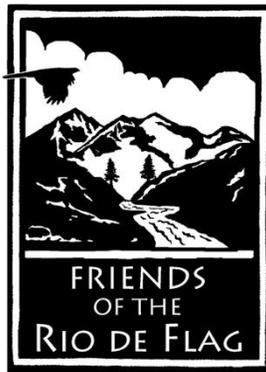


# Advancing Watershed Planning for the Rio de Flag



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# TECHNICAL PROPOSAL

## 1. Executive Summary

Applicant: Friends of the Rio de Flag  
Date: January 31, 2018  
Location: Flagstaff, Coconino County, Arizona  
Name: Advancing Watershed Planning for the Rio de Flag

The Rio de Flag is an ephemeral river and riparian corridor that connects the Flagstaff community and enhances public well-being by providing a multitude of environmental, social, cultural, and economic benefits. The Friends of the Rio de Flag (FoRio) is an existing watershed group seeking funding under Tasks A and B of the WaterSMART: Cooperative Watershed Management Program to support expansion of the watershed group through engagement of a broad-base of stakeholders and completion of a watershed restoration plan. We propose to:

- 1) Assemble diverse watershed stakeholders to define the scope and desired outcomes of the watershed planning process;
- 2) Develop a memorandum of understanding as well as visions and goals for the group;
- 3) Conduct outreach activities including creating an outreach plan and information materials (e.g., brochures, advertisements, and website);
- 4) Facilitate stakeholder workshops to expand and diversify watershed group membership;
- 5) Gather information about issues and needs related to water quality, quantity, and restoration within the watershed (i.e., through stakeholder interviews and research);
- 6) Facilitate public workshops to understand community needs and identify priority projects that will improve the watershed and river corridor;
- 7) Host public meetings to present the watershed restoration plan draft and request final comments, and;
- 8) Develop a watershed restoration plan including conceptual watershed management projects.

The bulk of grant funds would support contracts for a watershed coordinator to organize the group and coordinate its activities, and; a natural resource facilitation firm to guide in the expansion of the watershed group through stakeholder and public engagement and development of a watershed restoration plan. Project activities are consistent with the goals of the Funding Opportunity Announcement in that they will promote the sustainable development of Flagstaff's water resources, improve the ecological resilience of rivers and streams, and conserve water for multiple uses using collaborative conservation efforts. All work proposed herein will be complete within two years following contract award (October 2018). The proposed project is not located on a Federal facility.

## 2. Background Data

### 2.1 Project Location

The Friends of the Rio de Flag (FoRio) is interested in focusing planning on the Rio de Flag Watershed. The Rio de Flag (RDF) Watershed in southcentral Coconino County, Arizona covers over 200 square miles (Figure 1). The headwaters begin along the western flanks of the San

Francisco Peaks (highest point at 12,000 feet) and soon flow into and through the City of Flagstaff (elevation 7,000 feet). The RDF Watershed (10-digit HUC) is part of the 1,200 square mile Canyon Diablo Watershed (8-digit HUC) which flows into the Little Colorado River and then into the Colorado River upstream of Grand Canyon National Park. Most rivers in the region are ephemeral due to fractious underlying geology, and the Rio de Flag (river) is no exception. However, springs and reclaimed wastewater support perennial reaches of the Rio de Flag that provide important riparian and wetland habitats throughout the watershed. The Rio de Flag has been described as the core and connector for the City of Flagstaff's Open Space program and the Flagstaff Urban Trails System (FUTS). The FUTS connects Flagstaff to its watershed by offering aesthetic and recreational enjoyment, historical links to pre-Columbian cultures, and wildlife viewing opportunities as the "Rio" provides habitat, cover, and a movement corridor for wildlife.

Due to high urbanization and development, human impacts are more prevalent in the RDF Watershed than in the Canyon Diablo Watershed. The Flagstaff area depends heavily on groundwater wells within the RDF Watershed for municipal water supply, and therefore maintaining watershed and floodplain health is critical for ensuring water quantity and quality. In addition to recharging aquifers and vadose zones, the RDF Watershed processes and attenuates flood and stormwater flows. These are important consideration for the City of Flagstaff which is the only incorporated city in the greater Canyon Diablo Watershed and sits in the Rio de Flag's floodplain.

## **2.2 Sources of Water Supply and Current Uses**

Water sources include natural springs and seeps, runoff, and treated effluent in addition to stormwater. Springs and seeps along the Rio are fed by small, perched aquifers that fluctuate seasonally. Most of the river reaches are best characterized as ephemeral, however short sections downstream of springs and two city water treatment plants are perennial. Runoff is an important source of water for the Rio, especially during spring snow melt and summer monsoons. Runoff and treated effluent support riparian habitats along the Rio de Flag corridor while also providing education and recreation opportunities for local schools and community members.

Current uses include municipal, domestic, habitat support, and industrial. The City of Flagstaff draws 50% of its water supply from the local Coconino aquifer. The other 50% comes from springs on the San Francisco Peaks and surface water from another nearby watershed (Lake Mary). Although the relationship between the Rio de Flag and the Coconino aquifer is not well understood, initial aquifer recharge tests have shown that sections of the Rio de Flag percolate directly to the aquifer through fractures in the underlying rock. This means that flows in the Rio de Flag are probably impacting the quantity and quality of groundwater available for current and future Flagstaff area residents.

## **2.3 Water Rights Involved**

The largest water users in the RDF Watershed are municipal and private water companies which are permitted by the State of Arizona. Surface water claims exist along the Rio de Flag, but most are very small due to its ephemeral nature.

The City of Flagstaff owns rights to water at Lake Mary (located in a nearby watershed) and also owns reclaimed water it produces at two wastewater treatment plants. The City of Flagstaff uses and sells reclaimed water for irrigation, industrial, and other purposes, including support for

riparian habitats. A partnership between the City of Flagstaff and the Arizona Game and Fish Department guarantees 100 gallons per minute of reclaimed water released into the Rio de Flag as it flows through Picture Canyon Natural and Cultural Preserve through 2030. These flows are critical in supporting wetland and riparian habitats, especially during years of drought. Reuse of reclaimed water is also an important water conservation strategy for the community.

## **2.4 Water Issues Faced in the Rio de Flag Watershed**

The diversity of land ownership, land use types, water sources, and hydro-geomorphology throughout the Rio de Flag Watershed create a complexity of issues that affect a wide variety of stakeholders. While some of these issues are watershed-wide, others only affect certain “watershed reaches”, or sections of the main stem of the Rio de Flag and the tributaries flowing into these. Figure 1 and Table 1 provide a visual representation of how these issues play out by watershed reach as well as across the watershed.

Flagstaff area residents rely upon the RDF Watershed for drinking water, recreation, flood mitigation, and sustaining habitat quality for wildlife, recreation, and tourism. The habitat supported by the Rio de Flag is critical for maintaining and enhancing plant and animal diversity of the Rio’s ecological community which enriches the beauty of Flagstaff.

Major issues in the RDF Watershed include degraded riparian ecosystems, flooding, climate change, and water quality. Urban and suburban development have led to channelization of large sections of the Rio de Flag, removing natural channel meanders and wetland areas. This disturbance has led to noxious weed invasions and the narrowing and degradation of riparian areas. Channelization has also removed the Rio de Flag’s access to the adjacent floodplain and associated flood detention. Historical rerouting of the Rio de Flag and some tributaries has combined flows into inadequately sized channels, thus leaving some Flagstaff neighborhoods, businesses, and Northern Arizona University prone to severe flooding (Figure 2). Trash buildup and illegal dumping exacerbate flooding risks where the Rio de Flag flows through culverts and beneath roads. These episodes of periodic flooding create safety concerns for underserved and homeless populations who often camp in dry stream beds. The U.S. Army Corps of Engineers, with the City of Flagstaff as a partner, has conducted planning to mitigate potential flood damage and facilitate redevelopment in Flagstaff’s central business district with the Rio de Flag Flood Control Project.

Dense forest stands in the upper RDF Watershed carry high fuel loads that are prone to wildfire risk and post-fire flooding. In 2010, the Schultz Fire burned over 15,000 acres in the Flagstaff area which resulted in the flooding of houses in the lower watershed. The Schultz Fire prompted authorities and the public to reexamine the health of our local forests which led to the voter-approved and publically-funded Flagstaff Watershed Protection Project (FWPP). The FWPP is currently being implemented to reduce the risk of devastating wildfire and post-fire. Additional forest restoration projects are planned within the RDF Watershed through the Four Forest Restoration Initiative.

Climate change and human demand pose compounding, unprecedented challenges in the RDF Watershed. Climate scientists anticipate more frequent extreme drought and heat, and stronger storms with heavier rainfall in Arizona which could lead to both catastrophic wildfires and diminishing water resources<sup>1</sup>. At the same time, the Flagstaff Regional Plan 2030 (2014)

estimates that Flagstaff's population will increase to 150,000 by 2030, putting further pressure on already limited water resources. Current efforts by the City of Flagstaff to engage the public in addressing climate change are underway with the Flagstaff Climate Action and Adaptation Plan.

