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STORMWATER POLLUTION PREVENTION PLAN/ MONITORING IMPLEMENTATION PLAN (SWPPP)

Chiquita Canyon Landfill (WDID: 4 19I022488)
29201 Henry Mayo Drive
Castaic, CA 91384

Prepared for: Chiquita Canyon, LLC.

Prepared by: Onterris USA, Inc.

September 2, 2026 (12th Revision)

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Stormwater Pollution Prevention Plan/Monitoring Implementation Plan (SWPPP)

Chiquita Canyon Landfill (WDID: 4 19I022488)

SWPPP CERTIFICATION

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

Kevin Green, District Manager
Legally Responsible Person
(signed on site)

September 2, 2026

Disclaimer

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Abbreviations

AST	Aboveground Storage Tank
BMP	Best Management Practices
CASQA	California Stormwater Quality Association
CFR	Code of Federal Regulations
DAR	Duly Authorized Representative
DWQ	Division of Water Quality
ELAP	Environmental Laboratory Accreditation Program
EPA	United States Environmental Protection Agency
ERA	Exceedance Response Action
EVOH	Ethylene Vinyl Alcohol (cover material layer combined with HDPE)
Facility	The Chiquita Canyon Landfill facility
HDPE	High Density Polyethylene
IGP	General Permit for Storm Water Discharges Associated with Industrial Activities
LCRS	Leachate Collection and Removal System
LFG	Landfill Gas
LRP	Legally Responsible Person
mg/L	milligrams per Liter
mL	milliliters
MIP	Monitoring Implementation Plan
MRP	Monitoring and Reporting Program
MSGP	Multi Sector General Permit (Federal)
NAL	Numeric Action Level
NEL	Numeric Effluent Limitation assigned to certain TMDLs
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NSWD	Non-Stormwater Discharge
O&G	Oil and Grease
PCBs	Polychlorinated Biphenyls
pH	A scale where 1 is very acidic and 10 is very alkaline (may go higher or lower)
PPT	Pollution Prevention Team
PRDs	Permit Registration Documents
QA/QC	Quality Assurance/Quality Control
QISP	Qualified Industrial Stormwater Practitioner
QSE	Qualifying Storm Event
RWQCB	Regional Water Quality Control Board
SIC	Standard Industrial Classification
SMARTS	Stormwater Multiple Application and Report Tracking System
SPCC	Spill Prevention, Control and Countermeasures
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	California State Water Resources Control Board
TMDL	Total Maximum Daily Loads
TNAL	TMDL Numeric Action Level
TSS	Total Suspended Solids
WDID	Waste Discharge Identification Number
WDR	Waste Discharge Requirements

Record of SWPPP Revisions:

Revision Number	Prepared by	Description of Revision	Date of Revision
1	SWT Engineering	New Issue	August 2023
2	SWT Engineering	Updated to include additional BMPs to manage leachate	February 2024
3	SWT Engineering	Updated sections 3.3, 6.2, 6.5 to clarify basin discharge and flocculant dosing practices.	March 2024
4	SWT Engineering	Updated to include section 6.7 permanent mitigation controls and section 7.5.2 enhanced discharge monitoring. Updated section 6.6 to include additional leachate control BMPs, design information for the South Basin, and removed discharge pumping.	April 2024
5	SWT Engineering	Revised sections 3.3 and 6.6 to clarify basin discharge and flocculant dosing practices. Updated section 6.6 to adjust temporary leachate BMP controls. Updated Section 6.2 to clarify treatment BMPs. Updated sections 4.2.4 and 4.2.5 to clarify landfill gas/condensate/leachate collection disposal. Revised Table 4-1 to update leachate volume.	May 2024
6	SWT Engineering	Revised sections 6.6 and 6.7 to consolidate and reword temporary BMPs, address reaction area slope inspections, and installation of geomembrane cover. Updated Figure 5 to include updated acres of geomembrane cover and Figure 2 to include reaction area. Updated Monthly Inspection Form to include section 6.6.	July 2024
7	SWT Engineering	Revised sections 2.1.2, 3.2, 3.3, 4, 5.5, 6.2, 6.4, 6.5, 7.1, 7.3. 8.2.2, and 8.2.3 to incorporate updated operating hours, clarification to sample location, suspension of flocculant usage per LARWQCB, and BMPs included in recent Level 2 ERA report. Updated Table 4-1 to reflect current industrial materials. Update also includes minor edits to language/formatting throughout. Updated Figure 2 to reflect current conditions. Added Figures 3 and 4 to show further drainage and sample locations. Updated monthly inspection forms.	December 2024
8	SWT Engineering	Revised sections 3.2, 3.3, 4, 6.5, and 6.7 to detail changes in landfill operations, use of flocculant, and controlled discharge practices. Added App. J Passive Treatment Plan.	February 2025
9	SWT Engineering	Revised sections 3.2, 4.0, 4.1, 4.2, 5.1, 5.8, 6.2, 6.4, 6.7, and 8.0 to detail changes in landfill operations. Revised sections 4 and 6.4.1 to reflect limited beneficial reuse of green waste on slopes for erosion control.	September 2025
10	Montrose Environmental Solutions, Inc.	Revised sections 3.3, 4, 1, 4,4, 4.5, 4.7, 5.1, 6.5, 6.7, 7.5.2, and 8.2 to include changes to practices or materials on site, stormwater containment, and level status for pollutants, and additions reflecting new requirements under the Amended Investigative Order. Update also includes minor additions to incorporate IGP required text and formatting. Updated the site figures to reflect current topography and updated basin information.	April 2026
11	Onterris USA, Inc.	Revised sections of the SWPPP to reflect current site features, practices, drainage patterns, receiving waters, materials, equipment, pollutants, to update Level Status for pollutants, and to add requirements from the June 12, 2026 Investigative Order.	July 2026

12	Onterris USA, Inc.	Revised Tables 7-1 to 7-4 in Section 7.4 to ensure accurate indicator and supplemental parameters list under enhanced discharge monitoring along with holding times and preservative information	September 2026

1 Introduction

The contents of this Storm Water Pollution Prevention Plan (SWPPP), which includes a Monitoring Implementation Plan (MIP) are consistent with the requirements of the National Pollutant Discharge Elimination System (NPDES) No. CAS000001, General Permit for Storm Water Discharges Associated with Industrial Activities Order WQ 2014-0057-DWQ as amended by Order WQ 2015-0122-DWQ and Order WQ 2018-0028-DWQ. The amended Order was adopted by the State Water Resources Control Board (SWRCB) in 2018 and went into effect on July 1, 2020. A copy of the Industrial General Permit (hereafter referred to as the IGP), is enclosed in Appendix H.

1.1 SWPPP Objectives

The purpose of the SWPPP is to protect surface water quality by reducing the amount of pollutants in stormwater runoff. This SWPPP is a public domain document and is required to be certified and submitted online to the SWRCB using the Stormwater Multiple Application and Report Tracking System (SMARTS). A copy of the Notice of Intent (NOI) for the Chiquita Canyon Landfill (the Facility) is included in Appendix A.

The SWPPP has three major objectives:

- To identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of stormwater discharges and authorized non-stormwater discharges (NSWDs) from the Facility.
- To identify and describe minimum and site-specific advanced Best Management Practices (BMPs) implemented to reduce or prevent pollutants in stormwater discharges associated with industrial activities and in authorized NSWDs in a manner that reflects best industry practice, considering technological availability and economic practicability and achievability.
- To identify and describe conditions or circumstances that may require future revisions to the SWPPP.

The SWPPP is organized into the following sections:

Section 1 (current section) reviews the purpose of the SWPPP at the Facility and provides a general introduction to the plan.

Section 2 provides information regarding the Facility's Legally Responsible Person (LRP) and the Duly Authorized Representative (Approved Signatory), the Pollution Prevention Team (PPT), and the associated responsibilities for implementing the SWPPP.

Section 3 contains Facility information regarding the location (both regional and local), description of industrial activities, and stormwater drainage, discharge, and sampling locations.

Sections 4, 5, and 6 provide a pollutant source assessment of the Facility and associated BMPs.

Section 7 contains the Monitoring Implementation Plan (MIP).

Section 8 contains a discussion of Numeric Action Levels (NALs) and consequences for exceedances.

Section 9 contains information regarding record keeping.

1.2 SWPPP Revisions

Preparation of this SWPPP does not guarantee compliance with the IGP. It is the responsibility of the Facility to implement the BMPs, MIP, and recommendations in this document and revise the SWPPP when conditions warrant and as necessary. When significant revisions to the SWPPP are warranted, the Facility must certify and submit the revised SWPPP to SMARTS within 30 days. As stated in the Fact Sheet to the General Permit:

> *While it is not easy to draw a line generally between revisions that are significant and those that are not significant, Dischargers are not required to certify and submit via SMARTS any SWPPP revisions that are comprised of only typographical fixes or minor clarifications.*

SWPPP revisions are required:

i. If they are necessary to improve SWPPP consistency with any applicable municipal, state, and federal requirements that pertain to the requirements in the IGP;

ii. If visual observation records indicate corrective actions are necessary that are not already incorporated into the SWPPP;

iii. If there are any physical or operational changes at the facility and/or changes to the existing BMPs;

iv. If the Discharger is directed to revise the SWPPP by the SWRCB or Regional Water Quality Control Board (RWQCB); and

v. If a Discharger is requesting a suspension of monitoring activities, due to suspension of industrial activities for ten (10) or more consecutive calendar days at a remote and/or unstaffed site.

Less-than-significant revisions are required to be certified and submitted to SMARTS within three months of making the change. Page vii contains a table summarizing the revisions to the SWPPP in chronological order.

2 Stormwater Planning and Organization

This section of the SWPPP identifies specific positions or individuals that make up the Chiquita Canyon Landfill Pollution Prevention Team (PPT) who are responsible for implementing the SWPPP and IGP requirements.

2.1 Pollution Prevention Team

A stormwater PPT (Table 2-1) has been assembled to assist the District Manager in carrying out the contents of the SWPPP. The Facility PPT is further described in the following sections.

2.1.1 Legally Responsible Person (LRP)

The LRP is a manager responsible for stormwater pollution prevention at this Facility and for the following:

- Oversight of SWPPP development
- Oversight of Implementation and revision of the SWPPP
- Oversight of Implementation of monitoring program activities required in Section XI. of the IGP, and described in the MIP within this SWPPP
- Reviewing the Annual Comprehensive Facility Compliance Evaluation
- Reviewing and certifying submittals and Annual Report(s)
- Allocating adequate resources to SWPPP implementation
- Seeking adequate capital investment budget for BMP implementation consistent with technological availability and economic practicability and achievability as necessary

The LRP assigns a Duly Authorized Representative (DAR) in SMARTS that can certify and submit the required reports in the event of the LRP's absence.

2.1.2 PPT Composition and Responsibilities

The PPT is comprised of several key individuals as shown in Table 2-1. Each member is listed in the table with a description of his/her job title and responsibilities. The PPT is responsible for:

- Implementing the SWPPP
- Implementing monitoring program activities described in the MIP in this SWPPP
- Operations, maintenance, and responding to emergency situations
- Reviewing the overall operation and effectiveness of BMPs
- Arranging for training of team members and other personnel per IGP requirements
- Conducting good housekeeping and preventative maintenance observations of the Facility
- Identifying and directing corrective action for any spills, leaks or other potential sources of pollutants
- Completing the Annual Comprehensive Facility Compliance Evaluation
- Completing submittals and Annual Report
- Reviewing the SWPPP annually and revising the SWPPP as necessary

The PPT includes alternate team members based on training, qualifications, and availability to perform required duties in the event of a temporary absence of a member of the PPT. The PPT also includes a Qualified Industrial Stormwater Practitioner (QISP) who has completed a SWRCB-sponsored or approved training course or a self-guided course for licensed professionals.

Table 2-1: Pollution Prevention Team

Position	Duties and Activities
District Manager	LRP, SWPPP certification and logistics
Assistant District Manager	DAR, SWPPP implementation and logistics
Compliance Manager	SWPPP implementation and logistics
Region Environmental Manager	DAR, SWPPP development, training, and implementation
Maintenance/Operations Managers	Inspections and implementing/maintaining BMPs
Consultant (QISP)	SWPPP revisions, reporting, training, and conducting the annual comprehensive facility compliance evaluation
Consultant or Trained Site Staff	Stormwater inspections and sampling

3 Facility Assessment

The following sections describe the Facility, Regional Setting, and Site drainage.

3.1 Regional Setting, Location, and Extent

Chiquita Canyon Landfill is located at 29201 Henry Mayo Drive, Castaic, California, 91384 (34° 25' 34" N, 118° 38' 47"W) in the County of Los Angeles (site). The site consists of five parcels (Assessor's Parcel Numbers 3271-002-019, 3271-002-034, 3271-002-011, 3271-005-027, and 3271-002-013, respectively) totaling approximately 639 acres and is located north of Henry Mayo Drive, or California Highway 126 (CA-126). A map of the site vicinity including nearby water bodies is provided as Figure 1.

The Facility can only be accessed via a gated entrance driveway from Henry Mayo Drive (CA-126). The site is located within a canyon that is bordered by undeveloped native hill slopes on all sides except for a United States (U.S.) Postal Facility to the east and Henry Mayo Drive to the south. The primary surrounding activity is vehicle traffic on Henry Mayo Drive.

3.2 Facility Description

The Facility is a Class III landfill, which ceased active waste disposal operations on January 1, 2025, with the exception of a small working face for internally generated waste. In addition to the IGP, stormwater discharge from the site is regulated by Waste Discharge Requirements (WDRs) Order No. R4-2018-0172 issued by the Los Angeles Regional Water Quality Control Board (LARWQCB) on December 13, 2018, and Investigative Order No. R4-2026-0156 issued by the LARWQCB on June 12, 2026. The WDRs along with a Joint Technical Document include requirements and provisions for disposal of internally generated non-hazardous municipal solid waste and construction & demolition debris (C&D), landfill leachate management (collection, treatment, storage, and removal from the site), and landfill gas collection and

destruction. Ancillary site activities include maintenance, fueling, cleaning, and parking of trucks and equipment, storage of bins, maintenance fluids, parts and tools, and administrative activities.

WDR Order Number R4-2011-0052 issued by the LARWQCB on March 11, 2011, applies to sites that accept and use contaminated soils onsite. The Facility will continue to comply with this order, if it receives non-designated/non-hazardous contaminated soils, which meet the criteria listed in Section C of the Order.

The Facility is approximately 639 acres of which approximately 400 acres were permitted for waste disposal. The total area of industrial activities and materials exposed to stormwater at the site is currently approximately 400 acres. This is measured by calculating the areas exposed to industrial activities on site and excludes the buildings/canopies (roofed areas) and the areas with no exposure to industrial activities such as the offices and employee parking locations.

The Facility includes three disposal areas designated as Primary Canyon, Canyon B, and Main Canyon as shown on Figure 2. The Primary Canyon and Canyon B are closed with final cover. Effective January 1, 2025, the Facility stopped accepting residential, commercial and industrial waste. The Main Canyon still contains a small working face for disposal of internally generated waste. A small area of the site is leased to a third-party and contains a Landfill Gas Electrical Generation Facility, which is currently inactive. This inactive energy generation area is not included in this SWPPP.

The Facility is permitted to operate from 3 am to 7 pm, and is open from 5 am to 5 pm. Administrative hours occur when the office is open from 8 am to 5 pm Monday through Friday. The hours of staff who implement the industrial SWPPP and SWPPP specifications, including monitoring, observation, and sampling, are the same as the administrative hours (Monday through Friday from 8:00 am to 5:00 pm (except for holidays)). These administrative hours will be considered the operational hours for the intent of this SWPPP.

Figure 1 shows the site vicinity and nearby water bodies. Figure 2 provides an overview of the Facility and includes site topography and physical features, the Facility boundary, industrial activity areas, industrial material storage areas, the drainage area outlines, general stormwater flow directions and collection basins, stormwater discharge sampling points, and the locations of some of the structural BMPs. Figure 3 illustrates the southern stormwater conveyances and the South Detection Basin Area and includes an inserted detail view of the Maintenance Area. Figure 4 includes the East Detention Basin Area and stormwater conveyances along the north perimeter of the landfill. Figure 5 shows the pervious and impervious surfaces across the entire site.

Facility Name:	Chiquita Canyon Landfill
Address:	29201 Henry Mayo Dr Castaic, CA 91314
Site Contact:	Kevin Green (Telephone: 253-847-7555)
Facility SIC Code(s):	4953 (Landfills and Land Applications)
WDID #:	4 19I022488

3.3 Surface Water Drainage

Industrial activities and industrial material storage is present on approximately 400 acres of the Facility. Figure 5 illustrates the impervious and pervious areas at the site. Approximately 2 percent of the Facility is covered by paved roadways, concrete pads, buildings, canopies, and concrete drainage structures. As indicated on Figure 5, areas of the site are covered by impermeable geosynthetic cover or lined spill containment areas. The remainder of the Facility consists of pervious surface areas

including undisturbed native vegetated slopes, unpaved roads/paths, soil borrow areas, cleared flat areas used for staging equipment and materials, the unlined basins, and the portions of the landfill with soil cover materials.

Stormwater is conveyed by surface runoff and concrete channels, and in some sections by a network of underground and above ground pipes, which are shown on Figures 3 and 4. There are currently nine detention basins, which capture and retain stormwater, helping to reduce the stormwater flow velocity and allow sediment to settle. Some of these basins are considered temporary and may be reconfigured in future based on updated hydrologic analysis. There are no other on-site bodies of water. There are two drainage areas at the Facility and both include exposed industrial activity and storage areas.

3.3.1 Drainage Area 1

Drainage Area 1 encompasses approximately 38 percent of the northern portion of the Facility as presented on Figures 2 and 4. Drainage Area 1 includes the Canyon B closed waste disposal area, soil stockpile and borrow areas, and a small northwest portion of the Main Canyon landfill as illustrated on Figure 2. Stormwater from this section flows to temporary Sub-basin 4, then temporary Sub-basin 3, and ultimately to the East Detention Basin located at the eastern boundary of the site. The permanent East Detention Basin, designated as Sub-basin 2, has a capacity of approximately 14 acre-feet. There is also a Sub-basin 1 located at the concrete culvert at the Facility's eastern perimeter and downstream of the Sub-basin 2.

Stormwater discharges from the Facility's eastern perimeter via a large storm drain inlet pipe set in a concrete culvert in Sub-basin 1. The storm pipe runs beneath the U.S. Postal Facility to discharge into the Castaic Creek, which eventually discharges into the Santa Clara River. The pipe has been temporarily blocked with a steel plate and a soil "plug" and discharge can now only occur if enough stormwater collects in Sub-basin 1 to overtop the concrete berm. In the unlikely event that this occurs, the stormwater discharge will be sampled and analyzed for the required parameters at an environmental laboratory.

As noted above, the East Detention Basin, also known as Sub-basin 2, is considered a permanent basin, but Sub-basins 3 and 4 located upgradient of Sub-basin 2 are considered temporary basins, which may be reconfigured in future. These temporary sub-basins provide additional capacity and serve the purpose of retaining larger stormwater and sediment volumes and reducing the rate of runoff flow. Even before the "East" outlet drain was blocked, stormwater rarely discharged from Drainage Area 1 out the "East" discharge point.

3.3.2 Drainage Area 2

Drainage Area 2 encompasses approximately 62 percent of the Facility as outlined on Figure 2. It includes active and inactive waste disposal areas, maintenance facilities, storage areas, permanent and mobile office buildings, the flare station, the inactive energy plant, condensate and leachate collection sumps, condensate and leachate tank storage areas, the scale house and scales, a diesel fueling area, soil stockpile and borrow areas, and equipment and employee parking lots.

Stormwater runoff in Drainage Area 2 flows by gravity to concrete v-ditches and other drainage channels or enters drainage inlets connected to aboveground or below ground drainage pipes, all of which ultimately direct the flow to three south detention basins. Figure 3 illustrates the storm water conveyance system in detail. The two-stage South Detention Basin receives most of the stormwater

runoff from Drainage Area 2. A smaller detention basin (named Lower Basin) receives runoff from the southeast portion of the Facility and is located east of the paved landfill access road. This basin helps sediment settle out of the stormwater before it drains via two large subsurface pipes running beneath the road to the Stage 2 South Detention Basin. The paved entrance area and main haul road are graded to direct sheet flow runoff from the pavement to either the Lower Basin or South Detention Basins.

Design calculations for the South Detention Basin are included in Appendix B. The text and selected relevant figures and attachments in Appendix B were extracted from the Cell 8B Drainage Report, which was prepared by Tetra Tech in March 2023. The Stage 2 South Detention Basin has two tall standpipes that are wrapped in impermeable high-density polyethylene HDPE material to enable stormwater to rise up to a certain height (representing a calculated capacity) in the basin before it can overtop the standpipes and gravity flow to the outlet drains on the south side of the concrete spillway. This helps to maximize the stormwater and sediment retention capacity of the basin. Currently the two outlet drains have inflatable plugs inserted to prevent stormwater discharge from the south outfall. Controlled discharge of the accumulated stormwater from the Stage 2 South Detention Basin may be done on an as-needed basis, as described in Section 6.5. When stormwater is released, it flows through a concrete channel under Henry Mayo Drive (Highway 126), which directs the water to the Santa Clara River flood plain. Stormwater that discharges offsite from the South Detention Basin will be sampled at the concrete channel.

In the northwest portion of the Facility there are two additional small basins named Upper Basin 1 and Upper Basin 2 as indicated on Figure 2, that receive surface flow from the adjacent surrounding area. Stormwater that collects in these two basins is inspected, and if it is determined to be uncontaminated, it will be pumped into adjacent drainage channels that direct the water to the South Detention Basin. Though not expected, if the water does not appear to be clean, it may be collected and transported to one of the leachate tank farm areas for treatment and/or disposal offsite.

3.4 Receiving Waters

Stormwater from Drainage Area 2 flows south and ultimately discharges into the Santa Clara River, which is located south of Henry Mayo Drive (Highway 126). Stormwater discharge from Drainage Area 1 flows into Castaic Creek, which is not listed as an impaired water body, but discharges to the Santa Clara River. The Industrial General Permit Map Tool, accessible in SMARTS, indicates that the Facility discharges to Reach 5 of the Santa Clara River, which is the segment from the Blue Cut gaging station to West Pier Highway 99 Bridge. The Santa Clara River, Reach 5 is listed on the 303(d) List as an impaired water body. Nine miles of Reach 5 along the Santa Clara River were assessed for impairments, including the portion of the River that receives the Facility's discharge.

When the IGP was Amended in 2018, it included a list of TMDLs applicable to stormwater discharges to the Santa Clara River, Reach 5 based on the *Final California 2014 and 2016 Integrated Report (303(d) List/305(b) Report).* At that time, chloride, iron, and coliform bacteria were listed as TMDLs. Iron was already being sampled as a sector required parameter (See Section 7.4.1.1), so chloride and total coliform were added to the Facility MIP.

The current *Final California 2024 Integrated Report (303(d) List/305(b) Report)* for the Santa Clara River, Reach 5 is available at the following website:

https://www.waterboards.ca.gov/water_issues/programs/tmdl/2023_2024state_ir_reports/apx-b-factsheets/01035.shtml

This updated report lists E. coli and iron as TMDL parameters for Reach 5 of the Santa Clara River and delists chloride as a TMDL. Since E. coli is a subgroup of coliform, it has been analyzed in stormwater samples collected from the Facility since June 2022. Chloride, iron and E. coli will continue to be included as stormwater parameters in the Facility's MIP.

4 Potential Pollutant Sources

The potential sources of pollutants at the facility include industrial materials handled through industrial processes. Additional potential sources include:

- Dust and Particulate Generating Activities;
- Significant Spills and Leaks;
- Non-Stormwater Discharges; and
- Erodible surfaces.

Industrial materials used on-site that could be potential stormwater pollutants are listed in Table 4-1. The table provides a description of the industrial activity, associated industrial materials, maximum quantities, storage containers, material handling locations, associated pollutants, and potential stormwater exposure. Industrial activities, potential sources, and potential pollutants are described in Table 4-2. Also provided in Table 4-2 are the BMPs that are implemented to address pollutant sources. BMP detail sheets prepared by CASQA are included as Appendix C.

The locations of industrial materials (i.e., storage or parking areas) that could potentially be exposed to stormwater at the Facility are shown on Figures 2 through 4. The following sections of the SWPPP further describe the Facility-specific industrial materials and industrial processes conducted onsite.

Table 4-1: List of Industrial Materials

Product or Material	Maximum Quantity	Handling Frequency[1]	Storage Method	Storage and Handling Location	Receiving Location	Shipping Location	Spill and Leak Prevention Measures	Likelihood of Contact with Stormwater[1]
Diesel Fuel	8,000 gallons	Daily	8,000-gallon AST	Maintenance Area	Storage Location	Storage Location	Double-walled; secondary containment	Possible
Used Oil	750 gallons	Daily	750-gallon AST	Maintenance Area Containment	Storage Location	Storage Location	Double-walled; secondary containment	Unlikely
Transmission Oil	500 gallons	Daily	500-gallon AST	Maintenance Area Containment	Storage Location	Storage Location	Single-walled; Secondary containment, cover	Unlikely
Engine Oil	500 gallons	Daily	500-gallon AST	Maintenance Area Containment	Storage Location	Storage Location	Single-walled; secondary containment; cover	Unlikely
Drive Train Fluid	300 gallons	Daily	300-gallon AST	Maintenance Area Containment	Storage Location	Storage Location	Single-walled; Secondary containment, cover	Unlikely
Used Antifreeze	300 gallons	Daily	200-gallon AST	Maintenance Area Containment	Storage Location	Storage Location	Tank is an overpack; secondary containment, cover	Unlikely
Grease	55 gallons	Daily	55-gallon drum mounted on mobile refueler	Varies	Storage Location	Storage Location	Secondary containment; spill kits	Unlikely
Used Oil	500 gallons	Daily	Mounted on mobile refueler	Varies	Storage Location	Storage Location	Double-walled; spill kits	Possible
50W Oil	200 gallons	Daily	Mounted on mobile refueler	Varies	Storage Location	Storage Location	Secondary containment; spill kits	Unlikely
30W Oil	100 gallons	Daily	Mounted on mobile refueler	Varies	Storage Location	Storage Location	Secondary containment; spill kits	Unlikely
Engine / Hydraulic Oil	200 gallons	Daily	Mounted on mobile refueler	Varies	Storage Location	Storage Location	Secondary containment, Cover; spill kits	Unlikely
Diesel	1,750 gallons	Daily	Mounted on mobile refueler	Varies	Storage location	Storage location	Secondary containment, spill kits	Unlikely
Antifreeze	440 gallons	Daily	55-gallon drums	Maintenance Area Containment	Storage Location	Storage Location	Secondary containment, Cover; spill kits	Unlikely
Grease	220 gallons	Daily	55-gallon drums	Maintenance Area	Storage Location	Storage Location	Secondary containment, Cover; spill kits	Unlikely

Table 4-1: List of Industrial Materials, continued

Product or Material	Maximum Quantity	Handling Frequency1	Storage Method	Storage and Handling Location	Receiving Location	Shipping Location	Spill and Leak Prevention Measures	Likelihood of Contact with Stormwater1
Hydraulic / Transmission Fluid	110 gallons	Daily	55-gallon drums	Maintenance Area Containment	Storage Location	Storage Location	Secondary containment, cover; spill kits	Unlikely
Gear Oil	55 gallons	Daily	55-gallon drum	Maintenance Area Containment	Storage Location	Storage Location	Secondary containment, Cover; spill kits	Unlikely
Used Oil Filters	220 gallons	Daily	55-gallon drums	Maintenance Area	Storage Location	Storage Location	Secondary containment, Cover; spill kits	Unlikely
Automatic Transmission Fluid	110 gallons	Daily	55-gallon drums	Maintenance Area Containment	Storage Location	Storage Location	Secondary containment, Cover; spill kits	Unlikely
Diesel Exhaust Fluid	600 gallons	Daily	300-gallon totes	Maintenance Area	Storage Location	Storage Location	Secondary containment, Cover; spill kits	Unlikely
Landfill Gas Condensate	3 x 6,500 gallons	Daily	ASTs	Gas Flare Area	Storage Location	Storage Location	Double-walled; Secondary containment; Refer to preventive measures listed in Table 4-2	Unlikely
	5,000 gallons	Daily	AST	East Toe of Canyon B	Storage Location	Storage Location	Double-walled; Secondary containment; Refer to preventive measures listed in Table 4-2	Unlikely
	10,000 gallons	Daily	AST	Toe of Primary Canyon	Storage Location	Storage Location	Double-walled; Secondary containment; Refer to preventive measures listed in Table 4-2	Unlikely
Temporary Leachate/ Condensate Storage FRAC Tanks	5,000,000 gallons	Daily	AST	Phase 8A, 8B and Canyon D	Storage Location	Storage Location	Secondary containment	Unlikely
Landfill Leachate	140,000 gallons	Daily	AST, Sump	Toe of Main Canyon, Canyon B Sump, Tank Farms #7, #10, #13	Storage Location	Storage Location	Double-walled; Secondary containment; Refer to preventive measures listed in Table 4-2	Unlikely

Table 4-1: List of Industrial Materials, continued

Product or Material	Maximum Quantity	Handling Frequency[1]	Storage Method	Storage and Handling Location	Receiving Location	Shipping Location	Spill and Leak Prevention Measures	Likelihood of Contact with Stormwater[1]
Water-based Detergent/Degreaser	125 gallons	Daily	25-gallon drums	Wash Pad and Maintenance Area	Storage Location	Storage Location	Cover; spill kits	Unlikely
Internally Generated Waste	As needed	Daily	Landfill Deck	Outside	Active Landfill Face	N/A	N/A	Likely
Spent Activated Carbon	17,600 pounds	Daily	Bags	Primary Canyon	Storage Location	Storage Location	N/A	Unlikely
Diesel	1,000 gallons	Daily	Generator	Flare Station	Storage Location	Storage Location	Double-walled	Unlikely
Sodium Hydroxide 50%	1,650 gallons	Daily	Poly Totes	Primary Canyon	Storage Location	Storage Location	Secondary containment; Spill Kits	Possible
Sodium Hypochlorite 12.5%	990 gallons	Daily	Poly Totes	Primary Canyon	Storage Location	Storage Location	Secondary containment; Spill Kits	Possible

Notes:
[1] During hours of operation.
[2] Likelihood determined based on storage method: unlikely - stored inside, unlikely - permanent cover, possible - temporary cover, likely - uncovered.

Table 4-2: BMP Summary

Activity or Area	Source	Potential Pollutant	BMPs	BMP Equipment and Tools	Frequency
All Operations	Equipment and Materials	TSS, O&G	Place absorbent pads and/or drip pans under equipment stored or parked overnight that exhibit signs of leaking	Absorbent pads and drip pans	Weekly or as needed
			Remove or store under cover and on pallets abandoned or broken equipment or materials no longer considered for future use that have the potential to expose stormwater to pollutants*	Forklift, pallets, tarps	Weekly or as needed
			Implement proper spill prevention control measures daily and ensure spill kits are replenished	Spill kits	N/A
			Inspect heavy equipment daily for evidence of leaks and promptly (as soon as reasonably possible and in no case later than in advance of forecasted rainfall events) cleanup spills, drips, or leaks*	Absorbent materials, drip pans, and spill kits	Weekly or as needed
			Use dry cleanup methods, apply absorbent pads to leaks or spills, then properly dispose of used absorbent	Absorbent materials, shovel, container for used absorbent	As needed
			Train employees on proper cleanup and spill response	N/A	Minimum Annually
			Practice good housekeeping procedures during all operations	N/A	Daily
			Avoid storage of material outside for extended periods or during rain events*. See Section 5.8 for BMP exceptions.	Forklift to move industrial materials under cover	As needed
			Cover outdoor materials 24 hours ahead of likely storm events forecast at 50 percent or greater probability*. See Section 5.8 for BMP exceptions.	Covers/Tarps	As needed prior to rain event
Landfilling	Internally generated solid waste	TSS, O&G, pH, iron	Minimize exposed disposal working face during precipitation. See Section 5.8 for BMP exceptions.	Heavy equipment to cover exposed waste	As needed during rain
Landfill Gas Collection	Landfill gas condensate Equipment operation and maintenance	pH, Iron	Limit quantity and duration of condensate storage	N/A	N/A
			Provide double-walled tanks with secondary containment for storage	Tanks, compliant with regulatory requirements	As needed
			Inspect piping for condensate leaks and fix any issues promptly	N/A	Weekly

Table 4-2: BMP Summary, continued

Activity or Area	Source	Potential Pollutant	BMPs	BMP Equipment and Tools	Frequency
Leachate collection and storage	Landfill leachate seeps and storage	pH, Iron	Limit quantity and duration of leachate storage	Trucks to haul away leachate	N/A
			Use tanks with secondary containment for storage. Place tanks and piping in lined and bermed areas to contain leaks.	Equipment for creating lined containment areas	Routine inspection of secondary containment area
			Construct check dams in the stormwater drainage channels to capture potential seeps before they can flow to the detention basins.	Equipment for building check dams	As needed, prior to forecasted rain event
Material and product transport, general traffic	Materials blowing off vehicles	TSS	Use dry cleanup methods, vacuum sweep as needed and the day before rain events the entire paved Facility. Pick up litter and debris	Vacuum sweeper	As needed, prior to rain event
Fueling and Equipment maintenance	Spills and leaks	pH, O&G and iron	Use spill and overflow protection	Spill pallets, sensors	As needed
			Minimize stormwater run-on into fueling/maintenance areas	Equipment to create berms, sandbags	N/A
			Use absorbent materials and dry cleanup methods	Spill response equipment	As needed
			Implement proper spill prevention controls	N/A	N/A
			Inspect hoses and fittings and replace as needed.	Tools and hoses/parts	As needed
			Train employees on proper fueling techniques, spill cleanup, and spill response	N/A	Annually

Table 4-2: BMP Summary, continued

Activity or Area	Source	Potential Pollutant	BMPs	BMP Equipment and Tools	Frequency
Earth moving activities, truck traffic, and other activities that could cause erosion and release sediment	Native and disturbed soils, cover soils, soil borrow areas, and roads	TSS, iron	Install temporary drainage ditches during cell development	Heavy equipment	As needed
			Install and maintain a stormwater conveyance system to divert runoff around material storage areas and convey runoff through pipes and non-erodible features to the extent practicable	Pipes and heavy equipment	As needed
			Construct and maintain detention basins to contain sediment	Heavy equipment	As Needed
			Install energy dissipating devices to slow the velocity of stormwater drainage and prevent erosion	Gravel bags, wattles, check dams	As Needed
			Vacuum sweep paved areas as needed and prior to rain events to reduce trackable materials and dust	Vacuum sweeper	At least weekly and prior to rain events
			Install and maintain silt fencing along western slope, primary canyon stockpile, and temporary leachate storage area	Silt fencing	Annually
			Apply jute/hydroseed and/or soil binders on selected exposed slopes	Jute, hydroseed, water truck	As needed
			Install scrim plastic over soil operations placed over new cell liner	10-mil or 12-mil plastic liner	One time installation
			Place sandbag checks along access roads to establish a ditch line	5-year sandbags	Annual/ As needed
			Installed 30-mil geomembrane cover over 45 acres and 60-mil EVOH liner over 68 acres of the landfill	Tools & Equipment for installing cover	One time installation
			Install and maintain compacted rock surfacing over roadways and storage locations to prevent tracking and muddy ruts.	Rock	As needed
			Strategically apply anionic polyacrylamide flocculant upstream of and within sedimentation basins	Flocculant logs/powder, water pump	As needed during storm events
			Controlled discharge of accumulated stormwater from sedimentation basins	Water pump, water truck	As needed during or after storm events

Notes:
O&G – Oil and Grease
TSS – Total Suspended Solids
N/A – Not applicable
The lined spill-containment areas and the portions of the landfill with geomembrane and EVOH cover are shown on Figure 5.

