

Learning By Doing, Inc.: Coordinated Watershed Management in the Colorado River Headwaters

WaterSMART Cooperative Watershed
Management Program FY2024
R23AS00362



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Executive Summary

Date

August 29, 2024

Applicant

Grand County Learning By Doing, LLC

City, County, State

Hot Sulphur Springs, Grand County, Colorado

Project Summary

Grand County Learning By Doing (LBD) is a collaborative effort of diverse local, state, federal, and nonprofit water stakeholders working to improve the aquatic environment at the headwaters of the Colorado River, where transmountain diversions, drought, and climate change create challenges for water quality and supply planning. LBD provides a forum for the coordinated restoration and maintenance of headwater streams, which deliver vital water supplies (an average of 213,000 acre-feet annually) to Colorado's Front Range, the most populated area of the state, and pass flows downstream to the 40 million people who depend on the Colorado River. LBD uses the Grand County Stream Management Plan (GC SMP) as a guide in maintaining a healthy stream system in Grand County, Colorado, through the protection and enhancement of aquatic habitats, the protection of local water uses, and continued flexibility for future water operations. The coordination of LBD is critical to ensuring that this diverse group functions efficiently and effectively. Since our founding in 2013, LBD has built a strong reputation among informed water managers and river users. However, continued success hinges on LBD's ability to coordinate stakeholders in maintaining and, where reasonably possible, restoring or enhancing the condition of the aquatic environment in Grand County, which will expand LBD's credibility and reach within the community. If awarded, this grant will provide three years of salary for the Project Coordinator and the development of a public outreach plan with the help of a consultant. The grant will support public awareness and critical engagement regarding threats to stream health; ensure organized and informed, consensus-based decision-making for the targeted use of environmental water; execution of on-the-ground habitat and stream restoration projects; continued robust water quality monitoring and coordinated water operations; finalizing the update to the GC SMP; and creation of a prioritized list with implementation plans and associated timelines for projects identified in the GC SMP.

Length of Project

36 months

Estimated Project Completion Date

September 30, 2028

Federal Facility/Land Involvement

Federal lands make up 76% of the total land within LBD's Cooperative Effort Area (CEA). This consists of lands managed by the U.S. Forest Service (55%), National Park Service (11%), and Bureau of Land Management (10%) (Lotic, 2024). Additionally, the following features of the Bureau of Reclamation's Colorado-Big Thompson Project (C-BT) are all sited either within or immediately upstream of the project area: Willow Creek Reservoir, Willow Creek canal system and pump plant, Granby Reservoir, Farr Pump Plant, Granby Pump Canal, Granby Power Plant, Shadow Mountain Reservoir, Grand Lake, and the west portal of the Adams Tunnel.

Project Location

LBD focuses efforts within the CEA (USGS HUC 14010001) in Grand County, Colorado, covering a total area of over 1,075 square miles (or nearly 690,000 acres), which includes six towns (Grand Lake, Granby, Winter Park, Hot Sulphur Springs, Fraser, and Kremmling), unincorporated Grand County (including Tabernash and Parshall), and several municipal water districts within the Colorado and Fraser River Basins, upstream of the Colorado River confluence with the Blue River. Figure 1 provides a map of the watershed.

Applicant Category

LBD is the product of years of negotiations intended to address impacts from two water diversion projects that affect rivers in Grand County (Denver Water's Gross Reservoir Expansion Project and Northern Water's Windy Gap Firming Project). Two Intergovernmental Agreements (IGAs) established a long-term partnership of cooperation among the participating entities (Colorado River Water Conservation District, Denver Water, Grand County, Northern Water, Trout Unlimited, Colorado Parks & Wildlife, and Middle Park Water Conservancy District).

LBD seeks funding as an Existing Watershed Group because, since our founding in 2013, LBD has made significant progress in establishing a long-term, science-based program to collaboratively monitor and address changes in the Upper Colorado River Watershed. Each year, LBD designs, funds, and implements a plan for field data collection to collaboratively monitor key aquatic metrics within CEA's streams and rivers. LBD has completed several notable stream and habitat restoration projects on a number of streams in the CEA. Currently, LBD is engaged in watershed planning by updating the 2010 Grand County Stream Management Plan to better reflect current conditions on a landscape scale that will improve characterization and prioritization of areas of concern. With a shared vision of river health, LBD cooperatively responds to Grand County's aquatic environment challenges through aquatic habitat restoration and coordination of water operations where possible.

Eligibility of Applicant

LBD Inc. is a nonprofit 501(c)3 organization that meets the definition of a watershed group as a grassroots, non-regulatory entity that addresses water availability and water quality issues within the Colorado River Headwater watersheds, promotes sustainable water use, makes consensus-based decisions, and represents a diverse group of stakeholders working toward a shared vision documented in LBD's Articles of Incorporation, By-Laws, and other foundational agreements. As described in the previous section, Applicant Category, LBD meets the definition of an existing watershed group.

Project Description

LBD's funding request, the Coordinated Watershed Management in the Colorado River Headwaters, supports the retention of our dedicated Project Coordinator and the creation of an outreach plan. The Project Coordinator is crucial for continuing and expanding the work that LBD has been committed to since our inception. The importance of this work is heightened by upcoming opportunities and challenges related to water and watershed health within the CEA over the next three years. These include finalizing the GC SMP update, developing initial plans and timelines for high-priority projects identified in the updated GC SMP, addressing the impacts of population growth and climate change, and responding to issues that may arise from the upcoming completion of two significant water diversion projects in the CEA. Further details on these challenges and opportunities can be found in Sub-criterion No. B1. Critical Watershed Needs or Issues.

Securing three years of salary for the Project Coordinator will enable LBD to focus more effectively and efficiently on these upcoming circumstances. The Project Coordinator plays a vital role in ensuring that LBD's Board of Directors and Management Committee stay aligned with the goals, activities, action items, budgets, and timelines necessary to mitigate future hurdles and take advantage of arising opportunities. The development of an outreach plan will help LBD engage the community in our work, expanding our reach and impact.

The project's six goals will address Task Areas A, B, and C of the WaterSMART Cooperative Watershed Management Projects funding opportunity.

Goal 1: Increase public support for and engagement with LBD.

LBD will address Task Area A ("conducting outreach activities") through increased public engagement to raise awareness of LBD's mission *to engage in a cooperative, iterative, and on-going process to maintain, and when reasonably possible, restore or enhance the aquatic environment in the Colorado, Fraser, and Williams Fork River Basins, upstream of the Colorado River confluence with the Blue River*. To accomplish this, LBD will hire a contractor to assist in developing an outreach plan. LBD expects the plan to expand upon the current outreach efforts, which may include presentations, tabling at events, and creating outreach materials.

Ongoing outreach includes reporting stream conditions and LBD activities by publishing an aquatic resource monitoring plan, an aquatic resource monitoring report, an operations plan, an operations report, an annual report, and a quarterly e-newsletter. In addition, LBD is conducting a series of professionally facilitated public meetings associated with the GC SMP update. LBD also forms ad hoc committees and coordinates the distribution of information as issues arise. For example, following recent catastrophic wildfires, LBD coordinated seven meetings of the Post-Fire Science, Research, and Monitoring Network to facilitate the sharing of information regarding research projects, recovery efforts, and data collection following the East Troublesome and Williams Fork wildfires.

Goal 2: Ensure organized and informed, consensus-based decision-making within LBD.

Task Area B (“Working with watershed group members, landowners, Federal agencies, and state or local governments to determine how the watershed can be improved.”) will be addressed through continued coordination of LBD’s committees and subcommittees to collect strategic and technical input. The IGAs state that the LBD parties will “continue to adapt and improve the draft SMP cooperatively as additional information is developed, understanding of desired stream conditions is better defined, and the management goals for each stream reach are agreed upon.”

The Project Coordinator will coordinate the activities of LBD and the various committees and subcommittees to ensure LBD’s goals and objectives are met. The Monitoring Subcommittee meets monthly to handle technical aspects of LBD’s aquatic monitoring and data collection program; the Operations Subcommittee meets weekly from mid-April through September to implement coordinated water operations, bypass flows, and reservoir releases; and the Projects Subcommittee meets monthly to develop and oversee the implementation of on-the-ground stream and aquatic habitat improvement projects. The Technical and Management Committees and LBD Inc. Board of Directors meet bimonthly.

Goal 3: Ensure that monitoring programs continue to inform LBD’s decisions and actions, particularly in response to emerging undesirable trends and conditions.

Goal 3 supports Task Area B (“conduct monitoring activities...”) through the operation of LBD’s monitoring programs. These programs are refined, as needed, to adapt to current conditions. The programs currently include the following in the CEA: stream temperature monitoring at 67 sites, sediment monitoring at 18 sites, and macroinvertebrate bioassessments at 22 sites. The program also supports and utilizes the data from the State of Colorado’s fish surveys at six sites in the watershed. LBD shares planning decisions in the annual Aquatic Resource Monitoring Plan and reports the results in the annual edition of the Aquatic Resource Monitoring Report. The 2023 Aquatic Resource Monitoring Plan and the 2023 Aquatic Resource Monitoring Report provide more insight into the program.

