

Final Environmental Impact Report

Z-Best Composting Facility Modifications

SCH 2018102041

April 24, 2024

Prepared for:

County of Santa Clara
Department of Planning and Development
70 West Hedding Street, 7th Floor East Wing
San Jose, CA 95110

Prepared by:

AECOM
4 North Second Street, Suite 675
San Jose, CA 95113
aecom.com

County of Santa Clara
Department of Planning and Development
70 West Hedding Street, 7th Floor, East Wing
San Jose, CA 95110

Table of Contents

1	Introduction	1
1.1	CEQA Process	1
1.2	Document Organization	1
2	Agencies, Organizations and Persons Commenting on the Recirculated Draft EIR.....	3
3	Responses to Comments Received on the Recirculated Draft EIR	4
3.1	Written Comments and Responses to Comments	4
3.1.1	Agency Comments	4
3.1.2	Individual Comments	29
3.1.3	Applicant Comments	42
3.2	Verbal Comments and Responses to Comments	46
3.3	Staff-Initiated Changes	46
4	Changes to the Recirculated Draft EIR.....	48
4.1	Changes to Specific Sections of the Recirculated Draft EIR.....	48
4.1.1	Changes to Section 2	48
4.1.2	Changes to Section 3	48
4.1.3	Changes to Section 4	50
4.1.4	Changes to Section 5	53
4.1.5	Changes to Section 7	54
4.1.6	Changes to Section 8	55
4.1.7	Changes to Section 11	56
4.1.8	Changes to Section 13	67
4.1.9	Changes to Section 15	69
4.1.10	Changes to Section 18	70
4.1.11	Changes to Section 19	72
4.2	New and Updated Appendices.....	73
5	References.....	74

Appendices

Appendix A	Comment Letters on Recirculated Draft EIR
Appendix B	Mitigation Monitoring and Reporting Program
Appendix C	Updated Tables and Figures
Appendix D	New or Updated Appendices

Tables

Table 2-1: List of Written Comments Received on the Recirculated Draft EIR	3
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Acronyms and Abbreviations

AADT	Average Annual Daily Traffic
ADA	American Disabilities Act
BAAQMD	Bay Area Air Quality Management District
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CEQA	California Environmental Quality Act
CASP	covered aerated static pile
CHP	California Highway Patrol
CLOMR	Conditional Letter of Map Revision
Composting General Order	General Waste Discharge Requirements for Composting Operations contained in Order No. WQ 2015-0121-DWQ adopted on August 4, 2015, and amendments under Order WQ 2020-0012-DWQ, adopted on April 7, 2020.
County	County of Santa Clara
CTI	Compost Technologies, Inc.
DSDD	Design Standard Decision Document
ECS	Engineered Compost Systems
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
FEMA	Federal Emergency Management Agency
Final EIR	Final Environmental Impact Report
General Order	Composting General Order
GHG	greenhouse gas
HDPE	high-density polyethylene
ICE	Intersection Control Evaluation
Lead agency	County of Santa Clara
LOS	Level of Service
MA	Maintenance Agreement
MGS	Midwest Guardrail System
MSW	municipal solid waste

NAVD 88	North American Vertical Datum of 1988
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NOx	nitrogen oxides
OPR	California Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PAED	Project Approval and Environmental Document
RDEIR	Recirculated Draft Environmental Impact Report
ROG	reactive organic gases
ROW	right-of-way
RWQCB	Regional Water Quality Control Board (Central Coast)
SB	southbound
SCAQMD	South Coast Air Quality Management District
SCH	State Clearinghouse
SJVAPCD	San Joaquin Valley Air Pollution Control District
SR	State Route
STN	State Transportation Network
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
TDM	Travel Demand Model
TMP	Transportation Management Plan
VMT	vehicle miles traveled
VOC	volatile organic compounds
VW	Valley Water (Santa Clara Valley Water District)

1 Introduction

1.1 CEQA Process

On April 20, 2023, the County of Santa Clara (lead agency) released for public review a Recirculated Draft Environmental Impact Report (RDEIR) for the proposed Z-Best Composting Facility Modifications (SCH# 2018102041) pursuant to the requirements of the California Environmental Quality Act (CEQA). The 60-day public review and comment period (which was extended beyond the minimum 45-day review period required by CEQA) on the RDEIR began on April 20, 2023, and closed on June 19, 2023.

Section 15088(a) of the CEQA Guidelines states that:

The lead agency shall evaluate comments on environmental issues received from persons who reviewed the Draft EIR and shall prepare a written response. The lead agency shall respond to comments received during the noticed comment period and any extensions and may respond to late comments.

In accordance with CEQA Guidelines Section 15088.5(f)(1), and as advised in the Notice of Availability and in Section 1.2.3 of the RDEIR, although the previous comments on the original Draft Environmental Impact Report (original Draft EIR) are still part of the administrative record and were taken into consideration during preparation of the RDEIR, those comments do not require a written response in the Final Environmental Impact Report (Final EIR). **Therefore, this Final EIR only responds to comments submitted in response to the RDEIR.**

Accordingly, the County of Santa Clara (County) has evaluated the comments received on the RDEIR for the Z-Best Facility Modifications (the Project) and prepared written responses to those comments. CEQA does not require the lead agency to respond to comments about the merits of the proposed project unless they involve the EIR's analysis of its environmental issues.

This response to comments document, together with the RDEIR as published, and the Mitigation Monitoring and Reporting Program attached as Appendix A, constitute the Final EIR for the Project.

Certification of the Final EIR as adequate and complete must take place before the County can approve the Project. Certification of the Final EIR does not constitute approval of the Project; certification is required for ultimate project approval, but the approval would be a separate action by the County.

1.2 Document Organization

Pursuant to Section 15132 of the CEQA Guidelines, a Final EIR shall consist of:

- a) The Draft EIR or a revision of the draft;

- b) Comments and recommendations received on the Draft EIR either verbatim or in summary;
- c) A list of persons, organizations, and public agencies commenting on the Draft EIR;
- d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process; and
- e) Any other information added by the Lead Agency.

