

**Ash-grey (Indian) Paintbrush
(*Castilleja cinerea*)**

**5-Year Review:
Summary and Evaluation**



**U.S. Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
Carlsbad, California**

March 2008

5-YEAR REVIEW
Ash-grey (Indian) Paintbrush/*Castilleja cinerea*

1. GENERAL INFORMATION

1.1. Reviewers

Lead Regional or Headquarters Office: Diane Elam and Jenness McBride, Region 8, California and Nevada, 916-414-6464

Lead Field Office: Karen A. Goebel and Jesse Bennett, Carlsbad Fish and Wildlife Office, 760-431-9440

1.2. Methodology used to complete the review

This review was compiled by Jesse Bennett of the Carlsbad Fish and Wildlife Office (CFWO), U.S. Fish and Wildlife Service (USFWS), and considered available literature, office files, and discussions with researchers or lands managers whose expertise includes the ash-grey (Indian) paintbrush.

1.3. Background

1.3.1. FR Notice citation announcing initiation of this review

The notice announcing the initiation of this and other 5-year reviews and opening of the comment period for 60 days was published on February 14, 2007 (72 FR 7064). We did not receive any information specific to ash-grey (Indian) paintbrush, but we did receive one general comment letter supporting continued protection under the Endangered Species Act of 1973 (Act), as amended, of all species noticed in this announcement.

1.3.2. Listing history

Original Listing

FR notice: 63 FR 49006

Date listed: September 14, 1998

Entity listed: species; Ash-grey (Indian) Paintbrush (*Castilleja cinerea*)

Classification: threatened

1.3.3. Associated rulemakings

Critical habitat has been designated for this species.

FR notice: 72 FR 73092

Date designated: December 26, 2007

1.3.4. Review History

No comprehensive status reviews have been conducted for this species.

1.3.5. Species' Recovery Priority Number at start of 5-year review

The species' Recovery Priority Number was reported as a value of "8" in the 2007 Recovery Data Call for the Carlsbad Fish and Wildlife Office. This number indicates that the species has a moderate degree of threat and a high potential for recovery.

1.3.6. Recovery Plan or Outline

No draft or final recovery plan has been developed.

2. REVIEW ANALYSIS

2.1. Application of the 1996 Distinct Population Segment (DPS) policy

2.1.1. Is the species under review a vertebrate?

No. The Endangered Species Act defines species as including any subspecies of fish or wildlife or plants and any distinct population segment of any species of vertebrate wildlife. This definition limits listings as distinct population segments (DPS) only to vertebrate species of fish and wildlife. Because the ash-grey (Indian) paintbrush is a plant and the DPS policy is not applicable, the application of the DPS policy to the species listing is not addressed further in this review.

2.2. Recovery Criteria

2.2.1. Does the species have a final, approved recovery plan containing objective, measurable criteria?

No, there is no recovery plan for this species.

2.3. Updated Information and Current Species Status

Ash-grey (Indian) paintbrush was federally listed as threatened in 1998. In 2002, the U.S. Forest Service (USFS) updated their Pebble Plain Habitat Management Guide (USFS 2002). In 2005, the USFS completed a species viability analysis and biological assessment for ash-grey (Indian) paintbrush (USFS 2005). These documents are the primary sources of new information for ash-grey (Indian) paintbrush relevant to this 5-year review.

2.3.1. Biology and Habitat

Life History

Ash-gray (Indian) paintbrush is a semi-parasitic perennial plant with several ascending to decumbent (reclining on the ground) grayish stems sprouting from the root-stem. These stems are 4-8 inches (in.) (10.2-20.3 centimeters (cm)) tall. The flower stalk is usually yellow-green (sometimes reddish-orange) with yellow hairs on the lower bracts. The calyx is almost equally divided into linear lobes; the corolla is yellowish (63 FR 49006). Ash-gray paintbrush is distinguished from other *Castilleja* in its range by short-haired stems and leaves, yellowish flowers, calyx lobes of equal length, and its perennial nature (63 FR 49006).

Ash-gray paintbrush is usually found on pebble plain habitat, but it can be found in other areas including upper montane coniferous forest, meadows, and pinyon/juniper woodlands (USFS 2002). Species associated with ash-gray paintbrush on pebble plain habitat include black sagebrush (*Artemisia nova*), southern mountain buckwheat (*Eriogonum kennedyi* var. *austromontanum*), fleabane daisy (*Erigeron aphanactis*), and pine bluegrass (*Poa secunda* ssp. *secunda*). Pebble plains are characteristically treeless openings within surrounding montane pinyon-juniper woodland or coniferous forest with clay soils covered with quartzite pebbles. They have extremely low infiltration rates and high runoff potentials (63 FR 49006). The surface of undisturbed pebble plain habitat is about 31-38 percent vegetation, 15 percent plant litter, 45-47 percent rock pavement, and 0.89-1.2 percent bare soil (USFS 2002). Most occurrences are at elevations between 6,000 to 9,500 feet (ft) (1,288.8 to 2,895.6 meters (m)) (63 FR 49006).

During 2001 surveys, the USFS documented 73 species associated with pebble plain habitat (USFS 2002). Many of the associated species found were narrowly distributed, while others were disjunct occurrences of species found north and south of the San Bernardino Mountains (USFS 2002).

Spatial Distribution

According to the final listing rule, ash-grey (Indian) paintbrush was known from fewer than 20 localities in San Bernardino County, mostly on pebble plains, but also from several localities in pine forest habitats near the Snow Valley Ski area, along Sugarloaf Ridge (part of the Sawmill Complex), and in the vicinity of Lost Creek (within the area now referred to as the Grinnell Ridge Complex) (63 FR 49006). These localities were discussed as generally encompassed by 13 pebble plain complexes and other areas that support ash-grey (Indian) paintbrush (63 FR 49006).

According to the rule proposing critical habitat for ash-grey (Indian) paintbrush and other pebble plains species, ash-grey (Indian) paintbrush was also known in the 1970s, prior to the time of listing, to occur on pebble plains within the area now referred to as the Fawnskin Complex and in non-pebble plain meadow margin habitat adjacent to Big Bear and Baldwin lakes (71 FR 67712). While these areas were not identified in the final

listing rule, we consider them to be occupied at the time of listing based on pre-listing occupancy records in our files (71 FR 67712) and included these areas in our final designation of critical habitat (72 FR 73092).

Currently, ash-grey (Indian) paintbrush is known to occur in 11 pebble plain complexes and several non-pebble plain habitat areas (Figure 1). The pebble plain complexes supporting ash-grey (Indian) paintbrush include Arrastre/Union Flat, Big Bear Lake, Broom Flat, Fawnskin, Gold Mountain, Holcomb Valley, North Baldwin Lake, Sawmill, Snow Valley, South Baldwin Ridge/Erwin Lake and Sugarloaf Ridge (72 FR 73092, USFWS 2005). While the pebble plain in the Grinnell Ridge Complex was thought to be occupied by ash-grey (Indian) paintbrush at the time of listing, the area was last surveyed in 1994, and we are unable to determine whether this area is currently occupied (71 FR 67712). Ash-grey (Indian) paintbrush occurs in non-pebble plain habitat in pine forests near the Snow Forest Ski Area, along Sugarloaf Ridge, and in the vicinity of Lost Creek (71 FR 67712).

Abundance

Ash-grey (Indian) paintbrush occurs in a mosaic distribution among the various pebble plain complexes. The distribution may change locally over time, but generally extends throughout a pebble plain complex. In the final rule listing ash-grey (Indian) paintbrush as a federally threatened species, it was estimated that there were 700 acres (ac) (283.3 hectares (ha)) of historical pebble plains habitat and 545 ac (220.6 ha) of remaining pebble plains habitat (63 FR 49006). These estimates of habitat were based on the work by Derby (1979 cited in USFS 2002), which characterized pebble plain habitat as having two indicator species, Bear Valley sandwort (*Arenaria ursina*) and southern mountain buckwheat.

However, since the listing of the species, USFS botanists have documented several new occurrences of habitat that have only one or none of these indicator species (USFS 2002). The 2002 Pebble Plain Habitat Management Guide (USFS 2002) uses the more recent work by the USFS to define pebble plain habitat using a point system based on plant indicator species and soils. Based on this system, the San Bernardino National Forest supports about 3,322 ac (1,344.4 ha) of pebble plain habitat and private land supports about 666 ac (269.5 ha) (USFS 2002). More specifically, recent data indicates that there are about 1,973 ac (798.5 ha) of ash-grey (Indian) paintbrush occupied habitat remaining, with 1,622 ac (656.4 ha), or about 82 percent, on San Bernardino National Forest lands; 290 ac (117.4 ha), or about 15 percent, on private lands; 48 ac (19.4 ha), or about 2 percent, on municipal lands and special districts; and 13 ac (5.3 ha), or less than 1 percent, on State lands (J. Bill pers. comm. 2007).

Due to this change in definition of what constitutes pebble plain habitat, it is not possible to determine quantitatively if there has been a change in the number of acres of pebble plain habitat known to be occupied by the ash-grey (Indian) paintbrush since the species was listed. However, the USFS indicates that populations are declining due to recreation,

existing roads and trails, mining, prospecting, cattle trespass, target shooting, unauthorized off-road driving, and urbanization (USFS 2005).

Taxonomy

At listing ash-grey (Indian) paintbrush was considered to be in the Scrophulariaceae (figwort) family. Recent taxonomic studies have placed the genus *Castilleja* and other plant genera formerly in the Scrophulariaceae into the Orobanchaceae (broomrape) family (Olmstead *et al.* 2001).

2.3.2. Five-Factor Analysis (threats, conservation measures, and regulatory mechanisms)

2.3.2.1. Present or threatened destruction, modification or curtailment of its habitat or range

The final rule listing the ash-grey (Indian) paintbrush (63 FR 49006) describes the major threats to this and other species confined to pebble plains habitats as habitat destruction, degradation, and fragmentation resulting from urbanization, off-road vehicle activity, alteration of hydrological conditions, fuelwood harvesting, and mining. While not identified in the final listing rule, fuelbreaks for fire suppression have also damaged pebble plain habitat (USFS 2002).

The most significant and persistent threat to pebble plains habitat identified in the final listing rule was off-road vehicle activity (63 FR 49006). Off-road vehicle activity and urbanization are the primary threats still affecting the ash-grey (Indian) paintbrush (S. Eliason *in litt.* 2006; USFWS 2005). Urbanization directly removes ash-grey (Indian) paintbrush and can also increase public access and off-road driving (S. Eliason *in litt.* 2006). Development is identified as an ongoing threat at the North Baldwin Lake, South Baldwin Ridge/Erwin Lake, Big Bear Lake, Fawnskin, Sawmill, and Gold Mountain complexes (USFS 2002).

The primary cause of habitat degradation on the San Bernardino National Forest is unauthorized off-road vehicle use (USFWS 2005). Additional lesser threats include road use and maintenance, mining, and dispersed recreation (S. Eliason *in litt.* 2006; USFWS 2005). Vehicles cause considerable damage to ash-grey (Indian) paintbrush habitat. All of the pebble plain complexes have some degree of impact associated with the authorized and unauthorized use of vehicles and associated maintenance and/or recreational activities (USFS 2002).

In the final rule to list the species, we noted that pebble plains are very susceptible to damage during spring thaw (63 FR 49006). During the wet season, vehicles both directly destroy plants and create deep ruts that change the water flow patterns over the pebble plains, potentially indirectly affecting plants (63 FR 49006). Vehicular activity also favors the establishment of species more tolerant of disturbance, potentially altering the composition of the plant community over time (Stephenson

and Calcarone 1999). Non-native species are specifically identified as a concern in the Fawnskin, Arrastre/Union Flat, Sawmill, North Baldwin Lake, South Baldwin Ridge/Erwin Lake, and Broom Flat complexes in the Pebble Plain Habitat Management Guide (USFS 2002). Finally, vehicular activity can result in soil compaction and can cover individuals with dust and mud that can impair physiological functions (USFWS 2005; USFS 2002).

The USFS has instituted numerous protective measures and land designations to increase protection of ash-grey (Indian) paintbrush since its listing. Some measures such as fencing, signage, and monitoring have been in place since listing. Barriers and signs are placed to direct recreational use away from this species (USFS 2002). In 1999, eight road segments that were affecting pebble plain habitat were decommissioned. The USFS has also been conducting monitoring to ensure that conservation measures are effective. Special use permit events have been relocated or modified to avoid effects to ash-grey (Indian) paintbrush. Further, the Mountaintop Ranger District has been closed to dispersed shooting, so the potential threat of trampling from shooters should be eliminated. Seeding and monitoring have occurred since the 1980's following unauthorized dozer use in the North Baldwin Pebble Plain. Erosion has been controlled and the habitat is slowly revegetating (USFS 2005). The USFS acquired about 23 ac (9.3 ha) of ash-grey (Indian) paintbrush habitat at Broom Flat (USFWS 2005).

To reduce the potential for fire suppression activities to impact pebble plain habitat, the San Bernardino National Forest has a fire suppression plan specific to this habitat. Fire personnel are trained to identify pebble plain habitat and to use suppression techniques that reduce or prevent soil disturbance. A notebook with habitat maps and suppression plans has been distributed to fire personnel annually (USFS 2005). However, in October of 2003, a 0.25 mi (0.4 km) portion of the Fawnskin Pebble Plain Habitat Complex was bulldozed by accident as an emergency fuelbreak for the Old Fire. Suppression rehabilitation was completed in December 2003. Long-term effects to habitat are unclear (USFS 2005).

In 2005, non-jeopardy biological and conference opinions (FWS-773.9) were issued that addressed the Revised Land Management Plans for the four southern California national forests. These plans included strategic direction in the form of land use zoning and standards. The land use zoning and standards indicated that for projects under the plans: 1) ongoing activities will be neutral or beneficial to certain areas with ash-grey (Indian) paintbrush, 2) new activities will be neutral or beneficial to ash-grey (Indian) paintbrush, and 3) expansion of existing facilities or new facilities will focus recreational use away from ash-grey (Indian) paintbrush. Exceptions were included in the plans for fuel treatments in wildland-urban interface areas and to allow for projects with short-term effects and long-term benefits (USFWS 2005).

In addition to the adoption of land use zoning and standards, the USFS also proposed the Arrastre and Wildhorse Research Natural Areas, which cover about 469 ac (189.8 ha) of ash-grey (Indian) paintbrush occupied habitat (USFS 2005). If designated,

these areas will be subject to the USFS policy for Research Natural Areas, which indicates that “Research Natural Areas may only be used for research, study, observation, monitoring, and those educational activities that maintain unmodified conditions” (USFWS 2005).

In summary, two primary threats identified at listing, urbanization and off-road vehicle use, continue to impact ash-grey (Indian) paintbrush. On private lands, development activities continue to threaten habitat and occurrences of the ash-grey (Indian) paintbrush. Likewise, on the San Bernardino National Forest off-road vehicle use is still negatively impacting pebble plain habitat supporting ash-grey (Indian) paintbrush. While these threats have not been eliminated since the listing of the species, impacts to pebble plain habitat on USFS lands has decreased due to significant efforts by this agency to implement habitat protection measures.

2.3.2.2. Overutilization for commercial, recreational, scientific, or educational purposes

The final rule listing ash-grey (Indian) paintbrush and six other plant taxa from the southern California mountains indicated that some of the taxa may have become vulnerable to collecting by curiosity seekers as a result of the increased publicity following publication of the proposed rule. A survey of the collections of a herbarium showed increases in the numbers of collections of ash-grey (Indian) paintbrush and other pebble plain taxa following publication of an article describing this new habitat type (63 FR 49006). However, we have no information on collection of this species since its listing.

2.3.2.3. Disease or predation

Disease and predation are not known to be factors affecting ash-grey (Indian) paintbrush.

2.3.2.4. Inadequacy of existing regulatory mechanisms

State Protections

Ash-grey (Indian) paintbrush is not listed under the California Endangered Species Act (CESA). Thus, the CESA and the Native Plant Protection Act (NPPA) provide no protection for this species. The only State law providing any potential protection to ash-grey (Indian) paintbrush is the California Environmental Quality Act (CEQA).

The CEQA is the principal statute mandating environmental assessment of projects in California. The purpose of the CEQA is to evaluate whether a proposed project may have an adverse effect on the environment and, if so, if that effect can be reduced or eliminated by pursuing an alternative course of action or through mitigation. The CEQA applies to projects proposed to be undertaken or requiring approval by State and local public agencies (<http://www.ca.gov/state/portal>).

Ash-grey (Indian) paintbrush is on the California Native Plant Society (CNPS) Inventory as List 1B. Under the CEQA, impacts to List 1B plants are considered significant and must be addressed. If significant effects are identified, the lead agency has the option of requiring mitigation through changes in the project or to decide that overriding considerations make mitigation infeasible (CEQA Sec. 21002). However, the CEQA does not guarantee that conservation projects will be implemented. Protection of listed species through the CEQA is dependent upon the discretion of the lead agency involved.

Federal Protections

The National Environmental Policy Act (NEPA) may provide some protection for ash-grey (Indian) paintbrush for projects with a Federal nexus. NEPA requires that the planning process for Federal actions be documented to ensure that effects on the environment are considered. The NEPA process is intended to help public officials make better decisions based on an understanding of the environmental consequences of their actions and to take actions to protect, restore, and enhance the environment (40 CFR 1500.1). Carrying out the NEPA process ensures that agency decision makers have information about the environmental effects of Federal actions and information on a range of alternatives that will accomplish the project purpose and need.

For environmental impacts that are significant, the Federal agency must identify means to mitigate these impacts (40 CFR 1502.16). For projects undertaken, funded, or authorized by Federal agencies, the NEPA would at least require that any significant adverse impacts to the human environment, including impacts to the natural and physical environment (40 CFR 1508.14), be considered. Projects that are mandated to comply with the NEPA may provide some consideration of impacts to ash-grey (Indian) paintbrush and its habitat.

The Endangered Species Act is the primary Federal law providing protection for the ash-grey (Indian) paintbrush. Beyond the actual listing of the species, these protections for ash-grey (Indian) paintbrush are afforded particularly through sections 7 and 9 of the Act. Section 7 of the Act requires Federal agencies to insure that any action authorized, funded, or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat. Section 7 also encourages Federal agencies to use their authorities to carry out programs for the conservation of listed species. Section 9 of the Act also prohibits the removal, damage, or destruction of listed plants on Federal lands and on other areas in knowing violation of any State law or regulation or State criminal trespass law.

The USFWS has addressed some projects through section 7 consultations with the USFS. In 2001, non-jeopardy biological and conference opinions (1-6-99-F-25) were issued addressing the impacts of Land and Resource Management Plan program direction and activities that were occurring in ash-grey (Indian) paintbrush habitat

(USFWS 2001). The primary activities occurring included roads, utility corridors, and dispersed recreation. In 2005, non-jeopardy biological and conference opinions (FWS-773.9) were issued that addressed the Revised Land Management Plans for the four southern California national forests as described more fully above under factor A.

In summary, while both CEQA and NEPA may provide some discretionary conservation benefit to ash-grey (Indian) paintbrush, the Act is the primary regulatory mechanism mandating ash-grey (Indian) paintbrush conservation. With the majority of suitable and occupied habitat on USFS lands, the Act remains the primary regulatory mechanism for ensuring that the ash-grey (Indian) paintbrush is addressed during planning efforts for land management actions potentially affecting this species.

2.3.2.5. Other natural or manmade factors affecting its continued existence

Among the threats identified in the final listing rule for this species were non-native species, and this threat still exists. Introduced species of grasses and forbs can displace ash-grey (Indian) paintbrush by competing for nutrients, water, light, and space. Weedy plant invasions are facilitated by disturbances (71 FR 67712; Stephenson and Calcarone 1999) such as off-road vehicle use, urban and residential developments, and various recreational activities. In addition, fuels management activities, including vegetation removal and fire suppression activities, have the potential to facilitate non-native species introductions.

In addition, trampling by feral burros was also identified as a threat to ash-grey (Indian) paintbrush in the final listing rule. The final rule indicated that trampling by feral burros occurred at the North Baldwin Lake, Sawmill, Broom Flat (formerly Onyx), and Gold Mountain pebble plain complexes. However, the final listing rule anticipated that the threat from feral burros would be alleviated upon removal of burros from these areas under the provisions of the Big Bear Wild Burro Territory Management Plan (63 FR 49006). Under this plan, burros would only remain in about 45 ac (18 ha) of the Broom Flat (formerly Onyx) pebble plain complex (USFWS 1997). In 1998, burros were removed from the Big Bear City area, which includes the North Baldwin Lake, Sawmill, and Gold Mountain pebble plain complexes, but they still remain in the Broom Flat pebble plain complex (USFS 2005). Thus, as predicted, this threat to ash-grey (Indian) paintbrush has been addressed at all but the Broom Flat pebble plain complex.

2.4. Synthesis

Habitat destruction, degradation, and fragmentation resulting from urbanization and off-road vehicle activity were identified among other threats to ash-grey (Indian) paintbrush at the time of listing, and these activities remain the primary threats today. The regulatory protections for ash-grey (Indian) paintbrush on private lands are very limited, and urban development activities still threaten pebble plain and other habitats supporting ash-grey (Indian) paintbrush. While the majority (82 percent) of the habitat identified for ash-grey

(Indian) paintbrush occurs on USFS lands where monitoring and management actions are implemented, and the USFS has proposed additional land use designations to protect this species, unauthorized off-road vehicle use in occupied habitat and weedy plant invasions continue to negatively impact ash-grey (Indian) paintbrush on USFS lands (USFS 2005).

Quantitative data needed to determine occurrence, habitat, or population trends since the time of listing are compromised by the change in definition of what constitutes pebble plain habitat. Thus, further monitoring and evaluation using the habitat information and occurrence data initiated by the 2002 Pebble Plain Habitat Management Guide (USFS 2002) is needed prior to determining whether USFS management efforts are effective at reducing or eliminating the current threats sufficient to conserve remaining pebble plain habitat and to support recovery of the ash-grey (Indian) paintbrush.

