ARIZONA WATER PROTECTION FUND COMMISSION

Business Meeting – November 19 & 20, 2019
Arizona Department of Water Resources
Middle Verde River Conference Room
1110 W. Washington St., Ste. 310
Phoenix, AZ 85007

Final Meeting Minutes

November 19, 2019

ATTENDANCE

Commission Members Present
Charles Paradzick – Chairman
Pat Jacobs – Vice Chairman
Paul Brick
Michael Macauley
Roy Pierpoint
William Schock

Commission Members Absent
Lucinda Earven

Arizona Water Protection Fund Staff
Reuben Teran

CALL TO ORDER

Chairman Charles Paradzick called the meeting of the Arizona Water Protection Fund (AWPF) Commission to order at 10:00 a.m.

COMMISSION MEMBER ROLL CALL

Mr. Reuben Teran called the roll of the AWPF Commission. Six voting members were in attendance, one member was absent, and a quorum of the Commission was present.

CALL TO THE PUBLIC

Chairman Paradzick made a call to the public to address the Commission. No public comments were made.

REVIEW AND APPROVAL OF THE JUNE 11, 2019 MEETING MINUTES

Commissioner Pat Jacobs made a motion to approve the meeting minutes, with a second from Commissioner Roy Pierpoint. Chairman Paradzick asked if there were any comments or questions on the draft meeting minutes. Chairman Paradzick stated he did find one typo on page 1 which was corrected by Mr. Teran. Chairman Paradzick asked if there was a motion to approve the minutes as amended. Commissioner Jacobs made a motion to approve the meeting minutes as amended, with a second from Commissioner Paul Brick. The motion passed unanimously.

ARIZONA WATER PROTECTION FUND PROGRAM UPDATES

Fiscal Year 2019 Draft Grant Award Contracts

Mr. Teran stated that there are currently 2 projects selected for funding during the fiscal year 2019 grant cycle that have not yet gone into grant award contracts. These projects include WPF1914: Headwater Stream Restoration - Coyote Springs, Museum of Northern Arizona, Flagstaff, and WPF1919: Webber Creek Sediment Control Project. Mr. Teran stated that draft agreements have been developed and sent to the grantees for review and comment at the beginning of calendar year 2019, and has followed up with them periodically, but there has been a lack of response and communication from these entities.

Mr. Teran explained that the grantee for the Webber Creek project did receive a grant from the Arizona Department of Environmental Quality (ADEQ) for essentially the same project, and they have nearly completed the engineering design plan for the entire site and implemented a few small volunteer work projects. He did meet with the grantee in October 2019, and felt that they did want to continue moving forward with a grant award contract.

Commissioner Michael Macauley asked if they are changing the scope of the AWPF approved project because they have the other grant from ADEQ. Mr. Teran responded that the scope of work has not changed because both fund sources will be needed to implement the work.

Mr. Teran was notified that the executive director for the Museum of Northern Arizona had resigned earlier in the year, and that the draft grant award contract that was sent to them fell through the cracks as they were trying to fill that position. A new executive director has been hired and it appears that they are ready to move forward with finalizing a grant award contract. One contract clause that is being added to the agreement is the requirement to obtain a severance and transfer of an existing surface water right that will be required to implement the project as proposed. This process could take up to 1 year, and the draft agreement has stipulations that if this process cannot be competed, then no further work can be implemented, and the parties will re-assess the project.

Chairman Paradzick stated that he has been in discussion with Mr. Teran over the last 2 month on the status of these projects, and that if there had not been any response from the grantees or positive actions taking place then these projects may have been placed on the Commission agenda for discussion and possible action. He stated that based on today's updates it looks favorable that the grantees will be forward with grant award contracts.

Fund Balance

Mr. Teran reminded the Commission members that the financial information he will be going over is in the Commissioner's notebooks and will also be displayed on the screen. Handouts were also available on the table in the meeting room. The period covered by the update was July 1, 2019 – October 31, 2019, and Mr. Teran reminded Commission members that there are 2 fund accounts in the AWPF which include a grant account and an administrative account.

The grant fund balance at the beginning of fiscal year 2020 (July 1, 2019) was $2,684,831. Revenues into the fund include $18,965 from interest, $655,965 from Central Arizona Project (CAP) in-lieu fees, and a general fund appropriation of $750,000. This totaled $1,424,930 of new monies into the fund.

Commissioner William Schock asked if staff could briefly explain the in-lieu fee tax and its origin. Mr. Teran responded that whenever an entity purchases CAP water for use outside of the CAP tri-county service area, there is a fee charged and those fees are transferred into the Water Protection Fund. Commission Schock inquired if this year's deposit of in-lieu fees will be the last. Commissioner Jacobs stated that the State of Nevada has indicated that they will not be storing CAP water in the State of Arizona, and there are no anticipated in-lieu fees coming into the program.

Mr. Teran stated that active grant award contract expenditures have been $454,976, and a transfer of funds to the administrative account was $161,720. Total grant fund expenditures were $616,696. The AWPF grant fund balance as of October 31, 2019 was $3,493,065 and existing grant award contract obligations total $1,685,709. This leaves an uncommitted grant fund balance of $1,807,357.

In the administration account the beginning fund balance was $7,185. Total revenue included $531 from interest. Expenditures from this account included $54,872 for staff support, $416 for travel, and $966 for operating expenses. The administrative fund account balance as of October 31, 2019 was $113,182, which does include the transfer of $161,720 from the grant account.

The total fund balance as of October 31, 2019 was $1,920,539.

Brief on Probable Transition to eCivis Process for Future Grant Application Submissions

Mr. Teran stated that the Arizona Department of Administration is encouraging all state agencies with grant funding programs to use the eCivis grant tracking program, and went over a handout that gave a brief overview of eCivis.

Chairman Paradzick asked if a formal Commission action or decision is needed at this point. Mr. Teran responded that formal action is not necessary at this time, but could be discussed at the next Commission meeting and possibly rolled into the overall grant application guidelines review process.

Commissioner Macauley asked if going to an electronic grant submission process would reduce workload for staff. Mr. Teran responded that from an application processing standpoint, this program would eliminate the physical paper possessing, and may help facilitate the electronic processing and website public review if the application documents can be combined into one single document within the system.

Commissioner Jacobs asked if there was going to be a cost to the AWPF or to the end user to use the eCivis system. Mr. Teran responded that he does not believe there is a cost to use this system, but he will do more research and follow up with the Commission.

Commissioner William Schock commented that some of the applications submitted during the last grant cycle appeared to be stand-alone .pfd copies, while others appeared to be scanned copies, and asked if this new system would be able to generate the electronic copy. Mr. Teran stated that while individual documents may be uploaded into the eCivis program as part of an online application process, the system should be able to generate a combined file with the application contents. Commissioner Schock asked if it would be difficult for members of the public who are not very proficient or comfortable with the use of this technology to use this online application system. Mr. Teran stated that the Arizona Department of Administration (ADOA) is encouraging all state agencies to move to the online grant tracking system.

Chairman Paradzick suggested that during the triennial grant application review process, questions should be added to include the scope of projects that the Commission should be considering, and ask for

suggestions about simplifying the application process. He stated that he has had some feedback from applicants about the challenge to put together paper copies of an application, and the Commission has been challenged with the volume of information that has been submitted. He further commented that with the triennial review it is timely for the Commission to review this information to get set up for the next year.

Commission Member Expenses

Mr. Teran reminded the Commission that per A.R.S. § 2103(C) members are eligible to request compensation related to their travel and meal expenses associated with Commission business according to State Travel guidelines. He also stated that those who wish to request reimbursement should do so in a timely manner following the Commission meetings, preferably within 30 days of the travel. If requests are made after 60 or more days, this becomes an issue with the Arizona Department of Administration and approvals for reimbursement would no longer come from the Arizona Department of Water Resources (ADWR), but would have to be from the General Accounting Office. Mr. Teran stated that he was also informed that a recent State audit related to Commission member reimbursements found that very few AWPF Commission members have requested compensation or reimbursement for their travel related expenses. Vice-Chairman Jacobs stated that the Central Arizona Project does cover his travel expenses for Commission related business, and Chairman Paradzick stated that Salt River Project covers his travel expenses.

Commissioner Schock asked if travel related costs are the only eligible reimbursable expenses for Commission members, or if time spent at attending Commission meetings is also eligible. Mr. Teran responded that Commission members are eligible to receive reimbursement for meals, lodging, and mileage for Commission related business.

With a time certain agenda item at 10:30am, Chairman Paradzick tabled the Triennial Grant Application Guidelines Review Process and Commission Conflict of Interest Notice to later in the agenda.

FISCAL YEAR 2020 GRANT APPLICANT PRESENTATIONS

WPF2008 - Middle and Upper Fossil Creek Invasive Plant Removal

- Presenter: Rebecca Davidson, National Forest Foundation

During the presentation Ms. Davidson clarified the AWPF grant request should be $98,662, and not $105,000 as noted on the application cover page. The clarification was presented to address the AWPF staff review which noted that the grant request amount was unclear based on discrepancies between the detailed budget table and scope of work task figures in the application.

Commissioner Michael Macauley asked if any treatments have occurred above the dam location. Ms. Davidson responded that treatments have not yet been completed in that area or in the wilderness, and the planned treatments will be in the perennial reaches and spring sources in the upper section of Fossil Creek. Commissioner Macauley also asked how they would keep salt cedar at less than 10% since it is a very prolific plant. Ms. Davidson responded that the Friends of the Verde River typically work 5-6 years in specific areas to implement salt cedar re-treatments year after year, and it appears that they are having success with these types of re-treatments to make sure invasive plant species can be minimized while the native vegetation reestablishes. Commissioner Macauley asked how the tamarisk beetle will affect the treatments. Ms. Davidson responded that she did not know how that might affect treatments, but speculated that if tamarisk is removed and native vegetation is reestablished, then the beetle would not have much effect in the area and may eventually die out. Chairman Paradzick stated that there has been a lot of

emphasis from restoration proponents to get ahead of the tamarisk beetle, and that this project fits into the general approach of the various watershed groups and agencies who are trying to get ahead of the beetle by getting the non-native vegetation out and letting the native vegetation re-establish or support revegetation efforts.

Chairman Paradzick asked if there is an educational or outreach component for this project. Ms. Davidson responded that the grant funds requested would primarily be used for restoration efforts and would not be used for outreach activities, but the Verde Watershed Restoration Coalition is engaged in overall outreach activities.

WPF2007 - El Rio Riparian Restoration Project

- Presenters: Jim Conroy, all from the Town of Marana.

Commissioner Brick stated that there was a comment in the AWPF Staff review about the potential for water from the Santa Cruz River to be flow into the Preserve and be impounded, and asked if the Town of Marana has a surface water right or authority to impound surface water from the Santa Cruz River. Mr. Teran followed up by stating that this was identified by the ADWR Surface Water program during their review of the application, and that the Town of Marana currently does not have any surface water rights on file with ADWR related to this particular property. Mr. Conroy stated that they do, and as part of the bank protection project design there is a notch at the end of the structure to allow water to flow out of the Preserve and back into the channel, and they would also have the ability to pump water out.

Commissioner William Schock asked what the Cortaro-Marana Irrigation District (CMID) water would normally be used for, rather than it being pumped into the Preserve. Mr. Doug Greenland from CMID responded that it would normally go to irrigate farmland, and that with their water right and available resources they have they are well within their water right, so it is not an issue. He also stated that the approximate amount of water to be used for this project is less than 10-acre feet, and the CMID delivers over 40,000-acre feet. Commissioner Schock asked how water in the Preserve is currently being maintained, whether it is being pumped in there, leftover from the last flood, or coming in from rain sources. Mr. Conroy responded that the Preserve is currently getting water from 4 concrete stormwater entrances, with big influxes coming in from flooding in the Santa Cruz River. He also stated that with the planned construction of the back protection, they will need more water going into the Preserve to keep it a viable wildlife corridor.

Commissioner Macauley stated that the Preserve was created by a flood in 2015, and asked how the Town of Marana was going to deal with the next flood. Mr. Conroy responded that the bank protection project will start in approximately 90-days, and be done in about a year, but there would be no dramatic measures taken to address the next flood other than absorb the water. Commissioner Macauley stated that the Town is currently cleaning out a lot of residue from the last flood, and will get more residue from the next flood. Mr. Conroy stated that until the bank protection is completed, they will continue to function in the same manner as they have to deal with the debris and everything else that comes with the floods.

WPF2015 - Restoration in the Gila River Riparian Corridor

- Presenters: Bethany Drahota and Melanie Tluczek, Gila Watershed Partnership

Chairman Paradzick commented that the AWPF staff review had some comments regarding the land tenure and access for the project, and asked Mr. Teran to elaborate on this. Mr. Teran stated that during his review of the application packet several restoration sites were listed as part of the applicant's overall restoration plan, but it was not clear exactly which project sites were going to restored with AWPF grant funds. He also stated that although today's presentation clarified the planned restoration areas, the grant application did not contain any letters of support or documentation of access for the restoration locations. Chairman Paradzick asked if the Gila Watershed Partnership has legal access to the selected restoration sites. Ms. Tluczek responded that they do have all the permits necessary to work on the sites and permission from the landowners.

Commissioner Schock stated that in Task #3 the first item is to procure signed landowner agreements from new landowners, and asked if that should occur long before Task #3. Ms. Tluczek replied that is already complete.

Commissioner Macauley inquired about the source of water for the project, and stated that water could not be taken from the Gila River. Ms. Drahota responded that with the irrigation system they use a water truck and they have an arrangement with County to fill up that truck from a local fire hydrant about 2 miles offsite. They then use the truck to fill up on-site storage tanks to run the irrigation system.

WPF2005 - Winkelman Natural Resource Conservation District Riparian Restoration

- Presenter: Kyle Thompson, Winkelman Natural Resources Conservation District

Commissioner Macauley asked what would be done with the salt cedar after it was removed. Mr. Thompson responded that the Town of Kearny fire department has expressed interest in using the site for training and could burn the salt cedar, in addition to grubbing and possible mastication.

Chairman Paradzick asked for more clarification on the revegetation effort of the project. Mr. Thompson stated that he has talked with the Gila Watershed Partnership and understands that some of their issues included herbivory and noxious weeds, and so the WNRCD has included a funding request for herbivore protectors, and may also use a local community garden to grow plants in addition to maintenance of weeds and salt cedar with herbicide.

Chairman Paradzick commented that the WNRCD's overall tamarisk management plan may require coordination with landowners along the Gila and San Pedro Rivers, and asked who the landowners and stakeholders would be on the San Pedro River. Mr. Thompson responded that there are a handful of landowners around Dudleyville, AZ that have small parcels along the San Pedro River, there is a rancher who expressed interest in salt cedar removal, and there is an ongoing local effort in Aravaipa Canyon to remove salt cedar. He also stated that this project would provide a good opportunity to coordinate with other entities interested in tamarisk removal efforts.

WPF2014 - Rio de Flag Riparian Enhancement Project

- Presenter: Art Keith, Post-Doctoral Researcher, Northern Arizona University

Commissioner Brick commented that the plan is to plant 1,000 cottonwood trees along approximately 1,000 ft. of streambank, and asked if this was going to take a lot of the water out of the creek provided they don't

die or if there are a lot of survivors. Mr. Keith responded that he is hoping they won't die, and once they get tapped into the water table, they should be fine and not need any more irrigation. Until that point, they trees would be irrigated with reclaimed water from the City of Flagstaff. He also stated the cottonwood trees planted on the streambank do provide a lot of shade as the trees get bigger, and this would help to reduce evaporation.

Chairman Paradzick asked if any prior work has been done to assess what the previous vegetation community was like in the project area prior to manipulation, or if there were any reference sites up or down stream with cottonwood trees. Mr. Keith responded that he was not aware of any information, but he would fully expect that the area could support a cottonwood gallery.

Commissioner Schock commented that the project will plant 1,000 cottonwood trees on 3-acres, and they will need to be planted pretty close to each other. He asked how there will be paths or openings in the 1,000 cottonwood trees. Mr. Keith responded that the trees would be on 3-meter spacing in several rows, and as the trees get bigger, they start competing and would eventually thin out naturally. Commissioner Schock asked if the amount of water transpiration from the planted cottonwood trees has been considered and if this would have any effect on the amount of water flowing in the stream. Mr. Keith responded that he does not know the elevation of the water table in this area, but they have a similar cottonwood garden area along the Agua Fria River right along the stream with 4,500 trees, and although the stream is dry right now the trees appear to be doing fine even though it is an arid habitat. He also stated that the benefits to the forest would get would far outweigh the amount of water they would use.

Commissioner Macauley inquired about the pond that was in the project area, and asked if it was an existing stock tank or if it was put in to catch the runoff from Interstate-40. Mr. Keith stated that this is City of Flagstaff property and there has been some grading done there to create a catchment pond, but he does not know why it was done. Commissioner Macauley stated that they may need a surface water right. Chairman Paradzick asked if they would be using water from that the existing pond, or if the pond would be modified as part of the project. Mr. Keith stated that they will not be pumping water from the pond, and they would only plant trees along the bank.

- LUNCH BREAK

- Chairman Paradzick resumed the meeting resumed at 1:30pm.

WPF2002 - Little Colorado River Valley Conservation Area Restoration Project

- Presenters: Ian Torrence, American Conservation Experience

Commissioner Macauley commented that the presentation referenced another project taking place downstream of the proposed project area, and asked if any restoration work will be completed upstream. Mr. Torrence stated that they hope to continue working upstream along the Babbitt Ranch property and with partners such as the Navajo Nation as opportunities allow.

Commissioner Pierpoint asked what type of follow up maintenance program American Conservation Experience (ACE) has since there are invasive plant seed sources upstream and downstream. Mr. Torrence replied that ACE has a 5-year agreement with Babbitt Ranches which would be used to facilitate maintenance of the project site.

Commissioner Schock commented that the applicant is proposing to treat a square shape of tamarisk in a heavily infested area with a seed source on all sides and if the Little Colorado River floods there is a potential for the treated area to be exposed to a large seed load and be re-infested. Mr. Torrence stated that the existing infestation occurred at under ideal conditions at one point in time, and in the future the right conditions may occur to enable a re-infestation after the treatment is implemented, but with the ACE crews and constant maintenance they would be able to address any sprouting tamarisk or regrowth.

Commissioner Schock commented that the total treatment area is 5-acres, and costs for treatment will be around $134,000 which equates to approximately $26,000/acre, which is high when compared to other projects that are proposing to remove tamarisk. Mr. Torrence responded that this site is different than anyone else's proposal with high density, well established stands of tamarisk.

WPF2016 - Reduction of Erosion and Sedimentation Along San Pedro River Through Hydrologic Restoration of Upland Watershed

- Presenters: Alana Riggs, Fort Huachuca Sentinel Landscape Partnership Coordinator, and Owen Lonsdale, Elquen Ranch LLC

Commissioner Schock commented that this was a very ambitious project and asked if anything like this has ever been done before. Ms. Riggs responded that upstream of the project area a project has been implemented on a ranch to create sediment catchment basins. Commissioner Schock asked if this was the Horseshoe Draw project, and Mr. Lonsdale responded that the Horseshoe Draw project was done in partnership with Cochise County. Commissioner Schock stated that the proposed project is very different from the Horseshoe Draw project, and Mr. Lonsdale replied that the costs between both projects are very different, the proposed project has a lot of local support, and will have a multitude of benefits.

Commissioner Schock stated that there are not any engineering designs available that describe exactly what would be done in the project area, aside from general drawings on a map. Mr. Lonsdale commented about his backgrounds in engineering and heavy equipment use and stated that the project would be a success if implemented.

WPF2003 - Promoting a Conservation Incentive Program in the Lower San Pedro Watershed

- Presenter: Bailey Kennett, Arizona Land and Water Trust

Commissioner Brick asked what the incentives are of water transactions for landowners. Ms. Kennett responded that current transactions included payments for fallowing land, crop conversion which includes payments to the landowner and for the purchase of native seed for the pasture, and irrigation efficiency improvements which includes the purchasing of infrastructure.

Commissioner Macauley asked if water transactions include transferring water from one basin to another. Ms. Kennett responded no, and explained that the agreements are between the Trust and the individual landowner which would include a monitoring program to ensure that water use will be minimized according to term of the agreement.

Chairman Paradzick if there has been any preliminary investigations on who the major landowners and land user are from an industrial standpoint along the Lower San Pedro River, and if there has been any interest

from these entities regarding water rights and current adjudications. Ms. Kennett responded that the Trust recognizes there are major industrial users in the watershed, and before they reach out to those entities, they really want to be sure they are prepared for those conversations.

Vice-Chair Jacobs asked if there is similar program in Colorado, and who the primary participants are. Ms. Kennett responded that there are programs in other western states, and the primary participants are agriculture. Vice-Chairman Jacobs stated that his interested in learning more on these other programs.

WPF2012 - Paria Beach Riparian Restoration

- Presenters: Kelly Burke, Grand Canyon Wildlands Council

Commissioner Macauley asked what historical type of native tree was present at the Paria Beach site prior to the arrival of tamarisk. Ms. Burke responded that Gooding's willow and cottonwood, hackberry, and box elder trees were present.

Commissioner Brick asked if there is a water right to take water out of the Colorado River to irrigate the new plants. Ms. Burke responded that the project is located in the Upper Colorado River basin which falls under State water rights law, and the letter of support provided by the GLCA was intended to document that GLCA has the authority to use water and the ability for the Grand Canyon Wildlands Council (GCWC) to use it will be documented through an agreement between GLCA and GCWC.

WPF2000 - Gila Valley Irrigation District System Optimization Phase I

- Presenter: Justin Layton, Gila Valley Irrigation District

Vice-Chairman Jacobs asked if the water in the canals would be electronically monitored. Mr. Layton responded that currently water is monitored and measured with a weir stick, but this project could allow for automation in the future.

Commissioner Macauley asked if the Gila Valley Irrigation District GVID has toured or seen the central electronically controlled system in Yuma, AZ. Mr. Layton stated that he has not, but has been in conversation with many people both in-state and out-of-state about irrigation efficiencies and stated that they need to have the infrastructure in place before they can work on centralized automation.

Chairman Paradzick stated that by Statue the Commission should be able to justify that this project has some sort of tangible benefit to the riparian system and stream flows in the Gila River, and asked how the proposed project will benefit the riparian system, stream flows, and wildlife. Mr. Layton responded that he appreciates and understands this a goal for the Commission, and stated that it is a concern for GVID to try to put any number or percentage on how they can improve river or stream flows, but it would have an indirect benefit to the Gila River itself by not having the GVID draw as much water as they have in the past. He reiterated that the GVID is nervous to put any kind of hard figure on the amount of water they might be saving because there are too many unknowns for them.

WPF2001 - Sandhill Farm Water and Wildlife Conservation Project

- Presenter: J. Blanton Belk, Sandhill Farms, LLC

Commissioner Schock asked how many gallons of water per minute the new solar pump would produce, the depth of the well, and the inside diameter of the casing. Mr. Belk responded that the well would produce 35 gallons of water per minute, the well is currently 400ft. deep with the water level at 50ft. below the earth's surface, and the diameter of the well casing is 8in.

Since there was time before the next scheduled presentation, Chairman Paradzick brought forth agenda item VI. Triennial Grant Application Guidelines Review Process (A.R.S. § 45-2105)

TRIENNIAL GRANT APPLICATION GUIDELINES REVIEW PROCESS (A.R.S. § 45-2105)

Mr. Teran informed the Commission that an application guidelines review is required by State statute and went over the criteria described in A.R.S § 45-2105. He also reminded the Commission that during the last update on this topic at the June 11, 2019 Commission meeting that it was decided to table implementing the grant application guidelines review process until after the current fiscal year grant applications were submitted, and that is why this agenda item is now being discussed today.

Chairman Paradzick stated that the last time the Commission went through this process, all requests for comments was done at one time, and he did not recall that the Commission received any comments. Chairman Paradzick recommended that staff review and update the request for comments letter that was developed last time and include the option for a public hearing. He further commented that an outcome from the last guidelines review process led to the Commission supporting the inclusion of watershed restoration related projects as part of the program's overall goals and objectives.

Commissioner Macauley asked if the guidelines review process will be affected by the probable transition to eCivis. Mr. Teran responded that the overall grant application process and content requirements should remain the same, with the only difference that it would be submitted through the online portal rather than on paper, or scanned paper forms. The eCivis program would also allow the applicant to upload existing information such as water rights documentation, maps, or supplemental reports as individual files, which would be combined with the entire online application packet.

Commissioner Schock commented that a lot of work goes into the staff's review of the grant applications because of the need to review and document if the application has identified or addressed the applicable evaluation criteria outlined in the grant application manual. He also commented that it can be difficult to specifically identify where the information may be located in extensive or large grant application documents.

Vice-Chairman Jacobs asked if there can be a limit to the number of pages in an application. Chairman Paradzick responded that the Commission has the ability to determine that, and recommended that it might be valuable to have other entities that have experience with grant administration to provide some suggestions or tips for streamlining the grant application process.

Commissioner Macauley made a motion for staff to work with the Chairman to develop the request for comments letter and to move forward with the grant applications guidelines review process, with a second from Commissioner Brick. The motion passed unanimously.

FISCAL YEAR 2020 GRANT APPLICANT PRESENTATIONS (continued**)**

WPF2011 - Harrenburg Wash Enhancement Project

- Presenters: Elizabeth Krug and Geoffrey Gross, Coconino County Parks and Recreation

Commissioner Macauley inquired about the pond that was breached, and asked if that feature was dug by a golf course as a recreational site. Mr. Gross responded that the pond was dug as a recreational site. Commissioner Macauley asked if there was a water right obtained for the pond at that time. Mr. Gross responded that through their research the Coconino County Parks and Recreation Department (Department) does not believe there was a water right, and stated that the Department currently does not have a water right for the breached pond. Mr. Teran stated that the ADWR Surface Water program did review this application and found that there were no official State records of a surface water right associated with the breached pond. Commissioner Macauley stated that typically when there is an issue, you could go back to the County courthouse where the water right was recorded and look under mill sites and water rights, but that documentation may not always be available in the ADWR office.

Chairman Paradzick asked the applicant to elaborate a little more on the public outreach and public use of the project site. Ms. Krug stated that a lot of people already use the site and it is a major amenity to the people who live in the area, and there is a great opportunity for public outreach to the community.

Commissioner Macauley commented about the use of weed-free hay or straw that will be used on the project, and stated that the herbicides that were used to make it weed free may end up killing the existing vegetation where it is distributed because it can linger.

Commission Schock asked if the project will require a lot of fill material, and if that fill will be coming from off site. Mr. Gross responded that the fill would come from on-site, and will be primarily taken from the breached pond feature.

Mr. Teran requested clarification regarding the scope of work and overall intent of the project, and asked if the Department was intending to restore the pond feature or retain any surface water as part of the project. Mr. Gross responded no, and commented that the intent is to restore the wetland function of the project area which would include a re-design of the pond feature so it would not retain surface water.

WPF2013 - Fort McDowell Yavapai Nation Verde River Riparian Restoration Project

- Presenters: Melissa McMaster, Mariposa Ecological and Botanical Consulting LLC, and Karen Shaw, Ft. McDowell Yavapai Nation

Commissioner Schock commented that from his perspective the FMYN has been really efficient with the design and implementation of the currently funded AWPF project, and commended them on their current work.

Mr. Teran referred to his staff review of the project and informed the Commission that as part of the scope of work funding is being requested to develop plans that will not be implemented in the timeframe of this project, and it is not clear if or when those planned restoration activities would be implemented. He further commented that he just wanted the Commission to be aware of this in the event there were any concerns.

RECESS UNTIL WEDNESDAY, NOVEMBER 20, 2019 – 9:00 A.M.

Chairman Paradzick stated that the presentations scheduled for today are over, and the meeting will need to be recessed and be resumed tomorrow at 9:00 a.m. Commissioner Macauley made a motion to recess until 9:00 a.m. on Wednesday, November 20, 2019, with a second from Commissioner Pierpoint. The motion passed unanimously, and the meeting was recessed at 4:35 p.m.

November 20, 2019

ATTENDANCE

Commission Members Present
Charles Paradzick – Chairman
Pat Jacobs – Vice Chairman
Paul Brick
Michael Macauley
Roy Pierpoint
William Schock

Commission Members Absent
Lucinda Earven

Arizona Water Protection Fund Staff
Reuben Teran

RESUME ORDER FROM MEETING STARTED TUESDAY, NOVEMBER 19, 2019

Chairman Charles Paradzick called the meeting of the AWPF Commission to order at 9:01 a.m.

Commission Member Roll Call
Mr. Reuben Teran called the roll of the AWPF Commission. Six voting members were in attendance, one member was absent, and a quorum of the Commission was present.

Since there was time before the next scheduled presentation, Chairman Paradzick brought forth agenda item VII. Commission Conflict of Interest Notice.

COMMISSION CONFLICT OF INTEREST NOTICE

Mr. Teran referred to the handout in the Commissioner's meeting materials regarding the Commission Conflict of Interest Memo, and reminded the Commission that if anyone believes they have a conflict of interest regarding any grant application that they should fill out the Memo accordingly, give it to staff, and refrain from any discussion or decision regarding the identified grant application. No conflict of interest memos were submitted.

FISCAL YEAR 2020 GRANT APPLICANT PRESENTATIONS (continued)

WPF2006 - Sonoita Creek Wildlife Linkage Watershed Stewardship Project

- Presenter: David Seibert, Borderlands Restoration Network

Commissioner Bill Schock asked if there are any riparian areas located within the 3 canyons identified as part the project area. Mr. Seibert responded that the area to the north know as Big Casa Blanca Canyon

does have riparian habitat. Commissioner Schock asked if there are grazing permits within the project area. Mr. Seibert responded that there are grazing permits on the USDA Forest Service lands. Commissioner Schock asked if they know how much water this project could add to the watershed if the rock structures were installed. Mr. Seibert stated that they are interested in developing a water budget, and also support ground water recharge. Commissioners Schock asked if they have a plan for getting this information. Mr. Seibert responded that they do not have a plan at this time.

Mr. Teran referred to the staff review of the application and stated that if this project were selected for funding, the ADWR Surface Water Rights program would like to review the designs and specifications of the proposed rock dam structures to make sure there are no possible surface water right impoundments based on the designs of the structures and maintenance. Mr. Seibert stated that this would be helpful to get this review and clarification to help inform others that may be interested in doing similar work.

WPF2004 - Restoring Sutherland Creek, an Intermittent Creek in a Critical Shallow Groundwater Area

- Presenter: Tevor Hare, Watershed Management Group

Commissioner Paul Brick commented that most of the project area appears to be privately owned land, and asked if the public would be able to access any of the project area. Mr. Hare responded that there is no public access to the project area.

Chairman Paradzick requested clarification that a landowner initially modified the stream channel on their private property which ultimately led to all the downstream erosion and stream channel issues, and asked if that landowner would be providing any in-kind or matching funds to support the restoration effort. Mr. Hare responded that landowner actions did initially cause the issues, and the landowner is not providing any in-kind or matching funds for this specific project.

Commissioner Macauley inquired about access to USDA Forest Service managed lands. Mr. Hare responded that there is no parking in the area, but there is access to State Trust Lands before you reach the project site and that could eventually provide access to Forest Service managed lands. Commissioner Macauley also commented that it is a violation of State law to redirect water across to someone else's property. Mr. Hare responded that there was no State action taken on the previous matter, and he was not clear if Pima County elevated the matter to the State level.

Mr. Hare stated that Mr. Teran's staff review indicated that irrigation line was to be purchased, but he clarified that this was no longer the intent and if there was going to be a revegetation or planting effort that irrigation would be the responsibility of the individual landowner. Mr. Hare also stated that he does not have signed agreements with all the landowners in the project area, but he still working on this and understands that a grant award contract would not be developed until these agreements are in place.

Commissioner Macauley asked how the drainage structures for the road crossing would be designed. Mr. Hare stated that rock cross vanes will be used, which would be designed to hold the grade and keep the water in the middle of the channel.

Commissioner Schock asked how many rock structures are planned to be installed. Mr. Hare responded that he does not have an exact number, but it could be hundreds.

WPF2009 - San Pedro Natural Resource Conservation District Riparian Restoration Program

- Presenters: Sharon Reid, San Pedro Natural Resource Conservation District and Deborrah Smith, Arizona Association of Conservation Districts

Chairman Paradzick commented that the San Pedro River is a major focus for conservation, and asked if the proposed management plan is going to research the available literature and past work completed by various entities to help identify the underlying reasons why the tamarisk has established, and not just looking to treat the symptoms. Ms. Reid responded that the big picture intent is to reduce the water drawdown of the river by removing tamarisk and increase riparian restoration. Chairman Paradzick asked if the water balance has been considered for what vegetation would replace the tamarisk, and what the drawdown of the river might be with those plants and the evapotranspiration of the native vegetation. Ms. Reid responded that they would use woody type shrubbery along the bank, and where necessary they would use the metal railroad iron jack fence types structures in areas of heavy erosion to help slow the water from the uplands similar to what was done along the Santa Cruz River, and stated that they do not plan on planting willows or cottonwoods.

Commissioner Paul Brick asked if there has been any consideration what would be done if the tamarisk beetle arrives. Ms. Reid stated that there is some evidence that the beetle is there, and there are some people interested in removing the remaining wood. Commissioner Brick asked if the tamarisk will be removed after treatments are implemented. Ms. Reid stated that they will not take it out, but are investigating how they could use it, possibly for erosion control but they do have some people interested in going in and cutting it up.

Commissioner Schock commented that the application budget identified hand cutting and stump treatments at $2,400/acre, and asked how that figure was derived since other applications submitted with the same proposed treatments had significantly less costs per acre identified. Ms. Reid responded that those cost figures came from the Bureau of Land Management (BLM) who is working with other Natural Resource Conservation Districts (NRCD) in the BLM district through contracted rates, and they used the higher end rates for the application so the wouldn't under budget the costs.

Ms. Smith commented on the earlier question of identifying the initial causes of salt cedar establishment and stated that all the NRCDs across the state are working to address the issue of tamarisk and identifying the causes which are mostly issues in the uplands due to vegetation and ground cover loss. Commissioner Paradzick commented that even thought the San Pedro is a naturally flowing system, it should be considered that anthropogenic changes to the environment have allowed tamarisk to outcompete the native riparian vegetation and had inquired earlier if the proposed tamarisk management plan would be identify the underlying causes of the tamarisk establishment in addition to how to manage the existing vegetation. Ms. Reid stated that they will only be addressing tamarisk treatments since they have no control on the causes of its establishment.

WPF2010 - Quantifying Benefits for Brush Management on Arizona Rangelands

- Presenter: Deborrah Smith, Arizona Association of Conservation Districts

Commissioner Macauley inquired about the timeframe for this project. Ms. Smith replied 2 years which would include 1 year of research and 1 year of data gathering, but it may be 3-4 years to get to the end of the overall project and published results. The remainder of the project would be funded though other

sources. Commissioner Macauley commented that it may take many years before you see any results from a given treatment. Ms. Smith replied that they will be looking at treatments that have already been completed.

Commissioner Schock commented that research and data will be gathered on what is currently existing or available, but stated that there are other successful projects out there being completed by landowners that are not in any published literature. He asked if any social media or internet site would be available to highlight successful practices in the short term while this project is implemented. Ms. Smith responded that interim reports could be produced to provide useful information as the project progresses.

FISCAL YEAR 2020 GRANT CYCLE AWARDS

Discussion on Fiscal Year 2020 Grant Applications

Chairman Paradzick stated that as in previous years, the Commission has the ability to provide their initial priorities and feedback on the grant applications, and Mr. Teran does have a grant application / Commission priority matrix ready to capture this input, in addition to a spreadsheet to track grant award selections and funding amounts.

Mr. Teran stated the current unobligated fund balance is $1,807,357, and reminded the Commission that they do have the ability to discuss and consider additional program administrative funding along with grant application awards. Mr. Teran explained the current funding available and projected administrative costs over the next four fiscal years.

The Commission discussed if there was need to approve additional administrative funding now, and Commissioner Schock asked what the chances are of the program not getting funding in the future and what communication or reporting there has been with the Legislature about program funding. Mr. Teran stated that the only reporting he provides to the Legislature is the required submission of the AWPF annual report to the Governor, President of the Senate, and Speaker of the House of Representatives which is due on July 1 each year.

Commissioner Macauley stated that there are currently 2 projects that were awarded funding last grant cycle that have not yet gone to contract and asked if the Commission should put a time limit for the execution of a grant award contract. Chairman Paradzick replied that he did not feel this was the appropriate time to get into that discussion and recommended that if this is something the Commission wants to discuss that we could make note of it at the end of the meeting and possible discuss it at a future Commission meeting.

Chairman Paradzick stated that based on current available grant fund balance and projected administrative costs he recommended the Commission plan for grant funding between $1,645,607 and $1,160,477, and asked each Commission member to provide their top 5-6 priority projects for funding.

Chairman Paradzick's priorities included WPF2002, WPF2007, WPF 2008, WPF2011, WPF2012, and WPF2013.

Vice-Chairman Jacobs' priorities included WPF2000, WPF2001, WPF 2002, WPF2003, WPF 2008, and WPF2010.

Commissioner Brick's priorities included WPF2001, WPF2005, WPF2008, WPF2009, WPF2010, and WPF2012.

Commissioner Macauley's priorities included WPF2000, WPF2002, WPF2008, WPF2010, WPF2012, and WPF2015.

Commissioner Pierpoint's priorities included WPF2000, WPF2001, WPF2003, WPF2008, and WPF2013.

Commissioner Schock's priorities included WPF2004, WPF2005, WPF2009, WPF2010, and WPF2013.

Based on the Commissioners initial priorities 2 applications that had a majority support of 4 or more voting Commission members present and included WPF2008 and WPF2010.

The Commission then deliberated on the projects that had 3 supporting Commission members. These included WPF2000, WPF2001, WPF2002, WPF2012, and WPF2013. Chairman Paradzick supported WPF2001.

WPF2001 has a majority support of the voting Commission members present.

The Commission continued deliberating on the projects that had 3 supporting Commission members which included WPF2000, WPF2002, WPF2012, and WPF2013. Commissioner Brick supported WPF2013 and WPF2000.

WPF2000 and WPF2013 have a majority support of the voting Commission members present.

The Commission continued deliberating on the projects that had 3 supporting Commission members which included WPF2002 and WPF2012. Vice-Chairman Jacobs asked if anything was funded related to the Paria Beach Riparian Restoration project in fiscal year 2019. Mr. Teran responded the project was not funded, and WPF2012 is a re-submission of essentially the same project and scope of work that was submitted during the last grant cycle. Chairman Paradzick stated that a concern that the Commission had with the previous application was the cost of monitoring program with little in-kind contribution from the National Park Service, and the current application addressed that concern and reduced the cost. He also stated the applicant has had several successful AWPF projects, and the current project is in an area highly visible to the public. Commissioner Jacobs supported WPF2012.

WPF2012 has a majority support of the voting Commission members present.

Chairman Paradzick asked for any comments related to WPF2002. Commissioner Macauley stated he already supports the project, and Commission Schock stated that he thought it is a great project, but did not support it because it was very high cost for only 5-acres of treatment. Commissioner Pierpoint did not support the project because the treatment area would be still surrounded by tamarisk and the seed source would be a maintenance issue into the future.

Chairman Paradzick asked for any comments or discussion on the applications that have not yet been considered for funding. Vice-Chairman commented that WPF2005 and WPF2009 projects are similar in scope and asked if they were in the same general vicinity, and Commissioner Brick stated that they are not. Chairman Paradzick stated that he supports WPF2005. Commissioner Pierpoint stated that he also supports project WPF2005. Commissioner Brick commented that he already supports the project.

WPF2005 has a majority support of the voting Commission members present.

Chairman Paradzick asked again for any comments or discussion on the applications that have not yet been considered. Mr. Teran described the list of remaining applications. Chairman Paradzick stated that he initially supported WPF2011. Commissioner Macauley stated that he supports WPF2011. Commissioner Paul Brick expressed support for WPF2011. Commissioner Pierpoint supported WPF2011.

WPF2011 has a majority support of the voting Commission members present.

Chairman Paradzick asked again for any comments or discussion on the applications that have not yet been considered. Mr. Teran described the list of remaining applications. Commissioner Schock commented that the Commission has not generally funded many projects involving dirt work or erosion control, and stated that he voted for WPF2004 because the project involves erosion control and slowing down water. Commissioners Brick and Paradzick responded that they understand the issue, but did not feel comfortable supporting work to fix a problem caused by someone else's actions.

Commissioner Schock commented that WPF2016 was a real ambitious project and it may be helpful for them to try to implement some of the work at a smaller scale before attempting such a big project. Commissioner Macauley commented that overall it appeared like a good project, but there are lot of issues to consider.

Chairman Paradzick stated that WPF2003 requested $62,000 for water conservation actions. Commissioner Macauley commented that his concern with the project is taking water from one entity and giving to another and essentially repurposing the water, and how this could be done legally based on land ownership and applicable water use. He stated that a question that remained unanswered was how water savings is being quantified. Commissioner Schock stated that he was not clear how the program would work. Vice-Chairman Jacobs commented that for $62,000 it could be possible to see how the program would work, and Chairman Paradzick stated that he does see value for the applicant to go through the research process and look at Arizona Water Law and all the issues and determine what it would take to get there. Vice-Chairman Jacobs asked if the Commission is willing to make the effort to fund the project and have them come back and report how it is working. The Commission continued deliberating on the potential issues of water rights and land ownership. Chairman Paradzick stated that the Commission has a lot of questions about the project, and asked if any Commissioner members support this project after the discussion. No other Commissioners expressed support for the project.

Commissioner Brick asked for the grant application numbers being considered for funding. Mr. Teran responded WPF2000, WPF2001, WPF2005, WPF2008, WPF2010, WPF2011, WPF2012, and WPF2013. Chairman Paradzick asked the Commission for comments regarding the list of project funding recommendations. Commissioner Macauley requested that for any projects that may have a discrepancy between the applicant's fund request and AWPF staff calculations that a justification for the difference be made by the applicant.

Commissioner Macauley made a motion to approve the following grant applications WPF2000, WPF2001, WPF2005, WPF2008, WPF2010, WPF2011, WPF2012, and WPF2013 up to the amount recommended by the Executive Director, and with the conditions as stated in the staff reviews, and approved by the Chair, with a second from Commissioner Schock. The motion passed unanimously.

Mr. Teran updated the AWPF funds tracking table with the projects selected for funding which totaled $1,201,670. He also reminded the Commission that they have an opportunity to consider administrative funding for the program during this meeting or at a future Commission meeting.

FINAL CALL TO THE PUBLIC

Chairman Paradzick made a final call to the public to address the Commission. Mr. Gary Gold, Policy Advisor for U.S. Senator Krysten Sinema addressed the Commission and stated that they are interested in addressing the tamarisk issue and have introduced a bill that would set up a program within the US Department of Agriculture specifically for tamarisk removal, replacements, and monitoring and he wanted to inform this Commission and could forward a copy of the bill and additional information if anyone was interested.