This Final EIR is divided into the following sections and appendices:

- Section 1, “Introduction,” describes the CEQA process and the organization of this document.
- Section 2, “Agencies, Organizations and Persons Commenting on the Recirculated Draft EIR,” lists all agencies, organizations and persons that submitted written or oral comments on the RDEIR during the public review and comment period. The list also indicates the receipt date of each written correspondence and the comment code assigned to each commenter.
- Section 3, “Responses to Comments Received on the Recirculated Draft EIR,” details the specific comments received during the public review period and provides the County’s response to each comment. Each substantive comment within a particular comment letter is assigned a unique number along with the comment code for that commenter, with corresponding responses similarly numbered. Verbal comments received during the public meeting held during the review period are summarized and responded to in turn.
- Section 4, “Changes to the Recirculated Draft EIR,” contains text changes to the RDEIR made in response to comments received on the RDEIR or initiated by County staff.

Appendix A contains full copies of the comment letters and emails received in their original format. Appendix B contains the Mitigation Monitoring and Reporting Program, which identifies mitigation measures and the responsible parties, tasks, and schedule for monitoring mitigation compliance. Appendix C contains updated tables and figures, and Appendix D contains additional appendices to the EIR added in response to comments received on the RDEIR.

2 Agencies, Organizations and Persons Commenting on the Recirculated Draft EIR

In accordance with CEQA Guidelines Section 15088, this document includes written responses to email and letter comments received by the County on the RDEIR during the public review period, as well as for two letters received following the close of public review. No verbal comments on the RDEIR were received at the public meeting held on May 30, 2023.

Table 2-1 below lists all written comments received on the RDEIR. Each commenter is given a unique commenter code, which is used in Section 3 of this document to identify individual subtopics raised by the commenters and the County's responses to those comments. Full copies of each written comment letter are contained in Appendix A.

Table 2-1: List of Written Comments Received on the Recirculated Draft EIR

Code	Name of Commenter	Comment Type	Comment Date
CALTRANS-A	Yunsheng Luo, California Department of Transportation	Agency	June 5, 2023
CALTRANS-B	Nick Saleh, California Department of Transportation	Agency	Sept 15, 2023
CHP	P. Cooper, California Highway Patrol	Agency	May 21, 2023
RWQCB	Ryan Lodge for Matthew T. Keeling, Central Coast Regional Water Quality Control Board	Agency	Sept 5, 2023
VW	Benjamin Hwang, Valley Water	Agency	June 20, 2023
DORADO	Dorado Leasing (via JRG Attorneys, with attached exhibits by Dr. Trevor Suslow)	Individual	June 20, 2023
OSHINS	Cary Oshins	Individual	May 24, 2023
ZBEST	John Doyle, GreenWaste (with attached exhibit from WSP USA, Inc.)	Project Applicant	May 31, 2023

3 Responses to Comments Received on the Recirculated Draft EIR

In accordance with CEQA Guidelines Section 15088, this document includes written responses to all comments received by the County on the RDEIR during the public review period. Written comments are presented in Section 3.1, each followed by the County's response. Within each section, comments and associated responses are organized by commenter type (agency, organization, or individual) and then alphabetically, by commenter code. See Section 2 of this document for a full list of all commenters, and Appendix A for full copies of all written comments received.

Six written comment letters were received during the public review period for the RDEIR, and two additional letters were received after the close of the review period. Each comment letter has been divided into individual comment topics requiring a response, e.g., the first topic raised in a letter is coded as [Commenter Code]-1, the second topic is coded as [Commenter Code]-2. The text or a summary of each comment topic is reproduced below, followed by the County's response to that comment topic, in turn. Where changes to the RDEIR are made in response to a comment, the response to the particular comment states this and explains which section of the RDEIR has been modified. All text changes to the RDEIR are presented in Section 4, "Changes to the Recirculated Draft EIR," of this Final EIR.

3.1 Written Comments and Responses to Comments

3.1.1 Agency Comments

CALTRANS-A: California Department of Transportation

Comment CALTRANS-A-1:

The project vehicle miles traveled (VMT) analysis and significance determination are undertaken in a manner consistent with the Office of Planning and Research's (OPR) Technical Advisory. Per the recirculated DEIR, this project is found to have significant VMT impact. Please consider measures to mitigate the project's impact to VMT, including those listed in the following section.

Response to Comment CALTRANS-A-1:

This is an introductory comment requesting consideration of additional VMT mitigation measures as presented in comment CALTRANS-A-2. See Response to Comment CALTRANS-A-2 below.

Comment CALTRANS-A-2:

Location efficiency factors, including community design and regional accessibility, influence a project's impact on the environment. Using Caltrans' Smart Mobility Framework Guide 2020 ([link](#)), the proposed project site is identified as a Suburban Community/Area where community design is moderate to weak and regional accessibility varies.

Given the place, type and size of the project, the recirculated DEIR should include a robust Transportation Demand Management (TDM) Program to reduce VMT and greenhouse gas emissions from future development in this area. The measures listed below have been quantified by California Air Pollution Control Officers Association (CAPCOA) and shown to have different efficiencies reducing regional VMT:

Suburban and Rural strategies

- *Increased location efficiency;*
- *Orientation of Project towards non-auto corridor;*
- *Pedestrian network improvements;*
- *Discounted transit programs (rural);*
- *Provide local shuttles to increase transit outreach (rural);*
- *Employer-based vanpool;*
- *Telecommuting programs and alternative work schedules*

Using a combination of strategies appropriate to the project and the site can reduce VMT, along with related impacts on the environment and State facilities. TDM programs should be documented with annual monitoring reports by a TDM coordinator to demonstrate effectiveness. If the project does not achieve the VMT reduction goals, the reports should also include next steps to take in order to achieve those targets.

Please reach out to Caltrans for further information about TDM measures and a toolbox for implementing these measures in land use projects. Additionally, refer to the CAPCOA Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity ([link](#)).

Response to Comment CALTRANS-A-2:

As described in a follow-up letter from Caltrans (see Comment CALTRANS-B-3 below), this comment's reference to "Suburban Community/Area" is an error, and the correct classification for the Project site is "Rural Area." The Smart Mobility Framework Guide acknowledges that opportunities to employ smart mobility principles in rural areas are largely concentrated in small town settings, and that challenges include limited opportunities for bicycle and pedestrian transportation, limited feasibility of transit systems, and few opportunities to increase location efficiency (Caltrans 2020).

