United States
Department of
Agriculture

Forest Service

Pacific Southwest Region

Cleveland National Forest

April
2012

Kitchen Creek Helitanker Base Project

ENVIRONMENTAL ASSESSMENT

DESCANSO RANGER DISTRICT

To comply with the National Environmental Policy Act, the Kitchen Creek Helitanker Base Environmental Assessment has been prepared. This Environmental Assessment tiers to the decision for the 2005 Land and Resource Management Plan for the Cleveland National Forest and complies with the standards and guidelines of that plan. To avoid bulk and duplication these documents are incorporated by reference. These documents, as well as information from the project record are available from the Cleveland National Forest Supervisor's Office, San Diego, California.

This Environmental Assessment is not a decision document. Instead, it presents the evidence and analysis necessary to determine whether the consequences of the Proposed Action are "significant" and therefore whether an Environmental Impact Statement is necessary. The Responsible Official (Donn Christiansen, District Ranger, Descanso Ranger District) will determine whether an Environmental Impact Statement is necessary and whether or not to implement one of the alternatives considered in the Environmental Assessment.

Kitchen Creek Helitanker Base Project

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ABSTRACT

The Descanso Ranger District of the Cleveland National Forest (CNF) proposes to construct a Helitanker base on National Forest System lands in the Kitchen Creek Helitanker Base Project Area. The purpose of this project is to improve the response time of Type 1 Heavy Helicopters to the southern half of the Cleveland National Forest, thereby potentially increasing the efficacy of wildland fire suppression activities in this area.

Constructing this Helitanker base has been identified as a mitigation factor for the construction of the Sunrise Powerlink (SRPL), a high voltage electrical transmission line being constructed by San Diego Gas and Electric through San Diego County, including on lands managed by the United States Forest Service. The construction of the SRPL has been identified in the ROD/EIS as a potential source of wildland fire ignitions. Unfortunately, the vegetated area that it runs through also contains some of the oldest and most vulnerable wildland fire fuels on the CNF.

This Environmental Assessment documents the analysis completed by the project Planning Team to estimate the site specific effects of implementing proposed project Alternatives. The Environmental Assessment tiers to the decision for the 2005 Land and Resource Management Plan for the Cleveland National Forest and complies with the standards and guidelines of that plan.

Construction of the Helitanker base would impact approximately 11 acres of National Forest System lands. Approximately 10 acres of the land would be the footprint of the Helitanker base itself, and less than one additional acre would be comprised of water well drilling; related infrastructure for water well usage; and trenching lines from Interstate 8 along Kitchen Creek Road to the Helitanker base to install utility lines for electricity and communication.

Issues that resulted from scoping and collaboration were incorporated into the development and design of the Agency Proposed Action – Alternative B. Scoping comments did not lead the Planning Team to develop another alternative, as issues identified in scoping were consistent with Forest Plan mitigation requirements. The analysis discloses the direct, indirect and cumulative effects that may occur as a result of the implementation of the Proposed Action and the No-Action Alternatives.

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Chapter 1 - Introduction

The Descanso Ranger District of the Cleveland National Forest is proposing to construct a Helitanker base on National Forest System land in eastern San Diego County. This Helitanker base will be used to house and support up to two Type 1 (heavy) helicopters. These helicopters are used in the suppression of wildland fires on National Forest System lands and elsewhere throughout the country.

The Helitanker base, when constructed, may have two takeoff/landing pads, office space, one aircraft hangar, warehouse space, vehicle parking, vehicle based fuel containment areas, watertanks, and other common infrastructure. An eight foot tall black chain-link fence will be constructed around the perimeter of the Helitanker base for security purposes. Some security lighting will also be installed in and or around the site. Not all of these buildings may be constructed, or constructed initially. At a minimum, the takeoff/landing pads, and office space will be constructed.

The Forest Service has prepared this Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA) of 1969, and other relevant federal and state laws and regulations. This EA discloses the direct, indirect and cumulative environmental impacts that may result from the implementation of the Proposed Action. It is prepared according to the format established by the Council of Environmental Quality (CEQ) regulations implementing NEPA (40 CFR 1500-1508).

Activities proposed on National Forest System lands as part of the Kitchen Creek Helitanker base must conform to the 2005 Cleveland National Forest LMP (Forest Plan) Standards and Guidelines.

Additional documentation, including more detailed analyses of project-area resources, may be found in the project planning record located at the Forest Supervisor's Office (US Forest Service) in San Diego, California. These records are available for public review.

1.1 Kitchen Creek Helitanker Base Project Location

The project is located approximately 25 miles east of Alpine, California on the Descanso District of the Cleveland National Forest (CNF). The area can be accessed by Kitchen Creek Road, north of Interstate 8, at mile marker 54. The project location is located east of Kitchen Creek road, 1.0 mile north of Interstate 8, directly north of a barbed wire fence with a two-track dirt road running along it.

The size of the constructed Helitanker base is proposed to be approximately 10 acres in size, although some additional smaller impact areas are located outside this main project area. These additional areas will be used for water well drilling, and the running of lines for electricity and communications. Additional areas of impact outside the main 10 acres comprise less than 1 acre.

The project area is located just north of the existing Cameron Fire Station, 1.0 mile north of Interstate 8. The legal location is: Township 17 South, Range 5 East, Section 3 of the San Bernardino Base Meridian. Please see the map located in chapter 2.

1.2 Background

Since 1995, the CNF has hosted a nationally-contracted Type 1 Helitanker helicopter. Firefighting helicopters are "typed" based upon such metrics as load capacity, passenger seats, and gross takeoff/landing weight. To be classified as a "Helitanker," the helicopter must have a fixed delivery tank, has to have a 1,100 gallon minimum tank capacity, and must be certified by the Air Tanker

Board. The most commonly recognized Helitanker is the Sikorsky S-64, a civilian version of the US Army's CH-54. The S-64, known as a "skycrane" is an effective Helitanker on initial attack wildland fires due to its large water-dropping capability and its ability to maneuver in tighter areas than airtankers. The early use of Helitankers, especially in open brushlands of southern California, is often critical in stopping an advancing head fire.

The CNF currently hosts one S-64 Helitanker at Hemet-Ryan Airfield, in Hemet, California.

1.3 Purpose and Need for Action

The purpose of this project is to construct a Helitanker base in order to better protect the southern half of the Cleveland National Forest from wildland fire. Constructing a base will enable quicker response times for Helitankers to areas of the CNF that have historically had long response times from Helitankers. This Helitanker base will also allow quicker refueling to occur for Helitankers operating in Southern San Diego County, allowing for more flight time dedicated to fire suppression.

The CNF has hosted an S-64 Helitanker at Hemet-Ryan Airfield in Hemet, California, for the last several years. The proposal would relocate that contracted aircraft 75 miles south to Kitchen Creek. The northern half of the Forest will still be effectively covered by Helitanker support due to the fact that the San Bernardino National Forest hosts two Helitankers at the San Bernardino Air Tanker Base in San Bernardino, CA. This proposed action will enable a more disbursed resource allocation of Helitankers in the zone.

The proposed project area is located in the Morena Place (pg 43, Part 2, CNF LMP). Land Use Zones are used for the purposes of identifying appropriate management types of 'uses' that are consistent with the achievement of the desired condition described in Part 1 of the LMP (pg 2, Part 2, CNF LMP). The project area is in the Land Use Zone designated as "Developed Area Interface (DAI)." Areas designated as DAI include areas adjacent to communities or concentrated developed areas with more scattered or isolated community infrastructure. As a result, human use and activity is more noticeable in these areas. The 'Activity' category that this proposal falls under is "Developed Facilities." Table 2.2.3 (pg. 4, Part 2, CNF LMP) shows that Developed Facilities in the DAI are considered a "Suitable" use.

The project proposal is consistent with Forest Plan Goal 1.1: "Improve the ability of southern California communities to limit loss of life and property and recover from the high intensity wildland fires that are a natural part of the state's ecosystem (pg. 19, Part 1, CNF LMP). It is consistent with Forest Goal 1.2.1: "reduce the potential for widespread losses of montane conifer forests caused by severe, extensive, stand replacing fires (pg. 22, Part 1, CNF LMP). It is consistent with National Strategic Plan Goal 1: "reduce the risk from catastrophic wildfire" (pg. 49, Part 1, CNF LMP). This proposal is consistent with Program Strategy and Tactic FH2: "prevention of fire induced type conversion (pg. 92, Part 2 CNF LMP); and FIRE3: "fire suppression emphasis" (pg. 117, Part 2, CNF LMP).

This project has been identified as mitigation in the Environmental Impact Statement/Record of Decision for the construction of the Sunrise Powerlink, a high voltage electrical transmission line being built through San Diego County, including on lands managed by the US Forest Service (Mitigation F-3a).

The need for this project stems from the fact that although high voltage powerlines themselves do not usually start wildland fires, they do stand as a "significant barrier" to firefighting operations both on the ground and in the air. When a fire burns in the same area as powerlines, the resultant smoke can act as a

conduit for electricity to travel from the wires to the ground (known as "arcing"). This poses a life hazard to firefighting personnel working in the area. Under these circumstances, direct suppression actions can rarely be taken in the immediate area of the fire. As a result, fires will necessarily grow larger until firefighters can reengage the fire a safe distance away from the electrical transmission lines. The transmission towers and electrical wires serve as a physical barrier to firefighting aircraft. Aircraft must also stay a safe distance away in order to avoid both arcing and impact hazards.

