



Hans W. Kernkamp, General Manager-Chief Engineer

**Notice of Intent to Adopt Mitigated Negative Declaration For
Badlands Landfill Integrated Project
Environmental Assessment No. 2017-03**

DATE: April 24, 2019
TO: Agencies and All Interested Persons
PROJECT NAME: Badlands Landfill Integrated Project (BLIP)
REVIEW PERIOD: April 25, 2019 to May 28, 2019

PROJECT LOCATION: The Project is at the Badlands Landfill located at 31125 Ironwood Avenue near the City of Moreno Valley, in unincorporated Riverside County. The APNs for the Project are 413-140-023, 413-140-024, 413-140-025, 413-140-030, 413-140-033, 413-140-034, 413-140-036, 422-030-011, 422-030-014, 422-030-015, and 422-050-014.

The proposed Project involves operational and administrative changes at the Badlands Landfill to ensure continued operation of the regional facility. Specifically, the BLIP would revise the landfill's Solid Waste Facility Permit to increase the permitted disturbance area from 278 acres to 811 acres, which includes expanding the disposal footprint from 150 acres to 396 acres (in multiple stages), thereby providing an additional 50 years of critically needed landfill capacity. Additionally, the BLIP would increase the maximum permitted daily tonnage by 500 tons per day (tpd) from 4,500 tpd to 5,000 tpd, add an organics processing operation, and allow for other minor administrative and operational changes. The BLIP will not change the hours of operation or increase the permitted number of vehicles/trucks allowed at the landfill. For more details on the BLIP, see Chapter 2 - Project Description, of Environmental Assessment (EA) No. 2017-03.

The Riverside County Department of Waste Resources (RCDWR), on behalf of Riverside County as Lead Agency, has determined that the proposed BLIP will not have a significant effect on the environment with the implementation of proposed mitigation measures and recommends the adoption of a Mitigated Negative Declaration (MND) for EA No. 2017-03.

MND/EA No. 2017-03 is available at the following locations: RCDWR website www.rcwaste.org or at 14310 Frederick Street in Moreno Valley and Riverside County Clerk at 2724 Gateway Drive in Riverside from 7:30 AM to 4:30 PM, Monday through Friday. The document has also been sent to the Moreno Valley Public Library, 25480 Alessandro Blvd in Moreno Valley (951.413.3880).

Any comments on the proposed Project, the determination to adopt a MND, or requests for more information should be directed to: RCDWR, Attention: Kinika Hesterly, Urban/Regional Planner IV, 14310 Frederick Street, Moreno Valley, CA 92553. E-mail: khesterl@rivco.org. Telephone 951.486.3200/Fax 951.486.3205.

Written comments must be received at the above address by 5:00 p.m. on May 28, 2019. Any written comments received will be forwarded to the Riverside County Board of Supervisors and will be considered, along with the EA and any oral testimony, before any action is taken on the Project. The Board of Supervisors may consider this Project on or after June 25, 2019. Any decision made by this body will be mailed to anyone requesting such notification.

RIVERSIDE COUNTY DEPARTMENT OF WASTE RESOURCES
Hans Kernkamp, General Manager – Chief Engineer

Ryan Ross, Principal Planner

Draft
Environmental Assessment No. 2017-03
for the
Badlands Landfill Integrated Project



April 2019

Riverside County Department of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

Table of Contents

Acronyms and Abbreviations	3
Chapter 1	4
Introduction.....	4
Chapter 2	7
Project Description.....	7
Chapter 3	25
Environmental Checklist.....	25
1. AESTHETICS.....	29
2. AGRICULTURE AND FORESTRY RESOURCES	32
3. AIR QUALITY	34
4. BIOLOGICAL RESOURCES	49
5. CULTURAL RESOURCES	59
6. ENERGY	61
7. GEOLOGY AND SOILS.....	62
8. GREENHOUSE GAS	67
9. HAZARDS AND HAZARDOUS MATERIALS.....	72
10. HYDROLOGY AND WATER QUALITY	77
11. LAND USE AND PLANNING.....	80
12. MINERAL RESOURCES	82
13. NOISE.....	83
14. POPULATION AND HOUSING.....	85
15. PUBLIC SERVICES	86
16. RECREATION	88
17. TRANSPORTATION.....	89
18. TRIBAL CULTURAL RESOURCES.....	93
19. UTILITIES AND SERVICE SYSTEMS.....	96
20. WILDFIRE	99
21. MANDATORY FINDINGS OF SIGNIFICANCE	101
SUMMARY OF MITIGATION MEASURES.....	103
Chapter 4.....	108
References.....	108
Chapter 5.....	109
Exhibits	109
Chapter 6.....	111
Appendices.....	111

Acronyms and Abbreviations

AB 32	California's Global Warming Solutions Act
AB 939	California Integrated Waste Management Act
ACOE	Army Corps of Engineers
AFT	Acre Feet per Year
AQMP	Air Quality Management Plan
BLIP	Badlands Landfill Integrated Project
BMP	Best Management Practices
CH ₄	Methane
CO ₂	Carbon Dioxide
CAP	Climate Action Plan
CCR	California Code of Regulations
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
County	County of Riverside
DBESP	Determination of Biologically Equivalent or Superior Preservation
EA	Environmental Assessment
EAP	Emergency Action Plan
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
GHG	Greenhouse Gas
HHW	Household Hazardous Waste
JPR	Joint Project Review
MND	Mitigated Negative Declaration
MSHCP	Multiple Species Habitat Conservation Plan (Western Riverside County)
NAHC	Native American Heritage Commission
ND	Negative Declaration
NPDES	National Pollutant Discharge Elimination System
PHHWCF	Permanent Household Hazardous Waste Collection Facility
PRC	Public Resources Code
RCA	Western Riverside County Regional Conservation Authority
RCDWR	Riverside County Department of Waste Resources
RCHCA	Riverside County Habitat Conservation Agency
RCRCD	Riverside-Corona Resource Conservation District
SARWQCB	Santa Ana Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SWPPP	Storm Water Pollution Prevention Plan
TPD	Tons Per Day
TPY	Tons Per Year
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VOC	Volatile Organic Compounds
WDR	Waste Discharge Requirements
WIP	Waste Inspection Program

Chapter 1

Introduction

Purpose and Use

The purpose of Environmental Assessment (EA) No. 2017-03 is to describe the proposed Project, its potential environmental impacts, and feasible mitigation measures to determine if potential adverse environmental effects caused by the proposed Project can be reduced to below a level of significance. The “Project” addressed in this EA involves the development and implementation of the Badlands Landfill Integrated Project (BLIP or Project). Details regarding the BLIP are located in Chapter 2, Project Description.

The County of Riverside (County), as Lead Agency, and other responsible and regulatory agencies with approval authority over the Project, will use the EA to make informed decisions concerning the expanded use and operation of the landfill.

Compliance with CEQA

EA No. 2017-03 has been prepared in accordance with the California Environmental Quality Act (“CEQA”) Public Resources Code Section 21000 et seq and the implementing Guidelines (Section 15000 et seq.) and will be used to satisfy the requirements of the State CEQA Guidelines Section 15063, “Initial Study.”

The Riverside County Department of Waste Resources (RCDWR), on behalf of the County as Lead Agency, has determined that with implementation of the mitigation measures described herein, the Project will not have a significant effect on the environment and recommends that a Mitigated Negative Declaration (MND) be adopted.

EA No. 2017-03 is subject to a 30-day public review period by responsible and trustee agencies and interested public. All responses and comments received during this time period will be presented to the Riverside County Board of Supervisors (BOS) at the time that this body considers the Project.

Additional environmental information regarding the Badlands Landfill site and operation is contained in the following environmental documents, available at the RCDWR HQ, 14310 Frederick Street in Moreno Valley, CA and incorporated, herein, by reference:

- The Badlands Landfill started operation in 1966 with a Rubbish Dump Permit (RD No. 6-0165) issued by the California Resources Agency, Department of Conservation, Division of Forestry on September 15, 1966. A renewed Rubbish Dump Permit (RD No. 6-0417) was issued on June 4, 1971 and another renewed permit on December 31, 1980 (no RD No. for this permit) for the continued operation of the landfill. No records of an EA exist for any of these permit approvals. A Solid Waste Facility Permit (SWFP) was initially issued in 1979 by the then California Waste Management Board (CWMB). On May 26, 1992, the then newly formed California Integrated Waste Management Board (CIWMB), formerly known as the CWMB, issued a revised SWFP, which allowed the maximum daily capacity of the landfill to increase from 97 tons to 1,400 tons, with an average of 440 tons/day, and the hours of operation to increase from 6:00 a.m. to 8:00 p.m., daylight hours only.
- EA No. 35310 was prepared for the 1992 SWFP, for which a MND was adopted by the BOS on November 13, 1990 (SCH No. 90020749).

- EA No. 37161 was prepared for the increase in tonnage from 1,400 tons per day (tpd) to 4,000 tpd, for which a MND was adopted by the BOS on January 27, 1998 (SCH No. 97111047).
- EA No. 39813 was prepared for a revised SWFP which included the development of the Waste Recycling Park (WRP), new hours of operation, additional design capacity, and other operational and administrative changes, at the Badlands Landfill, for which a MND was adopted by the BOS on May 24, 2005 (SCH No. 2005041040).
- Addendum No.1 to EA No. 39813 was prepared for the acceptance of refuse as early as 4:00 a.m. for which the addendum was approved by the BOS on June 14, 2005.
- Addendum No.2 to EA No. 39813 was prepared for the correction of a graphic error in an exhibit of the refuse footprint for which an addendum was approved by the BOS on July 31, 2007.
- EA No. Badlands 2010-01 was prepared for a soil stockpile area and relocated Waste Recycle Park, for which an MND was adopted by the BOS on January 25, 2011 (SCH No. 2010101090).
- Addendum to EA No. Badlands 2010-01 was prepared for a SWFP revision which included revisions such as an increase in daily tonnage from 4,000 tpd to 4,500 tpd, for which an addendum was approved by the BOS on December 15, 2015.

Scope of Environmental Assessment

This EA evaluates the following environmental topics:

<input checked="" type="checkbox"/> Aesthetics	<input checked="" type="checkbox"/> Greenhouse Gas	<input checked="" type="checkbox"/> Public Services
<input checked="" type="checkbox"/> Agriculture Resources	<input checked="" type="checkbox"/> Hazards and Hazardous Materials	<input checked="" type="checkbox"/> Recreation
<input checked="" type="checkbox"/> Air Quality	<input checked="" type="checkbox"/> Hydrology/Water Quality	<input checked="" type="checkbox"/> Transportation
<input checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Land Use/Planning	<input checked="" type="checkbox"/> Tribal Cultural Resources
<input checked="" type="checkbox"/> Cultural Resources	<input checked="" type="checkbox"/> Mineral Resources	<input checked="" type="checkbox"/> Utilities/Service Systems
<input checked="" type="checkbox"/> Energy	<input checked="" type="checkbox"/> Noise	<input checked="" type="checkbox"/> Wildfire
<input checked="" type="checkbox"/> Geology/Soils	<input checked="" type="checkbox"/> Population/Housing	

Impact Terminology

The following terminology is used in the EA to describe the levels of significance of impacts that could result from the proposed Project:

- The Project is considered to have no impact if the analysis concludes that the Project would not affect a particular resource topic.
- An impact is considered less than significant if the analysis concludes that either the Project would cause no substantial adverse change to the environment or that impacts would not require mitigation measures.

An impact is considered less than significant after mitigation if the analysis concludes that the proposed Project would cause substantial adverse change to the environment that would require the inclusion of appropriate and feasible mitigation measures to reduce the impact to a less than significant level. If the application of mitigation measures may not reduce a significant impact to a less than significant level, the impact would be considered potentially unavoidable and significant under CEQA.

Organization of the Environmental Assessment

The content and format of this document, as described below, are designed to meet the requirements of CEQA.

Chapter 1 — Introduction: identifies the purpose, scope, and terminology of the document.

Chapter 2 — Project Description: identifies the location, background, Project objectives, characteristics, development, and identifies the permits and approvals required for the Project.

Chapter 3 — Environmental Checklist: presents the checklist responses for each resource. This section includes a brief setting description for each resource and identifies the Project's impacts on those resources.

Chapter 4 — References

Chapter 5 — Exhibits

Chapter 6 — Appendices

Chapter 2

Project Description

Project Location

The Badlands Landfill (Project site) is located at 31125 Ironwood Avenue, northeast of the jurisdictional boundary of the City of Moreno Valley, north of Highway 60, and westerly of the City of Beaumont, in an unincorporated area of western Riverside County (refer to **Figure 2-1**, Regional Location and Vicinity Map).

The 1,168-acre Project site is located in Section 32, portions of Sections 31 and 33, Township 2 South, Range 2 West, and within portions of Sections 4 and 5, Township 3 South, Range 2 West of the San Bernardino Base and Meridian and can also be described as Riverside County Assessor's Parcel Number (APNs) 413-140-023, 413-140-024, 413-140-025, 413-140-030, 413-140-033, 413-140-034, 413-140-036, 422-030-011, 422-030-014, 422-030-015, and 422-050-014. Regional access to the landfill site is provided via State Highway 60, located just south of the Project site. Direct access to the site is provided by Ironwood Avenue and Theodore Street.

Zoning/Land Use

The Badlands Landfill site is within the Reche Canyon/Badlands Area Plan of the General Plan, with a Public Facility (PF) land use designation. The entire Project site is zoned *W-2 (Controlled Development)*. Per Riverside County Land Use Planning and Zoning Regulation Ordinance No. 348 (Zoning Ordinance), "Disposal Service Operations" are a conditionally permitted land use within this zone. However, the landfill expansion is not subject to the Zoning Ordinance per Section 18.2.a., "no federal, state, county or city governmental Project shall be subject to the provisions of this ordinance..."

The Badlands Landfill property is located within the upper portion of the San Timoteo Badlands. The on-site topography is characterized by steep narrow canyons. Areas to north, east, west and south of the Project site are located within the unincorporated area of Riverside County and are zoned:

- North: Controlled Development (W-2) and Rural Residential (RR)
- East: Controlled Development (W-2)
- West: Controlled Development (W-2)
- South: Controlled Development (W-2)

Land uses surrounding the Project site include:

- North: Vacant
- East: Vacant
- West: Vacant
- South: Vacant, State Highway 60

Regional Setting

Riverside County is located in an area of Southern California referred to as the Inland Empire. The Inland Empire is an approximate 28,000 square mile metropolitan area primarily comprised of Riverside and San Bernardino counties, east of Los Angeles County.

The Project site is located within the Reche Canyon/Badlands Area Plan of the County General Plan. Specifically, the Project site is located in the upper portion of the San Timoteo Badlands area, an extensive pattern of dramatic and rugged mountainous terrain forming the eastern edge of the area plan. The San Timoteo Badlands area is recognized as a regional wildlife corridor, and current land uses in the area are predominantly solid waste management, open space, and habitat conservation.

The Badlands Landfill provides services to the cities and/or communities of Riverside, Moreno Valley, Temecula, Perris, Lake Elsinore, Murrieta, and unincorporated areas of western Riverside County. Generally, waste originating from anywhere within Riverside County may be accepted for disposal at the Badlands Landfill. As a regional facility, the landfill also provides disposal services to surrounding counties, namely Los Angeles County, Orange County, San Diego County, and San Bernardino County.

The landfill also accepts residual waste from three private transfer stations in western Riverside County, namely, Robert A. Nelson Transfer Station/Materials Recovery Facility (RAN TS/MRF), Moreno Valley Transfer Station (MVTs), and Perris Transfer Station (PTS).

Existing Operational Characteristics

The Badlands Landfill is an existing Class III, nonhazardous municipal solid waste (MSW) facility situated on 1,168 acres of County property, of which 278 acres are permitted for the current landfill operations, with a 150 acre disposal footprint.

The landfill is permitted to accept up to 4,500 tons per day (tpd) of MSW and 300 tpd of beneficial reuse material, including greenwaste. In addition to accepting waste from communities and cities within Riverside County, the Badlands Landfill is a regional facility that can also accept waste from other counties, namely, Los Angeles, Orange, San Diego, and San Bernardino counties. The “Area Method of Landfilling” is currently used, whereby refuse is confined in an active face and compacted in layers into cells, which are then combined into progressing terraces (lifts), until the grades defined by the landfill grading plan are established. The current permitted landfill operation is expected to reach the design capacity in 2025.

Material recovery is conducted at the landfill to promote recycling, maximize landfill diversion, and conserve landfill capacity by targeting various recyclable items, such as metals, waste tires, construction and demolition (C&D) waste, and greenwaste. In addition, a metals recycling program, which is operated in conjunction with the Waste Inspection Program (WIP), is implemented to recycle metal appliances safely and economically by removing the hazardous components of the appliances. A WRP has been approved for operation. The approved WRP will integrate the various waste diversion activities, a future material exchange program, and hazardous waste management for a variety of hazard-containing waste items, specifically targeting electronic waste, universal waste, and household and commercial hazardous waste.

All landfill activities, including MSW delivery, are permitted to occur between the hours of 4:00 AM and 8:00 PM with the aid of artificial lighting for operation beyond daylight hours. The landfill is allowed to be open seven (7) days per week and is closed on certain County holidays.

Landfill operations are guided by a Joint Technical Document (JTD) which supports regulatory permitting/approvals and addresses applicable regulatory requirements for a landfill. The JTD is prepared to satisfy the Report of Waste Discharge Requirements found in California CCR, Title 27, Section 21585

and the Report of Disposal Site Information (RDSI) requirements found in CCR Title 27, Section 21600. It is also required for the issuance of a SWFP. The purpose of the JTD is to describe, in detail, a landfill project, including proposed design and operational features and procedures, and the proposed design for closure as well as description of post-closure maintenance activities.

Table 2-1
Existing Landfill Operations

Category	Description
Permitted Hours of Operation	Monday through Sunday except certain County holidays. All landfill activities, including waste delivery, are permitted between the hours of 4:00 a.m. and 8:00 p.m. 24 hrs/7 days for ancillary or maintenance activities
Permitted Tons per Day (tpd)	4,500 tpd of General Non-Hazardous Materials and 300 tpd of beneficial reuse material
Permitted Traffic Volume Per Day	612 vehicles
Permitted Disposal Area	150 acres
Permitted Landfill Area	278 acres
Permitted Disposal Site Capacity	33.5 million cubic yards
Maximum Elevation	2,460 feet MSL
Maximum Depth	275 feet Below Surface Grade (BSG)
Date Anticipated to Reach Capacity	2025

Project Objectives

The underlying purpose of the BLIP is to implement a forward-looking plan for the Badlands Landfill to provide long-term countywide disposal capacity, as well as to promote conservation of valuable landfill space by means of on-site waste diversion using a variety of waste management technologies and processes. It is the ultimate goal of the BLIP to enable the county's landfill system to improve and integrate waste disposal and diversion toward sustainable waste resources management. The specific objectives of the BLIP are as follows:

- Provide long-term countywide waste disposal capacity at the Badlands Landfill. Without the Project, landfill capacity will be exhausted in approximately 2025. The Project will provide approximately 50 years of landfill capacity, which is critical to accommodate projected growth in Riverside County.
- Provide system-wide contingency disposal capacity to compensate for a temporary or permanent loss of daily capacity at either the Lamb Canyon Landfill or El Sobrante Landfill, due to halt of operation or premature closure of either landfill caused by a natural disaster or an adverse circumstance.

- Provide cost-effective waste disposal to residents and businesses of Riverside County.
- Facilitate continued compliance with AB 939 diversion mandates by Riverside County and its cities by enhancing and expanding existing on-site waste diversion opportunities.
- Provide recycling services to facilitate compliance with AB 341 commercial recycling mandates.
- Facilitate waste diversion and landfill space conservation through on-site recycling programs and green/food waste composting.
- Maximize feasible extension of the service life of the Badlands Landfill.
- Minimize environmental impacts and liability to the County by means of accelerated, controlled decomposition of waste materials using landfill-based composting, or other waste conversion technologies.
- Provide waste conversion services to facilitate compliance with AB 1826 and SB 1383 organics recycling mandates.

Summary of Project Characteristics

The proposed Project will revise the SWFP and JTD for the Badlands Landfill allowing for the following operational and administrative changes:

- Increase limits of the permitted disturbance area from 278 acres to 811 acres – a 533 acre increase.
 - Expand the disposal footprint from 150 acres to 396 acres in multiple stages – a 246 acre increase.
 - Increase maximum daily capacity from 4,500 tons of refuse per day (tpd) to 5,000 tpd.
 - Increase the ultimate in-place refuse capacity from 20.5 million tons to 86 million tons – an increase of 66 million tons.
 - Extend the landfill's estimated life-expectancy from 2025 to 2073 – a 48 year increase.
 - Add stormwater detention basins, percolation basins, and two (2) stockpile areas as part of site development.
 - Relocation of the fee booth, WRP, and other ancillary uses and activities within the disturbance limits, as necessary.
 - Installation of environmental protection and monitoring systems:
 - Composite Liner
 - Leachate Collection and Removal System (LCRS)
 - Surface Water Drainage Systems
 - Groundwater Monitoring Systems
 - Landfill Gas Migration Monitoring, Collection, and Control Systems
- Add an organics processing operation (up to 300 tpd).
- No change to hours of operation or vehicles allowed per day – vehicles will remain at 612.

- Landfill Closure and Post-Closure updates.

This document analyzes potential environmental effects associated with the proposed BLIP. Specific Project characteristics are described in detail in the following sections:

Project Boundary and Operations

As shown on **Figure 2-2**, the Project Study Area is the area of the Badlands Landfill property included in this EA which analyzes the expanded commercial disposal area, proposed waste diversion and other landfill activities. The Project Study Area encompasses 543 acres¹.

The current permitted 278 acre disturbance area (less 10 acres of access roads- see footnote #1) and 16.2 acre deed restricted area have been excluded from the Project Study Area. A 60.5 acre area that was previously environmentally assessed has been identified on the site plan for the BLIP. This area was used for the western Stockpile Project and most of it has been disturbed and included in the existing 278 acre disturbance limits. With the BLIP, the total permitted disturbance limits at the landfill would increase from 278 acres to 811 acres – a 533 acre increase. The landfill’s disposal footprint is within the permitted disturbance limits and will be revised as part of the BLIP from its existing 150 acres permitted limit to 396 acres, an increase of 246 acres.

In addition to waste disposal, other landfill activities will continue to occur within the proposed disturbance limits, including, but not limited to, soil stockpiling, retention and sedimentation basins, materials storage, equipment parking and maintenance, road realignment and maintenance, drainage control, energy recovery, waste recycling and organics processing², household hazardous waste management or recycle-only household hazardous waste collection, residential waste collection, landfill gas and groundwater/leachate monitoring and management, gate fee booth and truck scales, office buildings and/or the relocation of these ancillary uses/activities as necessary.

Disposal Footprint

The Project proposes to excavate/grade approximately 285 acres to the south and east of the existing disposal area (see **Figure 2-3 and Figure 2-11**). This excavation is proposed to occur in approximately seventeen (17) stages (ranging from 11 to 26 acres in each stage) which will be followed by the installation of a liner system³ to be used for the expanded refuse disposal area. Ultimately, the lined refuse disposal area will be increased by 246 acres. Also, two (2) areas to the north and east of the expansion area will be used to stockpile excavated dirt, and stormwater detention basins to improve stormwater quality.

Overall Disposal Capacity

The BLIP would increase the daily disposal capacity as well as total in-place capacity, extend its life expectancy from 2025 to 2073 – an increase of 48 years, and expand its function to include organic waste composting. The permitted daily capacity is proposed to increase from the current 4,500 tpd to a maximum of 5,000 tpd. The current capacity of the permitted landfill is approximately 20.5 million tons, of which, approximately 6.6 million tons is still available as of January 2019. The ultimate in-place capacity of the landfill (Phases 1 and 2) would increase to a total of approximately 86 million tons (20.5 million tons in Phase 1 and 65.6 million tons in Phase 2).

¹ Includes 10 acres of existing access roads already within the landfill’s permitted disturbance limits. The 10 acres of access roads were included in the study area for biological resources analysis.

² Organics processing (compost/chip & grind, etc.) is not an existing permitted activity; as such, it is evaluated in this EA.

³ Details regarding the liner system are provided beginning on pg. 12 under Environmental Protection and Monitoring.

Phasing of Capacity Increase

The conceptual boundaries of the landfill development phases are shown in **Figure 2-3**. The existing permitted refuse footprint is comprised of Phase 1 (P1) (totaling 150 acres). Phase 2 (P2) would be subdivided into smaller areas, or stages, for purposes of landfill liner construction sequencing, soil storage, as well as drainage control. Subdivision of a development phase would have the benefit of limiting land disturbance to a relatively small portion (approximately 11-26 acres) at any one time.

Construction of P2 is likely to begin 12-24 months prior to the current disposal area (P1) reaching capacity⁴. P2 would be carried out in approximately seventeen (17) stages (P2S1, S2,...S17). Landfilling would likely start in the north portion of P2 and end in the last stage in the southern end. P2 encompasses a total of 285 acres, 246 acres of which would be developed as the disposal footprint, providing an additional total in-place capacity of approximately 65.6 million tons of refuse.

Soil Excavation

Each phase of landfill development would require soil excavation from the canyon floor and slopes to create the design airspace for refuse placement and foundation for liner construction. In other words, soil excavation would also be phased. Part of the excavated soil may be used as daily cover at the active face of the landfill. The BLIP design is expected to generate approximately 33 million cubic yards (cy) of excavated soil. Approximately 19 million cy of the total excavated soil would be used for daily cover throughout the life of the BLIP, about 2 million cy would be used for final closure after the landfill ceases operation, and the remaining soil would be stockpiled (see **Figure 2-4**, Stockpile Plan). Excavation depths must maintain a minimum of 10-foot separation of waste or the bottom liner from the highest anticipated groundwater levels. An evaluation will be performed prior to the final design for each excavation phase/stage.

Environmental Protection and Monitoring⁵

One of the objectives of the BLIP is to ensure environmental protection while carrying out the essential integrated waste management practices at the Badlands Landfill. Federal and state regulations for landfill operations provide minimum landfill design and operation standards for protection of air and water resources, as well as public health and safety from potential adverse effects of landfill operation. Therefore, the BLIP will be designed and implemented to meet or exceed these minimum standards as discussed in the following sections.

Composite Liner

Groundwater will be protected from landfill leachate contamination by a composite liner, a leachate collection and removal system (LCRS), and a network of groundwater monitoring wells. The minimum design standards for bottom and slope liner are prescribed in federal Subtitle D and Title 23 of the California Code of Regulations (CCR). **Figure 2-5** illustrates both the prescriptive bottom and slope liner designs, which include the following components:

Prescriptive Bottom Liner:

- Subgrade — A scarified surface, graded and smoothed prior to placement of liner materials.

⁴ Phase 1 is estimated to reach capacity in 2025.

⁵ RCDWR may substitute specified materials, design, system or action as may be required for any aspect of the Project (operation, monitoring, maintenance, closure, etc.) providing that such material, design, system or action complies with all applicable Federal, State, and local regulations and is approved by the Federal, State or local regulatory agency having jurisdiction.

- Low Permeability Soil Layer (LPSL) — A 2-foot thick soil layer with an engineered permeability of 1×10^{-7} cm/sec.
- Flexible Membrane Liner (FML) — A textured synthetic membrane of at least 40-mil thickness (60 mil if high density polyethylene (HDPE)).
- Cushion Fabric — A 16-ounce (or equivalent) geotextile fabric to protect the FML from puncture by the leachate drainage materials on top.
- Leachate Collection & Removal System (LCRS) Drainage Layer — A 1-foot thick layer of granular material with hydraulic conductivity that, in combination with the bottom slope, would prevent more than 1 foot of liquid from collecting on the liner system.
- Filter Fabric — A geotextile fabric placed over the granular drainage material to prevent intrusion by soil fines.
- Protective Soil Layer — A 1-foot thick layer of soil with a maximum particle diameter of less than 3 inches, to protect the liner system from operations traffic, upon initial placement of refuse above the liner system.

Prescriptive Slope Liner:

- Subgrade
- 2-foot LPSL
- 60-mil FML
- Geotextile Layer
- 1- foot Drainage layer
- Geotextile Layer
- 2-foot Protective Soil Layer

The BLIP would consider alternative bottom and slope liner designs, as illustrated in **Figure 2-6**. The ultimate liner designs for the BLIP, however, would be determined in coordination with the Santa Ana Regional Water Quality Control Board (SARWQCB) and Local Enforcement Agency (LEA).

The alternative bottom liner design is to reduce the extent of the prescriptive LPSL and compensate for it with an increased use of synthetic liners. The alternative design would have three (3) primary benefits: 1) An order of magnitude decrease in leak potential; 2) less construction impacts associated with the LPSL; and 3) lower cost of the LPSL, as low permeability soil is not likely available on-site thus requiring importation from a distant source. The following is a brief description of the current approved alternative bottom liner design:

- Subgrade — Same as prescriptive design.
- LPSL — A 1-foot thick soil layer with an engineered permeability of 1×10^{-5} cm/sec.
- 60 mil HDPE
- Geosynthetic Clay Layer
- 60 mil HDPE
- 12 oz. geotextile cushion layer
- 9 inch drainage layer
- 8 oz. Filter Fabric geotextile
- 2-Foot Protective Soil Layer

Steep slope conditions at the site are not suitable for the prescriptive slope liner design, because at steep angles, the LPSL is unable to support itself. Under these conditions, the State-approved steep sideslope liner system would be used, pursuant to State Water Resources Control Board (SWRCB) Order No. 93-62. Upon permission by the SARWQCB, an alternative slope liner design may also be used on regular slopes,

as a solution to the shortage/absence of low permeability soil on-site and high soil import cost. Also, like its bottom liner counterpart, the alternative slope liner design would reduce impacts associated with placement of the LPSL. The following is a brief description of the current State-approved alternative design:

- Subgrade — Same as prescriptive design.
- 60-mil Textured FML (LPSL replacement)
- Geocomposite — Same as prescriptive design.
- 1-Foot Protective Soil Layer — Same as prescriptive design.

In addition to the State-approved sideslope liner system, the Badlands liner system will include a Geosynthetic Clay Layer (GCL) below the FML layer. Geosynthetic clay liners (GCLs) are factory manufactured waterproof barriers consisting of a layer of bentonite or other very low-permeability material supported by geotextiles and/or geomembranes, mechanically held together by needling, stitching, or chemical adhesives.

Leachate Collection and Removal System (LCRS)

Leachate refers to a liquid that is the result of percolation of water (e.g. rain) through solid waste or from decomposition of or release of liquids from the waste itself. Landfill leachate is formed partially from infiltration of rain water into the buried waste (particularly in regions with plenty of rainfall) and partially from the moisture content within the waste. For arid and semi-arid regions, landfill leachate primarily originates from the buried waste, through discharge of its water content as well as during decomposition of organic waste. Therefore, leachate commonly contains both biological materials and chemical constituents. Sanitary landfills are therefore designed to prevent groundwater contamination by capturing and then removing the leachate generated within the landfill. This is the primary function of the LCRS. Further, as per CCR Title 14, Section 17781, the landfill operator must monitor, collect, treat, and dispose of leachate for a minimum of 30 years after landfill closure, and until the responsible regulatory agencies have determined that leachate is no longer being produced, or that discharge of leachate would no longer adversely affect water quality.

The BLIP will continue to use the current, standard LCRS design for all future landfill development phases; however, compliance with additional or new standards will occur if required. **Figure 2-7** illustrates the basic design of the LCRS for the BLIP. The LCRS Drainage Layer covers the bottom area of the landfill cell, where a trench within the LCRS layer collects the leachate through a perforated pipe that drains to the LCRS sump or tank. A synthetic drainage layer is used on the slope liner system, which collects and drains leachate toward the bottom of the landfill cell and eventually into the LCRS sump. The stored leachate is periodically pumped out, tested, and treated, as necessary. If it is determined not to be harmful to people and the environment, leachate is commonly used for dust control at the landfill.

Surface Water Drainage System

Existing surface water drainage facilities are designed to accommodate estimated flows from a 100-year, 24-hour precipitation event, pursuant to CCR, Title 27, and in accordance with applicable Riverside County standards. Soil berms and concrete ditches are used around the landfill perimeter to intercept and then divert run-on flows away from the landfill areas. Precipitation that falls directly onto the waste eventually percolates into the LCRS. Precipitation falling directly on the landfill area is controlled by a system of benches, berms, lined ditches, basins, and down-drains to reduce sheet flows across large sloped surfaces and divert runoff toward the stormwater system. Peak runoff flows are accommodated by either temporary or permanent sedimentation basins. There are four existing sedimentation basins on-site. The southwest Sedimentation basin is a permanent basin located south of the current landfill limits. All run-off from the Phase 1 area discharges into this basin. The Stockpile Sedimentation Basin is located within the existing

eastern Stockpile Limits and the P2 area Sedimentation Basin is currently located south of the stockpile. The Stockpile Sedimentation Basin intercepts and collects surface drainage originating from the stockpile area. The P2 area Sedimentation Basin receives flow from the Stockpile Sedimentation Basin and a portion of the western slope within this area. The P2 area Sedimentation Basin and Stockpile Sedimentation basins will be removed as part of the expansion Project. The western Stockpile Sedimentation Basin handles drainage from the western stockpile, office and flare station area. As part of the phased landfill development, additional basins (see **Figure 2-11**) within the permitted disturbance limits will be constructed, as needed, in order to facilitate the reduction of storm water contamination and improved water quality. The types of basins installed may include infiltration, detention, retention, percolation and/or sedimentation basins.

Under the BLIP, the existing surface water drainage and erosion control plans will continue to apply with necessary modifications, such as using compost to replace or complement the greenwaste cover. Details of the surface water drainage plan for the BLIP are discussed below and subject to approval by the SARWQCB, AQMD and LEA.

A hydrology study was performed comparing the existing condition at the site to the post P2 expansion condition (see Appendices). According to the study, the P2 Expansion will increase the peak runoff by about 2.1% and the total runoff by about 1.8%. Even though the increase in peak runoff is insignificant, the basins will capture and ultimately discharge the runoff at a rate generally equivalent to the existing conditions, thereby not impacting downstream resources. Most of the Badlands site is in the 765 square mile San Jacinto watershed which eventually feeds into the Santa Ana River. The remainder of the site is in the 125 square mile San Timoteo watershed which also feeds into the Santa Ana River. The Project's impact to the watersheds is negligible due to its minimal size in comparison to the size and scale of both watersheds; however, the impact of increased runoff will be reduced by the planned construction of sedimentation basins at all the discharge points except for the 2.7 acre area at the site entrance. Most of the stormwater is detained in these basins for a period of time to allow sediment to settle to the bottom of the basins. Depending on forecasted weather, the stormwater is typically detained for up to a week. The typical evaporation rate for surface water in the area is a little more than one inch per week during the winter months and over 2 inches per week during the summer months. A certain volume of stormwater evaporates while it is detained and the remaining stormwater is discharged through an intake pipe that floats on the water in order to discharge the cleanest water from the basin.

Groundwater and Surface Water Monitoring

Groundwater and surface water monitoring requirements for solid waste landfill operations are found in CCR, Title 27, Subchapter 3, Article 1. A groundwater monitoring program has been in place at the Badlands Landfill since 1990 under the regulation of the Waste Discharge Requirements (WDRs) issued by the SARWQCB. Eight (8) groundwater monitoring wells are positioned around the perimeter of the landfill footprint to monitor groundwater quality beneath the landfill and for detection of a release from the landfill (see **Figure 2-8**). In addition, there are two (2) more wells that are checked to determine the groundwater elevations in the area. Additional groundwater monitoring wells will be added to the groundwater monitoring system commensurate with future landfill development under the BLIP, in compliance with CCR, Title 27. Also, vertical wells for storm water injection and infiltration and/or percolation basins may be installed and will be monitored by staff.

Storm water monitoring is required under the NPDES, General Permit for Storm Water Discharges Associated with Industrial Activities. Currently, storm water runoff from the landfill site is monitored at three (3) discharge locations, all of which lie within the San Jacinto Watershed. A minimum of two (2) storm water samples are collected every six months at each discharge location. The six month periods are from January 1 to June 30 and July 1 to December 31 of each year. In addition, routine inspection of surface

drainage facilities, and landfill surface and access roads are performed. Maintenance and improvements are completed, as necessary, in general accordance with the SWPPP. Prior to implementation of the BLIP, the SWPPP will be updated to address Project-specific storm water protection issues and include the necessary mitigation and monitoring requirements.

Landfill Gas Monitoring, Collection, Disposal, and Conversion System

When the organic components of buried MSW decompose, landfill gas (LFG) is produced inside the landfill. LFG is primarily composed of methane (CH₄) and carbon dioxide (CO₂). Since CH₄ is combustible in air at concentrations between 5% and 15% and is a powerful GHG, a principal concern in landfill operations is to prevent lateral migration and accumulation of LFG in and/or under nearby buildings, as well as to minimize fugitive CH₄ emissions from the surface of the landfill. Other gases occur in LFG in trace amounts, including non-methane organic compounds (NMOC) and toxic gases. Although present in trace amounts, fugitive emissions of these gases could have a cumulative adverse effect on public health and safety and the environment. Further, uncontrolled LFG could migrate into surrounding soils, eventually condensing into liquid form and causing contamination of surface water and groundwater.

The existing LFG monitoring, collection, and control system (LFG System) operates under a Title V facility permit issued by the SCAQMD in cooperation with the EPA. RCDWR environmental staff monitors and inspects the LFG system. The LFG system consists of an extensive network of horizontal and vertical gas collection wells, multiple-level subterranean gas monitoring probes, a blower that applies negative pressure to collect LFG from the wells, and currently two (2) flare stations that combust the LFG (refer to **Figure 2-9**). As additional refuse is placed and the landfill footprint expands, the LFG system will be expanded to maintain the integrity of the system. Although not a physical part of the LFG system, the composite bottom and slope liner system also serves as a gas barrier restricting the downward migration of LFG and condensate into the groundwater table and lateral migration of LFG beyond the refuse footprint.

