1. Introduction

This Draft Environmental Impact Report (Draft EIR) has been prepared to evaluate the environmental impacts associated with implementing the Western Placer Waste Management Authority's (WPWMA's) *Renewable Placer: Waste Action Plan* (Waste Action Plan) (WPWMA 2020). The Waste Action Plan has been developed to identify the physical and operational Waste Recovery[1] and Waste Disposal[2] changes needed at the WPWMA facility to continue providing high-quality solid waste management services in response to a fast-growing population in an increasingly complex regulatory environment and rapidly changing global recycling markets. Furthermore, the WPWMA's Waste Action Plan has been developed to take advantage of local opportunities, which could serve to increase the diversion of recyclable materials and deliver these materials to local markets. As the fundamental goal of the Waste Action Plan, this approach of fostering the development of local markets is intended to spur environmentally focused innovation, create jobs and meet the goals of the Placer County Sunset Area Plan, and reduce the environmental impacts (including vehicle traffic, air emissions, and greenhouse gas emissions) associated with long-distance transport of recyclable commodities to domestic and foreign markets. Two concepts to implement the Waste Recovery and Waste Disposal changes associated with the Waste Action Plan (Plan Concept 1 and Plan Concept 2) are described in detail in Chapter 3, Project Description, of this Draft EIR. The two plan concepts represent different approaches to implementing the Waste Action Plan and are collectively referred to as the proposed project.

Section 1.1 defines the WPWMA. The project location, purpose, intended uses of this Draft EIR, and project objectives are presented in Sections 1.2 through 1.4. Section 1.5 identifies the baseline environmental conditions of the WPWMA's facility for the purposes of evaluating the proposed project, and Section 1.6 describes the existing activities that occur at the WPWMA facility. Sections 1.7, 1.8, and 1.9 describe the public review process for the Draft EIR, permits, and approvals necessary for the Waste Action Plan, and content and organization of the Draft EIR, respectively.

1.1 WPWMA

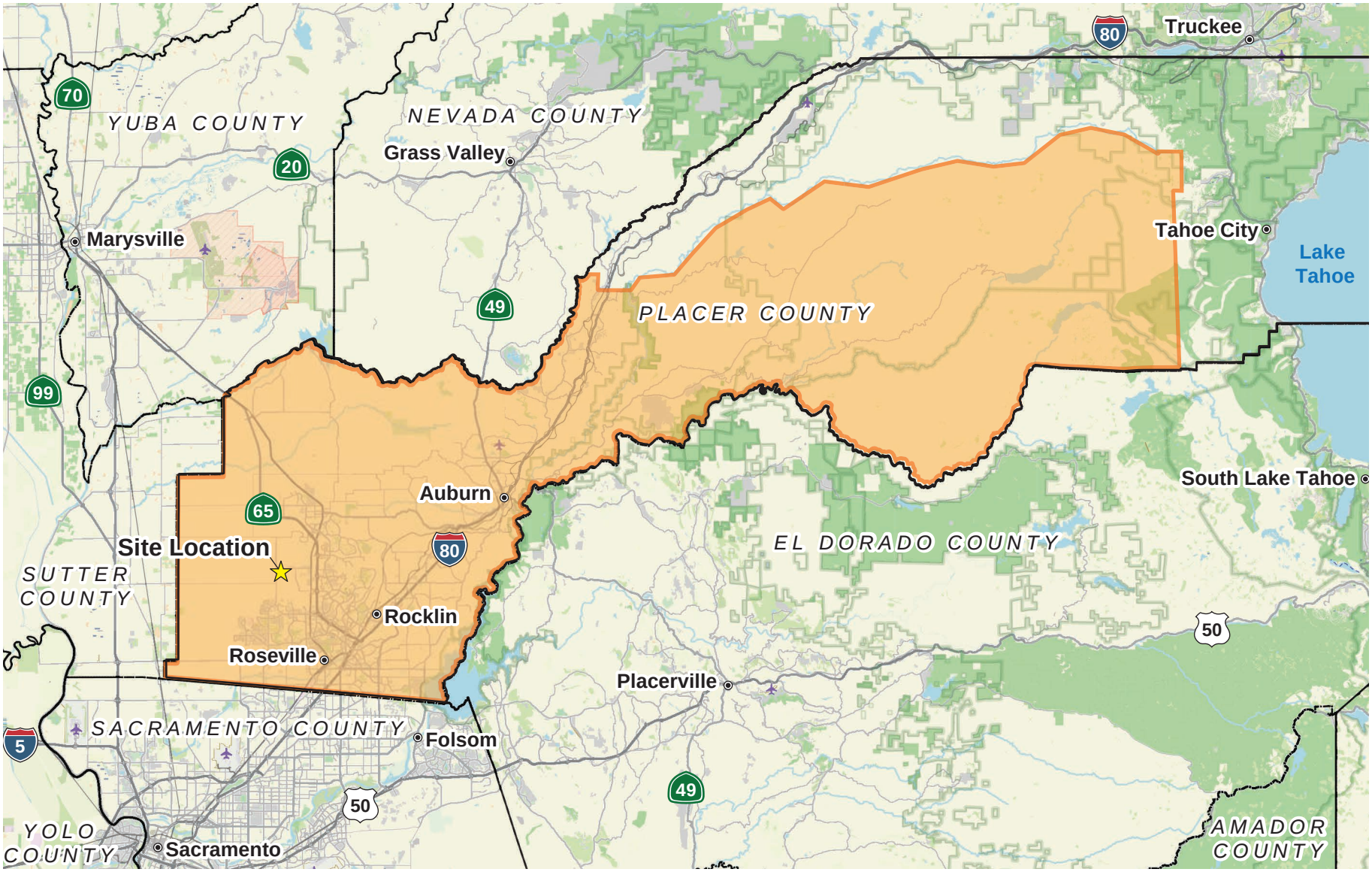
The WPWMA is a regional authority established in 1978 through a joint exercise of powers agreement between Placer County and the cities of Lincoln, Rocklin, and Roseville (Member Agencies) to own, operate, and maintain a sanitary landfill and related improvements. The WPWMA also provides solid waste services to the cities of Auburn and Colfax and the Town of Loomis; these entities and the Member Agencies are collectively referred to as Participating Agencies. The Participating Agencies are provided with solid waste recycling, recovery, and disposal services at the WPWMA facility. The WPWMA's service area encompasses a majority of Placer County in terms of geography (Figure 1-1) and population.

1.2 Project Location

The project site is located on the eastern edge of the Sacramento Valley in Placer County (Figure 1-1) between the cities of Roseville and Lincoln. The site is located on property owned by the WPWMA, generally at the intersection of Athens Avenue and Fiddyment Road, in parts of Sections 5, 6, and 31 of Township 11 North, Range 6 East, Roseville, California, 7.5-minute quadrangle, Mount Diablo Baseline and Meridian (Figure 1-2). The site's latitude and longitude, as determined at the Athens Avenue and

[1] Waste Recovery is primarily concerned with activities that divert from the solid waste stream those materials that can be reused, composted, or recycled for some other purpose, or those activities which occur in order to identify materials that can be removed from the waste stream and those which must become part of Waste Disposal.

[2] Waste Disposal is primarily concerned with landfilling; that is, the burial of solid waste in a landfill.



LEGEND

WPWMA Service Area

North

0 5 10

Approximate scale in miles

Figure 1-1. Regional Vicinity Map
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Renewable Placer: Waste Action Plan
Placer County, California

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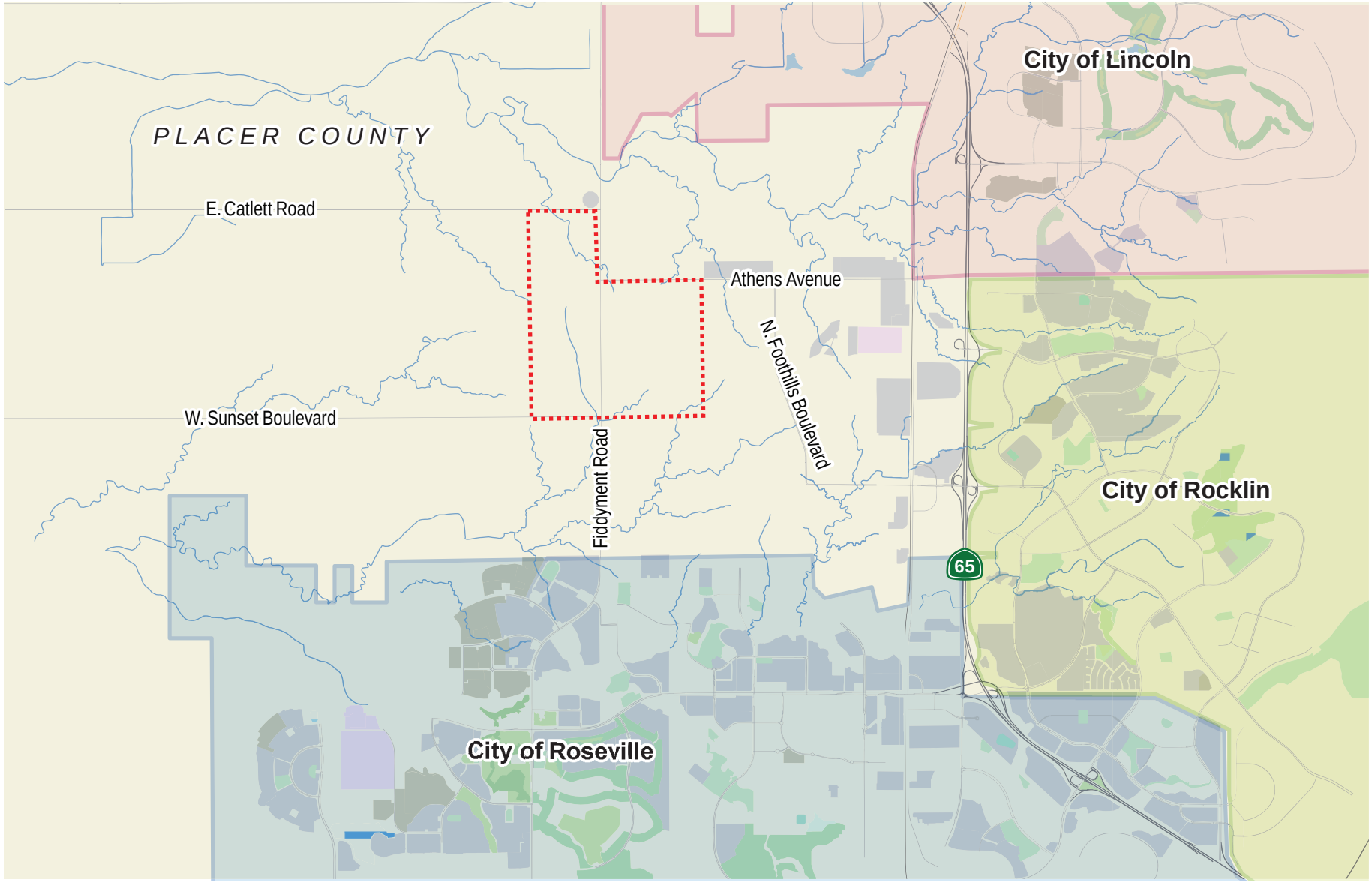

LEGEND

- Project Boundary
- Streams
- City of Lincoln
- City of Rocklin
- City of Roseville

North

0 4,000 8,000

Approximate scale in feet

Figure 1-2. Site Location Map
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Renewable Placer: Waste Action Plan
Placer County, California

Jacobs

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Fiddyment Road intersection, are 38°50'19.97"N and 121°20'57.76"W, respectively. The site's immediate surroundings include rural agricultural lands with the exception of industrial uses located directly to the northeast.

The site includes three contiguous properties totaling 928 acres[3] (Figure 1-3). These properties are described as follows:

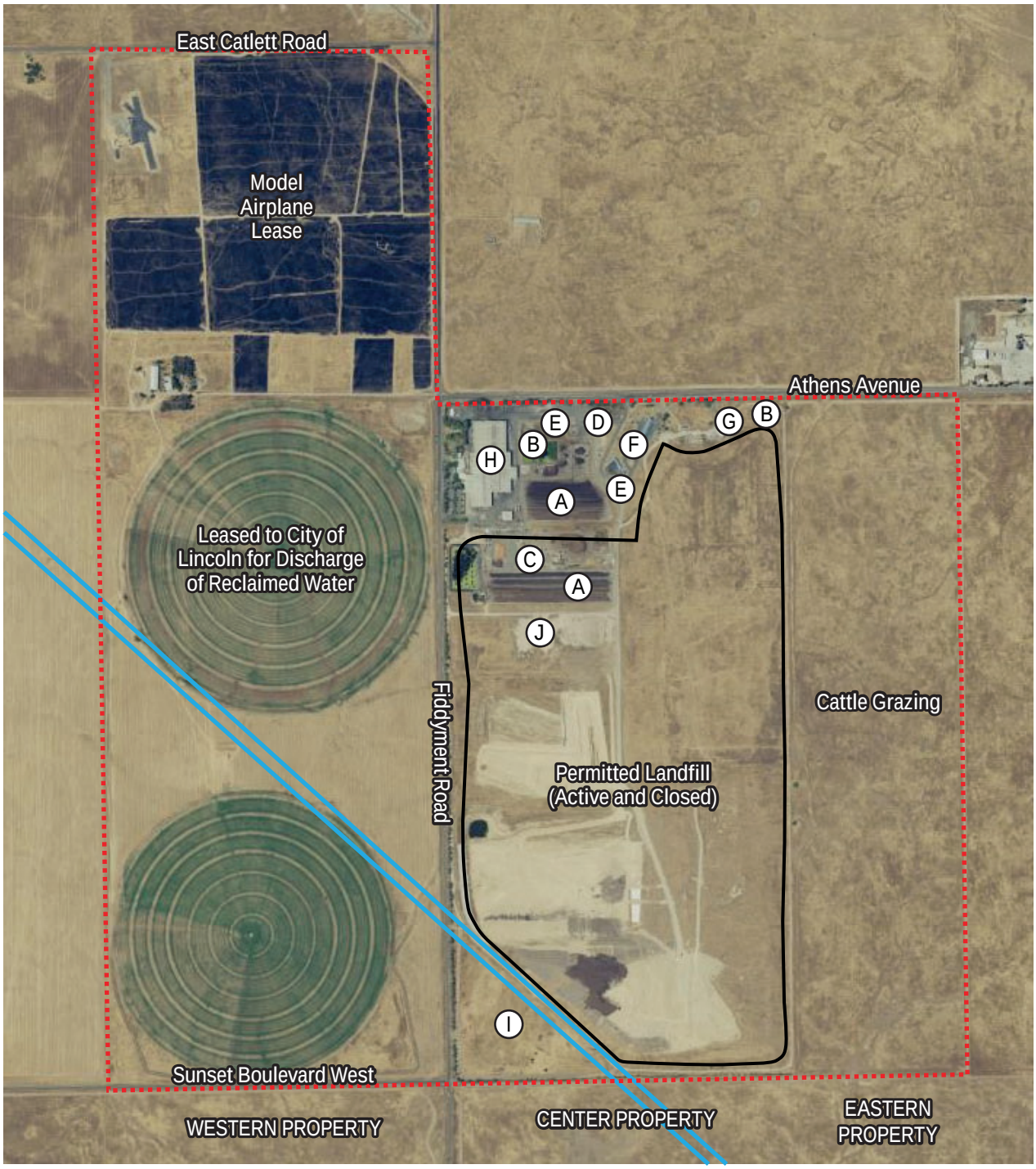
- Approximately 155-acre eastern property, which is leased by the WPWMA to a private entity for cattle grazing and is not currently permitted for solid waste operations.
- Approximately 314-acre center property, which includes the existing Material Recovery Facility (MRF) building, organics management operation, construction and demolition (C&D) materials processing area, public waste drop-off area, household hazardous waste (HHW) facilities, Western Regional Sanitary Landfill (WRSL), stormwater ponds, scale house facilities, landfill gas-to-energy plant, site entrance infrastructure, and a Pacific Gas & Electric Company (PG&E) transmission line easement.
- Approximately 459-acre western property, part of which is currently leased to the City of Lincoln for discharge of reclaimed water and a part of which is leased for model airplane operations. A sublessee of the City of Lincoln resides on this property in a single-story residential structure located at the end of the dirt road that extends directly west from the intersection of Athens Avenue and Fiddyment Road. The same PG&E transmission line easement that extends along the southwestern corner of the center property extends through the south-central part of this property. Solid waste uses on this property have already been subject to environmental review, and a conditional use permit to operate a landfill was previously granted by the Placer County Planning Commission; however, the property has not been fully permitted for solid waste related operations.

