

Title: Development of Queen Creek Working Group and Watershed Restoration Plan for the Upper Queen Creek Watershed

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## **Executive Summary**

December 5, 2023

Town of Superior

Pinal County

Arizona

The Town of Superior is applying for funding to develop a watershed group and perform watershed restoration planning for the Upper Queen Creek Watershed (HUC10 1505010004). Working with partners, including municipal water suppliers (Arizona Water Company), major water users (e.g., Resolution Copper, Boyce Thompson Arboretum), and agency stakeholders (e.g., United States Forest Service, Bureau of Land Management, Arizona Department of Environmental Quality), the Town of Superior will facilitate development of the Queen Creek Working Group into a watershed group through a campaign of workshop and stakeholder outreach. Following these efforts, the Group will develop an integrated watershed restoration plan, performing a baseline assessment, identifying watershed priorities, and potential projects to address key functions. Based on Group development to date, the key issues in the watershed include addressing wildfire risk, maintaining natural areas, and addressing mining impacts on water quantity and quality. The proposed effort will allow stakeholders to develop consensus-based plans to address priority concerns.

Assuming a start date of 6/1/2024, the project is expected to run 2.75 years and complete in March, 2027.

## 1 Project Location

The Upper Queen Creek Watershed is a HUC 10 (1505010004) watershed within the Middle Gila Watershed (Figure 1) approximately centered on the Town of Superior in central Arizona. The Town of Superior, located approximately 70 miles east of Phoenix and 70 miles north of Tucson, originated with the Silver King Mine in the late 1880's based on prolific deposits of both silver and copper and mining continues today with operations managed by Resolution Copper. In recent years, the Town has worked to promote cultural tourism within their historic downtown corridor along with recreational tourism in the surrounding Sonoran Desert and Tonto National Forest. Queen Creek is the major stream in the watershed, flowing through downtown Superior, and draining more than 143 square miles (91,000 acres) to downstream communities like Queen Valley and Queen Creek. Since 2019, the Town of Superior has led the Queen Creek Working Group, focused on addressing issues associated with water quantity and quality within the Upper Queen Creek Watershed.

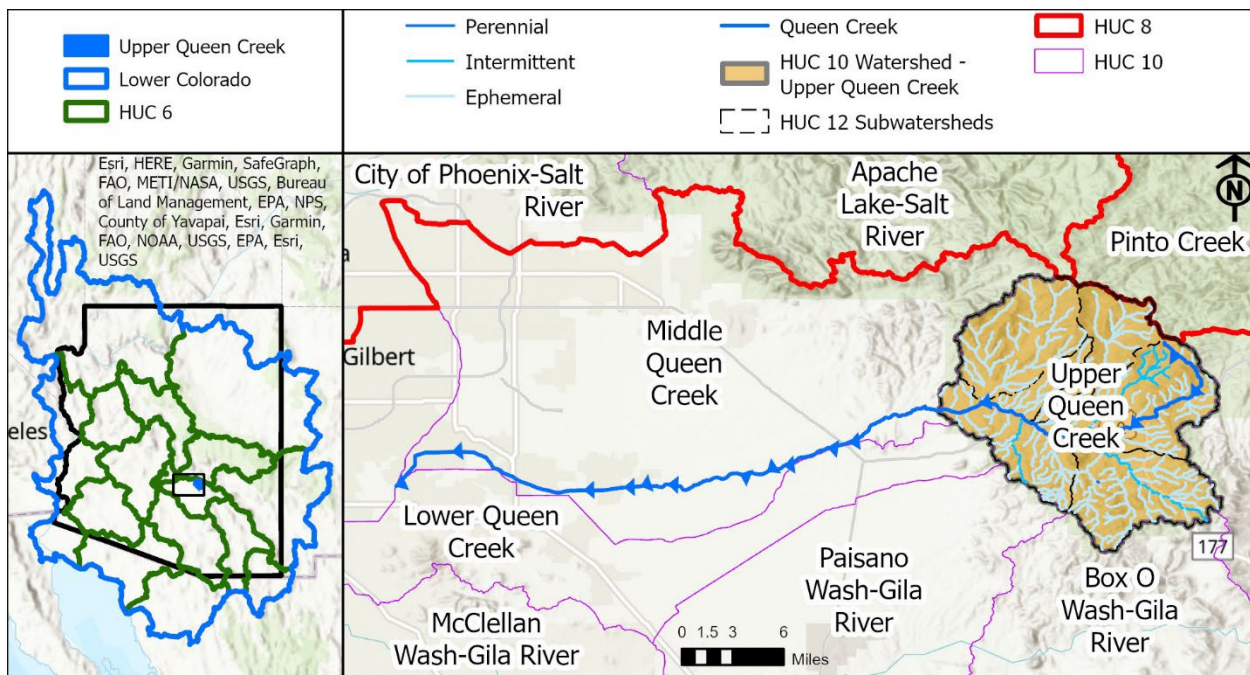


Figure 1: Upper Queen Creek Watershed; Left: Location within Arizona and Lower Colorado River Basin; Right: Detail View Showing Queen Creek

## 2 Applicant Category

The Town of Superior is serving as sponsor for the formation of a new watershed group emerging from a broad coalition of stakeholders in the vicinity of the Town of Superior known as the Queen Creek Working Group (Group). The Group was formed in 2019 as a way of sharing information and coordinating the development and implementation of restoration projects for the Queen Creek near the Town of Superior. The Group seeks to address some of the historic impacts of mining in the region, including restoring seasonal surface flows and restoring/sustaining the riparian areas associated with

Queen Creek. The Group is composed of stakeholders that impact water quantity and quality in the Watershed, as identified through a stakeholder mapping exercise with the Group and listed in Table 1.

