



**Title: Development of Sonoita Creek Watershed Working Group and Creation of Watershed Restoration Plan**

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## Executive Summary

*August 28, 2024*

*Tucson Audubon Society*

*Tucson, AZ - Pima County*

Tucson Audubon (TA) is applying for funding to develop a Watershed Group and create a collaborative watershed restoration plan for the Sonoita Creek Watershed (HUC10 1505030102). The Proposal Team for this project includes the Town of Patagonia (the Town), Friends of Sonoita Creek (FoSC), Borderlands Restoration Network (BRN), The Nature Conservancy (TNC), and Sky Island Alliance (SIA). The Project will engage a diverse range of stakeholders—including federal agencies, municipalities, residents, mining representatives, ranchers, and NGOs. All decisions will be made through a consensus-based process to ensure inclusive and equitable participation. The planning efforts will focus on adaptive, cooperative strategies to address water supply and quality challenges, without requiring permits or initiating construction. While some potential restoration projects may be identified on federal lands, the plan will not specifically target these areas. The proposed Sonoita Creek Watershed Group will build on existing public and private initiatives to create sustainable solutions that empower communities to manage the watershed's resources effectively. Assuming a start date in July 2025, the project will span three years and conclude with a public presentation of the finalized watershed restoration plan by July of 2028.

### Project Location

The Sonoita Creek Watershed (HUC10 1505030102) covers approximately 168,000 acres or 258 square miles. Located southeast of Tucson, AZ and directly south of the Santa Rita mountain range, the watershed ranges in elevation from 9,456 feet at Mount Wrightson in the Santa Ritas to 3,481 feet at the confluence with the Santa Cruz River at Rio Rico. Sonoita Creek is the main watercourse through this watershed with tributaries including Temporal Gulch, Red Rock Creek, and Harshaw Creek. The Sonoita Creek Watershed is fully contained within the boundaries of the United States, and it is not directly adjacent to the international border.

The primary human community in the watershed is The Town. Beginning in the 1800's and continuing through the present, significant increases in human settlement, mining activity, agricultural irrigation, livestock, and municipal use have altered the course of Sonoita Creek and increased pressure on what is known as one of the highest quality riparian habitats in the region, supporting species diversity ranging from endangered Gila topminnow to coatimundi and mountain lion.

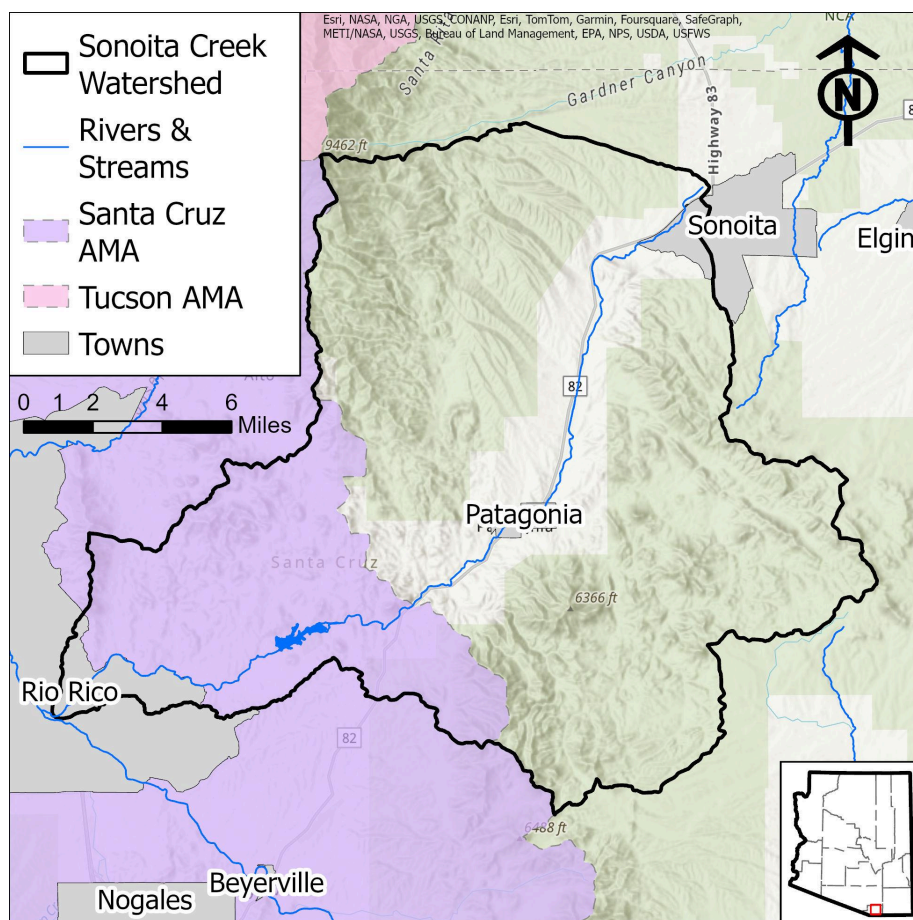


Figure 1. Geographic position of Sonoita Creek Watershed.

The Sonoita Creek Watershed is a biodiversity hotspot with several unique and rare habitats represented throughout. Several large springs occur in the upper Sonoita Creek valley that sustain short stretches of perennial stream flow including a 7-mile stretch from TNC's Patagonia-Sonoita Creek Preserve downstream to Patagonia Lake and a 2 mile stretch between Patagonia Lake and the community of Rio Rico, with smaller spring-fed perennial sections scattered throughout the watershed. At the highest elevations of the watershed, above 6,000 feet, steep, rocky slopes are forested with ponderosa pine, Southwestern white pine, Douglas-fir, Chihuahuah pine, and various oak species. The middle elevations are characterized by evergreen oak-alligator juniper woodlands, forming part of the unique "sky islands" habitats. At lower elevations, the landscape transitions into upper Sonoran semi-desert grasslands, while the riparian zone of Sonoita Creek features diverse ecosystems, including mesquite bosque, sacaton grassland, Fremont cottonwood-Goodding's willow gallery forests, and cienegas.

### **Applicant Category**

TA is serving as sponsor and will coordinate, alongside the Proposal Team, the formation of a new Watershed Group made up of a number of local organizations, landowners, and other collaborative partners who are all working in parallel on water resources, watershed health, and planning. Members are listed below in Table 1.

*Table 1: Sonoita Creek Groups, including currently engaged in effort (current), intermittently engaged (intermittent), and to be engaged (outreach planned).*

<b>Stakeholder Name</b>	<b>Description, Role in Watershed</b>
Town of Patagonia	Local government (current)
Arizona Department of Environmental Quality	State agency (current)
University of Arizona	Academic Institution (current)
Friends of Sonoita Creek	Community non-profit (current)
The Nature Conservancy	Community non-profit (current)
Tucson Audubon Society	Community non-profit (current)
Borderlands Restoration Network	Community non-profit (current)
Sky Island Alliance	Community non-profit (current)

Kimley-Horn and Associates	County floodplain management consultant (outreach planned)
US Forest Service, Coronado National Forest	Federal agency (Intermittent)
Santa Cruz Natural Resources Conservation District	Collaborative land management entity (current)
Santa Cruz County	Floodplain Manager, County Agency (current)
Circle Z Ranch	Significant landowner, conservation partner (current)
South32 Hermosa Mine	Mine in advancing development (current)
Las Cienegas Watershed Partnership	Collaborative land management entity (Intermittent)
Friends of the Santa Cruz River	Community non-profit (outreach planned)
Arizona Game and Fish Department	State agency (intermittent)
Arizona State Parks & Trails	State agency (outreach planned)
Fort Huachuca Sentinel Landscape Partnership	Coordinating entity of the federally-designated landscape (current)
Patagonia Area Resource Alliance	Community non-profit (current)
Arizona Department of Transportation	State agency (outreach planned)
Sonoran Institute	Community non-profit (current)
Santa Cruz Valley Heritage Alliance, Inc	Coordinating entity of the federally-designated Heritage Area (current)
US National Park Service, Tumacacori National Historic Park	Federally-managed park unit (current)

US Geological Survey	Federal agency (outreach planned)
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In 2015, the Town of Patagonia’s growing concern about the complexity of water resource issues for flooding, water supply, and water quality culminated in the establishment of the advisory “Flood and Flow Committee” which remains active and reports to the Town Council. In 2016, the Committee funded an initial watershed management plan to collect baseline water resources data and to achieve stakeholder consensus on main goals for watershed planning. The resulting *Watershed Management Plan (Phase 1)* report was submitted to the Town Council in 2017. The stakeholder’s priority follow-up project was a *Water Quality Road Map* submitted to the Town Council in 2020, summarizing available water quality data, gaps that required new monitoring efforts, and constituents of concern (NextGen Engineering 2019).

In 2020, TNC partnered with BRN, TA, and Circle Z Ranch to produce a *Sonoita Creek Watershed Conservation Plan*. The *Watershed Plan* outlines shared conservation targets and collective strategies to support those targets and maintain the incredible biodiversity of the watershed. Together the partners identified conservation targets that acknowledge the diverse vegetation and habitat types unique to the Sonoita Creek Watershed, as well as human well-being targets such as flood protection and water security. The 2020 plan will inform, alongside other gathered resources, the watershed planning under this new effort. The new plan will expand scope and stakeholder engagement, complete a thorough resource gap analysis, and identify and rank specific and, later, implementable restoration projects.

In 2022, the University of Arizona Water Resources Research Center began working with Town of Patagonia stakeholders through funding from the Climate Assessment for the Southwest (CLIMAS) to apply new and emerging data in development of drought preparedness and response recommendations with the goal of supporting local and regional decision-making. An important element of these efforts was compiling relevant information and findings about local conditions of water and natural resources as reference during the evaluation of potential conservation and drought management options. Through consultation with stakeholders and co-production of drought planning recommendations for the Town of Patagonia, the final outcomes of this effort include guidance and documentation of methods and drought planning policies, with discussion of lessons and applicability for small communities in Arizona, as well as a final drought preparedness and response recommendations report for the consideration of the Town of Patagonia. The final report is due in January 2025.

In 2023, Santa Cruz County initiated the *Patagonia Regional Flood Control Project Feasibility Study and Alternative Analysis*. The first phase, “Existing Conditions Analysis”, was the subject of a public meeting in March 2024 to describe the initial results of floodplain modeling, a final report is scheduled for early 2025. A second phase will analyze alternatives to mitigate flood risk.

The first community workshop for this application was convened in May 2024, online, with natural resources managers, to collect an initial set of watershed values, concerns, and solutions. These ideas were converted into a public survey distributed online in July and completed by

approximately 135 people from within and outside the Sonoita Creek Watershed. The survey results provided the basis for drafting mission statements that were reviewed by workshop participants on August 6 (further described below). The survey and workshop results are the guiding framework for the work plan outlined in this application.

On August 6, 2024, over 40 community members, representing the diverse stakeholder interests of the Sonoita Creek Watershed came together in-person and online to provide input on the creation of a new watershed management group. This event provided the opportunity to hear directly from stakeholders about watershed concerns and recommendations, which have informed key elements of this proposal including the preliminary mission statement.

At the August workshop, participants responded to two example mission statements created by the Proposal Team based on stakeholder survey responses. After a robust discussion, the Proposal Team then developed the following preliminary mission statement, which will be refined as part of the funded work.

*The Sonoita Creek Watershed is a biodiversity hotspot where ecological and human communities face pressing threats driven by climate change, landscape degradation, development, and industrial mining. Through collaborative and science-based decision making, we seek to achieve holistic watershed restoration and integrated land and water management that provides a healthy and resilient watershed for future generations to enjoy.*

### **Eligibility of Applicant**

The watershed collaborative described herein is located in Arizona, sponsored by Tucson Audubon (TA), and is a new group made up of local government agencies, non-profit organizations, and academic institutions.

TA is a non-profit, 501c3 organization whose mission is to inspire people to enjoy and protect birds through education, restoration, and conservation of the environment upon which we all depend. TA both implements programming and owns property, the Paton Center for Hummingbirds, for the purposes of conservation and public engagement. The Paton Center property, totaling 13 acres, is situated along the Sonoita Creek riparian corridor, where TA has performed extensive ecological restoration work, supported research efforts tracking foraging behaviors of Montezuma Quail (*Cyrtocopus montezumae*), and engages volunteers in water quality monitoring effort. TA successfully and consistently collaborates with BRN, TNC, the Town of Patagonia, and others to address threats to the ecological health and function of the watershed throughout the region.

A global destination for birdwatching enthusiasts, the Paton Center, along with the adjacent Sonoita Creek Preserve, owned and operated by TNC, and nearby Borderlands Wildlife Preserve, owned and operated by BRN, contribute greatly to the economic vitality of the Town of Patagonia and surrounding area, drawing estimates of at least 17,000 visitors annually, supporting the local service industry sector as a primary attraction for tourists.

