### RIVER ROAD AQUATIC ECOSYSTEM RESTORATION PROJECT FREQUENTLY ASKED QUESTIONS

### JUNE 2024

This document includes questions and comments that were received prior to and during the May 23<sup>rd</sup> public information session held at the Tri-Point Center.

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#### **General Questions**

#### 1. What is the River Road Aquatic Ecosystem Restoration Project?

The River Road Ecosystem Restoration project will leverage federal funding through the Bipartisan Infrastructure Law and the current administration's Initiatives Pilot to implement channel restoration activities, improve fish passage, and mitigate erosion. Using stream restoration techniques, the project will remove non-native and invasive species and reestablish native riparian and aquatic plants, improving quality of migratory and resident avian habitats. Restoring this section of the river will provide further connectivity along the river to park patrons with the reconfiguration of vehicular and pedestrian access, as well as additional birding, fishing, and other recreational opportunities.

#### 2. What is the footprint of this project? Is Avenue B included?

This project will include ecosystem restoration along the San Antonio River from Mulberry to Hwy 281. Avenue A will be transformed into a hike and bike trail and closed to vehicular traffic. There is a proposed improvement for the Mulberry Road crossing. Avenue B is outside of the project area.



## 3. Where will the Avenue A hike and bike trail go at the end of Avenue A?

An additional trail would be a proposed betterment above the base project. Adjustments to Avenue A will extend to a new pedestrian bridge that will be installed at Woodlawn. The community's vision through the San Antonio River Improvements Project (SARIP) / Museum Reach has been to connect Avenue A to existing trails.

#### 4. What are the ultimate outcomes anticipated from this project?

This project will increase and improve habitat, increase and improve plant and wildlife diversity, and reduce erosion along the river. Invasive species removal and native species plantings will increase the buffer between the river, River Road, and either the trail (Avenue A) or the golf course. This buffer will help dilute pollution entering the river and reduce erosion impacts through the implementation of a natural stream design. Removal of the low water crossings will also positively impact fish species by allowing fish passage downstream. These removals of low water crossings within the river can help reduce the amount of erosion occurring in this reach of the San Antonio River by maintaining natural function of the river. Excessive pooling within this section of the river is a factor that has contributed to the severe erosion occurring along River Road and Avenue A. Instream structures have the capability of protecting the riverbanks while also providing shelter and foraging habitat for fish and other aquatic wildlife.

### 5. How did this project come about? What is the historical timeline of the project?

Improving this section of the San Antonio River has been a priority for many years. Beginning in 1998, the San Antonio River Oversight Committee made recommendations for San Antonio River Improvement Projects including identifying the stretch of river from the Museum Reach to Brackenridge Park as a priority segment. See the graphic below for more project history:



## 6. What were the results of the feasibility study and where can that information be found?

The feasibility study, which was conducted from 2018 – 2020 and whose results were presented to the public at this meeting can be found here: <u>River Road Aquatic Ecosystem Restoration (army.mil)</u>

Previously recorded meetings can be accessed here: <u>River Road Ecosystem Restoration – Bexar County</u> <u>Capital Improvements Program (bexarcip.org)</u>

## 7. Who are the key entities involved in this project and what are their roles and responsibilities?

The US Army Corps of Engineers is the federal agency in charge of this project. The San Antonio River Authority, as the non-federal sponsor, is responsible for real estate property interests and relocations, if required, and committed to the operations and maintenance of this project including implementation of the Adaptive Management Plan.

#### 8. What other stakeholders have been engaged in this project?

Over the lifetime of the project, the project team has engaged stakeholders including but not limited to: Bexar County, Texas Commission on Environmental Quality (TCEQ), City of San Antonio Parks, Public Works and Office of Historic Preservation, River Road Neighborhood Association, Centro San Antonio, Audubon Society, Texas Forest Service, Tribal Nations, Brackenridge Park Conservancy, Brackenridge Park Stakeholder Advisory Committee, and the Brackenridge Golf Course.

The U.S. Army Corps of Engineers has specifically contacted the American Indians in Texas at the Spanish Colonial Missions, The Comanche Nation, the City of San Antonio Archaeologist, The Kiowa Tribe of Oklahoma, The Apache Tribe of Oklahoma, the Texas Historical Commission, The Tonkawa Tribe of Oklahoma, the U.S. Fish and Wildlife Service, the Texas Parks and Wildlife Department, the Texas Commission on Environmental Quality, the Natural Resources Conservation Service, and the Environmental Protection Agency in the development of this project.