*Table 1: Upper Queen Creek Stakeholder Groups, including currently engaged (current), intermittently engaged (intermittent), and to be engaged (outreach planned)*

<b>Stakeholder Name</b>	<b>Description</b>
Town of Superior	Local government (current)
Resolution Copper	Mine in advanced development (current)
Boyce Thompson Arboretum	Local landowner and nature preserve (current)
Pinal County	County government (current)
Arizona Water Company	Municipal water supplier (current)
Arizona Department of Environmental Quality	State agency (current)
Queen Valley Water and Fire	Downstream water provider (current)
Eastern Pinal Watershed Partners	Watershed planning group (current)
Rebuild Superior	Community non-profit (current)
University of Arizona	Academic institution (current)
Legends of Superior Trails	Community non-profit (current)
Chamber of Commerce	Community non-profit (intermittent)
Rotary Club	Community non-profit (intermittent)
AZ Trails	Community non-profit (intermittent)
Tonto Recreational Alliance	Community non-profit (intermittent)
Friends of the Tonto	Community non-profit (current)
Queen Creek Climbing Association	Community non-profit (current)
Arizona Department of Water Resources	State agency (intermittent)
Imeris	Established perlite mine (outreach planned)
Omya	Established marble quarry (outreach planned)
Kalamazoo	Business (outreach planned)
Central Arizona Project	State water authority (outreach planned)
Salt River Project	Regional water provider (outreach planned)
Queen Valley Water District	Regional water provider (outreach planned)
San Carlos Apache Tribe	Tribal community (outreach planned)
Hopi Tribe	Tribal community (outreach planned)
Central Arizona Association of Governments	Regional government entity (outreach planned)
Pinal County Water Augmentation Authority	Regional water governance (outreach planned)
Roosevelt District	Local water district (outreach planned)
Tonto National Forest	Federal agency (intermittent)

To date, the Group has reached significant milestones for restoration along Queen Creek, including securing federal and matching funds for installation of a reclaimed water pipeline and rehabilitation of a groundwater infiltration and storage basin on Queen Creek, upstream of the Town of Superior. In spring 2023, the Town formalized an agreement with Arizona Water Company (AWC) to use an old infiltration gallery located near the AWC storage tank above town in Queen Creek Canyon. This infiltration gallery collected surface water until the mid-90s to serve drinking water for the town. This project will allow us to collect water upstream of the permeable limestone beds and historic mine impacts and restore it to the creek in the hard rock section near the Magma Club. A test release in April 2023 was used to see how the creek would respond to the restored flow, and we are currently analyzing the test results. This project neither adds nor removes anything from the natural stream flow; it pipes stormwater past a zone where it would be lost to the permeable limestone beds.

We will also build a pipeline from the wastewater treatment plant below the town to the US 60 park. This will provide enough water to restore some of the native cottonwood stands and potentially provide effluent water to irrigate additional baseball fields in the future. This water, through a different pipeline, already irrigates the ball fields at the school. This project was designed by the Chavez administration in the late 1990s but was put on hold when funding dried up.

The funding for these projects is coming through a water infrastructure grant of \$2.25 million from the US Army Corp of Engineers, with the Town match of \$750,000 coming from Resolution Copper.

The Group has also begun development of a Town of Superior Green Infrastructure (GI) Project along Main Street using vacant lots to address localized flooding and promote stormwater recharge along the alluvial floodplain of the Queen Creek. Using GI (rainwater cisterns, recessed planting areas, permeable surfaces, etc.), the identified lots will be converted into shaded outdoor public gathering spaces using native and desert-adapted landscapes that will promote stormwater infiltration while mitigating flooding within the urban watershed. This project evolved and expanded after receiving a small grant from the WaterNow Alliance and River Network to outline a green infrastructure pilot project, decide upon goals and expected outcomes, and vet the project among stakeholders. To develop the concept, we formed stronger ties within the community by seeking out key stakeholder input and partners through initial interviews and meetings. The resulting project approach was then presented to the Queen Creek Working Group to gain feedback and input from a broader set of stakeholders, as well as to inform our next steps in identifying a site for the project. To date, we formed an Advisory Committee to guide the project stages, including representatives from the Town, a local non-profit, the local arboretum, and Pinal County.

Building on these project successes, the Group has recently recognized the need to expand into a Watershed Group, formalizing a mission statement and structure to enable integrative, adaptive watershed management in the Upper Queen Creek

Watershed. Based on the discussions during a preliminary workshop and responses received from a broad survey, the Group has developed the following preliminary mission statement:

The Queen Creek Working Group uses stream restoration & maintenance and long-term water & land use planning to ensure future community water supplies and environmental stewardship by addressing the impacts of mining and lack of integrated natural resource management.

This mission statement will be updated and finalized based on stakeholder feedback as part of the watershed-wide outreach and group development activities proposed herein. These achievements and preliminary outreach work demonstrate that this group and the communities represented are affected by and can affect both the quality and quantity of water within the watershed and are capable of promoting the sustainable use of watershed resources. In addition to this effort, development of the group (e.g., formalization of structure, membership, and decision-making processes) is necessary to facilitate consensus-based integrated watershed planning in the region and increase our capacity to improve and protect watershed health.

### **3 Eligibility of Applicant**

The Queen Creek Working Group focuses coordination efforts on the Upper Queen Creek Watershed surrounding the Town of Superior. Both the Town and Watershed are located in the state of Arizona. The Town of Superior is a local government entity. The Town of Superior is sponsoring the development of the Queen Creek Working Group into a Watershed Group. The Town of Superior relies on the Queen Creek surface flows for recreation and tourism, wildlife habitat, enhancement of property values, and mitigating the effects of climate change (e.g., healthy riparian areas reduce local heat concentration). Water quality impacts health in the region, downstream flows, and water transport, also creating challenges for water management strategies such as groundwater recharge due to relating permitting exclusions. Further, the Queen Creek Working Group represents diverse stakeholders within the watershed, see Table 1. We have demonstrated success collaboratively initiating projects for stream and riparian restoration along Queen Creek but need additional time and support to undertake comprehensive and integrated planning within the watershed. The activation and participation of this engaged network of stakeholders will promote the sustainable use of resources. Examples include: local environmental and non-profit groups (e.g., Regenerating Sonora and Rebuild Superior) can represent the needs and concerns of local residents; Boyce Thompson Arboretum is a major landowner, water user, attraction, and economic driver in the area; Arizona Water Company is the major water supplier to the town (and region), leveraging significant water use data, surface water rights that are under consideration of future alternative management strategies, and capacity to encourage conservation through various means. As an organizing member of the Group, the Town of Superior will function as a member, have a member on the BOD, and act as fiscal agent for this grant.