As an organizing member of this group, TA will act as fiscal agent, and assume primary responsibility for coordination of collaborative efforts, project management, and oversight of contracted services throughout the grant period, and will remain deeply committed to working within the Sonoita Creek Watershed and Town of Patagonia to ensure the successful implementation of a Watershed Plan once adopted.

#### Core Collaborators:

*Borderlands Restoration Network* (BRN, subawardee) - partners to grow a restorative economy by rebuilding healthy ecosystems, restoring habitat for plants and wildlife, and reconnecting our border communities to the land through shared learning. BRN staffs year round restoration teams based in the Sonoita Creek Watershed who specialize in building erosion control structures, sourcing and planting regionally appropriate native plants and seeds, and educating local communities through youth programming and skill share workshops.

BRN utilizes a series of impactful climate solutions through its multifaceted programs, each addressing the escalating challenges of climate change from multiple fronts. The organization operates at the confluence of ecological restoration, biodiversity conservation, and environmental education through three cornerstone programs: the Education Program, Native Plant Program (NPP), and the Watershed Restoration Program (WRP). These initiatives are not siloed efforts but are interwoven strands of a comprehensive strategy designed to engage climate solutions, restore ecological functioning, and foster a sustainable relationship between the land and its inhabitants.

Through interprogram collaboration, BRN plays a pivotal role in enhancing ecological functioning. By restoring and maintaining ecosystem functions, BRN's efforts bolster natural cycles that are crucial for the recycling of nutrients, the flow of energy, and the regulation of climate—all essential for supporting diverse life forms (Gooden & Pritzlaff, 2021; Norman et al., 2021b). These activities not only strengthen ecological resilience but also boost the overall productivity and stability of the environments we manage.

*Sky Island Alliance* - (SIA, subawardee) is a regional conservation nonprofit dedicated to protecting and restoring the diversity of life and lands in the Sky Islands of the U.S. and Mexico. SIA conducts spring seeking and monitoring throughout the Patagonia Mountains within the Sonoita Creek Watershed.

*The Nature Conservancy* - is an international non-profit organization with a mission to conserve the lands and waters on which all life depends, and owns and manages the 873-acre Patagonia-Sonoita Creek Preserve, containing the first two miles of permanent flow of Sonoita Creek and adjacent floodplains.

*Friends of Sonoita Creek* - has worked for over two decades to protect and restore the water and natural habitat of Sonoita Creek.



*Town of Patagonia* - is the main municipal agency in the watershed, providing and protecting water supply, land use, and other activities within its jurisdiction. The Town's Flood and Flow Advisory Committee is an active participant in the Proposal Team.

## **Project Description**

This project will pursue Task A and Task B activities, as outlined in the NOFO. A description of planned activities is outlined below, while additional detail regarding project schedule is provided in section 5.3 Criteria C: Readiness to Proceed.

### **Watershed Group Definitions:**

- Proposal Team = Partners contributing to the Proposal, outlined above
- The Group = Watershed Group created as part of funded work, broadly
- Steering Committee = Administrative and oversight branch of Group, detailed below
- Planning, Monitoring, Restoration Planning, or other Committee = Additional issue-focused Committees created as part of the Watershed Group, detailed below

## **Task A: Watershed Group Development**

Reclamation support will enable much-needed capacity to undertake strategic watershed planning, while also providing an opportunity to create a focused, stakeholder-supported structure that will set the effort up for long-term success. Given the watershed's varied and pressing challenges related to balancing environmental and economic needs, it is essential that the Group has a strong organizational structure, an established mission and focused goals, by-laws to structure participation and Group engagement, and clearly defined roles that will build and maintain momentum on this effort. Planned activities to develop the Watershed Group are as follows:

- If funded, the Proposal Team will support TA in planning activities until a Watershed Group Steering Committee is established and approved by stakeholders.
- The Proposal Team will assist TA in selecting a neutral, third-party to facilitate stakeholder workshops.
- Upon receipt of funds, initial workshops will be organized to: inform stakeholders about the receipt of funds; gather input on and, later, approve Steering Committee composition; and finalize mission and vision statement, and Watershed Group goals.
- Once established, the Steering Committee will draft and then secure stakeholder approval on products including the following:
  - Name of Group
  - Organizational structure, to include potential creation, role, and composition of additional committees
  - Outreach and engagement plan including communications strategy, updated and maintained contact list, and an outline of the purpose and expected frequency of stakeholder engagement and public outreach (i.e., in-person and virtual meetings, workshops, field trips, community tabling events, etc)

- Long-term operations and sustainable funding plan
- The Steering Committee will meet with leadership of other regional watershed collaboratives to understand, document, and, where reasonable, apply lessons learned including those related to organizational structure, operations, engagement, and watershed planning processes. The Sonoita Creek Watershed group benefits from having several established collaboratives throughout the region from which we can draw experience to strengthen our own effort.
- Steering committee will also solicit public input on additional committees and their structure before making decisions. Final additional committee approval will be sought in a future stakeholder workshop alongside commencement of Task B activities under this project. Additional committees will include a broader group of stakeholders and information experts who can help further specific goals of the project

### **Task B: Watershed Restoration Planning**

For the Sonoita Creek Watershed, restoration planning requires a long-term commitment to plan, implement, monitor, and then adapt projects and programs for water resources and ecosystem sustainability. This grant seeks to establish the foundation for a long-term local capacity for watershed management in a rural, “slim tax base”, area of Arizona.

Once established, the Group will begin the watershed planning process by completing a thorough inventory of existing watershed resources by compiling available reports, plans, data, and documentation of past and current efforts related to water resources and watershed condition. Resources will be provided on a web-based platform later in the process. The Group will also compile any existing documentation of watershed threats, needs, and plans to address. This assessment may yield additional stakeholders that may be interested to engage in the new Group.

After the initial watershed assessment is complete, the Group will organize a stakeholder workshop to share this information, solicit supporting or additional information, and develop watershed restoration plans and water monitoring goals. Stakeholders will also complete the final approval of Group subcommittees at the outset of this workshop, completing Task A activities under this project.

Once established, the Watershed Restoration Planning Committee (Planning Committee), or equivalent, will begin the process of writing the Watershed Plan. Throughout this process, Planning Committee and Monitoring Committee members will identify and engage with subject matter experts to provide guidance and will engage contractor(s) where technical support is needed. Steps will include the following:

- Draft and secure stakeholder approval on an outline, timeline, and description of final products including web-platform.
- Based on approved products above, draft the watershed restoration plan with periodic opportunities for input from Group members, partners, and stakeholders.

- Review list of existing resources and efforts in the context of watershed restoration plan goals to perform a gap analysis that documents what water monitoring, water resources, and watershed condition information may be missing in past efforts, including gaps in project type and geographic focus.
- Create a water monitoring plan (Monitoring Committee led) including a plan to fill monitoring gaps identified in gap analysis as well as bolster monitoring to support and provide scientific backing to the project.
- Develop a list of conceptual watershed restoration projects:
  - Draft and secure stakeholder approval on project goals, criteria, and evaluation matrix
  - Organize a stakeholder workshop to gather input on possible restoration projects and project areas, including opportunities recognized as lacking in the gap analysis
  - Utilize approved matrix to evaluate proposed restoration projects and determine highest ranking projects for further consideration
  - Develop high-level concept plans for the highest ranking restoration projects that may include a summary of Planning Committee project evaluation, project type and area, project lead, support needed, general timeline, and expected conservation and/or community benefit
- Organize a stakeholder workshop to introduce and gather initial feedback on highest-ranking restoration projects; initiate a public comment period to allow for additional consideration.
- After a public comment period, create a final list of highest-ranking projects.
- Develop a publicly-accessible website with a map-based platform that includes a list of existing resources and efforts, a monitoring database and map of monitoring locations, and a database and map of past, current, and potential future restoration projects.
- Organize a stakeholder workshop to present on watershed restoration plan, final conceptual project list, and web resources including water monitoring database and projects database.
- Throughout the grant period, sub-contract with Watershed Group organizations to continue - and expand, based on gap analysis - water resources monitoring.

### **E.1.1. Evaluation Criterion A—Watershed Group Diversity and Geographic Scope**

#### ***E.1.1.1. Sub-criterion No. A1. Watershed Group Diversity***

The Sonoita Creek Watershed has a diverse set of stakeholders representing the full geographic range of the watershed, with complementary and competing interests in water resources, land use, and other elements of a watershed. Prior to this grant application effort, there have been communications among watershed stakeholders at different times, as discussed in Section 2: Applicant Category.

The stakeholders in the Sonoita Creek Watershed will have critical roles in the new Watershed Group. Any of the stakeholders may become a project champion, contribute to or participate in Watershed Group Committee(s), or provide resources for a project, including private and public landowners who play an essential role in granting access or easements for restoration projects.

Efforts to include a diverse range of stakeholders were demonstrated in the workshops for this grant application which included:

- Sending email invitations to a broad list and also to key stakeholders to distribute
- Providing hybrid meeting options
- Meeting at key stakeholders or understaffed agencies
- Posting notices at the Patagonia Post Office
- Publishing notices in the local newspapers Patagonia Regional Times and Nogales International

The below Table 2 illustrates the various stakeholder interests that completed the stakeholder survey, which was widely distributed in July 2024.

*Table 2. Surveyed stakeholder interests.*

<b>What type of interests does your organization represent within the watershed?</b>			
Concerned citizen	93	Environmental	59
Livestock grazing	3	Municipal water supplies	9
Mining	8	Private property owner	55
Timber production	0	Federal government	1
Land development	9	State government	6
Recreation or tourism	41	Local government	6
Irrigated agriculture	2	Tribes	0

See Table 1 for a Stakeholder List that includes those involved in the Proposal Team, those that provided a letter of support, those intermittently involved, and those that have not yet been involved in pre-proposal activities but are recognized as important contributors in the Watershed Group and will be engaged at a later point. Timber production and hydroelectric power production are not present in the watershed and therefore not included in the list of stakeholders. Letters of support for the development of a Sonoita Creek Watershed Group and the restoration planning activities proposed in this scope have been provided by 14 diverse stakeholders and are included in this proposal package.

The structure of the Sonoita Creek Watershed Group will be a refinement of the core contributors to past watershed efforts and the formation of this grant application. The proposed structure is:

- Steering Committee
- Monitoring Committee
- Watershed Restoration Planning committee

Each committee will consist of relevant representatives that will be identified partly through a public selection and approval process with the goal that the Steering Committee represent the many diverse interests present in the watershed while subcommittees will consist of relevant professionals and more-specified interests.

At project outset, current Group participants will engage in stakeholder mapping (e.g. interviewing current and newly-identified stakeholders to find others, brainstorming, public records search for grazing and well allotments) to develop an outreach plan. Stakeholders will be invited to add to the list in the first workshop and the Coordinator will be tasked with reaching out to groups and persons not yet engaged with the project to encourage their participation or to, at least, get input regarding their current watershed practices/impacts, what they hope to see from the project, the history of their involvement, and their account of broad history of the watershed. Interviews with many key stakeholders will also be conducted by the Coordinator to develop as thorough as possible a history of the watershed, its current state, and its changes through time.

Group development will occur throughout the first year of the project with the Steering Committee being identified first and additional committees subsequently. Stakeholders and the public will be engaged throughout this process and allowed to provide input in multiple ways including during the first three stakeholder workshops devoted at least partially to group development. Decision-making regarding committee makeup and structure will be made via consensus both internally in the Group and at public workshops.

The first stakeholder meeting as part of funded work will serve to notify the public of the award and the Proposal Team will present those attending with results from stakeholder mapping exercises already performed. Attendees will be invited to provide input on gaps in representation from said list as well as provide input on what interests/persons should be represented on the Steering Committee. The Proposal team will put together a “short list” after said workshop of potential Steering Committee members and the Coordinator will reach out to persons and groups identified to gauge interest and ability to participate. The Coordinator and Proposal Team will then narrow the list to the final members, via vote, which will be presented to stakeholders for approval at the second workshop.

Once the Steering committee is approved, stakeholders will be invited to edit and then approve the proposed additional committees and their structure. Feedback on these during a stakeholder workshop will be accounted for in defining the makeup of additional committees but these, likely focused on monitoring and restoration planning, will include a broader number of members and consist of representatives and subject experts from each issue area. First round membership of additional committees, along with their finalized structure, will be presented to stakeholders in a later workshop alongside initial information gathering for the watershed planning process.

