### DEPARTMENT OF THE ARMY PERMIT

**Permittee:** This modified Regional General Permit (RGP 45) applies to:

- (1) the Los Angeles County Department of Public Works (LACDPW) at their 158 sediment entrapment facilities (see Figure 1 and Table 1), and;
- (2) other applicants within Los Angeles County and additional LACDPW projects. With additional requirements, the U.S. Army Corps of Engineers, Los Angeles District Regulatory Branch (Corps) will also consider requests for maintenance and sediment removal, at other sediment entrapment sites and by other applicants within Los Angeles County (see Special Condition A).

**Permit Number**: SPL-2003-00411-BLR

**Issuing Office**: Los Angeles District

Note: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

**Project Location**: Sediment entrapment facilities throughout Los Angeles County, California as specified (see Figure 1 and Table 1).

### **Project Description:**

The District Engineer, Los Angeles District U.S. Army Corps of Engineers hereby modifies and reissues Regional General Permit (RGP) No. 45.

This regional general permit (RGP) authorizes sediment removal and maintenance of soft bottom sediment entrapment basins, access roads, and other appurtenances such as, but not limited to the following: inlet chutes, trash racks, facing slabs, gage boards, slow and down drains, outlet towers, and a small channel and area around the outlet tower as described below.

To temporarily discharge fill onto 182 acre(s) of waters of the U.S. pursuant to Section 404 of the Clean Water Act of 1972, in association with the WRDA-LACDPW RGP 45 Debris Basin Maintenance Project as shown on the attached drawings.

- (1) Specifically, this RGP authorizes sediment removal under the following two situations:
  - (A) when the quantity of sediment in a sediment entrapment basin has reached 25%

capacity or more, as identified in the permit application.

(B) when a sediment entrapment basin has reached 5% or more of the basin's capacity and when more than 20% of the watershed for a particular basin has burned within the previous 5 years.

Maintenance of these facilities usually involves excavation, fill, and land clearing activity. Occasionally, such removal may involve non-mechanical means such as hand clearing. In almost all cases, the work is performed within existing and defined right-of-way easements. The sediment/debris removal operation at any one basin may occur infrequently (once every few years), several times during a storm season, or several times during and following a single storm event, depending upon the size of the sediment control facility, amount or intensity of water flow, and amount of sediment/debris produced by the watershed or event.

- (2) This RP authorizes maintenance (including reconstruction) of existing access roads to sediment basins covered by the RGP provided that the footprint does not change and the width and length of the road are the minimum necessary to access the sediment removal basin. Reconstruction and maintenance of fences and other appurtenances are also authorized.
- (3) This RGP also authorizes maintenance, for basins covered by the RGP, of a small (no more than 10 feet wide) entrainment channel and a 15 foot wide area immediately around outlet towers to prevent clogging and direct the low flow discharge to the outlet tower.
- (4) The RGP authorizes the removal of vegetation on the upstream and downstream jurisdictional faces of the sediment retention dam and abutments as necessary to comply with dam safety requirements of the California Department of Water Resources, Division of Safety of Dams or to ensure the integrity of the embankment.
- (5) This RGP authorizes weed control that is consistent with the terms and conditions of Regional General Permit No. 41 (*Invasive, Exotic Plant Removal*), with no further review by the Corps of Engineers, and normal weed removal above the 25% capacity area for fire control.

### DEFINITIONS AND ACRONYMS FOR PURPOSES OF THIS RGP

### **Definitions:**

Sediment Entrapment (debris) Basin - Sediment entrapment basin is a more accurate term than debris basin, but both are used synonymously in this document. A sediment entrapment basin is an engineered structure designed to capture sediments (i.e. mud, silt, sand, soil, rock, and dislodged vegetation), eroded from the steep hillside watershed above, before they can enter and block the downstream flood control systems. These basins are located at or near the canyon mouth. For example, in Los Angeles County the vast majority of the basins are located along the foothill areas at the base of the San Gabriel Mountains and Verdugo Hills. For the purposes of

this RGP, a sediment entrapment basin is assumed to have a "soft bottom", i.e., a natural bottom as opposed to a concrete bottom (Maintenance of existing concrete bottom basins is exempt from regulation.).

Capital Flood - Capital flood designations within Los Angeles County are made according to County of Los Angeles Department of Public Works standards. In layman terms, for a mountain watershed, a capital flood is the runoff from a 50-year rainfall storm event falling on a saturated watershed.

25%- and 100%-Capacity Areas and Lines - The current LACDPW design capacity for a basin is equal to the volume of sediment produced by a capital flood. The amount of sediment expected from a capital flood depends on the characteristics of the watershed above and rainfall data for the area. (LACDPW is currently in the process of bringing their existing sediment entrapment basins to "design" standards.) The area occupied by the sediment expected from a capital flood is determined by the basin topography.

Design Capacity - The total volume of sediment expected to be contained by a sediment entrapment basin when it is full.

25% Capacity - One fourth of the design capacity.

25%-Capacity Area - The area occupied by the entrapped sediment and debris when the basin is one-fourth full.

25%-Capacity Line - The outline (on the surrounding hillside or side slopes) of the area estimated to be inundated with water, sediment and debris when the basin is 25% full.

100% Capacity - Same as design capacity.

100%-Capacity Area - The area occupied by the entrapped sediment and debris when the basin is full.

100%-Capacity Line - The outline (on the surrounding hillside or side slopes) of the area expected to be inundated with water, sediment and debris when the basin is full.

Perennial Stream - For the purposes of this RGP, a perennial stream is a stream in which water on the surface of the basin flows year round from the upstream side of the basin or canyon mouth to water/sediment control structure (usually a dam).

### Acronyms

CDFG - California Department of Fish and Game

Corps - U. S. Army Corps of Engineers, Los Angeles District Regulatory Division FWS - U. S. Fish and Wildlife Service
ACNE - Implementation Without Conditions Notification
LACDPW - Los Angeles County Department of Public Works
RGP - Regional General Permit
RWQCB - Regional Water Quality Control Board
SPS - Sediment Placement Site

### **PERMIT CONDITIONS:**

### **General Conditions:**

- 1. The time limit for completing the authorized activity ends on **July 20, 2019**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
- 2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification from this permit from this office, which may require restoration of the area.
- 3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
- 4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
- 5. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished with the terms and conditions of your permit.

### **Special Conditions:**

### A. Prospective permittees for projects other than those listed in Table 1 -

Applicants/prospective permittees for projects other than those listed in Table 1 or for enlarging sites in Table 1 shall initially submit a "complete notification package" to the Corps that includes the following information:

- 1. Name, address, and telephone number of the applicant/prospective permittee;
- 2. Location of the proposed project, including a vicinity map;
- 3. Project purpose such as sediment removal, road maintenance, entrainment channel maintenance, etc. or all of the above;
- 4. Citation of this RGP;
- 5. Other information: a) a brief description of the proposed project, b) the extent of work being proposed, c) latitude and longitude, d) a copy of the US Geological Survey 71/2 minute quadrangle map showing the watershed of the proposed sediment entrapment basin, e) a to-scale plan view and cross-section drawing of the sediment entrapment facility with the 25%- and 100%- full capacity contour clearly demarcated, f) names of the drainages from the basin to the drainage which enters the Pacific Ocean, g) whether the drainage at the sediment entrapment basin is ephemeral, intermittent, or perennial, h) acreage and volumes of the 25%- and 100%-capacity areas, i) a discussion of the 5%-capacity area; (Note: 25% and 100%- lines may be approximate.)
- 6. A copy of a letter to the State Historic Preservation Office (SHPO) inquiring about the presence or absence of listed and/or eligible sites for listing in the National Historic Register in the proposed project area that may be affected by the proposed activity;
- 7. A copy of a letter to the U.S. Fish and Wildlife Service (FWS) inquiring about the presence or absence of any federally listed endangered or threatened species or designated critical habitat in the proposed project area that may be affected by the proposed activity;
- 8. A migratory bird and endangered species survey. If initial construction work for a proposed sediment entrapment facility must occur between March 15 and August 15, a migratory bird and endangered species survey must be initiated during the appropriate season and be submitted to the Corps and FWS. Survey personnel, timing, and protocol shall be coordinated and approved by the Corps in consultation with FWS prior to initiation of the regulated activity to insure appropriate survey results;
- 9. A 401 Water Quality Certification, WDR's, or waiver from the Regional Water Quality Control Board (RWQCB). A complete application for the proposed activity should be submitted simultaneously to the RWQCB. The 401 Water Quality Certification, WDR's, or waiver from the RWQCB shall be obtained and submitted to the Corps prior to final project verification by the Corps under this RGP;

- 10. The standard individual permit application form (Form ENG 4345) or the South Pacific Division Nationwide Permit Preconstruction Notification (PCN) form) may be used as the notification but must clearly indicate that it is a RGP 45 notification, and must include all of the information mentioned above. Work may not commence until verification of compliance with this RGP is received from the Corps, or forty-five days have passed since the Corps received a complete notification package;
- 11. Once an applicant receives verification that maintenance/cleanout of their sediment entrapment facility meets the requirements for this RGP, the applicant may thereafter follow the conditions listed under Special Condition B below for verified RGP holders.

### B. Maintenance Operations for Sediment Retention Basins for which the Corps has Verified Use of this RGP (Table 1).

- 1. The permittee shall maximize avoidance of any natural areas above the 25% capacity area including areas within the 25%- to 100%-capacity area, slopes, and areas in uplands. The 25%- to 100%- capacity area shall not be disturbed by any means unless approved exotic species removal is occurring or sediment deposition has occurred in that area such that sediment must be removed to restore capacity. Within the 25%-to 100%-capacity area, willows, oaks, and sycamores shall not be disturbed unless 90% of their height has been inundated by sediment. To the maximum extent practicable, with the exception of small entrainment channels and outlet tower clearing, native riparian vegetation shall be avoided in all areas while still maintaining basin capacities. Except during rainfall events, until such time as a training program is developed and implemented (see special condition No. 8), flagging will be installed around the outside perimeter of the work area prior to initiation of work. (Standard herbaceous weed control activities for fire prevention outside of the 25%-capacity area are exempted from the flagging requirement.)
- 2. Sediment removal in all sediment entrapment basins will occur between August 16 and March 15 of any given storm season unless prior approval is received from the Corps, in consultation with the FWS. Work in progress on March 15th will continue uninterrupted for two weeks or until completed, whichever is shorter.

In sediment entrapment basins where the 25%-capacity area is greater than 3 acres in size (10 basins), pre-cleanout migratory bird and endangered species surveys must be completed as appropriate by a qualified approved biologist(s) during appropriate seasons for potential species of concern. Depending on the status of the habitat the Corps of Engineers may waive the requirement. Alternatively, the Corps of Engineers may require additional protocol surveys for specific federally endangered or threatened species if submitted biological surveys indicate the possibility of the presence of such species. The

completed report must be submitted to the Corps and FWS for approval prior to cleanout or work in waters of the United States.

- 3. No activity is authorized under this RGP which is likely to jeopardize the continued existence of a threatened or endangered species or species proposed for such designation, as identified under the Federal Endangered Species Act. Nor is activity authorized which is likely to destroy or adversely modify the critical habitat of such species. Federal Agencies should follow their own procedures for complying with the Endangered Species Act. Non-federal permittees shall notify the District Engineer if any listed species or critical habitat might be affected or is in the vicinity of the project. The permittee shall not begin work on the activity until notified by the District Engineer that the requirements of the Endangered Species Act have been satisfied and that the activity is authorized. Information on the location of threatened and endangered species and their critical habitat can be obtained from the U.S. Fish and Wildlife Service and National Marine Fisheries Service.
- 4. No activity is authorized which may adversely affect historic properties listed, or eligible for listing, in the National Register of Historic Places until the District Engineer has complied with the provisions of 33 CFR 325, Appendix C. The prospective permittee must notify the District Engineer if the authorized activity may affect any historic properties listed, determined to be eligible, or which the prospective permittee has reason to believe may be eligible for listing on the National Register of Historic Places. The prospective permittee shall not begin the activity until notified by the District Engineer that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places (see 33 CFR 330.4(g)). Federal permittees should follow their own procedures for compliance with the requirements of the National Historic Preservation Act and other Federal historic preservation laws.
- 5. No mechanized equipment, rubber-tired or track vehicles, or other materials shall be stored in waters of the United States including wetlands, or within the 100%-capacity line or adjacent native habitat. Equipment shall be stored in previously disturbed areas.
- 6. All appropriate Best Management Practices must be used to preclude increased turbidity and to ensure that road construction does not restrict or impede the passage of normal or expected high flows.
- 7. This RGP cannot be used where herbicides have been used on native species within the 100%-capacity line or adjacent native habitat.