## 4 Project Description

The overall goals of the project are to develop the Queen Creek Working Group as a watershed group (Task A) and develop a watershed restoration plan (Task B).

Under Task A, the Queen Creek Working Group would hold a series of workshops to work with community and agency stakeholders with the following purpose:

- Discuss goals for group development and purpose of watershed planning
- Perform in-depth stakeholder mapping and outreach within the watershed
- Refine and finalize the group mission statement
- Formalize the group structure, including development of rules/bylaws, membership, Board of Directors composition, and decision making model
- Complete teambuilding activities

In addition to these group development-focused workshops, the Queen Creek Watershed Group will undertake development and execution of a detailed outreach plan, including development of materials in support of and participation in:

- Development of hubs for sharing watershed information, including maps and other visualization tools
- Tabling at community events
- Holding educational seminars to enable informed decision-making

To enable natural transition between tasks and to facilitate engagement, this phase will also include some pre-planning activities, like:

- Brainstorm and develop watershed restoration plan outline
- Collate and collect available data sources to help inform baseline watershed assessment
- Perform targeted outreach activities to understand issues and needs related to water quality, quantity, and watershed restoration via surveys, seminars, and interviews

Following these Group development efforts, the Queen Creek Working Group would transition to development of a watershed restoration plan under Task B. During this phase, the group would complete the watershed restoration plan, including:

- Develop and review a baseline assessment with stakeholders
- Using the baseline assessment as a discussion tool to build consensus around watershed issues and priorities
- Document existing management guidance from agencies and major stakeholders in the region
- Brainstorm with stakeholders and perform research (e.g., interviews, literature reviews) to identify potential projects types and project sites for addressing watershed needs



- Develop monitoring plans to understand long-term watershed function and evaluate effectiveness of projects when implemented
- Prioritize projects and project sites for implementation based on group priorities and criteria.

Throughout Task B, the Group would hold a series of workshops to update stakeholders on plan development status, build consensus around watershed issues and priorities, identify areas for targeted research and gaps in understanding of watershed processes. Workshops and seminars will include educational elements to support informed decision making by stakeholders and be tailored to participant interests. The Group plans to contract a full-time Watershed Coordinator to facilitate group development, act as primary author on the watershed restoration plan, and manage the project. The Watershed Coordinator will perform much of the targeted research and outreach (e.g., interviews, site visits, literature review, mapping activities, data analysis and visualization) to support plan development. These ongoing outreach, education, and engagement activities will help build awareness of the organization and encourage stakeholder participation in Group Development and watershed restoration planning.

## 5 Evaluation Criteria

### 5.1 Criteria A: Watershed Group Diversity and Scope

#### 5.1.1 Subcriteria A.1: Watershed Group Diversity

Participation in the Group to date includes major stakeholders with planned expansion efforts to increase engagement and representation of stakeholders within the watershed (Table 1). Beyond participating in routine meetings, these stakeholders

As part of initial outreach efforts to develop the Group’s mission statement and identify issues, we published a survey including a question on interests represented within the watershed. Of the 20 responses, respondents identified as follows:

Interest	Number of Responses
Mining	6
Environmental	5
Private Property Owner	3
Livestock Grazing	3
Recreation or Tourism	2
Land Development	2
Municipal water Supplies	2
Irrigated Agriculture	1
State government	1
Local government	1
Tribes	1

During the first meetings of the funded effort and in advance of the first workshop, current group participants will perform comprehensive stakeholder mapping (e.g., brainstorming, searching of public records for grazing allotments and non-domestic well ownership) to develop an outreach campaign in support of group development. Individual group members and the Watershed Coordinator will work to perform targeted outreach for those groups that have not yet participated (e.g., Imerys Perlite, Omya, San Carlos Apache Tribe, local ranches) to encourage their participation in subsequent group activities. The Watershed Coordinator will also perform in-depth outreach (e.g., interviews to identify issues and document local knowledge) to ensure as comprehensive a set of interests are represented in the Group and plan as possible.

During Group Development, the initial open membership group structure and cooperative actions will be refined and formalized. The group will develop and formalize these plans as part of the funded work, but the initial vision is to organize with a Board of Directors with open participation meetings. The initial Board of Directors composition, including roles and positions, will be decided via consensus in initial workshops. All stakeholders are eligible for membership on the Board but must be qualified to hold certain positions (e.g., Secretary, Treasurer) and must participate in most Group meetings. The goal will be to have the BOD membership reflect the diverse interests within the watershed (e.g., tribal, municipal, mining, water providers, USFS, ADEQ, NGOs, private property owners). After initial establishment, BOD membership will be determined by vote by existing members. Decision making will be made via consensus. At Queen Creek Working Group meetings, all stakeholders will be invited to participate, discuss issues, ask questions, and raise concerns. The BOD will consider these inputs and use standard techniques to assess and build consensus (e.g., voting, fist-to-five). As necessary, temporary teams will be formed to investigate issues more deeply, manage projects, and report back to the larger group on status and issue resolution at routine Queen Creek Working Group Meetings.