#### 9. How can the public stay informed about the project?

The River Road Aquatic Ecosystem Restoration project webpages are a great resource for project information, presentations from past meetings and other opportunities to get involved. More information can be found at <a href="https://www.bexarcip.org/project/river-road-restoration/">www.bexarcip.org/project/river-road-restoration/</a> or at <a href="https://www.swf.usace.army.mil/Missions/Civil-Works/Continuing-Authorities-Program/River-Road/">https://www.swf.usace.army.mil/Missions/Civil-Works/Continuing-Authorities-Program/River-Road/</a>.

Throughout the design process, there will be public information sessions held at 30%, 60% and 90%, public notifications about these events will be made by mail and on social media.

The public may also reach out directly to the US Army Corps of Engineers at the following email address: <u>RiverRoadER@usace.army.mil</u>.

### 10. What are the key milestones and schedule for this project?



#### 11. How does this project relate to other nearby projects?

This is a federally funded project through the U.S. Army Corps of Engineers and stands alone from ongoing or planned local projects in the area. The project team coordinates closely with local stakeholders and remains aware of nearby projects and their potential impacts. However, the ecosystem restoration project is separate from the nearby efforts.

#### 12. What if any roadways will be impacted?

This project will transform Avenue A into a hiking and biking trail and will no longer support vehicle usage (except emergency vehicles as needed).

### 13. What are some examples of other similar USACE projects and their outcomes?

The San Marcos Ecosystem Restoration Study involved the removal of invasive species from the aquatic and riparian habitats and replacing the invasive species with native aquatic and riparian species. This work was done in areas populated with the endangered fountain darter and Texas wild rice. More information can be found <u>here</u>.

The Resaca Boulevard project in Brownsville, Texas was a USACE project with a much higher concentration of invasive species than River Road. This project removed the invasive species, left the native species in place, and planted the invasive species areas with native plants. This project has exceeded expectations with the restoration response. More information can be found <u>here</u>.

The Lewisville, TX project was a project to provide habitat improvement to a USACE flood channel. Restoration included the control of non-native invasive species, the planting of native woodland species, and the construction of migratory bird nesting structures. More information can be found <u>here</u>.

#### 14. Is Davis Park included in the project?

Allison/Davis Park was integrated into the project because of its location within the floodplain. It is adjacent to the San Antonio River and has the potential to provide excellent benefits for wildlife. The park provides an opportunity to promote the establishment of native riparian species to promote the health of the San Antonio River. There are opportunities that will improve wildlife, such as migratory birds, conditions that may be able to better utilize the restored habitat over the project's life. The project will increase vertical structure by integrating a shrub canopy layer and a more diverse herbaceous canopy, habitat is provided for a more diverse community of bird and other wildlife species.

## 15. How does this project align with Brackenridge Park's Cultural Landscape Report and the park?

The aquatic ecosystem restoration project was studied prior to the publication of the Brackenridge Park Cultural Landscape Report. The Cultural Landscape Report mentions the project and recommends evaluating the low water crossing within the project boundaries for removal to allow a natural stream flow. This is referenced on pages 470-471 of the report.

### 16. What is the long-term plan for operations and maintenance and who is responsible?

The San Antonio River Authority will own and operate the area post construction. Continued maintenance will include tree/branch maintenance, invasive plant removal, native plantings, and trash removal. An adaptive management approach will be utilized in the operations and maintenance process.

#### Water

### 17. How will removing the low water crossings affect the river's depth and flow?

While the flow (cubic feet per second) of the river will not change, there could be impacts to the elevation. The goal of the project is to limit the impact downstream. The river would begin to develop the form and function of a natural river system, as ecologically as possible within an urban area. The current over-large pool in the river would change to allow for a series of pools and riffles to provide aquatic habitat and natural river function. The width and depth of the river will be determined during the design phase and will use FEMA hydraulic models that have been developed for the community for floodplain management.

### 18. What are the anticipated impacts to water quality from this project?

The project, by planting native vegetation (once plantings are mature, shading can improve dissolved oxygen, plantings will reduce contamination in the river) and addressing the overall ecosystem health, will provide ancillary water quality improvements. We have seen improved water quality where we have planted native plant species (grasses, wildflowers, trees, shrubs) along the Mission Reach of the San Antonio River and we will see that here as well. The planting of native vegetation and filtration possibilities will improve the clarity of the water in this section of the river.