- 8. The permittee operating under this RGP shall maintain copies of the terms and conditions of this RGP on each site and will provide training to all personnel doing work on a site to insure that the conditions are implemented.
- 9. The permittee operating under this RGP shall implement the attached training program document, "Debris Basins Maintenance Training Program for Field Personel Operating Under USACE Regional General permit 45" dated June 2015, for field personnel, managers, and other staff who are performing activities regulated under this RGP.
- 10. This condition is a result of site inspections of specific LACDPW basins. Mention of basins in this condition does not eliminate any Proposed General Condition or Special Condition for the Table 1 basins or any other basins.

Big Dalton - LACDPW shall a) work between August 15th and November 15th; and b) leave large trees in place where possible, even within the 25%-100% area(s).

Englewild - same as Big Dalton (above)

Hook East - LACDPW shall avoid habitat on side slopes.

Sawpit - LACDPW shall avoid tributaries entering the debris basin unless they are inundated with sediment.

Santa Anita - LACDPW shall a) work between August 15th and November 15th, and b) avoid existing large willows near the dam on both sides of the basin. Willows on the upstream dam face may be removed only for dam safety requriements.

Mullally - An exception will be made for Mullally Debris Basin.

Mullally may be cleaned when at 5% capacity regardless of the condition of the upstream watershed. This exception is due to the fact that Mullall is significantly undersized at this time. Should the facility be redesigned, LACDPW shall consult with the Corps on the proposed capacity in order to allow area for riparian vegetation to develop. This special condition will be void if the basin is redesigned and built.

- 11. The permittee shall dispose of all excavated sediment and debris at a legal disposal site. Disposal or stockpile of sediment on adjacent native habitat areas, State or federal waters of the United States is prohibited.
- 12. If the permittee proposes to remove any native vegetation beyond those areas cited above, the permittee shall submit a request to the Corps with an accompanying letter from Dam Safety stating the need and reasons for the additional vegetation removal. The

permittee shall not initiate any removal of native vegetation beyond those areas cited above unless the Corps of Engineers has provided written approval for the additional vegetation removal.

- **C.** Emergency Sediment Removal without Condition(s) Emergency situations are those situations where a basin has filled more rapidly than expected and must be cleared in response to a public safety need. In the event that any emergency sediment removal is to be implemented without use of any of the Special Conditions above:
- 1. The permittee must notify, in advance of the emergency action, the Regulatory Division, Los Angeles Section Chief, or the Project Manager for Los Angeles County by telephone or voice mail, (213-452-3414, 213-452-3372, respectively) of the project, location, the condition(s) that cannot be implemented, and the reason for the proposed action(s) without conditions;
- 2. The permittee must submit a notice to the Corps within three working days following work approval and/or to request remediation measures for impacts. The notice shall include a summary of activities that occurred including the location, the condition(s) that were not implemented, and a justification for implementation without condition(s).
- **D.** Non-emergency sediment removal without Condition(s) In the event that any non-emergency sediment removal is proposed to be implemented without any of the Special Conditions in B above, the permittee shall notify the Corps and receive prior approval.

This RGP does not preclude the use of other Nationwide Permits (33 CFR Part 330 Appendix A) provided that the project meets the terms and conditions for the Nationwide Permits, including a 401 water quality certification and Coastal Commission consistency determination, if appropriate.

### **Further Information:**

- 1. Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:
- () Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403).
- (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
- () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
- 2. Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal project.
- 3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.
- 4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
- 5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and

conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measure ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give you favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates tand conditions of this permit.	hat you accept and agree to comply with the terms
PERMITTEE  Los Angeles County Department of Public Wo	$\frac{8/10/2015}{\text{DATE}}$
This permit becomes effective when the Feder Army, has signed below.	al official, designated to act for the Secretary of the
ALLEN.AARON.O.1232270795	Digitally signed by ALLEN AARON.O.1232270795 DN: C=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=ALLEN.AARON.O.1232270795 Date: 2015.07.20 11:57:31-07'00'
Aaron O. Allen, Ph.D. Chief, North Coast Section Regulatory Division	DATE
is transferred, the terms and conditions of this owner(s) of the property. To validate the trans	•

TRANSFEREE

DATE



### LOS ANGELES DISTRICT U.S. ARMY CORPS OF ENGINEERS

### NOTIFICATION OF COMMENCEMENT OF WORK **FOR** DEPARTMENT OF THE ARMY PERMIT

Permi	t Num	ber:	SF	PL-200.	3-00411
		_			

Permit Number:	SPL-2003-00411		
Name of Permittee:	L.A. County Department	t of Public Works; Sree Kumar	
Date of Issuance:	July 20, 2015		
Date work in waters	of the U.S. will commen	ce:	
Corps of Engineers repermit suspension, mo	epresentative. If you fail odification, or revocation.	is subject to a compliance inspectio to comply with this permit you may (if applicable), have read and agree to permit.	y be subject to
Signature of Permittee	2	Date	
•	, .	encement of the activity authorized NE of the following three (3) methods	•
(1) E-MAIL a s	tatement with the above ir	nformation to: Bonnie.L.Rogers@usa	ace.armv.mil

- (2) FAX this certification, after signing, to: 213-452-4196
- (3) MAIL to the following address:

OR

OR

U.S. Army Corps of Engineers

Regulatory Division

ATTN: CESPL-RG-SPL-2003-00411-BLR

LOS ANGELES DISTRICT CORPS OF ENGINEERS

915 WILSHIRE BLVD. STE 930

LOS ANGELES, CALIFORNIA 90053-2325



### U.S. ARMY CORPS OF ENGINEERS

### NOTIFICATION OF COMPLETION OF WORK AND CERTIFICATION OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT

Permit Number: Name of Permittee: Date of Issuance:		of Public Works; Sree Kumar	
Construction period	(in weeks):		
Corps of Engineers repermit suspension, mo	epresentative. If you fail odification, or revocation.	s subject to a compliance inspectito comply with this permit you ment by the above referenced permit has aid permit.	ay be subject to
Signature of Permitte	2	Date	
	on of the activity authorized following three (3) method	d by this permit, sign this certificat ds:	ion and return i
(1) E-MAIL a statemo	ent with the above information	tion to: Bonnie.L.Rogers@usace.a	rmy.mil
(2) FAX this ce	ertification, after signing, to	o: 213-452-4196	

(3) MAIL to the following address:

OR

U.S. Army Corps of Engineers

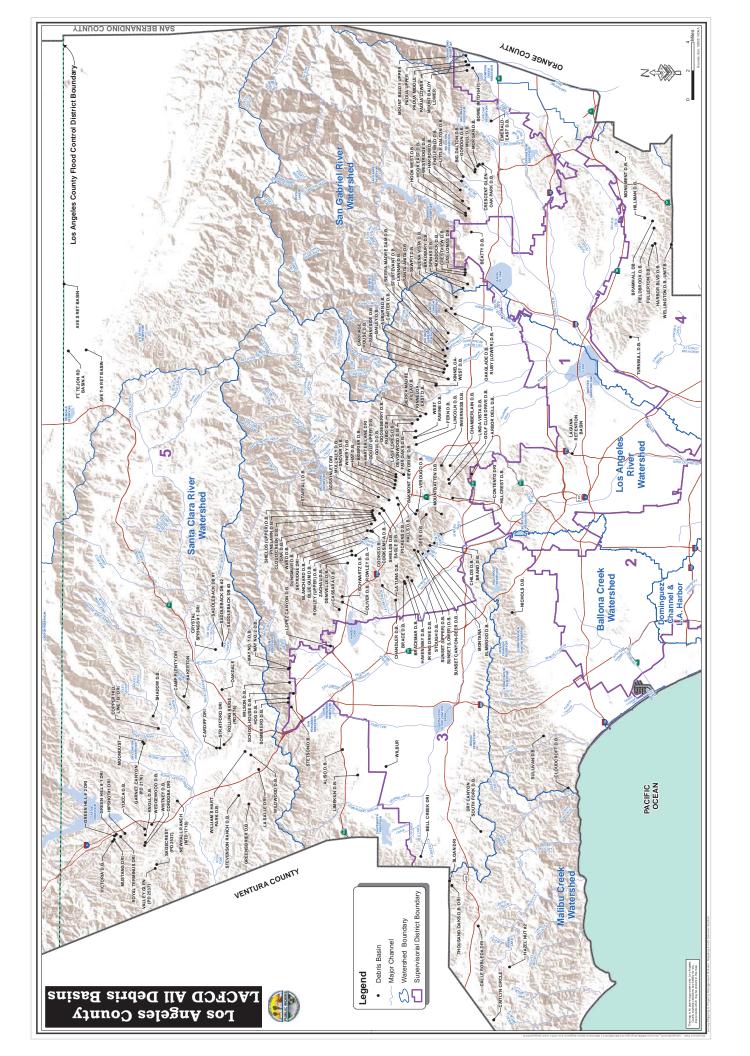
Regulatory Division

ATTN: CESPL-RG-SPL-2003-00411-BLR

LOS ANGELES DISTRICT CORPS OF ENGINEERS

915 WILSHIRE BLVD. STE 930

LOS ANGELES, CALIFORNIA 90053-2325



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FACILITY	ADDRESS	<u>USGS</u>	<u>LATITUDE</u>	LONGITUDE	<u>UPSTREAM WATERCOURSE</u>
Aliso	18100 San Fernando Mission Rd., Granada Hills	Oat Mountain	34 16'33"	118 31'32"	Aliso Creek
Arbor Dell (MTD 207 U02)	5400 Arbor Dell PI, Eagle Rock	Pasadena	34 08′50″	118 11′30″	Unnamed
Auburn	700 Auburn Avenue, Sierra Madre	Mount Wilson	34 10'26"	118 03'20"	Unnamed
Avenue S Retention Basin (PD 2136)	9300 Ave S, Littlerock	Little Rock	34 33'25"	117 57'40"	Desert Wash
Avenue T-8 Retention Basin (PD 2103)	4880 Ave T-8, Palmdale	Palmdale	34 32'00"	118 02'25"	Walnut Creek
Bailey	700 Oakcrest Dr., Sierra Madre	Mount Wilson	34 10'19"	118 03'29"	Bailey Canyon
Beatty	500 Sierra Madre Ave., Azusa	Azusa	34 08'52"	117 33'37"	Beatty Canyon
Bell Creek	6950 Valley Circle Blvd, West Hills	Calabasas	31 12'00"	118 39′20″	Bell Creek
Big Briar (PD 638)	5400 Haskell St, La Canada-Flintridge	Pasadena	34 13'26"	118 11'57"	Unnamed
Big Dalton	1000 Glendora Mt. Rd., Glendora	Glendora	34 09'19"	117 50'00"	Big Dalton Canyon
Blanchard	6400 Day St, Tujunga	Sunland	34 15'10"	118 16′12″	Blanchard Canyon
Blue Gum	10320 Haines Canyon Ave, Tujunga	Sunland	34 15′20″	118 16'30"	Blum Gum Canyon
Brace (MTD 266)	3440 Brace Canyon Rd, Burbank	Burbank	34 12'52"	118 19'19"	Brace Canyon
Bracemar (MTD 266)	3361 North Lamer St, Burbank	Burbank	34 12'50"	118 19'26"	Unnamed
Bradbury	72 Bliss Cyn Rd., Bradbury	Azusa	34 09'21"	117 58'02"	Bradbury Canyon
Bramhall	18909 Branhall Ln. Rowland Heights	La Habra	33 58'00"	117 52'30"	Vernon Channel
Brand	1700 Brand Park Dr, Glendale	Burbank	34 11'03"	118 16'31"	Brand Cyn
Buena Vista	1165 Norumbega Dr. Monrovia	Azusa	34 09'45"	117 58'40"	Unnamed
Calle Robleda (PD1505)	4900 Calle Robleda, Agoura Hills	Calabasas	34 08'15"	118 44′20″	Liberty Canyon
Camp Plenty (PD 354)	27950 Camp Plenty Rd, Canyon Country	Mint Canyon	34 25′50″	118 28′30″	Unnamed
Cardiff (PD 2097)	22350 Cardiff Dr, Saugus	Newhall	34 24'15"	118 37'30"	Unnamed
Carriage House	1600 Winding Way, Pasadena	Mount Wilson	34 10'33"	118 04'07"	Unnamed
Carter	600 N. Baldwin Ave., Sierra Madre	Mount Wilson	34 10'26"	118 02'58'	Unnamed
Cassara	11500 Christy Ave, Sylmar	Sunland	34 16'44"	118 21′23″	Cassara Canyon
Chamberlain	1400 Chamberlain Rd., Pasadena	Pasadena	34 10'07"	118 10'51"	Unnamed
Chandler	9900 Roscoe Blvd, Sun Valley	Burbank	34 13'24"	118 20'41"	Chandler Canyon
Childs	1790 Allen Ave, Glendale	Burbank	34 11'20"	118 16'43"	Childs Canyon
Cloud Creek (PD 891)	2978 Hawkridge Dr, La Crescenta	Pasadena	34 14'49"	118 14'34"	Unnamed
Cloudcroft	3400 Cloudcroft Dr, Malibu	Topanga	34 02'57"	118 34'12"	Parker Canyon
Contento (MTD 1221)	1042 Calle Contento, Glendale	Pasadena	34 10′15″	118 13'15"	Sycamore Canyon Channel
Cooks	5025 Boston Ave, Glendale	Burbank	34 14'49"	118 15'42"	Cooks Canyon
Cooks M1-A	5026 Boston Ave, Glendale	Burbank	34 14'56"	118 15'38"	Cooks Canyon
Copper Hill Line "B" (PD 1386)	Copper Hill Dr & Buckhorn Ln, Saugus	Mint Canyon	34 27'40"	118 29′50″	Unnamed
Cordoba (PD 2284)	30530 Gibraltar Pl, Castaic	Val Verde	34 28'40"	118 38′40″	Unnamed
Crescent Glen	200 N. Crescent Glen Dr., Glendora	Glendora	34 08'30"	117 49'15"	Oak Park Drain System
Crestview	12 Crestview Ct., Duarte	Azusa	34 09'12"	117 56'53"	Unnamed
Crystal Springs #1 (PD 2223)	27130 Crystal Springs Rd, Canyon Country	Mint Canyon	34 24'25"	118 24'30"	Unnamed
Deer	1290 Beaudry Blvd, Glendale	Pasadena	34 11'35"	118 14'27"	Deer Creek
Denivelle	7710 Denivelle Road, Tujunga	Sunland	34 16'20"	118 17′59″	Unnamed

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FACILITY	<u>ADDRESS</u>	<u>USGS</u>	LATITUDE	LONGITUDE	<u>UPSTREAM WATERCOURSE</u>
Devonwood	505 Devonwood Rd., Altadena	Pasadena	34 12'25"	118 07'49"	Unnamed
Dry Canyon – South Fork	22820 Mulholland Hwy, Calabasas	Canoga Park	34 08′10″	118 37'25"	Unnamed
Dunsmuir	5145 Dunsmore Ave, Glendale	Burbank	34 14'51"	118 15'07"	Dunsmore Canyon
Eagle	2700 Harmony Pl, La Crescenta	Pasadena	34 14'07"	118 14'09"	Eagle & Goss Canyon
Elmwood	1260 East Elmwood Ave, Burbank	Burbank	34 11'27"	118 17'07"	Elmwood Canyon
Emerald - East	4854 emerald Avenue, La Verne	Glendora	34 07'38"	117 45'53"	Unnamed
Englewild	4700 Englewild Dr., Glendora	Glendora	34 09'32"	117 50'52"	Englewild Canyon
Fair Oaks	300 Loma Alta Dr., Altadena	Pasadena	34 12'12"	118 08'23"	Unnamed
Fern	3500 Chaney Trail, Altadena	Pasadena	34 12'13"	118 08'51"	Chiquita Canyon
Fieldbrook	18566 Fieldbrook St., Rowland Heights	La Habra	33 57'51"	117 53'39"	Unnamed
Ft. Tejon (PD 2101)	4800 Essex Dr. Palmdale	Palmdale	34 33'15"	118 02'30"	Desert Wash
Fullerton (PD 2202-U2)	2300 Fullerton Rd. Rowland Heights	La Habra	0,85 EE	117 53'30"	San Jose Creek
Garnet Canyon (PD 2176) - <renamed 'a'="" db="" from="" line="" pd2176=""></renamed>	29090 High Sierra Trail, Saugus	Newhall	34°28'33"	118°31'15"	Unnamed
Golf Club	3065 E. Chevy Chase Dr, Glendale	Pasadena	34 10′10″	118 12'11"	Sycamore Canyon
Gooseberry	1600 Crest Drive, Altadena	Chico Flat	34 20'30"	118 07'15"	Gooseberry Creek
Gordon	1900 E. Foothill Blvd., Glendora	Glendora	34 08'29"	117 49'42"	Gordon Canyon
Goss Inlet (PD 503)	2550 Rockdell St, La Crescenta	Pasadena	34 14'15"	118 13′15″	Goss Canyon
Gould	800 Green Ln, La Canada-Flintridge	Pasadena	34 12'54"	118 11'33"	Gould Canyon
Gould Upper (PD 655)	Cul De Sac of Lone Grove Wy, La Canada-Flintridge	Pasadena	34 13'24"	118 11'33"	Gould Canyon
Green Hill #1 (PD 1974)	32200 Green Hill Dr, Castaic	Warm Springs	34 30′00″	118 37'45"	Unnamed
Green Hill #2 (PD 1974)	28410 Avion Ct, Castaic	Warm Springs	34 30′10″	118 37′50″	Unnamed
Greensbrier (PD 2495)	24800 Greensbrier Drive, Stevenson Ranch	Oat Mountain	34°22'13"	118°35'35"	Dewitt Canyon
Halls	2100 Cross St, La Canada-Flintridge	Pasadena	34 13'20"	118 13'15"	Hall Beckley Canyon
Harbor Blvd. (PD2202-U2)	3500 Harbor Blvd., Rowland Heights	La Habra	35 58,00"	117 54'00"	San Jose Creek
Harrow	4800 Easely Canyon Rd., Glendora	Glendora	34 09'23"	117 51'40"	Harrow Canyon
Harter Lane (PD 222)	5400 Harter Ln, La Canada-Flintridge	Pasadena	34 13′30″	118 11'45"	Harter Canyon
Haven Way (MTD 1008)	3630 Haven Wy, Burbank	Burbank	34 12′38″	118 19'09"	McClure Canyon
Нау	1235 El Vago St, La Canada-Flintridge	Pasadena	34 13′26″	118 12′16″	Hay Canyon
Hazel Nut (PD 2488)	1900 Hazel Nut Ct, Agoura	Point Dume	34 6′25″	118 47′17″	Unnamed
Hillcrest	1800 Hillcrest Ave, Glendale	Burbank	34 10'43"	118 15′54″	Hillcrest & Sherer Canyon
Hillman	2332 Hillman Lane, Rowland Heights	La Habra	33 58'30"	117 53'00"	San Jose Creek
Hipshot (PD 1683 U01)	31675 Hipshot Dr, Castaic	Newhall	34 29′10″	118 37'30"	Unnamed
Нов	15455 Glenoaks Blvd, Sylmar	San Fernando	34 19'50"	118 27′50″	Hog Canyon
Hook-East	9200 Sierra Madre Ave., Glendora	Azusa	34 09'12"	117 52'35"	Unnamed
Hook-West	9201 Sierra Madre Ave., Glendora	Azusa	34 09'13"	117 52'44"	Unnamed
Inverness	1377 Edgehill Place, Pasadena	Pasadena	34 10'40	118 10'51"	Unnamed
Irving (MTD 329)	940 Irving Dr, Burbank	Burbank	34 12'26"	118 19'15"	Unnamed
Kinneloa-East	2300 Kinneloa Canyon Road	Mount Wilson	34 10'59"	118 04'58"	Unnamed

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FACILITY	<u>ADDRESS</u>	<u>USGS</u>	LATITUDE	LONGITUDE	UPSTREAM WATERCOURSE
Kinneloa-West	2300 Brambling Lane, Unincorporated	Mount Wilson	34 11'04"	118 05 '05"	Unnamed
Knoll (PD 2279)	28450 Knoll Ct, Castaic	Val Verde	34 28'00"	118 38′00″	Unnamed
La Salle (PD 1358)	23700 La Salle Canyon Dr, Santa Clarita	Oat Mountain	34 21'40"	118 33′00″	Unnamed
La Tuna	9050 La Tuna Canyon Rd, Sun Valley	Burbank	34 14'12"	118 19'37"	La Tuna Canyon
Lannan	2701 Santa Anita Avenue, Sierra Madre	Mount Wilson	34 10'56"	118 01'56"	Unnamed
Las Flores	3200 Rubio Canyon Rd., Altadena	Pasadena	34 12'32"	118 07'32"	Las Flores Canyon
Las Lomas	50 Las Lomas Road, Duarte	Azusa	34 09'14"	117 56'40"	Unnamed
Limekiln	10500 Tunney Ave, Los Angeles	Oat Mountain	34° 15′38″	118°33′25″	Limekiln Canyon
Lincoln	600 Loma Alta Drive, Altadena	Pasadena	34 12'10"	118 09'22"	Unnamed/West Ravine Cyn
Linda Vista	3200 Linda Vista Rd, Glendale	Pasadena	34 10′14″	118 11'54"	Unnamed
Little Dalton	110 Glendora Mountain Rd, Glendora	Glendora	34 09'25"	117 50'14"	Little Dalton Canyon
Lopez	12000 Paxton St, Lake View Terrace	San Fernando	34 17'30"	118 24'15"	Lopez Canyon
Maddock	400 Vineyard Avenue, Duarte	Azusa	34 09'16"	117 57'03"	Maddock Canyon
May #1	13500 Fritz Ln, Sylmar	San Fernando	34 19'52"	118 25'42"	May Canyon
May #2	13500 Fritz Ln, Sylmar	San Fernando	34 19'48"	118 25'38"	Unnamed
Montana (MTD 510)	530 South Via Montana, Burbank	Burbank	34 12'00"	118 17'25"	Story Canyon
Monument	23746 Monument Cyn Dr., Diamond Bar	San Dimas	34 00'05"	117 48'10"	Unnamed
Morgan	2100 Valiant Street, Glendora	Glendora	34 08'28"	117 49'10"	Morgan Canyon
Mountbatten (MTD 787 U02)	1150 Mountbatten Dr, Glendale	Pasadena	34 10′39″	118 14'25"	Unnamed
Mull	1800 North Gordon Rd., Glendora	Glendora	34 08'27"	17 49'36"	Mull Canyon
Mullally (PD 274)	2000 Manistee Dr, La Canada-Flintridge	Pasadena	34 14′28″	118 13′14″	Mullally Canyon
Mustang (PD 2049)	32350 Mustang Dr, Castaic	Val Verde	34 30′00″	118 38′00″	Unnamed
Nichols	1920 Nichols Canyon Rd, Los Angeles	Hollywood	34 06'23"	118 21'31"	Nichols Canyon
Oak (MTD 864)	5324 Quail Canyon Rd, Glendale	Pasadena	34 14'40"	118 14'45"	Unnamed
Oak Park	2357 Oak Park Rd., Glendora	Glendora	34 08'30"	117 49'15"	Oak Park Drain System
Oakdale (PD 2389)	26500 Oakdale Canyon Ln, Canyon Country	Mint Canyon	34 23'52"	118 27'17"	Unnamed
Oakglade	900 Ridgeside Drive, Monrovia	Azusa	34 10'25"	117 59'39"	Unnamed
Oakmont (MTD 806)	2940 Oakmont View Dr, Glendale	Pasadena	34 12′14″	118 14'23'	Unnamed
Oliver	11300 Dominica Ave, Lake View Terrace	Sunland	34 16′34″	118 20′52″	Oliver Canyon
Pickens	4628 Briggs St, La Crescenta	Pasadena	34 13′16″	118 13'43"	Pickens Canyon
Pinelawn (PD 1053)	2850 Pinelawn Dr, La Crescenta	Pasadena	34 13′16″	118 13'43"	Unnamed
Rowley	10720 Las Lunitas Ave., Tujunga	Sunland	31 15'50"	118 17'25"	Rowley Canyon
Rowley Upper	10890 Amidon Pl, Tujunga	Sunland	34 16'05"	118 17'08"	Rowley Canyon
Royal Terminus (PD 1920)	28410 Royal Rd, Castaic	Newhall	34 29′30″	118 37'45"	Unnamed
Rubio	3200 Rubio Canyon Rd., Altadena	Mt. Wilson	34 11′56″	118 07'19"	Rubio Canyon
Ruby Lower	300 Scenic Drive, Monrovia	Azusa	34 09'51"	117 39′54″	Ruby Canyon
Saddleback #1 (PD 2247)	15230 Saddleback Rd, Santa Clarita	Mint Canyon	34 23′30″	118 24'00"	Unnamed
Saddleback #2 (PD 2247)	15200 Saddleback Rd, Santa Clarita	Mint Canyon	34 24'00"	118 24'00"	Unnamed
Saddleback #3 (PD 2247)	15200 Saddleback Rd, Santa Clarita	Mint Canyon	34 23′30″	118 24'00"	Unnamed