4.1 Industrial Processes

Figures 2 through 4 show the areas of industrial activities. The primary industrial activities at the Facility consist of disposal of small quantities of internally generated waste, the leachate collection, treatment, and removal systems, the landfill gas collection and destruction systems, condensate collection and removal, and vehicle and equipment maintenance, washing, and fueling. Areas at the Facility that are considered to have significant potential pollutant sources are the maintenance, storage, and fueling areas, the flare station, the leachate Tank Farm areas, the condensate storage tanks, and disturbed soil and truck traffic areas. Potential pollutant sources are discussed further by area and process in the following sections.

4.2 Material Handling and Storage Areas

Industrial activities at the Facility consist of disposing of small quantities of internally generated waste, vehicle and equipment maintenance, and landfill leachate and condensate gas collection and disposal. Potential sources of pollutants from material handling operations include leaks or drips from trucks/equipment operated onsite and from other industrial materials handled or stored onsite as listed in Table 4-1. A Hazardous Material Business Plan (HMBP) is updated annually or more frequently as needed for this Facility.

Facility-specific industrial processes and industrial materials are further described in the subsections below.

4.2.1 Active Landfill Face

Internally generated wastes are placed into the active landfill face. Cover is placed over the refuse fill as specified under California Code of Regulation, Title 14 (Title 14). Title 14 requires approved daily cover or alternative daily cover to be placed on the working face and one foot of approved intermediate or alternative immediate cover to be placed on the top and side slopes of each advancing lift. Cover materials are graded to direct precipitation away from the landfill areas to mitigate the ponding of surface water over wastes, and to mitigate erosion caused by precipitation. Once the active cells have reached final capacity, alternative daily cover may be placed on intermediate slopes. The disturbance of soil associated with these activities may generate dust and sediment that may be transported by stormwater run-off. Sources of disturbed soil include the borrow pit, stockpiles of cover soil, daily or intermediate cover placed on cells, and erosion from haul roads.

4.2.2 Vehicle and Equipment Fueling

Diesel fuel is stored on-site near the maintenance area and to fuel a generator. The fuel is stored in an 8,000-gallon, double-walled aboveground storage tank (AST). Some equipment is fueled at the tank. A mobile refueling truck also fills up at the tank and then drives to refuel the heavy equipment operating in various locations at the Facility. There is also a 1000-gallon diesel fuel tank on a back-up generator located at the flare station.

4.2.3 Maintenance Area

Routine maintenance and storage of vehicles and equipment occur in the maintenance area. There is also a wash pad for cleaning equipment. Materials stored in the Maintenance Area include used and new motor oil, gear oil, grease, transmission oil, drive train fluid, and used and new antifreeze. The materials are handled during operating hours and are stored in material-compatible ASTs, drums, or totes with secondary containment as detailed in Table 4-1. The location of the Maintenance Area is shown on Figure 2, and a detailed insert map of the Maintenance Area is provided on Figure 3. The Maintenance Area is a potential pollutant source if spills or drips of fuel, oil, antifreeze, or lubricants are exposed to rain and contaminate stormwater run-off. To prevent releases maintenance fluids are stored with secondary containment and kept under the canopy.

4.2.4 Maintenance Fluids and Oil Handling

There are several mobile refueling trucks that transport new oil to top off heavy equipment operating around the site. One of these trucks collects used oil in a 500-gallon tank and transports it back to the Maintenance Area, where it is pumped into a 750-gallon double-walled AST. A certified contractor periodically pumps out the used oil and transports it off-site to a licensed facility for recycling or disposal using appropriate manifest documentation. Facility personnel monitor maintenance fluid and fuel delivery and removal procedures performed by contractors for spills and leaks. Used oil filters, used absorbent, media from the oil/water separator, and other materials with absorbed petroleum products or hazardous fluids are collected by a licensed hauler for proper disposal.

4.2.5 Landfill Gas and Condensate Collection and Disposal

To comply with regulations promulgated by the South Coast Air Quality Management District (SCAQMD) and EPA, a landfill gas (LFG) collection and destruction system operates at the Facility. The collection system consists of an inter-connected system of horizontal and vertical LFG extraction wells. The gas extraction wells are connected by an aboveground HDPE pipe network, which transports the gas to a flare station facility located on the north edge of the Primary Canyon landfill (Figure 2).

LFG generated condensate accumulates in the header lines and is collected and stored in a series of double-walled ASTs. The condensate may then be stored in a Frac Tank with secondary containment prior to offsite disposal.

The LFG condensate storage areas can be a potential source of pollutants if condensate is spilled during transfer operations or leaks from storage tanks or fittings. The condensate handling areas are uncovered, so rain could contact and mobilize condensate.

4.2.6 Leachate Collection and Disposal

The disposal areas located in Canyon B and the Main Canyon have been equipped with leachate collection and removal systems (LCRS) to collect and convey landfill leachate to collection sumps, from which the leachate can be removed. In 2023 leachate production increased significantly in the northwest area of the site and additional leachate collection tanks and associated piping had to be installed to manage this. Lined and bermed areas were created to provide spill containment for the numerous leachate storage frac tanks. These areas are identified as “Tank Farms” on Figures 2 and 5. The leachate collection sumps, storage tanks, and associated piping are regularly inspected for

signs of releases. Leachate recovered from the LCRS at the landfill may be treated (when feasible) before it is transported off-site to a licensed facility for additional treatment or disposal.

Stormwater that collects in the lined and bermed Tank Farm areas is inspected for signs of contaminants. If the accumulated stormwater is clean, it may be pumped to a nearby drainage channel, which will direct it to the South Detention Basin. If the stormwater appears to be contaminated with leachate, then the water will be transported off-site for treatment or disposal. In Tank Farm 13, any accumulated stormwater must be disposed of as leachate and not released to the Facility's stormwater conveyance system.

The Tank Farms and other leachate storage or seepage areas onsite are potential pollutant sources that may allow leachate to commingle with stormwater runoff. The Facility has been directed by the LARWQCB to sample and submit for laboratory analysis all discharges into and out of the South and East Detention Basins.

4.3 Dust and Particulate Generating Activities

Vehicles delivering industrial materials to the site may track in dust and particulates. Truck traffic and heavy equipment operations onsite also have the potential to generate airborne dust and particulates. To reduce dust, roads that are not paved at the Facility are compacted and may be topped with gravel. These unpaved roads comprise approximately 90 percent of the road surfaces at the site and a water truck may be used during dry conditions to spray water on areas prone to airborne dust, as needed. Earth moving activities that generate dust may also be sprayed with water, when necessary. Since the Facility stopped accepting municipal solid waste, there are significantly less dust generating activities occurring onsite.

4.4 Significant Spills and Leaks

The NPDES General Permit requires a list of industrial materials that have spilled or leaked in significant quantities and have had the potential to be discharged from the facility's stormwater conveyance system within the last five years.

The Facility maintains records of relevant spills and leaks in accordance with Condition 27(e) of the Stipulated Order for Abatement in Case No. 6177-4 as well as similar reports required under the Waste Discharge Requirements at the following link:

https://chiquitacanyon.com/odor-mitigation/stipulated-order-for-abatement/#stipulated-order-condition-27e-leachate-leak-spill-reports.

There is a potential risk for spills or leaks to occur within the Facility where industrial materials are handled or stored. Spills or leaks are addressed promptly in the manner discussed in Section 5.3 and per the Facility's SPCC Plan. A description of spills and the corrective actions taken are documented in the reports available online at the link listed above. As part of routine inspections, the PPT inspects the Facility for leaks and spills. Appendix D includes a form for describing significant spills and leaks and recording response procedures.

4.5 Non-stormwater Discharges

NSWDs consist of discharges which do not originate from precipitation events. The General Permit provides allowances for specified NSWDs provided they:

- Do not cause erosion;
- Do not carry other pollutants;
- Are not prohibited by the local MS4; and
- Do not require a separate NPDES Permit from the Los Angeles Regional Water Quality Control Board (LARWQCB).

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

Potential NSWDs that are authorized at this facility include the following:

- Fire hydrants or fire prevention response system flushing
- Irrigation drainage/landscape water
- Air conditioner condensate

These authorized NSWDs will be managed with the stormwater and non-stormwater BMPs described in Section 5 of this SWPPP. These BMPs are implemented to:

- Reduce or prevent the contact of authorized NSWDs with materials or equipment that are potential sources of pollutants;
- Reduce, to the extent practicable, the flow or volume of authorized NSWDs;
- Ensure that authorized NSWDs do not contain quantities of pollutants that cause or contribute to an exceedance of water quality standards; and
- Reduce or prevent discharges of pollutants in authorized NSWDs in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.

Monthly visual observations are conducted according to the IGP (Section XI.A.1) for NSWDs and sources to ensure adequate BMP implementation and effectiveness. Monthly visual observations include observations for evidence of unauthorized NSWDs. Secondary containment, spill kits, and spill response procedures are in place to ensure that no unauthorized NSWDs will reach any stormwater discharge location.

Water trucks are frequently used for wetting soil surfaces at the Facility in order to reduce fugitive dust. The spray water is only applied in amounts that evaporate or are absorbed into the soil to ensure there is no discharge offsite. Water trucks are only utilized during the dry season or extended periods of dry weather during the wet season. In the event that this water discharges offsite, it would be considered an unauthorized NSWD.

Based on historical inspections and observations, no unauthorized NSWDs have been observed discharging offsite from the Facility.

4.6 Erodible Surfaces

The Facility is primarily unpaved. Erosion of non-vegetated areas can cause sediment mobilization and increase sediment loading in stormwater runoff. Additional sources of disturbed soil include stockpiles of cover soil, daily or intermediate cover placed on cells, or erosion from haul roads. Most drainage pathways at the Facility discharge to detention basins, which act as sedimentation basins. Erosion control BMPs implemented at the Facility are discussed in Sections 5.5 and 6.4.

4.7 Materials Inventory

A list of industrial materials handled and stored at the Facility is presented in Table 4-1. Table 4-1 lists locations where industrial materials are received, stored, shipped, and handled. Also included are the storage method, typical handling frequency, and the likelihood of exposure to stormwater.

4.8 Pollutant Source Assessment

A potential pollutant source assessment was performed to identify industrial activities with the potential to contribute pollutants to stormwater discharge, evaluate BMPs implemented or to be implemented, and to reduce the overall potential for pollution.

Industrial activities and potential pollutant sources are identified in previous Sections 4.1 and 4.2 and BMPs are identified in the following Sections 5 and 6. The following information is summarized in Tables 4-1 and 4-2.

- Areas of Facility with likely sources of pollutants.
- Pollutants likely to be present in industrial stormwater discharges and authorized NSWDs.
- Approximate quantity, physical characteristics, and locations of each industrial material handled, produced, stored, recycled, or disposed.
- Degree to which the pollutants associated with those materials may be exposed to and mobilized by contact with stormwater.
- Direct and indirect pathways by which pollutants may be exposed to stormwater or authorized NSWDs.

Sampling, visual observation, and inspection records were reviewed as part of the annual SWPPP assessment; however, historic records are not included as part of this SWPPP. The effectiveness of existing BMPs to reduce or prevent pollutants in industrial stormwater discharges and authorized NSWDs was examined during a review of historical data.

As described in previous Section 3.4, the Facility stormwater runoff ultimately discharges to Reach 5 of the Santa Clara River, which is Listed as a 303(d) impaired water body. Based on the *Final California 2024 Integrated Report (303(d) List/305(b) Report)* for the Santa Clara River, Reach 5, E. coli and iron are impairments with assigned TMDLs. Chloride, iron, and coliform bacteria were listed as TMDLs in the older 2014 and 2016 Integrated Reports. Since chloride and total coliform were previously included in the Facility's MIP (Section 7), they will continue to be analyzed along with iron and E. coli in stormwater samples.

Consistent with the WDR amendments for contaminated soils and related wastes (R4-2011-0052), the Facility has developed a parameter list. These additional parameters are described in a separate work plan for the site and the results for the additional monitoring will be reported separately with the corresponding quarterly or semiannual monitoring reports, pursuant to the monitoring and reporting program in the site-specific WDRs. Therefore, these results will not be included in the stormwater annual monitoring report submitted to SMARTS .

5 Minimum Best Management Practices

Minimum BMPs generally consist of processes, prohibitions, procedures, and a schedule of activities that reduce the potential for stormwater and authorized NSWDs to be exposed to pollutants. The minimum BMPs described in this section are required by the General Permit.

5.1 Good Housekeeping

The Facility implements the good housekeeping BMPs described below to reduce the impact of potential pollutants. The minimum BMPs described in the General Permit are italicized, with the facility-specific implementation following:

i. *Observe all outdoor areas associated with industrial activities including stormwater discharge locations, drainage areas, conveyance systems, waste handling/disposal areas, and perimeter areas impacted by off-facility materials or stormwater run-on to determine housekeeping needs. Any identified debris, waste, spills, tracked materials, or leaked materials shall be cleaned and disposed of properly.*

The Facility observes parking lots, driveways, and storage areas and removes trash and debris on a regular basis.

ii. *Minimize or prevent material tracking.*

Facility personnel keep litter and debris picked up so that it is not tracked off-site. Track out pads and rumble strips are installed along the access road to minimize track out.

iii. *Minimize dust generated from industrial materials or activities.*

The Facility utilizes a water spray truck to minimize dust generation.

iv. *Ensure that all facility areas impacted by rinse/wash waters are cleaned as soon as possible.*

Vehicles and equipment are cleaned in a designated concrete wash area with 100% containment. Wash water is collected and sent offsite for disposal, as needed.

v. *Cover all stored industrial materials that can be readily mobilized by contact with stormwater.*

Industrial materials that can be readily mobilized by contact with stormwater are covered to the extent practicable. See Section 5.8 for exceptions regarding the active landfill face.

vi. *Contain all stored non-solid industrial materials (e.g., particulates, powders, shredded paper, etc.) that can be transported or dispersed via wind or contact with stormwater.*

All non-solid industrial materials at the Facility are stored in the Maintenance Building or office.

vii. *Prevent disposal of any rinse/wash waters or industrial materials into the stormwater system.*

Rinse/wash water is collected and recycled at the Facility, and does not commingle with stormwater.

viii. *Minimize stormwater discharges from non-industrial areas (e.g., stormwater flows from employee parking areas) that contact industrial areas of the facility.*

Stormwater discharges from non-industrial areas such as landscaped areas do not contact the industrial areas of the Facility.

ix. *Minimize authorized NSWDs from non-industrials areas (e.g., potable water, irrigation water, fire hydrant testing, etc.) that contact industrial areas of the facility.*

The site drainage pattern is such that NSWDs from non-industrial areas such as the parking lot and driveway do not contact the industrial areas of the Facility.

5.2 Preventative maintenance

The Facility implements the preventative maintenance BMPs described below to reduce the impact of potential pollutants. The Minimum BMPs as described in the IGP are italicized, with the facility-specific implementation following:

i. *Identify equipment and systems used outdoors that may spill or leak potential stormwater pollutants.*

The Facility has identified equipment and systems used outdoors that may spill or leak potential stormwater pollutants, including forklifts, trucks, and other heavy equipment.

i. *Observe the identified equipment and systems to detect leaks, or identify conditions that may result in the development of leaks.*

Facility personnel perform visual inspections for evidence of leaks or identify conditions that may result in the development of leaks; inspections are recorded on monitoring forms. Equipment is repaired or replaced as needed.

ii. *Establish an appropriate schedule for maintenance of identified equipment and systems.*

Maintenance is conducted on equipment and systems in accordance with the site's policy. Maintenance schedules are set by management and may change based on equipment needs.

iii. *Establish procedure for prompt maintenance and repair of equipment, and maintenance of systems when conditions exist that may result in the development of spills of leaks.*

Equipment will be given priority maintenance/repair status if conditions exist that may result in spills or leaks.

5.3 Spill and Leak Prevention and Response

The Facility implements the spill and leak prevention and response BMPs described below. The minimum BMPs as described in the IGP are italicized, with the facility-specific implementation following.

i) Establish procedure and/or controls to minimize spills and leaks.

The Facility properly labels and uses lids to seal cans and drums storing liquids. Liquids are typically not dispensed from containers or drums. The Facility uses oil absorbent pads or other protective devices for liquid transfer operations to catch incidental spillage and drips from any dispensing attachments.

ii) Develop and implement spill and leak response procedures to prevent industrial materials from discharging through the stormwater conveyance system. Spilled or leaked industrial material shall be cleaned and disposed of properly.

The Facility maintains spill cleanup kits near material storage areas. Spilled or leaked industrial materials are cleaned up promptly and disposed of properly.

iii) Identify and describe all necessary and appropriate spill and leak response equipment, location(s) of spill and leak response equipment, and spill or leak response equipment maintenance procedures.

Spill kits and other spill and leak response equipment and locations are identified on Figure 2. Each spill kit is inspected monthly to confirm its contents are adequate to respond to a spill. At a minimum the following spill-cleanup equipment must be maintained on-site and dedicated to spill cleanup:

- Absorbent pads and/or absorbent material capable of absorbing 15 gallons of fuel
- Absorbent boom, a minimum of 10 feet in length with a 12-gallon absorbent capacity
- A 55-gallon drum or 5-gallon buckets with lids
- Non-metallic shovel

iv) Identify and train appropriate spill and leak response personnel.

Employee training is discussed in Section 5.6.

5.4 Material Handling and Waste Management

The Facility implements the material handling and waste management BMPs described below to reduce the impact of potential pollutants. The Minimum BMPs as described in the IGP are italicized, with the facility-specific implementation following:

i. Prevent or minimize handling of industrial materials or wastes that can be readily mobilized by contact with stormwater during a storm event.

Material handling is discussed in Section 4.1. Canvas or polyethylene tarps are used for covering exposed equipment parts and supplies, or inert materials when rain is anticipated. Exceptions are described in Section 5.8.

ii. *Contain all stored non-solid industrial materials or wastes that can be transported or dispersed via wind erosion or contact with stormwater during handling.*

All stored non-solid industrial materials or wastes that can be transported or dispersed via wind erosion or contact with stormwater are contained during handling.

iii. *Cover industrial waste disposal containers and industrial materials storage containers that contain industrial materials when not in use.*

Industrial waste disposal containers and industrial material storage containers that contain industrial materials are appropriately covered when not in use.

iv. *Cover outdoor materials 48 hours ahead of likely storm events forecasted at 50 percent or greater probability.*

Canvas or polyethylene tarps are used for covering exposed equipment parts and supplies prior to and during a rain event that the National Oceanic and Atmospheric Administration (NOAA) website identifies as having a 50 percent or greater probability of precipitation, as feasible.

v. *Divert run-on and stormwater generated from within the facility away from all stockpiled materials.*

Facility drainage is shown on Figure 2. Stormwater is directed away from stockpiled materials.

vi. *Clean all spills of industrial materials/wastes that occur during handling in accordance with the spill response procedures.*

Spill response procedures at the Facility are discussed in Section 5.3 and Appendix D.

vii. *Observe and clean as appropriate, any other material/waste handling equipment or containers that can be contaminated by contact with industrial materials or wastes.*

Equipment at the Facility is properly maintained as discussed in Section 5.2.

5.5 Erosion and Sediment Control

The Facility implements the erosion and sediment control BMPs described below, as applicable. The minimum BMPs as described in the General Permit are italicized, with the facility-specific implementation following.

i. *Implement effective wind erosion controls.*

Accessible surfaces of the site are wetted or vegetated as practical to reduce dust dispersal, and as discussed in Sections 4 (Table 4-2) and 6.4.

ii. *Provide effective stabilization for erodible areas prior to forecasted storm events.*

Erodible areas are stabilized as discussed in Sections 4 (Table 4-2) and 6.4.

iii. *Maintain effective perimeter controls and stabilize all site entrances and exits to sufficiently control discharges of erodible materials from discharging or being tracked off the site.*

The Facility maintains rumble strips at transitions from unimproved roadways to paved roadways and other areas as needed. The entrance to the Facility is paved.

iv. *Divert run-on and stormwater generated from within the facility away from all erodible materials.*

Facility drainage patterns are shown on Figures 2, 3, and 4. Stormwater is diverted away from erodible materials as much as possible.

v. *If sediment basins are implemented, ensure compliance with design storm standards described in section X.H.6 of the General Permit.*

The Facility employs detention basins which act as sedimentation basins, as described in Section 3.3. If new detention or sedimentation basins are constructed, they will comply with the design storm standards laid out in the IGP.

5.6 Employee Training Program

The implementation of an employee awareness program shall be executed to inform personnel of the goals and components of the SWPPP, and to address spill response procedures, good housekeeping, maintenance requirements, and material management practices. The following general employee awareness practices will be followed:

- Presentations on employee stormwater awareness will be given at safety meetings.
- Training meetings for those employees directly involved in stormwater compliance will be given on the use of the SWPPP and its components.
- If an employee misses training, a training make-up session will be conducted within 30 days of returning to the job.
- Equipment operators are trained on the proper use of fuel dispensers and tank "topping off" is not allowed.

Chiquita Canyon Landfill must document that an employee awareness program has been established. A log of the dates on which specific employees receive training shall be kept with the Employee Information Training Sheet and Employee Training Log included with the stormwater compliance documents for the site. An example of employee training materials are enclosed in Appendix E.

Facility employees that have direct responsibilities in areas of the Facility that have the potential to impact stormwater receive awareness SWPPP training annually and within 30 days of hire for new employees.

The following information should be covered in the employee awareness program:

1) Goals of the SWPPP

The SWPPP's purpose is to suggest stormwater control methods that may reduce pollutant transport from the site to surrounding surface water bodies. Chiquita Canyon Landfill should use the SWPPP to guide daily operations and evaluate future design and construction.

2) Components of the SWPPP

Facility employees impacting stormwater pollution prevention or part of the PPT must be made aware of the SWPPP's four components:

- Introduction
- Facility Assessment
- Stormwater BMPs
- Sampling and Monitoring Plan.

The PPT must be familiar with all four sections of the SWPPP and review it annually. If the plan is modified (during the annual review or at another time), key personnel must be notified of the changes before they are implemented.

All PPT and employee training is documented, and the records are stored with the SWPPP. Records of employee training are kept for at least 5 years.

5.7 Quality Assurance and Record Keeping

The Facility implements the quality-assurance and record-keeping BMPs described below to reduce the impact of potential pollutants. The Minimum BMPs as described in the General Permit are italicized, with the facility-specific implementation following.

i. *Develop and implement management procedures to ensure that appropriate staff implement all elements of the SWPPP, including the Monitoring Implementation Plan (MIP).*

   The PPT is responsible for ensuring that all elements of the SWPPP, including the MIP and BMPs, are implemented. The district manager directs the PPT to track and complete all required permit conditions. This is achieved by monthly Facility compliance team meetings.

ii. *Develop a method of tracking and recording the implementation of BMPs identified in the SWPPP.*

   BMP implementation is tracked and recorded as discussed in Section 9 of this SWPPP.

iii. *Maintain the BMP implementation records, training records, and records related to any spills and clean-up related response activities for a minimum of five (5) years.*

   All records required by the General Permit and SWPPP are maintained for a minimum of 5 years. Quality assurance activities are documented and entered into the SWPPP records. Records are maintained as discussed in Section 9 of this SWPPP.

5.8 Minimum Best Management Practice Exceptions

The following minimum BMPs are not fully implemented because they have been determined to not reflect a best industry practice, are not economically practicable, or are not economically achievable.

"Cover all stored industrial materials that can be readily mobilized by contact with stormwater."

Industrial materials that can be readily mobilized by contact with stormwater are covered to the extent practicable. The active landfill face is not covered during Facility operations due to the need to frequently access, move, or otherwise handle the waste on a daily basis. In accordance with standard industry operational procedures, the active face is covered at the end of each business day with soil or approved alternative daily cover to prevent vectors, odors, infiltration of rainwater, and to control windblown litter.

6 Advanced BMPS

Advanced BMPs reduce or prevent discharges of pollutants in stormwater discharge in a manner that reflects best industry practice, considering technological availability and economic practicability and availability. Advanced BMPs, including temporary BMPS, are implemented at the Facility as necessary.

6.1 Exposure Minimization and Best Management Practices

The Facility stores petroleum products, oil filters, batteries, and other hazardous and universal waste materials in covered locations. This overhead coverage reduces or prevents the potential for stormwater pollutants associated with these activities from contacting or entering stormwater. These potential pollutants include TSS, pH, O&G, and iron.

The Facility has installed geomembrane and EVOH cover over large portions of the Main Canyon Landfill as shown on Figure 5. Additional cover will continue to be installed in future. This impermeable cover prevents rain from contacting cover soils or infiltrating into the waste prism. This prevents soil erosion, particularly from sloped areas.

6.2 Stormwater Containment and Discharge Reduction Best Management Practices

The Facility currently has four unlined detention basins in the East (Drainage Area 1) and three basins in the South (Drainage Area 2). These detention basins receive stormwater runoff from all areas of the Facility. Stormwater runoff does not exit the Facility boundaries without first flowing through a detention basin. The detention basins slow the stormwater flow and allow suspended solids to settle, which reduces the amount of pollutants in stormwater leaving the facility. Regular removal of accumulated sediment from the basins increases the effectiveness of these basins. Potential pollutants that are mitigated by the detention basins include TSS, metals (particulates or adsorbed to particulates), and other pollutants that are bound or adsorbed to particulates.

6.3 Treatment Control BMPS

Treatment control BMPs include one or more mechanical, chemical, biological, physical, or any other treatment process technology and are sized to meet the treatment control design storm standard. As described in Section 6.5, stormwater in the South Detention Basin is typically treated with anionic polyacrylamide flocculant to help sediment to settle and reduce suspended solids in the stormwater discharge. There are no additional treatment control BMPs that meet the treatment control design criteria being implemented at this time at the Facility.

6.4 Other Advanced Best-Management Practices

The Facility uses secondary containment in the maintenance and storage areas to reduce the potential for stored liquids to contact stormwater. The secondary containment reduces or prevents the potential for O&G impact to stormwater. Secondary containment capacities are detailed in the SPCC.

Curbing is located along the paved portions of the roadways to contain and direct stormwater runoff to the south detention basin.

Activities that generate erosion and sediment migration vary during the operational phases of a landfill and have declined as the CCL progresses towards the closure phase. Revegetation/soil stabilization generally commences prior to the wet season to address areas impacted by soil disturbing activities. Soil binders such as Earthguard may be applied as needed to the erosion-prone side slopes of the upper detention basin. The cover and detention basins discussed above have been constructed to reduce sediment in stormwater discharges.

Naturally occurring vegetation throughout the Facility filters sediment from stormwater before discharge. Vegetation can also provide a slight pH buffering effect. The stormwater drainage systems in place have been designed to divert stormwater away from operational areas and through vegetated areas where practicable.

Specific advanced BMP descriptions that are implemented, to the extent practicable, at the Facility are detailed in the following sections.

6.4.1 Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles. The Facility incorporates erosion control measures that are effective and result in the reduction of sediment related pollutants in stormwater discharges and authorized non-stormwater discharges.

The Facility implements the following practices for effective temporary and longer-term erosion control during soil disturbing activities:

- Preserve existing vegetation where practicable and when feasible.
- Implement temporary erosion control measures with focused implementation prior to the wet season.
- Stabilize non-active areas prior to the wet season.
- Control erosion in concentrated flow paths by applying erosion control products and maintaining swales as required.
- Apply hydroseed for vegetation development, jute, or other longer-term erosion control to areas deemed available for longer-term controls (e.g. areas no longer planned for soil disturbance).

Sufficient erosion control materials will be maintained on-site to allow implementation in conformance with the SWPPP. This includes implementation of BMPs in active areas and non-active areas before the onset of rain.

The following BMPs should be considered for implementation to prevent erosion in areas where soil has been disturbed:

Scheduling

- Operating activities will be scheduled with the incorporation of both soil stabilization and sediment control measure BMPs to reduce the discharge of pollutants. The schedule will limit exposure of disturbed soil to wind, rain, and stormwater run-on and run-off where practicable.

Preservation of Existing Vegetation

- Existing vegetation will be maintained to the extent practicable.

Hydroseeding

- Hydroseeding or other longer-term erosion control will be applied in areas deemed available for longer-term controls to protect disturbed soil areas from soil erosion. The hydroseeding materials will be applied after final grading operations. The application of hydroseeding materials will be performed in accordance with manufacturer's specifications.

Geotextile and Mats

- Geotextile or erosion control matting (ECM) should be installed in v-ditches, as needed; the application of erosion control matting will be performed in accordance with manufacturer's specifications. ECMs should not include any synthetic component because of this material's potential adverse impact to Wildlife.

Slope Protection

- Slope drains consist of a pipe used to intercept and direct surface runoff into a stabilized watercourse, trapping device, or stabilized area. Slope drains are used with earth dikes and drainage ditches to intercept and direct surface flow away from slope areas to protect recently cut or fill slopes.
- Compost Blankets can be applied to protect disturbed soil areas from soil erosion, and can be used as an alternative to hydroseeding, particularly on steeper slopes.
- Scrim plastic cover can be installed over soil operations related to new cell construction.

Soil Binders

- 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. Example of soil binders that are recommended are:
- Gorilla-Snot is a biodegradable liquid copolymer used to stabilize and solidify any soil or aggregate as well as provide erosion control and dust suppression.
- Other suitable, comparable products.

Additional erosion control BMPs are discussed in Sections 4 (Table 4-2) and 5.5.

6.5 Sediment Control

Sediment controls are structural measures that are intended to complement and enhance the selected erosion control measures and reduce sediment discharges from actively disturbed soil areas. Sediment controls are designed to intercept and settle out or filter soil particles that have been detached and transported by the force of water. The Facility implements sediment control measures that are effective and result in the reduction of sediment related pollutants in stormwater discharges and authorized non-stormwater discharges.

Sufficient quantities of temporary sediment control materials are maintained on-site to allow implementation of temporary sediment controls in the event of predicted rain and for rapid response. This includes implementing BMPs in active areas and non-active areas that require deployment before the onset of rain. BMPs that should be considered for implementation to prevent sediment migration from disturbed soil areas are:

Fiber Rolls (or straw wattles)

- Fiber rolls or straw wattles can be installed surrounding the entire outside perimeter of the disturbed soil area as well as surrounding stockpiles. Fiber rolls should be placed along the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope lengths and spread runoff as sheet flow. Fiber rolls, should not include any synthetic components to prevent potential adverse impact to Wildlife.

Gravel Bag Berm

- Gravel bag berms can be installed along the down gradient perimeter of disturbed soil areas to prevent run-off if there is a sufficient structural base for support and stabilization of the gravel bags. Gravel bags can also be used alongside access roads to reduce flow velocities and settle out particles.

Sandbag Checks

- Sandbag checks are installed along access roads to establish a ditch line.

Silt Fencing

- As shown on Figure 2, silt fencing is installed along portions of the southwestern fence, Canyon B, and the north Cell 7 Excavation area. It is also placed along the fence separating the Stage 1 and Stage 2 South Detention Basins.

Sweeping

- Paved areas will be vacuum swept prior to an anticipated storm event, or as needed to control excessive dirt and dust. The sweeping will include increased focus in areas where noticeable tracking of materials occurs.

Flocculant

- Anionic polyacrylamide flocculant is used at the Facility in strategic locations to enhance the settling of solids that are suspended in site stormwater runoff. Flocculant is primarily applied upstream of the South Detention Basin using flocculant logs and is also supplementally dosed at the Stage 2 South Detention Basin using flocculant logs or powdered flocculant. Flocculant is applied in accordance with a Passive Treatment Plan (PTP) prepared by Applied Polymer Systems for the Facility, which is included as Appendix F.

Controlled Discharge

- Accumulated stormwater from the sedimentation basins at the Facility is discharged off-site as needed in a controlled manner. This may be done using mechanical pumping to decant stormwater from the sedimentation basins to the discharge points. The sedimentation basins are decanted to the maximum extent possible between precipitation events to allow for additional storage capacity in the event of future precipitation events. Controlled discharges allow for enhanced settling of suspended sediment in stormwater. This practice is implemented when possible but is not always feasible due to the size and frequency of precipitation events. During periods of dry weather, accumulated stormwater may be used in a water spray truck to minimize dust generation.

6.6 Temporary BMPS for Leachate Seep Control

The Facility has implemented the following temporary best management practices to manage leachate seep control:

- Perform regular inspections of Reaction Area slopes, including visual observations on the soil cover and integrity of the geomembrane cover (inspected and reported pursuant to Milestone #2B of the June 6, 2024, LEA Compliance Order).
- Immediately contain any seeps by placing soil berms or dams, including in the concrete stormwater channel, or by diverting it back to the landfill's leachate collection system. Collect with vacuum truck, as needed pursuant to Condition 24 of the Modified Stipulated Order for Abatement ("SOFA").
- Immediately contact Site Management to report seep location.
- Monitor seeps periodically for any breach or other issues (monitored and reported pursuant to Conditions 27(b) and (c) of the SOFA).
- Reroute leachate and transport leachate in a sealed tanker truck to minimize its exposure to open air pursuant to Condition 24 of the SOFA.
- Pressure wash any impacted concrete ditches/channels and collect wash liquid by vacuum truck.

