

**UTV INSPECTION FORM**

Date:		Owner, Rental Company:	
Project #:		Model #:	
Project Title:		Operator:	

**OBSERVATIONS**  
Indicate Location of Damage



**EQUIPMENT**

<b>REQUIRED</b>	<input type="checkbox"/> Personal Communication Device(s) (2-Way Radio, Cell Phone or Satellite Phone)
<input type="checkbox"/> Valid Training Certificate	<input type="checkbox"/> Tool Kit
<input type="checkbox"/> Vehicle Registration and Insurance	<input type="checkbox"/> Fire Extinguisher
<input type="checkbox"/> Operator's Manual	<input type="checkbox"/> OHS Legislation
<input type="checkbox"/> Orientation to Vehicle	<input type="checkbox"/> Other (Specify):
<input type="checkbox"/> DOT/SNELL Helmet (Preferably with Face Shield)	<b>RECOMMENDED</b>
<input type="checkbox"/> CSA Approved Eye/Face Protection (Required with Open-Faced Helmets)	<input type="checkbox"/> Fuel (Stored in NFPA Approved Gas Can)
<input type="checkbox"/> Winch	<input type="checkbox"/> Spill Kit
<input type="checkbox"/> CSA Approved Footwear	<input type="checkbox"/> Paddles (As Required)
<input type="checkbox"/> Hand Protection (Must be Appropriate to Weather and Suitable for Use with Winch)	<input type="checkbox"/> Personal Survival Kit (May be a Requirement for Some Groups)
<input type="checkbox"/> High Visibility Vest or High Visibility Nomex Coveralls	<input type="checkbox"/> UTV Kit
<input type="checkbox"/> Long Sleeves (Shirt or Jacket) and Long Pants	<input type="checkbox"/> Other (Specify):
<input type="checkbox"/> First Aid Kit (Alberta #2) (BC)	<input type="checkbox"/> Other (Specify):
<input type="checkbox"/> Approved Buoyancy Device	<input type="checkbox"/> Other (Specify):
<input type="checkbox"/> Maps, Compass, GPS	<input type="checkbox"/> Other (Specify):

**DAILY INSPECTION**

<b>UTV Unit #</b>							
<b>Dates (Insert):</b>							
<b>Odometer/Hours:</b>							
<b>Seat Belts</b>							
<b>Lights &amp; Switches</b>							
<b>Control Cables</b>							
<b>Fittings &amp; Fasteners</b>							
<b>Horn</b>							
<b>Instrument Panel</b>							
<b>Parking Brake</b>							
<b>Steering</b>							
<b>Accelerator Pedal</b>							
<b>Engine Oil</b>							
<b>Coolant Reservoir</b>							
<b>Suspension</b>							
<b>Wheel Lug Nuts</b>							
<b>Tires</b>							
<b>Axle Boots</b>							

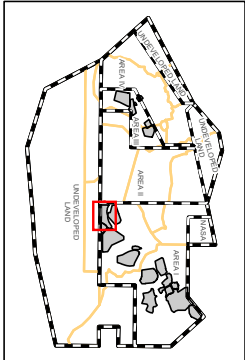
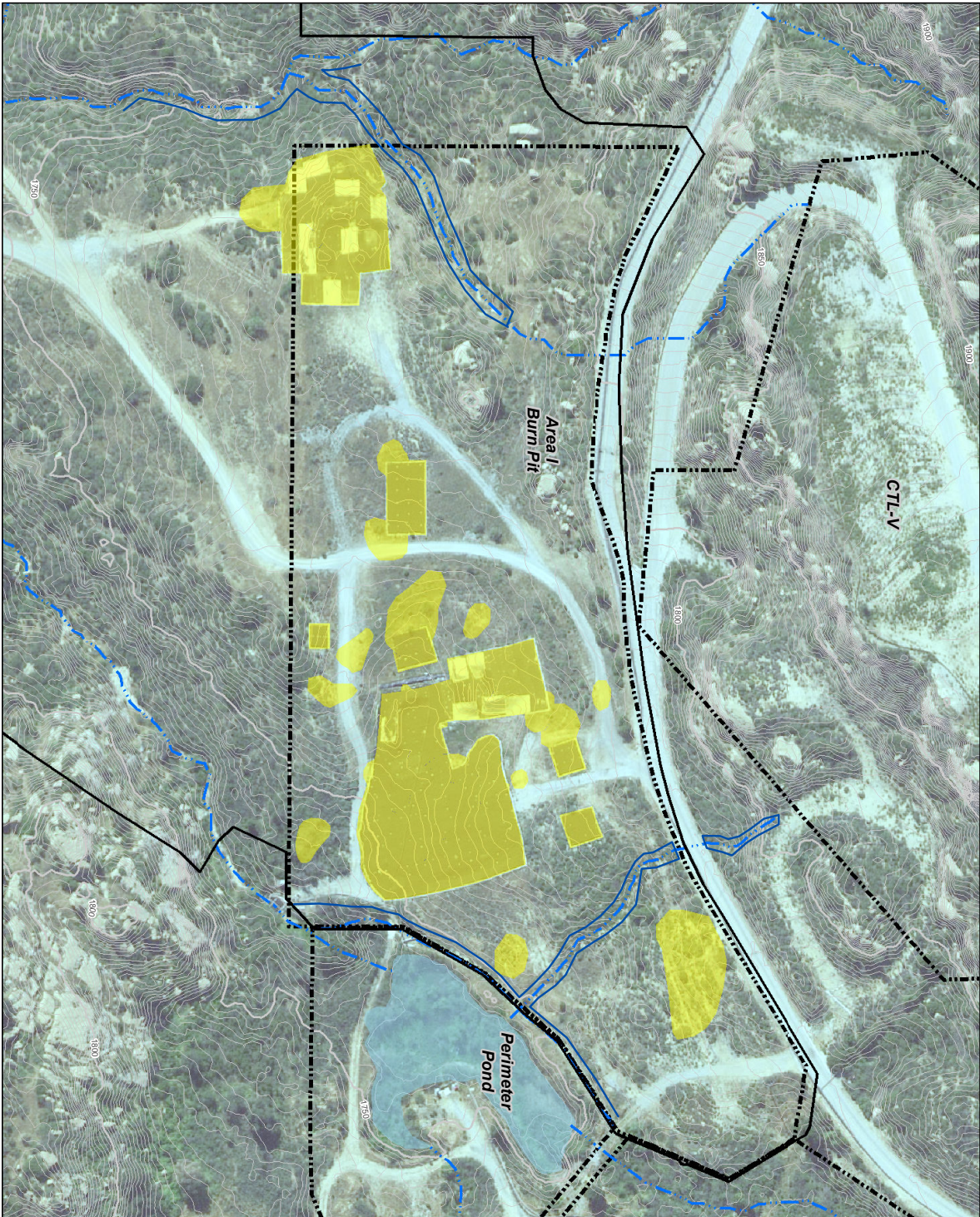


## UTV INSPECTION FORM

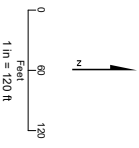
If deficiencies are identified, indicate the concern and provide details below:			
Corrective Actions Recommended	Person(s) Responsible	Expected Date of Completion	Corrected Immediately?
Observer Name:	Signature:	Date:	
Comments:			
Project Manager/Supervisor Name:	Signature:	Date:	
Comments:			

**Appendix B**  
**Topographic Survey and Early Action Area**  
**Excavation Plans**

**Attachment B-1**  
**Removal Action Area Topography**



- BASEMAP LEGEND**
- Boeing RFI Site
  - Area I Burn Pit RFI Site Reporting Area
  - Drainage Channel
  - Top of Bank of Drainage Channel
  - Elevation Contour Line (2-foot interval)
  - Pond
  - Early Action Area



**FIGURE B-1**  
**Area I Burn Pit Early Action Area Topography**  
 Early Action Work Plan  
 Area I Burn Pit RFI Site  
 Boeing RFI Subarea 1B Southwest  
 Santa Susana Field Laboratory, Ventura County, California

## **Attachment B-2 Grading Plans**

Final grading plans will be provided in an addendum after  
Ventura County Public Works approval

**Appendix C**  
**Natural Resources Management Plan**



**Santa Susana Field Laboratory  
Ventura County, California**

**Appendix C – Natural Resources Management Plan**

**Final**

**August 2023**

**The Boeing Company**

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Gene Ng, P.E., 63222  
Project Engineer





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## Acronyms and Abbreviations

<b>Acronym</b>	<b>Definition</b>
AIBP	Area I Burn Pit
Boeing	The Boeing Company
CDFW	California Department of Fish and Wildlife
CNPS	California Native Plant Society
CTL-I	Component Test Laboratory I
CTL-V	Component Test Laboratory V
DTSC	California Environmental Protection Agency, Department of Toxic Substances Control
EAA	Early Action Area
ESA	environmentally sensitive area
GPS	global positioning system
LETf	Laser Engineering Test Facility
MBTA	Migratory Bird Treaty Act
NPPA	Native Plant Protection Act
NRMP	Natural Resources Management Plan
Padre	Padre Associates, Inc.
RAW	Removal Action Work Plan
RCRA	Resource Conservation and Recovery Act
RFI	RCRA facility investigation
SSFL	Santa Susana Field Laboratory
SUL	Southern Undeveloped Land
TPZ	tree protection zone
VPB	vernal pool branchiopods

## 1. Introduction

This Natural Resources Management Plan (NRMP) was prepared on behalf of The Boeing Company (Boeing) in support of removal action activities for part of the Area I Burn Pit (AIBP) Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) site within Boeing RFI Subarea 1B Southwest at the Santa Susana Field Laboratory (SSFL) in Ventura County, California (Figure C-1). This NRMP is Appendix C of the Removal Action Work Plan (RAW) that provides details of the removal action activities.

This RAW has been prepared for Boeing pursuant to the *Imminent and Substantial Endangerment Determination and Consent Order, Docket No. HSA-FY21/22-148, Santa Susana Field Laboratory, Area I Burn Pit Area, Simi Valley, Ventura County, California* (DTSC 2022) (2022 ISE Order). The 2022 ISE Order applies to the Early Action Area (EAA) of the AIBP RFI site shown on Figure C-2.

### 1.1 Background

The AIBP RFI site reporting area is approximately 27 acres in the east-central portion of the SSFL. The AIBP RFI site was established for the destruction of chemicals by combustion and detonation. The AIBP RFI site is currently inactive, and all structures have been demolished. Portions of the site are covered with a geotextile fabric.

Sampling and analytical data collected to date indicate that soil within the EAA shown on Figure C-2 contain certain metals, polychlorinated biphenyls, volatile organic constituents, and dioxins that pose a threat to ecological health, and contain radionuclides in the soil at concentrations that exceed lookup table values. California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) issued the 2022 ISE Order to address these concerns for soil within areas potentially disturbed by construction activities for the removal action (collectively called the EAA) (Figure C-2), and to address soil underneath areas covered by geotextile fabric to stabilize the site until the final cleanup is completed.

### 1.2 Purpose and Scope

Boeing has developed this NRMP to describe the methods to identify sensitive plant species, preserve and protect sensitive and nonsensitive native plants during vegetation clearance, dispose of native and noninvasive species, and monitor the impacts of the removal action to plant communities in and around the AIBP EAA. The currently estimated removal areas total 2.4 acres.

## 2. Existing Conditions

### 2.1 Pre-excavation Biological Survey

A survey to identify special-status plant species and wildlife within the EAA was completed by Padre Associates, Inc. (Padre) on June 29, 2022. A follow-up survey was performed in auxiliary portions of the EAA (that is, the proposed staging areas selected for the project) on September 14, 2022 (Padre 2022a). The biological survey area is shown on Figure C-2. The location of individual species was recorded using a handheld global positioning system (GPS) device with an accuracy of 2 meters or less after post-processing. Photographs were also taken from different vantage points to establish long-term photographic stations. Prior biological surveys that included, or immediately surrounded, the EAA are listed in Table C-1. In addition, other field surveys have been performed by Padre biologists since 1999 at the SSFL, which provide additional background for the preparation of the subject biological survey activities.

Botanical surveys within the EAA were performed at various times of the year, as appropriate for both annual and perennial species. The surveys were conducted along pedestrian transects throughout the entire EAA to visually inspect and scan the area from multiple vantage points (that is, throughout all habitat types, and across all rock formations). Special focus was paid to the documentation of the occurrence and population demography of Santa Susana tarplant (*Deinandra minthornii*), a State Rare species known to occupy much of the SSFL, including the AIBP RFI site.

Wildlife reconnaissance surveys were performed concurrently with, or in addition to botanical surveys to compile a list of all animal species encountered and their notable behaviors and sign (for example, burrows, scat, prey remains). Wildlife surveys included documenting all avian species by auditory and visual cues using direct sight and 10×42 binoculars. Special focus was also paid to surveying for special-status amphibians, reptiles, and mammals that are known to occur within the Simi Hills, particularly at the SSFL. The survey dates and corresponding descriptions are provided in Table C-1 with additional detail on botanical surveys and mapping for Santa Susana tarplant provided in Section 2.1.1.

#### 2.1.1 Vegetation Types

Vegetation throughout the biological survey area is composed of a mix of native and non-native vegetation types. According to the Manual of California Vegetation, Second Edition and online revisions (Sawyer et al. 2009-2022), the dominant vegetation types include the following, in general order of decreasing concentration based on a qualitative assessment of the EAA. Additional vegetation mapping prior to the project

start is planned to quantify the areal extent of each vegetation type. Global and State Rarity Rankings on a scale of 1 to 5 (imperiled to secure) are also provided:

- *Lotus scoparius* (*Acmispon glaber*) Shrubland Alliance (Deer weed scrub), G5 S5 -
- *Eriodictyon crassifolium* Provisional Shrubland Alliance (Thick leaf yerba santa scrub), G3 S3
- *Baccharis pilularis* Shrubland Alliance (Coyote Brush Scrub), G5 S5
- *Adenostoma fasciculatum* Shrubland Alliance (Chamise Chaparral), G5 S5

Vegetation within the biological survey area includes mixed scrub and ruderal species that have undergone repeated disturbance from routine maintenance of felt tarps covering the biological survey area and brush clearance for defensible space for fire. In addition to the previously listed dominant vegetation types, there are areas of ruderal land composed of non-native annual grasses (*Bromus* spp.), summer mustard (*Hirschfeldia incana*), and tocalote (*Centaurea melitensis*). Other landcover types within the biological survey area include felt tarp secured by concrete cinder blocks, gravel, and bare ground. Evidence of a recent brush fire was observed in the form of burned stems of shrubs that have resprouted from their root crowns.

Native species include deerweed (*Acmispon glaber*), black sage (*Salvia mellifera*), clustered tarweed (*Deinandra fasciculata*), California aster (*Corethrogyne filaginifolia*), coyotebrush (*Baccharis pilularis*), cliff aster (*Malacothrix saxatilis*), vinegar weed (*Trichostemma lanceolata*), laurel sumac (*Malosma laurina*), bush mallow (*Malacothamnus fasciculatus*), turkey mullein (*Croton setigerus*), Spanish clover (*Acmispon americanus*), purple sage (*Salvia leucophylla*), horseweed (*Erigeron canadensis*), yerba santa (*Eriodictyon crassifolium*), twiggy wreath plant (*Stephanomeria virgata* ssp. *virgata*), purple nightshade (*Solanum xanti*), California bush sunflower (*Encelia californica*), narrow-leaved milkweed (*Asclepias fascicularis*), needlegrass (*Stipa* sp.), California buckwheat (*Eriogonum fasciculatum*), coast goldenbush (*Isocoma menziesii* var. *vernonioides*), Palmer's goldenbush (*Ericameria palmeri* var. *pachylepis*), chamise, telegraphweed (*Heterotheca grandiflora*), California sagebrush (*Artemisia californica*), western ragweed (*Ambrosia psilostachya*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), wild cucumber (*Marah macrocarpa*), hoary-leaved ceanothus (*Ceanothus crassifolius*), caterpillar phacelia (*Phacelia ramosissima*), holly-leaf cherry (*Prunus ilicifolia*), coast live oak (*Quercus agrifolia*), and Santa Susana tarplant. Non-native species include summer mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), red brome (*Bromus madritensis* ssp. *rubens*), stork's-bill (*Erodium botrys*), pit-seed goosefoot (*Chenopodium berlandieri*), fountain grass (*Pennisetum setaceum*), and slender wildoats (*Avena barbata*).

The EAA has been burned by wildfire twice in recent history during the Topanga Fire in 2005 and the Woolsey Fire in 2018. The recent fires over the already disturbed landscape have resulted in dense deer weed thickets around the tarps and access

roadways. The lesser disturbed vegetated areas still have a few burned stumps but some plants, such as laurel sumac, have progressed past root sprouting to more mature growth forms. Current conditions also show vigorous regeneration of black sage and yerba santa.

Santa Susana tarplant (State Rare under the Native Plant Protection Act of 1977 [NPPA]; California Native Plant Society [CNPS] Rare Plant Rank 1B.2 [rare, threatened, or endangered in California or elsewhere; moderately threatened in California]) was present in several locations within the biological survey area, including:

- One small (6 inches tall) individual was growing through the tarp next to a cinder block near the northwest corner of the main, eastern tarp and observed during the June 29, 2022 biological survey that included the AIBP site.

During a follow-up survey on August 29, 2022, it was documented that this plant was no longer present. Boeing investigated this incident and reported their conclusion to CDFW on October 4, 2022 (Boeing 2022).

