3. Project Description

3.1 Introduction

The Western Placer Waste Management Authority (WPWMA) is proposing to implement the Renewable Placer: Waste Action Plan (Waste Action Plan or project) within the properties owned by the WPWMA in western Placer County. The WPWMA has identified two separate plan concepts for implementing the Waste Action Plan, which are evaluated at an equal level of detail in this Draft Environmental Impact Report (EIR). These two plan concepts were developed through a detailed planning process that included convening an Advisory Committee composed of key staff from each of WPWMA's Member Agencies; organizing a Stakeholder Working Group consisting of nearby commercial entities, developers, environmental groups, and residential neighborhood representatives; and preparing detailed technical evaluations. This chapter describes the two plan concepts, which are collectively referred to as the proposed project.

3.2 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 WPWMA's three existing properties, generally at the intersection of Athens Avenue and Fiddyment Road, as described in Section 1.2 and shown on Figure 1-2.

3.3 Plan Concept Descriptions

The Waste Action Plan includes solid waste elements, complementary and programmatic elements, and supporting elements that are incorporated in both Plan Concept 1 and Plan Concept 2. The plan concepts contain these similar elements, but the locations and characteristics of the elements vary between the two concepts. Solid waste (Waste Recovery and Waste Disposal) project elements and supporting elements include those directly under the WPWMA's control. These elements are evaluated at a project-specific level of detail in this EIR. Complementary and programmatic elements include those that may involve third parties. Some of these complementary and programmatic elements are evaluated at a project level and some are evaluated at a program level.

Section 3.4 identifies the baseline condition for each project element and how it would change for each plan concept. Within Section 3.4, Tables 3-1, 3-2, and 3-3 summarize the solid waste project elements, complementary and programmatic elements, and supporting elements, respectively. Detailed descriptions of Plan Concept 1 and Plan Concept 2 are provided in Sections 3.5 and 3.6, respectively.

Solid waste project elements are the Waste Recovery and Waste Disposal project elements that are needed to continue providing solid waste management services to WPWMA's Participating Agencies in the near and long term. These project elements are summarized as follows:

Waste Recovery

- Expanded Operation of Materials Recovery Building – The proposed project includes continued and expanded operation of the Materials Recovery Facility (MRF) Building to accommodate growth in the waste stream.
- Expanded and Redesigned Organics Management Operation – The organics management operation would include an expanded and redesigned organics processing operation to increase capacity to

accommodate growth in the organics waste stream and increased organic diversion required by new state-mandated organics diversion regulations (Senate Bill 1383) to accept additional compostable material streams (for example, food waste, other organics), and to improve odor control.

- Expanded and Redesigned Construction and Demolition Materials Processing Operation – The construction and demolition (C&D) materials processing operation is proposed to be redesigned to increase capacity to accommodate growth in the waste stream and respond to increased state-mandated diversion requirements (e.g., CALGreen Building Standards) and the needs of Participating Agencies.
- Expanded and Redesigned Public Waste Drop-off Area Operations – The public waste drop-off area operations are proposed to include a new public waste tipping area, material buy-back center, household hazardous waste (HHW) facilities, reuse store, and a new entrance kiosk with vehicle queuing lanes. The expanded and redesigned public waste drop-off area operations are proposed to accommodate population growth and associated facility use, support customer safety and convenience, and provide opportunities for increased material diversion (e.g., operation of a reuse store).

Waste Disposal

- Expanded Landfill Disposal Capacity – The Western Regional Sanitary Landfill's (WRSL's) disposal capacity is proposed to be expanded to accommodate current and future Participating Agency solid Waste Disposal demands. This element addresses landfill expansion, tonnage and vehicle limit changes, and landfill environmental monitoring and control systems.
- Excavation of Existing Solid Waste – Closed and pre-Subtitle D sections of the WRSL are proposed to be excavated and relocated to a Subtitle D-compliant module on the site. Subtitle D of the Resource Conservation and Recovery Act (Part 258 of the *Code of Federal Regulations* [CFR]) regulates the design, operation, and monitoring of municipal solid waste landfills.

Complementary and Programmatic Elements are the project elements that are not specifically required to provide continued solid waste management services to the Participating Agencies but are important in achieving other project objectives (e.g., create opportunities for innovation and economic growth, enhance opportunities to increase recycling and landfill waste diversion, and enhance ability to comply with regulations). These project elements include the following:

- Compatible Technologies – Space would be reserved for third-party commercial or full-scale compatible technologies and manufacturing operations that would take materials and products primarily from the WPWMA's facility to produce beneficial products, including renewable energy, fuels, and marketable commodities.
- Pilot Study Area – Space would be reserved for third parties to conduct pilot studies, using materials and products primarily from WPWMA's facility and processing them in new ways or producing beneficial products, including renewable energy, fuels, and marketable commodities.
- University Research Area – Space would be reserved for university-led research, using materials and products primarily from the WPWMA's facility and processing them in new ways or producing beneficial products, including renewable energy and marketable commodities. This could also include more general solid waste-related research to, for example, improve facility diversion, increase efficiencies, and lower environmental impacts.
- Landfill Gas (LFG)-to-Compressed Natural Gas Area – Space would be reserved for a potential third-party or WPWMA-led facility that would convert LFG to compressed natural gas, hydrogen, or other renewable fuel that could be used to fuel vehicles operated by local governments, waste hauling or other private companies, or otherwise be transferred to other end users.

Supporting Elements are the project elements required to support the solid waste management and complementary and programmatic elements. Some of these elements already exist at the site and would be modified with project implementation, and some would be new additions. The elements include recovered materials storage areas, stormwater ponds, road crossings, maintenance areas, administrative buildings, facility parking, entrance facilities, wastewater and water supply infrastructure, LFG-to-energy plant, and site perimeter infrastructure.

3.3.1 Potential Facility Operating Contract Amendments

The WPWMA is currently undergoing a competitive procurement process for the future near-term (approximately 10-year) waste recovery and waste disposal contract operations WPWMA developed Requests for Proposals (RFPs) for these operations in May 2020. As part of that process, the WPWMA received proposals for waste recovery operations (termed MRF operations for the RFP) and for waste disposal operations (termed landfill operations for the RFP). The WPWMA's procurement process is ongoing as of the preparation of this Draft EIR (DEIR).

An independent review of the proposals for MRF operations was conducted following WPWMA's Board authorization at the February 11, 2021, WPWMA Board meeting. The independent review entailed a high-level review of the MRF operations conceptual designs to assist WPWMA with determining what, if any, proposed elements are not currently fully addressed in the two plan concepts. This EIR includes potential changes to the management of organics contained within the municipal solid waste (MSW) stream and the diversion rates that are proposed to result from additional organics processing.

Conceptual designs associated with the proposals for MRF operations are preliminary and do not contain enough detail to alter the details of Plan Concept 1 or Plan Concept 2. In this chapter, a discussion on the potential differences between the proposals for MRF operations and the proposed project have been added as a subsection within the respective sections that describe the Expanded and Redesigned Organics Management Operation. Chapter 4, Approach, includes additional discussion regarding the potential environmental impacts associated with the increased diversion and processing of organic materials entrained within the mixed (non-source separated) solid waste stream.

3.4 Baseline Condition and Plan Concept Comparison

Chapter 1, Introduction, provides a detailed discussion of the operations of existing facilities at the WPWMA site and an explanation of the environmental baseline for the project, based on current operations. For purposes of analysis in this DEIR, the baseline conditions are generally the conditions that existed on the three WPWMA-owned properties when the Notice of Preparation was released on March 15, 2019. For solid waste operations that fluctuate on a daily basis, the baseline is based on averages from calendar year 2018, unless otherwise specified. A full calendar year was used to capture the full range of operations that typically occur at the site over four seasons.

Tables 3-1, 3-2, and 3-3 summarize the environmental baseline and the changes associated with both plan concepts for solid waste project elements, complementary and programmatic elements, and supporting elements, respectively, which are discussed in detail in Sections 3.5 (Plan Concept 1) and 3.6 (Plan Concept 2) of this chapter.

Table 3-1. Summary of Environmental Baseline and Change Associated with Solid Waste Elements

Waste Action Plan Project Element	Environmental Baseline	Plan Concept 1 Change	Plan Concept 2 Change
Sitewide Operations			
Material Tonnage Permit Limits	Waste Recovery operations limited to 1,750 tpd; Waste Disposal operations limited to 1,900 tpd	Sitewide solid waste management activities limited to a rolling 7-day average of 4,000 tpd	Sitewide solid waste management activities limited to a rolling 7-day average of 4,000 tpd
Vehicle Permit Limits	Waste Recovery operations limited to 1,014 vehicles per day; Waste Disposal operations limited to 624 vehicles per day	The permitted vehicle limits for Waste Recovery and Waste Disposal operations would be eliminated	The permitted vehicle limits for Waste Recovery and Waste Disposal operations would be eliminated
Material Tons	The WPWMA facility received 483,968 tons of solid waste material in 2018	The WPWMA facility would receive up to 912,200 tons of solid waste material by 2050	The WPWMA facility would receive up to 912,200 tons of solid waste material by 2050
Material Recovery	Approximately 39% of material received at the site was recovered from the waste stream in 2018	The WPWMA facility would have a material recovery rate of 50% or greater by 2050	The WPWMA facility would have a material recovery rate of 50% or greater by 2050
Odor Management	Odors are managed by facility (in particular, MRF building, composting operation, WRSL)	Odors would be managed sitewide through implementation of a SWOP	Odors would be managed sitewide through implementation of a SWOP
Waste Recovery			
MRF Operation	The MRF building processed 240,068 tons of MSW in 2018	The MRF building would process up to 416,600 tons of MSW per year	The MRF building would process up to 416,600 tons of MSW per year
Expanded and Redesigned Organics Management Operation	Organics management operation located in the northern part of the center property	Expanded organics management relocated to the central part of the western property	Expanded organics management operation within the northern part of the center property. Requires relocation of waste in modules 1, 2, 10, and 11
	Organics management operation, using composting.	Designed to accommodate composting but could also accommodate other organics management methods.	Designed to accommodate composting but could also accommodate other organics management methods.
	The composting operation processed 60,606 tons in 2018, with minimal food waste	The composting operation would process up to 157,900 tons by 2050; food waste added	The composting operation would process up to 157,900 tons by 2050; food waste added
	Two compost leachate collection ponds on center property	50% increase in overall pond capacity and removal of pond on center property	50% increase in overall pond capacity and removal of pond on center property
	Processing via windrow piles	Processing transitions from windrows to ASP technology	Processing transitions from windrows to ASP technology

Table 3-1. Summary of Environmental Baseline and Change Associated with Solid Waste Elements

Waste Action Plan Project Element	Environmental Baseline	Plan Concept 1 Change	Plan Concept 2 Change
	Compostable materials received outside	Potential construction of a food waste receiving building	Potential construction of a food waste receiving building
	Odor control consists of implementation and maintenance of good operating practices consistent with the OIMP	Odor control consists of implementing a SWOP, which incorporates the OIMP; odor control improved by change in composting technology and use of biofilter layer on the compost piles.	Odor control consists of implementing a SWOP, which includes the OIMP; odor control improved by change in composting technology and use of biofilter layer on the compost piles.
Expanded and Redesigned C&D Materials Processing Operation	C&D materials processing located in the northern part of the center property	C&D materials processing operation increased in size by 2 to 3 times on the center property	C&D materials processing operation increased in size by 2 to 3 times on the center property and integrated with expanded composting operation and redesigned public waste drop-off; requires relocation of waste in modules 1, 2, 10, and 11
	The C&D materials processing operation, including inerts area, processed 87,404 tons in 2018	The C&D materials processing operation would process up to 174,600 tons per year of C&D plus 55,200 tons per year inerts by 2050	The C&D materials processing operation would process up to 174,600 tons per year of C&D plus 55,200 tons per year inerts by 2050
Expanded and Redesigned Public Waste Drop-Off Area Operations	Public waste drop-off area operations (tipping area, buy-back center, HHW) located in the northern part of the center property	Public waste drop-off area operations expanded and redesigned and relocated to the western property; new facilities include a public tipping area, material buy-back center, HHW waste drop-off area, reuse store, and entrance kiosk with vehicle queuing.	Expanded and redesigned public waste drop-off operations on the center property; new facilities include public tipping area, material buy-back center, HHW waste drop-off area, and reuse store; requires relocation of waste in modules 1, 2, 10, and 11
	Public waste drop-off area operations received 44,194 tons in 2019	Public waste drop-off area operations would receive up to 83,300 tons per year by 2050	Public waste drop-off area operations would receive up to 83,300 tons per year by 2050
Environmental control measures for Waste Recovery operations	Environmental control measures are implemented in a manner consistent with regulations to protect public health and the environment	Existing environmental control measures would continue and expand with the expanded Waste Recovery operations	Existing environmental control measures would continue and expand with the expanded Waste Recovery operations
Waste Disposal			
Increased Waste Disposal	Annual tons disposed – 288,838	Projected annual tons disposed – 521,100 by 2050	Projected annual tons disposed – 521,100 by 2050

Table 3-1. Summary of Environmental Baseline and Change Associated with Solid Waste Elements

Waste Action Plan Project Element	Environmental Baseline	Plan Concept 1 Change	Plan Concept 2 Change
Expanded Landfill Disposal Capacity	Waste footprint located on center property in one contiguous landfill footprint	Waste footprint expanded to eastern property in one contiguous landfill footprint	Waste footprint expanded to western property with distinct landfill footprints on the center and western properties
	Elevation – 196 feet AMSL and permitted peak elevation – 295 feet AMSL	Height increase above current conditions – 129 feet. Height increase above currently permitted conditions – 30 feet	Height increase above current conditions – 129 feet. Height increase above currently permitted conditions – 30 feet
	Permitted waste footprint – 231 acres	Waste footprint expands by 89 acres to 320 acres	Waste footprint expands by 131 acres to 362 acres
	Permitted capacity – 36.3 million cy	Landfill disposal capacity increases by approximately 45.1 million cy	Landfill disposal capacity increases by approximately 50.2 million cy
	Waste capacity exhausted by approximately 2058	Estimated landfill site life increases by approximately 43 years	Estimated landfill site life increases by approximately 52 years
	Eventual relocation of Waste Recovery operations on currently permitted Module 9 to allow for future landfill disposal	Elimination of currently permitted Module 9 for future Waste Disposal	Elimination of currently permitted Modules 8 and 9 for future Waste Disposal
Excavation of Existing Solid Waste	Waste in non-Subtitle D lined modules (modules 1, 2, 10, 11)	Module 1, 2, 10, and 11 contents would be excavated and relocated to an onsite Subtitle D-compliant module; excavated modules would be lined and reused for future Waste Disposal when needed; remaining excavated module areas would be backfilled with clean soil (starting in year 2045) within 5 years to accommodate expansion of solid waste activities on the center property.	Module 1, 2, 10, and 11 contents would be excavated and relocated to an onsite Subtitle D-compliant module; a portion of Module 11 would be lined and reused for future Waste Disposal; remaining excavated module areas would be backfilled with clean soil within 3 years (starting in year 2024) to accommodate expansion of solid waste activities on the center property
	Peak elevations of Modules 1, 2, 10, and 11 do not exceed approximately 170 feet AMSL	The peak elevation of Modules 1, 2, 10, and 11 would be approximately 325 feet AMSL	A portion of Module 11 would be relined and incorporated into the remaining waste cells, which would be approximately 325 feet AMSL. Modules 1, 2, 10, and part of 11 would be filled with clean soil to match the surrounding ground elevation

Table 3-1. Summary of Environmental Baseline and Change Associated with Solid Waste Elements

Waste Action Plan Project Element	Environmental Baseline	Plan Concept 1 Change	Plan Concept 2 Change
Landfill Environmental Monitoring and Control Systems	Double-composite landfill liners are installed in modules constructed within the existing permitted landfill footprint	No changes in the liner systems; future modules would include double-composite liners	No changes in the liner systems; future modules would include double-composite liners
	Leachate, surface water, LFG management systems	The leachate, surface water, and LFG management systems would be expanded to accommodate the expanded landfill footprint and height	The leachate, surface water, and LFG management systems would be expanded to accommodate the expanded landfill footprint and height, and duplicated for the landfill expansion on the western property

Notes:
AMSL = above mean sea level
C&D = Construction and Demolition
cy = cubic yard(s)
OIMP = Odor Impact Minimization Plan
SWOP = Site-Wide Odor Plan
tpd = ton(s) per day

Table 3-2. Summary of Environmental Baseline and Change Associated with Complementary and Programmatic Elements

Waste Action Plan Project Element	Environmental Baseline	Plan Concept 1 Change	Plan Concept 2 Change
Complementary and Programmatic Elements	Grazing operations on the eastern property, solid waste operations on the center property, and irrigation and model airplane operations on the western property	Project Level – Development of up to 300,000 square feet of buildings plus exterior infrastructure for industrial uses that are complementary to the solid waste management elements. Industrial uses may include compatible technologies, pilot study areas, university research areas, and an LFG to compressed natural gas area Program Level – Up to 1.6 million square feet of industrial uses that are complementary to the solid waste management elements	Project Level – Development of up to 300,000 square feet of buildings plus exterior infrastructure for industrial uses that are complementary to the solid waste management elements. Industrial uses may include compatible technologies, pilot study areas, university research areas, and an LFG to compressed natural gas area Program Level – Up to 1.6 million square feet of industrial uses that are complementary to the solid waste management elements
		Project Level – Located on the northern part of the western property Program Level – Primarily in the northern and southern	Project Level – Located on the northern part of the eastern property Program Level – Primarily on the eastern property, plus

Table 3-2. Summary of Environmental Baseline and Change Associated with Complementary and Programmatic Elements

Waste Action Plan Project Element	Environmental Baseline	Plan Concept 1 Change	Plan Concept 2 Change
		parts of the western property, plus locations on the center property, although some uses may be developed in closer proximity to the solid waste project elements or within areas not yet developed with solid waste project elements	locations on the center property and southern part of the western property, although some uses may be developed in closer proximity to the solid waste project elements or within areas not yet developed with solid waste project elements

Table 3-3. Summary of Environmental Baseline and Change Associated with Supporting Elements

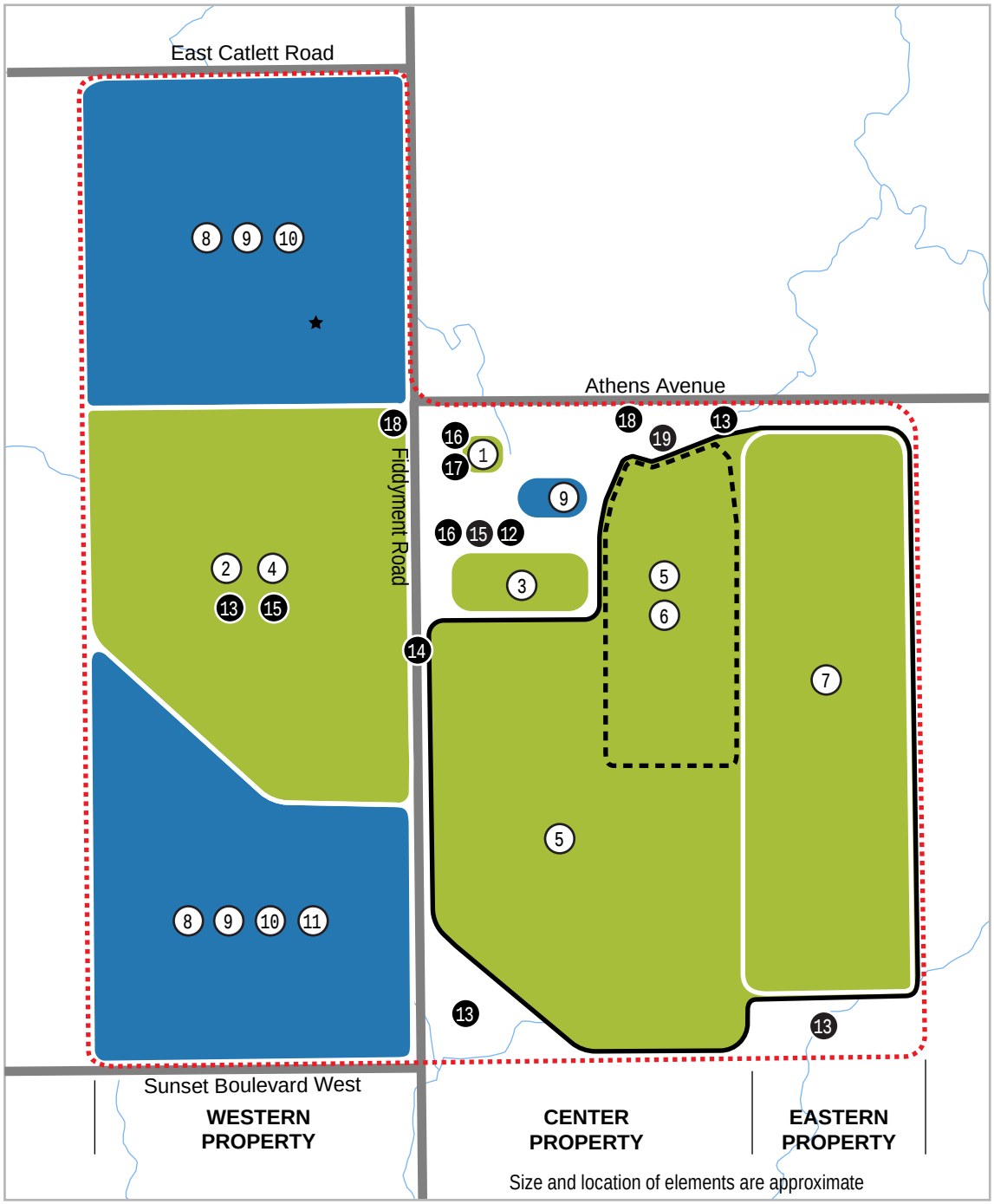
Waste Action Plan Project Element	Environmental Baseline	Plan Concept 1 Change	Plan Concept 2 Change
Waste Recovery and Waste Disposal – Supporting Elements	Materials recovered from the MRF operations are stored either within or outside of the MRF building, depending on materials type and space constraints	Construction of a new recovered materials storage building and increased ability to store recovered materials inside	Construction of a new recovered materials storage building and increased ability to store recovered materials inside
	Stormwater ponds on center property	New and expanded stormwater ponds on western, center, and eastern properties	New and expanded stormwater ponds on western and center properties
	Road crossings between center and western property limited to public roads	Separated facility-only crossing of Fiddyment Road that would connect center and western properties	Separated facility-only crossing of Fiddyment Road that would connect center and western properties
	Maintenance facility on the center property	Center property maintenance facility would be upgraded and a new satellite maintenance facility would be constructed on the western property (for compost and public waste drop-off operations)	Center property maintenance facility would be upgraded and a new satellite maintenance facility would be constructed on the western property (for landfill operations)
	Administration building on the center property	Expansion or addition of administration building with an education center and parking	Expansion or addition of administration building with education center and parking
	Entrance facilities on Athens Avenue	Upgraded Athens Avenue entrance facilities, including	Upgraded Athens Avenue entrance facilities, including site access and

Table 3-3. Summary of Environmental Baseline and Change Associated with Supporting Elements

Waste Action Plan Project Element	Environmental Baseline	Plan Concept 1 Change	Plan Concept 2 Change
		site access and scale house infrastructure when needed	scale house infrastructure when needed
	Restricted dirt road access to western property at Fiddyment Road and Athens Avenue intersection	New paved site entrance to western property at Fiddyment Road and Athens Avenue intersection to accommodate public access to the western property	New paved site entrance to western property at Fiddyment Road and Athens Avenue intersection to accommodate expanded landfill operation
	Wastewater and fire protection water line used for the existing Public Waste Drop-Off Area operations	A new wastewater and new fire protection water line extending to the western property would be necessary to service the relocated public waste drop-off area operations	A new wastewater and fire protection water line extending to the western property would be necessary to service the expanded landfill operations
	LFG-to-energy plant operations on center property	No change to continued LFG-to-energy plant operations on the center property	No change (beyond LFG management systems on the western property, mentioned in Table 3-1) to continued LFG-to-energy plant operations on the center property
	Landscaping and fencing located along sections of the center property	Expanded perimeter landscaping and fencing to surround entire project site	Expanded perimeter landscaping and fencing to surround entire project site

3.5 Plan Concept 1

Plan Concept 1 (Figure 3-1) includes all of the elements summarized in Tables 3-1, 3-2, and 3-3 of Section 3.3. Section 3.5.1 describes changes to sitewide solid waste operations related to Waste Recovery and Waste Disposal that would change as a result of Plan Concept 1, while Sections 3.5.2 and 3.5.3 describe the unique Waste Recovery and Waste Disposal elements that are proposed to be implemented for Plan Concept 1. Section 3.5.4 describes complementary and programmatic elements proposed for Plan Concept 1, and Section 3.5.5 describes supporting elements for Plan Concept 1.



LEGEND

Solid Waste Project Elements

1. Materials Recovery Facility Building
2. Organics Management Operation
3. Construction & Demolition Materials Processing Operation
4. Public Waste Drop-Off Area Operations, Including Household Hazardous Waste Facility
5. Current & Future Landfill
6. Waste Excavation Area
7. Landfill Expansion Area

Complementary/Programmatic Elements

8. Compatible Technologies
9. Pilot Study Area
10. University Research Area
11. Landfill Gas To Compressed Natural Gas Area

★ Approximate Location of Project Level Complementary Elements

Supporting Elements

12. Recovered Materials Storage Area
13. Stormwater Ponds
14. Road Crossing
15. Maintenance Areas
16. Administrative Building Areas
17. Parking
18. Entrances
19. Landfill Gas-to-Energy Plant

Project Boundary

Landfill Footprint

Waste Excavation Area

North

0 0.5 1

Approximate scale in miles

Figure 3-1. Plan Concept 1
Draft Environmental Impact Report
Renewable Placer: Waste Action Plan
Placer County, California

Jacobs

3.5.1 Sitewide Solid Waste Operations

Summary

Table 3-4 summarizes the existing environmental baseline conditions related to sitewide solid waste operations and how implementation of Plan Concept 1 would change those conditions.

