



Claremont Hills Wilderness



MASTER PLAN

CHWP Environmental Conditions Whitepaper Context

As a part of the scope of work for the Biological Resources Report created by Bonterra PSOMAS for the Claremont Hills Wilderness Park (CHWP) Project a study area was agreed upon. The 1,704 acre study area for the CHWP Master Plan is a portion of the total Wilderness Park which is over 2,000 acres. The areas of the Wilderness Park to the east and west of Palmer Canyon Road are not included in the study area. These areas are not publicly accessible, and they are not affected by the same issues (e.g., parking, crowding) as the 1,704 acre study area. Please see the maps labeled CHWP Wilderness Park and CHWP Environmental Study Area for reference.

Purpose

This whitepaper summarizes results of the environmental baseline inventory and the trail inventory. The environmental baseline report was prepared by BonTerra Psomas, dated July 16, 2014, and is available on the City's website. The trail inventory is based on data collected by MIG, Inc.

The purpose of the inventory was to identify: sensitive plant and animal species and habitats, areas of environmental concern (presence of erosion, presence of invasive species), and the degree of human impact at CHWP. BonTerra Psomas staff conducted a literature review, a review of aerial photography, and four days of site observations within the CHWP. MIG, Inc. conducted the trail inventory. The purpose of the trail inventory was to identify areas of erosion and whether or not erosion was related to the level of visitor use.

To evaluate the potential of the study area for sensitive vegetation communities, and sensitive plant species, the vegetation surveillance included United States Geological Service (USGS) 7.5-minute quadrangles of Mt. Baldy, Glendora, Crystal Lake, Mount San Antonio, Telegraph Peak, Cucamonga Peak, Guasti, Ontario and San Dimas. A review of Federal Endangered Species Act (FESA) critical habitat documents was used to identify any portions of the study area occurring within proposed or designated critical habitat. Plants were identified using Baldwin et al. (2012) and the Jepson Flora Project (2012). Taxonomy follows Baldwin et al. (2012) and current scientific data (e.g., scientific journals) for scientific and common names. Vegetation communities were generally classified using *A Manual of California*

Vegetation (Sawyer 2009). Additionally, vegetation communities described in Holland (1986) and the California Department of Fish and Wildlife's (CDFW) Natural Communities List (CDFW 2010) were considered while classifying vegetation.

Vegetation types and land covers that were observed in the study area were categorized into the following groups: coastal sage scrub communities, chaparral communities, riparian areas, upland woodlands, non-native communities, and other areas. Within these habitat categories, specific vegetation types that were observed include: California sagebrush scrub, California sagebrush-laurel sumac scrub, laurel sumac scrub, laurel sumac scrub/annual grassland, California buckwheat scrub, sagebrush-annual grassland ecotone, chamise-black sage chaparral, chamise chaparral, scrub oak chaparral, annual grassland, coast live oak woodland, California sycamore-coast live oak woodland, California sycamore-coast live oak woodland-restoration, California sycamore woodland, willow thickets, mule fat thickets, coast live oak woodland, eucalyptus stands, ornamental, developed, and disturbed -- all of which are defined categories of habitat communities. Many of these areas are recovering from previous fires.

Vegetation Communities

Sage Scrub Communities

California sagebrush scrub occurs throughout the eastern portion of the study area. This vegetation type is dominated by California sagebrush (*Artemisia californica*), with California buckwheat (*Eriogonum fasciculatum*), white sage (*Salvia apiana*), black sage (*Salvia mellifera*), laurel sumac (*Malosma laurina*), and toyon (*Heteromeles arbutifolia*). The understory includes herbaceous species such as blue dicks (*Dichelostemma capitatum*), ripgut brome (*Bromus diandrus*), and red brome (*Bromus madritensis* ssp. *rubens*).

California sagebrush – laurel sumac scrub occurs throughout the central and eastern portions of the study area. Within this vegetation type, California sagebrush is co-dominated by laurel sumac. Other shrub species mentioned above are also found in lesser amounts within this vegetation type. The understory consists of herbaceous species dominated by non-native grasses (*Bromus* spp.).

Laurel sumac scrub occurs in the southern portion of the study area. This vegetation type is dominated by laurel sumac, with other shrubs such as California sagebrush and white sage scattered sparsely throughout. Understory species are the same as those found in the other scrub vegetation types described above.

Laurel sumac scrub/annual grassland occurs throughout the southern portion of the study area. These areas are similar to the laurel sumac scrub described above, with areas of annual grassland incorporated throughout. This vegetation type contains the same dominant species as laurel sumac scrub, but with the inclusion of a high density of non-native annual grassland species such as ripgut brome, red brome, and slender wild oat (*Avena barbata*).