- Nineteen small, medium, and large individuals were growing on or adjacent to a sandstone outcrop along the northwestern margin of the biological survey area. All of these individuals were present in follow-up site visits.
- Five medium-to-large individuals were growing in a formerly graded, but revegetated area to the south and east of the EAA. All of these individuals were present in follow-up site visits.
- About 32 small, medium, and large individuals were growing in revegetated and roadside areas of the former CTL-V area, north of the EAA, which is proposed as a staging area. All of these individuals were tallied and mapped during the September 14, 2022 follow-up site visit.
- A total of three small and medium individuals were growing in revegetated areas of the former CTL-III area, east of the EAA, which is proposed as a staging area. All of these individuals were tallied and mapped during the May 16, 2023 follow-up site visit.
- One medium individual was growing at the edge of the gravel lot at the Laser Engineering Test Facility/ Component Test Laboratory I (LETF/CTL-I) area, approximately 0.75 mile northeast of the EAA, which is proposed as a staging area. About six medium individuals were growing on the adjacent bare rock. All of these individuals were tallied and mapped during a June 28, 2023 site visit.

Each Santa Susana tarplant was flagged with fluorescent pink or orange ribbon in the field, and their locations are provided on Figure C-2. There are currently 24 Santa Susana tarplants located in areas surrounding the EAA, and an additional 45 Santa Susana tarplants located adjacent to the proposed staging areas, which would not be directly or indirectly affected by the proposed project activities. All Santa Susana

tarplants and their seedbanks outside of the proposed excavation activities and their associated staging areas will be afforded special protection to avoid take according to the NPPA.

Observations of Santa Susana tarplant individuals by the project biologists at the SSFL have repeatedly noted that the species commonly persists for 10 years or more. Due to their long-lived nature, many of the individuals within the EAA originally observed in past years are still alive in 2022; however, some of the individuals observed in 2022 have emerged in recent years. Post-fire observations following the 2018 Woolsey Fire have also indicated that Santa Susana tarplant readily sprouts from burned, woody stalks. Overall, the population is considered stable, if not slightly increased, due to the observation of previously undocumented individuals within similarly mapped areas. Individuals of all size classes from seedlings of 3 inches tall or less to mature, many stemmed plants were present. Small- to medium-sized plants were typical for most of the plants observed within or adjacent to the EAA, with the exception of several larger individuals adjacent to the proposed staging area at CTL-V.

The mapped locations of Santa Susana tarplant on Figure C-2 represent a collection of past data and 2022 data, because areas of both live and dead plants may represent seed bank stored in the soil or rock crevices. Santa Susana tarplant was present within two clusters in the northwest and eastern portions of the biological survey area, well outside of the currently proposed excavations. Santa Susana tarplant were also located adjacent to, but well outside, the proposed staging areas for the project.

No other special-status plants, including but not limited to Braunton's milk-vetch (*Astragalus brauntonii*, [federal endangered]), mariposa lilies (*Calochortus* spp. [CNPS Rare Plant Rank 4.2, limited distribution]), Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*, [CNPS Rare Plant Rank 4.2, limited distribution]), or Malibu baccharis (*Baccharis malibuensis*, [a CNPS Rare Plant Rank 1B.1; rare, threatened, or endangered in California or elsewhere; seriously threatened in California]) were observed within the survey area.

Coast live oak trees, which are protected by the Ventura County Tree Ordinance when larger than 3 inches in diameter at breast height, were also observed along the eastern margins of the survey area and adjacent to the access road leading to the proposed staging area at the former CTL-V, but are out of the EAA. There are seven protected oak trees located immediately adjacent to the EAA or proposed staging areas. Additional details on oak tree protection requirements are provided in Section 3.

### 2.1.2 Wildlife

Wildlife habitat quality is low to moderate within and high adjacent to the EAA for a variety of reptile, bird, and mammal species. Much of the project area is impacted by access roads and tarps. Aquatic habitats are mostly absent within the EAA, with exception



of ephemeral drainages along the east and west margins (Figure C-2), which will be protected and avoided by the project activities.

Bird species observed during the June 29, 2022 AIBP biological surveys included California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), white-throated swift (*Aeronautes saxatalis*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), ash-throated flycatcher (*Myiarchus cinerascens*), California scrub-jay (*Aphelocoma californica*), common raven (*Corvus corax*), northern mockingbird (*Mimus polyglottos*), wrenit (*Chamaea fasciata*), canyon wren (*Catherpes mexicanus*), Bewick's wren (*Thryomanes bewickii*), phainopepla (*Phainopepla nitens*), house finch (*Haemorhous mexicana*), lesser goldfinch (*Spinus psaltria*), California towhee (*Melospiza crissalis*), and spotted towhee (*Pipilo maculatus*). During the June 2022 survey, bird activity was low, consisting mainly of foraging onsite, and perching in nearby trees or utility poles. No active bird nests were observed, and obvious signs of breeding (for example, nest material collection, food deliveries, or pair bonding) were limited to California quail parents tending to a covey of juveniles readily moving in and out of the area. One unoccupied nest, possibly from California towhee, was observed in a laurel sumac shrub and was assumed to have already been abandoned post-breeding. All of the species observed are protected by state Fish and Game Code and the federal Migratory Bird Treaty Act (MBTA). An additional 137 bird species have been recorded at the SSFL (Padre 2022b), some of which may be expected to occur at or near the EAA.

Special attention has been paid during each survey for the presence or absence of listed bird species including coastal California gnatcatcher (*Polioptila californica californica*, [federally threatened]) and least Bell's vireo (*Vireo bellii pusillus*, [federally endangered]); neither of which have been observed at or near the EAA. Special attention was also paid to the presence of any raptor (bird of prey) nests in the trees or rock outcrops within the EAA, or close enough to be affected by the project, and none were observed.

Mammal observations included ground squirrel (*Otospermophilus beecheyi*, [burrows]), big-eared woodrat (*Neotoma macrotis* [potentially active nest of freshly deposited twigs at the base of the single blue elderberry tree at the west end of the Biological Survey Area]), Audubon's cottontail (*Sylvilagus audubonii*, [scat]), and coyote (*Canis latrans*, [scat, tracks, and evidence of bedding down on tarp]). No evidence of bat roosts was observed within the EAA.

Reptiles and amphibians collectively observed within the EAA were limited to western fence lizard (*Sceloporus occidentalis longipes*) and common side-blotched lizard (*Uta stansburiana*). Blainville's horned lizard (*Phrynosoma blainvillii*), a California Department of Fish and Wildlife (CDFW) Species of Special Concern, has been observed at AIBP, but not for more than 10 years. San Diegan tiger whiptail (*Aspidoscelis tigris stegnegeri*), a CDFW Species of Special Concern, was observed at the former CTL-V area

in July 2022, and is regularly observed throughout the SSFL. Other animals previously observed on the adjacent SSFL property have included western toad (*Anaxyrus boreas halophilus*), chaparral whipsnake (striped racer, [*Coluber lateralis lateralis*]), gopher snake (*Pituophis catenifer annectens*), western spadefoot (*Spea hammondi* [a CDFW Species of Special Concern]), two-striped garter snake (*Thamnophis hammondi* [a CDFW Species of Special Concern]), legless lizard (*Anniella* sp. [a CDFW Species of Special Concern]), and coast patch-nosed snake (*Salvadora hexalepis virgultea* [a CDFW Species of Special Concern]).

## 2.2 Environmentally Sensitive Areas

Environmentally Sensitive Area (ESA) designations are based on the presence of plants that are listed under the NPPA plants or animals that are protected by state Fish and Game Code, Sections 3503 (nesting birds) and 3503.5 (birds-of-prey) or are potentially occupied by animals listed under the federal Endangered Species Act of 1973 or occupied by trees that are protected under the 1992 Ventura County Oak Tree Protection Ordinance. ESAs and specific locations of rare species have been identified during biological surveys conducted within or adjacent to the EAA. These survey findings will be confirmed during pre-project biological and cultural surveys prior to construction activities in the EAA. ESAs include locations and areas of sensitive plant species (for example, Santa Susana tarplant, including seedbank locations, and coast live oak trees), sensitive wildlife habitats (for example, active bird nests), and/or areas of cultural significance. For the purpose of this removal action, jurisdictional waters of the State including ponds and drainages, are also considered to be an ESA.

Each ESA will have an appropriate buffer established by the project biologist or project archaeologist so that these sensitive species or cultural areas can be avoided. These areas will be delineated with stakes, traffic cones, snow fencing, and/or caution tape to alert workers of the presence of a biologically or culturally sensitive location. No vehicles will be allowed within any ESA, and routine foot traffic and the introduction of materials or equipment (such as dragging of hoses) will be directed away from ESAs during the removal action. Each ESA buffer shape will be established on a case-by-case basis in the field prior to excavation activities. The locations and estimated extent of identified ESAs are provided on Figure C-2. The ESAs include areas within the top of bank of drainage channel (dark blue line) and within the sensitive plant species buffer (dark green line) on Figure C-2.

### **3. Protection and Preservation of Sensitive and Native Species**

#### **3.1 Worker Environmental Awareness Training**

The removal action will be implemented in a manner that minimizes or avoids impacts to environmental resources. Worker environmental awareness training is required for all project personnel. Topics that will be covered include the description of special-status species or other sensitive resources that comprise the ESAs within and adjacent to the EAA and their avoidance protections.

Upon entry to the worksite, work crews or individuals will be provided an environmental sensitivity training session describing the known or potential presence of special-status or otherwise protected plant and wildlife species and their identification characteristics (for example, Santa Susana tarplant, California legless lizard, San Diegan tiger whiptail, Blainville's horned lizard, San Bernardino ring-necked snake, coast patch-nosed snake, western spadefoot, nesting birds, San Diego desert woodrat, and oak trees). Any newly onboarded crew members will also be provided with this training before beginning work.

Each staff member who is responsible for laying out project equipment will be instructed to avoid placement of any equipment within ESAs. If questions arise during implementation, a qualified biologist will be consulted to direct appropriate action(s). Images of sensitive species for education of site workers or site visitors are provided in Appendix D of the RAW.

#### **3.2 Special-Status Species Protections**

##### **3.2.1 Santa Susana Tarplant**

DTSC has determined that conditions at the AIBP EAA constitute an imminent and substantial endangerment to ecological receptors and require immediate response. While a similar removal action was considered exempt from the NPPA pursuant to Fish and Game Code Section 1912 (DTSC 2022), this exception is not expected to be used for the AIBP Early Action project. Instead, Boeing has incorporated specific avoidance and minimization measures into the RAW and NRMP to protect Santa Susana tarplant intended to eliminate or minimize unavoidable direct or indirect impacts while successfully implementing the removal action to comply with the 2022 ISE Order. As noted in Section 2.1.1, a single Santa Susana tarplant was recently removed (Boeing 2022), but no other direct or indirect impacts to other Santa Susana tarplants will occur due to the proposed AIBP Early Action project. Because the Santa Susana tarplant is locally abundant at the SSFL (conservatively estimated at 20,000 or more live

individuals), the AIBP Early Action project will not put the species in peril of becoming threatened or endangered or of extinction.

To protect the two clusters of Santa Susana tarplants outside of the tarped areas, along with all individuals or clusters of Santa Susana tarplants near the proposed staging area at the former CTL-V, these areas will be delineated in the field as an ESA. The ESAs will be delineated with traffic delineators, snow fencing, and/or caution tape to alert workers. No vehicles will be allowed within any ESA, and routine foot traffic and the introduction of materials or equipment will be directed away from ESAs during the removal action.

To protect live individual Santa Susana tarplants and associated seedbanks in the soil or rock cracks located downgradient of each plant, the ESA will include a protective buffer area established around each plant or group of plants. Figure C-2 depicts the estimated ESA limits based on existing field surveys. The associated ESA buffers will be finalized in the field based on the pre-construction survey, topographic conditions, and the required work for nearby excavations. The buffer area boundary may vary in distance depending on the topographical location of the plants but will be no less than 3 feet from each plant on its uphill side and may extend to 25 feet or more on flat ground or its downhill side, depending on habitat suitability for Santa Susana tarplant. The extension of the ESAs in a downgradient fashion is intended to account for the most likely scenario of where seeds are dispersed due to short-distance movement with surface water runoff or aeolian mechanisms. The distance of 25 feet was selected as a reasonable estimate based on multiplying the plant's typical height at maturity by a factor of 10.

A biologist will be present to oversee proper placement of ESA delineators, and to prevent work from encroaching into ESAs throughout vegetation removal. A qualified biologist will perform routine inspections of the ESA delineators to ensure the buffers are being maintained throughout the project.

Spraying water for dust control purposes in the EAA, including within 100 feet of Santa Susana tarplants, will be minimized to avoid ponding and the infestation of Argentine ants (*Linepithema humile*). Watering routes will be inspected daily by the project construction manager, field supervisor, or project biologist to look for ponded water or erosional rills and inform project personnel to ensure dust control restrictions are followed.

### **3.2.2 Coast Live Oak**

The County of Ventura Tree Protection Ordinance (County Zoning Ordinance no. 8107-25) considers oak trees (including coast live oak) at least 9.5 inches (single trunk) or 6.25 inches (multi-trunk) in girth (circumference) measured at a height of 4.5 feet, halfway between the uphill and downhill sides of the root crown as county-protected trees. In addition, single-trunk trees with a girth of 90 inches or greater, or multiple-trunk trees with at least two trunks with girths 72 inches or greater at a height of 4.5 feet

are considered to be “heritage” trees. The County Tree Protection Ordinance also protects western sycamore (*Platanus racemosa*), which do not occur within the EAA.

Oak tree protection regulations extend not only to the removal of oak trees, but invasion (encroachment) within the tree’s protected zone by activities including trenching, digging, or placement of heavy equipment, vehicles, or materials within the protected zone. The tree protection zone (TPZ) is defined as the surface and subsurface area within the dripline (outer limit of tree canopy) and extending a minimum of 5 feet outside the dripline, or 15 feet from the trunk of the tree, whichever is greater. According to the County Tree Protection Ordinance, any pruning of greater than 20 percent of the tree’s canopy or roots typically require a county permit.

Seven coast live oak trees that meet the county-protected designation are located immediately adjacent to the EAA or proposed staging areas, but these trees are not proposed for removal or other impacts. To comply with the Tree Protection Ordinance, ESAs will be established at the TPZ of each oak tree. The oak tree ESAs will be delineated with traffic delineators, snow fencing, and/or caution tape. No vehicles or heavy equipment will be allowed within the oak tree ESAs. Figure C-2 depicts ESA locations for coast live oak trees near the AIBP project area based on initial field surveys. ESA buffers will be finalized during pre-activity biological surveys. No pruning of branches or major roots or soil removal beneath the oak trees will be required for the project.

### **3.3 Other Flora and Fauna**

#### **3.3.1 Nesting Birds**

Prior to vegetation removal or pruning activities associated with the soil removal action, at least one pre-activity breeding and nesting bird survey will be performed if activities are planned within the typical bird breeding season of March 1 to August 15. The survey will focus on the portions of the EAA planned for work at that time, along with adjacent areas that are within close enough range to potentially cause disturbance to nesting bird activity. Additional surveys will be conducted as the work area expands into remaining portions of the EAA.

Any observed active bird nests will be provided with an appropriate buffer (50 to 500 feet depending on the species, maturity of nestlings, and topographical barriers that may shield the nest from disturbance). The buffer will be marked with surveyor ribbon and all crew will be informed of its need for avoidance. Ongoing breeding bird surveys will be conducted to monitor the progress of the nest to determine when work can begin or resume within the buffer. Observation of an active bird nest (or nests) by the crew, not previously discovered by the biologist, will immediately be brought to the biologist’s attention, who can determine the species and timing of the nesting cycle and provide

appropriate protection measures to ensure compliance with the MBTA and Fish and Game Code.

### **3.3.2 Selective Pruning of Native Plants**

Access to the soil excavation areas will occur from immediately adjacent access roadways to minimize additional disturbance of natural areas. However, it may be necessary to trim some shrubs outside the areas covered with geotextile fabric to provide access for soil removal activities. In these cases, selective pruning techniques will be used to protect the main portions of each plant's main root ball and the taller portions of the plant, where feasible, for natural regeneration after the project. Pruning will be conducted with oversight by the biological monitor. Protection of existing plants in place to the maximum extent feasible will aid in the long-term restoration goals of the project.

## 4. Selective Vegetation Removal

Selective vegetation removal and brush clearance will be implemented to reduce impacts to the local ecosystem. No vegetation clearance or soil disturbance will commence before completing pre-disturbance surveys. To the extent feasible, native and non-native vegetation that is removed will be segregated to avoid the spread of non-native and invasive species. If required for access, larger shrubs and trees may be pruned to raise the canopy of each plant to provide access on the ground but will not require complete removal.