FACILITY	<u>ADDRESS</u>	<u>USGS</u>	<u>LATITUDE</u>	LONGITUDE	UPSTREAM WATERCOURSE
Santa Anita	2000 Oak Place, Arcadia	Mount Wilson	34 10'14"	118 01'16"	Santa Anita Canyon
Sawpit	700 North Canyon Road, Monrovia	Azusa	34 10'05"	117 59'05"	Sawpit/Monrovia/Spanish Cyn
Schoolhouse	14500 Olive View Dr, Sylmar	San Fernando	34 19'32"	118 27'29"	Schoolhouse Canyon
Schwartz	9825 Foothill Blvd, Sylmar	Sunland	34 16'32"	118 20'32"	Schwartz Canyon
Shadow (PD 2099)	29000 Shadow Valley Ln, Saugus	Mint Canyon	34 28′12″	118 29'24"	Unnamed
Shields	5300 La Crescenta Ave, La Crescenta	Pasadena	34 14'23"	118 14'22"	Shields Canyon
Shields Upper (PD 769)	5670 Pine Cone Rd, La Crescenta	Pasadena	34 14'52"	118 14'15"	Shields Canyon
Sierra Madre Dam	900 Brookside Lane, Sierra Madre	Mount Wilson	34 10'34"	118 02'31"	Little Santa Anita Canyon
Sierra Madre Villa	1150 Sierra Madre Villa Ave., Pasadena	Mount Wilson	34 10'16"	118 04'36"	Pasadena Glen/Hastings Cyn
Skyridge (MTD 1317)	5190 Sky Ridge Dr, Glendale	Burbank	34 14'50"	118 15'40"	Unnamed
Sloan (PD 1726)	5850 Sloan PI, Calabasas	Calabasas	34 10′10″	118 41'45"	Gates Canyon
Snover	5250 Escalante Dr, La Canada-Flintridge	Pasadena	34 13'48"	118 13'22"	Snover Canyon
Sombrero	Cul De Sac of Sombrero Cyn Rd, Sylmar	San Fernando	34 19′52″	118 28'07"	Sombrero Canyon
Spinks	17 Woodlyn Land, Bradbury	Azusa	34 09'06"	117 37'42"	Spinks Canyon
Starfall (PD 1081)	2700 Starfall Dr, La Crescenta	Pasadena	34 14'47"	118 14'11"	Eagle Canyon
Stetson	13877 Glenoaks Blvd, Sylmar	San Fernando	34 19'41"	118 28′27″	Unnamed
Stevenson Ranch (PD 2528)	25305 Pico Canyon Rd, Stevenson Ranch	Newhall	34°22'53"	118°34'56"	Pico Canyon
Stough	1150 Walnut Ave, Burbank	Burbank	34 12'00"	118 18'09"	Stough Canyon
Stratford (PD 2097)	25450 Stratford Dr, Saugus	Newhall	34 24'00"	118 37'40"	Oakdale Canyon
Sturtevant	500 Lotus Lane, Sierra Madre	Mount Wilson	34 10'18"	118 02'22"	Unnamed
Sullivan	2200 Queensferry Rd, Los Angeles	Topanga	34 04'24"	118 30'26"	Sullivan Canyon
Sunnyside	4100 Park Vista Dr., Pasadena	Mount Wilson	34 10'26"	118 03'52"	Unnamed
Sunset Canyon-Deer Canyon	1270 Country Club Dr, Burbank	Burbank	34 12'05"	118 17′10″	Deer Canyon
Sunset Lower	455 Country Club Dr, Burbank	Burbank	34 11'09"	118 17'04"	Sunset Canyon
Sunset Upper	1500 Country Club Dr, Burbank	Burbank	34 12′18″	118 17'03"	Sunset Canyon
Thousand Oaks (PD 1726)	25800 Thousand Oaks Blvd, Calabasas	Calabasas	34 10'00"	118 41′50″	Unnamed
Turnbull	13600 Turnbull Canyon Road, Whittier	Whittier	33 59'15"	118 01'35"	Turnbull Canyon
Verdugo	3500 La Crescenta Ave, Glendale	Pasadena	34 12'06"	118 14'09"	Verdugo Wash
Victoria (PD 2275)	28632 Victoria Rd, Castaic	Whittier Peak	34 30′20″	118 38′10″	Unnamed
Ward	3145 Markridge Rd, Glendale	Pasadena	34 14'39"	118 14'52"	Ward Canyon
Wedgewood (PD 2467)	Cul De Sac of W. Wedgewood Ct, Castaic	Newhall	34 28′00″	118 37′10″	Villa Canyon
Wellington (PD 2202 UIII)	1792 Harbor Blvd, La Habra heights	La Habra	33 57' 26"	117 55' 13"	Unnamed
West Ravine	3600 chaney Trail, Altadena	Pasadena	34 12'18"	118 08'51"	Unnamed
Westridge	1000 Westridge Avenue, Glendora	Glendora	34 09'01"	117 52'15"	Unnamed
Whitney (PD 2444)	30530 Whitney Dr, Castaic	Val Verde	34 28′30″	118 38′30″	Villa Canyon
Wilbur	19000 Nordhoff Ave, Northridge	Canoga Park	34 13'45"	118 32'45"	Aliso & Wilbur Canyon
Wildwood (PROJ 1222)	23145 Davey Ave, Newhall	Oat Mountain	34 22'06"	118 31′56″	Wildwood Canyon
William S. Hart Park (RDD 341)	22900 Market St, Newhall	Oat Mountain	34 22′27″	118 31'42"	Unnamed
Wilson	14301 Saranac Dr, Sylmar	San Fernando	34 19'46"	118 26'41"	Wilson Canyon

Minery         ADDRESS         ADDRESS         LATITUDE         LONGITUDE         UPSTREAM WATERCOL           Winery         1409 El Vago St, La Canada-Flintridge         Pasadena         34 13′30″         118 12′33″         Winery Canyon           Vucca (PD 2157)         30570 Yucca Pl, Castaic         Newhall         34 28′12″         118 37′12″         Unnamed           Zachau         10905 Sevenhills Dr, Tujunga         Sunland         34 16′02″         118 17′25″         Zachau Canyon						
1409 El Vago St, La Canada-Flintridge       Pasadena       34 13′30″       118 12′33″       V         1 30570 Yucca Pl, Castaic       Newhall       34 28′12″       118 37′12″       Z         1 0905 Sevenhills Dr, Tujunga       Sunland       3416′02″       118 17′25″       Z	FACILITY	ADDRESS	<u>NSGS</u>	LATITUDE	LONGITUDE	<b>UPSTREAM WATERCOURSE</b>
30570 Yucca Pl, Castaic         Newhall         34 28/12"         118 37/12"           10905 Sevenhills Dr, Tujunga         Sunland         3416/02"         118 17/25"	Winery	1409 El Vago St, La Canada-Flintridge	Pasadena	34 13'30"	118 12'33"	Winery Canyon
10905 Sevenhills Dr, Tujunga Sunland 3416′02″   11817′25″	Yucca (PD 2157)	30570 Yucca PI, Castaic	Newhall	34 28′12″	118 37'12"	Unnamed
	Zachau	10905 Sevenhills Dr, Tujunga	Sunland	3416'02"	118 17'25"	Zachau Canyon

### DEBRIS BASIN MAINTENANCE PROGRAM

The operation of the LACFCD of Los Angeles Debris Basin Maintenance Program requires regular vegetation mowing and/or periodic removal of vegetation and sediment from debris basins throughout the LACFCD of Los Angeles. LACFCD defines three sub-areas in each debris basin to describe the limits of the basin and interior work areas. These three areas, in order of increasing size, include the 25% capacity elevation contour boundary (25% of design capacity), the mowing contour boundary, and the 100% capacity elevation contour boundary (100% of design capacity). (The current LACFCD design capacity for a debris basin is the volume of debris a basin can impound, which depends on the characteristics of the upstream watershed and rainfall data for the area.)

- The 25% contour delineates the portion of the debris basin that receives periodic sediment removal as needed to maintain the capacity of the basin at or below this contour elevation. Maintenance of each basin at or below the 25% contour provides that adequate capacity is available to protect downstream areas from future storm water flows.
- The mowing contour is similar to and often overlaps the 25% contour and is the portion of the debris basin that receives annual vegetation trimming and/or mowing.
- The debris basin limit contour delineates the design capacity of each basin (i.e. the 100% contour). The boundary of the LACFCD-owned property containing the debris basin generally extends outside the basin limit contour, and often includes an access road for LACFCD maintenance vehicles.

### **Routine Maintenance Activities**

Routine maintenance (RM) activities consist of hand clearing, annual mowing, debris basin cleanouts, or other means of minor vegetation management and/or structural repairs necessary to maintain the functionality of the debris basin and comply with State Division of safety of Dams (DSOD) and vector and fire control requirements. RM would consist of any combination of the following activities.

### A) The Removal of Fallen and Dead Trees and Annual Brush Maintenance

The removal of fallen and dead trees and annual brush maintenance will not to exceed 50 cubic yards, combined fallen, dead trees and brush, annually. Heavy equipment such as dump truck and backhoes will not be utilized in areas of the basins where vegetation may be crushed or damaged outside the 25% contour. Outside the 25% contour all debris clearing and tree trimming shall be done by hand using hand tools, and only to the extent necessary to facilitate the project goals. It is understood that in some situations heavy equipment must be utilized to remove large, cumbersome, or dangerous materials. When heavy equipment must be utilized the biologist shall clearly mark a path to and from the debris to be removed and equipment Permittee's shall stay within the demarcated zone. If any plant or animals identified as California Department of Fish and Wildlife ('Department') species of special concern, or U.S. Fish and Wildlife Service ('Service') state listed or threatened species may be impacted as a result of these activities, the Service shall be contacted PRIOR to any work being conducted and an exclusionary plan shall be created and implemented to avoid impacts to those resources. For purposes of mowing only: after appropriate surveys have been conducted by a qualified biologist and no sensitive species have been observed utilizing the area, LACFCD may mow within the 25% contour without PRIOR notification to the Department. However, if biological surveys indicate a state listed or candidate species could be impacted, no maintenance may be conducted, and consultation with the Department is REQUIRED.

