roaring Fork River Stream Gage Installation, Aspen Center for Environmental Studies

Designed and installed a stream gage to monitor discharge on the Roaring Fork River near John Denver Park in Aspen, CO. Developed a system to stream data from the datalogger and publish it on an interactive website maintained by ACES for educational purposes. Measure stream flow for stream gage calibration.

Groundwater Assessment

Conducted surface and groundwater availability evaluations. Conducted field sampling from groundwater wells for water quality evaluations and recommendations for treatment. Designed and implemented a groundwater tracer test to determine travel times and to assist with understanding a subsurface system.

Upper Blackfoot Mining Complex Sediment Re-suspension Assessment, Montana State University

Assessed the potential for contaminated sediment re-suspension from a mine impacted wetland while completing graduate work at Montana State University. Completed a channel response assessment for the Upper Blackfoot Mining Complex/Mike Horse Mine. Installed and maintained stream gage at the headwaters of the Blackfoot River near Lincoln, MT. Measured stream flow along tributaries. Assessed flood impacts from historic dam breach. Developed hydrologic and hydraulic model of the Upper Blackfoot River.

Database Management, Montana State University, Watershed Hydrology and Analysis Labs

Maintained a SQL Server database for a scientific lab as part of a national data acquisition effort (Consortium of Universities for the Advancement of Hydrologic Science). Taught students and faculty how to use data loading and acquisition tools. Participated in database software development and facilitated the design and installation of remote data acquisition systems.

Professional Credentials

Fundamentals of Engineering (EIT) (4/2008)

Professional Engineer (PE) (10/2010)

Leadership Positions

Captain, Women's Whitewater Raft Team

Train and compete with teams of four or six women in international, continental, and national whitewater raft races and championships. Participate in Time Trial, Head-to-Head Sprint, Slalom, and Downriver racing disciplines. Training and racing require hard work in inclement weather and the ability to react quickly to changing circumstances in high-stress situations. Maintaining optimum team dynamics requires open lines of communication and constant introspection to ensure that team interests are placed above self interests.

Technical Qualifications

Field Proficiencies

Solar array and battery bank setup
Meteorological tower set-up
Radio telemetry communication systems
Survey-grade GPS equipment
Mapping-grade GPS equipment
Basic Wetland Identification and Delineation

Methodological Proficiencies

Stream discharge measurements
Groundwater tracer experiments

Programming and Computing Proficiencies

ArcGIS / QGIS
HEC-RAS, HEC-HMS
RiverWare, StateMod, MODSIM
Matlab
Loggernet, CR-Basic, and Edlog (Campbell Scientific)
Microsoft Office (Word, Excel, Access)
Visual Basic

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SUMMARY OF EXPERTISE AND APPROACH

Heather Bergman facilitates and mediates complex public policy deliberations on a variety of substantive issues. Heather has facilitated collaborative negotiations and discussions involving diverse stakeholders from federal and state agencies, local municipalities, advocacy organizations, ranchers, farmers, community residents, and the public at large. Much of Heather's work portfolio focuses on high-conflict collaborative processes, and her strength is helping diverse and often opposing participants find common ground. Heather also has an extensive background in designing and managing retreats, workshops, and public outreach meetings for teams and organizations in need of a targeted process for achieving their goals. Heather uses humor to defuse tense situations and help participants feel at ease, allowing them to move beyond initial barriers and find consensus.

SELECT MEDIATION AND FACILITATION EXPERIENCE

Forest Health Advisory Council

The Colorado State Forester recently selected Heather to facilitate the deliberations of the new Forest Health Advisory Council established by the Colorado Legislature in 2016 to advise the State Forester on issues related to forest health in Colorado. The 24-member Council will explore issues related to forest health, including prescribed fire, wildfire mitigation treatments, watershed protection, community protection programs, timber industry viability, and recreational needs and impacts. The Council will examine current policy and programs and make recommendations for change. They may also identify one or more pilot projects for the Colorado State Forest Service to implement in the near term.

Front Range Roundtable

Heather facilitates the Front Range Roundtable, a coalition of individuals from state and federal agencies, local governments, environmental and conservation organizations, the academic and scientific communities, and industry and user groups with a commitment to forest health and fire risk mitigation along Colorado's Front Range. The Roundtable seeks to engage communities and foster support for the implementation of forest management goals that help protect communities and restore forest health. The Roundtable's focus area encompasses 10 counties on Colorado's Front Range, and its members explore ideas and options for fuels treatment and mitigation to minimize the risk of wildfire and restoration of healthy forest ecosystems in burned areas.

Boulder Valley Comprehensive Plan Community Engagement

Heather worked with City of Boulder planning staff to design and deliver more than 10 community workshops as part of the update process for the Boulder Valley Comprehensive Plan. City staff wanted the engagement effort to be meaningful and fun, so Heather help them design table top conversations and games that allowed them to explore different visions for Boulder's future and different policy options for achieving each vision. Participants discussed where to focus new development, where to focus infill projects, how to balance development of jobs with development of housing, and related issues. Activities involved small group discussions, creation of "visions" for the community, electronic polling, tradeoff exercises, "policy maker for a day" activities, and other fun but meaningful activities.

Heather is working with the Estes Valley Watershed Coalition staff to implement creative outreach tools for soliciting community input on a resiliency plan for the Upper Big Thompson River corridor outside

Customer Focus Groups for Denver Water

Denver Water recently selected Peak Facilitation Group to design and facilitate several online and in-person customer focus groups to solicit information on issues related to policy, pricing, and communication. Heather will work with Denver Water staff and the Citizens Advisory Committee (CAC) to develop a customized approach for these focus groups based on what Denver Water staff would like to learn from and what the CAC would advise based on their unique knowledge about different sectors in the Denver community. This is a pilot project for 2017 with an eye toward developing specific tools and approaches that can be replicated over time as a reliable way to get meaningful input from customers.

Water Efficiency Working Group

Heather is currently facilitating the Water Efficiency Working Group, a diverse group of water stakeholders advising Denver Water staff on conservation practices. Denver Water is preparing their five-year conservation plan, a document that they hope will include targets for indoor and outdoor water use on residential and commercial properties, as well as creative strategies for helping the utility and its customers achieve those targets. Stakeholders on the group include the City and County of Denver, water distributors providing water outside Denver's service boundaries, Denver City Parks, Denver Public Schools, the conservation community, the landscape industry, and water interests on the West Slope. The Working Group aims to deliver final recommendations to the Denver Water Board at the end of 2016.