6.7 Permanent Mitigation Controls

The Facility has completed installation of 45 acres of a 30 mil High Density Polyethylene (HDPE) geomembrane cover over portions of the Main Canyon Landfill to counter methane surface exceedances, fugitive gas (LFG) emissions in the short-term, and surface exposure of leachate coming in potential contact with stormwater. These areas are indicated on Figure 5. Additionally, installation of 68 acres of 60 mil HDPE with EVOH is underway.

7 Stormwater Sampling and Monitoring Implementation Plan (MIP)

The MIP in this section describes a facility-specific monitoring program to provide indicator-monitoring information for assessing the levels of pollutants in stormwater discharges, the effectiveness of BMPs to prevent or reduce pollutants, and the need for corrective action. The objectives of the MIP are to:

- Assess whether BMPs addressing pollutants in industrial stormwater discharges and authorized NSWDs are effective for compliance with the effluent and receiving water limitations of the General Permit.
- Measure the presence of pollutants in industrial stormwater discharges and authorized NSWDs relative to their respective Numeric Action Levels (NALs) and determine whether an ERA process is required.
- Assess whether the suite of BMPs implemented at the facility is effective in reducing or preventing pollutants in industrial stormwater discharges and authorized NSWDs.

The MIP includes a description of the following:

- Discharge locations.
- Visual monitoring procedures.
- Sampling requirements and sample handling procedures.
- A list of analytical methods and related detection limits.
- Visual and sample event observation response procedures.
- PPT member assignments.

7.1 Discharge Locations

There are a total of two (2) industrial stormwater discharge locations at the Facility. The stormwater discharge locations are shown on Figure 2 and described herein:

- EAST: Located at the concrete spillway of the east detention basin.
- SOUTH: Located at the outfall of the south detention basin, to the west of the Facility entrance.

7.2 Visual Observations

The General Permit requires two basic types of visual observations designed to identify sources of pollutants.

- Monthly Visual Observations: Conducted on a day with no precipitation during daylight hours to observe authorized and unauthorized NSWDs, potential pollutant sources, and BMP effectiveness and maintenance.
- Sampling Event Visual Observations: Conducted at the same time that sampling occurs to observe the quality of discharges and sources of observed pollutants.

7.2.1 Monthly Visual Observations

A member of the PPT visually observes each drainage area at least monthly. The scope of the visual observation includes the following elements:

- The presence or indications of prior, current, or potential unauthorized NSWDs and their sources.
- Authorized NSWD.
- Implemented BMPs.
- Potential pollutant sources including industrial activity areas, outdoor equipment, and other potential industrial pollutant sources.
- Each area of industrial activity.

The inspections are conducted during daylight hours, during scheduled Facility operating hours, on days without precipitation. Inspectors are to document the presence or indication of any NSWD. The Facility's authorized NSWDs (if any) and associated BMPs are also observed. During the winter months, monthly visual inspections are conducted as the weather permits.

Visual observations are documented on the applicable form located in Appendix G.

7.2.2 Sampling Event Visual Observations

A member of the PPT is assigned to perform visual stormwater observations during sample collection. A back-up member of the team is to be assigned when the primary PPT member is absent or unavailable. Visual observations are to be documented on the applicable form in Appendix G.

Per the IGP, sampling is required four times per reporting year: twice during the first half of the reporting year (July 1 through December 31) and twice during the second half of the reporting year (January 1 through June 30). Per Investigative Order Number R4-2026-0156, every discharge into and out of the East and South Detention Basins should be sampled.

Per the IGP, sampling and corresponding visual observations are only required of stormwater discharges that meet the sampling criteria in Section 7.3. Observations are not required when dangerous weather conditions exist (i.e., flooding, high winds, or electrical storms), discharge occurs outside scheduled Facility operating hours, or events not sampled are explained in the Annual Report. Observations are also not required for drainage areas that have no exposure to industrial activities and materials.

The inspections include visual observations of stormwater runoff to evaluate the presence of floating or suspended materials, O&G sheen, discoloration, turbidity, or other signs of pollutant impacts to stormwater runoff. Observations are also made to assess the proper performance of stormwater collection and diversion structures (e.g., surface drains). The SWPPP shall be revised, as necessary, if visual observations indicate that the SWPPP is inaccurate or additional BMPs are needed to control or prevent pollutants in stormwater discharges.

7.2.3 Visual Observation Records and Response Procedures

Records of the observations include the name of the observer, date, time, locations observed, observations, and response action(s) taken.

In the event that a visual observation indicates a condition that may inadequately reduce or prevent pollutants in industrial stormwater, corrective action will be taken.

The SWPPP shall be revised, as necessary, if visual observations indicate that the document is inaccurate or additional or revised BMPs are needed to address the observations or to reduce or prevent pollutants in industrial stormwater discharges.

Appendix G includes example templates for required visual observations.

7.3 Sampling and Analysis

The IGP requires collection of stormwater discharges for laboratory analysis from a Qualifying Storm Event (QSE). The General Permit describes a QSE as when stormwater discharge occurs from at least one drainage area when the discharge is preceded by at least 48 hours with no discharges from any of the drainage areas. Samples are collected from two QSEs occurring within the first half of the reporting year (July 1 through December 31) and two QSEs occurring within the second half of the reporting year (January 1 through June 30).

Additionally, according to WDR Order No. R4-2011-0052, a QSE is one that: (1) has produced a minimum of ¼-inch of rainfall as measured by an onsite rainfall measurement device, and (2) was preceded by two consecutive days of dry weather, where combined rainfall is less than 1/8-inch as measured by an onsite rainfall measurement device. Sampling procedures in accordance with WDR Order No. R4-2011-0052

are detailed in the "Waste Acceptance Plan, Chiquita Canyon Landfill" prepared by EnviroSolve Corporation dated April 29, 2011.

Per the Investigative Order Number R4-2026-0156, all discharges into or out of the East and South Detention Basins should be sampled.

When stormwater is stored or contained, sampling occurs at the time the stored water is released. A PPT member or their trained designee will collect stormwater samples under the following conditions:

- During regularly scheduled Facility administrative hours
- During daylight hours
- When weather and site conditions are safe.

There are two stormwater discharge locations identified as "East" and "South", as discussed in Section 7.1.

7.4 Parameters for Analysis, Methods, Detection Limits, and Numeric Action Levels

The minimum parameters for sampling and analysis include pH, TSS, and O&G.

Pursuant to requirements of the IGP, individual samples of stormwater from this site are field tested with a calibrated portable instrument for monitoring pH. Collected samples are analyzed in the laboratory or in the field for the parameters listed in the following Table 7-1, which lists the analytical method, holding time, bottle preservative and Numeric Action Level (NAL) values. It should be noted that the laboratory analyses will be performed according to sufficiently sensitive test methods per the 2018 IGP Amendment.

7.4.1 Sector Required Analysis

Based on the standard industrial classification (SIC) code 4953 for landfills, iron is a sector-required analyses specified in the IGP monitoring program. Table 7-1 displays an overview of the sampling parameters.

Table 7-1: Test Parameters, Methods, Holding Time and NALs

Parameter	Analytical Method	Holding Time[1]	Preservation	Numeric Action Level (NAL)	
				Annual Average	Instantaneous
pH (units)	pH meter	15 minutes	None	NA	Less than 6.0 Greater than 9.0
Total Suspended Solids (mg/L)	SM2540-D	7 days	Cool to ≤6 °C	100	400
Oil & Grease (mg/L)	EPA1664A	28 days	HCl; Cool to ≤6 °C	15	25
Iron (mg/L)	EPA 200.7	6 months	HNO_3	1.0	NA

mg/L – milligrams per liter HCl – Hydrochloric Acid HNO_3 - Nitric Acid NA – Not Available
SM – Standard Methods for the Examination of Water and Wastewater
(1) From 40 CFR Section 136.3 Table II – Required Containers, Preservation Techniques, and Holding Times.

7.4.2 303(d) Impairment Required Analysis

Stormwater from the Facility ultimately discharges into the Santa Clara River, Reach 5, which is a 303(d) Listed impaired water body. The current TMDLs include E. Coli and iron. Previous TMDLs included chloride and coliform bacteria. Since stormwater sample results indicated the presence of chloride and coliform bacteria, these parameters will continue to be sampled along with E. coli as listed in the following Table 7-2.

Table 7-2: 303(D) Impairment Test Parameters, Holding Time and NALs

Parameter	Analytical Method	Holding Time(1)	Preservation	TMDL Numeric Action Level (TNAL)	
				Annual Average	Instantaneous
Chloride (mg/L)	EPA 300.0	28 days	None	NA	NA
Coliform Bacteria, Total (MPN/100 mL)	EPA 9221 B, C, or E	8 hours	Cool <10°C; 0.008% $Na_2S_2O_3$	NA	NA
E. coli (MPN/100 mL)	SM 9221F	8 hours	Cool <10°C; 0.008% $Na_2S_2O_3$	NA	235/100 mL

mg/L – milligrams per liter MPN/100 mL - Most Probable Number per 100 milliliters $Na_2S_2O_3$ – Sodium Thiosulfate NA – Not Available
SM – Standard Methods for the Examination of Water and Wastewater
(1) From 40 CFR Section 136.3 Table II – Required Containers, Preservation Techniques, and Holding Times.

7.4.3 WDR R4-2011-0052 FOR CONTAMINATED SOILS

Pursuant to the WDRs for contaminated soils and related wastes (R4-2011-0052), additional parameters are outlined in a separate work plan. It should be noted that the results for the additional monitoring will be reported separately with the corresponding quarterly or semiannual monitoring reports, pursuant to the monitoring and reporting program (MRP) in the site-specific WDRs and will not be included in the stormwater annual monitoring report submitted to SMARTS.

7.4.4 40 CFR Subchapter N Requirements

Pollutants specified in Part 445 – Landfills Point Source Category, Subpart B – RCRA Subtitle D Non-Hazardous Waste Landfill and the federal stormwater effluent limitation guidelines (ELGs) are shown in the following table.

Table 7-3: 40 CFR Chapter 1 Subchapter N Parameters, Methods, Holding Time and Maximum Daily Effluent Limits for Non-Hazardous Landfills

Parameter	Analytical Method	Holding Time[1]	Preservative	Maximum Daily Effluent Limitation Guidelines (ELGs)
pH	EPA 9040	ASAP	None	Within the range 6 to 9
Total Suspended Solids	SM 2540-D	7 days	Cool to ≤6°C	88 mg/L
Biochemical Oxygen Demand (BOD)	SM 5210B	48 hours	Cool to ≤6°C	140 mg/L
Ammonia (as N)	SM 4500-NH_3C	28 days	H_2SO_4 Cool to ≤6°C	10 mg/L
α-Terpineol	EPA 8270E	7 days	HCl	0.033 mg/L
Benzoic Acid	EPA 625.1	7 days	Cool to ≤6°C	0.12 mg/L
p-Cresol	EPA 625.1	7 days	Cool to ≤6°C	0.025 mg/L
Phenol	EPA 625.1	7 days	Cool to ≤6°C	0.026 mg/L
Zinc	EPA 200.7/200.8	180 days	HNO_3	0.20 mg/L

mg/L – milligrams per liter H_2SO_4 – Sulfuric Acid HCl - Hydrochloric Acid HNO_3 - Nitric Acid
SM – Standard Methods for the Examination of Water and Wastewater
(1) From 40 CFR Section 136.3 Table II – Required Containers, Preservation Techniques, and Holding Times.

7.5 Enhanced Discharge Monitoring

Pursuant to Investigative Order No. R4-2026-0156 dated June 12, 2026, the Facility is required to sample and submit the analysis of any and all discharges into and out of both the East and South Detention Basins on site. The Order includes an Appendix 1: List of Analytes and Associated Reporting Limits, which is enclosed in Appendix I. The Order further requires additional monitoring requirements outlined in Paragraphs 5-12 of the Order, including that all analytes be subject to the Method Reporting Limits listed in Appendix 1; sufficient sample volume be collected to re-run analyses undiluted if diluted analysis are non-detect, until a detection without J flag is obtained or the Reporting Limit is met; and all results be submitted to the LAWRQCB within 45 days of the first day of the storm event that produces a discharge. The laboratory analyses shall be performed by an Environmental Laboratory Accreditation Program (ELAP) certified laboratory using sufficiently sensitive test procedures and conducted according to test procedures under 40 CFR, Part 136, including the observation of holding times, unless other test procedures have been specified by the LARWQCB or are required under 40CFR Chapter 1 Subchapter N.

Appendix 1 of Investigative Order No. R4-2026-0156 includes the following Monitoring parameters (Mpars) specified in Table T-2 of the MRP Number CI-6231 from Order No. R4-2018-0172.

Table 7-4: MRP CI-6231 Table T-2 Mpars

Indicator Parameters	Analytical Method
Alkalinity, total	SM 2320B
Ammonia, nitrogen	SM 4500-Norg
Chemical Oxygen Demand (COD)	SM 5220D
Chloride	EPA 300.0
Nitrate-N	EPA 300.0
Sodium	EPA 200.7
Sulfate	EPA 300.0
Potassium, total	EPA 200.7
Total Dissolved Solids (TDS)	SM 2540E
Total Organic Carbon (TOC)	SM 5310B
Appendix I Volatile Organic Compounds (VOCs)	EPA 8260D
Dichlorodifluoromethane (DCDFM)	EPA 8260D
1,4-Dioxane	EPA 8270 SIM
Supplemental Parameters	**Analytical Method**
Bicarbonate as $CaCO_3$	SM 2320B
Boron, total	EPA 200.7
Bromide	EPA 300.0
Calcium, total	EPA 200.7
Carbon Dioxide	Lab RSK-175
Fluoride	EPA 300.0
Iron, total	EPA 200.7
Magnesium, total	EPA 200.7
Manganese, total	EPA 200.7/200.8
Sodium, total	EPA 200.7
Sulfide	EPA 300.0
pH, Specific Conductance, Temperature & Turbidity	Field Parameters

SM – Standard Methods for the Examination of Water and Wastewater SIM – Selected Ion Monitoring

An example Chain of Custody that includes the parameters listed in Tables 7-1, 7-2, 7-3, and 7-4 above and the Appendix 1 list of analytes is included as Appendix J.

7.6 Sample Collection and Handling Procedures

Samples are collected in laboratory-provided bottles that are either unpreserved (TSS and chloride) or preserved (metals and O&G). If the sample analytical method requires an unpreserved bottle, the bottle may be placed directly in the flow of water to collect the sample. If a preserved bottle is required, the sample must be collected in an unpreserved bottle then transferred to the bottle containing the preservative in order to avoid washing the preservative out of the bottle. Guidance on sample collection, analytical methods, sample preservation, and sample handling is obtained from the Stormwater Sample Collection and Handling Instructions attached to the IGP and from the analytical laboratory.

The following procedures must be followed to ensure sample integrity:

- Obtain appropriate sample bottles from the laboratory to have them on hand before the first storm event.
- Track weather forecasts to determine the expected arrival date and time of the storm event and quantity of rainfall.
- After rain has begun falling, check if the storm event is creating discharge and if it is safe to collect stormwater samples.
- If stormwater discharge is occurring, collect samples within the first 4 hours of the start of the discharge or at the start of Facility operations if the QSE started within the previous 12 hours.
- Record visual observations of required items using the sampling form provided in Appendix G.
- Properly label the samples and complete the chain of custody for submittal to the analytical laboratory. An example chain of custody form is enclosed in Appendix J.
- Place the samples in a cooler chilled with ice or frozen ice packs and submit the samples to the lab, accompanied by the completed chain of custody as soon as possible after the samples are collected to ensure the coliform and E. coli holding times are met.

7.6.1 Field Calibration Procedures

For pH, monitoring will be conducted using a calibrated portable instrument for pH. The sampler shall ensure that all field measurements are conducted in accordance with the manufacturer's instructions that accompany the instrument. It is recommended that the pH meter is calibrated 24 hours before an announced rain event that the National Oceanic and Atmospheric Association website has identified as having a 50 percent or greater probability of precipitation.

7.7 Monitoring Methods and Exceptions

The stormwater discharges observed and collected must be representative of the stormwater discharge in each drainage area of the Facility. If discharges are impacted by run-on from an adjacent Facility, an alternate visual monitoring and sample collection location shall be identified. If visual observation and sample collection locations are difficult to inspect and sample, an alternate location representative of the Facility's stormwater discharges may be identified.

Sample collection or inspections are not required during dangerous weather conditions (i.e., flooding, high winds, or electrical storms) or outside scheduled operating hours. Documentation of dangerous conditions preventing sampling or inspections shall be entered into the site record.

7.8 Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation)

The QISP consultant performs one comprehensive annual site evaluation during each report period (July 1st to June 30th). The evaluation is conducted a minimum of eight months and a maximum of sixteen months from the previous Annual Evaluation. At a minimum, the Annual Evaluation consists of:

- A review of all sampling, visual observations, and inspection records conducted during the previous reporting year
- An inspection of all areas of industrial activity and associated potential pollutant sources for evidence of, or the potential for, pollutants entering the stormwater conveyance system
- An inspection of all drainage areas previously identified as having no exposure to industrial activities and materials in accordance with the definitions in Section XVII of the General Permit
- An inspection of equipment needed to implement the BMPs
- An inspection of any BMPs
- A review and effectiveness assessment of all BMPs for each area of industrial activity and associated potential pollutant sources to determine if the BMPs are properly designed, implemented, and are effective in reducing and preventing pollutants in industrial stormwater discharges and authorized NSWDs
- An assessment of any other factors needed to comply with the requirements in Section XVI.B of the General Permit.

The Facility should implement SWPPP revisions resulting from the Annual Evaluation within 90 days of the evaluation.

8 Numeric Action Level/TMDL NAL and Exceedance Reporting

Facility personnel compare stormwater monitoring results at the Facility to the two types of NALs (annual and instantaneous) provided in Tables 7-1 and 7-2. The TMDL NAL (TNAL) for E. coli is provided in Table 7-2.

8.1.1 Annual Numeric Action Level Exceedance

The average (mean) concentration for each parameter included in Table 7-1 shall be determined using the monitoring results for the entire Facility over the reporting year, with the exception of pH for which there is only an instantaneous NAL. The Facility shall compare the average concentration for each parameter to the corresponding annual NAL in Table 7-1. An annual NAL exceedance occurs when the average of all the analytical results for a single parameter exceeds the annual NAL value.

8.1.2 Instantaneous Maximum Numeric Action Level Exceedance

The Facility shall compare analytical results from each distinct stormwater sample to the corresponding instantaneous maximum NAL in Table 7-1. An instantaneous maximum NAL/TNAL (as applicable) exceedance occurs when the sample results of two sampling events within a reporting year for a single parameter exceed the instantaneous maximum NAL. Instantaneous maximum NALs exist for TSS, O&G, and pH. Applicable TMDL requirements are applied as instantaneous values as defined in Section XII.A.2 of the IGP. An instantaneous maximum TNAL exists for E. Coli at this facility.

8.2 Exceedance Response Actions

Exceedance response actions are actions required of the Facility, pursuant to the General Permit, when an annual or instantaneous maximum NAL is exceeded.

8.2.1 Baseline Status

At the beginning of Notice of Intent (NOI) Coverage, the Facility has baseline status for all parameters.

8.2.2 Level 1 Status

Baseline status changes to Level 1 status for any given parameter if monitoring results indicate an NAL exceedance for that same parameter. Level 1 status commences on July 1 following the reporting year during which the exceedance(s) occurred. Information about the Level 1 ERA Evaluation, Level 1 ERA Report, and NAL/TNAL exceedances prior to implementation of Level 1 status BMPs is included in the General Permit.

8.2.3 Level 2 Status

Level 1 status for any given parameter changes to Level 2 status if sampling results indicate an NAL/TNAL exceedance for that same parameter while the Facility is in Level 1. Level 2 status will commence on July 1 following the reporting year during which the NAL/TNAL exceedance occurred. Information about the Level 2 ERA Action Plan and the Level 2 ERA Technical Report is included in the IGP.

9 Monitoring Records and Reporting Requirements

Records of all monitoring and training required by the IGP are to be kept with this SWPPP and reports shall be submitted in SMARTS as required by the IGP. Records and reporting requirements for the Investigative Order are provided in the Order.

9.1 Record Keeping

All monitoring must be properly documented on the appropriate forms in this SWPPP (Appendix G) and maintained for a minimum of 5 years. Minimum records to be maintained are as follows:

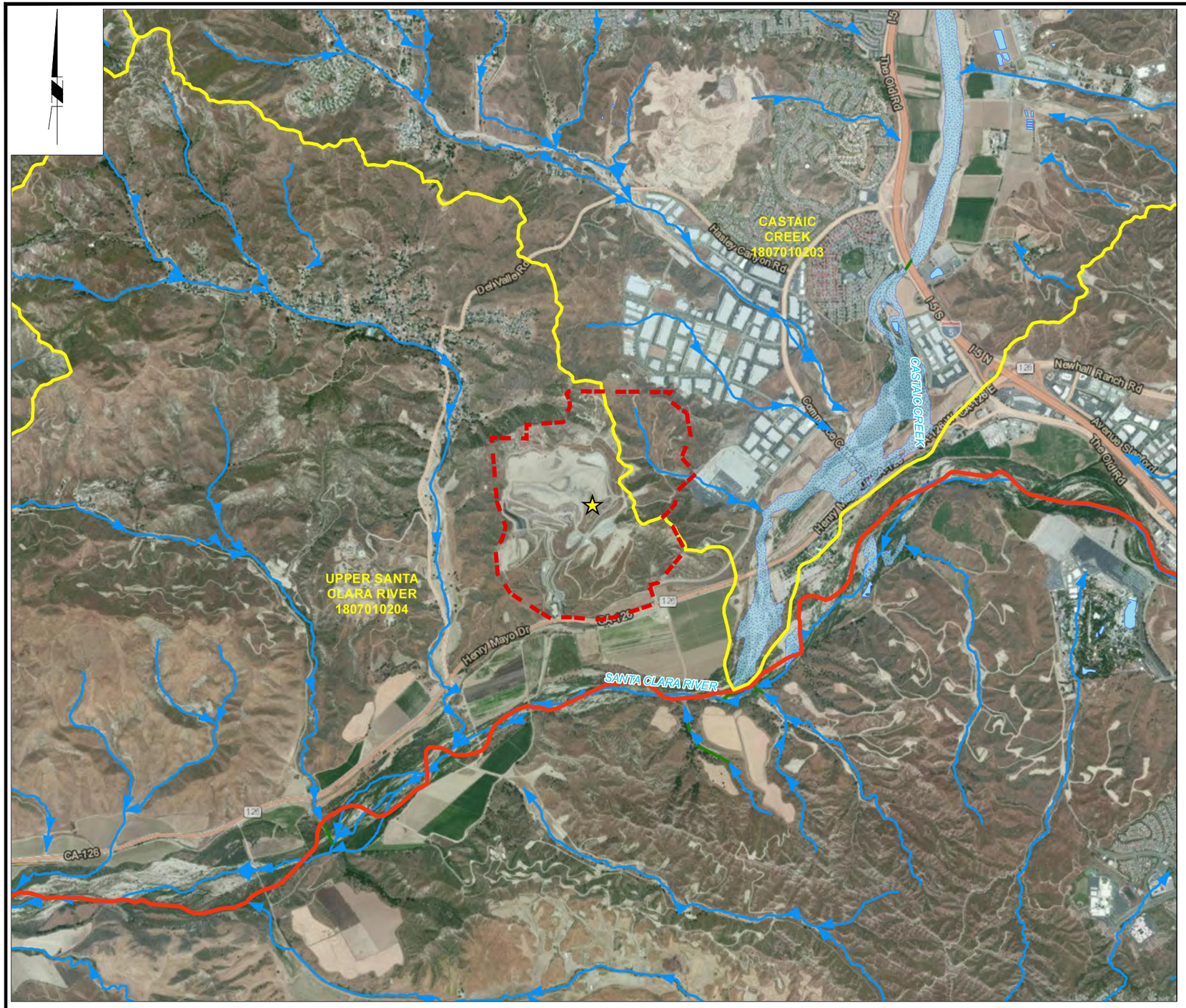
- The SWPPP and MIP
- Monthly Visual Observations – NSWDs and BMP implementation
- Sampling Event Visual Observations – Stormwater Discharges
- BMP log
- Annual Visual Observations – Annual Evaluation
- Annual Evaluation Summary Report
- Personnel Training
- Significant Spills and Leaks
- Documentation of Dangerous Weather Preventing Inspection or Sampling

9.2 Reporting Requirements

The IGP requires an annual report covering the period from July 1st to June 30th be submitted in the SMARTs website by July 15th. The Annual Report questions include:

- Whether the Discharger complies with and has addressed all applicable requirements of the IGP.
- An explanation for any non-compliance of monitoring and sampling requirements within the reporting year.
- A statement that the Discharger has assessed the potential pollutants listed for the impaired watershed that the Facility discharges to.
- A statement that the impaired watershed parameters have been included in the pollutant source assessment in the SWPPP, or a date when they will be added to the SWPPP.
- The date of the Annual Comprehensive Compliance Evaluation.
- If additional NAL exceedances occurred in the same drainage area for any Level 2 parameters.
- If a Level 2 ERA Technical Report was updated (if applicable).

Figures



LEGEND

- SITE LOCATION
- CONNECTOR
- STREAM OR RIVER
- APPROXIMATE SITE BOUNDARY
- WATERSHED BOUNDARY (HU10)
- LAKE/POND
- WASH



1500 750 0 1500 3000 4500

SCALE: 1"=1500'

NOTES

1. HYDROGRAPHY DATA EXTRACTED FROM USGS FILE DOWNLOAD. DATE OF DATA: JAN. 8, 2014.

2. 303D IMPAIRED DATA OBTAINED FROM US EPA EDG CLIP N SHIP WEBSITE (HTTPS://EDG.EPA.GOV/CLIPNSHIP/). DATE OF DATA: MAY 1, 2015.

REFERENCE

AERIAL IMAGERY OBTAINED FROM ESRI BASEMAP WEB SERVICE TITLED WORLD_IMAGERY. DATE OF IMAGERY: JUNE 3, 2010.

PROJECT
CHIQUITA CANYON LANDFILL SWPPP
CASTAIC, CA

FIGURE 1

PREPARED BY:

SWT Civil & Environmental Engineering

800-C ROCHESTER AVE.
ONTARIO, CALIFORNIA. 91761

SOURCE: GOLDER ASSOCIATES. REGIONAL SETTING AND SITE VICINITY. 2015

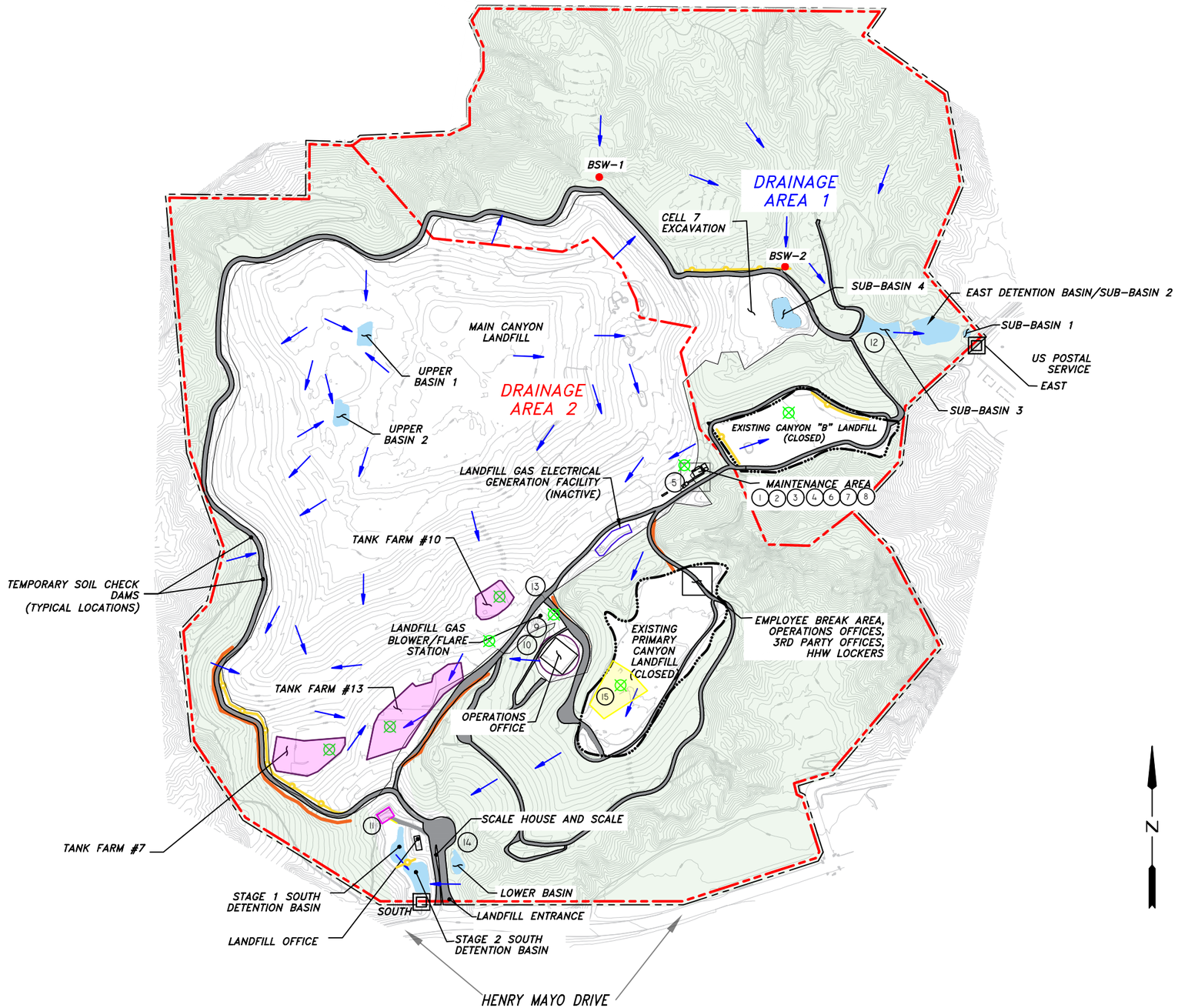
WASTE CONNECTIONS

CHIQUITA CANYON SWPPP 2024

VICINITY AND LOCATION MAP

DECEMBER 2024

Z:\PROJECTS\WASTE CONNECTIONS\CHIQUITA CANYON 4050\SWPPPS\SWPPP 2024\ACAD\FIGURE\FIG01-VICINITY AND LOCATION MAP



LEGEND:

- APPROXIMATE FACILITY BOUNDARY
- APPROXIMATE LIMIT OF CLOSED LANDFILL
- APPROXIMATE LIMIT OF AREA LEASED TO THIRD PARTY
- GENERAL DRAINAGE FLOW DIRECTION
- SAMPLING LOCATION
- DRAINAGE AREA BOUNDARY
- SILT FENCE
- SANDBAG CHECK DAMS
- PAVED AREA WITH CURBING (SEE NOTE 2)
- NON-INDUSTRIAL AREAS
- SPILL KIT
- SPILL CONTAINMENT AREAS WITH LEACHATE TANKS
- BACKGROUND STORMWATER SAMPLING LOCATION
- SPILL CONTAINMENT AREA

ABOVEGROUND STORAGE TANKS (ASTs) AND DRUMS CONTAINERS

1. 750 GAL USED OIL (AST 1)
2. 500 GAL TRANSMISSION OIL (AST 2)
3. 500 GAL ENGINE OIL (AST 3)
4. 300 GAL DRIVE TRAIN FLUID (AST 4)
5. 8,000 GAL DIESEL FUEL (AST 8)
6. 68 GAL DIESEL GENERATOR (AST 9)
7. 55-GAL DRUMS OF HYDRAULIC OIL, GEAR OIL, TRANSMISSION FLUID (DI - D4)
8. 100 GAL GASOLINE FLATBED TRUCK (MS-1)
9. 2x500 GAL DIESEL GENERATOR (AST 10)
10. CONDENSATE TANKS
11. 7x10,000 GAL LEACHATE ASTS
12. 5,000 GAL CONDENSATE AST
13. 19,500 GAL CONDENSATE AST
14. 10,000 GAL CONDENSATE AST
15. 1,650 GAL SODIUM HYDROXIDE 50% POLY TOTES
    990 GAL SODIUM HYPOCHLORITE 12.5% POLY TOTES

N

NOTES:

1. TOPOGRAPHY ACQUIRED FROM TETRA TECH MARCH 2026
2. RUMBLE STRIPS ARE LOCATED GENERALLY AT END OF UNIMPROVED ROADWAYS, OFFICE AREA, AND OTHER AREAS, AS NECESSARY.