Table 3-4. Summary of Sitewide Solid Waste Operational Changes Under Plan Concept 1

Environmental Baseline	Plan Concept 1	Change
483,968 tons per year of material received at the site	Up to 912,200 tons per year of material received at the site	Up to 428,232 additional tons per year of material received at the site
Approximately 39% of material received at the site is recovered from the waste stream	Recovery of material received from the waste stream of 50% or greater	Recovery of material received at the site from the waste stream increased by 11% or greater
Waste Recovery operations limited to 1,750 tons per day; Waste Disposal operations limited to 1,900 tpd	Sitewide solid waste management activities limited to a 7-day rolling average of 4,000 tpd	Conversion to a single permit limit; sitewide, 7-day rolling average of 4,000 tpd
Waste Recovery operations limited to 1,014 vehicles per day; Waste Disposal operations limited to 624 vehicles per day	The permitted vehicle limits for Waste Recovery and Waste Disposal operations would be eliminated	The number of Waste Recovery and Waste Disposal vehicles accessing the WPWMA facility would no longer be controlled by a permit limit
Odors are managed by facility (in particular, MRF building, composting operation, WRSL)	Odors would be managed sitewide through implementation of a SWOP	Improvements in odor control by managing odors sitewide rather than by facility

Detailed Description

The proposed project has been identified to address the physical and operational changes that are needed at the WPWMA facility to accommodate the solid waste management needs of the Participating Agencies into the future, as well as to provide opportunities for future compatible technologies to be located onsite. Sitewide changes associated with Plan Concept 1 related to material and permit limits, traffic, and odor management are described in the following sections of this chapter.

Sitewide Material Quantities, Diversion Rate, and Permitted Tonnage.

The WPWMA projects an average 2 percent annual increase in the amount of waste received at the facility over the project period. This estimated increase in the waste stream reflects anticipated regional growth trends and changes in the recyclables market based on current and upcoming regulatory requirements and other market conditions.

As shown on Figure 1-4 (2018 Waste Material Flowchart) and Figure 3-2 (2050 Waste Material Flowchart), the WPWMA anticipates that annual waste material received at the site will grow from 483,968 tons in 2018 to 912,200 tons by 2050. In 2018, approximately 39 percent of waste material received at the site was recovered from the waste stream and not placed in the WRSL. By 2050, the recovery rate is anticipated to increase to 50 percent or greater, primarily because of operational changes in organics management and C&D processing operations. Recovery greater than 50 percent may be possible as a result of future regulatory requirements and diversion opportunities that could result from the type and size of complementary technologies evaluated at a programmatic level in this EIR and discussed in Section 3.5.4.

The existing Solid Waste Facilities Permit (SWFP) for Waste Recovery operations includes a permit limit of 1,750 tpd of material received, while the existing SWFP for Waste Disposal operations has a permit limit of 1,900 tpd of material received. In order for the WPWMA facility to accommodate anticipated growth in waste tonnage, Plan Concept 1 assumes the sitewide (Waste Recovery and Waste Disposal) permitted peak daily waste acceptance limit would be converted to a sitewide 7-day rolling average of 4,000 tpd. This change would allow the WPWMA to respond to changing regulations and waste streams without the potential to exceed a permit limit associated with either Waste Recovery or Waste Disposal. This change would also allow the WPWMA to seamlessly divert material received at the site to future compatible manufacturing technologies, further contributing to increased diversion rates. With this change, the daily sitewide tonnage limit would be defined as the average over a continuous rolling 7-day period. This number is identified by calculating, on each day that material is accepted, the average daily tonnage received over the prior 7 operating days. This rolling-average permit limit is proposed so that during unusually high peak days, waste haulers are not turned away, while the WPWMA facility still maintains a limit that prevents waste acceptance volumes from exceeding estimated growth levels.

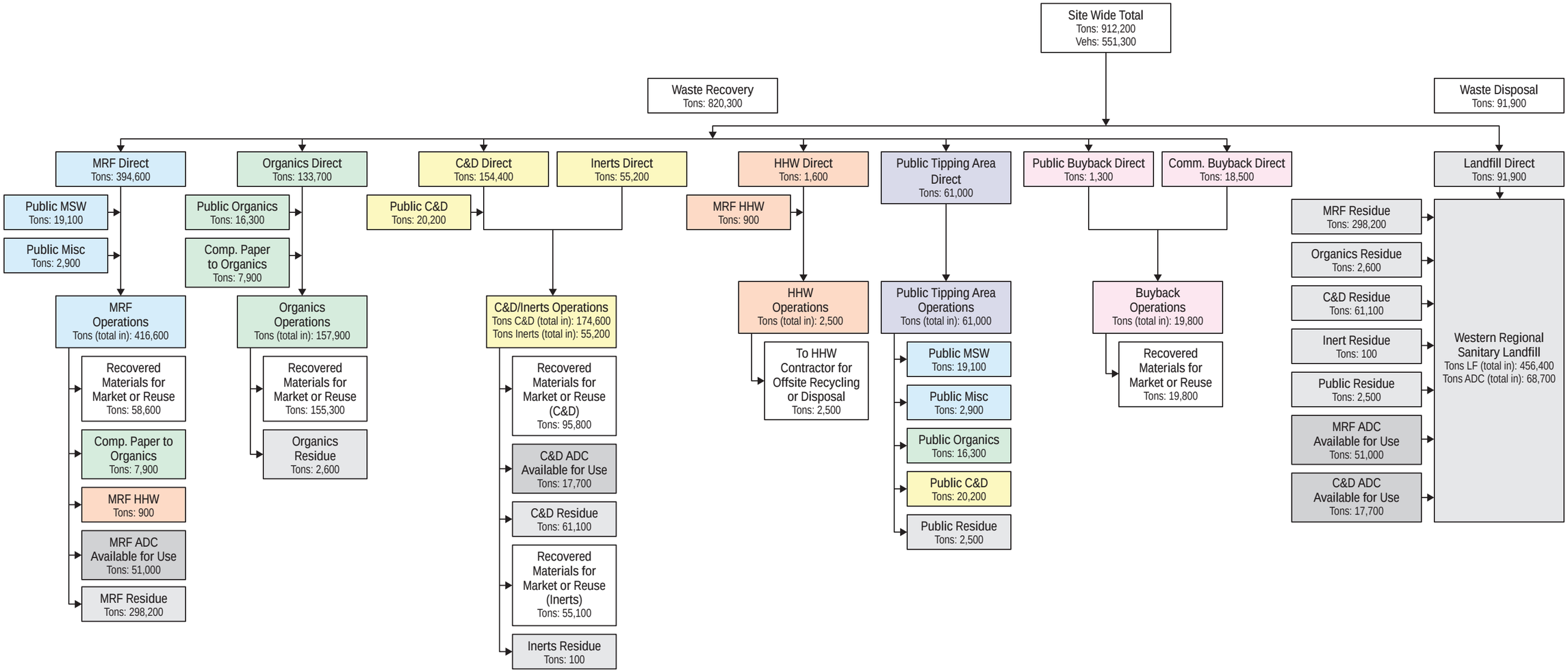
The sitewide 7-day rolling average of 4,000 tpd considers a number of factors, including the variability between material types and acceptance rates and modes (for example, materials delivered to the WRSL and MRF are typically delivered in larger trucks on weekdays, whereas material received at the public waste drop-off area is typically delivered in small personal vehicles on the weekend). The sitewide 7-day rolling average also takes into account the anticipated increase in materials through 2050 and the relationship between average tons received per day and peak tons received per day over the past several years.

Removal of Permit Limit for Vehicles

Currently, Waste Recovery operations under SWFP No. 031-AA-0001 include a vehicle limit of 1,014 vehicles per day, while Waste Disposal operations under SWFP No. 031-AA-0210 include a vehicle limit of 624 vehicles per day. Plan Concept 1 proposes to eliminate vehicle permit limits for Waste Recovery and Waste Disposal operations, instead relying on a sitewide tonnage limit with a 7-day rolling average, as described previously. Because daily vehicle permit limits would require waste-hauling vehicles to be turned away if they are exceeded, the limits have the potential to discourage the appropriate disposal of waste materials. Eliminating the vehicle limits for Waste Recovery and Waste Disposal operations would not be expected to increase the number of vehicle trips generated by such operations, as the number of inbound vehicles would instead be controlled through the sitewide tonnage limit.

Sitewide Odor Management

In addition to the odor-control measures currently undertaken at the facility and described throughout Chapter 1, Introduction, the WPWMA will fully implement a SWOP to provide information about facility odor sources, meteorological conditions that have the potential to exacerbate the perception of odors, and the measures the WPWMA will take to reduce the potential for facility odors to be perceived by nearby receptors. The SWOP will be used as a tool by the WPWMA and its facility operators and contractors to consistently and proactively take the appropriate steps to reduce the potential for offsite odors. The SWOP will establish BMPs used by the WPWMA and its contractors and operators to mitigate the release of odors from WPWMA facilities. It will include measures to prevent, monitor, and address odors. The BMPs will reflect current operating and regulatory conditions; changes in regulations or programs operated by the Participating Agencies may necessitate revisions to the SWOP.



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. The 2050 annual projections included on this flow diagram are based on actual 2018 tonnage and incoming vehicle quantities that have been escalated based on a number of assumptions, including, but not limited to, population projections and solid waste regulations.
3. Tonnage and vehicle quantities have been rounded in 2050 after escalation.
4. Projections have been estimated with best available data at the time of development; actual conditions in the future may differ.
5. Only customer vehicle counts as presented. Internal site vehicles are not shown.

SPECIFIC NOTES

a. ADC tons are available for use as ADC at the landfill if needed. If not needed, ADC tons are disposed.

Figure 3-2. 2050 Waste Material Flow Chart
Draft Environmental Impact Report
Renewable Placer: Waste Action Plan
Placer County, California

The SWOP identifies four facilities or operations at the WPWMA facility with the greatest potential to produce odors: MRF building, composting operation, active landfill areas, and LFG collection and control system. Specific odor-control measures from the SWOP for each of these operations is included in their respective discussion in this chapter. The SWOP is included in Appendix C.6.

3.5.2 Waste Recovery Operations

Plan Concept 1 (Figure 3-2) includes changes to the Waste Recovery operations that occur at the MRF building, organics management operation, C&D material processing operation, and public waste drop-off area operations, each of which are described in Sections 3.5.2.1 through 3.5.2.4. Changes in the environmental control features common to Waste Recovery operations are described in Section 3.5.2.5.

Expanded Material Recovery Facility Building Operation

Summary.

Table 3-5 summarizes existing environmental baseline conditions related to MRF building operations and how implementation of Plan Concept 1 would change those conditions.

Table 3-5. Summary of Expanded MRF Building Operation Under Plan Concept 1

Environmental Baseline	Plan Concept 1	Change
Annual waste material processing of 240,068 tons	Annual waste material processing of up to 416,600 tons	MRF building processes up to an additional 176,532 tons per year by 2050
MRF building permitted to receive material 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	MRF building permitted to receive material 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	No change
Material processing at MRF building permitted from 6:00 a.m. to 11:30 p.m. Monday through Sunday, with additional maintenance and cleanup work permitted from 4:00 p.m. to 6:00 a.m. Monday through Sunday	Material processing at MRF building may occur 24 hours per day, 7 days per week	Daily material processing at MRF building potentially occurring overnight.

Detailed Description.

In 2018, approximately 50 percent of the material received at the WPWMA facility was processed through the MRF building, or approximately 240,068 tons. By 2050, material processed through the MRF building is anticipated to increase to approximately 416,600 tons, or roughly 46 percent of the total material received at the WPWMA facility. The existing MRF building is sized to accommodate the increase in annual tonnage anticipated through 2050, but hours of operation for the MRF building would increase as tonnage increases over time. The MRF building is permitted to process material from 6:00 a.m. to 7:30 p.m.,. Monday to Saturday and from 6:00 a.m. to 5:00 p.m. Sundays and holidays, but it currently typically operates a single shift from 6:30 a.m. to 3:00 p.m. Monday to Friday. The WPWMA anticipates that the hours per day for MRF building operations will increase as material processed increases, potentially up to a 24-hour per day operation. While this represents an increase over the current and permitted operation, the

WPWMA is currently permitted to conduct MRF building maintenance and cleanup activities 24 hours per day.

MRF Building Odor Control – The materials processed in the MRF building include organic materials and other putrescible wastes that have the potential to emit odors as they begin to decompose. As such, the WPWMA currently implements BMPs for odor control for the MRF building. As part of the proposed project, the WPWMA will implement BMPs for the MRF building as part of the SWOP, as provided in Appendix C.6. These BMPs 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.

Achievement of Project Objectives – Expanded operation of the MRF building would help the WPWMA achieve several project objectives, including the following:

- Stabilizing the costs of Waste Recovery efforts
- Improving operational efficiencies
- Extending the operational life of the current WPWMA facility
- Increasing the diversion of materials from the landfill
- Reducing greenhouse gas (GHG) emissions
- Enhancing operational flexibility
- Facilitating the siting and development of compatible technologies

Expanded and Redesigned Organics Management Operation

Summary.

Table 3-6 summarizes existing environmental baseline conditions related to the organics management operation and how implementation of Plan Concept 1 would change those conditions.

Table 3-6. Summary of Expanded and Redesigned Organics Management Operation Under Plan Concept 1

Environmental Baseline	Plan Concept 1	Change
Organics management operations located in the northern part of the center property	Expanded organics management operations relocated to the central part of the western property	Organics management operations relocated to the western property and expanded
Organics management operation consists of composting	Organics management operation designed for composting but could accommodate other methods in the future	No change in use of composting for organics management
60,606 tons per year of green waste composted	157,900 tons per year of green waste, food waste, and other organics composted	Increase of 97,294 tons per year of compost and addition of food waste composting
Two compost leachate collection ponds on center property	Construct one leachate collection pond on western property and remove one pond on center property	50% increase in pond capacity and removal of pond on center property
Windrow composting process	Composting process – ASP technology active composting	Transition from windrow to ASP technology

Table 3-6. Summary of Expanded and Redesigned Organics Management Operation Under Plan Concept 1

Environmental Baseline	Plan Concept 1	Change
Compostable materials received outside	Potential construction of food waste-receiving building	Evaluation conducted with and without a future food waste receiving building
Odor control – Implementation and maintenance of good operating practices consistent with the OIMP	Odor control – Implement a SWOP, ASP technology, and use a biofilter layer on the piles to provide some odor control in addition to good operating practices	Improved composting technology for odor control

Detailed Description.

The need for the expanded and redesigned organics management operation is driven by anticipated population growth within the WPWMA's service area and Senate Bill (SB) 1383. SB 1383 was signed into California law in 2016, establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) in various sectors of California's economy. SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025.

Methane emissions resulting from the decomposition of organic waste in landfills contribute to global climate change. Organic materials, including waste that can be recycled or composted, account for a significant amount of California's overall waste stream. Food waste alone accounts for approximately 18 percent of material that goes to landfills. Increasing food waste prevention, encouraging edible food rescue, and expanding the composting and in-vessel digestion of organic waste throughout the state is expected to help reduce methane emissions from organic waste disposed in California's landfills. In addition, compost has numerous benefits, including water conservation, improved soil health, and carbon sequestration, and anaerobic digestion produces biogas that can be used to create electricity or renewable transportation fuels (CalRecycle 2019).

The WPWMA actively supports the Participating Agencies in meeting the targets established by SB 1383. In particular, the expanded organics management operation at the WPWMA facility proposed as part of Plan Concept 1 is intended to help the Participating Agencies achieve a 75 percent reduction in the level of disposal organic waste by 2025.

Initially, the WPWMA intends to manage the organics waste stream by implementing an expanded composting operation, which is described in detail in the following subsection. The proposed composting operation would continue processing green waste material and incorporate increasing amounts of food waste and other organics.

In the future, the WPWMA may determine that it is more beneficial to the Participating Agencies to manage the organics waste stream in alternate ways in addition to composting. For example, one method of managing food waste that is becoming more common is through anaerobic digestion. A potential future scenario at the WPWMA facility may include processing food waste and other select organics through anaerobic digestion while continuing to process green waste through composting. The future potential for anaerobic digestion at the WPWMA facility is further discussed in Section 3.5.4, Complementary and Programmatic Elements.

Expanded Organics Management Operation – The existing organics management operation, which uses composting in the northern part of the center property, would be relocated to the central part of the western property and expanded to accommodate anticipated material growth rates, increased organics diversion requirements, food waste and other non-green waste organic materials processing, and improvements in odor control. The existing composting operation currently processes approximately 60,606 tons per year of organic materials (predominately green waste and a relatively small amount of food waste.) Within 30 years (by 2050), the relocated and expanded compost operation is estimated to process a total of 157,900 tons per year of combined green waste, food waste, and other organics.

The relocated composting operation would include an outdoor positive[12] ASP system for the near term that could potentially transition to an outdoor negative[13], or reverse[14], ASP system with an extended bed configuration. The relocated operation would also include an outdoor feedstock receiving and preprocessing area, curing area, screening and product storage area, and dedicated stormwater pond with a geosynthetic liner.

Compostable Material Receiving Operation – Source-separated feedstock (green waste, wood waste, and food waste) would be unloaded directly by customers into outdoor receiving piles: green waste would be unloaded within a green waste receiving area, wood waste would be unloaded within a wood waste receiving area, and food waste would be unloaded adjacent to the preprocessed green waste for expedited mixing and stockpiling. The food waste receiving and preprocessing area would be located within an enclosed space in the future as the WPWMA receives increasing levels of food waste. Each receiving pile or enclosure would be sized to hold the estimated peak design per week tonnage. The WPWMA estimates that a food receiving building would be required when food waste exceeds 30 percent of the total incoming compost feedstock.

Unloading of materials by customers would alternate between piles weekly. Receiving piles in the feedstock receiving areas would be approximately 12 feet high and 75 feet wide, which would allow five customers to unload simultaneously. Customers would unload material on the frontside of the piles, while operations staff would remove material from the backside. The piles would serve as a barrier between customers and operations staff and equipment.

Preprocessing would primarily occur outdoors within the receiving area. Material would be sent through a sort line for visual inspection and to remove contaminants prior to further preprocessing. Visible contaminants would be manually removed and disposed. After the sort line, material would be sent through a tub grinder (or similar size-reducing piece of equipment) for further preprocessing. After grinding, feedstocks would be pushed into piles located adjacent to the receiving piles and away from the customer unloading area.

Grinding operations would alternate between receiving piles weekly, such that the receiving pile that was created the previous period (up to a week) would be ground the following period (up to a week). The grinder would be situated between the receiving pile and the ground material stockpile during operation. Feedstocks would be managed with a front-end loader equipped with an oversized grapple bucket, excavator or similar equipment. A portable misting system would be available for use around the grinder as required.

The relocated composting operation is assumed to eventually include the use of an enclosed food waste receiving and mixing building (as described previously), correlated to increasing amounts of food waste at

[12] ASP composting managed by pushing air through the composting pile.

[13] ASP composting managed by pulling air through the composting pile.

[14] ASP composting managed by either pushing or pulling air through the composting pile. Able to change air flow direction.

the WPWMA facility. However, because the timing of the building construction is not tied to the relocation of the composting operation, there would likely be a period of composting of primarily green waste and food waste that does not include the use of an enclosed receiving area. The use of a receiving building is anticipated to reduce odors associated with food waste. Therefore, for impact evaluation purposes, this EIR evaluates the impacts of operating the composting operation with the addition of minimal food waste (less than 30 percent of total compost feedstock and organic waste and no receiving building) and with increasing levels of food waste (greater than 30 percent of total compost feedstock and organic waste and with a receiving building).

Aerated Static Pile Composting Operation – Material would be moved from the receiving and preprocessing area to the active compost area, using a combination of electrically powered conveyors, conventional or other front-end loaders, or tandem-axle trucks. The ASP composting system is proposed to be sized to provide a minimum 4-week active composting process. It is anticipated that four ASP beds would be provided, each with a capacity of approximately 15,577 cy, and five aeration zones. The ASP composting system would initially be positive ASP but could transition to negative or reversible ASP and would be located outdoors. Fire hydrants would be located near the receiving area in accordance with *California Fire Code* requirements.

Curing Operation – After feedstocks have been stabilized in the active composting system, additional curing would be completed so that the materials meet regulatory and market requirements. First, material would be physically removed from the ASP piles by using a combination of front-end loaders and conveyors and then placed into curing piles. Curing would be completed by using an outdoor static pile system, with an anticipated residence time of 8 weeks. Up to 78 static piles would be provided for curing, with a total capacity of 85,613 cy.

The ASP and static pile (active and curing) systems would be built over a concrete slab. Working areas around the ASP and static pile systems would consist of compacted gravel base or subbase overlain by heavy-duty asphalt or concrete. Concrete and heavy-duty asphalt surfaces would be designed to withstand the weight of wheel loaders and trucks. These surfaces would be designed, constructed, and maintained to provide a durable working surface and protect groundwater.

Post-Curing Composting Operation – Following curing, material would be relocated to a screening and temporary stockpile area, using front-end loaders and electrically powered conveyors. Materials in the temporary stockpile area would be screened by using an electrically powered stationary trommel or star screen with a 20- to 25-cy feed hopper. The screening equipment may be covered by a light-weight steel-fabric structure to allow for continuous operation during rainy periods.

After screening, the finished product would be stockpiled while awaiting shipping to end users. The screening and product storage areas would have a total capacity of approximately 40,000 cy and 14,030 cy per week, respectively. The finished product storage area would have sufficient space to store roughly 2 months' worth of finished product. This would allow for continued operation during slow product marketing periods (e.g., winter months). It would also allow for product to be further cured before it leaves the facility, which may be necessary for certain markets or end uses. Overs (larger pieces that remain from the screening process) could be reused as an amendment for fresh feedstocks, as biofilter material, reprocessed for landscape applications, or used as a biomass fuel.

Compost Pond – The compost pond in the northern part of the center property, east of the MRF, would be removed or repurposed for noncompost leachate use. If removed, the compost pond may be backfilled with clean soil. A new pond on the western property would be constructed and would have sufficient capacity to avoid overtopping in wet weather.

Composting Operation Odor Control – ASP as an active composting method can have positive effects on odor control. Use of positive ASP includes the placement of a 1-foot biofilter layer (typically finished compost) atop the active ASP piles. In the event the positive ASP is transitioned to a negative or reserve ASP process, the process air collected would be treated by using a stand-alone biofilter. The biofilters would consist of a 5-foot-thick layer of coarse wood chips blended with compost overlying a network of air distribution pipes. The biofilters would be situated on an asphalt or concrete pad, which would be sloped (approximately 1 percent slope) for drainage and for the collection of any leachate. Leachate would be directed to an aerated collection pond. Odor control in the curing operation would be achieved through the implementation and maintenance of good operating practices consistent with the SWOP to be implemented for the proposed project (Appendix C.6), and which includes additional BMPs for the composting operation.

Achievement of Project Objectives – The expansion and redesign of the compost operation would help WPWMA achieve several project objectives, including the following:

- Complying with new state regulations related to organics diversion from landfills
- Stabilizing the costs of composting
- Improving operational efficiencies
- Extending the operational life of current WPWMA facilities
- Expanding the diversion of materials from the landfill
- Reducing GHG emissions
- Enhancing public safety by improving internal circulation
- Enhancing operational flexibility
- Continuing to improve compatibility with adjacent land uses by implementing ASP technologies
- Developing the properties in a manner consistent with the Sunset Area Plan

Differences Between MRF Operations RFP Proposals and Plan Concepts – Vendor proposals received in the MRF Operations procurement process include some variations in the types of materials processed at the organics processing area as well as some differences in how that material is processed (MSW organics composting). Generally, the vendor-proposed organics management operation is being designed to accommodate a total tonnage of 157,550 tons per year of organics: 92,450 tons per year of food waste and the organics fraction of MSW (OFMSW) and 65,100 tons per year of yard waste. This is capacity is comparable to the buildout capacity as the Organics Management Operation in Plan Concept 1 and Plan Concept 2. The inclusion of the OFMSW in the proposed feedstocks is one area that the proposals differ from the plan concepts. It is assumed that this material would be recovered during the sorting process inside the MRF building. Recovering this material would also result in higher diversion rates and less material going to the landfill (as either average daily cover or disposed material). Additional features of the Organics Management Operation represented in the proposals is summarized as follows:

- **Location** – The proposals show the Organics Management Operation located on the center property (which is consistent with Plan Concept 1).
- **Processing Technology** – The technology proposed for processing includes a combination of ASP and covered ASP (CASP). Some form of CASP would be used to process the food waste and OFMSW. One of the proposals uses a biolayer (similar to the proposed project) cover, and one uses a membrane cover. The aeration systems proposed for the food waste and OFMSW is either positive or reverse flow. The two proposals use a biolayer cover on the ASP piles that are processing yard waste. ASP is used for curing all organics feedstocks rather than static piles.
- **Feedstock Receiving Building** – One proposal includes an odor-controlled building for receiving and processing yard waste. This differs slightly from the plan concepts, which include the potential future inclusion of a receiving building for food waste.

