# SAN FOUND CONFLUENCE RIVER

## **Confluence Park Self-Guided Tour**

Confluence Park's name resonates on many levels:

1) The park is sited adjacent to the confluence of the San Antonio River and San Pedro Creek.

2) The park is an educational tool for the confluence of science, engineering, technology, math and the arts.

3) The park provides an opportunity for a confluence of cultures to come together and be better stewards of their resources and environment.

4) The park acts as the confluence of Westside Creeks and Mission Reach hike and bike trails.

This tour will travel within Confluence Park and along the Mission Reach Ecosystem Restoration and Recreation Project, completed in 2013 and now referred to as the "Mission Reach."

The Mission Reach Project has four primary roles:

1) The project seeks to maintain and improve flood protection for residents and businesses surrounding the river.

2) The project intends to improve ecosystem function on the San Antonio River by restoring riverine features and riparian woodlands, reintroducing native plants and enhancing aquatic habitat.

3) The project aims to provide additional recreation opportunities for the San Antonio community to enjoy their river.

4) The project hopes to restore former historical and cultural connections that tied the San Antonio Missions with the river that provided for their existence.

This linear tour will start and end at Confluence Park, 310 W Mitchell St, San Antonio, TX 78204. Limited parking is available on site.

Tour Distance: 1 mile Tour Duration: 45 minutes - 1 hour

Welcome to Confluence Park!

# Self-Guided Tour Maps

# **Confluence Park**



#### **Mission Reach Trail**





**1. Permeable Parking** The odd crunching beneath your feet is the permeable parking lot, a low impact development feature. This permeable surface allows for water to soak into the ground and eventually be used by the nearby oak trees and other vegetation, or captured in the water catchment system. *Activity: What do the nearby oak trees (and all oak trees) have in common?* 



2. Water Catchment System A site-wide water catchment system collects all of the rainwater that falls on the site and feeds it into an underground cistern measuring 12,600 cubic feet or approximately 100,000 gallons. The underground structure is constructed with Atlantis Chambers, polymer containers that look, interlock and stack like milk crates to provide structural support for the soil and vegetation above it. An additional 100,000 gallons is estimated to be held temporarily in the bio-filtration embayment over the catchment system. The estimated rainwater collection is 286,000 gallons per year. This water is used for irrigation and other uses in the park.

Activity: How is this system similar to an aquifer?



**3. BHP Pavilion** Designed by parametric modeling with the idea of covering those under the pavilion from rainfall like an umbrella, while also capturing water like a lily, the pavilion is constructed of 22, 40,000lb concrete "petals." Rainfall on the pavilion is funneled into drains and directed to the nearby water catchment area. *Activity: Can you find the spot with the loud rushing sound under the pavilion*?



**4. Rescue Trees** At the far edge of the pavilion near the bridge, there are 4 of 7 trees in the park that are multi-trunked and do no look like the typical single trunked nursery tree. These trees, and their 36,000lb rootballs, were rescued from a bulldozer and transported 210 miles to their new home at Confluence Park. *Activity: Can you find the other multi-trunked rescue trees in the park?* 



**5. Estela Avery Education Center** This indoor building features solar panels which fulfill its energy needs for the year. Its thermal efficiency is due to being built into a hill and having a green "living" rooftop covered in native planting. Even the toilet water is recycled from rainwater that is captured in the onsite water catchment system. Educational programming is supported by the Estela Avery Education Endowment which removes financial barriers for schools to visit the park. *Activity: From the park's entrance sign, can you tell where the classroom is?* 



**6. Watershed Model** The entire San Antonio River is 242 miles long, but has over 8,800 miles of waterways that drain into over 4,100 square miles of land. Here, you can see it all in stainless steel; the white peg is the location of Confluence Park. *Activity: Find your home or prominent bodies of water, such as: Medina River, Cibolo Creek, Salado Creek, Leon Creek and the Gulf of Mexico.* 



**7. Native Grassland** The species of grass demonstrated here are all native to Texas and have extraordinary traits that allow them to thrive in our challenging climate. Many of them have root systems that can grow 8-12 feet deep. This allows them to use water from deeper water tables during drought conditions and hold fast to the soil when they are pulled by flood waters, preventing erosion. These deep roots also pull nutrients from water and contribute to cleaner groundwater in our aquifers. *Activity: Look at the signs and compare which species are used by wildlife for nesting, food, larval hosts etc.* 

Activity: Why do these signs have both Latin and common names identifying each plant?