Onterris™

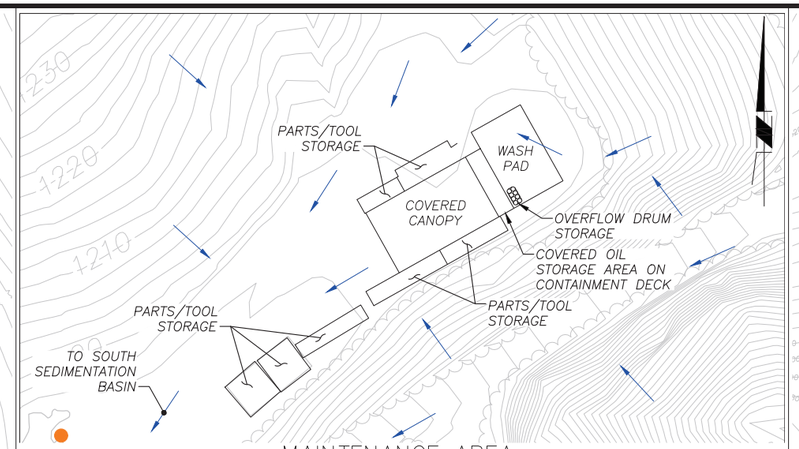
0 800' 1,600'

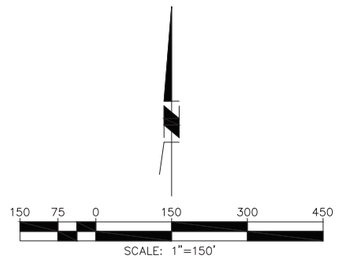
APPROX. SCALE: 1" =800'

FIGURE 2
SWPPP SITE MAP
CHIQUITA CANYON LANDFILL
29201 Henry Mayo Drive
Castaic, CA 93184

PROJECT NO.: 037592		
DATE: 07/17/2026		
DRAWN: LC	CHECKED: SB	APPRVD: MP

S:\CHIQUITA CANYON LF\FIGURES\CAD\FIGURE 2 CHIQUITA CANYON SWPPP 20260713.DWG 7/17/202615:25:40





LEGEND

- PROPERTY BOUNDARY
- 1200 GRADE CONTOUR
- DRAINAGE CHANNELS
- DRAINAGE PIPES – ABOVE GROUND
- DRAINAGE PIPES – BELOW GROUND
- DRAINAGE INLET
- FLOW DIRECTION
- SILT FENCE
- SANDBAG CHECK DAMS
- SAMPLING INLET

TOPOGRAPHY ACQUIRED FROM TETRA TECH MARCH 2026

SOURCE: CHIQUITA CANYON LANDFILL CELL 8B DRAINAGE REPORT (TETRA TECH, MARCH 2023)

FIGURE 3

Onterris

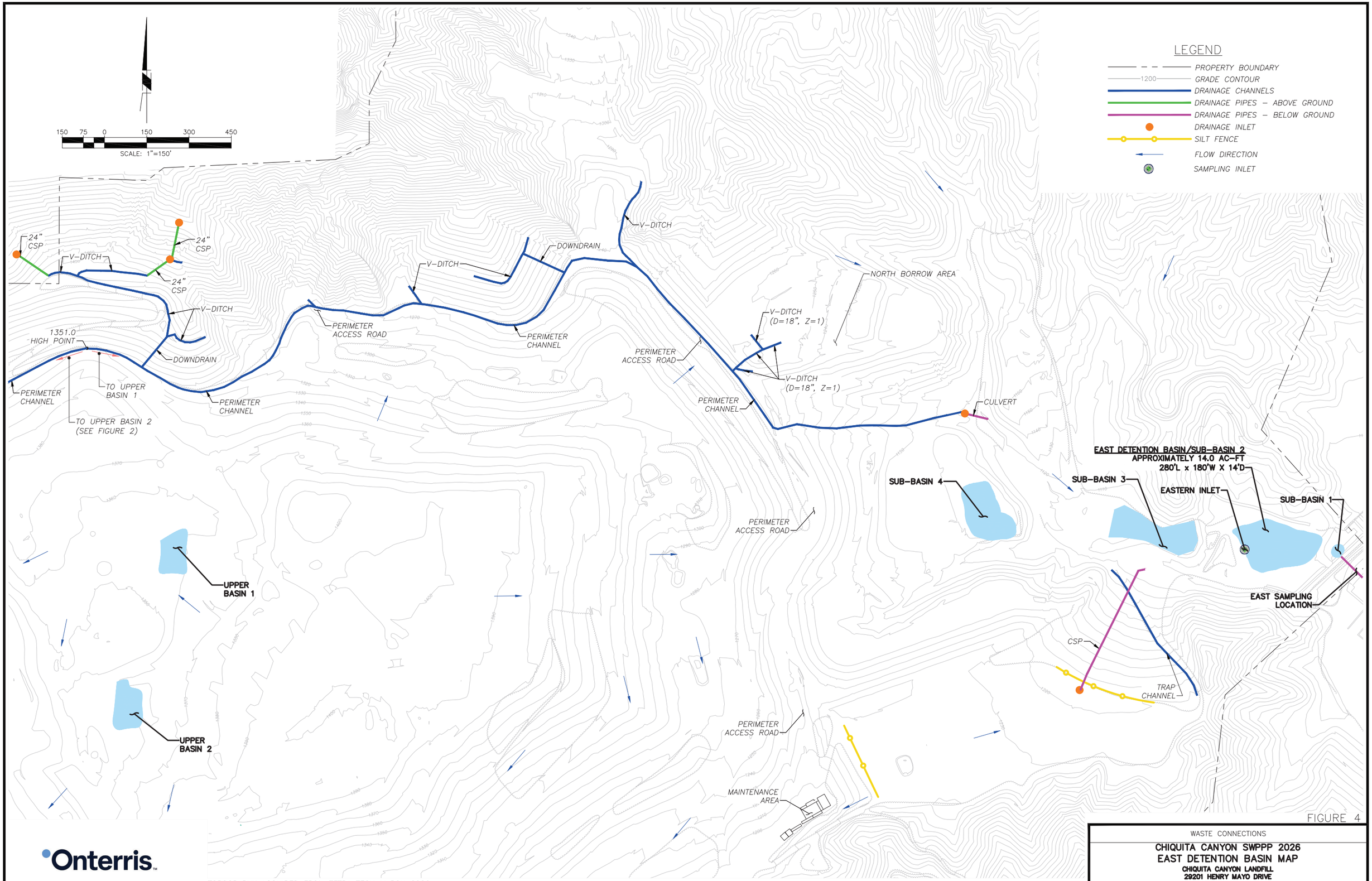
WASTE CONNECTIONS

CHIQUITA CANYON SWPPP 2026
SOUTH DETENTION BASIN MAP

CHIQUITA CANYON LANDFILL
29201 HENRY MAYO DRIVE
CASTAIC, CA 93184

FEBRUARY 2026

S:\CHIQUITA CANYON LF\FIGURES\CAD\FIG03-SOUTH SED.BASIN MAP



TOPOGRAPHY ACQUIRED FROM TETRA TECH MARCH 2026

FIGURE 4

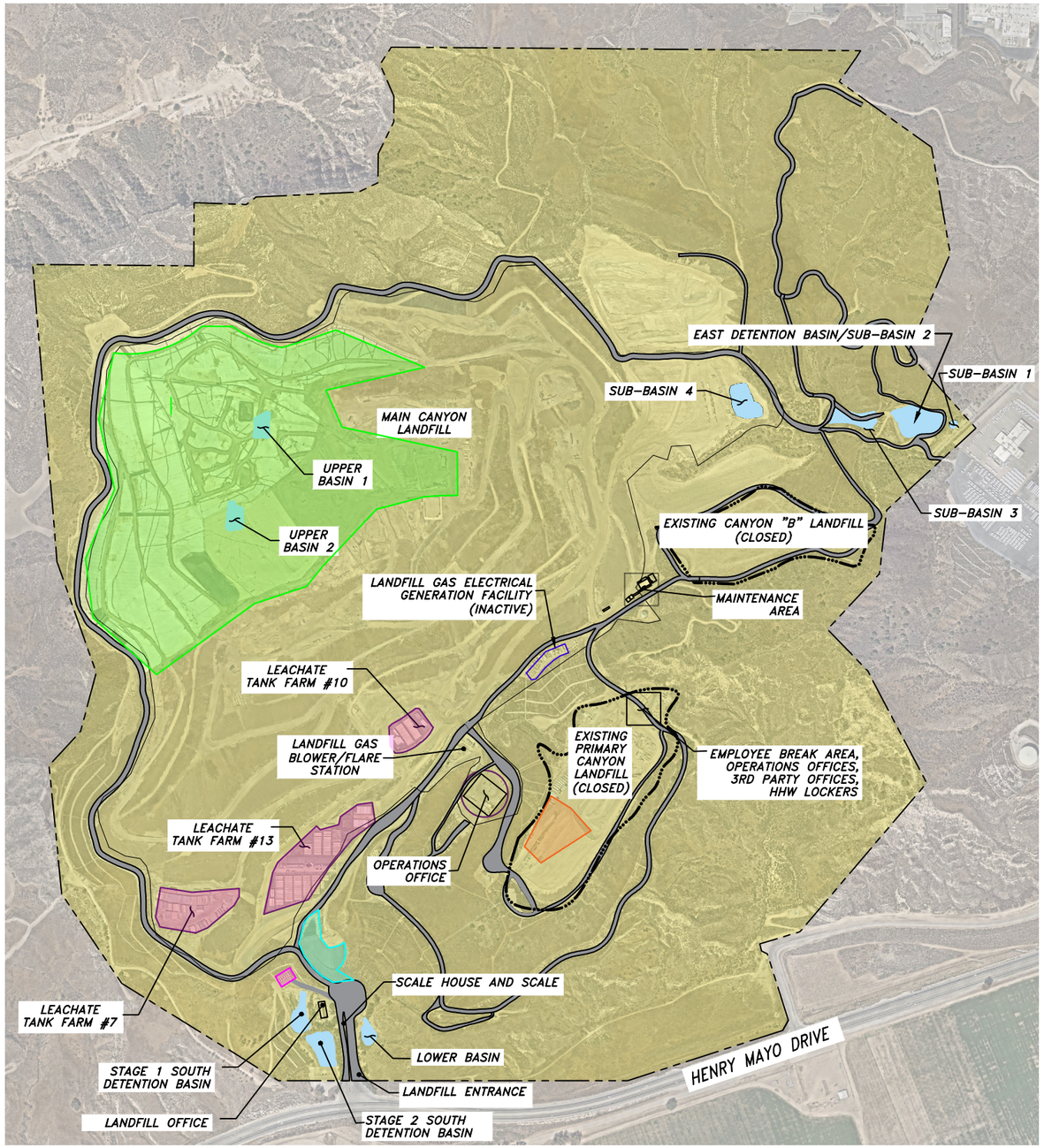
Onterris

WASTE CONNECTIONS

CHIQUITA CANYON SWPPP 2026
EAST DETENTION BASIN MAP

CHIQUITA CANYON LANDFILL
29201 HENRY MAYO DRIVE
CASTAIC, CA 93184

S:\CHIQUITA CANYON LF\FIGURES\CAD\FIG04–EAST SED.BASIN MAP



LEGEND:

- APPROXIMATE FACILITY BOUNDARY
- APPROXIMATE LIMIT OF CLOSED LANDFILL
- APPROXIMATE LIMIT OF AREA LEASED TO THIRD PARTY
- PERVIOUS AREAS
- PAVED AREAS
- SPILL CONTAINMENT AREAS WITH LEACHATE TANKS
- SPILL CONTAINMENT AREA
- GEOSYNTHETIC COVER
- PLASTIC SLOPE EROSION PROTECTION

N

Onterris™

0 800' 1,600'

APPROX. SCALE: 1" =800'

FIGURE 5
IMPERVIOUS AREAS SITE MAP

CHIQUITA CANYON LANDFILL
29201 Henry Mayo Drive
Castaic, CA 93184

PROJECT NO.: 063265		
DATE: 07/17/2026		
DRAWN: LC	CHECKED: SB	APPRVD: MP

S:\CHIQUITA CANYON LF\FIGURES\CAD\FIGURE 2 CHIQUITA CANYON SWPPP 20260713.DWG 7/17/202615:25:02

Appendix A Notice of Intent

State Water Resources Control Board

NOTICE OF INTENT

GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH INDUSTRIAL ACTIVITY (WQ ORDER No. 2014-0057-DWQ)
(Excluding Construction Activities)

GAVIN NEWSOM
GOVERNOR

YANA GARCIA
SECRETARY FOR
ENVIRONMENTAL PROTECTION

WDID: 4 19I022488 Status: Active

Operator Information

Type: Private Business

Name: Chiquita Canyon LLC
Address: 29201 Henry Mayo Dr
Address 2:
City/State/Zip: Castaic CA 91384
Federal Tax ID:

Contact Name: Kevin Green
Title: District Manager
Phone Number: 661-257-3655
Email Address: kevin.green@wasteconnections.com

Facility Information

Level:

Contact Name: Kevin Green
Title: District Manager
Site Name: Chiquita Canyon LLC
Address: 29201 Henry Mayo Dr
City/State/Zip: Castaic CA 91384
County: Los Angeles
Latitude: 34.4237 Longitude: -118.6498

Site Phone #: 661-257-3655
Email Address: kevin.green@wasteconnections.com
Site Size: 592 Acres
Industrial Area Exposed to Storm Water: 639 Acres
Percent of Site Impervious (Including Rooftops): 5 %

SIC Code Information

1. 4953 Refuse Systems
2.
3.

Additional Information

Receiving Water: Santa Clara River
Flow: Directly
Storm Drain System:
Compliance Group:

RWQCB Jurisdiction: Region 4 - Los Angeles
Phone: 213-576-6600
Email: r4_stormwater@waterboards.ca.gov

Certification

Name: Mark Gingrich
Date: February 12, 2025
Title: Division Vice President

Appendix B South Drainage Basin Information from the Cell 8B Drainage Report

CELL 8B DRAINAGE REPORT

CHIQUITA CANYON LANDFILL

2022-0123
March 2023

PREPARED FOR

Chiquita Canyon Landfill
29201 Henry Mayo Drive
Castaic, California 91384

PREPARED BY

Tetra Tech
21700 Copley Drive, Suite 200
Diamond Bar, California 91765
Phone: (909) 860-7777
Tetratech.com



Caleb H. Moore, P.E.

CHIQUITA CANYON LANDFILL
CELL 8B DRAINAGE REPORT

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ATTACHMENTS

Attachment 1 – Post Development Peak Flow and Debris Production Summary Tables
Attachment 2 – Hydrology and Sedimentation Manual References

Attachment 3 – Modified Rational Method Analysis
Attachment 4 – Sedimentation Basin Analysis
Attachment 5 – Low Impact Development Analysis
Attachment 6 – Hydraulics Summary Table
Attachment 7 – Hydraulic Calculations

1.0 INTRODUCTION

The Chiquita Canyon Landfill (CCL) is an existing landfill located in the northwestern portion of Los Angeles County. It is approximately three (3) miles west of the intersection of Interstate 5 (I5) and State Route 126 (SR126). The existing site entrance is at the southernly property boundary, adjacent to SR126. See Figure 1 for Location Map.

The existing permitted landfill is comprised of two closed areas, Canyon B and Primary Canyon landfill areas, and an active operating area, Main Canyon landfill area, see Figure 2. Cell 8, located at the south end of the Main Canyon landfill area and west of the closed Primary Canyon landfill area (see Figure 3). Cell 8 is proposed to be constructed in two phases, Cell 8A and 8B. The Cell 8A Drainage Report, dated January 2022, prepared by Tetra Tech was approved by Los Angeles County Public Works (LACPW) and Cell 8A has been constructed. Cell 8B construction is planned to start in the spring of 2023. It was agreed upon in the Cell 8A design submittal that Cell 6 would be used as the pre-development condition for all of Cell 8. The Cell 8 grading and drainage improvements is designed to meet the Los Angeles County drainage requirements. This report summarizes the drainage analysis for the proposed Chiquita Canyon Landfill (CCL) Cell 8B grading, which encompasses both Cell 8A and 8B.

1.1 PRE-DEVELOPMENT DRAINAGE CONDITION

The CCL property consists of approximately 639 acres and there are three main drainage areas that discharge at three different locations, see Figure 2. Drainage area A is approximately 349 acres, within drainage area A there is the Main Canyon which is the current active landfill area (labeled as drainage area A1), Primary Canyon which is a closed cell (labeled as drainage area A2) and non-landfill area which include perimeter access road, graded and material slopes (labeled as drainage area A3). All drainage within drainage area A flows to the existing sedimentation basin in the south west corner of the site and discharges under SR126 through an existing Caltrans rectangular culvert and ultimately into the Santa Clara River. There are two other main drainage areas, drainage area B (approximately 208 acres) which discharges in the north easterly portion of the site and drainage area C (approximately 82 acres) which discharges in the south easterly portion of the site, these areas are defined on Figure 2, additionally there are small portions of the property where drainage sheet flows offsite into other watersheds. Flows within drainage areas B, C and the offsite portions were not calculated as they are not affected by the development of Cell 8B.

The existing sedimentation basin is considered the compliance point to assure that an increase in discharge is not occurring as part of the Cell 8B development project, therefore all areas contributing to the sedimentation basin have been considered in this analysis. In the pre-development condition, the flow into the existing sediment basin is the sum of drainage areas A1 through A3 and totals approximately 507 cubic feet per second (CFS), after the water is routed through the permitted basin outlet structure the peak flow is approximately 360 CFS. The peak flows calculated in the hydrology analysis were proportioned over the three subareas based on the size of the subarea and listed on the Drainage Area Map (see Figure 2), see Section 2 for the detailed hydrology analysis and Figure 4 for the pre-development hydrology map. The Drainage Area Maps (Figures 2 and 3) were not used in the analysis. These maps were prepared at the request of LACPW.

The pre-development drainage area includes the development of the area tributary to the sedimentation basin through Cell 6 liner expansion and is part of an overall development footprint that will expand the total drainage area as part of the approved permits for the site. The actual undeveloped site condition (prior to any development) does not include a basin or landfill cells, however, for this analysis we have proposed for expediency of the review process to treat the Cell 6 site condition as the pre-developed condition.

1.2 POST-DEVELOPMENT DRAINAGE CONDITION

The Cell 8 (Cells 8A and 8B) development project will add approximately 36 acres of additional drainage area to area A outlined within the pre-development area. Additionally, the entrance improvements along the southerly portion of the

landfill being completed near the same time as the Cell 8B project, will add approximately one (1) acre that originally drained into drainage area C, to drainage area A. A total of 37 acres is added to the analysis of total drainage area contributing flow to the basin (see Figure 3). All other acreage for the landfill site will decrease or remain unchanged and therefore is not considered in this analysis. Therefore, for the post-development condition drainage area A is approximately 386 acres, within drainage area A there is the Main Canyon which is the current active landfill area (labeled as drainage area A1), Primary Canyon which is a closed cell (labeled as drainage area A2), non-landfill area which include perimeter access road, graded and material slopes (labeled as drainage area A3), and the proposed Cell 8B (labeled as drainage area A4). The first phase of this development, Cell 8A, was previously approved earlier this year and therefore the hydrology and hydraulics that have not been modified by this expansion will not be addressed in this report except where at the point of compliance at the discharge of the basin. During the Cell 8A design the flows from Cell 8B were considered so that additional modifications to the basin would not be required as part of Cell 8B development, although the analysis of the flows from Cell 8B were considered they were not a part of the Cell 8A drainage report, this report documents that analysis.

In the post-development drainage area, the flow into the existing sediment basin is the sum of drainage areas A1 through A4 and totals approximately 555 CFS, after the water is routed through the modified basin outlet structure the peak flow is approximately 353 CFS. The peak flows calculated in the hydrology analysis were proportioned over the four subareas based on the size of the subarea and listed on the Drainage Area Map (see Figure 3), see Section 2 for the detailed hydrology analysis and Figure 5 for the post-development hydrology map. The Drainage Area Maps (Figures 2 and 3) were not used in the analysis. These maps were prepared at the request of LACPW.

1.3 HYDROLOGIC AND HYDRAULIC REFERENCES AND RESOURCES

The following information and computer programs were used for the drainage analysis:

- Hydrology Manual (HM) published by the Los Angeles County Public Works (LACPW), January 2006.
- Sedimentation Manual (SM) 2nd Edition, published by LACPW, March 2006.
- Low Impact Development Standards Manual, published by LACPW, February 2014.
- Watershed Modeling System (WMS), Version 11.0 computer software, developed by Aquaveo LLC.
- HydroCalc Calculator developed by LACPW.
- FlowMaster, Version 8i, published by Bentley Systems, Inc., Watertown, Connecticut, November 2009.
- Water Surface Pressure Gradient for Windows (WSPGW), Version 14.08, developed by CivilDesign Corporation.
- Chiquita Canyon Landfill Drainage Analysis (CCLDA), prepared by Golder Associates, June 30, 2015.

2.0 HYDROLOGIC ANALYSIS

2.1 DESIGN CRITERIA

The design criteria used in determining storm runoff and sediment production was based on procedures and design data prescribed in the Hydrology Manual (HM), Sedimentation Manual (SM) and the Low Impact Development Standards Manual (LIDSM). The HM requires evaluating runoff from the 50-year, 24-hour storm event under clear and burned conditions and the Low Impact Development (LID) ordinance requires to retain the Storm Water Quality Design Volume (SWQDv). The SWQDv is equal to the total runoff volume generated from the 85th Percentile, 24-hour storm event.

The design criteria used in the analysis area as follows:

- Design Storm
  - 50-year, 24-hour event: 5.8 inches (HM, Appendix B, Figure 1-H1.43, Val Verde Isohyetal Map)
  - 85th Percentile, 24-hour event: 1.1 inches (LIDSM, Los Angeles County 85th Percentile Isoheytal Map)
- Soil Type
  - 097: Santa Clara River (SCR-5) for adjacent and undeveloped areas (HM, Appendix C and Figure 1-H1.43)

- Sediment Production
  - 50-year, 24-hour event: Capital Flood Hydrology (HM, Section 2)
  - DPA-5: Val Verde Hydrologic Map (SM, Appendix A, Figure 1-H1.43)
  - Peak Bulking Factor: Santa Clara Basin, Curve DPA-5 (SM, Appendix B, Figure B-5)
  - Debris Production Rate: Santa Clara Basin, Curve DPA-5 (SM, Appendix B, Figure B-2)
- Fire Factor
  - FF=0.34 (HM, Table 6.3.3)

2.2 METHODOLOGY

The method used for determining the storm runoff peak flows and runoff volumes are based on the Modified Rational Method (MODRAT), developed by LACPW. The Modified Rational Method is based on the Rational Method but instead of calculating the peak flow it calculates flows versus time, allowing the values to be plotted resulting in a hydrograph and associated flow volume for the entire storm event.

LACPW has developed a hydrologic program, HydroCalc Calculator, which completes the full MODRAT calculation for single subareas. Because HydroCalc does not have routing capabilities, it is limited to watersheds up to 40 acres. When routing is required, HydroCalc calculator can still be used as a subarea time of concentration (Tc) calculator. Subarea Tc is then incorporated into another LACPW approved hydrologic modeling program with routing capabilities.

Watershed Modeling System (WMS) software, which is approved by LACPW, was used for hydrologic modeling using the MODRAT. The 50-year, 24-hour design storm event was modeled for both pre-development and post-development conditions, using drainage areas, time of concentrations, soil types, percent impervious, storm event rainfall depth, water routing information, and a fire factor that accounts for the increased runoff from burned land.

In addition to the 50-year burned peak flow, the LACPW's HM also requires calculating the 50-year bulked flow resulting from burned land that considers the transport of sediment and debris. Bulking and Debris Production calculations were performed in accordance with the SM. To determine bulked peak flow, SM Equation 3.4.3 for partially developed watersheds was used. This equation uses total undeveloped and developed areas to determine a bulking factor (see Attachment 2 for SM references). For the CCL, undisturbed areas were considered undeveloped areas and areas within the landfill footprint or disturbed areas were considered developed. Attachment 1 presents the peak flow and debris production summary tables for the Cell 8B pre- and post-development condition. The following sections describe the input and output data from the hydrologic software.

2.2.1 RUNOFF COEFFICIENT

The Modified Rational Method uses the runoff coefficient to help determine the flow and volume of runoff in a watershed. Variables affecting the runoff coefficient are percent imperviousness, soil type, and rainfall intensity.

The percent imperviousness is based on the ratio of impervious area to area within the designated drainage area. For the drainage areas on the landfill, five percent imperviousness was assumed to account for concrete-lined channels, downdrains, and other drainage features. The impervious cover considered in the analysis includes existing or proposed paving, and major concrete-lined channels. Retaining walls and other structures with a relatively small footprint were not considered. The percent imperviousness is included in the model outputs included in Attachment 3.

The soil type used for this analysis is the Santa Clara River (SCR-5) No. 97, which is listed in the design criteria. The soil type used for burned watershed modeling was soil type No. 297, which is the corresponding burned soil type for the above SCR-5 (No. 97) soil type. See Attachment 2 for HM references. It should be noted that the soil types assumed for the final cover of the landfill will closely resemble soil type 20 (Yolo Sandy Loam) due to the prescribed engineering properties for the landfill final cover and therefore will need to be an onsite processed material or imported soil. Los Angeles County Public Works has requested that soil type 97 be used to match the soil maps for the area. These soils will not be present in landfill areas noted in the undeveloped or developed conditions. The resultant calculations have

shown an incremental increase of calculated runoff for both the undeveloped and developed condition that is more conservative analysis, however, we have demonstrated that the additional runoff flows will not negatively impact the sedimentation basin or offsite outlet structures, therefore we will not object to the required use of soil type 97 in the analysis.

2.2.2 TIME OF CONCENTRATION

The time of concentration (Tc) is the time for runoff to travel from the most hydraulically distant point in a drainage area to a drainage collection outlet point. The LACPW relies on a regression equation derived from hundreds of studies using the kinematic wave theory to determine time of concentration. HydroCalc Calculator, developed by LACPW, was used to determine time of concentrations for this drainage analysis. The input variables required for the calculator include basin acreage, flow path length, flow path slope, rainfall depth, percent impervious, soil type, design storm frequency, and fire factor. The time of concentration results can be found in the HydroCalc Calculator output files in Attachment 3.

2.2.3 RAINFALL INTENSITY

Rainfall intensity is based on the depth of rain during a specified length of time, allowing rain to be measured in inches for a specific design storm. It is derived from a dimensionless rainfall mass curve based on the probability that 80 percent of the 24-hour rainfall amount occurs and 80 percent of the 24-hour period has elapsed. The MODRAT computer program utilizes a default mass curve that is based on this assumption.

For the CCL site, the 50-year, 24-hour rainfall amount of 5.8 inches was obtained from the Val Verde Isohyetal Map from the HM, Appendix B, Figure 1-H1.43. The 85th Percentile rainfall amount of 1.1 inches was obtained from the Los Angeles County 85th Percentile Isohyetal Map, referenced in the LIDSM. All rainfall data is included in Attachment 2.

2.2.4 DRAINAGE AREAS

The watershed was divided into subareas related to a collection point or drainage structure, such as a downdrain inlet or commencement of a proposed channel or pipe culvert. Subareas are alphanumerically identified along a certain flow path. See Figure 4 and 5 for subarea designations.

2.3 LOW IMPACT DEVELOPMENT ANALYSIS

Per CUP condition item number 52, the CCL Cell 8B grading design must comply with the Los Angeles County LID Ordinance. To meet LID requirements, the sedimentation basin must retain the Storm Water Quality Design Volume (SWQDv) generated from the 85th percentile, 24-hour storm event. The SWQDv was calculated with the same input assumptions and areas as the developed 50-Year 24-hour storm event, except substituting rainfall data for the 85th percentile storm. The rainfall depth for the storm is 1.1 inches and was gathered from the LACPW 85th Percentile Isohyetal Map, referenced in the LIDSM. See attachment 2 for the LACPW 85th Percentile Isohyetal Map.

HydroCalc Calculator was used to calculate runoff volume for each individual subarea. Hydrograph routing is not supported by the HydroCalc program, therefore the summation of runoff volume for each induvial subarea, resulting in the total runoff volume for the watershed, was used as the SWQDv. To confirm that the sedimentation basin has the storage capacity to retain the SWQDv, the basin must retain the SWQDv in addition to the debris produced by the watershed (see Attachment 1 for debris production calculations). The total storage capacity required to comply with the LID ordinance resulted in 8.39 acre-feet. The dead storage capacity in the proposed modified basin is 8.49 ac-ft which meets the volume requirements for the 85th Percentile precipitation runoff as prescribed in CUP Condition 52. See Attachment 5 for low impact development analysis including the 85th Percentile runoff volume calculations.

2.4 PRE-DEVELOPMENT HYDROLOGY

In the pre-development condition, surface flows are managed through an existing drainage system consisting of diversion berms, benches, concrete ditches, pipe culverts and downdrains. The existing sedimentation basin is located at the southwesterly corner of the site and is used as the discharge point for the watershed. Stormwater runoff passes through the existing basin, outlets through a box culvert under SR126 to the Santa Clara stormwater drainage system.

The pre-development (Cell 6) condition was modeled and analyzed to verify capacity of major existing drainage structures and compared to the potential incremental impact of the Cell 8B post-development condition on the sedimentation basin and the immediate downstream offsite drainage structures. The drainage analysis for the pre-development condition was based on the aerial topography performed on January 13, 2020 by Continental Mapping Consultants, Inc along with the permitted basin plans prepared by Golder Associates (2002) (see Figure 4 for Cell 8B Pre-Development Hydrology Map).

2.5 POST-DEVELOPMENT HYDROLOGY

The watershed for the post-development condition drains southerly towards the existing sedimentation basin and discharges through the existing outlet structure in the same manner as the pre-development condition. The stormwater drainage analysis for the post-development condition was based on the proposed Cell 8 grading design, in conjunction with the aerial topography performed on January 13, 2020 by Continental Mapping Consultants, Inc., with supplemental survey in the basin area from January 12, 2021, performed by Blue Ridge Services, Inc. and April 7, 2021 performed by Tetra Tech. Conceptual interim and final waste fill and excavation plans were considered to analyze the configuration with the largest tributary area. Any discrepancy between the fill/excavation/grading shown in this drainage study and interim or final waste fill/excavation/grading plans shall be resolved if deemed necessary by LACPW. Such resolution might require revision of this hydrology study.

The purpose of this hydrology study is to demonstrate that all proposed Cell 8B drainage improvements are sized appropriately and to verify conveyance capacity of the existing sedimentation basin and outfall under SR126. See Figure 5 for Cell 8B Post-Development Hydrology Map.

2.6 HYDROLOGIC ANALYSIS RESULTS

The 50-year, 24-hour burned and bulked peak flows for the pre- and post-drainage conditions were determined by the MODRAT method in accordance with the LACPW HM using WMS. The burned and bulked peak flow for the pre- and post-development condition resulted in 506.88 CFS and 555.30 CFS, respectively. See Attachment 1 for peak flow summary tables and Attachment 3 for MODRAT analysis output files.

3.0 HYDRAULIC ANALYSIS

Stormwater control for the proposed Cell 8B grading has been designed to route stormwater through a dendritic system of bench channels, down drains, concrete lined channels, and pipe culverts to the existing sedimentation basin located on the southernly area of the site. FlowMaster hydraulic calculator was used for the sizing of all drainage structures and WSPGW was used to perform a basin outflow analysis. All stormwater facilities were analyzed using the 50-year, 24-hour burned and bulked peak flows, see Attachment 6 for the hydraulics summary table and Attachment 7 for the FlowMaster and WSPGW output files.

3.1 STORMWATER ROUTING

Proposed perimeter drainage structures for Cell 8B, convey stormwater around the waste cell in a southerly direction. Perimeter drainage on the east side of Cell 8B drainage includes a 36-inch to a 42-inch HDPE pipe that transitions to a

3-foot bottom, 3-foot-deep trapezoidal channel, that transitions to a 48-inch HDPE culvert, and ultimately outlets into the existing sedimentation basin. Cell 8B drainage improvements along the southwesterly end of the Primary Canyon includes the realignment of a 36-inch corrugated metal pipe (CMP) downdrain, joining a proposed 2-foot bottom, 2-foot deep trapezoidal channel, that transitions to a proposed 36-inch CMP, that joins an existing 48-inch CMP and ultimate outlets into the existing sedimentation basin. Perimeter drainage on the west side of Cell 8 will remain the same and is currently being constructed in accordance with the approved Cell 8A grading and drainage plans. All pertinent drainage structures will be sized or verified for capacity and appropriate freeboard. See Attachment 6 and 7 for hydraulics summary and calculations.

The outlet structures for the sedimentation basin consist of two 84-inch riser pipes with drain slots in the sides which discharge to the two 60-inch horizontal outlet pipes. The two 60-inch outflow pipes discharge into an off-site 12-foot wide by 9-foot high box culvert underneath SR126 (see photograph below) and ultimately to the Santa Clara stormwater drainage system.

Photograph: Existing Sedimentation Basin Outflow Structures, April 8, 2021.



The Cell 8B grading was designed to promote runoff and minimize erosion. All stormwater facilities were analyzed for the 50-year, 24-hour burned and bulked peak flow and hydraulic calculations were performed at various drainage collection points shown on Figure 5, indicative of the most conservative scenario.

3.2 SEDIMENTATION BASIN ANALYSIS

The sedimentation basin was analyzed at the discharge point using the MODRAT. A reservoir routing analysis for the basin was performed for the 50-year, 24-hour burned and bulked flow condition. A 4-day precipitation factor was applied to the reservoir routing. To simulate the 50-year, 24-hour burned and bulked flow routing through the basin, dead storage was added to the basin equal to the debris produced from the corresponding watershed. This volume was calculated using SM Equation 3.3.3 for partially developed watersheds. This equation uses the total undisturbed and disturbed areas to determine a storm debris production rate that is then used to calculate the volume of sediment produced from the

watershed, which is similar to calculating debris flow rates as discussed in Section 2.2. These calculations are presented in more detail in Attachment 1.

3.2.1 PRE-DEVELOPMENT BASIN CAPACITY

Based on comments received from LACPW, Tetra Tech is not analyzing the existing basin configuration based on current topography. LACPW has requested that the pre-developed site condition that is analyzed be in substantial conformance with the 2002 basin plans. Tetra Tech has calculated the storage capacity from the CCLDA prepared by Golder Associates. As mentioned in Section 3.1.4 of the CCLDA, the basin volume was gathered from as-built drawings of Sedimentation Basin No.1. Golder's basin plans depict the base of the basin at elevation 958 feet, the weir overflow at elevation 973 feet, and the top of the basin (concrete dam elevation) at 975 feet (see Attachment 4 for storage calculations). In the pre-development condition, there is 3.75 acre-feet of dead storage for debris and sediments. The calculated pre-developed peak basin outflow is 359.92 CFS, with a peak water surface elevation of 968.64 feet (see schematic figure in Attachment 4).

For the pre-development condition, the elevation discharge relationship of the basin was calculated using the orifice and weir equations, with outfall data obtained from the as-built drawings of the sedimentation basin. Although the riser pipe orifices and overtopping weir are the initial restricting factors to outlet flow, the capacity of the 60-inch outlet pipe inlet becomes the constraining element when the water surface in the basin reaches an elevation three (3) feet above the top of the riser pipe (see sedimentation basin modeling analysis results in Attachment 4).

3.2.2 POST-DEVELOPMENT BASIN CAPACITY

Basin storage calculations for the post-development condition were performed using the aerial drone topography performed by Blue Ridge Services Inc. (January 21, 2021), supplemental field survey performed by Tetra Tech Inc. (April 7, 2021), and proposed basin remedial grading. Vertical survey control for the post-development basin outflow analysis was established in the drone topography by Blue Ridge Services. Tetra Tech field survey findings showed the top of the basin (concrete dam elevation) at elevation 974.5 feet and the spillway elevation at 971.5 feet. The proposed configuration allows for 3.17 acre-feet of dead storage for debris storage requirements. To mitigate a higher peak flow downstream of the basin due to the development of Cell 8B based on a comparison of the pre-developed (Cell 6) condition and Cell 8B design, modifications to the drain slots in the two 84-inch riser outflow pipes were proposed to reduce the peak outflow. The drain slots were increased in size and additional slots were added, see the schematic in Attachment 4. Basin remedial grading and basin outflow modifications are completed during the Cell 8A grading and drainage improvements under a separate permit (see sheet C-109 of the Cell 8A grading plan set for the proposed modifications to the standpipes). The modified outfall system resulted in a peak outflow of 352.83 CFS at a water surface elevation of 968.14 feet. Since the spillway elevation of the basin is at elevation 971.5 feet, the basin provides a freeboard of 3.36 feet, 1.36 feet more than the required two (2) feet of freeboard. See Sheet C-204 of the Cell 8A grading plan set for the basin plan and profile and Attachment 4 of this report for basin outflow calculations, illustrations, and routing analysis for the post-development condition.

