

HABITAT CONSERVATION PLAN

for the

**ISSUANCE OF AN INCIDENTAL TAKE PERMIT UNDER SECTION 10(a)(1)(B)
OF THE ENDANGERED SPECIES ACT**

for the

FEDERALLY ENDANGERED DELHI SANDS FLOWER-LOVING FLY

for the

**VALLEY BOULEVARD/PEPPER AVENUE INTERSECTION REALIGNMENT
AND IMPROVEMENT PROJECT, CITY OF COLTON, SAN BERNARDINO
COUNTY, CALIFORNIA**

Prepared for:

**The County of San Bernardino
385 North Arrowhead
San Bernardino, CA 92415-0120**

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EXECUTIVE SUMMARY

The County of San Bernardino (County) has applied for a permit from the U.S. Fish and Wildlife Service pursuant to section 10(a)(1)(B) of the Endangered Species Act, as amended (16 U.S.C. 1531 *et seq.*), to incidentally take the federally endangered Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*; “DSF”). The incidental take is anticipated to occur as a result of construction activities associated with proposed realignment and improvement of the Valley Boulevard and Pepper Avenue intersection in the City of Colton, San Bernardino County, California. Based on several years of surveys within the adjacent DSF Hospital Preserve and habitat contiguity, the proposed project is within an area considered to be occupied by the DSF.

The County proposes to mitigate impacts to the DSF either through acquisition and conservation of a 2.04-acre parcel adjacent to the proposed project (Hospital Preserve Extension Alternative) or purchase of 5 acres of credit within the Vulcan Materials Inc. Colton Dunes Conservation Bank (Conservation Bank Alternative). If the Hospital Preserve Extension Alternative is chosen, copies of the final management plan and conservation easement would be on file at the Carlsbad Fish and Wildlife Office before the permit is issued. If the Conservation Bank Alternative is chosen, the County would provide proof of purchase of credits toward conservation of 5 acres at the Conservation Bank prior to any ground disturbing activities. Vulcan Materials Inc. has provided assurances to the Service through a banking agreement that the Conservation Bank will be managed and monitored to ensure the long-term conservation of the DSF, and the County would be entitled to rely on these management and monitoring assurances [Intra-Service Section 7 Consultation for the Habitat Enhancement and Management Plan for the Colton Dunes Conservation Bank, City of Colton, San Bernardino County, California (1-6-05-F-3849.1)].

This Habitat Conservation Plan has been prepared in consultation with the Service to fulfill the requirements of a section 10(a)(1)(B) permit application for the proposed project.

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1 INTRODUCTION

1.1 Purpose and Need

The County of San Bernardino (County) proposes to improve traffic circulation and reduce flood potential at the existing Valley Boulevard and Pepper Avenue intersection in the City of Colton, California. The project is an adopted mitigation measure for traffic impacts associated with the completed construction of the Arrowhead Regional Medical Center. The project will be undertaken prior to proposed improvements to the Interstate 10 (I-10) and Valley Boulevard interchange adjacent to this intersection (Informal consultation between the Federal Highway Administration and the Service regarding the I-10 corridor). The proposed intersection improvements will occur in an area considered to be occupied by the federally endangered Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*; “DSF”). The County is seeking a permit for incidental take of the DSF in the course of otherwise lawful activities associated with construction of the proposed project. Such authorization is necessary because activities associated with the construction of the proposed project may result in incidental take, through removal and modification of DSF habitat, despite the mitigation and minimization program proposed by the County.

1.2 Regulatory Requirements

The Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*), provides for the protection and conservation of fish, wildlife and plants that have been federally listed as threatened or endangered. Activities otherwise prohibited by section 9 of the Act and subject to the civil and criminal enforcement provisions of section 11 of the Act may be authorized for Federal entities pursuant to the requirements of section 7 of the Act and for other persons pursuant to section 10 of the Act.