As documented in the final rule listing ash-grey (Indian) paintbrush as threatened, this species is likely to become endangered within the foreseeable future if the threats described above are not reduced or eliminated. The final rule documents that due to management activities conducted by the USFS (including fencing, signing, and monitoring), ash-grey (Indian) paintbrush is not subject to imminent extinction; thus, the appropriate listing decision was a threatened designation.

Based on the current known distribution of the species and our expectation of continued USFS management, we have determined that the ash-grey (Indian) paintbrush, though still at risk from the primary threats of urban development and off-road vehicle use, is not subject to imminent extinction. Thus, this species should continue to remain a threatened species, and no change to the status of ash-grey (Indian) paintbrush is warranted at this time.

3. RESULTS

3.1. Recommended Classification

- ☐ Downlist to Threatened
- ☐ Uplist to Endangered
- ☐ Delist (Indicate reasons for delisting per 50 CFR 424.11):
 - ☐ Extinction
 - ☐ Recovery
 - ☐ Original data for classification in error
- ☒ No change is needed

3.2. New Recovery Priority Number

While protections for ash-grey (Indian) paintbrush have increased on national forest lands, occupied and restorable habitat for this species continues to be threatened by urban

development and off-road vehicle use. Therefore, the Recovery Priority Number remains 8, indicating that the taxon has a moderate degree of threat and a high potential for recovery.

3.3. Listing and Reclassification Priority Number, if reclassification is recommended

Not applicable

4. RECOMMENDATIONS FOR FUTURE ACTIONS

Develop Recovery Plan

Develop a recovery plan for ash-grey (Indian) paintbrush that identifies objectives and specific delisting criteria for this species and prioritizes recovery actions such as non-native species removals, surveys, habitat acquisitions, and habitat restoration. In the interim, follow the guidance provided in the Pebble Plain Habitat Management Guide (USFS 2002).

Monitor Existing Populations

Systematic monitoring of ash-grey (Indian) paintbrush throughout known and potentially occupied sites is necessary to track the status of the species and identify management priorities. There is a need to continue to obtain quantitative information regarding the status of this species to evaluate the effectiveness of conservation efforts over time.

Protection of Additional Ash-Grey (Indian) Paintbrush Habitat

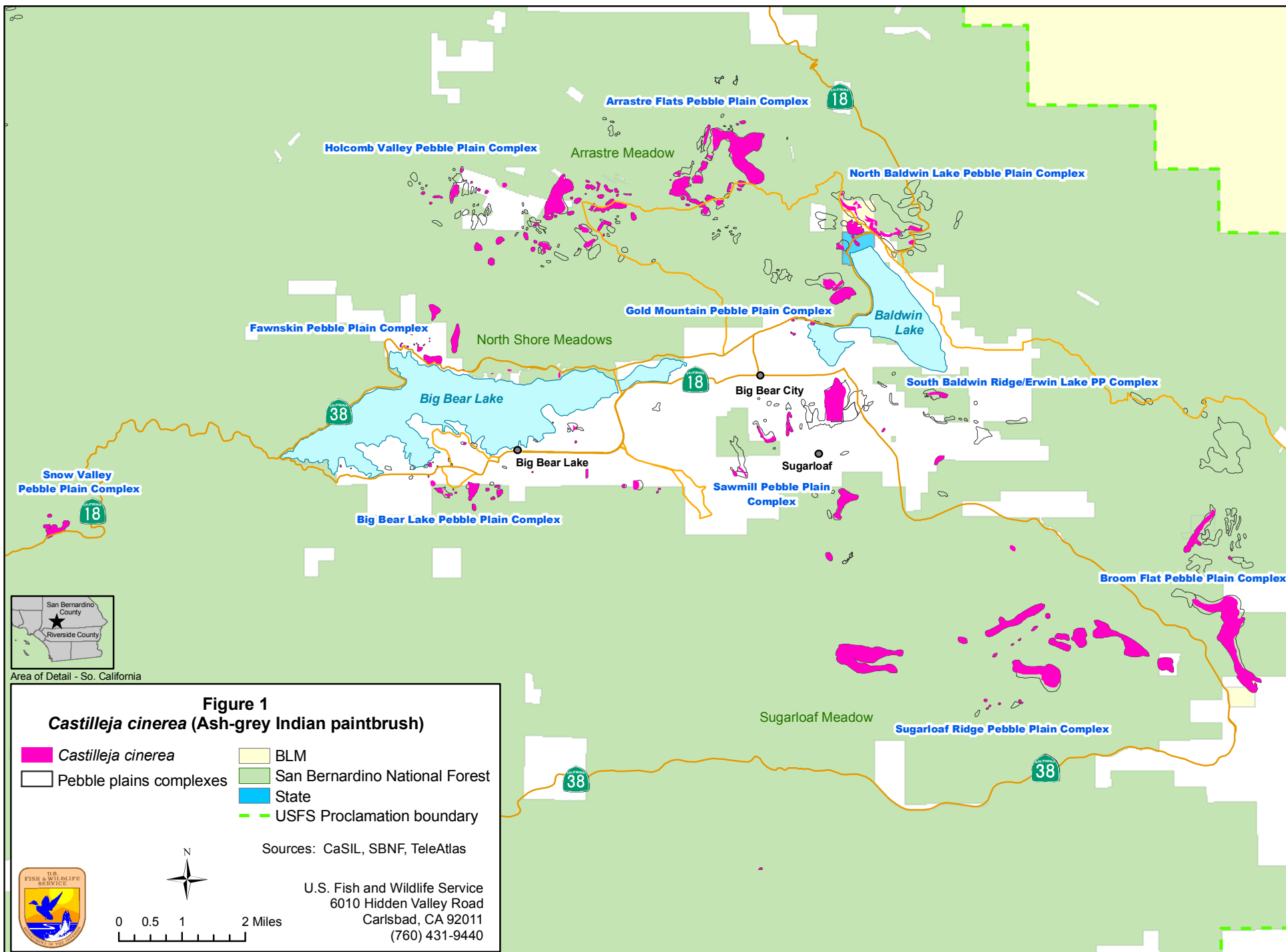
Seek opportunities to acquire non-federal portions of ash-grey (Indian) paintbrush habitat.

Management of Occupied Ash-Grey (Indian) Paintbrush Habitat

- a) Continue monitoring programs for the effectiveness of measures to protect ash-grey (Indian) paintbrush from recreational activities and make adjustments to signs, barriers, and roads as necessary.
- b) Avoid new developments in or near ash-grey (Indian) paintbrush habitat.
- c) Continue outreach to non-federal landowners regarding the presence of ash-grey (Indian) paintbrush and the importance of protecting this species.

5. REFERENCES

- Bill, J. 2007. San Bernardino National Forest. Personal communication via email to Jesse Bennett. January 31, 2007.
- Eliason, S. 2006. Forest Service Botanist. In Litt. Letter to Carlsbad Fish and Wildlife Office dated January 22, 2006. Comments regarding proposed designation of critical habitat for pebble plains plants.
- Olmstead, R. G., C. W. DePamphilis, A. D. Wolfe, N. D. Young, W. J. Elisons, P. A. Reeves. 2001. Disintegration of the Scrophulariaceae. *American Journal of Botany*. 88: 348-361.
- Stephenson, J. R. and G. M. Calcarone. 1999. Southern California mountain and foothills assessment: habitat and species conservation issues. Gen. Tech. Rep. PSW-GTR-172. USDA Forest Service, Pacific Southwest Research Station, Albany, California. 402 pp.
- USFS (U.S. Forest Service). 2002. Pebble Plain Habitat Management Guide. Unpublished report submitted to the U.S. Fish and Wildlife Service.
- USFS (U.S. Forest Service). 2005. Biological assessment for the revised Land Management Plans (Forest Plans) for the four southern California national forests. Unpublished document submitted to the U.S. Fish and Wildlife Service.
- USFWS (U.S. Fish and Wildlife Service). 1997. Biological/Conference Opinion on the Wild Burro Management Plan for the San Bernardino National Forest, San Bernardino County, California (1-6-97-F-4).
- USFWS (U. S. Fish and Wildlife Service). 2001. Formal section 7 consultation for various and ongoing and related activities affecting pebble plains, San Bernardino County, California (1-6-99-F-25). February 14, 2001.
- USFWS (U. S. Fish and Wildlife Service). 2005. Biological and conference opinions on the Revised Land and Resource Management Plans for the Four Southern California National Forests, California (1-6-05-F-773.9). September 15, 2005.



U.S. FISH AND WILDLIFE SERVICE
5-YEAR REVIEW OF ASH-GREY (INDIAN) PAINTBRUSH (*Castilleja cinerea*)

Current Classification: Threatened

Recommendation resulting from the 5-Year Review:

☐ Downlist to Threatened

☐ Uplist to Endangered

☐ Delist

☒ No change needed

Appropriate Listing/Reclassification Priority Number, if applicable:

Not applicable

Review Conducted By: Karen A. Goebel and Jesse Bennett

FIELD OFFICE APPROVAL:

Lead Field Supervisor, Fish and Wildlife Service

Approve



Date 3-27-08

REGIONAL OFFICE APPROVAL:

Lead Regional Director, Fish and Wildlife Service

Approve



Date 3/31/08

Comment Letter #13

From: [Mary Murrell](#)
To: [Morrissey, Jim](#)
Subject: Please Reject the Moon Camp Project! Save the Bald Eagles and Ash-Gray Paintbrush!
Date: Sunday, March 17, 2024 1:28:43 PM

You don't often get email from mjwmurrell@gmail.com. [Learn why this is important](#)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you can confirm the sender and know the content is safe.

Dear Jim Morrissey,

I was shocked to hear that the County is considering the Moon Camp Project (*PRDEIR No. 3*) which threatens to destroy Big Bear Lake's bald eagle habitat and the Ash-Gray Paintbrush/Pebble Plain that grows only in the San Bernardino mountains, specifically in this section of Fawnskin.

13-1

I have long been a fan of Jackie and Shadow. In fact, I have visited Fawnskin and Big Bear Lake several times over the past three years because Jackie and Shadow put this community on the national (and global) map! Although I was heartbroken when all three of their eggs didn't hatch this week, at least I (and thousands of others) believe there was hope for their future eggs to hatch, so that Big Bear Bald Eagles can continue on for generations. However, learning of the proposed Moon Camp Project has all but decimated those hopes, if it is allowed to pass. If the bald eagles don't have their habitat perches and fishing spots, they will not last there. They will either find a new spot or be wiped out completely. What a travesty that would be for Fawnskin, the Big Bear Lake community, the residents, the businesses, the visitors, for nature -- for everyone!

13-2

No development project is worth decimating such a unique forest and its rare, endangered species of bald eagles and Ash-Gray Paintbrush. We must stand up for nature and give it a voice, or else the forest and its inhabitants will soon be gone. Jackie, Shadow, and the Ash-Gray Paintbrush deserve to thrive. Please protect these precious natural resources and REJECT the Moon Camp Project. For those living now and for future generations!

Thank you for your time,
Mary Murrell

**RESPONSE TO COMMENT
LETTER #13
MARY MURRELL**

- 13-1 This comment appears to be one of ten form comment letters, which vary slightly from one another, but convey the same message: the comment letter asks for the Project to be rejected due to impacts to “Jackie and Shadow”—local bald eagles to the Big Bear Valley and Moon Camp Project area. Other than general concerns regarding potentially significant impacts to ashy-gray Indian paintbrush, pebble plain, and bald eagle, including the possible extirpation of these species/habitats, the commenter does not point to a specific point in the PRDEIR No. 3 with which the commenter takes issue.

Responses to this comment can be found under Response to Comment #2 (2-1), which addresses the concerns raised in this comment, completely.

- 13-2 The comment requests that the Project be rejected by the decision-makers, and expresses the opinion of the commenter that the Project is not worth decimating the habitat that supports bald eagle and ashy-gray Indian paintbrush. The comment is noted and will be made available to the County decision-makers as part of the RFEIR package prior to a decision on the proposed Project.

Comment Letter #14

From: [Anastasia Mazula](#)
To: [Morrissey, Jim](#)
Subject: Urgent Appeal: Protecting Our Precious Natural Heritage
Date: Saturday, March 16, 2024 11:24:15 AM

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Dear Mr. Morrissey,

14-1

It pains me to learn that the County is considering the Moon Camp Project (PRDEIR No. 3), a venture that poses **a significant threat** to the fragile habitat of bald eagles in Big Bear Lake and the exclusive Ash-Gray Paintbrush/Pebble Plain found solely in the San Bernardino mountains, particularly in the Fawnskin area. We cannot destroy these ecosystems for a development project. We must advocate for the preservation of nature and grant it a platform, lest we witness the irreversible loss of the forest and its inhabitants. Jackie, Shadow, and the Ash-Gray Paintbrush deserve better. **I urge you to protect these invaluable natural treasures and oppose the Moon Camp Project.**

Please consider the implications for future generations and the profound consequences of destroying this habitat.

Thank you for your time,
Anastasia Clarke

**RESPONSE TO COMMENT
LETTER #14
ANASTASIA MAZULA**

- 14-1 This comment appears to be one of ten form comment letters, which vary slightly from one another, but convey the same message: the comment letter asks for the Project to be rejected due to impacts to “Jackie and Shadow”—local bald eagles to the Big Bear Valley and Moon Camp Project area—and due to impacts to ashy-gray Indian paintbrush/pebble plain habitat. Other than general concerns regarding potentially significant impacts to ashy-gray Indian paintbrush, pebble plain, and bald eagle, including the possible extirpation of these species/habitats, the commenter does not point to a specific point in the PRDEIR No. 3 with which the commenter takes issue.

Responses to this comment can be found under Response to Comment #2 (2-1), which addresses the concerns raised in this comment, completely.

Comment Letter #15

From: [Padraic Foran](#)
To: [Morrissey, Jim](#)
Subject: Public Comment on Moon Camp Project (PRDEIR No. 3)
Date: Monday, March 18, 2024 4:00:21 PM

You don't often get email from padraicforan@gmail.com. [Learn why this is important](#)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you can confirm the sender and know the content is safe.

Dear Jim Morrissey,

15-1

I am writing to express my deep concern about the proposed Moon Camp Project (*PRDEIR No. 3*) which would wreak havoc on pristine forest that is home to bald eagles and rare plants that grow only in certain areas of the San Bernardino mountains.

The proposed Moon Camp project puts these species--already endangered and threatened--at even greater risk. Developers' attempts to mitigate its harms are far too little. Put simply, the Moon Camp project has no place in such a beautiful and fragile ecosystem.

15-2

My daughters, ages 8 and 4, have often marveled at the bald eagles who perch on trees in this stretch of beautiful wilderness. I hope that other children can continue to do the same for many generations to come. But if the City and County fail to protect this wild space now, we may lose these beautiful creatures and plant life forever.

The City of Fawnskin and the County of Bernardino must stand up to protect these endangered and threatened species and reject the Moon Camp Project!

Thank you,
Padraic Foran
(503)830-0169
padraicforan@gmail.com

**RESPONSE TO COMMENT
LETTER #15
PADRAIC FORAN**

- 15-1 The comment alleges that the Project would harm bald eagles and rare plants and states generally that the mitigation provided in the PRDEIR No. 3 and in former environmental documentation would not be sufficient to protect these species. Other than general concerns regarding potentially significant impacts to bald eagle and rare plants, including the possible extirpation of these species/habitats, the commenter does not point to a specific point in the PRDEIR No. 3 with which the commenter takes issue.

As discussed in the introduction to these responses to comments, and under Response to Comment 2-1, the PRDEIR No. 3 focuses solely on the topics of Biological Resources (impacts to ashy-gray Indian paintbrush and pebble plain habitat), Hazards and Hazardous Materials (wildfire evacuation), and Land Use and Planning (consistency with the San Bernardino Countywide Plan). The analysis and CEQA determinations for topics that fall outside of the narrow focus of the PRDEIR No. 3 were deemed adequate by the Court, and therefore no longer warrant discussion or consideration beyond what was presented in the July 2020 FEIR, pursuant to CEQA Statute 15234(d).

Only new comments submitted on the recirculated portions of the PRDEIR No. 3 will be considered by the County. As an example, the comments in this comment letter pertaining to impacts on the bald eagle will not be considered in the responses to comments, because the Court determined that the impacts on bald eagle were adequately analyzed in the July 2020 FEIR. Thus, the opportunity to comment on impacts determined to be adequate by the Court that were not the aforementioned focus of the PRDEIR No. 3 has concluded.

Overall, the PRDEIR No. 3 indicates that *“On an occurrence basis, there are approximately 5,567 occurrences of ashy-gray Indian paintbrush occurrences are located within the proposed Project site. Of the 5,567 occurrences, 4,895 will be permanently protected within the Open Space Conservation Easement of Lot A and H, representing 88 percent of the total occurrences of ashy-gray Indian paintbrush within the Project site”* (page 4-24). This on-site conservation of ashy-gray Indian paintbrush occurrences results in mitigation, reinforced by MM **BR-1b** for Project impacts at more than an approximately 7:1 ratio. On an acreage basis, the Project will mitigate impacts to the ashy-gray Indian paintbrush on-site at a 1.68:1 ratio. Furthermore, MM **BR-1a** establishes seed collection that would take place prior to construction within Lots 1, 4, 47, 48, 49, and 50, which are not protected as part of the 4,895 plants that would be conserved within the Open Space Conservation Easement of Lot A and H. Thus, as evidenced by the analysis provided in PRDEIR No. 3, the Project would not result in extirpation of the ashy-gray Indian paintbrush on the Project site; in fact, it would result in the permanent conservation of the primary areas on site that support this species.

- 15-2 This comment pertains to protection of bald eagle and plant life, and urges the County to reject the Moon Camp Project. Please refer to Response to Comment #2 (2-1), which addresses the concerns raised in this comment, completely. The comment is noted and will be made available to County decision-makers as part of the RFEIR package prior to a decision on the proposed Project.

Comment Letter #16

From: [Sylvia Stutz](#)
To: [Morrissey, Jim](#)
Subject: Support for Big Bear Lake's bald eagle habitat & the Ash-Gray Paintbrush/Pebble Plain
Date: Monday, March 18, 2024 1:44:23 PM

You don't often get email from sylviajstutz@gmail.com. [Learn why this is important](#)

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Dear Jim Morrissey,

16-1

I was saddened to hear that the County is considering the Moon Camp Project (*PRDEIR No. 3*) which threatens to destroy Big Bear Lake's bald eagle habitat and the Ash-Gray Paintbrush/Pebble Plain that grows only in the San Bernardino mountains, specifically in this section of Fawnskin. No development project is worth decimating such a unique forest and its rare, endangered species of bald eagles and Ash-Gray Paintbrush. We must stand up for nature and give it a voice, or else the forest and its inhabitants will soon be gone. Jackie, Shadow, and the Ash-Gray Paintbrush deserve to thrive. Please protect these precious natural resources and reject the Moon Camp Project!

Thank you for your time,
Sylvia Stutz

Sent from my iPhone

**RESPONSE TO COMMENT
LETTER #16
SYLVIA STUTZ**

- 16-1 This comment appears to be one of ten form comment letters, which vary slightly from one another, but convey the same message: the comment letter asks for the Project to be rejected due to impacts to “Jackie and Shadow”—local bald eagles to the Big Bear Valley and Moon Camp Project area—and due to impacts to ashy-gray Indian paintbrush/pebble plain habitat. Other than general concerns regarding potentially significant impacts to ashy-gray Indian paintbrush, pebble plain, and bald eagle, including the possible extirpation of these species/habitats, the commenter does not point to a specific point in the PRDEIR No. 3 with which the commenter takes issue.

Responses to this comment can be found under Response to Comment #2 (2-1), which addresses the concerns raised in this comment, completely.

Comment Letter #17

From: joyjoy1090@gmail.com
To: [Morrissey, Jim](#)
Subject: Reject the Moon Camp Project -- PRDEIR No. 3 is Insufficient -- Save Bald Eagles and Ash-Gray Paintbrush
Date: Monday, March 18, 2024 3:43:51 PM

[You don't often get email from joyjoy1090@gmail.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

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Dear Jim Morrissey,

I am absolutely devastated to learn about the County's consideration of the Moon Camp Project (PRDEIR No. 3)! The thought of Big Bear Lake's bald eagle habitat and the Ash-Gray Paintbrush/Pebble Plain in Fawnskin being threatened fills my heart with sorrow. These sacred lands are home to rare and endangered species such as the majestic bald eagles and the delicate Ash-Gray Paintbrush. How can we even fathom destroying such a precious ecosystem for the sake of a development project?

17-1

It breaks my heart to imagine a world where Jackie, Shadow, and the Ash-Gray Paintbrush no longer exist. These beautiful beings deserve to thrive in their natural habitat, not be displaced by human greed. We must be the voice for those who cannot speak for themselves, for the forest and its inhabitants are counting on us to stand up and protect them.

I urge you to reconsider the implications of the Moon Camp Project and take a stand for nature. Let us make the choice to prioritize the preservation of our planet's irreplaceable natural resources over profit and progress. Please, let us do everything in our power to reject this destructive project and safeguard the future of our environment.

Thank you for listening to my plea,
Joy Witte

**RESPONSE TO COMMENT
LETTER #17
JOY WITTE**

- 17-1 This comment appears to be one of ten form comment letters, which vary slightly from one another, but convey the same message: the comment letter asks for the Project to be rejected due to impacts to “Jackie and Shadow”—local bald eagles to the Big Bear Valley and Moon Camp Project area—and due to impacts to ashy-gray Indian paintbrush/pebble plain habitat. Other than general concerns regarding potentially significant impacts to ashy-gray Indian paintbrush, pebble plain, and bald eagle, including the possible extirpation of these species/habitats, the commenter does not point to a specific point in the PRDEIR No. 3 with which the commenter takes issue.

Responses to this comment can be found under Response to Comment #2 (2-1), which addresses the concerns raised in this comment, completely. The comment is noted and will be made available to County decision-makers as part of the RFEIR package prior to a decision on the proposed Program.