- **Stormwater Management** – No changes from plan concepts; stormwater would be managed in the same infrastructure and with the same BMPs for compost stormwater.
- **Utilities and Energy** – The capacity of the Organics Management Operations represented in the proposals is essentially equal to the ultimate capacity of this area in the plan concepts. With the addition of the OFMSW, it is assumed that the timeline for this size facility is required sooner, but that the ultimate capacity is the same. While this would result in an increase in energy use in the near term, in the end, the energy and utilities should be equivalent.

Expanded and Redesigned Construction and Demolition Materials Processing Operations

Summary.

Table 3-7 summarizes the existing environmental baseline conditions related to the C&D material processing operation and how implementation of Plan Concept 1 would change those conditions.

Table 3-7. Summary of Expanded and Redesigned Construction and Demolition Material Processing Operations Under Plan Concept 1

Environmental Baseline	Plan Concept 1	Change
C&D materials processing operation in the northern part of the center property	Expanded C&D materials processing operation on the center property	Increase in the size of the C&D materials processing operation by 2 to 3 times on the center property
58,146 tons per year of C&D material processed plus 29,258 tons per year of inerts processed	174,600 tons per year of C&D material processed, plus 55,200 tons per year inerts	Increase of 116,454 tons per year of processed C&D material and 25,942 tons per year inerts

Detailed Description.

The C&D operations area (that includes a covered receiving area and a C&D materials processing line) in the northern part of the center property would be expanded and redesigned to improve operational efficiencies, accommodate growth in the waste stream, and respond to increased state-mandated diversion requirements (e.g., CALGreen Building Standards) and the needs of Participating Agencies. The expanded C&D materials processing operations would cover the area that currently includes the existing C&D operations and existing composting operations to the east of the existing MRF operations. The expanded C&D operations would cover approximately 2 to 3 times the area of the existing C&D operations and would be designed to accommodate new processing equipment capable of handling the projected tonnage. A canopy structure would be constructed to shield the processing area from weather elements.

The existing C&D area processes approximately 58,146 tons of C&D material plus 29,258 tons per year of inerts. Within 30 years, the expanded and redesigned C&D materials processing operation is estimated to process up to 174,600 tons per year of C&D materials.

The C&D materials processing area may also support the receipt, stockpiling, and processing of inert materials. Up to 55,200 tons per year of inert material would be processed at the WPWMA facility by 2050. However, inert materials may also be stockpiled and processed at various areas throughout the site. For example, materials to be used for road base may be stockpiled and processed adjacent to the main onsite landfill haul roads.

Achievement of Project Objectives – The expansion and redesign of the C&D operations would help WPWMA achieve several project objectives, including the following:

- Complying with new state regulations related to C&D material diversion
- Stabilizing the costs of C&D operations
- Improving operational efficiencies
- Extending the operational life of the current WPWMA facility
- Increasing the diversion of materials from the landfill
- Reducing GHG emissions
- Enhancing public safety by improving internal circulation
- Enhancing operational flexibility
- Conducting operations in the most environmentally responsible manner possible
- Developing the properties in a manner consistent with the Sunset Area Plan

Expanded and Redesigned Public Waste Drop-Off Area Operations

Summary.

Table 3-8 summarizes the existing environmental baseline conditions related to public waste drop-off area operations and how implementation of Plan Concept 1 would change those conditions.

Table 3-8. Summary of Expanded and Redesigned Public Waste Drop-Off Area Operations Under Plan Concept 1

Environmental Baseline	Plan Concept 1	Change
Public waste drop-off area in the northern part of the center property includes a public tipping area, drop-off area for buy-back materials and HHW, and an entrance kiosk	The public waste drop-off area would be expanded, redesigned, and relocated to the central part of the western property. New facilities would include a public tipping area, material buy-back center, HHW drop-off area, reuse store, and entrance kiosk with vehicle queuing.	Existing public waste drop-off area relocated, redesigned, and expanded, with the addition of a reuse store.
44,194 tons per year received	Public waste drop-off area operations would receive up to 83,300 tons by 2050	Increase in public waste drop-off area operations by up to 39,106 tons by 2050

Detailed Description.

The existing public waste drop-off area, which consists of a public waste tipping area, buy-back center, and HHW facility, is located in the northern part of the center property. The expanded public waste drop-off area would be redesigned and relocated to the western property to enhance the safety and convenience of public customers by separating them from the more active commercial waste management operations. The public waste drop-off area operations are proposed to include a public waste tipping area, a material buy-back and sales center, an HHW waste drop-off area, a reuse store, and an entrance kiosk with vehicle queuing lanes.

The public waste tipping area currently accepts MSW, C&D, electronic wastes, tires, and appliances. In general, material received at the public waste tipping area may include any of the materials accepted for Waste Recovery or Waste Disposal. These same waste materials would be accepted at the expanded tipping area. The customer unloading area would be a flat slab instead of the current split-grade, Z-wall

configuration for operational safety and flexibility. The tipping floor would have several slots, in an open configuration, for customers to back into and unload their materials. Customers would unload material into piles on one side of the tipping area, while operations staff would remove material from the opposite side. The piles would serve as a barrier between customers and operations staff and equipment. Operations staff would load materials into roll-off bins.

The tipping area and waste handling area would be located on a concrete pad. All other surfaces of the drop-off area would be paved with heavy-duty asphalt. The concrete and heavy-duty asphalt surfaces would be designed, constructed, and maintained to provide a durable working surface and protect groundwater.

Approximately 26 tipping slots would be provided at the public tipping floor for customers to unload MSW, C&D, green waste, and wood waste. Tires would be accepted in 40-cy bins, with loading conducted at grade. Appliances would be accepted at a loading dock and placed onto trailers. Mattresses and carpet would be accepted and placed into 53-foot trailers or 40-cy bins by loaders or forklifts. A roll-off bin truck would be used to transport full bins to the MRF, C&D processing area or organics processing area after being weighed at the scale house.

The buy-back center is currently co-located with the HHW receiving area within the public waste drop-off area and is where clean, source-separated recyclables can be dropped off free of charge, and glass, plastic, and aluminum California Redemption Value (CRV) beverage containers can be turned in for a refund. The HHW receiving area receives hazardous materials from the public and small-quantity generators. These activities would be relocated to the western property and expanded to include a new material buy-back center, a new HHW drop-off area, and a reuse store. The material buy-back center, HHW drop-off area, and reuse store would be located near the entrance kiosk. These facilities are intended to encourage the diversion of waste from the landfill by allowing customers to sell or donate usable items rather than disposing of them, to purchase used items rather than buying new items, and to conveniently drop off HHW and recyclables.

The buy-back center would have approximately six unloading positions, and the HHW drop-off area would have approximately four unloading positions. The reuse store would have parking spots to enable customers to go inside to conduct transactions. Surface water from outside of the public waste drop-off area would be diverted away from the operating areas by using ditches, swales, and berms. Runoff from the public waste drop-off area would be captured through a combination of ditches and swales and would be transferred to the western property's detention pond. Fire hydrants would be located in close proximity to the public waste drop-off area, consistent with *California Fire Code* requirements.

Achievement of Project Objectives – The expansion and redesign of the public waste drop-off area would help WPWMA achieve several project objectives, including the following:

- Stabilizing the costs of waste acceptance activities
- Improving operational efficiencies
- Extending the operational life of the current WPWMA facility
- Increasing the diversion of materials from the landfill
- Reducing GHG emissions
- Enhancing public safety by improving internal circulation
- Improving convenience for public customers
- Enhancing operational flexibility
- Conducting operations in the most environmentally responsible manner possible
- Developing the properties in a manner consistent with the Sunset Area Plan

Environmental Control Measures Implementation

Summary.

Table 3-9 summarizes the existing environmental baseline conditions related to Waste Recovery environmental control measures and how implementation of Plan Concept 1 would change those conditions.

Table 3-9. Summary of Environmental Control Measure Implementation Under Plan Concept 1

Environmental Baseline	Plan Concept 1	Change
Environmental control measures are implemented in a manner consistent with regulations to protect public health and the environment	Expanded Waste Recovery operations would require the continued implementation of environmental control measures, including dust control, litter control, nuisance control, odor control, and load checking	Existing environmental control measures would continue to be implemented with the expanded Waste Recovery operations

Detailed Description.

Existing Waste Recovery environmental control measures are described in Section 1.5.2.5 of Chapter 1, Introduction. Environmental control measures include dust control, litter control, nuisance control, odor monitoring and control, and load checking. These environmental control measures are implemented in accordance with the requirements of *California Code of Regulations* (CCR) Title 27.

With the expansion in Waste Recovery operations at the composting operation, C&D materials processing operations, and public waste drop-off area, the continued implementation of these environmental control measures would be required. Although Waste Recovery operations would expand, no substantial change in these measures or how they would be implemented is expected. However, odor monitoring and control for Waste Recovery operations would be improved by implementing the SWOP, included in Appendix C.6.

Achievement of Project Objectives – The continued implementation of environmental control measures would help the WPWMA achieve the project objectives of conducting operations in the most environmentally responsible manner possible.

3.5.3 Waste Disposal Operations

Waste Disposal operations at the WPWMA facility consist of operation of the WRSL. Plan Concept 1 includes changes to the Waste Disposal operations that occur at the WRSL, including landfill disposal capacity expansion, an increase in the tonnage acceptance limit, the elimination of the permitted vehicle limit, modifications in the landfill environmental monitoring and control systems, and the proposed excavation and relocation of previously disposed waste in areas that do not have a Subtitle D-compliant liner system. These changes are described in Sections 3.5.6 through 3.5.9. Plan Concept 1 does not include any changes in the sources or types of waste accepted, the typical Waste Disposal operations (for example, load checking, daily cover placement, intermediate cover placement), the nuisance control measures (with the exception of improved odor controls with implementation of the SWOP), or the closure plan for the WRSL.

Increased Landfill Waste Disposal

Summary.

Table 3-10 summarizes the existing environmental baseline conditions related to Waste Disposal and how implementation of Plan Concept 1 would change those conditions.

Table 3-10. Summary of Tonnage and Vehicle Limit Changes Under Plan Concept 1

Environmental Baseline	Plan Concept 1	Change
Baseline annual disposed tons = 288,838	Projected annual disposed tons = 533,654	Projected increase in annual tons = 244,816
Material Tonnage Permit Limits	Waste Recovery operations limited to 1,750 tpd; Waste Disposal operations limited to 1,900 tons per day	Sitewide solid waste management activities limited to a rolling 7-day average of 4,000 tpd
Vehicle Permit Limits	Waste Recovery operations limited to 1,014 vehicles per day; Waste Disposal operations limited to 624 vehicles per day	The permitted vehicle limits for Waste Recovery and Waste Disposal operations would be eliminated

Detailed Description.

As illustrated on Figures 1-4 and 3-2, the WPWMA generally projects an average 2 percent annual increase in the amount of waste accepted for disposal at the WRSL over the project period, with interim adjustments in select years to account for increased diversion through improved Waste Recovery capabilities, such as at the Organics Management Operation and the C&D Materials Processing Operation. This estimated increase in the waste stream requiring disposal at the WRSL reflects anticipated regional growth trends, current and future stability and health of recyclables markets and regulatory requirements related to landfill disposal. These future Waste Disposal estimates are independent of any proposed changes to the current WRSL configuration identified in Plan Concept 1. Any considered changes to the WRSL configuration are in response to the estimated growth in the waste stream requiring disposal.

Assuming that the individual daily waste acceptance rates, including the peak acceptance days, also escalate at an average annual rate of 2 percent, the disposal metrics would change as follows:

Waste Disposal Metric	2018 (Actual)	2050 (Estimated)
Average weekday disposal rate	1,113 tons	1,755 tons
Total (annual) waste disposed	294,923 tons	456,400 tons

Source: Oddo, pers. comm. 2020

Achievement of Project Objectives – The increase in the Waste Disposal tonnage limit and the removal of vehicle count limit would help WPWMA achieve several project objectives, including the following:

- Maximizing Waste Disposal capacity to accommodate anticipated long-term growth for as long as possible
- Maintaining a stable and relatively predictable cost structure
- Improving operational efficiencies

Expanded Landfill Disposal Capacity

Summary.

Table 3-11 summarizes the existing environmental baseline conditions related to landfill disposal capacity and how implementation of Plan Concept 1 would change those conditions.

Table 3-11. Summary of the Proposed WRSL Capacity Increase Under Plan Concept 1

Environmental Baseline	Plan Concept 1	Change
Landfill located on the center property	Landfill located on the center and eastern properties	Waste footprint expanded to eastern property
Landfill height – 196 feet above msl. Baseline permitted peak elevation – 295 feet AMSL	Proposed permitted peak landfill elevation – 325 feet AMSL	Height increase above current conditions – 129 feet. Height increase above currently permitted conditions – 30 feet
Permitted Waste Disposal footprint of 231 acres	Proposed Waste Disposal footprint of 320 acres	Increase in Waste Disposal footprint by 89 acres
Permitted capacity = 36.3 million cy	Proposed permitted capacity = 81.4 million cy	Increase in permitted capacity = 45.1 million cy
Waste capacity exhausted in approximately 2058	Waste capacity exhausted in approximately 2101	Estimated 43-year increase in landfill site life
Maximum depth of landfill excavation for module development – 57 feet AMSL	Proposed maximum depth of landfill excavation for module development – 57 feet AMSL	No change in depth of landfill excavation
Eventual relocation of current composting and C&D operations on Module 9 to allow for future development of this module for landfill disposal	Continued use of Module 9 for processing and recycling operations. Module 9 would not be excavated for landfill disposal	Elimination of Module 9 for future Waste Disposal

Detailed Description.

Waste Disposal activities are currently allowed within the boundaries of the existing 231-acre permitted landfill footprint on the center property. Plan Concept 1 includes expanding the WRSL footprint onto the eastern property to create a total contiguous landfill footprint of approximately 320 acres. Plan Concept 1 also includes increasing the permitted height of the WRSL to 325 feet AMSL, or approximately 30 feet above the currently permitted peak elevation of 295 feet AMSL and 129 feet above the WRSL's existing height of 196 feet AMSL (as of aerial mapping dated January 2, 2019).

As of June 30, 2019, the WRSL had a remaining disposal capacity of approximately 23.6 million cy. Based on projected Waste Disposal trends and the currently permitted maximum capacity of approximately 36.3 million cy, the WRSL is estimated to reach final capacity in 2058 (Golder Associates Inc. 2017). With the proposed footprint expansion and height increase, the WRSL's total permitted Waste Disposal capacity would increase by approximately 45.1 million cy to a total of approximately 81.4 million cy. As a result, the WRSL's remaining site life is estimated to extend to approximately the year 2101.

These site life projections are strongly affected by growth in the waste stream. For example, if waste stream growth consistently exceeds the assumed growth rates, then the site life will decrease. Other factors also affect the WRSL's site life, including the refuse-to-soil ratio achieved when applying daily and intermediate soil cover, the recovery rate achieved at the MRF, the tonnage of organics diverted from the landfill, and actual settlement of the waste.

Within the existing WRSL footprint, the pre-landfill-development elevations ranged from approximately 106 feet AMSL in the southwestern corner to approximately 134 feet AMSL in the center part of the site. The maximum depth of landfill excavation within the existing WRSL footprint to accommodate the development of Waste Disposal modules is 57 feet AMSL.

For the eastern property, current ground surface elevations range from 111 feet AMSL along the southern property boundary to 131 feet AMSL in the central part of the property. The maximum depth of landfill excavation proposed within the eastern property to accommodate the development of Waste Disposal modules would be to a depth of 57 feet AMSL. Therefore, there would be no change in the maximum depth of landfill excavation with implementation of Plan Concept 1.

The existing compost and C&D recovery operations located on the part of the WRSL designated as Module 9 are currently planned to be relocated when Module 9 is ultimately needed for Waste Disposal. However, Plan Concept 1 assumes that Module 9 would not be converted to a landfill module in the future but would continue to be used for Waste Recovery operations. Eliminating the use of Module 9 for Waste Disposal operations would reduce the WRSL's currently permitted disposal capacity. However, this reduction would be substantially offset by the additional capacity realized by developing landfill capacity on the eastern property. The total permitted Waste Disposal capacity estimates discussed previously for Plan Concept 1 reflect the increase in capacity associated with the eastern expansion and the capacity reduction caused by the elimination of Module 9.

With the implementation of Plan Concept 1, the additional Waste Disposal capacity provided by an eastern expansion would be available following project approval and the issuance of all applicable permits but would only be developed as needed. Figure 3-3 identifies the anticipated sequence in which existing and future landfill modules would be filled. Based on this anticipated fill sequence, Figure 3-4 identifies the estimated elevation and contours of the existing and expanded WRSL in the year 2050. Figure 3-5 identifies the final elevation and contours of the WRSL once it reaches full capacity, which is estimated to occur in the year 2101.

WRSL Operation Odor Control – As described in Chapter 1 (Section 1.6.3.10), the existing WRSL implements a series of BMPs in order to minimize the potential for offsite odors from aerobic decomposition of waste (primarily from the landfill working face). In addition to the existing BMPs, the WPWMA would implement a SWOP for the proposed project (Appendix C.6), which includes additional BMPs for landfill operation.

Achievement of Project Objectives – The expansion of landfill disposal capacity would help WPWMA achieve several project objectives, including the following:

- Maintaining a stable and relatively predictable cost structure
- Improving operational efficiencies
- Extending the operational life of the current WPWMA facilities
- Increasing the permitted landfill footprint and height to optimize the efficient use of land for Waste Disposal

- Providing sufficient Waste Disposal capacity to accommodate anticipated long-term growth
- Enhancing operational flexibility
- Developing the properties in a manner consistent with the Sunset Area Plan

Landfill Environmental Monitoring and Control Systems

Summary.

Table 3-12 summarizes the existing environmental baseline conditions related to landfill environmental monitoring and control systems and how implementation of Plan Concept 1 would change those conditions.

Table 3-12. Summary of Landfill Environmental Monitoring and Control System Changes Under Plan Concept 1

Environmental Baseline	Plan Concept 1	Change
A combination of non-Subtitle D and Subtitle D-compliant (composite) lined modules exists within the WRSL permitted footprint; double-composite landfill liners will be installed in new modules constructed within the existing permitted landfill footprint	Double-composite landfill liners would be installed in any future modules, consistent with current practice	No changes in the liner systems are proposed with this Plan Concept. Future modules are proposed to include double-composite liners, consistent with current practice
Continued operation of the existing leachate management system, surface water management system, and LFG management system and expansion of these systems within the existing permitted landfill footprint	The environmental management systems would be expanded to accommodate the expanded landfill footprint and height	Expanded environmental management systems to reflect the expanded landfill footprint and height
Environmental monitoring systems and programs are in place in compliance with current regulations for leachate, surface water, groundwater, and perimeter LFG	The environmental monitoring systems and programs would be expanded based on the landfill footprint and applicable regulatory requirements	Expanded environmental monitoring systems and programs to reflect the expanded landfill footprint

Detailed Description.

The existing WRSL incorporates various environmental monitoring and control systems designed to eliminate, minimize, or identify potential environmental impacts and nuisances. The following environmental control systems are integrated into the current WRSL operations and would be expanded as the WRSL footprint expands:

- Double-Composite Landfill Liner System
- Leachate Management System
- Surface Water Management System
- LFG Management System
- Groundwater Monitoring System

Figure 3-3. Plan Concept 1 WRSL Anticipated Fill Sequence
Draft Environmental Impact Report
Renewable Placer: Waste Action Plan
Placer County, California

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Notes:

Locations are approximate.

Existing contours based on June 30, 2017 survey.

Estimated Air Space Consumed by 2050
19,500,000 CY

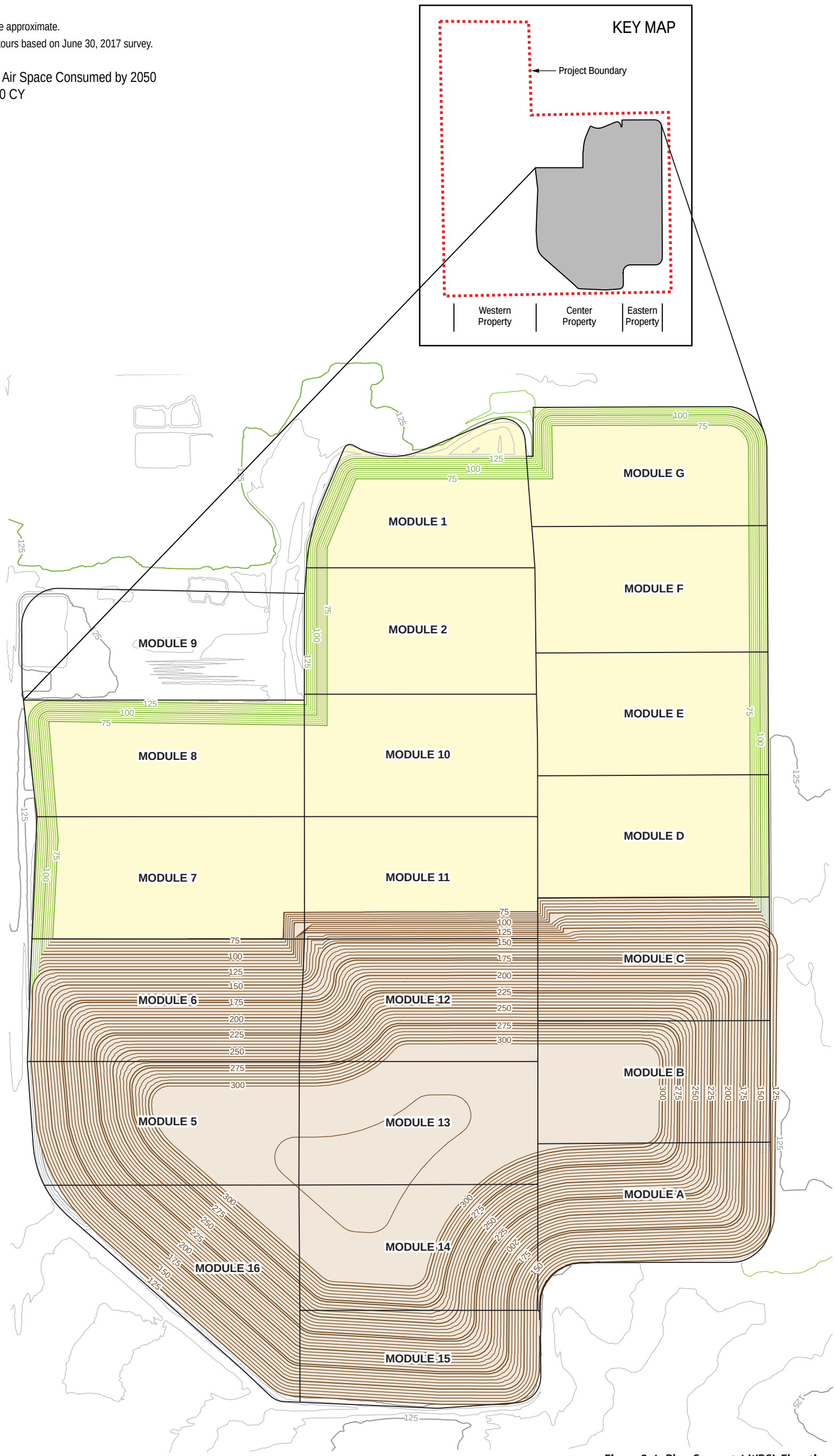

Figure 3-4. Plan Concept 1 WRSL Elevation and Contours Estimated in Year 2050
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Placer County, California

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Notes:

Locations are approximate.

Existing contours based on June 30, 2017 survey.

Estimated Air Space
81,400,000 CY

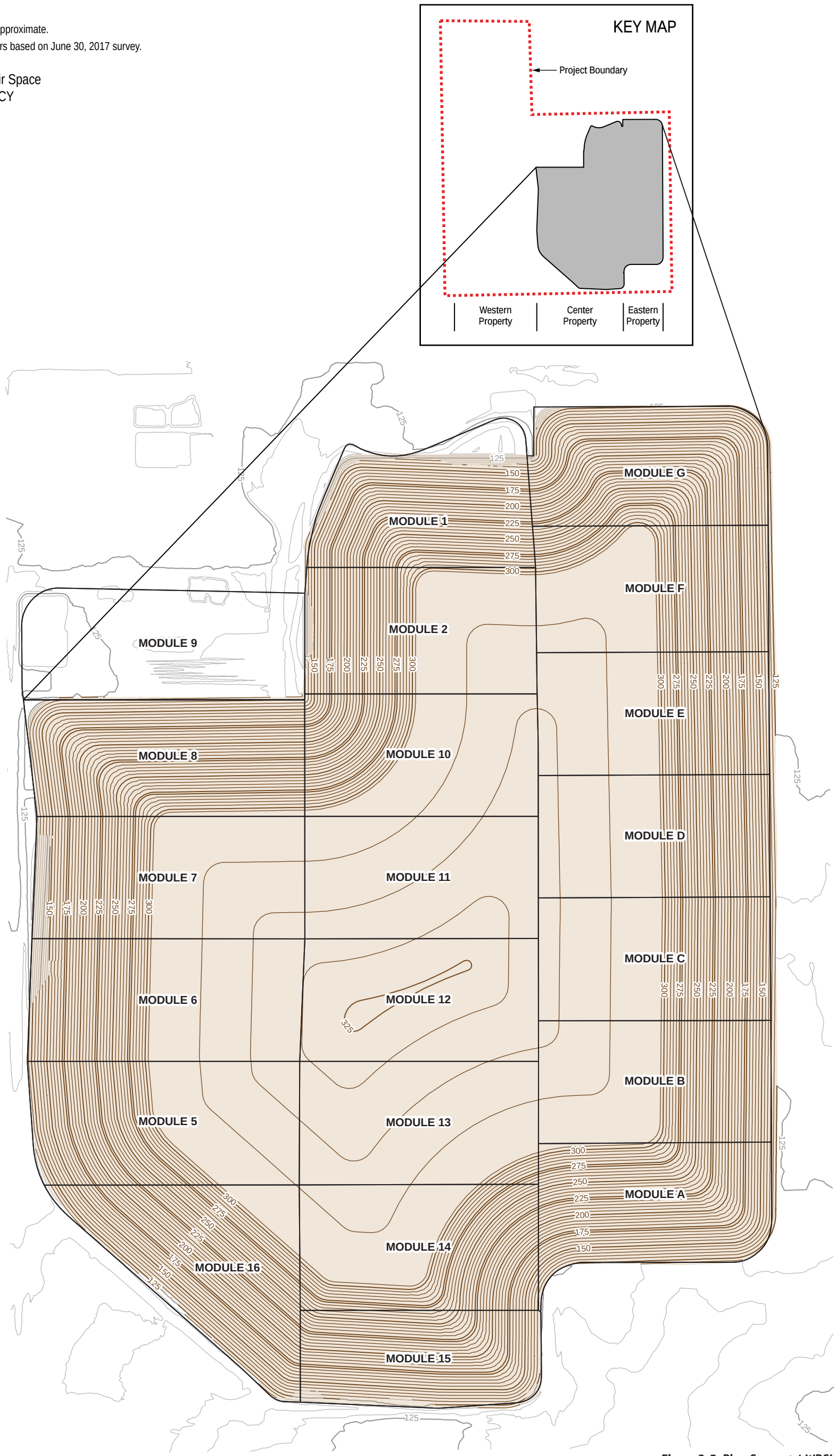

Figure 3-5. Plan Concept 1 WRSL Final Closure Peak Elevation and Contours
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Renewable Placer: Waste Action Plan
Placer County, California

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Environmental monitoring and reporting occurs for leachate, surface water, groundwater, and LFG. Existing environmental monitoring systems for the WRSL are shown on Figure 1-7, and the expansion of these systems for Plan Concept 1 is shown on Figure 3-6.