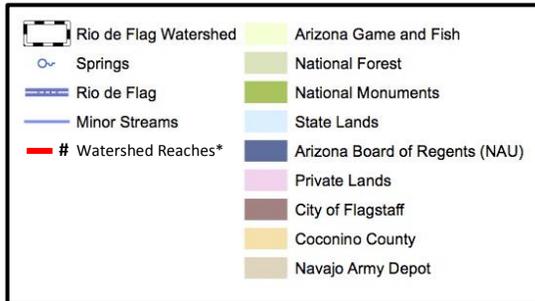
Flagstaff will likely rely more on groundwater if the projected population growth scenarios play out, and polluted stormwater runoff may impact groundwater in the long-term. Similarly, unregulated compounds of emerging concern (CECs) raise questions about their effects on human health and the environment. Reclaimed water that contains trace amounts of CECs is used to recharge the aquifer. Scientists are uncertain about the persistence and biologic impacts of CECs, and more research is needed.

The combination of these complex, interconnected issues requires data gathering, organization, and planning in order to facilitate a more sustainable balance between human needs and watershed health. FoRio proposes to engage a diverse group of stakeholders to address the critical watershed needs in the Rio de Flag through collaborative planning including public outreach and data gathering.

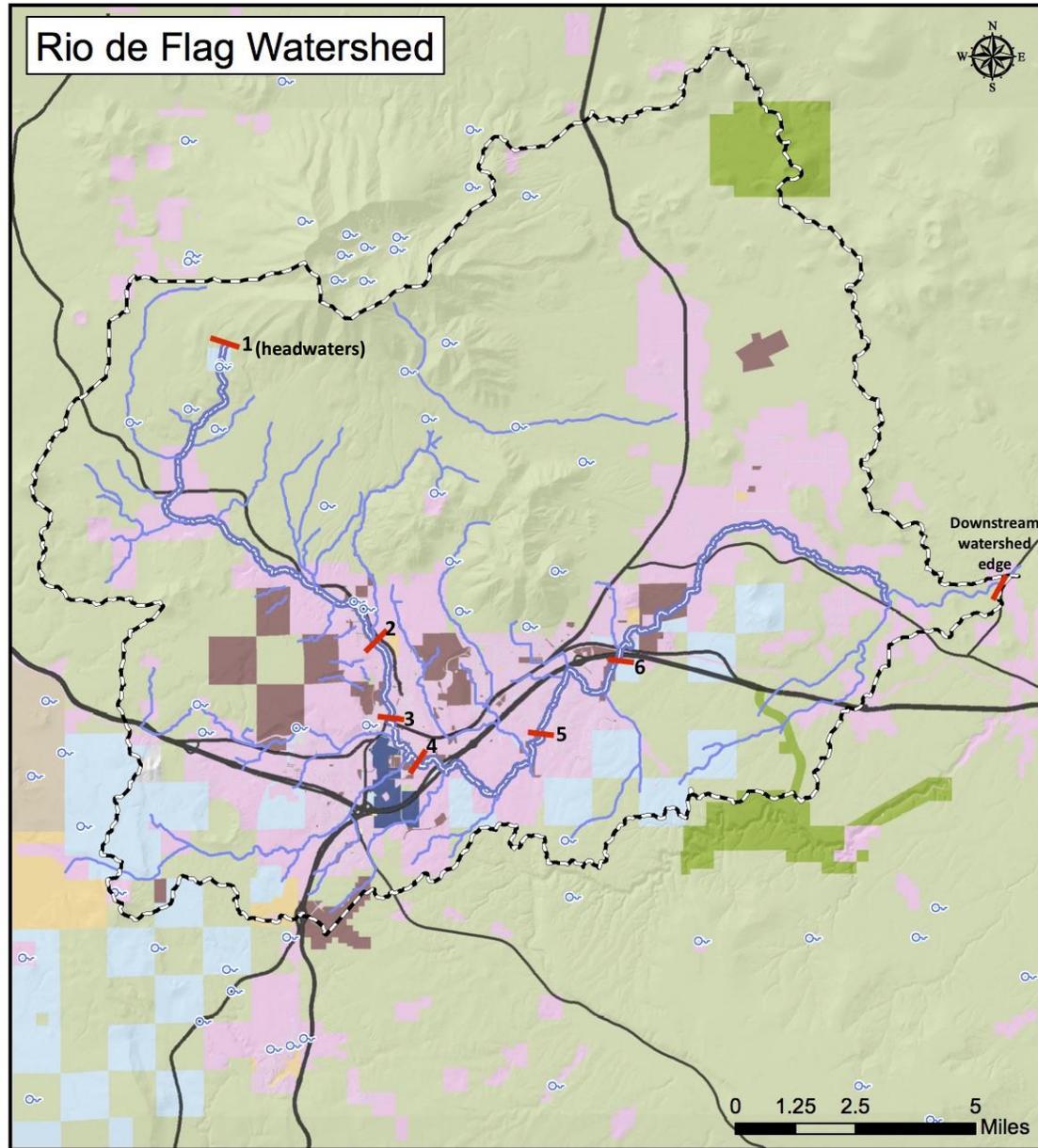
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<sup>1</sup>MacDonald, GM (2010) Water, climate change, and sustainability in the southwest. *Proc Natl Acad Sci USA* 107: 21256-21262.

**Figure 1. Rio de Flag Watershed with Watershed Reaches**



\*Watershed reaches correspond to descriptions in Table 1. We define “watershed reach” as distinct sections of the Rio de Flag including the tributaries that feed into these sections. For example, Reach 1 includes the section of the Rio de Flag from the headwaters up to Reach 2, with all the tributaries feeding into the Rio de Flag above Reach 2 considered as part of Reach 1.



**Table 1.** Water Issues, Opportunities, and Stakeholders by Watershed Reach

<b>REACH #</b>	<b>CHARACTER</b>	<b>WATER SOURCE</b>	<b>ISSUES</b>	<b>OPPORTUNITIES</b>	<b>STAKEHOLDERS</b>
1	Disturbed natural, urban/rural	Springs, stormwater	Flooding, water quality, wildfire	Recreation, restoration, scenic beauty	COF*, CC*, CNF, developers, FVNA, local tribes, private landowners
2	Ditched, urban with FUTS	Stormwater	Erosion, noxious weeds	Education, recreation, restoration	AZGF, COF, private landowners and businesses, recreation groups, WB*
3	Very urban, altered channel, FUTS	Stormwater	Flooding, noxious weeds, trash, water quality	Restoration, stormwater absorption	COF, FDBA, NAU, private landowners, SSCA*
4	Natural canyon, open grassland	Reclaimed water, Stormwater	Erosion, noxious weeds, trash, water quality	Education, recreation, restoration, potential recharge, scenic beauty	CC, COF, developers, private businesses and landowners, vulnerable population advocacy groups, WB
5	Golf course and altered channel	Stormwater	Flooding, noxious weeds	Education, recreation, restoration	CC, COF, developers, private landowners,
6	Disturbed channel, restored channel, ditch	Reclaimed water, stormwater	Noxious weeds, trash	Education, recreation, restoration, scenic beauty, archaeology	AZGF, CC, COF, DP, local tribes, private landowners, WB
1-6 (all reaches)	Varies	Reclaimed water, springs, stormwater	Erosion, flooding, noxious weeds, trash, water quality, wildfire	Education, recreation, restoration, stormwater absorption	Region-wide stakeholders (see full list on Page 7)

Please refer to Figure 1 to view geographic locations of Reaches 1-6. Reaches are generalized here to provide context for understanding the known opportunities, problems, or needs that vary from the headwaters to the downstream end of the Rio de Flag watershed. Acronyms in table: AZGF (Arizona Game and Fish Department); COF (City of Flagstaff\*); CC (Coconino County\*); CNF (Coconino National Forest); DP (Doney Park [unincorporated small community]); FDBA (Flagstaff Downtown Business Alliance); FUTS (Flagstaff Urban Trail System); FVNA (Fort Valley Neighborhood Association); NAU (Northern Arizona University); SSCA (Southside Community Association\*); WB (Willow Bend Environmental Education Center\*).

\*Indicates current involvement in the Existing Watershed Group. All other organizations and entities will be recruited for involvement under this project (see list on Page 7). Data for this table was gathered during pre-planning meetings between FoRio, the City of Flagstaff, and Coconino County in fall 2017.