#### ***E.1.1.2. Sub-criterion No. A2. Geographic Scope***

The Proposal Team hopes to perform planning activities in the HUC 10 Sonoita Creek Watershed, as demonstrated in Figure 1, covering the full subbasin size watershed. Sonoita Creek is the focus of restoration planning under this effort. The selected project boundary incorporates the major stakeholders and surrounding land uses that impact the Creek, and water quality and quantity, while keeping focus narrow enough to ensure greater likelihood of successful and high-impact projects. Figure 2 displays the major landscape features and surface management surrounding the Town of Patagonia and represents many stakeholders identified in Table 1. Figure 3 demonstrates broader land ownership throughout the watershed. The Group intends to represent

persons/entities from the entire range of the watershed. This watershed contributes to the Santa Cruz River watershed to the west and changes to it can have positive impacts downstream, hence the inclusion of Santa Cruz River stakeholders in this project.

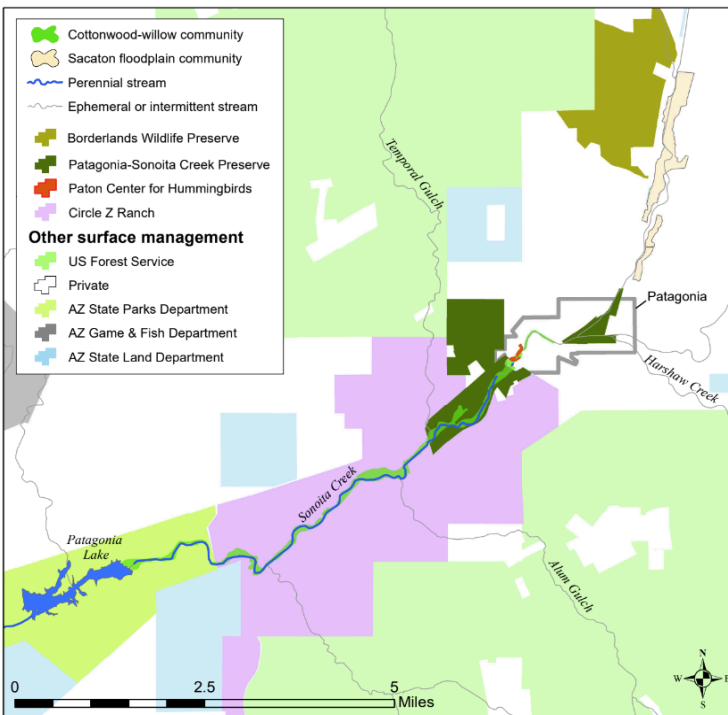


Figure 2. Conservation targets and land management in the vicinity of Patagonia

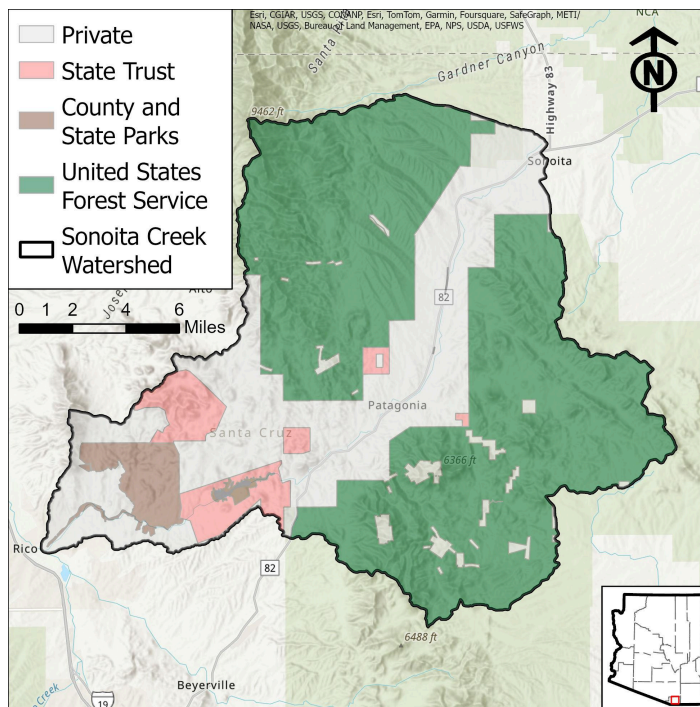


Figure 3. Land ownership in Sonoita Creek Watershed

## E.1.2. Criteria B – Developing Strategies to Address Critical Watershed Needs

### E.1.2.1. Sub-criterion No. B1. Critical Watershed Needs or Issues

On May 29, 2024, the Proposal Team hosted the first of two stakeholder workshops to elicit feedback on a draft mission statement, including watershed values, issues, and methods/solutions. Using a virtual whiteboard, stakeholders participated in a brainstorming session and generated 46 watershed issues. The Proposal Team then synthesized ideas into 14 overarching themes, which became choices in the “local issues” survey question.

The stakeholder survey was then distributed widely and generated 134 total responses: 79 respondents live in the watershed, 42 work in the watershed, and 67 visit the watershed for recreation; some respondents selected multiple relationships to the watershed. Results of the “local issues” survey question are provided in Figure 4.

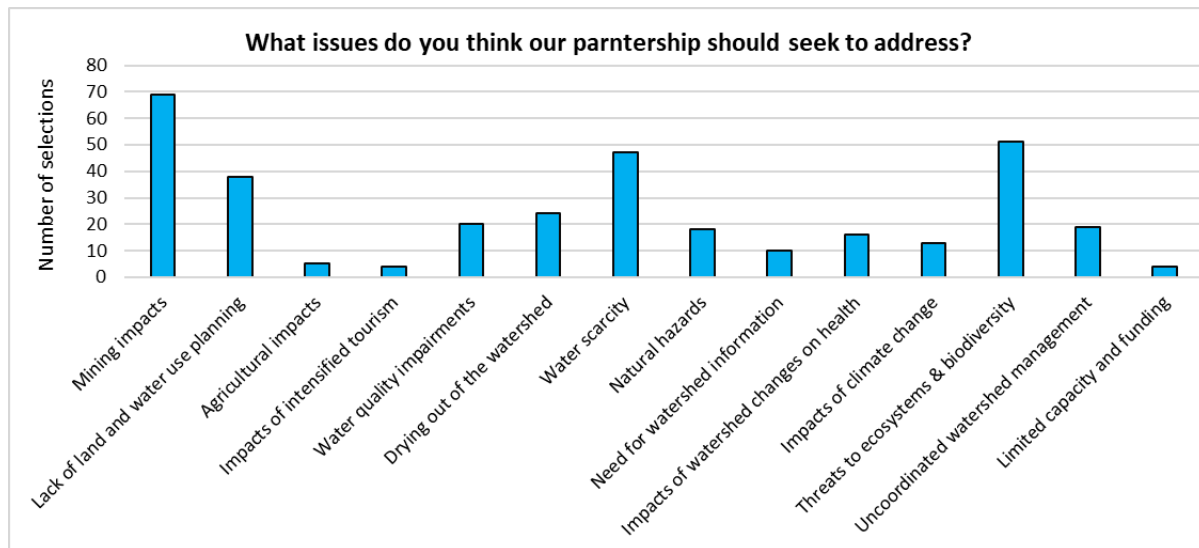


Figure 4: Results of “local issues” survey question (July 2024).

The top five watershed issues identified in the survey are:

- Mining impacts (69 votes)
- Degraded ecosystems and threats to biodiversity (51 votes)
- Water scarcity and increasing water demand (47 votes)
- Lack of integrated land and water use planning (38 votes)
- Drying out of the watershed (24 votes)

Survey participants were additionally given the opportunity to select “other” as an option in all survey questions and input personalized answers. These answers will be included in any resources compiled in the stakeholder input gathering portions of funded work.

The survey revealed that the highest concern among stakeholders was the impact of mining on the watershed. This underscores the importance of including mining developers and operators in

the watershed planning group, which aims to bring together a broad range of stakeholders. The group is designed to be a safe space for discussing mining developments, their current and potential future impacts, and possible mitigation strategies. Through these discussions, the group can work towards developing a consensus on recommendations for the watershed, which, while not legally binding, can significantly inform Federal and State regulatory processes by providing a well-rounded understanding of local perspectives.

Mining activities have diverse impacts on watersheds, including effects on supporting land and habitat, increased traffic, air pollution, and changes to water quality and quantity. These impacts are not only ongoing but also include the legacy of historic mining practices. In the Sonoita Creek Watershed, the primary current mining activity is the South32 Hermosa mine. This project is currently in the NEPA public review process under FAST-41 program, which aims to streamline the federal permitting process and enhance transparency for large infrastructure projects that facilitate development in areas deemed a federal priority. The Hermosa mine is a proposed zinc and manganese operation, which are considered critical minerals by the U.S. Geological Survey, and the federal government has prioritized their extraction under the Defense Production Act due to their importance in the large-capacity battery supply chain. The operation, located in the Patagonia Mountains adjacent to the Town of Patagonia, will involve both surface and subsurface impacts on mostly federal (US Forest Service) land and may also significantly impact groundwater resources in the Patagonia Mountains and throughout the watershed due to its large-scale dewatering plans (USDOI 2024).

Given the federal support for the South32 Hermosa mine and the recognition of zinc and manganese as critical minerals for energy transition, there is even greater reason to include mining representatives in the watershed planning process. South32 representatives have been engaged in pre-proposal stakeholder activities and have provided a letter of support for the Watershed Group. With NEPA processes expected to conclude and operations to commence in 2026, consensus-based mitigative watershed planning and restoration is a pressing need.

Historical mining and its ongoing impacts in the watershed was a top concern in the 2020 *Sonoita Creek Watershed Conservation Plan*, before the Hermosa Mine became a larger issue. The Patagonia mountains and throughout the Sonoita Creek Watershed were popular areas for historic minerals exploration and mining. Historical mines often have legacy issues including human and wildlife safety threats from open mine shafts and impacts to ecosystems and water quality from waste rock piles and continued drainage from mines.

In addition to mining, the below critical watershed conservation issues were identified in the collaborative 2020 *Sonoita Creek Watershed Conservation Plan* and echo those expressed by stakeholders in the 2024 survey.

#### *Altered flood regime*

Multiple factors, including historical alterations to the channel and floodplain of Sonoita Creek since the 1880s, have altered the natural flood regime, leading to more frequent and destructive



floods. Changes such as channel straightening, the construction of berms, and other infrastructure have restricted the natural flow of floods, preventing overbanking and meandering. This has resulted in stream entrenchment, which, along with groundwater depletion, affects water table height, soil moisture, and sediment deposition, thereby limiting the recruitment of native vegetation like cottonwood, willow, sacaton, and mesquite. The entrenchment also reduces habitat diversity and increases both the duration and severity of floods, leading to more scouring. Additionally, climate change is predicted to cause more extreme precipitation events, with heavy rainfall becoming more frequent even as overall precipitation declines in the Southwest. Studies have documented increased rainfall intensities, such as those in the San Pedro River basin, since the mid-1970s, and climate change has also contributed to the rise in catastrophic wildfires. These fires often lead to large flash floods that cause significant erosion and damage to both human communities and riparian ecosystems

#### *Increased erosion and sedimentation*

Historic overgrazing by livestock in the Sonoita Creek Watershed has had lasting effects on watershed conditions and the flood regime. Watershed quality is largely influenced by the condition of upland semi-desert grasslands. Increased perennial grass and light shrub cover help "anchor" the landscape, allowing for greater infiltration of precipitation, less surface runoff, reduced flood peaks, and improved water quality through reduced sedimentation. The composition and structure of semi-desert grasslands have changed significantly over the past century due to fire suppression and intense cattle grazing which leaves the watershed at greater risk for erosion and sedimentation (Bodner & Robles 2017). As noted above, large fires often lead to flash floods, which can cause severe erosion of stream channels and deposit large amounts of sediment elsewhere. In Sonoita Creek, there is a risk that stream segments with perennial flow could be buried by sediment, destroying habitats for fish and other aquatic species.

#### *Competition by non-native species*

The introduction and spread of non-native species, both plants and animals, throughout the watershed can significantly reduce biodiversity and degrade habitat quality for native species. Non-native plants, often benefiting from competitive advantages exacerbated by climate change, can outcompete native flora, leading to decreased species diversity and less suitable habitat and forage for native fauna. Similarly, non-native animals pose substantial threats to local ecosystems. Non-native fish such as mosquitofish, bass, green sunfish, and red shiner, which migrate upstream from Patagonia Lake or enter from upstream springs and stock tanks, are known predators and competitors of native fish, significantly impacting their survival. Non-native crayfish also contribute to biodiversity loss by feeding on a wide range of native species, including fish, tadpoles, young snakes, and aquatic invertebrates. Additionally, introduced bullfrogs have been associated with the decline of native amphibians and some reptiles, such as Mexican garter snakes and Chiricahua leopard frogs. Overall, the presence of non-native species disrupts the natural balance, leading to decreased biodiversity and less resilient habitats.