The Powerlink is located in areas of chaparral vegetation that are nearing the end of their predicted fire return interval. As a result of years of fire suppression activities, coupled with past fire activity, there are areas of the Descanso Ranger District that possess large contiguous blocks of single-aged chaparral vegetation. Of particular note is the Laguna Fire (1970) scar. Large areas of this fire scar are now 41 years old, which is of concern for local fire managers in terms of potential for fire spread and intensities. Locating a Type-1 firefighting helicopter in the vicinity is aimed at reducing fire size and spread early after an ignition, before it can have a chance to grow larger and start interacting with the Sunrise Powerlink infrastructure.

1.3.1 Existing Condition and Desired Future Condition

The current location of the Helitanker base is at Hemet-Ryan Airfield in Hemet, California. Flying from Hemet puts the Helitanker approximately 20 air miles away from either the Trabuco Ranger District or the Palomar Ranger District. This translates to a minimum of 5.25 minutes of flight time at 105 miles per hour (average cruising speed) before the Helitanker enters airspace above National Forest System lands. This time is likely conservative, due to the fact that the Helitanker requires time to get up to cruising speed, and will be travelling slower if its tank is full of water.

The desired condition is to construct a Helitanker base in the Kitchen Creek project area. Doing so would place a US Forest Service resource within the boundary of the National Forest. This will enable faster response times to wildland fire ignitions on the National Forest in many areas of the CNF. Placing the Helitanker within the boundaries of the National Forest is listed in the Cleveland National Forest Facilities Master Plan. Operation of the completed Helitanker base would be approximately from June through November in a given year. This coincides with the wildland fire season.

The proposed action, if implemented, would require approximately one year to construct.
The Helitanker is a "National Resource," meaning that it may be relocated by the National Aviation Program Leader at any time to another area of the country to assist in wildland fire suppression. For example, in 2011, the Helitanker spent only 66 days out of its 184 day contract period at Hemet-Ryan. The rest of the time it was allocated to Texas and other regions of the country. Limited use of the Helitanker base for fire or non-fire purposes outside of this time is possible, such as for search and rescue operations.

1.4 Public Involvement

The public was involved in many facets of this project's development. Responses were made from the scoping efforts, from the public comment effort, as well as personal communications. This interaction was extended to cooperating agencies as well, such as the California Department of Fish and Game California Department of Forestry and Fire Protection.

A chronology of public involvement is as follows:

July 1st, 2011. Project proposal added to the 4th quarter Schedule of Proposed Actions.

August 17th, 2011. Legal Notice of Scoping published in the Union Tribune Newspaper, San Diego, CA.
August 18th, 2011. Scoping Letter posted to the Cleveland National Forest website for public review.
August 19th, 2011. Scoping letter mailed to interested parties on the standard CNF mailing list.
January 13th, 2012. Draft EA posted on the CNF website.
January 23rd, 2012. Draft EA documents (hard copy) mailed to three commenters from Scoping, as well as approximately 150 postcards mailed with information about the Legal Notice.
January 24th 2012. Legal Notice of Public Comment Period/ Public Comment Period.

1.5 Issues

For purposes of NEPA analysis, an "issue" arises from the relationship between actions (proposed, connected, similar, and cumulative) and environmental consequences (physical, biological, cultural, and socioeconomic).

The Interdisciplinary Team (IDT) reviewed comments from the public and other agencies, and identified key issues in a content analysis process. These key issues as well as several issues identified by resource specialists during IDT meetings were used in this EA to design the Proposed Action, prescribe design criteria, and describe environmental effects. Other issues were determined to be relevant but differ from key issues in that they were not used to formulate alternative approaches. They often describe minor or consistent consequences among alternatives considered in detail and are covered by mitigation measures or monitoring. Issues not addressed in this EA are those that have already been decided by law, regulation, or existing plans, were outside the scope of the decision being made, or were conjectural (not supported by scientific or factual evidence). See the project record for notes from the content analysis process.

1.5.1 Key Issues

1. **Concern that elevated noise levels as a result of Helitanker Base operations will harm wildlife species such as Bighorn Sheep and Golden Eagles.**

   Input from the public has expressed concern that the proposed Helitanker base, when in operation, has the possibility to negatively affect wildlife species. Although public comments refers to the Helitanker base itself, the issue would be the associated noise from Type 1 Helicopters landing and taking off from the Helitanker base, as well as associated nearby low-level flight.

   Wildlife species mentioned in scoping comments include Golden Eagles and Bighorn Sheep. The actual potential negative impact of noise to these species was not identified in the scoping letters. These components are analyzed and compared across alternatives in this document.

2. **Potential for damage to mature oak trees within the project site, including impact to raptor foraging areas.**

   The proposed action stands to impact oak trees of a mature size on a limited scale. The proposed area boundary currently contains three mature oak trees, and the proposed area is located adjacent to a small stand of approximately 30 trees. Construction of the Helitanker base would require that the 3 oak trees located within the project area be removed. No additional trees are proposed to require removal at this time. A discussion of the effects of removing these trees is found in the Chapter three, Wildlife and Botanical Resources section.

3. **Potential to alter the visual component and increase industrialization of a rural and scenic area, and more.**

   Constructing this Helitanker base will change the visual look of the project area, primarily for those Forest users travelling to the Cibbets Flat campground. There may also be a change in the look of the area for vehicle drivers travelling on Interstate 8.The Helitanker base is proposed to be located in an area that is near the Cameron Fire Station, a pre-existing Forest Service administrative site. How this interacts with Scenic Integrity Objectives is analyzed in this document.

4. **Project is located over an EPA- designated Sole Source Aquifer.**

   The Kitchen Creek Helitanker base is located on the Campo-Cottonwood Sole Source Aquifer, one of the nine sole source aquifers designated in the Environmental Protection Agency (EPA) Region 9. To be a sole source, the aquifer must supply more than 50% of a community's drinking water.

   The EPA's Sole Source Aquifer (SSA) Program was established under Section 1424(e) of the Safe Drinking Water Act (SDWA.) Since 1977, it has been used by communities to help prevent contamination of groundwater from federally funded projects. It has increased public awareness of the vulnerability of groundwater resources. The SSA program allows for EPA environmental review of any project that is financially assisted by federal grants or federal loan guarantees.

   During the course of this analysis, the EPA was consulted in regards to this potential issue. A discussion of the consultation is found in the Chapter Three, Watershed and Soils section.

1.5.2 Issues Considered But Not Analyzed in Detail

The Council on Environmental Quality (CEQ) NEPA regulations explain this delineation in Sec. 1501.7, "…identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)…" Issues not analyzed in detail were identified as those that (a.) are treated the same in all alternatives, (b) outside the scope of the proposed action, (c) already decided by law or regulation or (d) not supported by scientific evidence. A brief list of these issues eliminated from detailed study are found below, however additional information on these issues may be found in the Project Record.

1. **Potential airspace conflict with Hang Gliding.**

   A member of the public brought to attention that hang gliding and paragliding launches occur at Sheepshead Mountain, 3.5 miles northwest of the project site. The commenter expressed concern that there could be airspace conflicts with hang gliders, who take off from Sheepshead Mountain, and who commonly travel towards Kitchen Creek at altitudes of up to 7,000 feet.

   Both hang gliders and paragliders (those aircraft types identified as in use in the commenter's letter) are designated as "Ultralight Aircraft" by the Federal Aviation Administration (FAA). A review of this potential issue determined that Federal Aviation Regulations (FAR), Part 103 (CFR Title 14), governs the operation of Ultralight Aircraft. The commenter expressed concern for potential airspace conflicts with the operation of the proposed Helitanker base.

   FAR Section 103.13 governs the right of way rules for ultralight aircraft. These rules dictate that (a) each person operating an ultralight vehicle shall maintain vigilance so as to see and avoid aircraft and shall yield the right-of-way to all aircraft; (b) no person may operate an ultralight vehicle in a

manner that creates a collision hazard with respect to any aircraft; and that (c) powered ultralights shall yield the right-of-way to unpowered ultralights. Given the fact that FAA/FAR regulations already dictate the operation of ultralight aircraft as well as the Class G airspace in which they operate, the Interdisciplinary Team does not feel that further mitigation or examination of this potential issue is warranted.

2. **Concern that elevated noise levels as a result of Helitanker Base operations will negatively impact local residents.**

   Although potential impact to nearby residents was identified as a potential issue, no specific residential areas were identified by commenter's. A field and remote sensing review of the area showed that the closest known residential structure is located more than 1.5 miles away from the proposed Helitanker base.

   The lack of proximity of the proposed Helitanker base to residents and businesses was one of the main contributing factors to proposing this area for construction. Residents that do live in the general area are few and widely scattered. Also, according to US Forest Service aviation policy, no aircraft are permitted to engage in flight after official dusk. Therefore, there should be no impact to residents during nighttime hours from low flying aircraft.

1.6 Relationship to the Forest Plan

The 2005 Revision of the Forest Plan for the Cleveland National Forest includes provisions of the National Forest Management Act, its implementing regulations, and other guiding documents. The Forest Plan details the direction for managing the land and resources of the Cleveland National Forest.

1.6.1 Current Laws

The Environmental Assessment for the Kitchen Creek Helitanker Base Project has been prepared pursuant to the requirements of the National Environmental Policy Act (NEPA, 40 CFR 1500-1508), the National Forest Management Act (NFMA implementing regulations of 2008 including 36 CFR 219.2, and the transition provisions of 36 CFR 219.14), and the 2005 Cleveland National Forest land and Resource Management Plan. Federal laws, including the Endangered Species Act, Clean Air Act, and Clean Water Act, also apply.