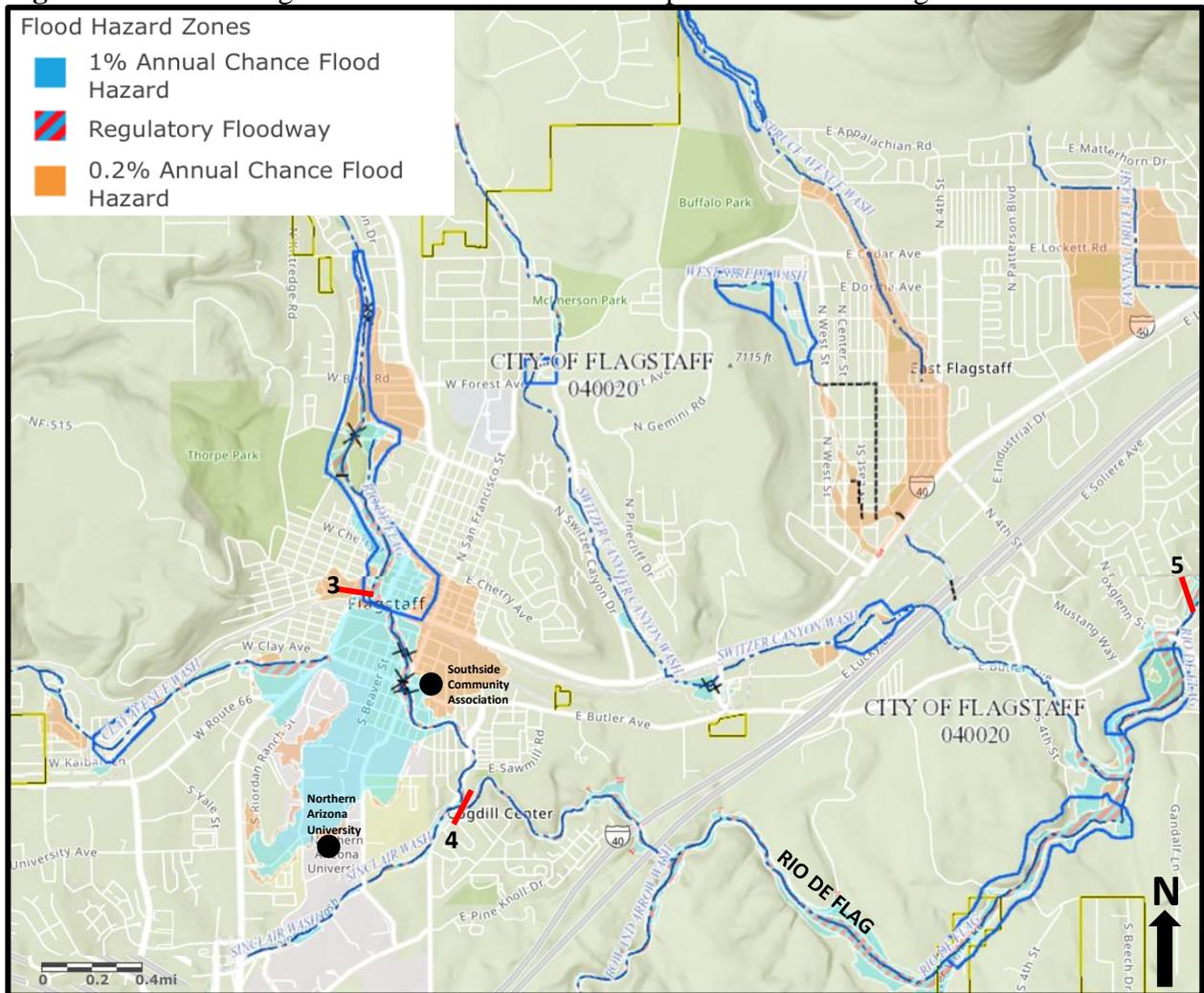
Existing members include:

- City of Flagstaff
- Coconino County
- Southside Community Association
- Willow Bend Environmental Education Center

Potential members include, but are not limited to:

- The Arboretum at Flagstaff
- Arizona Department of Environmental Quality (ADEQ)
- Arizona Department of Water Resources (ADWR)
- Arizona Game and Fish Department (AZGF)
- Arizona Public Service Electric Company (APS)
- Arizona State Land Department (ASLD)
- City of Flagstaff (COF)
- City of Flagstaff and the Water Services Compounds of Emerging Concern Advisory Council (COF)
- Coconino County (CC)
- Coconino Community College (CCC)
- Coconino County Cooperative Extension (CCCE)
- Coconino Master Gardeners Association (CMGA)
- Coconino National Forest (CNF)
- Coconino Plateau Water Advisory Council/Coconino Plateau Watershed Partnership
- Doney Park USC (unincorporated small community)
- Flagstaff Chamber of Commerce (FCC)
- Flagstaff Downtown Business Alliance (FBDA)
- Flagstaff Fire Department (FFD)
- Flagstaff Pedestrian and Bicycle Advisory Committees (FPBAC)
- Flagstaff Ranger District (FRD)
- Flagstaff Water Group (FWG)
- Fort Valley Neighborhood Association (FVNA)
- Friends of Flagstaff's Future (F3)
- Grand Canyon Trust (GCT)
- Greater Flagstaff Forests Partnership (GFFP)
- Hopi Tribe (HT)
- Navajo Nation (NN)
- Northern Arizona University (NAU)
- Private businesses and landowners (located in the 100-year floodplain and involved in watershed activities)
- The Nature Conservancy
- United States Geological Survey (USGS)
- Walnut Canyon National Monument (WCNM)
- Vulnerable population advocacy groups
- Representation from local developers

**Figure 2.** FEMA Designated 100 and 500-Year Floodplains in Central Flagstaff



**Figure 2.** Federal Emergency Management Agency's (FEMA) 100 and 500-year floodplain zones (shown in blue and orange) in central Flagstaff. Northern Arizona University and Southside Community Association shown located in the 100 and 500-year floodplains. Watershed reaches (red lines) 3-5 correspond to Figure 1 and Table 1. Not pictured: floodplain zones upstream and downstream of central Flagstaff. Rio de Flag flows south from the northwest. Map retrieved from the FEMA GeoPlatform at <https://fema.maps.arcgis.com> and edited by Chelsea Silva.

### 3. Technical Project Description

#### 3.1 Applicant Category: Existing Watershed Group

The Friends of the Rio de Flag (FoRio) is applying as a member of an Existing Watershed Group as defined under Section 6001(5) of the Cooperative Watershed Management Act.

FoRio is a nonprofit, grassroots organization comprised of local residents whose goals are to protect, restore, clean-up, and improve the Rio de Flag and its tributaries to maximize their

beauty, educational, recreational, and natural resource values, including the riparian habitats they provide. FoRio was formed in 2007 (incorporated in 2010) by a group of conservationists, scientists, concerned citizens, and local government representatives interested in raising awareness about the Rio de Flag (RDF) Watershed. Ongoing partnerships with the City of Flagstaff, Coconino County, the Southside Community Association, and Willow Bend Environmental Education Center, among others, allow FoRio and its partners to make consensus-based recommendations to address water availability and water quality issues within the RDF Watershed.

Nascent watershed planning efforts began in 2015 when FoRio made education and watershed planning two priorities. First, FoRio hired an AmeriCorps VISTA member to build capacity of the organization and expand place-based science learning opportunities to local schools. As a result, the Rio de Flag Stewardship program was launched to give schools, organizations, and local businesses the opportunity to restore, clean-up, and take part in citizen science projects focused on the Rio de Flag. The program relies upon the collaborative efforts of FoRio with the City of Flagstaff Sustainability Program and partnerships with groups throughout the community to provide education and volunteer opportunities that help build community resiliency through coordinated watershed restoration.

Next, FoRio has strengthened relationships with key stakeholders to build trust for watershed planning. Activities include: coordination meetings with staff at the City of Flagstaff (COF) and Coconino County (CC); an online, public watershed survey released in collaboration with COF and CC intended to gather public input on watershed needs, and; targeted outreach and education on environmental justice and watershed planning in Flagstaff's Southside Neighborhood, an area plagued by seasonal flooding, in coordination with COF, the Southside Community Association, and Northern Arizona University (NAU) using funds from an EPA Environmental Justice Small grant. In addition, FoRio has partnered with the City of Flagstaff, Willow Bend Environmental Education Center (WB), and other partners since 2007 on Make a Difference Day, a national celebration dedicated to service in local communities. Traditionally, this event has been dedicated to Rio de Flag restoration. The City of Flagstaff provides funding and staff for this event, and FoRio and WB provide volunteers, staff, and outreach.

### **3.2 Applicant Eligibility**

The Friends of the Rio de Flag (FoRio) is a 501(c)3 nonprofit, grassroots organization located in Coconino County, Arizona. Our mission is to promote the Rio de Flag's natural stream system as a unique and valuable natural resource and an asset to the City of Flagstaff and the surrounding community. Flagstaff area residents are affected by the quality and quantity of water in the Rio de Flag and the condition of its floodplain and riparian areas. Degraded riparian habitat, channel instability, potential wildfire, flood control infrastructure, recreational needs, and other human watershed issues threaten the health of the Rio de Flag. Climate change and increasing water demands are expected to put further pressure on water resources provided by the RDF Watershed.

FoRio is requesting Bureau of Reclamation funding to further develop our existing watershed group. FoRio in partnership with the City of Flagstaff and Coconino County have initiated efforts to organize stakeholders and further dialogue about watershed activities and planning. Together, this core group of stakeholders has acted as a steering committee for initiating

watershed planning, and have identified the need for bringing on a broad-base of stakeholders in order to enhance the group's understanding of the concerns that exist about the watershed, and at the same time provide for a more robust watershed restoration plan that has local and regional buy-in (see Attachment 1 for letters of support).