Organic Waste Diversion

The existing SWFP for the landfill already allows for up to 300 tpd material (primarily organics) to be used for alternative daily cover (ADC), erosion control, or other beneficial uses. The proposed Project would allow for development of an organics processing facility at the landfill, operated by the RCDWR or by a qualified third party operator. The proposed organics operation merely introduces a different option for processing the existing 300 tpd of organics permitted for beneficial reuse. Initial operations at the landfill may involve composting pilot/demonstration projects, chip and grind, or smaller scale/scope versions of the composting methods/systems described in this section. The proposed operation may use an aerated static pile (ASP) composting system, such as the GORE® Cover Compost System (or a similar system), the windrow method, or a combination of both⁶. Regardless of method, development of the organics operation will occur within the permitted disturbance area (see **Figures 2-11 to 2-14**). The proposed facility would allow for processing of a mixture of organics to produce marketable compost, mulch, and other soil amendment products. Both the aerated and windrow methods are described below.⁷

⁶ If needed, both ASP and windrow processing may occur, depending on the amount of food waste and overall organics. If more than 5,000 tpy of food waste is processed, the ASP operation will be utilized. The ASP operation is limited at 150 tpd, leaving 150 tpd for other organics processing activities such as windrow composting and chip & grind. The total organics processing would not exceed 300 tpd.

⁷ The scale of the composting area (i.e. number of windrows, dimensions of ASP bunkers, etc.), components, and/or operation may change based on site specific needs.

Acceptable Feedstock

Acceptable feedstock materials include: green waste, woody waste, agricultural materials, food material, manure, paper products, and digestate as outlined in Title 14 CCR. Additives and amendments including, but not limited to, fertilizers, urea, peat moss, or gypsum, may also be used during the composting process as needed.

The following is an estimated average daily quantity of accepted feedstocks at 300 tpd:

- Residential Green Waste.....25 tons
- Commercial Green Waste...150 tons
- Food material.....60 tons
- Manure.....10 tons
- Wood and Paper Products.....25 tons
- Digestate.....30 tons

As stated, initial organics processing operations may involve composting pilot/demonstration projects, chip and grind, or smaller scale/scope versions of the composting methods/systems described in this section. As the organics operation and feed stock availability evolves (not to exceed the tonnage and activities evaluated in this EA) RCDWR will process a SWFP/RCSI amendment with the LEA which will include the specific operations (tonnage, ASP, windrow, chip & grind, etc.).

Due to logistical difficulties with obtaining clean, source separated food waste⁸, early organics activities will primarily involve greenwaste processing with minimal food waste. RCDWR anticipates using windrow composting until such time that the availability of clean food waste approaches the 5,000 ton per year (tpy) threshold established by AQMD under Rule 1133.3⁹.

ASP Composting

The proposed ASP compost operation will require the construction of a series of concrete bunkers. There will be an aisle between each bunker to allow a tarping machine to straddle each bunker and unroll cover tarps. Each bunker will have sidewalls approximately three to four feet high and a rear push-wall approximately eight feet high.

Composting with the GORE® Cover Compost System, or similar ASP system, typically occurs in three phases. Phase 1 lasts four weeks, Phase 2 lasts two weeks, and Phase 3 lasts two weeks. Phase 1 and Phase 2 are covered using a micropore cover system that helps to retain moisture and control odors and emissions. Phase 3 bunkers and finished curing areas are not covered. Turning of the compost material between phases is performed to ensure aerobic decomposition of the organic matter. Each bunker has air supplied through the process with an appropriately sized fan. The fan is computer controlled based on pile temperature and oxygen concentration, and discharges to a permitted emission control device. The fan does not operate continuously.

Each compost bunker holds approximately 500 tons of feedstock. The aerated composting process would take approximately eight weeks to complete and the initial 500 ton feedstock would yield approximately

⁸ RCDWR anticipates that due to the State-wide implementation of SB 1383 and AB 1826, in the next 5-10 years, more source separation of organic materials will take place, resulting in cleaner feedstocks and increased usage of food waste at the landfill's organics facility.

⁹ Per AQMD Rule 1133.3, compost operations that exceed 5,000 tpy of food waste are required to use an approved emission control device. Once the organics operation approaches this threshold, RCDWR will initiate the ASP (or other comparable process) compost operation.

250 to 300 tons of finished product. Once the compost has gone through the active composting phase, it will be moved to an adjacent area for curing prior to screening of the finished compost.

Liquids (leachate) draining from the active compost are collected in trench drains under each bunker that drain to sumps and are pumped into aboveground storage tanks. The collected liquids are added to new batches of compost feedstock as a source of moisture, thereby reducing the need for using domestic water as process water.

Food waste will be processed and incorporated into compost feedstock the same day of its arrival. Any food waste that cannot be used as immediate feedstock will be covered with a layer of green waste and will be processed as compost feedstock on the next business day. Composting will be permitted and performed in accordance with the composting requirements of Title 14, Division 7, Chapter 3.1.

Windrow Composting Method

Windrows will be formed using a frontend bucket loader creating compost windrows that measure approximately 6- to 8-feet high, approximately 10- to 12-feet wide, and 150 feet long. Based upon a bulk density of 800 pounds per cubic yard, each windrow contains approximately 175 tons of processed organic material (food/green waste). The windrows will be spaced at approximately 12-foot intervals to allow access to the sides of each windrow. The WRP can accommodate approximately 59 windrows at the noted dimensions.

Newly created piles of compost will be covered with a layer of screened or unscreened compost within 24 hours of initial pile formation. The compost layer shall be placed on the top of the pile at a depth of at least 6 inches. If the pile is turned within the first 7 days to allow temperature control and pathogen reduction, the compost cap does not need to be reapplied. When turning windrows, liquid shall be applied as an emission control.

New windrows are turned using a front-end bucket loader twice per week for the first two weeks. This allows the compost to heat up to allow for the Process to Further Reduce Pathogens (PFRP). This is the active thermophilic process during which temperatures can reach 160°F that eliminates common microbial pathogens. After the first two weeks, windrows are turned once per week until PFRP is complete in 2 to 4 weeks. Prior to turning the windrow, water is applied to the exterior using a water truck or hose. The turning process mixes the water throughout the windrow. Optimum moisture content for windrows is 40 to 60 percent measured by gravimetric methods.

As required by Title 14, external and internal temperatures and material moisture content are monitored on a daily basis. The pathogen reduction requirements of Chapter 3.1 of Title 14, CRR, Section 17868.3, requires that active compost be turned a minimum of five times within 15 days and the windrow must maintain a constant temperature of at least 131°F during the entire 15 days.

Windrows undergoing active composting would be located on a protected surface, subject to approval by the RWQCB-SAR. A windrow turner may also be utilized that would allow for a more efficient turning and blending of the feedstock and improving the overall quality of the finished product. The windrow turner creates a windrow approximately 12 feet wide and approximately 6 ½ feet high or higher; but windrows will not exceed 8 feet in height. Aisles between windrows average 12 feet.

As the temperatures decrease, the compost enters the curing stage where microbial populations shift to beneficial soil organisms. The compost is cured or stabilized for approximately 4 weeks, but may be held on-site for several months. Curing materials may stay on the active composting windrow area or may be

moved to the finished product storage area in the southeast corner of the site, depending upon current demand. The finished compost may then be screened for specific uses based upon demand.

The following equipment may be required for the composting operations:

- Trommel screen
- Grinder
- Compost turner
- Wheeled loader
- Sort Line (electrified)

Landfill Hours and Daily Vehicle Limits

The current Badlands Landfill is permitted to receive waste from 4:00 AM to 8:00 PM, Monday through Sunday and conduct ancillary and maintenance activities 24 hours/day, 7 days/week. Also, 612 vehicles per day are permitted at the landfill. No changes are proposed to the hours of operation or daily vehicles allowed.

Landfill Ancillary Facilities and Activities

The current LFG System complex may be expanded to include a new G2E facility or flare systems using more efficient technology, as needed (if technically and economically feasible). Ancillary landfill activities, such as regular landfill gas and groundwater monitoring and remediation, equipment maintenance, material storage, environmental mitigation, field surveys and pilot waste management technology research projects, etc., will continue to take place within the landfill property. Pilot research/demonstration projects related to LFG and environmental monitoring systems, if any, would be subject to future CEQA review prior to implementation.

In summary, the proposed BLIP would substantially upgrade the existing Badlands Landfill to become a truly integrated waste management facility serving the Inland Empire and surrounding jurisdictions.

Table 2-2 below compares the existing and proposed landfill conditions.

Table 2-2
Summary of Existing and Proposed Landfill Conditions

Landfill Conditions	Existing Permit	Proposed
Landfill Property Boundary	1,168 acres	No change
Permitted Landfill Area	278 acres	811 acres
Refuse Disposal Footprint	150 acres	396 acres (ultimate)
Total In-Place Capacity	17 million tons	86 million tons
Maximum Daily Tonnage	4,500 tons	5,000 tpd
Estimated Remaining Landfill Life	9 years (as of June 30, 2016)	48 years (from 2025)
Landfill Service Area	Riverside, Los Angeles, San Bernardino, and Orange Counties	No change
Integrated Waste Management	Refuse disposal Waste Inspection Program (WIP) Limited waste recycling Limited energy recovery	Refuse disposal WIP and PHHWF Organics Diversion Increased waste recycling Increased energy recovery
Permitted Maximum Elevation	2,460 MSL	No change
Permitted Maximum Depth	275 BSG	320 BSG
Hours of Operation	Ancillary/Maintenance Activities: 24 hours/day, 7 days/week Waste receiving: 4:00 AM – 8:00 PM (Mon – Sun)	Ancillary/Maintenance Activities: No change Waste receiving: No change
Permitted Traffic Volume	612 trips/day	No change
Landfill Access	Off SR60 @ Theodore St. to Ironwood Avenue	No change
Landfill Liner System	Subtitle D liner over up to 104 acres; 46 acres unlined prior to Subtitle D	Transition to approved synthetic liner system, in compliance with WDRs & 27 CCR §20330
Leachate Management System	LCRS as per 27 CCR §20340 & WDRs	Expand the LCRS
Groundwater Monitoring	Perimeter monitoring system as per CFR 40 Part 258 & WDRs	Expand the system
Surface Water Protection	Surface drainage control as per NPDES permit requirements	Expand system to cover the WRP; new stockpiles; and new LFG complex
Landfill Gas Management	LFG monitoring, control, and conversion system as per Title V, 27 CCR §20919-20939, and SCAQMD Rule 1150.1	Expand collection and control system capacity; Partner with a private development team to implement a LFG beneficial use project, if feasible
Ancillary Facilities	Field office, scales & fee booth, LFG facility complex, equipment pad, and 3 retention basins, 1 borrow stockpile	A new field office; new fee booth configuration; improve WRP area; new basins; new borrow/soil stockpiling sites
Daily Cover	Soil; tarp; greenwaste	Soil; tarp; greenwaste; compost
Erosion Control	Greenwaste cover	Greenwaste and compost covers

Landfill Equipment and Labor Needs

At full operation, the landfill will employ about 43 people. Table 2-3, *Proposed Daily Personnel*, summarizes the increase in the number and type of employees needed for full implementation of the BLIP. The area requiring the greatest labor increase is for field and maintenance workers. Table 2-4, *Proposed Daily Peak Landfill Equipment Operation*, depicts the change in the type and number of equipment needed for future waste processing volumes. The number of on-site artificial light sources, which are primarily needed to support the acceptance of waste during non-daylight hours, will also be increased (see Section 2.0, *Environmental Setting*, for a breakdown of existing employee and equipment amounts).

Table 2-3
Proposed Daily Personnel

Job Category	Existing Personnel	Proposed Personnel	Increase From Existing Conditions
Landfill Operations/Management	10	16	6
Construction and Maintenance	5	7	2
Litter Control	4	6	2
Environmental Monitoring/Remediation	2	4	2
Compost Operation	0	2	2
Traffic Direction	3	4	1
Waste Recycling	2	2	0
Waste Inspection/HHW Management	1	2	1
TOTAL	27	43	16

Table 2-4
Proposed Daily Peak Landfill Equipment

Equipment Type	Baseline/Existing Equipment	Additional Equipment Needed for the Project
Compactor	2	0
Scraper	7	3
Dump truck	2	0
Dozer	6	0
Loader	1	1
Excavator	2	0
Motor Grader	3	0
Water Truck	3	1
Back Hoe	2	0
Water Pump	-	2
Rock Crusher	-	1
Forklift	1	1
Grinder	-	1
Trommel/Screener	-	1
Compost Turner	-	1
Landfill Tipper	-	1
TOTAL	29	13

Landfill Closure

Landfill closure will eventually occur once a landfill or a portion of it reaches capacity and is no longer accepting waste. Closure is the process during which a landfill or disposal site, or a portion thereof (e.g., waste management unit, as defined in Title 27, California Code of Regulations (27 CCR) §20164), is no longer receiving waste and is being prepared for post-closure maintenance according to an approved plan and construction schedule. Post-closure maintenance includes all activities undertaken at a closed waste management unit to maintain the integrity of containment features, and to monitor compliance with applicable performance standards. In accordance with 27 CCR, all operators of Class II and Class III municipal solid waste landfill facilities must prepare and file a preliminary closure plan, a post-closure maintenance plan, partial final, or a final closure plan and post-closure maintenance plan at time of filing for a permit or revisions of project or permit review or renewal. A Preliminary Closure and Post-closure Maintenance Plan (PCPMP) for the Badlands Landfill was prepared and filed in 2016 for the current landfill operation. The PCPMP covers only the Phase 1 area and calls for a final closure of the landfill as a single unit, which was projected to occur in 2025 when the existing 150-acre refuse footprint reaches capacity. A final closure and post-closure maintenance plan is required to be prepared prior to actual termination of disposal operation and implemented within 30 days of receipt of the last load of refuse within the landfill phase being closed.

In permitting the BLIP, a new PCPMP will be required, in compliance with Title 27. In summary, landfill closure and post-closure maintenance plans address the following mandatory areas:

- Final cover construction and maintenance
- Landfill slope stability and maintenance
- Drainage control and stormwater protection
- Leachate collection
- Landfill gas collection and disposal/conversion

Federal Subtitle D and CCR Title 23, §21090(a) and (b) prescriptive final cover is a layered cap system, consisting primarily of a foundation layer, a low permeability clay layer, and a vegetative top layer. Conventional landfill cover system designs use barrier layers consisting of materials with low hydraulic conductivity (e.g., clay, geosynthetic clay liners, or geomembranes) to minimize the percolation of water from the cover to the waste. Specifically, Subtitle D requires that the final cover system must have a permeability less than or equal to that of the bottom liner, or a permeability no greater than 1×10^{-5} cm/s, whichever is less.

To avoid the problem of desiccation within the low permeability clay layer of the prescriptive final cover and to take advantage of the Badlands Landfill's hydrologic conditions, the BLIP proposes an Evapotranspiration (ET) Landfill Cover System, or simply, a monolithic cover, that would achieve or exceed the required performance of the Subtitle D prescriptive cover. In contrast to the prescriptive cover, ET cover systems use the hydrological processes (water balance components) at a site, which include the soil's water storage capacity, precipitation, surface runoff, evapotranspiration, and infiltration, to minimize percolation. In technical terms, these cover systems are based on the unsaturated flow characteristics that are rendered by soil properties (i.e., soil texture resulting from a special blend of different soils) to store water until it is either transpired through vegetation or evaporated from the cover surface.

The final topographic configuration of the landfill would be defined by slope stability considerations and minimum gradients for landfill settlement and adequate drainage. Side slopes are typically benched, and the top deck of the landfill maintained at a minimum of 5% to allow for settlement and provide for surface drainage. Landfill surface runoff control is designed to handle 100 year, 24 hours storms and uses berms, channels, ditches, etc., to minimize slope erosion and eventually divert the runoff to retention basins.

Figure 2-10 shows a final cover design:

- 1-foot intermediate (interim) cover layer (bottom)
- 3-foot or greater fine-grained vegetative layer (top)

Detailed final cover construction specifications will be developed in coordination with the LEA, CalRecycle, and SARWQCB. In addition, the cover contractor would be required to conduct testing on the selected soil blending and moisture conditioning methods to ensure that specifications are met, prior to actual placement of the final cover. Indigenous ground cover vegetation and, where appropriate or when required for biological mitigation, Riversidian Sage Scrub/Chaparral/Sugarbush Sage Scrub vegetation may be planted on the final cover.

Post-Closure Maintenance

Post-closure activities primarily involve the inspection and repair of the landfill, assuring that containment and monitoring systems retain their integrity and that wildland fire hazard is minimized. Post-closure activities will perform the standard duties stipulated in CCR Title 27, §21090(c) and cover the following main landfill features:

- Final cover
- Side slopes and top deck
- Vegetation
- Drainage structures
- Stormwater protection structures
- Leachate Collection and Monitoring System
- Landfill Gas Collection, Monitoring, Disposal, and Recovery System
- Groundwater Monitoring System

An appropriate number of moisture monitoring stations will be strategically placed in the cover system. These moisture probes would be assessed periodically, as approved by the regulators, for excessive infiltration.

Potential Post-Closure Uses

The common land use for a closed landfill is open space, which is most compatible with the required post-closure activities. However, stabilized landfill units/regions and non-disposal areas can also accommodate other beneficial uses, such as habitat restoration, wind and/or solar energy farm, or a waste conversion facility. These uses will be analyzed further if proposed in the future.

Subsequent Discretionary Actions

The proposed Project may be required to obtain and/or update the following permits and/or approvals from the agency identified:

- MND for EA No. 2017-03 (*County of Riverside*)
- Solid Waste Facility Permit, Report of Compost Site Information (*Concurrence by the CalRecycle; Issuance by Riverside County Environmental Health Department, Local Enforcement Agency*)
- Waste Discharge Requirements (*Santa Ana Regional Water Quality Control Board*)
- National Pollutant Discharge Elimination System Permit (*State Water Resources Control Board*)
- Hazardous Waste Spill Contingency Plan (*County of Riverside Environmental Health Department, Hazardous Materials Branch*)
- Permits to Construct and Operate (*South Coast Air Quality Management District*)
- Hazardous Materials Generator Permit/EPA Identification Number (*Department of Toxic Substances Control, California Environmental Protection Agency*)
- Permit by Rule or Operating Permit (*Department of Toxic Substances Control, California Environmental Protection Agency*)
- 404 Clean Water Act Permit (*USACE*)
- 401 Water Quality Certification (*Santa Ana Regional Water Quality Control Board*)
- 1602 Streambed Alteration Agreement (*California Department of Fish and Game*)
- Consistency with Western Riverside County Multiple Species Habitat Conservation Plan (*Western Riverside County Regional Conservation Authority*)
- Encroachment Permit(s) and/or Right-of-Way Vacation Permit (*Riverside County Transportation Department*)
- Compliance with Rule 1133, Rule 1133.1, Rule 1133.3, Rule 1157 Permits, and other applicable AQMD rules/permits (*South Coast Air Quality Management District*)

Chapter 3

Environmental Checklist

1	Project Title:	Badlands Landfill Integrated Project
2	Lead Agency Name:	County of Riverside
3	Contact Person/Phone Number:	Kinika Hesterly, Urban/Regional Planner IV (951) 486-3200
4	Project Location:	Badlands Landfill 31125 Ironwood Avenue Moreno Valley, CA 92555
5	Project Sponsor's Name/Address:	Department of Waste Resources 14310 Frederick Street Moreno Valley, CA 92553
6	General Plan Designation:	Public Facilities [PF]
7	Zoning:	Controlled Development [W-2]

Environmental Factors Potentially Affected

The environmental factors checked below (x) would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Recreation | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Transportation | <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Wildfire | |

Determination

On the basis of this initial evaluation:

☐ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed Project MAY have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed Project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be address.

☐ I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to the earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Kinika Hesterly
Kinika Hesterly, Urban/Regional Planner IV
Riverside County Department of Waste Resources

4.24.19
Date

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, and then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or ND, pursuant to CEQA Guidelines Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - Earlier Analysis Used. Identify and state where they are available for review.
 - Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). References to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify the significance criteria or threshold, if any, used to evaluate each question; and the mitigation measure identified, if any, to reduce the impact to less than significant.

1. AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Source: Riverside County General Plan: Land Use Element, Scenic Corridors; Sight Line Analysis (see Chapter 5- Exhibits/Figures).

1a. Have a substantial adverse effect on a scenic vista?

Scenic vistas are described by the General Plan as points, accessible to the general public, that provide a view of the countryside. The Project site is located in the upper portion of the San Timoteo Badlands area, which generally exhibits an extensive pattern of dramatic and rugged mountainous terrain. The on-site topography is typical of the Badlands, consisting of many small ridges and relatively steep, eroded hillsides dissected by complex drainage channels. The highest ridge, dividing the San Jacinto River and San Timoteo Canyon watersheds, trends generally from west to east and southeast and traverses the northeast corner of the Project site. Smaller ridges, which are separated by drainage channels, branch to the north and south of this major ridge. These smaller ridges are further dissected in a complex pattern of steep slopes facing nearly every direction. Deep and narrow north-south running canyons are the predominant land form on the Project site.

According to the General Plan, the Badlands Landfill property is not located within a scenic highway corridor. Scenic highway corridors are designated in areas where scenic vistas and scenic resources have been identified. Scenic resources are described as areas with prominent or unusual features of the landscape and the landfill site is not considered unusual or prominent but rather a continuation of the terrain and topography of the Badlands area.

The Project proposes to expand the existing disposal area, add new stockpiles areas, water quality and percolation basins, ancillary and waste diversion activities such as composting. The expanded disposal

areas will be covered daily with natural colored tarps, similar in appearance to the surrounding hills, or with soil generated from excavation that occurs at the site. Stockpiles will consist of the natural material from the site which will blend in with the terrain in the area. Steep slopes and rugged terrain will help shield the Project site from the general public and, furthermore, all components of the Project are required to comply with the existing permitted height restriction of the landfill – 2,460 feet. This will make the Project components consistent with any perceived existing height related visual impacts. Additionally, the Project development proposes to move east, away from the nearest residences located approximately one mile away from the existing landfill operations. In addition to existing ridgelines and terrain shielding these residents from views of the landfill operation, the increase in distance from residents to the expanded landfill operations will only serve to further reduce any perceived adverse visual impacts.

A Sight Line Analysis (see Chapter 5- Exhibits/Figures) was created to demonstrate a variety of views that could be experienced by the public as a result of the landfill expansion proposed by the Project. Views of the existing landfill, and the proposed expansion, demonstrated on the exhibit were from the perspective of motorists traveling along Highway 60. As indicated by Cross Section A-A of the exhibit (located west of Theodore Street), views from this perspective will show only the existing fill plan of the landfill - the landfill expansion proposed by the Project cannot be seen from this location. Moving east approximately 960 feet provides more unobstructed views of the ultimate landfill expansion proposed by the Project, as indicated by Cross Section B-B. This line-of-sight perspective, however, is located at a distance over 1.3 miles from the landfill and a majority of those that would notice this view would only do so temporarily as passing motorists. Traveling further along, landfill views would be completely out of sight in many areas due to the barriers created by the existing steep and rugged terrain known as the Badlands (see Cross Sections C-C and D-D). Finally, the line-of-sight locations shown by Cross Sections E-E and F-F are in areas bordered by Badlands on the north and south. These views could be experienced by traveling motorists momentarily due to the presence of valleys within the Badlands providing views of the proposed landfill expansion. Additionally, residents that may be located within the view shed of the landfill expansion will be a mile or more away and could experience landfill expansion views gradually over time as the need to construct additional landfill expansion phases arises. The gradual nature of construction, distance of the landfill construction moving away from local residents, as well as the landfill best practices of covering the waste daily, will help minimize perceived impacts that could occur because of the landfill expansion.

Lastly, the Project site is designated to be used for public facilities and has been used to operate the Badlands Landfill since 1966. Therefore, the Project is a reasonable continuation of the landfill's development and is consistent with the intended use of the property. Consistency with existing height restrictions at the landfill, blending with the topography of the area, siting within County-owned property currently utilized for the operation of the active Badlands Landfill which provides essential disposal services for the region, and being located outside of a designated scenic highway corridor, demonstrate that the Project will not have a substantial adverse effect on a scenic vista.

FINDING: The impact will be less than significant.

1b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The nearest highway to the site, State Highway 60, is not designated a scenic highway (General Plan, Scenic Highways). The project will not damage scenic resources in a scenic highway corridor.

FINDING: There will be no impact.

1c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The existing character of the site consists of activities harmonious with the operation of an active landfill. Properties immediately adjacent to the landfill site are vacant open space, including conservation property. The general area is characterized by the rugged terrain, steep slopes and ridgelines of the Badlands region. The Project proposes the expansion of landfill activities such as waste disposal, waste diversion, and other ancillary activities in order to accommodate the growing need for these services in the region. The nearest residences are located approximately one mile away from the landfill operation and views of the landfill are shielded from these residences by existing ridgelines and steep terrain. Additionally, a majority of the expanded landfill operations will be developed to the east of the existing disposal area, further away from the existing residents. As indicated by the Sight Line Analysis exhibit and described in the response to item 1a. above, passing motorists may notice the landfill expansion but this will occur momentarily while traveling along the 60 freeway. Lastly, the Project merely proposes the continued development of the landfill which is compatible with the existing character and quality of public views of the site and its surroundings.

FINDING: The impact will be less than significant.

1d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The landfill site is secluded and views are limited due to buffering from topography and most of what can be seen would appear similar to the surrounding landscape. Nighttime lighting is feasible with evening disposal and maintenance; however, this already occurs when needed for maintenance and operational activities. New disposal areas will be constructed in stages and will occur east of the existing landfill disposal area, which will be further away from existing residences. Further, new disposal areas will be constructed after the previous stage reaches capacity. This means the need for lighting will be consistent with existing operations and will not grow as the active disposal area moves. Also, there is no change proposed to the hours of operation for the Project. Lighting needs will be consistent with the current landfill operation. According to Riverside County GIS, the Project is located within Zone B (within 45 miles) of the Mt. Palomar Observatory. RCDWR is required to comply with Riverside County Ordinance No. 655, Regulating Light Pollution, to limit light spillage that may interfere with the operations of the Mt. Palomar Observatory. Compliance with an ordinance is not considered unique mitigation for the purposes of CEQA, however, to reduce the potential for creating substantial light or glare, all installed or portable lighting will be shielded and directed downward. With this, the Project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

FINDING: The impact will be less than significant with mitigation.

Mitigation Measures

A-1 All installed or portable lighting shall be shielded and directed downward.

2. AGRICULTURE AND FORESTRY RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC §12220(g)), timberland (as defined by PRC §4526), or timberland zoned Timberland Production (as defined by Government Code §51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sources: Riverside County General Plan: Multipurpose Open Space Element, Agricultural Resources; Riverside County Geographic Information System (RCGIS).

2a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The landfill property is not designated prime or unique farmland, nor farmland of statewide importance. The property and surroundings are made up of rugged terrain and slopes that do not support soils for farmland. The property is designated as Urban-Built-Up Land in the RCGIS and has been utilized to operate the Badlands Landfill since 1966. No farming occurs at the site and farming is not proposed in the Project. The Project proposes to expand the landfill operation within the existing landfill property boundaries.

FINDING: There will be no impact.

2b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?

The Project site is not located within an agricultural zone or preserve according to the Riverside County GIS. Williamson Act contracts only apply to land within an agricultural preserve.

FINDING: There will be no impact.

2c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC §12220(g)), timberland (as defined by PRC §4526), or timberland zoned Timberland Production (as defined by Government Code §51104(g))?

The Project site is not located within a zoning classification for forest land or timberland.

FINDING: There will be no impact.

2d. Result in the loss of forest land or conversion of forest land to non-forest use?

The Project site is not located in forest land and Project activities will not convert forest land to a non-forest use.

FINDING: There will be no impact.

2e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The existing environment consists of a landfill surrounded by rugged terrain, steep slopes, and ridgelines. The Project involves the expansion of the Badlands Landfill operation. The Project site is not located in forest land or Farmland; as such, Project activities will not involve the conversion of Farmland or forest land to a non-agricultural or non-forest use.

FINDING: There will be no impact.

3. AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in a cumulative considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sources: Project Materials; Riverside County General Plan; Air Quality and Global Climate Change Impact Analysis (i.e. Air Quality Report), Ganddini Group, Inc., dated January 9, 2019.

3a.-3b. Conflict with or obstruct implementation of the applicable air quality plan? Result in a cumulative considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Air quality impacts associated with the existing permitted landfill operations and site plan, which includes waste disposal, site maintenance, diversion activities, and other ancillary uses, as addressed in both JTD No. 7 along with SWFP 33-AA-0006, are baseline emissions that have been thoroughly analyzed, assessed, and mitigated for in previously certified CEQA documents for the landfill (EA37161, EA39813, and EA2010-01). Therefore, only emissions associated with the proposed Project were included in the Air Quality Report prepared by the Ganddini Group (2019). The proposed Project includes a 500 tpd increase in the maximum daily disposal capacity of the landfill, adding an organics facility to process compost, mulch, soil amendments, etc. (up to 300 tpd), expanding the refuse footprint by approximately 250 acres, adding stormwater detention/percolation basins, and two (2) stockpile areas.

Construction of the expanded waste disposal area and stockpiles will generate new emissions as discussed in this section of the EA. Emissions relating to the site operations in the new disposal areas are changing minimally. This is because landfill disposal operations will merely be shifted to the new disposal area after capacity in the existing disposal area is reached. New emissions will occur as a result of the minor increase in daily permitted tonnage (500 tpd) due to additional transfer trucks using the landfill (the Project does not increase the permitted amount of vehicles), as well as new emissions from the organics processing area (both from processing and composting).

Daily air emissions thresholds are set by the SCAQMD, the regulatory agency responsible for reducing emissions from stationary, mobile, and indirect sources within the Project area. SCAQMD regulations are

primarily established to ensure that the ambient air meets federal and state air quality standards. The 2016 AQMP is a regional blueprint for achieving the federal air quality standards and healthful air.

Federal - United States EPA

The United States EPA is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The NAAQS pollutants were identified using medical evidence. As part of its enforcement responsibilities, the EPA requires each State with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The SIP must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market based programs within the timeframe identified in the SIP.

State – California Air Resources Board

The California Air Resources Board (CARB), which is a part of the EPA is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. The CAAQS for criteria pollutants are provided in the Air Quality Analysis and the table below. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g. hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

Regional - South Coast Air Basin

The landfill is located within the northwestern portion of Riverside County, which is part of the SCAB that includes all of Orange County as well as the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SCAB is located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the SCAB is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter. The landfill is located toward the northeast portion of the SCAB near the foot of the San Bernardino Mountains, which define the eastern boundary of the SCAB.

Table 3-1
State and Federal Criteria Pollutant Standards

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Ozone (O ₃)	0.09 ppm/1-hour 0.07 ppm/8-hour	0.070 ppm/8-hour	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage.
Carbon Monoxide (CO)	20.0 ppm/1-hour 9.0 ppm/8-hour	35.0 ppm/1-hour 9.0 ppm/8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO ₂)	0.18 ppm/1-hour 0.03 ppm/annual	100 ppm/1-hour 0.053 ppm/annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO ₂)	0.25 ppm/1-hour 0.04 ppm/24-hour	75 ppb/1-hour	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM ₁₀)	50 µg/m ³ /24-hour 20 µg/m ³ /annual	150 µg/m ³ /24-hour	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in elderly.
Suspended Particulate Matter (PM _{2.5})	12 µg/m ³ / annual	35 µg/m ³ /24-hour 12 µg/m ³ /annual	
Sulfates	25 µg/m ³ /24-hour	No Federal Standards	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) property damage.
Lead	1.5 µg/m ³ /30-day	1.5 µg/m ³ /3- month rolling	(a) Learning disabilities; (b) Impairment of blood formation and nerve conduction.
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer-visibility of 10 miles or more due to particles when humidity is less than 70 percent.	No Federal Standards	Visibility impairment on days when relative humidity is less than 70 percent.

Table 3-2
South Coast Air Basin Attainment Status

Pollutant	State Status ¹	National Status ²
Ozone	Nonattainment	Nonattainment (Extreme)
Carbon monoxide	Attainment	Attainment/Unclassified
Nitrogen dioxide	Attainment	Attainment/Unclassified
Sulfur dioxide	Attainment	Attainment/Unclassified
PM10	Nonattainment	Attainment (Maintenance)
PM2.5	Nonattainment	Nonattainment (Moderate)

Notes:

1. Source of State status: California Air Resources Board June 2015.
2. Source of National status: <https://www.epa.gov/green-book> and CARB 2015.

Regional - South Coast Air Quality Management District

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the SCAB. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies.

Under federal and state law, the SCAQMD is under legal obligation to enforce air pollution regulations. These regulations are primarily meant to ensure that the ambient air meets federal and state air quality standards. SCAQMD also has broad authority to regulate toxic and hazardous air emissions, and these regulations are enforced in the same manner as those that pertain to the ambient air quality standards.

The SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. The SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. On June 30, 2016, the SCAQMD released its Draft 2016 AQMP. The AQMP was approved by CARB on March 23, 2017.

The incremental regional air quality impact of an individual Project is generally very small and difficult to measure. Therefore, the SCAQMD has developed significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a Project is not quantifiable on a regional scale. These thresholds are provided in Table 3-3 below.

Table 3-3
SCAQMD Air Quality Significance Thresholds

Pollutant	Mass Daily Thresholds	
	Construction (lbs/day)	Operation (lbs/day)
NO _x	100	55
VOC	75	55
PM ₁₀	150	150
PM _{2.5}	55	55
SO ₂	150	150
CO	550	550
Lead	3	3

Local – County of Riverside
Riverside County General Plan

Local jurisdictions, such as the County of Riverside, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the County is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. For this Project, the County of Riverside General Plan considers the AQMP in its Air Quality Element.

The Project site is designated as Public Facilities land use designation in the Riverside County General Plan. The proposed landfill expansion remains consistent with the land use designation and would not require a General Plan Amendment or zone change. Additionally, the Air Quality Element of the County of Riverside General Plan summarizes air quality issues in the Basin, the AQMP and programs administered by federal, state, and special purpose agencies, and establishes goals and policies to improve air quality. The goals and policies in the Air Quality Element that will be addressed with implementation of this Project include:

AQ 2.2 Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible. This is accomplished with the siting of the facility due to the topography acting as a natural barrier to the few residences near the Project.

AQ 4.9 Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites. Daily watering via water trucks will continue to be implemented at the landfill.

AQ 5.1 Utilize source reduction, recycling and other appropriate measures to reduce the amount of solid waste disposed of in landfills. This will continue to be accomplished with existing, expanded, and new waste diversion activities.

The proposed Project would not result in an inconsistency with the AQMP as a result of implementation.

Project Impacts – Construction

Construction activities associated with the proposed Project have the potential to generate air emissions that could negatively impact air quality. This section outlines the Project construction and its associated air quality impacts.

The Project proposes to excavate/grade 285 acres to the south and east of the existing 150 acre disposal area. The excavation is proposed to occur in approximately seventeen stages (ranging from 11 to 26 acres in each stage), which will be followed by the installation of a liner system to be used for the expanded refuse disposal area. Construction is anticipated to occur over a 50 year period. Ultimately, the lined refuse disposal area will be increased by 246 acres. The Project also includes relocation of the fee booth, Waste Recycling Park area, development of a compost operation, and other ancillary uses and activities within the site as necessary. Two areas to the north and east of the expansion area will be used to stockpile excavated dirt and new water quality and percolation basins will be added.

Construction of the Project's worst-case scenario activities (excavation of the disposal area and liner construction) will occur sequentially (work items will not overlap) and will consist of the following listed areas:

- 1) Mobilization. Mobilization will occur for approximately ten (10) days and two (2) flatbed trucks will be utilized to haul equipment to the site. Work will occur for approximately four (4) hours per day.
- 2) Develop Water/Install BMPs. This work item includes the initial clearance and pump setup to get water to the Project site. This will take approximately 10 days and involve 8 workers. Work equipment consists of 1-backhoe, 2-water pumps, 1-loader, 1-tracked bulldozer and 1-water truck.
- 3) Demolition and Crushing. This work item includes the demolition of drainage channels, riprap, asphalt roads, concrete materials and site preparation. Removal of these items takes approximately 20 days and subsequent crushing will be 5 days. This work will involve 7 workers. Work equipment consists of 1-tracked excavator, 2-dump trucks, 1-water truck, 1-wheeled loader and 1-rock crusher.
- 4) Earthwork, Liner Subgrade, and Stockpile Construction. This work includes excavation, dirt hauling, Protective Cover Soil (PCS) installation, and engineered fill and will occur for approximately 410 days with 20 workers. Work equipment includes: 8-wheeled scrapers, 3-tracked bulldozers, 3-water trucks, and 1-wheeled motor grader. This equipment will be used for approximately 8 hours per day.
- 5) Liner System Installation. This work will occur for approximately 135 days with 10 workers. Work equipment includes: 1-wheeled loader, 1-wheeled forklift, 1-dump truck, and 1-water truck, and will be used between 4 and 8 hours per day.
- 6) Compost Facility Installation. This work involves the development of a compost area including grading and site development (pad development and equipment assembly) and will occur for approximately 25 days with 8 workers. Development of an ASP or windrow composting operation will utilize the following equipment: 1-wheeled scraper, 1-tracked bulldozer, 1-wheeled motor grader, 1-water truck, 1-concrete truck, and 1-concrete pump. This equipment will be utilized between 4 and 8 hours per day.
- 7) Demobilization. Removing the equipment used during construction will take approximately 4 hours per day for 10 days. Two (2) flatbed trucks will be utilized to haul equipment off of the Project site.