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Monitoring and Reporting Program
Moon Camp 50-lot Residential Division, TT No. 16136
Big Bear Lake, San Bernardino County, California
SCH No. 2002021105

Prepared for:

County of San Bernardino
Advance Planning Division
Land Use Services Department
385 North Arrowhead Avenue
San Bernardino, California 92415-0182

Prepared by:

Tom Dodson & Associates
2150 North Arrowhead Avenue
San Bernardino, California 92405
(909) 882-3612

Table 1: Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
A-1a. Construction equipment staging areas shall be located away from existing residential uses. Appropriate screening (i.e., temporary fencing with opaque material) shall be used to buffer views of construction equipment and material, when feasible. Staging locations shall be indicated on Project Grading Plans. (MM 5.4-1a)	Review and approval of the Grading Plans, and on-site inspection to confirm implementation of mitigation measures.	Prior to approval of Grading Plans, and during project construction	County of San Bernardino		
A-1b. All construction-related lighting associated with the construction of new roadways, improvements to SR-38 and the installation of utilities shall be located and aimed away from adjacent residential areas. Lighting shall use the minimum wattage necessary to provide safety at the construction site. A construction safety lighting plan shall be submitted to the County for review along with Grading Permit applications for the subdivision of the lots. (MM 5.4-1b)	Review and implement proposed plans.	Prior to issuance of Grading Permits	County of San Bernardino		
A-2a. All homes shall provide a two-car garage with automatic garage doors. (MM 5.4-2a)	Review and implement proposed plans.	Prior to final project approvals	County of San Bernardino		
A-2b. New development shall be subordinate to the natural setting and minimize reflective surfaces. Building materials including siding and roof materials shall be selected to blend in hue and brightness with the surroundings. Colors shall be earth tones: shades of grays, tans, browns, greens, and pale yellows; and shall be consistent with the mountain character of the area. (MM 5.4-2b)	Review and approval of Architectural Plans.	Prior to final project approvals	County of San Bernardino		
A-2c. Outside parking/storage areas associated with the boat dock activities shall be screened from view by the placement of landscaping and plantings which are compatible with the local environment and, where practicable, are capable of surviving with a minimum of maintenance and supplemental water. (MM 5.4-2c)	Review and approval of site and landscape plans.	Prior to final project approvals	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
A-2d. Construction plans for each individual lot shall include the identification and placement of vegetation with the mature height of trees listed. Landscaping and plantings should not obstruct significant views, within or outside of the project, either when installed or when they reach maturity. The removal of existing vegetation shall not be required to create views. (MM 5.4-2d)	Review and approval of landscape plans.	Prior to final project approvals	County of San Bernardino		
A-2e. A Note shall be placed on the Composite Development Plan stating that during construction plans review and prior to issuance of building permits for each lot, the building inspector shall refer to the Mitigation Monitoring and Compliance Program regarding these aesthetic impact mitigation measures. The building inspector shall coordinate with the Planning Division the review and approval of building plans in relation to these aesthetic impact mitigation measures, prior to approval and issuance of building permits. (MM 5.4-2e)	Review and implement proposed plans. Confirm coordination with Planning Division.	Prior to approval and issuance of building permits	County of San Bernardino		
A-3a. Any entry sign for the development shall be a monument style sign compatible with the mountain character, preferably, rock or rock appearance. (MM 5.4-3a)	Review and approval of architectural plans.	Prior to final project approvals	County of San Bernardino		
A-3b. Prior to recordation of the tract map (and/or any ground disturbance, whichever occurs first), landscaping or revegetation plans for lettered lots (A through D) shall be submitted to and approved by the San Bernardino County Land Use Services Department. (MM 5.4-3b)	Review and implement proposed plans.	Prior to recordation of the tract map or before ground-disturbing (preparation and construction activities)	County of San Bernardino		
A-4a. All exterior lighting shall be designed and located as to avoid intrusive effects on adjacent residential properties and undeveloped areas adjacent to the Project site. Low intensity street lighting and low-intensity exterior lighting shall be used throughout the development to the extent feasible. Lighting fixtures shall use shielding, if	Review and approval of lighting plans.	Prior to final project approvals	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
necessary to prevent spill lighting on adjacent off-site uses. (MM 5.4 4a)					
A-4b. Lighting used for various components of the development plan shall be reviewed for light intensity levels, fixture height, fixture location and design by an independent engineer, and reviewed and approved by the County Building and Safety Division to ensure that light emitted from the proposed project does not intrude onto adjacent residential properties. (MM 5.4-4b)	Review and approval of lighting plans by the County Building and Safety Division.	Prior to final project approvals	County of San Bernardino		
A-4c. The project shall use minimally reflective glass. All other materials used on exterior buildings and structures shall be selected with attention to minimizing reflective glare. (MM 5.4-4c)	Review and approval of architectural plans.	Prior to final project approvals	County of San Bernardino		
A-4d: Vegetated buffers shall be used along State Route 38 to reduce light intrusion on residential development and on forested areas located adjacent to the Project site. The vegetation buffers shall be reflected on the master landscape plan submitted to and approved by the County Land Use Services Department prior to the issuance of the first grading permit. (MM 5.4-4d)	Review and implement proposed plans.	Prior to final project approvals	County of San Bernardino		
A-4e. All outdoor light fixtures shall be cutoff luminaries and only high- or low-pressure sodium lamps shall be used. (MM 5.4-4f)	Review and approval of lighting plans.	Prior to final project approvals	County of San Bernardino		
A-4f. Mitigation Measures A-4a through A-4e shall be included in the Conditions, Covenants, and Restrictions (CC&Rs) of the Homeowner's Association (HOA). (MM5.4-4e)	Submit the Project CC&Rs to the County of San Bernardino Planning Department	Prior to final project approvals	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<p>AQ-1. Prior to construction of the project, the project proponent will provide a Fugitive Dust Control Plan that will describe the application of standard best management practices (BMPs) to control dust during construction. The Fugitive Dust Control Plan shall be submitted to the County and SCAQMD for approval and approved prior to construction. Best management practices will include, but not be limited to:</p> <ul style="list-style-type: none"> • For any earth moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction. • For all disturbed surface areas (except completed grading areas), apply dust suppression in a sufficient quantity and frequency to maintain a stabilized surface; any areas which cannot be stabilized, as evidenced by wind driven dust, must have an application of water at least twice per day to at least 80 percent of the unstabilized area. • For all inactive disturbed surface areas, apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind-driven fugitive dust, excluding any areas that are inaccessible due to excessive slope or other safety conditions. • For all unpaved roads, water all roads used for any vehicular traffic once daily and restrict vehicle speed to 15 mph. • For all open storage piles, apply water to at least 80 percent of the surface areas of all open storage piles on a daily basis when there is evidence of wind-driven fugitive dust. • Mass grading activities shall be limited to a maximum of 5 acres per day. 	Review and approval of the Fugitive Dust Control Plan.	Prior to issuance of grading plan	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
AQ-2. To reduce emissions from the construction equipment within the Project site, the construction contractor will: <ul style="list-style-type: none"> • Use catalyst and filtration technologies on mobile construction equipment. • All diesel-fueled engines used in construction of the project shall use ultra-low sulfur diesel fuel containing no more than 15-ppm sulfur, or a suitable alternative fuel. • All construction diesel engines, which have a rating of 50 hp or more, shall meet the Tier II California Emission Standards for off-road compression ignition engines. • Heavy-duty diesel equipment will be maintained in optimum running condition. 	Review and approval of construction plans and specifications.	Prior to issuance of applicable construction permits and during project construction	County of San Bernardino		
AQ-3. To reduce the emissions from wood burning apparatus; the following requirement will be placed on all new residences constructed on the proposed project's lots: <ul style="list-style-type: none"> • No open-hearth fireplace will be allowed in new construction, only EPA Phase II Certified fireplaces and wood stoves, pellet stoves, and natural gas fireplaces shall be allowed. 	Review and approval of construction plans and specifications.	Prior to final project approvals	County of San Bernardino		
AQ-4. To establish a "Good Neighbor Policy for Burning" that will further help reduce the potential for localized nuisance complaints related to wood burning; the proponent shall distribute an informational flyer to each purchaser of lots. At a minimum, the flyer will say: KNOW WHEN TO BURN <ul style="list-style-type: none"> • Monitor all fires; never leave a fire unattended. • Upgrade an older woodstove to one with a catalytic combustor that burns off excess pollutants. • Be courteous when visitors come to your home. Wood smoke can cause problems for people with developing 	Confirm distribution of flyer.	At the time of lot purchases	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<p>or sensitive lungs (i.e. children, the elderly) and people with lung disease.</p> <p>KNOW WHAT TO BURN</p> <ul style="list-style-type: none"> • Split large pieces of wood into smaller pieces and make sure it has been seasoned (allowed to dry for a year). Burning fresh cut logs = smoky fires. • When buying wood from a dealer, do not assume it has been seasoned. • Small hot fires are more efficient and less wasteful than large fires. • Never burn chemically treated wood or non-wood materials. • Manufactured fire logs provide a nice ambience, have the least impact to air quality, and are a good choice for homeowners who use a fireplace infrequently. <p>KNOW HOW TO BURN</p> <ul style="list-style-type: none"> • Proper combustion is key. Make sure your wood fire is not starved; if excess smoke is coming from the chimney or stack, the fire isn't getting enough air. • Visually check your chimney or stack 10 to 15 minutes after you light a fire to ensure it is not emitting excess amounts of smoke. • Homeowners should have woodstoves and fireplaces serviced and cleaned yearly to ensure they are working properly. 					
<p>BR-1a. The Project applicant shall coordinate with a botanical conservation seed collection/seed bank organization, such as the California Botanic Garden or Center for Plant Conservation, that shall be approved by USFWS to collect seed from the 672 affected ashy-gray Indian paintbrush plants within the Roadway, Lot F, and Lots 1, 2, 3, 4, 5, 47, 48, 49, and 50 after seed has set.</p>	<p>Confirm seed collection has occurred.</p>	<p>Prior to issuance of grading permits and the initiation of clearing or grading activities on the Project site</p>	<p>United States Fish and Wildlife Service (USFWS)</p>		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<p>The seed collection shall be carried out by a qualified biologist(s) familiar with the ashy-gray Indian paintbrush species. Prior to the collection of seeds, the approved Biologist/Botanist shall prepare and submit for approval by USFWS and California Botanic Garden a Seed Collection and Banking Plan that is consistent with the California Botanic Garden Seed Collection Policy and Seed Collection Guidelines. Per California Botanic Garden Seed Collection Guidelines, a minimum of 2,500 seeds obtained from a minimum of 50 individual plants shall be collected.</p> <p>Overheating can kill seeds, and excessive heat and temperature fluctuations shall be avoided. High moisture content during storage can also cause seed damage and loss of viability due to molds, and as such, high moisture periods shall also be avoided. Seed collection shall be collected and stored in such a way as to ensure its viability, where the sum of temperature (degrees F) and relative humidity (%) does not exceed 100. The seed collection shall occur prior to construction or ground disturbance within the lots occupied by the ashy-gray Indian paintbrush species. USFWS shall be contacted upon the coordination of the seed collection with the botanical conservation seed collection/seed bank organization to provide an opportunity for collaboration on the species conservation efforts. Any recommendations by USFWS for seed collection and seed banking shall be taken into account.</p>					
BR-1b. Prior to the initiation of clearing or grading activities on the project site, the 6.2-9.2-acre on-site conservation easements (including Lot-A and Lot-H) covering all of Lots A, B and H, and parts of Lots C and D shall be established. The conservation easement shall be	Confirm recordation of easement.	Prior to issuance of grading permits and the initiation of clearing or grading activities on the Project site	California Department of Fish and Wildlife (CDFW)		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
in favor of a California Department of Fish and Wildlife approved conservation or mitigation bank (https://wildlife.ca.gov/Conservation/Planning/Banking/Approved-Banks) and shall be recorded in the San Bernardino County Recorder's Office. The easement shall provide for the continued protection and preservation of the property American Bald Eagle and Rare Plant habitat through development of a Long-Term Management Plan (LTMP). The LTMP shall provide for the preservation, restoration, and enforcement of the Conservation Areas so that each area is maintained, and restored where needed, to its natural condition. The LTMP will also include documentation of baseline conditions, any needed site preparation, anticipated restoration/enhancement activities, a biological monitoring program, the creation of a set of success criteria for managing the site, anticipated maintenance activities, an annual reporting process, and a set of contingency or adaptive management measures to be implemented in case success criteria are not being met; to ensure that the implementation of the LTMP is fully funded, a Property Action Report (PAR) will be prepared that will document costs for site security, maintenance activities, site preparation, restoration/enhancements activities, biological monitoring, contingency measure and annual reporting. The costs identified in the PAR will be used to develop a non-wasting endowment that will ensure all costs will be available to establish the site, conduct any needed restoration and enhancements, and to fund reoccurring annual cost needed to manage the site in perpetuity. The easement shall, at a minimum, restrict all use of the property that has the potential to impact bald eagle perch trees, the quality of valuable biological habitat, including the occurrences of the Federally Threatened ash-gray					

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
Indian paintbrush. The property shall be fenced and signs shall be placed on the fencing indicating the sensitive nature of the property habitat and warning that any entry would be prosecuted as a trespass. Project proponent shall also create a perpetual, non-wasting endowment for the management and preservation of the mitigation property. The management entity will be approved by the CDFW.					
<p>BR-1c. The Project Applicant shall take the following actions to further ensure the permanent preservation of the Conservation Areas:</p> <ul style="list-style-type: none"> Except for access by residents to Lot B & C, access to the Conservation Areas by pedestrians and motor vehicles shall be restricted. The Conservation Areas shall be secured through installation of fencing or other barriers to prevent access to Conservation Areas. Barriers shall be installed prior to commencement of any construction activities on-site. The Project Applicant shall also include provisions in the CC&Rs for the Project instituting penalties to residents who violate the restrictions and cause any damage to the protected plant habitat and Bald Eagle perch trees. Include enforcement provisions in the CC&Rs requiring the Homeowner's Association, individual resident within the project, the Conservation or Mitigation Bank and/or County of San Bernardino to enforce any violation of the provisions intended for the protection of sensitive plant species located within Lot A and Lot H. Include enforcement provisions in the CC&Rs requiring the Homeowner's Association to implement an awareness program for special status plant species, specifically ashy-gray Indian paintbrush, with special attention to homeowners on lots with retained ashy-gray Indian paintbrush. The awareness program shall 	<p>Submit the Project CC&Rs to the County of San Bernardino Planning Department</p> <p>Distribute list of prohibited invasive plant to lot owners</p> <p>Review and approval of Grading Plan</p> <p>Submission of annual biological monitoring report to be retained in the project file.</p> <p>Prepare annual biological monitoring report on rare plan</p>	<p>Prior to the recordation of the final subdivision</p> <p>During Project implementation</p>	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<p>encourage residents to retain ashy-gray Indian paintbrush within individual property owner lots in a natural state to preserve the species.</p> <ul style="list-style-type: none"> • Include enforcement provisions in the CC&Rs requiring the Homeowner's Association to prohibit and enforce prohibition of use of OHV within the Project site. • Install appropriate signage identifying Conservation Areas and the sensitive nature of such areas on the Project site and that access is prohibited. The Conservation Areas shall be monitored on a regular basis by the Conservation Entity. • Prohibit use of invasive plant species in landscaping. Each lot owner shall be given a list of prohibited invasive plant species upon purchase of lot with the parcel. Landscape plans for individual parcels shall be approved by the County prior to development to ensure no inappropriate plant material is incorporated into the design of any individual lot or common area which may compromise the quality of the Conservation Areas. • Development may not change the natural hydrologic conditions of the Conservation Areas. All grading plans shall be reviewed by the County to ensure hydrologic conditions of the conservation lands are not adversely changed by development. • The Project Applicant or Approved Conservation or Mitigation Bank shall monitor Conservation Areas on a periodic basis to ensure invasive, non-native species are not present. All non-native invasive plant species shall be removed from Conservation Areas. • Fuel modification zones and programs shall not be implemented in Lots A and H. • The Conservation Entity shall prepare an annual biological monitoring report identifying the current 	<p>species status and necessary enhancement and protection actions</p> <p>Routine monitoring of rare plant resources on Lot A and H</p>				