FoRio currently works on watershed-related projects with The Arboretum at Flagstaff, Arizona Department of Environmental Quality (through their Arizona Water Watch program), schools within the Flagstaff Unified School District, the Southside Community Association, and Willow Bend Environmental Education Center, who represent nonprofit organizations, neighborhood associations, and state agencies. These entities plus others that represent a diversity of stakeholders (listed on Page 7) will be invited to join the watershed group. We recognize that successful watershed planning and management requires the involvement and support of broad-based stakeholders. Therefore, we aim to focus our current and future work on expanding our stakeholder network and involvement to facilitate effective communication and alliance in protecting and restoring the RDF Watershed.

FoRio has been successful in promoting the Rio de Flag for nearly a decade and membership has grown from roughly 100 members to over 375 members. Our experience and knowledge of the issues and users of the Rio de Flag Watershed make us well suited to address watershed issues in such a way that promotes restoration, improvement, and sustainable use of water resources.

### **3.3 Goals**

FoRio is requesting funding from the Bureau of Reclamation's WaterSMART program to complete activities under Tasks A and B – Watershed Group Development and Watershed Restoration Planning.

Through this grant, FoRio will meet the following goals:

- 1) Assemble diverse watershed stakeholders to define the scope and desired outcomes of the watershed planning process;
- 2) Develop a memorandum of understanding as well as visions and goals for the group;
- 3) Conduct outreach activities including creating an outreach plan and information materials (e.g., brochures, advertisements, and website);
- 4) Facilitate stakeholder workshops to expand and diversify watershed group membership;
- 5) Gather information about issues and needs related to water quality, quantity, and restoration within the watershed (i.e., through stakeholder interviews and research);
- 6) Facilitate public workshops to understand community needs and identify priority projects that will improve the watershed and river corridor;
- 7) Host public meetings to present the watershed restoration plan draft and request final comments, and;
- 8) Develop a watershed restoration plan including conceptual watershed management projects.

Chelsea Silva, FoRio Executive Director, will serve as the Watershed Group Coordinator, project manager, and Reclamation liaison. Southwest Decision Resources<sup>2</sup>, a local environmental consulting firm, will facilitate stakeholder outreach and development of the watershed group.

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<sup>2</sup>Southwest Decision Resources; <http://www.swdresources.com/>

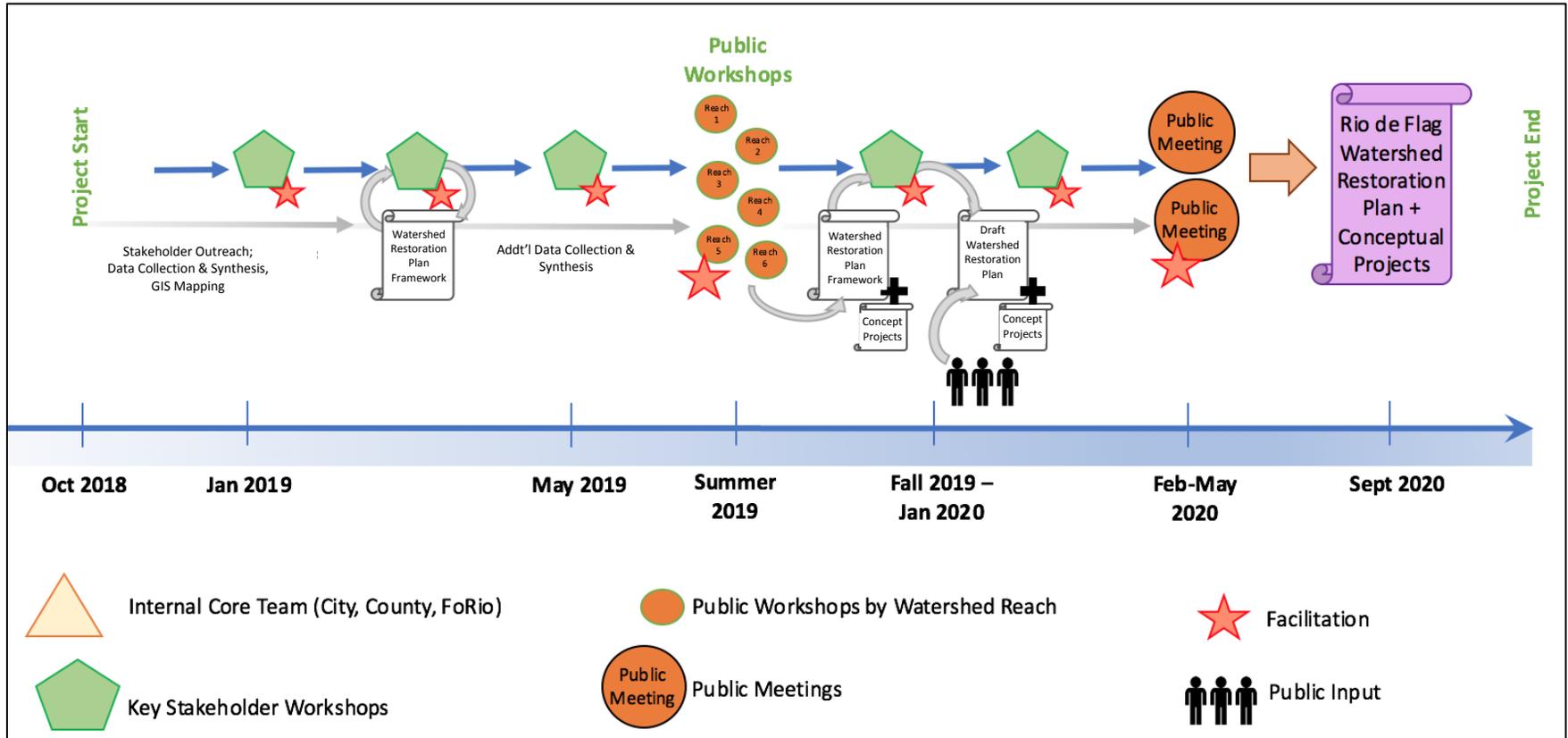
### 3.4 Approach

The Friends of the Rio de Flag is proposing a two-year project to meet the goals outlined in Section 3.3 (Table 2 and Figure 3).

**Table 2.** Project Tasks and Timeline

<b>TASK</b>	<b>SUBTASK</b>
<b>October 2018 – December 2018</b>	
Project hiring; conduct stakeholder outreach	<ol style="list-style-type: none"> <li>1. Friends of the Rio de Flag (FoRio) hires Watershed Coordinator (WC) and Public Outreach and Education Specialist (POES)</li> <li>2. Outreach and educational materials created</li> <li>3. GIS mapping/data collection begins</li> <li>3. Outreach/interviews with stakeholders in first 60 days</li> </ol>
<b>January 2019 – August 2019</b>	
Facilitate stakeholder/watershed group workshops and watershed group fundamentals development	<ol style="list-style-type: none"> <li>1. Southwest Decision Resources (SDR) hired 60 days after project start</li> <li>2. WC continues data collection/synthesis and outlines watershed restoration plan framework</li> <li>3. SDR and WC carry out 3 half-day workshops to develop watershed group fundamentals, review watershed restoration plan framework, form subcommittees</li> </ol>
Information gathering and public workshops	<ol style="list-style-type: none"> <li>1. Targeted research based on stakeholder-identified problems and needs</li> <li>2. SDR, WC, and POES hold six workshops throughout the watershed to identify watershed needs and projects that would improve the watershed</li> </ol>
<b>September 2019 – April 2020</b>	
Draft a watershed restoration plan/ conceptual projects	<ol style="list-style-type: none"> <li>1. SDR facilitates 2 half-day workshops with watershed group members</li> <li>2. Subcommittees and others contribute to development of watershed restoration plan sections, review conceptual projects</li> <li>3. Draft watershed restoration plan/conceptual projects complete</li> <li>2. Two public meetings to present draft watershed restoration plan and solicit public comments</li> </ol>
Public meetings	<ol style="list-style-type: none"> <li>1. SDR facilitates 2 public meetings to allow for public comment on final draft plan</li> </ol>
<b>May 2020 – September 2020</b>	
Completion of Rio de Flag Watershed Restoration Plan	<ol style="list-style-type: none"> <li>1. WC incorporates final public comments into watershed restoration plan and completes final draft by August 31, 2020.</li> </ol>
Final Reclamation report development	<ol style="list-style-type: none"> <li>1. Outline achievements, lessons learned, and future goals in a final report for Reclamation</li> <li>2. Submit by September 30, 2020</li> </ol>

**Figure 3.** Process Map for Watershed Planning for the Rio de Flag



**Oct. 2018 – Aug. 2019 tasks:** FoRio will hire a Watershed Coordinator and a Public Outreach and Education Specialist in the first two weeks of the project period. FoRio will conduct stakeholder outreach in the first 60 days of the project period to expand stakeholder membership, with an outreach plan completed in the first two weeks of the project. Outreach tasks to be completed by the Watershed Coordinator and Public Outreach and Education Specialist will include one-on-one contact with potential stakeholders, attendance at board meetings, and development of an introductory letter, a fact sheet, multi-media presentation, press release(s), and development of a website. Interviews will be conducted as needed to determine stakeholder priorities for watershed planning. Stakeholders will be invited to attend three ½ day workshops (see below).