Ms. Sara Wagner, Grants that Go the Distance, LLC addressed the Commission and stated that she is a grant professional and worked with the Landward Foundation in preparing grant application WPF2002. She expressed that what probably did not come across in their application was that the project was not specifically on the Babbitt Ranches, but on a conservation easement of over 200-acres that will be a place where people can come to learn about restoration. Ms. Wagner also commented that although their application did very well in the staff technical review, she was not aware how important project visibility and costs per acre were to the Commission.

FUTURE MEETING DATE(S)

Chairman Paradzick stated that he will be resigning from the AWPF Commission as he has taken a new position within Salt River Project, and this will be his last Commission meeting. The Commission and staff thanked him for his time and service.

Mr. Teran stated that the Commission has typically held general business meetings in March. Chairman Paradzick asked the Commissioner members to identify possible dates in March 2020. Vice-Chairman Jacobs suggested meeting on Tuesday, March 10, 2020, in Tucson, AZ, and there was a consensus from the Commission.

Mr. Teran stated he will plan for a March 10, 2020 meeting date and research possible meeting locations.

ADJOURN

With no other agenda items Chairman Paradzick asked if there is a motion to adjourn. Commissioner Pierpoint made a motion to adjourn, with a second from Commissioner Brick. The motion passed unanimously, and the meeting adjourned at 12:47 p.m.

Arizona Water Protection Fund Commission Meeting:
November 19, 2019

Meeting Location:
Arizona Department of Water Resources
Middle Verde River Conference Room
1110 W. Washington St., Ste 300
Phoenix, AZ 85007

Arizona Water Protection Fund Commission		
Name	**Signature**	**Participating by Telephone**
VOTING MEMBERS		
Charles Paradzick*		
Pat Jacobs**		
Paul Brick	Paul Brick	
Lucinda Earven		
Michael Macauley		
Roy Pierpoint	Roy Pierpoint	
William ~~Shock~~ SCHOCK	William H Schock	
NONVOTING EX-OFFICIO MEMBERS		
Lisa Atkins		
Thomas Buschatzke		
NONVOTING ADVISORY MEMBERS		
Honorable David L. Cook		
Honorable Sine Kerr		

*Chair, **Vice-Chair

Arizona Water Protection Fund Commission Meeting:
November 20, 2019

Meeting Location:
Arizona Department of Water Resources
Middle Verde River Conference Room
1110 W. Washington St., Ste 300
Phoenix, AZ 85007

Arizona Water Protection Fund Commission		
Name	**Signature**	**Participating by Telephone**
VOTING MEMBERS		
Charles Paradzick*		
Pat Jacobs**		
Paul Brick	Paul Brick	
Lucinda Earven		
Michael Macauley		
Roy Pierpoint		
William ~~Shock~~ SCHOCK	William H. Schock	
NONVOTING EX-OFFICIO MEMBERS		
Lisa Atkins		
Thomas Buschatzke		
NONVOTING ADVISORY MEMBERS		
Honorable David L. Cook		
Honorable Sine Kerr		

*Chair, **Vice-Chair

Arizona Water Protection Fund Commission Fiscal Year 2020 Grant Application Voting Table

Application #	Project Title	Charles Paradzick	Pat Jacobs	Paul Brick	Lucinda Earven	Michael Macauley	Roy Pierpoint	William Schock	Yes Votes	Commission Majority Votes for Funding Consideration
ADWR	Program Administration								**0**	No
WPF2000	Gila Valley Irrigation District System - Optimization Phase I		1	1		1	1		**4**	Yes
WPF2001	Sandhill Farm Water and Wildlife Conservation Project	1	1	1			1		**4**	Yes
WPF2002	Little Colorado River Valley Conservation Area Restoration Project	1	1			1			**3**	No
WPF2003	Promoting a Conservation Incentive Program in the Lower San Pedro Watershed		1				1		**2**	No
WPF2004	Restoring Sutherland Creek, an Intermittent Creek in a Critical Shallow Groundwater Area							1	**1**	No
WPF2005	Winkelman Natural Resource Conservation District Riparian Restoration	1		1			1	1	**4**	Yes
WPF2006	Sonoita Creek Wildlife Linkage Watershed Stewardship Project								**0**	No
WPF2007	El Rio Preserve Riparian Restoration Project	1							**1**	No
WPF2008	Middle and Upper Fossil Creek Invasive Plant Removal	1	1	1		1	1		**5**	Yes
WPF2009	San Pedro Natural Resource Conservation District Riparian Restoration Program			1				1	**2**	No
WPF2010	Quantifying Benefits for Brush Management on Arizona Rangelands		1	1		1		1	**4**	Yes
WPF2011	Harrenburg Wash Enhancement Project	1		1		1	1		**4**	Yes
WPF2012	Paria Beach Riparian Restoration	1	1	1		1			**4**	Yes
WPF2013	Fort McDowell Yavapai Nation Verde River Riparian Restoration Project	1		1			1	1	**4**	Yes
WPF2014	Rio de Flag Riparian Enhancement Project								**0**	No
WPF2015	Habitat Restoration in the Gila River Riparian Corridor					1			**1**	No
WPF2016	Reduction of Erosion and Sedimentation Along San Pedro River Through Hydrological Restoration of Upland Watershed								**0**	No

1 = Yes Vote
0 = No Vote

Arizona Water Protection Fund Commission
Projects Selected for Fiscal Year 2020 Funding

				$1,807,357.00	AWPF Available Fund Balance
		Amount Projected	Amount Budgeted	Available Balance	Fund
	Program Administration (FY 2021 - FY 2024)	$646,880 00	$161,750 00	$1,645,607 00	Administrative
				$0 00	Non-Committed AWPF Funds
				$1,645,607.00	Commission Grant Funding Available
Application #	**Project Title**	**Amount Requested**	**Amount Funded**	**Available Balance**	**Project Type**
WPF2000	Gila Valley Irrigation District System - Optimization Phase I	$257,775 00	$257,775 00	1,387,832 00	Water Conservation
WPF2001	Sandhill Farm Water and Wildlife Conservation Project	$35,254 00	$35,254 00	1,352,578 00	Capital
WPF2002	Little Colorado River Valley Conservation Area Restoration Project	$108,818 00		1,352,578 00	Capital
WPF2003	Promoting a Conservation Incentive Program in the Lower San Pedro Watershed	$62,789 00		1,352,578 00	Capital
WPF2004	Restoring Sutherland Creek, an Intermittent Creek in a Critical Shallow Groundwater Area	$344,226 00		1,352,578 00	Capital
WPF2005	Winkelman Natural Resource Conservation District Riparian Restoration	$205,844 00	$205,844 00	1,146,734 00	Capital
WPF2006	Sonoita Creek Wildlife Linkage Watershed Stewardship Project	$262,500 00		1,146,734 00	Capital
WPF2007	El Rio Preserve Riparian Restoration Project	$110,000 00		1,146,734 00	Capital
WPF2008	Middle and Upper Fossil Creek Invasive Plant Removal	$98,662 00	$98,662 00	1,048,072 00	Capital
WPF2009	San Pedro Natural Resource Conservation District Riparian Restoration Program	$257,200 00		1,048,072 00	Capital
WPF2010	Quantifying Benefits for Brush Management on Arizona Rangelands	$50,000 00	$50,000 00	998,072 00	Research
WPF2011	Harrenburg Wash Enhancement Project	$129,190 00	$129,190 00	868,882 00	Capital
WPF2012	Paria Beach Riparian Restoration	$187,699 00	$187,699 00	681,183 00	Capital
WPF2013	Fort McDowell Yavapai Nation Verde River Riparian Restoration Project	$237,246 00	$237,246 00	443,937 00	Capital
WPF2014	Rio de Flag Riparian Enhancement Project	$188,893 50		443,937 00	Capital
WPF2015	Habitat Restoration in the Gila River Riparian Corridor	$492,839 00		443,937 00	Capital
WPF2016	Reduction of Erosion and Sedimentation Along San Pedro River Through Hydrological Restoration of Upland Watershed	$142,693 00		443,937 00	Capital
		3,171,628.50	**1,201,670.00**		

$70,298.00 (available for research)	**Research Funds Balance**	**20,298.00**
	Available Grant Funding Balance	**443,937.00**

ARIZONA WATER PROTECTION FUND COMMISSION

Business Meeting – June 11, 2019
Arizona Department of Water Resources
Middle Verde River Conference Room
1110 W. Washington St., Ste. 310
Phoenix, AZ 85007

DRAFT Meeting Minutes

ATTENDANCE

Commission Members Present
Paul Brick
Lucinda Earven
Pat Jacobs
Michael Macauley
Charles Paradzick
Roy Pierpoint
William Schock

Arizona Water Protection Fund Staff
Reuben Teran

Public Present
Kimberly Drahota
Melissa McMaster (via telephone)
Kim McReynolds
Lynne Smith
Linda Searle
Melanie Tluczek

CALL TO ORDER

Chairman Charles Paradzick called the meeting of the Arizona Water Protection Fund (AWPF) Commission to order at 10:01 a.m., and welcomed recently appointed Commissioner Lucina Earven and Arizona Department of Water Resources Deputy Director Lynne Smith.

COMMISSION MEMBER ROLL CALL

Mr. Reuben Teran called the roll of the AWPF Commission. Six voting members were in attendance, and a quorum of the Commission was present. Mr. Teran stated that Commissioner Bill Schock was running late, but should be in attendance in about 45 minutes.

CALL TO THE PUBLIC

Chairman Paradzick made a call to the public to address the Commission. No public comments were made.

REVIEW APPROVAL OF THE MARCH 26, 2019 MEETING MINUTES

Commissioner Roy Pierpoint made a motion to approve the meeting minutes, with a second from Commissioner Pat Jacobs. Chairman Paradzick asked if there were any comments or questions on the draft meeting minutes. Chairman Paradzick stated he did find one typo on page 9 which was corrected by Mr. Teran. Chairman Paradzick asked if there was a motion to approve the minutes as amended. Commissioner

Paul Brick made a motion to approve the meeting minutes as amended, with a second from Commissioner Pierpoint. The motion passed unanimously.

GRANT 17-192WPF: LOWER VERDE RIVER RIPARIAN RESTORATION PROJECT PROJECT PRESENTATION

Mr. Teran stated that a letter was provided from the Ft. McDowell Yavapai Nation requesting a grant award contract increase of $20,675. This was due to a mistake found in the Task #6 budget that was initially submitted in the grant application where only some of the budget line items were included in the subtotal, and some were accidently omitted. The letter included an attachment of the proposed project budget and highlighted the mistake. Ms. Melissa McMaster stated that on behalf of the Ft. McDowell Yavapai Nation that she apologizes for this oversight and they were surprised that no one had caught it previously since it was a twenty-thousand-dollar difference. She also stated that at this point all items have been completed for Task #6 and was inquiring if the Commission would be able to approve an increase in the grant award contract amount. Otherwise, the Fort McDowell Yavapai Nation will have to re-evaluate the scope of work and available funding.

Chairman Paradzick stated that he had previously asked Mr. Teran if this type of request has ever come up in the past since this type of issue has not come before this Commission. Mr. Teran responded that requests for funding increases had come up before previous Commissions in the past, and in this instance, there was not a change in the scope of work and the funding request was included in the original grant application but was inadvertently missing from the total grant fund request and grant award contract. Chairman Paradzick commented that unless there was any other discussion necessary, a motion from the Commission is needed to act on this request. Commissioner Pierpoint made a motion to approve the increase to the grant award contract, with a second from Commissioner Brick. The motion passed unanimously. Mr. Teran stated that this action will require a grant award contract amendment and that he will work with the Ft. McDowell Yavapai Nation and the Commission Chair to get this completed. Ms. McMaster thanked the Commission.

PROJECT PRESENTATION. AWPF GRANT 17-190WPF: RIVER RESTORATION THROUGH HAZARDOUS FUELS AND INVASIVE SPECIES REMOVAL

A presentation on this grant award contract was given by Ms. Melanie Tluczek, Executive Director and Ms. Bethany Drahota, Habitat Restoration Manager of the Gila Watershed Partnership. A copy of the presentation is attached.

Commissioner Michael Macauley stated that fire stimulates tamarisk seeds, and asked if there were any issues with regrowth of tamarisk in areas where there was burning of the tamarisk after it was cut down. Ms. Drahota responded that she went back and retreated both sides where the fire burned, one side with chemicals and the other with hand loppers. She found that the area treated with chemicals had minimal regrowth of tamarisk, but the area with hand treatments had many re-sprouts. She also stated that if you go back and retreat the re-sprouts quickly while they are green and just emerging, you do get great results of tamarisk removal. She further stated that the area treated with chemicals now has many secondary weeds.

Commissioner Macauley asked if there are any plans for measuring increases or decreases in soil moisture as a result of removing the tamarisk. Ms. Drahota stated that they are currently measuring groundwater levels in the area every three months. They do see variations of groundwater levels based on the farming in the area, but it does give them an idea of areas to plant and when to plant. She commented that soil moisture information would be great, but it is currently outside of the capacity of what they can do right now. Commissioner Macualey asked if they have checked with the New Mexico State Association of

Conservation Districts (NMSACD) as they have done a lot of treatment of tamarisk through Albuquerque, and through those treatments they were able to increase the soil moisture content by 5%. He commented that that he was not clear how they measured it. Ms. Drahota stated that they had not contacted the NMSACD, but indicated that they plan to collect soil samples this next season and they may be able to measure soil moisture content.

Commissioner Brick commented that during the presentation it was stated that work was going to be continuing next year, and asked if there were plans to apply for Water Protection Fund funds or if there were other funding sources that will be used to implement this project. Ms. Melanie Tluczek responded that the Gila Watershed Partnership would like to apply for funding specifically for the planting and monitoring as those are going to be important components of the project. She also stated that they have one more year of funding with the Walton Foundation that has been a big source of match for this project, in addition to available funds from the Arizona Department of Forestry and Fire Management.

Chairman Paradzick asked if they have seen any natural recruitment in the open areas as a result of recent floods through the area. Ms. Drahota responded that they will be starting their summer monitoring next month, but most of the recruitment they had seen last summer was cottonwood basal and seedlings recruitment post-fire, and she is hoping they will have a good cottonwood germination year. Ms. Tluczek commented that Ms. Drahota has done an amazing job coordinating a difficult project and that they have a pretty strong team now, especially since they had a lot personnel turnover and a lull administratively. She also stated the Gila Watershed Partnership is now in a good position to continue work.

Mr. Teran stated that this project will be closed out when the grant award contract expires at the end of August. The Commission thanked the Gila Watershed Partnership for coming to the meeting and for their presentation.

Commissioner Bill Schock joined the meeting.

PROJECT PRESENTATION. AWPF GRANT 15-186WPF: PHASE II GILA RIVER CORRIDOR INVASIVE WEED CONTROL

A presentation on this grant award contract was given by Ms. Linda Searle from the Coronado Resource, Conservation & Development Area, Inc., and Ms. Kim McReynolds from the University of Arizona Cooperative Extension. Mr. Teran stated that the project final report has been submitted and the grant award contract is in the process of being closed out. A copy of the presentation is attached.

Commissioner Macauley commented that the presentation seems to indicate that there is a need for groups that are implementing related projects in the same area to communicate or coordinate on their activities, and asked how the AWPF Commission would be able to help facilitate that. Ms. Searle stated that they have invited the public and other partners to their meeting and outreach activities, and they have presented the weed problem to the Gila Watershed Partnership. She also stated that if there were grants that were covering the same watershed with projects in close proximity it would be good to be able to exchange contact information with those entities to share information on project activities. Since the Gila Watershed Partnership mentioned that weeds are starting to become an issue at their project site, this would be a good opportunity for them to engage with the steering committee that is addressing weed issues. Ms. Searle commented that the steering committee is a non-profit group and is not able to apply for grants so they would need to have another organization such as the county or extension office apply for grants. Commissioner Macauley commented that the local Natural Resource Conservation District may also be

able to provide support in that role. Ms. Searle and Ms. Reynolds both commented on the continued need to address the prevalence and spread invasive weeds in Arizona.

Commissioner Bill Schock commented that the outreach materials presented identified the herbicide milestone, and asked if that was the primary herbicide used and stated that an applicators license was not necessary for that particular herbicide. Ms. Reynolds responded that all herbicides used for this project were general use did not require an applicator license, and that Milestone was used for Russian knapweed, yellow star thistle, and Malta star thistle because that was what worked best in test plot trials at Kansas Settlement in Cochise County and in Duncan, AZ. They also used the chemical Escort to treat whitetop, but ran into a problem with soil pH because the chemical binds in soils with a pH greater than 7.9. They also found that it was harder on some of the crops where they were using it to treat weeds. This year they used Weed Master and it appears that is working well on whitetop. They also found that the chemical Habitat works very well, and you can use it up to the water's edge. Ms. Reynolds commented that another concern is the potential for weeds to build up resistance to herbicide, so having a few alternatives can help minimize that resistance.

Commissioner Schock asked if the test plot treatments were conducted by the University of Arizona Cooperative Extension. Ms. Reynolds responded that it was a University of Arizona weed specialist and herself that implemented the test plot treatments. Commissioner Schock asked if they were using backpack sprayers or ATVs. Ms. Reynolds responded that for the test plots they used backpack sprayers, and also stated that there is a shed at the Cooperative Extension office that BLM purchased years ago where the chemicals are currently stored, and they have 3 or 4 2-gallon hand sprayers, a few 5-gallon backpack sprayers, and a few ATV sprayers. People who are farming use their own spray equipment.

Commissioner Schock asked if they were reseeding after herbicide application, and Ms. Reynolds responded that they have not yet done any reseeding, but that is something they are working on right now with Freeport McMorran. Ms. Reynolds stated that she has native grass mixes available based on soil ecological sites, developed in coordination with the Natural Resource Conservation Service. Commissioner Jacobs recommended that if a site visit was going to be done in that area, that it may be a good idea to invite other interested parties with grants in the watershed to discuss treatments and reseeding options.

The Commission thanked Ms. Searle and Ms. Reynolds for their presentation.

ARIZONA WATER PROTECTION FUND PROGRAM UPDATES

Mr. Teran reminded the Commission members that the financial information he will be going over is in the Commissioner's notebooks and will also be displayed on the screen. Handouts were also available on the table in the meeting room.

Financial Report

Mr. Teran stated that the entire $650,000 appropriated to the Water Protection Fund for fiscal year 2019 is documented in the financial records as being deposited. The current fund balance as of June 6, 2019 is $2,698,432, and the current unobligated fund balance is $804,021. There is $1,894,411 currently obligated to existing grant award contracts, but Mr. Teran stated that total does not include approximately $230,000 of funds that were awarded by the Commission in November 2019 that are still in the contract negotiation phase. With those funds included, the total unobligated fund balance would be approximately $574,000. Commissioner Macauley asked if the obligated fund balance total includes the $20,000 added to grant award contract 17-192WPF discussed today, and Mr. Teran responded that it does not. With those funds subtracted, the unobligated balance would then be approximately $554,000.

Commissioner Lucinda Earven asked where the funds for the program come from since she is new to the Commission. Mr. Teran stated that for fiscal year 2019 the Water Protection Fund received an appropriation from the Legislature for $400,000, and that $250,000 was appropriated by the Legislature to the ADWR budget specifically for the Water Protection Fund. He also stated that interest from the fund balance is credited to the fund, and described that the Water Protection fund has 2 accounts. One for grant project expenditures and one for administration. Chairman Paradzick added that the Commission has granted funds back to ADWR for program administration. Chairman Paradzick also stated that in-lieu tax fees from Central Arizona Project water sales are also deposited into the Water Protection Fund. Commissioner Jacobs commented that there are no current plans for entities to store Colorado River water in Arizona, and that there is only 1 more outstanding in-lieu tax fee payment anticipated for the near future.

Legislation Update

Mr. Teran stated that at the last Commission meeting he provided an update on House Bill 2013 which was a bill to appropriate $1,00,000 to the Water Protection Fund, but the bill was never made it through the entire Legislative session. He then referenced House Bill 2747 which is the General Appropriations bill, also known as the Feed bill for the entire state. Mr. Teran stated that Section 100 on page 76 identifies ADWR's budget and highlighted that there is a line item for a $750,000 Water Protection Fund deposit for fiscal year 2020. Commissioner Brick asked when those funds will be available. Deputy Director Lynne Smith stated that those funds will be available July 1, 2019, but will be deposited into the Water Protection Fund quarterly unless the Commission has a need to have it all earlier, in which case an approval process would be necessary. Mr. Teran stated that he worked with ADWR finance each quarter to ensure that the appropriated funds were deposited into the Water Protection Fund account, and he will do the same for the coming fiscal year. He also stated that the Water Protection Fund will also be receiving a deposit of in-lieu fee funds for fiscal year 2020 in the amount of $655,965. Commissioner Schock asked if this was going be the last in-lieu tax fee deposit. Commissioner Jacobs stated that there has been no out-of-district water storage for 2 years and this is the last in-lieu tax fee payment for the foreseeable future. Mr. Teran stated that total deposits for fiscal year 2020 will total $1,405,965. Chairman Paradzick commented that there should be approximately $1.9 million available in the Water Protection Fund as we plan for the next grant cycle. Chairman Paradzick commented that in the past the Commission has planned any allocation of grant funds along with the allocation of administrative funds.

Mr. Teran provided an update on House Bill 2753 which was a Session Law also passed this Legislative session. Deputy Director Smith stated that this is also know as a budget reconciliation bill, and because you cannot legislate in the General Appropriations Act, these types of bills identify changes that go along with the General Appropriations Act to implement the budget. Mr. Teran stated that under Section 7 in House Bill 2753 it states that the Commission may grant up to $336,000 of the unobligated balance to ADWR to pay for administrative costs in fiscal year 2019-2020. He also stated that during the grant award selections in November 2018 the Commission was projecting out 2 years of administrative costs to coincide with the new grant awards and approved $323,440 for program administration. Given that there is both Legislative and Commission approval for the use of administrative funds for fiscal year 2020, Mr. Teran stated that the plan is to continue to budget and make requests for administrative costs each year as the need arises. Chairman Paradzick added that any administrative funds requested cannot exceed the amount authorized by the Legislature in any one year.

Commissioner Schock inquired how the details of the administrative costs ended up in the bill like that, and asked if that language was put in there by ADWR, or by a member of the Legislature. Deputy Director Smith responded that the Legislature develops those details. In this case, she stated that the language for Water Protection Fund administration has been in previous bills for several years. She further stated that

each year the Governor's Budget Office staff may ask ADWR if any changes may be necessary budget related items. Commissioner Schock asked who in ADWR is contacted by the Governor's Budget Office staff. Deputy Director Smith replied Mr. Scott Selin, Chief Financial Officer. Commissioner Jacobs commented on that being a common scenario for the beginning of the development of the state budget where the Governor's Office will go through last year's budget for each state agency and inquire if any changes are needed. Commissioner Schock stated that he is currently working with the State Land Department on something very similar, and he was very appreciative to learn how the overall process works. Deputy Director Smith also stated that there is a Statutory due date of September 1st for every state agency to turn in their budget request for the next fiscal year. Commissioner Schock asked if for example the Commission wanted to request $1 million in the next budget session how would that process work. Deputy Director Smith replied that the most common way would be for each Commission member to work independently with members of the Legislature.

Mr. Teran then provided a brief update on House Bill 2753/Senate Bill 1556 which establishes the Nonnative Vegetation Species Eradication Fund consisting of legislative appropriations for specific nonnative vegetation invasive species eradication projects that will be administered by the Arizona Department of Forestry and Fire Management (ADFFM). Commissioner Macauley stated this may be an opportunity for the AWPF to meet with them to coordinate some of these grants since the AWPF's issues are watershed issues with noxious and invasive species that affect water, and the types of projects solicited for the ADFFM program may generally be the same. Commissioner Brick commented that ADFFM funds could be used as matching funds for AWPF funds. Chairman Paradzick suggested that the AWPF ask where the AZDFFM are in their program development and see what their target goals and objectives are going to be after their program is up and running. Commissioner Jacobs commented that since all AWPF and AZDFFM funds are taxpayer dollars, that anything we do should try to be done in the most effective way.

Triennial Grant Application Guidelines Review Process (A.R.S. § 45-2105)

Mr. Teran stated that a Triennial Grant Application Guidelines review process for the AWPF should be taking place this year, and that an update was initially provided at the March 2019 Commission Meeting. Due to the potential that the Commission may decide to move forward with a grant cycle for fiscal year 2020, Mr. Teran requested guidance from the Commission if it would applicable to begin soliciting input from the public at this point in time. Mr. Teran stated that it may be confusing to the public for the Commission to be requesting grant applications based on the current grant application guidelines that will be discussed today, and at the same time soliciting input and feedback on revising those same guidelines.

Commissioner Roy Pierpoint suggested that the Commission should wait to solicit comments regarding grant application revisions, but have any new guideline ready for fiscal year 2021. Chairman Paradzick commented that during the last guidelines revision process the Commission solicited input from all the various stakeholders, and while there were a few minor updates made, the major change was identifying a set of overall objectives under the capital projects category that included the addition of projects that improve watershed conditions using forestry treatments near rivers or streams to improve water quality or increase water quantity. Chairman Paradzick stated that the Commission needs to get this process completed to adhere to the statute, but recommended any work to solicit changes to the grant application guidelines be tabled at this time. Commissioner Jacobs requested that soliciting input for the Triennial Grant Application Guidelines process be added to the November 2019 Commission meeting agenda.

FISCAL YEAR 2019 ARIZONA WATER PROTECTION FUND ANNUAL REPORT

Mr. Teran stated that the AWPF annual report is due to the in the Governor, President of the State Senate and, Speaker of the House of Representatives on July 1, 2019, and a copy of the draft report has been provided to Commission members for review and comment. Mr. Teran stated that he updated the executive summary and conclusions sections, and added in content to better describe some of the successes the program had this last year. He also stated that the cover page and Chairman letter need to be incorporated after the body of the text is finalized. Mr. Teran asked for any comments or clarification needed, and direction from the Commission on how to proceed. Commissioner Pierpoint stated he read the draft and it looked good, and Chairman Paradzick stated he did not have any comments on the document. Commissioner Jacobs asked if the funded projects table in the report is available electronically in a format that can be searched. Mr. Teran responded that the final document is typically in a .pdf format, but that it can be searched for key words. The table itself could also be copied and placed into an excel spreadsheet if further analysis is necessary. Commissioner Jacobs made a motion to approve the FY 2019 Annual Report, with a second from Commissioner Pierpoint. The motion was passed unanimously.

GRANT APPLICATION MANUAL & FISCAL YEAR 2020 GRANT CYCLE

Mr. Teran stated that the latest version of the fiscal year 2020 grant application manual is provided in the Commissioner's notebook. Chairman Paradzick asked all Commissioners to refer to page 7 of the manual where it refers to the grant application schedule and wanted to make sure the presentation schedule and grant award selection dates proposed for November 19 – 20, 2019 still work for everyone. Commission Earven asked if Commissioners are supposed to attend the grant application workshop. Mr. Teran responded that this workshop is provided for members of the public or potential applicants that interested in applying for a grant from the AWPF. He also stated that staff does offer pre-application consultations to potential grant applicants to discuss their project and to review draft application content.

Commissioner Jacobs made a motion to approve the fiscal year 2020 grant application manual and move forward with the fiscal year 2020 grant cycle, with a second from Commissioner Macauley. The motion passed unanimously.

ELECTION OF COMMISSION CHAIR AND VICE-CHAIR OFFICER POSITIONS

Chairman Paradzick stated that these elections take place annually, and he is currently serving as Chairman and Commissioner Jacobs is currently serving as Vice-Chair. Commissioner Macauley made a motion to keep the current officers in place, with a second from Commissioner Pierpoint. The motion passed unanimously.

FINAL CALL TO THE PUBLIC

Chairman Paradzick made a final call to the public to address the Commission. No public comments were made.

FUTURE MEETING DATE(S)

Mr. Teran stated that the next full commission meeting dates are November 19 – 20, 2019 based on the approval of the grant application manual and fiscal year 2020 grant cycle. He also stated that Executive Committee meetings may be held as necessary to address any business or contract issues that may come up. Chairman Paradzick stated that a minimum of 3 Commission members are needed for an Executive Committee meeting. This would include the Chair, Vice-Chair, and any other Commission member that is

interested and available to attend that meeting. Mr. Teran stated that any meetings scheduled will need to follow the Open Meeting Law, and be noticed a minimum of 24 hours in advance.

ADJOURN

With no other agenda items Chairman Paradzick asked if there is a motion to adjourn. Commissioner Jacobs made a motion to adjourn, with a second from Commissioner Schock. The motion passed unanimously, and the meeting adjourned at 12:39p.m.

Department of Water Resources
Water Protection Fund
FY 2020 Fund Activity
For the period July 1, 2019, through October 31, 2019

Description	WPF Grants	WPF Administration	Total
Beginning Fund Balance - 7/1/2019	**$2,684,831**	**$7,185**	**$2,692,016**
Revenues:			
Interest Income	$18,965	$531	$19,497
In-Lieu Fee Deposit	$655,965	$0	$655,965
General Fund Appropriation	$750,000	$0	
Total - Revenues	$1,424,930	$531	$675,462
Expenditures:			
Salary Expense	$0	$54,872	$54,872
Grantee Payments	$454,976	$0	$454,976
Travel	$0	$416	$416
Operating Expenses	$0	$966	$966
Transfers - Administrative Expenses	$161,720	($161,720)	$0
Total - Expenditures	$616,696	($105,466)	$511,230
Fund Balance - October 31, 2019	**$3,493,065**	**$113,182**	**$3,606,248**
Less: Existing Grant Obligations	**($1,685,709)**		
FY 20 Uncommitted Balance	**$1,807,357**	**$113,182**	**$1,920,539**

Less: Projected Admin Support (4 years)	**($646,880)**
Projected Funds Available to Grant	**$1,160,477**

eCIVIS

CUSTOMERS SECTORS

- *eCivis* is a Grants Management and Cost Allocation Software the helps state, local and tribal government agencies maximize their grant revenues, track financial and program performance, prepare cost allocation plans and budgets.

- *eCivis* streamlines the application process, grantee documentation, communication, reimbursement requests, and report management.

- *eCivis* also delivers transparency of all grantee activities as required by statute.

- The State of Arizona advocates using *eCivis* for all grant activity.

45-2103. Arizona water protection fund commission

A. The Arizona water protection fund commission is established and consists of two ex officio members, two advisory members and nine appointed members who are residents of this state, who have demonstrated an interest in natural resources and who are appointed as follows:

1. One person who represents a multi-county water conservation district established pursuant to title 48, chapter 22 and named by that district's governing board.

2. One person who represents a state association of natural resource conservation districts and who is appointed by the governor.

3. Four persons who represent natural resource conservation districts established pursuant to title 37, chapter 6, and who represent geographically diverse areas of this state, two of whom shall be appointed by the president of the senate and two of whom are appointed by the speaker of the house of representatives.

4. One member of the public who has at least a bachelor's degree in hydrology, who represents a city that is served by the central Arizona project and who is appointed by the governor.

5. One person who is knowledgeable in natural resource conservation issues or in water resource issues related to riparian ecosystems, who represents an agricultural improvement district established pursuant to title 48, chapter 17 and who is appointed by the governor.

6. One person who represents an Indian tribe and who is appointed by the chairman of the intertribal council of Arizona.

7. As nonvoting ex officio members, the director of the department of water resources and the state land commissioner.

8. As nonvoting advisory members, one member of the house of representatives who is appointed by the speaker of the house of representatives and one member of the senate who is appointed by the president of the senate. Advisory members may not be considered for purposes of establishing a quorum.

B. Members of the commission appointed pursuant to subsection A, paragraphs 1 through 6 of this section shall be appointed for staggered terms of three years. A member may serve more than one term and may continue to serve beyond the expiration of the term until a successor is appointed and assumes office.

C. **On request, members who are not ex officio members of the commission are eligible to receive compensation pursuant to section 38-611, not to exceed three thousand dollars in any calendar year, and are eligible for reimbursement for expenses pursuant to title 38, chapter 4, article 2.**

D. Members of the commission are immune from liability for any action necessary to carry out the purposes of this chapter.

45-2105. Application guidelines

Before any monies are granted pursuant to section 45-2113, and by July 1, 1995, and every three years thereafter, the commission shall develop in conjunction with the department guidelines for applicants for funding. Guidelines shall include the following:

1. Delineation of geographic areas in this state where protection and restoration will be emphasized.

2. Identification of issues of concern.

3. Types of measures needed to address issues of concern.

4. A requirement that the applicant include a description of the relationship between the proposed project and existing plans, reports and information that are relevant to the proposed project.

45-2106. Public involvement

A. The commission is subject to the provisions of title 38, chapter 3, article 3.1 and title 39, chapter 1.

B. The commission shall develop and may amend the guidelines for applicants required by section 45-2105 after reviewing the recommendations submitted by the natural resource conservation districts developed pursuant to section 37-1054, subsections D and E and the information gathered during the public involvement process.

C. The commission shall gather information from the following:

1. The director of the department of water resources and the state land commissioner.

2. The federal and state fish, wildlife, recreation and natural resource agencies.

3. County and municipal entities.

4. The public.

D. The commission shall develop procedures to assure adequate public participation. At a minimum, public participation procedures shall prescribe public notice requirements including the content and publication of the notice, provide an opportunity for public hearings and specify the procedures governing the hearings and require the public availability of relevant documents. Public hearings shall be held at places and times which afford a reasonable opportunity to persons to participate.

E. The commission shall make available for viewing copies of the recommendations and supporting documents submitted pursuant to this section and may charge a reasonable fee for copying.

M E M O R A N D U M

To: Reuben Teran, Executive Director
Arizona Water Protection Fund

From: Arizona Water Protection Fund Commissioner

Subject: **Commissioner Conflict of Interest**

I hereby state that my relatives or I may have a "substantial interest" within the meaning of Arizona Revised Statutes §38-501, et seq., or other cause to refrain from participation in the Water Protection Fund Application(s) listed below. I will refrain from voting on or participating in any manner on the application(s) identified below.

Note: Attorneys who are members of the Water Protection Fund Commission are also bound by the Rules of Professional Conduct, Rules of the Supreme Court, 17A A.R.S., Rule 42.

_____
Application Number(s)

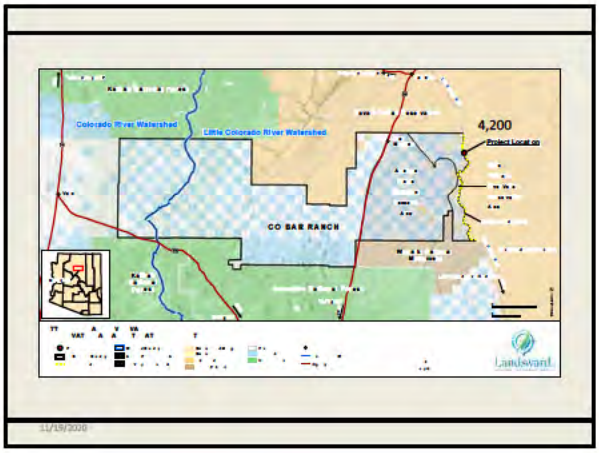
_____
Date

_____
Printed name

_____
Signature


Little Colorado River Valley
Conservation Area Restoration Project
Landsward fdn
SCIENCE RESEARCH ETHICS
GILA WATERSHED PARTNERSHIP OF ARIZONA
dawnKISHphotography
DEPARTMENT OF FORESTRY AND FIRE MANAGEMENT
AZ
AMERICAN CONSERVATION EXPERIENCE
ACE
NAU
NORTHERN ARIZONA UNIVERSITY
Department of Anthropology

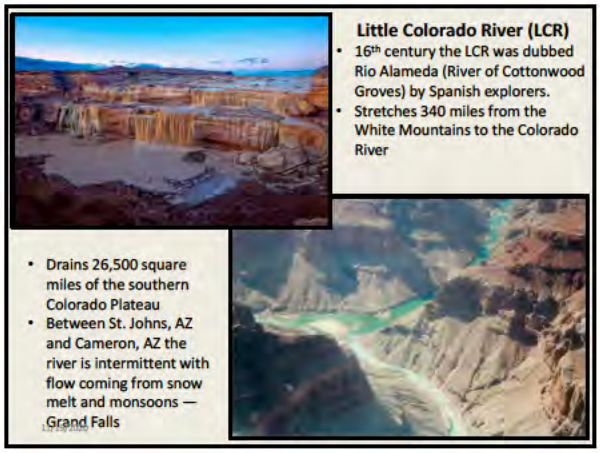
1


Colorado River Watershed
Little Colorado River Watershed
4,200
Project Location
CO BAR RANCH
Landsward

2


BABBITT RANCHES
• 130-year-old family run business
• Located on 270,00 acres between the Grand Canyon and the San Francisco Peaks
• Raise cattle and quarter horses

3


Landsward fdn
SCIENCE RESEARCH ETHICS
• A 501(c)(3) organization
• Charitable, educational and scientific endeavors
• Develops and promotes ecological and social science research so landowners and land managers have the latest science-based information to support decisions and conservation practices on lands affecting the Coconino Plateau Region and the Little Colorado River Valley.
• Provide scientific data of the biology, habitats, wildlife populations, general environmental conditions and quality of the land to assist in understanding and protecting the short-term and long-term integrity and biodiversity of this environment

4

Little Colorado River (LCR)
• 16th century the LCR was dubbed Rio Alameda (River of Cottonwood Groves) by Spanish explorers.
• Stretches 340 miles from the White Mountains to the Colorado River
• Drains 26,500 square miles of the southern Colorado Plateau
• Between St. Johns, AZ and Cameron, AZ the river is intermittent with flow coming from snow melt and monsoons — Grand Falls

5

6

7

Little Colorado River Historically

2000
Cameron, AZ
(10 miles downstream)

2003
Woodruff, AZ
(100 miles upstream)

11/19/2020

Photos from *The Ribbon of Green*

8

Riparian Importance:
- Make up 1% of the total land area in Southwest
- In Arizona, 80% of all vertebrates spend some portion of their lifecycle in riparian habitat
- In Arizona, 70% of all endangered species survival hinge on functional riparian habitat
- Supports 10x the breeding and migratory birds than the surrounding uplands

9

Riparian Stressors:
- Climate change = reduced water resources, increased temps
- Invasive plant species = compete for precious resources, prolific seeders, create a single-species environment (loss of site biodiversity), wildfire adapted

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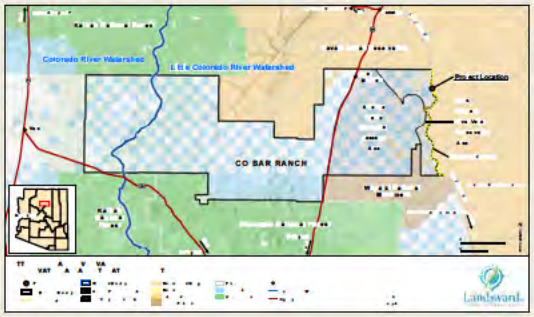

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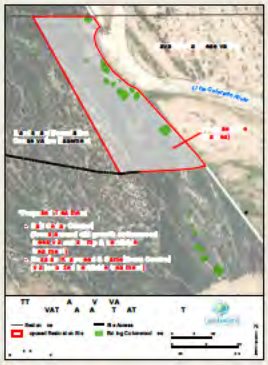

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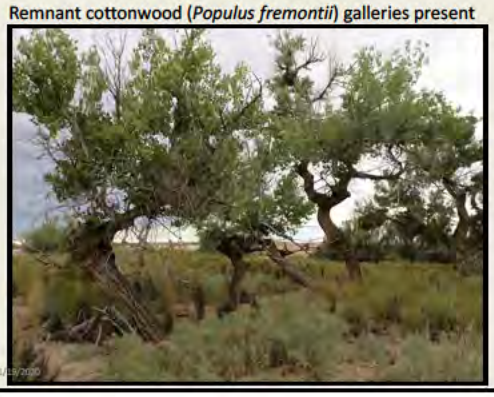
Our Project Site

14

Site Importance

Remnant cottonwood (*Populus fremontii*) galleries present



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Site Importance

Willow and desert olive present

Salix exigua

Forestiera pubescens

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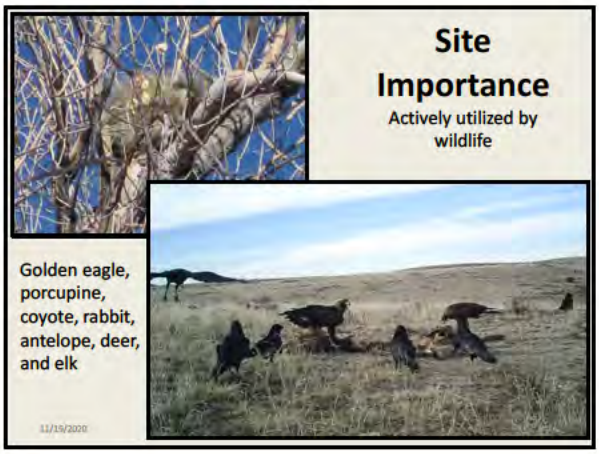

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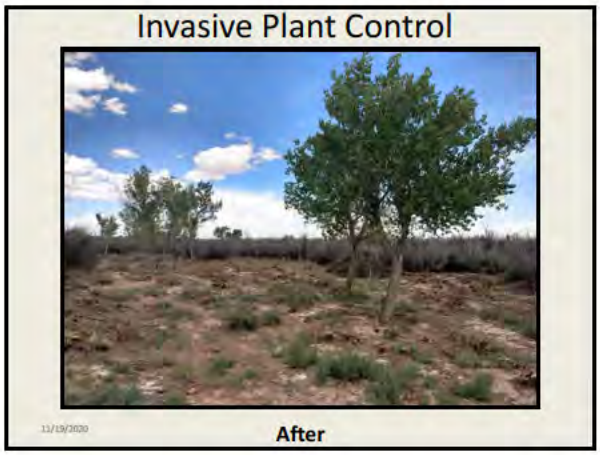

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Debris Removal/Pile Burning

After NAU's help with archeology clearance, pile burns will be completed by Arizona Department of Forestry and Fire Management

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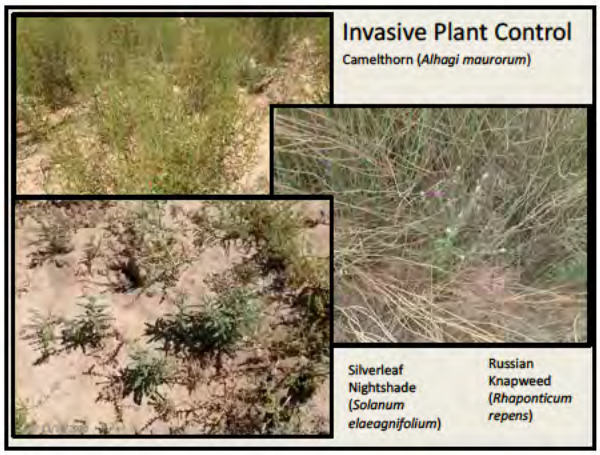

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Revegetation with On Hand, Native, Competitive Grasses

- IPM approach: Control small, initial invasions and patches with herbicide (knapweed and nightshade)
- Camelthorn: Ubiquitous infestation and long lasting seed bank
- With Gila Watershed Partnership plant and sow hardy alkali sacaton (*Sporobolus airoides*) and saltgrass (*Distichlis spicata)* seed and plug plantings to:

1. Compete against weeds
2. Reestablish native seed bank
3. Act as nurse-plant to other natural and facilitated reveg efforts
4. Provide wildlife forage

11/19/2020

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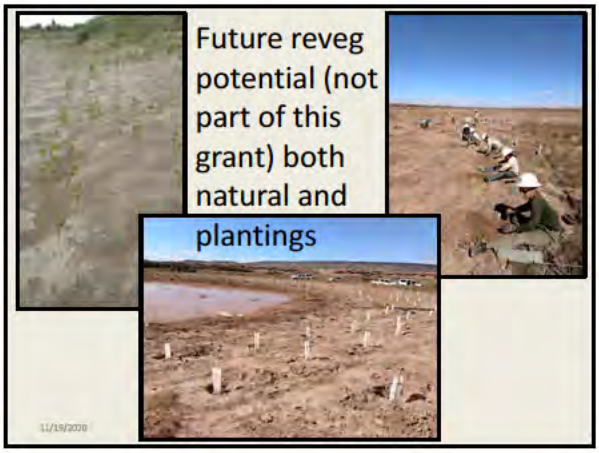

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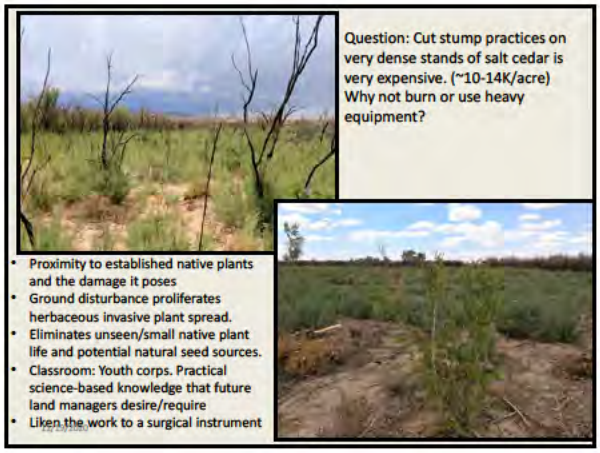

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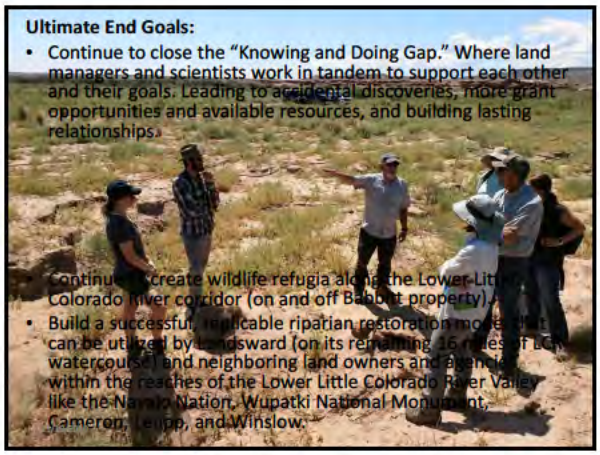

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- Past Funding: Wildlife Conservation Society Grant. Partners included Landsward, NAU, ACE, Arizona Fish and Game, and Babbitt Ranches. Constructed 1800' of new fence and successfully controlled weeds on 52.5 acres of the LCRVCA.
- Future Funding: Just awarded $60K from the Arizona Department of Forestry and Fire Management Invasive Plant Grant to work on a similar 3-acre parcel ~1 mile downstream
- Future Funding Partners/Opportunities…

11/19/2020

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Cameron Farm Enterprise

Formed in 2018, to demonstrate productive and sustainable community-based regenerative irrigated farming, community gardens, and wildlife sanctuaries in the Little Colorado River Valley.

