



## CITY OF SANTA BARBARA

### PARKS AND RECREATION COMMISSION REPORT

**AGENDA DATE:** May 25, 2016

**TO:** Parks and Recreation Commission

**FROM:** Creeks Division, Parks and Recreation Department

**SUBJECT:** Upper Arroyo Burro Restoration at Barger Canyon

**RECOMMENDATION:** That the Commission receive a report on the Upper Arroyo Burro Restoration at Barger Canyon Project.

#### **DISCUSSION:**

##### Background

The project site is located at 3780 Foothill Road, a 14.19 acre vacant property owned by the City of Santa Barbara. The property was purchased in 2013 by the Creeks Division for the purpose of undertaking a creek restoration project. The purchase also included a conservation easement over the stream-side portion of an adjacent property. Together, the City-owned parcel and the conservation easement will allow for 2,200 linear feet of Arroyo Burro to be restored.

This portion of Arroyo Burro is currently in a degraded state due to past channel modifications, agricultural development and poor land management. The site was historically a coast live oak woodland with a high-quality, well-established riparian zone dominated by willows, sycamores, and oaks. Many of these trees were removed for agricultural development in the 1950s and replaced with orchard species. During this transition, runoff from the surrounding hillsides dramatically increased, resulting in creek bank and channel erosion. In an attempt to manage this erosion, creek banks were armored with concrete and other hard structures, and most of the remaining riparian trees were removed. This resulted in increased flow rates and erosion, and reduced water quality, groundwater recharge, and wildlife habitat at the site. In 2007, the orchard on the site was clear-cut and the land remained fallow until the property burned during the Jesusita wildfire in 2009. To remedy the existing site conditions, a large-scale restoration effort is needed.

##### Project Description

The project will restore approximately 4.95 acres of riparian and upland habitat along upper Arroyo Burro in Barger Canyon. The project will consist of four primary tasks:

1. Remove the existing structures and debris (concrete, rip-rap, etc.) in the creek and re-grade the channel to create a more natural and stable creek bed and banks.
2. Widen the creek channel at the downstream end of the project reach to provide space to rebuild bends and meanders and to expand the riparian/wetland zone.
3. Construct a seasonal wetland in the upland area to capture and infiltrate storm water runoff and provide increased native habitat diversity, and
4. Re-vegetate the disturbed areas and riparian corridor with native trees and plants.

### Design Details

The project will remove a concrete vehicular bridge, dilapidated pedestrian bridges, sheet metal walls, pipe and wire revetment, rock rip rap, stacked broken concrete, sakrete walls, concrete walls, drop-inlet structures, a concrete foundation, an asphalt roadway, and invasive plants. It will restore 2,200 linear feet of creek-side habitat. Artificial hard structures in the creek will be removed, and 1,000 linear feet of creek banks will be re-graded to create shallower, less erosive slopes.

The lower 600 feet of the creek channel which was previously straightened will be widened to provide more natural meanders and a braided section of channel. This will increase the width of the riparian zone, reduce channel slopes, increase storm flow infiltration and improve water quality conditions downstream. The removed fill material from the lower channel will be used on site to construct an approximately 7,000 square foot upland seasonal wetland in a broad flat area where few native species existed. This depression will be seasonally wet from storm runoff from the upslope properties and will provide increased habitat diversity on site through the creation of wetland habitat while providing additional capture, infiltration, and treatment of storm water runoff.

Approximately, 800 cubic yards of large rock, cobble, and gravel will be imported to the site to rebuild the stream channel to improve fish passage and reduce future channel incision. The completed channel reconstruction will simulate a natural streambed that provides pool, riffle, and shallow floodplain wetland habitat. The channel banks will be protected from erosion through grading, planting, and strategic boulder placement. The project includes restoration of the upper creek banks through the installation of native trees, and riparian plants. The project, as designed, will not decrease channel capacity or increase flood risks to the park or surrounding properties.

### Timeline

Permitting and environmental review for the project is complete. The Creeks Division, working with the Public Works Department, has finalized the project designs and

specifications to put the project out to bid. The bidding period for both the construction contract and landscape contract is set to close on May 31, 2016. The project will require approximately five months to complete. The estimated project start date is July 15, 2016, and the estimated project completion date is November 15, 2016. Heavy equipment work will require approximately three months (July-October), and restoration/landscaping/irrigation will require approximately two months (October-November). The construction period was chosen to avoid the rainy season and nesting bird season.

**BUDGET/FINANCIAL INFORMATION:**

The project will be bid under two separate contracts, one for construction and the other for landscape installation and maintenance. The engineer's projected total cost estimate is \$1,050,000. The projected construction portion is \$700,000, the landscape installation portion is \$260,000, and construction management, inspections and material testing during construction is \$90,000. Funds for the project are included in the Creeks Division FY16/17 Capital Improvement Program. All project funding will come from Measure B.

**ATTACHMENTS:** 1. Site Location  
2. Arroyo Burro Plan

**PREPARED BY:** Erin Markey, Creeks Restoration Planner

**SUBMITTED BY:** Cameron Benson, Creeks Division Manager

**APPROVED BY:** Jill E. Zachary, Parks and Recreation Director