### 4.1 Fire Prevention

Most of the EAA is maintained with relatively small amounts of dry brush that could ignite if a spark was inadvertently introduced while working. Equipment used to clear vegetation has the potential to create sparks if a metal blade strikes quartz-rich gravel or if sparks are emitted from the exhaust of internal combustion engines. The following standards are in place to prevent wildfires:

- Smoking or any substance, including e-cigarettes, is prohibited.
- Devices that create open flames are prohibited.
- All rideable equipment must carry with fire extinguishers.
- No motorized vehicles are allowed in areas with vegetation higher than 6 inches off the ground.
- A water source and portable fire extinguishers must be available within 20 feet of hand crews working with motorized equipment that may cause sparks (for example, string trimmers/weed whackers and chain saws).
- Spark arresters are required for gasoline powered equipment.
- Fuel tanks should not be topped off.
- A hot work permit is required for cutting with a torch, welding, or grinding.
- A fire extinguisher, shovel, and 35-foot radius vegetation reduction or wet down, consistent with Occupational Safety and Health Administration Hot Work standards, is required for hot work.
- No hot work or mowing is allowed on days when Red Flag Warnings are issued by the National Weather Service.
- Vegetation reduction tasks will be limited if conditions are hot, dry, and windy.
- When towing, chains must be secured to prevent them from throwing sparks.

## **4.2 Pre-activity Biological Surveys**

Biological surveys to identify the presence of special-status or otherwise protected plants and wildlife, including nesting birds, will be performed by a qualified biologist for the EAA and areas potentially impacted by removal action activities approximately 1 week or less before the start of work activities at individual excavation areas.

Sensitive plants (for example, Santa Susana tarplant), protected trees (that is, coast live oak), and bird nest buffers will be flagged to alert workers of their presence, and to facilitate establishment of the ESAs for their protection and avoidance during vegetation removal and excavation activities. Methods for protecting sensitive species are summarized in Section 3.

## **4.3 Biological Monitoring**

A biologist/botanist will be present to oversee proper placement of ESA delineators throughout vegetation removal and periodically throughout soil excavation to prevent work from encroaching into ESAs. Biologists/botanists that were previously approved by CDFW regarding work associated with the 2022 ISE Order will be retained to conduct the biological monitoring, consultation, and compliance with the RAW during project implementation. The biologist will also notify the project construction manager and field supervisors immediately of the potential ESAs (for example, at the discovery of an active bird nest). If sensitive animal species are encountered, work will halt and a biologist will be contacted to redirect field activities and/or relocate the special-status wildlife species to suitable habitat nearby that is sufficiently out of harm's way. If special-status plant species are encountered during project implementation that were not previously identified, the biologist will consult with field and management staff to determine how best to protect these individuals. The special-status species location and quantity will be recorded, mapped, and photographed for RAW reporting and documentation compliance.

## **4.4 Removal of Invasive Species**

Invasive species commonly found within the EAA include, but are not limited to, summer mustard, wild oats, brome grasses, fountain grass, and tocalote. These herbaceous species occur more densely along the margins of the tarps and roads that are routinely maintained.

### **4.4.1 Areas Accessible with Heavy Equipment**

To access the excavation areas, low-lying invasive vegetation outside of ESAs may be mowed to expedite the clearing process. Mowed vegetation will be raked, bagged, and taken to the Vegetation Biomass Staging Area for disposal as green waste. Field crews will exercise care when mowing to preserve nearby native vegetation.



#### **4.4.2 Containment in Covered Bins**

To limit their spread, invasive species will be collected in covered containers and transported to the Vegetation Biomass Staging Area where the containers will be temporarily stored for offsite disposal. The containers must be reasonably resistant to damage from wildlife (for example, rodents) and clearly labeled as GREEN WASTE.

#### **4.4.3 Offsite Disposal**

Disposal of green waste will be coordinated with an offsite recycling facility that is able to accept the type of vegetation removed from the EAA. Boeing or its green waste transportation subcontractor will confirm the bins do not contain any materials prohibited by the facility before departing the SSFL.

### **4.5 Removal of Native Species**

#### **4.5.1 Areas Accessible with Heavy Equipment**

It is expected that heavy vehicles will be able to directly access the EAAs from adjacent, existing access roads without removing significant quantities of native plants. If required, however, low-lying native vegetation outside of ESAs may be mowed or manually cleared to expedite access to the excavation areas and any peripheral parking, staging, or satellite accumulation areas. Field crews will exercise care when mowing to preserve or minimize impacts to native vegetation. If sufficient biomass is generated from vegetation clearing, that material will be woodchipped and broadcast onto adjacent natural areas outside of the AIBP RFI site. Because disturbance to native plants will be minimized, the need for replanting bare soil areas is not anticipated.

#### **4.5.2 Dispersion of Native Plant Material**

Vegetation cuttings from native plants will be dispersed into natural areas outside of the AIBP RFI site to provide wildlife habitat. To minimize the spread of invasive seeds, all cutting devices that were used to trim invasive species must be cleaned before using these tools in native vegetation. Chain saws or reciprocating saws will be equipped with new and unused cutting chains or blades, respectively, when used to reduce the size of the plant cuttings to accelerate decomposition.

## 5. Site Restoration

The overall removal action restoration goals are (1) to minimize the need to re-excavate clean backfill when the future remedial action occurs for the rest of the AIBP RFI site and (2) to not leave an environment for fauna and flora to develop that would make future remedial actions at the site more difficult.

Restoration activities will be performed to minimize erosion and sediment transport and minimize ponding in the excavations. The land surface immediately around the excavations will receive minor grading so that surface water flow moves away from the excavations. It is expected that the excavations will not be backfilled, but rather, be surrounded by fencing. The fencing would be designed to prevent human and discourage animal entrances into the excavation voids. It is recognized that vegetation, even possibly Santa Susana tarplant, will begin to re-establish in the excavated areas after completion of the AIBP Early Action project. The longer that vegetation is allowed to re-establish in the excavations, the more it represents a potential attractant for wildlife. For this reason, regular hand-clearing of the vegetation within the excavations is recommended for the interim period after the AIBP Early Action and the initiation of the final site remedy.

The areas surrounding the excavations will not be enhanced to promote the establishment of native vegetation because it is likely that the vegetation would need to be cleared for the future remedial actions. Aside from the minor grading around the excavations, other grading at the site will not occur so that the current nature and extent of contamination that will guide future remedial actions will be preserved.

## **6. Post-excavation Activities**

### **6.1 Removal of Species Protections**

Upon completion of the removal actions and associated restoration, if any, the ESA delineation materials will be removed and properly disposed of or recycled. A qualified biologist will escort the work crew for the removal of these materials to ensure all sensitive resources are protected and that all of the materials are located and removed.

### **6.2 Follow-up Biological Survey**

A biological post-project survey will be conducted by the project biologist to document any changes to the EAA, including areas potentially impacted by removal action activities from pre-project conditions, to determine if excavations could cause entrapment of wildlife and to make recommendations. Pre- and post-photographic documentation from established stations will be collected in the field. The results of the post-project survey will be documented in a report meeting current professional standards and submitted to information repositories to contribute to future research and planning. The post-project survey report will also be included in an appendix in the RAW Implementation Report.

## 7. References

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC). 2022. *Imminent and Substantial Endangerment Determination and Consent Order, Santa Susana Field Laboratory, Area I Burn Pit Area, Simi Valley, Ventura County, California, The Boeing Company (Respondent)*. Docket No. HSA-FY21/22-148. May 9.

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The Boeing Company (Boeing). 2022. Letter from Michael Bower/The Boeing Company to Ms. Erinn Wilson-Olgin/California Department of Fish Wildlife, South Coast Region. "Unauthorized Removal of Santa Susana Tarplant at Former Santa Susana Field Laboratory Property in Ventura County, CA." October 4.

**Table**

**Table C-1. Area I Burn Pit Biological Survey Summary**

Survey Date(s)	Survey Type(s)	Description
October 23 and 24, 2008	AIBP Biological Survey	Site map of AIBP survey area showed two SSFL tarplant clusters locations.
January 12, 2011	CTL-V Demolition Biological Survey (initial)	Pre-activity biological survey for demolition activities in the CTL-V demolition area because it may be used as a laydown and storage area.
April 5, 2011	CTL-V Demolition Biological Survey (follow-up)	Follow-up pre-activity biological survey for demolition activities in the CTL-V demolition area.
August 16, 2011	Perimeter Pond Western Concrete Channel Demolition Biological Survey	Pre-activity biological survey for demolition activities in the Perimeter Pond Western Concrete Channel, which included the eastern edge of the AIBP RFI site.
January 5, 2012	Area I Pipeline, Access Routes and AISTP Demolition Biological Survey	Pre-activity biological survey for demolition activities includes complete inventory of all sensitive biological resources observed in the Area I Pipeline, access routes and AISTP demolition areas, which included the AIBP RFI site.
December 1, 2013	Biological Resources Study	Results of biological resources study to document biological resources that are present or potentially present at or near proposed soil and groundwater remediation sites within Areas I and III and at proposed borrow sites in the part of the property known as SUL.
May to June, 2014	California Gnatcatcher ( <i>Polioptila californica</i> ) Survey: Area I and Area III (Soil and Groundwater Remediation Sites) and SUL (Borrow Sites)	Negative results of surveys for California gnatcatcher ( <i>Polioptila californica</i> ) at proposed soil and groundwater remediation sites in Areas I and III and proposed borrow sites in the part of the property known as SUL (Conducted by Forde Biological).
July 21, 2014	Western Spadefoot Toad ( <i>Spea hammondi</i> ) Habitat Assessment	Results of western spadefoot toad ( <i>Spea hammondi</i> ) habitat assessment and species conservation recommendations at proposed soil and groundwater remediation sites within Area I and Area III and at proposed borrow sites within the part of the property known as SUL.
September 1, 2014	Botanical Survey	Results of botanical surveys to document botanical resources present or potentially present throughout the biological survey area.

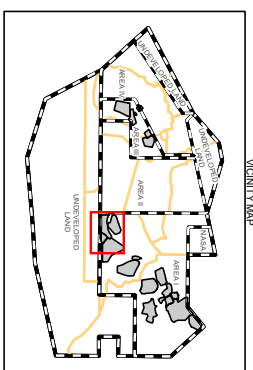
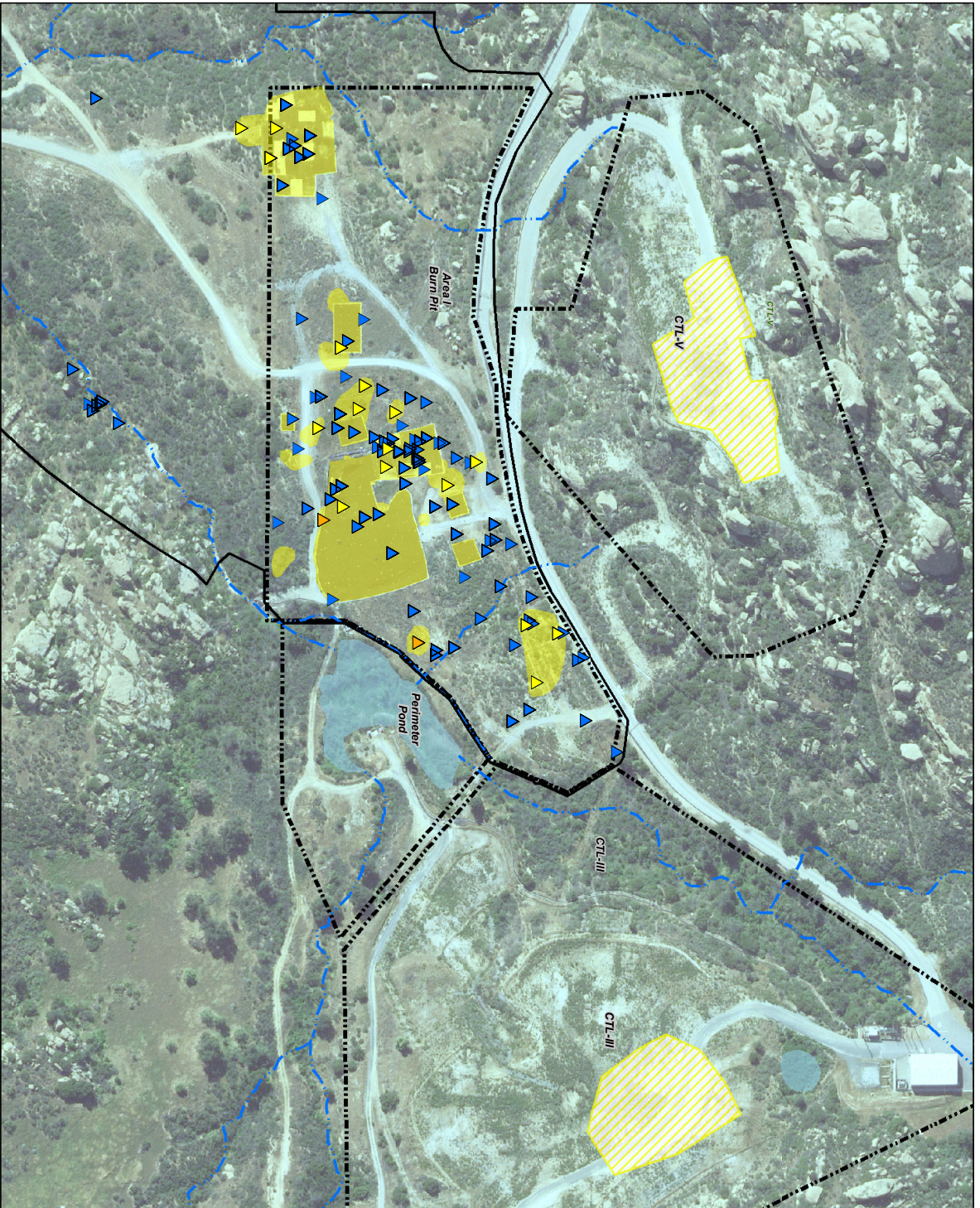
**Table C-1. Area I Burn Pit Biological Survey Summary**

Survey Date(s)	Survey Type(s)	Description
October 17, 2014	Acoustical Bat Survey	Results of bat surveys for proposed soil and groundwater remediation sites within Area I and Area III and at proposed borrow sites within the part of the property known as SUL.
January 16, 2015	CTL-V and AIBP Areas Biological Survey	Pre-activity biological surveys for soil sampling.
April 1, 2015	VPB Habitat Assessment	Pre-activity assessment to identify and analyze potential suitable habitat for listed VPB (fairy shrimp and tadpole shrimp) and to determine the level of effort that may be necessary to conduct protocol-level surveys for VPB at proposed soil and groundwater remediation sites within Area I and Area III and at proposed borrow sites within the part of the property known as SUL.
June 29, 2022	AIBP Early Action Remediation Botanical and Wildlife Survey	Pre-activity biological survey for project planning and permitting purposes in advance of activities proposed for 2023 includes complete inventory and GPS of all sensitive biological resources observed in the AIBP.
July 18, 2022	Post-Fire Pollinator Sampling	Bee visitation sampling throughout restored vegetation at former CTL-V.
August 29, 2022	Perimeter Pond Biological Survey	Reconnaissance survey of Perimeter Pond, with follow-up site visit at AIBP.
September 14, 2022	AIBP Early Action Remediation Botanical and Wildlife Survey	Follow-up survey and GPS mapping of Santa Susana tarplant at staging areas.
June 28, 2023	LETf/CTL-I Biological Survey	Reconnaissance survey of LETf/CTL-I for potential use as a temporary storage area.