Information gathering will begin 30 days into the project period and continue throughout the first year of the project period and will include research on current watershed conditions and GIS mapping, as well as synthesis of data gathering during previous watershed planning efforts (see 4.2.2 *Subcriterion No. B2. “Watershed Restoration Planning”*). GIS data will be requested from the City of Flagstaff, Coconino County, and other potential stakeholders. GIS mapping and spatial analysis will assist in interpreting information collected during the first year of the project period. GIS services will be conducted by the Watershed Coordinator in collaboration with partners. These data will be used to create a framework for the watershed restoration plan and will be presented during the second stakeholder meeting. Data will be made publically available through an online database (Google Drive) according to permissions of partners. Information gathering will be carried out by the Watershed Coordinator.

Southwest Decision Resources (SDR), a local facilitation and environmental planning consultancy group, will be hired approximately 60 days into the project to assist the expanded watershed group in the development of group fundamentals including a memorandum of understanding, communications plan, and vision and goals of the group. Stakeholders will participate in three, ½ day workshops held every two months from January 2019 – May 2019. Workshops will be organized as follows: 1<sup>st</sup>) Identification of watershed needs and opportunities; definition of group fundamentals (and official acceptance of stakeholders into group as “watershed group members”) 2<sup>nd</sup>) Introduction and discussion of draft watershed restoration plan framework and; 3) Subcommittee identification; definition and scope of public workshops finalized. Entities that are not interested in watershed group membership will still be encouraged to get involved with current or future watershed-related projects.

Next, the Watershed Coordinator will conduct interviews as needed with new watershed group members to identify problems and opportunities across the watershed. This will be followed by targeted research on member-identified problems and opportunities as well as research on current watershed conditions.

Beginning in May 2019, the Watershed Coordinator will work with the Public Outreach and Education Specialist and SDR to begin public outreach in coordination with the watershed group. The Public Outreach and Education Specialist will develop communication and outreach materials to inform residents about the watershed and opportunities to be involved in watershed planning (i.e., public workshops).

Public workshops will be organized in summer 2019 to gain an idea of community concerns and preferences for projects that would improve conditions in the watershed. Workshops held over a 6-week period will be organized by watershed reach (see Figure 1 and Table 1) and will serve as a method for identifying problems, needs, and opportunities not identified through the initial stakeholder/watershed group engagement process. SDR will plan and facilitate these workshops in coordination with the Watershed Coordinator and Public Outreach and Education Specialist. Promotion of events will be carried out by the Public Outreach and Education Specialist. Data gathered during these workshops will be synthesized by the Public Outreach and Education Specialist. Interested community members will be invited to participate in the crafting and review of the draft watershed restoration plan during March through May 2020.

Oct. 2018 – Aug. 2019 project milestones: Expansion of the watershed group through stakeholder outreach and workshops to develop watershed group fundamentals and define the scope and outcomes of a watershed planning process; identification of problems and needs in the watershed through stakeholder workshops and interviews; framework for watershed restoration plan completed; GIS mapping and analysis initiated; public outreach and education materials developed, and; identification of public views on problems and needs in the watershed and potential conceptual projects.

**Sept. 2019 – April 2020 tasks:** The Watershed Coordinator will continue adding detail to the watershed restoration plan framework. Public input gathered during public workshops (including conceptual watershed management projects) will be incorporated. The Watershed Coordinator and SDR will coordinate two ½ day watershed group workshops to review data gathered during public workshops and plan for public meetings. Subcommittees and any interested community members identified during public workshops will work with the Watershed Coordinator to elaborate on sections of the plan.

Two public meetings held at separate locations across the watershed will be held within a two-week period between February and April 2020 to present the draft watershed restoration plan. These meetings will provide residents with the opportunity to provide final comments on the draft plan. SDR will facilitate these meetings with aid from the Watershed Coordinator. The Public Outreach and Education Specialist will promote these events.

Sept. 2019 – April 2020 project milestones: Public input collected and incorporated into watershed restoration plan; presentation of the watershed restoration plan provides final opportunity for public comments.

**May 2020 – Sept. 2020 tasks:** Following public meetings, the Watershed Coordinator will incorporate final comments and finish the watershed restoration plan and conceptual projects by August 31, 2020. A final Reclamation report will be completed in the last two months of the project period and submitted no later than September 30, 2020.

May 2020 – Sept. 2020 project milestones: Completion of a watershed restoration plan and general watershed management project concepts, and completion of a final Reclamation report.

## 4. Evaluation Criteria

### 4.1 Criterion A: Watershed Group Diversity and Geographic Scope

#### 4.1.1 Subcriterion No. A1. Watershed Group Diversity

Planned expansion of the watershed group will include broad-based, diverse representation of affected stakeholders across the watershed. Current members include the City of Flagstaff, Coconino County, the Southside Community Association, and Willow Bend Environmental Education Center. These members represent local and regional governing bodies, an advocacy group/neighborhood association for Southside Neighborhood residents who live in the 100-year floodplain and are affected by periodic flooding of the Rio de Flag, and a local environmental education center. FoRio will work in coordination with these partners to expand the group's participation to include a more diverse group of stakeholders across the watershed. Outreach to stakeholders will occur during October through December 2019 with targeted outreach to community members and neighborhoods occurring during public workshops and public meetings to follow (May 2019 and spring 2020). Potential members include, but are not limited to those organizations and entities listed on Page 7.

Due to the location of the Rio de Flag Watershed, FoRio will not seek out representatives from hydroelectric production, livestock grazing, or irrigated agricultural production. These activities are either secondary or nonexistent in the watershed and therefore do not represent activities of concern regarding the health of the Rio de Flag Watershed.

Outreach to new members will occur in the October through December 2018 with in-depth interviews (as needed) with new and existing members to provide a launching point for researching watershed concerns. Three ½-day workshops planned in January through May 2019 will help build trust and understanding of these diverse stakeholders (more details on stakeholder outreach are provided in section **3.4 Approach**).

Successful watershed planning for the Rio de Flag requires the ability for Flagstaff area residents to share their ideas and express concerns. Therefore, in summer 2019 we will host public workshops throughout the watershed aimed at gathering community input. This will also provide residents with an opportunity to ask questions and identify projects of interest focused on watershed restoration (see section **3.4 Approach** for more information).

Expansion of the watershed group will improve dialogue and relationships with key stakeholders whose participation and input in watershed planning are fundamental. This project will expand lines of communication between Federal, state, local governments, tribes, and local communities by creating a one-stop-shop for identifying and addressing watershed issues, thereby increasing the collective capacity of these entities to efficiently and effectively address watershed issues.

Letters of support and the resolution authorizing expansion of the existing watershed group are included in Attachments 1 and 2.

#### 4.1.2 Subcriterion No. A2. Geographic Scope

Over 70,000 Flagstaff area residents are affected by the health of the Rio de Flag watershed due to a variety of environmental challenges (Figure 1 and Table 1). The Rio de Flag Watershed (10-

digit HUC) is a major tributary system within the Canyon Diablo Watershed (8-digit HUC #15020015) which drains into the Little Colorado River and then into the Colorado River upstream of Grand Canyon National Park. The Rio de Flag Watershed comprises over 200 square miles of the 1,200 square mile 8-digit HUC, and FoRio is interested in focusing planning for the Rio de Flag because its watershed functions directly impact the most populated region within the Canyon Diablo Watershed, while the remainder of the greater Canyon Diablo Watershed is extremely rural and relatively less impacted than the Rio de Flag drainage.

The following stakeholders are currently involved in the watershed group and represent local and regional land managers/governments, a neighborhood association, and a nonprofit environmental education center: the City of Flagstaff, Coconino County, the Southside Community Association, and Willow Bend Environmental Education Center. Outreach activities are planned (and described in **Section 3.4 Approach**) to expand membership to include stakeholders who represent the full geographic scope of the area. Please see the list on Page 7 for stakeholders to be targeted through outreach activities under this project.

## **4.2 Criterion B: Addressing Critical Watershed Needs**

### *4.2.1 Subcriterion No. B1. Critical Watershed Needs or Issues*

**Section 2.4** outlines the critical issues and needs in the Rio de Flag (RDF) Watershed identified during pre-planning activities carried out since 2015. Below we elaborate on these issues within the broad categories of degraded riparian ecosystems, flooding, climate change, and water quality. Also provided are specific stakeholders and agencies that will bring specific insights to the project they are directly impacted by these issues. As the project is carried out, other stakeholders listed on Page 7 or otherwise may be approached, as needed, for interviews on watershed issues as appropriate.

While the RDF Watershed provides many benefits to Flagstaff area residents, it also faces many issues (Figure 1 and Table 1) including:

- Active erosion
- Channelization and flooding
- Forest health and wildfire risk
- Illegal dumping
- Noxious weed invasions
- Polluted urban runoff
- Safety concerns for underserved and homeless populations
- Urbanization
- Water demands with growing human population and development

These issues vary across the watershed, affecting different stakeholders where they occur. For instance, while noxious weed invasions present a challenge across the watershed, flooding only affects stakeholders located within and around the 100-year floodplain (Figure 2). Similarly, illegal dumping in the Rio de Flag is concentrated in the urban areas of Flagstaff, affecting neighborhoods in these areas and local government officials.