Goal 4: Ensure coordinated water operations continue to address low flows, high stream temperatures, and other issues, such as turbidity, sediment, and flushing flows, as they emerge. Not all requests for coordinated operations can be accommodated, but LBD stakeholders consider and discuss all reasonable requests.

Goal 4 supports Task Area B (“Working with watershed group members, landowners, Federal agencies, and state or local governments to determine how the watershed can be improved.” and “Interviewing watershed group members and stakeholders to gain an idea of projects that would improve the watershed.”). Through the facilitation of the weekly Operations Subcommittee meetings, LBD ensures that the collaborative process formalized in the IGAs for coordinated operations occurs quickly when undesirable conditions in the CEA require action. During these meetings, the LBD member organizations review emerging streamflow conditions, including habitat, environmental, and recreational concerns, and consider opportunities to coordinate their water operations to reduce impacts.

This is an adaptive management process, and the specific actions to be taken each year are not known in advance. The actions taken are reported in the annual Operations Report produced at the end of the year. The LBD Operations Subcommittee conducts weekly operations calls from mid-April through September, evaluating opportunities to provide flushing flows during runoff and addressing issues of low flows or high stream temperatures in the summer after runoff.

In the last two years, LBD coordinated 25,000 acre-feet of diversion bypasses and reservoir releases to mitigate high stream temperatures and transport sediment. Since our founding, LBD has removed 5,556 tons of traction sand from the Fraser River below Berthoud Pass and has completed three on-the-ground restoration projects in the CEA designed to improve stream health and aquatic habitat.

Goal 5: Finalize the update to the Grand County Stream Management Plan (GC SMP).

Goal 5 supports Task Area A (“Gathering information about issues and needs related to water quality, water quantity, and restoration needs within the watershed” and “Conducting pre-planning activities, including... reviewing existing plans...”) and B (“...updating an existing restoration plan,” “...performing an analysis of the watershed to identify and prioritize watershed management projects,” and “Conducting mapping and other technical analyses.”). The original GC SMP was finalized in 2010 and was the first SMP in Colorado. LBD will finalize the update to the GC SMP and, once finalized, will prioritize and take actionable steps to plan the projects identified within it (see Goal 6). The SMP provides a scientifically based range of stream flows and physical solutions, such as restoration, to protect and, where possible, improve the aquatic environment of Grand County’s streams.

LBD will implement the GC SMP by:

- Monitoring key indicators of aquatic conditions, such as stream temperature, sediment transport, macroinvertebrate and fish health, and intact habitat;
- Using available water resources and operational flexibility to immediately address identified problems (through coordinated water operations);
- Implementing stream restoration and improvement projects to provide long-term solutions (see Goal 6).

Goal 6: Create a prioritized list with implementation plans and a timeline for projects identified in the GC SMP.

Goal 6 supports Task Area B (“Developing general watershed management project concepts or performing an analysis of the watershed to identify and prioritize watershed management projects.”) and C (“Completing an analysis to identify specific project locations.” and “Developing project timelines and milestones.”). On-the-ground projects that improve stream health and aquatic habitat are a critical aspect of SMP implementation. Many Grand County streams suffer from low flows, high stream temperatures, and other conditions affecting aquatic habitat and life. On-the-ground projects are designed to improve the physical conditions of the stream and stream channel to preserve and, when possible, enhance the aquatic habitat in the face of these changing conditions.

Implementation of on-the-ground projects is highly resource-intensive and requires an experienced Project Coordinator to guide the process of identifying and prioritizing projects, obtaining funding, developing Request for Proposals (RFPs), selecting consultants and contractors, coordinating with LBD partners, stakeholders, and landowners, overseeing construction, and other associated activities. The Project Coordinator will assist with every facet of project implementation.

LBD has not received or applied for CWMP funding in the past.

Evaluation Criteria

Evaluation Criterion A— Watershed Group Diversity & Geographic Scope

Sub-criterion No. A1. Watershed Group Diversity

- *For New and Existing Watershed Groups, a description of the stakeholder groups (e.g., agriculture, municipal, recreation, environmental, Tribal) within the watershed that affect or are affected by the quantity or quality of water within the watershed (“affected stakeholders”). Describe their role in the watershed and how they interact with the water resources and identify specific organizations, entities, or individuals that make up these groups.*

LBD works in HUC 14010001 with the following stakeholder groups who affect or are affected by water quality and quantity. LBD’s CEA incorporates over 1,075 square miles of Grand County, covering most of the 8-digit HUC.

Stakeholder Group	Role in the Watershed	Interactions with Water Resources	Organizations, entities, and individuals that make up this group
Agriculture	Grand County's agriculture consists primarily of hay crops and cattle production. Farm-related income in the County was over \$12 million in 2022, according to the 2022 Census of Agriculture County Profile.	Agricultural stakeholders interact with water through water rights administration, irrigation, and diversions. Historically, this community’s ability to utilize its water rights has been compromised by decreases in stream flows caused by trans-basin diversions, and the resultant overgrowth of algae and aquatic weeds obstructing intakes.	Irrigators of Lands in the Vicinity of Kremmling (ILVK), area ranches, other Grand County agriculture, and community members.
Industrial	Henderson Mill processes	Industrial stakeholders are regulated for water quality	Climax Molybdenum,

	molybdenum in the Williams Fork basin. Other industrial water uses include snowmaking, distilling, brewing, and marijuana cultivation facilities.	impacts, and many have water rights in the CEA.	Granby Ranch, Winter Park Resort Association, and many smaller operations.
Municipal & Local Government	Providing water for drinking, cooking, cleaning, sanitation, fire protection, road maintenance, weed spraying, municipal parks and recreation, etc. Additionally, this stakeholder group advocates for economic benefits in all sectors resulting from vibrant aquatic resources (tourism, agriculture, recreation, environment).	Municipal stakeholders divert, store, treat, and provide water to the public. Those who care about municipal water quality are also included here.	Grand County, the Towns of Fraser, Grand Lake, Granby, Hot Sulphur Springs, Kremmling, Parshall, Tabernash, Winter Park, fire protection districts, water and sanitation districts, and community members.
Water Conservation/Conservancy Districts	Protect, conserve, use, and develop water resources.	These districts create and oversee programs related to water conservation, flood/drought mitigation, watershed protection, stream restoration, water supply planning, project financing, and protection of the State's water rights. Some districts offer technical assistance and education within their region, as well.	Colorado River Water Conservation District, Denver Water, Middle Park Conservation District, Middle Park Water Conservancy District, Northern Colorado Water Conservation District.

Recreation	Water-based recreation (boating, angling, kayaking, rafting, paddleboarding) and snow sports (skiing, snowboarding, snowmobiling, Nordic, snowshoeing, etc.) are significant economic drivers in Grand County. Outdoor recreation tourism employs 61% of the county's workforce (Doedderlein et al.).	Recreational stakeholders depend on water for lake and river recreation and snow/water storage for snow sports.	Devils Thumb Ranch, Granby Ranch, Headwaters Trail Alliance, Winter Park Resort, golf clubs/courses, Nordic skiing resorts/courses, commercial guide services (hunting, fishing, rafting), local/tourist skiers, boaters, anglers, and community members.
Environmental	Protecting the resource for non-consumptive use also benefits all other uses (recreation, agriculture, municipal).	Environmental stakeholders are interested in instream flows, habitat, fish and wildlife, and ecosystem services.	Colorado Headwaters Land Trust, Grand County Water Information Network, Grand County Wildfire Council, Headwaters Center, River Network, Three Lakes Watershed Association, Trout Unlimited , Upper Colorado Watershed Environment Team, and community members.
Federal & State Agencies	The engaged government agencies administer natural	Manage and protect water (and other) resources.	Bureau of Land Management, Colorado Parks & Wildlife , Colorado Water Conservation

	resource policies and programs.		Board, Rocky Mountain National Park, US Bureau of Reclamation, US Forest Service.
Multiple Interests	These entities have multiple interests and cannot easily be defined as participants in one stakeholder group.		Various property owners' associations, local businesses, and community members.

- *Provide an explanation of the specific individuals, entities, and organizations already participating in the watershed group and whether the current participation is representative of the affected stakeholders within the watershed. In other words, if the watershed group is already diverse, please provide support demonstrating the diversity of the group. Provide a description of the stakeholders that are involved, what their involvement in the group entails, and reference any letters of support or pledges/donations from affected stakeholders.*

The entities included in the table above in bold are members of the LBD Board of Directors or the LBD Management Committee, further described below in response to the question about LBD's structure. Although no board or management committee members are recognized in the table under agriculture, industry, municipal, or recreation, several members, such as Grand County (listed under the "Municipal and Local Government" area), have significant interests in each of these areas and endeavor to represent the varied interests of residents. Also, many groups listed under one category represent the interests of another, such as Trout Unlimited, which regularly works toward positive environmental and recreational outcomes.

