



CITY OF SANTA BARBARA
PARKS AND RECREATION COMMISSION REPORT

AGENDA DATE: September 27, 2017
TO: Parks and Recreation Commission
FROM: Creeks Division, Parks and Recreation Department
SUBJECT: Andrée Clark Bird Refuge Restoration Project

RECOMMENDATION: That the Commission receive a presentation on the Andrée Clark Bird Refuge Restoration Project.

DISCUSSION:

BACKGROUND

The Andrée Clark Bird Refuge (Bird Refuge) is a 32-acre lake located on the east end of Santa Barbara. The lake is an historic salt marsh that was dredged in the late 1920's to provide a year-round water feature and improve habitat for open water bird species. The Bird Refuge is an important aesthetic feature of the City and provides wildlife habitat as well as recreational open space for the community.

Poor water quality conditions and strong odors at the lake have been problematic since the 1930's. In the past ten years, the poor water quality (low dissolved oxygen levels, cyanobacteria blooms, poor water clarity, and strong odor) has continued to deteriorate due to the accumulation of nutrients, lack of flushing storm events, and drought conditions.

The Bird Refuge is unique when compared to other small lakes for three primary reasons: 1) it is very shallow; 2) it does not flush on a regular basis; and 3) nutrient levels are very high. Because of these characteristics, most of the water quality improvement techniques that often work for small lakes would be, or have proven to be, ineffective in the Bird Refuge.

Various strategies to improve water quality and reduce odor events have been proposed and/or implemented during the last 80 years (dredging, chemical treatment, supplemental water, mechanical mixing, microbial augmentation, etc.). None of these techniques have proved to be cost effective or successful in the long-run.

In an effort to develop a long-term solution to the deteriorating water quality, wildlife habitat, and periodic odor events, the Creeks Division started intensive water quality monitoring of the Bird Refuge in 2012. The same year, the Creeks Division also

implemented a pilot project to improve water quality by increasing circulation and dissolved oxygen within a section of the lake. Although continued water quality monitoring has provided valuable data for assessing potential solutions, the pilot project has not significantly increased dissolved oxygen or improved water quality.

RESTORATION PROJECT ALTERNATIVES

The goals of the restoration project are to improve water quality, wildlife habitat (aquatic and avian), aesthetics, and reduce odors while maintaining current flood protection. The final conceptual design will strive to meet the identified goals using a cost effective approach that will be acceptable to permitting agencies.

During 2015/16, the Creeks Division evaluated a number of potential techniques for improving water quality conditions in the Bird Refuge. Staff reviewed all existing City documentation related to improving water quality and reducing odor in the Bird Refuge and met with several technical experts. Eight alternatives were identified for preliminary consideration. Generally speaking, the alternatives employed different strategic combinations of dredging, filling, flushing, probiotics, and hydrologic restoration.

The alternatives were presented to the City's Sustainability Council Committee on June 20, 2016. Based on estimated cost, feasibility, and potential for success in meeting the project goals, the Sustainability Council Committee recommended that the Creeks Division focus on three of the alternatives for further assessment.

On September 13, 2016, the City Council concurred with the Sustainability Committee and approved a contract with Anchor QEA to perform additional technical studies and develop conceptual plans for the three design alternatives. The three alternatives are described in more detail below.

Alternative 1

Make no physical changes to the Bird Refuge and allow continued deposition of nutrients and sediment.

Alternative 2

Improve flushing of the lake through modifications to the weir and weir gate at Cabrillo Boulevard and dune restoration at the mouth of the Bird Refuge on East Beach.

Alternative 3

Improve flushing of the lake by modifications to the weir and weir gate at Cabrillo Boulevard and dune restoration at the mouth of the Bird Refuge on East Beach, periodic mechanical opening of the lake mouth on East Beach, and partial dredging and filling of the lake to increase water depth, improve habitat, reduce lake surface area, and provide additional recreation features (i.e., trail around the lake).

PUBLIC OUTREACH

During the summer of 2017, Creeks Division staff conducted extensive outreach to project stakeholders. This included neighbors, environmental groups, and the general public. Individual meetings with interested stakeholders (Santa Barbara Zoo, Montecito Country Club, East Beach Townhomes HOA, Santa Barbara Audubon, Santa Barbara Channel Keeper, Heal the Ocean, etc.) were held. In addition, a public meeting was conducted at the Cabrillo Pavilion Arts Center on September 6, 2017, which included 32 members of the public and a site visit during the regularly scheduled Creeks Advisory Committee meeting on September 20, 2017. Meetings were focused on explaining the habitat/water quality issues surrounding the Bird Refuge and potential restoration design alternatives, and receiving questions and comments.

Valuable input regarding the restoration design alternatives was provided by the various stakeholders and members of the public. In general, there was support for restoring the Bird Refuge. There was no consensus or strong preference expressed for a preferred design alternative.

Opportunities for additional stakeholder and public input will be provided at an upcoming meeting with the City Council.

BUDGET

Design Alternative 1 adds no additional cost to the City. The preliminary cost estimate for Design Alternative 2 is approximately \$1 million, and Design Alternative 3 approximately \$7 million. The Creeks Division Capital budget for the Bird Refuge restoration project for FY 18 includes approximately \$1.2 million. Depending on the scope of the project, additional funds for project construction may be available from state coastal wetland restoration grant fund programs.

NEXT STEPS

The project will be presented to the Sustainability Council Committee and the City Council before the end of 2017. Should the City Council decide to move forward with restoration efforts, final design and permitting would start in early 2018. Due to the complexity of the project approval process (seven different permitting agencies), final design and permitting will require a minimum of 18 months to complete. Project construction could begin in the summer of 2019, although summer of 2020 is a more likely start date.

ATTACHMENT: Project Site Photos/Maps

PREPARED BY: Cameron Benson, Creek Restoration/Clean Water Manager

Parks and Recreation Commission Report
Andrée Clark Bird Refuge Restoration Project
September 27, 2017
Page 4

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