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<p>status of the rare plant species and any necessary actions to further enhance and protect the habitat.</p> <ul style="list-style-type: none"> The Conservation Entity shall conduct routine monitoring of rare plant resources on Lot A and H. The occurrence of non-native species outbreaks, or other examples of ecological disturbance as a result of indirect impacts of development in and around Lots A and H shall be reported in the annual biological monitoring reports and remedial action shall be recommended and implemented by the Conservation Entity. 					
<p>BR-1d. Construction (i.e. ground disturbing activities) that falls within the rear portions of Lots 1, 4, 47, 48, 49, and 50 shall be prohibited by means of building envelopes or building setback lines to prevent construction in the occupied ashy-gray Indian paintbrush habitat. To ensure that ashy-gray Indian paintbrush occurring within building setback lines within the rear portions of Lots 1, 4, 47, 48, 49, and 50 are not impacted by project-related activities, the Project Applicant shall install orange construction fence around the perimeter of the rear building setbacks. All ground disturbing activities shall be restricted outside of the rear building setbacks of Lots 1, 4, 47, 48, 49, and 50.</p>	Review and approval of site plans.	Prior to final project approvals	County of San Bernardino		
<p>BR-2. Trees and downed logs shall remain in place, to the extent that clearing is not required by the development process, and a 50-foot setback (measured on each side of the centerline) must be maintained along the deepest ravine at the eastern edge of the property. This measure will serve to preserve habitat for potential special status wildlife species.</p>	On-site inspection to confirm implementation of mitigation measures.	During construction	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<p>BR-3. Given the negative results of on-site surveys and the available technical and peer reviewed literature, negative effects to the San Bernardino flying squirrel are not expected. However, because marginal foraging habitat was found on-site, the following mitigation measures will be implemented in the lots with densely forested areas and snags. These mitigation measures are to be implemented to avoid and minimize impacts to San Bernardino flying squirrels:</p> <ul style="list-style-type: none"> • The Project Applicant shall have a qualified biologist as a monitor just prior to and during all tree removal on-site. • Minimize the removal of large coarse woody debris (>10cm diameter), which provide microhabitat for the growth of hypogeous fungi. • Limit removal of standing snags (>25cm dbh) and large trees (>25cm dbh), which provide both structural complexity and potential nesting habitat. • Prioritize the retention of large trees and snags with visible potential cavity nesting structures, which are associated with higher densities of northern flying squirrels. • Minimize the loss of continuous canopy closure, especially in the drainages, which provides protection from predators while foraging and may play an important role in maintaining habitat connectivity. • The Project Applicant must compensate for the removal of suitable habitat through construction and erection of two nest boxes and one aggregate box per snag removed. • The Project Applicant is required to provide homeowners with information on the biology of the San Bernardino flying squirrel and suggest steps that homeowners can take to reduce their urban-edge effects. 	Confirm presence of a qualified biologist.	During project construction	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<ul style="list-style-type: none"> All subsequent home developers must comply with these provisions, which shall be enforced by the County of San Bernardino through implementation of the Mitigation Monitoring and Reporting Program as mandated by CEQA. <p>If the monitoring biologist observes a flying squirrel during pre- construction and/or construction monitoring, the biologist will immediately halt work until the occupied tree can be vacated prior to felling the tree; however, if the work is during the nesting season (generally March through May), when baby squirrels could be present, the nest will not be vacated until after the nesting season ends (June 1st), as cleared by the monitoring biologist.</p>					
<p>BR-4. Eagle perch trees identified in the 2002 Bonterra Consulting Bald Eagle Survey for Tentative Tract 16136, Moon Camp, Fawnskin, San Bernardino County, California, (see Appendix A of the Revised and Recirculated Draft EIR No. 2), and the Long Term Management Plan shall be preserved in place upon project completion. If any of the designated perch trees should become hazardous and need to be taken down, replacement will be either (1) at a 5:1 ratio with the creation of artificial perch trees within the Conservation Areas or by enhancing other trees by trimming and limbing to make suitable for eagle perching. The exact method of perch tree replacement shall be made after consultation with a certified arborist. Prior to commencement of construction activity, the applicant shall have a qualified consultant survey all trees on- site to determine the location of all perch trees to be preserved. Any development that may occur within the Project site and in the individual lots must avoid impacts to trees larger than 24 inches dbh and their root</p>	Confirm presence of qualified consultant.	Prior to commencement of construction activity and during construction	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
structures to the maximum extent feasible. If any additional non-perch trees on-site larger than 24 inches dbh are removed, then a replacement ratio of 2:1 shall be required and replacement trees shall be 24-inch box trees or larger. Whenever an eagle perch tree or other non-perch tree larger than 24 inches dbh is removed, the Homeowners Association shall retain a qualified consultant to oversee removal and compliance with the replacement requirement. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual lots must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.					
BR-5. Prior to vegetation clearing, grading, or other disturbance, the Project site shall be surveyed to identify all large trees (i.e., greater than 20 inches in diameter at 4.5 feet from the ground) within 600 feet from the high water line. Trees identified on the Project site as having a diameter in excess of 20 inches at 4.5 feet from the ground within 600 feet of the shoreline shall be documented and tagged. Any development that may occur within the Project site and in the individual lots shall avoid impacts to tagged trees and their root structures. If such trees cannot be avoided, their removal shall be coordinated with the County of San Bernardino to minimize impacts to the extent feasible. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of individual lots must be clearly presented	Confirm completion of survey for Project site.	Prior to vegetation clearing, grading, or other disturbance	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.					
<p>BR-6. Seven days prior to the onset of construction activities, a qualified biologist shall survey within the limits of project disturbance for the presence of any active raptor nests. Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFW.</p> <p>If nesting activity is present at any raptor nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for raptors in the region of the Project site normally occurs from February 1 to July 31. To protect any nest site, the following restrictions on construction are required between February 1 and July 31 (or until nests are no longer active as determined by a qualified biologist): (1) clearing limits shall be established a minimum of 300 feet in any direction from any occupied nest and (2) access and surveying shall not be allowed within 200 feet of any occupied nest. Any encroachment into the 300/200-foot buffer area around the known nest shall only be allowed if it is determined by a qualified biologist that the proposed activity shall not disturb the nest occupants. Construction during the nesting season can occur only at the sites if a qualified biologist has determined that fledglings have left the nest.</p>	Confirm completion of survey for Project site by a qualified biologist.	Seven days prior to the onset of construction activities	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
BR-7. Vegetation removal, clearing, and grading on the Project site shall be performed outside of the breeding and nesting season (between February 1 and July 31) to minimize the effects of these activities on breeding activities of migratory birds and other species. If clearing occurs during breeding season, a 30-day clearance survey for nesting birds shall be conducted. Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFW. If nesting activity is present at any nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code.	Confirm vegetation removal, clearing, and grading does not occur during nesting season. If so, confirm 30-day clearance survey was completed.	Prior to project construction	County of San Bernardino		
BR-8. The use of the boat dock for motorized boating shall be prohibited between the dates of December 1 and April 1. No motorized boats shall be allowed to launch or moor in the vicinity of the boat dock at any time during this period. This restriction shall be clearly displayed on signage at the entrance to the parking lot and on the boat dock visible from both land and water. This requirement shall also be published in the Homeowner's Association Conditions, Covenants & Restrictions (CC&Rs).	Submit the Project CC&Rs to the County of San Bernardino Planning Department.	Prior to approval of final Project plans	County of San Bernardino		
BR-9. Street lamps on the Project site shall not exceed 20 feet in height, shall be fully shielded to focus light onto the street surface and shall avoid any lighting spillover onto adjacent open space or properties. Furthermore, street lights shall utilize low color temperature lighting (e.g., red or orange).	Review and approval of lighting plans.	Prior to final project approvals	County of San Bernardino		
BR-10. Outdoor lighting for proposed homes on the individual tentative tracts shall not exceed 1,000 lumens. Furthermore, residential outdoor lighting shall not exceed 20 feet in height and must be shielded and focused	Review and approval of lighting plans.	Prior to final project approvals	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
downward to avoid lighting spillover onto adjacent open space or properties. These restrictions on outdoor lighting of the individual lots must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This requirement shall also be published in the Homeowner's Association CC&Rs.					
<p>BR-11. To limit the amount of human disturbance on adjacent natural open space areas, signs shall be posted, to the satisfaction of the Planning Director or appointee, along the northern and eastern perimeter of the Project site where the property boundary abuts USFS open space with the following statement: "Sensitive plant and wildlife habitat. Please use designated trails and keep pets on a leash at all times."</p> <p>In addition, a requirement stating that residents shall keep out of adjacent open space areas to the north with the exception of designated trails will be published in the Homeowner's Association CC&Rs and a map of designated hiking trails will be provided to all residents.</p>	<p>On-site inspection to confirm implementation of mitigation measures.</p> <p>Submit the Project CC&Rs to the County of San Bernardino Planning Department.</p>	<p>During Project implementation</p> <p>Prior to final project approvals</p>	County of San Bernardino		
<p>BR-12. Prior to recordation of the final map, a landscaping plan for the entire tract shall be prepared (inclusive of a plant palette) with an emphasis on native trees and plant species, and such plan shall be submitted to the County of San Bernardino for review and approval by a qualified biologist. The review shall determine that invasive, non-native plant species are not to be used in the proposed landscaping. The biologist will suggest appropriate native plant substitutes or non-invasive, nonnative plants. A note shall be placed on the Composite Development Plan indicating that all proposed landscaping (including landscaping on individual lots)</p>	<p>Review and implement proposed plans.</p> <p>Submit the Project CC&Rs to the County of San Bernardino Planning Department.</p>	Prior to recordation of the final map	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
shall conform to the overall approved tract map landscaping plan. A requirement shall be included stating that residents shall be restricted to the use of tree and plant species approved per the overall tract map landscaping plan. The Homeowner's Association CC&Rs shall also require individual lot owners to use only tree and plant species approved per the overall tract map landscaping plan/plant palette.					
BR-13. Prior to issuance of grading permits, the Project applicant shall obtain all required authorization from agencies with jurisdiction over all unavoidable impacts to State and Federal jurisdictional lakes, streams, and associated habitat within the Project site. Impacted features shall be offset through onsite restoration, offsite restoration, or purchase of credits at an agency-approved mitigation bank in the region at no less than a 3:1 for direct impacts and 1:1 for indirect impacts if impacts cannot be avoided.	Confirm receipt of required authorizations.	Prior to issuance of grading permits	County of San Bernardino		
HAZ-1. Fire Access Road Maintenance: Maintenance is an important component for the long-term reliability of all Project roadways. Maintenance obligations for the Moon Camp Project shall be the responsibility of the HOA for routine road surface and roadside vegetation maintenance throughout the Project site, internal to the Project site, and excluding maintenance along SR-38, for which Caltrans is responsible.	Submit the Project CC&Rs to the County of San Bernardino Planning Department for HOA responsibilities Routine maintenance of road surface and roadside vegetation	During Project implementation (operation)	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
HAZ-2. Updates to the Wildfire Evacuation Plan: The Wildfire Evacuation Plan shall be periodically updated by the HOA, which shall be included as a requirement in the HOA bylaws. The updates shall follow lessons learned from actual wildfire or other emergency evacuation incidents, as new technologies become available that would aid in the evacuation process, and as changing landscapes and development patterns occur within and adjacent to the Project site that may impact how evacuation is accomplished. This shall occur at least every 2 years. Additionally, This Wildfire Evacuation Plan shall be adjusted and continued coordination by the Owner(s) and/or Developer and/or Property Manager and fire/law enforcement agencies shall occur during each of the construction phases. With each phase, the evacuation routes may be subject to changes with the addition of both primary and secondary evacuation routes.	Submit HOA bylaws to the County of San Bernardino Planning Department	During Project implementation (operation)	County of San Bernardino		
HAZ-3. 1. Moon Camp shall designate a Fire Safety Coordinator(s) to oversee implementation of the Wildfire Evacuation Plan and overall fire coordination with Big Bear Fire Department and San Bernardino County Fire Protection District. 2. The Fire Safety Coordinator(s) shall coordinate an annual fire evacuation drill/fire exercise to ensure proper safety measures have been implemented, facility awareness and preparation of a facility-wide "Ready, Set, Go!" plan. The Fire Safety Coordinator shall also organize resident training and awareness through various practices: i. New hire fire awareness and evacuation training ii. Ongoing resident training iii. Facility sweeps by trained residents	Review and implement proposed plan. Submit HOA bylaws to the County of San Bernardino Planning Department	During Project implementation (operation)	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<p>iv. Strategically placed fire safety and evacuation/sheltering protocol information, as determined by the Fire Safety Coordinator.</p> <p>3. The Moon Camp Project shall include a proactive facility wildfire education program utilizing a multi-pronged approach to fire safety following the “Ready, Set, Go!” approach to wildfire evacuation, to include, but not limited to:</p> <p>i. Annual wildfire and evacuation safety awareness meeting in coordination with local fire agencies.</p> <p>ii. Annual reminder notices shall be provided to each resident encouraging them to review the Wildfire iii. Evacuation Plan and be familiar with evacuation protocols.</p> <p>iii. The Project HOA website shall host a webpage dedicated to wildfire and evacuation education and awareness, which should include a copy of this Wildfire Evacuation Plan and the resources provided herein.</p> <p>4. The Project includes a contingency plan for the rare occurrence that evacuation is not safe that includes residents sheltering in place within onsite structures.</p> <p>5. The Fire Safety Coordinator shall submit a report detailing compliance with the above provisions to the County on a yearly basis to demonstrate compliance with this measure.</p>					
HYD-1. Prior to issuance of a building permit, a program satisfactory to the County will be formulated to handle storm drain waters adequately.	Review and implement proposed program.	Prior to issuance of a building permit	County of San Bernardino		
HYD-2. All required drainage improvements must be designed and constructed to County standards. Tentative tract map, site plan, and other precise plans for individual lots will be accompanied by adequate plans for drainage	Review and implement proposed plans.	Prior to final project approvals	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
improvements prepared by registered professional engineers.					
HYD-3. The proposed cross culverts shall be sized for 100-year burn and bulking flow rates. The burn and bulking method would increase the runoff from the natural areas. The method provided in the Los Angeles County Hydrology Manual is recommended. In addition, the cross culverts shall all be designed with headwalls to prevent CMP crushing, and shall be maintained adequately.	Review and approval of proposed plans On-site inspection to confirm implementation of mitigation measures.	Prior to final project approvals During construction activities	County of San Bernardino		
HYD-4. To mitigate sediment transport during construction, the developer shall submit a sedimentation control plan with the grading plan for review and approval by the Public Works Department. The Project engineer shall certify compliance.	Review and implement proposed plans.	Prior to final project approvals	County of San Bernardino Project Engineer		
HYD-5. Prior to Grading Permit issuance and as part of the Proposed Alternative Project's compliance with the NPDES requirements, a Notice of Intent (NOI) shall be prepared and submitted to the Santa Ana Regional Water Quality Control Board providing notification and intent to comply with the State of California general permit. Also, a Storm Water Pollution Prevention Plan (SWPPP) shall be completed for the construction activities on-site. A copy of the SWPPP shall be available and implemented at the construction-site at all times. The SWPPP shall outline the source control and/or treatment control BMPs to avoid or mitigate runoff pollutants at the construction site to the "maximum extent practicable."	Review and implement proposed plan.	Prior to Grading Permit issuance	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<p>HYD-6. At a minimum, the following shall be implemented from the California Storm Water Best Management Practice Handbook-Construction Activity:</p> <ul style="list-style-type: none"> • Dewatering Operations—This operation requires the use of sediment controls to prevent or reduce the discharge of pollutants to storm water from dewatering operations. • Paving Operations—Prevent or reduce the runoff of pollutants from paving operations by proper storage of materials, protecting storm drain facilities during construction, and training employees. • Structural Construction and Painting—Keep site and area clean and orderly, use erosion control, use proper storage facilities, use safe products and train employees to prevent and reduce pollutant discharge to storm water facilities from construction and painting. • Material Delivery and Storage—Minimize the storage of hazardous materials on-site. If stored on-site, keep in designated areas, install secondary containment, conduct regular inspections and train employees. • Material Use—Prevent and reduce the discharge of pesticides, herbicides, fertilizers, detergents, plaster, petroleum products and other hazardous materials from entering the storm water. • Solid Waste Management—This BMP describes the requirements to properly design and maintain trash storage areas. The primary design feature requires the storage of trash in covered areas. • Hazardous Waste Management—This BMP describes the requirements to properly design and maintain waste areas. • Concrete Waste Management—Prevent and reduce pollutant discharge to storm water from concrete waste 	<p>Review Project SWPPP to confirm inclusion of the listed BMPs</p> <p>Confirm BMPs are incorporated into design and construction phases.</p>	<p>Prior to SWPPP approval</p> <p>Before ground-disturbing (preparation and construction activities)</p>	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<p>by performing on and off-site washouts in designated areas and training employees and consultants.</p> <ul style="list-style-type: none"> • Sanitary Septic Water Management—Provide convenient, well-maintained facilities, and arrange regular service and disposal of sanitary waste. • Vehicle and Equipment Cleaning—Use off-site facilities or wash in designated areas to reduce pollutant discharge into the storm drain facilities. • Vehicle and Equipment Fueling—Use off-site facilities or designated areas with enclosures or coverings to reduce pollutant discharge into the storm drain facilities. • Vehicle and Equipment Maintenance—Use off-site facilities or designated areas with enclosing or coverings to reduce pollutant discharge into the storm drain facilities. In addition, run a “dry site” to prevent pollution discharge into storm drains. • Employee and Subcontractor Training—Have a training session for employees and subcontractors to understand the need for implementation and usage of BMPs. • Preservation of Existing Vegetation—Minimize the removal of existing trees and shrubs since they serve as erosion control. • Seeding and Planting—Provide soil stability by planting and seeding grasses, trees, shrubs, vines, and ground cover. • Mulching—Stabilize cleared or freshly seeded areas with mulch. • Geotextiles and Mats—Natural or synthetics material can be used for soil stability. • Dust Control—Reduce wind erosion and dust generated by construction activities by using dust control measures. 					

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<ul style="list-style-type: none"> • Construction Road Stabilization—All on-site vehicle transport routes shall be stabilized immediately after grading and frequently maintained to prevent erosion and control dust. • Stabilized Construction Entrance—Stabilize the entrance pad to the construction area to reduce amount of sediment tracked off-site. • Earth Dikes—Construct earth dikes of compacted soil to divert runoff or channel water to a desired location. Temporary Drains and Swales—Use temporary drains and swales to divert off-site runoff around the construction-site and stabilized areas and to direct it into sediment basins or traps. • Outlet Protection—Use rock or grouted rock at outlet pipes to prevent scouring of soil caused by high velocities. • Check Dams—Use check dams to reduce velocities of concentrated flows, thereby reducing erosion and promoting sedimentation behind the dams. Check dams are small and placed across swales and drainage ditches. • Silt Fence—Composed of filter fabric, these are entrenched, attached to support poles, and sometimes backed by wire fence support. Silt fences promote sedimentation behind the fence of sediment-laden water. • Straw Bale Barrier—Place straw bales end to end in a level contour in a shallow trench and stake them in place. The bales detain runoff and promote sedimentation. • Sand Bag Barriers—By stacking sand bags on a level contour, a barrier is created to detain sediment-laden water. The barrier promotes sedimentation. 					