#### *Reduced groundwater levels and spring flow*

The flow of Sonoita Creek and the health of its riparian corridor are heavily dependent on groundwater supplies. Increased groundwater pumping in the Town of Patagonia, driven by population growth or other factors, could quickly reduce downstream flow. Wells throughout the watershed, including those higher up along Sonoita Creek and in tributary canyons, also draw from the creek's groundwater, though their impact on perennial flow would be slower. Disparities between aquifer recharge and groundwater pumping could lower groundwater tables, adversely affecting both human communities and ecosystems that rely on shallow groundwater. Additionally, long-term drought, climate change, and land use changes in higher-elevation recharge zones pose ongoing threats to groundwater levels. The Hermosa Mine's dewatering activities could further disrupt groundwater availability, impacting the Town of Patagonia, which relies entirely on groundwater. The watershed contains numerous springs, with the largest, Monkey Spring, having been significantly altered to divert water for agricultural and other uses, leading to substantial ecological impacts such as species and habitat loss. Over eighty springs in the Patagonia Mountains are potentially at risk due to the dewatering activities of the South32 Hermosa Mine.

#### *Impaired water quality*

The water quality in Sonoita Creek is affected by materials from throughout its watershed. This includes heavy metals from historic mining waste and naturally fractured bedrock. Arizona Department of Environmental Quality (ADEQ) has rated Sonoita Creek as impaired due to high zinc and low dissolved oxygen level. However, in draft listings for 2024, Sonoita Creek was removed from the impaired list while Patagonia Lake was added. Tributaries of Sonoita Creek including Alum Gulch, Three R Canyon, and Harshaw Creek also have impairments and non-attainments due to high metals and acidity (ADEQ 2024). A full list of impairments in the Watershed is available in Appendix 1. The complex network of tailings, tunnels, and rock fractures makes predicting and remediating this type of contamination difficult. There is also potential for additional pollution from the Hermosa Mine, currently under development. Figure 4 displays current watercourse impairments and Areas of concern for water quality including historic and current mine sites.

Impaired water quality poses a threat to human and ecological communities on both chronic and episodic time scales. Many wells in the area have tested above drinking water standards for cadmium, copper, arsenic, fluoride, and lead (ADWR 2009). Existing pollution in Sonoita Creek at current levels appears to be a chronic condition that might impair aquatic life but allow it to persist. However, the potential for a major toxic spill or greater inflows from an existing site or from future mining/industrial activity remain active threats.

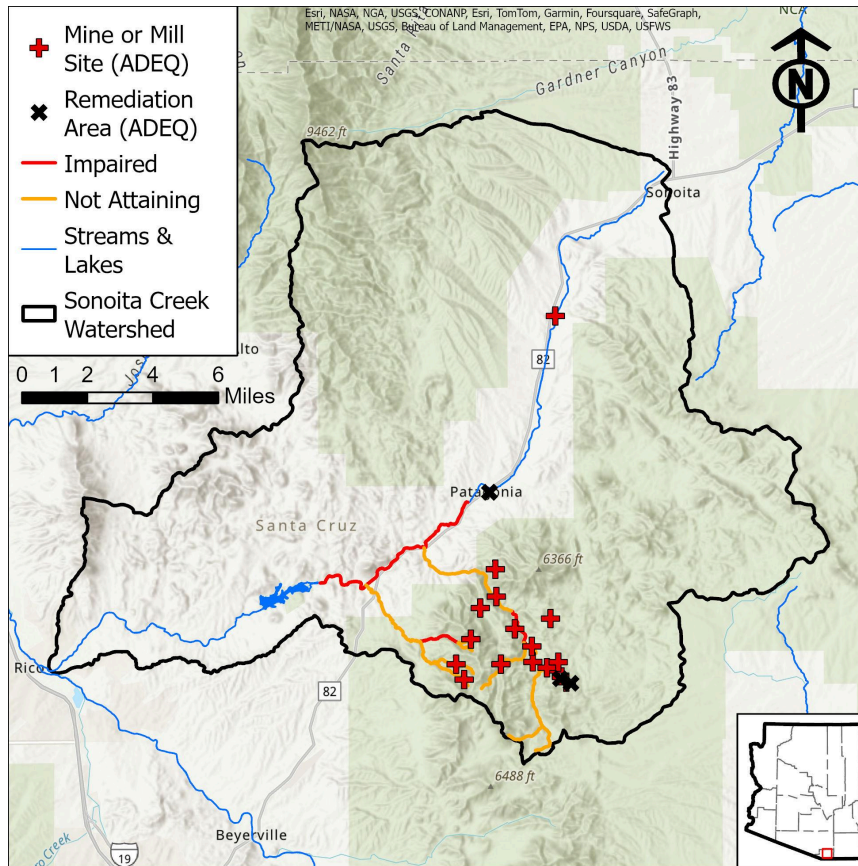


Figure 4. Areas of Concern in Sonoita Creek Watershed.

#### **E.1.2.2. Sub-criterion No. B2. Project Benefits**

The variety of issues identified in the stakeholder survey and in the *2020 Sonoita Creek Watershed Conservation Plan* will benefit from the structured, collaborative, and science-based planning activities proposed in this scope. With Reclamation support, anticipated benefits include the following:

##### Direction, structure, and capacity

As discussed, and as demonstrated in the stakeholder survey, there are a number of stakeholders actively engaged in the watershed and a variety of conservation partnerships and planning initiatives have developed significantly in recent years (Tables 1 & 2). While much has been learned from these efforts and a strong and capable network has grown over time, watershed stakeholders have largely lacked the direction and capacity to mobilize past planning efforts (Figure 4). The activities proposed in this scope will create an organizational structure, guided by a locally supported mission and vision, where stakeholders can meet to strategically develop and later implement restoration projects. And importantly, grant funding will support staff and partner capacity to convene the group, maintain momentum on projects, thoroughly engage

locals and other regional experts, and help support the group in remaining accountable to its important goals.

#### Neutral, outcome-focused platform for collaboration and community education

From climate impacts to habitat degradation to industrial mining, the Sonoita Creek Watershed faces pressing threats - and as indicated in the “local values” survey question, potential mining impacts are a high priority by many. While it is understood that participating stakeholders have different and conflicting viewpoints on mining and other local issues - there is widespread recognition that a neutral space for discussion and collaboration on win-win watershed restoration opportunities is needed. As proposed in this scope, stakeholder input and consensus will inform the organizational structure of the Watershed Group including by-laws and committee participation. Attention will be given to ensure that all voices are represented and that watershed restoration goals and activities are driven by science and shared goals.

The collaboration networks and web-based platforms established through this effort will also serve as a foundation for community education and lasting engagement on watershed issues.

#### Watershed restoration plan and menu of conceptual projects with broad-based support

The watershed restoration activities proposed in this scope will benefit from the group having a formalized organizational structure, the capacity to remain accountable to goals, and a diverse and collaborative platform for project planning.

First, the documentation of existing watershed plans, resources, and monitoring data, and the subsequent gap analysis will support the time and effort of all stakeholders by ensuring that efforts are not duplicative of past work but are instead highlighting lessons learned and advancing any aligned work. Additionally, this step will contribute to project planning as reviewing past work is bound to generate a broader variety of restoration concepts than those currently circulating with stakeholders today.

As proposed, the watershed restoration plan and preliminary list of conceptual watershed restoration projects will be reflective of the gap analysis and developed based on input from watershed group members, regional practitioners and subject matter experts, agency representatives, and stakeholders. The Sonoita Creek Watershed is fortunate to have an extensive and diverse array of stakeholders able to contribute both technical expertise and local knowledge to the development of a holistic restoration plan and projects list. Another benefit of this diverse engagement in project planning is that organizations, particularly agencies, are engaged early and better positioned to later enable project implementation, including related access, permitting, and funding needs. Further, the proposed map-based platform illustrating projects and water monitoring locations is intended to be an interactive and compelling way to stimulate information sharing and collaborative planning.

Though specific watershed restoration projects will be developed throughout the grant period, projects are expected to align with the “local solutions” and “actions” identified as priorities in the pre-proposal stakeholder engagement survey, as illustrated in Figures 5 and 6. Projects are

expected to benefit a variety of watershed issues including those identified in the *2020 Sonoita Creek Watershed Conservation Plan*: altered flood regime, increased erosion and sedimentation, competition by non-native plants, increased predation on fish and birds, reduced groundwater levels, diversion of spring flow, impaired water quality, and persistence of historic degradation.

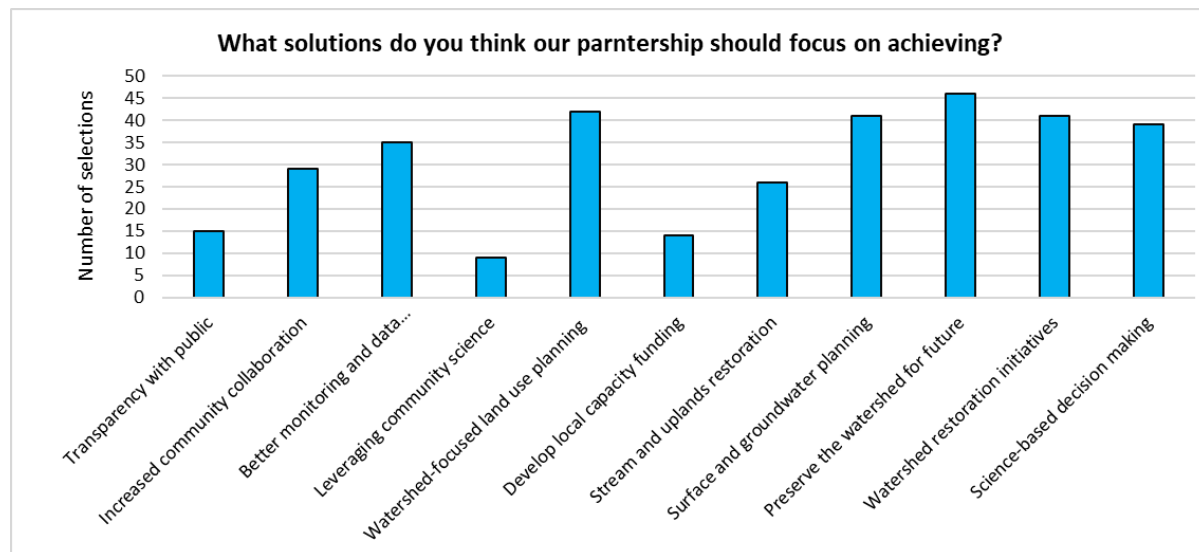


Figure 5. Stakeholder survey results for partnership solution focus preferences.

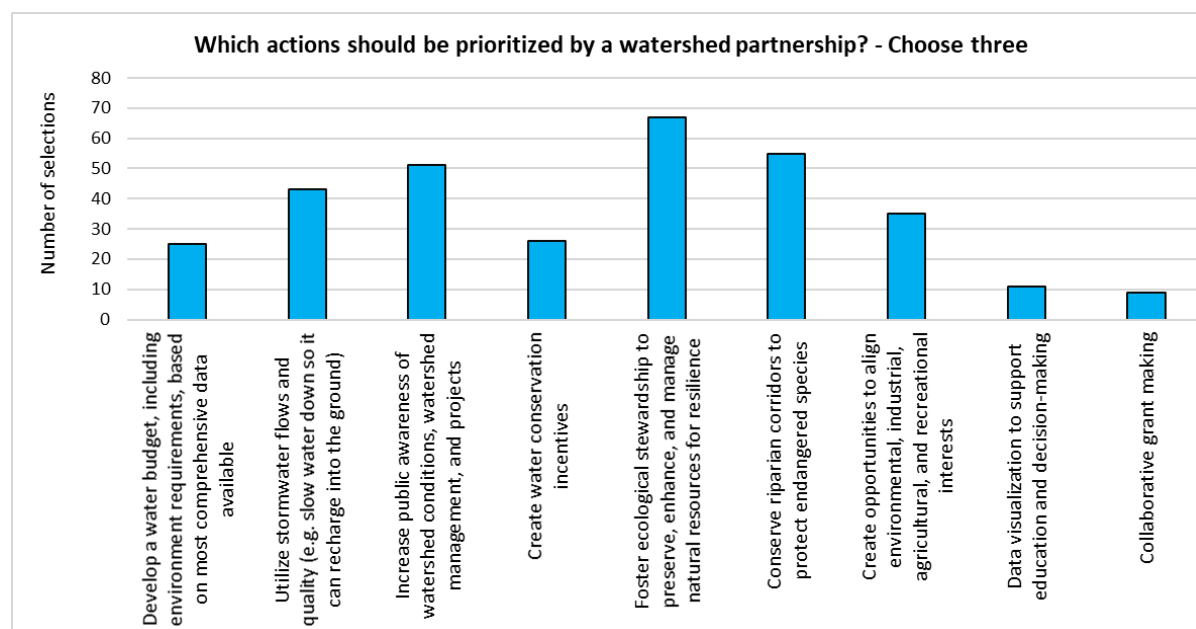


Figure 6. Stakeholder survey results for partnership action preferences (July 2024).