#### Water Levels and Flooding

## 19. Will the project impact flooding or the 100-year floodplain?

No, the project is not allowed to increase flood surface elevation. The project will have no negative impact on flooding and the 100-year floodplain.

#### 20. What will the proposed in-stream structures look like?

Instream structures will be constructed of natural materials, such as stone, native wood, and other natural materials. They are designed to create the pools, riffles, and runs of a natural stream that we are looking to incorporate and develop as part of the ecosystem restoration process. Natural stream design features such as cross vanes and j hooks are examples of potential solutions to maintaining a balanced sediment transport of the river (see examples below).



Rock Cross Vane Structure



Log Cross Vane Structure



J-hook

### 21. What are the sources of water that feed this section of the river?

This section of the river is part of the Olmos Creek – San Antonio River Watershed, which is a subwatershed of the Upper San Antonio River Watershed. This section of the river is a part of the San Antonio River Basin. Cibolo Creek, Salado Creek, Leon Creek, the Medina River and each creek/river's associated watershed also feed into this section of the river. In addition, water is received from natural springs, the Zoo's ultraviolet treatment facility, and the San Antonio Water System (SAWS) Recycled Water infrastructure.

#### 22. Will the project be designed with climate change in mind?

A Greenhouse gas emissions study will be performed for this project in compliance with the Clean Air Act. Climate Change will be considered while designing and building the project to the maximum extent possible.

#### Wildlife

#### 23. How will this project affect birding?

The project's overall goal is to improve the ecological systems, including bird habitat, within the study area. During construction, birding would be temporarily impacted by the removal of invasive species and noise from construction activities. However, birding would be positively impacted by the project over the long-term. The project will implement methods that will increase vegetative diversity by removing invasive species and planting native species. Diversity along the river in the understory, mid-story, and overstory will increase the diversity of migratory and resident bird species and wildlife that inhabit or rest in the study area.

### 24. What steps will be taken to protect birds and other wildlife throughout the process?

Project implementation will occur in compliance with the U.S. Fish & Wildlife Migratory Bird Treaty Act with the goal of avoiding or minimizing disturbances to the bird population. The removal of vegetation is limited to invasive species except for the case of construction access. The removal of vegetation will occur outside of the breeding season if feasible.

#### 25. How will this project impact fish in the area?

This project will help to improve fish passage and habitat. The project will increase the diversity of fish habitat by creating pools (deeper areas with slower flow), riffles (shallower areas with faster flow), and runs and glides (medium depth areas with medium flows). Fish species that specialize in these habitats will utilize the created habitats. The elimination of the lower water crossing will remove the barriers that would allow these fish species to move into these new habitats. Current populations of aquatic life will be protected during construction by using proper construction best management practices (BMPs).

#### Vegetation, Erosion and Sedimentation

### 26. What invasives are there now and how will they be removed?

Current invasive vegetative species within the study area include: giant cane (*Arundo donax*), Bermudagrass (*Cynodon dactylon*), chinaberry tree (*Melia azedarach*), Chinese privet (*Ligustrum sinense*), elephant ear (*Colocasia spp.*), bastard cabbage (*Rapistrum spp.*), and lantana (*Lantana camara*). The removal of non-native invasive species will utilize an integrated pest management approach. Most species will be cut down at the base and the stump will be treated with an aquatic labeled (approved for use in and adjacent to aquatic habitats) herbicide approved by the EPA and the USFWS. Certain species will be sprayed with an aquatic approved labeled herbicide in a foliar application. The invasive species control methodology will depend on the invasive species.

## 27. What exactly is an "adaptive management plan"? What is planted?

An adaptive management plan allows the operating and maintaining entity the flexibility to learn from past and present management activities that are successful in establishing a high percentage of native plant cover and can be revisited over time as new information becomes available.

The design consultant will recommend native grasses, wildflowers, shrubs and trees consistent with San Antonio's ecoregions, and the San Antonio River Authority will implement the adaptive management plan to ensure they are successfully established and maintained. Native plants will be sourced locally either by collecting and propagating seeds from the project area or by purchasing plant materials from local nurseries. Examples of plant species that may be included in the planting design can be found in Attachment A of Appendix C4 in the feasibility report [River Road Aquatic Ecosystem Restoration (army.mil)].