#### 5.1.2 Subcriteria A.2: Geographic Scope

As shown in Figure 1, the Queen Creek Working Group seeks to perform planning activities for the HUC-10 Upper Queen Creek Watershed, covering the full scale of the small sub-basin size watershed. This watershed drains the land surrounding the Town of Superior, supporting the riparian area around Queen Creek. The Queen Creek Working Group is focused on restoration activities on Queen Creek and selected this boundary to represent the stakeholders and physical processes that impact water quantity and quality in the affected reaches of Queen Creek. Figure 1 shows the geographic context of the planning area within other watersheds in the region. Figure 2 shows land ownership and the location of major stakeholders within the watershed. Table 2 summarizes the land ownership with area within the watershed.

Table 2: Land Ownership within Upper Queen Creek Watershed

Owner	Area (sq miles)
BLM	0.61
Forest Service	133
Private	9.6
State Trust	0.19

The Forest Service has three main allotments in the area: Millsite in the west, Superior through the center, and Devils Canyon to the east. All three allotments allow cattle grazing, but not sheep, goats, horses, donkeys, mules, or bison. Of major consequence for the watershed, a land swap of Forest Service land has been under review and litigation for several years. The issuance of an EIS would trigger the advancement of the congressionally approved land swap, which would allow the Resolution Copper project to move forward.

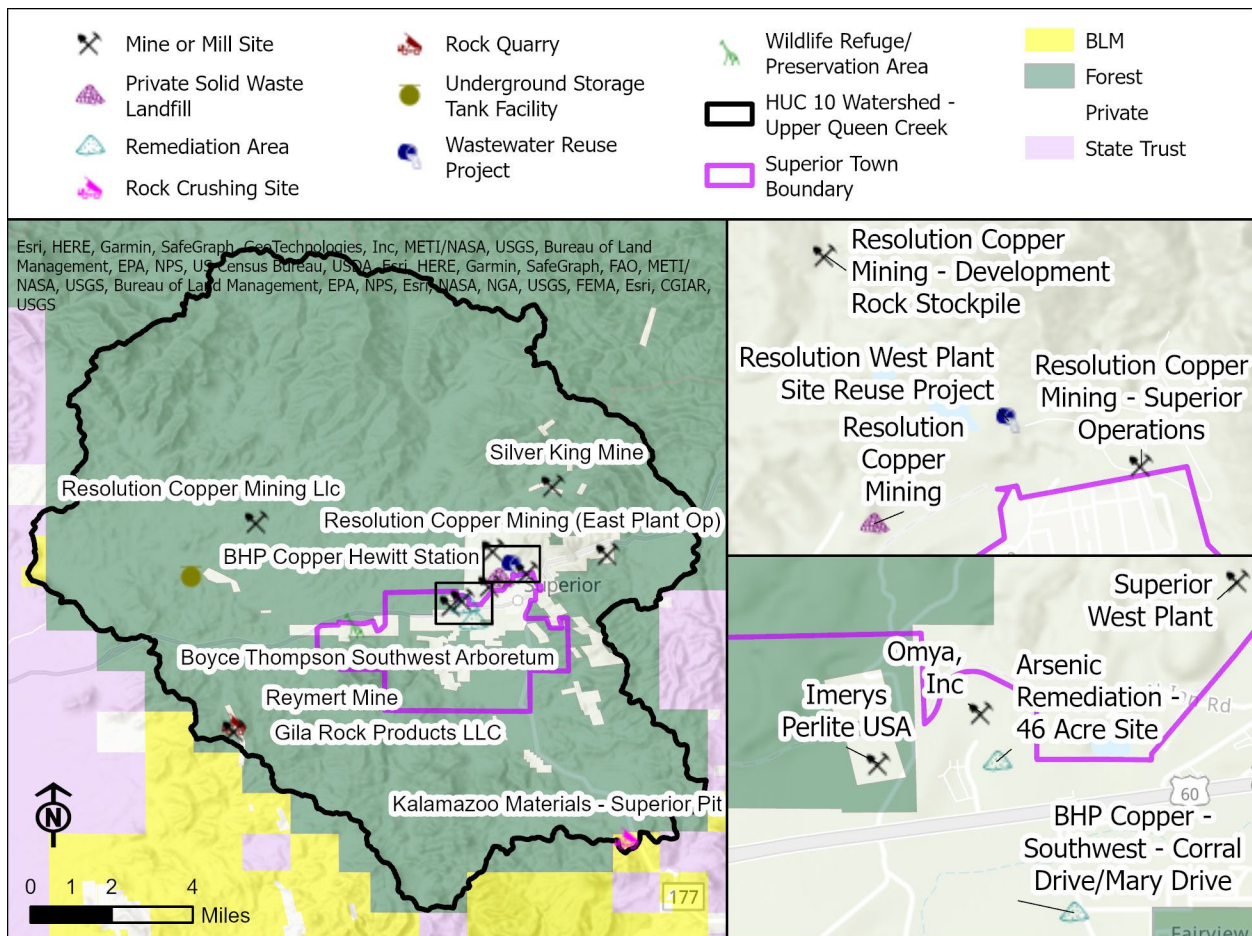


Figure 2: Land Ownership and Stakeholder Locations

5.2 *Criteria B: Developing Strategies to Address Critical Watershed Needs*

5.2.1 *Subcriteria B.1: Critical Watershed Needs or Issues*

The highly unique context of the Town of Superior is important to their current environmental conditions. Mining has been the primary industry supporting the Town’s economy since the 1800s. Mining communities often face greater barriers to trust because of the environmental quality impacts of the industry and power dynamics of large corporations operating in small towns. Home to one of the largest known copper deposits in the world, Superior may be a small town but what happens here is of national and international consequence. As a country, we are grappling with what mineral extraction means for the sustainability of surrounding communities and environmental quality. The Queen Creek Working Group is well-positioned to advocate for informed decision making that benefits water supplies and the environment. The Town already has strong partners in this endeavor with a vested interest in maintaining reliable and safe drinking water for future generations. The formation of a watershed partnership will help us move forward with clear objectives and mutual understanding.

