



EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

7 February 2018

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Adam Pescatore, Regulatory Compliance Coordinator
Harvest Power California, LLC.
6943 North Golden State Blvd
Fresno, CA 93722

NOTICE OF APPLICABILITY

WATER QUALITY ORDER 2015-0121-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS FOR COMPOSTING OPERATIONS
HARVEST POWER CALIFORNIA, LLC
HARVEST-LATHROP COMPOSTING FACILITY
SAN JOAQUIN COUNTY

On 3 August 2016, Harvest Power California, LLC (the Discharger) submitted a Report of Waste Discharge (ROWD) and subsequent information which was determined to be complete on 25 January 2018 for the Harvest-Lathrop Composting Facility (Facility). The ROWD includes a Technical Report, Notice of Intent (NOI), and a filing fee to obtain coverage under Water Quality Order 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations (hereafter General Order), for composting operations at the above-referenced site. The complete General Order can be accessed at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2015/wqo2015_0121_dwq.pdf

This Notice of Applicability (NOA) was developed after the review of your ROWD as described in the attached Staff Memorandum which is a part of this NOA. Based on staff's review, the Facility meets the conditions of the General Order, and is hereby covered under State Water Resources Control Board General Order **2015-0121-DWQ-R5S009** as a **Tier II** composting operation. The Discharger must comply with all Tier II requirements of the General Order.

The filing fee for the Harvest-Lathrop Composting Facility is based on Threat to Water Quality and Complexity rating of **3B**. The submitted \$4,699 filing fee covers the first year permitted by this Notice of Applicability (NOA). The Discharger shall submit the required annual fee (as specified in the annual billing issued by the State Water Resources Control Board) until the Notice of Applicability is officially terminated.

To fully comply with this NOA, please familiarize yourself with the contents of the enclosed Staff Memorandum and all of the requirements of the General Order. The Discharger is responsible for implementing all operations in a manner that complies with the General Order to assure compliance with the General Order, including any additional site specific mitigation measures identified in the Discharger's Technical Report for water quality protection. Any noncompliance with this General Order and/or failure to implement mitigation measures identified for water quality protection constitutes a violation of the Water Code, and is grounds for enforcement action, and/or termination of enrollment under this General Order.

Conditions of this Composting General Order include but are not limited to:

- The Water and Wastewater Management Plan (Section 3) including the Operations and Monitoring Plan (Section 4) as submitted in the 25 January 2018 Technical Report and approved by staff in this NOA, must be implemented including but not limited to the following requirements summarized in the Staff Memorandum:
 - Compliance with Compost Pad Operation Areas i.e., Working Surface Specifications;
 - Compliance with Wastewater Pond Specifications;
 - Compliance with Compost Wastewater Drainage Conveyance Structure Specifications;
 - 2-foot minimum groundwater separation requirements; and
 - Limitations on application of wastewater pond water used for dust control purposes.
- Submittal of final design report(s) i.e., plans, specifications, CQA manual, etc. for any improvement involving the containment of waste i.e., compost pads, conveyance structures, detention ponds at least 60 days prior to solicitation for construction bids.
- Technical reports must be submitted 90 days prior to each construction activity or in accordance with the previous item (whichever is greater), while post-construction reports must be submitted 60 days after the completion of each construction activity.
- Construction/Reconstruction of Wastewater Detention Ponds 1 and 2, associated pan lysimeters, and enough of the working pad area, access roads, and drainage ditches that feed the detention ponds to allow the Discharger to operate through the 2018-2019 wet season, including piezometers for groundwater separation monitoring must be completed by **1 November 2018** and a final Post-Construction Report documenting the completion must be submitted within 60 days following completion of construction.
- Construction of Active Composting and Curing Areas 1 and 2 including drainage conveyance structures must be completed by **1 October 2019** and a final Post-Construction Report documenting the completion must be submitted within 60 days following completion of construction.
- Construction of Final Product Storage Area and Receiving Area including drainage conveyance structures must be completed by **1 October 2020** and a final Post-Construction Report documenting the completion must be submitted within 60 days following completion of construction.
- Achieve Full Compliance of General Order and Notice of Applicability by **1 January 2021**.
- The implementation of additional monitoring and reporting requirements specified in the Staff Memorandum:
 - Groundwater Separation Monitoring as required in section 10 of the Staff Memorandum; and
 - Implementation of Detention Ponds Contingency Plan Action Levels 1 and 2 as required in section 6.c. and 6.d of the Staff Memorandum.
- The Annual Monitoring and Maintenance Report, technical reports, and all monitoring reports must be uploaded into the State Water Board's GeoTracker database.
- A revised NOI is required at least 90 days prior to:
 - Change of ownership or operator
 - Expansion of the composting facility beyond that regulated by this NOA;
 - adding a new feedstock, additive, or amendment;

- o changing material or construction specifications;
- o changing a monitoring program; or
- o changing an operation or activity not described in the approved NOI and technical report.

Attachment B of the General Order and the Staff Memorandum includes specific monitoring and reporting requirements that you must comply with, including routine monitoring and reporting to the Central Valley Regional Water Control Board. The first year Annual Monitoring and Maintenance Report as identified in the General Order must be submitted to the Central Valley Regional Water Board no later than **1 April 2019**, and then annually by 1 April each year.

All monitoring and technical reports and other correspondence must be converted to searchable Portable Document Format (PDF) and submitted electronically to the State Water Board's GeoTracker database (see General Order, Report Submittals). Once you receive an upload confirmation from GeoTracker that your report has been received, please send a courtesy email and confirmation number to centralvalleysacramento@waterboards.ca.gov and to the staff person indicated below. To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the body of the email or any documentation submitted to the mailing address for this office:

Attention:	Brendan Kenny, Compliance and Enforcement Unit Brendan.Kenny@waterboards.ca.gov (916) 464-4635
Discharger Name:	Harvest Power California, LLC
Facility Name:	Harvest-Lathrop Composting Facility
County:	San Joaquin County
CIWQS Place ID:	827021

Now that the NOA has been issued, the Board's Compliance and Enforcement Section will provide management of this composting site. Brendan Kenny is your new point of contact for any questions about the General Order and NOA, and you may contact him at the contact email and phone number provided above. If you find it necessary to make a change to your permitted operations, Brendan Kenny will direct you to the appropriate Permitting staff.

