

# Tubac Nature Preserve



## Precedent Reviews

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# Wetland Precedents

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# Lagunas de Anza Nogales, AZ

This wetland restoration project is an educational resource for the Nogales and Rio Rico communities.

## Pros:

- Educational historic and environmental signage in English and Spanish
- Community gardens and birding stations
- Community art display
- Outdoor classrooms
- Picnic area



# Lagunas de Anza Nogales, AZ

## Cons:

- Lack of accessibility on lower portion; users must take steps down to the wetlands
- Presence of invasive plants like *Arundo donax* around the wetlands
- Trails in the wetland area are narrow; few spots to sit along the trails
- Erosion makes some trails hard to traverse



# Yuma East Wetlands

Yuma, AZ

Infested with invasive species, crime, and pollution before restoration, this site is now cherished as a natural wonder of Southern AZ.

Pros:

- Community involvement from the outset; landowners, indigenous peoples, and many more had a voice in the project
- Colorado River banks were stabilized with native vegetation instead of concrete

- Trails connect all the pieces of the project to the surrounding urban areas and downtown
- Allows for heavy seasonal use. Yuma Bird Festival takes place in the wetlands for one week every year



# South Los Angeles Wetland Park

Los Angeles, CA

This project transforms a brownfield into a community park that captures and treats urban stormwater runoff through a wetland. Park amenities include:

- 4.5 acres of constructed wetlands and 4.5 acres of upland habitat
- A series of trails, boardwalks, and observation decks
- Picnic areas
- Educational signage that teaches park visitors about the planting zones and water management
- A natural rock-garden seating area



# South Los Angeles Wetland Park

Los Angeles, CA

## Pros:

- Addresses social equity by creating a neighborhood-rejuvenating amenity in a historically underserved community
- The addition of trees and other vegetation sequesters an estimated 1.82 tons of atmospheric carbon annually
- Construction of the wetlands helps filter stormwater runoff and leads to cleaner water being reintroduced into the ecosystem

## Cons:

- Lacks educational signage in Spanish, which limits understanding for a majority of the local population
- The addition of trees is focused in the wetland area and not enough in the usable areas such as trails
- Does not account for unexpected climate conditions, leading to incorrect water calculations and as a result, the wetlands are drying out and additional water from external sources is needed to support the wetlands





# Sweetwater Wetlands

Tucson, AZ

These constructed wetlands are part of Tucson's reclaimed water network. They provide another layer of treatment and serve as a habitat and educational resource.

## Pros:

- Regular maintenance reduces mosquito breeding and fire risk
- Exposes visitors to deep, shallow, and open water habitats
- Accessible pathways

- Infrastructure as public space/amenity
- Guided and self-guided tours and activities
- Shaded seating areas

## Cons:

- Users cannot interact with the water for safety reasons and pets are not allowed
- Soil becomes slippery after rain due to its high clay content, limiting use



# Summary of Wetland Projects

Key lessons from wetland projects include:

- Take opportunities for education on historic and environmental topics relating to the site
- Provide opportunities for users to engage with nature – examples include birding stations, signage, and outdoor classrooms
- Maintenance is key to keep spaces safe and accessible
- Connectivity to the surroundings improves access and encourages use of the site
- Community involvement is crucial to ensuring the project serves community needs and will be taken care of



# Community Precedents

- George “Doc” Cavalliere Park
- WMG Living Lab and Learning Center

# George "Doc" Cavalliere Park

## Scottsdale, AZ

This public park works as a massive stormwater management installation and recreation center. Features include:

- Green Infrastructure
- Shaded seating and recreation areas
- Native vegetation from different Arizona biotic communities
- Reuse of on-site materials, such as gabions and decomposed granite, to build amenities



# WMG Living Lab and Learning Center

## Tucson, AZ

The Watershed Management Group HQ is a publicly accessible demonstration site for sustainability in the desert. Features include:

- Passive and active rainwater harvesting
- Affordable amenities like solar ovens and “tippy-taps” for handwashing
- Educational signage in English and Spanish, plus digital self-guided tours in both languages

- Outdoor event/teaching areas
- Composting toilets



# Summary of Community Projects

Main lessons from community projects include:

- Involve the community in the design process and beyond. Provide opportunities for volunteering, learning, and social engagement
- Provide spaces for all age groups and users  
For example, spaces for children with playgrounds or exploratory play; quieter seating areas
- Give users options on how to learn and use the site – guided and self-guided activities could be provided



# Accessibility Precedents

- Accessible Anza Trail Cultural History Park
- Riverwalk Sensory Trail

# Accessible Anza Trail Cultural History Park

Tucson, AZ

This park provides engaging learning opportunities using inclusive Universal Design Principles and is located adjacent to the AZ State Schools for Deaf and Blind.