### **B)** Tree Trimming

Trees throughout the riparian areas outside the 25% contour, other than willow species, that require trimming shall only be trimmed under supervision of a tree surgeon or qualified arborist. This Agreement does not authorize the removal of any trees with a diameter at breast height (DBH) of greater than 4 inches without PRIOR Department approval. Based on new information additional protective measures and mitigation may be required.

### C) Brush Clearance and Vegetation Mowing

The brush clearance program requires removal and reduction of dead trees and trimming or thinning of bushes and shrubs, and removal of other combustible refuse near roads, fences, buildings, and combustible fences. Where brush clearance activities are to be conducted outside the 25% contour, no more than 50 total cubic yards of this types material shall be removed annually without additional consultation from the Department. If greater than 50 cubic yards of materials need to be cleared from any one debris basin during any one RM activity additional consultation with the Department shall be required and additional protective measures and/or mitigation may be required. This Agreement does not authorize large scale fuel modification activities.

Vegetation removal and facility repairs within LACFCD's debris basin limits would be performed as required or requested by the California Department of Water Resources, Division of Safety of Dams (DSOD), the Agricultural Commission (AC), the Vector Control District (VCD), or local fire Departments. Upon receipt of notices from DSOD, AC, VCD or local fire Departments that vegetation removal and/or repairs are required, LACFCD would inform the Department and provide copies of the notices or email requests. LACFCD must remove vegetation that would be creating a fire hazard, vector, and/or odor nuisance to adjacent properties or that may be detrimental to the public health and safety, and the stability of the debris basin. If removal of this vegetation requires passing through an area that would be outside the boundaries of the notice, LACFCD would provide a description of that path when notifying Department.

- 1. Vegetation mowing at all debris basins would be performed annually between August 16<sup>th</sup> and March 15<sup>th</sup> to prevent any impacts to nesting birds that could occur.
- 2. If mowing during the nesting season (e.g., mid-February through mid-August) is necessary, a qualified biologist shall perform a nesting bird survey prior to initiation of mowing if there would be a potential for impacts to nesting birds, and findings must be submitted to the Department for concurrence. Additional restrictions and protective measures can be found in the Resource Protection portion of the Agreement.
- 3. Mowing using mechanical mowers would be performed within the 25% contour of debris basins. Exotic and invasive/weed removal would be performed by hand between the 25% and 100% contours for fire and invasive vegetation control.
- 4. The 25% contour location is based on previous surveys performed at the basins. Handheld GPS equipment would be used in the field to determine several points in the debris basin that define the 25% contour. These GPS points would be imported into database spreadsheets. The data would be used in the field to determine or mark the 25% contour limits prior to initiation of mowing activities.
- 5. Invasive vegetation would be removed first by hand and put onto a tarp or handled according to the different methods discussed below under "Exotic Species Eradication Control".
- 6. All pre- and post mowing site visits would be conducted by a qualified biologist to ensure that all mowing activities are performed according to the provisions of the Long-term Agreement or other applicable regulatory agency permits. Before and after photos (either by biologists or LACFCD staff), monthly schedule updates, and biological monitoring status reports from the biologists would be conducted and included as part of the annual debris basin maintenance monitoring report.

### D) Entrainment Channel and Outlet Tower Area Clearing

1. Maintenance of a small (i.e., no more than 10-foot wide) entrainment channel that

extends from the debris basin outlet tower to the upstream end of the LACFCD easement along the flow path, and a 15-foot wide radius area immediately around the outside surface of an outlet tower at the top of the deposited debris would be performed annually to prevent clogging of the tower inlet and to direct the low flow discharge from the basin into the outlet tower.

- 2. In cases where a debris basin, in a non-burned watershed that has less than 25% capacity, has sufficient accumulated debris to require clearing around the outlet tower (i.e., greater than 5-feet deep from the bottom of the debris basin), the following condition shall apply when removing sediment around the outlet tower: Sediment clearing around the tower to ensure a clean tower inlet would require excavating a 15-foot radius from the tower's outer surface to the basin bottom elevation. This bottom basin elevation would be as shown on the ultimate cut plan for that basin. At the outer circumference of the 15-foot cleared area, a 2:1 slope shall be constructed to meet the existing debris surface. This would ensure that no material would fall against the tower during or after a storm event. Therefore, excavating would require additional vegetation and sediment removals, as necessary, to create a 2:1 slope from the top of the sediment to the bottom of the excavated area to operate a backhoe (or gradall) and provide access for a truck to remove the excavated debris.
- 3. These annual maintenance activities would be performed immediately following the mowing activities to minimize impacts on vegetation, or thereafter during the storm season as deemed necessary by LACFCD. If work needs to be performed during the nesting season, a biological monitor would be present and/or available during the mowing activities to ensure compliance with nesting bird requirements. Both mechanical and non-mechanical tools would be used, as necessary, to perform the maintenance activities.

### E) Sediment Removal

Sediment removal would be authorized under the following conditions: Removal of accumulated sediment is necessary when the debris basin capacity reaches or exceeds the 25% contour. Sediment removal is completed with heavy equipment, such as a backhoe(s) or excavator(s), transferring the sediment into a dump truck(s). Generally, 10-cy trucks are used to transport the sediment from the debris basin to a designated sediment placement site. There are multiple variables that contribute to the rate at which the 25% contour would be filled, thereby triggering a cleanout requirement. Many of these factors, such as wildfires, amount of annual rainfall, and changes in land use conditions upstream of the basin, cannot be anticipated. These types of variables make it impractical to predict the frequency of debris basin sediment removal activities; however, historically the debris basins have been cleaned out generally once every 5 to 20 years. The overall cleanout period can be longer (i.e., up to 12 weeks) for larger basins because of weather delays, as sediment clearing is suspended for rain. Although sediment clearing is generally accomplished in the months prior to the rainy season (between mid-August and early November), this activity are can occur year-round as needed to adequately maintain the floodcontrol facilities. If maintenance activities are proposed at a time that sensitive biological resources may be affected, such as the nesting bird season, specific preventative measures would be implemented in accordance with all applicable permits, including the proposed provisions of this Agreement discussed further below.

- 1. When the quantity of sediment in a debris basin has reached or exceeded the 25% of the debris basin's volume.
- 2. When the quantity of sediment in a debris basin has reached or exceeded 5% or more of the basin's capacity and more than 20% of the watershed upstream of the debris basin has burned within the previous 5 years.

- 3. Sediment removal in all debris basins would occur between August 16<sup>th</sup> and March 15<sup>th</sup> of any given storm season unless prior approval is received from the Department If work in progress could potentially extend beyond March 15<sup>th</sup> LACFCD would be required to perform the necessary nesting bird surveys, in accordance with other provisions of this Agreement, before work may continue uninterrupted.
- 4. Sediment removal below the cleanout thresholds listed above would only be performed after prior approval from all agencies.
- 5. Sediment removal usually involves excavation, fill, and land clearing activity. The work would be performed using mechanical equipment and non-mechanical activities such as hand clearing. Work would be performed within the existing and defined right-of-way easements. All buried vegetation within the sediment deposition zone would be removed with the sediment as part of the removal activity.
- 6. A qualified biological monitor would be present or available before and during the sediment removal activities to ensure protection of resources.
- 7. A Water Diversion Plan would be prepared and appropriate Best Management Practices (BMPs) installed prior to start of work when a basin has ponded or flowing water. The plan would include appropriate BMPs and water sampling and testing protocols to comply with applicable Regional Water Quality Control Board (RWQCB) requirements. Similar to the RWQCB permit conditions, copies of the water sampling testing results would be submitted to the Department for its records.
- 8. Two standard water diversion plans (diversion plans) that have been previously approved by agencies and used by LACFCD during previous basin cleanouts that involved ponded or flowing water are included as part of the Long-term Agreement. Any future debris basin cleanout activity would use either one of the diversion plans and would notify the Department in writing. No diversion plans would be submitted prior to start of the cleanout. However, if LACFCD believes there would be a need to deviate from the pre-approved water diversion plan, a modified diversion plan would be submitted to the Department for review and approval.

### F) Maintenance of Access Road and Other Appurtenances

1. Maintenance would be authorized, including restoration/reconstruction of existing access roads to and into debris basins, parking and turnaround areas, crest of spillway and spillway structures, provided the footprint does not change and the minimum width and length of the road necessary to provide access for routine maintenance and sediment removal. Reconstruction and maintenance of fences and other appurtenances would be also authorized. Appropriate BMPs would be installed prior to start of performing maintenance activities.

2. Annual inspections of the debris basin structures would be conducted, including minor repairs of outlet towers and access railings/stairs, graffiti removals, spillway, inlet and outlet pipe structures/chutes, riprap, trash racks, facing slabs, gage boards, slow and down drains, fence, unclogging of outlet towers, and other appurtenances to ensure compliance with other agency requirements and for the safety of the basin dam structures. This may require the use of hand and/or mechanical equipment and trucks to enter the basins to perform the repairs.

### G) State Division of Safety of Dams (DSOD) Compliance

Removal of vegetation and/or accumulated trash/debris, including repair of rodent-damaged portions on the upstream and downstream faces of the debris basin dam and abutments would be allowed as necessary to comply with dam safety requirements of the DSOD and/or to ensure the integrity of the embankment. Additional maintenance activities may be required by State DSOD and shall be performed accordingly to comply with applicable regulations, including notification and coordination with Department and other agencies.

### H) Storm Damage Repair and Restoration Projects

Storm damage repair and restoration of existing structures back to pre-storm conditions includes eroded or damaged slopes and embankments, down drains, inlet and outlet pipes and related structures, and other on-site structures. E-mail notification to the Department would be required prior to initiation of any such storm damage repair or restoration projects for existing structures.

### **Conditions**

Sediment removal from debris basins would be allowed whenever necessary to protect downstream public health, safety and welfare. Debris basins with special situations that warrant specific conditions are listed below in Table 2 with the appropriate restrictions necessary to protect the environmental resources values present. Wilson Debris Basin requires a phased clearance program which is intended to reduce the amount of vegetation removed in any one year from vegetation mowing activities.

Table 2-Special Conditions

Debris Basin	Special Condition
Big Dalton &	Sediment removal activities would be conducted between August 15th and November 15th and would avoid major trees located within the slopes of the basin banks where at all
Englewild	possible, even when cleaning within the 25%-100% contour.
Linda Vista & Mullally	These basins are significantly undersized and require sediment clearing whenever the basin reaches 5% of maximum capacity, regardless of the upstream watershed conditions. Should the facility be redesigned, LACFCD would consult with the agencies on the proposed capacity in order to allow area for riparian vegetation to develop. This special condition would be void once the basins were built.