Double-Composite Landfill Liner System – Landfill liner systems are designed to contain waste materials, including liquids, and prevent them from coming into contact with the underlying soil or groundwater. As described in the Landfill Module Development Phasing discussion included in Chapter 1, the liner systems for the existing modules on the site vary, depending on when they were constructed. Because Modules 1, 2, 10, and 11 were constructed prior to implementation of Subtitle D regulations, they do not have Subtitle D-compliant liner systems. Plan Concept 1 includes excavating and relocating the waste in these modules to a new Subtitle D-compliant, double-composite lined module. The excavation area is proposed to be reengineered to include a Subtitle D-compliant, double-composite liner to accommodate future landfill disposal needs. For more discussion regarding the potential excavation and relocation of waste within Modules 1, 2, 10, and 11, see the discussion of Excavation of Existing Solid Waste (Section 3.5.3.4). In addition, any new modules constructed within the existing permitted landfill footprint or within the expanded footprint proposed on the eastern property would include Subtitle D-compliant, double-composite landfill liner systems. The existing and future liner system is illustrated on Figure 1-8.

Leachate Management System – The leachate collection and removal system (LCRS) is designed to provide efficient collection and removal of liquids that come into contact with and leach through the waste mass (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 modules, as described in the Landfill Module Development Phasing discussion included in Chapter 1. However, the overall system generally consists a gravel layer as part of the base liner system that serves to direct leachate to a low area, or sump. Riser pipes extend down to the base of the sump and include a dedicated pump to facilitate regular removal of leachate from the landfill. Leachate extracted from the sumps is conveyed through a series of pipes to the sanitary sewer via a maintenance hole located north of the LFG blower and flare station. The expansion of the LCRS associated with landfill expansion would include the extension of the gravel layer of the base liner system and the installation of additional riser and collection pipes. The removed leachate would continue to be conveyed through the expanded collection pipe system to the maintenance hole north of the flare station.

Surface Water Management System – The WRSL's surface water management system consists of drainage ditches, berms, culverts, and down-drains that direct stormwater through a perimeter channel to two existing detention basins, one located in the site's northeastern corner and the other located in the wetland area in the site's southwestern corner. Similar surface water control infrastructure would be installed for the expanded landfill. This infrastructure would include drainage ditches, berms, culverts, down-drains, and perimeter channels. Additional stormwater detention ponds would also be installed, as described in the discussion of supporting facilities. This stormwater management infrastructure would be sized to accommodate the 1,000-year, 24-hour storm event as required by Title 27 CCR §20365. The detention basins would be designed to release controlled flows into existing offsite drainage channels, as required by Placer County standards.

Landfill Gas Management System – 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 gasses. LFG also includes trace amounts of volatile organic compounds (VOCs), sulfur-based compounds, and ammonia, all of which can contribute to LFG odors. The WRSL's LFG management system, described in Section 1.3.6.9, would be expanded as the WRSL expands, including the construction of additional LFG extraction wells and support structures and facilities. Figure 3-6 shows the anticipated expansion of the LFG management system. While the enclosed ground flare is currently sized to combust all LFG generated by the current landfill when needed (and will

be upgraded as necessary in the future), WPWMA intends to continue using the LFG to produce and sell electricity (currently via a third-party energy developer) as a beneficial reuse. In addition, a component of Plant Concept 1 includes the possible construction of an LFG-to-compressed natural gas facility, hydrogen, or other renewable fuel on the western property (Figure 3-1). This facility is described in more detail under the discussion of complementary and programmatic elements. With the installation of this facility, WPWMA would have the ability to produce and sell vehicle-grade or pipeline-grade compressed natural gas, hydrogen or other renewable fuels.

As described in Chapter 1 (Section 1.6.3.10), the WPWMA implements BMPs to minimize the potential for offsite odors from LFG. In addition to the existing BMPs, the WPWMA would implement a SWOP for the proposed project (Appendix C.6), which includes additional BMPs for WPWMA's LFG management system.

Groundwater Monitoring System – Groundwater monitoring is performed on a quarterly basis at the WRSL in accordance with the Monitoring and Reporting Program (MRP) described in WDR Order No. R5-2007-0047 (CVRWQCB 2007). The groundwater monitoring network consists of 39 groundwater monitoring wells across the site as follows:

- 12 wells associated with the Corrective Action Program (CAP) (MW-5, CW-5S, CW-5M, CW-5D, MW-9, CW-9S, CW-9M, CW-9D, MW-10, MW-11R, MW-13, and MW-23R) sampled quarterly
- 24 downgradient wells associated with the Detection Monitoring Program (MW-2, MW-3, MW-6, MW-7, CW-7S, CW-7M, CW-7D, MW-8, MW-12, MW-14 through MW-18, CW-19S, CW-19M, CW-19D, MW-22, MW-24, CW-25S, CW-25M, and CS-25D sampled semiannually, and MW-19 and MW-20 sampled quarterly)
- 2 upgradient (background) wells (LW-1 and MW-4) sampled annually
- Well MW-1 used for water level monitoring only

The 15 "CW" cluster wells were installed to monitor the shallow (-S), intermediate (-M), and deep (-D) intervals of the uppermost water-bearing zone and are sampled by using a portable electric submersible pump. All other monitoring wells are screened in the uppermost water-bearing zone and, with the exception of well LW-1, are equipped with a dedicated submersible pump used for purging and to retrieve groundwater samples. Well LW-1 is purged and sampled by using a disposable bailer. A similar and expanded groundwater monitoring system would be installed to accommodate the expansion of the WRSL.

Achievement of Project Objectives – The proposed changes to the landfill environmental monitoring and control systems would help WPWMA achieve project objectives, including the following:

- Complying with applicable regulations
- Conducting operations in the most environmentally responsible manner possible

Notes:

Locations are approximate.

Existing contours based on June 30, 2017 survey.

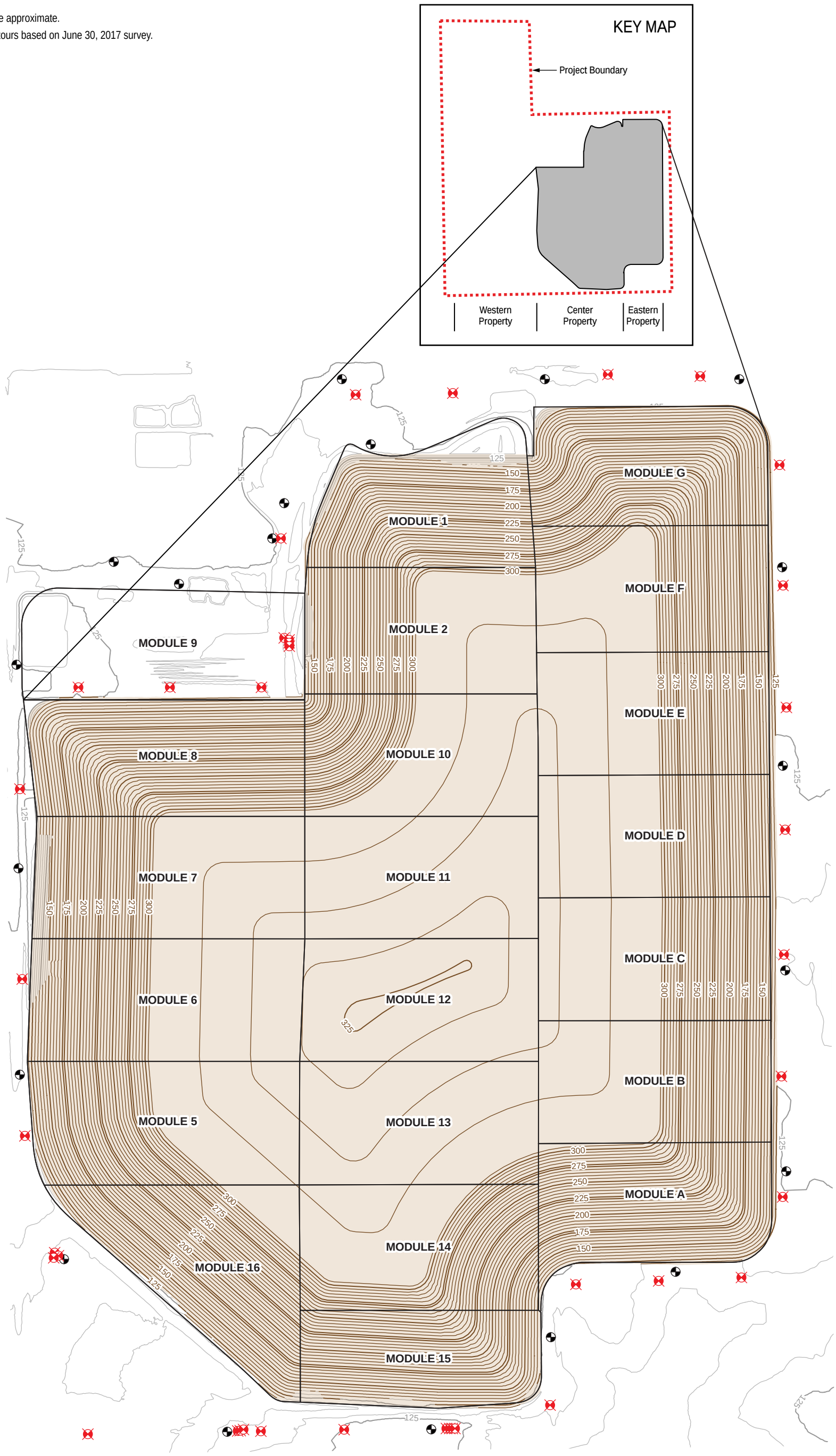

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Figure 3-6. Plan Concept 1 WRSL Environmental Monitoring Systems

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Renewable Placer: Waste Action Plan

Placer County, California

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Excavation of Existing Solid Waste

Summary.

Table 3-13 summarizes the existing environmental baseline conditions related to excavation of existing solid waste and how implementation of Plan Concept 1 would change those conditions.

Table 3-13. Summary of Solid Waste Excavation Changes Under Plan Concept 1

Environmental Baseline	Plan Concept 1	Change
Modules 1, 2, 10, and 11 are closed, and no additional waste will be placed in these modules	Modules 1, 2, 10, and 11 would be excavated and the contents relocated to an onsite Subtitle D-compliant module; Excavated modules would be lined with a Subtitle D-compliant liner and reused for future Waste Disposal when needed	Buried waste would be excavated and relocated; Excavated modules would be reused for Waste Disposal
Peak elevations of Modules 1, 2, 10, and 11 do not exceed approximately 170 feet AMSL	Peak elevations of reused Modules 1, 2, 10, and 11 would increase to between 320 and 325 feet, depending upon the individual module	Increase in peak elevations of between 150 and 155 feet for Modules 1, 2, 10, and 11

Detailed Description.

Physical Waste Relocation Activities – Plan Concept 1 includes excavating the contents of Modules 1, 2, 10, and 11, which encompass approximately 66 acres, and relocating the contents to a Subtitle D-compliant lined module within the permitted landfill footprint.

Waste relocation activities at the pre-Subtitle D area would include removal of leachate and LFG collection infrastructure, buried waste, soil cover, and as appropriate, any underlying soils affected by a release from the landfill and posing a threat to water quality or the environment. The estimated total volume of waste material within the pre-Subtitle D modules is 3,646,000 cy (Golder Associates Inc. 2018). This includes final cover soils, Class III nonhazardous solid waste, and daily and interim soil cover. The Class III nonhazardous solid waste is assumed to include mixed municipal wastes, C&D debris, yard wastes and rubbish, and inert materials such as concrete and white goods (for example, appliances) (Golder Associates Inc. 2018). The relocation of the contents of these modules to new modules is estimated to require a total of 300 days to complete but may be implemented in phases (Golder Associates Inc. 2018). Although the excavation of these modules would not need to occur immediately under Plan Concept 1 and could be delayed until the additional landfill capacity is needed, this EIR assumes these activities would occur from 2045 to 2050, although WPWMA may proceed sooner with the excavation, based on economic, technical, or environmental factors.

A contractor is likely to be hired to conduct the excavation activities and would be responsible for identifying, on a daily basis, the area of excavation and for stripping the existing final cover soils that are not affected by waste. The contractor would stockpile these soils in a designated area. The contractor would excavate the remainder of the contents, including waste and commingled cover soils, and place them into trucks for transport to the designated disposal areas onsite. WPWMA staff would be responsible for confirming that the waste materials are disposed in conformance with site permits and applicable laws and regulations. Excavation would proceed until reaching the base of waste. The excavation would

progress laterally across the designated excavation area. Trained personnel provided by the contractor would observe the excavation process to identify any nonconforming waste materials, including hazardous waste, which would be sent offsite for proper handling and would not be relocated to an onsite landfill module for reburial. Trained personnel provided by the contractor would also observe the exposed subgrade soils to identify any areas that may be affected by a release from the landfill (Golder Associates Inc. 2018).

Available geologic information indicates that the pre-Subtitle D area lies primarily above stream-laid alluvial deposits of arkosic gravel, sand, silt, and clay. In some areas, it is anticipated that excavation would extend into the underlying gravel, sand, silt, and clays. Actual grades and conditions may vary and would be determined at the time of excavation. Anticipated excavation depths range from 10 to 66 feet, based on available information. Waste relocation activities would include excavation and stockpiling of almost 428,000 cy of final cover soil that is not anticipated to be significantly affected by waste materials (Golder Associates Inc. 2018). The clean cover soils would be reused elsewhere on the site as landfill cover or as temporary fill in excavated areas.

The contractor would be responsible for covering exposed waste at the end of each work day with a minimum of 6 inches of compacted earthen material or an approved alternative daily cover (such as tarps) to control vectors, fires, odors, blowing litter, and scavenging. The contractor would place intermediate cover over exposed waste and temporary waste slopes where no additional waste excavation or waste relocation work would occur within 180 days. Intermediate cover would consist of a minimum 1-foot-thick layer of compacted earthen material, including daily cover soil. There are no approved alternative materials for intermediate cover. The intermediate cover would protect otherwise exposed waste, thereby controlling vectors, fires, odors, blowing litter, and scavenging during any potential lapses in waste relocation activities (Golder Associates Inc. 2018).

The contractor would provide for positive drainage at the top of excavation slopes to control stormwater run-on into the excavation. The remaining excavation would be graded such that precipitation from the 100-year, 24-hour design storm would drain and prevent water from rising above the waste at the toe of the temporary waste slope. This would prevent ponding water from posing a threat for seeping into buried waste and causing a potential for leachate development. WPWMA personnel or their designee also would visit the site after qualifying precipitation events and at least once a week in the wet season and verify that ponded water is pumped to stormwater if clean or to sewer if not, as needed. Slopes that would be cut from native soils would be constructed without intermediate cover (Golder Associates Inc. 2018).

Excavated areas to be developed with a Subtitle D composite liner system would be graded at roughly 1.5 to 3.5 percent to flow to the eastern central edge of the excavation. Slopes would be seeded at the conclusion of construction to control erosion. Additional erosion controls such as diversion berms, hay bales, and straw wattles would be used as necessary during construction in accordance with applicable surface water pollution prevention plans (Golder Associates Inc. 2018).

Although it is anticipated that primarily MSW would be encountered, there is the potential to encounter hazardous or nonconforming wastes during the waste relocation. Hazardous wastes are defined in Title 22 of the CCR Section 66261.3. Hazardous wastes have the following characteristics:

- They are ignitable, corrosive, reactive, or toxic.
- They have the potential to cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness.
- They have the potential to pose a substantial present or potential hazard to human health or the environment, because of factors including their carcinogenicity, acute toxicity, chronic toxicity,

bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed.

Nonconforming wastes comprise other waste material that is not accepted at the landfill, excluding hazardous waste, and include the following:

- Wastes containing soluble pollutants in concentrations that exceed applicable water quality objectives, or that could cause degradation of waters of the state, according to *California Water Code* Section 13173.
- Cathode ray tubes from televisions and computer monitors.
- Electronic wastes such as televisions and refrigerators.

The contractor would be required to develop and implement a contingency plan in the event that hazardous or nonconforming wastes are encountered during waste relocation. The contractor would be required to base the contingency plan on guidelines issued by the State of California Governor's Office of Emergency Services (CA OES 2001).

Waste Excavation Odor Control – The BMPs included in the SWOP (Appendix C.6) to be implemented for the proposed project associated with landfill operation would apply to waste excavation activities.

Reuse of Excavated Waste Modules – Because Modules 1, 2, 10, and 11 have been closed, they have reached their peak elevation of approximately 170 feet AMSL, and no additional waste can be placed on top of the modules. However, if the waste is removed from these modules, they can be reused for Waste Disposal with the installation of a Subtitle D-compliant liner system. Plan Concept 1 includes reusing the excavated modules for Waste Disposal. Through this reuse, the peak elevation of these modules would increase to match the elevations of the other landfill modules. As a result of reusing these modules, the WRSL's total disposal capacity would increase because the peak elevation of these modules would be substantially higher once refilled (that is, up to 325 feet versus 170 feet AMSL).

Achievement of Project Objectives – The excavation of existing solid waste would help the WPWMA achieve several project objectives, including the following:

- Maintaining a stable and relatively predictable cost structure
- Extending the operational life of the current WPWMA facility
- Increasing the height of parts of the landfill to optimize the efficient use of land for Waste Disposal
- Providing sufficient Waste Disposal capacity to accommodate anticipated long-term growth

3.5.4 Complementary and Programmatic Elements

Summary

Table 3-14 summarizes the existing environmental baseline conditions related to complementary and programmatic elements and how implementation of Plan Concept 1 would change those conditions. Plan Concept 1 generally locates the 1.9 million square feet of complementary elements on the northern and southern extents of the western property, with some activities on the center property. For purposes of this EIR, up to 300,000 square feet of building associated with the complementary elements plus associated outdoor infrastructure are considered at a project level. For purposes of analysis, these industrial uses are assumed to be located on the northern part of the western property (Figure 3-1).

Table 3-14. Summary of Complementary and Programmatic Elements Under Plan Concept 1

Environmental Baseline	Plan Concept 1	Change
Grazing operations on the eastern property, solid waste operations on the center property, and irrigation and model airplane operations on the western property	Project Level – Development of up to 300,000 square feet of building plus exterior infrastructure for complementary solid waste management elements. Industrial uses may include compatible technologies, pilot study areas, university research areas, and an LFG to compressed natural gas area	Project Level – Development of up to 300,000 square feet of industrial uses
	Program Level – Up to 1.6 million square feet of industrial uses that are complementary to the solid waste management elements	Program Level – Development of up to 1.6 million square feet of industrial uses
	Project Level – Located on the northern part of the western property, plus locations on the center property	Project Level – Complementary and programmatic elements primarily in the northern part of the western property
	Program Level – Primarily in the northern and southern parts of the western property, plus locations on the center property; although some uses may be developed in closer proximity to the solid waste project elements or within areas not yet developed with solid waste project elements	Program Level – Complementary and programmatic elements primarily on the northern and southern part of the western property, plus locations on the center property

Detailed Description

The complementary and programmatic elements include the development of compatible technologies, pilot study areas, university research areas, and a LFG to compressed natural gas, hydrogen or other renewable fuel production and vehicle-fueling area. On the project level, these are assumed to be located on the northern part of the western property and may include compatible technologies or pilot studies. On a program level, areas have been designated in the northern and southern parts of the western property to accommodate development of compatible technologies and university research uses. Potential pilot studies are proposed to be located in these areas in addition to areas east of the MRF operations on the center property. The LFG to compressed natural gas, hydrogen, or other renewable fuel-production and vehicle-fueling area is proposed to be located in the southern part of the western property.

The complementary and programmatic elements are anticipated to include solid waste-oriented industrial uses that could include warehouses, light-manufacturing plants, processing plants, research and development labs, offices, and other supporting infrastructure. The allowable uses are dictated by the site's land use and zoning designations identified in the Sunset Area Plan (Placer County 2018). The applicable Sunset Area Plan goals, policies, design guidelines, and land use and zoning designations are described in detail in the following subsection.

Although space has been reserved for these elements primarily within the western property, opportunities may arise that would support locating some of these complementary and programmatic elements in closer proximity to the solid waste project elements or within areas not yet developed with solid waste project elements. Additionally, the entire site includes a single land use designation (Eco-Industrial/ Manufacturing/WPWMA District [EI]) and a single zoning designation (Eco-Industrial [ECO]). Therefore, the uses allowed within those land use and zoning designations are presumed to be acceptable anywhere on the site that does not include a conflicting use (for example, the permitted Waste Disposal area). These designations are defined in detail in the following subsection.

Sunset Area Plan. The project site is located within the center of the Sunset Area, which includes 13.9 square miles of land situated between the cities of Rocklin to the east, Roseville to the south, Lincoln to the north, and unincorporated Placer County to the west. In 2018, the County developed the Sunset Area Plan. The vision of the Sunset Area Plan is to take advantage of opportunities to create a unique employment, entertainment, and education center that will provide regional benefit, create primary-wage earner jobs for residents of nearby cities and unincorporated areas, and help generate revenue to fund countywide services.

The Sunset Area Plan identifies goals, policies, implementation programs, and standards for a wide range of issues affecting the use of land within the Sunset Area. It also includes a Land Use Diagram, which specifies the type, location, and intensity of development within the Plan Area. In addition to a policy document that identifies applicable policies for the area, the Sunset Area Plan includes separately published Implementing Zoning Regulations and Corridor Design Standards and Guidelines. These regulations, standards, and guidelines specify the details that are intended to make certain that new development delivers on the vision of the Sunset Area Plan (Placer County 2018).

The Sunset Area Plan Land Use Diagram identifies the land use designation for the project site as EI. The land use designations of the Sunset Area Plan are intended to be broad to allow for flexibility in implementation. The EI designation provides for solid waste-related management, processing, recycling, and composting operations, as well as industrial and manufacturing uses focused on alternative waste-to-energy technologies, recovery and reuse of materials, solid waste-related research and development, and related advanced manufacturing, perhaps in conjunction with nearby universities. Typical uses permitted under the EI designation are as follows:

- Manufacturing and remanufacturing, including advanced materials
- C&D debris recycling
- Plastics processing (grinding, washing, pelletizing, molding)
- Paper conversion
- Wood salvage and remilling
- Glass processing and manufacturing
- Scrap tire recycling and baling
- Electronics repair, de-manufacturing, recycling
- Nonprofit or small industry incubator
- Landfill operations
- Necessary public utility and safety facilities

The Sunset Area Plan goal and policies specifically applicable to the EI land use designation include the following:

- Goal LU/ED-6: Eco-Industrial. To support WPWMA's efforts to diversify and expand its operations while protecting the viability of its facilities.

- Policy LU/ED-6.1: Innovation/Research and Development. The County will support WPWMA initiatives to establish industrial and manufacturing uses focused on alternative waste-to-energy technologies, recovery and reuse of materials, solid waste-related research and development, and related advanced manufacturing. This includes efforts to collaborate with nearby universities to advance state-of-the-art approaches to these activities.
- Policy LU/ED-6.2: Land Use Changes near WPWMA facilities. When considering land use changes near the WRSL and the WPWMA MRF operation, the County will consider the regional value of these solid waste facilities and operations. To protect these facilities and operations from incompatible encroachment, as well as to protect new uses from nuisances generated by the landfill and MRF, new development will be reviewed and approved on a project-by-project basis, considering proximity to the active operation of these facilities and predicated on the new development's ability to comply with the standards specified in Table 1-3 of this Plan.
- Policy LU/ED-6.3: WPWMA Land Use Compatibility. The County will encourage businesses that are compatible with WPWMA land uses, such as businesses focused on the collection and conversion of waste, including biomass and production of organics for composting and mulching to be located in the Eco-Industrial District.
- Policy LU/ED-6.4: Composting Materials. The County will encourage production of composting materials that meet standards to be used for applications such as landscaping and rural lands.