Rio Grande National Forest Plan Revision Public Engagement

The US Forest Service is revising the Rio Grande National Forest Plan, the document that guides management of the Rio Grande National Forest in southern Colorado. The forest is an important natural and community resource, and engaging the public in a meaningful way in the plan revision is critical. Heather worked with staff from the US Forest Service and the National Forest Foundation to develop and implement exciting new public engagement opportunities that allowed stakeholders throughout the San Luis Valley to not only give their opinions on the future of the forest, but also to engage in constructive dialogue on key issues with individuals who have different visions for and uses of the forest. These cross-sector stakeholder dialogues informed all phases of the plan revision process.

North Trail Study Area

Heather led the public engagement process for the City of Boulder as developed a management plan to improve visitor experiences and increase the sustainability of trails on open space north of Boulder. The City sought to balance recreational access and opportunities to the North Trail Study Area (NTSA) while conserving diverse natural, cultural, and agricultural resources. The public engagement effort included multiple community workshops aimed at assessing current use and resource conditions, the community's interests in and desired outcomes for the NTSA, options and creative ideas exist for new management approaches, and different ways the City could manage the NTSA to achieve the different management goals for the area.

Long-Range Transportation Plan Environmental Mitigation Advisory Group

Heather facilitated a pilot project in the Pikes Peak region to develop a long-range transportation plan through a collaborative, stakeholder process. Local, state, and federal stakeholders worked with staff of the Metropolitan Planning Organization to develop a vision, mission, and goals for the transportation plan, and also provided substantial feedback and guidance on the development of the planning scenarios that provided the foundation for the planning process. Heather is now facilitating the Advisory's Group work to develop an advance mitigation plan for addressing the impacts of future transportation projects in the region by identifying and prioritizing values that must be conserved on site as well as additional conservation benefits that could be achieved through off-site, out-of-kind mitigation projects.

Interbasin Compact Committee

For five years, Heather facilitated the deliberations of the Interbasin Compact Committee (IBCC). The 27 members of the IBCC represent nine basin roundtables and additional stakeholders in statewide water issues. The Committee was working to address the long-term water supply challenges of the state, balancing the needs of municipal water providers, agricultural producers, industrial users, the recreation economy, and the natural environment. In June 2014, the IBCC reached a groundbreaking agreement on a conceptual framework for development of a new transmountain diversion in a way that will bring benefits to communities on both sides of the Continental Divide. This draft conceptual framework was included in the first draft of Colorado's Water Plan.

Responsible Natural Gas Production

Under the direction of former Colorado Governor Bill Ritter, the Center for a New Energy Economy provides decision makers with recommendations and strategies for accelerating progress toward a clean energy economy while maintaining national security, economic vitality, public health, social equity, and wise use of natural resources. Heather facilitated a multi-stakeholder roundtable to develop recommendations for responsible natural gas production policy for the President to potentially implement through executive authority. Stakeholders included industry representatives and environmental organizations.

West Trail Study Community Collaborative Group

Heather facilitated the deliberations of the Community Collaborative Group (CCG), a diverse group of stakeholders working to prepare consensus recommendations to the Open Space and Mountain Parks department regarding trail location, recreational use, and natural resource conservation. Representatives of recreation, conservation, and other interests provided consensus input into a comprehensive land-use plan for 12,000 acres of grassland, foothills, and mountains that serve as Boulder's visual backdrop.

Affordable Housing Task Force

Heather facilitated the deliberations of the City of Boulder's Affordable Housing Task Force, a diverse group of community stakeholders working to develop recommendations to the City for ways to meet the growing need for affordable housing in the City of Boulder. The group's deliberations touched not only on the provision of both rental and home ownership opportunities, but also related issues like transportation, social service needs, environmental impacts, and financial constraints. This 18-month process ended with a report to staff and City Council that included recommendations for generating new financial resources, distributing the cost of providing affordable housing equitably among the sectors that contribute to the need, and establishing innovative programs and incentives to increase the provision of affordable housing in the City.

Washington School Site Redesign

Heather facilitated the stakeholder deliberation process in this controversial effort to design an urban infill redevelopment project on the site of a closed elementary school in Boulder, Colorado. Neighbors of the site had concerns about the development's impact on parking, home values, neighborhood feel, and quality of life. The City of Boulder had requirements regarding historic building preservation, provision of affordable housing, solar access, and density. Heather helped the stakeholders to reconcile these often competing demands into a consensus list of guiding principles for the developer.

Fountain Creek Vision Task Force

Heather facilitated the deliberations of the Fountain Creek Vision Task Force in southern Colorado, a group of diverse stakeholders seeking agreement about how to restore the Fountain Creek watershed, which crosses three counties and includes several towns and cities, substantial agricultural land, and a large military base. Fountain Creek is on the 303(d) list for E. coli and sedimentation, and flooding and stormwater are other serious concerns. This collaborative process resulted in a detailed watershed management plan and the creation of a watershed district by the Colorado Legislature.

Bureau of Land Management Community Assessments in North Central Colorado

Heather co-facilitated a pre-planning process for the Bureau of Land Management (BLM) that sought to engage local governments in discussions about the future of federal public lands in north-central Colorado. This project involved interviews and focus groups with staff and elected officials from several towns, cities, and counties in the state to gather their views on how residents use public lands and how public lands should be managed in the future.

Northwest Colorado Stewardship

Heather co-facilitated the negotiations of the Northwest Colorado Stewardship (NWCOS), a diverse group of community stakeholders who come up with a “community alternative” for inclusion in draft resource management plan for a large area of federal public land. This collaborative community visioning approach helped the stakeholders to see the complexities of the land use planning process and the challenges inherent in planning for multiple uses that include wilderness designation, energy development, habitat and species protection, and motorized and non-motorized recreation.