Santa Anita	<ul> <li>Sediment removal activities would be conducted between August 16th and November 15th and would avoid existing large willows near the dam on both sides of the basin. Willow growth on the upstream dam face may be removed to meet dam safety requirements.</li> <li>A 10-foot wide channel within the path of the inflow, through the willow grove located at the upstream end of the basin reservoir, would be maintained as-needed to relieve the blockage of debris upstream of the trees and allow debris and sediment to reach the basin.</li> <li>A 16-foot wide access area along the toe of the upstream dam embankment face and the west embankment (adjacent to the access road and the residential homes) would be cleared of vegetation and maintained to allow maintenance vehicle trucks or equipment to access the outlet tower from the west invert access ramp for maintenance, to conduct upstream spillway embankment inspection, and to maintain a fire hazard clearing area on the west side of the basin.</li> <li>A 15-foot wide radius clearance area around the outside surface of the tower would be</li> </ul>
O	cleared of debris, vegetation, and sediment to unclog the outlet tower inlets, ensure proper drainage, and to direct storm flows into the outlet tower.
Sawpit	LACFCD would avoid tributaries entering the debris basin unless they are inundated with sediment.
Sierra Madre Dam	The State Division of Safety of Dams (DSOD) requires Sierra Madre Dam to be cleaned out whenever the accumulated debris surface reaches a target elevation of 1,128. 9 feet above mean sea level (msl). This elevation corresponds to the maximum water and silt level at which the debris basin could safely operate in the event of a maximum credible earthquake.
Wilson	<ul> <li>The area within the 25% contour that would be downstream of the July 2008 mature vegetation line (as indicated by a purple line on attached graphic) would be mowed annually in its entirety. Beginning at the edge of the mature vegetation line, the remainder of the 25% contour would be segregated into two areas by the control line. The eastern section would be mowed during even numbered years and the western portion would be mowed during odd numbered years. Training channels would be cut along the toe of both sides of the basin.</li> <li>The training channel along the west side of the basin would collect waters flowing from the canyon. This western channel would be maintained up to the mature vegetation line annually. During odd numbered years, when the western half of the mature area would be cleared, the training channel would be extended to the furthest upstream point to collect the canyon runoff.</li> <li>The training channel along the east side would collect water coming from a natural spring along that bank of the channel. A culvert would be placed to funnel the water under the basin access road and would be maintained annually.</li> <li>A 15-foot wide radius clearance area around the outside surface of the outlet tower would be cleared annually of debris, vegetation, and sediment to unclog the outlet tower inlets, ensure proper drainage, and to direct storm flows into the outlet tower.</li> </ul>

### FOR FIELD PERSONEL OPERATING UNDER USACE REGIONAL GENERAL PERMIT 45

Prepared by
Los Angeles County Department of Public Works
Los Angeles County Flood Control District

For

United States Army Corp of Engineers

June 2015

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### Introduction

A sediment entrapment basin (Debris Basin) is an engineered structure designed to capture sediments (i.e. mud, silt, sand, soil, rock, and dislodged vegetation), eroded from the steep hillside watershed above, before they can enter and block the downstream flood control systems. These basins are located at or near the canyon mouth. Capital Flood designations within Los Angeles County are made according to County of Los Angeles Department of Public Works standards. In layman terms, for a mountain watershed, a capital flood is the runoff from a 50-year rainfall storm event falling on a saturated watershed.

### **Background and Scope**

Maintenance of these facilities usually involves excavation, fill, and occasionally land clearing activity. Such clearing activity may involve non-mechanical means such as hand clearing. But, in almost all cases, the work is performed within existing and defined right-of-way easements. The sediment/debris removal operation at any one basin may occur infrequently (once every few years), several times during a storm season, or several times during and following a single storm event, depending upon the size of the sediment control facility, amount or intensity of the rains, and amount of sediment/debris produced by the watershed.

The maintenance activities for debris basins include, but are not limited to:

- a) Maintenance (including reconstruction) of existing access roads to sediment basins. Reconstruction and maintenance of fences and other appurtenances are also authorized.
- b) Maintenance for basins covered by the Regional General Permit (RGP) of a small entrainment channel (no more than 10 feet wide) and a 15 foot wide area immediately around outlet towers to prevent clogging and to direct the low flow discharge to the outlet tower.
- c) Removal of vegetation on the upstream and downstream jurisdictional faces of the sediment retention dam and abutments as necessary to comply with dam safety requirements of the California Department of Water Resources, Division of Safety of Dams or to ensure the integrity of the embankment.
- d) Weed control that is consistent with the terms and conditions of RGP No. 41, with no further review by the United States Army Corps of Engineers (USACE), and normal weed removal above the 25%-capacity area for fire control.

### **Purpose**

The main purpose of this training document is to comply with Federal & State and local environmental requirements and Clean Water Quality Act.

### **Training Resources**

- USACE Regional General Permit 45
- Los Angeles Regional Water Quality Control Board (LARWQCB)
- California Department of Fish & Wildlife (CDFW) Streambed Alteration Agreement (SAA)

### **Training Materials List**

- USACE Regional General Permit 45 Special Conditions
- Best Management Practices conducted during work
- Nesting Bird Awareness Training Material
- Endangered Species (Los Angeles County Area –USFWS List)
- Invasive vegetation plants list -Photos

### **USACE** Regional General Permit (RGP) 45 - Special Conditions

- 1) The permittee shall maximize avoidance of any natural areas above the 25% capacity area including areas within the 25%- to 100%-capacity area, slopes, and areas in uplands. The 25%- to 100%- capacity area shall not be disturbed by any means unless approved exotic species removal is occurring or sediment deposition has occurred in that area such that sediment must be removed to restore capacity Within the 25%-to 100%-capacity area, willows, oaks, and sycamores shall not be disturbed unless 90% of their height has been inundated by sediment. To the maximum extent practicable, with the exception of small entrainment channels and outlet tower clearing, native riparian vegetation shall be avoided in all areas while still maintaining basin capacities. Except during rainfall events, until such time as a training program is developed and implemented, flagging will be installed around the outside perimeter of the work area prior to initiation of work. (Standard herbaceous weed control activities for fire prevention outside of the 25%-capacity area are exempted from the flagging requirement.)
- 2) Sediment removal in all sediment entrapment basins will occur between August 16 and March 15 of any given storm season unless prior approval is received from the USACE, in consultation with the United States Fish and Wildlife Services (USFWS). Work in progress on March 15th will continue uninterrupted for two weeks or until completed, whichever is shorter.
  - In sediment entrapment basins where the 25%-capacity area is greater than 3 acres in size, pre-cleanout migratory bird and endangered species surveys must be completed semi-annually by a USACE approved biologist(s) during appropriate seasons for potential species of concern. Depending on the status of the habitat the Corps of Engineers may waive the requirement. Alternatively, the Corps of Engineers may require additional protocol surveys for specific federally endangered or threatened species if submitted biological surveys indicate the possibility of the presence of such species. The completed report must be submitted to the USACE and USFWS for approval prior to clean-out.
- 3) No activity is authorized under this RGP which is likely to jeopardize the continued existence of a threatened or endangered species or species proposed for such designation, as identified under the Federal Endangered Species Act. Nor is activity authorized which is likely to destroy or adversely modify the critical habitat of such species. Federal Agencies should follow their own procedures for complying with the Endangered Species Act. Non-federal permittees shall notify the District Engineer if any listed species or critical habitat might be affected or is in the vicinity of the project. The permittee shall not begin work on the activity until notified by the District Engineer that the requirements of the Endangered Species Act have been satisfied and that the activity is authorized. Information on the location of threatened and endangered species and their critical habitat can be obtained from the USFWS and National Marine Fisheries Service.

- 4) No activity is authorized which may adversely affect historic properties listed, or eligible for listing, in the National Register of Historic Places until the District Engineer has complied with the provisions of 33 CFR 325, Appendix C. The prospective permittee must notify the District Engineer if the authorized activity may affect any historic properties listed, determined to be eligible, or which the prospective permittee has reason to believe may be eligible for listing on the National Register of Historic Places. The prospective permittee shall not begin the activity until notified by the District Engineer that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places (see 33 CFR 330.4(g)). Federal permittees should follow their own procedures for compliance with the requirements of the National Historic Preservation Act and other Federal historic preservation laws.
- 5) No mechanized equipment, rubber-tired or track vehicles, or other materials shall be stored in waters of the United States including wetlands, or within the 100%-capacity line or adjacent native habitat. Equipment shall be stored in previously disturbed areas.
- 6) All appropriate Best Management Practices must be used to preclude increased turbidity and to ensure that road construction does not restrict or impede the passage of normal or expected high flows.
- 7) This RGP cannot be used where herbicides have been used on native species within the 100%-capacity line or adjacent native habitat.
- 8) The permittee operating under this RGP shall maintain copies of the terms and conditions of this RGP on each site and will provide training to all personnel doing work on a site to insure that the conditions are implemented.
- 9) The permittee operating under this RGP shall develop a training program for field personnel performing activities regulated under this RGP and their managers, planning personnel, and other appropriate managers and staff. The training program shall cover Best Management Practices including management oriented for water quality, management oriented for wildlife, native flora and fauna expected on the site and mechanisms for avoidance, a discussion of nesting season, native plants vs. invasive weeds, and endangered species protocol. The training program shall be developed in coordination with the USACE, Environmental protection Agency (EPA), Regional Water Quality Control Board (RWQCB), USFWS, and California Department of Fish and Wildlife (CDFW) and be approved by the Corps. Appropriate personnel (see above) shall receive training prior to September 15, 1998. Certification that said training has been completed shall be transmitted to Corps Regulatory prior to September 1, 1998. Invasive weeds to be considered are those listed in RGP 41, i.e. giant reed, salt cedar, tree tobacco, castor bean, Russian thistle, star thistle, artichoke thistle, thistle, pampas grass, fountain grass, or cocklebur Smaller weeds that might be considered for sensitive removal to control fire are mustards, introduced annual grasses, sweet clover, and some composites such as ox tongue.

- 10) This condition is a result of site inmspections of specific LACDPW basins. Mention of basins in this condition does not eliminate any Proposed General Condition or Special Condition for the Table 1 basins or any other basins.
  - ➤ Big Dalton LACDPW shall a) clean between August 15th and November 15th, and b) leave major trees where at all possible, even when cleaning within the 25%-100% area.
  - Englewild same as Big Dalton
  - Hook East LACDPW shall avoid habitat on side slopes.
  - Sawpit LACDPW shall avoid tributaries entering the debris basin unless they are inundated with sediment.
  - Santa Anita LACDPW shall a) clean between August 15th and November 15th, and b) avoid existing large willows near the dam on both sides of the basin Willows on the upstream dam face may be removed for dam safety purposes.
  - Mullally An exception will be made for Mullally Debris Basin. Mullally may be cleaned when at 5% capacity regardless of the condition of the upstream watershed. This exception is due to the fact that Mullally is significantly undersized at this time. Should the facility be redesigned, LACDPW shall consult with the Corps on the proposed capacity in order to allow area for riparian vegetation to develop. This special condition will be void if the basin is redesigned and built.
- 11) The permittee shall dispose of all excavated sediment and debris at a legal disposal point. Disposal of sediment on adjacent native habitat areas, State or federal "waters" is prohibited.
- 12) If the permittee proposes to remove any native vegetation beyond those areas cited above, the permittee shall submit a request to the Corps with an accompanying letter from Dam Safety stating the need and reasons for the additional vegetation removal. The permittee shall not initiate any removal of native vegetation beyond those areas cited above unless the Corps of Engineers has provided written approval for the additional vegetation removal.

### **APPENDIX A**

Best Management Practices - Water Quality Protocol

### FLOOD MAINTENANCE DIVISION'S WATER QUALITY SAMPLING/MONITORING PROTOCOLS DEBRIS BASINS

(updated 8-18-14)

Below is the Flood Maintenance Division's (FMD) protocol for water sampling (WQ) that is to be conducted in conjunction with the permitted work in Debris Basins (DB) that have water flowing downstream of the project limit area:

- FMD field staff shall not begin work until the qualified biologist confirms that the appropriate environmental measures, such as bird nesting surveys, the flagging of sensitive areas, and related activities were performed.
- 2) Review the project schedule to ensure work on the project will begin as scheduled. The Superintendent/Foreman shall immediately notify the Planning and Estimating Unit (P & E) of any changes in the work schedule.
- 3) Field staff shall request WQ samples with at least **three days of advance notification** through e-mail to the FMD Yard's assigned WQ Coordinator, copying the Superintendent and Foreman, and the immediate supervisor. Attach the completed WQ sampling request information page to the e-mail.
- 4) The Yard WQ Coordinator shall arrange WQ testing with the sampler (GMED or Consultant) via e-mail with a copy to the requesting field staff, Superintendent, Forman, and the following FMD staff: Jemellee Cruz, Fady Attia, CE, Asst. AE, and AE. DO NOT start work until you receive confirmation that the Pre-Work water quality testing was completed.
- 5) For each facility, the WQ Coordinator, with the original WQ email request, shall assign an FMD field staff, with their cell phone no., email address, and a secondary contact info. to meet the Sampler on-site to show where to take water samples the first day. The assigned FMD field staff will be the primary contact for the Sampler to provide the turbidity results on site throughout the clearing activities for that project site. The assigned FMD field staff shall be responsible for relaying the info. to his supervisor and the ESU.
- 6) Each yard will provide a specific PCA/Project No. for <u>each</u> facility they request WQ sampling for project cost tracking.
- 7) The following lists the required number of WQ samples to be taken, their location, and sampling frequency for each project that requires WQ testing:
  - Each project reach will require three (3) sampling stations located as follows:
    - o at the upstream limit of the project
    - within the project

- at the downstream limit of the project, before the next drain flowing into the channel
- The frequency of sampling at each location must be as follows:
  - Pre-work: Once within seven (7) days prior to the start of the maintenance activity. Pre-clearing Baseline sampling – no BMPs downstream.
  - During work: On a daily basis during the maintenance activity for the first week and then once (1) a week thereafter until the project is completed – with installed BMPs.
  - Post work: Once within seven (7) days after the project has been completed. Post-Clearing Baseline sampling – after BMPs are removed.
- 8) The Water Diversion Plan (WDP) must be followed for water diversions. Any deviation to the plan will require approval from the Regional Water Quality Control Board (RWQCB). FMD field staff will provide ESU with a draft plan for any proposed alternative WDP. ESU will finalize the plan and e-mail it to Jemellee Cruz so that it may be submitted as an alternate WDP to the RWQCB for approval prior to the start of the work. If water diversion is infeasible, justify and document the reasoning.
- 9) Sampler (GMED or Consultant) will immediately verbally notify the onsite FMD field staff of any Turbidity or Total Suspended Solids exceedances. Also, the sampler will report exceedances to the Superintendent and Foreman requesting the sampling as well as the following FMD staff: Jemellee Cruz, Fady Attia, CE, Asst. AE, and AE. The consultant will follow up with an email to Jemellee Cruz and the AE.