California buckwheat scrub occurs in small patches or strips scattered throughout the western and southern portions of the study area. This vegetation type is dominated by California buckwheat with scattered California sagebrush, coastal deerweed (*Acmispon glaber*), and sessileflower goldenaster

(*Heterotheca sessiliflora*). The understory consists of herbaceous species dominated by non-native grasses.

Sagebrush-annual grassland ecotone occurs on south-facing slopes in the southern portion of the study area. This vegetation type represents areas of transition due to previous disturbances such as grazing. These areas contain significant quantities of non-native grasses such as ripgut brome, red brome, and wild oat with native annual species including succulent lupine (*Lupinus succulentus*), California poppy (*Eschscholzia californica*), and blue dicks occurring throughout. Emergent coastal sage scrub species are present throughout and include pinebush (*Ericameria pinifolia*), California sagebrush, and California buckwheat.

Chaparral Communities

Chamise – black sage chaparral occurs in large areas in the western portion of the study area and smaller portions of the eastern study area. This vegetation type is co-dominated by chamise (*Adenostoma fasciculatum*) and black sage. Additional species commonly occurring in this vegetation type include California sagebrush, hoaryleaf ceanothus (*Ceanothus crassifolius*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac, and toyon, with an understory of non-native grasses.

Chamise chaparral occurs in the northern, central, and western portions of the study area. This vegetation type is dominated by chamise with hoaryleaf ceanothus, laurel sumac, black sage, California sagebrush, and toyon. Areas of chamise near the intersection of Johnson's Pasture and Burbank Roads are degraded with shortpod mustard (*Hirshfeldia incana*) and non-native grasses.

Scrub oak chaparral occurs on north-facing slopes across the study area. This vegetation type is dominated by San Gabriel scrub oak (*Quercus durata* ssp. *gabrielensis*), with hoaryleaf ceanothus, little leaved red berry (*Rhamnus crocea*), skunk bush (*Rhus aromatica*), hillside gooseberry (*Ribes californicum*), heart-leaved bush-penstemon (*Keckiella cordifolia*), southern honeysuckle (*Lonicera subspicata* var. *denudata*), chamise, white sage, and scattered bush monkeyflower.

Riparian Communities

Coast live oak woodland occurs along drainages throughout the study area. Coast live oak woodland is dominated by coast live oak trees (*Quercus agrifolia*), with canyon live oak, (*Quercus chrysolepis*), western sycamore (*Platanus racemosa*), San Gabriel scrub oak, toyon, and California bay (*Umbellularia californica*). The understory is open and dominated by western poison oak (*Toxicodendron diversilobum*), with mugwort (*Artemisia douglasiana*), giant wild rye (*Elymus condensatus*), wild cucumber (*Marah macrocarpus*), common miner's-lettuce (*Claytonia perfoliata* ssp. *perfoliata*), and non-native grasses including ripgut brome and hare barley (*Hordeum murinum* var. *leporinum*).

California sycamore-coast live oak woodland occurs in the southeastern drainage on the study area as well as additional smaller drainages throughout the study area. This vegetation type has a dense tree canopy that is dominated by western sycamore and coast live oak trees. Additional species include blue elderberry (*Sambucus nigra* ssp. *caerulea*), arroyo willow (*Salix lasiolepis*), mule fat, and scattered California sagebrush and chamise.

California sycamore-coast live oak woodland-restoration occurs along Sycamore Canyon in the southern portion of the study area. Areas here have been cleared along the riparian drainage and western sycamore and coast live oak trees have been planted. These planted trees are young, therefore the canopy is open and coastal sage scrub species including California sagebrush, laurel sumac, and deer weed, are present with ripgut brome, shortpod mustard, and hare's ear cabbage (*Sisymbrium orientale*).

California sycamore woodland occurs within drainages throughout the study area. This vegetation type is dominated by western sycamore and mule fat, with elderberry, California gooseberry, coast live oak, black willow (*Salix gooddingii*), narrow-leaved willow (*Salix exigua*), oak mistletoe (*Phoradendron serotinum* ssp. *tomentosum*), and chaparral nightshade (*Solanum xanti*). The understory consists of herbaceous species including non-native grasses.

Willow thickets occur in the basins adjacent to the eastern and southwestern boundaries of the study area. These areas are dominated by young arroyo willow, with mule fat and cattails (*Typha* sp.).

Mule fat thickets occur along the California sycamore woodland riparian drainage in Johnson's Pasture and consist of dense mule fat.