The WPWMA's mailing address is 3013 Fiddyment Road, Roseville, CA 95747. The assessor parcel numbers for each of the WPWMA properties are identified in Table 1-1.

Table 1-1. WPWMA Property Assessor Parcel Numbers

Project Properties	Assessor Parcel Numbers
Western Property	021-281-001-000, 021-281-002-000, 017-062-001-000, 017-062-002-000, 017-062-003-000
Center Property	017-063-001-000, 017-063-002-000
Eastern Property	017-063-003-000

[3] 928 acres corresponds to the total acres of each assessor parcel as listed in Placer County GIS, rounded. This may be slightly different from some of the acreages reported in previous documents for this project.



LEGEND

- (A) Organics Management Operation
- (B) Stormwater Ponds
- (C) Construction and Demolition Material Processing Operation
- (D) Entrance
- (E) Scalehouse Facilities
- (F) Public Waste Drop-Off Area
- (G) Landfill Gas-to-Energy Plant
- (H) Materials Recovery Facility Building
- (I) Stormwater Management and Biological Mitigation
- (J) Inert Materials Storage and Processing Area

- Project Boundary
- Landfill Footprint
- PG&E 230 kV Easement

Figure 1-3. Existing Site and Uses
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North

0 0.25 0.5

Approximate scale in miles

Jacobs

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1.3 Purpose and Intended Uses of this Draft Environmental Impact Report

This Draft EIR was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (*Public Resources Code* [PRC] Section 21000 et seq.) and the State CEQA guidelines (*California Code of Regulations* [CCR] Section 15000 et seq.). An EIR is a full disclosure, public information document in which the significant environmental impacts of a project are evaluated, feasible measures to mitigate significant impacts are identified, and alternatives to the project that can reduce or avoid significant environmental effects are discussed.

An EIR is an informational document used in the planning and decision-making process by the lead agency and responsible and trustee agencies. The lead agency is the public agency with primary responsibility over the proposed project. In accordance with State CEQA Guidelines Section 15051(a), "If the project will be carried out by a public agency, that agency shall be the Lead Agency even if the project would be located within the jurisdiction of another public agency." Because the proposed project is being carried out by the WPWMA, the lead agency for the proposed project is the WPWMA.

The purpose of an EIR is not to recommend either approval or denial of a project. CEQA requires decision makers to balance the benefits of a project against its unavoidable environmental effects in deciding whether to carry out a project. The lead agency will consider the Draft EIR, comments received on the Draft EIR, and responses to those comments before making a decision. If significant environmental effects are identified, the lead agency must adopt "Findings," indicating whether feasible mitigation measures or alternatives exist that can avoid or reduce those effects. If the environmental impacts are identified as significant and unavoidable, the lead agency may still approve the project if it determines that the social, economic, or other benefits outweigh the unavoidable impacts. The lead agency would then be required to prepare a "Statement of Overriding Considerations" that discusses the specific reasons for approving the project, based on information in the EIR and other information in the record (PRC Section 21002; State CEQA Guidelines Section 15093).

1.4 Project Objectives

Placer County, the majority of which is included in the WPWMA's service area, was the second-fastest growing county in California in 2018, according to the California Department of Finance, State Population Projections (May 2019). Based on land use projections included in the general plans of the Participating Agencies, the population served by the WPWMA is expected to nearly double over the next 30 years. In addition to projected population increases, the Participating Agencies are seeking ways to respond to simultaneous restrictions in global recycling markets and increasingly stringent state-mandated limitations on materials that can be disposed in California's landfills.

In anticipation of this projected growth, the WPWMA initiated a master planning effort in 2015 identified as the *Renewable Placer: Waste Action Plan*. The purpose of the Waste Action Plan is to identify the physical and operational changes needed at the WPWMA facility that will allow the facility to support future Waste Recovery and Waste Disposal needs for the rapidly growing communities it serves while complying with an increasingly complex regulatory environment and fluctuating global recyclables markets. The Waste Action Plan was also developed to maintain a stable cost structure for the Participating Agencies, improve operational efficiencies and customer safety, and continue to enhance compatibility between ongoing operations and current and future adjacent land uses.

The WPWMA developed the Waste Action Plan to articulate a long-term vision for optimizing the ongoing Waste Recovery and Waste Disposal services provided to the Participating Agencies. The objectives of the Waste Action Plan that would help achieve this vision are described as follows:

- Maintain a stable and relatively predictable cost structure through continued local-government control of solid waste management operations, improve operational efficiencies, and extend the operational life of the current WPWMA facility.
- Expand the site's capacity to divert materials from landfill disposal and contribute to greenhouse gas emission reductions through expanded organics management, improved recovery of C&D materials, recycling, and public buy-back activities.
- Increase the WRSL's permitted footprint and height to optimize the efficient use of land for Waste Disposal and so that sufficient Waste Disposal capacity is available to accommodate anticipated long-term growth in the Participating Agencies' waste streams.
- Enhance customer safety by improving site access and internal circulation, which would minimize potential conflicts between commercial vehicles and public users.
- Provide the WPWMA with operational flexibility to accommodate an increasingly complex and evolving regulatory environment and verify that operations associated with Waste Action Plan implementation are conducted in the most environmentally responsible manner possible.
- Facilitate the siting and development of compatible technologies that would benefit from proximity to the WPWMA.
  - Compatible technologies could include both proven and innovative recycling strategies intended to capitalize on an evolving local recyclable materials market and potentially reduce dependence on foreign markets.
  - Developing compatible technologies could promote state-mandated waste diversion goals, offset costs associated with ongoing solid waste operations, and generate innovative and creative economic opportunities within the County consistent with the Sunset Area Plan's objectives (Placer County 2019).
- Continue to improve compatibility between current and future WPWMA operations and existing and proposed adjacent land uses based on the surrounding area's anticipated transition to a more urban environment.
- Encourage implementation of the Placer County Conservation Program and the integration of environmentally conscious practices into the facility operations.
- Develop WPWMA properties consistent with the goals, policies, and implementation programs identified in the Sunset Area Plan (Placer County 2019).
- Position the WPWMA facility as a hub of innovation that promotes the development of a circular economy[4] in Placer County.

1.5 Existing Baseline Conditions

The State CEQA guidelines (CCR Section 15125[a]) state the following:

> An EIR must include a description of the physical environmental conditions near the project. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The purpose of this requirement is to give the

[4] A circular economy aims to redefine growth, focusing on positive society-wide benefits. It entails gradually decoupling economic activity from the consumption of finite resources, and designing waste out of the system. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural, and social capital. It is based on three principles: design out waste and pollution, keep products and materials in use, regenerate natural systems. (https://www.ellenmacarthurfoundation.org/circular-economy/concept)

public and decision makers the most accurate and understandable picture practically possible of the project's likely near-term and long-term impacts.

(1) Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation (NOP) is published, or if no NOP is published, at the time environmental analysis is commenced, from both a local and regional perspective. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project's impacts, a lead agency may define existing conditions by referencing historical conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a lead agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record.

(2) A lead agency may use projected future conditions (beyond the date of project operations) baseline as the sole baseline for analysis only if it demonstrates with substantial evidence that use of existing conditions would be either misleading or without informative value to decision makers and the public. The WPWMA issued an NOP for the project on March 15, 2019, and initiated preparation of the CEQA environmental review process. For this analysis, the baseline conditions for this Draft EIR are generally the conditions that existed on the three WPWMA-owned properties in 2019. For solid waste operations that fluctuate on a daily basis and to represent a full year of data, the baseline is based on averages from calendar year 2018, unless otherwise specified.

Chapters 5 through 17 of this Draft EIR present the existing environmental conditions on the project site and surrounding area, in accordance with the State CEQA guidelines (CCR Section 15125). This setting generally serves as the baseline against which environmental impacts are evaluated. However, because the center property currently includes extensive ongoing Waste Recovery and Waste Disposal activities, these operations are described in detail in the next section. In addition, a summary table is provided in Chapter 3, Project Description, that identifies how the proposed elements of both plan concepts evaluated in this Draft EIR would change from the baseline conditions. Additional discussion of the baseline for the proposed project is provided in Chapter 4, Approach.

1.6 Existing Waste Recovery and Waste Disposal Operations

1.6.1 Sitewide Operations

Waste and recyclable materials are currently received at the WPWMA site from two of the four waste collection franchise areas (Districts 1 and 4) in unincorporated Placer County, the cities of Roseville, Rocklin, Lincoln, Colfax, and Auburn, and the Town of Loomis. The WPWMA's service area, which encompasses the majority of the geographical area and population of Placer County, is depicted on Figure 1-1. The WPWMA facility is open 365 days a year to receive waste materials. The WPWMA is the legal owner and operator of all onsite operations and contracts with private firms to conduct day-to-day operations at the site.

Customers and materials enter the site from the main entrance on Athens Avenue, as shown on Figure 1-3. A left-turn lane is provided on Athens Avenue to prevent waiting westbound vehicles from blocking the road. Once vehicles enter the site, they stop for assessment at one of two scale house complexes, one for self-haul customers and the other for commercial customers. The scale house operator weighs the incoming material on one of the available scales or estimates the volume of the load and collects the appropriate disposal fee (tipping fee). Based on the contents of the load, the scale house operator directs the vehicle to the appropriate area of the site to unload the materials.

Figure 1-4 identifies the waste and recyclable materials and associated vehicles received at the WPWMA facility in 2018. As shown, the WPWMA facility received 483,968 tons of material and 292,551 vehicles in 2018. The majority of this material, approximately 400,738 tons, was initially associated with Waste Recovery operations, while the remainder, approximately 83,230 tons, was initially associated with Waste Disposal operations.

Waste Recovery operations are primarily permitted (with the exception of inert materials) under Solid Waste Facilities Permit (SWFP) No. 031-AA-0001. Waste Recovery includes MRF operations, compost operations (organics management), C&D waste operations, public waste drop-off area operations, and HHW facility operations. SWFP No. 031-AA-0001 allows for the receipt of waste and recyclable materials from 6:00 a.m. to 7:30 p.m. Monday through Saturday and from 6:00 a.m. to 5:00 p.m. Sundays and designated holidays. Designated holidays are January 1, Memorial Day, July 4, Labor Day, Thanksgiving, and December 25. Permitted material processing hours are from 6:00 a.m. to 11:30 p.m. Monday through Sunday. Additional facility maintenance and cleanup work may take place from 4:00 p.m. to 6:00 a.m. Monday through Sunday. SWFP No. 031-AA-0001 limits the total daily acceptance of waste materials to 1,750 tons per day and total customer traffic to 1,014 vehicles per day.

Waste Disposal operations are permitted under SWFP No. 031-AA-0210. Waste Disposal operations comprise operation of the WRSL and the receipt of inert materials. SWFP No. 031-AA-0210 allows for the receipt and disposal of materials from Monday through Saturday, 7:00 a.m. to 7:30 p.m. and Sunday 8:00 a.m. to 5:00 p.m. Ancillary operations, including equipment servicing and start-up, removal of temporary daily cover material, and preparation of the daily cell to receive waste, are allowed to occur between 6:00 and 7:00 a.m., Monday through Saturday, and between 7:00 and 8:00 a.m. on Sunday. Other onsite operations such as application of daily cover and landfill-related construction may extend to 8:30 p.m. SWFP No. 031-AA-0210 limits the total daily acceptance and burial of waste materials to 1,900 tons per day and total customer traffic to 624 vehicles per day.

Descriptions of the WPWMA's current Waste Recovery and Waste Disposal operations are provided in Sections 1.6.2 and 1.6.3, respectively.

Eastern Property

The WPWMA's eastern property, depicted on Figure 1-3, is not currently permitted for solid waste-related operations. The WPWMA currently leases the land to a private party for the purposes of grazing cattle.

Western Property

The WPWMA's western property, depicted on Figure 1-3, is not currently permitted for solid waste- related operations. The WPWMA currently leases a portion of the property to the City of Lincoln for the purposes of application of reclaimed wastewater, and it leases another portion of the property to the Associated Modelers of Sacramento for the purposes of operating a radio-controlled airplane flight club.

1.6.2 Waste Recovery Operations

Waste Recovery operations include the MRF building, organics management operations, C&D materials processing area, public waste drop-off area, and HHW facilities, each of which are described in Sections 1.6.2.1 through 1.6.2.4. Support and environmental control features common to Waste Recovery operations are described in Section 1.6.2.5, and traffic levels associated with Waste Recovery operations are described in Section 1.6.2.6.

Material Recovery Facility Building Operation

Location.

The MRF building is located in the northwestern corner of the center property, as shown on Figure 1-5. Access to the MRF is provided through the main site entrance gate on Athens Avenue.

Material – Source, Type, and Amount.

Most residential and commercial municipal solid waste (MSW) is sent directly to the MRF building for processing. In addition to the MSW that is sent directly to the MRF building, MSW received at the public waste drop-off area (discussed in Section 1.6.2.4) is also transported to the MRF building for processing. At the MRF, salvageable materials are recovered to be recycled or reused. This includes newspaper, mixed paper, cardboard, ferrous and nonferrous metals, glass, plastics, green waste, wood waste, inert materials, electronic devices, and HHW. Additionally, other materials legally prohibited from disposal at the WRSL are recovered to protect the landfill and the surrounding environment. Recovery of these various materials reduces the amount of waste ultimately received and disposed at the WRSL.

The baseline amount of MSW received and processed at the MRF building in 2018 is shown in Table 1-2 and is based on WPWMA scale house records.