This Notice of Applicability replaces the Discharger's current Monitoring and Reporting Plan R5-2008-0811. For administrative purposes Monitoring and Reporting Plan R5-2008-0811 is rescinded except for purposes of enforcement. The Discharger shall comply with the monitoring and reporting requirements of Water Quality Order 2015-0121-DWQ and any additional monitoring and reporting requirements specified in this NOA to ensure protection of receiving water quality.

Pamela C. Creedon
 For PAMELA C. CREEDON
 Executive Officer

Enclosures: Staff Memorandum dated 7 February 2018

cc: James Sanchez and Patricia Sanchez (landowners), 8700 Woodward Lake Drive, Oakdale
 Gary Aguinaga, Sr. Vice President and COO, Energy, Harvest Power, Fresno
 Christopher Carey, Sr. Vice President, Harvest Power California, LLC., Fresno
 Linda Turkatte, San Joaquin County Environmental Health, Stockton
 (Continued on next page)

Christine Karl, CalRecycle, Sacramento

Brianna St. Pierre, Land Disposal Program, Division of Water Quality, SWRCB, Sacramento

Howard Hold, Central Valley Water Board, Rancho Cordova

Central Valley Regional Water Quality Control Board

STAFF MEMORANDUM

TO: Brad Shelton, P.G. *BS 2/6/18*
Senior Engineering Geologist
Title 27 Permitting and Mining Unit Supervisor

FROM: Vinoo Jain, P.E., M80301 *VJain*
Water Resources Control Engineer
Title 27 Permitting and Mining Unit Staff

DATE: 7 February 2018



SUBJECT: **APPLICABILITY OF COVERAGE UNDER STATE WATER RESOURCES CONTROL BOARD WATER QUALITY ORDER 2015-0121-DWQ, HARVEST-LATHROP COMPOSTING FACILITY, TIER II COMPOSTING FACILITY, SAN JOAQUIN COUNTY**

1. REPORT OF WASTE DISCHARGE

On 3 August 2016 and later corrected on 16 August 2016, Harvest Power California, LLC. ("Discharger") submitted a Report of Waste Discharge (ROWD) for the Harvest-Lathrop Composting Facility ("HLC Facility" or "Facility") located at 916 Frewert Road in San Joaquin County as a Tier 2 Facility. The ROWD included a draft Technical Report, Notice of Intent (NOI), and Filing Fee, to obtain coverage under Water Quality Order 2015-0121-DWQ, *General Waste Discharge Requirements for Composting Operations* (hereafter General Order) for composting operations at the above-referenced Site. In the submittal the Discharger requested additional time to submit a final Technical Report.

On 7 October 2016, Central Valley Water Board staff sent the Discharger a Water Code section 13260 letter requesting a complete ROWD by 4 November 2016.

On 4 November 2016 the Discharger submitted a technical report with supplemental submission of soil compaction results on 29 November 2016. Following discussions between Water Board Staff and the Discharger's consultant, the Discharger updated and revised its 4 November 2016 technical report and provided on 20 April 2017 via email a final Technical Report dated 17 April 2017 (Final Technical Report).

After review of the Discharger's Final Technical Report and determination that the submittal was incomplete, on 9 June 2017 Central Valley Water Board staff sent the Discharger a letter identifying ten (10) areas of concern with the Final Technical Report that needed to be addressed by 28 July 2017. On 1 August 2017, the Discharger requested a 45-day extension in order to adequately address the 10 areas of concern.

On 15 September 2017 the Discharger submitted its revised Final Technical Report dated 15 September 2017. On 5 December 2017 eight (8) comments were submitted via email to the Discharger regarding its revised Final Technical Report.

On 19 December 2017 the Discharger responded to the 5 December 2017 email stating that a revised Final Technical Report would be submitted no later than 30 January 2018.

Upon further discussion with the Discharger on its Final Technical Report and the Discharger's latest submittal of its revised Final Technical Report dated 25 January 2018 (2018 Revised Final Technical Report) Central Valley Water Board staff has deemed the ROWD to be complete on 25 January 2018.

2. SITE DESCRIPTION

The existing Facility is located at 916 Frewert Road on 20 acres in San Joaquin County approximately 1.3 miles west of Manthey Road/ 5 Freeway in City of Lathrop, Assessor Parcel Number 191-260-22. The existing 20-acre Facility has been in operation since 2007 (See Attachment A). Land uses within one mile from perimeter of operation are agricultural, residential and commercial.

The Facility is subject to a Solid Waste Facility Permit from the Sacramento County LEA and CalRecycle. The Solid Waste Facility Permit (SWFP) (39-AA-0051) for the facility limits the Facility to 500 tons per day and 156,000 tons (approximately 313,000 cubic yards) of feedstock per year.

The upper Quaternary geology in the northern San Joaquin Valley and at this site is controlled by the influx of sediments from the Sierra Nevada Range to the east and the Diablo Range to the west. With the constant flow from rivers out of the Sierra Nevada Range, the sediments of the northern San Joaquin Valley consist mostly of alluvial, paludal, lacustrine and flood basin sedimentation, sands, gravels and cobbles with some clay and silts.

San Joaquin County water bearing formations, from the San Joaquin River east to the Sierra Nevada Range, consist of, from the surface down, Basin Deposits, Alluvium and the Victor Formation, Laguna Formation, Mehrten Formation and the Valley Springs Formation. At the site, Basin deposits, most likely derived from flooding of the San Joaquin River and alluvium deposits in a cut and fill environment.