All other organizations and entities listed above (those not bolded) have engaged with LBD in the past, at a minimum, through attendance at community meetings for the GC SMP Update or an LBD meeting. The diversity among these groups is significant. It is anticipated that such diverse participation will continue, particularly following the implementation of an outreach plan, which will lead to greater community awareness and engagement in LBD's meetings, events, and projects.

Letters of support are attached from:

- American Rivers
- Colorado Parks & Wildlife
- Colorado River Water Conservation District
- Denver Water
- Grand County
- Northern Colorado Water Conservancy District
- The Nature Conservancy
- Trout Unlimited

The following have provided financial contributions to LBD: Devils Thumb Ranch, Grand County, Colorado River Water Conservation District, Colorado Water Conservation Board, Denver Water, Middle Park Water Conservancy District, Northern Colorado Water Conservancy District, Trout Unlimited, and the Windy Gap Fund managed by the Grand Foundation. Additionally, all board and management committee members provide significant in-kind support.

- *If the group does not already represent the full stakeholder diversity of the watershed, provide details on how you plan to target affected stakeholders to ensure that your group will represent a diverse set of stakeholders within the watershed, such as engaging in outreach to include new members, or collaborating with different groups or partners (e.g., outreach or partnership activities, public meetings, newsletters, marketing materials, or recruitment of new members).*

LBD's stakeholders represent the diversity of the watershed. Outreach, an integral part of this project, will raise awareness of LBD's work in the community, which is anticipated to result in additional individuals and entities engaging with LBD. This is welcomed through specific committee and subcommittee involvement and is always encouraged at public events, presentations, and volunteer programs. Such events are announced through social media, newsletters, and LBD's website. More opportunities for promoting these events with an expanding diversity of stakeholders will be explored during the outreach plan's development.

- *Describe the structure of the watershed group. Is there a formal membership process or is participation more informal? If a formal membership process exists, ensure your responses under this criterion make it clear which watershed group participants are formal members and which act as partner organizations. How are decisions made within the watershed group? Does a board of directors make decisions or are decisions made on a consensus basis? If the watershed group has a board of directors, how are board members chosen?*

LBD emerged from two Intergovernmental Agreements (IGAs) with the intention that LBD will "address impacts that may be associated with existing operations by [Denver Water & Northern Colorado Water Conservancy District], Grand County and other water users in the Cooperative Effort Area. Any new impacts to the aquatic environment projected to be caused by [Denver Water's Gross Reservoir Expansion Project and Northern Water's Windy Gap Firing Project] will be addressed by mitigation plans to be developed by regulatory agencies as part of the permitting process for the [Gross Reservoir Expansion Project and Windy Gap Firing Project]." The IGAs established a long-term partnership of cooperation, not conflict, among the participating entities.

Pursuant to the IGAs, the Management Committee members (made up of representatives from Colorado Parks & Wildlife, Middle Park Water Conservancy District, Colorado River Water Conservation District, Denver Water, Grand County, Northern Colorado Water Conservancy District, and Trout Unlimited) are appointed by LBD's Board of Directors (made up of representatives from Colorado River Water Conservation District, Denver Water, Grand County, Northern Colorado Water Conservancy District, and Trout Unlimited). Any member of the Management Committee who has not appointed a representative to the Board of Directors is granted authority to appoint one at any time.

Decisions are made by consensus. The Management Committee oversees all of LBD's activities with one voting member from each organization. At bimonthly meetings, the Technical Committee meets and advises the Management Committee on activities so they can make consensus-based decisions using the research, advice, and recommendations from the Technical Committee. Finally, the Board of Directors convenes to vote on contracting and financial decisions, always following the direction of the Management Committee.

As new projects and programs are implemented, LBD often engages the seven entities that comprise the Management Committee and other outside partners. For example, a Stakeholder Advisory Committee was created to help guide the process of drafting the GC SMP Update. There is no formal process for participating in such ad hoc committees.

- *Any other support demonstrating that the watershed group will include a diverse membership.*

Other stakeholders not already engaged on the board or Management Committee are welcome to participate in LBD's Technical Committee and Operations Subcommittee meetings, which are open to the public. Additionally, LBD often invites stakeholders to attend meetings to share their expertise or perspectives on topics of interest to the committee/subcommittee. Although these non-members do not have voting ability, their critical insight is referenced and considered by the members when making decisions.

Sub-criterion No. A2. Geographic Scope

- *Provide a map illustrating the geographic boundaries of the area in which the watershed group will work.*

LBD works throughout the CEA. Figure 1 provides a map of the geographic boundaries.

- *The map should also identify the location or boundaries of the stakeholder groups within the area and indicate which stakeholders are currently involved in the group and which will be targeted through outreach. If a map of stakeholder locations cannot be provided, please describe the geographic scope of the area to the best of your knowledge, including where specific stakeholders are located within the watershed.*

All of the Management Committee members (Colorado Parks & Wildlife, Colorado River Water Conservation District, Denver Water, Grand County, Middle Park Water Conservancy District, Northern Colorado Water Conservation District, and Trout Unlimited) have an interest and engage in discussions and decisions covering **the entire CEA**. Therefore, the provided map does not outline the boundaries of where each is engaged or headquartered but broadly outlines land ownership for broad groups.

LBD intends to conduct outreach throughout the entire CEA as well.

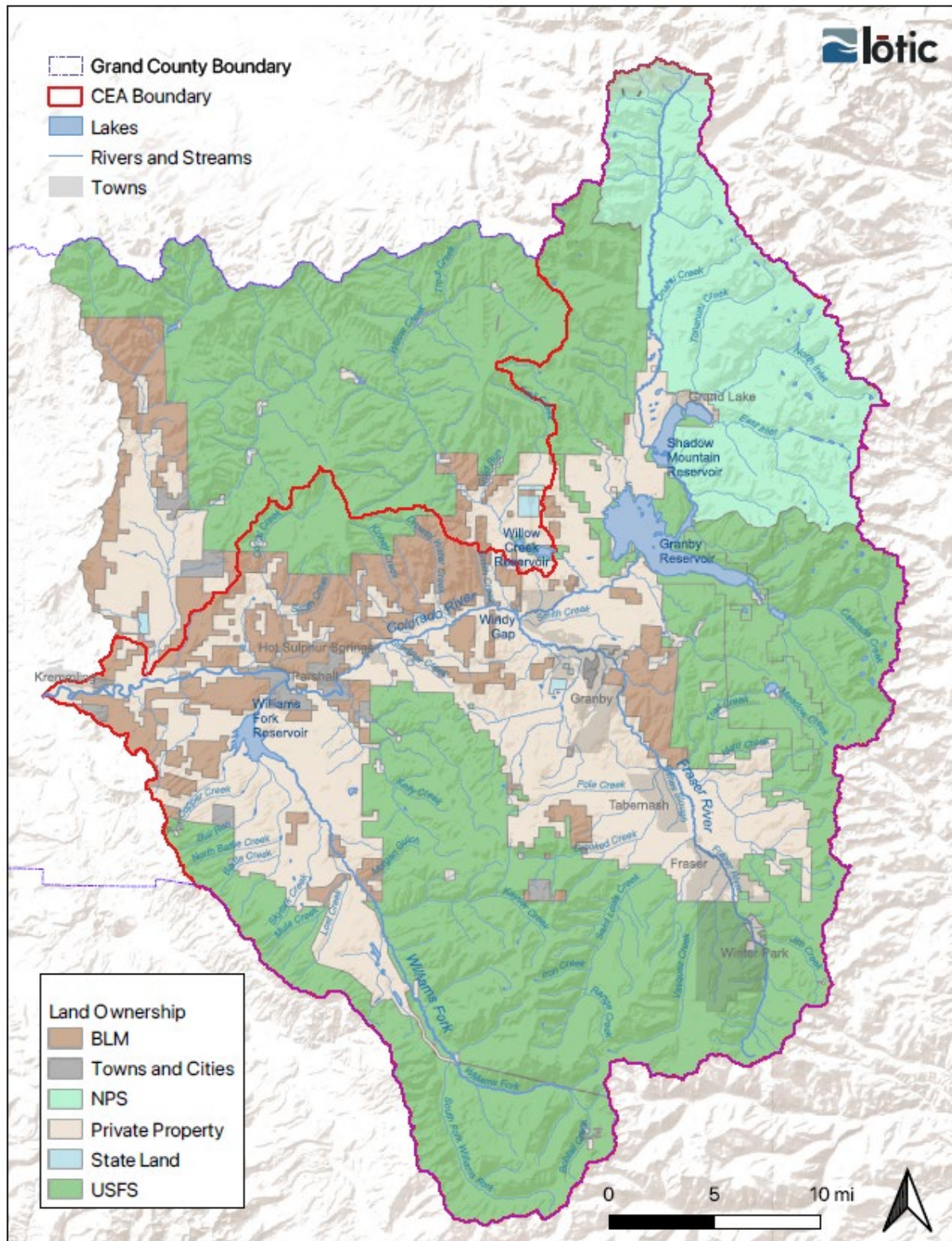


Figure 1. Map of Land Ownership within LBD's Cooperative Effort Area (CEA) (Lotic Hydrological, 2024)

- *Describe the extent to which the planned membership of the watershed group will represent the full geographic scope of the area in which the group intends to work. If applicable, describe the extent to which the watershed group already represents the geographic scope of the area.*

As described above, LBD's members already represent the full geographic scope of the CEA and will continue to do so.