### E.1.3. Evaluation Criterion C—Readiness to Proceed

#### *Preliminary project schedule*

The project will be divided into two primary phases: Task A activities to establish a Watershed Group and Task B activities to create a Sonoita Creek Watershed restoration plan. A series of stakeholder workshops will occur throughout the grant period and seven of those (two in Phase 1, five in Phase 2), detailed below, will mark major project milestones. Workshops, coordinated by TA and BRN, will be organized as part of funded work by the Coordinator alongside Core Collaborators and Proposal Team members while the workshops will be facilitated by a neutral third party facilitator.

Phase 1 - Watershed Group development - Upon award, the Proposal Team (TA (Coordinator), BRN, FoSC, SIA, TNC, Town of Patagonia) will host a kick-off meeting where they will develop a strategy to begin identifying Steering Committee members and will begin planning the first “Notice of Award” stakeholder meeting. The Steering Committee, once identified, will meet on a monthly basis to complete project tasks. Those in Phase 1 will include conducting meetings with various area Watershed Group leadership to gather input, drafting and approval of committee structure and rules, development of subcommittees, and gathering community input on watershed and water monitoring goals.

Proposal team kickoff meeting - organized by Coordinator

- Review project requirements, timeline, scope, and roles moving forward
- Plan stakeholder workshop 1 including date, outreach strategy, agenda, and roles
- Identify or make plan to select facilitator for stakeholder workshops
- Begin stakeholder mapping process

1. Stakeholder workshop - Notice of award

- Inform stakeholders about receipt of funds and review project goals, scope, and timeline of activities
- Gather stakeholder input on individuals who should be involved
- Finalize mission statement
- Gather input on role and composition of the Steering Committee

2. Stakeholder workshop - Steering Committee approval

- Approve Steering Committee membership
- Review and approve drafted steering committee products including group name, articles of incorporation, bylaws, and business practices
- Approve Steering Committee structure and gather input on potential subcommittees including Monitoring, Restoration Planning, and Outreach and Education subcommittees
- Provide input on and approve outreach and engagement plan

Phase 2 - Watershed Plan Development - The Steering and/or the Restoration Planning Committee will focus on writing and developing a watershed plan alongside stakeholders. This process will include:

- Initial approval of plan outline, timeline, and description of final products

- Engaging with subject matter experts, community stakeholders, agency partners, and regional practitioners
  - Performance of a gap analysis in expertise, geographic focus, and baseline data
  - Drafting and later approval of decision matrix for restoration projects
  - Ranking of projects
1. Stakeholder workshop - Watershed restoration plan goals
    - Share list of ongoing efforts and existing resources to ensure it is comprehensive
    - Gather input on watershed restoration plan goals
    - Gather input on water monitoring goals
    - Approve additional committee structure and initial makeup
  2. Stakeholder workshop - Project solicitation and goals
    - Develop list of goals for restoration projects
    - Approve drafted decision matrix for restoration projects
    - Gather input on possible restoration projects and project areas
    - Announce the beginning of project solicitation period
  3. Stakeholder workshop - Project presentation and ranking
    - Introduce and gather feedback on highest ranking 7-10 projects identified by Planning Committee
    - Announce public comment period following workshop
  4. Stakeholder workshop - Top projects presentation
    - Provide summary of public comment period results
    - Present highest ranked 4-6 projects identified by the planning committee with decision matrix alongside public input
    - Gather last feedback on watershed plan
  5. Stakeholder workshop - Final Plan Presentation
    - Present final plan to stakeholders including final conceptual project list
    - Introduce public resources including website, map features, monitoring database, and projects database

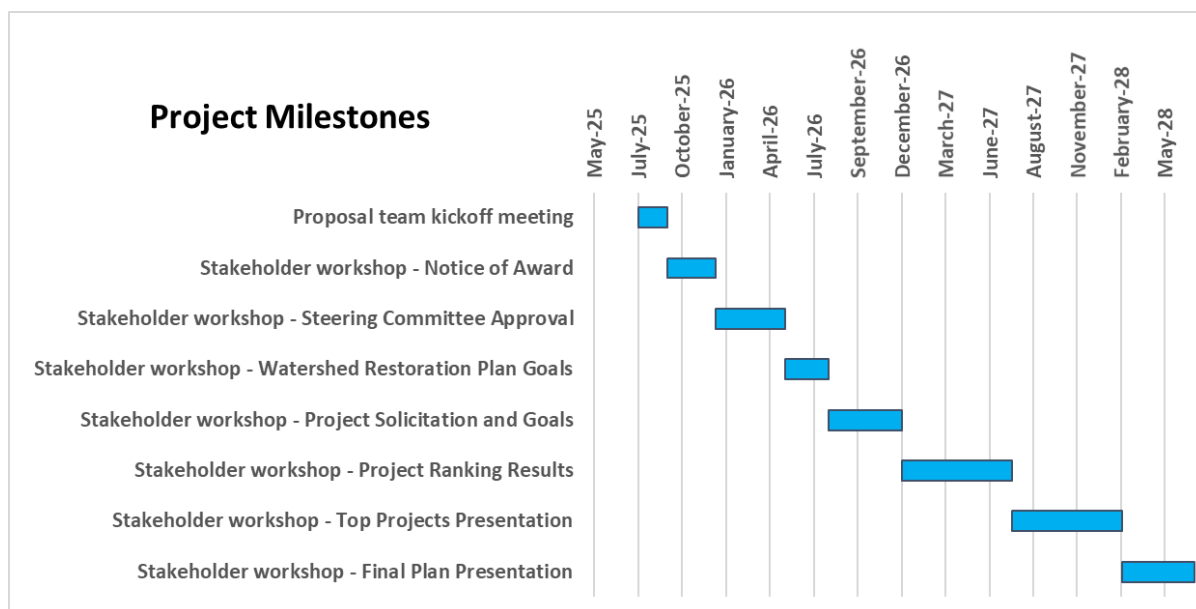


Figure 7. Project milestones schedule

### Budget

The budget and budget narrative, as proposed (attached via grants.gov), confirm that these deliverables can be accomplished within the proposed time frame, with reasonable explanation for costs.

## E.1.4. Evaluation Criterion D—Presidential and Department of the Interior Priorities

### E.1.4.1. Climate Change (EO 14008)

The upper Santa Cruz River Watershed, including Sonoita Creek Watershed, is expected to see the effects of climate change more severely than other regions of the country, including larger temperature increases, greater variability of precipitation events, reduced overall precipitation, and increased risk of wildfire. Climate change threatens not only water supply, biodiversity, and ecosystem health but also human health and wellbeing in the watershed. The proposed watershed planning group will make consensus-based decisions to mitigate effects of climate change through sound water and land management while strengthening local resiliency to outlined threats.

### E.1.4.2. Benefits to Disadvantaged, Underserved, and Tribal Communities

#### Disadvantaged and Underserved Communities (EO 13985)

The Sonoita Creek Watershed includes a disadvantaged community identified in the Climate and Economic Justice Screening tool, census tract 04023966104. Dimensions of burden:

- Climate Change:



- Expected agricultural loss rate: economic loss to agricultural value resulting from natural hazards each year: 98th percentile
- Projected wildfire risk: projected risk to properties from wildfire from fire fuels, weather, humans, and fire movements in 30 years: 90th percentile
- Water and wastewater:
  - Wastewater discharge: modeled toxic concentrations at parts of streams within 500 meters: 94th percentile
- and Low Income for both:
  - People in households where income is less than or equal to twice the federal poverty level, not including students enrolled in higher educations

This community is located at the downstream end of the watershed meaning that flood control, sediment control, and water quality projects undertaken as part of, or as a result of plans made in this project, could have a larger positive impact on this area. Restoration efforts, including invasive species management, will help mitigate wildfire risks by reducing fuel loads and burn intensity, and by countering the effects of aridification. By collaborating with the Natural Resource Conservation District (NRCDD) and other stakeholders, the Group will prioritize projects that directly address the high agricultural loss rate and improve water management throughout the watershed.

**Tribal Communities** (*President's memorandum, Tribal Consultation and Strengthening Nation-to-Nation Relationships*)

This project does not directly serve or benefit a Tribe through public health and safety, water quality, new water supplies, economic growth opportunities, or improving water management. It does not support current Reclamation activity with a Tribe.

## References

ADEQ (Arizona Department of Environmental Quality). (2024). Approved 2022 impairments and Draft 2024 impairments. In Surface Water Quality Improvement Section.

ADWR (Arizona Department of Water Resources). (2009). Water Quality Division: Safe Drinking Water.

Bodner, G. S., & Robles, M. D. (2017). Enduring a decade of drought: Patterns and drivers of vegetation change in a semi-arid grassland. *Journal of Arid Environments*, 136, 1–14.

NextGen Engineering, N. (2019, September 16). Sonoita Creek Watershed: A Roadmap to Water Quality. ArcGIS StoryMaps. Retrieved August 28, 2024, from <https://storymaps.arcgis.com/stories/bca939c4b0c44f8bb939159a28f1515b>

US Department of the Interior (DOI). South32 Hermosa Critical Minerals Project. (n.d.). Federal Infrastructure Projects Permitting Dashboard. 2024.

### 1 Project Budget

Personnel	Unit Quantity Y1 (Type)	Rate per Unit	Y1 Total	Unit Qty Y2	Y2 Total	Unit Qty Y3	Y3 Total	TOTAL Reclamation Investment
TA - Watershed Program Manager	740 (hours)	\$27.54	\$20,379.60	640	\$17,625.60	640	\$17,625.60	\$55,630.80
TA - WPM Fringe	0.34 (percent)		\$6,929.06		\$5,992.70		\$5,992.70	\$18,914.47
TA - Sonoita Creek Watershed Specialist	400 (hours)	\$23.05	\$9,220.00	400	\$9,220.00	400	\$9,220.00	\$27,660.00
TA - SCWS Fringe	0.34 (percent)		\$3,134.80		\$3,134.80		\$3,134.80	\$9,404.40
TA - Executive Director	60 (hours)	\$58.17	\$3,490.20	60	\$3,490.20	60	\$3,490.20	\$10,470.60
TA - ED Fringe	0.34 (percent)		\$1,186.67		\$1,186.67		\$1,186.67	\$3,560.00
	<b>Total Personnel</b>		<b>\$44,340.33</b>		<b>\$40,649.97</b>		<b>\$40,649.97</b>	<b>\$125,640.28</b>
<b>Contractual</b>								
Facilitation and Data analysis (Contract)			\$12,000.00		\$12,000.00		\$12,000.00	\$36,000.00
Monitoring (Subaward: SIA)			\$10,000.00		\$10,000.00		\$10,000.00	\$30,000.00
Subaward: BRN (Steering Committee,			\$22,500.00		\$22,500.00		\$22,500.00	\$67,500.00

Project Evaluation, Education, Planning)								
	<b>Total Contracted Services</b>		<b>\$44,500.00</b>		<b>\$44,500.00</b>		<b>\$44,500.00</b>	
<b>Travel</b>								
Mileage to and from meetings, monitoring sites	2500 miles per year	.67 per mile	\$1,675		\$1,675		\$1,675	\$5,025
<b>Supplies/ Materials</b>								
Meeting supplies (print costs, refreshments), monitoring supplies			\$2,000		\$2,000		\$2,000	\$6,000
<b>Total Direct Costs</b>			<b>\$92,515.33</b>		<b>\$88,824.97</b>		<b>\$88,824.97</b>	
<b>Indirect Costs</b>								
<i>de minimis</i> 10% rate	0.1		\$9,251.53		\$8,882.50		\$8,882.50	
<b>TOTAL</b>			<b>\$101,766.87</b>		<b>\$97,707.47</b>		<b>\$97,707.47</b>	<b>\$297,181.80</b>

<b>FUNDING SOURCES</b>	<b>AMOUNT</b>
<b>Non-Federal Entities</b>	
1. n/a	\$0
<b>Non-Federal Subtotal</b>	\$0
<b>REQUESTED RECLAMATION FUNDING</b>	<b>\$297181.80</b>

### Budget Narrative

**As a founding member, Tucson Audubon (TA) will lead this proposed project on behalf of the Sonoita Creek Watershed Partnership.** This budget includes labor allocated for TA's staff, along with contractual labor for other individuals who will be supporting this effort through our partner organizations (sub awardees Borderlands Restoration Network and Sky Island Alliance), and contracted consultants assisting with facilitation and data analysis. The effort proposed here will result in the development of a Sonoita Creek Watershed Plan, as described in the Technical Proposal.

If TA is awarded funding through this opportunity, TA staff will follow its adopted procurement protocols and gather estimates from no less than three firms for facilitation. Internal controls are in place to ensure sound fiscal operations and compliance with federal reporting guidelines throughout the grant period.