Basin Deposits in the area of the site consists of continental unconsolidated gravel and coarse to medium sands deposited along the San Joaquin River. These deposits are porous and good conduits to the lower aquifers of the aforementioned formations and deposits. In all cases, the subaerial deposits consist of silts, clay, sands and gravels with the silts, clays and gravels being more discontinuous lenticular deposit within the formations mentioned. Near the San Joaquin River, peat and clay deposits are not uncommon.

Groundwater is at a depth of 9 to 13 feet below existing ground surface (bgs). The groundwater flow is northeast to southwest and calculated to have a velocity of 0.012 feet/day. The closest surface water from the site is San Joaquin River, which is approximately 0.5 miles southwest of the site. Since the site is near the San Joaquin River, fluctuations of the groundwater elevations were considerably low due to recharge from the river.

Due to shallow groundwater (first encountered groundwater) at the Facility the Discharger has stated in its 2018 Revised Final Technical Report that it will maintain a minimum separation of 2 feet between the base of the ponds (lowest point of waste in the containment system i.e., base of waste) and groundwater level. The Discharger will install piezometers around the detention ponds to establish a potentiometric surface map of groundwater elevation below the detention ponds. The approximate piezometric locations are shown on Attachment B. The Discharger shall provide additional monitoring and reporting as described in Section 10 of this staff memorandum to ensure that minimum 2 feet separation is maintained between base of waste and highest groundwater level.

The subsurface soils underneath the site consists of fine grained Silty Sand (SM) and Silt (ML). Upper 10 feet bgs consists of dry to moist, fine-grained, Silty Sand (SM), which is underlain by Silt (SM) in medium dense condition. Fines content, i.e. particles passing #200 sieve (0.074 mm opening size) range from 15 to 53 percent. Laboratory test results of in-situ soils indicated that the soils underneath the working surface are not uniformly compacted and hydraulic conductivities are both above and below 1.0×10^{-5} cm/sec.

Annual rainfall average is approximately 9.85 inches. The historic maximum and minimum annual rainfall is 21.14 inches and 4.11 inches respectively, for the period of record spanning from 1949 to 2010. Precipitation measurements were recorded at the Tracy-Carbona weather station. The weather station is located approximately 13 miles from the Facility.

The mean annual evaporation for the site is 97.48 inches per year, for the period of record spanning 1955 to 2010. Evaporation measurements were recorded at the Tracy Pumping Plant, approximately 15 miles from the Facility.

The National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Vol. 6, Version 2, rainfall frequency map provided the rainfall data used in the hydrology analysis of the site. The NOAA rainfall frequency map indicated that the peak 25-year, 24-hour storm event was determined to be 2.71 inches.

According to Federal Emergency Management Agency (FEMA) map number 06077C0610F the Facility is protected by a levee from the 1% annual chance (100-year) flood and in an area determined to be outside the 0.2% annual chance (500-year) floodplain. However, the site is within a dam inundation zone for the Lake McClure, San Luis, and/or New Melones dams in the headwaters of the San Joaquin River tributaries.

At the Facility there is one on-site agricultural water supply well that supplies water for the composting operation and one on-site domestic water supply well which supplies water to the Facility office building. The nearest off-site water supply well is located approximately 0.36 miles east of the north-east Facility boundary.

3. PROPOSED COMPOSTING OPERATIONS

The proposed composting operation will be divided into three distinct operational areas: (1) a Receiving Area of 1.7 acres, (2) Active Composting and Curing Areas totaling 6.8 acres, and (3) a Finished Product Storage Area of 2.6 acres. The composting operation will also include two wastewater detention ponds (Pond 1 and Pond 2) with surface areas of approximately 0.7 and 1.7 acres respectively (See Attachment B). Ancillary facilities that are not subject to the requirements of the General Order include various buildings, truck and employee parking, fuel storage area, and a truck scale.

The Facility will operate year round and uses a thermophilic, aerated windrow composting process. The Facility will recycle green waste, food waste and agricultural waste, obtained from urban residential sources and local agricultural facilities. After receiving, all incoming materials will be screened manually and stockpiled in an area reserved for grinding (Receiving Area) and then placed into windrows for processing. All compostable material entering the site will be ground and incorporated within 36 hours of receipt. The windrows will be approximately 7 feet high, 18 feet wide, 250 feet long and situated 8 feet apart. The material will remain in the windrows until it is cured.

This stage of creating mature compost lasts approximately 3 months. Water will be pumped from the wells and applied to piles using either sprinklers, which are placed atop the windrows and moved when the material covered by the radius becomes saturated, or a water truck that drives between the windrows and applies water directly to the piles via high pressure injection nozzles. Watering will be done primarily during the 15 days of pathogen reduction. During this time, the piles will be turned five times by a windrow compost turner and watered before they are turned. The piles are monitored for temperature and moisture and turned to ensure they meet pathogen, vector attraction, and VOC reduction requirements.

At the end of the curing phase, the material will be run through a trommel screen and material will be separated into fines and overs. There are no additives used in the composting process. The only amendments that will be used on site are new Gypsum (up to 25%) and lime mixed into some finished product on a small batch-by-batch basis. The fines will be sold as finished compost products. The overs will be recycled back into the compost process. The Process Flow diagram (Attachment C) shows movement of material from received to final product. The compost generated will be marketed to the landscaping and agricultural communities.

Any wood waste coming into the Facility will be separated, ground, stored and taken to a facility to be used as energy. As outlined, in the Discharger's Solid Waste Facility Permit (39-AA- 0051), this activity is considered a small volume CDI debris processing. The Facility will not take in more than 25 tons per day of wood waste.

Stormwater that forms leachate (wastewater) at the Facility will be directed using minimum 1% drainage slope on the working surfaces (operational areas) to drainage ditches which convey the wastewater to detention pond 1 (Pond 1) or detention pond 2 (Pond 2). The Facility will be designed to rely on gravity flow from the operational areas to Pond 1 and Pond 2. Wastewater will be periodically removed from Pond 1 and Pond 2 for moisture conditioning compost windrows and for dust control.