The significant and unavoidable vehicle miles traveled (VMT) impact of the Project is predominantly due to the large increase in heavy truck traffic associated with the increased volume of municipal solid waste (MSW) that would be hauled from various material recovery facilities to the Project site, increased volume of non-compostable trash to various landfills, and increased volumes of finished product from the Project site to various markets. The Project would result in an estimated increase of 1,136 VMT per

day due to the increase in employees, compared to an estimated increase due to truck traffic of 7,712 VMT per day (normal operations) and up to 12,109 VMT per day (peak season operations). Therefore, the contribution to VMT impacts from employee vehicle trips would be comparatively minor. The majority of potential mitigation measures suggested by the commenter address only employee-related VMT, and therefore would have negligible impact on reducing overall VMT from the Project. Furthermore, due to the rural location of the Project site, the distribution of existing (and presumed future) employee residences per Table 2 of Appendix G-2 of the RDEIR, the lack of existing transit programs, staggered employee shift times, and the 24-hour operating conditions at the facility, any employer-based vanpool or discounted/supplemented transit programs are unlikely to substantially reduce even the employee-related VMT for the site. In addition, California law currently prohibits public agencies from requiring employers to implement employee trip-reduction programs unless federal law expressly requires such a program. (See Health & Safety Code § 40717.9.)

As discussed in Section 13.4.1 of the RDEIR, the estimated increase in truck-based VMT identified in the RDEIR is a conservative, “worst case” scenario, as no account has been taken for the associated reduction in VMT from the decreased number of trucks transporting MSW to landfills or other composting facilities compared to existing or No Project conditions. As discussed in Section 7.4.2 of the RDEIR, implementation of the proposed Project would enable Z-Best to compost up to 875 tons per day more MSW than is possible under existing conditions, which would result in a decrease in vehicle miles traveled from trucks transporting this waste to other landfills or to other composting facilities in the region. In other words, this waste would continue to be generated in the region and would need to be disposed in a landfill or an alternate composting facility. The 2020 greenhouse gas (GHG) evaluation in Appendix B-5 of the RDEIR included evaluation of a range of truck travel scenarios for informational purposes. The avoided VMT associated with these scenarios ranged from 4,833 VMT/day to 15,128 VMT/day, depending on the assumptions made regarding the avoided trips. Two of the four scenarios considered would avoid sufficient VMT/day to offset the Project’s truck-based 7,712 VMT/day for normal operations, and one of the scenarios would avoid sufficient VMT to offset the Project’s truck-based 12,109 VMT/day for peak season operations. However, as discussed in Section 13.4.1 of the RDEIR, due to the lack of available models for analyzing truck trip VMTs or quantitative thresholds for truck-based VMT impacts in rural areas, the EIR considered any increase in truck-based VMT as a potentially significant impact.

As detailed in Section 13.4.1.1 of the RDEIR, no feasible mitigation measures to reduce truck-based VMT have been identified; therefore, the conclusion of the EIR that VMT impacts would be significant and unavoidable is unchanged.

No changes to the RDEIR are recommended in response to this comment.

Comment CALTRANS-A-3:

Please identify project-generated travel demand and estimate the costs of transit and active transportation improvements necessitated by the proposed project; viable funding sources such as development and/or transportation impact fees should also be identified. We encourage a sufficient allocation of fair share contributions toward multi-modal and regional transit improvements to fully mitigate cumulative impacts to regional transportation. We also strongly support measures to increase sustainable mode shares, thereby reducing VMT.

Response to Comment CALTRANS-A-3:

As described in a follow-up letter from Caltrans (see Comment CALTRANS-B-4 below), this comment should be replaced with the text provided in that letter. Please see Response to Comment CALTRANS-B-4, below.

Comment CALTRANS-A-4:

The expansion of the Z-Best facility is expected to increase the truck movement in and out of the facility at the intersection. These trips should be restricted to off peak times whenever possible. Since southbound (SB) SR-25 has only one lane at the Bolsa intersection, a merging lane should be provided for trucks turning right when leaving the facility. A storage lane should be provided for the vehicles turning left at the intersection towards Bolsa Road. The minimum length of the left and right turn lanes from SR-25 to Bolsa Road should be 486 feet plus the storage lane length. The approach taper length for both should be at least 660 feet within Caltrans' ROW.

Caltrans has documented operational benefits of a SB receiving lane from Bolsa Road and documented these benefits with the project sponsor in an Intersection Control Evaluation (ICE) report. Caltrans recommends that the project add a receiving lane in the SB median for traffic making a left from SB Bolsa Road onto SB SR-25. It should be noted that the proposed project uses all available Right-of-Way (ROW) making it a challenge for Caltrans to pursue the addition of a receiving lane as a standalone project. As stated previously, and as a condition of approval for any Caltrans encroachment permit, Caltrans requests that the appropriate ROW considerations are made as to not preclude future intersection improvements.

To adequately evaluate the potential impact of the truck turning patterns on SR-25, please provide more information, such as truck turning radius and center turning radius, for Caltrans to review.

Response to Comment CALTRANS-A-4:

As discussed in Section 13.4.2.1 of the RDEIR, the Project already proposes to restrict new truck movements to off-peak hours and would also re-assign the timing of existing truck trips to result in a net decrease in peak-hour truck movements as compared to baseline conditions.

As discussed in Section 13.4.2.3 of the RDEIR, mitigation measure MM-TRA-2 (which incorporates MM-TRA-2-Alt3) is recommended, which would require either that the relocated driveway/Bolsa Road intersection be signalized (thereby avoiding the need for a merging lane for trucks turning right onto State Route (SR)-25 from the facility and requiring coordination with Caltrans to determine the appropriate signalized intersection layout as part of the encroachment agreement) or would alternatively require that the

driveway be retained in its existing location with several improvements including a merging lane for trucks turning right onto SR-25 from the facility.