The County has also developed zoning regulations and development standards and design guidelines that are designed to specify in greater detail how the land use designations and policies of the Sunset Area Plan will be implemented. The Sunset Area Plan Implementing Zone Regulations include a Zoning Map that identifies the project site zoning as ECO. The intent of the ECO Zone is to provide areas for industrial uses that emphasize ecology, waste reuse and sustainable salvaging, and remanufacturing. Remanufacturing uses are defined as operations that produce consumer products with recycled content that can include, for example, facilities that manufacture cardboard boxes made from recycled paper or facilities that produce picnic tables made of recycled plastic pellets. This zone directly serves and is compatible with the ongoing operation of the landfill. The uses in this zone are intended to allow for manufacturing and remanufacturing, recycling of C&D debris, plastics processing, paper conversion, glass processing, and similar industrial uses.

Sunset Area Plan Preliminary Phasing and Building Assumptions. Placer County prepares Area Plans to guide land use development in key areas and communities in unincorporated areas of the County. The intent of these area or community plans is to give clear direction regarding physical development and land use decisions over a 20-year horizon. As such, the Sunset Area Plan is a policy document intended to guide development over the next 20 years.

As part of a background report prepared during the development of the Sunset Area Plan, Economic & Planning Systems (EPS) prepared a market analysis in August 2015 to establish an economic context and estimate market support for ongoing land use development in the Sunset Area. EPS used forecasts of industry employment in the region to estimate a potential range of acreage supportable from demand for land uses over the next 20 years. EPS's market analysis estimated net land demand for industrial and flex, office, ancillary retail, and entertainment mixed-use uses, providing a range of potential acreage absorbed annually over a 20-year period (Placer County 2018).

Following preparation of the background report and market analysis, the County established an updated land use plan reflecting buildout of the Sunset Area Plan. Based on market analysis findings regarding absorption, EPS estimated that the Sunset Area Plan has a development holding capacity that may span over 80 years. Based on this estimate, the land use plan was delineated into two phases: Phase 1, which

identified the estimated market demand for development that could occur within a 20-year plan horizon; and Phase 2, which identified the remaining land development likely to occur beyond a 20-year plan horizon (Ascent Environmental 2018).

EPS's annual acreage absorption estimates for industrial uses were based on historical absorption in the region, a quantitative analysis of employment projections, and potential capture within the project area. Over the Phase 1 development period for the Sunset Area Plan, EPS estimated that 5,183,000 square feet of industrial development would be built (Table 3-3, Ascent Environmental 2018). This estimate assumed that the Placer Ranch Specific Plan area would be fully built out in Phase 1 and would include 1,658,000 square feet of industrial uses. The remaining 3,525,000 square feet of industrial development was assumed to be split between the project site and the light industrial-designated area located east of the project site and adjacent to Industrial Boulevard. If these industrial areas develop over the 20-year Phase 1 planning period in proportion to their available designated acreages, approximately 55.3 percent, or 1,946,325 square feet, of industrial uses would be developed on the project site.

For consistency with the development assumptions included in the Sunset Area Plan, Plan Concept 1 assumes 1,946,325 square feet (300,000 square feet for the project level and the remaining 1.6 million square feet for the program level) of industrial uses would be developed on the project site within the timeframe of the Waste Action Plan implementation, which extends to 2050.

The vast majority of these industrial uses would be constructed within the areas designated for complementary and programmatic elements, as shown on Figure 3-1. However, as previously discussed, opportunities may arise that would support locating some of these industrial uses in closer proximity to the solid waste project elements or within areas not yet developed with solid waste project elements. Therefore, this plan concept assumes these industrial uses could be located anywhere on the project site that does not include a conflicting use.

Potential Compatible Technology Development. The WPWMA has been approached by several companies interested in developing compatible technologies at the site. The types of projects identified by these companies have varied, including wood biomass conversion facilities, anaerobic digesters, organic waste-to-energy projects, the use of pyrolysis, and plastics recycling technologies. One such technology includes producing bioplastics from the acids that are generated by the anaerobic digestion process. These bioplastics can further be converted to energy by feeding them back to the digesters to make biogas. By locating adjacent to the WPWMA's solid waste operations, organic materials would be available to support anaerobic facilities, and the chemicals and energy from these anaerobic facilities could be used to manufacture green products such as bioplastics for food packaging. The scale of these compatible technology facilities can vary substantially, depending upon the volume of material available from the WPWMA solid waste operations. Any of the potential compatible technologies would need to be consistent with the land use and zoning designations identified in the Sunset Area Plan and would need to be compatible with the WPWMA's ongoing solid waste operations at the site.

As discussed in Section 3.5.2.2 and the previous paragraph, the WPWMA may choose in the future to manage the food waste portion (and potentially other portions) of the organics management operation through anaerobic digestion or other noncomposting technology. Two CalRecycle Program EIRs have been prepared to facilitate the future development of an anaerobic digester. The first of these, prepared in 2011, is the *Program Environmental Impact Report for Statewide Anaerobic Digester Facilities for the Treatment of Municipal Organic Solid Waste*. The CalRecycle policy recognizes that organic wastes are a resource, not just solid wastes that must be disposed. Organic wastes have an energy value that can be captured and used, and they are also a necessary component of compost, soil amendments, and other useful products. The Final Program EIR and associated background and guidance documents can be found

on the CalRecycle website:
http://calrecycle.ca.gov/SWFacilities/Compostables/AnaerobicDig/default.htm#EIR.

The second Program EIR prepared by CalRecycle in 2019 is the Program EIR for SB 1383 Regulations titled *Short-Lived Climate Pollutants: Organic Waste Methane Emission Reduction*. SB 1383 requires redirection of a substantial amount of organic waste from landfill disposal. An estimated 26.8 million tons of organic waste in the state would need to be redirected from landfill disposal in 2025, with the amount of material to be redirected to increase in the years thereafter. The Program EIR was prepared to analyze the potential environmental impacts of implementing the SB 1383 regulations. CalRecycle considered a number of reasonably foreseeable compliance responses associated with implementation of SB 1383 regulations. Among these responses is that the redirection of organic waste from landfills would be reasonably expected to result in the development of new or expanded organic Waste Recovery and edible food recovery facilities in the state. The Program EIR considers the following significant types of compliance responses for the management of food waste: compost, anaerobic digestion, chipping and grinding, and recycling. The Final Program EIR and associated background and guidance documents can be found on the CalRecycle website: https://www.calrecycle.ca.gov/laws/rulemaking/archive/2020/slcp.

If the WPWMA or a third party were to pursue an anaerobic digestion project at the WPWMA facility as part of the space identified for complementary technologies, the required site-specific analysis under the California Environmental Quality Act (CEQA) for such a project could be a tiered document that uses the 2011 CalRecycle Program EIR, the 2019 CalRecycle Program EIR, and this project EIR.

Long-term Development Assumptions. During Phase 2, the Sunset Area Plan EIR estimated that a total of 7,916,600 square feet of industrial development would occur on the project site at full buildout, including the 1,946,325 square feet associated with Phase 1. Full buildout was estimated to take approximately 80 years to complete (Table 4.14-17, Ascent Environmental 2018). This estimate assumes that 605.8 acres of the site would be developed with industrial uses with a floor area ratio of 0.3 (Ascent Environmental 2018).

The Sunset Area Plan EIR programmatically evaluated the impacts associated with developing this level of industrial uses on the project site. This DEIR incorporates by reference the programmatic analysis of the Phase 2 industrial development included in the Sunset Area Plan EIR. However, because the square footage of industrial development identified in Phase 1 would be sufficient to meet the project objectives and the industrial demand beyond 2050 would be speculative, the implementation of Phase 2 development assumptions on the project site are not considered a component of Plan Concept 1.

Achievement of Project Objectives. The complementary and programmatic elements would help the WPWMA achieve several project objectives, including the following:

- Maintaining a stable and relatively predictable cost structure
- Expanding the diversion of materials from the landfill
- Reducing GHG emissions
- Enhancing operational flexibility
- Conducting operations in the most environmentally responsible manner possible
- Facilitating the siting and development of compatible technologies that would benefit from proximity to the WPWMA
- Developing the properties in a manner consistent with the Sunset Area Plan

3.5.5 Supporting Elements

Summary

Table 3-15 summarizes existing environmental baseline conditions related to supporting elements and how implementation of Plan Concept 1 would change those conditions.

Table 3-15. Summary of Supporting Elements Under Plan Concept 1

Environmental Baseline	Plan Concept 1	Change
Materials recovered from the MRF operations are stored either within or outside of the MRF building, depending on space constraints	New recovered materials storage building, approximately 70,000 square feet	Construction of a new building and increased ability to store recovered materials inside
Stormwater ponds on center property	New and expanded stormwater ponds on western, center, and eastern properties	Additional stormwater ponds associated with expanded solid waste operations
Road crossings between center and western property limited to public roads	Separated crossing of Fiddyment Road that would connect center and western properties	Improved access for solid waste operations between center and western properties
Maintenance facility on the center property	Center property maintenance facility would be upgraded, and a new satellite maintenance facility would be constructed on the western property for compost and public waste drop-off operations	Upgraded maintenance facility on center property and new satellite maintenance facility on western property
Administration building on the center property	New administration building with education center and parking	A second administration building with an education center and parking
Entrance facilities on Athens Avenue	Upgraded Athens Avenue entrance facilities when needed	Improved site access and scale house infrastructure
Restricted dirt road access to western property at Fiddyment Road and Athens Avenue intersection	New paved site entrance to western property at Fiddyment Road and Athens Avenue intersection	Public access to the solid waste operations on the western property
Wastewater and fire protection water line used for the existing public waste drop-off area operations	A new wastewater and new fire protection water line extending to the western property would be necessary to service the relocated public waste drop-off area operations	Installation of new wastewater and fire protection water line in Fiddyment Road or Athens Avenue
LFG-to-energy plant operations on center property	Continued LFG-to-energy plant operations on the center property	No change in LFG-to-energy plant operations
Landscaping and fencing located along sections of the center property	Landscaping and fencing would surround entire project site	Expanded perimeter landscaping and fencing

Detailed Description

The WPWMA facility currently includes a number of elements that support ongoing solid waste operations at the site. These existing elements are primarily located in the northern part of the center property (Figure 1-3). Plan Concept 1 (Figure 3-1) includes modifications to many of these elements and the addition of new elements. These supporting elements are described in further detail as follows and include recovered materials storage areas, stormwater ponds, a road crossing, maintenance areas, administration buildings, facility parking, entrance facilities, wastewater and water supply infrastructure, the existing LFG-to-energy plant, and site perimeter infrastructure.

Recovered Materials Storage Building – When materials recovered from the MRF operations exceed the capacity of storage areas within the MRF building, they are stored outside. The outside storage of these materials can degrade their value as a result of weather exposure and can also have stormwater impacts. The construction of a recovered materials storage building is proposed to protect recovered MRF materials from weather exposure prior to being transported offsite as well as to keep stormwater from contacting these materials. The enclosed storage building would be approximately 70,000 square feet in size and would be located generally to the east of the existing MRF building.

Stormwater Ponds – The project site includes two existing stormwater ponds: one located in the northeastern corner of the center property and one located directly east of the existing MRF building. The site also includes two compost leachate retention basins adjacent to the existing composting operations in the northern part of the center property. Plan Concept 1 proposes to relocate the stormwater pond located directly east of the MRF building and to construct additional stormwater ponds throughout the site. New stormwater ponds are currently proposed at the southern end of the eastern property, at the northern and southwestern ends of the center property, and within the central area of the western property. However, the locations of these ponds may vary depending on how the solid waste elements are built out. The ponds that would capture stormwater from the relocated composting, public waste drop-off, and C&D areas would be sized based on a 100-year, 24-hour intensity precipitation event, and the landfill stormwater ponds would be sized for a 1,000-year, 24-hour intensity precipitation event, consistent with Class II landfill requirements.

Road Crossing – On Fiddyment Road, south of Athens Avenue, a new separated road crossing is proposed to be installed to connect the waste operations on the center property to those proposed on the western property. The purpose of this crossing is to allow WPWMA and operator staff to easily transport materials across Fiddyment Road between the center property and western property while avoiding driving solid waste vehicles on public roads. A number of crossing alternatives are being considered, including under crossings with and without retaining walls, overcrossings with and without retaining walls, and a conveyor system for transporting materials. The following initial assumptions were used for these vehicle crossings (however, they would be built to County standards). Vehicle crossings are assumed to include two 12-foot lanes with 4-foot shoulders and a 25-mile-per-hour design speed. If an overcrossing is built, it would include 16 feet 6 inches of vertical clearance. Because the WPWMA has not yet selected a preferred road crossing, all three of these options are being evaluated in this EIR.

Maintenance Areas – The existing maintenance facility on the center property is proposed to be upgraded to support the expanded solid waste operations. This upgrade includes constructing an approximately 12,000-square foot building with expanded pad space. A second satellite maintenance facility is proposed in the central part of the western property to support composting and public waste drop-off area operations. This satellite maintenance facility would include an 8,500-square foot building with space for administrative offices and parking.

Administration Building and Parking – A new or expanded administration building is proposed near the existing administration building in the northwestern corner of the center property to accommodate additional staff offices and parking. A new building would contain approximately 12,400 square feet, including approximately 2,400 square feet for an education center, and an approximately 25,000-square foot parking area.

Entrances – The existing Athens Avenue waste delivery entrance facilities in the northern part of the center property are proposed to be redesigned and realigned to better accommodate anticipated future traffic loading. Improvements include new entrance roadways, a new scale building, and three scales (two inbound scales and one outbound scale). Because the majority of public traffic would be redirected to the western property with this plan concept, these changes would not initially be needed and would not be implemented until the existing site entrance nears its vehicle capacity.

To provide access to the western property, a new site entrance is proposed in the southwestern corner of the Athens Avenue and Fiddyment Road intersection. This new entrance would provide access to the new composting operation, public waste drop-off area, and maintenance area proposed on the western property and would reduce the number of self-haul vehicles accessing the center property. The western entrance would include a scale building and two new scales (one inbound scale and one outbound scale).

Wastewater and Water Supply Infrastructure – The relocation of the composting operations and the public waste drop-off operations (discussed previously) to the western property would require the installation of a wastewater line and fire protection water line extending from the Fiddyment Road and Athens Avenue intersection south along Fiddyment Road to the Sunset Boulevard and Fiddyment Road intersection. These lines would extend for approximately 5,300 linear feet.

Landfill Gas-to-Energy Plant – No changes are proposed to the existing LFG-to-Energy Plant located in the northeastern part of the center property with implementation of Plan Concept 1.

Landscaping and Perimeter Fencing – Landscaping and irrigation would be installed at the administrative building, main entrance, and along the site perimeter. In addition, fencing would be installed along the site perimeter.

Any building square footage associated with these supporting element uses is assumed to be included in the total square footage of industrial uses identified in the Sunset Area Plan for the site.

Achievement of Project Objectives – The supporting elements would help the WPWMA achieve several project objectives, including the following:

- Maintaining a stable and relatively predictable cost structure
- Improving operational efficiencies
- Enhancing customer safety by improving site access and internal circulation
- Enhancing operational flexibility
- Conducting operations in the most environmentally responsible manner possible
- Developing the properties in a manner consistent with the Sunset Area Plan

3.6 Plan Concept 2

Plan Concept 2 (Figure 3-7) includes all of the elements summarized in Tables 3-1, 3-2, and 3-3 of Section 3.4. Section 3.6.1 describes changes to sitewide solid waste operations related to Waste Recovery and Waste Disposal that would change as a result of Plan Concept 2, while Sections 3.6.2 and 3.6.3 describe the unique Waste Recovery and Waste Disposal elements that are proposed to be implemented

for Plan Concept 2. Section 3.6.4 describes complementary and programmatic elements proposed for Plan Concept 2, and Section 3.6.5 describes supporting elements for Plan Concept 2.

3.6.1 Sitewide Solid Waste Operations

Summary

Table 3-16 summarizes the existing environmental baseline conditions related to sitewide solid waste operations and how implementation of Plan Concept 2 would change those conditions.

Table 3-16. Summary of Sitewide Solid Waste Operational Changes Under Plan Concept 2

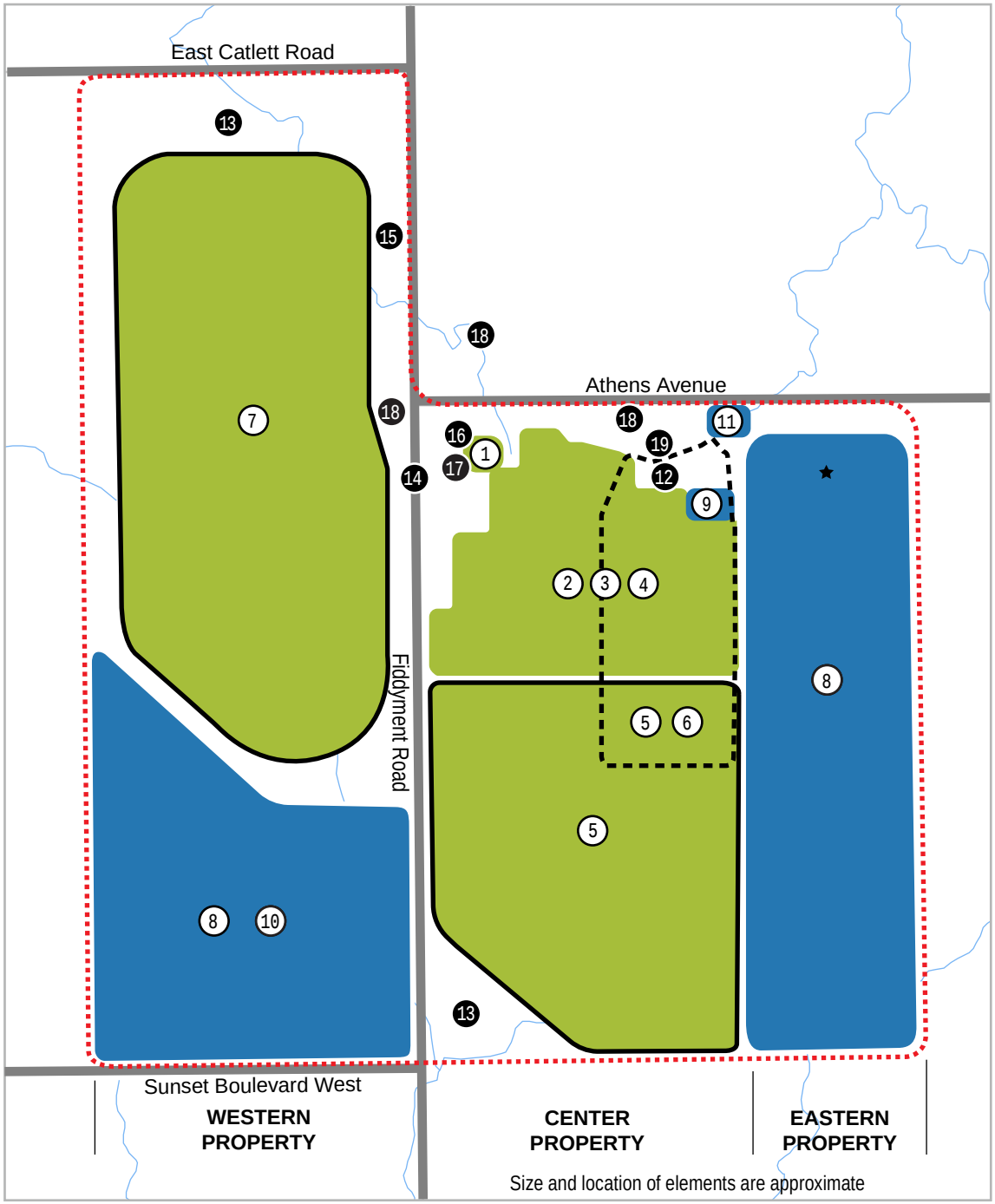
Environmental Baseline	Plan Concept 2	Change
483,968 tons per year of material received at the site	Up to 912,200 tons per year of material received at the site	Up to 428,232 additional tons per year of material received at the site
Approximately 39% of material received at the site is recovered from the waste stream	Recovery of material received from the waste stream of 50% or greater	Recovery of material received at the site from the waste stream increased by 11% or greater
Waste Recovery operations limited to 1,750 tpd; Waste Disposal operations limited to 1,900 tpd	Sitewide solid waste management activities limited to a 7-day rolling average of 4,000 tpd	Conversion to a single permit limit with a 7-day rolling average of 4,000 tpd
Waste Recovery operations limited to 1,014 vehicles per day; Waste Disposal operations limited to 624 vehicles per day	The permitted vehicle limits for Waste Recovery and Waste Disposal operations would be eliminated	The number of Waste Recovery and Waste Disposal vehicles accessing the WPWMA facility would no longer be controlled by a permit limit
Odors are managed by facility (in particular, MRF building, composting operation, WRSL)	Odors would be managed sitewide through implementation of a SWOP	Improvements in odor control by managing odors sitewide, rather than by facility

Detailed Description

The proposed project has been identified to address the physical and operational changes that are needed at the WPWMA facility to accommodate the solid waste management needs of the Participating Agencies into the future, as well as to provide opportunities for future compatible technologies to be located onsite. Sitewide changes associated with Plan Concept 2 related to material and permit limits, traffic, and odor management are described in the following sections.

Sitewide Material Quantities, Diversion Rate, and Permitted Tonnage.

The WPWMA projects an average 2 percent annual increase in the amount of waste received at the WPWMA facility over the project period. This estimated increase in the waste stream reflects anticipated regional growth trends and changes in the recyclables market, based on current and upcoming regulatory requirements and other market conditions.



LEGEND

Solid Waste Project Elements

1. Materials Recovery Facility Building
2. Organics Management Operation
3. Construction & Demolition Materials Processing Operation
4. Public Waste Drop-Off Area Operations, Including Household Hazardous Waste Facility
5. Current & Future Landfill
6. Waste Excavation Area
7. Landfill Expansion Area

Complementary/Programmatic Elements

8. Compatible Technologies
9. Pilot Study Area
10. University Research Area
11. Landfill Gas To Compressed Natural Gas Area

★ Approximate Location of Project Level Complementary Elements

Supporting Elements

12. Recovered Materials Storage Area
13. Stormwater Ponds
14. Road Crossing
15. Maintenance Areas
16. Administrative Building Areas
17. Parking
18. Entrances
19. Landfill Gas-to-Energy Plant

Project Boundary

Landfill Footprint

Waste Excavation Area

North

0 0.5 1

Approximate scale in miles

Figure 3-7. Plan Concept 2
Draft Environmental Impact Report
Renewable Placer: Waste Action Plan
Placer County, California

Jacobs

As shown on Figure 1-4 (2018 Waste Material Flowchart) and Figure 3-2 (2050 Waste Material Flowchart), the WPWMA anticipates that annual waste material received at the site will grow from 483,968 tons in 2018 to 912,200 tons by 2050. In 2018, approximately 39 percent of waste material received at the site was recovered from the waste stream and not placed in the WRSL. By 2050, the recovery rate is anticipated to increase to 50 percent or greater, primarily because of operational changes in the organics management and C&D processing operations. Recovery greater than 50 percent may be possible because of future regulatory requirements and diversion opportunities that could result from the type and size of complementary technologies evaluated at a programmatic level in this EIR and discussed in Section 3.6.4.

The existing SWFP for Waste Recovery operations includes a permit limit of 1,750 tpd of material received, while the existing SWFP for Waste Disposal operations has a permit limit of 1,900 tpd of material received. For the WPWMA facility to accommodate anticipated growth in waste tonnage, Plan Concept 2 assumes the sitewide (Waste Recovery and Waste Disposal) permitted peak daily waste acceptance limit would be converted to a sitewide 7-day rolling average of 4,000 tpd. This change would allow the WPWMA to respond to changing regulations and waste streams without the potential to exceed a permit limit associated with either Waste Recovery or Waste Disposal. This change would also allow the WPWMA to seamlessly divert material received at the site to future compatible manufacturing technologies, further contributing to increased diversion rates. With this change, the daily sitewide tonnage limit would be defined as the average over a continuous rolling 7-day period. This number is identified by calculating, on each day that material is accepted, the average daily tonnage received over the prior 7 operating days. This rolling-average permit limit is proposed so that during unusually high peak days, waste haulers are not turned away, while the WPWMA facility still maintains a limit that prevents waste acceptance volumes from exceeding estimated growth levels.

The sitewide 7-day rolling average of 4,000 tons per day considers a number of factors, including the variability between material types and acceptance rates and modes (for example, materials delivered to the WRSL and MRF are typically delivered in larger trucks on weekdays, whereas material received at the public waste drop-off area is typically delivered in small, personal vehicles on the weekend). The sitewide 7-day rolling average also takes into account the anticipated increase in materials through 2050 and the relationship between average tons received per day and peak tons received per day over the past several years.

Removal of Permit Limit for Vehicles

Currently, Waste Recovery operations under SWFP No. 031-AA-0001 include a vehicle limit of 1,014 vehicles per day, while Waste Disposal operations under SWFP No. 031-AA-0210 include a vehicle limit of 624 vehicles per day. Plan Concept 2 proposes to eliminate vehicle permit limits for Waste Recovery and Waste Disposal operations, instead relying on a sitewide tonnage limit with a 7-day rolling average, as described previously. Because daily vehicle permit limits would require waste-hauling vehicles to be turned away if they are exceeded, the limits have the potential to discourage the appropriate disposal of waste materials. Eliminating the vehicle limits for Waste Recovery and Waste Disposal operations would not be expected to increase the number of vehicle trips generated by such operations, as the number of inbound vehicles would instead be controlled through the sitewide tonnage limit.