The results of the Discharger's water balance analysis for wastewater storage capacity requirements in accordance with the General Order are shown below:

Month	Ponds 1 and 2 Available Capacity¹ (Gallons)	Wettest Season, Wastewater Storage in Ponds² (Gallons)	Required Design Storm Reserve Capacity³ (Gallons)	Remaining capacity⁴ (Gallons)
October	3,528,189	-	1,196,369	2,331,820
November	3,528,189	278,035	1,196,369	2,053,785
December	3,528,189	909,216	1,196,369	1,422,604
January	3,528,189	2,037,871	1,196,369	293,949

Month	Ponds 1 and 2 Available Capacity ¹ (Gallons)	Wettest Season, Wastewater Storage in Ponds ² (Gallons)	Required Design Storm Reserve Capacity ³ (Gallons)	Remaining capacity ⁴ (Gallons)
February	3,528,189	2,955,361	1,196,369	(623,541)
March	3,528,189	3,262,087	1,196,369	(930,267)
April	3,528,189	3,065,570	1,196,369	(733,750)
May	3,528,189	2,190,570	1,196,369	141,250
June	3,528,189	1,315,570	1,196,369	1,016,250
July	3,528,189	440,570	1,196,369	1,891,250
August	3,528,189	258,536	1,196,369	2,073,284
September	3,528,189	83,536	1,196,369	2,248,284

¹ Does not include 1-foot freeboard volume

² Net increase in wastewater storage in ponds after accounting for evaporation and operational use (dust control and moisture conditioning of composting piles)

³ Required storage to accommodate 25-year 24-hour Design Storm (2.71 inches) runoff from working surfaces and falling into ponds

⁴ Remaining storage capacity in ponds.

The table above shows that the Discharger will need to implement a contingency plan for handling additional wastewater runoff during a wettest year wet season to maintain reserve storage capacity for the 25-year 24-hour Design Storm of 2.71 inches if the Design Storm has not already occurred by the 1 February. As a contingency plan, the Discharger can mobilize and install above ground portable storage tanks for containment of wastewater should a wet season occur comparable to the wettest season currently on record. Another option is trucking wastewater to a wastewater treatment plant for disposal. Section 10(b) Monitoring and Reporting of this memorandum provides the procedures to be followed to notify, monitor, and report when the Discharger shall implement a contingency plan if the Design Storm has not already occurred by 1 February.

The Discharger must submit a final design report with detailed design information at least 90 days prior to new construction of working surfaces, detention ponds, berms, ditches, or any other water quality protection containment structure for approval by the Central Valley Water Board. The final design information must include final water balance calculations for detention ponds, final design of wastewater conveyance features, liner materials and thicknesses, and rationale for liner system design. The design report must ensure testing and quality assurance of liner materials and compacted soils in accordance with commonly accepted engineering practices, American Society for Testing and Materials test methods, and/or other appropriate material standards. This testing includes final electronic leak location survey of any geomembrane barrier layer. The Discharger must submit a post-construction report to the Central Valley Water Board within 60 days of completing all construction activities associated with all applicable containment and monitoring structures, as required for compliance with this General Order and the MRP.

4. FACILITY TIER CLASIFICATION

Based on the information submitted by the Discharger and confirmed by Central Valley Water Board staff, the Facility is classified as **Tier II** as defined by the General Order.

5. COMPLIANCE WITH COMPOSTING PAD SPECIFICATIONS

The General Order provides minimum specifications for design, construction, and operation of Tier II facilities working surfaces. Working surfaces must be capable of resisting damage from the movement of equipment and weight of piles, and have a hydraulic conductivity of 1.0×10^{-5} centimeters per second (cm/s) or less.

The Discharger stated in the 2018 Revised Final Technical Report that they shall comply with the General Order requirements for working surfaces used in composting operations including but not limited to designing and constructing such working surfaces with minimum one-foot thick Class 2 aggregate base modified with on-site fine grained soil compacted to minimum 95% maximum dry density achieving a hydraulic conductivity of 1.0×10^{-5} centimeters per second (cm/s) or less. Therefore, all composting operations shall be conducted on working surfaces constructed with minimum one-foot thick layer as described above having a hydraulic conductivity of 1.0×10^{-5} centimeters per second (cm/s) or less as shown in Attachment D.

The Discharger's maintenance of the working surfaces shall include periodically surveying the working surfaces to ensure:

- a. Drainage grades are maintained at minimum 1% grade to facilitate drainage and minimize ponding to reduce infiltration of liquids;
- b. Localized ponding does not occur due to operations, settlement, etc.; and
- c. The low permeability working surface thickness is maintained to at least 1-foot at all times.

Repairs to the working surface shall be submitted as part of the Discharger's Annual Monitoring and Maintenance Report and shall include construction quality assurance that the materials and methods used to repair the working surface ensures that the hydraulic conductivity of the repair does not exceed 1.0×10^{-5} centimeters per second (cm/s).

The Discharger shall also maintain the working surface such that it provides year round equipment access to feedstock, additives, amendments, and compost (active, curing, and final product) without damage to the working surfaces and containment structures.

6. COMPLIANCE WITH COMPOST WASTEWATER POND SPECIFICATIONS

Detention ponds must be designed, constructed, operated, and maintained to meet a hydraulic conductivity of 1.0×10^{-6} cm/s or less. Detention ponds must be designed and constructed with a pan lysimeter monitoring device under the lowest point of the pond, or an equivalent engineered alternative specified in the NOI and/or a technical report, and approved by the Regional Water Board. Also, detention ponds must be designed, constructed, and maintained (Pond Sizing) to prevent conditions contributing to, causing, or threatening to cause contamination, pollution, or nuisance, and must be capable of containing, without overflow or overtopping (taking into consideration the crest of wind-driven waves and water reused in the composting operation), all runoff from the working surfaces in addition to precipitation that falls into the detention pond from a 25-year, 24-hour peak storm event at a minimum, or equivalent alternative approved by the Regional Water

Board.

