

Advancing Watershed Planning for the Rio de Flag

Interim Report #8: January 1 - March 31, 2021

for the US Bureau of Reclamation

WaterSMART Grant Agreement #R18AP00102

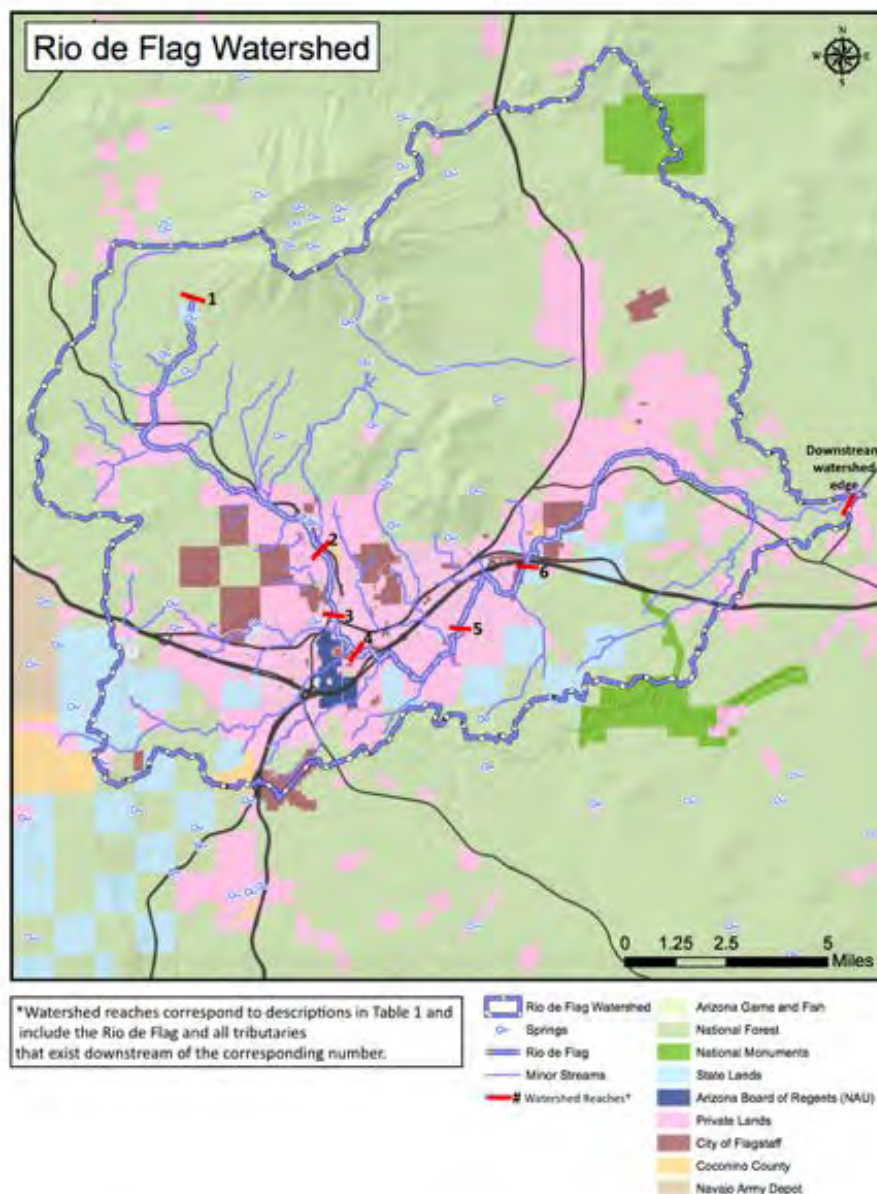


Prepared by Friends of the Rio de Flag

Apr. 29, 2021, Flagstaff, Arizona

BACKGROUND AND OBJECTIVES

Americans face an increasing set of water resource challenges. Aging infrastructure, rapid population growth, depletion of groundwater resources, impaired water quality associated with particular land uses and land covers, water needed for human and environmental uses, and drought all play a role in determining the freshwater conditions at any given place and time. The US Bureau of Reclamation's WaterSMART: Cooperative Watershed Management Program provides a framework for Federal leadership and assistance to stretch and secure water supplies for future generations in support of the priorities of the Department of the Interior: to create a legacy of conservation stewardship and restore trust with local communities by providing funding to grassroots, local watershed groups, and encouraging diverse stakeholders to develop collaborative solutions that address their water management needs.