SKILLS AND EXPERTISE

- MEETING FACILITATION
- CONFLICT MEDIATION
- STAKEHOLDER ENGAGEMENT
- COLLABORATIVE PROBLEM SOLVING
- PUBLIC / COMMUNITY ENGAGEMENT
- STRATEGIC PLANNING
- PROCESS DESIGN
- TEAM BUILDING

EDUCATION

- DOCTOR OF PHILOSOPHY IN POLITICAL SCIENCE *All but Dissertation* (2002) – Colorado State University; Comparative and Environmental Politics
- MASTER OF PUBLIC ADMINISTRATION (1997) – University of Colorado at Denver; Environmental Law and Policy and Nonprofit Organization Management
- BACHELOR OF ARTS (1994) – Beloit College; International Relations and Modern Languages

EMPLOYMENT

- PEAK FACILITATION GROUP, INC. 2010 – present
- THE KEYSTONE CENTER 2005-2010
- THE WILDERNESS SOCIETY, PUBLIC LANDS PROGRAM 2004-2005
- GLOBAL GREENGRANTS FUND 2003-2004
- US ENVIRONMENTAL PROTECTION AGENCY, ENVIRONMENTAL JUSTICE PROGRAM 2002-2003



Advocates for our rivers

Holly J. Loff

EDUCATION

Duke University
Certificate: Nonprofit Management, 2016

University of Montana, Missoula
Bachelor of Science: Resource Conservation, 1998

Other Education

Nonprofit Executive Leadership Program, El Pomar Foundation, June 2017
Financial Resource Development, Masters of Nonprofit Management Program, Regis University, 2005
Grant Writing, Masters of Nonprofit Management Program, Regis University, 2005

CONFERENCE PARTICIPATION & PRESENTATIONS

Presenter, FIPS-MOUCHE World Flyfishing Championships- Conservation Symposium, September 2016, Vail, CO.

Presenter, State of the River, May 2016, Edwards, CO.

Presenter, FIPS-MOUCHE World Youth Flyfishing Championships- Conservation Symposium, September 2015, Camp Hale, CO.

Presenter, State of the River, May 2015, Edwards, CO.

Presenter, State of the River, May 2014, Edwards, CO.

Steering Committee and Volunteer Coordinator, Mountain Rural Philanthropy Days, June 2011, Edwards, CO.

Presenter, Teaching Outside the Box 2007, Colorado Alliance for Environmental Education, Granby, CO.

Presenter, Colorado Association for Recycling Conference 2007, Keystone, CO.

Committee Chair, Teaching Outside the Box 2005, Colorado Alliance for Environmental Education.

Presenter, Teaching Outside the Box 2005, Colorado Alliance for Environmental Education, Granby, CO.

RECENT HONORS & AWARDS

2017 Hometown Media Award Winner: Best of Documentary Access Center Professional; Film: Heart of Vail, which documents the water quality concerns on Gore Creek. Awarded to JK Perry of High Five Access Media in Partnership with Eagle River Watershed Council. Narration by Holly Loff.

2016 Community Impact Award finalist, Eagle River Watershed Council

2013 Small Nonprofit of the Year Award winner, Eagle River Watershed Council

EXPERIENCE

Can Do Multiple Sclerosis, Edwards, CO

June 2012-May 2013

Grants & Corporate Relations Specialist

Managed all foundation and corporate relationships and communications; managed all corporate sponsors for all events and programs; developed, cultivated, and stewarded grant and sponsorship relationships with corporations and foundations; researched and qualified grant funders; submitted letters of interest, grant proposals, and grant reports; assisted in development of program budgets with the involvement of program and marketing staff; tracked the use of restricted funds and public recognition of funders

Solar Energy International, Carbondale, CO

August 2011-June 2012

Development Manager

Oversaw a comprehensive development program, including: annual fund with direct mail; electronic & social media appeals; cultivation, solicitation and stewardship of donors; grant searches; proposal/report writing; developed a corporate sponsorship program

Holly J Loff Consulting, Gypsum, CO

August 2009-August 2011

Identified prospective funders and opportunities for clients; wrote, edited, submitted grant proposals, reports, etc. to foundations, corporations & government; developed a grant calendar for clients

High Country Conservation Center, Frisco, CO

July 2002- April 2008

Associate Director, 2006-2008

Developed and instructed the first Master Composter program, which has since been replicated in other communities; grew a monthly newsletter column to a monthly and then weekly print newspaper column; co-authored the weekly newspaper column; co-designed/wrote/produced Summit County Green Guides; developed the Summit Green Business program; managed numerous outreach events; facilitated numerous committees; edited monthly e-newsletter; presented educational workshops; planned fundraising and outreach events; produced an educational show on local television

Education Coordinator, 2002-2006

Managed all of the organization's advocacy programs including workshops, workplace educational presentations (for local municipalities and businesses), school programs; marketed educational programs; edited quarterly print newsletter

VOLUNTEER EXPERIENCE

Town of Gypsum, Parks & Recreation Committee, 2009-2015. Secretary 2014-2015

Eagle County School District's Wild West Day, Solicitations Co-Chair 2012- 2013

Colorado Alliance for Environmental Education, Advisory Board Member, 2004-2006

Continental Divide Land Trust, Board Member, 2002-2005. Volunteer Coordinator, 2004

Tim Thompson, PE, LEED AP, CEM

P.O. Box 9327 Avon, CO 81620

(541) 810-1800

tim.projectengineer@gmail.com

PROJECT ENGINEER

Professional Engineer with extensive experience in civil engineering, construction, real estate development, and energy efficiency projects. Strong leadership ability to manage people and projects. Technical expertise in residential, commercial, and school renovation site grading and Stormwater Pollution Prevention Plans.

CERTIFICATIONS

PE - Registered Professional Engineer - Colorado, Utah, Oregon, West Virginia

LEED AP BD+C - Leadership in Energy and Environmental Design - Accredited Professional – Building Design + Construction

CEM - Certified Energy Manager

PROFESSIONAL EXPERIENCE

Project Manager TTK Engineering 2010–Present Klamath Falls,OR/ Avon,CO

- Directed teams of engineers and contractors for water conservation and energy efficiency measures for low impact development
- Supervised maintenance personnel and contractors installing best available technology stormwater control measures including rain gardens and swales
- Managed trail construction beside Lake Ewauna to minimize runoff
- Created *Energy and Water Conservation Plan* saved school district over \$100,000
- Performed Facility Condition Assessments (FCA's) on federal building grounds
- Responsible for budgets, change orders, RFI's, as-built drawings, and close out docs

Senior Project Engineer WH Pacific Engineers 2007-2010 Klamath Falls,OR

- Supervised engineers and contractors for destination resort property construction using water efficient landscaping technologies and storm drain outlet protection
- Owner's representative responsible for project costs, project status and schedule
- Managed sustainable commercial land development planning
- Performed hydrology and runoff computations per Maryland Stormwater Design
- Directed civil engineering design process including scopes of work, bid documents, cost estimates, and retention basin design calculations

Engineering Manager Engineering Services, Inc. 2005-2007 Beckley, WV

- Project Manager for large hotel development land use and LID drainage design
- Performed Phase I Environmental Site Assessments
- Negotiated with regulatory agencies to facilitate building permit approval process
- Supervised contractors performing environmental audits and water quality studies