During Project construction, current soil management and site maintenance activities, as well as improvement Projects, will cease at the landfill, and baseline/existing equipment, where appropriate, shall be redirected to the construction of the proposed Project. Therefore, the emissions from heavy equipment

avoided as a result of halting the previously mentioned landfill activities, will be used for off-set credits when determining air emission results. Engines better than Tier 0 were modeled in CalEEMod when determining the off-set emission credits for the existing fleet. Off-set credits are from 5-wheeled scrapers, 3-tracked bulldozers, 2-water trucks, 2-wheeled motor graders, 2-dump trucks, 1-tracked excavator, and 1-wheeled backhoe. The proposed construction equipment was modeled using Tier 3 final or better engines.

Methodology

Typical emission rates from construction activities were obtained by entering information specific to the Project's construction equipment, construction activities, and duration of equipment use into the computer modeling program, CalEEMod Version 2016.3.2. CalEEMod was published by the SCAQMD to calculate air pollutant emissions. Once Project information is added into CalEEMod, the model generates air pollutant emission results. The air pollutant emissions results represent the highest level of emissions generated during each construction phase. This information is used to compare Project air emissions to SCAQMD thresholds of significance, which allows Project impacts to be determined. SCAQMD thresholds of significance are established for criteria pollutants – Reactive Organic Gas/Volatile Organic Compounds (ROG/VOCs), NO_x, Carbon Monoxide (CO), Sulfur Dioxide (SO₂), Particulate Matter (PM)_{2.5} and PM₁₀. If worst-case scenario Project construction-related emissions exceed SCAQMD daily thresholds of significance established for criteria pollutants, then Project emissions would be considered significant and mitigation measures should be incorporated to reduce the emission level. Conversely, if construction-related air pollutant emissions do not exceed SCAQMD daily thresholds, the Project will be considered to have a less than significant impact on criteria pollutants in the region.

Work Item No. 4 (Earthwork, Liner Subgrade, and Stockpile Construction) is the most intense area of construction. A total of approximately 2.4 million cubic yards will be excavated during liner construction over 17 stages, which results in a maximum export of 208,000 cubic yards for the largest 26-acre stage (the stage analyzed as worst-case) to the on-site stockpile areas 1 and/or 2. This stage of construction is anticipated to generate 20,800 hauling trips (using on-road haul trucks with 10 cubic yards capacity) that will travel approximately one mile to the on-site stockpile areas.

Construction-related regional air quality emissions results are provided in Table 3-4 below. Construction-source emissions would not exceed applicable regional thresholds of significance established by the SCAQMD for the most intense construction work item. Note that even without applying off-set credits, the Project emissions would not exceed applicable thresholds of significance.¹⁰ The construction emissions printouts from CalEEMod are provided in Appendix B of the Air Quality Report.

For localized emissions, as shown in Tables 3-7 and 3-8, the Project will also not exceed applicable Localized Significance Thresholds (LSTs) established by the SCAQMD. Therefore, Project construction-source emissions would not conflict with the Basin AQMP.

¹⁰ See subtotal for Work Item 4 on Table 3-4 (in bold with green background).

Table 3-4
Construction-Related Regional Criteria Pollutant Emissions

Activity	Pollutant Emissions (pounds/day)					
	ROG/VOC	NOx	CO	SO ₂	PM10	PM2.5
Items 1&2: Mob./BMPs						
On-Site	0.51	11.34	14.89	0.02	1.27	0.79
Off-Site	0.08	0.35	0.59	0.00	0.17	0.05
Subtotal	0.59	11.69	15.48	0.03	1.44	0.84
Off-Set Equipment	-7.96	-127.57	-136.65	-0.13	-3.71	-2.98
Total	-7.37	-115.88	-121.17	-0.10	-2.27	-2.14
Item 3: Demo/Crushing						
On-Site	0.34	7.40	10.59	0.02	0.89	0.51
Off-Site	0.04	0.14	0.35	0.00	0.10	0.03
Subtotal	0.39	7.53	10.93	0.02	0.99	0.54
Off-Set Equipment	-7.96	-127.57	-136.65	-0.13	-3.71	-2.98
Total	-7.57	-120.04	-125.72	-0.11	-2.72	-2.45
Item 4: Earthwork						
On-Site	3.72	71.99	80.68	0.15	2.78	2.74
Off-Site	0.27	6.26	1.79	0.01	0.44	0.12
Subtotal	4.00	78.25	82.47	0.16	3.23	2.86
Off-Set Equipment	-7.96	-127.57	-136.65	-0.13	-3.71	-2.98
Total	-3.96	-49.32	-54.18	0.04	-0.48	-0.12
Item 5: Liner Install						
On-Site	0.11	2.59	3.50	0.00	0.18	0.18
Off-Site	2.14	1.27	16.55	0.05	5.47	1.47
Subtotal	2.26	3.86	20.05	0.05	5.65	1.65
Off-Set Equipment	-7.96	-127.57	-136.65	-0.13	-3.71	-2.98
Total	-5.70	-123.71	-116.60	-0.07	1.94	-1.33
Item 6i: Compost ASP						
On-Site	0.86	17.08	19.83	0.04	1.17	0.79
Off-Site	0.05	0.11	0.36	0.00	0.12	0.03
Subtotal	0.91	17.19	20.19	0.04	1.30	0.82
Off-Set Equipment	-7.96	-127.57	-136.65	-0.13	-3.71	-2.98
Total	-7.05	-110.38	-116.46	-0.09	-2.41	-2.16
Item 6ii&7: Windrow and Demobilization						
On-Site	0.86	17.08	19.83	0.04	1.17	0.79
Off-Site	0.05	0.29	0.39	0.00	0.13	0.04
Subtotal	0.91	17.37	20.22	0.04	1.31	0.83
Off-Set Equipment	-7.96	-127.57	-136.65	-0.13	-3.71	-2.98
Total	-7.05	-110.20	-116.43	-0.09	-2.40	-2.16
SCAQMD Thresholds	75	100	550	150	150	55
Exceeds Thresholds?	NO	NO	NO	NO	NO	NO

Project Impacts – Operations

Project activities that will result in operational changes include: 1) increased waste disposal activity (500 tpd increase) and, 2) development of an organics processing facility.

A. Increased waste disposal activity (500 tpd increase)

Waste Delivery Vehicles

The Project will increase the maximum daily capacity from 4,500 tpd of refuse to 5,000 tpd. While the Project's proposed increase of 500 tpd may result in additional vehicles to the landfill, the overall existing permitted number of vehicles per day will remain the same at 612.

Regardless, the potential for additional vehicles was analyzed in the Air Quality Report prepared by the Ganddini Group (2019). The AQ Analysis evaluated criteria emissions from an additional 23 waste delivery trucks (transfer trucks), each with an average roundtrip of 17.5 miles. As shown on Table 3-6, the potential emissions associated with the slight increase in waste delivery vehicles is insignificant and does not exceed thresholds of significance.

Landfill Equipment

No additional heavy equipment is required to process the additional waste as it will be merely incorporated into the daily waste cells and processed with the on-going, in-coming waste stream. It will be delivered throughout the day and the processing capacity of the existing equipment is more than adequate to handle the marginal tonnage increase. However, the Project includes usage of a one-tracked landfill tipper as part of the operation. Operation of the landfill tipper was included as part of the Project's on-site equipment emissions, which did not exceed thresholds of significance (see Table 3-6).

B. Organics Operation

Organics Delivery Vehicles

While it is anticipated that most of the organic feedstock will come from existing trips to the landfill, the addition of an organics operation¹¹ may result in an additional seven (7) waste delivery trucks (transfer trucks). While the Project's proposed composting operation may slightly increase vehicles to the landfill, the overall existing permitted number of vehicles per day will remain the same at 612.

The AQ Analysis evaluated criteria emissions from the additional seven (7) truck trips, each with an average roundtrip of 17.5 miles. As shown on Table 3-6, the potential emissions associated with the slight increase in organics delivery vehicles is insignificant and does not exceed thresholds of significance.

Compost Emissions

The proposed Project expansion would add an organics processing operation to produce marketable compost, mulch, and other soil amendment products. Composting processing activities may consist of the windrow method with a permitted daily tonnage of up to 300 tpd, an ASP operation with a permitted

¹¹ The Badlands landfill receives approximately 150-200 tons per day of green waste/organic material, which may be used as feedstock for the proposed composting operation. Since the proposed windrow composting operation will be capped at 300 tpd, the AQ analysis evaluated the potential increase in vehicle emissions associated with the additional 150 tpd for the windrow composting operation (7 transfer trucks).

daily tonnage of up to 150 tpd, or a combination of both, not to exceed 300 tpd of total processed organics.

Because the 300 tpd windrow compost operation will be more impactful than the 150 ton ASP operation (larger operation, not under pressurized emission controls, etc.), only emissions from the proposed windrow operation were modeled in the Air Quality report. Since the proposed ASP facility will be similar to the existing ASP facility located at the West Valley Transfer Station in the City of Fontana, daily emission rates from this facility are discussed in this EA for comparative purposes.

Organics Equipment

Both of the proposed composting activities (ASP and Windrow) require the addition of new equipment to the Project site. New equipment for the organics operations include: 1 grinder, 1 trommel screen, 1 compost turner, and 1 wheeled loader. The on-site equipment emissions were calculated using CalEEMod and modeled at 12 hours per day, although the hours of use are likely to be less than 12 hours per day. As shown on Table 3-6, the potential emissions associated with the new organics equipment does not exceed thresholds of significance.

ASP Compost Operation

A source test was completed in March 2016 for the Gore® Compost System located at the West Valley Transfer Station in Fontana, CA. The source test reported that the Gore® Compost System resulted in an 89.0% reduction in VOC baseline emissions (from 4.25 lbs/ton to 0.468 lbs/ton), and a 99.5% reduction in Ammonia baseline emissions (from 0.46 lbs/ton to 0.0025 lbs/ton). The report for the source test is included in the Appendices.

Table 3-5 lists the daily emissions from the West Valley ASP facility. Since the proposed ASP facility at the Badlands Landfill will be similar in scale and scope as the West Valley ASP facility, these daily emissions are likely to be experienced at the Badlands ASP facility. As shown in Table 3-5, estimated daily emission rates do not exceed thresholds of significance.

Table 3-5
Estimated Daily Emissions for ASP System (lbs/day)

Phase	VOC	NH3
Phase I	26.3	0.12
Phase II	7.1	0.05
Overall	33.3	0.17
SCAQMD Thresholds	55	n/a

Furthermore, since 2000, the Badlands landfill received an average of 150-200 tpd of greenwaste which once placed in the landfill or on slopes for erosion control, is left to naturally decompose. As analyzed in the AQ Report, composting results in an approximate 60 to 92 percent reduction in VOCs compared with natural decay. Therefore, not only does the comparative analysis of ASP emissions identify daily emission rates do not exceed thresholds of significance, implementing the ASP compost system will actually result in a significant reduction in existing VOC emissions¹².

Windrow Compost Operation

VOC emissions from the proposed 300 tpd windrow compost operation were modeled and evaluated in the Air Quality Report, summarized as follows: If the 300 tpd of organics were to decompose

¹² Table 3-6 shows a reduction of approximately 1,900 lbs/day of VOCs for the 300 tpd windrow system. Since the ASP operation is proposed at 150 tpd (half of the windrow), the estimated reduction in VOCs attributable to the ASP operation is approximately 950 tpd.

naturally, it would result in 3,189 pounds of VOC emitted per day (300 tons x 10.63 lbs VOC per ton). Composting results in a 60 percent reduction of VOC emissions; therefore, if the material were composted (through the Project), the emissions would total of 1,275 pounds VOC per day (3,189 pounds minus 1,914 pounds). As shown in Table 3-6, the windrow composting operation would result in the elimination of approximately 1,914 pounds of VOC from entering the South Coast Air Basin through natural decomposition. This approach is valid because VOC is a regional pollutant and the primary disposal methods that currently exist for greenwaste in the SCAB are land application, alternative daily cover or erosion control at landfills, or illegal dumping, all of which result in natural decomposition. Additionally, VOC is of concern because its presence contributes to the formation of ozone in the presence of sunlight and NOx. Therefore, as shown in Table 3-6 the proposed windrow composting operation would not exceed thresholds of significance, and would result in a reduction of VOC, ozone precursors, and ozone in the SCAB.

Table 3-6
Regional Operational Criteria Pollutants Regional Air Emissions

Activity	Pollutant Emissions (pounds/day)						Ammonia
	VOC	NOx	CO	SO2	PM10	PM2.5	
On-Site Equipment Emissions	0.86	16.63	20.04	0.03	0.66	0.66	0.00
Area Sources	3.86	0.00	0.03	0.00	0.00	0.00	0.00
Energy Usage	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Sources	0.19	8.61	1.27	0.02	0.47	0.14	0.00
Windrow Compost Emissions							
-Proposed New (300 tons)	1275.00	0.00	0.00	0.00	0.00	0.00	39.6
VOC offset from composting – reduction of natural decomposition emissions	-3,189.00						
Net Increase Compost Emissions	-1,914.00	0.00	0.00	0.00	0.00	0.00	39.6
Total Emissions	-1,909.09	25.24	21.34	0.06	1.14	0.80	39.6
SCAQMD Thresholds	55	55	550	150	150	55	--
Exceeds Threshold?	NO	NO	NO	NO	NO	NO	--

Note- Only windrow composting emissions were evaluated because the windrow composting method has greater emission generation compared to the ASP method. As such, the greatest potential for emission generation (windrow composting) was evaluated.

RCDWR shall also comply with all applicable SCAQMD Rules including, but not limited to 402 – Nuisance, 403 – Fugitive Dust, 1108 – Cutback Asphalt, 1133, 1133.1, 1133.2, 1133.3 – Composting and Chipping and Grinding Operations.

Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. Compliance with Rule 402 will reduce local air quality and odor impacts to nearby sensitive receptors.

Rule 403 require that fugitive dust be controlled so the presence of dust does not remain visible in the atmosphere beyond the property line of the emission source, and it requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site.

Rule 1108 regulates the VOC content of asphalt used during construction.

Rule 1133 governs chipping and grinding activities and composting operations and details registration and fee requirements with the SCAQMD for all composting that occurs within the SCAQMD's jurisdiction.

Rule 1133.1 governs chipping and grinding activities within the SCAQMD and places limitations on food waste. It also requires that mixed greenwaste be chipped within 48 hours of receipt, excluding holidays. Rule 1133.1 also requires operators to maintain operational records for the prior five year period and shall include daily amounts of greenwaste received, daily weather conditions and moisture content of the piles.

Rule 1133.2 governs co-composting, which is defined as where biosolids and/or manure are mixed with bulking agents to produce compost. Rule 1133.2 requires that all new co-composting activities either occur within an enclosure that has set air flow rates or through development of a compliance plan that demonstrates an overall emission reduction of 80 percent for both ammonia and VOC emissions. Rule 1133.2 also requires that co-composting operations do not result in a measurable increase in background levels of ammonia or VOC, which is required to be verified through regular measurements of the co-composting operations.

Rule 1133.3 governs greenwaste composting operations within the SCAQMD and requires that any active composting that contains more than 10 percent foodwaste is required to be operated with either an emission control system that has an overall control efficiency of at least 80 percent for VOC and ammonia emissions or a control alternative that achieves the same reductions. Rule 1133.3 also requires that each active pile is covered with a minimum of 6 inches of finished compost, requires that water be applied before turning a pile, and is required to limit manure to 20 percent or less of the active compost pile. Rule 1133.3 also requires regular measurements to be taken of the ammonia and VOC emissions from the piles in order to ensure compliance with the 80 percent control efficiency requirements and that records of the source testing of the piles be maintained for a minimum of five years.

In addition to the Project adhering to SCAQMD rules, the Project's operation emissions will not exceed established SCAQMD thresholds of significance for air pollutants, including for additional waste disposal, waste diversion activities, mobile sources, and added organics operation. Based on the analysis provided, and as indicated in the preceding analysis, the Project will not conflict with or obstruct implementation of the 2016 AQMP, nor will the Project result in a cumulative considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard.

FINDING: The impact will be less than significant.

3c. Expose sensitive receptors to substantial pollutant concentrations?

For purposes of CEQA, the SCAQMD considers a sensitive receptor to be a residence, hospital, convalescent facility, school, child care center, athletic facility, and playground. The nearest off-site sensitive receptor to the Project site is the RV Park (Fisherman's Retreat) located approximately 0.73 miles (~1,175 meters) northeast of the proposed Project's construction activities.

Potential activities that may emit odors during construction include the application of materials such as asphalt pavement, paints and solvents and from diesel equipment emissions. The objectionable odors that

may be produced during the construction process are short-term in nature and the odor emissions are expected to cease upon drying or hardening of the odor producing materials. Due to the short-term nature, distance to the nearby sensitive receptors, and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the proposed Project. Diesel exhaust and VOCs would be emitted during construction of the project, which are objectionable to some; however, emissions would disperse rapidly from the Project site and should not reach an objectionable or substantial level at the nearest sensitive receptors. Also, during Project operations on-site emissions will not exceed SCAQMD LSTs for sensitive receptors¹³. The Project will not expose sensitive receptors to substantial pollutant concentrations.

Table 3-7

Local Construction Emissions at the Nearest Sensitive Receptors

Phase	On-Site Pollutant Emissions (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Work Items 1 & 2: Mobilization and Install BMPs	11.34	14.89	1.27	0.79
Work Item 3: Demo/Crushing	7.40	10.59	0.89	0.51
Work Item 4: Earthwork	71.99	80.68	2.78	2.74
Work Item 5: Liner Install	2.59	3.50	0.18	0.18
Work Item 6i: Windrow Composting Install	17.08	19.83	1.17	0.79
Work Item 6ii & 7: ASP Composting Install and Demobilization	17.08	19.83	1.17	0.79
SCAQMD Threshold for 500 meters (1,640 feet)	1,072	29,256	207	105
Exceeds Threshold?	NO	NO	NO	NO

Table 3-8

Local Operational Emissions at the Nearest Sensitive Receptors

On-Site Emission Source	On-Site Pollutant Emissions (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
On-Site Equipment	16.63	20.04	0.66	0.66
Area Sources	0.00	0.03	0.00	0.00
On-Site Vehicle Emissions	0.86	0.13	0.05	0.01
Windrow Compost Emissions	0.00	0.00	0.00	0.00
Total Emissions	17.49	20.20	0.71	0.68
SCAQMD Threshold for 500 meters (1,640 feet)	1,072	29,256	50	26
Exceeds Threshold?	NO	NO	NO	NO

FINDING: The impact will be less than significant.

3d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The BLIP proposes an expanded waste disposal area, increased waste diversion activities including composting, environmental monitoring systems, drainage and stormwater pollution prevention BMPs, and

¹³ LSTs were calculated using CalEEMod and SCAQMD's look up tables.

other ancillary landfill activities. Odors at a landfill could be considered a serious public nuisance if not properly controlled. Objectionable odors can be caused by increased disposal, loads mainly consisting of MSW, agricultural material, dead animals, and other objectionable odor producers. Commercial loads with dead animals are buried immediately under the daily lift or in a separate cell, and other more odoriferous loads will be managed similarly. Although these are practices in place for the sake of being proactive, there are no documented odor complaints as offensive odors are not common at the Badlands Landfill due to its location, the region's arid climate, and the composition of the waste stream buried. Regular odor control measures include continual compaction of waste and routine placement of daily cover. Fugitive LFG emissions through the landfill cover could also add to the landfill odors; however, these emissions are easily controlled by timely placement of daily and intermediate cover, as well as timely repair of cover damage from surface erosion or vector activities. The landfill gas collection system uses a vacuum which reduces the amount of fugitive LFG emissions. Site personnel will be trained to assess organic waste materials upon receipt, for odor generation potential, and manage this material in a manner that minimizes offensive odors.

Composting could generate objectionable odors; however, due to the remote location of the landfill and its distance from the nearest residence, as well as the odor-minimizing operation (i.e. limited use of manure, covering of food waste; the ASP system is under vacuum and cover, etc.), composting operations are not expected to generate objectionable odors. It's important to note that the landfill already disposes of significant quantities of organic material without receiving odor complaints. The proposed organics operation (composting/mulch) merely changes the processing of organic material already coming to the site from disposal/burial to compost/re-use, which will not significantly increase the amount and type of odors.

In order to ensure that composting operations will not create objectionable odors, during the SWFP application process, RCDWR would be required to conform to the odor requirements provided in California Code of Regulations, Title 14, Chapter 3.1, Compostable Materials Handling Operations and Facilities Regulatory Requirements, which provides specific odor management requirements for compost facilities. In order to conform to Title 14, Chapter 3.1, RCDWR will prepare an Odor Impact Minimization Plan (OIMP) for review and approval by the LEA and CalRecycle. The OIMP includes the following components:

- Description of the meteorological conditions effecting migration of odors and/or transport of odor-causing material off-site with consideration of effects related to seasonal variations;
- Complaint response protocol;
- Design considerations to minimize odors including special efforts for rapid processing of food wastes, methods and degrees of aeration, methods to maintain aerobic conditions through control of moisture content, measures to control airborne emissions including detailed policy and procedures regarding the receipt and processing of any liquids, water quality management, in addition to considerations regarding equipment reliability, personal training, weather event impacts, and utility service interruptions;
- Operational procedures to minimize odors with detailed methods to reduce potential for odor generation by stagnation of feedstock, drainage controls, storage practices, and finally contingency plans.

Furthermore, RCDWR will comply with the County's BMPs for processing of organic materials (see Appendices). The BMPs were specifically developed to address odors and vectors potentially associated with processing of food waste, manure and other wet or odiferous feedstocks. Acceptable feedstock materials include: greenwaste, agricultural materials, food material, manure, paper products, and digestate as outlined in Title 14 CCR. BMPs apply to acceptable feedstock, additives, amendments, active composting, compost curing, OIMP implementation, facility maintenance, and feedstock preparation.

While many of the BMPs listed will apply to the Project, following are measures specifically developed for feedstock preparation:

- **Feedstock Preparation**
- Foodwaste and manure shall be covered with ground greenwaste, or unscreened or screened compost within 3 hours of receipt and incorporated into an active pile within 48 hours of receipt to minimize odor generation and attraction to vectors.
- Incorporate wet or odiferous feedstock loads directly into actively composting windrows or aerated static piles, where practical.
- Mix odiferous feedstock materials with appropriate amount of bulking agent, high carbon amendments, or finished compost and then moisture conditioned to reduce odor releases.
- Manure shall not exceed 20% by volume.
- Grinding of odiferous feedstock materials should be accompanied with the application of misting water or other odor control measures approved by the regulating agencies.
- Feedstock composition must be adjusted to achieve a high carbon to nitrogen ratio (30:1), proper moisture contents, and good porosity, all of which are conducive to aerobic decomposition and odor minimization.
- Reduce material mixing activities in unfavorable weather conditions (stagnant air or windy) to minimize odor generation.

The Project site is situated in a remote area surrounded by canyons which serve to prevent emissions, such as those leading to odors, from adversely affecting a substantial number of people. Additionally, through on-going operational odor controls and compliance with CCR Title 14, applicable SCAQMD regulations governing composting, and the County's BMPs, potential odors associated with the Project will be less than significant.

FINDING: The impact will be less than significant.

4. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Services?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Services?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sources: General Biological Assessment and WRCMSHCP Compliance Report by the Riverside County Habitat Conservation Agency (RCHCA), dated January 16, 2019; Determination of Biologically Equivalent or Superior Preservation (DBESP), by RCHCA, dated July 30, 2018, last revised March 29, 2019; Delineation of State and Federal Jurisdictional Waters (JD), by Michael Baker International, dated July 2016 (revised March 2018); Joint Project Review (JPR) 18-08-24-01, dated January 30, 2019.

4a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Services?

A General Biological Assessment Report (RCHCA, 2019) was conducted for this Project for the purpose of providing a biological analysis of all sensitive biological resources present within the area and a general overview of biological functions and values of the Project study area. The report also analyzed the Project's compliance with the western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Details about the MSHCP Criteria cells and conservation goals can be found in section 4(f).

Project Site Conditions

The Project study area is situated in the San Timoteo Badlands. The area within and immediately surrounding the study site can be characterized by very steep and rugged terrain. The majority of the proposed expansion site has remained undeveloped. Evidence of past disturbances can be found throughout the expansion area and include off road vehicle trails and scattered debris. A series of unimproved roads exist within the southern portion of the Landfill boundaries. The roads are in various forms of repair with some being overgrown with vegetation and other modest condition do to the use by off highway vehicles.

The proposed Project will utilize some of the existing roads to gain access into portions of the Project area particularly in the eastern portion of the Project site. Within the eastern canyons of the Project site, existing access roads (jeep trails) typically follow the drainage/riverine resources. Most of the Project's proposed disturbance within this area was shifted approximately 15-20 feet west of the drainage features to avoid impacts. Areas where the proposed access road would result in impacts were included in the impact acreage for the Project. For areas where the proposed impacts are within close proximity to, but not impacting a riverine resource, standard measures will be deployed to protect the resource- delineated and marked with stakes, fencing, or other appropriate identifying markers (see Mitigation Measure Bio-4). Other typical BMPs will be deployed as needed (standard construction BMPs).

The northern-most portion of the proposed expansion site was previously utilized as an off road motorcycle park. Historical grading associated with motorcycle trails and improvised roads still exist within the vicinity of the motorcycle park. Along with historical disturbances, the RCDWR maintains a road leading to the motorcycle park area in order to maintain access to a monitoring well that is located in the area.

An approximately 45 acre portion of the expansion area has already been disturbed and is currently functioning as a borrow area for current landfill operations. The borrow area was evaluated for biological resources in the past and was not examined as a part of this analysis.

Included in this analysis is an area along Ironwood Avenue, which is the main landfill access road. Biological resource information was collected for this area. The area immediately east of Ironwood Avenue is extremely steep and populated by sugar bush scrub and Riversidean sage scrub species. The western portion of the slope along Ironwood Avenue has been partially graded to accommodate site drainage. The eastern slope along this area was subject to a habitat restoration project which established sugar bush scrub along the slopes. A portion of the area west of Ironwood Avenue was previously graded and re-contoured. Riversidean sage scrub exists in areas that were not graded. A significant amount of Russian thistle (*Salsola tragus*) can be found along both sides of Ironwood Avenue.

The higher elevation areas within the larger eastern portion of the study area are sparsely vegetated by sugar bush (*Rhus ovata*) and toyon (*Heteromeles arbutifolia*) shrubs and non-native grasses. Flatter portions within the lower elevation areas in the survey limits consist of mostly non-native grasslands and small patches of Riversidean sage scrub. Sugar bush was observed to be the dominant native species within lower

elevation slopes. Non-native grasses along with Russian thistle and stinknet (*Oncosiphon piluliferum*) are found in vast quantities throughout the proposed expansion area. Russian thistle is the most dominant species found within the survey area.

According to the jurisdictional delineation and observations made in the field, the site does not contain wetlands. No features were found within the proposed expansion area that could potentially pond water. Non-wetland waters of the U.S., as well as waters of the State, were identified within the Project site, for which further discussion, including proposed mitigation, can be found in section 4(b).

The following discussion addresses Sections 6.1.2, 6.1.3, 6.1.4 and 6.3.2 of the MSHCP:

Sections 6.1.2 Riparian/Riverine Areas:

The proposed expansion and disturbance area contains several ephemeral drainage features that qualify as Riparian/Riverine features. The ephemeral drainages present within the Project site mostly lack riparian vegetation; however, some riparian vegetation associated with the ephemeral drainages is found in small amounts in lower elevation areas. Brittlebush (*Encelia farinosa*), California Sagebrush (*Artemisia californica*) and tree tobacco (*Nicotina glauca*) are the most common species found within ephemeral drainages. Approximately 5.9 acres of riverine/riparian features will be impacted by construction of the Project; as such, a DBESP was prepared that identified mitigation for these impacts. As part of the JPR process (Project was deemed consistent with the MSHCP by the RCA on January 30, 2019), the DBESP was provided to the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) for review. Based on CDFW and USFWS review, the DBESP was updated to provide additional clarification regarding proposed mitigation. On April 2, 2019, CDFW and USFWS found that the Project was consistent with the MSHCP.

Section 6.1.3 Protection of Narrow Endemic Plant Species

No narrow endemic plant species surveys are required for this site in accordance with this section of the MSHCP. No narrow endemic plants were observed during the site surveys.

Section 6.1.4 Urban/Wildlands Interface Guidelines (UWIG)

Portions of the Project site are adjacent to conservation lands and Criteria cells. The northern border of the landfill is adjacent to land that has been preserved by the MSHCP for reserve assembly. The property located directly to the east of the proposed Project is the Norton Younglove Preserve which is considered as Public Quasi Public land. To alleviate edge effects associated with Project on these areas, the Project will incorporate UWIG to be in compliance with the MSHCP. The areas of the UWIG are discussed below:

Drainage – The final design of the expansion area shall incorporate measures required by the National Pollutant Discharge Elimination System, the Regional Water Quality Control Board, or other landfill permitting entities to manage runoff and any leachate produced by the landfill. No untreated surface water shall be directed to or discharged into adjacent conservation areas. Water discharged from the landfill will be subject to leachate removal and collection system and other drainage systems before being directed into natural drainages. Drainage improvements, such as water quality basins, will aid in treating waters that flow from the site.

Toxics – Utilizing the same systems that are described in the drainage section above, the landfill will address the discharge of toxics or pollutants into any surrounding areas. In addition to the leachate removal and collection system, and drainage systems that shall be put in place to ensure water quality, the landfill will also closely monitor groundwater to check for any potential contamination.

Lighting – While night lighting is not anticipated to occur regularly, it is not prohibited due to maintenance and other activities that may need to occur beyond daylight hours. All lighting utilized during nighttime will be directed away from conservation or wildland areas.

Noise – Current landfill operations utilize heavy equipment during daily landfill operations. The amount of noise generated by the proposed expansion should be equal to sound levels currently experienced. Any equipment used during initial development and during normal landfill operations shall be maintained in good working conditions with proper noise-reducing equipment installed. A substantial buffer area shall remain between the active landfill site and most surrounding properties.

Invasives – The proposed Project shall not require nor is proposing any landscape plans. On certain occasions, seeding of areas is required for stabilization purposes. As is the current practice, only native seed mixes that are approved by a qualified biologist shall be used within the proposed expansion area.

Barriers – The rugged topography of the Project site and proposed use for waste disposal and soil storage would serve as an effective barrier to public access and domestic predation to the adjacent vacant land. Also, public access at the Project site will be restricted from unauthorized entry due to the gate fee booth operation.

Grading/Land Development – Project activities are designed to be setback from property lines and this sufficient space ensures that activities will not encroach into adjacent vacant land that is not utilized for landfill purposes. Additionally, as identified in the MSHCP, the Project site is not located in an area called out for conservation. Proposed activities within the Project site are part of the standard landfill development that provides essential public services at the Badlands Landfill, a Covered Activity under Section 7.3.8 of the MSHCP. With MSHCP compliance, including reducing edge effects discussed in the previous paragraphs, the Project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors.

Section 6.3.2 Additional Survey Needs

The Project site is located within a CASSA survey area for Nevin's barberry, smooth tarplant, and round leaved filaree. The Project site lacks the cismontane woodlands or grassland, and clay soils associated with round-leaved filaree. Focused surveys for round-leaved filaree were not conducted due to a lack of suitable habitat.

The Project site lacks alkali and clay soils, and appropriate elevation, associated with smooth tarplant; therefore, focused surveys for smooth tarplant were not conducted.

The Project site contains suitable habitat for Nevin's barberry. A focused survey for Nevin's Barberry was conducted on October 1, 2018. Meandering transects were walked through the survey area in an attempt to locate individuals. Nevin's Barberry was not detected during focused survey and is considered absent from the site.

The Project site is also located within an Additional Survey Needs and Procedures Area for burrowing owl. Step I habitat suitability surveys (Burrowing owl Survey Instructions 2006) for burrow owl were conducted on May 22-23, 2017 and February 26, 2018. The Project site is composed of steep hillsides and thick vegetation. All small mammal burrows found on site were less than 4 centimeters in size and would not provide habitat for burrowing owl. Due to the lack of suitable burrowing owl habitat, no further surveys were warranted.

Migratory Bird Treaty Act (MBTA)/Nesting Birds

Nesting birds have the potential to occupy the site. Therefore, mitigation measure Bio-2 was developed to require a nesting bird clearance survey prior to ground disturbance during the period of February 1st – August 31st.

Non-MSHCP Species

The Habitat Assessment also identified that there were five (5) sensitive species that have the potential to occur at the site that are not covered under the MSHCP: the Northwestern San Diego Pocket Mouse, the Southern Grasshopper Mouse, the San Bernardino Aster plant, Robinson's Pepper-grass, and the Crotch Bumble Bee. The Bumble Bee was excluded from further assessment because it does not have a federal or state designation, and the Northwestern San Diego Pocket Mouse, the Southern Grasshopper Mouse, the San Bernardino Aster plant, and Robinson's Pepper-grass, are not listed as endangered or threatened by the USFWS or the CDFW.

The two mammals are designated state Species of Special Concern (SSC), the aster is designated as moderately threatened in the state and the pepper-grass is designated as not very threatened in the state. The four special status species described above were not observed during the biological surveys carried out in 2017 and 2018. Previous biological surveys, including focused surveys within portions of the proposed disturbance area, also did not identify the species in question.

Regardless, while these species were not identified during multiple field surveys, to avoid the potential for impacts to any of the four sensitive species described, mitigation measure Bio-3 was prepared that requires a qualified biologist to survey all proposed development areas prior to any ground disturbance. The biologist will prepare appropriate mitigation or impact minimization plans in case one or more of the special status species are identified.

Based on the discussion in this section and incorporation of mitigation measures Bio-1 through Bio-4, which includes requirements for pre-construction surveys and biological monitoring, the Project will not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Services.

FINDING: The impact will be less than significant with mitigation.

Mitigation Measures

Bio-1 A qualified biologist shall be retained to act as a biological monitor during initial project implementation. The biological monitor shall review all proposed plans and provide directions to avoid or minimize impacts to sensitive biological resources. The biological monitor shall routinely monitor construction activities to ensure compliance with any regulations relating to the protection of wildlife or sensitive habitats.

Bio-2 Should any habitat need to be cleared or disturbed during the traditional bird nesting season of February 1 – August 31, a qualified biologist shall conduct nesting bird clearance surveys no more than 3 days prior to the start of ground disturbance. The clearance surveys should cover the entire disturbance area as well as 500 foot buffer area. If any nesting activity is detected during the surveys the qualified biologist shall establish and oversee implementation of avoidance and impact minimization measures.

- Bio-3** The biological monitor shall monitor the project site prior to ground disturbance and during construction activities for the presence of the Northwestern San Diego Pocket Mouse, Southern Grasshopper Mouse, Robinson's Pepper-grass and San Bernardino Aster. If these species are found, the biological monitor shall carry out necessary impact avoidance and minimization activities to avoid take of the species until a Habitat Mitigation and Monitoring Plan (HMMP) can be produced and approved by the appropriate natural resource agencies.
- Bio-4** Prior to any ground disturbance activities, all Riverine/Riparian features within the vicinity of proposed construction activities which are not identified for disturbance shall be clearly identified and delineated by using methods which may include staking/tape, temporary fencing, signage, or other appropriate measures/methods as determined by the RCDWR in consultation with the biological monitor.
- Bio-5** The Project shall comply with Section 6.1.4-UWIG of the MSHCP as documented in the RCA's Joint Project Review letter (Letter- dated 1/30/19)- see item "d" for Section 6.1.4 (pgs 6 -7). Additionally, the best management practices listed in the Letter under item "e" for MSHCP Volume I, Appendix C, shall be implemented for the duration of construction, as applicable.

4b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Services?

The Project area contains drainage features, consisting of Riverine/Riparian habitat, proposed to be permanently impacted by development of the Project. The proposed project will impact 5.93 acres of MSHCP defined Riverine/Riparian habitat. 1.90 acres of the total 5.93 acres impacted are considered Riverine, the remaining 4.03 acres fit the definition of Riparian systems. The proposed project will result in the following jurisdictional impacts: 1.15 acres of non-wetland waters under the jurisdiction of the USACE and SARWQCB, and 5.93 acres of under the jurisdiction of the CDFW (see Table 4-1). The Project site does not contain any wetlands as defined by the USACE (further discussed in section 4c).

Table 4-1 Impacts to Jurisdictional Waters

USACE/SARWQCB (non-wetland)		CDFW			Western Riverside MSHCP Riverine/Riparian	
Acreage	Linear Feet	Streambed		Associated Riparian	Acreage	Linear Feet
		Acreage	Linear Feet	Acreage		
1.15	25,736	1.90	23,433	4.03	5.93	40,705

To offset impacts and compensate for the loss of Riverine/Riparian habitat associated with the proposed expansion Project, the RCDWR is partnering with the RCHCA to develop a mitigation site within the Lake Mathews/Estelle Mountain Reserve (LMR). Overall there are approximately 33 acres of jurisdictional drainages that are available for RCDWR to utilize as mitigation for this Project within the LMR, as well as future projects, as needed. Through consultation and approval from the Wildlife Agencies, a real property instrument (Conservation Easement (CE), Restrictive covenant, or other instrument) may be placed over the riverine/riparian habitat within the LMR¹⁴. Specifically, RCDWR will fund restoration/improvements

¹⁴ The final determination regarding the real property mechanism required for establishment of the mitigation area within the LMR is subject to review and approval with RCHCA and the Wildlife agencies.

to riverine/riparian drainages located within the northwestern portion of the LMR. A qualified entity will perform the initial restoration, and long term monitoring will be completed by a third party, likely the Riverside-Corona Regional Conservation District (RCRCD)¹⁵. RCDWR funding will address both the initial restoration and long term maintenance and monitoring in perpetuity.