## 28. How will erosion be addressed by this project and what rate of erosion is expected post-project?

The project is based on the restoration of the sediment transport balance of the river. To create that balance, instream structures will be added to the river that will aid in the dissipation of energy from instream flows, redirecting flows from bank, and aid in sedimentation movement. We will be planting native grasses, wildflowers, shrubs, and trees to stabilize the banks. Bald Cypress and Montezuma Cypress trees are part of the plant species palette and do an excellent job of protecting the banks from erosion. Post construction, the rate of erosion should equal the rate of sedimentation which should both be minimal.

### 29. What impacts are expected downstream as sedimentation and debris are removed from the area?

Natural stream design balances out sediment transport and planting of native vegetation will help filter debris. After the project is complete sedimentation effects should be minimal.

#### **Cultural Resources**

### 30. What occurs during a cultural resources survey and where can I find the results of the study?

A cultural resources survey will begin in the Summer of 2024, and includes minimally invasive shovel testing, backhoe testing, and an architectural survey. The U.S. Army Corps of Engineers will draft a report in Fall 2024. The report is then filed with the Texas Historic Preservation Officer at the Texas Historical Commission for review and comments. Depending on the survey findings, the project may require archaeological testing.

# 31. If historical artifacts are identified during the cultural resources survey, how are they managed and how are impacts mitigated?

If historical artifacts are encountered during field work, they will be cataloged and curated per Texas Historical Commission approved methodology. The artifacts will be stored at a federally approved facility.

### 32. Are there opportunities to provide interpretation or educational displays of the history of the area?

Yes, current plans request interpretive signage as additional work to the project. In addition to the cultural survey report and information from the City of San Antonio's Office of Historic Preservation and similarly situated agencies, public comments and general information from the public will be considered in the development of the interpretive signage.

# 33. Are the low water crossings considered historic structures? If so, what necessitates and/or allows for their removal?

The Woodlawn low water crossing is identified as a significant Nation Youth Administration project. The Brackenridge Park Cultural Landscape Report recommends evaluation of the low water crossing for replacement with a structure allowing natural stream flow. Although some measures could be enacted without the removal of the low water crossing, there are still significant impacts from the low water crossing because of the pooling it has created. This is an aquatic ecosystem restoration project, and the low water crossing is not a natural feature of the San Antonio River. The artificial pooling induced by the low water crossing is additive to the other conditions that exist in the project area that have created excessive erosion and sedimentation within the river.

#### **Recreation and Other Amenities**

### 34. What recreational amenities are being proposed for the project?

The base project includes a multi-use trail, improved access for fishing and birding opportunities, improved trash receptacles, and interpretive signage. In coordination with Bexar County, the River Authority has requested several amenities as additional work to shade structures, benches, a trailhead, and opportunities for public art.

### 35. Are there any opportunities for public input on the design and aesthetics of the recreation features?

There will be engagement opportunities at public information sessions at the 30%, 60% and 90% milestones during the design phase. Project information and past meeting materials are available to the public on the project website <u>www.bexarcip.org/project/river-road-restoration</u>. Members of the public can reach out the U.S. Army Corps of Engineers through the project email <u>RiverRoadER@usace.army.mil</u>.

### 36. Will this project address or change the lighting and noise levels on Avenue A?

Closing Avenue A for vehicular traffic and converting it to a hike and bike trail will reduce noise and lighting in the area. The San Antonio River Authority is requesting a trailhead which could include low level lighting. There are no plans to light the extent of the hike and bike trail.

#### 37. Is a traffic study being performed for this project?

This project does not include a traffic study. If there are traffic impact analyses being performed by other groups that could be useful for the design and implementation of this project, we will consider their conclusions and applicability to the River Road Aquatic Ecosystem Restoration Project.

## 38. Will parking and accessible access to the area be provided by this project?

The project team is considering a betterment that creates a small parking lot on the northside of Mulberry that would provide access for people to cross Mulberry into the hike and bike trail that is presently Avenue A. There will not be parking on that hike and bike trail, it is meant for pedestrians and bikes.

## 39. What effects will this project have on impervious cover in the project area?

This project will not add impervious cover along the San Antonio River within the project area.

### 40. Will heavy equipment continue to be allowed on Avenue A once the project is complete?

This project will transform Avenue A into a hiking and biking trail and will no longer support vehicle usage (except emergency vehicles as needed).