#### a. Personnel

Tucson Audubon Watershed Program Manager, Cally Wilken

Cally will serve as the Watershed Group Coordinator throughout the 3-year grant period in the performance of all tasks for each budget year as described below. The hourly rate represented is the actual labor rate, consistently applied to Federal and non-Federal activities.

**Total: \$55,630.80 (740 x 27.54 Y1 = \$20,379.60, 640 x 27.54 Y2 = \$17,625.60, 640 x 27.54 Y3 = \$17,625.60)**

Tucson Audubon Sonoita Creek Watershed Specialist, Howard Buchanan

Howard Buchanan will serve in the role of Sonoita Creek Watershed Specialist, assisting with monitoring coordination, data analysis, public engagement, and project management. The hourly rate represented is the actual labor rate, consistently applied to Federal and non-Federal activities.

**Total: \$27,660 (400 x \$23.05 Y1 = \$9,220.00, 400 x \$23.05 Y2 = \$9,220.00, 400 x \$23.05 Y3 = \$9,220.00)**

Tucson Audubon Executive Director, Melissa Fratello

Melissa Fratello will attend stakeholder meetings and planning sessions throughout the grant period, and work in an advisory role. The hourly rate represented is the actual labor rate, consistently applied to Federal and non-Federal activities.

**Total: \$10,470.60 (60 x \$58.17 Y1 = \$3,490.20, 60 x \$58.17 Y2 = \$3,490.20, 60 x \$58.17 Y3 = \$3,490.20)**

#### **b. Fringe**

**Hourly amount (less than 35% of compensation):** Fringe benefit rates reflected below are based on hours for each staff member and include benefits and required taxes paid for each position. Fringe rates have been computed at \$9.36 per hour for Watershed Program Manager, \$7.84 per hour for the Sonoita Creek Watershed Specialist, and \$19.78 per hour for the Executive Director, and are applied to the 2,020, 1200, and 180 hour estimates for each position, respectively.

#### **c. Travel**

**The budget includes \$5,025 in travel costs** for the Watershed Program Manager and/or Sonoita Creek Watershed Specialist to travel to stakeholder meetings in the watershed on a bimonthly basis at minimum throughout the grant period. The estimate is based on travel costs for meetings with an estimated 100 miles roundtrip for each meeting, from Tucson to the Town of Patagonia and back (2500 mi x 0.67/mi = \$570).

#### **d. Equipment**

**N/A**

#### **e. Supplies**

**The budget includes \$6,000 (\$2,000 per year) for supplies and materials**, including print materials and refreshments for monthly and quarterly stakeholder meetings, and basic supplies for partner and volunteer Sonoita Creek Watershed monitoring efforts, including water quality sampling supplies.

#### **f. Contractual**

##### **1. Contract Narrative**

Consultants will be hired to assist with facilitation of quarterly meetings, presentations, and planning activities. We have conducted a preliminary price analysis and found average fees for facilitation consultants in the area are \$120 per hour. The estimate would provide 100 hours of facilitation work per year focused on the development of the watershed plan. Our procurement policies require that we obtain at least three quotes for services and the selection will be based on best value (qualifications and price).

##### **2. Subaward Narrative**

Subaward in the amount of \$67,500 (\$22,500 per year) will be made to Borderlands Restoration Network, a Town of Patagonia-based non-profit to conduct outreach, assist in planning activities, data analysis and project evaluation design, facilitate and host stakeholder meetings, and provide educational programs related to the watershed planning effort. The subaward includes \$48,196.69 for personnel salary and \$19,279.56 for fringe benefits. Salary costs are based on the compensation rate for the subrecipient Watershed Program Director (\$32.05/hr. x 641 hours), Native Plant Program Director (\$33.92/hr. x 642 hours), and Executive Director (\$58.76/hr x 100 hrs ) and a fringe rate of 40%. (total is \$67,476.25).

Subaward in the amount of \$10,000 per year will be made to Sky Island Alliance to support their continued spring monitoring efforts throughout the Sonoita Creek Watershed, volunteer management, outreach, and staff participation in monthly and quarterly pre-planning and planning meetings. The subaward includes \$6,833 for personnel salary and \$3,167 for fringe benefits per year. Salary costs are based on the compensation rate for the subrecipient Habitat Conservation Manager (\$42.28/hr x 236.5 hrs) and a fringe rate of 32%.

#### **g. Construction**

None of the proposed tasks require construction or breaking of ground.

**h. Other**

N/A

**i. Indirect Costs**

TA does not have a current Federal negotiated indirect cost rate agreement, so indirect costs were calculated using the 10% de minimis rate as detailed below.

Personnel \$93,761.40

Fringe Benefits \$31,878.88

Travel \$5,025

Equipment NA

Supplies \$6,000

Contractual \$133,500

Construction NA

Other Direct Costs NA

Total Indirect Costs  $\$270,165.28 \times 10\% = \mathbf{\$27,016.53}$ **Total Proposed Budget Amount: 297,181.80**

## 2 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.*

The proposed project serves to develop a Watershed Group and author a watershed restoration plan, so there should be no physical impact from these efforts.

*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?*

There are listed endangered species and critical habitat in the plan boundary, but they will not be affected by the planning and monitoring efforts proposed by this project.

*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.*

The proposed project serves to develop a watershed group and author a watershed restoration plan, so there should be no impact from these efforts.

*When was the water delivery system constructed?*

Not applicable, the proposed project does not modify a water delivery system.

*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.*

The planning and monitoring efforts will not result in the modification of or effects to any irrigation systems.

*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.*

Historic buildings in the Sonoita Creek Watershed include Cady Hall, the James Finley House, and The Little Outfit Schoolhouse. The planning and monitoring efforts proposed by this project will not impact any historical building structures, or features.



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

There are archeological sites in the plan boundary. The planning and monitoring efforts proposed by this project will not impact archeological sites.

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

The proposed project serves to develop a Watershed Group and author a watershed restoration plan, so there should be no impact from these efforts.

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

The proposed project serves to develop a Watershed Group and author a watershed restoration plan, so there should be no impact from these efforts.

*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?*

The proposed project serves to develop a Watershed Group and author a watershed restoration plan, so there should be no impact from these efforts.

### **3 Required Permits or Approvals**

There are no permits or approvals necessary for the proposed work.

### **4 Overlap or Duplication of Effort Statement**

This proposal does not duplicate any proposal or project that has been or will be submitted for funding consideration to any other funding sources, federal or non-federal.

### **5 Conflict of Interest Disclosure Statement**

2 CFR §1402.112 – Financial Assistance Interior Regulation: No actual or potential conflict of interest exists at the time of application. All non-federal entities and employees involved in this proposed project will take appropriate steps to avoid conflict of interest.

### **6 Uniform Audit Reporting Statement**

Tucson Audubon, State of Arizona, EIN # 86-6053779

Tucson Audubon is required to submit a Single Audit report for Fiscal Year 2023, which is currently in progress and expected to be submitted through the Federal Audit Clearinghouse Internet Data System by October 31, 2024.

**7 SF-LL: Disclosure of Lobbying Activities (If Applicable)**

Not Applicable.

**8 Letters of Support**

Included as attachment in Appendix 2. Letters of Support



**BORDERLANDS  
RESTORATION  
NETWORK**

**REBUILD.  
RESTORE.  
RECONNECT.**

PO Box 121  
Patagonia, AZ 85624  
p: (520) 216-4148  
e: [info@borderlandsrestoration.org](mailto:info@borderlandsrestoration.org)  
[www.borderlandsrestoration.org](http://www.borderlandsrestoration.org)

August 6<sup>th</sup>, 2024

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

Dear Ms. Graber,

Borderlands Restoration Network is thrilled to provide this letter of support for the establishment of a watershed restoration partnership in the Sonoita Creek watershed of southern Arizona. This partnership is deeply aligned with our mission to protect critical wildlife corridors, restore habitats for plants and wildlife, and reconnect our border communities to the land through shared learning. The formation of this group will amplify our efforts by fostering collaboration and taking actionable steps to enhance community well-being and safeguard the health of our precious watershed.

Patagonia is not just where we work—it's where we live, grow, and invest our hearts. Our offices, community education center, farm, nursery, and seed barn operations are all rooted here. Nearly all our staff are long-time residents or have grown up in Patagonia, making us integral members of this community. We are proud stewards of the Borderlands Wildlife Preserve, a critical component of the Sonoita Creek wildlife corridor, which relies on the vitality of the Sonoita Creek watershed. Our Watershed Restoration and Native Plant teams, with the invaluable help of volunteers and local community members, have installed hundreds of erosion control structures, conducted vegetation treatments, and implemented native seeding initiatives to rejuvenate this critical watershed.

A watershed partnership in the Sonoita Creek area is not just beneficial—it is essential. Such a partnership will bring together many diverse perspectives and expertise, creating a unified force to tackle watershed-wide issues. Through collaboration, the partnership can build a shared understanding and develop the multi-pronged management strategies needed to address the vulnerabilities and enhance the resilience of our natural resources and water systems. This collective approach is vital for effective watershed management.

This partnership will unite non-profit organizations, local governments, state and federal agencies, industrial leaders, and community members, paving the way for watershed-scale conservation and sustainable water management. By engaging diverse stakeholders in exploring water management solutions, we can increase commitment and achieve shared goals. Establishing a neutral forum for open dialogue will improve trust and reduce potential conflicts, fostering a cooperative spirit essential for regional success.



**BORDERLANDS  
RESTORATION  
NETWORK**

**REBUILD.  
RESTORE.  
RECONNECT.**

PO Box 121  
Patagonia, AZ 85624  
p: (520) 216-4148  
e: [info@borderlandsrestoration.org](mailto:info@borderlandsrestoration.org)  
[www.borderlandsrestoration.org](http://www.borderlandsrestoration.org)

The Sonoita Creek watershed faces numerous threats, including the escalating impacts of climate change, development pressures, the risk of over-extraction of water, habitat fragmentation, pollution, invasive species, and erosion and sedimentation. Addressing these challenges requires coordinated efforts and comprehensive strategies that only a diverse and collaborative partnership can provide. Additionally, the well-being of this land and its people is deeply tied to the health of the watershed, making these collaborative efforts even more crucial.

Furthermore, we are developing the Borderlands Earth Care Center as an educational hub to deepen our community's connection to the land. This center will serve as a focal point for learning and collaboration, perfectly complementing the watershed partnership by providing a space for education, outreach, and hands-on involvement in restoration efforts.

Borderland Restoration Network is further committed to supporting the watershed partnership by:

- **Providing Expertise:** Sharing our knowledge and experience in watershed management, habitat restoration, erosion control, and native vegetation to guide the partnership's initiatives.
- **Offering Resources:** Utilizing our facilities, such as the Borderlands Earth Care Center, as venues for meetings, workshops, and educational activities.
- **Engaging the Community:** Leveraging our strong community ties to mobilize local volunteers and stakeholders, fostering a collaborative environment for all involved.
- **Promoting Best Practices:** Advocating for sustainable and science-based management practices to ensure the long-term health and resilience of the watershed.

Borderlands Restoration Network is passionate about working closely with our community partners to ensure the success of this watershed partnership. Our region urgently needs a cohesive group that can bring together all interests and operate on a watershed-wide basis. In cooperation with local stakeholders, the proposed partnership will create tangible benefits for our unique part of Arizona, and we are wholeheartedly enthusiastic about this initiative. If you have any questions or require additional information, please don't hesitate to reach out to me at [rsierracorona@borderlandsrestoration.org](mailto:rsierracorona@borderlandsrestoration.org) or (510) 560-1565.

Sincerely,

Dr. Rodrigo Sierra Corona  
Executive Director



15 July 2024

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

Dear Ms. Graber:

Sky Island Alliance is pleased to provide this letter of support for the establishment of a watershed restoration partnership in the Sonoita Creek watershed of southern Arizona. Our mission is to protect and restore the diversity of life and lands in the Sky Island region, using science, conservation, education, and advocacy to connect the binational landscapes, people, and wildlife for the benefit of all. We take the “alliance” part of our name very seriously; a watershed partnership would support our group’s mission by bringing together organizations and stakeholders to protect the Sonoita Creek watershed.

The partnership will provide opportunities for needed collaborative planning and actionable steps forward to enhance the well-being of the community and protect the health of the watershed for the benefit of natural areas and water users. Diverse interest groups and community members bring knowledge, expertise, and perspective to the resolution of watershed-wide issues. Working together provides an excellent opportunity to generate a common understanding and the shared knowledge required for holistic watershed management, which can address vulnerability and resilience of natural resources and human water uses. Such an understanding is critical to effectively guide watershed management.