AIBP = Area I Burn Pit  
 AISTP = Area I Sewage Treatment Plant  
 CTL-I = Component Test Laboratory I  
 CTL-V = Component Test Laboratory V  
 GPS = global positioning system  
 LETf = Laser Engineering Test Facility  
 RFI = RCRA facility investigation  
 SSFL = Santa Susanna Field Laboratory  
 SUL = Southern Undeveloped Land  
 VPB = vernal pool branchiopod

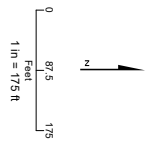
## Figures



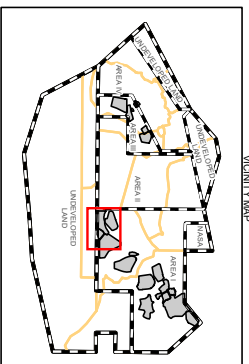
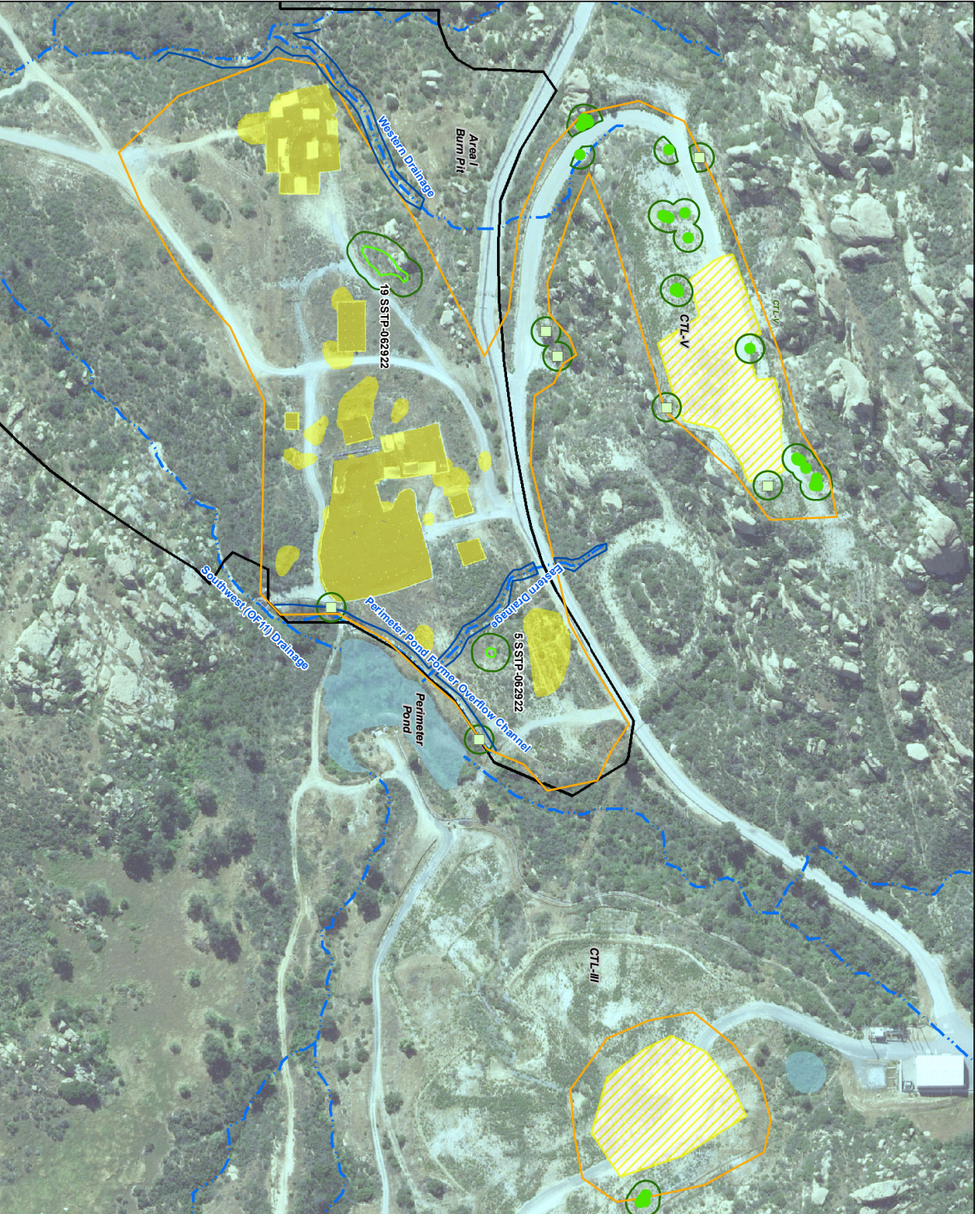


- BASEMAP LEGEND**
- Boeing RFI Site
  - Area I Burn Pit RFI Site Reporting Area
  - Drainage Channel
  - Pond
  - Early Action Area
  - Temporary Storage
- Radionuclide Soil Detects Compared to January 30, 2013 Draft Provisional Radiological Look-Up Table Values (LUTV)**
- Detected <= LUTV
  - Detected > LUTV / <= 2x LUTV
  - Detected > 2x LUTV to

Note: Only detects are presented.



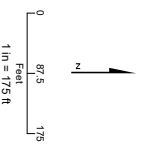
**FIGURE C-1**  
**Area I Burn Pit Early Action Area**  
 Early Action Work Plan  
 Area I Burn Pit RFI Site  
 Boeing RFI Subarea 1B Southwest  
 Santa Susana Field Laboratory, Ventura County, California



- BASEMAP LEGEND**
- Boeing RFI Site
  - Area I Burn Pit RFI Site Reporting Area
  - Drainage Channel
  - Top of Bank of Drainage Channel
  - Pond
  - Early Action Area
  - Temporary Storage Area
- Sensitive Plant Species Plant**
- Coast Live Oak
  - Santa Susana Tapplant
  - Santa Susana Tapplant
  - Sensitive Plant Species Buffer
  - Biological Survey Area

Notes:

- 1) Sensitive species mapped on June 29, 2022 and September 14, 2022.
- 2) Environmentally Sensitive Area (ESA) includes areas within the top of bank of drainage channels (green line) and within the sensitive plant species buffer (green line) and within the sensitive plant species tapplant (green line).
- 3) Sensitive plant species located outside of the biological survey area are not shown on this figure.



**FIGURE C-2**  
**Environmentally Sensitive Areas**  
 Early Action Work Plan  
 Area I Burn Pit RFI Site  
 Boeing RFI Subarea 1B Southwest  
 Santa Susana Field Laboratory, Ventura County, California

**Appendix D**  
**Images of Environmentally Sensitive Species**

**Attachment D-1**  
**Special Status Species In Environmentally Sensitive Areas**

Appendix D:	Special-Status Project: Species in Environmentally Sensitive Areas	Area I Burn Pit Removal Action Work Plan
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Photograph ID: 1

**Name:**  
Santa Susana Tarplant  
(*Deinandra minthornii*),  
California Special-status  
Species

**Source:**  
Photo credit Michael Tuma





Photograph ID: 2



**Name:**  
Santa Susana Tarplant  
(*Deinandra minthornii*),  
California Special-status  
Species

**Source:**  
Photo credit Michael Tuma



Appendix D: Special-Status Project: Species in Environmentally Sensitive Areas		Area I Burn Pit Removal Action Work Plan
<b>Photograph ID:</b> 3		
<b>Name:</b> Coastal Live Oak Tree		
<b>Source:</b> Photo credit The Boeing Company		
<b>Photograph ID:</b> 4		
<b>Name:</b> Coastal Live Oak Tree		
<b>Source:</b> Photo credit The Boeing Company (Permission from Padre Associates, Inc.)		

**Attachment D-2**  
**Other Sensitive Species at SSFL**



Appendix D:	Other Sensitive Species at SSFL	Project:	Area I Burn Pit Removal Action Work Plan
<p><b>Photograph ID: 1</b></p> <p><b>Name:</b> Braunton's Milk-vetch (<i>Astragalus brauntonii</i>) Federally Endangered Species</p> <p><b>Source:</b> Photo credit Michael Charter</p>			
<p><b>Photograph ID: 2</b></p> <p><b>Name:</b> Braunton's Milk-vetch (<i>Astragalus brauntonii</i>) Federally Endangered Species</p> <p><b>Source:</b> Photo credit Michael Charter</p>			






Appendix D:	Other Sensitive Species at SSFL	Project:	Area I Burn Pit Removal Action Work Plan
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Photograph ID: 3	
<b>Name:</b> Plummer's Mariposa Lily ( <i>Calochortus plummerae</i> ) California Native Plant Society Rare, Threatened, or Endangered	
<b>Source:</b> Photo credit Michael Charter	



Photograph ID: 4	
<b>Name:</b> Plummer's Mariposa Lily ( <i>Calochortus plummerae</i> ) California Native Plant Society Rare, Threatened, or Endangered	
<b>Source:</b> Photo credit Michael Charter	

Appendix D:	Other Sensitive Species at SSFL	Project:	Area I Burn Pit Removal Action Work Plan
<p><b>Photograph ID:</b> 5</p> <p><b>Name:</b> Humboldt Lily (<i>Lilium humboldtii ocellatum</i>) California Native Plant Society List 4 Species and Federal Species of Concern</p> <p><b>Source:</b> Permission from Padre Associates, Inc.</p>			
<p><b>Photograph ID:</b> 6</p> <p><b>Name:</b> Humboldt Lily (<i>Lilium humboldtii ocellatum</i>) California Native Plant Society List 4 Species and Federal Species of Concern</p> <p><b>Source:</b> Photo credit Michael Charter</p>			

Appendix D:	Other Sensitive Species at SSFL	Project:	Area I Burn Pit Removal Action Work Plan
<p><b>Photograph ID:</b> 7</p> <p><b>Name:</b> Blainville's (coast) Horned Lizard (<i>Phrynosoma blainvillii</i>), California Species of Special Concern</p> <p><b>Source:</b> Permission from Padre Associates, Inc.</p>			
<p><b>Photograph ID:</b> 8</p> <p><b>Name:</b> California Legless Lizard (<i>Anniella</i> sp.), California Species of Special Concern</p> <p><b>Source:</b> Permission from Padre Associates, Inc.</p>			

Appendix D:	Other Sensitive Species at SSFL	Project:	Area I Burn Pit Removal Action Work Plan
<p><b>Photograph ID:</b> 9</p> <p><b>Name:</b> Coast Patch-nosed Snake (<i>Salvadora hexalepis virgulata</i>), California Species of Special Concern</p> <p><b>Source:</b> Permission from Padre Associates, Inc.</p>			
<p><b>Photograph ID:</b> 10</p> <p><b>Name:</b> San Bernardino Ring-necked Snake (<i>Diadophis punctatus modestus</i>), California Special Animal</p> <p><b>Source:</b> Permission from Padre Associates, Inc.</p>			

Appendix D:	Other Sensitive Species at SSFL	Project:	Area I Burn Pit Removal Action Work Plan
<p><b>Photograph ID:</b> 11</p> <p><b>Name:</b> San Diego Desert Whiptail (<i>Aspidoscelis tigris stegnegeri</i>), California Species of Special Concern</p> <p><b>Source:</b> Permission from Padre Associates, Inc.</p>			
<p><b>Photograph ID:</b> 12</p> <p><b>Name:</b> Western Spadefoot (<i>Spea hammondi</i>), California Species of Special Concern</p> <p><b>Source:</b> Permission from Padre Associates, Inc.</p>			

Appendix D:	Other Sensitive Species at SSFL	Project:	Area I Burn Pit Removal Action Work Plan
<p><b>Photograph ID:</b> 13</p> <p><b>Name:</b> Coastal California Gnatcatcher (<i>Polioptila californica californica</i>), federally threatened and California Bird Species of Special Concern</p> <p><b>Source:</b> Photo credit: Marci Koski/USFWS</p>			
<p><b>Photograph ID:</b> 14</p> <p><b>Name:</b> Least Bell's Vireo (<i>Vireo bellii pusillus</i>), Federally Endangered and California Endangered</p> <p><b>Source:</b> Photo credit: USFWS</p>			

**Appendix E**  
**Stormwater Pollution Prevention Plan**

# STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

for

Santa Susanna Field Laboratory  
Area I Burn Pit Removal Action  
Ventura County, California

**RISK LEVEL 2**

**WASTE DISCHARGE IDENTIFICATION NUMBER (WDID): TBD**

## Prepared for:

The Boeing Company  
5800 Woolsey Canyon Road  
Canoga Park, CA 91304

## Prepared by:

Jacobs  
2600 Michelson Dr. Ste 500  
Irvine, CA 92612  
Gino Nguyen, PE, QSD/QSP

## Preparation Date

August 2023

## Estimated Project Dates:

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Start of Construction	<b>01/15/2024</b>	Completion of Construction	<b>07/01/2024</b>
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# Qualified SWPPP Developer

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Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name: SSFL Area I Burn Pit Removal Action

Project Number/ID [if applicable] 706331CH

“This Stormwater Pollution Prevention Plan and its appendices were prepared under my direction to meet the requirements of the California Construction General Permit (SWRCB Orders No. 2009-009-DWQ as amended by Order 2010-0014-DWQ and Order 2012-0006-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below.”

**Gino Nguyen**

5/23/2023

*QSD Signature*

*Date*

Gino Nguyen

354

*QSD Name*

*QSD Certificate Number*

Professional Civil Engineer/Jacobs

714-724-0649

*Title and Affiliation*

*Telephone Number*

Gino.Nguyen@Jacobs.com

*Email*

# Legally Responsible Person

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Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name: SSFL Area I Burn Pit Removal Action

Project Number/ID [if applicable] 706331CH

Either the Legally Responsible Person (LRP) or Approved Signatory must electronically sign, certify, and submit via SMARTS (Stormwater Multiple Application and Report Tracking System) to the SWRCB (State Water Resource Control Board) for Notice of Intent, Changes of Information, Annual Reports, and Notices of Termination. In doing so, the LRP or Approved Signatory is certifying:

“I certify under penalty of law that this document and all appendices were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

The LRP (and Approved Signatory, if applicable) for this project are:

Kim O'Rourke (Senior Manager, The Boeing Company)

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Legally Responsible Person

# Amendment Log

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Project Name: SSFL Area I Burn Pit Removal Action

Project Number/ID [if applicable] 706331CH

Amendment No.	Date	Brief Description of Amendment, include section and page number	Prepared and Approved By
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#

# Section 1 SWPPP Requirements

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## 1.1 INTRODUCTION

The Area I Burn Pit (AIBP) Removal Action (Project) comprises removal action activities as part of the Area I Burn Pit (AIBP) Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) site within Boeing RFI Subarea 1B Southwest at the Santa Susana Field Laboratory (SSFL) in Ventura County, California.

This Stormwater Pollution Prevention Plan (SWPPP) is an appendix to the Removal Action Work Plan and has been prepared for the Boeing Company (Boeing) pursuant to the *Imminent and Substantial Endangerment Determination and Consent Order, Santa Susana Field Laboratory, Area I Burn Pit Area* (DTSC, 2022a) (Order). The Order applies to the specific area of the AIBP RFI site. This SWPPP is also subject to the Construction General Permit (CGP), which can be found in Appendix A.

The AIBP comprises 27 acres, of which 5.93 acres will be disturbed. The Project is located at 5800 Woolsey Canyon Road in Ventura County, California. The project's location is shown on the Figure 1 in Appendix B. The AIBP RFI is located in the east-central portion of the SSFL within Area I. The areas where remedial work is being done takes place within the Removal Action Areas (RAA), which is presented in Figure E-2. Historically, the AIBP RFI site was established for the destruction of chemicals by combustion and detonation. The AIBP RFI site is currently inactive, and all structures have been demolished.

The AIBP RFI is located south of where CTL V Road turns into Coca Road and north of Roca Avenue on property owned by Boeing. There are ephemeral drainage channels located west and east of the site which receive runoff from AIBP and whose headwaters are located within the southwestern portion of the Area I portion of the SSFL property. These channels are presented in Figure E-3 in Appendix B. From the AIBP RFI site, the drainage trends in a southwesterly direction near the AIBP and the Area II boundary, and then continues in a southwesterly direction towards Bell Creek. Bell Creek is in the Los Angeles River hydrologic unit.

## 1.2 SWPPP AVAILABILITY AND IMPLEMENTATION

The discharger shall make the SWPPP available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the CASQA (California Stormwater Quality Association) BMPs (Best Management Practices) and map/drawing will be left with the field crew and the original SWPPP shall be made available via request by radio/telephone. For permit registration documents, refer to Appendix C.

The SWPPP shall be implemented concurrently with the start of ground disturbing activities.

## 1.3 SWPPP AMENDMENTS

The SWPPP should be revised when:

- There is a General Permit violation.
- There is a reduction or increase in total disturbed acreage (General Permit Section II Part C).
- BMPs do not meet the objectives of reducing or eliminating pollutants in stormwater discharges.

Additionally, the SWPPP shall be amended when:

- There is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4);
- There is a change in the project duration that changes the project’s risk level; or
- When deemed necessary by the QSD (Qualified SWPPP Designer). The QSD has determined that the changes listed in Table 1.1 can be field determined by the QSP (Qualified SWPPP Practitioner). All other changes shall be made by the QSD as formal amendments to the SWPPP.

The following items shall be included in each amendment:

- Who requested the amendment;
- The location of proposed change;
- The reason for change;
- The original BMP proposed, if any; and
- The new BMP proposed.

An amendment shall be logged at the front of the SWPPP, and certification kept in Appendix D. The SWPPP text shall be revised replaced and/or hand annotated as necessary to properly convey the amendment. SWPPP amendments must be made by a QSD. Table 1.1 presents changes that have been designated by the QSD as “to be field determined” and constitute minor changes that the QSP may implement based on field conditions. For submitted changes to the PRD, refer to Appendix E.

**Table 1.1 List of Changes to be Field Determined**

<b>Candidate changes for field location or determination by QSP <sup>(1)</sup></b>	<b>Check changes that can be field located or field determined by QSP</b>
Increase quantity of an Erosion or Sediment Control Measure	X
Relocate/add stockpiles or stored materials	X
Relocate or add toilets	X
Relocate vehicle storage and/or fueling locations	X
Relocate areas for waste storage	X
Relocate water storage and/or water transfer location	X
Changes to access points (entrance/exits)	X
Change type of Erosion or Sediment Control Measure	X
Changes to location of erosion or sediment control	X
Minor changes to schedule or phases	X

**Table 1.1 List of Changes to be Field Determined**

Candidate changes for field location or determination by QSP <sup>(1)</sup>	Check changes that can be field located or field determined by QSP
Changes in construction materials	X
<i>(1) Any field changes not identified for field location or field determination by QSP must be approved by QSD</i>	

**1.4 RETENTION OF RECORDS**

Paper or electronic records of documents required by this SWPPP shall be retained for a minimum of three years from the date generated or date submitted.

These records shall be available at the Site until construction is complete. Records assisting in the determination of compliance with the General Permit shall be made available within a reasonable time to the Los Angeles RWQCB Quality Board (RWQCB), California State Water Resources Control Board, or U.S. Environmental Protection Agency (EPA) upon request. Requests by the RWQCB for retention of records for a period longer than three years shall be adhered to.

**1.5 REQUIRED NON-COMPLIANCE REPORTING**

If a General Permit discharge violation occurs, the QSP shall immediately notify the LRP. The LRP shall include information on the violation with the Annual Report. Corrective measures will be implemented immediately following identification of the discharge or written notice of non-compliance from the RWQCB. Discharges and corrective actions must be documented and include the following items:

- The date, time, location, nature of operation and type of unauthorized discharge.
- The cause or nature of the notice or order.
- The BMPs deployed before the discharge event, or prior to receiving notice or order.
- The date of deployment and type of BMPs deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence.