**8.** Mission Reach Vegetation On your way out of the park, there is an area that demonstrates the Mission Reach vegetation profile "grown in" 30-50 years in the future. The majority of the 23,000 trees planted on the Mission Reach were planted very small and will grow in with time. As those trees grow, the grasses will primarily cover the landscape, but with time and following natural succession patterns, the trees will dominate the landscape and different understory species will thrive under their shade.

Activity: Carefully observe this landscape. When you return from the Mission Reach section of the tour, compare and contrast what you see by the river to this demonstration ecotype.

Features 9 through 15 on the self-guided tour are outside of Confluence Park on the Mission Reach Trail.





**9. Symbols** You are very close to Mission Concepción, or as it is properly known, *Mission Nuestra Señora de la Concepción de Acuña*. It was named in honor of Our Lady of the Immaculate Conception and Juan de Acuña, the Marques de Casafuerte, the Viceroy of New Spain (Mexico) when the Mission was transferred to the San Antonio River in 1731. This same symbol you see on the sidewalk of a triangle with a circle above it is found above the door to the church. *Activity: Walk or bike the .5mi (by road) or 1 mi (using Riverwalk) from Confluence Park to Mission Concepcion. Tall maps along the trail of the Riverwalk include locations of each Mission.* 



**10. Quatrefoil** The symbol that you see etched into the sidewalk is called a quatrefoil. In French, the word "quatrefoil" means "four leaves," which describes its shape. The quatrefoil was chosen as the unifying symbol for the Mission Reach because of its importance in the architecture of the San Antonio Missions, particularly as it relates to the famous *La Ventana de Rosa*, or the Rose Window, at Mission San José.

Activity: Where else have you seen this symbol around San Antonio?



**11. Riffles** On this walking tour, you will pass several rocky areas in the river, which are features known as riffles. Riffles are areas where the velocity of the water is faster and the depth is shallower than average. Riffles are important habitats for aquatic insects, the primary food source for larger fish. Riffles also provide water quality benefits for wildlife by increasing the oxygen content of the water. Adjacent to these features, you will also find canoe and kayak chutes that allow for paddle recreation along the Mission Reach without portaging.

Activity: Blue bollards designate access points from the trail to the river. Can you find other symbols on the trail which also represent access points?



**12. Pedestrian Bridge** The appearance of this bridge was augmented by the detailed artistry of Anne Wallace with funding for the additional artwork coming from the San Antonio River Foundation. The title of this artwork is "The Once and Future River." The title comes from the images of native plants and animals that have been sand blasted into the concrete using a very precise stenciling technique. The images depict some of the many species that lived in the San Antonio River before it was damaged by flood control efforts in the 1950s and that should return to the River through restoration.

Activity: Can you identify 3 of the species in the artwork?



**13. The Confluence** This is where San Pedro Creek meets the San Antonio River, the namesake of Confluence Park. By this point, San Pedro Creek has already joined with 3 other creeks that drain most of the west side of San Antonio. In the 1960s, these tributaries to the San Antonio River underwent the same alterations in the name of flood control as the main channel. Beginning at this Confluence are trails which connect the San Antonio River to these creeks.

Activity: How does water quality and land use in one part of the watershed impact areas downstream?