**Issue I – Degraded Riparian Ecosystems:** Urban development has resulted in the degradation of large portions of the Rio de Flag and its tributaries. The removal of natural meanders that slowed flow and subsequent erosion has led to significant downcutting and overall channel instability in some sections. Channelization as a result of development has also caused significant soil disturbance thereby exacerbating noxious weed invasions. Urbanization has similarly led to

channels being used as illegal dumping grounds. The combination of these driving factors has degraded riparian ecosystems that provide essential habitat and cover for wildlife.

- *Issue I – Stakeholders/Agencies:* Arizona Game and Fish Department, City of Flagstaff, Coconino County, Coconino County Cooperative Extension, Coconino Master Gardeners Association, Coconino National Forest, Coconino Plateau Water Advisory Council/Watershed Partnership, Grand Canyon Trust, Hopi Tribe, Navajo Nation, Northern Arizona University, United States Geological Survey, Walnut Canyon National Monument

Issue II – Flooding: The cumulative effects of population growth and demands for housing and development have led to a precarious situation for the Flagstaff area. While the Rio de Flag is an ephemeral drainage system, seasonal flooding occurs throughout the community as channelization to meet human demands has removed the Rio de Flag's access to the adjacent floodplain, thus leaving large sections of Flagstaff and the surrounding communities prone to severe flooding. This includes a portion of the homeless population in Flagstaff who camp in dry streambeds and are at high risk of flash floods. The dangers posed by possible 50-year and 100-year flood events and larger events require planning and mitigation strategies. The City of Flagstaff with the U.S. Army Corps of Engineers has conducted ongoing planning to mitigate potential flood damage and facilitate redevelopment in Flagstaff's central business district through the Rio de Flag Flood Control Project. Another ongoing project, the Flagstaff Watershed Protection Project, aims at reducing the risk of wildfire in the upper watershed, thereby reducing post-fire flooding. FoRio received funding through an EPA Environmental Justice Small grant to conduct community outreach and education in the Southside Neighborhood related to the section of the Rio de Flag flowing through this neighborhood. Additional stakeholders will need to be engaged to determine other areas affected by flooding and to discuss best management practices needed to address this issue.

- *Issue II – Stakeholders/Agencies:* City of Flagstaff, Coconino County, local developers, Flagstaff Chamber of Commerce, Fort Valley Neighborhood Association, Friends of Flagstaff's Future, Northern Arizona University, private businesses and landowners, Southside Community Association, additional neighborhood associations

Issues III and IV – Climate Change and Water Quality: Climate change presents a growing concern for Flagstaff area residents living in the Rio de Flag Watershed. Climate predictions suggest that both drought and strong storms will become more frequent. This will expose the Flagstaff area to high intensity wildfire and fewer water resource options. Already stressed water resources will further diminish with climate change<sup>1</sup>, presenting challenges for the Flagstaff community which is expected to increase in population in coming years.

Water conservation strategies will be an essential component for mitigating climate change in Flagstaff into the future. Another important conservation strategy already relied upon in Flagstaff is water recycling. The Rio de Flag relies upon reclaimed water flows delivered from Flagstaff's two wastewater treatment plants to sustain its riparian ecosystems. However, unregulated compounds of emerging concern (CECs) left unfiltered in reclaimed water raise concerns about their effects on human health and the environment. These concerns will become even more important as water demands increase along with the expected increase in population, and reclaimed water is further sought out to meet these demands. Better understanding about and

discussion regarding the potential effects of CECs on human health and the environment will be necessary in order to develop management strategies.

- Issue III – Stakeholders/Agencies: City of Flagstaff, Coconino National Forest, Grand Canyon Trust, Flagstaff Ranger District, Northern Arizona University
- Issue IV – Stakeholders/Agencies: Arizona Department of Environmental Quality, Arizona Game and Fish Department, City of Flagstaff, City of Flagstaff Water Services, Flagstaff Water Group, Hopi Tribe, Navajo Nation, Water Services CEC Advisory Council, Friends of Flagstaff’s Future

The combination of this set of complex, interconnected issues in the Rio de Flag Watershed requires data gathering, organization, and planning in order to facilitate a more sustainable balance between human needs and watershed health. A collaborative approach is necessary to create an effective conservation stewardship legacy for the Rio de Flag Watershed. The Friends of the Rio de Flag proposes to organize a diverse group of stakeholders to address critical watershed needs in the Rio de Flag through collaborative watershed planning.

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<sup>1</sup>MacDonald, GM (2010) Water, climate change, and sustainability in the southwest. *Proc Natl Acad Sci USA* 107: 21256-21262.

*4.2.2 Subcriterion No. B2. Developing Strategies to Address Critical Watershed Needs or Issues Stakeholder Outreach and Partnership Building:* Previous partnership-building efforts began in 2015 when FoRio made watershed planning and education a priority. First, FoRio launched the Rio de Flag Stewardship program to give schools, organizations, and local businesses the opportunity to restore, clean-up, and take part in citizen science projects focused on the Rio de Flag. The program relies upon the collaborative efforts of FoRio, the City of Flagstaff Sustainability Program, Flagstaff Unified School District, and the Arizona Department of Environmental Quality’s Arizona Water Watch Program. The “Adopt” program provides education and volunteer opportunities that help build community resiliency through coordinated watershed restoration.

Second, FoRio has partnered with the City of Flagstaff, Willow Bend Environmental Education Center, and other partners since 2007 on Make a Difference Day, a nationally celebrated day dedicated to service in local communities. Traditionally, this event has been dedicated to restoring and improving sections of the Rio de Flag. Over one hundred volunteers attend this event every year, giving residents a chance to give back to the watershed. FoRio provides capacity for this event through volunteer recruitment, leadership, and in-kind resources (professional photography and watershed restoration expertise from the Board of Directors).

Finally, FoRio has strengthened partnerships with key stakeholders to build trust for watershed planning through meetings specific to watershed planning with staff at the City of Flagstaff (COF) and Coconino County (CC); release of an online, public watershed survey in collaboration with COF and CC intended to gather public input on watershed needs; and targeted outreach and education on environmental justice and watershed planning in Flagstaff’s Southside Neighborhood, an area plagued by seasonal flooding, in coordination with COF, the Southside Community Association, and Northern Arizona University (NAU) (supported by an EPA

Environmental Justice Small grant).

FoRio will build upon these previous partnerships through outreach that will broaden participation to include a diversity of stakeholders (see Page 7 for a list of additional stakeholders to be engaged). Initial outreach will be followed by stakeholder, public workshops, and public meetings to build trust, strengthen communication between stakeholders in the region and, ultimately, create a watershed restoration plan (see **Section 4.3 Approach**).

We anticipate that discussion about land use planning processes and land use designations within the Rio de Flag and its floodplain will arise during both stakeholder and public workshops. All workshops will be facilitated by professional consultant team members with Southwest Decision Resources (SDR) who will guide these discussions. SDR provides knowledge and expertise in discussing landscape-scale questions that involve multiple stakeholders.

FoRio will establish relationships with conservation organizations that advocate for balanced stewardship and use of public lands including Arizona Game and Fish Department, Grand Canyon Trust, and others. Relationship building with these organizations will occur through those activities described in **Section 4.3 Approach**.

Watershed Restoration Planning: Information gathering regarding the critical issues, needs, and opportunities in the watershed will occur through dialogue during stakeholder workshops and stakeholder interviews, literature research, public workshops, and public meetings. Further, information will be collected through review of relevant planning documents prepared by local government agencies. Strategies will be developed with public input on a reach by reach basis. We will reference peer-reviewed, scientific literature in order to identify best practices to manage land and water resources and adapt to changes in the environment.

In the case of conflict, the watershed group will identify opportunities to resolve such conflict through discussions mediated by SDR. SDR will provide help in facilitating a more structured and inclusive process with an emphasis on fostering more positive, sustaining working relationships among stakeholders. SDR's commitment to "achieving broad participation, higher quality outcomes, and more lasting solutions" will drive positive conflict resolution within the watershed group.

Prioritization of issues within the restoration plan will be determined by 1) utilizing conceptual plans and costs to look at the benefit/cost ratio; 2) utilizing a temporal need matrix to understand feasibility; 3) recognizing regulatory needs, and; 4) prioritizing issues that affect underserved populations.

Work under this project will build upon previous watershed planning efforts by FoRio, the City of Flagstaff, and Coconino County for the Rio de Flag Watershed. These pre-planning efforts include:

- Relationship-building between stakeholders: FoRio hired Southwest Decision Resources in fall 2016 with an Arizona Community Foundation grant to begin building important relationships with the City of Flagstaff and Coconino County. SDR and FoRio met multiple times in late 2016 and 2017 with each the City of Flagstaff and Coconino

County to gauge interest in watershed. These coordination meetings were followed by an SDR-facilitated meeting amongst all three groups to identify current watershed-related efforts underway and craft language for a questionnaire (see next bullet). A second meeting is planned for February 2018 to discuss next steps. These previous relationship-building activities will set the stage for expanding the watershed group to include a wide-ranging group of stakeholders.