Caltrans is already planning the installation of a storage lane (i.e., left turn lane) for vehicles turning left from SR-25 onto Bolsa Road and a southbound receiving lane from Bolsa Road, which was analyzed as a cumulative project (see Section 15 of the RDEIR). The analysis found that the cumulative impact of the Z-Best and Caltrans projects on traffic safety would be potentially significant, due to the complex intersection geometry that would be required to accommodate all of the proposed turning lanes. The proposed mitigation (MM-TRA-2) requires that either a traffic signal be installed to control traffic at the Bolsa Road intersection or that the driveway be retained in its existing location in accordance with mitigation measure MM-TRA-2-Alt3 so that it does not interfere with Caltrans' proposed installation of a receiving lane/storage lane at Bolsa Road. Figure 6 of Appendix G-3 (Traffic Safety Memorandum), reproduced as Figure 1 below, shows a conceptual layout for how addition of turning lanes at the existing driveway might be implemented in conjunction with Caltrans' proposed SR-25/Bolsa Road intersection improvements. The final design would need to be approved by Caltrans as part the encroachment permit.

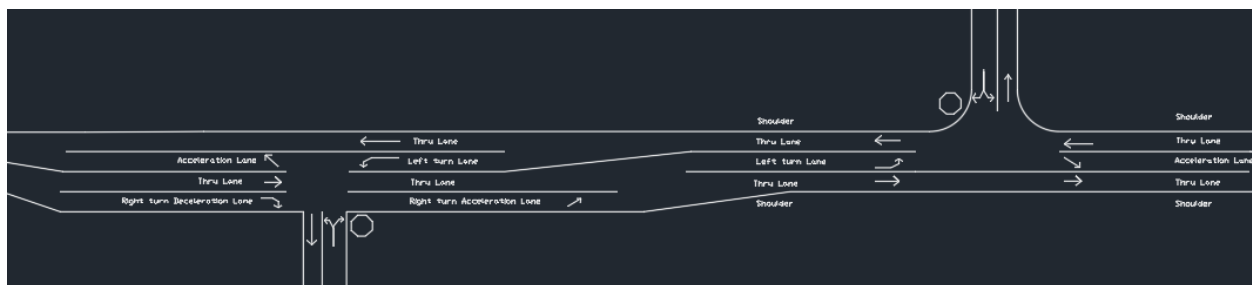


Figure 1: Conceptual Intersection Layout for Alternative 3 + Cumulative Scenario (not to scale)

Truck turning radii for the proposed intersection layout are provided in Figure 4 of Appendix G-1 to the RDEIR; however, the proposed intersection layout shown in that figure would not be implemented, due to the requirements of mitigation measure MM-TRA-2 (which requires either signalization of the intersection or retention of the existing driveway location with additional improvements). Details of the mitigated driveway layout, including truck turning radii, would be provided by the Applicant to Caltrans for review and approval as part of the encroachment permit process.

No changes to the RDEIR are required in response to this comment.

Comment CALTRANS-A-5:

There are plans for widening SR-25 from San Felipe Road within the Hollister City limits to US-101 near Gilroy. In 2016, a Project Approval and Environmental Document (PAED) was completed that generally set an outline of ROW needs for such a project. Before any approvals are given, it is important to confirm that the project modifications preserve enough ROW consistent with the final document. The ultimate project includes constructing a median barrier as part of the expressway conversion which will make the Z-Best facility driveway a right-in right-out scenario.

Response to Comment CALTRANS-A-5:

The future plans for the SR-25 Expressway Conversion Project are identified as a cumulative project within the RDEIR (see item 15 in Table 15-1). The proposed Project does not include any reduction in right-of-way (ROW) width, and final design of the site access and associated improvements to SR-25 (either as a signalized Bolsa Road/Z-Best Driveway intersection, or as improvements at the existing driveway location) would be required to obtain an encroachment permit from Caltrans.

No changes to the RDEIR are required in response to this comment.

Comment CALTRANS-A-6:

The proposed retaining walls on both sides of SR-25 are within the clear recovery zone. Please consider obtaining additional right of way to extend the side slope to match with the existing ground. Otherwise, the Midwest Guardrail System (MGS) is needed at the hinge point to prevent errant vehicles going over the retaining walls.

Response to Comment CALTRANS-A-6:

As discussed previously in Response to Comment CALTRANS-A-4, mitigation measure MM-TRA-2 requires that the relocated driveway/Bolsa Road intersection be signalized or would alternatively require that the Z-Best driveway be retained in its existing location with several improvements such as acceleration and deceleration lanes added. The mitigation measure specifically states that whichever approach is ultimately taken, the Applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of the permit review and approval process. This would include maintenance of a clear recovery zone in accordance with Caltrans standards.

No changes to the RDEIR are required in response to this comment.

Comment CALTRANS-A-7:

The Applicant should provide calculations showing the pre-and post-project runoff to Caltrans facilities when submitting the encroachment permit application for the project work along SR-25.

Response to Comment CALTRANS-A-7:

Section 11.4.1.2 of the RDEIR acknowledges that the proposed improvements within the SR-25 right of way must comply with the Caltrans NPDES Permit. Minor edits are proposed to Section 4.4.2, Section 11.4.1.2, and MM-TRA-2 in Section 13.4.2.3 of the RDEIR to further clarify that the Applicant must submit hydraulic calculations as part of the encroachment permit process and comply with Caltrans' stormwater management standards (see Section 4 below).

Comment CALTRANS-A-8:

Project work that requires movement of oversized or excessive load vehicles on State roadways require a transportation permit that is issued by Caltrans. To apply, please visit Caltrans Transportation Permits ([link](#)). Prior to construction, coordination may be required with Caltrans to develop a Transportation Management Plan (TMP) to reduce construction traffic impacts to the State Transportation Network (STN).

Response to Comment CALTRANS-A-8:

As discussed in Section 13.4.3 of the RDEIR, mitigation measure MM-TRA-3 requires the Applicant or their contractor to prepare a Construction Traffic Management Plan in accordance with MUTCD requirements and the Caltrans Transportation Management Plan Guidelines, which would require review and approval by Caltrans. Minor edits are proposed to Section 4.4.2 and MM-TRA-3 in Section 13.4.3 to clarify that a transportation permit from Caltrans would also be required if oversized or excessive load vehicles would be utilized (see Section 4 below).

Comment CALTRANS-A-9:

Any utilities that are proposed, moved or modified within Caltrans' ROW shall be discussed. If utilities are impacted by the project, provide site plans that show the location of existing and/or proposed utilities. These modifications require a CALTRANS-issued encroachment permit.

