

LAW OFFICE OF MARC CHYTILO, APC

ENVIRONMENTAL LAW

August 18, 2017

Andrew Willis, Enforcement Supervisor
Deanna Christensen, Supervising Coastal Program Analyst
California Coastal Commission South Central Coast District
89 South California Street, Suite 200
Ventura, CA 93001

RE: Coastal Violations and Impending Development at Tajiguas Landfill

Dear Mr. Willis and Ms. Christensen:

This office represents the Gaviota Coast Conservancy (GCC), a non-profit organization dedicated to preserving the environment and rural character of the Gaviota Coast. The County of Santa Barbara owns and the County Public Works Department operates the Tajiguas Landfill in a coastal canyon on the Gaviota Coast. A portion of the landfill is located within the Coastal Zone, on agriculturally zoned land not authorized for landfill use. The County recently acknowledged that they have used an incorrect coastal zone boundary line at the Tajiguas Landfill for decades, and most recently in their planning and approval of planned development and intensification of activities at the Tajiguas Landfill. The County claims that most of their inland activities at Tajiguas are exempt from planning permits, and that landfill activities in the Coastal Zone pre-date the Coastal Act and accordingly are vested entitlements exempt from coastal permitting requirements. Though our investigation of the site history, we discovered that the County has not established the existence of any vested right, has not followed mandatory Commission procedure for obtaining a Vested Rights Determination, and appears to have waived any vested right by obtaining Coastal Development Permits (CDPs) for landfill development, including a 1973 CDP for drainage improvements approved by the Commission directly (before certification of the County's Local Coastal Plan (LCP) and before the 1978 Solid Waste Facility Permit the County has relied on to help establish the extent of the vested right).

In 1973 Commission staff expressed "reservations about the broader question of whether the sanitary landfill in this particular location is a desirable use of the Coastal Zone" and "suggest[ed] that any future expansion of the Tajiguas Landfill be closely monitored by the Commission and that serious thought be given to alternate means and locations for the disposal of the material presently deposited at Tajiguas." (Exhibit 2.) Rather than heed this direction, the County continued to expand the Tajiguas Landfill both inside and outside the Coastal Zone by authorizing new development, substantially expanding the waste footprint, and substantially increasing the lifetime of the Landfill without providing the opportunity for Commission oversight, let alone enabling the "close monitoring" suggested by Commission staff in 1973.

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Landfill expansions were authorized in 1989, and twice 1992, to address three instances where landfill facility expansion was found to constitute a “significant change since the original permit issuance date in 1978”. (See Exhibits 3, 3a, and 3b.) In 1999 the Board of Supervisors approved the Bench Plan which regraded slopes (including those in the Coastal Zone) to increase the Landfill’s capacity by 2.5 million cubic yards. (Exhibit 6a.) Even after Commission Staff informed the County of the need to secure a Vested Rights Determination, in December 2002 the Board of Supervisors approved another expansion to increase landfill capacity by 7.5 million cubic yards, including new and increased use of the Coastal Zone for “borrow areas” and other landfill uses without any coastal permitting or Coastal Commission review.¹ It appears that these expansions and piecemeal development substantially exceeded the boundaries, scope and nature of any development that could have vested before passage of the Coastal Act.

The Board of Supervisors insisted the 2002 expansion would be the last, however they nonetheless approved another significant expansion of the Landfill in December 2016 which would extend the Landfill’s life by an additional 10 years by constructing a 120,100 square foot enclosed industrial trash sorting and processing facility including a Materials Recovery Facility (MRF) and Anaerobic Digester (AD) (the Tajiguas Resource Recovery Project or “TRRP”).² The County designed the TRRP such that the MRF and AD were located north of what the Public Works Department understood was the Coastal Zone boundary, and asserted no coastal permitting was necessary.

In February of this year, before the TRRP financing was finalized, the County discovered a discrepancy between the County Public Works Department’s maps and the official State Coastal Zone boundary. This discovery resulted in more of the landfill property being located within the Coastal Zone than previously thought, including the proposed AD facility. The County sought a Coastal Zone Boundary Adjustment to allow the proposed facility to be located outside of the Coastal Zone that Coastal Commission staff categorically denied (Exhibit 1). The County is now proposing to revise the TRRP to relocate the AD to the adjacent Baron Ranch, a County-owned property used for agriculture and public recreation (the Baron Ranch Trail).

Following our discovery of the Coastal Zone Boundary discrepancy, we made a series of Public Records Act requests of the County to understand the history of the County’s landfill operations in the Coastal Zone. The documents provided reveal a troubling pattern of County disregard for the Coastal Commission’s jurisdiction and for the resources of the Coastal Zone.

¹ 01-EIR-05 and CEQA Addendum (11-8-06) (available at <http://cosb.countyofsb.org/pwd/pwrrwm.aspx?id=46873>)

² 12EIR-00000-00002, § 3.0, Project Description (available at <http://resourcerecoveryproject.com/pages/downloads/environmental-documents.php>)

By this letter, we request that the Commission investigate the County's historic practices, secure a specific delineation of whether and what vested rights may exist, require permitting for all unpermitted development and intensification in both the newly recognized coastal zone as well as for unpermitted development and intensification in the previously-acknowledged coastal zone, and to undertake enforcement actions to address the illegally constructed development and intensification in all parts of the coastal zone. In addition, we implore the Commission to engage in the impending County process to revise the TRRP to address the coastal zone boundary error, beginning with a scheduled Planning Commission hearing on August 30 to revise the Waste Facility Overlay to avoid the Coastal Zone and include a portion of Baron Ranch.

A. The County Has No Vested Right to Landfill Development in the Coastal Zone

*"Public Resources Code section 30608 provides: 'No person who has obtained a vested right in a development prior to the effective date of this division or who has obtained a permit from the California Coastal Zone Conservation Commission pursuant to the California Coastal Zone Conservation Act of 1972 (former Division 18 (commencing with Section 27000)) shall be required to secure approval for the development pursuant to this division. However, no substantial change may be made in the development **without prior approval having been obtained** under this division.'" (LT-WR v. CCC (2007) 152 Cal. App. 4th 770, 782 (italics in original; bold added.)) "Any person *claiming a vested right* in a development and who wishes to be exempt from the permit requirements of the Act pursuant to *Public Resources Code Section 30608 must substantiate the claim in a proceeding before the Commission under this subchapter*. In such a proceeding the claimant shall assume the burden of proof." (*Id.*, quoting Cal. Code Regs., tit. 14, § 13200, italics added.) One of the many reasons for this requirement is public notification and participation in defining the scope of a claim of vested rights, a hallmark of the Coastal Act.*

Before the Board of Supervisors approved the 2002 landfill expansion (reviewed in EIR No. 01-EIR-05), Commission Staff reviewed the draft EIR³ and faxed a letter informing the County of the need to pursue a Vested Rights Determination:

County staff has asserted that the use of the borrow site and potentially other improvements within the coastal zone do not require coastal development permits because the improvements are an entitlement vested by reliance on 1965 County approvals and as further defined in the 1978 Solid Waste Facilities Permit. Commission staff has reviewed some preliminary materials regarding the original approvals; however the extent of the vested right is unclear. Under Public Resources Code Section 30608, a

³ The County did not include the Coastal Commission as a responsible agency in the 2002 expansion EIR; it appears that the Commission was notified of potential issues with the 2002 Expansion EIR by concerned individuals and/or organizations in the community.

coastal development permit is required for a “substantial change” to vested development. In cases of uncertainty regarding the extent of vested rights, such as this, the Coastal Commission regulations provide a process for filing a “claim of vested rights” that will be heard by the Coastal Commission. Title 14 California Code of Regulations Sections 13200-13208 provide details regarding the proceedings for vested rights claims.

It is Commission staff’s position that the County needs to pursue formal action by the Commission through a vested rights application. We are providing an application with this letter. We welcome further discussion regarding this issue and the overall Tajiguas project.

(Exhibit 4.) Although this letter clearly advises the County that it must follow the mandatory procedures for establishing a vested right, the County failed to timely apply for a Vested Rights Determination as required by the Coastal Act (Public Resources Code § 30608) and its regulations (14 Cal. Code of Regs. § 13200). Accordingly, the County may have no valid claim of vested rights for the Tajiguas Landfill anywhere in the Coastal Zone (*see Davis v. California Coastal Zone Conservation Com.* (1976) 57 Cal.App.3d 700, 707-708.)

Moreover, the County sought and obtained various CDPs for activities at the Landfill, including the 1973 CDP from the Commission (for stormwater diversion, not the larger landfill) (*see* Exhibit 2), and various additional CDPs the County approved after LCP certification (*see* Exhibits 7, 7a, 7b, 7c) including one CDP approved after the Commission notified the County of the need to apply for a Vested Rights Determination (Exhibit 7d). Case law unequivocally establishes that under these circumstances the County has waived any claim of vested rights to landfill development in the Coastal Zone. (*Id.*; *LT-WR*, 152 Cal. App. 4th at pp. 784-785).

B. Existing and Proposed Landfill Development Violates the LCP and Coastal Act

Landfill uses are not allowed in agricultural zone districts within the Coastal Zone (*see* Coastal Zoning Ordinance (CZO) § 35-68.3), and the LCP prohibits rezoning of this agriculturally zoned land to allow landfill uses which are not priority uses under the Coastal Act (CZO § 35-64 (“If a lot is zoned for agricultural use and is located in a rural area not contiguous with the urban/rural boundary, rezoning to a non-agricultural zone district shall not be permitted unless such conversion of the entire lot would allow for another priority use under the Coastal Act, e.g., coastal dependent industry, recreation and access, or protection of an environmentally sensitive habitat.”))

Over the years the County has taken numerous actions in the Coastal Zone at Tajiguas that appear to constitute violations of its own LCP and the Coastal Act. These apparent violations fall into three categories, addressed in detail below. First, the County has developed landfill facilities and conducted various landfill activities in the area erroneously believed to be outside of the Coastal Zone without CDPs. Second, the County has approved new development

and expanded landfill operations in the area always acknowledged to be within the Coastal Zone in a manner that substantially changes the development the County claims predates the Coastal Act. The County issued CDPs for some of this development, but the majority was approved without CDPs. Third and finally, the County continues to propose new development at the landfill that will substantially change and intensify uses and development within the Coastal Zone, without CDPs, without concerns for conformity with the LCP, and without Commission involvement.

The County's existing and proposed landfill development has and will harm coastal resources. Extensive alterations to Pila Creek significantly impact endemic populations of California Red-legged frog and other sensitive species that occupy riparian areas above and in the coastal zone. Groundwater contamination from contact with buried waste in the unlined portion of the landfill has long been of concern, and is "managed" with a leachate collection system that includes a 60 foot deep interception trench in the Coastal Zone but continues to pose a risk to water quality and to coastal and marine ecosystems.⁴ Additionally, as clearly stated in the 1973 permit application to the Coastal Commission, "the existing landfill is being designed for a future park or other appropriate recreational use". (Exhibit 5.) Every action taken by the County to extend the lifetime of Tajiguas Landfill delays its use for public park and/or recreational purposes.

Discussed below, the County has significantly expanded the Tajiguas Landfill in a manner constituting a significant change to the development may have existed before the Coastal Act. Not only has the County approved new development including an expansion of the waste

⁴ See Exhibit 11, 2010 WDR, ¶ 33; see also Exhibit 10, 2003 WDR, ¶ 15 ("The currently permitted unlined modules and proposed lined modules do not meet CCR Title 27, Section 20260 (b)(1) siting criteria with regard to "geologic setting". Considering the size of the waste management unit, permeability and transmissivity of underlying soils, depth to groundwater, background groundwater quality, current and anticipated groundwater use, and annual precipitation, the native underlying soils do not ensure protection of groundwater or surface water quality."); ¶ 28 ("Historically, Volatile Organic Compounds (VOC) have been detected in downgradient wells. Leachate was suspected of being the source of VOC detections. In response, the Discharger implemented Corrective Action. Initially the Discharger installed a groundwater/leachate collection and removal system (LCRS #1) to capture contaminated groundwater. The Discharger has since expanded Corrective Action to include Landfill gas extraction, leachate extraction and upgradient groundwater extraction. Total VOC concentrations and the number of detected compounds have declined in response to Corrective Action implementation. Data from September 1996, indicated downgradient wells MW-4 and MW-10 had total VOC concentrations of 32 and 7.3 μ g/l respectively. In June 2002, total VOC concentrations in wells MW-4 and MW-10 had declined to 7.4 and ND respectively. There were no other confirmed detections in wells further downgradient, during the June 2002 sampling event.")

footprint, soil borrow areas, a scale house, landfill gas flare, large internal combustion engines, trash racks in Pila Creek and other creek modifications, leachate collection system in the Coastal Zone, among other things, it has substantially increased the intensity of use of the Coastal Zone landfill facilities, and considerably extended the amount of time the Coastal Zone facilities will be used for and impacted by landfill operations. These actions have substantially increased the significant impacts to coastal resources that ongoing landfill operations at Tajiguas pose. With the Tajiguas Resource Recovery Project the County proposes to again extend operations at the Tajiguas Landfill including use of the Coastal Zone facilities from the County's 1999 stated closure date (2015), and from the current projected date that the landfill will be full (2026) until 2036. As a result of this extension in landfill life, significant and unavoidable impacts to coastal resources will occur (*see* EIR 01-EIR-05, p. 8) and full closure and restoration of the site for public recreation will be substantially delayed.

1. Unpermitted Landfill Development in Upper Coastal Zone Area

In February the County discovered that the official state Coastal Zone boundary was approximately 500 feet further south than the boundary included on the Public Works Department's maps and relied on throughout the Landfill's permitting history following the passage of the Coastal Act. Accordingly, any development in this newly recognized "Upper Coastal Zone" occurred without regard for compliance with laws and regulations governing development in the Coastal Zone, and no CDPs were ever sought for development in the Upper Coastal Zone nor were the substantive or procedural requirements of the LCP or Coastal Act addressed. It is our understanding that none of the development in the Upper Coastal Zone predated the Coastal Act.

Structural and physical Landfill development that was been installed in the Upper Coastal Zone subsequent to the passage of the Coastal Act and adoption of the LCP includes but is not limited to the following:

- The 2002 Expansion increased the elevation and footprint of the waste pile, in a location that appears to be within Upper Coastal Zone (01-EIR-05, Figures 2-2, 2-3⁵)
- Portion of the operations deck including the administrative office (Exhibit 9, Tajiguas SWPPP, 2016, Figure 2)
- Leachate collection and removal system components (*see* Exhibit 11, 2010 WDR, ¶ 37)
- Drainage infrastructure identified in the SWPPP (Exhibit 9, Figures 2 & 3) and Boundary Adjustment Request (Exhibit 1a, Attachment 4)

⁵ Available at <http://cosb.countyofsb.org/pwd/pwrrwm.aspx?id=46873>

- Portion of the green waste pad (*see* Exhibit 9, Figure 2)

This Landfill development has had significant and on-going adverse impacts to resources in the coastal zone.

2. Unpermitted Landfill Development in Lower Coastal Zone Area

Landfill development in the area always recognized by the County Public Works Department as being within the Coastal Zone (referred to herein as the “Lower Coastal Zone”) includes: a) pre-Coastal Act development; b) post-Coastal Act development for which no CDP was obtained; and c) post-Coastal Act development for which a CDP was obtained. These three categories are addressed in turn below.

a. Pre-Coastal Act Development

The County has and continues to assert that landfill activities within the Lower Coastal Zone are exempt from coastal permitting as vested “grandfathered” uses. However, as stated in the above-referenced memo from Coastal Commission Staff, the extent of the landfill activities that pre-date the Coastal Act is unclear, and furthermore to establish that landfill activities are exempt from Coastal permitting requirements the County must obtain a Vested Rights Determination pursuant to Public Resources Code 30608 and applicable regulations. It appears based on the records we’ve reviewed that the County never followed through on Coastal Staff’s request, and never submitted or obtained a Vested Rights Determination from the Commission. Without this determination, the County has no claim of any vested rights in the Coastal Zone. (*See LT-WR*, 152 Cal. App. 4th at pp. 784-785; *Davis*, 57 Cal.App.3d 700 at 707-708.)

b. Post-Coastal Act Development without CDP

The majority of the post-Coastal Act development that occurred in the Lower Coastal Zone occurred without CDPs, based on unjustified assumptions that the development in question was within the scope of the pre-Coastal Act development. Specifically, the County has asserted on numerous occasions (*see e.g.* Exhibit 6 documents) that no permits are required for activities both large and small in the Coastal Zone, stating for example:

Within the Coastal Zone, the Tajiguas Landfill is a legal non-conforming use which predates the California Environmental Quality Act and Coastal Act. No new Coastal Development Permits are required for activities and operations that support this existing legal non-conforming use.

(Exhibit 6g).

However, as discussed above, the County has not established that *any* development in the Coastal Zone at Tajiguas Landfill is exempt from Coastal permitting requirements. Moreover, many of the individual developments, and certainly the sum of the developments, constitute a substantial change in the development from the 1978 Solid Waste Facility Permit (Exhibit 8) that the County has frequently used to characterize the development they considered vested. It is, at the least, very troubling that the County continued to assert that activities and operations in the Coastal Zone require no permits when Coastal Commission Staff informed the County in 2002 that the extent of the County's vested right is unclear. (Exhibit 4.)

The development in the Lower Coastal Zone for which the County did not issue CDPs include the following:

- Tajiguas Landfill Bench Plan which regraded slopes including the south face of the landfill, to increase the volume of the landfill by 2.5 million cubic yards (from 12.6 to approximately 15.1 million cubic yards) (Exhibit 6).
- Sedimentation Basin involving 60,000 cubic yards of grading to construct a basin to accommodate a 50-100 year storm event (Exhibit 6a).
- Office Trailer Relocation and Sediment Control Structure (Exhibit 6b).
- "Maintenance activities" in Canada de la Pila Creek (Exhibits 6c and d).
- Landfill office septic system (Exhibit 6e)
- The 2002 Expansion including the West Borrow Area (*see* 01-EIR-05, Figures 2-2, 2-3⁶; *see* Exhibit 2)
- The 2002 Expansion including the South Corner Modification that was initially determined to require removal of waste deposited in the Coastal Zone above the 400' elevation purportedly authorized by the 1978 SWFP, however the County subsequently "changed its interpretation" of the 1978 SWFP and determined the removal of buried waste in the coastal zone was not necessary. The County then certified a CEQA Addendum that eliminated the South Corner Modification from the Project. (CEQA Addendum, 11/8/06⁷). Accordingly, the waste elevation in the Coastal Zone continues to exceed 400 feet in elevation.

⁶ Available at [http://cosb.countyofsb.org/uploadedFiles/pwd/RRWMD/2.0\(1\).pdf](http://cosb.countyofsb.org/uploadedFiles/pwd/RRWMD/2.0(1).pdf)

⁷ Available at <http://cosb.countyofsb.org/uploadedFiles/pwd/RRWMD/Final%20CEQA%20Addendum.pdf>

- Dewatering well platforms and other infrastructure associated with the leachate collection system (Exhibit 6f; *see* Exhibit 11, 2010 WDR, ¶37)
- Temporary Southeast Stockpile Area (Exhibit 6h)

It is significant that many of these actions, developments and intensification of uses were undertaken without compliance with the procedures that ensure public notice and participation.

c. Post-Coastal Act Development with CDP

Since landfill uses are not authorized in the Coastal Zone, there appears to be no legal basis for issuance of CDPs for landfill development in the Coastal Zone. Accordingly, while the County issued CDPs for the following development, this development appears to constitute a violation of the County's LCP including provisions of the Coastal Zoning Ordinance (CZO) governing allowable uses on agriculturally zoned lands. (*See* Santa Barbara County Coastal Zoning Ordinance §§ 35-68.3).

The development in the Lower Coastal Zone for which the County issued CDPs include the following:

- CDP for Truck Scale and Gatehouse (7/23/85) (Exhibit 7)
- CDP for Landfill Gas Flare (6/26/98) (Exhibit 7a)
- CDP for Irrigation and Water Storage (11/12/98) (Exhibit 7b)
- CDP for Pila Creek Flood Maintenance (8/21/01) (Exhibit 7c)
- CDP for Entrance Gas Station Demolition (10/31/06) (Exhibit 7d)

The Coastal Commission also approved a CDP in 1973 for the installation of pipeline and earthen ditches to divert surface drainage water around the periphery of the Landfill, before certification of the County's LCP. (Exhibit 2.)

Discussed above, the County's actions in pursuing and approving these CDPs appears to have the legal effect of precluding the County from later asserting that it has a vested right to landfill uses in the Coastal Zone. (*See Davis*, 57 Cal.App.3d 700 at 707-708.)

3. Development of Tajiguas Resource Recovery Project

The County is proceeding hastily to approve a redesigned Tajiguas Resource Recovery Project that attempts to relocate the TRRP AD facility outside of the Coastal Zone and to relocate two large internal combustion engines from the Coastal Zone to an inland location on Baron Ranch. This process includes a proposed General Plan amendment to revise the Waste Disposal Facility Overlay boundary and expand the landfill to include a portion of the neighboring Baron Ranch, which was acquired by the County for the principal purpose of buffering the Tajiguas Landfill's noise and odor impacts and is currently used for public access, habitat restoration, and agriculture. This General Plan amendment is scheduled to be heard by the County Planning Commission on August 30th. We feel it is essential that the Coastal Commission engage in the County's process of associated with any future development at the Tajiguas Landfill, including the Tajiguas Resource Recovery Project "2.0".

Even if the AD is successfully relocated outside of the Coastal Zone, the TRRP has the effect of substantially intensifying Landfill uses in the Coastal Zone. For example, the TRRP will increase truck trips to the Tajiguas Landfill associated with transporting mixed recyclables and source separated organics which were previously processed at facilities in Ventura, Santa Maria, and Oxnard. By extending the landfill's life by approximately 10 years, 10 additional years-worth of truck traffic will utilize Landfill infrastructure located in the Coastal Zone including roadways and the scalehouse. Use of the leachate collection system, LFG flare, and other Coastal Zone infrastructure will also be substantially extended. The TRRP EIR identified several significant impacts caused by prolonging the life of the landfill including Class I significant and unavoidable impacts to biological resources and air quality (*See* TRRP EIR, pp. 2-64.) Additionally, while not identified as an impact in the TRRP EIR, extending the life of the Landfill substantially delays restoration of the site and opening of the site for public recreation (*see* Exhibit 5.)

Gaviota Coast Conservancy, together with other concerned organizations and individuals, is working on developing a robust alternative to the TRRP that a) focuses on waste reduction and enhanced source separation including organics collection, b) proposes an urban location for the MRF and one or more regional composting facilities, and c) avoids additional expansion of Tajiguas Landfill onto Baron Ranch. Eventually, the "residuals" (true trash) could be deposited at the new regional landfill in Santa Maria remote from the Coastal Zone in a location the RWQCB characterizes as "well sited", instead of Tajiguas Landfill on the Gaviota Coast.

C. Conclusion

The County Board of Supervisors expressly committed and directed staff that the 2002 expansion would be the last and the Landfill must be responsibly closed. Unfortunately, the County has not honored that commitment and continues to propose new and expanded uses at

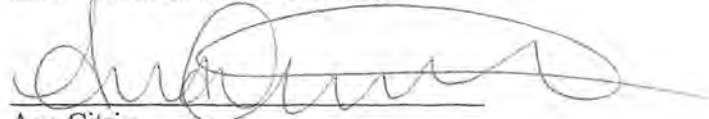
Tajiguas, all without regard for the limitations of the LCP and the jurisdiction of the Coastal Commission, including the clear direction that "any future expansion of the Tajiguas landfill be closely monitored by the Commission and that serious thought be given to alternate means and locations for the disposal of the material presently deposited at Tajiguas" (Exhibit 2) and that the County "pursue formal action by the Commission through a vested rights application" (Exhibit 4).

The Coastal Commission has both the right and we believe the obligation to ensure that the County not undertake development in the Coastal Zone at Tajiguas Landfill in violation of its LCP and the Coastal Act. We ask that you investigate this matter thoroughly and notify the County of any violations, and/or concerns regarding the Tajiguas Resource Recovery Project as soon as possible.

We have sought to secure documents from the County and other sources in our investigation of this project, and have not yet received or reviewed all documents of interest. If we discover additional information that is germane to the issues raised in this letter, we will transmit it to you.

Sincerely,

LAW OFFICE OF MARC CHYTILO



Ana Citrin
Marc Chytilo

Exhibits:

- Exhibit 1: CCC Response to MBA Application (3-29-17)
- Exhibit 1a: County MBA Request (3-23-17)
- Exhibit 2: CCC Staff Report (9-26-73)
- Exhibit 3: Tajiguas Landfill Permit Revision (1989)
- Exhibit 3a: Tajiguas Landfill Stipulated Order of Compliance (1-29-92)
- Exhibit 3b: Tajiguas Landfill Stipulated Order of Compliance (9-8-92)
- Exhibit 4: CCC Letter to County (8-6-02)
- Exhibit 5: CDP Application (1973)
- Exhibit 6: Bench Plan Memo (8-16-99)
- Exhibit 6a: Sedimentation Basin Memo (11-29-00)
- Exhibit 6b: Office Trailer and Sediment Control Memo (1-23-01)
- Exhibit 6c: Projects 1-4 Memo (11-29-00)
- Exhibit 6d: Pila Creek Maintenance Memo (3-1-05)

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Exhibit 6e: Office Septic System Memo (8-13-08)
Exhibit 6f: Dewatering Well Platforms Memo (4-27-09)
Exhibit 6g: Reconfiguration Project Memo (8-4-09)
Exhibit 6h: Stockpile Memo and CEQA Determination (12-2-13)
Exhibit 7: Truck Scale and Gatehouse CDP (7-23-85)
Exhibit 7a: Landfill Gas Flare CDP (6-26-98)
Exhibit 7b: Irrigation and Water Storage CDP (11-12-98)
Exhibit 7c: Pila Creek Flood Maintenance CDP (8-21-01)
Exhibit 7d: Demolition CDP (1-31-06)
Exhibit 8: Solid Waste Facility Permit (1978)
Exhibit 9: Tajiguas SWPPP (2016)
Exhibit 10: Tajiguas WDR (2003)
Exhibit 11: Tajiguas WDR (2010)

CC: Jack Ainsworth, Executive Director
Steve Hudson, District Director, South Central Coast
Shana Gray, District Supervisor, South Central Coast

CALIFORNIA COASTAL COMMISSION

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March 29, 2017

Mona Miyasato, County Executive Officer
County of Santa Barbara
105 East Anapamu Street, Room 406
Santa Barbara, CA 93101

**Subject: Review and Determination- County of Santa Barbara Coastal Zone Boundary
Adjustment Request: Tajiguas Landfill Property- Gaviota Coast**

Ms. Miyasato:

We are in receipt of the County of Santa Barbara's Coastal Zone Boundary adjustment request for the Tajiguas Landfill Property, assessor parcel number 081-150-019 (received March 24, 2017) pursuant to Section 30103(b) of the California Coastal Act and Section 13255.2 of the California Code of Regulations. We appreciate the time and effort that went into your submittal and understand the importance of the project with which this request is associated and its environmental benefits. Based upon our review of the application as submitted, however, we have determined that the request does not conform to Coastal Act section 30103(b) and all provisions of Title 14 California Code of Regulations Section 13255.2 and therefore it must be rejected, as discussed below.

Coastal Zone Boundary Adjustments

The Coastal Zone Boundary was defined by the legislature when it enacted the Coastal Act. Neither the Commission nor its executive director may make significant changes to this legislatively-defined boundary. Coastal Act section 30103(b) does, however, provide the Commission with the authority to make minor adjustments to the Coastal Zone Boundary. The minor boundary adjustment to the Coastal Zone Boundary process helps avoid confusion and to make clear the location of the Coastal Zone. These minor adjustments are not mandatory and they may only be made within strictly defined parameters.

The specific language of Section 30103(b) states, in relevant part, that the Commission may adjust the boundary "the minimum distance seaward necessary up to a maximum of 200 yards, to avoid bisecting any single lot or parcel or to conform it to readily identifiable natural or manmade features."

The Commission's code of regulations identifies what must accompany requests for minor boundary adjustments, and requires that the information be sufficient to enable the commission to determine whether the proposed adjustment is consistent with section 30103(b). 14 CCR § 13255.2(b). Subsection (5) of 13255.2(b) requires the submittal of a map that shows "the existence and location of all readily identifiable natural and manmade features." Finally, the Commission's regulations require the executive director to determine, within five days of receipt

EXHIBIT 1

of a request for a minor boundary adjustment, whether the request conforms to regulatory requirements and to Coastal Act section 30103(b). If the request “patently fails” to conform to section 30103(b), the executive director is required to reject it. 14 CCR 13256.1(a).

The Proposed Minor Boundary Adjustment

In its request, the County is proposing to move the existing Coastal Zone Boundary at the Tajiguas Landfill seaward a maximum distance of approximately 173 yards, which is within the maximum distance identified in Section 30103(b). The proposed adjustment does not, however, avoid bisecting the parcel or conform the boundary to a “readily identifiable natural or manmade feature.” There is no readily identifiable natural or manmade feature on site to which the Coastal Zone Boundary would be adjusted.

This is clear from the map that the County submitted in an effort to comply with Commission regulations section 13255.2(b)(5) – this section requires a map of “the existence and location of all readily identifiable natural and manmade features.” The County’s Attachment 3 is a map of the subject parcel, with a depiction of the existing and proposed Coastal Zone Boundary. There is not, however, any discernable “existing” or “readily identifiable” manmade feature that corresponds to the location of the proposed new Coastal Zone Boundary. The depiction in Attachment 3 shows only the line drawn by the County to represent the new Coastal Zone Boundary but none of the five features it asserts meet the Coastal Act requirement are discernable on this map, much less “readily identifiable.” For this reason, the County’s submittal does not comply with regulations section 13255.2 and must be rejected on that basis alone.

More importantly, there does not appear to be any actual, existing “manmade feature” to which the Coastal Zone Boundary could be adjusted. The County is proposing that the Coastal Zone Boundary be defined by a line drawn to the outlet of a down drain, then to the location of a pipe inlet, then to the outside point of sedimentation basin, and finally through two individual catch points before returning to the existing Coastal Zone Boundary. However, these “manmade features” can only be considered discontinuous points to which nodes of the Coastal Zone would be adjusted. As proposed, this adjustment is essentially a connect-the-dots approach with no readily identifiable natural or manmade feature (such as road rights-of-ways, railroad rights-of-way, curbs, or bluffs) identified between the existing up-coast and down-coast Coastal Zone Boundary and the features labeled “Concrete Down Drain,” “Pipe Inlet,” “Outlet of Sedimentation Basin,” and “Catch Points” in Attachment 4. Given that there are no natural or manmade features to which the Coastal Zone Boundary could be adjusted, the proposal patently fails to conform to section 30103(b) and must be rejected.

Staff also notes that the County’s proposal is solely to remove from the coastal zone and therefore coastal permitting requirements a portion of a specific project - the proposed Tajiguas Resource Recovery Project, the site of which is currently bisected by the Coastal Zone. It appears that the County’s proposed boundary adjustment of the Coastal Zone more closely relates to a larger planning issue more suitable to the LCP planning / permitting process, rather

Ms. Mona Miyasato

Review and Determination- County of Santa Barbara Coastal Zone Boundary Adjustment Request: Tajiguas Landfill Property

March 29, 2017

Page 3

than a minor Coastal Zone boundary adjustment as defined under the Coastal Act. The County of Santa Barbara has a certified LCP and the LCP planning / permitting process would be the appropriate avenue to resolve any issues associated with the proposed Tajiguas Resource Recovery Project development and its conformance with the goals and policies of the certified LCP.

While Commission staff is sympathetic to the County's position in this case, this proposal patently fails to conform to the requirements of Coastal Act section 30103(b). While the Executive Director understands the difficult position in which the County finds itself, section 30103(b) does not allow a minor boundary adjustment to a "manmade feature" that cannot be considered "readily identifiable" and simply does not exist.

Please do not hesitate to contact either myself or Darryl Rance at (415) 904-5335 if we can be of further assistance.

Sincerely,



Greg Benoit
Mapping Program Manager

Cc: Jack Ainsworth, Executive Director (CCC)- via email
Al Wanger, Deputy Director (CCC)- via email
Steve Hudson, Deputy Director (CCC)- via email
Dianne Black- Assistant Director (Santa Barbara Co)- via email

County Of Santa Barbara

Mona Miyasato
County Executive Officer



105 East Anapamu Street, Room 406
Santa Barbara, California 93101
805-568-3400 • Fax 805-568-3414
www.countyofsb.org

Executive Office

March 23, 2017

Mr. Jack Ainsworth
Executive Director
California Coastal Commission
45 Fremont Street
San Francisco, CA 94105

Re: Request for Minor Boundary Adjustment to the Coastal Zone Boundary – Santa Barbara County
Tajiguas Landfill Property – Gaviota Coast

Dear Mr. Ainsworth:

Santa Barbara County, as both the property owner and local government of jurisdiction, is requesting a Minor Boundary Adjustment to the Coastal Zone boundary to include approximately 6.74 acres of land and to conform the boundary to readily identifiable manmade features at the County's Tajiguas Landfill. The landfill began operations in 1967 prior to enactment of the Coastal Act in 1976.

The following address the submittal requirements for a Minor Boundary Adjustment to the Coastal Zone boundary pursuant to Section 13255.2(b) of Title 14 of the California Code of Regulations, the Coastal Commission's Administrative Regulations (consistent with 30103(b) of the Public Resources Code):

1) Name and address of the owner of the affected lot or parcel.

County of Santa Barbara, 105 East Anapamu Street, Santa Barbara, CA 93101.

2) Names and Addresses of all occupants of the affected lot or parcel.

There are no occupants of the landfill property.

3) A description and documentation of the applicant's legal interest in the affected lot or parcel.

The County owns the property in fee simple. Please see attached deed (Attachment 1).

4) Names and addresses of all owners and occupants of all lots or parcels wholly or partially within 100 feet of the affected lot or parcel and the addresses of all such lots or parcels.

EXHIBIT 1a

Terri Maus-Nisich
Assistant County Executive Officer
tmaus@countyofsb.org

Matthew P. Pontes
Assistant County Executive Officer
mpontes@countyofsb.org

Jeff Frapwell
Assistant County Executive Officer
jfrapwell@countyofsb.org

Dennis Bozanich
Deputy County Executive Officer
dbozanich@countyofsb.org

There are no parcels owned or occupied by anyone other than the County of Santa Barbara within 100 feet of parcel subject to the proposed adjustment. Included in this application as Attachment 2 is the list of the interested parties that the County will notice for the proposed Minor Boundary Adjustment. A project at the landfill, the Tajiguas Resource Recovery Project, went through a thorough public meeting process with 140 public meetings and hearings. The County compiled an extensive list of interested parties for that project and has used that list for Attachment 2.

- 5) A map of suitable scale to show the present and proposed location of the coastal zone boundary, all lots within 100 feet of the affected lot or parcel, and the existence and location of all readily identifiable natural and manmade features.

Attachment 3 includes the present and proposed location of the Coastal Zone boundary, all lots within 100 feet of the parcel containing the proposed Minor Boundary Adjustment, and all readily identifiable natural and manmade features. Attachment 4 is a map that shows the: 1) the Tajiguas Resource Recovery Project which includes three facilities: the Materials Recovery Facility, the Anaerobic Digester Facility and the Composting Management Unit; and, 2) the proposed boundary adjustment, including identification of the manmade features used to draw the proposed Minor Boundary Adjustment.

- 6) A description of the existing use of the affected lot or parcel and the nearby lands.

The property that is subject to the requested Minor Boundary Adjustment is the current site of the Tajiguas Landfill which has been operated as a County municipal solid waste disposal facility (Class III non-hazardous solid waste) since 1967. The southern portion of the landfill is located within the Coastal Zone and pre-dates the Federal Coastal Zone Management Act of 1972, the State's Coastal Act of 1976, and the County's Coastal Zoning Ordinance. Within the Coastal Zone, landfill operations preceded the Coastal Act. Solid waste disposal has been discontinued within the Coastal Zone and this portion of the landfill is in the process of being closed pursuant to State law and revegetated with coastal sage scrub vegetation. Within the Inland area and Coastal Zone, the County continues "borrow and cover" grading for the solid waste disposal in the northern portion of the site. In the Coastal Zone, this is part of the landfill operations that preceded the Coastal Act. Landfill disposal operations will continue outside the Coastal Zone and the generation of borrow soil as cover material will continue from the historic site.

The County of Santa Barbara owns approximately 1,600 acres of property along the Gaviota Coast including these adjacent properties: 1) the Tajiguas Landfill (Assessor Parcel Numbers [APN] 081-150-042, APNs 081-150-019 and 081-150-026); 2) the Baron Ranch (APNs 081-100-005, 081-150-032 and 081-090-009); and 3) two parcels to the south of the landfill parcels (APNs 081-150-033 and 081-150-034). The Baron Ranch and the parcels south of the landfill were purchased to prevent impending development, provide a buffer around the landfill and provide recreational opportunities. The landfill parcel affected by the proposed Minor Boundary Adjustment is APN 081-150-019.

Surrounding lands are used primarily for agriculture or open space including: to the west, the former Hercules Gas Plant (under PCB remediation); to the northwest Arroyo Hondo (recreation/open space); to the north, the Los Padres National Forest; to the east, the County-owned Baron Ranch (agriculture, public trail and native plant restoration); and to the south, U.S. Highway 101 and the Union Pacific Railroad. The only residential community (Arroyo Quemada) is located on the coast south of Highway 101, approximately 2,000 feet southeast of the landfill.

7) A discussion of the reasons for the request that the coastal zone boundary be adjusted.

Reason for Request

The request for a Minor Boundary Adjustment to the Coastal Zone boundary is to conform the boundary to readily identifiable manmade features at the County's Tajiguas Landfill. The Minor Boundary Adjustment will also accommodate the County's designed and approved Tajiguas Resource Recovery Project (TRRP). As discussed below, the purpose of the TRRP is to meet statewide solid waste requirements and initiatives, to extend the life of the landfill by increasing recycling and composting efforts, and to benefit the environment by doing so. The TRRP facilities accomplish this by recovering any recyclables to be sold to commodity markets, and by recovering food and other organic waste still left in trash cans and converting it into green energy, compost and/or soil amendments. By reducing the amount the County landfills each year by over 60 percent, the County significantly reduces the greenhouse gases caused by the waste generated by our community.

After an extensive public review process, the County certified a Subsequent Environmental Impact Report (EIR) for the TRRP in July 2016 and an errata to the EIR <http://cosb.countyofsb.org/pwd/pwrrwm.aspx?id=46873> . The EIR did not identify any significant and unavoidable impacts associated with the project with the exception of impacts related to the extension of the landfill life. The extension of the life of the landfill is due to the reduced landfilling following TRRP implementation through increased recycling and composting. Beneficial impacts associated with the project identified in the EIR include reduced GHG emissions and reduced potential for off-site litter because of waste processing within the Materials Recovery Facility. The project is identified as a significant GHG reduction element in the County of Santa Barbara Energy and Climate Action Plan and the City of Santa Barbara's Climate Action Plans.

Prior to and during the CEQA review process, the County considered the Coastal Zone boundary as shown in the County's certified Local Coastal Program (LCP). Based on the LCP depiction of the Coastal Zone boundary, the TRRP's facilities were: 1) designed to be north of the Coastal Zone boundary as shown in the LCP; and 2) supported by continued "borrow and cover" grading south of the State's Coastal Zone boundary (Public Resources Code section 30103(a)), consistent with the scope of "borrow and cover" grading at the Tajiguas Landfill that preceded the Coastal Act. Since the TRRP is located within an existing landfill, the site is already disturbed. As part of the ongoing landfill operations, the County must continue "borrow and cover" grading for solid waste disposal at the site. This "borrow and cover" grading south of the existing Coastal Zone boundary between the edge of pavement/limits of building pad for the TRRP and the proposed Coastal Zone boundary line depicted on Attachment 3 is consistent with the scope of the landfill

operation that preceded the Coastal Act. However, to avoid any confusion on this point and for ease of administration, the requested Minor Boundary Adjustment to the black line is based on readily identifiable manmade features that account for both the proposed footprint of the TRRP facilities and nearby grading around the facilities (See Attachment 5 for the Grading Plan and limits of disturbance). Therefore, the County is requesting a minor adjustment to the Coastal Zone boundary as shown on Attachment 3.

Recognizing that the Tajiguas Landfill Property and its natural features have been significantly modified by historic and ongoing landfill operations, the Minor Boundary Adjustment requested follows readily identifiable manmade features and has been drawn to minimize coastal acreage that would be affected. Of the 1,600 acres owned by the County along the Gaviota Coast, the Minor Boundary Adjustment would only involve approximately 6.74 acres. The adjustment will allow the County to continue to address the state's waste management and greenhouse gas reduction laws and directives in the least disruptive way and provide the important environmental and waste management benefits, listed above.

Background

The Santa Barbara County Public Works Department, Resource Recovery and Waste Management Division (RRWMD) is responsible for the management of solid waste resources for a large portion of Santa Barbara County. RRWMD's mission is to protect public health by providing County residents with cost effective, innovative, and environmentally sound solutions in waste management. RRWMD provides an integrated waste management system consisting of: recycling programs for commingled recyclables and green-waste; a program to collect food waste from the commercial sector; programs for residential and small business hazardous waste, sharps and pharmaceutical collection; electronic waste collection and recycling; management of a regional Green Business Program; coordination of a regional Coastal Clean Up Day; development of a local plastic bag ban ordinance; the operation of four recycling and transfer stations; the operation of one household hazardous waste collection center; and operation of the Tajiguas Landfill.

Recycling programs are extremely successful in the communities served by the Tajiguas Landfill. These communities include the unincorporated areas of the South Coast, Cuyama and Santa Ynez Valleys, as well as the cities of Santa Barbara, Goleta, Solvang and Buellton. Together these communities recycle more than 70 percent of the waste they generate. However even with these programs, over 165,000 tons of waste was still buried at the Tajiguas Landfill in 2012. Approximately half of this residual waste is recyclables like metals, and organic waste. To capture and divert this additional recyclable material, after years of public and regulatory outreach and consultation and a detailed environmental review process, the County approved the TRRP consisting of a Materials Recovery Facility, an Anaerobic Digestion Facility and a Composting Area, that would recover any recyclables still left in trash cans for sale as a commodity as well as any food and other organic waste to be converted into green energy and compost and/or soil amendments.

The TRRP is being implemented in response to, and is supported by, a number of state and federal directives, statutes and initiatives and provides tangible benefits addressed in Attachment 6.

Support for the Requested Minor Boundary Adjustment of Coastal Zone Boundary

Section 13256.1(b) requires the executive director to review the requested Minor Boundary Adjustment and investigate the following factors. Each factor is cited below, followed by the County's analysis of the factor:

1. Whether there are alternative adjustments to the boundary either seaward or landward which would be consistent with the provisions of Public Resources Code Section 30103(b) and which would result in a more readily identifiable location for the coastal zone boundary.

The County's proposed Minor Boundary Adjustment is consistent with Coastal Act Section 30103(b) as it adjusts the coastal boundary the minimum distance necessary to conform to a readily identifiable manmade feature, the proposed TRRP facilities and borrow and cover grading area. It also is well within the 200 yard adjustment area allowed by Public Resources Code Section 30103(b), as the adjustment is a maximum of 173 yards south of the existing Coastal Zone boundary.

As stated above, the entire portion of the parcel already has been altered by historic landfill operations and the adjustment: (1) would accommodate the proposed footprint of the TRRP facilities and nearby grading around the facilities, consistent with the scope of the landfill operation that preceded the Coastal Act; and (2) would create a readily identifiable location of the Coastal Zone Boundary for ease of administration.

No alternative adjustment to the boundary exists that would result in a more readily identifiable location for the Coastal Zone boundary as the requested Minor Boundary Adjustment is the minimum necessary to achieve the above clarity and conformance to readily identifiable manmade features.

2. Whether there are coastal resources on the affected lot or parcel which would be affected by a change in the boundary.

The entire area proposed to be adjusted out of the Coastal Zone is historical and long-disturbed landfill area. There are no coastal resources in the area subject to the proposed Minor Boundary Adjustment, including no significant environmental impacts to scenic or visual resources. Any views from the Coastal Zone to the TRRP are of an already disturbed area, and this Minor Boundary Adjustment would not affect that.

3. Whether an adjustment to the boundary would affect coastal resources on other lands.

The Minor Boundary Adjustment would not affect coastal resources on other lands. The adjustment area is located in an area of the site that is not close to property boundaries, and would not affect drainages flowing offsite.

4. Whether an adjustment to the boundary would affect opportunities for public access to or along the coast.

The adjustment to the boundary would not affect public access to the coast, since the parcel is not adjacent to the coast and the public currently cannot use or access the parcel. Further, the County has established a public trail on the Baron Ranch and is in the process of completing the environmental review and permitting for an expansion of the trail and its uses, adjacent to the landfill operation. Once approved, the trail will provide access through the Coastal Zone and provide recreational users a connection to the Los Padres National Forest.

5. Whether an adjustment to the boundary would affect the ability of local government to prepare a local coastal program in conformance with the goals, objectives and policies of the Coastal Act of 1976.

The County has a certified local coastal program. The TRRP was analyzed for conformity with the County's Comprehensive Plan and the County's certified local coastal program in a staff report to the County Planning Commission in January 2016. The Minor Boundary Adjustment would not hinder the plan's conformance with the goals, objectives and policies of the Coastal Act of 1976, since the area of the Minor Boundary Adjustment is a highly disturbed landfill and contains no coastal resources.

In addition, the County of Santa Barbara has posted a conspicuous notice of the proposed adjustment concurrently with submittal of this request. The form and location of the posted notice is "similar to that required by Section 13054(b)" of the Coastal Commission's Administrative Regulations, as required by 13255.2(c) of the Regulations. A copy is attached as Attachment 7. We understand that the request does not require a filing fee since it is being made by a local government.

We are available to address any questions you may have pertaining to this request. We are hopeful that the submittal will be forwarded to the Coastal Commission for decision at their May 2017 hearing in San Diego. If you have any questions or need any additional information, please contact Dianne Black, Assistant Director of Planning and Development at (805) 568-2086 or by email at Dianne@countyofsb.org.

Regards,



Mona Miyasato
County Executive Officer

Attachment 1: Property Owner information - Deed

Attachment 2: Interested Parties mailing labels (County's noticing list)

Attachment 3: Map of present boundary, proposed boundary, and natural and manmade features, and property boundaries

Attachment 4: Map of the TRRP and Proposed Boundary Adjustment, with manmade features noted

Attachment 5: Grading and Drainage Plan for Construction Groundwater Permit

Attachment 6: TRRP Environmental Benefits and Compliance

Attachment 7: Copy of Posted Notice Affidavit

cc: Glenn Russell, Director Planning and Development
Scott McGolpin, Director Public Works

ATTACHMENT 1

RECORDED AT REQUEST OF
R/W agent

BOOK 2174 PAGE 406

Dec 6 3 05 PM '66

OFFICIAL RECORDS
SANTA BARBARA CO., CALIF.
RITA VAN HUSNIAZ, REGISTERER

NO FEE

GRANT DEED

Project No. Folio No. 143
Project: Proposed Disposal
Site
Parcel No. 1 and 2

RANCHO COSTA LINDA, a limited partnership,

does hereby GRANT to the COUNTY OF SANTA BARBARA the real property in the County of Santa Barbara, State of California, described as:

PARCEL 1

That portion of land situated in the County of Santa Barbara, State of California, and being North of the State Highway as shown on Map of Survey made by F. F. Flournoy of the division of the Pedro Baron Ranch, being part of the Rancho Nuestra Senora del Refugio, which map is of record in the Office of the County Recorder of said County, in Book 13, at Page 98 of Maps, and which portion is more particularly described as follows:

BEGINNING at the Northeast corner of that certain parcel of land conveyed to Terra Firma Associates by Deed recorded December 31, 1964 in Book 2085, at Page 1456 of Official Records, records of said County, said point is also located on the Easterly line of that certain parcel of land as conveyed to the grantor herein by Deed recorded May 31, 1962 in Book 1931, at Page 225 of Official Records, records of said County, thence Westerly along the Northerly line of said Terra Firma Associates' parcel of land and its Westerly prolongation from the Northwesterly corner thereof, a distance of 2,905.00 feet, more or less, to a point on the Easterly line of the parcel of land conveyed to Shell Oil Corporation by Deed recorded January 25, 1963 in Book 1973, at Page 868 of Official Records, records of said County, said point being located North 10°16'20" East, 220.04 feet from the Southerly terminus of that certain course in said deed having a bearing of North 10°16'20" East and a length of 1,175.04 feet; thence along said course, a distance of 955.00 feet to the Northerly terminus thereof; thence continuing along said Easterly line North 12°48'23" West 176.26 feet; thence North 03°03'50" West 398.09 feet to the Northeast corner of said Shell Oil Company's parcel; thence continuing along the Northerly prolongation of said Easterly line, North 03°03'50" West 562.41 feet to a point; thence Easterly parallel with the Northerly line of said Terra Firma Associates' parcel and its Westerly prolongation a distance of 2,696.73 feet to a point on the Easterly line of said deed conveyed to the grantors herein; thence Southerly along said Easterly line, the following courses and distances; thence South 11°33'00" East 98.62 feet; thence South 04°35'00" East 400.00 feet; thence South 04°09'00" East 1,596.20 feet more or less to the POINT OF BEGINNING.

Excepting therefrom all oil, oil rights, minerals, mineral rights, natural gas, natural gas rights, and other hydrocarbons by whatsoever name known that may be within or under the parcel of land hereinabove described, together with the perpetual right of drilling, mining, exploring, and operating therefor and removing the same from said land or any other land, including the right to whipstock or directionally drill and mine from lands other than those hereinabove described, oil or gas wells, tunnels and shafts into, through or across the subsurface of the land hereinabove described, and to bottom such whipstocked or directionally drilled wells, tunnels, and shafts under and beneath

or beyond the exterior limits thereof, and to redrill, retunnel, equip, maintain, repair, deepen and operate any such wells or mines, without, however, the right to drill, mine, explore and operate through the surface or the upper 100 feet of the subsurface of the land hereinabove described or otherwise in such manner as to endanger or interfere with any public use of said land or any public improvement or structure thereon.

Also excepting and reserving to the Grantor herein, their heirs, successors or assigns the following three (3) easements lying within Parcel 1, hereinabove described:

An easement, sixty (60.00) feet in width, for ingress, egress, public utility and pipeline purposes, over, under, upon and through said Parcel 1, said sixty foot easement beginning at the Northerly terminus of Parcel 2, hereinafter described, and terminating on the Northerly line of said Parcel 1 nearest to the present well site; this easement shall be situated in such locations as the present road exists and as said road shall be reconstructed, from time to time, for any subsequent relocation thereof.

An easement for ingress, egress, public utilities and pipelines over, under, upon and through a strip of land, sixty (60.00) feet in width, Easterly of, adjacent to, and parallel with the Westerly boundary of said Parcel 1; sidelines of said easement to extend from the Southerly line of said Parcel 1 to the Northerly line of said Parcel 1.

An easement for ingress, egress, public utilities and pipelines over, under, upon and through, and temporary stockpiling of materials on the Northerly one hundred (100.00) feet -- measured at right angles to the Northerly line of said Parcel 1 -- of the Westerly fourteen hundred (1,400.00) feet. The stockpiling of any materials shall be removed within a reasonable time upon notice from Grantee when, as, and if said stockpiling interferes unreasonably with the Grantee's use of said land.

PARCEL 2

A non-exclusive easement, 60 feet in width, for ingress and egress and public utility purposes over that portion of Rancho Nuestra Senora Del Refugio, as shown on a map filed in Book 13, at Page 98 of Maps, records of the County of Santa Barbara, State of California, described as follows:

BEGINNING on a point in the Northerly line of the tract of land conveyed in the Deed to the State of California (U.S. Highway 101), recorded on December 8, 1948 in Book 826, at Page 480 of Official Records, at the Southwesterly corner of the Service Station Lease to Shell Oil Company, recorded on March 20, 1962 in Book 1911, at Page 648 of Official Records;

Thence First, along the Westerly line of said "Shell Lease" and its Northerly prolongation, North 1,400 + feet to a point in the Southerly line of Parcel 1 hereinabove described;

Thence Second, along said Southerly line, West 60 feet;

Thence Third, at right angles to the hereinabove referred to Southerly line and parallel with said Westerly line of said "Shell Lease", South 1,380 + feet to the Northerly line of the tract of land conveyed to the State of California;

Thence Fourth, along said Northerly line on a curve with a radius of 9,825.00 feet, Easterly 61 + feet to the POINT OF BEGINNING.

This Grant Deed is executed and delivered with the express understanding and intention of the Grantor and Grantee that this Grant Deed incorporates all of the covenants and provisions contained in Agreement for Sale of Real Property and Interest in Real Property between Grantor and Grantee dated the 21st day of November, 1966, and further that said covenants and provisions are expressly made for the benefit of the heirs, successors and assigns of the Grantor and Grantee and that said covenants and provisions are intended to and shall run with and benefit the parcels of land referred to in said Agreement for Sale.

Grantors, for themselves, their heirs, successors and assigns, do hereby release grantee, its officers, employees and agents, from any and all liability arising out of the use of said land for the purposes stated or implied herein.

Dated: November 18, 1966 RANCHO COSTA LINDA, a Limited Partnership

General Partner: Jacob Seidowitz
Jacob Seidowitz

General Partner: Eric Bruckner
Eric Bruckner

ACKNOWLEDGMENT OF GRANTOR

STATE OF CALIFORNIA, COUNTY OF _____ ss.
On _____, before me, the undersigned, a Notary Public in and for said County and State, personally appeared _____

known to me to be the person whose name _____ subscribed to the within Instrument, and acknowledged that _____ executed the same.

WITNESS my hand and official seal.

CERTIFICATE OF ACCEPTANCE

State of California, ss.
County of Santa Barbara.

Grant

THIS IS TO CERTIFY that the interest in real property conveyed by the Deed ~~to~~ dated November 18, 1966 from Rancho Costa Linda, a limited partnership

to the County of Santa Barbara, _____ State of California, a political corporation and/or governmental agency, is hereby accepted by Order of the Board of Supervisors of the County of Santa Barbara on November 21, 1966 and the grantee consents to recordation thereof by its duly authorized officer.

WITNESS my hand and the seal of said Board this 21st day of November, A.D. 1966

By J. E. Lewis County Clerk.
Anna Jordan Deputy Clerk.



THIS SPACE FOR COUNTY RECORDER'S USE

APPROVALS

Approved as to form by County Counsel on July 1, 1963	
<u>Carl E. Vogel</u> Right of Way Agent R/W & Land Dept. County Administration Bldg. Santa Barbara, Calif. 93104	

Recorded at request of, and return to:
Santa Barbara County Right of Way Dept.,
Court House, Santa Barbara, California

ACKNOWLEDGMENT OF GRANTOR
(Corporation)

STATE OF CALIFORNIA, COUNTY OF _____ ss:

On this _____ day of _____, 19____, before me, a Notary Public in and for said County and State, personally appeared _____, known to me to be the _____ President, and _____

known to me to be the _____ Secretary of the Corporation that executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the said Corporation and acknowledged to me that such Corporation executed the within Instrument pursuant to its by-laws or a resolution of its board of directors.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Notary Public in and for said County and State.

ACKNOWLEDGMENT OF GRANTOR
(Partnership)

STATE OF CALIFORNIA, COUNTY OF SANTA BARBARA ss:

On this 18th day of November, 1966, before me, a Notary Public in and for said County and State, personally appeared ERIC BRUCKNER and JACOB SELDOWITZ

General
known to me to be the partner(s) of the partnership that executed the within Instrument, and acknowledged to me that such partnership executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.



Angie B. Scholtz
Notary Public in and for Said County and State.
ANGIE B. SCHOLTZ
My Commission Expires Feb. 28, 1967

ACKNOWLEDGMENT OF SUBSCRIBING WITNESS

STATE OF CALIFORNIA, COUNTY OF _____ ss:

On _____, before me, the undersigned, a Notary Public in and for said County and State, personally appeared _____, personally known to me to be the person whose name is subscribed to the within Instrument, as a Witness thereto, who being by me duly sworn, deposes and says: That _____ resides in _____ County, and that _____ was present and saw _____

_____ personally known to _____ to be the same person described in and whose name _____ subscribed to the within and annexed Instrument as _____ thereto, execute and deliver the same, and _____ acknowledged to said affiant that _____ executed the same; and that said affiant subscribed _____ name thereto as a Witness.

WITNESS my hand and official seal.

return to: R/W

ATTACHMENT 2

081-090-009
COUNTY OF SANTA BARBARA
14550 HWY 101
GOLETA CA 93117

081-100-045
KING, HELEN DEBORAH VAN DYKE
ESTATE TRUST 2/9/1999
8029 FRONTAGE RD
MANHATTAN MT 59741

081-100-050
WINTER HAWK, LLC
14000 CALLE REAL
GOLETA CA 93117

081-100-054
POPPY MOUNTAIN, LLC
14000 CALLE REAL
GOLETA CA 93117

081-100-060
MAZ PROPERTIES INC
14000 CALLE REAL
GOLETA CA 93117

081-150-011
QUEMADA MUTUAL WATER COMPANY
1 ARROYO QUEMADA LN
GOLETA CA 93117

081-150-012
QUEMADA CORPORATION
1 ARROYO QUEMADA LN
GOLETA CA 93117

SUSAN MILLHOLLAN
1091 CAMINO DEL RIO
SANTA BARBARA CA 93110

081-150-022
CASEY, MICHAEL P & NANCY M FAMILY
TRUST
4694 LA ESPADA DR
SANTA BARBARA CA 93111

LORRAINE MOREY
1110 CAMINO DEL RIO
SANTA BARBARA CA 93110

081-150-031
MEYER, GARY W/GERDA M TTEES (for)
MEYER FAM TR 5/12/99
1426 SCHOOLHOUSE RD
SANTA BARBARA CA 93108

081-150-032
COUNTY OF SANTA BARBARA
14550 HWY 101
GOLETA CA 93117

081-150-033
PAVELKA, MARCO
5662 CALLE REAL 216
GOLETA CA 93117

081-150-034
HART FAMILY TRUST 5/14/08
494 N LA CUMBRE RD
SANTA BARBARA CA 93110

081-150-041
AERA ENERGY LLC
PO BOX 11164
BAKERSFIELD CA 93389 1164

081-160-002
BACIU FAMILY LLC
5707 RIDGEFIELD RD
BETHESADA MD 20816

081-170-001
BACIU FAMILY LLC
5707 RIDGEFIELD RD
BETHESADA MD 20816

081-170-002
AERA ENERGY LLC
PO BOX 11164
BAKERSFIELD CA 93389

081-170-003
BACIU FAMILY LLC
5707 RIDGEFIELD RD
BETHESADA MD 20816

081-180-004
RENNICK SCOTT P
1809 CO RD 727
GUNNISON CO 81230

081-180-005
AERA ENERGY LLC
PO BOX 11164
BAKERSFIELD CA 93389

081-190-002
JONES GEORGE BRADFORD & JOAN
HOOD TRSTES (for) JONES G BRADFORD
FAM TRUST 12/16/88
1820 THE STRAND
MANHATTAN BEACH CA 90266

081-190-003
GEREMIA, ALEXANDRA FAMILY TRUST
8/5/98
3500 HIGHWAY 154
SANTA BARBARA CA 93105

081-190-004
OCCUPANT
11 ARROYO QUEMADA LN
GOLETA CA 93117

081-190-005
OCCUPANT
675 PINE ST
SOLVANG CA 93463

081-190-006
OCCUPANT
612 HIGHLAND AVE
SAN MATEO CA 94401

081-190-007
ASERAPPA, CATHERINE E
612 HIGHLAND AVE
SAN MATEO CA 94401

081-190-008
LOPEZ ROBERTA ROWE TR
RR 1 BOX 11 ARROYO QUEMADA
GOLETA CA 93117

081-190-013
SOARING EAGLE TRUST 5/10/07
5231 SENFORD AVE
LOS ANGELES CA 90056

081-190-016
MADRIAGA, LESLIE ELIZABETH
1196 MUSTANG DR
SANTA YNEZ CA 93460

BEVERLY BOISE-COASSART
41 HOLLISTER RANCH
GAVIOTA CA 93117

MARK LLOYD
3 W CARRILLO
SANTA BARBARA CA 93101

PAUL VAN LEER
RRZ BOX 234A
GOLETA CA 93117

059-050-003
ROSES, JOAQUIN & VALERIE REVOCABLE
TRUST 5/4/1997 AMENDED 8/24/2006
4593 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-050-006
MCKERNAN, KAREN H REVOCABLE TRUST
2/18/10
4599 CAMINO MOLINERO
SANTA BARBARA CA 93111

059-061-001
YOUNG, JAMES M
4583 CAMINO DEL MIRASOL
SANTA BARBARA CA 93110

059-061-004
MICHAELS HELEN J TRUSTEE (for)
MICHAELS HELEN J TR 3-16-95
4595 CAMINO DEL MIRASOL
SANTA BARBARA CA 93110

081-190-009
GREATHOUSE FAMILY 2005 REVOCABLE
TRUST 10/11/05
1277 SAN ANTONIO CREEK RD
SANTA BARBARA CA 93111

081-190-014
SMITH FAMILY TRUST
ARROYO QUEMADA LN 5
GOLETA CA 93117

081-200-032
BEAN BLOSSOM, LLC
14000 CALLE REAL
GOLETA CA 93117

TERRI BOWMAN
11560 CALLE REAL
GOLETA CA 93117

PHILIP MCKENNA
321 EAST MISSION STREET
SANTA BARBARA CA 93101

059-050-001
MCKAIG, BRUCE & LOUISE A FAMILY
TRUST
4589 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-050-004
WOLF, JOHN & ANITA M REVOCABLE
TRUST 5/31/1990
4595 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-050-007
GROSS-SCHAEFER FAMILY TRUST 9/27/04
4598 CAMINO MOLINERO
SANTA BARBARA CA 93110

BUCK GARDNER
4622 GRANDA PL
SANTA BARBARA CA 93110

059-061-005
HOUK FAMILY TRUST SURVIVORS TR
4599 CAMINO DEL MIRASOL
SANTA BARBARA CA 93110

081-190-012
QUEMADA MUTUAL WATER COMPANY
1 ARROYO QUEMADA LN
GOLETA CA 93117

081-190-015
KOCH, KLAUS LIVING TRUST
25 ARROYO QUEMADA
GOLETA CA 93117

GUNER TAUTRIM
12220 CALLE REAL
GOLETA CA 93117

CHARLES "KIM" KIMBELL
4080 SONRIENTE ROAD
SANTA BARBARA CA 93110

JENIFER MCNABB
2121 REFUGIO ROAD
GOLETA CA 93117

WILLIAM HANCOCK
246 LOMA BONITA DR
SAN LUIS OBISPO CA 93401

059-050-005
IVERSON SURV'S TR 5/6/06
4597 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-050-008
ANDERSON, DONALD/CHRISTINE LIVING
TRUST 10/1/88
4596 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-061-003
CIONTEA, JAMES C
4591 CAMINO DEL MIRASOL
SANTA BARBARA CA 93110

059-061-009
STEVENSON JAMES N
983 CAMINO DEL RIO
SANTA BARBARA CA 93110

059-061-010
BILDSTEN LARS/ELLEN
971 CAMINO DEL RIO
SANTA BARBARA CA 93110

059-061-013
ALFERNES, RODNEY C
941 CAMINO DEL RIO
SANTA BARBARA CA 93110

059-062-004
JENSEN, GREGORY M
712 E MASON ST
SANTA BARBARA CA 93103

059-071-002
HALPERIN MARITAL TRUST
4577 CAMINO DEL MIRASOL
SANTA BARBARA CA 93110

059-071-005
CROMBIE KENNETH C REV TRUST 1-29-86
4578 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-072-002
WILLIAMS FAMILY TRUST 05/08/1997
4585 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-073-001
BODE MURIEL E TRUSTEE (for) BODE
UNIFIED CREDIT TR
940 CAMINO DEL RIO
SANTA BARBARA CA 93110

059-073-004
PETRINI FAMILY TRUST 10/26/01
4558 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-073-007
SKIFF, GINA MARIA BIFANO
4595 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-073-010
HOLEHOUSE, THOMAS W
4541 CAMINO MOLINERO
SANTA BARBARA CA 93105

059-061-011
HONE TRUST 11/4/98
4592 CAMINO DEL MIRASOL
SANTA BARBARA CA 93110

059-061-014
MCCLESKEY, CAROLYN LIVING TRUST
3/7/08
955 CAMINO DEL RIO
SANTA BARBARA CA 93110

059-062-005
HAMMOND, RICHARD E/ANN B
REVOCABLE TRUST 10/27/09
950 CAMINO DEL RIO
SANTA BARBARA CA 93110

059-071-003
ANDREOLI, GREGORY J
4571 CAMINO DEL MIRASOL
SANTA BARBARA CA 93110

059-071-006
MICHEALSEN DANIEL K/JULIE B TRUSTEES
(for) MICHEALSEN DANIEL K/JULIE FAM TR
4/27/90
4584 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-072-003
RODRIGUEZ, JORGE FAMILY REVOCABLE
TRUST 9/15/2011
4583 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-073-002
HALEY FAMILY TRUST FBO BRADFORD R &
ALISA M HALEY 9/10/2004
930 CAMINO DEL RIO
SANTA BARBARA CA 93110

059-073-005
NICHOLSON FAMILY TRUST
1283 RIMMER AVE
PACIFIC PALISADES CA 90272

SYLVIA MILLER
4258-3 CARPINTERIA AVE
CARPINTERIA CA 93013

059-073-011
ACKLEY RICHARD H/JOAN M TRUSTEES
(for) ACKLEY FAM TR 3-30-92
202 RED SAND RD
GRAND JUNCTION CO 81507 1156

059-061-012
BAER, HAROLD J
6414 MIDWICK CT
BAKERSFIELD CA 93306

059-062-003
DEP REVOCABLE LIVING TRUST 1/27/2010
972 CAMINO DEL RIO
SANTA BARBARA CA 93110

059-071-001
CURATALO CHARLES J/BEATRICE WARD
TRSTEEES (for) CURATALO FAM TR 3-9-94
4581 CAMINO DEL MIRASOL
SANTA BARBARA CA 93110

059-071-004
KINCANNON WILLIAM N/MAUREEN H
TRUSTEES (for) KINCANNON TR 5-18-93
4572 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-072-001
BELKIN FAMILY TRUST 6/27/2012
4587 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-072-004
MCGINNIS LIVING TRUST 10/8/10
4575 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-073-003
SANCHEZ JEANNE M TR 6-4-82
920 CAMINO DEL RIO
SANTA BARBARA CA 93110

059-073-006
CONSTANCE M DELBROOK-MARQUEZ
1994 FAMILY TRUST 8/19/94
4546 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-073-009
HARRISON SURVIVOR'S TRUST 3/30/84
28621 SHADY RIDGE LN
TRABUCO CANYON CA 92679

059-073-012
NARDO, CHARLES & CAROL LIVING TRUST
8/10/98
4555 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-073-013

HOLLINGSHEAD, GLENN W
4561 CAMINO MOLINERO
SANTA BARBARA CA 93110

059-090-005

NELSON FAMILY TRUST 3/3/00
4491 LA PALOMA AVE
SANTA BARBARA CA 93105

059-090-008

JEFFERS RICHARD H/MARY M TRUSTEES
(for) JEFFERS TR 9/10/99
4467 LA PALOMA AVE
SANTA BARBARA CA 93105

059-090-009

EVANS LLOYD B/PATRICIA ANNE
4457 LA PALOMA AVE
SANTA BARBARA CA 93105

059-090-011

FROWISS MELINDA P TRUSTEE (for)
FROWISS MELINDA REV TR 4/12/96
4455 LA PALOMA AVE
SANTA BARBARA CA 93105

059-090-012

JEFFERS LE ROY H/VADA E TRUSTEES (for)
JEFFERS FAM TR 4/3/91
4473 LA PALOMA AVE
SANTA BARBARA CA 93105

059-090-014

CONDON MAYFIELD TRUST 6/5/13
4490 LA PALOMA AVE
SANTA BARBARA CA 93105

059-090-015

WIPF, ERIK S/DYANNE M REVOCABLE
TRUST 8/30/08
4486 LA PALOMA AVE
SANTA BARBARA CA 93105

059-110-001

FROWISS LEE G/DOLORES V TRUSTEES (for)
FROWISS LIV TR 6/5/95
4449 LA PALOMA AVE
SANTA BARBARA CA 93105

059-120-003

COUNTY OF SANTA BARBARA
4400 CATHEDRAL OAKS RD
SANTA BARBARA CA 93110

059-120-004

COUNTY OF SANTA BARBARA
123 E ANAPAMU ST
SANTA BARBARA CA 93101

059-130-015

ST VINCENTS INSTITUTION
4200 CALLE REAL
SANTA BARBARA CA 93110 1454

PATRICIA MCCORMACK
405 GRENOBLE RD
SANTA BARBARA CA 93110

059-140-029

COUNTY OF SANTA BARBARA
310 CAMINO DEL REMEDIO
SANTA BARBARA CA 93110

059-140-030

COUNTY OF SANTA BARBARA
305 CAMINO REMEDIO
SANTA BARBARA CA 93110

059-150-002

RUSCONI VALENTINO L
695 LORRAINE AVE
SANTA BARBARA CA 93110

059-150-005

ESCAMILLA, MARIO J
1490 N SAN MARCOS RD
SANTA BARBARA CA 93111

059-150-006

COLES, ROBERT J JR 2008 IRREVOCABLE
TRUST 11/8/2008
PO BOX 60202
SANTA BARBARA CA 93160

059-150-009

GABRIELLI, MARCO
2720 PAINTED CAVE RD
SANTA BARBARA CA 93105

059-150-010

MCCLELLAN, MICHAEL R
2851 BASELINE AVE
SANTA YNEZ CA 93460

059-150-011

DAMRON, STELLA LIVING TRUST 1/10/01
2840 HOLLY RD
SANTA BARBARA CA 93105

059-500-012

OCCUPANT
128 EL SUENO RD
SANTA BARBARA, CA 93110

059-150-014

TURNBULL, LESLIE A
3944 STATE ST 200
SANTA BARBARA CA 93105

059-150-016

RAPP, NANCY L TRUST 10/19/07
810 WINDSOR WAY
SANTA BARBARA CA 93105

059-150-023

RUSCONI VALENTINO/ANNA
695 LORRAINE AVE
SANTA BARBARA CA 93110

059-150-024

GALBRAITH TRUST
537 MILLS WAY
GOLETA CA 93117

059-150-025

GALBRAITH TRUST
537 MILLS WAY
GOLETA CA 93117

059-150-026

CUEVAS JORGE/ROSA M
660 EL SUENO RD
SANTA BARBARA CA 93110

059-150-027

ADAMSKI, DOUG
650 EL SUENO RD
SANTA BARBARA CA 93110

059-150-028

CIPRIANO, MIGUEL ANGEL
640 EL SUENO RD
SANTA BARBARA CA 93110

059-150-029
NAVA, SERGIO/LUCINA
630 EL SUENO RD
SANTA BARBARA CA 93110

059-150-034
JOHNSON ANDREW J
621 LORRAINE AVE
SANTA BARBARA CA 93110

059-160-008
OWEN, DAVID & ELIZABETH LIVING TRUST
690 LORRAINE AVE
SANTA BARBARA CA 93110

059-171-006
SANTOS FAMILY TRUST 2/12/09
511 EL SUENO RD
SANTA BARBARA CA 93110

059-171-010
BAKER-HALL CATHERINE
449 EL SUENO RD
SANTA BARBARA CA 93110

059-171-013
LAFFERTY G ALBERT/JENNIFER E
503 EL SUENO RD
SANTA BARBARA CA 93110

059-171-018
BERGER, MICHAEL
479 EL SUENO ROAD
SANTA BARBARA CA 93110

059-171-021
SMITH TED WAYNE/MONICA KARIN
BUCHER
PO BOX 30973
SANTA BARBARA CA 93130

059-171-024
POEHLER, WILLIAM/PAMELA LIVING TRUST
12/11/09
585 EL SUENO RD
SANTA BARBARA CA 93110

059-172-003
SCHUYLER, PETER T TRUST 8/14/98
535 LORRAINE AVE
SANTA BARBARA CA 93110

059-150-031
LINDQUIST SYLVIA TRUSTEE (for)
LINDQUIST SYLVIA LIV TR 8-4-98
582 EL SUENO RD
SANTA BARBARA CA 93110

059-150-037
HERRERA, PAVEL
581 LORRAINE AVE
SANTA BARBARA CA 93110

059-300-078
OCCUPANT
440 CAMINO DEL REMED E
SANTA BARBARA, CA 93110

059-300-084
OCCUPANT
450 CAMINO DEL REMED E
SANTA BARBARA, CA 93110

059-171-011
JACKSON MADELINE ADELE GORDON-
459 EL SUENO RD
SANTA BARBARA CA 93110

059-171-014
CORBY, TIFFANY
525 EL SUENO RD
SANTA BARBARA CA 93110

059-171-019
ADAME, CARLOS J
1125 ARBOLADO RD
SANTA BARBARA CA 93103

059-171-022
MORAN-WILSHUSEN, LYNN SUSAN
TESTAMENTARY TRUST
539 EL SUENO RD
SANTA BARBARA CA 93110

059-172-001
HERBERT, BEVERLY SUE
575 LORRAINE AVE
SANTA BARBARA CA 93110

059-172-004
SCHUYLER PETER T TRUSTEE (for)
SCHUYLER PETER T TR 8-14-98
525 LORRAINE AVE
SANTA BARBARA CA 93110 0752

059-150-033
RUSCONI VALENTINO LUIGI TRUSTEE (for)
RUSCONI VALENTINO LIV TR 11-11-94
695 LORRAINE AVE
SANTA BARBARA CA 93110

059-160-007
RANCHO SANTA BARBARA
333 OLD MILL RD
SANTA BARBARA CA 93110

059-171-003
RUSCONI VALENTINO LUIGI TRUSTEE (for)
RUSCONI VALENTINO LIV TR 11-11-94
695 LORRAINE AVE
SANTA BARBARA CA 93110

059-171-008
JENKINS DAVID K/KATHY
501 EL SUENO RD
SANTA BARBARA CA 93110

059-171-012
HERNANDEZ, GABRIEL/ILENE
465 EL SUENO RD
SANTA BARBARA CA 93110

059-171-017
FROELICHER, JOHN V
489 EL SUENO RD
SANTA BARBARA CA 93110

059-171-020
WHITE, KRISTINE MAINLAND
555 EL SUENO RD
SANTA BARBARA CA 93110

059-171-023
WILLIAM & PAMELA POEHLER LIVING
TRUST 9/22/00
585 EL SUENO RD
SANTA BARBARA CA 93110

059-172-002
BOBRO GEORGE/SHIRLEY M
545 LORRAINE AVE
SANTA BARBARA CA 93110

059-172-005
WILSON, BROOKE
517 LORRAINE AVE
SANTA BARBARA CA 93110

059-172-006
ROBERSON, JUDY AND GERRY
476 EL SUENO RD
SANTA BARBARA CA 93110

059-172-009
PACKARD, PATRICIA LIVING TRUST 5/24/10
5120 N SIESTA DR
TUCSON AZ 85750

059-172-012
BLOOMFIELD, BRIAN
480 EL SUENO RD
SANTA BARBARA CA 93110

059-172-015
GASPAR, ARTHUR
524 EL SUENO RD
SANTA BARBARA CA 93110

059-172-018
MICHELSEN CHARLES J
572 EL SUENO RD
SANTA BARBARA CA 93110

059-180-012
GULLEY, PHILLIP E & DIANE F TRUST
7/22/10
596 LORRAINE AVE
SANTA BARBARA CA 93110

059-180-017
MOHUN FAMILY REVOCABLE TRUST
660 LORRAINE AVE
SANTA BARBARA CA 93110

059-180-021
MOORE RALPH C/CHARLOTTE C
518 LORRAINE AVE
SANTA BARBARA CA 93110

059-221-002
BRAIR FAMILY TRUST 3/25/98
419 EL SUENO RD
SANTA BARBARA CA 93110

059-221-005
LOPEZ, ARTHUR B
365 SHERWOOD DR
SANTA BARBARA CA 93110

059-172-007
ROGERS DAVID L/HEIDI S TRUSTEES (for)
ROGERS FAM TR
466 EL SUENO RD
SANTA BARBARA CA 93110

059-172-010
RODRIGUEZ, TONY B
440 EL SUENO RD
SANTA BARBARA CA 93110

059-172-013
LANDIN STELLA M
478 EL SUENO RD
SANTA BARBARA CA 93110

059-172-016
CARDONA, FRANK S/GUADALUPE G TTEES
(for) CARDONA, FRANK S/GUADALUPE G
TR 7/21/94
740 RUSSELL WAY
SANTA BARBARA CA 93110

059-172-019
CHAFFIN, RUSSELL J
570 EL SUENO RD
SANTA BARBARA CA 93110

059-180-015
FRIEDMAN, SIDNEY
620 LORRAINE AVE
SANTA BARBARA CA 93110

059-180-018
STETTNER, MARY E LIVING TRUST 5/5/12
532 LORRAINE AVE
SANTA BARBARA CA 93110

059-180-025
THRONSON CRISTINA H TRUSTEE (for)
LORRAINE TR 11/4/98
580 LORRAINE AVE
SANTA BARBARA CA 93110

059-221-003
ALDANA, J M FAMILY TRUST
1918 EMERSON AVE
SANTA BARBARA CA 93101

059-221-006
WALSER LUCINDA
359 SHERWOOD DR
SANTA BARBARA CA 93110

059-172-008
PACKARD, PATRICIA LIVING TRUST 5/24/10
5120 N SIESTA DR
TUCSON AZ 85750

059-172-011
COURT, DAVID BRIAN
464 EL SUENO RD
SANTA BARBARA CA 93110

059-172-014
REYNOLDS LEIF/KATHY CARLISLE
506 EL SUENO RD
SANTA BARBARA CA 93110

059-172-017
BRADEN, DIANA
831 HOGAN PL
PASO ROBLES CA 93446

059-180-011
RANCHO SANTA BARBARA
333 OLD MILL RD
SANTA BARBARA CA 93110

059-180-016
LIBBEY TRUST
630 LORRAINE AVE
SANTA BARBARA CA 93110

059-180-020
MEAD DAVID G/JUDITH A TRUSTEES (for)
MEAD LIV TR 5/6/99
524 LORRAINE AVE
SANTA BARBARA CA 93110

059-300-091
OCCUPANT
460 CAMINO DEL REMED C
SANTA BARBARA, CA 93110

059-221-004
GRIFFIN, ANTHONY R
375 SHERWOOD DR
SANTA BARBARA CA 93110

059-221-007
SHMIDOV, VALENTIN
353 SHERWOOD DR
SANTA BARBARA CA 93110

059-221-008
TEVIS, PAUL M
345 SHERWOOD DR
SANTA BARBARA CA 93110

059-221-009
RINKER FAMILY BYPASS TRUST 05/14/1992
339 SHERWOOD DR
SANTA BARBARA CA 93110

059-221-010
BROSNAN, DEBBIE
325 SHERWOOD DR
SANTA BARBARA CA 93111

059-221-011
BIEGEN, JUDITH M
315 SHERWOOD DR
SANTA BARBARA CA 93110

059-221-017
MCFARLAND, LOREN L/PATRICIA A
REVOCABLE 2008 TRUST 2/1/08
329 VEREDA DEL CIERVO
GOLETA CA 93117

059-221-018
KNUDSON, CHRISTOPHER T
279 SHERWOOD DR
SANTA BARBARA CA 93110

059-221-019
KNUDSON CHRISTOPHER
259 SHERWOOD DR
SANTA BARBARA CA 93110

059-221-020
COUNTY OF SANTA BARBARA
105 E ANAPAMU ST 108
SANTA BARBARA CA 93101

059-221-021
HOFFMAN, BRIAN
305 SHERWOOD DR
SANTA BARBARA CA 93110

059-221-022
BIEGEN JUDITH M
315 SHERWOOD DR
SANTA BARBARA CA 93110

059-221-023
FUSARO CRAIG A/LINDA L
435 EL SUENO RD
SANTA BARBARA CA 93110

059-221-024
BORNSTEIN LANE FAM TR 9/22/98
435 1/2 EL SUENO RD
SANTA BARBARA CA 93110

059-221-025
BROSNAN, DEBBIE
325 SHERWOOD DR
SANTA BARBARA CA 93111

059-221-026
ANDERSEN, DORA M LIVING TRUST
11/14/91
295 SHERWOOD DR
SANTA BARBARA CA 93110

059-222-001
SCHURMER, EARL
379 EL SUENO RD
SANTA BARBARA CA 93110

059-222-002
ORTIZ, MARIA L REVOCABLE TRUST
9/16/08
355 EL SUENO RD
SANTA BARBARA CA 93110

KAS TERHORST
4477-F SHADOW BLVD
SANTA BARBARA CA 93105

059-222-005
MALLOY, KEITH
1841 KNOLL DR
VENTURA CA 93003

059-222-007
STRNAD, WILLIAM ADRIAM
PO BOX 6892
SANTA BARBARA CA 93160

559-181-092
OCCUPANT
333 OLD MILL RD 192
SANTA BARBARA, CA 93110

059-222-009
DISHMAN JAMES MICHAEL/DONNA
276 SHERWOOD DR
SANTA BARBARA CA 93110

059-222-010
WONG FAMILY TRUST 2/3/10
4512 VIA HUERTO
SANTA BARBARA CA 93110

059-222-011
JONES MARY E TRUSTEE (for) JONES MARY
E LIV TR S-19-97
288 SHERWOOD DR
SANTA BARBARA CA 93110

059-222-014
WILSON ROBERT FRANCIS TRUSTEE (for)
WILSON ROBERT FRANCIS LIV TR 12/30/94
340 SHERWOOD DR
SANTA BARBARA CA 93110

059-222-015
TAORMINA, ANTHONY
360 SHERWOOD DR
SANTA BARBARA CA 93110

059-222-016
GIBSON, TERI L
365 EL SUENO RD
SANTA BARBARA CA 93110

059-222-017
SANCHEZ, MARK ROBERT
364 SHERWOOD DR
SANTA BARBARA CA 93110

059-222-018
LEVINE, BRENT E
4590 SIERRA MADRE DR
SANTA BARBARA CA 93110

059-222-019
LONG JOHN W/JOY H WILLIAMS
269 EL SUENO RD
SANTA BARBARA CA 93110

059-222-020
HILL, JENNIFER L
304 SHERWOOD DR
SANTA BARBARA CA 93110

059-222-021 HARVEY, IAN E & LINDA A TRUST 24602 PASEO VENDAVAL LAKE FOREST CA 92630	059-420-009 OCCUPANT 4531 OAK GLEN DR I SANTA BARBARA, CA 93110	059-223-001 BELL ROBERT M/SUSAN A 436 EL SUENO RD SANTA BARBARA CA 93110
059-223-002 DJP TRUST 6/28/00 5386 HOLLISTER AVE A GOLETA CA 93111	559-181-086 OCCUPANT 333 OLD MILL RD 186 SANTA BARBARA, CA 93110	059-223-004 LAWLER MICHAEL J 360 EL SUENO RD SANTA BARBARA CA 93110
059-223-005 KENT, STEVEN JAMES & RIKALO, NANCY ELIZABETH 1993 REVOKABLE TRUST 1201 HIGH RIDGE LN SANTA BARBARA CA 93103	059-223-006 LAWSON MIKE/ANJANNETTE 330 EL SUENO RD SANTA BARBARA CA 93110	059-223-007 LAWSON, ANJANNETTE 330 EL SUENO RD SANTA BARBARA CA 93110
059-223-008 PALLADINO, HELEN M 314 EL SUENO RD SANTA BARBARA CA 93110	059-223-009 MURPHY, BRIAN & LAURA REVOCABLE TRUST 292 EL SUENO RD SANTA BARBARA CA 93110	059-223-010 MURPHY, BRIAN/LAURA TRUST 9/27/04 292 EL SUENO RD SANTA BARBARA CA 93110
059-223-011 SHAH, SUMIT 284 EL SUENO RD SANTA BARBARA CA 93110	059-223-012 RYAN PATRICIA 266 EL SUENO RD SANTA BARBARA CA 93110	059-223-013 MCAFFEE JOHN H/DONNA MARLENE 1624 E PINE AVE LOMPOC CA 93436
059-231-001 LAURN, VAN WILLIAM 249 SHERWOOD DR SANTA BARBARA CA 93110	059-231-002 WOOLLUM JAMES D/STELLA 233 SHERWOOD DR SANTA BARBARA CA 93110	059-231-003 METHNER, KERRY 217 SHERWOOD DR SANTA BARBARA CA 93110
059-231-005 SCHOLLE, DIANE M 101 SHERWOOD DR SANTA BARBARA CA 93110	059-231-006 MORANDO FAMILY 1999 TRUST 9/10/99 179 EL SUENO RD SANTA BARBARA CA 93110	059-231-009 HERNANDEZ, ALICE TRUST 206 SHERWOOD DR SANTA BARBARA CA 93110
059-231-010 CHAVEZ, GILBERT A 218 SHERWOOD DR SANTA BARBARA CA 93110	059-231-013 BETZHOLTZ, ANDERS 238 SHERWOOD DR SANTA BARBARA CA 93110	059-231-014 BENTON FAMILY TRUST 4/18/13 338 N ONTARE RD SANTA BARBARA CA 93105
059-231-015 LIGMAN JAMES R 235 EL SUENO RD SANTA BARBARA CA 93110	059-231-016 VALDEZ, JUAN M 239 EL SUENO RD SANTA BARBARA CA 93110	059-231-017 ZERMENO SAUL/PATRICIA 225 EL SUENO RD SANTA BARBARA CA 93110
059-231-018 SPAGNOLO FRANK 205 EL SUENO RD SANTA BARBARA CA 93110	059-231-019 HERNANDEZ, MARK V 201 EL SUENO RD SANTA BARBARA CA 93110	HAROLD HATTIER 3727 ESSEX ST SANTA BARBARA CA 93105

059-231-021

JAMES BOYSEL & KAREN COTTRIEL LIVING
TRUST 1/11/01
177 EL SUENO RD
SANTA BARBARA CA 93110

059-231-024

ROBINSON CAROLYN J TRUSTEE (for)
ROBINSON CAROLYN J TR 6-3-95
131 EL SUENO RD
SANTA BARBARA CA 93110

059-231-031

GAFFNEY TOM
173 EL SUENO RD
SANTA BARBARA CA 93110

059-231-036

CHRISTNER, RONALD ARTHUR TRUST
8/1/88
171 EL SUENO RD
SANTA BARBARA CA 93110

059-231-039

GULICK, MICHAEL ALAN LIVING TRUST
4/24/13
155 SHERWOOD DR
SANTA BARBARA CA 93110

059-232-002

BANKO-JORDAN PARTNERSHIP
5290 OVERPASS RD 213
SANTA BARBARA CA 93111

059-232-005

ORTIZ, JOSEPH A
184 EL SUENO RD
SANTA BARBARA CA 93110

059-232-012

ALEXANDER BENJAMIN E/MARGARET A
TRUSTEES (for) ALEXANDER
BENJAMIN/MARGARET LIV TR 12/98
4714 AVALON AVE
SANTA BARBARA CA 93110

059-260-003

PIGEON LIVING TRUST 1/31/08
1005 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

059-260-006

ILER FAMILY REVOCABLE TRUST
961 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

059-231-022

RINKER FAMILY SURVIVOR'S TRUST
05/14/1992
339 SHERWOOD DR
SANTA BARBARA CA 93110

059-231-028

MEHLER LAUREL JEANNE
196 SHERWOOD DR
SANTA BARBARA CA 93110

059-231-032

PAXTON, CLARKE PATTON
175 EL SUENO RD
SANTA BARBARA CA 93110

059-231-037

HOVE FAMILY TRUST 9/11/00
505 DOLORES
SANTA BARBARA CA 93109

059-231-040

GULICK, MICHAEL ALAN LIVING TRUST
4/24/13
175 SHERWOOD DR
SANTA BARBARA CA 93110

059-232-003

CHRISTENSEN MARIE DIANE
178 EL SUENO RD
SANTA BARBARA CA 93110

059-232-006

EHRlich PAUL RICHARD TRUSTEE (for)
EHRlich PAUL RICHARD LIV TR 3/15/00
1325 KOWALSKI AVE
SANTA BARBARA CA 93101

059-240-006

BELL TRUST 8/12/91
4320 CALLE REAL
SANTA BARBARA CA 93110

059-260-004

PANGBURN DONALD F/FRANCES S
999 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

059-260-007

COUNTY OF SANTA BARBARA
610 MISSION CANYON RD
SANTA BARBARA CA 93105

059-231-023

ZARAGOSA, RUBEN
161 EL SUENO RD
SANTA BARBARA CA 93110

059-231-029

MEHLER LAUREL JEANNE
196 SHERWOOD DR
SANTA BARBARA CA 93110 1034

059-231-034

MORANDO MICHAEL JOSEPH/DOROTHY K
TTEES
179 EL SUENO RD
SANTA BARBARA CA 93110

059-231-038

WILLIAMS, CHRISTOPHER
1635 STATE ST
SANTA BARBARA CA 93101

059-232-001

BUTLER, ROBERT C
1635 STATE ST
SANTA BARBARA CA 93101

059-232-004

CELMINS, JOHN TRUST 8/10/00
182 EL SUENO RD
SANTA BARBARA CA 93110

059-232-007

CARLISLE, JOYCE TRUST
152 EL SUENO RD
SANTA BARBARA CA 93110

059-240-008

RANCHO SANTA BARBARA
333 OLD MILL RD
SANTA BARBARA CA 93110

059-260-005

MCALPINE CELESTE W TRUSTEE (for)
MCALPINE CELESTE W TR 8-26-96
989 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

059-260-008

WORSLEY FAMILY TRUST 5/20/97
910 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

059-260-009

BORTOLAZZO FAMILY 2003 REVOCABLE
TRUST
924 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

059-260-010

BRUNET FAMILY TRUST 12/16/04
936 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

059-260-011

OBRIEN, C PATRICIA TRUSTEE (for) OBRIEN
FAM TR 6/3/92
946 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

059-260-012

OBRIEN JOSEPH J/CATHERINE M
958 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

059-260-013

MASHHOON FAMILY TRUST
970 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

059-260-014

RIDGEWAY, STEVEN K
976 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

059-320-008

COOK ROBERT E/IRIS M TRUST 2-21-89
669 ALTO DR
SANTA BARBARA CA 93110

059-320-009

COVELL PAUL M/MARJORIE E TRUSTEES
(for) COVELL LIV TR 10/19/92
665 ALTO DR
SANTA BARBARA CA 93110

059-320-010

DELISLE FAMILY TRUST
655 ALTO DR
SANTA BARBARA CA 93110

059-320-011

HARTMAN RICHARD J
610 ALTO DR
SANTA BARBARA CA 93110

059-320-013

JAMGOCHIAN SUSAN C TRUSTEE (for)
JAMGOCHIAN SURVIVORS TR 8/30/89
660 ALTO DR
SANTA BARBARA CA 93110

059-320-014

MCKINNON WILLIAM R/PATRICIA F
670 ALTO DR
SANTA BARBARA CA 93110

059-331-001

TEDESCHI, LOUIS & JANET LIVING TRUST
4655 SIERRA MADRE RD
SANTA BARBARA CA 93110

059-331-002

FREDRICKSON, GLENN H
4635 SIERRA MADRE RD
SANTA BARBARA CA 93110

059-331-003

BAER, AMY SUSAN
20 EXCHANGE PL 325
NEW YORK NY 10005

059-331-004

EIBERT, JEROME J & HUONG T REVOCABLE
TRUST 7/12/01
4650 PENNELL RD
SANTA BARBARA CA 93110

059-331-005

PARK, JOHN SUNG WOO
4611 SIERRA MADRE RD
SANTA BARBARA CA 93110

059-331-006

GOUGH BRIAN G/JUDY D
4605 SIERRA MADRE RD
SANTA BARBARA CA 93110

059-331-007

DODDS, DIANE L
679 ALTO DR
SANTA BARBARA CA 93110

059-332-004

COHN MARTIN P/REBECCA L
4630 SIERRA MADRE DR
SANTA BARBARA CA 93110

059-332-005

TIBURON PROPERTIES TRUST 2/14/13
1 E WASHINGTON 1900
PHOENIX AZ 85004

059-332-006

AMJADI FAMILY TRUST 12/14/96
740 ALTO DR
SANTA BARBARA CA 93111

059-332-007

LOVE, MARIANA
730 ALTO DR
SANTA BARBARA CA 93110

059-332-008

TOKUMARU, DENNIS/TOMOYE FAMILY
LIVING TRUST 4/27/06
720 ALTO DR
SANTA BARBARA CA 93110

059-332-009

BARLETTA, JOHN R TRUST
4600 SIERRA MADRE RD
SANTA BARBARA CA 93110

059-333-001

HARRAH, GORDON L & DOLORES R AB
LIVING TRUST
2434 LAS POSITAS RD
SANTA BARBARA CA 93105

059-333-002

BOWERS, JOHN E
4601 SIERRA MADRE RD
SANTA BARBARA CA 93110

059-370-001

GAGE, WM BEN FAMILY TRUST 5/23/91
705 PADERNO CT
SANTA BARBARA CA 93110

059-370-002

ECKERSON BYRON S/A T
740 PADERNO CT
SANTA BARBARA CA 93110

059-370-003

TOBIN-MONTANO LIVING TRUST 8/2/07
730 PADERNO CT
SANTA BARBARA CA 93110

059-370-004
GRAHAM RICHARD A/NANCY J TRUSTEES
(for) GRAHAM FAM REV TR 4/22/98
720 PADERNO CT
SANTA BARBARA CA 93110

059-370-008
MARTINDALE FAMILY LIVING TRUST
7/21/03
4579 SIERRA MADRE RD
SANTA BARBARA CA 93110

059-370-011
MOURAD, A GEORGE & LEONA A LIVING
TRUST
4591 SIERRA MADRE RD
SANTA BARBARA CA 93110

059-370-015
SIERRA MADRE HOMEOWNERS
ASSOCIATION
1332 DE LA VINA
SANTA BARBARA CA 93101

059-470-004
HAN, WEIDONG H
4640 GREENHILL WAY
SANTA BARBARA CA 93105

061-040-002
GOLETA CEMETERY DISTRICT
44 S SAN ANTONIO RD
SANTA BARBARA CA 93110

061-040-012
COUNTY OF SANTA BARBARA
123 E ANAPAMU ST
SANTA BARBARA CA 93101

061-040-037
COUNTY OF SANTA BARBARA
4540 HOLLISTER AVE
SANTA BARBARA CA 93110

061-081-015
FAITH BAPTIST CHURCH OF SANTA
BARBARA
4485 HOLLISTER AVE
SANTA BARBARA CA 93110

061-082-015
UNIFIED GROUP HOLDINGS, LLC
16 W MISSION ST F
SANTA BARBARA CA 93101

059-370-006
BHARGAVA BRIJ B/SUNANDA TRUSTEES
(for) BHARGAVA FAM TR 6/14/96
4596 SIERRA MADRE RD
SANTA BARBARA CA 93110

059-370-009
WOOLAWAY, SHARON E
4583 SIERRA MADRE RD
SANTA BARBARA CA 93110

059-370-012
ZMOLEK JAMES C/JULIE ANN TRUSTEES
(for) ZMOLEK FAM TR 8/23/95
4595 SIERRA MADRE RD
SANTA BARBARA CA 93110

059-370-017
SNYDER FAMILY TRUST
710 PADERNO CT
SANTA BARBARA CA 93110

059-470-005
COUNTY OF SANTA BARBARA
4430 CALLE REAL
SANTA BARBARA CA 93110

061-040-008
CATHOLIC CEMETERY
3424 WILSHIRE BLVD
LOS ANGELES CA 90010

061-040-023
COUNTY OF SANTA BARBARA
695 VIA TRANQUILA
SANTA BARBARA CA 93110

061-070-013
COOK PATRICK C
4505 HOLLISTER AVE
SANTA BARBARA CA 93110

061-081-022
DEBEVOISE, BRUCE
4471 HOLLISTER AVE
SANTA BARBARA CA 93110

061-082-017
TALEVI FAMILY TRUST
5925 TRUDI DR
GOLETA CA 93117

059-370-007
OCCUPANT
4590 SIERRA MADRE RD
SANTA BARBARA CA 93110

059-370-010
GROTENHUIS VIRGINIA A
4587 SIERRA MADRE RD
SANTA BARBARA CA 93110

059-370-014
STEEL, JOHN
4591 CATHEDRAL OAKS RD
SANTA BARBARA CA 93110

059-470-003
DUFFENS, CHRISTINA REVOCABLE TRUST
7/18/96
4698 GRANADA WAY
SANTA BARBARA CA 93110

CHRISINA COFFMAN
4680 GATE WAY
SANTA BARBARA CA 93110

061-040-011
COUNTY OF SANTA BARBARA
123 E ANAPAMU ST
SANTA BARBARA CA 93101

061-040-024
COUNTY OF SANTA BARBARA
4500 HOLLISTER AVE
SANTA BARBARA CA 93110

061-081-007
DE BRUIN JOHANNES/NADINE
7301 DOMINGOS RD
LOMPOC CA 93436

061-081-023
BREIDENSTEIN, T J LIVING TRUST 4/9/01
4475 HOLLISTER AVE
SANTA BARBARA CA 93110

061-082-019
STEVENS, STEVEN E REVOCABLE TRUST
5/30/06
1003 BISHOP ST 1200
HONOLULU HI 96813

061-083-001
MATTIAS FAMILY TRUST
25085 HIGHSRING AVE
NEWHALL CA 91321

061-083-004
HAWKES EMMET J/SALLY TRUSTEES (for)
HAWKES TR 3-1-90
213 W FIGUEROA ST
SANTA BARBARA CA 93101

061-091-012
PORTER ALAN R
PO BOX 5460
SANTA BARBARA CA 93150

059-300-053
DUSSETTE, DEAN
410 CAMINO DEL REMEDIO B
SANTA BARBARA CA 93110

059-300-059
DEALBA, MARTHA L FAMILY LIVING TRUST
410 CAMINO DEL REMEDIO H
SANTA BARBARA CA 93110

059-300-063
GREENE, GERARD
420 CAMINO DEL REMEDIO D
SANTA BARBARA CA 93110

059-300-067
SINGH TED J JR
430 CAMINO DEL REMEDIO A
SANTA BARBARA CA 93110

059-300-072
RODRIGUEZ, ANTONIO
430 CAMINO DEL REMEDIO F
SANTA BARBARA CA 93110

059-300-075
FRANCO, SYLVIA
440 CAMINO DEL REMEDIO B
SANTA BARBARA CA 93110

059-300-080
ARCHULETTA, STANLEY W/PEGGY A
REVOCABLE TRUST
450 CAMINO DEL REMEDIO A
SANTA BARBARA CA 93110

061-083-002
CARROLL RICHARD ET AL
25085 HIGHSRING AVE
NEWHALL CA 91321

061-083-005
CARROLL, PATRICK C
2825 DE LA VINA ST
SANTA BARBARA CA 93105

059-061-006
LALUMANDIERE FAMILY REVOCABLE
TRUST
4600 CAMINO DEL MIRASOL
SANTA BARBARA CA 93110

059-300-055
MACISAAC, SHAWN NOEL
410 CAMINO DEL REMEDIO D
SANTA BARBARA CA 93110

JOANN REDDING
4647 MALAGA CIRCLE
GOLETA CA 93110

059-300-065
VUONG ANH
420 CAMINO DEL REMEDIO F
SANTA BARBARA CA 93110

059-300-068
VOITA, DONALD C II
430 CAMINO DEL REMEDIO
SANTA BARBARA CA 93110

059-300-073
BIEDERMANN ROLAND/JUANITA
430 CAMINO DEL REMEDIO G
SANTA BARBARA CA 93110

059-300-077
PURCELL MICHAEL S/WENDA A
440 CAMINO DEL REMEDIO D
SANTA BARBARA CA 93110

059-300-081
HANACHI, MOHAMMAD H
450 CAMINO DEL REMEDIO B
SANTA BARBARA CA 93110

061-083-003
CARROLL RICHARD/NANCY S
964 SAN ROQUE RD
SANTA BARBARA CA 93105

061-083-007
GORDON FAMILY SURVIVOR'S TRUST A
6/28/99
912 MORENO RD
SANTA BARBARA CA 93103

059-300-052
KIM YONG CHAN/DAN HEE
410 CAMINO DEL REMEDIO # A
SANTA BARBARA CA 93110

059-300-057
TRIVELL, LISA
410 CAMINO DEL REMEDIO
SANTA BARBARA CA 93110 1344

059-300-061
LOPEZ RUDY C/SANDRA C
420 CAMINO DEL REMEDIO B
SANTA BARBARA CA 93110

059-300-066
KINNEY LYNDA L
420 CAMINO DEL REMEDIO G
SANTA BARBARA CA 93110

059-300-070
LANDSFELD, MARTIN
430 CAMINO DEL REMEDIO D
SANTA BARBARA CA 93110

059-300-074
SANCHEZ, NANCY
1512 GRAND AVE
SANTA BARBARA CA 93103

059-300-079
MURRAY, THOMAS E III
440 CAMINO DEL REMED F
SANTA BARBARA CA 93110

059-300-083
BUDIN MELINDA M
450 CAMINO DEL REMEDIO D
SANTA BARBARA CA 93110

059-300-085

JUDY, NICHOLAS BLAINE
450 CAMINO DEL REMEDIO F
SANTA BARBARA CA 93110

059-300-087

LAM, TUAN Q
450 CAMINO DEL REMEDIO
SANTA BARBARA CA 93110

059-300-088

AZIOS, NICOLAS
450 CAMINO DEL REMEDIO I
SANTA BARBARA CA 93110

059-300-089

THANANAKEN, SITTIPORN
460 CAMINO DEL REMEDIO A
SANTA BARBARA CA 93110

059-300-090

HAGUE MICHELE
460 CAMINO DEL REMEDIO B
SANTA BARBARA CA 93110

059-300-092

LINCOLN, CHARLES F LIVING TRUST
11/1/01
460 CAMINO DEL REMEDIO D
SANTA BARBARA CA 93110

059-300-094

SHUTT NANCY
460 CAMINO DEL REMEDIO F
SANTA BARBARA CA 93110

059-300-095

CORNISH, MARK D
460 CAMINO DEL REMEDIO G
SANTA BARBARA CA 93110

059-300-096

BEN-SASSON, ITZIK
460 CAMINO DEL REMEDIO H
SANTA BARBARA CA 93110

059-420-001

MONTOYA, MIGUEL J
4531 OAK GLEN DR A
SANTA BARBARA CA 93110

059-420-002

DEGRACE, SUZANNE
4531 OAK GLEN DR B
SANTA BARBARA CA 93110

059-420-004

MURILLO, JESUS NAVARRO
4531 OAK GLEN DR D
SANTA BARBARA CA 93110

059-420-006

NGO, LONG KIM
4531 OAK GLEN DR F
SANTA BARBARA CA 93110

059-420-007

ARIAS, DELFINA
4531 OAK GLEN DR G
SANTA BARBARA CA 93110

MARTHA HASSEN

333 OLD MILL RD 67
SANTA BARBARA CA 93110

059-420-010

WOOFER, RHEA D TRUST 3/1/07
4531 OAK GLEN DR J
SANTA BARBARA CA 93110

TOM ELLIOTT

4711 GATE WAY
SANTA BARBARA CA 93110

059-420-013

ALMASCO, CAYETANA
4535 OAK GLEN DR A
SANTA BARBARA CA 93110

059-420-014

VAN SLYKE KATHY
4535 OAK GLEN DR B
SANTA BARBARA CA 93110

059-420-016

DOULTON, ALEXIS K
4535 OAK GLEN DR D
SANTA BARBARA CA 93110

059-420-018

MORELLO, STACEY TRAVIS
4535 OAK GLEN DR F
SANTA BARBARA CA 93110

059-420-026

DIAZ, MARIA P
4521 OAK GLEN DR A
SANTA BARBARA CA 93110

059-420-027

HEWES, TAMI E
4521 OAK GLEN DR B
SANTA BARBARA CA 93110

GARY PETERSEN

350 CHAPALA STREET SUITE 207
SANTA BARBARA CA 93101

059-420-031

OATES, JONATHAN
4521 OAK GLEN DR F
SANTA BARBARA CA 93110

059-420-032

FITTON, ALLISON N
4521 OAK GLEN DR G
SANTA BARBARA CA 93110

059-420-033

PRUSINSKI, JEANETTE F
4521 OAK GLEN RD H
SANTA BARBARA CA 93110

059-420-034

KIM KENNETH O
4521 OAK GLEN DR I
SANTA BARBARA CA 93110

059-420-035

DONOVAN, SHANNON CAROL
4510 OAK GLEN DR A
SANTA BARBARA CA 93110

059-420-036

ESQUEDA, ANGELITA
4510 OAK GLEN DR B
SANTA BARBARA CA 93110

059-420-038
WESTWICK, ANDREW
4510 OAK GLEN DR D
SANTA BARBARA CA 93110

059-420-042
BAUGHER, SHAWN PATRICK
409 CAMINO DEL REMEDIO A
SANTA BARBARA CA 93110

059-420-047
DOYAL, MEGAN M
409 CAMINO DEL REMEDIO F
SANTA BARBARA CA 93110

059-420-051
SUNDSTROM DEANNA M
405 CAMINO DEL REMEDIO B
SANTA BARBARA CA 93110

059-420-056
LAUGHNER, KEITH M
405 CAMINO DEL REMEDIO G
SANTA BARBARA CA 93110

059-420-060
CAVALETTO, ANDREA
401 CAMINO DEL REMEDIO D
SANTA BARBARA CA 93110

059-420-064
KLASS DAVID F
401 CAMINO DEL REMEDIO H
SANTA BARBARA CA 93110

059-430-002
HAIMANIS ALEX
4565 OAK GLEN DR B
SANTA BARBARA CA 93110

059-430-008
TEDESCHI, FRANK
4565 OAK GLEN DR H
SANTA BARBARA CA 93110

059-430-012
TAKAYA, ERIC CRAIG
4561 OAK GLEN DR D
SANTA BARBARA CA 93110

059-420-040
HINKLEY JANETTE MARIE
4510 OAK GLEN DR F
SANTA BARBARA CA 93110

059-420-043
ARELLANES, WENDY
409 CAMINO DEL REMEDIO B
SANTA BARBARA CA 93110

059-420-049
GRACE JENNIFER K
409 CAMINO DEL REMEDIO H
SANTA BARBARA CA 93110

059-420-053
WEED ANDREW D
405 CAMINO DEL REMEDIO D
SANTA BARBARA CA 93110

059-420-057
GONZALEZ, MARIA
401 CAMINO DEL REMEDIO A
SANTA BARBARA CA 93110

059-420-061
REGIS BARBARA J
401 CAMINO DEL REMEDIO E
SANTA BARBARA CA 93110

059-420-065
LAMOthe, SARA JAYNE
401 CAMINO DEL REMEDIO I
SANTA BARBARA CA 93110

059-430-004
KREIDEN MARK
612 CALLE GRANADA
SANTA BARBARA CA 93105

059-430-009
SHERPA, NAWANG
4561 OAK GLEN DR A
SANTA BARBARA CA 93110

ROBERT SULNICK
225 E COTA STREET SUITE #2
SANTA BARBARA CA 93101

059-420-041
WEAVER, KAREN M
4510 OAK GLEN DR G
SANTA BARBARA CA 93110

059-420-045
SHINODA, SUSAN JOYCE
409 CAMINO DEL REMEDIO D
SANTA BARBARA CA 93110

059-420-050
EARNEST JEFFREY D
405 CAMINO DEL REMEDIO A
SANTA BARBARA CA 93110

059-420-055
FORTUNA, MATTHEW J
405 CAMINO DEL REMEDIO F
SANTA BARBARA CA 93110

059-420-058
SCHUESTER LAROY E & RODGER L
TRUSTEES (for) SCHUESTER LAROY E REV
TR 1999
401 CAMINO DEL REMEDIO B
SANTA BARBARA CA 93110