- a. The Discharger stated in its 2018 Revised Final Technical Report that it shall comply with the General Order requirements for its detention ponds used in composting operations including but not limited to designing and constructing its detention ponds using the following pond liner system (from top to bottom- See Attachment D):
 - 1) 40 mil Linear Low-Density Polyethylene (LLDPE) Geosynthetic Geomembrane Liner¹
 - 2) Geosynthetic Clay Liner with equivalent or less flow-through rate as 1-foot thick clay having less 1.0×10^{-6} cm/s or less hydraulic conductivity
 - 3) Compacted Subgrade
- b. The Discharger stated in the 2018 Revised Final Technical Report that they will install a pan lysimeter below the lowest point of the detention pond capable of effectively monitoring the unsaturated zone below the detention pond bottom as shown in Attachment D.
- c. The Discharger has shown in 2018 Revised Final Technical Report that the proposed detention ponds required to meet the pond sizing specifications of the General Order may require implementation of a contingency plan during a wettest year period (21.14 inches annual rainfall) where excess wastewater may need to be stored in above ground temporary storage tanks or disposed of at a wastewater treatment plant. The excess wastewater is the result of the Discharger having to maintain reserve capacity in its detention ponds due to runoff and precipitation falling on the ponds from the 25-year 24-hour Design Storm of 2.71 inches. The use of above ground temporary storage tanks or disposal of wastewater at a wastewater treatment plant after 1 February to manage excess compost wastewater is necessary in order for the Discharger to maintain sufficient freeboard and reserve storage for the Design Storm to prevent overflow and/or overtopping of the detention ponds. The Discharger's water balance predicts that if the Design Storm occurs after 1 February the Discharger will need to store excess wastewater in above ground temporary storage tanks or dispose of wastewater off-site during the following months if a wet year similar to the wettest year on record were to occur:

Month	Estimated Contingency Plan Additional Storage Required ¹ (Gallons)
February	623,541
March	930,267
April	733,750

¹Potential storage or disposal needed to maintain reserve capacity for Design Storm

In order to determine when the Discharger must begin implementing its contingency plan to store excess wastewater in additional above-ground portable storage tanks or dispose of excess wastewater at a wastewater treatment plant, two action levels shall be implemented based on wastewater elevations in the detention ponds if the Design Storm has not already occurred by 1 February. If the Design Storm of 2.71 inches occurred in a 24-hour period prior to 1 February the Discharger must notify the Central Valley Water

¹ The Discharger may add a protective soil cover above the LLDPE geomembrane liner as shown in Attachment D so long as the Discharger's water balance analysis and detention pond capacity calculations account for the loss in associated wastewater storage capacity. The Discharger's 2018 Revised Final Technical Report Appendix B currently does not take into account loss of storage capacity due to the protective soil cover.

Board staff in writing documenting the event and the amount of precipitation received at the Facility. Otherwise a summary of the action levels and responses required by the Discharger is shown below:

- 1) **Action Level 1** ((1.5 feet (clearly marked to provide visual verification) below the minimum 1-foot freeboard level in Pond 1 or Pond 2 (also clearly marked to provide visual verification)). At Action Level 1, the Discharger shall:
 - i. Review on site water usage to determine how more pond wastewater can be used for dust control. If the Discharger determines that it can apply wastewater for dust control the Discharger must record weather conditions, daily precipitation total (24-hour period), and take photographs recording site conditions before application of wastewater to areas needing dust control and photographs recording site conditions after application to show that over application of wastewater did not occur;
 - ii. Increase wastewater detention pond water level inspection frequency to include weekly inspections ; and
 - iii. Record of contact with temporary storage tank provider to arrange for staging temporary storage tanks at the Facility or record of contact with a wastewater treatment plant where the Discharger has established an agreement to receive the wastewater for disposal.

 - 2) **Action Level 2** ((0.5 feet (clearly marked to provide visual verification) below the minimum 1-foot freeboard level in Pond 1 or Pond 2 (also clearly marked to provide visual verification)). At Action Level 2 the Discharger shall:
 - i. Review on site water usage to determine how more pond wastewater can be used for dust control. If the Discharger determines that it can apply wastewater for dust control, the Discharger must record weather conditions, daily precipitation total (24-hour period), detention pond elevation, and take photographs recording site conditions before application of wastewater to areas needing dust control and photographs recording site conditions after application to show that over application of wastewater did not occur;
 - ii. Commence pumping to temporary storage tanks for future on site use or commence trucking of wastewater to a wastewater treatment plant for disposal; and
 - iii. Increase inspections to daily until the pond elevation returns to Action Level 1 status.
- d. As a condition of maintaining coverage under the General Order, the Discharger is required to complete the following items when Action Level 1 and Action Level 2 conditions are initiated:
- 1) The Discharger shall **immediately** report by telephone and follow-up with an electronic mail message to the appropriate Central Valley Water Board compliance and enforcement staff within **24 hours** that it has initiated Action Level 2;

- 2) Keep daily records of weather conditions, the elevation of compost wastewater in the detention ponds, daily precipitation totals (24-hour period), and submit such records as part of the annual report and made available to Central Valley Water Board staff upon request;
 - 3) Keep records which are part of the annual report and made available to Central Valley Water Board staff upon request on the date, quantity (gallons), and disposal method (i.e. dust control and compost wastewater removed from the detention ponds to temporary storage tanks necessary or off-site trucking of wastewater to a wastewater treatment plant to lower the detention pond level to below Action Level 2); and
 - 4) Summarize the records kept including photographs taken during the Action Level 1 and Action Level 2 response in the annual report required by the General Order.
- e. The Discharger is limited to application of wastewater pond water for dust control purposes to areas where low permeability working surfaces have been installed and drainage from those surfaces is directed to the wastewater detention Pond 1 and Pond 2.