The RCDWR shall provide funding for a minimum of 17.79 acres within the LMR to compensate for the loss of Riparian/Riverine habitat associated with the proposed Project. The RCDWR will mitigate Riverine and Riparian impacts at a 3:1 ratio. Riparian/Riverine habitat within the LMR lies within MSHCP plan area and is a part of the Santa Ana River watershed. Enhancement activities contemplated for the conserved/restricted Riparian/Riverine habitat include the restoration of hydrology, invasive species removal and supplemental planting.

If the RCDWR and RCHCA are not successful in developing the LMR mitigation site, then RCDWR shall purchase credits from a mitigation bank or In-Lieu Fee program that is approved by the western Riverside County Regional Conservation Authority (RCA), the USFWS, USACE, and the CDFW. Purchase of credits shall meet the minimum 3:1 ratio for Riverine/Riparian impacts.

FINDING: The impact will be less than significant with mitigation.

Mitigation Measures

Bio-6 RCDWR shall comply with the mitigation identified in the DBESP (RCHCA, 2019), which requires the funding for a minimum of 17.79 acres within the LMR to compensate for the loss of Riparian/Riverine habitat associated with the proposed Project. If the RCDWR and RCHCA are not successful in developing the LMR mitigation site, then RCDWR shall purchase credits from a mitigation bank or In-Lieu Fee program that is approved by the RCA, USFWS, USACE, and CDFW. Purchase of credits shall meet the minimum 3:1 ratio for Riverine/Riparian impacts.

Bio-7 Prior to Project impacts within jurisdictional waters, RCDWR shall consult with and obtain permits and/or agreements from the California Department of Fish and Wildlife- Streambed Alteration Agreement, Santa Ana Regional Water Quality Control Board- Clean Water Act Section 401 Certification, and the U.S. Army Corps of Engineers- Clean Water Act Section 404 Permit. Mitigation shall meet a minimum ratio of 3:1.

4c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

According to the Biological Assessment (RCHCA, 2019) and JD (M. Baker, 2018) prepared for the Project, no portion of the Project site contains wetlands. For federal jurisdiction, only non-wetland waters of the U.S. are located at the site, for which impacts to these features have been addressed, and mitigation was identified, in section 4(b) above. USACE staff also visited the Project site and provided concurrence with the findings of the JD, which did not identify any federally protected wetlands. As such, the Project will not have a substantial adverse effect on federally protected wetlands through direct removal, filling, hydrological interruption, or other means.

FINDING: There will be no impact.

¹⁵ If a CE is required, then a qualified third party would hold the CE (likely RCRCD). Specifics regarding the 3rd party CE holder will be finalized at a later time during establishment of a CE, if needed.

4d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The relationship of the Project site to large open space areas in the immediate vicinity was evaluated in terms of connectivity and habitat linkages. The MSHCP Cores and Linkages Map was also consulted to determine the project site's proximity to MSHCP-defined wildlife cores and habitat linkages. Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. Corridors mitigate the effects of habitat fragmentation by: (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

From a regional perspective, the Project site is situated west of the Norton Younglove Reserve in the Badlands, approximately one mile north of State Highway 60 and 1.5 miles south of San Timoteo Creek. Although there is increased urbanization to the southwest of the project site within the City of Moreno Valley, the Project site and the majority of the areas in the immediate vicinity consist of open space. The Project site lies within Proposed Core 3 (Badlands/Potrero) of the MSHCP. Proposed Core 3 is contiguous with Existing Core H (Lake Perris/Mystic Lake) and Existing Core K (San Jacinto Mountains) and also functions as a Linkage, connecting the San Bernardino National Forest with San Bernardino County and other Linkages and conserved areas.

The Project site is contiguous with open space and, therefore, supports the movement of larger mammals that require larger home range areas and dispersal distances or dense vegetative cover (e.g., mountain lion and bobcat). In addition, species that do not require large home ranges and those species that are less restricted in movement pathway requirements (e.g. raccoon, skunk, coyote, birds) are likely move through the Project site, particularly within drainages and along ridgelines. However, the Project site is not considered a "wildlife corridor" because it is not a piece of habitat that is linear in nature and connects two or more habitat patches that would otherwise be fragmented or isolated from one another. In fact, the Project site is a very small part of a larger open space area (i.e., the Badlands) that provides a variety of travel routes in the form of ridges and canyons that facilitate movement. The Project is not expected to substantially affect the movement of wildlife in the Badlands region or affect the use of Proposed Core 3 as a Linkage. Additionally, the lack of perennial waters (no native or migratory fish species on-site), as well as RCDWR's compliance with the UWIG (discussed in section 4a), will further ensure that impacts to wildlife movement are considered less than significant.

FINDING: The impact will be less than significant.

4e. - 4f. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The Project falls within the MSHCP area. The MSHCP was approved on June 17, 2003, and is intended to "enhance and maintain biological diversity and ecosystem processes while allowing future economic growth." When fully implemented, the MSHCP will result in preserving more than 500,000 acres of land for conservation of 146 species and their habitats in Western Riverside County. As a "Permittee" under the MSHCP, the RCDWR "may engage in, and receive Take Authorization [of a species or their habitat] for, Covered Activities as set forth in Section 7.0 of the MSHCP." In return for coverage of an identified waste

activity, the RCDWR, as a signatory to the Implementing Agreement (IA), is obligated to carry out the provisions of Section 13.6, County Waste Obligations, under the MSHCP and the IA.

The conservation area of the MSHCP is divided into four categories: (1) Public/Quasi-Public (PQP) Conserved Lands; (2) Criteria Area; (3) Special Linkage Area; and, (4) Rural Mountainous Designation. The category of Public/Quasi-Public Conserved Lands will form the backbone of the conservation area of the MSHCP, which accounts for 347,000 potential acres of targeted conservation area. The rest of the targeted conservation area will be assembled from lands that fall under the category of Criteria Area. Conservation criteria are established for each planning cell (Cell) in the Criteria Area, in accordance with biological requirements, physical characteristics of the lands, conservation principals, etc. The Criteria Area is an analytical tool for determining which properties to evaluate for acquisition and conservation under the MSHCP and does not impose land use restrictions.

According to Figure 3-1, MSHCP Plan Map, of the MSHCP, the majority of the Project site's 1,168 acres is not located in either PQP Conservation Lands or in a Criteria Area, which means that this acreage is not targeted for conservation. As per Section 7.1 - Covered Activities Outside Criteria Area and PQP Lands, the landfill activity within this acreage is permitted under the MSHCP, provided that the RCDWR meets its obligations under the MSHCP and the IA, which RCDWR has met as evidenced by the RCA finding the Project consistent with the MSHCP during the JPR process (determination made January 30, 2019).

MSHCP Criteria Cells 655, 656, 660, 661, 743 and 831 border the Project site to the north and west. Of the 543 acres that comprise the Project study area, approximately 78 acres along the western limits of the Project site fall within MSHCP Cell Group T, Criteria Cells 743 and 831, for which approximately 48 acres were previously assessed, reviewed, and mitigated for under JPR #10-07-13-01¹⁶. Cell Group T targets conservation within the central portion of the Cell Group, which is located well outside of the Badlands Landfill property. The Project site is located in the southeastern portion of the cell group. The proposed Project will result in additional activities (organics facility, site improvements-basins, drainage improvements, access roads, etc.) within Criteria Cells 743 and 831. Since the proposed Project involves activities within Criteria cells, RCDWR, as a permittee to the MSHCP, completed the JPR process with the RCA, CDFW, and USFWS. On January 30, 2019, the RCA determined the Project was consistent with the MSHCP. CDFW and USFWS reviewed the DBESP prepared for the Project and on April 2, 2019, also found that the Project was consistent with the MSHCP.

The Riverside County Integrated Project (RCIP) Conservation Summary Report Generator shows that a few acres within the northern portion of the landfill property are within Criteria cells. Specifically within the northeast corner of the Project site, 0.83 acres of the falls within Criteria Cell 660, and 0.04 acres within Criteria Cell 661. An analysis was conducted using Geographic Information System (GIS) and found the landfill parcel lines and the Criteria Cells may have been intended to run parallel to each other; however, a shift within available published parcel line data may have occurred. While no impacts are planned within portions of the Badlands Landfill that are bound by the limits of Criteria Cells 660 and 661, the Badlands Property line will be clearly delineated prior to construction activities along the northern border by a licensed surveyor to further ensure that any impacts remain within the landfill property.

As demonstrated, the Project is consistent with the MSHCP and will not conflict with any other approved local, regional, or state policies or ordinances protecting biological resources.

FINDING: The impact will be less than significant with mitigation.

¹⁶ Evaluated the development of a soil stockpile and associated drainage improvements for the landfill in 2010.

Mitigation Measure

- Bio-8** Prior to ground disturbance, the northern border of the Badlands Property line adjacent to Criteria Cells 660 and 661 will be clearly delineated by a licensed surveyor to further ensure that Project disturbance remains within the landfill property.

5. CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sources: Phase 1 Cultural Resource Assessment, prepared by Michael Brandman Associates (MBA), dated December 6, 2010.

5a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

The BLIP proposes an expanded waste disposal area, increased waste diversion activities including composting, environmental monitoring systems, drainage and stormwater pollution prevention BMPs, and other ancillary landfill activities. The BLIP is compatible with the existing use of the property for a landfill operation. According to a site survey and records search conducted by MBA, several isolated dirt roads that appeared to have been built after State Highway 60 were located; however, these were not considered significant historic resources. Also, the De Anza Cycle Park was likely an old farm site; however, this area is located outside of the Project disturbance area. There is no evidence that the Project area was used by anyone until the 1950's, therefore, the potential for intact significant historic resources is low.

FINDING: The impact is considered less than significant.

5b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

According to the site survey and records search conducted by MBA, there are no known cultural resources within the Project area and because of this the potential for such resources is considered unlikely. The BLIP proposes an expanded waste disposal area, increased waste diversion activities including composting, environmental monitoring systems, drainage and stormwater pollution prevention BMPs, and other ancillary landfill activities. Due to the unlikely presence of cultural resources within the Project area, MBA does not recommend that any future ground-disturbance in the Project area be monitored by a qualified archaeologist.

FINDING: The impact is considered less than significant.

5c. Disturb any human remains, including those interred outside of formal cemeteries?

The BLIP proposes an expanded waste disposal area, increased waste diversion activities including composting, environmental monitoring systems, drainage and stormwater pollution prevention BMPs, and other ancillary landfill activities. Human remains are not considered likely at the site; however, standard mitigation measures have been included in the event that human remains are found during Project implementation.

FINDING: The impact will be less than significant with mitigation.

Mitigation Measure

C-1 In the event of an accidental discovery or recognition of any human remains, Public Resources Code (PRC) Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps shall be taken:

- There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, then the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” of the deceased Native American. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, or
- Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the property in a location not subject to further subsurface disturbance:
 - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;
 - The descendant identified fails to make a recommendation; or
 - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

6. ENERGY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Source: Project Materials.

6a. / 6b. Will the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? Will the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Section 15126.2 of the CEQA Guidelines, states that potential energy impacts must be considered in an Environmental Impact Report (EIR). Although, this Project does not require an EIR, energy impacts have been analyzed for discussion purposes. Construction of the BLIP will use energy predominantly from heavy equipment; however, this Project will not be wasteful or inefficient as existing equipment will be utilized when possible which will save on energy needed during transport. Through efficient landfill fill sequencing, material stockpiles will be located in close proximity to landfill fill areas to reduce heavy equipment haul distances, which will minimize fuel use. In addition, the RCDWR implements an idling policy that institutes a 5 minute idling limit for heavy equipment. Further, the operation of the BLIP will serve to enhance energy efficiency in the region, through organics processing (composting, mulches, soil amendments, etc.) and the continued collection of various recyclable material, by reducing the amount of materials that enter the solid waste stream. These waste diversion efforts preserve landfill capacity and will reduce the amount of energy resources used by equipment at the landfill to move, bury, and compact waste, as well as during the gas collection system processes as materials breakdown. The Project will enhance and not conflict with or obstruct a state or local plan related to energy.

FINDING: The impact will be less than significant.

7. GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sources: Riverside County GIS and Riverside County General Plan: Safety Element, Subsidence and Expansive & Collapsible Soils, EA No. 2010-01; Paleontological Assessment, prepared by MBA, dated April 2011.

7a(i).-7a(iv). Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Strong seismic ground shaking? Seismic-related ground failure, including liquefaction? Landslides?

The San Timoteo formation is a widespread deposit of sands, gravels, and clays that extend northward from the foothills of the San Jacinto Mountains for a distance of nearly 20 miles. The San Timoteo Badlands rise from an elevation of about 1,720 feet in Moreno Valley, to over 2,625 feet. Hill slopes are typically about 200 feet high and steeper than 1:1. The hills have steep, short ridges separated by ephemeral streams, typical of badland topography.

Geologic conditions remain consistent with the analysis provided in previously adopted documents EA No. 39813 and EA No. Badlands 2010-01, which state that according to the Riverside County General Plan Figure S-1 - Mapped Faulting in Riverside County, an active faulting system, which consists of a Holocene Fault and Late Quaternary Fault, is situated southwesterly of the Badlands Landfill property. According to Figure S-2, Earthquake Fault Study Zones, the Holocene Fault of the said active faulting system falls within an Alquist-Priolo Fault Zone, and the Late Quaternary Fault is designated as a Recommended Fault Zone. A close-up view of the seismic/geological setting of the landfill region is found in Figure 12, Seismic Hazards, of the Reche Canyon/Badlands Area Plan in the General Plan. According to Figure 12, the Badlands Landfill property is not underlain by any known active fault. Figure 12 shows that a known seismic fault is located within a quarter mile of the landfill boundary.

Construction of the BLIP will result in a change to the landfill's steep and rugged topography to facilitate the operation of landfill expansion activities, primarily the additional waste disposal area. Also included are activities such as increased waste diversion with composting, environmental monitoring systems, storm water pollution prevention BMPs, and ancillary landfill activities. The construction areas will be engineered to meet seismic requirements. Also, drainage facilities including retention and/or sedimentation basin, down drains, ditches, and swales will be utilized to control surface runoff and reduce surface erosion. This will reduce the potential for directly or indirectly causing negative effects from strong seismic ground shaking and ground failure, including liquefaction and landslides.

FINDING: The impact will be less than significant.

7b. Result in substantial soil erosion or the loss of topsoil?

The BLIP will involve construction that could result in soil erosion; however, excavation and stockpile areas will be engineered to meet minimum safety requirements, and excavated areas will not create a hazard because BMPs, such as silt fencing, fiber rolls, and hydro-seeding of slopes, will be implemented for erosion control and slope stability protection. Landfill operations will result in a change in natural topography, where the hills and slopes have been flattened and engineered as they are excavated and then filled with refuse and soil. This results in a reduction of the risk of landslides and mudflows caused by erosion of tall, steep natural slopes. All engineered slopes will be designed to be constructed to meet the minimum static and seismic factors of safety requirements.

FINDING: The impact will be less than significant.

7c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Landslides are a common occurrence associated with the badlands. Small, shallow, rapidly-moving debris flows are very abundant in the San Timoteo Badlands. Overall the debris flow process is probably the main

erosional force on the slopes of the badlands.¹⁷ The Project site's primary underlying soil component (BaG) is characterized by severe erosion.¹⁸ The landfill site is classified as having a "high susceptibility" to seismically-induced landslides and rockfalls, according to the General Plan, Figure 13, Slope Instability. The Project will utilize compacted, engineered soil during construction. This will ensure the Project's stability and reduction in the risk of landslides. Liquefaction is not likely to occur onsite because of the depth of groundwater (liquefaction usually occurs as a result of a shallow ground water table in addition to ground shaking). Lateral spreading can occur when there is liquefaction but with the unlikelihood of liquefaction, lateral spreading is not anticipated. Subsidence occurs when land sinks to a lower level. Although land subsidence is possible in the proposed expansion area, it is not likely as the site is not used for the large-scale removal of subsurface water, the main cause of the earth's compaction and subsidence. Also, collapse is not likely to occur as tall vertical structures are not proposed on undisturbed portions of the landfill and engineering at the site will ensure construction on stable soils.

FINDING: The impact will be less than significant.

7d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

The shrink-swell potential of soil refers to the change in volume of the soil, which results from a change in moisture content. It is determined on the basis of the amount and type of clay in the soil layers. Some clay soils expand when moisture is added and shrink when dry. High shrink-swell characteristics affect construction of roads, foundations of structures, and sites for reservoirs. According to U.S. Department of Agriculture (USDA), Soil Survey, 1980, the specific soils on the landfill site consist primarily of Badlands Alluvium (BaG) (EA39813). In accordance with the USDA, the BaG soil has low shrink-swell potential, therefore, potential direct or indirect risks involving expansive soil to existing and proposed construction is considered insignificant.

FINDING: The impact will be less than significant.

7e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The landfill site has soils adequate enough to support two (2) existing septic tanks. Chemical toilets are also in use at the site and will continue to be available. The Project does not propose additional septic tanks or alternative waste water disposal systems.

FINDING: There will be no impact.

7f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

According to the Paleontological Assessment conducted by MBA, the Badlands Landfill site is located in an area of high paleontological sensitivity. The Project site is underlain by a single lithologic unit, the San Timoteo Formation. The San Timoteo Formation has high potential for the presence of significant fossils, including both large and small vertebrates, based on the known fossil localities and finds within the same rock formations in the surrounding area. The Paleontological Assessment completed for the Project included a field survey and records check. While no new fossil localities were identified during the field

¹⁷ Special Report 186, Landslides in the Highway 60 Corridor, San Timoteo Badlands, Riverside County, California, 2002, Department of Conservation, California Geological Survey

¹⁸ Soil Conservation Service Soil Survey of Western Riverside County, November 1971

survey, the records search identified several recorded localities in the north/northeastern portion of the landfill property.

Project activities associated with the BLIP will result in grading and excavation within areas of high paleontological sensitivity; as such, RCDWR, in consultation with MBA, developed a comprehensive mitigation program to adequately protect significant paleontological resources from being destroyed by earthmoving activities during Project implementation. The mitigation program includes paleontological monitoring of earthmoving activities within the San Timoteo Formation and if identified, the recovery and preservation of sensitive paleontological resources. A qualified paleontologist will be retained prior to earthmoving activities. For mitigation, the qualified paleontologist will develop a discover/treatment plan for fossil remains that may be encountered, assess finds, stop work if fossils are encountered, and produce a final report, after each landfill development phase, outlining the results and findings of the paleontological monitoring. Compliance with the comprehensive mitigation program, as detailed in mitigation measures G-1 through G-9, will ensure that the Project's potential impacts to unique paleontological resources will be less than significant.

FINDING: The impact will be less than significant with mitigation.

Mitigation Measures

G-1 A qualified paleontologist shall be retained by the landfill operator to determine if any of the previously identified localities are still existent and assess the condition of the localities, if existent. If localities are present and determined significant, a specific Paleontological Resources Mitigation Program (PRMP) treatment plan shall be developed. The treatment plan(s) shall address appropriate sampling, analysis, and documentation methodologies/techniques used to obtain scientific information associated with each of the potentially impacted localities. The plan shall require that all collected specimens be placed in an acceptable museum, repository or accredited institution.

G-2 Prior to any earthmoving in the BLIP area, a qualified vertebrate paleontologist shall be retained by the landfill operator to develop a storage agreement with an appropriate repository to allow for the permanent storage and maintenance of any fossil remains recovered during implementation of the BLIP.

G-3 Prior to any earthmoving in the BLIP area, the landfill operator shall retain a qualified paleontologist to develop a discovery/treatment plan for any fossil remains encountered during earthmoving activities. The plan shall outline the standard procedures for the identification, treatment, and assessment of specimen and site data associated with any paleontological find. The mitigation plan shall also include a paleontological resources awareness training program for the BLIP's earthmoving staff including equipment operators, to raise their awareness of and alertness to potential fossil resources. At a minimum, the program shall require initial training of all new staff and refresher training of existing staff.

G-4 Paleontological monitoring shall be conducted during earthmoving activities in sediments of the San Timoteo Formation. Earthmoving activities in areas where previously disturbed strata will be buried but not otherwise disturbed need not be monitored. The supervising paleontological monitor shall have the authority to reduce or terminate monitoring once it is determined that the probability of encountering the fossils is low.

G-5 If fossil remains are encountered when a paleontological monitor is not present, the landfill operator shall immediately divert the earthmoving activities to another area and then contact the supervising paleontologist to assess the find and determine the appropriate recovery. Earthmoving activities within the fossil recovery area shall not resume until all fossil recovery work is completed and a written clearance for continued Project operation is received from the supervising paleontological monitor.

G-6 The paleontological monitor on duty shall have the authority to immediately cease earthmoving activities in and around the area where fossils are encountered. The fossil recovery site shall be delineated by yellow tape, or other appropriate means, at a distance of no greater than 50 feet from the find. Earthmoving activities within the fossil recovery area shall not resume until all fossil recovery work is completed and a written clearance for continued Project operation is received from the supervising paleontological monitor.

G-7 The supervising paleontological monitor shall determine the paleontological importance of the rock units being monitored for consideration of periodic examination of the rock units for presence of microfossils. All microfossil remains identified and determined as important by the supervising paleontological monitor shall be collected, processed, and recovered.

G-8 All recovered fossil remains shall be prepared to the point of identification to the lowest taxonomic level possible by a qualified paleontologist. The items shall then be curated at approved repository following standard museum standards.

G-9 At the conclusion of the earth excavation operation in each landfill development phase, a final PRMP report outlining the results and findings of the mitigation monitoring program for the Project phase shall be prepared by the supervising paleontologist and submitted to the County of Riverside Planning and RCDWR, as well as the designated museum repository following accessioning of the fossil collection. Interim monitoring reports shall be prepared throughout the BLIP life, including the final landfill closure phase. The reports shall consist of, but are not limited to, the following components; a) a description of the geology and stratigraphy of each monitored paleosol, or fossil bearing rock unit; b) a summary of field and laboratory methods used; c) a faunal list of species recovered and an inventory of catalogued fossil specimens; d) an evaluation of the scientific importance of the recovered specimens; and e) a discussion of the relationship of the newly recorded fossil sites in the BLIP area with those previously recorded sites in the general area.

8. GREENHOUSE GAS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sources: Project materials; Air Quality and Global Climate Change Impact Analysis (Ganddini Group, Inc., dated January 9, 2019)

8a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHGs are important because their emissions trap radiation emitted from the earth's surface which otherwise would have escaped to space. Prominent GHGs contributing to this process include carbon dioxide, methane, water vapor, nitrous oxide and chlorofluorocarbons. Anthropogenic emissions (caused or produced by humans) of these GHGs in excess of natural ambient concentrations are responsible for the trend of the earth's unnatural warming, known as global warming or climate change. The proposed landfill expansion Project is anticipated to generate GHG emissions directly and indirectly from construction activities, energy use, vehicle emissions, on-site equipment, increased waste disposal, water usage for landfill activities, and composting. A brief description of each activity is provided.

Construction

Grading and excavation of approximately 300 acres to the south and east of the existing 150 acre disposal area is proposed. This excavation is will occur in approximately seventeen (17) stages (ranging from 11 to 26 acres in each stage) which will be followed by the installation of a liner system to be used for the expanded refuse disposal area. Ultimately, the lined refuse disposal area will be increased by approximately 250 acres. Also, two (2) areas to the north and east of the expansion area will be used to stockpile excavated dirt, and new water quality and percolation basins will be constructed. The construction related GHG emissions included in the GHG analysis were based on a 30 year amortization rate as recommended by the SCAQMD.

Vehicle Emissions

Mobile sources include emissions from the additional vehicle miles generated from the Project.

On-site Equipment

The proposed increase in daily tonnage allowed and the new processing activity would require the addition of equipment to the Project site. Table 8-1 provides a list of the proposed additional diesel equipment that will be used during operation of the Project.

Windrow Composting

The anticipated 200 tons per day of greenwaste to be composted was entered into the WARM model based on 200 tons of yard trimmings. The 200 tons of compost was multiplied by 365 days in order to calculate the annual tons of greenwaste to be composted and it was assumed that 95 percent of the greenwaste would be composted and 5 percent would be sent to a landfill.

The anticipated 100 tons per day of food waste to be composted was also entered into the WARM Model. The 100 tons were multiplied by 365 days in order to calculate the annual tons and it was assumed that 80 percent of the food waste would be reduced and 20 percent would be sent to a landfill. The WARM model found that by composting, the proposed project would reduce GHG emissions over non-composting by 18,678.70 MTCO₂e per year (see Table 8-2).

ASP Composting

Reductions in Project-related GHG emissions would be similar to those reported above for Windrow Composting.

**Table 8-1
Additional Operational Diesel Equipment**

Equipment Type	Number
Trommel/Screenner	1
Compost Turner	1
Grinder	1
Landfill Tipper	1
Wheeled Loader	1

The Project is located within the SCAB, which is under the jurisdiction of the SCAQMD. SCAQMD is in the process of preparing recommended significance thresholds for GHGs for local lead agency consideration (“SCAQMD draft local agency threshold”). The current draft thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the Project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the Project is consistent with a GHG reduction plan. If a Project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project’s construction emissions are averaged over 30 years and are added to a project’s operational emissions. If a project’s emissions are under one of the following screening thresholds, then the project is less than significant:
 - All land use types: 3,000 MTCO₂e per year
 - Based on land use type: residential: 3,500 MTCO₂e per year; commercial: 1,400 MTCO₂e per year; or mixed use: 3,000 MTCO₂e per year.
- Tier 4 has the following options:

- Option 1: Reduce emissions from business as usual (BAU) by a certain percentage; this percentage is currently undefined.
 - Option 2: Early implementation of applicable AB 32 Scoping Plan measures.
 - Option 3, 2020 target for service populations (SP), which includes residents and employees: 4.8 MTCO₂e/SP/year for projects and 6.6 MTCO₂e/SP/year for plans;
 - Option 3, 2035 target: 3.0 MTCO₂e/SP/year for projects and 4.1 MTCO₂e/SP/year for plans.
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD's draft threshold uses the Executive Order S-3-05 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap carbon dioxide concentrations at 450 ppm, thus stabilizing global climate. The County's Climate Action Plan (CAP) establishes goals and policies to reduce GHG emissions in the Basin. These goals include reducing GHG emissions to 1990 levels by 2020 in compliance with AB 32 (see item 8b below for more discussion on the CAP). To determine whether the Project is significant, this analysis uses the SCAQMD draft local agency Tier 3 threshold of 3,000 MTCO₂e per year for all land use types. This is also consistent with the screening threshold of significance used by Riverside County.

Table 8-2
Project-Related Greenhouse Gas Emissions

Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO ₂	NonBio-CO ₂	CO ₂	CH ₄	N ₂ O	CO ₂ e
Area Sources	0.00	0.01	0.01	0.00	0.00	0.01
Mobile Sources	0.00	356.52	356.52	0.03	0.00	357.33
Waste	0.00	0.00	0.00	0.00	0.00	0.00
Water	0.00	0.00	0.00	0.00	0.00	0.00
Construction	0.00	918.97	918.97	0.24	0.00	925.39
On-site Equipment	0.00	558.02	558.02	0.18	0.00	562.54
Composting	0.00	0.00	0.00	0.00	0.00	-18,678.70
Total Emissions						-16,833.44
SCAQMD Draft Screening Threshold						3,000
Exceeds Threshold?						NO

The data provided in Table 8-2 shows that Project-related GHG emissions would be reduced by 18,678 MTCO₂e per year due to composting. This is because composting food and green waste generates less emissions than landfilling and natural decay. Since the proposed Project would result in a reduction of GHG emissions, with total emissions of -16,833 MTCO₂e per year, it is well below the SCAQMD draft threshold of significance of 3,000 MTCO₂e per year.

FINDING: The impact will be less than significant.

8b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

In 2006, the California State Legislature adopted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which was phased in starting in 2012.

The County of Riverside developed a CAP to address GHG reduction goals¹⁹. The specific goals and actions included in the CAP that are applicable to the proposed Project include those pertaining to energy and water use reduction, promotion of green building measures, waste reduction, and reduction in vehicle miles traveled. The proposed Project would also be required to include all mandatory green building measures under the CALGreen Code (Title 24, Part 11), which would require that new buildings reduce water consumption, divert construction waste from landfills, and install low pollutant emitting finish materials. The implementation of these stricter building and appliance standards would result in water, energy, and construction waste reductions for the proposed Project. The Project will be recycling household hazardous waste and waste from small waste generators, which also meet the CAP's goals pertaining to waste reduction. As stated above, the GHG emissions generated by the proposed Project would not exceed the GHG screening threshold of 3,000 metric tons per year of CO₂e. Consequently, the implementation of the proposed Project would not hinder the state's ability to achieve AB 32's goal of achieving 1990 levels of GHG emissions by 2020. Additional mandates that address reducing GHG emissions are provided below.

AB 939 requires each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling, or other means. The proposed Project would promote implementation of AB 939 through expanding waste diversion opportunities for the region.

AB 341 focuses on increased commercial waste recycling as a method to reduce GHG emissions. The regulation requires businesses and organizations that generate four (4) or more cubic yards of waste per week, and multi-family residences of five (5) or more units, to recycle. The proposed Project would provide much needed composting and recycling infrastructure to meet the goals of AB 341.

AB 1826 requires businesses that generate eight (8) or more cubic yards of organic waste per week to arrange for organic waste recycling services. The Project will facilitate compliance with this requirement by accepting organic waste that is collected.

SB 32 requires the state board to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030. SCAQMD's thresholds used Executive Order (EO) S-3-05 goal as the basis for deriving the screening level. The California Governor issued EO S-3-05, GHG Emission, in June 2005, which established the following reduction targets:

- 2010: Reduce GHG emissions to 2000 levels
- 2020: Reduce GHG emissions to 1990 levels
- 2050: Reduce GHG emissions to 80% below 1990 levels

SB 1383 requires the state board to approve and begin implementing that comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40%, hydrofluorocarbon gases by 40%, and anthropogenic black carbon by 50% below 2013 levels by 2030, as specified. SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional

¹⁹ The County of Riverside is in the process of updating the CAP to comply with SB 32 requirements.

target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

As the SCAQMD uses EO S-3-05 as the basis for their GHG emissions screening level, and this EO includes the long-term goal to reduce greenhouse gas emissions to 80% below 1990 levels by 2050, the Project would also be consistent with the goal of SB 32 (to reduce GHG emissions to 40% below 1990 levels by 2030). Therefore, projects that meet the current interim emissions targets/thresholds established by SCAQMD would also be on track to meet the reduction targets for 2030. Furthermore, all of the post 2020 reductions in GHG emissions are addressed via regulatory requirements at the state level and the Project will be required to comply with these regulations as they come into effect. Additionally, as the net GHG impacts from the Project are negative (a reduction GHG), the Project would also assist with meeting future GHG reduction goals, including SB 100 (signed into law on September 10, 2018), which aims to achieve and maintain net negative GHG emissions by 2045.

The proposed Project would reduce GHG emissions and promote the implementation of the requirements discussed above. Furthermore, as the Project's GHG emissions do not exceed the SCAQMD draft threshold (based on EO S-3-05), the Project would not conflict with the goals of SB 32 and the County of Riverside CAP; therefore, the project would not conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases and impacts are considered to be less than significant.

FINDING: The impact will be less than significant.

9. HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sources: Project materials. California Department of Toxic Substances Control "Envirostor" Database, Riverside County Airport Land Use Plan, Local Airline Website.

9a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The Project proposes to further develop and expand the Badlands Landfill to provide for long-term solid waste management and waste diversion capacity for the region. Specifically, the Project proposes to increase the waste disposal area, add a composting operation, and incorporate additional water quality basins and percolation basins and stockpiles in addition to other ancillary landfill activities. Hazardous

waste is not accepted for burial at the Badlands Landfill. However, HHW, such as paints, batteries, motor oil, detergents, and Universal Waste (i.e., electronic waste, florescent light bulbs, mercury-containing thermometers and components, etc.), are hazardous and are commonly commingled with the regular refuse that is brought to the landfill. Likewise, commercial waste loads are occasionally contaminated with commercial/industrial hazardous waste. As a result, a load checking program is implemented at the Badlands Landfill to minimize or eliminate hazardous waste and other ineligible waste received at the landfills as well as to identify hazardous waste, including HHW and other ineligible waste, and require generators or haulers of the waste to assume responsibility for its proper offsite processing or disposal at a facility permitted for such waste. The load checking program aids in detecting hazardous waste prior to such waste being disposed of at the landfill; additionally, it educates customers and discourages them from bringing in such material.

The Badlands Landfill has a Hazardous Materials Business Emergency Plan (HMBEP) which is part of the site's EAP. The HMBEP includes prevention, mitigation, abatement and evacuation procedures for small and large spills. The Department's WIP has inspection staff that have received proper training in handling any accidental spill of HHW to ensure public health and safety. The WIP manages the recovered "Orphan" hazardous waste in accordance with California Code of Regulation (CCR), Title 22, §66262.34(d). The Orphaned hazardous waste can be stored on-site up to 270 days in a secure storage container, and is removed by a licensed hazardous waste hauler/recycler.

In addition, HHW collection programs, which facilitate proper disposal of hazardous wastes and discourage illegal hazardous waste disposal, are offered at Badlands Landfill.

A full Recycle-Only HHW Antifreeze, Battery, Oil, and Paint (ABOP) collection facility is currently operating on site in accordance with California H&SC Division 20 Article 10.8 and a certified PaintCare collection program in accordance with Title 14 Chapter 11 Article 2. These programs allow used oil, antifreeze, lead acid batteries, paint and paint products to be collected for recycling. By providing these services, the opportunity for proper management of this material for the public is increased and the amount of these recyclable wastes in the solid waste stream is reduced.

Transport of hazardous waste materials is handled according to federal transportation requirements as described in the California Code of Federal Regulations and is not considered unique mitigation for the purposes of CEQA. HHW materials will be collected and temporarily stored onsite until collected and recycled and/or permanently disposed of at an authorized Treatment, Storage Disposal Facility (TSDF). Through the random inspection of loads, the risk of exposing hazardous materials to the public and environment will be reduced. Some hazardous materials will inadvertently make it into the waste disposal stream; however, adherence to practices of inspecting loads as well as the practice of disposing of and burying loads, in addition HHW programs at the landfill site, hazards to the public or environment are greatly reduced and not considered significant.

FINDING: The impact is considered less than significant.

9b. Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The Project proposes an expansion of the existing landfill along with ancillary and waste diversion activities. The risk of accidental explosion and release of hazardous substances at the landfill are mainly associated with the handling of the hazardous waste uncovered during waste inspection. The landfill will continue the current operation of providing refuse disposal for acceptable items. The WIP will be used to try and reduce unauthorized disposal of hazardous waste, although it is recognized that some materials may be intermingled with regular refuse and this cannot be completely eliminated. HHW items will continue to

be collected for temporary storage onsite and ultimate removal by a licensed hauler for proper recycling or disposal off-site. The existing practices of collecting HHW and randomly inspecting loads will continue to be incorporated at the site as a standard practice to reduce the potential release of hazardous materials into the environment. All equipment maintenance and fuel storage will comply with related laws, regulations, ordinances, and/or standards.

Composting methods and practices, such as monitoring compost pile temperatures, adding moisture at appropriate times, as well as turning or aerating piles, will be utilized during the composting operation. This will reduce the likelihood of pile temperatures rising to unsafe levels and help prevent fires or spontaneous combustion. Hazardous materials will not be composted. Additionally, the composting area will be equipped with fire extinguishers for fire suppression as well as water trucks which will continue to be utilized where needed within the landfill property. RCDWR will comply with the fire plan for the proposed compost area (provided in the Appendices). This plan was developed in consultation with the Riverside County Fire Department.

FINDING: The impact is less than significant with mitigation.

Mitigation Measures

HAZ-1 Comply with State permit requirements for the design, operation, and maintenance of the PHHWF and composting operation.

HAZ-2 Update the HHW Spills Contingency Plan to incorporate the operation of the PHHWF and occasional mobile collection events.

HAZ-3 All mobile collection events that take place at the PHHWF site must strictly follow the operation protocol of the County's own mobile hazardous waste collection program to ensure public safety and protection of the environment.

HAZ-4 Maintain the current performance level of the WIP in terms of continued implementation of BMPs and emphasis on personnel safety training.

HAZ-5 Ensure efficient operation of the LFG recovery, disposal, and monitoring system and composting operation by means of close scrutiny performance and regular maintenance.

9c. Emit hazardous emissions or handle hazardous or acutely hazardous materials substances, or waste within one-quarter mile of an existing or proposed school?

The landfill is located a considerable distance from the nearest school, approximately 5 miles, therefore it will not emit hazardous emissions or handle hazardous or acutely hazardous materials substances, or waste within one-quarter mile of an existing or proposed school.

FINDING: There will be no impact.

9d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

According to the Department of Toxic Substances Control "Envirostor" database, the subject property is not a hazardous materials site pursuant to government Code Section 65962.5 and, as a result, will not create a significant hazard to the public or environment.

FINDING: There will be no impact.

9e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

According to the Riverside County Airport Land Use Plan, the subject property is not located within the plan, nor is it located within two miles of a public airport or public use airport. The Project does not propose airport uses, nor is it in proximity to an airport. Therefore, the Project would not result in a safety hazard or excessive noise for people residing or working in the area.

FINDING: There will be no impact.

9f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Badlands Landfill is located in a remote area of Riverside County and will not involve hazardous features sufficient to pose a major threat to public health and safety or to create an environmental impact of catastrophic nature. The ingress and egress designed at the site will assist with the flow of traffic which will facilitate emergency response and emergency evacuation, if necessary. Therefore, the Project is not expected to interfere with the County's emergency response plan or emergency evacuation plan.