Response to Comment CALTRANS-A-9:

Utility plans would be submitted by the Applicant as part of the encroachment permit application required as part of mitigation measure MM-TRA-2. Minor edits are proposed to Section 4.4.2 of the RDEIR to clarify that Caltrans would review proposed utility modifications within SR-25 as part of the encroachment permit process (see Section 4 below).

Comment CALTRANS-A-10:

As the Lead Agency, the County of Santa Clara is responsible for all project mitigation, including any needed improvements to the STN. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures.

Response to Comment CALTRANS-A-10:

Mitigation measure MM-TRA-2A requires the Applicant to contribute its fair share of the cost for installation of traffic controls at the Bolsa Road/SR-25/Project site driveway. Although the County will monitor compliance with this condition, the County does not have any information regarding the details or total cost of the installation of traffic controls and, therefore, cannot determine the Project's fair share contribution. This information will need to be determined by Caltrans when this information is available. Minor edits are proposed to this mitigation measure to clarify that the Applicant's funding contribution to the cost of all SR-25 improvements (not just the traffic controls) would be determined by Caltrans, and that the Project Applicant would be fully responsible for the cost of Project-related improvements and mitigation on the Project site. Similar edits are also proposed to MM-TRA-2B in Section 13.4.2.3 of the RDEIR with respect to the alternative site access via modification of the existing Project site driveway instead of signalization of the relocated driveway (see Section 4 below). See also Response to Comment CALTRANS-B-1.

Comment CALTRANS-A-11:

If any Caltrans facilities are impacted by the project, those facilities must meet American Disabilities Act (ADA) Standards after project completion. As well, the project must maintain bicycle and pedestrian access during construction. These access considerations support Caltrans' equity mission to provide a safe, sustainable, and equitable transportation network for all users.

Response to Comment CALTRANS-A-11:

As discussed in Section 13 of the RDEIR, there are no existing bicycle or pedestrian access facilities in proximity to the Project site that would be impacted by the Project. Mitigation measure MM-TRA-3 requires the preparation and implementation of a Construction Traffic Management Plan during construction, which requires the repair and restoration of any impacted facilities to Caltrans requirements (which would include compliance with the Americans with Disabilities standards, if applicable). Minor edits are proposed to MM-TRA-3 in Section 13.4.3 of the RDEIR to specifically state that pedestrian and bicycle access through the SR-25 corridor shall be maintained throughout construction (see Section 4 below).

Comment CALTRANS-A-12:

Please be advised that any permanent work or temporary traffic control that encroaches onto Caltrans' ROW requires a CALTRANS-issued encroachment permit. As part of the encroachment permit submittal process, you may be asked by the Office of Encroachment Permits to submit a completed encroachment permit application package, digital set of plans clearly delineating Caltrans' ROW, digital copy of signed, dated and stamped (include stamp expiration date) traffic control plans, this comment letter, your response to the comment letter, and where applicable, the following items: new or amended Maintenance Agreement (MA), approved Design Standard Decision Document (DSDD), approved encroachment exception request, and/or airspace lease agreement. Your application package may be emailed to D4Permits@dot.ca.gov.

To obtain information about the most current encroachment permit process and to download the permit application, please visit [Caltrans Encroachment Permits \(link\)](#). Thank you again for including Caltrans in the environmental review process. Should you have any questions regarding this letter, or for future notifications and requests for review of new projects, please email LDR-D4@dot.ca.gov.

Response to Comment CALTRANS-A-12:

The need for the Applicant to obtain an encroachment permit from Caltrans is acknowledged within Sections 4.4.2 and 13 of the RDEIR. See also responses to comments CALTRANS-A-7, CALTRANS-A-8, CALTRANS-A-9, and CALTRANS-A-11 above.

No additional changes to the RDEIR are required in response to this comment.

CALTRANS-B: California Department of Transportation

Comment CALTRANS-B-1:

Under section “MM-TRA-2: Installation of Traffic Controls or Retention of Driveway in Existing Location”, please revise the sections A and B as recommended below:

- A. The Applicant shall modify its proposed design for the SR-25 improvements and driveway relocation to include the installation of traffic signals at the intersection of SR-25/Bolsa Road/relocated driveway, if agreed to by Caltrans. The Applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of the permit review and approval process, including maintenance of a clear recovery zone and compliance with Caltrans’ stormwater management standards. The Applicant is fully responsible of the proposed project cost and any mitigation impacts to traffic operations and safety. The Applicant’s funding contribution to the cost of the SR-25 improvements, either in full or in part, shall be determined by Caltrans.*
- B. The Applicant shall not increase processing capacity of the facility (and associated increase in haul-truck and employee traffic) at the site until either (1) the signalized intersection is operational in accordance with MM-TRA-2A above, or (2) alternative improvements are made to the existing project site driveway in accordance with Alternative 3 and mitigation measure MM-TRA-2-Alt 3 and no relocation of the project site driveway shall occur until the signalized intersection is operational in accordance with MM-TRA-2A. The Applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of their permit review and approval process. The Applicant is fully responsible of the proposed project cost and any mitigation impacts to traffic operations and safety. The Applicant’s funding contribution to the cost of the SR-25 improvements, either in full or in part, shall be determined by Caltrans.*

Response to Comment CALTRANS-B-1:

The commenter’s suggested revisions to mitigation measure MM-TRA-2 in Section 13.4.2.3 of the RDEIR provide additional clarification regarding the need for Caltrans approval for the installation of traffic signals at the intersection of SR-25/Bolsa Road/relocated driveway and the need for Caltrans determination of funding contributions for any SR-25 improvements associated with the Project. The suggested revisions also clarify that the Applicant is fully responsible for the cost of Project-related improvements and mitigation on the Project site. Minor edits are proposed to MM-TRA-2 in response to this comment, as shown in Section 4, although minor alterations to the language suggested by the commenter have been made for additional clarity. The proposed edits to the mitigation measures do not affect the analysis of the RDEIR or the conclusion that the impact of the Project to operational traffic safety would be less than significant with mitigation.