By modifying the existing drain slots to increase the flow intake at a lower elevation on the two 84-inch riser pipes, this will reduce the peak outflow below the calculated pre-developed (Cell 6) outflow. A new storage discharge curve was generated and utilized in the post-development WMS unit hydrograph model to calculate the peak outflows from the sedimentation basin, and the basin volume required for the respective storm event (see Attachment 4 for the sedimentation basin modeling analysis results).

4.0 CONCLUSION

4.1 PEAK DISCHARGE SUMMARY

The 50-year, 24-hour burned and bulked peak outflow generated in the Cell 8B pre- and post-development conditions are 359.92 CFS and 352.83 CFS respectively, resulting in a peak flow reduction of 7.09 CFS. Consequently, the water elevation at the outlet of the 12-foot wide by 9-foot high concrete box culvert below SR126, decreased from 1.32 feet (pre-developed, Cell 6) to 1.31 feet (post-development). See Attachments 6 and 7 for the hydraulic summary table and WSPG calculations.

The sedimentation basin with the remedial grading and standpipe modifications proposed in the Cell 8A grading and drainage improvements (see Cell 8A grading plans), provides the requisite storage volume to contain the stormwater flow and debris from a 50-year, 24-hour burned and bulked storm event with a 4-day precipitation factor, as well as retain the SWQDv and debris described in Section 2.3. As detailed in Section 3.2, the sedimentation volume can be accommodated in the sedimentation basin at a level below the basin outlet elevation and the water surface in the basins stays below the freeboard elevation.

It is concluded that the proposed CCL Cell 8B grading drainage system, which includes a combination of proposed and existing drainage structures, has adequate capacity to accommodate the 50-year, 24-hour burned and bulked peak flow and to retain the SWQDv to meet the Los Angeles County drainage and LID requirements.

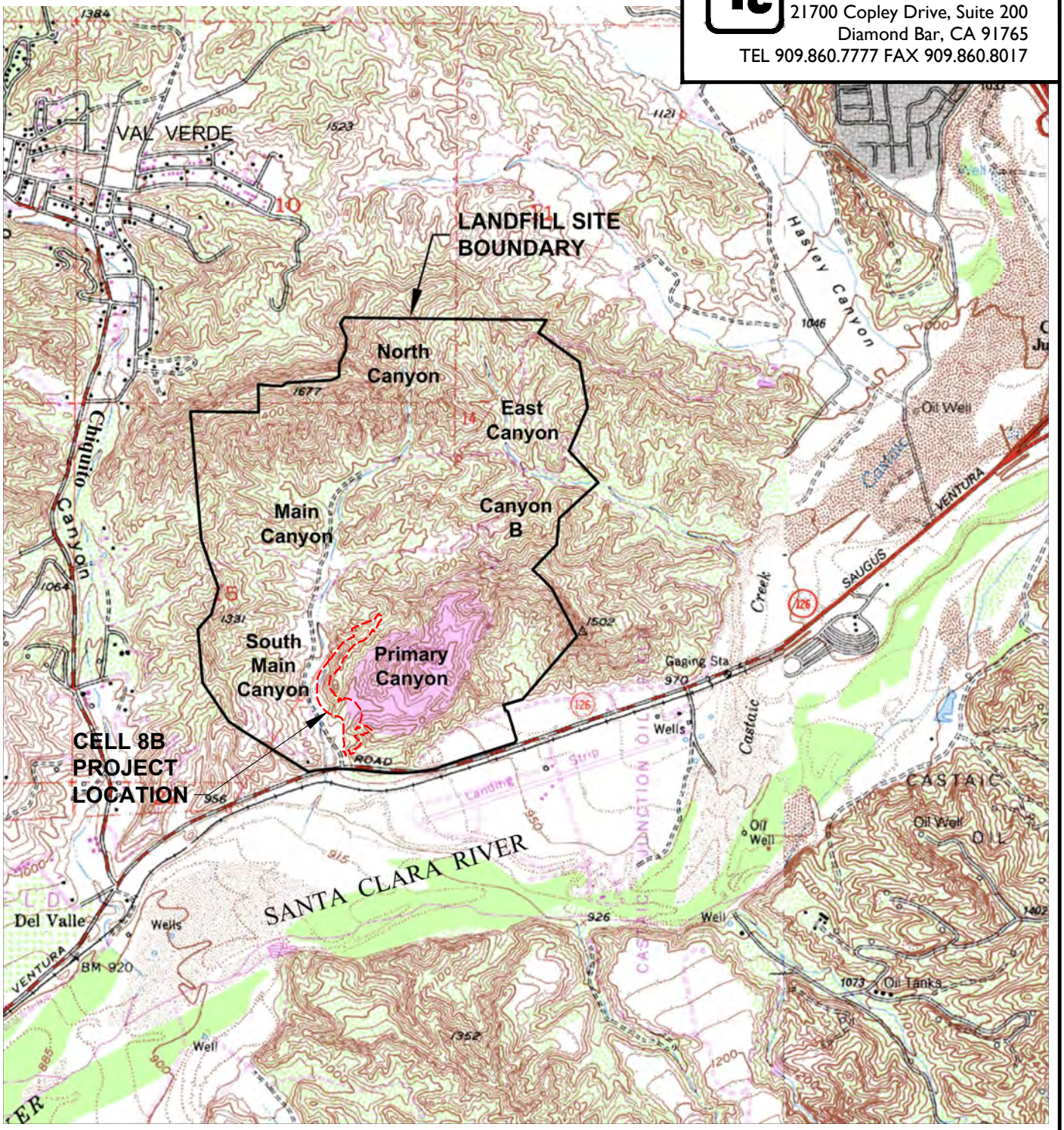
4.2 DIVERSION SUMMARY

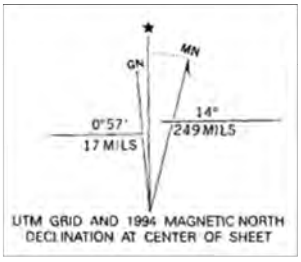
As described in Section 1.1, the CCL property is divided into three main drainage areas that discharge at three different locations, in the predeveloped condition (prior to any landfill development) Drainage Area A is approximately 416 acres, based on topography from aerial photographs taken in 1947, see Figure 7. The CCLDA by Golder Associates identifies the Drainage Area A as being 305 acres in the existing permitted condition for the final grading prior to the expansion, however at that time, based on a cursory review of the topography the main canyon drainage area (~349 acres) was similar to the existing condition of the Cell 8B pre-developed condition. The CCLDA was provided to LACPW as the basis for the appropriate performance for the existing basin to mitigate the peak flows for the site in the final proposed configuration which shows a final drainage area for Drainage Area A being 364 acres. It is our understanding that the CCLDA was not reviewed and approved by LACPW. The pre-developed condition for the Cell 8B project is 349 acres and the proposed post-developed Drainage Area A will now be 386 acres which includes a portion of the Drainage Area C. As stated in the previous section, there will not be an increase of peak discharge off the site from the development of Cell 8B.

As demonstrated in the CCLDA, in this report, and will again be demonstrated in future development reports the easterly and westerly basins will provide adequate storage to mitigate for peak discharge flows and the required retention for treatment of the 85th percentile precipitation runoff.

FIGURES

TETRA TECH
21700 Copley Drive, Suite 200
Diamond Bar, CA 91765
TEL 909.860.7777 FAX 909.860.8017





LOCATION MAP

PREPARED FOR

Chiquita Canyon Landfill

VALENCIA, CALIFORNIA

U.S.G.S 7.5 MINUTE

VAL VERDE, CA
34118-D6-TF-024
1991

NEWHALL, CA
1995
NIMA 2252 I NE - SERIES V895

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

FIGURE 1

P:\WASTE CONNECTIONS\CHIQUITA\CELL 8\CAD\SHEETFILES\CELL 8B GRADING PERMIT\FIGURES\C-800 LOCATION MAP.DWG 6/7/2022 10:54 PM

EXISTING DROP INLET

SITE ENTRANCE

DUAL 48d CMP

977.90 FL

961.84 TOP.

962.28 TOE

958.97 TOE

978.89 GATE

979.24 TC

979.66 TC

CELL 8A GRADING (SEPARATE PERMIT)

975.37 TOP DAM

975.54 TOP DAM

974.52 TOP DAM

954.19 FL 9H 12D BOX

980.06 END TC

12'W x 9'H BOX CULVERT

942.63 FL 9H 12W BOX

961.16 TOE

974.48 TOP DAM

957.50 FL

955.76 FL 60 CSP

DUAL 60" CMP

961.46 TOP.

958.22 TOE

979.92 TOP SLOPE

958.38 TOE

957.57 FL

974.70 TOP DAM

955.72 FL 60 CSP

961.26 TOE

974.56 TOP DAM

954.18 FL 9H 12D Box

980.18 TOP SLOPE

961.55 TOP.

962.03 TOE

958.16 FL

979.35 TOP SLOPE

961.76 TOE

970.55 SPILLWAY

974.51 TOP DAM

967.06 FL

978.95 SPILLWAY

OVERFLOW SWALE

SPILLWAY

974.45 TOP DAM

CELL 8A GRADING (SEPARATE PERMIT)

3.0:1

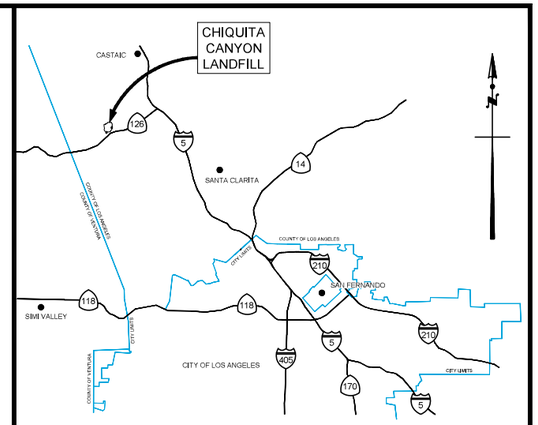
3.5:1

2.5:1

2.0:1

HENRY MAYO DRIVE / SR 126

DATE OF TOPOGRAPHIES: JANUARY 13, 2020 PREPARED BY CONTINENTAL MAPPING CONSULTANTS INC., BASIN AREA: JANUARY 12, 2021 PREPARED BY BLUE RIDGE SERVICES INC. & APRIL 7, 2021 PERFORMED BY TETRA TECH INC.



LOCATION MAP
NTS

0 20 40 80
GRAPHIC SCALE:1"= 40'

LEGEND

- APPROXIMATE LIMIT OF PROPERTY LINE
- LIMIT OF GRADING / DAYLIGHT
- UNPAVED ROAD / BENCH
- EXISTING UNPAVED ROAD / BENCH
- 10 PROPOSED MAJOR CONTOUR
- 9 PROPOSED MINOR CONTOUR
- 10 CONSTRUCTED MAJOR CONTOUR
- 9 CONSTRUCTED MINOR CONTOUR
- 10 EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- RIDGE LINE
- LIMIT OF 2021 TOPOGRAPHY
- PROPOSED TERRACE CHANNEL
- PROPOSED DRAINAGE CHANNEL/STRUCTURE
- PROPOSED STORM DRAIN PIPE
- EXISTING STORM DRAIN PIPE
- EXISTING DRAINAGE CHANNEL/STRUCTURE
- PAVED ROAD
- ELEV DESC FIELD SURVEY POINT

REGISTERED PROFESSIONAL ENGINEER CALEB H. MOORE 66580 CIVIL STATE OF CALIFORNIA

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Diamond Bar, CA 91765
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CHIQUITA CANYON LANDFILL

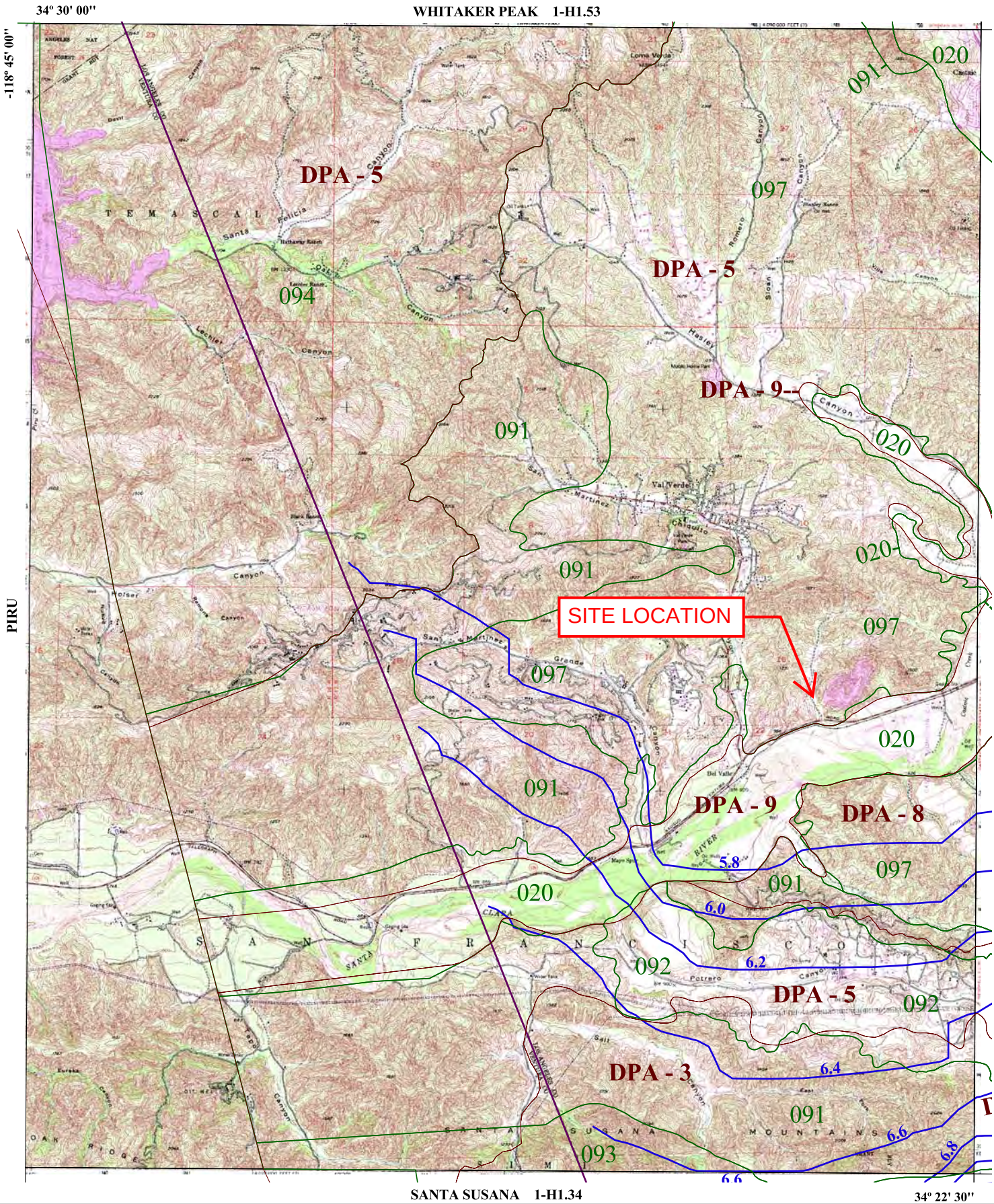
SUPPLEMENTAL SEDIMENTATION BASIN TOPOGRAPHY AND GRADING

DESIGNED BY :	P.V.	FILE : C-803 Basin Topography And Grading.dwg	
DRAWN BY :	P.V.	DATE : 09-2021	SCALE: AS SHOWN
CHECKED BY :	C.H.M.	DATE : 09-2021	
APPROVED BY :	C.H.M.	DATE : 09-2021	FIGURE 6

P:\Waste Connections\Chiquita\Cell 8\CAD\Sheet Files\Cell 8B Grading Permit\Figures\C-803 Basin Topography And Grading.dwg 6/17/2022 2:49 PM

ATTACHMENT 2

HYDROLOGY AND SEDIMENTATION MANUAL REFERENCES



N
W E
S

016 SOIL CLASSIFICATION AREA

7.2 INCHES OF RAINFALL

DPA - 6 DEBRIS POTENTIAL AREA

1 0 1 2 Miles

25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714

VAL VERDE
50-YEAR 24-HOUR ISOHYET

1-H1.43

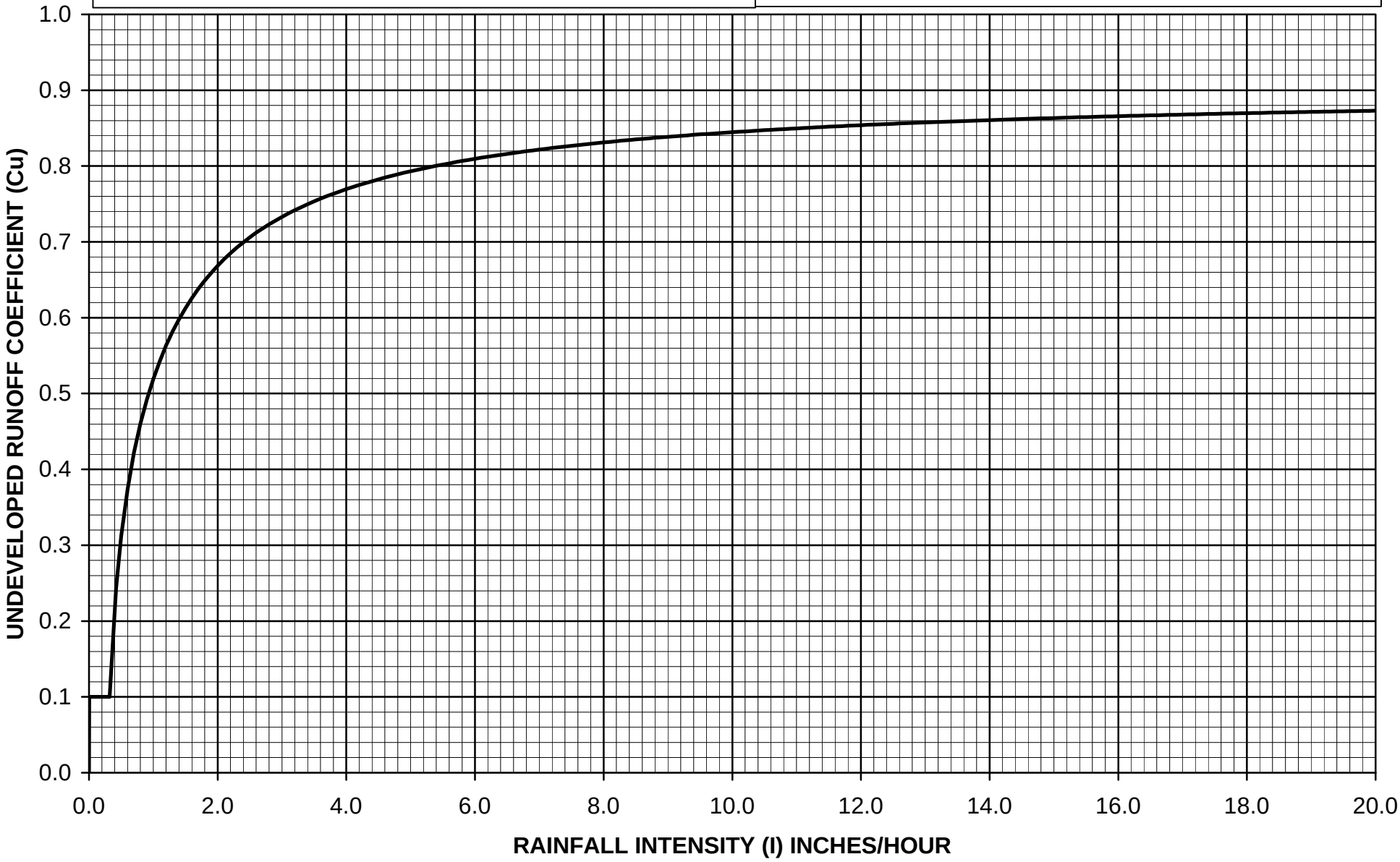
LOS ANGELES COUNTY PUBLIC WORKS Public Service That Works

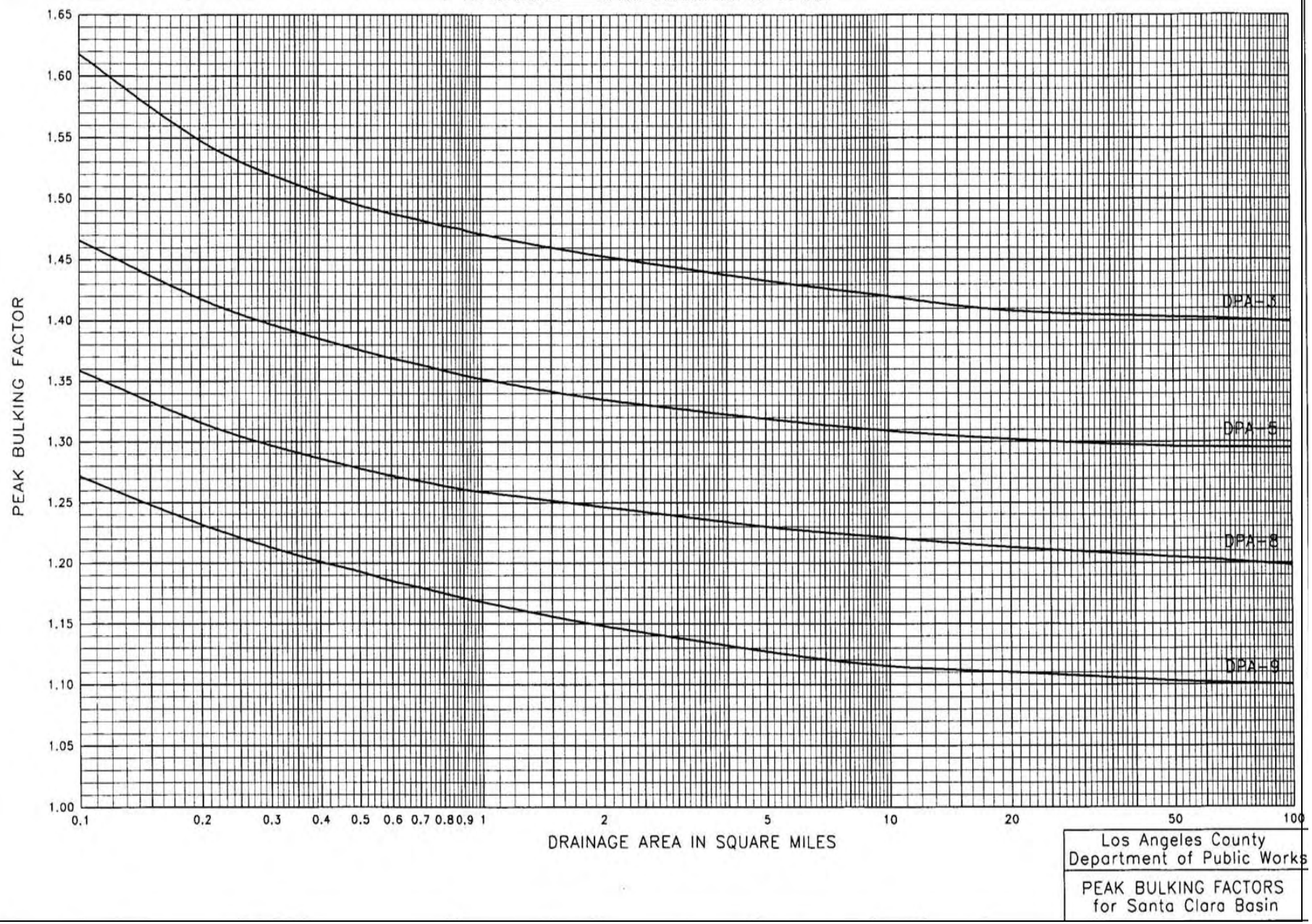
$C_D = (0.9 * IMP) + (1.0 - IMP) * C_U$

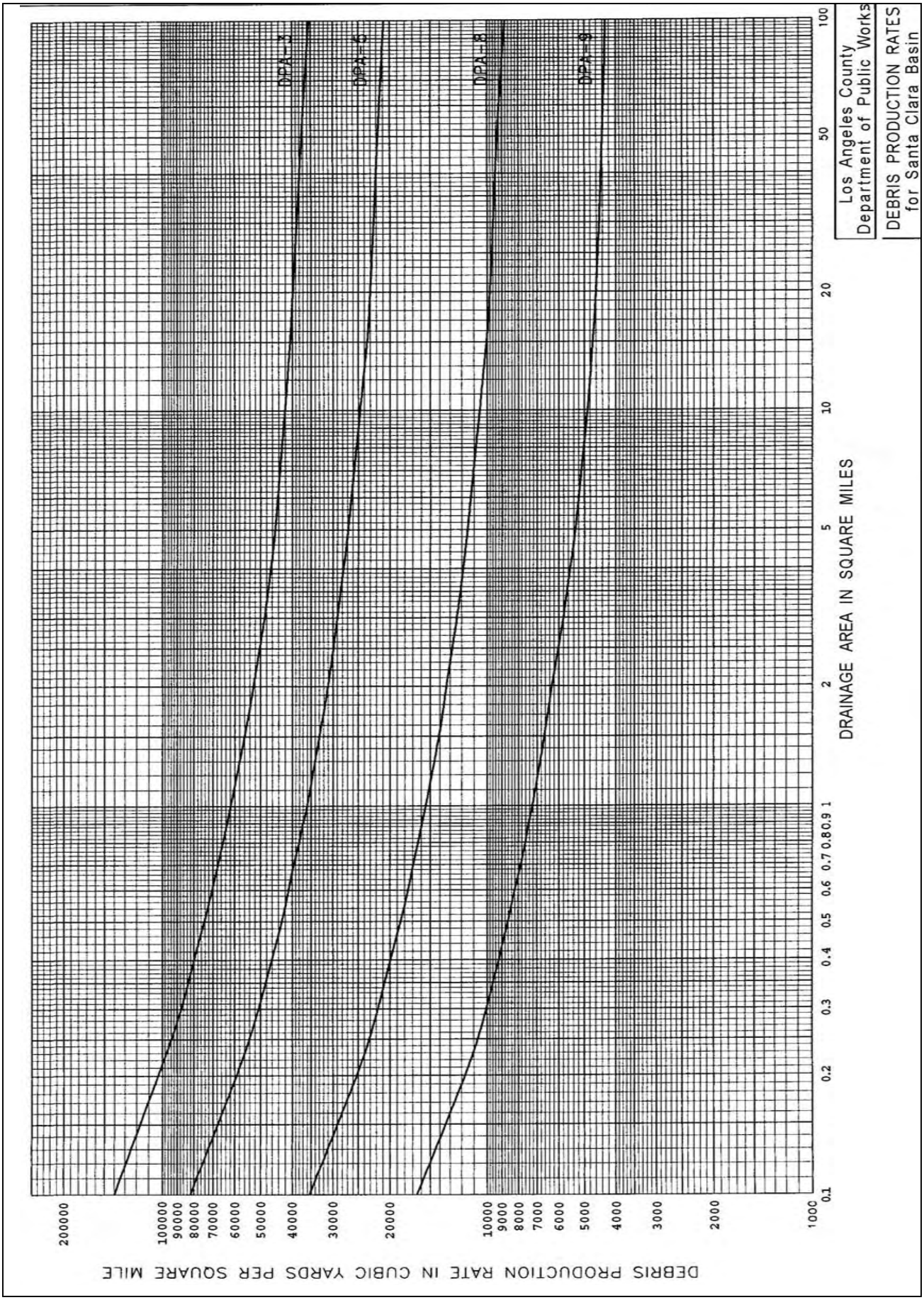
Where: C_D = Developed Runoff Coefficient
IMP = Proportion Impervious
C_U = Undeveloped runoff coefficient

Los Angeles County Department of Public Works

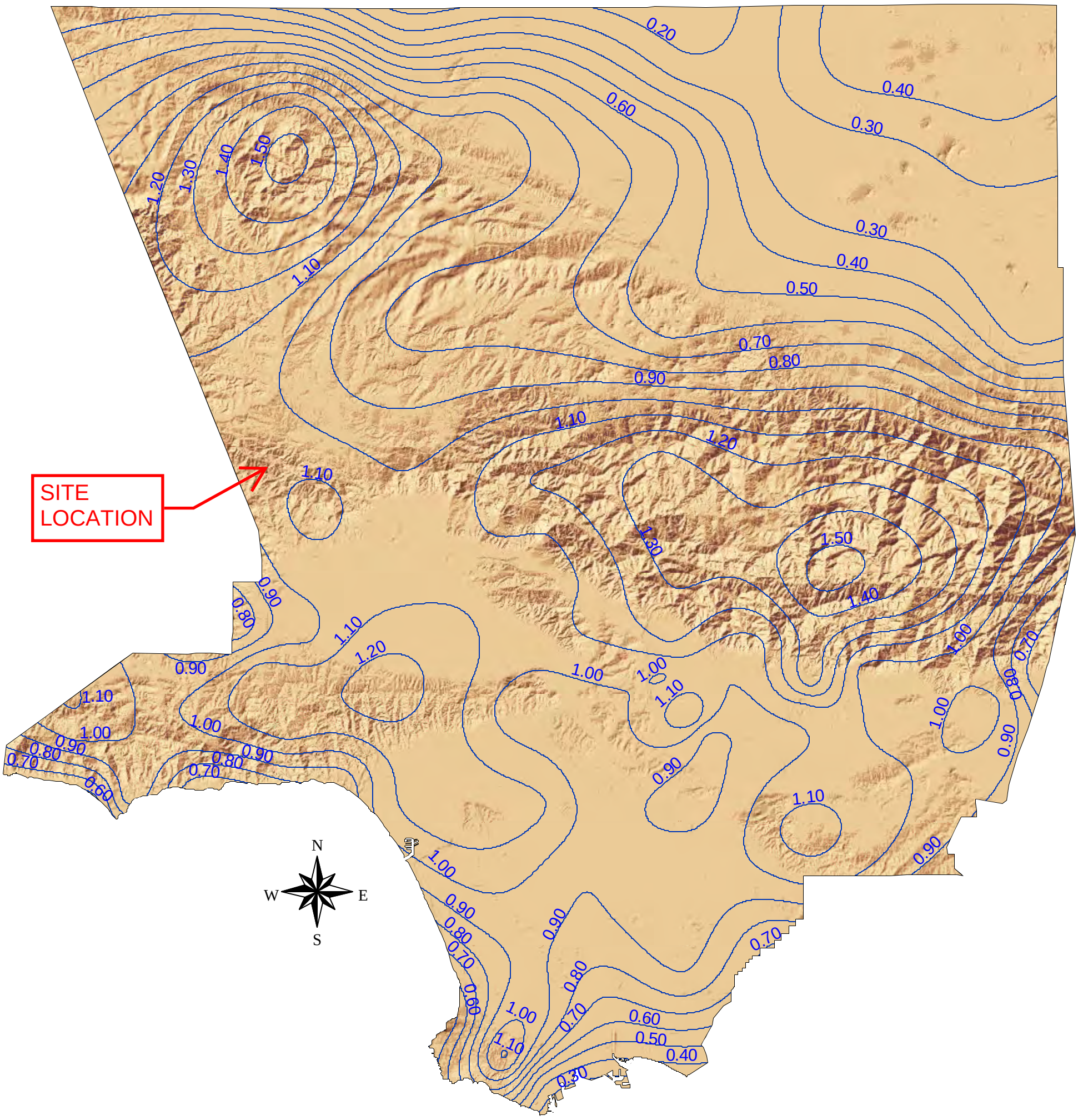
RUNOFF COEFFICIENT CURVE
SOIL TYPE NO. 097




PEAK BULKING FACTOR
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
2
5
10
20
50
100
DRAINAGE AREA IN SQUARE MILES
DPA-3
DPA-5
DPA-8
DPA-9
Los Angeles County
Department of Public Works
PEAK BULKING FACTORS
for Santa Clara Basin


DEBRIS PRODUCTION RATE IN CUBIC YARDS PER SQUARE MILE
200000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
2
5
10
20
50
100
DRAINAGE AREA IN SQUARE MILES
DPA-3
DPA-4
DPA-5
DPA-6
Los Angeles County
Department of Public Works
DEBRIS PRODUCTION RATES
for Santa Clara Basin

85th Percentile 24-hr Rainfall Isohyetal Map



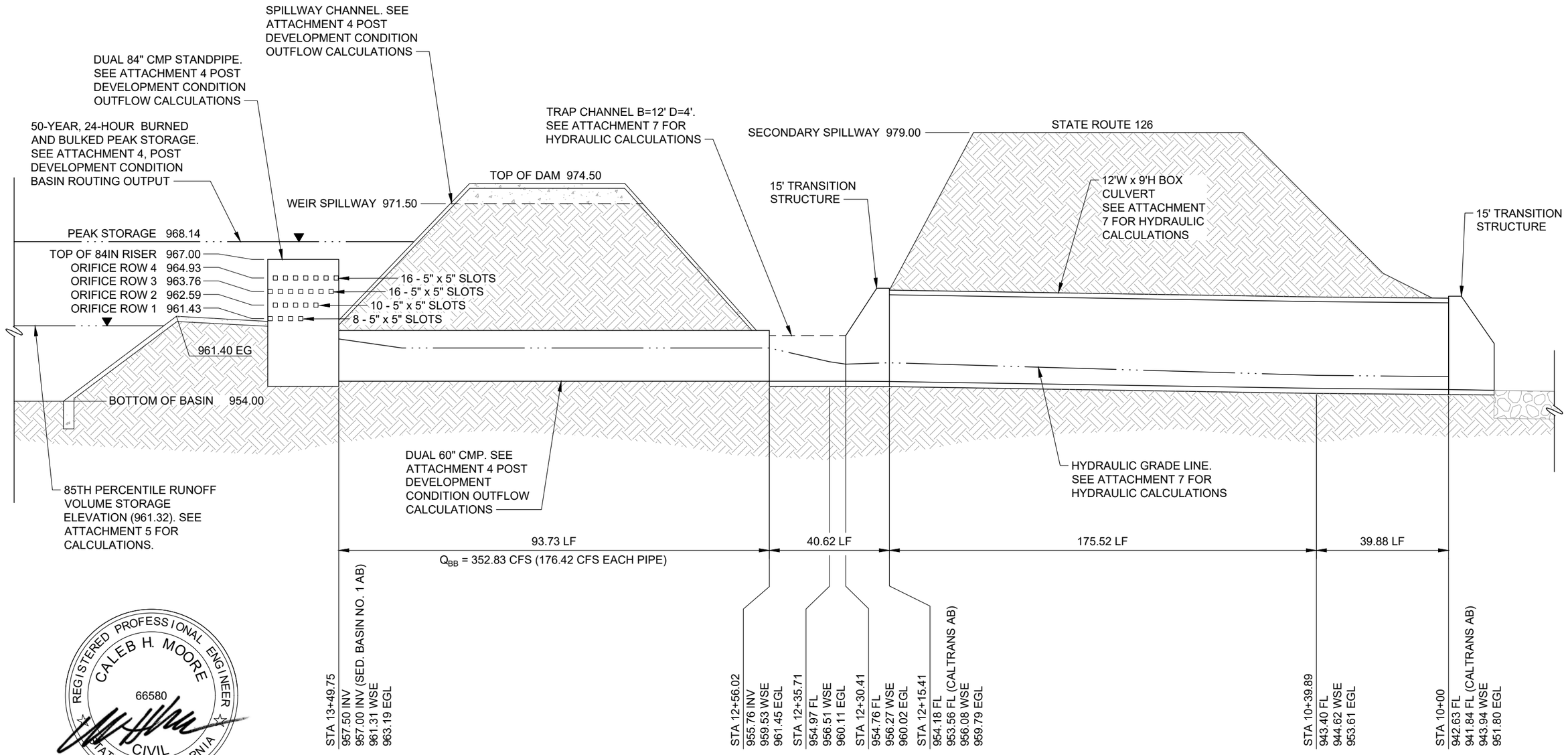
ATTACHMENT 4

SEDIMENTATION BASIN ANALYSIS

POST-DEVELOPMENT CONDITION

SEDIMENTATION BASIN ANALYSIS

BASIN STORAGE CAPACITY AND OUTFLOW CALCULATIONS



BASIN OUTFLOW ELEVATION VIEW
NTS

REGISTERED PROFESSIONAL ENGINEER
CALEB H. MOORE
66580
CIVIL
STATE OF CALIFORNIA

ABBREVIATIONS:

AB	AS-BUILT
CFS	CUBIC FEET PER SECOND
EG	EXISTING GRADE
EGE	ENERGY GRADE ELEVATION
FL	FLOW LINE
INV	INVERT
NTS	NOT TO SCALE
WSE	WATER SURFACE ELEVATION

NOTE:

THE VERTICAL DATUM FOR THE POST-DEVELOPMENT SEDIMENTATION BASIN AND OUTFLOW SYSTEM IS BASED ON AERIAL DRONE TOPOGRAPHY BY BLUE RIDGE SERVICES INC., PERFORMED ON JANUARY 12, 2021. SEE SECTION 3.2 OF REPORT SUMMARY FOR A MORE DETAILED DESCRIPTION.