Supporters include: Indian Dispute Resolution Services, Navajo Nation's Soil and Water Conservation District and District Grazing Committees, Navajo Nation departments and programs, USDA, BIA, USGS, EPA, and many grassroots entities…

11/19/2020

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Bureau of Indian Affairs Western Navajo Agency

- In 2017 completed weed inventory of the LCR between Cameron and the Confluence
- Currently work with Babbitt Ranches on fencing projects in the area

11/19/2020

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Arizona Land and Water Trust

Promoting a Conservation Incentive Program in the Lower San Pedro Watershed

1

Presentation Overview

- Intro to Arizona Land and Water Trust
- Water Transactions & Desert Rivers Program
- Lower San Pedro Conservation Incentive Program
  - Overview
  - Tasks
  - Proposal Details
- Summary

2

Land Protection & Water Conservation

3

Water Transactions for Agricultural Landowners

Seasonal fallowing

- Suspension of irrigation on part or all of a farm or pasture

Crop conversion

- Conversion of traditional crops or pasture to low-water use species

Efficiency improvements

- Modernization of infrastructure or technology for irrigation, delivery or diversion

4

Desert Rivers Program

To date,
12 water transactions with
6 landowners

2,781 acre-feet of water saved for the Upper Gila and Lower San Pedro River systems

→ *906 million gallons*

5

Lower San Pedro Conservation Incentive Program

Since 2014,
320 million gallons for river system,
$214,856 to local economy

Proposal Overview

- Broaden transaction approach
  - Assess viability of conservation incentives with non-agricultural entities – agencies, industries, municipalities, private well owners
  - Design locally-relevant incentive program

6

Lower San Pedro Conservation Incentive Program

Tasks

- Research Appropriate Water Transaction Models
  - Determine opportunity for non-ag transactions
- Generate Awareness and Interest
  - Ensure local priorities & goals drive program
  - Build connections for future transactions
- Develop Program Framework and Transaction Models
  - Develop, build support for specific water transactions
  - Build a sustainable regional transaction program
- Develop a Final Report and Oral Presentation
  - Provide foundation for outside investment in transactions

7

Lower San Pedro Conservation Incentive Program

Timeline

- 2 years

Budget

- $62,789

Matching Funds

- $20,000 – $46,500

Letters of Support

- AZ Game & Fish Department
- Pinal Co. Board Supervisor

8

Lower San Pedro Conservation Incentive Program

Summary

- Water Conservation funding category

  Activities outlined in this proposal **develop, promote and implement a program** designed to **conserve water** for the maintenance, enhancement and restoration of **Arizona's river and riparian resources**

- Broaden transaction approach

  Assess viability of conservation incentives with non-agricultural entities and **design locally-impactful incentive program**

9

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Winkelman Natural Resource Conservation District Riparian Restoration

Kyle Thompson
Winkelman NRCD

1

Summary

1. Create Tamarisk Management Plan for WNRCD
2. Remove tamarisk and plant native vegetation on 20 acres along the Gila River
3. Revegetate 105-acres of riparian habitat
   (Tamarisk already removed)

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Project Goals

- Decrease water loss due to invasive tamarisk
- Improve long-term riparian ecosystem functioning and restore wildlife habitat
- Create long-term tamarisk management plan

9

Tamarisk Management Plan

- Community collaboration and outreach opportunity
- Create detailed WNRCD Tamarisk Management Plan
  - Lower San Pedro River (~40river miles)
  - Gila River (~50 river miles)

10

Tamarisk Management Plan

- BMPs
- Restoration goals
- Monitoring methods
- Priority restoration site list (already created)
- Long-term maintenance plans and agreements
- Create 2 site-specific restoration plans

11

Tamarisk Removal

- Contract heavy equipment operator to grub tamarisk
- Contract with American Conservation Experience
  - Cut stump treatment (hand cut + herbicide)

12

Revegetation

Revegetation of native riparian and desert plants

- Coordinated effort between local volunteers, local expert organization, agencies, and WNRCD
- Trees and shrubs will be planted on 62 acres with 30 plants per acre
- Seeding to be done on 41 acres

13

Maintenance

Maintenance to be done by WNRCD and ACE until 2022

Town of Kearny and WNRCD are committed to maintaining these sites

Final maintenance agreement plans to be completed in Management Plan

14

Timeline of Work

Site	Treatment	Date
Kearny	Tamarisk Removal (other proj.)	Winter 2019/2020
Kearny	Revegetation	Spring 2021
Kearny	Retreatment (Herbicide)	Spring 2021/2022
DuBois Ranch/Sheriff's	Tamarisk Removal	Winter 2020
DuBois Ranch/Sheriff's	Revegetation	Spring 2021
DuBois Ranch/Sheriff's	Retreatment (Herbicide)	Spring 2021/2022

15

Completed Tasks

- Coordination with Town of Kearny
- Biological surveys (for plants and wildlife)
- Cultural resource and historic property clearances
- Endangered Species Section 7 consultation with USFWS
- Tamarisk removal to be completed by Winter 2019
- Potential restoration site lists for WNRCD

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Budget

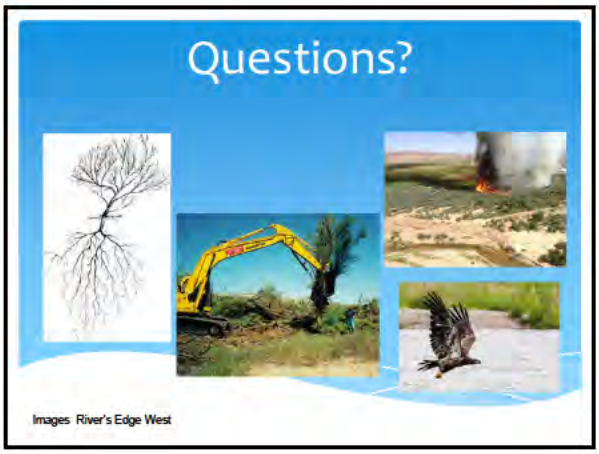
$7,442	Planning / Tamarisk Plan
$10,418	Permitting / Authorizations / Contracts
$2,166	Pretreatment Monitoring
$56,871	Tamarisk Removal
$56,325	Plant Materials
$60,040	Post-treatment Maintenance / Monitoring
$2,779	Project Finalization and Reporting
$205,844	**Total Requested**
$18,414	In-kind match

17

Desired and Expected Outcomes

- Restoration of 125 acres of riparian habitat
- Long-term establishment of native vegetation
- Community engagement
- Decreased water loss
  - Long-term resistance to negative impacts by non-native plant species

18



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Revegetation

- Known Species on site
  - Blue Palo Verde
  - Mexican Palo Verde
  - Desert broom
  - Seep willow
  - Graythorn
  - Whitethorn acacia
  - Sacred Datura
  - Globe mallow
  - Wolfberry
  - Willow

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El Rio Preserve

Arizona Water Protection Fund Application

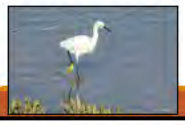
November 19, 2019

MARANA AZ

1

El Rio Preserve Overview

- The 104-acre El Rio Preserve is positioned on the Lower Santa Cruz River
- Town of Marana recognized El Rio as a Preserve in 2015
- Public lands bill signed in March 2019 designating Santa Cruz Valley National Heritage Area (including this portion of the Santa Cruz River)
- Pima County Regional Flood Control District currently working to provide Bank Protection at El Rio

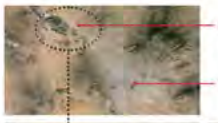


MARANA AZ

2

Location Overview

Satellite Image



MARANA AZ

3

Project Scope of Work

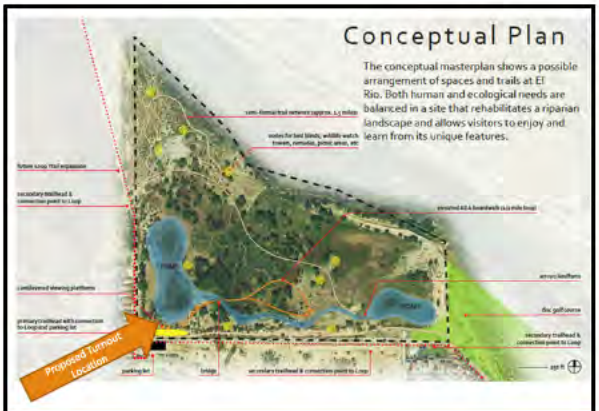
- Construct/Install CMID Turnout Facility and Delivery Pipeline
- New flow control and outlet structure designed to convey water into the southwest drainage channel at the Preserve
- This will provide an assured water source and maintain the riparian habitat for this critical wildlife connection

MARANA AZ

4

Conceptual Plan

The conceptual masterplan shows a possible arrangement of spaces and trails at El Rio. Both human and ecological needs are balanced in a site that rehabilitates a riparian landscape and allows visitors to enjoy and learn from its unique features.



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Project Monitoring & Maintenance

- Water provided from CMID pipeline from groundwater
- Provided from CMID under category "Environmental Class Water"
- **Project maintenance - "CMID will at its own cost reasonably operate, maintain, and repair its water facilities used to deliver water to the delivery location(s) described" (specified in TOM/CMID IGA)**

MARANA AZ

6

Benefit to Riparian Dependent Wildlife

- El Rio is a Premier Birding Area and the riparian habitat supports migrating birds
  - When breeding, more than 50% of southwest bird species nest in riparian habitat.
  - Migrating birds in Arizona depend on riparian habitat more than any other habitat
  - Studies have shown that in Arizona and New Mexico, at least 80% of all animals use riparian habitats at some stage of their lives
  - El Rio provides a crucial link in the Southwest Wildlife Corridor

MARANA AZ

7

Benefit to Riparian Dependent Wildlife

- The Arizona Game and Fish Department has proposed using the permanent water supply at El Rio to help native fish to thrive; including several endangered species
- Having a living pond would help support 42 odonate species
  - Provides mosquito and algae control; A single dragonfly can eat 30 to 100+ mosquitos a day
  - Larval dragonflies and damselflies indicate water quality
  - Neotropical species draw recreationalists to southern Arizona

MARANA AZ

8

Collaborative Partners

Arizona State Forestry and Fire Management
Cortaro Marana Irrigation District
Friends of El Rio Preserve
Marana Unified School District
Tucson Audubon Society
Coalition for Sonoran Desert Protection
University of Arizona
Pima County Flood Control District
Pima County Natural Resources Parks and Recreation
Sonoran Institute

MARANA AZ

9

Collaborative Partners & Outreach

- Partnering with CMID
  - Provides expertise in the areas of hydrology and watershed management
  - Supports CMID business
- Partnering with numerous ecological organizations
  - Providing expertise in natural sciences and conservation
  - Providing expertise in cultural resources and environmental protection
- Continual Public Outreach and Support
  - Town of Marana Website
  - Ribbon Cutting Ceremony/Groundbreakings
  - Featured on Friends of El Rio websites, social media, local news outlets

MARANA AZ

10

Town Commitment to El Rio Vision

BUTTERFLY GARDEN INSTALLATION AND INTERPRETIVE SIGNAGE SERIES

OUTDOOR CLASSROOM SPACE

MARANA AZ

11

Town Commitment to El Rio Vision

PATH BEAUTIFICATION & CLEAN-UP

EL RIO INVASIVE PLANT INVENTORY

BANK PROTECTION & STEWARDSHIP

MARANA AZ

12

Town Commitment to El Rio Vision

MARANA AZ

13

Continued Development of El Rio

- Direct benefit to:
  - Riparian habitat
  - Sonoran Desert wildlife
  - Local business
  - Town of Marana Community and children/youth
  - Schools, researchers, and environmentalists
  - Hobbyists and recreationalists

MARANA AZ

14

Thank you for your consideration!

Questions?

15

Middle and Upper Fossil Creek Invasive Species Treatment and Restoration Project

National Forest Foundation

1

National Forest Foundation

Chartered by Congress, the National Forest Foundation was created in 1993 with a simple mission: *bring people together to restore and enhance our National Forests and Grasslands.*

2

3

Fossil Creek Invasive Species Plant Removal Project

Project Area **Upper and Middle Reaches of Fossil Creek**, designated as a Wild and Scenic River and recognized in Arizona as an Outstanding Water.

Direct Benefits This project will restore habitat conditions to **improve native riparian vegetation** and habitat, and improve **proper hydrologic conditions** and functions of Fossil Creek. This work would also **benefit the Verde River watershed by limiting the spread of targeted invasive plant species.**

Indirect Benefits This project will also **support the economic and recreational resource** Fossil Creek provides, and will restore habitat needs for **native fish and wildlife** that depend on the Fossil Creek riparian corridor and landscape.

Public Involvement: [illegible] developed the Verde River Cooperative Invasive Plant Management [illegible] Verde Watershed [illegible]

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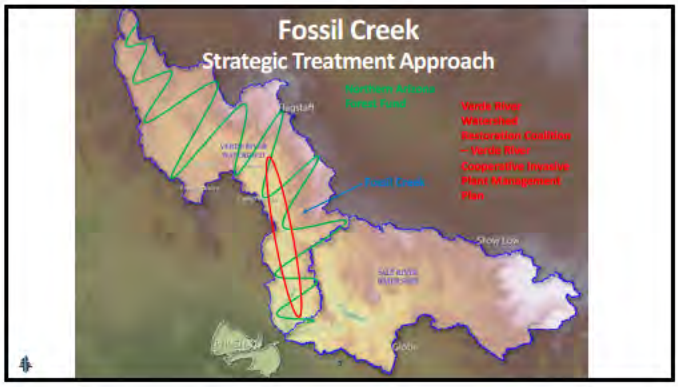

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Middle Segment

Waterfall, downstream to the Mazatzal Recreation Site.

Upper Segment

Everything above the waterfall to the Wilderness boundary, and within the perennial portion.

Project activities occur on Coconino and Tonto National Forests, with Coconino National Forest taking management lead on overall management, NEPA and Arch Clearances.

Activity	Objective	Area
Monitor/Retreat Middle Fossil Creek	Improve Riparian Function	5.0 Miles
Monitor/Treat Upper Fossil Creek	Improve Riparian Function	4.5 Miles
Monitor/Treat Himalayan Blackberry	Minimize threats to Wilderness	0.5 Acres

6

Target Invasive Plant Species

Tamarisk	Russian Olive	Tree of Heaven	Giant Reed	Himalayan Blackberry
Tamarix spp.	*Elaeagnus angustifolia*	*Ailanthus altissima*	*Arundo donax*	*Rubus armeniacus*

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AWPF 2019 Grant – List of Tasks

Task 1 Permits/Clearances	Task 2 Plan Development	Task 3 Upper Reach Monitoring/ Treatment	Task 4 Middle Reach Monitoring/ Retreatment	Task 5 Final Report
FVR – Work with CNF for final clearances	FVR – Coordinate with CNF, develop and submit monitoring and treatment plan – Upper Reach	FVR – Implement Upper Reach Monitoring and Treatment 4.5 Miles	FVR – Implement Upper and Middle Reaches Monitoring and Retreatment	FVR – Submit final report, including summary of all methods, outcomes of tasks, analysis of data, etc.
FVR – Contract with AZCC Crews	FVR – Coordinate with CNF, develop and submit monitoring and retreatment plan – Middle Reach	FVR – Conduct Pilot Blackberry removal/treatment project Upper Reach 0.5 acres	FVR – Retreat Blackberry as identified in plans.	
Timing Prior to fieldwork	Timing Prior to fieldwork	Timing Year 1	Timing Year 2	Timing August 30, 2021

8

Methods and Long Term Management

In June 2013, management responsibility and authority of Fossil Creek Area was delegated by the Tonto National Forest to the Coconino National Forest.

Methods

- Crews use a variety of manual (hand pulling loppers and hand saws) mechanical (chainsaws) and chemical treatments to treat.
- Once debris is cleared crews use manual treatment to cut into manageable pieces.
- Crews follow protocol in deciding if biomass should be made into habitat piles' or dragged and scattered in uplands.
- Crews will map all new areas and reevaluate areas previously mapped to identify recruitment of natives and will retreat as needed.

Management

- Protection of Fossil Creek's unique natural and cultural resource – primary management goal for FS (as WSR).
- FS currently manages Fossil Creek under interim measures.
- CNF is currently developing a Comprehensive River Management Plan to identify and reduce threats to Fossil Creek.
- Desired Conditions: "Invasive plants rarely occur in the Fossil Creek Corridor and where they exist their populations are declining.

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Confirmed Budget, Years 1 and 2

Budget Item	Description – Total Needed	AWPF Requested	Matched Dollars	Total
Salary	FRV – 33,114	33,114		33,114
	NFF – 20,140	4,240* 40 hrs/2 years	15,900 (in kind)* 150 hrs/2 years	20,140
	CNF – 8,100		8,100 (in kind)* 150 hrs/2 years	8,100
Direct Expenses and Equipment, Permits	8,740	8,740		8,740
Contracts	87,870	47,870	40,000 (NAFF)	87,870
Overhead (5%)	4,698	4,698		4,698
Total		**98,662**	**64,000**	**162,662**

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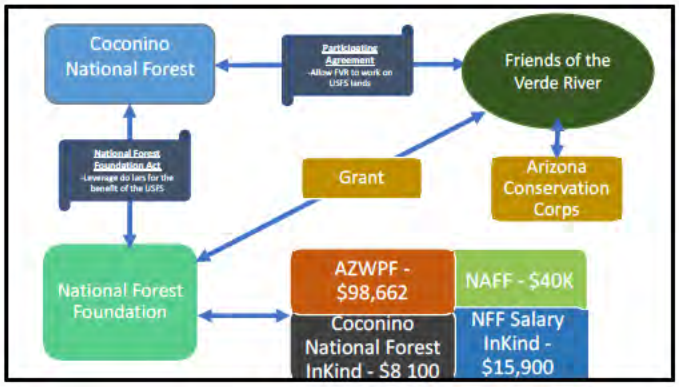

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Thank You

Contact:

Rebecca Davidson
Director Southern Rockies
rdavidson@nationalforests.org
720.749-9008

nationalforests.org

National Forest Foundation

12

Harrenburg Wash Enhancement Project

Coconino County Parks & Recreation

November 2019

COCONINO
COUNTY ARIZONA

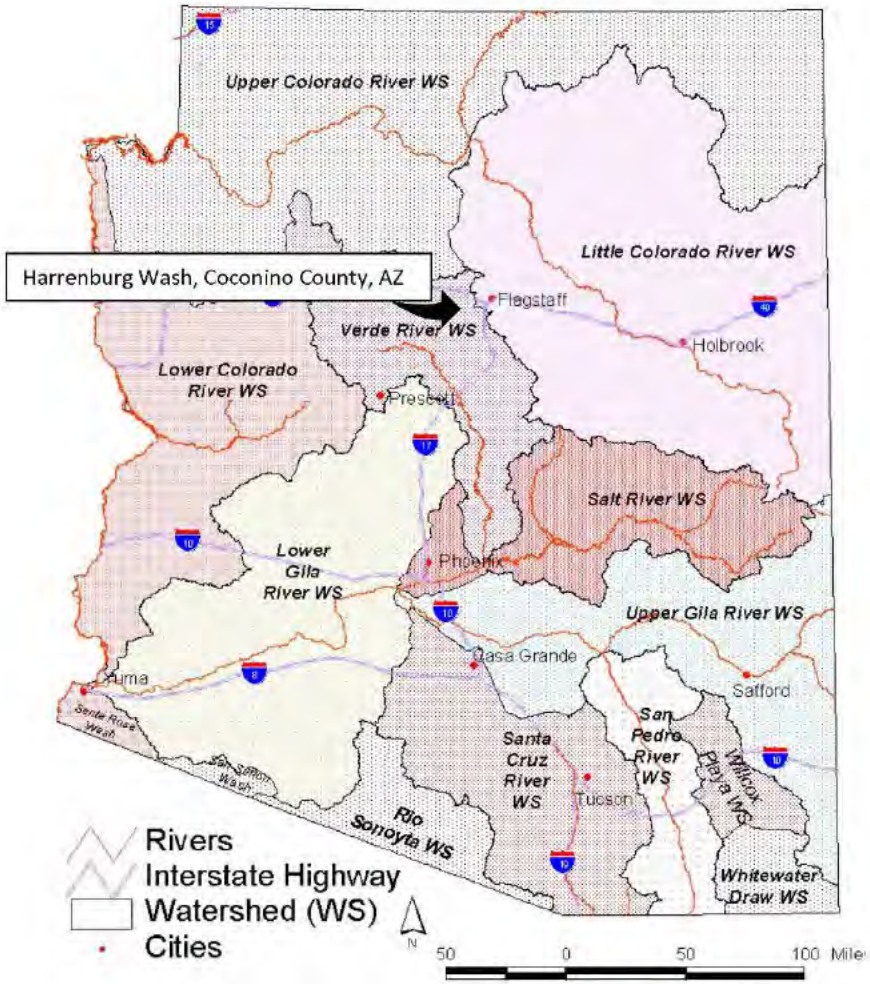
Who We Are

- Regional parks and recreation system, based out of Flagstaff
- 17 full time staff, 3 part time staff
- Manage Coconino County parks, recreation sites, trails, and open spaces
- 3,406 acres in 9 parks and natural areas
- 24 miles of trails
- Special events and outdoor programming

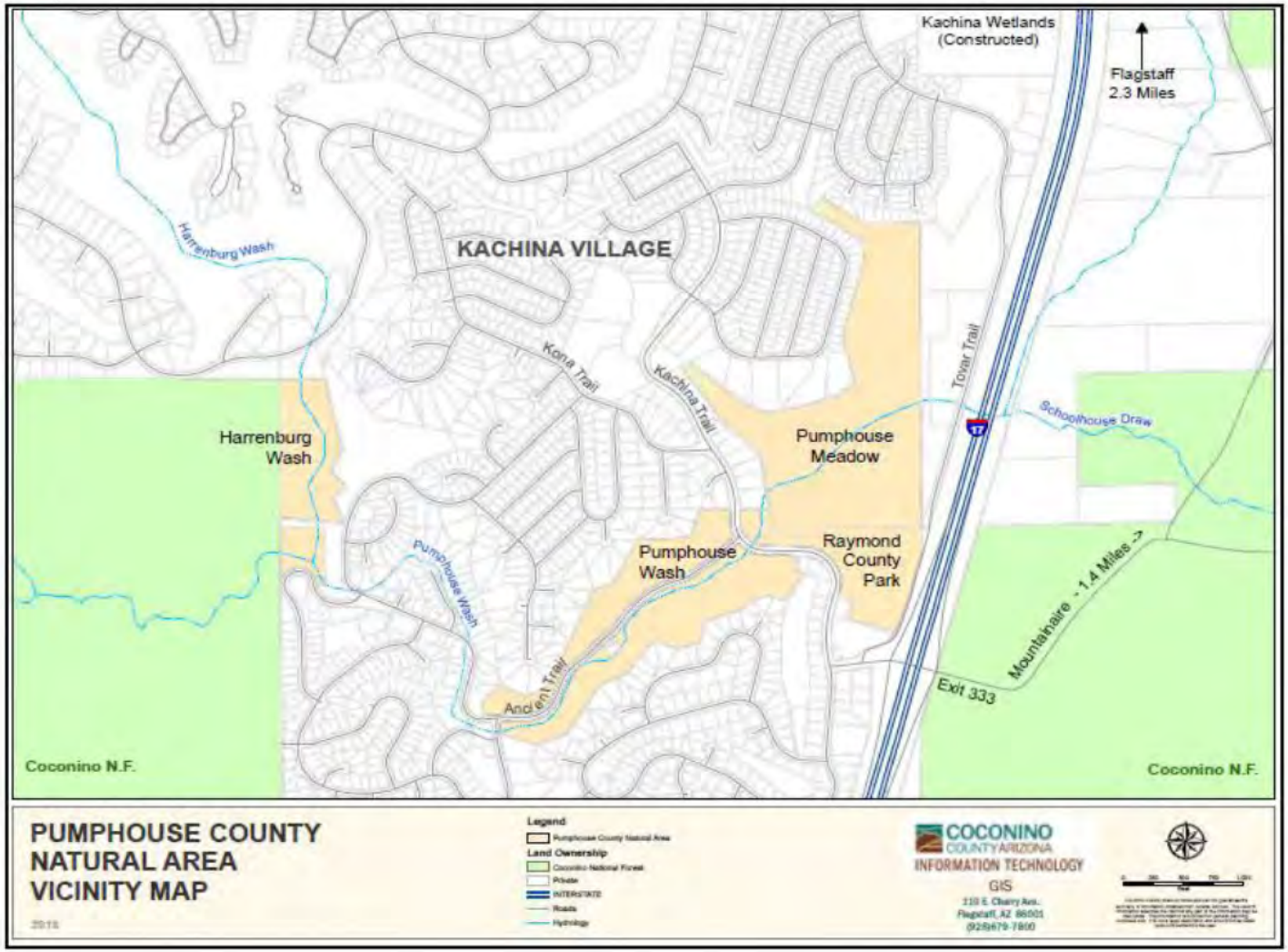
Who We Are – Stewards of natural resources

- Management of open space is a core goal of Coconino County

Project area



Project area



Harrenburg Wash

- Pumphouse County Natural Area
  - 128-acre area spring-fed wetland, south of Flagstaff
  - Three sites including **Harrenburg Wash**
  - Headwaters of Oak Creek, a major tributary of the Verde River, one of the desert's last free-flowing rivers
- Adjacent to USFS Coconino National Forest

What is the Harrenburg Wash Enhancement Project

- Harrenburg Wash is a 16-acre parcel
- Housing development's fishing pond, earthen dam in 1960s, dam breached
- Channel excavations
- Flood plain fill
- Invasion of non-native weed species

What is the Harrenburg Wash Enhancement Project

- Channel restoration
- Treating invasive weeds, diffuse knapweed
- Re-vegetation of native vegetation
- Maintenance and monitoring
- Public outreach

Through these enhancements, the wash area will see improved water quality, less sediment flow, slower surface flood water runoff, and a higher biodiversity of plant and animal species with increased native plants and trees.

Project area

Harrenburg Wash

Headcuts

Invasive weeds – diffuse knapweed

Diffuse knapweed treatment areas

Re-vegetation

Why fund the Harrenburg Wash Enhancement Project

- On-going issue of headcutting and invasive weeds
- Positive effects of this project felt in headwaters of Oak Creek
- Expert staff
- Working with leaders in the field, Natural Channel Designs
- Committed to enhancement and stewardship of the resource through our department's mission and vision

Questions

Paria Beach Riparian Restoration in Glen Canyon National Recreation Area, Lees Ferry, Arizona

Kelly Burke, Director & Dr. Larry Stevens, Senior Ecologist

Grand Canyon Wildlands Council

GRAND CANYON WILDLANDS COUNCIL
(by Wild Arizona, office in Flagstaff, AZ)

Founded: 1 March 1996

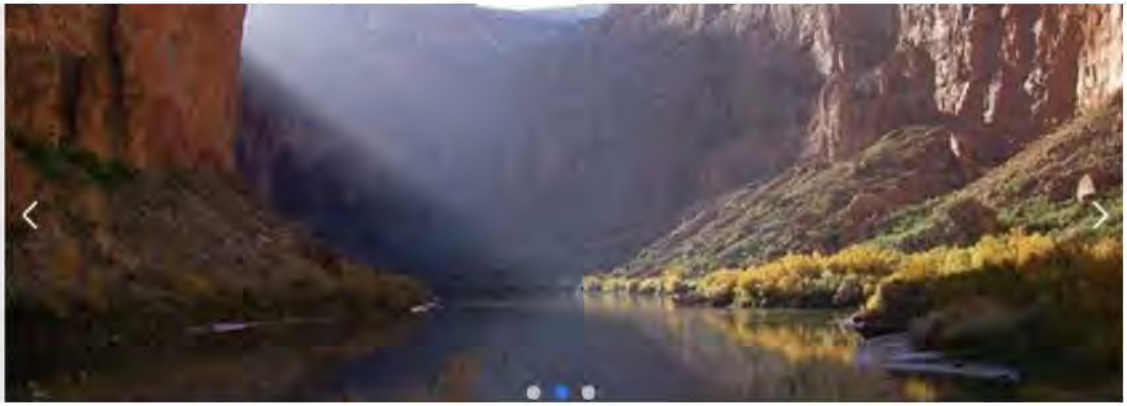
Purpose: ***to protect and restore the Colorado River Ecosystem and Grand Canyon***

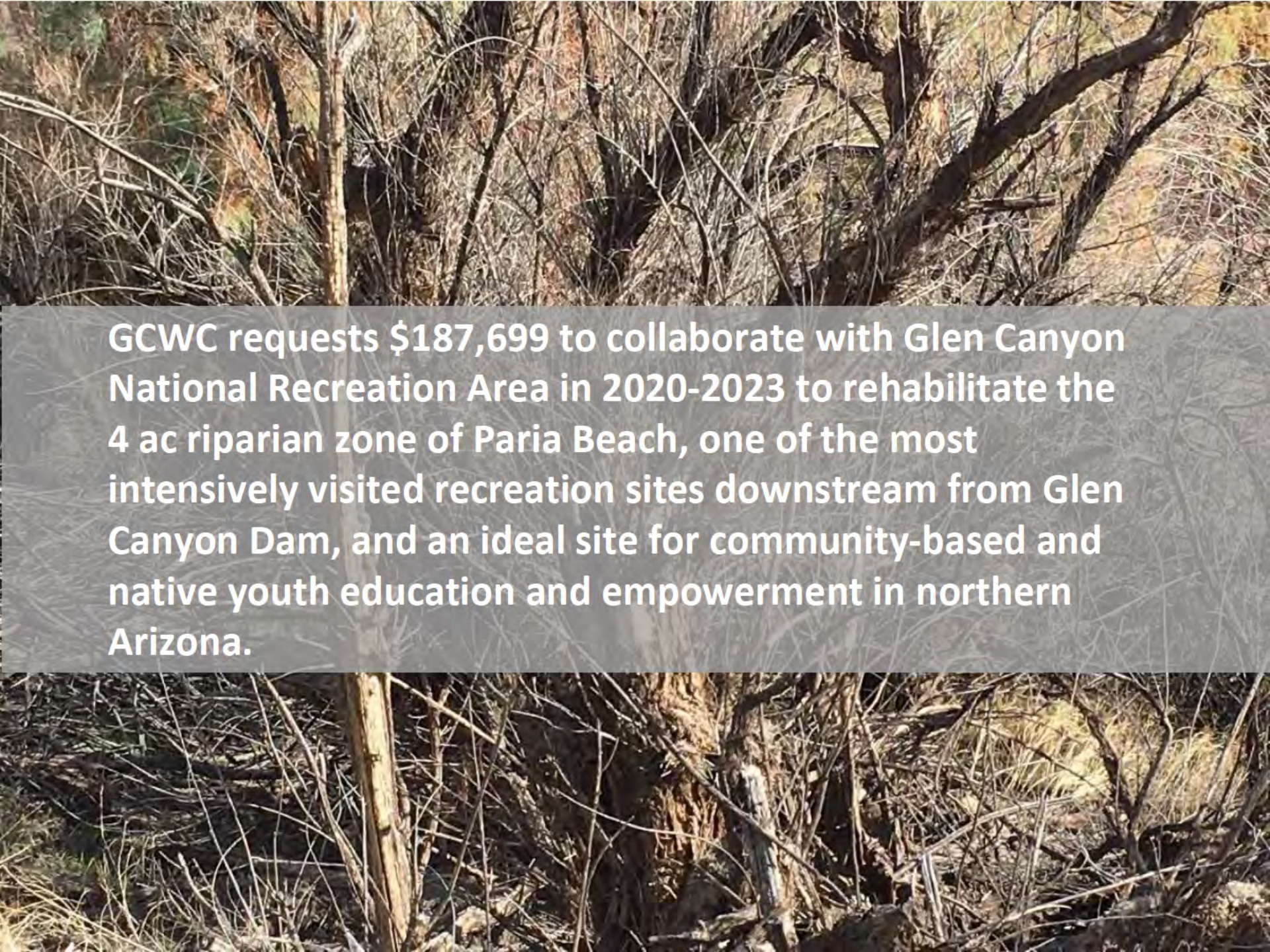
Director: Ms. Kelly Burke

Projects:
- Colorado River adaptive management
- Agency advisement
- Landscape and species conservation and restoration
- Educational outreach, River Guide/Map

GRAND CANYON WILDLANDS COUNCIL

Grand Canyon Wildlands Council
@GrandCanyonWildlands





GCWC requests $187,699 to collaborate with Glen Canyon National Recreation Area in 2020-2023 to rehabilitate the 4 ac riparian zone of Paria Beach, one of the most intensively visited recreation sites downstream from Glen Canyon Dam, and an ideal site for community-based and native youth education and empowerment in northern Arizona.

The Paria Beach

Problem: Tamarisk dominance "solved" by introduction of *Diorhabda* leaf beetles, decimating tamarisk but no recovery of native phreatophyes or habitat.

Result: Degradation of headwater and higher stream order riparian wildlife habitat, function, visitor and recreation experience.

Solution: Riparian restoration/rehabilitation, likely permanent improvements in site- and river corridor habitat through enhanced habitat, native seed production, recreation experience and outdoor classroom development.

AWPF-funded: GCWC and Fred Phillips Consulting Lees Ferry Riparian Restoration 2001 - 2015

Methods

10 ac, ready access
Mechanical tamarisk removal
Irrigation system installation
Revegetation with native species
Monitoring

Results

Native vegetation cover, 5 yr
Avian diversity >2 yr
Use of landscape by wildlife
Recreational use for camping

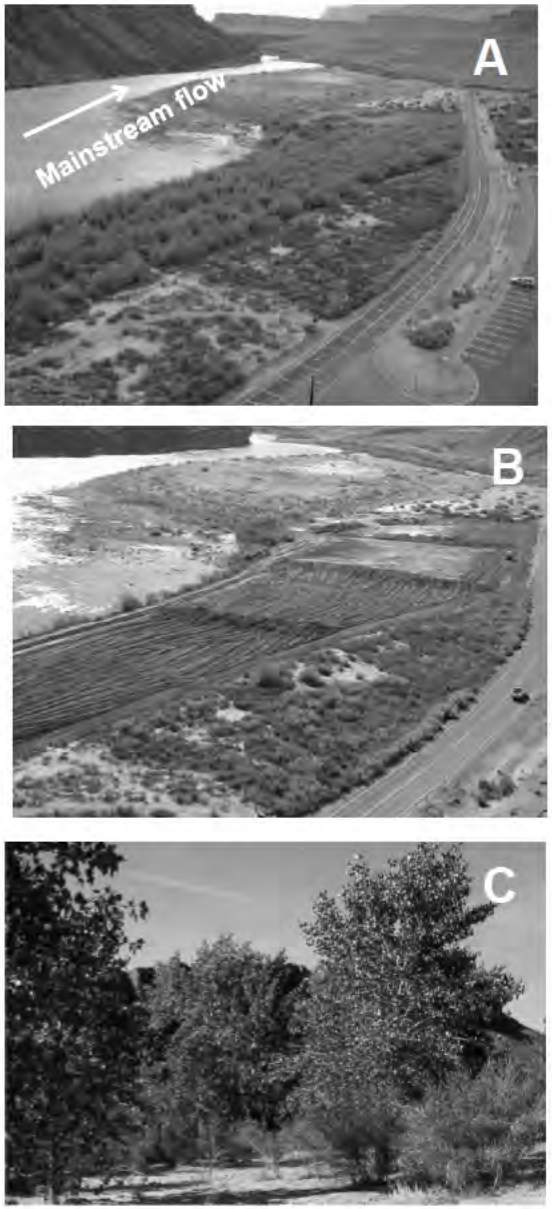


Fig. 2.2: Lees Ferry pilot rehabilitation site. A – Pre-treatement, 2001; B – Post Treatment, 2002; C – native phreatophyte growth in 2011.