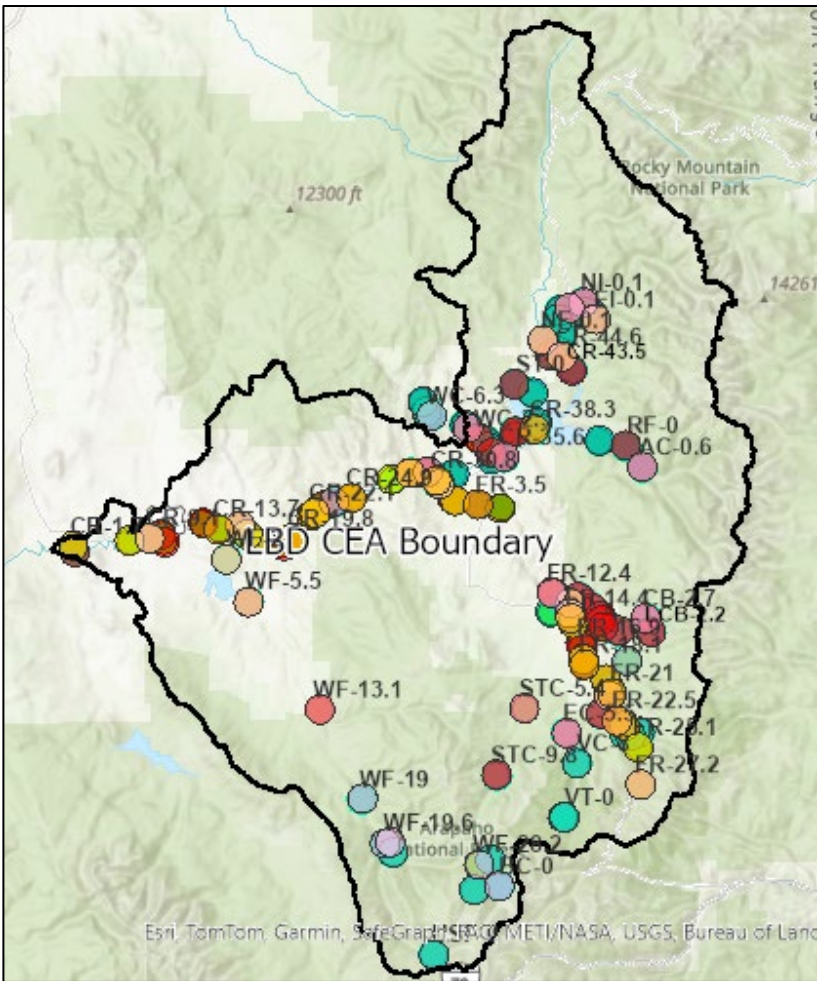
- *Describe the efforts that you will undertake to ensure that the watershed group will target stakeholders that represent the full geographic scope of the area in which the watershed group will work. For example, will outreach focus on stakeholders in a certain part of the watershed the have historically not been represented in the watershed group.*

LBD's activities will continue to target stakeholders from all over the watershed through aquatic conditions monitoring, as depicted in Figure 2. LBD's coordinated water operations generally involve transmountain diversions (TMDs), outlined with dotted lines in Figure 1. They are situated in the CEA's headwaters, thereby positively impacting the entire CEA downstream on the Williams Fork, Fraser, and Colorado Rivers.

The outreach plan will outline outreach activities and strategies that target the entire CEA. LBD will participate in events, such as presenting or tabling, in different locations throughout the CEA to reach community members from various stakeholder groups and geographic regions.

- *Describe why you have chosen to work within the watershed area you described. For example, if the watershed group is only working along the river corridor, describe why they are not working within the larger watershed area.*

The project activities will occur throughout the entire CEA, the boundaries of which were established in the two IGAs that initiated LBD's founding. The boundaries were selected to encompass the primary downstream areas that experience propagating impacts from water operations and source water areas. The Upper Colorado River system and the Fraser and Williams Fork Rivers serve as critical municipal, agricultural, recreational, environmental, and industrial water supply sources for Colorado and provide vital aquatic habitat.



After years of conflict, East Slope water providers (Denver Water and Northern Colorado Water Conservation District) and West Slope entities, including Grand County, began working together through LBD to maintain and, where possible, restore or enhance the aquatic environment of Grand County's streams.

Since our founding in 2013, LBD has established a robust water quality monitoring program, coordinated 25,000 acre-feet of diversion bypasses and reservoir releases to mitigate stream temperatures and flush sediment, completed three restoration projects in the CEA with two more currently in design/implementation, and is updating the GC SMP, a critical tool for guiding future project prioritization. As much as LBD has accomplished, it would not have been possible without our Project Coordinator. The upcoming three years will offer significant opportunities for LBD's multi-faceted work, which could easily become challenges without proper coordination. These opportunities and challenges include:

- As previously stated, the update to the GC SMP is underway now and will provide significant insights into the condition of the headwaters' aquatic environment and identify the primary impacts on stream health. LBD needs a dedicated coordinator to ensure this is completed in a timely fashion.
- The power of the GC SMP is in its ability to prioritize project needs in the CEA. LBD will launch these initiatives by developing initial plans and a timeline for accomplishing high-priority projects. A dedicated coordinator is needed to guide project prioritization and planning.
- Completion of the Chimney Hollow Reservoir and the Gross Reservoir Expansion will place an additional burden on the Colorado River's headwater streams, which will be exacerbated by local population growth and climate change, making coordinated water operations critical. It is important that LBD has current and real-time monitoring data available for decision-making, that the Operations Subcommittee meetings are recorded, and that stakeholders receive regular reminders on action items. The Project Coordinator manages these actions.
- The Gross Reservoir Expansion Project will provide dedicated water through annual bypasses to address low-flow conditions in the Fraser and Colorado Rivers. Each calendar year after the Gross Reservoir Expansion Project becomes operational, Denver Water will make 1,000-acre feet of water available to Grand County from its Fraser Collection System for environmental purposes and any incidental recreational benefit. The Project Coordinator's facilitation of the coordinated water operations will be necessary to address these conditions successfully.

Sub-criterion No. B2. Project Benefits

- *Linking your response to the critical watershed issues you identified in response to Criterion B1, please provide an explanation of why your proposed watershed group activities are an important next step for addressing the issues.*

While LBD members dedicate a significant amount of time to implementing the GC SMP and furthering LBD's goals, given the amount of coordination needed, LBD requires a dedicated and compensated Project Coordinator to successfully navigate the changes above while continuing and expanding existing programs for the benefit of the aquatic environment in the CEA.

Although LBD is respected among water professionals and government entities, the local community has limited awareness of LBD. The success of the items listed above hinges on community engagement.

- *Based on current information, what are the expected benefits of the proposed activities? To the extent possible, describe the anticipated benefits. Provide quantitative and qualitative support for the expected benefits (e.g., cite to relevant data sources or literature, provide examples where applicable).*

If awarded, this grant will help fund the Project Coordinator's time over three years and hire an outreach consultant to establish and implement a stakeholder outreach plan.

Increasing awareness of LBD goals and functions, our projects, and the threats to local streams will be a critical first step for the other actions. Additionally, raising LBD's profile in the community opens the opportunity to garner financial support from individuals, diversifying LBD's funding and thereby protecting the organization's financial and organizational sustainability.

Long-term benefits from the proposed activities are anticipated to include:

- Greater community awareness of the threats to stream health.
- Engagement by residents in projects and discussions regarding stream health.
- Positioning LBD as a reliable resource for information on local streams.
- Early identification and mitigation of water quality concerns.
- Improved water quality and habitat.
- Organized and informed consensus-based decision-making by the LBD board.
- Trust and open lines of communication between East and West Slope entities.
- Reliable and diversified funding streams for LBD operations.

- *What stakeholders will benefit from the proposed project?*

Grand County's (and specifically the CEA's) residents and visitors and all stakeholders listed in the table in Sub-criterion No. A1. Watershed Group Diversity will benefit from LBD's work.