Section 10(a)(2)(A) of the Act states that no permit may be issued authorizing any taking referred to in Section 10(a)(1)(B) unless the applicant submits to the Secretary of the Interior (Secretary) a Conservation Plan that specifies:

1. The impact which will likely result from such taking;
2. What steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps;
3. What alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and
4. Such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan; and

The Service has determined this document to be a “low-effect” Habitat Conservation Plan (HCP). A low-effect HCP is one “involving: (1) minor or negligible effects on federally-listed, proposed or candidate species and their habitats ... and (2) minor or negligible effects on other environmental values or resources. ‘Low-effect’ incidental take permits are those permits that, despite their authorization of some small level of incidental take, individually or cumulatively have a minor or negligible effect on species covered ...” (Service/NOAA 1996).

This HCP has been prepared in consultation with the U.S. Fish and Wildlife Service (Service) to fulfill the requirements of Section 10(a)(2)(A) of the Act as part of a Section 10(a)(1)(B) take permit being sought for the proposed road improvement project in the City of Colton, San Bernardino County, California.

1.3 Permit Applicant

The County of San Bernardino is the applicant for the incidental take permit.

1.4 Permit Duration

The duration of the section 10(a)(1)(B) permit for this project is 10 years from the date of issuance. The permit allows the permittee (County) or their successors to incidentally take, either directly or indirectly, the Delhi Sands flower-loving fly within the geographical boundaries identified in the HCP over that time period. The permit may only be transferred consistent with CFR part 13 section 13.25, which requires that 1) the permittee and proposed transferee apply for a permit transfer (through submission of an assumption agreement between the two parties), 2) the proposed transferee meets all the qualifications for holding a permit, 3) the transferee provides written assurances that it can meet the financial obligations and will implement the terms and conditions of the permit, including any outstanding mitigation requirements, and 4) that the transferee provides any additional information the Service deems necessary. After expiration of this permit, any “take” within said geographic boundaries will require re-authorization.

1.5 Project Description

The County proposes to relocate the current Valley Boulevard/Pepper Avenue intersection approximately 76 meters (250 feet) north of its current alignment. Pepper Avenue would be widened from four to six lanes in the segment between San Bernardino Avenue and I-10. Valley Boulevard would be realigned northward. The improvement limits on Valley Boulevard are 246 meters (811 feet) west and 284 meters (938 feet) east of Pepper Avenue. Valley Boulevard would retain two through lanes in each direction with turn lanes at the intersection with Pepper Avenue. A signalized street connection approximately 152 meters (500 feet) west of Pepper Avenue would be developed to include a frontage road and cul-de-sac. An access road would be constructed to permit southbound Pepper Avenue traffic direct access to local business. Construction of the Preferred Alternative would occur over an estimated nine month period. Within occupied DSF habitat, the total construction impact, including temporary construction staging, will be 1.84 acres.

1.6 Site Description

A 16.84-acre "County Area of Potential Effect" (CAPE) has been established that includes the proposed project area (Figure 1). The CAPE is located in the City of Colton and adjacent unincorporated land in San Bernardino County north of the I-10 interchange at Pepper Avenue. Undeveloped areas within the CAPE include the Valley Boulevard and Pepper Avenue rights-of-way, Edison International (formerly Southern California Edison Company) transmission lines, and privately-held vacant land. These areas are vegetated by non-native grassland, Riversidean sage scrub (RSS), and rows of eucalyptus and pepper trees.

Portions of the CAPE are within or adjacent to the existing Hospital Preserve, which was set aside in association with construction of the Arrowhead Regional Medical Center. The Hospital Preserve is known to be occupied by DSF (Kingsley 2002; Carlsbad Fish and Wildlife Office Listing and Recovery database, 2005). Based on the proximity of the proposed project site to the Hospital Preserve and the contiguity of Delhi sands between the Hospital Preserve and the project site, an estimated 1.84 acres of DSF habitat would be affected by the proposed project. The 1.84-acre project site supports some native vegetation; however non-native grass species rather than the sparse cover of native vegetation found in higher-quality habitat for DSF, predominates at the site. No other federally- or State-listed or sensitive species occur within the project area.