Table 1-2. 2018 Baseline Material Recovery Facility Building Tonnages

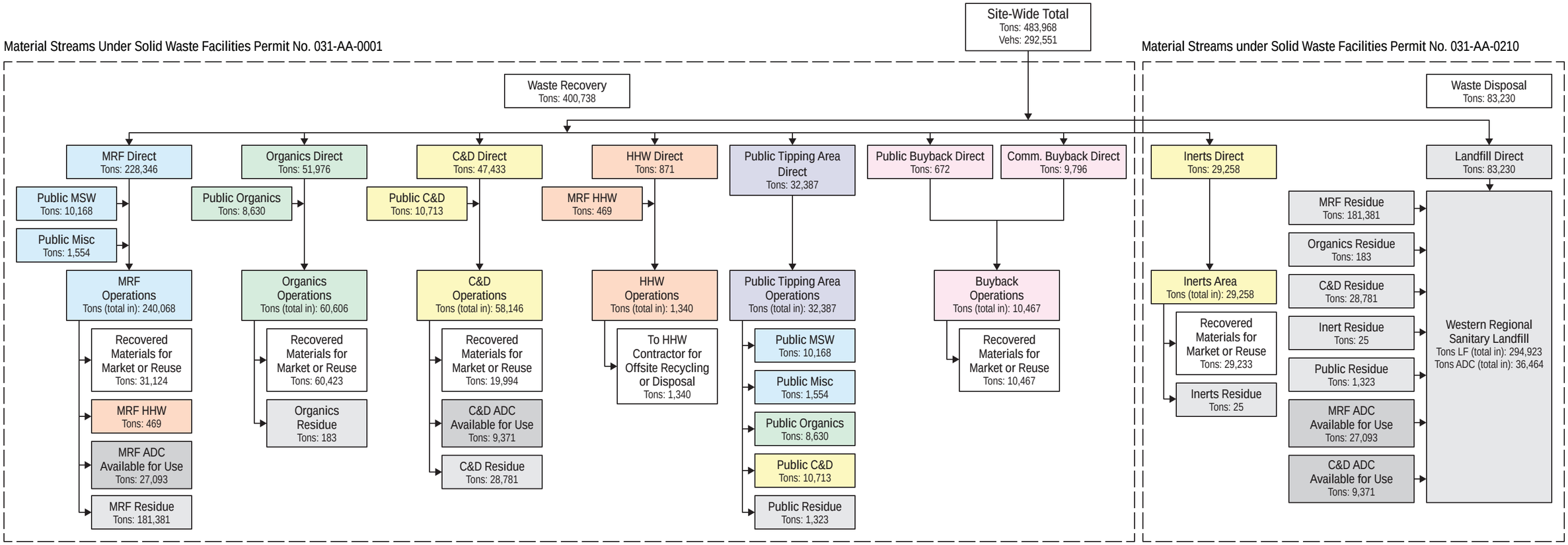
Baseline Criterion	Tonnage Quantity
Average weekday acceptance rate	822
Peak daily acceptance rate (occurred on 11/30/2018)	1,091
Average of 10 highest daily acceptance rates	903
Total (annual) accepted and processed	240,068

Source: WPWMA 2020

Operation.

MSW received at the MRF building is initially placed on the receiving floor. Once on the floor, wastes are managed by front-end loaders with some manual separation. The wastes are either stockpiled or directly pushed into one of six walking floor pit conveyors: five of these lines direct the wastes to the processing and sorting area, and the sixth conveys nonrecyclable wastes to a truck for transport to the WRSL. MSW is processed each weekday and some may remain on the receiving floor overnight to facilitate the start of operations the following day.

Pit conveyors transport the MSW from the receiving area to the processing area. The first stage of processing involves human-based pre-sort and debagging (mostly to protect the equipment), followed by mechanical sorting during which the wastes pass through rotating trommels to separate the materials by size. Following the trommels, wastes are further screened by using disk screens to separate materials by dimension (that is, two-dimensional items such as paper and three-dimensional items such as bottles and



GENERAL NOTES

1. This flow diagram has been prepared for planning purposes and for use in the preparation of the Renewable Placer Waste Action Plan EIR.
2. This flow diagram includes actual 2018 tonnage and incoming vehicle quantities.
3. Only customer vehicle counts are presented. Internal site vehicles are not shown.
4. Total inbound and total outbound values may not equate exactly due to rounding.

Figure 1-4. 2018 Waste Material Flow Chart
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Placer County, California

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Figure 1-5. Existing Waste Recovery Operations
Draft Environmental Impact Report
Renewable Placer: Waste Action Plan
Placer County, California

North

0 0.25 0.5

Approximate scale in miles

Jacobs

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cans) and to remove fines, dirt, and grit. After the screening, the materials are conveyed over a series of sorting tables where recoverable products are removed and placed into temporary storage bunkers. Most of the recovered products are conveyed to baler units for consolidation (including paper, newspaper, cardboard, plastics, and some metals).

The bales are stored in the bale warehouse, outside on the southern end of the warehouse, along the southern boundary of the MRF building, or along the fence of the northern compost pond before being transported to market. Other materials such as glass, green and wood waste, inerts, electronics, and HHW are transferred to other parts of the facility for additional processing or sale. Fine materials[5] are further screened to remove products larger than a half-inch, such as food waste, and are subsequently sent to the WRSL for use as alternative daily cover (ADC). Nonrecovered materials are conveyed to top-loading transfer trailers, which are used to transport these materials to the WRSL for disposal.

Of the material processed at the MRF building in 2018, approximately 13 percent was recovered for market or reuse; less than 1 percent was HHW, either shipped offsite or taken to the HHW facility for further management; 11 percent was used for ADC at the WRSL; and 76 percent was disposed in the WRSL.

Odor Management.

The materials processed at the MRF building include organic materials and other putrescible wastes that have the potential to emit odors as they begin to decompose.

Best management practices (BMPs) for odors at the MRF focus on timely and consistent processing of the materials and regular housekeeping and cleaning of the facility to avoid the accumulation of potentially odiferous materials. These BMPs are identified as follows:

- Process waste materials within 48 hours of receipt. For the purposes of this BMP, "process" means to sort the materials to recover marketable commodities and transport the residue to the WRSL for burial.
- Screen ADC generated from MRF fines to a 0.5-inch minus size, thereby reducing the potential for larger pieces of food waste to be present. The MRF operator is responsible for regularly inspecting and properly maintaining the ADC screening system to maintain this material sizing standard.
- Transport all ADC to the WRSL the same day it is produced at the MRF. No overnight storage of ADC is allowed.
- Transport residual wastes to the WRSL the same day they are produced. Limit overnight storage of residue in trailers to situations in which the MRF is operated outside of the landfill waste acceptance hours.
- Continuously operate the stormwater pond aeration system to the degree that the aerators are fully submerged so that the dissolved oxygen level in the pond is greater than 1 milligram per liter.

[5] Fine materials are also referred to as "fines" and "MRF fines" and refer to the finely crushed material, dirt, and grit that remains when larger material is sorted out at the MRF.

Organics Management Operation

Location.

The organics management operation is generally located to the east and south of the MRF building (Figure 1-5) and includes a material receiving and processing area, two concrete composting pads with windrows that are built on top of the concrete pads to process the organic material, finished product screening and storage areas, and two compost leachate evaporation ponds.

Material – Source, Type, and Amount.

Currently, approximately 96 percent of the material the WPWMA composts consists of green waste from commercial and residential haulers. Green waste generally refers to landscape wastes consisting of leaves, grass clippings, weeds, yard trimmings, wood waste, branches, stumps, home garden residues, and other miscellaneous organic materials. A small amount of food waste is received as part of a pilot-level study. As depicted on Figure 1-4, roughly 86 percent of compost material in 2018 arrived directly at the organics management operation, and 14 percent was received at the public waste drop-off area and transported to the organics management operation.

The baseline amount of green and food waste received and processed at the organics management operation in 2018 is shown in Table 1-3 and is based on WPWMA scale house records.

Table 1-3. 2018 Baseline Organics Management Operation Tonnages

Baseline Criterion	Tonnage Quantity
Average weekday acceptance rate	193
Peak daily acceptance rate (occurred on 12/6/2018)	482
Average of 10 highest daily acceptance rates	375
Total (annual) accepted and processed	60,606

Source: WPWMA 2020

Operation.

As green waste is received at the organics management operation, it is chipped and ground at the preprocessing area, which has a capacity of approximately 400 tons per day (WPWMA 2014). The chipping and grinding operations are conducted by using mobile equipment located on concrete pads. As food waste is received, it is blended with ground green waste to avoid the potential for nuisances (for example, odors and vectors).

Chipped and ground green waste is stored in the preprocessing area prior to transport to one of the two compost pads. The duration that green waste is stored within the preprocessing area is minimized to reduce the potential for nuisances (odors, vectors). Once the preprocessed green waste is delivered to the compost pads, it is either placed into open windrows or mixed with food waste and formed into static piles that are aerated via a series of perforated pipes (WPWMA 2014).

The WPWMA generally composts by using an open windrowing method. However, it recently conducted a pilot-level study to evaluate co-composting of green and food waste, using an aerated static pile (ASP) composting method. The WPWMA is currently working with the Placer County Air Pollution Control District

(PCAPCD) to permit full-scale ASP composting and will retain approval to use windrow composting for the non-food portion, approximately half of the feedstock, under current permitting.

In the case of windrowed materials, the piles are periodically watered (using a water truck), turned (using a diesel-powered windrow turner or loader), and monitored manually to maintain sufficient temperature levels for decomposition and to achieve pathogen reduction. The compost remains in windrows for a period of at least 8 weeks (WPWMA 2014).

In the case of ASP, the materials are initially wetted. Air is then periodically applied by blowers connected to perforated pipes underneath the piles. Aeration is used to maintain a temperature range similar to that of windrowing for the purposes of achieving decomposition and pathogen reduction. The WPWMA has not determined the appropriate amount of time that material needs to remain in the ASP system; current estimates suggest the timing could be between 6 and 9 weeks (WPWMA 2014).

Following completion of the active composting process (windrow and ASP), the material is moved to static piles and allowed to cure, screened (using a diesel-powered trommel screening device located within the compost pad area), and then marketed for sale and removed from the site. All composting activities occur outdoors.

The windrows are managed to minimize runoff or generation of leachate. Water that seeps through the windrows is collected and managed in the leachate drainage control system, which drains into two collection ponds. The collection ponds are designed to prevent collected compost leachate from leaving the facility. The southern pond is sized for a 25-year return period followed by an average storm year; the northern pond is not sized for a particular design storm year (WPWMA 2020) but is currently being reconstructed to contain runoff from the average annual precipitation plus 0.7 times the standard deviation (approximately 30.56 inches of rain) plus the runoff from a 25-year, 24-hour (3.95 inches) storm. If necessary, to avoid overflowing the ponds, compost leachate may be reused in the composting operation or disposed to the sanitary sewer via a temporary discharge permit with the sewer utility.

As shown on Figure 1-4, of the material received at the organics management operation in 2018, less than 1 percent was identified as a noncompostable contaminant (for example, plastic) or was unsuitable for composting (for example, palm fronds) and was transported to the WRSL for disposal.

Organics Management Operations Odor Management.

Green waste and a small amount of food waste are received directly at the organics management operation. Other organic materials that may be composted, such as paper, will generally be received as part of the MSW stream at the MRF that is recovered by the MRF operator and subsequently transported to the organics management operation.

As received, green waste generally has a relatively low odor potential, as sufficient oxygen is available to prevent significant anaerobic conditions. However, during certain parts of the year (typically early spring and fall) when there may be alternating cycles of warm weather followed by rain, the amount of grass clippings or leaves received at the WPWMA facility can increase dramatically. In some cases, the green waste can already have entered a semi-anaerobic phase (and begin producing odors) before being received at the site.

Food waste will most often exhibit a high odor potential upon receipt at the organics management operation. As such, prompt processing and blending of food waste or more highly odiferous green waste materials with processed, shredded green waste will help to minimize the odor potential from the organics management operations.

Commercial composting facilities in California are required to implement an Odor Impact Minimization Plan (OIMP), as codified in CCR Title 14 (Natural Resources), Division 7 (CalRecycle CIWMB), Chapter 3.1 (Compostable Materials Handling Operations and Facilities Regulatory Requirements), Article 3 (Report of Facility Information), Section 17863.4 (Odor Impact Minimization Plan). The OIMP process relies on a philosophy of constant improvement rather than prescriptive standards. The OIMP describes design and operational procedures for minimizing odors, topographic and meteorological conditions, and a complaint response protocol.

The OIMP describes potential sources of odor and the odor control measures currently being implemented at the WPWMA's organics management operation. The WPWMA's OIMP was updated in 2016 for the organics management operation through October 2020. As part of the documents prepared for permitting ASP composting with the PCAPCD, the WPWMA updated the OIMP for use in 2021 and beyond.

In accordance with the OIMP, WPWMA implements several BMPs to reduce the potential for organics management operation odors to be perceived by nearby receptors, identified as follows:

- Perform initial processing (grinding) of green materials within 7 calendar days of receipt.
- Limit windrow composting methods to green waste only unless otherwise approved, in writing, by the local enforcement agency (LEA). All other materials will be composted using ASP methods.
- Maintain materials in the composting windrows for at least 8 weeks.
- Continuously operate the compost pond aeration system to the degree that the aerators are fully submerged so that the dissolved oxygen level in the pond is greater than 1 milligram per liter.

Construction and Demolition Materials Processing Operation

Location.

The existing C&D materials processing operations include two distinct areas: the inerts area for nonwaste materials, including primarily clean soil, concrete, brick, tile and rock, and the C&D operation area that includes a covered receiving area and C&D materials processing line. The inerts area is located south of the southern compost pad, and the C&D operation area is located between the northern and southern compost pads and adjacent to the green and wood waste tipping pad (Figure 1-5).

Material – Source, Type, and Amount.

Prior to 2007, WPWMA did not distinguish between MSW and C&D. As a result, all mixed wastes were directed to the MRF for processing and material recovery. In 2007, the California Building Standards Commission developed green building standards, which required a minimum diversion level of materials from landfilling in an effort to meet the goals of AB 32. In response, WPWMA established a separate C&D processing area and contractually required its facility operator to achieve a minimum 50 percent diversion of all C&D materials sent to the facility. At the time, the WPWMA estimated that C&D comprised approximately 10 percent of the total mixed-waste stream received at the facility. Improvements made to the MRF in 2005 increased MRF processing capacity to approximately 2,000 tons per day (inclusive of C&D), including a separate C&D materials processing area sized to accommodate approximately 200 tons per day of materials.

As depicted on Figure 1-4, roughly 82 percent of C&D material in 2018 arrived directly at the C&D operation, and 18 percent was received at the public waste drop-off area and transported to the C&D materials processing operation. For inerts, 100 percent of the material in 2018 arrived directly at the inerts area.

Similar to the MRF building, at the C&D materials processing area, salvageable materials, including C&D (for example, concrete, brick, rock, wood, drywall, clean soil), cardboard, ferrous and nonferrous metals, glass, plastics, green waste, wood waste, inert materials, appliances, wall board, electronic devices, and HHW or other materials legally prohibited from disposal at the WRSL are recovered for market or reuse, thereby reducing the amount of waste ultimately received and buried at the WRSL.

The baseline amount of C&D material received and processed at the C&D materials processing area in 2018 is shown in Table 1-4 and is based on WPWMA scale house records.

Table 1-4. 2018 Construction and Demolition Material Tonnages

Baseline Criterion	Tonnage Quantity
Average weekday acceptance rate	160
Peak daily acceptance rate (occurred on 3/20/2018)	278
Average of 10 highest daily acceptance rates	169
Total (annual) accepted and processed	58,146

Source: WPWMA 2020

In 2018, the WPWMA received 29,258 tons of inert material (under SWFP No. 031-AA-0210 as part of Waste Disposal operations).

Operation.

In the C&D materials processing line, material is initially placed on the receiving floor where hand sorting is used to remove larger salvageable items such as wood, metal, wall board, and appliances. Following the initial floor sort, the remaining materials are pushed into a walking floor pit conveyor, using a front-end loader, or picked and placed onto a walking floor with an excavator. The materials are then conveyed to a series of vibrating screens to remove fines and other smaller materials before passing through a magnet and along a sorting conveyor. Once on the conveyor, sorters recover salvageable items; nonrecovered materials are top loaded into transfer trailers for subsequent transport to the WRSL for disposal. Fines recovered during the screening process are subsequently sent to the WRSL for use as ADC (in conjunction with the fines recovered at the MRF for the same purpose). In the inerts area, inert materials are received and stockpiled until they are processed or reused.

The WPWMA's operator endeavors to process a majority of C&D material on the same day that it is received, although given current acceptance rates of the material, it is common that unprocessed material remains on the receiving floor overnight. Inerts are processed as needed.

As shown on Figure 1-4, approximately 34 percent of material processed at the C&D materials processing operation in 2018 was recovered for market or reuse, 16 percent was transported to the WRSL for use as ADC, and 50 percent was transported to the WRSL for disposal.