EDUCATION

Bachelor of Science Engineering (BSEM), West Virginia University
Water Quality, Stormwater Runoff, Economics, and Management Courses

PROFESSIONAL AFFILIATIONS

Co-Founder Piney Creek Watershed Association

Eagle River Watershed Council

Actively Green Sustainability Program - Vail

Colorado Department of Public Health & Environment Regulatory Compliance

Vail Valley Partnership

Klamath County Oregon Planning Commissioner

Co-Founder US Green Building Council Klamath Falls Leaf

Board Member Klamath Basin Homebuilders Association

Project Management Institute Trustee

Klamath County Economic Development Association



BUREAU OF LAND MANAGEMENT
COLORADO RIVER VALLEY FIELD OFFICE
2300 River Frontage Road
Silt, CO 81652
www.blm.gov/co/st/en/fo/crvfo.html



In Reply Refer to:
7220 (CON040)

October 26, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

Dear Chris Sturm:

I write to express my strong support for the Eagle River Integrated Water Management Plan (ER-IWMP) being coordinated by Eagle River Watershed Council for their application to the Colorado Watershed Restoration grant. This project will take important steps towards improving security for all water uses in the Eagle River Watershed planning area by understanding existing and future use needs and gaps, developing strategies for meeting shortages, and planning for the protection and maintenance of healthy riverine ecosystems.

The ER-IWMP will utilize a stakeholder process to identify the environmental and recreational flow needs in the Eagle River and assess its current impairments and how those may change with future water supply development. The Bureau of Land Management Colorado River Valley Field Office (BLM CRVFO) is located in Silt, CO. The mission of the BLM is to sustain the health, diversity, and productivity of America's public lands for the multiple use and enjoyment of present and future generations. Considering the mission of the BLM, the BLM CRVFO supports the ER-IWMP project because we are dedicated to preserving and protecting water resources along the Eagle River as the land we manage for multiple uses relies on the water quality and quantity supplied by the river.

The BLM CRVFO manages a variety of uses along the Eagle River including, but not limited to; recreational uses, agricultural lands, terrestrial and aquatic wildlife habitat, upland and riparian ecosystems, and natural resource development activities. All of these uses rely on and can impact the health of the Eagle River. Therefore, we are interested in making sure we have sufficient flows in the river to help maintain suitable conditions for the aforementioned uses.

The BLM CRVFO is ready to be engaged and supportive of ER-IWMP project. We are prepared to serve the public interest in the planning and evaluation of these resources. We are able to commit to in kind resource donations in the form of data collection, data analysis and environmental assessments if necessary. Please give the ER-IWMP application the highest consideration.

Sincerely,


Gloria Tibbetts
Acting Field Office Manager
(970) 876-9000



COLORADO OPERATIONS
Climax Mine
11236 Highway 91 - Fremont Pass
Climax, CO 80429
Phone (719) 486-2150
Fax (719) 486-2251

October 27, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

Dear Mr. Sturm:

I am writing this letter on behalf of Climax Molybdenum Company in support of the Eagle River Integrated Water Management Plan (ER-IWMP) being coordinated by Eagle River Watershed Council.

The ER-IWMP will utilize a stakeholder process to identify the environmental recreational flow and supply needs in the Eagle River, assess its current impairments and evaluate how those may change with future water supply development. We support this planning process and effort to build consensus because of its importance to regional water supply planning.

The ER-IWMP clearly fits the interests of Climax Molybdenum Company in developing joint-use water supply projects in concert with the needs of our Eagle River MOU partnership while managing specific community values surrounding water for all beneficial and environmental uses. Climax Molybdenum Company plans to participate in this planning effort and further commits \$11,000 towards matching funds needed to complete this project. We look forward to the collaborative effort with the numerous stakeholders in this process.

If you have any questions in regards to our support, please do not hesitate to contact me directly at (720) 942-3231.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bryce Romig'.

Bryce Romig
Manager, Administration
Climax Molybdenum Company
bromig@fmi.com

THE COLORADO BASIN ROUNDTABLE
C/O P.O. BOX 1120
GLENWOOD SPRINGS, COLORADO
81602

October 3, 2017

Chris Sturm
Colorado Water Conservation Board
1313 Sherman Street
Denver, CO 80203

Dear Chris,

The Colorado Basin Roundtable (CBRT) supports the Eagle River Watershed Council's Eagle River Integrated Water Management Plan (ER-IWMP) submission for a Colorado Watershed Restoration Program grant.

IWMPs (also known as Stream Management Plans or SMPs) are one part of the many approaches outlined in Colorado's Water Plan (CWP) to secure water supplies while protecting the environmental, social, and economic values held by Colorado's citizens. CWP highlighted the need for SMPs as a tool to protect watershed health, the environment and recreation. It stated a goal to "cover 80 percent of the locally prioritized lists of rivers with SMPs by ... 2030."

SMPs are stakeholder-driven management plans that shepherd environmental and recreational goals and values into actionable projects aimed at "maintaining or improving flow regimes and other physical conditions," for localized environmental and recreational water uses. Per the Water Plan, SMPs "can provide a framework to basin roundtables, local stakeholders, and decision makers for decision making and project implementation."

CBRT submitted a Basin Implementation Plan (BIP) as its contribution to Colorado's Water Plan. A primary objective of CBRT's BIP is to look inside the six counties for projects and processes that will define the Colorado Basin's water supply future and environmental needs. It also identifies the necessity of restoring and protecting the flows and water quality of the Colorado River. CBRT believes the conceptual proposal from Eagle River Watershed Council for the ER-IWMP will contribute to meeting these objectives and needs. Additionally, CBRT will consider a Water Supply Reserve Fund grant request for this project in the coming months.

Sincerely,



Jim Pokrandt
Colorado Basin Roundtable Chair



COLORADO

Parks and Wildlife

Department of Natural Resources

Glenwood Springs Service Center
0088 Wildlife Way
Glenwood Springs, CO 81601
P 970.947.2920 | F 970.947.2936

October 26, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

Dear Mr. Sturm:

Colorado Parks and Wildlife (CPW) is supporting the development of the Eagle River Integrated Water Management Plan (ER-IWMP) being coordinated by Eagle River Watershed Council. This plan will help identify issues both with environmental and recreational flows and if they would change with future water developments.