2 DELHI SANDS FLOWER-LOVING FLY

2.1 Species Account

The DSF was federally listed as endangered on September 23, 1993 (58 FR 49881-49887). Critical habitat has not been designated for this species. The DSF belongs to the Dipteran family Mydidae. There are more than 30 known species of *Rhaphiomidas*, distributed across the southwestern United States and northern Mexico. These flies are relatively large – with length among the species ranging from approximately 1.5 to 4 centimeters. All species of *Rhaphiomidas* are associated with arid, sandy habitats, with most species living on dune systems of inland desert valleys, rivers, deltas, and beach strands. Many species often hover before flowers in the manner of hummingbirds, using a long, thin, tubular proboscis (mouth-part) to probe for nectar.

The DSF flight period is typically July through September, when individual adults emerge, reproduce and die. The adult life span of an individual DSF is thought to last for a few weeks at most (Kingsley 2002). DSF, like other *Rhaphiomidas* species, appears to have an annual life cycle (because of the annual flight). However, it is widely believed that the underground larval/pupal stage may persist for additional years, depending upon various environmental factors such as annual rainfall, food availability and weather conditions. It is known that DSF larvae develop underground; however, the specific biological attributes (larval biology, habits and food requirements) are not yet known for the DSF.

2.2 Status of the Species

The DSF is only known to occur in association with Delhi sand deposits and presumably occupied the once extensive dune system of the upper Santa Ana River Valley, including

portions the City of Colton, west through portions of the City of Ontario, and south to the Santa Ana River. Today, DSF exist on only a few disjunct sites within a radius of about eight miles in southwestern San Bernardino and northwestern Riverside counties (Service 1997). More than 95 percent of historic DSF habitat was considered eliminated by development, agriculture and other land management practices by 1993. Many of the last remaining fragments of DSF habitat are currently under pressure by land management efforts such as heavy disking, irrigation, manure dumping, and gravel dumping.

2.3 Assessment of Incidental Take

A 1.84-acre area that would be developed as part of the proposed project contains Delhi sand soils. The vegetation onsite is indicative of what is typically considered to be low quality DSF habitat; however, DSF have been found in similar areas with low quality (CFO Listing and Recovery database, 2005). In addition, the project site is contiguous with high quality, DSF-occupied habitat in the Hospital Preserve and other adjacent undeveloped habitat (CFO Listing and Recovery database 2005). The applicant chose to forego DSF surveys in favor of assuming that the site was occupied based upon this rationale. Therefore, we assume that a low density of eggs, larvae and/or pupae exist in the soil at the project site. All DSF eggs, larvae and pupae within the 1.84-acre area would be crushed or displaced through project implementation; however, we anticipate that few individuals would be lost due to the low density of individuals we anticipate could be supported within the 1.84-acre project site.

Indirect impacts to DSF in adjacent occupied habitat are also anticipated upon project implementation. The 1.84-acre area of occupied habitat is within a DSF habitat corridor designed to maintain dispersal of DSF between the Hospital Preserve and habitat to the west. Project implementation would shorten the existing corridor by approximately 250 feet, thereby slightly reducing the dispersal function of the corridor.

3 HABITAT CONSERVATION PLAN

3.1 Purpose and Goals of the HCP

This HCP has been prepared to avoid and minimize impacts to the DSF during project construction and to mitigate for unavoidable impacts through permanent conservation and management of high-quality, DSF-occupied habitat off the project site.

3.2 Actions to Minimize Impacts

During project construction, the County would work to minimize impacts to DSF outside of the project area in adjacent and/or nearby DSF habitat. Disturbance includes, but is not limited to, such activities as grading, stockpiling and excavating soil, parking, and storage of equipment, and ingress and egress of vehicles and personnel. Prior to construction activities, a chain-link fence would be erected along the north edge of the realigned Valley Boulevard to prevent encroachment into the habitat. County employees and subcontractors would be educated to avoid and minimize disturbance to DSF habitat. Bi-weekly monitoring would occur during construction to ensure that construction activities do not extend beyond the project area. The 1.84-acre area of occupied DSF habitat will be cleared and graded prior to the DSF flight season (July 1) to discourage

DSF from ovipositing (laying eggs) within the construction area.