CHIQUITA CANYON LANDFILL

MODIFIED SEDIMENTATION BASIN OUTFLOW SCHEMATIC

TETRA TECH
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P:\Waste Connections\Chiquita\Cell 8\CAD\SheetFiles\Cell 8B Grading Permit\Figures\C-805 Modified Basin Outflow Schematic

TETRA TECH BAS

Chiquita Canyon Landfill
Cell 8B Post-Development
Basin Outflow
Calculations

Job Number : 2020-0031
Calculated By: PV
Checked By: JMH
Date: 10 Sept, 2021

DESIGN CALCULATION REQUIRED

Determine the stage peak outflow (Q) from the modified twin standpipes in the westerly basin at the Chiquita Canyon

CALCULATIONS

Determine peak Q for each orifice row using the calculation per FHWA HEC 22 - Urban Drainage Design Manual, Chapter 8 - Detention and Retention Facility, September 2009. (Publication No. FHWA-NHI-10-009)

Equation: $Q = CA\,(2gh)^{1/2}$

where, Q = discharge in cfs;
A = cross-sectional area of conduit in ft^2;
g = gravitational constant (32.2 ft/sec^2);
h = head, in ft, above centerline of orifice opening;
C = orifice coefficient (0.65).

See Modified Sedimentation Basin Outflow Schematic (see note 1)

Orifice Row	Variable	Units \ Elev.	962	964	966	968	970	972	974	974.5
1	h = Elev. - 961.425	ft	0.58	2.58	4.58	6.58	8.58	10.58	12.58	13.08
	A (8 x 5" sqaure)	ft^2	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39
	Q_1	**cfs**	**5.49**	**11.63**	**15.50**	**18.58**	**21.21**	**23.56**	**25.69**	**26.20**
2	h = Elev. - 962.592	ft	0.00	1.41	3.41	5.41	7.41	9.41	11.41	11.91
	A (10 x 5" sqaure)	ft^2	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74
	Q_2	**cfs**	**0.00**	**10.75**	**16.72**	**21.06**	**24.65**	**27.78**	**30.59**	**31.25**
3	h = Elev. - 963.759	ft	0.00	0.24	2.24	4.24	6.24	8.24	10.24	10.74
	A (16 x 5" sqaure)	ft^2	2.78	2.78	2.78	2.78	2.78	2.78	2.78	2.78
	Q_3	**cfs**	**0.00**	**7.11**	**21.69**	**29.84**	**36.20**	**41.60**	**46.37**	**47.49**
4	h = Elev. - 964.925	ft	0.00	0.00	1.08	3.08	5.08	7.08	9.08	9.58
	A (16 x 5" sqaure)	ft^2	2.78	2.78	2.78	2.78	2.78	2.78	2.78	2.78
	Q_4	**cfs**	**0.00**	**0.00**	**15.02**	**25.41**	**32.64**	**38.54**	**43.65**	**44.84**
Total Q_5 = Sum of Q_1 to Q_4		**cfs**	**5.49**	**29.48**	**68.93**	**94.88**	**114.70**	**131.47**	**146.30**	**149.77**

Determine peak Q of the standpipe and outflow culverts as a weir and orifice. The lower of the peak Q's shall be used in the summary

The capacity of a weir can be estimated using the following equations (Brater and King, 1976):

1. Horizontal crested weirs

For horizontal crested weirs (both broad-crested and sharp-crested)

$Q = C\,L\,H^{3/2}$ (1303)

Where
Q = Flow (cubic feet per second)
C = weir coefficient
= 3.3 for a sharp-crested weir
= 2.65 for a broad-crested weir
L = Effective horizontal length of weir in
H = Head (feet)

C= 3.30 Sharp Crested Weir

	Variable	Units \ Elev.	962	964	966	968	970	972	974	974.5
Standpipe Weir	h = Elev. - 967	ft	0.00	0.00	0.00	1.00	3.00	5.00	7.00	7.50
	L	ft	21.47	21.47	21.47	21.47	21.47	21.47	21.47	21.47
	Q_6	**cfs**	0.00	0.00	0.00	70.85	368.15	792.14	1312.18	1455.25
Total Riser Pipe Flow	**$Q_7 = Q_5 + Q_6$**	**cfs**	**5.49**	**29.48**	**68.93**	**165.74**	**482.85**	**923.61**	**1458.47**	**1605.02**
	Q_8 (2 pipes)= 2xQ_7	**cfs**	**10.99**	**58.97**	**137.86**	**331.47**	**965.71**	**1847.22**	**2916.95**	**3210.04**
Culvert - Orifice	h = Elev. - 960	ft	2.00	4.00	6.00	8.00	10.00	12.00	14.00	14.50
	A	ft^2	19.63	19.63	19.63	19.63	19.63	19.63	19.63	19.63
	Q_9	**cfs**	**144.84**	**204.84**	**250.88**	**289.69**	**323.88**	**354.79**	**383.22**	**390.01**
	Q_{10} (2 pipes)= 2xQ_9	**cfs**	**289.69**	**409.68**	**501.76**	**579.38**	**647.76**	**709.59**	**766.44**	**780.01**

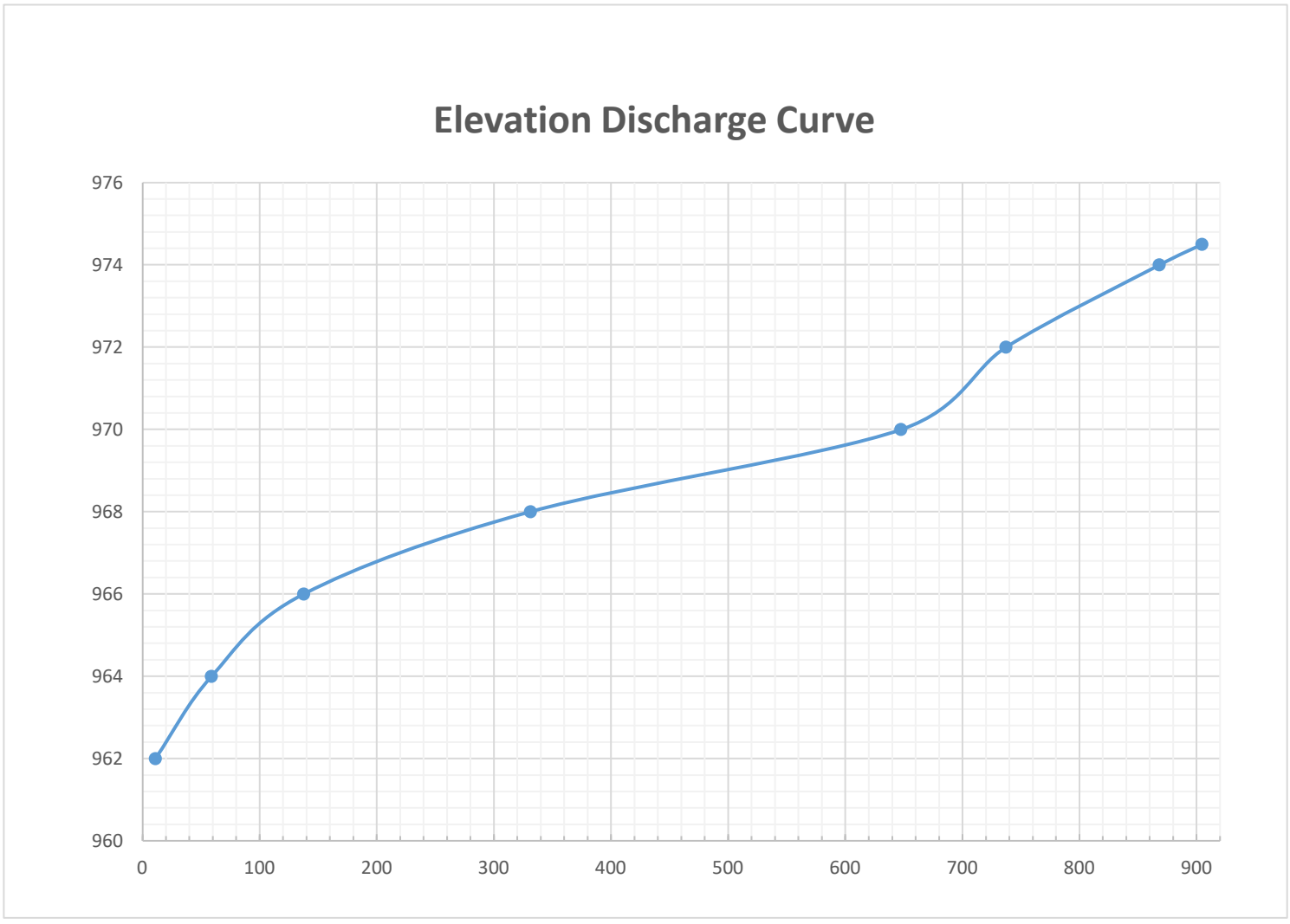
Use Mannings to Determine Peak Q for Riser - See Flowmaster Calculations on Page 2 of 2 for Assumed Input Values

	Variable	Units \ Elev.	962	964	966	968	970	972	974	974.5
Culvert - Mannings	**Q_{11}**	**cfs**	**205.05**	**262.43**	**333.66**	**392.16**	**443.00**	**488.58**	**530.25**	**540.17**
	Q_{12}(2 pipes)=2xQ_{11}	**cfs**	**410.10**	**524.86**	**667.32**	**784.32**	**886.00**	**977.16**	**1060.50**	**1080.34**

C= 2.65 Broad-crested Weir

	Variable	Units \ Elev.	962	964	966	968	970	972	974	974.5
Spillway Weir	h = Elev. - 970.55	ft	0.00	0.00	0.00	0.00	0.00	1.45	3.45	3.95
	L	ft	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
	Q_{13}	**cfs**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**27.76**	**101.89**	**124.82**

Discharge Curve	Elev.	962	964	966	968	970	972	974	974.5
	Equation	Q_8	Q_8	Q_8	Q_8	$Q_{10}+Q_{13}$	$Q_{10}+Q_{13}$	$Q_{10}+Q_{13}$	$Q_{10}+Q_{13}$
	Q_{total} (cfs)	**10.99**	**58.97**	**137.86**	**331.47**	**647.76**	**737.35**	**868.33**	**904.83**



Cicular Pipe (Cell 8B Out Flow Post Condition.fm8) Report

Label	Solve For	Friction Method	Roughness Coefficient	Channel Slope (%)	Normal Depth (ft)	Diameter (ft)	Discharge (ft³/s)	Flow Area (ft²)	Wetted Perimeter (ft)	Hydraulic Radius (ft)	Top Width (ft)	Critical Depth (ft)	Velocity (ft/s)	Flow Type
Culvert - EL 962	Discharge	Manning Formula	0.024	2.00000	4.00	5.00	195.00	16.84	11.07	1.52	4.00	3.99	11.58	SubCritical

Pressure Pipe (Cell 8B Out Flow Post Condition.fm8) Report

Label	Solve For	Friction Method	Pressure at 1 (feet H2O)	Pressure at 2 (feet H2O)	Elevation at 1 (ft)	Elevation at 2 (ft)	Length (ft)	Roughness Coefficient	Diameter (ft)	Discharge (ft³/s)	Energy Grade at 1 (ft)	Energy Grade at 2 (ft)	Hydraulic Grade at 1 (ft)	Hydraulic Grade at 2 (ft)	Velocity (ft/s)
Culvert - EL 964	Discharge	Manning Formula	1.00	0.00	958.00	956.16	92.00	0.024	5.00	247.85	961.48	958.64	959.00	956.16	12.62
Culvert - EL 966	Discharge	Manning Formula	3.00	0.00	958.00	956.16	92.00	0.024	5.00	323.55	965.22	960.38	961.00	956.16	16.48
Culvert - EL 968	Discharge	Manning Formula	5.00	0.00	958.00	956.16	92.00	0.024	5.00	384.63	968.96	962.12	963.00	956.16	19.59
Culvert - EL 970	Discharge	Manning Formula	7.00	0.00	958.00	956.16	92.00	0.024	5.00	437.26	972.71	963.87	965.00	956.16	22.27
Culvert - EL 972	Discharge	Manning Formula	9.00	0.00	958.00	956.16	92.00	0.024	5.00	484.21	976.45	965.61	967.00	956.16	24.66
Culvert - EL 974	Discharge	Manning Formula	11.00	0.00	958.00	956.16	92.00	0.024	5.00	526.99	980.19	967.35	969.00	956.16	26.84
Culvert - EL 975	Discharge	Manning Formula	12.00	0.00	958.00	956.16	92.00	0.024	5.00	547.12	982.07	968.23	970.00	956.16	27.86

BASIN STORAGE CAPACITY

DATE	9/7/2021	**JOB**	Chiquita Cell 8 Basin Capacity
CALC BY	JMH	**Description**	Post-Development Condition
Checked By	PV		

DESIGN CALCULATION REQUIRED

Determine the total volume of the basin and the dead storage capacity.

CALCULATIONS

The average end-area method was used to determine the basin capacity at each contour interval.

Equation: $$V = \Sigma\, \mathrm{h}\, \frac{A_1 + A_2}{2}$$

V = Volume
h = height, elevation 1 - elevation 2
A = Area

The area for each elevation was calculated using Auto CAD and is based on the contours from the January 12, 2021 drone topography performed by Blue Ridge Services, Inc. and the proposed grading within the basin, see Sheets C-104 and C-109 of the Cell 8A construction plan set. See Figure 6.

CONTOUR	AREA sq feet	AVE. AREA sq feet	VOLUME cubic yards	ΣVOLUME cubic yards	VOLUME ac-ft	ΣVOLUME ac-ft
950	11,987		0	0	0	0
952	14,787	13,387	992	992	0.61	0.61
954	27,973	21,380	1,584	2,575	0.98	1.60
956	34,039	31,006	2,297	4,872	1.42	3.02
958	40,650	37,345	2,766	7,638	1.71	4.73
960	48,221	44,435	3,292	10,930	2.04	6.77
962	58,823	53,522	3,965	14,894	2.46	9.23
964	70,055	64,439	4,773	19,668	2.96	12.19
966	80,948	75,502	5,593	25,260	3.47	15.66
968	89,193	85,070	6,302	31,562	3.91	19.56
970	98,001	93,597	6,933	38,495	4.30	23.86
972	112,682	105,341	7,803	46,298	4.84	28.70
974	122,634	117,658	8,715	55,013	5.40	34.10
976	132,332	127,483	9,443	64,457	5.85	39.95

The topo has a two foot contour interval, therefore interpolation was used to calculate the volume at a specific elevation.

Equation: $$y = y_1 + (x - x_1)\, \frac{(y_2 - y_1)}{(x_2 - x_1)}$$

y_1 = Cumulative volume at contour elevation 1
y_2 = Cumulative volume at contour elevation 2
y = Capacity at elevation x
x_1 = Elevation 1
x_2 = Elevation 2
x = Elevation which capacity is required

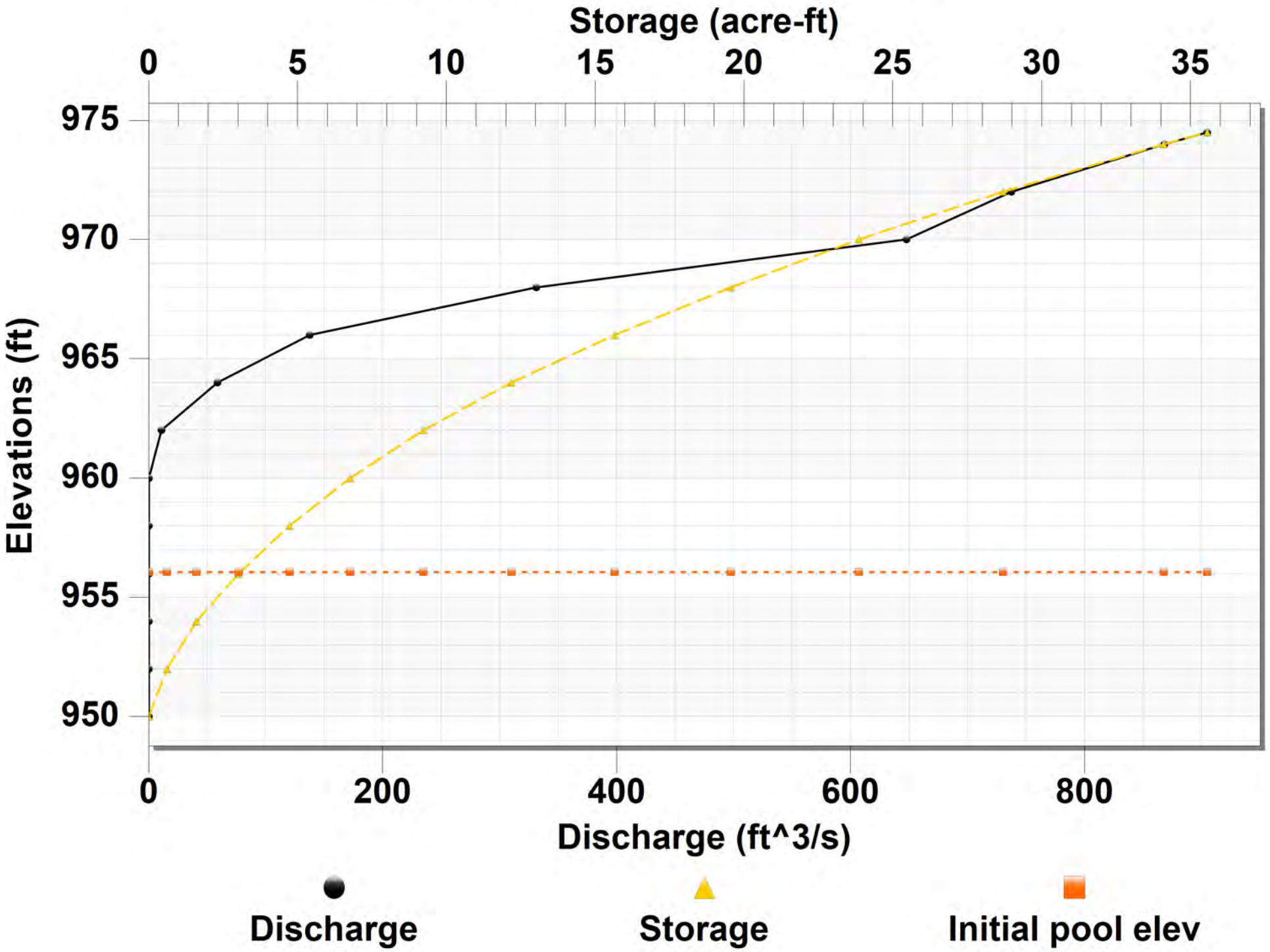
Dead Storage Capacity			Total Basin Capacity		
y_1 =	6.77	ac-ft	y_1 =	34.10	ac-ft
y_2 =	9.23	ac-ft	y_2 =	39.95	ac-ft
x_1 =	960	ft	x_1 =	974	ft
x_2 =	962	ft	x_2 =	976	ft
x =	961.4	ft (See note)	x =	974.5	ft (See note)
y =	**8.49**	**ac-ft**	**y =**	**35.56**	**ac-ft**

Notes: Elevations for the dead storage capacity and top of spill way are based on field survey performed by Tetra Tech on April 7, 2021, see Figure 6.

P:\Waste Connections\Chiquita\Cell 8\Docs\Calcs\Hydraulics\Grading Permit\Cell 8B\Basin Outflow\Basin Volume Calculation.xls

```
RESERVOIR  41AF  14  0  956.0700
 COMPOSITE ELEVATION     COMPOSITE STORAGE   COMPOSITE DISCHARGE
          950.000000              0.000000              0.000000
          952.000000              0.610000              0.000000
          954.000000              1.600000              0.000000
          956.000000              3.020000              0.000000
          958.000000              4.730000              0.000000
          960.000000              6.770000              0.000000
          962.000000              9.230000             10.990000
          964.000000             12.190000             58.970000
          966.000000             15.660000            137.860000
          968.000000             19.560000            331.470000
          970.000000             23.860000            647.760000
          972.000000             28.700000            737.350000
          974.000000             34.100000            868.330000
          974.500000             35.560000            904.830000
END RESERVOIR  41AF
```

Storage Discharge Curves



Appendix C California Stormwater Quality Association (CASQA) BMP Handbook Fact Sheets

(Available Electronically Onsite)

Appendix D Spill Response Plan, Spill Guide, and Spill Log

List of Significant Spills and Leaks

Facility: _____
Completed by: _____
Title: _____
Date: _____

List all spills and leaks of toxic or hazardouse pollutants that were significant after the date of three years prior to the effective date of this Permit. Significant spills and leaks should include but are not limited to, release of oil or hazardous substances in excess of reportable quantities. Although not required, we suggest you list spills and leaks of non-hazardous materials.

Date (month/day/year)	Location (as indicated on site map)	Description				Response Procedure		Preventive Measure Taken
		Type of Material	Quantity	Source, if known	Reason for spill/leak	Amount of Material Recovered	Material no longer exposed to Stormwater? (yes/no)	

SPILL RESPONSE PLAN

Introduction

The following describes the spill response plan to follow in the event of a spill. Spill responders must also refer to the Material Safety Data Sheet (MSDS) for the spilled material and the oil Spill Prevention, Control, and Countermeasures (SPCC) Plan, if applicable. Discharge of spilled materials to groundwater, surface water, or soil is prohibited by state and federal laws. It is imperative that actions be taken to respond to a spill once it has occurred.

Prompt response to a spill is the best means of minimizing impact to the environment and in particular, preventing a discharge reaching the waters of the United States. In the event of a spill, the site supervisor will assume the role of spill coordinator until he/she can notify the Environmental Manager. If the spill coordinator is unable to notify either the Environmental Manager or Safety Manager or any of the back-up spill coordinators, then he/she will assume the responsibility of implementing the emergency spill response procedures provided that he/she has been trained on the means of protecting the health and safety of spill response personnel and on the implementation of this spill response plan.

The spill coordinator will assess the hazard, secure spill response and personal protective equipment, and contain and eliminate the spill source as outlined below. Information regarding spill response equipment and personal protective equipment is available in the facility SPCC and MSDS for materials stored.

Assess Hazard

Upon notification of a spill, the spill coordinator will determine the hazard potential of the spill. The spill coordinator will determine the following factors:

- The substance spilled and its hazard potential;
- The amount of the spill and the extent of spreading; and,
- The source of the leakage/ spill.

Where appropriate, the spill coordinator will consult with the Environmental Manager or Safety Manager to determine the potential hazard to employees and to the surrounding public from the substance spilled, if a reportable spill occurs (see Notification and Reporting Section).

If a spill is determined to be of such a magnitude that it cannot be safely and effectively controlled by facility personnel, then the coordinator will promptly notify outside emergency response agencies (e.g., the local office of emergency services) to implement control and clean-up.

Secure Spill Response and Personal Protective Equipment

Upon determining the hazard potential for the planned response action, the spill coordinator will direct those who will respond to the spill to obtain the appropriate response equipment and personal protective equipment (PPE). Employees will not be issued spill response equipment or PPE without having been trained on its proper use and limitations.

Contain and Eliminate Spill Source

Upon obtaining the proper spill response equipment and PPE, the spill responder(s) will first attempt to contain the spill so as to prevent its entry into a drain inlet (DI), a ditch or conveyance that eventually discharges to the waters of the United States. Examples of equipment and media that can be used to contain spills include dikes and berms, sand and oil absorbent materials such as kitty litter, straw bales, and absorbent pillows and booms.

At the same time as containment is being performed or as soon as possible after containment, the spill responder(s) will attempt to seal or otherwise stop the source of the spill. Common methods of eliminating a spill source include closing valves, using a leak stopping compound for pin hole leaks, using drum overpacks, deactivating pumps, and diverting flow to another pathway, as long as this pathway does not allow the spill to enter waters of the United States or adjoining shorelines.

In the event that contractor assistance is required for clean up, the spill coordinator or designee will arrange for timely clean up with an outside contractor.

Waste Disposal

Wastes resulting from a minor spill response will be containerized in impervious bags, drums, buckets, or other appropriate container. The waste will be removed from the site by a licensed waste hauler in a timely manner. Wastes resulting from a major spill response will be characterized and disposed of properly.

Notification and Reporting

In the event of a spill, a senior on-site person will notify the Environmental Manager or designee, and the Environmental Manager or designee will complete the written Spill Notification Form. This form details the time, material, and quantity of oil released. Some spills may also require that local, state, or federal agencies be notified immediately or within 60 days. Spill notification requirements are included in the SPCC for this facility, if applicable, and in the attached publication from the Governor's Office of Emergency Services, *California Hazardous Materials Spill/ Release Notification Guide*, October 2013.

Spill Notification Form

Part A: Basic Spill Data	
Type of Spilled Substance:	**Notification Person:**
Quantity Released:	**Spill Date and Time:**
Location of Spill:	**Discovery Date and Time:**
Weather conditions:	**Spill Duration**:
Facility Name & Location:	**Release to**: [ ]air [ ] water [ ] ocean [ ] well [ ] soil [ ] sewer [ ] containment [ ]other_____
Owner / Company Name:	**Telephone:** Facility:
Nature of spill and environmental or health effects: [ ]Injuries [ ] Fatalities	

Part B: Notification Checklist		
Spill Type	**Notification Date and Time**	**Name of Person that Received Call**
Spill reported to local and state agencies:		
Spill reaches groundwater or surface water:		
National Response Center 800-424-8802		

Send a copy of this form to the Environmental Manager.

Cal OES

GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

California Hazardous Materials Spill / Release Notification Guidance

To Report all significant releases or threatened releases of hazardous materials:

First Call:

9-1-1

(or local emergency response agency)

Then Call:

Cal OES State Warning Center

(800) 852 - 7550 or (916) 845 - 8911

February 2014

Gavin Newsom, Governor
Mark S. Ghilarducci, Director
Revised by: Trevor Anderson, Bill Potter & Jon Kolman
Layout by: Jon Kolman

February 2014

This guidance summarizes pertinent emergency notification requirements. For precise legal requirements, review specific laws and regulations. This guidance applies to all significant releases of hazardous materials. Refer to the Safe Drinking Water Act of 1986, better known as Proposition 65, and §9030 of the California Labor Code for additional reporting requirements.

The State of California makes no warranty, expressed or implied, and assumes no liability for omissions or errors contained in this publication.

SPILL OR RELEASE NOTIFICATION

Q: What are the emergency notification requirements in case of a spill or release of hazardous materials?

A: All significant releases or threatened releases of a hazardous material, including oil and radioactive materials, require emergency notification to government agencies. The law specifies:

- Who must notify
- What information is needed
- Which government agencies must be notified
- When must government agencies be notified
- Release quantity or basis for the report

WHO MUST NOTIFY

Q: Who is obligated to notify?

A: Requirements for immediate notification of all significant spills or threatened releases cover:

- Owners
- Operators
- Licensees
- Persons in Charge
- Employers

Notification is required regarding significant releases from:

- Facilities
- Vehicles
- Vessels
- Pipelines
- Railroads

State law: Handlers, any employees, authorized representatives, agent or designees of handlers shall, upon discovery, immediately report any release or threatened release of hazardous materials (Health and Safety Code §25510).

Federal law: Notification to the National Response Center is required for all releases that equal or exceed federal reporting quantities:

- (EPCRA) Owners and Operators to report, and
- (CERCLA) Person in Charge to report

WHEN TO NOTIFY

Q: When must emergency notification be made?
A: All significant spills or threatened releases of hazardous materials, including oil and radioactive materials, **must be immediately** reported. Notification shall be made by telephone.

Also, written Follow-Up Reports (Section 304) are required within **7 days** if the release equals or exceeds the Federal Reportable Quantities. (see web site for more information)

WHAT INFORMATION

Q: What information is required?
A: State notification requirements for a spill or threatened release include (as a minimum):

- Identity of caller
- Exact location, date and time of spill, release or threatened release
- Location of threatened or involved waterway or stormdrains
- Substance, quantity involved, and isotope if necessary
- Chemical name (if known, it should be reported if the chemical is extremely hazardous)
- Description of what happened

Federal notification required additional information for spills (CERCLA chemicals) that exceed federal reporting requirements, which includes:

- Medium or media impacted by the release
- Time and duration of the release
- Proper precautions to take
- Known or anticipated health risks
- Name and phone number for more information

WHICH AGENCIES

Q: Who must be notified?

A: Notification must be given to the following agencies:

- **The Local Emergency Response Agency**
  9-1-1 or the local Fire Department
- **The Local Unified Program Agency (UPA), if different from local fire.**

Note: The UPA may designate a call to the 9-1-1 emergency number as meeting the requirement for notifying the UPA.

Phone:_____

enter local number

And

- **The California Governor's Office of Emergency Services, California State Warning Center:**

Phone (800) 852-7550 or (916) 845-8911

And, if appropriate:

- **The California Highway Patrol:**

Phone: 9-1-1

(The California Highway Patrol must be notified for spills occuring on highways in the State of California. (CVC 23112.5))

In Addition, as necessary, one or more of the following:

National Response Center

If the spill equals or exceeds CERCLA Federal Reportable Quantities, Phone: (800) 424-8802

United States Coast Guard

Waterway Spill / Release

Sectors:

San Francisco: (415) 399-3547

Los Angeles/Long Beach: (310) 521-3805

San Diego: (619) 278-7033

California Occupational Safety and Health Administration (Cal/OSHA)

For serious injuries or harmful exposures to workers, contact the local Cal/OSHA District Office

California Department of Health Services, Radiological Health Branch

All radiological incidents, contact the California State Warning Center

Department of Toxic Substances Control (DTSC)

Hazardous waste tank system releases, and secondary containment containment releases, contact the appropriate DTSC Regional Office

Department of Conservation

Division of Oil, Gas, and Geothermal Resources (DOG GR) Release of Oil and Gas at a Drilling and Production Facility, contact the appropriate DOGGR Office

Public Utilities

Natural Gas Pipeline Releases, contact the Public Utilities Commission (PUC)

Department of Fish and Wildlife, Office of Spill Prevention and Response (DFW)

Waterway Spill/Release, contact the appropriate DFW Office or the California State Warning Center

Regional Water Quality Control Board (RWQCB)

Waterway Spill/Release, contact the appropriate RWQCB Office

Notification must also be made to the California Governor's Office of Emergency Services, California State Warning Center for the following:

- Discharges or threatened discharges of oil in marine waters
- Any spill or other release of one barrel (42 gallons) or more of petroleum products at a tank facility
- Discharges of any hazardous substances or sewage, into or on any waters of the state
- Discharges that may threaten or impact water quality
- Any found or lost radioactive materials
- Discharges of oil or petroleum products, into or on any waters of the state
- Hazardous Liquid Pipeline releases and every rupture, explosion or fire involving a pipeline

WRITTEN REPORTS

Q: When are written reports required?
A: Different laws have different time requirements and criteria for submitting written reports. After a spill or release of hazardous materials, including oil and radioactive materials, immediate verbal emergency notification should be followed up as soon as possible with a Written Follow-Up Report, if required, to the following agencies:

1) California Governor's Office of Emergency Services Section 304 Follow Up Report.