CPW is pleased to support this process to develop consensus and further integrate the importance of the Eagle River in maintaining essential terrestrial and aquatic wildlife habitat along with promoting the diversity of wildlife species within the watershed.

The mission for CPW is: To perpetuate the wildlife resources of the state, to provide a quality state park system, and to provide enjoyable and sustainable outdoor recreation opportunities that educate and inspire current and future generations to serve as active stewards of Colorado's natural resources. The development of the ERIWMP will certainly fit well within CPW's mission statement.

If you have any questions in regards to our support, please feel free to contact District Wildlife Managers Bill Andree at 970-390-2240 or Craig Wescoatt at 970-948-0354.

Sincerely,



Perry Will
Area Wildlife Manager

Xc: JT Romatzke, B Andree, C Wescoatt





Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

10/25/2017

Dear Chris;

I am writing this letter on behalf of the Colorado River District in support of the Eagle River Integrated Water Management Plan (ER-IWMP) being coordinated by Eagle River Watershed Council.

The Eagle River and its tributaries serve a wide range of interests and this management plan process will bring stakeholders to a common table to identify the environmental and recreational flow needs and opportunities in the basin. The plan offers a chance to leverage broad participation to enhance the stream systems economic and social benefits. We support this process because River District experience has shown that the best approach to managing our water is through a holistic and collaborative approach. Accordingly, the River District has committed a \$10,000 cash match to the effort.

The ER-IWMP clearly fits the mission of the Colorado River District to lead in the protection, conservation, use, and development of the water resources of the Colorado River basin for the welfare of the District.

If you have any questions in regard to our support, please do not hesitate to contact me directly.

Sincerely,

R. Eric Kuhn
General Manager
Colorado River District
970.945.8522
ekuhn@crwcd.org

OFFICE OF THE
BOARD OF COMMISSIONERS
970-328-8605
FAX: 970-328-8629
eagleadmin@eaglecounty.us
www.eaglecounty.us



JILL H. RYAN
KATHY CHANDLER-HENRY
JEANNE MCQUEENEY

October 24, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

Dear Mr. Sturm,

We're writing in support of the Eagle River Watershed Council (ERWC) as they seek grant funding from your organization to develop an Integrated Water Management Plan (IWMP) for critical segments of Eagle River that are likely to be impacted by projects identified by the parties who signed the Eagle River MOU. It is our hope that the IWMP will inform Eagle River management decisions that remain protective of the non-consumptive needs which are vital to protecting our local economy.

Protection of the natural environment is a priority in our strategic plan and maintaining healthy rivers and streams is paramount to our constituents. The ERWC recently held a stakeholder meeting with a wide variety of river users and special interests to discuss the development of an IWMP. All in attendance agreed that this effort will result in a positive outcome and not threaten senior water right holders. Eagle County supports the ERWC as they advocate for the health and conservation of the Eagle River through research, education and projects. They have a proven track record of implementing many successful projects and we're confident that the development of an IWMP will be no exception.

If you have any questions in regards to our support, please do not hesitate to contact our Environmental Health Director, Ray Merry at (970) 328-8757.

Sincerely,

Jill H. Ryan
Chair

Kathy Chandler-Henry
Commissioner

Jeanne McQueeney
Commissioner



October 27, 2017

Sent Via Email

Colorado Water Conservation Board
Attn: Chris Sturm
1313 Sherman Street, Room 721
Denver, CO 80203

Dear Chris:

I am writing this letter on behalf of Eagle River Water & Sanitation District, Upper Eagle Regional Water Authority and Eagle Park Reservoir Company in support of the grant application being submitted for the Eagle River Integrated Water Management Plan (ER-IWMP) being coordinated by the Eagle River Watershed Council.

The ER-IWMP will utilize a stakeholder process to identify the environmental and recreation flow needs in the Eagle River, and assess any current impairments and how those may change with future water supply development. We support this planning process and effort to build community consensus. Our community values its rivers, which provide drinking, irrigation and snowmaking water, fish habitat and aesthetic values, and understands that the available water in the basin must be balanced between these uses for a successful and sustainable community and economy.

Participating in ER-IWMP development process clearly fits the mission of our entities, which is to provide efficient, effective, and reliable water and wastewater utility services in a manner that respects the natural environment. We therefore commit to a dollar match of **\$15,000**. Other services in-kind that we are willing to contribute are: 1) consulting time to assist in peer review of our StateMOD hydrology/water rights model and model runs needed for the identification of stream flow deficits, and 2) staff time to provide historical perspective of water issues in the study area and an understanding of how the current water system is operated and the resulting impacts on stream flows.

If you have any questions in regards to our support, please do not hesitate to contact me directly at 970-477-5444.

Sincerely,

A handwritten signature in blue ink that reads "Linn Brooks".

Linn Brooks
General Manager



Fly Fishing Outfitters
P.O.Box 5346
Eagle, CO 81631

October 22, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

Dear Chris Sturm:

I am writing this letter on behalf of my business Fly Fishing Outfitters in support of the Eagle River Integrated Water Management Plan (ER-IWMP) being coordinated by Eagle River Watershed Council.

Since 1992 Fly-fishing Outfitters has been the Vail Valley's Orvis endorsed year around outfitters. We employ over 30 guides at the height of our season.

The ER-IWMP will utilize a stakeholder process to identify the environmental and recreational flow needs in the Eagle River and assess its current impairments and how those may change with future water supply development. We support this planning process and effort to build consensus, because as a group of 30 plus local fly fishing guides we depend on the health of the Eagle river for our livelihoods.

The ER-IWMP clearly fits the mission our company's commitment to help preserve our cold-water fishery.

If you have any questions in regards to our support, please do not hesitate to contact me directly at 970-845-8090.

Sincerely,
John Packer
Owner



HOMESTAKE WATER PROJECT

Otero Pump Station
37200 North Highway 24
P.O. Box 1821
Buena Vista, CO 81211

719-395-1595 or 719-668-9595 (Phone)
719-395-1590 or 719-668-9590 (FAX)

October 27, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

Dear Chris Sturm:

We are writing this letter on behalf of the Homestake Water Project in support of the Eagle River Integrated Water Management Plan (ER-IWMP) being coordinated by Eagle River Watershed Council.

The ER-IWMP will utilize a stakeholder process to identify the environmental and recreational flow needs in the Eagle River and assess its current impairments and how those may change with future water supply development. We support this planning process and effort to build consensus, because of the importance of the Eagle River and its watershed to the Homestake Water Project partners existing and future water supplies.