AWPF- and NPS-funded
Glen Canyon NRA
Hidden Slough (-6.5R)
Riparian Restoration:
7 acre, remote site,
2007-2018

Paria Beach Restoration Goals and Tasks

Goals

- Goal 1: *Restore natural shoreline configuration, native riparian ecosystem function, and natural riverside habitats, along the Colorado River below Glen Canyon Dam.*
- Goal 2: *Enhance the quality of recreation experience, including angling, wildlife viewing, boating, and beach visitation; sustain the local recreation economy*
- Goal 3: *Engage, educate & empower Native American and local youth*

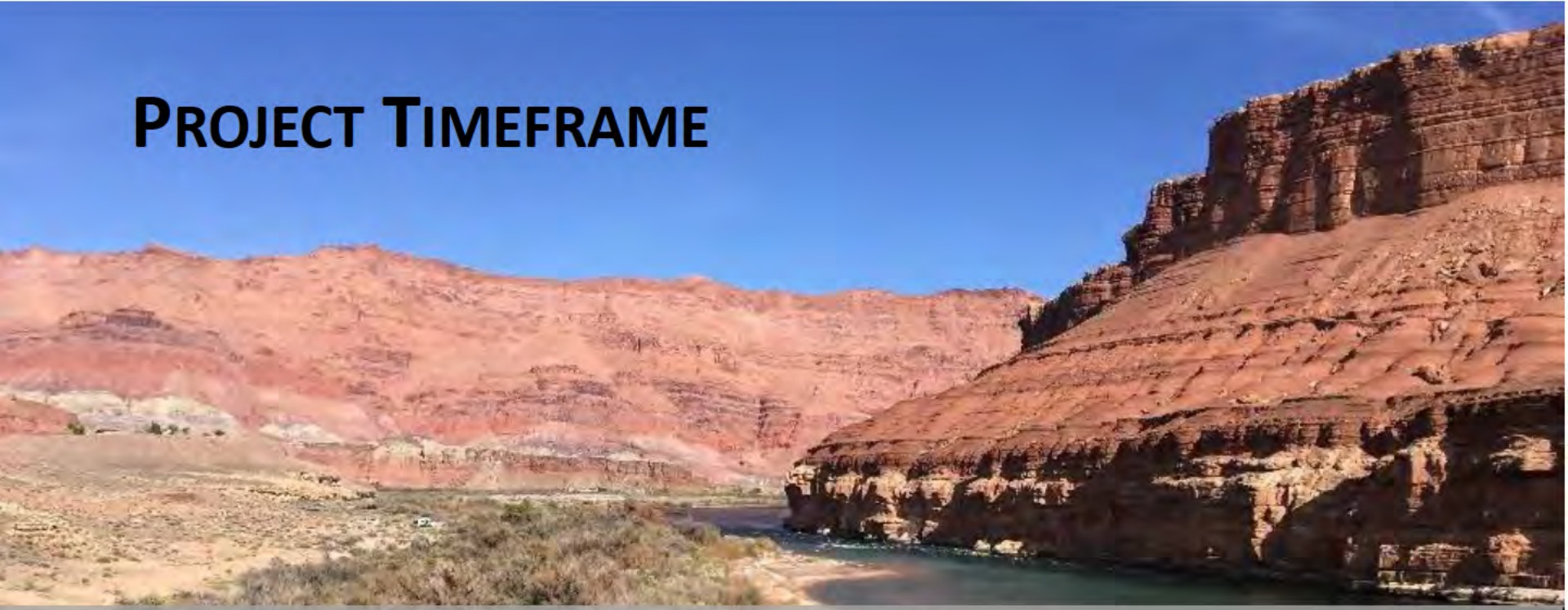
Tasks

- Task 1: Obtain permits, authorizations, clearances and agreements
- Task 2: Compilation and assessment of background information
- Task 3: Develop restoration, maintenance, monitoring, and outreach/education plans
- Task 4: Monitor vegetation, inverts, herps, birds, mammals
- Task 5: Implement restoration
- Task 6: Public outreach and community youth education
- Task 7: Final report

GCWC and NPS Project Staff

Kelly Burke, GCWC Director & Project Coordinator
Brian Stultz, Project Manager
Larry Stevens, Science & Monitoring
Lonnie Pilkigton, Restoration Ecologist, GLCA
John Pflaumer, Education Specialist, GLCA
Coordinator Hopi Tribal Youth (Task-dependent)
Other assistants and volunteers (Task-dependent)

PROJECT TIMEFRAME



Jan. thru Oct. 2020: Permits, agreements, background, maps, plans

July 2020 thru Oct. 2022: GLCA staff & volunteers monitoring program set up and assistance

Nov. 2020 thru Nov. 2022:Tamarisk removal, native plantings, irrigation, maintenance; outdoor classroom development and public outreach

Dec. 2022 thru Feb. 2023:Final reporting

Proposed Budget - Summary

Task No.	Description	AWPF Cost	Match	Project Total
1	Obtain permits, authorizations, clearances	$15,656	$9,831	$25,487
2	Compile, assess background information	$ 7,035	$3,595	$10,630
3	Prepare plans	$12,784	$4,484	$17,268
4	Monitor wildlife	$12,443	$27,123	$39,566
5	Restoration implementation and maintenance	$108,281	$59,215	$167,496
6	Public outreach	$22,050	$16,200	$38,250
7	Final report	$ 9,450	$2,730	$12,180
All	**Total project cost**	**$187,699**	**$123,178**	**$310,877**

GCWC expresses its deep gratitude to AWPF for past support, and thanks the Commission for consideration of this project

Questions and Discussion

AWPF
Grant Proposal Presentation
November 19, 2019

Fort McDowell Yavapai Nation Lower Verde River Riparian Restoration Project Phase 2

Karen Shaw
Environmental Specialist
Fort McDowell Yavapai Nation
&
Melissa McMaster
Plant Ecologist
Mariposa Ecological and Botanical Consulting

1

FMYN Tribal goals, connections, and involvement

- **Native Plants and Invasive Species –**
  - **Long Term Goal of the Tribal Environmental Plan-2016**
    - " Native plants are re-established and maintained on tribal lands, enabling traditional ceremonial uses and thriving native species"
  - FMYN has participated in and provided support to invasive plant survey and plant removal along the Verde River since 2014
  - FMYN staff (environmental manager, environmental specialist, hydrologist) and Tribal Youth and Elders are integral to this proposal

2

Significance of the Lower Verde

Riparian services
- 5% of FMYN is riparian
- Relic cottonwood and Goodding's willow forests
- 4 pair of nesting bald eagles
- Cultural and traditional resources
- Economic significance
- Wildlife and plant diversity
  - Migratory bird habitat (Southwestern willow flycatcher)

Risks
- Water consumption
- Decreased biodiversity
  - Fewer cottonwood and willow recruitment
- Tamarisk beetle on the Verde in Clarkdale

3

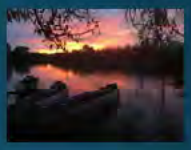
Previous efforts

- 2015-2017

BIA grant
- Map and treat giant reed (*Arundo donax*)
- Create a vegetation map
- Map all invasives along the river

- 2016- current (ends August 2020)

AWPF grant
- Continue to treat giant reed and tree tobacco
- Develop a Restoration Plan for the 10 mile stretch
- 33 acre Pilot Project Site- Develop and implement invasive plant removal and native plant rejuvenation



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Proposed projects for current grant application

- Continue treatment of tree tobacco and giant reed along the river for two more years
- Develop plans for two new restoration projects based on the Restoration Manual and lessons learned from the pilot project
  - Invasive species removal and native plant enhancement
- Implement invasive species at one Restoration site
- Pilot Project Site
  - Implement Phase 2 of planting
  - Retreat tamarisk and giant reed
- Monitor invasive plant treatments and restoration activities at all work sites

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Retreat giant reed and tree tobacco for 2 more years

- Continue to build off previous years efforts- last 10 miles of the Verde
- Giant reed populations have significantly decreased
- Tree tobacco populations significantly increased since high flows in 2018
- Timing is critical!

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Benefits of continued treatment

- Giant reed up river (Verde Valley) vs. down river; more dispersed and less dense
- Tree tobacco- mostly upriver
  - Meeting with Tonto National Forest hydrologist
- Effective and efficient treatment and monitoring plan in place
- More water availability
- Enhanced habitat
- Crucial timing!

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Invasive plant treatments and restoration at two sites

13

String of pearls

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Riparian Restoration at 2 sites

- Biological Assessment
- Using the Restoration Manual finalize plans for these two sites
- Pre-work Assessment
  - Depth to water
  - Soil salinity
- Based on data collection develop plans
  - Invasive plant treatment plan
  - Restoration plan
- Implement Invasive plant treatments at RM 3.11 and Site RM 6.89L if possible
- Holistic approach
- Getting ahead of the tamarisk beetle
- Tribal participation

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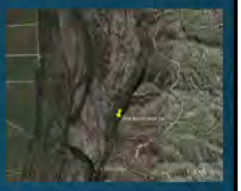
Continued work on the 33-acre Pilot Project

- Grow out plant materials
  - Cottonwoods, willows, marsh species
- Phase 2 planting
  - FMYN youth, Elders, and community members
- Retreat tamarisk and giant reed as needed



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Monitor invasive plant treatments and restoration activities

- Giant reed and tree tobacco locations and treatment success
- Pre- and post-work at 2 new sites
- Pre- and post-planting at Pilot Project
- Engage local community members
- Share successes and challenges with other groups
- Partner with other Tribes implementing active restoration

20

Summary

- Strategically phasing projects along the river
- String of Pearls….continued tamarisk treatments along the river and expansion of native plant habitats
- Crucial point for giant reed (almost cleared) and tree tobacco (expansion)
- Two new cohorts of cottonwoods for nesting bald eagles
- Enhanced habitat for all wildlife
- Excellent opportunity for youth and community engagement and stewardship
- Building off momentum and already established plans
- Connections up and down river- new partnerships with Tonto National Forest and Friends of the Verde
- Timing with the arrival of the tamarisk beetle
- More water available for native plant species and the river

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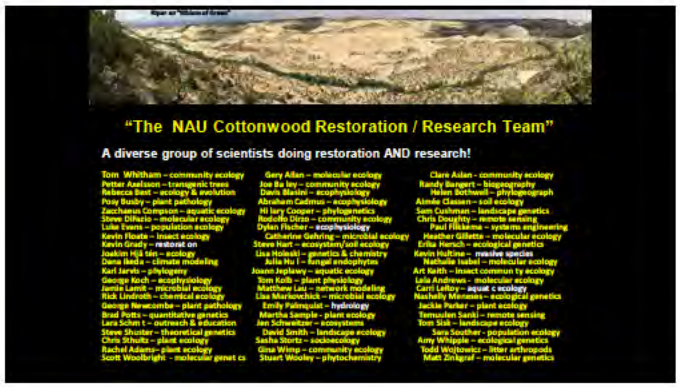

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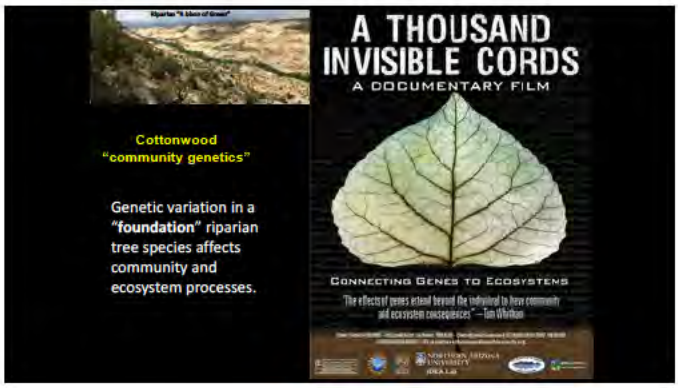

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Why Cottonwood?

Because they are a "Foundation" tree species

- Foundation species disproportionately structure their ecosystem by creating locally stable conditions and providing specific resources for diverse organisms.
- Cottonwood: cover approx. 3-5% of desert southwest but support 80+% of biodiversity!
- Also extremely important for potential to hold water, and prevent the establishment and spread of invasive exotics. (tamarix, camel thorn, non-native grasses, etc.)
- Just as the loss of a foundation species will fundamentally change an ecosystem, the restoration of one will also have profound effects on biodiversity and ecosystem function.

4

RIO DE FLAG PROJECT OVERVIEW

- Enhance and enrich riparian resources in an urban environment.
- Reintroduce native plants creating a more typical riparian ecosystem.
- Provide opportunity for research and an outdoor classroom.
- Create genetic repository garden.
- Provide an example project to encourage support for additional riparian restoration.

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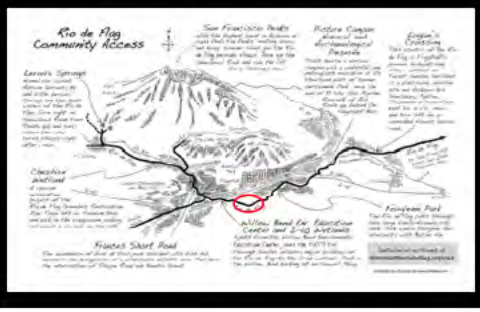
Flagstaff and the "Rio de Flag"



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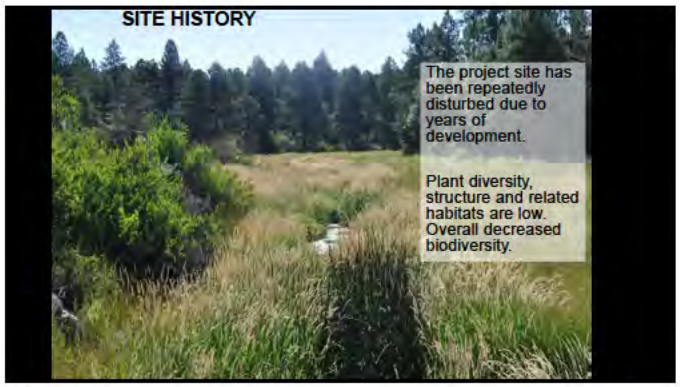

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Urban riparian systems are often undervalued and knowledge of urban stream system function and restoration is still limited.

HISTORICAL NEGLECT

As a result, valuable riparian areas are not adequately protected and regional and local decisions often negatively affect stream channels.

11

SITE SOLUTIONS

Invasive, weedy species will be removed, reduced and managed.

Cottonwoods, willows and possibly other riparian vegetation will be introduced to stabilize channel, increase habitat diversity, promote biodiversity and help improve water retention and quality.

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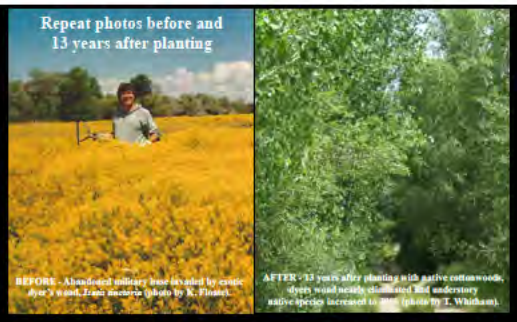

Success - Turning an intercity SuperFund site into the Ogden Nature Center for thousands of K-12 students

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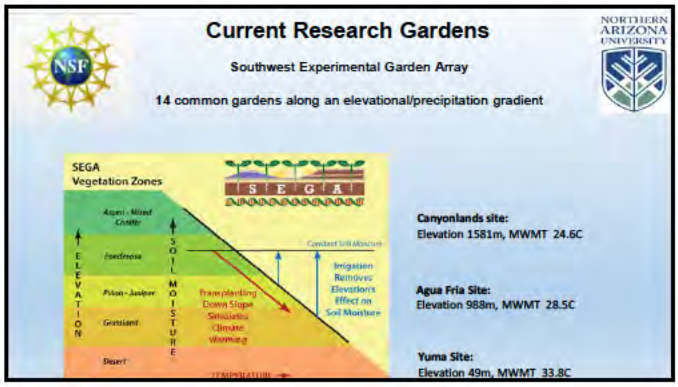

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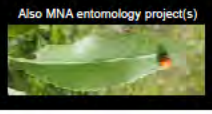
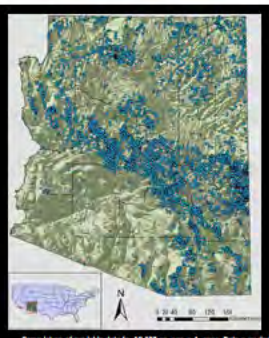
Research Component

Many "relict" populations of narrowleaf cottonwoods are threatened and will likely soon be lost. By relocating trees to a "common garden" their genetic diversity can be conserved (repository) for future research and restoration projects.

Use of common gardens to determine what is best for restoration efforts.

Also MNA entomology project(s)





Comp lat on of eva lable data fo 10,227 sp ngs n A zona. Data p ov ded by AUF S, Cocon no Nat onal Fo est, T bal gove nments, Ka bab Nat onal Fo est, Glenn R ns, E yan B ean and Susan Mo an, G and Canyon T ustand the Southe n Colo ado Plateau Netwo k.

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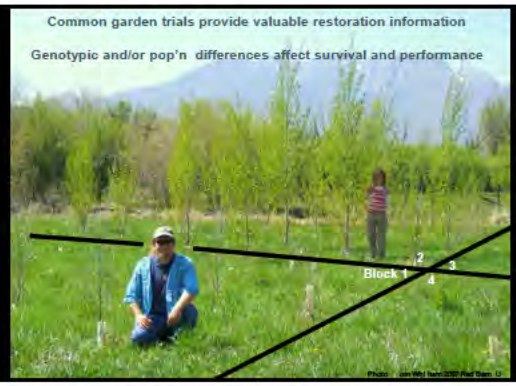


18

Public outreach and an outdoor classroom

"This is a really cool way to learn."

- 40 high school students
- 500 cottonwood trees
- 3 days

Restoration site on the Little Colorado River

19

PROJECT BENEFITS

- Creation of a riparian corridor along a highly visible stretch of an urban stream channel.
- Demonstrate and inform landowners and the public about the potential benefits of riparian restoration efforts.
- Increased biodiversity and ecosystem function due to the reintroduction of foundation riparian species.
- Provide a genetic repository for threatened populations of cottonwoods, and a valuable outdoor classroom and research garden for multiple users.
- The project will serve as an example for additional riparian restoration efforts.

The project is meant to "jump-start" other similar beneficial projects and thereby multiply the benefits of this project.

20

Summary & Questions

- 3-5 acres along the Rio de Flag in Flagstaff Arizona
- 1000+ Cottonwood trees, 200+ Willow trees
- Genetic conservation of threatened populations
- Research garden and classroom
- Example project for future, similar restoration efforts

Art Keith
Email: ark36@nau.edu

21

Funding Agencies

Land Managers

Working Together to Provide Solutions

Research/Training/Outreach

22

GILA WATERSHED PARTNERSHIP OF ARIZONA

Habitat Rehabilitation Along the Gila River

Gila Watershed Partnership Restoration Plans for 2020 & Beyond

Overview

- Restoration to Date
- Successes, Challenges, & Notable Adaptations
- Plans for this Grant Cycle

GWP Restoration Goals

- GWP goals:
  - Conserve natural resources
  - Enhance the environment

- Restoration goals:
  - Create islands of native tree species along the Gila
  - Wildlife habitat, especially for T & E species
  - Prepare for the tamarisk leaf beetle arrival
  - Reduce fire risk
  - Conserve water through establishing native vegetation


Southwest Willow Flycatcher

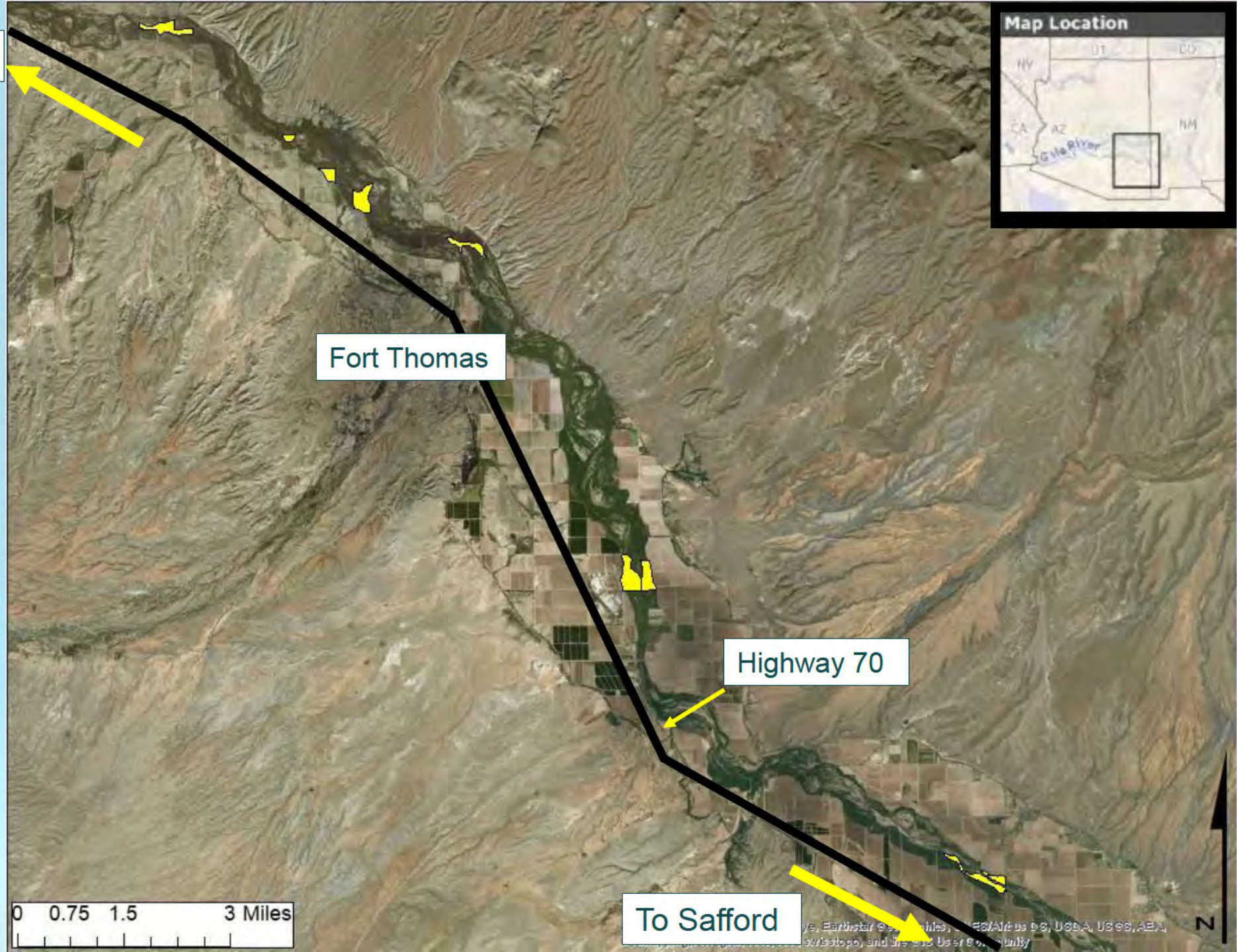

Yellow-Billed Cuckoo


Coyote Willow

From North to South:

- **R3:** 46.0-acres
- **R8:** 9.9-acres
- **R9:** 17.4-acres
- **R10:** 47.0-acres
- **R11:** 27.0-acres
- **R14:** 61.7-acres
- **R15:** 39.6-acres
- **R18:** 56.2-acres

Gila Watershed Partnership Field Sites



Partners in Success!

- Arizona Conservation Corps (AZCC)
- National Civilian Community Corps (NCCC)
- San Carlos Apache Tribe
- Fort Grant Prison Crew
- Volunteers

Partners in Success!

- Walton Family Foundation
- Arizona Department of Forestry and Fire Management Invasive Species Grant
- Eastern Arizona College – Discovery Park

Restoration Up to Now

2014 to 2019:

- 177.72-acres of Salt Cedar Removed
- 98.76-acres of Salt Cedar Retreated
- 14.01-acres of Salt Cedar Piles Burned
- 73.47-acres of Cleared Land Revegetated

Challenges, Successes, & Adaptations for the Future

Challenges

- Water!

- Groundwater Depths Can Top 20-ft!
- No Rights to the River Water
- Hotter & Drier Trends

Challenges

- Water!
- Herbivory!

Photo from Arizona-Sonora Desert Museum facebook page
https://www.facebook.com/desertmuseum

Elk

Deer

Beaver

Ground Squirrel

Rat

Road Runner

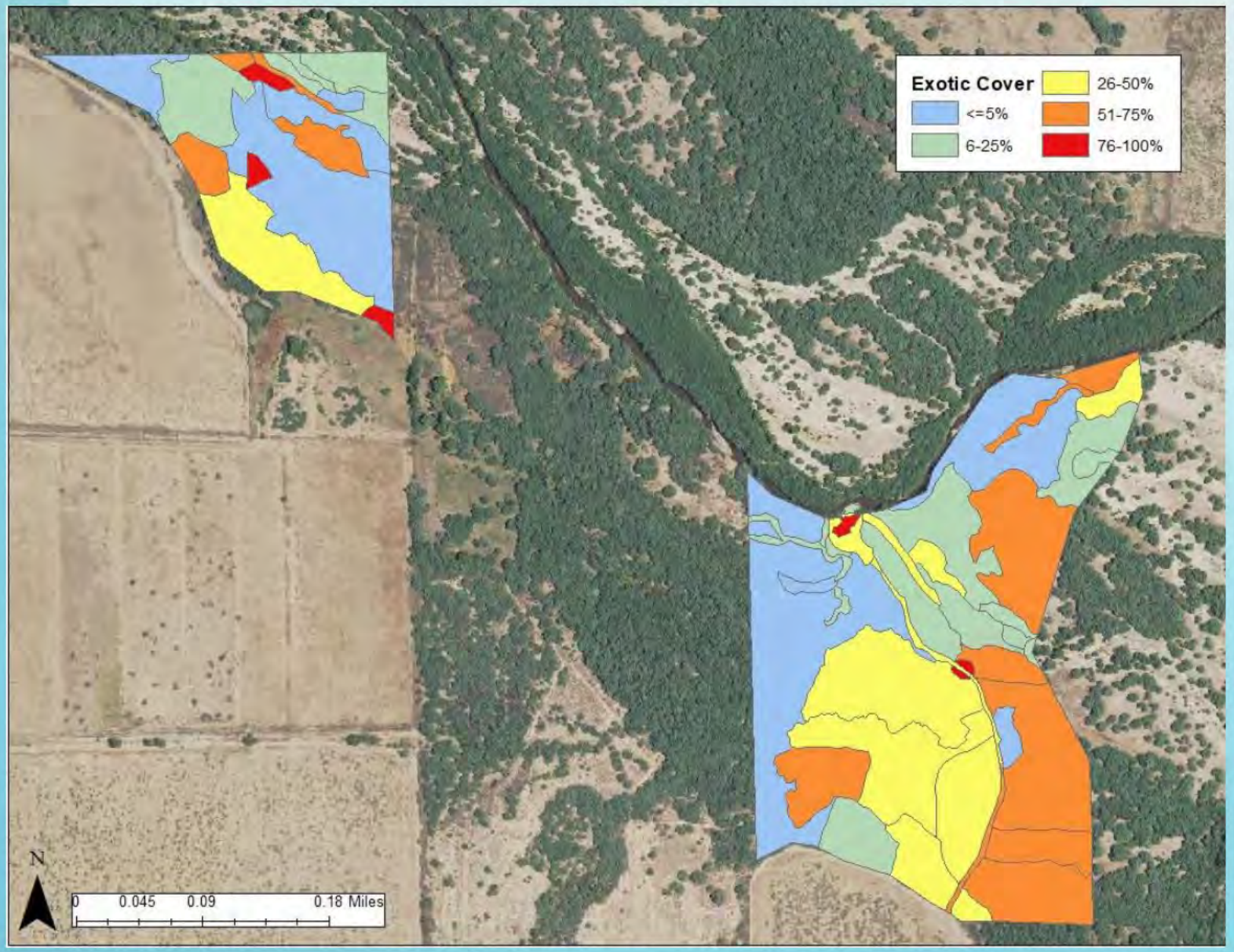
Rabbit

Challenges

Photo from Arizona-Sonora Desert Museum facebook page
https://www.facebook.com/desertmuseum

- Water!
- Herbivory!
- Weeds!

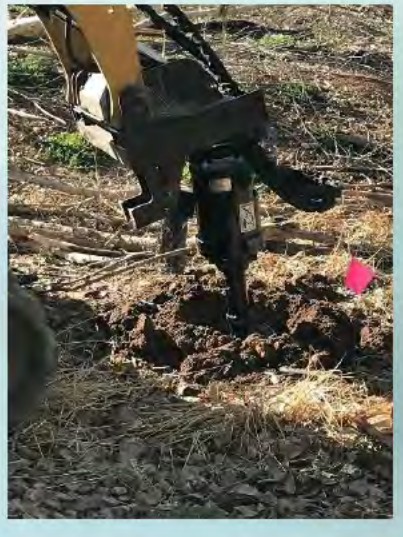
Challenges



- Weeds!

Notable Successes & Adaptations!

- Irrigation & Plant Survival Success



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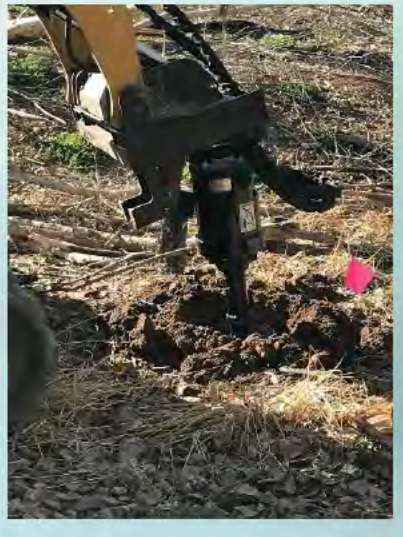
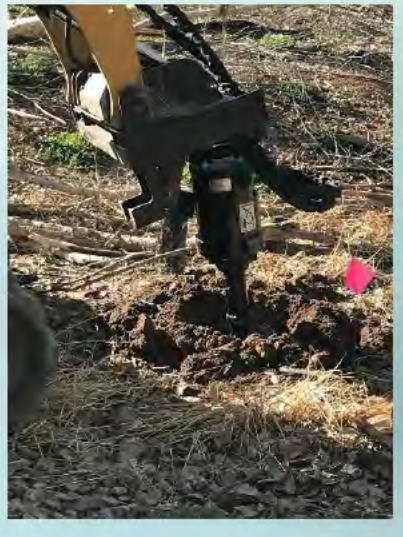


81% Survival of Plants in Irrigation Zone!

Notable Successes & Adaptations!

- Irrigation & Plant Survival Success
  - Herbivory Deterrents



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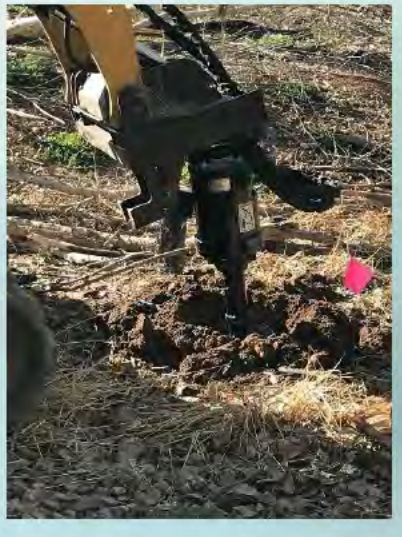
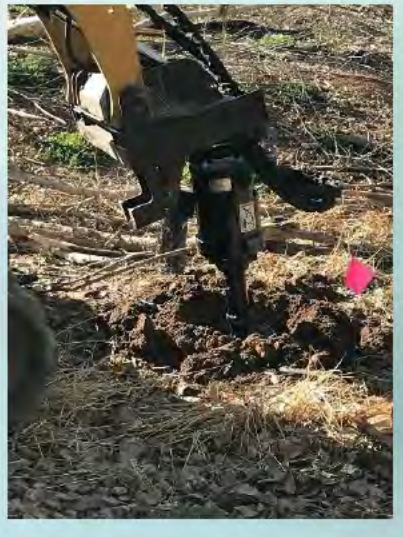
  - Herbivory Deterrents



Caging was successful in deterring ungulate predation & exclosures blocked flood debris

Notable Successes & Adaptations!



- Irrigation & Plant Survival Success
  - Herbivory Deterrents
    - Prescribed Burning Set in Place w/ an Approved Burn Plan

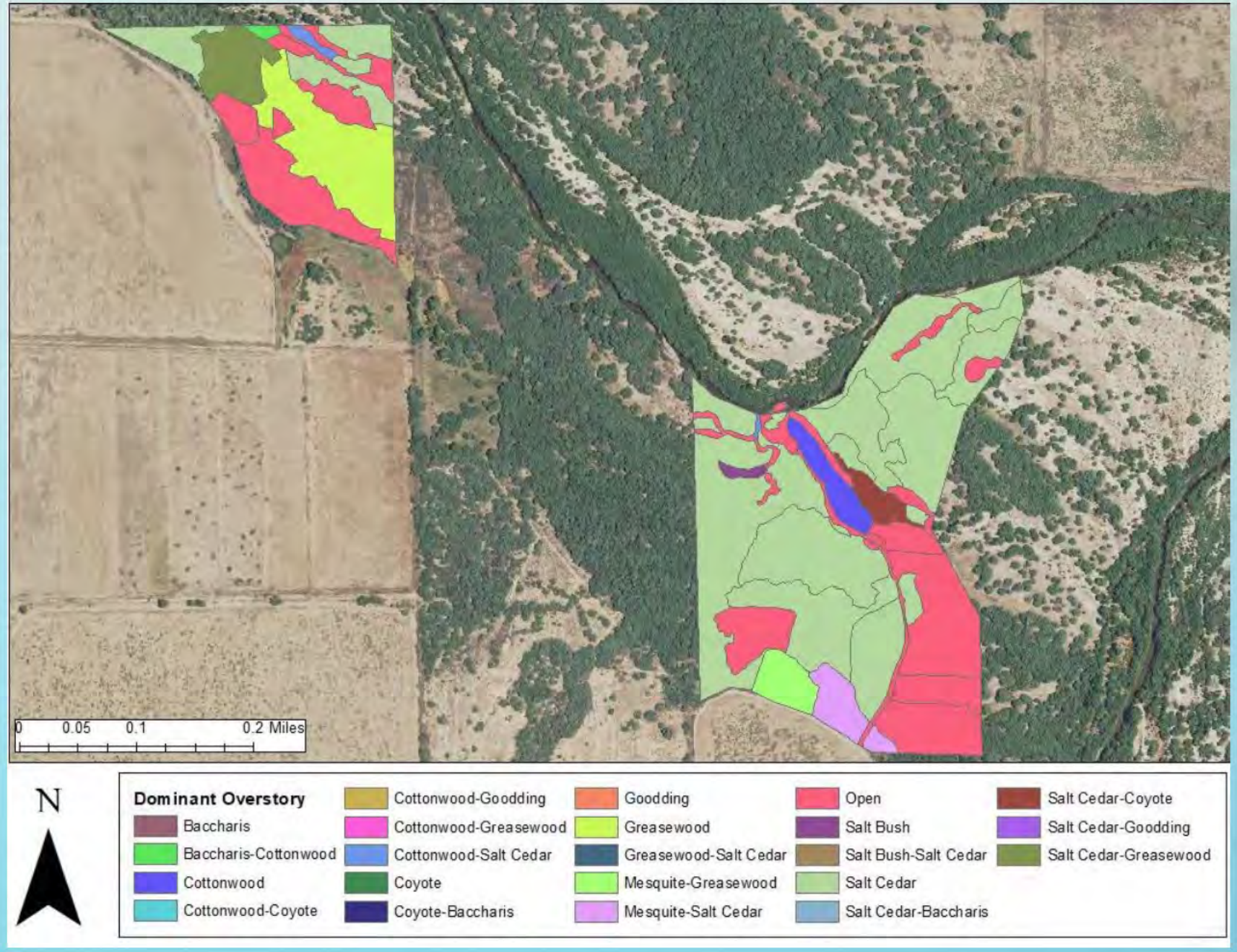
Plans for the Upcoming Grant Cycle (2020 & Beyond)

Three Year Plan for Rehabilitation

Switching to a Maintenance Mind Set & Loving Adaptive Management

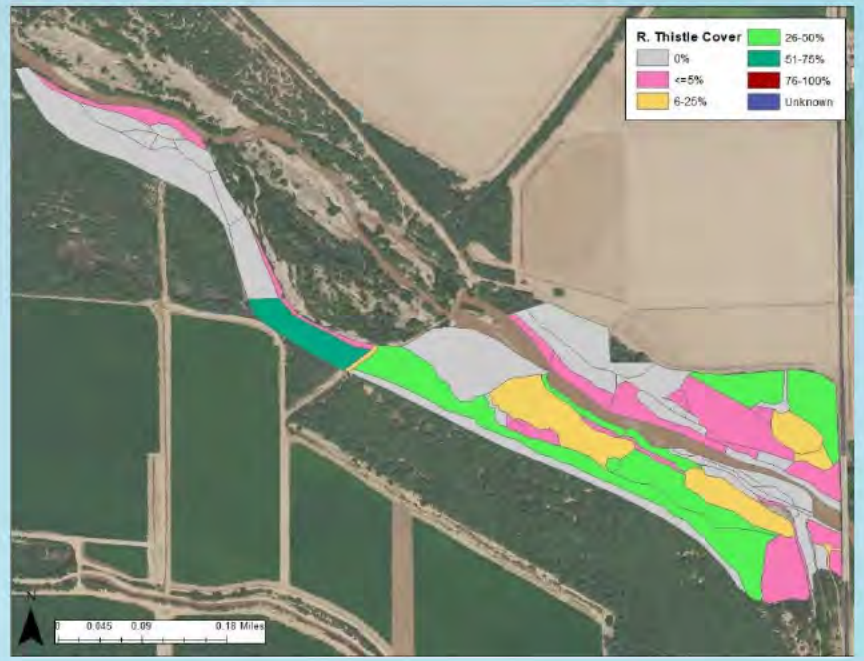
- Remove 10-acres of Salt Cedar Annually
- Retreat a Minimum of 35-acres Annually
  - Also, Prescribed Burns
- Institute a New Secondary Weed Management Plan
- Plant and/or Seed 10 to 15-acres Annually

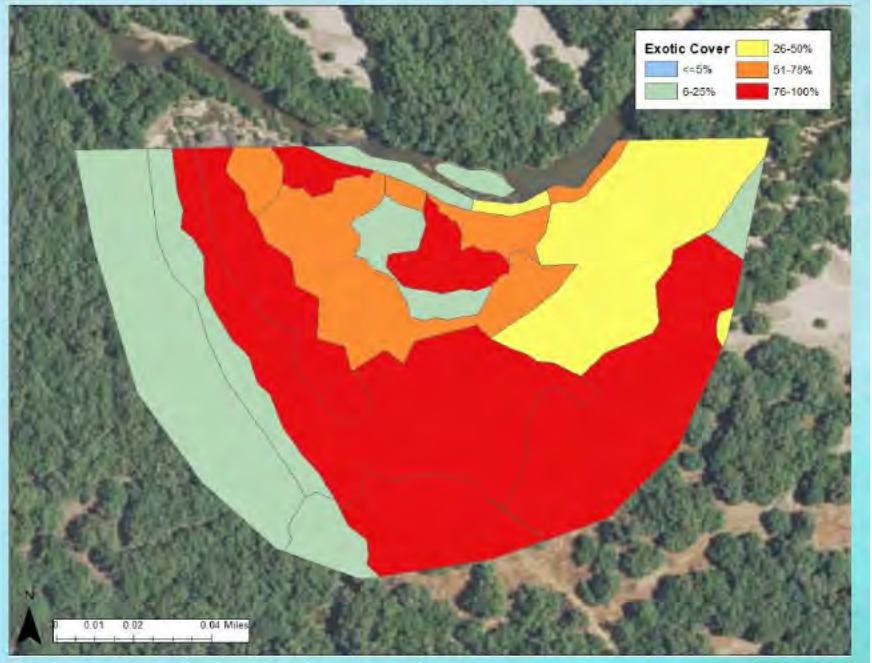
- **Drivers of Priority Restoration Plans:**
  - Current Dominant Cover
  - Weed Prevalence
  - Access
  - Suitability for Different Plant Species



APPENDIX 1: Weed Management Plan. A schedule for when management actions need to occur with priority exotic herbaceous weeds year-round.