As part of the workshop and online survey described above, the Group identified a high-level list of concerns within the watershed for ranking. Workshop participants were asked to define their top two issues that affect the watershed and that we could address as a watershed partnership. The responses are captured in Table 3.

*Table 3: Priorities issues identified by workshop participants and survey respondents*

<b>Issues</b>	<b># of Responses</b>
Mining impacts	9
Lack of integrated management of natural resources	8
Lack of understanding of water system	7
Limited water management strategies	5
Degraded land and water	5
Climate change	3
Too much planning, not enough implementation	3
Water conflict	2
Urban development	2

The online survey included a prompt for respondents to list other watershed issues of concern. To further refine these concerns, we also asked respondents to assess their level of concern for watershed challenges on a scale ranging from not concerned (1) to most concerned (5).

*Table 4: Watershed challenge identified by survey respondents*

<b>Challenge</b>	<b>Average Score</b>
Wildfire risk	4.3
Health of natural areas	3.9

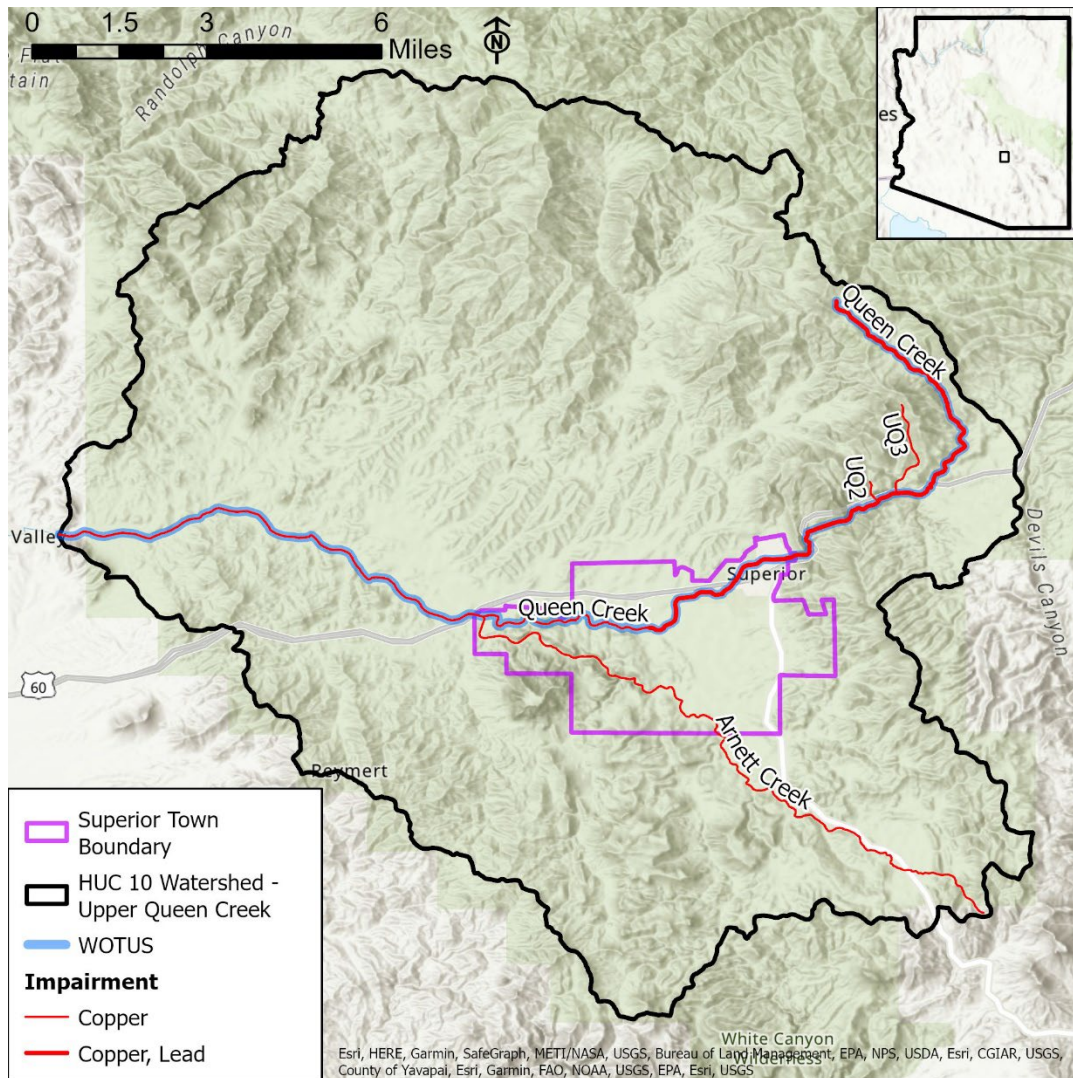
<b>Challenge</b>	<b>Average Score</b>
Supporting native plant and animal species	3.9
Mining impacts on water quality	3.9
Municipal impacts on water quality	3.9
Water delivery infrastructure	3.9
Decreasing precipitation	3.9
Water demand	3.9
Urban development	3.9
Surface water availability	3.8
Habitat health in areas adjacent to streams	3.8
Increasing temperatures	3.8
Population growth	3.8
Erosion	3.7
Groundwater table levels	3.7
Managing invasive species	3.7
Land fragmentation	3.5
Agricultural impacts on water quality	3.5
Air quality	3.4
Mesquite encroachment	3.4
Flooding	3.3

Upper Queen Creek watershed includes six stream reaches (approximately 36 miles) currently listed as impaired for copper and lead, as recorded on the Arizona Clean Water Act Section 303(d) list (Table 4).