Not-to-exceed water quality standards for turbidity are as follows:

- For Natural turbidity between 0 and 50 Nephelometric Turbidity Units (NTU); an increase in turbidity downstream shall not exceed 20% of the upstream value.
- For Natural turbidity greater than 50 NTU, an increase in turbidity downstream shall not exceed 10% of the upstream value.

If the sampler informs the FMD field staff that the turbidity reading exceeds water quality standards, then the FMD field staff shall stop work immediately and resume the work only after the source of turbidity has been identified, BMPs have been properly cleaned, and, if necessary, additional BMPs have been incorporated. The sampler will help identify the source of turbidity or outside water quality influences and may provide recommendations on how to reduce the turbidity. Afterward, the sampler will retake samples. Any actions taken should be documented in the mitigation Monitoring Program Compliance Verification Form. For better water quality test results, please clean and maintain downstream BMPs on a daily basis. Downstream sampling point need to be taken as far downstream from the last BMP, and before the next diverging storm drain.

#### The BMPs to be implemented include, but are not limited to, the following:

- Access routes and staging areas will be located within pre-existing access roads or disturbed areas.
- All equipment and materials will be stored and fueled within the designated staging area.

The staging area will be secured with best management practices so as to prevent and provide protection from spills.

- Spill prevention and controls to contain leaks and spills from construction machinery will be used.
- Shaker plates will be used by vehicles prior to entering and leaving the debris basins.
   Silt Fences and Sandbags will be placed as required around and downstream of the debris basins. Water trucks and street sweepers will be used for dust control. Onsite biologists will conduct biological monitoring during project activities. Additionally, the crews will be required to follow LACFCD Standard Specifications pertaining to project site maintenance and construction activities.
- Any trash, debris, refuse, and cleared vegetation will be removed and disposed of according to local waste programs.
- All temporary BMPs will be removed from the project site upon completion of the maintenance activities.

#### **Appendix B**





Eucalyptus





Pampas Grass





Pepper Tree





Tamarisk





Tree Tobacco





Cape Ivy





Castor Bean





Arundo (Giant Reed)

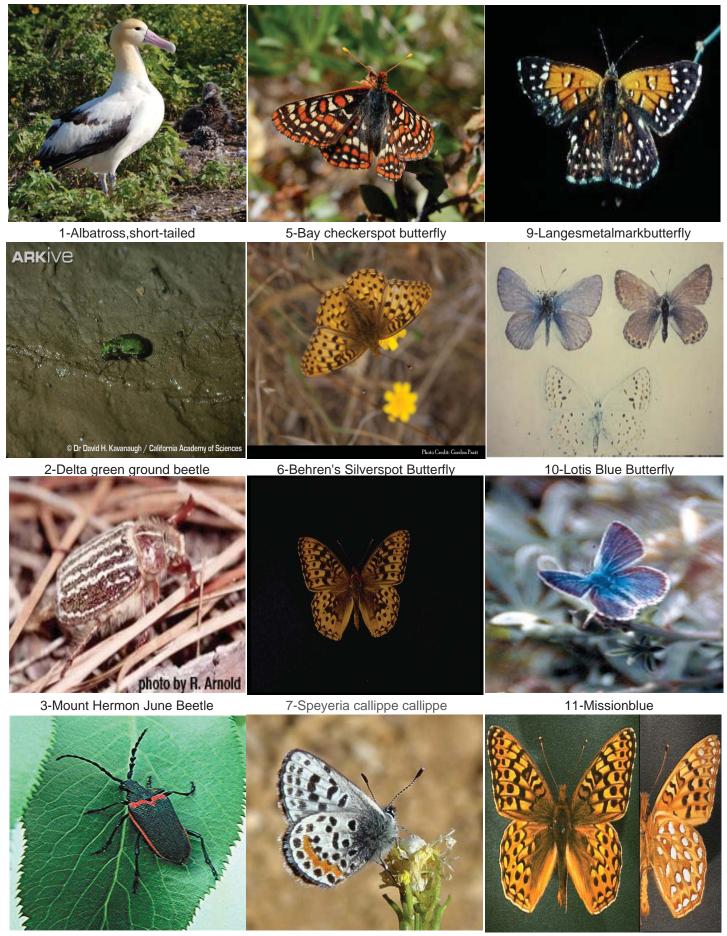




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#### **APPENDIX C**

California Threatened & Endangered Species - Animals



4-Valley elderberry longhorn beetle 8-E

8-El Segundo Blue

12-MYRTLE'S SILVERSPOT BUTTERFLY

Animals -



22-Bald Eagle

23-Conservancy Fairy Shrimp

24-Fairy shrimp, longhorn



34-Aleutian Canada Goose

35-Grasshopper, Zayante band-winged

36-Fresno kangaroo rat



46-Mountain beaver, Point Arena

47-Mouse, Pacific pocket

48-Mouse, salt marsh harvest



58-Rail, light-footed clapper

59-Rail, Yuma clapper

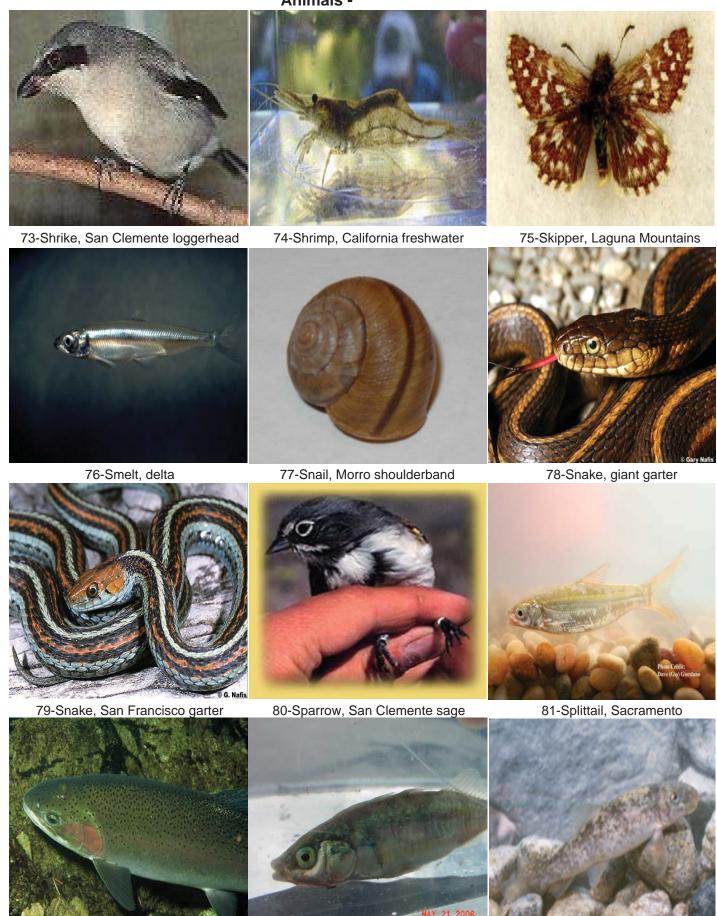
60-Salamander, California tiger



70-Seal, Guadalupe fur

71-Sheep, bighorn

72-Sheep, bighorn



82-Steelhead (southern CA coast)

83-Stickleback, unarmored threespine

84-Sucker, Santa Ana





85-Sucker, Lost River

87-Sucker, shortnose





86-Sucker, razorback

87-Tadpole shrimp, vernal pool

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88-Tern, California least

89-Toad, arroyo

90-Tortoise, desert



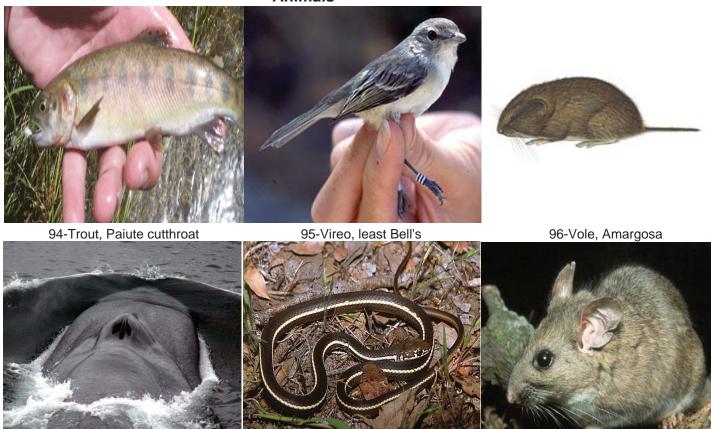




91-Towhee, Inyo California

92-Trout, Lahontan cutthroat

93-Trout, Little Kern golden



98-whipsnake, Alameda

99-Woodrat, riparian

97-Whale, blue

#### **Appendix D**

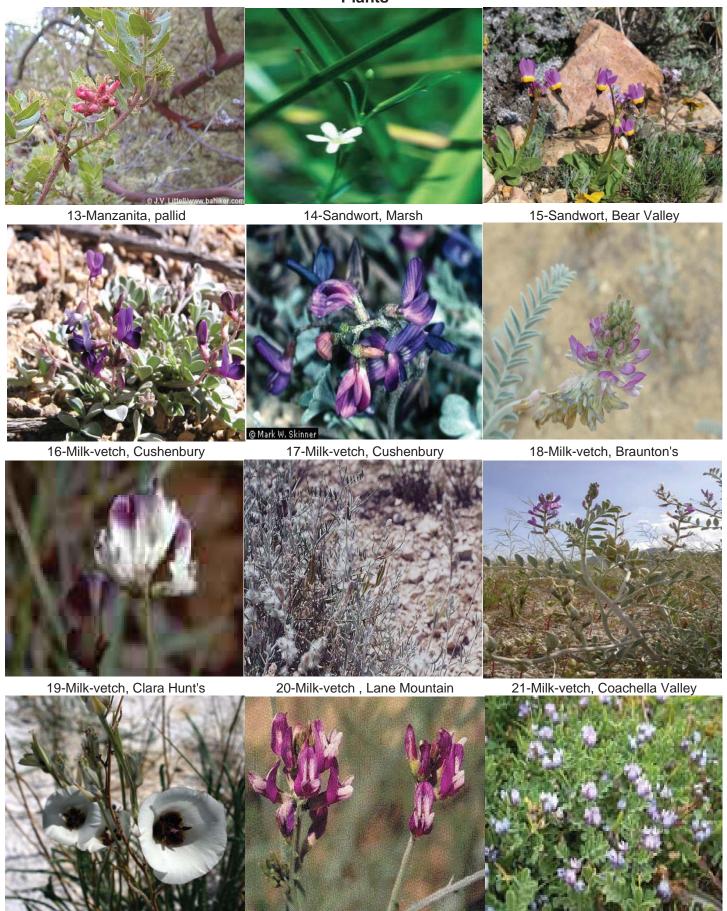
California Threatened & Endangered Species - Plants