1.6.2 Decision Framework

The Responsible Official for this proposal is the Descanso District Ranger. After reviewing the Proposed Actions, the No Action Alternative, and the environmental consequences of implementation, the Responsible Official will determine through a Decision Notice what activities, if any, will be implemented, and what management requirements and mitigation measures will accompany the activities.

Chapter 2 - Alternatives Including the Proposed Action

Alternatives are presented in accordance with the direction found in the CFR Title 40, Part 1502.14. Alternatives will be analyzed in accordance with FSH 1900.15, Chapter 10, Sections 15 and 16. Please refer to the included map for location of the analysis area. The Descanso Ranger District has developed

two alternatives for the Kitchen Creek Helitanker base. Alternatives have been developed with the help of public, collaborating agency, and interest group input via public contact and the previously completed Scoping Period. This collaboration helped refine the proposed treatment alternatives.

Alternatives include a no-action Alternative, which would result in no Helitanker base being constructed at Kitchen Creek. The Agency Proposed Action is to construct a Helitanker base at Kitchen Creek. A brief description of these Alternatives is outlined below.

2.1 Alternatives Analyzed in Detail

Appendix A has design criteria for the Wildlife and Botanical Resources, Cultural Heritage, Soils, Hydrology, and Invasive Plants, and are made part of the action alternative.

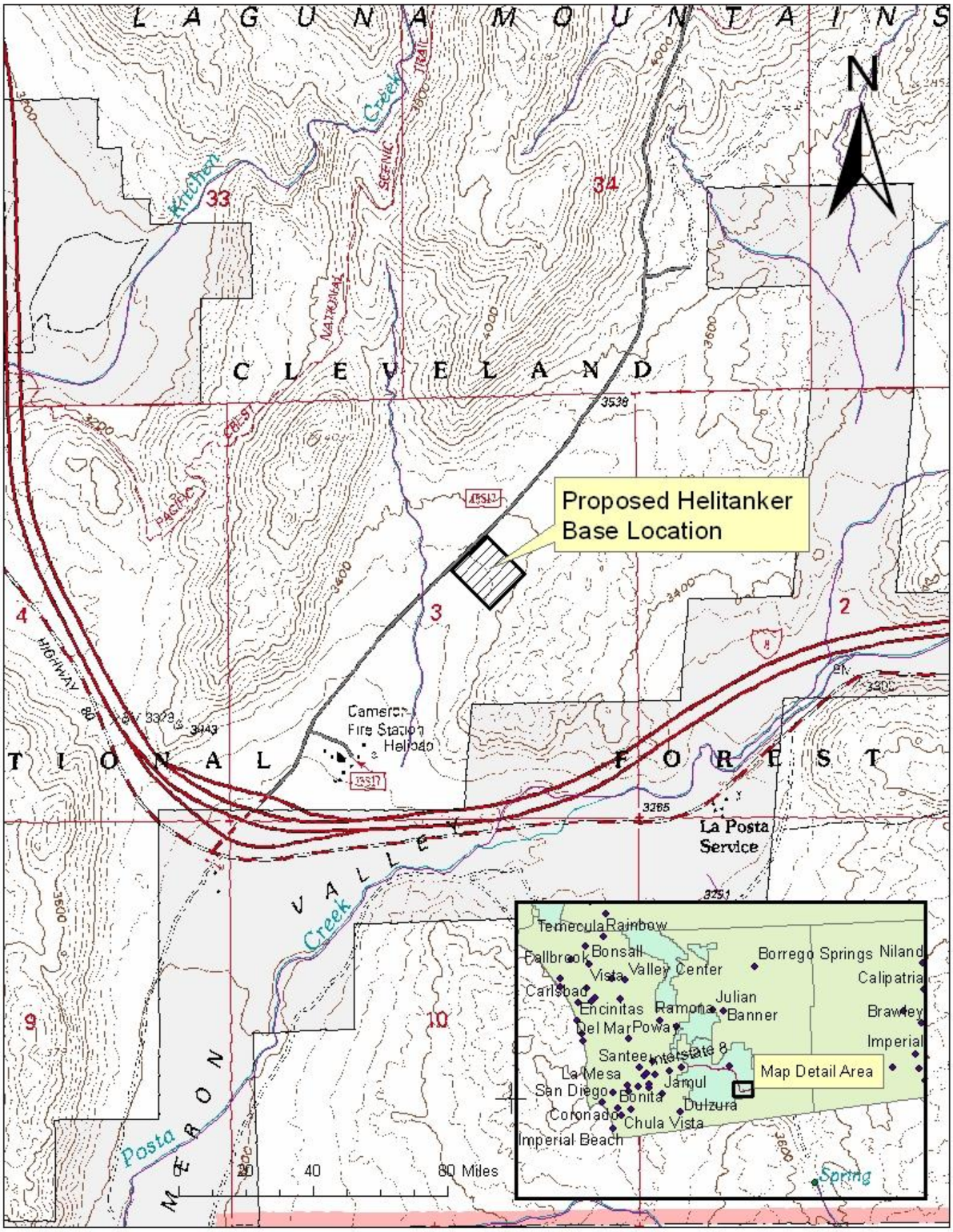
Alternative A -No Action Alternative

Under Alternative A, no Helitanker base would be constructed, and the CNF Helitanker would remain at Hemet-Ryan Airfield.

Alternative B – Agency Proposed Action

Under Alternative B, a Helitanker base would be constructed at the Kitchen Creek Project Area. The Helitanker base would host the annually contracted Helitanker, as well as be able to house an additional Type 1 helicopter as needed. It would contain two helipads, a hangar, an office, a garage/warehouse, and parking for approximately 14 employees. A water storage tank would be located on site, as well as a propane fueled generator and several small outbuildings. The Helitanker base would be primarily used from June through November in a given year.

Figure 1 Map of the Proposed Kitchen Creek Helitanker Base Project Area



2.2 Project Description

2.2.1 Alternative A - No-Action Alternative

No activities would be implemented under this alternative. This alternative is represented by the existing condition of the project area and is used as a baseline against which to compare the Proposed Action. This alternative complies with 40 CFR 1502.14(d), which requires that a No Action Alternative be included in the analysis.

Alternative A would not change the location of the contracted Helitanker. The Helitanker would remain 20 miles outside of the National Forest, a minimum 5 minute travel time away from Forest lands. The Helitanker location would remain inconsistent with the CNF Facilities Master Plan. One of the primary identified mitigations for the Sunrise Powerlink would go unfulfilled. The area would be left unprotected by a quick responding Type 1 helicopter, in an area that has higher potential for fire ignitions due to the Powerlink. Since activities would not be proposed, additional mitigation measures or management requirements would not be needed or applied to this alternative.

2.2.2 Alternative B – Agency Proposed Action

Under Alternative B, a Helitanker base would be constructed at the Kitchen Creek Project Area. The Helitanker base would host the annually contracted Helitanker, as well as be able to house an additional Type 1 helicopter as needed. It would contain infrastructure needed to support up to two Type 1 helicopters and their associated personnel. The Helitanker base would be primarily used from June through November in a given year.

2.3 Monitoring

Monitoring activities can be divided into Forest Plan monitoring and project-specific monitoring. The National Forest Management Act requires that National Forests monitor and evaluate their forest plans (36 CFR 219.11). Part 2 of the Forest Plan includes the monitoring and evaluation activities to be conducted as part of Forest Plan implementation. The Cleveland National Forest uses performance indicators for tracking program accomplishments. Additionally, project-specific monitoring is an important aspect of complying with the standards and guidelines established in the Forest Plan for all projects.

Items to be monitored with associated information are found in the Cleveland LMP, Part 2.

Table 1 Project Implementation Monitoring for the Kitchen Creek Helitanker Base Project Area

Item to be Monitored	Responsibility	Timing of Monitoring	Objectives for Monitoring
Wildlife Nesting/Use of the Site	Forest Biologist	Prior to, concurrent with, and following implementation	To ensure compliance with Forest Plan standards and guidelines
Project Operations Restrictions for Wildlife	Forest Biologist	Prior to, current with and following construction	To ensure compliance with mitigation requirements.
Weed Infestation and Spread	Forest Range Specialist	Post construction	To ensure compliance with mitigation requirements.
Soils and Hydrological Impacts	Forest Soils Specialist/Hydrologist	Post construction	To evaluate soil impacts and hydrologic function during construction and post-construction.
Heritage Resources	Forest Archeologist	Concurrent with and post construction	To examine locations of known and previously undiscovered heritage resources.
Facilities Operations and Maintenance Performance Indicators	Forest Engineer	Post construction	Forest Plan Monitoring requirement.
Fire and Aviation Management Performance Indicators	Forest Fire Chief	Post construction	Forest Plan Monitoring requirement.

2.4 Alternatives Considered But Eliminated

Two alternatives other than the No-Action and Agency Proposed Action were evaluated. These other alternatives consist of alternate potential sites to operate a Helitanker from.

The first alternative considered but eliminated proposed to construct a Helitanker base at the Oak Grove Work Center. This is a work center located in Oak Grove, CA, in the northern portion of the Palomar Ranger District. This is a site that currently houses the Palomar Hotshot Crew, two Forest Service Type-3 wildland fire engines, and a prevention officer. Residential structures also exist on the compound. This alternative was eliminated because it would impact a large number of mature oak trees, it would greatly increase the noise of the local area (impacting the residents of Oak Grove as well as the work center), and does not address the need for mitigation of the Sunrise Powerlink.