Sitewide Odor Management

In addition to the odor-control measures currently undertaken at the facility and described throughout Chapter 1, Introduction, the WPWMA will fully implement a SWOP to provide information about facility odor sources, meteorological conditions that have the potential to exacerbate the perception of odors, and the measures the WPWMA will take to reduce the potential for facility odors to be perceived by nearby

receptors. The SWOP will be used as a tool by the WPWMA and its facility operators and contractors to consistently and proactively take the appropriate steps to reduce the potential for offsite odors. The SWOP will establish BMPs used by the WPWMA to mitigate the release of odors from WPWMA facilities. It will include measures to prevent, monitor, and address odors. The BMPs will reflect current operating and regulatory conditions; changes in regulations or programs operated by the Participating Agencies may necessitate revisions to the SWOP.

The SWOP identifies four facilities or operations at the WPWMA facility with the greatest potential to produce odors: MRF building, composting operation, active landfill areas, and LFG collection and control system. Specific odor-control measures from the SWOP for each of these operations is included in their respective discussion in this chapter. The SWOP is included in Appendix C.6.

3.6.2 Waste Recovery Operations

Plan Concept 2 (Figure 3-7) includes changes to the Waste Recovery operations that occur at the MRF building, organics management operation, C&D material processing operation, and public waste drop-off area operations, each of which are described in Sections 3.6.2.1 through 3.6.2.4. Changes in the environmental control features common to Waste Recovery operations are described in Section 3.6.2.5.

Expanded Material Recovery Facility Building Operation

Summary.

Table 3-17 summarizes the existing environmental baseline conditions related to MRF building operation and how implementation of Plan Concept 2 would change those conditions.

Table 3-17. Summary of Expanded MRF Building Operation Under Plan Concept 2

Environmental Baseline	Plan Concept 2	Change
Annual waste material processing of 240,068 tons	Annual waste material processing of up to 416,600 tons	MRF building processes up to an additional 176,532 tons per year by 2050
MRF building permitted to receive material 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	MRF building permitted to receive material from 6:00 a.m. to 7:30 p.m. Monday through Saturday and from 6:00 a.m. to 5:00 p.m. Sunday and designated holidays	No change
Material processing at MRF building permitted from 6:00 a.m. to 11:30 p.m. Monday through Sunday, with additional maintenance and cleanup work permitted from 4:00 p.m. to 6:00 a.m. Monday through Sunday	Material processing at MRF building may occur 24 hours per day, Monday through Sunday	Daily material processing at MRF building potentially occurring overnight

Detailed Description.

In 2018, approximately 50 percent of the material received at the WPWMA facility was processed through the MRF building, or approximately 240,068 tons. By 2050, material processed through the MRF building is anticipated to increase to approximately 416,600 tons, or roughly 46 percent of the total material received at the WPWMA facility. The existing MRF building is sized to accommodate the increase in annual tonnage anticipated through 2050, but hours of operation for the MRF building would increase as tonnage increases

over time. The MRF building is permitted to process material from 6:00 a.m. to 7:30 p.m. Monday to Saturday and from 6:00 a.m. to 5:00 p.m. Sundays and holidays but currently typically operates a single shift from 6:30 a.m. to 3:00 p.m. Monday to Friday. The WPWMA anticipates that the hours per day for MRF building operations will increase as material processed increases, potentially up to 24 hours per day operation. While this represents an increase over the current and permitted operation, the WPWMA is currently permitted to conduct MRF building maintenance and cleanup activities 24 hours per day.

MRF Building Odor Control – The materials processed at the MRF include organic materials and other putrescible wastes that have the potential to emit odors as they begin to decompose. As such, WPWMA currently implements BMPs for odor control for the MRF building. As part of the proposed project, the WPWMA will continue to implement additional BMPs for the MRF building as part of implementation of the SWOP, as provided in Appendix C.6. These BMPs 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.

Achievement of Project Objectives – Expanded operation of the MRF building would help the WPWMA achieve several project objectives, including the following:

- Stabilizing the costs of Waste Recovery efforts
- Improving operational efficiencies
- Extending the operational life of the current WPWMA facility
- Increasing the diversion of materials from the landfill
- Reducing GHG emissions
- Enhancing operational flexibility
- Facilitating the siting and development of compatible technologies

Expanded and Redesigned Organics Management Operation

Summary

Table 3-18 summarizes the existing environmental baseline conditions related to the organics management operation and how implementation of Plan Concept 2 would change those conditions.

Table 3-18. Summary of Expanded and Redesigned Organics Management Operation Under Plan Concept 2

Environmental Baseline	Plan Concept 2	Change
Organics management operations located in the northern part of the center property	Expansion of the existing organics management operation within the northern part of the center property; Requires relocation of waste in modules 1, 2, 10, and 11	Organics management operation on the center property expanded and waste in modules 1, 2, 10, and 11 excavated and relocated
Organics management operation consists of composting	Organics management operation designed for composting but could accommodate other methods in the future	No change in use of composting for organics management
60,606 tons per year of green waste composted	157,900 tons per year of combined green waste, food waste, and other organics composted	Increase of 97,294 tons per year of compost and addition of food waste composting
Two compost leachate collection ponds	Redesign ponds to accommodate larger composting operations	Pond redesign and increase in capacity by approximately 50%

Table 3-18. Summary of Expanded and Redesigned Organics Management Operation Under Plan Concept 2

Environmental Baseline	Plan Concept 2	Change
Windrow composting process	Composting process – ASP technology for active composting	Transition from windrow to ASP technology
Compostable materials received outside	Potential construction of a food waste receiving building	Evaluation conducted with and without a future food waste receiving building
Odor control – Implementation and maintenance of good operating practices consistent with the SWOP and OIMP	Odor control – Implement SWOP, ASP technology, and use a biofilter layer on the piles to provide some odor control in addition to good operating practices	Improved composting technology for odor control

Detailed Description

The need for the expanded and redesigned organics management operation is driven by anticipated population growth within the WPWMA's service area and SB1383. SB 1383 was signed into California law in 2016, establishing methane emissions reduction targets in a statewide effort to reduce emissions of SLCP in various sectors of California's economy. SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025.

Methane emissions resulting from the decomposition of organic waste in landfills contribute to global climate change. Organic materials, including waste that can be recycled or composted, account for a significant amount of California's overall waste stream. Food waste alone accounts for approximately 18 percent of material that goes to landfills. Increasing food waste prevention, encouraging edible food rescue, and expanding the composting and in-vessel digestion of organic waste throughout the state is expected to help reduce methane emissions from organic waste disposed in California's landfills. In addition, compost has numerous benefits, including water conservation, improved soil health, and carbon sequestration, and anaerobic digestion produces biogas that can be used to create electricity or renewable transportation fuels (CalRecycle 2019).

The WPWMA actively supports its Member Agencies in meeting the targets established by SB 1383. In particular, the expanded organics management operation at the WPWMA facility proposed as part of Plan Concept 2 is intended to help Member Agencies achieve a 75 percent reduction in the level of disposal organic waste by 2025.

Initially, the WPWMA intends to manage the organics waste stream by implementing an expanded composting operation, described in detail in the following sections. The proposed composting operation would continue processing green waste material and incorporate increasing amounts of food waste and other organics.

In the future, the WPWMA may determine that it is more beneficial to the Participating Agencies to manage the organics waste stream in alternate ways in addition to composting. For example, one method of managing food waste that is becoming more common is through anaerobic digestion. A potential future scenario at the WPWMA may include processing food waste and other select organics through anaerobic digestion while continuing to process green waste through composting. The future potential for anaerobic

digestion at the WPWMA facility is further discussed in Section 3.6.4, Complementary and Programmatic Elements.

Expanded Organics Management Operation – The existing organics management operation, which uses composting in the northern part of the center property, would be expanded on the center property to accommodate anticipated material growth rates, increased organics diversion requirements, the processing of food waste and other non-green waste organic materials, and improvements in odor control. The existing composting operation currently processes approximately 60,606 tons per year of organics material (predominantly green waste and a relatively small amount of food waste). By 2050, the expanded compost operations are estimated to be processing a total of 157,900 tons per year of combined green waste and food waste.

The expanded composting operations would include an outdoor positive ASP system for the near term that could potentially transition to an outdoor negative, or reverse, ASP system with an extended bed configuration. The expanded operations would also include an outdoor feedstock receiving and preprocessing area, curing area, and screening and product storage area. The two existing ponds that serve the existing composting operations would be redesigned to accommodate the expansion. The capacity of these ponds is anticipated to be increased by approximately 50 percent.

Compostable Material Receiving Operations – Source-separated feedstock (green waste, wood waste, and food waste) would be unloaded directly by customers into outdoor receiving piles: green waste would be unloaded within the green waste receiving area, wood waste would be unloaded directly by customers into an outdoor receiving pile situated within the wood waste receiving area, and food waste would be unloaded adjacent to the preprocessed green waste for expedited mixing and stockpiling. Each receiving pile or facility would be sized to hold the estimated peak design per week tonnage. The food waste receiving and preprocessing area would be located within an enclosed space in the future as the WPWMA receives increasing levels of food waste. The WPWMA estimates that a food receiving building would be required when food waste exceeds 30 percent of the total incoming compost feedstock.

Unloading of materials by customers would alternate between piles weekly. Receiving piles in the feedstock receiving areas would be approximately 12 feet high and 75 feet wide, which would allow five customers to unload simultaneously. Customers would unload material on the one side of the piles, while operations staff would remove material from the opposite side. The piles would serve as a barrier between customers and operations staff and equipment.

All preprocessing would initially occur outdoors within the receiving area. Material would be sent through a sort line for visual inspection and to remove contaminants prior to preprocessing. Visible contaminants would be manually removed and disposed. After the sort line, material would be sent through a tub grinder (or similar size-reducing piece of equipment) for further preprocessing. After grinding, feedstocks would be pushed into piles located adjacent to the receiving piles and away from the customer unloading area.

Grinding operations would alternate between receiving piles weekly, such that the receiving pile that was created the previous period (up to a week) would be ground the following period (up to a week). The grinder would be situated between the receiving pile and the ground material stockpile during operation. Feedstocks would be managed with a front-end loader equipped with an oversized grapple bucket, excavator, or similar equipment. A portable misting system would be available for use around the grinder as required.

The expanded composting operation is assumed to eventually include the use of an enclosed food waste receiving and mixing building (as indicated previously), correlated to increasing amounts of food waste at

the WPWMA facility. However, because the timing of the building construction is not tied to the expansion of the composting operations, there would likely be a period of composting of primarily green and food waste that does not include the use of an enclosed receiving area. The use of a receiving building is anticipated to reduce odors from food waste. Therefore, for impact evaluation purposes, this EIR evaluates the impacts of operating the composting operation with the addition of minimal food waste (less than 30 percent of total compost feedstock and organic waste and no receiving building) and with increasing levels of food waste (greater than 30 percent of total compost feedstock and organic waste and with a receiving building).

Aerated Static Pile Composting Operations – Material would be moved from the receiving and preprocessing area to the active compost area by using a combination of electrically powered conveyors, conventional or other front-end loaders, or tandem-axle trucks. The ASP composting system is proposed to be sized to provide a 4-week active composting process. It is anticipated that four ASP beds would be provided, each with a capacity of approximately 15,577 cy, and five aeration zones. The ASP composting system would initially be positive ASP but could transition to negative, or reversible ASP and would be located outdoors. Fire hydrants would be located near the receiving area in accordance with *Placer County Fire Code* requirements.

Curing Operation – After feedstocks have been stabilized in the active composting system, additional curing would be completed so that the materials meet regulatory and market requirements. First, material would be physically removed from the ASP piles by using a combination of front-end loaders and conveyors and then placed into curing piles. Curing would be completed by using an outdoor static pile system with an anticipated residence time of 8 weeks. Seventy-eight static piles would be provided for curing, with a total capacity of 85,613 cy.

The ASP and static pile (active and curing) systems would be built over a concrete slab. Working areas around the ASP and static pile systems would consist of compacted gravel base or subbase overlain by heavy-duty asphalt or concrete. Concrete and heavy-duty asphalt surfaces would be designed to withstand the weight of wheel loaders and trucks. These surfaces would be designed, constructed, and maintained to provide a durable working surface and protect groundwater.

Post-Curing Composting Operation – Following curing, material would be relocated to a screening and temporary stockpile area by using front-end loaders and electrically powered conveyors. Materials in the temporary stockpile area would be screened by using an electrically powered, stationary trommel or star screen with a 20- to 25-cy feed hopper. The screening equipment may be covered by a light-weight steel-fabric structure to allow for continuous operation during rainy periods.

After screening, the finished product would be stockpiled while awaiting shipping to end users. The screening and product storage areas would have a total capacity of approximately 40,000 cy and 14,030 cy per week, respectively. The finished product and product storage area has sufficient space to store roughly 2 months' worth of finished product. This would allow for continued operation during slow product marketing periods (for example, winter months). It would also allow for product to be further aged (cured) before it leaves the facility, which may be necessary for certain markets and end uses. Overs that remain from the screening process could be reused as an amendment for fresh feedstocks, as biofilter material, reprocessed for landscape applications, or used as a biomass fuel.

Compost Pond – The compost pond in the northern part of the center property, east of the MRF, would be removed or modified as required by the Regional Water Quality Control Board. This compost pond is approximately 53,200 square feet in area. The new or modified compost pond would have adequate capacity to prevent overtopping during the 25-year return period storm year without pumping to the sewer.

Composting Operation Odor Control – ASP as an active composting method has positive effects on odor control. Use of positive ASP includes the placement of a 1-foot biofilter layer (typically finished compost) atop the active ASP piles. In the event the ASP is transitioned to a negative or reserve ASP process, the process air collected would be treated by using a stand-alone biofilter. The biofilters would consist of a 5-foot-thick layer of coarse wood chips blended with compost overlying a network of air distribution pipes. The biofilters would be situated on an asphalt or concrete pad, which would be sloped (approximately 1 percent slope) for drainage and for the collection of any leachate. Leachate would be directed to an aerated collection pond. Odor control in the curing operation would be achieved through the implementation and maintenance of good operating practices consistent with the SWOP to be implemented for the proposed project (Appendix C.6), and which includes additional BMPs for the composting operation.

Achievement of Project Objectives – The expansion and redesign of the compost operations would help the WPWMA achieve several project objectives, including the following:

- Complying with new state regulations related to organics diversion from landfills
- Stabilizing the costs of composting
- Improving operational efficiencies
- Extending the operational life of the current WPWMA facility
- Expanding the diversion of materials from the landfill
- Reducing GHG emissions
- Enhancing public safety by improving internal circulation
- Enhancing operational flexibility
- Continuing to improve compatibility with adjacent land uses through the implementation of ASP technologies
- Developing the properties in a manner consistent with the Sunset Area Plan

Differences Between MRF Operations RFP Proposals and Plan Concepts – Vendor proposals received in the MRF Operations procurement process include some variations in the types of materials processed at the organics processing area as well as some differences in how that material is processed (MSW organics composting). Generally, the vendor-proposed organics management operation is being designed to accommodate a total tonnage of 157,550 tons per year of organics (92,450 tons per year of food waste plus the organics fraction of MSW and 65,100 tons per year of yard waste). This capacity is comparable to the full buildout capacity of the Organics Management Operation in Plan Concept 1 and Plan Concept 2. The inclusion of the organic fraction of MSW in the proposed feedstocks is one area that the proposals differ from the plan concepts. It is assumed that this material would be recovered during the sorting process inside the MRF building. Recovering this material would also result in higher diversion rates and less material going to the landfill. Additional features of the Organics Management Operation represented in the proposals is summarized as follows:

- **Location** – The proposals show the Organics Management Operation located on the center property (which is consistent with Plan Concept 2).
- **Processing Technology** – The technology proposed for processing includes a combination of ASP and covered ASP CASP. Some form of CASP would be used to process the food waste and OFMSW. One of those proposals, utilizes a biolayer (similar to the proposed project) cover and one uses a membrane cover. The aeration systems proposed for the food waste and OFMSW is either positive or reverse flow.

The two proposals use a biolayer cover on the ASP piles that are processing yard waste. ASP is used for curing all organics feedstocks rather than static piles

- **Feedstock Receiving Building** – One proposal includes an odor-controlled building for the receiving and processing of yard waste. This differs slightly from the plan concepts, which include the potential future inclusion of a receiving building for food waste.
- **Stormwater Management** – No changes from plan concepts; stormwater would be managed in the same infrastructure and with the same BMPs for compost stormwater.
- **Utilities and Energy** – The capacity of the Organics Management Operations represented in the proposals is essentially equal to the ultimate capacity of this area in the plan concepts. With the addition of the OFMSW, it is assumed that the timeline for this size facility is required sooner, but that the ultimate capacity is the same. While this would result in an increase in energy use in the near-term, in the end, the energy and utilities should be equivalent.

Expanded and Redesigned Construction and Demolition Materials Processing Operations

Summary

Table 3-19 summarizes the existing environmental baseline conditions related to C&D material processing operations and how implementation of Plan Concept 2 would change those conditions.

Table 3-19. Summary of Expanded and Redesigned Construction and Demolition Materials Processing Operations Under Plan Concept 2

Environmental Baseline	Plan Concept 2	Change
C&D materials processing operation on the center property	Expanded C&D materials processing operation on the center property. Requires relocation of waste in modules 1, 2, 10, and 11	Increase in the size of the C&D materials processing operation by 2 to 3 times on the center property. Waste in modules 1, 2, 10, and 11 excavated and relocated
58,146 tons per year of C&D material processed plus 29,258 tons per year of inerts processed	174,600 tons per year of C&D material processed, plus 55,200 tons per year inerts	Increase of 116,454 tons per year of processed C&D material and 25,942 tons per year inerts

Detailed Description

The C&D operations area (that includes a covered receiving area and a C&D materials processing line) in the northern part of the center property would be expanded and redesigned to improve operational efficiencies, accommodate growth in the waste stream, and respond to increased state-mandated diversion requirements (e.g., CALGreen Building Standards), and the needs of Participating Agencies. To accommodate this expansion, buried waste in the northern part of the existing landfill footprint, including within Modules 1, 2, 10, and 11, would need to be excavated and relocated to a Subtitle D-compliant landfill module within another area of the landfill footprint. A detailed description of these activities is included in the Excavation of Existing Solid Waste section. The excavation and relocation of this waste would provide the necessary area on the center property to accommodate the expanded C&D materials processing operation.

The expanded C&D operations would cover approximately 2 to 3 times the area of the existing C&D operations and would be designed to accommodate new processing equipment capable of handling the

projected tonnage. An open-air roof structure would be constructed to shield the processing line from weather elements.

The existing C&D materials processing area processes approximately 58,146 tons of C&D material plus another 29,258 tons per year of inerts. Within 30 years, the expanded and redesigned C&D materials processing operation is estimated to process up to 174,600 tons per year of C&D materials.

The C&D materials processing area may also support the receipt, stockpiling, and processing of inert materials. Up to 55,200 tons per year of inert material would be processed at the WPWMA facility by 2050. However, inert materials may also be stockpiled and processed at various areas throughout the site. For example, materials to be used for road base may be stockpiled and processed adjacent to the main onsite landfill haul roads.

Achievement of Project Objectives – The expansion and redesign of the C&D operations would help WPWMA achieve several project objectives, including the following:

- Complying with new state regulations related to C&D material diversion
- Stabilizing the costs of C&D operations
- Improving operational efficiencies
- Extending the operational life of the current WPWMA facility
- Increasing the diversion of materials from the landfill
- Reducing GHG emissions
- Enhancing public safety by improving internal circulation
- Enhancing operational flexibility
- Conducting operations in the most environmentally responsible manner possible
- Developing the properties in a manner consistent with the Sunset Area Plan

Expanded and Redesigned Public Waste Drop-Off Area Operations

Summary

Table 3-20 summarizes the existing environmental baseline conditions related to public waste drop-off area operations and how implementation of Plan Concept 2 would change those conditions.

Table 3-20. Summary of Expanded and Redesigned Public Waste Drop-Off Area Operations Under Plan Concept 2

Environmental Baseline	Plan Concept 2	Change
Public waste drop-off area in the northern part of the center property includes a public tipping area, drop-off area for buy-back materials and HHW, and an entrance kiosk	Expanded and redesigned public waste drop-off area on the center property. New facilities include a public tipping area, material buy-back center, HHW drop-off area, reuse store, and entrance kiosk with vehicle queuing. Requires relocation of waste in modules 1, 2, 10, and 11	Increase in public waste drop-off area capacity on the center property; new reuse store. Waste in Modules 1, 2, 10, and 11 excavated and relocated
44,194 tons per year received	Public waste drop-off area operations would receive up to 83,300 tons by 2050	Increase in public waste drop-off area operations by up to 39,106 tons by 2050

Detailed Description

The existing public waste drop-off area is located in the northern part of the center property. The expanded public waste drop-off area would be redesigned and expanded to enhance the safety and convenience of public customers by separating them from the more active commercial waste management operations. The public waste drop-off area operations are proposed to include a public waste tipping area, a material buy-back and sales center, an HHW drop-off area, a reuse store, and an entrance kiosk with vehicle queuing lanes.

The eastern part of this new public waste drop-off area will require that buried waste in the northern part of the existing landfill footprint, including within Modules 1, 2, 10, and 11, would need to be excavated and relocated to a Subtitle D-compliant landfill module within another area of the landfill footprint. A detailed description of these activities is included in the Existing Solid Waste Excavation section.

The public waste drop-off area currently accepts MSW, C&D, electronic wastes, tires, and appliances. In general, material received at the public waste drop-off area may include any of the materials accepted for Waste Recovery or Waste Disposal. These same waste materials would be accepted at the expanded drop-off area. The customer unloading area would be a flat slab instead of the current split-grade, Z-wall configuration for operational safety and flexibility. The tipping floor would have several slots, in an open configuration, for customers to back into and unload their materials. Customers would unload material into piles on the one side of the tipping area, while operations staff would remove material from the opposite side. The piles would serve as a barrier between customers and operations staff and equipment. Operations staff would load materials into roll-off bins.

The tipping area would be on a concrete pad. All other surfaces of the drop-off area would be paved with heavy-duty asphalt. The concrete and heavy-duty asphalt surfaces would be designed, constructed, and maintained to provide a durable working surface and protect groundwater.

Approximately 26 tipping slots would be provided at the public tipping floor for customers to unload MSW, C&D, green waste, and wood waste. Tires would be accepted in 40-cy bins, with loading conducted at grade. Appliances would be accepted at a loading dock and placed onto trailers. Mattresses and carpet would be accepted and placed into 53-foot trailers or 40-cy bins by loaders or forklifts. A roll-off bin truck would be used to transport full bins to the MRF, C&D processing area, or organics processing area after being weighed at the scale house.

Surface water from outside of the public waste drop-off area would be diverted away from the operating areas by using ditches, swales, and berms. Runoff from the public waste drop-off area would be captured through a combination of ditches and swales and would be transferred to a center property detention pond. Fire hydrants would be located near the public waste drop-off area, consistent with *Placer County Fire Code* requirements.

The buy-back center is currently co-located with the HHW receiving area within the public waste drop-off area and is where clean, source-separated recyclables can be dropped off free of charge and where glass, plastic, and aluminum CRV beverage containers can be turned in for a refund. The HHW receiving area receives hazardous waste from the public and small-quantity generators. These activities would be relocated to the expanded and redesigned public drop-off area to include a new material buy-back center, a new HHW drop-off area, and a reuse store. The material buy-back center, HHW drop-off area, and reuse store would be located near the entrance kiosk. These facilities are intended to encourage the diversion of waste from the landfill by allowing customers to sell or donate usable items rather than disposing of them, to purchase used items rather than buying new items, and to conveniently drop off HHW and recyclables.

The buy-back center would have approximately six unloading positions, and the HHW drop-off area would have approximately four unloading positions. The reuse store would have parking spots and customers would go inside to conduct transactions.

Achievement of Project Objectives – The expansion and redesign of the public waste drop-off area would help the WPWMA achieve several project objectives, including the following:

- Stabilizing the costs of waste acceptance activities
- Improving operational efficiencies
- Extending the operational life of the current WPWMA facility
- Increasing the diversion of materials from the landfill
- Reducing GHG emissions
- Enhancing public safety by improving internal circulation
- Enhancing operational flexibility
- Conducting operations in the most environmentally responsible manner possible
- Developing the properties in a manner consistent with the Sunset Area Plan

Environmental Control Measure Implementation

Summary

Table 3-21 summarizes the existing environmental baseline conditions related to Waste Recovery environmental control measures, and how implementation of Plan Concept 2 would change those conditions.

Table 3-21. Summary of Environmental Control Measure Implementation Under Plan Concept 2

Environmental Baseline	Plan Concept 2	Change
Environmental control measures are implemented consistent with regulations to protect public health and the environment	The expanded Waste Recovery operations would require the continued implementation of environmental control measures, including dust control, litter control, nuisance control, odor control, and load checking	The existing environmental control measures would continue to be implemented with the expanded Waste Recovery operations

Detailed Description

Existing Waste Recovery environmental control measures are described in Section 1.5.2.5 of the Introduction Chapter. Environmental control measures include dust control, litter control, nuisance control, odor monitoring and control, and load checking. These environmental control measures are implemented in a manner consistent with the requirements of CCR Title 27.

With the expansion in Waste Recovery operations at the composting operation, C&D materials processing operations, and public waste drop-off area operations, the continued implementation of these control measures would be required. Although Waste Recovery operations would expand, no substantial change in these measures or how they would be implemented is expected. However, odor monitoring and control for Waste Recovery operations would be improved by implementing the SWOP, included in Appendix C.6.

Achievement of Project Objectives – The continued implementation of required environmental control measures would help the WPWMA achieve the project objectives of conducting operations in the most environmentally responsible manner possible.