Evaluation Criterion C— Readiness to Proceed

- *Include a preliminary project schedule that shows the stages and duration of the proposed work including major tasks, milestones, and dates. For each task and milestone, indicate who will have the primary responsibility for completion. Proposals that provide a detailed project schedule broken down by tasks and subtasks with identified milestones will be prioritized.*

1. **Goal: Increase public support and engagement with LBD and its projects to raise awareness for threats to stream health in Grand County.**

Primarily Responsible Party:

LBD Project Coordinator

Milestones with timeline (all timelines are for the entire grant period (Sept 2025-Sept2028) unless otherwise stated):

- Develop an outreach plan- Sept 2025-March 2026

- An outreach consultant will be hired through an RFP process.
- The outreach consultant will meet with LBD members over a 6-month period.
- LBD and the consultant will gain a solid understanding of the community's interests, needs, and preferences through a process established by the consultant.
- LBD will review and edit the plan.
- Implement the outreach plan- March 2026-Sept 2028
 - E-newsletters published quarterly.
 - Five presentations and tabling at events annually to share results from monitoring and project implementation in Grand County.
 - Press releases provided to media outlets to recruit project volunteers, announce funding, and following completion of each project and other news.
 - Publish the [annual LBD reports](#) to inform the public of stream conditions and LBD activities.
 - Website is updated quarterly.
 - Other activities/events as identified in the outreach plan.

The outreach plan will identify additional milestones, tasks, and associated timelines.

2. Goal: Ensure organized and informed, consensus-based decision-making within LBD by collecting strategic and technical input.

Primarily Responsible Party:

LBD Project Coordinator

Milestones with timeline (all timelines are for the entire grant period (Sept 2025-Sept2028) unless otherwise stated):

- Coordinate and facilitate monthly meetings with the Projects Subcommittee and Monitoring Subcommittee.
 - Set meeting dates and send meeting reminders.
 - Take and distribute meeting notes.
 - Ensure action items are completed on time.
- Coordinate and facilitate meetings with the Technical Committee / Management Committee every other month.
 - Set meeting dates and send meeting reminders.
 - Take and distribute meeting notes.
 - Ensure action items are completed on time.
- Coordinate and facilitate weekly meetings with the Operations Subcommittee from mid-April through September.
 - Set meeting dates and send meeting reminders.
 - Take and distribute meeting notes.
 - Ensure action items are completed on time.
- Complete at least three on-the-ground projects to improve aquatic habitat within Grand County.
 - See Goal 6.

3. Goal: Ensure that monitoring programs continue to inform LBD's decisions and actions, particularly in response to emerging undesirable trends and conditions.

Primarily Responsible Party:

LBD Project Coordinator with support from the LBD Monitoring Subcommittee

Milestones with timeline (all timelines are for the entire grant period (Sept 2025-Sept2028) unless otherwise stated):

- Continue/expand data collection, including:
 - Stream temperature monitoring at 67 sites
 - Sediment monitoring at 18 sites.
 - Macroinvertebrate bioassessments at 22 sites.
 - Support CPW's fish surveys at 6 sites in the watershed.
- The Aquatic Resource Monitoring Plan and Report are published annually.
 - Compile monitoring data.
 - Draft and revise the Plan and the Report annually.
- Coordinate and facilitate Monitoring Subcommittee meetings.
 - Set meeting dates and send meeting reminders.
 - Take and distribute meeting notes.
 - Ensure action items are completed on time.

4. Goal: Ensure coordinated water operations address low flows, high stream temperatures, and other issues, such as turbidity, sediment, and flushing flows, as they emerge.

Primarily Responsible Party:

LBD Project Coordinator with support from the LBD Operations Committee

Milestones with timeline (all timelines are for the entire grant period (Sept 2025-Sept2028) unless otherwise stated):

- Although not all requests for coordinated operations can be accommodated, 100% are considered and discussed.
 - Coordinate the subcommittee meetings and presentations.
 - Facilitate discussion regarding coordination of releases of flushing flows in diversion systems, as available and where needed, to address low-flow or high stream temperature issues where possible.
 - The Project Coordinator ensures the determined actions happen promptly and are informed by LBD's monitoring program, current conditions, and availability and flexibility of water from LBD's partners
- Develop annual runoff and in-season operations plan.
- Publish the Annual Operations Report.

5. Goal: Finalize the Grand County Stream Management Plan (GC SMP) update.

Primarily Responsible Party:

LBD Project Coordinator

Milestones with timeline (all timelines are for the entire grant period (Sept 2025-Sept2028) unless otherwise stated):

- Updated GC SMP completed- Spring 2027

6. Goal: Create a prioritized project list with implementation plans and a timeline for projects identified in the GC SMP.

Primarily Responsible Party:

LBD Project Coordinator with support from the LBD Projects Subcommittee

Milestones with timeline (all timelines are for the entire grant period (Sept 2025-Sept2028) unless otherwise stated):

- A final prioritized list of projects- early 2027
 - The project coordinator will:
 - Facilitate consensus for LBD prioritization and selection of on-the-ground projects.
 - Organize LBD meetings, including taking notes and ensuring follow-through with identified tasks.
 - Prepare grants to fund selected projects.
 - Work with the Projects Subcommittee on the procurement process to select contractors to design, engineer, permit, and construct the projects.
 - Once contractors are selected, the coordinator will be the point-of-contact for LBD and will be involved in every step of the process leading to construction.
 - Ensure all necessary approvals and permits for projects are obtained.
 - Oversee project construction.
- Develop a timeline and initial plans for implementation of the prioritized projects- 2027
- *Proposals with a budget and budget narrative that provide a reasonable explanation of project costs will be prioritized.*

A budget and budget narrative are uploaded using the Budget Narrative Attachment Form on Grants.gov.

- *Describe any new policies or administrative actions required to implement the plan or project being designed.*

LBD does not anticipate the need to develop new policies or administrative actions for this effort.

Evaluation Criterion D— Presidential & DOI Priorities

Climate Change

- *Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.*

The Colorado River Basin is currently experiencing its worst drought in recorded history. Since 2000, it has experienced the driest period in 1,200 years (Williams et al., 2022). Colorado State University updated the Colorado Climate Report, a comprehensive climate study that predicts a

5-30% reduction in stream flows over the next 30 years. Average temperatures are projected to increase by 1-4 degrees by 2050. This is after a 2.3-degree increase between 1980 and 2022. These temperature increases will continue to increase wildfire danger and reduce snowpack (Smith & Booth, 2024). Agriculture and recreation (particularly skiing, fishing, and boating) will be disproportionately impacted. As economic drivers for Grand County and Colorado, a decline in these industries will have an economic impact locally and potentially statewide and beyond. The impacts of climate change in Grand County have grave implications for wildlife and human health as water supplies dwindle.

This project supports stream monitoring that will track numerous conditions, including stream flows and temperatures. LBD's Operations Committee can address both low flows and high stream temperatures, as well as other concerns, through coordinated water operations, which help to increase flows and reduce temperatures, safeguarding water quality, habitat, and fish populations. Outreach efforts will help the local community understand the impacts of climate change on local streams and how they can minimize their own impacts. The GC SMP update will further illuminate the challenges and opportunities. Once implemented, the restored riparian vegetation and potential increase in beaver activity will help reduce wildfire severity and further climate change resilience.

Finally, the West is expected to experience dwindling snowpacks, which serve as storage and a slow-release mechanism for water every spring. A reconnected floodplain and associated wetlands provide similar short-term hydrologic exchange enhancements. This will be essential if snowpacks continue to decrease. Additionally, the reconnection of the floodplain offers the opportunity to increase carbon sequestration (Corday, 2024).

- *Does this proposed project strengthen water supply sustainability to increase resilience to climate change? Does the proposed project contribute to climate change resiliency in other ways not described above?*

LBD's work takes critical and massive strides in strengthening water supply sustainability in Grand County through robust and consistent monitoring of stream conditions, coordination of water operations based upon data and emerging trends, increased community understanding of stream health and threats, finalization of the GC SMP, prioritized project implementation planning, and, perhaps most importantly, by creating a forum for discussion between entities that prior to the formation of LBD were regularly mired in counterproductive conflict. These activities help the stakeholders track emerging threats so those threats can be mitigated, safeguarding water quality and quantity, both of which are under threat from climate change impacts. This safeguarding will increase climate change resilience with benefits propagating downstream in the Colorado River.

Benefits to Disadvantaged, Underserved, & Tribal Communities

Disadvantaged and Underserved Community Benefits:

- *Please use the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening Tool, available online at Explore the map – Climate & Economic Justice Screening Tool (<https://screeningtool.geoplatform.gov>) to identify the disadvantaged communities that will benefit from your project.*

According to the Climate & Economic Justice Screening Tool, no disadvantaged communities exist in the CEA. However, the Tool identifies some noteworthy burden thresholds that are met in the CEA. These include:

- The “expected population loss rate” from “fatalities and injuries resulting from natural hazards every year” ranges from the 97th to 98th percentile throughout the CEA.
 - One or more abandoned mine lands are located within the CEA.
 - The CEA is in the 94th percentile for “wastewater discharge: modeled toxic concentrations at parts of streams within 500 meters.”
 - The CEA is in the 92nd percentile for “transportation barriers: average of relative cost and time spent on transportation.”
- *If applicable, describe how the proposed project will serve or benefit a disadvantaged or underserved community, identified using the tool described above. For example, will the project improve public health and safety by addressing water quality, add new water supplies, provide economic growth opportunities, or provide other benefits in a disadvantages or underserved community?*

LBD’s work will make the CEA more resilient to natural disasters, such as floods and wildfires, which could reduce associated fatalities and injuries. LBD’s robust water quality monitoring work will track and identify water quality concerns, such as discharge from abandoned mines or wastewater, which LBD and our stakeholders can then address. LBD does not address transportation barriers.