7. COMPLIANCE WITH COMPOST WASTEWATER DRAINAGE CONVEYANCE STRUCTURE SPECIFICATIONS

The General Order provides minimum specifications for design, construction, and maintenance of Tier II Facility drainage ditches. Drainage ditches must be capable of conveying all precipitation and runoff from a 25-year, 24-hour peak storm event at a minimum, and have a hydraulic conductivity of 1.0×10^{-5} centimeters per second (cm/s) or less. The General Order also requires that berms/curbs and other drainage conveyance systems be designed, constructed, and maintained to manage, contain, and/or redirect precipitation flows from a 25-year, 24-hour peak storm event at a minimum.

The Discharger stated in the 2018 Revised Final Technical Report that they shall comply with the General Order requirements for drainage ditches used in composting operations including but not limited to designing and constructing such conveyance structures with minimum six-inch thick Portland cement concrete. Therefore, all drainage ditches shall be constructed using minimum six-inch thick Portland cement concrete as shown in Attachment D, Drainage Ditch Details.

The Discharger proposes to construct run-on/runoff control berms using earthen fill as shown in Attachment D, Section C-C. The final materials and size shall be determined during submittal of a final Design Report which prevents at a minimum run-on and run-off from a 25-year, 24-hour peak storm event, adequately protected from erosion, and must not cause, threaten to cause, or contribute to conditions resulting in contamination, pollution, or nuisance.

8. COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

To fulfill requirements imposed by the California Environmental Quality Act ("CEQA") (Pub. Resources Code, § 21000 et seq.), San Joaquin County, acting as Lead Agency issued a Notice of Determination (NOD) on 11 April 2012 finding that the mitigated negative declaration that the mitigated negative declaration (See SCH #2012022021) adding urban green waste (including some food waste handling activities) to an existing agricultural waste composting facility is consistent with the Project proponent's existing conditional use permit

(CUP). Furthermore, the Discharger's compliance with the General Order and any additional site specific requirements identified in a Notice of Applicability issued to the Discharger will ensure that any water quality impacts are less than significant.

9. TIMELINE FOR COMPLIANCE

The table below shows the proposed improvement plan schedule which incorporates on-going operations of the Facility, seasonal weather, fluctuations in the market demand of finished product, and company resources. The HLC Facility must comply with the proposed timeline.

Task/Improvement	Completion Dates
a. Submittal of Final Design Report(s) i.e., plans, specifications, CQA manual, etc. for any improvement involving the containment of waste i.e., compost pads, conveyance structures, detention ponds	At least 90 days prior to solicitation for construction bids
b. Construction/Reconstruction of Wastewater Detention Ponds 1 and 2, associated pan lysimeters and enough of the working pad area, access roads, and drainage ditches that feed the detention ponds to allow the Discharger to operate through the 2018-2019 wet season, including piezometers for groundwater separation monitoring	1 November 2018
c. Construction of Active Composting and Curing Areas 1 and 2 including drainage conveyance structures	1 October 2019
d. Construction of Final Product Storage Area and Receiving Area including drainage conveyance structures	1 October 2020
e. Achieve Full Compliance of General Order and Notice of Applicability	1 January 2021
f. Submit Final Post-Construction Report	Within 60 days of Completing Items b through d above

10. MONITORING AND REPORTING

At a minimum, HLC Facility will regularly inspect and maintain all containment, control, monitoring structures, and monitoring systems pursuant to Attachment B of General Order Monitoring and Reporting requirements and according to Section 4 of the 2018 Revised

Final Technical Report submitted as part of the ROWD. The frequency of inspections will be sufficient to prevent discharges of feedstock, additives, amendments, compost (active, curing, or final product), or wastewater from creating, threatening to create, or contributing to conditions of contamination, pollution, or nuisance. Results of monitoring will be reported annually in the Annual Monitoring and Maintenance Report which will be submitted by **1 April** of each year as long as the Notice of Applicability is in effect.

The Discharger in response to site specific conditions is required to perform additional monitoring and reporting as described in this staff memorandum related to:

- a. **Groundwater Separation Monitoring.** To verify that the Discharger has maintained minimum 2-foot groundwater separation between lowest point of waste in the detention ponds and underlying groundwater elevation the Discharger shall:
 - 1) Monthly between 1 October and 1 May monitor and record groundwater elevations in piezometers associated with determining groundwater separation between the base of waste in wastewater detention ponds and groundwater. The Discharger on a monthly basis shall determine if the 2-foot separation is maintained. The Discharger shall report the monthly results as part of its General Order annual reporting requirement. If at any time the Discharger has determined it has not maintained the 2-foot minimum separation requirement the Discharger shall comply with item 2 below:
 - 2) The Discharger shall immediately report by telephone and follow-up with an electronic mail message to the appropriate Central Valley Water Board compliance and enforcement staff within 24 hours that it has violated the 2-foot minimum groundwater separation requirement; and
 - 3) Submit a work plan within 60 days describing how it is going to address the minimum groundwater separation violation.
- b. **Implementation of Detention Ponds Contingency Plan Action Levels 1 and 2 as required in section 6.c. and 6.d.**

11. SITE CLOSURE

At least 90 days prior to ceasing composting operations, HLC Facility shall submit a Site Closure Plan to the RWQCB for approval. The site restoration shall include work necessary to protect public health, safety, and the environment.