3.6.3 Waste Disposal Operations

Waste Disposal operations at the WPWMA facility consist of operation of the WRSL. Plan Concept 2 includes changes to the Waste Disposal operations that occur at the WRSL, including landfill disposal capacity expansion, an increase in the tonnage acceptance limit, the elimination of the permitted vehicle limit, modifications in the landfill environmental monitoring and control systems, and the proposed excavation and relocation of previously disposed waste in areas that do not have a Subtitle D-compliant liner system. These changes are described in Sections 3.6.6 through 3.6.9. Plan Concept 2 does not include any changes in the sources or types of waste accepted, the typical Waste Disposal operations (for example, load checking, daily cover placement, intermediate cover placement), the nuisance control measures, or the closure plan for the WRSL.

Increased Landfill Waste Disposal

Summary.

Table 3-22 summarizes the existing environmental baseline conditions related to Waste Disposal and how implementation of Plan Concept 2 would change those conditions.

Table 3-22. Summary of Tonnage and Vehicle Limit Changes Under Plan Concept 2

Environmental Baseline	Plan Concept 1	Change
Current annual disposed tons – 288,838	Projected annual disposed tons – 533,654	Projected increase in annual tons – 244,816
Material Tonnage Permit Limits	Waste Recovery operations limited to 1,750 tpd; Waste Disposal operations limited to 1,900 tons per day	Sitewide solid waste management activities limited to a rolling 7-day average of 4,000 tpd
Vehicle Permit Limits	Waste Recovery operations limited to 1,014 vehicles per day; Waste Disposal operations limited to 624 vehicles per day	The permitted vehicle limits for Waste Recovery and Waste Disposal operations would be eliminated

Detailed Description.

As illustrated on Figures 1-4 and 3-2, the WPWMA generally projects an average 2 percent annual increase in the amount of waste accepted for disposal at the WRSL over the project period, with interim adjustments in select years to account for increased diversion through improved Waste Recovery capabilities, such as at the Organics Management Operation and the C&D Materials Processing Operation. This estimated increase in the waste stream requiring disposal at the WRSL reflects anticipated regional growth trends, current and future stability and health of recyclables markets, and regulatory requirements related to landfill disposal. These future Waste Disposal estimates are independent of any proposed changes to the current WRSL configuration identified in Plan Concept 1. Any considered changes to the WRSL configuration are in response to the estimated growth in the waste stream requiring disposal.

Assuming that the individual daily waste acceptance rates, including the peak acceptance days, also escalate at an average annual rate of 2 percent, the disposal metrics would change as follows:

Waste Disposal Metric	2018 (Actual)	2050 (Estimated)
Average weekday disposal rate	1,113 tons	1,755 tons
Total (annual) waste disposed	294,923 tons	456,400 tons

Source: Oddo, pers. comm. 2020

Achievement of Project Objectives – The increase in the Waste Disposal tonnage limit and the removal of vehicle count limit would help the WPWMA achieve several project objectives, including the following:

- Providing sufficient Waste Disposal capacity to accommodate anticipated long-term growth
- Maintaining a stable and relatively predictable cost structure
- Improving operational efficiencies

Expanded Landfill Disposal Capacity

Summary

Table 3-23 summarizes the existing environmental baseline conditions related to landfill capacity and how implementation of Plan Concept 2 would change those conditions.

Table 3-23. Summary of Proposed Landfill Capacity Increase Under Plan Concept 2

Environmental Baseline	Plan Concept 2	Change
Landfill located on center property	Landfill located on center property, and second landfill located western property	New permitted landfill on western property
Landfill height – 196 feet above msl. Current permitted peak elevation – 295 feet AMSL	Proposed permitted peak landfill elevation – 325 feet AMSL	Height increase above current conditions – 129 feet. Height increase above currently permitted conditions – 30 feet
Permitted Waste Disposal footprint – 231 acres	Proposed total Waste Disposal footprint for both landfills – 362 acres	Increase in Waste Disposal footprint – 131 acres
Permitted capacity = 36.3 million cy	Proposed permitted capacity = 86.5 million cy	Increase in permitted capacity = 50.2 million cy
Waste capacity exhausted in approximately 2058	Waste capacity exhausted in approximately 2110	Estimated 52-year increase in landfill site life
Maximum depth of landfill excavation for module development – 57 feet AMSL	Proposed maximum depth of landfill excavation for module development for both landfills – 57 feet AMSL	No change in depth of landfill excavation

Table 3-23. Summary of Proposed Landfill Capacity Increase Under Plan Concept 2

Environmental Baseline	Plan Concept 2	Change
Eventual excavation of Module 8 and relocation of current composting and C&D operations on Module 9 to allow for future development of these modules for landfill disposal	Continued use of Module 9 for processing and recycling operations and use of Module 8 for these activities. Neither Module 8 nor 9 would be excavated for landfill disposal	Elimination of Modules 8 and 9 for future Waste Disposal with associated reduction in landfill disposal capacity on the center property

Detailed Description

Waste Disposal activities are currently allowed within the boundaries of the existing 231-acre permitted landfill footprint on the center property. Plan Concept 2 includes continuing to use the existing WRSL on the center property while also building a second landfill on the western property. The footprint of the existing WRSL would be reduced by eliminating the use of Modules 8 and 9 for landfill disposal. The combined footprint of the two landfills would be 362 acres. Plan Concept 2 also includes increasing the permitted landfill heights to 325 feet, or approximately 30 feet above the currently permitted peak elevation of 295 feet and 129 feet above the landfill's existing height of 196 feet (as of aerial mapping dated January 2, 2019). With this change, both landfills would be permitted to reach a maximum height of 325 feet.

As of June 30, 2019, the WRSL had a remaining disposal capacity of approximately 23.6 million cy. Based on projected Waste Disposal trends and the currently permitted maximum capacity of approximately 36.3 million cy, the WRSL is estimated to reach final capacity in 2058 (Golder Associates, Inc. 2017). By constructing a second landfill on the western property and increasing the permitted landfill heights, the site's total remaining Waste Disposal capacity would increase by approximately 50.2 million cy to a total of approximately 86.5 million cy. As a result, the WRSL's remaining site life is estimated to extend to approximately the year 2110.

These site life projections are strongly affected by growth in the waste stream. If waste stream growth consistently exceeds the assumed growth rates, then the site life will decrease. Other factors also affect the WRSL's site life, including the refuse-to-soil ratio achieved when applying daily and intermediate soil cover, the recovery rate achieved at the MRF, the tonnage of organics diverted from the landfill, and actual settlement of the waste.

Within the existing WRSL footprint, the pre-landfill-development elevations ranged from approximately 106 feet AMSL in the southwestern corner to approximately 134 feet AMSL in the central part of the site. The maximum depth of landfill excavation within the existing landfill footprint to accommodate the development of Waste Disposal modules is 57 feet AMSL.

For the western property, the current ground surface elevations range from 103 feet AMSL along the southern property boundary to 127 feet AMSL in the central part of the property. The maximum depth of landfill excavation proposed within the western property to accommodate the development of Waste Disposal modules would be to a depth of 57 feet AMSL. Therefore, there would be no change in the maximum depth of landfill excavation with the implementation of Plan Concept 2.

The existing composting and C&D material processing operations located on the part of the WRSL designated as Module 9 are currently planned to be relocated when Module 9 is ultimately needed for Waste Disposal. However, Plan Concept 2 assumes that Module 9 would not be converted to a landfill module in the future but would continue to be used for Waste Recovery operations. In addition, Module 8 is assumed to not be used for landfilling. Eliminating the use of Modules 8 and 9 for Waste Disposal operations would reduce the WRSL's currently permitted disposal capacity. However, this reduction would be substantially offset by the additional capacity realized by developing landfill capacity on the western property. The total permitted Waste Disposal capacity estimates discussed previously for Plan Concept 2 reflect the increase in capacity associated with the western expansion and the capacity reduction resulting from the elimination of Modules 8 and 9.

With the implementation of Plan Concept 2, the additional Waste Disposal capacity that would be provided by the western landfill expansion would be available following project approval and the issuance of all applicable permits but would only be developed as needed. Figure 3-8 identifies the sequence in which existing and future landfill modules are estimated to be filled. Based on this anticipated fill sequence, Figure 3-9 identifies the estimated elevation and contours of the existing landfill and the western landfill in the year 2050. Figure 3-10 identifies the final elevation and contours of the existing and western landfills once they reach full capacity, which is estimated to occur in the year 2110.

WRSL Operation Odor Control – As described in Chapter 1 (Section 1.6.3.10), the existing WRSL implements a series of BMPs to minimize the potential for offsite odors from aerobic decomposition of waste (primarily from the landfill working face). In addition to the existing BMPs, the WPWMA would implement a SWOP for the proposed project (Appendix C.6), which includes additional BMPs for landfill operation.

Achievement of Project Objectives – The expansion of landfill disposal capacity would help the WPWMA achieve several project objectives, including the following:

- Maintaining a stable and relatively predictable cost structure
- Improving operational efficiencies
- Extending the operational life of the current WPWMA facility
- Increasing the permitted landfill footprint and height to optimize the efficient use of land for Waste Disposal
- Providing sufficient Waste Disposal capacity to accommodate anticipated long-term growth
- Enhancing operational flexibility
- Developing the properties in a manner consistent with the Sunset Area Plan

Figure 3-8. Plan Concept 2 WRSL Anticipated Fill Sequence
Draft Environmental Impact Report
Renewable Placer: Waste Action Plan
Placer County, California

Jacobs

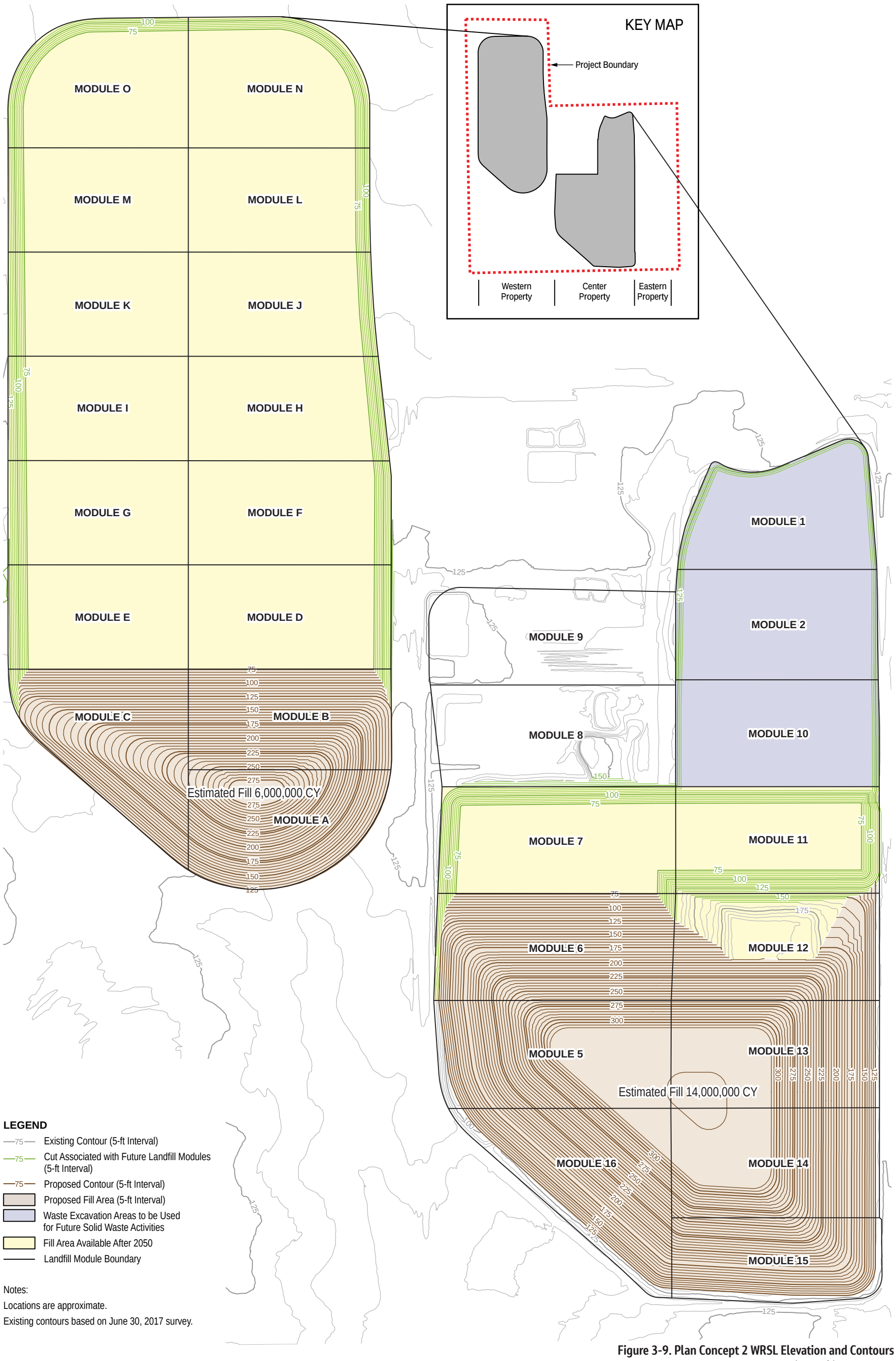


Figure 3-9. Plan Concept 2 WRSL Elevation and Contours Estimated in Year 2050
Draft Environmental Impact Report
Renewable Placer: Waste Action Plan
Placer County, California

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Jacobs

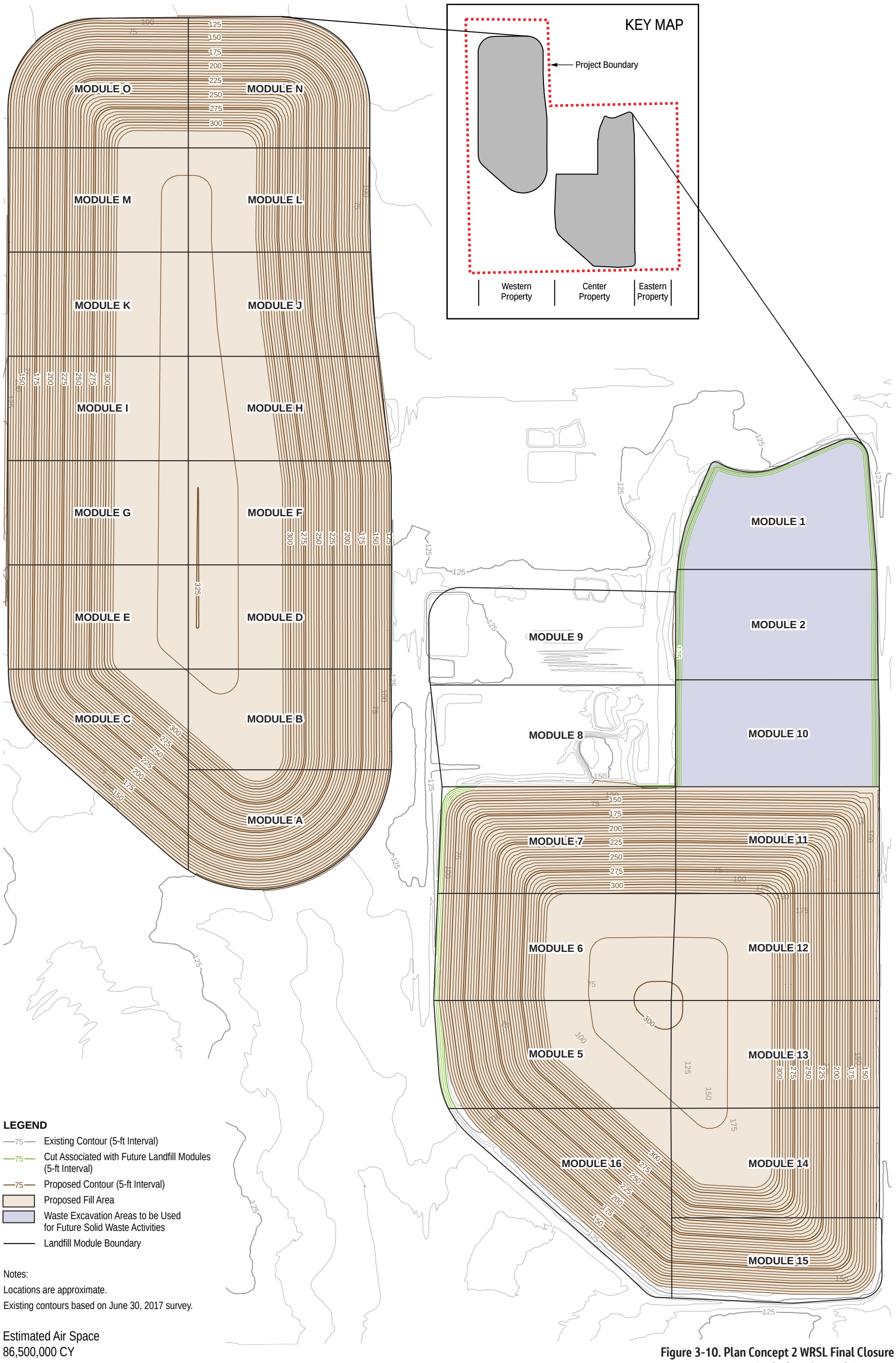

Figure 3-10. Plan Concept 2 WRSL Final Closure Peak Elevation and Contours
Draft Environmental Impact Report
Renewable Placer: Waste Action Plan
Placer County, California

Jacobs

Landfill Environmental Monitoring and Control Systems

Summary

Table 3-24 summarizes the existing environmental baseline conditions related to landfill environmental monitoring and control systems and how implementation of Plan Concept 2 would change those conditions.

Table 3-24. Summary of Landfill Environmental Monitoring and Control Systems Under Plan Concept 2

Environmental Baseline	Plan Concept 2	Change
A combination of non-Subtitle D and Subtitle D-compliant (composite) lined modules exists within the WRSL permitted footprint; Double-composite landfill liners will be installed in new modules constructed within the existing permitted landfill footprint	Double-composite landfill liners would be installed in any future modules, consistent with current practice	No changes in the liner systems are proposed with this Plan Concept; Future modules are proposed to include double-composite liners, consistent with current practice
Continued operation of the existing leachate management system, surface water management system, and LFG management system and expansion of these systems within the existing permitted landfill footprint	The environmental monitoring systems would be expanded to accommodate the increased landfill height on the center property and would be replicated in the second landfill on the western property	Expanded environmental monitoring systems consistent with the increased landfill height on the center property and the new landfill on the western property
Environmental monitoring systems and programs are in place in compliance with current regulations for leachate, surface water, groundwater, and perimeter LFG	The environmental monitoring systems and programs would be expanded based on the landfill footprint and applicable regulatory requirements	Expanded environmental monitoring systems and programs to reflect the expanded landfill footprint

Detailed Description

The existing WRSL incorporates various environmental monitoring and control systems designed to eliminate, minimize, or identify potential environmental impacts and nuisances. The following environmental monitoring and control systems are integrated into the current WRSL operations and would be expanded as the landfill height increases on the center property and the new landfill is constructed on the western property:

- Double-Composite Landfill Liner System
- Leachate Management System
- Surface Water Management System
- LFG Management System
- Groundwater monitoring system

Environmental monitoring and reporting occurs for leachate, surface water, groundwater, and LFG. Existing environmental monitoring systems for the WRSL are shown on Figure 1-7, and the expansion of these systems for Plan Concept 2 is shown on Figure 3-11.

Double-Composite Landfill Liner System – Landfill liner systems are designed to contain waste materials, including liquids, and prevent them from coming into contact with the underlying soil or groundwater. As described in the Landfill Module Development Phasing discussion included in Chapter 1, the liner systems for the existing modules on the site vary depending on when they were constructed. Because Modules 1, 2, 10, and 11 were constructed prior to implementation of Subtitle D regulations, they do not have Subtitle D-compliant liner systems. Plan Concept 2 includes excavating and relocating the waste in these modules to a new Subtitle D-compliant, double-composite-lined module. The excavation area is proposed to be reengineered to include a Subtitle D-compliant, double-composite liner to accommodate future landfill disposal needs. For more discussion regarding the potential excavation and relocation of waste within Modules 1, 2, 10, and 11, see the discussion of Excavation of Existing Solid Waste. In addition, any new modules constructed within the existing permitted landfill footprint or on the western property would include Subtitle D-compliant double-composite landfill liner systems. The existing and future liner system is illustrated on Figure 1-8.

Leachate Management System – The LCRS is designed to provide efficient collection and removal of liquids that come into contact with and leach through the waste mass (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 modules, as described in the Landfill Module Development Phasing discussion included in Chapter 1. However, the overall system generally consists of a gravel layer as part of the base liner system that serves to direct leachate to a low area, or sump. Riser pipes extend down to the base of the sump and include a dedicated pump to facilitate regular removal of leachate from the landfill. Leachate extracted from the sumps is conveyed through a series of pipes to the sanitary sewer via a maintenance hole located north of the LFG blower and flare station. The expansion of the LCRS associated with landfill expansion would include the extension of the gravel layer of the base liner system and the installation of additional riser and collection pipes. The removed leachate would continue to be conveyed through the expanded collection pipe system to the maintenance hole north of the flare station. The construction of an LCRS associated with western property landfill expansion would be of the same design as the center property. The leachate collection system on the western property landfill would be connected to either a new connection to an expanded sanitary sewer line or to the center property for leachate disposal via the maintenance hole north of the flare station for disposal.

Surface Water Management System – The WRSL's surface water management system consists of drainage ditches, berms, culverts, and down-drains that direct stormwater through a perimeter channel to two existing detention basins: one located in the site's northeastern corner and the other located in the wetland area in the site's southwestern corner. Similar surface water control infrastructure would be installed at the landfill on the western property. This infrastructure would include drainage ditches, berms, culverts, down-drains, and a perimeter channel. Additional stormwater detention ponds would also be installed, as described in the discussion of supporting facilities in the following sections. This stormwater management infrastructure would be sized to accommodate the 1,000-year, 24-hour storm event as required by Title 27 CCR §20365. The detention basins would be designed to release controlled flows into existing offsite drainage channels, as required by Placer County standards.

Landfill Gas Management System – 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, all of which can contribute to LFG odors. The WRSL's LFG management system, described in Section 1.3.6.9, would be expanded as the WRSL expands, including the construction of additional LFG extraction wells and support structures and facilities. Figure 3-11 shows the anticipated expansion of the LFG management system.

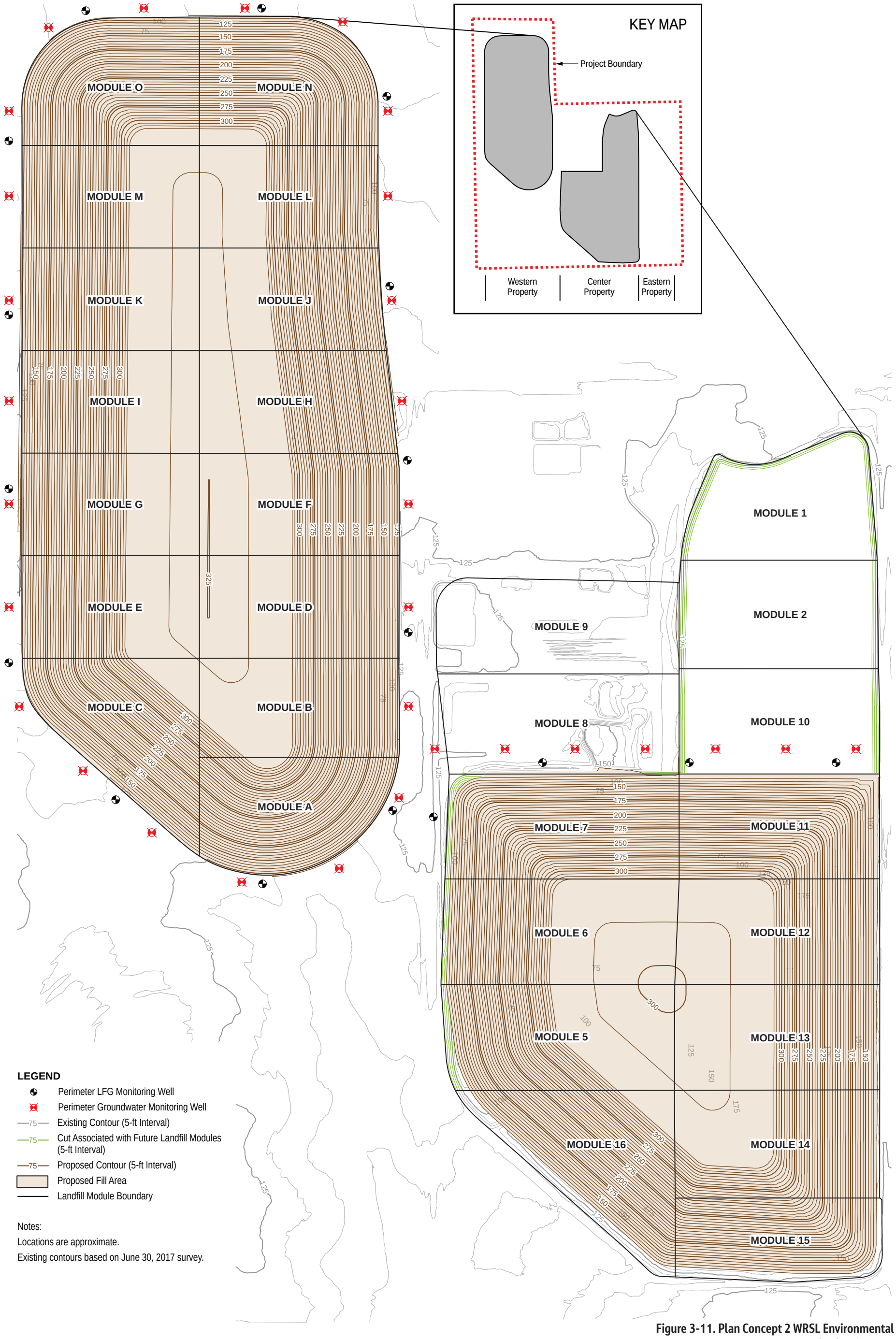

Figure 3-11. Plan Concept 2 WRSL Environmental Monitoring Systems
Draft Environmental Impact Report
Renewable Placer: Waste Action Plan
Placer County, California

Jacobs

While the enclosed ground flare is currently sized to combust all of the LFG generated by the current landfill when needed (and will be upgraded as necessary in the future), the WPWMA intends to continue using the LFG to produce and sell electricity (currently via a third-party energy developer) as a beneficial reuse. In addition, a component of Plant Concept 2 includes the construction of an LFG to compressed natural gas, hydrogen or other renewable fuel facility on the center property (Figure 3-7). This facility is described in more detail under the discussion of complementary and programmatic elements in this chapter. With the installation of this facility, the WPWMA would have the ability to produce and sell vehicle-grade or pipeline-grade compressed natural gas, hydrogen or other renewable fuels.