Reporting requirements for NALs (Numeric Action Levels) exceedances are discussed in Appendix Q.

**1.6 ANNUAL REPORT**

The General Permit requires that permittees prepare, certify, and electronically submit an Annual Report no later than September 1 of each year. Reporting requirements are identified in Section XVI of the General Permit. Annual reports will be filed in SMARTS and in accordance with information required by the online forms.



## **1.7 CHANGES TO PERMIT COVERAGE**

The General Permit allows for the reduction or increase of the total acreage covered under the General Permit when: a portion of the project is complete and/or conditions for termination of coverage have been met (see Section 1.8); when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

Modified PRDs shall be filed electronically within 30 days of a reduction or increase in total disturbed area if a change in permit-covered acreage is to be sought. The SWPPP shall be modified appropriately and shall be logged at the front of the SWPPP and certification of SWPPP amendments are to be kept in Appendix D. Updated PRDs submitted electronically via SMARTS can be found in Appendix E.

## **1.8 NOTICE OF TERMINATION**

A Notice of Termination (NOT) must be submitted electronically by the LRP via SMARTS to terminate coverage under the General Permit. According to the requirements of Section II.D.1 of the General Permit, the following method will be used to satisfy final cover requirements:

The NOT must include a final Site Map for the AIBP Removal Action and representative photographs of the project site that demonstrate final stabilization has been achieved. The NOT shall be submitted within 90 days of construction completion. The RWQCB will consider a construction site complete when the conditions of the General Permit, Section II.D, have been met.

## **Section 2 Project Information**

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### **2.1 PROJECT AND SITE DESCRIPTION**

#### **2.1.1 Site Description**

The AIBP project site comprises approximately 27 acres and is located at 5800 Woolsey Canyon Road in Ventura County, California. The project site is located approximately 2.5 miles northwest of the intersection of Roscoe Boulevard and Valley Circle Boulevard in Canoga Park, California. The project site is located approximately 1 mile east of Bell Creek. The project is located at N 34°13'29", -118°41'23" W and is identified on the Site Map in Appendix B.

#### **2.1.2 Existing Conditions**

As of the initial date of this SWPPP, the project site is demolished. The project site was previously used to destroy chemicals by combustion and detonation. There are seven soil areas covered with geotextile fabric and several soil areas that will be removed. Historical sampling and analytical data collected to date indicate soil within the area shown in Figure E-2 contain certain metals, polychlorinated biphenyls (PCBs), volatile organic carbon (VOCs), and dioxins that pose a threat to ecological health, as well as containing radionuclides in the soil above threshold levels. Areas where contaminated soil is confirmed is currently covered with a geotextile fabric to prevent exposure to contaminated soil.

Within the northernmost stockpile location, gravel surfacing is used for stabilization. For more information on the stockpile locations, refer to section 2.1.5.

#### **2.1.3 Existing Drainage**

The project site is rocky due to its location near the crest of the Simi Hills that are part of the Santa Monica Mountains. The terrain consists of ridges, canyons, and sandstone bedrock. The elevation of the project site ranges from approximately 1850 feet above mean sea level (amsl) to 1720 feet amsl. Surface drainage at the AIBP site currently flows to the southwest, towards Bell Creek. Bell Creek flows south and east for nine miles to the north end of the Los Angeles River Reach 6. Stormwater is conveyed through surface runoff along natural channels. Stormwater discharges from the site are considered direct discharges as defined by the State Water Board into Bell Creek. Existing site topography, drainage patterns, and stormwater conveyance systems are shown on Figure E-2.

The project discharges to Bell Creek and then Reach 6 of the Los Angeles River that is listed for water quality impairment on the most recent 303(d)-list for:

- Indicator Bacteria – Bell Creek
- Copper – LA River
- Indicator Bacteria – LA River
- Selenium – LA River
- Toxicity – LA River

#### **2.1.4 Geology and Groundwater**

The site is underlain by quaternary alluvium/coalluvium and the Cretaceous Chatsworth formation. The quaternary deposits consisting of alluvium/coalluvium are between 5 to 15 feet thick and occur in the low spots and along the drainage courses. There are also fill materials of

silty sand up to 35 to 40 feet thick in some areas that generally comprised of Chatsworth formation soils (NASA, 2017). Groundwater occurs beneath the site at approximately 1600-1800 feet above amsl. The groundwater gradient is toward Bell Creek to the west.

### **2.1.5 Project Description**

Project grading will occur on approximately 5.93 acres of the project, which comprises approximately 22 percent of the total area. The limits of grading are shown on Figure E-2 in Appendix B. Grading will include excavation activities, with the total graded material estimated to be 10,504 cubic yards. No fill material will be imported during grading activities. Graded materials are expected to be hauled away and disposed of offsite. Soil will be stockpiled in the Temporary Storage Areas for temporary storage as shown on Figure E-2 and 4 in Appendix B. There are four stockpile areas: one to the immediate north across Coca Road, and three east, with two of these along Coca Road and the fourth one south of the road connected by an access road. Each stockpile sites will have a plastic tarp for storing contaminated soil to prevent contact with the bare soil and fiber rolls for drainage controls. All waste will be transported off-site and the storage areas will return to existing conditions. The size of the areas varies from 0.45 acres to 1.05 acres, with a total acreage of 2.96 acres for storage. BMPs will be placed at each stockpile area, which can be found on Figure E-5 through Figure E-7.

Mass Haul routes are also defined in Figure E-2 as well. Construction activities will be phased with mass grading and final stabilization phases. For a comprehensive description of the project, refer to the main text of the Removal Action Work Plan for the Area I Burn Pits.

During construction, drainage controls will be used to divert water from the excavation areas to prevent contact with contaminated soils. Run-on on the west side of the site will drain towards Outfall 001 and run-on on the east side of the site will drain towards Outfall 011. Stormwater will be treated for sediments via the perimeter pond located east of the construction site. After treatment, the stormwater will either evaporate or infiltrate into the soil as the sediment settle. For an illustration of the drainage controls during construction, refer to Figure E-2.

Santa Susana tar plants are identified near the planned excavation areas. To prevent damage to these plants during construction activities, sensitive species buffers are in place, which is shown on Figure E-2.

Construction will be done in two phases: mass grading and final stabilization. Mass grading includes the excavation activities while the final stabilization phase will include construction activities such as hydroseeding using hydromulch. During construction, only small sections will be excavated at a time to limit exposure to soil, as well as to keep the fabric in place during rain events. Soil testing will be conducted after excavation to confirm the removal of contaminated soils.

During construction, a Qualified Industrial Stormwater Practitioner will be on site once a week to ensure that the practices prescribed in this SWPPP is adhered to.

### **2.1.6 Developed Condition**

Post-construction surface drainage will be directed to the southwest as surface flow through the streambed and will discharge into the Bell Canyon Creek. There are no changes to the natural streambed during the construction period, with no new developed drainage channels. For construction site estimates, refer to Table 2.1.

**Table 2.1 Construction Site Estimates**

Construction site area	<u>5.93</u>	acres
Percent impervious before construction	<u>0</u>	%
Runoff coefficient before construction	<u>0.52*</u>	
Percent impervious after construction	<u>0</u>	%
Runoff coefficient after construction	<u>0.52*</u>	

\*Computed using Caltrans Highway Manual (Chapter 810)

Final Stabilization practices will vary based on depth of the excavation. Some of the burn pits will be excavated until bedrock is reached while the other burn pits are to be sprayed with soil stabilizer and compacted.

Post Construction conditions are required to demonstrate no increase in runoff due to site activities.

## **2.2 PERMITS AND GOVERNING DOCUMENTS**

In addition to the General Permit, the following documents have been taken into account while preparing this SWPPP:

- RWQCB requirements
- Basin Plan requirements
- Contract Documents
- Air Quality Regulations and Permits
- Federal Endangered Species Act
- State of California Endangered Species Act
- Clean Water Act Section 401 Water Quality Certifications and 404 Permits
- CA Department of Fish and Game 1600 Streambed Alteration Agreement

## **2.3 STORMWATER RUN-ON FROM OFFSITE AREAS**

Run-on to the site is generated by sheet flow from upgradient undeveloped land, creeks, and streams that run through or discharge from the site.

The anticipated runoff coefficients range from 0.52 to 0.73 as determined from the Caltrans Highway Design Manual. Appendix C will contain the numbers selected from the Figure 819.21 (Runoff Coefficients for Undeveloped Areas Watershed Types). The sum of the numbers selected is how the coefficient was selected.

The General Permit requires that temporary BMPs be implemented to direct offsite run-on away from disturbed areas through the use of runoff controls. The following BMPs will be implemented: linear sediment BMPs including plastic geotextile mats, fiber rolls, street sweeping, and possibly berms. These BMPs will be located on the south side of the tarped and

soil excavation areas. Run-on is not expected to be significant as construction takes place during the dry season under a short timeframe. Additionally, the roads will act as a barrier to run-on from reaching the site.

## 2.4 FINDINGS OF THE CONSTRUCTION SITE SEDIMENT & RECEIVING WATER RISK DETERMINATION

A construction site risk assessment has been performed for the project and the resultant risk level is Risk Level [2].

The risk level was determined through the use of the *Rainfall Erosivity Factor Calculator for Small Construction Sites* at: <https://www.epa.gov/npdes/rainfall-erosivity-factor-calculator-small-constructionsites>, for the R factor. The K and LS factor were determined by using the Caltrans Water Quality Planning Tool: <http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx>. The risk level is based on project duration, location, proximity to impaired receiving waters, and soil conditions. A copy of the Risk Level determination submitted on SMARTS with the PRDs is included in Appendix C.

Table 2.2 and Table 2.3 summarize the sediment and receiving water risk factors and document the sources of information used to derive the factors.

**Table 2.2 Summary of Sediment Risk**

RUSLE Factor	Value	Method for establishing value
R	35.8	USEPA Rainfall Erosivity Calculator
K	0.32	CalTrans Water Quality Planning Tool
LS	8.64	CalTrans Water Quality Planning Tool
<b>Total Predicted Sediment Loss (tons/acre)</b>		<b>98.98</b>
<b>Overall Sediment Risk</b> Low Sediment Risk < 15 tons/ acre Medium Sediment Risk >= 15 and < 75 tons/acre High Sediment Risk >= 75 tons/acre		<input type="checkbox"/> Low <input type="checkbox"/> Medium <input checked="" type="checkbox"/> High

Runoff from the project site discharges into natural channels that discharge into Bell Creek and eventually into Reach 6 of the Los Angeles River. The LA River ultimately discharges to the Pacific Ocean at San Pedro Bay.

**Table 2.3 Summary of Receiving Water Risk**

Receiving Water Name	303(d) Listed for Sediment Related Pollutant <sup>(1)</sup>	TMDL for Sediment Related Pollutant <sup>(1)</sup>	Beneficial Uses of COLD, SPAWN, and MIGRATORY <sup>(1)</sup>
Bell Creek/ LA River Reach 6	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Overall Receiving Water Risk</b>			<input checked="" type="checkbox"/> Low <input type="checkbox"/> High

**Table 2.3 Summary of Receiving Water Risk**

<b>Receiving Water Name</b>	<b>303(d) Listed for Sediment Related Pollutant <sup>(1)</sup></b>	<b>TMDL for Sediment Related Pollutant <sup>(1)</sup></b>	<b>Beneficial Uses of COLD, SPAWN, and MIGRATORY <sup>(1)</sup></b>
(1) If yes is selected for any option the Receiving Water Risk is High			

Risk Level 2 sites are subject to both the narrative effluent limitations and numeric effluent standards. The narrative effluent limitations require stormwater discharges associated with construction activity to minimize or prevent pollutants in stormwater and authorized non-stormwater through the use of controls, structures, and best management practices. Discharges from Risk Level 2 site are subject to NALs for pH and turbidity shown in Table 2.4. This SWPPP has been prepared to address Risk Level 2 requirements (General Permit Appendix A).

**Table 2.4 Numeric Action Levels**

<b>Parameter</b>	<b>Unit</b>	<b>Numeric Action Level Daily Average</b>
pH	pH units	Lower NAL = 6.5 Upper NAL = 8.5
Turbidity	NTU	250 NTU

**2.5 CONSTRUCTION SCHEDULE**

The site sediment risk was determined based on construction taking place between 01/15/2024 and 07/01/2024. Modification or extension of the schedule (start and end dates) may affect risk determination and permit requirements. The LRP shall contact the QSD if the schedule changes during construction to address potential impact to the SWPPP. The estimated schedule for planned work can be found in Appendix F.

**2.6 POTENTIAL CONSTRUCTION ACTIVITY AND POLLUTANT SOURCES**

Appendix G includes a list of construction activities and associated materials that are anticipated to be used onsite. These activities and associated materials will or could potentially contribute pollutants, other than sediment, to stormwater runoff.

The anticipated activities and associated pollutants were used in Section 3 to select the Best Management Practices for the project. Locations of anticipated pollutants and associated BMPs are shown on the figures in Appendix B. The BMPs are to be used by the contractor during excavation to prevent the discharge of unauthorized pollutants into the stormwater.

For sampling requirements for non-visible pollutants associated with construction activity, please refer to Appendix R. For a full and complete list of onsite pollutants, refer to the project’s Health and Safety Plan.

## 2.7 IDENTIFICATION OF NON-STORMWATER DISCHARGES

Non-stormwater discharges consist of discharges which do not originate from precipitation events. The General Permit provides allowances for specified non-stormwater discharges that do not cause erosion or carry other pollutants.

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the General Permit and listed in the SWPPP, or authorized under a separate NPDES permit, are prohibited.

Activities at this site that may result in unauthorized non-stormwater discharges include:

- Dust Control

Steps will be taken, including the implementation of appropriate BMPs, to ensure that unauthorized discharges are eliminated, controlled, disposed, or treated on-site.

Discharges of construction materials and wastes, such as fuel or paint, resulting from dumping, spills, or direct contact with rainwater or stormwater runoff, are also prohibited.

The following discharge(s) have been authorized by (a) regional NPDES permit(s):

- None

## 2.8 REQUIRED SITE MAP INFORMATION

The construction project's Site Map(s) showing the project location, surface water boundaries, geographic features, construction site perimeter and general topography and other requirements identified in Appendix B of the General Permit is located in Appendix B. Table 2.5 identifies Map or Sheet Nos. where required elements are illustrated.

**Table 2.5 Required Map Information**

Included on Map/Plan Sheet No. <sup>(1)</sup>	Required Element
Figure 1	The project's surrounding area (vicinity)
Figure E-2	Site layout
Figure E-2	Construction site boundaries
Figure E-2 & E-3	Drainage areas
Figure E-2 & E-3	Discharge locations
Figure E- 3	Sampling locations
Figure E-2 & E-3	Areas of soil disturbance (temporary or permanent)

**Table 2.5 Required Map Information**

<b>Included on Map/Plan Sheet No. <sup>(1)</sup></b>	<b>Required Element</b>
Figure E-2 & E-3	Active areas of soil disturbance (cut or fill)
Figure E-2	Locations of runoff BMPs
Figure E-2	Locations of erosion control BMPs
Figure E-2	Locations of sediment control BMPs
X	ATS (Active Treatment System) location (if applicable)
Figure E-2	Locations of sensitive habitats, watercourses, or other features which are not to be disturbed
Figure E-2	Locations of all post-construction BMPs
Figure E-2	Waste storage areas
Figure E-2	Vehicle storage areas
Figure E-2	Material storage areas
Figure E-2	Entrance and Exits
Figure E-2	Fueling Locations



## Section 3 Best Management Practices

### 3.1 SCHEDULE FOR BMP IMPLEMENTATION

**Table 3.1 BMP Implementation Schedule**

	<b>BMP</b>	<b>Implementation</b>	<b>Duration</b>
<b>Erosion Control</b>	EC-1, Scheduling	Prior to Construction	Entirety of Project
	EC-2 Preservation of Existing Vegetation	Start of Construction	Entirety of Project
	EC-3 Hydraulic Mulch	Start of Construction	Entirety of Project
	EC-4 Hydroseed	Not Used	Entirety of Project
	EC-5 Soil Binders	Start of Construction	Entirety of Project
	EC-6 Straw Mulch	Not Used	Entirety of Project
	EC-7 Geotextiles and Mats	Start of Construction	Entirety of Project
	EC-8 Wood Mulching	Not Used	Entirety of Project
	EC-9 Earth Dike and Drainage Swales	Not Used	Entirety of Project
	EC-10 Velocity Dissipation Devices	Not Used	Entirety of Project
	EC-11 Slope Drains	Not Used	Entirety of Project
	EC-12 Stream Bank Stabilization	Not Used	Entirety of Project
	EC-13 Compost Blankets	Not Used	Entirety of Project
	EC-14 Soil Preparation-Roughening	Not Used	Entirety of Project
	EC-15 Non-Vegetated Stabilization	Not Used	Entirety of Project
<b>Wind Erosion</b>	WE-1 Wind Erosion Control	Start of Construction	Entirety of Project
<b>Sediment Control</b>	SE-1 Silt Fence	Not Used	Entirety of Project
	SE-2 Sediment Basin	Not Used	Entirety of Project
	SE-3 Sediment Trap	Not Used	Entirety of Project
	SE-4 Check Dams	Start of Construction	Entirety of Project
	SE-5 Fiber Rolls	Start of Construction	Entirety of Project