FINDING: The impact will be less than significant.

9g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The Badlands Landfill is located within a designated High Wildfire Susceptibility Zone, according to Safety Element Figure S-11 in the General Plan. Existing vegetation in the vicinity of the landfill area consists primarily of Riversidean sage scrub and chaparral. This vegetation is prone to catch fire during the long dry seasons, and is a primary factor for wildfires in the region.

The landfill operation requires the clearance of vegetation, thus creating a large open space void of fire-susceptible vegetation. This means a landfill site can act as an effective firebreak to control spreading wildfire. However, a landfill operation in a fire hazardous region could spark a wildfire in several ways, including, equipment or operational fire accidents (due to composting or other landfill operations or equipment), mishandling of "hot" loads that contain smoldering materials, and accidental spill or mishandling of flammable hazardous waste at the PHHWF.

Fire-fighting capability is addressed by water trucks and fire extinguishers. The nearest fire station (Station No. 58) is approximately 5 miles away on Moreno Beach. The response time to the landfill site from this fire station is approximately 10-12 minutes.

The compost area will contain a water tank and be designed with 12 feet of separation between rows – this will provide adequate circulation to address fire hazards. Also, in addition to access to fire extinguishers and water trucks at the landfill, internal compost pile temperatures will be monitored daily to reduce the potential for fires. If internal temperatures are too high, additional moisture will be added, and the piles will be turned (or a fan will be utilized) to aerate and cool down. Due to the amount of regulations and regulatory agencies involved with the operation of a landfill and composting facility, in addition to the presence of trained staff, water trucks, and fire suppression equipment, the fire hazards associated with the

BLIP are not expected to expose people or structures, directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

FINDING: The impact will be less than significant.

10. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sources: Project materials; Riverside County GIS, SAWPA GIS Map.

10a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The Badlands Landfill Project site is located within the San Jacinto River watershed and the San Timoteo watershed. The landfill is permitted to operate under the California State Water Resources Control Board NPDES Industrial General Permit and the California Regional Water Quality Control Board – Santa Ana Region Waste Discharge Requirements (WDRs). The Project, which includes a landfill expansion and

additional waste diversion activities such as composting, will comply with NPDES regulations and WDRs to manage stormwater in a way that prevents or reduces pollution. Stormwater BMPs including, but not limited to, silt fencing, fiber rolls, check dams, hydroseeding on slopes, retention and/or sedimentation basins or other water quality basins, will continue to be incorporated at the landfill site and implemented within the expansion area. Furthermore, in compliance with composting regulations, RCDWR is required to submit documentation to the Regional Water Quality Control Board and Local Enforcement Agency that describes the site design and operation methods to be used to prevent liquids generated from composting operations from coming in contact with groundwater and surface waters. This will include a new WDR to identify composting operations based on State Water Resources Control Board Order 2015-0121-DWQ – General Waste Discharge Requirements for Composting Operations²⁰. Through Project design, regulatory compliance with the NPDES, SWPPP, WDRs, and the incorporation of BMPs, the Project will not violate water quality standards or WDRs, or otherwise substantially degrade surface or ground water quality.

FINDING: The impact is less than significant.

10b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The Project includes a landfill expansion with associated maintenance and ancillary uses, as well as waste diversion activities. According to the Santa Ana Watershed Project Authority (SAWPA) GIS Groundwater Recharge Map, the landfill property is not located within in a groundwater recharge basin and does not propose a use that is known to substantially decrease groundwater. An on-site groundwater well is currently utilized as a supplemental water source for the existing operation. The proposed Project will not increase the rate or intensity at which the groundwater is used and it is anticipated that the activities associated with the proposed Project will continue to utilize the hydrant on Theodore St as the primary water source (existing source) and will not have a significant impact on groundwater supplies.

FINDING: The impact will be less than significant.

10c.(i)(ii) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site? Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

The Project proposes construction of an expanded waste disposal area, and ancillary activities resulting in the fill of several ephemeral watercourses in the proposed expansion area. However, substantial erosion or siltation is not anticipated as the Project will be designed to incorporate non-structural and structural BMPs such as, but not limited to, fiber rolls, check dams, concrete v-ditches and water quality basins as methods to reduce impacts to water quality in addition to substantial storm runoff that could lead to flooding on- or off-site.

FINDING: The impact will be less than significant.

10c.(iii)(iv). Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? Impede or redirect flood flows?

²⁰ The organics processing facility will be designed to meet the Tier II standards of the General Waste Discharge Requirements for Composting Operations, thereby meeting the most protective surface and ground water quality standards.

The Project will incorporate stormwater BMPs such as sedimentation or other water quality basins to catch runoff before it leaves the site. Substantial runoff and pollution is not anticipated as the Project will be designed to incorporate non-structural and structural BMPs such as, but not limited to, fiber rolls, check dams, concrete v-ditches and sedimentation basins or other water quality basins as methods to reduce the velocity of water runoff as well as impacts to water quality. In order to reduce or eliminate the creation of runoff water at the site, these BMPs will be designed, installed, and constructed to comply with NPDES, WDR, and SWPPP requirements in accordance with the State Water Resources Control Board's requirements for construction activities. See response to 9a for more details regarding methods, measures, and regulations applicable to the Project addressing protection of water quality. Through site design and regulatory compliance, the Project is not anticipated to exceed the capacity of stormwater drainage systems, provide substantial sources of polluted runoff, adversely impede or redirect flood flows, or substantially degrade water quality.

FINDING: The impact will be less than significant.

10d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

A seiche is defined as a standing wave in an enclosed or partially enclosed body of water. Lakes in seismically active areas are at risk from seiches. A tsunami is defined as a wave that can be generated by an earthquake, landslide, volcanic eruption, or a large meteor. Mudflow can happen when a large amount of sediment becomes unstable and this can happen from the shaking of an earthquake, or saturation of sediment initiating sliding.

The landfill expansion Project site is located at a higher elevation than the nearest water body, Mystic Lake, which is over three miles southeast of the landfill. Mystic Lake does not contain significant enough amounts of water to generate a seiche or tsunami that could impact the elevated landfill area. Additionally, mudflow is not likely to be significant at the landfill due to the small amounts of rainfall in the area and the slope stabilizing BMPs utilized for stormwater pollution prevention. The Project site is not at risk for flood hazard, tsunami, or seiche, and does not risk release of pollutants due to project inundation.

FINDING: The impact is considered less than significant.

10e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

See responses to 10a and 10b. The Project will comply with NPDES regulations and WDRs to manage water quality at the site and comply with the Water Quality Control Plan, Santa Ana River Basin. The landfill is not located within a groundwater management zone. The Project will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

FINDING: The impact will be less than significant.

11. LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sources: Project materials; site investigation; Countywide Integrated Waste Management Plan; General Plan, EA No. Badlands 2010-01.

11a. Physically divide an established community?

The Project site is primarily surrounded by vacant lands and open space with the nearest residences located on Theodore Street about one mile west/southwest of the westerly property line of the landfill. Immediately west of the western property line of the landfill site is a 344-acre parcel owned by the RCA and designated as a “habitat conservation area” of the MSHCP. Immediately to the north is a large parcel encompassing 560 acres of open space owned by the California Department of Parks and Recreation. To the east of the Project site are open space parcels owned by the Riverside County Regional Park/Open Space District and Riverside County. The Project site abuts private parcels in its vicinity on the southwestern border. State Highway 60 is also located south of the Project site.

The landfill expansion Project will occur within the existing landfill property. Therefore, construction brought about by the Project would not physically divide an established community.

FINDING: The impact will be less than significant.

11b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Countywide Integrated Waste Management Plan (CIWMP)

The Riverside Countywide Integrated Waste Management Plan (CIWMP), dated September 1996, was approved by the CIWMB on September 23, 1998. The CIWMP, which is composed of a Summary Plan, Siting Element, Source Reduction and Recycling Element, Household Hazardous Waste Element, and Nondisposal Facility Element, was prepared in compliance with the Integrated Waste Management Act of 1989 (AB 939, et.seq.) for the purpose of defining programs and policies to reduce waste disposal by 25 percent (%) in 1995 and 50% by 2000.

The Badlands Landfill is consistent with the goals and policies of the CIWMP. The goals of the Siting Element of the CIWMP address the need for providing long-term disposal capacity and economically and environmentally safe operation of the landfill system. Therefore, the Project is important to the continued operation of the Badlands Landfill, which will provide long-term disposal capacity for the region through activities such as increase waste disposal, drainage improvements, dirt management, and environmental

monitoring. In addition, the Project would facilitate recycling and composting activities at the landfill. Increased recycling means increased waste diversion and conservation of landfill space.

Riverside County General Plan and Zoning

The County of Riverside's primary planning document, the General Plan, along with the Community and Environmental Transportation Acceptability Process (CETAP) and the MSHCP, are part of the Riverside County Integrated Project (RCIP). The Badlands Landfill site is within the Reche Canyon/Badlands Area Plan of the General Plan, which designates the Badlands Landfill site as Public Facility (PF) land use. This designation is intended for the use of public projects which is consistent with the landfill use.

The entire Project site is zoned W-2 (Controlled Development). Per the Riverside County Zoning Ordinance No. 348, "Disposal Service Operations" are conditionally permitted land use within this zone. However, the Riverside County Department of Waste Resources is a public agency and in accordance with the provisions of Section 18.2.a.b.(1) of Riverside County Zoning Ordinance No. 348, public projects are not subject to the provisions of the zoning ordinance.

Western Riverside County MSHCP

Approved on June 17, 2003, the MSHCP is intended to "enhance and maintain biological diversity and ecosystem processes while allowing future economic growth." If fully implemented, the MSHCP will result in preserving more than 500,000 acres of land for conservation of 146 species and their habitats in western Riverside County. As a "Permittee" under the MSHCP, the RCDWR "may engage in, and receive Take Authorization [of a species or their habitat] for, Covered Activities as set forth in Section 7.0 of the MSHCP." In return for coverage of an identified waste activity, the RCDWR, as a signatory to the Implementing Agreement, is obligated to carry out the provisions of Section 13.6, County Waste Obligations, under the MSHCP and that agreement.

The conservation area of the MSHCP is divided into four categories: (1) Public/Quasi-Public (PQP) Conserved Lands; (2) Criteria Area; (3) Special Linkage Area; and, (4) Rural Mountainous Designation. The category of Public/Quasi-Public Conserved Lands will form the backbone of the conservation area of the MSHCP, which accounts for 347,000 potential acres of targeted conservation area. The rest of the targeted conservation area will be assembled from lands that fall under the category of Criteria Area. Conservation criteria are established for each planning cell (Cell) in the Criteria Area, in accordance with biological requirements, physical characteristics of the lands, conservation principals, etc. The Criteria Area is an analytical tool for determining which properties to evaluate for acquisition and conservation under the MSHCP and does not impose land use restrictions.

According to the MSHCP Plan Map, Figure 3-1, the Project site is not located in PQP Conservation Lands but a portion of the Project site is located within Criteria Areas within MSHCP Cell Group T. Cell Group T targets conservation within the central portion of the Cell Group, which is located outside of the Badlands Landfill. A majority of the Badlands Landfill is located outside of Cell Group T, however, the western portion of the landfill which is also proposed to be disturbed by Project activities, is located within the southeastern portion of Cell Group T within Criteria Cells 743 and 831. Although the southeastern portion of Cell Group T is not targeted for conservation as identified by the goals outlined in the MSHCP, a JPR and DBESP analysis were completed as discussed in the Biological Resources section of this EA. The JPR and DBESP process identified that the Project was determined to be consistent with the MSHCP.

FINDING: The impact will be less than significant.

12. MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sources: Riverside County General Plan: Multipurpose Open Space Element, Mineral Resources Section.

12a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

According to the County's General Plan Figure OS-6, Mineral Resources Area, the Badlands Landfill property is located within the MRZ-3 area where mineral deposits are likely to exist; however, the significance is undetermined. The Project proposes the continued development of the landfill, including increased waste disposal, waste diversion and other ancillary landfill activities. Should landfill operations cease in the future, and if soil testing shows that the on-site material is a useful quality, the site could possibly be used for the recovery of aggregate materials. Implementing the proposed Project will not result in the loss of availability of any known mineral resource that would be of value to the region and residents of the state.

FINDING: The impact will be less than significant.

12b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The Project does not propose mining and is not located in an identified locally important mineral resource recovery site. The potential for finding mineral resources is less than significant.

FINDING: The impact will be less than significant.

13. NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive ground-borne vibration or ground-borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sources: Riverside County General Plan: Noise Element; Ordinance No. 847; Airport Land Use Compatibility Plan, EA No. 39813, EA Badlands No. 2010-01

13a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The landfill site is located in a very secluded canyon region of the Badlands – an area with steep and rugged terrain and hills - which act as a natural sound barrier. The BLIP proposes increased waste disposal, waste diversion activities, additional environmental monitoring and protection activities, and other ancillary activities, all of which are typical activities at a landfill. The Project will generate noise consistent with the existing sounds and levels at the landfill. The Project will increase the current daily capacity of the landfill by 500 tpd over time as the need arises; however, there will not be a significant increase in operational equipment use intensity or waste hauling traffic volume. The previous environmental evaluation and existing permitted vehicle limit, of 612 vehicles per day, will remain the same for this Project – there will be no change to the number of vehicles permitted daily or the associated noise. Noise associated with the Project's additional 30 truck trips (23 MSW trucks/7 Organics trucks) would not exceed or even come close to an increase of 3 dBA.^{21,22}

²¹ Decibels are measured on a logarithmic scale, which quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as a doubled traffic volume, would increase the noise levels by 3 dBA. To reach this 3 dBA level, landfill truck traffic would need to double. As stated, there will be no change to the number of daily permitted vehicles.

²² It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA; that a change of 5 dBA is readily perceptible, and that an increase (decrease) of 10 dBA sounds twice (half) as loud. This definition is recommended by the California Department of Transportation's Traffic Noise Analysis Protocol for New Highway and Reconstruction Projects.

Landfill equipment operation is a source of landfill noise. However, noise has never been a public nuisance problem or an environmental issue at the Badlands Landfill primarily due to the isolation of the landfill site from existing residences. Also, landfill heavy equipment is already equipped with modern noise attenuation devices and closed cabs to protect the operators, who are also required to wear ear plugs or similar hearing protection devices, as warranted.

Heavy equipment for the composting operation, including a grinder, screener, and loader, could create excessive noise-levels; however, this is not anticipated due to the remote and elevated location of the landfill and its distance from residents and population centers. Additionally, the potential noise associated with composting equipment is typical for a landfill and would be indistinguishable from other landfill activities.

Landfill liner construction will likely have the greatest potential for noise generation, as it involves the most heavy equipment usage. However, noise from liner construction is not a new source of noise as it currently takes place within the existing landfill footprint as needed (typically every 3-5 years). Liner construction is temporary and due to the Project's location in the Badlands region, as well as eastward moving development (moving further distance away from residences), it is not anticipated to generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established.

FINDING: The impact will be less than significant.

13b. Generation of excessive ground-borne vibration or ground-borne noise levels?

Although heavy equipment is already in use at the landfill, additional equipment will be required during Project construction and operation; however, is minimal, temporary, and consistent with existing levels at the Badlands Landfill. Construction will occur in phases and will occur when the previous phase reaches capacity. This phased construction approach will reduce the temporary noise impacts from construction (shorter duration). Also, due to the isolation of the Badlands Landfill and that the majority of the proposed landfill expansion will occur to the east of the existing operations - further away from existing residents - the Project is not anticipated to cause significant generation of excessive ground-borne vibration or ground-borne noise levels.

Heavy equipment for the composting operation, including a grinder, screener, and loader, could create excessive ground-borne vibration or noise-levels; however, as previously stated, due to the remote and elevated location of the landfill and its distance from residents and population centers, the Project will not create a significant impact. Additionally, the potential noise associated with composting equipment is typical for a landfill and would be indistinguishable from other landfill activities.

FINDING: There will be a less than significant impact.

13c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

According to the Riverside County Airport Land Use Plan, the Badlands Landfill is not included in the plan or known to be within two miles of a public airport or public use airport, or within the vicinity of a private airstrip. Therefore, the BLIP would not, due to proximity to an airport, expose people residing or working in the Project area to excessive noise levels.

FINDING: There will be no impact.

14. POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source: Project materials.

14a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The Project proposes to further develop the Badlands Landfill by expanding into an integrated facility to provide for long-term solid waste management and waste diversion capacity for the region. Specifically, the Project proposes to increase the waste disposal area, add a composting operation, and incorporate additional water quality basins and percolation basins and stockpiles in addition to other ancillary landfill activities. Since landfills generally do not generate human population growth or residential/commercial developments in their vicinity, they are not considered a growth-inducing land use. The growth of the landfill is needed to accommodate existing and future regional population, and will not induce additional growth.

FINDING: There will be no impact.

14b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The Project is proposed to occur at the Badlands Landfill which has been in operation since 1966. The nearest residences are located one mile away from the existing landfill operation; therefore, the Project will not cause displacement of substantial numbers of existing people or housing necessitating the construction of replacement housing elsewhere.

FINDING: There will be no impact.

15. PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable services ratios, response time or other performance objectives for any of the public services:				
a. Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sources: Public service facilities; and Moreno Valley Unified School District., EA No. Badlands 2010-01.

15a – 15e. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable services ratios, response time or other performance objectives for any of the public services?

Fire protection: A fire prevention plan and other emergency response plans are in place at the Badlands Landfill. Also, RCDWR will comply with the fire plan for the proposed organics processing operation (provided in the Appendices). This plan was developed in consultation with the Riverside County Fire Department. These plans require that the operator maintain fire suppression equipment on the Project site and any other fire control means, as may be deemed necessary by the Riverside County Fire Department. A minor fire that occurs on the landfill property can be controlled by spraying water with the two 4,000-gallon water trucks or by overwhelming the fire with dirt with the use of on-site heavy equipment. Additionally, minor fires can be controlled by using Dry Chemical fire extinguishers stored in the HHWCF. These standard fire suppression measures will also apply to the Project and are deemed adequate for the purpose. The organics operation will include an on-site fire protection system with fire suppression equipment, such as fire extinguishers and water trucks, as well as personnel trained in fire suppression equipment use. Also, the compost area will contain a water tank and the area was designed to have adequate circulation for fire prevention purposes, including 12 feet of separation between compost rows.

FINDING: The impact will be less than significant.

Police protection: The Riverside County Sheriff Department provides police services for the Badlands Landfill. The nearest sheriff station is the Moreno Valley Station, located at 14114 Business Center Drive, in the City of Moreno Valley. The Moreno Valley Station is located approximately eight (8) miles from the landfill site. Response time to an emergency call could be as short as five (5) minutes. The proposed Project will not significantly impact the County Sheriff Department's ability to provide its present law enforcement services to the County residents in the area. Due to the isolated location of the property, and the fact that the property is used for the operation of a landfill, the site is not anticipated to be a prime target for criminals. Moreover, security is provided by a guard on duty.

FINDING: The impact will be less than significant.

Schools: The landfill expansion Project is not growth-inducing with a potential to impact schools or generate the need for additional schools.

FINDING: There will be no impact.

Parks: The landfill expansion Project is not growth-inducing with a potential to impact parks or generate the need for additional parks.

FINDING: There will be no impact.

Other public services/facilities: Both site access roads, Ironwood Avenue and Theodore Street, have been improved to accommodate the existing landfill capacity. The landfill is permitted to receive 612 vehicle trips per day and this will not increase with the Project. There is no anticipated significant impact from the Project on other public facilities or services.

FINDING: There will be no impact.

16. RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source: Project materials.

16a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The Project proposes the continued development of the Badlands Landfill including an expanded waste disposal area, increased waste diversion activities including composting, additional water quality basins, stockpile areas, and other landfill ancillary activities. The Project does not include housing or other growth-inducing uses that would cause the occurrence or acceleration of the physical deterioration of recreation facilities.

FINDING: There will be no impact.

16b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The Project proposes the continued development of a landfill operation to include an expanded waste disposal area, household hazardous waste collection, materials exchange, landfill gas to energy facilities, recycling, and composting. These uses will not include recreational facilities or require construction or expansion of recreational facilities.

FINDING: There will be no impact.

17. TRANSPORTATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities??	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Would the project				
i. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sources: Project Materials; General Plan; EA No. 37161, EA No. 39813, EA No. Badlands 2010-01.

17a. Conflict with an program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The BLIP proposes an expanded waste disposal area, increased waste diversion activities including composting, environmental monitoring systems, drainage and stormwater pollution prevention BMPs, and other ancillary landfill activities. The permitted waste disposal tonnage will increase by 500 tons per day (from 4,500 tpd to 5,000 tpd); however, there will be no change to the amount of vehicles currently permitted at the landfill – 612. Based on existing customer data, the average number of vehicles using the site per day is 271. The proposed 500 tpd increase is only anticipated to generate 23 additional waste delivery vehicles (transfer trucks) per day or 57.5 passenger car equivalents (PCE) (23 vehicles x 2.5 PCE factor). Also, the proposed 150 tpd of food waste is anticipated to generate 7 transfer truck deliveries to accommodate the composting operation. The anticipated 30 vehicle per day increase has the potential to raise the average daily vehicle total from 271 to approximately 301 vehicles, which will continue to be significantly lower than the 612 vehicles currently permitted to use the landfill daily. From September 2017 to August 2018, the maximum vehicles received in one day was 408. With the addition of 30 vehicles per day anticipated from the Project, the daily vehicle total would reach approximately 438 - this will

continue to be lower than the current vehicle limit of 612 vehicles per day at the landfill, which was evaluated in prior CEQA documents.

The 30 additional transfer trucks will generate approximately 60 transfer truck trips per day (30 transfer trucks x 2 trips) or 150 PCE trips per day ((30 transfer trucks x 2.5 PCE) x 2 trips). From September 2017 to August 2018, the average number of vehicles received at the landfill during daily peak hours was 24 vehicles from 7-9am, and 8 vehicles from 4-6pm. The additional transfer trucks will deliver MSW to the landfill throughout the day; as such, the amount of peak hour trips will continue to remain well below 100. A traffic impact analysis (TIA) is needed when at-least 100 peak hour trips are anticipated as a result of a Project, because, at that amount, local traffic circulation and congestion could be negatively impacted. The trips anticipated to be generated will not meet the threshold for requiring the Project to prepare a TIA, and will not significantly impact vehicular circulation in the area.

When traveling on Highway 60, Theodore Street is the main access road to reach Ironwood Avenue. Ironwood Avenue provides direct access to the landfill. Theodore Street is a paved, non-County maintained road, and Ironwood Avenue is classified as a paved, County-maintained road. The Riverside County Congestion Management Program (CMP), established in 1990 under Proposition 111, establishes measures of effectiveness of the circulation system thereby prompting reasonable growth management programs that will utilize new transportation funds, alleviate traffic congestion and related impacts, and improve air quality. The Riverside County Transportation Commission (RCTC) is the designated Congestion Management Agency for Riverside County and is responsible for the development and implementation of the CMP. According to the General Plan, within the Reche Canyon/Badlands Area Plan, level of service (LOS) D is applicable to all new development proposals in the area unless a lesser level is approved by the Board of Supervisors. LOS designations describe the level of congestion or traffic delay on a given roadway. LOS D is generally described as high density and approaching unstable traffic flow, but traffic flow is tolerable. Although the LOS standard for the intersection of Theodore Street and Ironwood Ave is D; it is currently operating at LOS A which is generally described as free flowing traffic flow.²³ Also, neither Ironwood Avenue nor Theodore Street have been identified as having deficient LOS according to the CMP and General Plan.

Additionally, the eastbound off-ramp and westbound on and off-ramps at Theodore Street and State Highway 60 currently operate at LOS B which is defined as reasonably free-flowing with speeds beginning to be restricted by traffic conditions. The traffic anticipated to be generated by the Project would not significantly impact the level of service of these roadways and off/on-ramps. Lastly, non-motorized travel, such as pedestrian and bicycle traffic, is not permitted at the landfill due to the safety hazards this would entail. Therefore, the Project will not conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

FINDING: The impact will be less than significant.

17b.i. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision?

On December 28, 2018, changes to the state CEQA Guidelines took effect. This included updates to Appendix G- CEQA Environmental Checklist Form, as well as the addition of section 15064.3, relating to the determination of transportation impacts. Per State CEQA Guidelines section 15064.3 (c), provisions of section 15064.3 are effective statewide on July 1, 2020. While lead agencies may immediately implement

²³ Traffic Impact Assessment Technical Report for the World Logistics Center, prepared by WSP USA Inc., dated July 2018.

the provisions of section 15064.3, the RCDWR, on behalf of the County of Riverside as lead agency, has opted to use the longstanding thresholds for impacts to transportation- see response to 17b.ii.

RCDWR will continue to develop an appropriate mechanism, metrics, and thresholds to evaluate transportation impacts from future landfill development projects²⁴. Note that the nature of landfill development is far different from traditional residential, commercial, and industrial land-uses, for which the provisions of section 15064.3, as well as the guidance found in the Technical Advisory document (Office of Planning and Research, December 2018), would more easily apply.

FINDING: No impacts as the provisions of section 15064.3 are not yet applicable.

17b.ii. Would the project conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

The County of Riverside's CMP was established in the state to link land use, transportation, and air quality to prompt programs that effectively alleviate traffic congestion and related impacts and improve air quality. Although the Project proposes an expansion of the waste disposal area, and an increase in waste diversion and other ancillary activities, the existing landfill facility is already permitted for 612 vehicle trips daily and the Project does not expect to reach this amount. Further, the existing average vehicle traffic count is reported at 271 vehicles per day, well below the permitted number of trips currently allowed. The proposed Project is estimated to generate 150 additional PCE trips scattered throughout the day, which would continue to be well under the existing permitted limit of 612 vehicle trips per day (see Table 17-1). Also, as stated above, the roadways that will be impacted by the Project are not identified as being deficient in their levels of service.

**Table 17-1
Proposed Tonnage and
Maximum Daily Trips (24-Hour)**

	Existing Permitted 4,500 TPD		Average Traffic Volume		Proposed 500 TPD Increase (expanded disposal area) and 150 TPD		
	Trips	Tons	Year	No. of Vehicles		Additional Vehicles Expected ²⁵	Tons
Self-Haul Vehicles	118	64	2015	225	Transfer Trucks	30	650
Commercial Trucks	41	192	2016	235	(PCE) ²⁶	(75)	-
Transfer Trailers	198	4,244			TOTALS	30	650
Other Trips	255		2017	271			
TOTALS	612	4,500					

FINDING: The impact will be less than significant.

²⁴ In December 2018, the Office of Planning and Research (OPR) released a Technical Advisory (TA) on Evaluating Transportation Impacts in CEQA. The TA states, "Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types." (pg. 17).

²⁵ The additional vehicles, when added to the 2017 Average Traffic Volume (301 vehicles), will continue to be well under the 612 vehicle per day limit currently permitted.

²⁶ PCE factor is 2.5 passenger cars per transfer truck.

17c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The BLIP proposes landfill expansion activities such as an increase waste disposal and waste diversion activities, as well as environmental monitoring systems and drainage improvements. The increased waste disposal will involve the construction of an expanded waste disposal area which includes a protective liner system. The liner contractor shall be responsible for preparing and implementing a traffic safety plan, subject to approval by the Riverside County Waste Resources Department, for any hauling operation or on-road equipment used that may affect a public road. At a minimum, such plan should call for the use of appropriate traffic safety signs and flagmen, or safe directional aid, to ensure intersection traffic safety. Incorporating traffic safety mitigation measures will substantially reduce hazards at the site that could arise.

Mitigation Measure

T-1 Traffic control measures will be incorporated by the construction contractor(s) in conjunction with the Department to facilitate travel safety at the site. These measures will be incorporated during periods of heavy equipment operation during liner construction, as well as when there is an unusually heavy usage of the site by customers or haulers, and during periods of inclement weather. These measures will be addressed through adequate directional signage, utilizing road barriers/blockades, adding, blocking, or modifying internal roads, using flagmen to direct or redirect traffic.

FINDING: The impact will be less than significant with mitigation.

17d. Result in inadequate emergency access?

Regional access to the Project site is provided via State Highway 60 and Theodore Street. Local access is provided by Ironwood Avenue, a road which was re-aligned and widened in 1999 for accommodation of the anticipated growth of landfill truck traffic as a result of future landfill expansions. These routes provide adequate emergency access. Landfill roads will continue to be constructed and maintained as necessary to provide the most direct and safe access to the disposal area, in addition to providing adequate emergency access.

FINDING: The impact will be less than significant.

18. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sources: Project materials; Phase 1 Cultural Resources Assessment by Michael Brandman Associates (MBA), dated December 6, 2010; Standard Mitigation Letter from the Soboba Band of Luiseno Indians, dated September 6, 2017; Mitigation Measures from the Morongo Band of Mission Indians (email), dated October 4, 2017.

18a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k):
- ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe:

The BLIP proposes an expanded waste disposal area, increased waste diversion activities including composting, environmental monitoring systems, drainage and stormwater pollution prevention BMPs, and other ancillary landfill activities. The Project area consists of rugged terrain that is difficult to traverse. Based on the Cultural Resources Assessment provided by MBA, the difficult terrain and lack of perennial surface waters in the Project area would have made it an undesirable place for pre-historic and historic human populations. Also, the records searches with the NAHC and Eastern Information Center (EIC) yielded negative results for containing significant historic or cultural resources. The site is not listed or eligible for listing in the California Register or Historical Resources or any local register of historical resources.

As determined by the Cultural Resource Assessment conducted by MBA, and as relayed above, significant historical resources, according to the criteria set forth in Public Resources Code Section 5024.1, were not documented at the site and are not anticipated to be present due to site characteristics being unfavorable for historic human settlement. Pursuant to Assembly Bill (AB) 52, notification letters were provided to tribes who requested to be notified about projects in the area. Although no sacred or significant cultural resources have been identified or documented at the site, both the Morongo Band of Mission Indians and Soboba Band of Mission Indians (Tribes) requested consultation. At the request of the Tribes, a monitor shall be on-site during all initial ground disturbing activities and excavation of each portion of the Project site. While no Tribal Cultural Resources (TCRs) were identified in the Project's Cultural Resource Assessment or during AB 52 consultation with the Tribes, the following mitigation measures will ensure that Project impacts to TCRs will be less than significant.

FINDING: The impact will be less than significant with mitigation.

Mitigation Measures

TR-1 Prior to grading, RCDWR shall enter into an agreement with the Morongo and Soboba tribes for Native American monitoring. The Native American Monitor(s) shall be on-site during all initial ground disturbing activities and excavation of each portion of the Project site including clearing, grubbing, tree removals, grading and trenching. The Native American Monitor(s) shall have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of tribal cultural resources.

TR-2 If during ground disturbance activities, unanticipated tribal cultural resources are discovered, the following procedures shall be followed:

1. All ground disturbance activities within 100 feet of the discovered tribal cultural resource shall be halted and RCDWR shall call the County Archaeologist, or qualified archaeologist (if the County Archaeologist is not available), immediately upon discovery of the tribal cultural resource. A meeting shall be convened between RCDWR, the County Archaeologist, and a representative from the both the Morongo and Soboba tribes, to discuss the significance of the find(s). At the meeting with the aforementioned parties, a decision is to be made, with the concurrence of the County Archaeologist, as to the appropriate treatment (documentation, recovery, avoidance, etc.) for the tribal cultural resource. Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished.
2. All inadvertent discoveries of tribal cultural resources shall be temporarily curated on site in a secured location until the end of the Project or at a secure off-site location acceptable to the Morongo and Soboba tribes.

TR-3 RCDWR shall relinquish ownership of all tribal cultural resources (with the exception of sacred items, burial goods, and Human Remains) and provide evidence to the satisfaction of the County Archaeologist that all archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), have been handled through one of the following methods:

1. A fully executed reburial agreement with the appropriate culturally affiliated Native American tribe or band. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloging, analysis and special studies have been completed on the tribal cultural resource(s).
2. Curation at a Riverside County Curation facility that meets federal standards per 36 CFR Part 79 and therefore will be professionally curated and made available to other archaeologists/researchers and tribal members for further study. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence shall be in the form of a letter from the curation facility identifying that archaeological materials have been received and that all fees have been paid.
3. If the Morongo and Soboba tribes cannot come to an agreement between themselves as to the disposition of tribal cultural resources, RCDWR shall then proceed with curation at the Western Science Center.
4. No destructive analysis or other laboratory testing of a tribal cultural resource shall take place unless agreed upon by the Morongo and Soboba tribes. If requested and if feasible, the County shall make accommodations for on-site reburial of tribal cultural resources in an area not subject to further ground disturbance in the future (open spaces, nature preserves, easements, etc.). The location of the reburial shall remain confidential and shall be recorded on a Department of Parks and Recreation (DPR) form by the County archaeologist and filed with the Eastern Information Center at the University of California, Riverside. If requested, a final report of the tribal monitoring activities shall be prepared and a copy shall be provided to the tribes.

19. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sources: Project materials; Riverside County Environmental Health Department.

19a. Require or result in the relocation or construction of new or expanded water, wastewater treatment facilities or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The landfill does not utilize a sewer system or wastewater treatment system currently, nor will these be necessary for the expansion Project as landfill operations are not generally considered significant producers of wastewater. The Project will not result in a need for new water or wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities. There are two (2) septic systems on-site that will remain, in addition to chemical toilets.

Site BMPs, such as sedimentation basins or other water quality basins, and other storm water pollution prevention measures will be utilized to prevent or reduce storm water contamination at the site. As demonstrated in this EA, construction of new on-site facilities, or improvements to existing on-site drainage structures, will not result in significant environmental impacts. Any such facility(ies) will be located within

the landfill's permitted disturbance limits and RCDWR will obtain all necessary approvals and permits, as documented in this EA.

FINDING: There will be no impact.

19b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Water

An average of approximately 24,700 gallons of water per day was consumed daily for dust control between 2017 and 2018. The bulk of the water used for dust control is obtained via 4,000-gallon water trucks from an off-site fire hydrant on Theodore Street, approximately 1 mile from the landfill property, with a production well located within the northern portion of the landfill property used as a supplemental water source. An average of approximately 170 gallons per day of non-potable water is used for fire protection and flushing toilets in the field office via a 20,000-gallon water storage tank located adjacent to the field office. Bottled water is supplied for personnel consumption.

The BLIP would increase the daily water requirement temporarily for dust control during construction, and incrementally for the operation of the landfill due to the increase in landfill area that will require dust control. The added organics operation would also require water to ensure required moisture levels are maintained for the composting process. Water will continue to be provided primarily by the hydrant on Theodore Street.

**Table 19-1
Water Usage (Daily)**

Purpose	Existing Quantity (gallons)	Proposed Quantity (gallons)	Increase From Existing Conditions (gallons)
Dust Control	24,700	29,400	4,700
Personnel Use/Fire Protection	170	255	85
Composting	0	24,000	24,000
TOTAL	24,870	53,655	28,785

While sufficient water supplies are available to serve the site from existing sources, recycled water and other liquids, accepted or generated at the site, can be used for the proposed organics operation, dust control activities, etc.. Usage of non-potable water sources, where appropriate, will only assist RCDWR to ensure that Project impacts remain less than significant.

Furthermore, as shown in Table 19-1, the net increase in daily water usage due to Project implementation (process water, dust control, fire protection) is an estimated 28,785 gallons per day (gpd). Using the U.S. Environmental Protection Agency's estimate²⁷ of 300 gpd for a typical household of four (4), the increase in water consumption for the Project would be equivalent to that of an additional 96 households for a site total of 179 households. The threshold for the preparation of a Water Supply Assessment to determine if a water provider has an adequate water supply is 500 homes.²⁸ When evaluating the acre-feet demand from

²⁷ From U.S. Environmental Protection, <https://www.epa.gov/watersense/how-we-use-water>

²⁸ As stated in Water Code section 10912(7): a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

500 homes in the western Riverside area, this equates to approximately 336 acre-feet per year (AFY).²⁹ Water demand from the Project is 27 AFY.³⁰

As such, the increase in the potable water consumption for the Project is well below these thresholds and no significant effects on water supply for the reasonably future during normal, dry and multiple dry years, are anticipated.

FINDING: The impact will be less than significant.

19c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The landfill does not utilize a sewer or wastewater treatment facility. In fact, the landfill serves wastewater treatment providers by accepting non-hazardous sludge items generated by wastewater treatment providers.

FINDING: There will be no impact.

19d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The Project is a landfill expansion which will ensure adequate capacity to accommodate solid waste disposal needs in the region.

FINDING: There will be no impact.

19e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The Project will greatly benefit the region by continuing to provide solid waste services and other resource saving opportunities to the region. Federal, state, and local management and reduction statutes and regulations, related to solid waste, will be enhanced by the Project.

FINDING: There will be no impact.

²⁹ $(500 \text{ households} \times 3.34 \text{ persons per household} \times 180 \text{ gallons per capita per day} \times 365 \text{ days}) / (325,851 \text{ gallons per acre feet}) = 336 \text{ AFY}$

³⁰ $(28,785 \text{ gpd} \times 306 \text{ operating days/year}) / 325,851 \text{ gallons per acre feet} = 27.03 \text{ AFY}$. A 365 day/year operation results in 32.24 AFY.

20. WILDFIRE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Source: Project materials.

20a. Will the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The Badlands Landfill is located in a remote area of Riverside County and will not involve hazardous features sufficient to pose a major threat to public health and safety or to create an environmental impact of catastrophic nature. The ingress and egress designed at the site will assist with the flow of traffic which will facilitate emergency response and emergency evacuation, if necessary. The Badlands Emergency Action Plan (EAP) contains emergency procedures for wildfires within the Badlands Landfill property. The EAP will be updated as part of the JTD revision to account for all new operations associated with the BLIP. In addition, Department Operations staff and non-department contractors performing work at the Badlands Landfill will be required to prepare an emergency access plan that will allow emergency response personnel have clear access to fires and medical incidents. Therefore, the Project is not expected to interfere with the County's emergency response plan or emergency evacuation plan.