The ER-IWMP clearly fits Homestake Water Project partner's mission of finding solutions to developing our joint use water supplies while minimizing environmental impacts. We understand that the total project estimate is at \$363,000 with a positive, ambitious scope. The Homestake Water Project partners are able to commit a \$20,000 cash match toward grant funding of ER-IWMP to be used in years 2018 and 2019. We intend to actively participate to increase our understanding of stakeholder needs in this important watershed and work toward productive assessments and future planning that takes into consideration all stakeholders of this resource.

If you have any questions in regards to our support, please do not hesitate to contact either of the Homestake Water Project partners below.

Sincerely,

Alexandra Davis
Deputy Director of Water Resources
Aurora Water
(303) 739-7274
aldavis@auroragov.org

Brett Gracely
Water Resources Manager
Colorado Springs Utilities
(719) 668-4052
bgracely@csu.org



200 Lion Park Circle
Rifle, CO 81650
Phone: 970-625-1829

October 26, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

Dear Chris Sturm:

I am writing this letter on behalf of the Middle Colorado Watershed Council in support of the Eagle River Integrated Water Management Plan (ER-IWMP) being coordinated by Eagle River Watershed Council.

The mission of the Middle Colorado Watershed Council (MCWC) is to evaluate, protect and enhance the health of the middle Colorado River watershed through the cooperative effort of watershed stakeholders. Our organization is supportive of the ER-IWMP effort for a few reasons.

The MCWC's geographic area of interest lies immediately downstream of the Eagle River Watershed Council's (ERWC) focus area. The MCWC is intending to undertake a similar IWMP process in the middle Colorado River beginning in 2018, subject to funding approval. We look forward to collaborating with the ERWC as both organizations embark on this important work. We see the benefits that can accrue from our two organizations working concurrently on IWMP planning processes by sharing technical data, experiences, and outcomes and intend to communicate these on a regular basis. As a downstream neighbor, we may realize both direct and indirect benefits from any projects, processes or actions that may be taken to address environmental and recreation flow needs through the ER-IWMP process. The ER-IWMP will advance one of the top goals of the Colorado Basin Roundtable to "Protect and Restore Streams, Rivers, Lakes and Riparian Areas". For these reasons, the MCWC expresses its full support for the ER-IWMP and urges the Colorado Water Conservation Board to do the same.

If you have any questions in regards to our support, please do not hesitate to contact me directly at 303-204-4164.

Sincerely,

A handwritten signature in black ink that reads "Laurie Rink".

Laurie Rink
Executive Director



October 30, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman Street, Room 721
Denver, CO 80203

Dear Mr. Sturm:

The Town of Avon is in full support of the Eagle River Integrated Water Management Plan (ER-IWMP) coordinated by the Eagle River Watershed Council. The ER-IWMP will identify the water quality, water quantity and recreation flow requirements of the Eagle River today and in the future. We anticipate long-term demands on the watershed because of additional growth, water storage development and climate change. The long-term protection of the Eagle River is vital to Avon's recreation based economy.

Completing the ER-IWMP will assist Avon and the entire Vail Valley in managing this valuable resource today and in the future. Therefore, the Town of Avon fully supports the ER-IWMP and will contribute \$10,000 over two-years for the development of the plan.

If you have any questions regarding Avon's support, please do not hesitate to contact me directly at 970-748-4045.

Sincerely,

A handwritten signature in blue ink, appearing to read "Justin Hildreth", with a long, sweeping underline that extends to the right.

Justin Hildreth, PE
Town Engineer

October 19, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

Dear Chris Sturm:

I am writing this letter on behalf of the Town of Gypsum in support of the Eagle River Integrated Water Management Plan (ER-IWMP) being coordinated by Eagle River Watershed Council.

The ER-IWMP will utilize a stakeholder process to identify the environmental and recreational flow needs in the Eagle River and assess its current impairments and how those may change with future water supply development. Last year, the Town of Gypsum completed a Source Water Protection Plan for the Gypsum Creek basin which was developed through a stakeholder process and we are very satisfied with the result. Through collaboration with a disparate group of landowners, water users, citizens and local, state and federal agencies, a broad community has been formed that has a much deeper understanding Respect and concern for the current condition, threats and opportunities in our Gypsum Creek watershed.

We support this planning process and effort to build consensus, because we are a small part of a greater Eagle River watershed and we want to be a contributing part of that community and to better understand how we impact and contribute to it. From this perspective, the ER-IWMP is a great opportunity. We will be contributing \$5,000 to the effort.

If you have any questions in regards to our support, please do not hesitate to contact me directly at (970) 524-1723.