**Table 3.1 BMP Implementation Schedule**

	<b>BMP</b>	<b>Implementation</b>	<b>Duration</b>
	SE-6 Gravel Bag Berm	Start of Construction	Entirety of Project
	SE-7 Street Sweeping and Vacuuming	Start of Construction	Entirety of Project
	SE-8 Sandbag Barrier	Not Used	Entirety of Project
	SE-9 Straw Bale Barrier	Not Used	Entirety of Project
	SE-10 Storm Drain Inlet Productions	Not Used	Entirety of Project
	SE-11 ATS	Not Used	Entirety of Project
	SE-12 Manufactured Linear Sediment Controls	Not Used	Entirety of Project
	SE-13 Compost Sock and Berm	Not Used	Entirety of Project
	SE-14 Biofilter Bags	Not Used	Entirety of Project
	Stormwater Diversion (SWD)	Prior to Construction	Entirety of Project
<b>Tracking Control</b>	TC-1 Stabilized Construction Entrance and Exit	Start of Construction	Entirety of Project
	TC-2 Stabilized Construction Roadway	Not Used	Entirety of Project
	TC-3 Entrance Outlet Tire Wash	Not Used	Entirety of Project
<b>Non-Stormwater Management</b>	NS-1 Water Conservation Practices	Start of Construction	Entirety of Project
	NS-2 Dewatering Operations	Start of Construction	Entirety of Project
	NS-3 Paving and Grinding Operations	Not Used	Entirety of Project
	NS-4 Temporary Stream Crossing	Not Used	Entirety of Project
	NS-5 Clear Water Diversion	Not Used	Entirety of Project
	NS-6 Illicit Connection/Discharge	Start of Construction	Entirety of Project
	NS-7 Potable Water/Irrigation	Not Used	Entirety of Project
	NS-8 Vehicle and Equipment Cleaning	Not Used	Entirety of Project
	NS-9 Vehicle and Equipment Fueling	Start of Construction	Entirety of Project

**Table 3.1 BMP Implementation Schedule**

	<b>BMP</b>	<b>Implementation</b>	<b>Duration</b>
	NS-10 Vehicle and Equipment Maintenance	Start of Construction	Entirety of Project
	NS-11 Pile Driving Operations	Not Used	Entirety of Project
	NS-12 Concrete Curing	Not Used	Entirety of Project
	NS-13 Concrete Finishing	Not Used	Entirety of Project
	NS-14 Material Over Water	Not Used	Entirety of Project
	NS-15 Demolition Adjacent to Water	Not Used	Entirety of Project
	NS-16 Temporary Batch Plants	Not Used	Entirety of Project
<b>Waste Management and Materials Pollution Control</b>	WM-1 Material Delivery and Storage	Start of Construction	Entirety of Project
	WM-2 Material Use	Start of Construction	Entirety of Project
	WM-3 Stockpile Management	Start of Construction	Entirety of Project
	WM-4 Spill Prevention and Control	Start of Construction	Entirety of Project
	WM-5 Solid Waste Management	Start of Construction	Entirety of Project
	WM-6 Hazardous Waste Management	Start of Construction	Entirety of Project
	WM-7 Contaminated Soil Management	Start of Construction	Entirety of Project
	WM-8 Concrete Waste Management	Not Used	Entirety of Project
	WM-9 Sanitary/Septic Waste Management	Start of Construction	Entirety of Project
	WM-10 Liquid Waste Management	Not Used	Entirety of Project

**3.2 EROSION AND SEDIMENT CONTROL**

Erosion and sediment controls are required by the General Permit to provide effective reduction or elimination of sediment related pollutants in stormwater discharges and authorized non-stormwater discharges from the Site. Applicable BMPs are identified in this section for erosion control, sediment control, tracking control, and wind erosion control. For a visual depiction of the erosion and sediment controls, refer to Figure E-2. Note that not all BMPs will be shown.

**3.2.1 Erosion Control**

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles.

This construction project will implement the following practices to provide effective temporary and final erosion control during construction:

1. Preserve existing vegetation where required and when feasible.
2. The area of soil disturbing operations shall be controlled such that the Contractor is able to implement erosion control BMPs quickly and effectively.
3. Stabilize non-active areas within 14 days of cessation of construction activities or sooner if stipulated by local requirements.
4. Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding, or alternate methods.
5. Prior to the completion of construction, apply permanent erosion control to remaining disturbed soil areas.

Sufficient erosion control materials shall be maintained onsite to allow implementation in conformance with this SWPPP.

The following erosion control BMP selection table, Table 3.2 indicates the BMPs that shall be initially implemented to control erosion on the construction site. The QSP may change BMPs as needed based on site conditions at any time.

These temporary erosion control BMPs shall be implemented in conformance with the following guidelines and as outlined in the BMP Fact Sheets provided in Appendix H. Note that not all BMPs are displayed in Figure E-2. Site specific details in the Site Map prevail over standard details included in BMP Fact Sheets. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

### **EC-1, Scheduling**

Schedule construction activities in a manner that minimizes the exposure of disturbed soils to wind, rain, run-on, and run-off, which will reduce the discharge of pollutants to the storm drain system. No construction activities shall take place 24 hours prior to potential storm event that may have impact to generate pollution. Construction is anticipated to take place from January 10<sup>th</sup> to July 10<sup>th</sup>, 2024 Field Preparation is anticipated to take place during the first two weeks of construction. Field Work is commenced thereafter, covering the excavation and restoration activities of the project.

### **EC-2, Preservation of Existing Vegetation**

Preserve existing vegetation in all areas within the project limits to ensure protection of vegetation, and other areas where erosion control will be difficult to establish. This will be applied during all construction activities to control the damage to the existing vegetation. Areas noted to contain a sensitive species will have a buffer region surrounding the sensitive species to minimize ecological impact.

### **EC-3 Hydraulic Mulch**

Hydraulic Mulch will be utilized for soil stabilization after excavation and prior to compaction. This will consist of fibrous materials mixed with water and is intended to provide protection against water and wind erosion for a temporary period (Until post-closure requirements are

met). Application consists of spraying the mulch into the excavated pits after soil sampling. Reapplication as needed.

#### **EC-5, Soil Binders**

Soil binders may be utilized as an alternative to hydraulic mulch for soil stabilization purposes in the event that hydromulch is not readily available during construction. This includes materials that can be applied to the surface of the excavated burn pits to prevent water and wind erosion. Reapplications as needed.

#### **EC-7, Geotextiles and Mats**

Place plastic covers on any non-active disturbed soil areas (DSA) and stockpiles to prevent soil particles from detaching and becoming suspended in stormwater runoff, and on active sites where DSAs are apart from construction activities. With a forecasted storm even, this BMP will be placed to eliminated discharge of these pollutants to the streambed. Polyethylene covers will be used throughout the project area to cover small, exposed soil areas to forecast storm events, and anchored to prevent damage by wind.

#### **WE-1, Wind Erosion Control**

Apply water or other chemical dust suppressants to prevent or alleviate dust nuisance generated by construction activities. Wind erosion control BMPs are suitable during the following construction activities: Construction vehicle traffic on unpaved roads, drilling and blasting activities, soils and debris storage piles, batch drop from front-end loaders, areas with un-stabilized soil, and final grading/site stabilization. Other suitable activities can be for heavily traveled and disturbed areas, wet suppression (watering), chemical dust suppression, gravel asphalt surfacing, temporary gravel construction entrances equipment wash-out areas, and haul truck covers can be employed as dust control applications.

**Table 3.2 Erosion Control BMPs**

CASQA Fact Sheet	BMP Name	Considered for the Project <sup>(1)</sup>	BMP Used		If not used, state reason and alternate BMP, if applicable
			YES	NO	
EC-1	Scheduling	✓	✓		
EC-2	Preservation of Existing Vegetation	✓	✓		
EC-3	Hydraulic Mulch	✓ <sup>(2)</sup>	✓		
EC-4	Hydroseed	✓ <sup>(2)</sup>		✓	Not required
EC-5	Soil Binders	✓ <sup>(2)</sup>	✓		Not required
EC-6	Straw Mulch	✓ <sup>(2)</sup>		✓	Not required
EC-7	Geotextiles and Mats	✓ <sup>(2)</sup>	✓		
EC-8	Wood Mulching	✓ <sup>(2)</sup>		✓	Not required
EC-9	Earth Dike and Drainage Swales	✓ <sup>(3)</sup>		✓	Not required
EC-10	Velocity Dissipation Devices	✓ <sup>(3)</sup>		✓	Not required
EC-11	Slope Drains	✓ <sup>(3)</sup>		✓	Not required
EC-12	Stream Bank Stabilization	✓		✓	Not required
EC-13	Compost Blankets	✓ <sup>(2)</sup>		✓	Not required
EC-14	Soil Preparation-Roughening	✓		✓	Not required
EC-15	Non-Vegetated Stabilization	✓ <sup>(2)</sup>		✓	Not required
WE-1	Wind Erosion Control	✓	✓		

<sup>(1)</sup> The General Permit's Fact Sheet Section II.J.1.c through II.J.1.g describes various BMPs that should be considered for use on the construction site.

<sup>(2)</sup> The OSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements.

<sup>(3)</sup> All run-on and runoff from the construction site shall be managed for LUP Types 2 and 3 and LUP Type 1 if the evaluation of quantity and quality of run-on and runoff deems them necessary or visual inspections show that the site requires these controls. Run-on from offsite shall be directed away from all disturbed areas, diversion of offsite flows may require design/analysis by a licensed civil engineer and/or additional environmental permitting.

### **3.2.2 Sediment Controls**

Sediment controls are temporary or permanent structural measures that are intended to complement the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water.

The following sediment control BMP selection table, Table 3.3, indicates the BMPs that shall be initially implemented to control sediment on the construction site. Fact Sheets for temporary sediment control BMPs are provided in Appendix H. The QSP may change BMPs as needed based on site conditions at any time.

These temporary sediment control BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. Note that not all BMPs are displayed in Figure E-2. Site specific details in the Site Map prevail over standard details included in BMP Fact Sheets. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

#### **SE-4, Check Dams**

Place check dams will be placed across ditches and open channels to reduce scour and channel reducing flow velocity and encouraging sediment dropout.

#### **SE-5, Fiber Rolls**

Install temporary biodegradable fiber rolls to intercept runoff, reduce flow velocity, release runoff as sheet flow and provide removal of sediment from runoff. The fiber rolls will be implemented along the southern end of the RAAs (Figure E-2). Fiber rolls are to remain during the entire construction period until postclosure requirements are met.

#### **SE-6, Gravel Bag Berm**

As needed, install gravel bag berms as needed to anchor plastic tarps over stockpiles, deploy check dams in ditches, provide inlet protection, and anchor for fiber rolls in paved areas.

#### **SE-7, Street Sweeping and Vacuuming**

Provide street sweeping and vacuuming at the construction staging area, entrance, and exit by a standard street broom sweeper. At least one sweeper will always remain on the job during the period that sweeping work is required. Sweepers shall be self-loading, motorized, and have spray nozzles. Sweepers may include a vacuum apparatus.

#### **SWD, Stormwater Diversion**

Prior to construction, a stormwater diversion line shall be implemented to divert stormwater into the Perimeter Pond. This consists of a 3" pipe that will be along Roca Avenue draining towards the Perimeter Pond, along with two pipe ramp protectors. On the west end, a sump will be installed with a grate inlet and trash screen. For a visual illustration, refer to Figure E-2.

### **TC-1, Stabilized Construction Entrance and Exit**

Install and maintain a stabilized construction entrance/exit at construction site entrances and exits (Figure E-2). These construction entrances are not limited to the areas shown on the erosion control plans and must be implemented to prevent the off- site tracking of loose construction and landscape materials in appropriate locations. Shaker/Rumble plates shall be placed for added tracking protection.



**Table 3.3 Temporary Sediment Control BMPs**

CASQA Fact Sheet	BMP Name	Considered for the Project <sup>(1)</sup>	BMP used		If not used, state reason and alternate BMP, if applicable
			YES	NO	
SE-1	Silt Fence	✓ <sup>(2)</sup> <sup>(3)</sup>		✓	Not required
SE-2	Sediment Basin	✓		✓	Not required
SE-3	Sediment Trap	✓		✓	Not required
SE-4	Check Dams	✓		✓	
SE-5	Fiber Rolls	✓ <sup>(2)</sup> <sup>(3)</sup>		✓	
SE-6	Gravel Bag Berm	✓ <sup>(3)</sup>		✓	
SE-7	Street Sweeping and Vacuuming	✓		✓	
SE-8	Sandbag Barrier	✓		✓	Not required
SE-9	Straw Bale Barrier	✓		✓	Not required
SE-10	Storm Drain Inlet Protection	✓ RL2&3		✓	Not required
SE-11	ATS	✓		✓	Not required
SE-12	Manufactured Linear Sediment Controls	✓		✓	Not required
SE-13	Compost Sock and Berm	✓ <sup>(3)</sup>		✓	Not required
SE-14	Biofilter Bags	✓ <sup>(3)</sup>		✓	Not required
SWD	Stormwater Diversion <sup>(4)</sup>	✓		✓	
TC-1	Stabilized Construction Entrance and Exit	✓		✓	
TC-2	Stabilized Construction Roadway	✓		✓	
TC-3	Entrance Outlet Tire Wash	✓		✓	No cleaning on construction site

<sup>(1)</sup> The General Permit's Fact Sheet Section II.J.1.c through II.J.1.g describes various BMPs that should be considered for use on the construction site.

<sup>(2)</sup> The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements.

<sup>(3)</sup> All run-on and runoff from the construction site shall be managed. Risk Level 2 & 3 shall provide linear sediment control along toe of slope, face of slope, and at the grade breaks of exposed slope.

<sup>(4)</sup> SWD is not a CASQA BMP

### **3.3 NON-STORMWATER CONTROLS AND WASTE AND MATERIALS MANAGEMENT**

#### **3.3.1 Non-Stormwater Controls**

Non-stormwater discharges into storm drainage systems or waterways which are not authorized under the General Permit are prohibited. Non-stormwater discharges for which a separate NPDES permit is required by the local RWQCB are prohibited unless coverage under the separate NPDES permit has been obtained for the discharge. The selection of non-stormwater BMPs is based on the list of construction activities with a potential for non-stormwater discharges identified in Section 2.7 of this SWPPP.

The following non-stormwater control BMP selection table indicates the BMPs that shall be implemented to control sediment on the construction site. Fact Sheets for temporary non-stormwater control BMPs are provided in Appendix H.

Non-stormwater BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. Note that not all BMPs are displayed in Figure E-2. Site specific details in the Site Map prevail over standard details included in BMP Fact Sheets. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

For a visual depiction of the non-stormwater controls, refer to Figure E-2. Note that not all BMPs will be shown.

#### **NC-1 Water Conservation Practices**

Conserve water where possible. Use dust palliatives as a water substitute when possible. Do not overwater during dust control. Equipment that uses water should be inspected for water leaks frequently and repaired when detected.

#### **NC-2 Dewatering Operation**

Dewatering Operations will take place to manage discharge of pollutants when non-stormwater and precipitation must be removed from a work site. Turbidity levels will be monitored.

#### **NC-6 Illicit Connection/Discharge**

Illicit Connections and Discharges will be monitored and reported when such incidents occur on the construction site.

#### **NC-9 Vehicle and Equipment Fueling**

Vehicle and Equipment Fueling will be done at the construction staging area. Adequate amounts of absorbent spill cleanup material and spill kits shall be kept in the fueling area and on fueling trucks. Spill cleanup material and kits shall be disposed of immediately after use. Drip pans or absorbent pads shall be used during fueling unless performed over an impermeable surface. Appropriate measures, like bundle of absorbent material backed by gravel bags at the down slope will be installed, to ensure that no liquid is discharged from the plastic sheeting. All BMP's will be implemented at the staging area (Figure E-2) within the project limits.

**NC-10 Vehicle and Equipment Maintenance**

Vehicle and Equipment Maintenance will be done at the construction staging area. Adequate amounts of absorbent spill cleanup material and spill kits shall be kept in the fueling area and on fueling trucks. Spill cleanup material and kits shall be disposed of immediately after use. Drip pans or absorbent pads shall be used during fueling unless performed over an impermeable surface. Appropriate measures, like bundle of absorbent material backed by gravel bags at the down slope will be installed, to ensure that no liquid is discharged from the plastic sheeting. All BMP's will be implemented at the staging area (Figure E-2) within the project limits.

**Table 3.4 Temporary Non-Stormwater BMPs**

CASQA Fact Sheet	BMP Name	Considered for the Project <sup>(1)</sup>	BMP used		If not used, state reason and alternate BMP, if applicable
			YES	NO	
NS-1	Water Conservation Practices	✓	✓		
NS-2	Dewatering Operation	✓	✓		
NS-3	Paving and Grinding Operation	✓		✓	Not required
NS-4	Temporary Stream Crossing	✓		✓	Not required
NS-5	Clear Water Diversion	✓		✓	Not required
NS-6	Illicit Connection/Discharge	✓	✓		
NS-7	Potable Water/Irrigation	✓		✓	Not required
NS-8	Vehicle and Equipment Cleaning	✓		✓	Not required
NS-9	Vehicle and Equipment Fueling	✓	✓		
NS-10	Vehicle and Equipment Maintenance	✓	✓		
NS-11	Pile Driving Operation	✓		✓	Not required
NS-12	Concrete Curing	✓		✓	Not required
NS-13	Concrete Finishing	✓		✓	Not required
NS-14	Material and Equipment Use Over Water	✓		✓	Not required
NS-15	Demolition Removal Adjacent to Water	✓		✓	Not required
NS-16	Temporary Batch Plants	✓		✓	Not required

<sup>(1)</sup> The General Permit's Fact Sheet Section II.J.1.c through II.J.1.g describes various BMPs that should be considered for use on the construction site.