Comment CALTRANS-B-2:

Under section “Mitigation Measure MM-TRA-2-Alt3: Installation of Intersection Lighting and Warning Signage”, please revise the section as recommended:

The proposed design for Alternative 3 shall include the installation of a southbound acceleration lane for trucks turning right out of the existing Z-Best driveway, as well as installation of intersection lighting at the existing intersection of SR-25/Bolsa Road and at the existing Z-Best driveway, and installation of “Caution: Trucks Entering Highway” signage on SR-25 on both approaches to the driveway. The Applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of their permit review process. The Applicant is fully responsible of the proposed project cost and any mitigation impacts to traffic operations and safety. The Applicant’s funding contribution to the cost of the SR-25 improvements, either in full or in part, shall be determined by Caltrans.

Response to Comment CALTRANS-B-2:

The commenter requests revisions to mitigation measure MM-TRA-Alt3 (from Section 18.4.3.3 of the RDEIR) to clarify that the Applicant is fully responsible for the cost of Alternative 3-related improvements and mitigation on the Project site and the need for Caltrans determination of funding contributions for any SR-25 improvements associated with the Alternative 3. Minor edits are proposed to MM-TRA-2-Alt3 in response to this comment, as shown in Section 4, although minor alterations to the language suggested by the commenter have been made for additional clarity. The proposed edits to the mitigation measures do not affect the analysis of the RDEIR or the conclusion that the impact of Alternative 3 to operational traffic safety would be less than significant with mitigation.

Comment CALTRANS-B-3:

For items related to our June 5th comment letter:

- A. Under the subheading “Mitigation Strategies”, please correct the classification of the project site as “Rural Area.”*

Response to Comment CALTRANS-B-3:

This comment provides clarification/corrections to the previous comment letter sent by Caltrans on June 5, 2023 (refer to comment CALTRANS-A-2, above). Response to Comment CALTRANS-A-2 has taken this correction into account. No changes to the RDEIR are required in response to this comment.

Comment CALTRANS-B-4:

- B. Please replace the section “Transportation Impact Fees” to “Fair Share Contributions”: We encourage a sufficient allocation of fair share contributions toward multi-modal and regional transit improvements to fully mitigate cumulative impacts to regional transportation. We also strongly support measures to increase sustainable mode shares, thereby reducing VMT.*

Response to Comment CALTRANS-B-4:

This comment provides clarification/corrections to the previous comment letter sent by Caltrans on June 5, 2023 (refer to comment CALTRANS-A-3, above).

As discussed in Section 13.4.1.1 of the RDEIR, due to the rural nature of the site and lack of existing transit services or bicycle/pedestrian facilities serving the Project site, common travel demand management strategies that are more available and feasible in urban settings to increase sustainable mode shares and reduce VMT are not available for the proposed Project. For example, the rural location of the Project site, the distribution of existing (and presumed future) employee residences per Table 2 of Appendix G-2 of the RDEIR, the lack of existing transit programs, staggered employee shift times, and the 24-hour operating conditions at the facility would not feasibly support an employee vanpool program. Furthermore, there are no planned transit, bicycle, or pedestrian improvements proposed along the SR-25 corridor or Bolsa Road, and the County is not aware of any available fair share programs for multi-modal and regional transit improvements to mitigate VMT in the region.

No changes to the RDEIR are recommended in response to this comment.

CHP: Department of California Highway Patrol

Comment CHP-1:

I was recently requested to review the Notice of Environmental Impact document from the State Clearinghouse (SCH) related to the proposed Z-Best Composting Facility Modifications located at 980 State Route 25, Gilroy, CA 95020. The California Highway Patrol's (CHP) interest in commenting surrounds our concerns for the increase in heavy truck traffic entering and exiting the facility from the newly proposed uncontrolled driveway onto a State Highway. In addition, the CHP's interest surrounds the increased response times, enforcement, services calls resulting from the increase in heavy truck traffic and the subsequent impact to vehicular traffic. The plan needs to ensure all roadways being utilized or altered, can support the weight of the increased number of loaded trucks and will not degrade. The plan needs to ensure any changes to the roadway configuration consider the 100 extra trucks per day that will be entering and exiting the facility and the impact this will have on vehicular traffic on State Route 25.

Response to Comment CHP-1:

The impacts of increased operational truck traffic on SR-25 are analyzed within Section 13.4.2 of the RDEIR. Mitigation measures are proposed to reduce the identified impacts to the extent feasible, including but not limited to the requirement for either installation of traffic signals at the new driveway/Bolsa Road/SR-25 intersection; or alternatively, retaining the existing driveway location and implementing additional safety improvements (see MM-TRA-2 in Section 13.4.2.3 of the RDEIR).

With regard to the weight of the increased number of loaded trucks, the average daily truck traffic of 1,790 truck trips per day under existing conditions is approximately 6.5 percent of total daily traffic on this segment of SR-25, compared to an average percentage truck traffic of 10.37 percent on all State highways (Caltrans 2023). The proposed Project would add approximately 100 additional truck trips, which is an increase of approximately 5 percent of total daily truck traffic. SR-25 is a State highway that has been constructed and is maintained in accordance with Caltrans design standards, which include consideration of heavy truck traffic. Any Project-related improvements within the State ROW associated with the SR-25/Bolsa Road/Project site driveway intersection (or improvements to the existing driveway intersection under Alternative 3) would also be required to comply with Caltrans design standards and be

approved by Caltrans as part of the encroachment permit process. Therefore, SR-25 is anticipated to be able to support the increase in heavy truck traffic associated with Project operations. Furthermore, the State imposes weight-related fees on commercial vehicles in addition to other registration fees,¹ and preempts local agencies from imposing additional fees.²

No changes to the RDEIR are recommended in response to this comment.

Comment CHP-2:

The plan needs to seriously address material spillage from loaded trucks, that is already present at the current driveway site, it's [sic] impact on the safety of the roadway conditions, and how this will be mitigated. Currently, the material spillage contributes to roadway markings becoming obstructed and a safety issue in roadway conditions.

Response to Comment CHP-2:

Mitigation measure MM-AES-2 in Section 5.4.2 of the RDEIR includes requirements for an off-site litter management plan, which would include procedures and penalties to discourage haul trucks arriving on site or transporting materials from the facility from failing to properly secure their loads. While this mitigation measure was recommended in order to reduce the aesthetic impacts of trash/litter along the SR-25 frontage, it would also serve to reduce the potential for material spillage and associated obstructions of roadway markings. State law also requires vehicle contents to be covered so that nothing spills or otherwise escapes from the vehicle.³

Minor edits are proposed to MM-AES-2 to address material spillage as well as litter (see Section 4, below). Minor edits are also proposed to Section 13.4.2 of the RDEIR to acknowledge the potential traffic safety impact from obscured road markings due to material spillage.