12. DISCUSSION

The Discharger has provided sufficient information through its ROWD for Central Valley Water Board staff to determine whether the Discharger's existing composting operations is eligible for coverage under the composting General Order. The Discharger's ROWD including its 2018 Revised Final Technical Report has provided assurance that composting operations and the conveyance of compost wastewater meets the requirements of the General Order for minimizing the discharge of Constituents of Concern to receiving waters. The Discharger's proposed lining of its compost wastewater detention pond meets the requirements of the General Order. This memorandum in conjunction with the NOA includes a site specific wastewater contingency plan that establishes action levels for notification, monitoring, and reporting to ensure that the Discharger's detention ponds have sufficient capacity to maintain minimum freeboard requirements to prevent overtopping or overflow

that meets the requirements of the General Order. The Discharger has also provided assurances that operational areas (working surfaces) and conveyance structures will meet the low permeability requirements of the General Order. Finally, the Discharger proposed design and construction of conveyance structures such as ditches, berms, etc. used to transport compost wastewater from the working surfaces that will meet at a minimum the 25-year, 24-hour peak storm event requirement of the General Order. The Discharger's proposed compliance schedule for making Facility improvements that will bring the Facility into full compliance with the General Order meets the requirements of the General Order.

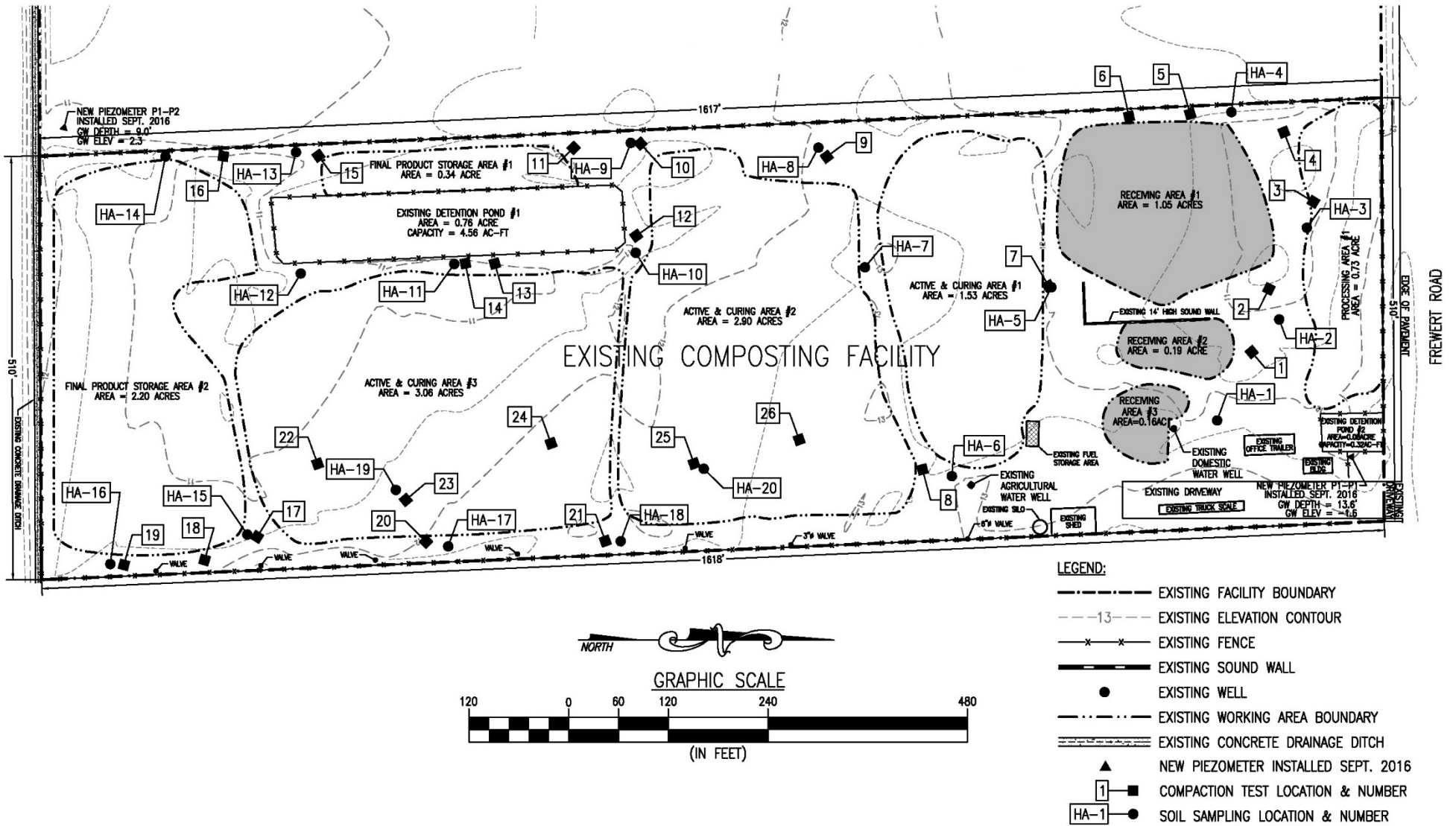
13. RECOMMENDATION

Based on staff review of the ROWD, the Discharger's 2018 Revised Final Technical Report and supporting documents, Harvest-Lathrop Composting Facility meets the minimum requirements of the General Order. The Notice of Applicability (NOA) can be issued and stay in effect as long as the Discharger implements all operations in a manner that complies with the requirements of the General Order and site specific requirements in this Staff Memorandum. Furthermore, for administrative purposes the Discharger's current Monitoring and Reporting Plan R5-2008-0811 should be rescinded except for purposes of enforcement.