10-Manzanita, Presidio

11-Manzanita, Morro

12-Manzanita, Ione



22-Milk-vetch, Fish Slough

23-Milk-vetch, Peirson's

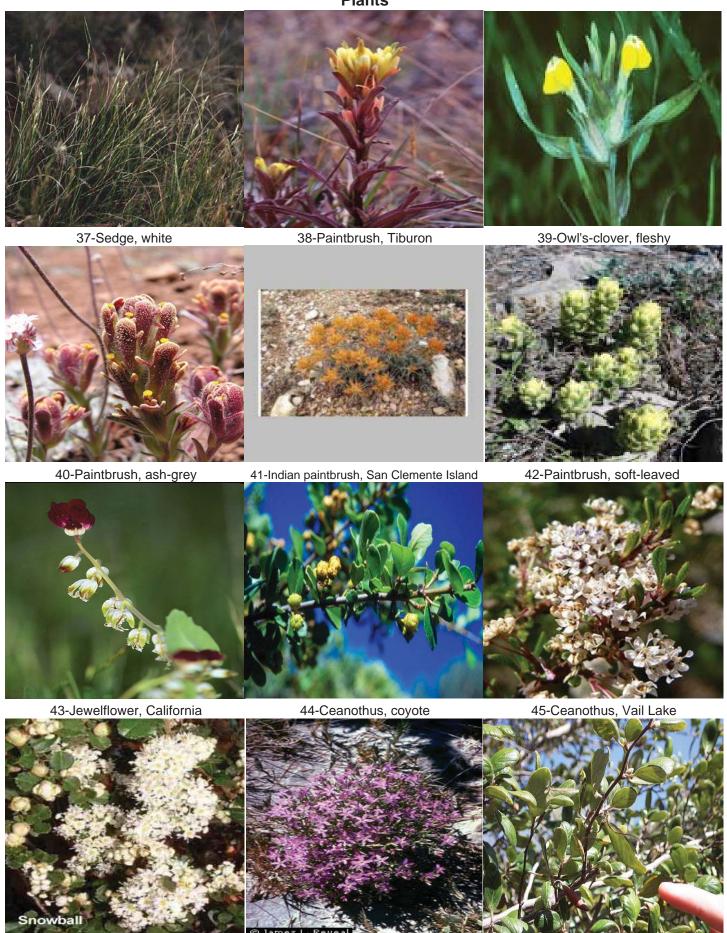
24-Milk-vetch, coastal dunes



34-Pussypaws, Mariposa

35-Morning-glory, Stebbins'

36-Evening-primrose, San Benito



46-Ceanothus, Pine Hill

47-Centaury, spring-loving

48-Mountain-mahogany, Catalina Island



58-Thistle, Suisun 59-Thistle, La Graciosa 60-Clarkia, Presidio



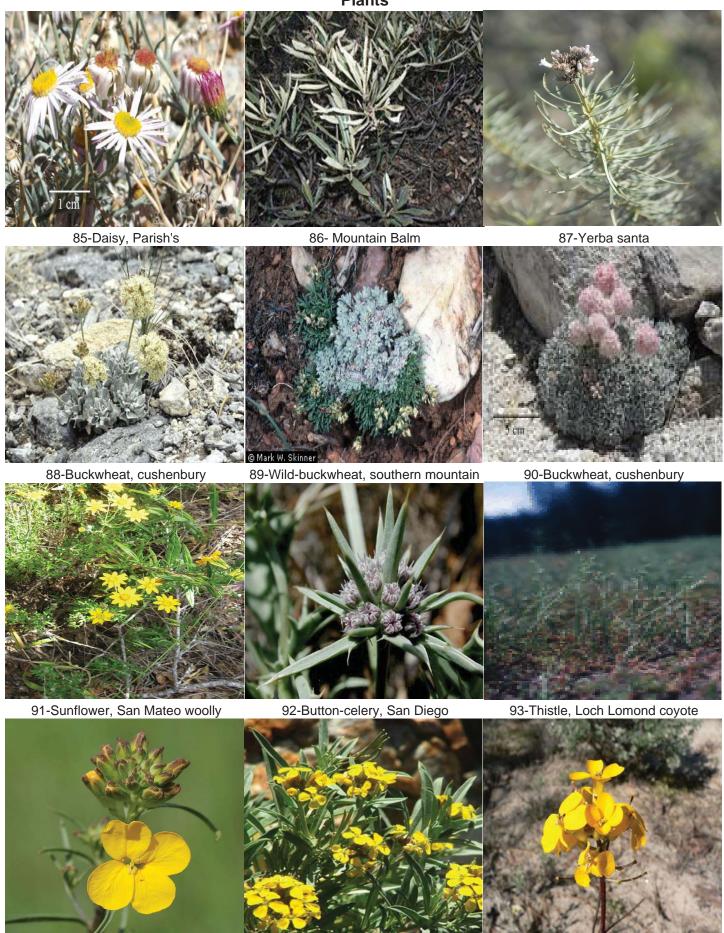
70-Larkspur, Baker's 71-Larkspur, yellow 72-Larkspur



82- Mallow, Kern

83- Woolly-star, Santa Ana River

84-Woolly-star, Hoover's



94-Wallflower, Contra Costa

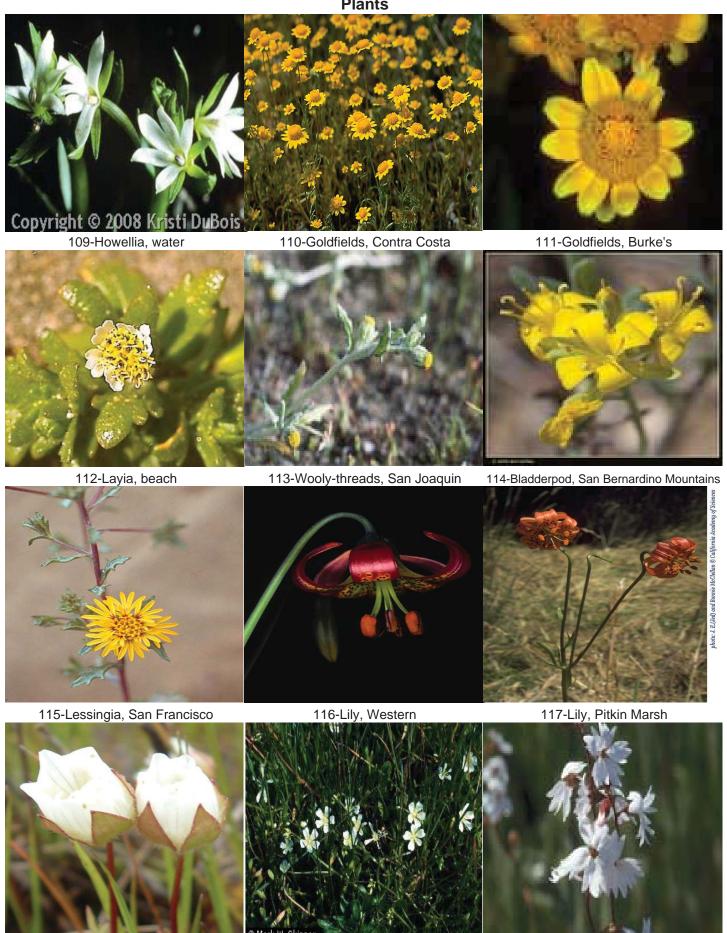
95-Wallflower, Menzies'

96-Wallflower, Ben Lomond



106-Tarplant, Gaviota 107-Dwarf-flax, Marin

108-Tarplant, Santa Cruz



118-Meadowfoam, Butte County

119-Meadowfoam, Sebastopol

120-Woodland-star, San Clemente Islanc



130-Navarretia, meany-flowered

131-Grass, Colusa

132-Niterwort, Amargosa



142-Stonecrop, Lake County

143-Pentachaeta, white-rayed

144-Pentachaeta, Lyon's



154-Watercress, Gambel's

155-Butterweed, Layne's

156-Rockcress, Santa Cruz Island



166-Pennycress, Kneeland Prairie

167-Fringepod, Santa Cruz Island

168-Fringepod, Santa Cruz Island



169-Clover, showy Indian

170-Clover, Monterey

171-Grass, Solano



172-Vervain, Red Hills

#### **Appendix E**

Nesting Bird Awareness Training

#### **NESTING BIRD AWARENESS**







Federal & State laws protect nearly all bird species while they are nesting. Disturbance that may reduce the potential for successful nesting is prohibited. In an effort to avoid disturbances that may result from Department of Public Works (DPW) field operations and maintenance activities, five simple steps can be taken. These steps should be implemented when starting work in a new area or when a work area has not been active for more than three consecutive days.

Los Angeles County Department of Public Works Flood Maintenance Division PUBLIC WORK



#### (STEP

## Consider the Season

Before starting field work at a new site, determine if work would be conducted in the nesting season. The season varies between species, however it is generally considered to run from March 15 to August 31. These dates may change slightly so confirm annually with your supervisor. Although not expected to occur outside of this season, nesting is protected regardless of when it occurs.

#### STEP

# Approach with Caution

When entering a new work area, make an effort to minimize initial disturbance by approaching slowly and quietly if feasible.

#### STEP

## Stop and Watch

As you approach a new work area, stop momentarily and watch for any signs of bird nesting. Visually scan the trees, other vegetation, bare ground, natural or man-made crevices, eves of buildings, under bridges, or other potential nest sites. Indication of nesting may include:

- Carrying nest building materials
  - Copulation
- Courting behavior (unusual fight pattern)
- · Mated birds (chasing or following closely in flight)
  - · Sudden fly away when closely approached
    - · Prolonged activity on or adjacent to nest

Continue to enter the area with occasional pauses to watch from different vantage points. If no potential nesting indicators are observed, commence with work activities.

#### (STEP)

### Search for Nest

If potential indicators of nesting are observed, continue observations and search for likely nest location. Search initially from a distance to avoid disturbance, then slowly approach a suspected location with caution. If detected, discontinue approach or any other disturbance. Make note of nest location if detected and report to supervisor before continuing work.



# Establish Protective Buffer

If a nesting area is detected, a buffer zone around the nest should be established. The buffer zone is typically 300 ft from the nest for song birds and 500 ft for raptors. This distance may be less if other factors on the site would minimize disturbance levels from proposed activities. Consult with your supervisor to determine an appropriate buffer distance. Within the buffer, activities should be limited to occasional foot traffic, periodic drive through, or other such activities of minimal noise production. Use of machinery or other equipment that may substantially increase ambient noise levels shall be restricted to areas outside the buffer zone. The protective buffer restrictions shall remain in effect until nesting activities have ceased.





deposited at the bottom of the nest and are not visible This nest type sways freely in strong winds. Eggs are A pendant nest is made from fine materials woven in opening located in the upper half of the structure. suspended from a branch. Access is through an the shape of a sock or elongated bag which is when observing this nest type.







### Sphere

A sphere (or globular) nest is composed of fine materials woven in the shape of a sphere. Birds vegetation (such as cattails) ponds or lakes. Some species, such as cliff swallows, use mud to his nest type can frequently be found in emergent construct this type of nest attached to a large rock or cliff face. Man-made structures such as the eves of buildings and the underside of bridges are access the interior through a single small opening. commonly used in lieu of natural surfaces.

The saucer nest is made with only a few materials placed together in the shape of a saucer, or a very shallow bowl. ground adjacent to vegetation or on various man-made These nests are usually constructed on level branches within shrubs or trees but can also be located on the structures





The burrow nest type occurs within an underground squirrels or smaller mammals then abandoned and used by a burrow nesting bird such as the burrowing owl. Burrows used by birds are typically adjacent to cavity. These burrows are usually constructed by rock outcrops or within an earthen embankment but can sometimes be on flat ground.

### Crevice

often very simple and may not include and additional nest A crevice nest is normally located within a large crack in materials. Species that use crevices, such as the Northern similarly solid materials (i.e. concrete). These nests are rough winged swallow, may be seen flying around the opening to ward off approaching potential predators. rocks or other type of space between rocks or other