	Common Name	Scientific Name	Goal of Removal	Fall	Winter	Spring	Summer	Notes
1	**Belvedere/ Burningbush**	*Bassia scoparia*	Reduction/ Eradication			Chemical	Manual (& Chemical)	Tends to be chemical resistant, you must use stronger herbicide or mix a weaker one with multiple kinds
2	**Oak-Leaved Goosefoot**	*Chenopodium spp*	Reduction	Manual		Manual & Chemical	Chemical	No chemical treatment designed for this plant; we will use treatments for a similar species and test for effective percentages
3	**Russian Thistle**	*Salsola kali & tragus*	Reduction			Chemical	Manual (& Chemical)	Leaving some on the site can help with other vegetation growth
4	**Giant Reed**	*Arundo donax*	Eradication	Manual & Chemical		Chemical	Chemical	Chemical twice--once in late summer to fall, once, and once in spring
5	**Yellow Starthistle**	*Centaurea spp*	Eradication (where possible)		Manual	Chemical		Either two chemical treatments (one in winter and one in spring) or higher chemical % once in late spring; only control small patches, in large patches just control the borders; please GPS mark any populations seen
6	**Johnson Grass**	*Sorghum halopense*	Reduction/ Eradication			Manual & Chemical	Manual & Chemical	Very hard to treat, repeated removals in spring when the plants are young is most likely to help--treat multiple times per season
7	**Red Sorrel**	*Rumex dentatus*	Reduction		Manual & Chemical	Manual & Chemical		Removing above-ground biomass reduces next-year growth; you must dig out root; chemicals are best applied on early stem formations--watch for this for timing





16 Priority Weed Species Found Throughout Sites

Goals	Management Action	SMART Objective	Monitoring Approach	Monitoring Frequency	Monitoring Output	AM Trigger	AM Actions
Reduce wildfire risk	Remove standing biomass of salt cedar & treat salt cedar re-sprouts	Implement fuels treatments to reduce total salt cedar cover to <10% of all treated sites within 5 years of initial primary treatment	Utilize electronic field forms to document total cover of woody plant species within individual MU	Annually for first 5-years following treatment. Every 2-3 years thereafter	GIS maps/layers showing relative vegetation cover within MUs; Table showing percent cover	Salt cedar cover in a treated area exceeds 10% cover	Implement control treatment (Appendix 7)
Transition treatment areas from non-native to native dominated cover	Control cover of non-native herbaceous plants	Implement control treatments to reduce herbaceous plant cover to the following management thresholds within 5-years following initial primary treatment: - Kochia & Russian thistle: <25% total cover - Giant cane (*Arundo donax*) and all Arizona state-listed noxious weed species: 0% total cover - Other species in Appendix 1: <25% total cover	Document total cover of non-native herbaceous species within each MU Use electronic field forms to document species of management concern	Annually for first 5-years following treatment. Every 2-3 years thereafter	GIS maps/layers and a table showing relative cover of weedy herbaceous vegetation	>0% for Giant cane and AZ state listed noxious weeds >25% cover for all other non-native herbaceous species	Implement control treatment (see Appendix 7)
	Plant native trees and shrubs in hydrologically suitable locations	Native tree and shrub species will achieve the following survival goals within 5 years following planting: - 70% in zones where max. dtw ≤ 6 ft. - 50% in zones where max. dtw > 6 ft.	Utilize GIS maps loaded on Avenza Maps to navigate to species planting locations at each project site. Complete electronic field forms to document status of each species according to live, dead or missing.	1st year after planting; Annually if planting occurs annually	GIS maps/layers showing planting locations and survival; Tables/bar charts of individual species survival rates by project site.	Survival of planted species fall below survival threshold 12-18 months after planting	Supplemental planting; Evaluate potential causes of failure, i.e., drought, pests, herbivory, etc. Look at groundwater hydrograph. Change future planting methods accordingly
	Planting native trees and shrubs in hydrologically suitable locations	Native tree and shrub species will comprise at least 75% relative canopy cover in MUs within 5-years following planting	Utilize electronic field forms to document relative cover of woody plant species within individual MU	Three times: 1st baseline (pre-treatment) 2 years after planting 5 years after planting	GIS maps/layers showing relative vegetation cover within MUs; Table showing percent cover	Relative woody phreatophyte cover <75%	Investigate the need for control treatment of invasive species; Implement additional planting and seeding strategies
	Create 'safe sites' for native cottonwood and willow seedling recruitment by removing salt cedar along channel bank lines	New cottonwood and/or willow seedlings are present/observed in May in at least 1 in 5 years along channel bank lines cleared of salt cedar	Presence/Absence surveys in May that are walked along bank-lines in previously treated areas	Annually in May for at least 5 years following bankline clearing	Presence/Absence points plotted within a GIS landscape (shapefile)	No new seedlings are observed along bank-lines for 5 consecutive years	Evaluate causes and treat (i.e. crowded out with weeds); Increase supplemental hand seeding or N/A
	Seeding native grasses and shrubs	Native seeded species will comprise at least 15% of aerial cover in seeded zones within 5 years (quads or line intercepts)	Transects with quadrats within seeded zones Photo points prior to seeding and each year (install 2-3 points around seeded zone depending on acreage)	First, third, and fifth years following seeding event	Table of percent cover within seeded zone; (quadrats and transects allow a subset that can be extrapolated)	<15% of aerial cover is comprised of seeded species after five years	Look for potential causes of failure, i.e., drought, drowning, pests, herbivory, etc. Look at groundwater hydrograph. Change future seeding methods accordingly

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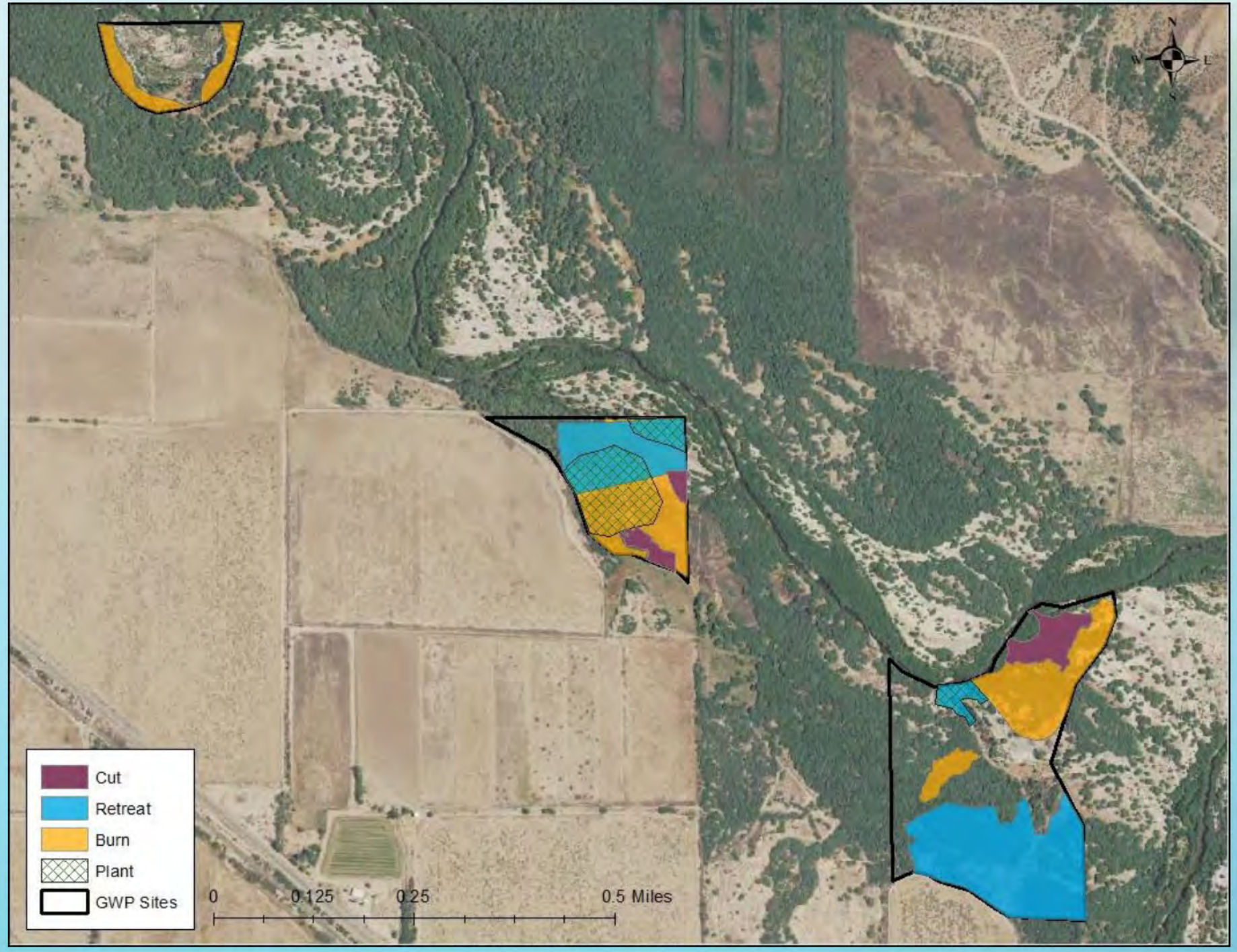
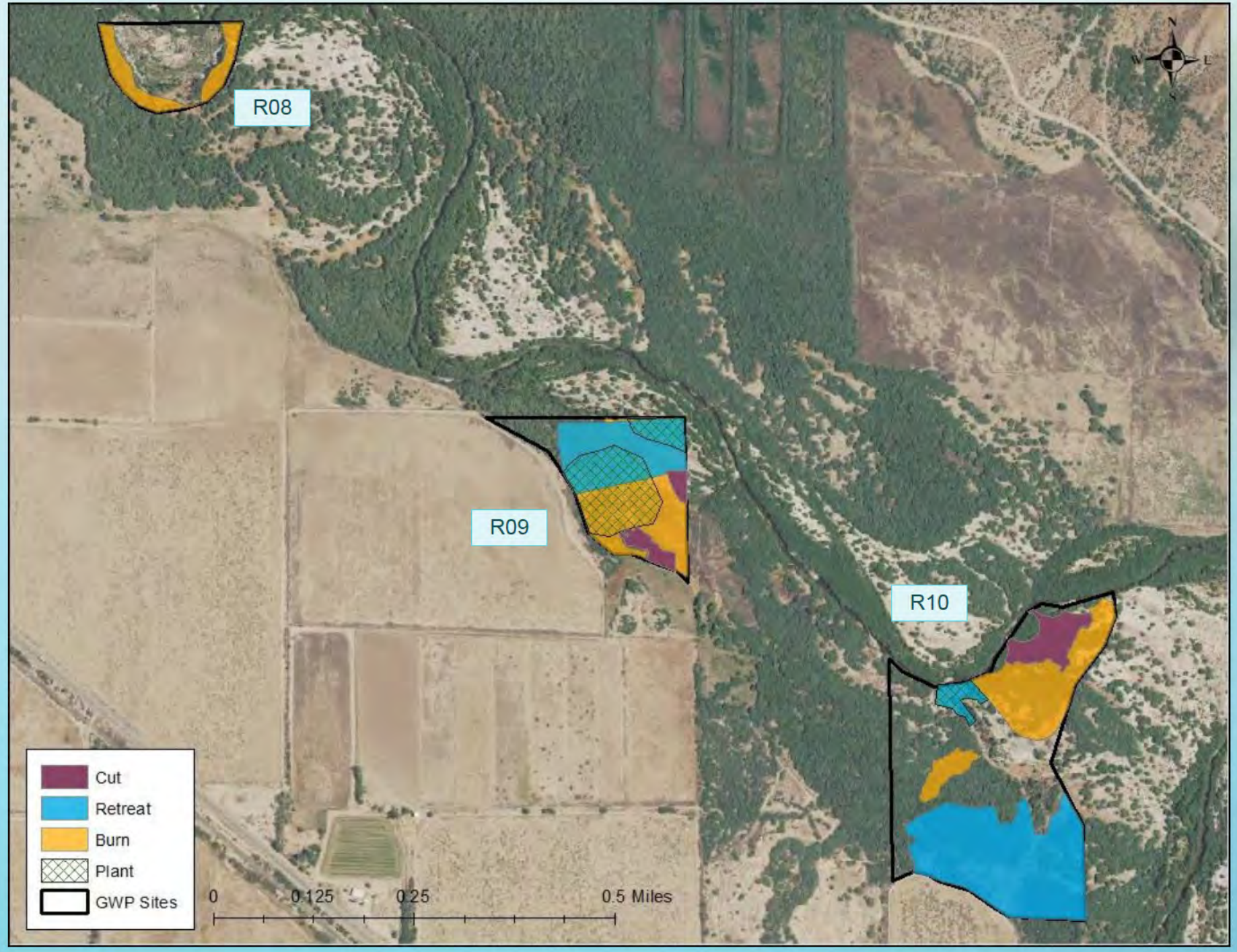
2020 Site Plans



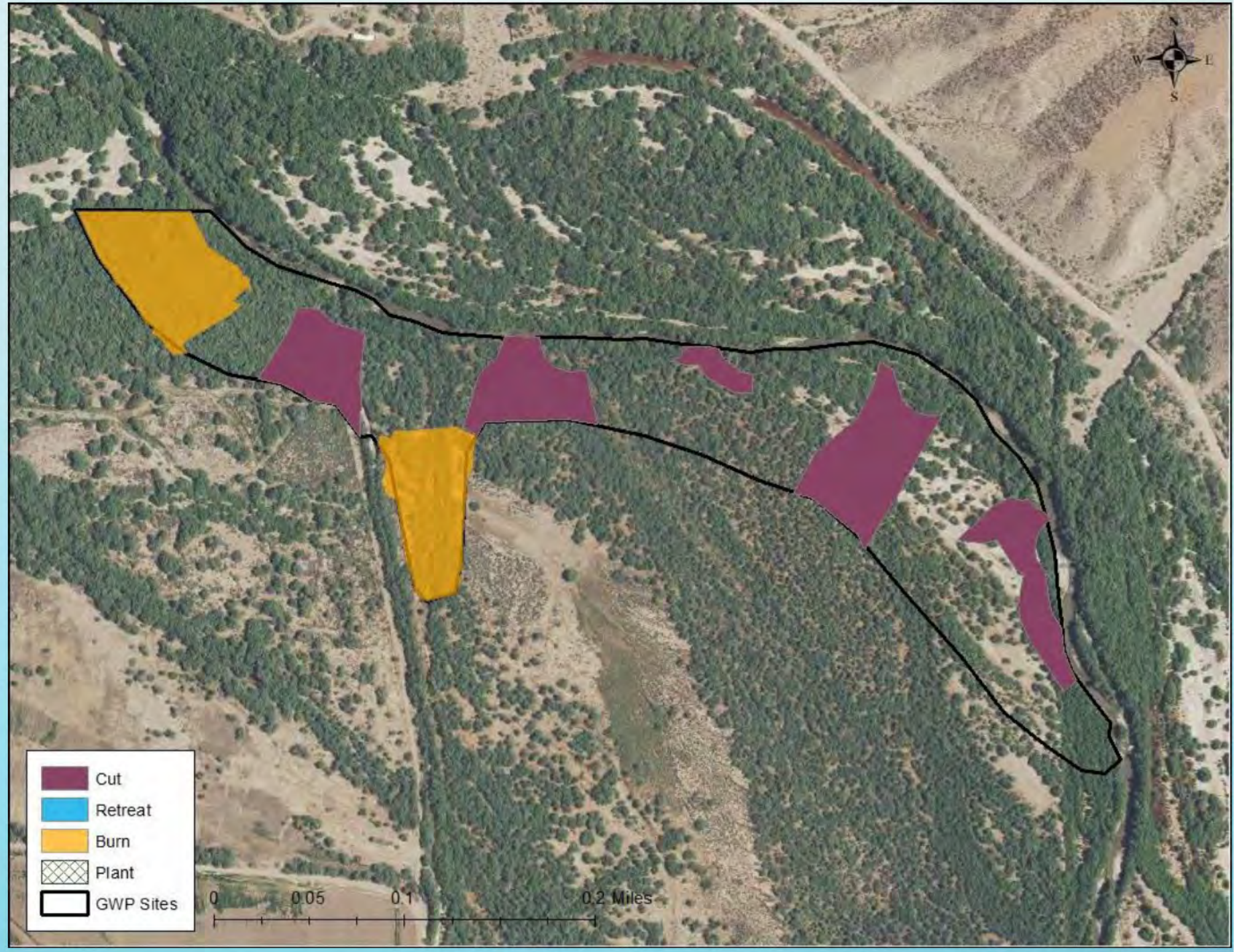
2021-2023 Plans:

Intensive Retreatment & Secondary Weed Management

- **R08:** Machine Retreatment and Secondary Weed Treatment; Planting Grasses & Willows
- **R09:** Salt Cedar Retreatment & Continued Planting; Some Primary Removal
- **R10:** Primary Removal; Seeding; Additional Planting; and Weed and Salt Cedar Management



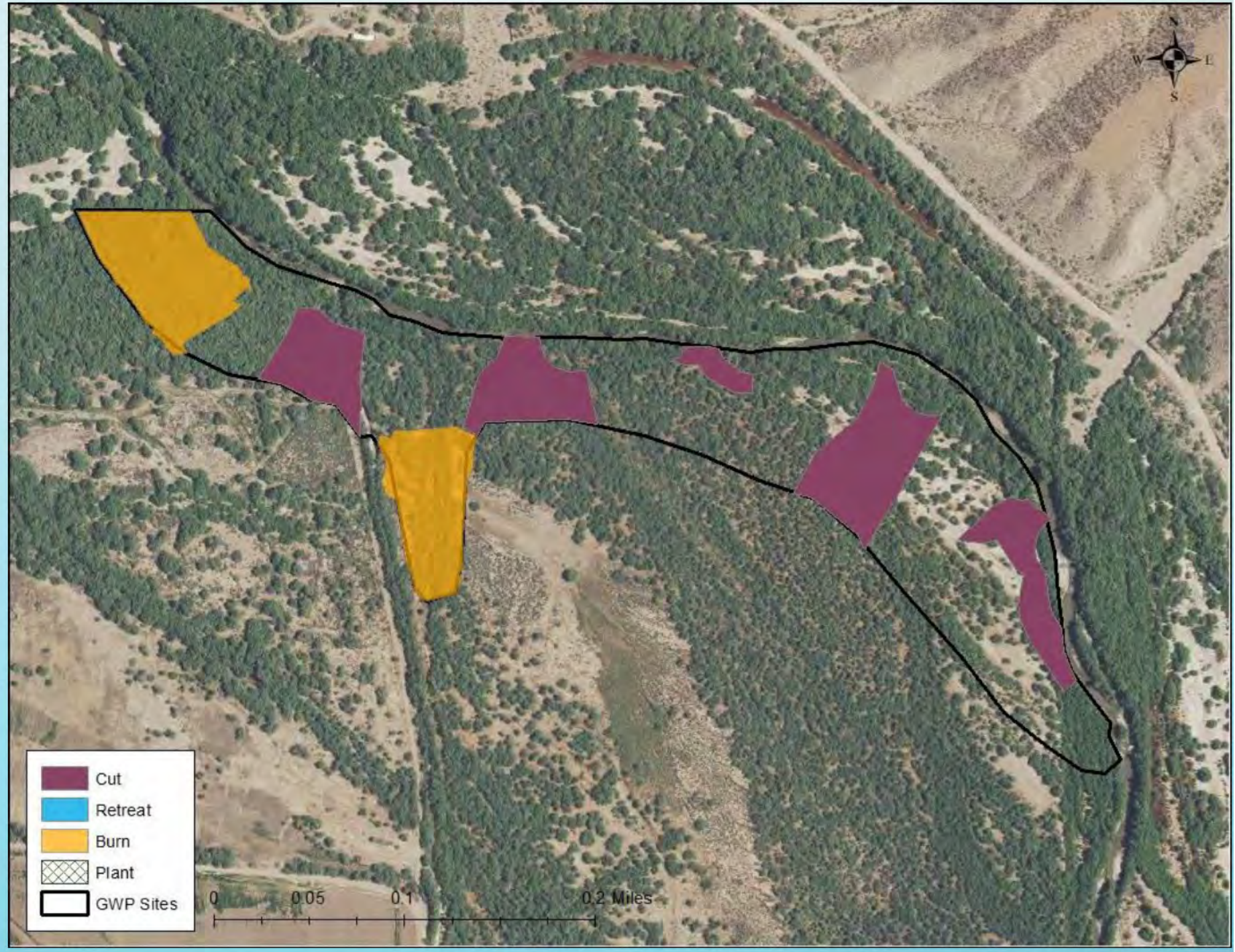
2020 Site Plans



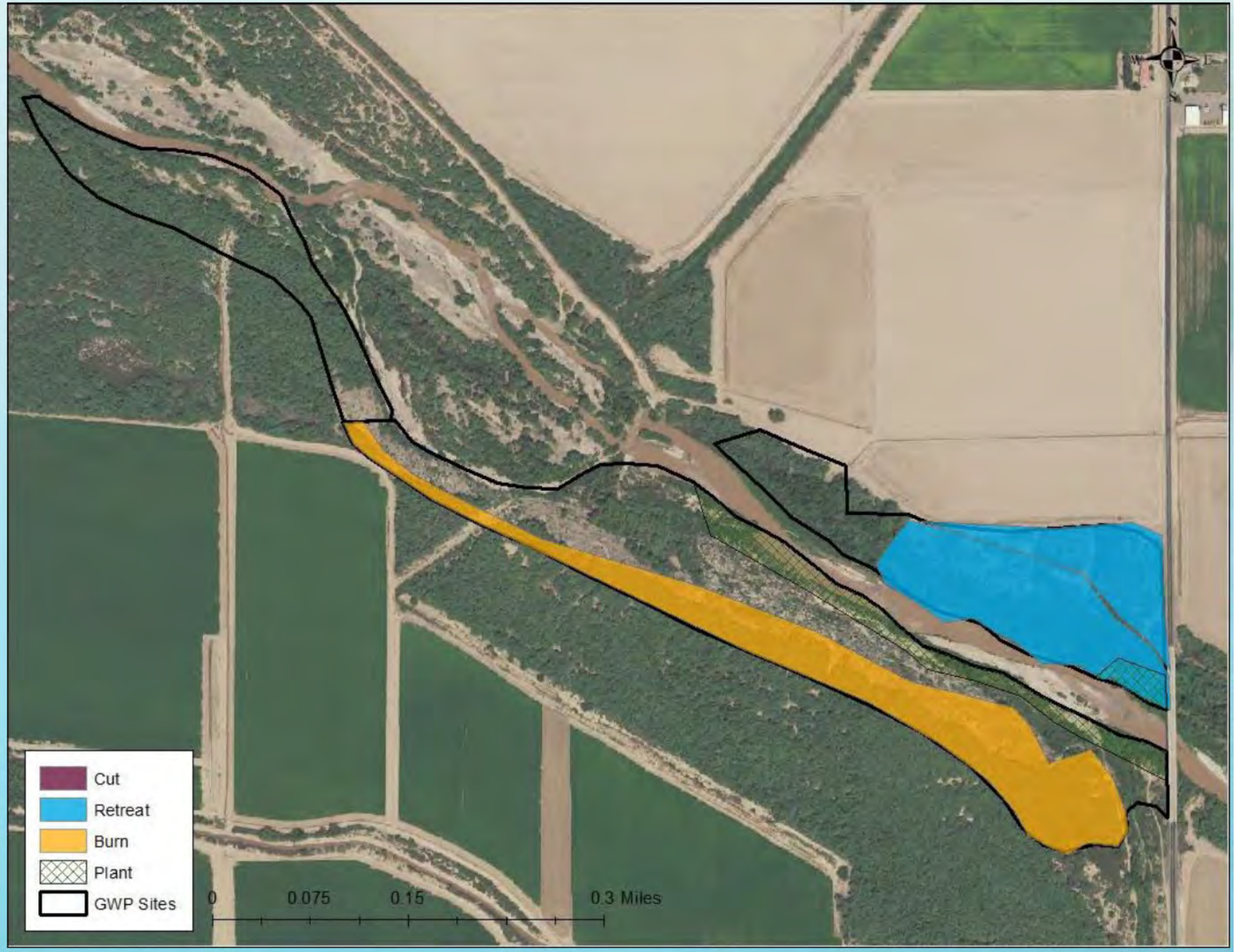
2021-2023 Plans:

Intensive Retreatment & Secondary Weed Management

- **R11:** Salt Cedar Retreatment and Secondary Weed Management; Mulching and Burning; Upland Species Planting & Seeding



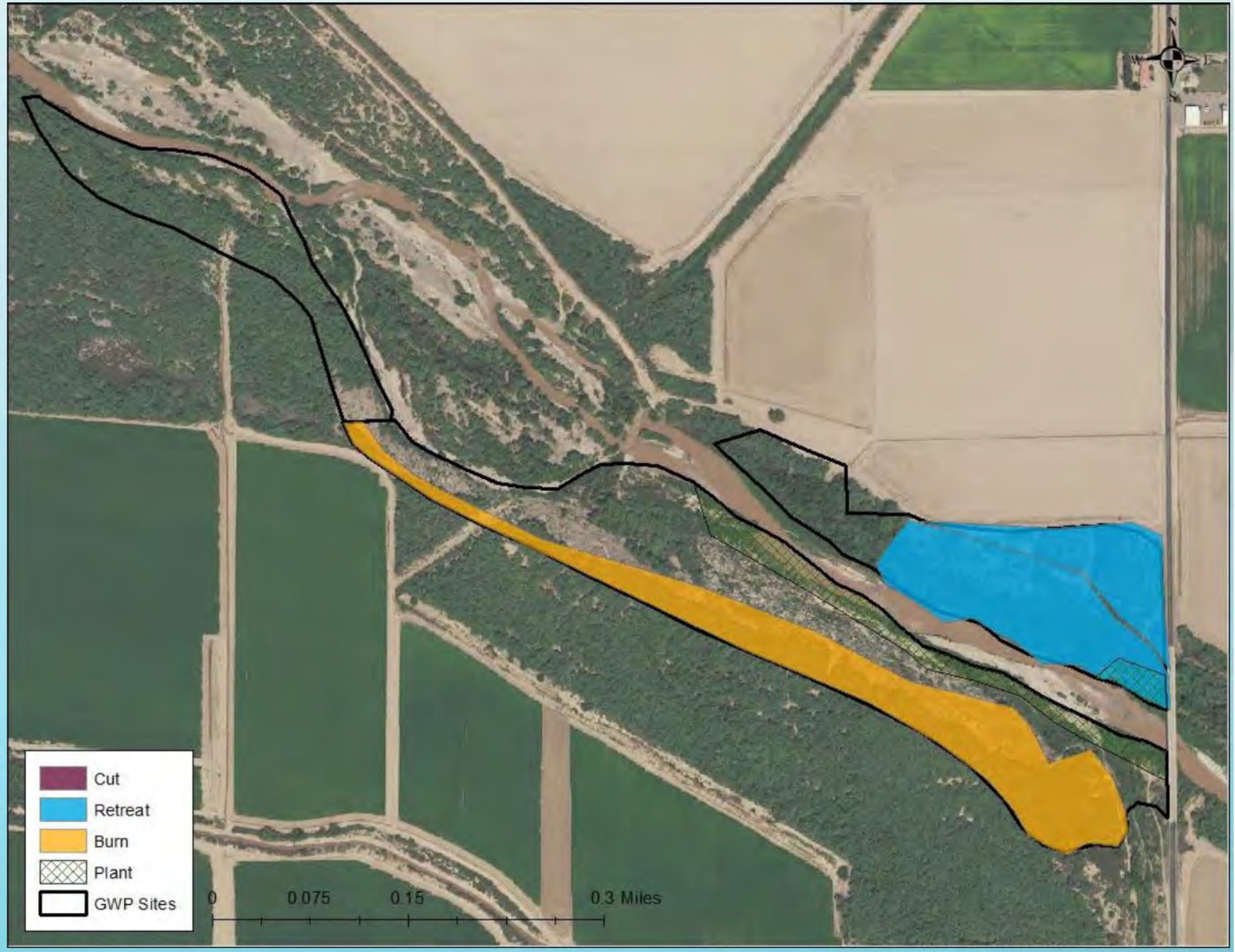
2020 Site Plans



2021-2023 Plans:

Intensive Retreatment & Secondary Weed Management

- **R18:** Salt Cedar Retreatment and Secondary Weed Management; Mulching and Continued Burning; Upland Species Planting & Seeding; Planting in Washes for Riparian Species



QUESTIONS?

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Reduction of Erosion and Sedimentation Along San Pedro River Through Hydrologic Restoration of Upland Watershed.

Arizona Water Protection Fund

2020 Funding Cycle

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Google Earth

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Google Earth

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USDA

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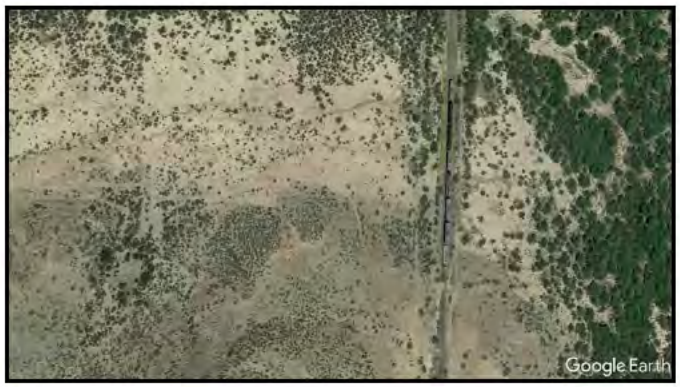
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USDA

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Google Earth

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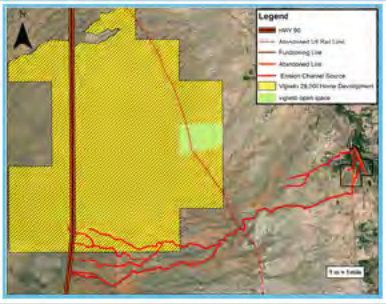

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Current Projects

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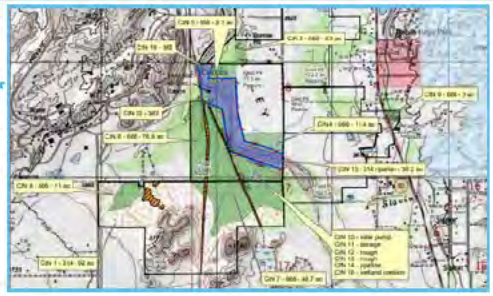
NRCS Working Lands for Wildlife, Southwestern Willow Flycatcher Project



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Additional Items

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The Nature Conservancy

Partners and Support

NRCS

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Monitoring

Current Monitoring:

San Pedro Wet/Dry mapping- The Nature Conservancy

NRCS Working Lands for Wildlife- Chase Skarrer, Willcox NRCS

AZ Dept. Forestry and Fire Mgmt. Forest Management Plan- Willie Sommers, DFFM

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Public Outreach

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A Diverse Set of Land Interests

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Additional Contract Requirements:

- Maintenance
- Permits
- T&E Species Surveys

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Maintenance

NRCS Water and Sediment Control Basin Maintenance Requirements:

Prepare an operation and maintenance plan for the operator. The minimum requirements in the operation and maintenance plan are—

- Periodic inspections especially immediately following significant runoff events.
- Prompt repair or replacement of damaged components.
- Maintenance of basin ridge height and outlet elevations.
- Removal of sediment that has accumulated in the basin to maintain capacity and grade.
- Regular cleaning of inlets for underground outlets. Repair or replacement of inlets damaged by farm equipment. Removal of sediment around inlets to ensure that the inlet remains the lowest spot in the basin.
- Where vegetation is specified regular mowing and control of trees and brush. Schedule vegetative disturbances to avoid the peak-nesting season.
- Notification of hazards about steep slopes on the basin.

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Permits

- Surface Water Rights- Water Retention vs. Detention
- Clean Water Act Section (404) Permitting Discharges of Dredge or Fill Material

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Threatened & Endangered Species

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Completed Wildlife Surveys

Biological Opinion: Stu Tuttle, NRCS

Habitat Surveys: Rana Tucker, AZGFD

Pedestrian Surveys: Kris Randall, USFWS

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Scope of Work & Costs

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Scope of Work

Schedule of Tasks, Deliverables and Payments				
No.	Task	Deliverable	Expected Date of Completion	Cost
1	Cultural Resource Survey	Archeological Survey Completed	Done	$0
2	Development of Engineering Plan	Completion of Work Plans	4 months after contract signed	40,000
3	Construction of water & Sediment control Basin	Completion of Basins	7 months after contract signed	$56,208.48
4	Backfilling of Large Gullies with Slash	Gullies filled	7 months after contract signed	$857,844.64
5	Final Report	Final Report and Oral presentation	1 month after end of task 4	$530

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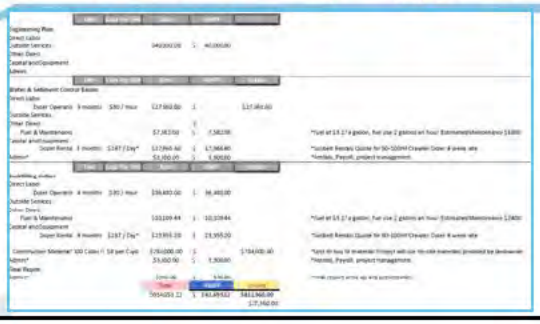

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Questions

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Restoring Sutherland Creek:
An Intermittent Creek in a Critical Shallow Groundwater Area

Watershed Management Group
Trevor Hare, Restoration Biologist

1

Watershed Management Group
50-year Vision to Restore Tucson s Heritage of Flowing Creeks and Rivers

- Convened the Santa Cruz Watershed Collaborative
  - Develop a Santa Cruz Watershed Restoration Plan funded by Bureau of Reclamation -$100,000
  - Partners include City of Tucson, Pima County, Tucson Water, Metro Water, BKW Farms, FICO, Bureau of Reclamation, US Fish and Wildlife Service, BLM, Forest Service, AZGFD, AZDEQ, Sonoran Institute, AZ Land and Water Trust, Tucson Audubon, University of Arizona, Freeport-McMoRan, ASARCO, USGS, Saguaro National Park, Marana, Sahuarita
- Consulting for homeowners, landowners, businesses, jurisdictions and agencies
  - Water Policy, Green Stormwater Infrastructure, Erosion Control, Upland and Riparian Restoration, Native Re-vegetation, Educational Programming

2

Current Erosion Control and Restoration Work

Bureau of Reclamation
- Ciénega Creek -$130,000

ADEQ
- Ciénega Creek -$160,000
- San Pedro River in Sonora -$300,000

Pima County
- Floodplain sites -$240,000/2 years

Intel
- Tributary arroyos -$60,000

Two NRCS RCPP grants in development
- San Xavier District of the Tohono O odham
- Altar Valley Conservation Alliance, University of Arizona and Pima County

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2011
Pt of Diversion
Genius Loci

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2012
Pt of Diversion
Genius Loci

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2014
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2015
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2017
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Genius Loci

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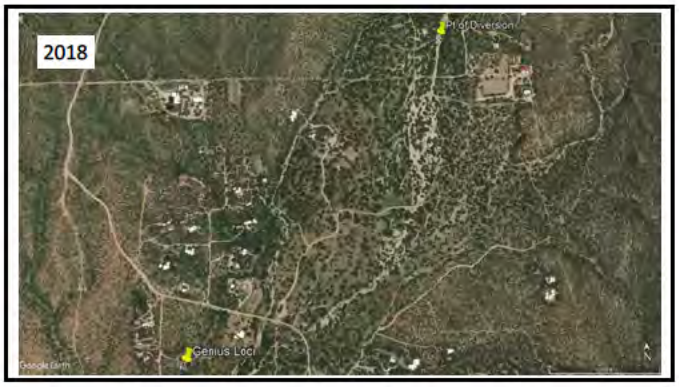
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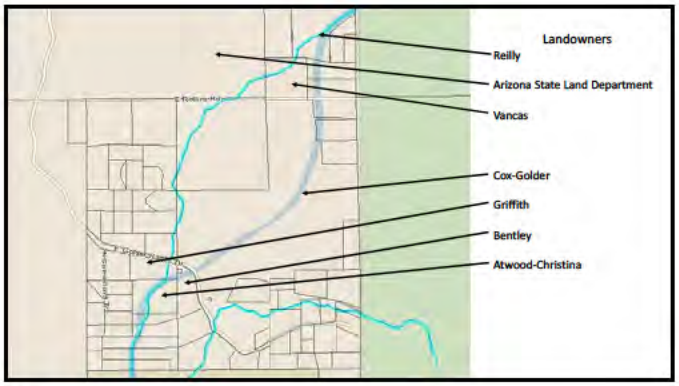

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Nov 1, 2019 at 10 38 AM

Good morning Trevor,
The State Land Department is not able to support your Water Protection Fund grant proposal, or any others. All use of State Trust Land requires permission in the form of a lease or permit. In this case, a Right of Way would be required. There is an application process and fee for this instrument and it takes several months to process. My apologies that we did not inform you of this when you first contacted us.

Regards,
Steve

Thu, Oct 31, 2019 at 9:35 AM Trevor Hare [illegible] wrote:
Steve and Pam -I present the proposed project to the Arizona Water Protection Fund Commission on November 20th and want to get something in writing from you all that says I will be able to work on the State Land parcel if need be but I will have to get a permit to place improvements'
Thank you -Trevor

On Thu, Aug 29, 2019 at 8 35 AM Steve Rusiecki <srusiecki@azland.gov> wrote
Thanks Trevor, I have forwarded your request to our Planning and Engineering Division and ROW Section for review.

Steve
Steve Rusiecki
Interim Director
Natural Resources Div sion

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Project Objectives

- Review and refine the original proposal provided by Natural Channel Design with local residents and landowners
- Construct instream and floodplain grade control structures, improve road drainage where it is capturing creek flow, treat adjacent upland areas and tributary arroyos
- Monitor, evaluate, and provide maintenance of treatments in coordination with landowners to foster long-term benefits

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Scope of Work

- Assessment –based on a Natural Channel Design recommended approach
- Design –based on collaboration with WMG, NCD and landowners
- Implementation –using practitioners, youth corps, local contractors, trainees, and volunteers
- Monitoring and Maintenance –involved parties, community groups, landowners
- Reporting –monthly messaging through multiple channels including required reports to AWPF, WMG communications, local and national popular and scientific press

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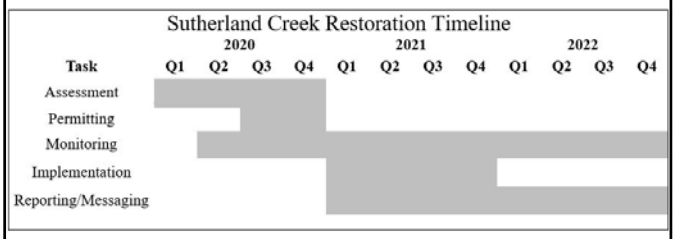

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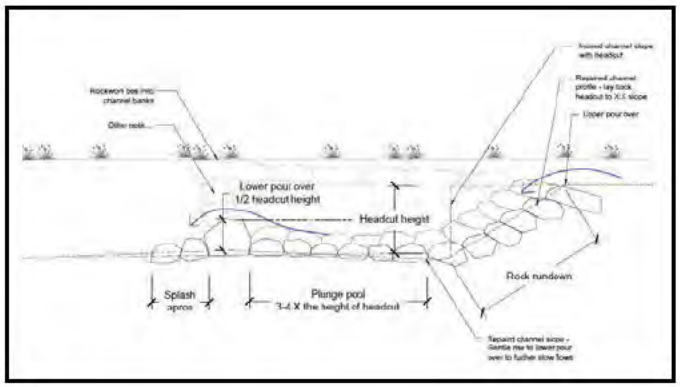

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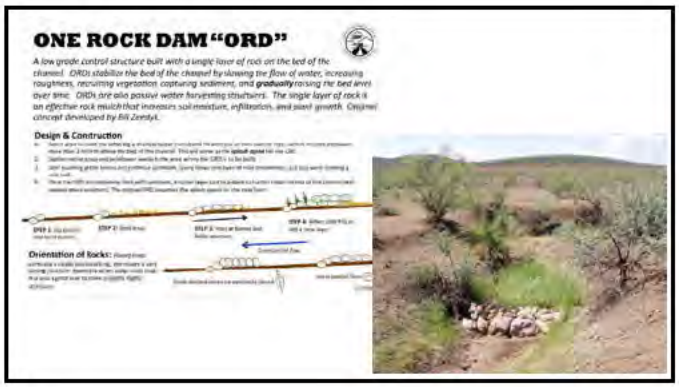

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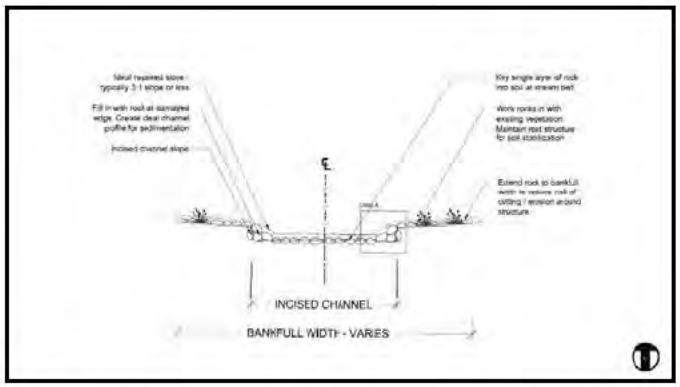

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Funding Request

- Grant Oversight -$15,600
- Assessment, Design and Planning -$82,040
- Permitting -$15,000
- Implementation -$188,380
- Monitoring and Maintenance -$20,064
- Reporting -$6,750

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San Pedro Natural Resource Conservation District

Riparian Restoration Program

A PROJECT TO DEVELOP A LONG-TERM RIPARIAN MANAGEMENT PLAN AND BEGIN RESTORATION OF RIPARIAN HABITAT ALONG THE SAN PEDRO RIVER

The San Pedro Natural Resource Conservation District (SPNRCD) intends to create a Riparian Area Restoration Program. This Program will aim to remove the invasive species commonly referred to as saltcedar, or tamarisk (Tamarix spp.) in order to restore riparian areas along the San Pedro watershed. The San Pedro River has been heavily impacted by tamarisk, causing increased water loss, fire hazards, and the loss of wildlife habitat.

This Program will seek to restore desirable riparian area vegetation in order to improve proper hydrologic conditions/functions, improve water quality and quantity, and decrease severe wildfire hazards adjacent to urban areas by invasive species removal and reintroducing native plant species in the treated areas.

SPNRCD is seeking grant funds from WPF to initiate this program. When a Long-Term Plan for Riparian Restoration is complete, it will furnish the basis for soliciting funding and assistance from other public and private sources.

Goals

- Decrease water loss along the San Pedro River by removing the invasive species tamarisk.
- Improve long-term riparian ecosystem functioning through the native plant revegetation and maintenance.
- Restore native habitat for wildlife by improving the availability of food and cover with native plants.
- Bring together diverse stakeholders to complete restoration efforts including ranchers, farmers, county and city governments, government agencies, non-government organizations, and public citizens.

Project Objectives

- Develop a long-term plan for improving and maintaining riparian vegetation and control of invasive species for the San Pedro Natural Resource Conservation District.
- Remove saltcedar on 200 acres by mechanical grubbing and by hand cutting and herbicide stump painting on areas identified as priority in the planning process.
- Rehabilitate and maintain disturbed riparian habitat by planting native species after removal of saltcedar.
- Monitor the results of treatments and use this information to develop educational materials for the local residents and schools.

The following slides will address the concerns raised in the WPF Staff Review.

"At this time, it is not clear where field checking efforts will take place for the development of the Riparian Area Restoration Program, and the application did not contain any evidence of control, tenure, secured access, or identification of potential project area(s) for data collection activities"

The Riparian Area Restoration Plan will be developed by interpreting aerial and/or statellite imagery, including use of drones, to identify areas which are invaded by saltcedar and require treatment. Based on this inventory, ground truthing will take place to further confirm the extent of the problem, the needed treatments, etc. It is not possible to identify exactly where those field checking point will be until the initial inventory is made. Selection of field checking points will be based not only on the inventory, but also on obtaining permission from landowners.

"Overall, the proposed scope of work appears adequate to implement the stated project activities. However, some of the proposed deliverables only include a description such as "saltcedar removal" and "200 acres of restored land". These will need to be further clarified and include products such as progress reports on the work/activity(s) accomplished with photos, maps, and/or other documentation identifying the restoration action(s) implemented "

The proposal states that a report, with maps and other data, on the initial inventory and plan will be submitted to WPF. A report will also be submitted to WPF with all necessary clearances and permitting prior to any land treatments. The proposal also states that a final report and presentation to WPF will be made in 2022 that documents all saltcedar treatments and revegetation projects with full documentation of the areas treated, the methods used, the results of the treatments, and a plan for monitoring. If interim progress reports on the treatment phase are needed, they can be supplied.

"It is understood that the first part of the project is to develop a long-term riparian restoration plan for the SPNRCD, and then use that plan to help identify priority areas for restoration which should include a description of the recommended vegetation treatment type(s) and plans for maintenance and monitoring. The application has identified 2 project areas for restoration based on the 5 letters from local landowners who may already be participating in the restoration projects through funding from the Arizona Department of Forestry and Fire Management"

A separate proposal was developed for funding by the Arizona Department of Forestry and Fire Management; however no funding has been received from this source in the project area. Should other funding be received, it will be used to increase the scope of the program.

"Staff recommends that standalone, site specific restoration and monitoring plans be developed for the 2 salt cedar control areas proposed in the application. As inventory and assessment is completed for the rest of the SPNRCD it may then be more applicable to have the final, long-term restoration plan deliverable for the rest of the SPNRCD to be submitted towards the end of the project and after the planned restoration activities have been implemented."

Stand alone, site specific restoration and monitoring plans will be developed for all areas identified for treatment under the Riparian Restoration Plan, but no site-specific areas have yet been identified. The 2 salt cedar control areas identified in the proposal are two reaches of the San Pedro River within the SPNRCD that were identified by landowners as having a problem. Completion of the long-term restoration plan based on an inventory of the entire length of the San Pedro River within the District will form the basis for identifying specific treatment areas and developing site-specific restoration and monitoring plans. That is why it was included as the first step in the process.

"The specific amount and location of acres for restoration actions (salt cedar removal and/or re-seeding) proposed for this project was not clear. The executive summary references 100 acres of salt cedar removal and planting native vegetation, the Project Objectives section references the removal of 65 acres of salt cedar by grubbing and hand cutting, the scope of work reference 200 acres to be identified for treatment, the Salt cedar Area #1 map references approximately 160 acres, and the Salt Cedar Area #2 map references approximately 192 acres"

There is some confusion in the acreages included in the proposal. The reference to 100 acres and 65 acres were apparently figures from an earlier draft of the proposal that were not corrected in the final draft. The Salt Cedar Areas contain about 160 acres and 192 acres respectively, as determined from aerial imagery. These two areas include the areas identified by local landowners. However, there may be 500 or more acres that need treatment within the District – the final acreage will be determined by the inventory and Long-Term Restoration Plan. The proposal for WPF funding is to treat 200 acres as an initial effort.

Thank you for your attention. I hope this presentation has cleared up any concerns raised by staff. I will take questions if there is time remaining.

QUANTIFYING BENEFITS FOR BRUSH MANAGEMENT ON ARIZONA RANGELANDS

A PROPOSAL BY THE ARIZONA ASSOCIATION OF CONSERVATION DISTRICTS TO GATHER AND ANALYZE FIELD DATA ON THE EFFECTS OF BRUSH MANAGEMENT ON WATERSHED ATTRIBUTES AFFECTING SOIL EROSION, RUNOFF AMOUNTS AND RATES, AND WATER QUALITY

Background

Widespread increased in shrubs and trees in Arizona over the past 100 years in various vegetation types has resulted in degraded watershed condition, reduced wildlife habitat, and, in some cases, increased wildfire hazard.

Existing Knowledge

There have been research studies on effects of brush treatments and tree thinning on understory, runoff, sediment yield, etc. but these can only provide general reference.

Actual brush treatments have sometimes been successful and sometimes not, causing some to question whether the expense is justified.