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<ul style="list-style-type: none"> • Brush or Rock Filter—Made of 0.75 to 3-inch diameter rocks placed on a level contour or composed of brush wrapped in filter cloth and staked to the toe of the slope provides a sediment trap. • Storm Drain Inlet Protection—Devices that remove sediment from sediment laden storm water before entering the storm drain inlet or catch basin. • Sediment Trap—A sediment trap is a small, excavated, or bermed area where runoff for small drainage areas can pass through allowing sediment to settle out. 					
<p>HYD-7. A water quality maintenance program will be implemented to mitigate the impact of Proposed Alternative Project generated runoff on surface water quality over the long term. The program outlined in Water Pollution Aspects of Street Surface Contaminants (prepared by the United States Environmental Protection Agency) provides recommendations for street cleaning and prevention of pollution generation.</p> <ul style="list-style-type: none"> • Prior to Grading Permit issuance, a Water Quality Management Plan (WQMP) shall be developed and shall include both Non-Structural and Source Control BMPs. The WQMP shall conform to the San Bernardino County Draft NPDES permit and WQMP standards. The following are the minimum required controls to be implemented as a part of the WQMP for Urban Runoff. • Education for Property Owners, Tenants and Occupations—The Property Owners Association is required to provide awareness educational material, including information provided by San Bernardino County. The materials shall include a description of chemicals that should be limited to the property and proper disposal, including prohibition of hosing waste directly to gutters, catch basins, storm drains or the lake. 	Review and implement proposed program.	<p>Prior to issuance of grading permits</p> <p>During grading activities</p> <p>During Project implementation</p>	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<ul style="list-style-type: none"> • Activity Restrictions—The developer shall prepare conditions, covenants and restriction of the protection of surface water quality. • Common Area Landscape Management—For the common landscape areas on-going maintenance shall occur consistent with County Administrative Design Guidelines or city equivalent, plus fertilizer and pesticide usage consistent with the instructions contained on product labels and with regulation administered by the State Department of Pesticide Regulation or county equivalent. • Common Area Catch Basin Inspection—Property Owners • Associations shall have privately owned catch basins cleaned and maintained, as needed. These are intended to prevent sediment, garden waste, trash and other pollutants from entering the public streets and storm drain systems. • Common Area Litter Control—POAs shall be required to implement trash management and litter control procedures to minimize pollution to drainage waters. • Street Sweeping Private Streets and Parking Lots—Streets and Parking lots shall be swept as needed, to prevent sediment, garden waste, trash and other pollutants from entering public streets and storm drain systems. 					
<p>HYD-8. The following controls from the California Storm Water Best Management Practice Handbook—Municipal shall be employed:</p> <ul style="list-style-type: none"> • Housekeeping Practices—This entails practices such as cleaning up spills, proper disposal of certain substances and wise application of chemicals. • Used Oil Recycling—May apply to maintenance and security vehicles. 	Confirm BMPs are incorporated into design and construction plans.	Prior to construction of project	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<ul style="list-style-type: none"> Vegetation Controls—Vegetation control typically includes chemical (herbicide) application and mechanical methods. Chemical methods are discussed in SC10. Mechanical methods include leaving existing vegetation, cutting less frequently, hand cutting, planting low maintenance vegetation, collecting and properly disposing of clippings and cuttings, and educating employees and the public. Storm Drain Flushing—Although general storm drain gradients are sufficiently steep for self-cleansing, visual inspection may reveal a buildup of sediment and other pollutants at the inlets or outlets, in which case flushing may be advisable. 					
HYD-9. The Water Quality Management Plan (WQMP) shall include Structural or Treatment BMPs. The structural BMPs utilized shall focus on meeting potential TMDL requirements for noxious aquatic plants, nutrients, sedimentation and siltation. The structural BMPs shall conform to the San Bernardino County NPDES permit and the San Bernardino WQMP standards.	Confirm BMPs are incorporated into the WQMP.	Prior to final Project approvals	County of San Bernardino		
HYD-10. Consistent with the WQMP guidelines contained in the Draft National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for San Bernardino County, Structural BMPs shall be required for the Proposed Alternative Project. They shall be sized to comply with one of the following numeric sizing criteria or be considered by the Permittees to provide equivalent or better treatment. Volume-based BMPs shall be designed to infiltrate or treat either: <ul style="list-style-type: none"> The volume of runoff produced from the 85th percentile 24-hour storm event, as determined from the local historical rainfall record; or 	Confirm BMPs are incorporated into the WQMP.	Prior to final Project approvals	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<ul style="list-style-type: none"> The volume of the annual runoff produced by the 85th percentile 24-hours rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998); or The volume of annual runoff based on unit basin storage volume, to achieve 80 percent or more volume treatment by the method recommended in California Stormwater Best Management Practice Handbook—Industrial/Commercial (1993); or The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile 24-hour runoff event. <p>—OR—</p> <ul style="list-style-type: none"> Flow-based BMPs shall be designed to infiltrate or treat either: <ul style="list-style-type: none"> The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or The maximum flow rate of runoff, as determined from the local historical rainfall record that achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two. 					
<p>HYD-11. The following are the minimum required controls to be implemented as a part of the Water Quality Management Plan (WQMP) for Urban Runoff.</p> <ul style="list-style-type: none"> Control of Impervious Runoff—Surface runoff shall be directed to landscaped areas or pervious areas. 	On-site inspection to confirm implementation	Ongoing	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<ul style="list-style-type: none"> • Common Area Efficient Irrigation—Physical implementation of the landscape plan consistent with County Administrative Design Guidelines or city equivalent, which may include provision of water sensors, programmable irrigation timers, etc. • Common Area Runoff—Minimizing Landscape Design—Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. • Catch Basin Stenciling—“No Dumping—Flows to Lake” or equivalent effective phrase shall be stenciled on catch basins to alert the public as to the destination of pollutant discharging into storm drain. • Debris Posts—These shall be installed to prevent large floatable debris from entering the storm drains. They shall be placed upstream of the cross culverts. • Inlet Trash Racks—These shall be installed where appropriate to reduce intake and transport through the storm drain system of large floatable debris. Trash racks shall be provided where drainage from open areas enters storm drain or cross culverts. 	of mitigation measures.				
HYD-12. Storm water treatment under the NPDES Permit and the future TMDL requirements shall include the construction of treatment BMPs.	Verify construction of treatment BMPs are included.	During construction activities	County of San Bernardino		
HYD-13. Treatment BMPs appropriate for on-site use shall include infiltration trenches and basins, swales, inlet filtration, and/or water quality basins.	Confirm BMPs are incorporated.	Every 5 years	County of San Bernardino		
HYD-14. All storm water runoff shall be treated before leaving the site to reduce pollutants in Big Bear Lake.	Review and approval of project WQMP	Prior to final Project approvals	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<p>HYD-15. Infiltration trenches and/or basins shall be used on site to meet potential future TMDLs for noxious aquatic plants and nutrients. Infiltration trenches and basins treat storm water runoff through filtration. A typical infiltration trench is essentially an excavated trench that is lined with filter fabric and backfilled with stones. Depth of the infiltration trench shall range from three to eight feet and shall be located in areas with permeable soils, and water table and bedrock depth situated well below the bottom of the trench. Trenches shall not be used to trap coarse sediments since large sediment would likely clog the trench. Grass buffers may be installed to capture sediment before it enters the trench to minimize clogging.</p> <p>Infiltration basins shall be used for drainage areas between 5 and 50 acres. Infiltration basins shall be either in-line or offline, and may treat different volumes such as the water quality volume or the 2-year or 10-year storm.</p>	Review and approval of project WQMP to ensure the listed BMPs are incorporated into the WQMP.	Prior to final Project approvals	County of San Bernardino		
<p>HYD-16. The Proposed Alternative Project shall implement either vegetative swales, enhanced vegetated swales utilizing check dams and wide depressions, a series of small detention facilities designed similarly to a dry detention basin, or a combination of these treatment methods into a treatment train (series of Structural BMPs). The Water Quality Management Plan shall address treatment for the Proposed Alternative Project to assure that runoff from the site is treated to the “maximum extent practicable.” The swales shall be treated as water quality features and shall be maintained differently than grass areas. Specifically, pesticides, herbicide, and fertilizers, which may be used on the grass areas, shall not be used in the vegetation swales.</p>	Review and approval of project WQMP to ensure the listed BMPs are incorporated into the WQMP.	Prior to final project approvals	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<p>HYD-17. Filtration shall be implemented as a treatment method and shall use drop-in infiltration devices or inline devices. Drop-infiltration devices at all curb inlets within the internal parking lots shall be implemented to provide potential pollutant removal. Existing examples of these filtration devices include the Drain Pac Storm Drain Inserts and Fossil Filters. These types of devices are efficient at removing oil and grease, debris, and suspended solids from treated waters. Some of these devices have also exhibited high efficiencies at removing heavy metals and other pollutants.</p> <p>Inline devices suggested for use on-site include the Continuous Deflection Separator (CDS unit). Once the runoff has entered the storm drain, an in-line diversion would direct the treatment flow to a CDS unit. The CDS unit is a non-blocking, non-mechanical screening system, which would provide a second line of defense for solids removal. Adsorption materials can be added within the CDS unit to aid in the removal of oil and grease. The treated flow would then exit the CDS unit and continue downstream. Monitoring of filtration devices shall be conducted.</p> <p>The use of street sweeps on the parking lots and streets shall aid in reducing the amounts of sediment and debris that flow through the devices. This would extend the effectiveness of the devices during a storm event and would lower the frequency of required maintenance. The devices shall be checked and cleaned, if necessary, once a month during the rainy season, following any precipitation and at the end of the dry season prior to the first precipitation event of the rainy season.</p> <p>Consideration shall be given to using these filtration units in other areas besides the parking lot inlets. Another potential</p>	<p>Review and approval of project WQMP to ensure the listed BMPs are incorporated into the WQMP.</p> <p>Routine monitoring of filtration devices.</p>	<p>Prior to final project approvals</p> <p>During Project implementation</p>	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
location is at the downstream end of the tributary pipes that feed the discharge point. Siting these units at a downstream point would allow for the treatment of a greater amount of runoff.					
HYD-18. The Developer shall comply with any requirements of the U.S. Army Corps of Engineers (ACOE) and the California Department of Fish and Wildlife (CDFW) regarding water quality and drainage.	Review and approval of Project SWPPP and WQMP to confirm that ACOE and CDFW requirements are met through the incorporation of appropriate BMPs	Prior to final project approvals	County of San Bernardino		
HYD-19. A well located on the site of the Proposed Alternative Project, if not used as a water supply well or a monitoring well, shall be capped and taken out of service in accordance with accepted civil engineering standards.	Confirm implementation of mitigation measures.	Ongoing	County of San Bernardino		
NOI-1. Construction contractors shall be required to ensure that construction equipment is well tuned and maintained according to the manufacturer's specifications, and that the equipment's standard noise reduction devices are in good working order. (MM5.7-1b, modified.)	Confirm implementation of mitigation measures.	During construction activities	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
NOI-2. Consistent with the County of San Bernardino Development Code Section 87.0901, construction activities shall be limited as follows (MM 5.7-1a modified): For general construction activities, the operation of construction equipment and outdoor construction or repair work shall be limited to the hours between 7:00 a.m. and 7:00 p.m., Monday through Saturday.	Confirm implementation of mitigation measures.	Prior to issuance of grading permits During construction activities	County of San Bernardino		
NOI-3. Construction equipment noise shall be minimized during project construction by muffling and shielding intakes and exhaust on construction equipment (per the manufacturers' specifications) and by shrouding or shielding impact tools. All equipment shall have sound-control devices no less effective than those provided by the manufacturer. (MM5.7-1c, modified.)	Confirm implementation of mitigation measures.	During construction activities	County of San Bernardino		
NOI-4. Construction activities contractors shall locate fixed construction equipment (such as compressors and generators) and construction staging areas as far as possible from adjacent residences. Activities within these staging areas shall conform to the time limitations established in Mitigation Measure NOI-2. (MM5.7-1d, modified.)	Confirm implementation of mitigation measures.	During construction activities	County of San Bernardino		
PS-1. The fire flow requirement shall be 1750 gpm @ 2 hours based on homes in the range of 3,600 to 4,800 square feet, and 2,000 gpm @ 2 hours for homes greater than 4,800 square feet. (MM 5.3-1a.)	Review and approval of Project plans Confirm a hydrant flow test has been conducted by the water supplier	Prior to final project approvals	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
PS-2. All residences less than 5,000 square feet shall be subject to the standard fire sprinkler requirement (NFPA 13D). Homes above 5,000 square feet shall be subject to the NFPA13R sprinkler requirement. (MM 5.3-1b, as modified.)	Review and approval of Project plans Confirm a hydrant flow test has been conducted by the water supplier	Prior to final project approvals	County of San Bernardino		
PS-3. A Fuels Management Plan, with specifications, shall be prepared and subject to approval by the County of San Bernardino Fire Department and San Bernardino National Forest Service. The Fuels Management Plan shall implement the fire safety requirements of the FS1 Fire Safety Overlay District, including a 100-foot minimum setback requirement from the National Forest. The fuel modification zone shall be located entirely within the project boundaries. The minimum fuel modification zone requirements may be greater in steeper areas (up to 300 feet), as determined by the Fire Department. (MM 5.3-1c, as modified.)	Review and implement proposed program.	Prior to final Project approvals	County of San Bernardino Fire Department and San Bernardino National Forest Service		
PS-4. A Homeowner's Association shall be established to implement the Fuels Management Plan. The Fuels Management Plan shall specify any professional assistance, if necessary, to implement the action portion of the plan. The Plan shall determine if a Registered Professional Forrester is necessary for professional guidance to implement the Plan. The HOA is to be responsible for fuel modification in common areas. (MM 5.3-1e, as modified.)	Confirm implementation of mitigation measures.	Prior to final project approval	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
T-1. Project Design Features recommended in the TIA shall be incorporated into the project design. These include: <ul style="list-style-type: none"> • Construction of North Shore Drive at its ultimate half-section width as a Mountain Major highway from Canyon Drive to the Easterly project boundary. • Installation of a stop sign control at Driveway #1 and Driveway #2. • Construction of an Eastbound Left Turn Lane at Driveway 1/North Shore Drive and Driveway 2/North Shore Drive for 2030 Buildout Conditions. • Construction of a 2nd Eastbound Through Lane at Driveway/North Shore Drive and Driveway 2/North Shore Drive for 2030 Buildout Conditions. 	Confirm implementation of mitigation measures into project plans.	Prior to final project approvals	County of San Bernardino		
T-2. The eastbound left turn lanes at both project access points will be constructed at opening year at 100% cost to the Applicant. The Applicant shall pay fair share costs of the construction of the eastbound through lanes at both project access points for the horizon year conditions. The developer shall pay the fair share cost of \$99,320 toward the off-site traffic improvements recommended in Appendix G of the San Bernardino Congestion Management Program, 2003 Update.	Confirm implementation of mitigation measures.	Prior to final project approvals	County of San Bernardino		
T-3. The following Project Design Features recommended in the Revised 2018 Focused Traffic Impact Assessment (FEIR Appendix M) shall be incorporated into the Proposed Alternative Project design: <ul style="list-style-type: none"> • Construction of left-turn pockets on driveways along North Shore Drive (SR-38) on Driveway 1 and Driveway 2. • Construction of a Class II Bicycle Lane on North Shore Drive (SR-38) in the eastbound direction. 	Confirm implementation of mitigation measures.	Prior to final project approvals	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<p>U-1a. The Moon Camp Homeowners Association shall create a “conservation guidelines” booklet that outlines the following measures:</p> <ul style="list-style-type: none"> • All indoor water fixtures shall be low flow/low flush. • Landscape shall not be irrigated between the hours of 9:00 a.m. and 6:00 p.m. • Residences, buildings, and premises shall be limited to watering landscaping every other day. • Water from landscape irrigation shall not be allowed to run off into streets or other paved areas. • Water leaks are not permitted and must be repaired as soon as practicable. • Sidewalks, paved driveways, and parkways shall not be washed off with hoses, except as required for sanitary purposes. • Washing non-commercial vehicles (cars, boats RVs) is permitted; however, it shall only be permitted with an automatic shut-off nozzle on a hose, or with a bucket. • Turf landscaping shall be limited to 500 square feet on a parcel or lot unless the water purveyor’s regulations allow additional turf area. • Turf irrigation shall include an automatic controller that incorporates evapotranspiration and rain shutoff features. • Sprinklers are only allowed on turf. All other landscape plantings must be irrigated with efficient, low water use devices, such as, drip systems or bubblers. • All outdoor irrigation systems shall be shut off and winterized between November 1st and April 1st of each year. • A model landscaping and irrigation guide shall be prepared for the tract and required by homeowner association rules. The guide shall identify the following conservation measures: Landscaping shall include a 	Confirm implementation of mitigation measures.	Prior to final project approvals	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
<p>plant palate that emphasizes Xeriscape, native plants and cultivars that are suitable for the mountain climate. Plant materials shall be low water consuming and fire resistant. Irrigation shall limit aerial spray methods and shall emphasize drip and bubbler type emitters. The landscaping guidelines shall be reviewed and approved by the Land Use Services Department.</p> <ul style="list-style-type: none"> The Project shall comply with the local water agency's "Model Landscape and Irrigation" ordinance. 					
<p>U-1b. Pumping and extraction of groundwater shall be limited to 9 acre-feet per year for Well FP-2, 0 acre-feet per year for Well FP-3, and 5 acre-feet per year for Well FP-4. If DWP desires to extract groundwater from Well FP-2 in excess of 9 acre-feet per year, the purveyor shall conduct an independent environmental analysis and consider potential impacts at that time.</p>	Confirm implementation of mitigation measures.	Ongoing	County of San Bernardino		
<p>U-1c. The grant deeds transferring ownership of Wells FP-2, FP-3 and FP-4 shall include the pumping and extraction limitations included in Mitigation Measure U-1b. The grant deeds shall also state that DWP, on January 1st of each year, shall report the amount of the prior year's annual groundwater production from Wells FP-2, FP-3 and FP-4 to the County Planning Department and the County Health Department.</p>	Confirm implementation of mitigation measures.	Ongoing	County of San Bernardino		
<p>U-2. Prior to issuance of building permits, the Applicant shall fund all on-site and off-site sewer improvements required to support development of the Project site. Such improvements shall be to the satisfaction of the County Service Area (CSA) 53B.</p>	Confirm implementation of mitigation measures.	Prior to issuance of building permits	County of San Bernardino		
<p>U-3. Prior to issuance of building permits, the Applicant shall provide evidence to the County of San Bernardino that the BBARWA has sufficient transmission and</p>	Confirm implementation	Prior to issuance of building permits	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
treatment plant capacity to accept sewage flows from the Project site.	of mitigation measures.				
5.9-1. Project-related grading, grubbing, trenching, excavations, and/or other earth-moving activities in the project area shall be monitored by a qualified archaeologist. In the event that a material of potential cultural significance is uncovered during such activities on the Project site, all earth-moving activities in the project area shall cease and the archeologist shall evaluate the quality and significance of the material. Earth-moving activities shall not continue in the area where a material of potential cultural significance is uncovered until resources have been completely removed by the archaeologist and recorded as appropriate.	Confirm presence of a qualified archaeologist.	Prior to grading, grubbing, trenching, excavations, and/or other earth-moving activities	County of San Bernardino		
5.9-2a. Grading shall be monitored during excavation in areas identified as likely to contain paleontologic resources by a qualified paleontological monitor. Monitoring shall be accomplished for any undisturbed subsurface older alluvium, which might be present in the subsurface. The monitor shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments which are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must be empowered to temporarily halt or divert grading equipment to allow for removal of abundant or large specimens.	Confirm presence of a paleontological monitor, as necessary.	During grading and excavation	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
5.9-2b. Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates.	Confirm implementation of mitigation measures.	During construction activities	County of San Bernardino		
5.9-2c. Identification and curation of specimens into a museum repository with permanent retrievable storage shall occur for paleontological resources.	Confirm implementation of mitigation measures.	During construction activities	County of San Bernardino		
5.9-2d. A report of findings shall be prepared with an appended itemized inventory of specimens. The report shall include pertinent discussion of the significance of all recovered resources where appropriate. The report and inventory when submitted to the appropriate Lead Agency, shall signify completion of the program to mitigate impacts to paleontologic resources.	Confirm inventory is itemized in a report.	At the completion of construction	County of San Bernardino		
5.9-3. In the event human remains are discovered during grading/construction activities, work shall cease in the immediate area of the discovery and the Project Applicant shall comply with the requirements and procedures set forth in Section 5097.98 of the Public Resources Code, including notification of the County Coroner, notification of the Native American Heritage Commission, and consultation with the individual identified by the Native American Heritage Commission to be the “most likely descendent.”	Cease construction when there is a discovery of human remains and contact County Coroner and NAHC.	During construction activities	County of San Bernardino		
GS-1. The stability of south facing cut slopes shall be analyzed as part of the design-level geotechnical investigation. Utilizing 2:1 buttressed slopes using onsite native soil materials, or constructing geotextile-reinforced soil buttresses for planned unstable cut slopes are typical engineering designs for stabilizing slopes. Either of these methods, or other methods, must be approved by the San	Review and approval of design-level geotechnical investigation to ensure that the stability of south	Prior to final Project approvals	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
Bernardino County Department of Building and Safety. (MM 5.10-1 of the 2005 Final EIR was modified in response to comments on the 2005 Draft EIR.)	facing cut slopes have been analyzed.				
GS-2a. Due to the potential for erosion associated with younger alluvial deposits within the two major on-site stream channels, increased surface drainage quantities associated with development on-site shall be directed away from the stream channels. (MM5.10-2a of the 2005 Final EIR.)	Review and approval of Project drainage plans	Prior to final Project approvals	County of San Bernardino		
GS2b. Prior to the issuance of Grading Permits, the Project Applicant shall prepare a Soil Erosion and Sedimentation Plan for submittal and approval by the County Building and Safety Department. (MM 5.10-2b of the 2005 Final EIR.)	Review and implement proposed plans.	Prior to the issuance of Grading Permits	County of San Bernardino		
GS-3. Engineering design for all structures and roadways shall be based on the current California Uniform Building Code at the time of project development. Construction plans shall be in accordance with seismic design standards set forth by the County's Development Code and Uniform Building Code. (MM 5.10-3 of the 2005 Final EIR.)	Review of construction plans.	Prior to final Project approvals	County of San Bernardino		
GS-4. Residential structures shall be located in areas which provide a minimum of five feet of freeboard above the high water line for any structures. (MM 5.10-4 of the 2005 Final EIR.)	Review and approval of Project plans.	Prior to final Project approvals	County of San Bernardino		
GS-5. Prior to grading permit issuance, a quantitative geotechnical analysis and design-level geotechnical engineering report shall be required and submitted to the County of San Bernardino Department of Building and Safety for their approval. (MM 5.10-5 of the 2005 Final	Review and approval of quantitative geotechnical analysis and design-level	Prior to grading permit issuance	County of San Bernardino		

Table 1 (cont.): Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
EIR has been modified in response to comments on the 2005 Final EIR.)	geotechnical engineering report				
R-1. The proposed project shall be conditioned to provide the right of way to allow future construction of a pedal path along the south side of North Shore Drive, prior to map recordation. The right-of-way is included in the 66-foot offer of dedication included on the Site Plan. (MM 5.2-2 of the 2005 Final EIR has been modified in response to public comments to provide access.)	Review and approval of Project site plans	Prior to final project approvals	County of San Bernardino		

**PARTIALLY RECIRCULATED
DRAFT ENVIRONMENTAL IMPACT
REPORT NO. 3
(Volume 1)**

Partially Recirculated
Draft Environmental Impact Report No. 3
Moon Camp 50-lot Residential Division, TT No. 16136
Big Bear Lake, San Bernardino County, California
SCH No. 2002021105

Prepared for:

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CHAPTER 1 – INTRODUCTION

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1.1 BACKGROUND AND PURPOSE OF THE DRAFT PARTIALLY RECIRCULATED ENVIRONMENTAL IMPACT REPORT

In April of 2010, the County of San Bernardino (County) published the Draft Revised and Recirculated DEIR (RRDEIR) No. 1 for the Moon Camp Project (Project), which assessed the potential environmental impact of adopting a General Plan Amendment (GPA) from Bear Valley Community Plan Rural Living 40 acres (BV/RL-40) to Bear Valley Community Plan Single Residential 20,000 square feet (SF)(BV/RS-20,000), adopting Tentative Tract Map (TTM) No. 16136 with a total of 50 residential lots, 8 lettered lots, and a marina (boat dock) with 55 boat slips within a 62.43 acre site in the unincorporated community of Fawnskin within the County of San Bernardino. A second RRDEIR was published in December of 2011 by the County, which focused on impacts to Special Status plant species. The TTM No. 16136 that was presented as part of the December of 2011 RRDEIR No. 2 is provided as **Figure 1-1**, and aerial photos depicting the Project site at the regional and site-specific levels are provided as **Figures 1-2 and 1-3**, respectively. The Moon Camp Final Environmental Impact Report (FEIR) was finalized in July of 2020, and was certified by the San Bernardino County Board of Supervisors on July 28, 2020, with the Notice of Determination (NOD) filed with the County Clerk of the Board on July 29, 2020. The State Clearinghouse Number for the Project is 2002021105. The July 2020 Moon Camp FEIR is provided as Appendix 1 to this Partially Recirculated DEIR (PRDEIR) No. 3.

On August 28, 2020, the Friends of Big Bear Valley, San Bernardino Valley Audubon Society, Inc., and Center for Biological Diversity (collectively, the petitioners), filed a lawsuit against the County alleging, among other things, that the County failed to comply with CEQA in approving the Project. The matter came before the San Bernardino County Superior Court at a hearing on January 20, 2022. As discussed in more detail in Section 1.1.3 *infra*, the Court concluded the County failed to comply with CEQA in two narrow circumstances. The Court issued a writ of mandate that ordered the County to set aside and vacate (1) the certification of the Project's EIR, (2) the CEQA Findings of Fact and Statement of Overriding Considerations, (3) the mitigation Monitoring and Reporting Program, and (4) approval of Tentative Tract Map No. 16163.

The purpose of this PRDEIR is to correct the deficiencies identified by the Court in support of the County's reconsideration of the Project.

1.1.1 Project History

In March 2004, the County circulated a DEIR evaluating the Moon Camp Project and received numerous comments from the public in response to the DEIR. The Original Project consisted of 92 residential lots with 3 lettered lots, on 62.43 acres with a minimum lot size of 7,200 square feet, and development of a marina (boat dock) with 103 boat slips in the unincorporated community of Fawnskin (refer to **Figure 1-3**). The 2004 DEIR was recirculated in March 2005 to address cumulative effects, biological resource impacts, and wildfire. The March 2005 DEIR was finalized and published to the California Office of Planning and Research (OPR) State Clearinghouse in January 2006, but the January 2006 FEIR was not put forth before the County Board of Supervisors for certification. The Applicant, RCK Properties, Inc., decided to revise the Project to substantially reduce, and in some cases, completely avoid the significant environmental impacts identified in the 2006 Moon Camp FEIR (Original Project). The January 2006 FEIR is

provided as Appendix 2 to this Partially Recirculated Draft EIR No. 3. Thus, partially in response to the comments received on the January 2006 FEIR, the Original Project was redesigned, and the EIR was revised and recirculated in April of 2010, analyzing the revised Project Description, in place of the Original Project Description. This revised Project Description is referred to as the 2010 Alternative Project, and was analyzed in the April 2010 RRDEIR No. 1, which is provided as Appendix 3 to this PRDEIR No. 3. The 2010 Alternative Project reduced the number of residential lots from 92 to 50, and included 7 lettered lots. Of the seven lettered lots, one would be designated Open Space/Conservation (4.91 acres), one would be designated as Open Space/Neighborhood Lake Access (0.82 acre with 891 lineal feet of lakefront access), one would be developed as the marina parking lot for a 55-slip private boat marina (2.90 acres), three include existing well sites, and the final lettered lot is a potential reservoir site. Ultimately, the 50 residential lots would have a minimum lot size of 20,000 SF and would be sold individually and developed into individual custom homes.

Finally, although already determined to be less than significant with mitigation, the County commissioned a Focused Special Status Plant Species Survey, dated August 2010 (Appendix 5 [also found as Appendix A.11 to the December 2011 RRDEIR No. 2 provided as Appendix 3]), to confirm the conclusion in the April 2010 RRDEIR No. 1 that impacts to the ashy-gray Indian paintbrush (*Castilleja cinerea*; a Federally-Listed Threatened Species) would be less than significant. The survey analyzed the density of ashy-gray Indian paintbrush within the Project site and whether Project implementation would result in potential off-site impacts on the U.S. Forest Service (USFS) pebble plain habitat near the northeast portion of the Project site (**Figure 1-5**). The 2010 Focused Special Status Plant Species Survey showed the presence of high densities of ashy-gray Indian paintbrush plants on the westernmost Lots (Lots 1, 2 and 3) in the area west of “Street A”—the public roadway proposed to traverse through the Project site.

Additionally, the 2010 Supplemental Focused Special Status Plant Species Survey, which provided for an above-average precipitation year for observation, determined that the area thought to be pebble plain habitat located within Lot A (as identified within the Supplemental Focused Rare Plant Survey, dated June 29, 2008, Appendix 6 [also found as Appendix B.9 to the April 2010 RRDEIR No. 1 provided as Appendix 3]), is not a true pebble plain habitat due to the lack of presence within the Project site of two key indicator species (*Arenaria ursina* and *Eriogonum kennedyi austromontanum*).

Based on the new finding regarding the presence of high densities of ashy-gray Indian paintbrush in areas occupied by significant ashy-gray Indian paintbrush occurrences, the applicant redesigned the subdivision layout to further minimize impacts to this species. This iteration of the Project is referred to as the 2011 Alternative Project and is the version of the Project ultimately approved by the County in July 2020. The redesigned subdivision (TTM No. 16136, provided as **Figure 1-1**) creates an eighth lettered lot, Lot “H” Open Space Conservation Easement, over the area with the highest concentration of plants, which covered 2010 Alternative Project Lots 1-3 (refer to **Figure 1-4**). The 2011 Alternative Project created 3 replacement residential lots proposed to be created along the south side of Street “A”, which is an area with significantly lower concentrations of ashy-gray Indian paintbrush. Thus, in order to address the revision in the subdivision, and to address the findings presented in the 2010 Supplemental Focused Special Status Plant Species Survey (Appendix 5), the County determined that certain chapters and/or portions of prior analyses should be revised and recirculated for public review. Thus, the December 2011 RRDEIR No. 2 was prepared, as addressed above.