2) The responsible regulating agency such as:

- California Department of Health Services, Radiological Health Branch, Radiological Incident Reporting.
- Department of Toxic Substances Control, Facility Incident or Tank System Release Report.
- Cal/OSHA, serious injury or harmful exposure to workers.

3) U.S. DOT and DOE, transportation-related incidents.

PENALTIES

Federal and state laws provide for administrative penalties of up to $25,000 per day for each violation of emergency notification requirements. Criminal penalties may also apply.

STATUTES

Q: What statutory provisions require emergency notification?
A: Many statutes require emergency notification of a hazardous chemical release, including:

- Health and Safety Code §25270.8, 25510
- Vehicle Code §23112.5
- Public Utilities Code §7673 (General Orders #22-B, 161)
- Government Code §51018, 8670.25.5 (a)
- Water Code §13271, 13272
- California Labor Code §6409.1 (b)
- Title 42, U.S. Code §9603, 11004

Q: What are the statutory provisions for written Follow-Up Reports (Section 304)?
A: Written reports are required by several statutes, including:

- Health and Safety Code §25503 (c) (9)
- California Labor Code §6409.1 (a)
- Water Code §13260, 13267
- Title 42, U.S. Code §11004
- Government Code §51018

REGULATIONS

In addition to statutes, several agencies have notification or reporting regulations:

- Title 8, CCR, §342
- Title 13, CCR, §1166
- Title 14, CCR, §1722 (h)
- Title 17, CCR, §30295
- Title 19, CCR, §2703, 2705
- Title 22, CCR, §66265.56 (j), 66265.196 (e)
- Title 23, CCR, §2230, 2250, 2251, 2260
- Title 40, CFR, §263 esp. Section §263.30
- Title 49, CFR, §171.16

WEBSITES

State Regulations
http://www.oal.ca.gov

State Statutes
http://leginfo.legislature.ca.gov

Federal Regulations
http://www.gpo.gov/fdsys/

Federal Reportable Quantities
http://www.epa.gov/superfund/policy/release/rq/index.htm

See California Labor Code §9030 and the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) for other reporting requirements.

DEFINITIONS

Q: What is a "Hazardous Material"?
A: "Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or threatened hazard to human health and safety or to the environment, if released into the workplace or the environment...." (Health and Safety Code, §25501 (m))

Q: What is a release?
A: "Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, unless permitted or authorized by a regulatory agency".
(Health and Safety Code, §25501 (q) and CERCLA §101 (22))

Q: What is a threatened release?
A: A threatened release is a condition creating a substantial probability of harm that requires immediate action to prevent, reduce, or mitigate damages to persons, property, or the environment. (Health and Safety Code §25501 (u))

DEFINITIONS...cont

Q: What hazardous material release requires notification?
A: All significant spills, releases, or threatened releases of hazardous materials **must be immediately** reported.

In addition, all releases that result in injuries, or workers harmfully exposed, **must be immediately** reported to Cal/OSHA (CA Labor Code §6409.1 (b)). Notification covers significant releases or threatened releases relating to all of the following:

"Hazardous Substances"
As listed in 40 CFR §302.4; Clean Water Act §307, §311; CERCLA §102; RCRA §3001; Clean Air Act §112; Toxic Substance Control Act §7, and as defined by California Health and Safety Code §25501 (n).

"Extremely Hazardous Substances"
As required by Chapter 6.95 Health and Safety Code, EPCRA §302

"Radioactive Materials"
As required by Title 17 §30100

Illegal releases of hazardous waste

Employee exposures resulting in injuries
As required by California Labor Code §6409.1 (b)

"Sewage"
As required by Title 23 CCR §2250 (a) (Reportable quantity is 1,000 gallons or more for municipal and private utility waste water treatment plants).

SEWAGE RELEASES

State Law requires that an unauthorized discharge of sewage into or onto state waters must be reported to the Cal OES Warning Center. The Reportable Quantity for sewage spills is 1000 gallons or more, as established in regulation (Title 23, CCR, §2250 (a)).

Please note that the Regional Water Quality Control Boards and Local Health Departments may have additional reporting requirements - Please contact these offices to determine what requirements may pertain to you.

PETROLEUM (OIL) DISCHARGES

If a release of oil in any way causes harm or threatens to cause harm to public health and safety, the environment, or property, immediate notification must be made to the Cal OES Warning Center.

State Law requires that **ANY** discharge or threatened discharge of oil into **STATE WATERS** must be reported to Cal OES. (California Government Code (GC) §8670.25.5; California Water Code (WC) §13272, California State Oil Spill Contingency Plan).

If the release of oil is on **LAND** and is not discharged or threatening to discharge into State Waters; and (a) does not cause harm or threaten to cause harm to the public health and safety, the environment, or property; **AND** (b) is **under** 42 gallons, then no notification to the Cal OES Warning Center is required.

INCIDENT/RELEASE ASSESSMENT FORM

Handlers of hazardous materials are required to report releases. The following is a tool to be used for assessing if a release is potentially reportable as required by Chapter 6.95 of the California Health and Safety Code. This assessment tool does not replace good judgement, Chapter 6.95, or other state or federal release reporting requirements. ***If in doubt, report the release. If an emergency, call 9-1-1.***

Questions for Incident Assessment	Yes	No
1. Was anyone killed or injured, or did they require medical care or admitted to a hospital for observation?	☐	☐
2. Did anyone, other than employees in the immediate area of the release, evacuate?	☐	☐
3. Did the release cause off-site damage to public or private property?	☐	☐
4. Is the release greater than or equal to a reportable quantity (RQ)?	☐	☐
5. Was there an uncontrolled or unpermitted release to the air?	☐	☐
6. Did an uncontrolled or unpermitted release escape secondary containment, or extend into any sewers, storm water conveyance systems, utility vaults and conduits, wetlands, waterways, public roads, or off-site?	☐	☐
7. Will control, containment, decontamination, and/or clean up require the assistance of federal, state, county, or municipal response elements?	☐	☐
8. Did the release or threatened release involve an unknown material or contain an unknown hazardous constituent?	☐	☐
9. Is the incident a threatened release? (a condition creating a substantial probability of harm that requires immediate action to prevent, reduce, or mitigate damages to persons, property, or the environment.)	☐	☐
10. Is there an increased potential for secondary effects including fire, explosion, line rupture, equipment failure, or other outcomes that may endanger or cause exposure to employees, the general public, or the environment?	☐	☐

If the answer is **YES** to *any* of the above questions - report the release to the California Governor's Office of Emergency Services Warning Center at (800) 852-7550 or (916) 845-8911, and to your local UPA. Note: Other state and federal agencies may require notification depending on the circumstances.

If in doubt, report the release!

EMERGENCY NOTIFICATION SUMMARY

Telephone Calls are Required For All Significant Releases of Hazardous Materials.

At a MINIMUM, the Spiller should call:
9-1-1 or the Local Emergency Response Agency
(e.g. Fire Department)
AND/OR
Local Unified Program Agency
AND
The California Governor's Office of Emergency Services, California State Warning Center
(800) 852-7550 or (916) 845-8911

In addition to 9-1-1 and Cal OES, the following apply under varying circumstances:

Spill Type/Location/Injuries	Who to Call
Releases that equal or exceed Federal Reportable Quantities (CERCLA)	Call the National Response Center (NRC)
All releases on-highway	Call California Highway Patrol (CHP)
All hazardous waste tank releases	Call Department of Toxic Substances Control Regional Office (DTSC)
All serious worker injuries or harmful exposures	Call Cal/OSHA District Office
All oil spills at drilling and production fixed facilities	Call Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR)
All spills with a potential to impact water quality	Call Cal OES
All potential or actual railroad releases (California definition of hazardous materials)	Call the Local Emergency Response Agency and the Public Utilities Commission (PUC)
All Hazardous Liquid Pipelines	Call local fire department (Hazardous Liquid Pipeline Safety is State Fire Marshal jurisdiction)
All Natural Gas Pipelines	Call Public Utilities Commission (PUC)
All incidents involving Radioactive Material	Call California Department of Public Health (CDPH), Radiological Preparedness Branch

IMPORTANT PHONE NUMBERS

Space has been provided below to allow you to enter important phone numbers for easy reference.

Agency Name	Phone Number
California State Warning Center (Cal OES)	(800) 852-7550 or (916) 845-8911
National Response Center	(800) 424-8802
United States Coast Guard San Francisco Sector: Los Angeles/Long Beach Sector: San Diego Sector:	 (415) 399-3547 (310) 521-3805 (619) 278-7033
Unified Program Agency (UPA) (Local #)	
California Occupational Safety and Health Administration (Cal/OSHA) (Local #)	
Department of Toxic Substances and Control (DTSC) (Local #)	
California Department of Health Services, Radiological Health Branch (Local #)	
Department of Conservation	
California Public Utilities Commission (PUC)	(800) 649-7570
Department of Fish and Wildlife, Office of Spill Prevention and Response (OSPR) (Local #)	
Regional Water Quality Control Board (RWQCB) (Local #)	

ACRONYMS

Cal EPA - California Environmental Protection Agency
Cal OES - California Governor's Office of Emergency Services
Cal/OSHA - California Occupational Safety and Health Administration
CCR - California Code of Regulations
CDPH - California Department of Public Health
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act (aka Superfund)
CFR - Code of Federal Regulations
CHP - California Highway Patrol
DFW - Department of Fish and Wildlife (formerly Department of Fish and Game)
DOGGR - California Division of Oil, Gas, and Geothermal Resources
DTSC - Department of Toxic Substances Control
U.S. EPA - U.S. Environmental Protection Agency
EPCRA - Emergency Planning and Community Right-to-Know Act (SARA Title III)
GC - California Government Code
HSC - Health and Safety Code
LEPC - Local Emergency Planning Committee
NRC - National Response Center
OEHHA - Office of Environmental Health Hazard Assessment
OSFM - Office of the State Fire Marshal
OSPR - Office of Spill Prevention and Response
PUC - Public Utilities Commission
RCRA - Resource Conservation and Recovery Act
SERC - State Emergency Response Commission
UPA - Unified Program Agency
USCG - Unitied States Coast Guard
U.S. DOT - U.S. Department of Transportation
WC - California Water Code

CONTRIBUTORS

This guidance was developed with input from the following agencies:

California Governor's Office of Emergency Services (Cal OES)
Office of the State Fire Marshal (OSFM)
California Highway Patrol (CHP)
California Environmental Protection Agency (Cal EPA)

- Department of Toxic Substances Control (DTSC)
- State Water Resources Control Board (SWRCB)
- Air Resources Board (ARB)
- Department of Pesticide Regulation (DPR)
- Department of Resources, Recycling, and Recovery (Cal Recycle)
- Office of Environmental Health Hazard Assessment (OEHHA)

Department of Fish and Wildlife (DFW)

- Office of Spill Prevention and Response (OSPR)

Department of Food and Agriculture (DFA)
Department of Public Health (CDPH)
Department of Industrial Relations

- California Occupational Safety and Health Administration (Cal/OSHA)

Department of Transportation (CalTrans)
U.S. Environmental Protection Agency, (U.S. EPA) Region IX
Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR)
Department of Water Resources (DWR)
San Diego County Department of Environmental Health
State Lands Commission (SLC)

Appendix E Employee Training Materials

EMPLOYEE INFORMATION TRAINING SHEET

The goal of the Stormwater Pollution Prevention Plan is to reduce the potential for stormwater pollution resulting from site activities using common sense approaches. The following summarizes spill prevention and response procedures, good housekeeping practices, and general stormwater management guidelines that should be implemented at all times.

Minimum BMPs

Required by the general permit.

- Good housekeeping practices
  - Observe outdoor areas and remove trash and debris; keep paved areas free of sediment, debris, and oil and grease (sweeping)
  - Inspect and clean stormwater conveyance structures (i.e., catch basins, vaults, etc.)
  - Contain wash waters and dispose of properly
  - Cover (or store indoors) industrial materials that can be mobilized by stormwater
  - Prevent waste oils, solvents, fuels, or hazardous chemicals from spilling on the ground or pavement
  - Promptly cleanup any spills
- Preventative maintenance
  - Identify pollutant sources
  - Inspect and maintain equipment (i.e., trucks, tractors, and forklifts) to prevent leakage of oil, grease and fuels
- Spill and leak prevention and response
  - Label and seal cans and drums storing liquids
  - Use drip pans during transfer operations
  - Locate and maintain spill kits near material storage areas
  - Store bulk petroleum products, solvents, hazardous liquids and other materials in properly designed storage tanks or containers placed within secondary containment structures
  - Store or dispose of motor oils and hydraulic oils in specified drums and containers; never pour them onto the ground or into the storm water or sewer system
  - In case of spill follow SPCC: notify the Site Manager, clean up using absorbent material; use absorbent boom or pads/ mats
- Material handling and waste management
  - Do not handle potential stormwater pollutants such as petroleum products outside during a storm event
  - Cover containers containing industrial wastes and industrial materials when not in use. Examples include waste tires and scrap metal
  - Store and handle paints, oils, and cleaning solvents only inside covered areas
  - Clean and maintain material handling equipment or containers
- Erosion and sediment control

- Inspect and maintain erosion control measures before storm event
- Includes wind erosion

Stormwater Management Guidelines

Be on the lookout for opportunities to make operational changes that could reduce stormwater pollution. Some ideas to consider:

- **Alter the Activity.** Substitute processing, storage, and maintenance activities that will not contaminate stormwater for those activities that may contaminate stormwater. This includes substituting non-hazardous chemicals for hazardous chemicals and changing activities to minimize contact of contaminants with stormwater.
- **Enclose and Cover the Activity.** Enclose and cover activities inside a building or structure to prevent the contact of processing, storage, and maintenance activities with stormwater.
- **Segregate the Activity.** Keep those activities which are likely to contaminate stormwater separated from those activities which will not contaminate stormwater.

Be sure to pass on your ideas to your supervisor.

Monitoring Program

- Monthly BMP Inspections
- Monthly Visual Observations- Dry day inspections
- Sampling Event Observations
- Sampling protocols
  - pH meter usage and calibration
  - sampling kits
  - COCs prefilled
  - Sample Log (pH)
- Annual Evaluation – Annual Comprehensive Facility Compliance Evaluation

Compliance Schedule

- Perform monthly NSWD observations (Monthly Visual Observations form)
- Conduct Sampling Event Observations
- Implement/ maintain BMPs as necessary
- Collect stormwater samples as described in Monitoring and Implementation Plan in SWPPP
- Upload analytical results within 30 days of receiving the data to SMARTS
- Review data for BMP effectiveness. If additional BMPs need to be implemented, revise the SWPPP accordingly and upload to SMARTS
- Perform an Annual Evaluation as described in SWPPP
- Complete and submit the Annual Report via SMARTS by July 15
- Conduct employee training annually.

Facility:_____ **Date:**_____ **Time:**_____

Meeting Conducted By:_____ **Title:**_____

Meeting Minutes

_____

_____

_____

_____

_____

_____

_____

_____

Handouts and Training Program Aids (videos, powerpoint, etc.)

1. _____
2. _____
3. _____

Annual Stormwater Training Attendance Log

Use this log to document employee participation in stormwater pollution prevention training exercises. Record the employee name and date of training. Employees should sign this log upon completion.

Employee Name (Print)	Date of Training	Signature

Appendix F Flocculant Passive Treatment Plan

APPLIED POLYMER SYSTEMS, INC.

Product Details and Design for Floc Log®

& Silt Stop® Use in Passive Treatment



PREPARED FOR:

Matt Breuer
Waste Connections
Matt.breuer@wasteconnections.com

PROJECT:

Chiquita Canyon Landfill,

PREPARATION DATE: November 2024

Contents

1. Manufacturer and Product Details

2. Performance Testing and Product Selection

3. Application Rates and Calculated Chemical Quantities

4. Field Confirmation, Chemical Recalculation, & Reapplication Rates

5. Application Methods & Design

6. Storage, Spill Prevention and Response

7. Maintenance and Removal Procedures

8. Monitoring Requirements

Acronyms Defined:

aPAM – anionic Polyacrylamide

BMP – best management practice(s)

NTU – nephelometric turbidity units (turbidity)

PAM - Polyacrylamide

PEBMP – polymer enhanced best management practice(s)

PTP – Passive Treatment Plan

Section 1. Manufacturer and Product Details

1.1 Introduction

The information supplied in this document is to aid in preparation of a Passive Treatment Plan. The provided data and documents are prepared and provided specifically for Applied Polymer System's 706b Floc Log®, 706b Floc Log Mat, and 712 Silt Stop® products.

1.2 Manufacturer Details

Company Name: Applied Polymer Systems, Inc.
Address: 519 Industrial Drive, Woodstock, GA 30189
Phone: 678-494-5998
Fax: 678-494-5298
Email: info@apsfloc.com
Website: www.apsfloc.com

Applied Polymer Systems Representative(s):

Kyla J. Wood, PhD, Chief Science Officer, 404-353-3546, kyla@apsfloc.com, 225 Bishop Woods Rd, Marquette, MI 49855

Brian M. Free, QSD, CPESC, CPSWQ, CPAg, Director of Business Development, bfree@apsfloc.com, 336-458-6211

1.3 Product Details

General Requirements for Passive Treatment Chemicals

All Applied Polymer Systems Floc Log®, Silt Stop®, and Silt Clear® products meet or exceed the criteria for Passive Treatment Chemicals listed in Section B.1 of Attachment G of the 2022 Construction General Permit. See Table 1 and 2 for product specific information regarding the requirements. These requirements ensure polymer safety and quality.

Table 1. Floc Log® General Chemical Characteristics

Floc Log® Type	**703d**	**703d#3**	**706b**	**707a**	**730b**
Charge	Anionic	Anionic	Anionic	Anionic	Anionic
[a] Free of nonylphenol and nonylphenol ethoxylates	Yes	Yes	Yes	Yes	Yes
[b] Drinking grade (less than 0.05% residual acrylamide monomer)	Yes	Yes	Yes	Yes	Yes
Charge Density	10-55%	10-55%	10-55%	10-55%	10-55%
Molecular Weight	6-25 mg/ mole	6-25 mg/ mole	6-25 mg/ mole	6-25 mg/ mole	6-25 mg/ mole

[a]APS 700 Series Floc Logs® are semi-hydrated, solid logs produced primarily from blends of granular anionic polyacrylamide. No liquid emulsions or surfactants of any kind are used in Floc Logs® or during Floc Log® production.
[b] All APS 700 Series Floc Logs are produced from food grade granular polyacrylamide that are NSF Standard 60 Certified. Applied Polymer systems, its base granular polymers (Silt Stop), and certifications are searchable on the NSF website at https://www.nsf.org/certified-products-systems.

Table 2. Granular Silt Stop® and Silt Clear® General Chemical Characteristics

Granular Product	**702**	**705**	**707**	**710**	**712**	**730**	**740**	**745**	**Silt Clear®**
Charge	Anionic	Anionic	Anionic	Anionic	Anionic	Anionic	Anionic	Anionic	Anionic
[a] Free of nonylphenol and nonylphenol ethoxylates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
[b] Drinking grade (less than 0.05% residual acrylamide monomer)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Charge Density	10-55%	10-55%	10-55%	10-55%	10-55%	10-55%	10-55%	10-55%	10-55%
Molecular Weight	6-25 mg/ mole	6-25 mg/ mole	6-25 mg/ mole	6-25 mg/ mole	6-25 mg/ mole	6-25 mg/ mole	6-25 mg/ mole	6-25 mg/ mole	6-25 mg/ mole

[a]APS 700 Series Silt Stop® and Silt Clear® are granular and powder products produced primarily from blends of granular anionic polyacrylamide. No liquid emulsions or surfactants of any kind are used in Silt Stop®/ Silt Clear® or during production.
[b] All APS 700 Series Silt Stop and Silt Clear powder/ granular products are food grade and NSF Standard 60 Certified. Applied Polymer systems, its products, and certifications are searchable on the NSF website at https://www.nsf.org/certified-products-systems.

Toxicity and Formulation Specific Information

706b Floc Log:

Each product has unique acute and chronic toxicity data that were measured by a third party, certified laboratory in accordance with methods outlined by US EPA for toxicity testing of freshwater aquatic organisms (methods EPA-821-R-02-012 & EPA-821-R-02-013). Table 3 presents a summary of acute and chronic toxicological data for the **706b Floc Log** that was most effective for this project's soil and water based on performance testing. Full toxicological reports can be obtained upon request to the manufacturer, Applied Polymer Systems, Inc.

712 Silt Stop powder:

Each product has unique acute and chronic toxicity data that were measured by a third party, certified laboratory in accordance with methods outlined by US EPA for toxicity testing of freshwater aquatic organisms (methods EPA-821-R-02-012 & EPA-821-R-02-013). Table 4 presents a summary of acute and chronic toxicological data for the **712 Silt Stop®** powder that was most effective for this project's soil and water based on performance testing. Full

toxicological reports can be obtained upon request to the manufacturer, Applied Polymer Systems, Inc.

Toxicological Summary for the 706b Floc Log®

Test 1: 96-hr. Fathead Minnow Larval Survival and Growth Test, Non-renewal Toxicity Test
Method: U.S. EPA-821-R-02-012

Test 2: 7-Day Fathead Minnow Larval Survival and Growth Test
Method: U.S. EPA-821-R-02-013

Test 3: 48-hr. Water Flea Acute Survival Static, Non-renewal Toxicity Test
Method: U.S. EPA-821-R-02-012

Test 4: Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms
Method: U.S. EPA-821-R-02-013

Table 3. Toxicological Summary for the 706b Floc Log

Test #	Type	Organism	NOEC (mg/)	LOEC (mg/L)	IC25 (mg/L)	EC50 (mg/L)
1	Acute Survival	*P. promelas*	1200	2500	NA	2928
2	Chronic Survival	*P. promelas*	52.5	NA	77.8	155
2	Chronic Growth	*P. promelas*	52.5	NA	50.1	150
3	Acute Survival	*C. dubia*	420	NA	NA	673
4	Chronic Survival	*C. dubia*	52.7	NA	78.7	NA
4	Chronic Reproduction	*C. dubia*	52.5	NA	66.8	NA

Toxicological Summary for 712 Silt Stop®

Test 1: 96-hr. Fathead Minnow Larval Survival and Growth Test, Non-renewal Toxicity Test
Method: U.S. EPA-821-R-02-012

Test 2: 7-Day Fathead Minnow Larval Survival and Growth Test
Method: U.S. EPA-821-R-02-013

Test 3: 48-hr. Water Flea Acute Survival Static, Non-renewal Toxicity Test
Method: U.S. EPA-821-R-02-012

Test 4: Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms
Method: U.S. EPA-821-R-02-013

Table 4. Toxicological Summary for 712 Silt Stop

Test #	Type	Organism	NOEC (mg/)	LOEC (mg/L)	IC25 (mg/L)	EC50 (mg/L)
1	Acute Survival	*P. promelas*	6,720	>6720	>6720	>6720
2	Chronic Survival	*P. promelas*	NA	NA	6,698	NA
2	Chronic Growth	*P. promelas*	NA	NA	NA	NA
3	Acute Survival	*C. dubia*	840	NA	NA	1,617
4	Chronic Survival	*C. dubia*	52.5	NA	122.5	NA
4	Chronic Growth	*C. dubia*	52.5	NA	59.3	NA

Section 2. Performance Testing and Product Selection

2.1 Introduction

All products used for erosion and sediment control and water treatment must be matched to each site's unique soil, sediment, and/or water. Using a generic or untested product formulation may result in nonreactivity between the polymer and soil particles in the water resulting in poor or no performance and possibly the movement of unreacted, dissolved polymer off site.

The following test was performed by Applied Polymer Systems, Inc. at our Woodstock, GA facility. Results are not interchangeable with any other products, formulations, or manufactures.

2.2 Sample Analysis (Performance Testing) Results

Summary of Results

The **APS 706b Floc Log** was effective in flocculating suspended sediment particles in the samples from Chiquita Canyon Landfill, resulting in clarification and a significant reduction in turbidity. The **712 Silt Stop** powder effectively reacted with the soil samples from the site. The 712 Silt Stop can be used for water clarification as well as stabilization of exposed soils where necessary.

Sample	Location (284)	Description	APS Application	Special Instructions
10/28/2024	**Analysis by: VLI**	**Sample Type/ Location**		**Reaction Time / NTU Value**
	Chiquita Canyon 29201 Henry Maya Dr Castaic, CA 91384 425-414-2903 matt.breuer@wasteconnecti	**Chiquita Canyon Landfill** **Soil Sample** pH: ~7 NTUi: 620 Hardness: 25 mg $CaCO_3$/	**Floc Log Type** 706b **Stabilization** 712	40 sec / NTUf: 8.88

Note: For detailed instructions and application rates, please refer to the Polymer Enhanced Best Management (PEBMP) Application Guide which is located on the bottom right hand corner of our website at www.SiltStop.com.

Floc Logs are designed to work in flowing water conditions. **Mixing / reaction times will be very important when using the Floc Log listed above. Mixing must be continuous for the time stated to obtain the best results.** A mixing ditch, pipe or flume system may be used with either a pump or gravity flow to meet this requirement. All the turbid water must continuously come in contact with the Floc Logs in the treatment ditch. Particulate formed may be captured by filtering through or across a series of jute matting after the mixing and reaction has been completed (see pages 42 - 51). **The dosage rate should be 50 GPM flow / Floc Log placed in a series or row and as close to the source of turbidity as possible.**

Stabilization of the soil at the source may be obtained by spreading the site-specific Silt Stop powder onto the soil surface then covering the soil with open-weave jute, coconut matting, mulch, or straw. This will perform as a stabilizer for reducing soil and clay movement into the runoff water, as a tackifier to hold the soil/organic matrix in place, as well as providing surface area for attachment of flocculated sediment. For detailed application rates and instructions, please see the Soil Stabilization section beginning on page 5 of the PEBMP.

Figure 1. Sample report provides effective formulation (706b Floc Log and 712 Silt Stop), pre- and post- turbidity, & reaction time needed to complete floc formation (~40-45 seconds).

Section 3. Application Rates and Estimated Chemical Quantities

3.1 Introduction

Passive treatment application rates, dosing, and methods used in treatment zones shall be determined based on the manufacturer's guidance to provide adequate sediment control without having an excess amount in runoff.

The smallest amount of product that produces the desired water clarity, quality, and/ or turbidity should be used. Application rates in Tables 5 are an estimate and may need adjusting on site.

We suggest applying 50% or less of the suggested Floc Log application rate initially, and then adding or removing Floc Logs until desired results are achieved.

Estimated and calculated flocculant concentrations should remain at 25 mg/L or less (~50% of the NOEC [no observed effects concentration] from toxicological studies). The estimated concentrations in Table 5 are meant to be conservative. 706b Floc Logs and 712 Silt Stop powders are effective in removing suspended sediment at a concentration significantly lower than the most sensitive toxicological thresholds. In addition, once the dissolved polymer is bound to sediment and the sediment is settled or captured, the polymer is no longer present in discharge water, further increasing the aquatic safety margin.

Table 5. Suggested Flow Rate Based Application Rates and Estimated Concentrations (Chemical Quantity) in Treated Water

Flow Rate (cfs) 85th percentile, 50 yr event	Suggested Floc Log(s)	Suggested Floc Mat(s)	Suggested * Silt Stop	Estimated Maximum Concentration (mg/L)	Expected Floc Log Lifespan
~14-40 (6,283-17,951 gpm)	~60-100 (~480-800 lbs)	10 (200 lbs)	~20 lbs	~7-19 mg/L	~5-10 million gal

* Silt Stop Powder is re-applied every 1-3 rain events (~ every 0.5 inches of rain)

If smaller, lower flow channels are used to cumulatively create the estimated flow rates above, the following table should be used to estimate total Floc Log number in each smaller channel.

Flow Rate (gpm)	Suggested Floc Log(s)®
100	4
200	4
300	4-6
400	6-8
500	7-10
600	8-12
700	10-14

800	11-16
900	13-18
1000	14-20
1200	16-22
1400	18-24
1600	20-28
1800	22-30
2000	24-32
2400	26-32
2800	28-32
3200	30-32

3.2 Formula and Assumptions

Estimated dosage is based on product lifespan, amount (mass of product used), and volume of water treated. They are APS product specific. The values are conservative, and actual concentrations are expected to be less, but must be confirmed by re-calcuating the concentrations (Section 7). Channels are assumed to be approximately 10 feet wide. Calculations and/or additional information is available upon request from the manufacturer, Applied Polymer Systems, Inc.

3.3 Chemical Concentrations in Variable Flow Rates

Floc Log concentration and lifespan (i.e. time to complete dissolution) is based on the total volume of water required to dissolve the floc logs. Rain events will vary in flow rate and water volume. With smaller rain events and less water, the lifespan of the Floc Logs will increase. The actual concentration of the Floc Logs in the water will remain relatively constant, but how long it takes the Floc Logs to dissolve may vary based on the flow rates (and water volumes) produced by various size rain events.

Section 4. Field Confirmation, Chemical Recalculation, & Reapplication Rates

Due to the high margin of safety of anionic PAM products, residual testing is not required. In addition, residual testing of anionic PAM in field waters is historically inaccurate and difficult as organic materials in field water can cause interference. If desired, field concentrations can be confirmed based on the following information.

706b Floc Logs and 712 Silt Stop lifespan (time to complete dissolution) may vary by site depending on temperature, water chemistry, and channel/ flow variations. APS aPAM products should be applied at the suggested rates estimated in Section 3 of this document and based on manufacturer product specific guidelines. Once applied on site, the following information should be monitored to estimate site specific chemical quantities and re-application rates:

1. Approximate product life span (days until complete dissolution and product replacement)

2. Approximate amount of product used (number of Floc Logs, pounds of Silt Stop)
3. Approximate water volume (used to calculate total volume during application period)

Once specific site information is determined, accurate chemical quantities and reapplication rates will be re-calculated by Applied Polymer Systems and/or trained individual to ensure applications rates remain within an environmentally protective concentration when compared to provided toxicological data for the 706b Floc Log and 712 Silt Stop products.

Section 5. Application Methods (Site Specific Design)

Floc Log® and Silt Stop® products should be applied in accordance with Applied Polymer Systems guidelines to ensure adequate formulation, application rate, mixing, and reaction time are achieved for successful use. Floc Log® and Silt Stop® flyers are included in the Appendix. Preliminary discussion for site specific design for the Chiquita Canyon Landfill project includes expected gravity flows of up to 14-40 cfs (~6,200-18,000 gpm). Passive treatment zones at the site are open channels that lead to detention basins. Passive treatment systems for this site will consist primarily of open channel treatment with downstream particle capture. Important components will be channel BMPs implemented to maximize mixing and reaction time with high flow rates, and particle capture within the channel and sedimentation basins. Silt Stop® powder may also be applied directly to the sedimentation basins via direct powder application or metered pump dosing within the suggested total application rate described in Section 3.1. If flocculant is applied directly to the sedimentation basins, it is recommended to enhance mixing by use of a pump.

Dosage Notice: Flow rates and associated Floc Log, Floc Log Mat, and Silt Stop application rates are based on the 85th percentile of a 50-year, 24-hour event, which equates to approximately a 1.1-inch, 24 hour event. Do not exceed the suggested application rates in Table 5 without consulting the manufacturer or passive treatment specialist.

In high flow estimates (i.e. >2,000 gpm) we suggest starting with 50% or less of the suggested product amount and then increasing up to the maximum suggested as needed. Application rates may be decreased if lower doses are still effective for the specific site.

If floc or gel is visible outside of passive treatment zone, or water discharging from passive treatment zone is noticeably (feels) slimy or viscous, 1) application rate is too high and should be decreased, and or 2) floc capture is inadequate and needs to be adjusted.

Site maps are included with the facility's stormwater pollution prevention plan (SWPPP) as Figures 2-4. The SWPPP site maps detail stormwater conveyances and sedimentation basins, which comprise the passive treatment zone. System 1 includes an approximately 100 foot open channel that flows to a closed pipe then in to a velocity dissipation and sedimentation basin.

Open Channel Passive Treatment Design

1. ***Open Channel Passive Treatment System (High flows, >2,000 gpm):*** Floc Logs and Floc Log Mats should be installed in each channel based on expected flow rates and suggested application rates in Section 3. Assuming channel is ~10 feet wide.
    a. ***Basic Channel Requirements***
        i. Must be lined (no bare soil)
        ii. Must be long enough to promote 45+ seconds of mixing and reaction to fully form floc before reaching detention or velocity dissipation basins
        iii. Jute or other fibrous matting installed in Passive Treatment Dosing Zone and Floc Capture Zone (coir, excelsior)
        iv. Fiber rolls should be installed in the passive treatment dosing zone as well at end of the channel in the floc capture zone to collect floc
        v. Flow velocity in channel is ~5 feet per second or less for optimal passive treatment performance and water depth is 1 foot or less. Channel width may need to be adjusted if velocity and water depth are too high to promote effective flocculation.