3.3 Actions to Mitigate Impacts

The County proposes to mitigate impacts to the DSF either through acquisition and conservation of a 2.04-acre parcel with high quality DSF habitat adjacent to the proposed project (Hospital Preserve Extension Alternative) or purchase of 5 acres of credit within the Vulcan Materials Inc. Colton Dunes Conservation Bank (Conservation Bank Alternative).

Under the Hospital Preserve Extension Alternative, the County would establish an endowment with One Hundred Thousand Dollars (\$100,000.00) to be used by the County Service Area 70, Improvement Zone OS-2 (District) or other management entity accepted by the Service for management of the property. A Conservation Easement would be dedicated to the District or other management entity acceptable to the Service for the Acquisition Parcel. Prior to ground-breaking activities, a Service-approved management plan would be established to provide methods to limit access, manage weeds and remove trash that minimize impacts to DSF and its habitat. Prior to construction, fencing would be installed around perimeter of the Acquisition Parcel to reduce trespassing. Signs would be placed on the fence and or set aside boundaries, informing County employees, subcontractors and public, that this area is a protected habitat and is off-limits to all persons.

Under the Conservation Bank Alternative, the County would mitigate project impacts to the DSF through the purchase of 5 acres of high quality, occupied habitat with known long-term conservation value at the Colton Dunes Conservation Bank. The bank is within the largest remaining area known to support DSF, and conservation within this area is considered essential for DSF recovery (Service 1997). DSF have been observed throughout the majority of the Conservation Bank as recently as 2004 (Goodlet 2004; Carlsbad Fish and Wildlife Office Listing and Recovery database 2004).

3.4 Monitoring, Management and Reporting

Under the Hospital Preserve Extension Alternative, a \$100,000 non-wasting endowment would be established for monitoring and management of the Acquisition Parcel. Management and monitoring activities would be coordinated with the CFWO and the District or other management entity accepted by the Service.

Under the Conservation Bank Alternative, no further funding, monitoring, or management activities would need to be conducted by the County. As a Service-approved bank, the County would be entitled to rely on the management and monitoring assurances inherent in the conservation banking agreement.

To report on the incidental take of the DSF at the project site, the County would notify the CFWO within two days prior to project site grading and also provide a post-grading notice to the CFWO.

3.5 Funding

Prior to any ground-disturbing activities, the County would provide to the CFWO either 1) a final conservation easement for the Acquisition Parcel and proof that a \$100,000 endowment has been established, or 2) proof of purchase towards conservation of 5 acres at the Conservation Bank.

4 CHANGED CIRCUMSTANCES

“Changed circumstances” means changes in circumstances affecting the DSF or the geographic area covered by the HCP that can reasonably be anticipated by the County and reasonably be planned for in the HCP (*e.g.* the listing of a new species, or a fire or other natural catastrophic event in areas prone to such events). Changed circumstances are not Unforeseen Circumstances.

The only changed circumstance identified in the HCP is the listing of a new species. In the event that a non-covered species that may be affected by the proposed project becomes listed under the Act, the County would implement “no take/no jeopardy” measures identified by the Service until the permit is amended to include such species, or until the Service notifies the County that such measures are no longer needed to avoid jeopardy, take of, or adverse modification of critical habitat of the non-covered species.

Management within the Acquisition Parcel would be flexible enough to deal with changed circumstances that may occur through natural catastrophic events. Events such as flooding or fire are expected to result in temporary effects to DSF habitat that would not require extensive habitat restoration to maintain DSF occupation.

The management plan for the Conservation Bank provides that the Conservation Bank would be adaptively managed to deal with any potential changed circumstances. Adequate funding for responses to changed circumstances is included in the per acre fee; therefore, the County has no further obligations for changed circumstances within the Conservation Bank.