059-420-062
VITANZA FAMILY TRUST 11/13/07
397 N SAN MATEO AVE
VENTURA CA 93004

059-430-001
HECKROTTE CATHERINE C
4565 OAK GLEN DR A
SANTA BARBARA CA 93110

059-430-006
URBAN, JUSTIN
4565 OAK GLEN DR F
SANTA BARBARA CA 93110

059-430-010
HAMILTON STEPHANIE C
4561 OAK GLEN DR B
SANTA BARBARA CA 93110

059-430-015
PEATTIE, HILLARY J
4561 OAK GLEN DR G
SANTA BARBARA CA 93110

059-430-016
GUY, OSBOURNE B
4555 OAK GLEN DR A
SANTA BARBARA CA 93110

059-430-024
JOHNSON, MATTHEW
4551 OAK GLEN DR A
SANTA BARBARA CA 93110

059-430-029
FITCH, CHRISTOPHER L
5070 SANTA SUSANA AVE
SANTA BARBARA CA 93111

059-430-032
KARSH JAAN
4541 OAK GLEN DR B
SANTA BARBARA CA 93110

059-430-037
MILLETT BARBARA
4545 OAK GLEN DR A
SANTA BARBARA CA 93110

059-430-042
FRIEDMAN, ROBERT
4545 OAK GLEN DR F
SANTA BARBARA CA 93110

059-430-046
RUEHLE, LINDA
4558 OAK GLEN DR B
SANTA BARBARA CA 93110

059-430-051
SANCHEZ, JEAN PAGE
4538 OAK GLEN DR 14A
SANTA BARBARA CA 93110

059-430-056
FOWLER, RYAN
4538 OAK GLEN DR F
SANTA BARBARA CA 93110

059-430-059
MORRISEY SANDRA J
4534 OAK GLEN DR B
SANTA BARBARA CA 93110

059-430-017
MANSOUR, GEORGE R
4555 OAK GLEN DR B
SANTA BARBARA CA 93110

059-430-025
VANNGUYEN, NHO
4551 OAK GLEN DR B
SANTA BARBARA CA 93110

059-430-030
NGUYEN, PHUONGHA THI
4551 OAK GLEN DR G
SANTA BARBARA CA 93110

059-430-034
BACHINO-SAUCEDO, TONI
4541 OAK GLEN DR D
SANTA BARBARA CA 93110

059-430-038
CORNETT, BETH ANNA
4545 OAK GLEN DR B
SANTA BARBARA CA 93110

059-430-044
LOMAN, FAWN M
4545 OAK GLEN DR H
SANTA BARBARA CA 93110

059-430-048
MORRIS JACQUELINE
4558 OAK GLEN DR D
SANTA BARBARA CA 93110

059-430-052
PLOURDE, DOMINIC
4538 OAK GLEN DR B
SANTA BARBARA CA 93110

059-430-057
BENET LINDA R
4538 OAK GLEN DR G
SANTA BARBARA CA 93110

059-430-061
NOWAK GREGORY A
4534 OAK GLEN DR D
SANTA BARBARA CA 93110

059-430-019
GUICHARD, ANAMARIE
4555 OAK GLEN DR D
SANTA BARBARA CA 93110

059-430-027
BARNES JAMES OLIVER
4551 OAK GLEN DR D
SANTA BARBARA CA 93110

059-430-031
SCHMITT KATHLEEN P TRUST OF 2011
8/15/2011
4541 OAK GLEN DR A
SANTA BARBARA CA 93110

059-430-036
ANDREWS 2004 TRUST 6/18/04
4541 OAK GLEN DR F
SANTA BARBARA CA 93110

059-430-040
BLANCO, LEAH
4545 OAK GLEN DR D
SANTA BARBARA CA 93110

059-430-045
NGU, LINH
4558 OAK GLEN DR A
SANTA BARBARA CA 93110

059-430-050
REINISH, JENNIFER
4558 OAK GLEN DR F
SANTA BARBARA CA 93110

COUNTY OF VENTURA RMA/PLANNING DIVISION
ENVIROMENTAL REVIEW
800 S. VICTORIA AVE., L# 1740
VENTURA CA 93009

059-430-058
GONZALEZ, CORINA A
1377 TOMOL RD
CARPINTERIA CA 93013

059-430-063
VELAZQUEZ, DAVID BRAVO JR
4534 OAK GLEN DR F
SANTA BARBARA CA 93110

059-500-012
FULLER, PAUL R
4248 PINEHURST CIR
STOCKTON CA 95219

JUDITH ROBERTSON
476 EL SUENO RD
SANTA BARBARA CA 93110

059-300-069
AKWALOS PAMELA P
430 CAMINO DEL REMEDIO C
SANTA BARBARA CA 93110

059-300-078
SAAKE, MICHELLE
PO BOX 60504
SANTA BARBARA CA 93160

059-300-086
DOYLE MELVIN A/MILAGROS B
450 CAMINO DEL REMEDIO G
SANTA BARBARA CA 93110

059-420-003
HERNANDEZ, FABIAN
4531 OAK GLEN DR C
SANTA BARBARA CA 93110

059-420-011
SPEICHER ANN K
4531 OAK GLEN DR K
SANTA BARBARA CA 93110

059-420-019
MONTENEGRO SONIA E
4535 OAK GLEN DR G
SANTA BARBARA CA 93110

059-420-037
CERIALE BARBARA J
4510 OAK GLEN DR C
SANTA BARBARA CA 93110

VON A JANSMA
385 GREENDALE CT
SANTA BARBARA CA 93110

059-300-054
HILL, SHAWN M
410 CAMINO DEL REMEDIO C
SANTA BARBARA CA 93110

059-300-062
CASTREJON, BERNARDINO
420 CAMINO DEL REMEDIO C
SANTA BARBARA CA 93110

059-300-071
YARNO RAQUEL
430 CAMINO DEL REMEDIO E
SANTA BARBARA CA 93110

059-300-082
LORSCHIEDER EDITH
450 CAMINO DEL REMEDIO C
SANTA BARBARA CA 93110

059-300-091
LEES, CYNTHIA J
460 CAMNO DEL REMEDIO
SANTA BARBARA CA 93110

059-420-005
ANDERSON, ERIK
4531 OAK GLEN DR E
SANTA BARBARA CA 93110

059-420-015
KUMP, KASEY R
4535 OAK GLEN DR C
SANTA BARBARA CA 93110

059-420-028
SUMMER, CARI
4521 OAK GLEN DR C
SANTA BARBARA CA 93110

059-420-039
COKELEY, RAYCE J
4510 OAK GLEN DR E
SANTA BARBARA CA 93110

059-420-048
LOPEZ, MARICELA C
409 CMNO DEL REMED #G
SANTA BARBARA CA 93110

059-300-056
SOPER, JILLIAN
410 CAMINO DEL REMEDIO E
SANTA BARBARA CA 93110

059-300-064
TWOBIRDS, LOVETTE DEE
420 CAMINO DEL REMEDIO E
SANTA BARBARA CA 93110

059-300-076
WEBER, MARY LEE REVOCABLE TRUST
8/11/09
440 CAMINO DEL REMEDIO C
SANTA BARBARA CA 93110

059-300-084
HACKNEY, PATRICK
450 CAMINO DEL REMEDIO SE
SANTA BARBARA CA 93110

059-300-093
ROLFE, JAMES G
31 E CANON PERDIDO ST
SANTA BARBARA CA 93101

059-420-009
CHEN, ANGIE
PO BOX 8383
GOLETA CA 93118

059-420-017
MARRS, MARY KATHRYN
4535 OAK GLEN DR E
SANTA BARBARA CA 93110

059-420-030
KRISTIANSSEN, KAI
4521 OAK GLEN DR E
SANTA BARBARA CA 93110

059-420-044
CRUSE, JASON A
409 CAMINO DEL REMEDIO C
SANTA BARBARA CA 93110

059-420-052
RUSSELL, LISA A
405 CAMINO DEL REMEDIO C
SANTA BARBARA CA 93110

059-420-054
BARNES, CATHLEEN A
10904 Dapple Way
BAKERSFIELD CA 93312

059-420-059
LE, TIN
401 CAMINO DEL REMEDIO C
SANTA BARBARA CA 93110

059-420-063
URQUIDI, JOHN
401 CAMINO DEL REMED G
SANTA BARBARA CA 93110

059-430-003
LIVESLEY, TONY REVOCABLE TRUST
1/14/08
4565 OAK GLEN DR C
SANTA BARBARA CA 93110

059-430-005
REESE, ALFORD R
4565 OAK GLEN DR E
SANTA BARBARA CA 93110

DENISE SOLLENNE
4643 PUENTE PLAZA
SANTA BARBARA CA 93110

059-430-011
MILLER ALBERT
4561 OAK GLEN DR C
SANTA BARBARA CA 93110

059-430-013
LIVESLEY, KIP REVOCABLE LIVING TRUST
5/8/07
4561 OAK GLEN DR E
SANTA BARBARA CA 93110

059-430-018
OCCUPANT
4555 OAK GLEN DR C
SANTA BARBARA CA 93110

059-430-020
RICARD, ROBERTA GAGE
4555 OAK GLEN DR E
SANTA BARBARA CA 93110

059-430-026
ELLIS ANGELA R
4551 OAK GLEN DR C
SANTA BARBARA CA 93110

059-430-028
BALARAMAN, NIRMAL
4551 OAK GLEN DR E
SANTA BARBARA CA 93110

059-430-033
CLARKE MATTHEW
4541 OAK GLEN DR C
SANTA BARBARA CA 93110

059-430-035
TEITELMAN, SHARON
4541 OAK GLEN DR E
SANTA BARBARA CA 93110

ORETHA LAMBERT
340 OLD MILL RD 182
SANTA BARBARA CA 93110

059-430-041
SCHERZ, ANN
PO BOX 92216
SANTA BARBARA CA 93190

059-430-043
MRAZEK, MICHAEL
4545 OAK GLEN DR G
SANTA BARBARA CA 93110

059-430-047
ZEVALLOS, LINDA A
4558 OAK GLEN DR C
SANTA BARBARA CA 93110

059-430-049
HUYNH, NGHIA PHI
4558 OAK GLEN DR E
SANTA BARBARA CA 93110

059-430-053
MARINUS, MICHELLE
4538 OAK GLEN DR C
SANTA BARBARA CA 93110

059-430-055
HOUSTON, KENNETH
4538 OAK GLEN DR E
SANTA BARBARA CA 93110

059-430-060
BOWMAN, JOHN KEYES II
4534 OAK GLEN DR C
SANTA BARBARA CA 93110

059-430-062
BACK, GILBERTO
4534 OAK GLEN DR E
SANTA BARBARA CA 93110

559-181-034
WHEELUS, CHYRL JO
333 OLD MILL RD 134
SANTA BARBARA CA 93110

559-181-091
OCCUPANT
333 OLD MILL RD 191
SANTA BARBARA, CA 93110

GERRY ASPEN
4677 SIERRA MADRE RD
SANTA BARBARA CA 93110

559-181-037
WEISS, LORI SUE
333 OLD MILL RD 137
SANTA BARBARA CA 93110

559-181-038
GORDON FLORENCE P TRSTEE (for)
GORDON FLORENCE P TRUST
333 OLD MILL RD 138
SANTA BARBARA CA 93110

559-181-039
OCCUPANT
333 OLD MILL RD 139
SANTA BARBARA CA 93110

559-181-040
LOGAN ELENORA M
333 OLD MILL RD 140
SANTA BARBARA CA 93110

559-181-041
SORENSEN, HENA E TRUST
333 OLD MILL RD 141
SANTA BARBARA CA 93110

559-181-044
TROON BEVERLY J
333 OLD MILL RD 144
SANTA BARBARA CA 93110

559-181-047
REINERTSON LIV TR 10/20/04
333 OLD MILL RD 147
SANTA BARBARA CA 93110

559-181-050
MULKERN, STEPHEN
333 OLD MILL RD 150
SANTA BARBARA CA 93110

ROBERT GLORE
4706 GREENWAY RD
SANTA BARBARA CA 93110

JAMES E MARINO
1026 CAMINO DEL RIO
SANTA BARBARA CA 93110

559-181-060
CAMPBELL, SHANNON
333 OLD MILL RD 160
SANTA BARBARA CA 93110

559-181-063
BOHLEN, CARMEN LIVING TRUST
333 OLD MILL RD 163
SANTA BARBARA CA 93110

559-181-068
OCCUPANT
333 OLD MILL RD 168
SANTA BARBARA CA 93110

559-181-071
OCCUPANT
333 OLD MILL RD 171
SANTA BARBARA CA 93110

559-181-042
PHILLIPS MARGARET
333 OLD MILL RD 142
SANTA BARBARA CA 93110

559-181-045
GLOVER BETTY J
333 OLD MILL RD 145
SANTA BARBARA CA 93110

MAX AUGUST
1019 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

559-181-051
SANTA BARBARA MANUFACTURE HOME
SALES
1285 CAMINO MANADERO
SANTA BARBARA CA 93111

559-181-054
MASON WESLEY/IRENE
333 OLD MILL RD 154
SANTA BARBARA CA 93110

559-181-058
ARNOLD, WILLIAM A
333 OLD MILL RD 158
SANTA BARBARA CA 93110

559-181-061
OCCUPANT
333 OLD MILL RD 161
SANTA BARBARA CA 93110

559-181-066
NELSON, WAYNE R FAMILY TRUST 4/4/91
333 OLD MILL RD 166
SANTA BARBARA CA 93110

559-181-069
OCCUPANT
333 OLD MILL RD 169
SANTA BARBARA CA 93110

559-181-072
COLE DEREK
333 OLD MILL RD 172
SANTA BARBARA CA 93110

559-181-043
ALVARADO, SHARON E
333 OLD MILL RD 143
SANTA BARBARA CA 93110

559-181-046
OCCUPANT
333 OLD MILL RD 146
SANTA BARBARA CA 93110

559-181-049
OCCUPANT
333 OLD MILL RD 149
SANTA BARBARA CA 93110

559-181-052
WAGGENER, STEVEN J
333 OLD MILL RD 152
SANTA BARBARA CA 93110

559-181-055
OCCUPANT
333 OLD MILL RD 155
SANTA BARBARA CA 93110

559-181-059
OCCUPANT
333 OLD MILL RD 159
SANTA BARBARA CA 93110

559-181-062
OCCUPANT
333 OLD MILL RD 162
SANTA BARBARA CA 93110

DAN LAPORTE
4432 MEADOWLARK LN
SANTA BARBARA CA 93105

559-181-070
KOENIG MARY W
333 OLD MILL RD 170
SANTA BARBARA CA 93110

559-181-073
PERUMEAN, DANIEL
333 OLD MILL RD 173
SANTA BARBARA CA 93110

559-181-074
ABERCROMBIE, ELAINE REVOCABLE LIVING
TRUST 2/27/06
333 OLD MILL RD 174
SANTA BARBARA CA 93110

559-181-078
OCCUPANT
333 OLD MILL RD 178
SANTA BARBARA CA 93110

559-181-083
MCLENNAN, RAE ANN
333 OLD MILL RD 183
SANTA BARBARA CA 93110

SONJA CUTNER
360 SHERWOOD DR
SANTA BARBARA CA 93110

559-181-089
OCCUPANT
333 OLD MILL RD 189
SANTA BARBARA CA 93110

559-181-092
OCCUPANT
1155 LA VISTA RD
SANTA BARBARA CA 93110

559-181-095
GOODHOUSE LEO J & NANCY C TRUSTEES
(for) GOODHOUSE LEO J & NANCY C REV
FAM TR
333 OLD MILL RD 195
SANTA BARBARA CA 93110

MO AMJADE
750 ALTO DR
SANTA BARBARA CA 93110

559-182-024
UYESAKA, JANE LIVING TRUST 7/17/09
126 W CALLE CRESPI 3
SANTA BARBARA CA 93105

559-182-027
LEHTO BJORN/GLORIA
333 OLD MILL RD 227
SANTA BARBARA CA 93110

559-181-076
COXON GWEN
333 OLD MILL RD 176
SANTA BARBARA CA 93110

559-181-079
ERICKSEN, LEON D & LEE H LIVING TRUST
3/18/06
333 OLD MILL RD 179
SANTA BARBARA CA 93110

559-181-084
GREGSON ALBERT/NORMA
333 OLD MILL RD 184
SANTA BARBARA CA 93110

559-181-087
BURNHAM, FLORA R
333 OLD MILL RD 187
SANTA BARBARA CA 93110

559-181-090
OCCUPANT
333 OLD MILL RD 190
SANTA BARBARA CA 93110

559-181-093
SAFFOLD FAMILY REVOCABLE TRUST
7/25/00
333 OLD MILL RD 193
SANTA BARBARA CA 93110

559-182-019
OCCUPANT
333 OLD MILL RD 219
SANTA BARBARA CA 93110

LINDA & STEVE PETERSEN
1084 CAMINO DEL RIO
SANTA BARBARA CA 93110

559-182-025
BRADLEY BRIAN G
1461 HOLLIDAY HILL RD
GOLETA CA 93117

559-182-028
WHARTON, JAN
333 OLD MILL RD 228
SANTA BARBARA CA 93110

559-181-077
YOUNG, CHERYL ANN
333 OLD MILL RD 177
SANTA BARBARA CA 93110

559-181-082
PAGLIARO, EUGENE REVOCABLE TRUST
6/23/02
333 OLD MILL RD 182
SANTA BARBARA CA 93110

559-181-085
OCCUPANT
333 OLD MILL RD 185
SANTA BARBARA CA 93110

LOIS MCNETT
4436 MEADOWLARK LN
SANTA BARBARA CA 93105

559-181-091
KENNEDY IVY M
3741 VENITIA LN
SANTA BARBARA CA 93105

559-181-094
OCCUPANT
333 OLD MILL RD 194
SANTA BARBARA CA 93110

559-182-020
TOEPPNER SHIRLEY A
333 OLD MILL RD 220
SANTA BARBARA CA 93110

559-182-023
OCCUPANT
333 OLD MILL RD 223
SANTA BARBARA CA 93110

559-182-026
DAVIDSON REVOCABLE TRUST 2010
333 OLD MILL RD 226
SANTA BARBARA CA 93110

559-182-029
LA VINO MAXINE E
4029 B INVIERNO DR
SANTA BARBARA CA 93110

559-181-051
OCCUPANT
333 OLD MILL RD 151
SANTA BARBARA, CA 93110

559-182-031
OCCUPANT
333 OLD MILL RD 231
SANTA BARBARA CA 93110

559-182-032
OCCUPANT
333 OLD MILL RD 232
SANTA BARBARA CA 93110

559-182-033
PEZZATI MARIO/MAURA
333 OLD MILL RD 233
SANTA BARBARA CA 93110

559-182-034
MOLINARI, ROBERT FRANCIS TRUST
2/11/99
333 OLD MILL RD 234
SANTA BARBARA CA 93110

559-182-035
OCCUPANT
333 OLD MILL RD 235
SANTA BARBARA CA 93110

559-182-036
OCCUPANT
333 OLD MILL RD 236
SANTA BARBARA CA 93110

559-182-037
ESPINOSA WILLIAM G/C
333 OLD MILL RD 237
SANTA BARBARA CA 93110

559-182-038
FLOWERS, LUCIANA
333 OLD MILL RD 238
SANTA BARBARA CA 93110

559-182-039
MCCOMBS, ANN
13135 ROUNDUP AVE
SAN DIEGO CA 92125

RUTH VON EBERSTEIN
133 CAMPO VISTA DR
SANTA BARBARA CA 93111

559-182-041
CHANDLER, STEVEN
333 OLD MILL RD 241
SANTA BARBARA CA 93110

559-182-042
SENNING, PRISCILLA ALDEN
333 OLD MILL RD 242
SANTA BARBARA CA 93110

559-182-043
OCCUPANT
791 FIFTH ST
HOLLISTER CA 95023

MIKE CONDRON
101 ALNOLD PL
SANTA BARBARA CA 93117

559-182-045
OCCUPANT
333 OLD MILL RD 245
SANTA BARBARA CA 93110

559-182-046
TINDELL LEONARD H
333 OLD MILL RD 246
SANTA BARBARA CA 93110

559-182-047
CASWELL F DONALD
333 OLD MILL RD 247
SANTA BARBARA CA 93110

559-182-048
OCCUPANT
333 OLD MILL RD 248
SANTA BARBARA CA 93110

559-182-049
SARGIS THOMAS A/MARTHA M TRUST OF
1995
333 OLD MILL RD 249
SANTA BARBARA CA 93110

559-182-050
OCCUPANT
333 OLD MILL RD 250
SANTA BARBARA CA 93110

559-182-051
CARTWRIGHT FAMILY LIVING TRUST
9/20/10
333 OLD MILL RD 251
SANTA BARBARA CA 93110

559-182-052
SULLIVAN, DONNA FAYE INGLIMO LIVING
TRUST 1/16/03
333 OLD MILL RD 252
SANTA BARBARA CA 93110

559-182-053
ANDERSON, BARBARA A REVOCABLE
TRUST 12/22/06
333 OLD MILL RD 253
SANTA BARBARA CA 93110

559-182-054
OCCUPANT
333 OLD MILL RD 254
SANTA BARBARA CA 93110

559-182-055
TIEGEN RICHARD C/IRENE J
333 OLD MILL RD 255
SANTA BARBARA CA 93110

559-182-056
ATKARI STEVEN/ELIZABETH
333 OLD MILL RD 256
SANTA BARBARA CA 93110

559-182-057
MCEWEN, ROBERT GERALD & SALLY ANN
REVOCABLE LIVING TRUST
333 OLD MILL RD 257
SANTA BARBARA CA 93110

559-182-058
OCCUPANT
333 OLD MILL RD 258
SANTA BARBARA CA 93110

559-182-059
OCCUPANT
333 OLD MILL RD 259
SANTA BARBARA CA 93110

559-182-060
WARREN TRUST 10/16/86
333 OLD MILL RD 260
SANTA BARBARA CA 93110

559-182-063
OCCUPANT
333 OLD MILL RD 263
SANTA BARBARA CA 93110

559-182-066
TALKINGTON FAM TR 4/12/99
333 OLD MILL RD 266
SANTA BARBARA CA 93110

559-182-066
TALKINGTON FAM TR 4/12/99
333 OLD MILL RD 266
SANTA BARBARA CA 93110

JOHN HAINES
5234 CALLE CRISTOBAL
SANTA BARBARA CA 93111

559-182-072
OCCUPANT
333 OLD MILL RD 272
SANTA BARBARA CA 93110

559-182-075
SODEN, JOHN W
333 OLD MILL RD 275
SANTA BARBARA CA 93110

LAURIE PUNCHES
201 LOS ALAMOS AVE
SANTA BARBARA CA 93109

559-182-081
LIND, DIANNE C
333 OLD MILL RD 281
SANTA BARBARA CA 93110

559-182-084
ALERIDGE, CLAYTON
333 OLD MILL RD 284
SANTA BARBARA CA 93110

559-182-061
RICHTER, RUTH F
333 OLD MILL RD 261
SANTA BARBARA CA 93110

559-182-064
CARLSON, NANCY L LIVING TRUST
333 OLD MILL RD 264
SANTA BARBARA CA 93110

KYLE OGDEN
260 SHERWOOD DR
SANTA BARBARA CA 93110

LYNNE TAHNYSIAN
4640 SIERRA MADRE RD
SANTA BARBARA CA 93110

CHRISTINE WESTERHOUSE
464 EL SUENO RD
SANTA BARBARA CA 93110

559-182-073
OCCUPANT
333 OLD MILL RD 273
SANTA BARBARA CA 93110

059-430-058
OCCUPANT
4534 OAK GLEN DR A
SANTA BARBARA, CA 93110

559-182-079
SCHUETTE, PATRICIA
333 OLD MILL RD 279
SANTA BARBARA CA 93110

559-182-082
BLACKWELL I ANNE
333 OLD MILL RD 282
SANTA BARBARA CA 93110

559-182-085
OCCUPANT
333 OLD MILL RD 285
SANTA BARBARA CA 93110

559-182-062
DELAHAY, KEVIN J AND REGINA LIVING
TRUST 10/27/10
333 OLD MILL RD 262
SANTA BARBARA CA 93110

559-182-065
ELKIN, GIBSON FAMILY TRUST
333 OLD MILL RD 265
SANTA BARBARA CA 93110

559-182-065
ELKIN, GIBSON FAMILY TRUST
333 OLD MILL RD 265
SANTA BARBARA CA 93110

559-182-068
LINQUIST EDWARD R/EDNA F 1994 TR
333 OLD MILL RD 268
SANTA BARBARA CA 93110

559-182-071
LANE, BARBARA
333 OLD MILL RD 271
SANTA BARBARA CA 93110

559-182-074
AGUR, JOYCE A LIVING TRUST 5/18/06
333 OLD MILL RD 274
SANTA BARBARA CA 93110

559-182-077
OCCUPANT
333 OLD MILL RD 277
SANTA BARBARA CA 93110

559-182-080
PATTERSON, MICHAEL A
333 OLD MILL RD 280
SANTA BARBARA CA 93110

559-182-083
OCCUPANT
333 OLD MILL RD 283
SANTA BARBARA CA 93110

559-182-086
OCCUPANT
333 OLD MILL RD 286
SANTA BARBARA CA 93110

559-182-087
OCCUPANT
333 OLD MILL RD 287
SANTA BARBARA CA 93110

CAROL WESTON
4746 SIERRA MADRE DRIVE
SANTA BARBARA CA 93110

559-244-038
HAWKINS DIANA L
4326 CALLE REAL 138
SANTA BARBARA CA 93110

JIM RICHARD
333 OLD MILL ROAD #308
SANTA BARBARA CA 93110

017-113-020
AMERICAN TRADITION - Attn: Cathy Mehl
PO BOX 908
LOS OLIVOS CA 93441

017-570-012
BARTLEY HENRY E
110 SANTA ROSA PL
SANTA BARBARA CA 93109

017-570-022; -023
BROMMERS ARVID R/ALICE C TRUSTEES
5 E ARRELLAGA ST
SANTA BARBARA CA 93101

017-113-026; -027
D M ORTEGA HILL PARTNERSHIP
PO BOX 4127
SANTA BARBARA CA 93140

017-161-004
HANSON-SNEDDON LIVING TRUST
05/15/2007
222 BALBOA DR
SANTA BARBARA CA 93109

017-570-005
JENSEN, GREGORY M
712 E MASON ST
SANTA BARBARA CA 93103

559-182-088
YACOBIAN ROBERT
333 OLD MILL RD 288
SANTA BARBARA CA 93110

059-430-041
OCCUPANT
4545 OAK GLEN DR E
SANTA BARBARA, CA 93110

559-244-039
WEISS, ELIZABETH M
4326 CALLE REAL 139
SANTA BARBARA CA 93110

LAUREN HANSON
288 SHERWOOD DRIVE
SANTA BARBARA CA 93110

017-680-009
AMERICAN TRADITION
PO BOX 898
LOS OLIVOS CA 93441

017-161-005
BECHSTEIN, LEO A
709 KIMBALL AVE
SANTA BARBARA CA 93103

017-113-022
CHANNEL INVESTMENT COMPANY
P O BOX 3092
SANTA BARBARA CA 93130 3092

017-570-025
GUTSNALL TODD S/PATTI BARTHEIS
106 POWERS AVE
SANTA BARBARA CA 93103

KATHLEEN ELMER
340 OLD MILL RD 183
SANTA BARBARA CA 93110

017-570-017
JJC MCCANN, LLC
947 ARBOLADO RD
SANTA BARBARA CA 93103

559-182-089
OCCUPANT
333 OLD MILL RD 289
SANTA BARBARA CA 93110

559-244-037
OTT ALBERT JOSEPH
4326 CALLE REAL 137
SANTA BARBARA CA 93110

TOM ELLIOT
4711 GATEWAY
SANTA BARBARA CA 93110

BARBARA KLOOS
531 LOS FELIZ
SANTA BARBARA CA 93110

017-030-012
ASTI HOLDING COMPANY LLC
P O BOX 4127
SANTA BARBARA CA 93140

017-162-015; -016
BORGATELLO C NORMAN
PO BX 5670
SANTA BARBARA CA 93150 5670

017-570-013
CLARK, PETER LIVING TRUST 10/27/92
1969 BOUNDARY DR
SANTA BARBARA CA 93108

017-570-016
HANSEN LISA MARIE
631 CHAPALA ST
SANTA BARBARA CA 93101

017-113-012
JACQUES PTRS
775 E BLITHEDALE AVE 358
MILL VALLEY CA 94941

017-161-002
KIMBALL, KURT H
2050 SYCAMORE CANYON RD
SANTA BARBARA CA 93108

017-161-007
KIMBALL, KURT H
712 NOPALITOS WAY
SANTA BARBARA CA 93103

017-113-025
MARBORG INDUSTRIES
PO BOX 4127
SANTA BARBARA CA 93140

017-030-015
MCCORMIX CORPORATION
Attn: Olsen, Kenneth, President
PO BOX 848
SANTA BARBARA CA 93102

017-113-032
MORRO LLC - Attn: Spumoni Holding CO
LLC
136 NORTH QUARANTINA STREET
SANTA BARBARA CA 93140

017-680-013
PARKER FESS DOUBLETREE HOTEL --
Attn: Doubletree Hotel Corp.
633 E CABRILLO BLVD
SANTA BARBARA CA 93103

017-570-015
POWERS AVENUE, LLC
1262 DOVER LN
SANTA BARBARA CA 93103

017-570-019
ROTTAPEL, MICHAEL S
860 HIGHLAND DR 5
SANTA BARBARA CA 93109

017-010-074
UNION PACIFIC RAILROAD --
Attn: David Pickett
10031 FOOTHILLS BLVD, STE 200
ROSEVILLE CA 95747

017-570-021
TILTON, ADELLE EXEMPTION TRUST
PO BOX 11505
ZEPHYR COVE NV 89448

017-162-001; -002
WALTERS, SCOTT A
702 KIMBALL AVE
SANTA BARBARA CA 93103

017-162-004; -005; -013; -014; -018
LASH, ARTHUR R
PO BOX 4640
SANTA BARBARA CA 93140 4640

017-161-001
MAREK, GREGORY & PATRICIA A LIVING
TRUST - Attn: Marek, Gregory R Trustee
PO BOX 4702
SANTA BARBARA CA 93140

LOIS KROC
4767 SIERRA MADRE RD
SANTA BARBARA CA 931110

017-030-014
NMC PARKING LLC - Attn: PMB 358
775 E BLITHEDALE AVE
MILL VALLEY CA 94941

017-113-031
PEGSEVEN, LLC
PO BOX 4552
SANTA BARBARA CA 93140

017-113-024
PRIDE OF OWNERSHIP PROPERTY LLC
PO BOX 1058
SUMMERLAND CA 93067

017-570-004
SGC REVOCABLE TRUST
PO BOX 4308
SANTA BARBARA CA 93140

017-113-033
SPUMONI HOLDING CO LLC --
Attn: Spumoni Holding Co. LLC
136 NORTH QUARANTINA STREET
SANTA BARBARA CA 93140

017-570-002
TURNER, PAUL M TRUST --
Attn: Turner, Paul M Trustee
105 S. QUARANTINA ST
SANTA BARBARA CA 93103

017-570-007; -020
WATTS, MILLA S TRUSTEE
1627 PATERNA RD
SANTA BARBARA CA 93103

017-570-001
MACY CORNERSTONE, LLC
1423 KENWOOD RD
SANTA BARBARA CA 93109

017-570-026
MCCANN, JOHN T & JANET A LIVING
TRUST
1222 CRAVENS LN
CARPINTERIA CA 93013

017-570-024
MITCHELL CHARLES KING
110 POWERS AVE
SANTA BARBARA CA 93103

017-570-006
PAN TECHNOLOGIES, INC
PO BOX 30352
SANTA BARBARA CA 93130

SUZY PION
14700 ORACLE PLACE
PACIFIC PALISADES CA 90272

017-161-006
RADA, KATIE P LIVING TRUST 7/15/10
707 KIMBALL AVE
SANTA BARBARA CA 93103

017-010-072; -073; -074
UNION PACIFIC RAILROAD --
Attn: Lisa Burnside, Sr. Mgr - R.E.
1400 DOUGLAS ST. STOP 1690
OMAHA, NE 68179

017-570-028; -029; -030
STANFIELD JAMES/GARILYNN F
PO BOX 41058
SANTA BARBARA CA 93140

017-162-003
VALLEY IMPROVEMENTS INC
PO BX 5670
SANTA BARBARA CA 93150 5670

CITY OF SANTA BARBARA - CD PLANNING
- Attn: Receptionist
630 GARDEN ST
SANTA BARBARA CA 93101

SCE - 3RD PARTY ENVIRONMENTAL
REVIEW - Attn: Karen Cadavona
2244 WALNUT GROVE AVE, QUAD 4C
472A
ROSEMEAD, CA 91770

SOUTHERN CALIFORNIA EDISON - Attn:
Rondi Guthrie, Region Mgr, Local PA
103 DAVID LOVE PLACE
GOLETA CA 93117

MILPAS COMMUNITY ASSN - Attn: Allan
Bleeker, President
PO BOX 4427
SANTA BARBARA CA 93140

SANTA BARBARA REGION - Attn: Chamber
of Commerce
104 W. ANAPAMU ST. STE A
SANTA BARBARA CA 93101

SB VISITORS AND CONFERENCE BUREAU -
Attn: Kathy Janega-Dykes
500 E MONTECITO ST
SANTA BARBARA, CA 93103

CALIFORNIA COASTAL COMMISSION -
Melissa Ahrens
89 S CALIFORNIA ST, STE 200
VENTURA CA 93001

ENVIRONMENTAL DEFENSE CENTER
906 GARDEN ST, STE 2
SANTA BARBARA CA 93101

SANTA BARBARA COUNTY AIR
POLLUTION CONTROL DIST. - Attn: Molly
Pearson
260 N. SAN ANTONIO RD, STE. A
SANTA BARBARA CA 93110

ALLIED NEIGHBORHOOD ASSOCIATION -
Attn: Jean Holmes
3749 BRENNAR DRIVE
SANTA BARBARA CA 93105

LEAGUE OF WOMEN VOTERS - Attn: Connie
Hannah
5788 ENCINA ROAD #3
GOLETA CA 93117

BRYAN UHRIG
20 S. CALLE CESAR CHAVEZ
SANTA BARBARA CA 93103

AREA ENERGY, LLC-RANDY PONDER
PO BOX 11164
BAKERSFIELD CA 93389

NEIGHBORHOOD ADVISORY COUNCIL
(East & West sides) - Attn: Mark Alvarado
WESTSIDE COMMUNITY CENTER
INTER-OFFICE MAIL

ALLIED PROTECTIVE & IMPROVEMENT
ASSOC-LEE MOLDAVER, PRESIDENT
PO BOX 22854
SANTA BARBARA CA 93121

ASSOCIATION OF GOVERNMENTS
TRAFFIC SOLUTIONS-PETER IMHOF

CONSERVATION CHAIR, SB AUDOBON
5679 HOLLISTER AVE #5B
GOLETA CA 93117

BEAN BLOSSOM, LLC
1400 CALLE REAL
GOLETA CA 93117

BRADFORD FAMILY TRUST-JONES GEORGE
BRADFORD
1820 THE STRAND
MANHATTAN BEACH CA 80266

BRADFORD FAMILY TRUST-JOAN HOOD
TRUSTEES
1820 THE STRAND
MANHATTAN BEACH CA 80266

059-430-023
LOPEZ, CHRISTINA DANIEL
4555 OAK GLEN DR H
SANTA BARBARA, CA 93110

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PO BOX 231
BUELLTON CA 93427

BUELLTON LIBRARY-JUDI JUST
PO BOX 187
BUELLTON CA 93427

CA DEPARTMENT OF PARKS &
RECREATION
911 SAN PEDRO ST
VENTURA CA 93001

CA DEPARTMENT OF TRANSPORTATION -
CHRIS SCHAEFFER
50 HIGUERA ST
SAN LUIS OBISPO CA 93401

CA PUBLIC UTILITIES COMMISSION-
TRANSMISSION & ENVIRONMENTAL
PERMITTING
505 VAN NESS AVENUE, 4TH FLOOR
SAN FRANCISCO CA 94102

CALIFORNIA COASTAL COMMISSION
SOUTH CENTRAL COASTAL AREA
89 SOUTH CALIFORNIA STREET STE 200
VENTURA CA 93001

CALIFORNIA NATIVE PLANT SOCIETY-
DAVE MAGNEY
PO BOX 1346
OJAI CA 93024

CALRECYCLE-RAYMOND M. SEAMANS
1001 I STREET
SACRAMENTO CA 95814

CALRECYCLE-JACQUES FRANCO
1001 I STREET
SACRAMENTO CA 93101

059-430-022
ELLIS, CHRISTINE G
4555 OAK GLEN DR G
SANTA BARBARA, CA 93110

CALTRANS-ADAM FUKUSHIMA
50 HIGUERA ST
SAN LUIS OBISPO CA 93401

CARPINTERIA PUBLIC LIBRARY-REFERENCE
LIBRARIAN
5141 CARPINTERIA AVE
CARPINTERIA CA 93013

CITIZENS PLANNING ASSOCIATION
916 ANACAPA STREET
SANTA BARBARA CA 93101

CITY OF BUELLTON-MARC BIERDZINSKI
PO BOX 1819
BUELLTON CA 93427

CITY OF CARPINTERIA-JACKIE CAMPBELL
5775 CARPINTERIA AVE
CARPINTERIA CA 93013

CITY OF CARPINTERIA-CHARLIE EBERLING
5775 CARPINTERIA AVE
CARPINTERIA CA 93013

CITY OF GOLETA-ROSEMARIE GAGLIANO

CITY OF GOLETA-EVERETT KING

CITY OF GOLETA-MICHELLE GREEN, CITY
MANAGER
130 CREMONA DR., SUITE B
GOLETA CA 93117

CITY OF LOMPOC-ARLEEN PELSTER
100 CIVIC CENTER DRIVE
LOMPOC CA 93436

CITY OF LOMPOC-STEVE CLARKE
PO BOX 8001
LOMPOC CA 93436

CITY OF SB-BOB SAMARIO

CITY OF SB-MATT FORE

CITY OF SANTA BARBARA-HELENE
SCHNEIDER, MAYOR
735 ANACAPA STREET
SANTA BARBARA CA 93101

CITY OF SANTA BARBARA-GREGG HART,
COUNCILMEMBER
735 ANACAPA STREET
SANTA BARBARA CA 93101

CITY OF SANTA BARBARA-DALE
FRANCISCO, COUNCILMEMBER
735 ANACAPA STREET
SANTA BARBARA CA 93101

CITY OF SANTA BARBARA-FRANK
HOTCHKISS, COUNCILMEMBER
735 ANACAPA STREET
SANTA BARBARA CA 93101

CITY OF SANTA BARBARA-HARWOOD
"BENDY" WHITE, COUNCILMEMBER
735 ANACAPA STREET
SANTA BARBARA CA 93101

CITY OF SANTA BARBARA-RANDY
ROWSE, COUNCILMEMBER
735 ANACAPA STREET
SANTA BARBARA CA 93101

CITY OF SANTA BARBARA-CATHY
MURILLO, COUNCILMEMBER
735 ANACAPA STREET
SANTA BARBARA CA 93101

CITY OF SANTA BARBARA-JIM
ARMSTRONG
PO BOX 1990
SANTA BARBARA CA 93102

CITY OF SANTA BARBARA PLANNING
DEPT.-BARBARA SHELTON
630 GARDEN STREET
SANTA BARBARA CA 93101

JOHN AND KAREN LONG
4707 SIERRA MADRE ROAD
SANTA BARBARA CA 93110

CITY OF SANTA MARIA-STEVE KAHN
2065 E MAIN STREET
SANTA MARIA CA 93454

CITY OF SANTA MARIA COMMUNITY
DEVELOPMENT DIRECTOR-LAWRENCE W.
APPEL
110 S PINE STREET, SUITE 101
SANTA MARIA CA 93454

CITY OF SOLVANG-BRAD VIDRO
1644 OAK STREET
SOLVANG CA 93463

CITY OF SOLVANG PLANNING DIRECTOR-
SHELLEY STAHL
411 SECOND STREET
SOLVANG CA 93463

CITY OF SOLVANG/COMMUNITY
DEVELOPMENT DIRECTOR-ARLEEN
PELSTER
1644 OAK STREET
SOLVANG CA 93463

CLERK OF THE BOARD

COALITION OF LABOR AGRICULTURE
AND BUSINESS-ANDY CALDWELL
PO BOX 7523
SANTA MARIA CA 93456

COASTAL CONSERVANCY
1330 BROADWAY STE 100
OAKLAND CA 94612

059-430-054
OCCUPANT
4538 OAK GLEN DR D
SANTA BARBARA, CA 93110

CAROL MINEAU
4421 LA PALOMA AVE
SANTA BARBARA CA 93105

COUNTY OF SANTA BARBARA
ENVIROMENTAL HEALTH SERVICES-PAUL
JENZEN

COUNTY OF SANTA BARBARA SHERIFF
DEPARTMENT

DEPARTMENT OF CONSERVATION
DIVISION OF RECYCLING
801 K STREET MS18-58
SACRAMENTO CA 95814

DEPT OF ANTHROPOLOGY-PROFESSOR
MICHAEL GLASSOW
UNIVERSITY OF CALIFORNIA
SANTA BARBARA CA 93106

ENVIROMENTAL DEFENSE CENTER-LINDA
KROP
906 GARDEN STREET, SUITE 2
SANTA BARBARA CA 93101

GAIL MARSHALL
5559 CANALINO DRIVE
CARPINTERIA CA 93013

GOLETA BRANCH LIBRARY-PAM BURY
500 N FAIRVIEW AVE
GOLETA CA 93117

COASTAL CONSERVANCY-RACHEL
COUCH
2929 A VERDE VISTA DRIVE
SANTA BARBARA CA 93105

COMMUNITY ENVIROMENTAL COUNCIL-
DAVE DAVIS
26 W ANAPAMU
SANTA BARBARA CA 93101

COUNTY OF SANTA BARBARA BUILDING
& SAFETY DIVISION P&D-JEFF THOMAS

COUNTY OF SANTA BARBARA LONG
RANGE PLANNING-TERRY RODRIGUEZ

CULTURAL PRESERVATION CONSULTANT
SYBCI ELDERS CONSULTANT-FREDDIE
ROMERO
PO BOX 365
SANTA YNEZ CA 93460

DEPARTMENT OF FISH & GAME-MARTIN
POTTER
PO BOX 1797
OJAI CA 93024

SUE MASSANARI
996 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

FIRE DEPT/REVIEW SECION-DWIGHT PEPIN

GAVIOTA COAST CONSERVANCY-MIKE
LUNSFORD
PO BOX 1099
GOLETA CA 93116

GOLETA VALLEY CHAMBER OF
COMMERCE-KRISTEN MILLER
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GOLETA CA 93116

COASTAL VIEW
4856 CARPINTERIA AVE
CARPINTERIA CA 93013

COUNTY NEWS CLIPPING SERVICE-JOHN
HANKINS
1056 EUGENIA PL #A
CARPINTERIA CA 93013

COUNTY OF SANTA BARBARA
COMMUNITY SERVICES DEPARTMENT-
CLAUD GARCIACELAY

COUNTY OF SANTA BARBARA PUBLIC
WORKS TRANSPORTATION DIVISION-
WILLIAM ROBERTSON

DEPARTMENT OF
CONSERVATION/DIVISION OF LAND RES.
PROTECTION
801 K STREET MS 13-20
SACRAMENTO CA 95814

DEPARTMENT OF FISH & GAME-NATASHA
LOHMUS
1933 CLIFF DRIVE, SUITE 9
SANTA BARBARA CA 93109

ENVIROMENTAL DEFENSE CENTER-BRIAN
TRAUTWEIN
906 GARDEN STREET, SUITE 2
SANTA BARBARA CA 93101

FISH & GAME COMMISSION
1416 9TH STREET ROOM 1320
SACRAMENTO CA 95814

GAVIOTA COAST CONSERVANCY-BOB
HAZARD
PO BOX 1099
GOLETA CA 93116

GOLETA VALLEY COMMUNITY CENTER-
MARGE DEEVERS
5679 HOLLISTER AVE
GOLETA CA 93117

GREATHOUSE FAMILY REVOCABLE TRUST
1277 SAN ANTONIO CREEK RD
SANTA BARBARA CA 93111

GRIFFITH FAMILY TRUST-JAMES/LOMA
GRIFFITH
612 HIGHLAND AVE
SAN MATEO CA 94401

HEAL THE OCEAN-HILLARY HAUSER
PO BOX 90106
SANTA BARBARA CA 93190

HEAL THE OCEAN-PRIYA VERMA
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SANTA BARBARA CA 93190

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SANTA MARIA CA 93455

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KOCH, KLAUS LIVING TRUST
25 ARROYO QUEMADA LANE
GOLETA CA 93117

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COUNTY-RICHARD NAGLER
PO BOX 91830
SANTA BARBARA CA 93190

LEAGUE OF WOMEN VOTERS
328 CARRILLO STREET, SUITE #A
SANTA BARBARA CA 93101

LOS ANGELES TIMES-KEN WEISS
202 W FIRST STREET
LOS ANGELES CA 90012

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ALICIA HARRISON AICP-LAND USE PLANNER,
Brownstein Hyatt Farber Schreck, LLP
1020 STATE STREET
SANTA BARBARA CA 93101

MEYER FAM TR 5/12/99-MEYER, GARY
W/GERDA M TTEES
1426 SCHOOLHOUSE RD
SANTA BARBARA CA 93108

MICHAEL P & NANCY M CASEY-FAMILY
TRUST
4694 LA ESPADA DR
SANTA BARBARA CA 93111

MONTECITO JOURNAL
1122 COAST VILLAGE CIR
MONTECITO CA 93108

MONTECITO PUBLIC LIBRARY-REFERENCE
LIBRARY
1469 EAST VALLEY ROAD
MONTECITO CA 93108

NATIVE AMERICAN HERITAGE
COMMISSION-DAVE SINGLETON
915 CAPITOL MALL, ROOM 364
SACRAMENTO CA 95814

OCCUPANT
14470 CALLE REAL
GOLETA CA 93117

OCCUPANT
15 ARROYO QUEMADA LANE
GOLETA CA 93117

OCCUPANT
14000 HWY 101
GOLETA CA 93117

OCCUPANT
14900 CALLE REAL
GAVIOTA CA 93117

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LOTAH
48825 SAPAQUE ROAD
BRADLY CA 93426

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PEDERSEN
675 PINE STREET
SOLVANG CA 93463

PLANNING & DEVELOPMENT-DIANNE
BLACK

SUSAN RIPARETTI
4444 MEADOWLARK LN
SANTA BARBARA CA 93105

DAVE HENNERMAN
730 EL RODEO RD
SANTA BARBARA CA

QUEMADA MUTUAL WATER COMPANY
1026 ILLIFF ST
PACIFIC PALISADES CA 90272

RANCHO SUENO IMPROVEMENT
ASSOCIATION-JUDY ROBERSON
476 EL SUENO ROAD
SANTA BARBARA CA 93110

REG. WATER QUALITY CONTROL
BOARD/CENT. COAST REGION-RYAN
LODGE
895 AEROVISTA PLACE, SUITE 101
SAN LUIS OBISPO CA 93401

S.B. COUNTY PLANNING & DEVELOPMENT
DEVELOPMENT DEPARTMENT-ANNE ALMY

SAN LUIS OBISPO DEPT. OF PLANNING-VIC
HOLLAND
COUNTY GOVERNMENT ROOM 310
SAN LUIS OBISPO CA 93408

SANTA BARBARA CITY PLANNING DEPT.-
BETTIE WEISS, CITY PLANNER
PO BOX 1990
SANTA BARBARA CA 93102

SANTA BARBARA COUNTY-MONA
MIYASATO

SANTA BARBARA COUNTY-RENE BAHL

SANTA BARBARA COUNTY-DENNIS
BOZANICH

SANTA BARBARA COUNTY COUNSEL-
JENNIFER RICHARDSON

SANTA BARBARA COUNTY COUNSEL-
MARIE LASALA

SANTA BARBARA COUNTY P & D
COUNTY BIOLOGIST-MELISSA MOONEY

SANTA BARBARA COUNTY PLANNING &
DEVELOPMENT-BRIAN A. TETLEY,
PLANNER
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SANTA BARBARA COUNTY PUBLIC
WORKS-CHARLES CABLE

SANTA BARBARA COUNTY PUBLIC
WORKS-TRAVIS SPIER

SANTA BARBARA COUNTY PUBLIC
WORKS-SCOTT MCGOLPIN

SANTA BARBARA COUNTY PUBLIC
WORKS-MARK SCHLEICH

SANTA BARBARA COUNTY PUBLIC
WORKS-IMELDA CRAGIN

SANTA BARBARA COUNTY PUBLIC
WORKS-JODDI LEIPNER

SANTA BARBARA COUNTY PUBLIC
WORKS-LESLIE WELLS

SANTA BARBARA COUNTY PUBLIC
WORKS-CARLYLE JOHNSTON

SANTA BARBARA COUNTY PUBLIC
WORKS-RR&WM LIBRARY

SANTA BARBARA COUNTY SURVEYORS
OFFICE-ALEKSANDAR JEVREMOVIC

SANTA BARBARA NEWS PRESS-DON
KATICH, DIRECTOR
PO DRAWER N-N
SANTA BARBARA CA 93101

SANTA BARBARA NEWS PRESS-SCOTT
STEEPLETON
PO DRAWER N-N
SANTA BARBARA CA 93101

SANTA BARBARA PUBLIC LIBRARY-
REFERENCE: GOVERNMENT DOCUMENTS
40 E ANAPAMU
SANTA BARBARA CA 93101

SANTA MARIA TIMES
PO BOX 400
SANTA MARIA CA 93454

SANTA YNEZ BAND OF MISSION INDIANS-
VINCENT ARMENTA, CHAIRPERSON
PO BOX 517
SANTA YNEZ CA 93460

SANTA YNEZ LIBRARY C/O SOLVANG
PUBLIC LIBRARY-JEAN JOHNSON
1745 MISSION DRIVE
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OPLINGER
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SB CHANNELKEEPER
714 BOND AVENUE
SANTA BARBARA CA 93102

SB COUNTY BOARD OF SUPERVISOR-
SALUD CARBAJAL
1ST DISTRICT

SB COUNTY BOARD OF SUPERVISOR-
JANET WOLF
2ND DISTRICT

SB COUNTY BOARD OF SUPERVISOR-
DOREEN FARR
3RD DISTRICT

SB COUNTY BOARD OF SUPERVISOR-
PETER ADAM
4TH DISTRICT

SB COUNTY BOARD OF SUPERVISOR-
STEVE LAVAGNINO
5TH DISTRICT

SB COUNTY BOARD OF SUPERVISOR-
JEREMY TITTLE
1ST DISTRICT

SB COUNTY BOARD OF SUPERVISOR-
MARY O'GORMAN
2ND DISTRICT

SB COUNTY BOARD OF SUPERVISOR-
CHRIS HENSON
3RD DISTRICT

SB COUNTY BOARD OF SUPERVISOR-
CORY BANTILAN
5TH DISTRICT

SB COUNTY BOARD OF SUPERVISOR - BOB
NELSON
4TH DISTRICT

SB COUNTY ENVIROMENTAL HEALTH-
DAVID BRUMMOND

SB COUNTY FLOOD CONTROL-TOM
FAYRAM, DEPUTY DIRECTOR

SB COUNTY LEA-LISA SLOAN
225 CAMINO DEL REMEDIO
SANTA BARBARA CA 93101

SB COUNTY PLANNING COMMISSION-
MICHAEL COONEY

SB COUNTY PLANNING COMMISSION-
CECILIA BROWN

SB COUNTY PLANNING COMMISSION-
JOAN HARTMAN

SB COUNTY PROJECT CLEAN WATER-
CATHLEEN GARNAND

SB NATURAL HISTORY MUSEUM-ERNEST
MCGOVERN UNZUETA
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SANTA BARBARA CA 93105

SB RANGER DISTRICT US FOREST SERVICE-
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3505 PARADISE ROAD
SANTA BARBARA CA 93105

SHUTE, MIHALY AND WEINBERGER LLP-
ELLISON FOLK
396 HAYES STREET
SAN FRANCISCO CA 94102

SHUTE, MIHALY AND WEINBERGER LLP-
CARMEN BORG
396 HAYES STREET
SAN FRANCISCO CA 94102

SIERRA CLUB-ROBERT BERNSTEIN
448 MILLS WAY #B
GOLETA CA 93117

SMITH FAMILY TRUST
ARROYO QUEMADA LN #5
GOLETA CA 93117

SOARING EAGLE TURST
9300 LASAINE AVE
NORTHRIDGE CA 91325

SOARING EAGLE TURST
5231 SANFORD AVE
LOS ANGELES CA 90056

SOLVANG CHAMBER OF COMMERCE-
LINDA JACKSON, EXEC. DIRECTOR
PO BOX 465
SOLVANG CA 93464

SOLVANG PUBLIC LIBRARY-JEAN
JOHNSON
1745 MISSION DRIVE
SOLVANG CA 93463

SOUTHERN CALIFORNIA GAS CO-
TIMOTHY MAHONEY
134 E VICTORIA STREET
SANTA BARBARA CA 93101

STATE CLEARING HOUSE-SCOTT
MORGAN
1400 TENTH STREET RM 222
SACRAMENTO CA 95814

STATE LANDS COMMISSION
100 HOWE AVE., STE 100 S
SACRAMENTO CA 95825

SUMMERLAND POST OFFICE-POSTMASTER
2245 LILLIE AVENUE
SUMMERLAND CA 93067

SURFRIDER-BOB KEATS
630 MIRAMONTE DRIVE
SANTA BARBARA CA 93109

SURFRIDER FOUNDATION-KEITH
ZANDONA
PO BOX 21703
SANTA BARBARA CA 93121

THE COASTAL STEWARDSHIP COUNCIL-
BEATRICE STABLEFORD, STEWARDSHIP
DIRECTOR
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GOLETA CA 93117

THE LOMPOC RECORD-RICK TUTTLE
PO BOX 578
LOMPOC CA 93436

SENTINEL
133 E DE LA GUERRA ST #182
SANTA BARBARA CA 93101

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ENVIROMENTAL AFFAIRS
UNIVERSITY OF CALIFORNIA
SANTA BARBARA CA 93106

UCSB DIRECTOR OF NATURAL RESERVE
SYSTEM-MARINE SCIENCE INSTITUTE
UNIVERSITY OF CALIFORNIA
SANTA BARBARA CA 93106

UCSB LIBRARY REFERENCFE DEPARTMENT-
BARBARA SILBER
UNIVERSITY OF CALIFORNIA
SANTA BARBARA CA 93106

UCSB LIBRARY REFERENCFE DEPARTMENT-
JANET MARTORANA
UNIVERSITY OF CALIFORNIA
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UCSB MUSEUM OF SYSTEMATICS &
ECOLOGY-MARK HOLMGRAN
UNIVERSITY OF CALIFORNIA
SANTA BARBARA CA 93106

UCSB OFFICE OF GOVERNMENT
RELATIONS-KIRSTEN DESHLER, DIRECTOR
UNIVERSITY OF CALIFORNIA
SANTA BARBARA CA 93106

URBAN CREEKS COUNCIL
PO BOX 1476
SANTA BARBARA CA 93102

US ARMY CORPS OF ENGINEERS VENTURA
FILED OFFICE-J.W. MARKHAM
2151 ALESSANDRO DRIVE, SUITE 225
VENTURA CA 93001

US FISH & WILDLIFE SERVICE-ROGER ROOT
2493 PORTOLA ROAD #B
VENTURA CA 93003

US FOREST SERVICE LOS PADRES
NATIONAL FOREST-JEANIE DERBY
6755 HOLLISTER #150
GOLETA CA 93117

VENTURA COUNTY AIR POLLUTION
CONTROL DISTRICT
669 COUNTY SQUARE DR. 2ND FLOOR
VENTURA CA 93003

VENTURA COUNTY RESOURCE
MGMT/PLANNING & DEVELOPMENT-KEITH
TURNER
800 S VICTORIA
VENTURA CA 93009

VISTA DEL MAR UNION SCHOOL
9467 SAN JULIAN ROAD
GAVIOTA CA 93117

059-050-010
MERCADO, NELLY & ALBERT N TRUST
11/5/1993
3199 PADARO LN
CARPINTERIA CA 93103

059-050-009
HECK RON/SHIRLEY TRUSTEES (for) HECK
FAM TR 1-10-97
4594 CAMINO MOLINERO
SANTA BARBARA, CA 93110

WOMEN'S ENVIROMENTAL WATCH-
CATHIE MCHENRY
3900 SKYLARK
SANTA YNEZ CA 93460

BETTY J COURTNEY, CALIFORNIA OF FISH
AND WILDLIFE, SOUTH COAST REGION
3883 RUFFIN ROAD
SAN DIEGO CA 92123

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SHUTE, MIHALY AND WEINBERGER LLP
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SAN FRANCISCO CA 94102

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MANAGER, CITY OF GOLETA
130 CREMONA DRIVE, SUITE B
GOLETA CA 93117

GAVIOTA PLANNING ADVISORY
COMMITTEE

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BARBARA, PLANNING DIVISION
CDD 830 GARDEN STREET
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AND DEVELOP. SERVICES
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BAKERSFIELD CA 93301

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SANTA BARBARA CA 93105

MICHAEL HOWE
1482 E MOUNTAIN DR
SANTA BARBARA CA 93108

ROBERTA LOPEZ
RR1 BOX 11 ARROYO QUEMADA
GOLETA CA 93117

SCOTT RENNICK
1809 CO RD 727
GUNNISON CA 81230

MANUAL ARMENTA
158 KALAWA SHAG
SANTA YNEZ CA 93460

MARGRET CASH
PO BOX 623
SANTA YNEZ CA 93460

CATHERINCE E ASERAPPA
612 HIGHLAND AVE
SAN MATEO CA 94401

LESLIE ELIZABETH MADRIAGA
1196 MUSTANG DR
SANTA YNEZ CA 93460

LORETTA MURILLO
PO BOX 1367
SANTA YNEZ CA 93460

GRACE PACHECO
156 D 176 KALAW SHAG
SANTA YNEZ CA 93460

HOCHBERG FAMILY
4710 SIERRA MADRE ROAD
SANTA BARBARA CA 93110

PATRICK TUMAMAIT
992 EL CAMINO CORTO
OJAI CA 93023

CAROL A. PULIDO
165 MOUNTAINVIEW STREET
OAK VIEW CA 93022

JULIE LYNN TUMAMAIT
365 NORTH POLI AVE
OJAI CA 93023

059-430-021
RUCH RICHARD D TRUSTEE (for) RUCH
RICHARD D REV TR 6/30/99
4555 OAK GLEN DR F
SANTA BARBARA, CA 93110

ANA CITRIN
PO BOX 92233
SANTA BARBARA CA 93190

SCOTT BULL, SURFRIDER FOUNDATION
PO BOX 21703
SANTA BARBARA CA 93121

KEN HOUGH, SB CAN
PO BOX 23453
SANTA BARBARA CA 93121

DICK FLACKS, SB CAN
1603 GARDEN STREET
SANTA BARBARA CA 93101

SUSAN SHANK, LWV OF SB
328 E CARRILLO, SUITE A
SANTA BARBARA CA 93101

JOANIE JONES, LWV OF SB
328 E CARRILLO, SUITE A
SANTA BARBARA CA 93101

REBECCA CLAASSEN, LWV OF SB
328 E CARRILLO, SUITE A
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BRADLEY ANGEL, GREENACTION
NETWORK
559 ELLIS STREET
SAN FRANCISCO CA 94109

HILLARY BLACKERBY, OFFICE OF
ASSEMBLY MEMBER WILLIAMS-37TH DIST.
101 W ANAPAMU STREET
SANTA BARBARA CA 93105

JAMES JOYCE, OFFICE OF STATE SENATOR
JACKSON-19TH DIST.
222 EAST CARRILLO, SUITE 309
SANTA BARBARA CA 93101

DR. ADAM K. GREEN, SBCC CENTER FOR
SUSTAINABILITY
721 CLIFF DRIVE
SANTA BARBARA CA 93109

PAUL RELIS, ES STUDIES PROGRAM
2670 PUESTA DEL SOL
SANTA BARBARA CA 93105

ED EASTON, GAVIOTA COAST
CONSERVANCY
PO BOX 1099
GOLETA CA 93116

PLANNING AND DEVELOPMENT, HEARING
SUPPORT-LARRY FERINI 4TH DISTRICT
123 EAST ANAPAMU STREET
SANTA BARBARA CA 93101

NOOZHAWK
PO BOX 101
SANTA BARBARA CA 93102

PLANNING AND DEVELOPMENT, HEARING
SUPPORT-DANIEL BLOUGH 5TH DISTRICT
123 EAST ANAPAMU STREET
SANTA BARBARA CA 93101

KATIE DAVIS-WATER GUARDIANS
528 WOODLEAD LANE
GOLETA CA 93117

CHERI SPENCER
4983 LA RAMADA DRIVE
SANTA BARBARA CA 93111

JOHN RUIZ
1826 STANWOOD DR
SANTA BARBARA CA 93103

JOHN DEWEY MUSTANG

GERALD COMATI

JOHN KULAR

SARA HEAD AECOM

JULIE NICESWANGER-HICKMAN AECOM

MATT DUNN URS

DAN DAWSON/SCOTT SCHELL ATE

JEFF ZUKIN GEOSYNTEC

JEFF POST GEOSOLUTIONS

MARK SEITS HDR

JUSTIN ANDERSON
4590 SIERRA MADRE DR
SANTA BARBARA CA 93110

JANICE MEADOWCRONT
1025 CAMINO DEL RETIRO
SANTA BARBARA CA 93110

081-150-002
OCCUPANT
14900 CALLE REAL
GAVIOTA, CA 93117

081-150-042
OCCUPANT
14470 CALLE REAL RD
GOLETA, CA 93117

PAM ENGBRETSON
611 WEST G STREET
SAN DIEGO CA 92101

081-190-006
PEDERSEN FRANK ARTHUR/JEAN C TRUSTEES
(for) PEDERSEN REV TRUST 10/4/90
15 ARROYO QUEMADA LN
GAVIOTA, CA 93117

081-200-028
OCCUPANT
14000 HWY 101
GOLETA, CA 93117

059-050-010
OCCUPANT
4590 CAMINO MOLINERO
SANTA BARBARA, CA 93110

059-061-012
OCCUPANT
4586 CAMINO DEL MIRASOL
SANTA BARBARA, CA 93110

059-062-004
OCCUPANT
960 CAMINO DEL RIO
SANTA BARBARA, CA 93110 1009

059-073-005
OCCUPANT
4548 CAMINO MOLINERO
SANTA BARBARA, CA 93110

059-073-011
OCCUPANT
4549 CAMINO MOLINERO
SANTA BARBARA, CA 93110

059-073-009
OCCUPANT
4537 CAMINO MOLINERO
SANTA BARBARA, CA 93110

059-073-007
OCCUPANT
4544 CAMINO MOLINERO
SANTA BARBARA, CA 93110

059-140-029
OCCUPANT
260 N SAN ANTONIO RD
SANTA BARBARA, CA 93110

059-120-004
OCCUPANT
4410 CATHEDRAL OAKS RD
SANTA BARBARA, CA 93110 1042

059-150-006
OCCUPANT
595 LORRAINE AVE
SANTA BARBARA, CA 93110

059-150-009
OCCUPANT
596 EL SUENO RD
SANTA BARBARA, CA 93110

059-150-010
OCCUPANT
612 EL SUENO RD
SANTA BARBARA, CA 93110

059-231-020
OCCUPANT
185 EL SUENO RD
SANTA BARBARA, CA 93110

059-231-022
OCCUPANT
169 EL SUENO RD
SANTA BARBARA, CA 93110

059-231-033
OCCUPANT
160 SHERWOOD DR
SANTA BARBARA, CA 93110

059-150-011
OCCUPANT
620 EL SUENO RD
SANTA BARBARA, CA 93110

059-150-014
OCCUPANT
585 LORRAINE AVE
SANTA BARBARA, CA 93110

059-150-016
OCCUPANT
4385 CATHEDRAL OAKS RD
SANTA BARBARA, CA 93110

059-150-024
OCCUPANT
4395 CATHEDRAL OAKS RD
SANTA BARBARA, CA 93110

059-150-025
OCCUPANT
670 EL SUENO RD
SANTA BARBARA, CA 93110

059-171-003
OCCUPANT
563 EL SUENO RD
SANTA BARBARA, CA 93110

059-171-019
OCCUPANT
549 EL SUENO RD
SANTA BARBARA, CA 93110

059-171-023
OCCUPANT
587 EL SUENO RD REAR
SANTA BARBARA, CA 93110

059-172-008
OCCUPANT
438 1/2 EL SUENO RD
SANTA BARBARA, CA 93110 1025

059-172-009
OCCUPANT
438 EL SUENO RD
SANTA BARBARA, CA 93110 1025

059-172-016
OCCUPANT
536 EL SUENO RD
SANTA BARBARA, CA 93110 1027

THE KELLY FAMILY
1122 VIA REGINA
SANTA BARBARA CA 93111

059-221-003
OCCUPANT
409 EL SUENO RD
SANTA BARBARA, CA 93110
ENO RD

059-221-017
OCCUPANT
285 SHERWOOD DR
SANTA BARBARA, CA 93110

059-221-024
OCCUPANT
433 EL SUENO RD
SANTA BARBARA, CA 93110

059-222-005
OCCUPANT
285 EL SUENO RD
SANTA BARBARA, CA 93110

059-222-007
OCCUPANT
272 SHERWOOD DR
SANTA BARBARA, CA 93110

059-222-010
OCCUPANT
274 SHERWOOD DR
SANTA BARBARA, CA 93110

059-222-018
William P Edwards & Cardella D Stephens
251 EL SUENO RD
SANTA BARBARA, CA 93110

059-222-021
OCCUPANT
307 EL SUENO RD
SANTA BARBARA, CA 93110

059-430-004
OCCUPANT
4565 OAK GLEN DR D
SANTA BARBARA, CA 93110

059-223-005
OCCUPANT
346 EL SUENO RD
SANTA BARBARA, CA 93110

059-223-008
OCCUPANT
314 A EL SUENO RD
SANTA BARBARA, CA 93110

059-223-010
OCCUPANT
284 1/2 EL SUENO RD
SANTA BARBARA, CA 93110

059-223-013
OCCUPANT
266 1/2 EL SUENO RD
SANTA BARBARA, CA 93110

059-231-006
OCCUPANT
110 SHERWOOD DR
SANTA BARBARA, CA 93110

059-231-014
OCCUPANT
250 SHERWOOD DR
SANTA BARBARA, CA 93110

059-430-014
OCCUPANT
4561 OAK GLEN DR F
SANTA BARBARA, CA 93110

059-430-051
OCCUPANT
4538 OAK GLEN DR A
SANTA BARBARA, CA 93110

059-430-029
OCCUPANT
4551 OAK GLEN DR F
SANTA BARBARA, CA 93110

059-231-035
OCCUPANT
168 SHERWOOD DR
SANTA BARBARA, CA 93110

559-182-025
OCCUPANT
333 OLD MILL RD 225
SANTA BARBARA, CA 93110

059-231-037
OCCUPANT
165 EL SUENO RD
SANTA BARBARA, CA 93110

059-231-038
OCCUPANT
228 SHERWOOD DR
SANTA BARBARA, CA 93110

059-232-001
OCCUPANT
250 EL SUENO RD
SANTA BARBARA, CA 93110

059-232-002
OCCUPANT
204 EL SUENO RD
SANTA BARBARA, CA 93110

059-232-006
OCCUPANT
180 EL SUENO RD
SANTA BARBARA, CA 93110

059-232-012
OCCUPANT
130 EL SUENO RD
SANTA BARBARA, CA 93110

059-240-006
OCCUPANT
4326 CALLE REAL
SANTA BARBARA, CA 93110

059-331-003
OCCUPANT
4627 SIERRA MADRE RD
SANTA BARBARA, CA 93110

059-331-004
OCCUPANT
4619 SIERRA MADRE RD
SANTA BARBARA, CA 93110

059-332-005
OCCUPANT
4626 SIERRA MADRE RD
SANTA BARBARA, CA 93110

559-182-024
OCCUPANT
333 OLD MILL RD 224
SANTA BARBARA, CA 93110

061-081-007
OCCUPANT
4455 HOLLISTER AVE
SANTA BARBARA, CA 93110

061-082-015
OCCUPANT
4447 HOLLISTER AVE
SANTA BARBARA, CA 93110

061-082-017
OCCUPANT
4437 HOLLISTER AVE
SANTA BARBARA, CA 93110

061-082-019
OCCUPANT
4441 HOLLISTER AVE
SANTA BARBARA, CA 93110

061-083-001
OCCUPANT
4444 HOLLISTER AVE
SANTA BARBARA, CA 93110

061-083-003
OCCUPANT
4434 HOLLISTER AVE
SANTA BARBARA, CA 93110

061-083-004
OCCUPANT
4430 HOLLISTER AVE
SANTA BARBARA, CA 93110

061-083-005
OCCUPANT
4422 HOLLISTER AVE UNIT 101
SANTA BARBARA, CA 93110

061-083-007
OCCUPANT
4410 HOLLISTER AVE
SANTA BARBARA, CA 93110

061-091-012
OCCUPANT
4425 HOLLISTER AVE
SANTA BARBARA, CA 93110

059-300-057
OCCUPANT
410 CAMINO DEL REMED F
SANTA BARBARA, CA 93110

059-300-060

OCCUPANT

420 CAMINO DEL REMED A
SANTA BARBARA, CA 93110

059-300-068

OCCUPANT

430 CAMINO DEL REMED B
SANTA BARBARA, CA 93110

059-300-074

OCCUPANT

440 CAMINO DEL REMED A
SANTA BARBARA, CA 93110

059-300-087

OCCUPANT

450 CAMINO DEL REMED H
SANTA BARBARA, CA 93110

059-420-012

OCCUPANT

4531 OAK GLEN DR L
SANTA BARBARA, CA 93110

SIDONIA SLAFF

340 OLD MILL ROAD 181
SANTA BARBARA CA 93110

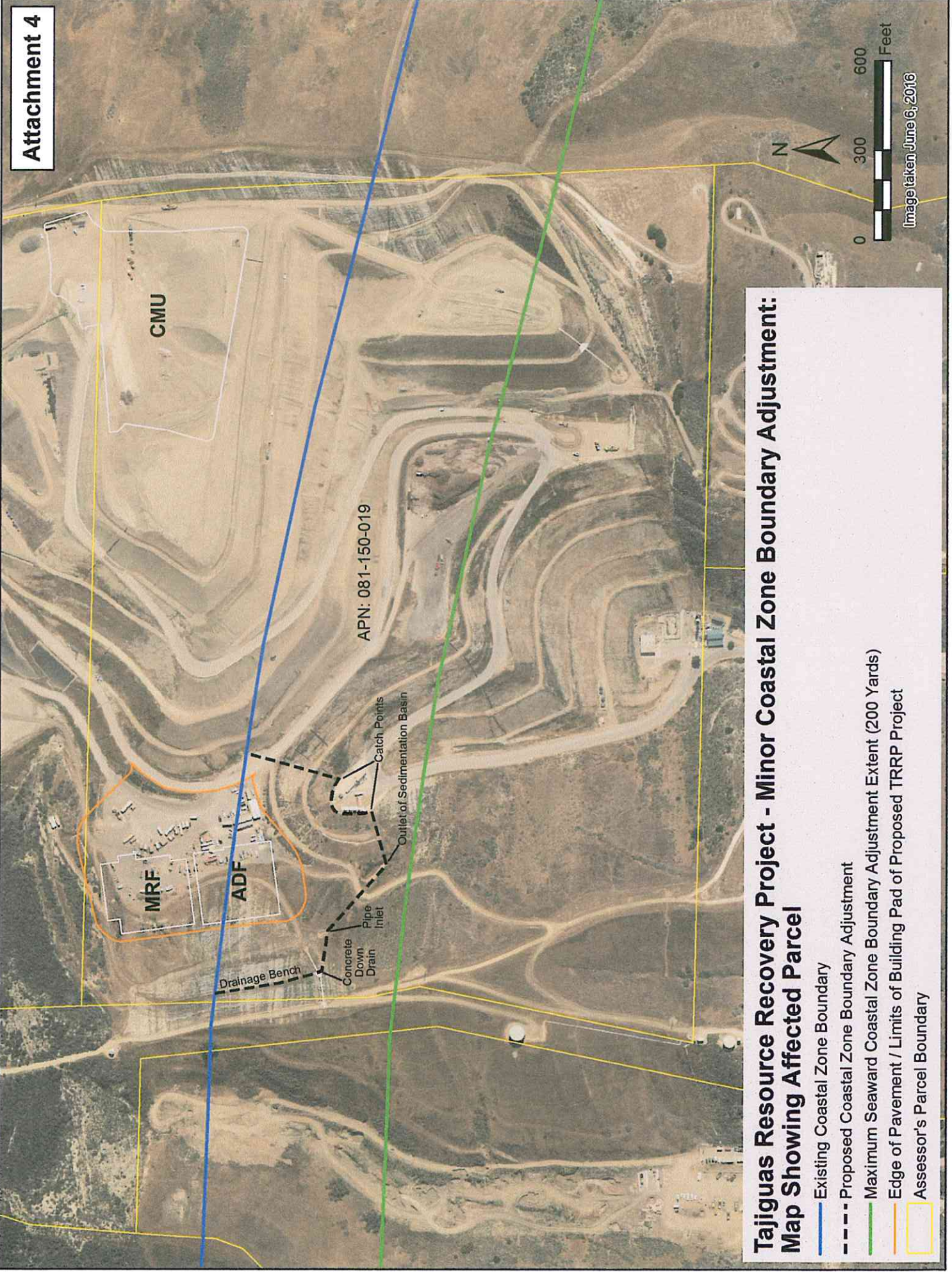
ATTACHMENT 3



Tajiguas Resource Recovery Project - Proposed Minor Boundary Adjustment: Map Showing All Parcels Within 100 Feet of Affected Parcel

- Existing Coastal Zone Boundary
- - - - Proposed Coastal Zone Boundary Adjustment
- Maximum Seaward Coastal Zone Boundary Adjustment Extent (200 Yards)
- Edge of Pavement / Limits of Building Pad of Proposed TRRP Project
- Assessor's Parcel Boundary

ATTACHMENT 4



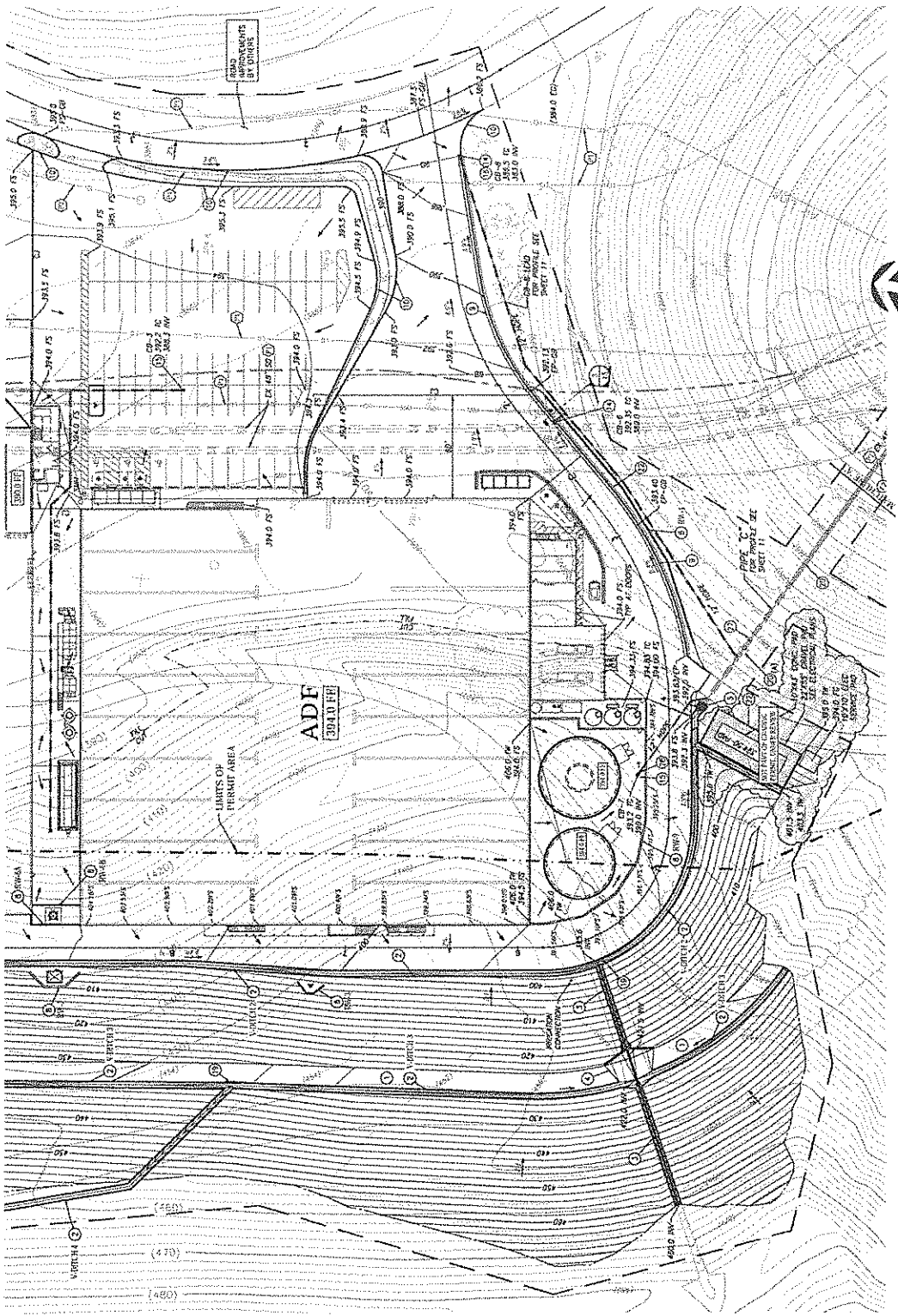
**Tajiguas Resource Recovery Project - Minor Coastal Zone Boundary Adjustment:
Map Showing Affected Parcel**

- Existing Coastal Zone Boundary
- Proposed Coastal Zone Boundary Adjustment
- Maximum Seaward Coastal Zone Boundary Adjustment Extent (200 Yards)
- Edge of Pavement / Limits of Building Pad of Proposed TRRP Project
- Assessor's Parcel Boundary



ATTACHMENT 5

GRADING & DRAINAGE CONTINUED ON SHEET 9



CONSTRUCTION NOTES:

1. CONSTRUCT BENCH PER (1)
2. CONSTRUCT 4'-HIGH FENCE PER (2)
3. CONSTRUCT DRAINAGE FENCE PER (3)
4. CONSTRUCT BENCH CROSSING PER (4)
5. CONSTRUCT DRAINAGE INLET PER (5)
6. CONSTRUCT DRAINAGE INLET AT EXISTING MANHOLE PER (6)
7. CONSTRUCT CONCRETE WALL WITH STRUCTURAL DRAINAGE (NOT PART OF GRADING PLAN) PER (7)
8. CONSTRUCT CONCRETE CURB & GUTTER PER (8)
9. CONSTRUCT CONCRETE CURB PER (9)
10. CONSTRUCT CONCRETE CURB PER (10)
11. CONSTRUCT CONCRETE CURB PER (11)
12. CONSTRUCT CONCRETE CURB PER (12)
13. CONSTRUCT CONCRETE CURB PER (13)
14. CONSTRUCT CONCRETE CURB PER (14)
15. CONSTRUCT CONCRETE CURB PER (15)
16. CONSTRUCT CONCRETE CURB PER (16)
17. CONSTRUCT CONCRETE CURB PER (17)
18. CONSTRUCT CONCRETE CURB PER (18)
19. CONSTRUCT CONCRETE CURB PER (19)
20. CONSTRUCT CONCRETE CURB PER (20)
21. CONSTRUCT CONCRETE CURB PER (21)
22. CONSTRUCT CONCRETE CURB PER (22)
23. CONSTRUCT CONCRETE CURB PER (23)
24. CONSTRUCT CONCRETE CURB PER (24)
25. CONSTRUCT CONCRETE CURB PER (25)
26. CONSTRUCT CONCRETE CURB PER (26)
27. CONSTRUCT CONCRETE CURB PER (27)
28. CONSTRUCT CONCRETE CURB PER (28)
29. CONSTRUCT CONCRETE CURB PER (29)
30. CONSTRUCT CONCRETE CURB PER (30)

NOTES:

1. STAIN RESISTANT FINISH TO BE GRAY-LEVEL COX. MAKE 1/4" TO 1/2" BELL AND-SHOOT CONNECTIONS. ALL MANHOLE COVERS MUST BE 15" TO 20" ABOVE FINISH GRADE. ALL MANHOLE COVERS MUST BE REINFORCED WITH 4" X 4" REINFORCING BARS PER (1).
2. NEW DRAINAGE PIPE INSTALLATION AND TESTING PER (1)

LEGEND

- EXISTING PROPERTY (SHOWN AS IS)
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED DRAINAGE
- PROPOSED FENCE
- PROPOSED CURB
- PROPOSED GUTTER
- PROPOSED MANHOLE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE CURB WITH STRUCTURAL DRAINAGE
- PROPOSED CONCRETE CURB WITH GUTTER
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (1)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (2)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (3)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (4)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (5)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (6)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (7)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (8)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (9)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (10)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (11)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (12)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (13)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (14)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (15)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (16)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (17)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (18)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (19)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (20)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (21)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (22)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (23)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (24)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (25)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (26)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (27)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (28)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (29)
- PROPOSED CONCRETE CURB WITH GUTTER AND 4" X 4" REINFORCING BARS PER (30)



<p>TAIJIGUAS RESOURCE RECOVERY PROJECT PHASE 1 - MR & AD FACILITIES GRADING AND DRAINAGE: ADF</p>		<p>SHEET NO. C8</p>
<p>DATE: _____</p>	<p>DATE: _____</p>	<p>DATE: _____</p>
<p>DESIGNED BY: _____</p>	<p>CHECKED BY: _____</p>	<p>APPROVED BY: _____</p>
<p>PRELIMINARY <small>NOT FOR CONSTRUCTION</small></p>		
<p>John Kular Consulting <small>12101 Redwood Drive, Berkeley, CA 94711 949.383.5447</small></p>		
<p>PROJECT NO: BT31008</p>	<p>DATE: _____</p>	<p>DATE: _____</p>
<p>ISSUED FOR BID: 7/29/2017</p> <p>ISSUED FOR PRELIMINARY REVIEW BY BORARD: 12/15/2016</p> <p>ISSUED FOR PRELIMINARY REVIEW BY PROJECT TEAM: 11/01/2016</p> <p>ISSUED FOR PRELIMINARY REVIEW BY PROJECT TEAM: 11/01/2016</p>		

ATTACHMENT 6

ATTACHMENT 6

TAJIGUAS RESOURCE RECOVERY PROJECT - ENVIRONMENTAL BENEFITS AND COMPLIANCE

The TRRP responds to and is supported by the following state and federal directives, statutes and initiatives:

1	AB 32 - California Global Warming Solutions Act of 2006 Added §§ 38500 et seq. to Cal. Health & Safety Code (H&SC)	Assembly Bill (AB) 32 was the first program in the country to take a comprehensive, long-term approach to addressing climate change and reducing greenhouse gas emissions (GHG). One of the seven major GHGs identified in this Act is Methane (CH ₂). The TRRP will significantly reduce Methane emissions by diverting organic materials to the Anaerobic Digestion facility where they will be converted to electricity and compost. (See AB 32 Overview, pg. 2 & H&SC §§ 38500 et seq.)
2	CalRecycle's (2009) Strategic Directive 6.1 Requires Programs that Reduce Disposal of Organic Waste	To meet the mandates in the Integrated Waste Management Act CalRecycle implements programs to reduce waste generation, divert materials from landfills, and recover materials. Directive 6.1 requires programs that reduce the amount of organics waste disposed in landfills 50% by 2020. (See CalRecycle Strategic Directives, SD-6.) Organic waste decomposition in a landfill is a large contributor to GHG emissions, specifically Methane. Digesting the waste reduces Methane emissions because the resulting gas is completely captured and used beneficially as fuel.
3	AB 341 (2011) Amends Cal. Public Resources Code (PRC)	The AB 341 amendments to the California Public Resources Code set a goal for the state to reduce, recycle, or compost not less than 75 percent of all solid waste by 2020 and thereafter. (See AB 341 Legislative Counsel's Digest and Pub. Res. Code § 41780.01.)
4	AB 1826 (2014) Adds §§ 42649.8 et seq. to Cal. Public Resources Code Requiring Organic Waste Recycling Programs	AB 1826 adds §§ 42649.8 et seq. to the Public Resources Code requiring cities and counties to implement an organic waste recycling program that includes, among other things, mandatory commercial organic waste recycling for businesses generating four cubic yards or more of commercial solid waste per week.
5	Existing Public Resources Code §§ 41701& 41703 Require Plans for 15 yrs. Disposal Capacity	Requires all jurisdictions in the State to plan for 15 years of disposal capacity for waste "that cannot be reduced, recycled or composted." (See Pub. Res. Code §§ 41701 & 41703.)
6	AB 1045 (2015) Adds Statewide Compost Policy to Public Resources Code	AB 1045 adds §§ 42649.86 and 42649.87 to the Public Resources Code to require state agencies to work together to develop and implement policies to aid in diverting organic waste from landfills and to develop recommendations for promoting organic waste. (See Summary of AB 1045 and Pub. Res. Code §§ 42649.86 & 42649.87.)

7	AB 876 (2015) Adds § 41821.4 to Public Resources Code to Reduce Landfilling of Organics & Increase Composting & Anaerobic Digestion	Requires cities and counties to plan for the building of sufficient composting and anaerobic digestion infrastructure needed for a 15-year period. (See Pub. Res. Code § 41821.4, Note §1(d) specifically addresses anaerobic digestion of organics and CalRecycle AB 876 Organics Management Infrastructure Planning Guidance.)
8	USDA & EPA (2015) Food Waste Reduction Goal	On September 16, 2015, the United States Department of Agriculture and the United States Environmental Protection Agency announced the United States' first-ever national food waste reduction goal, calling for a 50-percent reduction by 2030. (See EPA News Release, 9/16/15.)

The TRRP allows the South Coast and the Santa Ynez and Cuyama Valleys to satisfy all of the state and federal directives, statutes and initiatives discussed above by providing the following tangible benefits:

- Providing a long-term (20-year) waste management plan;
- Supporting the region's recycling goals by providing the infrastructure necessary to support existing and future waste management programs (Materials Recovery Facility for recyclables, Anaerobic Digestion Facility and Composting Area for organics);
- Increasing the region's diversion rate from 73 percent to approximately 80 percent without any changes to current programs (meets AB 341 goal of 75 percent in 2020);
- Significantly reducing GHG emissions. Compared to landfilling, recycling activities associated with the Project are expected to eliminate GHG levels equivalent to annual emissions from approximately 13,270 vehicles/year (AB 32: GHG reductions by 2020), and the reduction in landfilling of organic materials would result in a decrease of nearly one million metric tons of CO₂ during the first 50 years following project implementation;
- Generating a net of approximately 1 megawatt of renewable energy each year making the Project eligible for renewable energy credits; and
- Providing a cost-effective solution for long-term waste management.

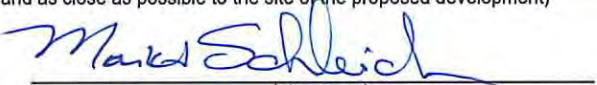
ATTACHMENT 7

APPENDIX D
(Permit Application)

DECLARATION OF POSTING

Prior to or at the time the application is submitted for filing, the applicant must post, at a conspicuous place, easily read by the public and as close as possible to the site of the proposed development, notice that an application for the proposed development has been submitted to the Commission. Such notice shall contain a general description of the nature of the proposed development. The Commission furnishes the applicant with a standardized form to be used for such posting. If the applicant fails to post the completed notice form and sign the Declaration of Posting, the Executive Director of the Commission shall refuse to file the application. 14 Cal. Code Regs. Section 13054(d).

Please sign and date this Declaration of Posting form when the site is posted; it serves as proof of posting. It should be returned to our office with the application.

Pursuant to the requirements of California Administrative Code Section 13054(d), I hereby certify	
that on, <u>3/23/17</u>	I or my authorized representative posted the Notice
<small>(date of posting)</small>	
of Pending Permit for application to obtain a coastal development permit for the development of	
<u>REQUEST FOR A MINOR BOUNDARY</u>	
<u>ADJUSTMENT OF THE COASTAL ZONE BOUNDARY TO</u>	
<u>CONFORM TO READILY IDENTIFIABLE MANMADE FEATURES</u>	
<small>(description of development)</small>	
Located at <u>TALIGUAS LANDFILL - APN 081-150-019</u>	
<small>(address of development or assessor's parcel number)</small>	
The public notice was posted at <u>TALIGUAS LANDFILL SCALE HOUSE</u>	
<small>(a conspicuous place, easily seen by the public and as close as possible to the site of the proposed development)</small>	
	
<small>(signature)</small>	
<u>3/23/17</u>	
<small>(date)</small>	

NOTE: Your application cannot be processed until this **Declaration of Posting** is signed and returned to this office.

<small>FOR OFFICE USE ONLY</small>	
PERMIT NUMBER	_____
RECEIVED	_____
DECLARATION COMPLETE	_____

CALIFORNIA COASTAL ZONE CONSERVATION COMMISSION
SOUTH CENTRAL COAST REGION

MEETING AT RECREATION CENTER (Dune & Shasta St.)
MORRO BAY

CONSENT AGENDA - SEPTEMBER 26, 1973 9:30 AM

APPLICATION 21-B

APPLICANT: Santa Barbara County Public Works Department
123 E. Anapamu Street, Santa Barbara, CA 93101

LOCATION: Canada de la Pila, approx. 26 miles westerly of
the City of Santa Barbara, in the Tajiguas area.

PROJECT: Construction of approx. 1500 LF of pipeline,
1100 LF of earth ditch and approx. 1800 LF of
earthen "V" ditch to divert surface drainage water
around the periphery of the Tajiguas landfill.

ANALYSIS:

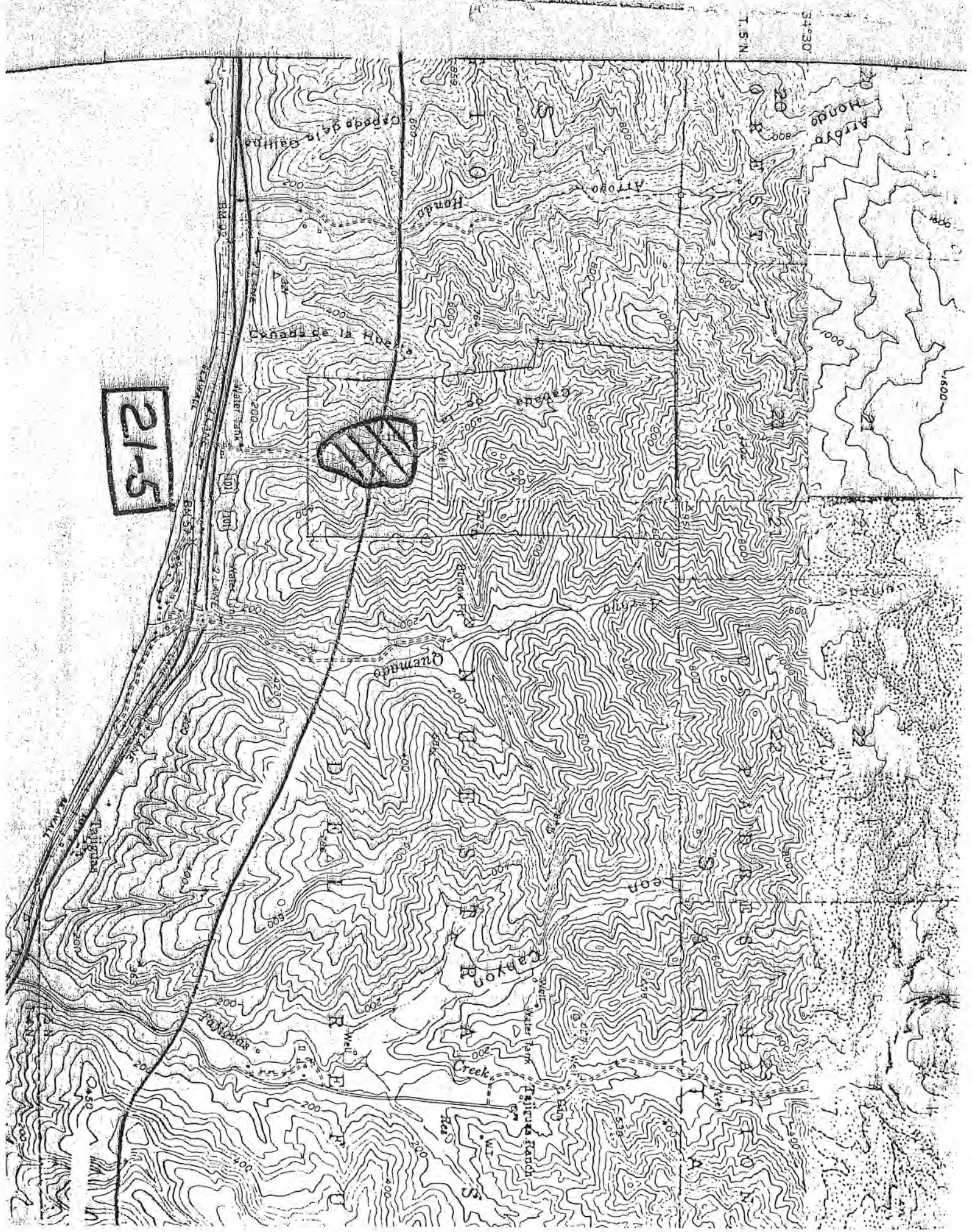
Approval of this Permit Application will allow the County to comply with the California Regional Water Quality Control Board requirement which mandates that "surface runoff and/or flood waters, except rain falling naturally on the dumping site faces, shall be prevented from passing over or percolating through the decomposable materials deposited at this site." The staff concurs with the County of Santa Barbara's assertion that "planned drainage facilities will allow surface water to bypass the landfill operation and reduce the hazard of leachate seeping from the landfill and flowing into the existing drainage course."

While the staff endorses this project, we have reservations about the broader question of whether the sanitary landfill in this particular location is a desirable use of the Coastal Zone. We suggest that any future expansion of the Tajiguas landfill be closely monitored by the Commission and that serious thought be given to alternate means and locations for the disposal of the material presently deposited at Tajiguas.

EXHIBIT 2

RECOMMENDATION: APPROVAL.

21-5



T. 5 N.
S. 4° 30'

Atorjo
Hondo

Hondo

Canada de la Hoja

Guerrero

Cerro de la Cruz

Creek

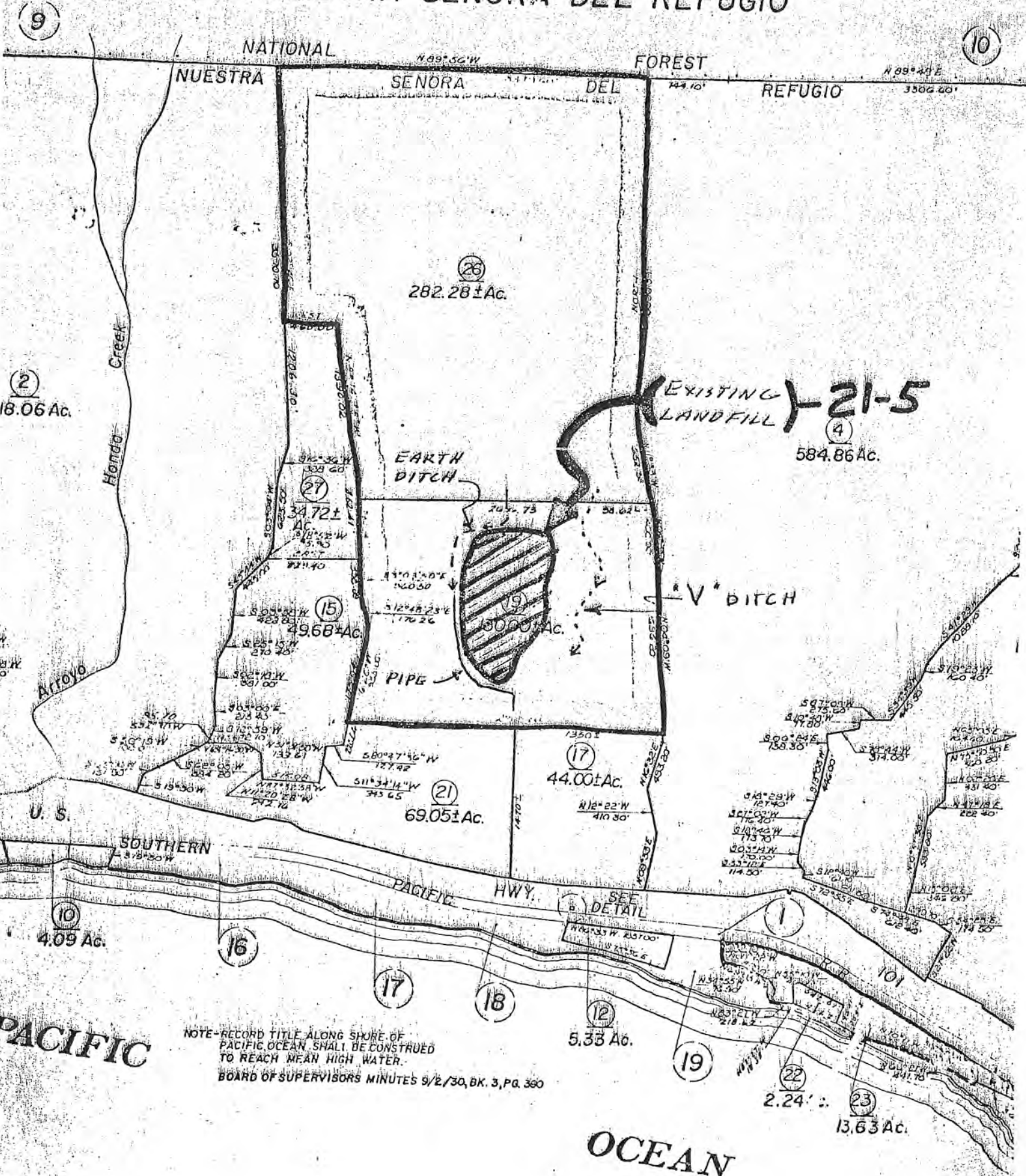
Ranch

Water Tank

Ranch

Water Tank

RANCHO NUESTRA SENORA DEL REFUGIO



(2) 18.06 Ac.

(26) 282.28 ± Ac.

(EXISTING LANDFILL) - 21-5
(4) 584.86 Ac.

(27) 34.72 ± Ac.

(15) 49.68 ± Ac.

(9) 30.00 ± Ac.

(17) 44.00 ± Ac.

(21) 69.05 ± Ac.

(10) 4.09 Ac.

(16)

(17)

(18)

(12) 5.33 Ac.

(19)

(22) 2.24 ±

(23) 13.63 Ac.

NOTE - RECORD TITLE ALONG SHORE OF PACIFIC OCEAN, SHALL BE CONSTRUED TO REACH MEAN HIGH WATER.
BOARD OF SUPERVISORS MINUTES 9/2/30, BK. 3, PG. 360

OCEAN

Assess
County

NOTE - Assessor's Block Numbers Shown in Ellipses

TAJIGUAS SANITARY LANDFILL PERMIT 42-AA-015
Original Permit Issuance Date February 10, 1978
Original SSWMB Approval Date February 10, 1978

The Solid Waste Facility Permit Review Report for this facility was prepared and submitted to the CWMB during July and August 1989. The facility was found to have a significant change since the original permit issuance date in 1978 and the change is addressed in this permit revision.

FINDINGS:

1. A) The landfill is owned by the County of Santa Barbara and operated by the Solid Waste Management Division of the County Department of Public Works. The reason for the significant change finding was because the tonnage had increased from the amount estimated in the original operating permit and an expansion in height and area is anticipated. These matters have been addressed in an environmental document.
- B) The landfill is located 23 miles west of Santa Barbara in a small coastal canyon named Canada de la Pila. The site is accessed by traveling west from Santa Barbara on Highway 101 and then north 1/4 mile along the landfill access road.

A map showing the general location of the original site in relationship to the communities of Santa Barbara, Santa Maria, Lompoc, Buellton and Los Olivos is attached as Exhibit #1. This map also shows the location of houses and other structures in the vicinity of the landfill as well as the general legal description on Assessor's Parcel Number 81-150-19 in Sections 28 and 33 T., 5 N., R., 31 W., S.B. & M.

A photo of the landfill showing the proposed expansion area and the relationship to other properties in the vicinity is attached as Exhibit #2.

A zoning map of the area is attached as Exhibit #3. A map showing the landfill access off Highway 101 is attached as Exhibit #4.

A photo of the landfill showing the entrance road, landfill gate, scale house, closed service station and the landfilled area is attached as Exhibit #5.

A photo showing the view of the landfill from the east of the closed service station is attached as Exhibit #6.

Other maps showing larger scale details of the landfill and of the expansion area are to be found in the Report of Disposal Site Information dated September 1988 and in the Engineering Report dated September 1988, both of which are on file in the offices of the LEA and of the CWMB.

The landfill area consists of two parcels. The first one currently being used for landfilling is 130 acres \pm of which about 75 acres are being used for filling and as a source of cover material. The second parcel immediately north of the landfill on Assessor's Parcel No. 81-151-19 consists of 282.28 acres \pm which is being used only as a source of borrow material at this time.

- C) The physical plant consists of a two lane paved road north of Highway 101 through a gate which is locked at night to a scale and scale house where all loads (except for those arriving in the county transfer trailers which are weighed before leaving the transfer station) are weighed and inspected by the scale house attendant. A shop building and break room for site employees is

located a few hundred feet north of the scale house. The two lane paved road proceeds up the hill in a northerly direction to the disposal area.

A monitoring well is located at the northwest area of the site above the fill and monitoring wells have been installed downstream of the fill. Landfill gas probes have been installed around the site and some leachate collecting pipes have been installed at the southern boundary of the fill area. A leachate study is under way and further leachate collection and treatment facilities may be installed in the future. Drainage has been installed along the east and west sides of the fill area and uphill drainage is diverted into these two drainage systems.

Water is available for dust control, wash down of equipment and emergency eye wash and shower.

The following equipment is provided to the site:

- 2 Caterpillar D8L Bulldozers
- 1 Caterpillar 826C Landfill Trash Compactor
- 2 Caterpillar 637 Earth Movers
- 1 Caterpillar 46A Bulldozer
- 1 Caterpillar Road Grader
- 1 Service Truck
- 1 Water Truck

- D) The site is now designated by the Regional Water Quality Control Board as a Class III landfill which can accept non-hazardous wastes which includes all putrescible and non-putrescible solid, semi-solid and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and

industrial appliances, manure, vegetable or animal solid and semi-solid wastes and other solid and semi-solid wastes; provided that such wastes do not contain wastes which must be managed as hazardous wastes or wastes which contain pollutants in concentrations which exceed water quality objectives or could cause degradation of the waters of the state (i.e., designated waste).

- E) During 1986 and 1987 after scales had been installed at the site, the waste stream was averaging 1038 to 1048 tons per day. In 1988, the waste stream was measured as high as 1168 tons per day in August.

The Engineering Report prepared in September 1988 estimated a remaining site life until 1999. However, further study is being made which might extend the design capacity estimates for many years past the early 2000's. The site has enough operating personnel and equipment to handle considerably more tonnage per operating day than is presently being disposed.

- F) Traffic enters the site through the gate and proceeds to the scale house and scale where all loads are inspected by the scale house attendant, except for those loads that arrive in the county transfer trailers which are weighed before leaving the transfer station in Santa Barbara. Traffic then proceeds up the hill to the disposal area where wastes are dumped at the toe of the area being worked. Due to the steepness and curves in the access road, a large mirror has been placed at the main turn so that the approaches are visible to those going up or down the hill. All vehicles are required to use their headlights when ascending or descending the hill to the disposal area for safety purposes.

As wastes are dumped, they are spread and compacted in a maximum of two foot lifts. After disposing of their loads, vehicle operators then proceed back down the hill to the scale house where their vehicles are weighed empty if the truck weight is not on record in the scale house. The vehicles then proceed east or west on Highway 101 toward Santa Barbara or Buellton.

- G) Resource recovery, recycling and salvaging are not conducted at this disposal facility. Any hazardous wastes, such as batteries or oil, shall be handled in a manner approved by the LEA and the CWMB. (Specific handling instructions are included in Title 22, California Code of Regulations.)
- H) Hazardous wastes are prohibited to be disposed of at this facility. A sign delineating what material is accepted and what is not accepted is posted at the entrance to the site.