The second alternative considered but eliminated proposed to place a Helitanker at the Ramona Airport in Ramona, CA. This Airport is where the CNF currently houses the Ramona Helitack crew, and where the USFS/CALFIRE jointly operate an Air Attack Base. This alternative was eliminated because it would only allow room for one Helitanker, it may have triggered a state-level environmental review, it had a high potential to cause noise impacts to the residents of Ramona, it was likely to adversely affect endangered species, it didn't address the need for mitigation due to the Sunrise Powerlink, it would

require a large amount of construction to bring it to a serviceable level, the lease costs were determined to be too high, and there would be no room for expansion in the future

Chapter 3 - Affected Environment and Environmental Consequences

This section describes the environmental impacts of the alternatives. Specialist reports, which include assessments of the affected environment and more detailed analysis of direct, indirect, and cumulative effects of the alternatives, can be found in the project file at the Forest Supervisors Office in San Diego, CA.

3.1 Invasive Plants

Affected Environment

Noxious weed and invasive plant species inventories have been completed throughout the project area. A site specific inventory has been completed for the Kitchen Creek Helitanker base project. Non-native species found within or adjacent to the project area are found in Table 2. As the project area exists in the footprint of the old Kitchen Creek road, these species probably colonized the area after road construction activities such as grading, and hauling material from infested sites. The area is located next to a paved travel route and also has a two-track road running alongside it. Evidence of recreational shooting was found on the site. These activities all have the potential to contribute to the arrival of non-native plant species. Species such as Cheatgrass (*Bromus tectorum*) are commonly known to invade highly disturbed areas such as burned areas, road sides, trail heads, and along livestock driveways. Recreational travel, road maintenance, wildfires, and livestock grazing have likely contributed to the persistence of these species within the project area.

As with most invasive plant species, the anticipated response of the identified weed species to disturbance is colonization and spread within affected areas. Ground disturbing activities associated with construction activities have the potential to facilitate the spread and establishment of invasive plant populations.

Table 2 Site Inventory Summary – Non-Native and Invasive Plant Species

SCIENTIFIC NAME	COMMON NAME	STATUS
Avena sp.	Wild Oat	Invasive
Bromus diandrus	Ripgut Brome	Invasive
Bromus hordeaceus	Soft Chess	Non-Native
Bromus madritensis rubens	Red Brome	Invasive
Elytrigia pontica ssp. pontica	Rush Wheatgrass	Non-Native
Erodium cicutarium	Filaree	Invasive
Hirschfeldia incana	Mustard	Non-Native
Hypochoeris glabra	Cat's Ear	Non-Native
Salsola tragus	Tumbleweed	Non-Native
Sisymbrium altissimum	Tumble Mustard	Non-Native

Direct and Indirect Effects of Alternatives A – No Action and B – Agency Proposed Actions

Alternative A- Alternative A does not propose to implement any treatments within the proposed project area. The current conditions that exist on the ground would be expected to be maintained. Further

incursion of noxious or weedy plants would be expected to continue along the same path as it currently exists. If known infestations within the project area remain untreated, the risk of spread and establishment may increase naturally given the array of other unrelated activities that occur in the area.

Implementation of Alternative B has a low to moderate potential to increase both the total acres infested with noxious weeds and the density at which they occur. However, within the project area, the surface land use is proposed to be changed from vegetated to hard-surfaced (paved and/or rocked). Given this fact, the actual area of the CNF that is vegetated will be reduced, and would reduce in actual fewer acres of land invaded by non-native species as well as native species.

The following mitigations for the action alternative have been designed to decrease the risk of spread and establishment: machinery will be weed-washed prior to entering and leaving the project area.

Forest Plan Compliance

The 2005 Cleveland LMP provides goals that relate to noxious weeds within the analysis area. The following management direction applies to this project:

Reverse the trend of increasing loss of natural resource values due to invasive species (Goal 2.1). Areas of invasive plant species have been identified in the Noxious/Invasive Plants specialists report. Mitigation measures included in this document will be followed in order to achieve this Forest Plan Goal.

Risk Assessment

The "risk" rating comparison for proposed activities is a relative ranking system between proposed treatment types and alternatives solely for the site specific project area. Under no conditions does the analysis of "risk" associated with the proposed treatment on this project relate to a comparison of this site to other sites on the Descanso Ranger District. The "risk" rating assigned is the predicted risk that implementing a project has potential to increase invasive species introduction or establishment.

A risk assessment was completed to determine the likelihood of increasing total acres infested with noxious and invasive within each treatment unit within the project area for the action alternatives. The full risk assessment is available in the noxious weed specialist report. A summary comparison of alternatives is provided here.

Alternative A - No Action - Under Alternative A there is no change in the risk assessment as there would be no actions implemented. Noxious weed spread would continue to be affected by existing, on-going actions unrelated to this proposal.

Alternative B – Agency Proposed Action - For alternative B, the risks of invasion is tied to the construction of the Helitanker base. Operation of the Helitanker base is not expected to contribute to any increase of invasive weed species in the area as transportation to and from the base will be via hard surfaced roads and parking areas. The overall rating is low to moderate risk that noxious weeds would be introduced and/or spread in the project area because the project includes measures to avoid weed introduction. See Table 3 for risk rating factors and descriptions.

Table 3 Invasive Plants - Summary Rating

Risk Rating based upon treatment implementation		
Risk Factor	**Risk Description**	**Risk Rating**
Vulnerability of vegetation to invasion	Project site is in an area that has naturalized populations of non-native grasses	Moderate
Soil Disturbance	Grading and installation of facilities will require considerable soil disturbance	High
Travel routes to project (equipment in and out, etc.)	Equipment brought in for construction could transport weeds to site	Moderate
Risk of transporting new infestations into project area	Equipment brought in for construction could transport weeds to site	Moderate

Cumulative Effects of Alternative B – Agency Proposed Action

The weed infestations in the project area are a result from previous management activities such as road construction, multiple recreational uses, etc. Currently activities such as hunting and livestock grazing are occurring across the entire project area and are currently making control and eradication of the noxious weeds on site difficult. Additional disturbances within the area will add to the challenge of managing the noxious weed populations in this area.

3.2 Wildlife and Botanical Resources

The Forest Service is required by law, regulation, and policy to address impacts to wildlife species of special designations. Proposal of the Kitchen Creek Helitanker Base Project as such requires analysis of the effects of the alternative on wildlife habitat for:

- Management Indicator Species (MIS)
- Threatened, Endangered, Proposed, and Candidate species (TEPC)
- Forest Service Region 5 Sensitive wildlife species
- Golden Eagle

Direct and indirect effects to these species will be analyzed at the geographic scale of the Kitchen Creek Helitanker Base Proposed Project (11 acres). Cumulative effects will be analyzed at the geographic scale of the Hydrological Unit Level 6, La Posta Creek.

3.2.1 Management Indicator Species (MIS) Habitat

MIS are animal or plant species identified in the Cleveland National Forest LRMP (USDA 2005a), which was developed under the 1982 National Forest System Land and Resource Management Planning Rule (1982 Planning Rule) (36 CFR 219). Guidance regarding MIS set forth in the Forest Plan directs Forest Service resource managers to (1) at project scale, analyze the effects of proposed projects on the habitats of each MIS affected by such projects, and (2) at the national forest (Forest) scale, monitor populations and/or habitat trends of forest MIS, as identified by the LRMP.

The Cleveland National Forest has ten MIS species that have been identified (2005 Forest Plan). A full list of these species can be found in the MIS specialist report. The MIS whose habitat is within the project area will be discussed in this analysis. These are Mountain Lion, Mule Deer, and Song Sparrow.

Affected Environment – MIS

Detailed background information and trend information on MIS for the Forest is documented in the Cleveland National Forest MIS Report (USDA 2007b), which is hereby incorporated by reference for Mountain Lion, Mule Deer, and Song Sparrow.

Mountain Lion

Baseline information and trend

The mountain lion was selected as an MIS to detect the effects of forest activities and uses on landscape-level habitat fragmentation and habitat linkages. The mountain lion is the largest carnivore in the planning area and requires large core habitat areas, abundant prey, and habitat connectivity between sub-populations. An interagency, inter-forest monitoring program of mountain lion populations and use patterns, habitat, and landscape linkages can be used to estimate the effects of forest management on mountain lion abundance and patterns of use and serve as an indicator of the connectivity of biological communities at the landscape level. Recent state population estimates range from 2,500 to 5,000 individuals, with an increasing population trend. Mountain lions inhabit forest and shrubland habitats throughout California where deer, their primary prey, are found.

Direct and Indirect Effects of the No Action - Alternative A
Selection of the "no action" alternative would not contribute to habitat fragmentation and would not reduce the amount of habitat available for this species.

Direct and Indirect Effects of the Agency-Proposed Action - Alternative B
Construction of a Helitanker base will contribute to habitat fragmentation. The project will reduce the amount of habitat available for this species by approximately 11 acres. Because the base will be built in an area where there is already a major road and a fire station, the proposed project is not expected to contribute to habitat and population trends for Mountain Lion.

Cumulative Effects of the Agency Proposed Action – Alternative B
Due to the small scope of this project and its location adjacent to an existing road and a developed site, the project is not expected to contribute to cumulative effects for Mountain Lion.