A new LFG collection system would need to be installed on the western property that would include extraction wells and support structures and facilities. The LFG associated with the western property landfill would initially be conveyed to the existing flare system on the center property until sufficient gas is generated to convert it to energy. At that time, the LFG from the western property would likely be piped to the proposed LFG-to-fuels facility on the center property.

As described in Chapter 1 (Section 1.6.3.10), the WPWMA implements BMPs in order to minimize the potential for offsite odors from LFG. In addition to the existing BMPs, the WPWMA would implement a SWOP for the proposed project (Appendix C.6), which includes additional BMPs for the WPWMA's LFG management system.

Groundwater Monitoring System – Groundwater monitoring is performed on a quarterly basis at the WRSL in accordance with the Monitoring and Reporting Program (MRP) described in WDR Order No. R5-2007-0047 (CVRWQCB 2007). The groundwater monitoring network consists of 39 groundwater monitoring wells across the site as follows:

- 12 wells associated with the Corrective Action Program (CAP) (MW-5, CW-5S, CW-5M, CW-5D, MW-9, CW-9S, CW-9M, CW-9D, MW-10, MW-11R, MW-13, and MW-23R) sampled quarterly
- 24 downgradient wells associated with the Detection Monitoring Program (MW-2, MW-3, MW-6, MW-7, CW-7S, CW-7M, CW-7D, MW-8, MW-12, MW-14 through MW-18, CW-19S, CW-19M, CW-19D, MW-22, MW-24, CW-25S, CW-25M, and CS-25D sampled semiannually, and MW-19 and MW-20 sampled quarterly)
- 2 upgradient (background) wells (LW-1 and MW-4) sampled annually
- Well MW-1 used for water level monitoring only

The 15 "CW" cluster wells were installed to monitor the shallow (-S), intermediate (-M), and deep (-D) intervals of the uppermost water-bearing zone and are sampled by using a portable electric submersible pump. All other monitoring wells are screened in the uppermost water-bearing zone and, with the exception of well LW-1, are equipped with a dedicated submersible pump used for purging and to retrieve groundwater samples. Well LW-1 is purged and sampled by using a disposable bailer. A similar and expanded groundwater monitoring system would be installed to accommodate the expansion of the WRSL.

Achievement of Project Objectives – The proposed changes to the landfill environmental monitoring and control systems would help the WPWMA achieve project objectives, including the following:

- Complying with applicable regulations
- Conducting operations in the most environmentally responsible manner possible

Excavation of Existing Solid Waste

Summary

Table 3-25 summarizes the existing environmental baseline conditions related to excavation of existing solid waste and how implementation of Plan Concept 2 would change those conditions.

Table 3-25. Summary of Solid Waste Excavation Changes Under Plan Concept 2

Environmental Baseline	Plan Concept 2	Change
Modules 1, 2, 10, and 11 are closed, and no additional will be placed in these modules	Modules 1, 2, 10, and 11 would be excavated and the contents relocated within 3 years to an onsite Subtitle D-compliant module; Excavated modules would be lined with a Subtitle D-compliant liner and reused for future Waste Disposal	Buried waste would be excavated and relocated within 3 years; Excavated modules would be reused for expanded solid waste operations

Detailed Description

Physical Waste Relocation Activities – Plan Concept 2 includes excavating the contents of Modules 1, 2, 10, and 11, which encompass approximately 66 acres, within 3 years (starting in 2024) following project approval to accommodate the expansion of composting, C&D processing, and public waste drop-off uses on the center property.

Waste relocation activities at the pre-Subtitle D area would include removing leachate and LFG collection infrastructure, buried waste, soil cover, and as appropriate, any underlying soils affected by a release from the landfill and posing a threat to water quality or the environment. The estimated total volume of waste material within the pre-Subtitle D modules is 3,646,000 cy (Golder Associates Inc. 2018). This includes final cover soils, Class III nonhazardous solid waste, and daily and interim soil cover. The Class III nonhazardous solid waste is assumed to include mixed municipal wastes, C&D debris, yard wastes and rubbish, and inert materials such as concrete and white goods (for example, appliances) (Golder Associates Inc. 2018). The excavated waste would be relocated to a Subtitle D-compliant lined module within the permitted landfill footprint. The relocation of the contents of these modules is estimated to require a total of 300 days to complete but may be implemented in phases (Golder Associates Inc. 2018).

A contractor is likely be hired to conduct the excavation activities and would be responsible for identifying, on a daily basis, the area of excavation and for stripping the existing final cover soils that are not affected by waste. The contractor would stockpile these soils in a designated area. The contractor would excavate the remainder of the contents, including waste and commingled cover soils, and place them into trucks for transport to the designated disposal areas onsite. WPWMA staff would be responsible for disposing of the waste materials in conformance with site permits and applicable laws and regulations. Excavation would proceed until reaching the base of waste. Excavation would progress laterally across the designated excavation area. Trained personnel provided by the contractor would observe the excavation process to identify any nonconforming waste materials, including hazardous waste, which would be sent offsite for proper handling and would not be relocated to an onsite landfill module for reburial. Trained personnel provided by the contractor would also observe the exposed subgrade soils to identify any areas that may be affected by a release from the landfill (Golder Associates Inc. 2018).

Available geologic information indicates that the pre-Subtitle D area lies primarily above stream-laid alluvial deposits of arkosic gravel, sand, silt, and clay. In some areas, it is anticipated that excavation would extend into the underlying gravel, sand, silt, and clays. Actual grades and conditions may vary and would be determined at the time of excavation. Anticipated excavation depths range from 10 to 66 feet, based on available information. Waste relocation activities would include excavation and stockpiling of almost 428,000 cy of final cover soil that is not anticipated to be significantly affected by waste materials (Golder Associates Inc. 2018). The clean cover soils would be reused elsewhere on the site as landfill cover or as temporary fill in excavated areas.

The contractor would be responsible for covering exposed waste at the end of each work day with a minimum of 6 inches of compacted earthen material or an approved alternative daily cover (for example, tarps) to control vectors, fires, odors, blowing litter, and scavenging. The contractor would place intermediate cover over exposed waste and temporary waste slopes where no additional waste excavation or waste relocation work would occur within 180 days. Intermediate cover would consist of a minimum 1-foot-thick layer of compacted earthen material, including daily cover soil. There are no approved alternative materials for intermediate cover. The intermediate cover would protect otherwise exposed waste, thereby controlling vectors, fires, odors, blowing litter, and scavenging during any potential lapses in waste relocation activities (Golder Associates Inc. 2018).

The contractor would provide for positive drainage at the top of excavation slopes to control stormwater run-on into the excavation. The remaining excavation would be graded such that precipitation from the 100-year, 24-hour design storm would drain and prevent water from rising above the waste at the toe of the temporary waste slope. This would prevent ponding water from posing a threat for seeping into buried waste and causing a potential for leachate development. WPWMA personnel or their designee also would visit the site after precipitation events that exceed 1 inch in 24 hours of rainfall and verify that ponded water is pumped to stormwater if clean or to sewer if not, as needed. Slopes that would be cut from native soils would be constructed without intermediate cover (Golder Associates Inc. 2018).

Excavated areas to be developed with a Subtitle D composite liner system would be graded at roughly 1.5 to 3.5 percent to flow to the eastern central edge of the excavation. Areas to be developed for other solid waste facilities would receive earthfill to the design grades. Slopes would be seeded at the conclusion of construction to control erosion. Additional erosion controls, such as diversion berms, hay bales, and straw wattles, would be used as necessary during construction in accordance with applicable surface water pollution prevention plans (Golder Associates Inc. 2018).

Although it is anticipated that primarily MSW would be encountered, there is the potential to encounter hazardous or nonconforming wastes during the waste relocation. Hazardous wastes are defined in Title 22 of CCR Section 66261.3. Hazardous wastes have the following characteristics:

- They are ignitable, corrosive, reactive, or toxic.
- They have the potential to cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness.
- They have the potential to pose a substantial present or potential hazard to human health or the environment, because of factors including their carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed.

Nonconforming wastes comprise other waste material that is not accepted at the landfill, excluding hazardous waste, and include the following:

- Wastes containing soluble pollutants in concentrations that exceed applicable water quality objectives, or that could cause degradation of waters of the state, according to *California Water Code* Section 13173.
- Cathode ray tubes from televisions and computer monitors.
- Electronic wastes such as televisions and refrigerators.

The contractor would be required to develop and implement a contingency plan in case hazardous or nonconforming wastes are encountered during waste relocation. The contractor would be required to base the contingency plan on guidelines issued by the State of California Governor's Office of Emergency Services (CA OES 2001).

Waste Excavation Odor Control – The BMPs included in the SWOP (Appendix C.6) to be implemented for the proposed project associated with landfill operation would apply to waste excavation activities.

Reuse of Excavated Waste Modules – Because Modules 1, 2, 10, and 11 have been closed, they have reached their peak elevation of approximately 170 feet AMSL, and no additional waste can be placed on top of the modules. However, if the waste is removed from these modules, they can be reused for solid waste activities after the excavated area is filled. Plan Concept 2 includes reusing the excavated modules for the expanded composting, C&D processing, public waste drop-off, recovered materials storage, and alternative technologies pilot study uses. To accommodate these uses, within 3 years following project approval, the excavated area would be filled to surrounding elevations with available onsite soil to provide a flat working surface.

Achievement of Project Objectives – The excavation of existing solid waste would help the WPWMA achieve several project objectives, including the following:

- Maintaining a stable and relatively predictable cost structure
- Extending the operational life of the current WPWMA facility
- Increasing the height of parts of the landfill to optimize the efficient use of land for Waste Disposal
- Providing sufficient Waste Disposal capacity to accommodate anticipated long-term growth

3.6.4 Complementary/Programmatic Elements

Summary

Table 3-26 summarizes the existing environmental baseline conditions related to complementary and programmatic elements and how implementation of Plan Concept 2 would change those conditions. Plan Concept 2 generally locates the 1.9 million square feet of complementary elements on the eastern property and the southern extent of the western property, with some activities on the center property. For purposes of this EIR, up to 300,000 square feet of building associated with the complementary elements plus associated outdoor infrastructure are considered at a project level. For purposes of analysis, these industrial uses are assumed to be located on the northern part of the eastern property (Figure 3-7).

Table 3-26. Summary of Complementary and Programmatic Elements Under Plan Concept 2

Environmental Baseline	Plan Concept 2	Change
Grazing operations on the eastern property, solid waste operations on the center property, and irrigation and model airplane operations on the western property	Project Level – Development of up to 300,000 square feet of building plus exterior infrastructure for complementary solid waste management elements; Industrial uses may include compatible technologies, pilot study areas, university research areas, and an LFG to compressed natural gas, hydrogen, or other renewable fuels area Program Level – Up to 1.6 million square feet of industrial uses that are complementary to the solid waste management elements	Project Level – Development of up to 300,000 square feet of industrial uses Program Level – Development of up to 1.6 million square feet of industrial uses
	Project Level – Located on the northern part of the eastern property Program Level – Primarily on the eastern property, plus locations on the center property, although some uses may be developed in closer proximity to the solid waste project elements or within areas not yet developed with solid waste project elements	Project Level – Complementary and programmatic elements on the northern part of the eastern property Program Level – Complementary and programmatic elements on the eastern property

Detailed Description

The complementary and programmatic elements include the development of compatible technologies, pilot study areas, university research areas, and an LFG to compressed natural gas, hydrogen or other renewable fuel-production and vehicle-filling area. On the project level, these are assumed to be located on the northern part of the eastern property and may include compatible technologies or pilot studies. On a program level, areas have been designated on the remainder of the eastern property and in the southern parts of the western property to accommodate development of compatible technologies and university research uses. Potential pilot studies are proposed to be located in these areas in addition to areas east of the MRF operations on the center property. The LFG to fuel-production and vehicle-filling area, is proposed to be located in the northern part of the eastern property.

The complementary and programmatic elements are anticipated to include solid waste-oriented industrial uses that could include warehouses, light-manufacturing plants, processing plants, research and development labs, offices and other supporting infrastructure. The allowable uses are dictated by the site's land use and zoning designations identified in the Sunset Area Plan (Placer County 2018). The applicable Sunset Area Plan goals, policies, design guidelines, and land use and zoning designations are described in detail in the Concept Plan 1 discussion of complementary and programmatic elements.

Although space has been reserved for these elements primarily within the western and eastern properties (Figure 3-7), opportunities may arise that would support locating some of these complementary and programmatic elements in closer proximity to the solid waste project elements or within areas not yet developed with solid waste project elements. Additionally, the entire site includes a single land use designation (EI) and a single zoning designation (ECO). Therefore, the uses allowed within those land use

and zoning designations are presumed to be acceptable anywhere on the site that does not include a conflicting use (for example, the landfill mound).

Sunset Area Plan Preliminary Phasing and Building Assumptions. As previously described under Plan Concept 1, the development of the Sunset Area Plan was divided into two phases: Phase 1, which identified the estimated market demand for development that could occur within a 20-year plan horizon; and Phase 2, which identified the remaining land development likely to occur beyond a 20-year plan horizon (Ascent Environmental 2018). Over the Phase 1 development period for the Sunset Area Plan, 1,946,325 square feet of industrial uses were estimated to be built on the project site (Table 3-3, Ascent Environmental 2018). For consistency with the development assumptions included in the Sunset Area Plan, Plan Concept 2 assumes this same square footage of industrial uses would be developed on the project site within the timeframe of the Waste Action Plan implementation, which extends to 2050.

Potential Compatible Technology Development. The WPWMA has been approached by several companies interested in developing compatible technologies at the site. The types of projects identified by these companies have varied, including wood biomass conversion facilities, anaerobic digesters, organic waste-to-energy projects, the use of pyrolysis, and plastics recycling technologies. One such technology includes producing bioplastics from the acids that are generated by the anaerobic digestion process. These bioplastics can further be converted to energy by feeding them back to the digesters to make biogas. By locating adjacent to the WPWMA solid waste operations, organic materials would be available to support anaerobic facilities, and the chemicals and energy from these anaerobic facilities could be used to manufacture green products such as bioplastics for food packaging. The scale of these compatible technology facilities can vary substantially, depending on the volume of material available from the WPWMA solid waste operations. Any of the potential compatible technologies would need to be consistent with the land use and zoning designations identified in the Sunset Area Plan and would need to be compatible with the WPWMA's ongoing solid waste operations at the site.

As discussed in Section 3.6.2.2 and the previous paragraph, the WPWMA may choose in the future to manage the food waste portion (and potentially other portions) of the organics management operation through anaerobic digestion or other noncomposting technology. Two CalRecycle Program EIRs have been prepared to facilitate the future development of an anaerobic digester. The first of these, prepared in 2011, is the *Program Environmental Impact Report for Statewide Anaerobic Digester Facilities for the Treatment of Municipal Organic Solid Waste*. The CalRecycle policy recognizes that organic wastes are a resource, not just solid wastes that must be disposed. Organic wastes have an energy value that can be captured and used, and are also a necessary component of compost, soil amendments, and other useful products. The Final Program EIR and associated background and guidance documents can be found on the CalRecycle website: http://calrecycle.ca.gov/SWFacilities/Compostables/AnaerobicDig/default.htm#EIR.

The second Program EIR, prepared by CalRecycle in 2019, is the Program EIR for SB 1383 *Regulations Short-Lived Climate Pollutants: Organic Waste Methane Emission Reduction*. SB 1383 requires redirection of a substantial amount of organic waste from landfill disposal. An estimated 26.8 million tons of organic waste in the state would need to be redirected from landfill disposal in 2025, with the amount of material to be redirected to increase in the years thereafter. The Program EIR was prepared to analyze the potential environmental impacts of implementing the SB 1383 regulations. CalRecycle considered a number of reasonably foreseeable compliance responses associated with implementing SB 1383 regulations. Among these responses is that the redirection of organic waste from landfills would be reasonably expected to result in the development of new or expanded organic Waste Recovery and edible food recovery facilities in the state. The Program EIR considers the following significant types of compliance responses for the management of food waste: compost, anaerobic digestion, chipping and grinding, and recycling. The Final

Program EIR and associated background and guidance documents can be found on the CalRecycle website: https://www.calrecycle.ca.gov/laws/rulemaking/slcp.

If the WPWMA or a third party were to pursue an anaerobic digestion project at the WPWMA facility as part of the space identified for complementary technologies, the required site-specific analysis under CEQA for such a project could be a tiered document that uses the 2011 CalRecycle Program EIR, the 2019 CalRecycle Program EIR, and this project EIR.

Long-term Development Assumptions. During Phase 2, the Sunset Area Plan EIR estimated that a total of 7,916,600 square feet of industrial development would occur on the project site at full buildout, including the 1,946,325 square feet associated with Phase 1. Full buildout was estimated to take approximately 80 years to complete (Table 4.14-17, Ascent Environmental 2018). This estimate assumes that 605.8 acres of the site would be developed with industrial uses, with a floor area ratio of 0.3 (Ascent Environmental 2018).

The Sunset Area Plan EIR programmatically evaluated the impacts associated with developing this level of industrial uses on the project site. This DEIR incorporates by reference the programmatic analysis of the Phase 2 industrial development included in the Sunset Area Plan EIR. However, because the square footage of industrial development identified in Phase 1 would be sufficient to meet the project objectives, and the industrial demand beyond 2050 would be speculative, the implementation of Phase 2 development assumptions on the project site are not considered a component of Plan Concept 2.

Achievement of Project Objectives. The complementary and programmatic elements would help WPWMA achieve several project objectives, including the following:

- Maintaining a stable and relatively predictable cost structure
- Expanding the diversion of materials from the landfill
- Reducing GHG emissions
- Enhancing operational flexibility
- Conducting operations in the most environmentally responsible manner possible
- Facilitating the siting and development of compatible technologies that would benefit from proximity to WPWMA
- Developing the properties in a manner consistent with the Sunset Area Plan

3.6.5 Supporting Elements

Summary

Table 3-27 summarizes the existing environmental baseline conditions related to supporting elements and how implementation of Plan Concept 2 would change those conditions.

Table 3-27. Summary of Supporting Elements Under Plan Concept 2

Environmental Baseline	Plan Concept 2	Change
Materials recovered from the MRF operations are stored either within or outside of the MRF building, depending on space constraints	New recovery materials storage building	Construction of a new building and increased ability to store recovered materials inside
Stormwater ponds on center property	New and expanded stormwater ponds on western and center properties	Additional stormwater ponds associated with expanded solid waste operations
Road crossings between center and western property limited to public roads	Separated crossing of Fiddyment Road that would connect center and western properties	Improved access for solid waste operations between center and western properties
Maintenance facility on the center property	Center property maintenance facility would be upgraded, and a new maintenance facility would be constructed on the western property for WRSL operation	Upgraded maintenance facility on center property and new maintenance facility on western property
Administration building on the center property	New administration building with education center parking	A second administration building with and education center and parking
Entrance facilities on Athens Avenue	Upgraded Athens Avenue entrance facilities	Improved site access and scale house infrastructure
Restricted dirt road access to western property at the Fiddyment Road and Athens Avenue intersection	New paved site entrance to western property at the Fiddyment Road and Athens Avenue intersection	Access provided to the western property for expanded landfill operations
Wastewater and fire protection water line used for the existing public waste drop-off area operations	A new wastewater and fire protection water line extending to the western property would be necessary to service the expanded landfill operations	Installation of new wastewater and fire protection water line in Fiddyment Road
LFG-to-energy plant operations on center property	Continued LFG-to-energy plant operations on the center property	No change in LFG-to-energy plant operations
Landscaping and fencing located along section of the center property	Landscaping and fencing would surround entire project site	Expanded perimeter landscaping and fencing

Detailed Description

The WPWMA facility currently includes a number of elements that support ongoing solid waste operations at the site. These existing elements are primarily located in the northern part of the center property (Figure 1-3). Plan Concept 2 (Figure 3-7) includes modifications to many of these elements and the addition of new elements. These supporting elements are described in further detail in the following subsections and include recovered materials storage areas, stormwater ponds, a road crossing, maintenance areas, administration buildings, facility parking, entrance facilities, wastewater and water supply infrastructure, the existing LFG-to-energy plant, and site perimeter infrastructure.

Recovered Materials Storage Building – When materials recovered from the MRF operations exceed the capacity of storage areas within the MRF building, they are stored outside. The outside storage of these materials can degrade their value as a result of weather exposure and can also have stormwater impacts. The construction of a recovered materials storage building is proposed to protect recovered MRF materials from weather exposure prior to being transported offsite as well as to keep stormwater from contacting these materials. The enclosed storage building would be approximately 70,000 square feet in size and would be located generally to the east of the MRF building.

Stormwater Ponds – The project site includes two existing stormwater ponds: one located in the northeastern corner of the center property and one located directly east of the MRF building. The site also includes two compost leachate retention basins adjacent to the existing composting operations in the northern part of the center property. Plan Concept 2 proposes to relocate the stormwater pond located directly east of the MRF building and to construct additional stormwater ponds throughout the site. New stormwater ponds are currently proposed at the northern end of the western property and the southwestern end of the center property. However, the locations of these ponds may vary depending on how the solid waste elements are built out. The ponds that would capture stormwater from the relocated composting, public waste drop-off, and C&D areas would be sized based on a 100-year, 24-hour intensity precipitation event, and the landfill stormwater ponds would be sized for a 1,000-year, 24-hour intensity precipitation event, consistent with Class II landfill requirements.

Road Crossing – On Fiddyment Road, south of Athens Avenue, a new separated road crossing is proposed to be installed to connect the waste operations on the center property to those proposed on the western property. This crossing is located further north than identified for Plan Concept 1. The purpose of this crossing is to allow WPWMA and operator staff to easily cross Fiddyment Road to access the western property while avoiding driving solid waste vehicles on public roads. Three crossing alternatives are being considered, including under crossings with and without retaining walls, overcrossings with and without retaining walls, and a conveyor system for transporting recovered materials. The following initial assumptions were used for these vehicle crossings (however, they will be built to County standards). Vehicle crossings are assumed to include two 12-foot lanes with 4-foot shoulders and a 25-mile-per-hour design speed. If an overcrossing is built, it would include 16 feet 6 inches of vertical clearance. Because the WPWMA has not yet selected a preferred road crossing, all three of these options are being evaluated in this EIR.

Maintenance Areas – The existing maintenance facility on the center property is proposed to be upgraded to support the expanded solid waste operations. This upgrade includes constructing an approximately 12,000-square foot building with expanded pad space. A second satellite maintenance facility is proposed in the central part of the western property to support waste disposal operations. This satellite maintenance facility would include an 8,500-square foot building with space for administrative offices and parking.

Administration Building and Parking – A new or expanded administration building is proposed near the existing administration building in the northwestern corner of the center property to accommodate additional staff offices and parking. A new building would contain approximately 12,400 square feet, including approximately 2,400 square feet for an education center and an approximately 25,000-square foot parking area.

Entrances – The existing Athens Avenue waste delivery entrance facilities in the northern part of the center property are proposed to be redesigned and realigned to better accommodate anticipated future traffic loading. Improvements include new entrance roadways, a new scale building, and three scales (two inbound scales and one outbound scale).

To provide access to the western property, a new site entrance is proposed in the southwestern corner of the Athens Avenue and Fiddyment Road intersection. This new entrance would provide access to the new landfill proposed on the western property. The western entrance would include a scale building and two new scales (one inbound scale and one outbound scale).

Wastewater and Water Supply Infrastructure – The development of new landfill area on the western property would require the installation of a wastewater line and fire protection water line extending from the Fiddyment Road and Athens Avenue intersection south along Fiddyment Road to the Sunset Boulevard and Fiddyment Road intersection. These lines would extend for approximately 5,300 linear feet.

Landfill Gas-to-Energy Plant – No changes are proposed to the existing LFG-to-Energy Plant located in the northeastern part of the center property with implementation of Plan Concept 2.

Landscaping and Perimeter Fencing – Landscaping and irrigation would be installed at the administrative building, main entrance, and along the site perimeter. In addition, fencing would be installed along the site perimeter.

Any building square footage associated with these supporting element uses is assumed to be included in the total square footage of industrial uses identified in the Sunset Area Plan for the site.

Achievement of Project Objectives – The supporting elements would help the WPWMA achieve several project objectives, including the following:

- Maintaining a stable and relatively predictable cost structure
- Improving operational efficiencies
- Enhancing customer safety by improving site access and internal circulation
- Enhancing operational flexibility
- Conducting operations in the most environmentally responsible manner possible
- Developing the properties in a manner consistent with the Sunset Area Plan

3.7 References

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