The inerts area is used to receive, stockpile, and eventually process inert material that is received at the WPWMA facility. In 2018, the vast majority of processed inerts was used beneficially onsite or sold for offsite use, and a tiny amount was disposed of in the WRSL.

Public Waste Drop-Off Area Operations

The public waste drop-off area is composed of a gatehouse complex with vehicle queuing lanes and various facilities where the public can drop off a variety of self-haul materials. Facilities include a waste tipping area, buy-back center, and HHW facility. Each is described in the following sections.

Public Waste Tipping Area (Z-Wall).

Location

The public waste tipping area is one of several components of the existing public waste drop-off area, located in the northern portion of the center property (Figure 1-5).

Material – Source, Type, and Amount

The public can drop off a variety of self-haul materials, including MSW, C&D material, electronic wastes, tires, and appliances at the public waste tipping area, referred to as the "Z-Wall." In general, material received at the Z-Wall may include any of the materials accepted for Waste Recovery or Waste Disposal.

Based on WPWMA scale house records, approximately 32,387 tons of material were received at the Z-Wall in 2018.

Operation

Upon arrival at the public area gatehouse, members of the public are generally directed to the Z-Wall to unload their wastes. The Z-Wall has multiple elevated drop-off slots for customers to back into and unload their materials over a guardrail into roll-off bins located below. Mixed-waste loads are dumped into roll-off bins at the Z-Wall, while green and wood waste loads are directed to the green and wood waste processing area located near the C&D materials processing area. Once the roll-off bins are filled, they are transported by the facility operator to the MRF building, C&D materials processing area, or WRSL after being weighed at the scale house. Self-haul customers transporting mixed waste in larger vehicles that may be difficult or unsafe to unload at the Z-Wall may be directed to unload on the MRF receiving floor or at the C&D materials processing area.

Chlorofluorocarbon (CFC) and non-CFC-containing white goods (e.g., refrigerators, washers and dryers) are accepted at the Z-Wall, separated by type, and transported to the MRF building for subsequent processing. Devices containing cathode ray tubes, electronic devices, and other universal wastes accepted at the Z-wall as well as those that are removed from the waste stream are temporarily stored until they are transported to the appropriate offsite recycling and processing facility.

As shown on Figure 1-4, approximately 36 percent of material received at the Z-Wall in 2018 was transported to the MRF building for processing, 27 percent was transported to the organics management operation for processing, 33 percent was transported to the C&D materials processing operation, and 4 percent was transported to the WRSL for disposal.

Buy-back Center Operation.

Location

The buy-back center is one of several components of the existing public waste drop-off area, located in the northern portion of the center property (Figure 1-5). The buy-back center is co-located with the HHW receiving area (discussed further in this section).

Material – Source, Type, and Amount

The buy-back center accepts clean, source-separated recyclables (for example, cardboard and mixed paper) free of charge (from Public or Commercial customers) and glass, plastic, and aluminum beverage containers (with a CA redemption value) can be turned in for a refund.

Based on WPWMA scale house records, approximately 10,467 tons of material were received at the buy-back center in 2018.

Operation

Upon arrival at either the main commercial scale house (for larger loads that need to be weighed) or the public area gatehouse, customers with source-separated recyclables are directed to the buy-back area. From the buy-back center, materials are prepared for shipping offsite for further management. As shown on Figure 1-4, 100 percent of material received at the buy-back center was recovered for market or reuse.

Household Hazardous Waste Facility Operation.

Location

The HHW Facility Operation includes activities at the HHW receiving area (co-located with the buy-back center and one of several components of the existing public waste drop-off area) and at the HHW building, which is located directly north of the MRF building (Figure 1-5).

Material – Source, Type, and Amount

HHW at the WPWMA facility generally consists of the types of wastes generated by households that are prohibited from disposal in the WRSL. HHW primarily consists of paint and solvents; used motor oil and filters, anti-freeze, and other automotive fluids; cleaning products; pool and garden chemicals; aerosol cans; sharps and medications except controlled substances; auto batteries; and household batteries.

The HHW receiving area that is co-located with the buy-back center receives HHW from the public and small-quantity generators. The HHW building (north of the MRF building) primarily receives and processes HHW recovered from other operations on the site, including from the public waste drop-off area, buy-back/HHW area, MRF building operation, C&D materials processing operation, and organics management operation. Occasionally, customers with HHW are sent directly to the HHW building for drop off. Public customers may also periodically be directed to the HHW building on weekends to reduce the impact on the public waste drop-off area.

As depicted on Figure 1-4, roughly 65 percent of HHW in 2018 arrived directly at either the HHW receiving area or HHW building, and 35 percent was recovered from the processing of MSW and C&D materials.

Operation

The HHW facilities are generally used for receiving, categorizing, packaging, and loading materials onto trucks for shipment offsite for recycling or disposal. As shown on Figure 1-4, approximately 1,340 tons of HHW were removed from the site in 2018 for recycling or offsite disposal.

Waste Recovery Support Facilities, Nuisance Controls, and Load Checking

The support facilities, nuisance control measures, and load-checking operations for the Waste Recovery operations are discussed as follows.

Waste Recovery Operations Support Facilities.

The MRF building, organics management operation, C&D materials processing area, and public waste drop-off area include various support facilities intended to promote safe and efficient operations as well as the protection of public health and the environment. These support facilities are depicted on Figure 1-5 and include the following:

Maintenance Area – The maintenance area is located south of the MRF building. The area includes a maintenance building and an outdoor storage and staging area for equipment requiring maintenance. The maintenance area currently serves the equipment maintenance needs for all of the waste operations on the site, including the WRSL.

Administration Building – The current administration building is attached to the MRF building with a parking lot located adjacent to the building. The administration building includes offices for WPWMA and facility operator staff as well as the WPWMA's Board of Directors Chambers.

Fire Fighting Equipment – Most structures at the site are equipped with a sprinkler system that will turn on automatically in case of a fire. The MRF building (exclusive of the offices) is equipped with automated roof-mounted heat/smoke vents.

Fire hydrants are located

- Near the Athens Avenue entrance
- On the northern side of the MRF office
- In the MRF parking lot
- Along the western side of the composting pad
- Along the southern MRF boundary, near the vehicle maintenance building and fuel tanks

Fire extinguishers and hose bibs where water can be drawn for firefighting are located throughout the facility.

Surface Water Drainage System – The drainage system consists of ditches, berms, culverts, two MRF and two stormwater detention basins, and two compost leachate retention basins. All noncontact water[6] is directed to the stormwater detention basins for eventual discharge offsite. Contact water from the organics management and C&D operations is conveyed to the compost leachate retention ponds; all other contact water is disposed to the sanitary sewer system onsite or trucked to an offsite sanitary sewer system.

[6] Water that does not come into contact with waste. Water that does come into contact with waste materials is referred to as "contact water."

Parking Facilities – Onsite parking is provided for vehicles and equipment associated with solid waste operations, including employee vehicles. The onsite overnight transfer trailer parking area is approximately 40,000 square feet in size. It is used to park up to 12 transfer trailers containing residue materials from the MRF building or C&D materials processing operation in situations where these facilities are operated after the WRSL has ceased accepting waste for the day. Any stored residual materials are transported by semi-trucks the following day to the WRSL for disposal. This area may also be used to store other operational vehicles and equipment.

Lighting – Pole-mounted lights illuminate internal roads, driveways, parking areas, and outdoor areas across the site. Lighting inside each building or structure (for example, covered receiving area for C&D) is designed to industry standards for an industrial facility.

Site Security – A 6-foot-high chain-link fence lies between the public right-of-way and the waste receiving and processing areas. The fence has locking gates at all traffic access points: the Athens Avenue entrance; the internal road to the WRSL; and the employee parking lot adjacent to the office. The southern compost area is topographically constrained by a vegetative barrier and posted with signs declaring no unauthorized access.

Water Supply – The Placer County Water Agency supplies potable water and fire suppression water to the site. Water for washing and drinking is available in the administration building breakroom and all restrooms. The water system provides water to emergency eyewash and shower stations located throughout the site.

An onsite production well located adjacent to the facility entrance provides nonpotable water for composting operations, landscape irrigation, and dust control. This production well was decommissioned in June 2021. Nonpotable water from the compost leachate ponds can be reused in the composting process. Municipal reclaimed water may also be periodically used in the composting process and for landscape irrigation and dust control in lieu of other onsite nonpotable water supplies.

Waste Recovery Operations Nuisance Control Measures.

The following measures have been established at the site to eliminate or minimize nuisances associated with Waste Recovery operations.

Dust Control – The major sources of dust occur during the unloading and processing of MSW loads in the receiving area of the MRF and during receiving and processing of green waste, wood waste, and C&D materials. The following measures are implemented to control dust at the site:

- Dust generated from material being unloaded or from loading the in-feed conveyors is substantially contained within the receiving area.
- Misters are used to minimize dust along the sorting lines and in the receiving area.
- Dust generated from processing wood waste, green waste, and C&D materials is controlled with water spray.
- Weekly sweeping of all paved areas is conducted by the facility operator.
- Dust from the composting operation is minimized by maintaining appropriate moisture content of the compost.
- Green and wood waste grinding and compost windrow turning operations are minimized during windy conditions.

Litter Control and Illegally Dumped Waste – The site's perimeter fence contains most windblown litter within the property. Litter is routinely collected from all areas within the site, including drainage ditches. The Waste Recovery facility operator also performs regular litter collection from streets adjacent to the site generally daily within 1 mile and weekly up to 2 miles from the facility entrance.

The Waste Recovery facility operator is responsible for the daily patrol and cleanup of illegally dumped waste and litter on the following sections of roadway:

- Athens Avenue: Fiddyment to Industrial
- Industrial Boulevard: 12 Bridges to 1 mile south of Athens
- Fiddyment Road: 1 mile north of Athens to 2 miles south of Athens
- Foothills Boulevard North: Athens to Sunset Boulevard West

The Waste Recovery facility operator is also responsible for the weekly patrol and cleanup of illegally dumped waste on the following sections of roadway:

- Fiddyment Road: 2 miles south of Athens Avenue to Blue Oaks Boulevard
- East Catlett Road: Fiddyment Road to 1 mile west on East Catlett Road
- Sunset Boulevard West: Fiddyment Road to 1 mile west on Sunset Boulevard West and Highway 65 to North Foothills Boulevard
- Industrial Boulevard: 1 mile south of Athens Avenue to Sunset Boulevard West

Nuisance Control – The facility was designed and is operated to preclude a public nuisance problem. Measures to minimize odors and the attraction and propagation of flies, rodents, and other vectors include the following:

- MSW and C&D is required to be processed within 48 hours of receipt, and residue (nonrecyclables) generated or segregated as part of this processing is transported to the WRSL for disposal.
- An overnight storage area is available for transfer trailers containing MSW or C&D residue generated after the WRSL has ceased accepting waste for the day. The openings in the trailers are covered to minimize odors and vector attraction and breeding. Residue stored overnight is hauled the following day to the WRSL for disposal.
- All wastewater from the processing operation (wash down) is disposed in the sanitary sewer system for treatment at the City of Roseville's wastewater treatment plant.
- The MRF tipping floor is scraped daily with a rubber plate attached to all loader buckets.
- A designated crew removes wastes on a daily basis that have accumulated around and under the MRF and C&D processing equipment and sorting lines as a result of processing operations.

Odor Monitoring and Investigations – As discussed previously for the WPWMA's MRF building operation and organics management operation, the WPWMA implements an OIMP for the organics management operation and additional BMPs for the MRF building operation and organics management operation. In addition to the BMPs identified for these odor-producing activities, the WPWMA also implements a sitewide continuous odor-monitoring and dispersion-modeling system and meteorological station. The odor-monitoring and dispersion-modeling system provides objective, quantifiable, visual representations of the probable offsite odor concentrations over time associated with WPWMA operations.

As part of the odor-monitoring system, the WPWMA has the ability to conduct predictive odor risk modeling and produce a daily odor risk forecast that facility operators and contractors can use to plan operations and minimize the potential for offsite odors. The WPWMA also operates an online odor

notification system that allows individuals who experience an odor to report it directly to the WPWMA. The odor notification system generates a file summarizing pertinent information that is emailed directly to WPWMA and PCAPCD personnel. Receipt of an odor notification by WPWMA staff results in a field investigation in the reported area for as many odor notifications as possible. Investigations are typically performed when odors are reported during office business hours and within 2 hours of being experienced.

Waste Recovery Operations Load Checking.

The load-checking program is designed to prevent the inadvertent acceptance and processing of hazardous and prohibited wastes delivered in the mixed-waste stream. The load-checking program consists of four elements:

Training – Training for personnel includes the effects of hazardous substances on human health and the environment, identification of prohibited materials, and emergency notification and response procedures.

Load Checking – The surveillance load-checking program is conducted to varying degrees by the scale house attendant, tipping floor spotters, tipping floor loader operators, and sorters on the picking lines. A spotter or a loader operator checks the loads discharged on the MRF and C&D receiving floor either during the unloading process or immediately thereafter. The primary responsibility of the sorters is to remove recyclable materials from the sort lines. However, they also have the opportunity to identify HHW or other prohibited materials in the waste stream and segregate them for appropriate recycling or disposal. In addition to these surveillance activities, facility operator staff conducts one random load inspection per week.

Waste Management – If a prohibited material (for example, explosives, medical waste, asbestos, certain gas cylinders) is observed at the scale house or on the MRF or C&D tipping floor, the scale house attendant or spotter will inform the customer that it is their responsibility to properly manage and dispose of the waste. If a prohibited waste is observed on the tipping floor after the customer has left the site and the generator (hauler) is known, the Waste Recovery facility operator staff will label the waste to identify it as belonging to the generator and will move it to the HHW facility for temporary storage. Waste Recovery facility staff will contact the generator and inform them they must remove the waste from the facility and properly manage and dispose of it or pay for the WPWMA to do so. If the generator refuses to take responsibility for the waste, then Placer County Environmental Health Services will be notified. If the generator is not known, the employee will move the waste to the HHW facility for ultimate offsite recycling or disposal. If the prohibited waste is observed on the sorting line, qualified personnel will collect the material and move it to the HHW facility for offsite reuse or disposal.

Record Keeping – Load-checking and waste-inspection forms are maintained onsite for 5 years. Employee training records are maintained at the facility for at least 4 years beyond termination of the employee's employment.

Waste Recovery Operations – Traffic

As indicated previously, SWFP No. 031-AA-0001 applies to all Waste Recovery operations. This permit allows for the receipt of materials 7 days per week and includes a vehicle permit limit of 1,014 vehicles per day.

In 2018, the peak weekday vehicle count associated with Waste Recovery operations occurred on Wednesday, May 30, 2018, and resulted in 918 vehicles. The peak weekend vehicle count occurred on Saturday, May 26, 2018, and resulted in 1,196 vehicles.

The average number of vehicles associated with Waste Recovery operations in 2018 was 694 vehicles per day. In 2018, the majority of the vehicle trips (75 percent) associated with Waste Recovery operations were made by cars and light-duty (pickup) trucks. Larger trucks represented 4 percent of the total vehicle trips, while 19 percent were associated with medium-sized dump or delivery trucks, and 2 percent of the vehicle trips were associated with larger dump trucks or semi-trailers.

1.6.3 Waste Disposal Operation

Waste Disposal operation at the WPWMA facility consists of the operation of the WRSL. In addition to describing the location, materials, and waste amounts, the following discussion also describes key components of the Waste Disposal operation, including landfill access, landfill module development phasing, landfill Waste Disposal operations, remediation and monitoring of existing groundwater contamination, environmental monitoring and control systems, nuisance control measures, traffic levels, and the landfill closure plan.