14. Mission Portal The path that leads away from the river will take you to the Mission Concepción Portal. By 2019, there will be one portal at each of the 4 historic missions, which will provide a physical and symbolic connection between each mission and the Mission Reach. If you climb to the top of this outlook, you can see the top of Mission Concepción. The portals are carefully designed by artists, architects, landscape architects and historians. The San Antonio River Foundation also contributed funds to add some artistic enhancements to the portal. *Activity: Why do we need features which direct people from river level to the Missions*?



**15.** "**River Return**" Environmental artist Stacy Levy was commissioned by the San Antonio River Foundation to contribute to the creation of this Mission Portal, a connection between the San Antonio River and Mission Concepción. Levy's works use sculptural forms that speak to shapes and patterns from nature. For this installation, "River Return", Levy's primary concept was to create an experience that combines the beautiful limestone of the Mission with the flowing forms of the River. *Activity: Look at the patterns etched into the surface. How do the shapes close to the river change as you look towards Mission Concepción*?

Thank you for visiting Confluence Park, a San Antonio River Foundation project, and the Mission Reach Ecosystem Restoration and Recreation Project. More information can be found at <a href="http://confluencepark.sariverfound.org/">http://confluencepark.sariverfound.org/</a> and <a href="http://www.sara-tx.org">www.sara-tx.org</a>.





## **Activity Answers**

- Q1: What do the nearby oak trees (and all oak trees) have in common?
- A1: They all drop a special kind of seed known as an acorn.

Q2: How is this system similar to an aquifer?

A2: Both retain water using pores; the water catchment system has Atlantis Chambers while many aquifers are made up of limestone filled with cavities. Both have soils and native planting for biofiltration of water and each is very important to having a sustainable water resource.

Q3: Can you find the spot with the loud rushing sound under the pavilion?

A3: There are several focal points created by the petals' parabolic share to capture sounds from far away locations. In the marked area, you can always hear a loud rushing of water, which sounds like you are standing right next to the river.



- Q4: Can you find the other multi-trunked rescue trees in the park?
- A4: There is 1 in the Grassland and 2 are in the Mission Reach Ecosystem Restoration ecotype.

Q5: From the park's entrance sign, can you tell where the classroom is?

A5: The classroom is under the low hill in front of the large pavilion.

Q6: Find your home or prominent bodies of water, such as: Medina River, Cibolo Creek, Salado Creek, Leon Creek and the Gulf of Mexico.

A6: Map was created by the San Antonio River Authority



Q7: Why do these signs have both Latin and common names identifying each plant?

A7: Common names for plants are regional, and even in the same region there can be many names for a single plant. The Latin scientific name is a single designation that scientists can use to identify a plant even if they are halfway across the world.

Q10: Where else have you seen this symbol around San Antonio?

A10: It is the official logo of the City of San Antonio and can be seen in almost all city marketing materials.

Q11: Blue bollards designate access points from the trail to the river. Can you find other symbols on the trail which also represent access points?

A11: There are also crossed paddles etched into the trail near each bollard.



Q12: Can you identify 3 of the species in the artwork?

A12: Freshwater prawn, bullhead minnows, log perch, golden orb mussels, pickerel weeds, frogs, rattlesnakes and dragonflies are all good answers.

Q13: How does water quality and land use in one part of the watershed impact areas downstream? A13: Pollution moves with water; extra trash and pollutants that enter the river at any point affect the water quality in the river downstream and, in our case, eventually ends up in the Gulf of Mexico.

Q14: Why do we need features which direct people from river level to the Missions?

A14: The missions were built at their current location because of essential access to the river. However, due to urbanization and the previous channelization of the river, they are no longer in sight of each other. To maintain our cultural heritage which involves the connection between each mission and the river, public art installations draw the eye upwards and give a visible reason to walk up from river level.

Q15: Look at the patterns etched into the surface. How do the shapes close to the river change as you look towards Mission Concepción?

A15: Closer to the river, the etched patterns look like swirling water, waves and eddys. As the patterns transition towards the mission, the shapes begin to resemble architecture of Mission Conception, with the final shape being a fleur de lis pointing towards the mission.