Residents are alerted through the news media where to dispose of hazardous materials.

Every incoming load is inspected by the scale house attendant as waste loads come across the scale. In addition, the site operators inspect loads as they are deposited at the disposal area. The scale house attendant and the site operators have hazardous wastes that are brought to the site picked up or removed by the people bringing the wastes onto the site. The vehicle license numbers of any person bringing hazardous materials onto the site are recorded by the site attendant.

A list of names and telephone numbers of the persons and agencies to which hazardous wastes incidents are to be reported is included in Exhibit #7.

All site employees are trained by Santa Barbara County to be on the watch for any hazardous materials being brought onto the site for disposal.

The refuse inspectors assigned to the Solid Waste Management Division are available to investigate any such incidents.

- I) The only anticipated changes in design and operation of this facility during the next five years will be the elevation change and the tonnage increase and the use of the site number 2 immediately north of the existing site for cover and disposal. These changes have been addressed in an environmental document. Should it prove feasible, the possibility exists that design of the facility might be revised to allow landfilling of waste in the area between the scale house and the current landfill. If this proves feasible, the life of the site may be extended for many years. This expansion of the fill area will be addressed in a modification or revision of this permit, if proposed.
 - J) As mentioned previously, the estimated closure date for this facility is 1999, but this date is subject to many of the variables which will be determined as future design changes are made. Operating hours for the site are 7:00 a.m. to 4:00 p.m., Monday through Saturday.
2. A) The Report of Disposal Site Information dated September 1988 and the Engineering Report dated September 1988 describe the operation of this facility.

TAJIGUAS SANITARY LANDFILL PERMIT 42-AA-015
(CONTINUED)

- B) Since this is a county owned and operated facility that predates the permit regulations and adopting codes as well as most of the CEQA processes, there are no county land use permits or conditional use permits.
 - C) The Regional Water Quality Control Board, Waste Discharge Requirements (order 85-88) adopted on June 14, 1985 condition the use and operation of this facility as well as this permit by the LEA.
 - D) There are no Air Pollution Control District variances and permits in effect at this site.
 - E) An environmental Document has been prepared for this site to reflect the expansion in acreage, height and tonnage and the additional site life.
 - F) Does not apply since the owner and operator are the County of Santa Barbara.
 - G) Does not apply since the owner and operator of the site are the same.
 - H) Does not apply.
 - I) Does not apply.
 - J) There are no local county ordinances or rulings which regulate specific facility operations except for this solid waste facility permit.
- 3.
- A) This permit is consistent with the COSWMP dated May 1985.
 - B) This permit is consistent with the standards adopted by the California Waste Management Board.
 - C) An environmental document has been prepared to address the site expansion in area and height and the increase in tonnage from the original permit.

4. The design and operation of this facility is currently meeting the State Minimum Standards for Handling and Disposal as determined by inspections on August 30, October 6 and December 13, 1989, and by our review of previous inspection reports for the past several years.
5. Attached as Exhibit #8 is a statement from the local fire protection authority that the facility is in conformance with applicable fire standards as required by Government Code Section 66796.43.
6. Does not apply.
7. Does not apply.

CONDITIONS:

A. Requirements:

1. This facility must comply with State Minimum Standards for Solid Waste Handling and Disposal.
2. The facility must comply with all federal, state and local requirements and enactments, including all mitigation measures given in any certified environmental document filed pursuant to Public Resources Code, Section 21081.6.
3. Any additional information required by the LEA must be provided.
4. At the discretion of the LEA, landfill gas monitoring probes shall be installed for the detection of gas migration. If required, a gas control system shall be installed.

B. Prohibitions:

The following actions are prohibited at this site:

1. Disposal of liquid wastes except for sewage sludge as approved by the Regional Water Quality Control Board.

2. Disposal of hazardous and infectious materials.
3. Disposal of septic tank pumpings.
4. Scavenging.
5. Burning.
6. Standing water on covered fill areas.

C. Specifications:

1. Since this facility was existing, CEQA provisions are not required for its continued use or modification of the permit; however, we wish to note that an environmental review process has been requested by the LEA due to the significant change noted during the five year permit review conducted by the LEA in 1989. This review has now been completed and a copy transmitted to the CWMB office in Sacramento.
2. Any changes in design and operation from those items noted in the Findings Sections #1 and #2 of this permit would be considered a significant change and would require a permit revision.
3. This facility has a permitted capacity of 1,300 tons per operating day and shall not receive more than this amount without first obtaining a revision of the permit.
(a) Unusual occurrences such as demolition debris from an emergency situation such as fire, earthquake, act of war, act of God, etc., which temporarily cause the facility to exceed its permitted capacity or daily tonnage are permitted, provided that the LEA is notified and has agreed to the temporary situation.
4. Does not apply since this facility does not accept liquid wastes.
5. A change in the operator of this facility would require a new permit.

D. Provisions:

This permit is subject to review by the LEA and may be modified, suspended or revoked, for sufficient cause, after a hearing. Title 7.3 Government Code Section 66796.56.

E. Closure/Postclosure Maintenance:

1. The operator shall submit to the LEA copies of a plan for the closure of the landfill and a plan for the postclosure maintenance of the landfill for approval by the LEA, the Regional Water Quality Control Board and the CWMB. These plans shall be submitted not later than the first date after July 1, 1990, that the Solid Waste Facilities Permit is required to be reviewed (five year permit review) required per Government Code Section 66796.33(d) and California Administrative Code, Title 14, Section 18213. The date for this submittal will be March 31, 1994.
2. An application for the five year permit review is due from the operator to the LEA 120 days prior to the due date for the completion of the review. The closure/postclosure plans should be submitted with the application for review by March 31, 1994.
3. With the operators closure plans, evidence is to be submitted of financial ability to provide for the cost of closure and 15 years of postclosure maintenance.

F. Self-Monitoring:

1. Environmental measurements of water quality, leachate, gas, noise, dust levels, etc., shall be reported to the LEA on a quarterly basis.
2. Number of vehicles utilizing the site during the last week of each quarter shall be reported to the LEA on a quarterly basis.

3. Area of the site utilized shall be reported to the LEA on a quarterly basis. Include the location and depth of all filled areas as built.
4. Quantities and types of wastes received shall be reported to the LEA on a quarterly basis.
5. Qualities and types of goods recycled and/or salvaged shall be reported to the LEA on a quarterly basis.
6. A log of special occurrences, i.e., fires, explosions, accidents, hazardous wastes, etc., shall be maintained and reported to the LEA on a quarterly basis.
7. Results of the hazardous waste screening program shall be reported to the LEA on a quarterly basis.
8. Does not apply since this is a disposal site and not a transfer station facility.

HC:lh
SW-101

EXHIBITS

Tajiguas Sanitary Landfill Permit 42-AA-015

1. Map showing general location of the original site in relationship to the communities of Santa Barbara, Santa Maria, Buellton, Lompoc, Los Olivos and Los Alamos. This map also shows the location of houses and other structures in the general vicinity as well as a general legal description.
2. Photo of landfill showing proposed expansion area and relationship to other properties in the area.
3. Zoning map of the area.
4. Map showing landfill access off Highway 101.
5. Photo of landfill showing entrance road, landfill gate, scale house on lower center, closed service station at bottom right and filled area in upper center.
6. Photo showing view of the landfill from east of the closed service station.
7. Names and telephone numbers of refuse inspectors and other responsible persons and agencies for hazardous waste reporting.
8. Statement from fire protection authority that the facility is in conformance with applicable fire standards as required by Government Code Section 66796.43.

STIPULATED ORDER OF COMPLIANCE AND AGREEMENT
COUNTY OF SANTA BARBARA
TAJIGUAS SANITARY LANDFILL
SOLID WASTE FACILITIES PERMIT #42-AA-015
January 29, 1992

Recent State solid waste legislation has resulted in increased surveillance of solid waste disposal facilities and has revealed that a significant number of the solid waste facilities in the State of California are currently exceeding the terms and conditions of their solid waste facilities permits. State law requires that all solid waste facilities be brought into compliance with the terms of an existing or revised solid waste facilities permit. This Stipulated Order of Compliance and Agreement is an enforcement mechanism which will allow the Tajiguas Sanitary Landfill to operate in a manner which will continue to protect the public health and prevent environmental degradation while the solid waste facilities permit is being revised.

Marlene F. Demery, Director of Santa Barbara County Department of Public Works, the owner/operator of the Tajiguas Sanitary Landfill, and Gary W. Erbeck, Deputy Director for Environmental Health Services, the Local Enforcement Agency, agree to this order and the County Public Works Department will comply with the terms of this order.

The Tajiguas Sanitary Landfill, located at Highway 101, 23 miles west of the City of Santa Barbara, is alleged to be in violation of its Solid Waste Facilities Permit #42-AA-015 issued in 1978 under Division 30, Public Resources Code, Section 44004 which reads:

- (a) No operator of a solid waste facility shall make a significant change in the design or operation of any solid waste facility except in conformance with the terms and conditions in an approved solid waste facilities permit.
- (b) If the operator wishes to modify the design or operation of a solid waste facility, the operator shall file an application for revision of the existing solid waste facilities permit with the enforcement agency. The application shall be filed at least 120 days in advance of the date when the proposed modification is to take place.

CONDITIONS EXCEEDING THE TERMS AND CONDITIONS OF THE 1978 SOLID WASTE FACILITIES PERMIT 42-AA-015:

- 1) The tonnage of wastes received daily at the site exceeds the 550 tons per day specified in the 1978 Solid Waste Facilities Permit #42-AA-015. The site has accepted up to 1200 tons of waste per day. Acceptance of tonnage in excess of that specified in Solid Waste Facilities Permit #42-AA-015 represents a significant change in facility operation and is in violation of Section 18211, California Code of Regulations and Section 44004, Public Resources Code.
- 2) The acceptance of sewage sludge is expressly prohibited in the Solid Waste Facilities Permit. However, the California Regional Water Quality Control Board, Central Coast Region, has allowed the operator to accept sewage sludge and the landfill is currently accepting sewage sludge. Until such time as approval for the acceptance of sludge is obtained from the California Integrated Waste Management Board and the Local Enforcement Agency and Solid Waste Facilities Permit #42-AA-015 is revised to reflect this approval, the acceptance of sludge at this facility is in violation of Sections 18211 and 17743 of the California Code of Regulations and Section 44004 of the Public Resources Code.
- 3) The maximum height of this facility, as specified in Solid Waste Facilities Permit #42-AA-015, is 400 feet. The operator is currently exceeding this elevation by up to 20 feet. Exceeding the terms and conditions of the Solid Waste Facilities Permit is a violation of Section 18211, California Code of Regulations and Section 44004, Public Resources Code.

TERMS AND CONDITIONS

- 1) During the effective period of this document, a maximum of 1200 tons of waste per day may be accepted.
- 2) Sewage sludge accepted for disposal at the site must meet the current Waste Discharge Requirements as approved in writing by the California Regional Water Quality Control Board, Central Coast Region.
- 3) The height of the landfill shall not exceed 420 feet.
- 4) Until a revised Solid Waste Facilities Permit is issued, no further increase in tonnage or implementation of new activities not expressly stated in the Solid Waste Facilities Permit #42-AA-015 or this document may occur.

- 5) This agreement may be amended at any time by mutual written agreement of the enforcement agency and the operator. The operator shall file an application with the Local Enforcement Agency for an amendment of this agreement.

SPECIFIED ACTION

An order is hereby issued to prepare the following documents:

- 1) File a California Environmental Quality Act document acceptable to all applicable enforcement agencies (Local Enforcement Agency, California Regional Water Quality Control Board, California Integrated Waste Management Board). This document must address all significant changes to the design and operation of the landfill.
- 2) File a complete application for a revised Solid Waste Facilities Permit.
- 3) File a revised Report of Disposal Site Information to accurately reflect the design and operation of the facility, including any changes projected within the next five years.
- 4) Obtain a revised Solid Waste Facilities Permit from the California Integrated Waste Management Board on or before August 1, 1992.


AGREEMENT AND REMEDIES

- A) The undersigned hereby agree that the operations of the Tajiguas Sanitary Landfill between this date and the date of the revised permit approval shall be governed by the foregoing terms and conditions.
- B) This order will become effective immediately upon execution by the Owner/Operator of Tajiguas Sanitary Landfill (Santa Barbara County Public Works) and the Local Enforcement Agency (Santa Barbara County Environmental Health Services) and will remain in effect up to and terminate on the date a revised Solid Waste Facilities Permit is issued or until August 1, 1992, whichever occurs first.
- C) If the Owner/Operator, the Santa Barbara County Department of Public Works, in any way, violates the terms and conditions contained herein, the Owner/Operator agrees to be bound by the following:

1. After service by mail or personal delivery of a written notification from the Local Enforcement Agency of a specific violation or violations, the operator shall have 72 hours to correct the violation or violations to the satisfaction of the Local Enforcement Agency and if proper corrections are made, the landfill shall be considered in compliance.
2. Violation or failure to comply with this Stipulated Order of Compliance and Agreement will require the County of Santa Barbara to immediately return to operating within the terms and conditions of the existing Solid Waste Facilities Permit #42-AA-015. Failure to return to the conditions of Solid Waste Facilities Permit #42-AA-015 could result in civil penalties as cited in Section 45200, Public Resources Code and/or suspension or revocation of the Solid Waste Facilities Permit as per Section 44500, Public Resources Code, and any other enforcement action authorized by the Act.
3. This agreement may be amended at any time by mutual written agreement of the enforcement agency and the operator. The operator shall file an application with the Local Enforcement Agency for an amendment of this agreement.


OWNER/OPERATOR

DATE February 4, 196


MARLENE F. DEMERY
DIRECTOR OF PUBLIC WORKS
COUNTY OF SANTA BARBARA
OWNER/OPERATOR
TAJIGUAS SANITARY LANDFILL

LOCAL ENFORCEMENT AGENCY

DATE 2/4/82


GARY W. ERBECK
DEPUTY DIRECTOR FOR
LOCAL ENFORCEMENT AGENCY
ENVIRONMENTAL HEALTH SERVICES
COUNTY OF SANTA BARBARA

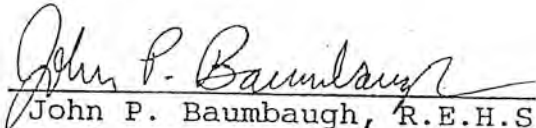
DECLARATION

I, John P. Baumbaugh, declare under penalty of perjury that the following is true and correct:

1. I am duly employed as a Senior Environmental Health Specialist, Solid Waste Management Section, Santa Barbara County Division of Environmental Health.
2. The allegations of the foregoing Stipulated Order of Compliance and Agreement are known to me, and to my personal knowledge to be correct. This knowledge was obtained by:
 - a. Site inspection made by me on December 30, 1991.
 - b. A review of records on file at the Division of Environmental Health Services.

Executed at Santa Barbara County Environmental Health Services,
5540 Ekwill Street, Suite B, Santa Barbara, CA 93111.

DATE: January 28, 1992


John P. Baumbaugh, R.E.H.S.
Senior Environmental Health Specialist
Santa Barbara County
Environmental Health Services

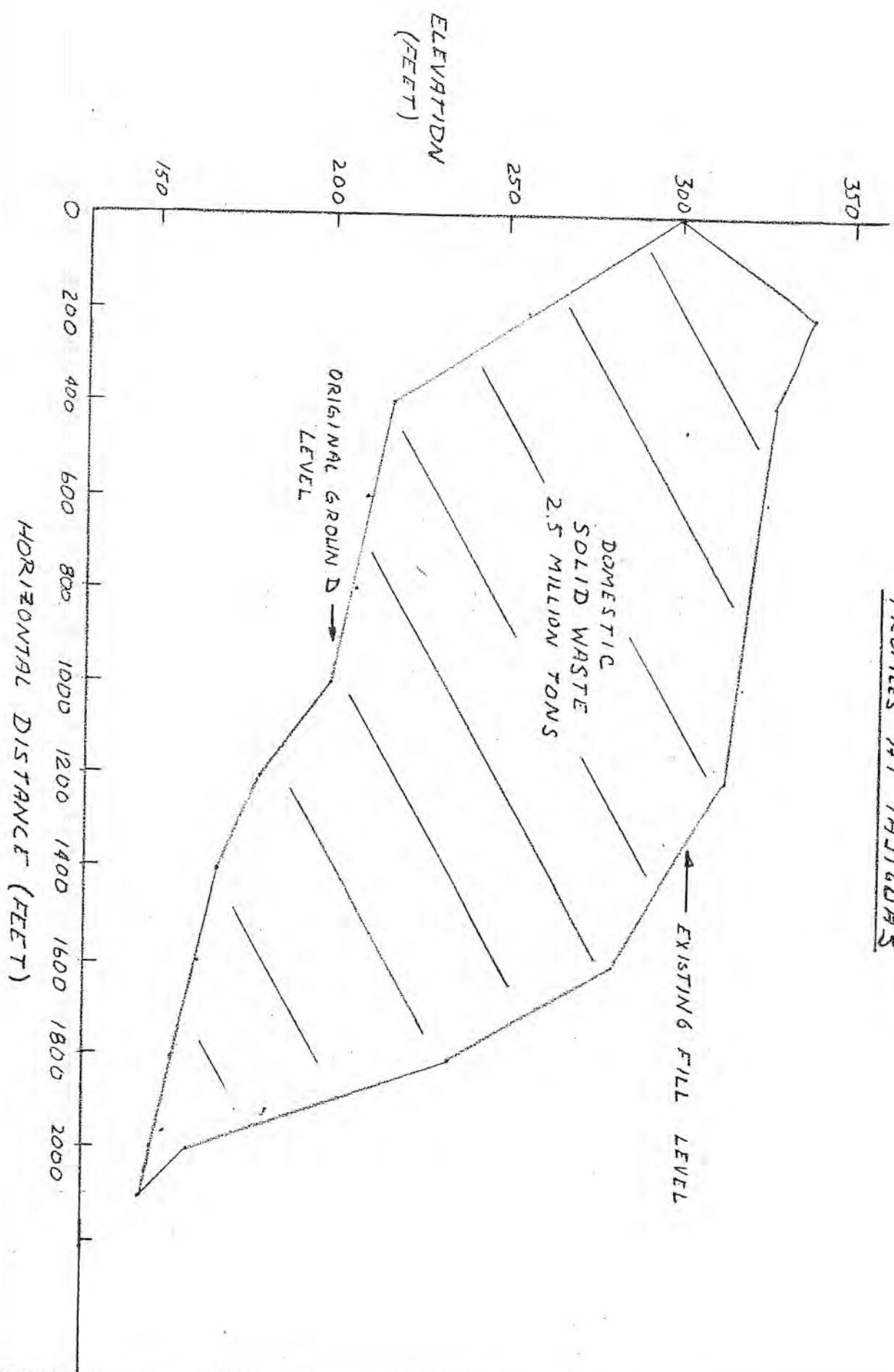
TOTAL TONNAGE IN TAJIGUAS LANDFILL

<u>FY YEAR</u>	<u>TONNAGE</u>	
67 - 68	126,000	
68 - 69	133,000	259,000
69 - 70	136,800	395,800
70 - 71	140,100	535,900
71 - 72	158,688	694,588
72 - 73	166,953	861,541
73 - 74	170,431	1,031,972
74 - 75	176,096	1,208,068
75 - 76	177,363	1,385,431
76 - 77	190,896	1,576,327
77 - 78	193,501	1,769,828
78 - 79	222,721	1,992,549
79 - 80	222,168	2,214,717

1982

2,500,000

EXISTING AND ORIGINAL
PROFILES AT TAJIQUAS



----- EXISTING PROFILE
 _____ ORIGINAL PROFILE

SCALE: HORIZONTAL 50:1
 VERTICAL 40:1

BY: DKL DATE: 8/81 SUBJECT: _____
 CHKD. BY: _____ DATE: _____
 SHEET NO. _____ OF _____
 JOB NO. _____

CALIFORNIA WASTE MANAGEMENT BOARD

1020 NINTH STREET, SUITE 300
SACRAMENTO, CALIFORNIA 95814



RECEIVED

MAY 20 1983

S. D. COHEN
RESOURCE MGT. DEPT.

May 18, 1983

Mr. Wilson Hubbell, Senior Planner
Santa Barbara County Resource
Management Department
123 East Anapamu St.
Santa Barbara, CA 93101

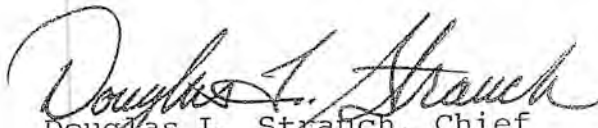
Dear Mr. Hubbell:

This letter is in response to your question posed to my staff member Christal Waters: "Does Santa Barbara County have to pursue an amendment to the existing permit at Tajiguas in order to use the additional property?"

The permit will need to be revised, but a new facility permit will not be required. Our review of the existing permit on Tajiguas Landfill indicates that the permit mentions the full 412 acres (130 plus the 282 additional acres). This facility was issued a "grandfathered" permit, as it existed prior to the enactment of the Kapiloff Solid Waste Control Act in 1972. The Report of Disposal Site Information in the permit will need to be changed to show the design and operation of the landfill on the additional acreage. Our staff counsel has reviewed your question and concurs with this determination.

If you have any further questions on this matter, please contact me at (916) 322-6172.

Sincerely,


Douglas L. Strauch, Chief
Waste Management Division

CWaters:cp

STIPULATED ORDER OF COMPLIANCE AND AGREEMENT
COUNTY OF SANTA BARBARA
TAJIGUAS SANITARY LANDFILL
SOLID WASTE FACILITIES PERMIT #42-AA-015
September 8, 1992

Recent State solid waste legislation has resulted in increased surveillance of solid waste disposal facilities and has revealed that a significant number of the solid waste facilities in the State of California are currently exceeding the terms and conditions of their solid waste facilities permits. State law requires that all solid waste facilities be brought into compliance with the terms of an existing or revised solid waste facilities permit. This Stipulated Order of Compliance and Agreement is an enforcement mechanism which will allow the Tajiguas Sanitary Landfill to operate in a manner which will continue to protect the public health and prevent environmental degradation while the solid waste facilities permit is being revised.

Marlene F. Demery, Director of Santa Barbara County Department of Public Works, the Owner/Operator of the Tajiguas Sanitary Landfill and Gary W. Erbeck Director for Environmental Health Services, the Local Enforcement Agency, agree to this order and the County Public Works Department will comply with the terms of this order.

The Tajiguas Sanitary Landfill located at Highway 101, 33 miles west of the City of Santa Barbara is alleged to be in violation of its Solid Waste Facilities Permit #42-AA-015 issued in 1978 under Division 30, Public Resources Code, Section 44004 which reads:

- (a) No operator of a solid waste facility shall make a significant change in the design or operation of any solid waste facility except in conformance with the terms and conditions in an approved solid waste facilities permit.
- (b) If the operator wishes to modify the design or operation of a solid waste facility, the operator shall file an application for revision of the existing solid waste facilities permit with the enforcement agency. The application shall be filed at least 120 days in advance of the date when the proposed modification is to take place.

CONDITIONS EXCEEDING THE TERMS AND CONDITIONS
OF THE 1978 SOLID WASTE FACILITIES PERMIT 42-AA-015:

- 1) The tonnage of wastes received daily at the site exceeds the 550 tons per day specified in the 1978 Solid Waste Facilities Permit #42-AA-015. The site has accepted up to 1200 tons of waste per day. Acceptance of tonnage in excess of that specified in Solid Waste Facilities Permit 42-AA-015 represents a significant change in facility operation and is in violation of Section 18211, California Code of Regulations and Section 44004 Public Resources Code.
- 2) The acceptance of sewage sludge is expressly prohibited in the Solid Waste Facilities Permit. However, the California Regional Water Quality Control Board, Central Coast Region, has allowed the operator to accept sewage sludge and the landfill is currently accepting sewage sludge. Until such time as approval for the acceptance of sludge is obtained from the California Integrated Waste Management Board and the Local Enforcement Agency and Solid Waste Facilities Permit #42-AA-015 is revised to reflect this approval, the acceptance of sludge at this facility is in violation of Sections 18211 and 17743 of the California Code of Regulations and Section 44004 of the Public Resources Code.
- 3) The maximum height of this facility, as specified in Solid Waste Facilities Permit #42-AA-015, is 400 feet. The operator is currently exceeding this elevation by up to 20 feet. Exceeding the terms and conditions of the Solid Waste Facilities Permit is a violation of Section 18211, California Code of Regulations and Section 44004, Public Resources Code.

TERMS AND CONDITIONS

- 1) During the effective period of this document, a maximum of 1200 tons of waste per day may be accepted.
- 2) Sewage sludge accepted for disposal at the site must meet the current Waste Discharge Requirements as approved in writing by the California Regional Water Quality Control Board, Central Coast Region.
- 3) The height of the landfill shall not exceed 435 feet.

STIPULATED ORDER OF COMPLIANCE AND AGREEMENT
COUNTY OF SANTA BARBARA
TAJIGUAS SANITARY LANDFILL
SOLID WASTE FACILITIES PERMIT #42-AA-015
September 8, 1992

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- (b) If the operator wishes to modify the design or operation of a solid waste facility, the operator shall file an application for revision of the existing solid waste facilities permit with the enforcement agency. The application shall be filed at least 120 days in advance of the date when the proposed modification is to take place.

- 4) Until a revised Solid Waste Facilities Permit is issued no further increase in tonnage or implementation of new activities not expressly stated in the Solid Waste Facilities Permit #42-AA-015 or this document may occur.
- 5) This agreement may be amended at any time by mutual written agreement of the enforcement agency and the operator. The operator shall file an application with the Local Enforcement Agency for an amendment of this agreement.

SPECIFIED ACTION

An order is hereby issued to prepare the following documents:

- 1) File a complete application for a revised Solid Waste Facilities Permit.
- 2) File a revised Report of Disposal Site Information to accurately reflect the design and operation of the facility, including any changes projected within the next five years.
- 3) Obtain a revised Solid Waste Facilities Permit from the California Integrated Waste Management Board on or before February 1, 1993.

AGREEMENTS AND REMEDIES

- A. The undersigned hereby agrees that the operations of the Tajiguas Sanitary Landfill between this date and the date of the revised permit approval shall be governed by the foregoing terms and conditions.
- B. This order will become effective immediately upon execution by the Owner/Operator of the Tajiguas Sanitary Landfill (Santa Barbara County Public Works) and the Local Enforcement Agency (Santa Barbara County Environmental Health Services Department, and will remain in effect up to and terminate on the date a revised Solid Waste Facilities Permit is issued or until February 1, 1993, whichever occurs first.
- C. If the Owner/Operator, the Santa Barbara County Department of Public Works, in any way violates the terms and conditions contained herein, the Owner/Operator agrees to be bound by the following:

1. After service by mail or personal delivery of a written notification from the Local Enforcement Agency of a specific violation or violations, the operator shall have 72 hours to correct the violation or violations to the satisfaction of the Local Enforcement Agency and if proper corrections are made to the satisfaction of the Local Enforcement Agency the facility shall be considered in compliance.
2. Violation or failure to comply with this Stipulated Order of Compliance and Agreement will require the County of Santa Barbara to immediately return to operating within the terms and conditions of the 1978 Solid Waste Facilities Permit #42-AA-015. Failure to return to the conditions listed in the 1978 Solid Waste Facilities Permit #42-AA-015 may result in civil penalties imposed on the operator pursuant to Section 45200, Public Resources Code and/or suspension or revocation of the Solid Waste Facilities Permit per Section 44500, Public Resources Code, and any other enforcement action authorized by the Act.
3. This agreement may be amended at any time by mutual written agreement of the Local Enforcement Agency and the Owner/Operator. The operator shall file an application with the Local Enforcement Agency for an amendment of this agreement.

OWNER/OPERATOR

DATE Sept 10, 1992



MARLENE F. DEMERY
DIRECTOR OF PUBLIC WORKS
COUNTY OF SANTA BARBARA
OWNER/OPERATOR
SANTA BARBARA COUNTY TRANSFER STATION

LOCAL ENFORCEMENT AGENCY

DATE 9/15/92



GARY W. ERBECK
DIRECTOR FOR
LOCAL ENFORCEMENT AGENCY
ENVIRONMENTAL HEALTH SERVICES DEPARTMENT
COUNTY OF SANTA BARBARA
SW-136

DECLARATION

I, David Brummond, declare under penalty of perjury that the following is true and correct:

1. I am duly employed as a Senior Environmental Health Specialist, Solid Waste Management Section, Santa Barbara County Department of Environmental Health.
2. The allegations of the foregoing Stipulated Order of Compliance and Agreement are known to me, and to my personal knowledge to be correct. This knowledge was obtained by:
 - a. Site inspection made by me on July 27, 1992
 - b. A review of records on file at the Department of Environmental Health Services.

Executed at Santa Barbara County Environmental Health Services, Department, 120 Cremona Drive, Suite C, Santa Barbara, CA 93111.

DATE: Sept 9, 1992

David Brummond

David Brummond
Sr. Environmental Health Specialist
Santa Barbara County
Environmental Health Services Dept.

FACSIMILE TRANSMITTAL COVER SHEET

Date: *Aug 6, 2002*

Number of Pages : *6*
(Including Cover Sheet)

To: *Diane Meester*
~~*Sharon Brea*~~

Agency/Firm:

Phone Number:
FAX 568-2030

From: *Shana Gray*
CALIFORNIA COASTAL COMMISSION
South Central Coastal District Office
89 S. California Street
Ventura, CA 93001
(805) 585-1800

COMMENTS:

RECEIVED
AUG 06 2002
S.B. COUNTY
PLANNING & DEVELOPMENT

CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA
69 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
(805) 585-1800



August 6, 2002

Diane Meester
Planning and Development
County of Santa Barbara
123 East Anapamu Street
Santa Barbara, CA 93101-2058

RE: Tajiguas Landfill Expansion Project

Dear Ms. Meester,

We have reviewed the general project description of the Tajiguas Landfill Expansion Consistency Determination in the draft County staff report dated May 7, 2002 and the updated project description in the Memorandum dated August 1, 2002. We have also reviewed the draft EIR (October 2001) and contacted County staff to determine the extent of the expansion and the portion of the project within the coastal zone. From the information we have obtained, it appears that a portion of the project would be located within the coastal zone, specifically a portion of the West Slope Borrow Area. County staff indicated that grading calculations and grading extent were not broken out specifically for the coastal zone portion of the project. The EIR prepared for this project indicates that the West Slope Borrow Area (Table 2-5, page 2-41 of the EIR) would be excavated for a possible total of 600,000 cubic yards of soil to be used as landfill cover. Since there was no separate calculation of which portion which would be excavated in the coastal zone, Commission staff consulted the EIR and aerial photos showing the borrow site. It appears that approximately half of the West Slope Borrow Area may be located within the coastal zone.

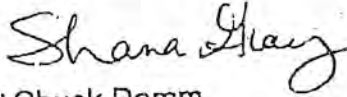
County staff has asserted that the use of the borrow site and potentially other improvements within the coastal zone do not require coastal development permits because the improvements are an entitlement vested by reliance on 1965 County approvals and as further defined in the 1978 Solid Waste Facilities Permit. Commission staff has reviewed some preliminary materials regarding the original approvals; however, the extent of the vested right is unclear. Under Public Resources Code Section 30608, a coastal development permit is required for a "substantial change" to vested development. In cases of uncertainty regarding the extent of vested rights, such as this, the Coastal Commission regulations provide a process for filing a "claim of vested rights" that will be heard by the Coastal Commission. Title 14 California Code of Regulations Sections 13200-13208 provide details regarding the proceedings for vested rights claims.

It is the Commission staff's position that the County needs to pursue formal action by the Commission through a vested rights application. We are providing an application with this letter. We welcome further discussion regarding this issue and the overall

August 6, 2002
Page 2

Tajiguas project. Please do not hesitate to contact me or Shana Gray should you have any questions or concerns.

Sincerely,



For: Chuck Damm
Senior Deputy Director

RECEIVED

AUG 06 2002

S.B. COUNTY
PLANNING & DEVELOPMENT

CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA
VENTURA CA 93001
(805) 641-0142



CLAIM OF VESTED RIGHTS

NOTE: Documentation of the information requested, such as permits, receipts, buildings department inspection reports, and photographs, must be attached.

1. Name of claimant, address, and telephone number:
(Please include zip code & area code):

2. Name, address and telephone number of claimant's representative, if any:
(Please include zip code & area code):

3. Describe the development claimed to be exempt and its location. Include all incidental improvements such as utilities, road, etc. Attach a site plan, development plan, grading plan, and construction or architectural plans.

4. California Environmental Quality Act/Project Status.

Check one of the following:

a. Categorically exempt _____, Class: _____, Item: _____.

Describe exempted status and date granted: _____

b. Date Negative Declaration Status granted: _____

c. Date Environmental Impact Report approved: _____

Attach environmental impact report or negative declaration.

FOR COASTAL COMMISSION USE:

Claim Number: _____

Date Submitted _____

Date Filed _____

5. List all governmental approvals which have been obtained (including those from federal agencies) and list the date of each final approval. Attach copies of all approvals.

6. List any governmental approvals which have not yet been obtained and anticipated date of approval.

7. List any conditions to which the approvals are subject and date on which the conditions were satisfied or are expected to be satisfied.

8. Specify, on additional pages, nature and extent of work in progress or completed, including (a) date of each portion commenced (i.e., grading, foundation work, structural work, etc.); (b) governmental approval pursuant to which portion was commenced; (c) portions completed and date on which completed; (d) status of each portion on January 1, 1972 and/or January 1, 1977 (e) status of each portion on date of claim; (f) amounts of money expended on portions of work completed or in progress (itemize dates and amounts of expenditures; do not include expenses incurred in securing any necessary governmental approvals).

9. Describe those portions of development remaining to be constructed.

10. List the amount and nature of any liabilities incurred that are not covered above and dates incurred. List any remaining liabilities to be incurred and dates when these are anticipated to be incurred.

11. State the expected total cost of the development, excluding expenses incurred in securing any necessary governmental expenses.

12. Is the development planned as a series of phases or segments? If so, explain.

13. When is it anticipated that the total development would be completed?

14. Authorization of Agent.

I hereby authorize _____ to act as my representative and bind me in all matters concerning this application.

Signature of Claimant

15. I hereby certify that to the best of my knowledge the information in this application and all attached exhibits is full, complete, and correct, and I understand that any misstatement or omission, of the requested information or of any information subsequently requested, shall be grounds for denying the exemption or suspending, or revoking any exemption allowed on the basis of these or subsequent representations, or for the seeking of such other and further relief as may seem proper to the Commission.

Signature of Claimant(s) or Agent

SOUTH CENTRAL COAST
REGIONAL COASTAL COMMISSION

APPLICATION FOR PERMIT

SECTION I: APPLICANT

1. Name, address, and telephone number of applicant:

Santa Barbara County Public Works Dept.

123 E. Anapamu St., Santa Barbara, CA 93101 (805) 966-1611
(zip code) (area code)

2. Name, address and telephone number of applicant's representative, if any:

Norman Caldwell - Director of Public Works, Roy Baldner - Eng. & Const.

Div., Wendell Nichols - Development Division ()
(zip code) (area code)

SECTION II: SUMMARY OF WORK PROPOSED AND PROJECT LOCATION

3. Brief (one or two sentence) description of work proposed:

Construction of drainage facilities to protect existing landfill from surface infiltration from winter rains.

4. Brief description of project location (city or county, nearest roads, etc.):

Tajiguas Landfill - approximately 25 miles westerly of the City of Santa Barbara.

SOUTH CENTRAL COAST
REGIONAL COASTAL COMMISSION
Permit Application # 21-5
Date: 8/30/73

RECEIPT OF APPLICATION
FOR PERMIT

THE SOUTH COAST REGIONAL COASTAL COMMISSION is in receipt of your application(s) for Coastal Permit for your project and of your fee paid in the amount of

Please save this as your receipt and as record of your application number.

{ Pamela Emerson
Dave Loomis

965-65 EXHIBIT 5

5. Describe (a) designations of the property shown on any applicable city or county general plans, and (b) the present zoning of the property. Explain whether the proposed project is consistent with local plans and zoning.

General Plan designation - Open & Grazing

Present zoning - "U" (Unlimited Agriculture)

Proposed - "Waste Disposal Facility" overlay

6. Attach to this application a U.S. Geological Survey 7½-minute quadrangle map and a detailed plat map (available from title insurance companies). On maps specify your project in relation to nearby areas, and as appropriate, to the line of mean high tide, the inland boundary of the permit area, any nearby beaches, any nearby public recreational areas, any nearby marshes, and any other major features of the natural topography or any major buildings, and precisely what development is proposed.
7. Does the proposed development consist only of a repair or improvement to an existing structure at a cost not in excess of \$25,000? If so, please explain briefly and indicate how the cost of the repair or improvement was computed:

No

8. If not a repair or improvement to an existing structure, is the cost of the proposed development less than \$10,000? If so, please explain briefly and indicate how the cost of the development was computed:

No

9. The parcel(s) of property on which the work is proposed are Assessor's Parcel(s) number 81-150-19 & 81-150-26

10. List the name and address of each owner of property adjacent to the site of the proposed development:

SEE ATTACHED LIST

(Please include a stamped, addressed envelope for each person. (See front page, paragraph 5.)

10. 81-150-02 Edith C. Field
c/o J. James Hollister
125 E. Victoria St.
Santa Barbara, CA 93101

81-150-04 Marie A. Baron
c/o Edward Meyer Exec.
1426 School House Rd.
Santa Barbara, CA 93108

81-150-15 Shell Oil Company
1008 W. 6th St.
Los Angeles, CA 90054

81-150-17 Terra Firma Associates
3700 State St. 301
Santa Barbara, CA 93105

81-150-21 Rancho Costa Linda
3700 State St. 301
Santa Barbara, CA 93105

81-150-27 Rancho Costa Linda
3700 State St. 301
Santa Barbara, CA 93105

81-090-08 Edith C. Field
c/o J. James Hollister
P. O. Box 630
Santa Barbara, CA 93102

81-090-10 U.S.A.

SECTION III: DETAILED DESCRIPTION OF PROPOSED WORK

11. Does the development involve dredging, filling, or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon? If so, please explain.

No

12. Would the development reduce the size of any beach or other area usable for public recreation? If so, please explain.

No

13. Would the development reduce or impose restrictions upon public access to tidal and submerged lands, beaches or the line of mean high tide where there is no beach? If so, please explain.

No

14. Would the development substantially interfere with or detract from the line of sight toward the sea from the state highway nearest the coast? If so, please explain.

No

15. Would the development have the potential for adversely affecting water quality, existing areas of open water free of visible structures, existing and potential commercial and sport fisheries, or agricultural uses of land which are existing on November 8, 1972? If so, please explain.

No, the project is to protect water quality and the beach.

16. Would the project increase access to publicly-owned or publicly-used beaches, to recreation areas, or to natural reserves? Please explain.

No

17. Would the development affect any area that could be used for public recreation or as a wildlife preserve? Would the development affect any area of historic or archeological importance? Please explain.

Yes, the existing landfill is being designed for a future park or other appropriate recreational use.

18. What provisions have been made in the project for treatment of solid and liquid wastes, and for their disposition and management, so that adverse effects upon coastal zone resources will be minimized?

See the attached operational discharge requirement permit from Calif. Regional Water Quality Control Board plus additional reports and maps.

19. Describe any provisions in the project to ensure that alterations to existing land forms and vegetation, and construction of structures, will cause minimum adverse effect to scenic resources and minimum danger of floods, landslides, erosion, siltation, or failure in the event of earthquake.

The proposed drainage ditches and pipeline will reduce erosion and control flooding. Existing low earth dams are on the site to capture silt. Seismic forces will have little affect on the flexible corrugated pipeline.

SECTION IV: OTHER PERMITS OR APPROVALS NEEDED

20. List all permits, permissions, or approvals required from public agencies for this project, and indicate whether these permits, permissions, or approvals have been (a) applied for and (b) granted. ("Public agencies" includes cities, counties, regional agencies, redevelopment agencies, etc., and also includes the State Lands Commission, the Army Corps of Engineers, and the appropriate Regional Water Quality Control Board.)

Approval by the Santa Barbara County Board of Supervisors (See attached minutes) - Recommendation of Project from the Regional Water Quality Control Board (attached).

SECTION V: PROJECT'S CONSISTENCY WITH THE CALIFORNIA COASTAL ZONE CONSERVATION ACT OF 1972

21. The California Coastal Zone Conservation Act of 1972 states, in Section 27402, that no permit shall be issued unless the regional commission has first found both of the following:
- (a) That the development will not have any substantial adverse environmental or ecological effect, and
 - (b) That the development is consistent with the following findings, declarations, and objectives:
 - (1) "The California coastal zone is a distinct and valuable natural resource belonging to all the people and existing as a delicately balanced eco-system; ...the permanent protection of the remaining natural and scenic resources of the coastal zone is a paramount concern to present and future residents of the state and nation; ...in order to promote the public safety, health and welfare, and to protect public and private property, wildlife, marine fisheries, and other ocean resources, and the natural environment, it is necessary to preserve the ecological balance of the coastal zone and prevent its further deterioration and destruction; ...it is the policy of the state to preserve, protect, and, where possible, to restore the resources of the coastal zone for the enjoyment of the current and succeeding generations...."
 - (2) "(a) The maintenance, restoration, and enhancement of the overall quality of the coastal zone environment, including, but not limited to, its amenities and aesthetic values.

- "(b) The continued existence of optimum populations of all species of living organisms.
- "(c) The orderly, balanced utilization and preservation, consistent with sound conservation principles, of all living and nonliving coastal zone resources.
- "(d) The avoidance of irreversible and irretrievable commitments of coastal zone resources."

Please explain whether the project is consistent with these requirements of law. Use additional paper if necessary.

SECTION VI: ENVIRONMENTAL IMPACT STATEMENT

22. Has an environmental impact statement been prepared for the project? If so, attach a copy to this application. If not, please so indicate.

Yes. See attached Negative Declaration.

SECTION VII: ADDITIONAL INFORMATION REGARDING PROPOSED WORK

If you feel you would like to provide more information in order to describe your proposed development in greater detail, please do so and attach it to this application and title it accordingly.

23. Attach to this application sufficient documentation to show applicant's interest in the property (such as copies of deed, title report, parcel map, etc.) and any easements or other restrictions affecting the property.

Wendell J. Nichols

SIGNATURE OF APPLICANT OR AGENT



County of Santa Barbara Planning and Development

John Patton, Director

August 16, 1999

Phillip Demery, Director
County Public Works Department
123 E. Anapamu Street
Santa Barbara, CA 93101

Re: **Tajiguas Landfill Bench Plan: Review of local permit requirements**
APNs 081-150-019 and -026

Dear Mr. Demery:

This letter is provided to document our review of the proposed bench plan at the Tajiguas Landfill with regard to local permit requirements. As the bench plan involves earth moving inside and outside the Coastal Zone, both Coastal and non-Coastal permit issues are addressed.

Bench Plan Description

The proposed Tajiguas Landfill Bench Plan involves a reconfiguration of the existing graded slopes and benches which form the north, south and west faces of the landfill. This work would serve to provide air space for refuse disposal, prepare the landfill for final closure and facilitate ongoing drainage and erosion control improvements. In addition, approximately 500,000 cubic yards of air space now filled with soil would be recovered for refuse disposal. The proposed plan would increase the volume of the landfill from the current 12.6 million cubic yards (as depicted in the current landfill plan included in the 1995 Solid Waste Facilities Permit), to approximately 15.1 million cubic yards. The plan would result in modifying the current minimum 3:1 gradient benched landfill slopes (the existing slopes range from 3:1 to 2:1 in gradient) to 2:1 gradient benched slopes. Under the proposed plan, the benches would be 15 feet in width (rather than the current 25-foot width) and would continue to be installed approximately every 40 feet of vertical landfill height. The plan includes revegetation with native plant species of a 0.10 acre area located outside of the area of waste disposal which would be disturbed by incidental grading.

The Bench Plan involves areas in the Coastal Zone below 400 feet in elevation and areas outside the Coastal Zone below 500 feet in elevation. Refer to the attached detailed description of the Bench Plan prepared by the Public Works Department.

EXHIBIT 6

Local Land Use Permit Requirements

Outside of the Coastal Zone

The portion of the Tajiguas Landfill located outside of the Coastal Zone is not subject to the requirement of a local land use permit pursuant to Section 35-201.2 of the County of Santa Barbara Article III Zoning Ordinance. This section specifically exempts "development by the County of Santa Barbara or any district of which the Board of Supervisors is the governing body" from the permit requirements of the zoning ordinance.

Inside the Coastal Zone

The Bench Plan is not subject to the permit requirements of the Article II Coastal Zoning Ordinance as the Bench Plan is within the scope of the existing historic landfill facility.

The Tajiguas Landfill was installed and began operating in 1966, prior to the enactment of the Coastal Act, the passage of the California Environmental Quality Act and the onset of State regulation of landfills through the Solid Waste Management Act. Therefore, the only potentially applicable regulation was the County of Santa Barbara Zoning Ordinance #661. The Tajiguas Landfill, a County public works facility, was not subject to a County permit requirement because Ordinance #661 specifically states that it is not applicable to "*the County of Santa Barbara or any district of which the Board of Supervisors is the governing body.*" Thus, the landfill became a legal facility with no established limits of operation within the boundaries of the original landfill property (APN 081-150-019). In 1978, the landfill received a Solid Waste Facilities Permit (SWFP) from the State of California. The 1978 SWFP imposed a 400-foot elevation limit on the landfill but otherwise did not affect the permit status of the facility. Landfill activity within the parcel and below 400 feet in elevation was (and is) a continuation of the historic operation of the original landfill. This landfill activity is not subject to Coastal Zone permit requirements. The 1988 SWFP expanded the height limit to 500 feet throughout the landfill, including the coastal zone. However, no Coastal Development Permit to allow the increase in height within the coastal zone portion of the landfill has been issued.

In the Coastal Zone, the Bench Plan involves landfill activity below 400 feet in elevation. As discussed above, this work is considered to be a continuation of the historic operation of the original landfill. This activity does not constitute a new project that would trigger Coastal Zone permit requirements. Thus, no new permits are required for the implementation of the Bench Plan.

Development of a new landfill or the expansion of an existing landfill (i.e. expansion above 400 feet in elevation) would be subject to the permit requirements specified in the Article II Coastal Zoning Ordinance. Given the current agricultural zoning of the subject property (APN 081-150-019), such a proposal would require a Coastal Land Use Plan amendment, a zone district change, a Development Plan and a Coastal Development Permit.

Phillip Demery
August 16, 1999
Page 3

Based on the above discussion, Planning and Development has determined that no new Coastal Development or Land Use Permits are required for the implementation of the Bench Plan.

I hope that this letter clarifies the Coastal Zone and non-Coastal permit status of the Tajiguas Landfill as it pertains to the proposed Bench Plan. If you have any questions, please call me at (805) 568-2000 or Brian Baca at (805) 568-2004.

Sincerely,



John Patton
Director

Attachment: Bench Plan description dated August 13, 1999

cc: Mark Schleich, Public Works Dept.
Brian R. Baca, P&D
Albert McCurdy, P&D
Imelda Cragin, Public Works Dept.
Lisa Sloan, EHS

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County of Santa Barbara Planning and Development

John Patton, Director

November 29, 2000

Roger Briggs
Regional Water Quality Control Board
Central Coast Region
81 Higuera Street, Suite 200
San Luis Obispo, CA 93401 - 5427

Re: Tajiguas Landfill Sedimentation Basin

Dear Mr. Briggs:

This letter is provided to document our review of the proposed sedimentation basin at the Tajiguas Landfill with regard to the permit process. As the proposed sedimentation basin is located within the coastal zone, permit issues are addressed in the Coastal Zoning Ordinance or Article II of Chapter 35 of the County Code.

Sedimentation Basin Description

The proposed Tajiguas Landfill Sedimentation Basin involves construction of a basin to accommodate surface runoff from a 50 - 100 year storm event. Construction of the basin would require approximately 60,000 cubic yards of grading (cut and fill). In order for the basin to function, a portion of Pila Creek would also have to be diverted, another aspect of the development which would require a permit under the Coastal Zoning Ordinance.

The proposed Sedimentation Basin is located on Assessor's Parcel Number 081-150-021 which is located within the Coastal Zone and is zoned for General Agriculture, 320 acre minimum size (AG-II-320) as shown on the enclosed site plan. Permitted uses in this zone district include all types of agriculture, agricultural accessory structures, one single family dwelling per legal lot, boarding of animals, greenhouses, quarrying, etc. A list of the regulations of the AG-II zone district is attached for your reference.

Background

The Tajiguas Landfill was installed and began operating in 1966, prior to the enactment of the Coastal Act, the passage of the California Environmental Quality Act and the onset of State regulation of landfills through the Solid Waste Management Act. Therefore, the only applicable regulation was the County of Santa Barbara Zoning Ordinance #661. The Tajiguas Landfill, a County public works facility, was not subject to a County permit requirement because Ordinance #661 specifically states that it is not applicable to *"the County of Santa Barbara or any district of which the Board of Supervisors is the*

EXHIBIT 6a

governing body." Thus, the landfill became a legal non-conforming facility within the coastal zone as regulations were adopted by the different state and local agencies. All landfill and landfill-related activities which occur within the existing historic landfill facility are considered to be within the scope of normal landfill activities and thus can be permitted despite the status of the facility as a non-conforming use. However, any landfill-related development located outside of the existing historic landfill facility would not qualify for such a privilege.

Local Permit Requirements

The Sedimentation Basin is subject to the permit requirements of the Article II Coastal Zoning Ordinance as it is not within the scope of the existing historic landfill facility. In the Coastal Zone, the Sedimentation Basin involves a landfill-related activity on a parcel that has not previously been used for landfill purposes. This activity constitutes a new project that would trigger Coastal Zone permit requirements.¹

Development of a new landfill or the expansion of an existing landfill or accessory facilities, such as the proposed sedimentation basin, would be subject to the permit requirements specified in the Article II Coastal Zoning Ordinance. Given the current agricultural zoning of the subject property, which does not allow a landfill as a permitted use nor as a conditionally permitted use, such a proposal would require a Coastal Land Use Plan amendment and a zone district change to the only zoning designation in the Article II Coastal Zoning Ordinance which allows landfills (PU – Public Utility).

A Rezone and Coastal Plan Amendment must be recommended for approval by the County Planning Commission, approved by the Board of Supervisors and ultimately approved by the California Coastal Commission. However, the Coastal Act places as its highest priority the preservation and protection of natural resources and prime agricultural lands. (See Public Resources Code §§ 30241-42.) The County's certified Local Coastal Program includes policies which limit the conversion of agriculturally zoned land only to "another priority use under the Coastal Act, e.g. coastal dependent industry, recreation and access, or protection of an environmentally sensitive habitat." (County Coastal Land Use Plan Policy 8-1.) On lands not suited for agricultural use, coastal dependent development has the highest priority. Given these facts, it is highly unlikely that the County and the Coastal Commission could make the necessary findings to approve a rezone and coastal plan amendment from agriculture to Public Utility to accommodate a sedimentation basin for the landfill on the subject property.

¹ Because the Legislature has established two statutory schemes applicable to the landfill, one under the jurisdiction of the Integrated Waste Management Board and the other under the Coastal Commission, these state agencies must share their jurisdiction over the landfill, which must meet the permit requirements of both statutory schemes. (See *Air Pollution Control District v. Public Utilities Commission* (1971) 4 Cal.3d 945.)

Based on the above discussion, Planning and Development has determined that construction of a sediment basin on agriculturally zoned property not currently used for landfill purposes could not be permitted given the existing zoning (AG-II-320).

I hope that this letter clarifies the permit status of the Tajiguas Landfill Sedimentation Basin. If you have any questions, please call Jackie Campbell of my staff at (805) 568-2076.

Sincerely,

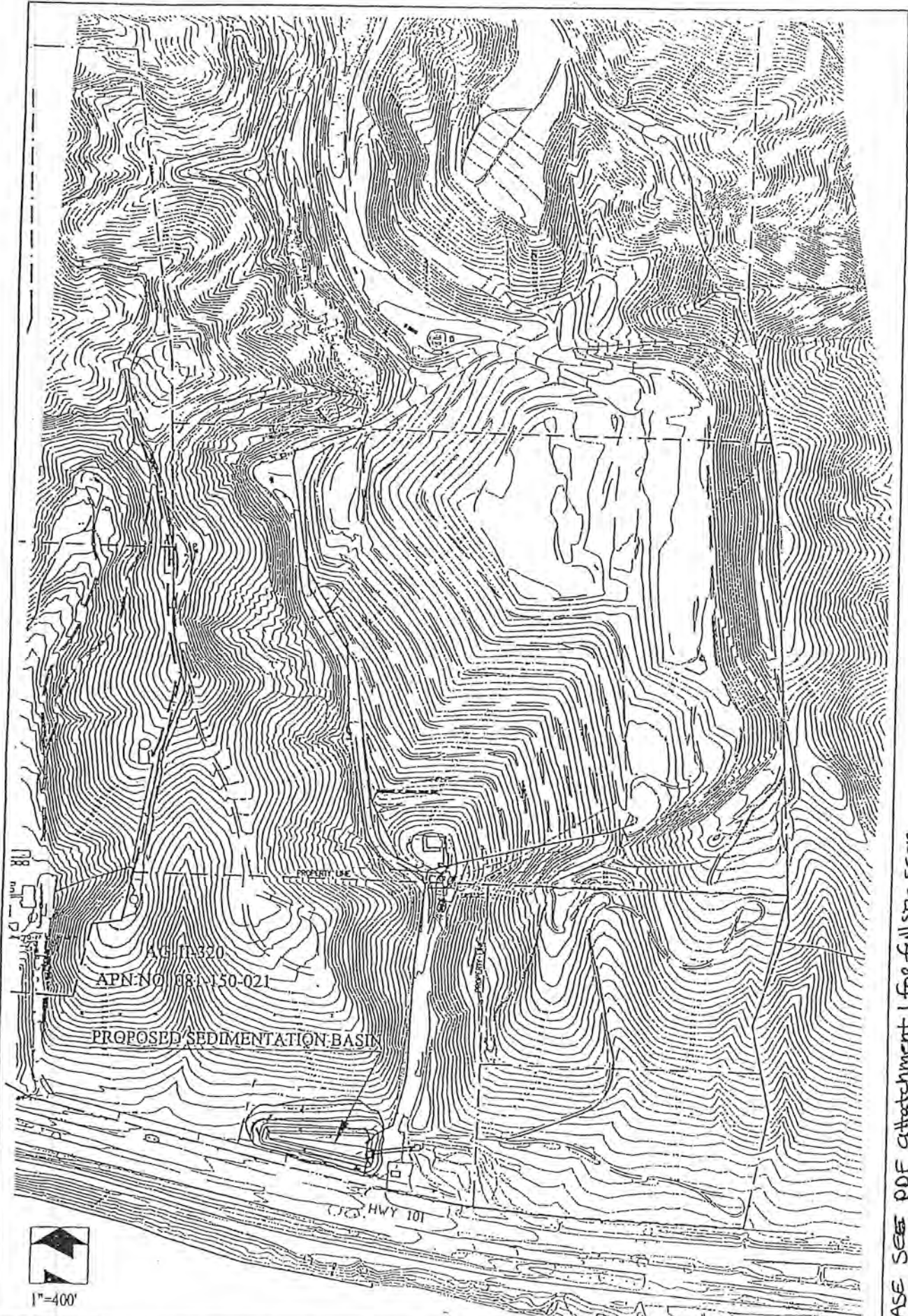
A handwritten signature in black ink, appearing to read 'John Patton', with a large, sweeping flourish extending to the right.

John Patton
Director

enclosures

cc: Mark Schleich, Public Works Department
Alan Seltzer, Chief Deputy Counsel
David McDermott, County Counsel
Brian Baca, CEG, P&D Geologist

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PLEASE SEE PDF attachment 1 for full size scan.

REVIEWED BY: DESIGNED BY: DRAWN BY: SCALE: SHEET 1 of 1	SANTA BARBARA COUNTY SOLID WASTE AND UTILITIES DIVISION PROPOSED SEDIMENTATION BASIN TAJIGUAS SANITARY LANDFILL	REVISIONS DATE DESCRIPTION	SITE PLAN DRAWING FILE: PRPBAS1H.dwg 11-27-00 14:50:39
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Sec. 35-69. AG-II Agriculture II

(Amended by Ord. 4298, 3/24/98)

Sec. 35-69.1. Purpose and Intent.

The purpose of the Agriculture II district is to establish agricultural land use for large prime and non-prime agricultural lands in the rural areas of the County (minimum 40 to 320 acre lots) and to preserve prime and non-prime soils for long-term agricultural use.

Sec. 35-69.2. Processing.

No permits for development including grading shall be issued except in conformance with Sec. 35-169. (Coastal Development Permit).

Sec. 35-69.3. Permitted Uses.

1. All types of agriculture and farming, including commercial raising of animals, subject to the limitations hereinafter provided in this Sec. 35-69.
2. Sale of agricultural products produced on the premises provided that such sale is conducted either within an existing agricultural building or from a separate stand not exceeding two hundred (200) square feet and located no closer than twenty (20) feet to the right-of-way line of any street.
3. Commercial boarding of animals.
4. Private and/or commercial kennels. *(Amended by Ord. 4067, 8/18/92)*
5. One single family dwelling unit per legal lot. Such dwelling may be a mobile home certified under the National Mobile Home Construction and Safety Standards Act of 1974 (42 U.S.C. § 5401 et seq.) on a permanent foundation system, pursuant to Health & Safety Code § 18551, subject to the provisions of Sec. 35-141 (General Regulations).
6. One guest house or artist studio per legal lot subject to the provisions of Sec. 35-120 (General Regulations). *(Amended by Ord. 3835, 3/20/90)*
7. Greenhouses, hothouses, or other plant protection structures, and related development, i.e., packing shed, parking, driveways, etc.; however, for any development of 20,000 square feet or more and all additions which when added to existing development total 20,000 square feet or more, a development plan shall be submitted, processed, and approved as provided in Sec. 35-174. (Development Plans). *(Amended by Ord. 3838, 3/20/90)*

8. On-shore oil development, including, exploratory and production wells, pipelines, storage tanks, processing facilities for on-shore oil and gas, and truck terminals subject to the requirements set forth in DIVISION 9, OIL & GAS FACILITIES.
9. Excavation or quarrying of building or construction materials, including diatomaceous earth, subject to the provisions of Sec. 35-177 (Reclamation Plans).
10. Home occupations, subject to the provisions of Section 35-121 (General Regulations). *(Amended by Ord. 3836, 3/20/90)*
11. Accessory uses, buildings, and structures which are customarily incidental to the above uses.

Sec. 35-69.4. Uses Permitted With a Major Conditional Use Permit.

1. Animal hospitals and clinics.
2. Low-intensity recreational development such as hiking trails, public riding stables, recreational camps, campgrounds, retreats, and guest ranches, provided that such development:
 - a. is in character with the rural setting,
 - b. does not interfere with agricultural production on or adjacent to the lot on which it is located,
 - c. does not include commercial facilities open to the general public who are not using the recreational facility, and
 - d. does not require an expansion of urban services which will increase pressure for conversion of the affected agricultural lands.
3. Wineries, including processing, distribution, and sale of wine grapes and wine grape products grown off the premises, provided:
 - a. the winery is located on premises used for vineyard purposes,
 - b. the winery is operated in connection with the processing of wine grapes grown on the premises, and
 - c. retail sales of wine grape products shall be limited to those processed on the premises.

4. Facilities for the sorting, cleaning, packing, freezing, and storage of horticultural and agricultural products (not including animals) grown off the premises preparatory to wholesale or retail sale and/or shipment in their natural form provided:
 - a. the facility shall be accessory to and supportive of other agricultural operations located on the same premises as the proposed facility and on other local agricultural lands (defined as lands located within 25 miles of the boundaries of Santa Barbara County),
 - b. the primary purpose of the facility shall not be to import, on a continuing basis, horticultural or agricultural products from land more than 25 miles beyond the boundaries of Santa Barbara County for local processing, distribution, or sale.
 - c. the products are determined by the Planning Commission to be similar to products grown on the premises where the facility is located or on other local agricultural lands, and
 - d. the facility processes products grown on the premises or on other local agricultural lands.
5. Piers and staging areas for oil and gas development subject to the regulations in DIVISION 9, OIL AND GAS FACILITIES.
6. Aquaculture, subject to the provisions of Sec. 35-136 (General Regulations).
7. Sorting, cleaning, and further breaking and storing of abalone shells landed live in Santa Barbara County, preparatory to shipment in their natural form.
8. Farm labor camps, including trailers, for housing five or more persons engaged full-time in agriculture working on or off the farm or ranch upon which the dwelling(s) is located, subject to the provisions of Sec. 35-132.9 (General Regulations).
(Amended by Ord. 3838, 3/20/90)
9. Exploration and production of offshore oil and gas reservoirs from onshore locations, including exploratory and production wells, pipelines, temporary storage tanks, dehydration and separation facilities, and temporary truck terminals located within the Gaviota or Las Flores Canyon Consolidated Oil and Gas Planning Areas,

subject to the requirements set forth in DIVISION 9, OIL & GAS FACILITIES.

(Added by Ord. 4235, 9/3/96)

Sec. 35-69.5. Uses Permitted with a Minor Conditional Use Permit.

(Amended by Ord. 3838, 3/20/90)

1. Additional dwellings for not to exceed four employees of the owner or lessee of the land engaged full time in agriculture on the farm or ranch upon which the dwelling is located provided:
 - a. the applicant can document the existing and proposed agricultural use of the land and demonstrate a need for additional dwellings to support such use; and
 - b. the applicant provides proof of the full-time employment of the employees.

Sec. 35-69.6. Minimum Lot Size.

Each main dwelling unit shall be located on a lot having minimum gross lot area as indicated below for the symbol shown on the lot on the applicable Santa Barbara County Zoning Map.

<u>Zoning Symbol</u>	<u>Minimum Lot Size</u>
AG-II-40	40 acres
AG-II-100	100 acres
AG-II-320	320 acres

A dwelling may be located upon a smaller lot if such lot is shown as a legal lot either on a recorded subdivision or parcel map or is a legal lot as evidenced by a recorded certificate of compliance.

Sec. 35-69.7. Height Limit and Setback Regulations.

None, except that no building or structure shall be located within fifty (50) feet of the centerline or within twenty (20) feet of the right-of-way line of any street.

Sec. 35-69.8. Parking.

Parking shall be provided as specified in DIVISION 6, PARKING REGULATIONS except for: *(Amended by Ord. 4067, 8/18/92).*

1. Agricultural Developments not requiring Development Plan (DP) approval, shall not be required to comply with design specifications for marking or striping (Sec.

35-114.3.c.), except for handicap parking spaces required under State Law.
(Amended by Ord. 4067, 8/18/92)

2. Agricultural Development projects requiring Development Plan (DP) approval may request that the Decisionmaker waive certain design specifications for marking or striping otherwise required under Sec. 35-114.3.c. *(Amended by Ord. 4067, 8/18/92)*



County of Santa Barbara Planning and Development

John Patton, Director

January 23, 2001

Imelda Cragin
Solid Waste and Utilities Division
Public Works Department
123 East Anapamu Street
Santa Barbara CA 93101

Re: **Tajiguas Landfill Office Trailer relocation and Sediment Control Structure:
Exemption from permit requirements.**

Dear Ms. Cragin:

Our department has reviewed the December 26, 2000 Public Works Department memorandum (attached) regarding the proposed relocation of office trailers and the installation of a sediment control structure (i.e. a sedimentation basin) at the southern end of the existing Tajiguas Landfill. According to the 12-26-00 memorandum, the sediment control facilities are proposed in response to a mandate of the Regional Water Quality Control Board.

The Tajiguas Landfill began operating before 1970, prior to the permit requirements of the California Coastal Act and the environmental review requirements of the California Environmental Quality Act (CEQA). Thus, the landfill constitutes an existing historic public works facility. Ongoing routine landfill activities that occur within the original boundary of the landfill (i.e. on the landfill parcel; APN 081-150-019) and are located below the 1978 Solid Waste Facilities Permit elevation limit of 400 feet MSL are considered part of the ongoing operation of the historic landfill. Implementation of erosion and sedimentation control measures is a routine landfill activity that has occurred in various forms over the decades of landfill operation. Jute matting, soil cement, hydro-seeding, sedimentation basins, and other measures have been utilized at the site to control erosion and sedimentation. The proposed sedimentation basin and associated facilities are considered a part of these ongoing and routine landfill operations. Thus, the proposed installation of a new sedimentation basin does not require a Coastal Development Permit and is not a project under CEQA.

The relocation of temporary trailers to another location at the landfill (in this case, a location outside the Coastal Zone), is also considered part of routine landfill operations and not subject to any permit requirement. The re-location site is identified in the attached 12-26-00 memorandum.

EXHIBIT 6b

I hope this adequately addresses your questions regarding the permit requirements for the proposed activities at the Tajiguas Landfill.

Sincerely,



Jackie Campbell
Supervising Planner

Attachment: 12-26-00 memorandum to B. Baca from I. Cragin..

Cc: Brian R. Baca, P&D
Chris Wilson, SWUD

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Memorandum

Date: July 11, 2001

To: Brian Baca, Registered Geologist
Planning and Development

From: Kathy Kefauver, Sr. Engineering Environmental Planner (KSK)
Solid Waste and Utilities

Subject: Determination of Exemption from Coastal Development Permits and Request for Concurrence

CC: Imelda Cragin

The Solid Waste and Utilities Division (Division) has a number of repair and maintenance projects associated with the ongoing operations at Tajiguas Landfill that will be accomplished this summer. The Division requests concurrence from Planning and Development (P&D) that projects #1-3, as described in the attachment, are exempt from a County Permit or determination of the County permit required for these projects. Descriptions of projects #1-3 provide information from Article II of the Coastal Zoning Ordinance to support exemptions from a CDP.

Further, the Division is advising P&D that a Coastal Development Permit (CDP) application for Project #4 has been submitted for review. However, the Division requests that the project be considered as an accessory to the on-going operations of the landfill, similar to the scale and scalehouse. The CDP application was submitted to construct and maintain trash racks in Pila Creek south of the Tajiguas Landfill that were damaged in last winter's storms. The trash racks were constructed in 1997 in accordance with the California Environmental Quality (CEQA), however, a CDP from P&D was apparently not obtained, and may not be required. Maintenance of the trash racks is required to ensure long-term optimal litter entrapment and forestall erosion that could compromise the integrity of the trash racks that are required by the Local Enforcement Agency (LEA). The repair project was included as part of the Flood Control and Maintenance Activities for 2001, as an addendum to the Flood Control and Maintenance EIR. The District is currently pursuing Section 404 and 401 permits and a 1601 Streambed Alteration Agreement.

Thank you for considering this request for concurrence. We look forward to hearing from you. The Division would appreciate a reply by July 27, 2001. If you have any questions or concerns regarding the specifics of the projects discussed below, please do not hesitate to contact me at X3614.

Repair and Maintenance Projects Associated With Ongoing Operations at the Tajiguas Landfill 2001

1. Tajiguas Road Scale and Scalehouse Storm Water Flooding Abatement

The proposed project is located on APN 81-151-021, the parcel south of Tajiguas Landfill. The purpose of the proposed project is to divert storm water runoff from the Tajiguas Landfill access road and prevent flooding of the scale and scalehouse as occurred during the previous winter. The previous winter storm water runoff from the Tajiguas Landfill access road inundated the scale and scalehouse and the proposed project is designed to prevent flooding of these facilities in the future.

A small ridge in the Tajiguas roadway pavement currently exists, but is inadequate to divert any substantial flow. A gutter would be constructed across the existing roadway and would discharge via an overside drain to Pila Creek. A gradual build-up in the existing access roadbed between the gutter and the scalehouse would be installed to divert storm flows from the Tajiguas Landfill access road, collect and divert flows via the gutter and discharge the flow to Pila Creek. The overside drain would prevent erosion of the Pila Creek bank (Figure 1).

The Solid Waste and Utilities Division believes this project may be exempt from a CDP based on the County Guidelines on Repair and Maintenance and Utility Connection to permitted Development (Appendix C, Article II of Chapter 35 of the County Code Zoning Ordinance). Section 35-169.2 of the Coastal Zoning Ordinance states in part: "A Coastal Development Permit shall be required in the coastal zone with the exception of the following:

Repair and maintenance activities that do not result in addition to or enlargement or expansion of the object of such repair or maintenance activities."

Under Item A. Roads, the ordinance states that no permit is required for repair and maintenance of existing public roads including

"Maintenance activities are generally those necessary to preserve the highway facility as it was constructed, including: ... restoration and repair of drainage appurtenances, installation of minor drainage facilities for preservation of the roadway or adjacent properties, and restoring pavement and base to original condition by replacement, resurfacing, or pavement grooving."

Note that an Environmentally Sensitive Habitat Area (ESH) designation is not present on Pila Creek according to the Gaviota Coast Coastal Zoning overlay map. Requirements for permitting under the ESH designation do not apply to Pila Creek.

The proposed project would not enlarge or expand the Tajiguas Landfill access road and would protect the permitted scale and scalehouse from flooding. The overside drain would be a minor drainage facility installed to maintain the roadway, protect the scalehouse and scale on the parcel adjacent to the Tajiguas Landfill and prevent erosion of the creek bank.

Additionally, the access road serves the existing Tajiguas Landfill operations on the parcel to the north. Therefore, SWUD believes this project may be exempt from a CDP.

2. Drainage Structure Maintenance Tajiguas Road

The purpose of this project is to modify a drainage structure on APN 81-150-019, located south of the Tajiguas Landfill near the co-generation facility (Figure 2), and to repair and maintain existing drainage inlets along the Tajiguas Landfill access road.

The Solid Waste and Utilities Division believes this project may be exempt from a CDP based on the County Guidelines on Repair and Maintenance and Utility Connection to Permitted Development (Appendix C, Article II of Chapter 35 of the County Code Zoning Ordinance). Section 35-169.2 of the Coastal Zoning Ordinance states in part: "A Coastal Development Permit shall be required in the coastal zone with the exception of the following:

Repair and maintenance activities that do not result in addition to or enlargement or expansion of the object of such repair or maintenance activities."

The project represents maintenance of the drainage system only and would not enlarge or expand the drainage system. The drainage system supports existing landfill operations and therefore, SWUD believes this project may be exempt from a CDP.

3. Highway 101 Roadway Deceleration/Acceleration Lane Improvement

The purpose of the proposed project is to improve safety at the Highway 101/Tajiguas Landfill entrance road as required through mitigation measures required in 89-EIR-8. Both the deceleration lane of Highway 101 at the entrance to the Tajiguas Landfill (northbound lane) and the acceleration lane exiting the landfill (southbound lane) would be extended to accomplish this purpose.

The northbound deceleration lane (right turn lane) to the entrance of the Tajiguas Landfill would be lengthened from approximately 250 feet to a maximum of 563 feet, and be approximately 12 feet wide with a 4 foot shoulder to meet Caltrans design requirements. The acceleration lane (left turn lane) would be lengthened from approximately 580 feet to 740 feet. The lane would also be approximately 12 feet wide with a 4-foot shoulder, as with the deceleration lane. The total maximum area of disturbance would be approximately 5,280 square feet for the deceleration lane ($[(563-250) \times (12 + 4)] = 5,280$) and approximately 2,560 square feet for the acceleration lane ($[(740-580) \times (12 + 4)] = 2,560$), for a total of 7,840 square feet ($5,280 + 2,560 = 7,840$ square feet).

The project is located on Highway 101 just east of the Landfill access road. Canada de la Pila enters a corrugated metal pipe (CMP) and flows through the pipe under the Highway. The proposed project would avoid disturbing Canada de la Pila Creek. Both lanes would be designed under Caltrans standards and the entire project would be located within the Caltrans right-of-way of U.S. Highway 101. Traffic safety measures would be implemented as per Caltrans requirements and Best Management Practices (BMPs)--including erosion control--would be implemented during construction. The acceleration/deceleration lanes would not expand the capacity of the existing roadway or the number of traffic lanes.

The project is consistent with the TC - Transportation Corridor zoning designation. Permitted uses include freeways, highways, streets, and roads including shoulders, turnouts, and interchanges.

Although a Development Plan is typically required for development in the TC zoning district, SWUD believes this project may be exempt from the permit requirement of this zoning district under the County Guidelines on Repair and Maintenance and Utility Connection to Permitted Development (Article II, Appendix C). The improvement is an at grade safety device installed for the purpose of improving the

safe operation of the highway. Additionally, the project may be exempt from the requirement of a CDP based on the following elements of the County Guidelines on Article II of Chapter 35 of the County Code Zoning Ordinance:

- “Coastal Development Permit (Page 328): Improvements or structures shall be exempt provided that the parcel on which they are located is not within 300 feet of the edge of a coastal bluff or the inland extent of any beach, or not within or contiguous to an Environmentally Sensitive Habitat (ESH) area.”

The project is not located within 300 feet of the edge of a coastal bluff or the inland extent of any beach. In addition, Canada de la Pila is not designated as an ESH area on the Gaviota Coast Coastal Zoning Overlay map. Although Canada de la Pila is adjacent to Highway 101, the project would not encroach into the creek.

- Repair and Maintenance and Utility Connection to permitted Development (Appendix C, Article II of Chapter 35 of the County Code Zoning Ordinance). Section 35-169.2 of the Coastal Zoning Ordinance states in part: “A Coastal Development Permit shall be required in the coastal zone with the exception of the following:

Under Item A. Roads, the ordinance states that “No permit is required for repair and maintenance of existing public roads including ... installation or expansion of retaining walls, safety barriers and railings and other compatible developments within the existing right-of-way...” Maintenance activities are generally those necessary to preserve the highway facility as it was constructed, including ... restoration, repair and modifying for public safety bridges and other highway structures... provided there is not expansion in the roadway or number of traffic lanes.”

The project potentially meets the criteria above in that, the entire project would be located within the existing Caltrans right-of-way and would not add to or expand the capacity of the lanes. Therefore SWUD believes this project may also be exempt from a CDP.

4. Trash Racks in Pila Creek

As this project apparently was not permitted when trash racks were constructed in 1997, the current request for permitting will rectify the oversight. The trash racks were installed under Flood Control Maintenance activities in 1997, received CEQA review through an addendum to the Flood Control and Maintenance EIR, and completed revegetation followed the construction of the trash racks in compliance with the mitigation measures.

Litter occasionally is transported off the landfill by wind and/or water and is deposited in the creek, as Canada de la Pila Creek is downstream of the Tajiguas Landfill. In order to improve trapping of errant litter, a series of trash racks were placed in the creek. These trash racks were constructed such that they are a minor impediment to high storm water flows, thus minimizing the risk of flooding. On a regular basis, workers check the creek for litter and collect any errant litter from within the creek so that it is not transported further downstream to the ocean. The Local Enforcement Agency (LEA) requires minimization of errant litter leaving the Tajiguas Landfill.

The efficiency of the existing trash racks has been reduced by bank erosion and downcutting that occurred on each of the outer sides of the fences during the previous winter's high flows in Pila Creek. Erosion of the supporting foundations of each trash rack has also occurred. The proposed maintenance of the trash racks and support structures will help stabilize the eroded banks, which will otherwise tend to continue to erode and promote additional bank loss with associated downstream sediment deposition.

This project has been included as a project under the Flood Control and Maintenance Activities for 2001, and has undergone CEQA review as part of the Flood Control and Maintenance Programmatic EIR and was certified by the Board on June 25, 2001.

A CDP application for trash rack construction and repair was forwarded to you on July 6, 2001. However, the Division believes this project may be considered an accessory to the existing Tajiguas Landfill operations. This project must be accomplished this summer, prior to this winter's rainy season to continue to comply with the LEA's requirement for errant litter control. An expedited review and determination of the need for a CDP is requested for this project to prevent wind and water-borne litter from being carried off the Tajiguas Landfill site and to prevent further bank erosion and downcutting at the trash racks.

Thank you for your help in determining the level of permitting required for each of these projects.



County of Santa Barbara Planning and Development

Valentin Alexeeff, Director
Dianne Meester, Assistant Director

March 1, 2005

Mark Schleich
Deputy Director
Resource Recovery & Waste Management Division
130 E. Victoria Street
Santa Barbara CA 93101

Re: **Tajiguas Municipal Landfill: Maintenance activities in Canada de la Pila Creek.**
APN 081-150-043

Dear Mr. Schleich:

We have been informed that your department wishes to conduct excavation activities within the channel of Canada de la Pila Creek just downstream of the Tajiguas Landfill. An existing debris screen (i.e. trash rack) located in the creek channel has impounded sediment along a 150 foot length of the channel. The proposed excavation would serve to remove this accumulated sediment that eroded from the landfill during the recent heavy winter rains.

The proposed creek clearing activity has occurred periodically and routinely over the past 35 years as part of landfill operations. These operations pre-date the California Coastal Act and the adoption of the County Coastal Land Use Plan. Similar to other ongoing operations of the historic Tajiguas Landfill, no Coastal Development Permit is required to continue this historic practice.

If you have any questions, please contact P&D Geologist Brian R. Baca at 68-2004

Sincerely,

Valentin Alexeeff
Director


EXHIBIT 6d



COUNTY OF SANTA BARBARA
PLANNING AND DEVELOPMENT

MEMORANDUM

TO: Joddi Leipner, Senior Engineering Environmental Planner
Public Works Solid Waste

FROM: Dave Ward, Deputy Director 
Development Review South

DATE: August 13, 2008

RE: Tajiguas Landfill Office Septic System

You have asked whether the installation of a new septic system, with leach field components located in the Coastal Zone, to support the relocated office facilities for the Tajiguas Landfill requires permits from Planning and Development. The answer is no, the proposed installation of a new septic system does not require a Coastal Development Permit and is not a project under CEQA.

Consistent with historic determinations (e.g. "Tajiguas Landfill Office Trailer Relocation and Sediment Control Structures, exemption from permit requirements", dated January 23, 2001), the relocation of the offices within the footprint of the landfill constitutes part of the ongoing operation of the historic landfill. Ongoing operational components of the historic landfill do not require permits from Planning and Development. Insofar as the proposed new septic system is integral to supporting the relocated office facilities, the septic system too is considered part of the ongoing operation of the historic landfill. Oversight and permitting by Environmental Health Services satisfies any possible concerns regarding health and safety as it pertains to the septic system.

I hope this adequately addresses your question regarding the permit requirements for the proposed activity at the Tajiguas Landfill.

Cc: John Baker, Director of Planning and Development
Dianne Black, Director of Development Services
Mark Schleich, Deputy Director of Public Works Resource Recovery



**COUNTY OF SANTA BARBARA
PLANNING AND DEVELOPMENT**

MEMORANDUM

TO: Joddi Leipner, Senior Engineering Environmental Planner
Public Works Solid Waste Division

FROM: Dave Ward, Deputy Director *D. Ward*
Development Review South

DATE: April 27, 2009

RE: Tajiguas Landfill Dewatering Well Platforms

You have asked whether installation of three platforms around existing dewatering wells within coastal zone portion of the Tajiguas Landfill requires approval of a Coastal Development Permit. The answer is no, the proposed installation does not require a CDP and is not a project under CEQA.

Consistent with historic determinations (e.g. Tajiguas Landfill Office Trailer Relocation and Sediment Control Structures, exemption from permit requirements, dated January 23, 2001, and Tajiguas Landfill Office Septic System, exemption from permits, dated August 13, 2008), the installation of three wood platforms within the footprint of the historic landfill constitutes part of the ongoing operation of the historic landfill. Ongoing operational components of the historic landfill do not require permits from Planning and Development. Insofar as the proposed new platforms are integral to maintaining, repairing, and replacing the dewatering wells, which have historically functioned to extract leachate from the landfill as required by the landfill's Waste Discharge Requirements as issued by the Regional Water Quality Control Board, the platforms too are considered part of the ongoing operation of the landfill and a necessary component to fulfilling the obligations of the Waste Discharge Requirements. The Tajiguas Landfill began operating before enactment of the California Environmental Quality Act, California Coastal Act, and adoption of the County Coastal Land Use Plan. Thus, the landfill constitutes an existing historic public works facility. Therefore, no CDP is required to continue this historic operation and it is not a project under CEQA.

I hope this adequately addresses your question regarding the permit requirements for the proposed platforms.

Cc: Dianne Black, Director of Development Services
Mark Schleich, Deputy Director of Public Works Resource Recovery



County of Santa Barbara Planning and Development

Dianne Black, Interim Director

Derek Johnson, Director Long Range Planning

August 4, 2009

Joddi Leipner
Senior Engineering Environmental Planner
Resource Recovery & Waste Management
130 E. Victoria Street
Santa Barbara, CA 93101

RE: Tajiguas Landfill – Land Use Permit information for LEA

Dear Joddi,

As we discussed on the telephone, you are in the process of obtaining your Solid Waste Facility Permit for the Tajiguas Landfill Reconfiguration Project and the Local Enforcement Agency (EHS) needs to make a series of findings, one of which discusses local land use permit requirements or absence thereof.

The Tajiguas Landfill is located within areas zoned for agriculture within the inland and coastal areas of Santa Barbara County. Pursuant to Section 35.10.040.G.1.b of the Santa Barbara County Land Use and Development Code, within the unincorporated inland areas of the County, the provisions of the Development Code do not apply to "development by the County or any district of which the Board is the governing body." Therefore, operation of the Tajiguas Landfill within the inland areas of the County is not subject to local land use permit requirements. Within the Coastal Zone, the Tajiguas Landfill is a legal non-conforming use which predates the California Environmental Quality Act and the Coastal Act. No new Coastal Development Permits are required for activities and operations that support this existing legal non-conforming use. In summary, there are no land use permit requirements for continued operation of the landfill and implementation of the reconfiguration project.

I hope this letter satisfies your needs. Please contact me at 568-2520 if you have any questions or need further information.

Sincerely,

Dave Ward, Deputy Director
Development Review Division

Development Review
Building & Safety
Energy, Administration
123 E. Anapamu Street
Santa Barbara, CA 93101
Phone: (805) 568-2000
FAX: (805) 568-2030

Long Range Planning
30 E. Figueroa St, 2nd Floor
Santa Barbara, CA 93101
Phone: (805) 568-5380
FAX: (805) 568-2076

Development Review
Building & Safety
Agricultural Planning
624 W. Foster Road
Santa Maria, CA 93455
Phone: (805) 934-6250
FAX: (805) 934-6258

EXHIBIT 6g

To: Decisionmakers

From: Dianne Black, Assistant Director
Planning and Development

Project Lead Agency: Santa Barbara County Public Works Department, Resource Recovery & Waste Management Division.

Date: December 2, 2013

RE: CEQA Determination for the Tajiguas Landfill Temporary Southeast Stockpile Areas: Finding that Section 15162 of the State CEQA Guidelines applies to temporary stockpiling of landfill closure soil in the proposed southeast stockpile areas on the Tajiguas Landfill. CEQA Section 15162 allows the use of a previously prepared EIR or ND unless subsequent changes are proposed in the project which will require important revisions to the previous EIR or ND due to the involvement of new significant impacts, or there are substantial changes with respect to the circumstances under which the project is undertaken, or new information becomes available.

Project Location: The Tajiguas Landfill is located at 14470 Calle Real, Goleta, California, 93117 on three County-owned parcels, Assessor's Parcel Numbers (APN) 081-150-019, 081-150-042 and 081-150-026, located approximately 26 miles west of the City of Santa Barbara, along the Gaviota coast, Third Supervisorial District (Figure 1). The temporary southeast stockpile areas would be located on APN 081-150-019.

1.0 Background/Executive Summary

The Tajiguas Landfill has been in operation since 1967 for disposal of municipal solid waste. Tajiguas Landfill is located in a coastal canyon known as Cañada de la Pila, approximately 26 miles west of the City of Santa Barbara. The original landfill predates adoption of the California Environmental Quality Act (CEQA) and the Coastal Act, which designated Coastal Zones in California in 1976. The Coastal Zone boundary bisects a small southerly portion of the Tajiguas Landfill site.

On August 13, 2002, the BOS certified an Environmental Impact Report (EIR) (01-EIR-05) for, and approved, the Tajiguas Landfill Expansion Project (Front Canyon Expansion). This project consists of the horizontal and vertical expansion of the landfill outside of the Coastal Zone, providing 8.2 mcy of additional waste disposal capacity. The County obtained the necessary approvals and permits to expand the Tajiguas Landfill and currently, the third phase of the expansion is under design.

An Addendum to the Final EIR 01-EIR-05 was prepared and approved by the BOS in December 2006, allowing the Resource Recovery & Waste Management Division (RRWMD) to modify two components of the approved Project Description for the Tajiguas Landfill Expansion Project.

These modifications included elimination of the proposed Coastal Zone Southeast Corner Modification and a reconfiguration of the North Slope borrow/stockpile area. The Southeast Corner Modification involved the excavation and relocation of waste and cover soil within and adjacent to the Coastal Zone above an elevation of 400 feet above mean sea level (amsl) to another portion of the landfill. This modification was intended to address a perceived inconsistency with the Coastal Act and Coastal Zoning Ordinance with respect to the permitted height of landfill activities within the Coastal Zone. Upon further review, it was determined that the 400 foot limit appeared to be spurious and was based on a misreading of the 1978 Solid Waste Facility Permit (SWFP). In an effort to facilitate phased closure, minimize impacts of closure activities, and to reduce closure costs, the Southeast Corner Modification was eliminated from the Project Description for the Tajiguas Landfill Expansion Project, and municipal solid waste deposited above 400 feet above msl in the Coastal Zone would be left in-place as part of closure. The modified North Slope borrow/stockpile area included an area of about 19 acres that overlapped, but extended to the east of the existing approved borrow area. The reconfigured borrow area provides slopes that are more suitable for temporary stockpiling of material.

In 2007, the RRWMD proposed a change in the location of the Green-Waste Processing Area and determined, pursuant to State CEQA Guidelines Section 15162 (determination letter dated April 19, 2007), that no substantial changes were proposed in the project, no substantial changes occurred with respect to the circumstances under which the project was undertaken, and no new information of substantial importance was received with respect to the project or the mitigation measures, and therefore no new EIR was required for the approval of the proposed change to the Tajiguas Landfill Expansion Project associated with relocating the Green-Waste Processing Area.

In May 2009, the BOS certified a subsequent EIR (08EIR-00000-00007) for, and approved, the Tajiguas Landfill Reconfiguration and Baron Ranch Restoration Project (SCH No. 2008201052). The project involved the reconfiguration of the waste footprint approved as a part of the Tajiguas Landfill Expansion Project, which provided a number of engineering and environmental benefits and the comprehensive restoration of native habitats on the county-owned Baron Ranch to benefit the Federally endangered California red-legged frog. The reconfiguration did not modify any of the operational parameters (e.g., refuse capacity, operating hours, environmental systems) reviewed in 01-EIR-05.

The Tajiguas Landfill Expansion Project EIR (01-EIR-05), December 5, 2006 Addendum, April 19, 2007 15162 Determination and Tajiguas Landfill Reconfiguration and Baron Ranch Restoration EIR (08EIR-00000-00007) are herein referred to as the "Tajiguas Landfill Environmental Documents".

As described below, the RRWMD is now proposing to temporarily stockpile final cover soil on the southeast corner of the Tajiguas Landfill. These temporary soil stockpile areas would allow for more efficient landfill closure construction and reduce environmental impacts of soil transport as the areas are significantly closer to the area planned for phased closure. These temporary soil stockpile areas would be subject to all applicable mitigation measures included in the Tajiguas Landfill Environmental Documents.

Pursuant to CEQA Guidelines, Sections 15162, when an EIR has been certified for a project, no subsequent EIR shall be prepared for that project unless the Lead Agency determines, on the

basis of substantial evidence in the light of the whole record one of the following:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR... due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR... due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR... was adopted, shows any of the following:
 - (A) The project will have one or more significant effects not discussed in the previous EIR...;
 - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

(CEQA Guidelines, Sections 15162, subd. (a)); see also Pub. Resources Code, Section 21166.)

Based on the preceding legal standards, and as discussed in further detail below, the proposed modifications to the Tajiguas Landfill Expansion Project to temporarily stockpile cover soil does not trigger the requirements for a subsequent EIR. The modifications neither reveal previously undisclosed significant environmental impacts nor a substantial increase in the severity of previously disclosed impacts (CEQA Guidelines, Sections 15162).

2.0 Changes in the Proposed Project Description

The Tajiguas Landfill Environmental Documents identified and analyzed proposed soil stockpile locations associated with excavations for the construction of the landfill waste disposal cells and installation of the groundwater protection systems (liners). Stockpile locations identified in these documents included the top deck of the landfill, areas north of the landfill and the north slope borrow/stockpile area.

RRWMD is preparing to close a portion of the landfill in which waste disposal activities are

complete (including the southern portion in the coastal zone) and is concurrently preparing other approved areas of the landfill to receive waste. Both the closure activities and the liner installation are occurring in phases at the site. Phased closure involves placement of a soil cover (cap) over the existing landfill, reconstruction of the landfill gas collection system (headers and laterals), drainage improvements, and revegetation. Construction of the new waste cells involves clearing and excavating the waste disposal area and installing the groundwater protection system (liner) prior to waste placement. The excavated soil is stockpiled on the landfill property in the locations described above for future use in daily, intermediate, and final cover of the landfill.

Construction of the Phase IIIB Liner Project is proposed for spring/summer 2014. The Phase IIIB Liner Project includes the excavation of approximately 1 million cubic yards (mcy) of soil. Approximately 300,000 to 400,000 cy of this excavated material is proposed to be used for final cover for landfill closure, which could occur as early as spring/summer 2015. Soil from the excavation would normally be sent to the north slope stockpile/borrow area for storage until used for daily cover or closure. However, to facilitate phased closure and reduce soil handling and hauling distances, RRWMD is proposing to temporarily stockpile the excavated material in temporary cover soil stockpile areas (temporary southeast stockpile areas) at the southeast corner of the landfill (Figure 2). The proposed stockpile locations are within the proposed landfill phased closure area. The proposed temporary southeast stockpile areas are within the permitted landfill disturbance area over the landfill waste footprint. The stockpiles would occupy a total area of approximately 9.09 acres including a small area within the coastal zone (approximately 5.43 acres). The overall dimensions of the main stockpile area would be approximately 750 feet by 450 feet. Utilizing the temporary southeast stockpile areas will be more efficient than stockpiling in the north stockpile area, as it is closer to the area where the material will be used as final cover. Use of the temporary southeast stockpile areas will reduce the number of trucks/scrapper trips and the hauling distance that would otherwise be required to move the material from the north stockpile/borrow area to the proposed phased closure project area. The areas beneath the proposed stockpile areas would also be included in the phased closure.

3.0 Changes in Project Impacts

3.1 Geology

The Tajiguas Landfill Environmental Documents evaluated geologic impacts from expansion of the landfill including excavation of the expansion areas, waste placements, cut and fill slopes, stockpiling, etc. Geologic hazards analyzed included fault rupture (Class III), liquefaction (Class III), slope failure of cut slopes (e.g., landslides) (Class III), slope failure of waste fill slopes (Class II), erosion and sedimentation (Class III), collapsible soils or expansive soils (Class II), and differential settlement (Class III). Measures to address the geohazards included detailed slope stability reports, restrictions on cut slopes (not to exceed 2: 1 unless specified in the slope stability report), excavation of expansive soils, and construction methods to avoid shallow landslides.

Temporary Southeast Stockpile Areas

Temporary use of the proposed southeast final cover stockpile areas would not result in any changes to the geologic analysis, as there will not be any change in excavation on-site. Cover materials will be temporarily stockpiled on the proposed southeast stockpile areas before being used as cover material and the areas underneath the stockpiles will also be closed. As described

in the Landfill environmental documents, best management practices (BMP) such as wattles and vegetation would be used to stabilize and prevent erosion of the stockpile areas and would be engineered to ensure the stability of the stockpile slopes.

3.2 Water Resources

The Tajiguas Landfill Environmental Documents evaluated impacts to water resources including surface flow, water use and water quality, groundwater use and water quality associated with operations and with closure activities and following closure. With ongoing implementation of erosion control measures, compliance with state storm water regulations (including preparation and implementation of a Storm Water Pollution Prevention Plan) and operation of the leachate collection system, water quality impacts from expansion of the landfill were found to be adverse but less than significant (Class III). Impacts associated with water use on-site were also found to be adverse but not significant (Class III).

Temporary Southeast Stockpile Areas

There are not expected to be any new water resource impacts from use of the temporary southeast stockpile areas. As mentioned in Section 3.4, the proposed stockpile areas will be sprayed with water (via a water truck) for dust control. On-site wells provide the landfill with water and the water demand for dust control would be within the volume previously analyzed in the Tajiguas Landfill Environmental Documents. Erosion control measures and other sediment control BMPs would continue to be implemented to ensure temporary stockpiling does not create new water quality impacts and any storm drain inlets in the vicinity of the stockpile would also be protected to reduce the potential for stockpiled sediment from being carried off-site.

3.3 Biological Resources

As disclosed in the Tajiguas Landfill Environmental Documents, the landfill expansion was identified as resulting in a number of significant and unavoidable (Class I) biological impacts. These impacts included: loss of an estimated 71 acres of habitat (including mature chaparral, degraded coastal sage scrub, coast live oak woodland, non-native annual grassland, bare rock, and ruderal/landscaped areas), loss of 100 to 150 coast live oak trees, impacts to sensitive plant species (e.g., Gaviota tar plant, Hoffman's night shade, Santa Barbara Honeysuckle, etc.), and impacts to sensitive wildlife species and habitats (California red legged frog, San Diego desert woodrat). Impacts to other wildlife ranged from significant but mitigable (e.g., American peregrine falcon, Cooper's hawk, white-tailed kite, Class II) to adverse but not significant (e.g., ringtails, mountain lion, Swainson's hawks, bank swallows, etc., Class III).

Measures to reduce these impacts included surveys to identify and relocate sensitive plants, protection and avoidance of riparian areas in upper Pila Creek (minimum 50-foot setback), oak tree protection and replacement, desert woodrat surveys, erosion control, landfill revegetation, implementation of a California red-legged frog management plan, limitations on lighting, and litter control.

Temporary Southeast Stockpile Areas

The proposed temporary southeast stockpile areas would not result in changes to the biological impact analysis contained in the Tajiguas Landfill Environmental Documents. The proposed stockpile areas are located on top of the refuse footprint, in areas already disturbed by landfill operations and that do not support sensitive habitats or wildlife species.

3.4 Nuisances

Nuisance related impacts identified in association with the Tajiguas Landfill Environmental Documents included disease carrying vectors, birds, odors, litter, illegal dumping, and dust. The impacts were considered to be significant but mitigable (Class II) with implementation of measures such as good housekeeping procedures, bird management, litter control, dust control, and odor control.

Temporary Southeast Stockpile Areas

The temporary southeast stockpile areas of the landfill will not result in any change to the nuisance impacts analysis in the Landfill Environmental Documents. The stockpiles will contain clean dirt excavated from the Phase IIIB liner area and will not create any new impacts associated with vectors, birds, odor, or illegal dumping. The proposed southeast stockpile areas are closer to the area where the stockpiled materials will be used as final soil cover, thus reducing the distance of hauling necessary for the project. Consistent with current dust control practices, the proposed stockpile areas would be sprayed with water to control fugitive dust. As stated above, standard nuisance control measures will also continue to be implemented for the duration of the project.

3.5 Land Use

The Tajiguas Landfill Expansion and Reconfiguration were found to be consistent with all applicable policies of the Santa Barbara County Comprehensive Plan and Local Coastal Program Plan and consistent with the provisions of the County of Santa Barbara Inland Zoning Ordinance (Article III).

Temporary Southeast Stockpile Areas

The proposed temporary southeast stockpile areas would be partially located within the coastal zone. Within the coastal zone, the Tajiguas Landfill is a legal non-conforming use that predates CEQA and the Coastal Act. The Planning Department has determined in the past that activities and operations that support this existing non-conforming use do not require new coastal development permits and within the inland areas the landfill is exempt for the Land Use Development Code. The temporary southeast stockpile areas would be used to stockpile soil that would be used for closure of portions of the landfill both within the coastal zone and within the inland area. Final closure of the landfill is part of historic operation of the landfill and therefore part of this legal non-conforming use. Therefore, the proposed southeast stockpile areas would be consistent with all applicable policies of the Santa Barbara County Comprehensive Plan and in compliance with the County Inland Zoning Ordinance.

3.6 Visual Resources/Aesthetics

Views of the Tajiguas Landfill are limited due to its isolated location and intervening topography, and visual impacts associated with the Tajiguas Landfill Project were identified as

significant and unavoidable in the Tajiguas Landfill Environmental Documents from several public viewing locations.

Due to the significant terrain modification and the visibility of the site from several public viewing locations, visual impacts associated with the landfill expansion (during operations and during and after closure) were determined to be significant and unavoidable (Class I). Implementation of EIR measures such as recontouring the landfill to blend in with the natural terrain and revegetating the landfill cover would help reduce but not eliminate this significant visual impact. Impacts from lighting were determined to be significant but mitigable (Class II) with restrictions of hours on operation and lighting.

Temporary Southeast Stockpile Areas

The proposed temporary southeast stockpile areas would not contribute to any change to the previously disclosed visual impacts. The stockpiles would be situated on a lower landfill deck area. The maximum elevation of the stockpiles would be 496 feet (msl), which is below the existing top deck elevation of approximately 580 feet (msl) and the permitted top deck elevation of 620 feet (msl).

3.7 Noise

As identified in the Environmental Documents for the Tajiguas Landfill, noise impacts associated with operations, blasting, and closure activities were determined to be adverse but less than significant (Class III) due to the distance to sensitive receptors and the intervening topography. In general, noise sensitive land uses are limited in proximity to the Tajiguas Landfill. The landfill property is bounded by the county-owned Baron Ranch to the east, the Los Padres National Forest to the north, and Cañada de la Huerta (site of the former Shell Hercules Plant which is currently undergoing remediation) to the west. Other land uses in the project area include the Arroyo Hondo Preserve located approximately 1,100 feet west of the proposed project area. The preserve also borders the Tajiguas Landfill property to the north and a hiking trail (Upper Outlaw Trail) on the Preserve is located approximately 2,000 feet to the northwest of the proposed project area and runs along a ridge which forms the boundary between Arroyo Hondo and the Tajiguas Landfill Property. The preserve is not considered a noise sensitive land use pursuant to County definitions. Measures included in the Environmental Documents to further reduce noise impacts include maintenance of landfill equipment (i.e., muffling and shielding intakes and exhausts), restrictions on blasting, and limiting activity to existing hours of operation.

Temporary Southeast Stockpile Areas

The proposed temporary southeast stockpile areas would not result in any changes to the noise analysis contained in the Tajiguas Landfill Environmental Documents. Activities necessary to complete phased closure including final grading, placement of final cover, and revegetation of the landfill were considered in the prior noise analysis. While the stockpile location will be closer to the proposed location of a residence on the Hart property to the south, equipment operations to bring soil to the closure area would occur whether the stockpile material is at the proposed location or at the north slope stockpile/borrow area. The temporary southeast stockpile areas are closer to the area to be closed with the final cover soil which will result in a shorter hauling distance, and generate noise for a shorter period of time. Stockpiling would occur during

the landfill's existing permitted hours of operation. Noise impacts would remain adverse but less than significant (Class III).

4.0 Other Environmental Issue Areas

The previous Environmental Documents, disclosed that the Tajiguas Landfill Expansion Project would result in significant and unavoidable (Class I) impacts to air quality impacts (significant NO_x and PM₁₀ emissions and exceedance of the carcinogenic risk significance threshold). The documents also identified significant but mitigable (Class II), and adverse but less than significant (Class III) impacts, to traffic and traffic safety. Impacts to these environmental issue areas are not changed as a result of the stockpile on the southeast portion of the current landfill (although a shorter hauling distance resulting from using the proposed southeast stockpile will reduce emissions, the impacts for the Tajiguas Landfill Expansion Project will remain the same). Thus, the existing Tajiguas Landfill Environmental Documents remain adequate to disclose impacts for these issue areas.

5.0 Findings

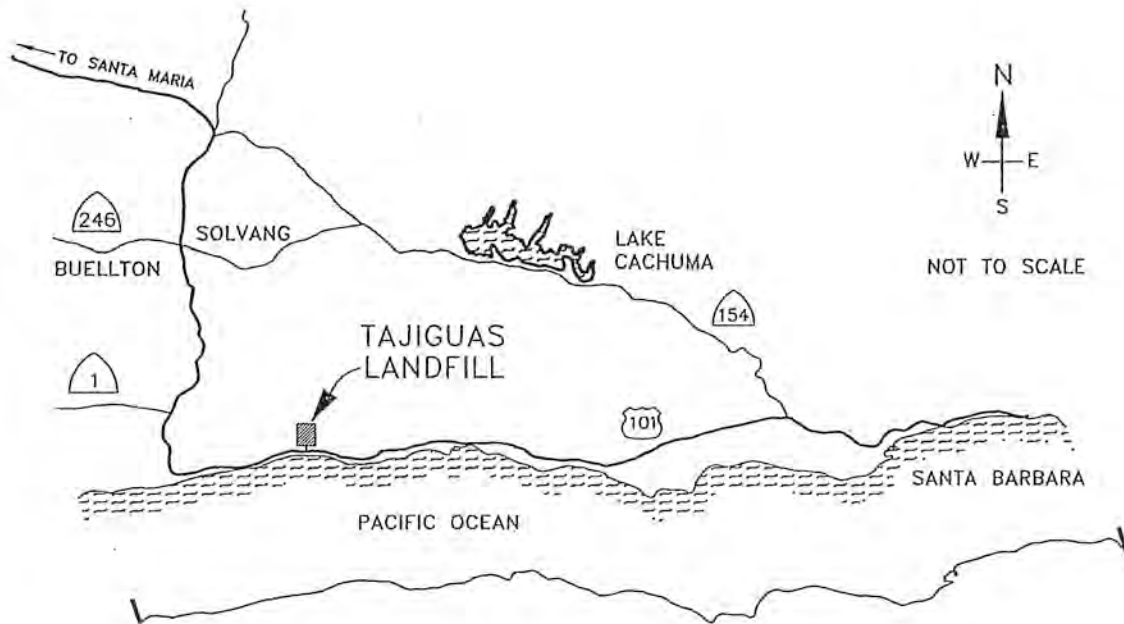
The Planning and Development Department concludes that the previous environmental documents may be used to fulfill the environmental review requirements of the current project. Because the current project meets the conditions for the application of State CEQA Guidelines, Sections 15162, preparation of a new EIR is not required.

Discretionary processing of the Tajiguas Landfill Temporary Southeast Stockpile Areas may now proceed with the understanding that any substantial changes in the proposal may be subject to further environmental review.

Attachments:

Figure 1 - Regional Project Location

Figure 2 - Site Map



COUNTY OF SANTA BARBARA
 RESOURCE RECOVERY AND
 WASTE MANAGEMENT DIVISION

FIGURE 1
 TAJIGUAS LANDFILL
 REGIONAL LOCATION MAP

Coastal Devel. Permit No. 85-CDP-160
Building Permit No. _____

COASTAL DEVELOPMENT PERMIT

On July 23, 1985, The Resource Management Department of the County of Santa Barbara granted to S.B. County - Public Works - Solid Waste this permit, VALID FOR ONE YEAR, for the development described below, subject to the attached standard conditions, and the listed special conditions, if any.

Approved project: 10' x 60' Portable Truck Scale And Portable Gate House

Parcel # and Project Address: 81-150-21; 14740 Calle Real (Tajiguas Landfill)

Special conditions: 1. Project will be located entirely within County road easement.

2. Grading will be limited to 100 cubic yards.

Note:

1. The approval of this project shall not be held to permit or to be an approval of a violation of any provision of any County Ordinance or State Law.
2. Action of the Resource Management Department on this Coastal Development Permit shall become final after ten (10) calendar days of the approval date during which time an appeal may be filed in accordance with Sec. 35-182.2 (Appeals) of the Coastal Zoning Ordinance.

IMPORTANT: THIS PERMIT IS NOT VALID UNLESS AND UNTIL WHITE COPY OF THE PERMIT WITH THE SIGNED ACKNOWLEDGEMENT HAS BEEN RETURNED TO RESOURCE MANAGEMENT. PINK COPY MUST BE POSTED IN A PROMINENT PLACE ON THE SUBJECT PROPERTY

Approved By:


(Signature)

July 23, 1985
(Date)

Acknowledgment: The undersigned permittee acknowledges receipt of this permit and agrees to abide by all terms and conditions thereof.


(Signature)

August 7, 1985
(Date)

RESOURCE MANAGEMENT DEPARTMENT 123 E. ANAPIMU ST. SANTA BARBARA 93101
963-7135

5146R

EXHIBIT 7

Units-return Yellow-file copy Pink-post on property Goldenrod-applicant copy

85-CDP-160

COUNTY OF SANTA BARBARA

123 E. ANAPAMU ST.
SANTA BARBARA,
CALIFORNIA 93101
AREA CODE 805
863-7115



EDWARD J. MARINI
Assistant Director
(Public Works)

WILLIAM G. MENCHEN
Assistant Director
(Roads)

DEPARTMENT OF PUBLIC WORKS

CHARLES F. WAGNER
Director

July 18, 1985

Ms Dianne Guzman, Director
Resource Management Department
123 East Anapamu Street
Santa Barbara, CA 93101

Dear Ms. Guzman:

The Public Works Department - Solid Waste Management Division is proposing the installation of a truck weighing scale at the Tajiguas Landfill. The scale will be installed within a road easement granted to the County as depicted in the attached assessors map and described in Exhibit C. I have attached a letter from the present owner of the parcel containing the road easement granting permission for the installation of the scale within the easement.

The installation will consist of placing a ten foot by sixty foot portable truck scale on concrete piers, constructing an A. C. approach and exit, locating a portable gatehouse and contracting with Southern California Edison for an electrical hookup. I estimate the grading requirements at less than one hundred cubic yards. The longitudinal centerline of the scale will be approximately ten feet east of the landfill access road and twenty-three feet west of an existing drainage channel. The only vegetation that would be impacted are weeds that are presently growing the area where the scale will be located.

Please contact me at Ext. 7614 if I can be of help or answer any questions.