Location

The WRSL is located on the WPWMA's center property (Figure 1-3). The permitted disposal footprint covers approximately 231 acres of the 314-acre center property, while landfilling has occurred on approximately 158 acres of the property. The remaining 73 acres permitted for landfilling have not yet been developed as landfill modules.

Landfill Access

Public access to the WRSL is provided through the site entrance gate on Athens Avenue. Two additional access points to the WRSL are located along Fiddyment Road to the west, although the site roadways in this area are not paved, these gated access points are locked, and the access points are not intended for public or customer use. The WRSL perimeter is fenced with 4-strand barbed wire or hog wire on the western, southern, and eastern sides. The northern side (Athens Avenue) includes a 6-foot-high chain-link fence. After passing through one of the two scale house complexes, vehicles accessing the WRSL continue southbound along a haul road that extends through the center of the property to the west of Modules 1, 2, 10, 11, 12, 13, and 14.

Material – Source, Type, and Amount

The WRSL is operated as a Class II and Class III facility. Class III facilities are those that accept nonhazardous MSW. The definition of nonhazardous solid waste from 27 CCR Section 20220 is as follows:

> Nonhazardous solid waste includes all putrescible and nonputrescible solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances (except e-wastes), manure, vegetable or animal solid and semi-solid wastes, and other discarded waste (whether of solid and semi-solid consistency); provided such wastes do not contain wastes which must be managed as hazardous wastes, or wastes which contain soluble pollutants in concentrations which exceed applicable water quality objectives or could cause degradation of wastes of the state (i.e., designated waste).

A Class II facility can accept all of the nonhazardous solid waste allowed for a Class III facility plus "designated" wastes, using the criteria set forth in CCR Title 27 and Waste Discharge Requirements R5-2007-0047. Waste accepted at a Class II facility includes any industrial solid waste that cannot be

described as hazardous. These waste types are described in further detail under the discussion of accepted waste types.

Waste Source.

Of the tonnage that was delivered to the WRSL for disposal in 2018, the majority comprised residual material from the MRF building, organics management operation, C&D materials processing operation, and public tipping area, and the remainder was direct haul to the WRSL.

Waste Types.

The following describes the waste types that are accepted and those that are not accepted at the WRSL:

Nonhazardous Solid Waste – Most wastes currently accepted at the WRSL can be classified as nonhazardous solid wastes, and include mixed municipal wastes, C&D debris, and residual materials resulting from Waste Recovery processing operations.

High Liquid Content Waste – Nonhazardous sludges are accepted at the WRSL. A majority of the sludges received and disposed of at the WRSL are generated by publicly owned treatment works in the Cities of Auburn, Lincoln, Roseville, and in Placer County.

Sludge accepted at the Class III modules that is shown to have at least 20 percent solids (primary sludge) or 15 percent solids (secondary sludge) is mixed with refuse at a minimum solids-to-liquids ratio of 5:1 by weight and is not permitted to exceed the initial moisture-holding capacity of the solid waste. These restrictions do not apply to the disposal of dewatered sludge in the Class II portion of the WRSL.

Dewatered (dried) sewage or water treatment sludge may be used as ADC consistent with CCR Title 27 §20690(a)(8) requirements. Dried water treatment sludge is currently used as ADC.

Designated Wastes – Designated wastes are accepted at the WRSL for disposal in the site's Class II modules. A Class II landfill can accept all nonhazardous solid waste for disposal, including designated wastes. Acceptable designated wastes include industrial sludges, dredge debris, treated wood waste, commercial and industrial waste, and glass cullet (that is, crushed glass ready for remelt).

Dead Animals – Dead animals are not accepted at the WRSL. However, small dead animals that are occasionally disposed in the residential waste remain commingled with the waste when being buried.

Treated Medical Waste – The WRSL accepts autoclaved medical waste. In accordance with the Medical Waste Management Act, autoclaved medical waste is deemed to be solid waste. When autoclaved medical waste is received, the operator digs a hole near the working face and buries the autoclaved medical waste in the hole.

Other Wastes Requiring Special Handling – Other nonhazardous wastes that may be accepted at the WRSL include the following:

- ***Treated Wood Waste*** – Treated wood waste is accepted at the WRSL and disposed in Class II modules only. Treated wood waste is wood treated with a chemical preservative, not including creosote, and that does not require a certification letter from the generator prior to disposal.
- ***Cannery Waste*** – Presently, cannery waste is not generated within Placer County, and out-of-county waste is not accepted at the WRSL. If, in the future, cannery waste is generated in Placer County, the

generator will be required to certify that the cannery waste has a solids content of 50 percent or greater before it could be accepted for disposal at the site.

- ***Tires*** – Tires are accepted at the Waste Recovery facilities but are separated from the waste stream for transport offsite for recycling. If a tire is found at the WRSL, it is removed and delivered to the Waste Recovery facilities.
- ***Soil*** – Soils and other inert materials that, using best professional judgment, are free of materials that could be released in concentrations exceeding applicable water quality objectives can be stockpiled at the WRSL for on or offsite beneficial reuse. The WRSL may also accept soils, inert materials, and other materials that may be suspected to contain nonhazardous levels of contaminants upon characterization of the materials through lab analysis; however, these materials would be disposed and not stockpiled for reuse. Hydrocarbon contaminated soil is not accepted at the WRSL. Inert materials received at the WRSL under SWFP No. 031-AA-0210 are processed at the inerts area of the C&D materials processing operation as part of Waste Recovery operations described in Section 1.6.2.

Waste Amounts.

As depicted on Figure 1-4, material associated with the existing SWFP for the WRSL includes direct haul to the WRSL; inert materials processed as part of Waste Recovery at the C&D materials processing area; and residue from the MRF building, organics management operation, C&D materials processing operation, and public waste drop-off tipping area that is disposed in the WRSL. Of the material disposed in the WRSL, approximately 28 percent is received directly at the WRSL, whereas approximately 62 percent is transported to the WRSL from the MRF building. The remaining 10 percent of waste disposed is transported to the WRSL from the organics management operation, C&D materials processing operation, and public waste tipping area.

The 2018 WRSL Waste Disposal metrics are shown in Table 1-5 and are based on WPWMA scale house records.

Table 1-5. 2018 Baseline Western Regional Sanitary Landfill Waste Disposal Metrics

Baseline Criterion	Tonnage Quantity
Permitted maximum daily disposal rate	1,900
Average weekday disposal rate	1,134
Total (annual) waste disposed	294,923

Source: WPWMA 2020

Based on its remaining capacity and projected Waste Disposal trends, the WRSL is estimated to reach its currently permitted landfill capacity in 2058 (Golder Associates, Inc. 2017), although reaching the permitted landfill boundary would require demolition of some of the existing Waste Recovery facilities. This site life projection is strongly affected by growth in the waste stream as well as the strength of recyclable markets, regulatory limitations on materials that can be legally landfilled, and soil usage trends. For example, if waste stream growth consistently exceeds the assumed growth rates, and global recycling markets continue to decline, more material will require disposal, thereby shortening the WRSL's site life.

Elevation

The WRSL's maximum permitted elevation is 295 feet above mean sea level (AMSL), which is approximately 175 feet above the surrounding ground surface. Pre-landfill development elevations ranged from

approximately 106 feet AMSL in the southwestern corner to approximately 134 AMSL in the center of the site. The current maximum elevation of the WRSL is approximately 196 feet AMSL. The maximum depth of WRSL excavation to accommodate the development of Waste Disposal modules is 57 feet AMSL.

Waste Disposal Operation – Traffic

As indicated previously, SWFP No. 031-AA-0210 applies to Waste Disposal operations. SWFP No. 031-AA-0210 allows for the receipt of materials 7 days per week and includes a vehicle permit limit of 624 vehicles per day.

In 2018, the peak weekday vehicle count associated with Waste Disposal operations occurred on Friday, August 31, 2018, and resulted in 135 vehicles. While permitted to operate 7 days per week, the WRSL typically operates 5 days per week, Monday through Friday, and on weekends as needed. In 2018, the WRSL operated 5 weekend days. The average number of vehicles associated with Waste Disposal operations in 2018 was 61 vehicles per weekday.

Landfill Module Development Phasing

The site was originally permitted for Waste Disposal activities in 1979. In 1992, the WRSL was divided into 16 modules for refuse fill placement, as shown on Figure 1-6. Modules 3 and 4 were located directly west of Modules 1 and 2 but were never used for landfilling and were removed from the WRSL site plan to accommodate the Waste Recovery facilities. The WRSL currently has 14 remaining modules that are numbered 1, 2, and 5 through 16. The site development to date has extended along the eastern half and southwestern corner of the WRSL. Modules are developed by excavating native, previously undisturbed soils out of an area of the permitted landfill and then installing a liner system prior to disposing waste material into the module.

The liner systems are designed so that waste materials, including liquids, remain within the modules and do not come into contact with the underlying soil. Subtitle D of the Resource Conservation and Recovery Act (Part 258 of the *Code of Federal Regulations*) regulates the design, operation, and monitoring of MSW landfills, including the design criteria for liner systems that are required to be installed in landfill modules. However, several modules within the existing WRSL were constructed prior to the adoption of Subtitle D. For Modules 1 and 2, which were the first two modules constructed on the site, the module bases consist solely of compacted native soils. For Modules 10 and 11, which were constructed following Modules 1 and 2, the module bases consist of compacted clay with only the southwestern end of Module 11 incorporating a geomembrane liner above the compacted clay.

During excavation of a module, the module floor is sloped to drain to a low point (sump) located along the perimeter of the landfill. In addition, Subtitle D-compliant modules include a leachate collection and removal system (LCRS) installed in the base of the modules on top of the liner system that is connected to, and integrated with, a membrane-lined sump (in such cases, the sump is an integral part of the LCRS). The LCRS collects liquids at the base of the modules that have been exposed to waste materials and provides a highly permeable pathway for leachate to flow to the module sump. A riser pipe is installed during liner construction, extending from the base of the sump to the top surface of the excavation (that is, native ground surface). A pump is installed in the riser pipe and allows for leachate collected by the LCRS to be removed and discharged to the sanitary sewer.

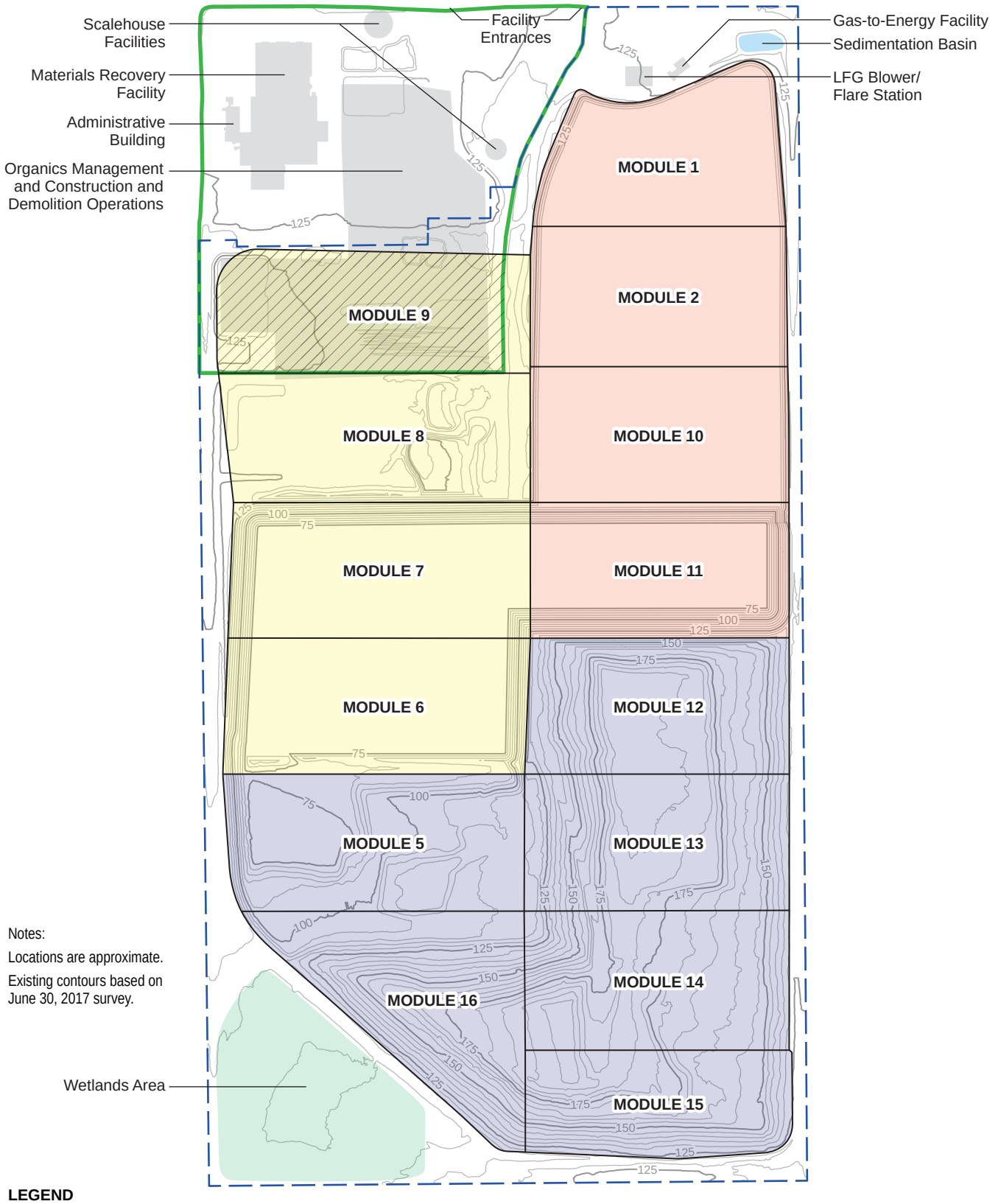

Figure 1-6. Existing WRSL Development Plan
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Renewable Placer: Waste Action Plan
Placer County, California

Jacobs

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The following describes the existing liner systems within the WRSL's developed modules:

- Modules 1 and 2 were constructed as Waste Disposal units lined with compacted onsite soils and were closed in 1998 with a final cover system consisting of various soil components. Modules 1 and 2 share a leachate sump (located in Module 2) and a side slope riser pipe to access the sump (Golder Associates, Inc. 2018) that was damaged and replaced in 2019 with a vertical LCRS riser pipe.
- Modules 10 and 11 were constructed with a compacted clay liner. The southwestern end of Module 11 incorporated a geomembrane liner above the compacted clay liner. Modules 10 and 11 were closed with a final cover applied in the summer of 1999. Like Module 2, Module 10 has a leachate sump and a replacement vertical riser pipe to access the sump. The western half of Module 10 and all of Module 11 includes an LCRS with a leachate sump (Golder Associates, Inc. 2018).
- Module 12 was constructed with a Subtitle D composite liner consisting of 6 inches of compacted soil overlain by a geomembrane. Module 12 includes an LCRS.
- Module 13 incorporated a Subtitle D composite liner system consisting of 2 feet of compacted clay with a hydraulic conductivity of 1×10^{-7} centimeters per second (cm/sec) or less overlain by a 60-millimeter (mil)-thick high-density polyethylene (HDPE) geomembrane. Module 13 includes an LCRS.
- Module 14 was constructed with a Subtitle D single-composite base liner system consisting of a 1-foot-thick compacted clay layer with a hydraulic conductivity of 1×10^{-7} cm/sec or less overlain by a geosynthetic clay liner (GCL) that is overlain by a 60-mil-thick HDPE geomembrane. All of Module 14 includes an LCRS. Because Module 14 is a Class II unit, a separation liner consisting of a 60-mil-thick HDPE geomembrane was placed on the south-facing Module 13 slope to maintain a physical separation between Class II and Class III wastes and leachate.
- Module 15 was constructed with a Subtitle D double-composite base liner system consisting of a prepared subgrade, a secondary GCL with a hydraulic conductivity of 5×10^{-9} cm/sec or less, a secondary double-sided textured 60-mil HDPE geomembrane, a secondary geocomposite leachate collection layer, a primary GCL with a hydraulic conductivity of 5×10^{-9} cm/sec or less, a primary double-side textured 60-mil HDPE geomembrane, a 12-inch gravel layer with leachate collection pipes, a geotextile filter, and a 12-inch soil cover layer. The LCRS sump installed in Module 15 consists of a primary sump connected to the primary HDPE geomembrane, a leak detection sump connected to the secondary HDPE membrane and an underlying pan lysimeter.
- Module 16 was constructed with a Subtitle D double-composite base liner system consisting of a prepared subgrade, a GCL with a hydraulic conductivity of 5×10^{-9} cm/sec or less a secondary double-sided textured 60-mil HDPE geomembrane, a secondary geocomposite leachate collection layer, a primary GCL with a hydraulic conductivity of 5×10^{-9} cm/sec or less, a primary single-side textured 60-mil HDPE geomembrane, a 9-inch gravel layer with leachate collection pipes, a geotextile filter, and a 15-inch soil cover layer. Unlike the other modules that are sloped to drain to a single sump, Module 16 was graded to include a high point along the middle of the module with each side draining to a separate sump—one to the southeastern edge of the module, the other to the western edge of the module. The LCRS sumps installed in Module 16 consist of a primary sump connected to the primary HDPE geomembrane, a leak detection sump connected to the secondary HDPE membrane, and an underlying pan lysimeter.
- Module 5 was constructed by using the Water Board-approved Module 16[7] design criteria with the exception of using a smaller-diameter, more-rounded drainage layer and sump gravel and installing

[7] The Water Board-approved design criteria for Module 5 are the same criteria that were approved for Module 16 by the Water Board on January 18, 2007, as referenced in bullet 45 of the site's Waste Discharge Requirements Order No. R5-2007-0047 (page 187 of the JTD pdf). This consists of a double composite base liner system and a single composite side-slope system, as discussed in bullet 46 of the WDRs.

regularly spaced gravel sections of the operations layer soil to promote leachate drainage from the waste to the blanket LCRS, facilitating LCRS operation.

- Modules 6, 7, 8, and 9 have not yet been constructed.

Landfill Waste Disposal Operations

Load-Checking Program.

The Waste Disposal load-checking program is conducted to varying degrees by the scale house attendant, spotters, and landfill equipment operators. Either a spotter or equipment operator checks the loads discharged at the WRSL during the unloading process or immediately thereafter. In addition to these surveillance activities, landfill operator staff conduct a minimum of two random load inspection per week.

Waste Disposal and Daily Cover Placement.

When Waste Disposal vehicles arrive at the WRSL's working face, they are directed according to the vehicle type. The WRSL's working face is the area where waste delivered to the site for disposal is unloaded and compacted. Public vehicles are directed to unload near the active working face, away from unloading transfer trucks. Traffic cones and a spotter are used to direct traffic to the unloading area.

After vehicles empty their loads, the refuse is spread and compacted in 2-foot-thick layers on a 4:1 (horizontal to vertical) to 3:1 (maximum) sloped working face, consistent with optimum slope angles for landfill compaction equipment operation. The working face is typically 70 to 100 feet wide. The refuse fill is placed in 10-foot lifts. During wet weather, wastes are unloaded on the wet-weather tipping pad near the working face, which is typically constructed of broken concrete and other bulky inert materials that are largely later removed and reused for the next wet-weather tipping pad.

Once material is placed at the working face, the compaction equipment makes several passes over each 2-foot layer so that all wastes are compacted. Large or bulky wastes are separated to prevent bridging of the surrounding refuse and are thoroughly crushed by compacting equipment. Concrete and other large, inert debris are directed to a separate area of the site where they are stored and periodically processed for subsequent reuse. This inert material may be used for building wet-weather access roads and tipping pads.

Temporary berms are constructed around the working face to divert surface water runoff around the active working face to minimize contact water. The working face is aligned as necessary to avoid trapping runoff. Rainfall that does contact the waste is collected and trucked or pumped to the sanitary sewer.

Each module is filled according to the module-specific design before advancing to the next module as depicted in a master fill plan, the most current version of which was prepared by SCS in 2003. Drainage facilities, roads, and other site improvements are constructed and extended as the fill progresses.

Cover material is placed over the refuse at the end of each day. The top deck and side slopes of the daily fill area are covered with a minimum of 6 inches of compacted soil or an approved ADC material such as tarps, dried bio-solids from water (not wastewater) treatment plants, or MRF fines from MSW or C&D processing operations.

Processed MRF or C&D fines, mechanically screened to a 1/2-inch minus size, are used as ADC. Fines are placed in a minimum 6-inch-thick lift on the side slopes of the daily fill area that will receive waste the following day. MRF fines are not exposed for more than 24 hours after placement as cover (i.e., any areas of the landfill that will not be filled within 24 hours will be covered with soil). The landfill operator may reject any load of MRF fines because of excessive amounts of food waste or odors. Rejected loads are

buried with the day's waste. The WPWMA uses up to 283 tons of MRF or C&D fines as ADC per day and up to 1,588 tons per week. When the landfill receives materials for use as ADC, it is placed that day (as needed); otherwise it is disposed.

At the end of each operating day, or more frequently on high-wind days, the landfill contract operator's foreman brings laborers in from other duties (as appropriate) to patrol the working area for litter. Litter is removed from the daily cover stockpile, areas between the working face and the litter fences, and vehicle unloading area.

Areas around the vehicle unloading area and any push trails to the working face also are covered with daily cover, and any litter in those areas is picked up regularly. One of the landfill workers is responsible for remaining onsite until the fill area is properly covered for the evening.

Intermediate Cover Placement.

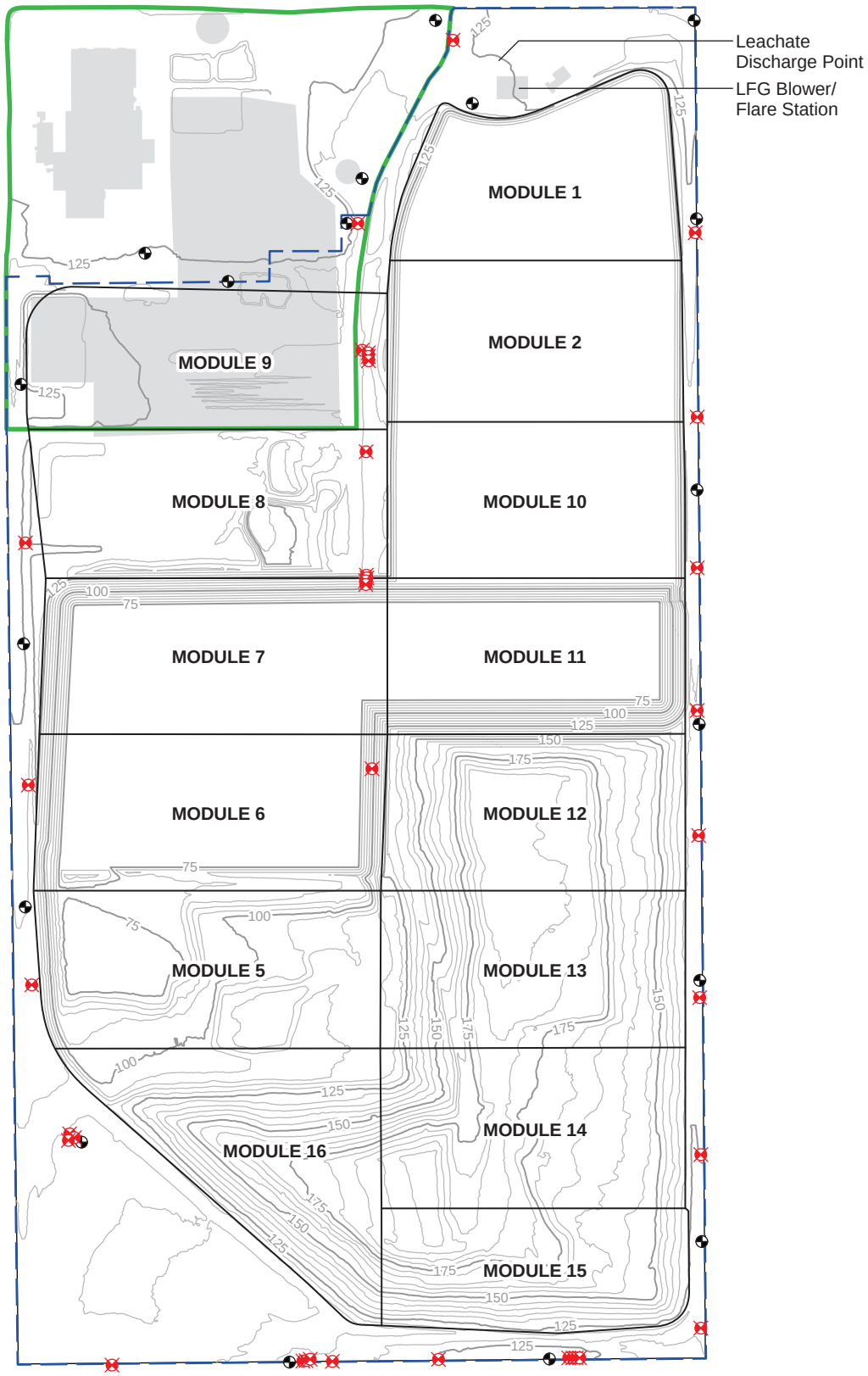
Intermediate cover is applied to areas of the WRSL where filling is not anticipated within 180 days. Intermediate cover consists of 12 inches of compacted soil or an approved engineered alternative.

Soil materials for cover construction come from onsite excavation of landfill expansion modules. The base excavation for all the modules is estimated to produce sufficient soil for daily, intermediate, and final covers.

Existing Groundwater Contamination

Because the four initial modules were constructed prior to establishment of the Subtitle D-compliant liner system requirements, they have greater potential to release leachate and landfill gas (LFG) into the underlying soil and groundwater than the Subtitle D-compliant liners. The contamination of groundwater can be detected by monitoring the quality of the groundwater within wells installed around the perimeter of the WRSL. In 1995, the degradation of site groundwater quality was first observed in monitoring well MW-9, which is located immediately west of Module 2 (the location of groundwater quality monitoring wells is shown on Figure 1-7). Modules 1 and 2 were subsequently closed and received final cover in 1998. Groundwater within well MW-9 was determined to contain several volatile organic compounds (VOCs). A comparison of VOCs detected in LFG samples from LFG probe GM-14 at the site with the VOCs detected in the groundwater in well MW-9 indicated that LFG may be responsible for the VOCs detected in the well MW-9 groundwater (Lawrence & Associates 1995). In addition, analyses of general water quality parameters in well MW-9 indicated that there may be a leachate influence on the quality of groundwater. Lawrence & Associates (1995) showed that the effects of leachate on groundwater were limited to a small area around well MW-9. A Corrective Action Program (CAP) and Addendum were submitted to the Regional Water Quality Control Board (RWQCB) on May 20, 1997, and September 23, 1997, respectively. The RWQCB approved the CAP and its addendum in late 1997, which required the installation of final cover to limit leachate production and an LFG management system on closed modules. To monitor the effectiveness of these CAP measures, corrective action wells are sampled on a quarterly basis. Data from the CAP wells are evaluated for inorganic and organic constituent trends quarterly. (Golder Associates, Inc. 2018).

Fluctuations in concentrations of VOCs, calcium, magnesium, and bicarbonate alkalinity, all of which can be affected by LFG, have been observed in the samples from the CAP wells. The changes in concentrations of these parameters suggest that the influence of LFG on groundwater quality has varied over time (Golder Associates, Inc. 2018). Quarterly water quality monitoring results suggest that, based on the estimated groundwater velocity of 10.1 feet per year (SCS 2020) and general flow direction from northeast to southwest, it could take 150 years or more before the contaminated groundwater reaches the WPWMA's southern property line from where it appears to have originated.



Notes:

Locations are approximate.

Existing contours based on June 30, 2017 survey.

LEGEND

- Perimeter LFG Monitoring Well
- Perimeter Groundwater Monitoring Well
- Facility
- 75 — Existing Contour (5-ft Interval)
- Landfill Module Boundary
- Landfill Permit Boundary
- MRF Permit Boundary

North

0 500 1,000

Approximate scale in feet

Figure 1-7. Existing WRSL Environmental Monitoring System

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Jacobs

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Landfill Environmental Monitoring and Control Systems

The WRSL incorporates various environmental monitoring and control systems designed to eliminate, minimize or identify potential environmental impacts and nuisances. These systems are intended to promote safe operations at the WRSL and the protection of public health and the environment. The following environmental monitoring and control systems are integrated into the current landfill operations and will continue to be part of the operations as long as dictated by applicable state and federal regulations:

- Double-Composite Landfill Liner System
- Leachate Management System
- Surface Water Management System
- LFG Management System
- LFG perimeter probe monitoring network
- Groundwater monitoring well network

Double-Composite Landfill Liner System.

The descriptions of the landfill liner systems for the existing modules are presented in Landfill Module Development Phasing, Section 1.6.3.6. As described in this section, Modules 5, 15, and 16 were constructed with a double-composite liner system, and all future Class II modules will be constructed with similar liner systems unless there is a change in the applicable state and federal regulations, such as if a superior technology or practice is identified. The double-composite liner system is described as follows:

Landfill Base Liner System – The containment system for base areas of the WRSL is composed of the following base liner components, from bottom to top, which are represented on Figure 1-8:

Base Liner System:

- Prepared subgrade soils
- Secondary GCL with maximum hydraulic conductivity of 5×10^{-9} cm/sec
- Secondary 60-mil-thick, double-sided, textured HDPE geomembrane
- Geonet or Geotextile Filter Fabric leak detection layer
- Primary GCL with hydraulic conductivity of 5×10^{-9} cm/sec or less
- Primary 60-mil-thick, single-sided, textured HDPE geomembrane

2-foot Operations Layer:

- 9-inch-thick LCRS gravel layer
- Geotextile filter fabric
- 15-inch thick operations layer

Landfill Side Slope Liner – The containment system for subgrade side slope areas of the WRSL is composed of the following side slope liner components, from bottom to top:

Side Slope Liner System:

- Prepared subgrade soils
- Primary GCL with maximum hydraulic conductivity of 5×10^{-9} cm/sec
- Primary 60-mil-thick, single-sided textured HDPE geomembrane
- 2-foot Operations Layer:
- 24-inch-thick soil layer with leachate collection pipes