Upland Woodland Communities

Coast live oak woodland occurs on north trending slopes in Johnson's Pasture and is dominated by coast live oak trees. Additional species occurring in this vegetation type include San Gabriel scrub oak, chamise, and laurel sumac, with an understory of non-native grasses.

Non-Native Communities and Other Areas

Annual grassland occurs throughout Johnson's Pasture in the southwestern portion of the study area. This vegetation type is dominated by non-native grasses, including slender wild oat, ripgut brome, and red brome with non-native weedy species including shortpod mustard, common horehound *Marrubium vulgare*, and sourclover (*Melilotus indica*), with annual native species such as California milkweed (*Asclepias californica*) and blue dicks. Scattered chaparral species and sage scrub species listed above also occur throughout the grasslands. Additional disturbed or cleared areas occur in the study area and are comprised of non-native grasses, mustards, and other disturbance-following species including red-stemmed filaree, strigose lotus (*Acmispon strigosus*), and miniature lupine (*Lupinus bicolor*).

Eucalyptus stands occur primarily in the southwestern portions of the study area in Johnson's Pasture and Sycamore Canyon. The eucalyptus stands in Johnson's pasture are generally upland stands of eucalyptus trees (*Eucalyptus* spp.) with an understory of semi-natural herbaceous species as listed above. The eucalyptus stands in Sycamore Canyon occur along the downstream portion of a riparian corridor. This area is dominated by eucalyptus trees with scattered black locust (*Robinia pseudoacacia*) and coast live oak trees. Mule fat, ash trees (*Fraxinus* sp.), fan palms (*Washingtonia* sp.), tree tobacco (*Nicotiana glauca*), mugwort, and poison oak are present in the understory. Additional stands of eucalyptus occur along Cobal Canyon with Peruvian pepper trees (*Schinus molle*) and pines (*Pinus* sp.).

Ornamental areas occur in the eastern portion of the study area and consist of planted rows of olive trees (*Olea europaea*). A stand of pines trees occurs in Johnson's Pasture and is included as ornamental vegetation.

Developed areas consist of paved roads and concrete utility pads occurring within the study area.

Disturbed areas consist of dirt roads that have little to no vegetation occurring. These dirt roads include Cobal Canyon, Burbank, and Johnson's Pasture trails. Transitional areas immediately adjacent to the fire road trails include disturbance-following species such as red-stemmed filaree (*Erodium cicutarium*), strigose lotus (*Acmispon strigosus*), miniature lupine (*Lupinus bicolor*), Russian thistle (*Salsola tragus*), wild oat, and riggut brome.

Invasive Species

Invasive (exotic) species are found on site, but their occurrences are localized and generally do not appear to present an immediate concern to habitat integrity. BonTerra Psomas staff observed small, isolated patches of tree tobacco, Spanish broom, black locust, castor bean, and eucalyptus. Spanish broom and castor bean are rated as having a high potential to impact habitats (as rated by the California Invasive Plant Council; meaning, these species have the potential to produce seed prolifically, grow rapidly, and displace native species), while the others are rated as having moderate potential. Though these species have the potential to be problematic, they are currently found in small patches.

Special Status Vegetation Types

The California Natural Diversity Database (CNDDDB) provides an inventory of vegetation types that are considered special status by the State and federal resource agencies, academic institutions, and various conservation groups, such as the California Native Plant Society.

In this report, all vegetation alliances that have NatureServe State ranks of S1 to S3 are considered to be highly imperiled. Information on the NatureServe ranking methodology may be found in the complete BonTerra Psomas Report dated July 16, 2014.

Four of the aforementioned vegetation types in the study area would be considered special status: scrub oak chaparral, California sycamore-coast live oak woodland, California sycamore woodland, and willow thickets.

Special Status Plant and Wildlife Species

Plants or wildlife may be considered to have "special status" due to declining populations, vulnerability to habitat change, or restricted distributions. Certain special status species have been listed as Threatened or Endangered under the California and/or Federal Endangered Species Acts.

Special Status Plants

Several special status plant species are known to occur or have historically occurred in the vicinity of the study area. Five of these species are federally and/or State-listed Threatened or Endangered species: Braunton's milk-vetch, Nevin's barberry, thread-leaved brodiaea, San Fernando Valley spineflower, and slender-horned spineflower, Brand's star phacelia is a candidate species for federal listing. Potentially suitable habitat exists in the study area for each of these species. Only Nevin's barberry was observed during the reconnaissance survey. Any impacts to this species or any special status species, if present, would be considered significant under Section 15380 of the California Environmental Quality Act (CEQA).