Sincerely,



Jeff Shroll, Gypsum Town Manager

ADMINISTRATION

Town Manager
Jeff Shroll

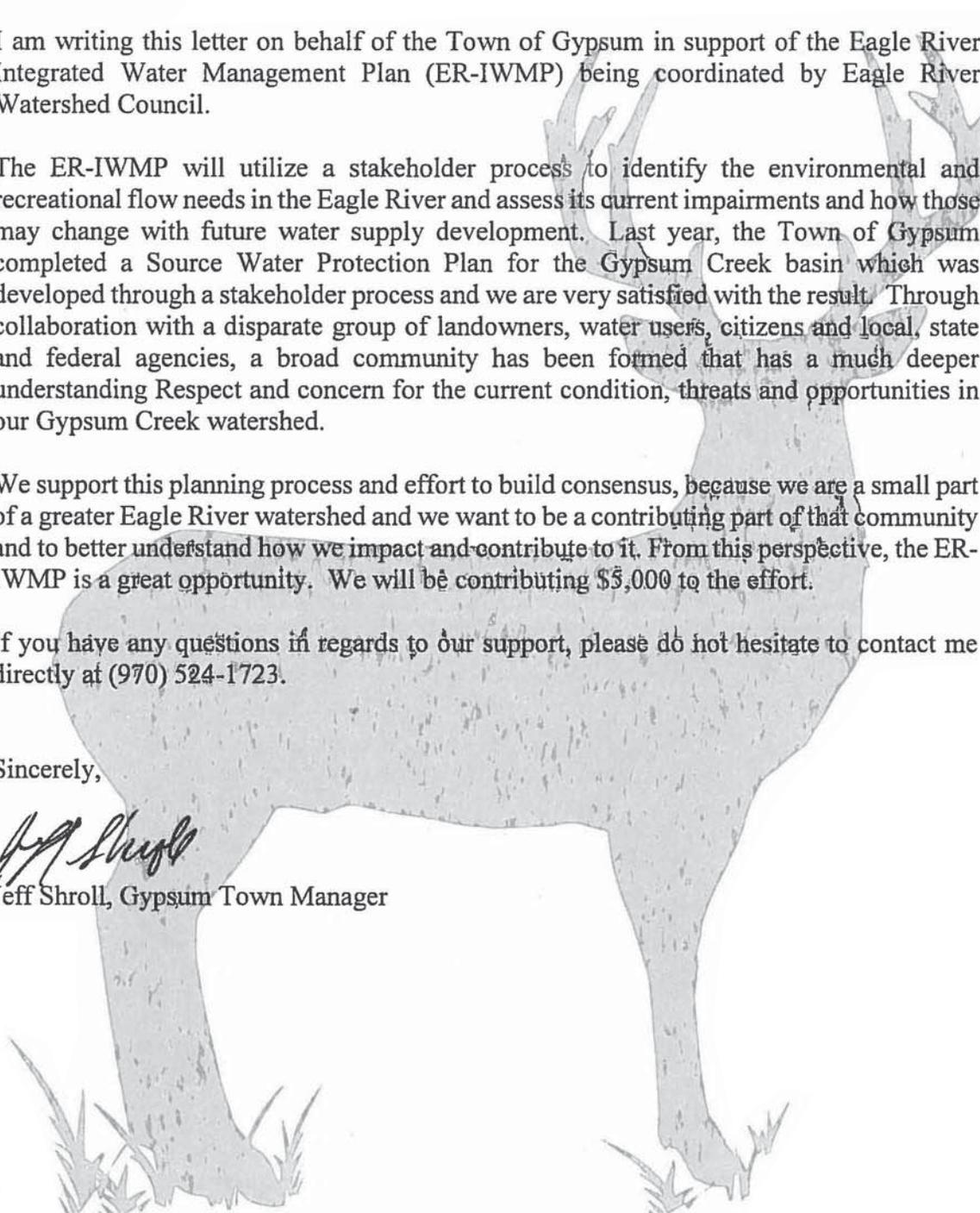
Asst. Town Manager
Frances Barela

Town Clerk
Danette Schlegel

Finance Officer
Mark Silverthorn

Sales Tax Auditor
Lynn Trudeau

Special Projects Coordinator
Krista DeHerrera



TOWN OF MINTURN
P.O. Box 309 ♦ 302 Pine Street
Minturn, CO 81645
Phone: 970-827-5645 Fax: 970-827-5545

Janet Hawkinson, MLAP
Minturn Planning Director



Town Council
Matt Scherr - Mayor
Earle Bidez - ProTem Mayor
Terry Armistead - Council
Sidney Harrington - Council
Kristina Krone - Council
Sage Pierson - Council
John Widerman - Council

October 23, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

Dear Chris Sturm:

The Town of Minturn is in support of the Eagle River Integrated Water Management Plan (ER-IWMP) being coordinated by Eagle River Watershed Council. We have many development projects being proposed in our town and find this plan to be of great importance to our town and Eagle County. It is important that a comprehensive plan be developed in order for intelligent decisions to be made in regards to development, recreation and the health of wildlife and the environment.

We support this planning process and effort to build consensus, benefiting the community and protecting the health of rivers, streams and watersheds. The Town of Minturn has committed to support the ER-IWMP by a public vote and cash contribution by the Minturn Town Council on October 18, 2017.

If you have any questions in regards to our support, please do not hesitate to contact me directly at 970-827-5645 ext.3.

Sincerely,

A handwritten signature in black ink that reads "Janet Hawkinson". The signature is written in a cursive, flowing style.

Janet Hawkinson, MLAP
Minturn Planning Director
planner@minturn.org
970-827-5645 e. 3



75 South Frontage Road West
Vail, Colorado 81657
vailgov.com

Community Development Department
970.479.2138
970.479.2452 fax

October 18, 2017

Chris Sturm
Colorado Water Conservation Board
1313 Sherman St., Room 721
Denver, CO 80203

Dear Mr. Sturm,

I am writing on behalf of the Town of Vail to express our strong support for the effort by Eagle River Watershed Council (ERWC) to develop an Integrated Management Plan for the Eagle River Watershed. Vail plans to join its neighboring communities in supporting this effort financially with \$5,000 contributions in 2018 and 2019.

From my perspective as a member of the stakeholder group that has already convened several times, Holly Loff and ERWC are doing an outstanding job of gathering a wide variety of community stakeholders to contribute to this process. The stakeholder group will collaborate to assess current threats to the quantity and quality of our water in Eagle County and work to develop a plan which ensures that the needs of all stakeholders are met and the aquatic and riparian ecosystems in our valley are protected.

It is our belief that the collaborative approach envisioned by ERWC will be a thorough and effective way to proactively address the challenges our water supply is likely to face in the future. The stakeholder group consists of representatives of a wide variety of entities, some of which have had disagreements over water-related issues in the past. This collaborative approach will foster cooperation and ensure that conflicts are uncovered and remedied in productive, mutually-beneficial ways. This strategy has high potential to guarantee that the Eagle River and its tributaries are wisely managed while protecting the rights and needs of the individuals, communities and businesses that depend on this watershed.

Thank you for your consideration.

Sincerely,

Peter Wadden, M.A.
Watershed Education Coordinator
Town of Vail



Richard Van Gytenbeek, Colorado River Basin Outreach Coordinator, Colorado Water Project

October 25, 2017

Colorado Water Conservation Board
Mr. Chris Sturm
Stream Restoration Coordinator
1313 Sherman Street, Room 721
Denver, CO 80203

Delivered Via Email

RE: Support for the Eagle River Integrated Water Management Plan.

Dear Chris

Trout Unlimited would like to express their support for the Eagle River Integrated Water Management Plan (ERIWMP) which is being coordinated by the Eagle River Watershed Council. The Eagle River sub-basin is one of western Colorado's most important high elevation watersheds, a current and future stronghold for cold water fisheries.

As you know TU has been a strong supporter of Stream Management Plans (aka Integrated Water Plans) since their inception. Our organization strongly supports the need to determine environmental and recreational flow gaps in many of our rivers and streams. To understand and define those gaps, we must have the support of water right holders. A collaborative water planning process that includes all water users, respects existing water rights and seeks innovative management opportunities that help both consumptive and non-consumptive users is the essence of integrated planning.