Sincerely,

Chris Wilson

Chris Wilson
Staff Engineer

CW/dw

NOTICE OF PENDING DECISION/ INTENT TO ISSUE AN APPEALABLE COASTAL DEVELOPMENT PERMIT (CDP)

(Subsequent to a previous discretionary approval)

Case No.: 95-CDP-118 Planner: Brian Baca
Project Name: Tajiguas Landfill Energy Project
Project Address: 14470 Calle Real, Santa Barbara, CA
A.P.N.: 081-150-019, 081-150-026
Prior Discretionary Case No.: 95-CP-046

Initials: *BF*



The Planning and Development Department (P&D) intends to grant final approval and issue this Coastal Development Permit for the development described below, based upon the required findings and subject to the attached terms and conditions.

START OF PUBLIC COMMENT PERIOD/POSTING DATE: June 6, 1998

FINAL COUNTY APPROVAL DATE: June 12, 1998

COASTAL COMMISSION APPEAL PERIOD: The County's final approval of this project can only be appealed to the California Coastal Commission by the applicant, an aggrieved person, or any two members of the Coastal Commission (Coastal Act Sec. 30603). The Coastal Commission 18 working day appeal period will commence on the day after their receipt of the County's Notice of Final Approval. An appeal must be filed with the Coastal Commission at 88 South California St., Suite 200, Ventura, CA 93001. Please contact California Coastal Commission regarding the timing of the appeal period.

ESTIMATED DATE OF PERMIT ISSUANCE: (if no appeal filed) June 28, 1998

PUBLIC COMMENTS: You may submit written or oral comments on this pending decision to the project planner at P&D, 125 East Anapxmu Street, Santa Barbara, CA 93101, prior to the Final County Approval Date. Comments submitted after or on the Final County Approval Date will not be accepted. If you have questions regarding this project please contact the project planner at 588-2004

PROJECT DESCRIPTION SUMMARY: See Attachment A.

PROJECT SPECIFIC CONDITIONS:

See Attachment A.

TERMS OF FINAL APPROVAL:

1. Posting Notice. A weather-proofed copy of this Notice, with Attachments, shall be posted in three (3) conspicuous places along the perimeter of the subject property. At least one (1) notice shall be visible from the nearest street. Each copy of this Notice shall remain posted continuously until the Date of Permit Issuance. (Art. II Sec. 35-161.3.)

Case #: 95-CDP-118

Project Name: Tajiguas Landfill Energy Project

Project Address: Tajiguas Municipal Landfill

APN: 081-150-019, 081-150-026, 081-150-021

ATTACHMENT A CONDITIONS OF APPROVAL

STANDARD CONDITIONS

1. Notice of Receipt and Acknowledgement: The permit is not valid and construction shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to Planning & Development.
2. Expiration: If construction has not commenced, the permit will expire two (2) years from the date on which Planning & Development issued the permit. Construction shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Compliance: All construction must occur in strict compliance with the proposal set forth in the application for permit, subject to any special conditions as listed. Any deviation from the approved plans must be reviewed and approved by Planning & Development staff.
4. Interpretation: Any question of intent or interpretation of any condition will be resolved by the Director of Planning & Development. The permit may be assigned to any qualified person provided assignee files with Planning and Development an affidavit accepting all terms and conditions of the permit.
5. Terms and Conditions Run with the Land: These terms and conditions shall be perpetual. It is the intent of Planning & Development and the permittee to bind all future owners and possessors of the property to the terms and conditions.

PROJECT SPECIFIC CONDITONS

1. This Coastal Development Permit is based upon and limited to compliance with the project description and conditions of approval set forth below. Any deviations from the project description, exhibits or conditions must be reviewed and approved by the County for conformity with this approval. Deviations may require approved changes to the permit and/or further environmental review. Deviations without the above described approval will constitute a violation of permit approval.

The project description is as follows:

The proposed project would include a landfill gas collection system connected to an electrical power plant and/or a gas-burning flare. Under the flare-only option, the project would be comprised solely of a system to collect and then burn landfill gas, an air pollutant currently emitted from the landfill. Under the power generation option, this facility would result in the thermal destruction of landfill gas and the generation of electricity for sale to Southern California Edison Company. Landfill gas, primarily methane produced through the decomposition of organic

matter in the refuse, would be collected through a network of vertical and horizontal wells installed within the buried solid waste. This gas would be used as the fuel to power an engine which would generate electricity. A more detailed description of the facility is presented below. The gas collection and destruction system would be the same for a flare-only operation except that an engine generator would not be installed.

Gas collection would be accomplished through a network of wells and pipelines installed in the solid waste. Vertical wells up to 100 feet deep would be drilled into the existing (i.e. already buried) solid waste. Horizontal wells will be installed with future refuse as it is deposited from the initiation of the project through the completion of the landfill. After sufficient refuse covers the horizontal wells, they will be connected to the collection system piping. This piping is connected to an electric-motor driven blower or fan which draws a vacuum on the piping and the wells. The air pressure within the collection system is maintained at a level below atmospheric pressure. This results in the landfill gas flowing into the wells rather than migrating through the solid waste and into the atmosphere.

The electrical generation facility would consist of various components housed in a single building to be located at the base or southern end of the landfill adjacent to the existing maintenance buildings. The facility would include the collection system blower, a flare for burning gas when the engine generator is not operating, one engine generator, electrical transformers and switch gear and other supporting equipment and vessels. This equipment would destroy landfill gas either through combustion in the engine generator or burning it in the flare whenever the engine is not operating. If there is more landfill gas produced than can be used by the engine, the excess would be burned in the flare.

The facility would encompass about 7,500 square feet enclosed with an eight-foot high chain-link fence with screening slats. A metal Butler-type building approximately 3,850 square feet in size would house the engine generator, controls and switch gear. The collection system main header pipe would enter the facility and go through a knock-out drum that removes particles and moisture. Upon initial start-up of the collection system and periodically thereafter, the moisture or gas condensate, would be chemically analyzed to determine if it contains hazardous constituents. Approximately 500-800 gallons per day of gas condensate would be collected and used on the landfill site for dust control if determined to be non-hazardous by the Local Enforcement Agency and the Regional Water Quality Control Board. If determined to be hazardous, the gas condensate would be disposed or treated according to standard regulations pursuant to Title 22, California Code of Regulations. The landfill gas would next pass through the blower and a cooler and then be delivered to the engine as fuel.

Equipment located outside the building would include the radiators for the engine generator, the gas cooling system, transformers and the connection with Southern California Edison. The utility connection would consist of an overhead electrical line about 200-feet long extending from the facility to an existing power pole.

The facility would be unmanned and would operate 24 hours per day. Periodic inspections and maintenance would be performed on the equipment. An automated alarm and shutdown system linked to the telephone would monitor system performance and notify company operators of alarms or shutdowns. Response time of company representatives would be about two hours.

The flare proposed to be used would meet federal regulation for air emissions. The engine selected has the best available control technology (BACT) as determined by the California Air Pollution Control Officers Association (CAPCOA) BACT Clearinghouse. The engine has a destruction efficiency of about 97%. The flare would have a 99% destruction efficiency.

The grading, development, use, and maintenance of the property, the size, shape, arrangement, and location of structures, parking areas and landscape areas, and the protection and preservation of resources shall conform to

the project description above and the hearing exhibits and conditions of approval below. The property and any portions thereof shall be sold, leased or financed in compliance with this project description and the approved hearing exhibits and conditions of approval hereto. All plans (such as Landscape and Tree Protection Plans) must be submitted for review and approval and shall be implemented as approved by the County.

2. If the Zoning Administrator determines at a noticed public hearing that the permittee is not in compliance with any conditions of this permit pursuant to the provisions of section 35-169.9 of Article II of the Santa Barbara County Code, the Zoning Administrator may, in addition to revoking the permit pursuant to said section, amend, alter, delete or add conditions to this permit.

3. The applicant's acceptance of this permit and/or commencement of construction and/or operations under this permit shall be deemed acceptance of all conditions of this permit by the permittee.

4. The Zoning Administrator's approval of this Appealable CDP shall expire two years from the date of approval or if appealed, the date of action by the Board of Supervisors or the California Coastal Commission on the appeal, if the permit for use, building or structure permit has not been issued.

5. The use and/or construction of the building or structure, authorized by this approval cannot commence until the Coastal Development Permit and necessary Building Permits have been issued. Prior to issuance of the Coastal Development Permit, all of the project conditions that are required to be satisfied prior to issuance of the Coastal Development Permit must be satisfied. Plans accompanying this Coastal Development Permit shall contain all project conditions.

6. Developer shall defend, indemnify and hold harmless the County or its agents, officers and employees from any claim, action or proceeding against the County or its agents, officers or employees, to attack, set aside, void, or annul, in whole or in part, the County's approval of the Coastal Development Permit. In the event that the County fails promptly to notify the applicant of any such claim, action or proceeding, or that the County fails to cooperate fully in the defense of said claim, this condition shall thereafter be of no further force or effect.

7. In the event that any condition imposing a fee, exaction, dedication or other mitigation measure is challenged by the project sponsors in an action filed in a court of law or threatened to be filed therein which action is brought within the time period provided for by law, this approval shall be suspended pending dismissal of such action, the expiration of the limitation period applicable to such action, or final resolution of such action. If any condition is invalidated by a court of law, the entire project shall be reviewed by the County and substitute conditions may be imposed.

**NOTICE OF PENDING DECISION/
INTENT TO ISSUE A
COASTAL DEVELOPMENT PERMIT (CDP)**

Case No.: 98-CDP-245 Planner: Brian R. Baca Initials *BRB*
Project Name: Spray Irrigation and Water Storage, Tajiguas Landfill
Project Address: 14470 Calle Real (US 101, 26 miles w. of Sta. Barbara)
A.P.N.: 081-150-019, -015, -021



Planning & Development (P&D) *intends to grant final approval and issue* this Coastal Development Permit for the development described below, based upon the required findings and subject to the attached terms and conditions.

START OF PUBLIC COMMENT PERIOD/POSTING DATE: October 22, 1998

FINAL APPROVAL DATE/COUNTY APPEAL PERIOD STARTS: October 30, 1998

COUNTY APPEAL PERIOD ENDS: November 9, 1998

DATE OF PERMIT ISSUANCE: *(if no appeal filed)* November 10, 1998

PUBLIC COMMENTS: Written or oral public comments on this pending decision may be submitted to the project planner, prior to the Final Approval Date. Comments submitted on or after the Final Approval Date will not be accepted. If you have questions regarding this project please contact the project planner at 568-2004.

APPEALS: The final approval of this project may be appealed to the Planning Commission by the applicant, owner, or any aggrieved person. The written appeal must be filed with P&D at 123 East Anapamu Street, Santa Barbara, CA 93101 by 5:00 p.m. on or before the date the County Appeal Period Ends as identified above (Art. II Sec. 35-182.) Note: This Permit cannot be appealed to the California Coastal Commission.

PROJECT DESCRIPTION SUMMARY:

The Public Works Department proposes to utilize two existing offsite water tanks (400,000 gallons and 220,000 gallons in capacity) to store water obtained from the existing subsurface cutoff trench (leachate recovery system) located at the toe of the Tajiguas Landfill. The water would be used for landfill dust control and spray irrigation.

PROJECT SPECIFIC CONDITIONS:

See Attachment A and Attachment B.

TERMS OF FINAL APPROVAL:

**ZONING PERMIT
ISSUED**

SANTA BARBARA CO. PLANNING & DEVELOPMENT

1. Posting Notice. A weather-proofed copy of this Notice, with Attachments, shall be posted in three (3) conspicuous places along the perimeter of the subject property. At least one (1) notice shall be visible from the nearest public street. Each copy of this Notice shall remain posted continuously until the Date of Permit Issuance. (Art. II Sec. 35-181.3)
2. Mailed Notice. A copy of this Notice, with Attachments, shall be mailed to all property owners and residents within 100 feet of the subject property, the Coastal Commission, and all persons who have filed a written request and supplied P&D with self-addressed stamped envelopes. (Sec. 35-181.3.)

3. Amendment/Extension. P&D reserves the right to change, amend or extend this pending decision prior to the Final Approval Date, based upon comments received from the public or other interested parties. In such event, an amended notice shall be posted for the full ten (10) calendar day Appeal Period.

4. Date of Final Approval. If no changes to the project are made pursuant to public comment, this approval shall become final on the date indicated above, provided that all terms and conditions have been met.

TERMS OF PERMIT ISSUANCE:

1. Work Prohibited Prior to Permit Issuance. No work, development, or use intended to be authorized pursuant to this approval shall commence prior to issuance of this Coastal Development Permit and/or any other required permit (e.g., Building Permit). Warning! This is not a Building/Grading Permit.

2. Date of Permit Issuance. This Permit shall be deemed effective and issued on the Date of Permit Issuance as identified above, provided:

- a. All terms and conditions including the requirement to post notice have been met and this Notice/Permit has been signed,
- b. The Affidavit of Posting Notice was returned to P&D prior to the expiration of the Appeal Period (Failure to submit the affidavit by such date shall render the approval null and void), and
- c. No appeal is filed.

3. Time Limit. Failure to obtain a required construction, demolition, or grading permit and to lawfully commence development within two (2) years of permit issuance, shall render this Coastal Development Permit null and void. A Coastal Development Permit that follows an approved Final Development Plan (FDP) shall be rendered null and void on the date the FDP expires even if the FDP expiration date is within two years of the Coastal Development Permits issuance.

NOTE: This Notice of Pending Decision/Intent to Issue a Coastal Development Permit serves as the Coastal Development Permit once the permit is deemed effective and issued. Issuance of a permit for this project does not allow construction or use outside of the project description, terms or conditions; nor shall it be construed to be an approval of a violation of any provision of any County Policy, Ordinance or other governmental regulation.

OWNER/APPLICANT ACKNOWLEDGMENT: Undersigned permittee acknowledges receipt of this pending approval and agrees to abide by all terms and conditions thereof.

Chas Wilson

[Handwritten Signature]

11/22/98
Date

Print Name

Signature

ZONING PERMIT
ISSUED

SANTA BARBARA CO. PLANNING & DEVELOPMENT

Planning & Development Issuance by:

[Handwritten Signature]

11-12-98

Planner

Date

**NOTICE OF PENDING DECISION/
INTENT TO ISSUE A
COASTAL DEVELOPMENT PERMIT (CDP)**

Case No.: 01CDP-00000-00076 Planner: David Swenk Initials *DS*
Applicant Name: Santa Barbara County Flood Control District
Project Name: Canada de la Pila Creek Flood Control Maintenance
Project Address: N/A Canada de la Pila Creek
A.P.N.: 081-150-032
Previous Discretionary Case: 97-CP-063 RV01



Planning & Development (P&D) *intends to grant final approval and issue* this Coastal Development Permit for the development described below, based upon the required findings and subject to the attached terms and conditions. This project is located within the Coastal Zone.

FINAL COUNTY APPROVAL DATE: August 21, 2001

POSTING DATE: August 21, 2001

COASTAL COMMISSION APPEAL PERIOD: The County's final approval of this project can only be appealed to the California Coastal Commission by the applicant, an aggrieved person, or any two members of the Coastal Commission (Coastal Act Sec. 30603). The Coastal Commission 10 working day appeal period will commence on the day after their receipt of this Notice. An appeal must be filed with the Coastal Commission at 89 South California St., Suite 200, Ventura, CA 93001. Please contact California Coastal Commission regarding the timing of the appeal period.

ESTIMATED DATE OF PERMIT ISSUANCE: *(if no appeal filed)* August 31, 2001

PROJECT DESCRIPTION SUMMARY: Routine Flood Control Maintenance of Canada de la Pila Creek. Please see attached project description for details.

PROJECT SPECIFIC CONDITIONS: See attached.

TERMS OF FINAL APPROVAL:

- 1. Posting Notice.** A weather-proofed copy of this Notice, with Attachments, shall be posted in three (3) conspicuous places along the perimeter of the subject property. At least one (1) notice shall be visible from the nearest public street. Each copy of this Notice shall remain posted continuously until the **Date of Permit Issuance**. (Art. II Sec. 35-181.3)
- 2. Amendment/Extension.** P&D reserves the right to change, amend or extend this pending decision prior to the **Final County Approval Date**, based upon comments received by the public or other interested parties. In such event, an amended notice shall be provided and the CCC Appeal Period will run for a full ten (10) working days.

3. **Date of Final County Approval.** Be advised if no changes to the project are made pursuant to public comment, this approval shall become final on the date indicated above provided that all terms and conditions have been met.

TERMS OF PERMIT ISSUANCE:

1. **Work Prohibited Prior to Permit Issuance.** No work, development, or use intended to be authorized pursuant to this approval shall commence prior to issuance of this Coastal Development Permit and/or any other required permit (e.g., Building Permit). **Warning! This is not a Building/Grading Permit.**

2. **Date of Permit Issuance.** This Permit shall be deemed effective and issued on the **Date of Permit Issuance** as identified above, provided:

- a. All terms and conditions including the requirement to post notice have been met and this Notice/Permit has been signed,
- b. The Affidavit of Posting Notice was returned to P&D prior to the expiration of the Appeal Period (Failure to submit the affidavit by such date shall render the approval null and void), and
- c. No appeal is filed with the Coastal Commission.

3. **Time Limit.** Failure to obtain a required construction, demolition, or grading permit and to lawfully commence development within two (2) years of permit issuance, shall render this Coastal Development Permit null and void. A Coastal Development Permit that follows an approved Final Development Plan (FDP) shall be rendered null and void on the date the FDP expires even if the FDP expiration date is within two years of the Coastal Development Permit issuance, unless substantial physical construction has been completed.

NOTE: This Notice of Pending Decision/Intent to Issue a Coastal Development Permit serves as the Coastal Development Permit once the permit is deemed effective and issued. Issuance of a permit for this project does not allow construction or use outside of the project description, terms or conditions; nor shall it be construed to be an approval of a violation of any provision of any County Policy, Ordinance or other governmental regulation.

OWNER/APPLICANT ACKNOWLEDGMENT: Undersigned permittee acknowledges receipt of this pending approval and agrees to abide by all terms and conditions thereof.

Larry Fausett Larry L. Fausett 8/21/01
Print Name Signature Date

Planning & Development Issuance by:

Davis Swenk 8/21/01
Planner Date

ATTACHMENT A
CONDITIONS OF APPROVAL
01CDP-00000-00076

This Coastal Development Permit is based upon and limited to compliance with the project description, Exhibit A, and conditions of approval set forth below. Any deviations from the project description, exhibits, or conditions must be reviewed and approved by the County for conformity with this approval. Deviations may require approved changes to the permit and/or further environmental review. Deviations without the above described approval will constitute a violation of permit approval.

1. PROJECT DESCRIPTION

The project is for a Coastal Development Permit to conduct annual maintenance procedures in Canada de la Pila Creek. The project calls for Flood Control routine maintenance in two general activities; desilting and shaping.

Channel shaping is typically done to reduce bank erosion. Using a dozer, loader, or excavator, streambed material or rip-rap is placed against eroding banks. Bank stabilization frequently occurs on the outside of a bend in the creek where it is most susceptible to erosion. Bank stabilization is usually proposed where structures or specimen trees are threatened. Revegetation of the eroding banks occurs when feasible to provide additional bank stabilization and riparian habitat. Heavy equipment accesses the creek at existing Flood Control ramps or ramps will be cut into banks in the vicinity of the proposed maintenance.

Desilting involves removal of streambed material to increase the capacity of the creek. Creek capacity is reduced by deposition of stream sediments consisting of silt, sand, cobbles, and boulders. Desilting frequently occurs in the downstream reaches of the creeks where the grade is very flat. Desilting also occurs under Highway 101 and the adjacent frontage roads on many creeks. Some bridges obstruct high flows and further reduction of the capacity under the bridges due to sedimentation creates hazardous conditions. Desilting is done using cranes, gradalls, and/or loaders and dozers. The desilted material is hauled to suitable disposal sites after it has dewatered on-site. The material is typically made available to the public or hauled away by CALTRANS as many desilting projects take place under state roads.

A Litter Containment Work Plan (plan) has been developed for the Tajiguas Landfill as required by the Local Enforcement Agency (LEA) of the Integrated Waste Management Agency. The LEA has recently found that all components of the plan have been complied with. The LEA required the trash racks in the creek to remain in compliance with the plan. The current trash racks were constructed to comply with these plans, however, high flows associated with the past winter storms have caused bank erosion on either side of the trash racks. Maintenance of the trash racks and support structures is required to repair the banks and prevent further downcutting.

Using a small dozer, the streambed will be shaped to facilitate repair of the footings at each of the four trash racks to further reduce bank erosion and downcutting. The trash rack support structures will be keyed into the bank where erosion has occurred. This project will greatly improve the ability of the trash racks to trap litter before it is transported offsite to the ocean. Access will be taken at an existing ramp located immediately downstream of the culvert that runs under the landfill.

The California Regional Water Control Board (RWQCB) requires sediment control from the Landfill. The sediment basins improve water quality in Canada de la Pila creek by reducing turbidity in Canada de la Pila and at the discharge point at the Pacific Ocean. Sediment will be removed from the northern in-channel basin to retain capacity to control sediment from the back canyon area of Canada de la Pila. Sediment will be removed from the historical limits of the basin only. The creek bed upstream of the basin will be retained in its current, natural state.

Sediment will be removed using dozers, an excavator, loader and other equipment as required, loaded on to trucks and hauled to a stockpile area within the existing landfill operations area. The soil will be dried and used on the landfill as daily cover or as fill material. Access will be via existing access roads surrounding the basin.

PROJECT SPECIFIC CONDITIONS

1. Any Federally, State or locally listed species along with its supporting habitat shall be protected and avoided.
2. The District will obtain all necessary state or federal permits. **Plan Requirements:** Before operations commence, the District will ensure it has applied for and received all necessary permits associated with this project including the California Department of Fish and Game, California State Lands Commission, Regional Water Quality Control Board, California Coastal Commission, and the US Army Corps of Engineers. **Timing:** All permits will be issued before start of operations or upon written or oral approval of the said agencies. **Monitoring:** The District Engineer shall be responsible for obtaining any needed permits and ensuring compliance with any provisions set forth in said permits.
3. Shallow and deep aquatic habitats, including pools, plunge pools and riffles shall be retained and restored and wherever feasible established; where feasible, natural stream flow shall be maintained during flood control activities.
4. Major brushing, desilting, and shaping shall be justified by a needs analysis and appropriate technical engineering analysis. **Plan Requirements/Timing:** Shaping and other methods of channel realignment shall be minimized. All areas identified for major operations including but not limited to brushing, desilting, and shaping in the stream corridor shall be identified through assessment by the District and reviewed by the County Biologist or qualified staff prior to commencement of operations. Implementation of the plan shall be developed in accordance with a Creek Revegetation Plan identified in Project Condition #15. **Monitoring:** P&D shall review plans prior to commencement of operations.
5. Field personnel shall be informed of pertinent flood control and environmental objectives and policies, and they shall feedback field observations to their supervisors.
6. Field personnel shall be trained to recognize and avoid negatively affecting important plants, animals, and cultural resources. **Plan Requirements/Timing:** The District shall provide training utilizing Planning and Development Department Resource Specialists or a Planning and Development Approved Biologist to train field personnel in environmental resource identification prior to and during operations.

7. Where feasible, dragline and bulldozer desilting shall be limited to specific sediment basins.
8. Shaping and other methods of channel realignment shall be minimized.
9. Unneeded or infrequently used access ramps shall be removed and restored to a natural condition.
10. Preproject surveys, performed by an independent or County staff specialist approved by Resource Management and Flood Control, shall document all existing sensitive and/or significant resources. This document shall be provided to all appropriate agencies.
11. On-site monitoring shall protect and preserve all sensitive and/or significant resources, especially biological, geomorphic, and cultural, during desilting, shaping, and other maintenance activities.
12. Following project implementation, it shall be documented whether required mitigations were performed, whether they were effective, and whether further mitigation is needed. Monitoring records shall be kept and made available to the public upon request.
13. Where native or biologically beneficial vegetation is removed within riparian corridors or other wetlands, on-site vegetation shall be re-established, where feasible, to ensure no net loss of habitat value, other biological resource, or significant vegetated area.
14. If removal of native vegetation occurs, the District shall implement a creek revegetation plan. The plan shall include, but not be limited to the following measures:
 - A) All revegetation shall consist of native plant species endemic to riparian habitat and wetland areas. Invasive, non-indigenous plant species, including Barnyard grass (*Echinochloa crus-galli*), which tends to supplant native species shall not be used.
 - B) Planting will be maintained in good growing condition throughout the life of the project and, when necessary, shall be replaced with new plant materials to ensure continued compliance with applicable landscape requirements.

Plan Requirements: The Revegetation Plan for this permit shall be prepared by a qualified biologist or environmental specialist. The program shall specify that all upland areas on the subject site disturbed as a result of the project be planted and maintained for habitat restoration and erosion control purposes as soon as possible after disturbance has occurred. The Revegetation Plan for the Santa Barbara County Flood Control District Maintenance Program shall be used as a guide to revegetate the areas subject to revegetation. Disturbed areas within the streambed/channel that are not subject to perennial stream flow may also be planted and maintained with native plant species endemic to riparian habitat areas if necessary. **Timing:** Revegetation shall take place after the maintenance operation during recommended times for revegetation. **Monitoring:** Revegetation shall be monitored by a District biologist in accordance with the Revegetation Plan for Santa Barbara County Flood Control District Maintenance Program. Success of the revegetation shall be based on the Revegetation Plan and the California Department of Fish & Game 1601 agreement. Criteria for revegetation success over a 3-year period shall include survival rate and cover of native species.

15. Where on-site revegetation is infeasible, off-site revegetation shall mitigate vegetation loss at a site that is as close to the disturbed site as possible; there shall be no net loss of habitat value, other biological resource, or significant vegetated area. Approved and successful revegetation shall be considered mitigation for repetitive removal of vegetation from the disturbed site in perpetuity.
16. Soil containing willows and cattails will be stockpiled and placed in the maintenance area following desilting to serve as a seed source for revegetation.
17. Canopy vegetation shall be preserved and enhanced as a biological and flood control resource.
18. Bank vegetation and buffer zones shall be protected and enhanced; this includes native and beneficial non-native trees of all age classes, shrubs and herbs.
19. Wherever feasible and desirable, certain sensitive animals should be relocated prior to flood control activities. Relocation shall be to nearby appropriate habitat within the same watershed.
20. Potential adverse impacts to habitat and their associated dependent species shall be minimized. **Plan Requirements:** The environmental resource specialist shall conduct a survey of the project site each day prior to commencement of any maintenance activities to determine whether any sensitive wildlife species are present. If species are found which can be impacted a plan shall be developed by the environmental resource specialist which includes the following:
 - A) A methodology for observation of the species that includes a schedule of surveying prior to District activities and to coincide with periods of activity, including at night.
 - B) Criteria for determining an adverse impact is occurring.
 - C) Measures to be taken if adverse impacts occur and the procedures to follow in implementing these measures to include:
 - 1) Initiate a salvage and relocation program prior to any excavation/maintenance activities to move sensitive species and significant wildlife features (breeding bird nests etc.) by hand to safe locations elsewhere along the project reach.
 - 2) As appropriate, implement a resource avoidance program with sufficient buffer areas to ensure adverse effects to such resources are avoided.

Timing: The plan shall be prepared and approved by the District biologist prior to commencing dredging activities.

Monitoring: Monitoring will be done by the District biologist or a qualified ornithologist.

21. Flood Control activities that would impact fish shall not occur on creek or river reaches that are known to support fish during spawning and rearing season. Activities that would impact birds shall not occur on reaches of creeks, rivers or estuaries that are known to support sensitive riparian-dependent and estuary-

dependent birds if nesting and/or breeding activity has been identified. A pre-project survey to identify nesting and/or breeding activity shall be required for Flood Control activities during nesting season.

22. Desilting and shaping shall be limited to the period of lowest flow in intermittent and ephemeral streams. Where winter erosion is a factor, the early part of the dry season should be utilized.
23. Overhanging vegetation shall be encouraged consistent with the riparian corridor goals for canopy creation. Flood Control shall minimize the removal based on the potential heavy equipment passage along the creek inverts.
24. Herbicides, fuels, lubricants or equipment shall be stored, poured or refilled only outside of riparian corridors, channels, and estuaries.
25. Guidelines shall be adopted and implemented for herbicide, fuel, and lubricant spills, spill prevention, containment, monitoring, and clean-up.
26. Pumping the water from the basin will not occur until mid-July, following a survey by a biologist qualified in California red-legged frog identification, to confirm that the tadpoles have metamorphosed and have left the basin.
27. The basin will be allowed to dry and the sediment removed in the fall to avoid the California red-legged frog breeding season.
28. The southern basin will remain undisturbed during and following construction to serve as refugia for the red-legged frogs during desilting of the northern basin.
29. A qualified biologist shall survey for and relocate California red-legged frogs from the work area prior to each day's activities.
30. Mechanical equipment which minimizes impacts to channel beds shall be used whenever feasible.
31. Where appropriate, silt fences, settling basins, and other sediment traps shall be temporarily used downstream from shaping in perennial streams.
32. Where appropriate, silt fences, settling basins, and other sediment traps shall be temporarily used downstream from desilting in perennial streams.
33. Vehicle emissions shall be reduced by ensuring proper vehicle maintenance and by minimizing simultaneous vehicle use.
34. All possible vehicle use shall be curtailed during periods of expected poor air quality.
35. All on-site, adjacent landowners and current occupants shall be noticed and informed of and invited to comment on, flood control activities in their area.

36. Adjacent residents shall be notified prior to brushing activities; and where feasible, chainsaws and dozers shall only be used between 8 a.m. and 5 p.m.
37. Brushing equipment shall be maintained so that noise is as low as possible

OFFICE MEMORANDUM

To Imelda

Date 8-30-01

From Karl

In re Permits

Imelda,

Here are the permits for Pila Creek. I am still waiting for a letter from the Corps stating that this year's Annual Plan projects are consistent with our General Permit. Nevertheless, keep these on site + I'll let you know when I get the Corps letter. Please call if you have any questions. Karl 3443

ORAL messages waste your time and the time of the other person; they often cause annoying interruptions and are apt to be misunderstood or forgotten. Put it in writing.



Santa Barbara County Flood Control & Water Conservation District and Water Agency

123 E. Anapamu Street, Santa Barbara, California 93101

(805) 568-3440 Fax: (805) 568-3434

Web: <http://www.publicworkssb.org/>

Phillip M. Demery
Public Works Director

Thomas D. Fayram
Deputy Public Works Director

NOTICE OF FINAL ACTION

August 06, 2001

On August 06, 2001 Santa Barbara County took final action on the appealable development described below:

- Appealable Coastal Development Permit
- Appealable Coastal Development Permit 01CDP-00000-00076 following discretionary case # 97-CP-063 RV01.
- Discretionary action on a case type, case#

Project Applicant/Property Owner:

Santa Barbara County Flood Control District
123 E. Anapamu St., Santa Barbara, CA 93101
(805)568-3443

Project Description: The project is for a Coastal Development Permit to conduct annual maintenance procedures in Canada de la Pina Creek.

Location: The project involves APN 081-150-032 in the Goleta area, Santa Barbara County, California.

The receipt of this letter and the attached materials start the 10 working day appeal period during which the County's decision may be appealed to the Coastal Commission. Appeals must be in writing to the appropriate Coastal Commission district office.

Please contact David Swenk, the case planner at 934-6589 if you have any questions regarding the County's action or this notice.

David Swenk
Project Planner *by LF*

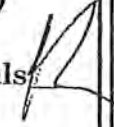
8/21/01
August 21, 2001

Attachments:

Coastal Development Permit
Final Action Letter dated October 28, 1999

cc: Applicant

**NOTICE OF PENDING DECISION/
INTENT TO ISSUE A
COASTAL DEVELOPMENT PERMIT (CDP)**

Case No.: 06CDP-00000-00116 Planner: Petra Leyva Initials: 
Applicant Name: County of Santa Barbara
Project Name: Tajiguas Landfill Entrance-Gas Station Demolition
Project Address: 14470 Calle Real
A.P.N.: 081-150-042
Zone District: AG-II-320
Application Filed: 10/04/06



Planning & Development (P&D) *intends to grant final approval and issue* this Coastal Development Permit for the development described below, based upon the required findings and subject to the attached terms and conditions. This project is located within the Coastal Zone.

START OF PUBLIC COMMENT PERIOD/POSTING DATE: October 11, 2006

FINAL APPROVAL (DECISION) DATE/COUNTY APPEAL PERIOD STARTS: October 18, 2006

COUNTY APPEAL PERIOD ENDS: October 30, 2006

DATE OF PERMIT ISSUANCE: *(if no appeal filed)* October 31, 2006

PUBLIC COMMENTS: Written or oral public comments on this pending decision may be submitted to the project planner prior to the **Final Approval Date**. Comments submitted on or after the **Final Approval Date** will not be accepted. If you have questions regarding this project please contact the project planner at.

APPEALS: The final approval of this project may be appealed to the Planning Commission by the applicant, an aggrieved person, or any two members of the Coastal Commission. The written appeal must be filed with P&D at 123 East Anapamu Street, Santa Barbara 93101 by 5:00 p.m. on or before the date the **County Appeal Period Ends** as identified above (Art. II Sec. 35-182.) **Note: This Permit cannot be appealed to the California Coastal Commission.**

ASSOCIATED CASE NUMBERS:

PROJECT DESCRIPTION SUMMARY: Demolition of abandoned gas station

PROJECT SPECIFIC CONDITIONS: Construction activity for site preparation and for future development shall be limited to the hours between 7:00 a.m. and 4:00 p.m., Monday through Friday. No construction shall occur on State holidays (e.g., Thanksgiving, Labor Day). Construction equipment maintenance shall be limited to the same hours. Non-noise generating construction activities such as interior painting are not subject to these restrictions.

TERMS OF FINAL APPROVAL:

1. **Posting Notice.** A weather-proofed copy of this Notice, with Attachments, shall be posted in three (3) conspicuous places along the perimeter of the subject property. At least one (1) notice shall be visible from the nearest public street. Each copy of this Notice shall remain posted continuously until the **Date of Permit Issuance**. (Art. II Sec. 35-181.3)

2. **Mailed Notice.** A copy of this Notice, with Attachments, shall be mailed to all property owners and residents within 100 feet of the subject property, the Coastal Commission, and all persons who have filed a written request and supplied P&D with self-addressed stamped envelopes. (Sec. 35-181.3.)

EXHIBIT 7d

3. Amendment/Extension. P&D reserves the right to change, amend or extend this pending decision prior to the **Final Approval Date**, based upon comments received from the public or other interested parties. In such event, an amended notice shall be posted for the full ten (10) calendar day Appeal Period.

4. Date of Final Approval. If no changes to the project are made pursuant to public comment, this approval shall become final on the date indicated above, provided that all terms and conditions have been met.

TERMS OF PERMIT ISSUANCE:

1. Work Prohibited Prior to Permit Issuance. No work, development, or use intended to be authorized pursuant to this approval shall commence prior to issuance of this Coastal Development Permit and/or any other required permit (e.g., Building Permit). **Warning! This is not a Building/Grading Permit.**

2. Date of Permit Issuance. This Permit shall be deemed effective and issued on the **Date of Permit Issuance** as identified above, provided:

- a. All terms and conditions including the requirement to post notice have been met and this Notice/Permit has been signed,
- b. The **Affidavit of Posting Notice** was returned to P&D prior to the expiration of the Appeal Period (Failure to submit the affidavit by such date shall render the approval null and void), and
- c. No appeal is filed.

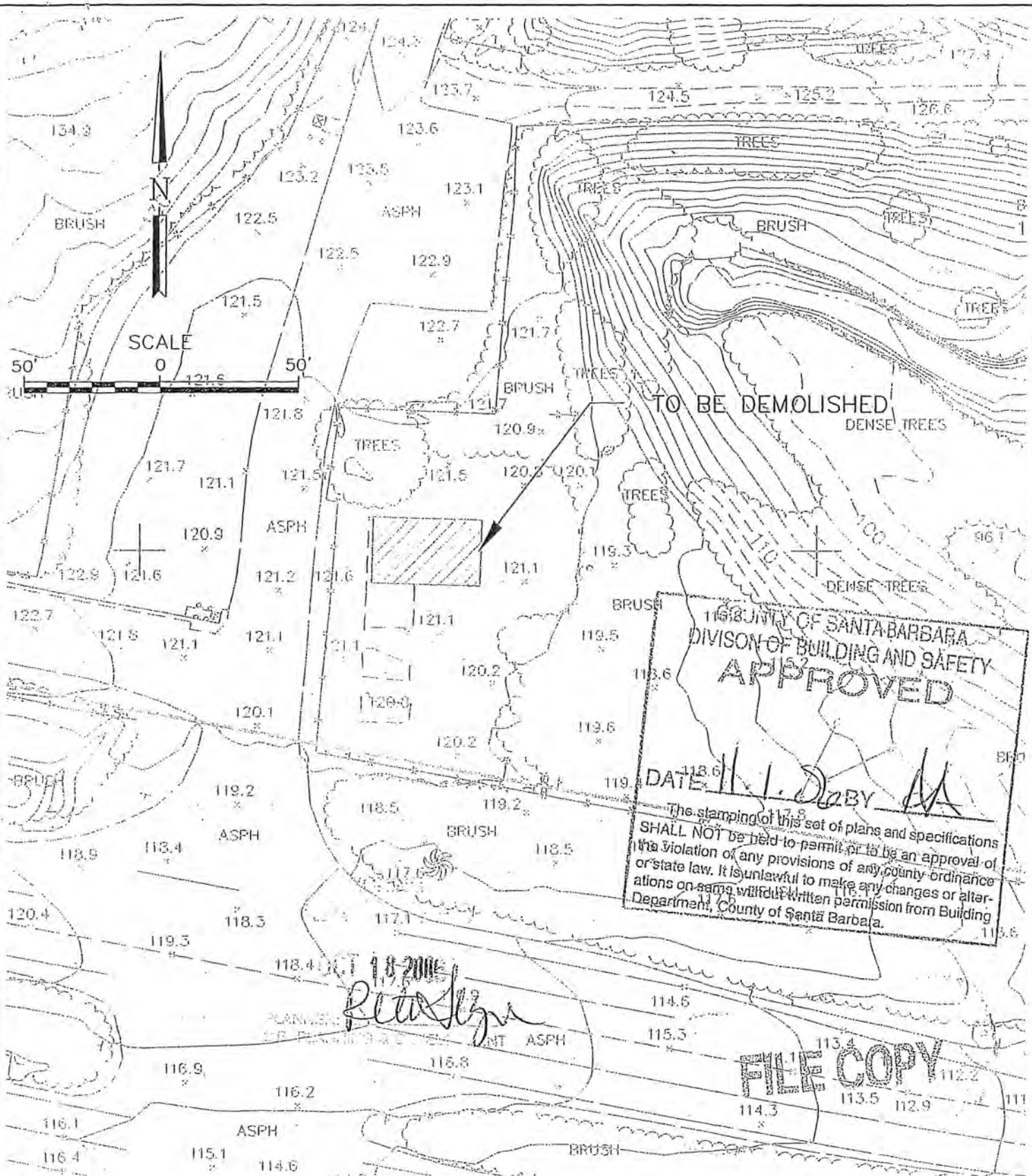
3. Time Limit. Failure to obtain a required construction, demolition, or grading permit and to lawfully commence development within two (2) years of permit issuance, shall render this Coastal Development Permit null and void. A Coastal Development Permit that follows an approved Final Development Plan (FDP) shall be rendered null and void on the date the FDP expires even if the FDP expiration date is within two years of the Coastal Development Permit issuance, unless substantial physical construction has been completed.

NOTE: This Notice of Pending Decision/Intent to Issue a Coastal Development Permit serves as the Coastal Development Permit once the permit is deemed effective and issued. Issuance of a permit for this project does not allow construction or use outside of the project description, terms or conditions; nor shall it be construed to be an approval of a violation of any provision of any County Policy, Ordinance or other governmental regulation.

OWNER/APPLICANT ACKNOWLEDGMENT: Undersigned permittee acknowledges receipt of this pending approval and agrees to abide by all terms and conditions thereof.

Jodi Leipner _____, 10/11/06
Print Name Signature Date

Planning & Development Issuance by:
_____ , 11/1/06
Planner Date



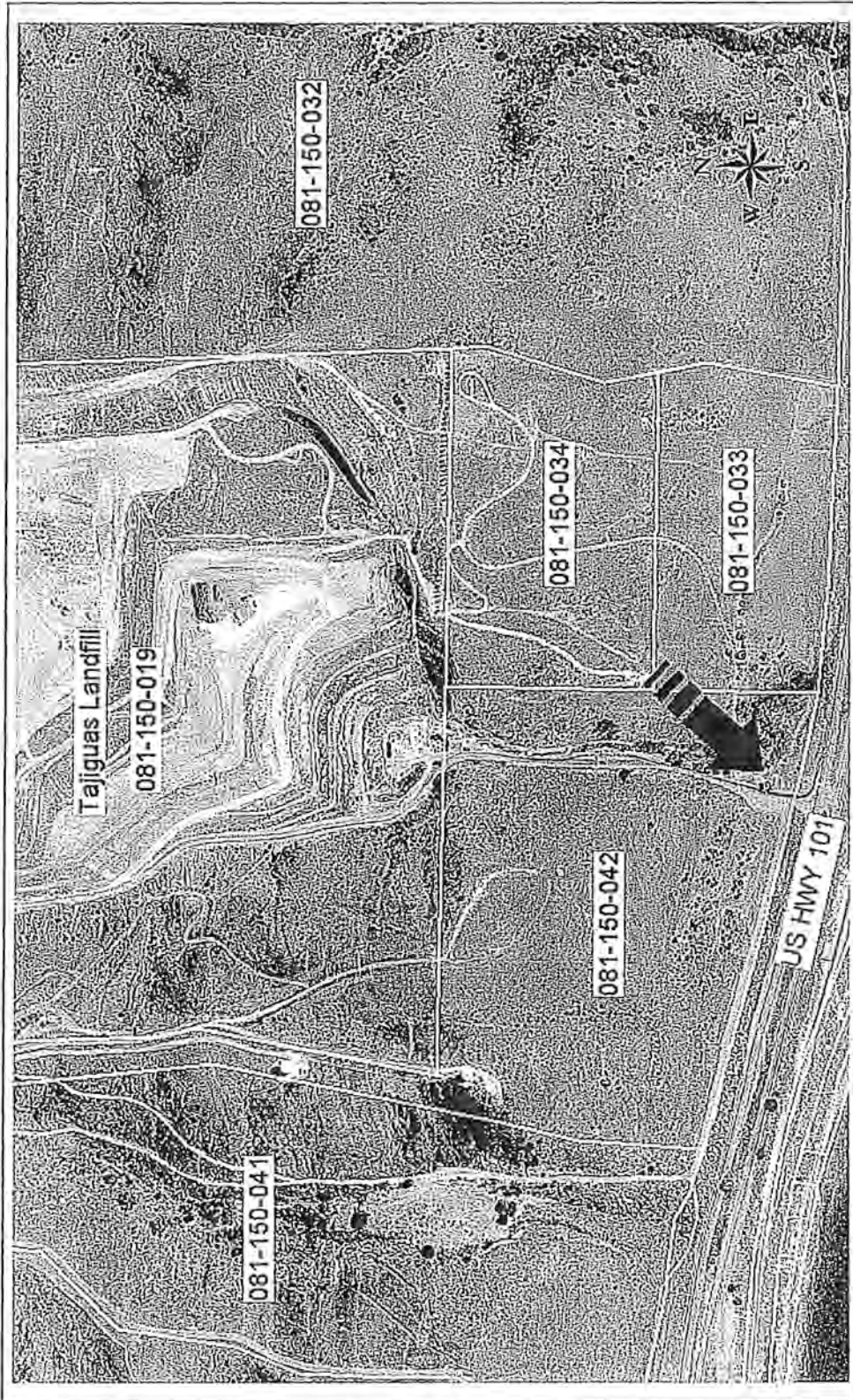
TANKS REMOVED UNDER BUILDING PERMIT 127599.

SEPTIC SYSTEM ABANDONED UNDER EHS PERMIT Q100769.

**COUNTY OF SANTA BARBARA
 RESOURCE RECOVERY &
 WASTE MANAGEMENT DIVISION**

**TAJIGUAS LANDFILL ENTRANCE
 ABANDONED GAS STATION
 DEMOLITION**

Figure 1
Vicinity Map



FILE COPY



Figure 2 - Abandoned Gas Station to be Demolished
(looking northeast from US 101 right-of-way)

FILE COPY

**Tajiguas Landfill Entrance Abandoned Gas Station Demolition
Copies of Relevant Building Permits**

FILE COPY



PUBLIC WORKS
BUILDING & GRADING DIVISION
COUNTY OF SANTA BARBARA

PERMIT NO

127599

VALIDATION

SANTA BARBARA
589-3030

LOMPOC
736-5621

SOLVANG
686-5544

SANTA MARIA
934-6230

416

Date of Application: 12-22-88

WHEN PROPERLY VALIDATED THIS IS YOUR PERMIT

PROJECT ADDRESS 14750 Hwy 101 (Zol.) Tajiguas		ASSESSOR'S PARCEL NO 81-015-021-0
<input type="checkbox"/> OWNER <input type="checkbox"/> CONTRACTOR <input type="checkbox"/> AUTHORIZED AGENT <input type="checkbox"/> LEASEE OWNER'S NAME: Anthony Martinelli PHONE: 682-1474 ADDRESS: 516 Peach Grove City: SB		
CONTRACTOR'S NAME: Richardson PHONE: 964-3558 ADDRESS: P.O. Box 87 City: SB PHONE: 93102 STATE LIC. NO: 406903		
ARCHITECT/DESIGNER OR ENGINEER ADDRESS: CITY:		
CLASS OF WORK: <input type="checkbox"/> NEW <input type="checkbox"/> ALTERATION <input type="checkbox"/> ADDITION <input type="checkbox"/> MOVE <input type="checkbox"/> DEMOLITION <input type="checkbox"/> REPAIR <input checked="" type="checkbox"/> Tank Removal		
USE OF BLDG.: <input type="checkbox"/> RETAIL <input type="checkbox"/> S.F. DWG <input type="checkbox"/> CONDOMINIUM <input type="checkbox"/> OFFICE <input type="checkbox"/> DUPLEX <input type="checkbox"/> APARTMENT <input type="checkbox"/> RESTAURANT <input type="checkbox"/> OTHER		
High Fire Rates	Fire Sprinklers Req. Yes/No	Type of Contol
Occup. Group	No. of Bedrooms	No. of Stories
No. of Units	AREA	VALUATION
ELECTRICAL	PLUMBING	MECHANICAL
Temp. Service	Traps	S.F. DWG
Septic	Water Heater	Heating App.
Sq. Ft. Building	Water Piping	Appl. Ventil.
Sq. Ft. Garage	Septic System	Cooling Appl.
	Gas Outlets	Incid. Gas
REMARKS: 03/30/89 Stoped by Tank Already Removed and covered up hole.		

INSPECTION RECORD

INSPECTIONS	DATE	INITIALS	INSPECTIONS	DATE	INITIALS	INSPECTIONS	DATE	INITIALS
Temporary Erection			DO NOT ROOF UNTIL ABOVE IS SIGNED			Pool Spa/Sealback		
Final Grading			Shear Panel Nailing			Roof Steels		
Fill/tee			Block Wall Steel			Bonding Electric Conduit		
Sealbacks/Compaction			Frame					
Foundation's (so)			Exterior Insiding			DO NOT SUNT UNTIL ABOVE IS SIGNED		
Grounding Electrode			Insulation					
						Gas Test		
DO NOT POUR FOOTINGS UNTIL ABOVE IS SIGNED			DO NOT COVER WALLS UNTIL ABOVE IS SIGNED			Underground Electric Plumbing		
Under Slab Floor Plumbled			Interior Latn Drywall			Deck Reinforcement		
Under Slab Floor Electric						Pool Fence/Gate		
Moisture Test			Septic Tank			FINAL INSPECTIONS		
			Absorption Area			Gas Pressure Test (199)		
DO NOT POUR SLAB UNTIL ABOVE IS SIGNED			Rough Grading			Plumbing Final		
Gas Piping Groundwork			Drainage Device			Mechanical Final		
Rough Plumbing			Retaining Wall Steel			Grading Final		
Rough Electric			Finish Grading			Electrical Final		
Rough Mechanical						Building Final		
Roof Truss Nailing								

INSPECTOR COPY

03/30/89



**PUBLIC WORKS
BUILDING & GRADING DIVISION
COUNTY OF SANTA BARBARA**

**PERMIT NO.
127599**

SANTA BARBARA 568-3030 LOMPOC 736-5821 SOLVANG 686-5544 SANTA MARIA 934-6230

Date of Application: 12-22-88

WHEN PROPERLY VALIDATED THIS IS YOUR PERMIT

VALIDATION

PROJECT ADDRESS: 124730 Hwy 901, Santa Barbara, CA 93101	ASSESSOR'S PARCEL NO.: 81-005-021-0
OWNER: <input checked="" type="checkbox"/> OWNER <input type="checkbox"/> CONTRACTOR <input type="checkbox"/> ARCHITECT/ENGINEER <input type="checkbox"/> VENDOR	
PERMIT NAME: Anthony Marinelli	PHONE: 568-1147
ADDRESS: 1106 Peach Avenue, Santa Barbara, CA 93101	
CONTRACTOR NAME: Richardson	PHONE: 964-3558
ADDRESS: 124730 Hwy 901, Santa Barbara, CA 93101	STATE: CA
ARCHITECT/ENGINEER OR ENGINEER	
ADDRESS	
CITY	
CLASS OF WORK: <input type="checkbox"/> NEW <input type="checkbox"/> ALTERATION <input type="checkbox"/> ADDITION <input type="checkbox"/> MOVE <input type="checkbox"/> DEMOLITION <input type="checkbox"/> REPAIR	USE OF BUILDING: <input type="checkbox"/> RETAIL <input type="checkbox"/> OFFICE <input type="checkbox"/> DUPLEX <input type="checkbox"/> GONDOMINIUM <input type="checkbox"/> APARTMENT <input type="checkbox"/> RESTAURANT <input type="checkbox"/> OTHER

High Fire Area	Fire Sprinklers	Type of Const.	Occup. Group	Model Rooms	No. of Stories	Vol. of Units	AREA	VALUATION
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sq. Ft.	Building
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sq. Ft.	Other
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sq. Ft.	Grading
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sq. Ft.	Excavation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sq. Ft.	Grading
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sq. Ft.	Grading
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sq. Ft.	Grading
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sq. Ft.	Grading

REMARKS

NOTICE (Please check appropriate box in each paragraph)

(A) THIS PERMIT BECOMES NULL AND VOID if work or construction commenced is not commenced within 180 days (from date of issuance or work is suspended or abandoned for a period of 180 days) after work is commenced.

(B) I certify that I am licensed under the State Contractors License Law and my contractor's license is in full force and effect for this work.

(C) I certify that I am exempt from Business and Professions Code 770115 under: (A) Owner/Builder (B) Public Works (C) Other: _____

AND

(D) I certify that I have filed with the County of Santa Barbara Building Safety Office a copy of workers' compensation insurance policy, W.C. No. _____, policy # _____, expiration date _____, for a Certificate of Consent to Insure by the Director of Industrial Relations.

(E) I certify that I shall remain under Labor Code 13000 because: (1) the permit is for work of \$100,000 or less; or (2) I have the performance of this work for which this permit is issued shall not employ any person in any manner so as to become subject to the workers' compensation laws of California.

AND

I certify that I have read this application and declare under penalty of perjury that the information contained herein is true, correct and complete; I agree to comply with all County ordinances and state laws relating to building construction and hereby give my consent to the County to enter my property to enter with the owner's knowledge and consent.

Executed at County of Santa Barbara on 12-22-88 *Anthony Marinelli*
 _____ (Owner or Contractor)

APPROVALS	DATE APPROVED	APPROVED BY	REMARKS	PLAN CHECK
TRANSPORTATION				DATE REC'D/REPR'D
HEALTH DEPT.				
WATER DISTRICT				
FIRE DEPT.				
SANITARY DISTRICT				
LAND USE				
FLOOD CONTROL				

Q100769

COUNTY OF SANTA BARBARA
ENVIRONMENTAL HEALTH SERVICES

INDIVIDUAL SEWAGE DISPOSAL SYSTEM
PERMIT APPLICATION

REQUIRED ATTACHMENTS: Two copies of a soils report with system design specifications, and three copies of the plot plan and the floor plan for the proposed structure(s) must be submitted with this application. Non-residential systems require calculation of peak daily flow based on design flow rates in the Uniform Plumbing Code. Use of seepage pits (drywells) will be permitted only when leach lines are determined to be infeasible by the soil engineer with concurrence of EHS.

1. Job location TASIGVAS CAUDILL 14420 CALLE RIAL, SA 93117
parcel city/county zip code
2. Assessor's Parcel Number 081-150-021
3. Owner CoPSA SOLID WASTE Telephone No. 882-3600
Mailing Address 109 E. VICTORIA, SANTA BARBARA, CA 93101
city/state
4. Applicant: Owner Contractor Authorized Agent _____
5. Contractor _____ Lic. No./Class _____
Address _____ Telephone No. _____
6. Type of Permit:
 New Construction Abandonment (For abandonment skip to Item 16)
 Repair / Modification (Description) _____
7. Type of development:
 Residential: Number of bedrooms _____
Number of fixture units (see chart) _____
 Commercial: Number of fixture units _____
Maximum number of employees and visitors _____
Peak Daily Flow (attach calculations) _____
8. Water supply: Public: Name of water company/district _____
 Private: Onsite Source _____ Off-site _____
9. Distance from nearest water well (within 500 feet):
Septic Tank _____ feet Disposal Area _____ feet
10. Distance from springs, lakes, ocean waters and natural drainage courses:
Septic Tank _____ feet Disposal Area _____ feet
11. Type of disposal system: Leach Line Seepage Pit Alternative System
12. Size of septic tank 1500 gallons
13. Natural surface slope _____ percent

(SEE REVERSE SIDE)

FILE COPY

14. Leach Line Installation:
 Number of trench _____ Length of each: nch _____ feet
 Depth of each trench _____ Bottom width of trench _____ inches
 Earth cover over drainline _____ Filter material under drain line _____ inches
 Square feet/linear foot of trench _____ Total absorption area _____ square feet

15. Seepage pit installation:
 Number of pits _____ Diameter of each pit _____ feet
 Earth cover over pits _____ Depth of each pit _____ feet

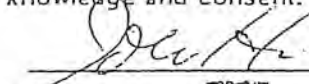
16. WORKERS' COMPENSATION DECLARATION:
 (Please check appropriate box in each paragraph.)
 (1a) I certify that I am licensed under the State Contractor's License Law and my contractor's license is in full force and effect; OR
 (1b) I certify that I am exempt from Business and Professions Code #7031.5 under:
 #7044-Owner/Builder, #7048-Price of labor and material less than \$200 or
 Other _____

AND

(2a) I certify that I have on file with the County of Santa Barbara-Building & Development, a certificate of workers' compensation insurance:
 Insurer _____, Policy # _____
 Expiration date _____, or a Certificate of Consent to self-insure by the Director of Industrial Relations; OR
 (2b) I certify that I am exempt under Labor Code #3800 because: the permit is for work of \$100 or less, or that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California.

17. I certify that I have read this application and declare under penalty of perjury that the information contained herein is true, correct and complete. I agree to comply with all county ordinances and state laws relating to building development construction, and hereby authorize representatives of this county to enter with the owner's full knowledge and consent.

Executed at County of Santa Barbara on MAY 6, 1999



 JOHN ARNES
PRINT NAME

When approved by authorized Environmental Health Services staff, this application shall be considered a Permit to Construct an Individual Sewage Disposal System. Please note that other permits, eg. electrical installation, waste discharge requirements, land use clearance, etc. may be required from other agencies. THIS PERMIT BECOMES NULL AND VOID if work or construction authorized is not commenced within 180 days from date of approval, or work is suspended or abandoned for a period of 180 days any time after work is commenced. Any changes require prior approval by EHS and documentation in an "as built" plan.

FOR OFFICE USE ONLY

Program 42 Element _____ District _____ Location _____

Fee Code 999 Received by _____ Date Received _____

Amount Received _____ Receipt Number _____ Check Number _____

Application: Approved Denied By Shari Holloway Date May 12, 99

Conditions Witnessed Destruct of TANK previously
Verification of waste lines/toilet/sink removal

Copy of permit sent to Building and Development Division _____

Final Inspection/Clearance by Shari Holloway Date August 13, 99

Sinks & toilets removed from abandoned gas station
 Sewer lines concreted closed & water lines capped
 SLH 8/12/99

TOTAL P.04
FILE COPY

I finally
verified the gas
station Bathrooms
were destroyed.

Shari

~~///~~ x4936

FILE COPY

06BDP-00000-01402
SB PUB WORKS/TAJIGUAS STATION DEM
14470 CALLE REAL RD

GOLETA 081-150-042

06BDP-00000-01402
SB PUB WORKS/TAJIGUAS STATION DEM
14470 CALLE REAL RD

GOLETA 081-150-042

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06BDP-00000-01402
SB PUB WORKS/TAJIGUAS STATION DEM
14470 CALLE REAL RD

GOLETA 081-150-042

PAGE 1		OF 3
ENFORCEMENT AGENCY Santa Barbara County Environmental Health Services	COUNTY Santa Barbara	SOLID WASTE FACILITY PERMIT AP 42-SS-015
FACILITY NAME Tajiguas Sanitary Landfill		PROPOSED
DEPARTMENT Department of Public Works - Solid Waste Management Division		DATE Feb. 10, 1978
ADDRESS Highway 101, 23 miles due west of the City of Santa Barbara		ENFORCEMENT AGENCY APPROVAL
CITY LOCATION		

FINDINGS:

The Tajiguas Sanitary Landfill, located off Highway 101, 23 miles due west of the City of Santa Barbara, is a large bowl-shaped valley. The wastes, approximately 550 tons a day, 6 days a week, is disposed of by the cell method. Refuse faces are generated down canyon (southward) in approximately 100-foot wide fronts. Cell lengths are usually determined by the volume of refuse deposited over the six-day work week while cell depth is held to 12½ feet. All surfaces are covered with embankment, a minimum of two feet thick including the work face. Finished landfill faces are sloped at 2:1, insuring growth of vegetation for erosion control.

The wastes, which includes residential and commercial wastes of the Group 2 and 3 classification, are delivered by County transfer trailers. Liquid/hazardous wastes and septic tank pumpings and sewage sludge are not received at this facility. Personnel have been instructed on the safe handling of special wastes such as infectious wastes and dead animals. There is no special handling or sorting necessary for the materials which do not require special handling. The hours of operation are 7:00 a.m. to 5:00 p.m. Monday through Saturday, closed on Sundays and New Year's Day, 4th of July, Labor Day, Thanksgiving Day, and Christmas Day.

Projected on the basis of a capacity of 3.69 million tons and the population figures from the Department of Planning, estimated life of the site is estimated to be to the year 2005. At present, the disposal site is on 130 acres and future expansion on adjacent property will consist of approximately 283 acres.

The following document condition the design and operation of this facility:
California Regional Water Quality Control Board, Central Coast Region--
"Requirements for Waste Discharge".

This permit becomes void upon change of operator or any significant change in design or operation from that described by the Report of Station or Disposal Site Information.
This permit does not authorize the operation of any facility contrary to the State Minimum Standards for Solid Waste Handling and Disposal. This permit cannot be considered as permission to violate existing laws, ordinances, regulations, or statutes of other government agencies.

ENFORCEMENT AGENCY Santa Barbara County Environmental Health Services	TYPED NAME Lawrence Hart, M.D., M.P.H.
DATE 12/15/77	
DIRECTOR, Health Care Services	

(Tajiguas Sanitary Landfill)

FINDINGS: (Continued)

4. Land within 1,000 feet of the perimeter of the sanitary landfill is zoned 100-AG-0 which means 100-acre parcel minimum general agricultural with oil drilling and U which means unrestricted agricultural district.
5. The State minimum standards are presently being met at this existing facility.
6. The Tajiguas Sanitary Landfill does comply with the County's final version of the Solid Waste Management Plan.

CONDITIONS:

Subsection A - Requirements

1. This facility must comply with all of the State Minimum Standards for Solid Waste Handling and Disposal.
2. This facility must comply with all federal, state, and local requirements and enactments.
3. Upon the request of the enforcement agency, additional information concerning this facility must be provided.

section B - Prohibitions

The following actions are prohibited at this facility:

1. Disposal of hazardous wastes.
2. Disposal of septic tank pumping and sewage sludge.
3. Scavenging.
4. Burning.

Subsection C - Specifications

1. Except for those changes which are required under the "Conditions" portion of this permit, significant changes in design or operation from that described in #1 and #2 of the Findings Section is not allowed. Prior to the initiation of any changes, the enforcement agency shall be notified.

Subsection D - Provisions

This permit is subject to review by the enforcement agency and may be suspended, revoked, or modified at any time for sufficient cause.

CONDITIONS: (Continued)

Subsection E - Self-Monitoring

The following items shall be monitored by the operator of this facility and records shall be kept and made available to the enforcement agency upon request:

1. Incidence of injury and property damage accidents, fires, explosions, earth slides, discharge of wastes not permitted in the class of site, flooding, and other unusual occurrences, noting date, time, and name of witnesses, if any, and description of incident.
2. Number of vehicles utilizing the site per week.
3. Quantity and types of wastes received at the site per week.
4. Quantity and types of wastes salvaged per week.

TO CHRIS

STATE SOLID WASTE MANAGEMENT BOARD

709 11TH STREET
SACRAMENTO, CALIFORNIA 95814

FEB 23 1978

PERMIT

C3L...

FEB 27 1978

Mr. Edward L. Everett, Director
44440 Calle Real
Santa Barbara, CA 93110Dear Mr. Everett :

Pursuant to Government Code Section 66796.32(d), the State Solid Waste Management Board has considered the attached proposed solid waste facility(ies) permit(s) at its meeting of February 10, 1978 and has concurred with the issuance of those permit(s) for the following facility(ies):

Foxen Canyon Sanitary Landfill
New Cuyama Sanitary Landfill
Tajiguas Sanitary Landfill
Ventucopa Sanitary Landfill

011
42-AA-017
42-AA-010
42-AA-015
42-AA-013

If you have any questions regarding this matter, please contact Bill Cortner at (916) 322 2659 Bill

Sincerely,

Douglas L. Strauch
Douglas L. Strauch, Chief
Enforcement Division

attachments

cc: State Department of Health
744 P Street
Sacramento, CA 95814



STATE SOLID WASTE MANAGEMENT BOARD

Solid Waste Facility Permits

Decision #78-17

SUBJECT:

Proposed solid waste facility permits. Submitted by the Santa Barbara County Environmental Services as local enforcement agency.

FINDINGS:

The State Solid Waste Management Board makes the following finding of fact:

1. Proposed solid waste facilities permits for the following existing facilities in Santa Barbara County, received January 27, 1978, have been submitted to this Board for concurrence with or objection to their issuance. The proposed permits are for the following facilities.

Foxen Canyon Sanitary Landfill	42-AA-011 <i>me</i>
New Cuyama Sanitary Landfill	42-AA-010
Tajiguas Sanitary Landfill	42-AA-015
Ventucopa Sanitary Landfill	42-AA-013
2. The proposed solid waste facilities permits are consistent with the applicable county solid waste management plans; and
3. The proposed solid waste facilities permits are consistent with the State Minimum Standards for Solid Waste Handling and Disposal; and
4. The State Solid Waste Management Board and its staff have reviewed the proposed solid waste facilities permits and concur with the form and content of those permits.

CONCLUSION:

The proposed solid waste facilities permits comply with the requirements of Article 2 of Chapter 3 of Title 7.3 of the Government Code, and with the requirements of the State Solid Waste Management Board. Consequently, the State Solid Waste Management Board concurs in the issuance of the subject proposed solid waste facilities permits.

CERTIFICATION

The undersigned Executive Officer of the State Solid Waste Management Board does hereby certify that the foregoing is a full, true and correct copy of a decision duly and regularly adopted at a meeting of the State Solid Waste Management Board held on February 9-10/78.

Dated: FEB 10 1978

Albert A. Marino

Albert A. Marino
Executive Officer

SOLID WASTE FACILITY PERMIT APPLICATION

MB E-1-77 (NEW 6-77)

ENFORCEMENT AGENCY

FOR ENFORCEMENT AGENCY USE ONLY

ENVIRONMENTAL HEALTH, Dept. of Health Care Serv

FILE NUMBER (PERMIT NUMBER)

Santa Barbara County

DATE RECEIVED

FILING FEE

DATE OF APPLICATION

DATE ACCEPTED

RECEIPT NUMBER

1. NOTICE OF OPERATION *

2. APPLICATION FOR SOLID WASTE FACILITY PERMIT *

3. APPLICATION FOR MODIFICATION OF PERMIT *

4. AMENDMENT OF APPLICATION

5. APPLICATION FOR REVIEW

DATE PERMIT ISSUED

CO SWMP REFERENCE PAGE(S)

NOTE: This form has been developed for multiple uses. It is the transmittal sheet for documents required to be submitted to the enforcement agency. *A Report of Station or Disposal Site Information or an amendment thereto must be submitted with this form.

I. GENERAL DESCRIPTION OF FACILITY	NAME OF FACILITY TAJIGUAS SANITARY LANDFILL			
	LOCATION OF FACILITY (GIVE ADDRESS OR LOCATION DESCRIPTION BY SECTION, TOWNSHIP, RANGE, COUNTY) Highway 101, 23 miles due west of the City of Santa Barbara			
	TYPE OF FACILITY <input checked="" type="checkbox"/> SOLID WASTE DISPOSAL SITE <input type="checkbox"/> TRANSFER/PROCESSING STATION (INCLUDES RESOURCE RECOVERY)			
	TYPE OF WASTES TO BE RECEIVED <input checked="" type="checkbox"/> RESIDENTIAL REFUSE <input checked="" type="checkbox"/> CONSTRUCTION/DEMOLITION WASTES <input type="checkbox"/> HAZARDOUS WASTES <input checked="" type="checkbox"/> COMMERCIAL SOLID WASTES <input type="checkbox"/> SEWAGE SLUDGE <input type="checkbox"/> AGRICULTURAL WASTES <input checked="" type="checkbox"/> TIRES <input type="checkbox"/> LIQUIDS/SLURRIES <input type="checkbox"/> SEPTIC TANK PUMPINGS <input type="checkbox"/> OTHER (SPECIFY)			
II. FACILITY OPERATION	OPERATION <input checked="" type="checkbox"/> COMMENCED <input type="checkbox"/> WILL COMMENCE	EFFECTIVE DATE July 1966	PROPOSED CHANGE (CHECK ONE OR BOTH) <input type="checkbox"/> DESIGN <input type="checkbox"/> OPERATION	EFFECTIVE DATE
III. OPERATOR INFORMATION	OWNER OF PROPERTY (NAME) County of Santa Barbara		ADDRESS 105 E. Anapamu Street, Santa Barbara Ca. 93105	
	OPERATOR (NAME) Dept. of Public Works, Solid Waste Management Division		ADDRESS 123 E. Anapamu Street Santa Barbara, Ca 93105	
	ADDRESS WHERE LEGAL NOTICE MAY BE SERVED Dept. of Public Works, Solid Waste Management Division 123 E. Anapamu Street, Santa Barbara 93105			
IV.	FILING FEE ENCLOSED 5			

I hereby acknowledge that I have read this application and the Report of Station or Disposal Site Information, and certify that the information given is true and accurate to the best of my knowledge and belief. In operating the solid waste facility, I agree to comply with the conditions of the permit and with state and local enactments.

APPLICANT (OWNER OR AGENT) <i>Charles F. Wagner</i> NAME CHARLES F. WAGNER		SIGNATURE (OPERATOR OR AGENT) <i>Leon H. Smith</i> TYPED NAME LEON H. SMITH	
DIRECTOR OF PUBLIC WORKS		DATE 8-15-77	TITLE SOLID WASTE MGT. SUPT.
DATE 8-15-77		DATE 8-15-77	
ENFORCEMENT AGENCY USE ONLY	CHECK APPROPRIATE BOX <input type="checkbox"/> APPLICATION APPROVED <input type="checkbox"/> APPLICATION DENIED		
	SIGNATURE	TITLE AND PRINTED NAME	DATE AND TELEPHONE NO.
SOLID WASTE MANAGEMENT BOARD USE ONLY	DATE RECEIVED	CHECK APPROPRIATE BOX <input type="checkbox"/> CONCUR WITH PROPOSED PERMIT <input type="checkbox"/> OBJECT TO PROPOSED PERMIT <input type="checkbox"/> AGENCY DENIAL UPHELD <input type="checkbox"/> OTHER (SPECIFY)	
	SIGNATURE	TITLE AND PRINTED NAME	DATE AND TELEPHONE NO.

Solid Waste Facility Permit Application
Tajiguas Sanitary Landfill
Santa Barbara County

1. The Tajiguas Sanitary Landfill is sometimes referred to as "Canada de la Pila." It is a large bowl shaped valley. There are no liquid waste ponds or hazardous waste areas. The site receives all the waste generated through the Santa Barbara Transfer Station. Only Group 2 and 3 wastes are accepted for disposal.

Waste disposal is performed by the cell method. Refuse faces are generated down canyon (southward) in approximately 100' wide fronts. Cell lengths are usually determined by refuse deposited over the six-day work week. Cell depth is held to 12½'. All surfaces are covered with embankment, a minimum of two feet thick including the work face. Finished landfill faces are sloped at 2:1 insuring growth of vegetation for erosion control.

- a. Hours of site operation are 7:00 a.m. to 5:00 p.m. Monday through Saturday. Closed Sundays and the following Holidays: New Years Day, July 4th, Labor Day, Thanksgiving, and Christmas Day.
- b. No special handling or separation are required in this operation.
- c. Standby equipment is moved from the Foxen Canyon Landfill and New Cuyama Landfill if needed.
- d. The following equipment is used at the landfill:
 - 1 - Scraper-Tandum, Terex TS-14
 - 1 - Tractor, Crawler, CAT, 46-A-C w/Hyd Bladed Rippers
 - 1 - Tractor, Crawler, CAT, 46-A-T w/Trash Blade
 - 1 - Truck-Water, 2,000 gallon
 - 1 - Grader-Motor, CAT
- e. Sanitary facilities including showers are provided in the maintenance building located at the site. In addition, water is purchased from a local vendor for drinking purposes of personnel assigned.
- f. The following climatic conditions are: The average rainfall based on the Santa Barbara area 107 year average is 17.672 per year. The wind velocity is 3 to 7 miles per hour in a south-westerly direction. Because of the mild weather condition on the south coast of Santa Barbara County, snow-fall is negative.
- g. Climatic conditions do not adversely affect our site operations. We have constructed an all weather road to the top of the fill site and proper drains are in place for the rainy season.

- h. Noise has not been a problem at the site. All odors are kept to a minimum as the site is constantly being covered. Fences are constructed in order to control the litter problem. Dust is controlled through the use of a water truck. All possible measures are taken to control insects and rodents in the lunch room and shop area. We have a 10,000 gallon water storage tank and water truck for use in the event of a fire.
 - i. No salvaging is permitted in the landfill.
 - j. All traffic at the landfill is controlled since the general public does not have access to the site. Noise is not a problem. There are no residential areas in the vicinity of the site. All personnel working at the site and operating equipment are required to wear earplugs. All health and safety equipment is provided by the County.
2. The site receives all residential and commercial solid wastes. Only Group 2 and 3 wastes are accepted at the site. No liquid or hazardous wastes as described by the Health and Safety Code Section 25100 et seq. are received at this site.
- We handle approximately 550 tons per day, six days a week. Our peak loading periods occur during the months of June through September.
- a. All personnel have been instructed in the handling of special wastes such as infectious wastes and dead animals. No septic tank pumpings or sewage sludge are received at this facility.
 - b. No hazardous wastes are accepted for disposal.
3. There are approximately 412 acres in the parcel. Capacity is estimated at 3.69 million tons with an estimated life to the year 2005. Life expectancy for the site is based on projected population figures projected by the County Planning Department for the South Coast area of the County.
4. See map attached.

Access to the site is off Highway 101. There is only the one entrance and exit to the site. There is a two lane all weather road starting at the freeway and goes to the top and back of the landfill area. At the mouth of the canyon there is a fence and locked gate. Entrance is only available when the site is in operation. Since the site is not open to the public there is never any traffic problem. Entrance to the landfill site is limited to our own transfer trailers and contractors with large trucks authorized to dump upon prior approval of the Solid Waste Management Division.

Approximately 60 vehicles per day enter the site. They are our own tractor-trailers and commercial haulers hauling demolition type material and refuse haulers with roll-off boxes.

5. See plot plan attached.
6. See plot plan attached.
7. See map attached.
8. See map attached.
9. See Engineering report attached.
10. See plot plan attached.
11. Due to geology in the site area, we have never had a problem with leachate at this site and no problems are expected in the future.
12. Well locations have been indicated on the attached map.

Both the upstream and downstream wells are tested yearly and general mineral analyses are obtained. Results are forwarded to Central Coast Regional Water Quality Control Board in January of each year.

In addition, samples are taken quarterly of the upstream well and bacteriological reports are made to the Solid Waste Management Division by the Department of Health Care Services.
13. To date venting has not been considered in this site.
14. At the present time it is proposed that the site will be used by the County for recreational activities.
15. The site is owned and operated by the County of Santa Barbara. Organizational and functional charts are attached. Personnel

assigned to this site are:

- 1 - Refuse Supervisor
- 5 - Heavy Equipment Operators
- 1 - Heavy Equipment Mechanic.

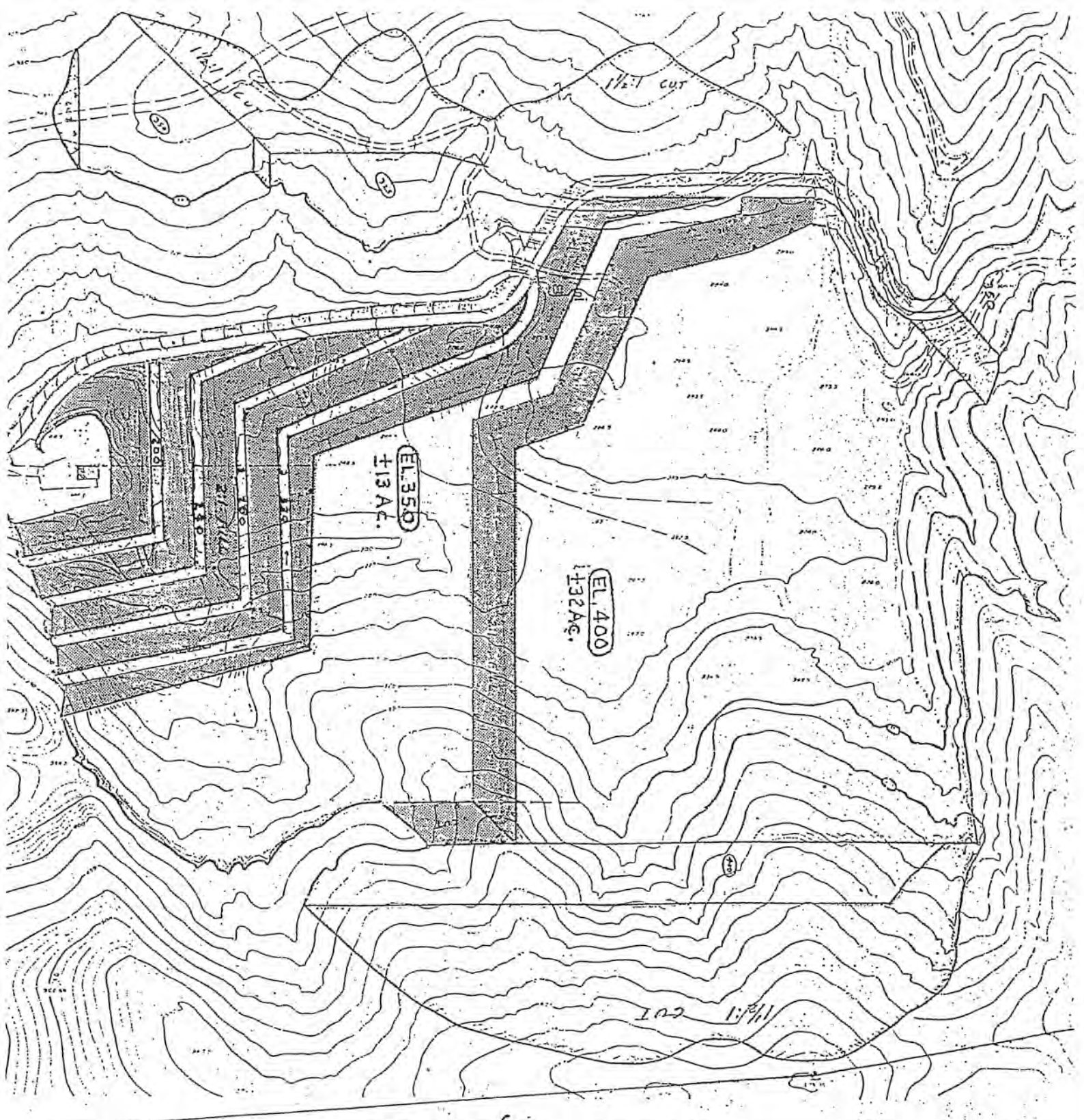
Personnel to be notified in case of emergency:

Mr. Charles F. Wagner
Director of Public Works
123 E. Anapamu Street
Santa Barbara, Calif. 93101
Telephone (805) ~~966-1611 Ext. 267~~

Mr. Paul E. Price
Asst. Public Works Director
123 E. Anapamu Street
Santa Barbara, Calif. 93101
Telephone (805) ~~966-1611 Ext. 267~~

Mr. Leon H. Smith
Solid Waste Management Division
Department of Public Works
123 E. Anapamu St.
Santa Barbara, Calif. 93101
Telephone (805) 966-1611 Ext. 240,214

16. See plot plan attached for zoning requirements. Copy of Central Coastal Regional Water Quality Control Board Requirements for Waste Discharge for this site is attached.



TAJIGUAS LANDFILL
FINISH GRADES
PHASE I
Scale: 1" = 320'

**STORMWATER POLLUTION
PREVENTION PLAN**

**TAJIGUAS SANITARY LANDFILL
SANTA BARBARA COUNTY
CALIFORNIA**



**Santa Barbara County
Public Works Department
Resource Recovery &
Waste Management Division**

**July 2016; Amended December 2016
Project No. 129917**

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Appendices

Appendix A - 2015 Recertified Notice of Intent (NOI) - Tajiguas Landfill
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Appendix D - Monthly Site Inspection Forms

Acronyms

ADC	Alternative daily cover
BMP	Best Management Practice
CMU	Compost Management Unit
CRLF	California red-legged frog
ERA	Exceedance Response Action
Fe	Iron
HHW	Household Hazardous Waste
IGP	Industrial General Permit
LCRS	Leachate collection and removal system
NAL	Numeric Action Level
NPDES	National Pollution Discharge Elimination System
QSD	Qualified Storm Water Plan Developer
QSP	Qualified Storm Water Practitioner
QISP	Qualified Industrial Storm Water Practitioner
RWQCB	Regional Water Quality Control Board
SC	Specific Conductance
SPCC	Spill Prevention, Control, Countermeasure Plan
SWPPP	Storm Water Pollution Prevention Plan
SWQCB	State Water Quality Control Board
TRRP	Tajiguas Resource Recovery Project
TSL	Tajiguas Sanitary Landfill
TSS	Total Suspended Solids
WDR	Waste Discharge Requirement
Zn	Zinc

SWPPP AMENDMENT LOG

Project Name: TAJIGUAS SANITARY LANDFILL

<u>Amendment No.</u>	<u>Date</u>	<u>Brief Description of Amendment</u>	<u>Prepared By</u>
1	12/2016	Amendment to update the Site Map to show additional BMPs implemented at the site. The text has also been updated reflect current SWPPP Team and Level 1 status.	SWT Engineering
2			
3			
4			
5			

1.0 OVERVIEW

This SWPPP fulfills the 2015 Industrial General Stormwater Permit requirements and includes details on the site conditions, sources of pollutants, policies and BMPs to reduce storm water pollution.

1.1 POLLUTANT SOURCES AND TYPES

Past stormwater sampling data at Tajiguas Sanitary Landfill (TSL) confirm operational and disturbed areas are a major source of stormwater pollution. The data also shows that run-on from upstream and undisturbed areas can also contribute a large amount of stormwater pollutants.

A major potential for stormwater pollution is from operating areas such as: active disposal, earthwork, vehicle circulation.

The top pollutants of concern at this location are total suspended solids (TSS) and iron (Fe). TSS and Fe are consistently over the limits in storm water discharge. Also of concern is pH which can occur above allowable range (alkaline).

The source of TSS contamination is erosion off disturbed surfaces from site operations. The source of Fe and high pH are likely due to their presence in the native site soils.

Past data show that sediment (TSS) and iron (Fe) are consistently over the allowable limits and that pH is occasionally over the allowable limit.

The stormwater discharges are consistently low in organic contamination and oil/grease indicating stormwater is protected from waste and vehicle maintenance/operations.

Past data show organics (COD, BOD, TOC) and oil & grease (O&G) are consistently within the allowable limits.

1.2 BMP PRIORITIES AND POLICIES

The top priority of the BMP selection is to reduce TSS contamination. Reducing TSS is expected to result in reduced Fe and other metals, as well as organics in the stormwater discharge. The second priority of the BMP policies is to characterize the source of Fe and pH presence in stormwater. The BMP program priorities and policies are summarized below.

BMP PRIORITIES

PRIORITY NO. 1: REDUCE TSS

TSS is consistently over the allowable limit and is the first contaminant to be reduced. TSS reduction will result in the reduction of other contamination such as adsorbed metals (Fe) and organics.

PRIORITY NO. 2: Address Fe, pH

Characterize the source of Fe and pH, including contribution from native soil, and develop contamination reduction measures.

2.0 BACKGROUND

2.1 Regulatory History

In 1972, Congress amended the Federal Water Pollution Control Act, also referred to as the Clean Water Act (CWA), so that the discharge of pollutants to waters of the United States from any point source is prohibited unless the discharge is in compliance with a National Pollution Discharge Elimination System (NPDES) permit. The ultimate goal was to make sure rivers and

BMP POLICIES

POLICY NO. 1: MINIMIZE DISTURBED AREAS

Greatly decrease disturbed and operating areas (active disposal, earthwork, vehicle circulation). Strategically manage operations so the absolute minimum of disturbed area occurs at all times.

POLICY NO. 2: USE SOURCE CONTROLS TO CONTAIN SEDIMENT WITHIN DISTURBED AREAS

If an area is disturbed, contain sediment within the immediate drainage subarea.

POLICY NO. 3: DISTURBED AREAS DISCHARGING ANYWHERE OTHER THAN TO THE NORTH SEDIMENTATION BASIN HAVE 1st PRIORITY FOR BMP TREATMENT

Disturbed areas that do not flow to the North Sedimentation basin must receive first priority BMP treatment. Flows from such areas travel to the site boundary with little or no sediment removal. The areas include but are not limited to: areas tributary to the South Sedimentation Basin, areas tributary to the 48" storm drains, unpaved and paved access roads.

streams were fishable, swimmable, and drinkable.

The federal regulations allow authorized states to enforce the program and in California, these permits are issued through the State Water Resources Control Board (SWRCB). The SWRCB developed various types of permits, such as for industrial sites, construction sites and municipalities.

TSL falls under the Industrial General Permit (IGP) category. Industrial permits are known as “general” permits because a standard rule is issued to which all sites in that category should conform. The IGP generally requires facility operators to:

- Eliminate unauthorized non-stormwater discharges
- Develop and implement a stormwater pollution prevention plan (SWPPP), and
- Perform monitoring of stormwater discharges and authorized non-storm water discharges

Revisions to the NDPES permit rules have since taken place by EPA and adopted by the SWQCB as follows:

<u>Date</u>	<u>Major Revision</u>	<u>Effect on TSL</u>
1990-7	Phase I Permitting Requirements: Industrial Sites obtain coverage	NOI filed (see App. A) SWPPP completed and available on site
1999	Phase II Permitting Requirements: Construction Sites 1 to 5 acres obtain coverage	none
2015	Revised Industrial General Permit Monitoring and Sampling Requirements	Numeric Action Limits in effect, increased monitoring schedules

Development, implementation, and maintenance of the SWPPP provides the County of Santa Barbara’s TSL with a plan to reduce pollutants contained in stormwater discharges and comply with the requirements of the Industrial General Permit issued by the SWRCB (Permit No. WDID #3 42S000451).

2.2 Other Landfill Regulations

The TSL is also regulated by Waste Discharge Requirements (WDRs) issued by the California Regional Water Quality Control Board – Central Coast Region (CRWQCB). The WDRs for the site are given in R3-2010-0006. The WDRs contain inspection and sampling requirements for surface drainage some of which are equivalent to those set forth in the NPDES rule.

2.3 SWPPP Content

This SWPPP meets the requirements of the revised Industrial General Permit effective July 2015 by the SWRCB including the following:

- Form the Pollution Prevention Team
- Develop a facility map; Identify potential pollutant sources; Inventory materials and chemicals; List significant spills and leaks; Identify non-stormwater discharges; Assess pollutant risks

- BMP Identification Including Minimum Required BMPs and Site Specific BMPs. Reference and follow guidelines in California Stormwater Quality Association (CASQA) Industrial BMP handbook.
- Implement BMPs
- Perform Employee Training
- Evaluate and Monitor Program Including Annual Inspection; Review Monitoring Results; Revise SWPPP as necessary

3.0 SWPPP TEAM

The SWPPP team for TSL is named below with a description of roles and responsibilities.

Imelda Cragin, SWPPP Team Manager

Review and approve the SWPPP including revisions due to significant site changes.

Travis Spier, Operations Manager

Assist in BMP evaluation, selection, design and revisions based on field conditions.

Travis Spier, Site Manager

Follow BMP requirements as described in this document, evaluate measures for cost and practicality, provide input for BMP improvement and revision.

John Hancock, Engineering Technician

Perform the inspections and monitoring as required by the Industrial General Permit and WDRs

4.0 FACILITY DESCRIPTION

4.1 Location and Adjacent Areas

The TSL is located in an unincorporated portion of Santa Barbara County west of the City of Goleta (see Figure 1 – Vicinity Map). The landfill is located within two County-owned parcels that have a combined area of 412 acres (see Figure 2 – Site Map).

The landfill entrance is located approximately 1,000 feet from the Pacific Ocean. Property to the east of the landfill is County owned and is currently used for agricultural purpose. Property to the west is open space. The few acres immediately to the south of the scale house are County owned and have been landscaped with drought tolerant vegetation as a visual buffer. Adjacent and downstream of the entrance is U.S. Highway 101.

Downstream and 2,000 feet southeast of the landfill property line are approximately one dozen residential homes located on beachfront property in the Arroyo Quemada neighborhood, named for the next drainage feature (Arroyo Quemado) east of the landfill. Arroyo Quemado is a distinctly separate drainage watershed from the Pila Creek watershed in which the Tajiguas Landfill is located.

Surface drainage from the landfill exits the site and is conveyed through Highway and Railroad structures to an outlet which discharge on the beach to the ocean.

4.2 Weather and Precipitation

4.2.1 Weather Station

A permanent automatic weather station is located at the landfill and is owned and operated by the County. Real time data is provided for: precipitation, wind velocity and temperature. The station website is:

http://santabarbara.onerain.com/site.php?site_id=91&view_id=5

TSL is located near the coast and receives an average of approximately eighteen inches of rain per year primarily between the months of November and April.

4.2.2 Qualifying Storm Event

The 2015 IGP states that sampling and visual monitoring is required for:

- any storm that produces a discharge at the site compliance point;
- and-
- is preceded by 48 hours with no discharge at the compliance point

4.2.3 Design Storm Event

The 2015 IGP state that BMPs must be designed using the following storm data:

- Volume Based: 85th percentile, 24-hr storm
= 1.28 in at TSL
- Flow Based: 85th percentile hourly storm x 2 -or- 0.2 in/hr

Storm data for the above volume was computed by the Santa Barbara County Public Works Department-Water Resources-Hydrology Division.

4.3 Surface Drainage Systems

4.3.1 Overview

The total watershed area tributary to the landfill is 390 acres, of which 220 acres are located upstream of the landfill. The remaining 170 acres includes the landfill and surrounding hillsides.

Within the facility boundaries lies Pila Creek, a natural watercourse which originates in the watershed upstream of the site. In the upper areas of the facility, Pila Creek has been altered and is an engineered swale with a paved invert. In the mid reaches of the facility Pila Creek is contained in underground pipes. In the lower reaches of the facility, such as adjacent to the scalehouse, it remains as a natural swale.

4.3.2 Receiving Water

Pila Creek is the receiving water for the TSL stormwater discharge and flows to the Pacific Ocean about 1,000 feet upcoast of Arroyo Quemado beach. Pila Creek is not listed as a 303(d) impacted water of the state (see website http://www.swrcb.ca.gov/water_issues/programs/tmdl/integrated2012.shtml)

An interactive map of all assessed waters, and all pollutant categories for the site area is available on line at http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml and a listing for the beach at Arroyo Quemado has been assessed for pathogens (copy [partial] Appendix B).

Pila Creek is not shown on the RWQCB Central Coast Basin Plan for beneficial uses, however, both watercourses immediately to the east and west of Pila Creek are listed for beneficial uses (see copy of Basin Plan Beneficial Uses [partial] Appendix B).

4.3.3 Facility Storm Drain System

Surface water is not allowed to pond on any area of the refuse footprint at TSL per the WDRs and state regulations. In addition, drainage control systems must direct rainfall away from and shed rainfall off the refuse filled areas.

There are 4 major drainage subareas within the facility described below (see Figure 3 Storm Drain System & Monitoring Location Plan).

NORTH SEDIMENTATION BASIN DRAINAGE SYSTEM

Tributary Area. The North Sedimentation Basin receives run-off from active and recently filled refuse areas, recently and past cut side slopes, as well as the large back canyon soil stockpile.

Flow Structures. Drainage moves mostly by sheet flow. It is transferred through concrete toe ditches, flared inlets, above-ground down drains, and underground pipes to the North Sedimentation Basin.

Operation. The North Sedimentation Basin is operated under two policies:

- **Policy 1:** Detain drainage long enough to reduce sediment in storm water discharges to acceptable limits
- **Policy 2:** Discharge water rapidly enough to avoid becoming habitat for California red-legged frogs (CRLF).

Operation. The North Sedimentation Basin contains dual skimmers that sends clarified drainage to the 48" underground drain pipe. If the basin capacity is exceeded, flows spill to a paved open channel which discharges into the 48" underground drain line. The North Sedimentation Basin may also be pumped into the paved open channel during the winter season to provide capacity in anticipation of future storms.

The dual skimmers in the North Sedimentation Basin are operated so retention time is long enough to remove a large percent of sediment, but short enough to prevent becoming habitat for CRLF. A program for sampling the North Sedimentation Basin sediment discharge under various retention times is in progress in 2015+ and the data will determine the optimum retention time for meeting the stated policies.

48" UNDERGROUND STORM DRAIN DRAINAGE SYSTEM

Tributary Area. Additional areas drain to the 48" underground storm drain separately from those delivered by the North Sedimentation Basin. These additional areas include: administration/operations complex, back canyon landfill disposal area, and some previously disturbed west slopes.

Flow Structures: Drainage is transferred to the 48" underground storm drain almost entirely by sheet flow through one or two major inlets. All the drainage that enters the 48" underground storm drain discharges to Pila Creek near the scale house.

Operation: A trash rack protects the inlet at the 48" underground storm drain inlet from large obstructions.

UPSTREAM AND OFFSITE RUN-ON DRAINAGE AREAS

Tributary Area. The upstream and offsite run-on drainage areas include the undisturbed upstream watershed and portions of the west side of the property. The upstream undisturbed area drains onto the site, along the original Pila Creek alignment, into the site paved open channel and into the 48” underground drain line.

Flow Structures: Drainage moves entirely by sheet flow before entering the site paved channel and 48” underground storm drain.

Operation: There are no operations associated with the upstream/miscellaneous drainage system. Stormwater flows through by gravity without intentional treatment.

4.3.4 Surface Water Monitoring Locations

The IGP requires monitoring of surface water at all industrial discharge locations. The industrial discharge location for TSL is defined as monitoring location SW4 at the site boundary (see Figure 3). Additional surface water monitoring is performed at locations inside the site in fulfillment of WDR requirements and for in house data. A summary of the surface water monitoring locations is as follows:

SUMMARY – SURFACE WATER MONITORING LOCATIONS

Location	Description	Program
SW1 (Pila Creek Upstream of Landfill Disturbed Area)	Run On (Background) Surface Water Quality	WDR
Sed Basin (Discharge from North Sedimentation Basin skimmer)	Active disposal and stockpile areas; This sampling point used to be located at North Sedimentation Basin spillway but moved to skimmer outlet	WDR
SW3 (Inlet to 48” underground drain)	Pre 2010: Surface Drainage from Active Disposal Area and Clarified Overflow from In-Channel Basins 2010 – Present: Combined Surface Water Quality from Background Areas, Active Disposal, and Administration Complex	WDR
SW4 (Downstream Site Boundary Discharge Point)	IGP COMPLIANCE LOCATION: Combined Surface Water Quality from Background and All Site Areas	IGP, WDR
SW5 (Discharge from the Southern Sediment Basin)	Combined Surface Water Quality from Inactive and some Active Areas	WDR

4.3.5 Paved Acreage

The total paved area is approximately 16 acres, or about 4 percent of the total landfill property. Paved areas include (see Fig. 2):

- Landfill Administration Complex - The administration complex houses the offices, employee facilities, various storage containers, a HazMat staging facility, and the fuel storage tanks and dispensing equipment.
- Site Access Road - The site access roads are paved for approximately one mile. The roads are approximately 30-foot-wide and there are two routes: a westerly fork leads to the administration complex, an easterly fork leads to the tipping area.
- Maintenance Facility and Southern Sedimentation Basin Area - This area is paved and located at the mouth of the landfill canyon. This area is approximately 200 feet by 200 feet.
- Green Waste Area - Green waste is processed and stored on a paved pad at an intermediate elevation between the landfill entrance and the active tipping area.

4.4 Environmental Activities and Systems

4.4.1 Daily Waste Disposal

Waste is brought to the site by private waste haulers and County semi-trailers. Public access for waste disposal is not allowed. Waste is tipped in the active disposal area, moved into a cell of prescribed thickness and area, and consolidated by repeated passes of a compactor. The typical cell dimensions are approximately 17 feet high, 125 feet wide and 20 feet deep.

At the end of each operating day, the newly placed waste layer is covered with an alternative daily cover (ADC) or six inches of clean soil. ADC used most often, soil cover is used rarely. The ADC used most frequently is a tarp; the ADC used infrequently is green waste. The purpose of the daily cover is to protect the refuse from vectors (birds, insects, mammals), reduce odor, and prevent the infiltration of precipitation into the refuse mass.

Clean soil and/or ADC are spread over the waste and is sloped to shed precipitation off the refuse area. The soil or green waste remains in place and is covered with waste the next operating day. The tarp ADC is placed over the refuse layer at the end of the operating day and is sloped to shed precipitation off the refuse area. The tarp is removed at the beginning of the next day of operation and reused.

4.4.2 Vehicle Circulation

The TSL is permitted to receive a maximum of 1500 tons of solid waste per day (which includes up to 145 tons per day of green waste). Between 870 - 900 tons per day of material is received at the site by an average of about 80 commercial and public vehicles per day. Upon entering the facility, waste hauling vehicles are weighed at a scale house and proceed to the landfill disposal area via the site access road. After tipping the waste load, vehicles exit the site by following the same route.

Vehicles and equipment stationed permanently on-site include:

Bulldozer - soil excavation	Tool Carrier – maintenance
Bulldozer - waste handling	Water Trucks - dust control
Earthmover - soil moving	Backhoe - construction
Compactor - waste compaction	Loader – maintenance
Road Grader – grading	Skip Loader– maintenance
Pick-Up Trucks – transportation	Green Waste Grinder - chipping

4.4.3 Dust Control Activities

Dust control reduces release of particles generated by the daily site activities. To control dust, water is sprayed on the operation areas including active waste disposal area (excluding the working face), earthwork areas, green waste processing and unpaved roads. Water is obtained from on-site storage tanks. The storage tanks are filled from on and off-site wells, and the several environmental control systems that recover liquid from the landfill. Water from dust control spraying is not allowed to reach the surface drainage system.

4.4.4 Litter Control Activities

Litter control prevents windblown items from contacting surface water on the site. Litter control methods include:

- portable and permanent fencing placed downwind of the active disposal area and at key points where litter accumulates
- daily litter patrol to remove litter
- year-round clean out of litter in waterways, and
- litter screening **around** all drainage inlets

4.4.5 Landfill Gas to Energy Power Plant and Vehicle Maintenance Shop

A landfill gas to energy plant (LFGTE) is located near the site entrance and is owned and operated by private company. The LFGTE includes a flare, engines and condensate disposal processes.

The TSL vehicle maintenance building also is located in the same area, however, only infrequent welding is done in the building. Minor vehicle maintenance, such as oil/filter change is done in the administration area.

The South Sedimentation Basin is located in the same area as the LFGTE plant.

4.4.6 Fuel, HHW, Oil Storage

The fueling, household hazardous waste (HHW) and grease/oil storage area is located on the east side of the site and includes the following (see Figure 2 Site Plan):

- 20,000-gallon double-walled red-dyed diesel fuel tank



- 230-gallon double-walled gasoline fuel tank
- 550-gallon double-walled clear diesel fuel tank
- 500-gallon double-walled waste oil tank under canopy
- Drums of used motor fluids in curbed area under canopy
- 500-gallon doubled-walled lube oil tank in walk-in metal shed
- Additional storage sheds containing various vehicle maintenance supplies
- HHW Facility-- Paint, batteries, drums and miscellaneous containers of HHW



Most short duration vehicle maintenance is conducted this area, such as oil change, lube and minor engine adjustment.

4.4.7 Green Waste Recycling

Green waste is recycled at the TSL in a designated area on one of the benches on the face of the landfill. Green waste is processed in an on-site horizontal, diesel-fueled grinder and sold to local agriculture and landscape operations.

4.4.8 White Goods

White goods are salvaged at TSL. Freon, if any, is removed, prior to storage in the roll-off bin.

4.4.9 Spare Parts Storage

A spare parts storage area is located near the backcanyon disposal area. Items stored in this area include: spare tires, drainage pipes, fencing, etc.

4.4.10 Groundwater Monitoring System

Groundwater monitoring wells are located at the TSL. The wells are sampled on a semi-annual and annual schedule. Past testing has found that the purge water does not contain contaminants that would classify the purge water as hazardous. The purge water is normally drained onto the ground in the vicinity of the monitoring well and infiltrates into the soil. Because of the small volume of purge water that is drained onto the ground, it does not run-off of the site.

4.4.11 Landfill Gas Control System

A LFG collection and control system has been installed in refuse filled areas at the landfill. The gas provides the fuel to an on-site cogeneration plant (owned by others) which generates electricity.

A byproduct of the gas collection process is liquid condensate. The LFG condensate is contained in the plant where it is incinerated or transported off-site by an approved waste disposal company.

4.4.12 Leachate Collection and Removal System

Leachate is generated when water passing through the landfill comes in contact with the buried waste. Potential sources of water for leachate formation include infiltration of rainfall, surface water from surrounding areas draining onto the landfill, and/or moisture contained within the waste materials. The composition of leachate is highly dependent upon the wastes contained in the landfill and will vary significantly with the landfill over time. The operational procedures and engineering design features for Tajiguas are intended to prevent or minimize leachate generation, detect leachate generation and movement, contain and collect generated leachate, and store the collected leachate until it can be disposed of in an approved manner.

Four leachate collection and removal systems (LCRS) exist at the site with associated storage tanks (see Fig. 2 for tank locations). Testing of the water recovered from all the LCRS systems has shown that the water is non-hazardous, and has been approved by the RWQCB for use on-site for dust control.

- LCRS1. LCRS1 consists of a ground water cut-off trench at the toe of the landfill near the mouth of the canyon. Landfill impacted groundwater removed from LCRS1 is pumped into Tank 1-an aboveground 5,000-gallon polyethylene storage tank with secondary containment located near the extraction wells. From the 5,000-gallon storage tank, the landfill impacted groundwater is either pumped to Tank 2 or 3- two storage tanks located on the ridgeline west of the landfill with a total capacity of 690,000 gallons, or directly to a second 5,000-gallon polyethylene storage tank with secondary containment that is used to fill a water truck. Landfill impacted groundwater collected in this system is periodically sampled and tested. Landfill impacted groundwater from this system is disposed of on the landfill for dust control, or used in soil compaction.
- LCRS2. LCRS2 is part of the composite liner system located along the eastern portion of the landfill. Liquid from this system is pumped to Tanks L1-L3 that are interconnected (5,000-gallon double walled storage tanks near the main access road). Liquid is then transferred directly into a water truck for use as dust control.
- LCRS3. LCRS3 is a horizontal well dewatering system consisting of three wells drilled horizontally into the landfill below the first bench behind the maintenance building. Water from this system drains to a 1,500-gallon storage tank located in the maintenance shop area, and is then pumped into Tanks L1-L3. The water is then transferred directly into a water truck for use as dust control.
- LCRS4. LCRS4 consists of dewatering wells constructed within the landfill. Liquid from this system drains to Tank L1-L3 (5,000-gallon storage tanks near the main access road). It is then transferred into a water truck for use as dust control.
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5.0 STORM WATER POLLUTION SOURCE IDENTIFICATION

5.1 Summary of Storm Water Pollution Sources

A summary of potential storm water pollution sources, including the quantity of material typically present at each source, is shown in the following tables.

As shown in Table 5A, the major potential for storm water pollution is from operating and disturbed areas (active disposal, earthwork, vehicle circulation, etc.) and involves release of sediment and iron.

TABLE 5A. STORM EVENTS

AREA	ACTIVITY	POLLUTANT	QUANTITY ON SITE	STORM EVENTS DISCHARGE HISTORY
Upstream Undisturbed Area Run On	undisturbed	Sediment	none	Sediment, Fe
Active Disposal Area	Refuse Disposal	Litter & Sediment	850 tons or less refuse / day	Litter & Sediment
Earthwork– Temporary Slopes and Decks (Refuse Filled)	Grading	Sediment	Varies	Sediment, Fe
Earthwork– Stockpile	Grading	Sediment	Varies	Sediment, Fe
Earthwork–Final Cover Projects	Grading, Planting	Sediment	Varies	Sediment, Fe
Inactive Disposal	none	Sediment	Varies	Sediment, Fe
Paved Roads	Vehicle Circ.	Sediment	Varies	Sediment
Unpaved Roads	Vehicle Circ.	Sediment	Varies	Sediment
Green Waste Processing	Chipping	Plant Material, Diesel	100 ~ 500 tn	None last 5 years

Past data show organics (COD, BOD, TOC) and oil & grease (O&G) are consistently within the allowable limits indicating stormwater is well protected from contact with waste and vehicle maintenance/operations.

TABLE 5B. NON STORM EVENTS

AREA	ACTIVITY	POLLUTANT	QUANTITY ON SITE	NON-STORM EVENTS DISCHARGE HISTORY
Vehicle Maintenance	Oil and Lube	Oil, Fluids	Small Containers	None last 5 years
Vehicle Fueling	Fueling	Diesel-Red Dye Diesel-Clear Gasoline	20,000 gal tank 550 gallon tank 230 gallon	None last 5 years
Waste Oil Storage	Waste Oil Storage	Vehicle Oil	500-gallon tank	None
Clean Oil Shed	Oil Storage	Vehicle Oil	500-gallon tank in metal shed	None
Hydraulic Fluid Storage	Storage	Lubricant	Varies	None last 5 years
Vehicle Maintenance Supply Shed	Storage	Miscellaneous Mechanical Supplies	Varies	None last 5 years
White Goods Recycling	Appliances Temporary Storage	Freon	Varies	None last 5 years
Household Hazardous Waste Collection	Materials Temporary Storage	Paint, Batteries, Antifreeze, Solvents, Pesticides, Etc	Varies	None last 5 years
LCRS Tanks A - D, Tanks 1 - 4	Waste water storage	Various, Measurable Amounts of Biological and Chemical Constituents	Varies up to 690,000 gals	None last 5 years

5.2 Storm Event Discharges

5.2.1 Upstream Undisturbed Area Run On

Upstream undisturbed area run on contributes sediment and iron to surface water pollution generated onsite. The upstream area is characterized by established coastal sage scrub vegetation.

5.2.2 Active Disposal Area

The greatest potential for surface water pollution from the active disposal area is from sediment and iron release in winter months. During extended periods of precipitation, special procedures are required at the TSL by the RWQCB as summarized below:

- Grade cover materials to divert run-off away from the current waste disposal area to prevent surface water contact with waste material.
- Grade newly filled surfaces of the landfill to promote run-off and prevent ponding of surface water over waste and to resist erosion
- Install all necessary run-off diversion and erosion prevention measures to prevent erosion and flooding of the areas filled with waste
- Install one-foot-thick intermediate cover over all areas containing solid waste, excluding the active face

Disposal operations are also in progress during the dry months and brief storms may occasionally occur. However summer storms do not usually produce sufficient rainfall to create run-off and special procedures are not typically needed.

5.2.3 Inactive Disposal Area

The greatest potential for surface water pollution from the inactive disposal areas is from sediment and iron release in winter months. Intermediate cover consisting of a minimum of one-foot soil with highly established vegetation has been in place on inactive slopes for an extended period (years). The inactive areas include: outside faces, benches and slopes.

5.2.4 Earthwork Areas

Earthwork projects may be in progress during winter months and in any given year might be one or more of: temporary slopes and decks, borrow cut, soil stockpile activities. Any of these earthwork projects have a significant potential to release sediment and iron in storm events.

5.2.5 Paved Roads

Paved roads have a potential for sediment release during storm events from soil left on the pavement by vehicles exiting the landfill disposal and construction areas. Paved roads also transfer sediment rapidly to the site boundary by draining into the underground storm drain pipes. The paved road area is a small fraction of the total site but there is a large impact due to the faster potential for sediment release.

5.2.6 Unpaved Roads

The area of unpaved roads at the site may be a small fraction of the total area of disturbed surfaces but their surface is frequently disturbed and consists of a large quantity of loose soil. The roads also transmit sediment fairly quickly to concentrated points of discharge in storm events.

5.2.7 Green Waste Processing

Green waste is delivered and chipped daily at the site. Raw material is a mixture of home, public agency and commercial vegetation and ranges in size from small clippings to large tree branches. A stockpile of mulch is produced by chipping the material in a horizontal grinder at the green waste area. Mulch leaves the site regularly as it is sold to customers.