Figure 14. Passive treatment open channel examples

2. ***Passive Treatment Zone <u>Suggested</u> Set-Up***
    a. ***Passive Treatment Dosing Zone*** **(Figure 15)**
        i. Dosing zone installed in upper ½ to 1/3 of channel
        ii. Dosing zone should be a minimum of 10-20 feet long (depending on flow rate and channel size).
        iii. Ideally will contain check strucures
        iv. Install Floc Logs and Floc Log Mats directly below (down flow) of each fiber roll
        v. Floc Logs spaced ~1.5-2 feet apart across channel and down channel
        vi. Floc Log Mats installed directly below Floc Logs
        vii. Apply Silt Stop granular to fiber rolls and jute matting below fiber rolls
        viii. Avoid installing flocculants directly up-flow of fiber rolls where water pools
        ix. Apply suggested application rate in Table 5. Floc Log and Mats reapplied when dissolved (visually observe), Silt Stop reapplied after ~0.5 inches of rain
        x. All flocculants should be in the flow of water, water that circumvents or does not contact the flocculants (Floc Logs, Floc Log Mats, and Silt Stop) will not work effectively or provide treatment
        xi. Applying at least one fiber roll downstream of Dosing Zone will help collected floc and prevent it from entering the rock lined Mixing Zone
    b. ***Mixing Zone*** **(Figure 15)**
        i. Area between dosing zone and floc capture zone
        ii. ~20-50 feet long (may be longer depending on available length and dependent on flow rate and channel size).
        iii. Floc may start to settle and build up in this area depending on flow rate and how quickly floc forms (keep in mind for maintenance considerations)
    c. ***Floc Capture Zone*** **(Figure 15)**
        i. Installed at end of channel (before discharge to pipe or basin), after Dosing and Mixing Zones
        ii. Ideally this zone will be 20-50 feet long depending on flow rate and channel size
        iii. Ideally zone will be lined with jute matting and contain fiber rolls or wattles
        iv. Floc capture zone may be a basin or trap rather than increased channel length

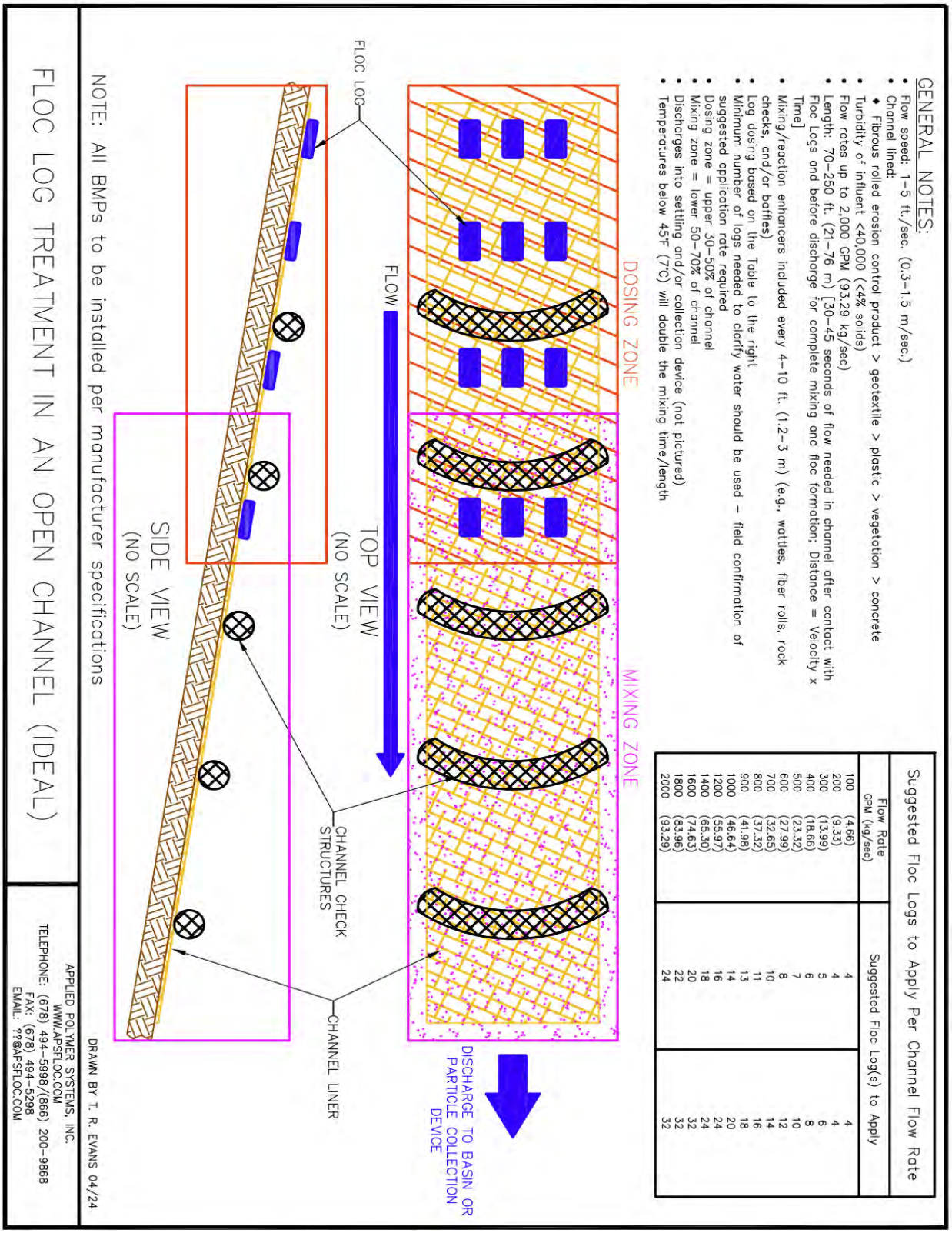


Figure 15 a. Ideal Open Channel Pasive Treatment Design EXAMPLE. Check structures, matting type (as long as rough and fibrous), and rock fill may be changed with other BMPS that promote mixng, flocculation, and particle capture.







Figure 15 b, c, d. Open Channel Pasive Treatment Design examples. Check structures, matting type (as long as rough and fibrous), and rock fill may be changed with other BMPS that promote mixing, flocculation, and particle capture.

3. ***Detention Basins*:** Detention basins should be stabilized and ideally not a contributing source to turbidity in basin. Any turbidity introduced after the flocculant treatment areas will mask the treated water.
4. ***Detention Basin Outfalls***
    a. *Outfalls as floc capture:* If needed, install jute mattings and coir, jute, or wood wattles where possible to collect any remaining floc.
    b. *Outfall as passive treatment zones:* If basin is turbid, outfalls may be used as treatment zones. Install jute matting, Floc Log Mats & Floc Logs, and check structures (wattles) to collect flocculated particles. If using outfalls as a passive treatment zone, must comply with buffer zone requirements and ensure that floc is fully captured after the passive treatment zone.

Note: Once Floc Logs® and Silt Stop® powders are applied, new sediment entering the system should be minimized. New sediment entering the treatment area will reduce the effectiveness of treatment.

Section 6. Storage, Spill Prevention and Response

8.1 Passive Treatment Chemical Storage

Product SDSs should be maintained on site in accordance with the corresponding SWPPP. Please select the appropriate product from the drop-down menu to include the SDS in this document. The 706b Floc Log® and 712 Silt Stop® powder are included in the Appendix.

Floc Logs®

APS 700 Series Floc Logs® are individually wrapped in wax lined paper with 4 logs per box. A pallet consists of 36 boxes (144 Floc Logs®) stacked and plastic wrapped on a pallet. Floc Logs® should be stored in a dry location out of direct sunlight.

Silt Stop® & Silt Clear®

Granular/ Powders (700 Series Silt Stop® and Silt Clear®) are packaged in wax lined, 50 pound bags or 2.5 gallon plastic totes. Silt Stop® and Silt Clear® granular and powder products should be stored in a dry location out of direct sunlight.

8.2 Spill Prevention

Floc Log®, Silt Stop®, and Silt Clear® products should be contained in an area where bags and totes will be safe from puncture and rupture by equipment or other objects. The storage area should be away from receiving water bodies where if a spill occurs, concentrated material will not enter a water body unabated.

8.3 Spill Response

Do not use water to clean up spilled Silt Stop® or Silt Clear®. Spilled granular or powder Silt Stop® and Silt Clear® materials should be cleaned up immediately. Material should be cleaned up dry if possible, by scooping, sweeping, or shoveling. Vacuuming should be performed with caution as this may result in airborne dust. aPAM dust may irritate eyes.

All aPAM based Floc Log® and Silt Stop® materials are non-hazardous and unused or spilled material may be disposed of with general construction waste. Floc Logs® may be picked up and moved to a new location away from rain and direct sunlight.

Special consideration and attention should be given to spills near discharge areas or near receiving water. Concentrated Silt Stop® or Silt Clear® should not be allowed to leave the site or enter waters of the state.

Section 7. Maintenance and Removal Procedures

6.1 Introduction

Section D.2.a of Attachment G of the 2022 Construction General Permit requires "design details and drawings for maintenance and removal procedures for the products applied on-site" (CACGP 2022) be included in the prepared Passive Treatment Plan.

6.2 Maintenance Procedures

Floc Log® Maintenance

Floc Log® Dissolution & Replacement

Floc Logs® are designed to dissolve in flowing water after ~1.5-2 million gallons of water. Floc Logs® that fully dissolve, exposing the internal jute/ coconut skeleton, need to be replaced. Frequency of replacement can depend on a variety of site factors including flow and channel characteristics such as velocity, temperature, continuous or intermittent flow, closed pipe or open channel, etc. Complete dissolution of Floc Logs® material may occur in <1 week to upwards of 1 month. In open channels it is expected that Floc Logs® will take an average of 2-3 weeks to fully dissolve. Visual inspection of the Floc Logs® and visual and or turbidimetric analysis of the treated water is used to determine the need for reapplication.



Sediment Coated Floc Logs®

During use, Floc Logs® may become coated with sediment (blinding). If Floc Logs® are fully coated, they will no longer dissolve, making them ineffective. Sediment coated Floc Logs® should be scraped, brushed, or cleaned off to re-expose aPAM material to flowing water.

If Floc Logs® are continually and rapidly becoming coated with sediment, additional sediment controls should be incorporated upstream of Floc Logs®. Floc Logs® should also always be installed in lined channels and never placed directly on bare soil.

Floc Log® Placement

Floc Logs® must be placed in flowing water for dissolution and effective use. Floc Logs® should be periodically inspected to ensure that they have not been moved outside of channelized flows and that they are not installed on bare soil.

Dried Floc Logs®

Floc Logs® are primarily hydrated, granular aPAM formed into a log configuration. If Floc Logs® are used in intermittent flow conditions and exposed to air and sunlight, the surface of the logs may dry. Dried Floc Logs® must rehydrate to continue dissolving and effectively treat turbid water. Rehydration may take upwards of 15-20 minutes.

Incorporating 712 Silt Stop® in the passive treatment zone in addition to the Floc Logs® can provide treatment during periods of rehydration to ensure all water is treated, including the first flush of water from a rain event during Floc Log® rehydration. Dried Floc Logs® may also be rewetted via hose or soaking prior to forecasted rain events so the rehydration period will not be needed.

Silt Stop® Maintenance

aPAM based granular and powder products such as Silt Stop® and Silt Clear® will form a gel coating when applied to matting, check dams, etc. This gel will fully dissolve. Maintenance for Silt Stop® and Silt Clear® is to reapply as needed during treatment (typically reapplication occurs after ever 0.5 inches of rain).

6.3 Removal Procedures

Floc Log®

Floc Logs® contain an internal, biodegradable coconut skeleton with an attached jute rope (also biodegradable). The remaining internal Floc Log® skeleton and rope should be disposed of once the surrounding polymer gel material is fully dissolved. If deployed Floc Logs are not fully dissolved at a time when passive treatment is no longer required, or the project or project phase has completed, the partially dissolved Floc Logs® may be: 1) moved to an alternate passive treatment location if the formulations match, 2) dried, wrapped in wax paper, and saved for subsequent application; or 3) disposed of.

Silt Stop®

Granular/ powder based aPAM products (Silt Stop® and Silt Clear®) dissolve more rapidly than Floc Log® and solid aPAM products due to greater particle surface area. Once Silt Stop® has been deployed it is typically left in place until dissolved. Silt Stop® and Silt Clear® are not expected to remain in significant amounts of time (2-4 rain events or near daily application if pumping or every 0.5 inches of rain). If Silt Stop®/ Silt Clear® applied to wattles, rock checks, matting or other sediment and erosion control BMPs remains at project completion and is no longer needed, it may be left in place with other BMPs (as long as a buffer remains between its location and discharge areas), or it can be disposed of.

6.4 General PAM Disposal Information

Anionic polyacrylamide is a non-hazardous substance that requires no special disposal considerations (i.e., PAM can be disposed of in a landfill). Check with your local regulations and permit requirements to determine where to dispose of unused, non-hazardous construction materials. Unused, unopened material has a shelf life of 1-2 years, material should be stored out of direct sunlight and away from water to use on subsequent project(s).

Section 8. Performance Monitoring

9.1 Additional Passive Treatment System Monitoring

Turbidity will be the ultimate indicator of passive treatment performance. Visual observation of discharge water clarity (from the passive treatment zone), as well as visual floc formation and capture in the passive treatment zone are also indicators or a functioning passive treatment system.

Additional monitoring can aid in system performance and safety and is listed below. Monitoring should be conducted pre- and post- qualifying rain events to ensure the system is intact and to determine if any adjustments or system maintenance are required.

Before and after each precipitation event, observe the passive treatment zone from the start of the dosing area through the particle capture zone and:

1. Ensure passive treatment products are securely installed in the correct locations (in the flow of water, with additional planned BMPs, etc.).
2. Ensure non-chemical BMPs in the treatment zone (jute matting, fiber rolls, check structures, etc.) are intact, properly installed, etc.
3. Ensure non-chemical BMPs are not fully saturated with flocculated particles (if fully saturated, clean off or replace)
4. Ensure Floc Logs and Floc Mats are not buried or fully coated in sediment (if fully coated will need to be cleaned off to dissolve properly)
5. Visually inspect if flocculated particles are observed beyond the particle capture zone or at basin outflows (if observed, additional particle capture should be planned and deployed)
6. Ensure that significant sediment is not building up in the treatment zone and that no additional sources of sediment are circumventing the treatment zone

Monitoring for Chemical Quantity (Concentration) Calculation and Confirmation:

1. Record volume of water of each precipitation event for each passive treatment system
2. Record qualitative Floc Log size after each event (i.e. 75% of original size, 50% of original size, 25% of original size, etc.).
3. Record when passive treatment products are fully dissolved or almost dissolved and time of replacement

Appendix G Example Stormwater Monitoring and Reporting Forms

MONTHLY STORMWATER INSPECTION - To be completed on days without rain

Inspect all Drainage Areas, BMPs, equipment used to implement BMPs, all industrial activity areas, and associated pollutant sources

Facility: Chiquita Canyon Landfill
Address: 29201 Henry Mayo Drive
Castaic, CA 91384

Date: _____
Observer Name(s): _____
Observer Title(s): _____

Potential Pollutant Source/ Industrial Activity Area	Inspection Items	Yes/No/ NA	Additional BMPs or Corrective Actions and their date(s) of implemention	Date Completed
South Sample Point	Any unauthorized non-stormwater discharges?			
	Any authorized non-stormwater discharges?			
East Sample Point	Any unauthorized non-stormwater discharges?			
	Any authorized non-stormwater discharges			
All Operations	Was equipment serviced outside of maintenance area or on the active face during rain?			
	Are absorbent materials deployed for spills picked up after use and disposed of properly?			
Stormwater Conveyance System	Any significant accumulation of sediment or debris in the concrete v-ditches or channels?			
Paved Areas	Any sediment accumulation on paved areas of the facility in need of vacuum sweeping?			
	Any off-site tracking of sediment or debris?			
	Any visible spills or leaks?			

Potential Pollutant Source/ Industrial Activity Area	Inspection Items	Yes/No/ NA	Additional BMPs or Corrective Actions and their date(s) of implemention	Date Completed
Erosion and Sediment	Is stormwater properly diverted around active fill area and soil stockpile?			
	Is the stormwater conveyance system properly maintained and diverting runoff from material storage areas?			
	Are sediment and retention basins properly maintained by removing accumulated sediment, debris & excessive vegetation?			
	Are slope protection measures applied (eg. Mulch, hydroseed, wattles etc.)?			
	Are energy dissipating devices properly installed at the necessary locations to slow the velocity of stormwater and prevent erosion?			
	Any areas of accummulated sediment that need to be cleaned?			
	Any trash/debris around the facility with the potential to impact stormwater?			
Leachate & Condensate Collection, Storage, & Conveyance	Are tanks provided with secondary containment or located in a lined area?			
	Are there any visible spills or leaks?			
Trash Disposal	Do all garbage containers have lids closed or tarps covering them?			
South Sedimentation Basin	Is there accumulation of sediment/debris or excessive vegetation? Any damaged fencing, weirs, pumps, plugs, or storm drains?			

Potential Pollutant Source/ Industrial Activity Area	Inspection Items	Yes/No/ NA	Additional BMPs or Corrective Actions and their date(s) of implemention	Date Completed
East Detention Basin	Is there accumulation of sediment/debris or excessive vegetation? Any damaged components?			
Lower Basin (Across the road from South Detention Basin)	Is there accumulation of sediment/debris or excessive vegetation? Any damaged components?			
Upper Basin 1 (in Reaction Area)	Is there accumulation of sediment/debris or excessive vegetation? Any damaged components?			
Upper Basin 2 (in Reaction Area)	Is there accumulation of sediment/debris or excessive vegetation? Any damaged components?			
Tank Farm 7	Is secondary containment area free of debris and visible spills/leaks?			
Tank Farm 10	Is secondary containment area free of debris and visible spills/leaks?			
Tank Farm 13	Is secondary containment area free of debris and visible spills/leaks?			
Tracking Industrial Vehicle Entry/Exit Points	Any off-site tracking of sediment or debris?			
Spill Response Kits	Are any spill kits missing or relocated from the maintenance shop?			
	Are any spill kits missing supplies or in poor condition (eg. Lids broken, full of water/trash, mildew, or staining?)			

STORM WATER POLLUTION PREVENTION AND MONITORING IMPLEMENTATION PLAN

Potential Pollutant Source/ Industrial Activity Area	Inspection Items	Yes/No/ NA	Additional BMPs or Corrective Actions and their date(s) of implemention	Date Completed
Liner/Reaction Area	Any signs of rips in liner and/or leachate seeps, leaks, or sediment accumulation?			
Chemical Storage Areas	Is secondary containment area free of debris and visible spills/leaks?			
	Are the tanks/containers in good condition?			
	Any spent absorbent or secondary drip pans that need removal?			
	Are there any signs of spills or leaks?			
Geomembrane Cover and North & West Perimeter Roads	Is stormwater properly diverted around reaction area?			
	Are there any visible signs of leachate seep(s), and if so, did you immediately inform your supervisor and contain the seep?			
	Are soil dams/berms and other best management practices in place or available to prevent any leachate from reaching the south detention basin?			
	Are there any visible signs of residual leachate seeps in the concrete channel which should be pressure washed and cleaned?			
	Are there any visible signs of damage to the geomembrane cover (tears, punctures, etc.) and if so, did you immediately inform your supervisor?			

Describe any additional corrective measures and/or additional BMPs required: _____

Sampling Event Observation Form			
Date and Time of Inspection:			Report Date:
Chiquita Canyon Landfill			
Weather			
Previous Weather Conditions (last 48 hours):		Weather:	
Precipitation Total:			
Estimate storm beginning: _____ (date and time)	Estimate storm duration: _____ (hours)	Estimate time since last storm: _____ (days or hours)	Rain gauge reading: _____ (inches)
Sampling Event Observations			
Observations: If yes identify location and observe drainage area to identify probable cause			
Odors Yes ☐ No ☐			
Floating solids, not including organics Yes ☐ No ☐			
Visible Oil Sheen Yes ☐ No ☐			
Discoloration (i.e. any color or cloudiness that is not clear) Yes ☐ No ☐			

Exception Documentation (explanation required if inspection could not be conducted).	
Inspector Information	
Inspector Name:	Inspector Title:
Signature:	Date:

Sampling Log		
Chiquita Canyon Landfill	Date:	Time Start:
Sampler Name:		

Field Meter Calibration
pH Meter ID No./Description: Calibration Date/Time:

Field pH Measurements		
Discharge Location Identifier	pH	Time
South		
East		

Samples Collected		
Discharge Location Identifier	Constituent	Time
South		
East		

Additional Sampling Notes:
Time End:

Appendix H NPDES General Permit No. CAS000001, Order 2018-0028-DWQ

(Available Electronically)

Appendix I Appendix 1 List of Analytes from Investigative Order No. R4-2026-0156

Appendix 1: List of Analytes and Associated Reporting Limits

Analyte	Method Reporting Limit	Units
Total Alkalinity	5	mg/L as CaCO3
Ammonia Nitrogen	0.01	mg/L
COD	10	mg/L
Chloride	1	mg/L
Nitrate-Nitrogen	0.2	mg/L
Total Sodium	1	mg/L
Sulfate	0.5	mg/L
Total Potassium	1	mg/L
TDS	10	mg/L
TOC	0.3	mg/L
1,1-Dichloroethane	0.5	ug/L
1,2-Dichloroethane	0.3	ug/L
1,4-Dichlorobenzene	0.5	ug/L
Benzene	0.5	ug/L
Chloromethane	0.5	ug/L
cis-1,2-Dichloroethene	0.5	ug/L
Dichlorodifluoromethane	0.5	ug/L
Methylene chloride	3	ug/L
Tetrachloroethene	0.5	ug/L
Trichloroethene	0.5	ug/L
Vinyl chloride	0.5	ug/L
1,4-Dioxane	0.2	ug/L
Bicarbonate (as $CaCO_3$)	5	mg/L
Total Boron	100	ug/L
Bromide	10	ug/L
Total Calcium	1	mg/L
Carbon Dioxide	0.1	mg/L
Fluoride	0.05	mg/L
Total Iron	50	ug/L
Total Magnesium	1	mg/L
Total Manganese	1	ug/L
pH (field)	1	pH units

Sulfide	0.1	mg/L
Specific Conductance	10	umho/cm
Temperature (field)	1	C
Turbidity (field)	0.1	NTU
BOD	2.5	mg/L
TSS	0.5	mg/L
Alpha Terpineol	1	ug/L
Benzoic Acid	50	ug/L
Para Cresol	10	ug/L
Phenol	10	ug/L
NH3 Unionized	0.01	mg/L
Total Antimony	10	ug/L
Total Arsenic	5	ug/L
Barium	20	ug/L
Total Beryllium	10	ug/L
Total Cadmium	1	ug/L
Total Chromium	20	ug/L
Cobalt	10	ug/L
Total Copper	4.5	ug/L
Total Lead	10	ug/L
Total Mercury	0.2	ug/L
Total Nickel	10	ug/L
Total Selenium	5	ug/L
Total Silver	10	ug/L
Total Thallium	1	ug/L
Total Vanadium	10	ug/L
Total Zinc	1	ug/L
4-Isopropyltoluene	0.5	ug/L
Aluminum	0.05	ug/L
Aniline	1	ug/L
Total Cyanide	5	ug/L
Isobutanol	100	ug/L
Isopropanol	1000	ug/L
Methyl-tert-butyl ether (MTBE)	5	ug/L
Naphthalene	0.5	ug/L
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	0.008	ug/L
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	0.008	ug/L
Perfluorobutane Sulfonic Acid	0.005	ug/L

Perfluorobutyric Acid	0.005	ug/L
Perfluorodecanoic Acid	0.005	ug/L
Perfluoroheptanoic Acid	0.005	ug/L
Perfluorohexanesulfonic Acid	0.005	ug/L
Perfluorohexanoic Acid	0.005	ug/L
Perfluorooctane Sulfonic Acid	0.005	ug/L
Perfluorooctanoic Acid	0.005	ug/L
Perfluoropentanoic Acid	0.005	ug/L
Pyridine	10	ug/L
Strontium	0.1	ug/L
Tin	20	ug/L
Toluene	0.5	ug/L
bis-(2-Ethylhexyl)phthalate	5	ug/L
m-Cresol	0.19	ug/L
o-Xylene	10	ug/L
Butyl Benzyl Phthalate; Benzyl Butyl Phthalate	10	ug/L
Carbon Disulfide	0.5	ug/L
p-Chloroaniline	29	ug/L
p-Chloro-m-cresol; 4-Chloro-3-methylphenol	10	ug/L
o-Cresol; 2-Methylphenol	10	ug/L
Diethyl Phthalate	10	ug/L
2,4-Dimethylphenol; m-Xylenol	10	ug/L
Ethylbenzene	0.5	ug/L
2-Hexanone; Methyl Butyl Ketone	0.5	ug/L
Methoxychlor	10	ug/L
Methyl ethyl ketone; MEK; 2-Butanone	3	ug/L
2-Methylnaphthalene	0.01	ug/L
4-Methyl-2-pentanone; Methyl isobutyl ketone	0.5	ug/L
Pentachlorophenol	0.25	ug/L
Phenanthrene	0.005	ug/L
Propionitrile; Ethyl Cyanide	200	ug/L
Silvex; 2,4,5-TP	1	ug/L
Styrene	0.5	ug/L
1,2,4-Trichlorobenzene	0.5	ug/L
Xylene (total)	0.5	ug/L
Dacthal (DCPA)l	1	ug/L
Acenaphthene	10	ug/L

Appendix J Example Laboratory Chain of Custody

COC instructions can be found under the instructions tab

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Chain of Custody

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LAB-COR-GF006-00 Page 1 of 4

Client:	Chiquita Canyon LLC		
Address:	29201 Henry Mayo Drive		
City/State/ZIP:	Castaic	CA	91384
Phone|Email:			
Collected By:			

Client Contact Name:	
Project Name|Number:	Chiquita Landfill Stormwater
Site Address:	29201 Henry Mayo Drive, Castaic, CA 91384
Invoice Info|PO#|Quote#:	

Analysis Requested

	Sample Identification	Date (mm/dd/yyy) Start	Date (mm/dd/yyy) Stop (Composite Only)	Time (24hr. clock) Start	Time (24hr. clock) Stop (Composite Only)	Type	Matrix	# Units	EPA 200.7/200.8 Metals	EPA 245.1 Mercury	SM 4500-CN-C Cyanide	EPA 8081/8082 Pesticides/PCBs	EPA 8141 OP-Pesticides	EPA 8151 Herbicides	EPA 8260 VOCs	EPA 8260 Acrolein/Acrylonitrile	Comments
1	South Basin - Eastern Inlet					G	X										
2	South Basin - Western Inlet					G	X										
3	South Basin - Discharge					G	X										
4	East Basin - Inlet					G	X										
5	East Basin - Discharge					G	X										
6																	
7																	
8																	
9																	
10																	
	Preservative: **0**=none|**1**=$Na_2S_2O_3$|**2**=HCl|**3**=H_2SO_4|**4**=NaOH|**5**=HNO_3|**6**=CH_3OH|**7**=$Zn(CH_3CO_2)_2$					Put codes here→			5	5	4	0	0	0	0	0	

↓ Relinquished By ↓	↓ Date ↓	↓ Time ↓	↓ Received By ↓	↓ Date ↓	↓ Time ↓

↑ mm/dd/yyyy ↑ 24hr ↑ clock ↑ mm/dd/yyyy ↑ 24hr ↑ clock

Standard	Same-Day	1 Day	2 Day	3 Day	5 Day

All TATs Subject to Approval by Onterris Laboratories, LLC

Additional Requests: See attached for Appendix 1 analyte list 200.8 - Al, Ag, As, B, Ba, Be, Cd, Co, Cr, Cu, Ni, Mn, Pb, Sb, Se, Sn, Sr, Tl, V, Zn
200.7 - Fe, Ca, K, Mg, Na, Fe

WorkOrder #:

Therm ID: °C **Correction Factor:** °C

Temp Received: °C **Corrected Temp:** °C

Type: **B**=Blank|**C**=Composite|**G**=Grab or Discrete|X=Other

Matrix: **G**=Gas|**GW**=Groundwater|**O**=Oil|**P**=Product|**S**=Soil|**SD**=Sediment|**SO**=Solid|**T**=Tissue|WP=Wipe|**WW**=Wastewater|**X**=Other

Unless otherwise agreed in writing, these services are provided pursuant to the terms and conditions as set forth at onterris.com/terms-and-conditions. Onterris acceptance of this order is **expressly limited** to these terms and conditions

COC instructions can be found under the instructions tab

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Chain of Custody

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LAB-COR-GF006-00 Page 2 of 4

Client:	Chiquita Canyon Landfil		
Address:	29201 Henry Mayo Drive		
City/State/ZIP:	Castaic	CA	91384
Phone|Email:			
Collected By:			

Client Contact Name:	
Project Name|Number:	Chiquita Landfill Stormwater
Site Address:	29201 Henry Mayo Drive, Castaic, CA 91384
Invoice Info|PO#|Quote#:	

Analysis Requested

	Sample Identification	Date (mm/dd/yyy) Start	Date (mm/dd/yyy) Stop (Composite Only)	Time (24hr. clock) Start	Time (24hr. clock) Stop (Composite Only)	Type	Matrix	# Units	EPA 8270E	EPA 8290 2378-TCDD	SM 4500-S2-D Total Sulfide	EPA 420.1 Total Phenolics	EPA 1664A Oil & Grease	SM 9221B Total Coliform	SM 9221F E. Coli	EPA 300.0 Cl, Br, Fl, NO3, NO2, SO4	Comments
1	South Basin - Eastern Inlet					G	X										
2	South Basin - Western Inlet					G	X										
3	South Basin - Discharge					G	X										
4	East Basin - Inlet					G	X										
5	East Basin - Discharge					G	X										
6																	
7																	
8																	
9																	
10																	
	Preservative: **0**=none|**1**=$Na_2S_2O_3$|**2**=HCl|**3**=H_2SO_4|**4**=NaOH|**5**=HNO_3|**6**=CH_3OH|**7**=$Zn(CH_3CO_2)_2$					Put codes here→			0	0	7	3	3	1	1	0	

↓ Relinquished By ↓	↓ Date ↓	↓ Time ↓	↓ Received By ↓	↓ Date ↓	↓ Time ↓

↑ mm/dd/yyyy ↑ 24hr ↑ clock ↑ mm/dd/yyyy ↑ 24hr ↑ clock

Standard	Same-Day	1 Day	2 Day	3 Day	5 Day

All TATs Subject to Approval by Onterris Laboratories, LLC

Additional Requests: See attached for Appendix 1 analyte list

Therm ID: **Correction Factor:** °C

Temp Received: °C **Corrected Temp:** °C

WorkOrder #

Type: **B**=Blank|**C**=Composite|**G**=Grab or Discrete|X=Other

Matrix: **G**=Gas|**GW**=Groundwater|**O**=Oil|**P**=Product|**S**=Soil|**SD**=Sediment|**SO**=Solid|**T**=Tissue|WP=Wipe|**WW**=Wastewater|**X**=Other

Unless otherwise agreed in writing, these services are provided pursuant to the terms and conditions as set forth at onterris.com/terms-and-conditions. Onterris acceptance of this order is **expressly limited** to these terms and conditions

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Chain of Custody

Onterris

931 W. Barkley Avenue, Orange, CA, 92868 | #714.771.6900

LAB-COR-GF006-00 | Page 3 of 4

Client:	Chiquita Canyon Landfil		
Address:	29201 Henry Mayo Drive		
City/State/ZIP:	Castaic	CA	91384
Phone|Email:			
Collected By:			

Client Contact Name:	
Project Name|Number:	Chiquita Landfill Stormwater
Site Address:	29201 Henry Mayo Drive, Castaic, CA 91384
Invoice Info|PO#|Quote#:	

	Sample Identification	Date (mm/dd/yyy) Start	Date (mm/dd/yyy) Stop (Composite Only)	Time (24hr. clock) Start	Time (24hr. clock) Stop (Composite Only)	Type	Matrix	# Units	SM 2540D TSS	SM 5310B TOC	EPA 8270 SIM 1,4-Dioxane	SM 2320B Alkalinity	SM 5220D COD	SM 2510B Specific Conductance	RSK-175 Carbon Dioxide	SM 2540E TDS	Comments
									Analysis Requested								
1	South Basin - Eastern Inlet					G	X										
2	South Basin - Western Inlet					G	X										
3	South Basin - Discharge					G	X										
4	East Basin - Inlet					G	X										
5	East Basin - Discharge					G	X										
6																	
7																	
8																	
9																	
10																	
	Preservative: **0**=none|**1**=$Na_2S_2O_3$|**2**=HCl|**3**=H_2SO_4|**4**=NaOH|**5**=HNO_3|**6**=CH_3OH|**7**=$Zn(CH_3CO_2)_2$					Put codes here→			0	3	0	0	3	0	0	0	

↓ Relinquished By ↓	↓ Date ↓	↓ Time ↓	↓ Received By ↓	↓ Date ↓	↓ Time ↓

↑ mm/dd/yyyy ↑ 24hr ↑ clock ↑ mm/dd/yyyy ↑ 24hr ↑ clock

Standard	Same-Day	1 Day	2 Day	3 Day	5 Day

All TATs Subject to Approval by Onterris Laboratories, LLC

Additional Requests: See attached for Appendix 1 analyte list

Therm ID: | **Correction Factor:** | °C

Temp Received: | °C | **Corrected Temp:** | °C

WorkOrder #:

Type: **B**=Blank|**C**=Composite|**G**=Grab or Discrete|X=Other

Matrix: **G**=Gas|**GW**=Groundwater|**O**=Oil|**P**=Product|**S**=Soil|**SD**=Sediment|**SO**=Solid|**T**=Tissue|WP=Wipe|**WW**=Wastewater|**X**=Other

Unless otherwise agreed in writing, these services are provided pursuant to the terms and conditions as set forth at onterris.com/terms-and-conditions. Onterris acceptance of this order is **expressly limited** to these terms and conditions

COC instructions can be found under the instructions tab

Do not use this form for drinking water or air media submissions

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	Sample Identification	Date (mm/dd/yyy) Start	Date (mm/dd/yyy) Stop (Composite Only)	Time (24hr. clock) Start	Time (24hr. clock) Stop (Composite Only)	Type	Matrix	# Units	SM 2130B Turbidity	EPA 350.1 Ammonia	EPA 350.1 Un-Ionized NH3	EPA 625.1 - See Add'l Requests	SM 5210B BOD	EPA 1633 PFAS			Comments
									Analysis Requested								
1	South Basin - Eastern Inlet					G	X										
2	South Basin - Western Inlet					G	X										
3	South Basin - Discharge					G	X										
4	East Basin - Inlet					G	X										
5	East Basin - Discharge					G	X										
6																	
7																	
8																	
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	Preservative: **0**=none|**1**=$Na_2S_2O_3$|**2**=HCl|**3**=H_2SO_4|**4**=NaOH|**5**=HNO_3|**6**=CH_3OH|**7**=$Zn(CH_3CO_2)_2$					Put codes here→			0	3	3	0	0	0			

↓ Relinquished By ↓	↓ Date ↓	↓ Time↓	↓ Received By ↓	↓ Date ↓	↓ Time ↓

↑ mm/dd/yyyy ↑ 24hr ↑ clock ↑ mm/dd/yyyy ↑ 24hr ↑ clock

Standard	Same-Day	1 Day	2 Day	3 Day	5 Day

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Additional Requests: See attached for Appendix 1 analyte list
EPA 625.1 - Benzoic Acid, Pyridine, Phenol, 2-methylphenol, 3,4-methylphenol, Cresol, Naphthalene, alpha-terpineol

WorkOrder #:

Therm ID: **Temp Received:** °C

Correction Factor: °C **Corrected Temp:** °C

Type: **B**=Blank|**C**=Composite|**G**=Grab or Discrete|X=Other

Matrix: **G**=Gas|**GW**=Groundwater|**O**=Oil|**P**=Product|**S**=Soil|**SD**=Sediment|**SO**=Solid|**T**=Tissue|WP=Wipe|**WW**=Wastewater|**X**=Other

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