A partnership of non-profit organizations, local governments, state and federal agencies, industrial leaders, and community members will facilitate watershed-scale conservation and sustainable water management. Engaging stakeholders in exploring water management solutions increases their commitment to achieving shared goals. A neutral forum for discussion of shared concerns will improve trust and reduce potential conflict among the participants. We see the establishment of a watershed partnership as an important step toward regional cooperation to address current threats facing the Sonoita Creek watershed such as the Hermosa Mine project dewatering and water discharge into our sensitive creeks.

We look forward to working closely with community partners to ensure the success of the watershed partnership. In cooperation with local stakeholders, the proposed watershed partnership will create a tangible benefit for our region of Arizona, and we are enthusiastic about the work and support the creation of a watershed partnership.

Sincerely,

Louise Misztal  
Executive Director  
Sky Island Alliance



## TOWN OF PATAGONIA TOWN COUNCIL

P.O. BOX 767  
PATAGONIA, AZ 85624

MAYOR WOOD, VICE-MAYOR STABILE,  
COUNCIL MEMBERS REIBSLAGER, FINCH AND CLAVERIE

DATE: 07/24/2024

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

Re: Notice of Funding Opportunity No. R23AS00362

Dear Ms. Graber:

The Town of Patagonia is pleased to provide this letter of support for the establishment of a watershed restoration partnership in the Sonoita Creek watershed of Southern Arizona. A watershed partnership would support our group's mission by this statement: "A watershed partnership will be beneficial to the management of critical water resources in the Town of Patagonia and will support a healthy watershed, reducing flooding risks, increasing groundwater levels for municipal supply, and contribute to the overall resilience of the region. We will help achieve these goals by sharing data, model results, and publicizing group events"

A watershed partnership in the Sonoita Creek watershed will provide opportunities for needed collaboration and actionable steps forward to enhance the well-being of the community and protect the health of the watershed for the benefit of natural areas and water users. Diverse interest groups and community members bring knowledge, expertise, and perspective to the resolution of watershed-wide issues. Working together provides an excellent opportunity to generate a common understanding and the shared knowledge required for holistic watershed management, which can address vulnerability and resilience of natural resources and human water uses. Such an understanding is critical to effectively guide watershed management.

A partnership of the various non-profit organizations, local governments, state and federal agencies, industry leaders, and community members will facilitate watershed-scale conservation and sustainable water management. Engaging stakeholders in exploring water management solutions increases their commitment to achieving shared goals. A neutral forum for discussion of shared concerns will improve trust and reduce potential conflict among the participants. We see the establishment of a watershed partnership as an important step toward regional cooperation to address issues of historical mining impacts concerning water quality in Harshaw and Sonoita Creeks.





## TOWN OF PATAGONIA TOWN COUNCIL

P.O. BOX 767  
PATAGONIA, AZ 85624

MAYOR WOOD, VICE-MAYOR STABILE,  
COUNCIL MEMBERS REIBSLAGER, FINCH AND CLAVERIE

The Town of Patagonia looks forward to working closely with community partners to ensure the success of a watershed partnership in the region. This area needs a group that brings all interests together and operates on a watershed-wide basis. In cooperation with local stakeholders, the proposed watershed partnership will create a tangible benefit for our region of Arizona. We are enthusiastic about the work and support the creation of a watershed partnership.

Sincerely,

*Shirley Finch*  
*Creda Wood*

*Michael Stabile*

*Angie*  
*Reibslager*

The Patagonia Town Council

Mayor Wood, Vice-Mayor Stabile, Council Members Reibslager, Finch and Claverie

August 23, 2024

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

Re: Notice of Funding Opportunity No. R23AS00362

Dear Ms. Graber:

This letter acknowledges commitment by The Nature Conservancy (TNC) to participate in the collaborative effort to establish a watershed restoration partnership in the Sonoita Creek watershed, as proposed in the Cooperative Watershed Management Program Phase 1 proposal submitted by Tucson Audubon Society.

The Nature Conservancy's mission is to conserve the lands and waters on which all life depends. In 1966, TNC purchased its first property in Arizona: the Patagonia-Sonoita Creek Preserve, which protects three miles of perennial Sonoita Creek in and just downstream from the Town of Patagonia. The 865-acre Preserve protects a remarkable example of rare Fremont cottonwood-Goodding willow riparian forest and contains one of the two unique ciénega habitats found within the watershed – ecosystems that support four or more species of native fish, some of the highest breeding bird densities in the country, and critical habitat for four federally listed threatened and endangered species, among countless other wildlife.

Beyond the Preserve, TNC works collaboratively with organizations, agencies, and private landowners on land protection, water monitoring, and watershed planning including the 2020 "Sonoita Creek Watershed Conservation Plan". However, while conservation partnerships have developed significantly in recent years, there remains a need for structure and capacity to convene the area's diverse stakeholders, identify shared goals, and conceptualize win-win watershed restoration projects that will protect this important ecosystem from a variety of pressing threats. The proposed Sonoita Creek watershed partnership will enable such strategic and sustained collaboration, as well as actionable steps toward needed restoration.

The Nature Conservancy will continue its long-time commitment to the Sonoita Creek watershed, maintaining program activities that further the goals outlined in this proposal. In addition to the essential and full-time activities of Preserve stewardship, Conservation staff will remain key watershed collaborators. Staff from multiple program areas will continue to pursue stewardship, land protection, and water monitoring and project development – work that aligns with and will complement proposed activities.



The establishment of a Sonoita Creek watershed partnership as proposed in this scope is critical and urgently needed to protect one of Arizona's most biodiverse landscapes. The Nature Conservancy is enthusiastic in its support and looks forward to working with our partners to develop and advance a successful partnership that builds resilience for Sonoita Creek and surrounding communities.

If you have any questions, please don't hesitate to contact me.

Sincerely yours,

Scott Deeny  
Arizona Director of Conservation  
The Nature Conservancy



August 23, 2024

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

**Re: Notice of Funding Opportunity No. R23AS00362**

Dear Ms. Graber:

South32 Hermosa Inc. (South32 Hermosa) is pleased to provide this letter of support for the establishment of a watershed restoration partnership in the Sonoita Creek watershed of southern Arizona. We find good alignment with three of the goals identified by the stakeholders in the community. We support efforts promoting Access to Nature and in developing educational programs and facilities which offer opportunities to understand and connect with the natural environment. The goal of Responsible Land and Resource Management falls in line with South32 Hermosa objectives in being responsible stewards of the valuable resources which we manage. This includes our goals for responsible mineral development and water management as well as providing safe and valuable jobs for members of the community. We also believe in Coordinated Watershed Planning as we continue to work with the community to understand and work towards common interests in environmental data collection and distribution, as reflected in our annual distribution of regional seep and spring conditions. Our intent is to continue to work with the community on additional data collection initiatives to better understand and sustain our shared watershed.

A partnership in the Sonoita Creek watershed will provide opportunities for broad collaboration and improved well-being of the community and the watershed. Working together provides an excellent opportunity to generate a common understanding and the shared knowledge and responsibilities required for holistic watershed management. A partnership of the various non-profit organizations, local governments, state and federal agencies, industrial leaders, and community members will facilitate watershed-scale initiatives aimed towards achieving shared goals. We see the establishment of a watershed partnership as an important step toward regional cooperation to address issues related to riparian and wildlife conservation, sustaining good quality water supplies for the community, and managing the potential changes related to climate change.

South32 looks forward to continuing collaboration with regional stakeholders and contributing to the success of a Sonoita Creek watershed partnership.

Sincerely,

Pat Risner  
SOUTH32 HERMOSA PRESIDENT  
520-405-8895  
Pat.Risner@south32.net

14 August 2024

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

Re: Notice of Funding Opportunity No. R23AS00362

Dear Ms. Graber:

Sonoran Institute is pleased to provide this letter of support for the establishment of a watershed restoration partnership in the Sonoita Creek watershed of southern Arizona. A watershed partnership would support our group's mission by complementing our soon-to-finish BOR watershed planning grant (R22AP00310: Assessment, Prioritization, and Design of Riparian Restoration Opportunities in the Middle Santa Cruz River, Arizona). And as a conservation organization, this proposed watershed partnership would complement our mission of connecting people and communities to the natural resources that nourish and sustain us.

A watershed partnership in the Sonoita Creek watershed will provide opportunities for needed collaboration and actionable steps forward to enhance the well-being of the community and protect the health of the watershed for the benefit of natural areas and water users. Diverse interest groups and community members bring diverse knowledge, expertise, and perspective to the resolution of watershed-wide issues. Working together provides an excellent opportunity to generate a common understanding and the shared knowledge required for holistic watershed management, which can address vulnerability and resilience of natural resources and human water uses. Such an understanding is critical to effectively guide watershed management.

A partnership of the various non-profit organizations, local governments, state and federal agencies, industrial leaders, and community members will facilitate watershed-scale conservation and sustainable water management. Engaging stakeholders in exploring water management solutions increases their commitment to achieving shared goals. A neutral forum for discussion of shared concerns will improve trust and reduce potential conflict among the participants. We see the establishment of a watershed partnership as an important step toward regional cooperation to address issues of water quality, water quantity, and community engagement that stand to impact the rare riparian corridor of Sonoita Creek and downstream, the Santa Cruz River, which was designated as the country's 4<sup>th</sup> most endangered river by American Rivers in 2024.

Sonoran Institute looks forward to working closely with community partners to ensure the success of a watershed partnership in the region. This area is in need of a group that brings all interests together and operates on a watershed-wide basis. In cooperation with local stakeholders, the proposed watershed partnership will create a tangible benefit for our region of



SONORAN  
INSTITUTE

Arizona. We are enthusiastic about the work and support the creation of a watershed partnership.

Respectfully,

A handwritten signature in black ink, appearing to read 'Luke Cole'.

Luke Cole, PhD  
Director of the Santa Cruz River program  
Sonoran Institute



SONORAN  
INSTITUTE



## **PATAGONIA AREA RESOURCE ALLIANCE**

**www.PatagoniaAlliance.org**  
**PO Box 1044 \* Patagonia, AZ 85624**



August 23, 2024

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

Re: Notice of Funding Opportunity No. R23AS00362

Dear Ms. Graber:

Patagonia Area Resource Alliance is pleased to provide this letter of support for the establishment of a watershed restoration partnership in the Sonoita Creek watershed of southern Arizona. A watershed partnership would support our group's mission to protect water as one of our natural resources from the realities of 21st century industrialized mining in a global biodiversity hotspot.

A watershed partnership in the Sonoita Creek watershed will provide opportunities for needed collaboration and actionable steps forward to enhance the well-being of the community and protect the health of the watershed for the benefit of natural areas and water users. Diverse interest groups and community members bring diverse knowledge, expertise, and perspective to the resolution of watershed-wide issues. Working together provides an excellent opportunity to generate a common understanding and the shared knowledge required for holistic watershed management, which can address vulnerability and resilience of natural resources and human water uses. Such an understanding is critical to effectively guide watershed management.

A partnership of the various non-profit organizations, local governments, state and federal agencies, industrial leaders, and community members will facilitate watershed-scale conservation and sustainable water management. Engaging stakeholders in exploring water management solutions increases their commitment to achieving shared goals. A neutral forum for discussion of shared concerns will improve trust and reduce potential conflict among the participants. We see the establishment of a watershed partnership as an important step toward regional cooperation to address issues of concern about the quantity and quality of water in the Patagonia Mountains and Sonoita Creek watershed which will be impacted by a mining project under construction and scheduled to move into production in 2027.

Patagonia Area Resource Alliance looks forward to working closely with community partners to ensure the success of a watershed partnership in the region. This area is in need of a group that brings all interests together and operates on a watershed-wide basis. In cooperation with local stakeholders, the proposed watershed partnership will create a tangible benefit for our region of Arizona. We are enthusiastic about the work and support the creation of a watershed partnership.

  
Carolyn Shafer, Mission Coordinator



# SENTINEL LANDSCAPES



13 August 2024

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

Re: Notice of Funding Opportunity No. R23AS00362

Dear Ms. Graber:

I am writing regarding the Tucson Audubon Society's submission to the Bureau of Reclamation Cooperative Watershed Management Planning grant. The proposal aims to establish a watershed partnership in the Sonoita Creek watershed, providing opportunities for needed local collaboration and actionable steps to enhance the community's well-being and protect the watershed's health for the benefit of natural areas and water users.

The Sentinel Landscape Partnership is a coalition of federal agencies, state and local governments, and non-governmental organizations that work with private landowners to advance sustainable land management practices around military installations and ranges. The Fort Huachuca Sentinel Landscape's priorities include protecting vital military test and training missions, strengthening the economies of farms, ranches, and forests, and conserving native species, unique habitats, and other natural resources.

The Tucson Audubon Society's application to the Bureau of Reclamation Cooperative Watershed Management Planning grant aligns with the Sentinel Landscape's priorities as outlined in the 2022 Fort Huachuca Sentinel Landscape Strategic Plan to improve water availability, quality, and quantity in watersheds and riparian zones.