Mule Deer

Baseline information and trend

The Mule Deer is a common to abundant, yearlong resident or elevational migrant with a widespread distribution throughout most of California (Longhurst et al. 1952, Ingles 1965). It occurs in early to intermediate successional stages of most forest, woodland, and brush habitats. Deer prefer a mosaic of various-aged vegetation that provides woody cover, meadow and shrubby openings, and free water. They occur in lower densities in open scrub and young chaparral, but tend to avoid dense brushfields. In chaparral habitats, mule deer thrive on early successional vegetation that is prevalent for 1–10 years after a fire (Bowyer 1981). In the low-elevation mountains of San Diego County mule deer primarily occupy meadows, oak woodlands, and low-elevation pine forests (Bowyer 1984, 1986).

Direct and Indirect Effects of the No Action - Alternative A
Selection of the "no action" alternative would not contribute to habitat fragmentation and would not reduce the amount of habitat available for this species.

Direct and Indirect Effects of the Agency-Proposed Action - Alternative B
Construction of a Helitanker base will contribute to habitat fragmentation. The project will reduce the amount of habitat available for this species by approximately 11 acres. Because the base will be built in an area where there is already a major road and a fire station, the proposed project is not expected to contribute to habitat and population trends for Mule Deer.

Cumulative Effects of the Agency Proposed Action – Alternative B
Due to the small scope of this project and its location adjacent to an existing road and a developed site, the project is not expected to contribute to cumulative effects for Mule Deer.

Song Sparrow

Baseline information and trend

The song sparrow was selected as a MIS for riparian areas because its abundance is expected to be responsive to management actions and to indicate trends in the status of the riparian biological community, particularly birds. As the human population continues to grow and the demand for water and recreation opportunities increases, the pressures on riparian habitat will also increase. Song sparrow abundance is negatively correlated with the use of riparian understory habitat for grazing and recreation (Marshall 1948) and positively correlated with the abundance of herbaceous vegetation (Ballard and Geupel 1998). Abundance trends for song sparrow and habitat condition assessments will help indicate whether national forest management is maintaining healthy riparian ecosystems in the face of the increasing recreation demand.

Direct and Indirect Effects of the No Action - Alternative A
Selection of the "no action" alternative would not contribute to habitat fragmentation and would not reduce the amount of habitat available for this species.

Direct and Indirect Effects of the Agency-Proposed Action - Alternative B
Construction of a Helitanker base will contribute to habitat fragmentation. The project will reduce the amount of habitat available for this species by approximately 11 acres. Because the base will be built in an area where there is already a major road and a fire station, the proposed project is not expected to contribute to habitat and population trends for Song Sparrow.

Cumulative Effects of the Agency Proposed Action – Alternative B
Due to the small scope of this project and its location adjacent to an existing road and a developed site, the project is not expected to contribute to cumulative effects for Song Sparrow.

3.2.2 Threatened, Endangered, Potential and Candidate (TEPC) Habitat

This document is prepared to comply with the legal requirements set forth under Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1536(c), 50 CFR 402), and policy and standards set forth in Forest Service Manual (FSM) 2672.4 through 2672.42. There is modeled habitat for one federally-listed species, Quino Checkerspot, at the project site (USDA Forest Service 2000).

Only Threatened, Endangered, Proposed, or Candidate species with potential or occupied habitat within or adjacent to the Kitchen Creek Helitanker Base Project area are evaluated in this environmental assessment. Only sensitive species that are known to occur or have a high probability of occurrence are evaluated in this assessment. Probability of occurrence is determined by the presence of suitable habitat in the area and /or confirmation of the presence of the species in the area. A biological assessment and biological evaluation (BA/BE) has been completed on the effects of the proposed action alternatives on TES wildlife and plant species. This analysis can be found in the project file located at the Forest Supervisor's Office.

One commenter suggested that the Forest should consider the effects of the project on Peninsular Bighorn Sheep. This species occurs on desert slopes east of the Cleveland National Forest (USFWS 2009, J.Bennett personal communication). Due to the lack of suitable habitat within the project area, Peninsular Bighorn Sheep will not be addressed in this document.

Affected Environment – TEPC Species

Threatened or Endangered Species - No species listed as Threatened or Endangered by the U.S. Fish and Wildlife Service are known to exist within the project area, however there is modeled habitat for one federally-listed species, Quino Checkerspot, at the project site (USDA Forest Service 2000). The project site is located within a disturbed site. This is not appropriate habitat for Quino Checkerspot because there are no primary host plants (*Plantago* sp. or *Castilleja exserta*) for Quino Checkerspot present at the site. Due to the lack of host plants, there is no suitable habitat for Quino Checkerspot at the site.

No Candidate or Proposed species are known to exist within the analysis area.

3.2.3 Sensitive Species –Terrestrial Wildlife and Plants

Affected Environment – Sensitive Species

A habitat suitability analysis was conducted for each sensitive plant and animal species on the Regional Forester's sensitive list. Based on the conditions at the project site, which has been disturbed by grazing, there is potential habitat for two Regional Forester's Sensitive plant species- Jacumba Milkvetch and Payson's Jewelflower - at the project site. The project area is potential habitat for three Regional Forester's Sensitive list animal species – San Diego Horned Lizard, California Legless Lizard, and Coastal Rosy Boa (see Tables 4 and 5).

Table 4 Region 5 Forest Service Sensitive Terrestrial Wildlife Species Probability of Occurrence within the Analysis Area

Species	Probability of Occurrence in the Project Area. (Species Analyzed in the BA/BE Report)
San Diego Horned Lizard (*Phrynosoma coronatum blainvillii*)	Moderate, potential habitat, analyzed
California Legless Lizard (*Anniella pulchra*)	Moderate, potential habitat, analyzed
Coastal Rosy Boa (*Lichanura trivirgata roseofusca*)	Moderate, potential habitat, analyzed

Table 5 Region 5 Forest Service Sensitive Botanical Species Probability of Occurrence within the Analysis Area

Present/Potential impact within Project area	Plant Species	Habitat and Known Populations
Potential habitat. Not observed on site.	Jacumba Milkvetch (*Astragalus douglasii var. perstricus*)	Stony hillsides, gravelly or sandy flats. Elevations 900 to 1370 meters. Eight occurrences on the CNF, stable population.
Potential habitat. Not observed on site.	Payson's Jewelflower (*Caulanthus simulans*)	Disturbed areas, sandy granitic soils associated within chaparral and coastal sage scrub. Streambeds and steep rocky slopes. Three occurrences on the CNF, with populations of between 100 and 1000 per occurrence.

Environmental Effects – TEPC and Sensitive Terrestrial Wildlife and Botanical Species

The Wildlife and Botanical Resources Specialist Report indicates that Alternative B – Agency Proposed Action may affect some individuals, but will not cause a trend toward federal listing or a loss of viability.

Quino Checkerspot

The project site is located within a disturbed site. This is not appropriate habitat for Quino Checkerspot because there are no primary host plants (*Plantago* sp. or *Castilleja exserta*) for Quino Checkerspot present at the site. Due to the lack of host plants, there is no suitable habitat for Quino Checkerspot at the site.

Jacumba Milkvetch and Payson's Jewelflower

Jacumba Milkvetch and Payson's Jewelflower were not observed during surveys of the site. They are not likely to be present in the project area. These species could be present in the seed bank. Construction of the project will result in the loss of 11 acres of potential habitat for these species.

San Diego Horned Lizard, California Legless Lizard, and Coastal Rosy Boa

Potential habitat is present for the San Diego Horned Lizard, California Legless Lizard, and Rosy Boa. The areas that will be accessed for pulling new cable are suitable resting habitat for these species, as they may bask on roadways and compacted areas. Individuals could be crushed and killed by vehicle traffic during construction of the new facility, and subsequently during operation of the facility. These effects are expected to be moderate. Most of the area occupied by the facility will be unsuitable for use by these species due to the installation of structures.

Cumulative Effects of Alternative B – Agency Proposed Action

In order to understand the contribution of past actions to the cumulative effects of the proposed action and alternatives, this analysis relies on current environmental conditions as a proxy for the impacts of past actions. This is because existing conditions reflect the aggregate impact of all prior human actions and natural events that have affected the environment and might contribute to cumulative effects.

This cumulative effects analysis does not attempt to quantify the effects of past human actions by adding up all prior actions on an action-by-action basis. There are several reasons for not taking this approach. First, a catalog and analysis of all past actions would be impractical to compile and unduly costly to obtain. Current conditions have been impacted by innumerable actions over the last century (and beyond), and trying to isolate the individual actions that continue to have residual impacts would

be nearly impossible. Second, providing the details of past actions on an individual basis would not be useful to predict the cumulative effects of the proposed action or alternatives. In fact, focusing on individual actions would be less accurate than looking at existing conditions, because there is limited information on the environmental impacts of individual past actions, and one can not reasonably identify each and every action over the last century that has contributed to current conditions.

Additionally, focusing on the impacts of past human actions risks ignoring the important residual effects of past natural events, which may contribute to cumulative effects just as much as human actions. By looking at current conditions, we are sure to capture all the residual effects of past human actions and natural events, regardless of which particular action or event contributed those effects. Third, public scoping for this project did not identify any public interest or need for detailed information on individual past actions.

Finally, the Council on Environmental Quality issued an interpretive memorandum on June 24, 2005 regarding analysis of past actions, which states, "agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions."