In addition, to species formally listed by the resource agencies, multiple species reported in the vicinity of the study area are California Rare Plant Rank (CRPR) List 1B and 2 plant species that may be considered constraints on project-related activities according to CEQA. Potentially suitable habitat exists

within the study area for the following List 1B and List 2 plant species: round-leaved filaree, slender mariposa lily, late-flowered mariposa lily, intermediate mariposa lily, Parry's spineflower, San Gabriel River dudleya, many-stemmed dudleya, San Gabriel bedstraw, mesa horkelia, California satintail, knotted rush, white rabbit tobacco, chaparral ragwort, San Bernardino aster, Greata's aster, and Sonoran maiden fern. Impacts on these species would be considered potentially significant per CEQA depending on the size of the population, if present, relative to populations in the region.

Special Status Wildlife

Several special status wildlife species are known to occur in the vicinity of the study area (CDFW 2014). The California gnatcatcher (*Polioptila californica californica*) is one of the only federally and/or State-listed Threatened or Endangered species with potentially suitable habitat occurring within the study area. Historical occurrences of coastal California gnatcatcher have been documented approximately 5 miles west of the study area but are presumed extirpated from this area due to development. U.S. Fish and Wildlife Service (USFWS) has determined final critical habitat for the gnatcatcher approximately 4.5 miles to the southwest of the study area in Frank Bonelli Regional Park. No contiguous habitat occurs between Bonelli Park and the study area, which reduces potential for dispersal to the study area, but does not eliminate potential. The study area is contiguous with open space to the east, along the foothills, where suitable habitat for the gnatcatcher occurs. Potentially suitable habitat occurs in the scrub vegetation types in the southern portion of the study area. In addition to species formally listed by the resource agencies, additional special status species may occur within the study area. Potentially suitable habitat for the following species exists within the survey area: silvery legless lizard (*Anniella pulchra pulchra*), coast (San Diego) horned lizard (*Phrynosoma coronatum blainvillii*), coast range newt (*Taricha torosa torosa*), San Bernardino ringneck snake (*Diadophis punctatus modestus*), San Bernardino Mountain kingsnake (*Lampropeltis zonata parvirubra*), San Bernardino Mountain kingsnake (*Lampropeltis zonata parvirubra*), coastal rosy boa (*Lichanura [Charina] trivirgata roseofusca*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), long-eared owl (*Asio otus*), burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western red bat (*Lasiurus blossevillii*), western mastiff bat (*Eumops perotis californicus*), pocketed free-tailed bat, big free-tailed bat (*Nyctinomops femorosaccus*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) southern grasshopper mouse (*Onychomys torridus ramona*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), San Diego desert woodrat (*Neotoma lepida intermedia*), and American badger (*Taxidea taxus*).

Trail Inventory

Overall condition

MIG collected trail information at 38 locations over a four day period in March 2014. At each location, MIG's staff noted the condition of the cutbank, trail surface, fill area, presence or absence of drainage features, and presence or absence of unauthorized trails. The presence of unauthorized trails was noted by BonTerra Psomas staff during their baseline resource inventory. Trail conditions were rated using a system developed by Mr. Timothy Best, a certified engineering geologist, for the Marin County Road and Trail Management Plan.

Based on information in the City's streets database, the CHWP contains slightly more than 20 miles (20.3 miles) of mapped trails. The trails are basically fire roads that are now used predominantly for passive recreation use. The fire roads provide essential access to the CHWP for LA County Fire and will be

maintained for this purpose. Based on four days of field observations, the general overall condition of the CHWP trail system is considered good.

Minor Erosion Impacts

It should be noted that winter 2013-14 was characterized by unusually dry conditions. As a result, the extent of erosion on the CHWP trail system may be lower compared to normal precipitation conditions. Thirteen locations had no erosion, while 15 showed minor erosion, and 10 showed a moderate level of erosion. None of the locations inventoried showed severe erosion. The majority (30 locations) of inventory locations did not have features to help direct water off the trail, thereby minimizing erosion. Among these, seven locations had trail tread erosion ratings of “moderate,” suggesting these should have drainage features installed.

Unauthorized Trails

In addition, BonTerra Psomas mapped approximately three miles of unauthorized trails. None of these unauthorized trails are maintained by LA County Fire or the City and do not have any drainage features. The majority of the mileage (2.2 miles) occurs in the Westside zone, with approximately equal amounts of unauthorized trails occurring in Johnson’s Pasture and the Eastside zone. The majority of the unauthorized trails follow ridgelines or contours and are unlikely to deliver sediment from erosion to the numerous drainages that occur in the CHWP.