Tribal Benefits:

- *Does the proposed project directly serve and/or benefit a Tribe? Benefits can include, but are not limited to, public health and safety by addressing water quality, new water supplies, economic growth opportunities, or improving water management. Does the proposed project support Reclamation’s Tribal trust responsibilities or a Reclamation activity with a Tribe?*

The project will not directly serve or benefit a Federally Recognized Tribe.

Resources

- Corday, J. (2024). (rep.). *Restoring Western Headwater Streams with Low-Tech Process-Based Methods: A Review of the Science and Case Study Results, Challenges, and Opportunities*. American Rivers.
- Council on Environmental Quality (Ed.). (n.d.). *Explore the Map- Climate & Economic Justice Screening Tool*. Screeningtool.geoplatform.gov.
- Doedderlein, J., Binnings, T., & Rochette, P. (n.d.). *Economic Impacts of Outdoor Recreation: A Study for Grand County and the Headwaters Trail Alliance*.
<https://static1.squarespace.com/static/56ad0a981a52032fce0964bf/t/578e7f14f7e0abdb e8d55be8/1468956445518/squarespace-201-part-II.pdf>
- Learning By Doing, Inc. (n.d.). Aquatic Monitoring in the Cooperative Effort Area. *Grand County Learning By Doing*. map. Retrieved 2024, from
<https://www.grandcountylearningbydoing.org/monitoring-map.html>.
- Lotic Hydrological, LLC. (2024). (rep.). *Comprehensive Watershed Assessment- May 2024*. Learning By Doing. Retrieved 2024, from
https://www.grandcountylearningbydoing.org/uploads/6/2/2/2/62221315/watershed_assessment_final_052124.pdf.
- Smith, J., & Booth, M. (2024, January 8). Colorado rivers may shrink by 30% as climate change continues, report says. *The Colorado Sun*.
- US Department of Agriculture. (2022). (rep.). *2022 Census of Agriculture County Profile- Grand County*. Retrieved from
https://www.nass.usda.gov/Publications/AgCensus/2022/Online_Resources/County_Profiles/Colorado/cp08049.pdf.
- Williams, A. P., Cook, B. I., & Smerdon, J. E. (2022). Rapid intensification of the emerging southwestern North American megadrought in 2020–2021. *Nature Climate Change*, 12(3), 232–234. <https://doi.org/10.1038/s41558-022-01290-z>

Project Budget

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
1. Colorado Water Conservation Board (grant)	\$53,959
Non-Federal Subtotal	\$53,959
REQUESTED RECLAMATION FUNDING	\$126,013.28

Table 1. Summary of Non-Federal and Federal Funding Sources

A budget narrative was uploaded to Grants.gov in both Excel and PDF formats.

Environmental and Cultural Resources Compliance

- Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.

No, this project does not include any on-the-ground or earth-disturbing work.

- Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

No known Federally listed species are in the CEA; regardless, no species (listed or otherwise) will be impacted by the project as there are no on-the-ground activities.

- Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as “Waters of the United States”? If so, please describe and estimate any impacts the proposed project may have.

There are no on-the-ground activities; therefore, no wetlands or surface water will be impacted.

- When was the water delivery system constructed?

Not applicable.

- Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.

No.

- Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.

Not applicable- no on-the-ground activities are associated with this project.

- Are there any known archeological sites in the proposed project area?

No on-the-ground activities are associated with the project, so there is no threat to archeological sites that may exist.

- Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?

No.

- Will the proposed project limit access to, and ceremonial use of, Indian sacred sites or result in other impacts on Tribal lands?

No.

- Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?

No.

Required Permits or Approvals

As this project consists of coordination and planning activities, there is no need for permits or approvals.

Overlap or Duplication of Effort Statement

To LBD's knowledge, there is no overlap in terms of activities, costs, or key personnel commitments between this project proposal and any other active or anticipated proposals or projects.

LBD submitted a proposal for WaterSMART Environmental Water Resources Project (EWRP) FY2024 funding for the Upper Colorado River Ecosystem Enhancement Project. This WaterSMART Cooperative Watershed Management Program proposal does not overlap or duplicate any portion of the EWRP proposal or project, or any other proposal/project submitted for any other funding consideration- Federal or non-Federal.

Conflict of Interest Disclosure Statement

No conflict of interest (actual or potential) exists at the time of application. LBD will continue to take appropriate steps to avoid conflicts of interest, including federal financial assistance agreements and procuring supplies, equipment, construction, and services as provided in 2 CFR §200.318.

LBD will monitor the areas of risk for conflict of interest (procurement of supplies, equipment, construction, and services) and identify, disclose, and mitigate or eliminate conflicts of interest.

LBD will notify the Bureau of Reclamation in writing if a conflict of interest arises during the project period.

As a nonprofit 501(c)3 organization, LBD has strict limitations on lobbying activities. Furthermore, no federal grant funds will be utilized for lobbying activities.

Uniform Audit Reporting Statement

LBD has not expended \$750,000 or more in Federal award funds in the last year (or ever) and, therefore, does not have a Single Audit Report to share.

Letters of Support

Letters of support from the following are attached as Appendix A.

- American Rivers
- Colorado Parks & Wildlife
- Colorado River Water Conservation District
- Denver Water
- Grand County
- Northern Colorado Water Conservancy District
- The Nature Conservancy
- Trout Unlimited

Official Resolution

An official resolution from LBD's Board of Directors is attached as Appendix B.

Learning By Doing, Inc.:
Coordinated Watershed Management
in the Colorado River Headwaters

Appendix A. Letters of Support



August 2, 2024

Bureau of Reclamation
Water Resources and Planning Office
Attn: Robin Graber
Mail Code: 86-6300
P.O. Box 25007
Denver, CO 80225

Dear Ms. Graber:

On behalf of the American Rivers Southwest Program, I am pleased to provide this letter of support for Grand County Learning By Doing's ongoing work to encourage and coordinate diverse stakeholders as they develop and implement local solutions to water management needs in Grand County, Colorado.

Learning By Doing (LBD) is a collaborative effort of local, state, federal, and nonprofit water stakeholders working to improve the aquatic environment at the headwaters of the Colorado River in the face of transmountain diversions, drought, and climate change. Although LBD Inc. was only founded in 2020, the group of stakeholders has been working together since 2015 and has built a reputation for doing good work in pursuit of its mission to *maintain and, where reasonably possible, restore or enhance the aquatic environment in the Fraser, Williams Fork, and Colorado River basins and their tributaries in Grand County, Colorado*. To keep the momentum going and expand its reach, LBD needs additional coordination support.

American Rivers (AR) was founded in 1973 and works nationally to protect and restore rivers for people and nature. AR's Southwest Program seeks to drive solutions for rivers' and communities' ability to heal and thrive in the face of climate change and human impacts. We support expanded coordination and outreach capacity for LBD because its work directly aligns with these values.

We strongly encourage the Bureau of Reclamation to support LBD's proposal for WaterSMART Cooperative Watershed Management Program funding. Please do not hesitate to contact me with any questions at hholm@americanrivers.org.

Sincerely,

Hannah Holm
American Rivers
Southwest Program, Western CO Office
115 N 5th St, Suite 410
Grand Junction, CO 81501

A handwritten signature in blue ink, appearing to read "Hannah Holm", is written over a light blue circular stamp that contains the text "AMERICAN RIVERS" and "SOUTHWEST PROGRAM".



COLORADO

Parks and Wildlife

Department of Natural Resources

NW Region Aquatics
711 Independent Avenue
Grand Junction, CO 81505
P 970.255.6100 | F 970.255.6111

August 21, 2024

Bureau of Reclamation - Water Resources and Planning Office

Attn: Robin Graber

P.O. Box 25007

Denver, CO 80225-0007

Dear Ms. Graber,

Colorado Parks and Wildlife (CPW) is pleased to provide this letter of support for Grand County Learning By Doing's (LBD) continued work to collaboratively implement local solutions to water management needs in Grand County, Colorado. LBD is a partnership involving local, state, federal, and nonprofit water stakeholders working to improve the aquatic environment at the headwaters of the Colorado River in the face of trans-mountain diversions, drought, and climate change. Coordination of LBD is critical to ensuring this diverse group of water stakeholders functions smoothly and that their robust watershed health and water supply planning work continues. LBD was founded in 2020 and has built a good reputation among water and river users. Continued funding for project coordination is essential to ensure that LBD continues to effectively improve the aquatic environments in Grand County.