- Public outreach and education: First, FoRio, the City of Flagstaff, and Coconino County released a public, online watershed survey (open in November 2017 and closed January 2018) to identify community perceptions about and experiences with the Rio de Flag. Data analysis is currently underway. Next, FoRio was awarded an EPA Environmental Justice Small grant in fall 2017 to support outreach and education on the Rio de Flag in the Southside Neighborhood where underserved residents face periodic flooding. Efforts under this project will serve to build relationships with residents in this neighborhood and the Southside Community Association. These previous public outreach and education efforts provide a basis for strengthening public engagement as outlined in tasks under this proposal.
- Data gathering: The Board of Directors of FoRio created a watershed planning vision document in 2017. The City of Flagstaff will hire consultants in spring 2018 to conduct a general assessment of watershed health that will be completed in June 2018. This will build upon a 2005 floodplain health inventory assessment. The vision document and general assessment of the health of the Rio de Flag will provide the foundation for completing a watershed restoration plan.

Watershed Management Project Design: This project does not include plans to design projects beyond a conceptual phase.

### **4.3 Criterion C: Implementation and Results**

#### *4.3.1 Subcriterion No.C1. Understanding of and Ability to Meet Program Requirements*

Please refer to **Section 3.4 Approach** and Table 2 “Project Tasks and Timeline” for a timeline for the proposed work, including major tasks, milestones, and dates. Project costs associated with the proposed project are outlined in the Project Budget.

#### *4.3.2 Subcriterion No.C2. Building on Relevant Federal, State, or Regional Planning Efforts*

Proposed activities outlined in the Technical Proposal will complement and help meet the goals of several ongoing water plans. Plans include the City of Flagstaff (COF) Zoning Code, COF Open Space Strategic Plan (2015), the Flagstaff Regional Plan 2030 (2014), the Coconino County Comprehensive Plan (2015), the COF Utilities Integrated Master Plan (2012), the Greater Flagstaff Community Wildfire Protection Plan (2005, revised 2012), the Flagstaff Watershed Protection Project (2012), the Flagstaff Climate Action and Adaptation Plan (expected 2018), and Picture Canyon Natural & Cultural Preserve Management Plan. These plans and others identified through data collection under this project will be considered and used as guiding tools for development of a watershed management plan.

In addition, this project will complement the EPA’s criteria for Watershed-Based Plans and FEMA’s Floodplain Management criteria. In complementing the goals of these Federal programs, this project will facilitate production of a watershed restoration plan that meets

multiple Federal goals and will provide a method for more effective resource development needed for watershed planning beyond the project period.

#### **4.4 Criterion D: Nexus to Department of Interior Initiatives**

The Rio de Flag Watershed is part of a larger drainage system belonging to the arid region of the Southwest. According to the Drought Monitor, the Rio de Flag Watershed lies in an area described as “Abnormally Dry.” This project supports the National Drought Resiliency Partnership initiative because the relationships built with key stakeholders and the watershed plan outline to and project concepts will help build resiliency drought in Flagstaff.

While not located within the locations specified under the Urban Water Federal Partnership, this project meets the initiative by “improving coordination among federal agencies and collaborating with community-led revitalization efforts to improve our Nation's water systems and promote their economic, environmental and social benefits.”

This project also supports the Colorado River Pilot Conservation Program because it promotes water conservation of the Rio de Flag, a tributary to the Lower Colorado River Basin (which contains Reclamation dams and reservoirs). Finally, this project supports the Environmental Protection Agency’s Environmental Justice Goal to “provide an environment where all people enjoy the same degree of protection from environmental and health hazards and equal access to the decision-making process to maintain a healthy environment in which to live, learn, and work” by involving a diversity of stakeholders, including those that represent underserved communities, in watershed planning.

This project has the potential to positively impact the northern spotted owl, a federally endangered species. Other species that might be impacted will be identified using the Arizona Game and Fish Department’s HabiMap tool, a web-based tool for identifying endangered and threatened species by location.

The Rio de Flag is utilized by several local tribes, including the Hopi and Navajo, for collection of socially important plants. In addition, the Rio de Flag Watershed is historically significant as it contains petroglyphs, encampments, and travel corridors from ancient tribes. Expansion of the watershed group will, therefore, serve to benefit local tribes because it will provide the opportunity to identify areas in the watershed that are culturally relevant or otherwise sacred to the tribes, and places that can either be protected or restored in collaboration with these tribes.

### **ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE**

The proposed project does not include monitoring, measurement, or other field work, and will not result in impacts to environmental or cultural resources.

### **REQUIRED PERMITS OR APPROVAL**

Access permits may be required for conducting surveys along the Rio de Flag where previous information on stream health is unavailable. The Friends of the Rio de Flag will seek out access permits from the City of Flagstaff, Coconino County, the United States Forest Service, the Arizona State Trust Fund, and private owners where permits are required. We are fortunate in that most needed information has already been acquired by the City of Flagstaff for the Watershed. All required permits will be obtained prior to accessing any section of the Rio de

Flag that the Friends of the Rio de Flag identifies as an area that needs to be surveyed for further data collection.

## PROJECT BUDGET

### 1. Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	\$/Unit	Quantity		
<b>Supplies and Materials</b>				
Office supplies	\$1,000	1	total	<b>\$1,000</b>
Printing	\$1,200	1	total	<b>\$1,200</b>
<b>Contractual/Construction</b>				
Watershed Group Coordinator	\$30	75	hours/month for 24 months	<b>\$54,000</b>
Public Outreach and Education Specialist	\$25	20	hours/month for 24 months	<b>\$12,000</b>
Facilitators	varies	1	each	<b>\$19,950</b>
<b>Other Costs</b>				
Space/Room Rental	\$200	13	each	<b>\$2,600</b>
<b>TOTAL DIRECT COSTS</b>				<b>\$88,150</b>
<b>Indirect Costs</b>				
	10%	-	-	<b>\$8,815</b>
<b>TOTAL ESTIMATED PROJECT COSTS</b>				<b>\$99,565</b>

### 2. Budget Narrative

#### 2.1 Materials and Supplies

Office supplies include pens, paper, staples, binder clips, and toner are needed for printing outreach materials, and for use during stakeholder and public workshops. A camera is needed to document project activities and capture images relevant to watershed planning for use in the watershed restoration plan. Office supplies will require \$1,000 while printing will require \$1,200.

#### 2.2 Contractual

Watershed Group Coordinator: FoRio will hire Chelsea Silva to serve as the Watershed Group Coordinator. Chelsea Silva currently serves part-time as FoRio's Executive Director. As the part-time Watershed Coordinator, she will conduct outreach to stakeholders, interview stakeholders, lead in organizing the stakeholder /public workshops and public meetings, and write the watershed restoration plan. Chelsea has volunteered with FoRio for over three years giving her the experience and familiarity to successfully serve in this position. \$54,000 is needed for the Watershed Coordinator at \$30/hour for 24 months at 75 hours/month.

Public Outreach and Education Specialist: A Public Outreach and Education Specialist will be hired to aid in engaging stakeholders and the public throughout the watershed planning process. \$12,000 is needed for the Public Outreach Education Specialist at \$25/hour for 24 months at 20 hours/month.

Facilitators: FoRio will hire Southwest Decision Resources (SDR) in 60 days of the project to aid in facilitating five stakeholder workshops, six public workshops, and two public meetings. We have identified Southwest Decision Resources, a local environmental consulting firm, to hire for this task for their expertise stakeholder and public engagement in landscape-scale environmental planning processes. SDR has helped FoRio with watershed planning since 2016 and provides professional experience and familiarity with watershed planning for the Rio de Flag. \$19,950 will be used to hire SDR to complete facilitation tasks (Senior Facilitator/Program Associate at \$94/hour for 115 hours and Facilitator/Program Associate at \$69/hour for 115 hours plus Expenses [\$1,200]).

### **2.3 Environmental and Regulatory Compliance Costs**

None.

### **2.4 Other**

Space/Room Rental: Meeting space fees for hosting stakeholder and public meetings will require a total of \$2,600 to cover five stakeholder workshops, six public workshops, and two public meetings, each valued at \$200.

### **2.5 Indirect Costs**

Friends of Rio de Flag opts to charge the de minimis rate of 10% MTDC for this project. MTDC means all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel, and up to the first \$25,000 of each subaward (regardless of the period of performance of the subawards under the award). MTDC excludes equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of \$25,000.

### **2.6 Total Costs**

The total direct and indirect costs for this project amount to \$99,565.

## **ATTACHMENTS**

### **Attachment 1. Letters of Support**

Letters of Support are provided by the following entities, individuals, and organizations:

- City of Flagstaff Water Services Division (local government)
- Coconino County Community Development Department (regional government)
- Jack Welch (local resident)
- Southside Community Association (neighborhood association)
- Willow Bend Environmental Education Center (environmental education nonprofit)

### **Attachment 2. Official Resolution**



FRIENDS OF THE RIO DE FLAG

Resolution of the Board of Directors

This is a certified copy of resolution that was passed by the Friends of the Rio de Flag (FoRio) Board of Directors, by vote and endorsed by a quorum of members, at an organized Board meeting held on January 11, 2018.