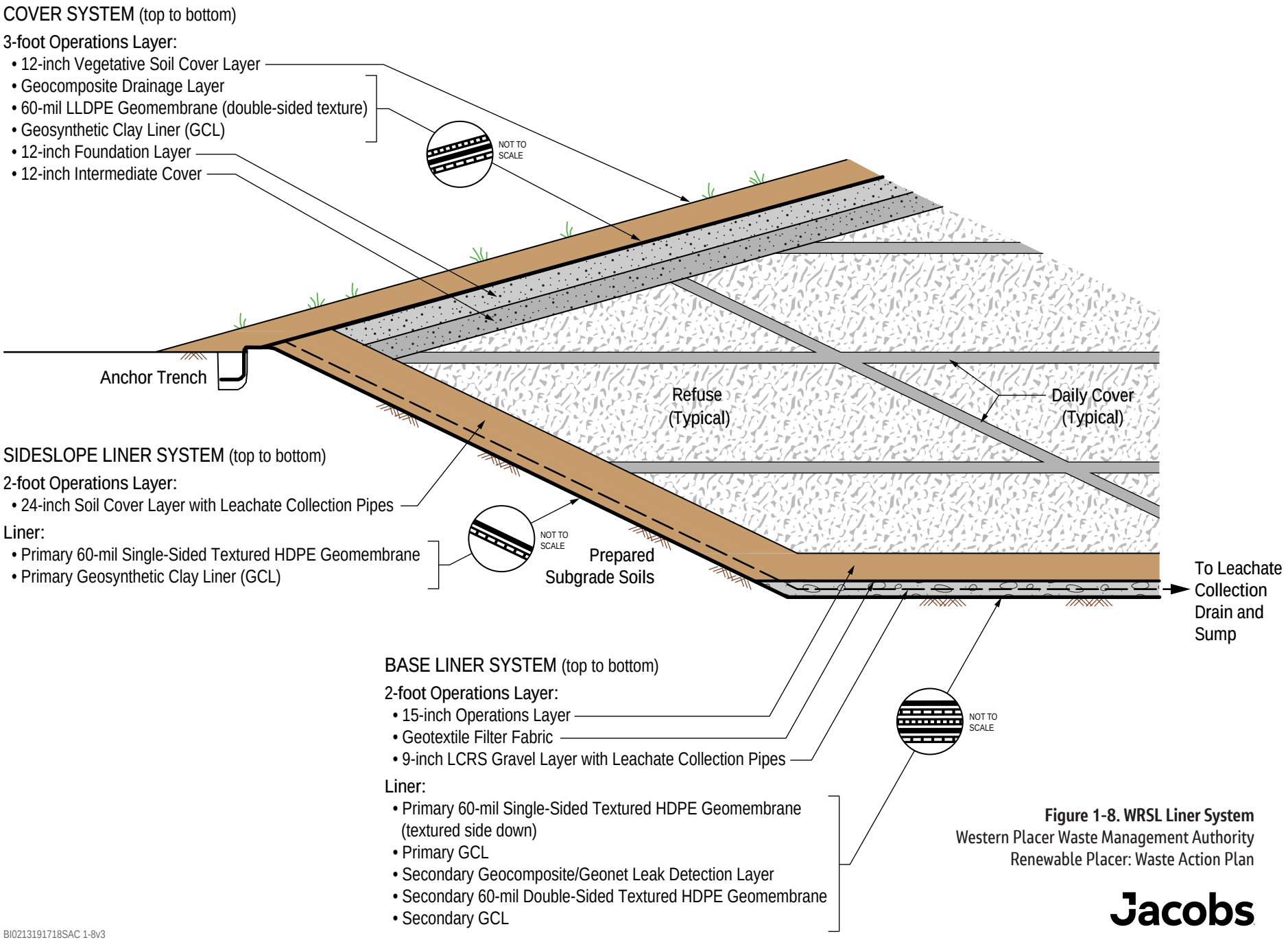


Figure 1-8. WRSL Liner System
Western Placer Waste Management Authority
Renewable Placer: Waste Action Plan

Jacobs

Landfill Cover System – The cover system for the WRSL is composed of the following components, from bottom to top:

- 12-inch intermediate cover
- 12-inch foundation layer
- GCL
- 60-mil, single-sided, textured HDPE geomembrane (textured side down)
- Geocomposite drainage layer
- 12-inch vegetative soil cover layer

Leachate Management System.

The LCRS is designed to provide efficient collection and removal of landfill leachate and meet the requirements of CCR Title 27 and Subtitle D. The LCRS design at the WRSL has evolved over time and differs between the different modules. However, the overall system generally consists of the installation of a gravel layer of the base liner system that allows landfill leachate to flow to a low area, or sump. Riser pipes extend down to the sump, and leachate can be pumped through these riser pipes to remove the leachate from the sump and convey it to the sanitary sewer for disposal. All of the modules that include a plastic liner system also include perforated pipes to more quickly convey collected leachate to the sump for extraction.

Contact water at the active face is minimized by reducing surface water run-on with diversion berms around the active face. Any observed ponding of contact water around the active face is trucked or pumped to the sanitary sewer. The public is kept away from contact water at the active face by berms and other types of barricades. Contact water and leachate are disposed to the sanitary sewer.

Surface Water Management System.

The WRSL's surface water management system consists of drainage ditches, berms, culverts and down-drains. These controls are sized to accommodate a 1,000-year, 24-hour storm event as required by Title 27 CCR §20365. A perimeter channel conveys water around the developed landfill. One detention area is located in the northeastern corner of the site, and the other is located in the wetland area in the site's southwestern corner. A third detention basin is located in the MRF area, also includes some MRF drainage, and discharges to the north under Athens Avenue.

The control of stormwater at the WRSL is focused on minimizing contact of water with waste. Stormwater is diverted away from exposed refuse and into the perimeter drainage channels that eventually drain to natural waterways.

Landfill Gas Management System.

The WRSL's active LFG management system consists of vertical and horizontal extraction wells, perimeter migration control extraction wells, pneumatic condensate sump pumps, and a flare station. The location of perimeter LFG monitoring wells is shown on Figure 1-7. The WRSL flare station includes a dual-zoned flare (two flares nested in one flare shell) capable of processing between 100 and 3,000 standard cubic feet per minute (scfm) of LFG and is operated on a continuous basis as the primary emissions control device. The WRSL flare station is sized to be capable of combusting all generated LFG in the event the landfill gas-to-energy facility were unable to operate or to consistently combust the residual LFG if the energy facility is operating.

A landfill gas-to-energy facility owned and operated by Energy 2001 Inc. under a lease agreement with WPWMA is located on the northern side of the site. This facility generates electricity by running LFG through internal combustion engines. The Energy 2001 facility currently diverts up to approximately 1,800 scfm of LFG from the flare station and includes a small flare capable of handling up to 450 scfm of LFG that has rarely been used since December 2017 when the WPWMA installed its dual-zoned flare.

The LFG management system will expand as the landfill expands, including the addition of extraction wells and support structures and facilities.

Landfill Nuisance Control Measures

Control measures related to fire prevention, vectors and birds, litter, odor, dust, and noise, have been established at the WRSL, consistent with CCR Title 27 regulations, to eliminate or minimize nuisances associated with landfill operations. Each are described in the following sections.

Fire Prevention and Control.

Fire protection of landfill equipment and vehicles is provided by portable fire extinguishers located in the equipment and vehicles. The office, maintenance facility, and landfill equipment are equipped with suitable fire extinguishers for extinguishing minor fires and for personnel safety. In addition, fire hydrants are located near the main site entrance along Athens Avenue.

A number of measures are taken to prevent fires and prepare to fight fires that occur. Preventative measures include the following:

- Training onsite personnel to respond properly
- Maintaining as small an active face as possible
- Keeping the water truck full when not in service
- Keeping a soil stockpile near the active face
- Repairing any erosion damage or cracks that develop in intermediate cover layers
- Installing an infill LFG management system
- Maintaining the infill LFG management system to prevent over pulling the field
- Enforcing the No Smoking condition on the WRSL
- Contributing approximately $250,000 annually to Placer County Fire

Examination for burning refuse or “hot loads” is conducted by the scale house staff as the load passes through the scales or public area gatehouse, and then by the spotter and equipment operators at the tipping area and working face. Screening of most wastes is conducted at the Waste Recovery areas of the site, which reduces the potential for hot loads to be delivered to the WRSL.

If smoke is observed before a load is dumped, the hauler or generator is directed to remove the load from the WRSL without dumping it or directed to a safe area of the WRSL to be properly extinguished by the WRSL operator or trained fire fighters. If the load has been placed at the working face, the landfill operator’s personnel assesses the situation and informs management. At this point, the load is either segregated from the other wastes, or emergency personnel are summoned, and the area evaluated. If the hot load is manageable, a dozer is used to remove the material and spread it over soil on an area where no refuse is present; this is only done if the water truck is present. Once the load is spread out, it is watered to extinguish the burning refuse. Once the material is completely cooled, it is disposed away from other refuse and completely encapsulated in soil.

Vector and Bird Control.

Refuse compaction and the application of daily cover are the most effective preventions against the propagation of vectors (e.g., insects, rodents) and birds on a landfill site. Although rodents have not been a problem at the WRSL in the past, site personnel inspect landfill areas routinely for any signs of rodent activity and implement the necessary measures to minimize vector nuisances. Professional pest control services are used as necessary. A bird control program that uses a variety of noise-making and bird-deterrent activities is implemented as needed. In addition, standing water is drained to minimize leachate production and secondarily prevent mosquito-breeding areas from remaining.

Litter Control.

Litter control measures are based on the wind conditions for the day and season. Normally, portable litter control fences are placed in the immediate vicinity of the working face to contain litter. When necessary, a work crew polices the litter fences near the working face, the site itself, access roads, and adjacent properties.

Odor Control.

There are two potential sources of odor from landfill operations: aerobic (with air) decomposition of incoming organic components of the disposed waste, and gases produced by anaerobic (without air) bacterial digestion of buried waste.

Odors associated with aerobic decomposition of waste are controlled by prompt placement of daily and intermediate cover. Sewage sludge is generally odiferous. The odor from this type of waste is reduced by quickly mixing the sludge with other waste and covering it immediately upon receipt. When the WRSL is not in operation (that is, not actively receiving waste materials for burial), all in-place wastes are covered by soil or an approved ADC. This cover serves to reduce the potential for windblown litter, vectors and odors. At the start of daily filling operations, the landfill operator establishes one or more daily active working faces where wastes will be disposed. The daily active working face is the only area(s) at the WRSL where wastes are exposed. On an average day, the size of the active working face is generally limited to less than 1 acre to minimize issues associated with the exposed waste, including the potential for odors. At the conclusion of each operating day, the WRSL operator places a layer of daily cover materials (soil or ADC) over the active working face to completely cover all wastes. BMPs implemented at the WRSL to minimize the potential for offsite odors from aerobic decomposition of waste are identified as follows:

- Discuss at the weekly landfill operations meeting, the planned location of each day's filling operations and when areas of previously buried waste that have been in place for a week or longer will need to be exposed for the purposes of establishing the daily active working face.
- Minimize the size of the working face to that necessary to maintain operator and customer safety. A working face between 1/4 and 1/2 acre is considered the minimum safe size for the tonnages disposed at the site.
- Minimize the open-air exposure time of wastes by placing newer wastes over older wastes throughout the operating day.
- Bury sludges and other highly odiferous loads immediately upon receipt by covering the materials as quickly as possible with less odiferous wastes.
- Use soil or "fines" recovered from the MRF building or C&D materials processing operation as an ADC as follows:
  - A 6-inch minimum layer of compacted, onsite, native soil, or

  - A 6-inch layer of MRF fines covered by a 6-inch layer of onsite, native soil, or
  - A 6-inch layer of MRF fines covered by a 6-inch layer of C&D fines.
  - Restrict use of ADC fines to areas that will receive additional fill within 24 hours. Exposure of ADC fines in excess of 24 hours is prohibited.
  - Daily cover will be compacted to minimize odor transmission. The minimum level of compaction may be achieved via track-walking the materials with a Caterpillar D-6 low ground pressure dozer or equivalent.
- Daily cover soil may be removed at the start of the operational filling day to minimize overall soil disposal rates. MRF fines and dried water (not wastewater) sludge used as ADC will not be removed and will remain in place once applied by the WRSL operator.
- Place and compact a minimum of 12 inches of intermediate soil cover over areas where landfilling operations will not occur for 180 days or more, consistent with the regulatory requirements identified in Title 27, section 20700 of the CCR. The depth of any previously placed soil daily cover will apply toward the intermediate soil depth requirement. The minimum level of compaction may be achieved via track-walking the intermediate cover soils materials with a Caterpillar D-8 dozer or equivalent.

Anaerobic bacterial digestion of buried waste produces LFG. Only the organic fraction of the landfilled waste will decompose and produce LFG. LFG is composed predominately of equal parts methane and carbon dioxide, both odorless gases. LFG also includes trace amounts of VOCs, sulfur-based compounds, and ammonia. It is generally the sulfur-based compounds and ammonia that result in LFG-related odors.

Federal and state law require that landfills with the potential to produce a certain amount of LFG install an LFG management system. WPWMA's current LFG management system includes a series of collection wells that remove the LFG from the waste mass (via an applied vacuum) and convey the LFG in an enclosed piping system to a central location (blower or flare station) where the LFG is either directed to the onsite energy developer to produce electricity or to an enclosed ground flare where it is destroyed through high-temperature combustion. BMPs implemented at the WRSL in order to minimize the potential for offsite odors from LFG are identified as follows:

- Comply with the provisions of 40 CFR Part 60 Subpart WWW and Title 17, CCR Section 95460, et seq.
- Maximize the recovery of LFG from the WRSL while minimizing the potential for subsurface combustion events and oxygen levels in excess of 1 percent by volume in the extracted LFG stream.

Dust Control.

The landfill operator is required to alleviate and prevent dust nuisance. Methods used to prevent dust at the WRSL include treating exposed soil piles to avoid dust generation, watering roadways at least twice per day, and suspending nonessential operations when sustained wind speeds exceed 25 miles per hour. In addition, dust may be controlled by placing daily and intermediate soil cover over the refuse fill in a timely manner, applying water or planting temporary vegetative cover on intermediate soil cover when conditions might cause recurrent problems with fugitive dust and erosion, as well as planting and maintaining vegetative cover on completed fill slopes and the interim cover to be placed on modules when they meet final grades.

Noise Control.

Noise emissions from onsite equipment are controlled by proper maintenance of mufflers. Adequate hearing protection devices are provided to personnel operating or working around equipment. In addition, the WRSL's distance from surrounding sensitive land uses minimizes noise impacts.

Landfill Closure Plan

When the WRSL reaches its peak capacity and can no longer accept waste for disposal, the WRSL closure plan will be implemented (Figure 1-9). The closure plan includes installation of a final landfill cover, establishment of final grades and slope protection measures, and implementation of closure and postclosure management operations. The primary functions of the final cover are as follows:

- Isolate the waste from the environment
- Control odors, vectors, and litter
- Control surface water infiltration in the landfill
- Control erosion and convey runoff to the surface water management system
- Control LFG

Throughout the closure and postclosure maintenance periods, the WRSL's environmental monitoring and control systems will continue to operate in a manner consistent with the site's Waste Discharge Requirements and applicable sections of CCR Title 27. The leachate management system will be operated, inspected, and maintained as long as there appears to be a potential for liquids to collect in the system's sumps.