Features include:

- Sensory garden beds
- Outdoor classroom
- Shaded seating
- Lighting
- Tactile interpretive public art
- Audio messages and QR code-linked videos w/ American Sign Language

Pros:

- Community engagement process included students and staff from the Schools for the Deaf and Blind, resulting in a learning oriented park that everyone can enjoy
- The bike path was rerouted around the park to keep fast traffic away from park visitors
- Turn-off indicators added to paths for cane users
- Low maintenance sturdy infrastructure (concrete and steel) and plant materials

- Public art designed with the community increases neighborhood pride and is less likely to be vandalized





# Accessible Anza Trail Cultural History Park

Tucson, AZ

## Cons:

- Graffiti is highly prevalent in the surrounding areas, making the site susceptible to vandalism
- Guide cables that run along the edges of the pathway have been stolen



# Riverwalk Sensory Trail

## Schuylerville, NY

This sensory trail project is designed to provide a riverside experience for individuals who are mobility or visually impaired. It is one of only a few handicap-accessible trails dedicated to visually impaired people in the United States.

Features include:

- Audio description stations along the trail
- Overlook decks that provide moments of pause along the river trail
- Wide and smooth trails that provide ample space for wheelchair accessibility

Pros:

- Audio descriptions allow the visually-impaired to gain a clearer sense of the surrounding environment and allows them to immerse themselves in the space
- Some overlook decks were designed to mimic spaces that are inaccessible to people with mobility impairments (ex. treehouses), expanding their range of possible experiences



# Summary of Accessibility Projects

Main lessons from accessibility projects include:



- Apply Principles of Universal Design – Design environments to be usable by all people to the greatest extent possible
- Exceed ADA minimum thresholds to make movement through the site more comfortable for all users
- Artistic works help users better engage with the educational aspects of a project

- QR codes allow for a cost effective mode to provide users with audio/visual interpretive engagement.

For instance, animal sounds, plant information, site history, and more, can be provided to supplement the experience

- Provide spaces for users to stop and rest along the trail

**Audio Tour**  
Pictured Rocks National Lakeshore  
(This cell phone tour is free - normal usage rates apply.)

**Dial**  
**906-813-9010**  
**PRESS**  
**5**

**1** Rewind      **2** Pause/Play  
**3** Fast Fwd      **#** Stop  
**0** Leave Comment      OnCellSystems

[www.myoncell.mobi/9068139010/5](http://www.myoncell.mobi/9068139010/5)

# Overall summary of lessons

- Convey information to users in multiple ways. Audio, video, and multilingual options
- Apply Principles of Universal Design to make spaces usable by all people, without the need for specialized design
- When possible, reuse on-site materials for sustainability and economic reasons
- Connect the site to the surroundings for better accessibility and visibility
- Involve the community beyond the design process. Allow them to keep adding to the site after the project's "completion"
- Provide spaces for all age groups and users, and design for both small and large activities
- Design for maintenance tasks to be as seamless as possible to keep the site safe, accessible, and inviting for all users



# References

- [Las Lagunas de Anza | Juan Bautista de Anza, National Historic Trail Nogales, AZ](#)
- [Yuma East Wetlands, Phases 1 and 2 | Landscape Performance Series](#)
- [Fred Phillips Consulting | Yuma East Wetlands Restoration](#)
- [South Los Angeles Wetland Park | Landscape Performance Series](#)
- [About Sweetwater Wetlands and Access | Official website of the City of Tucson \(tucsonaz.gov\)](#)
- [George "Doc" Cavalliere Park | Landscape Performance Series](#)
- [Your Living Lab and Learning Center | Watershed Management Group \(watershedmg.org\)](#)
- [What is La Expedición de Anza, 1775? – La Expedición de Anza, 1775 \(lea1775.org\)](#)
- [Riverwalk Sensory Trail — Hudson Crossing Park](#)