5.2.8 Final Cover Projects

Final cover projects are scheduled to be installed in phases over the next several years (2015+). These projects will be built under contract and will involve earthwork such as grading and compaction, soil stockpiling, and revegetation.

Cover project contractors will prepare and adhere to a project-specific SWPPP written as part of contract documents. The contractor is responsible for complying with the project specific SWPPP.

5.3 Non-Storm Event Discharges

5.3.1 Spill Prevention, Control, and Countermeasure Plan

A site-specific Spill Prevention, Control, and Countermeasure (SPCC) Plan addressing primarily non-storm event discharges for the fuel and oil storage areas has been written and is available at the landfill office.

5.3.2 Minor Vehicle Maintenance

Non storm surface water pollution is possible due to materials used in during minor vehicle maintenance. Example activities and materials include: oil and filter change, cleaning (solvents). In recent years, spills have not occurred in sufficient quantity to run-off.

5.4.3 Vehicle Fueling

Spills from vehicle fueling are a potential source of surface water pollution as non-storm events. Fuel tanks are located in the administration complex for on-road, off-road, and gasoline vehicles. Specific actions in the event of a spill at any of these tanks are given in the SPCC.

- Diesel Red-Dyed (off-road vehicle) Fueling Area – The largest fuel storage tank contains red-dyed diesel. The tank is double-walled to provide secondary containment in case of damage or leak. No additional curb or containment is required. Discharges have not occurred in sufficient quantity to run-off the area.
- Gas and Clear Diesel (on-road vehicle) Fuel Tanks – Smaller fuel storage tanks contain gas and clear diesel fuel. Both tanks are double-walled and are not required to be surrounded by secondary containment. Discharges have not occurred in sufficient quantity to run-off the area.

5.4.4 Waste Oil Storage

Spills from filling or emptying at the waste oil storage tank are a potential source of surface water pollution as a non-storm event. The 500-gallon waste oil storage tank is housed under a canopy

and inside a concrete curb in the administration complex. The tank is manufactured as double-walled to provide secondary containment in case of damage or leak. Specific actions in the event of a spill at the waste oil tank are given in the SPCC. Discharges have not occurred in sufficient quantity to run-off the area.

Routine oil change is performed at the waste/new oil storage tanks. A hose coupling directly from the vehicle to the waste oil tank is used for the service, which greatly reduces the change of oil spill.

5.4.5 New Oil Storage

A 500-gallon double walled oil storage tank is contained in a metal shed in the administration complex area. Spills from filling or emptying at the new oil storage tank are a potential source of surface water pollution as a non-storm event. Specific actions in the event of a spill at this location are given in the SPCC. Discharges have not occurred in sufficient quantity to run-off the area.

Routine oil change is performed at the waste/new oil storage tanks. A hose coupling directly from the vehicle to the new oil tank is used for the service, which greatly reduces the change of oil spill.

5.4.6 Hydraulic Fluid Storage

Spills from hydraulic fluid storage are a potential source of surface water pollution as a non-storm event. Specific actions in the event of a spill at these locations are given in the SPCC. Discharges have not occurred in sufficient quantity to run-off the area.

Hydraulic fluid is stored in 55-gallon drums under a canopy. The drums have closed lids and stand inside a concrete curb. The curb provides secondary containment for spills or leaks of hydraulic fluid.

Routine fluid change is performed at the storage sheds. An adequate container is used for draining and transferring spent fluids from the vehicles to the drums.

5.4.7 Vehicle Maintenance Supply Shed

An enclosed supply shed stores small containers of materials for vehicles. The shed would contain spills or leaks of the fluids. Specific actions in the event of a spill at these locations are given in the SPCC. Discharges have not occurred in sufficient quantity to run-off the area.

5.4.8 White Goods Recycling

Surface water pollution from the white goods recycling area may occur from stormwater contact with the appliance metal or from freon spill in refrigerators. However, if a refrigerator was damaged at the site and freon were to escape, freon is extremely volatile and would likely evaporate before reaching the site drainage system.

5.4.9 HHW Facility

The HHW facility meets strict design criteria and includes two bays of secondary containment curbing, a roof cover, and enclosed metal locker. The potential for surface water pollution from run-off and run-on is very low. Discharges have not occurred in sufficient quantity to run-off the area.

5.4.10 Leachate Collection and Removal System

The potential for a non-storm surface water pollution event from the LCRS systems is low because all of the water in the various LCRS systems has been tested a number of times and shown to be non-hazardous in composition.

Tanks 1 – 4 are single walled tanks and therefore have greater risk of leaks or spills. However, these tanks contain water from the groundwater interceptor trench; groundwater flows which originate deeper than buried refuse. The combined capacity of Tanks 1 – 4 is very large, enough for storage of water to meet a full year of construction needs at the site. Overflow of these tanks has not occurred.

Tanks A – D are double walled and at less risk from leaks or spills. These tanks contain water from refuse subdrains and dewatering wells. These tanks are pumped when nearing capacity by automatic equipment, and visual light alarms also switch on to trigger staff attention. Overflow of these tanks has not occurred.

5.5 Summary – Pollutant Source Assessment

Based on the potential storm and non-storm water pollutant sources described above, the County has evaluated the potential presence of the following pollutants identified as watershed impairments: Boron, Chloride, Dissolved Oxygen, Nitrate/Nitrite/Total Nitrogen and Sodium, and found these to not be present in the facility's industrial materials or activity.

In past years the County undertook a study and developed a program to identify the source of and reduce pathogens in the landfill storm water discharge. The source of pathogens was determined to be seagull scavenging and roosting on and around the site and active waste area. Seagull presence was mostly eliminated by a falcon program (falconer with raptors being active at the site on a routine schedule). Sampling in the site storm water discharge after the falcon program was established indicates pathogens are absent. The falcon program is in progress to date.

Based on the study and present falcon program, the County believes E. Coli and Enterococcus (enterococcus, Escherichia coli [e coli], Total Coliform, Fecal Coliform), are not present in the site discharge.

6.0 STORM WATER POLLUTION BEST MANAGEMENT PRACTICES (BMPs)

6.1 BMP Policy

The BMP policies are developed to address the potential storm water pollution sources which have been identified as originating largely from disturbed and operating areas (active disposal, earthwork, vehicle circulation, etc.). The policy goals are to minimize the occurrence of those areas and contain pollutants within the site.

BMP POLICIES

POLICY NO. 1: MINIMIZE DISTURBED AREAS

Greatly decrease disturbed and operating areas (active disposal, earthwork, vehicle circulation, etc.). Strategically manage operations so the absolute minimum of disturbed area occurs at all times.

POLICY NO. 2: USE SOURCE CONTROLS TO CONTAIN SEDIMENT WITHIN DISTURBED AREAS

If an area must be disturbed, contain sediment within the immediate local area as much as possible.

POLICY NO. 3: DISTURBED AREAS DISCHARGING ANYWHERE OTHER THAN TO THE NORTH SEDIMENTATION BASIN MUST HAVE PRIORITY FOR BMP TREATMENT

Disturbed areas that do not flow to the North Sedimentation basin must have first priority to receive BMP treatment. Flows from such areas travel to the site boundary with little or no sediment removal. The areas include but are not limited to: areas tributary to the South Sedimentation Basin, areas tributary to the 48" storm drains, unpaved and paved access roads.

6.2 BMP Summary

A summary of the best management practices (BMPs) for storm events and for non-storm events are shown in separate tables below.

TABLE 6A. STORM EVENT BMPS

AREA	ACTIVITY	POLLUTANT SOURCE	POLLUTANT	STORM EVENT BEST MANAGEMENT PRACTICE	CASQA FACT SHEET
ALL	ALL	Refuse, Erosion, Spill, Leak	Refuse, sediment, fuel and chemicals	Good Housekeeping, Preventive Maintenance, Employee Training	EC-1
Upstream Undisturbed Area	None	Erosion	Sediment, Fe	Do not disturb	EC-2
Active Disposal Area	Refuse Disposal	Refuse	Refuse, litter, sediment	MINIMIZE OPERATIONAL AREA SURFACE TREATMENT	SE-5 SE-9 TC-22
Temporary Slopes and Decks (Refuse Filled) Earthwork (Cut/Fill/Soil Stockpile)	Grading	Erosion	Sediment, Fe	MINIMIZE OPERATIONAL AREA SURFACE TREATMENT	SC-40 EC-3 EC-4 EC-5 EC-6 EC-7 EC-8
Inactive Disposal	Intermediate Cover	Erosion	Sediment, Fe	Do Not Disturb Established Vegetation	EC-2
Wind Susceptible Areas	Windblown litter	Paper, floatables	Varies	Litter patrols, Permanent & Temporary Fence, Apply Water	WE-1
Drainage Inlets	Convey Flows	Erosion	Sediment	TREAT FLOWS PRIOR TO ENTER DRAINAGE INLETS Inlet Protection	SE-5 SE-14
Vehicle Circulation-Paved Roads	Vehicle Circulation	Erosion	Sediment	SOURCE CONTROLS Street Sweeper, Minimize Tracking	SE-7 TC-1 to TC-3
Vehicle Circulation-Unpaved Roads	Vehicle Circulation	Erosion	Sediment	MINIMIZE OPERATIONAL AREA SURFACE TREATMENT	SC-40 EC-8

TABLE 6B. NON-STORM EVENT BMPS




AREA	ACTIVITY	POLLUTANT SOURCE	POLLUTANT	CASQA Fact Sheet
Green Waste Area	Chipping	Mulch	Organics	SC-32 SE-5 SE-14
Vehicle Maintenance	Oil change, lube	Spills	Vehicle fluids	SC-22 SC-21
Fueling Area	Vehicle Fuel	Spill, Leak	Diesel Gasoline	SC-20 SC-11
Waste Oil Storage	Oil Storage	Spill, Leak	Oil	SC-11 SC-31
New Oil Shed	Oil Storage	Spill, Leak	Oil	SC-11 SC-31
Hydraulic Fluid Storage	Chemical Storage	Spill, Leak	Chemical	SC-11 SC-31
Vehicle Mtc Supply Shed	Supplies Storage	Spill, Leak	Hydraulic Fluid	SC11 SC-34
White Goods Recycling	Appliance Storage	Spills	Metals, Freon	Define source of metal in stormwater
Household Hazardous Waste Collection	Temporary Storage	Spills, Leak	Paint, Batteries, Miscellaneous	SC-11 SC-34
LCRS Tanks 1 - 4	Groundwater storage	Spills, Leak	Non-hazardous material	SC-11 SC-31
LCRS Tanks A - D	Landfill Dewatering Well storage	Spills, Leak	Non-hazardous material	SC-11 SC-31
Final Cover Projects	Cover Construction	Erosion	Sediment	Project specific SWPPP By Contractor

6.2 BMP Details

6.2.1 Minimum BMPs – All Areas

Minimum non-structural BMPs are required by the IGP and are summarized below:

	<p>Good Housekeeping <i>(keep things tidy)</i></p>	<ul style="list-style-type: none"> · Observe and maintain industrial activity outdoor areas · Minimize or prevent material tracking · Minimize dust generated · Cleanup areas affected by rinse and wash water · Cover stored industrial materials that can be readily mobilized by contact with stormwater · Contain stored non-solid industrial materials or wastes · Prevent disposal of rinse/wash waters · Minimize flows of offsite stormwater and NSWDs into material handling areas
	<p>Preventative Maintenance <i>(know what may fail and plan for routine repairs)</i></p>	<ul style="list-style-type: none"> · Identify equipment and systems that may leak · Observe the equipment and systems to detect leaks · Establish a schedule for maintenance · Establish procedures for maintenance and repair
	<p>Spill and Leak Prevention and Response <i>(have a plan to prevent and clean up accidents)</i></p>	<ul style="list-style-type: none"> · Establish procedures and/or controls to minimize spills and leaks · Develop and implement spill and leak response procedures to prevent industrial materials from being discharge · Clean up spills and leaks promptly · Identify and describe needed spill and leak response equipment · Train appropriate spill
	<p>Material Handling and Waste Management <i>(take steps to make sure materials and waste don't wash or blow away)</i></p>	<ul style="list-style-type: none"> · Minimize handling of industrial materials or wastes that can be readily mobilized by contact with stormwater · Contain non-solid industrial materials or wastes that can be transported or dispersed by the wind or contact with stormwater · Cover industrial waste disposal and industrial material storage containers · Divert run-on and stormwater away from stockpiled materials · Clean spills that occur during handling · Observe and clean outdoor material/waste handling equipment or containers

	<p>Erosion and Sediment Controls <i>(minimize erosion and prevent sediment from leaving the site)</i></p>	<p>Implement effective wind erosion controls Provide effective stabilization for inactive areas, finished slopes, and other areas prior to a forecasted storm event. Maintain effective perimeter controls and stabilize site entrances Divert run-on and stormwater generated from within the facility away from erodible materials Properly design sediment basins</p>
	<p>Employee Training Program <i>(train staff to know what to do)</i></p>	<p>Train stormwater team members Prepare or acquire training manuals Identify which personnel need to be trained Provide a training schedule Maintain training documentation</p>
	<p>Quality Assurance Record Keeping <i>(keep track of and document everything)</i></p>	<p>Develop and implement management procedures to ensure implementation of plans Develop a method of tracking and recording program implementation Maintain implementation records (i.e., BMP deployment records, employee training logs, spill occurrence and clean-up records)</p>

6.2.2 General BMPs – All Operating and Disturbed Areas

BMP Policy 1 applies to all operational and disturbed areas because a major source of TSS is from those areas. Reduction in TSS is expected to result in reduction of other contamination such as metals and organics.

POLICY - ALL OPERATING AND DISTURBED AREAS

BMP Policy 1: MINIMIZE OPERATIONAL AND DISTURBED AREAS including: active disposal, temporary slopes and decks (refuse filled), earthwork, vehicle circulation.

The number and size of simultaneous operating areas and earthwork projects must be managed to result in the absolute minimum disturbed area.

Specific BMP – All Operating and Disturbed Areas

EC-1 Scheduling
Activities are to be scheduled during non- wet months as much as possible.
Duration and end dates must be planned so sufficient time is available to install wet weather preparation on the new surfaces before the winter months.

6.2.3 Specific BMPs – Upstream Undisturbed Area

Run on from upstream land enters and mixes with the site drainage. The upstream land consists completely of National Forest property covered with established coastal sage scrub vegetation. A BMP is not applicable because the upstream land is not part of the activities.

6.2.4 Specific BMPs - Active Disposal Area

The active area includes the daily exposed waste cell which is operated with minimal disturbed area. Run on is strongly prevented and only the precipitation that falls directly onto the cell would contact refuse. The waste cell is covered at the end of each working day with soil or ADC (tarp or mulch) to prevent any precipitation onto the waste when operation staff is gone. In a storm event, most precipitation is absorbed by the refuse, and run off is not typical. The primary BMP for run off (if any) from the active area is sediment reduction in the North Sedimentation Basin.

Specific BMPs- Active Disposal Area

SE-5 Fiber Rolls (prevent run on)

SE-9 Straw Bales (prevent run on)

TC-22 Sediment Basin (receives disposal area drainage)

- **Grading.** Surrounding surfaces are designed to slope away from the active area operation to prevent storm water contact with refuse.
- **Fiber Rolls (SE-5).** Placement of temporary fiber rolls may be used to prevent run on in the disposal area.
- **Straw Bales (SE-9).** Placement of temporary straw bales may be used to prevent run on in the disposal area.
- **Sediment Basin (TC-22).** Run off from the active disposal area drains to the North Sedimentation basin. The sedimentation basin is designed to retain silt and other settleable surface water contaminants.

6.2.5 Specific BMPs -Temporary Decks and Slopes; Earthwork (Cut/Fill/Stockpile)

BMP Policies No. 2 and 3 are necessary at temporary slopes/decks, and earthwork areas. These areas include waste filled zones which have been covered with intermediate cover soil,

POLICY - TEMPORARY DECKS AND SLOPES; EARTHWORK (CUT/FILL/STOCKPILE)

BMP Policy No. 2: USE SURFACE TREATMENT TO CONTAIN SEDIMENT WITHIN DISTURBED AREAS. If an area must be disturbed, contain sediment within the immediate local area as much as possible.

BMP Policy No. 3: DISTURBED AREAS DISCHARGING ANYWHERE OTHER THAN TO THE NORTH SEDIMENTATION BASIN MUST HAVE PRIORITY FOR BMP TREATMENT
Disturbed areas that do not flow to the North Sedimentation basin must have first priority to receive BMP treatment because flows from such areas travel to the site boundary with little or no sediment removal. The areas include but are not limited to: areas tributary to the South Sed Basin, areas tributary to the 48" storm drains, unpaved and paved access roads

as well as borrow cut, soil stockpile, and special project locations (such as closure projects). Surface water is not permitted to pond on the any refuse filled areas.

Actions that meet the SWPPP policies involve containing sediment within the local subarea using specific BMPs, then removal of further sediment in the North Sedimentation Basin, or prevention of sediment entering the underground drains.

Specific BMPs -Temporary Decks and Slopes; Earthwork (Cut/Fill/Stockpile)

SC-40 Stabilize Erodible Areas (one or combination of the following):

EC-3 Hydraulic Mulch (short term non-vegetative treatment)

EC-4 Hydroseed (long term vegetative treatment)

EC-5 Soil Binders (short term non-vegetative treatment)

EC-6 Straw Mulch (short term non-vegetative treatment)

EC-7 Geotextiles and Mats (long term vegetative or non-vegetative treatment)

EC-8 Wood Mulch (short term non-vegetative treatment)

- **Stabilize Erodible Areas (SC-40).** Stabilization methods must be based on the duration the surface will remain intact, the slope of the surface, and other area-specific details. Selection of one or a combination of the following BMPs is necessary:
 - **Hydraulic Mulch (EC-3).** Apply as a short duration, stand alone surface treatment or as a longer term surface treatment in combination with vegetative BMPs for wind and erosion control.
 - **Hydroseed (EC-4).** Apply in combination with hydromulch or rolled erosion control product (geotextile or mat) as a long duration surface treatment for wind and erosion control. Apply on areas which do not carry vehicle traffic.
 - **Soil Binder (EC-5).** Apply as a short duration, stand alone surface treatment for wind and erosion control where vegetative methods are not suitable. Apply on areas which do not carry vehicle traffic.
 - **Straw Mulch (EC-6).** Apply as a short duration, stand alone surface treatment by placing a uniform layer and incorporating into the soil with studded roller or anchoring with a tackifier.
 - **Geotextile and Mats (EC-7).** Apply as a long term surface treatment on steeper slopes where erosion potential is high or vegetation slow to establish. Use seeded mat or in combination with hydroseed.
 - **Wood Mulch (EC-8).** Apply as a short duration, stand alone surface treatment for wind and erosion control. Wood mulch can be used on areas which receive vehicle traffic. Apply as a longer term surface treatment in combination with vegetative BMPs.

6.2.6 Inactive Disposal Area BMPs

Inactive disposal areas of TSL have a layer of intermediate soil cover and established vegetation. A strong emphasis of no disturbance to the existing vegetation is recommended.

If any portion must be disturbed (for example, to correct settlement, or repair gas pipes), the surface is subject to BMP Policy No. 3 which gives areas that do not drain to North Sedimentation Basin first priority to be stabilized using BMPs in 6.2.5.

Specific BMPs – Inactive Disposal Areas

EC-2 Preserve Existing Vegetation

6.2.7 Wind Susceptible Area BMPs

Windblown litter from the daily disposal activities is removed by hand every day that it is observed. Both permanent and mobile litter fencing is used at the site. Litter fencing is installed at strategic locations on the site when forecasts predict windy conditions. In addition, the landfill is closed under extreme high wind periods.

Wind erosion of disturbed areas is reduced by application of water. No water from wind erosion control measures is allowed to enter the underground drain lines.

Specific BMPs – Wind Susceptible Areas

WE-1 Wind Erosion Control (applying water)

6.2.8 Drainage Inlet BMPs

Drainage inlet BMPs may be placed at the upstream side of inlets for small reductions in TSS and metals. The drainage inlet BMPs provide very limited surface flow treatment.

Specific BMPs – Drainage Inlets

SE-5 Fiber Rolls (limited sediment removal)

SE-14 Biofilter Bags (limited sediment, metals, organics removal)

Drainage inlet BMPs provide very limited surface flow treatment.

Inlet protection includes one of the following BMPs depending on the quantity of flow, origin of flow and available space:

- **Biofilter Bags (SE-14).** Biobags that are designed for metals and organics removal may be placed at drainage inlets to provide limited surface drainage treatment prior to entering the underground lines.

- **Fiber Rolls (SE-5).** Fiber rolls may be installed around inlets to provide limited sediment removal before flows enter the underground lines.
- **Wire Mesh or Temporary Fencing.** Grid fabric, such as wire mesh or temporary fencing, may be placed around drainage inlets to prevent brush and litter from entering the underground lines.

6.2.9 Vehicle Circulation - Paved Road BMPs

Soil on the paved road has a high potential to discharge from the site because it can enter the underground storm drain pipes and transfer rapidly to the site boundary. Therefore, a strong emphasis on preventing vehicle tracking and removing sediment on the paved road is recommended.

Specific BMPs – Vehicle Circulation Paved Roads

SE-7 Street Sweeping
TC-1 through TC-3 Tracking Control

- **Street Sweeping (SE-7).** Street sweeping is recommended to clean the paved road of sediment as needed based on visual inspection.
- **Tracking Control (TC-1, 2 and 3).** Stabilized active disposal area with rumble strips may be installed to remove sediment from tires prior to reaching the paved roads.

6.2.10 Unpaved Road BMPs

Sediment eroding from unpaved roads on the site has a substantial potential to discharge in surface water. Unpaved roads should be used as infrequently as possible.

Specific BMPs – Vehicle Circulation Unpaved Roads

SC-40 Stabilize Erodible Areas
EC-8 Wood Mulch (non-vegetative treatment)
Recycled Asphalt

- **Stabilize Erodible Areas (SC-40).** Stabilization methods must be based on the duration the surface will remain intact and other area-specific details.
 - **Non-Vegetated Surface Treatment.** Recycled asphalt or wood mulch may be applied as a stand alone surface treatment on areas which receive vehicle traffic.

6.2.11 Green Waste Area BMPs

Escape of raw and processed materials in storm events has not been generally observed at the green waste area, however, a strong emphasis must be made to contain particles within the immediate area. Only one inlet serves the green waste pad and preventing green waste from entering the inlet is required.

Specific BMPs – Green Waste Area

SC-32 Outdoor Equipment Operations

Inlet Protection

SE-5 Fiber Rolls (limited sediment removal)

SE-14 Biofilter Bags (limited sediment, metals, organics removal)

Inlet Protection BMPs provide very limited surface flow treatment.

Major practices to follow include:

- **Outdoor Equipment Operation (SC-32).** Contain particles in the immediate area.
- **Biofilter Bags (SE-14).** Biobags that are designed for metals and organics removal may be placed at drainage inlets to provide limited surface drainage treatment prior to entering the underground lines.
- **Fiber Rolls (SE-5).** Fiber rolls may be installed around green waste stockpiles to provide containment before flows enter the drains.

6.2.12 Vehicle Maintenance & Vehicle Washing BMPs

A no-spill history and absence of oil & grease in stormwater samples indicate good practices are being used for vehicle maintenance and vehicle washing.

Specific BMPs – Vehicle Maintenance & Vehicle Washing

SC-22 Vehicle and Equipment Repair

SC-21 Vehicle and Equipment Washing

- **Vehicle & Equipment Repair (SC-22).** Major practices to continue include:
 - **Designated Area.** Minor maintenance is done in the administration complex. Use of a tarp, drop cloth and/or drip pan is necessary for any work, such as fluid change, tune, and parts replacement.
 - **Employee Training.** Train mechanics and staff performing the vehicle maintenance in hazardous material awareness and handling including regular refresher courses.
 - **Spill and Clean Up Practices.** Routine oil change is done using a coupler directly from the vehicle to the oil tanks. The coupler greatly reduces any change of oil spill. Small incidences of spill or leak, if any, are promptly cleaned using

dedicated kits available within a few feet of the work. The kits contain absorbents, personal protective gear and emergency first aid items.

- **Waste Materials.** All waste materials such as oil, solvents, and vehicle parts are disposed of properly. The site includes a bulk waste oil storage which is drained by oil recycling contractor, and a state-of-the-art hazardous waste facility emptied by authorized contractor.
- **Recordkeeping.** Detailed and up-to-date records are kept of all vehicle maintenance and repair activities.
- **Vehicle Washing (SC-21).** Vehicle wash occurs very infrequently and only used when a passenger vehicle leaves the site, or a large equipment is taken out of service for a major repair. Vehicle wash is done using very little water, on unpaved areas where water infiltrates the surface and does not run off nor enter the drain system. No soap is used for vehicle wash. The objective of the vehicle wash is to remove soil and refuse material. Vehicle wash at TSL does not result in contamination of washwater with oil and grease, or other vehicle chemicals. A washrack structure is not used at the site, but the activity meets other recommendations in the CASQA guidelines.

6.2.13 Vehicle Fueling BMPs

A no-spill history and absence of stormwater contamination indicates good practices are being used for vehicle fueling. A formal SPCC Plan has been prepared for TSL and provides additional BMP practices for the fuel activities. The SPCC is on file at the site.

Specific BMPs – Vehicle Fueling

SC-20 Vehicle and Equipment Fueling

SC-11 Spill Prevention, Control and Cleanup

Spill Prevention, Control & Countermeasure Plan (SPCC)

Major practices to continue include:

- **Central Covered Fuel Dispensing Area.** Most fueling is done at the central designated area which has a cover structure to prevent rain contact.
- **Secondary Containment.** Fuel tanks are either double-walled or located within secondary containment for prevention of spills to surface drains.
- **Bollards.** The fuel tanks are surrounded by bollards to prevent damage by vehicles.

6.2.14 Waste Oil Storage BMPs

A no-spill history and absence of stormwater contamination indicates good practices are being used at the waste oil storage tank.

Specific BMPs – Waste Oil Storage

SC-31 Outdoor Liquid Container Storage
SC-11 Spill Prevention, Control and Cleanup
Spill Prevention, Control & Countermeasure Plan (SPCC)

Major practices to continue include:

- **Covered Waste Oil Tank Area.** The waste oil storage tank is housed under a canopy.
- **Secondary Containment.** The tank is double-walled and located inside a concrete curb.

6.2.15 New Oil Storage BMPs

A no-spill history and absence of stormwater contamination indicates good practices are being used at the new oil storage tank.

Specific BMPs – New Oil Storage

SC-31 Outdoor Liquid Container Storage
SC-11 Spill Prevention, Control and Cleanup
Spill Prevention, Control & Countermeasure Plan (SPCC)

Major practices to continue include:

- **Enclosed new Oil Tank Bldg.** The new oil storage tank is housed in a shed.
- **Secondary Containment.** The tank is double-walled which provides secondary containment.

6.2.16 Hydraulic Fluid Storage BMPs

A no-spill history and absence of stormwater contamination indicates good practices are being used at the hydraulic fluid storage area.

Specific BMPs – Hydraulic Fluid Storage

SC-31 Outdoor Liquid Container Storage
SC-11 Spill Prevention, Control and Cleanup

Major practices to continue include:

- **Covered Hydraulic Fluid Area.** The hydraulic fluid is stored in 55-gallon drums under a canopy.
- **Secondary Containment.** The hydraulic fluid drums are located inside a concrete curb.

6.2.17 Vehicle Maintenance Supply Shed BMPs

A no-spill history and absence of stormwater contamination indicates good practices are being used at the vehicle supply shed.

Specific BMPs – Vehicle Maintenance Supply Shed

SC-34 Waste Handling and Disposal
SC-11 Spill Prevention, Control and Cleanup

- **Enclosed Supply Shed.** The vehicle maintenance supplies are housed in a shed.

6.2.18 White Goods BMPs

Stormwater contamination from freon at the white goods area has not occurred because the liquid is extremely volatile and, if present, would evaporate before reaching the site drainage system. Stormwater contamination from contact with appliance metals is possible, but would be a very small fraction of other site metals sources. Identification of metals contamination sources is recommended to determine if BMPs are necessary at the white goods area.

6.2.19 HHW Facility BMPs

A no-spill history and absence of stormwater contamination indicates good practices are being used at the HHW Facility.

Specific BMPs – HHW Facility

SC-34 Waste Handling and Disposal
SC-11 Spill Prevention, Control and Cleanup

Major practices to continue include:

- **Regulatory Design.** The HHW facility includes separation bays, secondary containment curbing, a roof cover, and enclosed metal locker.

6.2.20 Leachate Collection and Removal System BMPs

A no-spill history and absence of stormwater contamination indicates good practices are being used at the LCRS storage tanks. The water stored in the various LCRS systems has been tested and shown to be non-hazardous, therefore a leak or spill would not impact surface water quality. However BMPs are recommended if the composition of the collected water changes.

Specific BMPs – LCRS Tanks

SC-31 Outdoor Liquid Container Storage
SC-11 Spill Prevention, Control and Cleanup

Major practices to continue include:

- **Secondary Containment.** The tanks that contain water from refuse areas are double-walled and located within a curbed area for secondary protection.

6.2.21 Final Cover Project BMPs

Final cover construction projects are scheduled at TSL in phases. Each phase is a separate project and storm water protection BMPs are required in a SWPPP written specifically for that phase as part of contract documents.

Each cover project will be installed by contractor who is responsible for complying with the surface water protection BMPs shown in that project specific SWPPP.

7.0 INSPECTION AND SAMPLING PROGRAM

7.1 Sampling Parameters

TSL is required to sample stormwater according to both the IGP and WDRs.

IGP BASIC AND ADDITIONAL PARAMETERS

pH
 TSS
 Oil & Grease
 Fe
 (Iron required per SIC code 4953, ref. Table 1, Industrial General Permit SWQCB Order 2014-0057-DWQ)

IGP SubChapter N PARAMETERS

BOD
 TSS
 Ammonia (as N)
 α-Terpineol
 Benzoic acid
 p-Cresol
 Phenol
 Zinc

WDR PARAMETERS

Parameter	USEPA Method ¹	Units ²
Specific Conductance	120.1	µS/cm
Nitrate & Nitrite as Nitrogen (30-day holding time)	300.0	mg/L
pH	Field	pH Units
Total Organic Carbon	9060	mg/L
Total Suspended Solids	160.2	mg/L
Iron (unfiltered)	6010B	mg/L

Footnotes:

¹ USEPA – United States Environmental Protection Agency. Upon receiving prior approval from the Central Coast Water Board Executive Officer, the Discharger may use equivalent analytical methods.

² mg/L – milligrams per liter; µS/cm – microSiemens per centimeter

7.2 Numeric Action Levels

The IGP Numeric Action Levels and the federal NPDES program effluent benchmarks for non-hazardous landfills using best practicable control technology are shown in the tables below (ref: Table 2, Industrial General Permit SWQCB Order 2014-0057-DWQ and 40 CFR § 445.21).

The NALs applicable to TSL are outlined in red.

PARAMETER	TEST METHOD	REPORTING UNITS	ANNUAL NAL	INSTANTANEOUS MAXIMUM NAL
pH*	See Section XI.C.2	pH units	N/A	Less than 6.0 Greater than 9.0
Suspended Solids (TSS)*, Total	SM 2540-D	mg/L	100	400
Oil & Grease (O&G)*, Total	EP A 1664A	mg/L	15	25
Zinc, Total (H)	EP A 200.8	mg/L	0.26**	
Copper, Total (H)	EP A 200.8	mg/L	0.0332**	
Cyanide, Total	SM 4500-CN C, D, or E	mg/L	0.022	
Lead, Total (H)	EP A 200.8	mg/L	0.262**	
Chemical Oxygen Demand (COD)	SM 5220C	mg/L	120	
Aluminum, Total	EP A 200.8	mg/L	0.75	
Iron, Total	EP A 200.7	mg/L	1.0	
Nitrate + Nitrite Nitrogen	SM 4500-NO3-E	mg/L as N	0.68	
Total Phosphorus	SM 4500-P B+E	mg/L as P	2.0	
Ammonia (as N)	SM 4500-NH3 B+C or E	mg/L	2.14	
Magnesium, total	EP A 200.7	mg/L	0.064	
Arsenic, Total (c)	EP A 200.8	mg/L	0.15	
Cadmium, Total (H)	EP A 200.8	mg/L	0.0053**	
Nickel, Total (H)	EP A 200.8	mg/L	1.02**	
Mercury, Total	EP A 245.1	mg/L	0.0014	
Selenium, Total	EP A 200.8	mg/L	0.005	
Silver, Total (H)	EP A 200.8	mg/L	0.0183**	
Biochemical Oxygen Demand (BOD)	SM 5210B	mg/L	30	

SM – Standard Methods for the Examination of Water and Wastewater, 18th edition

EP A – U.S. EPA test methods

(H) – Hardness dependent

* Minimum parameters required by this General Permit

** The NAL is the highest value used by U.S. EPA based on their hardness table in the 2008 MSGP.

It should be noted that as of July 1, 2016, the TSL is a Level 1 Facility for TSS, Iron, and pH. A Level 1 Exceedance Response Action (ERA) Report will be completed and submitted via SMARTS by January 1, 2017. Figure 4 shows the Level 1 ERA Site Map, which shows the additional BMPs implemented in response to the NAL Exceedance. In addition, the SWPPP Team has undergone SWPPP Training by a Qualified Industrial Stormwater Practitioner (QISP), as required for all Level 1 facilities.

**NPDES Effluent Limitation Benchmarks
Ref. 40 CFR § 445.21**

Regulated parameter	EPA NPDES	
	Maximum daily	Maximum monthly avg.
BOD mg/L, ppm	140	37
TOC mg/L, ppm		
TSS mg/L, ppm	88	27
Specific Conductance, umhos/cm		
Ammonia (as N) mg/L, ppm	10	4.9
α-Terpineol mg/L, ppm	0.033	0.016
Benzoic acid mg/L, ppm	0.12	0.071
p-Cresol mg/L, ppm	0.025	0.014
Phenol mg/L, ppm	0.026	0.015
Zinc mg/L, ppm	0.20	0.11
Oil & Grease mg/L, ppm		
pH	Within the range 6 to 9	Within the range 6 to 9

7.3 IGP Visual Inspection and Sampling

Visual inspection and sampling activities as required by the state Industrial General Permit (IGP) are described below. Stormwater sample results are to be entered electronically in SMARTS within 30 days of obtaining a sample.

Visual Inspections

MONTHLY: The site is reviewed visually for unauthorized non-storm discharges. There are no pre-authorized non-storm water discharges at the TSL. Overall condition and fulfillment of operational and structural BMPs are made at this time.

The monthly visual inspection report form is included in Appendix D.

ANNUAL: An annual storm water report is prepared electronically directly into the SMARTS data system.

Sampling

LOCATIONS: The stormwater discharge WDRs compliance location is (see Figure 3):

SW-4 Site downstream property boundary.

Currently, the site operates under both an Industrial General Permit and a Construction General Permit (CGP) (WDID No. 3 42C377629). The Construction General Permit covers the closure area, with the sampling point at SW 4 temporarily being used for CGP coverage. Once a Notice of Termination (NOT) has been filed for the CGP, the facility will resume collecting samples at the SW 4 sampling location as the only sampling location for the site. In the interim, the IGP stormwater samples are being collected at

locations SW 1, SW 4 (Interim), and SW 3. See Figure 3 for the locations, described below.

- SW 1 Background sample, upgradient of landfill activities
- SW 4 (Interim) Discharge from the northern sediment basin and the active area of the landfill.
- SW 3 Discharge from the 380 deck and a small portion of the fill deck.

FREQUENCY: Sampling is taken for four storms per reporting year with two samples collected from a QSE between July 1 and December 31 and two samples collected from a QSE between January 1 and June 30. The samples are taken within the first 4 hours of run off and within normal business hours.

PARAMETERS: Storm discharge is analyzed for:

Field Instrument	Lab Analysis
pH	TSS
Specific Conductance	Oil & Grease
	Total Organic Carbon
	Nitrate as N
	Iron
	Zinc

7.4 WDR Inspection and Sampling

Inspection and sampling activities are required by the site WDRs as summarized below. Some of the activities are equivalent with those required by the IGP program.

Visual Inspections

MONTHLY: Standard observations* are made at least monthly and after each storm event from October 1 – April 30 (equivalent with NPDES).

QUARTERLY: Standard observations* are made quarterly May to September (equivalent with NPDES).

*STANDARD OBSERVATIONS DEFINITION HIGHLIGHTS

For the Landfill:

- Presence of water in basins & ditches
- Evidence of discharge, estimated flowrate
- Presence of Odors
- Ponding over Refuse
- Erosion or Exposed Waste
- Waste in Runoff
- Non Stormwater Discharges
- Drainage System Integrity

For Receiving Water:

- Presence of Waste or other Suspended material
- Discoloration, Turbidity
- Odors

Evidence of Beneficial Use
Estimated Flowrate
Weather Conditions

Sampling

LOCATIONS: The stormwater discharge WDRs compliance location is (see Figure 3):

SW-4 Site downstream property boundary.

Currently, the site operates under both an Industrial General Permit and a Construction General Permit (CGP) (WDID No. 3 42C377629). The Construction General Permit covers the closure area, with the sampling point at SW 4 temporarily being used for CGP coverage. Once a Notice of Termination (NOT) has been filed for the CGP, the facility will resume collecting samples at the SW 4 sampling location as the only sampling location for the site. In the interim, the IGP stormwater samples are being collected at locations SW 1, SW 4 (Interim), and SW 3. See Figure 3 for the locations, described below.

SW 1 Background sample, upgradient of landfill activities

SW 4 (Interim) Discharge from the northern sediment basin and the active area of the landfill.

SW 3 Discharge from the 380 deck and a small portion of the fill deck.

FREQUENCY: Sampling is taken for four storms per reporting year with two samples collected from a QSE between July 1 and December 31 and two samples collected from a QSE between January 1 and June 30. The samples are taken within the first 4 hours of run off and within normal business hours.

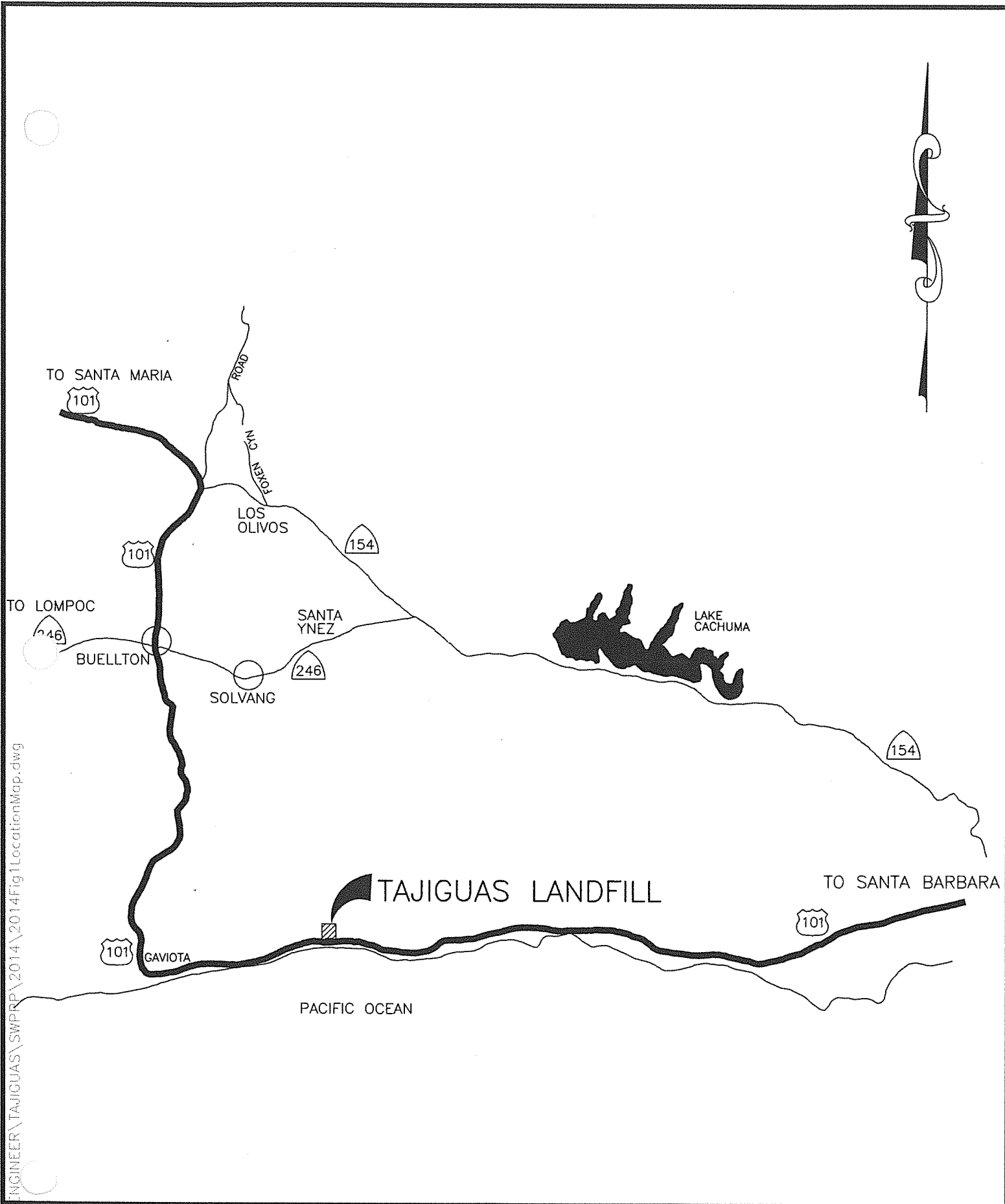
PARAMETERS: Storm discharge analyses under the WDRs are equivalent with NPDES parameters. Storm discharge is analyzed for:

Field Instrument

pH
Specific Conductance

Lab Analysis

TSS
Oil & Grease
Total Organic Carbon
Nitrate as N
Iron
Zinc

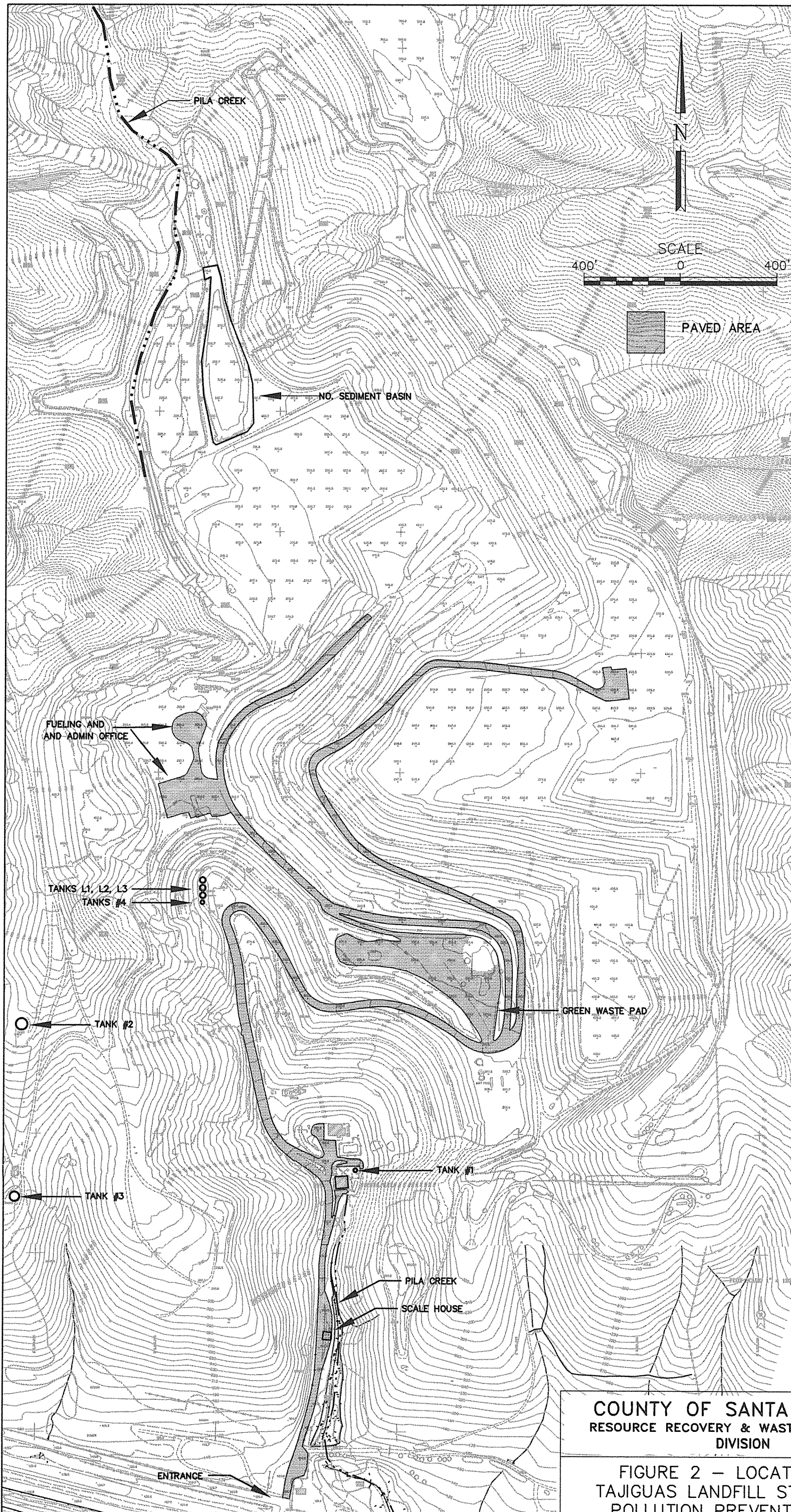


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COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
 RESOURCE RECOVERY & WASTE MANAGEMENT

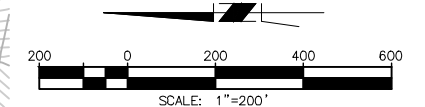
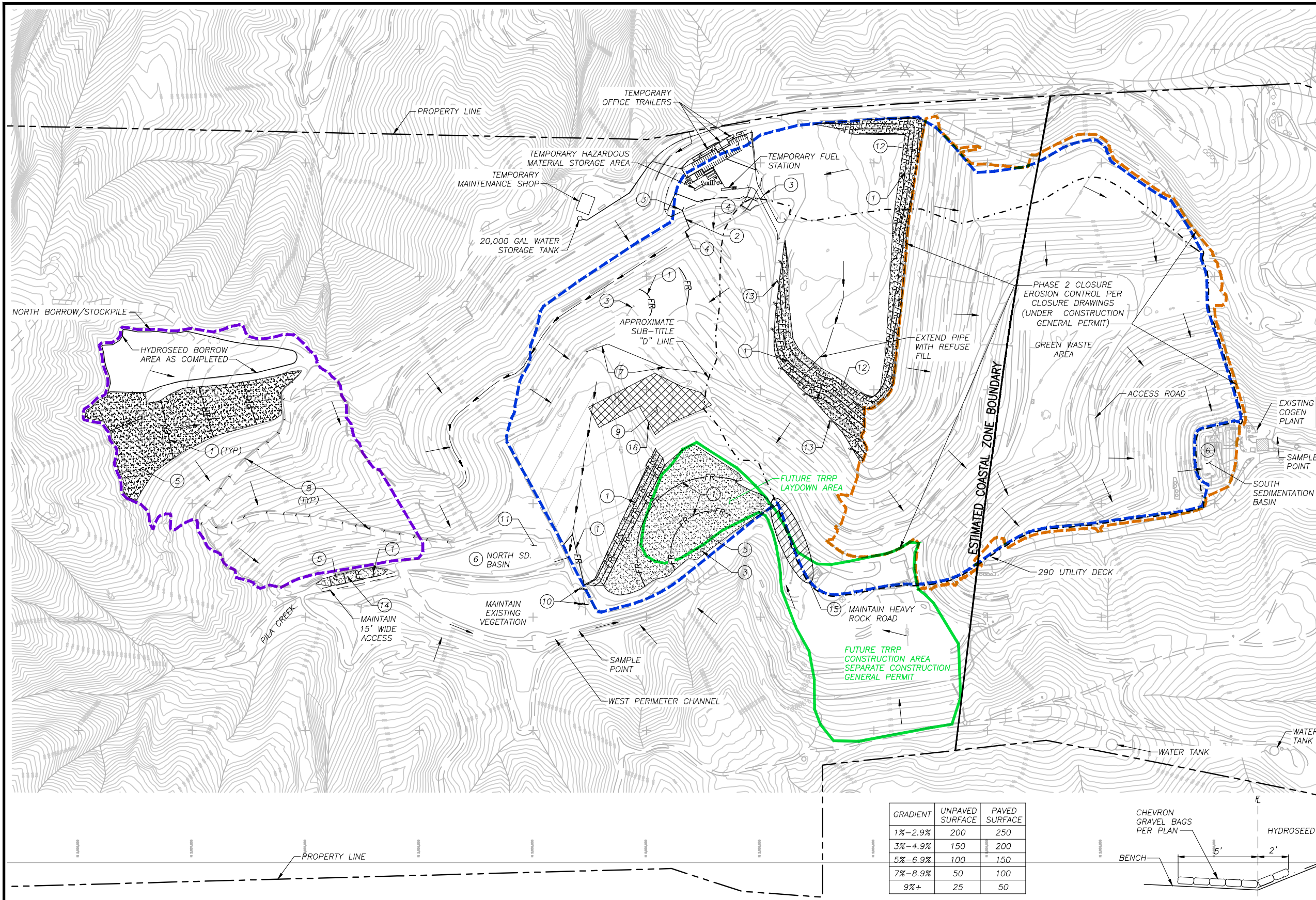
TAJIGUAS LANDFILL
 Stormwater Pollution Prevention Plan
 LOCATION MAP

SCALE:	FIGURE
NONE	1
	DESIGN BY:
	NGD



COUNTY OF SANTA BARBARA
 RESOURCE RECOVERY & WASTE MANAGEMENT
 DIVISION

FIGURE 2 – LOCATION MAP
 TAJIGUAS LANDFILL STORMWATER
 POLLUTION PREVENTION PLAN



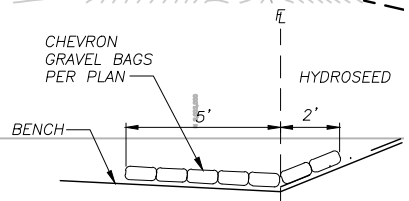
LEGEND

- 500 EXISTING CONTOUR
- - - - - APPROXIMATE SUB-TITLE "D" LINE
- PROPERTY LINE
- - - - - COUNTY OWNED PARCEL LINE
- FINAL WASTE FOOTPRINT PERIMETER
- NORTH BORROW/STOCKPILE
- PHASE 2 CLOSURE AREA
- HYDROSEED
- FR FIBER ROLL
- FLOW ARROWS

BMP's

- 1 FIBER ROLL ON DECK AREA (SE-05) ON LEVEL CONTOUR
- 2 24" DOWN DRAIN TO 30' WIDE BENCH
- 3 FIBER ROLL STAKED IN PLACE BEFORE FLUME OPENING (SE-05)
- 4 RIP-RAP @ OUTLET (EC-10) TO BE MAINTAINED
- 5 HYDROSEED (EC-04)
- 6 DETENTION BASIN (SE-02)
- 7 18" PIPE CROSSING TO PHASE IIIB PERIMETER CONCRETE CHANNEL
- 8 100-150 WATER BARS ALONG ROAD TO DIRECT FLOW INTO INSIDE ROAD
- 9 WET WEATHER DECK FOR RAIN DAYS
- 10 GRAVEL BAG CHECKS 25' O.C. +/- ALONG FLOW LINE ROAD OR AS SHOWN
- 11 SKIMMER OPERATION TO BE MAINTAINED AFTER EACH STORM EVENT REDUCE FLEX HOSE DISTANCE
- 12 EARTHGUARD LIQUID SOIL BINDER PER MFR. SPEC. AND TAJIGUAS SWPPP BMP EC-5
- 13 GRAVEL BAG BERMS AT 50 TO 200 FT INTERVALS BASED ON GRADIENT
- 14 EXCAVATED AT 5:1 TO CONCRETE DITCH
- 15 ROCK WITH 4" PLUS SIZE MATERIAL TO BE MAINTAINED FOR MAINTENANCE ACCESS (ADJUST GRADIENT IN AREA AS NEEDED)
- 16 STEEL PLATES AND RUMBLE STRIPS LOCATED AT THE ENTRANCE/EXIT OF THE WET WEATHER DECK

GRADIENT	UNPAVED SURFACE	PAVED SURFACE
1%-2.9%	200	250
3%-4.9%	150	200
5%-6.9%	100	150
7%-8.9%	50	100
9%+	25	50



DATE OF TOPOGRAPHY: MARCH 2, 2016

NO.	REVISION DESCRIPTION	DATE

APPROVAL RECOMMENDED	DATE

PREPARED BY:

800-C SOUTH ROCHESTER AVENUE
ONTARIO, CALIFORNIA 91761

PREPARED UNDER THE SUPERVISION OF

RESOURCE RECOVERY AND WASTE MANAGEMENT
TAJIGUAS SANITARY LANDFILL

**STORMWATER POLLUTION PREVENTION PLAN
SITE MAP**

DESIGNED BY : M.A.C.	SCALE : AS SHOWN	PROJECT NO: -
DRAWN BY : B.M.R.	DATE : 12-2016	
CHECKED BY :	DATE :	
APPROVED BY :	DATE :	

FIGURE **4**

Z:\PROJECTS\SANTA BARBARA\TAJIGUAS\LEVEL 1 ERA\FIGURES\FIG 01 TAJ SITE MAP

APPENDIX A

Notice of Intent (NOI)



State Water Resources Control Board
NOTICE OF INTENT

GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH INDUSTRIAL ACTIVITIES (WQ ORDER No. 2014-0057-DWQ)
(Excluding Construction Activities)



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

WDID: 3 421000451

Status: Active

Operator Information

Type: County Agency

Name: Santa Barbara Cnty

Contact Name: Mark Schleich

Address: 130 E Victoria St Ste 100

Title: Deputy Director

Address 2:

Phone #: 805-882-3600

City/State/Zip: Santa Barbara CA 93101

Email: mschleich@cosbpw.net

Federal Tax ID:

Facility Information

Level:

Site Name: Santa Barbara Cnty Tajiguas Landfill

Contact Name: Travis Spier

Address: 14470 Calle Real

Title: Operations Manager

City/State/Zip: Goleta CA 93117

Site Phone #: 805-729-6703

County: Santa Barbara

Email: tspier@cosbpw.net

Latitude: 34.47476

Longitude: -120.11859

Emergency: 805-729-6703

Total Site Size: 412 Acres

Percent of Site Impervious (including rooftops): %

Industrial Area exposed to Storm Water: 175

SIC Code(s)

Primary SIC: 4953

Refuse Systems

Secondary SIC:

Tertiary SIC:

Additional Information

Receiving Water: Canada De La Pila Stream

Water Flow: Indirectly

Storm drain system:

Compliance Group:

RWQCB Jurisdiction: Region 3 - Central Coast

Phone: 805-549-3147

Email: r3_stormwater@waterboards.ca.gov

Certification

Name Mark Schleich

Date: May 21, 2015

Title: Deputy Director

Water Resources Control Board
NOTICE OF INTENT



For Existing Facility Operators

TO COMPLY WITH THE TERMS OF THE
GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH INDUSTRIAL ACTIVITY (WQ ORDER No. 97-03-DWQ)

92-2-1

Notice of Intent (NOI) is being sent to all facility operators that were enrolled under the prior Industrial Storm Water General Permit that has now expired. A new General Permit has been adopted to replace the expired one. To enroll under the new General Permit, review this NOI (and make any necessary corrections), sign the CERTIFICATION on the reverse side, and return this original NOI within 45 days of receipt to: STORM WATER NOI PROCESSING UNIT, STATE WATER RESOURCES CONTROL BOARD, PO BOX 1977, SACRAMENTO, CA 95812-1977

FACILITY OPERATOR INFORMATION:

NAME: COUNTY OF SANTA BARBARA

STREET: 123 E. ANAPAMU STREET

CITY, STATE, ZIP: SANTA BARBARA CA 93101

WDID: 342S000451

CONTACT & PHONE

CHRIS WILSON

(805) 882-3621

FACILITY LOCATION:

NAME: TAJIGUAS SANITARY LANDFILL

STREET: 14470 CALLE REAL

CITY, STATE, ZIP: GOLETA, CA 93117

County: Santa Barbara

CONTACT & PHONE

CHRIS WILSON

(805) 882-3621

FACILITY MAILING ADDRESS: (IF DIFFERENT THAN FACILITY LOCATION)

STREET OR POST OFFICE BOX: 109 EAST VICTORIA

CITY, STATE, ZIP: SANTA BARBARA, CA 93101

ADDRESS FOR CORRESPONDENCE - SEND TO: (CHECK ONE)

[] Facility Operator Address [] Facility Mailing Address [] Both

BILLING ADDRESS INFORMATION - SEND TO: (CHECK ONE)

[] Facility Operator Address [] Facility Mailing Address [] Other (enter below)

NAME: _____

STREET: _____

CITY, STATE, ZIP: _____

CONTACT PERSON: _____ PHONE: _____


SIC(S) OF REGULATED ACTIVITY:

4953 Refuse Systems

DECLARATION:

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development of and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with."

Printed Name: Chris A. Wilson

Signature:  Date: May 29, 1997

Title: CIVIL ENGINEER MANAGER

CHRIS WILSON
COUNTY OF SANTA BARBARA
123 E. ANAPAMU STREET
SANTA BARBARA, CA 93101

For State Water Board Use

APPENDIX B

SWQCB 2012 Integrated Report (Section 303[d] Assessed Waters)

RWQCB 2011 Central Coast Basin Plan Beneficial Use List

RWQCB Central Coast Basin Plan Hydrologic Planning Area Map Fig. 2-1

DRAFT 2012 Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report) — Statewide

2012 Integrated Report **Map** 303(d) List Admin. Record Contact Us

2012 INTEGRATED REPORT — ALL ASSESSED WATERS

Zoom to county:
 Santa Barbara

Zoom to Regional Board:
 Central Coast (3)

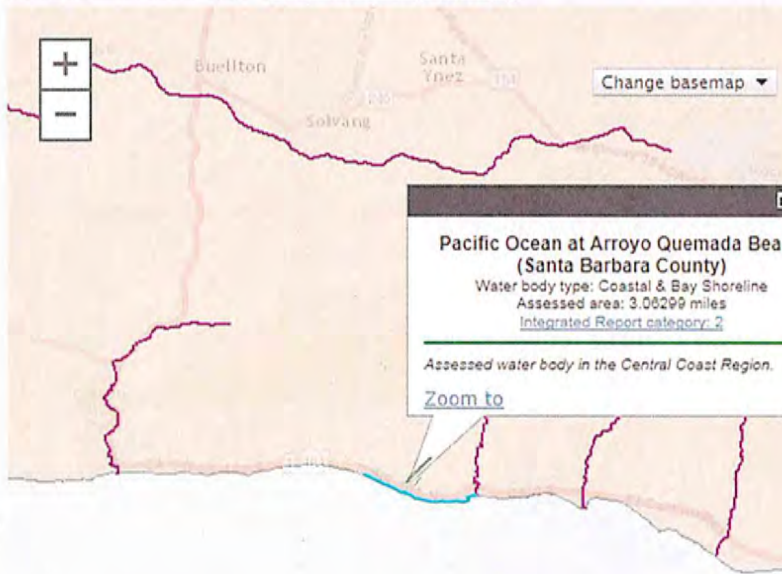
Map Help

Show county

Show Regional Board

Zoom to water body: (Filter: All)

Filter list by: Reset list



Pacific Ocean at Arroyo Quemada Beach (Santa Barbara County)
 Pollutant assessments [Close](#)

Pollutants	Listing Decision	Report Link	Potential Sources	Schedule	Comments
Enterococcus	Do Not List on 303 (d) list (TMDL required list)	22961	n/a		
Fecal Coliform	Do Not List on 303 (d) list (TMDL required list)	22886	n/a		
Total Coliform	Do Not List on 303 (d) list (TMDL required list)	23076	n/a		



Esri, HERE, DeLorme, USGS, EPA, ...

http://www.swrcb.ca.gov/water_issues/programs/tmdl/integrated2012.shtml

**CATEGORY 2
2012 CALIFORNIA WATERS SUPPORTING SOME CALIFORNIA BENEFICIAL USES**

Core Beneficial Uses		Applicable California Beneficial Uses	
<p>Aquatic Life Support</p> <p>Drinking Water Supply</p> <p>Fish Consumption</p> <p>Secondary Contact</p> <p>Shellfishing</p> <p>Swimming</p>	<p>Cold Freshwater Habitat, Estuarine Habitat, Fish Migration, Fish Spawning, Freshwater Replenishment, Inland Saline Water Habitat, Limited Wastewater, Marine Habitat, Preservation of Areas of Special Biological Significance, Preservation of Rare & Endangered Species, Warm Freshwater Habitat, Wetland Habitat, Wildlife Habitat</p> <p>Municipal & Domestic Supply</p> <p>Commercial or recreational collection of fish, shellfish, or organisms, Subsistence Fishing</p> <p>Non-Contact Recreation</p> <p>Shellfish Harvesting</p> <p>Water Contact Recreation</p>	<p>WATERSHED*</p> <p>CALWATER / USGS HUC</p>	<p>ESTIMATED AREA ASSESSED</p> <ul style="list-style-type: none"> • CORE BENEFICIAL USE <ul style="list-style-type: none"> ◦ California Beneficial Use Pollutant Assessed

Category 2 Criteria: 1) a water that supports some, but not all, of its California beneficial uses; and 2) has other uses that are not assessed or lack sufficient information to be assessed.

* USGS HUC - US Geological Survey Hydrologic Unit Code. Calwater - State Water Resources Control Board hydrological subunit area or even smaller planning watershed.

3	Pacific Ocean at Arroyo Quexmada Beach (Santa Barbara County)	Coastal & Bay Shoreline	31510022 / 18050013	<ul style="list-style-type: none"> • Swimming <ul style="list-style-type: none"> ◦ Water Contact Recreation <ul style="list-style-type: none"> Enterococcus, Fecal Coliform, Total Coliform 	3.1 Miles
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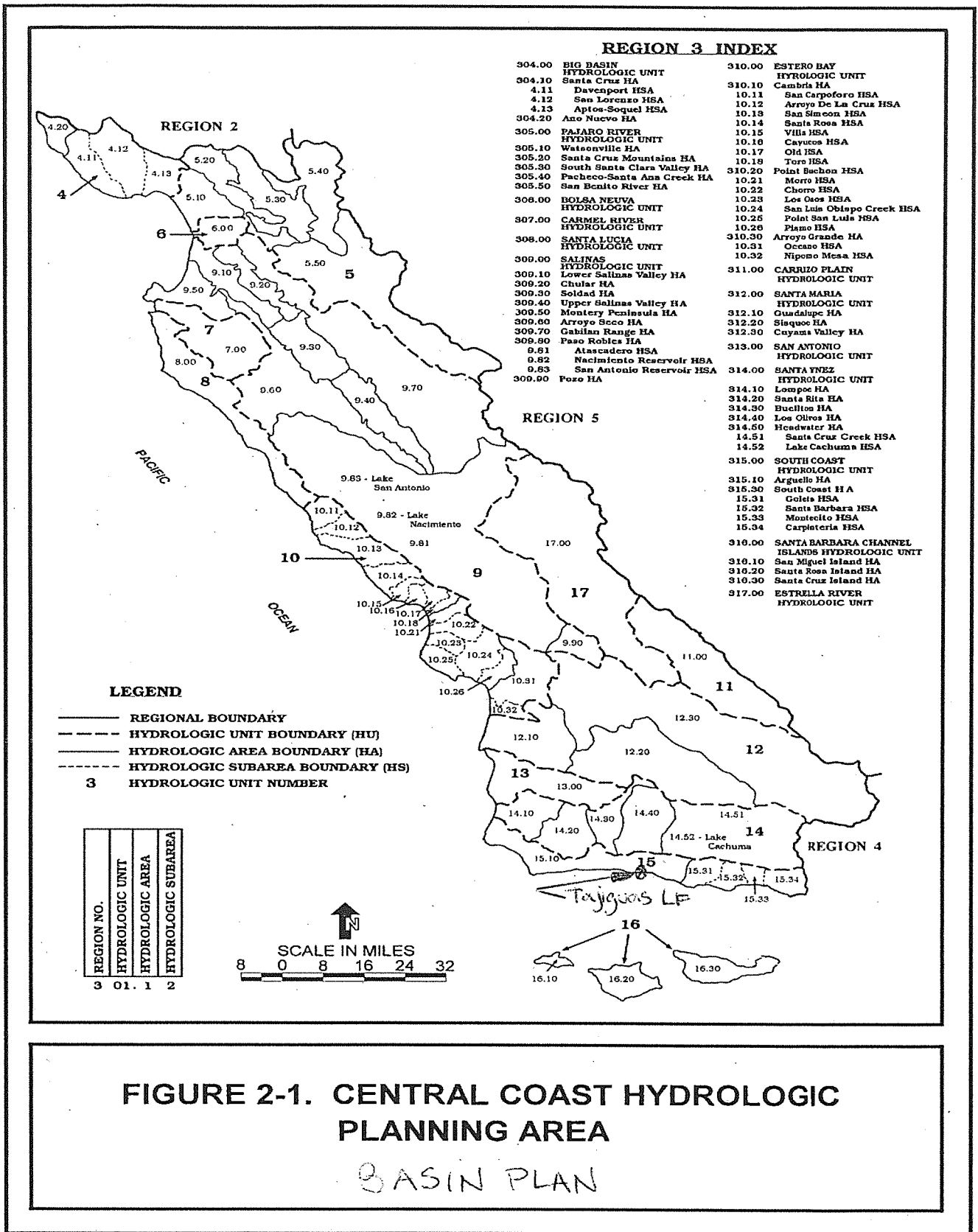
Ref: http://www.waterboards.ca.gov/water_issues/programs/tmdl/2012state_ir_reports/category2_report.shtml

Table 2-1. Identified Uses of Inland Surface Waters

Waterbody Names	MUN	AGR	PRO	IND	GWR	REC1	REC2	WILD	COLD	WARM	MIGR	SPWN	BIOL	RARE	EST	FRESH	NAV	POW	COMM	AQUA	SAL	SHELL
San Miguelito Creek	X	X			X	X	X	X	X	X		X							X			
Salsipuedes Creek	X	X		X	X	X	X	X	X	X	X	X							X			
El Jaro Creek	X	X		X	X	X	X	X	X	X	X	X							X			
El Callejon Creek	X				X	X	X	X		X									X			
Llanito Creek	X				X	X	X	X		X									X			
Yridisis Creek	X	X			X	X	X	X		X		X							X			
Canada de la Vina	X	X			X	X	X	X		X									X			
Nojoqui Creek	X	X			X	X	X	X		X		X							X			
Alamo Pintado Creek	X	X		X	X	X	X	X		X									X			
Zaca Creek	X	X			X	X	X	X		X				X					X			
Zaca Lake	X					X	X	X		X		X		X					X			
Santa Rosa Creek	X	X			X	X	X	X		X	X	X							X			
Santa Rita Creek	X	X		X	X	X	X	X		X									X			
Davis Creek	X				X	X	X	X		X									X			
Santa Lucia Canyon Creek	X	X			X	X	X	X		X									X			
Oak Canyon Creek	X	X		X	X	X	X	X		X			X						X			
Hilton Creek	X	X			X	X	X	X		X	X	X							X			
Cachuma Reservoir	X	X			X	X	X	X		X	X	X		X					X			
Santa Ynez River, upstream	X	X		X	X	X	X	X		X	X	X		X					X			
Gibraltar Reservoir	X	X		X	X	X	X	X		X									X			
Jameson Reservoir	X	X		X	X	X	X	X		X									X			
Agua Caliente Canyon	X	X		X	X	X	X	X		X									X			
Mono Creek	X	X		X	X	X	X	X		X									X			
Indian Creek	X	X		X	X	X	X	X		X									X			
Santa Cruz Creek	X	X		X	X	X	X	X		X									X			
Cachuma Creek	X				X	X	X	X		X									X			
SOUTH COAST HYDROLOGIC UNIT																						
Canada Honda Creek Estuary						X	X	X		X	X	X	X	X	X				X			X
Canada Honda Creek	X	X			X	X	X	X		X	X	X							X			
Canada Agua Viva	X				X	X	X	X		X									X			
Water Canyon Creek	X				X	X	X	X		X									X			
Canada del Jolloru	X					X	X	X		X									X			
Jalama Creek Estuary						X	X	X		X	X	X	X	X	X				X			X
Jalama Creek	X	X			X	X	X	X		X	X	X							X			
Escondido Creek	X				X	X	X	X		X	X	X		X					X			
Gaspar Creek	X				X	X	X	X		X									X			
Espada Creek	X				X	X	X	X		X									X			
Wood Canyon Creek	X				X	X	X	X		X									X			
Canada del Cojo	X				X	X	X	X		X									X			
Barranca Honda	X	X			X	X	X	X		X				X					X			

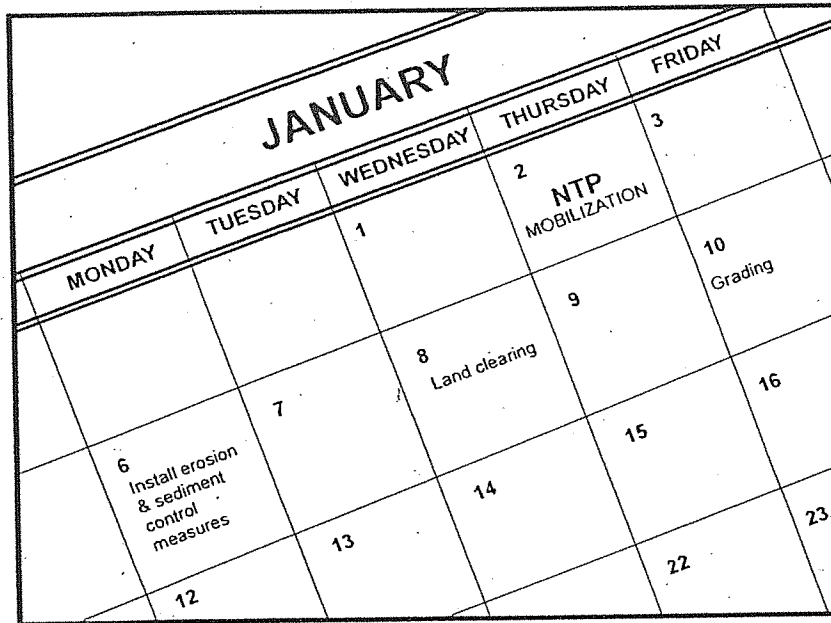
Table 2-1. Identified Uses of Inland Surface Waters

Waterbody Names	MUN	AGR	PRO	IND	GWR	REC1	REC2	WILD	COLD	WARM	MIGR	SPWN	BIOL	RARE	EST	FRESH	NAV	POW	COMM	AQUA	SAL	SHELL
Arroyo Buito	X	X			X	X	X	X		X					X	X			X			
Canada de Santa Anita	X	X			X	X	X	X		X					X	X			X			
Canada del Sacate	X	X			X	X	X	X		X					X	X			X			
Canada Alegria	X				X	X	X	X		X					X	X			X			
Canada del Agua Caliente	X	X			X	X	X	X	X	X					X	X			X			
Canada de la Gaviota	X	X			X	X	X	X	X	X			X		X	X			X			
Canada San Onofre	X					X	X	X	X	X					X	X			X			
Canada del Molino	X					X	X	X	X	X					X	X			X			
Arroyo Hondo	X					X	X	X	X	X					X	X			X			
Arroyo Quemado	X	X				X	X	X	X	X					X	X			X			
Tajigas Creek	X	X			X	X	X	X	X	X					X	X			X			
Canada del Refugio	X	X			X	X	X	X	X	X			X		X	X			X			
Canada del Capitan	X	X			X	X	X	X	X	X			X		X	X			X			
Dos Pueblos Canyon Creek	X	X	X	X	X	X	X	X	X	X					X	X			X			
Tecolote Creek	X	X	X	X	X	X	X	X	X	X					X	X			X			X
Devereaux Ranch Lagoon						X	X	X	X	X					X	X			X			
Devereaux Creek	X				X	X	X	X	X	X					X	X			X			
Goleta Point Marsh						X	X	X	X	X			X		X	X			X			
Goleta Slough/Estuary						X	X	X	X	X			X		X	X			X			X
Cameros Creek	X	X			X	X	X	X	X	X					X	X			X			
Tecolotito Creek	X				X	X	X	X	X	X					X	X			X			
Glen Anne Creek	X	X	X	X	X	X	X	X	X	X					X	X			X			
Los Caneros Wetland					X	X	X	X	X	X					X	X			X			
Los Caneros	X	X			X	X	X	X	X	X					X	X			X			
Atascadero Creek (SB)	X	X			X	X	X	X	X	X					X	X			X			
Maria Ygnacio Creek	X	X			X	X	X	X	X	X					X	X			X			
San Antonio Creek (S Barbara County)	X	X			X	X	X	X	X	X					X	X			X			
San Jose Creek (S Barbara County)	X	X			X	X	X	X	X	X					X	X			X			
Las Vegas Creek	X				X	X	X	X	X	X					X	X			X			
San Pedro Creek	X	X			X	X	X	X	X	X					X	X			X			
Las Palmas Creek	X				X	X	X	X	X	X					X	X			X			
Arroyo Burro Estuary						X	X	X	X	X					X	X			X			
Arroyo Burro Creek	X				X	X	X	X	X	X					X	X			X			
Mission Creek	X				X	X	X	X	X	X					X	X			X			
Rattlesnake Canyon	X				X	X	X	X	X	X					X	X			X			
Waste Slough					X	X	X	X	X	X					X	X			X			
Sycamore Creek	X	X			X	X	X	X	X	X					X	X			X			
Andree Clark Bird Refuge					X	X	X	X	X	X			X		X	X			X			X
San Ysidro Creek	X				X	X	X	X	X	X					X	X			X			
Romero Creek	X				X	X	X	X	X	X					X	X			X			
Toro Canyon Creek	X				X	X	X	X	X	X					X	X			X			
Arroyo Paredon	X	X			X	X	X	X	X	X					X	X			X			



APPENDIX C

CASQA BMP Handbook Factsheets



Description and Purpose

Scheduling is the development of a written plan that includes sequencing of construction activities and the implementation of BMPs such as erosion control and sediment control while taking local climate (rainfall, wind, etc.) into consideration. The purpose is to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff, and vehicle tracking, and to perform the construction activities and control practices in accordance with the planned schedule.

Suitable Applications

Proper sequencing of construction activities to reduce erosion potential should be incorporated into the schedule of every construction project especially during rainy season. Use of other, more costly yet less effective, erosion and sediment control BMPs may often be reduced through proper construction sequencing.

Limitations

- Environmental constraints such as nesting season prohibitions reduce the full capabilities of this BMP.

Implementation

- Avoid rainy periods. Schedule major grading operations during dry months when practical. Allow enough time before rainfall begins to stabilize the soil with vegetation or physical means or to install sediment trapping devices.
- Plan the project and develop a schedule showing each phase

Categories

EC	Erosion Control	<input checked="" type="checkbox"/>
SE	Sediment Control	<input checked="" type="checkbox"/>
TC	Tracking Control	<input checked="" type="checkbox"/>
WE	Wind Erosion Control	<input checked="" type="checkbox"/>
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

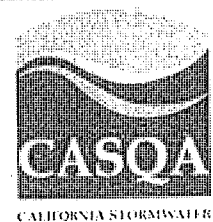
- Primary Objective
- Secondary Objective

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

None



of construction. Clearly show how the rainy season relates to soil disturbing and re-stabilization activities. Incorporate the construction schedule into the SWPPP.

- Include on the schedule, details on the rainy season implementation and deployment of:
 - Erosion control BMPs
 - Sediment control BMPs
 - Tracking control BMPs
 - Wind erosion control BMPs
 - Non-stormwater BMPs
 - Waste management and materials pollution control BMPs
- Include dates for activities that may require non-stormwater discharges such as dewatering, sawcutting, grinding, drilling, boring, crushing, blasting, painting, hydro-demolition, mortar mixing, pavement cleaning, etc.
- Work out the sequencing and timetable for the start and completion of each item such as site clearing and grubbing, grading, excavation, paving, foundation pouring utilities installation, etc., to minimize the active construction area during the rainy season.
 - Sequence trenching activities so that most open portions are closed before new trenching begins.
 - Incorporate staged seeding and re-vegetation of graded slopes as work progresses.
 - Schedule establishment of permanent vegetation during appropriate planting time for specified vegetation.
- Non-active areas should be stabilized as soon as practical after the cessation of soil disturbing activities or one day prior to the onset of precipitation.
- Monitor the weather forecast for rainfall.
- When rainfall is predicted, adjust the construction schedule to allow the implementation of soil stabilization and sediment treatment controls on all disturbed areas prior to the onset of rain.
- Be prepared year round to deploy erosion control and sediment control BMPs. Erosion may be caused during dry seasons by un-seasonal rainfall, wind, and vehicle tracking. Keep the site stabilized year round, and retain and maintain rainy season sediment trapping devices in operational condition.
- Apply permanent erosion control to areas deemed substantially complete during the project's defined seeding window.

Costs

Construction scheduling to reduce erosion may increase other construction costs due to reduced economies of scale in performing site grading. The cost effectiveness of scheduling techniques should be compared with the other less effective erosion and sedimentation controls to achieve a cost effective balance.

Inspection and Maintenance

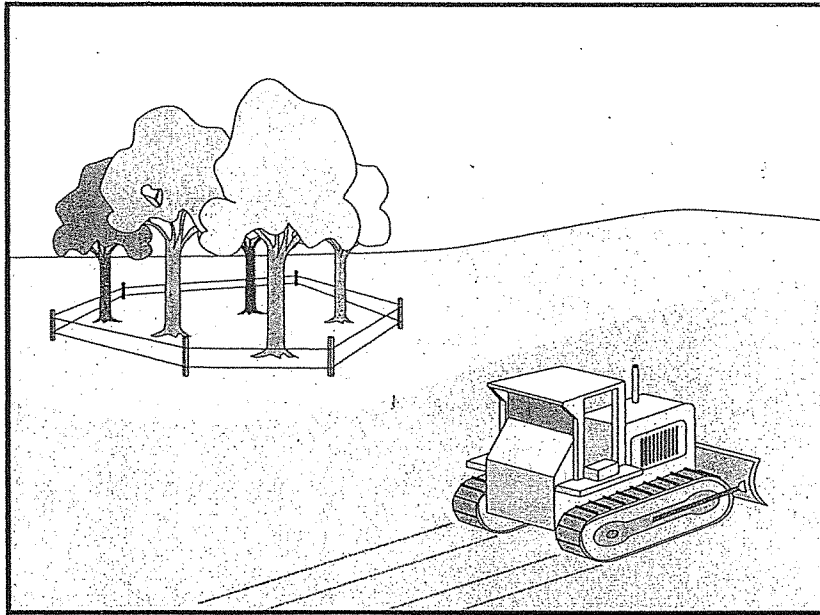
- Verify that work is progressing in accordance with the schedule. If progress deviates, take corrective actions.
- Amend the schedule when changes are warranted.
- Amend the schedule prior to the rainy season to show updated information on the deployment and implementation of construction site BMPs.

References

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities Developing Pollution Prevention Plans and Best Management Practices (EPA 832-R-92-005), U.S. Environmental Protection Agency, Office of Water, September 1992.

Preservation Of Existing Vegetation EC-2



Description and Purpose

Carefully planned preservation of existing vegetation minimizes the potential of removing or injuring existing trees, vines, shrubs, and grasses that protect soil from erosion.

Suitable Applications

Preservation of existing vegetation is suitable for use on most projects. Large project sites often provide the greatest opportunity for use of this BMP. Suitable applications include the following:

- Areas within the site where no construction activity occurs, or occurs at a later date. This BMP is especially suitable to multi year projects where grading can be phased.
- Areas where natural vegetation exists and is designated for preservation. Such areas often include steep slopes, watercourse, and building sites in wooded areas.
- Areas where local, state, and federal government require preservation, such as vernal pools, wetlands, marshes, certain oak trees, etc. These areas are usually designated on the plans, or in the specifications, permits, or environmental documents.
- Where vegetation designated for ultimate removal can be temporarily preserved and be utilized for erosion control and sediment control.

Limitations

- Requires forward planning by the owner/developer,

Categories

EC	Erosion Control	<input checked="" type="checkbox"/>
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

- Primary Objective
- Secondary Objective

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

None



Preservation Of Existing Vegetation EC-2

contractor, and design staff.

- Limited opportunities for use when project plans do not incorporate existing vegetation into the site design.
- For sites with diverse topography, it is often difficult and expensive to save existing trees while grading the site satisfactory for the planned development.

Implementation

The best way to prevent erosion is to not disturb the land. In order to reduce the impacts of new development and redevelopment, projects may be designed to avoid disturbing land in sensitive areas of the site (e.g., natural watercourses, steep slopes), and to incorporate unique or desirable existing vegetation into the site's landscaping plan. Clearly marking and leaving a buffer area around these unique areas during construction will help to preserve these areas as well as take advantage of natural erosion prevention and sediment trapping.

Existing vegetation to be preserved on the site must be protected from mechanical and other injury while the land is being developed. The purpose of protecting existing vegetation is to ensure the survival of desirable vegetation for shade, beautification, and erosion control. Mature vegetation has extensive root systems that help to hold soil in place, thus reducing erosion. In addition, vegetation helps keep soil from drying rapidly and becoming susceptible to erosion. To effectively save existing vegetation, no disturbances of any kind should be allowed within a defined area around the vegetation. For trees, no construction activity should occur within the drip line of the tree.

Timing

- Provide for preservation of existing vegetation prior to the commencement of clearing and grubbing operations or other soil disturbing activities in areas where no construction activity is planned or will occur at a later date.

Design and Layout

- Mark areas to be preserved with temporary fencing. Include sufficient setback to protect roots.
 - Orange colored plastic mesh fencing works well.
 - Use appropriate fence posts and adequate post spacing and depth to completely support the fence in an upright position.
- Locate temporary roadways, stockpiles, and layout areas to avoid stands of trees, shrubs, and grass.
- Consider the impact of grade changes to existing vegetation and the root zone.
- Maintain existing irrigation systems where feasible. Temporary irrigation may be required.
- Instruct employees and subcontractors to honor protective devices. Prohibit heavy equipment, vehicular traffic, or storage of construction materials within the protected area.

Preservation Of Existing Vegetation EC-2

Costs

There is little cost associated with preserving existing vegetation if properly planned during the project design, and these costs may be offset by aesthetic benefits that enhance property values. During construction, the cost for preserving existing vegetation will likely be less than the cost of applying erosion and sediment controls to the disturbed area. Replacing vegetation inadvertently destroyed during construction can be extremely expensive, sometimes in excess of \$10,000 per tree.

Inspection and Maintenance

During construction, the limits of disturbance should remain clearly marked at all times. Irrigation or maintenance of existing vegetation should be described in the landscaping plan. If damage to protected trees still occurs, maintenance guidelines described below should be followed:

- Verify that protective measures remain in place. Restore damaged protection measures immediately.
- Serious tree injuries shall be attended to by an arborist.
- Damage to the crown, trunk, or root system of a retained tree shall be repaired immediately.
- Trench as far from tree trunks as possible, usually outside of the tree drip line or canopy. Curve trenches around trees to avoid large roots or root concentrations. If roots are encountered, consider tunneling under them. When trenching or tunneling near or under trees to be retained, place tunnels at least 18 in. below the ground surface, and not below the tree center to minimize impact on the roots.
- Do not leave tree roots exposed to air. Cover exposed roots with soil as soon as possible. If soil covering is not practical, protect exposed roots with wet burlap or peat moss until the tunnel or trench is ready for backfill.
- Cleanly remove the ends of damaged roots with a smooth cut.
- Fill trenches and tunnels as soon as possible. Careful filling and tamping will eliminate air spaces in the soil, which can damage roots.
- If bark damage occurs, cut back all loosened bark into the undamaged area, with the cut tapered at the top and bottom and drainage provided at the base of the wood. Limit cutting the undamaged area as much as possible.
- Aerate soil that has been compacted over a trees root zone by punching holes 12 in. deep with an iron bar, and moving the bar back and forth until the soil is loosened. Place holes 18 in. apart throughout the area of compacted soil under the tree crown.
- Fertilization
 - Fertilize stressed or damaged broadleaf trees to aid recovery.
 - Fertilize trees in the late fall or early spring.

Preservation Of Existing Vegetation EC-2

- Apply fertilizer to the soil over the feeder roots and in accordance with label instructions, but never closer than 3 ft to the trunk. Increase the fertilized area by one-fourth of the crown area for conifers that have extended root systems.
- Retain protective measures until all other construction activity is complete to avoid damage during site cleanup and stabilization.

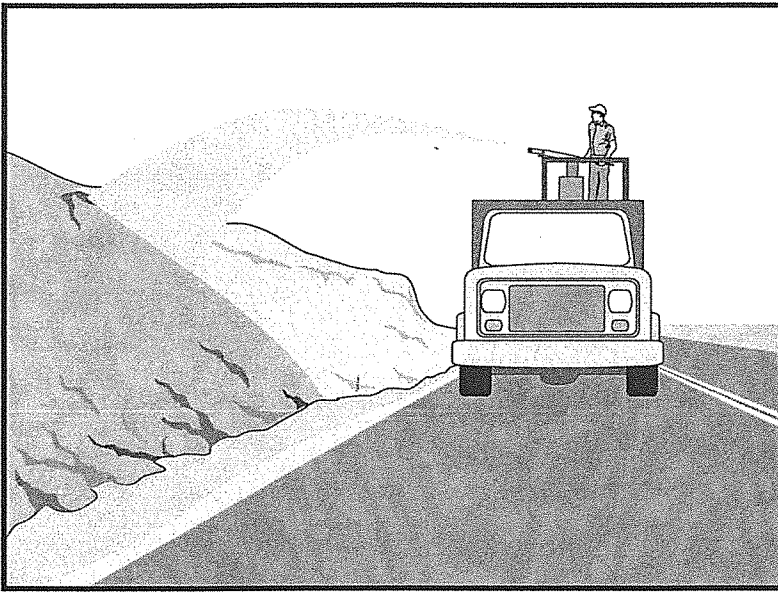
References

County of Sacramento Tree Preservation Ordinance, September 1981.

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management of the Puget Sound Basin, Technical Manual, Publication #91-75, Washington State Department of Ecology, February 1992.

Water Quality Management Plan for The Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.



Categories

EC	Erosion Control	<input checked="" type="checkbox"/>
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	<input checked="" type="checkbox"/>
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

- Primary Category
- Secondary Category

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

- EC-4 Hydroseeding
- EC-5 Soil Binders
- EC-6 Straw Mulch
- EC-7 Geotextiles and Mats
- EC-8 Wood Mulching
- EC-14 Compost Blanket
- EC-16 Non-Vegetative Stabilization

Description and Purpose

Hydraulic Mulch consists of various types of fibrous materials mixed with water and sprayed onto the soil surface in slurry form to provide a layer of temporary protection from wind and water erosion.

Suitable Applications

Hydraulic mulch as a temporary, stand alone, erosion control BMP is suitable for disturbed areas that require temporary protection from wind and water erosion until permanent soil stabilization activities commence. Examples include:

- Rough-graded areas that will remain inactive for longer than permit-required thresholds (e.g., 14 days) or otherwise require stabilization to minimize erosion or prevent sediment discharges.
- Soil stockpiles.
- Slopes with exposed soil between existing vegetation such as trees or shrubs.
- Slopes planted with live, container-grown vegetation or plugs.
- Slopes burned by wildfire.

Hydraulic mulch can also be applied to augment other erosion control BMPs such as:



- In conjunction with straw mulch (see EC-6 Straw Mulch) where the rate of hydraulic mulch is reduced to 100-500 lbs per acre and the slurry is applied over the straw as a tackifying agent to hold the straw in place.
- Supplemental application of soil amendments, such as fertilizer, lime, gypsum, soil bio-stimulants or compost.

Limitations

In general, hydraulic mulch is not limited by slope length, gradient or soil type. However, the following limitations typically apply:

- Most hydraulic mulch applications, particularly bonded fiber matrices (BFMs), require at least 24 hours to dry before rainfall occurs.
- Temporary applications (i.e., without a vegetative component) may require a second application in order to remain effective for an entire rainy season.
- Treatment areas must be accessible to hydraulic mulching equipment.
- Availability of water sources in remote areas for mixing and application.
- As a stand-alone temporary BMP, hydraulic mulches may need to be re-applied to maintain their erosion control effectiveness, typically after 6-12 months depending on the type of mulch used.
- Availability of hydraulic mulching equipment may be limited just prior to the rainy season and prior to storms due to high demand.
- Cellulose fiber mulches alone may not perform well on steep slopes or in coarse soils.

Implementation

- Where feasible, it is preferable to prepare soil surfaces prior to application by roughening embankments and fill areas with a crimping or punching type roller or by track walking.
- The majority of hydraulic mulch applications do not necessarily require surface/soil preparation (See EC-15 Soil Preparation) although in almost every case where re-vegetation is included as part of the practice, soil preparation can be beneficial. One of the advantages of hydraulic mulch over other erosion control methods is that it can be applied in areas where soil preparation is precluded by site conditions, such as steep slopes, rocky soils, or inaccessibility.
- Avoid mulch over spray onto roads, sidewalks, drainage channels, existing vegetation, etc.
- Hydraulic mulching is generally performed utilizing specialized machines that have a large water-holding/mixing tank and some form of mechanical agitation or other recirculation method to keep water, mulch and soil amendments in suspension. The mixed hydraulic slurry can be applied from a tower sprayer on top of the machine or by extending a hose to areas remote from the machine.

- Where possible apply hydraulic mulch from multiple directions to adequately cover the soil. Application from a single direction can result in shadowing, uneven coverage and failure of the BMP.
- Hydraulic mulch can also include a vegetative component, such as seed, rhizomes, or stolons (see EC-4 Hydraulic Seed).
- Typical hydraulic mulch application rates range from 2,000 pounds per acre for standard mulches (SMs) to 3,500 pounds per acre for BFMs. However, the required amount of hydraulic mulch to provide adequate coverage of exposed topsoil may appear to exceed the standard rates when the roughness of the soil surface is changed due to soil preparation methods (see EC-15 Soil Preparation) or by slope gradient.
- Other factors such as existing soil moisture and soil texture can have a profound effect on the amount of hydraulic mulch required (i.e. application rate) applied to achieve an erosion-resistant covering.
- Avoid use of mulch without a tackifier component, especially on slopes.
- Mulches used in the hydraulic mulch slurry can include:
 - Cellulose fiber
 - Thermally-processed wood fibers
 - Cotton
 - Synthetics
 - Compost (see EC-14, Compost Blanket)
- Additional guidance on the comparison and selection of temporary slope stabilization methods is provided in Appendix F of the Handbook.

Categories of Hydraulic Mulches

Standard Hydraulic Mulch (SM)

Standard hydraulic mulches are generally applied at a rate of 2,000 pounds per acre and are manufactured containing around 5% tackifier (i.e. soil binder), usually a plant-derived guar or psyllium type. Most standard mulches are green in color derived from food-color based dyes.

Hydraulic Matrices (HM) and Stabilized Fiber Matrices (SFM)

Hydraulic matrices and stabilized fiber matrices are slurries which contain increased levels of tackifiers/soil binders; usually 10% or more by weight. HMs and SFMs have improved performance compared to a standard hydraulic mulch (SM) because of the additional percentage of tackifier and because of their higher application rates, typically 2,500 – 4,000 pounds per acre. Hydraulic matrices can include a mixture of fibers, for example, a 50/50 blend of paper and wood fiber. In the case of an SFM, the tackifier/soil binder is specified as a polyacrylamide (PAM).

Bonded Fiber Matrix (BFM)

Bonded fiber matrices (BFMs) are hydraulically-applied systems of fibers, adhesives (typically guar based) and chemical cross-links. Upon drying, the slurry forms an erosion-resistant blanket that prevents soil erosion and promotes vegetation establishment. The cross-linked adhesive in the BFM should be biodegradable and should not dissolve or disperse upon re-wetting. BFMs are typically applied at rates from 3,000 to 4,000 lbs/acre based on the manufacturer's recommendation. BFMs should not be applied immediately before, during or immediately after rainfall or if the soil is saturated. Depending on the product, BFMs typically require 12 to 24 hours to dry and become effective.

Mechanically-Bonded Fiber Matrices (MBFM)

Mechanically-bonded fiber matrices (MBFMs) are hydraulically applied systems similar to BFM that use crimped synthetic fibers and PAM and are typically applied to a slope at a higher application rate than a standard BFM.

Hydraulic Compost Matrix (HCM)

Hydraulic compost matrix (HCM) is a field-derived practice whereby finely graded or sifted compost is introduced into the hydraulic mulch slurry. A guar-type tackifier can be added for steeper slope applications as well as any specified seed mixtures. A HCM can help to accelerate seed germination and growth. HCMs are particularly useful as an in-fill for three-dimensional re-vegetation geocomposites, such as turf reinforcement mats (TRM) (see EC-7 Geotextiles and Mats).

Costs

Average installed costs for hydraulic mulch categories are provided in Table 1, below.

**Table 1
HYDRAULIC MULCH BMPs
INSTALLED COSTS**

BMP	Installed Cost/Acre
Standard Hydraulic Mulching (SM)	\$1,700 - \$3,600 per acre
Hydraulic Matrices (HM) and Stabilized Fiber Matrices	
Guar-based	\$2,000 - \$4,000 per acre
PAM-based	\$2,500 - \$5,610 per acre
Bonded Fiber Matrix (BFM)	\$3,900 - \$6,900 per acre
Mechanically Bonded Fiber Matrix (MBFM)	\$4,500 - \$6,000 per acre
Hydraulic Compost Matrix (HCM)	\$3,000 - \$3,500 per acre

Source: Caltrans Soil Stabilization BMP Research for Erosion and Sediment Controls, July 2007

Inspection and Maintenance

- Maintain an unbroken, temporary mulched ground cover throughout the period of construction when the soils are not being reworked.
- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected

weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.

- Areas where erosion is evident should be repaired and BMPs re-applied as soon as possible. Care should be exercised to minimize the damage to protected areas while making repairs, as any area damaged will require re-application of BMPs.
- Compare the number of bags or weight of applied mulch to the area treated to determine actual application rates and compliance with specifications.

References

Soil Stabilization BMP Research for Erosion and Sediment Controls: Cost Survey Technical Memorandum, State of California Department of Transportation (Caltrans), July 2007.

Controlling Erosion of Construction Sites, Agriculture Information #347, U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service – SCS).

Guides for Erosion and Sediment Control in California, USDA Soils Conservation Service, January 1991.

Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

Sedimentation and Erosion Control, An Inventory of Current Practices Draft, US EPA, April 1990.

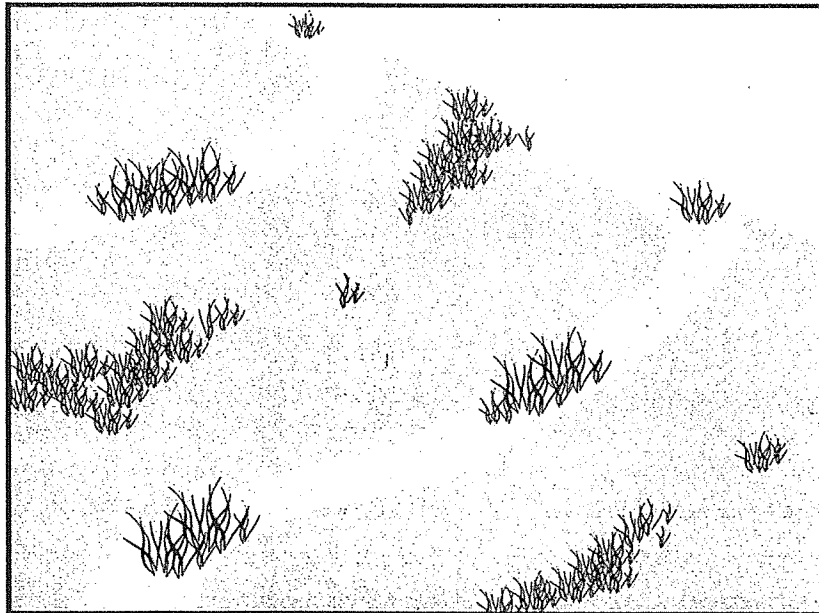
Soil Erosion by Water, Agriculture Information Bulletin #513, U.S. Department of Agriculture, Soil Conservation Service.

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Guidance Document: Soil Stabilization for Temporary Slopes, State of California Department of Transportation (Caltrans), November 1999

Stormwater Management of the Puget Sound Basin, Technical Manual, Publication #91-75, Washington State Department of Ecology, February 1992.

Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.



Description and Purpose

Hydroseeding typically consists of applying a mixture of a hydraulic mulch, seed, fertilizer, and stabilizing emulsion with a hydraulic mulcher, to temporarily protect exposed soils from erosion by water and wind. Hydraulic seeding, or hydroseeding, is simply the method by which temporary or permanent seed is applied to the soil surface.

Suitable Applications

Hydroseeding is suitable for disturbed areas requiring temporary protection until permanent stabilization is established, for disturbed areas that will be re-disturbed following an extended period of inactivity, or to apply permanent stabilization measures. Hydroseeding without mulch or other cover (e.g. EC-7, Erosion Control Blanket) is not a stand-alone erosion control BMP and should be combined with additional measures until vegetation establishment.

Typical applications for hydroseeding include:

- Disturbed soil/graded areas where permanent stabilization or continued earthwork is not anticipated prior to seed germination.
- Cleared and graded areas exposed to seasonal rains or temporary irrigation.
- Areas not subject to heavy wear by construction equipment or high traffic.

Categories

EC	Erosion Control	<input checked="" type="checkbox"/>
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	<input checked="" type="checkbox"/>
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

- Primary Category
- Secondary Category

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

- EC-3 Hydraulic Mulch
- EC-5 Soil Binders
- EC-6 Straw Mulch
- EC-7 Geotextiles and Mats
- EC-8 Wood Mulching
- EC-14 Compost Blanket
- EC-16 Non-Vegetative Stabilization



Limitations

- Availability of hydroseeding equipment may be limited just prior to the rainy season and prior to storms due to high demand.
- Hydraulic seed should be applied with hydraulic mulch or a stand-alone hydroseed, application should be followed by one of the following:
 - Straw mulch (see Straw Mulch EC-6)
 - Rolled erosion control products (see Geotextiles and Mats EC-7)
 - Application of Compost Blanket (see Compost Blanket EC-14)

Hydraulic seed may be used alone only on small flat surfaces when there is sufficient time in the season to ensure adequate vegetation establishment and coverage to provide adequate erosion control.

- Hydraulic seed without mulch does not provide immediate erosion control.
- Temporary seeding may not be appropriate for steep slopes (i.e., slopes readily prone to rill erosion or without sufficient topsoil).
- Temporary seeding may not be appropriate in dry periods without supplemental irrigation.
- Temporary vegetation may have to be removed before permanent vegetation is applied.
- Temporary vegetation may not be appropriate for short term inactivity (i.e. less than 3-6 months):

Implementation

In order to select appropriate hydraulic seed mixtures, an evaluation of site conditions should be performed with respect to:

- | | |
|---|----------------------------------|
| - Soil conditions | - Maintenance requirements |
| - Site topography and exposure (sun/wind) | - Sensitive adjacent areas |
| - Season and climate | - Water availability |
| - Vegetation types | - Plans for permanent vegetation |

The local office of the U.S.D.A. Natural Resources Conservation Service (NRCS) is an excellent source of information on appropriate seed mixes.

The following steps should be followed for implementation:

- Where appropriate or feasible, soil should be prepared to receive the seed by disking or otherwise scarifying (See EC-15, Soil Preparation) the surface to eliminate crust, improve air and water infiltration and create a more favorable environment for germination and growth.

- Avoid use of hydraulic seed in areas where the BMP would be incompatible with future earthwork activities.
- Hydraulic seed can be applied using a multiple step or one step process.
 - In a multiple step process, hydraulic seed is applied first, followed by mulch or a Rolled Erosion Control Product (RECP).
 - In the one step process, hydraulic seed is applied with hydraulic mulch in a hydraulic matrix. When the one step process is used to apply the mixture of fiber, seed, etc., the seed rate should be increased to compensate for all seeds not having direct contact with the soil.
- All hydraulically seeded areas should have mulch, or alternate erosion control cover to keep seeds in place and to moderate soil moisture and temperature until the seeds germinate and grow.
- All seeds should be in conformance with the California State Seed Law of the Department of Agriculture. Each seed bag should be delivered to the site sealed and clearly marked as to species, purity, percent germination, dealer's guarantee, and dates of test. The container should be labeled to clearly reflect the amount of Pure Live Seed (PLS) contained. All legume seed should be pellet inoculated. Inoculant sources should be species specific and should be applied at a rate of 2 lb of inoculant per 100 lb seed.
- Commercial fertilizer should conform to the requirements of the California Food and Agricultural Code, which can be found at http://www.leginfo.ca.gov/.html/fac_table_of_contents.html. Fertilizer should be pelleted or granular form.
- Follow up applications should be made as needed to cover areas of poor coverage or germination/vegetation establishment and to maintain adequate soil protection.
- Avoid over spray onto roads, sidewalks, drainage channels, existing vegetation, etc.
- Additional guidance on the comparison and selection of temporary slope stabilization methods is provided in Appendix F of the Handbook.

Costs

Average cost for installation and maintenance may vary from as low as \$1,900 per acre for flat slopes and stable soils, to \$4,000 per acre for moderate to steep slopes and/or erosive soils. Cost of seed mixtures vary based on types of required vegetation.

BMP	Installed Cost per Acre
Hydraulic Seed	\$1,900-\$4,000

Source: Caltrans Soil Stabilization BMP Research for Erosion and Sediment Controls, July 2007

Inspection and Maintenance

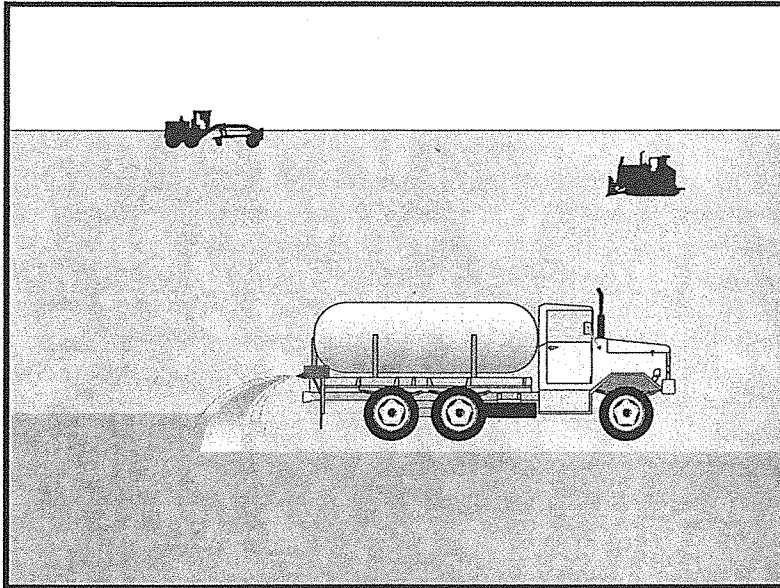
- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Areas where erosion is evident should be repaired and BMPs re-applied as soon as possible. Care should be exercised to minimize the damage to protected areas while making repairs, as any area damaged will require re-application of BMPs.
- Where seeds fail to germinate, or they germinate and die, the area must be re-seeded, fertilized, and mulched within the planting season, using not less than half the original application rates.
- Irrigation systems, if applicable, should be inspected daily while in use to identify system malfunctions and line breaks. When line breaks are detected, the system must be shut down immediately and breaks repaired before the system is put back into operation.
- Irrigation systems should be inspected for complete coverage and adjusted as needed to maintain complete coverage.

References

Soil Stabilization BMP Research for Erosion and Sediment Controls: Cost Survey Technical Memorandum, State of California Department of Transportation (Caltrans), July 2007.

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Guidance Document: Soil Stabilization for Temporary Slopes, State of California Department of Transportation (Caltrans), November 1999.



Description and Purpose

Soil binding consists of application and maintenance of a soil stabilizer to exposed soil surfaces. Soil binders are materials applied to the soil surface to temporarily prevent water and wind induced erosion of exposed soils on construction sites.

Suitable Applications

Soil binders are typically applied to disturbed areas requiring temporary protection. Because soil binders, when used as a stand-alone practice, can often be incorporated into the soil, they are a good alternative to mulches in areas where grading activities will soon resume. Soil binders are commonly used in the following areas:

- Rough graded soils that will be inactive for a short period of time
- Soil stockpiles
- Temporary haul roads prior to placement of crushed rock
- Compacted soil road base
- Construction staging, materials storage, and layout areas

Limitations

- Soil binders are temporary in nature and may need reapplication.

Categories

EC	Erosion Control	<input checked="" type="checkbox"/>
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	<input checked="" type="checkbox"/>
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

- Primary Category
- Secondary Category

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

- EC-3 Hydraulic Mulch
- EC-4 Hydroseeding
- EC-6 Straw Mulch
- EC-7 Geotextiles and Mats
- EC-8 Wood Mulching



- Soil binders require a minimum curing time until fully effective, as prescribed by the manufacturer. Curing time may be 24 hours or longer. Soil binders may need reapplication after a storm event.
- Soil binders will generally experience spot failures during heavy rainfall events. If runoff penetrates the soil at the top of a slope treated with a soil binder, it is likely that the runoff will undercut the stabilized soil layer and discharge at a point further down slope.
- Plant-material-based soil binders do not generally hold up to pedestrian or vehicular traffic across treated areas as well as polymeric emulsion blends or cementitious-based binders.
- Soil binders may not sufficiently penetrate compacted soils.
- Some soil binders are soil texture specific in terms of their effectiveness. For example, polyacrylamides (PAMs) work very well on silt and clayey soils but their performance decreases dramatically in sandy soils.
- Some soil binders may not perform well with low relative humidity. Under rainy conditions, some agents may become slippery or leach out of the soil.
- Soil binders may not cure if low temperatures occur within 24 hours of application.
- The water quality impacts of some chemical soil binders are relatively unknown and some may have water quality impacts due to their chemical makeup.