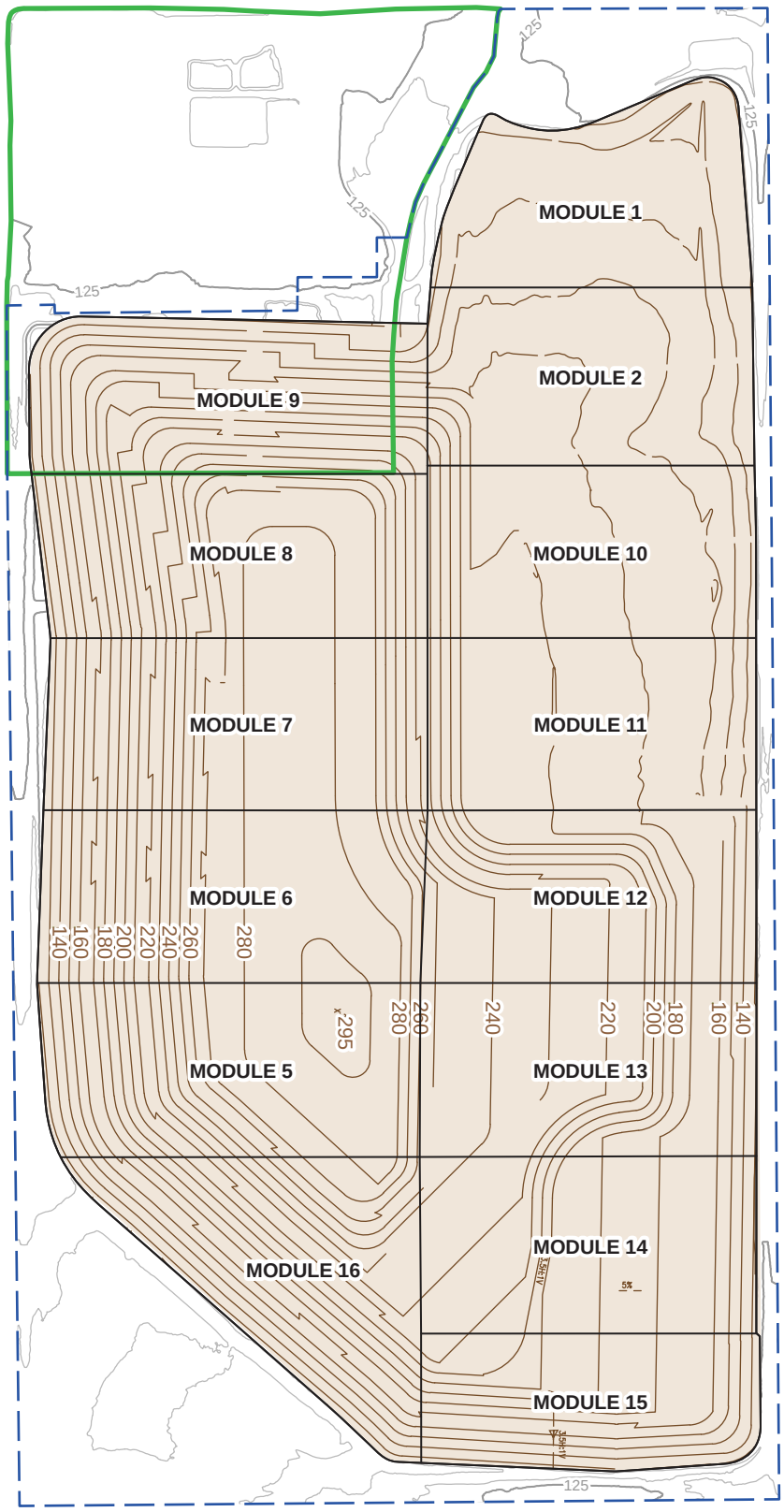
At closure, a majority of the LFG management system will be in place and operational. As part of closure activities, installation of remaining portions of the LFG management system (for example, extraction wells) will be completed, and final components of the LFG management system will be installed. Operational activities will include LFG extraction, transmission, combustion, and conversion to energy as long as significant volumes of LFG are generated as well as operation of the leachate and condensate collection systems and any related reporting.

The groundwater and surface water quality monitoring programs will continue to be implemented throughout the closure and postclosure maintenance periods. Maintenance activities will include drainage channel repairs, pumping of sedimentation basins, removal of silt and debris along drainage channels and in sedimentation basins, repair and replacement of erosion and sediment controls (for example, silt fences, hay bales, riprap), and regrading of the final cover erosion control layer. Groundwater sampling, analysis and reporting would continue to confirm that subterranean pollution control systems are working as expected.

1.7 Public Review Process

1.7.1 Notice of Preparation and Public Scoping Meeting

The first step of the EIR preparation was the distribution of the NOP. The NOP was distributed to inform agencies and the public that an EIR was being prepared for the project and to solicit information on the scope of issues to be evaluated in the EIR. On March 15, 2019, the NOP was submitted to the California State Clearinghouse and distributed to interested and affected federal, state, and local agencies; interested parties; and organizations. It was also made available for public review at the WPWMA's office and was posted on the Renewable Placer: Waste Action Plan website (www.RenewablePlacer.com).



Notes:

Locations are approximate.

Existing contours based on June 30, 2017 survey.

LEGEND

- Landfill Area
- 75 Current Grading Plan Contour (10-ft Interval)
- 75 Existing Contour (5-ft Interval)
- Landfill Module Boundary
- Landfill Permit Boundary
- MRF Permit Boundary

North

0 500 1,000

Approximate scale in feet

Figure 1-9. Existing WRSL Permitted Final Grading Plan
Draft Environmental Impact Report
Renewable Placer: Waste Action Plan
Placer County, California

Jacobs

BI0213191718SAC 1-7v4

The NOP included a summary of the proposed project and an invitation to submit comments on the content of the Draft EIR. The NOP and associated response letters are included in Appendix A of this Draft EIR. The following agencies and parties responded to the NOP:

- Placer County Flood Control and Water Conservation District
- Placer County Health and Human Services Environmental Health Division
- Placer County Executive Office
- Native American Heritage Commission
- Central Valley RWQCB
- United Auburn Indian Community
- California Department of Transportation (Caltrans)

In addition, a scoping meeting was held to present the proposed project and to solicit input from the public and responsible agencies on the content of the Draft EIR. The scoping meeting was held at the WPWMA's administrative offices, located at 3013 Fiddyment Road, Roseville, CA 95747, on April 1, 2019. A memorandum documenting how comments received on the NOP were addressed in this Draft EIR is found in Appendix A.

1.7.2 Circulation of the Draft EIR

This Draft EIR has been submitted to the State Clearinghouse for distribution to state agencies and is being made available for 45 days to allow public review and comment. An electronic version of this Draft EIR is available on the Renewable Placer: Waste Action Plan website (www.renewableplacer.com). Printed copies of this Draft EIR are available for review at the WPWMA's administrative offices at the address below. Comments will be accepted on the Draft EIR either in writing before the end of the review period or orally at the public hearing on the Draft EIR held before the WPWMA Board of Directors. The date, time, and location of the public hearing are provided in the notice of availability accompanying this Draft EIR. Written comments on the Draft EIR should be mailed or emailed to:

Western Placer Waste Management Authority
3013 Fiddyment Road
Roseville, CA 95747
Attn: Stephanie Ulmer
e-mail: EIRcomments@RenewablePlacer.com

Following the close of the comment period, responses will be prepared for all substantive comments on the Draft EIR. A Final EIR will be prepared, which will include comment responses and any necessary changes to the Draft EIR. The Final EIR will be considered for certification by the WPWMA Board. If certified, the Board may consider taking action on the Waste Action Plan.

1.8 Permits and Approvals

1.8.1 Regulatory Compliance

Solid waste facilities in California are regulated on multiple jurisdictional levels by local, state, and federal agencies. Compliance with the regulations of each of these agencies is necessary for the ongoing solid waste operations at the site. Local regulatory enforcement is performed by the Placer County Department of Health and Human Services Division of Environmental Health Services (LEA) and the PCAPCD. At the state level, regulatory agency oversight is provided by the Department of Resources Recycling and Recovery (CalRecycle) and the Central Valley RWQCB. Each of these local agencies is involved in issuing permits that condition the operation of WPWMA's facilities.

The California Integrated Waste Management Act (IWMA) of 1989 (Assembly Bill 939) requires counties to prepare a Countywide Integrated Waste Management Plan (CIWMP) and mandates a minimum 50 percent volume reduction in solid waste being landfilled by 2000. Compliance with the IWMA is the responsibility of local jurisdictions. Later legislation mandates the 50 percent diversion requirement be achieved every year (CalRecycle 2012).

Even with achievement of a 50 percent reduction in landfilled waste, the California legislature recognized that additional landfill capacity is required. Thus, the IWMA also requires counties to secure long-term (15 years) disposal capacity for waste that cannot be diverted. To conserve critical landfill space, it is CalRecycle policy to maximize the use of existing landfills, where feasible and environmentally acceptable.

The IWMA also requires development of countywide siting elements and solid waste facility components as part of the CIWMP to assure that locations exist for environmentally safe transformation and disposal facilities for waste that cannot feasibly be reduced, recycled, or composted. Availability of Waste Disposal capacity, however, does not relieve local jurisdictions from their responsibility for source reduction required by the IWMA.

1.8.2 Federal, State, and Local Permits and Approvals

Table 1-6 identifies permits and approvals that may be applicable to the proposed project. Many of these permits apply to the existing WPWMA facility and may need to be amended for implementation of the proposed project. Although a number of agencies are identified, discussions with those agencies will be required to determine the specific nature of any future permits or approvals that may be required from those agencies. Their inclusion in this document is intended to acknowledge the possible role of those agencies and confirm their notification. In addition, reference to these agencies is intended to provide them and the public with an environmental basis under CEQA guidelines to facilitate the dissemination of information deemed necessary to the discretionary approvals process and the approval or conditional approval of any aspect of the proposed project within their jurisdiction.

1.8.3 Local Approvals

Local agency permits and approvals that may be applicable to the proposed project include the following:

WPWMA

- Certification of the Final EIR, approval of the Waste Action Plan, and selection of a Plan Concept for implementation

Placer County

- SWFP (issued by the LEA with concurrence from CalRecycle)
- Authority to Construct and Permit to Operate issued by the PCAPCD

Placer County Department of Public Works

- Grading, Drainage, and Building Permits
- Offsite Encroachment Permits

Table 1-6. Existing WPWMA Facility Permits and Approvals

Agency	Permit or Approval
Federal	
United States Army Corps of Engineers	Clean Water Act, Section 404, #199400476, issued July 27, 1994
State	
CalRecycle (California Department of Resources Recycling and Recovery)	Landfill SWFP No. 031-AA-0210, Concurrence with LEA permit issuance
CalRecycle (California Department of Resources Recycling and Recovery)	MRF SWFP No. 031-AA-0001, Concurrence with LEA permit issuance
California Department of Toxic Substances Control	Part A and Part B Applications for a Permanent HHW Facility Permit, issued March 21, 1995
California Department of Toxic Substances Control	Permit by Rule Notification for a Permanent HHW Collection Facility, issued July 26, 2007
State Water Resources Control Board	Stormwater Discharge Permit Stormwater Pollution Prevention Plan (SWPPP) Stormwater Monitoring Program (SWMP)
California Department of Fish and Wildlife	Permit #II-392-94, issued July 26, 1994
Central Valley Regional Water Quality Control Board	Waste Discharge Requirements Order No. R5-2007-0047; and Monitoring and Reporting Program No. R5-2007-0047, and 93-200 (blanket Waste Discharge Requirement issued to all Chapter 15 dischargers, August 1997) General Permit to Discharge Stormwater Associated with Industrial Activity National Pollutant Discharge Elimination System (NPDES) #5A315011144, issued September 1, 1994 General Waste Discharge Requirements for Composting Operations (Order WQ 2015-0121-DWQ), issued March 16, 2017
Local	
Placer County Division of Environmental Health Services (LEA)	Landfill SWFP No. 031-AA-0210, issued December 11, 2012
Placer County Division of Environmental Health Services (LEA)	MRF SWFP No. 031-AA-0001, issued December 12, 2011
Placer County Planning Department	Conditional Use Permit No. 225, issued August 2001
City of Roseville	Wastewater Discharge Permit Number 887795, issued January 1, 2000. Allows discharge of leachate into Roseville's sewer system
PCAPCD	Permit to Operate No. PLWR-01-01, issued February 13, 2007 Permit to Operate No. PLWR-05-01, issued December 14, 2001 Authority to Construct No AC-WPMR-21A (windrows), AC-WPMR-21B (ASP) and AC-WPMR-21C (compost feedstock), issued May 28, 2021

1.9 Content and Organization of Draft EIR

The Draft EIR has been organized into the following Chapters:

- **Chapter 1.0, Introduction**. This chapter describes the proposed project location, purpose, and intended uses of this Draft EIR; project objectives; existing baseline conditions; existing solid waste management operations; public review process; permits and approvals; and general content and organization of the Draft EIR.
- **Chapter 2, Executive Summary**. The Executive Summary summarizes the proposed project, the significant and unavoidable environmental impacts, project alternatives, areas of controversy, issues to be resolved, the WPWMA project approval process, and environmental impacts and mitigation measures.
- **Chapter 3, Project Description**. This chapter describes the proposed project location and existing surrounding land uses and provides a detailed description of the two plan concepts that are evaluated at an equal level of detail in this Draft EIR.
- **Chapter 4, Approach**. This chapter describes the approach to the environmental analysis, including the evaluation of two plan concepts to implement the Waste Action Plan, identification of a preferred concept, relationship of the project to the Sunset Area Plan and Sunset Area Plan Environmental Impact Report, discussion of solid waste project elements versus complementary and programmatic elements, additional information related to project baseline, and MRF design concept evaluation included in the Draft EIR.
- **Chapters 5 through 17, Resource Area Analysis**. Chapters 5 through 17 discuss the following resource areas of concern. Each chapter includes an introduction, description of the methodology, description of the setting (regulatory and regional), analysis of potential impacts, identification and description of relevant mitigation measures, determination of impact significance after mitigation, and references.
  - Chapter 5, Aesthetics
  - Chapter 6, Air Quality and Odors
  - Chapter 7, Biological Resources
  - Chapter 8, Cultural and Tribal Cultural Resources
  - Chapter 9, Geology, Soils, and Paleontology
  - Chapter 10, Greenhouse Gas Emissions and Climate Change
  - Chapter 11, Hazards, Hazardous Materials, and Wildfire
  - Chapter 12, Hydrology and Water Quality
  - Chapter 13, Land Use and Planning
  - Chapter 14, Noise
  - Chapter 15, Public Services
  - Chapter 16, Transportation and Traffic
  - Chapter 17, Utilities and Energy
- **Chapter 18, Alternatives.** This chapter contains a reasonable range of alternatives to the proposed project, including the No Project Alternative. Each alternative is analyzed for feasibility, its ability to achieve the project objectives, and its ability to potentially avoid or substantially lessen significant environmental impacts associated with the proposed project.
- **Chapter 19, Cumulative Impacts**. This chapter includes a discussion of cumulative projects and impacts of the proposed project that may be cumulatively considerable.
- **Chapter 20, Other CEQA-Required Sections.** This chapter includes a discussion of significant irreversible environmental changes, growth-inducing impacts of the proposed project, and effects found not to be significant.

- **Chapter 21, Draft EIR Preparers and Contributors.** This chapter lists the primary authors and technical specialists for each resource area who contributed to preparation of the Draft EIR.
- **Appendixes**. The following appendixes to the Draft EIR are included:
  - Appendix A: NOP and Responses to Comments Received
  - Appendix B: Visual Resources Rating Forms
  - Appendix C.1: Methodology for Air Quality and Greenhouse Gas Impact Analysis
  - Appendix C.2: Air Quality Emission Calculations: Criteria Pollutants, Greenhouse Gases, and Toxic Air Contaminants
  - Appendix C.3: LandGEM Modeling Results
  - Appendix C.4: Air Dispersion and Health Risk Assessment Modeling Protocol
  - Appendix C.5: Health Risk Assessment Modeling Report
  - Appendix C.6: Site-Wide Odor Plan for the Western Placer Waste Management Authority's Solid Waste Processing and Disposal Facility
  - Appendix D: Project-Applicable Conditions on Covered Activities from the PCCP

1.10 References

Golder Associates, Inc. 2017. *Joint Technical Document, Western Regional Sanitary Landfill, Placer County, California, Volume I*. August.

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Placer County Community Development Resource Agency (Placer County). 2019. *Sunset Area Plan / Placer Ranch Specific Plan Final Environmental Impact Report*. State Clearinghouse #2016112012. October. Prepared by Ascent Environmental, Sacramento, CA.

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