The cumulative effects analysis in this (EA or EIS) is also consistent with Forest Service National Environmental Policy Act (NEPA) Regulations (36 CFR 220.4(f)) (July 24, 2008), which state, in part:

"CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions. Once the agency has identified those present effects of past actions that warrant consideration, the agency assesses the extent that the effects of the proposal for agency action or its alternatives will add to, modify, or mitigate those effects. The final analysis documents an agency assessment of the cumulative effects of the actions considered (including past, present, and reasonable foreseeable future actions) on the affected environment. With respect to past actions, during the scoping process and subsequent preparation of the analysis, the agency must determine what information regarding past actions is useful and relevant to the required analysis of cumulative effects. Cataloging past actions and specific information about the direct and indirect effects of their design and implementation could in some contexts be useful to predict the cumulative effects of the proposal.The CEQ regulations, however, do not require agencies to catalogue or exhaustively list and analyze all individual past actions. Simply because information about past actions may be available or obtained with reasonable effort does not mean that it is relevant and necessary to inform decision making. (40 CFR 1508.7)"

For these reasons, the analysis of past actions in this section is based on current environmental conditions.

The project is expected to have no effect on Quino Checkerspot and would not contribute to cumulative effects on this species. The project is expected to affect 11 acres of potential habitat for Jacumba Milkvetch, Payson's Jewelflower, San Diego Horned Lizard, California Legless Lizard, and Rosy Boa. These plant species have relatively limited distributions and the wildlife species have small home ranges. There are no other reasonably foreseeable Forest or private projects occurring within a few miles of the project area. The construction of the Cameron Helibase and associated improvements will contribute to cumulative effects for these five species.

3.2.4 Golden Eagle

A commenter raised a concern about the effect of the project on Golden Eagle so this species will be considered.

Golden Eagle Habitat Affected Environment

Golden Eagles are known to occur in the general vicinity of the project. They are likely to forage in the grassland area at the project site. There is no suitable nesting habitat within 1 mile of the project site.

Environmental Effects –Golden Eagle Habitat

Direct and Indirect Effects of the No-Action versus the Action Alternative

Alternative A – No Action Alternative
Under the no action alternative, current conditions for Golden Eagle in the Kitchen Creek Helitanker base project area would remain the same.

Alternative B – Agency Proposed Action
Golden Eagles are sensitive to loss of habitat, noise, disturbance near nests, and disturbance by helicopters when eagles are flying or foraging. The following effects are expected to result from the proposed project.

Loss of habitat
Construction and operation of the Helitanker base will result in the loss of approximately 11 acres of foraging habitat for Golden Eagle.

Noise levels
A Type 1 helicopter (Sikorsky S-64 model) generates noise levels of 70-100 decibels (db) in the immediate area of the helicopter (True and Rickey 1977). Studies have shown that noise levels above 60-70db disrupt the nesting behavior and nest success for birds (Habib et al. 2007). Noise levels diminish over distance. A 100db noise at a source decreases to a level of approximately 60 db at 100 meters, and 40 db at 1000 m. Therefore the primary area of disturbance will be within 100 meters of the helicopter with the greatest level of disturbance concentrated at the Helitanker base during its primary use season (approximately June to November). This will overlap slightly with the nesting season of Golden Eagles. There is no suitable nesting habitat for Golden Eagles near the project site so noise is not expected to affect nesting behavior.

Disturbance of nests
As stated above most of the Helitanker base will not be suitable for nesting, and the areas within approximately 100 meters of the Helitanker base may also be rendered unsuitable for nesting due to the noise levels associated with helicopter operations. The nearest known Golden Eagle nest sites are approximately 4 miles northeast along La Posta Road, 4 miles southwest near Lake Morena, and 5 miles north near Glencliff Fire Station. Due to the distance between the known nests and the lack of suitable nesting habitat for Golden Eagles near the project area, the Helitanker base is unlikely to affect Golden Eagle nesting activity.

Disturbance due to helicopters flying in and around project area.

The general area already experiences high levels of helicopter activity associated with a nearby Border Patrol station. Operation of the Kitchen Creek Helitanker base will result in elevated levels of activity when it is in use. This may disrupt flight or foraging activity by Golden Eagles as they will avoid helicopters.

Cumulative Effects to Golden Eagle Habitat
Past and current livestock grazing, road building, noxious weeds and invasive species, increases in motorized recreation, and recreational activities, in general, have affected Golden Eagle habitat within the analysis area. All of these activities have likely removed or altered vegetation to some degree or another and have added to cumulative effects on Golden Eagle.

There have been numerous wildfires on the Descanso District in the past 10 years affecting riparian and other favored habitats. Wildfire removes nesting, cover, and foraging habitat until these areas recover. While some noxious weeds have developed in these areas, likely affecting avian foraging, most of the occurrences are along roads and forest access points (Noxious weed and invasive species infestations likely come from a variety of sources including recreation activities and livestock grazing). If drier weather conditions prevail, wildfires are likely to continue to occur in riparian habitat, chaparral, and forests, and will add to the cumulative effects of all other authorized activities such as recreation and grazing.

Exotic insect infestations, particulary the Gold Spotted Oak Borer, as well as fuel wood cutting and livestock grazing have likely affected nesting and cover/perching opportunities for Golden Eagle.

The Helitanker base project will contribute to cumulative effects on Golden Eagle as it will reduce the amount of foraging habitat available and helicopter activity may disturb foraging birds.

3.3 Watershed and Soils

The relevant laws, guidance, and direction for the proposed project in relation to the affects to soil, hydrology, and watershed function are:

- National Forest Management Act (NFMA) of 1976 (as amended)
- Clean Water Act (CWA) of 1977 and 1982 (as amended)
- Executive Order 11988 (flood plains)
- Executive Order 11990 (wetlands)
- Forest Service Manual and Handbook Direction 2500 – Watershed and Air Management
- Region 5 Soil Quality Analysis Standards - 1996
- Water Quality Management for Forest System Lands in California - 2002
- Cleveland National Forest Land Management Plan - 2005

Affected Environment

General Description of Project Hydrology
The project is located in a board alluvial valley at an elevation of 3400 feet and receives approximately 22 inches of annual precipitation, mostly in the form of winter rain. Although, summer monsoon thundershowers and brief, light accumulations of winter snow are not uncommon events.

The proposed project is located within one 6th level Hydrologic Unit Code (HUC) watershed: 30,065 acre La Posta Creek watershed (HUC = 18040010020104). The watershed designations used by the

Forest Service come from the National Hydrologic Database maintained by the United States Geologic Survey. The State of California and Regional Water Quality Control Boards uses different watershed scales and boundaries.

A survey for jurisdictional waters of the US was conducted by Jason Jimenez, Forest Hydrologist, on October 24, 2011. Several features were noted. The main swale feature in the middle of the project area was found to be an abandoned roadbed. Further, up the abandoned roadbed, obvious lead off ditches were noted. Historic aerial photos were referenced and showed a road in the current location of the swale/old roadbed. Several other smaller swales were observed but no evidence of scour or an ordinary high water mark was observed. These features also did not show connection to navigable waters and would be considered isolated waters.

There is one small mapped Water of the US in the southwest corner of the project area. The waterway shows a Ordinary High Water Mark but does not show connection to navigable waters. This feature was identified early in the design process and has been avoided. No significant impacts will occur to the small ephemeral waterway.

3.3.1 Environmental Features and Water Quality Risk

Floodplains
Executive Order 11988 provides direction to avoid adverse impacts associated with the occupancy and modification of floodplains. Floodplains are defined by this order as "…the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum that area subject to a 1% (100-year recurrence) or greater chance of flooding in any one year."

No 100 year Federal Emergency Management Agency floodplains, regional floodplains, or California Department of Water Resources (DWR) Awareness Floodplains occur with the project boundary. A DWR awareness floodplain of La Posta Creek occurs 0.5 miles to the south. With the required stormwater controls and best management practices, no negative impacts are expected to that floodplain due to increased impervious surfaces or run-off.

The project is consistent with the direction set forth in Executive Order 11988. No extraordinary circumstances with respect to floodplains would be created by the project.

Wetlands
Executive Order 11990 was issued to avoid adverse impacts associated with destruction or modification of wetlands. Wetlands are defined by this order as "…areas inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds."

Therefore, no extraordinary circumstances with respect to wetlands would be created by the project.

Municipal watersheds
Municipal watersheds are defined in FSM 2542.05 as "A watershed that serves a public water system as defined in the Safe Drinking Water Act of 1974, as amended (42 U.S.C. §§ 300f, et seq.); or as defined in state safe drinking water statutes or regulations."

There are municipal water systems located downstream of the project as defined in FSM 2542.05. The limited area of the treatment, mitigation measures, and best management practices will result in no significant affect to municipal watersheds.

Waters of the United States
A survey for jurisdictional waters of the US was conducted by Jason Jimenez, Forest Hydrologist, on October 24, 2011. Several features were noted. The main swale feature in the middle of the project area was found to be an abandoned roadbed. Further, up the abandoned roadbed, obvious lead off ditches were noted. Historic aerial photos were referenced and showed a road in the current location of the swale/old roadbed. Several other smaller swales were observed but no evidence of scour or an ordinary high water mark was observed. These features also did not show connection to navigable waters and would be considered isolated waters.