*Table 5: Impaired Queen Creek stream reaches requiring TMDL*

<b>Stream</b>	<b>Reach</b>	<b>Length (miles)</b>	<b>Impairment (year)</b>
Arnett Creek	Headwaters to Queen Creek 15050100-1818	11.2	Dissolved Copper (2010)
Queen Creek	Headwaters to Superior Wastewater Treatment Plant (WWTP) Discharge 15050100-014A	8.8	Dissolved Copper (2002) Total Lead (2010) Total Selenium (2012)
	Superior WWTP Discharge to Potts Canyon 15050100-14B	5.9	Dissolved Copper (2004)
	Potts Canyon to Whitlow Canyon 150100-014C	8.0	Dissolved Copper (2010)
Unnamed Tributary to Queen Creek (UQ2)	Headwaters to Queen Creek 15050100-1000	0.5	Dissolved Copper (2010)

Unnamed Tributary to Queen Creek (UQ3)	Headwaters to Queen Creek 15050100-1843	1.7	Dissolved Copper (2010)
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*Figure 3: Waters of the United States and Stream Impairments in the Upper Queen Creek Watershed*

### 5.2.2 Subcriteria B.2: Project Benefits

#### 1. Provide Transparency and Collaborative Decision-Making Structure

The Queen Creek Working Group has built momentum and community support for restoration of the riparian area and increased instream flows through various watershed restoration and water management strategies. Our goal to increase diversity of stakeholders will help to balance the potential for economic development with the impacts of mining on long-term water supplies and environmental quality. At the same time, the watershed partnership will help us deepen our understanding of each other's

roles and limitations in a productive and transparent way. We are already making progress - the Town and Arizona Water Company launched Sustainability Elevated in 2021, a public messaging campaign that provides actions and tips that residents and commercial water users can adopt to help make their community more sustainable and water conscious – but additional structure, organization, outreach, and support will allow us to more fully represent the interests in the watershed. Additionally, the Town is seeking to restore flowing water to their local waterway to benefit the environment and quality of life through the collaborative efforts of the Queen Creek Working Group. The Group seeks to align our sustainability goals for both water conservation and the environment, while boosting momentum of the efforts for maximum impact and long-term benefits.

## 2. Expand Creek Restoration to a Holistic Watershed Approach

The Group has collaboratively identified the next step in their goal to restore Queen Creek as expanding on past efforts through an inventory of the restoration and management options that are available and study how the cumulative impact of implementation of projects to increase flows in the creek.

The holistic approach to watershed management aims to increase the overall health of the watershed and its natural processes. In large part, this approach equates to improvements to the creek itself (e.g. structures that collect, slow down, and redirect rainfall) as well as how the Town can use its water supplies for multiple benefits (e.g. treated effluent discharged to the creek feeds the riparian system as well as contributes to groundwater recharge). The goal is to account for the water savings of many actions to maximize the rainfall that we get, as well as the management options available, including water conservation strategies, green infrastructure, and public education.

## 3. Grow Capacity to Implement and Coordinate Ongoing Projects with Increased Stakeholder Input and Stewardship

There are three projects that are currently in progress under the management of the Town with support from the Group: 1) piping water from one part of the creek to another so that flows are not "lost" in the fracture zone above Magma bridge, 2) piping water from the wastewater treatment plant to the creek, and 3) treating invasive species that degrade natural processes. While the Town and Group have made great strides to secure funding to restore the waterway, they struggle to implement the projects and lead strong engagement efforts concurrently. The coordinator position and ambitious project schedule proposed for this project will allow stakeholders to better understand and provide input in the current and future restoration efforts.

## 4. Contribute to Greater Understanding and Actionable Science to Address Historic and Ongoing Water Quality Issues

The Group currently serves in an advisory capacity for ADEQ's Queen Creek Total Maximum Daily Load (TMDL) study that is being conducted over the course of two

years from September 2023 to August 2025. ADEQ provides quarterly updates at Group meetings about the status and findings of the TMDL sampling and analysis in order to gain feedback from our stakeholders and experts. ADEQ requests feedback in the form of input, expertise, data, and insight throughout the process of developing the Queen Creek TMDL. They may include feedback from the Group in the TMDL report, tentatively planned for release in 2026. The formation of a watershed partnership will increase the capacity of the group to gather feedback and information to support the ADEQ effort and translate the results for the public as well as incorporation into a watershed management plan.

### *5.3 Criteria C: Readiness to Proceed*

The proposed project is organized into two primary phases. The first phase focuses on group development efforts, while the second phase focuses on watershed restoration planning. The schedule (Figure 3), uses the major workshops as milestones.

Workshops occur at the end of the scheduled task, and all work necessary to prepare for individual workshops (e.g., preparation of agenda, developing educational elements, development of draft outreach plans, addressing comments on watershed assessment) will be completed in advance of individual workshops. Delivery of the completed watershed restoration plan will be the final milestone in the project. The specific details of work accomplished in support of each milestone are described below. Through all phases of the project, the Group will continue outreach in the form of tabling at community events, publicizing accomplishments on social media, press releases, etc.

#### *Group Development Phase*

During this phase, efforts will focus on comprehensive stakeholder mapping, outreach, and group development.

- Kickoff Meeting
  - Review preliminary mission statement, bylaws, rules, membership, and decision making structure
  - Review project schedule, reporting requirements, deliverables, and roles & responsibilities
  - Search for Watershed Coordinator
  - Perform stakeholder mapping
- Group Development Workshop 1 – Initial Stakeholder Outreach
  - Describe purpose of Watershed Group and watershed restoration plan
  - Review mission statement, bylaws, rules, membership, and decision making structure
  - Teambuilding exercise
  - Brainstorming watershed concerns, strategies for addressing
  - Brainstorm outreach plans, topics of interest, open questions, educational topics for workshops, website development, press/publication plans (press releases).