FINDING: The impact will be less than significant.

20b./20c. Does the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the

uncontrolled spread of a wildfire? Does the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The Badlands Landfill is located within a designated High Wildfire Susceptibility Zone, according to Safety Element Figure S-11 in the General Plan. Existing vegetation in the vicinity of the landfill area consists primarily of Riversidean sage scrub and chaparral. This vegetation is prone to catch fire during the long dry seasons, and is a primary factor for wildfires in the region.

The landfill operation requires the clearance of vegetation, thus creating a large open space void of fire-susceptible vegetation. This means a landfill site can act as an effective firebreak to control spreading wildfire. However, a landfill operation in a fire hazardous region could spark a wildfire in several ways, including, equipment or operational fire accidents (due to composting or other landfill operations or equipment), mishandling of “hot” loads that contain smoldering materials, and accidental spill or mishandling of flammable hazardous waste at the PHHWF.

Fire-fighting capability is addressed by water trucks and fire extinguishers. The nearest fire station (Station No. 58) is approximately 5 miles away on Moreno Beach. The response time to the landfill site from this fire station is approximately 10-12 minutes.

The Project includes a compost area that will contain a water tank and be designed with 12 feet of separation between rows of compost material – this will provide adequate circulation to address fire hazards. Also, in addition to access to fire extinguishers and water trucks at the landfill, internal compost pile temperatures will be monitored daily to reduce the potential for fires. If internal temperatures are too high, additional moisture will be added, and the piles will be turned (or a fan will be utilized) to aerate and cool down. Due to the amount of regulations and regulatory agencies involved with the operation of a landfill and composting facility, in addition to the presence of trained staff, water trucks, and fire suppression equipment, the fire hazards associated with the Project will not result in significant exposure to wildfire or generate fire prevention maintenance or resources that will result in significant impacts to the environment.

FINDING: The impact will be less than significant.

20d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Due to the remote location, distance from people and structures, and the presence of extensive ridges surrounding the landfill, the Project is unlikely to expose people or structures to significant risks from flooding or landslides.

FINDING: The impact will be less than significant.

21. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulative considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Source: Project materials.

21a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

As indicated in the previous analysis, through Project design, adherence to standard regulatory practices and compliance with proposed mitigation measures as listed throughout this document, no significant impacts are expected to occur. As such, implementation of the Project would not substantially degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

FINDING: The impact will be less than significant.

21b. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulative considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).

Based on the biological assessment provided for this Project, and the mitigation measures proposed, the Project is in compliance with the MSHCP and will not have a cumulatively considerable impact on biological resources (see the Biological Resources section for further analysis). Regarding Transportation, the Project is anticipated to generate an additional 30 truck trips daily which would continue to be well under the existing permitted limit of 612 vehicle trips per day. As discussed in the Transportation section, the circulation network surrounding the landfill operates at LOS B or better, and the Project would not generate enough trips to cause a significant impact. Concerning air quality and GHGs, the Project complies with daily and regional air pollutant emissions thresholds, established by the SCAQMD, to ensure that the ambient air meets federal and state air quality standards. The Project will actually reduce regional GHG emissions (via composting), thereby supporting the goals of SB 32 and the County of Riverside CAP. In addition to the Project’s water demand being well below the water supply threshold, the organics operation will assist the region with its water conservation goals through the production, and ultimate use, of compost and mulch, which are known to greatly assist with water reduction³¹. Finally, the Project will result in development of several water quality basins, which filter out pollutants and other heavy metal, thereby significantly improving the water quality for downstream resources. Therefore, as demonstrated in this EA, there are no impacts that are cumulatively considerable as it relates to past, current, or probable future projects.

FINDING: The impact will be less than significant.

21c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The Project will facilitate the safe and proper disposal or recovery of waste resources and will help reduce improper disposal methods that could result in adverse impacts to the environment. The Project will comply with applicable environmental regulations and no substantial adverse effects on human beings, either directly or indirectly, are anticipated to occur as a result of this Project.

FINDING: The impact will be less than significant.

³¹ Composting can increase the water holding capacity of soil by up to 7 times. Using compost also allows you to water more efficiently by reducing runoff and evaporation. <https://www.sdcwa.org/watersmart/news/improve-soil-and-serve-water-compost>

SUMMARY OF MITIGATION MEASURES

The following environmental factors are determined to have *A Less than Significant Impact After Mitigation*: Aesthetics, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Transportation, and Tribal Cultural Resources.

Aesthetics

A-1 All installed or portable lighting shall be shielded and directed downward.

Biological Resources

- Bio-1 A qualified biologist shall be retained to act as a biological monitor during initial project implementation. The biological monitor shall review all proposed plans and provide directions to avoid or minimize impacts to sensitive biological resources. The biological monitor shall routinely monitor construction activities to ensure compliance with any regulations relating to the protection of wildlife or sensitive habitats.
- Bio-2 Should any habitat need to be cleared or disturbed during the traditional bird nesting season of February 1 – August 31, a qualified biologist shall conduct nesting bird clearance surveys no more than 3 days prior to the start of ground disturbance. The clearance surveys should cover the entire disturbance area as well as 500 foot buffer area. If any nesting activity is detected during the surveys the qualified biologist shall establish and oversee implementation of avoidance and impact minimization measures.
- Bio-3 The biological monitor shall monitor the project site prior to ground disturbance and during construction activities for the presence of the Northwestern San Diego Pocket Mouse, Southern Grasshopper Mouse, Robinson's Pepper-grass and San Bernardino Aster. If these species are found, the biological monitor shall carry out necessary impact avoidance and minimization activities to avoid take of the species until a Habitat Mitigation and Monitoring Plan (HMMP) can be produced and approved by the appropriate natural resource agencies.
- Bio-4 Prior to any ground disturbance activities, all Riverine/Riparian features within the vicinity of proposed construction activities which are not identified for disturbance shall be clearly identified and delineated by using methods which may include staking/tape, temporary fencing, signage, or other appropriate measures/methods as determined by the RCDWR in consultation with the biological monitor.
- Bio-5 The Project shall comply with Section 6.1.4-UWIG of the MSHCP as documented in the RCA's Joint Project Review letter (Letter- dated 1/30/19) - see item "d" for Section 6.1.4 (pgs 6 -7). Additionally, the best management practices listed in the Letter under item "e" for MSHCP Volume I, Appendix C, shall be implemented for the duration of construction, as applicable.
- Bio-6 RCDWR shall comply with the mitigation identified in the DBESP (RCHCA, 2019), which requires the funding for a minimum of 17.79 acres within the LMR to compensate for the loss of Riparian/Riverine habitat associated with the proposed Project. If the RCDWR and RCHCA are not successful in developing the LMR mitigation site, then RCDWR shall purchase credits from a mitigation bank or In-Lieu Fee program that is approved by the RCA, USFWS, USACE, and CDFW. Purchase of credits shall meet the minimum 3:1 ratio for Riverine/Riparian impacts.

- Bio-7 Prior to Project impacts within jurisdictional waters, RCDWR shall consult with and obtain permits and/or agreements from the California Department of Fish and Wildlife- Streambed Alteration Agreement, Santa Ana Regional Water Quality Control Board- Clean Water Act Section 401 Certification, and the U.S. Army Corps of Engineers- Clean Water Act Section 404 Permit. Mitigation shall meet a minimum ratio of 3:1.
- Bio-8 Prior to ground disturbance, the northern border of the Badlands Property line adjacent to Criteria Cells 660 and 661 will be clearly delineated by a licensed surveyor to further ensure that Project disturbance remains within the landfill property.

Cultural Resources

- C-1 In the event of an accidental discovery or recognition of any human remains, Public Resources Code (PRC) Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps shall be taken:
- There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, then the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” of the deceased Native American. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, or
 - Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the property in a location not subject to further subsurface disturbance:
 - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;
 - The descendant identified fails to make a recommendation; or
 - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

Geology and Soils

- G-1 A qualified paleontologist shall be retained by the landfill operator to determine if any of the previously identified localities are still existent and assess the condition of the localities, if existent. If localities are present and determined significant, a specific Paleontological Resources Mitigation Program (PRMP) treatment plan shall be developed. The treatment plan(s) shall address appropriate sampling, analysis, and documentation methodologies/techniques used to obtain scientific information associated with each of the potentially impacted localities. The plan shall

require that all collected specimens be placed in an acceptable museum, repository or accredited institution.

- G-2 Prior to any earthmoving in the BLIP area, a qualified vertebrate paleontologist shall be retained by the landfill operator to develop a storage agreement with an appropriate repository to allow for the permanent storage and maintenance of any fossil remains recovered during implementation of the BLIP.
- G-3 Prior to any earthmoving in the BLIP area, the landfill operator shall retain a qualified paleontologist to develop a PRMP discovery/treatment plan for any fossil remains encountered during earthmoving activities. The plan shall outline the standard procedures for the identification, treatment, and assessment of specimen and site data associated with any paleontological find. The mitigation plan shall also include a paleontological resources awareness training program for the BLIP's earthmoving staff including equipment operators, to raise their awareness of and alertness to potential fossil resources. At a minimum, the program shall require initial training of all new staff and refresher training of existing staff.
- G-4 Paleontological monitoring shall be conducted during earthmoving activities in sediments of the San Timoteo Formation. Earthmoving activities in areas where previously disturbed strata will be buried but not otherwise disturbed need not be monitored. The supervising paleontological monitor shall have the authority to reduce or terminate monitoring once it is determined that the probability of encountering the fossils is low.
- G-5 If fossil remains are encountered when a paleontological monitor is not present, the landfill operator shall immediately divert the earthmoving activities to another area and then contact the supervising paleontologist to assess the find and determine the appropriate recovery. Earthmoving activities within the fossil recovery area shall not resume until all fossil recovery work is completed and a written clearance for continued Project operation is received from the supervising paleontological monitor.
- G-6 The paleontological monitor on duty shall have the authority to immediately cease earthmoving activities in and around the area where fossils are encountered. The fossil recovery site shall be delineated by yellow tape, or other appropriate means, at a distance of no greater than 50 feet from the find. Earthmoving activities within the fossil recovery area shall not resume until all fossil recovery work is completed and a written clearance for continued Project operation is received from the supervising paleontological monitor.
- G-7 The supervising paleontological monitor shall determine the paleontological importance of the rock units being monitored for consideration of periodic examination of the rock units for presence of microfossils. All microfossil remains identified and determined as important by the supervising paleontological monitor shall be collected, processed, and recovered.
- G-8 All recovered fossil remains shall be prepared to the point of identification to the lowest taxonomic level possible by a qualified paleontologist. The items shall then be curated at approved repository following standard museum standards.
- G-9 At the conclusion of the earth excavation operation in each landfill development phase, a final PRMP report outlining the results and findings of the mitigation monitoring program for the Project phase shall be prepared by the supervising paleontologist and submitted to the County of Riverside Planning and RCDWR, as well as the designated museum repository following accessioning of the fossil collection. Interim monitoring reports shall be prepared throughout the BLIP life, including

the final landfill closure phase. The reports shall consist of, but are not limited to, the following components; a) a description of the geology and stratigraphy of each monitored paleosol, or fossil bearing rock unit; b) a summary of field and laboratory methods used; c) a faunal list of species recovered and an inventory of catalogued fossil specimens; d) an evaluation of the scientific importance of the recovered specimens; and e) a discussion of the relationship of the newly recorded fossil sites in the BLIP area with those previously recorded sites in the general area.

Hazards and Hazardous Materials

HAZ-1 Comply with State permit requirements for the design, operation, and maintenance of the Permanent Household Hazardous Waste Facility (PHHWF).

HAZ-2 Update the Household Hazardous Waste (HHW) Spills Contingency Plan to incorporate the operation of the PHHWF and occasional mobile collection events.

HAZ-3 All mobile collection events that take place at the PHHWF site must strictly follow the operation protocol of the County's own mobile hazardous waste collection program to ensure public safety and protection of the environment.

HAZ-4 Maintain the current performance level of the (Waste Inspection Program) WIP in terms of continued implementation of Best Management Practices (BMPs) and emphasis on personnel safety training.

HAZ-5 Ensure efficient operation of the (Landfill Gas) LFG recovery, disposal, and monitoring system by means of close scrutiny of system performance and regular system maintenance.

Transportation

T-1 Traffic control measures will be incorporated by the construction contractor(s) in conjunction with the Department to facilitate travel safety at the site. These measures will be incorporated during periods of heavy equipment operation during liner construction, as well as when there is an unusually heavy usage of the site by customers or haulers, and during periods of inclement weather. These measures will be addressed through adequate directional signage, utilizing road barriers/blockades, adding, blocking, or modifying internal roads, using flagmen to direct or redirect traffic.

Tribal Cultural Resources

TR-1 Prior to grading, the Riverside County Department of Waste Resources (RCDWR) shall enter into an agreement with the appropriate tribes for Native American monitoring. The Native American Monitor(s) shall be on-site during all initial ground disturbing activities and excavation of each portion of the Project site including clearing, grubbing, tree removals, grading and trenching. The Native American Monitor(s) shall have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of tribal cultural resources.

TR-2 If during ground disturbance activities, unanticipated tribal cultural resources are discovered, the following procedures shall be followed:

1. All ground disturbance activities within 100 feet of the discovered tribal cultural resource shall be halted and RCDWR shall call the County Archaeologist, or qualified archaeologist (if the County Archaeologist is not available), immediately upon discovery of the tribal cultural resource. A meeting shall be convened between RCDWR, the County Archaeologist, and a representative from the both the Morongo and Soboba tribes, to discuss the significance of the find(s). At the meeting with the aforementioned parties, a decision is to be made, with the concurrence of the County Archaeologist, as to the appropriate treatment (documentation, recovery, avoidance, etc.) for the tribal cultural resource. Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished.
2. All inadvertent discoveries of tribal cultural resources shall be temporarily curated on site in a secured location until the end of the Project or at a secure off-site location acceptable to the Morongo and Soboba tribes.

TR-3 RCDWR shall relinquish ownership of all tribal cultural resources (with the exception of sacred items, burial goods, and Human Remains) and provide evidence to the satisfaction of the County Archaeologist that all archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), have been handled through one of the following methods:

1. A fully executed reburial agreement with the appropriate culturally affiliated Native American tribe or band. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloging, analysis and special studies have been completed on the tribal cultural resource(s).
2. Curation at a Riverside County Curation facility that meets federal standards per 36 CFR Part 79 and therefore will be professionally curated and made available to other archaeologists/researchers and tribal members for further study. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence shall be in the form of a letter from the curation facility identifying that archaeological materials have been received and that all fees have been paid.
3. If the Morongo and Soboba tribes cannot come to an agreement between themselves as to the disposition of tribal cultural resources, RCDWR shall then proceed with curation at the Western Science Center.
4. No destructive analysis or other laboratory testing of a tribal cultural resource shall take place unless agreed upon by the Morongo and Soboba tribes. If requested and if feasible, the County shall make accommodations for on-site reburial of tribal cultural resources in an area not subject to further ground disturbance in the future (open spaces, nature preserves, easements, etc.). The location of the reburial shall remain confidential and shall be recorded on a Department of Parks and Recreation (DPR) form by the County archaeologist and filed with the Eastern Information Center at the University of California, Riverside. If requested, a final report of the tribal monitoring activities shall be prepared and a copy shall be provided to the tribes.

Chapter 4

References

Air Quality/and Global Climate Change Impact Analysis, Ganddini Group, Inc., dated January 9, 2019.

Biological Resources Assessment by PCR Services Corporation, dated February 5, 2008.

County of Riverside, Planning Department (2003). Riverside County General Plan.

County of Riverside, Waste Management Department (1996). Countywide Integrated Waste Management Plan.

County of Riverside (2003). Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

Delineation of State and Federal Jurisdictional Waters, by Michael Baker International, dated July 2016, revised March 2018.

Determination of Biologically Equivalent or Superior Preservation (DBESP), by the Riverside County Habitat Conservation Agency, dated July 30, 2018, last revised March 29, 2019.

General Biological Assessment and Western Riverside County MSHCP by the Riverside County Habitat Conservation Agency, dated January 16, 2019.

Joint Project Review (JPR) No. 18-08-24-01, dated January 30, 2019.

Paleontological Assessment of the BLIP, prepared by MBA, dated April 2011.

Phase 1 Cultural Resource Assessment, prepared by MBA, dated December 6, 2010.

Standard Mitigation Language from the Morongo Band of Mission Indians, email dated October 4, 2017.

Standard Mitigation Letter from the Soboba Band of Luiseno Indians, dated September 6, 2017.

Chapter 5

Exhibits/Figures

Figure 2-1: Regional Location and Vicinity Map

Figure 2-2: Project Study Area

Figure 2-3: Phasing Plan

Figure 2-4: Stockpile Plan

Figure 2-5: Prescriptive Liner System

Figure 2-6: Alternative Liner System

Figure 2-7: Leachate Collection and Removal System

Figure 2-8: Groundwater Monitoring System

Figure 2-9: Gas Collection System

Figure 2-10: Final Cover Systems

Figure 2-11: Phase 2 Disturbance Area Map

Figure 2-12: Aerated Static Pile Compost

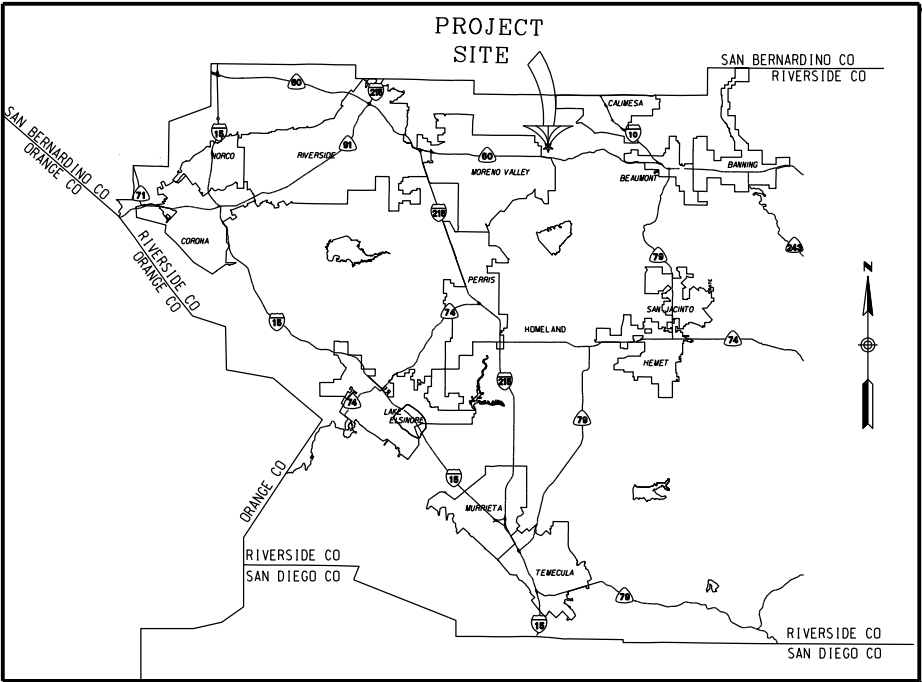
Figure 2-13: Windrow Compost

Figure 2-14: Combined (ASP/Windrow) Compost Systems

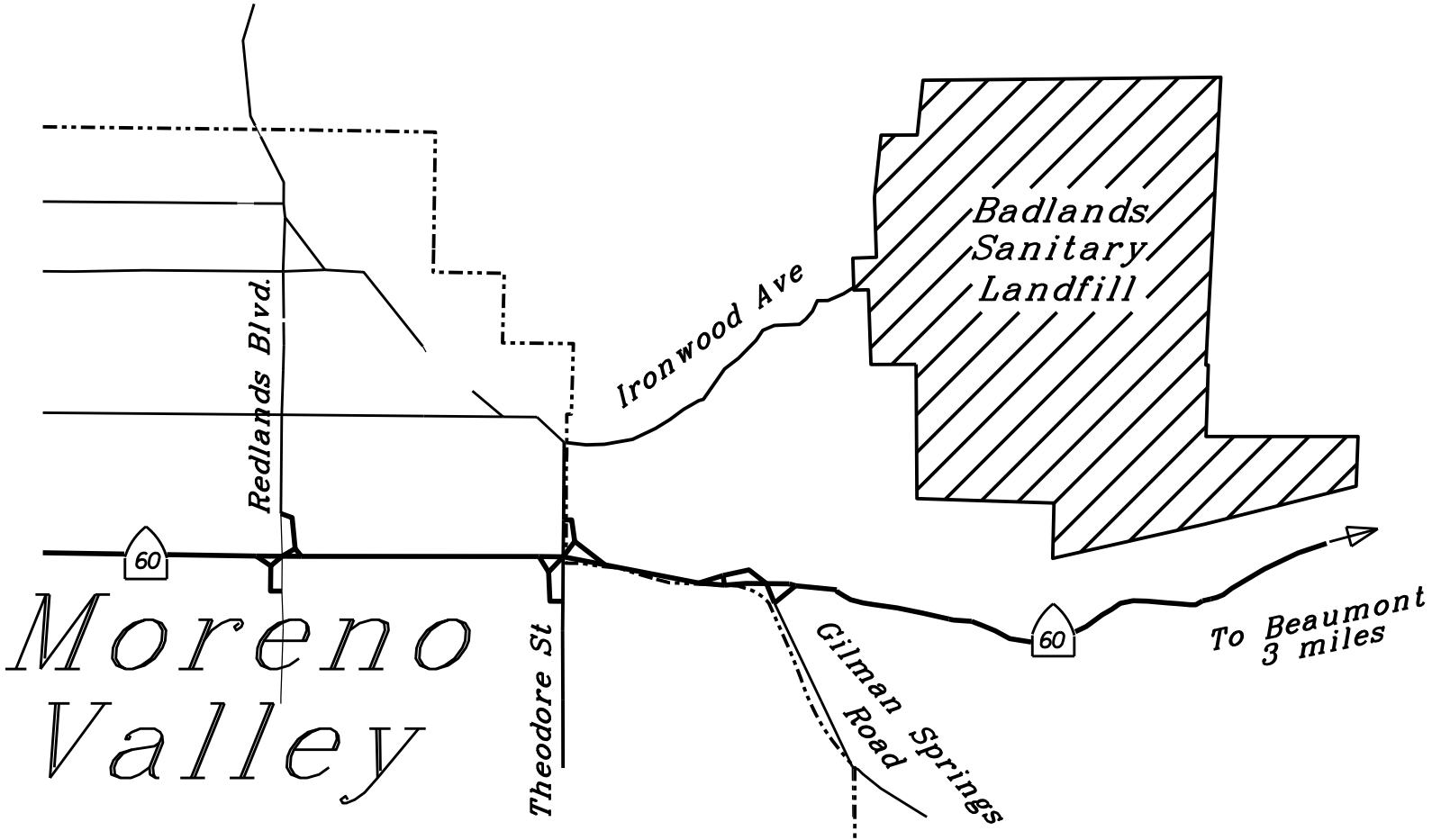
Sight Line Analysis

Badlands Sanitary Landfill Regional Location and Vicinity Map

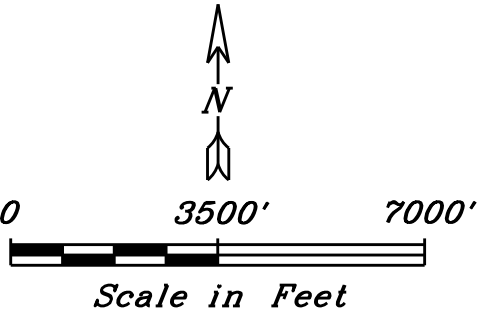
Por. Secs. 4 & 5 T3S R2W &
Sec. 32 T2S R2W S.B.B.M.



REGIONAL LOCATION MAP
N.T.S.



- Legend**
- Paved Access Roads ———
 - Freeway (Highway 60) ———
 - City Boundary - - - - -
 - Sanitary Landfill [hatched box]



NO.	REVISIONS	BY	APPROVED	DATE	DESIGNED BY:	BH
					DRAWN BY:	BH/UNM
					CHECKED BY:	
					DATE:	22 August 2017
					DATE OF PHOTOGRAPHY:	n/a



RIVERSIDE COUNTY
DEPARTMENT OF
WASTE RESOURCES

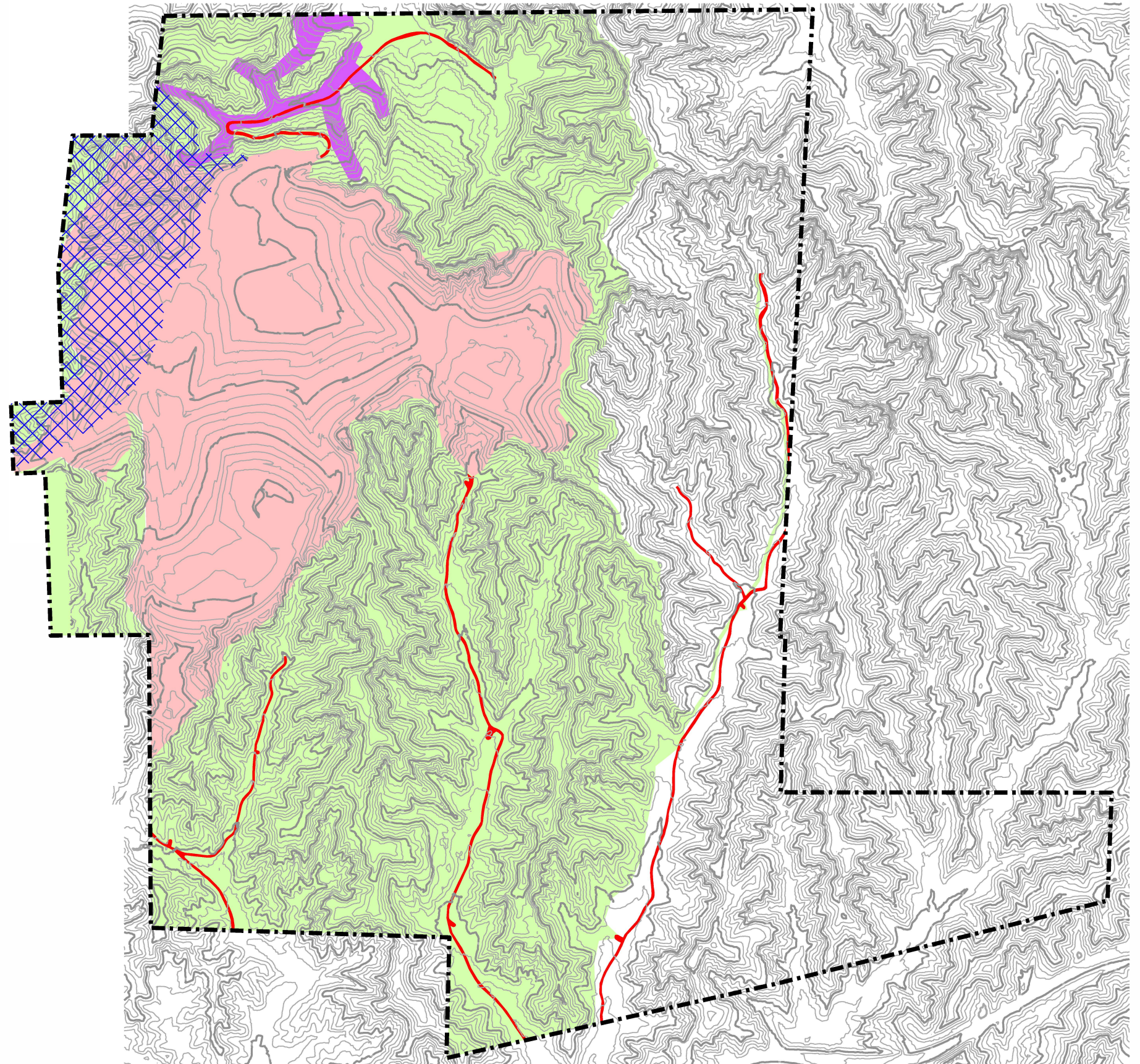
Hans Kernkamp, General Manager-Chief Engineer

Badlands Sanitary Landfill Regional Location And Vicinity	SCALE:	NTS
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	DIRECTORY:	BLUP Exhibits Updated 2017
	FILE:	Regional and Vicinity Map

Figure 2-1

Legend

- Current Property Line
- Project Study Area (543 Acres Total)
- Current Landfill Disturbance Limits (268 Acres)
- Current Access Road Disturbance Limits (10 Acres)
- Area Excluded By Deed Restriction (16.2 Acres)
- Area Previously Assessed (60.5 Ac.) with 16 Acres Outside Current Landfill Disturbance Limits



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					DATE: 11 October 2017
					DATE OF PHOTOGRAPHY:



Hans Kernkamp, General Manager / Chief Engineer



Badlands Sanitary Landfill

Project Study Area

Figure 2-2

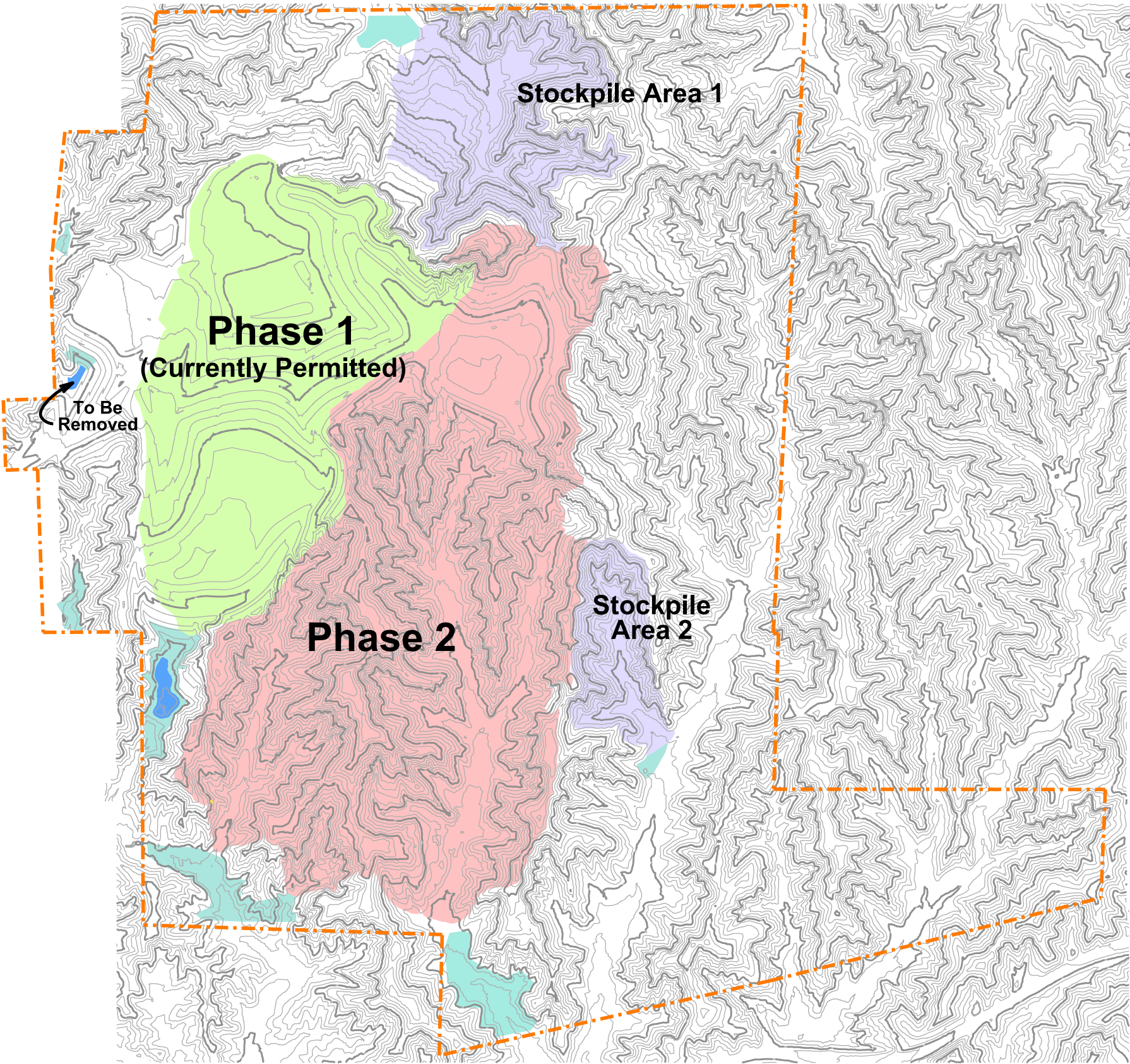
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FOLDER:	BLIP Exhibits Updated 2017
FILE:	Proposed Disturbance Limits
SHEET	1 OF 1

Summary of Quantities

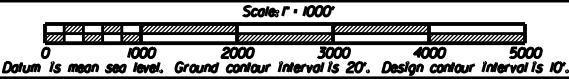
	Disposal Area (acres)	Excavation Quantity (cy)	Remaining/ Gained Airspace (cy)
Phase 1 (Canyons I,II,III,IV)	150	0	12.3 million
Phase 2 (Canyons V,VI)	238	33.0 million	108.9 million
Total	388	33.0 million	

Legend

- Existing Property Line (1,168 Acres)
- Existing Basins
- Proposed Basins



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					CHECKED BY:
					DATE: 2 October 2017
					DATE OF PHOTOGRAPHY:



Badlands Sanitary Landfill	SCALE: 1"=1000' @ 11" x 17"
Phasing Plan	SHEET 1 OF 1

Figure 2-3

Triangle Volume Report
Report Created: 8/17/2017
Time: 10:54am

Mode: Entire Surface
Input Grid Factor: 1.000000
Original Surface: Deanza merged w Jan 2017 topo
Description:
Preference: Default
Type: Existing
Design Surface: stockpile 1
Description:
Preference: Default
Type: Existing
Cut Factor: 1.00
Fill Factor: 1.00

Cut: 162.3 cu yd
Fill: 9,924,796.7 cu yd
Net: -9,924,634.5 cu yd

Triangle Volume Report
Report Created: 8/17/2017
Time: 10:55am

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Input Grid Factor: 1.000000
Original Surface: Deanza merged w Jan 2017 topo
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Type: Existing
Design Surface: Stockpile 2
Description:
Preference: Default
Type: Existing
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Fill Factor: 1.00

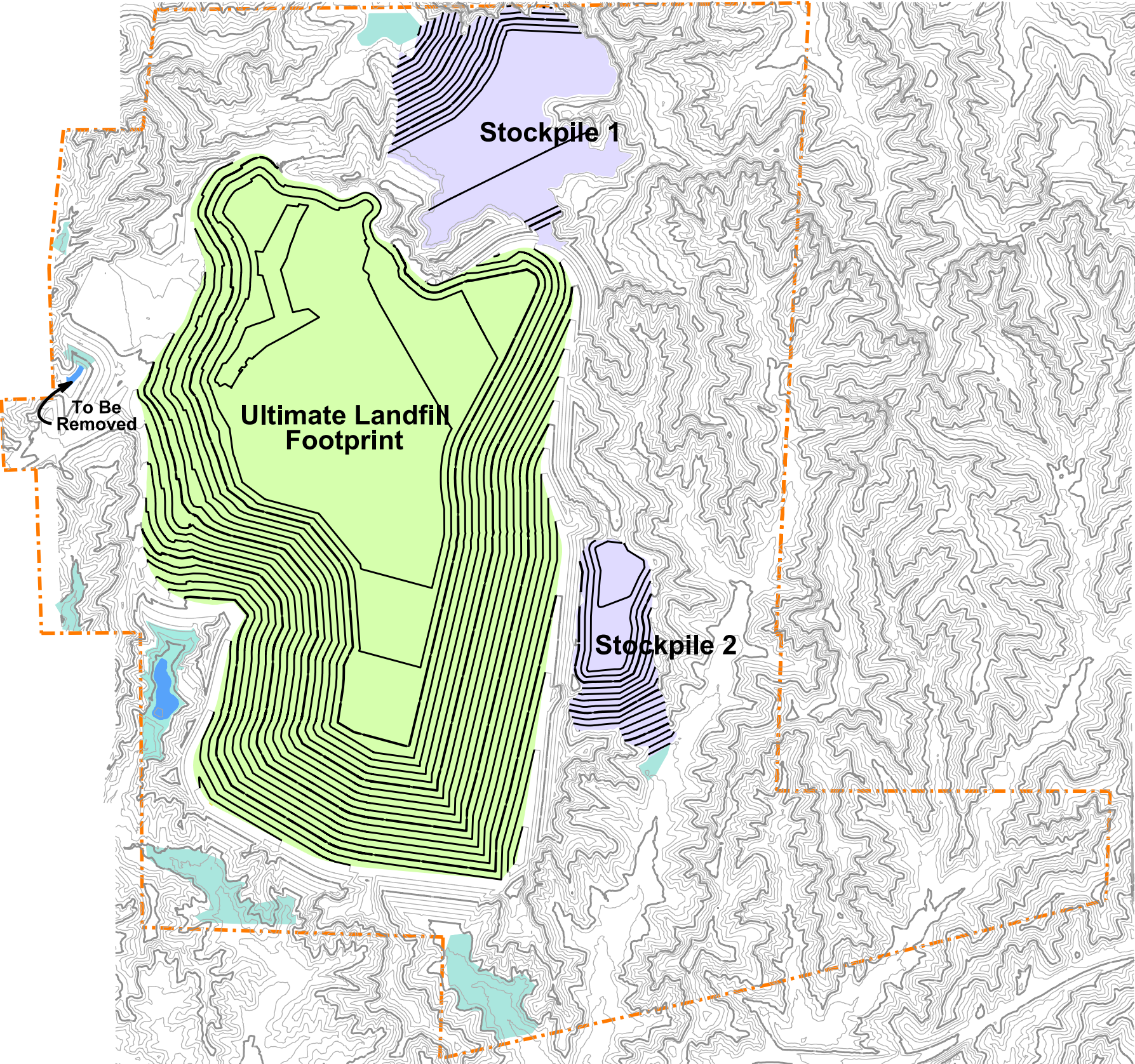
Cut: 43.8 cu yd
Fill: 4,338,886.0 cu yd
Net: -4,338,842.2 cu yd