More information is need to provide additional guidelines on where, how, and when brush treatment should be done.

Data on effects of brush treatments on ground cover, species composition, etc. have often not been collected, or if they were, the data rest in agency files and have not been analyzed.

The purpose of this project is to locate existing data and collect additional data on selected locations to quantify the effects of brush treatment as a basis for developing more compreshensive guidelines on how and where these treatments will be effective.

Procedures

1. Review and summarize all available published or unpublished reports on research and monitoring studies done on brush treatments in Arizona or similar environments in neighboring states.
2. Solicit assistance from federal and state agencies to identify brush treatment project areas and obtain any pre or post treatment data they may have files on the time, method and results of treatments.
3. Involve local ranchers and other landowners in the Conservation Districts to identify brush management areas and to assist in gathering data on these areas on their lands and grazing permits. AACD will arrange training for these people to collect the data according to established protocols.
4. Field data collection will involve either repeating earlier pre or post treatment monitoring where it exists or making treated vs untreated comparisons.
5. All of the field data will be analyzed by different vegetation types to try to draw conclusions about the effects of brush treatments in different ecological zones, weather conditions, etc. and why they were successful or failures.
6. A report on the results of this analysis will be prepared and reviewed by outside reviewers. It may form the basis for a published report by AACD or other entities.

The following slides offer a response to WPF staff review comments.

"The project is proposed to be implemented at a statewide scale. At this time, it is not clear where on-the-ground data collection efforts will take, and the application did not contain any evidence of control, tenure, secured access, or identification of potential project area(s) for research or data collection activities."

At this time it is not determined where on the ground data collection will take place. Part of the project is to discover from agencies and landowners where the brush management projects have been implemented, when it was done, and what existing data are available. Locations for further data collection will be identified based on that information to get a cross section of different environmental conditions and treatment types.

AACD does not anticipate problems of obtaining permission, access, or any required permits. The project is based on the cooperation of landowners, both public and private.

"The proposed research is not directly applicable to river and riparian restoration, or fish and wildlife resources that are dependent on river and riparian habitat"

The water in streams and riparian areas that results in riparian vegetation and fish and wildlife habitat, originates on the surrounding watersheds.

The kind and amount of vegetative cover is a major factor influencing both water yield and water quality. Brush management is aimed at improving the watershed, i.e. to increase water yield and ground water recharge, decrease flooding, and/or improve water quality by reducing sediment yield. It can also reduce danger of catastrophic wildfires that adversely affect riparian areas.

Increased knowledge about the effects of brush management on vegetation and ground cover will provide better guidance on how and where to conduct such projects to maximize beneficial effects on riparian areas

"A hypothesis was not described in the application"

This study is not a controlled experiment subject to statistical analysis to test a hypothesis. Rather, it is an observational study based on interpretation of either before and after data or treated vs non treated data. The data available will vary from one project to another and the sampling protocols may or may not be subject to statistical hypothesis testing.

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"It was not clear how or where all sub-categories (e.g., environmental conditions, quantitative measurements, qualitative assessments, direct estimation of soil erosion, modeling methods, etc.) within the above actions identified in the Project Plan would be incorporated into the proposed scope of work or reporting deliverables."

The anticipated reporting on data collected will be organized as follows:
The report will analyze results by major vegetation types, and by ecological sites and/or precipitation zones within those types. This may require a separate report for each type, depending on the number of projects located and analyzed.

For each of these vegetation types, environmental zones, and land types the analysis will consist of three types: 1) Quantitative data on pre-post treatment or treated-non treated comparisons. 2)Qualitative assessments or photo points, and 3) Estimates of erosion or runoff using the models described.

"It was also stated that the collection and analysis of on-the-ground data collected would take place with the help of interested individuals, but it was not clear where on-the-ground data may be collected, if access to project area(s) has been secured or how the data collection will take place. Access agreements will be needed with private landowners and permits for research/data collection activities may be needed if information will be collected on federal or state managed lands."

As stated before, on the ground data collection will take place where suitable brush management projects have been carried out or are planned.

These project will be located with the assistance and cooperation of both state and federal agencies responsible for the land or funding for the projects (e.g. ASLD, NRCS, BLM, FS, ASGFD, etc.) and of the ranchers/farmers with private land and/or permits and leases. Since both the agencies and the ranchers/farmers are basically cooperators in this project, and the data collection does not involve collection of plants or animals, the need for access agreements, permits or other clearances appear to be minimal. The data collection is similar to that carried out routinely by federal and state agencies in partnership with permittees and other interested parties. However, if access agreements and/or permits are required, they will be obtained.

"The application proposes to develop a project final report, but it is not clear if the project results are planned to be published in any other written media. The project findings would be presented at an AWPF Commission meeting."

AACD will present the results in a final report and oral presentation to WPF. The report may be published in total or in sections if a peer review panel and AACD's Board of Directors consider it appropriate. Publication might be done by AACD, in appropriate journals, or by other public or private entities if permitted by the AWPF Commission.

"While the AWPF Commission does support projects that improve watershed conditions using forest and/or near-stream restoration treatments that improve water quality or increase water quantity, the application did not clearly identify or demonstrate a connection between the proposed upland vegetative treatments research/data collection and how the information or lessons learned could be used to advance the science of river and riparian restoration or advance the scientific understanding of the ecosystem characteristics an (sic) functions associated with rivers, streams, and/or riparian habitats."

Riparian vegetation and wildlife habitat, water quality, amount and frequency of floods, bank stability, sediment deposition, and perennial flow maintained by ground water are all influenced by the vegetation, soil, topography and climatic features occurring on the watershed. Of these, vegetation is the only one that can be effectively managed. There is considerable scientific evidence, and widespread agreement by resource professionals, that increase of woody plants has had adverse effects on all the characteristics above, and that is one of the main justifications for increased support for brush management treatments in Arizona. Yet, there is still a lack of solid information on which areas and which treatments are most likely to be successful in shifting vegetation to species and life forms that will benefit riparian areas and water resources so that priorities can be established to achieve the best results for the money invested. That is the purpose of this project.

Sandhill Farm Water and Wildlife Conservation Project

1. This proposed project is also a direct match for the purpose intended for the allocation of the AZ Water Protection Fund as put forth in the state statutes: " …..for the restoration and conservation of the water resources….rivers, streams, riparian habitat and its associated fish and wildlife".
2. The project should enhance the multi-species habitat and the wetlands , all necessary for the diversity of the eastern part of the state.

Reuben Teran <rteran@azwater.gov>

AWPY grant cycle 2020

1 message

Fred Davis [redacted] Mon, Oct 21, 2019 at 8:04 PM
To: rteran@azwater.gov
Cc: whitewaterdraw@gmail.com, Fred Davis [redacted]

The board of supervisors at Whitewater Draw Natural Resource Conservation District has asked me to respond to your request for comments on the following application.

WPF2001-Sandhills Farm Water and Wildlife Conservation Project
It is with pleasure that our board can give our support to this project. Over the years Mr Blanton Belk as managing member has made great strides in rehabbing this property and making it a Conservation showplace.
Solar projects are near and dear to my heart since the ranch I live on has never had electricity and we have been on solar power since 2005.

Fred Davis
Chairman
Whitewater Draw Conservation District
[redacted]

Sent from my iPad

Coconino Natural Resource Conservation District

RECEIVED

SEP 30 2019

Arizona Water
Protection Fund

September 26th, 2019

Arizona Department of Water Resources
Reuben Teran, Executive Director
P.O. Box 36020
Phoenix, Arizona 85067

Re; WPF2002 – Little Colorado River Valley Conservation Area Restoration Project

Dear Mr. Teran,

Recently, the Coconino Natural Resource Conservation District (CNRCD) heard a presentation about Landsward Foundation's proposed "Little Colorado River Valley Conservation Area Restoration Project" during our CNRCD Board meeting held on August 22nd, 2019 in Flagstaff, Arizona.

The Coconino NRCD adamantly supports the conservation initiatives of Babbitt Ranches and the Landsward Foundation and their continued stewardship of natural resources and watershed improvement projects.

We encourage the Landsward Foundation to continue their excellent work and hope they are successful in the *Arizona Water Protection Fund Commission's Fiscal Year 2020 Funding Cycle.*

Please feel free to contact us at 928.779.1745 or coconinonrcd@gmail.com.

Sincerely,

Paul Babbitt, Chairman

Coconino Natural Resource Conservation District
703 E. Sawmill Road
Flagstaff, Arizona 86001

Cc; Landsward Foundation

Reuben Teran <rteran@azwater.gov>

Grant for Sutherland wash area

1 message

Kristie Atwood [redacted] > Fri, Nov 1, 2019 at 7:21 PM
To: rteran@azwater.gov
Cc: thare@watershedmg.org [redacted]

Hello,
I would like to write in support of the grant Trevor Hare of Watershed Management Group, is seeking for the area of the Sutherland Wash north of Catalina State Park. This is a very special area; a pocket of private land that is bordered by forest service land to the east, state trust to the west and north, and Catalina State Park to the south. It is still fairly undeveloped but in this state we know that won't last. In addition to the location a winding wash, the Sutherland, goes through these pieces of private land. It's ideal as a wildlife corridor, riparian habitat, and unique in having groundwater close to the surface.

It is this unique quality that inspired my husband and I to create the nonprofit Genius Loci Foundation and to devote the property we own along the Sutherland to restoration of habitat and protection. It is our dream that one day, all the properties in this area along the Sutherland could be linked to create a lasting wildlife corridor that connects the Sutherland with Catalina State Park, trust land, and the Coronado National forest.

The plan created by Natural Channel Design in 2017, which is the plan that Trevor has based this grant upon, considers the people in this area as well as the natural environment. About ten years ago, a property owner upstream decided that he didn't like the Sutherland flowing across his driveway and so bladed the existing path for the wash on his neighbors property. He cut down mesquite trees and desert willows that took the arms of two people to surround them, and bladed a new path for the wash, while also building up the sides of this new path with berms. What he did was illegal and detrimental to the the people and habitat along the Sutherland. The issue was reported to the county and the county tried to create a plan that would help to fix the problem of flooding for neighbors south of the clearing. Unfortunately it didn't work. The plan was not substantial enough nor did it restore the damage done in the wash or below it.

By the time NCD drew up their plan for Neighbors, which was privately funded by nearly all the neighbors chipping in small amounts, the flooding had caused the Sutherland to move back to a previous path which created severe flooding for all the people who lived here as well as great destruction to the wash itself, including head-cuts as deep as five feet and the downing of dozens of trees. When the worst of the flooding occurred in 2017, we had already begun habitat restoration on our property with the aid of the Sky Island Alliance. The water was so powerful that it completely washed away all the rock damns that SIA had put in place, four in total, one of which was over three feet tall and spanned more than six feet. These were put in place to stop serious head-cuts, protect native trees and wildlife habitat. Over 100 plants were also planted as the land had been degraded by grazing in previous years.

This grant would help to mitigate severe flooding as well as restore this delicate habitat. This area is in an alluvial plane and moves naturally back and forth from one channel to the other. When the berms were built and the wash moved, it caused the wash to change channels very suddenly, unnaturally, and destructively. This plan addresses this issue, helping people be safer as well as habitat and wildlife. Please consider funding this grant. It addresses many issues and the work done will help to keep this beautiful and special place safe and sound for all involved.

I also strongly support the work of Trevor and Watershed Management Group. They are the right people to see this grant through and to see the Sutherland into the future. We look forward to working with them in any way possible not only as individuals but as a not-for-profit. We hope you will look at the link below for Genius Loci, where you will be able to see some of the flow, our goals, habitat, and wildlife found on our property. Thank you for your time and for reading this very long statement. We hope for the best.

Kristie Atwood
[redacted]

[redacted]
Geniuslocifoundation.org

Restoring Sutherland Creek, an Intermittent Creek in a Critical Shallow Groundwater Area

As a restoration ecologist, I strongly encourage the Commission to fund this restoration project for the following reasons:

1. It is a sound restoration plan, based in science and starting at the true starting point which is to restore the natural geomorphology
2. The restoration will decrease erosion which benefits water quality
3. It will restore riparian health, which is beneficial for water quality, erosion, natural flood control, biodiversity, habitat for native species
4. The community will be engaged in the work and the stewardship which enhances the success of its longevity and continuity
5. The proposed project is a direct match for the purpose intended for the allocation of the AZ Water Protection Fund as put forth in the state statutes: " …..for the restoration and conservation of the water resources….rivers, streams, riparian habitat and its associated fish and wildlife".

Reuben Teran <rteran@azwater.gov>

Restoring Sutherland Creek Application # WPF2004

1 message

LeeAnne Long [redacted] Thu, Oct 24, 2019 at 12:27 PM
To: rteran@azwater.gov

Hi Mr. Rueben Teran,

Allow me to take this time to introduce myself. My name is LeeAnne Long and I am a homeowner on Golder Ranch Road. My land and easement road access to my home have been affected by the change in the water flow off the mountains in the last five years.
To get to the point, the easement road I share with a few other neighbors turned into the wash one summer not only blocking the ability to get to my home but also creating a dangerous situation should a medical emergency occur. Ambulances and paramedics would never be able to get to our homes with the torrid water rushing down the easement road. My own vehicle sank into the mud and filled with water and remained there until a tow trunk could get thru to pull it out.
The last few years we have had times where we had to park down the road and cross two creeks on foot to get to our homes. If we can't make it to our homes without walking through two creeks on foot how is an emergency vehicle supposed to get through?
The last major downpour a few monsoons back gushed across Golder Ranch Road preventing access to families living up the hill. What would happen if someone trapped up the hill had an emergency? An emergency vehicle would never be able to get through. The change in the water flow off the mountain has now created a situation where many families' safety has been affected. The project of restoring Sutherland Creek is crucial for access to many homes. I would hate to see someone in an emergency situation pass away just because they can't get across the treacherous flow of water pouring off the mountain blocking their way to a hospital or paramedics not available to help because they can't get through.

Thank you for your time,

LeeAnne Long
[redacted]

WALTER BLACKMAN
1700 WEST WASHINGTON, SUITE H
PHOENIX, ARIZONA 85007-2844
CAPITOL PHONE: (602) 926-3043
TOLL FREE: 1-800-352-8404
wblackman@azleg.gov

DISTRICT 6

COMMITTEES:
JUDICIARY,
Vice-Chairman
STATE & INTERNATIONAL AFFAIRS,
Vice-Chairman
GOVERNMENT REGULATORY AFFAIRS

Arizona House of Representatives

Phoenix, Arizona 85007

October 7, 2019

Arizona Department of Water Resources
Attn: Reuben Team
P.O. Box 36020
Phoenix, Arizona 85067

RE: Supporting Coconino County Arizona Water Protection Fund Grant Application WPF2011

Dear Mr. Teran,

Please accept this letter in support for the Harrenburg Wash Enhancement Project, a grant application for the Arizona Water Protection Fund (WPF2011). Harrenburg Wash, located within Pumphouse County Natural Area, is owned and maintained by Coconino County Parks and Recreation. The proposed improvements are needed for the area which is frequented and relished by the community. Coconino County also desires to improve the wash area habitat which is just upstream from Pumphouse Wash and part of the Upper Verde River Watershed and the headwaters of Oak Creek Canyon.

Coconino County would greatly benefit from environmental work and improvements within the Harrenburg Wash. Once privately owned, Harrenburg Wash has been impacted by the breaching of the damn, channel excavations, flood plain fill, and invasive weeds. The proposed improvements would enhance water quality in the area through channel improvements, weed mitigation, and revegetation. Additional native plants and trees in the area will allow for increased biodiversity and opportunities for the community to recreate.

Thank you in advance for your support of the project to enhance the Harrenburg Wash. The positive impacts of the improvements will improve the ecosystem and benefit the community for well over 20 years.

Sincerely,

Representative Walter J. Blackman
Vice Chairman, Judiciary
Vice Chairman, State & International Affairs
Member, Legislative District 6
1700 W. Washington
Phoenix, AZ 85007
Room 345
T: (602) 926-3043
E: wblackman@azleg.gov

RECEIVED
OCT 11 2019
Arizona Water Protection Fund

Coconino Natural Resource Conservation District

October 31st, 2019

Arizona Department of Water Resources
Reuben Teran, Executive Director
P.O. Box 36020
Phoenix, Arizona 85067

Re; WPF2014 – Rio de Flag Riparian Enhancement Project

Dear Mr. Teran,

The Coconino Natural Resource Conservation District (CNRCD) fully supports the proposed "Rio de Flag Riparian Enhancement Project" in Flagstaff, Arizona.

The Coconino NRCD adamantly supports this conservation initiative proposed by the Arizona Board of Regents for and on behalf of Northern Arizona University.

We encourage NAU and their excellent conservation work and hope they are successful in the *Arizona Water Protection Fund Commission's Fiscal Year 2020 Funding Cycle*.

Please feel free to contact us at 928.779.1745 or coconinonrcd@gmail.com.

Sincerely,

Paul Babbitt, Chairman

Coconino Natural Resource Conservation District
703 E. Sawmill Road
Flagstaff, Arizona 86001

928-774-7451

Cc; NAU

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 4, 2019	**Application Number**: WPF2000	**Type**: Water Conservation*
Title: Gila Valley Irrigation District System Optimization Phase I		
Applicant Name: Gila Valley Irrigation District		**Requested Amount**: $257,775
AWPF Reviewer: Reuben Teran		**Matching Funds**: $4,200**

SUMMARY:
The Gila Valley Irrigation District (GVID) is requesting funding to help modernize the lateral gate water delivery system on three of their canals: Union, Smithville, and Dodge-Nevada, to increase on-farm irrigation efficiency and improve environmental flow conditions. The specific objectives of the project are to implement improvements on 156 lateral gates along the Union, Smithville and Dodge-Nevada Canals to provide improved sediment and water level control, flow control, and flow measurement. The application states that modernization of these canals delivery systems will allow for future canal automation projects and on farm water conservation projects that may have the potential to improve water quality in the Gila River. The project intends to improve the Gila Valley Irrigation District's operational efficiency and available flows at turnouts for on-farm deliveries, increase the efficiency of individual irrigators, and conserve water for downstream users.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:
*The application was submitted under the Capital project category. However, upon further review of the scope of work and overall project objectives, staff suggests that this project falls more appropriately under the Commission's Water Conservation project category. The following review is based on the criteria of the Water Conservation category, which are the same as the Capital project category.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources
The proposed project does not intend to directly protect or restore river, stream, and riparian resources. Based on the scope of work for modernizing existing water delivery infrastructure, this project may have future indirect benefits to downstream river and riparian resources as water delivery efficiency is realized.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources
The scope of work is not intended to directly benefit wildlife resources dependent on river, stream, and riparian resources, but may have future indirect benefits to these species downstream as water delivery efficiency is realized.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate
Methodologies presented are appropriate and adequate for the scope of work proposed to implement improvements on 156 lateral gates along the Union, Smithville and Dodge-Nevada Canals.

Clarity and adequacy of the scope of work and deliverables
Scope of work appears appropriate for implementing the proposed project. Although a schematic of lateral gate construction specifications was provided, it was not entirely legible, and it is not clear where or how the canal upgrades will take place.

While monitoring and public outreach components were identified, they do not incorporate any river, riparian, or wildlife resource related attributes.

Expertise of applicant/personnel/subcontractors appropriate
The applicant, project personnel, and subcontractors are appropriate to implement the project as proposed.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project
The applicant is currently implementing Arizona Water Protection Fund grant 19-193WPF: Gila Valley Irrigation District Rapid Appraisal for Modernization. This grant was to complete an assessment of the existing Gila Valley Irrigation District canal infrastructure and develop an infrastructure modernization plan and budget for future canal improvements. The expiration date for that contract is June 30, 2020.

Monitoring

Objectives clearly identified
The monitoring component proposed for this project is to monitor water use at each new canal gate installed, and water use per irrigated field.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
The methods proposed will provide water data for the Gila Valley Irrigation Districts operational efficiency and on-farm irrigation deliveries, but do not evaluate benefits to rivers, streams and riparian resources, and/or dependent fish and wildlife resources.

Other Considerations:

Coordinated effort with state or watershed restoration programs
It was not clear in the application if this project is coordinated with other state or watershed restoration programs.

Public outreach
The public outreach activities primarily focus on training to ditch bosses and water users on how to use the new lateral canal gates, and presenting the successes of the overall project to the general public.

Project will support local businesses
Based on the scope of work of improving the operation of canal and water delivery systems, this project will support local agricultural operations dependent on these canals.

Broad-based public involvement and support
Letters of support for the project have been submitted by:

- Gila Valley Natural Resource Conservation District
- Town of Pima

Matching Funds
The application identified $161,250 in match ($157,000.00 from the Natural Resource Conservation Service Environmental Quality Incentives Program (EQIP), and $4,200 from the applicant).

**The Fiscal Year 2020 Grant Application Manual states the applicant must demonstrate that vital partnerships, funding, etc. have been committed at the time of the application or submit letters of support from the appropriate entities with a plan to obtain these critical elements prior to grant award. Although there was some general information in application about EQIP funds being made available for irrigation districts, the application did not include any direct evidence (e.g. funding award letter, funding agreement, etc.) that EQIP funding has been secured for this proposed project.

GENERAL COMMENTS:
Per the FY 2020 AWPF grant application manual, projects under the Water Conservation category should include measures that develop, promote or implement programs designed to conserve water for a purpose related to maintaining, enhancing and restoring Arizona's river and riparian resources, including fish and wildlife that are dependent on these important resources. While the primary objectives of this project appear to improve the Gila Valley Irrigation District's operational efficiency, improve available flows at turnouts for on-farm deliveries, and increase the efficiency of individual irrigators, a discussion on water conservation for downstream users and benefits to rivers and riparian resources was not fully articulated. These components were not proposed for monitoring or assessment, but benefits may be provided indirectly or realized in the future.

TECHNICAL (project design, hydrology, biology):

- Staff recommends that a detailed construction plans for the 156 lateral canal gates be included as a deliverable in the scope of work should this project be selected for funding.

- Proposed monitoring activities will include water use at each new canal gate, and water use per farm field during the irrigation season. It does not appear the applicant is considering monitoring any attributes of the Gila River itself or riparian related components.

- Public outreach components proposed for this project are to train ditch bosses and water users on the use of the new lateral gates, and presentations to partners and stakeholders on the implementation of the project. It does not appear the applicant is considering public outreach activities related to the Gila River itself or riparian related benefits.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:
The applicant currently has an active grant award contract identified as 19-193WPF: Gila Valley Irrigation District Rapid Appraisal for Modernization. One of the final deliverables for that agreement is to provide an infrastructure modernization implementation plan with a budget for future improvements. This deliverable has not yet been submitted, but the current grant application appears to be a desired project/action that may be identified from a finalized infrastructure modernization implementation plan.

Based on the scope of work for this project, Staff would categorize this project as a man-made water resources project. See Arizona Revised Statute § 45-2010. Declaration of Policy [for the Arizona Water Protection Fund]. Paragraph B states "…… The commission may also provide funding to develop and protect riparian habitats in conjunction with a man-made water resource project, if the man-made water resource project directly or indirectly benefits a river or stream and includes or creates a riparian habitat." Based on the scope of work of this project, the proposed construction of the 156 lateral canal gates along the Union, Smith, and Nevada-Dodge canals may indirectly benefit water availability in the Gila River and meet the first criteria of the man-made water resources project criteria. However, the specific locations of the lateral gate replacements along the three canals have not been identified, and it was not clear if these actions will include or create a riparian habitat. Based on the available information in the application, the second criteria for the man-made water resources project criteria has not been demonstrated.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Task(s) for the development and submittal of 1) project construction plans for the 156 lateral gates to be constructed on the Union, Smithville, and Dodge-Nevada canals; 2) outreach & education plans; and 3) monitoring plan.

- Applicable State Land Department permit(s) for any project actions that may take place on State Trust Lands.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 4, 2019	**Application Number**: WPF2001	**Type**: Capital Project*
Title: Sandhill Farm Water and Wildlife Conservation Project		
Applicant Name: Sandhill Farm, LLC		**Requested Amount**: *$35,254***
AWPF Reviewer: Reuben Teran		**Matching Funds**: *$8,818***

SUMMARY:
Sandhill Farm is requesting funding to retrofit an existing domestic well with a solar submersible pump and will connect the domestic well to the pipeline of an existing irrigation well. The purpose of this project is to keep seasonal wetland ponds filled with water for wildlife and livestock, water and maintain native willow trees planted for Southwestern Willow Flycatchers, and reduce power and electricity costs for providing water at the sites. A minimal amount of water will also go to the Sandhill Farm Headquarters mobile office building. Fencing will also be constructed to protect the new solar panels.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:
*The application was submitted under the Water Conservation project category. However, upon further review of the scope of work and overall project objectives, staff suggests that this project falls more appropriately under the Commission's Capital project category. The following review is based on the criteria of the Capital project category, which are the same as the Water Conservation project category.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources
The project proposes to support the enhancement of the floodplains of Whitewater Draw and Stockton Wash, and will use well water to help maintain water levels for seasonal wetland ponds and continue the establishment of native riparian trees and vegetation planted around the two seasonal wetlands.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources
The proposed project will provide water to maintain the seasonal wetland ponds and native willow trees and planted for the benefit of Southwestern willow flycatcher. Water from the well would also provide a more reliable source of water for wildlife.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate
The methodologies described in the scope of work are adequate for providing additional well water to support the maintenance of water levels at seasonal wetland ponds and the continued establishment of native willow trees. The proposed project may provide additional benefits to the floodplains of Whitewater Draw and Stockton Wash and associated wildlife resources, but monitoring to document any potential benefits was not proposed in the scope of work.

Clarity and adequacy of the scope of work and deliverables
The scope of work proposed for retrofitting an existing domestic will with a solar submersible pump and solar panels is adequate. The scope of work described a monitoring component that pertains to the oversight and inspection of the solar submersible pump and solar panels installation. Task #4 contained a statement about reseeding the area as needed, but it was not clear if seeding will be limited to the area where the fence will be built, or if any other areas of the project will be seeded. In addition, there was no fund request or budget identified for reseeding activities.

Expertise of applicant/personnel/subcontractors appropriate
The applicant, project personnel, and subcontractors are appropriate to implement the project as proposed.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project
The executive summary in the application describes previous projects completed on the Sandhill Farm, LLC property for the benefit of open space, range, and wildlife habitat improvement.

Monitoring

Objectives clearly identified
Monitoring objectives proposed for this project include identifying the success of each proposed task. This includes oversight and inspection of the solar well conversion activities, and weekly/monthly inspections to ensure the willow trees, livestock, and wildlife are receiving adequate water.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
Monitoring of environmental conditions, wildlife habitat, or water use/saving was not proposed as part of the scope of work.

Other Considerations:

Coordinated effort with state or watershed restoration programs
The application did not specifically identify if this project is part of a coordinated state or watershed restoration program.

Public outreach
Public outreach activities were not identified as part of the scope of work for this project. However, the application did mention that Sandhill Farms LLC invites people in the community, the state, and local schools to view the wetlands.

Project will support local businesses
The proposed project appears that it will support local businesses.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
N/A

Broad-based public involvement and support
Letters of support for the project have been submitted by:

- United States Department of Agriculture - Natural Resource Conservation Service
- Carol E. Cowan
- Tucson Audubon Society
- Whitewater Draw Natural Resource Conservation District Board of Supervisors
- Cynthia Ruehl

Matching Funds
In-kind contributions from the applicant have been identified as matching funds.

GENERAL COMMENTS:
None at this time.

TECHNICAL (project design, hydrology, biology):
The goals of this project are to 1) provide additional water to the seasonal wetland ponds and established willow trees, and 2) reduce the cost of electricity and 3) provide a year-round water source for livestock and wildlife. The proposed scope of work should address the stated goals of the project, but the application did not include any environmental monitoring or data collection components [e.g., water use, tree growth, vegetation, wildlife use, etc.] to assess or demonstrate benefits to stream and riparian resources / dependent fish and wildlife resources, or how these actions are enhancing or restoring the floodplain features of Whitewater Draw.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:

- The application states that a minimal amount of water from the retrofitted domestic well will go to the Sandhill Farms Headquarter mobile office building. Although this will be a result of the overall solar well retrofit activity for a domestic well, this part of the project does not demonstrate benefits to river, stream and riparian resources, or dependent fish and wildlife resources.

- **The AWPF fund request amount identified on this review (*$35,254.00)*, and matching costs identified (*$8,818.00)* are based on staff's calculations from the detailed budget information provided in the grant application. Staff's calculated fund request total is less than stated on the application cover page ($37,000.00). The original $37,000 requested does not coincide with the cost totals described in the tasks of the scope of work ($23,508), or the detailed budget breakdown.

- According to Arizona Department of Water Resources (ADWR) well registration information, the irrigation well is currently owned by Sandhill Farms, LLC., and the domestic/stock well is owned by Mr. J. Blanton Belk. If this project was selected for funding by the Commission, staff recommends the applicant contact the ADWR Groundwater Permitting & Well program to discuss and possibly update water use and reporting information as these two wells will ultimately be linked through the implementation of this project.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Task to address any necessary permits, authorizations, and subcontracts that may be needed to implement the scope of work.
- Applicable State Land Department permit(s) for any project actions that will take place on State Trust Lands.
- Any contract conditions TBD by the Commission, as applicable.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 8, 2019	**Application Number**: WPF2002	**Type**: Capital Project
Title: Little Colorado River Valley Conservation Area Restoration Project		
Applicant Name: Landsward Foundation		**Requested Amount**: $108,818
AWPF Reviewer: Reuben Teran		**Matching Funds**: $25,339

SUMMARY:
Landsward Foundation is partnering with Babbitt Ranches, American Conservation Experience (ACE), Northern Arizona University (NAU) Department of Anthropology, Arizona Department of Forestry and Fire Management, Gila Watershed Partnership of Arizona, and Dawn Kish Photo+Film, LLC to conduct riparian restoration within the Little Colorado River Valley Conservation Area. This project proposes to enhance the Lower Little Colorado River Watershed by decreasing negative impacts of non-native species through scientifically informed restoration of five acres by replacing invasive plant dominance with native forbs and grasses.

Overall project objectives are:

- Utilize cut-stump and basal bark herbicide methods to release old-growth Fremont cottonwood (*Populus fremontii*) galleries, sandbar willow (*Salix exigua*), and desert olive (*Forestiera pubescens*) from wildfire danger and direct resource (water and sunlight) competition with thick, monotypic stands of salt cedar (*Tamarix spp.)*,
- Control Russian knapweed (*Acroptilon repens*) and camelthorn (*Alhagi maurorum*) infestations with herbicides within cottonwood understory to provide the opportunity for successful natural and supplementary revegetation,
- Pile and burn piles of cut salt cedar slash to clear debris from site, preventing it from traveling downstream during flooding,
- Revegetate cleared cottonwood understory with locally sourced grasses [alkali sacaton (*Sporobolus airoides*) and desert saltgrass (*Distichlis spicata*)], forbs [fourwing saltbush (*Atriplex canescens*) and rubber rabbitbrush (*Ericameria nauseosa*)], and native seed mix using irrigation-less methods.
- Fence project site perimeter to protect area from cattle and wild horses trampling and/or eating new revegetation installations,
- Protect project sites from further invasive weed invasion and create refugia for native and transient avian and ungulate populations by keeping invasive plant species from reestablishing within the site after initial control measures, and
- Provide education on science utilized, methods enacted, and results achieved for those interested in learning and/or implementing similar regional projects, both through an on-site Landsward Discovery Expo and dissemination of a three-minute project video to increase public awareness of the function and value of riparian resources in northern Arizona.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:
No issues identified.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources

The project proposes to restore native riparian vegetation and habitat, restore hydrologic functions, and restore the floodplain along the Lower Little Colorado River.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources

The proposed project has a high potential to benefit wildlife and habitat resources along the Lower Little Colorado River.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate

The methodologies and designs are clearly presented and adequate, and demonstrate benefits to river, stream and riparian resources / dependent fish and wildlife resources.

Clarity and adequacy of the scope of work and deliverables

The scope of work and deliverables are clearly and adequately presented.

Expertise of applicant/personnel/subcontractors appropriate

The applicant and identified project partners are appropriate and have experience implementing the scope of work proposed.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project

The application provides an extensive description of existing plans, reports, and information relevant to applicant and the project through documentation and internet links.

Monitoring

Objectives clearly identified

Monitoring objectives are clearly identified and will assess the progression of restoration activities.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources

Monitoring methods are clearly presented and appropriate.

Other Considerations:

Coordinated effort with state or watershed restoration programs

The project area is located within the Little Colorado River Valley Conservation Area which was created to serve as a focus area for various studies and conservation actions on the CO Bar Ranch. The application also mentioned that a two-year $223,746 grant award from the Wildlife Conservation Society's 2018 Climate Adaptation Fund to conduct similar work further upstream within the Little Colorado River Valley Conservation Area in coordination with a research project being led by Northern Arizona University's Merriam-Powell Center for Environmental Research.

Public outreach
The project proposes to shoot and edit photographic and video footage of restoration activities (before, during, and after), and edit the content to produce an appealing educational video. In addition, this project intends to communicate and collaborate with neighboring landowners and the general public to promote riparian restoration within the Little Colorado River watershed by hosting a tour of the project area as part of the 2021 Landsward Discovery Community Expo.

Project will support local businesses
The applicant proposes to coordinate with and/or hire local consultants and contractors to implement project activities.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
N/A

Broad-based public involvement and support
Letters of support for the project have been submitted by:

- Babbitt Ranches (includes pledge of $500 in matching funds)
- American Conservation Experience (includes pledge of $5,988 in matching funds)
- Dawn Kish Photo + Film (includes pledge of $5,000 in matching funds)
- Northern Arizona University (includes pledge of $4,879 in matching funds)
- Gila Watershed Partnership of Arizona (includes pledge of $280 in matching funds)
- US Department of the Interior, Fish and Wildlife Service Partners for Fish and Wildlife Program
- US Department of the Interior, National Park Service, Flagstaff Area National Monuments
- Arizona Game and Fish Department
- Coconino Board of Supervisors
- SWCA, Inc. Environmental Consultants, Flagstaff
- Cameron Farm Enterprise
- Coconino Natural Resource Conservation District

Matching Funds
A total of $25,339 in matching funds will be provided by the applicant ($8,692) and the five project partners ($16,647) identified above.

GENERAL COMMENTS:
Administrative / overhead costs are not being requested for this project.

TECHNICAL (project design, hydrology, biology):
None at this time.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:
None at this time.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:
None at this time.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 8, 2019	**Application Number**: WPF2003	**Type**: Water Conservation Project
Title: Promoting a Conservation Incentive Program in the Lower San Pedro Watershed		
Applicant Name: Arizona Land and Water Trust		**Requested Amount**: $62,789
AWPF Reviewer: Reuben Teran		**Matching Funds**: $0.00*

SUMMARY:

The Arizona Land and Water Trust's Desert Rivers Program (Trust) is requesting support to promote and further develop their incentive-based water conservation program in the Lower San Pedro Watershed. The Trust proposes to broaden their water conservation agreements approach in the region (also known as "water transactions") by assessing the viability of incentive-based water transactions for non-agricultural landowners such as private well owners, industry, and agency partners.

Over the two-year project term, the Trust's watershed-specific goals include:

- Build and strengthen relationships with agricultural landowners, private well owners, industry and agency partners
- Better understand the opportunity for agricultural and non-agricultural water transactions
- Develop water transaction models that are relevant and impactful to the Lower San Pedro River and the communities it supports
- Generate interest from community partners and funders in specific water transaction opportunities

To meet these goals the Trust plans to build familiarity with non-agricultural water transactions and their potential applicability in the watershed; understand local priorities and water conservation goals to frame a relevant and meaningful conservation incentive program; develop a framework for a water conservation incentive program, with multiple water transaction models, that will secure mutual benefits for the Lower San Pedro River System and the communities it supports; and increase awareness of the Desert Rivers Program and the incentive opportunities that may be available to agricultural and non-agricultural entities throughout the watershed. The final products of the project are intended to help the Trust pursue appropriate funding sources in order to implement future water conservation projects for the benefit of the Lower San Pedro Watershed and riparian corridor.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:

The application referred to several application components as "not applicable" due to the nature of the proposed scope of work and no further documentation was provided. These included the State Historic Office Preservation Form; Project Site Photographs; Existing Plans, Reports, and Information Relative to the Project; Evidence of Control and Tenure of Land; and Evidence of Physical and Legal Availability of Water.

Although it is understood that no ground disturbing activities are planned to take place based on the proposed scope of work, the State Historic Office Preservation Form will be required to be submitted to AWPF if the application is selected for funding to comply with the requirements of Arizona Revised Statute § 41-861 *et seq*.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources
The proposed project will collect data and develop a framework of water transaction models to guide water conservation actions in the future that may protect, enhance, and maintain river and riparian resources.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources
The proposed project will collect data and develop a framework of water transaction models to guide water conservation actions in the future that may indirectly benefit fish and wildlife resources dependent on river and riparian resources.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate
The proposed methodologies and designs appear appropriate to complete the stated project objectives.

Clarity and adequacy of the scope of work and deliverables
The scope of work primarily pertains to data collection efforts and meeting with partners and community members to help develop a framework for a future water conservation program. Proposed deliverables would be submitted at the end of each year and consist of summaries of the year's activities under each Task. While data gathering and many meetings will take place, the progress of these activities and if they are meeting the desired goals of the project will be difficult to track with only an annual report after the action is complete.

Expertise of applicant/personnel/subcontractors appropriate
The applicant and project personnel are appropriate to implement the project as proposed.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project
The application did contain a summary table of previous water transactions completed by the applicant.

Monitoring

Objectives clearly identified
No information was provided in the application.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
Not able to evaluate.

Other Considerations:

Coordinated effort with state or watershed restoration programs
Based on the proposed scope of work it appears that the applicant may be coordinating with community members and agencies interested in watershed restoration activities.

Public outreach
The project does include an extensive public outreach effort.

Project will support local businesses
It was not clear if the proposed project will support local business.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
N/A

Broad-based public involvement and support
Letters of support for the project have been submitted by:

- Arizona Game and Fish Department
- Pinal County

Matching Funds
*The application states that $20,000 of matching funds have been secured from the US Smokeless Tobacco Company's Men Who Matter campaign to support the Desert Rivers Program work in the Lower San Pedro Watershed. Staff could not verify the external partner matching funds described in the application as it did not include any documentation (letter of support, funding award notification, etc.) of this funding as being secured specifically to implement the scope of work of the proposed project. In addition, it was not clear how the additional $20,0000 in funding would be used to support the Tasks proposed in the grant application.

GENERAL COMMENTS:
The AWPF is a reimbursable grant program, with payments made upon the submission of project deliverables. Under the current scope of work the applicant would have to cover all project expenditures throughout the year and then request reimbursement upon the submission of grant deliverables. Staff recommends adding in semi-annual progress reports for each Task, as applicable. This will help staff better track the progress of the project, and provide a mechanism for reimbursement requests.

TECHNICAL (project design, hydrology, biology):
None at this time.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:
None at this time.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Completed State Historic Preservation Office form.
- Project progress reports, as applicable.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 11, 2019	**Application Number**: WPF2004	**Type**: Capital Project
Title: Restoring Sutherland Creek, an Intermittent Creek in a Critical Shallow Groundwater Area		
Applicant Name: Watershed Management Group		**Requested Amount**: $344,226
AWPF Reviewer: Reuben Teran		**Matching Funds**: $118,324

SUMMARY:
Watershed Management Group (WMG) and partners propose to collaborate to preserve and restore Sutherland Creek through a community-based restoration effort. According to the application, it appears that many of the hydrologic issues are a result of poorly developed rural roads, impacts from low density development, and previous land management actions, including the re-routing of portions of the Sutherland Creek channel. These combined actions have led to straightening of portions of the creek, severe channel adjustments, and erosional head cuts. This project will build on and add to the assessment, design, and restoration option plan developed by Natural Channel Design in coordination with local landowners. The assessment and design were initiated by the Genius Loci Foundation, a local arts and environment non-profit, with monetary support from affected landowners.

The proposed project intends to:

- Review and refine the original proposal provided by Natural Channel Design with residents and landowners to determine the scope of work and where restoration actions can take place,
- Construct instream grade control structures using natural channel design techniques, divert and re-grade sections of rural roads that have captured creek flow to enhance creek hydrologic function, treat adjacent upland areas and tributary arroyos to mitigate erosion and enhance infiltration, and
- Monitor, evaluate, and provide maintenance of treatments in coordination with landowners to foster long-term benefits derived.

The restoration treatments are expected to enhance recharge of storm flows from adjacent uplands and immediate tributaries to the shallow groundwater area to enhance seasonal flows locally and downstream through Catalina State Park; stop erosion and improve riparian habitat from the treated section through downstream reaches of Sutherland Creek; and provide community-supported restoration activities to engage landowners and promote long-term stewardship of the creek.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:

- The Fiscal Year 2020 Grant Application Manual states that evidence of control and tenure of land must be demonstrated, and that the applicant must have legal and physical access and authority to manage the area where grant tasks are to be performed. It also states that if you do not own or manage the land on which the proposed project is located, the application should include documentation verifying ownership and include a copy of the permit, agreement or letter of intent that allows you access to the site. It further states that cooperative agreements with all parties having such access and authority, or letters of support with a plan to obtain cooperative agreements prior to grant award will meet this requirement and must be included.

Evidence of control and tenure of the project area(s) has not been demonstrated with the application. Completion of Task 1 of the scope of work intends to fulfill this requirement, and the application includes a sample landowner cooperation memorandum of understanding that would be used to help meet this requirement. There are eight potential restoration locations identified in the application with eight different parcels/owners/managers. Two letters of support from local landowners were included with the application, on letter of support from a homeowner on Golden Ranch Road was submitted during the public comment period, and one letter of support appears they may be a direct project partner.

- The Fiscal Year 2020 Grant Application Manual states that evidence of physical and legal availability of water must be demonstrated, and if water will be used in the project the water must be physically and legally available to the applicant for the proposed purpose. The AWPF budget identified the purchase of irrigation lines which will be used for native species revegetation efforts, but this will be dependent on landowner agreement(s) to provide irrigation for up to three years. The type of water (well, surface, etc.) to be used is unknown at this time, and further analysis of the stated use(s) of the water will need to be verified to ensure that the water used will be in accordance with the applicable water right(s). The application did not provide evidence of the physical and legal availability of water.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources

The project proposes to restore native riparian vegetation and habitat, restore proper hydrologic conditions and functions, and restore stream geomorphology and channel characteristic along Sutherland Creek.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources

The proposed project would help to restore necessary habitat components to wildlife resources that use Sutherland Creek.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate

Overall, the proposed project objectives demonstrate direct benefits to stream, riparian, and dependent wildlife resources. At this time the specific scope of work for actual restoration locations and activities to be implemented is not clearly identified, but will be finalized after the completion of Task 1.