Implementation

General Considerations

- Soil binders should conform to local municipality specifications and requirements.
- Site soil types will dictate appropriate soil binders to be used.
- A soil binder must be environmentally benign (non-toxic to plant and animal life), easy to apply, easy to maintain, economical, and should not stain paved or painted surfaces. Soil binders should not pollute stormwater when cured. Obtain a Material Safety Data Sheet (MSDS) from the manufacturer to ensure non-toxicity.
- Stormwater runoff from PAM treated soils should pass through one of the following sediment control BMP prior to discharging to surface waters.
 - When the total drainage area is greater than or equal to 5 acres, PAM treated areas should drain to a sediment basin.
 - Areas less than 5 acres should drain to sediment control BMPs, such as a sediment trap, or a series of check dams. The total number of check dams used should be maximized to achieve the greatest amount of settlement of sediment prior to discharging from the site. Each check dam should be spaced evenly in the drainage channel through which stormwater flows are discharged off site.
- Performance of soil binders depends on temperature, humidity, and traffic across treated areas.

- Avoid over spray onto roads, sidewalks, drainage channels, existing vegetation, etc.
- Additional guidance on the comparison and selection of temporary slope stabilization methods is provided in Appendix F of the Handbook.

Selecting a Soil Binder

Properties of common soil binders used for erosion control are provided on Table 1 at the end of this Fact Sheet. Use Table 1 to select an appropriate soil binder. Refer to WE-1, Wind Erosion Control, for dust control soil binders.

Factors to consider when selecting a soil binder include the following:

- Suitability to situation - Consider where the soil binder will be applied, if it needs a high resistance to leaching or abrasion, and whether it needs to be compatible with any existing vegetation. Determine the length of time soil stabilization will be needed, and if the soil binder will be placed in an area where it will degrade rapidly. In general, slope steepness is not a discriminating factor for the listed soil binders.
- Soil types and surface materials - Fines and moisture content are key properties of surface materials. Consider a soil binder's ability to penetrate, likelihood of leaching, and ability to form a surface crust on the surface materials.
- Frequency of application - The frequency of application is related to the functional longevity of the binder, which can be affected by subgrade conditions, surface type, climate, and maintenance schedule.
- Frequent applications could lead to high costs. Application frequency may be minimized if the soil binder has good penetration, low evaporation, and good longevity. Consider also that frequent application will require frequent equipment clean up.

Plant-Material-Based (Short Lived, <6 months) Binders

Guar: Guar is a non-toxic, biodegradable, natural galactomannan-based hydrocolloid treated with dispersant agents for easy field mixing. It should be mixed with water at the rate of 11 to 15 lb per 1,000 gallons. Recommended minimum application rates are as follows:

Application Rates for Guar Soil Stabilizer

Slope (H:V):	Flat	4:1	3:1	2:1	1:1
lb/acre:	40	45	50	60	70

Psyllium: Psyllium is composed of the finely ground muciloid coating of plantago seeds that is applied as a dry powder or in a wet slurry to the surface of the soil. It dries to form a firm but rewettable membrane that binds soil particles together, but permits germination and growth of seed. Psyllium requires 12 to 18 hours drying time. Application rates should be from 80 to 200 lb/acre, with enough water in solution to allow for a uniform slurry flow.

Starch: Starch is non-ionic, cold water soluble (pre-gelatinized) granular cornstarch. The material is mixed with water and applied at the rate of 150 lb/acre. Approximate drying time is 9 to 12 hours.

Plant-Material-Based (Long Lived, 6-12 months) Binders

Pitch and Rosin Emulsion: Generally, a non-ionic pitch and rosin emulsion has a minimum solids content of 48%. The rosin should be a minimum of 26% of the total solids content. The soil stabilizer should be non-corrosive, water dilutable emulsion that upon application cures to a water insoluble binding and cementing agent. For soil erosion control applications, the emulsion is diluted and should be applied as follows:

- For clayey soil: 5 parts water to 1 part emulsion
- For sandy soil: 10 parts water to 1 part emulsion

Application can be by water truck or hydraulic seeder with the emulsion and product mixture applied at the rate specified by the manufacturer.

Polymeric Emulsion Blend Binders

Acrylic Copolymers and Polymers: Polymeric soil stabilizers should consist of a liquid or solid polymer or copolymer with an acrylic base that contains a minimum of 55% solids. The polymeric compound should be handled and mixed in a manner that will not cause foaming or should contain an anti-foaming agent. The polymeric emulsion should not exceed its shelf life or expiration date; manufacturers should provide the expiration date. Polymeric soil stabilizer should be readily miscible in water, non-injurious to seed or animal life, non-flammable, should provide surface soil stabilization for various soil types without totally inhibiting water infiltration, and should not re-emulsify when cured. The applied compound typically requires 12 to 24 hours drying time. Liquid copolymer should be diluted at a rate of 10 parts water to 1 part polymer and the mixture applied to soil at a rate of 1,175 gallons/acre.

Liquid Polymers of Methacrylates and Acrylates: This material consists of a tackifier/sealer that is a liquid polymer of methacrylates and acrylates. It is an aqueous 100% acrylic emulsion blend of 40% solids by volume that is free from styrene, acetate, vinyl, ethoxylated surfactants or silicates. For soil stabilization applications, it is diluted with water in accordance with the manufacturer's recommendations, and applied with a hydraulic seeder at the rate of 20 gallons/acre. Drying time is 12 to 18 hours after application.

Copolymers of Sodium Acrylates and Acrylamides: These materials are non-toxic, dry powders that are copolymers of sodium acrylate and acrylamide. They are mixed with water and applied to the soil surface for erosion control at rates that are determined by slope gradient:

Slope Gradient (H:V)	lb/acre
Flat to 5:1	3.0 - 5.0
5:1 to 3:1	5.0 - 10.0
2:1 to 1:1	10.0 - 20.0

Poly-Acrylamide (PAM) and Copolymer of Acrylamide: Linear copolymer polyacrylamide for use as a soil binder is packaged as a dry flowable solid, as a liquid. Refer to the manufacturer's recommendation for dilution and application rates as they vary based on liquid or dry form, site conditions and climate.

- Limitations specific to PAM are as follows:

- Do not use PAM on a slope that flows into a water body without passing through a sediment trap or sediment basin.
- The specific PAM copolymer formulation must be anionic. Cationic PAM should not be used in any application because of known aquatic toxicity problems. Only the highest drinking water grade PAM, certified for compliance with ANSI/NSF Standard 60 for drinking water treatment, should be used for soil applications.
- PAM designated for erosion and sediment control should be “water soluble” or “linear” or “non-cross linked”.
- PAM should not be used as a stand-alone BMP to protect against water-based erosion. When combined with mulch, its effectiveness increases dramatically.

Hydro-Colloid Polymers: Hydro-Colloid Polymers are various combinations of dry flowable poly-acrylamides, copolymers and hydro-colloid polymers that are mixed with water and applied to the soil surface at rates of 55 to 60 lb/acre. Drying times are 0 to 4 hours.

Cementitious-Based Binders

Gypsum: This is a formulated gypsum based product that readily mixes with water and mulch to form a thin protective crust on the soil surface. It is composed of high purity gypsum that is ground, calcined and processed into calcium sulfate hemihydrate with a minimum purity of 86%. It is mixed in a hydraulic seeder and applied at rates 4,000 to 12,000 lb/acre. Drying time is 4 to 8 hours.

Applying Soil Binders

After selecting an appropriate soil binder, the untreated soil surface **must** be prepared before applying the soil binder. The untreated soil surface must contain sufficient moisture to assist the agent in achieving uniform distribution. In general, the following steps should be followed:

- Follow manufacturer’s written recommendations for application rates, pre-wetting of application area, and cleaning of equipment after use.
- Prior to application, roughen embankment and fill areas.
- Consider the drying time for the selected soil binder and apply with sufficient time before anticipated rainfall. Soil binders should not be applied during or immediately before rainfall.
- Avoid over spray onto roads, sidewalks, drainage channels, sound walls, existing vegetation, etc.
- Soil binders should not be applied to frozen soil, areas with standing water, under freezing or rainy conditions, or when the temperature is below 40°F during the curing period.
- More than one treatment is often necessary, although the second treatment may be diluted or have a lower application rate.
- Generally, soil binders require a minimum curing time of 24 hours before they are fully effective. Refer to manufacturer's instructions for specific cure time.

- For liquid agents:
 - Crown or slope ground to avoid ponding.
 - Uniformly pre-wet ground at 0.03 to 0.3 gal/yd² or according to manufacturer's recommendations.
 - Apply solution under pressure. Overlap solution 6 to 12 in.
 - Allow treated area to cure for the time recommended by the manufacturer; typically at least 24 hours.
 - Apply second treatment before first treatment becomes ineffective, using 50% application rate.
 - In low humidities, reactivate chemicals by re-wetting with water at 0.1 to 0.2 gal/yd².

Costs

Costs vary according to the soil stabilizer selected for implementation. The following are approximate installed costs:

Soil Binder	Cost per Acre (2000) ¹	Estimated Cost per Acre (2009) ²
Plant-Material-Based (Short Lived) Binders	\$700-\$900	\$770-\$990
Plant-Material-Based (Long Lived) Binders	\$1,200-\$1,500	\$1,320-\$1,650
Polymeric Emulsion Blend Binders	\$700-\$1,500	\$770-\$1,650
Cementitious-Based Binders	\$800-\$1,200	\$880-\$1,350

1. Source: Erosion Control Pilot Study Report, Caltrans, June 2000.

2. 2009 costs reflect a 10% escalation over year 2000 costs. Escalation based on informal survey of industry trends. Note: Expected cost increase is offset by competitive economic conditions.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Areas where erosion is evident should be repaired and BMPs re-applied as soon as possible. Care should be exercised to minimize the damage to protected areas while making repairs, as any area damaged will require re-application of BMPs.
- Reapply the selected soil binder as needed to maintain effectiveness.

Table 1 Properties of Soil Binders for Erosion Control

Evaluation Criteria	Binder Type			
	Plant Material Based (Short Lived)	Plant Material Based (Long Lived)	Polymeric Emulsion Blends	Cementitious-Based Binders
Relative Cost	Low	Moderate to High	Low to High	Low to Moderate
Resistance to Leaching	High	High	Low to Moderate	Moderate
Resistance to Abrasion	Moderate	Low	Moderate to High	Moderate to High
Longevity	Short to Medium	Medium	Medium to Long	Medium
Minimum Curing Time before Rain	9 to 18 hours	19 to 24 hours	0 to 24 hours	4 to 8 hours
Compatibility with Existing Vegetation	Good	Poor	Poor	Poor
Mode of Degradation	Biodegradable	Biodegradable	Photodegradable/ Chemically Degradable	Photodegradable/ Chemically Degradable
Labor Intensive	No	No	No	No
Specialized Application Equipment	Water Truck or Hydraulic Mulcher	Water Truck or Hydraulic Mulcher	Water Truck or Hydraulic Mulcher	Water Truck or Hydraulic Mulcher
Liquid/Powder	Powder	Liquid	Liquid/Powder	Powder
Surface Crusting	Yes, but dissolves on rewetting	Yes	Yes, but dissolves on rewetting	Yes
Clean Up	Water	Water	Water	Water
Erosion Control Application Rate	Varies ⁽¹⁾	Varies ⁽¹⁾	Varies ⁽¹⁾	4,000 to 12,000 lbs/acre

(1) See Implementation for specific rates.

References

Erosion Control Pilot Study Report, State of California Department of Transportation (Caltrans), June 2000.

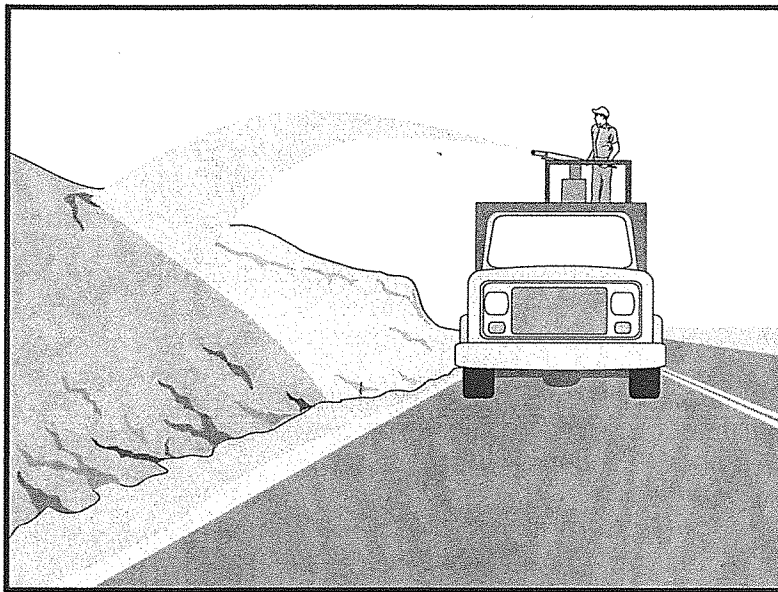
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Sedimentation and Erosion Control, An Inventory of Current Practices Draft, US EPA, April 1990.

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Guidance Document: Soil Stabilization for Temporary Slopes, State of California Department of Transportation (Caltrans), November 1999.

Stormwater Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.



Description and Purpose

Straw mulch consists of placing a uniform layer of straw and incorporating it into the soil with a studded roller or crimper, or anchoring it with a tackifier or stabilizing emulsion. Straw mulch protects the soil surface from the impact of rain drops, preventing soil particles from becoming dislodged.

Suitable Applications

Straw mulch is suitable for disturbed areas requiring temporary protection until permanent stabilization is established. Straw mulch can be specified for the following applications:

- As a stand-alone BMP on disturbed areas until soils can be prepared for permanent vegetation. The longevity of straw mulch is typically less than six months.
- Applied in combination with temporary seeding strategies
- Applied in combination with permanent seeding strategies to enhance plant establishment and final soil stabilization
- Applied around containerized plantings to control erosion until the plants become established to provide permanent stabilization

Limitations

- Availability of straw and straw blowing equipment may be limited just prior to the rainy season and prior to storms due to high demand.

Categories

EC	Erosion Control	<input checked="" type="checkbox"/>
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	<input checked="" type="checkbox"/>
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

- Primary Category
- Secondary Category

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

- EC-3 Hydraulic Mulch
- EC-4 Hydroseeding
- EC-5 Soil Binders
- EC-7 Geotextiles and Mats
- EC-8 Wood Mulching
- EC-14 Compost Blanket



- There is a potential for introduction of weed seed and unwanted plant material if weed-free agricultural straw is not specified.
- Straw mulch applied by hand is more time intensive and potentially costly.
- Wind may limit application of straw and blow straw into undesired locations.
- May have to be removed prior to permanent seeding or prior to further earthwork.
- “Punching” of straw does not work in sandy soils, necessitating the use of tackifiers.
- Potential fugitive dust control issues associated with straw applications can occur. Application of a stabilizing emulsion or a water stream at the same time straw is being blown can reduce this problem.
- Use of plastic netting should be avoided in areas where wildlife may be entrapped and may be prohibited for projects in certain areas with sensitive wildlife species, especially reptiles and amphibians.

Implementation

- Straw should be derived from weed-free wheat, rice, or barley. Where required by the plans, specifications, permits, or environmental documents, native grass straw should be used.
- Use tackifier to anchor straw mulch to the soil on slopes.
- Crimping, punch roller-type rollers, or track walking may also be used to incorporate straw mulch into the soil on slopes. Track walking can be used where other methods are impractical.
- Avoid placing straw onto roads, sidewalks, drainage channels, sound walls, existing vegetation, etc.
- Straw mulch with tackifier should not be applied during or immediately before rainfall.
- Additional guidance on the comparison and selection of temporary slope stabilization methods is provided in Appendix F of the Handbook.

Application Procedures

- When using a tackifier to anchor the straw mulch, roughen embankment or fill areas by rolling with a crimping or punching-type roller or by track walking before placing the straw mulch. Track walking should only be used where rolling is impractical.
- Apply straw at a rate of between 3,000 and 4,000 lb/acre, either by machine or by hand distribution and provide 100% ground cover. A lighter application is used for flat surfaces and a heavier application is used for slopes.
- Evenly distribute straw mulch on the soil surface.
- Anchoring straw mulch to the soil surface by “punching” it into the soil mechanically (incorporating) can be used in lieu of a tackifier.

- Methods for holding the straw mulch in place depend upon the slope steepness, accessibility, soil conditions, and longevity.
 - A tackifier acts to glue the straw fibers together and to the soil surface. The tackifier should be selected based on longevity and ability to hold the fibers in place. A tackifier is typically applied at a rate of 125 lb/acre. In windy conditions, the rates are typically 180 lb/acre.
 - On very small areas, a spade or shovel can be used to punch in straw mulch.
 - On slopes with soils that are stable enough and of sufficient gradient to safely support construction equipment without contributing to compaction and instability problems, straw can be "punched" into the ground using a knife blade roller or a straight bladed coulter, known commercially as a "crimper."

Costs

Average annual cost for installation and maintenance is included in the table below. Application by hand is more time intensive and potentially more costly.

BMP	Unit Cost per Acre
Straw mulch, crimped or punched	\$2,458-\$5,375
Straw mulch with tackifier	\$1,823-\$4,802

Source: Caltrans Soil Stabilization BMP Research for Erosion and Sediment Controls, July 2007

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Areas where erosion is evident should be repaired and BMPs re-applied as soon as possible. Care should be exercised to minimize the damage to protected areas while making repairs, as any area damaged will require re-application of BMPs.
- The key consideration in inspection and maintenance is that the straw needs to last long enough to achieve erosion control objectives. Straw mulch as a stand-alone BMP is temporary and is not suited for long-term erosion control.
- Maintain an unbroken, temporary mulched ground cover while disturbed soil areas are inactive. Repair any damaged ground cover and re-mulch exposed areas.
- Reapplication of straw mulch and tackifier may be required to maintain effective soil stabilization over disturbed areas and slopes.

References

Soil Stabilization BMP Research for Erosion and Sediment Controls: Cost Survey Technical Memorandum, State of California Department of Transportation (Caltrans), July 2007.

Erosion and Sediment Control Manual, Oregon Department of Environmental Quality, February 2005.

Controlling Erosion of Construction Sites, Agricultural Information Bulletin #347, U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service – SCS).

Guides for Erosion and Sediment Control in California, USDA Soils Conservation Service, January 1991.

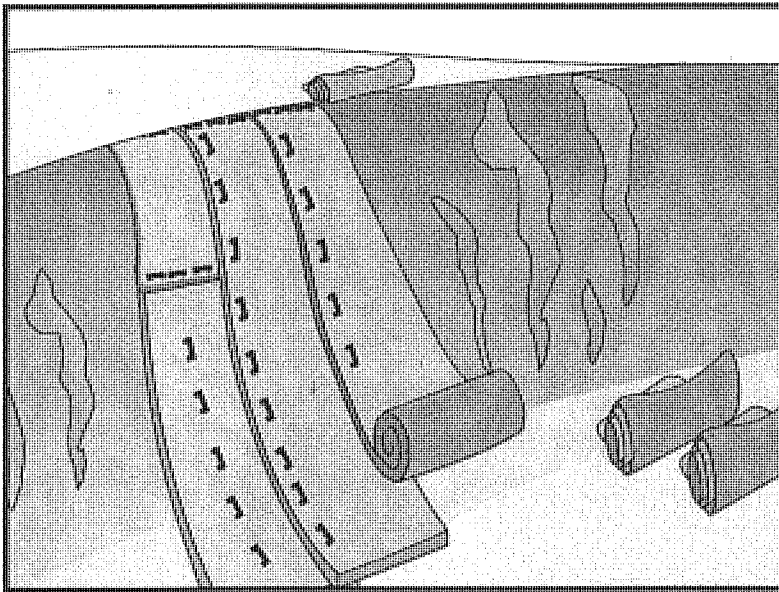
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Soil Erosion by Water, Agricultural Information Bulletin #513, U.S. Department of Agriculture, Soil Conservation Service.

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Stormwater Management of the Puget Sound Basin, Technical Manual, Publication #91-75, Washington State Department of Ecology, February 1992.

Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.



Description and Purpose

Mattings of natural materials are used to cover the soil surface to reduce erosion from rainfall impact, hold soil in place, and absorb and hold moisture near the soil surface. Additionally, matting may be used to stabilize soils until vegetation is established.

Suitable Applications

Mattings are commonly applied on short, steep slopes where erosion hazard is high and vegetation will be slow to establish. Mattings are also used on stream banks where moving water at velocities between 3 ft/s and 6 ft/s are likely to wash out new vegetation, and in areas where the soil surface is disturbed and where existing vegetation has been removed. Matting may also be used when seeding cannot occur (e.g., late season construction and/or the arrival of an early rain season). Erosion control matting should be considered when the soils are fine grained and potentially erosive. These measures should be considered in the following situations.

- Steep slopes, generally steeper than 3:1 (H:V)
- Slopes where the erosion potential is high
- Slopes and disturbed soils where mulch must be anchored
- Disturbed areas where plants are slow to develop
- Channels with flows exceeding 3.3 ft/s

Objectives

EC	Erosion Control	<input checked="" type="checkbox"/>
SE	Sediment Control	
TR	Tracking Control	
WE	Wind Erosion Control	3
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

- Primary Objective
- Secondary Objective

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

- EC-3 Hydraulic Mulch
- EC-4 Hydroseeding
- EC-5 Soil Binders
- EC-6 Straw Mulch
- EC-8 Wood Mulching



- Channels to be vegetated
- Stockpiles
- Slopes adjacent to water bodies of Environmentally Sensitive Areas (ESAs)

Limitations

- Properly installed mattings provide excellent erosion control but do so at relatively high cost. This high cost typically limits the use of mattings to areas of concentrated channel flow and steep slopes.
- Mattings are more costly than other BMP practices, limiting their use to areas where other BMPs are ineffective (e.g. channels, steep slopes).
- Installation is critical and requires experienced contractors. The contractor should install the matting material in such a manner that continuous contact between the material and the soil occurs.
- Geotextiles and Mats may delay seed germination, due to reduction in soil temperature.
- Blankets and mats are generally not suitable for excessively rocky sites or areas where the final vegetation will be mowed (since staples and netting can catch in mowers).
- Blankets and mats must be removed and disposed of prior to application of permanent soil stabilization measures.
- Plastic sheeting is easily vandalized, easily torn, photodegradable, and must be disposed of at a landfill.
- Plastic results in 100% runoff, which may cause serious erosion problems in the areas receiving the increased flow.
- The use of plastic should be limited to covering stockpiles or very small graded areas for short periods of time (such as through one imminent storm event) until alternative measures, such as seeding and mulching, may be installed.
- Geotextiles, mats, plastic covers, and erosion control covers have maximum flow rate limitations; consult the manufacturer for proper selection.
- Not suitable for areas that have heavy foot traffic (tripping hazard) – e.g., pad areas around buildings under construction.

Implementation***Material Selection***

Organic matting materials have been found to be effective where re-vegetation will be provided by re-seeding. The choice of matting should be based on the size of area, side slopes, surface conditions such as hardness, moisture, weed growth, and availability of materials.

The following natural and synthetic mattings are commonly used:

Geotextiles

- Material should be a woven polypropylene fabric with minimum thickness of 0.06 in., minimum width of 12 ft and should have minimum tensile strength of 150 lbs (warp), 80 lbs (fill) in conformance with the requirements in ASTM Designation: D 4632. The permittivity of the fabric should be approximately 0.07 sec^{-1} in conformance with the requirements in ASTM Designation: D4491. The fabric should have an ultraviolet (UV) stability of 70 percent in conformance with the requirements in ASTM designation: D4355. Geotextile blankets must be secured in place with wire staples or sandbags and by keying into tops of slopes to prevent infiltration of surface waters under geotextile. Staples should be made of minimum 11 gauge steel wire and should be U-shaped with 8 in. legs and 2 in. crown.
- Geotextiles may be reused if they are suitable for the use intended.

Plastic Covers

- Plastic sheeting should have a minimum thickness of 6 mils, and must be keyed in at the top of slope and firmly held in place with sandbags or other weights placed no more than 10 ft apart. Seams are typically taped or weighted down their entire length, and there should be at least a 12 in. to 24 in. overlap of all seams. Edges should be embedded a minimum of 6 in. in soil.
- All sheeting must be inspected periodically after installation and after significant rainstorms to check for erosion, undermining, and anchorage failure. Any failures must be repaired immediately. If washout or breakages occur, the material should be re-installed after repairing the damage to the slope.

Erosion Control Blankets/Mats

- Biodegradable rolled erosion control products (RECPs) are typically composed of jute fibers, curled wood fibers, straw, coconut fiber, or a combination of these materials. In order for an RECP to be considered 100% biodegradable, the netting, sewing or adhesive system that holds the biodegradable mulch fibers together must also be biodegradable.
 - **Jute** is a natural fiber that is made into a yarn that is loosely woven into a biodegradable mesh. It is designed to be used in conjunction with vegetation and has longevity of approximately one year. The material is supplied in rolled strips, which should be secured to the soil with U-shaped staples or stakes in accordance with manufacturers' recommendations.
 - **Excelsior** (curled wood fiber) blanket material should consist of machine produced mats of curled wood excelsior with 80 percent of the fiber 6 in. or longer. The excelsior blanket should be of consistent thickness. The wood fiber must be evenly distributed over the entire area of the blanket. The top surface of the blanket should be covered with a photodegradable extruded plastic mesh. The blanket should be smolder resistant without the use of chemical additives and should be non-toxic and non-injurious to plant and animal life. Excelsior blankets should be furnished in rolled strips, a minimum of 48 in. wide, and should have an average weight of 0.8 lb/yd^2 , ± 10 percent, at the time of manufacture. Excelsior blankets must be secured in place with wire staples. Staples

should be made of minimum 11 gauge steel wire and should be U-shaped with 8 in. legs and 2 in. crown.

- **Straw blanket** should be machine produced mats of straw with a lightweight biodegradable netting top layer. The straw should be attached to the netting with biodegradable thread or glue strips. The straw blanket should be of consistent thickness. The straw should be evenly distributed over the entire area of the blanket. Straw blanket should be furnished in rolled strips a minimum of 6.5 ft wide, a minimum of 80 ft long and a minimum of 0.5 lb/yd². Straw blankets must be secured in place with wire staples. Staples should be made of minimum 11 gauge steel wire and should be U-shaped with 8 in. legs and 2 in. crown.
 - **Wood fiber blanket** is composed of biodegradable fiber mulch with extruded plastic netting held together with adhesives. The material is designed to enhance re-vegetation. The material is furnished in rolled strips, which must be secured to the ground with U-shaped staples or stakes in accordance with manufacturers' recommendations.
 - **Coconut fiber blanket** should be a machine produced mat of 100 percent coconut fiber with biodegradable netting on the top and bottom. The coconut fiber should be attached to the netting with biodegradable thread or glue strips. The coconut fiber blanket should be of consistent thickness. The coconut fiber should be evenly distributed over the entire area of the blanket. Coconut fiber blanket should be furnished in rolled strips with a minimum of 6.5 ft wide, a minimum of 80 ft. long and a minimum of 0.5 lb/yd². Coconut fiber blankets must be secured in place with wire staples. Staples should be made of minimum 11 gauge steel wire and should be U-shaped with 8 in. legs and 2 in. crown.
 - **Coconut fiber mesh** is a thin permeable membrane made from coconut or corn fiber that is spun into a yarn and woven into a biodegradable mat. It is designed to be used in conjunction with vegetation and typically has longevity of several years. The material is supplied in rolled strips, which must be secured to the soil with U-shaped staples or stakes in accordance with manufacturers' recommendations.
 - **Straw coconut fiber blanket** should be machine produced mats of 70 percent straw and 30 percent coconut fiber with a biodegradable netting top layer and a biodegradable bottom net. The straw and coconut fiber should be attached to the netting with biodegradable thread or glue strips. The straw coconut fiber blanket should be of consistent thickness. The straw and coconut fiber should be evenly distributed over the entire area of the blanket. Straw coconut fiber blanket should be furnished in rolled strips a minimum of 6.5 ft wide, a minimum of 80 ft long and a minimum of 0.5 lb/yd². Straw coconut fiber blankets must be secured in place with wire staples. Staples should be made of minimum 11 gauge steel wire and should be U-shaped with 8 in. legs and 2 in. crown.
- Non-biodegradable RECPs are typically composed of polypropylene, polyethylene, nylon or other synthetic fibers. In some cases, a combination of biodegradable and synthetic fibers is used to construct the RECP. Netting used to hold these fibers together is typically non-biodegradable as well.

- **Plastic netting** is a lightweight biaxially oriented netting designed for securing loose mulches like straw or paper to soil surfaces to establish vegetation. The netting is photodegradable. The netting is supplied in rolled strips, which must be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- **Plastic mesh** is an open weave geotextile that is composed of an extruded synthetic fiber woven into a mesh with an opening size of less than ¼ in. It is used with re-vegetation or may be used to secure loose fiber such as straw to the ground. The material is supplied in rolled strips, which must be secured to the soil with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- **Synthetic fiber with netting** is a mat that is composed of durable synthetic fibers treated to resist chemicals and ultraviolet light. The mat is a dense, three dimensional mesh of synthetic (typically polyolefin) fibers stitched between two polypropylene nets. The mats are designed to be re-vegetated and provide a permanent composite system of soil, roots, and geomatrix. The material is furnished in rolled strips, which must be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- **Bonded synthetic fibers** consist of a three dimensional geomatrix nylon (or other synthetic) matting. Typically it has more than 90 percent open area, which facilitates root growth. It's tough root reinforcing system anchors vegetation and protects against hydraulic lift and shear forces created by high volume discharges. It can be installed over prepared soil, followed by seeding into the mat. Once vegetated, it becomes an invisible composite system of soil, roots, and geomatrix. The material is furnished in rolled strips that must be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- **Combination synthetic and biodegradable RECPs** consist of biodegradable fibers, such as wood fiber or coconut fiber, with a heavy polypropylene net stitched to the top and a high strength continuous filament geomatrix or net stitched to the bottom. The material is designed to enhance re-vegetation. The material is furnished in rolled strips, which must be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.

Site Preparation

- Proper site preparation is essential to ensure complete contact of the blanket or matting with the soil.
- Grade and shape the area of installation.
- Remove all rocks, clods, vegetation or other obstructions so that the installed blankets or mats will have complete, direct contact with the soil.
- Prepare seedbed by loosening 2 to 3 in. of topsoil.

Seeding

Seed the area before blanket installation for erosion control and revegetation. Seeding after mat installation is often specified for turf reinforcement application. When seeding prior to blanket

installation, all check slots and other areas disturbed during installation must be re-seeded. Where soil filling is specified, seed the matting and the entire disturbed area after installation and prior to filling the mat with soil.

Fertilize and seed in accordance with seeding specifications or other types of landscaping plans. When using jute matting on a seeded area, apply approximately half the seed before laying the mat and the remainder after laying the mat. The protective matting can be laid over areas where grass has been planted and the seedlings have emerged. Where vines or other ground covers are to be planted, lay the protective matting first and then plant through matting according to design of planting.

Check Slots

Check slots are made of glass fiber strips, excelsior matting strips or tight folded jute matting blanket or strips for use on steep, highly erodible watercourses. The check slots are placed in narrow trenches 6 to 12 in. deep across the channel and left flush with the soil surface. They are to cover the full cross section of designed flow.

Laying and Securing Matting

- Before laying the matting, all check slots should be installed and the friable seedbed made free from clods, rocks, and roots. The surface should be compacted and finished according to the requirements of the manufacturer's recommendations.
- Mechanical or manual lay down equipment should be capable of handling full rolls of fabric and laying the fabric smoothly without wrinkles or folds. The equipment should meet the fabric manufacturer's recommendations or equivalent standards.

Anchoring

- U-shaped wire staples, metal geotextile stake pins, or triangular wooden stakes can be used to anchor mats and blankets to the ground surface.
- Wire staples should be made of minimum 11 gauge steel wire and should be U-shaped with 8 in. legs and 2 in. crown.
- Metal stake pins should be 0.188 in. diameter steel with a 1.5 in. steel washer at the head of the pin, and 8 in. in length.
- Wire staples and metal stakes should be driven flush to the soil surface.

Installation on Slopes

Installation should be in accordance with the manufacturer's recommendations. In general, these will be as follows:

- Begin at the top of the slope and anchor the blanket in a 6 in. deep by 6 in. wide trench. Backfill trench and tamp earth firmly.
- Unroll blanket down slope in the direction of water flow.
- Overlap the edges of adjacent parallel rolls 2 to 3 in. and staple every 3 ft.

- When blankets must be spliced, place blankets end over end (shingle style) with 6 in. overlap. Staple through overlapped area, approximately 12 in. apart.
- Lay blankets loosely and maintain direct contact with the soil. Do not stretch.
- Staple blankets sufficiently to anchor blanket and maintain contact with the soil. Staples should be placed down the center and staggered with the staples placed along the edges. Steep slopes, 1:1 (H:V) to 2:1 (H:V), require a minimum of 2 staples/yd². Moderate slopes, 2:1 (H:V) to 3:1 (H:V), require a minimum of 1 1/2 staples/yd².

Installation in Channels

Installation should be in accordance with the manufacturer's recommendations. In general, these will be as follows:

- Dig initial anchor trench 12 in. deep and 6 in. wide across the channel at the lower end of the project area.
- Excavate intermittent check slots, 6 in. deep and 6 in. wide across the channel at 25 to 30 ft intervals along the channels.
- Cut longitudinal channel anchor trenches 4 in. deep and 4 in. wide along each side of the installation to bury edges of matting, whenever possible extend matting 2 to 3 in. above the crest of the channel side slopes.
- Beginning at the downstream end and in the center of the channel, place the initial end of the first roll in the anchor trench and secure with fastening devices at 12 in. intervals. Note: matting will initially be upside down in anchor trench.
- In the same manner, position adjacent rolls in anchor trench, overlapping the preceding roll a minimum of 3 in.
- Secure these initial ends of mats with anchors at 12 in. intervals, backfill and compact soil.
- Unroll center strip of matting upstream. Stop at next check slot or terminal anchor trench. Unroll adjacent mats upstream in similar fashion, maintaining a 3 in. overlap.
- Fold and secure all rolls of matting snugly into all transverse check slots. Lay mat in the bottom of the slot then fold back against itself. Anchor through both layers of mat at 12 in. intervals, then backfill and compact soil. Continue rolling all mat widths upstream to the next check slot or terminal anchor trench.
- Alternate method for non-critical installations: Place two rows of anchors on 6 in. centers at 25 to 30 ft. intervals in lieu of excavated check slots.
- Staple shingled lap spliced ends a minimum of 12 in. apart on 12 in. intervals.
- Place edges of outside mats in previously excavated longitudinal slots; anchor using prescribed staple pattern, backfill, and compact soil.
- Anchor, fill, and compact upstream end of mat in a 12 in. by 6 in. terminal trench.

- Secure mat to ground surface using U-shaped wire staples, geotextile pins, or wooden stakes.
- Seed and fill turf reinforcement matting with soil, if specified.

Soil Filling (if specified for turf reinforcement)

- Always consult the manufacturer's recommendations for installation.
- Do not drive tracked or heavy equipment over mat.
- Avoid any traffic over matting if loose or wet soil conditions exist.
- Use shovels, rakes, or brooms for fine grading and touch up.
- Smooth out soil filling just exposing top netting of mat.

Temporary Soil Stabilization Removal

- Temporary soil stabilization removed from the site of the work must be disposed of if necessary.

Costs

Relatively high compared to other BMPs. Biodegradable materials: \$0.50 - \$0.57/yd². Permanent materials: \$3.00 - \$4.50/yd². Staples: \$0.04 - \$0.05/staple. Approximate costs for installed materials are shown below:

Rolled Erosion Control Products		Installed Cost per Acre
Biodegradable	Jute Mesh	\$6,500
	Curled Wood Fiber	\$10,500
	Straw	\$8,900
	Wood Fiber	\$8,900
	Coconut Fiber	\$13,000
	Coconut Fiber Mesh	\$31,200
	Straw Coconut Fiber	\$10,900
Non-Biodegradable	Plastic Netting	\$2,000
	Plastic Mesh	\$3,200
	Synthetic Fiber with Netting	\$34,800
	Bonded Synthetic Fibers	\$50,000
	Combination with Biodegradable	\$32,000

Source: Caltrans Guidance for Soil Stabilization for Temporary Slopes, Nov. 1999

Inspection and Maintenance

- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season, and at two-week intervals during the non-rainy season.
- Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges occur.

- Areas where erosion is evident shall be repaired and BMPs reapplied as soon as possible. Care should be exercised to minimize the damage to protected areas while making repairs, as any area damaged will require reapplication of BMPs.
- If washout or breakage occurs, re-install the material after repairing the damage to the slope or channel.
- Make sure matting is uniformly in contact with the soil.
- Check that all the lap joints are secure.
- Check that staples are flush with the ground.
- Check that disturbed areas are seeded.

References

Guides for Erosion and Sediment Controls in California, USDA Soils Conservation Service, January 1991.

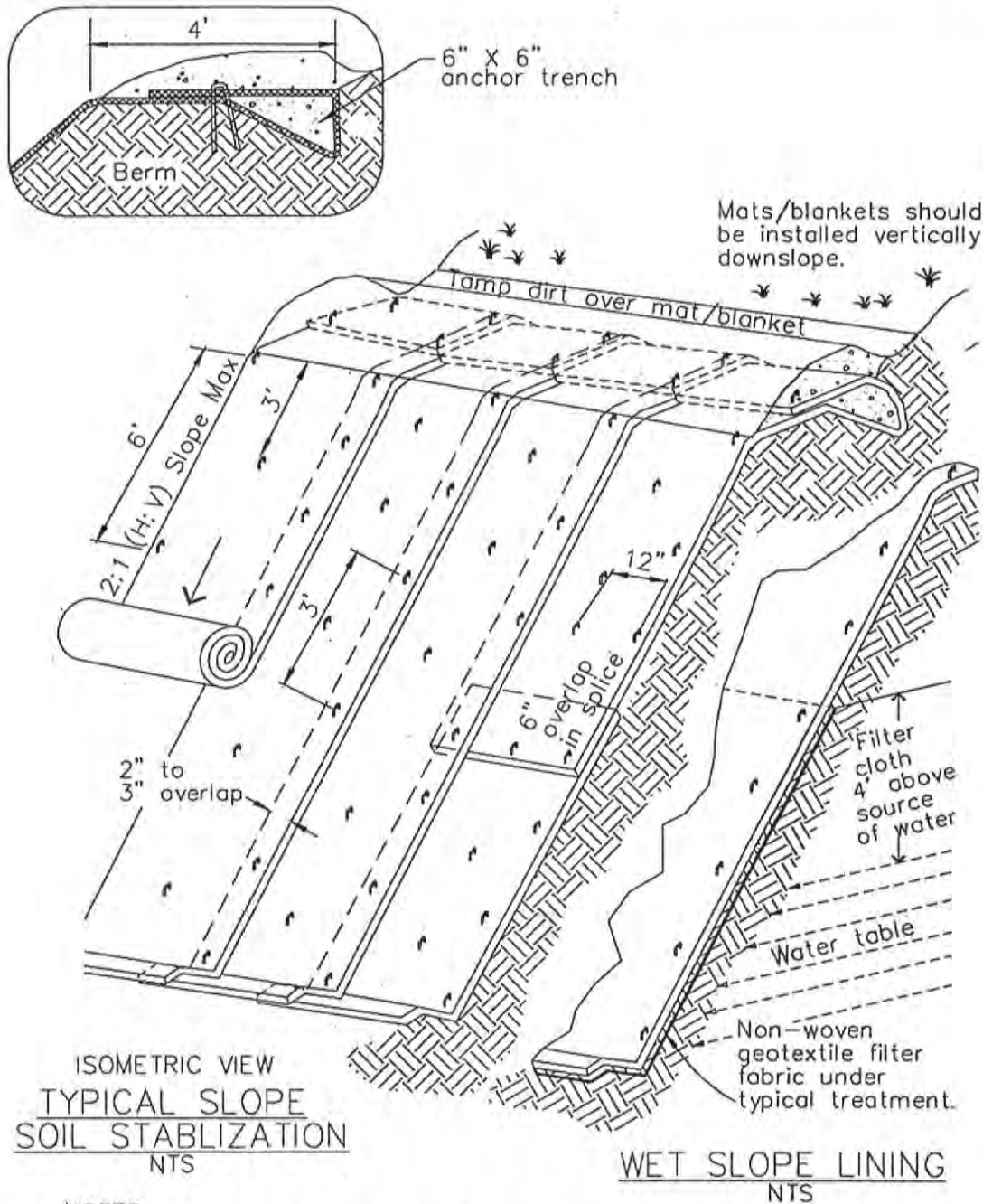
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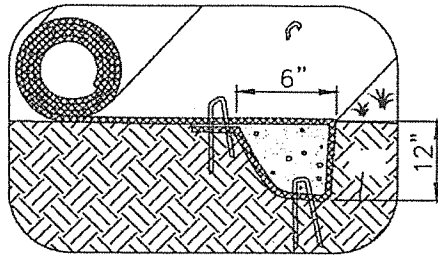
ISOMETRIC VIEW
TYPICAL SLOPE
SOIL STABILIZATION
 NTS

WET SLOPE LINING
 NTS

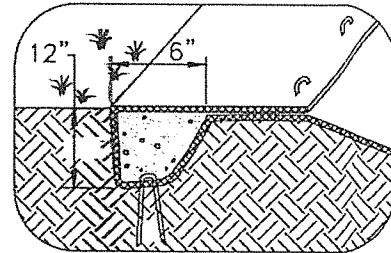
NOTES:

1. Slope surface shall be free of rocks, clods, sticks and grass. Mats/blankets shall have good soil contact.
2. Lay blankets loosely and stake or staple to maintain direct contact with the soil. Do not stretch.
3. Install per manufacturer's recommendations

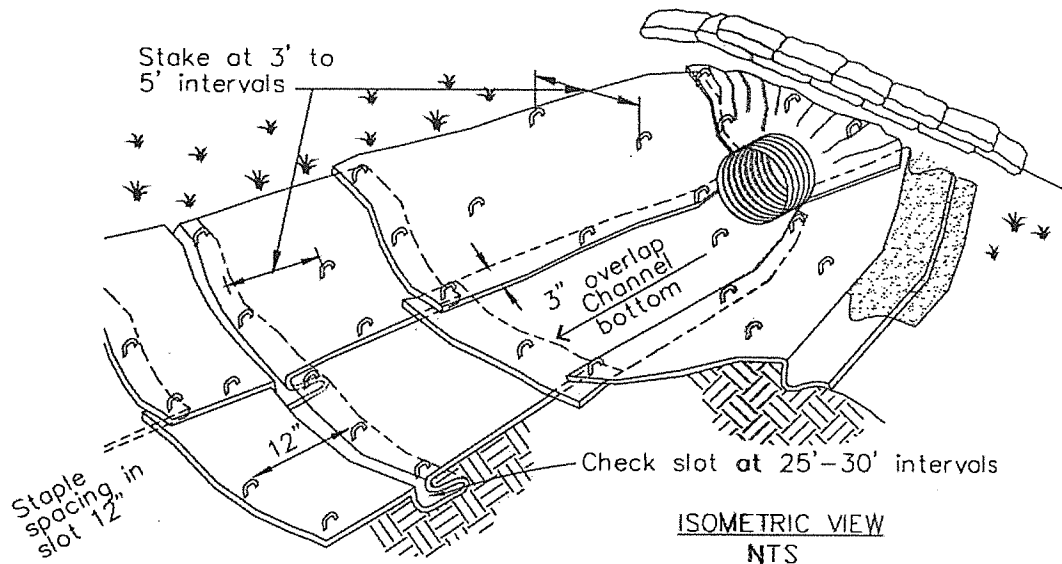
TYPICAL INSTALLATION DETAIL



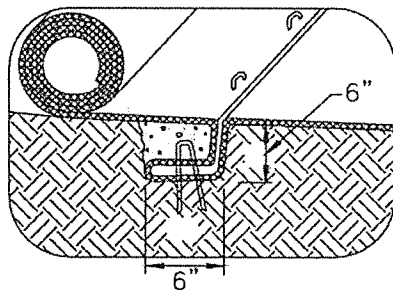
INITIAL CHANNEL ANCHOR TRENCH
NTS



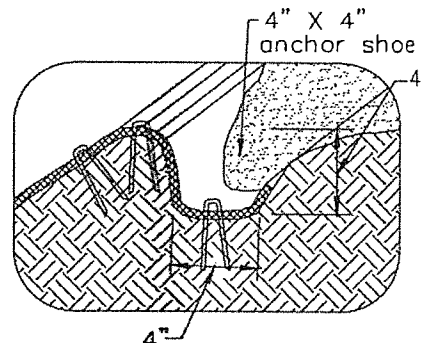
TERMINAL SLOPE AND CHANNEL ANCHOR TRENCH
NTS



ISOMETRIC VIEW
NTS



INTERMITTENT CHECK SLOT
NTS

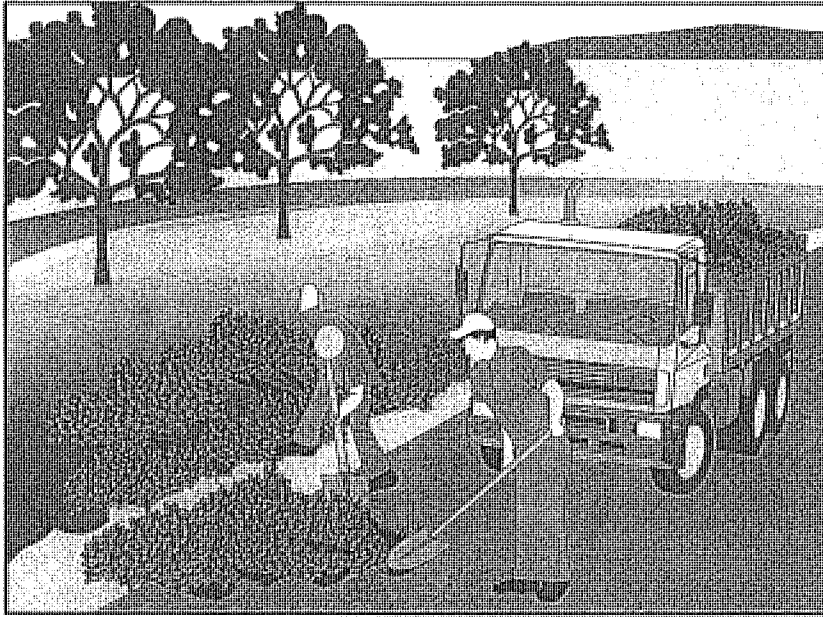


LONGITUDINAL ANCHOR TRENCH
NTS

NOTES:

1. Check slots to be constructed per manufacturers specifications.
2. Staking or stapling layout per manufacturers specifications.
3. Install per manufacturer's recommendations

TYPICAL INSTALLATION DETAIL



Description and Purpose

Wood mulching consists of applying a mixture of shredded wood mulch, bark or compost to disturbed soils. The primary function of wood mulching is to reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff.

Suitable Applications

Wood mulching is suitable for disturbed soil areas requiring temporary protection until permanent stabilization is established.

Limitations

- Not suitable for use on slopes steeper than 3:1 (H:V). Best suited to flat areas or gentle slopes or 5:1 (H:V) or flatter.
- Wood mulch and compost may introduce unwanted species.
- Not suitable for areas exposed to concentrated flows.
- May need to be removed prior to further earthwork.

Implementation

Mulch Selection

There are many types of mulches. Selection of the appropriate type of mulch should be based on the type of application, site conditions, and compatibility with planned or future uses.

Application Procedures

Prior to application, after existing vegetation has been

Categories

EC	Erosion Control	<input checked="" type="checkbox"/>
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	<input checked="" type="checkbox"/>
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

- Primary Objective
- Secondary Objective

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

- EC-3 Hydraulic Mulch
- EC-4 Hydroseeding
- EC-5 Soil Binders
- EC-6 Straw Mulch
- EC-7 Geotextiles and Mats



removed, roughen embankment and fill areas by rolling with a device such as a punching type roller or by track walking. The construction application procedures for mulches vary significantly depending upon the type of mulching method specified. Two methods are highlighted here:

- **Green Material:** This type of mulch is produced by the recycling of vegetation trimmings such as grass, shredded shrubs, and trees. Methods of application are generally by hand although pneumatic methods are available.
 - Green material can be used as a temporary ground cover with or without seeding.
 - The green material should be evenly distributed on site to a depth of not more than 2 in.
- **Shredded Wood:** Suitable for ground cover in ornamental or revegetated plantings.
 - Shredded wood/bark is conditionally suitable. See note under limitations.
 - Distribute by hand or use pneumatic methods.
 - Evenly distribute the mulch across the soil surface to a depth of 2 to 3 in.
- Avoid mulch placement onto roads, sidewalks, drainage channels, existing vegetation, etc.

Costs

Average annual cost for installation and maintenance (3-4 months useful life) is around \$4,000 per acre, but cost can increase if the source is not close to the project site.

Inspection and Maintenance

- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
- Areas where erosion is evident shall be repaired and BMPs reapplied as soon as possible. Care should be exercised to minimize the damage to protected areas while making repairs, as any area damaged will require reapplication of BMPs.
- Regardless of the mulching technique selected, the key consideration in inspection and maintenance is that the mulch needs to last long enough to achieve erosion control objectives. If the mulch is applied as a stand alone erosion control method over disturbed areas (without seed), it should last the length of time the site will remain barren or until final re-grading and revegetation.
- Where vegetation is not the ultimate cover, such as ornamental and landscape applications of bark or wood chips, inspection and maintenance should focus on longevity and integrity of the mulch.
- Reapply mulch when bare earth becomes visible.

References

Controlling Erosion of Construction Sites Agriculture Information Bulletin #347, U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service – SCS).

Guides for Erosion and Sediment Control in California, USDA Soils Conservation Service, January 1991.

Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

Proposed Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, Work Group Working Paper, USEPA, April 1992.

Sedimentation and Erosion Control, An Inventory of Current Practices Draft, U.S. EPA, April 1990.

Soil Erosion by Water Agricultural Information Bulletin #513, U.S. Department of Agriculture, Soil Conservation Service.

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.

Spill Prevention, Control & Cleanup SC-11

Description

Many activities that occur at an industrial or commercial site have the potential to cause accidental spills. Preparation for accidental spills, with proper training and reporting systems implemented, can minimize the discharge of pollutants to the environment.

Spills and leaks are one of the largest contributors of stormwater pollutants. Spill prevention and control plans are applicable to any site at which hazardous materials are stored or used. An effective plan should have spill prevention and response procedures that identify hazardous material storage areas, specify material handling procedures, describe spill response procedures, and provide locations of spill clean-up equipment and materials. The plan should take steps to identify and characterize potential spills, eliminate and reduce spill potential, respond to spills when they occur in an effort to prevent pollutants from entering the stormwater drainage system, and train personnel to prevent and control future spills. An adequate supply of spill clean-up materials must be maintained onsite.

Approach

General Pollution Prevention Protocols

- Develop procedures to prevent/mitigate spills to storm drain systems.
- Develop and standardize reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures.
- Establish procedures and/or controls to minimize spills and leaks. The procedures should address:
 - Description of the facility, owner and address, activities, chemicals, and quantities present;

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	
Nutrients	
Trash	
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Minimum BMPs Covered

 Good Housekeeping	
 Preventative Maintenance Spill and Leak	
 Prevention and Response	✓
 Material Handling & Waste Management	
 Erosion and Sediment Controls	
 Employee Training Program	✓
 Quality Assurance Record Keeping	✓



Spill Prevention, Control & Cleanup SC-11

- ✓ Facility map of the locations of industrial materials;
 - ✓ Notification and evacuation procedures;
 - ✓ Cleanup instructions;
 - ✓ Identification of responsible departments; and
 - ✓ Identify key spill response personnel.
- Recycle, reclaim, or reuse materials whenever possible. This will reduce the amount of process materials that are brought into the facility.



Spill and Leak Prevention and Response

Spill Prevention

- Develop procedures to prevent/mitigate spills to storm drain systems. Develop and standardize reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures.
- If illegal dumping is observed at the facility:
- ✓ Post “No Dumping” signs with a phone number for reporting illegal dumping and disposal. Signs should also indicate fines and penalties applicable for illegal dumping.
 - ✓ Landscaping and beautification efforts may also discourage illegal dumping.
 - ✓ Bright lighting and/or entrance barriers may also be needed to discourage illegal dumping.
- Store and contain liquid materials in such a manner that if the container is ruptured, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters, or groundwater.
- If the liquid is oil, gas, or other material that separates from and floats on water, install a spill control device (such as a tee section) in the catch basins that collect runoff from the storage tank area.



Preventative Maintenance

- Place drip pans or absorbent materials beneath all mounted taps, and at all potential drip and spill locations during filling and unloading of tanks. Any collected liquids or soiled absorbent materials must be reused/recycled or properly disposed.
- Store and maintain appropriate spill cleanup materials in a location known to all near the tank storage area; and ensure that employees are familiar with the site’s spill control plan and/or proper spill cleanup procedures.

Spill Prevention, Control & Cleanup SC-11

- Sweep and clean the storage area monthly if it is paved, *do not hose down the area to a storm drain.*
- Check tanks (and any containment sumps) daily for leaks and spills. Replace tanks that are leaking, corroded, or otherwise deteriorating with tanks in good condition. Collect all spilled liquids and properly dispose of them.
- Label all containers according to their contents (e.g., solvent, gasoline).
- Label hazardous substances regarding the potential hazard (corrosive, radioactive, flammable, explosive, poisonous).
- Prominently display required labels on transported hazardous and toxic materials (per US DOT regulations).
- Identify key spill response personnel.

Spill Response

- Clean up leaks and spills immediately.
- Place a stockpile of spill cleanup materials where it will be readily accessible (e.g., near storage and maintenance areas).
- On paved surfaces, clean up spills with as little water as possible.
 - ✓ Use a rag for small spills, a damp mop for general cleanup, and absorbent material for larger spills.
 - ✓ If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste.
 - ✓ If possible use physical methods for the cleanup of dry chemicals (e.g., brooms, shovels, sweepers, or vacuums).
- Never hose down or bury dry material spills. Sweep up the material and dispose of properly.
- Chemical cleanups of material can be achieved with the use of adsorbents, gels, and foams. Use adsorbent materials on small spills rather than hosing down the spill. Remove the adsorbent materials promptly and dispose of properly.
- For larger spills, a private spill cleanup company or Hazmat team may be necessary.

Spill Prevention, Control & Cleanup SC-11

Reporting

- Report spills that pose an immediate threat to human health or the environment to the Regional Water Quality Control Board or local authority as location regulations dictate.
- Federal regulations require that any oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hour).
- Report spills to 911 for dispatch and clean-up assistance when needed. Do not contact fire agencies directly.
- Establish a system for tracking incidents. The system should be designed to identify the following:
 - ✓ Types and quantities (in some cases) of wastes;
 - ✓ Patterns in time of occurrence (time of day/night, month, or year);
 - ✓ Mode of dumping (abandoned containers, “midnight dumping” from moving vehicles, direct dumping of materials, accidents/spills);
 - ✓ Clean-up procedures; and
 - ✓ Responsible parties.



Employee Training Program

- Educate employees about spill prevention and cleanup.
- Well-trained employees can reduce human errors that lead to accidental releases or spills:
 - ✓ The employee should have the tools and knowledge to immediately begin cleaning up a spill should one occur; and
 - ✓ Employees should be familiar with the Spill Prevention Control and Countermeasure Plan.
- Employees should be educated about aboveground storage tank requirements. Employees responsible for aboveground storage tanks and liquid transfers should be thoroughly familiar with the Spill Prevention Control and Countermeasure Plan and the plan should be readily available.
- Train employees to recognize and report illegal dumping incidents.

Spill Prevention, Control & Cleanup SC-11

Other Considerations (Limitations and Regulations)

- State regulations exist for facilities with a storage capacity of 10,000 gallons or more of petroleum to prepare a Spill Prevention Control and Countermeasure (SPCC) Plan (Health & Safety Code Chapter 6.67).
- State regulations also exist for storage of hazardous materials (Health & Safety Code Chapter 6.95), including the preparation of area and business plans for emergency response to the releases or threatened releases.
- Consider requiring smaller secondary containment areas (less than 200 sq. ft.) to be connected to the sanitary sewer, prohibiting any hard connections to the storm drain.

Requirements

Costs (including capital and operation & maintenance)

- Will vary depending on the size of the facility and the necessary controls.
- Prevention of leaks and spills is inexpensive. Treatment and/or disposal of contaminated soil or water can be quite expensive.

Maintenance (including administrative and staffing)

- Develop spill prevention and control plan, provide and document training, conduct inspections of material storage areas, and supply spill kits.
- Extra time is needed to properly handle and dispose of spills, which results in increased labor costs.

Supplemental Information

Further Detail of the BMP

Reporting

Record keeping and internal reporting represent good operating practices because they can increase the efficiency of the facility and the effectiveness of BMPs. A good record keeping system helps the facility minimize incident recurrence, correctly respond with appropriate cleanup activities, and comply with legal requirements. A record keeping and reporting system should be set up for documenting spills, leaks, and other discharges, including discharges of hazardous substances in reportable quantities. Incident records describe the quality and quantity of non-stormwater discharges to the storm sewer. These records should contain the following information:

- Date and time of the incident;
- Weather conditions;
- Duration of the spill/leak/discharge;

Spill Prevention, Control & Cleanup SC-11

- Cause of the spill/leak/discharge;
- Response procedures implemented;
- Persons notified; and
- Environmental problems associated with the spill/leak/discharge.

Separate record keeping systems should be established to document housekeeping and preventive maintenance inspections, and training activities. All housekeeping and preventive maintenance inspections should be documented. Inspection documentation should contain the following information:

- Date and time the inspection was performed;
- Name of the inspector;
- Items inspected;
- Problems noted;
- Corrective action required; and
- Date corrective action was taken.

Other means to document and record inspection results are field notes, timed and dated photographs, videotapes, and drawings and maps.

Aboveground Tank Leak and Spill Control

Accidental releases of materials from aboveground liquid storage tanks present the potential for contaminating stormwater with many different pollutants. Materials spilled, leaked, or lost from tanks may accumulate in soils or on impervious surfaces and be carried away by stormwater runoff.

The most common causes of unintentional releases are:

- Installation problems;
- Failure of piping systems (pipes, pumps, flanges, couplings, hoses, and valves);
- External corrosion and structural failure;
- Spills and overfills due to operator error; and
- Leaks during pumping of liquids or gases from truck or rail car to a storage tank or vice versa.

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Storage of reactive, ignitable, or flammable liquids should comply with the Uniform Fire Code and the National Electric Code. Practices listed below should be employed to enhance the code requirements:

- Tanks should be placed in a designated area.
- Tanks located in areas where firearms are discharged should be encapsulated in concrete or the equivalent.
- Designated areas should be impervious and paved with Portland cement concrete, free of cracks and gaps, in order to contain leaks and spills.
- Liquid materials should be stored in UL approved double walled tanks or surrounded by a curb or dike to provide the volume to contain 10 percent of the volume of all of the containers or 110 percent of the volume of the largest container, whichever is greater. The area inside the curb should slope to a drain.
- For used oil or dangerous waste, a dead-end sump should be installed in the drain.
- All other liquids should be drained to the sanitary sewer if available. The drain must have a positive control such as a lock, valve, or plug to prevent release of contaminated liquids.
- Accumulated stormwater in petroleum storage areas should be passed through an oil/water separator.

Maintenance is critical to preventing leaks and spills. Conduct routine inspections and:

- Check for external corrosion and structural failure.
- Check for spills and overfills due to operator error.
- Check for failure of piping system (pipes, pumps, flanges, coupling, hoses, and valves).
- Check for leaks or spills during pumping of liquids or gases from truck or rail car to a storage facility or vice versa.
- Visually inspect new tank or container installation for loose fittings, poor welding, and improper or poorly fitted gaskets.
- Inspect tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.
- Frequently relocate accumulated stormwater during the wet season.

Spill Prevention, Control & Cleanup SC-11

- Periodically conduct integrity testing by a qualified professional.

Vehicle Leak and Spill Control

Major spills on roadways and other public areas are generally handled by highly trained Hazmat teams from local fire departments or environmental health departments. The measures listed below pertain to leaks and smaller spills at vehicle maintenance shops.

In addition to implementing the spill prevention, control, and clean up practices above, use the following measures related to specific activities:

Vehicle and Equipment Maintenance

- Perform all vehicle fluid removal or changing inside or under cover to prevent the run-on of stormwater and the runoff of spills.
- Regularly inspect vehicles and equipment for leaks, and repair immediately.
- Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- Immediately drain all fluids from wrecked vehicles.
- Store wrecked vehicles or damaged equipment under cover.
- Place drip pans or absorbent materials under heavy equipment when not in use.
- Use absorbent materials on small spills rather than hosing down the spill.
- Remove the adsorbent materials promptly and dispose of properly.
- Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
- Oil filters disposed of in trashcans or dumpsters can leak oil and contaminate stormwater. Place the oil filter in a funnel over a waste oil recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask your oil supplier or recycler about recycling oil filters.
- Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries, even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Spill Prevention, Control & Cleanup SC-11

Vehicle and Equipment Fueling

- Design the fueling area to prevent the run-on of stormwater and the runoff of spills:

- Cover fueling area if possible.

- Use a perimeter drain or slope pavement inward with drainage to a sump.

- Pave fueling area with concrete rather than asphalt.

- If dead-end sump is not used to collect spills, install an oil/water separator.
- Install vapor recovery nozzles to help control drips as well as air pollution.
- Discourage “topping-off” of fuel tanks.
- Use secondary containment when transferring fuel from the tank truck to the fuel tank.
- Use absorbent materials on small spills and general cleaning rather than hosing down the area. Remove the absorbent materials promptly.
- Carry out all Federal and State requirements regarding underground storage tanks, or install above ground tanks.
- Do not use mobile fueling of mobile industrial equipment around the facility; rather, transport the equipment to designated fueling areas.
- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Train employees in proper fueling and cleanup procedures.

Industrial Spill Prevention Response

For the purposes of developing a spill prevention and response program to meet the stormwater regulations, facility managers should use information provided in this fact sheet and the spill prevention/response portions of the fact sheets in this handbook, for specific activities.

The program should:

- Integrate with existing emergency response/hazardous materials programs (e.g., Fire Department).
- Develop procedures to prevent/mitigate spills to storm drain systems.
- Identify responsible departments.

Spill Prevention, Control & Cleanup SC-11

- Develop and standardize reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures.
- Address spills at municipal facilities, as well as public areas.
- Provide training concerning spill prevention, response and cleanup to all appropriate personnel.

References and Resources

California's Nonpoint Source Program Plan. <http://www.swrcb.ca.gov/nps/index.html>.

Clark County Storm Water Pollution Control Manual. Available online at:
<http://www.co.clark.wa.us/pubworks/bmpman.pdf>.

King County Storm Water Pollution Control Manual. Available online at:
<http://dnr.metrokc.gov/wlr/dss/spcm.htm>.

Orange County Stormwater Program, Best Management Practices for Industrial/Commercial Business Activities. Available online at:
<http://ocwatersheds.com/documents/bmp/industrialcommercialbusinessesactivities>

Santa Clara Valley Urban Runoff Pollution Prevention Program.
<http://www.scvurppp.org>.

The Stormwater Managers Resource Center. <http://www.stormwatercenter.net/>.

Vehicle and Equipment Fueling SC-20

Description

Spills and leaks that occur during vehicle and equipment fueling can contribute hydrocarbons, oil and grease, as well as heavy metals, to stormwater runoff. Implementing the following management practices can help prevent fuel spills and leaks.

Approach

- Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

General Pollution Prevention Protocols

- Use properly maintained off-site fueling stations whenever possible. These businesses are better equipped to handle fuel and spills properly.
- Focus pollution prevention activities on containment of spills and leaks, most of which may occur during liquid transfers.



Good Housekeeping

- "Spot clean" leaks and drips routinely. Leaks are not cleaned up until the absorbent is picked up and disposed of properly.
- Manage materials and waste properly (see Material Handling and Waste Management) to reduce adverse impacts on stormwater quality.
- Paint signs on storm drain inlets to indicate that they are not to receive liquid or solid wastes.
- Post signs at sinks to remind employees not to pour wastes down drains.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Minimum BMPs Covered

Good Housekeeping	✓
Preventative Maintenance	✓
Spill and Leak Prevention and Response	✓
Material Handling & Waste Management	✓
Erosion and Sediment Controls	
Employee Training Program	✓
Quality Assurance Record Keeping	✓



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- Clean yard storm drain inlets(s) regularly and especially after large storms.
- Do not pour materials down storm drains.
- Build a shed or temporary roof over fueling area to limit exposure to rain.
- Post signs to remind employees and customers not to top off the fuel tank when filling and signs that ban customers and employees from changing engine oil or other fluids at that location.
- Report leaking vehicles to fleet maintenance.
- Ensure the following safeguards are in place:
 - ✓ Overflow protection devices on tank systems to warn the operator or automatically shut down transfer pumps when the tank reaches full capacity.
 - ✓ Protective guards around tanks and piping to prevent vehicle or forklift damage.
 - ✓ Clear tagging or labeling of all valves to reduce human error.
 - ✓ Emergency shut-off and emergency phone number.



Preventative Maintenance

Fuel Dispensing Areas

- Inspect vehicles and equipment for leaks regularly and repair immediately.
- Sweep the fueling area weekly, if it is paved, to collect loose particles, and wipe up spills with rags and other absorbent material immediately. Do not hose down the area to a storm drain.
- Fit underground storage tanks with spill containment and overfill prevention systems meeting the requirements of Section 2635(b) of Title 23 of the California Code of Regulations.
- Fit fuel dispensing nozzles with "hold-open latches" (automatic shutoffs) except where prohibited by local fire departments.
- Post signs at the fuel dispenser or fuel island warning vehicle owners/operators against "topping off" of vehicle fuel tanks.
- Design fueling area to prevent stormwater runoff and spills. Use a perimeter drain or slope pavement inward with drainage to sump; regularly remove materials accumulated in sump.
- Pave area with concrete rather than asphalt.

Vehicle and Equipment Fueling SC-20

- Cover fueling area with an overhanging roof structure or canopy so that precipitation cannot come in contact with the fueling area. Where covering is not feasible and the fuel island is surrounded by pavement, apply a suitable sealant that protects the asphalt from spilled fuels.
- Install vapor recovery nozzles to help control drips as well as air pollution.
- Use secondary containment when transferring fuel from the tank truck to the fuel tank. Cover storm drains in the vicinity during transfer.

Air/Water Supply Area

- Minimize the possibility of stormwater pollution from air/water supply areas by doing at least one of the following:
 - ✓ Spot clean leaks and drips routinely to prevent runoff of spillage.
 - ✓ Grade and pave the air/water supply area to prevent run-on of stormwater.
 - ✓ Install a roof over the air/water supply area.
 - ✓ Install a low containment berm around the air/water supply area.

Inspection

- Aboveground Tank Leak and Spill Control:
 - ✓ Check for external corrosion and structural failure.
 - ✓ Check for spills and overfills due to operator error.
 - ✓ Check for failure of piping system.
 - ✓ Check for leaks or spills during pumping of liquids or gases from truck or rail car to a storage facility or vice versa.
 - ✓ Visually inspect new tank or container installation for loose fittings, poor welding, and improper or poorly fitted gaskets.
 - ✓ Inspect tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.
 - ✓ Conduct integrity testing periodically by a qualified professional.
- Inspect and clean, if necessary, storm drain inlets and catch basins within the facility boundary before October 1 each year.

Vehicle and Equipment Fueling SC-20



Spill Response and Prevention Procedures

- Keep your spill prevention and control plan up-to-date.
- Maintain an adequate stockpile of spill cleanup materials at locations where it will be readily accessible.
- Clean leaks, drips, and other spills with as little water as possible.
 - ✓ Use rags for small spills,
 - ✓ Use a damp mop for general cleanup,
 - ✓ Use dry absorbent material for larger spills.
- Use the following three-step method for cleaning floors:
 - ✓ Clean spills with rags or other absorbent materials
 - ✓ Sweep floor using dry absorbent material
 - ✓ Mop the floor. Mop water may be discharged to the sanitary sewer via a toilet or sink.
- Remove the adsorbent materials promptly and dispose of properly when using absorbent materials on small spills.
- Store portable absorbent booms (long flexible shafts or barriers made of absorbent material) in unbermed fueling areas.
- Report spills promptly.
- If a dead-end sump is not used to collect spills, install an oil/water separator.



Material Handling and Waste Management

- Do not pour liquid wastes into floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections.
- Do not put used or leftover cleaning solutions, solvents, and automotive fluids in the sanitary sewer.
- Collect leaking or dripping fluids in drip pans or containers. Fluids are easier to recycle if kept separate.
- Promptly transfer used fluids to the proper waste or recycling drums. Do not leave drip pans or other open containers lying around.

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- Minimize the possibility of stormwater pollution from outside waste receptacles by doing at least one of the following:
 - ✓ Use only watertight waste receptacle(s) and keep the lid(s) closed.
 - ✓ Grade and pave the waste receptacle area to prevent run-on of stormwater.
 - ✓ Install a roof over the waste receptacle area.
 - ✓ Install a low containment berm around the waste receptacle area.
 - ✓ Use and maintain drip pans under waste receptacles.
- Post “no littering” signs.



Employee Training Program

- Educate employees about facility-wide pollution prevention measures and goals.
- Train designated employees (e.g., those involved with the handling or management of fuels) on proper fueling and cleanup procedures.
- Train designated employees upon hiring and annually thereafter on proper methods for handling and disposing of waste. Make sure that all employees understand stormwater discharge prohibitions, wastewater discharge requirements, and these best management practices.
- Ensure that employees are familiar with the site’s spill control plan and/or proper spill cleanup procedures.
- Use a training log or similar method to document training. The training log should include entries for:
 - ✓ Training topic,
 - ✓ Trainer,
 - ✓ Attendees,
 - ✓ Frequency,
 - ✓ Comments,
 - ✓ Target date for completion of training, and
 - ✓ Date completed.

Vehicle and Equipment Fueling SC-20



Quality Assurance and Record Keeping

- Keep accurate maintenance logs that document minimum BMP activities performed for vehicle and equipment fueling, quantities of materials removed, and improvement actions.
- Keep accurate logs of spill response actions that document what types of liquids were spilled, how it was cleaned up, and how the waste was disposed.
- Establish procedures to complete logs and file them in the central office.

Potential Capital Facility Costs and Operation & Maintenance Requirements

Facilities

- The retrofitting of existing fueling areas to minimize stormwater exposure or spill runoff can be expensive. Good design must occur during the initial installation. Extruded curb along the “upstream” side of the fueling area to prevent stormwater run-on is of modest cost.
- Capital investments will likely be required at some sites if adequate cover and containment facilities do not exist and can vary significantly depending upon site conditions.

Maintenance

- Most of the operations and maintenance activities associated with implementing this BMP are integrally linked to routine operations as previously described. Therefore additional O&M is not required.
- For facilities responsible for pre-treating their wastewater prior to discharging, the proper functioning of structural treatment system is an important maintenance consideration.
- Routine cleanout of sumps and oil/water separators is required for the devices to maintain their effectiveness, usually at least once a month. During periods of heavy rainfall, cleanout is required more often to ensure pollutants are not washed through the system. Sediment removal is also required on a regular basis to keep the device working efficiently.

Supplemental Information

Designing New Installations

The elements listed below should be included in the design and construction of new or substantially remodeled facilities.

Fuel Dispensing Areas

- Fuel dispensing areas must be paved with Portland cement concrete (or, equivalent smooth impervious surface), with a 2 to 4% slope to prevent ponding, and must be

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separated from the rest of the site by a grade break that prevents run-on of stormwater to the extent practicable. The fuel dispensing area is defined as extending 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus 1 foot, whichever is less. The paving around the fuel dispensing area may exceed the minimum dimensions of the "fuel dispensing area" stated above.

- The fuel dispensing area must be covered, and the cover's minimum dimensions must be equal to or greater than the area within the grade break or the fuel dispensing area, as defined above. The cover must not drain onto the fuel dispensing area.
- If necessary, install and maintain an oil control device in the appropriate catch basin(s) to treat runoff from the fueling area.

Outdoor Waste Receptacle Area

- Grade and pave the outdoor waste receptacle area to prevent run-on of stormwater to the extent practicable.

Air/Water Supply Area

- Grade and pave the air/water supply area to prevent run-on of stormwater to the extent practicable.

Designated Fueling Area

- If your facility has large numbers of mobile equipment working throughout the site and you currently fuel them with a mobile fuel truck, consider establishing a designated fueling area. With the exception of tracked equipment such as bulldozers and perhaps small forklifts, most vehicles should be able to travel to a designated area with little lost time. Place temporary "caps" over nearby catch basins or manhole covers so that if a spill occurs it is prevented from entering the storm drain.

Examples

The Spill Prevention Control and Countermeasure (SPCC) Plan, which is required by law for some facilities, is an effective program to reduce the number of accidental spills and minimize contamination of stormwater runoff.

The City of Palo Alto has an effective program for commercial vehicle service facilities. Many of the program's elements, including specific BMP guidance and lists of equipment suppliers, are also applicable to industrial facilities.

References and Resources

Orange County Stormwater Program, Best Management Practices for Industrial/Commercial Business Activities. Available online at:
<http://ocwatersheds.com/documents/bmp/industrialcommercialbusinessesactivities>.

Vehicle and Equipment Fueling SC-20

Oregon Department of Environmental Quality, 2013. *Industrial Stormwater Best Management Practices Manual- BMP 8 Vehicle, Pavement and Building Washing*. Available online at: <http://www.deq.state.or.us/wq/wqpermit/docs/IndBMP021413.pdf>

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Vehicle and Equipment Cleaning SC-21

Description

Wash water from vehicle and equipment cleaning activities performed outdoors or in areas where wash water flows onto the ground can contribute toxic hydrocarbons and other organic compounds, oils and greases, nutrients, phosphates, heavy metals, and suspended solids to stormwater runoff. Use of the procedures outlined below can prevent or reduce the discharge of pollutants to stormwater during vehicle and equipment cleaning.

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives

General Pollution Prevention Protocols

- If possible, use properly maintained off-site commercial washing and steam cleaning businesses whenever possible. These businesses are better equipped to handle and properly dispose of the wash waters.
- Use dry cleaning methods to remove debris and sweep area; avoid washing with water when possible.
- Good housekeeping practices can minimize the risk of contamination from wash water discharges.
- Use biodegradable, phosphate-free detergents for washing vehicles as appropriate
- Emphasize the connection between the storm drain system and runoff, help reinforce that vehicle and equipment washing activities affect local water quality through storm drain stenciling programs.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Minimum BMPs Addressed

 Good Housekeeping	✓
 Preventative Maintenance	✓
 Spill and Leak Prevention and Response	✓
 Material Handling & Waste Management	✓
 Erosion and Sediment Controls	
 Employee Training Program	✓
 Quality Assurance Record Keeping	✓



Vehicle and Equipment Cleaning SC-21

- Map on-site storm drain locations to avoid discharges to the storm drain system.
- Designate specific wash area with clarifier or place wash areas away from storm drain connections.



Good Housekeeping

- Mark the area clearly as a wash area by:
 - ✓ Posting signs stating that only washing is allowed in wash area; and
 - ✓ Providing information on how washing is to be done.
- Provide trash containers in wash area.
- Have all vehicle and equipment washing done in areas designed to collect and hold the wash and rinse water or effluent generated. Recycle, collect or treat wash water effluent prior to discharge to the sanitary sewer system.
- If washing/cleaning must occur on-site, consider washing vehicles and equipment inside the building or on an impervious surface to control the targeted constituents by directing them to the sanitary sewer.
- If washing must occur on-site and outdoor:
 - ✓ Use designated paved wash areas. This area must be covered or bermed to collect the wash water and graded to direct the wash water to a treatment or disposal facility.
 - ✓ Do not conduct oil changes and other engine maintenance in the designated washing area. Perform these activities in a place designated for oil change and maintenance activities.
 - ✓ Cover the wash area when not in use to prevent contact with rain water.
- Do not permit steam cleaning wash water to enter the storm drain system.
- If possible, conduct pressure and steam cleaning at appropriate off-site areas to avoid generating runoff with high pollutant concentrations.



Preventative Maintenance

- Install sumps or drain lines to collect wash water for treatment.
- Use hoses with nozzles that automatically turn off when left unattended.
- Perform routine inspections of drain lines, holding tanks, and hoses and repair leaks immediately.

Vehicle and Equipment Cleaning SC-21

- Perform routine inspection and maintenance of wash water recycling and treatment systems.



Spill Response and Prevention Procedures

- Keep the spill prevention and control plan up-to-date.
- Have an emergency plan, equipment, and trained personnel ready at all times to deal immediately with major spills.
- Collect all spilled liquids and properly dispose of them.
- Store and maintain appropriate spill cleanup materials in a location known to all near the designated wash area.



Material Handling and Waste Management

- Collect all wash water from vehicle and equipment cleaning operations. Consider treating and reusing or discharging wash waters to a sanitary sewer system.
- Large quantities of wash waters may require treatment at the facility. Treatment using a process treatment system (e.g., holding tank, filtration system, and related appurtenances) will require engineering and capital expenditures.
- Collect and treat small amounts of wash water at the facility and either recycle or discharge to the sanitary sewer system or collect and dispose of as an industrial waste.
- Discharge wash waters into sanitary sewer only after contacting local sewer authority to find out if pretreatment is required.



Employee Training Program

- Train employees on proper cleaning and wash water disposal procedures and conduct “refresher” courses on a regular basis.
- Train staff on proper maintenance measures for the wash area.
- Train employees and contractors on proper spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill should one occur.
- Use a training log or similar method to document training.



Quality Assurance and Record Keeping

- Keep accurate maintenance/inspection logs that document the minimum BMP activities performed for vehicle and equipment cleaning activities and improvement actions.

Vehicle and Equipment Cleaning SC-21

- Keep accurate logs of spill response actions that document what was spilled, how it was cleaned up, and how the waste was disposed.
- Establish procedures to complete logs and file them in the central office.

Other Facility-Specific Considerations

- Some municipalities may require pretreatment and monitoring of wash water discharges to the sanitary sewer.
- Steam cleaning can generate significant pollutant concentrations requiring that careful consideration be given to the environmental impacts and compliance issues related to the condensate wastewater generated.

Potential Limitations and Work-Arounds

Some facilities may have space constraints, limited staffing and time limitations that may preclude implementation of certain BMPs. Provided below are typical limitations and recommended “work-arounds”:

- Most car washing best management practices are inexpensive, and rely more on good housekeeping practices (where vehicles are washed, planning for the collection of wash water) than on expensive technology. However, the construction of a specialized area for vehicle washing can be expensive. Also, for facilities that cannot recycle their wash water, the cost of pre-treating wash water through either structural practices or planning for collection and hauling of contaminated water to sewage treatment plants can be cost-prohibitive.
- A potential work-around is to use properly maintained off-site commercial washing and steam cleaning businesses whenever possible.

Potential Capital Facility Costs and Operation & Maintenance Requirements

Facilities

- Many facilities will already have indoor covered areas where vehicle and equipment cleaning takes place and will require no additional capital expenditures for providing cover.
- Capital investments will be required at some sites if systems to collect and recycle/treat and properly discharge wash water are not in place. The cost associated with these investments will vary depending on the size of the washing facility and local regulations regarding effluent wash water.

Maintenance

- Perform wash and collection system inspections and repair.
- Sweep washing areas frequently to remove solid debris.

Vehicle and Equipment Cleaning SC-21

- Repair berms and dikes as necessary.
- Inspect and maintain sumps, oil/water separators, and on-site treatment/recycling units.

Supplemental Information

Designated Cleaning Areas

- Washing operations outside should be conducted in a designated wash area having the following characteristics:
 - ✓ Paved with Portland cement concrete
 - ✓ Covered and bermed to prevent contact with stormwater and contain wash water
 - ✓ Sloped for wash water collections
 - ✓ Drainage system for wash water to the sanitary or recycle treatment process waste sewer, or to a dead-end sump equipped with an oil/water separator if necessary.

References and Resources

Orange County Stormwater Program, Best Management Practices for Industrial/Commercial Business Activities. Available online at:

<http://ocwatersheds.com/documents/bmp/industrialcommercialbusinessesactivities>.

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Available online at: <https://fortress.wa.gov/ecy/publications/publications/95056.pdf>.

Vehicle and Equipment Repair SC-22

Description

Vehicle or equipment maintenance and repair are potentially significant sources of stormwater pollution, due to use of harmful materials and wastes during maintenance and repair processes. Engine repair and service (e.g., parts cleaning), replacement of fluids (e.g., oil change), and outdoor equipment storage and parking (leaking vehicles) can impact water quality if stormwater runoff from areas with these activities becomes polluted by a variety of contaminants. Implementation of the following activities must be done where applicable to prevent or reduce the discharge of pollutants to stormwater from vehicle and equipment maintenance and repair activities.

Approach

The BMP approach is to reduce the potential for pollutant discharges through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives. General pollution prevention protocols are presented followed by applicable minimum BMPs as required by the Industrial General Permit.

General Pollution Prevention Protocols

- Designate a vehicle maintenance area designed to prevent stormwater pollution.
- Minimize contact of stormwater with outside operations through berming and appropriate drainage routing.
- Keep accurate maintenance logs to evaluate materials removed and improvements made.
- Switch to non-toxic chemicals for maintenance when possible.
- Choose cleaning agents that can be recycled.
- Use drop cloths and drip pans.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment

Nutrients

Trash

Metals ✓

Bacteria

Oil and Grease ✓

Organics ✓

Minimum BMPs Covered

	Good Housekeeping	✓
	Preventative Maintenance	✓
	Spill and Leak Prevention and Response	✓
	Material Handling & Waste Management	✓
	Erosion and Sediment Controls	
	Employee Training Program	✓
	Quality Assurance Record Keeping	✓



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- Minimize use of solvents. Clean parts without using solvents whenever possible, or use water-based solvents for cleaning.
- Recycle used motor oil, diesel oil, and other vehicle fluids and parts whenever possible.

Operational Protocols

General

- Move maintenance and repair activities indoors whenever feasible.
- Place curbs around the immediate boundaries of process equipment.



Good Housekeeping

- Store idle equipment under cover
- Use a vehicle maintenance area designed to prevent stormwater pollution - minimize contact of stormwater with outside operations through berming and appropriate drainage routing.
- Avoid hosing down your work areas. If work areas are washed, collect and direct wash water to sanitary sewer. Use dry sweeping if possible.
- Paint signs on storm drain inlets to indicate that they are not to receive liquid or solid wastes.
- Post signs at sinks to remind employees not to pour wastes down drains.
- Clean yard storm drain inlets(s) regularly and especially after large storms.
- Do not pour materials down storm drains.
- Cover the work area to limit exposure to rain.
- Place curbs around the immediate boundaries of process equipment.
- Build a shed or temporary roof over areas where parked cars await repair or salvage, especially wrecked vehicles. Build a roof over vehicles kept for parts.



Preventive Maintenance and Repair Activities

- Provide a designated area for vehicle maintenance.
- Inspect vehicles and equipment for leaks regularly and repair immediately.
- Make sure incoming vehicles are checked for leaking oil and fluids. Do not allow leaking vehicles or equipment on-site without correcting the source of the leak and cleaning up any spill.
- Keep equipment clean; don't allow excessive build-up of oil and grease.

Vehicle and Equipment Repair SC-22

- Perform all vehicle fluid removal or changing inside or under cover if possible to prevent the run-on of stormwater and the runoff of spills.
- Use a tarp, ground cloth, or drip pans beneath the vehicle or equipment to capture all spills and drips if temporary work is being conducted outside. Collected drips and spills must be disposed, reused, or recycled properly.
- It is important to sweep the maintenance area weekly, if it is paved, to collect loose particles, and wipe up spills with rags and other absorbent material immediately. Do not hose down the area to a storm drain.
- Establish standard procedures to prevent spillage/leakage of fluids including:
 - ✓ Keep a drip pan under the vehicle while you unclip hoses, unscrew filters, or remove other parts. Use a drip pan under any vehicle that might leak while working on it to keep splatters or drips off the shop floor.
 - ✓ Promptly transfer used fluids to the proper waste or recycling drums. Do not leave drip pans or other open containers lying around.
 - ✓ Keep drip pans or containers under vehicles or equipment that may drip during repairs.
 - ✓ Do not change motor oil or perform equipment maintenance in non-appropriate areas.
- Drain oil and other fluids first if the vehicle or equipment is to be stored outdoors. Elevate and tarp stored vehicles and equipment.
- Monitor parked vehicles closely for leaks. Pans should be placed under any leaks to collect the fluids for proper disposal or recycling.
- Mechanics should clean vehicle parts without using liquid cleaners wherever possible to reduce waste.
- Steam cleaning and pressure washing may be used instead of solvent parts cleaning. The wastewater generated from steam cleaning must be discharged to an on-site oil water separator that is connected to a sanitary sewer or blind sump. Non-caustic detergents should be used instead of caustic cleaning agents, detergent-based or water-based cleaning systems in place of organic solvent degreasers, and non-chlorinated solvent in place of chlorinated organic solvents for parts cleaning. Refer to SC21 for more information on steam cleaning.
- Fifth-wheel bearings on trucks require routine lubrication. Typically chassis grease is applied to the fifth-wheel bearing at rates that result in grease dripping off of the bearing into the environment. To address this concern the following options are available:
 - ✓ Use specialized lubricants with good adhesion (e.g., stay in place) properties. Carefully follow manufacturer's label regarding the use of adhesive lubricant for

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truck fifth-wheels. Typically this means applying no more than 8 oz. of grease. No visible extrusion of lubricant from the fifth-wheel bearing when truck and trailer are connected should be present.

- ✓ Use on-board truck or on-board trailer automatic lubrication systems. If these systems apply lube thinner than National Grease Lubrication Institute #2, equipment for collection of used lubricant is needed to prevent excess lubricant from dripping off the truck.
- ✓ Use plastic or Teflon plates instead of grease or other lubricants. Carefully follow manufacturer's instructions for installation and operation.
- Use one of the following for lubricating vehicle-trailer coupling:
 - ✓ Specialized adhesive lubricants;
 - ✓ Grease-free fifth wheel slip plates (e.g., plastic or Teflon coatings); and
 - ✓ On-Board automatic lubricating systems.



Spill and Leak Prevention and Response Procedures

- Keep your spill prevention and control plan up-to-date.
- Place an adequate stockpile of spill cleanup materials where it will be readily accessible.
- Clean leaks, drips, and other spills with as little water as possible. Use rags for small spills, a damp mop for general cleanup, and dry absorbent material for larger spills. Use the following three-step method for cleaning floors:
 - ✓ Clean spills with rags or other absorbent materials;
 - ✓ Sweep floor using dry absorbent material; and
 - ✓ Mop the floor.

Mop water may be discharged to the sanitary sewer via a toilet or sink.

- Remove the adsorbent materials promptly and dispose of properly when using adsorbent materials on small spills.



Material Handling and Waste Management

- Designate a special area to drain and replace motor oil, coolant, and other fluids, where there are no connections to the storm drain or the sanitary sewer, and drips and spills can be easily cleaned up.
- Drain all fluids immediately from wrecked vehicles. Ensure that the drain pan or drip pan is large enough to contain drained fluids (e.g., larger pans are needed to contain antifreeze, which may gush from some vehicles).

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- Do not pour liquid waste to floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections.
- Do not put used or leftover cleaning solutions, solvents, and automotive fluids and in the sanitary sewer.
- Collect leaking or dripping fluids in drip pans or containers. Fluids are easier to recycle if kept separate.
- Promptly transfer used fluids to the proper waste or recycling drums. Do not leave drip pans or other open containers lying around.
- Place oil filter in a funnel over a waste oil recycling drum to drain excess oil before disposal since municipalities prohibit or discourage disposal of these items in solid waste facilities.
- Oil filters can also be recycled. Ask your oil supplier or recycler about recycling oil filters. Oil filters disposed of in trashcans or dumpsters can leak oil and contaminate stormwater.
- Store cracked batteries in a non-leaking secondary container and dispose of properly at recycling or household hazardous waste facilities.



Employee Training Program

- Train employees and contractors in the proper handling and disposal of engine fluids and waste materials.
- Employees should have the tools and knowledge to immediately begin cleaning up a spill should one occur.
- Conduct annual training to ensure that employees are familiar with the facility's spill control plan and/or proper spill cleanup procedures (You can use reusable cloth rags to clean up small drips and spills instead of disposables; these can be washed by a permitted industrial laundry. Do not clean them at home or at a coin-operated laundry business).
- Use a training log or similar method to document training.



Quality Assurance and Recordkeeping

- Keep accurate maintenance logs to evaluate materials removed and improvements made.
- Establish procedures to collect and file maintenance logs in the central office.

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Other Facility-Specific Considerations

Parts Cleaning

Vehicle and equipment maintenance facilities often must clean parts as a part of day-to-day operations. The following activities should be considered:

- Clean vehicle parts without using liquid cleaners wherever possible to reduce waste.
- Steam cleaning and pressure washing may be used instead of solvent parts cleaning.
- Wastewater generated from steam cleaning must be discharged to an on-site oil water separator that is connected to a sanitary sewer or blind sump.
- Use non-caustic detergents instead of caustic cleaning agents, detergent-based or water-based cleaning systems in place of organic solvent degreasers, and non-chlorinated solvent in place of chlorinated organic solvents for parts cleaning. Refer to SC21 for more information on steam cleaning.

Potential Limitations and Work-Arounds

- Some facilities may have space constraints and time limitations that may preclude all work from being conducted indoors.
 - ✓ Designate specific areas for outdoor activities.
 - ✓ Require employees to understand and follow preventive maintenance and spill and leak prevention BMPs.
- It may not be possible to contain and clean up spills from vehicles/equipment brought on-site after working hours.
 - ✓ Provide a designated area for afterhours deliveries.
 - ✓ Install spill kits.
- Drain pans (usually 1 ft. x 1 ft.) are generally too small to contain antifreeze
 - ✓ Purchase or fabricate large drip pans (3 ft. x 3 ft.) with sufficient volume to contain expected quantities of liquids based on equipment/vehicle specifications.
- Dry floor cleaning methods may not be sufficient for some spills.
 - ✓ Use three-step method instead.
- Identification of engine leaks may require some use of solvents.
 - ✓ Minimize the use of solvents and use drip pans to collect spills and leaks.
- Prices for recycled materials and fluids may be higher than those of non-recycled materials.

Vehicle and Equipment Repair SC-22

- Some facilities may be limited by a lack of providers of recycled materials, and by the absence of businesses to provide services such as hazardous waste removal, structural treatment practice maintenance, or solvent equipment and solvent recycling.

Potential Facilities and Maintenance Requirements

Facilities Requirements

- For facilities that already have covered areas where maintenance takes place, have berms or other means to retain spills and leaks, and/ have other appropriate constructed systems for containment, there may not need to be any significant new capital investment. Capital costs will likely be required at some sites if adequate cover and containment facilities do not exist and can vary significantly depending upon site conditions.



Maintenance Requirements

- Most of the operations and maintenance activity associated with implementing this BMP are integrally linked to routine operations as previously described. Therefore, significant additional operations and maintenance efforts are not likely to be required.
- For facilities responsible for pre-treating their wastewater prior to discharging, the proper functioning of structural treatment system is an important maintenance consideration. Routine cleanout of oil and grease is required for the devices to maintain their effectiveness, usually at least once a month. During periods of heavy rainfall, cleanout is required more often to ensure pollutants are not washed through the trap. Sediment removal is also required on a regular basis to keep the device working efficiently.
- It is important to sweep the maintenance area weekly, if it is paved, to collect loose particles, and wipe up spills with rags and other absorbent material immediately. Do not hose down the area to a storm drain.

Supplemental Information

Waste Reduction

Parts are often cleaned using solvents such as trichloroethylene, 1,1,1-trichloroethane or methylene chloride. Many of these cleaners are harmful and must be disposed of as a hazardous waste. Cleaning without using liquid cleaners (e.g., wire brush) whenever possible reduces waste. Prevent spills and drips of solvents and cleansers to the shop floor. Do all liquid cleaning at a centralized station so the solvents and residues stay in one area. Locate drip pans, drain boards, and drying racks to direct drips back into a solvent sink or fluid holding tank for reuse. Reducing the number of solvents makes recycling easier and reduces hazardous waste management costs. Often, one solvent can perform a job as well as two different solvents.

- Clean parts without using liquid cleaners whenever possible to reduce waste.
- Prevent spills and drips of solvents and cleansers to the shop floor.

Vehicle and Equipment Repair **SC-22**

- Do all liquid cleaning at a centralized station so the solvents and residues stay in one area.
- Locate drip pans, drain boards, and drying racks to direct drips back into a solvent sink or fluid holding tank for reuse.

Recycling

Separating wastes allows for easier recycling and may reduce treatment costs. Keep hazardous and non-hazardous wastes separate, do not mix used oil and solvents, and keep chlorinated solvents (e.g., 1,1,1-trichloroethane) separate from non-chlorinated solvents (e.g., kerosene and mineral spirits).

Many products made of recycled (i.e., refined or purified) materials are available. Engine oil, transmission fluid, antifreeze, and hydraulic fluid are available in recycled form. Buying recycled products supports the market for recycled materials.

- Recycling is always preferable to disposal of unwanted materials.
- Separate wastes for easier recycling. Keep hazardous and non-hazardous wastes separate, do not mix used oil and solvents, and keep chlorinated solvents separate from non-chlorinated solvents.
- Label and track the recycling of waste material (e.g., used oil, spent solvents, batteries).
- Purchase recycled products to support the market for recycled materials.

Safer Alternatives

If possible, eliminate or reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous material:

- Use non-caustic detergents instead of caustic cleaning for parts cleaning.
- Use detergent-based or water-based cleaning systems in place of organic solvent degreasers. Wash water may require treatment before it can be discharged to the sewer.
- Replace chlorinated organic solvents with non-chlorinated solvents. Non-chlorinated solvents like kerosene or mineral spirits are less toxic and less expensive to dispose of properly. Check list of active ingredients to see whether it contains chlorinated solvents.
- Choose cleaning agents that can be recycled.

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Orange County Stormwater Program, Best Management Practices for Industrial/Commercial Business Activities. Available online at:

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Vehicle and Equipment Repair SC-22

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Description

Accidental releases of materials from above ground liquid storage tanks, drums, and dumpsters present the potential for contaminating stormwater with many different pollutants. Tanks may store many potential stormwater runoff pollutants, such as gasoline, aviation gas, diesel fuel, kerosene, oils, greases, lubricants and other distilled, blended and refined products derived from crude petroleum. Materials spilled, leaked, or lost from storage tanks may accumulate in soils or on other surfaces and be carried away by rainfall runoff. These source controls apply to containers located outside of a building used to temporarily store liquid materials and include installing safeguards against accidental releases, installing secondary containment, conducting regular inspections, and training employees in standard operating procedures and spill cleanup techniques.

Approach

General Pollution Prevention Protocols

- Educate employees about pollution prevention measures and goals.
- Keep an accurate, up-to-date inventory of the materials delivered and stored on-site.
- Try to keep chemicals in their original containers, and keep them well labeled.
- Develop an operations plan that describes procedures for loading and/or unloading. Refer to SC-30 Outdoor Loading/Unloading of Materials for more detailed BMP information pertaining to loading and unloading of liquids.
- Protect materials from rainfall, run-on, runoff, and wind dispersal:
 - ✓ Cover the storage area with a roof.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize

Targeted Constituents

<i>Sediment</i>	
<i>Nutrients</i>	✓
<i>Trash</i>	
<i>Metals</i>	✓
<i>Bacteria</i>	
<i>Oil and Grease</i>	✓
<i>Organics</i>	✓

Minimum BMPs Covered

 <i>Good Housekeeping</i>	
 <i>Preventative Maintenance</i>	✓
 <i>Spill and Leak Prevention and Response</i>	✓
 <i>Material Handling & Waste Management</i>	✓
 <i>Erosion and Sediment Controls</i>	
 <i>Employee Training Program</i>	✓
 <i>Quality Assurance Record Keeping</i>	✓



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Outdoor Liquid Container Storage SC-31

- ✓ Minimize stormwater run-on by enclosing the area or building a berm around it.
- ✓ Use a walled structure for storage of liquid containers.
- ✓ Use only watertight containers and keep the lids closed.
- Employ safeguards against accidental releases:
 - ✓ Provide overflow protection devices to warn operator or automatic shutdown transfer pumps.
 - ✓ Provide protection guards (bollards) around tanks and piping to prevent damage from a vehicle or forklift.
 - ✓ Provide clear tagging or labeling, and restrict access to valves to reduce human error.
 - ✓ Berm or surround tank or container with secondary containment system, including dikes, liners, vaults, or double walled tanks.
 - ✓ Be aware and ready to address the fact that some municipalities require secondary containment areas to be connected to the sanitary sewer, prohibiting any hard connections to the storm drain.
 - ✓ Contact the appropriate regulatory agency regarding environmental compliance for facilities with “spill ponds” designed to intercept, treat, and/or divert spills.
 - ✓ Have registered and specifically trained professional engineers identify and correct potential problems such as loose fittings, poor welding, and improper or poorly fitted gaskets for newly installed tank systems.
- Use MSDSs to ID hazardous components and keep incompatible products apart and to list/have available appropriate PPE and clean-up products.



Good Housekeeping

- Provide storage tank piping located below product level with a shut-off valve at the tank; ideally this valve should be an automatic shear valve with the shut-off located inside the tank.
- Provide barriers such as posts or guardrails, where tanks are exposed, to prevent collision damage with vehicles.
- Provide secure storage to prevent vandalism-caused contamination.
- Place tight-fitting lids on containers.

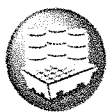
Outdoor Liquid Container Storage **SC-31**

- Enclose or cover the containers where they are stored.
- Raise the containers off the ground by use of pallet or similar method, with provisions for spill control.
- Do not store liquid containers near the storm drainage system or surface waters.
- Sweep and clean the storage area regularly if it is paved, do not hose down the area to a storm drain.



Preventative Maintenance

- Inspect storage areas regularly for leaks or spills.
- Conduct routine inspections and check for external corrosion of material containers. Also check for structural failure, spills and overfills due to operator error, failure of piping system.
- Check for leaks or spills during pumping of liquids or gases from truck or rail car to a storage facility or vice versa.
- Visually inspect new tank or container installations for loose fittings, poor welding, and improper or poorly fitted gaskets.
- Inspect tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.
- Replace containers that are leaking, corroded, or otherwise deteriorating with ones in good condition. If the liquid chemicals are corrosive, containers made of compatible materials must be used instead of metal drums.
- New or secondary containers must be labeled with the product name and hazards.



Spill Response and Prevention Procedures

- Keep your spill prevention and control plan up-to-date.
- Maintain an adequate stockpile of spill cleanup materials at locations where it will be readily accessible.
- Have an emergency plan, equipment, and trained personnel ready at all times to deal immediately with major spills.
- Collect spilled liquids and properly dispose of them.
- Remove the adsorbent materials promptly and dispose of properly when using adsorbent materials on small spills.
- Have employees trained in emergency spill cleanup procedures present when dangerous waste, liquid chemicals, or other wastes are delivered.

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- Prevent operator errors by using engineering safeguards and thus reducing accidental releases of pollutants.



Material Handling and Waste Management

- Contain the material in such a manner that if the container leaks or spills, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters or groundwater.
- Place drip pans or absorbent materials beneath mounted container taps, and at potential drip and spill locations during filling and unloading of containers. Any collected liquids or soiled absorbent materials must be reused/recycled or properly disposed.
- Ensure that any underground or aboveground storage tanks are designed and managed in accordance with applicable regulations, identified as a potential pollution source, and have secondary containment such as a berm or dike with an impervious surface.
- Do not pour liquids into floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections.
- Collect leaking or dripping fluids in drip pans or containers. Fluids are easier to recycle if kept separate.
- Promptly transfer used fluids to the proper waste or recycling drums. Do not leave drip pans or other open containers lying around.



Employee Training Program

- Train employee (e.g., fork lift operators) and contractors in proper spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.
- Train employees in proper spill response and prevention, materials handling, and waste management.
- Use a training log or similar method to document training.



Quality Assurance and Record Keeping

- Keep accurate maintenance/inspection logs that document minimum BMP activities performed for liquid container storage and improvement actions.
- Keep accurate logs of spill response actions that document what was spilled, how it was cleaned up, and how the waste was disposed.
- Establish procedures to complete logs and file them in the central office.

Other Facility-Specific Considerations

- Storage sheds often must meet building and fire code requirements.

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- The local fire district must be consulted for limitations on clearance of roof covers over containers used to store flammable materials.
- All specific standards set by Federal and State laws concerning the storage of oil and hazardous materials must be met.
- Storage of reactive, ignitable, or flammable liquids should comply with the Uniform Fire Code and the National Electric Code.
- Storage of oil and hazardous materials must meet specific Federal and State standards including:
 - ✓ Spill Prevention Control and Countermeasure Plan (SPCC) Plan;
 - ✓ Secondary containment;
 - ✓ Integrity and leak detection monitoring; and
 - ✓ Emergency preparedness plans.

Potential Capital Facility Costs and Operation & Maintenance Requirements

Facilities

- Capital investments such as sheds, covers, dikes, and curbs will likely be required at some sites if adequate cover and containment facilities do not exist and can vary significantly depending upon site conditions.

Maintenance

- Most of the operations and maintenance activities associated with implementing this BMP are integrally linked to routine operations as previously described. Therefore additional O&M is not required.
- Conduct regular inspections and make repairs and improvements as necessary.
- Conduct regular broom dry-sweeping of area. Do not wash with water.

Supplemental Information

The most common causes of unintentional releases are:

- Installation problems;
- Failure of piping systems (pipes, pumps, flanges, couplings, hoses, and valves);
- External corrosion and structural failure;
- Spills and overfills due to operator error; and
- Leaks during pumping of liquids or gases from truck or rail car to a storage tank or vice versa.

Outdoor Liquid Container Storage **SC-31**

Aboveground Tank Leak and Spill Control

Storage of reactive, ignitable, or flammable liquids should comply with the Uniform Fire Code and the National Electric Code. Practices listed below should be employed to enhance the code requirements:

- Tanks should be placed in a designated area.
- Tanks located in areas where firearms are discharged should be encapsulated in concrete or the equivalent.
- Designated areas should be paved with Portland cement concrete, free of cracks and gaps, and impervious in order to contain leaks and spills.
- Liquid materials should be stored in UL approved double walled tanks or surrounded by a curb or dike to provide the volume to contain 10% of the volume of the containers or 110% of the volume of the largest container, whichever is greater. The area inside the curb should slope to a drain.
- For used oil or dangerous waste, a dead-end sump should be installed in the drain.
- Other liquids should be drained to the sanitary sewer if available. The drain must have a positive control such as a lock, valve, or plug to prevent release of contaminated liquids.
- Accumulated stormwater in petroleum storage areas should be passed through an oil/water separator.

Maintenance is critical to preventing leaks and spills. Conduct routine weekly inspections and:

- Check for external corrosion and structural failure.
- Check for spills and overfills due to operator error.
- Check for failure of piping system (pipes, pumps, flanger, coupling, hoses, and valves).
- Check for leaks or spills during pumping of liquids or gases from truck or rail car to a storage facility or vice versa.
- Inspect new tank or container installation visually for loose fittings, poor welding, and improper or poorly fitted gaskets.
- Inspect tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.
- Frequently release accumulated stormwater during the wet season.
- Have periodic integrity testing conducted by a qualified professional.

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Dikes

One of the best protective measures against contamination of stormwater is the use of dikes. Containment dikes are berms or retaining walls that are designed to hold spills. Use of dikes is an effective pollution prevention measure for above ground storage tanks and railcar or tank truck loading and unloading areas. The dike surrounds the area of concern and holds the spill, keeping spill materials separated from the stormwater side of the dike area. Diking can be used in any industrial or municipal facility, but it is most commonly used for controlling large spills or releases from liquid storage areas and liquid transfer areas.

- For single-wall tanks, containment dikes should be large enough to hold the contents of the storage tank for the facility plus rain water.
- For trucks, diked areas should be capable of holding an amount equal to the volume of the tank truck compartment. Diked construction material should be strong enough to safely hold spilled materials.
- Dike materials can consist of earth, concrete, synthetic materials, metal, or other impervious materials.
- Strong acids or bases may react with metal containers, concrete, and some plastics.
- Where strong acids or bases are stored, alternative dike materials should be considered. More active organic chemicals may need certain special liners for dikes.
- Dikes may also be designed with impermeable materials to increase containment capabilities.
- Dikes should be inspected during or after significant storms or spills to check for washouts or overflows.
- Regular checks of containment dikes to insure the dikes are capable of holding spills should be conducted.
- Inability of a structure to retain stormwater, dike erosion, soggy areas, or changes in vegetation indicate problems with dike structures. Damaged areas should be patched and stabilized immediately.
- Earthen dikes may require special maintenance of vegetation such as mulching and irrigation.
- Remove accumulated stormwater after precipitation events and dispose of according to local regulations.

Curbing

Curbing is a barrier that surrounds an area of concern. Curbing is similar to containment diking in the way that it prevents spills and leaks from being released into the environment. Curbing is usually small scaled and does not contain large spills to the degree that dikes can. Curbing is common at many facilities in small areas where

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handling and transfer of liquid materials occur. Curbing can redirect contaminated stormwater away from the storage area. It is useful in areas where liquid materials are transferred from one container to another. Asphalt is a common material used for curbing; however, curbing materials can include earth, concrete, synthetic materials, metal, or other impenetrable materials.

- Spilled materials should be removed immediately from curbed areas to allow space for future spills.
- Curbs should have manually-controlled pump systems rather than common drainage systems for collection of spilled materials.
- The curbed area should be inspected regularly to clear clogging debris.
- Maintenance should also be conducted frequently to prevent overflow of any spilled materials as curbed areas are designed only for smaller spills.
- Remove accumulated stormwater after precipitation events and dispose of according to local regulations.
- Curbing has the following advantages:
 - ✓ Excellent run-on control;
 - ✓ Inexpensive;
 - ✓ Ease of installment;
 - ✓ Provides option to recycle materials spilled in curb areas; and
 - ✓ Common industry practice.

References and Resources

Clark County Clean Water Program. 2009. *Clark County Stormwater Pollution Control Manual Best Management Practices for Businesses and Government Agencies, AS A2 & A3*. Available online at:

<http://www.clark.wa.gov/boards/CleanWater/documents/PollutionControlManual.pdf>.

King County Storm Water Pollution Prevention Manual, 2009 *Commercial Best Management Practice (BMP) Activity Sheets: A-2 Storage of Liquid Materials in Stationary Tanks and A-3 Storage of Liquid Materials in Portable Containers*.