5 UNFORESEEN CIRCUMSTANCES

Unforeseen Circumstances are discussed in the Department of the Interior’s “Habitat Conservation Plan Assurances (‘No Surprises’) Final Rule,” issued February 23, 1998 (*Federal Register* vol. 63, no. 35). Pursuant to the provisions of the “No Surprises Policy,” in the event unforeseen circumstances affect a species covered by this HCP, the Permittee will not be required to provide additional mitigation which requires the commitment of additional lands, additional financial compensation, or additional restrictions on lands or other natural resources released for development use. Should Unforeseen Circumstances arise, changes will be limited to modifications within conserved habitat areas, or the HCP’s operating conservation program for the covered species, and will maintain the original terms of the HCP to the maximum extent possible. The assurances contained in the “No Surprises Policy” apply only if the Permittee has complied with its obligations under the HCP.

6 AMENDMENT PROCESS

6.1 Minor Amendments

The Service or the County may propose minor modifications to the HCP by providing notice to the other party. Such notice shall include a statement of the reason for the proposed modification and an analysis of its environmental effects, including its effects on operations under the HCP and on covered species. Minor amendments are permissible without amending the underlying section 10(a)(1)(B) permit provided that the Service determines that the changes do not 1) cause additional take of DSF that was not analyzed in connection with the original HCP, 2) result in operations under the HCP that are significantly different from those analyzed in connection with the original HCP, or 3) have adverse effects on the environment that are new or significantly different from those analyzed in connection with the original HCP.

6.2 Formal Amendments

Amendments that do not fit the definition of a minor amendment will be processed as formal amendments in accordance with all applicable legal requirements, including but not limited to the federal Endangered Species Act, the National Environmental Policy Act, and the Service's permit regulations. Formal permit amendments require written notification to the Service and the same justification and supporting information for compliance with a standard incidental take permit application, including conservation planning requirements and compliance with issuance criteria.

When the Service or the County believes that a formal amendment to the HCP is required, consultation with the Service will include the Service's Regional and California/Nevada Operations Offices. The County will prepare the appropriate documentation for submission to the Service. The documentation will include a description of the event or activity and an assessment of its impacts. The amendment will describe changes to the mitigation measures to ensure that the DSF is appropriately protected.

7 PERMIT RENEWAL OR EXTENSION

The permit may be renewed or extended with the approval of the Service. The request to renew or extend the permit must be submitted in writing by the applicant and reference the permit number; certify that all statements and information in the original application are still correct or include a list of changes; and provide specific information concerning what take has occurred under the existing permit and what portions of the project are still to be completed. The request must be made to the Fish and Wildlife Service's Carlsbad Fish and Wildlife Office at least 30 days prior to the permit's expiration date. As long as the request is received within 30 days prior to the permit expiration date, the permit shall remain valid while the renewal or extension is being processed. The renewal or extension may be approved in writing by the Deputy Manager of the Service's California/Nevada Operations Office. Changes to the HCP that would qualify as a formal amendment will be handled in accordance with section 6.2.

8 OTHER MEASURES

Section 10(a)(2)(A)(iv) of the ESA states that a HCP must specify other measures that the

Director may require as being necessary or appropriate for purposes of the plan. When conservation plans involve multiple parties, the Service may require that an Implementing Agreement be drafted and signed by each party to the HCP. The Service has determined this document to be a “low-effect” HCP with negligible or minor effects on listed species, whereby an Implementation Agreement is not required. No other measures that the Director may require have been identified for this HCP.

9 ALTERNATIVES TO THE PROPOSED ACTION CONSIDERED

This alternatives analysis compares the effects of two alternatives to the proposed permit. The following are considered the most reasonably feasible project alternatives: (1) the “modified project” alternative and (2) the “no action” alternative.

9.1 Modified Project Alternative

The Modified Project would create a grade separation (bridge) between Pepper Avenue and Valley Boulevard, raising the existing grade of Pepper while lowering Valley Boulevard. Pepper Avenue would be widened to three through lanes northbound and southbound, with provision of left and right turn lanes. A bridge structure would be required on Pepper Avenue; a new bridge over Valley Boulevard. Valley Boulevard would be realigned northward to accommodate traffic during construction. A "looped" connector road would be built in the northwest quadrant of the Valley Boulevard/Pepper Avenue intersection (opposite the Hospital) crossing to link vehicle access to these roads. The existing eastbound freeway off-ramp would be removed. The two new intersections would both be signalized. The realignment limits are 290 meters (951 feet) west and 300 meters (984 feet) east of Pepper Avenue.