"My children and their friends grew up spending time along the Rio de Flag where they could learn about a riparian ecosystem -- watching birds, insects, and plants regenerate each spring..."

—Lea J. Parker, *AZ Daily Sun*, Letters 2010



This interim report presents the objectives, activities, and outcomes of a WaterSMART grant focusing on the Rio de Flag in northern Arizona. The Rio de Flag is an ephemeral river and riparian corridor that interconnects the Flagstaff community and enhances public well-being, by providing a multitude of environmental, social, cultural, and economic benefits. The Rio de Flag's watershed, of south central Coconino County, covers an area of about 200 square miles. The headwaters originate at 12,000 ft along the western flanks of San Francisco Mountain and drain into and across the City of Flagstaff near 7,000 ft. The Rio de Flag watershed is part of the 1,200 square mile Canyon Diablo watershed that flows into the Little Colorado River, which in turn joins the mainstem Colorado River at their confluence in Grand Canyon National Park. Many rivers in the region are ephemeral or intermittent, given aridity and the loss of surface flow downward into underlying fractured bedrock, and the Rio de Flag is no exception. Also in the character of many Southwest rivers, the Rio de Flag is prone to remarkably large flooding events. These floods have been exacerbated by urban development throughout most of the watershed.

The Friends of the Rio de Flag is coordinating and focusing this collaborative watershed planning on the Rio de Flag because the over 70,000 Flagstaff area residents rely upon the Rio de Flag watershed as a source for drinking water, recreation, and livelihood. The Rio de Flag hosts valuable riparian habitats that are fed by periodic runoff flows, natural springs, and city-produced effluent. The Rio de Flag provides other vital services to the community in its capacity to process and absorb floods and stormwater. It is also an important open space corridor for City residents that connects communities and offers aesthetic and recreational enjoyment, historical links to ancestral indigenous cultures, and provides habitat, cover, and a movement corridor for wildlife. Urban development has resulted in water supply concerns, stream channelization, erosion, and degradation of the riparian ecosystem, which have increased the risk of flooding and caused water quality concerns. Friends of the Rio de Flag is coordinating and facilitating con-

versations amongst a diverse group of stakeholders to inform the watershed planning process. We especially seek to engage the Hopi Tribe and the Navajo Nation, who also have direct management interest in the Rio de Flag Watershed, while collectively recognizing that the watershed is of great cultural significance to the more than 13 indigenous nations affiliated with its headwaters on the San Francisco Peaks.

The long-term goals of Friends of Rio de Flag 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. This project advances those goals and centers on working collaboratively to meet two primary objectives:

1. Expand on our existing watershed group to form a broad-based multi-stakeholder Rio de Flag Watershed Group, in which Friends of the Rio de Flag serves as convener and collaborator;
2. Complete a watershed restoration plan, including general watershed management project concepts.

ACTIVITIES

The following activities lead to meeting our project objectives:

- Develop a mission statement, vision statement, memorandum of understanding, and goals for the watershed group;
- Conduct outreach activities including creating a communication plan, outreach plan, and information materials (i.e., brochures, advertisements, and website);
- Conduct stakeholder workshops to establish broad-based, diverse membership;
- Gather information about issues and needs related to water quality, quantity, and restoration within the watershed (i.e., through stakeholder interviews and research);
- Conduct public sub-watershed workshops to gain an idea of projects that would improve the watershed, and;
- Develop a watershed restoration plan and identify priority implementation projects to the conceptual level.

TASKS AND MILESTONES

Milestone / Task / Activity	Planned Start Date	Planned Completion Date
Stakeholder Outreach 50% Complete	In Progress	December 2019
Stakeholder Workshops 50% Complete	June 2019	December 2019
270 Day Sufficiency Report	December 2019	February 2020
Stakeholder Outreach Complete	October 2019	December 2019
Public Workshops	October 2019	June 2020
Draft Watershed Plan	February 2020	September 2020
Milestone / Task /Activity	Planned Start Date	Planned Completion Date
Stakeholder Workshops Complete	February 2020	July 2021
Draft Watershed Plan Complete	February 2020	June 2021
Request Public Input on Watershed Plan	June 2021	July 2021
Finalize Watershed Plan	August 2021	September 2021

milestone	current progress / status
Stakeholder Outreach	completed; formed expanded watershed group
Stakeholder Workshops 50%	completed; established clear watershed plan goals and objectives, mission, guidance document, developed Covid virtual public outreach plan.
270 day Sufficiency Report	completed, approved
Draft Watershed Plan 50%	nearing completion; detailed outline completed; drafts of 6 sections in progress; initial drafts of Cultural History, Public Outreach Plan and draft Background Hydrogeology, etc. section now completed. Anticipate reaching 50% draft watershed plan milestone by May 15.