Available online at:

<http://www.kingcounty.gov/environment/waterandland/stormwater/documents/pollution-prevention-manual/commercial-bmp.aspx>.

Orange County Stormwater Program, Best Management Practices for Industrial/Commercial Business Activities. Available online at:

<http://ocwatersheds.com/documents/bmp/industrialcommercialbusinessesactivities>.

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US EPA. National Pollutant Discharge Elimination System (NPDES) *Industrial Fact Sheet Series for Activities Covered by EPA's MSGP*. Available online at:
<http://cfpub.epa.gov/npdes/stormwater/swsectors.cfm>.

Outdoor Equipment Operations SC-32

Description

Outside process equipment operations and maintenance can contaminate stormwater runoff. Activities, such as grinding, painting, coating, sanding, degreasing or parts cleaning, landfills and waste piles, and solid waste treatment and disposal are examples of process operations that can lead to contamination of stormwater runoff. The targeted constituents will vary for each site depending on the operation being performed.

Approach

Implement source control BMPs to limit exposure of outdoor equipment to direct precipitation and stormwater run-on. Refer to SC-22 Vehicle and Equipment Repair for additional information.

General Pollution Prevention Protocols

- Perform the activity during dry periods whenever possible.
- Install secondary containment measures where leaks and spills may occur.
- Use non-toxic chemicals for maintenance and minimize or eliminate the use of solvents.
- Connect process equipment area to public sanitary sewer or facility wastewater treatment system when possible. Some jurisdictions require that secondary containment areas be connected to the sanitary sewer, prohibiting any hard connections to the storm drain.



Good Housekeeping

- Manage materials and waste properly (see Material Handling and Waste Management) to reduce adverse impacts on stormwater quality.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	✓
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓

Minimum BMPs Covered

	Good Housekeeping	✓
	Preventative Maintenance	✓
	Spill and Leak Prevention and Response	✓
	Material Handling & Waste Management	✓
	Erosion and Sediment Controls	
	Employee Training Program	✓
	Quality Assurance Record Keeping	✓



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- Cover the work area with a permanent roof if possible.
- Use drop cloths for sanding and painting operations.
- Use a vacuum for fine particle clean-up in pavement cracks and crevices.
- Minimize contact of stormwater with outside process equipment operations through berming and drainage routing (run-on prevention).
- "Spot clean" leaks and drips routinely. Leaks are not cleaned up until the absorbent is picked up and disposed of properly.
- Paint signs on storm drain inlets to indicate that they are not to receive liquid or solid wastes.
- Use roll down or permanent walls when windy/breezy to prevent wind transport of particulates/pollutants.



Preventative Maintenance

- Design outdoor equipment areas to prevent stormwater runoff and spills. Use a perimeter drain or slope pavement inward with drainage to sump.
- Dry clean the work area regularly. Do not wash outdoor equipment with water if there is a direct connection to the storm drain.
- Pave area with concrete rather than asphalt.
- Inspect outdoor equipment regularly for leaks or spills. Also check for structural failure, spills and overfills due to operator error, and/or failure of piping system.
- Inspect and clean, if necessary, storm drain inlets and catch basins within the outdoor equipment area before October 1 each year.



Spill Response and Prevention Procedures

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Have employees trained in emergency spill cleanup procedures present when dangerous waste, liquid chemicals, or other wastes are delivered.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- Prevent operator errors by using engineering safe guards and thus reducing accidental releases of pollutant.



Material Handling and Waste Management

Outdoor Equipment Operations SC-32

- Do not pour liquid wastes into floor drains, sinks, outdoor storm drain inlets, or other storm drain or sewer connections.
- Collect leaking or dripping fluids in drip pans or containers. Fluids are easier to recycle if kept separate.
- Promptly transfer used fluids to the proper waste or recycling drums. Do not leave drip pans or other open containers lying around.
- Minimize the possibility of stormwater pollution from outside waste receptacles by doing at least one of the following:
 - ✓ Use only watertight waste receptacle(s) and keep the lid(s) closed.
 - ✓ Grade and pave the waste receptacle area to prevent run-on of stormwater.
 - ✓ Install a roof over the waste receptacle area.



Employee Training Program

- Educate employees about pollution prevention measures and goals.
- Train employees on proper equipment operation and maintenance procedures.
- Train all employees upon hiring and annually thereafter on proper methods for handling and disposing of waste. Ensure that all employees understand stormwater discharge prohibitions, wastewater discharge requirements, and these best management practices.
- Use a training log or similar method to document training.
- Ensure that employees are familiar with the site's spill control plan and/or proper spill cleanup procedures.



Quality Assurance and Record Keeping

- Keep accurate maintenance logs that document minimum BMP activities performed for outdoor equipment, types and quantities of materials removed and disposed of, and any improvement actions.
- Keep accurate logs of spill response actions that document what was spilled, how it was cleaned up, and how the waste was disposed.
- Establish procedures to complete logs and file them in the central office.

Potential Limitations and Work-Arounds

Some facilities may have space constraints, limited staffing and time limitations that may preclude implementation of BMPs. Provided below are typical limitations and recommended "work-arounds."

Outdoor Equipment Operations SC-32

- Providing cover over outdoor equipment may be impractical or cost-prohibitive.
 - ✓ Operate outdoor equipment only during periods of dry weather.
- Regular operations and time limitations may require outdoor activities during wet weather.
 - ✓ Designate specific areas for outdoor activities.
 - ✓ Allow time for work area clean-up after each shift.
 - ✓ Require employees to understand and follow preventive maintenance and spill and leak prevention BMPs.
 - ✓ Design and install secondary containment and good housekeeping BMPs for outdoor equipment area.
- Storage sheds often must meet building and fire code requirements.

Potential Capital Facility Costs and Operation & Maintenance Requirements

Facilities

- Many facilities will already have indoor covered areas where vehicle and equipment repairs take place and will require no additional capital expenditures.
- If outdoor activities are required, construction of berms or other means to retain spills and leaks may require appropriate constructed systems for containment. These containment areas may require significant new capital investment.
- Capital investments will likely be required at some sites if adequate cover and containment facilities do not exist and can vary significantly depending upon site conditions.

Maintenance

- Most of the operations and maintenance activities associated with implementing this BMP are integrally linked to routine operations as previously described. Therefore additional O&M is not required.
- For facilities responsible for pre-treating their wastewater prior to discharging, the proper functioning of structural treatment system is an important maintenance consideration.
- Routine cleanout of oil and grease is required for the devices to maintain their effectiveness, usually at least once a month. During periods of heavy rainfall, cleanout is required more often to ensure pollutants are not washed through the trap. Sediment removal is also required on a regular basis to keep the device working efficiently.

Outdoor Equipment Operations SC-32

References and Resources

Minnesota Pollution Control Agency. *Industrial Stormwater Best Management Practices Guidebook BMP 26 Fueling and Liquid Loading/Unloading Operations*. Available online at: <http://www.pca.state.mn.us/index.php/view-document.html?gid=10557>.

New Jersey Department of Environmental Protection, 2013. *Basic Industrial Stormwater General Permit Guidance Document NJPDES General Permit No NJ0088315*. Available online at: http://www.nj.gov/dep/dwq/pdf/5G2_guidance_color.pdf.

Orange County Stormwater Program, Best Management Practices for Industrial/Commercial Business Activities. Available online at: <http://ocwatersheds.com/documents/bmp/industrialcommercialbusinessesactivities>.

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Sacramento County Environmental Management Stormwater Program: Best Management Practices. Available online at: <http://www.emd.saccounty.net/EnvHealth/Stormwater/Stormwater-BMPs.html>.

Santa Clara Valley Urban Runoff Pollution Prevention Program. <http://www.scvurppp-w2k.com/>

US EPA. National Pollutant Discharge Elimination System – Industrial Fact Sheet Series for Activities Covered by EPA’s Multi Sector General Permit. Available online at: <http://cfpub.epa.gov/npdes/stormwater/swsectors.cfm>.

Description

Improper storage and handling of solid wastes can allow toxic compounds, oils and greases, heavy metals, nutrients, suspended solids, and other pollutants to enter stormwater runoff. The discharge of pollutants to stormwater from waste handling and disposal can be prevented and reduced by tracking waste generation, storage, and disposal; reducing waste generation and disposal through source reduction, reuse, and recycling; and preventing run-on and runoff.

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

General Pollution Prevention Protocols

- Accomplish reduction in the amount of waste generated using the following source controls:
 - ✓ Production planning and sequencing;
 - ✓ Process or equipment modification;
 - ✓ Raw material substitution or elimination;
 - ✓ Loss prevention and housekeeping;
 - ✓ Waste segregation and separation; and
 - ✓ Close loop recycling.
- Establish a material tracking system to increase awareness about material usage. This may reduce spills and minimize contamination, thus reducing the amount of waste produced.
- Recycle materials whenever possible.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	
Nutrients	
Trash	
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓

Minimum BMPs Covered

 Good Housekeeping	✓
 Preventative Maintenance	✓
 Spill and Leak Prevention and Response	✓
 Material Handling & Waste Management	✓
 Erosion and Sediment Controls	
 Employee Training Program	✓
 Quality Assurance Record Keeping	✓



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- Use the entire product before disposing of the container.
- To the extent possible, store wastes under cover or indoors after ensuring all safety concerns such as fire hazard and ventilation are addressed.
- Provide containers for each waste stream at each work station. Allow time after shift to clean area.



Good Housekeeping

- Cover storage containers with leak proof lids or some other means. If waste is not in containers, cover all waste piles (plastic tarps are acceptable coverage) and prevent stormwater run-on and runoff with a berm. The waste containers or piles must be covered except when in use.
- Use drip pans or absorbent materials whenever grease containers are emptied by vacuum trucks or other means. Grease cannot be left on the ground. Collected grease must be properly disposed of as garbage.
- Dispose of rinse and wash water from cleaning waste containers into a sanitary sewer if allowed by the local sewer authority. Do not discharge wash water to the street or storm drain. Clean in a designated wash area that drains to a clarifier.
- Transfer waste from damaged containers into safe containers.
- Take special care when loading or unloading wastes to minimize losses. Loading systems can be used to minimize spills and fugitive emission losses such as dust or mist. Vacuum transfer systems can minimize waste loss.
- Keep the waste management area clean at all times by sweeping and cleaning up spills immediately.
- Use dry methods when possible (e.g., sweeping, use of absorbents) when cleaning around restaurant/food handling dumpster areas. If water must be used after sweeping/using absorbents, collect water and discharge through grease interceptor to the sewer.
- Stencil or demarcate storm drains on the facility's property with prohibitive message regarding waste disposal.
- Cover waste piles with temporary covering material such as reinforced tarpaulin, polyethylene, polyurethane, polypropylene or hypalon.
- If possible, move the activity indoor after ensuring all safety concerns such as fire hazard and ventilation are addressed.



Preventative Maintenance

- Prevent stormwater run-on from entering the waste management area by enclosing the area or building a berm around the area.
- Prevent waste materials from directly contacting rain.

- Cover waste piles with temporary covering material such as reinforced tarpaulin, polyethylene, polyurethane, polypropylene or hypalon.
- Cover the area with a permanent roof if feasible.
- Cover dumpsters to prevent rain from washing waste out of holes or cracks in the bottom of the dumpster.
- Check waste containers weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating.
- Sweep and clean the waste management area regularly. Use dry methods when possible (e.g., sweeping, vacuuming, use of absorbents) when cleaning around restaurant/food handling dumpster areas. If water must be used after sweeping/using absorbents, collect water and discharge through grease interceptor to the sewer.
- Inspect and replace faulty pumps or hoses regularly to minimize the potential of releases and spills.
- Repair leaking equipment including valves, lines, seals, or pumps promptly.



Spill Response and Prevention Procedures

- Keep your spill prevention and plan up-to-date.
- Have an emergency plan, equipment and trained personnel ready at all times to deal immediately with major spills.
- Collect all spilled liquids and properly dispose of them.
- Store and maintain appropriate spill cleanup materials in a location known to all near the designated wash area.
- Ensure that vehicles transporting waste have spill prevention equipment that can prevent spills during transport. Spill prevention equipment includes:
 - ✓ Vehicles equipped with baffles for liquid waste; and
 - ✓ Trucks with sealed gates and spill guards for solid waste.



Material Handling and Waste Management

Litter Control

- Post "No Littering" signs and enforce anti-litter laws.
- Provide a sufficient number of litter receptacles for the facility.
- Clean out and cover litter receptacles frequently to prevent spillage.

Waste Collection

- Keep waste collection areas clean.

- Inspect solid waste containers for structural damage regularly. Repair or replace damaged containers as necessary.
- Secure solid waste containers; containers must be closed tightly when not in use.
- Do not fill waste containers with washout water or any other liquid.
- Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc., may not be disposed of in solid waste containers (see chemical/ hazardous waste collection section below).
- Do not mix wastes; this can cause chemical reactions, make recycling impossible, and complicate disposal. Affix labels to all waste containers.

Chemical/Hazardous Wastes

- Select designated hazardous waste collection areas on-site.
- Store hazardous materials and wastes in covered containers and protect them from vandalism.
- Place hazardous waste containers in secondary containment.
- Make sure that hazardous waste is collected, removed, and disposed of only at authorized disposal areas.
- Hazardous waste cannot be reused or recycled; it must be disposed of by a licensed hazardous waste hauler.



Employee Training Program

- Educate employees about pollution prevention measures and goals.
- Train employees how to properly handle and dispose of waste using the source control BMPs described above.
- Train employees and subcontractors in proper hazardous waste management.
- Use a training log or similar method to document training.
- Ensure that employees are familiar with the site's spill control plan and/or proper spill cleanup procedures.



Quality Assurance and Record Keeping

- Keep accurate maintenance logs that document minimum BMP activities performed for waste handling and disposal, types and quantities of waste disposed of, and any improvement actions.
- Keep accurate logs of spill response actions that document what was spilled, how it was cleaned up, and how the waste was disposed.

- Establish procedures to complete logs and file them in the central office.

Potential Capital Facility Costs and Operation & Maintenance Requirements

Facilities

- Capital costs will vary substantially depending on the size of the facility and the types of waste handled. Significant capital costs may be associated with reducing wastes by modifying processes or implementing closed-loop recycling.
- Many facilities will already have indoor covered areas where waste materials will be stored and will require no additional capital expenditures for providing cover.
- If outdoor storage of wastes is required, construction of berms or other means to prevent stormwater run-on and runoff may require appropriate constructed systems for containment.
- Capital investments will likely be required at some sites if adequate cover and containment facilities do not exist and can vary significantly depending upon site conditions.

Maintenance

- Check waste containers weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating.
- Sweep and clean the waste management area regularly. Use dry methods when possible (e.g., sweeping, use of absorbents) when cleaning around restaurant/food handling dumpster areas. If water must be used after sweeping/using absorbents, collect water and discharge through grease interceptor to the sewer.
- Inspect and replace faulty pumps or hoses regularly to minimize the potential of releases and spills.
- Repair leaking equipment including valves, lines, seals, or pumps promptly.

References and Resources

Minnesota Pollution Control Agency, *Industrial Stormwater Best Management Practices Guidebook*. Available online at: <http://www.pca.state.mn.us/index.php/view-document.html?gid=10557>.

New Jersey Department of Environmental Protection, 2013. *Basic Industrial Stormwater General Permit Guidance Document NJPDES General Permit No NJ0088315*, Revised. Available online at: http://www.nj.gov/dep/dwq/pdf/5G2_guidance_color.pdf.

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US EPA. National Pollutant Discharge Elimination System – Industrial Fact Sheet Series for Activities Covered by EPA’s Multi Sector General Permit. Available online at:

<http://cfpub.epa.gov/npdes/stormwater/swsectors.cfm>.

Contaminated or Erodible Areas SC-40

Description

Areas within an industrial site that are bare of vegetation or are subject to activities that promote the suppression of vegetation are often subject to erosion. In addition, they may or may not be contaminated from past or current activities. If the area is temporarily bare because of construction, see SC-42 Building Repair, Remodeling, and Construction. Sites with excessive erosion or the potential for excessive erosion should consider employing the soil erosion BMPs identified in the Construction BMP Handbook. Note that this fact sheet addresses soils that do not exceed hazardous waste criteria (see Title 22 California Code of Regulations for Hazardous Waste Criteria).

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

General Pollution Prevention Protocols

Implement erosion and sediment control BMPs to stabilize soils and reduce pollutant discharges from contaminated or erodible surfaces.



Erosion and Sediment Controls

- Preserve natural vegetation whenever possible. See also EC-2 Preservation of Existing Vegetation, in the Construction BMP Handbook.
- Analyze soil conditions.
- Remove contaminated soil and dispose of properly.
- Stabilize loose soils by re-vegetating whenever possible. See also EC-4 Hydroseeding, in the Construction BMP Handbook.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓

Minimum BMPs Covered

	Good Housekeeping	
	Preventative Maintenance	
	Spill and Leak Prevention and	
	Material Handling & Waste Management	
	Erosion and Sediment Controls	✓
	Employee Training Program	✓
	Quality Assurance Record Keeping	✓



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Contaminated or Erodible Areas SC-40

- Utilize non-vegetative stabilization methods for areas prone to erosion where vegetative options are not feasible. Examples include:
 - ✓ Areas of vehicular or pedestrian traffic such as roads or paths;
 - ✓ Arid environments where vegetation would not provide timely ground coverage, or would require excessive irrigation;
 - ✓ Rocky substrate, infertile or droughty soils where vegetation would be difficult to establish; and
 - ✓ Areas where vegetation will not grow adequately within the construction time frame.

There are several non-vegetative stabilization methods and selection should be based on site-specific conditions. See also EC-16 Non-Vegetative Stabilization, in the Construction BMP Handbook.

- Utilize chemical stabilization when needed. See also EC-5 Soil Binders, in the Construction BMP Handbook.
- Use geosynthetic membranes to control erosion if feasible. See also EC-7 Geotextiles and Mats, in the Construction BMP Handbook.
- Stabilize all roadways, entrances, and exits to sufficiently control discharges of erodible materials from discharging or being tracked off the site. See also TC 1-3 Tracking Control, in the Construction BMP Handbook.
- Implement wind erosion control measures as necessary. See also WE-1 Wind Erosion Control, in the Construction BMP Handbook.



Employee Training Program

- Educate employees about pollution prevention measures and goals.
- Train employees how to properly install and maintain the erosion and sediment source control BMPs described above. Detailed information is provided in the Construction BMP Handbook.
- Use a training log or similar method to document training.



Quality Assurance and Record Keeping

- Keep accurate logs that document actions taken to maintain and improve the effectiveness of the erosion and sediment control BMPs described above.
- Keep accurate logs of spill response actions that document what was spilled, how it was cleaned up, and how the waste was disposed.
- Establish procedures to complete logs and file them in the central office.

Contaminated or Erodible Areas SC-40

Potential Capital Facility Costs and Operation & Maintenance Requirements

Facilities

- Many facilities do not have contaminated or erodible areas and will require no additional capital expenditures.
- For sites with contaminated or erodible areas, purchase and installation of erosion and sediment controls will require additional capital investments, and this amount will vary depending on site characteristics and the types of BMPs being implemented.
- Minimize costs by maintaining existing vegetation and limiting site operations on bare soils.

Maintenance

- The erosion and sediment control BMPs described above require periodic inspection and maintenance to remain effective. The cost of these actions will vary depending on site characteristics and the types of BMPs being implemented.
- Irrigation costs may be required to establish and maintain vegetation.

Supplemental Information

Stabilization of Erodible Areas

Preserving stabilized areas minimizes erosion potential, protects water quality, and provides aesthetic benefits. The most effective way to control erosion is to preserve existing vegetation. Preservation of natural vegetation provides a natural buffer zone and an opportunity for infiltration of stormwater and capture of pollutants in the soil matrix. This practice can be used as a permanent source control measure.

Vegetation preservation should be incorporated into the site. Preservation requires good site management to minimize operations on bare soils where vegetation exists. Proper maintenance is important to ensure healthy vegetation that can control erosion. Different species, soil types, and climatic conditions will require different maintenance activities such as mulching, fertilizing, liming, irrigation, pruning and weed and pest control.

The preferred approach is to leave as much native vegetation on-site as possible, thereby reducing or eliminating any erosion problem. However, assuming the site already has contaminated or erodible surface areas, there are four possible courses of action which can be taken:

- The area can be revegetated if it is not in use and therefore not subject to damage from site activities. In as much as the area is already devoid of vegetation, special measures are likely necessary. Lack of vegetation may be due to the lack of water and/or poor soils. The latter can perhaps be solved with fertilization, or the ground may simply be too compacted from prior use. Improving soil conditions may be sufficient to support the recovery of vegetation. Use process wastewater for irrigation if possible, and see the Construction BMP Handbook for further procedures on establishing vegetation.

Contaminated or Erodible Areas SC-40

- Watering trucks to prevent dust.
- Chemical stabilization can be used as an alternate method in areas where temporary seeding practices cannot be used because of season or climate. It can provide immediate, effective, and inexpensive erosion control. Application rates and procedures recommended by the manufacturer should be followed as closely as possible to prevent the products from forming ponds and creating large areas where moisture cannot penetrate the soil. See also EC-5, Soil Binders, in the Construction BMP Handbook for more information. Advantages of chemical stabilization include:
 - ✓ Applied easily to the surface;
 - ✓ Stabilizes areas effectively; and
 - ✓ Provides immediate protection to soils that are in danger of erosion.
- Contaminated soils should be cleaned up or removed. This requires determination of the level and extent of the contamination. Removal must comply with State and Federal regulations; permits must be acquired and fees paid.
- Non-vegetated stabilization methods are suitable for permanently protecting from erosion by water and wind. Non-vegetated stabilization should only be utilized when vegetation cannot be established due to soil or climactic conditions, or where vegetation may be a potential fire hazard.

Examples of non-vegetative stabilization BMPs are provided below:

- ✓ **Decomposed Granite (DG) and Gravel Mulch** are suitable for use in areas where vegetation establishment is difficult, on flat surfaces, trails and pathways, and when used in conjunction with a stabilizer or tackifier, on shallow slopes (i.e., 10:1 [H:V]). DG and gravel can also be used on shallow rocky slopes where vegetation cannot be established for permanent erosion control.
- ✓ **Degradable Mulches** can be used to cover and protect soil surfaces from erosion both in temporary and permanent applications. In many cases, the use of mulches by themselves requires routine inspection and re-application. See EC-3 Hydraulic Mulch, EC-6 Straw Mulch, EC-8 Wood Mulch, or EC-14 Compost Blankets of the Construction BMP Handbook for more information.
- ✓ **Geotextiles and Mats** can be used as a temporary stand-alone soil stabilization method. Depending on material selection, geotextiles and mats can be a short-term (3 months – 1 year) or long-term (1-2 years) temporary stabilization method. For more information on geotextiles and mats see EC-7 Geotextiles and Mats of the Construction BMP Handbook.
- ✓ **Rock Slope Protection** can be used when the slopes are subject to scour or have a high erosion potential, such as slopes adjacent to flowing waterways or slopes subject to overflow from detention facilities (spillways).

Contaminated or Erodible Areas SC-40

- ✓ **Soil Binders** can be used for temporary stabilization of stockpiles and disturbed areas not subject to heavy traffic. See EC-5 Soil Binders for more information. References and Resources.

References and Resources

California Stormwater Quality Association 2012, *Construction Stormwater Best Management Practice Handbook*. Available at <http://www.casqa.org>.

City of Seattle, Seattle Public Utilities Department of Planning and Development, 2009. *Stormwater Manual Vol. 1 Source Control Technical Requirements Manual*.

Orange County Stormwater Program, Best Management Practices for Industrial/Commercial Business Activities. Available online at: <http://ocwatersheds.com/documents/bmp/industrialcommercialbusinessesactivities>.

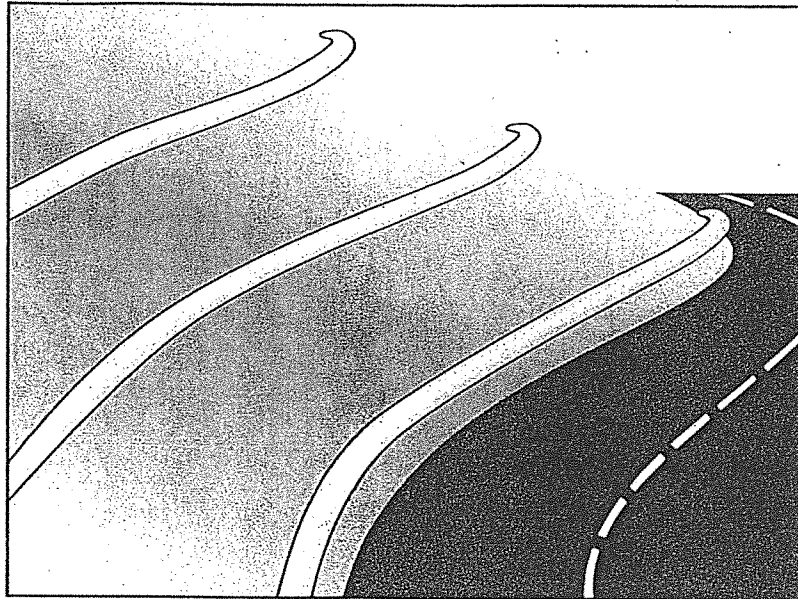
Sacramento Stormwater Management Program. *Best Management Practices for Industrial Storm Water Pollution Control*. Available online at: <http://www.msa.saccounty.net/sactostormwater/documents/guides/industrial-BMP-manual.pdf>.

Santa Clara Valley Urban Runoff Pollution Prevention Program, <http://www.securppp-w2k.com/>.

Tahoe Regional Planning Agency, *Best Management Practices Handbook*, 2012. Available online at: <http://www.tahoebmp.org/Documents/2012%20BMP%20Handbook.pdf>.

The Storm Water Managers Resource Center, <http://www.stormwatercenter.net>.

U.S. Environmental Protection Agency, *Construction Site Stormwater Runoff Control*. Available online at: http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=4.



Description and Purpose

A fiber roll consists of straw, coir, or other biodegradable materials bound into a tight tubular roll wrapped by netting, which can be photodegradable or natural. Additionally, gravel-core fiber rolls are available, which contain an imbedded ballast material such as gravel or sand for additional weight when staking the rolls are not feasible (such as use as inlet protection). When fiber rolls are placed at the toe and on the face of slopes along the contours, they intercept runoff, reduce its flow velocity, release the runoff as sheet flow, and provide removal of sediment from the runoff (through sedimentation). By interrupting the length of a slope, fiber rolls can also reduce sheet and rill erosion until vegetation is established.

Suitable Applications

Fiber rolls may be suitable:

- Along the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
- At the end of a downward slope where it transitions to a steeper slope.
- Along the perimeter of a project.
- As check dams in unlined ditches with minimal grade.
- Down-slope of exposed soil areas.
- At operational storm drains as a form of inlet protection.

Categories

EC	Erosion Control	<input checked="" type="checkbox"/>
SE	Sediment Control	<input checked="" type="checkbox"/>
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

- Primary Category
- Secondary Category

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

- SE-1 Silt Fence
- SE-6 Gravel Bag Berm
- SE-8 Sandbag Barrier
- SE-14 Biofilter Bags



- Around temporary stockpiles.

Limitations

- Fiber rolls are not effective unless trenched in and staked.
- Not intended for use in high flow situations.
- Difficult to move once saturated.
- If not properly staked and trenched in, fiber rolls could be transported by high flows.
- Fiber rolls have a very limited sediment capture zone.
- Fiber rolls should not be used on slopes subject to creep, slumping, or landslide.
- Rolls typically function for 12-24 months depending upon local conditions.

Implementation

Fiber Roll Materials

- Fiber rolls should be prefabricated.
- Fiber rolls may come manufactured containing polyacrylamide (PAM), a flocculating agent within the roll. Fiber rolls impregnated with PAM provide additional sediment removal capabilities and should be used in areas with fine, clayey or silty soils to provide additional sediment removal capabilities. Monitoring may be required for these installations.
- Fiber rolls are made from weed free rice straw, flax, or a similar agricultural material bound into a tight tubular roll by netting.
- Typical fiber rolls vary in diameter from 9 in. to 20 in. Larger diameter rolls are available as well.

Installation

- Locate fiber rolls on level contours spaced as follows:
 - Slope inclination of 4:1 (H:V) or flatter: Fiber rolls should be placed at a maximum interval of 20 ft.
 - Slope inclination between 4:1 and 2:1 (H:V): Fiber Rolls should be placed at a maximum interval of 15 ft. (a closer spacing is more effective).
 - Slope inclination 2:1 (H:V) or greater: Fiber Rolls should be placed at a maximum interval of 10 ft. (a closer spacing is more effective).
- Prepare the slope before beginning installation.
- Dig small trenches across the slope on the contour. The trench depth should be $\frac{1}{4}$ to $\frac{1}{3}$ of the thickness of the roll, and the width should equal the roll diameter, in order to provide area to backfill the trench.

- It is critical that rolls are installed perpendicular to water movement, and parallel to the slope contour.
- Start building trenches and installing rolls from the bottom of the slope and work up.
- It is recommended that pilot holes be driven through the fiber roll. Use a straight bar to drive holes through the roll and into the soil for the wooden stakes.
- Turn the ends of the fiber roll up slope to prevent runoff from going around the roll.
- Stake fiber rolls into the trench.
 - Drive stakes at the end of each fiber roll and spaced 4 ft maximum on center.
 - Use wood stakes with a nominal classification of 0.75 by 0.75 in. and minimum length of 24 in.
- If more than one fiber roll is placed in a row, the rolls should be overlapped, not abutted.
- See typical fiber roll installation details at the end of this fact sheet.

Removal

- Fiber rolls can be left in place or removed depending on the type of fiber roll and application (temporary vs. permanent installation). Typically, fiber rolls encased with plastic netting are used for a temporary application because the netting does not biodegrade. Fiber rolls used in a permanent application are typically encased with a biodegradable material and are left in place. Removal of a fiber roll used in a permanent application can result in greater disturbance.
- Temporary installations should only be removed when up gradient areas are stabilized per General Permit requirements, and/or pollutant sources no longer present a hazard. But, they should also be removed before vegetation becomes too mature so that the removal process does not disturb more soil and vegetation than is necessary.

Costs

Material costs for regular fiber rolls range from \$20 - \$30 per 25 ft roll.

Material costs for PAM impregnated fiber rolls range between 7.00-\$9.00 per linear foot, based upon vendor research.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Repair or replace split, torn, unraveling, or slumping fiber rolls.
- If the fiber roll is used as a sediment capture device, or as an erosion control device to maintain sheet flows, sediment that accumulates in the BMP should be periodically removed

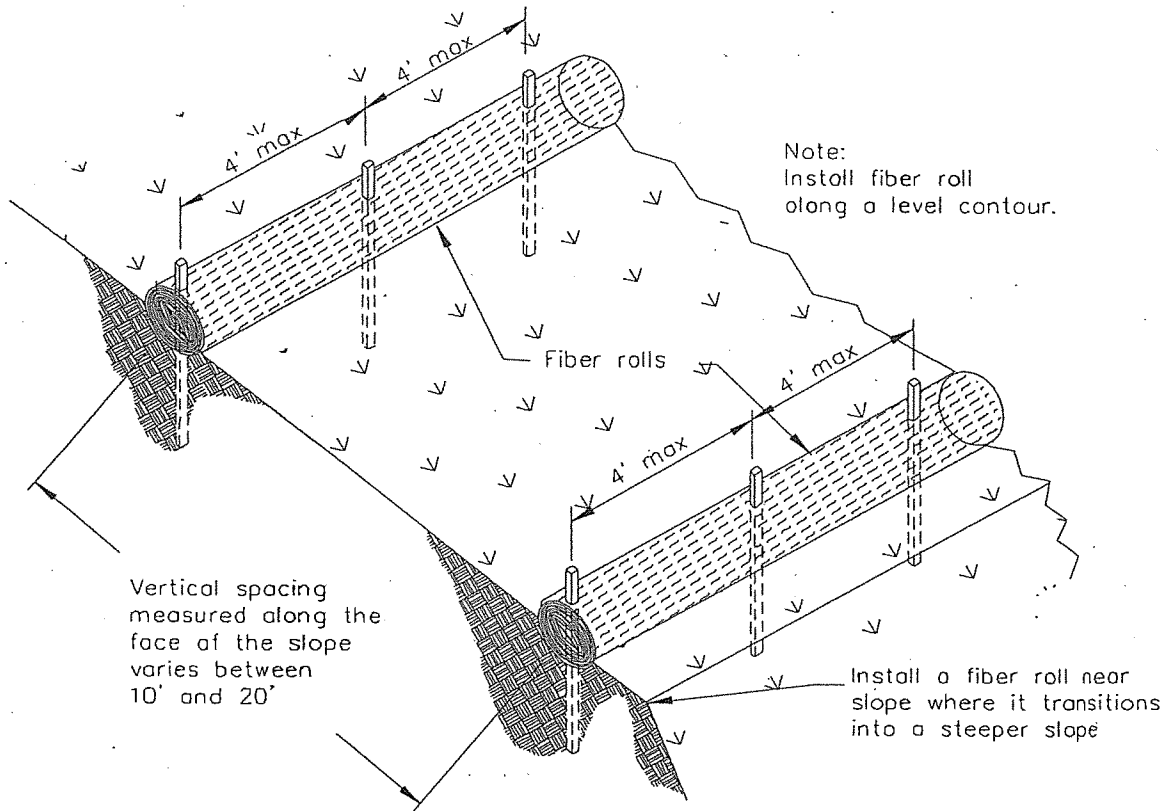
in order to maintain BMP effectiveness. Sediment should be removed when sediment accumulation reaches one-third the designated sediment storage depth.

- If fiber rolls are used for erosion control, such as in a check dam, sediment removal should not be required as long as the system continues to control the grade. Sediment control BMPs will likely be required in conjunction with this type of application.
- Repair any rills or gullies promptly.

References

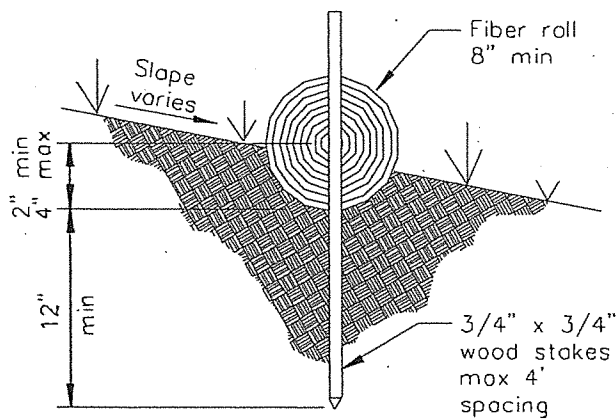
Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Erosion and Sediment Control Manual, Oregon Department of Environmental Quality, February 2005.



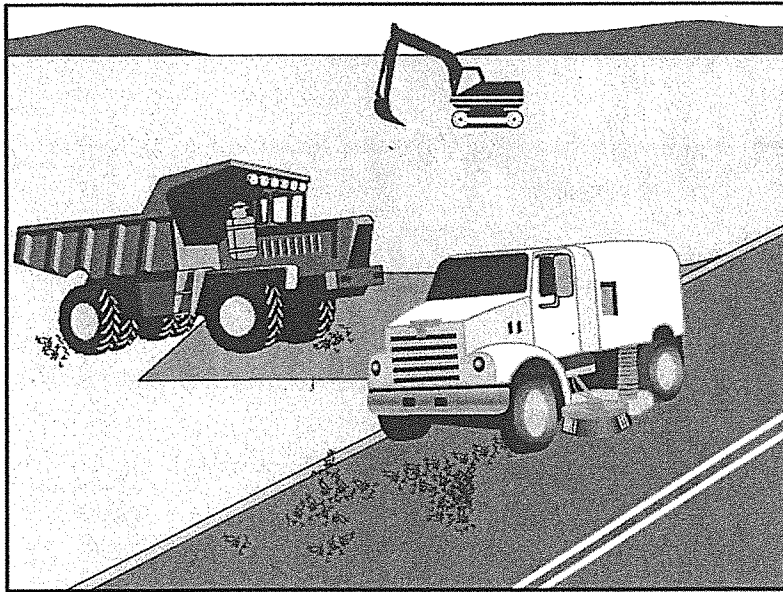
TYPICAL FIBER ROLL INSTALLATION

N.T.S.



ENTRENCHMENT DETAIL

N.T.S.



Description and Purpose

Street sweeping and vacuuming includes use of self-propelled and walk-behind equipment to remove sediment from streets and roadways, and to clean paved surfaces in preparation for final paving. Sweeping and vacuuming prevents sediment from the project site from entering storm drains or receiving waters.

Suitable Applications

Sweeping and vacuuming are suitable anywhere sediment is tracked from the project site onto public or private paved streets and roads, typically at points of egress. Sweeping and vacuuming are also applicable during preparation of paved surfaces for final paving.

Limitations

Sweeping and vacuuming may not be effective when sediment is wet or when tracked soil is caked (caked soil may need to be scraped loose).

Implementation

- Controlling the number of points where vehicles can leave the site will allow sweeping and vacuuming efforts to be focused, and perhaps save money.
- Inspect potential sediment tracking locations daily.
- Visible sediment tracking should be swept or vacuumed on a daily basis.

Objectives

EC	Erosion Control	
SE	Sediment Control	<input checked="" type="checkbox"/>
TR	Tracking Control	<input checked="" type="checkbox"/>
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

- Primary Objective
- Secondary Objective

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	
Trash	<input checked="" type="checkbox"/>
Metals	
Bacteria	
Oil and Grease	<input checked="" type="checkbox"/>
Organics	

Potential Alternatives

None



SE-7 Street Sweeping and Vacuuming

- Do not use kick brooms or sweeper attachments. These tend to spread the dirt rather than remove it.
- If not mixed with debris or trash, consider incorporating the removed sediment back into the project

Costs

Rental rates for self-propelled sweepers vary depending on hopper size and duration of rental. Expect rental rates from \$58/hour (3 yd³ hopper) to \$88/hour (9 yd³ hopper), plus operator costs. Hourly production rates vary with the amount of area to be swept and amount of sediment. Match the hopper size to the area and expect sediment load to minimize time spent dumping.

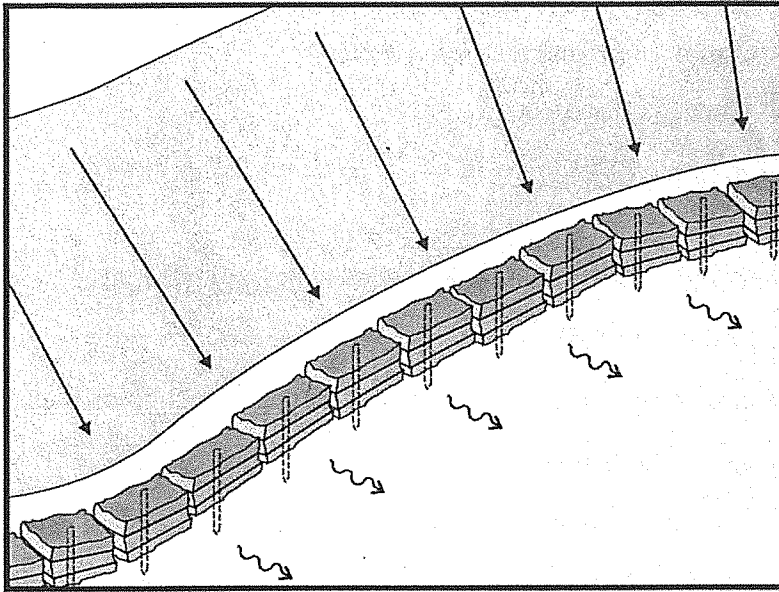
Inspection and Maintenance

- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
- When actively in use, points of ingress and egress must be inspected daily.
- When tracked or spilled sediment is observed outside the construction limits, it must be removed at least daily. More frequent removal, even continuous removal, may be required in some jurisdictions.
- Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
- Adjust brooms frequently; maximize efficiency of sweeping operations.
- After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Labor Surcharge and Equipment Rental Rates, State of California Department of Transportation (Caltrans), April 1, 2002 - March 31, 2003.



Description and Purpose

A straw bale barrier is a series of straw bales placed on a level contour to intercept sheet flows. Straw bale barriers pond sheet-flow runoff, allowing sediment to settle out.

Suitable Applications

Straw bale barriers may be suitable:

- As a linear sediment control measure:
 - Below the toe of slopes and erodible slopes
 - As sediment traps at culvert/pipe outlets
 - Below other small cleared areas
 - Along the perimeter of a site
 - Down slope of exposed soil areas
 - Around temporary stockpiles and spoil areas
 - Parallel to a roadway to keep sediment off paved areas
 - Along streams and channels
- As linear erosion control measure:
 - Along the face and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow

Objectives

EC	Erosion Control	<input checked="" type="checkbox"/>
SE	Sediment Control	<input checked="" type="checkbox"/>
TR	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

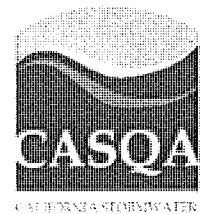
- Primary Objective
- Secondary Objective

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

- SE-1 Silt Fence
- SE-5 Fiber Rolls
- SE-6 Gravel Bag Berm
- SE-8 Sandbag Barrier



- At the top of slopes to divert runoff away from disturbed slopes
- As check dams across mildly sloped construction roads

Limitations

Straw bale barriers:

- Are not to be used for extended periods of time because they tend to rot and fall apart
- Are suitable only for sheet flow on slopes of 10 % or flatter
- Are not appropriate for large drainage areas, limit to one acre or less
- May require constant maintenance due to rotting
- Are not recommended for concentrated flow, inlet protection, channel flow, and live streams
- Cannot be made of bale bindings of jute or cotton
- Require labor-intensive installation and maintenance
- Cannot be used on paved surfaces
- Should not to be used for drain inlet protection
- Should not be used on lined ditches
- May introduce undesirable non-native plants to the area

Implementation

General

A straw bale barrier consists of a row of straw bales placed on a level contour. When appropriately placed, a straw bale barrier intercepts and slows sheet flow runoff, causing temporary ponding. The temporary ponding provides quiescent conditions allowing sediment to settle. Straw bale barriers also interrupt the slope length and thereby reduce erosion by reducing the tendency of sheet flows to concentrate into rivulets, which erode rills, and ultimately gullies, into disturbed, sloped soils.

Straw bale barriers have not been as effective as expected due to improper use. These barriers have been placed in streams and drainage ways where runoff volumes and velocities have caused the barriers to wash out. In addition, failure to stake and entrench the straw bale has allowed undercutting and end flow. Use of straw bale barriers in accordance with this BMP should produce acceptable results.

Design and Layout

- Locate straw bale barriers on a level contour.
 - Slopes up to 10:1 (H:V): Straw bales should be placed at a maximum interval of 50 ft (a closer spacing is more effective), with the first row near the toe of slope.
 - Slopes greater than 10:1 (H:V): Not recommended.

- Turn the ends of the straw bale barrier up slope to prevent runoff from going around the barrier.
- Allow sufficient space up slope from the barrier to allow ponding, and to provide room for sediment storage.
- For installation near the toe of the slope, consider moving the barrier away from the slope toe to facilitate cleaning. To prevent flow behind the barrier, sand bags can be placed perpendicular to the barrier to serve as cross barriers.
- Drainage area should not exceed 1 acre, or 0.25 acre per 100 ft of barrier.
- Maximum flow path to the barrier should be limited to 100 ft.
- Straw bale barriers should consist of two parallel rows.
 - Butt ends of bales tightly
 - Stagger butt joints between front and back row
 - Each row of bales must be trenched in and firmly staked
- Straw bale barriers are limited in height to one bale laid on its side.
- Anchor bales with either two wood stakes or four bars driven through the bale and into the soil. Drive the first stake towards the butt joint with the adjacent bale to force the bales together.
- See attached figure for installation details.

Materials

- **Straw Bale Size:** Each straw bale should be a minimum of 14 in. wide, 18 in. in height, 36 in. in length and should have a minimum mass of 50 lbs. The straw bale should be composed entirely of vegetative matter, except for the binding material.
- **Bale Bindings:** Bales should be bound by steel wire, nylon or polypropylene string placed horizontally. Jute and cotton binding should not be used. Baling wire should be a minimum diameter of 14 gauge. Nylon or polypropylene string should be approximately 12 gauge in diameter with a breaking strength of 80 lbs force.
- **Stakes:** Wood stakes should be commercial quality lumber of the size and shape shown on the plans. Each stake should be free from decay, splits or cracks longer than the thickness of the stake, or other defects that would weaken the stakes and cause the stakes to be structurally unsuitable. Steel bar reinforcement should be equal to a #4 designation or greater. End protection should be provided for any exposed bar reinforcement.

Costs

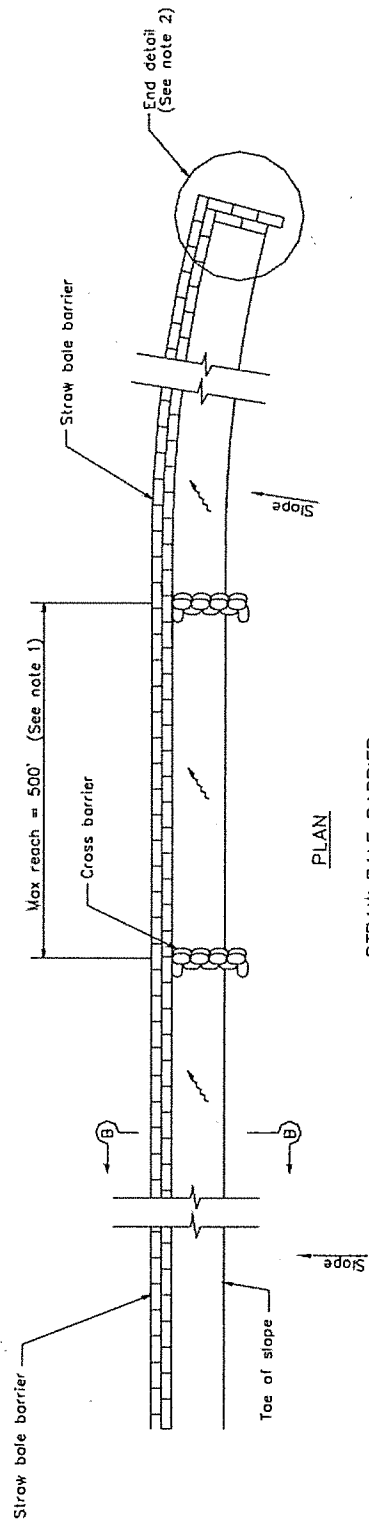
Straw bales cost \$5 - \$7 each. Adequate labor should be budgeted for installation and maintenance.

Inspection and Maintenance***Maintenance***

- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
- Straw bales degrade, especially when exposed to moisture. Rotting bales will need to be replaced on a regular basis.
- Replace or repair damaged bales as needed.
- Repair washouts or other damages as needed.
- Sediment that accumulates in the BMP must be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed at an appropriate location.
- Remove straw bales when no longer needed. Remove sediment accumulation, and clean, re-grade, and stabilize the area. Removed sediment should be incorporated in the project or disposed of.

References

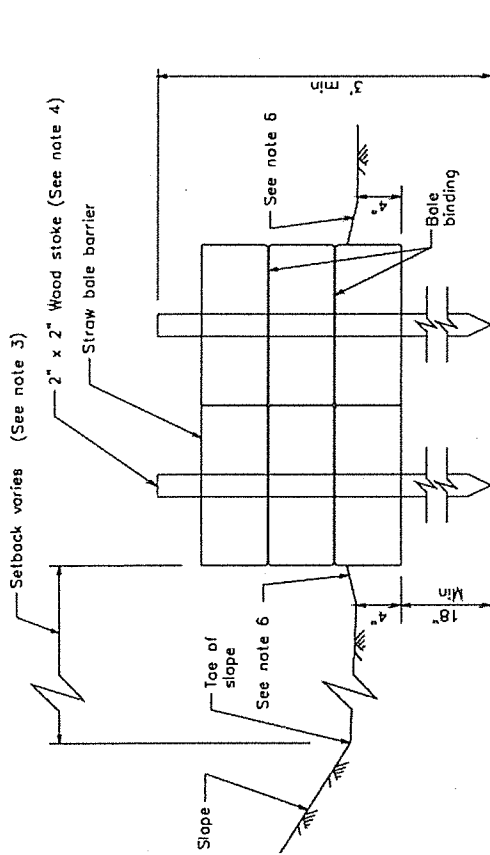
Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.



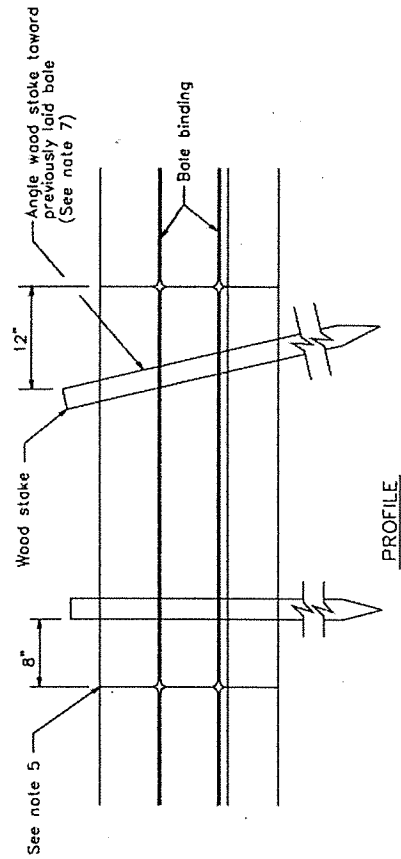
LEGEND
 ~~~~~ DIRECTION OF FLOW

**NOTES**

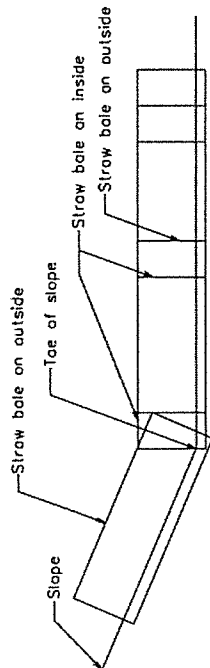
1. Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/2 the height of the linear barrier. In no case shall the reach length exceed 500'.
2. The end of barrier shall be turned up slope.
3. Dimension may vary to fit field condition.
4. Stake dimensions are nominal.
5. Place straw bales tightly together.
6. Tamp embedment spoils against sides of installed bales.
7. Drive angled wood stake before vertical stake to ensure tight abutment to adjacent bale.
8. Sandbag cross barriers should be a min of 1/2 and a max of 2/3 the height of the linear barrier.
9. Sandbag rows and layers should be offset to eliminate gaps.



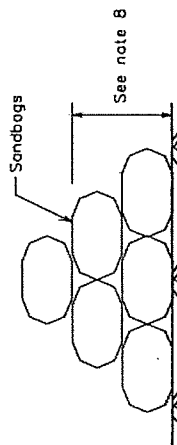
SECTION B-B



LEGEND  
 ~~~~~ DIRECTION OF FLOW



END DETAIL



SANDBAG CROSS BARRIER



Description and Purpose

Biofilter bags, or bio-bags, are a multi-purpose sediment control BMP consisting of a plastic mesh bag filled with 100% recycled wood product waste. Biofilter bags come in a variety of sizes (30" x 18" and 30" x 9" being common) and generally have between 1-2 cubic yards of recycled wood waste (or wood chips). Biofilter bags work by detaining flow and allowing a slow rate of discharge through the wood media. This action removes suspended sediment through gravity settling of the detained water and filtration within the bag.

Suitable Applications

Biofilter bags are a short-term BMP that can be rapidly deployed, maintained, and replaced. Biofilter bags can be an effective short-term solution to place in developed rills to prevent further erosion until permanent measures can be established. Suitable short-term applications include:

- As a linear sediment control measure:
 - Below the toe of slopes and erodible slopes
 - Below other small cleared areas
 - Along the perimeter of a site (with low-expected flow)
 - Down slope of exposed soil areas
 - Around temporary stockpiles and spoil areas
 - Parallel to a roadway to keep sediment off paved areas

Categories

| | | |
|----|--|-------------------------------------|
| EC | Erosion Control | |
| SE | Sediment Control | <input checked="" type="checkbox"/> |
| TR | Tracking Control | |
| WE | Wind Erosion Control | |
| NS | Non-Stormwater Management Control | |
| WM | Waste Management and Materials Pollution Control | |

Legend:

- Primary Category
- Secondary Category

Targeted Constituents

| | |
|----------------|-------------------------------------|
| Sediment | <input checked="" type="checkbox"/> |
| Nutrients | |
| Trash | |
| Metals | |
| Bacteria | |
| Oil and Grease | |
| Organics | |

Potential Alternatives

- SE-1 Silt Fence
- SE-4 Check Dams
- SE-5 Fiber Roll
- SE-6 Gravel Bag Berm
- SE-8 Sandbag Barrier
- SE-10 Storm Drain Inlet Protection

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- Along streams and channels
- As linear erosion control measure:
 - Along the face and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow
 - At the top of slopes to divert runoff away from disturbed slopes
 - As check dams across mildly sloped construction roads
- Inlet Protection (See SE-10)
- Supplement to silt fences or other sediment control devices

Limitations

- Short life-span (maximum usefulness of 2-3 months and should be replaced more frequently if needed); regular maintenance and replacement required to ensure effectiveness. Bags will rapidly fill with sediment and reduce permeability.
- Easily damaged by construction vehicles.
- If not properly staked, will fail on slope applications.
- If improperly installed can allow undercutting or side-cutting flow.
- Not effective where water velocities or volumes are high.
- Potentially buoyant and easily displaced if not properly installed.

Implementation

General

Biofilter bags are a relatively low cost temporary BMP that are easily deployed and have a simple installation that can be performed by hand. Without proper installation, however, biofilter bags can fail due to their light weight, potential displacement, and multiple joint locations. One of the benefits of utilizing biofilter bags is that the media (wood-product) can be recycled or used onsite when no longer needed (where acceptable).

Design and Layout – Linear control

- Locate biofilter bags on level contours.
 - Slopes between 20:1 and 4:1 (H:V): Biofilter bags should be placed at a maximum interval of 20 ft, with the first row near the slope toe.
 - Slopes between 4:1 and 2:1 (H:V): Biofilter bags should be placed at a maximum interval of 15 ft, with the first row near the slope toe.
 - Slopes 2:1 (H:V) or steeper: Biofilter bags should be placed at a maximum interval of 10 ft., with the first row placed the slope toe.

- Turn the ends of the biofilter bag barriers up slope to prevent runoff from going around the berm.
- Allow sufficient space up slope from the biofilter bag berm to allow ponding, and to provide room for sediment storage.
- Stake biofilter bags into a 1 to 2 in. deep trench with a width equal to the bag.
 - Drive one stake at each end of the bag.
 - Use wood stakes with a nominal classification of 0.75 by 0.75 in. and minimum length of 24 in.
- Biofilter bags should be overlapped (6 in.), not abutted.

Costs

Pre-filled biofilter bags cost approximately \$2.50-\$3.50 per bag, dependent upon size.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Biofilter bags exposed to sunlight will need to be replaced every two to three months due to degrading of the bags.
- Reshape or replace biofilter bags as needed.
- Repair washouts or other damage as needed.
- Sediment that is retained by the BMP should be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height.
- Remove biofilter bag berms when no longer needed. Remove sediment accumulation and clean, re-grade, and stabilize the area. Biofilter media may be used on-site, if allowed.

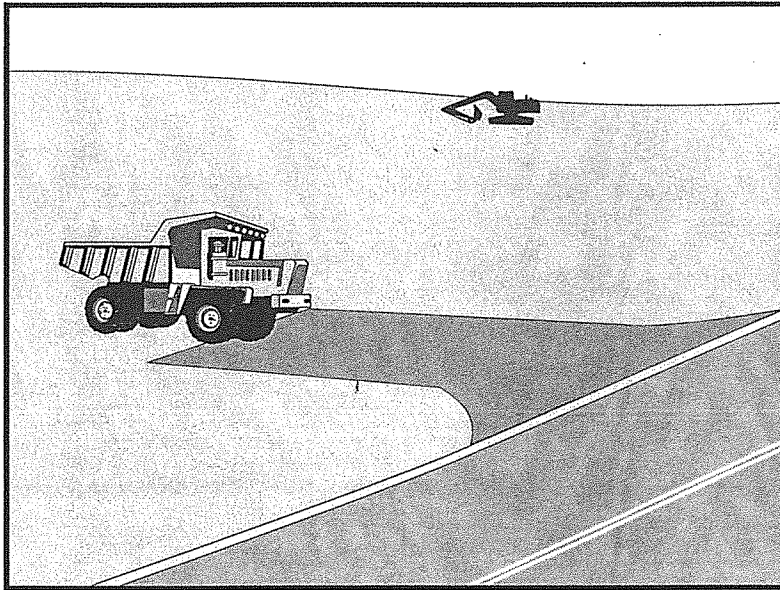
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Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Stabilized Construction Entrance/Exit TC-1



Categories

| | | |
|----|--|-------------------------------------|
| EC | Erosion Control | <input checked="" type="checkbox"/> |
| SE | Sediment Control | <input checked="" type="checkbox"/> |
| TC | Tracking Control | <input checked="" type="checkbox"/> |
| WE | Wind Erosion Control | |
| NS | Non-Stormwater Management Control | |
| WM | Waste Management and Materials Pollution Control | |

Legend:

- Primary Objective
- Secondary Objective

Description and Purpose

A stabilized construction access is defined by a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.

Suitable Applications

Use at construction sites:

- Where dirt or mud can be tracked onto public roads.
- Adjacent to water bodies.
- Where poor soils are encountered.
- Where dust is a problem during dry weather conditions.

Limitations

- Entrances and exits require periodic top dressing with additional stones.
- This BMP should be used in conjunction with street sweeping on adjacent public right of way.
- Entrances and exits should be constructed on level ground only.
- Stabilized construction entrances are rather expensive to construct and when a wash rack is included, a sediment trap of some kind must also be provided to collect wash water

Targeted Constituents

| | |
|----------------|-------------------------------------|
| Sediment | <input checked="" type="checkbox"/> |
| Nutrients | |
| Trash | |
| Metals | |
| Bacteria | |
| Oil and Grease | |
| Organics | |

Potential Alternatives

None



Stabilized Construction Entrance/Exit TC-1

runoff.

Implementation

General

A stabilized construction entrance is a pad of aggregate underlain with filter cloth located at any point where traffic will be entering or leaving a construction site to or from a public right of way, street, alley, sidewalk, or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public rights of way or streets. Reducing tracking of sediments and other pollutants onto paved roads helps prevent deposition of sediments into local storm drains and production of airborne dust.

Where traffic will be entering or leaving the construction site, a stabilized construction entrance should be used. NPDES permits require that appropriate measures be implemented to prevent tracking of sediments onto paved roadways, where a significant source of sediments is derived from mud and dirt carried out from unpaved roads and construction sites.

Stabilized construction entrances are moderately effective in removing sediment from equipment leaving a construction site. The entrance should be built on level ground. Advantages of the Stabilized Construction Entrance/Exit is that it does remove some sediment from equipment and serves to channel construction traffic in and out of the site at specified locations. Efficiency is greatly increased when a washing rack is included as part of a stabilized construction entrance/exit.

Design and Layout

- Construct on level ground where possible.
- Select 3 to 6 in. diameter stones.
- Use minimum depth of stones of 12 in. or as recommended by soils engineer.
- Construct length of 50 ft minimum, and 30 ft minimum width.
- Rumble racks constructed of steel panels with ridges and installed in the stabilized entrance/exit will help remove additional sediment and to keep adjacent streets clean.
- Provide ample turning radii as part of the entrance.
- Limit the points of entrance/exit to the construction site.
- Limit speed of vehicles to control dust.
- Properly grade each construction entrance/exit to prevent runoff from leaving the construction site.
- Route runoff from stabilized entrances/exits through a sediment trapping device before discharge.
- Design stabilized entrance/exit to support heaviest vehicles and equipment that will use it.

Stabilized Construction Entrance/Exit TC-1

- Select construction access stabilization (aggregate, asphaltic concrete, concrete) based on longevity, required performance, and site conditions. Do not use asphalt concrete (AC) grindings for stabilized construction access/roadway.
- If aggregate is selected, place crushed aggregate over geotextile fabric to at least 12 in. depth, or place aggregate to a depth recommended by a geotechnical engineer. A crushed aggregate greater than 3 in. but smaller than 6 in. should be used.
- Designate combination or single purpose entrances and exits to the construction site.
- Require that all employees, subcontractors, and suppliers utilize the stabilized construction access.
- Implement SE-7, Street Sweeping and Vacuuming, as needed.
- All exit locations intended to be used for more than a two-week period should have stabilized construction entrance/exit BMPs.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMPs are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect local roads adjacent to the site daily. Sweep or vacuum to remove visible accumulated sediment.
- Remove aggregate, separate and dispose of sediment if construction entrance/exit is clogged with sediment.
- Keep all temporary roadway ditches clear.
- Check for damage and repair as needed.
- Replace gravel material when surface voids are visible.
- Remove all sediment deposited on paved roadways within 24 hours.
- Remove gravel and filter fabric at completion of construction

Costs

Average annual cost for installation and maintenance may vary from \$1,200 to \$4,800 each, averaging \$2,400 per entrance. Costs will increase with addition of washing rack, and sediment trap. With wash rack, costs range from \$1,200 - \$6,000 each, averaging \$3,600 per entrance.

References

Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

Stabilized Construction Entrance/Exit TC-1

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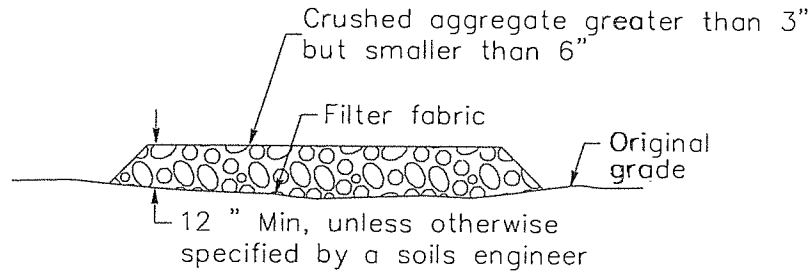
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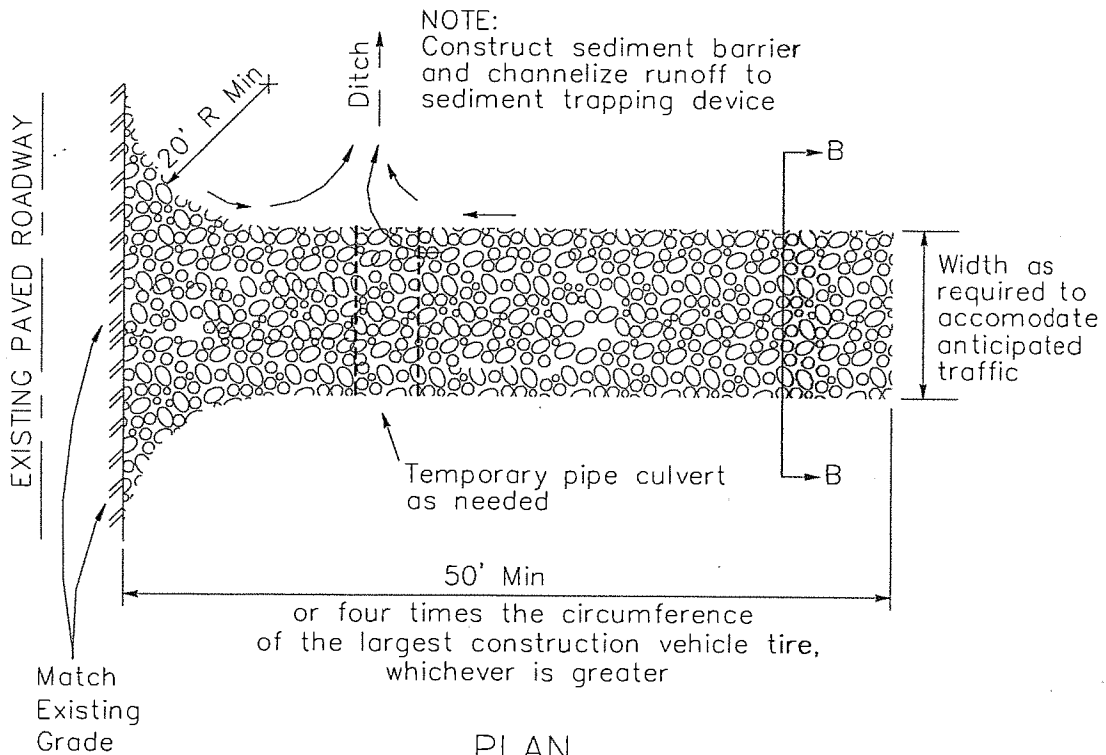
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Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.

Stabilized Construction Entrance/Exit TC-1

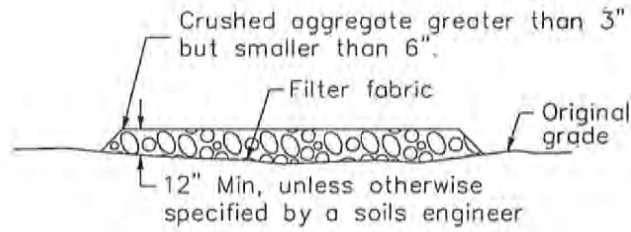


SECTION B-B
NTS

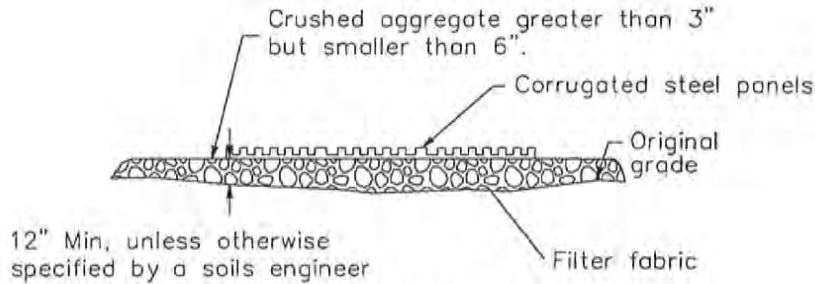


PLAN
NTS

Stabilized Construction Entrance/Exit TC-1

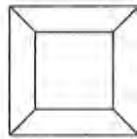


SECTION B-B
NTS

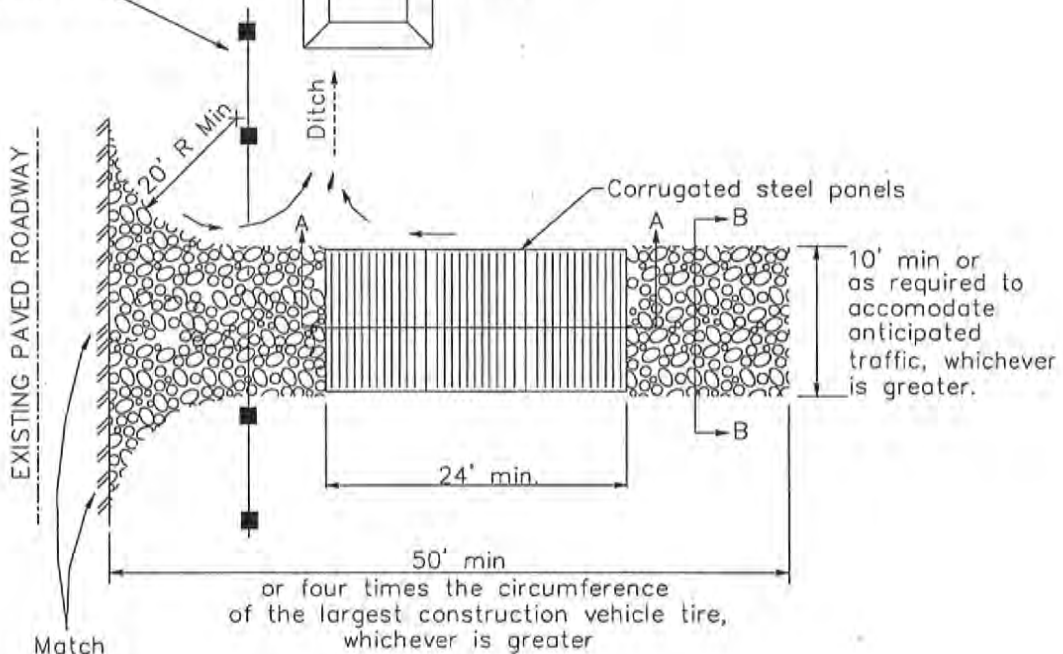


SECTION A-A
NOT TO SCALE

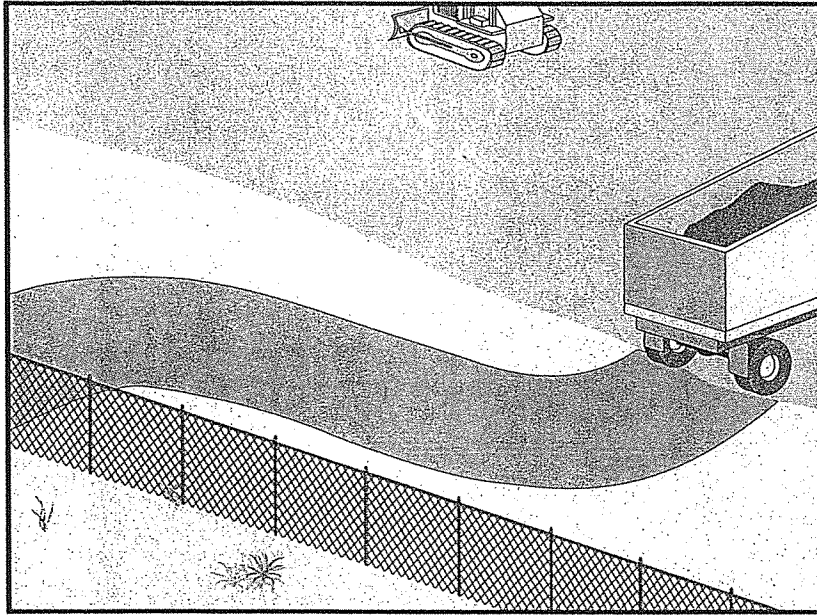
NOTE:
Construct sediment barrier and channelize runoff to sediment trapping device



Sediment trapping device



PLAN
NTS



Description and Purpose

Access roads, subdivision roads, parking areas, and other onsite vehicle transportation routes should be stabilized immediately after grading, and frequently maintained to prevent erosion and control dust.

Suitable Applications

This BMP should be applied for the following conditions:

- Temporary Construction Traffic:
 - Phased construction projects and offsite road access
 - Construction during wet weather
- Construction roadways and detour roads:
 - Where mud tracking is a problem during wet weather
 - Where dust is a problem during dry weather
 - Adjacent to water bodies
 - Where poor soils are encountered

Limitations

- The roadway must be removed or paved when construction is complete.
- Certain chemical stabilization methods may cause stormwater or soil pollution and should not be used. See WE-1, Wind Erosion Control.

Categories

| | | |
|----|--|-------------------------------------|
| EC | Erosion Control | <input checked="" type="checkbox"/> |
| SE | Sediment Control | <input checked="" type="checkbox"/> |
| TC | Tracking Control | <input checked="" type="checkbox"/> |
| WE | Wind Erosion Control | |
| NS | Non-Stormwater Management Control | |
| WM | Waste Management and Materials Pollution Control | |

Legend:

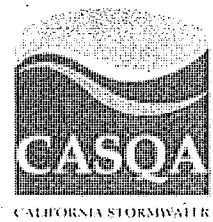
- Primary Objective
- Secondary Objective

Targeted Constituents

| | |
|----------------|-------------------------------------|
| Sediment | <input checked="" type="checkbox"/> |
| Nutrients | |
| Trash | |
| Metals | |
| Bacteria | |
| Oil and Grease | |
| Organics | |

Potential Alternatives

None



- Management of construction traffic is subject to air quality control measures. Contact the local air quality management agency.
- Materials will likely need to be removed prior to final project grading and stabilization.
- Use of this BMP may not be applicable to very short duration projects.

Implementation

General

Areas that are graded for construction vehicle transport and parking purposes are especially susceptible to erosion and dust. The exposed soil surface is continually disturbed, leaving no opportunity for vegetative stabilization. Such areas also tend to collect and transport runoff waters along their surfaces. During wet weather, they often become muddy quagmires that generate significant quantities of sediment that may pollute nearby streams or be transported offsite on the wheels of construction vehicles. Dirt roads can become so unstable during wet weather that they are virtually unusable.

Efficient construction road stabilization not only reduces onsite erosion but also can significantly speed onsite work, avoid instances of immobilized machinery and delivery vehicles, and generally improve site efficiency and working conditions during adverse weather

Installation/Application Criteria

Permanent roads and parking areas should be paved as soon as possible after grading. As an alternative where construction will be phased, the early application of gravel or chemical stabilization may solve potential erosion and stability problems. Temporary gravel roadway should be considered during the rainy season and on slopes greater than 5%.

Temporary roads should follow the contour of the natural terrain to the maximum extent possible. Slope should not exceed 15%. Roadways should be carefully graded to drain transversely. Provide drainage swales on each side of the roadway in the case of a crowned section or one side in the case of a super elevated section. Simple gravel berms without a trench can also be used.

Installed inlets should be protected to prevent sediment laden water from entering the storm sewer system (SE-10, Storm Drain Inlet Protection). In addition, the following criteria should be considered.

- Road should follow topographic contours to reduce erosion of the roadway.
- The roadway slope should not exceed 15%.
- Chemical stabilizers or water are usually required on gravel or dirt roads to prevent dust (WE-1, Wind Erosion Control).
- Properly grade roadway to prevent runoff from leaving the construction site.
- Design stabilized access to support heaviest vehicles and equipment that will use it.

- Stabilize roadway using aggregate, asphalt concrete, or concrete based on longevity, required performance, and site conditions. The use of cold mix asphalt or asphalt concrete (AC) grindings for stabilized construction roadway is not allowed.
- Coordinate materials with those used for stabilized construction entrance/exit points.
- If aggregate is selected, place crushed aggregate over geotextile fabric to at least 12 in. depth. A crushed aggregate greater than 3 in. but smaller than 6 in. should be used.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, impact weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued BMP implementation.
- Keep all temporary roadway ditches clear.
- When no longer required, remove stabilized construction roadway and re-grade and repair slopes.
- Periodically apply additional aggregate on gravel roads.
- Active dirt construction roads are commonly watered three or more times per day during the dry season.

Costs

Gravel construction roads are moderately expensive, but cost is often balanced by reductions in construction delay. No additional costs for dust control on construction roads should be required above that needed to meet local air quality requirements.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Coastal Nonpoint Pollution Control Program; Program Development and Approval Guidance, Working Group, Working Paper; USEPA, April 1992.

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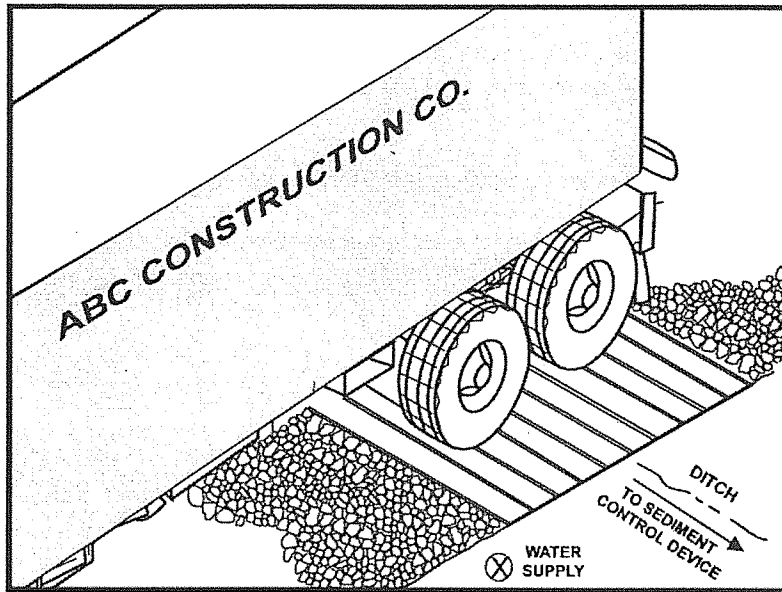
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Virginia Erosion and Sedimentation Control Handbook, Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation, 1991.

Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.



Objectives

| | | |
|----|--|-------------------------------------|
| EC | Erosion Control | |
| SE | Sediment Control | <input checked="" type="checkbox"/> |
| TC | Tracking Control | <input checked="" type="checkbox"/> |
| WE | Wind Erosion Control | |
| NS | Non-Stormwater Management Control | |
| WM | Waste Management and Materials Pollution Control | |

Legend:

- Primary Objective
- Secondary Objective

Description and Purpose

A tire wash is an area located at stabilized construction access points to remove sediment from tires and under carriages and to prevent sediment from being transported onto public roadways.

Suitable Applications

Tire washes may be used on construction sites where dirt and mud tracking onto public roads by construction vehicles may occur.

Limitations

- The tire wash requires a supply of wash water.
- A turnout or doublewide exit is required to avoid having entering vehicles drive through the wash area.
- Do not use where wet tire trucks leaving the site leave the road dangerously slick.

Implementation

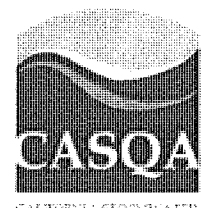
- Incorporate with a stabilized construction entrance/exit. See TC-1, Stabilized Construction Entrance/Exit.
- Construct on level ground when possible, on a pad of coarse aggregate greater than 3 in. but smaller than 6 in. A geotextile fabric should be placed below the aggregate.
- Wash rack should be designed and constructed/manufactured for anticipated traffic loads.

Targeted Constituents

| | |
|----------------|-------------------------------------|
| Sediment | <input checked="" type="checkbox"/> |
| Nutrients | |
| Trash | |
| Metals | |
| Bacteria | |
| Oil and Grease | |
| Organics | |

Potential Alternatives

TC-1 Stabilized Construction Entrance/Exit



- Provide a drainage ditch that will convey the runoff from the wash area to a sediment trapping device. The drainage ditch should be of sufficient grade, width, and depth to carry the wash runoff.
- Use hoses with automatic shutoff nozzles to prevent hoses from being left on.
- Require that all employees, subcontractors, and others that leave the site with mud caked tires and undercarriages to use the wash facility.
- Implement SC-7, Street Sweeping and Vacuuming, as needed.

Costs

Costs are low for installation of wash rack.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur.
- Remove accumulated sediment in wash rack and/or sediment trap to maintain system performance.
- Inspect routinely for damage and repair as needed.

References

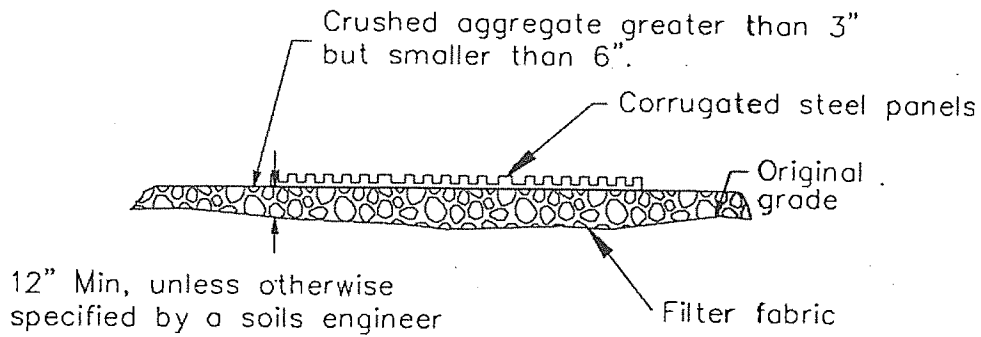
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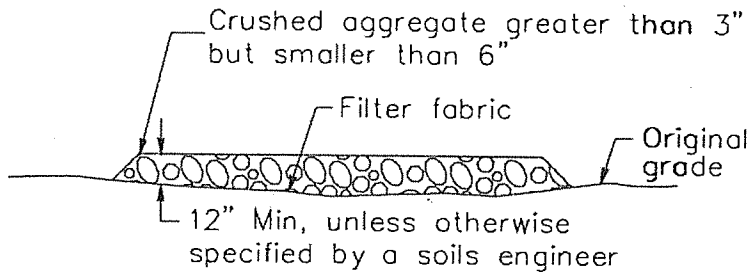
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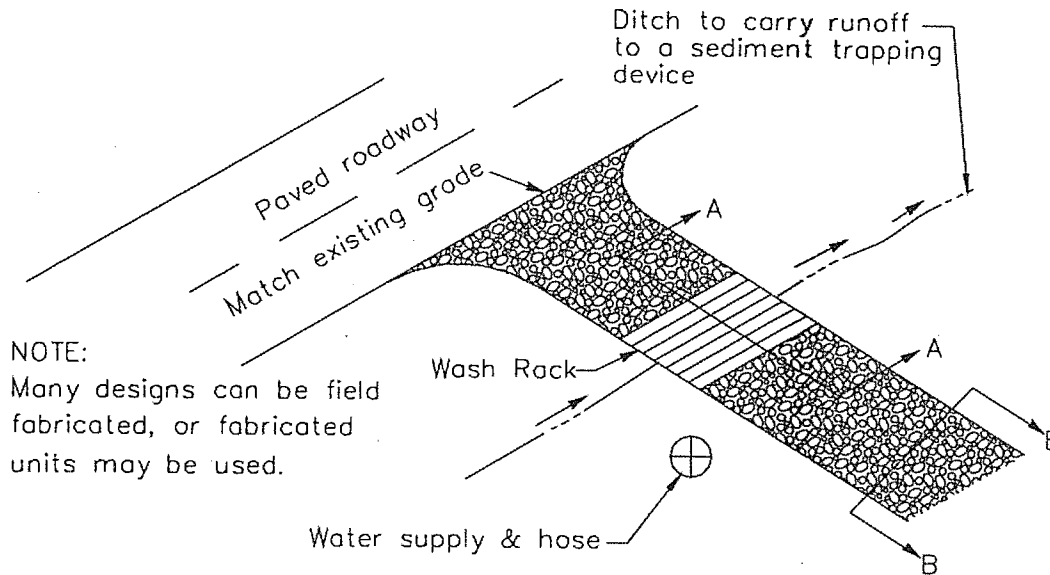
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SECTION A-A
NOT TO SCALE



SECTION B-B
NTS



TYPICAL TIRE WASH
NOT TO SCALE

General Description

Dry extended detention ponds (a.k.a. dry ponds, extended detention basins, detention ponds, extended detention ponds) are basins whose outlets have been designed to draw down the stormwater runoff from a water quality design storm for some minimum time (e.g., 48 hours) to allow particles and associated pollutants to settle. Unlike wet ponds, these facilities do not have a large permanent pool. They can also be used to provide flood control by including additional flood detention storage. Considerable stormwater volume reduction can also occur, depending on the infiltration capacity of the subsoil.

Inspection/Maintenance Considerations

Inspections should be conducted semi-annually and after significant storm events to identify potential problems early. Most maintenance efforts will need to be directed toward vegetation management and vector control, which may focus on basic housekeeping practices such as removal of debris accumulations and vegetation management to ensure that the basin dewater completely (recommended 48 hour residence time or less) to prevent creating mosquito and other vector habitats.

If infiltration is desired for stormwater reduction, the following additional maintenance may be required to maintain infiltrative capacity:

- Mechanically de-thatching and/or aerating the top soils along the sides and bottom of the basin;
- Tilling or dicing to scarify the bottom of the basin; and
- Maintaining adequate vegetative cover.

Advanced BMPs Covered



Maintenance Concerns

- *Accumulation of Metals and Toxics*
- *Clogged Soil Outlet Structures*
- *Vegetation/Landscape Maintenance*
- *Erosion*
- *Vector Control*

Targeted Constituents

| | |
|-----------------------|---|
| <i>Sediment</i> | ▲ |
| <i>Nutrients</i> | ● |
| <i>Trash</i> | ■ |
| <i>Metals</i> | ▲ |
| <i>Bacteria</i> | ▲ |
| <i>Oil and Grease</i> | ▲ |
| <i>Organics</i> | ▲ |

Legend (Removal Effectiveness)

- Low ■ High ▲ Medium
- * Requires Pretreatment

Note: The removal effectiveness ratings shown in the table are for properly designed, sited, and maintained BMPs; some configurations will have variations in pollutant effectiveness.



Extended Detention Basin

TC-22

Refer to TC-11 Infiltration Basin for further information.

| Inspection Activities | Suggested Frequency |
|---|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> Inspect after several storm events for bank stability, vegetation growth, and to determine if the desired residence time has been achieved. <input type="checkbox"/> Inspect outlet structure for evidence of clogging or outflow release velocities that are greater than design flow. | Post construction |
| <ul style="list-style-type: none"> <input type="checkbox"/> Inspect for the following issues: differential settlement, cracking, erosion of pond banks or bottom, leakage, tree growth on the embankment, the condition of the riprap in the inlet, clogging of outlet and pilot channels, standing water, slope stability, presence of burrows, sediment accumulation in the basin, forebay, and outlet structures, trash and debris, and the vigor and density of vegetation on the basin side slopes and floor. | Semi-annual, after significant storms, or more frequent |
| <ul style="list-style-type: none"> <input type="checkbox"/> Inspect for the following issues: subsidence, damage to the emergency spillway, inadequacy of the inlet/outlet channel erosion control measures, changes in the condition of the pilot channel, accumulated sediment volume, and semi-annual inspection items. | Annual |
| <ul style="list-style-type: none"> <input type="checkbox"/> During inspections, changes to the extended storage pond or the contributing watershed should be noted, as these may affect basin performance. | Annual inspection |
| Maintenance Activities | Suggested Frequency |
| <ul style="list-style-type: none"> <input type="checkbox"/> If necessary, modify the outlet orifice to achieve design values if inspection indicates modifications are necessary. <input type="checkbox"/> Repair undercut or eroded areas. <input type="checkbox"/> Mow side slopes for aesthetics and to remove woody debris that reduces storage volume. <input type="checkbox"/> Maintain vegetation in and around basin to prevent any erosion and minimize aesthetic concerns. Minimize use of fertilizers and pesticides. Reseed if necessary. <input type="checkbox"/> Remove litter and debris. <input type="checkbox"/> Make structural changes or repairs as needed to eliminate pools of water that stand longer than 96 hrs to prevent mosquito production, particularly during the warmer months of the year. Identify and eliminate sources of non-stormwater runoff that feed standing water pools. Coordinate with the local mosquito and vector control agency to control mosquitoes, if necessary. | Standard Maintenance (As needed) |
| <ul style="list-style-type: none"> <input type="checkbox"/> Remove accumulated trash and debris from the basin, around the riser pipe, side slopes, embankment, emergency spillway, and outflow trash racks. The frequency of this activity may be altered to meet specific site conditions. <input type="checkbox"/> Trim vegetation at the beginning and end of the wet season to prevent establishment of woody vegetation and for aesthetic and vector reasons. | Semi-annual, or more frequent, as needed |
| <ul style="list-style-type: none"> <input type="checkbox"/> Seed or sod to restore dead or damaged ground cover. <input type="checkbox"/> Repair erosion to banks and bottom as required. | Annual maintenance (as needed) |
| <ul style="list-style-type: none"> <input type="checkbox"/> Supplement vegetation if a significant portion have not been established (at least 50% of the surface area). <input type="checkbox"/> Remove nuisance plant species. | Annual maintenance (if needed) |
| <ul style="list-style-type: none"> <input type="checkbox"/> Remove sediment from the forebay to reduce frequency of main basin cleaning. | 3- to 5-year |

| | |
|---|-------------------|
| <input type="checkbox"/> Remove sediment from the basin bottom and thatch, aerate, or scarify soils to maintain infiltrative capacity. | maintenance |
| <input type="checkbox"/> Monitor sediment accumulation and remove accumulated sediment and regrade about every 10 years or when the accumulated sediment volume exceeds 10-20% of the basin volume, or when accumulation reaches 6 inches or if resuspension is observed. Clean in early spring so vegetation damaged during cleaning has time to re-establish. | Every 10-25 years |

Additional Information

In most cases, surface sediment removed from an extended detention basin during periodic maintenance to restore capacity does not contain toxic materials (e/g metals, oil and grease, or organics) at levels posing a hazardous concern. Studies to date indicate that pond sediments are generally below toxicity limits and can be safely landfilled or disposed onsite. Onsite sediment disposal is always preferable (if local authorities permit) as long as the sediments are deposited away from the perimeter to prevent their reentry into the basin. Sediments should be tested for toxic materials in compliance with current landfill requirements and disposed of properly.

Special considerations are required for extended detention basins to be effective in cold climates. Refer to the Stormwater Managers Resource Center for more information.

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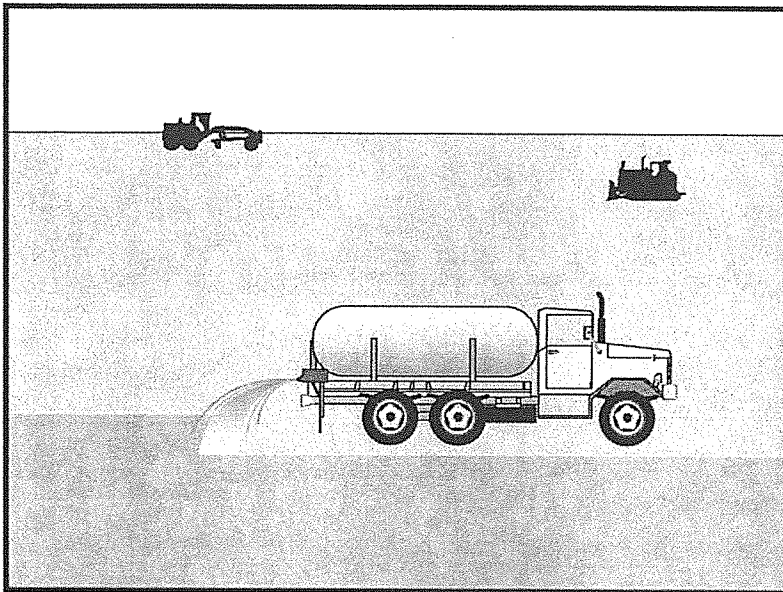
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Description and Purpose

Wind erosion or dust control consists of applying water or other dust palliatives as necessary to prevent or alleviate dust nuisance generated by construction activities. Covering small stockpiles or areas is an alternative to applying water or other dust palliatives.

Suitable Applications

Wind erosion control BMPs are suitable during the following construction activities:

- Construction vehicle traffic on unpaved roads
- Drilling and blasting activities
- Sediment tracking onto paved roads
- Soils and debris storage piles
- Batch drop from front-end loaders
- Areas with unstabilized soil
- Final grading/site stabilization

Limitations

- Watering prevents dust only for a short period and should be applied daily (or more often) to be effective.
- Over watering may cause erosion.

Objectives

| | | |
|----|--|-------------------------------------|
| EC | Erosion Control | |
| SE | Sediment Control | <input checked="" type="checkbox"/> |
| TC | Tracking Control | |
| WE | Wind Erosion Control | <input checked="" type="checkbox"/> |
| NS | Non-Stormwater Management Control | |
| WM | Waste Management and Materials Pollution Control | |

Legend:

- Primary Objective
- Secondary Objective

Targeted Constituents

| | |
|----------------|-------------------------------------|
| Sediment | <input checked="" type="checkbox"/> |
| Nutrients | |
| Trash | |
| Metals | |
| Bacteria | |
| Oil and Grease | |
| Organics | |

Potential Alternatives

None



- Oil or oil-treated subgrade should not be used for dust control because the oil may migrate into drainageways and/or seep into the soil.
- Effectiveness depends on soil, temperature, humidity, and wind velocity.
- Chemically treated sub grades may make the soil water repellant, interfering with long-term infiltration and the vegetation/re-vegetation of the site. Some chemical dust suppressants may be subject to freezing and may contain solvents and should be handled properly.
- Asphalt, as a mulch tack or chemical mulch, requires a 24-hour curing time to avoid adherence to equipment, worker shoes, etc. Application should be limited because asphalt surfacing may eventually migrate into the drainage system.
- In compacted areas, watering and other liquid dust control measures may wash sediment or other constituents into the drainage system.

Implementation

General

California's Mediterranean climate, with short wet seasons and long hot dry seasons, allows the soils to thoroughly dry out. During these dry seasons, construction activities are at their peak, and disturbed and exposed areas are increasingly subject to wind erosion, sediment tracking and dust generated by construction equipment.

Dust control, as a BMP, is a practice that is already in place for many construction activities. Los Angeles, the North Coast, and Sacramento, among others, have enacted dust control ordinances for construction activities that cause dust to be transported beyond the construction project property line.

Recently, the State Air Resources Control Board has, under the authority of the Clean Air Act, started to address air quality in relation to inhalable particulate matter less than 10 microns (PM-10). Approximately 90 percent of these small particles are considered to be dust. Existing dust control regulations by local agencies, municipal departments, public works department, and public health departments are in place in some regions within California.

Many local agencies require dust control in order to comply with local nuisance laws, opacity laws (visibility impairment) and the requirements of the Clean Air Act. The following are measures that local agencies may have already implemented as requirements for dust control from contractors:

- Construction and Grading Permits: Require provisions for dust control plans.
- Opacity Emission Limits: Enforce compliance with California air pollution control laws.
- Increase Overall Enforcement Activities: Priority given to cases involving citizen complaints.
- Maintain Field Application Records: Require records of dust control measures from contractor;
- Stormwater Pollution Prevention Plan: (SWPPP): Integrate dust control measures into SWPPP.

Dust Control Practices

Dust control BMPs generally stabilize exposed surfaces and minimize activities that suspend or track dust particles. The following table shows dust control practices that can be applied to site conditions that cause dust. For heavily traveled and disturbed areas, wet suppression (watering), chemical dust suppression, gravel asphalt surfacing, temporary gravel construction entrances, equipment wash-out areas, and haul truck covers can be employed as dust control applications. Permanent or temporary vegetation and mulching can be employed for areas of occasional or no construction traffic. Preventive measures would include minimizing surface areas to be disturbed, limiting onsite vehicle traffic to 15 mph, and controlling the number and activity of vehicles on a site at any given time.

| SITE CONDITION | DUST CONTROL PRACTICES | | | | | | | | |
|--|------------------------|----------|----------------------------|---------------------------|-------------------|-------------|---|-------------------|-----------------------------------|
| | Permanent Vegetation | Mulching | Wet Suppression (Watering) | Chemical Dust Suppression | Gravel or Asphalt | Silt Fences | Temporary Gravel Construction Entrances/Equipment Wash Down | Haul Truck Covers | Minimize Extent of Disturbed Area |
| Disturbed Areas not Subject to Traffic | X | X | X | X | X | | | | X |
| Disturbed Areas Subject to Traffic | | | X | X | X | | X | | X |
| Material Stock Pile Stabilization | | | X | X | | X | | | X |
| Demolition | | | X | | | | X | X | |
| Clearing/Excavation | | | X | X | | X | | | X |
| Truck Traffic on Unpaved Roads | | | X | X | X | | X | X | |
| Mud/Dirt Carry Out | | | | | X | | X | | |

Additional preventive measures include:

- Schedule construction activities to minimize exposed area (EC-1, Scheduling).
- Quickly stabilize exposed soils using vegetation, mulching, spray-on adhesives, calcium chloride, sprinkling, and stone/gravel layering.
- Identify and stabilize key access points prior to commencement of construction.
- Minimize the impact of dust by anticipating the direction of prevailing winds.
- Direct most construction traffic to stabilized roadways within the project site.
- Water should be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles that will ensure even distribution.
- All distribution equipment should be equipped with a positive means of shutoff.
- Unless water is applied by means of pipelines, at least one mobile unit should be available at all times to apply water or dust palliative to the project.

- If reclaimed waste water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the Regional Water Quality Control Board requirements. Non-potable water should not be conveyed in tanks or drain pipes that will be used to convey potable water and there should be no connection between potable and non-potable supplies. Non-potable tanks, pipes, and other conveyances should be marked, "NON-POTABLE WATER - DO NOT DRINK."
- Materials applied as temporary soil stabilizers and soil binders also generally provide wind erosion control benefits.
- Pave or chemically stabilize access points where unpaved traffic surfaces adjoin paved roads.
- Provide covers for haul trucks transporting materials that contribute to dust.
- Provide for wet suppression or chemical stabilization of exposed soils.
- Provide for rapid clean up of sediments deposited on paved roads. Furnish stabilized construction road entrances and vehicle wash down areas.
- Stabilize inactive construction sites using vegetation or chemical stabilization methods.
- Limit the amount of areas disturbed by clearing and earth moving operations by scheduling these activities in phases.

For chemical stabilization, there are many products available for chemically stabilizing gravel roadways and stockpiles. If chemical stabilization is used, the chemicals should not create any adverse effects on stormwater, plant life, or groundwater.

Costs

Installation costs for water and chemical dust suppression are low, but annual costs may be quite high since these measures are effective for only a few hours to a few days.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and at two-week intervals in the non-rainy season to verify continued BMP implementation.
- Check areas protected to ensure coverage.
- Most dust control measures require frequent, often daily, or multiple times per day attention.

References

Best Management Practices and Erosion Control Manual for Construction Sites, Flood Control District of Maricopa County, Arizona, September 1992.

California Air Pollution Control Laws, California Air Resources Board, 1992.

Caltrans, Standard Specifications, Sections 10, "Dust Control"; Section 17, "Watering"; and Section 18, "Dust Palliative".

Prospects for Attaining the State Ambient Air Quality Standards for Suspended Particulate Matter (PM₁₀), Visibility Reducing Particles, Sulfates, Lead, and Hydrogen Sulfide, California Air Resources Board, April 1991.

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

APPENDIX D

Monthly Site Inspection Forms

**ANNUAL REPORT
FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF**

SIDE A

STORM WATER DISCHARGES

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.

- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

| | | #1 | #2 | #3 | #4 |
|-------------------------|---|---|--|--|--|
| Observation Date: _____ | Drainage Location Description | | | | |
| Observers Name: _____ | Observation Time | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. |
| Title: _____ | Time Discharge Began | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. |
| Signature: _____ | Were Pollutants Observed
(If yes, complete reverse side) | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> |
| Observation Date: _____ | Drainage Location Description | #1 | #2 | #3 | #4 |
| Observers Name: _____ | Observation Time | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. |
| Title: _____ | Time Discharge Began | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. |
| Signature: _____ | Were Pollutants Observed
(If yes, complete reverse side) | YES <input type="checkbox"/> NO <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> |
| Observation Date: _____ | Drainage Location Description | #1 | #2 | #3 | #4 |
| Observers Name: _____ | Observation Time | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. |
| Title: _____ | Time Discharge Began | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. |
| Signature: _____ | Were Pollutants Observed
(If yes, complete reverse side) | YES <input type="checkbox"/> NO <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> |
| Observation Date: _____ | Drainage Location Description | #1 | #2 | #3 | #4 |
| Observers Name: _____ | Observation Time | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. |
| Title: _____ | Time Discharge Began | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. | <input type="checkbox"/> P.M.
<input type="checkbox"/> A.M. |
| Signature: _____ | Were Pollutants Observed
(If yes, complete reverse side) | YES <input type="checkbox"/> NO <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> |

ANNUAL REPORT

SIDE B

FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

| DATE/TIME OF OBSERVATION
(From Reverse Side) | DRAINAGE AREA DESCRIPTION

EXAMPLE: Discharge from material storage Area #2 | DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS

Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc. | IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS

EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area. | DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION |
|---|---|--|--|---|
| <p>_____</p> <p>AM <input type="checkbox"/> PM <input type="checkbox"/></p> | | | | |
| <p>_____</p> <p>AM <input type="checkbox"/> PM <input type="checkbox"/></p> | | | | |
| <p>_____</p> <p>AM <input type="checkbox"/> PM <input type="checkbox"/></p> | | | | |
| <p>_____</p> <p>AM <input type="checkbox"/> PM <input type="checkbox"/></p> | | | | |
| <p>_____</p> <p>AM <input type="checkbox"/> PM <input type="checkbox"/></p> | | | | |



REVISED WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2003-0011
Waste Discharger Identification No. 3 420301003

for

TAJIGUAS CLASS III LANDFILL
SANTA BARBARA COUNTY

To be Consideration at the March 21, 2003 Board Meeting

The California Regional Water Quality Control Board, Central Coast Region (hereafter Regional Board) finds that:

SITE OWNER AND LOCATION

1. The County of Santa Barbara owns the Tajiguas Class III Landfill. The Santa Barbara County Department of Public Works is responsible for site operations. The County of Santa Barbara is hereafter referred to as "Discharger" and the Tajiguas Class III Landfill is hereafter referred to as "Landfill".
2. The Landfill is located north of Highway 101, approximately 23 miles west of the City of Santa Barbara, at 14470 Calle Real, Santa Barbara County. The Landfill location is shown on **Figure 1**. The Landfill lies in Sections 28 and 33, Township 5 North, Range 31 West, San Bernardino Base & Meridian with a latitude of 34° 28' and a longitude of 120° 07'.
3. The Landfill is located on four parcels with a combined area of 412 acres. The existing Landfill covers 78 acres and includes both lined and unlined waste areas and related structures. A detailed Landfill description is contained in **Finding 8**.
4. Site operations are conducted on four parcels, with Assessor Parcel Numbers:
 - 081-150-019
 - 081-150-026
 - 081-150-032
 - 081150-027

PURPOSE OF ORDER

5. The purpose of Waste Discharge Requirements Order No. R3-2003-0011 (Hereafter "Order" or "Order No. R3-2003-0011") is to revise, update and replace Waste Discharge Requirements Order No. 93-68, adopted by the Board on November 16, 1993.
6. The Discharger submitted a Joint Technical Document (JTD) on November 30, 2002. Within the JTD, the Discharger proposes several significant changes to the Landfill. This Order update includes the following key elements:
 - An approximate 66-acre expansion consisting of a new 40-acre horizontal composite lined landfill and a 26-acre, 120 foot vertical expansion over existing waste.
 - A review of the entire 412-acre Landfill site.
 - Review and revision of Monitoring and Reporting Program 93-069r (MRP 93-069r), which includes landfill gas, groundwater and surface water monitoring.
 - Bring the Landfill into compliance with California Code of Regulations Title 27, Solid Waste, effective July 18, 1997 (CCR Title 27); and, 40 CFR Parts 257 and 258 Solid Waste Facility Disposal Criteria, Final Rule, as promulgated October 9, 1991 (40CFR 257 and 258).

LANDFILL HISTORY AND SITE DESCRIPTION

7. Waste discharge began in 1967, and has been regulated by the Board since 1970. Municipal wastes were initially disposed of along the sides of Canada de la Pila creek. Eventually, the creek was rerouted around the Landfill and wastes were disposed over the old channel. **Figure 2** shows the Landfills current configuration.

8. The Landfill occupies a 468-acre coastal canyon watershed on the Southern flank of the Santa Ynez Mountains. Site elevations vary from 120 above feet mean sea level (amsl) at the site entrance to 1240 feet amsl at the sites northern bounds. For the purposes of this Order, the Landfill can be divided into four areas:

❶ **Existing Unlined Area:** The existing unlined area first received waste in 1967. Landfilling first occurred on the western side of Canada de la Pila creek. Landfilling has since moved across the drainage and currently incorporates approximately 71.1 acres of the canyon. This unlined area is retrofitted with a leachate collection system. The leachate collection system (LCRS #3 and #4) is described in greater detail in **Finding 37**. This area has approximately three years of remaining capacity.

❷ **Existing Lined Area:** There is a 6.9-acre composite lined area east and contiguous with the unlined area. This area is equipped with a leachate collection system (LCRS #2) as described in **Finding 37**. Phase I of the proposed horizontal expansion will be tied into this area.

❸ **Proposed Vertical Expansion Area:** The proposed vertical expansion will consist of a 25.7-acre, 120-foot fill over existing waste. The vertical expansion will increase the maximum elevation from 500 feet amsl to 620 feet amsl. A small area will require liner over native side slopes. The expansion will be conducted in two phases. Phase IA will consist of filling to a height of 560 feet amsl and lining approximately 3.3-acres. Phase IB will consist of filling to an elevation of 620 feet amsl and lining approximately

1.5-acres. As part of expansion the Discharger is proposing to construct a leachate collection layer over unlined waste. This layer will provide a preferential path, for leachate, toward the horizontal expansion area leachate collection system. Phase IA and IB areas will provide 5,187,600 cubic yards of airspace and approximately ten years of disposal capacity.

❹ **Horizontal Expansion Area:** The horizontal expansion areas will be equipped with a composite liner and leachate collection system. The horizontal expansion areas will be completed in three phases (Phases II, III, and IV). Phase II will consist of a 15.8-acre expansion immediately north of Phases IA and IB. Phase II construction is anticipated to begin in 2012. Phase III will be constructed north of Phase II and consists of 5.8 acres. Phase IV will be constructed north of Phase III and will consist of 13.6 acres. The total volumetric capacity of Phases II, III, and IV will be 4,562,000 cubic yards or approximately nine years of capacity.

The attached **Figure 3** shows the existing Landfill and the proposed expansion areas.

9. The Landfill property is zoned *unlimited agriculture* with the surrounding areas zoned *agriculture, open space, and National Forrest*. The Santa Barbara County Board of Supervisors amended the County Comprehensive Plan and placed a Waste Disposal Facility Overlay on the Operational area.

10. Land within 1000 feet of the site is used for ranching, orchards and recreation. The closest residences are located in the private beach community of Arroyo Quemada. Arroyo Quemada is located approximately 2,000 feet to the southeast. The residences of Arroyo Quemada are served by private wells and trucked in water.

WASTE TYPE & CLASSIFICATION

11. Currently, the Landfill receives municipal solid waste from the south coast of Santa Barbara County, Cuyama Valley, and Santa

Ynez Valley. The Landfill received approximately 208,000 tons of waste in 2002. An average of 676 tons are disposed daily, based on 307 operating days per year.