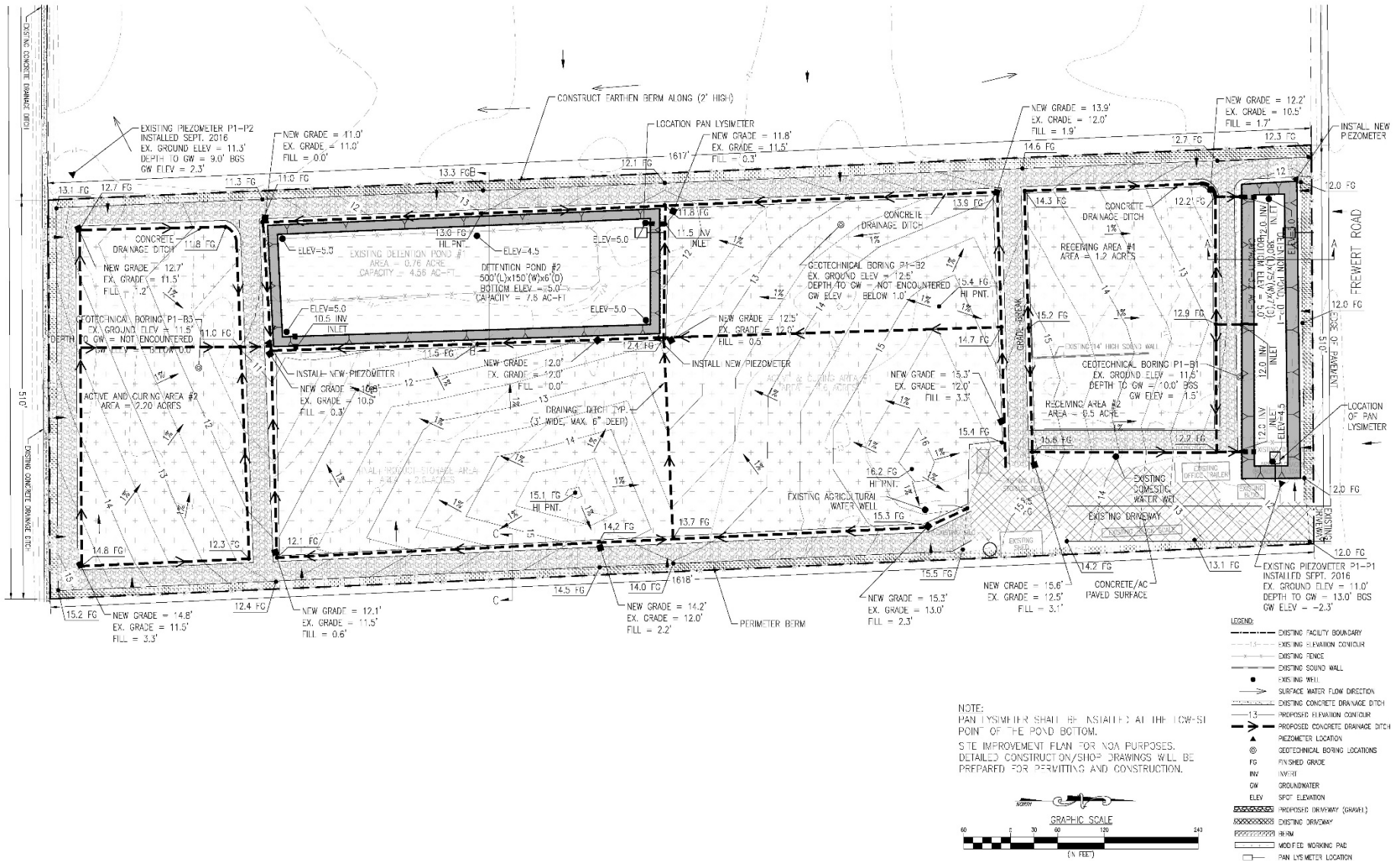
ATTACHMENTS:

- Attachment A: Existing Composting Facility
- Attachment B: Future Composting Facility Site Drainage Plan
- Attachment C: Compost Facility Process Flow Chart
- Attachment D: Wastewater Containment and Pan Lysimeter Details

ATTACHMENT A: Existing Composting Facility (Source: 2018 Revised Final Technical Report Figure A1 (modified))

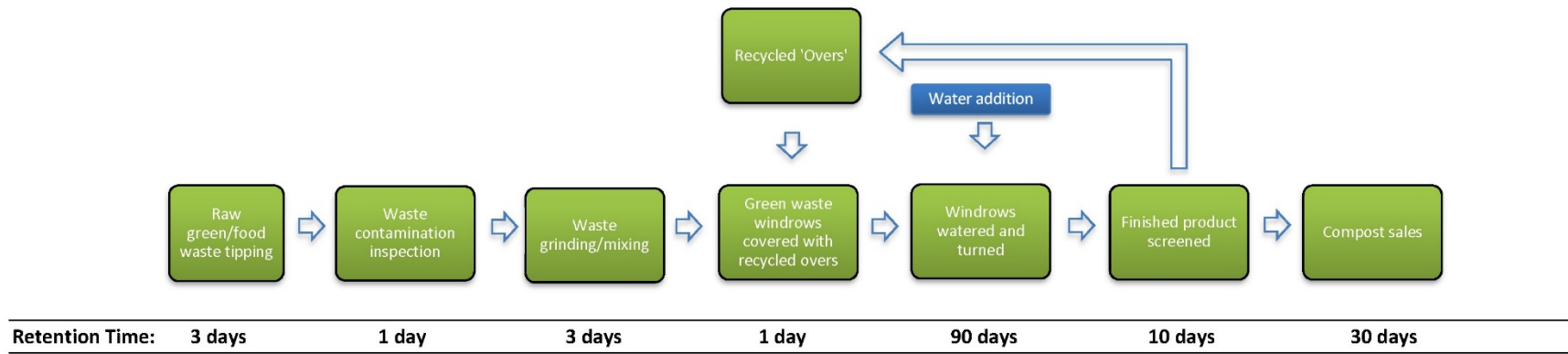


ATTACHMENT B: Future Composting Facility Site Drainage Plan (Source: 2018 Revised Final Technical Report Figure 3A)



ATTACHMENT C: Compost Facility Process Flow Chart (Source: 2018 Revised Final Technical Report Chart 1)

Harvest – Lathrop Composting Facility Process Flow



ATTACHMENT D: Wastewater Containment and Pan Lysimeter Details: (Source: 2018 Revised Final Technical Report Figure 3B)