This alternative would avoid DSF habitat within and adjacent to the Hospital Preserve but impact potentially occupied but disturbed DSF habitat in the northwest quadrant of the CAPE. This is the most costly of the alternatives analyzed. In addition, this alternative would require acquisition and relocation of businesses and utility facilities. Therefore, this alternative was not chosen.

9.2 No Action Alternative

Studies undertaken by the County of San Bernardino indicate the need for the proposed improvements due to construction of the Arrowhead Regional Medical Center. The improvements would accommodate existing and ongoing development in the Hospital vicinity. Currently, stacking distance is severely limited between Valley Boulevard and the on-and off-ramps of I-10 freeway, which causes significant traffic congestion, resulting in "level of service" (LOS) of E and F (A being best and F being worst). Existing conditions, the new Hospital and proposed future development require upgrade to current roadway systems. The No Action Alternative would result in gridlock conditions inside the project CAPE. Therefore, this alternative was not selected.

10 DEFINITIONS

Endangered Species – “...any species [including subspecies or qualifying distinct population segment] which is danger of extinction throughout all or a significant portion of its range.” [Section 3(6) of ESA]’

Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1513-1543) - Federal legislation that provides means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, and provides a program for the conservation of such endangered and threatened species.

Habitat – The location where a particular taxon of plant or animal lives and its surroundings, both living and non-living; the term includes the presence of a group of particular environmental conditions surrounding an organism including air, water, soil, mineral elements, moisture, temperature, and topography.

Habitat Conservation Plan (HCP) – Under section 10(a)(2)(A) of the ESA, a planning document that is a mandatory component of an incidental take permit application, also known as a HCP.

Implementing Agreement – An agreement that legally binds the permittee to the requirements and responsibilities of a conservation and section 10 permit. It may assign the responsibility for planning, approving, and implementing the mitigation measures under the HCP.

Incidental take - Take of any federally listed wildlife species that is incidental to, but not the purpose of, otherwise lawful activities (see definition for “take”) [ESA section 10(a)(1)(B)].

Incidental take permit – A permit that exempts a permittee from the take prohibition of section 9 of the ESA issued by the FWS pursuant to section 10(a)(1)(B) of the ESA.

Listed species – Species including subspecies and distinct vertebrate populations, of the fish, wildlife, or plants, listed as either endangered or threatened under section 4 of the ESA.

“Low-effect HCPs” – Those involving: (1) minor or negligible effects on federally listed, proposed, or candidate species and their habitats covered under the HCP; and (2) minor or negligible effects on other environmental values or resources. “Low-effect” incidental take permits are those permits that despite their authorization of some small level of incidental take, individually or cumulatively have a minor or negligible effect on species covered.

Mitigation – Under NEPA regulations, to moderate, reduce or alleviate the impacts of a proposed activity, including: a) avoiding the impact by not taking a certain action or parts of an action; b) minimizing impacts by limiting the degree or magnitude of the action; c) rectifying the impact by repairing, rehabilitating or restoring the affected environment; d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; e) compensating for the impact by replacing or providing substitute resources or environments (40 CFR 1508.20).

National Environmental Policy Act (NEPA) – Federal legislation establishing national policy that environmental impacts will be evaluated as an integral part of any major Federal action. Requires the preparation of an EIS (Environmental Impact Statement) for all major Federal actions significantly affecting the quality of the human environment (42 U.S.C. 4321-4327).

Take – Under section 3(18) of the ESA, “... to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” with respect to federally listed endangered species of wildlife. Federal regulations provide the same taking prohibitions for threatened wildlife species [50 CFR 17.31(a)].

11 LITERATURE CITED

- Kingsley, K. J. 2002. Population dynamics, resource use, and conservation needs of the Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis* Cazier) (Dipera: Mydidae), an endangered species. *Journal of Insect Conservation* 6:93-101.
- U.S. Fish and Wildlife Service. 1997. Delhi Sands Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*) Recovery Plan. U.S. Fish and Wildlife Service, Portland, OR. 51pp.