Public Workshops	completed; completed detailed public outreach plan, implemented Rio de Flag presentation and input series called Explore the Watershed - completed the 6 biweekly video-based expert presentations/public meetings/input surveys, in response to COVID 19 guidelines; developed interactive platforms and survey maps, launched WARF website, posted Zoom recordings and summary notes for the public, completed summary map of geo-referenced public comments, synthesized into online interactive GIS for WARF review.
Stakeholder Workshops	in progress; post-public input WARF workshop scheduled for May 19.

Table above shows milestone status and progress at end of current reporting period - March 31, 2021.

Note: Interim project performance reporting is described below in narratives under each of the tasks where work was conducted during the performance period.

1. Expand the Watershed Group

Description: Conduct outreach activities to expand and further develop our ability to promote the sustainable use of the water resources of the Rio de Flag Watershed and improve the functioning condition of springs and streams through: water conservation, improved water quality, ecological resiliency, and the reduction of water conflicts.

Tasks for this activity include:

- **Conduct outreach activities and create materials that can be used to reach stakeholders within the watershed and complete interviews within the first 120 days.**

Status: In December 2019 we reached the **Stakeholder Outreach Complete milestone** and stayed within the original cost estimate for this milestone. We interviewed a diversity of key stakeholders, most of whom agreed to participate in a watershed

stakeholder group to develop a Rio de Flag watershed plan and identify conceptual projects for implementation. We recently returned to the stakeholder interviews for additional conceptual projects that the interviewees had identified, to include in a project prioritization process being developed by the WARF.

- ***Assemble diverse watershed stakeholders to define the scope and desired outcomes of the watershed planning process.***

We assembled the watershed stakeholder group from those interviewed who had agreed to join. The stakeholders chose a name: the Watershed Alliance for the Rio de Flag, or WARF. We developed a mission/vision statement including primary goals, created our collaboration guidance document and identified a process to keep Flagstaff City Council and Coconino County Board of Supervisors apprised of our progress on the watershed plan, and developed an evolving process map for stakeholder and public input. The W.A.R.F. comprises stakeholders from Northern Arizona University, Hopi Tribe, City of Flagstaff, Coconino County, Coconino National Forest, Museum of Northern Arizona, Friends of the Rio de Flag, Wild Arizona, and private citizens with interest and expertise.

- ***Develop a memorandum of understanding as well as visions and goals for the group.***

In September 2020, Friends of the Rio de Flag started the discussion of researching longer-term options for a more formal structure for the WARF and seeking guidance from organization and collaboration experts in the area. With Southwest Decision Resources we will present options at the upcoming WARF workshop #4 in May 2021, as we move towards planning an implementation phase.

The **Watershed Alliance for the Rio de Flag**, or the **WARF**, has the following mission statement:

“The Watershed Alliance for the Rio de Flag promotes watershed health, benefits human and ecological communities, and increases public engagement through the development and implementation of the Rio de Flag Watershed Plan.”

Following are the six goals identified and set by the WARF:

Goal 1: Increase integrated cultural, scientific, and historical understanding of the Rio de Flag watershed.

Goal 2: Protect and enhance Rio de Flag watershed health to deliver ecosystem services to future generations.

Goal 3: Benefit human communities of the Rio de Flag watershed.

Goal 4: Benefit native ecological communities of the Rio de Flag watershed.

Goal 5: Increase public awareness and engagement to strengthen the community's connection to the Rio de Flag watershed.

Goal 6: Create a sustainable funding stream for the Rio de Flag watershed.

We agreed to hold monthly meetings of the WARF in the form of workshops to develop the Rio de Flag watershed plan and to plan for public workshops. We planned to resume that schedule with our August 2020 virtual stakeholder workshop but delayed additional stakeholder workshops during the period of the bi-weekly public meeting Zoom series, in winter to early spring 2020-21.

At previous WARF workshops, we developed objectives for the watershed restoration plan and reviewed a draft outline, built from the issues and trends resulting from our context mapping exercise. The core team expanded and refined the watershed plan outline and integrated information into the plan sub-sections to be reviewed at subsequent WARF workshops. We are completing the stakeholder workshop milestone virtually and the schedule was shifted to align with the virtual public workshops such that the WARF meets to review the workshop methods, review watershed plan sections, and to synthesize the comments/input for developing project concepts to be implemented as a result of the watershed planning.

