

Conceptual Restoration Proposal
Crystal Cove State Park – BFI Coastal Bluff Site
Submitted by: Irvine Ranch Conservancy
September 26, 2018

Overview

Orange County Waste and Recycling (OCWR) is seeking a minimum of 4.88 acres of coastal sage scrub restoration within the coastal zone of Orange County to mitigate for development of the closed Gothard Landfill site in Huntington Beach. OCWR has requested that the Irvine Ranch Conservancy (IRC) investigate opportunities for implementing the mitigation. Additionally, IRC may be able to direct funds from the State Coastal Conservancy to expand the scope and maximize the benefit of the proposed active restoration to 7.5 acres or more. As part of its standard landscape-scale restoration methodology, IRC will also conduct targeted weed control on approximately 88 acres of habitat in a buffer zone around the active restoration site.

IRC ecologists identified a preferred site after visiting several potential restoration sites at Crystal Cove State Park (CCSP) on August 31, 2018 with California State Parks (CASP) staff, including Environmental Scientist Lana Nguyen. The site preferred by all parties was a highly degraded approximately 7.5-acre coastal bluff terrace currently highly dominated by mustard and exotic annual grasses (referred to by State Parks Staff as the BFI Polygon). The site is surrounded by a native habitat mosaic dominated by functionally intact coastal sage scrub occupied by California gnatcatchers (*Polioptila californica*), with smaller patches of cactus scrub, lemonadeberry (*Rhus integrifolia*), and native bunchgrasses on flat to gently sloping terrain. Target weed species occur in this surrounding habitat but it is relatively healthy and functionally intact. The site is bordered by the BFI public access trail on the northwest, Pacific Coast Highway (PCH) to the southwest, and an active fuel modification zone for the community of Irvine Cove (Laguna Beach) to the southeast. The site is easily accessible by vehicle from a locked gate along PCH.

Coastal bluff terrace scrub is the most biologically diverse and rarest habitat-type in Crystal Cove State Park and likely all of coastal Southern California. The BFI site represents one of the last remaining opportunities for restoring coastal bluff terrace as well as an excellent site logistically for careful restoration implementation while being respectful of sensitive on-site cultural and biological resources. There are additional potential benefits to the State Park of this restoration project including closure and management of an unauthorized trail, improvement of coastal aesthetics along PCH, and the reintroduction of extremely rare and sensitive coastal plant species (Table 1). Rare and locally sensitive plant species recorded in the vicinity include San Diego tarweed (*Deinandra paniculata*), intermediate mariposa lily (*Calochortus weedii intermedius*), aphanisma (*Aphanisma blitoides*), *Chorizanthe staticoides ssp. chrysacantha*, among others. All have potential for re-introduction to the site.

Table 1. Potential benefits of the site

Values and Threats	Site Potential
Improved ecological value	✓✓
California Gnatcatcher habitat	✓✓
Coastal Cactus Wren habitat and connectivity	✓
Improved coastal aesthetics	✓
Sensitive plant re-introduction/protection	✓
Archeological site protection	✓
Facilitates closure/management of an unauthorized trail	✓
Protection against invasive species spread	✓

The Approach

Restoration methods will include the following: mowing with tracked equipment and by hand, raking and removal of thatch, low-concentration herbicide application, seeding using a tracked vehicle where appropriate with imprinter, hydroseeding, installation of container plants (no larger than 1-gallon) in select areas, watering by hand and with a temporary irrigation system, and weed pulling by hand. Methods are selected to be the lowest intensity necessary to achieve needed results. Straw wattles may be installed in areas prone to erosion. There will be no grading or tilling of the site in order to protect cultural resources. CCSP Cultural Resources staff have been consulted with prior to project planning and have identified a number of important cultural resource areas that will require modification of methods and possibly exclusion zones. It is generally agreed by that the restoration project is possible to implement with special attention paid to cultural resources at or near the soil surface.

The project timeline will extend up to 10 years to capitalize and adapt to inter-annual weather variability for site preparation, seeding, and plant establishment, and will include regular performance monitoring in years 0 (baseline) and 1, 3, and 5 after seeding and planting. Project sign-off will be followed by a long-term management program funded initially by the mitigation project and then to be determined in future discussions with CCSP based on overall park resource management. Site-specific intervention or repair is not anticipated after 10 years and the site will be managed as part of the general management of CCSP natural resources and habitats. Seed will either be collected within CCSP or will be produced with a provenance of no more than a 20-mile radius with a coastal zone influence.

The following goals are associated with this project:

- Maximize likelihood of establishment via dry seeding by extending project length thus allowing for multiple seeding events.
- Perform ongoing sensitive plant surveys to identify and protect species emerging from the seed bank during restoration and incorporate a reintroduction strategy as appropriate.
- Maximize restored acreage at the BFI site to create a resilient layer of contiguous habitat.

- Track ecological function by incorporating additional monitoring components (e.g., reptile monitoring, focused bird surveys, drone imagery, arthropod trapping, etc.).

Exhibit 1. Active Restoration Project Site – BFI Parcel



Potential Mitigation Area at Crystal Cove State Park

- /// Potential Mitigation Area (7.48 Acres)
- Two Track Trail
- Fuel Mod Zone
- - - Single Track Trail
- Crystal Cove State Park Boundary

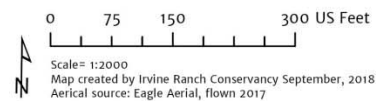


Exhibit 2. Total Project Site (95 Ac) Including Active Restoration and Targeted Invasive Control