It is the belief of the Fort Huachuca Steering Committee that the Tucson Audubon Society's application to Bureau of Reclamation Cooperative Watershed Management Planning grant will complement and advance our mission and goals.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott", written over a horizontal line.

Scott Feldhausen (Aug 13, 2024 17:31 EDT)

Scott Feldhausen,  
Chair, Fort Huachuca Sentinel Landscape Partnership

To view the Fort Huachuca Sentinel Landscape Strategic Plan, Visit  
<https://sentinellandscapes.org/landscapes/fort-huachuca/#resources>



SANTA CRUZ VALLEY  
NATIONAL HERITAGE AREA

August 23, 2024

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

Re: Notice of Funding Opportunity No. R23AS00362

Dear Ms. Graber:

The Santa Cruz Valley Heritage Alliance (SCVHA), the nonprofit legislated to oversee the Congressionally designated Santa Cruz Valley National Heritage Area, is pleased to provide this letter of support for the establishment of a watershed restoration partnership in the Sonoita Creek watershed of southern Arizona.

A watershed partnership would support our expressed Management Plan activities, as approved by the US Department of the Interior in November 2022, specifically addressed in Chapter 2 Section 5 (2.5) which seeks to recognize and support partners in their restoration and stewardship of the Sonoita Creek Valley and the larger Sonoita Plain.

A watershed partnership in the Sonoita Creek watershed will provide opportunities for needed collaboration and actionable steps forward to enhance the well-being of the community and protect the health of the watershed for the benefit of natural areas and water users. Diverse interest groups and community members bring a wide-range of knowledge, expertise, and perspective to the resolution of watershed-wide issues. Working together provides an excellent opportunity to generate a common understanding and the shared knowledge required for holistic watershed management, which can address vulnerability and resilience of natural resources and human water uses. Such an understanding is critical to effectively guide watershed management.

It is our conviction that connecting people to this watershed will elicit a higher level of caring. And when people care, they take care which leads to genuine, long-term stewardship. A partnership of various non-profit organizations, local governments, state and federal agencies, industrial leaders, and community members will facilitate watershed-scale conservation and sustainable water management. Engaging stakeholders in exploring water management solutions increases their commitment to achieving shared goals. A neutral forum for discussion of shared concerns will improve trust and reduce potential conflict among the participants. We see the establishment of a watershed partnership as an important step toward regional cooperation to address issues of climate change, water scarcity, loss of biodiversity, and the degradation of these natural resources.

That's why the SCVHA looks forward to working closely with community partners to ensure the success of a watershed partnership in the region. This area needs an organized group that brings

all interests together and operates on a watershed-wide basis. In cooperation with local stakeholders, the proposed watershed partnership will create a tangible benefit for our region of Arizona. We are enthusiastic about the work and support the creation of a watershed partnership.

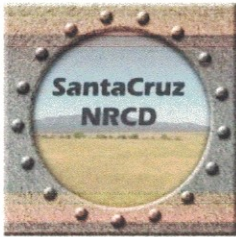
We respectfully ask you to give this application your favorable consideration.

Sincerely yours,



Lesley Kontowicz  
Executive Director





**Santa Cruz Natural Resource Conservation District  
97 Old Ruby Rd, Nogales, AZ 85621**

**July 17, 2024**

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

Dear Ms. Graber:

The Santa Cruz Natural Resource Conservation District is statutorily authorized by Arizona Revised Statutes, Title 37, Chapter 6, and serves a critical role in conserving natural resources on all lands within our district. Our district is locally controlled and governed by an elected Board of Supervisors, and is recognized for our special expertise in the fields of land, soil, water and natural resources management within our district.

The District offers this letter of support for the establishment of a watershed partnership in the Sonoita Creek watershed, which is within the boundary of our district. This partnership would be a feature of the Bureau of Reclamation's Water SMART Cooperative Watershed Management Program.

A partnership of non-profit organizations, local governments, state and federal agencies, industry leaders and community members will facilitate watershed scale conservation and sustainable natural resource management. Priority natural resource concerns for our district are: plant productivity and health related to woody plant invasion of historic grasslands, erosion control of rill and sheet erosion, and inadequate livestock water quantity, quality and distribution.

Working closely with local partners in the watershed partnership will create a tangible benefit for the Sonoita Creek watershed.

Sincerely,

A handwritten signature in blue ink that reads "Stephen M. Williams".

Stephen M. Williams, Chairman  
Santa Cruz NRCD



# Board of Supervisors

## Santa Cruz County

MANUEL RUIZ  
District 1

RUDY MOLERA  
District 2

BRUCE BRACKER  
District 3

August 14, 2024

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

Dear Ms. Graber:

The Santa Cruz County Board of Supervisors is pleased to provide this letter of support for the establishment of a watershed restoration partnership in the Sonoita Creek watershed of southeastern Santa Cruz County, in southern Arizona. A watershed partnership will be beneficial to the management of critical water resources in eastern Santa Cruz County by reducing flooding risks, improving ecosystem health, and contributing to the overall resilience of the region. We will help achieve these goals by sharing data, analyses, modeling results, incorporating watershed restoration initiatives in flood control projects, and publicizing group events.

A watershed partnership in the Sonoita Creek watershed will provide opportunities for needed collaboration and actionable steps forward to enhance the well-being of the community and protect the health of the watershed for the benefit of natural areas and water users. Diverse interest groups and community members bring diverse knowledge, expertise, and perspective to the resolution of watershed-wide issues. Working together provides an excellent opportunity to generate a common understanding and the shared knowledge required for holistic watershed management, which can address vulnerability and resilience of natural resources and human water uses. Such an understanding is critical to effectively guide watershed management.

A partnership of the various non-profit organizations, local governments, state and federal agencies, industrial leaders, and community members will facilitate watershed-scale conservation and sustainable water management. Engaging stakeholders in exploring water management solutions increases their commitment to achieving shared goals. A neutral forum for discussion of shared concerns will improve trust and reduce potential conflict among the participants. We see the establishment of a watershed partnership as an important step toward regional cooperation to address issues of natural hazards (e.g. flooding and wildfires), water quality related to historical mining impacts, degraded ecosystems, water scarcity amid increasing water demand, and integrating land and water use planning.

Santa Cruz County looks forward to working closely with community partners to ensure the success of a watershed partnership in the region. This area needs a group that brings all interests together and operates on a watershed-wide basis. In cooperation with local stakeholders, the proposed watershed partnership will create a tangible benefit for the County. We are enthusiastic about the work and support the creation of a watershed partnership.

Sincerely,

A handwritten signature in dark ink, appearing to read 'M. Ruiz', with a stylized flourish at the end.

Manuel Ruiz, Chairman  
Santa Cruz County Board of Supervisors



Diana Nash  
Circle Z Ranch  
PO Box 194  
Patagonia, AZ 85624

August 22, 2024

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

Re: Notice of Funding Opportunity No. R23AS00362

Dear Ms. Graber:

Circle Z Ranch is pleased to provide this letter of support for the establishment of a watershed restoration partnership in the Sonoita Creek watershed of southern Arizona. A watershed partnership would support our ranch's mission by protecting and enhancing the natural landscape that our guest ranch operation relies upon.


A watershed partnership in the Sonoita Creek watershed will provide opportunities for needed collaboration and actionable steps forward to enhance the well-being of the community and protect the health of the watershed for the benefit of natural areas and water users. Diverse interest groups and community members bring diverse knowledge, expertise, and perspective to the resolution of watershed-wide issues. Working together provides an excellent opportunity to generate a common understanding and the shared knowledge required for holistic watershed management, which can address vulnerability and resilience of natural resources and human water uses. Such an understanding is critical to effectively guide watershed management.

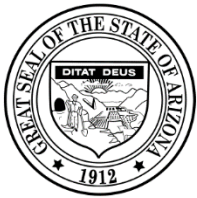
A partnership of the various non-profit organizations, local governments, state and federal agencies, industrial leaders, and community members will facilitate watershed-scale conservation and sustainable water management. Engaging stakeholders in exploring water management solutions increases their commitment to achieving shared goals. A neutral forum for discussion of shared concerns will improve trust and reduce potential conflict among the participants. We see the establishment of a watershed partnership as an important step toward regional cooperation to address water scarcity issues and promote a healthy landscape for current and future generations.

Circle Z Ranch looks forward to working closely with community partners to ensure the success of a watershed partnership in the region. This area is in need of a group that brings all interests together and operates on a watershed-wide basis. In cooperation with local stakeholders, the proposed watershed partnership will create a tangible benefit for our region of Arizona. We are enthusiastic about the work and support the creation of a watershed partnership.

Sincerely,

Diana Nash, owner, Circle Z Ranch

A handwritten signature in cursive script, appearing to read "Diana Nash", written in black ink.



Katie Hobbs  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Karen Peters  
Director

August 7<sup>th</sup>, 2024

Bureau of Reclamation  
Financial Assistance Support Section  
Attn: Mr. Darren Olson  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Dear Mr. Olson:

I am writing on behalf of the Arizona Department of Environmental Quality (ADEQ) to express support for the Sonoita Creek Working Group's WaterSMART Cooperative Watershed Management Program Grant application. The grant's intended purpose to facilitate the development of a Watershed Group in Sonoita Creek and the subsequent creation of a Watershed Restoration Plan aligns seamlessly with ADEQ's mission to protect human health and the environment.

The Sonoita Creek watershed holds significant importance in our state's water landscape. This initiative will empower regional stakeholders to help address E. coli, metals, and pH water quality impairments throughout the Sonoita Creek watershed, undertake watershed-wide challenges, and contribute to the overall health of the region's water resources. The proposed project supports ADEQ's commitment to improving and maintaining water quality in Arizona, ensuring the well-being of Arizona's waters and those that depend upon them.

ADEQ fully supports the Sonoita Creek Working Group's endeavor to develop a collaborative Watershed Group. Diverse interest groups and community members bring diverse knowledge, expertise, and perspectives to the resolution of watershed-wide issues. Working together provides an excellent opportunity to generate a common understanding of water quality and the shared knowledge required for holistic water quality improvement, which can support ADEQ's ongoing watershed improvement initiatives in the region. We believe that this initiative will not only enhance water quality in the Sonoita Creek watershed but also serve as a model for responsible watershed management practices on a regional scale.

If you require any additional information or clarification regarding our support for this grant application, please do not hesitate to contact us. We appreciate the Bureau of Reclamation's commitment to advancing water quality initiatives and look forward to the positive outcomes that will result from the successful implementation of the Sonoita Creek Working Group's proposed project.

Thank you for considering our letter of support.

Sincerely,

Meghan Smart, Senior Scientist- Community Science and Education Coordinator

Arizona Department of Environmental Quality

Redrock Ranch Patagonia, LLC  
40 Harshaw Creek Road  
Patagonia, AZ 85624

August 27, 2024

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

Re: Notice of Funding Opportunity No. R23AS00362

Dear Ms. Graber:

Redrock Ranch is pleased to provide this letter of support for the establishment of a watershed restoration partnership in the Sonoita Creek watershed of southern Arizona. A watershed partnership would support our group's mission by working with the watershed restoration group in the Redrock Canyon Watershed and Harshaw Creek where Redrock Ranch raises cattle. As a rancher I am very interested and concerned for the watershed in our community. I will continue to work with the monitoring group supplying data as needed.

A watershed partnership in the Sonoita Creek watershed will provide opportunities for needed collaboration and actionable steps forward to enhance the well-being of the community and protect the health of the watershed for the benefit of natural areas and water users. Diverse interest groups and community members bring diverse knowledge, expertise, and perspective to the resolution of watershed-wide issues. Working together provides an excellent opportunity to generate a common understanding and the shared knowledge required for holistic watershed management, which can address vulnerability and resilience of natural resources and human water uses. Such an understanding is critical to effectively guide watershed management.

A partnership of the various non-profit organizations, local governments, state and federal agencies, industrial leaders, and community members will facilitate watershed-scale conservation and sustainable water management. Engaging stakeholders in exploring water management solutions increases their commitment to achieving shared goals. A neutral forum for discussion of shared concerns will improve trust and reduce potential conflict among the participants. We see the establishment of a watershed partnership as an important step toward regional cooperation to address issues of concern for all constituents in the Patagonia/Sonoita communities.

Redrock Ranch looks forward to working closely with community partners to ensure the success of a watershed partnership in the region. This area is in need of a group that brings all interests together and operates on a watershed-wide basis. In cooperation with local stakeholders, the proposed watershed partnership will create a tangible benefit for our region of Arizona. We are enthusiastic about the work and support the creation of a watershed partnership.

Sincerely,

Christin J Peterson, Manager/Owner  
Redrock Ranch Patagonia, LLC