In conclusion, a summary of the impacts and findings of significance for the formerly circulated EIRs for the Moon Camp Project prior to the 2020 FEIR are discussed below, and the environmental documents are provided as Appendices to this PRDEIR No. 3 as a record of past circulations of the Moon Camp EIR:

- January 2006 FEIR (Original Project)(Appendix 2)
 - Significant adverse and unavoidable impacts resulting from development of the Original Project included: Aesthetics (loss of views of the lake and surrounding mountains due to the development of the 31 lakefront lots), Air Quality (short-term during construction and long-term), Biological Resources (noise and perch tree impacts on the bald eagle), and Water Supply (inconclusive groundwater supply).
- April 2010 RRDEIR No. 1 (2010 Alternative)(Appendix 3)
 - The RRDEIR No. 1 concluded that, with implementation of mitigation measures, all significant and unavoidable impacts resulting from implementation of the 2010 Alternative Project would be reduced to less than significant levels, with the exception of impacts to the American Bald Eagle, which remained significant and unavoidable.
- December 2011 RRDEIR No. 2 (2011 Alternative)(Appendix 4)
 - Based on the project redesign and creation of additional conservation area, the RRDEIR No. 2 concluded that impacts to the ashy-gray Indian paintbrush would continue to be less than significant with the identified mitigation measures intended to protect this species through conservation. However, the impacts to the American Bald Eagle remained significant and unavoidable

1.1.2 Litigation and Writ of Mandate

As discussed above, the April 2010 RRDEIR No. 1 was circulated for public review from April 5, 2010, to June 3, 2010, and 109 comment letters were received, while the December 2011 RRDEIR No. 2 was circulated from December 12, 2011 to February 7, 2012, and 32 comment letters were received. In July of 2020, the County prepared a FEIR, which included responses to all 141 comment letters received from federal, State, and regional agencies, as well as from organizations and individuals on RRDEIR No. 1 and No. 2.

On July 28, 2020, the County Board of Supervisors approved the proposed Project which consisted of (1) a General Plan Amendment and change to the Land Use Zoning District from Bear Valley/Rural Living-40 acres (BV/RL-40) to Bear Valley/Single Family Residential-20,000-square foot minimum lot size (BV/RS-20m), (2) Tentative Tract Map No. 16136, (3) certification of the Final EIR for the Project, and (4) adoption of CEQA findings of fact, statement of overriding considerations, and a mitigation monitoring and reporting program. In making its findings, the County concluded that the proposed Project would have a significant effect on the environment, and mitigation measures were made a condition of the Project approval. The County filed a Notice of Determination (NOD) with the County Clerk on July 29, 2020, and with the State Clearinghouse on August 4, 2020. Shortly thereafter on August 28, 2020, the Friends of Big Bear Valley, San Bernardino Valley Audubon Society, Inc., and Center for Biological Diversity (collectively, the petitioners), filed a lawsuit against the County alleging, among other things, that the County failed to comply with CEQA in approving the Project.

On October 26, 2020, the petitioners filed a first amendment to the petition for writ of mandate challenging the County approval of the Project. By way of the first amended petition, petitioners requested that the Court issue a writ of mandate finding the County failed to comply with CEQA in approving the Project and ordering the County to rescind the Project approvals.

The matter came before the San Bernardino County Superior Court at a hearing on January 20, 2022. After the hearing Superior Court judge David Cohn issued a ruling that found the County failed to comply with CEQA in 2 narrow instances:

1. There was no substantial evidence supporting the determination that impacts to the Ashy-Gray Indian Paintbrush were reduced to less than significant levels with the implementation of identified mitigation measures. Specifically, the Court found that there was no substantial evidence in the record supporting the County's finding that the preservation of the 10-acre Dixie Lee Lane parcel mitigated Project impacts to the Ashy-Gray Indian Paintbrush or pebble plain habitat.
2. The County's finding that the Project would have a less than significant impact on Wildfire Safety Hazards and Emergency Evacuation. Specifically, the Court concluded that the record failed to include substantial evidence supporting the finding that the identified evacuation routes are adequate to safely and efficiently evacuate the residents and the guests of the Project in the event of a wildfire.

All other grounds for the petition were denied. Based on this ruling, the Court issued a writ of mandate that ordered the County to set aside and vacate (1) the certification of the Project's EIR, (2) the CEQA Findings of Fact and Statement of Overriding Considerations, (3) the mitigation Monitoring and Reporting Program, and (4) approval of Tentative Tract Map No. 16163.

Severable from the Court's order is the County's approval of the General Plan and Zoning Amendment designating and rezoning the Project site from Rural Living-40 acres to Single-Family Residential-20,000-square foot minimum lot size (Board of Supervisors Ordinance 4391 and Resolution 2020-155). These approvals were determined to be severable due to the County's subsequent approval and adoption of an amended General Plan (Countywide Plan) on October 27, 2020, which designated the Project site as Very Low Density Residential under the Countywide Plan, with the Zoning district of the Project site as Bear Valley/Residential Single-20,000 SF Minimum (BV/RS-20M). Such approval was supported by the County's Countywide Plan Program EIR, certified in October 2020. As the Project conforms with the new Very Low-Density Residential land use designation, a General Plan Amendment (GPA) is no longer required. Furthermore, as the Project conforms with the new BV/RS-20M Zoning district, a Zoning Amendment is no longer required. Although the zoning map still includes the "BV" designation, indicating that the Project site is located within the Bear Valley Community Plan, all community plans were repealed on October 27, 2020 (Board of Supervisors Resolution No. 2020-198) and are no longer applicable. The "BV" designation, although no longer applicable, remains on the zoning map until the County adopts a comprehensive zoning update to reflect the changes made by the Countywide Plan.

1.1.3 Partially Recirculated Draft Environmental Impact Report

In response to the Court's writ of mandate, the County has chosen to take specific action necessary to bring its consideration of the Project into compliance with CEQA. The County has determined that revising the relevant sections of the July 2020 FEIR to address the inadequacies identified by the Court is the appropriate process for complying with the Court's ruling and writ of mandate. Thus, this PRDEIR No. 3 has been prepared pursuant to Section 15234 of the CEQA Guidelines, which only requires additional environmental review of portions of the July 2020 FEIR found by the Court not to comply with CEQA, consistent with principles of res judicata.

The purpose of this PRDEIR No. 3 is to revise and partially recirculate those portions of the EIR that the Court found deficient in its January 20, 2022 decision, in addition to a recirculation of a portion of the Land Use and Planning Subchapter of the EIR. The Land Use and Planning Subchapter of the EIR is being recirculated as part of this PRDEIR No. 3 to analyze the Project's consistency with the San Bernardino County Countywide Plan, adopted October 27, 2020, after the County's approval of the Moon Camp Project. Further details on the exact scope of this PRDEIR No. 3 are provided below.

1.2 CONTENT OF THE DRAFT PARTIALLY RECIRCULATED ENVIRONMENTAL IMPACT REPORT

As described above and affirmed in Section 15088.5(c) of the CEQA Guidelines, if the revisions to an EIR are limited to a few chapters or portions of the EIR, the lead agency need only recirculate the chapters or portions that have been modified. Therefore, the County is only including the following revised sections in this PRDEIR No. 3:

Chapter 1: Introduction. This chapter includes Moon Camp Project background and a history of the Project environmental documentation. It provides a description of the purpose and organization of the PRDEIR No. 3, in addition to providing a clear description of the Moon Camp Project analyzed in this PRDEIR No. 3. A summary of mitigation measures is also provided in a Table at the end of this Chapter.

Subchapter 2.1: Biological Resources. This section analyzes the Moon Camp Project's impacts on the ashy-gray Indian paintbrush and on pebble plain habitat.

Subchapter 2.2: Land Use and Planning. This section analyzes the Moon Camp Project's consistency with the 2020 San Bernardino Countywide Plan.

Subchapter 2.3: Hazards and Hazardous Materials (Wildfire Evacuation Risk). This section analyzes the Moon Camp Project's impacts on wildfire evacuation and risks thereof.

Chapter 3: Report Preparers. This chapter identifies the PRDEIR No. 3 authors and the consultants who provided analysis in support of the conclusions made in this PRDEIR No. 3.

Chapter 4: References. This chapter sets forth a comprehensive listing of all sources of information used in the preparation of this PRDEIR No. 3.

Comments on this PRDEIR No. 3 shall be limited to the recirculated portions herein per Section 15088.5(f)(2) of the CEQA Guidelines.

Please note that, as the Moon Camp Project has been analyzed in the January 2006 FEIR, and more recently in the two former revised and recirculated DEIRs, in addition to the 2020 FEIR, this PRDEIR No. 3 has been organized with a focus on responding to the Writ of Mandate, and addresses (1) those issues that the Court found deficient in its January 20, 2022 decision, and (2) the issue of Project land use consistency as a result of the recently adopted San Bernardino Countywide Plan. Thus, the organization of this PRDEIR No. 3 does not conform to the organization of past EIR iterations.

The analysis and conclusions that were presented in the January 2006 FEIR, as modified by April 2010 RRDEIR No. 1 and December 2011 RRDEIR No. 2, for all other impact areas, including

Cumulative Impacts, Alternatives, and Other CEQA Analysis (significant environmental effects which cannot be avoided if the proposed Project is implemented, significant irreversible environmental changes which would be caused by the proposed Project should it be implemented, and growth inducing impacts), have not changed. Thus, those sections addressing all other impact areas will not be recirculated as part of this PRDEIR No. 3.

1.3 MOON CAMP PROJECT DESCRIPTION

The Project Description for the Moon Camp Project remains mostly unchanged from that which was adopted as part of the July 2020 FEIR. The Project that was contemplated in the July 2020 FEIR remains the same, but the underlying land use designations and zoning districts have since changed as a result of the adoption of the San Bernardino Countywide Plan in October 2020. As a result, the land use designation has been modified to Very Low Density Residential (VLDR), and the Zoning district of the Project site has been modified to BV/RS-20M, to which the Moon Camp Project conforms. The land use and zoning consistency, in addition to the Project as a whole, are discussed in detail below.

1.3.1 Project Location and Setting

The proposed 62.43-acre Moon Camp Project site is located on the north shore of Big Bear Lake, in the unincorporated community of Fawnskin, County of San Bernardino (refer to **Figure 1-2** Regional Location, and **Figure 1-3**, Local Vicinity). State Route 38 (SR-38), also known as North Shore Drive, provides access to the Project site and transects the property. The Project site is roughly bounded to the north by Flicker Road, to the south by Big Bear Lake, to the east by Polique Canyon Road, and to the west by Canyon Road.

The Project site is located in the Section 13, Township 2 North, Range 1 West, San Bernardino Baseline and Meridian (SBBM), within the Fawnskin, CA USGS 7.5-minute topographic map,. San Bernardino County parcel numbers for the site include Assessor's Parcel Numbers (APN) 0304-082-04, 0304-091-12, 0304-091-22, and 0304-091-21. The geographical coordinates for the proposed Project are 34.264°, -116.933°.

1.3.2 Project and Surrounding Land Use and Zoning Districts

The Project site is currently vacant and undeveloped and is designated in the by the San Bernardino Countywide Plan for VLDR use (refer to **Figure 1-6**, Land Use Designations). The primary purpose of the VLDR, as identified in the Countywide Plan Land Use Element, is to allow for very low-density residential uses when developed as single-family neighborhoods that can share common infrastructure, public facilities, and services. The Project is located within the BV/RS20M Zoning District, which provides sites for single-family residential uses, incidental agricultural and recreational uses, and similar and compatible uses. **Table 1.3-1**, Existing Land Use and Official Land Use Zoning District, identifies the land use category of the site and surrounding properties, as well as the current land use zoning designations.

**Table 1.3-1
Existing Land Use and Official Land Use Zoning District**

Existing Land Use		Official Land Use Designations and Zoning Districts
Project Site	Vacant	Land Use Designation: Very Low Density Residential (VLDR) The VLDR designation allows for very low-density residential uses when developed as single-family neighborhoods that can share common infrastructure, public facilities, and services. Zoning: BV/RS-20M (Bear Valley/Single Residential–20,000 SF Minimum) The RS (Residential) zoning district provides sites for single-family residential uses, incidental agricultural and recreational uses, and similar and compatible uses.
North	Residential (N and NW) Forest (N and NE)	Land Use Designation: Open Space (OS) (United States Forest Service [USFS]), Resource/Land Management (RLM), and Low Density Residential (LDR). Zoning: BV/RS (Single Residential) and BV/RL-10 (Rural Living, 10-acre minimum lot size) BV/RC Resource Conservation (USFS)
South	Big Bear Lake (S) Residential (SE)	Land Use Designation: Floodway (FW) (Big Bear Lake) and LDR (Existing residential subdivision) Zoning: BV/FW Floodway (Big Bear Lake) and BV/RS (Existing residential subdivision)
East	Vacant Forest (N and NE)	Land Use Designation: OS (USFS) Zoning: BV/RC (Bear Valley/Resource Conservation)
West	Vacant, Residential	Land Use Designation: Special Development (SD) and RS. Zoning: BV/SD-RES Bear Valley/Special Development-Residential and BV/RS.
Source: San Bernardino County.		

1.3.3 **Proposed Project Description**

The Project consists of the subdivision of the site into 58 lots within the 62.43-acre site—50 numbered lots (single family residential lots) to be sold individually and developed into custom homes, and 8 lettered lots described as follows:

- 3 designated as Open Space/Conservation easements and Neighborhood Lake Access;
- 3 designated as well sites;
- 1 designated as a potential reservoir site; and
- 1 would be developed as the marina parking lot, the majority of which has been reserved as a conservation easement for bald eagle and rare plant habitat conservation.

The Project proposes 6.2 acres of Open Space, Conservation, and Neighborhood Lake Access within the Project site. Within this 6.2 acres, 4.84 acres of the Project preserves occupied ash-gray Indian paintbrush that will be preserved in perpetuity as part of Project implementation. Additionally, the parts of Lots C (marina parking) and D (well site) have been included as part of the Project conservation easement due to the number of trees along the lake shore line that are suitable for Bald Eagle perching and foraging for fish and waterfowl over Big Bear Lake. Thus, the development of the Moon Camp Project would establish conservation easements on-site totaling up to 9.2-acres covering all of Lots A, B and H, and parts of Lots C and D.

The Project also includes a 55-boat slip marina that would be open for a designated portion of the year between April 2 and November 30 annually. The marina parking lot also includes some open space for the preservation of existing trees. However, because of the development of the parking lot, the lot is not considered part of the Project's total provided Open Space.

One change from the Project approved in July of 2020 is that the 10-acre off-site parcel known as the Dixie Lee Lane parcel that was to be conserved as required by FEIR Mitigation Measure MM BR-1a, is now included as a project-related community benefit. As part of the Project, the applicant intends to permanently preserve the Dixie Lee Lane parcel by including it in a conservation easement and managed pursuant to the terms of the Project's Long Term Management Plan as required by Project conditions of approval. Though the Dixie Lee Lane parcel is no longer considered mitigation in the PDEIR, the parcel will be preserved in perpetuity in a similar fashion as required by the previous mitigation measure.

Infrastructure

The discussion below outlines the infrastructure proposed to be developed as part of the proposed Moon Camp Project. No changes in the description of Project infrastructure have occurred since the publication of the July 2020 FEIR.

Water Service

Water Service for the Project site would be provided by the Big Bear Department of Water and Power (DWP). Although the Project site is partially located outside of the DWP Service area and sphere of influence, the DWP and County CSA 53C entered into an Outside Service Agreement for Potable Water Service dated November 17, 2015, whereby DWP and CSA 53C agreed that, because of the lack of potable water facilities operated by CSA 53C in the Fawnskin area, it was not economical for CSA 53C to be the water provider for the Moon Camp property and that it was more appropriate for DWP to be the water purveyor. LAFCO approved the Agreement at its November 18, 2015 meeting. For DWP to provide potable water to the Project site, significant improvements to the upper Fawnskin pressure zone are necessary. The three ground water production wells located within the Project site would be deeded to DWP at the time the tract map is recorded. DWP has conducted a Water Feasibility Study (Alda 2007), and provided a conditional will serve letter to the Applicant. The developer would be required to construct the on-site and off-site facilities as described in the DWP's Water Feasibility Study (Alda 2007), as amended by the 2011 update, as discussed below.

The Water Feasibility Study provides two options (A and B) for expanding the existing Fawnskin Water System infrastructure. Option B has been chosen by DWP and the Applicant as the preferred Water Feasibility Study alternative for Water Service Alternative #1. In either case, the Applicant would install all common infrastructures, including fire hydrants, and would also install the water main lines within the Project site. The water improvements will primarily be constructed within the rights-of-way of existing or proposed paved roads. The water service infrastructure required is as follows:

- 900 ft of 12-inch pipeline along Ridge Road from the intersection of Raccoon Drive south to tie to an existing 8-inch PVC pipeline on a private easement.
- 200 ft of 12-inch pipeline along private easement to connect Fawnskin Drive and Canyon Road.
- 650 ft of 12-inch pipeline along Canyon Road to Chinook Road.
- 600 ft of 12-inch pipeline along Chinook Road to Flicker Road.
- 500 ft of 12-inch pipeline along Flicker Road to Mesquite Drive.

- 400 ft of 12-inch pipeline along Mesquite Road to North Shore Drive.
- 250 ft of 12-inch pipeline along North Shore Drive to development westerly boundary.
- Refurbishing existing Cline Miller pump station to augment pumping capacity to approximately 300 gpm.
- 50KW onsite emergency generators at the Cline Miller Reservoir.

See **Figure 1-6** for the proposed water facilities and improvements.

Projected water demand for the proposed Moon Camp 50-lot residential subdivision is based on the Water Feasibility Study's consumption rate of 250 gallons per day (gpd) per connection. **Figure 1-7**, Proposed Water Facilities, shows the Moon Camp water system proposed in the Water Feasibility Study. Maximum day demand is estimated based on information provided in the DWP Water Master Plan and it is equivalent to 1.76 times the average day demand. Therefore, the average and maximum day demands for the Project are estimated as follows:

- Average Daily Demand (ADD) = 12,500 gpd or 8.68 gpm; and
- Maximum Daily Demand (MDD) = 15.27 gpm.

Based on an estimated average day demand of 12,500 gallons, the annual water demand for the Project is estimated at 4.56 million gallons (MG) or 14.0 acre-feet per year (AFY).

Wastewater Service

The Project site is located within County Service Area 53, Improvement Zone B (CSA 53B) administered by the County of San Bernardino Special Districts Department. The Sewer Feasibility Study indicated that the existing sewer system located adjacent to the Project site to the southeast and southwest is capable of handling the wastewater flows from the Project.

The Applicant would be responsible for all plumbing and sewer facilities located within the site, including manholes and connection to the CSA 53B system at locations that have been approved by CSA 53B. **Figure 1-8**, Proposed Sewer Facilities, displays the preliminary system. The Applicant would also be responsible for an off-site sewer extension of approximately 1,200 linear feet along North Shore Drive to connect to an existing CSA 53B collector sewer to the southwest of the property. This extension would accommodate the westerly lots. The easterly lots would be served by a gravity sewer extended to the existing CSA 53B Pump Station B to the southeast of the property. Depending upon where some of the houses are built, some lots may require a residential sewage pump station to transport the lot's sewage up to the sewer line in the street adjoining the property.

The wastewater conveyance system on-site would be designed to accommodate these conditions and would be subject to review and approval by the County Special District's Engineer. In addition, regional connection fees would be imposed by the Big Bear Area Regional Wastewater Authority (BBARWA).

Roadway Facilities

The Project will include development of roadway facilities to service the Project and provide direct access for the residents to SR-38. The Project proposes two points of ingress and egress from SR-38 with Street "A" terminating on the east-end of the Project in the cul-de-sac. The Project roadway system will consist of standard two-lane roadways with two stop sign-controlled intersections on SR-38 and one intersection interior to the Project. Development of the roadway infrastructure will occur at one time at the initial phase of Moon Camp development.