### **3.3.2 Materials Management and Waste Management**

Materials management control practices consist of implementing procedural and structural BMPs for handling, storing, and using construction materials to prevent the release of those materials into stormwater discharges. The amount and type of construction materials to be utilized at the Site will depend upon the type of construction and the length of the construction period. The materials may be used continuously, such as fuel for vehicles and equipment, or the materials may be used for a discrete period, such as soil binders for temporary stabilization.

Waste management consist of implementing procedural and structural BMPs for handling, storing, and ensuring proper disposal of wastes to prevent the release of those wastes into stormwater discharges. If applicable to the project site, waste management should be conducted in accordance with the Project's Construction Waste Management Plan.

Materials and waste management pollution control BMPs shall be implemented to minimize stormwater contact with construction materials, wastes and service areas; and to prevent materials and wastes from being discharged off-site. The primary mechanisms for stormwater contact that shall be addressed include:

- Direct contact with precipitation
- Contact with stormwater run-on and runoff
- Wind dispersion of loose materials
- Direct discharge to the storm drain system through spills or dumping
- Extended contact with some materials and wastes, such as asphalt cold mix and treated wood products, which can leach pollutants into stormwater.

A list of construction activities is provided in Appendix G. The following Materials and Waste Management BMP selection table, Table 3.5, indicates the BMPs that shall be implemented to handle materials and control construction site wastes associated with these construction activities. Material management BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. If there is a conflict between multiple sources of information, the order of precedence shall conform to the list below:

1. Site Map site specific details
2. Narrative in the body of this SWPPP
3. Guidance in the BMPs fact sheet.

#### **WM-1 Material Delivery and Storage**

Implement material delivery and storage to prevent and minimize the discharges of construction materials during delivery and storage. The general material storage area will be located at the construction staging area (Figure E-2). The Contractor will store bagged or boxed material on pallets. If there is a predicted rain event during construction, bagged or boxed material shall be protected from wind and rain during non-working days when precipitation is predicted. The Contractor will provide sufficient separation between stored containers to allow for spill cleanup or emergency response access. Storage areas will be kept clean, well-organized, and equipped with cleanup supplies appropriate for the materials being stored. Secondary Containment will be used to store items such as fuel cans, etc., when required. The Contractor will repair or replace perimeter controls, containment structures, covers, and liners as needed.

## **WM-2 Material Use**

Material Use will be used to prevent or reduce discharge of pollutants to storm drains or watercourses during material uses, such as applications of pesticides and fertilizers.

## **WM-3 Stockpile Management**

Stockpile Management will be used to cover all materials required to be stockpiled, e.g. dirt and contaminated/hazardous wastes for the duration of this project. This BMP will be implemented during the rainy season in active disturbed soil areas at all times, and in non-active disturbed soil areas as determined necessary. During the non-rainy season, stockpile management will be used to cover stockpiles or waste storage areas prior to a forecasted storm event to eliminate discharge of these pollutants to the storm drain system. All stockpiles must be a minimum of 50 feet away from concentrated flows of storm water, drainage courses, and inlets. Any stockpiles of contaminated soil shall be managed in accordance with BMP WM-7, "Contaminated Soil Management". During the rainy season, all stockpiles shall be covered or protected with soil stabilization measures and a temporary perimeter sediment barrier at all times. During the non-rainy season, the stockpiles shall be covered or protected with a temporary perimeter sediment barrier prior to the onset of precipitation.

For a visual illustration of the stockpile areas, refer to **Figure E-4**.

## **WM-4 Spill Prevention and Control**

All potential pollutants will have a spill control prevention and control protocol to eliminate or minimize the discharge of potential pollutants. Fuel is the primary potential pollutant, but other spills may occur depending on uses at construction sites. To ensure minimal disruption. Fueling is to take place at the staging area only.

## **WM-5 Solid Waste Management**

Construction wastes in general, vegetative wastes from clearing and grubbing, and litter will be managed as per the guidelines for this BMP, which are included in Appendix A. Waste minimization will be practiced as much as possible through employee education at regular tail-gate meetings. Litter stored in containers will be handled by trash hauling contractors. Dumpsters sufficient in size and number will be provided to contain the solid waste generated by the project. Solids wastes will be loaded directly into trucks for off-site disposal.

## **WM-6 Hazardous Waste Management**

These are procedures and practices to minimize or eliminate the discharge of pollutants from construction site hazardous waste to the streambeds. In order to prevent the exposure of hazardous materials, waste containers will be stored onsite in containers in order to act quickly in the event of a hazardous spill. Also, containment berms will be utilized in areas of fueling and maintenance so that hazardous wastes can be contained in areas of high potential for a spill.

### **WM-7 Contaminated Soil Management**

Contaminated soil from the construction site will be isolated to minimize or eliminate the discharge of potential pollutants from the waste to the streambeds. Like WM-6, waste containers will be stored onsite to quickly dispose of any contaminated waste.

### **WM-9 Sanitary-Septic Waste Management**

Sanitary and Septic Waste wastewater from portable toilets placed in the staging area will not be discharged or buried within the project site. The WPCM shall inspect sanitary facility and monitor disposal procedures at least weekly. The contractor will hold regular meetings with employees and subcontractor to discuss and reinforce the disposal procedures. The contractor shall comply with local health agency requirements when using an on-site disposal system.

**Table 3.5 Temporary Materials Management BMPs**

CASQA Fact Sheet	BMP Name	Considered for Project <sup>(1)</sup>	BMP used		If not used, state reason and alternate BMP, if applicable
			YES	NO	
WM-01	Material Delivery and Storage	✓	✓		
WM-02	Material Use	✓	✓		
WM-03	Stockpile Management	✓	✓		
WM-04	Spill Prevention and Control	✓	✓		
WM-05	Solid Waste Management	✓	✓		
WM-06	Hazardous Waste Management	✓	✓		
WM-07	Contaminated Soil Management	✓	✓		
WM-08	Concrete Waste Management	✓		✓	Not required
WM-09	Sanitary-Septic Waste Management	✓	✓		
WM-10	Liquid Waste Management	✓		✓	Not required

<sup>(1)</sup> The General Permit's Fact Sheet Section II.J.1.c through II.J.1.g describes various BMPs that should be considered for use on the construction site.



### 3.4 POST CONSTRUCTION STORMWATER MANAGEMENT MEASURES

After construction is completed, biological and archaeological/cultural post-project surveys will be conducted by qualified specialists to document any changes to the Project Area, including areas potentially impacted by removal action activities, from pre-project conditions. The results of the pre- and post-project surveys will be documented in reports meeting current professional standards and submitted to information repositories to contribute to future research and planning. These include (for the archaeological survey report) the California State University Fullerton Information Center of the California Historic Resources Inventory System and the Ventura County Cultural Heritage Board; and (for the biological survey report) the California Native Plant Society and the California Natural Diversity Database.

Post construction BMPs are permanent measures installed during construction, designed to reduce or eliminate pollutant discharges from the site after construction is completed.

This site is located in an area subject to a Phase I or Phase II Municipal Separate Storm Sewer System (MS4) permit approved Stormwater Management Plan.  Yes  No

The following source control postconstruction BMPs to comply with General Permit Section XIII.B and local requirements have been identified for the site:

- None

## **Section 4 BMP Inspection and Maintenance, and Rain Event Action Plans**

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### **4.1 BMP INSPECTION AND MAINTENANCE**

The General Permit requires routine weekly inspections of BMPs, along with inspections before, during, and after qualifying rain events. A BMP inspection checklist must be filled out for inspections and maintained on-site onsite with the SWPPP. The inspection checklist includes the necessary information covered in Appendix I. A blank inspection checklist can be found in Appendix I. Completed checklists shall be kept in the Construction Site Monitoring Program (CSMP) Appendix P “Monitoring Records.”

BMPs shall be maintained regularly to ensure proper and effective functionality. If necessary, corrective actions shall be implemented within 72 hours of identified deficiencies and associated amendments to the SWPPP shall be prepared by the QSD.

Specific details for maintenance, inspection, and repair of Construction Site BMPs can be found in the BMP Factsheets in Appendix H.

### **4.2 RAIN EVENT ACTION PLANS**

The Rain Event Action Plan (REAP) is a written document designed to be used as a planning tool by the QSP to protect exposed portions of project sites and to ensure that the discharger has adequate materials, staff, and time to implement erosion and sediment control measures. These measures are intended to reduce the amount of sediment and other pollutants that could be generated during the rain event. It is the responsibility of the QSP to be aware of precipitation forecast and to obtain and print copies of the National Oceanic and Atmospheric Administration’s (NOAA) Forecast Weather Table Interface, available online at <http://forecast.weather.gov>.

The SWPPP includes REAP templates, but the QSP will need to customize them for each rain event. Site-specific REAP templates for each applicable project phase can be found in Appendix J. The QSP shall maintain a paper copy of completed REAPs in compliance with the record retention requirements Section 1.5 of this SWPPP. Completed REAPs shall be maintained in Appendix J.

The QSP will develop an event specific REAP 48 hours in advance of a precipitation event forecast to have a 50 percent or greater chance of producing precipitation in the project area. The REAP will be onsite and be implemented 24 hours in advance of any the predicted precipitation event.

At minimum, the REAP will include the following site and phase-specific information:

1. Site Address;
2. Calculated Risk Level (2 or 3);
3. Site Stormwater Manager Information including the name, company and 24-hour emergency telephone number;
4. Erosion and Sediment Control Provider information including the name, company and 24-hour emergency telephone number;
5. Stormwater Sampling Agent information including the name, company, and 24-hour emergency telephone number;
6. Activities associated with each construction phase;

7. Trades active on the construction site during each construction phase;
8. Contractor information for all trades; and
9. Recommended actions for each project phase.

## **Section 5 Training**

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Appendix L identifies the QSPs for the project. To promote stormwater management awareness specific for this project, periodic training of job-site personnel shall be included as part of routine project meetings (e.g. daily/weekly tailgate safety meetings), or task specific trainings as needed.

The QSP shall be responsible for providing this information at the meetings, and subsequently completing the training logs shown in Appendix K, which identify the site-specific stormwater topics covered as well as the names of site personnel who attended the meeting. Tasks may be delegated to trained employees by the QSP provided adequate supervision and oversight is provided. Training shall correspond to the specific tasks delegated, including SWPPP implementation, BMP inspection and maintenance, and recordkeeping.

Documentation of training activities (formal and informal) is retained in SWPPP Appendix K.

## Section 6 Responsible Parties and Operators

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### 6.1 RESPONSIBLE PARTIES

Approved Signatories who are responsible for SWPPP implementation and have authority to sign permit-related documents are listed below. Written authorizations from the LRP for these individuals are provided in Appendix L. The Approved Signatories assigned to this project are:

Name	Title	Phone Number
Kim O'Rourke (Senior Manager, Boeing)	LRP	714-321-9407
Gino Nguyen (Professional Civil Engineer, Jacobs)	QSD	714-724-0649

QSPs identified for the project are identified in Appendix L. The QSP shall have primary responsibility and significant authority for the implementation, maintenance, and inspection/monitoring of SWPPP requirements. The QSP will be available at all times throughout the duration of the project. Duties of the QSP include but are not limited to:

- Implementing all elements of the General Permit and SWPPP, including, but not limited to:
  - Ensuring that all BMPs are implemented, inspected, and properly maintained;
  - Performing non-stormwater and stormwater visual observations and inspections;
  - Performing non-stormwater and storm sampling and analysis, as required;
  - Performing routine inspections and observations;
  - Implementing non-stormwater management, and materials and waste management activities such as: monitoring discharges; general Site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than stormwater are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems, etc.;
- The QSP may delegate these inspections and activities to an appropriately trained employee but shall ensure adequacy and adequate deployment.
- Ensuring elimination of unauthorized discharges.
- The QSPs shall be assigned authority by the LRP to mobilize crews in order to make immediate repairs to the control measures.
- Coordinate with the Contractor(s) to assure all of the necessary corrections/repairs are made immediately and that the project complies with the SWPPP, General Permit, and approved plans at all times.
- Notifying the LRP or Authorized Signatory immediately of off-site discharges or other non-compliance events

## **6.2 CONTRACTOR LIST**

### **Contractor**

Name: TBD

Title: TBD

Company: TBD

Address: TBD

Phone Number: TBD

Number (24/7): TBD

## Section 7 References

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California Stormwater Quality Association (2019). *Construction BMP Handbook*. Available online at: [www.casqa.org](http://www.casqa.org)

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## ***Appendix A: Construction General Permit***

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Arnold Schwarzenegger  
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## I. BACKGROUND

### A. History

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added Section 402(p), which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that established storm water permit application requirements for specified categories of industries. The regulations provide that discharges of storm water to waters of the United States from construction projects that encompass five or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. Regulations (Phase II Rule) that became final on December 8, 1999 lowered the permitting threshold from five acres to one acre.

While federal regulations allow two permitting options for storm water discharges (Individual Permits and General Permits), the State Water Board has elected to adopt only one statewide General Permit at this time that will apply to most storm water discharges associated with construction activity.

On August 19, 1999, the State Water Board reissued the General Construction Storm Water Permit (Water Quality Order 99-08-DWQ). On December 8, 1999 the State Water Board amended Order 99-08-DWQ to apply to sites as small as one acre.

The General Permit accompanying this fact sheet regulates storm water runoff from construction sites. Regulating many storm water discharges under one permit will greatly reduce the administrative burden associated with permitting individual storm water discharges. To obtain coverage under this General Permit, dischargers shall electronically file the Permit Registration Documents (PRDs), which includes a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and other compliance related documents required by this General Permit and mail the appropriate permit fee to the State Water Board. It is expected that as the storm water program develops, the Regional Water Quality Control Boards (Regional Water Boards) may issue General Permits or Individual Permits containing more specific permit provisions. When this occurs, this General Permit will no longer regulate those dischargers.

### B. Legal Challenges and Court Decisions

#### 1. Early Court Decisions

Shortly after the passage of the CWA, the USEPA promulgated regulations exempting most storm water discharges from the NPDES permit requirements. (See [40 C.F.R. § 125.4 \(1975\)](#); see also *Natural Resources Defense Council v. Costle* (D.C. Cir. 1977) 568 F.2d 1369, 1372 (*Costle*); *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1163 (*Defenders of Wildlife*)). When environmental groups challenged this exemption in federal court, the District of Columbia Court of Appeals invalidated the regulation, holding that the USEPA “does not have authority to exempt categories of point sources from the permit requirements of [CWA] § 402.” (*Costle*, 568 F.2d at 1377.) The *Costle* court rejected the USEPA's argument that effluent-based storm sewer regulation was administratively infeasible because of the variable nature of storm water pollution and the number of affected storm sewers throughout the country. (*Id.* at 1377-82.) Although the court acknowledged the practical problems relating to storm sewer regulation, the court found the USEPA had the flexibility under the CWA to design regulations that would overcome these problems. (*Id.* at 1379-83.) In particular, the court pointed to general permits and permits based on requiring best management practices (BMPs).

During the next 15 years, the USEPA made numerous attempts to reconcile the statutory requirement of point source regulation with the practical problem of regulating possibly millions of diverse point source discharges of storm water. (See *Defenders of Wildlife*, 191 F.3d at 1163; see also Gallagher, Clean Water Act in Environmental Law Handbook (Sullivan, edit., 2003) p. 300 (Environmental Law Handbook); Eisen, *Toward a Sustainable Urbanism: Lessons from Federal Regulation of Urban Storm Water Runoff* (1995) 48 Wash. U.J. Urb. & Contemp. L.1, 40-41 [Regulation of Urban Storm Water Runoff].)

In 1987, Congress amended the CWA to require NPDES permits for storm water discharges. (See CWA § 402(p), 33 U.S.C. § 1342(p); *Defenders of Wildlife*, 191 F.3d at 1163; *Natural Resources Defense Council v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1296.) In these amendments, enacted as part of the Water Quality Act of 1987, Congress distinguished between industrial and municipal storm water discharges. With respect to industrial storm water discharges, Congress provided that NPDES permits "shall meet all applicable provisions of this section and section 1311 [requiring the USEPA to establish effluent limitations under specific timetables]." (CWA § 402(p)(3)(A), 33 U.S.C. § 1342(p)(3)(A); see also *Defenders of Wildlife*, 191 F.3d at 1163-64.)

In 1990, USEPA adopted regulations specifying what activities were considered "industrial" and thus required discharges of storm water associated with those activities to obtain coverage under NPDES permits. (55 Fed. Reg. 47,990 (1990); 40 C.F.R. § 122.26(b)(14).) Construction activities, deemed a subset of the industrial activities category, must also be regulated by an NPDES permit. (40 C.F.R. § 122.26(b)(14)(x)). In 1999, USEPA issued regulations for "Phase II" of storm water regulation, which required most small construction sites (1-5 acres) to be regulated under the NPDES program. (64 Fed. Reg. 68,722; 40 C.F.R. § 122.26(b)(15)(i).)