2. Watershed Management Project Concepts

Description: Work to develop project concepts that will benefit the health of the Rio de Flag Watershed through improved water quality and quantity, ecological resilience and conflict resolution efforts. Identify problems and needs within the Watershed from existing technical studies, reports and information from local, state and federal organizations as well as local community stakeholders and private organizations.

Tasks for this activity include:

• Facilitate public workshops to understand community needs and identify priority projects that will improve the watershed and river corridor.

Status: In February 2021, we reached the Public Workshops completed milestone for the 6 virtual speaker series and public input meetings. The summary notes, power-point presentations, and zoom recordings for each session are posted online on the new WARF website here: <https://sites.google.com/site/watershedalliancefortherio/public-meetings/presentations-and-notes>

From November to December 2020, we had conducted 4 in the series of 6 virtual bi-weekly public workshops tied to the 6 watershed plan goals, rather than geographically had they been in-person meetings. Each webinar featured multiple expert presenters on the watershed plan goal topics, with our core team facilitator Southwest Decision Resources.

We used several tools including the Zoom platform and polls, Mentimeter question surveys, and interactive map-based comment collection using Arc GIS tools.

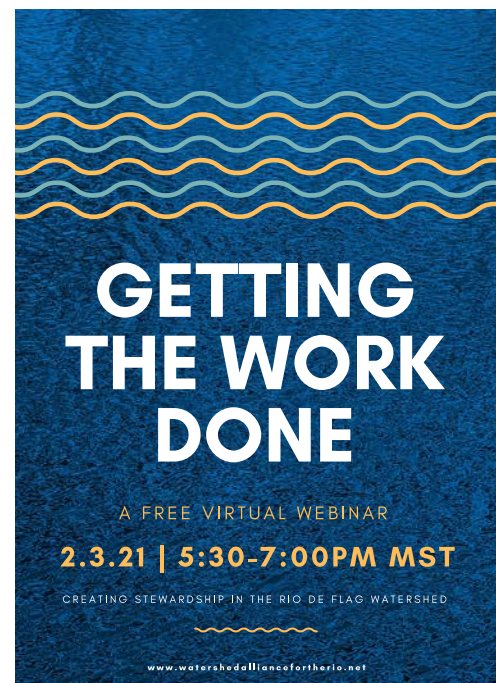
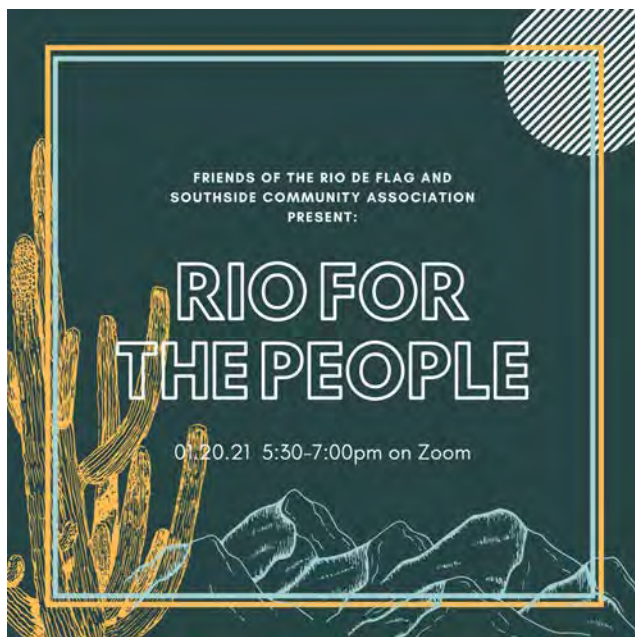
We developed a new logo and completed the website for the WARF (see screenshot below): watershedalliancefortherio.net



The webinars were recorded and are posted along with the event notes and speaker powerpoints (direct link: <https://sites.google.com/site/watershedalliancefortherio/public-meetings/presentations-and-notes>), on the new WARF website at watershedalliancefortherio.net to provide a growing set of public and stakeholder resources, and these recordings served to build interest for the public meeting/presentations series. The Zoom speaker series is entitled: **Explore the Watershed** (direct link: <https://sites.google.com/site/watershedalliancefortherio/public-meetings>)

We used social media, website event posts and email announcements to partner lists to raise interest and engage the public. We completed design of the kick-off Zoom public meeting event targeting the watershed plan goal of increasing watershed understanding and increasing engagement in the speaker series (see a sampling of graphics designed for social media posts below).