12. The Discharger's JTD indicates the existing landfill and proposed expansion will reach capacity in 2022. This is based on the Discharger's assumptions of an average annual disposal of 500,000 cubic yards of waste and soil cover (300,000 tons) and a waste capacity of 10,432,600 cubic yards (6,000,000 tons).
13. Wastes received are classified as non-hazardous solid wastes or inert wastes using the criteria set forth in CCR Title 27. The Landfill is also permitted to receive non-hazardous sludge and non-friable asbestos.
14. Wastes are disposed of utilizing the area and canyon disposal method. Wastes are placed and compacted in two foot layers on a 5:1 (horizontal:vertical) working face to achieve maximum compaction.
15. The currently permitted unlined modules and proposed lined modules do not meet CCR Title 27, Section 20260 (b)(1) siting criteria with regard to "geologic setting". Considering the size of the waste management unit, permeability and transmissivity of underlying soils, depth to groundwater, background groundwater quality, current and anticipated groundwater use, and annual precipitation, the native underlying soils do not ensure protection of groundwater or surface water quality.
16. Horizontal expansion areas will have engineered containment based on the geologic setting criteria in **Finding 15**. The CCR Title 27 prescriptive containment requirements are outlined in **Specification C.22**.

GEOLOGY/HYDROGEOLOGY

17. **Setting** – The existing Landfill and expansion area lie entirely within the Cañada de la Pila, a small coastal canyon watershed on the Santa Ynez Mountains southern flank. The Santa Ynez Mountains extend from Gaviota Canyon eastward to Matilija Gorge. The range is

composed of a single main crest that is continuous for approximately 50 miles.

18. **Topography** – The project area has moderately steep slopes with drainage in a southerly direction. Surface elevations range from 120 amsl at the site entrance, to 490 feet amsl at the northern limit of the existing Landfill. The ridge north of the project is approximately 1,240 feet amsl. Higher elevations consist of chaparral-covered slopes with lower elevations consisting of grass covered hills. **Figure 2** shows topographic features, ground surface contours, natural slopes, and drainage patterns.
19. **Structure** – The regional structure is dominated by the Santa Ynez fault; an east-west trending fault located approximately four miles (6.4 km) north of the Landfill. This vertical to steeply south-dipping fault displays oblique, left lateral, south side-up offset. Earthquake evaluations have been performed to determine the Maximum Probable Earthquake (MPE) event. The Discharger has determined that the MPE for the Landfill is a 5.5 magnitude quake with a mean peak bedrock acceleration of 0.24g on the Santa Ynez Fault.
20. **Stratigraphy** – Five major Geologic/Hydrologic units have been identified and include the: Gaviota Formation, undivided Sespe and Alegria Formation, Vaqueros Sandstone, Rincon Shale, and the Monterey Shale. The five formations are shown on **Figure 4**. Primarily the Rincon Shale and its derivative soil underlie the Landfill. A Geologic Cross Section is shown on **Figure 5**. These units generally strike east west and dip southward 40 to 70 degrees.
21. The Gaviota Formation (GF) underlies the properties northern bounds. The GF extends north of the surface water divide at the head of Cañada de la Pila. The GF is approximately 1,000 feet thick, and consists mainly of interbedded marine sandstone and siltstone. The upper 200 feet is primarily fine- to medium-grained sandstone that is locally gradational to siltstone. The GF contains groundwater within fractures. Groundwater flow is generally south, with a gradient of approximately 0.25 feet per foot (ft/ft).

- Hydraulic conductivities range from 290 to 0.09 ft/year (2.8×10^{-4} to 8.8×10^{-8} centimeters per second [cm/sec]).
22. The interfingered Sespe and Alegria Formation is 1,665 feet thick at the site, and consists mainly of interbedded sandstone, siltstone, and mudstone. The formation conformably overlies the Gaviota Formation. The northern expansion area will overlie the Sespe and Alegria Formation. The formation materials are currently excavated and used for daily cover. Groundwater is locally present in portions of the unit. The unit as a whole exhibits low permeability. Groundwater flow is generally south; with a gradient ranging approximately from 0.7 to of 0.09 ft/ft. Testing indicates a typical hydraulic conductivity of 0.1 feet/year [9.8×10^{-8} cm/sec].
 23. The Vaqueros Sandstone is approximately 670 feet thick, and overlies the undivided Sespe and Alegria Formation. The contact is gradational from mudstone upward to siltstone and fine sandstone. The Vaqueros Sandstone underlies the northern active landfilling area, and the base and side slopes of the southern expansion area. The Vaqueros Formation produces groundwater from fractures and intergranular porosity. Groundwater flow is generally southwest with a gradient of approximately 0.10 ft/ft. Hydraulic conductivity values for the Vaqueros Formation range from 144 to six ft/year (1.4×10^{-4} to 5.6×10^{-6} cm/sec).
 24. The Rincon Shale underlies a majority of the Landfill, and borders the Landfill to the east and west. Surface exposures are limited to cut slopes. The Rincon Shale overlies the Vaqueros Sandstone along a gradational contact, exposed northeast of the Landfill. The Rincon Shale thickness is approximately 1,470 feet. The formation consists primarily of massively bedded mudstone and claystone with subordinate siliceous shale and dolomite. The mudstone and claystone exhibits low permeability. The bedrock of this unit is generally impermeable and acts as a barrier to groundwater flow. Groundwater flow is generally south with a gradient 0.03 ft/ft. Hydraulic conductivities range from 0.008 to 0.1 ft/year (7.7×10^{-9} to 9.7×10^{-8} cm/sec) for unweathered Rincon shale, and from eight to 10 ft/year (7.7×10^{-6} to 9.7×10^{-6} cm/sec) for weathered zones. Groundwater flow is primarily through upper fractured zones.
 25. The area down canyon of the existing Landfill is underlain by the Miocene age Monterey Shale, which consists mainly of claystone and siltstone with carbonate and tuff interbeds. The Monterey Shale extends south into the Pacific Ocean. The Monterey Formation produces groundwater from weathered and fractured zones. Groundwater flow is generally southwest with a gradient of 0.1 ft/ft. Hydraulic conductivity of the weathered Monterey Formation is approximately 20 ft/year (2×10^{-5} cm/sec).
 26. Alluvium and Colluvium (A&C) are located throughout the property and are composed of weathered and eroded formation deposits. Alluvium and Colluvium are distributed along the narrow (less than 100 feet in width) valley bottom. The alluvium (and underlying shallow, weathered bedrock) accommodates the majority of shallow groundwater flow. The unconsolidated alluvial deposits north of the Landfill consist of alluvial sands, silts and clay to a maximum depth of 15 feet. These deposits only contain water seasonally as indicated by investigative soil borings.
- ## GROUND, STORM & SURFACE WATER
27. Groundwater - Site groundwater conditions are a result of the geologic formations hydraulic properties just described. According to the Discharger's data, these discrete units are hydraulically connected and behave as a single unit. Groundwater flows from topographically high areas downward to stream channels, where the flow emerges as discharges to streams, or as underflow in alluvial fill or fractured bedrock. Groundwater gradients are mainly influenced by topography, with steeper gradients in the mountain areas. Flow direction is also influenced by geologic structures and changes in lithology.
 28. Groundwater Quality - Site groundwater has been monitored continuously since 1988. Historically, Volatile Organic Compounds

- (VOC) have been detected in downgradient wells. Leachate was suspected of being the source of VOC detections. In response, the Discharger implemented Corrective Action. Initially the Discharger installed a groundwater/leachate collection and removal system (LCRS #1) to capture contaminated groundwater. The Discharger has since expanded Corrective Action to include Landfill gas extraction, leachate extraction and upgradient groundwater extraction. Total VOC concentrations and the number of detected compounds have declined in response to Corrective Action implementation. Data from September 1996, indicated downgradient wells MW-4 and MW-10 had total VOC concentrations of 32 and 7.3 µg/l respectively. In June 2002, total VOC concentrations in wells MW-4 and MW-10 had declined to 7.4 and ND respectively. There were no other confirmed detections in wells further downgradient, during the June 2002 sampling event.
29. Wells - There are approximately 27 supply wells within one mile of the Landfill. The closest well, well #2, is located upgradient of the Landfill and is used for site operations. Wells within one mile of the Landfill are shown on **Figure 6**. Typically wells located in the Monterey and Rincon formation are either dry, inactive or used for non-potable purposes. Groundwater used for potable and irrigation purposes is mainly derived from the Vaqueros and Gaviota formation wells.
30. Groundwater Separation Unlined Area – Groundwater currently contacts waste in portions of the Existing Unlined Area. California Code of Regulations Title 27, Section 20240(c), requires the Discharger to operate the Landfill to ensure that wastes will be a minimum of five feet above highest anticipated groundwater. This design standard is intended to reduce leachate generation and ensure no impairment of beneficial uses. However, the Discharger has demonstrated that meeting the five-foot separation is impracticable. Therefore, the Discharger has implemented specific engineered alternatives that are consistent with the performance goal and afford equivalent protection of groundwater quality. The location of the engineered alternatives are shown on **Figure 2** and consist of the North Groundwater Management System and Leachate Collection and Removal Systems #1[GLCRS], #3 and #4. The systems are described in **Finding 37**.
31. Groundwater Separation Horizontal Expansion Areas – The Discharger is required to design and operated the Horizontal Expansion Area to ensure a minimum five-foot separation between waste and highest anticipated groundwater [CCR Title 27, Section 20240(c)].
32. Surface/Storm Water – Surface water exists in upper canyon and Landfill areas only during and shortly after rain events. Landfill runoff is collected in ditches and over side drains and routed to permanent sedimentation control structures. Sediment removal is accomplished in two in-channel and one out-of-channel basins and a sediment control structure. The basins and structure are shown on **Figure 2**. As part of Landfill Expansion, the Discharger will be expanding the out-of-channel structure up canyon. The structures and basins discharge to Pila creek. Pila creek flows south under Highway 101 and discharges to the Pacific Ocean, approximately 2000 feet from the landfill property. Storm water run-on is intercepted by perimeter collection ditches, routed around the Landfill, and discharged to Pila creek.
33. Storm Water Permitting – In addition to this Order, the Discharger is required to be covered under a Statewide General Storm Water Permit. On May 29, 1997, the Discharger submitted a "Notice of Intent" to comply with the "State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000001 Waste Discharge Requirements for Discharge of Storm Water Associated with Industrial Activities Excluding Construction Activities".
34. Rainfall is seasonal with the majority of the precipitation falling between November and April. The annual average precipitation recorded at the Goleta station is 18.5 inches. The site-specific 100-year, 24-hour storm is 7.85 inches.

35. The site is not located in a 100-year flood plain according to the Federal Emergency Management Agency maps for Santa Barbara County.
36. Springs – There are no known springs located within Cañada de la Pila. However, prior to Landfill development, seasonal springs were reported to have been located beneath the current Landfill area. Seeps have been observed in the bluff area below the Community of Arroyo Quemada. Typically, springs in adjacent canyons have been developed for livestock and crop watering.

CONTROL SYSTEMS/MONITORING PROGRAMS

37. Leachate/Groundwater Control Systems – There are currently five-leachate recovery systems and one groundwater extraction well existing or proposed for the lined and unlined areas. The six systems consist of:
- LCRS #1 – This system consists of a groundwater extraction trench just south of the Existing Unlined Area. The trench is approximately 200 feet long, three feet wide, 47 feet deep, and is keyed into unweathered Rincon shale. This trench is used to intercept contaminated groundwater upgradient of the Point of Compliance.
 - LCRS #2 – This system collects leachate from a composite lined area east of the Unlined Active Area.
 - LCRS #3 – This system collects leachate from horizontal wells at the toe of the Existing Unlined Area.
 - LCRS #4 – This system collects leachate from five dewatering wells (DW 3-1, 3-2, 4-1, 4-2, and 4-3) constructed within Unlined Area waste.
 - LCRS #5 (proposed) – This system will overlie the Expansion Area bottom liner.
 - Extraction well P-20 extracts groundwater from the buried alluvial channel upgradient of buried waste. This well captures alluvial groundwater above the Vaqueros/Rincon contact.
38. Landfill Gas Control – Landfill gas is collected via wells in unlined and lined Areas. Primarily, the landfill gas is used to generate

electricity. Additionally, an onsite gas flare is installed and available if cogeneration demand falls.

39. Groundwater Monitoring – Groundwater was first monitored in 1988 and has been monitored continuously since that time. The first wells installed were wells MW-1, 2, 3, 4, 5, 6, 7 and 8. Subsequently, additional wells have been added to the monitoring network. There are a total of 25 groundwater-monitoring wells currently in place.
40. The present water quality monitoring system consists of 9 wells, which are sampled according to a schedule specified in the attached Monitoring and Reporting Program (MRP). In addition, another fourteen onsite wells are used for water level monitoring. The Discharger has proposed seven addition wells be installed as expansion proceeds. **Provision E.17** requires the Discharger to submit a detailed Expansion Area Monitoring Plan for these wells. This plan will be incorporated into the Monitoring and Reporting Program when accepted by the Regional Board Executive Officer. See **Figure A-1** in the MRP, for monitoring well locations.
41. Leachate Monitoring – Leachate is collected and stored in several tanks onsite. Stored leachate is routinely monitored and either disposed of onsite or hauled offsite for disposal. Leachate monitoring requirements are included in the attached MRP.
42. Surface Water Monitoring – Surface water is monitored at four locations around the Landfill. Surface water monitoring requirements are included in the attached MRP. Additionally, storm water is monitored according to the State's NPDES storm water discharge general permit.
43. Vadose Zone Monitoring – The current vadose zone monitoring system consists of a single lysimeter. As Landfill development proceeds, the Discharger will be required to expand the system. **Provision E.17** requires the Discharger to submit a detailed plan for vadose zone monitoring system expansion. Vadose zone monitoring requirements are included in the attached MRP.

44. Landfill Gas Monitoring – Landfill gas monitoring requirements are stipulated in the attached MRP. Landfill gas quantity and quality are measured regularly according to the MRP.

BASIN PLAN

45. The Water Quality Control Plan, Central Coast Basin (Basin Plan), was adopted by the Regional Board on September 8, 1994, and approved by the State Water Resources Control Board on November 17, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State Waters. This Order implements the water quality objectives of the Basin Plan.
46. The beneficial uses of surface water in Canada de la Pila include:
- Domestic and Municipal Supply
 - Agricultural Supply
 - Groundwater Recharge
 - Non-Contact Water Recreation
 - Contact Water Recreation
 - Wildlife Habitat
 - Warm Freshwater Habitat
 - Industrial Service Supply
47. The beneficial uses of groundwater in the vicinity of the Landfill are:
- Domestic and Municipal Supply
 - Agricultural Supply
 - Industrial Supply.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

48. The Santa Barbara County Board of Supervisors certified the Final Environmental Impact Report 01-EIR-5 on August 13, 2002, in accordance with the California Environmental Quality Act (Public Resources Code Section 21000 et. seq.). The Findings, Prohibitions, Specifications, and Provisions of this Order are consistent with certified Final Environmental Impact Report 01-EIR-5.
49. The Final Environmental Impact Report (FEIR) found that the Landfill and Landfill activity could have significant impacts on

water quality and may degrade water quality unless appropriate measures are taken.

50. Potential Water Quality Impacts outlined in the FEIR
- a. Slope failure could damage environmental control systems causing a release to surface or groundwater.
 - b. Expansive soils could potentially damage the landfill liner or other environmental control systems, causing a release to surface water or groundwater
 - c. Shallow landslides could affect surface water drainage.
 - d. Storm water and surface water run on could infiltrate the landfill generating leachate.
 - e. Groundwater quality could be affected by abandonment of monitoring wells, seepage of leachate, landfill gas migration, or spillage of liquids and subsequent migration of surface fluids into groundwater.
 - f. Landfill closure/postclosure could result in excessive sediment transport runoff from the drainage basins into Pila creek.
51. Mitigation Measure to the Potential Water Quality Impacts outlined in the FEIR.
- The potentially significant impacts are intended to be mitigated or avoided by a series of design measures that provide containment of waste and leachate. These design measures include the use of liners, leachate collection and removal systems, landfill gas recovery, grading, drainage systems, and limits on the physical dimension of the Landfill. Specific measures include:
- a. As part of the JTD, the Discharger has submitted a slope stability report to demonstrate the proposed expansion complies with landfill construction standards contained in CCR Title 27. This report shall be approved by the Executive Officer prior to construction.
 - b. Specification C.22 requires the Discharger to construct a well-prepared subgrade, engineered to support the Landfill and associated structures.
 - c. Specifications C.14 and C.16 addresses grading and erosion control to minimize shallow slope failure.

- d. Specification C.15 requires the Discharger to grade the Landfill to promote storm water runoff and limit infiltration.
- e. This Order requires the Discharger to inspect and maintain the landfill facilities and report any non-compliance that could potentially affect waters of the State. Site specific monitoring and reporting requirements are contained in MRP R3-2002-0011.
- f. Specifications C.14, C.15, and C.16 require the Discharger to implement erosion and sedimentation control and maintain onsite sedimentation and erosion control system performance.

GENERAL FINDINGS

52. Discharge of waste is a privilege, not a right, and authorization to discharge waste is conditioned upon the Discharger complying with provisions of Division 7 of the California Water Code and with any more stringent limitations necessary to implement the Basin Plan, to protect beneficial uses, and to prevent nuisance. Compliance with this Order should assure conditions are met and mitigate any potential changes in water quality caused by the project.

53. The Landfill operates under the following Orders and Permits:

- Waste Discharge Requirements Order No. 93-069.
- Waste Discharge Requirements Order No. 93-83.
- Region Wide Cleanup and Abatement Order No. R3-2002-0130.
- National Pollutant Discharge Elimination System Industrial Storm Water No. CAS000001.
- Permit to Operate No. P-9788, Tajiguas Landfill Gas to Energy Project, issued by the Santa Barbara County Air Pollution Control District on February 20, 2002.
- Solid Waste Facilities Permit No. 42-AA-0015, issued in November 18, 1999 by the Santa Barbara County, Environmental Health Department with concurrence from the Integrated Waste Management Board.

54. This Order implements the prescriptive standards and performance goals of CCR Title 27, as promulgated on July 18, 1997.

55. On **December 23, 2002**, the Regional Board notified the Discharger and interested agencies and persons of its intention to update the Landfill Waste Discharge Requirements and has provided them with a copy of the proposed Order and an opportunity to submit views and comments.

56. After considering all comments pertaining to this discharge during a public hearing on **March 21, 2003** this Order was found consistent with the above findings.

IT IS HEREBY ORDERED pursuant to authority in Section 13263 of the California Water Code, the County of Santa Barbara, Department of Public Works, their agents, successors, and assigns may discharge wastes at the Tajiguas Class III Landfill, providing compliance is maintained with the following:

A. COMPLIANCE WITH OTHER REGULATIONS, ORDERS AND STANDARD PROVISIONS

1. Discharge of waste shall comply with all applicable requirements contained in the California Code of Regulations Title 27, Division 2, Solid Waste (CCR Title 27) and Title 40 CFR Parts 257 and 258 (40 CFR) Solid Waste Facility Disposal Criteria. If any applicable regulation requirements overlap or conflict in any manner, the most water quality protective requirement shall govern in all cases, unless specifically stated otherwise in this Order, or as directed by the Executive Officer.

2. This Landfill is no longer subject to this Regional Board's Order No. 93-84 "Waste Discharge Requirements Amendment for All MSW Landfills in the Central Coast Region" (Super Order). The Super Order updated all Region 3 landfill WDR to comply with the updated federal landfill regulations, 40 CFR Parts 257 and 258. Through compliance with CCR Title 27 and 40 CFR Parts 257 and 258 as required above in A.1, the Discharger will

satisfy requirements identical to those within Order No. 93-84.

3. The Discharger shall monitor potential releases from the Landfill related to storm water runoff by complying with all requirements contained in the "State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000001 Waste Discharge Requirements for Discharge of Storm Water Associated with Industrial Activities Excluding Construction Activities".

B. PROHIBITIONS

1. Discharge of waste to areas outside the current Landfill boundary identified in **Figure 2** is prohibited.
2. Discharge of waste to areas within the Operational Area that have not previously received waste is prohibited unless a composite liner system as described in **Specification C.22**, is installed and accepted by the Executive Officer.
3. Discharge of the following types of wastes is prohibited;
 - a. Radioactive wastes.
 - b. Designated waste.
 - c. Hazardous waste.
 - d. Chemical and biological warfare agents.
 - e. Oils or other liquid petroleum products.
 - f. Wastes that have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the unit, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products.
 - g. Wastes that require a higher level of containment than provided by the Landfill.
4. Discharge of liquid or semi-solid waste (i.e., waste containing less than 50 percent solids by weight) other than dewatered sewage or water treatment sludge as described in Discharge **Provision E.12**, and Landfill leachate and gas condensate as described in Discharge **Specification C.26**, is prohibited.

5. Discharge of solid or liquid waste or leachate to surface waters, ponded water from any source, surface water drainage courses, or groundwater is prohibited.
6. Discharge of waste within 50 feet of the property line or within 100 feet of surface waters or domestic supply wells is prohibited.
7. Disposal of wastes within five (5) feet of the highest anticipated elevation of underlying groundwater, including the capillary fringe, is prohibited.

C. SPECIFICATIONS

General Specifications

1. All technical and monitoring reports submitted pursuant to this Order are required pursuant to Section 13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer, may subject the Discharger to enforcement action pursuant to Section 13268 of the California Water Code. The Regional Board will base all enforcement actions on the date of Order adoption.
2. The Discharger shall implement the attached Monitoring and Reporting Program No. R3-2003-0011 (MRP No. R3-2003-0011), including any addendum thereof, in order to detect at the earliest opportunity any unauthorized discharge of waste constituents or any unreasonable beneficial use impairment associated with and or caused by the discharge of waste.
3. The discharge shall neither cause nor contribute to any surface water contamination, pollution, or nuisance, including, but not limited to:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam.
 - b. Increases in bottom deposits or aquatic growth.
 - c. An adverse change in temperature turbidity, or apparent color beyond natural background levels.

- d. The creation or contribution of visible, floating, suspended, or deposited oil or other products of petroleum origin.
 - e. The introduction or increase in concentration of toxic or other pollutants/contaminants resulting in unreasonable impairment of beneficial uses of waters of the State.
4. The discharge shall not cause an increase in concentration of waste constituents in soil-pore gas, soil-pore liquid, perched water, groundwater or geologic materials outside of the Point of Compliance (as defined by CCR Title 27).
 5. The Discharger shall conduct intake load checking as specified by the 2002 JTD, Appendix E "Load Checking Program" or subsequently approved Executive Officer approved program.
 6. The Discharger shall remove and relocate any wastes discharged in violation of these requirements.
 7. The handling and disposal of friable asbestos containing wastes shall be in accordance with all applicable federal, state, and local statutes and regulations.
 8. Ash wastes may be discharged in the Landfill only when chemical analyses are provided to the Executive Officer's satisfaction that the waste is non-hazardous.
 9. Refuse shall be covered daily by at least six inches of soil cover material or an Executive Officer accepted alternative daily cover. Daily cover shall promote lateral runoff of rainfall away from the active disposal area.
 10. Water used over areas underlined by waste within unlined Landfill areas shall be limited to the minimum amount necessary for dust control and construction.
 11. Surface drainage from tributary areas and internal site drainage from non-landfill surface or subsurface sources shall not contact or percolate through wastes.

12. To prevent erosion and percolation through the waste, drainage ditches crossing over Landfill areas shall be lined with either a synthetic liner or at least a one-foot-thick layer of soil having an in-place hydraulic conductivity of 1×10^{-6} cm/sec or less.
13. Regional Board staff shall be notified within 24 hours by phone, with a written report to follow within seven days, of any slope failure or leachate seep occurring at the Landfill. Any leachate seep or any failure, which threatens the integrity of containment features or the Landfill, shall be promptly corrected and the methods shall be so stated in the written report.

Wet Weather

14. By **October 1** of each year, all necessary runoff diversion and erosion prevention measures shall be implemented. All necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the Landfill and to prevent surface drainage from contacting or percolating through wastes.
15. **Throughout the rainy season of each year**, a compacted intermediate soil cover designed and constructed to minimize percolation of precipitation through wastes, shall be maintained over the entire Waste Management Unit. The soil cover shall be in-place by **October 1 of each year**. The thickness and permeability of the intermediate cover shall be based primarily on site specific conditions including, but not limited to: length of exposure time; volume of underlying material; permeability, thickness and composition of existing cover; amount of yearly rainfall; depth to groundwater; beneficial uses of underlying groundwater; site specific geologic and hydrogeologic conditions; existing groundwater impacts and effectiveness of existing monitoring system.

The only exception to this specification is the working face. The working face shall be confined to the smallest area practicable based on the anticipated quantity of waste discharged and required waste management facility operations. Landfill areas which have been

provided with an Executive Officer approved vegetative layer as of the adoption date of this Order, shall not be required to satisfy this requirement. Based on site-specific conditions, the Executive Officer may require a thicker soil cover for any portion of the active WMU prior to the rainy season.

16. By **October 1 of each year**, vegetation shall be planted and maintained as necessary to minimize erosion on interim cover slopes and on slopes at final elevation. Vegetation shall be selected to require a minimum of irrigation and maintenance. Upon written Executive Officer approval, non-hazardous sewage sludge may be utilized as a soil amendment to promote vegetation. Soil amendments and fertilizers (including wastewater sludge) used to establish vegetation shall not exceed the vegetation's agronomic rates (i.e., annual nutrient needs), unless approved by the Executive Officer.
17. All Landfill surfaces and working faces shall be graded and operated to minimize rainfall infiltration into wastes, to prevent ponding of water, and to resist erosion.
18. Drainage facilities shall be designed and constructed to accommodate anticipated precipitation and peak surface runoff flows from a 100-year, 24-hour rainstorm event.
19. Storage facilities associated with precipitation and drainage control systems shall be emptied immediately following each storm, or otherwise managed, to maintain the design capacity of the system. A minimum of two feet of freeboard shall be maintained in all storm water/sediment containment ponds.
20. The Discharger shall continue to operate the existing Unlined Area to comply, to the extent feasible, with the five-foot separation rule. The current engineered alternative systems, outlined in **Finding 30**, shall be maintained and optimized as needed.

Design Criteria

21. Waste management units, containment structures and drainage facilities shall be designed and constructed under the direct supervision of a California Registered Civil

Engineer or a Certified Engineering Geologist, and shall be certified by that individual as meeting the prescriptive standards and performance goals of all state and federal landfill regulations including, but not limited to, CCR Title 27 and 40 CFR parts 257 and 258, prior to waste discharge.

22. Wastes shall not be discharged to new modules within the Operational Area unless equipped with a containment system, which meets either a. or b. below:
 - a. A composite liner and a leachate collection and removal system consisting of the following components:
 - A well-prepared subgrade engineered to support the Landfill and associated structures.
 - Lower Component: a minimum two-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec:
 - Upper Component: a minimum 60-mils high-density polyethylene (HDPE). The upper component must be installed in direct and uniform contact with the lower component.
 - A Leachate Collection and Removal System (LCRS), designed such that leachate gravity drains to a collection point/sump and is removed through either gravity or pumping to a holding tank or sanitary sewer for volume measurement, testing and disposal.
 - A protective soil layer or operations layer shall be placed above the LCRS and liner system. This layer shall be a minimum of 12 inches thick; or
 - b. An engineered alternative liner design, approved by the Executive Officer. Engineered alternative designs must satisfy the performance criteria in 40 CFR Section 258.40(a)(1) and (c), and satisfy the criteria for an engineered alternative to the above Prescriptive Design, as provided by CCR Title 27 Section 20080(b). Performance of the alternative composite liners' components, in combination, shall equal or exceed the waste containment capability of the Prescriptive Design, outlined above.

23. All Landfill facilities shall be designed and constructed to prevent damage during the maximum probable earthquake.
24. The current vadose zone monitoring system (VMS) shall be expanded to monitor the Expansion Area. The VMS shall comply with the requirements of CCR Title 27, Section 20415 (d).
25. A preferential leachate pathway layer shall be installed between the existing unlined areas and overlying vertical Expansion Area. This layer shall be constructed so that leachate generated in new waste placed over the unlined areas flows to the lined portion of the Landfill for collection and disposal.
26. The leachate collection and removal system shall:
 - Be designed and constructed to prevent more than 12 inches of static hydraulic head on the liner.
 - Convey to a sump, or other appropriate collection area, all leachate, which reaches the liner. The depth of fluid in any collection sump shall be kept at the minimum needed to ensure efficient pump operation.
 - Be designed so that short and long term system performance can be monitored and evaluated [CCR Title 27, Section 20340 (d)].
 - Storage facilities shall have a secondary containment system sized to hold 110 percent of the primary containment system capacity.
 - Be constructed with double lined sump(s) with leak detection monitoring.
27. Discharge of condensate or leachate shall comply with the following:
 - Liquids returned to only a waste management unit equipped with a containment system that meets or exceeds the performance standards of CCR Title 27, 40 CFR, Part 258.40(a)(2), or in this Order, whichever is more protective of water quality.
 - Liquids measured by volume and recorded on a monthly basis. These monthly

volumes shall be included as a part of monitoring submittals as required in MRP R3-2002-0065.

- No discharge of leachate within 48 hours of any forecasted rain event, during any rain event, or 48-hours after any rain event, unless a site specific Leachate Application Plan, acceptable to the Executive Officer, is submitted.
- Have an approved alternate method of leachate disposal (e.g., wastewater treatment plant) that is acceptable to the Executive Officer.

Closure

28. Areas at final elevations shall receive final cover pursuant to Title 27, Section 21090 which meets either a. or b. below:
 - a.
 - Minimum two-foot foundation layer placed over waste, compacted to maximum density obtainable at optimum moisture conditions (CCR Title 27, Section 21090 (a)(1)).
 - For units that have not been equipped with a Subtitle D composite liner system, a low hydraulic conductivity layer, consisting of compacted clay with a hydraulic conductivity of 1×10^{-6} cm/sec.
 - For units that have been equipped with a Subtitle D composite liner system, a low hydraulic conductivity layer equal to or less than the hydraulic conductivity of the bottom liner system.
 - At least one foot of soil capable of supporting vegetation, resisting erosion, and protecting the underlying low hydraulic conductivity layer.
 - b. An engineered alternative design, approved by the Executive Officer, will be considered for final cover areas. Engineered alternative designs must satisfy the performance criteria in 40 CFR Parts 257 and 258, and satisfy the criteria for an engineered alternative to the above Prescriptive Design, as provided by CCR Title 27. Performance of the alternative composite cover's components, in combination, shall equal or exceed the waste containment capability of the prescriptive design, outlined above.

D. WATER QUALITY PROTECTION STANDARDS

1. The Regional Board considers the Discharger to have a continuing responsibility for correcting any problems, which may arise in the future as a result of this waste discharge. This responsibility continues as long as the waste poses a threat to water quality.
2. The Point of Compliance follows the edge of the Landfill's "Current Landfill Boundary" and any expansion area within the "Operational Area" and includes the groundwater/leachate extraction system (GLCRS) as shown on **Figure 2**, and extends vertically down through the uppermost aquifer.
3. Discharge of waste shall not cause the concentration of any Constituents of Concern (COC) or Monitoring Parameter to exceed its respective background value in any monitored media (i.e., soil, or groundwater) at any Monitoring Point pursuant to MRP No. R3-2003-0011.
4. Constituents Of Concern and monitoring parameters for groundwater and surface water are listed in MRP No. R3-2003-0011. Monitoring points and background monitoring points for Detection and Corrective Action monitoring shall be those specified in MRP No. R3-2003-0011.
5. The discharge of waste shall not cause a statistically significant difference in water quality over background concentrations or Concentration Limit for each COC or Monitoring Parameter (per MRP No. R3-2003-0011) at the Point of Compliance. The Concentration Limits shall be maintained for as long as the waste poses a threat to water quality. Discharge of waste shall not adversely impact the quality of State waters.
6. Discharge of waste shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the State Water Resources Control Board.
7. Discharge of waste shall not cause concentrations of chemicals and radionuclides

in groundwater down-gradient of the Point Of Compliance to exceed the State Department of Health Services latest recommended Drinking Water Action Levels or Maximum Contaminant Levels of the California Code of Regulations Title 22, Division 4, Chapter 15, Article 5.5.

8. The Monitoring Parameters for samples include those listed in the Monitoring and Reporting Program. Monitoring Parameters will be subjected to the most appropriate statistical or non-statistical test, as required by the attached Monitoring and Reporting Program.
9. The Dischargers shall, in a timely fashion, install any additional groundwater, soil pore liquid, soil pore gas, surface water, and leachate monitoring devices as required by the Executive Officer.

E. PROVISIONS

General Provisions

1. Order No. 93-68, *Waste Discharge Requirements for the County of Santa Barbara, Department of Public Works, Tajiguas Class III Landfill*, adopted by the Board on November 16, 1993, is hereby rescinded.
2. The Discharger shall comply with "Monitoring and Reporting Program No. R3-2003-0011", or as specified by the Executive Officer.
3. The Regional Board will review this Order periodically and will revise these requirements when necessary.
4. The Discharger shall comply with all other applicable provisions of CCR Title 27 and 40 CFR Parts 257 and 258 that are not specifically referred to in this Order. If any applicable requirements overlap or conflict in any manner, the most restrictive requirement shall govern in all cases, unless specifically stated otherwise in this Order, or as directed by the Executive Officer.
5. Two weeks prior to and during construction of each module (e.g., preparing foundation,

- installing liner, install leachate collection and removal system, placing operations layer, etc.), the Discharger shall provide a schedule of construction activities. Schedules shall be updated on a weekly basis.
6. A Construction Quality Assurance Plan, acceptable to the Executive Officer, must be implemented by a third party (e.g., unrelated to the Discharger, Landfill operator, project designer, contractor) prior to starting construction.
 7. Prior to beginning discharge of waste into any newly constructed lined phase, the Discharger must receive a final site inspection, submit a final construction Quality Assurance Report, and receive written permission from the Executive Officer [CCR Title 27, Section 20324(d)(1)(C).]
 8. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to regulatory agency personnel and to facility operating personnel (who shall be familiar with its contents).
 9. The Discharger shall have a continuing responsibility to assure protection of usable waters, from discharged wastes and from gases and leachate generated by discharged waste, during the Landfill's active life, closure, and post-closure maintenance periods and during subsequent use of the property for other purposes.
 10. The Discharger shall maintain waste containment facilities and precipitation and drainage controls, and shall continue to monitor, as appropriate, groundwater, vadose zone, liquid and gas, surface waters, and leachate from waste management units as long as the waste poses a threat to water quality.
 11. Methane and other landfill gases, generated as a result of waste disposal, shall be adequately vented, removed from the Landfill, or otherwise controlled to prevent the danger of explosion, adverse health effects, nuisance conditions, and the degradation of water quality.
 12. Sewage sludge or water treatment sludge with greater than 50 percent moisture content may be discharged to the waste management unit if the following criteria are met:
 - Sludge shall be discharged only to lined modules that have a LCRS, designed such that leachate gravity drains to a collection point/sump and is removed through either gravity or pumping to a holding tank or sanitary sewer for volume measurement, testing and disposal.
 - A daily minimum solids-to-sludge ratio of 5 to 1, based on weight, shall be maintained when co-disposing sludge with solid waste.
 - Primary and mixtures of primary and secondary sewage sludge shall contain at least 20 percent solids by weight.
 - Secondary sewage sludge and water treatment sludge shall contain at least 15 percent solids by weight.

Reporting Provisions

13. All technical and monitoring reports submitted pursuant to this Order are being requested pursuant to Section 13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order or attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the Discharger to enforcement action pursuant to Section 13268 of the California Water Code.
14. Discharger shall notify Board staff, within 24 hours by telephone and within seven days in writing, of any noncompliance potentially or actually endangering health or the environment. Any noncompliance which threatens the Landfill's containment integrity shall be promptly corrected. Correction schedules are subject to the approval of the Executive Officer, except when delays will threaten the environment and/or the Landfill's integrity (i.e., emergency corrective measures). Corrections initiated prior to Executive Officer approval shall be so stated in the written report. The written report shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times or anticipated duration; and steps taken or

planned to reduce, eliminate, and prevent recurrence of the noncompliance. This provision includes, but is not limited to:

- Violation of a discharge prohibition.
 - Violation of any Water Quality Protection Standard.
 - Slope failure.
 - Leachate seep occurring on, or in proximity to, the Landfill.
15. Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule, shall be submitted within 14 days following each scheduled date unless otherwise specified within the Order. A report shall be submitted within 14 days of achieving full compliance.
16. Design reports shall be submitted 180 days in advance of any planned changes in the permitted facility or any activity, which could potentially or actually result in noncompliance.
17. The Discharger shall submit a detailed monitoring plan covering the Expansion Area. This plan should include, but not be limited to, vadose zone, surface and groundwater monitoring points, monitoring frequencies, analytical parameters and elevations.
REPORT DUE DATE: November 21, 2003
18. The Discharger shall submit a report of Wet Weather Preparedness. The report shall detail preparedness actions taken to ensure discharges to surface or groundwater do not occur during the impending rainy season, and ensure all other relevant CCR Title 27 and 40 CFR criteria have been implemented.
REPORT DUE DATE: October 1 yearly
19. The Dischargers shall obtain and maintain Financial Assurance Instruments (Instruments), which comply with CCR Title 27 and 40 CFR parts 257 and 258. The Dischargers shall submit a report every five years that either validates the instrument's ongoing viability or proposes and substantiates any needed changes [e.g., a documented increase in the monitoring systems' ability to provide reliable early detection of a release can cause a decrease in the Instrument's financial coverage].
REPORT DUE DATE: September 2, 2005.
20. The Discharger shall submit a letter report providing survey coordinates for the edge of Class III Area Boundary (see Figure 2). Survey coordinates shall also be established for the perimeter of each Expansion Area Module.
REPORT DUE DATE: Active lined and unlined areas- August 15, 2003
Newly lined areas- 30 days after construction of each cell.
21. For the protection of water quality, the Executive Officer may require partial and or final closure of any lined or unlined area regardless of whether the unit has reached final capacity. Such a requirement will be requested in writing and in accordance with CCR Title 27, Section 22190.
22. **The Discharger shall submit a Joint Technical Document pursuant to CCR Title 27, Section 21710, to the Executive Officer. The JTD shall contain, but is not limited to, the following:**
- Information on waste characteristics, geologic and climatologic characteristics of the Landfill and the surrounding region, installed features, operation plans for waste containment, precipitation and drainage controls, and closure and post closure maintenance plans, in accordance with CCR Title 27 Sections 21740, 21750, 21760, and 21769.
 - A completed SWRCB JTD Index, in accordance with CCR Title 27, Section 21585(b), with your JTD addendum.
 - A Discussion of whether, in the Discharger's opinion, there is any portion of this Order that is incorrect, obsolete, or otherwise in need of revision.
 - Any technical documents needed to demonstrate continued compliance with this Order and all pertinent State and Federal requirements.
 - Detailed information regarding regulatory considerations; design, construction and operating provisions; environmental monitoring; and closure and post-closure.

- A Fill Sequencing Plan which includes detailed maps. The Fill Sequencing Plan should describe in detail the overall development of the entire Landfill.
- A detailed description of the lateral and vertical extent of refuse within all existing Modules. It must include an accurate estimate of waste volumes within each existing Landfill module and an approximation of the remaining volume and years of capacity for each existing module and all new proposed modules within currently permitted Landfill boundaries. It must also describe all existing available space within currently permitted Landfill areas (i.e., modules where refuse has been placed in the past, but have not reached final permitted elevation and modules or portions of modules where refuse has never been placed).
- A discussion of any plans/proposals to close or partially close any modules or portions of modules, any proposed liner systems and respective design components, any proposed plans for long-term intermediate cover for Landfill areas which may remain inactive for long periods of time.

REPORT DUE DATE: March 7, 2008 or at the direction of the Executive Officer.

23. The Discharger shall submit to the Regional Board an updated closure and post-closure maintenance plan (Closure Plan). The Closure Plan shall describe the methods and controls to be used to assure protection of the quality of surface and groundwater during partial and final closure operations and during any proposed subsequent use of the land. The Closure Plan shall include:

- A description of the final cover, designed in accordance with all applicable State and Federal regulations and the methods and procedures to be used to install the cover.
- An estimate of the largest area of Waste Management Unit requiring a final cover at any time during the active life.
- An estimate of the maximum inventory of wastes on-site over the active life of the Landfill.
- A schedule for completing all activities necessary to satisfy all closure criteria as

required by CCR Title 27 and 40 CFR Parts 257 and 258 regulations.

- An estimate of closure and post closure maintenance costs.
- A proposal for a trust fund or equivalent financial arrangement to provide sufficient funding for closure and post-closure maintenance.
- The amount to be deposited in the trust fund or equivalent financial arrangement each year.

The Closure Plan shall be prepared by or under the supervision of a California Registered Civil Engineer or Certified Engineering Geologist. Updates of the plan are required whenever substantial changes occur or five years has elapsed since the last major revision. The method, identified for each Module's closure and protection of the quality of surface and groundwater, shall comply with this Order. The Closure Plan report shall be consistent with all applicable state and federal regulations, including CCR Title 27 and 40 CFR Parts 257 and 258.

REPORT DUE DATE: March 7, 2008 or at the direction of the Executive Officer.

24. The Discharger shall submit a technical report providing the design of liner components for the Expansion Modules. This design report shall include, but is not limited to, all waste containment and design elements included to satisfy **Specification C.22**. This report shall also include evaluation of all landfill-siting criteria, including liquefaction potential and elevated groundwater conditions. A proposed schedule for construction activities with real calendar dates shall be included with this report. The liner system design report shall be acceptable to the Executive Officer, prior to installation.

REPORT DUE DATE: 180 Days prior to construction.

25. The Discharger shall submit a technical report providing detailed procedures for leachate collection and removal system testing. This design report shall address the requirements of CCR Title 27, Section 20340 (d). The leachate collection and removal system testing report shall be acceptable to the Executive Officer, prior to implementation.

REPORT DUE DATE: 180 days prior to construction of lined Phases II, III and IV.

26. The Discharger shall submit Corrective Action Plan (CAP) Reports that discuss the effectiveness of the corrective action measures taken, the effectiveness of the source control measures taken, and propose corrective action and source control modifications and improvements. The reports shall include monitoring data trend analyses, operational summary for the year, an operations plan for the coming year, and a time schedule for any proposed CAP modification.

REPORT DUE DATE: January 31 yearly. This report shall be combined with the Annual Monitoring Report.

27. After suspending the CAP measures, the Discharger shall remain in corrective action monitoring until an approved Detection Monitoring Program in accordance with CCR Title 27 has been incorporated into Waste Discharge Requirements.
28. Any time the Executive Officer determines that the CAP does not satisfy the requirements of CCR Title 27, the Discharger shall, within 90 days of receiving written notification of such determination, submit an amended CAP with needed changes pursuant to Water Code section 13267.
29. The leachate collection and removal system shall be tested annually to demonstrate proper operation. The results of the test shall be compared with previous tests and included in the Annual Monitoring Report.
30. The Discharger shall notify the Regional Board in writing of any proposed change in ownership or responsibility for construction or operation of the Landfill in accordance with CCR Title 27, Section 21710 (c)(1). Failure to submit the notice in writing shall be considered a violation of §13264 of the Water Code. The written notice shall be given at least 90-days prior to the effective date of change in ownership or responsibility and shall:
- Be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate

continued compliance with these Waste Discharge Requirements.

- Contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Regional Board.
- Contain a statement indicating that the new owner or operator assumes full responsibility for compliance with this Order.

Request for change in ownership or responsibility may be approved or disapproved in writing by the Executive Officer. In the event of any change in ownership of this Landfill, the Discharger shall notify the succeeding owner or operator, in writing, of the existence of this Order. A copy of that notification shall be sent to the Executive Officer.

31. At any time, the Discharger may file a written request (including appropriate supporting documents) with the Regional Board Executive Officer, proposing appropriate modifications to the Monitoring and Reporting Program. The Executive Officer either shall reject the proposal for reasons listed, or shall incorporate it into a revised Monitoring and Reporting Program. The Discharger shall implement any changes in the Monitoring and Reporting Program proposed by the Executive Officer upon receipt of a revised Monitoring and Reporting Program.
32. The Discharger shall notify the Executive Officer at least 180 days prior to beginning any partial or final Landfill closure activities. The notice shall include a statement that all closure activities will conform to the most recently approved Closure Plan and that the Plan provides for closure in compliance with all applicable State and Federal regulations. If there is no approved Closure Plan, the Discharger must submit a complete Closure Plan at least 240 days prior to beginning any Landfill closure activities.
33. The Regional Board shall be allowed, at any time and without prior notification:

- Entry upon the Landfill or where records must be kept under the conditions of this Order and MRP No. R3-2002-0065.
 - Access to copy any records that must be kept under the conditions of this Order and MRP No. R3-2002-0065.
 - To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order and MRP No. R3-2002-0065.
 - To photograph, sample, and monitor for the purpose of showing compliance with this Order.
34. Except for data determined to be confidential under Section 13267 (b) of the California Water Code, all reports prepared in accordance with this Order are considered public record and shall be sent to the appropriate contact at the Integrated Waste Management Board and County Environmental Health Department. All report shall be signed as follows:
- For a public agency - by either a principal executive officer or ranking elected official*.
 - For a partnership or sole proprietorship - by a general partner or the proprietor, respectively*.
 - For a corporation - by a principal executive officer of at least the level of vice president*.
 - For **engineering reports** and monitoring reports- by a California Registered Civil Engineer or Certified Engineering Geologist.

*or their "duly authorized representative."

35. Any person signing a report makes the following certification, whether its expressed or implied:

"I certify under penalty of perjury I have personally examined and am familiar with the information submitted in this document and all

attachments and, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

36. Any person who violates Waste Discharge Requirements and/or who intentionally or negligently discharges waste or causes or permits waste to be deposited where it is discharged into waters of the State is liable for civil and/or criminal remedies, as appropriate, pursuant to Section 13350, 13385, and 13387 of the California Water Code.
37. Provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.
38. This Order does not authorize commission of any act causing injury to the property of another, does not convey any property rights of any sort, does not remove liability under federal, state, or local laws, and does not guarantee a capacity right.
39. The Discharger must comply with all conditions of these Waste Discharge Requirements. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these Waste Discharge Requirements by the Regional Board. [CWC Section 13261, 13263, 13265, 13267, 13268, 13300, 13301, 13304, 13340, 13350].

The Discharger shall comply with the following submittal and implementation schedule for all tasks and/or reports required by this Order:

REPORT AND TASK IMPLEMENTATION DATE SUMMARY

| <u>REPORT/TASK</u> | <u>IMPLEMENTATION DATE</u> |
|---|--|
| Expansion Area Monitoring Plan
[Provision No. E.17] | November 21, 2003 |
| Wet Weather Preparedness Report
[Provision No. E.18] | October 1 , of each year |
| Financial Assurance Report [Provision No. E.19] | September 2, 2005 and every five years thereafter |
| Survey Coordinate Report
[Provision No. E.20] | August 15, 2003 for Active lined and unlined areas
30 days after completion of construction |
| Joint Technical Document [Provision No. E.22] | March 7, 2008 or at the direction of the Executive Officer |
| Closure Plan [Provision No. E.23] | March 7, 2008 or at the direction of the Executive Officer |
| Liner Design Report [Provision No. E.24] | 180 days prior to construction |
| Leachate Collection and Removal System Testing Report. [Provision No. E.25] | 180 days prior to construction of the lined Phase IA |
| Corrective Action Plan Reports [Provision E.26] | January 31, yearly , as part of the annual monitoring report |

I, Roger W. Briggs, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on March 21, 2003.

Executive Officer

Figures: Figure 1 – Vicinity Map
 Figure 2 – Site Map
 Figure 3 – Proposed Expansion Area
 Figure 4 – Hydrologic Units
 Figure 5 – Geologic Cross Section
 Figure 6 – Wells Within One Mile

Attachment: Attachment A –Monitoring and Reporting Program No. R3-2002-0065

**STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906**

**PROPOSED WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2010-0006
Waste Discharger Identification No. 3 420301003
Adopted at the February 4, 2010 Board Meeting**

**FOR
TAJIGUAS CLASS III LANDFILL
SANTA BARBARA COUNTY**

The California Regional Water Quality Control Board, Central Coast Region (hereafter Water Board) finds that:

LANDFILL OWNER AND LOCATION

1. The County of Santa Barbara owns the Tajiguas Class III Landfill (hereafter "Landfill"). The Santa Barbara County Department of Public Works is responsible for Landfill operations. The County of Santa Barbara is hereafter referred to as "Discharger."
2. The Landfill is located approximately 25 miles west of the City of Santa Barbara in the County of Santa Barbara (see Site Location Map, **Figure 1**). The Landfill is located approximately 1,600 feet north of Highway 101, which provides access to the site. The Landfill's address is 14470 Calle Real, Goleta, California, 93117.
3. The Landfill lies on unsectionalized land (Section 28 & 33 T5N, R31W S.B.B.M) that is a portion of Nuestra Señora Del Refugio with a latitude of 34° 28' 54" N and a longitude of 120° 07' 40" W. The Landfill includes four parcels with a combined area of 502 acres. The Discharger conducts landfilling operations within two of the parcels [130 acres with assessor's parcel number (APN) 081-150-019 and 282 acres with APN 081-150-026]. The Discharger also conducts minor operations on two additional parcels: Five acres of a 723-acre area within APN 081-150-032 is used for site access and operations easement, and an 85-acre area with APN 081-150-027 is used for access roads, grading, and water tanks

PURPOSE OF ORDER

4. The Discharger submitted a Joint Technical Document (JTD) on November 30, 2002, and amended the JTD in March 2003, September 2004, December 2007, and July 2009. Within the JTD, the Discharger provides support and rationale for a proposed physical waste footprint design change (reconfiguration) of the Landfill.

5. The purpose of Waste Discharge Requirements Order No. R3-2010-0006 (Hereafter "Order" or "Order No. R3-2010-0006") is to revise and update requirements for discharging waste to the Landfill.
6. The Discharger is currently regulated by Waste Discharge Requirements Order No. R3-2003-0011 (hereafter "Order No. R3-2003-0011"), adopted by the Water Board on March 21, 2003. Order No. R3-2010-0006 replaces Order No. R3-2003-0011
7. Order No. R3-2010-0006 includes the following key elements:
 - a. Description of a proposed physical footprint design change (reconfiguration) to a portion of the Landfill's approved and permitted waste disposal footprint.
 - b. Compliance review for the Landfill facility.
 - c. Description of Landfill operations including waste management unit construction.
 - d. Specifications for disposal of treated wood waste.
8. The Discharger will design, construct, and operate the Landfill pursuant to California Code of Regulations (CCR) Title 27, Solid Waste (hereafter "Title 27") effective July 18, 1997, and pursuant to Code of Federal Regulations Title 40, Part 257 and 258 Solid Waste Facility Disposal Criteria, Final Rule, as promulgated on October 9, 1991 (hereafter "40 CFR 258").

LANDFILL DESCRIPTION AND HISTORY

9. The Landfill's property boundary ("waste management facility," as defined in Title 27) encompasses approximately 502 acres. The Landfill's total permitted operational area is 357 acres, with an approved and permitted waste disposal footprint of 118 acres. The permitted waste disposal footprint is comprised of both lined and unlined (pre-Subtitle D) areas. The permitted operational area includes the waste disposal area and ancillary facilities, which the Discharger uses to support landfill operations. Ancillary facilities include: the main access road, scale house and scale; administration and maintenance facilities; household hazardous waste storage area; green waste processing area, and unimproved roads that are used to access the east and west ridgelines. The current waste footprint occupies about 88 acres. Title 27 §20164 defines a "waste management unit" as an area of land, or a portion of a waste management facility, at which waste is discharged. The term includes containment features and ancillary features for precipitation and drainage control and for monitoring. For the Landfill, the waste management unit includes the disposal area, storm water conveyance ditches and culverts, and sediment retention basins.
10. Approximately 71.1 acres of the Landfill's approved waste disposal footprint are unlined (pre-Subtitle D regulations). In 2002 and 2003, the Discharger obtained all the necessary approvals and permits to expand the Landfill both vertically and laterally. The Discharger obtained permits for a 120-foot increase in the height of the landfill for a maximum height of 620 feet above mean sea level (msl) and for a lateral

expansion of 40 acres for a total permitted area of 118 acres. The Discharger will construct the horizontal expansion areas with a waste containment system (i.e., composite liner system) designed in compliance with State and Federal regulations under the California Code of Regulations Title 27 and 40 CFR 258. The Discharger proposes to modify the approved waste footprint by reconfiguring an approximately 12-acre portion of the expansion waste fill area. Waste filling operations are currently being conducted in both the pre-Subtitle D waste area (unlined) and the lined lateral expansion areas (Phase I and Phase II areas). The lined lateral development will continue with a total of three fill phases instead of four. The Discharger completed Phases 1A, 1B, and 2A (See Site Reconfiguration Map, **Figure 2**). Santa Barbara County Environmental Health Services permits the Discharger to accept up to 1,500 tons per day of municipal solid waste and yard waste. Based on current waste disposal rates, the Landfill would reach permitted capacity in approximately 2023. The currently permitted Landfill disposal capacity is 23.3 million cubic yards of waste.

11. The Discharger owns the Baron Ranch which is a 1,083-acre avocado and cherimoya ranch located in an adjacent canyon (Arroyo Quemado Canyon), immediately east of the Landfill. The Discharger purchased the ranch in 1991 to provide a buffer between the Landfill and private holdings, to prevent future subdivision and residential development adjacent to the Landfill, to allow flexibility for the existing and future solid waste operations, to provide options for mitigation, and to provide possible future public access for community uses. Baron Ranch currently supports approximately 90 acres of avocado and seven acres of cherimoya orchards.
12. Land use within 1,000 feet of the Landfill is primarily for ranching, orchards and recreation. The closest residences are located in the private beach community of Arroyo Quemada. Arroyo Quemada is located approximately 2,000 feet to the southeast (See Site Vicinity Map, **Figure 3**). The residences of Arroyo Quemada are served by private wells and trucked in water.
13. The Landfill property is zoned for unlimited agriculture with the surrounding areas zoned for agriculture, open space, and National Forest. The Santa Barbara County Board of Supervisors amended the County Comprehensive Plan and placed a Waste Disposal Facility Overlay on the two main landfill parcels (APN 081-150-019 and APN 081-150-026).
14. Rainfall is seasonal with the majority of the precipitation falling between November and April. The annual average precipitation recorded at the Goleta station is 18.5 inches. The site-specific 100-year, 24-hour storm is 7.85 inches.
15. Waste discharge began in 1967, and the Water Board began regulating the Landfill in 1970. Municipal wastes were initially disposed along either side of Cañada de la Pila creek. The Discharger rerouted the creek several times and the Creek was

finally diverted around the Landfill via an underground storm drain structure. Wastes were then placed over the existing drainage channel.

16. Wastes are disposed of utilizing the area and canyon disposal method. Wastes are placed and compacted in two foot layers on a 5:1 (horizontal:vertical) working face to achieve maximum compaction. As of April 2009, the Landfill holds approximately 10 million tons (16.6 million cubic yards, at 0.6 tons per cubic yard) of waste.

CLASSIFICATION AND WASTE TYPE

17. The Landfill is classified by the Water Board as a Class III waste management unit, approved for discharge of Nonhazardous Municipal Solid Waste, pursuant to Title 27 §20200.

18. The waste type allowed to be discharged at a Class III landfill, per Title 27 §20220, is generally limited to “Nonhazardous Solid Waste”, defined as:

“All putrescible and nonputrescible solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction waste, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes and other discarded waste (whether of solid or semi-solid consistency); provided that such wastes do not contain waste which must be managed as hazardous wastes, or wastes which contain soluble pollutants in concentrations which exceed applicable water quality objectives, or could cause degradation of water of the state (i.e., designated waste).”

19. Municipal solid waste currently delivered to the Landfill is generated by the City of Santa Barbara, the City of Goleta, the unincorporated areas of southern Santa Barbara County, and the Santa Ynez and Cuyama Valleys. The Landfill receives municipal solid waste from the South Coast Recycling and Transfer Station, the Santa Ynez Valley Recycling and Transfer Station, the New Cuyama Transfer Station, and the Ventucopa Transfer Station. Private waste collection companies and limited numbers of private individuals also haul solid waste to the Landfill. The Landfill received approximately 261,590 tons of waste in 2008. An average of 702 tons are disposed daily, based on 307 operating days per year.

20. Wastes received at the Landfill include non-hazardous residential curbside waste; commercial and industrial waste; demolition/construction debris; non-hazardous sludge; non-friable asbestos; and used tires. These wastes are suitable for disposal at a Class III landfill. The Landfill separates and recycles tires, appliances, scrap metal, wood waste, and green waste.

GEOLOGY/HYDROGEOLOGY

21. **Setting** – The existing Landfill and expansion area lies entirely within the Cañada de la Pila, a small coastal canyon watershed on the Santa Ynez Mountains' southern flank. The Santa Ynez Mountains extend from Gaviota Canyon eastward to Matilija Gorge (Ventura County). The range is composed of a single main crest that is continuous for approximately 50 miles.
22. **Topography** – The Landfill property has moderately steep slopes with drainage in a southerly direction. Surface elevations range from 120 feet msl at the site entrance, to 490 feet msl at the northern limit of the existing Landfill. The ridge north of the project is approximately 1,240 feet msl. Higher elevations consist of chaparral-covered slopes with lower elevations consisting of grass covered hills. **Figure 4** shows topographic features, ground surface contours, natural slopes, and drainage patterns.
23. **Stratigraphy** – The Discharger identifies five major geologic/hydrologic units which include the: Gaviota formation, undivided Sespe and Alegria formation, Vaqueros Sandstone, Rincon Shale, and the Monterey Shale. The five formations are shown on **Figure 4**. Primarily the Rincon Shale and its derivative soil underlie the existing unlined Landfill. Lined expansion areas are underlain by Rincon, Vaqueros and Sespe/Alegria formations. These units generally strike east west and dip southward 40 to 70 degrees.
- a. The Gaviota formation (GF) underlies the Landfill's northern boundary. The GF extends north of the surface water divide at the head of Cañada de la Pila. The GF is approximately 1,000 feet thick, and consists mainly of interbedded marine sandstone and siltstone. The upper 200 feet is primarily fine- to medium-grained sandstone that is locally gradational to siltstone. The GF contains groundwater within fractures. Groundwater flow is generally south, with a gradient of approximately 0.25 feet per foot (ft/ft). Hydraulic conductivities range from 290 to 0.09 ft/year (2.8×10^{-4} to 8.8×10^{-8} centimeters per second [cm/sec]). This range of conductivities is lower (less permeable) than those of the Vaqueros Hydrologic Unit.
 - b. The interfingered Sespe and Alegria formation is 1,665 feet thick at the site, and consists mainly of interbedded sandstone, siltstone, and mudstone. The formation conformably overlies the Gaviota formation. The northern expansion area will overlie the Sespe and Alegria formation. The Discharger currently excavates the formation materials for use as daily cover. Groundwater is locally present in portions of the unit but the unit as a whole exhibits low permeability. Groundwater flows generally southward; with a gradient ranging approximately from 0.7 to 0.09 ft/ft. Testing indicates a typical hydraulic conductivity of 0.1 feet/year [9.8×10^{-8} cm/sec].

- c. The Vaqueros Sandstone is approximately 670 feet thick, and overlies the undivided Sespe and Alegria formation. The contact is gradational from mudstone upward to siltstone and fine sandstone. The Vaqueros Sandstone underlies the northern active landfilling area, and the base and side slopes of the southern expansion area. The Vaqueros formation yields groundwater from fractures and intergranular porosity. Groundwater flows generally southwest with a gradient of approximately 0.10 ft/ft. Hydraulic conductivity values for the Vaqueros formation range from 144 to 6 ft/year (1.4×10^{-4} to 5.6×10^{-6} cm/sec).
 - d. The Rincon Shale underlies a majority of the Landfill, and borders the Landfill to the east and west. Surface exposures are limited to cut slopes. The Rincon Shale overlies the Vaqueros Sandstone along a gradational contact, which is exposed northeast of the Landfill. The Rincon Shale thickness is approximately 1,470 feet. The formation consists primarily of massively bedded mudstone and claystone with subordinate siliceous shale and dolomite. The mudstone and claystone exhibits low permeability. The bedrock of this unit is generally impermeable and acts as a barrier to groundwater flow. Groundwater flow is generally south with a gradient 0.03 ft/ft. Hydraulic conductivities range from 0.008 to 0.1 ft/year (7.7×10^{-9} to 9.7×10^{-8} cm/sec) for unweathered Rincon shale, and from 10 to 0.1 ft/year (1×10^{-5} to 1×10^{-7} cm/sec) for weathered zones. Groundwater flow is primarily through shallow weathered zones.
 - e. The area down canyon of the existing Landfill is underlain by the Miocene age Monterey Shale, which consists mainly of claystone and siltstone with carbonate and tuff interbeds. The Monterey Shale extends south into the Pacific Ocean. The Monterey formation yields groundwater from weathered and fractured zones. Groundwater flows generally southwest with a gradient of 0.1 ft/ft. Hydraulic conductivity of the weathered Monterey formation is approximately 20 ft/year (2×10^{-5} cm/sec).
 - f. Alluvium and Colluvium (A&C) are located throughout the property and are composed of weathered and eroded formation deposits. Alluvium and colluvium are distributed along the narrow (less than 100 feet in width) valley bottom. The alluvium (and underlying shallow, weathered bedrock) accommodates the majority of shallow groundwater flow. The unconsolidated alluvial deposits north of the Landfill consist of alluvial sands, silts, and clay to a maximum depth of 15 feet. These deposits only contain water seasonally as indicated by investigative soil borings.
24. **Faulting** – The regional structure is dominated by the Santa Ynez fault; an east-west trending fault located approximately four miles (6.4 km) north of the Landfill. This vertical to steeply south-dipping fault displays oblique, left lateral, south side-up offset. The Discharger performed earthquake evaluations to determine the Maximum Probable Earthquake (MPE) event. The Discharger has determined that the MPE for the Landfill is a 5.5 magnitude quake with a mean peak bedrock acceleration of 0.24g on the Santa Ynez Fault.

25. **Hydrogeology** – Groundwater conditions in the vicinity of the Landfill are complex due to the different hydrogeologic properties of local geologic formations. The hydrogeologic conditions of the canyon are defined by discrete hydrologic units, each of which comprises formations or parts of formations that are hydraulically connected and act as a single unit. The hydrologic units at the site also include lower permeability aquitards that contain and transmit significantly smaller quantities of water than the aquifer units.

SURFACE WATER, STORM WATER, AND GROUNDWATER

26. The Landfill is located within the South Coast Hydrologic Unit. The site is not located within the 100-year flood plain, according to the Federal Emergency Management Agency maps for Santa Barbara County. There are no designated wetlands on site.

27. **Springs** – There are no known springs located within Cañada de la Pila. However, prior to Landfill development, seasonal springs were reported to have been located beneath the current Landfill area. Locals have observed seeps in the bluff area below the community of Arroyo Quemado. Seeps have also been noticed in the Rincon formation after very wet winters. Springs in adjacent canyons have been developed for livestock and crop watering.

28. Surface water exists in the upper canyon and Landfill areas only during, and shortly after, rain events. Surface water runoff in the general vicinity of the Landfill flows predominantly towards the south. Drainage from the Landfill enters Pila Creek near the toe of the Landfill. Pila Creek flows south under Highway 101 and discharges to the Pacific Ocean, approximately 2,000 feet from the Landfill.

29. Landfill storm water runoff is collected in ditches and over side drains and is routed to permanent sedimentation control structures. The basins and sediment control structures are shown on **Figures 2**. Storm water run-on is intercepted by perimeter collection ditches, routed around the Landfill, and discharged to Pila creek.

30. **Groundwater** – Discrete hydrogeologic units are hydraulically connected and behave as a single unit. Groundwater flows from topographically high areas downward to stream channels, where the flow emerges as discharges to streams, or as underflow in alluvial fill or fractured bedrock. Groundwater gradients are mainly influenced by topography, with steeper gradients in the mountain areas. Flow direction is also influenced by geologic structures and changes in lithology.

31. **Groundwater Quality** – Natural groundwater quality (e.g., TDS, some metals, etc.) associated with the Monterey and other onsite formations is traditionally poor. The Discharger has monitored site groundwater continuously since 1988. Historically, the Discharger reported volatile organic compounds (VOC) at total VOC concentrations up to 2.2, 25.4 and 1.3 $\mu\text{g/l}$, in downgradient wells MW-2, MW-4, and side gradient well MW-10, respectively (December 1996 data). The Discharger

suspected that leachate was the source of VOC detections. In response, the Discharger implemented corrective action. Initially, the Discharger installed a groundwater/leachate collection and removal system (LCRS #1) to capture polluted groundwater. The Discharger has since expanded corrective action to include gas extraction, leachate extraction and upgradient groundwater extraction. Total VOC concentrations and the number of detected compounds have declined in response to corrective action implementation. The Discharger has not detected VOCs above the primary MCLs in MW-4 since early 1998. The Discharger has also not detected VOCs (or detected VOCs below their respective MCLs) in wells downgradient from MW-4 for the last 10 to 11 years. These data indicate that the environmental control systems and corrective action in place at the Landfill have effectively minimized impacts from the unlined Landfill on downgradient groundwater.

32. **Wells** - There are approximately 27 supply wells within one mile of the Landfill. The closest water supply well, well #3, is located downgradient of the Landfill and the Discharger uses this well for site operations. Typically, wells located in the Monterey and Rincon formation are dry, inactive, or used for non-potable purposes, because of poor water quality and quantity. Groundwater used for potable and irrigation purposes is mainly derived from the Vaqueros and Gaviota formation wells.
33. **Groundwater Separation** - Groundwater currently contacts waste in portions of the existing unlined area. The Discharger encountered groundwater in the Landfill at elevations ranging from approximately 240 to 290 feet msl. Based on test pumping results, the Discharger interprets groundwater to be present in isolated waste cells of intermediate permeability (likely waste material) separated from each other by zones of low permeability (likely daily cover soils material). Title 27, §20240(c), requires the Discharger to operate the Landfill to ensure that wastes will be a minimum of five feet above highest anticipated groundwater. This operation standard is intended to reduce leachate generation and ensure no impairment of beneficial uses. Groundwater currently contacts waste in portions of the existing unlined area. Therefore, the Discharger has proposed and implemented specific engineered alternatives, as allowed by Title 27, §20080(b), that are consistent with the performance goal and afford equivalent protection of groundwater quality. The location of the engineered alternatives are shown on **Figure 5** and consist of the Landfill gas extraction system, north groundwater management system (NGWMS) and leachate collection and removal systems #1[GLCRS], #3 (HWDS), and #4 (DW wells). The leachate, groundwater, and Landfill gas collection systems are described in Findings Nos. 37 and 38, respectively. Additionally, the Discharger has demonstrated that meeting the five-foot separation would be infeasible according to Title 27, §20080(c) because maintaining the five-foot separation is unreasonable (e.g., excavating and moving acres of waste) and unnecessarily burdensome and will cost substantially more than the engineered alternative which meet the criteria in Title 27, §20080(c).
34. **Groundwater Separation in Horizontal Expansion Areas** – The Discharger is required to design and operate the Horizontal Expansion Area (future expansion

areas) to ensure a minimum five-foot separation between waste and highest anticipated groundwater [Title 27, §20240(c)].

35. **Storm Water** – The Landfill is enrolled in the *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities* (General Storm Water Permit for Industrial Activities), under State Water Resources Control Board (State Water Board) Water Quality Order No. 97-03-DWQ and National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS00001.
36. The Landfill incorporates an existing out-of-channel basin and a sediment control structure for purposes of controlling sediment loading from storm water runoff. The Discharger can expand the out-of-channel basin if needed. The Discharger monitors the discharges from the sediment basin and sediment control structure under the General Storm Water Permit for Industrial Activities. In accordance with MRP R3-2010-0006, the Discharger is also required to annually collect a sediment sample from the bottom of each stormwater sediment basin and analyze that sample for metals or remove the accumulated sediments in the sediment basins prior to October 1 of each year and discharge the sediments to the lined portion of the Landfill.

CONTROL SYSTEMS AND MONITORING

37. **Leachate/Groundwater Control Systems** – There are four existing and one proposed leachate recovery system and one upgradient groundwater extraction system. The six systems consist of:
- a. **Leachate Collection and Removal System (LCRS) #1** – This system consists of a groundwater extraction trench (cut-off trench) just south of the existing unlined area, below the down-canyon extent of the Landfill. The trench is approximately 200 feet long, three feet wide, 47 feet deep, and is keyed into unweathered Rincon shale. The Discharger uses the trench to intercept polluted groundwater upgradient of the point of compliance.
 - b. **LCRS #2** – This system collects leachate from a composite lined area east of the unlined active area.
 - c. **LCRS #3** – This system consists of three 200 feet long horizontal wells within the lower lift of the waste as a horizontal well dewatering system. The system collects leachate from the horizontal wells at the toe of the existing unlined area.
 - d. **LCRS #4** – This system consists of four vertical dewatering wells (DW 3-1, 3-2, 4-2, and 4-3) constructed within the unlined Landfill.
 - e. **LCRS #5 (proposed)** – This system will overlie the expansion area's bottom composite liner system.
 - f. **North Groundwater Management System (NGWMS)** – The NGWMS consists of extraction well P-20, a submersible pump, a 10,000-gallon storage tank, and one piezometer. This system extracts groundwater from the buried Pila Creek alluvium channel upgradient of the Landfill, thereby drawing down the water table

beneath the unlined portion of the Landfill, and decreasing the contact between groundwater and waste.

38. **Landfill Gas Control System** – The Discharger collects Landfill gas via landfill gas extraction wells in unlined and lined areas. Landfill gas is generally used by an onsite internal combustion engine (generator) to create electricity up to a maximum electrical production of 3.1 megawatts. The flare is used to combust excess landfill gas not needed to fuel the generator, or when the generator is not operating. Excess landfill gas up to 300 standard cubic feet per minute is sent to the low flare burner tip. The gas recovery system controls downward and lateral migration of methane and VOCs associated with landfill gas, and limits the dissolution of landfill gas in groundwater and soil moisture.
39. Monitoring and Reporting Program (hereafter “MRP”) No. R3-2010-0006, issued by the Water Board’s Executive Officer, requires monitoring and reporting on: groundwater; vadose zone; leachate collection and removal; landfill gas; storm water drainage; waste intake; rainfall data; and physical site observations. The MRP establishes groundwater monitoring points; monitoring frequency; monitoring parameters; constituents of concern; criteria for sample collection and analyses; methods for analyzing data both statistically and non-statistically; minimum monitoring report content; and definition of terms.
40. **Groundwater Monitoring** – Groundwater monitoring at the Landfill includes approximately five detection monitoring wells (MW-12, -14, -15, -29, and -30) and four detection/corrective action monitoring wells¹ (MW-2, -3, -4, and -10), that monitor groundwater quality and groundwater elevation at the Landfill. The Discharger will expand the current groundwater monitoring system with the future development of the Landfill to include an additional monitoring well (MW-31). The locations of the groundwater monitoring points are shown on **Figure 5**. In addition to the detection/corrective action monitoring wells, there are water supply wells, monitoring, and piezometer wells that the Discharger monitors primarily for groundwater elevations but these wells can be monitored for supplemental water quality data, if required.
41. **Leachate Monitoring** – The Discharger collects and stores leachate and groundwater contacting waste in several tanks onsite. Stored leachate is routinely monitored and either disposed of onsite or hauled offsite for disposal. Onsite disposal is limited to dust control and construction, as described in “Leachate Reduction and Removal Plan for Tajiguas Landfill”, dated September 4, 2003.
42. **Surface Water Monitoring** – Surface water is monitored at four locations (SW-1, 3, 4, and 5) around the Landfill. Additionally, the Discharger monitors storm water according to the State’s NPDES storm water discharge general permit.

¹Detection monitoring for inorganic parameters and corrective action monitoring for VOCs.

43. **Vadose Zone Monitoring** – The current vadose zone monitoring system consists of a lysimeter adjacent to the Landfill and a subdrain system under lined areas of the Landfill. As Landfill development proceeds, the Discharger is required to expand the system.
44. **Landfill Gas Monitoring** – The Discharger measures Landfill gas quantity and quality regularly according to the MRP.

BASIN PLAN

45. The Water Quality Control Plan, Central Coast Basin (Basin Plan), was adopted by the Water Board on September 8, 1994, and approved by the State Water Board on November 17, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State Waters. This Order implements the water quality objectives stated in that Plan.
46. The Basin Plan identifies the following present and anticipated beneficial uses for surface water in Cañada de la Pila:
- a. Domestic and Municipal Supply
 - b. Agricultural Supply
 - c. Groundwater Recharge
 - d. Non-Contact Water Recreation
 - e. Contact Water Recreation
 - f. Wildlife Habitat
 - g. Warm Freshwater Habitat
 - h. Industrial Service Supply
47. Observed groundwater use in the vicinity of the Landfill is agricultural and domestic water supply. The Basin Plan identifies the following beneficial uses of groundwater in the vicinity of the Landfill:
- a. Domestic and Municipal Supply
 - b. Agricultural Supply
 - c. Industrial Supply

CALIFORNIA ENVIRONMENTAL QUALITY ACT Environmental Review and Permitting Background

48. This Order contains prohibitions, discharge specifications, water quality protection standards, and provisions intended to protect the environment by mitigating or avoiding impacts of the project on water quality. This Order addresses both an existing facility and a reconfiguration of the waste footprint and associated disturbances to extend the waste footprint west across Pila Creek (within Canada de la Pila) to the west of the canyon.

49. The Santa Barbara County [department] is the lead agency under the California Environmental Quality Act (CEQA) [Public Resources Code Section 21000 et. seq.] and the Central Coast Water Board is a responsible agency for purposes of CEQA. On **August 13, 2002**, the Santa Barbara County Board of Supervisors certified an Environmental Impact Report (EIR) (01-EIR-05) for, and approved, the Tajiguas Landfill Expansion Project (Front Canyon Expansion). This project consists of the horizontal and vertical expansion of the landfill outside of the Coastal Zone, providing 8.2 million cubic yards of additional waste disposal capacity for a total capacity of 23.3 million cubic yards. The Discharger received all applicable permits to construct and operate the expansion in 2003 and waste disposal is currently occurring in the approved and permitted waste disposal footprint.
50. On **May 5, 2009**, the Santa Barbara County Board of Supervisors certified the Final Subsequent Environmental Impact Report (SEIR), 08EIR-00000-00007, for the Tajiguas Landfill Reconfiguration and Baron Ranch Restoration Project, in accordance with CEQA and the CCR, Title 14. The County prepared SEIR (08EIR-00000-00007) as a Subsequent Environmental Impact Report to EIR (01-EIR-05), due to the potential for substantial changes to the types and severity of impacts identified in the previously certified EIR.

The approved project involves a redesign of a portion (approximately 12-acres) of the approved and permitted waste disposal footprint. The proposed waste footprint design change (reconfiguration) does not modify any of the existing operational parameters (e.g., waste disposal capacity, hours of operation, personnel requirements, waste handling procedures, etc.) but does involve physical changes to a portion of the approved location of the waste footprint and associated disturbances for construction activities and equipment operations in the back canyon area of the Landfill site.

The SEIR proposes the environmental mitigation measures that the County will implement through the Baron Ranch Restoration Project to offset the loss of habitat caused by the reconfiguration. The proposed reconfiguration negates the need for a large manmade earthen buttress to stabilize waste, removes in-channel sediment basins in Pila Creek allowing base flow in Pila Creek to continue downstream of the Landfill, and reduces the need to excavate and handle approximately 1.3 million cubic yards of soil, which significantly reduces potential future storm water impacts from storm water runoff.

As a responsible agency under CEQA, the CEQA Guidelines require the Water Board to consider the SEIR and make its own conclusions about whether to approve the project and to consider the environmental impacts of the proposed project as shown in the SEIR. A responsible agency may impose mitigation measures, but may only require mitigation for the environmental impacts of the parts of the project which it approves (see CCR Title 14). The Water Board has considered the SEIR and has included conditions in this Order to protect water quality.

As a responsible agency, the Water Board may not approve the project for which an EIR has been certified that identifies one or more significant environmental effects of the project unless the Water Board makes written findings for each of those significant effects. This Order authorizes the reconfiguration of an existing facility. For purposes of this Order, the Water Board is only required to address any significant environmental impacts that could be addressed within the jurisdiction of the Water Board that have been identified in the SEIR. The SEIR identified no significant environmental impacts with respect to water quality. The SEIR identified mitigation to avoid or lessen the environmental effects for non-water quality related impacts due to the landfill reconfiguration. The Water Board, therefore, is not required to make findings pursuant to CCR, Title 14 §15091 with respect to water quality associated with the landfill reconfiguration.

51. The Water Board has considered the Final SEIR adopted by the County of Santa Barbara and makes the following conclusions. All other potential environmental impacts identified in the Final SEIR are not within the responsibility and jurisdiction of the Water Board. Those other impacts and mitigation measures do not relate to water quality or pollution or nuisance associated with discharges of waste. This Order incorporates requirements that satisfy the mitigation measures identified in the Final SEIR.
52. On **June 16, 2009**, the Central Coast Water Board's Executive Officer, issued Water Quality Certification No. 34208WQ15 (Clean Water Act Section 401 Water Quality Certification for Discharge of Dredged and/or Fill Materials) to certify that any discharge from the Tajiguas Landfill Reconfiguration and Baron Ranch Project must comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. The Water Quality Certification states, "Except insofar as may be modified by any preceding conditions, all certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the applicant's project description and the Project Information Sheet, and (b) compliance with all applicable requirements of the Central Coast Water Board's Water Quality Control Plan (Basin Plan)."
53. Pursuant to CEQA guidelines §15096, the Water Board, as a responsible agency, adopts as part of the findings and provisions of this Order, Final Subsequent Environmental Impact Report (EIR No. 08EIR-00000-00007) Findings of Mitigation and a Mitigation Monitoring and Reporting Program. These findings are limited to the portion of the Landfill project approved by the Water Board and to mitigation measures that are within the Water Board's jurisdiction. Compliance with the mitigation measures and mitigation-monitoring program described in the findings is mandated by this Order.

54. Except with respect to the proposed reconfiguration of the approved footprint, this Order is for an existing facility and therefore is exempt from provisions of the California Environmental Quality Act (Public Resources Code, §21000, et seq.) in accordance with Title 14, Chapter 3, §15301.

GENERAL FINDINGS

55. In accordance with Title 27 §20260(b)(1) and 40 CFR 258.40, the Water Board finds that all new waste management units constructed at the Landfill must have prescriptive composite liners, except for engineered alternatives as provided in Title 27 §20080(b) and 40 CFR 258.40(a)(1) and (c).

56. In accordance with California Water Code §13263(g), no discharge into waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, must create a vested right to discharge. All discharges of waste into waters of the state are privileges, not rights. Authorization to discharge waste is conditioned upon the Discharger complying with provisions of Division 7 of the California Water Code and with any more stringent limitations necessary to implement the Basin Plan, to protect beneficial uses, and to prevent nuisance. Compliance with Order No. R3-2010-0006 should assure conditions are met and mitigate any potential changes in water quality attributed to the Landfill.

57. The Landfill meets the criteria of Title 27 and 40 CFR 258 for a Class III landfill suitable to receive non-hazardous solid waste. Order No. R3-2010-0006 implements, but is not limited to, the prescriptive standards and performance goals of Title 27 and 40 CFR 258.

58. **Antidegradation:** State Water Board Resolution No. 68-16 Statement of Policy with Respect to Maintaining High Quality of Waters in California (Resolution No. 68-16) requires Regional Water Boards, in regulating the discharge of waste, to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with the maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in a Regional Water Board's policies (e.g., quality that exceeds applicable water quality standards). Resolution No. 68-16 also states, in part:

“Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in best practicable treatment and control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained”.

59. The discharges regulated by this Order are required to comply with the land disposal regulations contained in Title 27, which are intended to prevent discharges of waste to waters of the state, preventing degradation of waters of the state. The discharge

is subject to waste discharge requirements, which will result in best practicable treatment or control.

60. The California Integrated Waste Management Board (CIWMB) regulates this Landfill under Solid Waste Facility Permit No. 42-AA-0015, issued on October 20, 2009 by the Santa Barbara County Environmental Health Services Division as the Local Enforcement Agency, following concurrence by the CIWMB.
61. The Landfill operates its gas extraction system under the Santa Barbara County Air Pollution Control District (SBCAPCD), Permit No. 9788-R2, issued on April 5, 2006. The SBCAPCD is currently reviewing a updated permit.
62. "Treated wood" means wood that contains a chemical preservative for purposes of protecting the wood against attacks from insects, microorganisms, fungi, and other environmental conditions that can lead to decay of the wood and the chemical preservative is registered pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code, Sec. 136 and following). This may include but is not limited to waste wood that has been treated with chromated copper arsenate, pentachlorophenol, creosote, acid copper chromate, ammoniacal copper arsenate, ammoniacal copper zinc arsenate, or chromated zinc chloride. Existing law regulates the control of hazardous waste, but exempts from the hazardous waste control laws, wood waste that is exempt from regulation under the federal Resource Conservation and Recovery Act (RCRA) of 1976, as amended if the wood waste is disposed of in a municipal landfill that meets certain requirements imposed pursuant to the Porter-Cologne Water Quality Control Act for the classification of disposal sites, and the Landfill meets other specified requirements outlined in Sections 25143.1.5 and 25150.7 of the Health and Safety Code. Section 25150.8 of the Health and Safety Code also provides that if treated wood waste is accepted by a solid waste landfill that manages and disposes of the treated wood waste in the manner specified, the treated wood waste must be deemed to be a solid waste, and not a hazardous or designated waste. The Discharger has indicated that all treated wood waste accepted at the facility will be handled and disposed of in accordance with the provisions outlined in Sections 25143.1.5, 25150.7, and 25150.8 of the Health and Safety Code.
63. On **June 8, 2009**, the CIWMB stated that the Discharger has demonstrated availability of financial resources to conduct closure and post closure maintenance activities and an appropriate financial assurance instrument for corrective action for a reasonably foreseeable release at the Landfill. The financial instruments for closure, post closure maintenance, and corrective action are annually adjusted for inflation.
64. Effective March 30, 2009, the Department of Toxic Substances Control (DTSC) repealed conditional authorization letters that allow automobile shredder waste that is subjected to certain treatment requirements to be classified as non-hazardous waste because DTSC's testing and analyses has shown increasing levels of

hazardous constituents in the treated shredder waste. On September 17, 2009, the DTSC granted an extension to the proposed repeal date regarding conditional authorization to manage automobile shredder waste as non-hazardous waste. The current extension is contingent on continuing progress in the development of alternative management standards that are protective of human health and the environment and does not specify a new effective date for the repeal of the conditional authorization. As a result, automobile shredder waste from certain authorized facilities managed pursuant to Title 22, California Code of Regulations, Section 66260.200(f) and Policy and Procedure #88-6 may continue to be managed as non-hazardous waste.

65. On November 11, 2009, the Water Board notified the Discharger and interested agencies and persons of its intent to issue Waste Discharge Requirements for the Landfill, and has provided the opportunity to review a copy of the proposed Order and submit written views and comments.

66. After considering all comments pertaining to this discharge during a public hearing on February 4, 2010, Water Board staff found that this Order is consistent with the above findings.

IT IS HEREBY ORDERED pursuant to authority in §13263 and §13267 of the California Water Code, the Discharger, its agents, successors, and assigns in maintaining the Tajiguas Class III Landfill must comply with the following:

A. COMPLIANCE WITH OTHER REGULATIONS AND ORDERS

1. Discharge of waste, operations, and monitoring must comply with all applicable requirements contained in Title 27 and 40 CFR Parts 257 and 258. If any applicable regulation requirements overlap or conflict in any manner, the most water quality protective requirement must govern in all cases, unless specifically stated otherwise in this Order, or as directed by the Executive Officer.
2. The Discharger must control storm water runoff releases from the Landfill by complying with all requirements contained in the General Storm Water Permit for Industrial Activities.

B. PROHIBITIONS

1. Discharge of waste to areas outside the approved and permitted waste disposal footprint (i.e., "Reconfigured Waste Footprint") for the Waste Management Unit as illustrated in Figure 2 is prohibited.
2. Discharge of waste within the approved and permitted waste disposal footprint for Waste Management Unit is prohibited as provided in Specification C.3.

3. Discharge of hazardous waste or hazardous constituents, except for treated wood waste or waste that is hazardous due only to its asbestos content, is prohibited. Wastes that are prohibited include but are not limited to:
 - a. Radioactive wastes.
 - b. Designated waste.
 - c. Hazardous waste, except waste that is hazardous due only to its asbestos content. Asbestos containing greater than one percent (>1%) friable asbestos material is considered hazardous but may be discharged as allowed by Specification C. 14.
 - d. Chemical and biological warfare agents.
 - e. Waste solvents, dry cleaning fluids, paint sludge, pesticides, phenols, brine, and acid and alkaline solutions.
 - f. Oils or other liquid petroleum products.
 - g. Wastes that have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the unit, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products.
 - h. Wastes that require a higher level of containment than provided by the Landfill.
 - i. Liquid or semi-solid waste containing less than 50 percent solids by weight. This includes landfill leachate and gas condensate, except as allowed by Specification C. 6, and sludge, except as allowed by Specification C.18.
4. Discharge of waste or leachate to ponded water, drainageway(s), or waters of the State, including groundwater, is prohibited.
5. Discharge of liquid waste, meaning any waste materials that are determined to contain free liquids through visual inspection, or as defined by Method 9095 (Paint Filter Liquids Test), is prohibited.
6. Discharge of waste within 50 feet of the property line, 100 feet of surface waters, or 100 feet of domestic water supply wells is prohibited, unless approved by the Executive Officer.
7. Disposal of wastes within five (5) feet of the highest anticipated elevation of underlying groundwater, including the capillary fringe, is prohibited, except as allowed under Title 27, §20080 (b) and (c).

C. SPECIFICATIONS

1. Discharge of waste must not cause a condition of pollution or contamination to occur through a statistically significant release of pollutants, contaminants, and/or waste constituents, as indicated by the most appropriate statistical [or non-statistical] data analysis method and retest method described in MRP No. R3-2010-0006.

2. Discharge, collection, and treatment of waste must not create nuisance, as defined by California Water Code §13050(m).
3. The Discharger must not discharge waste to areas inside the approved and permitted waste disposal footprint waste management units, which did not receive waste as of April 9, 1994, unless the discharge is to an area equipped with an Executive Officer-approved containment system consisting of a composite liner and LCRS. The liner must consist of the following three components, pursuant to 40 CFR 258 and Title 27 §20340:
 - a. Lower Component: A layer of compacted soil that is at least two feet thick that has a hydraulic conductivity of no more than 1×10^{-7} centimeters per second (0.1 feet/year);
 - b. Upper Component: A synthetic flexible membrane liner at least 40-thousandths of an inch (mil) thick (or at least 60-mils thick if the liner is high-density polyethylene) that is installed in direct and uniform contact with the Lower Component;
 - c. Leachate Collection and Removal System: The LCRS system must be capable of minimizing head buildup over the liner to less than 30 centimeters in depth. The LCRS must consist of a permeable subdrain layer, which covers the bottom of the module and extends as far up the sides as possible, (i.e., blanket type). The LCRS must be of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment and must be designed and operated to function without clogging through the scheduled closure and post closure maintenance period; or,
 - d. An engineered alternative design that satisfies the performance criteria in 40 CFR 258.40(a)(1) and (c), and satisfies the criteria for an engineered alternative to the Prescriptive Design, as provided by Title 27 §20080(b), where the Discharger receives written concurrence from the Executive Officer that the performance of the alternative composite liner's components, in combination, is equal to or exceeds the waste containment capability of the regulatory Prescriptive Design.
4. The Discharger must design, construct, and maintain to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, overtopping, and damage to waste management units, containment structures, and drainage facilities resulting from natural disasters (e.g., floods with a predicted frequency of once in 100 years, the maximum probable earthquake, and severe wind storms).
5. The Discharger must prevent formation of a habitat for carriers of pathogenic microorganisms.
6. Discharge of condensate or leachate must comply with the following:
 - a. The Discharger may only return liquids to a waste management unit equipped with a containment system that meets or exceeds the performance standard of

- Title 27, CFR 40 Part 258.40(a)(2), or the standard set in this Order, whichever is more protective of water quality;
- b. The Discharger must measure liquids by volume and record the volume on a monthly basis. The Discharger must include the monthly volume records in the monitoring submittals required in MRP No. R3-2010-0006;
 - c. A second containment system sized to hold 100% of the primary containment system holding capacity;
 - d. The Discharger may not discharge leachate within 48 hours of any forecasted rain event, during any rain event, or 48-hours after any rain event; and,
 - e. An approved alternate method of leachate disposal (e.g., wastewater treatment plant), that is acceptable to the Executive Officer.
7. Daily cover must prevent nuisance and excess leachate generation, and minimize infiltration, promote lateral runoff of precipitation/surface water away from the active disposal area. Shredded tires, tarps, and wood chips are approved as daily cover during the dry season (May 1 through September 30 of each year). Upon Executive Officer approval, the Discharger may utilize alternative daily cover materials during the wet season that minimize infiltration and promote lateral runoff.
 8. The Discharger must stockpile daily cover material during favorable weather to ensure that adequate daily cover material is accessible during inclement weather.
 9. The Discharger must operate the Landfill and configure the final Landfill contours, in conformance with the most recent Executive Officer-approved Operations Plan, and/or Report of Waste Discharge/Joint Technical Document (collectively Plan) except where the Plan conflicts with this Order. The most recently updated Plan is the Discharger's July 2009 "Joint Technical Document." In the event of conflict, this Order must govern in cases where it is more protective of water quality. Any change to the Plan that may affect compliance with this Order must be approved in writing by the Executive Officer prior to the change being implemented.
 10. The Discharger must grade and operate all Landfill surfaces and working faces to minimize precipitation/surface water from infiltrating into waste, to prevent ponding of water, and to resist erosion. The Discharger must repair erosion rills greater than six inches in depth, or when rills leave insufficient cover to prevent infiltration of precipitation/surface water. The Discharger must provide positive drainage to divert precipitation/surface water runoff from areas containing waste.
 11. Pursuant to the General Storm Water Permit for Industrial Activities, the Discharger must use best management practices to maintain the capacity of storm water retention facilities and thereby reduce or prevent pollutants in storm water from discharging into receiving waters to the best available technology standard. Title 27 §20365 requires that the Discharger periodically removes accumulated sediment from the storm water retention facilities and to empty or otherwise manage the facilities to maintain their capacity.

12. The Discharger must maintain a minimum of two feet of freeboard in all storm water sediment containment basins. Freeboard is defined as the distance between the water surface within the sedimentation basin and the top of the impoundment.
13. The Discharger must provide all Landfill areas that have not reached final fill elevation, but will remain inactive over one-year, with an Executive Officer-approved, long-term intermediate cover. The thickness and permeability of the long-term intermediate cover must be based primarily on site-specific conditions including, but not limited to length of exposure time; volume of underlying material, soil permeability, thickness and composition of existing cover; amount of yearly rainfall; depth to groundwater; beneficial uses of underlying groundwater; site-specific geologic and hydrogeologic conditions; and effectiveness of existing monitoring systems.
14. Wastes containing greater than one percent (>1%) friable asbestos are classified as hazardous under CCR, Title 22. Since such wastes do not pose a threat to water quality, §25143.7 of the Health and Safety Code permits their disposal in any landfill, providing waste discharge requirements specifically permit the discharge. Asbestos may be discharged in the Landfill only if it is handled and disposed of in accordance with §25143.7 of the Health and Safety Code, CCR, Title 14, §17897 "Standards for Handling and Disposal of Asbestos-Containing Waste," and all other applicable Federal, State, and local statutes and regulations.
15. New landfill units and lateral expansions must not be located in wetlands, as defined in 40 CFR §232.2(r), unless the owner or operator can make demonstrations pursuant to 40 CFR §258.12(a) that the discharge of waste will not cause or contribute to significant degradation of wetlands and associated ecological resources.
16. Wastes discharged in violation of this Order, must be removed and relocated.
17. "Treated wood" wastes may be discharged, but only to an area equipped with a composite liner and LCRS, and must be handled in accordance with California Health and Safety Code §25143.1.5 and §250150.7.
18. Sewage sludge or water treatment sludge with greater than 50% moisture content may be discharged at the Landfill if all of the following criteria are met:
 - a. The Discharger must discharge sludge only to waste management units that have a leachate collection and removal system designed such that leachate gravity drains to a collection point/sump and is removed through gravity or pumping to a holding tank or sanitary sewer for volume measurement, testing and disposal.
 - b. A daily minimum solids-to-sludge ratio of 5 to 1, based on weight, must be maintained when co-disposing (burying) sludge with solid waste.
 - c. Primary and mixtures of primary and secondary sewage sludge must contain at least 20 percent solids by weight.

- d. Secondary sewage sludge and water treatment sludge must contain at least 15 percent solids by weight.

D. WATER QUALITY PROTECTION STANDARDS

1. The discharge of waste must not cause a statistically significant difference in water quality over background concentrations for proposed concentration limits for each constituent of concern or monitoring parameter (per MRP No. R3-2010-0006) at the point of compliance. The Discharger must maintain concentration limits for as long as the waste poses a threat to water quality. Discharge of waste must not adversely impact the quality of State waters.
2. Pursuant to Title 27 §20405, the point of compliance is a vertical surface located at the hydraulically downgradient limit of a waste management unit that extends through the uppermost aquifer underlying the waste management unit.
3. Discharge of waste must not cause concentrations of chemicals and radionuclides in groundwater to exceed the State Department of Public Health's latest recommended Drinking Water Action Levels or Maximum Contaminant Levels of CCR Title 22, Division 4, Chapter 15, Article 5.5.
4. Discharge of waste must not cause a violation of any applicable water quality standard for receiving waters adopted by the Water Board or the State Water Board.
5. Discharge of waste must neither cause nor contribute to any surface water impacts.
6. Constituents of concern and monitoring parameters for groundwater, leachate, and landfill gas are listed in MRP No. R3-2010-0006. Monitoring points and background monitoring points must be those specified in MRP No. R3-2010-0006.
7. The compliance period, pursuant to Title 27 §20380(d)(1) and §20410, is estimated to be the year 2053 [based on the Landfill estimated closure date of 2023 plus 30 years, pursuant to 40 CFR 258.61(a)], or until waste discharged at the Landfill no longer poses a threat to water quality, whichever is longer [except as provided by 40 CFR 258.61(b)1].

E. PROVISIONS

1. Order No. R3-2003-0011 "Waste Discharge Requirements for the Tajiguas Class III Landfill," adopted by the Water Board on March 21, 2003, is hereby rescinded.
2. The Discharger is responsible for waste containment, monitoring, and correcting any problems resulting from the discharge of waste for as long as the waste poses a threat to water quality.

3. The Discharger must comply with MRP No. R3-2010-0006, as specified by the Executive Officer.
4. **By October 1 of each year**, the Discharger must complete all necessary runoff diversion and erosion prevention measures (except for planting vegetation). The Discharger must complete all necessary construction, maintenance, or repairs of precipitation and drainage control facilities to prevent erosion or Landfill flooding and to prevent surface drainage from contacting or percolating through waste. The Discharger must repair erosion rills greater than six-inches deep immediately after storm events that cause the erosion, if it is safe to do so.
5. **By October 1 of each year**, the Discharger must seed and maintain vegetation (as necessary) over all slopes within the entire Landfill area to prevent erosion. The Discharger must select vegetation that requires minimum irrigation and maintenance and a rooting depth not to exceed the vegetative layer thickness. After receiving approval from the Executive Officer, the Discharger may utilize non-hazardous sludge as a soil amendment to promote vegetation. Soil amendments and fertilizers (including wastewater sludge) used to establish vegetation must not exceed the vegetation's agronomic rates (i.e., annual nutrient needs).
6. **By October 1 of each year and throughout the rainy season of each year**, the Discharger must maintain a compacted soil cover designed and constructed to minimize percolation of precipitation through waste over the entire active Landfill area. The only exception to this specification is the working face. The working face must be confined to the smallest area practicable based on the anticipated quantity of waste discharged and required by waste management facility operations. Based on site-specific conditions, the Executive Officer may require a specified thickness of soil cover for any portion of the Landfill's active waste management unit prior to the rainy season.
7. Should additional data become available through monitoring or investigation that indicates compliance with this Order is not adequately protective of water quality, the Water Board will review and revise this Order as appropriate.
8. If the Discharger or the Water Board determines, pursuant to Title 27, §20420, that there is evidence of a release from any portion of the Landfill, the Discharger must immediately implement the procedures outlined in Title 27 §20380, §20385, §20430, and MRP No. R3-2010-0006.
9. This Order does not authorize commission of any act causing injury to the property of another, does not convey any property rights of any sort, does not remove liability under federal, state, or local laws, and does not guarantee a capacity right.

10. The Water Board must be allowed, at any time and without prior notification:
 - a. Entry upon the Landfill area or where records are kept under the conditions of this Order and MRP No. R3-2010-0006.
 - b. Access to a copy of any records that must be kept under the conditions of this Order and MRP No. R3-2010-0006.
 - c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order and MRP No. R3-2010-0006.
 - d. To photograph, sample, and monitor for the purpose of showing compliance with this Order.
11. The Discharger must take all reasonable steps to minimize or correct adverse impacts on the environment resulting from non-compliance with this Order.
12. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - a. Violation of any term or condition contained in this Order.
 - b. Obtaining this Order by misrepresentation, or by failure to disclose fully all relevant facts.
 - c. A change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge.
 - d. A material change in character, location, or volume of the waste being discharged to land.
13. Two-weeks prior to constructing each phase of a waste management unit (e.g., preparing foundation, installing liner, installing leachate collection and removal system, placing operations layer, etc.), the Discharger must notify Water Board staff.
14. Prior to liner or cover construction, a third party (e.g., unrelated to the Discharger, Landfill operator, project designer, contractor) must prepare a Construction Quality Assurance (CQA) Plan. The Executive Officer must approve the third party and CQA Plan. The third party must implement the CQA Plan and provide regular construction progress reports to the Executive Officer.
15. Prior to beginning discharge of waste into any newly constructed waste management unit, the Discharger must receive a final inspection and written approval from the Executive Officer.
16. The Discharger must obtain and maintain Financial Assurance Instruments (Instruments), which comply with CCR Title 27 (§22207 [Closure Fund], §22212 [Post Closure Fund], and §22220 et seq. [Corrective Action Fund]), and 40 CFR parts 257 and 258. Pursuant to CCR Title 27 §20380(b), the Discharger must obtain and maintain assurances of financial responsibility, naming the Water Board as

beneficiary, for initiating and completing corrective action for all known or reasonably foreseeable releases. As landfill conditions change, and upon the Water Board's request, the Discharger must submit a report proposing the amount of financial assurance necessary for corrective action for the Executive Officer's review and approval. The Discharger must demonstrate compliance with all financial instruments to the Water Board at a minimum of a) every five years, or b) when the Discharger submits a revised Joint Technical Document. The next regularly scheduled Joint Technical Document is **due August 1, 2014**.

REPORTING

17. All reports must be signed as follows:

- a. By either a principal executive officer or ranking elected official.
- b. Their "duly authorized representative."
- c. A California Registered Civil Engineer or Certified Engineering Geologist must sign engineering reports.

18. Any person signing a report makes the following certification, whether its expressed or implied:

"I certify under penalty of perjury I have personally examined and am familiar with the information submitted in this document and all attachments and, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of a fine and imprisonment."

19. Except for data determined to be confidential under §13267 (b)(2) of the California Water Code, all reports prepared in accordance with this Order must be available for public inspection at the Water Board office.

20. The Discharger must submit reports in advance of any planned changes in the permitted Landfill or in an activity, which could potentially or actually result in noncompliance.

21. **By October 1 of each year**, the Discharger must submit a Wet Weather Preparedness Report (WWPR). The WWPR must describe compliance with Provisions E.4, E.5, and E.6 above. The report must also detail preparedness actions taken to ensure discharges to surface or groundwater do not occur during the impending rainy season, and ensure compliance with all other relevant Title 27 and 40 CFR 258 criteria. The report must include photographs of all wet weather preparedness measures implemented.

22. At least **180-days** prior to construction of a waste management unit the Discharger must submit design plans and a CQA Plan. The Executive Officer will provide

comments on the design plans and CQA Plan to the Discharger no later than 90-days after receiving the document. Prior to beginning construction, the Discharger must receive Executive Officer approval on the waste management unit's design and CQA Plan.

23. The Discharger must notify the Water Board with a written request of any proposed change in ownership or responsibility for construction or operation of the Landfill in accordance with Title 27, §21710 (c)(1). The written request must be given at least 90-days prior to the effective date of change in ownership or responsibility and must:
 - a. Be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these Waste Discharge Requirements.
 - b. Contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Water Board.
 - c. Contain a statement indicating that the new owner or operator assumes full responsibility for compliance with this Order.
24. Request for change in ownership or responsibility may be approved or disapproved in writing by the Executive Officer. In the event of any change in ownership of this Landfill, the Discharger must notify the succeeding owner or operator, in writing, of the existence of this Order. A copy of that notification must be sent to the Executive Officer.
25. The Discharger must furnish, within a reasonable time, any information the Executive Officer may request to determine compliance with this Order or to determine whether cause exists for modifying or terminating this Order.
26. The Discharger or persons employed by the Discharger must comply with all notice and reporting requirements of the State Department of Water Resources, Santa Barbara County, and other applicable permitting agencies with concurrence of the Executive Officer regarding the permitting, construction, alteration, inactivation, destruction, or abandonment of all monitoring wells used for compliance with this Order or with MRP No. R3-2010-0006, as required by §13750.5 through §13755 and §13267 of the California Water Code.
27. Should the Discharger discover that it failed to submit any relevant facts or that it submitted incorrect information, it must promptly submit the missing or corrected information.
28. The Discharger must notify the Executive Officer, within 24 hours by telephone and within 14 days in writing, of:
 - a. Any noncompliance that potentially or actually endangers health or the environment. Reports of noncompliance must include a description of;

- i. The reason for non-compliance;
 - ii. A description of the non-compliance, including photo documentation;
 - iii. Schedule of tasks necessary to achieve compliance; and,
 - iv. An estimated date for achieving full compliance.
 - b. Any flooding, equipment failure, slope failure, or other change in Landfill conditions which could impair the integrity of waste containment facilities or of precipitation and drainage control structures;
 - c. Leachate seep(s) occurring on or in proximity to the Landfill;
 - d. Violation of a discharge prohibition; and,
 - e. Violation of any treatment system's discharge limitation.
29. Reports of compliance or noncompliance with, or any progress reports on, final requirements contained in any compliance schedule must be submitted within 14-days following each scheduled date. If reporting noncompliance, the report must include a description of:
- a. The reason for non-compliance.
 - b. A description of the non-compliance.
 - c. Schedule of tasks necessary to achieve compliance.
 - d. An estimated date for achieving full compliance.
30. The Discharger must promptly correct any noncompliance issue that threatens the Landfill's containment integrity. Correction schedules are subject to the approval of the Executive Officer, except when delays will threaten the environment and/or the Landfill's integrity (i.e., emergency corrective measures). For emergency corrective measures, the Discharger must report details of the corrections in writing within seven (7) days of initiating correction.
31. **By August 1, 2014**, the Discharger must submit a Report of Waste Discharge (hereafter "ROWD") pursuant to CCR Title 27 §21710, to the Executive Officer. The ROWD is to be submitted in the form of an addendum to the JTD, in accordance with Title 27 §21585 et al., and meet the following criteria:
- a. Updated information on waste characteristics, geologic, and climatologic characteristics of the waste management facility and the surrounding region, installed features, precipitation and drainage controls, and closure and post closure maintenance plans, in accordance with CCR Title 27 §21740, §21750, §21760, and §21769.
 - b. Include a completed State Water Board JTD Index, in accordance with CCR Title 27 §21585(b),
 - c. Discuss whether, in the Discharger's opinion, there is any portion of this Order that is incorrect, obsolete, or otherwise in need of revision.
 - d. Include any other technical documents needed to demonstrate continued compliance with this Order and all pertinent State and Federal requirements.
 - e. Include detailed updated information regarding regulatory considerations, operating provisions, environmental monitoring, and closure and post closure.

32. **By August 1, 2014** or earlier as needed, submit for the Executive Officer's review and approval an updated report on a reasonably foreseeable release, along with adjustments to financial assurances (as necessary).
33. The Discharger must file with the Water Board a ROWD (in accordance with Provision E. 31 of this Order) or secure a waiver from the Executive Officer at least 120-days before making any material change or proposed change in the character, location, or volume of the waste being discharged to land.

ENFORCEMENT

34. The Discharger must comply with all conditions of this Order. Non-compliance violates state law and is grounds for enforcement action or modification of the Order.
35. Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of §13267 of the California Water Code, or falsifying any information provided therein, is guilty of a misdemeanor.
36. The Discharger and any person who violates Waste Discharge Requirements and/or who intentionally or negligently discharges waste or causes or permits waste to be discharged into surface waters or groundwater of the state may be liable for civil and/or criminal remedies, as appropriate, pursuant to §13350, §13385, and §13387 of the California Water Code.
37. Provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order must not be affected.
38. The Water Board requires all technical and monitoring reports pursuant to this Order in accordance with §13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the Discharger to enforcement action pursuant to §13268 of the California Water Code.
39. The Discharger must comply with all conditions of these Waste Discharge Requirements. Violations may result in enforcement actions, including Water Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Water Board. (California Water Code §13261, §13267, §13263, §13265, §13268, §13300, §13301, §13304, §13340, §13350).
40. No provision or requirement of Order No. R3-2010-0006 or MRP No. R3-2010-0006 is a limit on the Discharger's responsibility to comply with other federal, state and local laws, regulations, or ordinances.

41. The Discharger must comply with the following submittal and implementation schedule for all tasks and/or reports required by this Order.

REPORT AND IMPLEMENTATION DATE SUMMARY

| TASK | IMPLEMENTATION DATE |
|--|--|
| Runoff diversion and erosion prevention [Provision No. E.4] | October 1, of each year |
| Vegetation placement over entire Landfill area [Provision No. E.5] | October 1, of each year |
| Notify Water Board staff [Provision E.13] | Two-weeks prior to constructing each phase |
| Wet Weather Preparedness Report [Provision No. E.21] | October 1, of each year |
| Design Plans and CQA Plan [Provision No. E.22] | 180-days prior to construction |
| ROWD/JTD Amendment [Provision No. E.31] | August 1, 2014 |
| Update Report on Reasonably Foreseeable Release [Provision No. E.32] | August 1, 2014, or sooner, as necessary |

I, Roger W. Briggs, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on February 4, 2010.



Executive Officer

Figures: Figure 1 – Site Location Map
Figure 2 – Site Reconfiguration Map
Figure 3 – Site Vicinity Map
Figure 4 – Site Formations Map
Figure 5 – Site Monitoring Map

Attachment: Attachment 1 – Monitoring and Reporting Program Order No. R3-2010-0006