There is one small mapped Water of the US in the southwest corner of the project area. The waterway shows a Ordinary High Water Mark but does not show connection to navigable waters. This feature was identified early in the design process and has been avoided. No significant impacts will occur to the small ephemeral waterway.

3.3.2 Beneficial Uses of Water and Existing Water Rights

The San Diego Regional Water Quality Control Board's Basin Plan as required by section 303 of the Clean Water Act defines the beneficial uses of water. Beneficial uses of the waters of the state that may be protected against quality degradation include, but are not necessarily limited to domestic, municipal, agricultural, and industrial supply; power generation, recreation, aesthetic enjoyment, navigation, and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Beneficial uses that may be affected by the development of the Kitchen Creek Helitanker base falls into three categories: inland surface waters, reservoirs and lakes, and ground waters.

The Kitchen Creek Helitanker base is located in the Cottonwood Creek Area (hydrologic unit basin number 11.30) of the Tijuana River Watershed for the designation of beneficial uses. Beneficial uses include supply, freshwater replenishment, contact and non-contact recreation, and wildlife habitat including rare species and spawning habitat. These uses would not be significantly affected by the development of the Kitchen Creek Helitanker base.

The reservoir that is closest and downstream from the Kitchen Creek Helitanker base is Lake Morena. Beneficial uses for Lake Morena (hydrologic unit basin number – 11.50) include supply, contact and non-contact recreation, and wildlife habitat including rare species. The Helitanker base is located approximately 5 miles northeast and does not have a direct connection to waters of the US. These uses would not be significantly affected by the development of the Kitchen Creek Helitanker base.

For ground waters, the Kitchen Creek Helitanker base is located in the Tijuana Hydrologic Unit, Cameron Area 11.70. The beneficial uses of ground water include municipal and agricultural. These uses would not be significantly affected by the development of the Kitchen Creek Helitanker base.

No existing water right was found in or adjacent to the project area, referencing the Cleveland National Forest's water rights information and water rights data found on the State of California's website.

The development of the Kitchen Creek Helitanker base has a very low potential to affect beneficial uses and existing water rights.

3.3.3 EPA Designated Sole Source Aquifer

The Kitchen Creek Helitanker base is located in the area of the Campo-Cottonwood Sole Source Aquifer, one of the nine sole source aquifers designated in Environmental Protection Agency (EPA) Region 9. To be a sole source, the aquifer must supply more than 50% of a community's drinking water.

The EPA's Sole Source Aquifer (SSA) Program was established under Section 1424(e) of the Safe Drinking Water Act (SDWA.) Since 1977, it has been used by communities to help prevent contamination of groundwater from federally funded projects. It has also increased public awareness of the vulnerability of groundwater resources. The SSA program allows for EPA review of any project that receives federal financial assistance.

Due to the fact that the proposed Helitanker base falls over a Sole Source Aquifer, consultation with the EPA through the Sole Source Aquifer review checklist process was initiated. On November 23rd, 2011, the EPA responded to the USFS by stating that "(b)ecause the proposed project will not receive federal financial assistance, the project is not subject to review under Section 1424(e) of the Safe Drinking Water Act."

However, due to the inherent value of the aquifer, and the concern raised by several commenters, the Forest Service conducted a review of potential concerns for the contamination of the aquifer by the construction and use of the Kitchen Creek Helitanker base.

The only significant fuel storage on the site will be when the Helitanker is operating during fire season, and will be contained in the fuel storage tank of a dedicated fuel truck. The fuel truck will be parked in a containment structure that exceeds the volume of the truck by 10% when not in use. The truck will only operate on impervious surfaces when traveling from the containment structure to the Helitanker and when actually fueling the Helitanker. Any fuel spills will be cleaned up (fuel, soil, and any potential water) to below residential thresholds and preferably to levels of non-detection. There will be no significant storage of hazardous wastes or materials beyond what is required for the normal operation of the Helitanker base. No dedicated fuel storage tanks are planned to be constructed at the Helitanker base. A backup electricity generator is planned for the site, however it will be run on an above ground propane tank.

The deepest depth of excavation will be for the building foundations, which will not encounter deep or shallow groundwater. All groundwater wells will adhere to state and county regulations regarding sanitary seals and prevention of groundwater aquifer contamination. All applicable best management practices will be in place during construction and operation of the Helitanker base to prevent discharges, runoff, and any potential contamination to the groundwater aquifer.

With the character of the site, character of the development and the best management practices in place there is no significant risk to the Campo-Cottonwood Sole Source Aquifer.

3.3.4 General Description of Project Soils

Mapped within the project area are two different soil series. The soils are generally derived young alluvial deposits. Mottsville loamy coarse sand is present on the west side of project area and Calpine coarse sandy loam is present on the eastside of the project. Both have rock fragment contains ranging from 10 to 30 percent. These soils are described as loose or very friable and are described as nonsticky

and nonplastic. Both soils are excessively well drained with moderate soil erosion hazards. In the soil survey, these soils are defined as low fertility with capabilities to support range. Both soils exhibit low shrink-swell behavior and slight limitations for septic tank effluent disposal, favorable for development.

Environmental Effects

Direct and Indirect Effects of Alternative A – No Action

The No Action Alternative would not cause any significant changes to the hydrology or soil present on the site. There would be no changes to cumulative watershed effects or other significant changes to the character of the site with the No Action Alternative.

Direct and Indirect Effects of Alternative B – Agency Proposed Action

The development of the Helitanker base would decrease infiltration rates and result in increased potential for runoff to adjacent areas. The decrease of hydrologic function would be minor, as a majority of the area in the project boundary would remain pervious. Engineering controls and best management practices will be in place to ensure that increased run-off does not transport sediment off-site or cause erosion.

Water quality and aquatic habitat located in the watershed would not be significantly impacted by the development of this site into a Helitanker base.

The groundwater resource would be protected from the wastewater system by compliance with County, State, and Federal regulations. The groundwater well would incorporate appropriate well drilling and well sealing practices to prevent contamination of the groundwater aquifer. Forest Service Technical Guide to Ground Water Resource Management will guide management and development of groundwater resources. Design potentials exist to promote infiltration of the runoff from non-pavement impervious surfaces (primarily the buildings); design could include bio-swales or other features to promote infiltration.

An analysis of water usage was conducted per Design Criteria – S46 of the Cleveland National Forest – Land Management Plan. Information concerning beneficial uses and water rights is found in Section 4.0. It was determined that normal operations of the Helitanker base would use approximately 72,000 gallons of water a year. This figure is based on an expected usage of 330 gallons per day during the 180 day contract time, and 75 gallons or less the remainder of the year. From the documents that petition the area for sole source aquifer designation, estimated pumpage of groundwater per day is 18.5 million gallons from an estimated 3,400 wells. Use of groundwater from the Kitchen Creek Helitanker base would involve approximately one hundredth of one percent of the total water pumpage of the aquifer. It is reasonable to conclude that the water use will provide for the long term protection of the aquifer and forest resources. The Helitanker base will allow for a more timely response to wildland fire starts and greater protection of the watershed and thus the aquifer.

Stormwater that contacts the helipads and other areas where potential for fuel, lubricant, and hydraulic spills exist will be routed through an oil/water separator before discharge off site.

3.3.5 Soils

Soil Quality Standards (SQS) do not apply to administrative sites and will not be utilized for this proposal. The Forest Service's Soil Management Handbook (FSH 2509.18, 2) states that "(s)oil quality

standards are intended for areas where management prescriptions are being applied, such as timber harvest areas and range allotments. They are not intended to apply to administrative sites or other areas with dedicated uses."

Development would be dedicated to permanent facilities including three buildings, helipads, and associated infrastructure. Approximately 10 acres of soil would be placed in a nonproductive state and would become unavailable for vegetative growth because of development. Building construction and infrastructure improvements would decrease the permeability and infiltration rates and result in higher potential runoff to adjacent areas.

There would be potential short-term increases in soil erosion and sediment moving off the project site. These increases will be prevented by the proper use of best management practices as described below. Sediment is not anticipated to enter any streams due to distance and extent of vegetation. A small area (less than 1 acre) will have increased compaction and greater storm-water run-off/hydrologic response. These direct effects will be minor and non-significant.

Cumulative Watershed Effects

With implementation of the Action Alternative, little impact would occur on a watershed scale. The land does not play any particular role in the protection or improvement of water quality. This project is not expected to significantly change current estimated cumulative watershed effects. The expansion of an existing site will not significantly affect watershed response and best management practices will protect water quality and maintain watershed condition. The additional fire suppression capacity could increase protection of watershed resources with better initial and extended attack response to wildfires starts.

The bounding of the cumulative watershed effects was the HUC 6 watershed, La Posta Creek. Reasonably foreseeable future activities in the watershed were analyzed for the five years in the future from the date of this report. It is not reasonable to predict Forest Service actions past five years. Land management planning focuses, agency focus, and agency budget can be significantly different 5 years from present.

Currently the Sunrise Powerlink is being constructed through the watershed. Ground disturbance for this project in this watershed is less than 20 acres and restoration of these areas will occur over the next two years. The Sunrise Powerlink raises cumulative watershed effects but not over thresholds and should gradually lower over time as restoration occurs. Other future activities will be limited fuel reduction and fuel break maintenance as well as the treatment of noxious weeds. Other activities will also include road maintenance, restoration, and decommissioning. These activities should lower cumulative water effects over time. On private land in this watershed, there are no known activities that would increase cumulative watershed effects beyond a threshold of concern.