The mission of CPW is to perpetuate the wildlife resources of the state, to provide a quality state parks 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. As an active partner in LBD, CPW provides expertise regarding management of the aquatic and terrestrial wildlife within Grand County and has representatives who serve on the Management, Technical, Monitoring, and Projects Committees. LBD's work supports CPW's mission by perpetuating the aquatic wildlife resources in Grand County, while also benefiting the public that uses those resources.

We strongly encourage the Bureau of Reclamation to support LBD's proposal for WaterSMART Cooperative Watershed Management Program funding. Your support is crucial to the success of this project. Please do not hesitate to contact me with any questions at Benjamin.Felt@state.co.us or 970-255-6186.

Sincerely,

Benjamin W. Felt
NW Region Senior Aquatic Biologist
970-255-6186; Benjamin.Felt@state.co.us



Jeff Davis, Director, Colorado Parks and Wildlife

Parks and Wildlife Commission: Dallas May, Chair • Richard Reading, Vice-Chair • Karen Bailey, Secretary • Jessica Beaulieu
Marie Haskett • Jack Murphy • Gabriel Otero • Duke Phillips, IV • James Jay Tutchton • Eden Vardy



COLORADO RIVER DISTRICT

PROTECTING WESTERN COLORADO WATER SINCE 1937

Bureau of Reclamation
Water Resources and Planning Office
Attn: Robin Graber
Mail Code: 86-6300
P.O. Box 25007
Denver, CO 80225

August 9, 2024

Dear Ms. Graber:

The Colorado River Water Conservation District ("Colorado River District") is pleased to provide this letter of support for Grand County Learning By Doing's continued work to encourage and coordinate diverse stakeholders as they develop and implement local solutions to water management needs in Grand County, Colorado. Learning By Doing is a collaborative effort of local, state, federal, and nonprofit water stakeholders working to improve the aquatic environment at the headwaters of the Colorado River in the face of transmountain diversions, drought, and climate change. Coordination of Learning By Doing is critical to ensuring this diverse group of water stakeholders functions smoothly and that their robust aquatic resource monitoring and stream improvement projects continue. LBD Inc. was founded in 2020 but has been working together since 2015 and has built a good reputation among informed water and river users. Still, it must expand its reach and recognizability to continue to meet its mission *to maintain and, where reasonably possible, restore or enhance the aquatic environment in the Fraser, Williams Fork, and Colorado River basins and their tributaries in Grand County, Colorado.*

I represent the Colorado River District as a member of the board of directors for Learning By Doing, Inc. The Colorado River District was created by the General Assembly of the State of Colorado in 1937, with a mission to "lead in the protection, conservation, use, and development of the water resources of the Colorado River Basin." The Colorado River District encompasses 15 counties on the Western Slope of Colorado, including Grand County. The Colorado River District fully supports the expanded coordination and outreach efforts of Learning By Doing. These efforts are critical to the health of the Fraser and Colorado rivers which sustain the municipal, ranching, and recreational economies that are so important to Grand County.

We strongly encourage the Bureau of Reclamation to support Learning By Doing's proposal for WaterSMART Cooperative Watershed Management Program funding. Your support is crucial to the success of this project. Please do not hesitate to contact me with any questions at (970) 930-4187 or jturner@crwcd.org.

Bureau of Reclamation
Water Resources and Planning Office
Attn: Robin Graber
August 9, 2024
Page 2



Sincerely,

A handwritten signature in blue ink, consisting of a stylized 'J' followed by a horizontal line that curves upwards at the end.

Jason V. Turner
Deputy General Counsel, CRWCD

U.S. Bureau of Reclamation
Water Resources and Planning Office
Attn: Robin Graber
Mail Code: 86-63000
P.O. Box 25007
Denver, CO 80225-0007

August 7, 2024

RE: Denver Water's Category A Partner Support Letter for Learning By Doing's proposal for WaterSMART Cooperative Watershed Management Program funding

Dear Ms. Graber:

Denver Water is pleased to provide this letter of support as a Category A Partner for Learning By Doing's continued work to encourage and coordinate diverse stakeholders as they develop and implement local solutions to water management needs in Grand County, Colorado. Learning By Doing is a collaborative effort of local, state, federal, and nonprofit water stakeholders working to improve the aquatic environment at the headwaters of the Colorado River in the face of transmountain diversions, drought, and climate change. Coordination of Learning By Doing is critical to ensuring this diverse group of water stakeholders functions smoothly and that their robust aquatic resource monitoring and stream improvement projects continue. LBD Inc. was founded in 2020 but has been working together since 2015 and has built a good reputation among informed water and river users. Still, it must expand its reach and recognizability to continue to meet its mission *to maintain and, where reasonably possible, restore or enhance the aquatic environment in the Fraser, Williams Fork, and Colorado River basins and their tributaries in [Grand County, Colorado](#).*

I represent Denver Water as a member of the Board of Directors of Grand County's Learning By Doing Cooperative Effort. My staff and I will provide support on the project management team and will be directly involved in the planning and implementation of the expanded coordination and outreach efforts of Learning By Doing. We support the implementation of Learning By Doing's expanded coordination and outreach efforts to meaningfully engage stakeholders and partners in important stream restoration efforts in the Fraser, Williams Fork, and Colorado River basins. Coordination, engagement and outreach result in direct benefits to the aquatic environment and align with Denver Water's mission to protect our water resources in the West and the goals of the Colorado Water Plan.

Denver Water fully supports Learning By Doing's grant application for Learning By Doing's proposal for WaterSMART Cooperative Watershed Management Program funding. Your support is crucial to the success of this project. Please feel free to contact me with any questions at rachel.badger@denverwater.org.

Sincerely,



Rachel Badger
Environmental & Watershed Planning Manager



Grand County BOARD OF COMMISSIONERS

Colorado

308 Byers Ave., P.O. Box 264 | Hot Sulphur Springs, CO 80451 | 970-725-3347

Richard D. Cimino

District 1, Fraser 80442

Merrit S. Linke

District 2, Granby 80446

Randal F. George

District 3, Kremmling 80459

Email: grndcty1@co.grand.co.us

Phone: 970-725-3100

Fax: 970-725-0565

Edward Moyer, County Manager

Maxine LaBarre-Krostue, County Attorney

Bureau of Reclamation
Water Resources and Planning Office
Attn: Robin Graber
Mail Code: 86-6300
P.O. Box 25007
Denver, CO 80225

August 6, 2024

Dear Ms. Graber:

Grand County is pleased to provide this letter of support for Learning By Doing's (LBD's) continued work to encourage and coordinate diverse stakeholders as they develop and implement local solutions to water management needs in Grand County, Colorado. Learning By Doing is a collaborative effort of local, state, federal, and nonprofit water stakeholders working to improve the aquatic environment at the headwaters of the Colorado River in Grand County, which are heavily impacted by trans-mountain diversions, aridification, and climate change. Coordination of LBD is critical to ensuring this diverse group of water stakeholders functions smoothly, and that their stream improvement projects and robust aquatic resource monitoring continue.

With annual average diversions of almost 282,000 AF removed from the Colorado River headwaters (based on the last 10 years), Grand County is already the hardest hit county in Colorado by trans-basin diversions. With a combined firm yield of 48,000 AF, completion of Denver Water's Gross Reservoir expansion and Northern Water's Chimney Hollow Reservoir will cause that figure to increase significantly in future years. LBD was born out of years of facilitated negotiations which preceded the approval these projects. Part of the point of negotiating for the existence of LBD was to keep the east- and west-slope interests working together to protect the headwaters of the Colorado River over the long-haul. With its mission to *maintain and, where reasonably possible, restore or enhance the aquatic environment in the Fraser, Williams Fork, and Colorado River basins and their tributaries in [Grand County, Colorado](#)*, LBD began working together in 2015, and founded LBD Inc. in 2020. LBD has already completed and begun new stream improvement projects, and is currently overhauling the outdated Grand County Stream Management Plan. LBD has built a good reputation among informed water and river users, and its work must continue.

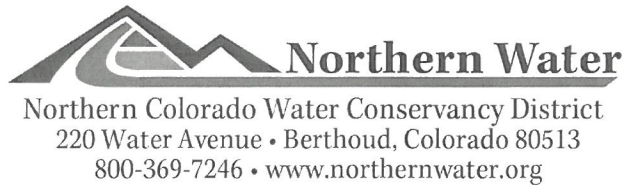
The continued successful pursuit of Learning By Doing's mission is critical to the health of the Fraser and Colorado rivers. In our strategic plan, Grand County recognizes that access to clean, abundant water is a requirement for any healthy economy, and perhaps especially for Grand County, which requires water to sustain our many outdoor recreational opportunities including skiing, fishing, boating and hunting, as well as agriculture, industry, municipalities and unincorporated areas. Grand County takes an active role in the stewardship of this precious, finite resource both for current residents and visitors, and for the benefit of future generations.

Grand County actively supports the expanded coordination and outreach efforts of Learning By Doing, and we strongly encourage the Bureau of Reclamation to support Learning By Doing's proposal for WaterSMART Cooperative Watershed Management Program funding, which is crucial to the success of this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Edward Moyer". The signature is fluid and cursive, with the first name "Edward" and last name "Moyer" clearly distinguishable.