- Group Development Workshop 2 – Finalizing Group Structure, Transition to Planning
  - Finalize mission statement, bylaws, rules, membership, and decision making structure
  - Teambuilding exercise
  - Provide examples of watershed plans throughout the state
  - Collaboratively begin development of watershed restoration plan outline

*Watershed Restoration Planning Phase:*

During this phase, the Group will focus on watershed restoration planning, including stakeholder outreach, research (e.g., interviews, literature reviews, site visits, monitoring activities) in support of completing the watershed assessment, developing understanding of watershed concerns, and identifying potential projects for implementation. This work is structured to ensure stakeholder participation through all phases of plan development, beginning with a review of detailed outline, proceeding through multiple reviews of the watershed assessment, culminating in the final project review. To encourage maximum stakeholder participation, each workshop task will consist of two workshops: one during business hours to facilitate agency/professional participation and one in the evening to facilitate community participation.

- Plan Workshop 1 – Watershed Plan Outline
  - Workshop Purpose:
    - Describe purpose of Watershed Group and watershed restoration plan
    - Discuss broad outline of the watershed restoration plan drafted with inputs from Group Development Phase
    - Brainstorm issues, desired conditions, potential projects, project sites, references, interviews, data gaps, etc. to inform plan development
  - Preparation Activities:
    - Perform targeted outreach to expand participation in planning efforts
    - Develop draft plan outline from inputs in Group Development Phase
  - Brainstorm issues, desired conditions, potential projects, project sites, references, interviews, data gaps, etc. to inform plan development
- Plan Workshop 2 – Watershed Assessment Review
  - Perform research to develop draft watershed assessment
  - Develop visualization tools (e.g., maps, online data sharing hubs) to support watershed assessment
  - Go through results of watershed assessment
  - Refine list of desired conditions, potential projects
  - Brainstorm project evaluation criteria, monitoring plans
- Plan Workshop 3 – Updated Watershed Assessment Review

- Perform additional research to address comments and feedback from initial Watershed Assessment Review.
- Review and evaluate results of watershed assessment
- Refine list of desired conditions, potential projects, project evaluation criteria, and monitoring plans
- Plan Workshop 4 – Draft Watershed Restoration Plan Review
  - Review draft Watershed Restoration Plan
  - Collect feedback and resolve comments
- Plan Workshop 5 – Final Watershed Restoration Plan Review
  - Review final Watershed Restoration Plan
  - Discuss and collectively determine next steps

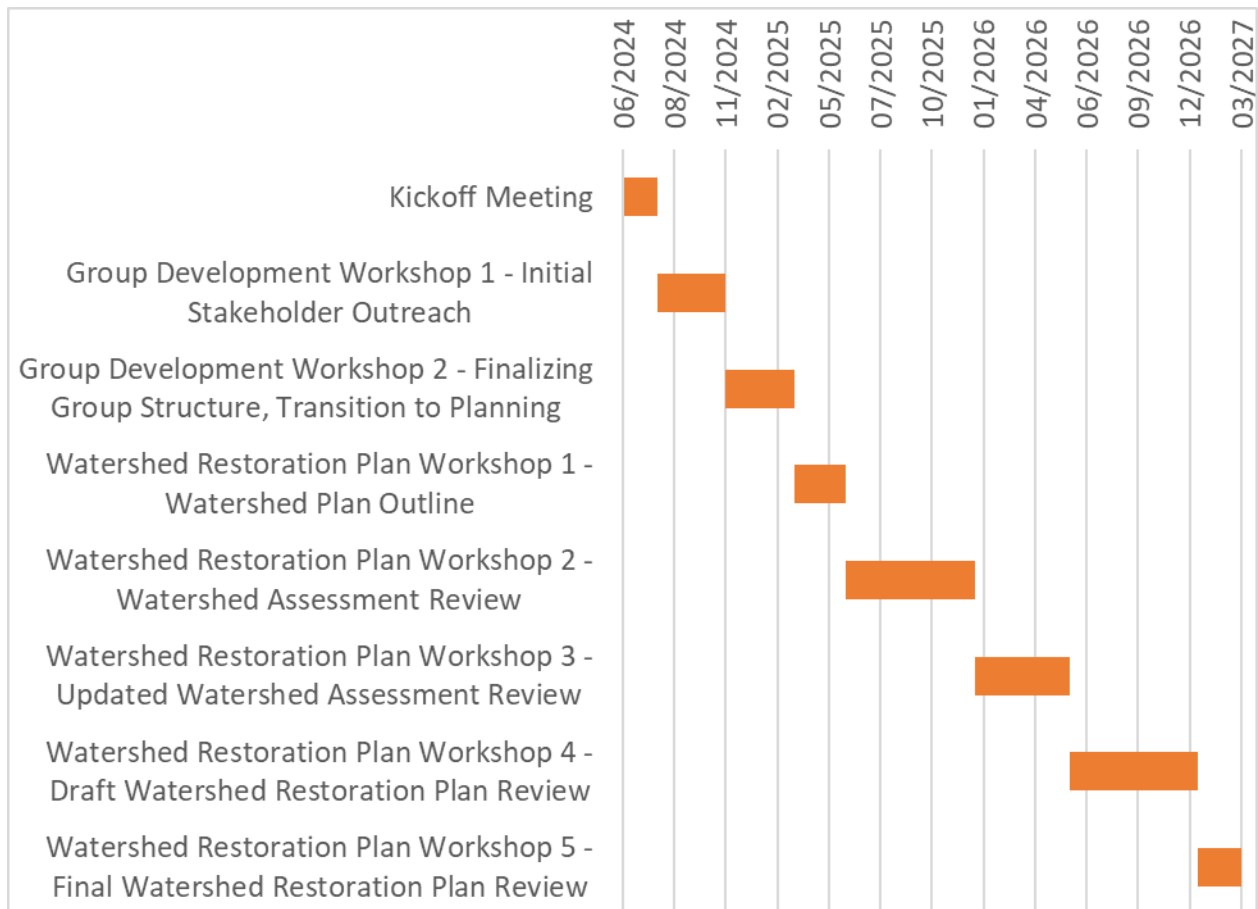


Figure 4: Project Schedule

#### 5.4 Criteria D: Presidential and Department of Interior Priorities

##### 5.4.1 Subcriteria D.1: Climate Change (EO 14008)

The Sonoran Desert, including the Upper Queen 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. Realizing the effects of climate change presents risks to regional biodiversity and local water supplies. The proposed planning project will provide a consensus-based, integrated approach to address land, water, and other natural resource management decisions to improve community resilience to the effects of climate change.