Comment CHP-3:

After reviewing the Traffic Engineers report on the plan, I do agree there are several items which need to be implemented to ensure the safety of the motoring public and flow of traffic on SR-25 and Bolsa Road. As described in the attachment, traffic on SR-25 and Bolsa Road is already heavy and Bolsa Road does have a restriction for left turns onto SR-25, Monday-Friday from 3pm-7pm. The roadway improvements to SR-25 and Bolsa Road are necessary and needed, to include the left turn lane improvements and acceleration lanes. With the requested realignment change to the Bolsa Road intersection, a severe safety concern exists with slow moving heavily loaded trucks entering/exiting onto SR-25, specially with the existing issues of material spillage.

Response to Comment CHP-3:

As discussed in Section 13.4.2 of the RDEIR, operational traffic safety impacts of the Project are identified as potentially significant, and mitigation measure MM-TRA-2 is recommended to reduce the impact to a less than significant level. With implementation of MM-TRA-2, which requires either signalization of the new intersection or retention of

¹ Veh. Code § 9400 *et seq.*; California Dept. of Motor Vehicles, Vehicle Industry Registration Procedures Manual, § 3.085 (Weight Fees).

² Veh. Code § 9400.8.

³ Veh. Code §§ 23114, 23115.

the driveway in its existing location plus additional safety improvements such as acceleration and deceleration lanes, the traffic safety impacts of the Project would be reduced to less than significant with mitigation. See also responses to comments CALTRANS-A-4 and CALTRANS-A-6.

See response to comment CHP-2 for discussion of safety issues from material spillage and associated revisions to the RDEIR.

Comment CHP-4:

Some type of traffic control device needs to be investigated to ensure an increase in crashes does not occur. Additionally, many of the reports referenced in the Engineering report reference data obtained from 2015, which is significantly out of date.

Response to Comment CHP-4:

The RDEIR analyzed potential traffic safety impacts and predicted crash frequency from the Project (see Section 13.4.2.2 and Appendix G-3). The analysis determined that the proposed Project would decrease the predicted crash frequency in the study area as a whole (from 2.8 crashes per year under existing conditions to 1.77 crashes per year with the Project) and would also slightly decrease the predicted crash frequency at the SR-25/Bolsa Road intersection (from 1.8 crashes per year under existing conditions to 1.77 crashes per year with the Project). However, a potentially significant traffic safety impact was identified because the Project is predicted to increase the proportion of broadside crashes, which are typically more severe than other crash types. The RDEIR recommended implementation of MM-TRA-2, which would require either the installation of traffic signals at the proposed SR-25/Bolsa Road/driveway intersection or that the existing Z-Best driveway be retained in its current location, with additional safety improvements such as acceleration and deceleration lanes. As described in Section 13.4.2 of the RDEIR, with implementation of MM-TRA-2, the traffic safety impacts of the Project would be reduced to less than significant with mitigation. The Applicant would be required to obtain an encroachment permit from Caltrans for the Project, which would include consideration of the final SR-25 improvements in relation to the requirements of Caltrans' Manual of Uniform Traffic Control Devices (Caltrans 2024). See also response to comment CALTRANS-A-4 regarding the potential installation of a traffic signal.

With respect to the age of the reference data utilized in the engineering reports, each of the transportation-related appendices and the age of the data therein are addressed in turn below.

The Traffic Operations and Site Access Analysis prepared for the Project (Appendix G-1) utilized existing driveway/intersection traffic count data from 2015, as well as truck scale data from 2013 (which represented the peak operations of the facility over the two years prior to the traffic counts). However, the majority of the Traffic Operations and Site Access Analysis report addresses potential impacts of the Project on Level of Service (LOS), which, as described in Section 13.3.2.1 of the RDEIR, is no longer considered an environmental impact under CEQA. The safety analysis of site access improvements within Appendix G-2 was largely based on the geometric layout of the intersection, and therefore did not rely on existing traffic count data. In any case, that analysis of traffic safety was superseded by the Traffic Safety Memorandum prepared in 2023 (Appendix G-3), discussed below. Therefore, the age of the traffic data used to analyze LOS

impacts in Appendix G-1 does not affect the conclusions of the RDEIR relating to VMT, traffic safety, or emergency access impacts.

The Supplemental VMT Clarification and Analysis memorandum prepared for the Project (Appendix G-2) utilized truck scale data from 2018 (the year that the Notice of Preparation [NOP] was released). Updated truck scale data provided by Z-Best in response to this comment (Doyle, pers. comm. 2023a) shows that the number of trucks per year accessing the Project site increased by approximately 12.5 percent between 2018 and 2022 (from approximately 35,000 trucks in 2018 to approximately 39,400 trucks in 2022). However, the number of existing truck movements at the site does not affect the calculations of the estimated net increase in truck VMT that would be generated by the proposed Project (an increase of 7,712 miles per day for regular days or 12,109 miles per day during peak days) because such calculations rely on the proposed increase in truck trips due to the Project (100 per day during normal operations and 158 per day during peak season), not the existing number of truck trips. Therefore, the age of the existing traffic data presented in Appendix G-2 does not affect the conclusion of the RDEIR that the Project would have a significant and unavoidable VMT impact.

The Traffic Safety Memorandum prepared for the Project (Appendix G-3) utilized crash history data for the 5-year period from 2016 through 2020, which was the most recent data available in 2022 when the report was prepared and includes data from the time of the Project's NOP release (October 2018). The calculations utilized an existing Average Annual Daily Traffic (AADT) of 27,300 for SR-25, which was the AADT at the San Benito/Santa Clara County Line (approximately half a mile from the Project site) in 2018 (when the Project's NOP was released) and also in 2017 and 2019 (Caltrans 2023). Note that AADT at this location decreased to 24,800 in 2020 due to the global COVID-19 pandemic, and most recent available data (2021) show an AADT of 26,500. Therefore, the use of the 2018 AADT for calculations within Appendix G-3 is considered appropriate, and the analysis and conclusions of the RDEIR with respect to operational traffic safety are still valid.