**Total Permanent Stockpile Storage =
up to 14,263,477 cy**

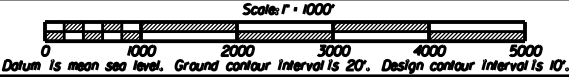
Maximum Height of Stockpile = 2,460'

Legend

- Ultimate Landfill Footprint (396 Acres)
- Proposed Stockpile Areas (84 Acres)
- Existing Basins
- Proposed Basins
- Existing Property Line (1,168 Acres)



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					DATE: 11 October 2017
					DATE OF PHOTOGRAPHY:

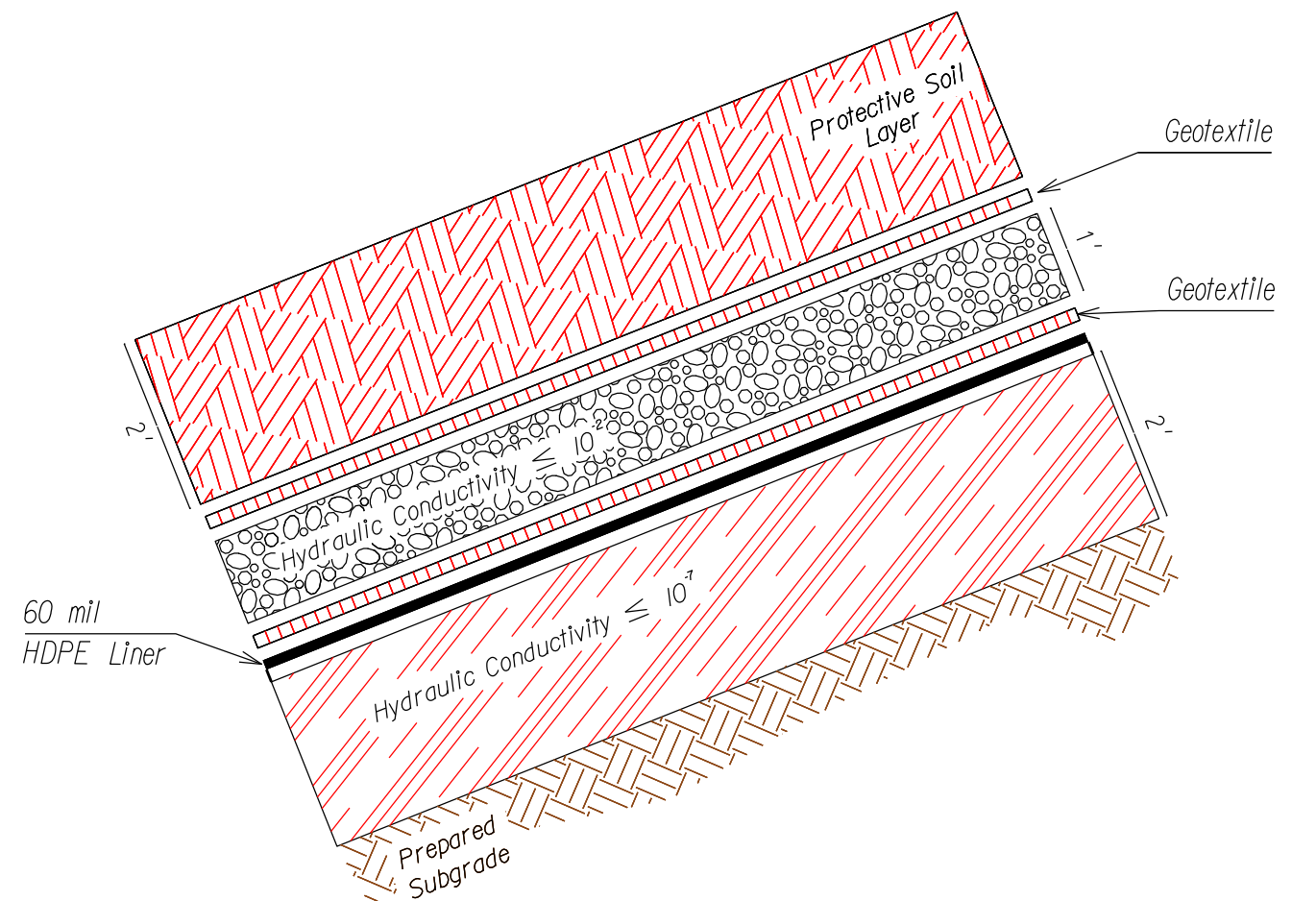
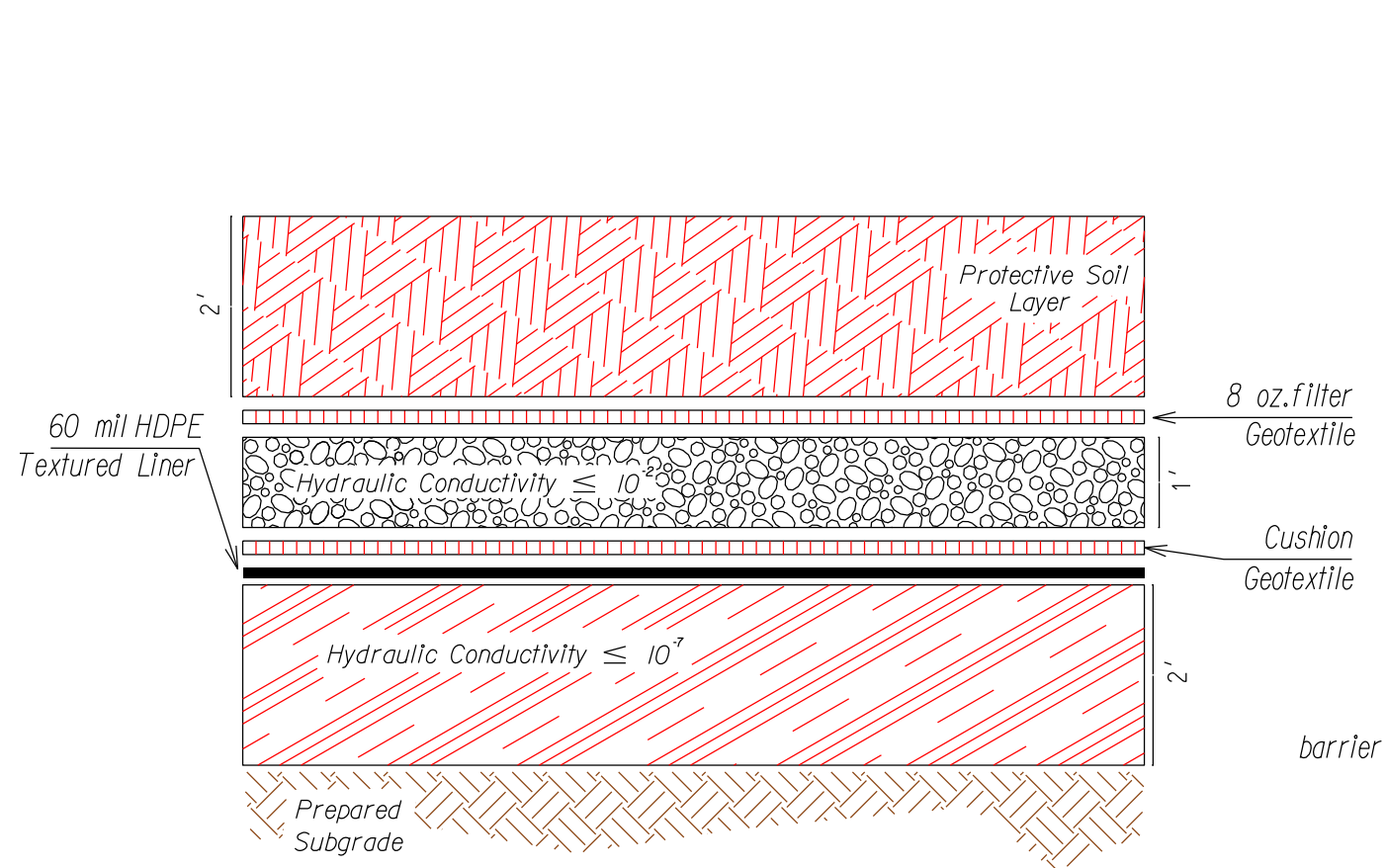


Badlands Sanitary Landfill

Stockpile Plan

Figure 2-4

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FOLDER:	BLIP Exhibits Updated 2017
FILE:	Stockpile Plan
SHEET	1 OF 1



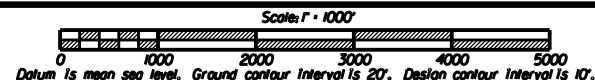
Prescriptive Bottom Liner System

Prescriptive Side Slope Liner System

NO.	REVISIONS	BY	APPROVED	DATE	DESIGNED BY:
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					CHECKED BY:
					DATE: 17 August 2017
					DATE OF PHOTOGRAPHY:



Hans Kernkamp, General Manager/ Chief Engineer

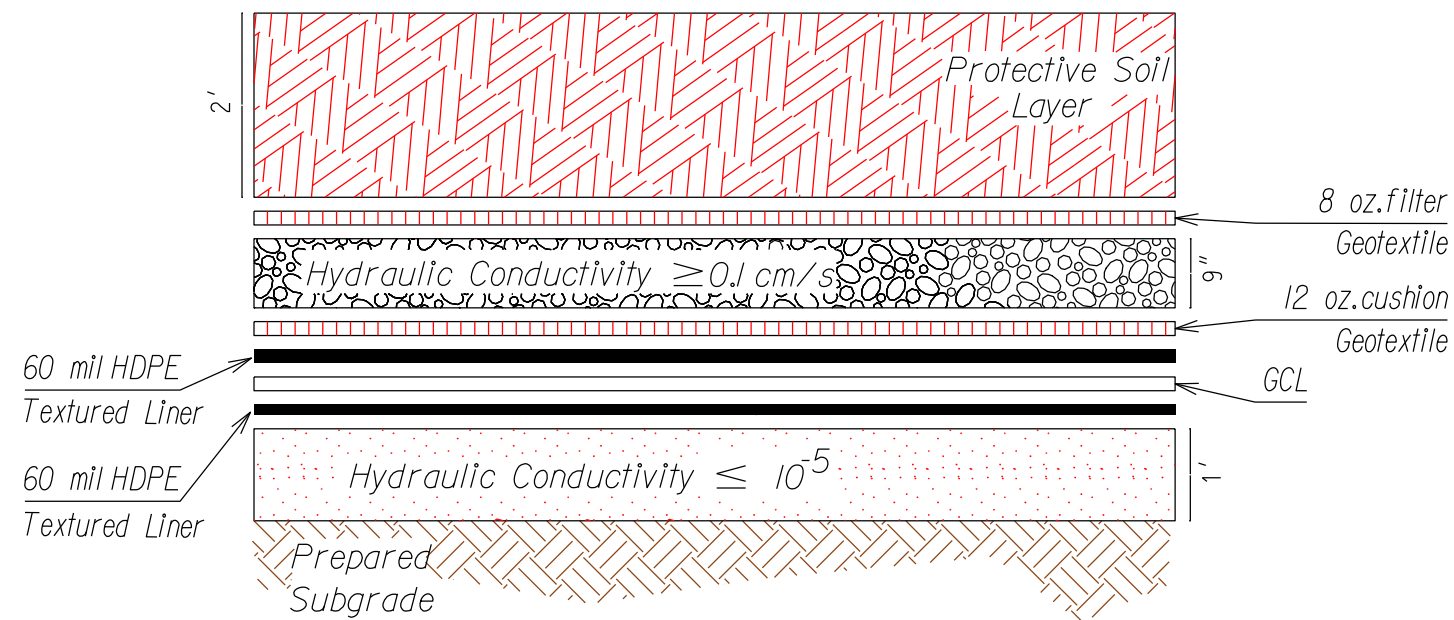


Badlands Sanitary Landfill

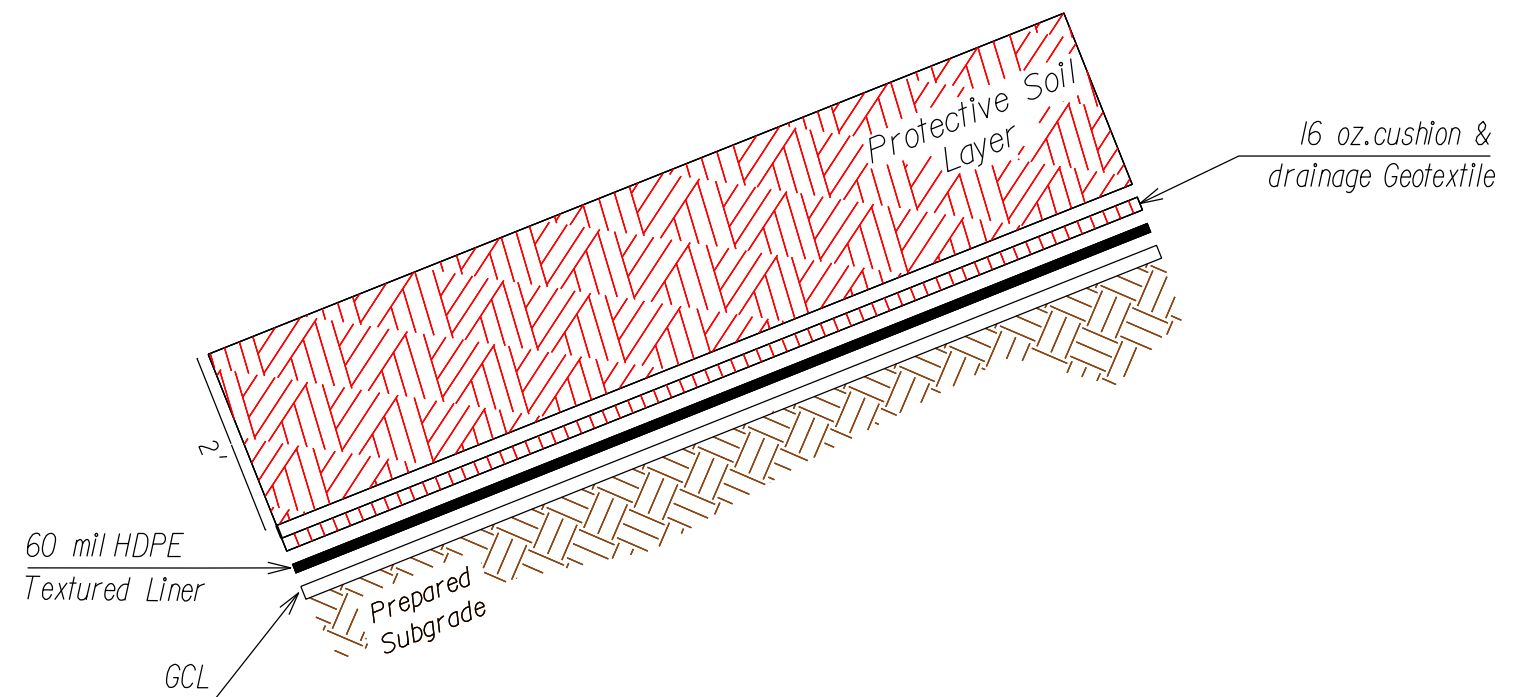
Prescriptive Liner System

Figure 2-5

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SHEET	1 OF 1



Alternative Bottom Liner System

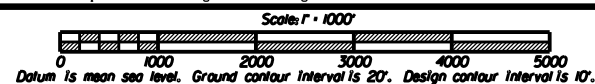


Alternative Side Slope Liner System

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					DATE: 17 August 2017
					DATE OF PHOTOGRAPHY:



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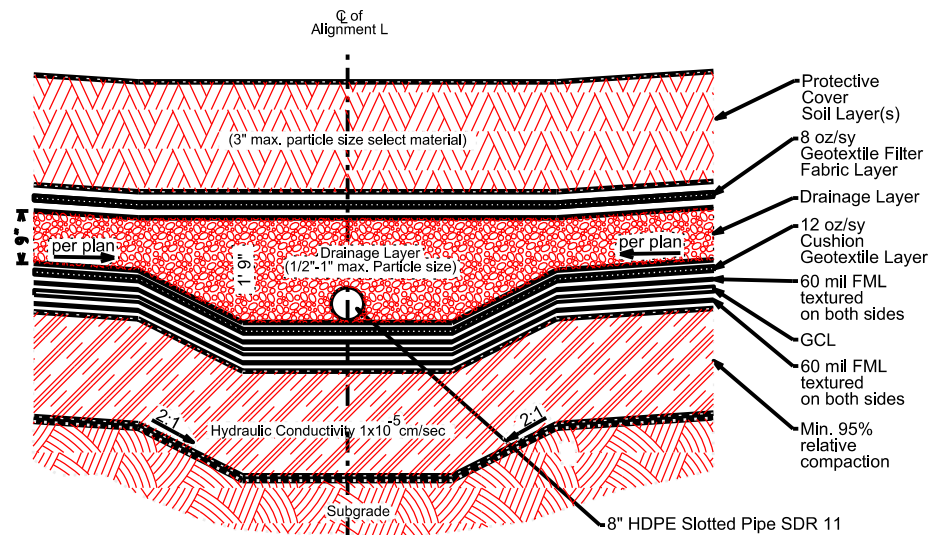


Badlands Sanitary Landfill

Alternative Liner System

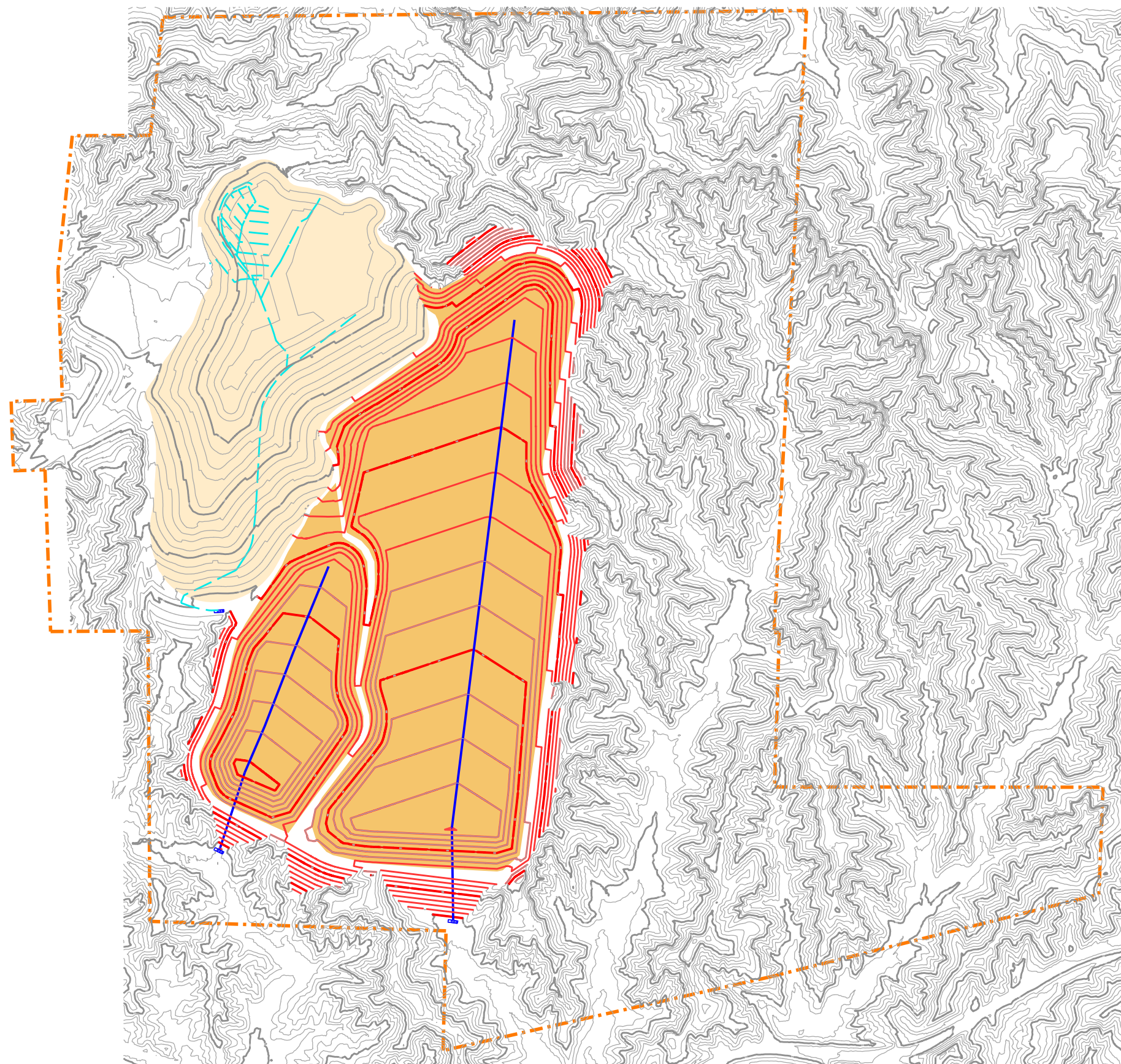
Figure 2-6

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SHEET	1 OF 1



LEGEND

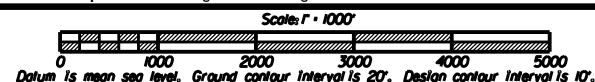
- Property Line
- Current Landfill Footprint
- Existing LCRS pipe
- Future Liner Areas
- Proposed LCRS pipe
- Proposed Subgrade Contours
- Proposed Leachate Tanks



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					DATE OF PHOTOGRAPHY:



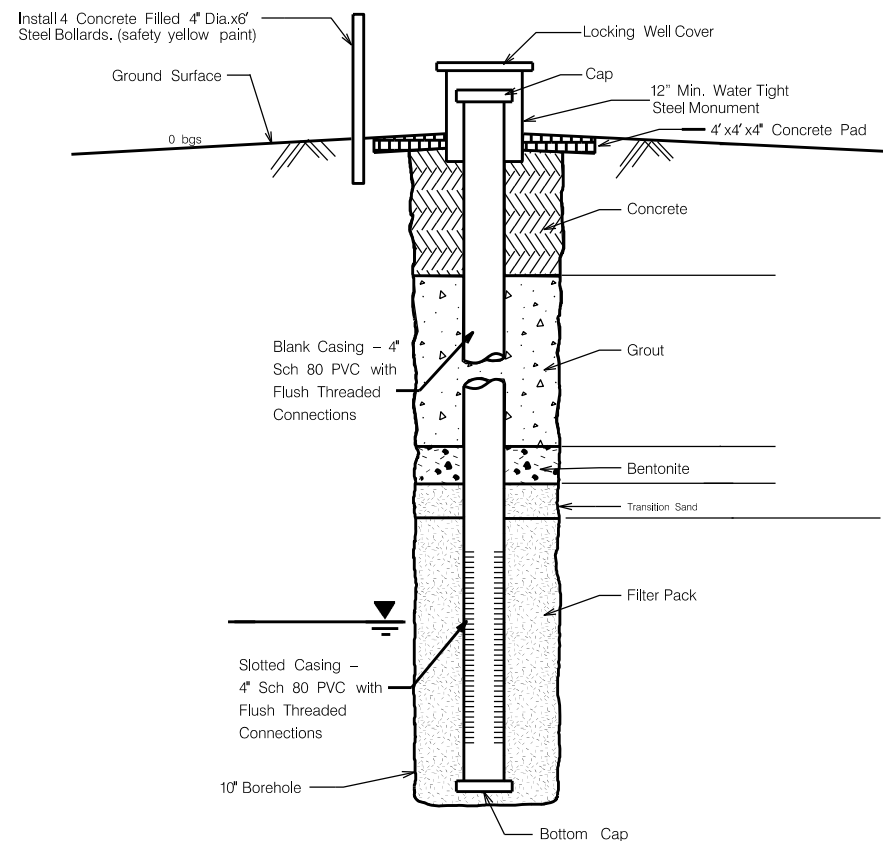
Hans Kernkamp, General Manager/ Chief Engineer



Badlands Sanitary Landfill Leachate Collection and Removal System

Figure 2-7

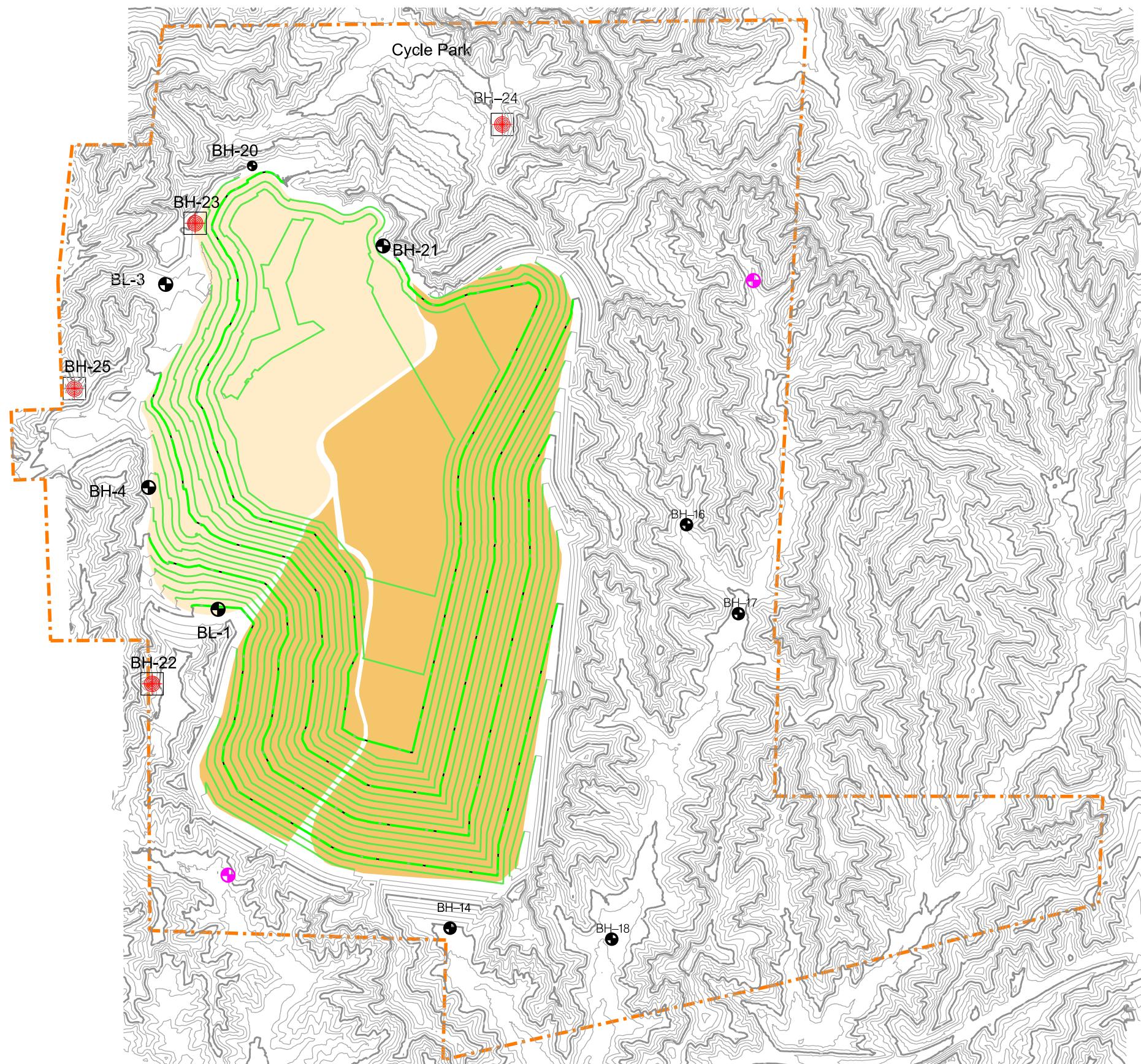
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SHEET	1 OF 1



Typical Groundwater Monitoring Well

LEGEND

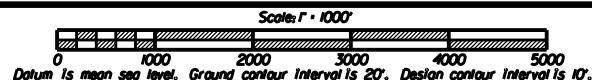
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- Proposed Property Acquisition
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- Groundwater Level Only Well
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- Potential Groundwater Monitoring Well



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					DATE: 17 August 2017
					DATE OF PHOTOGRAPHY:



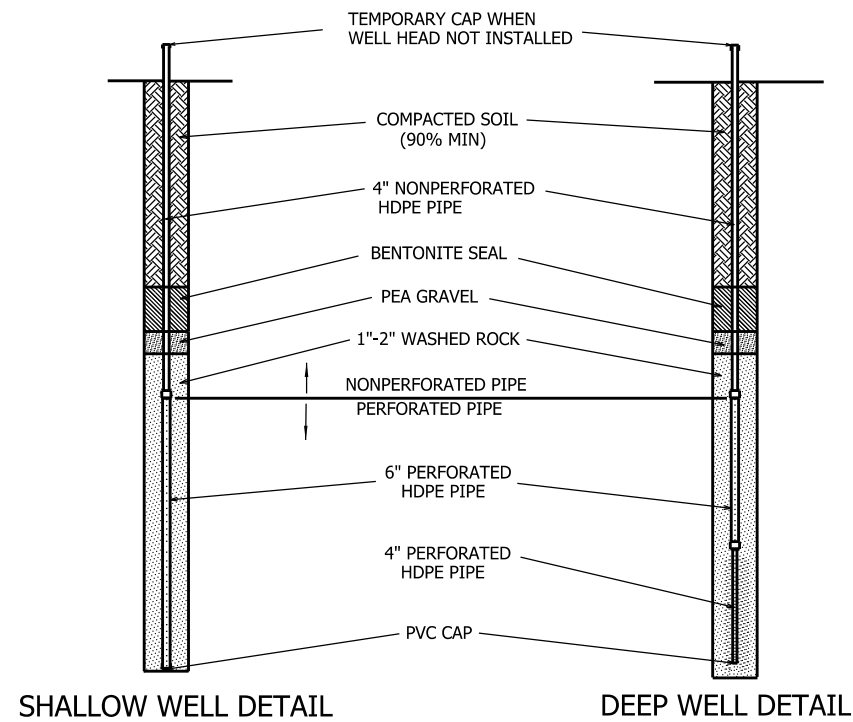
Hans Kernkamp, General Manager/ Chief Engineer



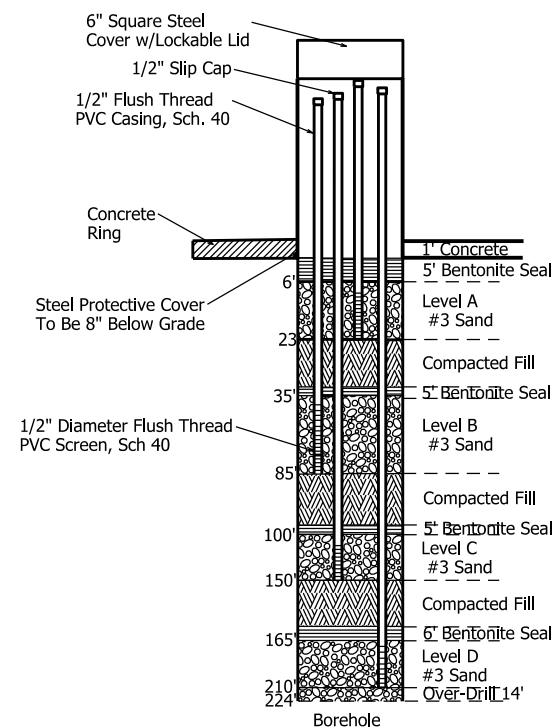
Badlands Sanitary Landfill Groundwater Monitoring System

Figure 2-8

SCALE:	1"=1000' @ 11" x 17"
SERVER:	
FOLDER:	Sites/Badlands/17ba/Projects
FOLDER:	BLIP Exhibits Updated 2017
FILE:	Groundwater Monitoring System
SHEET	1 OF 1



Typical Vertical Gas Well

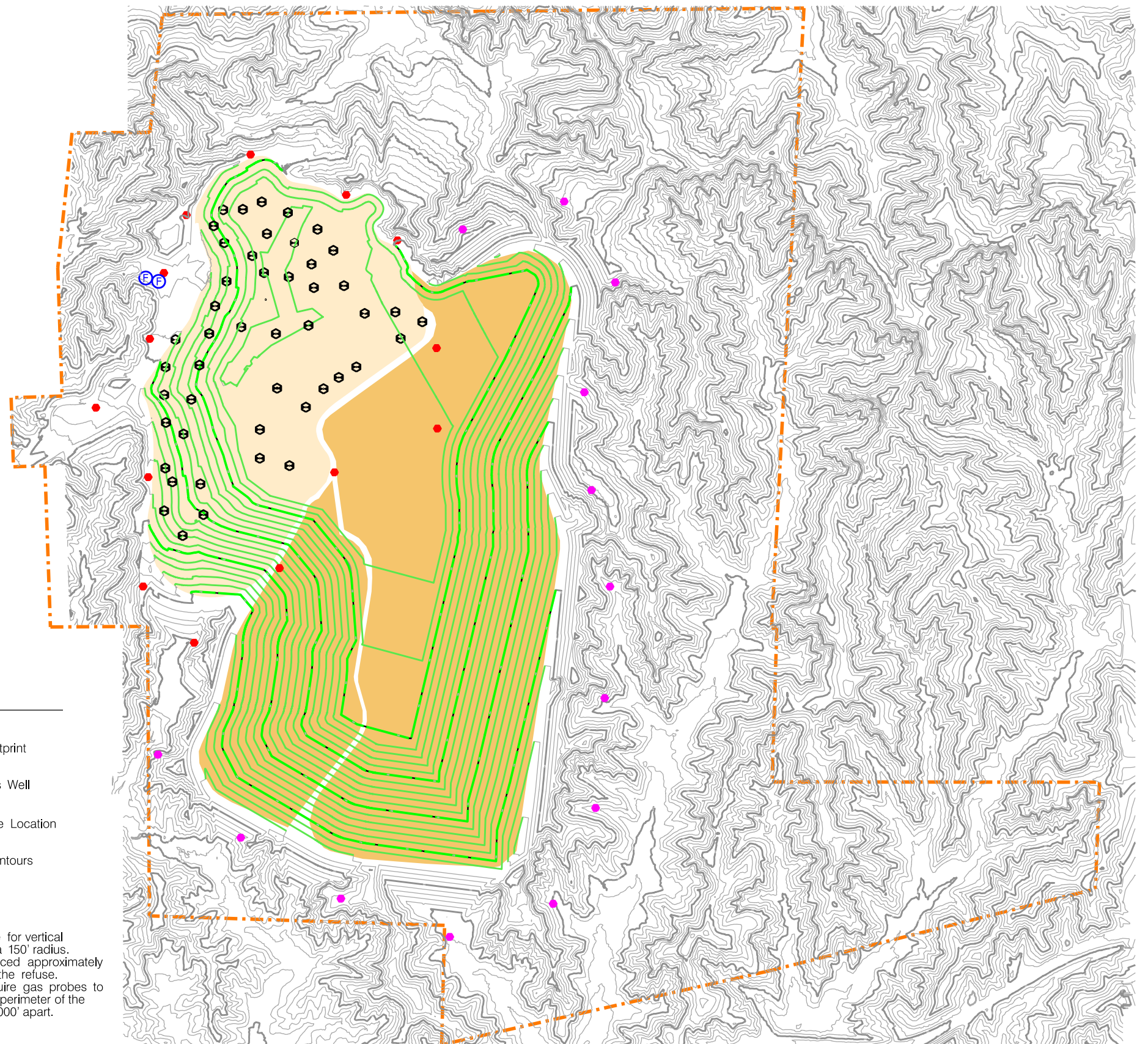


Typical Gas Probe

LEGEND

- Property Line
- Current Landfill Footprint
- Future Liner Areas
- Current Vertical Gas Well
- Current Gas Probe
- Potential Gas Probe Location
- Gas Flare
- Potential Landfill Contours

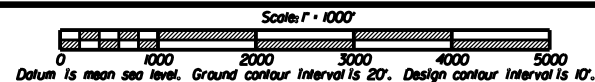
- Notes:
1. The sphere of influence for vertical wells is approximately a 150' radius.
 2. Horizontal wells are placed approximately every 50' vertical within the refuse.
 3. Current regulations require gas probes to be placed around the perimeter of the landfill no more than 1,000' apart.