3.4 Heritage Resources

Affected Environment

Previous cultural resource survey and inventory (Cameron Prescribed Burn Survey: Archaeological Reconaissance Report 05-02-DE-088) of the Area of Potential Effect (APE) for the subject undertaking has been reviewed and determined adequate for the purpose of historic property identification, in accord with Stipulation III(B)(5) of the Programmatic Agreement for Compliance with Section 106 of the National Historic Preservation Act for Undertakings on the National Forests of the Pacific Southwest

Region (PA). Based on the results of the previously conducted cultural resources survey and current archival and archaeological site record research conducted in support of the proposed project, it has been determined that there are no archaeological sites or other cultural resources within the area of potential effects (APE) associated with the construction of the proposed Helitanker base, in accord with Stipulation III(D)(1) of the PA. There would be no effect to historic properties resulting from the ground disturbing activities associated with the proposed construction. The project may be implemented as proposed, and no additional management measures are necessary for the protection of historic properties, in accord with Stipulation III(D)(2) of the PA and Section 106 of the National Historic Preservation Act (NHPA).

If any previously unrecorded cultural resources were to be inadvertently discovered during implementation of the proposed project, all project related activities in the vicinity of the discovery would cease, appropriate steps to secure and protect the discovery would be taken, the CNF Heritage Program Manager (HPM) would be notified, and the process defined in Stipulation V of the PA would be implemented. Any identification of human remains during the implementation of the proposed project would result in the implementation of the same procedures, as well as the implementation of the procedures for the protection and determination of the proper disposition of human remains stipulated in the Native American Graves Protection and Repatriation Act (NAGPRA). Suspended project activities in the vicinity of the inadvertent discovery of any cultural material or human remains would be resumed only with the written permission of the CNF HPM.

3.5 Air Quality

Affected Environment

San Diego County Air Pollution Control District ("Control District") includes the entire county. The climate of the Control District is dominated by a semi-permanent high pressure cell located over the Pacific Ocean, which influences the direction of prevailing winds and maintains clear skies for much of the year. The high pressure cell also creates two types of temperature inversions that may act to degrade local air quality—subsidence inversions and radiation inversions—both of which can trap pollutants between layers of air. When the pollutants become more concentrated in the atmosphere, photochemical reactions can produce ozone. The project area currently is in nonattainment of national ambient air quality standards for ozone and of state ambient air quality standards for ozone.

For purposes of meeting federal requirements, impact significance is related to federal conformity with the Environmental Protection Agency-approved state implementation plan and with national ambient air quality standards. Air quality impacts would be considered significant if they are expected to cause or contribute to an air quality violation in a nonattainment or maintenance area. However, if total direct and indirect project emissions fall below designated applicability threshold levels established under the Conformity Rule, no adverse change in attainment status is expected. For purposes of meeting state requirements, San Diego Air Quality Management District thresholds of significance for project emissions serve the same purpose as the federal applicability thresholds.

Direct and Indirect Effects of Alternative A – No Action

The No Action Alternative would result in no direct, indirect, or cumulative effects to the air resource in the project area.

Direct and Indirect Effects of Alternative B – Agency Proposed Action

Criteria pollutant emissions from vehicles and demolition equipment are expected to increase for the short term. Total emissions estimated for the project are 0.47 tons per year of VOC and 1.96 tons per year of NOx. Construction activities include the use of heavy equipment and worker vehicles would produce exhaust emissions, while travel on unpaved roads would produce fugitive dust. Small increases in short-term, localized emissions would occur.

Project-related activities would create minor, temporary increases in local fugitive dust emissions and emissions from motorized equipment in both the San Diego County Air Pollution Control District. However, after project-related activities are completed, emissions from windblown fugitive dust and dust from travel on unpaved roads and trails may be expected to decrease. The project demonstrates conformity with the state implementation plan under the federal Clean Air Act, and does not exceed the Control District daily project emissions significance thresholds. No adverse change in attainment status is expected to occur as a result of this project.

3.6 Scenic Integrity

Scenic integrity is a measure of the degree to which a landscape is visually perceived to be 'complete.' The highest scenic integrity ratings are given to those landscapes which have little or no deviation from the character valued by constituents for its aesthetic appeal. Scenic integrity is used to describe an existing situation, standard for management, or desired future condition

These are the objectives that define the minimum level to which landscapes are to be managed from an aesthetics standpoint. There are six objectives that describe the landscape in varying degrees from naturalness: Very High (Unaltered), High (Appears Unaltered), Moderate (Slightly Altered), Low (Moderately Altered), Very Low (Heavily Altered).

This area, as defined by the Scenic Integrity Objectives (SIO) in the LRMP, is defined as ‘High.’ A ‘High’ scenic integrity refers to landscapes where the valued landscape character "appears" intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident.

Constructing this Helitanker base is not expected to lower the SIO due to several reasons. First, the proposed base would be partially concealed from casual travelers on Interstate 8, due to a copse of mature oak trees that are growing north of the Cameron Fire Station. These oak tree would remain between the new Helitanker base and Cameron Fire Station and would serve as a natural screen.

Second, the Scenic Integrity of the area is manifested already by that of a Forest Service administration site. The Cameron Fire Station has been in place for many years, and would remain in the foreground for the majority of people travelling on Interstate 8. Because the proposed Helitanker base is located very near to the Cameron Fire Station, the current Scenic Integrity Objectives would be not dramatically changed due to a change in land usage.

The biggest change in visuals will be for those travelling along the Kitchen Creek Road, such as those travelling to and from the Cibbets Flat campground. However, as the Helitanker base will be virtually an extension of the Cameron Fire Station, little change in the overall aesthetic of the immediate area should be noticed by the public.

Chapter 4 - Consultation and Coordination

The Forest Service contacted, consulted, or collaborated with the following organizations, Federal, State, and local agencies, and tribes during the development of this environmental assessment.

Project Team Members

The following individuals served as interdisciplinary team members who conducted the environmental analysis and prepared reports that support this Environmental Assessment.

Name	Title	Responsibility
Donn Christiansen	District Ranger	Responsible Official
Stephen Fillmore	Forest Fuels Officer	IDT Leader/NEPA writer-editor
Kirsten Winter	Forest Biologist	Wildlife and Plant Biology Analysis
Jason Jimenez	Forest Soils/ Hydrologist	Hydrology and Soils Analysis
Steve Harvey	Forest Archeologist	Cultural Resource Analysis, SHPO Consultation
Jack Vanlear	Civil Engineer	Helitanker base design alternatives
Steve Eastwood	Forest Engineer	Engineering staff leader
Tammie Mather	Civil Engineer	IDT member/ Helitanker base designer
Andrea Nick	Air Quality Technician	Air Quality Analysis
Michael McCorison	Air Resource Specialist	Air Quality Analysis

Federal, State, and Local Agencies:

US Fish and Wildlife Service
California State Historic Preservation Officer
US Environmental Protection Agency

Tribes:

The appropriate Tribal entities were contacted during the initial scoping process, and no comments have been received from Tribes regarding the proposed project. Tribes will be invited to consult on the proposed project in association with the official Public Comment Period. Any requested consultation with Tribes would be conducted and any Tribal comments or concerns would be taken into consideration prior to any decision to implement the proposed project.

Others:

Donna Tisdale
Cindy Buxton
Bill Helliwell

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Appendix A – Design Criteria

Wildlife

1. The Coast Live Oak trees south of the project site will be cut and removed between September 1 and February 28 to minimize effects on nesting birds.
2. Approximately 50 Coast Live Oak trees will be planted on the nearby Cameron Fire Station grounds as part of the tree restoration mitigation for the Sunrise Powerlink project.
3. Potential impacts to nesting habitat for migratory bird species would be minimized by doing vegetation clearing outside of the nesting season whenever possible

Cultural Heritage

1. If previously undiscovered cultural sites are encountered during the course of treatment, the operator or hand crew would stop treatment and contact the Contract Administrator, who would then contact the Archaeologist to review the site. The Archaeologist would consult with the SHPO to determine the course of action to be taken. If affected properties are discovered after treatment, the Forest Service would document any damage and consult the appropriate SHPO and Council pursuant to 800.13(b).

Soils and Hydrology

1 Best Management Practices (BMP) for Building Construction will be adhered to during the construction phase of the project. These can be found in the Soils and Hydrology Specialist's Report Attachment (final) filed in the project record.
2. BMP's will be monitored for compliance by USFS staff, during the construction phase.

Invasive Plants

1 Require construction contract equipment to be clean, i.e. free of mud, dirt, and plant parts, prior to entering or leaving National Forest System lands.

Visual Quality Objectives

1. Security fence surrounding the site will be of PVC-coated chain link, black in color.

Appendix B – Acronyms, Abbreviations and Initialisms

BA	Biological Assessment
BE	Biological Evaluation
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
EA	Environmental Assessment
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FR	Federal Register
FR	Forest Service
FSH	Forest Service Handbook
HU	Hydrologic Unit
CDEQ	California Department of Environmental Quality
CDFG	California Department of Fish and Game
IDT	Inter Disciplinary Team
IRA	Inventoried Roadless Area
LMP	Land Management Plan (Forest Management Plan)
MOU	Memorandum of Understanding
MIS	Management Indicator Species
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NFS	National Forest System
RCA	Riparian Conservation Area
SHPA	State Historic Preservation Officer
CNF	Cleveland National Forest
TEPC	Threatened, Endangered, Protected, Candidate
TES	Threatened and Endangered Species
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service