Clarity and adequacy of the scope of work and deliverables

Overall, the proposed scope of work and deliverables are adequate, but the completion of Task 1 will ultimately provide the final restoration design(s) and project location(s) in coordination with partnering landowner(s).

Expertise of applicant/personnel/subcontractors appropriate

The applicant, project personnel, and subcontractors have the expertise to implement the project as proposed.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project

The application provides an extensive description of existing plans, reports, and other general information related to the proposed project.

Monitoring

Objectives clearly identified
Monitoring objectives are clearly identified.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
The proposed monitoring methods are appropriate and adequate to evaluate the benefits to Sutherland Wash, vegetative responses, and ground water levels in the project area.

Other Considerations:

Coordinated effort with state or watershed restoration programs
That application states that the Watershed Management Group along with other agencies and organizations have formed the Santa Cruz Watershed Collaborative to strategically coordinate water resource management, restoration, land use planning, and policy initiatives to achieve river restoration goals throughout the greater Tucson Basin.

Public outreach
A public outreach component was not specifically identified as project Task, but Task 1 does have $800 budgeted for outreach mailings and it appears that general public outreach about the project would be performed by the applicant throughout the project period.

The project overview and Task 4 do mention engaging 60 people in on-the-ground restoration activities and 400 people in direct outreach actions. The application also mentions the continued engagement of thousands of people through Watershed Management Groups' ongoing River Run Network Educational Creek Walks, presentations, monthly e-bulletin, Flow 365 Community Science Monitoring volunteers, and the Santa Cruz Watershed Collaborative.

Project will support local businesses
The proposed project will support local Arizona businesses.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
N/A

Broad-based public involvement and support
Letters of support for the project have been submitted by:

- Arizona State Parks & Trails, Catalina State Park
- Kristie Atwood
- Kristie Atwood and David Christiana
- Mitchell and Phineas Anderson
- LeeAnne Long
- Cynthia Ruehl

Matching Funds
Matching funds will be provided by the applicant and through volunteer labor.

GENERAL COMMENTS:
Task 1 of the project proposes to assess riparian vegetation and geomorphic conditions along Sutherland Creek, conduct site surveys, and engage in discussions with landowners to determine their interest in participating in restoration actions and where project actions may take place. At this time, it is not clear where or what restoration activities will take place because landowner participation will ultimately dictate what project(s) will be implemented. There are eight potential restoration locations identified in the application with eight different parcels/owners/land managers. Two letters of support from local landowners were included with the application, one letter from a homeowner on Golden Ranch Road was submitted during the public comment period, and one letter of support appears they may be a direct project partner.

The applicant noted that their commitment to maintenance of project benefits and capital improvements as 16-20 years. Although the applicant is not a landowner or land manager within the project area, they are proposing training and promoting long-term community-based stewardship to maintain the restoration project.

Supplemental equipment is planned to be purchased with grant funds including data well loggers, trail camera(s), geomorphology survey equipment, aerial imagery, construction tools, a laptop computer, and computer software.

TECHNICAL (project design, hydrology, biology):

- The first part of this project will primarily involve site assessments of riparian vegetation and geomorphic conditions, conduct site visits, and engage in discussions with landowners on potential restoration areas and actions. It appears that no specific project has been defined, but will be done as part of the overall grant.

- Obtaining permits for actual project locations selected for restoration will be obtained under Task 2, with a proposed deliverable due date at approximately the end of year 1. Restoration actions are also planned to start taking place within the second half of year 1. At this time, it is not known what specific restoration actions may planned to be implemented or where they may take place, Based on the types of permits that may be necessary for the proposed restoration work (e.g. Section 7/Endangered species consultation, Section 404 Clean Water Act, Permit to Place Improvements on State Land, etc.) it is not clear if all required permits could be obtained within the proposed timeline and the implementation schedule may need to be adjusted. Other potential costs for permits (e.g., State Trust Land, etc.) was not included in the budget.

- Review of the restoration plans for the instream grade control structures will need to be completed by Arizona Department of Water Resources (ADWR) Surface Water Rights Unit prior to installation.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:
AWPF budget identified the purchase of irrigation lines which will be used for native species revegetation efforts, but this will be dependent on landowner agreement(s) to provide irrigation for up to three years. The type of water (well, surface, etc.) to be used is unknown at this time, and further analysis of the stated use(s) of the water will need to be verified to ensure that the water used will be in accordance with the applicable water right(s).

As noted above, the actual scope of restoration activities may change based on final landowner participation, and this project may require several permits from various regulatory agencies depending on what work will be implemented. The project scope of work and timeline may have to be updated and/or revised in year 2 of the project.

Review of the project by ADWR Surface Water Permitting Unit indicated that further review is necessary regarding the locations, final designs, and maintenance plans for the instream grade control structures. The restoration structures may require a surface water right if they are retaining water, or if only detaining water, a maintenance plan will need to be developed to assure that water will not be retained in the future.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Landowner access and project implementation agreements prior to the development of a grant award contract if this project is selected for funding. It is not clear if/how this would work if this action(s) is going to be investigated during year 1 of the project.
- Documentation of the water right(s) to be used for vegetation establishment purposes prior to the development of a grant award contract if this project is selected for funding. It is not clear if/how this would work if this action is going to be investigated during the revegetation activities.
- Final project restoration design(s) and pre/post monitoring plans.
- Final instream grade control structure locations and designs.
- Applicable State Land Department permit(s) for any project actions that will take place on State Trust Lands.
- Surface water right documentation from ADWR, if necessary, or instream grade control maintenance plan.
- Subcontract(s) with project partners, as applicable.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 11, 2019	**Application Number**: WPF2005	**Type**: Capital Project
Title: Winkelman Natural Resource Conservation District Riparian Restoration		
Applicant Name: Winkelman Natural Resources Conservation District		**Requested Amount**: $205,844
AWPF Reviewer: Reuben Teran		**Matching Funds**: $18,414

SUMMARY:

The Winkelman Natural Resource Conservation District (WNRCD) is proposing to 1) create a Tamarisk Management Plan for the WNRCD outlining tamarisk treatment methods, priority restoration sites, revegetation goals, monitoring, long-term maintenance; 2) remove tamarisk and plant native vegetation on 20 acres along the Gila River on General Kearny Sheriff's Posse of Pinal County property; 3) remove tamarisk on 3 acres of private property along the Gila River; and 4) revegetate a 105-acre riparian corridor on Town of Kearny property where tamarisk is currently being removed. All 3 project areas will be revegetated with native trees and shrubs, monitored, and re-treated for tamarisk as necessary for the duration of the project. Long-term maintenance of these three restoration sites and future projects would be outlined in the WNRCD Tamarisk Management Plan.

The overall goals of the project are to:

- Decrease water loss along the Gila River by removing invasive tamarisk,
- Improve long-term riparian ecosystem functioning and restore native habitat for wildlife, and
- Create a long-term tamarisk management plan for the WNRCD and strengthen on-going collaborative conservation between ranchers, farmers, county and town governments, government agencies, non-government organizations, and public citizens.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:

The FY 2020 Grant Application Manual states that evidence of physical and legal availability of water must be demonstrated. The project is proposing revegetation activities with water being donated by a cooperating ranch(s) and hauled to the site(s) for revegetation activities. Evidence of the physical and legal availability of water was not included with the application, but it does state that proof of water rights for revegetation will be provided prior to the beginning of work activities. At this time, it is not clear what type(s) of water may be used (groundwater, surface water, other, etc.) and if that water would legally applicable for the use of establishing native vegetation.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources

The project proposes to restore native riparian vegetation and habitat, restore proper hydrologic conditions and functions; and restore the floodplain of the Gila River.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources
The proposed project has a high potential to restore habitat needs for wildlife resources using the Gila River riparian corridor.

Feasibility (Measures appropriate to address issues of concern identified above)
The project clearly identifies and demonstrates benefits to river and riparian resources.

Methodologies and designs clearly presented, appropriate and adequate
The project objectives are clearly identified and demonstrate direct benefits to Gila River riparian habitats and dependent wildlife resources.

Clarity and adequacy of the scope of work and deliverables
The scope of work is clear, but the proposed Task deliverables (except for the final report) only include copies of invoices, receipts, data, and/or photographs. While this would help to provide general documentation that work has been completed, it does not provide a narrative of what work was done, include an analysis of project data collected, or help inform staff, the Commission, or general public if the stated goals or objectives of the project or specific task(s) are being met.

Expertise of applicant/personnel/subcontractors appropriate
The applicant, project personnel, and identified subcontractors are appropriate to implement the project as proposed.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project
The application included the Federal Emergency Management Agency Record of Environmental Consideration for the Winkelman NRCD Pinal Rural Fuel Reduction project on the Town of Kearny lands.

Monitoring

Objectives clearly identified
Proposed monitoring activities include establishing vegetation monitoring transects to determine pre-treatment and baseline conditions following tamarisk removal and photo points.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
Details about specific monitoring methods were not described in the application. Those detail are to be identified and developed in the Tamarisk Management Plan created in Task 1.

Other Considerations:

Coordinated effort with state or watershed restoration programs
One of the goals of this project is to create a Tamarisk Management Plan outlining tamarisk treatment methods, priority restoration sites, revegetation goals, monitoring, long-term maintenance within the Winkelman NRCD.

Public outreach
A specific public outreach effort was not proposed as part of the scope of work; however, this project proposes

to bring together community members and organizations to improve the local watershed and provide an opportunity for the WNRCD and community members to learn from on-the-ground work.

Project will support local businesses
The project would support local business.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
Not applicable.

Broad-based public involvement and support
Letters of support for the project have been submitted by:

- Arizona Game and Fish Department
- Oracle Community Learning Garden
- American Conservation Experience
- Carol and Ralph DuBois
- Town of Kearny

Matching Funds
Matching funds described in the application will be provided by the applicant ($5,500) and volunteers ($12,914).

GENERAL COMMENTS:
None at this time.

TECHNICAL (project design, hydrology, biology):
None at this time.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:

- The application states that water used for revegetation efforts will be donated by Winkelman NRCD cooperating ranchers and hauled to the site for initial tree planting, and water rights of the water used will be demonstrated prior to work.
- Verification of land ownership documentation was not included in the application for the Town of Kearny, General Kearny Sheriff's Posse of Pinal County, or DuBois Ranch properties. However, letters of support were submitted by the Town of Kearny and DuBois Ranch that describe cooperation to implement the project in coordination with the applicant; and a Property Owner's Invasive Plant Reduction Agreement was included for the General Kearny Sheriff's Posse of Pinal County property.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Cooperative agreements for implementation of the project on the Town of Kearny and DuBois Ranch properties, prior to finalizing a grant award contract if this project selected for funding.
- Documentation of the legal use of water to be used for the revegetation activities, prior to the development of a grant award contract if the project is selected for funding.
- Documentation verifying ownership status of the Town of Kearny, General Kearny Sheriff Posse of Pinal County, and DuBois Ranch properties, prior to the development of a grant award contract if the project is selected for funding.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 16, 2019	**Application Number**: WPF2006	**Type**: Capital Project
Title: Sonoita Creek Wildlife Linkage Watershed Stewardship Project		
Applicant Name: Borderlands Restoration Network		**Requested Amount**: $262,500
AWPF Reviewer: Reuben Teran		**Matching Funds**: $107,500*

SUMMARY:
The Borderlands Restoration Network proposes to build upon and further the landscape-scale restoration effort for the Sonoita Creek Wildlife Linkage to stabilize soils, increase surface and base flows, and allow native riparian plants to further secure the ecosystem. This project, spanning both public and private lands, is designed to finish the hydrologic stabilization of the riparian headwaters of Smith and Stevens Canyons to stabilize the main drainages within those watersheds, and to begin the process of restoring the headwaters of Little Casa Blanca Canyon. This would be accomplished by installing hundreds of integrated erosion control structures such as one rock dam and Media Luna structures across the watersheds.

The goals of this project are to continue science-based watershed and riparian restoration across jurisdictional boundaries of a critical wildlife linkage; inspire and engage the next generation of restoration practitioners; develop a regional laboratory and demonstration site for landscape-scale restoration in the arid borderlands; engage the Town of Patagonia and greater borderland communities in the importance of riparian restoration; and develop sites and supporting outreach materials to educate visitors and travelers about restoration activities in the wildlife linkage.

The proposed objectives for this project include the development of a comprehensive restoration plan by building upon and expanding existing work and designs; implementing integrated restoration projects, train practitioners, and evaluate effects; improving soil stabilization, water quality ,and availability to facilitate riparian vegetation recovery; improving local and regional understanding and appreciation of water resources and ecosystem function, and providing meaningful ways for citizens to participate in watershed enhancement and climate resilience.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:
No issues identified at this time.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources
The project proposes to directly enhance hydrologic functions of the watershed and upper watershed channel beds by reducing soil erosion, and indirectly benefit stream and riparian resources downstream.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources
The proposed project has a high potential to reduce erosion and begin the process of restoring degraded habitat and improving water quality for wildlife resources.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate
The proposed methodologies are appropriate to reduce upland watershed soil erosion. The proposed project actions and objectives are clearly identified, and will have indirect benefits to downstream riparian and aquatic habitats. Site specific designs will be developed in cooperation with project partners as part of the scope of work.

Clarity and adequacy of the scope of work and deliverables
Overall, the proposed scope of work is appropriate and adequate to accomplish the project's goals and objectives. Task 4 mentions continuing outreach and education at every opportunity, but it is not clear if these actions would be completed as a formal project action, or just as opportunity(s) arise during the project term.

The scope of work mentions the submittal of signed landowner restoration agreements under Task 3 and a project monitoring plan under Task 4. If this project is selected for funding, staff recommends incorporating the landowner restoration agreement deliverables into Task 1, and the monitoring plan deliverable into Task 2.

Expertise of applicant/personnel/subcontractors appropriate
The applicant and key project personnel identified are appropriate to implement the project as proposed.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project
The applicant and partnering organizations have already installed over 600 small, one-rock erosion-control structures in the smaller sub-drainages of both Smith and Stevens Canyons, and the proposed project is a continuation of those watershed restoration efforts. The US Geological Survey is also conducting research within the watershed to help assess current watershed restoration techniques, and plan to use the research results to help provide a protocol for the development of a large-scale localized database and hydrological modeling network.

Monitoring

Objectives clearly identified
The applicant proposes to monitor the response of creek geomorphology, surface water flows, and vegetation to the proposed restoration; photo-points to show vegetation and channel response, wet-dry mapping to show trends in hydro-period; and greenline vegetation monitoring to show trends in increased bank storage, channel stability and vegetation response.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
Detailed monitoring methods were not included in the application, but will be provided as a grant deliverable. The monitoring components proposed are appropriate to evaluate the benefits to stream and riparian habitat resources.

Other Considerations:

Coordinated effort with state or watershed restoration programs
The proposed project is part of a locally coordinated watershed restoration program with many partners.

Public outreach
The project proposes to incorporate public outreach and education activities/opportunities as part of the restoration and monitoring activities, but details of how this would be accomplished were not detailed in the application. The budget does request funding for weatherproof signage, and staff suggests the inclusion of a public outreach plan as part of the scope of work.

Project will support local businesses
The proposed project will support local businesses.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
N/A

Broad-based public involvement and support
Letters of support for the project have been submitted by:

- The Nature Conservancy
- Friends of Sonoita Creek
- Wildlife Corridors, LLC
- The University of Arizona
- Deep Dirt Institute
- Coronado National Forest, Nogales Ranger District

Matching Funds
The application states that $145,000 of matching funds are available for this project. Based on the information provided in the application, staff was only able to verify project match of $107,500*. Match would be provided by Wildlife Corridors, LLC ($20,00), Deep Dirt Institute ($15,000), University of Arizona ($1,000 per letter of support), and the applicant ($71,500). Match was described from the following entities, but no letters or support or funding commitment documentation was included in the application:

- V.R. Seebe Charitable Trust grant ($25,000) for vegetation enhancement
- Sonoran Joint Venture ($10,000) for wildlife enhancement

A letter of support from the Coronado National Forest, Nogales Ranger District states that they have secured $26,000 of financial support for work occurring in Smith Canyon. It was not clear if those funds would be used specifically to help implement this project. This amount was not documented in the application as a matching fund source, and is not included in the matching funds noted at the top of this document.

GENERAL COMMENTS:

- The budget identifies a fund request of $10,000 for supplies/tools. No further details were provided.

TECHNICAL (project design, hydrology, biology):
Review of the restoration plans for the erosion control rock structures will need to be completed by Arizona Department of Water Resources (ADWR) Surface Water Rights Unit prior to installation.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:

- The application states that the project area has been previously surveyed for cultural resources, but a copy of the archaeological report was not included with the application. Any existing archaeological reports for the proposed project area will need to be submitted for consultation purposes with the State Historic Preservation Office if the project is selected for funding.

- Review of the project by the ADWR Surface Water Permitting Unit stated that more information is needed regarding the locations, final designs, and maintenance plans for the erosion control structures. The restoration structures may require a surface water right if they are retaining water, or if only detaining water, a maintenance plan will be needed to assure that water will not be retained in the future.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Development of a project pubic outreach plan to be included in Task 2.
- Surface water right documentation from ADWR for erosion control rock structures, if necessary, or submittal of an erosion control structure maintenance plan.
- Submittal of any existing archaeological reports completed in the project area prior to finalization of a grant award contract if the project is selected for funding.
- Documentation verifying ownership status of the Deep Dirt Institute property.
- Cooperative agreements for implementation of this project on the Wildlife Corridors, LLC, and Deep Dirt Institute properties prior to finalizing a grant award contract if this project selected for funding.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 21, 2019	**Application Number**: WPF2007	**Type**: Capital Project
Title: El Rio Preserve Riparian Restoration Project		
Applicant Name: Town of Marana		**Requested Amount**: $110,000
AWPF Reviewer: Reuben Teran		**Matching Funds**: $11,000

SUMMARY:
The 104-acre El Rio Riparian Preserve (Preserve) is located on the Lower Santa Cruz River, within the Town of Marana (Town). The Town is proposing to continue restoring this preserve and the riparian habitat by constructing a turnout pipe that would provide a reliable source of water for year-round habitat, with water provided from the Cortaro-Marana Irrigation District (CMID) to maintain baseline water levels at the preserve. The primary goals of the project are to enhance, restore, and maintain the riparian resource and create a year-round wildlife corridor. The secondary goal is to create a natural area amenity for the community and a living lab for local classrooms.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:
No issues identified at this time.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources
The project proposes to enhance the floodplain of the Santa Cruz River, and enhance native riparian vegetation and habitat within the Preserve. There is a potential that water delivered to the Preserve by the turnout may have general indirect benefits to the Santa Cruz River as some water may eventually reach the river though ground infiltration.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources
The has a high potential to maintain constructed pond water levels and enhance habitat components for migratory birds and riparian dependent wildlife resources.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate
The proposed methods and designs for constructing a turnout pipe to provide water to the Preserve are appropriate and adequate.

Clarity and adequacy of the scope of work and deliverables
The proposed scope of work includes two tasks: construction of the turnout pipe and the project final report.

Expertise of applicant/personnel/subcontractors appropriate
The applicant and project personnel are appropriate to oversee the implementation of the project as proposed. A company would be contracted to install the CMID turnout and water delivery pipe.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project
The Town has worked with several community stakeholders and partners to enhance the Preserve by developing an Invasive Species Management Plan and commissioning the removal of 160 cubic yards of trash. They are also partnering with the Pima County Regional Flood Control District to construct bank protection that will replace the existing earthen berm along the Santa Cruz River. The Town has also invested in an observation deck, an interpretive sign panel series, and a pollinator garden within the Preserve, and has worked with the CMID to complete the plans and design specific to the El Rio Turnout pipe project.

Monitoring

Objectives clearly identified
Monitoring is not proposed for this project.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
No monitoring is proposed for the project that would evaluate the benefits to riparian habitat or dependent fish and wildlife resources.

Other Considerations:

Coordinated effort with state or watershed restoration programs
The application states that the Preserve is regionally recognized as a wildlife linkage along the Santa Cruz River, between the Tortolita and Tucson Mountains.

Public outreach
A public outreach component was not proposed in the application, but the El Rio Preserve is visited extensively by the general public, birdwatchers, and used as an outdoor classroom.

Project will support local businesses
This project has the potential to support local businesses if supplies and materials for the turnout pipe construction are purchased locally.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
N/A

Broad-based public involvement and support
Letters of support for the project have been submitted by:

- Pima County Regional Flood Control District
- Arizona Department of Forestry and Fire Management
- Tucson Audubon Society

- Marana Unified School District
- US Department of the Interior, Fish and Wildlife Service
- Coalition for Sonoran Desert Protection

Matching Funds
Matching funds ($11,000) are proposed to be provided by the applicant in the form of administration.

GENERAL COMMENTS:
The proposed scope of work currently does not include a task for project tracking and reporting purposes, or a task for submission of applicable permits, agreements, clearances, and authorizations. Staff recommends these tasks be included in a grant award contract if the application is selected for funding.

All funds requested ($110,000) are for the construction of the turnout feature for the Preserve which include al supplies, materials, anticipated inflation, and contingency. The applicant has not requested any administrative/overhead funds from AWPF.

TECHNICAL (project design, hydrology, biology):
Project designs of the El Rio Preserve identify the construction of ponds and basins that will hold water. Although AWPF funds are not being used to construct any ponds or basins as part of the project, the turnout feature to be constructed with AWPF funds will be used to deliver water to at least one pond, and may potentially be used to supply water to other ponds or basins in the future. Through clarifying information provided by the applicant, it was stated that groundwater will be delivered to the El Rio Preserve by the CMID. The project was reviewed by Arizona Department of Water Resources Tucson Active Management Area (AMA) staff, and after clarification was made regarding the type of water to be delivered to the project area, there were no concerns from the AMA.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:
Based on the information provided in the application it appears that the Santa Cruz River has the potential to flood into the El Rio Preserve. The letter of support from the Pima County Flood Control District (District) stated "The District will design and construct bank protection that will replace the eroded earthen berm along the Santa Cruz River…" and "The bank protection project will help address the influx of invasive species and headcutting from the Santa Cruz River that flows in with each minor event while still allowing larger storms to flow into the preserve while maintaining floodplain connectivity." A review of the project by the ADWR Surface Water Program indicated that the Town of Marana does not have any surface water rights associated with the El Rio Preserve property, and it appears that water from the Santa Cruz River may be impounded without authority.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:
- A task for the submission of any applicable permits, agreements, clearances or authorizations.
- A task, or deliverables under the proposed construction task, for the submission of reports to help track the progress of the project.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 21, 2019	**Application Number**: WPF2008	**Type**: Capital Project
Title: Middle and Upper Fossil Creek Invasive Plant Removal		
Applicant Name: National Forest Foundation		**Requested Amount**: **TBD by the Commission $105,000 $103,210 or $ 81,109
AWPF Reviewer: Reuben Teran		**Matching Funds**: $55,900*

SUMMARY:
The proposed project focuses on the monitoring and treatment of invasive plant species, particularly tamarisk (*Tamarix spp.*), Tree of Heaven (*Ailanthus altissima)*, giant reed (*Arundo donax)*, and Russian olive (*Elaeagnus angustifolia)*, within the upper and middle reaches of the Wild & Scenic Fossil Creek. A pilot project consisting of monitoring and treatment of Himalayan blackberry is also planned to be implemented. The project area spans a total of approximately 900 riparian acres on both sides of the river within a 9.5-mile river reach located from middle Fossil Creek to the springs on Coconino and Tonto National Forest lands. Five miles of the project area was treated and mapped during the 2017-18 treatment season. The remaining 4.5 miles of the project area have not been treated or mapped. The main components of the project are:

- Invasive plant monitoring of previously treated sites within the project areas to maintain the benefits of prior invasive plant removal.
- Invasive plant initial treatment of all target invasive species within the project area. Partners have already treated the middle section of target invasive plants within the project area, which leaves the upstream reach untreated. The upper section of Fossil Creek will be initially treated for target invasive species.
- Invasive plant retreatment of regrowth of invasive plants to protect past investments in the treatment of the project site. Retreatment would be completed in the entire project area.

The overall goals for target invasive plant species removal are to completely eliminate Russian olive and giant reed, and manage tamarisk and tree of heaven to less than 10% cover in the riparian corridor.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:
No issues identified at this time.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources
The project proposes to restore habitat conditions to improve native riparian vegetation and habitat, and improve proper hydrologic conditions and functions of Fossil Creek. This work could also benefit the Verde River watershed by limiting the spread of targeted invasive plant species.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources
The proposed project has a high potential to protect and restore habitat needs for wildlife resources that use the Fossil Creek riparian corridor.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate
Methodologies and designs are clearly presented, and the project clearly identifies and demonstrates direct benefits to river, stream and riparian resources.

Clarity and adequacy of the scope of work and deliverables
The overall scope of work and project actions are clearly described; however, it is not clear where the proposed work is planned to take place. The overall project description states that the project area spans on both sides of Fossil Creek that would encompass both the Coconino National Forest and the Tonto National Forest. The deliverables for Task 1 (permits, clearances, authorizations) only refer to coordinating with the Coconino National Forest to discuss project implementation and compliance. It is not clear if work is planned to be implemented on the Tonto National Forest side of Fossil Creek, and a letter of support for the project was not provided by the Tonto National Forest.

Expertise of applicant/personnel/subcontractors appropriate
The applicant, project personnel, and subcontractors are appropriate to implement the project as proposed.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project
This project is being Fossil Creek Wild and Scenic River Draft Comprehensive River Management Plan Coconino and Tonto National Forests Gila and Yavapai Counties, Arizona

Monitoring

Objectives clearly identified
Proposed objectives for this project are to monitor previously treated and map and monitor newly treated restoration sites determine if improvements have been made to the riparian function and habitat of Fossil Creek.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
Specific monitoring methods were not described in the application, but proposed mapping and monitoring activities are going to follow protocols previously developed by the Friends of the Verde Rive and the Verde Watershed Restoration Coalition.

Other Considerations:

Coordinated effort with state or watershed restoration programs
The application states that this project will build on the over 9,000 acres of invasive plants that Friends of the Verde River has removed in past five years. It also states that this project is part of the Verde River Cooperative Invasive Plant Management Plan, and part of the Fossil Creek Wild and Scenic River

Comprehensive River Management Plan.

Public outreach
A public outreach component was not proposed as part of the project.

Project will support local businesses
The project would support local businesses through the sub-contracting of work activities.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
Not applicable.

Broad-based public involvement and support
Letters of support for the project have been submitted by:

- Coconino National Forest, Red Rock Ranger District
- Audubon Arizona

Matching Funds
*Matching funds are to be provided by the applicant ($55,900) which includes a $40,000 private cash donation and $15,900 in-kind match for applicant staff. The application states that the Coconino National Forest (CNF) would be providing an additional in-kind match of $8,100 for staff time, but the CNF letter of support for this project did not specifically document a commitment of resources. Staff could not verify this amount and it was not included in the matching funds section at the beginning of this document.

GENERAL COMMENTS:

- Page 75 [in Chapter 3. Management Direction; Vegetation; Desired Conditions for Vegetation] of The Fossil Creek Wild and Scenic River Draft Comprehensive Management Plan states:
  "Invasive plants rarely occur in the Fossil Creek corridor, and where they exist their populations are declining or limited to regularly disturbed areas."

  Under the proposed project it is understood that non-native vegetation re-treatments of previous restoration work will take place, along with mapping and initial treatment of newly identified populations of non-native vegetation. Although the Draft Comprehensive Management Plan states that invasive plants rarely occur in the Fossil Creek corridor, this project may help to provide more information on the relative abundance of non-native vegetation along Fossil Creek.

- Funding is requested for unidentified field supplies, and replacement tablets / data management software / computer related expenses.

TECHNICAL (project design, hydrology, biology):
It is not clear if this project is proposed to be implemented on both Coconino National Forest and Tonto National Forest managed lands. A letter of support for this project was provided by the Coconino National Forest, but a letter of support or documentation authorizing proposed project actions on the Tonto National Forest was not included in the application. The Fossil Creek Wild and Scenic River Draft Comprehensive River Management Plan was created for both the Coconino and Tonto National Forests, but based on language in Task 1 and information provided in the application it appears that work will only be implemented on Coconino National Forest managed lands. However, the application does mention that

the project area spans a total of approximately 900 riparian acres on both sides of the river within a 9.5-mile reach from middle fossil creek to the springs on Coconino and Tonto National Forest lands. Clarification of the project area for this specific project is needed.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:

- The application states that the commitment to maintenance of capital improvements is 5-10 years. The general provisions of the Arizona Water Protection Fund grant award agreement template identify 20 years of operation and maintenance is required for grant assisted projects, unless there are special provisions identified. The applicant is not the landowner/land manager, and a special provision may need to be discussed and approved by the Commission if the project is selected for funding.

- **The proposed budget for this project was not clearly articulated. The funds requested on the grant application cover page **($105,000**) differ from fund requested as identified in the detailed budget breakdown (**$102,310**), which also differs from what staff calculated (**$81,109**) based on the application budget details and described below. There were costs described for "Contractor of Reference" added into the total project budget after the project subtotal and 5% administrative cost were calculated, and it is not clear what these costs pertain to.

  According to staff's budget calculations, the following is a breakdown of costs:

Subtotal of project implementation costs:	$129,723
5% administration:	+ $ 6,486
Project Implementation Costs	= *$136,209*
Applicants "Contractor of Reference":	+ $ 7,000
Application Total Project Cost	= *$143,209*
Stated matching fund contributions:	- $ 62,100***

  Calculated AWPF Grant Fund Request = $ 81,109

  *** It appears that the amount of funds requested in the detailed breakdown ($102,310) only accounted for the $40,000 cash match of the stated $62,100 total match identified by the applicant.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Documentation of project support and/or authorization from the Tonto National Forest if this project will also be implemented on Tonto National Forest Lands. This will need to be submitted prior to drafting a grant award contract if the project is selected for funding.

- Commission determination if 5-10 years of maintenance responsibility for grant assisted improvements is acceptable.

- Clarification of the AWPF project funds requested and Commission approval.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 25, 2019	**Application Number**: WPF2009	**Type**: Capital Project
Title: San Pedro Natural Resources Conservation District Riparian Restoration Program		
Applicant Name: San Pedro Natural Resources Conservation District		**Requested Amount**: $257,200
AWPF Reviewer: Reuben Teran		**Matching Funds**: $13,600

SUMMARY:
The San Pedro Natural Resource Conservation District (SPNRCD) proposes to create a Riparian Area Restoration Program. This Program will aim to remove salt cedar, or tamarisk (*Tamarix spp.*), in order to restore riparian areas along the San Pedro watershed. The applicant intends to first develop a long-term riparian management plan by surveying the entire length of the San Pedro River within the SPNRCD using aerial photography and field checking to assess and classify riparian vegetation with respect to need for rehabilitation based on species composition, shrub/tree density, cover and suitability for treatment (i.e., access, soil type, etc.). This plan would then be used as a basis for setting priorities for future treatments.

Based on the results of the riparian management plan, specific project areas will be identified for treatment to be carried out under this project. The application included maps and landowner support for general areas that may be considered for restoration under this grant proposal. Each area will be further assessed, if necessary, to determine the method(s) to be used for salt cedar control. Proposed vegetation control methods include heavy equipment to grub salt cedar along the floodplain and/or contracted crews to hand cut salt cedar adjacent to the river (within 10 feet) to avoid bank disturbance, and then spraying the stumps with herbicide. After the salt cedar is removed, re-vegetation of the treated areas will be implemented with native riparian and desert plant seeds. The SPNRCD also proposes to implement follow-up treatments as necessary, maintenance of the restoration areas with herbicide, and monitor the results of the restoration activities through photo point monitoring.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:

- The application was submitted under the Water Conservation category, but upon further review of the scope of work staff finds this this project is more applicable under the Commission's Capital project category.

- At this time, it is not clear where field checking efforts will take place for the development of the Riparian Area Restoration Program, and the application did not contain any evidence of control, tenure, secured access, or identification of potential project area(s) for data collection activities.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources
The project proposes to restore native riparian vegetation and habitat; proper hydrologic conditions and functions, and the floodplain of the San Pedro River through the removal of invasive salt cedar.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources

The two stand-alone project areas have a high potential to protect and restore habitat needs for fish and wildlife resources dependent on the riparian habitats of the San Pedro River.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate

The methodologies proposed for the removal, re-treatment, revegetation, and monitoring are clearly identified and demonstrate benefits to river, stream and riparian resources

Clarity and adequacy of the scope of work and deliverables

Overall, the proposed scope of work appears adequate implement the stated project activities. However, some of the proposed deliverables only include a description such as "saltcedar removal" and "200 acres of restored land". These will need to be further clarified and include products such as progress reports on the work/activity(s) accomplished with photos, maps, and/or other documentation identifying the restoration action(s) implemented.

It is understood that the first part of the project is to develop a long-term riparian restoration plan for the SPNRCD, and then use that plan to help identify priority areas for restoration which should include a description of the recommended vegetation treatment type(s), and plans for maintenance and monitoring. The application has identified 2 project areas for restoration based on the 5 letters from local landowners who may already be participating in the restoration projects through funding from the Arizona Department of Forestry and Fire Management.

Staff recommends that standalone, site specific restoration and monitoring plans be developed for the 2 salt cedar control areas proposed in the application. As inventory and assessment is completed for the rest of the SPNRCD it may then be more applicable to have the final, long-term restoration plan deliverable for the rest of the SPNRCD to be submitted towards the end of the project and after the planned restoration activities have been implemented.

Expertise of applicant/personnel/subcontractors appropriate

The applicant and project personnel are appropriate to coordinate and implement the proposed project actions.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project

No specific information relative to the proposed project was included in the application.

Monitoring

Objectives clearly identified

The monitoring objective is to document the effectiveness of the salt cedar removal, and will be accomplished through photo point monitoring.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources

The methods proposed include monitoring approximately 5-10 acres per photo point with photos taken immediately after restoration efforts, about 1 year following treatments, and then at intervals of about 2-3 years.

Other Considerations:

Coordinated effort with state or watershed restoration programs
Based on the landowner cooperation letters included in the application, it appears the applicant may have also applied for a grant for the same project(s) with the Arizona Department of Forestry and Fire Management. This was not discussed in the background or scope of work in the application, and it is not clear if funding has been awarded for any of the 2 proposed project areas.

Public outreach
The application does not include a public outreach component, but does propose to use local volunteers in the restoration effort.

Project will support local businesses
The project may support local businesses through contracting with local restoration crews and rental of heavy equipment.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
Out of state consultants were not identified.

Broad-based public involvement and support
Support for the salt cedar removal project has been expressed by:

- Owen Lonsdale, ELQUEN LCC.
- Tom Barenberg, SRF Fence & Supply Co, Trex Fencing Distribution
- Jacob Kartchner
- Daniel Bryce
- Southeast Arizona Economic Development Group

No letters of support were submitted for the development of the long-term riparian restoration plan part of the project.

Matching Funds
Matching funds are proposed to be provided by the applicant ($2,000) and volunteers/participating landowners ($11,600)

GENERAL COMMENTS:
The specific amount and location of acres for restoration actions (salt cedar removal and/or re-seeding) proposed for this project was not clear. The executive summary references 100 acres of salt cedar removal and planting native vegetation, the Project Objectives section references the removal of 65 acres of salt cedar by grubbing and hand cutting, the scope of work reference 200 acres to be identified for treatment, the Salt cedar Area #1 map references approximately 160 acres, and the Salt Cedar Area #2 map references approximately 192 acres.

TECHNICAL (project design, hydrology, biology):
It is not clear if salt cedar removal has already begun within the two proposed restoration sites with funding from other sources. If the project is selected for funding, project deliverable time lines (especially for environmental permitting needs) will need to re-evaluated as there is a potential for project delays or unforeseen project costs due to environmental or agency permitting requirements, endangered species concerns, and/or seasonal riparian work restrictions. If areas where heavy equipment will be used have not already been cleared the State Historic Preservation Office, these areas may need to be surveyed for cultural resources. If endangered species are present, there may be a need for wildlife surveys and/or consultation with the US Fish and Wildlife Service based on where project activities may be implemented. The proposed budget for obtaining permits, authorizations, and contracts is currently $2,800 from AWPF funds, and $2,800 from matching funds.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:
None identified at this time.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Applicable scope of work deliverables such as, report, photos, maps, etc. documenting the work completed for each project Task.
- Clarifying the scope of work section into 2 distinct project actions:
    - Implementing on-the-ground restoration activities
    - Development of the Long-term Riparian Restoration Management Plan

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 28, 2019	**Application Number**: WPF2010	**Type**: Research Project
Title: Quantifying Benefits for Brush Management on Arizona Rangelands		
Applicant Name: Arizona Association of Conservation Districts		**Requested Amount**: $50,000
AWPF Reviewer: Reuben Teran		**Matching Funds**: $91,930

SUMMARY:
The purpose of this project is to gather and summarize existing information on brush management and to incorporate localized on-the-ground data collection information. The intent is to provide better information on why, where, how, and when brush management should be done to improve the cost effectiveness of these practices. The overall goal of this project is to provide local guidelines for the application of brush management to address rangeland resource concerns to improve the probability of success and thereby increase cost effectiveness.

The proposed project objectives include:

- Creating an up-to-date summary of the published reports of research on brush treatments in Arizona and appropriate neighboring states. This effort will be reported with observations on recommended treatments and expected results for different brush species and environmental zones in Arizona.
- Obtaining and summarizing any available information and data on specific brush treatments applied in the past in Arizona, and then use this information to supplement published studies and/or to design follow up data collection and monitoring on these historical treatments.
- Conducting studies on existing brush treatments, either by repeating previous measurements or collecting and analyzing data on comparable treated/non-treated areas.
- Establishing monitoring studies on existing and new brush treatments in selected areas to establish treatment effectiveness and longevity, especially on species or land types for which little previous studies exist.
- Training local producers and other interested residents on methods of monitoring brush treatments so that future treatments can be more thoroughly documented.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:
The project is proposed to be implemented at a statewide scale. At this time, it is not clear where on-the-ground data collection efforts will take, and the application did not contain any evidence of control, tenure, secured access, or identification of potential project area(s) for research or data collection activities.

EVALUATION CRITERIA:

Research is applicable to river and riparian restoration and or fish and wildlife that are dependent on river and riparian resources
The proposed research is not directly applicable to river and riparian restoration, or fish and wildlife resources that are dependent on river and riparian habitat.

Application demonstrates use of the Scientific Method

Background research includes data collection, analysis and synthesis

- *Data collection will build on existing data, or generate new data*
  Data collection will build on existing data, may incorporate the collection of new data, and may re-collect data from previously implemented projects. The application states that training will be provided by the local Natural Resource Conservation District to those who agree to participate in data collection efforts. The project may generate new data in the form of updated brush management guidelines to inform future restoration work.

  The proposed data collection will synthesize existing published and non-published studies and projects involved with brush management in Arizona and neighboring states.

- *Quality literature review provided*
  A literature review was not provided in the application. Existing literature will be reviewed and summarized as part of the project scope of work.

Hypothesis or hypotheses are clearly articulated
A hypothesis was not described in the application.

Research/experimental design is clearly presented, appropriate and adequate to:

- *Test hypothesis or hypotheses*
  The research phase of the project does not propose a to test a hypothesis.

- *Analyze data and draw conclusions*
  The project proposes to summarize existing brush management treatments, and analyze agency related data and any new on-the-ground data collected.

- *Report results*
  Results of the project will be reported as part of the project final report.

Feasibility

Clarity and adequacy of the scope of work and deliverables
The scope of work proposed was very broad and only contained 4 Tasks, but the application did include a Project Plan – Methods outline which was very detailed. The major components of the Project Plan – Methods document proposed the following actions:

- Organization of Studies
- Review of Published Literature
- Agency Data on Past Brush Treatments
- Agency Data Missing or Inadequate
- Studies for Planned Projects
- Training
- Data Collection Methods

It was not clear how or where all sub-categories (e.g., environmental conditions, quantitative measurements, qualitative assessments, direct estimation of soil erosion, modeling methods, etc.) within the above actions identified in the Project Plan would be incorporated into the proposed scope of work or

reporting deliverables. It was also stated that the collection and analysis of on-the-ground data collected would take place with the help of interested individuals, but it was not clear where on-the-ground data may be collected, if access to project area(s) has been secured or how the data collection will take place. Access agreements will be needed with private landowners, and permits for research/data collection activities may be needed if information will be collected on federal or state managed lands.

Expertise of applicant/personnel/subcontractors appropriate
The applicant and project personnel, and proposed contractors are appropriate to implement the project as proposed.

The application also proposes the involvement of local landowners and others in the monitoring of existing and future brush treatment projects. Training on monitoring activities will be required, and only provided to interested individuals.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project
Not available to evaluate. The application states that a summary paragraph for each plan/report with relevant portion or full report is attached as an appendix, but this information was not included in the application.

Research results may be translatable
It appears that the results of this research would be translatable with the intent of the research/data collected to be used by local restoration project proponents.

Proposal includes some form of publication as a deliverable (e.g. intent to publish results in a professional journal, article in a watershed newsletter, other written media) **and a commitment to some form of public presentation(s)** (e.g. AWPF Commission meeting, watershed group meeting, professional conference, or other peer group)
The application proposes to develop a project final report, but it is not clear if the project results are planned to be published in any other written media. The project findings would be presented at an AWPF Commission meeting.

Other Considerations

Project will support local businesses
The proposed project would support efforts of the Natural Resources Conservation Districts, but it was not clear if the project would support local businesses.

Out of state consultants are justified
Out of state consultants were not identified.

GENERAL COMMENTS:
Matching funds for the project will be provided by the applicant ($75,939), in addition to the USDA Agricultural Research Service Southwest Watershed Research Center ($16,000) for the federal cost of supporting the application of the Rangeland Hydrology Erosion Model (RHEM).