RESOLVED, that this Board of Directors hereby provides legal authority to Rick Miller, Board President, to enter the Friends of the Rio de Flag (FoRio) into a contractual agreement and financial and legal obligations associated with the receipt of a Cooperative Watershed Management Program (CWMP) Grant.

RESOLVED FURTHER, that the Board of Directors supports the application for the project, "Advancing Watershed Planning for the Rio de Flag."

RESOLVED FURTHER, that if selected to receive CWMP funds, FoRio will work with the Bureau of Reclamation to meet established deadlines for entering into a financial assistance agreement.

I, Rick Miller, certify that I am the duly elected and acting President of the Friends of the Rio de Flag, a 501(c)3 non-profit organization under the laws of the state of Arizona. I further certify that the resolution set forth above was adopted by the Board of Directors of the Friends of the Rio de Flag at a duly noted meeting on January 11, 2018 and that the said resolution has not been modified or rescinded.

Dated this day of January 25, 2018

A handwritten signature in black ink, appearing to read "Rick Miller", written in a cursive style.

Rick Miller, Friends of the Rio de Flag Board President



# City of Flagstaff

Water Services Division  
211 W. Aspen Ave.  
Flagstaff, Arizona 86001

January 25, 2018

RE: United States Bureau of Reclamation WaterSMART Cooperative Watershed  
Management grant program

To Whom It May Concern,

The City of Flagstaff Water Services Division writes this letter of support for the Friends of the Rio de Flag (FoRio) in their bid to seek funding through the United States Bureau of Reclamation under the WaterSMART Cooperative Watershed Management grant program. The mission of Flagstaff Water Services is to professionally and cost-effectively provide water, wastewater, and stormwater services that meet the present and future environmental, health, and safety needs of the community. Engaging in a process to continually improve our understanding of the Rio de Flag watershed is critical to fulfilling our mission. Therefore we support FoRio in their bid to seek funding for their "Advancing Watershed Planning for the Rio de Flag" project.

We recognize the FoRio as a local non-profit citizens group that has focused on the health and well-being of the Rio de Flag Watershed for nearly a decade, and we recognize the diverse, competent skills of their membership. The City has partnered with FoRio in successful projects in the past and has confidence in their ability to successfully carry forward this project with the Water Services Division as a key stakeholder.

The funding will enable the FoRio to hire a watershed coordinator which will assist that organization in engaging a diverse stakeholder group to achieve collaborative objectives. Please let us know if we can be of further assistance.

Sincerely,

Bradley M. Hill, R.G.  
Director - Water Services  
(928) 213-2400



***Water – Wastewater - Reclaimed Water - Stormwater***



**COCONINO COUNTY ARIZONA**  
**COMMUNITY DEVELOPMENT DEPARTMENT**

Jay Christelman  
Director

January 30, 2018

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

Attn: Mr. Darren Olson

Re: Letter of support for Friends of the Rio de Flag's funding request

Dear Mr. Olson,

I write to support the Friends of the Rio de Flag (FoRio) in its bid to seek funding through the Department of the Interior's Bureau of Reclamation WaterSMART program.

Coconino County Community Development is a key stakeholder in this effort given that the Rio de Flag spans four of the five Supervisorial Districts and impacts numerous communities throughout the county. We believe that a stakeholder-driven, community-supported watershed planning document for the Rio de Flag is a major step toward a wise and cooperative management strategy. Therefore, we support FoRio in its bid to seek funding for its "Advancing Watershed Planning for the Rio de Flag" project. Our department has been involved with preplanning for the Rio de Flag in partnership with FoRio since early 2017, and we are confident of its ability to carry out this project successfully.

FoRio is a local nonprofit citizens' group that has focused on the health and well-being of the Rio de Flag watershed for nearly a decade. Its membership includes a diverse skill set and its members are active in volunteer work that focuses on education, outreach, cleanup, weeding, native plant restoration, and monitoring of the Rio de Flag corridor.

The funding will provide the FoRio with the flexibility to hire a watershed coordinator, and the time and ability to develop an engaged watershed group composed of a diversity of stakeholders, including Coconino County.

Please let me know if I can be of any further assistance as you consider this important effort.

Sincerely,



Jason "Jay" Christelman  
Director, Community Development  
Coconino County

cc: J.M. Rumann, P.E., CFM, Engineering Supervisor; John Carr, P.E. CFM, County Hydrologist

Bureau of Reclamation - Financial Assistance Support Section  
Mail code: 84-27814  
P.O. Box 25007  
Denver, Colorado 80225  
Attention: Darren Olson

Mr Olson,

I am writing this letter in support of The Friends of the Rio de Flag Organization in their effort to seek funding through the United States Department of Interior, Bureau of Reclamation under the WaterSMART Cooperative Watershed Management Grant Program.

I have lived in Flagstaff for twenty years and was one of the founding members of The Friends of the Rio de Flag and have also served on their board. I have been deeply involved during my time living here in the support of the goals of this excellent, community oriented organization.

The Rio de Flag is an ephemeral stream that can become a roaring river during our monsoon season. This intermittent behavior supports a wide and very important diversity in plant and wildlife species plus it provides greenway recreational opportunities to the citizens of Flagstaff.

Along the water corridor of the Rio de Flag are ponds, related wetlands and watchable wildlife sites. Our urban trail system also has a vital place in the Rio de Flag landscape.

The Rio does have challenges however. Invasive weeds and erosion impede productive habitats relied on by wildlife. Lack of oversight along some of the urbanized sections of the Rio have put many of our native plants in jeopardy.

Therefore, I fully support this undertaking by the Friends of The Rio de Flag Organization to fund additional watershed planning and work as well as their many educational, monitoring and outreach programs.

*Jack Welch*

Jack Welch  
2600 East Seventh Avenue - #29  
Flagstaff, Arizona, 86004

928 714 0504  
ADILLLO@aol.com



19 January 2018

To Whom It May Concern:

The Southside Community Association writes to support the Friends of the Rio de Flag (FoRio) in their bid to seek funding through the United States Department of Interior, Bureau of Reclamation under the WaterSMART Cooperative Watershed Management grant program.

The Southside Community Association is a nonprofit organization whose mission is to advocate for issues for the residents of the Southside Neighborhood. With over half of the Southside Neighborhood located in the 100-year floodplain of the Rio de Flag, our organization understands the need for a stakeholder driven approach to watershed planning. We also recognize the need for involving community members in watershed planning efforts to address the complex issues present in our watershed, and therefore we support FoRio in their bid to seek funding for their "Advancing Watershed Planning for the Rio de Flag" project. The Southside Community Association currently partners with FoRio under an EPA Environmental Justice Small grant aimed at helping residents understand and plan for the future of the Rio de Flag channel that flows through the neighborhood and causes periodic flooding for local residents.

FoRio is a local non-profit citizens group that has focused on the health and well-being of the Rio de Flag Watershed for nearly a decade. Their membership includes a diverse skill set and is active in volunteer work that focuses on education, outreach, cleanup, weeding, native plant restoration, and monitoring of the Rio de Flag corridor.

The funding will provide the Friends of the Rio de Flag with the flexibility to hire a watershed coordinator, and the time and ability to develop an engaged watershed group composed of a diversity of stakeholders, including Willow Bend.

Please let us know if we can be of any further assistance as you consider this important effort.

Sincerely,

Deborah A. Harris, President  
Southside Community Association  
(928) 226-7566  
Deborah.Harris@nau.edu



12 January 2018

To Whom It May Concern:

Willow Bend Environmental Education Center writes to support the Friends of the Rio de Flag (FoRio) in their bid to seek funding through the United States Department of Interior, Bureau of Reclamation under the WaterSMART Cooperative Watershed Management grant program.

Willow Bend is a nonprofit organization whose mission is to provide educational outreach services that build environmental awareness and an ethic of responsible stewardship of our natural and cultural resources. Located along one of the main tributaries to the Rio de Flag, our organization understands the need for a stakeholder driven approach to watershed planning. We also recognize the need for involving community members in watershed planning efforts to address the complex issues present in our watershed, and therefore we support FoRio in their bid to seek funding for their "Advancing Watershed Planning for the Rio de Flag" project. Willow Bend has partnered with FoRio in successful projects in the past and has confidence in their ability to successfully carry forward this project.

FoRio is a local non-profit citizens group that has focused on the health and well-being of the Rio de Flag Watershed for nearly a decade. Their membership includes a diverse skill set and is active in volunteer work that focuses on education, outreach, cleanup, weeding, native plant restoration, and monitoring of the Rio de Flag corridor.

The funding will provide the Friends of the Rio de Flag with the flexibility to hire a watershed coordinator, and the time and ability to develop an engaged watershed group composed of a diversity of stakeholders, including Willow Bend.

Please let us know if we can be of any further assistance as you consider this important effort.

Sincerely,

Moran Henn   
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