

Pantano Wash Bank Protection and River Park: Fort Lowell to Tanque Verde Road

Ecosystem Restoration, Mitigation and Preservation

In addition to providing flood and erosion protection, and creating a river park, another goal of the project is to preserve, mitigate and restore the riparian ecosystem. The project uses several different techniques to enhance ecosystem preservation, mitigation and restoration as documented in the photographs and text provided below.

PIMA COUNTY NATIVE PLANT NURSERY

Pima County Native Plant Nursery supplies most of the native trees, bushes, cactus and succulents that were planted on the Pantano Wash Bank Protection and River Park project. Plants provided by the Native Plant Nursery are typical native plants salvaged from other projects or plants grown by the nursery from seeds that have been collected by Pima County Natural Resources and Parks and Recreation (NRPR) staff or volunteers.



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PRESERVATION FENCING

Brightly colored flagging is use to mark out large areas that the contractor is not to disturb.



Reject cobbles from soil cement plant.



Grader works along the haul road during the construction of the soil-cement bank protection on the right side of the photograph, while leaving the left side untouched.

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SLOPE EROSION PROTECTION



Concrete rubble is recycle for use as erosion protection in selected area of low scour potential.



Soil and sand cover and lock the concrete rubble in place, and provide a base for future plants.

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The bank is cover with rejected cobbles from the soil cement plant to stabilize the slope from local surface erosion.



The slope is then hydro-seeded. The hydro mixture of mulch, fertilizers, and native seed work their way between the cobbles. The cobbles work as a mulch providing shade and trapping moisture that allows the seeds to germinate. Over time, plants will grow on this cobble slope further protecting the slope from scour and enhancing the native environment.

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STORMWATER HARVESTING BASINS

Stormwater harvesting basins come in various sizes, shape and depths.



A shallow, narrow water-harvesting basin collect runoff from adjacent pavement. The water remains for only a day or two and supplement the reclaimed irrigation water that the adjacent plants receive.



Cobbles were placed in this shallow water-harvesting basin.

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This larger storm water-harvesting basin collects more runoff. Like the smaller basin, water is only permitted to remain for a couple of days.



Depth of ponding is also a critical concern for water harvesting. Special structures are provided to insure that the depth and time of detention are adequately controlled.

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ENVIRONMENTAL RESTORATION AREA BEHIND COSTCO

Stormwater from the Costco parking lot and from the Hill Farm Apartments previously drain directly into the Pantano Wash. Non-native species of trees and other plants flourish in this water rich environment. Recognizing this rich source of storm-water, the District cleared the non-natives leaving the native trees and shrubs. Additional native trees, shrubs and a special riparian seed mix were provided within a water harvesting basin that was created by the alignment of the bank protection.



Non-native thicket.



Removal of non-natives.

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Bank protection and pathway create a berm to provide storm water harvesting.



Additional native riparian trees and bushes are planted as part of the ecosystem restoration of this water rich area. Reject cobbles from the soil cement plant reduce potential for erosion by slowing the velocity of the storm-water and spreading the storm-water over a broader area of the main channel from Costco.

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Completed basin with slope stabilization and a special hydro-seed containing selected native grasses, flowers and shrubs that grow in a wet riparian ecosystem.



Slopes are stabilized with reject cobbles from the soil cement plant, and hydro-seed is sprayed to provide future slope stability and ecosystem plants.

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LIZARD HABITAT RUBBLE PILES



Rock recycled from the construction of the project provide a safe location for lizards to warm themselves and a quick hiding spot should a predator appear. Rock piles are grouped to provide a safe haven for lizards to run between.



A hawk.

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ENVIRONMENTAL PRESERVATION AREA



The Pantano Wash north of Costco expands onto a large flood prone parcel owned by Pima County Regional Flood Control District that does not require bank protection. This broad floodplain has been preserved in its native state with some exceptions that allow the District to better maintain this particular site.



Trash and debris have been cleared.

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Trash has been picked up and properly disposed of.



Invasive species such as buffel grass have been removed.

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Post and cable has been installed to keep unauthorized motorized vehicles out of the preservation area and to define the property that Pima County is to maintain.



A dirt pathway has been bladed into the preservation area for hiking, mountain bikes and equestrian use. The pathway allows maintenance crews to inspect the property, clean up the trash, remove invasive species and maintain the post and cable. The pathway also allows for TEP to access their major transmission line located within the preservation area.

Please see the Irrigation and Landscape Planting, and the Plazas and Sitting Areas packets for more information on other aspects of the river park.