NO.	REVISIONS	BY	APPROVED	DATE	DESIGNED BY:
					DRAWN BY: KJJ
					CHECKED BY:
					DATE: 17 August 2017
					DATE OF PHOTOGRAPHY:



Hans Kernkamp, General Manager/ Chief Engineer

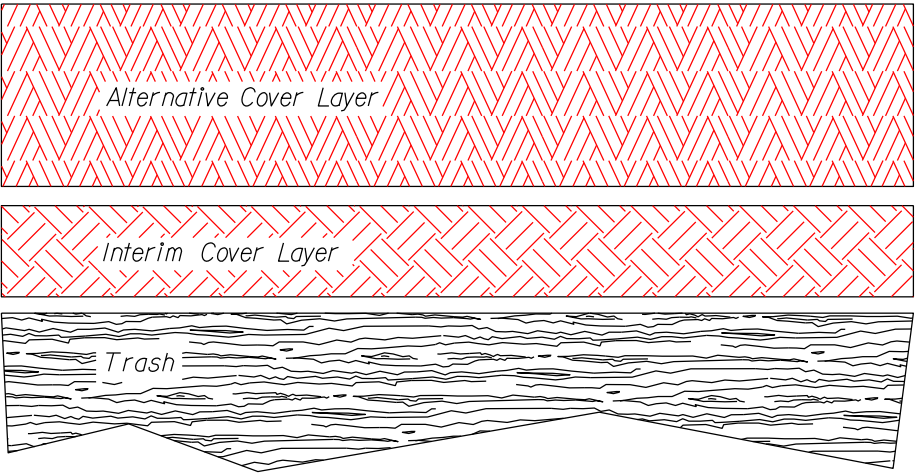


Badlands Sanitary Landfill

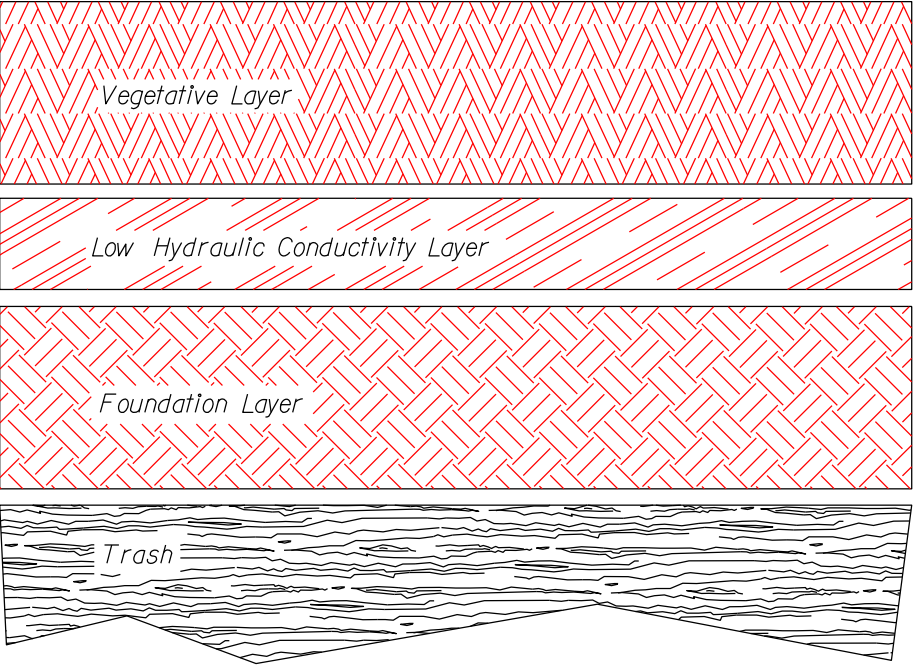
Gas Collection System

Figure 2-9

SCALE:	1"=1000' @ 11" x 17"
SERVER:	
FOLDER:	Sites/Badlands/17ba/Projects
FOLDER:	BLIP Exhibits Updated 2017
FILE:	Gas Collection System
SHEET	1 OF 1



Alternative Final Cover System

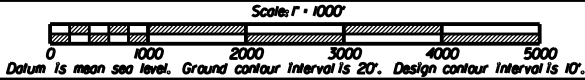


Prescriptive Final Cover System

NO.	REVISIONS	BY	APPROVED	DATE	DESIGNED BY:
					DRAWN BY: KJJ
					CHECKED BY:
					DATE: 17 August 2017
					DATE OF PHOTOGRAPHY:



Hans Kernkamp, General Manager/ Chief Engineer



Badlands Sanitary Landfill

Final Cover Systems

Figure 2-10

SCALE:	NTS
SERVER:	
FOLDER:	Sites/Badlands/17ba/Projects
FOLDER:	BLIP Exhibits Updated 2017
FILE:	Prescriptive Liner System
SHEET	1 OF 1

Current Metals Recycling Area
and Residential Dumping Pad

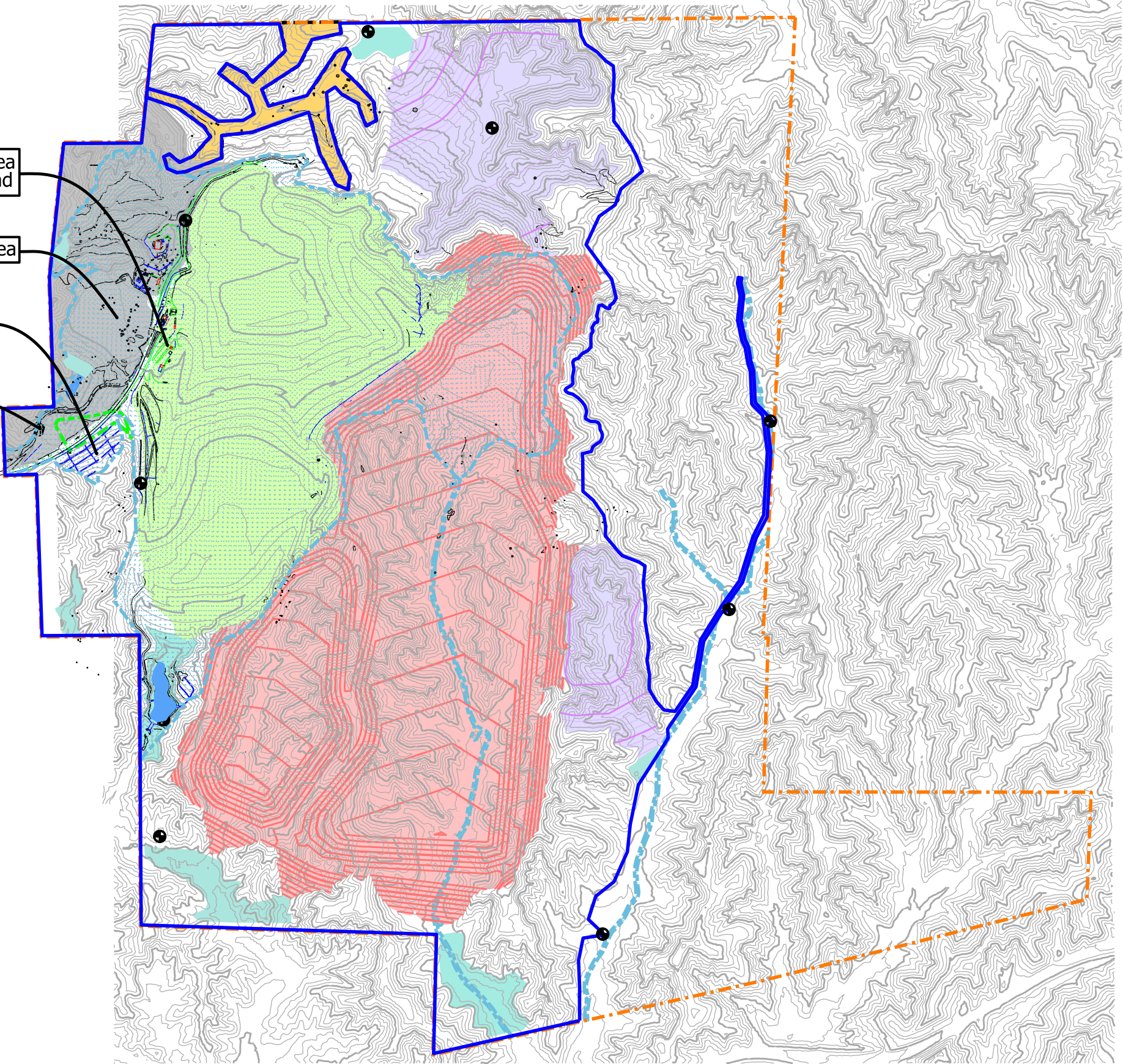
Proposed Composting Area

Existing Drainage
Structures

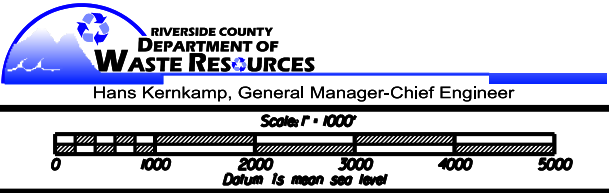
New Fee Booth
and Scale Location

Legend

- Current Badlands Property Line (1,168 Ac.)
- Proposed Disturbance Limit (811 Ac.)
- Current Disturbance Limits - Previously Assessed (278 Ac)
- Proposed Phase 2 Excavation Area (285 Ac)
- Current Phase 1 Fill Area (150 Ac)
- Proposed Stockpile 1 (59.4 Ac)
- Proposed Stockpile 2 (24.6 Ac)
- Deed Restricted Area (16.2 Ac)
- Relocated Metals Recycling Area and Residential Dumping Pad (6.5 Ac.)
- Existing Sedimentation Basin
- Proposed Sedimentation Basins
- Previously Assessed Area (60.5 Ac)
- Existing Monitoring Well



NO.	REVISIONS	BY	APPROVED	DATE	DESIGNED BY:	kjj
					DRAWN BY:	kjj
					CHECKED BY:	
					DATE:	16 November 2018
					DATE OF PHOTOGRAPHY:	

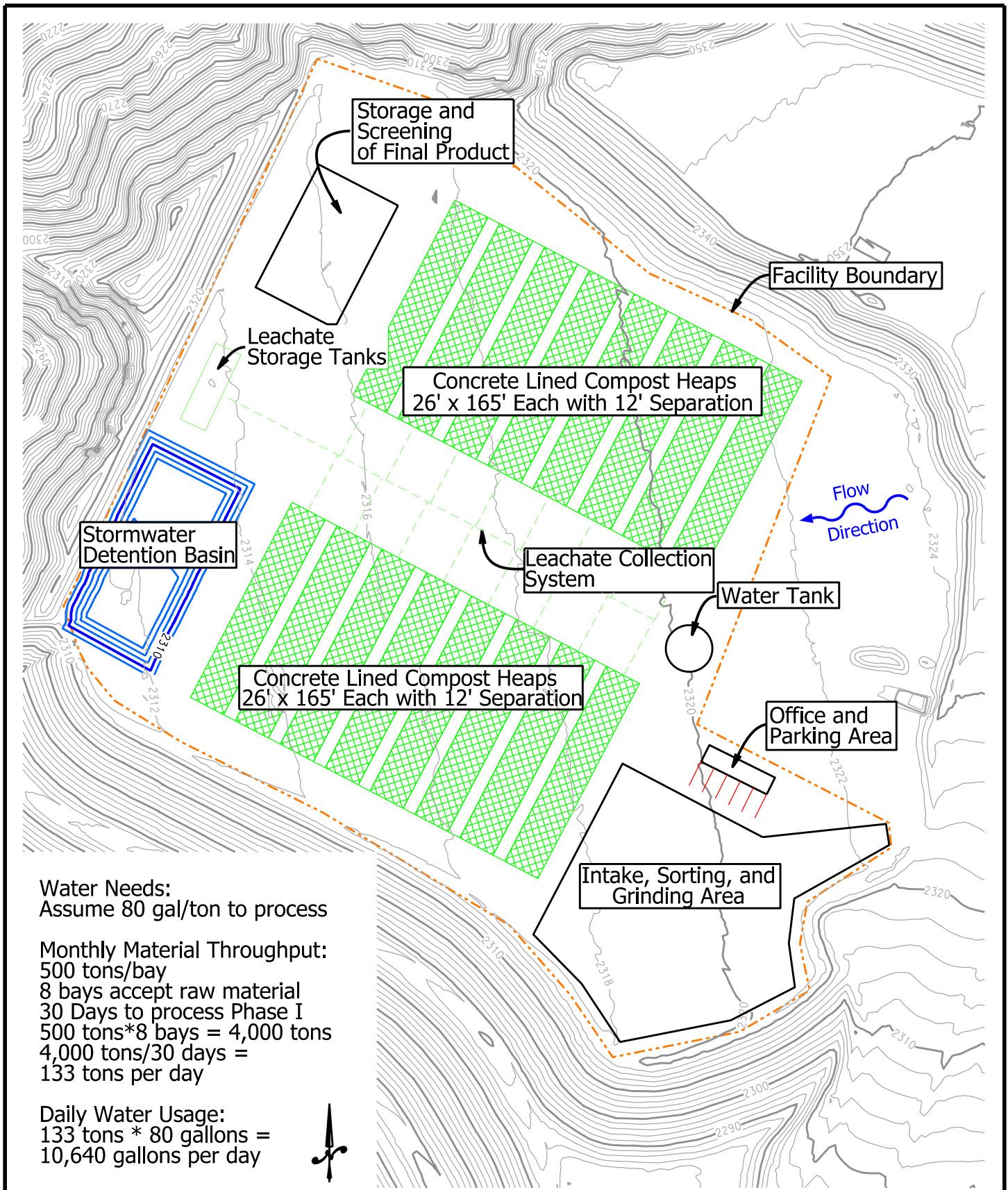


Badlands Sanitary Landfill

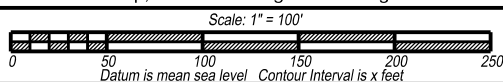
Phase 2 Disturbance Area Map

Figure 2-11

SCALE:	1"=1000'
SERVER:	
FOLDER:	Sites/Badlands/17ba/Projects
FOLDER:	
FILE:	Phase 2 Disturbance Area Map
SHEET	1 OF 1



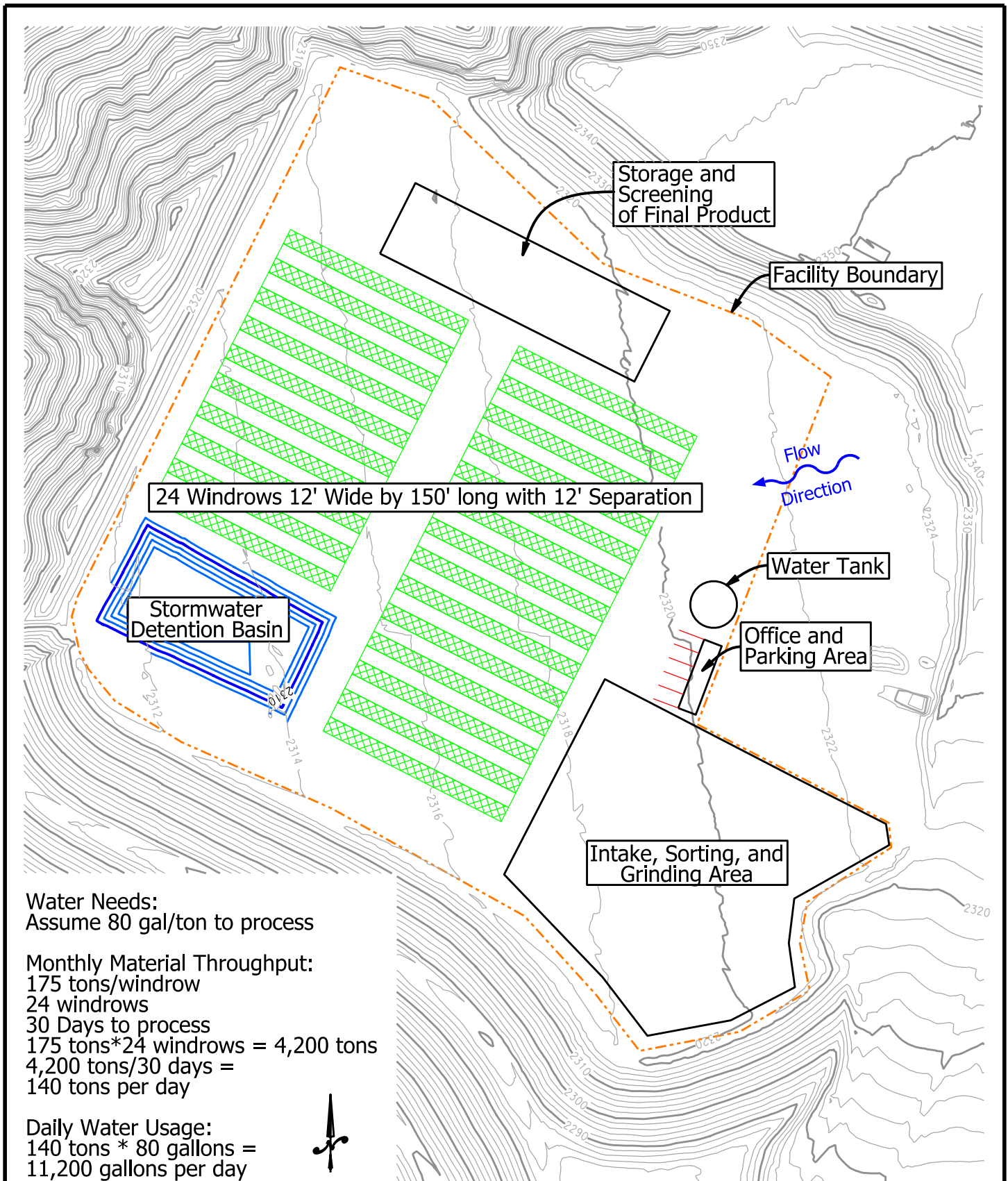
Hans Kernkamp, General Manager-Chief Engineer



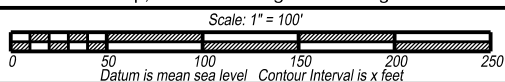
Badlands Sanitary Landfill Aerated Static Pile Compost

Figure 2-12

Project Title:	BLIP Exhibits	Designed By:	KJJ	Scale:	1"=100'
Folder/File:	Sites/badlands/17ba/Projects/BLIP Exhibits	Drawn By:	KJJ	Date:	March 9, 2018
Model Name:		Checked By:	AC	Flight Date:	May 2015



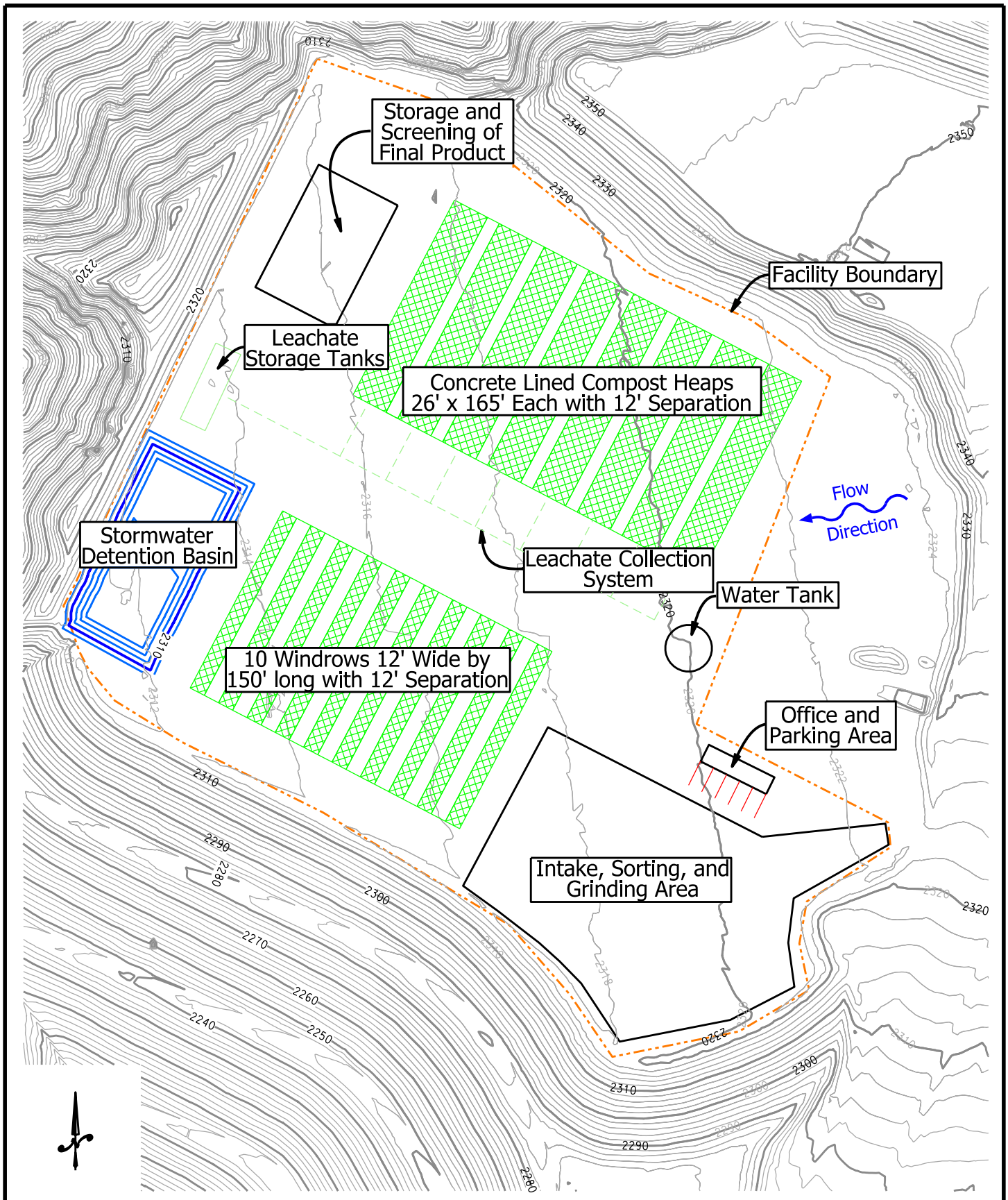
Hans Kernkamp, General Manager-Chief Engineer



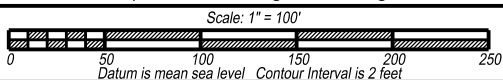
Badlands Sanitary Landfill Windrow Compost

Figure 2-13

Project Title:	BLIP Exhibits	Designed By:	KJJ	Scale:	1"=100'
Folder/File:	Sites/badlands/17ba/Projects/BLIP Exhibits	Drawn By:	KJJ	Date:	March 9, 2018
Model Name:		Checked By:	AC	Flight Date:	May 2015



Hans Kernkamp, General Manager-Chief Engineer








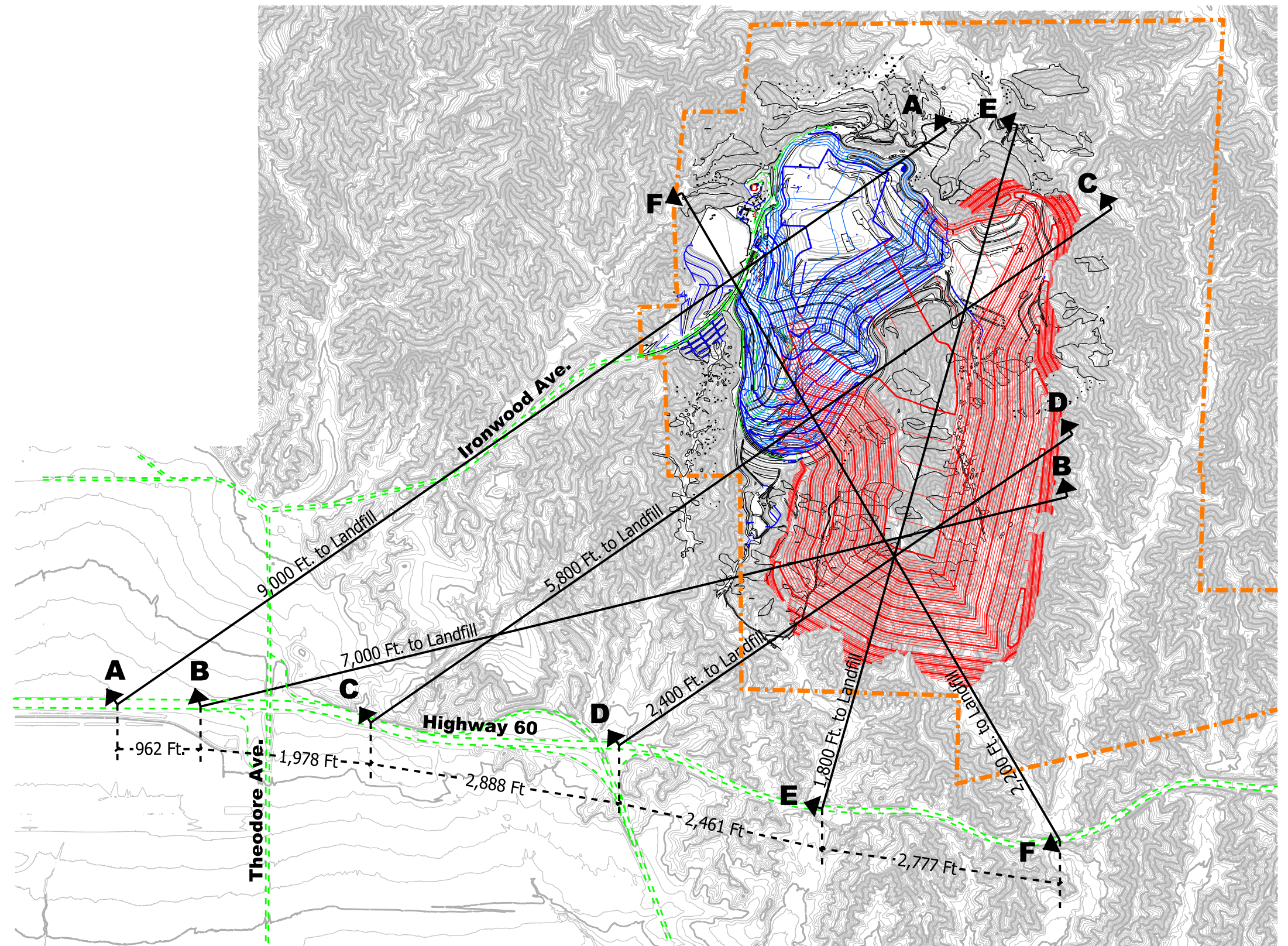
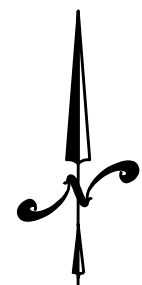
Badlands Sanitary Landfill Combined Compost Systems

Figure 2-14

Project Title:	BLIP Exhibits	Designed By:	KJJ	Scale:	1"=100'
Folder/File:	Sites/badlands/17ba/Projects/BLIP Exhibits	Drawn By:	KJJ	Date:	February 5, 2019
Model Name:		Checked By:	AC	Flight Date:	May 2015

Legend

-  Current Contours
-  Current Permitted Fill Area
-  Phase 2 Proposed Fill Area
-  Property Line
-  Paved Roads



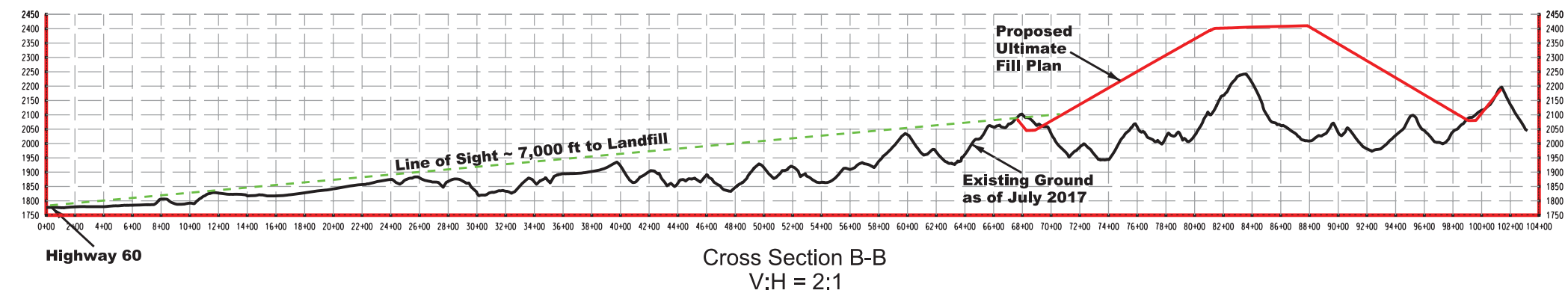
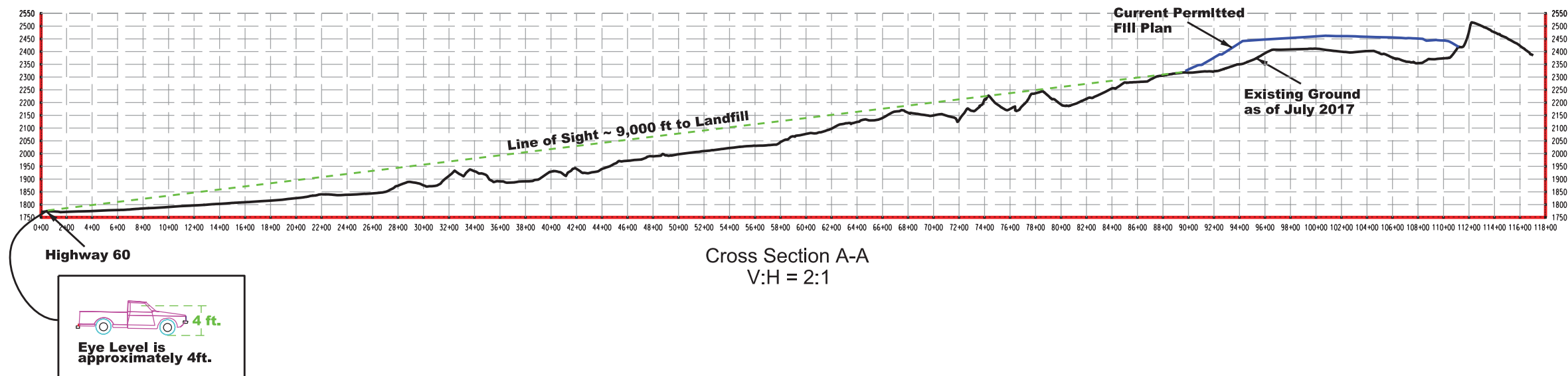
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Folder:	Sight Line Analysis
File:	Sight Line Analysis
Model Name:	
Date:	November 15, 2017
Flight Date:	May 2015
Designed By:	KJJ
Drawn By:	KJJ
Checked By:	AC
Sheet Number:	1 of 4



Datum is mean sea level Contour Interval is 10 feet

Badlands Sanitary Landfill
Phase 2 EA

Sight Line Analysis

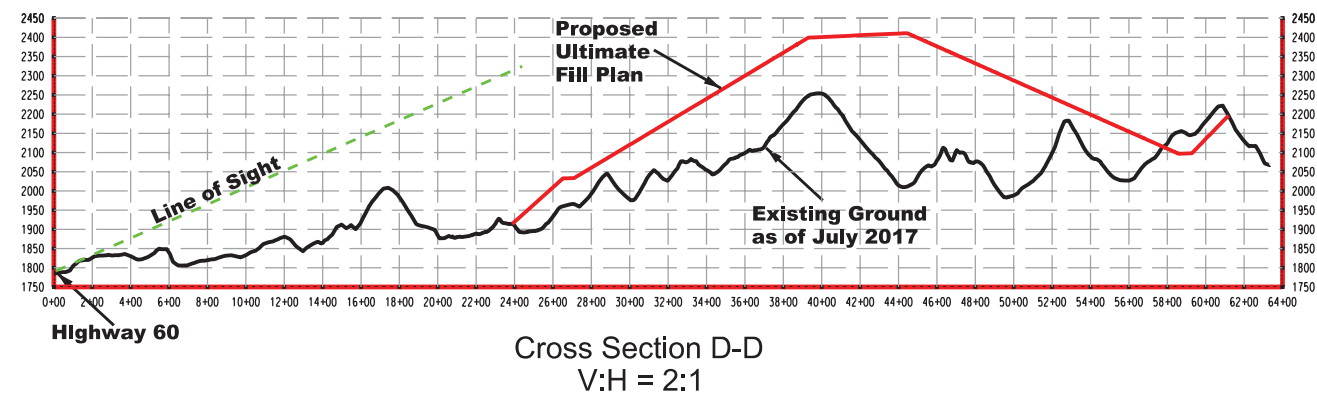
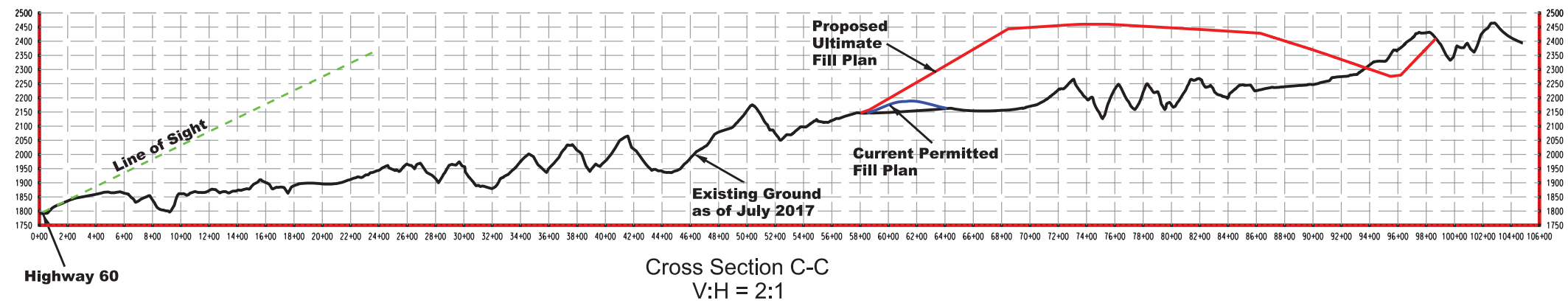


Scale:	NTS
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Folder:	Sight Line Analysis
File:	Sight Line Analysis
Model Name:	
Date:	November 29, 2017
Flight Date:	May 2015
Designed By:	KJJ
Drawn By:	KJJ
Checked By:	ACC
Sheet Number:	2 of 4



Badlands Sanitary Landfill
Phase 2 EA

Sight Line Analysis

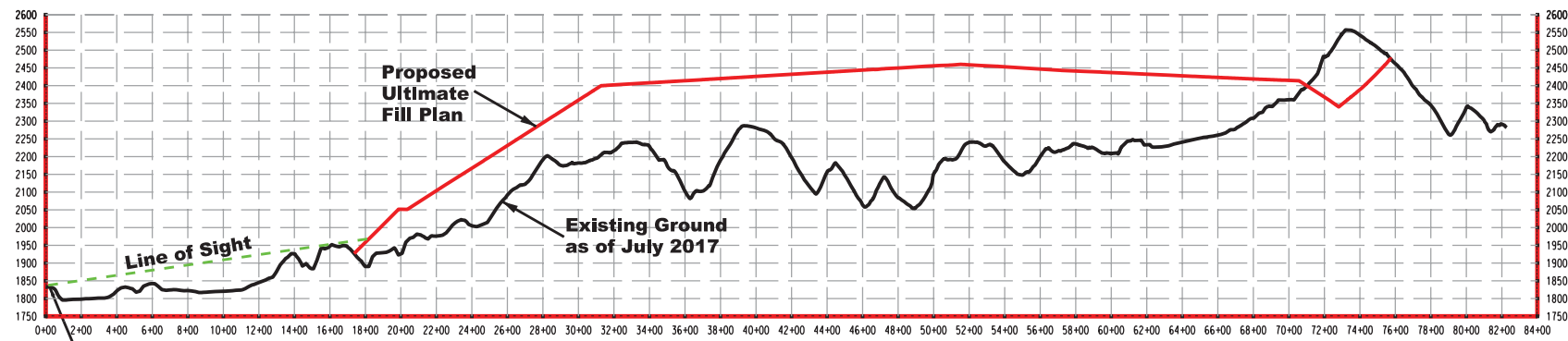


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Flight Date:	May 2015
Designed By:	KJJ
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Checked By:	ACC
Sheet Number:	3 of 4



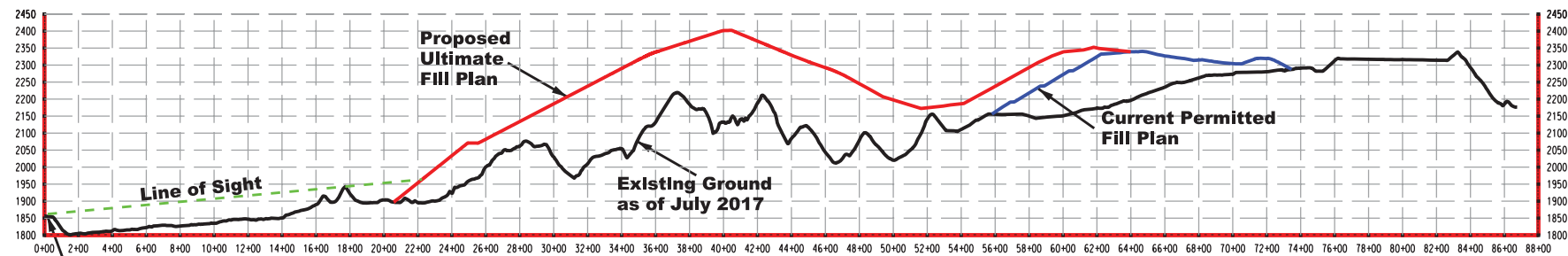
Badlands Sanitary Landfill
Phase 2 EA

Sight Line Analysis



Highway 60

Cross Section E-E
V:H = 2:1



Highway 60

Cross Section F-F
V:H = 2:1

Scale:	NTS
Folder:	sites/Badlands/ba17/Projects
Folder:	Sight Line Analysis
File:	Sight Line Analysis
Model Name:	
Date:	November 29, 2017
Flight Date:	May 2015
Designed By:	KJJ
Drawn By:	KJJ
Checked By:	ACC
Sheet Number:	4 of 4



Badlands Sanitary Landfill
Phase 2 EA

Sight Line Analysis