Human impact

Regarding human waste impacts, the consensus of BonTerra Psomas’ staff was that human waste areas do not appear to be in locations that are in danger of washing into streambeds and affecting water quality or site biology in general. From what staff observed in the field, human waste locations were generally limited to specific locations (see Exhibit 1) and were not located in areas that would wash down into drainages.

Summary

Based on results of the environmental baseline inventory, the study area contains many important biological resources and habitats. From BonTerra Psomas staff observations, the general overall condition of the study area would be considered good. Disturbances such as fire, historical grazing, and human foot and bike traffic are evident throughout the site and have allowed non-native vegetation such as mustard and various grasses to proliferate in portions of the study area. These disturbed areas seem to be mainly restricted to the Johnson’s Pasture area (in the southern portion of the study area) and along the main trails throughout the site. Although there are areas with a disturbed nature, the occurrence of extensive coast live oak woodland and sycamore woodland habitat has excellent biological value for the region. Additionally, the quality and condition of the scrub habitats in the study area is good with a high degree of species diversity.

Potential Policy Recommendations

Based on findings summarized above, there are several topics for which new policies or infrastructure should be considered in the Master Plan.

Erosion: Among 38 trail locations, the trail inventory found evidence of “moderate” erosion in ten locations, and “minor” erosion in fifteen locations. No locations were identified with “severe” erosion. The baseline assessment reported approximately three miles of unauthorized trails. The majority of these trails follow ridgelines or contours. A very small percentage of the total mileage (0.14 miles)

occurs within jurisdictional drainage areas (i.e., areas defined as “waters of the U.S.” and/or “waters of the State”) (see Exhibit 1), which are areas that are given special protection under the federal Clean Water Act. A policy could be developed that further clarifies that unauthorized trails located in “Waters of the State” areas should be clearly designated as closed. For those unauthorized trails that are not located within jurisdictional waters and could be retained, policies are needed to define maintenance and usage standards.

Litter: The environmental baseline inventory reported evidence of three types of litter: 1) hydration bottles, 2) toilet paper, and 3) orange peels and other organic waste. Based on preliminary park intercept survey results, the majority of the visitors use the CHWP for exercise and many observed by BonTerra Psomas staff were carrying hydration bottles. Many of the hydration bottles were thrown or blown over the side of the main trail within a mile of the CHWP entrance. Toilet paper was observed multiple times behind large shrubs where Park users are relieving themselves. Fruit peels from oranges were observed multiple times throughout the Park, usually at locations where benches have been placed. The Park would likely benefit from more numerous, closed-top, waste receptacles placed strategically along the Main (5-mile) Loop Trail. Furthermore, to minimize human waste, a discussion of sanitary facilities would also be appropriate.

Tree Retention: The environmental baseline inventory noted stands of eucalyptus trees located in the Sycamore Canyon and Johnson’s Pasture portions of the CHWP. Although considered an exotic species, these trees provide potential nesting and perching habitat for raptors in the CHWP. A discussion related to retaining or removing stands of Eucalyptus would be appropriate given concerns associated with fire hazards in Sycamore Canyon.

References

Baldwin, B. et. al. (ed.). 2012. The Jepson Manual, Vascular Plants of California, 2nd ed. University of California Press. <http://www.amazon.com/The-Jepson-Manual-Vascular-California/dp/0520253124>

California Department of Fish and Wildlife (CDFW). 2014. California Natural Diversity Database. Records of Occurrence for USGS Sunland, Condor Peak, Chilao Flat, Burbank, Pasadena, and Mount Wilson 7.5-minute quadrangles. Sacramento, CA: CDFW, Natural Heritage Division. www.wildlife.ca.gov

California Department of Fish and Wildlife (CDFW). 2010. Natural Communities List Arranged Alphabetically by Life Form. <http://www.dfg.ca.gov/biogeodata/vegcamp/pdfs/natcomlist.pdf>

CalFlora. 2000. Information on California Plants for Education, Research and Conservation (web application). Berkeley, California: The CalFlora Database (a non-profit organization). www.calflora.org.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Sacramento, CA: CDFG, Non-game Heritage Program. Located on City Website CHWP Marin County Parks and Open Space District. 2011. Draft Road and Trail Assessment prepared by Timothy Best and Alta Planning and Design. Benicia, CA. Located on City Website CHWP NatureServe. 2014. NatureServe Explorer Database (a non-profit organization). <http://www.natureserve.org/>

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation (Second Edition). Sacramento, CA: CNPS. http://www.cnps.org/store.php?crn=65&rn=451&action=show_detail