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Table 1.5-1
SUMMARY OF IMPACTS AND AVOIDANCE, MINIMIZATION AND MITIGATION MEASURES DISCUSSED IN THIS PRDEIR No. 3

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
<p>BIOLOGICAL RESOURCES</p> <p>BR-1a The Project applicant shall coordinate with a botanical conservation seed collection/seed bank organization, such as the California Botanic Garden or Center for Plant Conservation, that shall be approved by USFWS to collect seed from the 672 affected ashy-gray Indian paintbrush plants within the Roadway, Lot F, and Lots 1, 2, 3, 4, 5, 47, 48, 49, and 50 after seed has set. The seed collection shall be carried out by a qualified biologist(s) familiar with the ashy-gray Indian paintbrush species. Prior to the collection of seeds, the approved Biologist/Botanist shall prepare and submit for approval by USFWS and California Botanic Garden a Seed Collection and Banking Plan that is consistent with the California Botanic Garden Seed Collection Policy and Seed Collection Guidelines. Per California Botanic Garden Seed Collection Guidelines, a minimum of 2,500 seeds obtained from a minimum of 50 individual plants shall be collected.</p> <p>Overheating can kill seeds, and excessive heat and temperature fluctuations shall be avoided. High moisture content during storage can also cause seed damage and loss of viability due to molds, and as such, high moisture periods shall also be avoided. Seed collection shall be collected and stored in such a way as to ensure its viability, where the sum of temperature (degrees F) and relative humidity (%) does not exceed 100. The seed collection shall occur prior to construction or ground disturbance within the lots occupied by the ashy-gray Indian paintbrush species. USFWS shall be contacted upon the coordination of the seed collection with the botanical conservation seed collection/seed bank organization to provide an opportunity for collaboration on the species conservation efforts. Any recommendations by USFWS for seed collection and seed banking shall be taken into account.</p>	<p>San Bernardino County</p>
<p>BR-1b Prior to the initiation of clearing or grading activities on the project site, the 6.2-9.2-acre on-site conservation easements (including Lot-A and Lot-H) covering all of Lots A, B and H, and parts of Lots C and D shall be established. The conservation easement shall be in favor of a California Department of Fish and Wildlife approved conservation or mitigation bank (https://wildlife.ca.gov/Conservation/Planning/Banking/Approved-Banks) and shall be recorded in the San Bernardino County Recorder's Office. The easement shall provide for the continued protection and preservation of the property American Bald Eagle and Rare Plant habitat through development of a Long-Term Management Plan (LTMP). The LTMP shall provide for the preservation, restoration, and enforcement of the Conservation Areas so that each area is maintained, and restored where needed, to its natural condition. The LTMP will also include documentation of baseline conditions, any needed site preparation, anticipated restoration/enhancement activities, a biological monitoring program, the creation of a set of success criteria for managing the site, anticipated maintenance activities, an annual reporting process, and a set of contingency or adaptive management measures to be implemented in case success criteria are not being met; to ensure that the implementation of the LTMP is fully funded, a Property Action Report (PAR) will be prepared that will document costs for site security, maintenance activities, site preparation, restoration/enhancements activities, biological monitoring, contingency measure and annual reporting. The costs identified in the PAR will be used to develop a non-wasting endowment that will ensure all costs will be available to establish the site, conduct any needed restoration and enhancements, and to fund reoccurring annual cost needed to manage the site in perpetuity. The easement shall, at a minimum, restrict all use of the property that has the potential to impact bald eagle perch trees, the quality of valuable biological habitat, including the occurrences of the Federally Threatened ashy-gray Indian paintbrush. The property shall be fenced and signs shall be placed on the fencing indicating the sensitive nature of the property habitat and warning that any entry would be prosecuted as a trespass.</p>	<p>San Bernardino County</p>

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
<p>Project proponent shall also create a perpetual, non-wasting endowment for the management and preservation of the mitigation property. The management entity will be approved by the CDFW.</p>	
<p>BR 1-c The Project Applicant shall take the following actions to further ensure the permanent preservation of the Conservation Areas:</p> <ul style="list-style-type: none"> • Except for access by residents to Lot B & C, access to the Conservation Areas by pedestrians and motor vehicles shall be restricted. The Conservation Areas shall be secured through installation of fencing or other barriers to prevent access to Conservation Areas. Barriers shall be installed prior to commencement of any construction activities on-site. The Project Applicant shall also include provisions in the CC&Rs for the Project instituting penalties to residents who violate the restrictions and cause any damage to the protected plant habitat and Bald Eagle perch trees. • Include enforcement provisions in the CC&Rs requiring the Homeowner's Association, individual resident within the project, the Conservation or Mitigation Bank and/or County of San Bernardino to enforce any violation of the provisions intended for the protection of sensitive plant species located within Lot A and Lot H. • Include enforcement provisions in the CC&Rs requiring the Homeowner's Association to implement an awareness program for special status plant species, specifically ash-gray Indian paintbrush, with special attention to homeowners on lots with retained ash-gray Indian paintbrush. The awareness program shall encourage residents to retain ash-gray Indian paintbrush within individual property owner lots in a natural state to preserve the species. • Include enforcement provisions in the CC&Rs requiring the Homeowner's Association to prohibit and enforce prohibition of use of OHV within the Project site. • Install appropriate signage identifying Conservation Areas and the sensitive nature of such areas on the Project site and that access is prohibited. The Conservation Areas shall be monitored on a regular basis by the Conservation Entity. • Prohibit use of invasive plant species in landscaping. Each lot owner shall be given a list of prohibited invasive plant species upon purchase of lot with the parcel. Landscape plans for individual parcels shall be approved by the County prior to development to ensure no inappropriate plant material is incorporated into the design of any individual lot or common area which may compromise the quality of the Conservation Areas. • Development may not change the natural hydrologic conditions of the Conservation Areas. All grading plans shall be reviewed by the County to ensure hydrologic conditions of the conservation lands are not adversely changed by development. • The Project Applicant or Approved Conservation or Mitigation Bank shall monitor Conservation Areas on a periodic basis to ensure invasive, non-native species are not present. All non-native invasive plant species shall be removed from Conservation Areas. • Fuel modification zones and programs shall not be implemented in Lots A and H. • The Conservation Entity shall prepare an annual biological monitoring report identifying the current status of the rare plant species and any necessary actions to further enhance and protect the habitat. • The Conservation Entity shall conduct routine monitoring of rare plant resources on Lot A and H. The occurrence of non- native species outbreaks, or other examples of ecological disturbance as a result of indirect impacts of development in and around Lots A and H shall be reported in the annual biological monitoring reports and remedial action shall be recommended and implemented by the Conservation Entity. 	<p>San Bernardino County</p>

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
<p>BR-1d. Construction (i.e. ground disturbing activities) that falls within the rear portions of Lots 1, 4, 47, 48, 49, and 50 shall be prohibited by means of building envelopes or building setback lines to prevent construction in the occupied ashy-gray Indian paintbrush habitat. To ensure that ashy-gray Indian paintbrush occurring within building setback lines within the rear portions of Lots 1, 4, 47, 48, 49, and 50 are not impacted by project-related activities, the Project Applicant shall install orange construction fence around the perimeter of the rear building setbacks. All ground disturbing activities shall be restricted outside of the rear building setbacks of Lots 1, 4, 47, 48, 49, and 50.</p>	San Bernardino County
<p>BR-2. Trees and downed logs shall remain in place, to the extent that clearing is not required by the development process, and a 50-foot setback (measured on each side of the centerline) must be maintained along the deepest ravine at the eastern edge of the property. This measure will serve to preserve habitat for potential special status wildlife species.</p>	San Bernardino County
<p>BR-3. Given the negative results of on-site surveys and the available technical and peer reviewed literature, negative effects to the San Bernardino flying squirrel are not expected. However, because marginal foraging habitat was found on-site, the following mitigation measures will be implemented in the lots with densely forested areas and snags. These mitigation measures are to be implemented to avoid and minimize impacts to San Bernardino flying squirrels:</p> <ul style="list-style-type: none"> • The Project Applicant shall have a qualified biologist as a monitor just prior to and during all tree removal on-site. • Minimize the removal of large coarse woody debris (>10cm diameter), which provide microhabitat for the growth of hypogeous fungi. • Limit removal of standing snags (>25cm dbh) and large trees (>25cm dbh), which provide both structural complexity and potential nesting habitat. • Prioritize the retention of large trees and snags with visible potential cavity nesting structures, which are associated with higher densities of northern flying squirrels. • Minimize the loss of continuous canopy closure, especially in the drainages, which provides protection from predators while foraging and may play an important role in maintaining habitat connectivity. • The Project Applicant must compensate for the removal of suitable habitat through construction and erection of two nest boxes and one aggregate box per snag removed. • The Project Applicant is required to provide homeowners with information on the biology of the San Bernardino flying squirrel and suggest steps that homeowners can take to reduce their urban-edge effects. • All subsequent home developers must comply with these provisions, which shall be enforced by the County of San Bernardino through implementation of the Mitigation Monitoring and Reporting Program as mandated by CEQA. <p>If the monitoring biologist observes a flying squirrel during pre- construction and/or construction monitoring, the biologist will immediately halt work until the occupied tree can be vacated prior to felling the tree; however, if the work is during the nesting season (generally March through May), when baby squirrels could be present, the nest will not be vacated until after the nesting season ends (June 1st), as cleared by the monitoring biologist.</p>	San Bernardino County
<p>BR-4. Eagle perch trees identified in the 2002 Bonterra Consulting Bald Eagle Survey for Tentative Tract 16136, Moon Camp, Fawnskin, San Bernardino County, California, (see Appendix A of the Revised and Recirculated Draft EIR No. 2), and the Long-Term Management Plan shall be preserved in place upon project completion. If any of the designated perch trees should become hazardous and need to be taken down, replacement will be either (1) at a 5:1 ratio with the creation of artificial perch trees within the Conservation Areas or by enhancing other trees by trimming and limbing to make suitable for eagle perching. The exact method of perch tree replacement shall be made after consultation with a certified arborist. Prior to commencement of construction activity, the applicant shall have a qualified consultant survey all trees on- site to determine the location of all perch trees to be preserved. Any development that may occur within the Project site and in the individual lots must avoid impacts to trees larger than 24</p>	San Bernardino County

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
<p>inches dbh and their root structures to the maximum extent feasible. If any additional non-perch trees on-site larger than 24 inches dbh are removed, then a replacement ratio of 2:1 shall be required and replacement trees shall be 24-inch box trees or larger. Whenever an eagle perch tree or other non-perch tree larger than 24 inches dbh is removed, the Homeowners Association shall retain a qualified consultant to oversee removal and compliance with the replacement requirement. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual lots must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.</p>	
<p>BR-5. Prior to vegetation clearing, grading, or other disturbance, the Project site shall be surveyed to identify all large trees (i.e., greater than 20 inches in diameter at 4.5 feet from the ground) within 600 feet from the high-water line. Trees identified on the Project site as having a diameter in excess of 20 inches at 4.5 feet from the ground within 600 feet of the shoreline shall be documented and tagged. Any development that may occur within the Project site and in the individual lots shall avoid impacts to tagged trees and their root structures. If such trees cannot be avoided, their removal shall be coordinated with the County of San Bernardino to minimize impacts to the extent feasible. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of individual lots must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.</p>	<p>San Bernardino County</p>
<p>BR-6. Seven days prior to the onset of construction activities, a qualified biologist shall survey within the limits of project disturbance for the presence of any active raptor nests. Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFW.</p> <p>If nesting activity is present at any raptor nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for raptors in the region of the Project site normally occurs from February 1 to July 31. To protect any nest site, the following restrictions on construction are required between February 1 and July 31 (or until nests are no longer active as determined by a qualified biologist): (1) clearing limits shall be established a minimum of 300 feet in any direction from any occupied nest and (2) access and surveying shall not be allowed within 200 feet of any occupied nest. Any encroachment into the 300/200-foot buffer area around the known nest shall only be allowed if it is determined by a qualified biologist that the proposed activity shall not disturb the nest occupants. Construction during the nesting season can occur only at the sites if a qualified biologist has determined that fledglings have left the nest.</p>	<p>San Bernardino County</p>
<p>BR-7. Vegetation removal, clearing, and grading on the Project site shall be performed outside of the breeding and nesting season (between February 1 and July 31) to minimize the effects of these activities on breeding activities of migratory birds and other species. If clearing occurs during breeding season, a 30-day clearance survey for nesting birds shall be conducted. Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFW. If nesting activity is present at any nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code.</p>	<p>San Bernardino County</p>

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
BR-8. The use of the boat dock for motorized boating shall be prohibited between the dates of December 1 and April 1. No motorized boats shall be allowed to launch or moor in the vicinity of the boat dock at any time during this period. This restriction shall be clearly displayed on signage at the entrance to the parking lot and on the boat dock visible from both land and water. This requirement shall also be published in the Homeowner's Association Conditions, Covenants & Restrictions (CC&Rs).	San Bernardino County
BR-9. Street lamps on the Project site shall not exceed 20 feet in height, shall be fully shielded to focus light onto the street surface and shall avoid any lighting spillover onto adjacent open space or properties. Furthermore, street lights shall utilize low color temperature lighting (e.g., red or orange).	San Bernardino County
BR-10. Outdoor lighting for proposed homes on the individual tentative tracts shall not exceed 1,000 lumens. Furthermore, residential outdoor lighting shall not exceed 20 feet in height and must be shielded and focused downward to avoid lighting spillover onto adjacent open space or properties. These restrictions on outdoor lighting of the individual lots must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This requirement shall also be published in the Homeowner's Association CC&Rs.	San Bernardino County
BR-11. To limit the amount of human disturbance on adjacent natural open space areas, signs shall be posted, to the satisfaction of the Planning Director or appointee, along the northern and eastern perimeter of the Project site where the property boundary abuts USFS open space with the following statement: "Sensitive plant and wildlife habitat. Please use designated trails and keep pets on a leash at all times." In addition, a requirement stating that residents shall keep out of adjacent open space areas to the north with the exception of designated trails will be published in the Homeowner's Association CC&Rs and a map of designated hiking trails will be provided to all residents.	San Bernardino County
BR-12. Prior to recordation of the final map, a landscaping plan for the entire tract shall be prepared (inclusive of a plant palette) with an emphasis on native trees and plant species, and such plan shall be submitted to the County of San Bernardino for review and approval by a qualified biologist. The review shall determine that invasive, non-native plant species are not to be used in the proposed landscaping. The biologist will suggest appropriate native plant substitutes or non-invasive, nonnative plants. A note shall be placed on the Composite Development Plan indicating that all proposed landscaping (including landscaping on individual lots) shall conform to the overall approved tract map landscaping plan. A requirement shall be included stating that residents shall be restricted to the use of tree and plant species approved per the overall tract map landscaping plan. The Homeowner's Association CC&Rs shall also require individual lot owners to use only tree and plant species approved per the overall tract map landscaping plan/plant palette.	San Bernardino County
BR-13. Prior to issuance of grading permits, the Project applicant shall obtain all required authorization from agencies with jurisdiction over all unavoidable impacts to State and Federal jurisdictional lakes, streams, and associated habitat within the Project site. Impacted features shall be offset through onsite restoration, offsite restoration, or purchase of credits at an agency-approved mitigation bank in the region at no less than a 3:1 for direct impacts and 1:1 for indirect impacts if impacts cannot be avoided.	San Bernardino County

Impact Description	Impact After Mitigation
<p>Subchapter 4.2 examines whether the proposed Moon Camp Project would have a substantial adverse effect upon biological resources, specifically Project related impacts to the federally listed as threatened ashy-gray Indian paintbrush (<i>Castilleja cinerea</i>) or sensitive pebble plain habitat on the proposed Project site, as well as any indirect substantial effect upon any biological resources in the Big Bear Valley. The analysis is focused solely on this issue.</p> <p>Development of the proposed Project has the potential to significantly impact the Federally-listed Threatened and CNPS List 1B species, ashy-gray Indian paintbrush; and five CNPS List 1B species, Parish's rock cress, Big Bear Valley woollypod, silver-haired ivesia, purple monkeyflower, and Bear Valley phlox. Furthermore, the Project may also significantly impact bald eagle.</p> <p>Pebble Plain Habitat</p> <p>Section 4.2 analyzes the potential for the Project to result in a significant impact to the sensitive Pebble Plain habitat. The 2011 RRDEIR concluded that the project site did not contain true Pebble Plain habitat due to the lack of presence of the two indicator species. The 2023 Memo prepared by Jacobs Engineering Group Biologist, Daniel Smith concluded that the determination that no true pebble plain habitat exists on the project site was correct, and thus, the implementation of the proposed Project will have no potential to impact pebble plain habitat, and thus would not result in a potentially significant impact and no mitigation is required.</p> <p>Since, no true pebble plain habitat exists on the project site, and thus, the implementation of the proposed Project will have no potential to impact pebble plain habitat, and thus would not result in a potentially significant impact and no mitigation is required. Note that the Project Applicant, RCK Properties, owns the 10-acre Dixie Lee Lane parcel. The permanent protection of which was included as a mitigation measure in the FEIR certified by the County in connection with the 2020 approval of the Project. According to the 2010 Focused Special Status Plant Species Survey, the 10-acre Dixie Lee Lane parcel is estimated to contain very high densities of the two indicator species for pebble plain habitat—<i>Arenaria ursina</i> and <i>Eriogonum kennedyi austromontanum</i>—with an estimated population in the tens of thousands. Moreover, Dr. Krantz characterized the Dixie Lee Lane property parcel as a “textbook example of this rare plant community.” Dr. Krantz further opined that, to the best of his knowledge, the Dixie Lee Lane property parcel represents the highest density of pebble plain plant species of any privately held land in Big Bear Valley. The Dixie Lee Lane parcel is currently owned by the applicant and has no deed restrictions. As part of the proposed Project, the Project Applicant is offering this 10-acre parcel as a benefit to the community to be preserved in perpetuity, which will be enforced through the County's Conditions of Approval for the Project. However, the creation of a conservation</p>	<p>The Project revisions incorporated into the Moon Camp Project analyzed in Subchapter 4.2, are in direct response to the 2010 Focused Special Status Plant Species Survey prepared by Dr. Krantz. The survey identified a large number of ashy-gray Indian paintbrush occurrences in the western portion of the Project site, which shall be conserved through the creation of conservation areas A and H, as shown on Figure 4.2-2.</p> <p>Ashy-Gray Indian Paintbrush</p> <p>The 2010 Focused Special Status Plant Species Survey concluded that Project site contained 7.71 acres of habitat for the ashy-gray Indian paintbrush, of which 4.84 acres will be permanently preserved on-site. This results in mitigation of project impacts on a 1.68:1 ratio, on an acreage basis. On an occurrence basis, the Project site contains 5,567 occurrences of ashy-gray Indian paintbrush with 88 percent, or 4,895 of the occurrences within the Project site will be protected through permanent conservation easements designated within both lettered Lots A and H, which equates to a conservation on an occurrence basis of approximately 7:1. The conservation easements would be established through MM BR-1b, and the preservation of the conservation easements would be ensured through MM BR-1c. Furthermore, MM BR-1a would provide for an attempt to salvage ash-gray paintbrush seed prior to any Project related impacts to this species, and MM BR-1d would require the construction within Lots 1, 4, 47, 48, 49, and 50 to be restricted by means of building envelopes or building setback lines to prevent construction in the occupied ashy-gray Indian paintbrush habitat, wherever feasible, thereby minimizing impacts to the plants that can be feasibly retained as part of the Project. The permanent preservation of the 10-acre Dixie Lee Lane parcel was included as a mitigation measure in the 2020 FEIR. Although the permanent preservation of that parcel is included as a Project community benefit, permanent preservation of the parcel is not required to mitigate impacts to the Ashy-Gray Indian Paintbrush to less than significant levels. This is because impacts to Ashy-Gray Indian Paintbrush, as discussed under issue (a), above, can be mitigated to a level of less than significant with implementation of the 4 mitigation measures discussed in the adjacent column.</p> <p>Significant and unavoidable impacts related to Biological Resources have been identified for impacts to bald eagle. MM BR-4 would mitigate impacts by requiring replacement of perch trees at a ratio of 5:1 with the creation of artificial perch trees along the shoreline designated open space. In addition, any development that may occur within the Project site and in the individual lots must avoid impacts to these trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. However, because the Project would result in a permanent</p>

Impact Description	Impact After Mitigation
easement at the Dixie Lee Lane parcel is not considered mitigation to offset impacts to any special status plants (such as ashy-gray Indian paintbrush) or sensitive natural communities (such as pebble plain habitat), as originally identified in the 2020 FEIR for the Moon Camp Project.	<p>change in existing conditions under which the bald eagle currently occupies the site and vicinity, impacts would remain significant and unavoidable.</p> <p>It should be noted that CEQA requires all potentially significant impacts be avoided or substantially reduced prior to project approval. As previously noted, the Project is likely to result in significant unavoidable impacts to the bald eagle. Based on the County of San Bernardino criteria for determining impacts to bald eagles, any removal of perch trees or human activity resulting in light noise impacts are considered a significant impact under CEQA. This threshold is so restrictive that there is no reasonable configuration to the Moon Camp Project that could avoid a significant impact to the bald eagle. Therefore, further project modifications would not avoid or substantially reduce the identified impacts to bald eagles.</p> <p>No additional significant impacts related to Biological Resources have been identified following implementation of mitigation measures and/or compliance with applicable standards, requirements and/or policies by the County of San Bernardino.</p>

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
HAZARDS AND HAZARDOUS MATERIALS	
HAZ-1. <u>Fire Access Road Maintenance</u> : Maintenance is an important component for the long-term reliability of all Project roadways. Maintenance obligations for the Moon Camp Project shall be the responsibility of the HOA for routine road surface and roadside vegetation maintenance throughout the Project site, internal to the Project site, and excluding maintenance along SR-38, for which Caltrans is responsible.	San Bernardino County
HAZ-2. <u>Updates to the Wildfire Evacuation Plan</u> : The Wildfire Evacuation Plan shall be periodically updated by the HOA, which shall be included as a requirement in the HOA bylaws. The updates shall follow lessons learned from actual wildfire or other emergency evacuation incidents, as new technologies become available that would aid in the evacuation process, and as changing landscapes and development patterns occur within and adjacent to the Project site that may impact how evacuation is accomplished. This shall occur at least every 2 years. Additionally, This Wildfire Evacuation Plan shall be adjusted and continued coordination by the Owner(s) and/or Developer and/or Property Manager and fire/law enforcement agencies shall occur during each of the construction phases. With each phase, the evacuation routes may be subject to changes with the addition of both primary and secondary evacuation routes.	San Bernardino County
HAZ-3. <ol style="list-style-type: none"> 1. Moon Camp shall designate a Fire Safety Coordinator(s) to oversee implementation of the Wildfire Evacuation Plan and overall fire coordination with Big Bear Fire Department and San Bernardino County Fire Protection District. 2. The Fire Safety Coordinator(s) shall coordinate an annual fire evacuation drill/fire exercise to ensure proper safety measures have been implemented, facility awareness and preparation of a facility-wide "Ready, Set, Go!" plan. The Fire Safety Coordinator shall also organize resident training and awareness through various practices: <ol style="list-style-type: none"> i. New hire fire awareness and evacuation training ii. Ongoing resident training 	San Bernardino County