Edward Moyer
Grand County Manager



August 12, 2023

Bureau of Reclamation
Water Resources and Planning Office
Attn: Robin Graber
Mail Code: 86-6300
P.O. Box 25007
Denver, CO 80225

Dear Ms. Garber:

Northern Water is pleased to provide this letter of support for Grand County Learning By Doing's continued work to encourage and coordinate diverse stakeholders as they develop and implement local solutions to water management needs in Grand County, Colorado. Learning By Doing is a collaborative effort of local, state, federal, and nonprofit water stakeholders working to improve the aquatic environment at the headwaters of the Colorado River in the face of transmountain diversions, drought, and climate change. Coordination of Learning By Doing is critical to ensuring this diverse group of water stakeholders functions smoothly and that their robust aquatic resource monitoring and stream improvement projects continue. LBD Inc. was founded in 2020 but has been working together since 2015 and has built a good reputation among informed water and river users. Still, it must expand its reach and recognizability to continue to meet its mission *to maintain and, where reasonably possible, restore or enhance the aquatic environment in the Fraser, Williams Fork, and Colorado River basins and their tributaries in Grand County, Colorado.*

Northern Water was created in 1937 to jointly operate and maintain the Colorado-Big Thompson Project, with the U.S. Bureau of Reclamation. The C-BT Project collects supplemental water west of the Continental Divide for delivery to approximately 1,000,000 people and 615,000 irrigated acres in Northeastern Colorado for agricultural, municipal, domestic and industrial purposes. Northern Water has been a committed partner of Learning By Doing since 2015 and we are invested in their mission to improve and restore aquatic habitats in Grand County.

The success of Learning By Doing's projects, which have a significant impact on the Upper Colorado River watershed, hinges on effective project management and coordination. We recognize the critical role that a dedicated Project Coordinator plays in ensuring that Learning By Doing's programs and projects move forward efficiently, achieving the desired outcomes for these activities. Receipt of this grant funding will be instrumental in enabling Learning By Doing to continue its beneficial stream restoration projects, conduct essential monitoring, update the Grand County Stream Management Plan, and implement other enhancements to the aquatic environment in our region.

Moreover, Northern Water acknowledges the importance of effective communication and outreach to the broader Grand County community. The requested funding for marketing activities, including the development of a comprehensive marketing and outreach plan, is vital. It will allow Learning By Doing to communicate consistently with its stakeholders, reinforce its purpose, and promote a positive reputation within the community.

Northern Water fully supports Learning By Doing's WaterSMART grant application and believe that the funding will allow Learning By Doing to continue its invaluable work in protecting and restoring the aquatic resources in Grand County. We strongly encourage the Bureau of Reclamation to support this proposal for WaterSMART Cooperative Watershed Management Program funding. Your support is crucial to the success of this project. Please do not hesitate to contact me with any questions at 970-622-2333 or jdrager@northernwater.org.

Sincerely,



Jeff Drager

Director of Engineering



The Nature Conservancy in Colorado
2424 Spruce Street
Boulder, CO 80302

tel (303) 444-2950
fax (303) 444-2985
nature.org/colorado

August 6, 2024

Bureau of Reclamation
Water Resources and Planning Office
Attn: Robin Graber
Mail Code: 86-6300
P.O. Box 25007
Denver, CO 80225

RE: Learning by Doing

Dear Ms. Graber,

I am writing to express my enthusiastic support for the continued work of Grand County's Learning By Doing (LBD Inc.) to encourage and coordinate diverse stakeholders as they develop and implement local solutions to water management needs in Grand County, Colorado. LBD Inc. was founded in 2020 but has been working together since 2015 and has built a good reputation among informed water and river users. It is a collaborative effort of local, state, federal, and nonprofit water stakeholders working to improve the aquatic environment at the headwaters of the Colorado River in the face of transmountain diversions, drought, and climate change. Coordination support for Learning By Doing is critical to ensuring this diverse group of water stakeholders functions smoothly and that their robust aquatic resource monitoring and stream improvement projects continue. LBD Inc. is ready to take the next step to expand its reach and recognizability to continue to meet its mission to maintain and, where reasonably possible, restore or enhance the aquatic environment in the Fraser, Williams Fork, and Colorado River basins and their tributaries in Grand County, Colorado.

The Nature Conservancy (TNC) is a global non-profit organization that has been active in Colorado since 1966. At TNC Colorado, we strive to find collaborative solutions to some of the world's most complex challenges like rapid biodiversity loss and accelerated climate change. We employ a vast suite of partnerships and strategies to achieve real outcomes including nature-based climate solutions that also support livelihoods and protect vulnerable human populations. We support the expanded coordination and outreach efforts of Learning By Doing, because this is a critical moment for LBD, Inc. to support implementation and monitoring of the projects identified in the stream management plan developed by stakeholders. We have been actively engaged throughout Colorado in supporting the development of stream management plans by local watershed groups and helping these groups move forward to project implementation.

We strongly encourage the Bureau of Reclamation to support Learning By Doing's proposal for WaterSMART Cooperative Watershed Management Program funding. Your support is crucial to the success of this project. Please do not hesitate to contact me with any questions at diana.lane@tnc.org.

Sincerely,

Diana Lane
Director of Sustainable Food and Water Programs



Colorado River Headwaters Chapter
Trout Unlimited
PO Box 325
Fraser, CO 80442-0325
www.coheadwaters.org



Bureau of Reclamation
Water Resources and Planning Office
Attn: Robin Graber
Mail Code: 86-6300
PO Box 25007
Denver, CO 80225

August 12, 2024

Dear Ms. Graber,

As a member of Learning By Doing (LBD), Trout unlimited has a heightened awareness of the important work being done by all the diverse stakeholders LBD is coordinating to improve the health of our rivers in the headwaters of the Colorado River, here in Grand County. Our local rivers are challenged by drought, global warming and a lack of flows caused by trans-basin diversions. We support and appreciate all that LBD has been able to accomplish and look forward to them being even more successful with support from the BOR. With so many diverse organizations this work can only be successful through continued and improved coordination by LBD. Our Monitoring, Operations and Projects Committees consist of diversified interests working toward the common goal of improving stream health. Coordinating these diverse groups, growing our stakeholder participation and engaging the public are critical to the success of LBD. With BOR assistance LBD can assure that their goals can be achieved.

We encourage the Bureau of Reclamation to support LBD's proposal for WaterSMART Cooperative Watershed Management Program funding. Your support is both crucial to the success of this project and appreciated by all of the stakeholders in Grand County. Please contact me with any questions that you might have. My cell phone number is (970) 531-7166 and my email address is kirkklancke@gmail.com.

Sincerely,

Kirk Klancke

President, Colorado River Headwaters Chapter of Trout Unlimited

Learning By Doing, Inc.:
Coordinated Watershed Management
in the Colorado River Headwaters

Appendix B. Official Resolution

A RESOLUTION OF THE LEARNING BY DOING INC. BOARD OF DIRECTORS
AUTHORIZING AND APPROVING THE APPLICATION FOR GRANT FUNDS FOR THE
LEARNING BY DOING, INC: COOPERATIVE & COORDINATED WATERSHED
MANAGEMENT IN THE UPPER COLORADO BASIN

WHEREAS, the President of the United States and the United States Department of the Interior have provided funds for the WaterSMART Program; and

WHEREAS, the Bureau of Reclamation has been delegated the responsibility for the administration of this grant program, establishing necessary procedures; and

WHEREAS, said procedures established by the Bureau of Reclamation require a resolution certifying the approval of application(s) by the applicant's governing board before submission of said application(s); and

WHEREAS, the applicant, if selected, will enter into an agreement with the Bureau of Reclamation to carry out the activities as described in the proposal.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS THAT:

SECTION 1.

Approves the filing of an application for the WaterSMART Cooperative Watershed Management Program Phase I for Fiscal Year 2024 by Learning By Doing, Inc., requesting funding support for the completion of the Learning By Doing Inc.: Cooperative and Coordinated Watershed Management in the Upper Colorado Basin; and

SECTION 2.

Appoints Jason Turner or his designee, to act as agent with legal authority to enter into the grant agreement, conduct all negotiations, execute and submit all documents including, but not limited to, applications, agreements, payment requests and any other grant required correspondence which may be necessary for the completion of the grant program; and

SECTION 3.

Certifies that the Board of Directors for Learning By Doing, Inc. has reviewed and supports the proposed application; and

SECTION 4.

Certifies that Learning By Doing, Inc. will work with the Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement; and

SECTION 5.

This Resolution shall take effect immediately from and after its passage and publication as required by law.

PASSED AND APPROVED THIS 26th DAY OF AUGUST, 2024.

LEARNING BY DOING, INC.

A handwritten signature in blue ink, appearing to read "Jeff Drager", is written over a horizontal line.

Jeff Drager