With guidance from River Network, the ERWC has already cast a wide net. Their initial efforts to reach out via focus group calls and to bring those consumptive and non-consumptive user groups to the table are a good start and have set an open and collaborative tone to their process. The ERWC will also be working with the Colorado Basin Roundtable to help inform the CBRT-IWMP framework plan. A strong CBRT-IWMP framework plan will help the roundtable in their goal to integrate sub-basin SMP's into a basin-wide Colorado River IWMP. We hope that you will give serious consideration to this grant application as we believe it has a very strong chance of being successful and resulting in a community driven integrated water plan.

Sincerely,

Richard Van Gytenbeek

Richard Van Gytenbeek

Trout Unlimited: America's Leading Coldwater Fisheries Conservation Organization
1156 N. 5th St., Suite #409, Grand Junction, Colorado 81501
(307) 690-1267 • r.vangytenbeek@tu.org • www.tu.org



United States
Department of
Agriculture

Forest
Service

White River
National
Forest

Eagle/Holy Cross Ranger District
24747 US Hwy 24
P.O. Box 190
Minturn, CO 81645
(970) 827-5715
FAX (970) 827-9343

Date: October 24, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

Dear Chris Sturm,

The Eagle-Holy Cross Ranger District of the White River National Forest strongly supports the efforts of the Eagle River Watershed Council towards the coordination and creation of the Eagle River Integrated Water Management Plan.

The planning process and stakeholder engagement is consistent with White River National Forest goals of connecting communities and maintaining resilient landscapes, and the Integrated Water Management Plan looks to be a great tool for building consensus around environmental and recreational flow needs on the Eagle River.

Because the Eagle-Holy Cross Ranger District manages most of the land that makes up the Eagle River Watershed, we have a strong interest in the viability and success of this plan, and I look forward to continuing our involvement in – and support for – the process as it moves forward.

If you have any questions in regards to our support, please do not hesitate to contact me directly at (970) 827-5150, or awmayville@fs.fed.us.

Sincerely,

AARON W. MAYVILLE
District Ranger





October 19, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

Dear Chris Sturm:

I am writing this letter on behalf of Vail Valley Anglers in support of the Eagle River Integrated Water Management Plan (ER-IWMP) being coordinated by Eagle River Watershed Council.

The ER-IWMP will utilize a stakeholder process to identify the environmental and recreational flow needs in the Eagle River and assess its current impairments and how those may change with future water supply development. We support this planning process and effort to build consensus because of the ongoing strain on water resources throughout the State, but specifically in the Eagle River watershed. Our business depends on the health and well-being of the watershed including the fish habitat and related riparian zones that help to maintain the overall health of any river system. We utilize the Eagle River for guided fly fishing trips on a year round basis. It is important to maintain minimum flows throughout the year to support the aquatic life and to make the Eagle River an attractive and viable watershed for years to come.

The Eagle River is one of the last of a dying breed in the State of Colorado. It remains one of the larger freestone rivers in the State. Meaning, from its origin to the confluence with the Colorado River in Dotsero, it has no impedance or alterations other than the straightening that occurred to the extreme upper reaches during the height of the Camp Hale days.

I have been amazed over the 28 years I have lived in the Eagle River Valley at the resilience and general health of this watershed that parallels a major interstate for much of its length and has such a large group of diverse users. The last time I counted there were 14 golf courses in the Vail area as well as snowmaking operations at the resorts of Vail and Beaver Creek and yet, the Eagle has never been better from a fishing perspective. Much of that credit can go to the Gilman Mine cleanup but I know we have a long way to go there as well.

I look forward to contributing along with my staff to make an excellent plan for the future of the Eagle River. I hope you will consider the importance of this step and recognize that planning now will preserve much of what I have described above for future generations.

The ER-IWMP clearly fits the interests of Vail Valley Anglers because of our close connection with the river and how we rely on it to make our living. We support over 50 jobs locally and contribute to the community in many different ways.

If you have any questions in regards to our support, please do not hesitate to contact me or my staff directly at:

John Cochran, General Manager - john@vailvalleyanglers.com
Patrick Perry, Store and Guide Service Manager - pperry@vailvalleyanglers.com
Madeline Grande, Admin / Marketing - madeline@vailvalleyanglers.com

Sincerely,

John Cochran
970-926-0900

Vail Resorts
PO Box 915
Avon, CO 81620

October 30, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

Dear Chris Sturm:

I am writing this letter on behalf of Vail Resorts in support of the Eagle River Integrated Water Management Plan (ER-IWMP) being coordinated by Eagle River Watershed Council.

The ER-IWMP will utilize a stakeholder process to identify the environmental and recreational flow needs in the Eagle River and assess its current impairments and how those may change with future water supply development. We support this planning process and effort to build consensus, because the Eagle River and surrounding watershed is pertinent to Vail Resorts businesses and surrounding economy. Ensuring the health and proper management of this resource will ensure that businesses, residents and visitors alike can enjoy it for years to come.

The ER-IWMP clearly fits the interests of Vail Resorts which owns and operates Vail Mountain and Beaver Creek Resort which both fall into the Eagle River Watershed. We will work with the Eagle River Watershed Council on budgeting funding for this project.

If you have any questions in regards to our support, please do not hesitate to contact me directly at 970-754-4125

Sincerely,



Mike Jackson
Director of Mountain Planning
Vail Mountain and Beaver Creek Resort

October 25, 2017

Colorado Water Conservation Board
ATTN: Chris Sturm
1313 Sherman St., Room 721
Denver, CO 80203

Dear Chris Sturm:

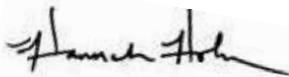
I am writing in support of the Eagle River Integrated Water Management Plan (ER-IWMP) being coordinated by Eagle River Watershed Council.

The ER-IWMP will utilize a stakeholder process to identify the environmental and recreational flow needs in the Eagle River and assess its current impairments and how those may change with future water supply development. This work directly responds to the Colorado Basin Roundtable Basin Implementation Plan priority goal of extending stream management planning throughout the basin.

I coordinate the Colorado Basin Roundtable Integrated Water Management Planning Framework Project for the Ruth Powell Hutchins Water Center at Colorado Mesa University, and I believe that the ER-IWMP will complement the Framework Project, as well as help demonstrate to other communities how they can use the tools developed through the framework project. The Hutchins Water Center will support this project through helping to ascertain how the products developed through the Framework project can be applied to the benefit of the Eagle River planning process.

If you have any questions in regards to our support, please do not hesitate to contact me directly at hholm@coloradomesa.edu or 970-248-1968.

Warm Regards,



Hannah Holm,
Coordinator