The series launch event, [Understanding our Changing Watershed](#), featured a number of speakers from a diverse range of backgrounds and expertise, giving brief perspectives on the Rio de Flag watershed and taking questions for discussion. We completed a new robust public outreach plan in response to the unique challenges presented by Covid 19. We introduced the speaker series, along with a watershed planning update to a well-attended (38 participants) Friends of the Rio de Flag Zoom Members Meeting presentation in mid-September 2020, to engage the viewers in helping us reach more Flagstaff residents with announcements of the public meetings.





• *The Watershed Group will provide workshops to develop watershed group fundamentals, review watershed restoration plan framework, form subcommittees.*

Status: The fourth stakeholder workshop, of five, is now scheduled for May 19, 2021, to review the summary of public input during the virtual public meetings, which includes the ArcGIS online map surveys completed by participants.

By March 2020, we had finalized representation from Coconino National Forest to the core planning team and the stakeholder group (now called **Watershed Alliance for the Rio de Flag**, or **WARF**). We held a Zoom core team meeting in April 2020 that included a representative for the Hopi Tribe, and had planned outreach to a potential representative of the Navajo Nation/Diné perspective as well. This outreach has continued to be delayed with the COVID-19 outbreak, its severity across the Navajo Nation and Hopi, and the extreme challenges to fighting the pandemic. In August 2020 The full core team of organizations and agencies, also including the City of Flagstaff, Coconino County, Coconino National Forest and the Hopi Tribe, conducted the third Stakeholder Workshop to finalize the Public Outreach Plan and Zoom public meeting series. **We reached the 50% completion milestone for stakeholder workshops.**

The third in-person stakeholder workshop had been postponed due to the coronavirus pandemic and we pivoted to designing and preparing for a video workshop. The core team took on the task of meeting virtually more frequently to develop the materials and tools to proceed virtually. By the end of June 2020 the core team had developed the public outreach plan framework and reach map for the watershed that were to be discussed and finalized at the third workshop in August.

Throughout July to September 2020, we worked intensively on developing the interactive tools, speaker lists, themes, sequence of topics, and marketing plan for the Zoom public meeting series. From October to December 2020, a smaller workgroup of core team members—Friends of the Rio de Flag (FoRio) and Southwest Decision Resources (SDR)—undertook the majority of workshop development, including planning for the remaining stakeholder workshops to complete this milestone.

• *The Watershed Group will hold workshops throughout the watershed to identify watershed needs and projects that would improve the watershed.*

With the adjustments to public workshops in the virtual space, necessary for safe social distancing and actually making it easier for people to join, the public workshops have brought together voices from across the watershed. The Zoom events have all been well attended by 40-50+ community members with a range of backgrounds and interests, as well as locations in the watershed where they reside. In the next quarterly report we will present the summarized results of Mentimeter surveys and Zoom polls of all 6 of the virtual events, as well as watershed reach and project themes for the map-based comments, which together will provide this information about the participants.

3. Watershed Restoration Plan

Description: Develop a watershed restoration plan (Watershed Plan) that will relate to the interests of all stakeholders. The Watershed Plan will be as inclusive as possible of all existing plans, data and concepts and will serve as a well-developed guideline for project concept implementation.

The tasks that will be completed under this activity include:

• *Develop a watershed restoration plan including conceptual watershed management projects*

Status: Nearing completion of the 50% milestone. In January to March 2021 we added initial drafts of the Human History and Reach Description sections. An initial draft of the Recommendations section will be completed after the WARF discusses prioritization of projects at their May workshop.

In October to December 2020 we worked on drafts of four watershed plan sections in progress, including the draft Background hydrogeology, physical science and ecosys-

tems section. We worked with Graduate students at Northern Arizona University to develop story maps (supporting public outreach) and policy reviews that will inform the Background policy section and watershed plan recommendations (see one of the completed story maps here: <https://storymaps.arcgis.com/stories/050f875787294f9c8d52f7ae697ef998>).

Previously, we completed a draft of the Public Outreach Plan section of the watershed plan outline, and multiple maps of the watershed, including maps of the reach-based sub-watersheds. a robust watershed plan outline was completed and watershed restoration plan development has been focused on introductory, background, reach description text, and on documenting the public outreach process, as well as developing the list of figures, tables, maps and other visual information needed in the plan document.

- ***Host public meetings to present the watershed restoration plan draft and request final comments.***