5.4.2 Subcriteria D.2: Disadvantaged and Underserved Communities:

The Town of Superior has been identified as a disadvantaged community under the Climate and Economic Justice Screening Tool. The factors that contribute to this designation and likely to be impacted by the proposed effort are summarized in Table 6.

*Table 6: Town of Superior – Factors Contributing to Disadvantaged Status*

Factor	Percentile	Description
Expected agricultural loss rate	91 <sup>st</sup>	Economic loss to agricultural value resulting from natural hazards each year
Projected wildfire risk	95 <sup>th</sup>	Projected risk to properties from wildfire due to excess fuels, weather, humans, and fire movement in 30 years
Wastewater discharge	93 <sup>rd</sup>	Modeled toxic concentrations at parts of streams within 500 meters)
Low income	80 <sup>th</sup>	People in households where income is less than or equal to twice the federal poverty level, not including students enrolled in higher education

By developing an integrated watershed restoration plan, the Queen Creek Working Group will identify land and water management actions that will improve watershed resiliency, addressing wildfire and water quality risks.

5.4.3 Subcriteria D.3: Tribal Communities

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 Reclamation activity with a Tribe.

## 6 Project Budget

See attached budget narrative for more detail of project budget. Table 6 shows the total project budget, and a brief summary is provided below.

Table 7: Project Budget

FUNDING SOURCES	AMOUNT
<b>Non-Federal Entities</b>	
1. N/A	\$ 0
<b>Non-Federal Subtotal</b>	\$ 0
<b>REQUESTED RECLAMATION FUNDING</b>	<b>\$245,308</b>

- Supplies: \$3,900
  - Food and supplies for 13 workshops, based on prior projects
  - Sharing meals is a key step in developing partnerships and encourages broader community participation
- Contractual: \$217,608
  - Funding for Watershed Coordinator Contract Position, based on Bureau of Labor Statistics median hydrologist rates for Phoenix Metropolitan Area
- Other Direct Costs: \$1,500
  - Facility rental for 6 evening community engagement workshops, based on prior projects
- Indirect Costs: \$22,301
  - Based on 10% De minimis rate

## 7 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 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 may be endangered species within the watershed, but there are no designated critical habitats. The proposed project serves to develop a watershed group and author a watershed restoration plan, so there should be no impact from these efforts.

*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.*

Queen Creek is listed as a Waters of the United State. 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?*

Water delivery systems in the Upper Queen Creek Watershed include pipelines to import water from the Desert Wellfield, various private wells drilled in the watershed, and reclaimed water (e.g., mine dewatering, municipal waste) distribution systems. Construction dates for various facilities date to the 1950s and there have been ongoing projects for improvement and maintenance of these systems.

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

*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.*

Boyce Thompson Southwestern Arboretum, Queen Creek Bridge, and the Magma hotel are all listed on the National Register of Historic Places. The proposed project serves to develop a watershed group and author a watershed restoration plan, so there should be no impact from these efforts.

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

There are known archaeological sites in the proposed project 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 and will address cultural compliance in plan development.

*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.

## **8 Required Permits or Approvals**

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

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

This proposal does not duplicate any proposal or project that has or will be submitted for funding consideration to any other funding source.

## **10 Conflict of Interest Disclosure Statement**

No actual or potential conflicts of interest exist at the time of submission.

## **11 Uniform Audit Reporting Statement**

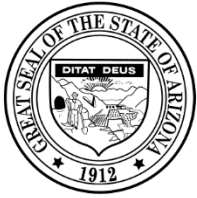
Last fiscal year, the Town of Superior did not spend more than \$750,000 in Federal Funds. In future years, audits will be conducted as required, under the EIN 86-0326655.

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

See attached SF-LL form.

## **13 Letters of Support**

Please see attached for letters of support



Katie Hobbs  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Karen Peters  
Director

November 22, 2023

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 Queen 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 Queen Creek and the subsequent creation of a Watershed Restoration Plan aligns seamlessly with ADEQ's mission to protect human health and the environment.


The Queen Creek corridor holds significant importance in our state's water landscape. This initiative will empower regional stakeholders to help address lead and copper water quality impairments throughout the Queen 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 Queen 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 Queen Creek corridor 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 Queen Creek Working Group's proposed project.

Thank you for considering our letter of support.

Sincerely,

DocuSigned by:  


7A7C293F922A4A2...  
Trevor Baggione, Director

Water Quality Division



Legends of Superior Trails  
PO Box 284  
Superior, AZ 85173  
jim@magmadorada.com

November 18, 2023

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:

Legends of Superior Trails - LOST is providing this letter of support for the establishment of a watershed partnership in Queen Creek watershed in the Superior, Arizona area of central Arizona. A watershed partnership will be beneficial to the management of critical water resources in our local community and will contribute to the overall resilience of the region.

A watershed partnership in the Queen Creek watershed will provide opportunities for needed collaboration to enhance the well-being of the community and protect the health of the watershed for the benefit natural areas and water users.

This partnership of the various non-profit organizations, local governments, state and federal agencies, company 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. We see the establishment of a watershed partnership as an important step toward regional cooperation.

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

Best Regards,

James S. Schenck  
LOST Vice President