## 2. Court Decisions on Public Participation

Two recent federal court opinions have vacated USEPA rules that denied meaningful public review of NPDES permit conditions. On January 14, 2003, the Ninth Circuit Court of Appeals held that certain aspects of USEPA's Phase II regulations governing MS4s were invalid primarily because the general permit did not contain express requirements for public participation. (*Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832.) Specifically, the court determined that applications for general permit coverage (including the Notice of Intent (NOI) and Storm Water Management Program (SWMP)) must be made available to the public, the applications must be reviewed and determined to meet the applicable standard by the permitting authority before coverage commences, and there must be a process to accommodate public hearings. (*Id.* at 852-54.) Similarly, on February 28, 2005, the Second Circuit Court of Appeals held that the USEPA's confined animal feeding operation (CAFO) rule violated the CWA because it allowed dischargers to write their own nutrient management plans without public review. (*Waterkeeper Alliance v. USEPA* (2d Cir. 2005) 399 F.3d 486.) Although neither decision involved the issuance of construction storm water permits, the State Water Board's Office of Chief Counsel has recommended that the new General Permit address the courts' rulings where feasible<sup>1</sup>.

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<sup>1</sup> In *Texas Independent Producers and Royalty Owners Assn. v. USEPA* (7th Cir. 2005) 410 F.3d 964, the Seventh Circuit Court of Appeals held that the USEPA's construction general permit was not required to provide the public with the opportunity for a public hearing on the Notice of Intent or Storm Water Pollution Prevention Plan. The Seventh Circuit briefly discussed why it agreed with the Ninth Circuit's dissent in *Environmental Defense Center*, but

The CWA and the USEPA's regulations provide states with the discretion to formulate permit terms, including specifying best management practices (BMPs), to achieve strict compliance with federal technology-based and water quality-based standards. (*Natural Resources Defense Council v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1308.) Accordingly, this General Permit has developed specific BMPs as well as numeric action levels (NALs) in order to achieve these minimum federal standards. In addition, the General Permit requires a SWPPP and REAP (another dynamic, site-specific plan) to be developed but has removed all language requiring the discharger to implement these plans – instead, the discharger is required to comply with specific requirements. By requiring the dischargers to implement these specific BMPs and NALs, this General Permit ensures that the dischargers do not “write their own permits.” As a result this General Permit does not require each discharger's SWPPP and REAP to be reviewed and approved by the Regional Water Boards.

This General Permit also requires dischargers to electronically file all permit-related compliance documents. These documents include, but are not limited to, NOIs, SWPPPs, annual reports, Notice of Terminations (NOTs), and numeric action level (NAL) exceedance reports. Electronically submitted compliance information is immediately available to the public, as well as the Regional Water Quality Control Board (Regional Water Board) offices, via the Internet. In addition, this General Permit enables public review and hearings on permit applications when appropriate. Under this General Permit, the public clearly has a meaningful opportunity to participate in the permitting process.

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generally did not discuss the substantive holdings in *Environmental Defense Center and Waterkeeper Alliance*, because neither court addressed the initial question of whether the plaintiffs had standing to challenge the permits at issue. However, notwithstanding the Seventh Circuit's decision, it is not binding or controlling on the State Water Board because California is located within the Ninth Circuit.

## **C. Blue Ribbon Panel of Experts and Feasibility of Numeric Effluent Limitations**

In 2005 and 2006, the State Water Board convened an expert panel (panel) to address the feasibility of numeric effluent limitations (NELs) in California's storm water permits. Specifically, the panel was asked to address:

“Is it technically feasible to establish numeric effluent limitations, or some other quantifiable limit, for inclusion in storm water permits? How would such limitations or criteria be established, and what information and data would be required?”

“The answers should address industrial general permits, construction general permits, and area-wide municipal permits. The answers should also address both technology-based limitations or criteria and water quality-based limitations or criteria. In evaluating establishment of any objective criteria, the panel should address all of the following:

The ability of the State Water Board to establish appropriate objective limitations or criteria;

How compliance determinations would be made;

The ability of dischargers and inspectors to monitor for compliance; and

The technical and financial ability of dischargers to comply with the limitations or criteria.”

Through a series of public participation processes (State Water Board meetings, State Water Board workshops, and the solicitation of written comments), a number of water quality, public process and overall program effectiveness problems were identified. Some of these problems are addressed through this General Permit.

## **D. Summary of Panel Findings on Construction Activities**

The panel's final report can be downloaded and viewed through links at [www.waterboards.ca.gov](http://www.waterboards.ca.gov) or by clicking [here](#)<sup>2</sup>.

The panel made the following observations:

“Limited field studies indicate that traditional erosion and sediment controls are highly variable in performance, resulting in highly variable turbidity levels in the site discharge.”

“Site-to-site variability in runoff turbidity from undeveloped sites can also be quite large in many areas of California, particularly in more arid regions with less natural vegetative cover and steep slopes.”

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<sup>2</sup> [http://www.waterboards.ca.gov/stormwtr/docs/numeric/swpanel\\_final\\_report.pdf](http://www.waterboards.ca.gov/stormwtr/docs/numeric/swpanel_final_report.pdf)

“Active treatment technologies involving the use of polymers with relatively large storage systems now exist that can provide much more consistent and very low discharge turbidity. However, these technologies have as yet only been applied to larger construction sites, generally five acres or greater. Furthermore, toxicity has been observed at some locations, although at the vast majority of sites, toxicity has not occurred. There is also the potential for an accidental large release of such chemicals with their use.”

“To date most of the construction permits have focused on TSS and turbidity, but have not addressed other, potentially significant pollutants such as phosphorus and an assortment of chemicals used at construction sites.”

“Currently, there is no required training or certification program for contractors, preparers of soil erosion and sediment control Storm Water Pollution Prevention Plans, or field inspectors.”

“The quality of storm water discharges from construction sites that effectively employ BMPs likely varies due to site conditions such as climate, soil, and topography.”

“The States of Oregon and Washington have recently adopted similar concepts to the Action Levels described earlier.”

In addition, the panel made the following conclusions:

“It is the consensus of the Panel that active treatment technologies make Numeric Limits technically feasible for pollutants commonly associated with storm water discharges from construction sites (e.g. TSS and turbidity) for larger construction sites. Technical practicalities and cost-effectiveness may make these technologies less feasible for smaller sites, including small drainages within a larger site, as these technologies have seen limited use at small construction sites. If chemical addition is not permitted, then Numeric Limits are not likely feasible.”

“The Board should consider Numeric Limits or Action Levels for other pollutants of relevance to construction sites, but in particular pH. It is of particular concern where fresh concrete or wash water from cement mixers/equipment is exposed to storm water.”

“The Board should consider the phased implementation of Numeric Limits and Action Levels, commensurate with the capacity of the dischargers and support industry to respond.”

## **E. How the Panel’s Findings are Used in this General Permit**

The State Water Board carefully considered the findings of the panel and related public comments. The State Water Board also reviewed and considered the comments regarding statewide storm water policy and the reissuance of the Industrial General Permit. From the input received the State Water Board identified some permit and program performance gaps that are addressed in this General Permit. The Summary of Significant Changes (below) in this General Permit are a direct result of this process.

## **F. Summary of Significant Changes in This General Permit**

The State Water Board has significant changes to Order 99-08-DWQ. This General Permit differs from Order 99-08-DWQ in the following significant ways:

**Rainfall Erosivity Waiver:** this General Permit includes the option allowing a small construction site (>1 and <5 acres) to self-certify if the rainfall erosivity value (R value) for their site's given location and time frame compute to be less than or equal to 5.

**Technology-Based Numeric Action Levels:** this General Permit includes NALs for pH and turbidity.

**Risk-Based Permitting Approach:** this General Permit establishes three levels of risk possible for a construction site. Risk is calculated in two parts: 1) Project Sediment Risk, and 2) Receiving Water Risk.

**Minimum Requirements Specified:** this General Permit imposes more minimum BMPs and requirements that were previously only required as elements of the SWPPP or were suggested by guidance.

**Project Site Soil Characteristics Monitoring and Reporting:** this General Permit provides the option for dischargers to monitor and report the soil characteristics at their project location. The primary purpose of this requirement is to provide better risk determination and eventually better program evaluation.

**Effluent Monitoring and Reporting:** this General Permit requires effluent monitoring and reporting for pH and turbidity in storm water discharges. The purpose of this monitoring is to evaluate whether NALs and NELs for Active Treatment Systems included in this General Permit are exceeded.

**Receiving Water Monitoring and Reporting:** this General Permit requires some Risk Level 3 and LUP Type 3 dischargers to monitor receiving waters and conduct bioassessments.

**Post-Construction Storm Water Performance Standards:** this General Permit specifies runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 NPDES permit, to avoid, minimize and/or mitigate post-construction storm water runoff impacts.

**Rain Event Action Plan:** this General Permit requires certain sites to develop and implement a Rain Event Action Plan (REAP) that must be designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event.

**Annual Reporting:** this General Permit requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements. The primary purpose of this requirement is to provide information needed for overall program evaluation and public information.

**Certification/Training Requirements for Key Project Personnel:** this General Permit requires that key personnel (e.g., SWPPP preparers, inspectors, etc.) have specific training or certifications to ensure their level of knowledge and skills are adequate to ensure their ability to design and evaluate project specifications that will comply with General Permit requirements.

**Linear Underground/Overhead Projects:** this General Permit includes requirements for all Linear Underground/Overhead Projects (LUPs).



## II. RATIONALE

### A. General Permit Approach

A general permit for construction activities is an appropriate permitting approach for the following reasons:

1. A general permit is an efficient method to establish the essential regulatory requirements for a broad range of construction activities under differing site conditions;
2. A general permit is the most efficient method to handle the large number of construction storm water permit applications;
3. The application process for coverage under a general permit is far less onerous than that for individual permit and hence more cost effective;
4. A general permit is consistent with USEPA's four-tier permitting strategy, the purpose of which is to use the flexibility provided by the CWA in designing a workable and efficient permitting system; and
5. A general permit is designed to provide coverage for a group of related facilities or operations of a specific industry type or group of industries. It is appropriate when the discharge characteristics are sufficiently similar, and a standard set of permit requirements can effectively provide environmental protection and comply with water quality standards for discharges. In most cases, the general permit will provide sufficient and appropriate management requirements to protect the quality of receiving waters from discharges of storm water from construction sites.

There may be instances where a general permit is not appropriate for a specific construction project. A Regional Water Board may require any discharger otherwise covered under the General Permit to apply for and obtain an Individual Permit or apply for coverage under a more specific General Permit. The Regional Water Board must determine that this General Permit does not provide adequate assurance that water quality will be protected, or that there is a site-specific reason why an individual permit should be required.

### B. Construction Activities Covered

#### 1. Construction activity subject to this General Permit:

Any construction or demolition activity, including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than one acre.

Construction activity that results in land surface disturbances of less than one acre if the construction activity is part of a larger common plan of development or sale of one or more acres of disturbed land surface.

Construction activity related to residential, commercial, or industrial development on lands currently used for agriculture including, but not limited to, the construction of buildings related to agriculture that are considered industrial pursuant to USEPA regulations, such as dairy barns or food processing facilities.

Construction activity associated with LUPs including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete

and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

Discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.<sup>3</sup>

Storm water discharges from dredge spoil placement that occur outside of U.S. Army Corps of Engineers jurisdiction<sup>4</sup> (upland sites) and that disturb one or more acres of land surface from construction activity are covered by this General Permit. Construction projects that intend to disturb one or more acres of land within the jurisdictional boundaries of a CWA § 404 permit should contact the appropriate Regional Water Board to determine whether this permit applies to the project.

## **2. Linear Underground/Overhead Projects (LUPs) subject to this General Permit:**

Underground/overhead facilities typically constructed as LUPs include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water, wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

Water Quality Order 2003-0007-DWQ regulated construction activities associated with small LUPs that resulted in land disturbances greater than one acre, but less than five acres. These projects were considered non-traditional construction projects. Attachment A of this Order now regulates all construction activities from LUPs resulting in land disturbances greater than one acre.

## **3. Common Plan of Development or Sale**

USEPA regulations include the term “common plan of development or sale” to ensure that acreage within a common project does not artificially escape the permit requirements because construction activities are phased, split among smaller parcels, or completed by different owners/developers. In the absence of an

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<sup>3</sup> Pursuant to the Ninth Circuit Court of Appeals’ decision in *NRDC v. EPA* (9th Cir. 2008) 526 F.3d 591, and subsequent denial of the USEPA’s petition for reconsideration in November 2008, oil and gas construction activities discharging storm water contaminated only with sediment are no longer exempt from the NPDES program.

<sup>4</sup> A construction site that includes a dredge and/or fill discharge to any water of the United States (e.g., wetland, channel, pond, or marine water) requires a CWA Section 404 permit from the U.S. Army Corps of Engineers and a CWA Section 401 Water Quality Certification from the Regional Water Board or State Water Board.

exact definition of “common plan of development or sale,” the State Water Board is required to exercise its regulatory discretion in providing a common sense interpretation of the term as it applies to construction projects and permit coverage. An overbroad interpretation of the term would render meaningless the clear “one acre” federal permitting threshold and would potentially trigger permitting of almost any construction activity that occurs within an area that had previously received area-wide utility or road improvements.

Construction projects generally receive grading and/or building permits (Local Permits) from local authorities prior to initiating construction activity. These Local Permits spell out the scope of the project, the parcels involved, the type of construction approved, etc. Referring to the Local Permit helps define “common plan of development or sale.” In cases such as tract home development, a Local Permit will include all phases of the construction project including rough grading, utility and road installation, and vertical construction. All construction activities approved in the Local Permit are part of the common plan and must remain under the General Permit until construction is completed. For custom home construction, Local Permits typically only approve vertical construction as the rough grading, utilities, and road improvements were already independently completed under the a previous Local Permit. In the case of a custom home site, the homeowner must submit plans and obtain a distinct and separate Local Permit from the local authority in order to proceed. It is not the intent of the State Water Board to require permitting for an individual homeowner building a custom home on a private lot of less than one acre if it is subject to a separate Local Permit. Similarly, the installation of a swimming pool, deck, or landscaping that disturbs less than one acre that was not part of any previous Local Permit are not required to be permitted.

The following are several examples of construction activity of less than one acre that would require permit coverage:

- a. A landowner receives a building permit(s) to build tract homes on a 100-acre site split into 200 one-third acre parcels, (the remaining acreage consists of streets and parkways) which are sold to individual homeowners as they are completed. The landowner completes and sells all the parcels except for two. Although the remaining two parcels combined are less than one acre, the landowner must continue permit coverage for the two parcels.
- b. One of the parcels discussed above is sold to another owner who intends to complete the construction as already approved in the Local Permit. The new landowner must file Permit Registration Documents (PRDs) to complete the construction even if the new landowner is required to obtain a separate Local Permit.
- c. Landowner in (1) above purchases 50 additional one half-acre parcels adjacent to the original 200-acre project. The landowner seeks a Local Permit (or amendment to existing Local permit) to build on 20 parcels while leaving the remaining 30 parcels for future development. The landowner must amend PRDs to include the 20 parcels 14 days prior to commencement of construction activity on those parcels.

## **C. Construction Activities Not Covered**

### **1. Traditional Construction Projects Not Covered**

This General Permit does not apply to the following construction activity:

- a. Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

- b. Disturbances to land surfaces solely related to agricultural operations such as disking, harrowing, terracing and leveling, and soil preparation.
- c. Discharges of storm water from areas on tribal lands; construction on tribal lands is regulated by a federal permit.
- d. Discharges of storm water within the Lake Tahoe Hydrologic Unit. The Lahontan Regional Water Board has adopted its own permit to regulate storm water discharges from construction activity in the Lake Tahoe Hydrologic Unit (Regional Water Board 6SLT). Owners of construction projects in this watershed must apply for the Lahontan Regional Water Board permit rather than the statewide Construction General Permit. Construction projects within the Lahontan region must also comply with the Lahontan Region Project Guideline for Erosion Control (R6T-2005-0007 Section), which can be found at [http://www.waterboards.ca.gov/lahontan/Adopted\\_Orders/2005/r6t\\_2005\\_0007.pdf](http://www.waterboards.ca.gov/lahontan/Adopted_Orders/2005/r6t_2005_0007.pdf)
- e. Construction activity that disturbs less than one acre of land surface, unless part of a larger common plan of development or the sale of one or more acres of disturbed land surface.
- f. Construction activity covered by an individual NPDES Permit for storm water discharges.
- g. Landfill construction activity that is subject to the Industrial General Permit.
- h. Construction activity that discharges to Combined Sewer Systems.
- i. Conveyances that discharge storm water runoff combined with municipal sewage.
- j. Discharges of storm water identified in CWA § 402(l)(2), 33 U.S.C. § 1342(l)(2).

**2. Linear Projects Not Covered**

- a. LUP construction activity does not include linear routine maintenance projects. Routine maintenance projects are projects associated with operations and maintenance activities that are conducted on existing lines and facilities and within existing right-of-way, easements, franchise agreements, or other legally binding agreements of the discharger. Routine maintenance projects include, but are not limited to projects that are conducted to:
  - i. Maintain the original purpose of the facility or hydraulic capacity.
  - ii. Update existing lines<sup>5</sup> and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
  - iii. Repairing leaks.

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<sup>5</sup>Update existing lines includes replacing existing lines with new materials or pipes.