While the AWPF Commission does support projects that improve watershed conditions using forest and/or near-stream restoration treatments that improve water quality or increase water quantity, the application did

not clearly identify or demonstrate a connection between the proposed upland vegetative treatments research/data collection and how the information or lessons learned could be used to advance the science of river and riparian restoration or advance the scientific understanding of the ecosystem characteristics an functions associated with rivers, streams, and/or riparian habitats.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:

A.R.S. § 45-213(H)(3) states that monies in the Water Protection Fund may be spent for … "granting monies in support of research and data collection, compilation, and analysis directly related to the purposes of this [Arizona Water Protection Fund] Chapter", and the Fiscal Year 2020 Grant Application Manual (Funding Categories) (2. Research) states … "research projects should be related to maintaining, enhancing, and restoring Arizona's river and riparian resources, including fish and wildlife that are dependent on these important resources." Based on the proposed scope of work, project plan methods, data to be collected, and the expected results of the research efforts, the proposed research focuses on identifying and quantifying benefits to upland habitats and rangeland resources. While upland restoration actions directly affect rangeland health and vegetation production, and indirectly affect overall watershed health, the proposed research project does not appear to assess water resources benefits, or demonstrate how the knowledge gained would inform the science of maintaining, enhancing or restoring river and riparian resources, or fish and wildlife that are dependent on river and riparian resources in the context of State statutes or the general Arizona Water Protection Fund program purpose.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Identification of on-the-ground data collection locations, with documentation of legal access to the project area(s) for the intended purpose of the project, prior to the execution of grant award contract should the application be selected for funding.
- Clarification on how the Project Plan – Methods outline will be incorporated into the proposed scope of work.
- Incorporation of progress reporting deliverables to help track the implementation of the project.
- A task for permitting, authorizations, and agreements.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 29, 2019	**Application Number**: WPF2011	**Type**: Capital Project
Title: Harrenburg Wash Enhancement Project		
Applicant Name: Coconino County Parks and Recreation Department		**Requested Amount**: $129,190
AWPF Reviewer: Reuben Teran		**Matching Funds**: $18,480

SUMMARY:
The applicant proposes to improve the stability, productivity and habitat quality of Harrenburg Wash, just upstream from its confluence with Pumphouse Wash, both of which are in the Upper Verde River Watershed and are the headwaters of Oak Creek Canyon. The wash and associated wetland habitat have been impacted by several factors including the building, filling, and partial breaching of an existing earthen dam and a relatively large pond that was constructed by a previous landowner and is now causing downstream channel erosion due to high water velocity; previous channel excavations that have initiated channel head cuts and created areas of excess flood plain fill; and the invasion of non-native weed species.

To restore Harrenburg Wash the applicant proposes to implement the following activities:

- Channel Improvements - The potholed/excavated areas that have initiated head cuts will be refilled with the materials that were removed, and the outlet of the wetland through the already-breached dam will be widened and reshaped to approximate a natural stable channel, based on a geomorphic reference from the area.
- Weed Treatment - Approximately seven acres will be treated to control diffuse knapweed, and will be implemented through applying herbicide in the spring while the plants are still small and actively growing, followed by manual pulling and bagging in mid-summer when they are large but before they have begun to set seed.
- Revegetation - This project will incorporate re-vegetation of disturbed areas in the channel area with appropriate native grass and forb seed or wetland plugs. This area may also provide an ideal site for planting genetically important cottonwoods in a refugia situation through partnership from the Northern Arizona Cottonwood Research Group. In addition, the old parking area will be over-seeded with a native grass and forb mix.
- Other Restoration Actions - An above-ground electrical wire and two associated wooden poles that dead end near the wetland will be removed from the site; several piles (approximately 40 cu yds) of broken asphalt and concrete that have been dumped on the site that will be removed; and removal of an existing rubble/rock wall that borders the parking area that will be replaced with single rocks or a fence to improve runoff direction and help maintain the area as weed free.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:
No issues identified.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources

The applicant proposes to protect and restore native riparian vegetation and habitat, restore proper hydrologic conditions and functions, restore proper stream geomorphology, and restore wetland habitat associated with Harrenburg Wash.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources

The proposed project has a high potential to benefit wildlife resources and improve riparian and wetland habitats through project activities that intend to increase the length of time for wetted soil conditions within Harrenburg Wash and treat non-nonnative invasive species.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate

The proposed restoration methodologies and overall project actions are appropriate and were clearly described in the application. A Coconino County grading plan with hydraulic model and drainage plan will also be developed to ensure the project meets specifications for permitting and construction.

Clarity and adequacy of the scope of work and deliverables

The proposed scope of work and associated deliverables were clearly presented and adequate. Staff also recommends the following items be included as deliverables in the scope of work: a general pesticide/herbicide application permit from the Arizona Department of Environmental Quality, and submittal of the final revegetation and channel construction plans (if they are not included in the proposed County Grading plan with hydrologic model and drainage plan described in Task 2).

Expertise of applicant/personnel/subcontractors appropriate

The applicant, project personnel, and subcontractors are appropriate to manage and oversee the implementation of the proposed project.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project

The following existing plans and information were described in the application.

- Coconino County Parks and Recreation Department Organizational Master Plan. Coconino County (2009).
- Pumphouse County Natural Area Resource Management Plan & Natural Area Operations. Coconino County (2014).
- Coconino County Comprehensive Plan. Coconino County (2015).
- Memo: Harrenburg Wash Enhancement Concepts. Natural Channel Design, Inc (2018).

Monitoring

Objectives clearly identified

Monitoring objectives will be focused monitoring water levels, the length of period for wetted soil conditions, and favorable changes to the meadow vegetation community.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
The monitoring proposed for this project is appropriate and will include the establishment of vegetation transects and several piezometers located within the Harrenburg Wash meadow. These are proposed to be installed and monitored before the project is implemented to allow baseline data to be collected.

Other Considerations:

Coordinated effort with state or watershed restoration programs
It was not clear if this project is coordinated with other state or watershed restoration programs, but the project does support Coconino County planning activities.

Public outreach
The applicant proposes to conduct public outreach and education activities that will include notification of the enhancement of the restoration area and importance of riparian habitats through websites, social media, e-newsletters, and print materials. The application will also research, design, fabricate, and install interpretive signage at the project area, organize a community tour of the project once complete, and conduct outreach at select environmental education programs and events.

Project will support local businesses
This project may support local businesses through contracting and material supply.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
Not applicable.

Broad-based public involvement and support
Letters of support for the project have been submitted by:

- Representative Walter J. Blackman – Arizona House of Representatives, Legislative District 6
- Matt Ryan – Coconino County Supervisor, District 3
- Arizona Game and Fish Department
- William Noble
- John Aber

Matching Funds
Matching funds will be provided by directly by the applicant for project oversight and monitoring.

GENERAL COMMENTS:
None at this time.

TECHNICAL (project design, hydrology, biology):
Based on existing information regarding the breached dam, associated pond, and proposed wetland restoration activities, a modification of the project design for this specific component may need to be considered. See the Administrative, Policy, and Institutional Factors section below.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:

Page 73 of the application [excerpt from the 2018 Natural Channel Design Harrenburg Wash Enhancement Concepts memo] states:

> "Keeping the outlet of the breach at its current elevation will have the effect of ponding approximately 2 acre-feet of surface water. This is the same amount of surface water storage that is currently occurring and considerably less than was originally stored behind the dam. This storage right should be confirmed as an existing water right so that it does not become contested in the future. If the storage right cannot be confirmed, there may be a need to lower the spillway to prevent storage of surface water. A wet meadow habitat would still be a sustainable project goal. All of the site enhancements suggested in this assessment would still apply."

The applicant states that they have contacted the Coconino County Assessor's Office, Recorder's Office, and the title company the County uses (Pioneer Title) for more information on the parcel's surface water rights. The county offices did not have any information, and per the title company, surface water rights are not included in a title report as such information is typically held at the state level.

A review of the project by the Arizona Department of Water Resources (ADWR) Surface Water Program states that a review of official records of ADWR have not revealed any surface water right or claim that authorizes the storage of surface water in the [currently breached] pond, and evidence of authority to impound surface water must be provided.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Evidence of an ADWR Surface water right to implement the project as proposed, or Commission approval for a modification of the project design to ensure that no surface water will be retained.
- Submission of the final channel restoration/construction design and revegetation plans, if not already included in the Coconino County grading plan with hydraulic model and drainage plan.
- Submission of subcontract agreements for review by AWPF staff.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 30, 2019	**Application Number**: WPF2012	**Type**: Capital Project
Title: Paria Beach Riparian Restoration		
Applicant Name: Grand Canyon Wildlands Council		**Requested Amount**: $187,699
AWPF Reviewer: Reuben Teran		**Matching Funds**: $123,178

SUMMARY:
The applicant is proposing to conduct and evaluate the tamarisk removal and revegetation at Paria Beach on the Colorado River with the intent to complete tamarisk control, undertake native phreatophyte revegetation, and assist the National Park Service with developing a monitoring program, site outreach, and curriculum for an onsite outdoor classroom. This project will also assist in further implementing Glen Canyon National Recreation Area's (CLCA) Colorado River Riparian Revegetation Plan. Ultimately, the project will inform riparian revegetation in many other settings in the Southwest where tamarisk removal involves large stands, heavily impacted by tamarisk beetle.

The goals of the project include:

- Restoring natural shoreline configuration, native riparian ecosystem function, and natural riverside habitats, along the Colorado River below Glen Canyon Dam
- Enhancing the quality of recreation experience, including angling, wildlife viewing, boating, and beach visitation to sustain the local recreation economy, and
- Engaging and empower Native American and local youth in hands-on learning through partnerships.

The proposed objectives for meeting the project goals are to:

- Assist GLCA staff ensure the sufficiency of GLCA riparian restoration guidance.
- Assemble, compile, and assess historic information to guide planning.
- Develop a prioritized restoration, maintenance, and monitoring plan for the site.
- Implement the restoration, maintenance, and monitoring plans.
- Collaborate with GLCA to achieve effective on-site education and outreach.
- Submit a final report and make a presentation to AWPF on the entire project.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:
The Fiscal Year 2020 Grant Application Manual states that evidence of physical and legal availability of water must be demonstrated, and if water will be used in the project the water must be physically and legally available to the applicant for the proposed purpose. The applicant proposes to pump Colorado River water up to water storage tanks that will be used to irrigate native riparian vegetation as part of the revegetation effort. Documentation of the legal authority to use Colorado River water for this purpose and the anticipated amount of water to be used was not included in the application. Evidence of the physical and legal availability to use Colorado River water has not been demonstrated.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources
The project proposes to restore native riparian vegetation and habitat on the upper and lower terraces of the Colorado River at Paria Beach.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources
The proposed project has a high potential to benefit wildlife and habitat resources along the Colorado River.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate
The methodologies and designs are clearly presented and adequate.

Clarity and adequacy of the scope of work and deliverables
The scope of work and deliverables are clearly and adequately presented. Although implementing a public outreach and education plan was described as part of the scope of work, staff recommends adding the development of this specific plan as an additional deliverable under Task 3.

Expertise of applicant/personnel/subcontractors appropriate
The applicant and identified project partners are appropriate and have experience implementing the scope of work proposed.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project
The applicant has successfully implemented similar restoration projects through the Arizona Water Protection Fund near the proposed project area. The application also identifies several higher-level management plans for the Glen Canyon Reach of the Colorado River, and the proposed project appears to fall within the guidelines of the stated management plans.

Monitoring

Objectives clearly identified
Monitoring objectives are clearly identified and include the intent to document the project area's pre-treatment conditions, evaluate project success, and assess potential applicability of these techniques elsewhere in the Glen Canyon National Recreation Area.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
Monitoring methods are clearly presented and appropriate.

Other Considerations:

Coordinated effort with state or watershed restoration programs
It was not clear if this project is coordinated with other state or watershed restoration programs, but it appears is does conform to planning guidelines for the Glen Canyon National Recreation Area.

Public outreach
The project proposes to develop a public outreach/education plan that will include National Park Service (NPS) approved signage on the significance of the site and its restoration. Pending discussion with NPS, outreach materials and information may be developed for on site, online, and public presentation. Additionally, the project proposes to engage Native American youth, high school students, and young adults in the riparian restoration efforts.

Project will support local businesses
This project may support local businesses though contracting and material supply.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
Not applicable.

Broad-based public involvement and support
Letters of support for the project have been submitted by:

- National Park Service, Glen Canyon National Recreation Area
- Conservation Legacy
- Arizona Raft Adventures & Grand Canyon Discovery
- Grant Canyon River Guides, Inc.
- Trout Unlimited
- Federation of Fly Fishers
- The Hopi Tribe

Matching Funds
The application states that matching funds will be provided by the applicant ($44,694), Glen Canyon National Recreation Area ($37,590), Arizona Raft Adventures ($4,000), Grand Canyon River Guides, Inc. ($905), Southwest Conservation Corp – Conservation Legacy ($2,250), and volunteers ($33,744). Letters of support for the project were provided by these project partners, and mention a commitment of resources or support for project activities. The Grand Canyon River Guides, Inc. letter did specify the exact amount of matching funds they are committed to providing for the project.

GENERAL COMMENTS:
Most of the reporting deliverables in the application are proposed as quarterly reports. Quarterly reports can be accommodated if budget or cash flow issues need to be considered, but based on the project activities and administrative purposes staff recommends that semi-annual reports may be more appropriate for project reporting and tracking purposes.

Review of the project by Arizona Department of Water Resources (ADWR) Colorado River Management (CRM) staff indicated that the project is in the Lower Colorado River Basin watershed, and not in the Upper Colorado River Basin watershed as identified in the application.

TECHNICAL (project design, hydrology, biology):
None at this time.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:
The application states that a submersible pump will be used to pipe and store Colorado River water for the irrigation of native riparian vegetation as part of the revegetation efforts for this project. The letter of support from the National Park Service states that water from the adjacent Colorado River will be used to establish and maintain riparian plant assemblages. However, documentation of the applicant's legal authority to use Colorado River water for the stated project purpose was not included in the application, and it is not clear what Colorado River contract or authority would be used for this project.

The State Historic Office Preservation forms in the application refer to a cultural resources survey project that was previously conducted in the project area and it appears it is associated with a 1994 National Park Service cooperative agreement. The actual survey report or supporting information was not included with the application, and may need to be submitted if requested by the State Historic Preservation office should the project be selected for funding.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Documentation of the applicant's legal authority to use Colorado River water for the stated purposes of this project, prior to the execution of a grant award contract if the project is selected for funding.
- Incorporation of semi-annual reporting deliverable due dates, if/when feasible for project tracking purposes.
- Submittal of an education and outreach plan deliverable.
- Arizona Department of Environmental Quality burn permit

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: November 5, 2019	**Application Number**: WPF2013	**Type**: Capital Project
Title: Fort McDowell Yavapai Nation Lower Verde River Riparian Restoration Project		
Applicant Name: Fort McDowell Yavapai Nation		**Requested Amount**: $237,246
AWPF Reviewer: Reuben Teran		**Matching Funds**: $36,993

SUMMARY:
The Fort McDowell Yavapai Nation (FMYN), Mariposa Ecological and Botanical Consulting, and Morning Dew Landscaping are partners in controlling invasive plant species along 10-miles of the Verde River and restoring native vegetation to select areas. The initial restoration work was supported through a grant from the Bureau of Indian Affairs, and additional support from the Arizona Water Protection Fund (AWPF) grant *17-192WPF: Lower Verde River Riparian Restoration Project* (17-192WPF) has enabled FMYN to continue treating giant reed (*Arundo donax*) and tree tobacco (*Nicotianna glauca*) along the river, implement tamarisk (*Tamarix sp.)* removal at a pilot project site, and develop a restoration manual for the 10-miles of river through the FMYN. This grant proposal builds on the current restoration along the Lower Verde River and will continue to work both up and downstream of the pilot project restoration site.

As part of the project the applicant proposes to implement the following activities:

- Continue to treat known and new populations of giant reed and tree tobacco along the Verde River for two more years
- Develop invasive species removal & native plant enhancement plans for two new restoration projects
- Retreat tamarisk in the FMYN pilot project site
- Implement Phase 2 planting in the pilot project site
- Conduct initial tamarisk treatment in a new restoration site (Site RM 3.11R), and
- Implement a monitoring program in all the areas we work.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:
No issues identified at this time.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources
The project proposes to protect and restore native riparian vegetation and habitat, restore proper hydrologic conditions and functions, and restore the floodplains of the Verde River through non-native invasive species removal at Site RM 3.11L and the planting of native riparian vegetation at the Pilot project site.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources
The project has a high potential to restore and enhance wildlife habitat needs in the Verde River corridor. The planting of native vegetation will also help to maintain vegetation cover and habitat that will offset the defoliation of salt cedar due to the anticipated arrival of the Tamarisk beetle.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate
The proposed restoration mythologies are appropriate and adequate, and will follow the Restoration Manual previously approved by AWPF staff for all planning activities, protocols for invasive plant removal, pole planting, and deep pot planting, and monitoring. The Restoration Manual developed under AWPF grant 17-192WPF identified eight potential sites for restoration and the applicant will focus planning efforts on two of these sites.

Is should be noted that the current Restoration Plan includes overall restoration methodology, and site-specific restoration plans will be developed for the high priority sites identified.

Clarity and adequacy of the scope of work and deliverables
In general, the scope of work and deliverables are clearly presented. However, it appears that the restoration actions proposed to be implemented in the scope of work will not include all actions described in the planning documents that are to be developed. Further discussion can be found below in the *General Comments* & *Technical* sections.

Expertise of applicant/personnel/subcontractors appropriate
The applicant and project personnel are appropriate to implement the project as proposed.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project
The proposed project is a continuation of restoration efforts supported by the Bureau of Indian Affairs, and AWPF through grant 17-192WPF which is currently active and set to expire in October 2020. Planning documents previously completed for the FMYN include:

- Fort McDowell Yavapai Nation Invasive Plant Treatment Plan for the Verde River
- Fort McDowell Yavapai Nation Archaeology Survey: Boundary Delineation and Limited Testing of Several Sites on the Fort McDowell Indian Reservation, Maricopa County, Arizona

The proposed project will also tier to plans and deliverables developed under the current AWPF grant 17-192WPF including:

- Restoration Manual for Invasive Plant Management and Riparian Restoration for the Lower Verde River
- Restoration Plan: Pilot Project Site Phase 1 & 2
- Invasive Plant Removal Plan
- Monitoring Plan and Protocols

Monitoring

Objectives clearly identified
The proposed monitoring objectives are to determine the changes in plant community composition and the successes and challenges of the restoration project to better inform future projects.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
The methods for project monitoring are clearly presented and adequate to evaluate the changes in vegetation composition and the benefits to the riparian habitat along the Verde River.

Other Considerations:

Coordinated effort with state or watershed restoration programs
It was not clear if this project is a coordinated effort with other state or watershed programs.

Public outreach
The scope of work did not include a specific public outreach component, but the project may create opportunities for Tribal members to provide input on the project and participate in the restoration activities.

Project will support local businesses
It was not clear if the project would support local businesses.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
Not applicable.

Broad-based public involvement and support
Letters of support for the project have been submitted by:

- RiversEdge West

Matching Funds
All matching funds will be provided by the applicant.

GENERAL COMMENTS:
Funding is being requested to develop plans that will not be implemented in the timeframe of this project, and it is not clear if or when those planned restoration activities would be implemented. As part of the scope of work depth to water analysis, invasive species removal planning, restoration/revegetation planning, and pre-& post monitoring activities are being proposed for both Site RM 3.11L and Site RM 6.89L. However, it appears that the only restoration activities to be implemented at Site RM 3.11L are pre-& post monitoring and invasive plant removal. At Site RM 6.89L only pre-monitoring will be implemented.

TECHNICAL (project design, hydrology, biology):
The scope of work did not include implementing restoration/revegetation activities at either Site RM 3.11R or Site RM 6.89L. Task 5 identifies developing invasive plant removal and restoration plans for these two sites, but the implementation of restoration activities or associated funding to complete restoration at the two sites was not identified in the scope of work or proposed budget. It was not clear why site-specific restoration plans are proposed to be developed if they are not intended to be implemented as part of the project; or if the restoration actions for both sites will be funded and/or implemented in the future.

Task 6 identifies invasive plant removal at Site RM 3.11R, but not Site RM 6.89. Task 5 identifies developing invasive plant removal and restoration plans for these two sites, but the implementation of invasive species removal at Site RM 6.89L was not identified in the scope of work or proposed budget.

Based on text in Task 8: Monitoring, it appears that invasive species removal for Site RM 6.89L may be implemented with other funding sources in the future.

Monitoring is proposed for by Sites RM 3.11R and RM 6.89L. Monitoring at RM 6.89L will only be done prior to tamarisk removal in preparation for future removal.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:
None identified at this time.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Commission determination if the proposed scope of work to be implemented through this project is acceptable, or if the scope of work and planning activities should be modified to only include activities related to on the ground restoration actions that will be implemented through this specific project.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: October 31, 2019	**Application Number**: WPF2014	**Type**: Capital Project
Title: Rio de Flag Enhancement Project		
Applicant Name: Arizona Board of Regents for and on behalf of Northern Arizona University		****Requested Amount**: TBD by the AWPF Commission $188,893.50 or $201,015 or $206,317
AWPF Reviewer: Reuben Teran		**Matching Funds**: $50,208

SUMMARY:
The applicant proposes to increase channel function and stability, enhance riparian vegetation, extend wildlife habitat corridors, provide the opportunity to expand applied research into stream restoration, and use the process of restoration to teach the local community about riparian corridors and their importance along an approximate 3,000ft. section of the Rio de Flag within the community of Flagstaff, AZ.

Project objectives include:

- Planting a variety of native riparian plant species (e.g., potentially up to 1000 cottonwood trees, 200 willows) along the stream channel and overbank areas that may include local willows (*Salix lasiolepis*), narrowleaf cottonwood (*Populus angustifolia*), Fremont cottonwood (*P. fremontii*) as well as other native plant species. The project area is also planned to be used as long-term refugia for relict cottonwood and rare willow species (which will also be planted part of the revegetation project to conserve the genetic diversity of these important riparian species) and reclaimed water will be used to irrigate and establish all vegetation plantings. Irrigation infrastructure and water will remain available during drought periods, especially for the cottonwood refugia.

- Implementing noxious weed management throughout the project area.

- Using the project area as a public outreach and education environment that will incorporate short-term and long-term biotic and vegetation monitoring, research opportunities, public tours, and environmental education opportunities local schools in the Flagstaff area.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:
The Fiscal Year 2020 Grant Application Manual states that evidence of physical and legal availability of water must be demonstrated, and if water will be used in the project the water must be physically and legally available to the applicant for the proposed purpose. The application states that the availability of water has already been confirmed with a verbal agreement from the City of Flagstaff, and that all necessary permits and authorizations will be obtained before beginning other work. While the City of Flagstaff did provide a letter of support for this project, it did not specifically mention a commitment to provide water for this project which is a critical component to the overall scope of work. Evidence of the physical and legal availability to use City of Flagstaff reclaimed water has not been demonstrated.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources

The project proposes to enhance native riparian vegetation and habitat along the Rio de Flag, and should increase the extent, diversity, and structure of the riparian community with the addition of native cottonwood, willows and other native plants.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources

The project has a high potential to enhance and restore habitat needs for wildlife species dependent on the Rio de Flag riparian corridor.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate

The general methodologies proposed for revegetation and noxious weed removal activities appear appropriate, and demonstrate benefits to riparian and dependent wildlife resources. However, the application was not clear if other ground or channel modification restoration actions will be implemented since the project has an extensive engineering planning and design components.

Task 2 in the scope of work also states that the results from the Site Assessment Plan activities will be included in Task #10, Concept Plan for Future Phase II an area downstream of the proposed revegetation area, but it is not clear where this concept area is, who owns the proposed land, if control and tenure for this other project area has been obtained, or what restoration work is required in that area.

Clarity and adequacy of the scope of work and deliverables

The scope or work was very detailed, and appears adequate accomplish the known objective of the project. However, as noted above, the scope of work does refer to the purpose of Task 3 as "To describe stream channel restoration design....", and Task 2 contains some project components such as "construction specifications, design parameters, and engineering drawings", and "restoration construction sequence and procedures". This would appear that some significant channel restoration actions are being proposed as part of the project, but the executive summary, statement of problems, and statement of solutions sections in the application, including the detailed budget and State Historic Office Preservation project description forms, did not include any details or information to support that stream channel modification work of work is going to be implemented.

Expertise of applicant/personnel/subcontractors appropriate

The applicant, project personnel, and potential subcontractors are appropriate to implement the revegetation project as proposed.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project

The proposed project should complement several other riparian projects in the Flagstaff area, including two previously funded AWPF projects (06-136WPF Arboretum at Flagstaff Wetland Enhancement Project, and 07-141WPF Picture Canyon Meander Restoration Project) which are located upstream and downstream of the proposed Rio de Flag project. The project should also be consistent with efforts by the City of Flagstaff and Arizona Department of Game and Fish to provide a greenway, open space network of wildlife corridors through the Flagstaff urban area.

Monitoring

Objectives clearly identified
The proposed objectives include monitoring channel stability and geomorphology, vegetation survival and ground cover, wildlife, and photo points, and would include baseline monitoring and annual monitoring activities.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
Proposed monitoring methods were not specifically described in the application, but Task 4 is specifically for the development of a project monitoring plan that should described all mythologies to be implemented for the project.

Other Considerations:

Coordinated effort with state or watershed restoration programs
It is not clear if this project is a coordinated effort with other state or watershed restoration programs.

Public outreach
The application proposes to develop and implement a public outreach and education plan for the project. As part of the project outreach, the application states that the Merriam-Powell Center for Environmental Research plans to conduct presentations, field visits, and larger educational events for primary and middle school students, and it is proposed that the Rio de Flag Enhancement Project will be used as an outdoor laboratory to provide opportunities for incorporation into the curriculums of the engineering, forestry, geology, biology, and environmental science departments within the College of Environment, Forestry and Natural Sciences at Northern Arizona University.

The application also states that as part of the project outreach, Willow Bend Environmental Education Center plans to conduct class presentations, field visits, and larger educational events for primary and secondary school students, and the Southwest Experimental Garden Array will include the site as an urban demonstration of restoration, long-term research showing the importance of genetics in restoration. While it appears that these two organizations will be partners in the project, the letter of support from the Southwest Garden Array was not included in the application, and the letter of support from the Coconino Natural Resource Conservation District did not mention the use or involvement of the Willow Bend Environmental Education Center.

Project will support local businesses
The proposed project could support local businesses through contracting and material supply.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
Not applicable.

Broad-based public involvement and support
Letters of support for the project have been submitted by:

- City of Flagstaff
- Northern Arizona University, Merriam-Powell Center for Environmental Research and the Cottonwood Ecology Group

- Museum of Northern Arizona
- Coconino Natural Resource Conservation District

Matching Funds
Matching funds are proposed to be provided by the applicant / Northern Arizona University / Merriam-Powell Center for Environmental Research ($36,728); Museum of Northern Arizona ($1,000); and volunteers ($12,480).

GENERAL COMMENTS:

- The project narrative and proposed budget do not appear to no fully coincide with the proposed scope of work. See the Technical section below.

- The detailed budget for Task 2: Prepare and Implement Site Assessment Plan has 5,000 miles has budgeted for travel with a Northern Arizona University vehicle. With the University campus only 0.5 miles from the proposed project area, it is not clear what other traveling may be taking place to plan for 5,000 miles of vehicle use for this one Task.

- Staff budget calculations for Task 8: Conduct Monitoring found that the applicant's detailed budget total costs for this Task was short by $5,302.

    - **The grant amount requested on the application cover page ($188,893.50) did not match the total project costs listed on the applicant's detailed expenditure record ($201,015.68), or the staff's budget calculations ($206,317) which does include the $5,302 above.
    - AWPF Commission approval is necessary to identify the supported grant award amount if this project is selected for funding.

TECHNICAL (project design, hydrology, biology):

- As stated previously, the scope of work refers to preparing engineered site assessment and final design plans for the project area, but it is not clear what actions (other than revegetation and irrigation system installation) may require extensive planning and engineering. A sentence is the Task 1 cost breakdown for permitting references the repair of an existing culvert crossing, and the proposed site assessment in Task 2 includes actions such as the evaluation of hydrology, hydraulics, and morphology of the channel and floodplain, but proposed restoration costs and overall project narratives in the application do not describe or contain details that would suggest stream channel modification activities or repairing a culvert crossing will be implemented.

- The project area contains a retention pond directly adjacent to the active stream channel and the application states that this pond catches runoff from Interstate-40. Review of the project by Arizona Department of Water Resources (ADWR) Surface Water Permitting Unit stated that a review of the official records of ADWR has not revealed any surface water right or claim that authorizes the storage of surface water in the pond. If stream channel modifications are going to be implemented that may affect this pond feature, coordination with the ADWR Surface Water Permitting Unit will be necessary.

- As stated above, the application proposes to implement a site assessment for a Concept Plan for Future Phase II, downstream of the project area that will be less detailed and rely on aerial photography and data analyses from previously conducted inventories. The application was not clear

on the Phase II location, land ownership status, and if control and tenure to implement the future project has been secured.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:

The application states that the commitment to maintenance of capital improvements is 5-10 years. The general provisions of the Arizona Water Protection Fund grant award agreement template identify 20 years of operation and maintenance is required for grant assisted projects, unless there are special provisions identified. The grant applicant is not the landowner/land manager, and a special provision may need to be discussed and approved by the Commission if the project is selected for funding.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Commission determination on a grant award amount if this project is selected for funding.
- Clarification on the scope of work to be implemented through this project.
- Evidence of the authority to impound surface water if the proposed project actions will affect the existing pond feature which currently has no legal authority to impound surface water.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: November 7, 2019	**Application Number**: WPF2015	**Type**: Capital Project
Title: Habitat Restoration in the Gila River Riparian Corridor		
Applicant Name: Gila Watershed Partnership of Arizona		**Requested Amount**: *$492,839
AWPF Reviewer: Reuben Teran		**Matching Funds**: **$42,082

SUMMARY:
The Gila Watershed Partnership of Arizona (GWP) is proposing to build upon approximately 5 years of restoration work in the Upper Gila River with the intent of restoring another 210 acres of riparian habitat over three years along the Upper Gila River. This would be accomplished by increasing secondary weed (exotic herbaceous species) management and prioritizing revegetation actions. Project goals are to remove 30 acres of standing salt cedar, burn and clear of 30 acres of piled salt cedar, intensively re-treat 120 acres of salt cedar regrowth and secondary weeds, and plant and/or seed 30-acres of native vegetation.

To reach these goals, GWP intends to implement fuels control treatments by removing invasive salt cedar cover and to complement this with the control and removal of invasive herbaceous weeds. Following initial treatment and subsequent retreatments of exotic-dominated areas, GWP intends to revegetate these treated areas with native phreatophyte (cottonwoods and willows) and small, low-water use tree and bush species. The project will also include a public outreach component and a monitoring program.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:

- The Fiscal Year 2020 Grant Application Manual states that evidence of control and tenure of land must be demonstrated, and that the applicant must have legal and physical access and authority to manage the area where grant tasks are to be performed. It also states that if you do not own or manage the land on which the proposed project is located, the application should include documentation verifying ownership and include a copy of the permit, agreement or letter of intent that allows you access to the site. It further states that cooperative agreements with all parties having such access and authority, or letters of support with a plan to obtain cooperative agreements prior to grant award will meet this requirement and must be included.

  The application describes several potential project sites within the GWPs Restoration Plan for the Upper Gila River 2019-2020, and the Project Location & Environmental Contaminant Information Page indicates that the project area consists of privately-owned lands that includes individual landowners and Freeport McMoRan. The application did not contain any documentation or information that the applicant has access to the project site(s) and can implement the project as proposed. Evidence of control and tenure of the project area(s) has not been demonstrated.

- The Fiscal Year 2020 Grant Application Manual states that evidence of physical and legal availability of water must be demonstrated, and if water will be used in the project the water must be physically and legally available to the applicant for the proposed purpose. Although scope of work did not specifically reference the use of water for irrigation purposes, the detailed budget did identify upland planting w/ irrigation as part of the AWPF fund request. The application did not include a description of the water source or potential water provider. However, it was noted that a

letter from the GWP in the application [date and recipient unknown] references that water was being purchased through the Graham County Electric Cooperative, Inc. for a Freeport McMoRan mitigation site. The source of water for irrigating the upland plants is not clear. Evidence of physical and legal availability of water for this project has not been demonstrated.

- Cover page states Water Conservation category, but staff recommends this project more appropriately falls under the Commission's Capital Project category.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources
The project proposes to restore native riparian vegetation and habitat, restore proper hydrologic conditions and functions, and restore the floodplains of the Gila River.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources
The project has a high potential to protect and restore habitat needs for obligate riparian wildlife species that use the Gila River corridor by removing invasive species, reducing fire risk, and improving habitat diversity.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate
The project methodologies and objectives are clearly identified and demonstrate benefits to the Gila River and dependent fish and wildlife resources.

Clarity and adequacy of the scope of work and deliverables

- The proposed scope of work was very detailed and contained several project actions that may be implemented, and in addition to detailed project implementation plans will be submitted as deliverables. However, the scope of work does not specifically identify the location(s) where restoration actions will be taking place over the four-year project. The Restoration Plan for the Upper Gila River 2019-2020 identifies eight sites with planned actions, and states that beyond 2021 additional sites will be added over time. It is not clear what site(s) make up the 210 acres of restoration activities proposed.

- Task 3: Implement Restoration Plan proposes one deliverable that will be submitted at the end of the third field season (~September 2023), and $400,203 of AWPF funds are requested to implement this task. Staff recommends that progress reports be added to this task to assist in project tracking, and to facilitate budget expenditure and reimbursements should this project be selected for funding.

- Task 4: Implementation of Monitoring Plan proposes one deliverable that will be submitted at the end of the second breeding season (~October 2023). Staff recommends that progress reports be added to this task to assist in project tracking, and to facilitate budget expenditure and reimbursements should this project be selected for funding.

Expertise of applicant/personnel/subcontractors appropriate
The applicant and project personnel are appropriate to implement the project as proposed.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project
The applicant recently implemented and closed out AWPF grant *17-190WPF*: *River Restoration Through Hazardous Fuels and Invasive Species Removal* that completed restoration work in the same general areas proposed for restoration in this grant application. With support from AWPF funds, the GWP removed 91.89-acres of tamarisk, retreated 39.82-acres of re-sprouts and secondary weeds, 14.02 of which were also burned to remove piles, and planted 16.53-acres of riparian vegetation species

The application states that the GWP works closely with public and private partners to secure the necessary funding to implement riparian restoration throughout the river corridor, and that the proposed project is an important component of this effort.

Monitoring

Objectives clearly identified
The proposed monitoring objectives for this project are to track and assess the success of the project and to guide management actions in each following season, and the application states that the GWP has developed a monitoring plan that outlines eight specific objectives with regards to overall restoration management along the river. These eight objectives were briefly described in the project overview section of the application.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
The application states that monitoring activities for this may include depth to water, threatened and endangered species surveys, plant and seeding survival and health, photo points, relative vegetation cover estimates, and/or site mapping. While it is not clear what specific monitoring actions will be implemented through this project, the proposed methods are appropriate and adequate to evaluate the benefits to the Gila River and dependent wildlife resources.

Other Considerations:

Coordinated effort with state or watershed restoration programs
The proposed project is a coordinated effort with local partners for the restoration of the Gila River.

Public outreach
The applicant proposes to conduct a multifaceted education and outreach program that may include a media campaign that reaches out to local and regional news outlets; participating through education booths in local events; coordinating and facilitating multiple volunteer events; presenting lessons learned at 3 local and regional meetings and conferences; and hosting a yearly Upper Gila Watershed Forum where project updates and results will be shared with the local and regional community.

Project will support local businesses
The project would support local businesses through material supply and contracting.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
Not applicable.

Broad-based public involvement and support
No letters of support for the project were included in the application or submitted during the public comment period.

Matching Funds
The application states that matching funds will be provided by the applicant ($42,082), the Arizona Department of Forestry and Fire Management ($241,510), the Walton Family Foundation ($18,000), and the National Civilian Community Corps ($191,290).

The Fiscal Year 2020 Grant Application Manual states that applicants must demonstrate that vital partnerships, funding, etc. have been committed at the time of the application or submit letters of support from the appropriate entities with a plan to obtain these critical elements prior to grant award. Although the application references matching funds will be provided by the entities identified above, the application did not include any letters or support or evidence (e.g. funding award letter, funding agreement, etc.) that funding has been secured from these organizations specifically for this proposed project.

GENERAL COMMENTS:

- Overall, the proposed project actions have a high potential to benefit the Gila River and associated riparian habitat. While the application contained many details of restoration actions and methods that could be used for restoration and monitoring activities, it lacked specific detail about where these actions would be taking place. This also effects the issue of control and tenure to implement the project, and what permits, clearances, and authorizations may need to be considered. (See TECHNICAL section below)

- The proposed budget only included lump sum costs for anticipated uses of AWPF funds. While it generally appears that the categories of items are applicable to implement the scope of work, it was not clear how these totals were calculated or what items like "materials" or "supplies" may include.

TECHNICAL (project design, hydrology, biology):
The applicant is proposing to restore 210 acres of riparian habitat over three years along the Upper Gila River, with the project goals to remove 30 acres of standing salt cedar, burn and clear of 30 acres of piled salt cedar, intensively re-treat 120 acres of salt cedar regrowth and secondary weeds, and plant and/or seed 30-acres of native vegetation. It is clear from the GWP's Restoration Plan for the Upper Gila River 2019-2020 that work may be taking place in some part of the 8+ general project areas, but it would have been helpful for the scope of work more fully describe what restoration actions are going to take place in what restoration area(s).

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:
*Based on staff's calculations of project expenses in the application budget table, total AWPF project expenses totaled $469,371, and (5%) administration costs totaled $23,468. Therefore, the grant application request total should be **$492,839**. This is a difference of -$43 from the original grant application request, which appears to be due to an overage of the administrative cost calculated by the applicant.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Evidence of control and tenure of the specific project area(s) where grant assisted actions will take place, prior to the execution of a grant award contract if the project is selected for funding.
- Evidence of the legal authority to use water for the state purpose of the project, prior to the execution of a grant award contract if the project is selected for funding.
- Identification of specific project areas where 210 acres of grant funded actions will take place.
- Addition of progress report deliverables under the Task 3: Implement Riparian Restoration Plan and Task 4: Implementation of Monitoring Plan.

FY 2020
ARIZONA WATER PROTECTION FUND
STAFF REVIEW

Review Date: November 4, 2019	**Application Number**: WPF2016	**Type**: Capital Project
Title: Reduction of Erosion and Sedimentation Along San Pedro River Through Hydrologic Restoration of Upland Watershed		
Applicant Name: Elquen, LLC		**Requested Amount**: $142,693
AWPF Reviewer: Reuben Teran		**Matching Funds**: $811,360

SUMMARY:
The applicant proposes to address erosion and sedimentation issues on private land along the San Pedro River, North of the San Pedro River Riparian Conservation Area in Cochise County, Arizona. The hydrologic function of the uplands west of the San Pedro River was altered in the early 1800s by two railroads built parallel to the river, and overland flow is currently intercepted and diverted under bridges where gullies have formed. Both railroads are currently abandoned but continue to channelize runoff into the San Pedro River. The goal of this project is to restore proper hydrologic function of the watershed on either side of railroad grades and enhance the riparian resources of the San Pedro River. The project proposes to 1) build water and erosion catchment basins at intervals along the uplands to intercept runoff upland of the railroad grades to reduce velocity and allow sedimentation to settle out of water; and 2) woody slash (taken from an ongoing Natural Resource Conservation Service Working Lands for Wildlife project on the property) would be compacted and placed into the deepest gullies connected to the river bed that are running parallel to the railroad grades.

APPLICATION SCREENING FOR COMPLETENESS AND CONSISTENCY WITH COMMISSION POLICIES:
No issues identified at this time.

EVALUATION CRITERIA:

Project Will Enhance, Maintain and/or Restore River, Stream and Riparian Resources
The project proposes to restore proper hydrologic conditions and functions of the uplands, and restore degraded riparian habitat along the San Pedro River. Monitoring for the project was not proposed, so it is not clear what effect(s) or improvements to river and/or riparian habitats may be realized, or if the goals and objectives of the project would have been met.

Project Will Benefit Fish and Wildlife Resources Dependent on River, Stream and Riparian Resources
If the project is successful at reducing erosion and further habitat degradation, there is a high potential to protect and restore habitat needs for wildlife resources dependent on the San Pedro River.

Feasibility (Measures appropriate to address issues of concern identified above)

Methodologies and designs clearly presented, appropriate and adequate
Project methodologies and preliminary designs are clearly presented. A detailed engineering hydrological plan will be developed under Task 2 that will identify the placement, spacing, and dimensions of the erosion

stabilization features and sediment control basins.

Clarity and adequacy of the scope of work and deliverables
The scope of work proposed is adequate to complete the project objectives, and all work activities are anticipated to be completed within 1-year.

As stated above, the scope of work does not propose any follow up monitoring or inspections of the improvements to assess their functionality or effectiveness, or monitoring of to assess river and/or riparian habitat benefits.

Expertise of applicant/personnel/subcontractors appropriate
The applicant and project personnel are appropriate to implement the project as proposed.

Description of the relationship between any existing plans, reports and/or information relevant to the proposed project
The proposed project area and the adjacent portion of the San Pedro River are currently under contract with the Natural Resource Conservation Service to complete a Working Lands for Wildlife Southwestern Willow Flycatcher project that includes the practices of brush management and forest stand improvement. This project is also tied to objectives identified in a Forest Management Plan for the property completed by the Arizona Department of Forestry and Fire Management.

Monitoring

Objectives clearly identified
Monitoring of project improvements or benefits to riparian habitats was not proposed for this project.

Methods clearly presented, appropriate and adequate to evaluate benefits to rivers, streams and riparian resources and/or dependent fish and wildlife resources
Monitoring of project improvements or benefits to riparian habitats was not proposed for this project.

Other Considerations:

Coordinated effort with state or watershed restoration programs
The proposed project would complement other projects currently underway on the Elquen, LCC property that include planned and/or completed actions such as brush management, forest stand improvement, riparian fencing, and wildlife ponds.

Public outreach
A public outreach component was not proposed for this project.

Project will support local businesses
This project may support local businesses through contracting and material supply.

If the applicant is proposing to use out of state consultants, there is adequate justification for their use and associated travel costs
Not applicable.

Broad-based public involvement and support
No letters of support for the project were included in the application or submitted during the public comment period.

Matching Funds
Project matching funds will be provided by the applicant in the amount of $811,360 for construction fill material and dozer operation.

GENERAL COMMENTS:
None at this time.

TECHNICAL (project design, hydrology, biology):

- Review of the project by the Arizona Department of Water Resources Surface Water Unit indicated that more information is needed regarding the final locations, designs, and maintenance plans for the proposed catchment basins. If catchment basins are constructed in a natural drainage that conveys water, they may require a surface water right if they are retaining surface water. If they are only detaining water, a maintenance plan will need to be submitted for review to assure that water will not be retained in the future.

- The filling of gullies along the San Pedro River may require a Clean Water Act Section 404 permit for those activities.

- The proposal included a task dedicated to a cultural resource survey which has already been completed, but it did describe evaluating and/or obtaining any other necessary permits that may be needed for the proposed project activities. This Task may also need to include endangered species consultation with the U.S Fish and Wildlife Service if endangered species or critical habitat is present in the project area.

ADMINISTRATIVE, POLICY, INSTITUTIONAL FACTORS:
None identified at this time.

CONTRACT CONDITIONS THAT WILL NEED TO BE ADDED:

- Addition of a Task for all other permits, clearances, authorizations, and agreements that may be necessary to implement the project (e.g. Army Corp of Engineers Clean Water Act Section 404 permit, endangered species consultation, etc.)
- Surface water right documentation if it is determined that water catchment basins are designed to retain surface water resources.
- Water catchment basin maintenance plan to be included with the engineering hydrological plan.