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
<ul style="list-style-type: none"> iii. Facility sweeps by trained residents iv. Strategically placed fire safety and evacuation/sheltering protocol information, as determined by the Fire Safety Coordinator. <p>3. The Moon Camp Project shall include a proactive facility wildfire education program utilizing a multi-pronged approach to fire safety following the “Ready, Set, Go!” approach to wildfire evacuation, to include, but not limited to:</p> <ul style="list-style-type: none"> i. Annual wildfire and evacuation safety awareness meeting in coordination with local fire agencies. ii. Annual reminder notices shall be provided to each resident encouraging them to review the Wildfire Evacuation Plan and be familiar with evacuation protocols. iii. The Project HOA website shall host a webpage dedicated to wildfire and evacuation education and awareness, which should include a copy of this Wildfire Evacuation Plan and the resources provided herein. <p>4. The Project includes a contingency plan for the rare occurrence that evacuation is not safe that includes residents sheltering in place within onsite structures.</p> <p>5. The Fire Safety Coordinator shall submit a report detailing compliance with the above provisions to the County on a yearly basis to demonstrate compliance with this measure.</p>	
<p>T-1. Project Design Features recommended in the TIA shall be incorporated into the project design. These include:</p> <ul style="list-style-type: none"> • Construction of North Shore Drive at its ultimate half-section width as a Mountain Major highway from Canyon Drive to the Easterly project boundary. • Installation of a stop sign control at Driveway #1 and Driveway #2. • Construction of an Eastbound Left Turn Lane at Driveway 1/North Shore Drive and Driveway 2/North Shore Drive for 2030 Buildout Conditions. • Construction of a 2nd Eastbound Through Lane at Driveway/North Shore Drive and Driveway 2/North Shore Drive for 2030 Buildout Conditions. 	San Bernardino County
<p>T-2. The eastbound left turn lanes at both project access points will be constructed at opening year at 100% cost to the Applicant. The Applicant shall pay fair share costs of the construction of the eastbound through lanes at both project access points for the horizon year conditions. The developer shall pay the fair share cost of \$99,320 toward the off-site traffic improvements recommended in Appendix G of the San Bernardino Congestion Management Program, 2003 Update.</p>	San Bernardino County
<p>T-3. The following Project Design Features recommended in the Revised 2018 Focused Traffic Impact Assessment (FEIR Appendix M) shall be incorporated into the Proposed Alternative Project design:</p> <ul style="list-style-type: none"> • Construction of left-turn pockets on driveways along North Shore Drive (SR-38) on Driveway 1 and Driveway 2. • Construction of a Class II Bicycle Lane on North Shore Drive (SR-38) in the eastbound direction. 	San Bernardino County

Impact Description	Impact After Mitigation
<p>Subchapter 4.3, Hazards and Hazardous Materials examined whether the proposed Moon Camp Project would have a substantial adverse impact with respect to hazards or hazardous materials by impairing implementation of or physically interfering with an adopted emergency response plan or emergency evacuation plan. The analysis is focused solely on this issue.</p> <p>It is estimated that the conservatively calculated minimum amount of time needed to move the existing, planned (future/cumulative) and Project populations to urbanized and/or designated evacuation areas would be</p>	<p>The hazards and hazardous materials evaluation in the DPEIR concluded that the identified evacuation hazards in the Program area can be adequately mitigated to a level of impact that is less significant. MMs HAZ-1 through HAZ-3 are required to ensure that updates to the Wildfire Evacuation Plan are made periodically, that the Ready, Set, Go! Program is implemented, and that fire road access is maintained. The circulation improvements determined to be necessary in the 2020 FEIR, and enforced by MMs T-1 through T-3, are not necessary conditions to minimize evacuation circulation impacts. However, implementation of MMs T-1 through T-3 would serve to further minimize traffic</p>

Impact Description	Impact After Mitigation
<p>approximately up to 1 hour and 42 minutes under varying constraints that may occur during an evacuation. Under the most conservative scenario, changes in evacuation times (Scenario 1 compared to Scenario 5 and 7) are minor for Land Use Areas A through D, with 6-, 2-, 0-, and 2-minute increases in evacuation time with the proposed Project, respectively. The 1-to-6-minute potential evacuation time increases are considered minimal and do not result in evacuation times for existing residents that would be considered excessive. The proposed Project would only add a maximum of 6 minutes to the evacuation times that would occur under Existing Land Uses with Cumulative Projects when the additional trips associated with the proposed Project are added to this scenario. Given this minimal addition to the time to it would take to evacuate to the nearest safety zone (in this case, the urban areas of the City of Big Bear Lake), the addition of the proposed Project to the Project area would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</p> <p>This evacuation analysis forecasts impacts not based solely on a numerical threshold, but is qualitative in nature, based on the extent to which the Project would interfere with an adopted emergency response plan or emergency evacuation plan, if at all. The Project's resident population would be considered a small relative increase to the region's visitor and resident population. Regardless, the Project has provided a comprehensive evacuation evaluation, and the evacuation time results are comparable to similar sized populations under a mass evacuation. Further, any additional time that a Project adds to an evacuation time does not necessarily generate a greater safety risk.</p> <p>However, a significant impairment of implementation of an adopted emergency response plan or emergency evacuation plan could occur if updates to the Wildfire Evacuation Plan are not made to assess current conditions, and if the Ready, Set, Go! Program¹ is not clearly communicated to residents of the Moon Camp Project</p>	<p>conflicts during both normal and evacuation conditions, as the intent of these measures is to enhance circulation to a level of less than significant. Through the implementation of these mitigation measures, the proposed Project would have a less than significant potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</p>

¹ The focus of the "Ready, Set, Go!" program (Appendix A of the Wildfire Evacuation Plan [Appendix 12, Volume 2 to this PRDEIR No. 3]) is on public awareness and preparedness, especially for those living and/or working in wildland-urban interface (WUI) areas. The program is designed to incorporate the local fire protection agency as part of the training and education process in order to ensure that evacuation preparedness information is disseminated to those who are subject to the potential impact from a wildfire.

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
LAND USE / PLANNING No Mitigation Required.	--

Impact Description	Impact After Mitigation										
<p>Subchapter 4.4, examines whether the proposed Moon Camp Project would have a substantial adverse effect upon land use and planning, including consistency with the San Bernardino Countywide Plan. The County proposed to analyze the following environmental issue in this Subchapter of the PRDEIR No. 3: the Project's consistency with the County of San Bernardino Countywide Plan, adopted on October 27, 2020, after the Certification of the EIR and approval of the Project. The analysis is focused solely on this issue.</p> <p>The Project was determined to be consistent with the applicable San Bernardino Countywide Plan Goals and Policies, and the SCAG Connect SoCal Goals that have been adopted for the purpose of avoiding or mitigating an environmental effect. Furthermore, according to the Southern California Association of Governments (SCAG) 6th Cycle Final Regional Housing Needs Assessment (RHNA) Allocation Plan, the County's regional housing needs are as follows:</p> <p style="text-align: center;">Table 4.4-3 REGIONAL HOUSING NEEDS: UNINCORPORATED COUNTY OF SAN BERNARDINO²</p> <table><tr><th>Total</th><th>Very Low Income</th><th>Low Income</th><th>Moderate Income</th><th>Above Moderate Income</th></tr><tr><td>8,832</td><td>2,179</td><td>1,360</td><td>1,523</td><td>3,770</td></tr></table> <p>The proposed project would contribute 50 units to the SCAG identified 8,832 dwelling unit deficit within the Unincorporated areas of the County at present, thus complying with the goals of the County's Housing Element. Therefore, the implementation of this project at this site is consistent with the County's plans and policies. Based on the preceding information, implementation of the Moon Camp Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, zone classification, or the County's Development Code) adopted for the purpose of avoiding or mitigating an environmental effect. No significant adverse impacts are anticipated under this issue and no mitigation is required.</p>	Total	Very Low Income	Low Income	Moderate Income	Above Moderate Income	8,832	2,179	1,360	1,523	3,770	<p>No mitigation is required to minimize impacts under this issue.</p>
Total	Very Low Income	Low Income	Moderate Income	Above Moderate Income							
8,832	2,179	1,360	1,523	3,770							

²SCAG, 2021. 6th Cycle Final RHNA Allocation Plan (approved by HCD on 3/22/21 and modified on 7/1/21) https://scag.ca.gov/sites/main/files/file-attachments/6th_cycle_final_rhna_allocation_plan_070121.pdf?1646938785 (accessed 06/12/23)

[illegible][illegible][illegible][illegible]

SURVEYOR'S NOTES

DATES OF BEARINGS
THE NORTH LINE OF THE 1/2 OF THE NE 1/4 OF SEC. 13,
T. 20N. R. 10E. BEING THE 1/2 OF THE NE 1/4 OF SEC. 13,
T. 20N. R. 10E. PER TRACT 7755, NW 100/87-88.

GENERAL NOTE

1. LOTS 34, 41, AND 42 MAY REQUIRE ACCESS ACROSS THE
EASTERN ADJACENT BORDERS.

2. TOTAL NUMBER OF WELLS ON SEVEN BOREHOLE MAP: 2,792
3. NUMBER OF TRENDS BEHIND ROAD NEAR TRACT 515

API INDEX MAP

INDICATES LOCATION OF MAP CHECKOUT LINE # 1.
NOTES: 5 PARCEL NUMBER: 0034-001-20
0034-001-21
0034-001-22
0034-001-23

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

EASEMENT FOR SUBSURFACE MAP

IDENTIFY SUBSURFACE MAP CHECKOUT LINE # 17

LEGEND

| | | | |
|--|----------------------------|--|------------------------------|
| | MANHOLE | | ROAD MARKING |
| | FIRE HYDRANT | | VALVE |
| | SIGN | | POWER POLE |
| | GUY WIRE | | STREET LAMP |
| | RETAINING WALL | | TANK |
| | TIE | | FACING RIB OF RETAINING WALL |
| | BELTED LINE | | BELTED LINE |
| | CONTROL POINT | | GROUND NOT VISIBLE |
| | OUT SLOPE 1/2 : 1 | | OUT SLOPE 1/2 : 1 OR LESS |
| | FULL SLOPE 1/2 : 1 OR LESS | | |

- DOCKS
- RAIN RUN TRENCH
- ROAD TRENCH
- GRADE OF PAVEMENT
- BUILDING OUTLINE
- LAND MONUMENT
- RAIL AND GALE POINT
- PROPERTY LINE AND HIGH WATER LINE
- RAIL RECORD OF SURVEY (ACS 17103-110)
- UTILITY TIE IN (1113-4749-80)
- DOE COOP. JURISDICTIONAL BOUNDARIES
- SEWER BASIN AREA (100' WIDTH)
- TOWN DRAIN EXISTENT
- TOWN BASIN STRUCTURE
- DRAIN INLET
- VALVE/VEY (PRELIMINARY SIZE SHOWN)
- TOWN DRAIN IDENTIFICATION NUMBER

[illegible]

PROPOSED LOT LINE
SCALE: 1"=400'

20.000 FT.

RTS VICINITY MAP

PROPOSED LOT LINE
SCALE: 1"=400'

20.000 FT.

RTS VICINITY MAP

CURVE TABLE

| | |
|---------------|---------------|
| 1 = 33.00' | 17 = 186.00' |
| 2 = 33.00' | 18 = 186.00' |
| 3 = 26.00' | 19 = 249.00' |
| 4 = 177.00' | 20 = 249.00' |
| 5 = 700.00' | 21 = 136.00' |
| 6 = 177.00' | 22 = 249.00' |
| 7 = 136.00' | 23 = 136.00' |
| 8 = 136.00' | 24 = 136.00' |
| 9 = 136.00' | 25 = 136.00' |
| 10 = 136.00' | 26 = 136.00' |
| 11 = 136.00' | 27 = 136.00' |
| 12 = 136.00' | 28 = 136.00' |
| 13 = 136.00' | 29 = 136.00' |
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| 134 = 249.00' | 134 = 249.00' |
| 135 = 249.00' | 135 = 249.00' |
| 136 = 249.00' | 136 = 249.00' |
| 137 = 249.00' | 137 = 249.00' |
| | |

[illegible]

SCALE: 1" = 100'
CONTOUR INTERVAL = 1'
DATE OF PHOTOGRAPHY 10-25-2000
PHOTO SCALE 1" = 300'
THIS MAP COMPILED BY PHOTOGRAMMETRIC METHODS
TOPOGRAPHIC MAP PREPARED BY: HICKS & HARTWICK, INC.
GRAPHIC SCALE
0 50 100 200 300 400
1 INCH = 100 FT.
THE BOUNDARY LINES SHOWN HEREON WERE DERIVED FROM RECORD INFORMATION

A. RIGHTS OF THE PUBLIC OVER ANY PORTION OF SAID LAND LYING WITHIN THE WATERS OF BIG BEAR LAKE.

(A) THE FACT THAT A PORTION OF THE PROPERTY LIES BELOW THE HIGH WATER MARK OF BIG BEAR LAKE IS SUBJECT TO FLOODING AND TO CATCH THE WATERS OF BIG BEAR LAKE, WHICH ARE SUBJECT TO CIRCUMSTANTIAL CHANGES IN THE WATER LEVELS AND CONDITIONS OF THE LAKE (DUE TO STORM WATERS AND SNOW MELT) FROM ADJOINING PROPERTY.

(B) SUBJECT TO INGRESS AND EGRESS OVER THAT PORTION OF THE PROPERTY LIES BELOW THE HIGH WATER MARK OF BIG BEAR LAKE, AND THE WATERS OF BIG BEAR LAKE, OVER THAT PORTION OF THE PROPERTY, THE WATERS OF BIG BEAR LAKE, IF SAME SHOULD BE FOUND TO BE.

B. AN EASEMENT FOR THE HEREINAFTER SET FORTH SPECIFIC PURPOSES, INCIDENTAL PURPOSES, RECORDED IN BOOK 23, PAGE 123, OFFICIAL RECORDS, COUNTY OF CALIFORNIA, FOR THE ESTABLISHMENT OF A STATE HIGHWAY.

C. AN EASEMENT WITH ITS CORRELATIVE DUTY OF CALIFORNIA BY THE STATE OF CALIFORNIA (AFFECTS PARCEL NOS. 1, 3 AND 4).

BOATS THAT MAY BE IN DISTRESS AND OTHER SIMILAR OR RELATED PURPOSES AND WAS CONVEYED TO BEAR VALLEY MARINE WATER COMPANY, A CORPORATION BY SUCH DOCUMENT.
(AFFECTS PARCEL NOS. 2 AND 3)

M. AN EASEMENT FOR THE FIREMARTIN SET FORTH SPECIFIC PURPOSE AND INCIDENTAL PURPOSES, RECORDED IN BOOK 808, PAGE 705, OFFICIAL RECORDS, SAID EASEMENT IS FOR SANITARY SEWER PURPOSES AND WAS CONVEYED TO THE BEAR WASTEWATER AGENCY BY SUCH DOCUMENT.
(AFFECTS ALL PARCELS)

18-23. INFORMATION DELINEATED ON MAP AS REQUIRED
24. PROJECT SHALL BE FOR **"LOT SALES ONLY"**
25. ALL EXISTING TREES DELINEATED ON MAP.

| LINE | STATION | LENGTH | LINE | STATION | LENGTH |
|------|-----------------|--------|------|-----------------|--------|
| 1.1 | N 10° 22' 22" W | 33.31 | 1.14 | N 14° 00' 00" W | 1.14 |
| 1.2 | N 15° 02' 59" E | 58.09 | 1.15 | N 15° 02' 59" E | 58.09 |
| 1.3 | N 67° 5' 44" E | 56.98 | 1.16 | N 67° 5' 44" E | 56.98 |
| 1.4 | N 21° 14' 56" E | 52.80 | 1.17 | N 21° 14' 56" E | 52.80 |
| 1.5 | N 55° 54' 59" E | 80.12 | 1.18 | N 55° 54' 59" E | 80.12 |
| 1.6 | N 21° 05' 44" E | 66.95 | 1.19 | N 21° 05' 44" E | 66.95 |
| 1.7 | N 1° 04' 04" E | 20.08 | 1.20 | N 1° 04' 04" E | 20.08 |
| 1.8 | N 89° 39' 59" W | 93.06 | 1.21 | N 89° 39' 59" W | 93.06 |
| 1.9 | N 60° 02' 12" W | 80.27 | 1.22 | N 60° 02' 12" W | 80.27 |
| 1.10 | N 58° 12' 03" W | 80.00 | 1.23 | N 58° 12' 03" W | 80.00 |
| 1.11 | N 77° 22' 48" W | 55.86 | 1.24 | N 77° 22' 48" W | 55.86 |
| 1.12 | N 77° 22' 48" W | 78.93 | 1.25 | N 77° 22' 48" W | 78.93 |
| 1.13 | N 46° 2' 51" E | 66.71 | 1.26 | N 46° 2' 51" E | 66.71 |

| | LENGTH | LINE | ANGLE | LENGTH | THICKNESS |
|---|--------|------|-------------|--------|-----------|
| A | 240.83 | L26 | N21°20'29"W | 29.13 | |
| B | 170.55 | L28 | N21°50'25"W | 89.79 | |
| C | 104.54 | L29 | N21°20'29"W | 158.91 | |
| D | 55.77 | L30 | N69°39'30"E | 51.71 | |
| E | 50.77 | L31 | N48°28'19"E | 110.19 | |
| F | 117.93 | L32 | N03°39'44"E | 228.65 | |
| G | 308.87 | L33 | N08°29'06"E | 74.47 | |
| H | 27.00 | L34 | N01°15'43"E | 28.99 | |
| I | 167.41 | L35 | N76°08'18"E | 41.29 | |
| J | 95.05 | L36 | N11°52'37"E | 79.53 | |
| K | 146.64 | L37 | N07°08'46"E | 89.43 | |
| L | 173.57 | L38 | N01°09'13"E | 53.50 | |
| M | 147.68 | L39 | N74°41'58"W | 54.58 | |

Matthew C. Hicks
No. 63494
Civil
STATE OF CALIFORNIA

| | | |
|-------------------|--|---|
| 453.1
10/15/17 | TREATMENT VOLUME: 3,914 cf
IRRIGATION: 1.0 cfs
TREATMENT FLORAPANE: 4,800 cf | FIELD BOOK REF.
ADD LEFT TURN POCKETS AT ENTRIES & BIKE
CHANGE PROPOSED STREETS TO PRIVATE LOT
UPDATE NQMP DATA BASED ON PRELIMINARY
REMOVED LOT "C" RESERVOIR SITE, NOT NEEDED
UNDER CURRENT WATER SERVICE PROPOSAL |
|-------------------|--|---|

| | | | |
|----------|----------------|-----|-------------|
| 06/07/06 | DESIGNED BY | AMD | APPROVED BY |
| 06/14/07 | DRAWN BY | AMD | |
| 03/09/07 | CHECKED BY | JWH | |
| 06/01/06 | RECOMMENDED BY | | |

TENTATIVE TRACT No. 161
POR. N 1/2 SEC 13, T2N, R1W, S
FAWN SKIN, CALIFORNIA

6136
S.B.M.
A

FIGURE 1-1



Source: National Agriculture Imagery Program, San Bernardino County (2009).



Michael Brandman Associates

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Exhibit 1-2 Project Vicinity Map Aerial Base

SAN BERNARDINO COUNTY
MOON CAMP RESIDENTIAL SUBDIVISION PROJECT

FIGURE 1-2

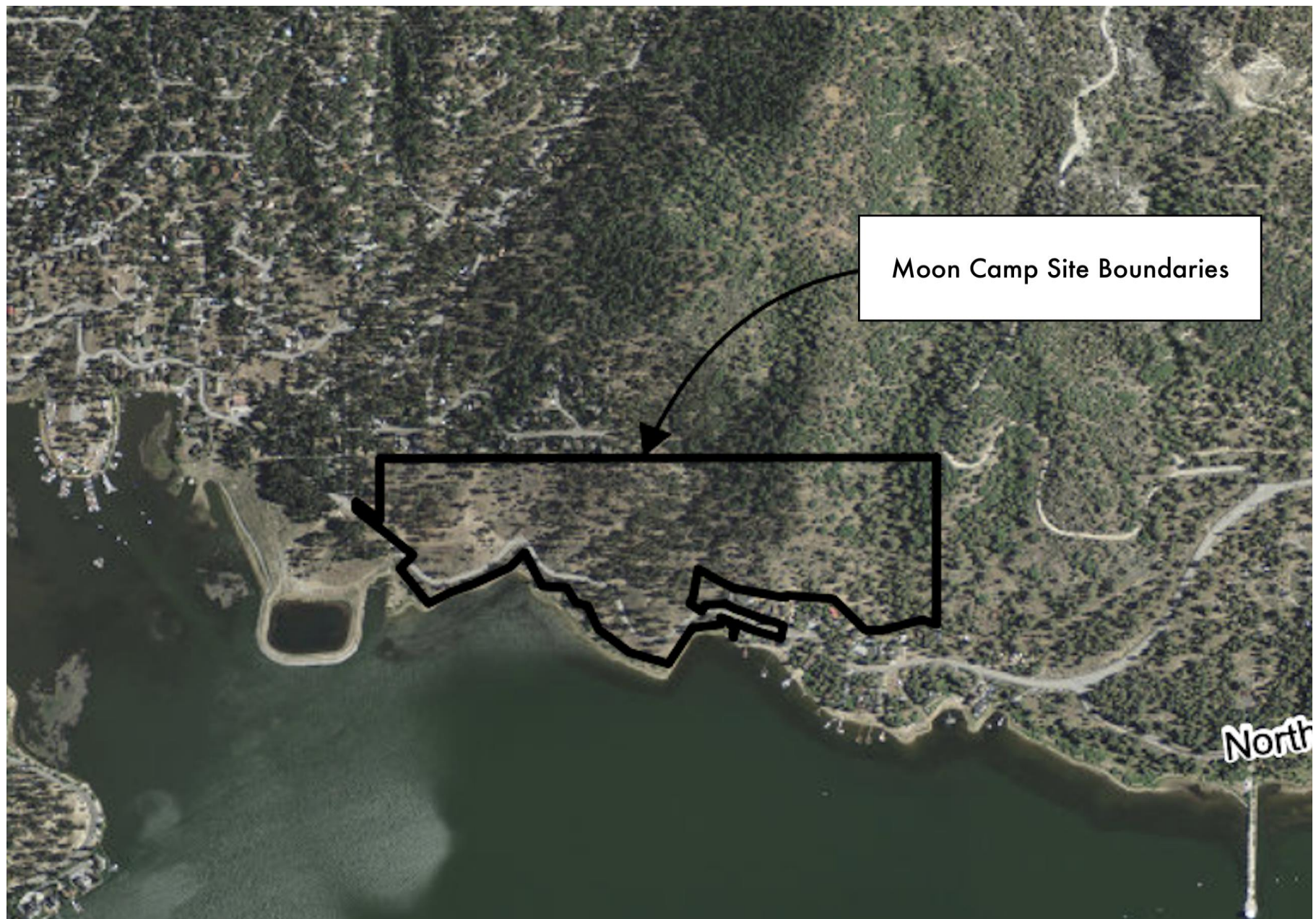


FIGURE 1-3