No changes are recommended to the RDEIR in response to this comment.

Comment CHP-5:

Facility operators need to ensure they establish, monitor, and enforce facility rules related to vehicle safety as CHP personnel work to ensure compliance with California Vehicle Code provisions.

Response to Comment CHP-5:

The on-road truck fleet servicing the site (i.e., MSW and green waste haul trucks) is operated by contract waste haulers, independent of Z-Best facility operations, who are required by law to comply with applicable vehicle safety rules such as speed limits and securing of loads. Z-Best has limited ability to establish, monitor, and enforce vehicle safety rules outside of the Z-Best property. Nonetheless, the County intends to include conditions of approval for the Project's Use Permit that will require the Applicant to provide funding for an independent party to provide regular compliance patrols and establish penalties for contract waste haulers that are cited for repeat infractions.

As discussed in response to comment CHP-2 above, minor edits are also proposed to mitigation measure MM-AES-2 in Section 5.4.2 of the RDEIR to address offsite spillage of materials, as well as litter.

No further changes to the RDEIR are required in response to this comment.

RWQCB: Central Coast Regional Water Quality Control Board

Comment RWQCB-1:

Central Coast Water Board staff (Staff) reviewed the subject letter and do not object to the mitigation measures proposed by the County. The subject mitigation measures do not appear to modify the facility in a way that would result in a violation of the minimum requirements of State Water Resources Control Board Order WQ 2020-0012-DWQ General Waste Discharge Requirements for Commercial Composting Operations (General Order), which currently regulates the facility. Staff do not have specific comments on proposed mitigation measures MM-HYD-1A and MM-HYD-4.

Response to Comment RWQCB-1:

The comment expresses no objections to the mitigation measures that were presented in a letter from County staff to the Regional Water Quality Control Board (RWQCB) on August 15, 2023. The letter included potential revisions to mitigation measures MM-HYD-1A, MM-HYD-1B, and MM-HYD-5, as well as a potential new mitigation measure MM-HYD-4 that County staff was considering in response to comments received on the RDEIR during the public review period. Given that the RWQCB has no objections to the amended/new mitigation measures, minor edits are proposed to Sections 11.4.1.1, 11.4.4.1, and 11.4.5 of the RDEIR to reflect the language of the mitigation measures from the August 15, 2023 letter. See Section 4, below.

Comment RWQCB-2:

The letter describes the County's rationale for finding that additional storage capacity is needed within Basin #1 to preclude discharge during a 25-year, 24-hour peak storm event in a wet year with normal operational volumes. As discussed with the County via videoconference on June 26, 2023, and August 2, 2023, and documented in the subject County letter, the Central Coast Water Board assesses compliance with the General Orders design requirements upon enrollment of the General Order and does not specify the exact conditions to be modeled to demonstrate compliance with these design requirements.

Response to Comment RWQCB-2:

Comment noted. No specific environmental issues or deficiencies of the RDEIR are raised that warrant a response under CEQA.

Comment RWQCB-3:

Section 4 of the Design, Construction, and Operation Requirements – Tier 2 Only prescribed by the General Order require detention basins to meet a hydraulic conductivity of 1.0×10^{-6} cm/sec or less. On May 22, 2023, the Central Coast Water Board approved an engineered alternative liner design for Basin #1 to bring the site into compliance with these minimum containment requirements of the General Order. If mitigation measure MM-HYD-1B requires modifications to the approved liner design, as drawn in the Basin #1 construction drawings dated November 28, 2022, the Central Coast Water Board will need to review the modifications for compliance with the General Order and issue a new approval letter.

Response to Comment RWQCB-3:

Comment noted. Minor edits are proposed to MM-HYD-1B to specifically state that the Applicant must demonstrate compliance with the Composting General Order requirements for hydraulic conductivity if the modified basin design would require changes to the previously approved engineered alternative liner design.

Comment RWQCB-4:

Mitigation measure MM-HYD-5 would require Z-Best to increase the berm height of Basin #2 to at least 150.41 feet so the basin would be able to maintain two feet of freeboard above the 100-year base flood elevation.

The Basin #2 liner system is a 60-mil high-density polyethylene (HDPE) geomembrane, underlain by geosynthetic clay. Based on the Basin #2 construction drawing dated April 11, 2018, the liner terminates into the anchor trench at approximately 150 feet on the south facing berm of the basin. Central Coast Water Board staff are concerned that an increase in berm height would allow for storage of fluids at elevations above the liner system and therefore may pose a threat to the effectiveness of containment. Staff recommends that fluid elevations in Basin #2 not exceed the liner elevation if modification to the basin are implemented as part of mitigation measure MM-HYD-5.

Response to Comment RWQCB-4:

The concerns of the RWQCB regarding the potential for water levels in Detention Basin #2 to exceed the existing liner height are acknowledged. Minor edits are proposed to mitigation measure MM-HYD-5 to require that the Applicant shall modify or replace the liner of Detention Basin #2 if required by the RWQCB in order to comply with the hydraulic conductivity requirements of the Composting General Order (or equivalent conditions of an individual permit). See Section 4 below.

VW: Valley Water**Comment VW-1:**

Table 2-1 Summary of Impacts and Mitigation (Page 15): There appears to be a formatting error as overlapping text is shown within the table.

Response to Comment VW-1:

Minor edits are proposed to the formatting of Table 2-1 to correct this error. No changes to the content of the table are proposed in response to this comment.

Comment VW-2:

Figure 3-3, Existing Site Operations, (Page 32): Detention basin #2 is shown as 2.0 acres, however, Section 3.1 – Project Location and Site Description (Page 28), describes the basin to have an area of approximately 2.1-acres. Please make sure all figures provided in the EIR are consistent with the descriptions provided in other sections throughout the EIR.

Response to Comment VW-2:

Detention Basin #2 is approximately 2 acres in size, as correctly shown in Figure 3-3. Minor edits are proposed to Sections 3.1 and 11.1.3.2 to make the description of the detention basin size in the text match the figure (see Section 4 below).

Comment VW-3:

Section 4.3.3.1, Leachate from ECS Composting Process (Page 57): The second paragraph references the Hydrology and Water Quality section as ‘Section 10;’ this should be referenced as Chapter 11.

Response to Comment VW-3:

Minor edits are proposed to the cross-reference in Section 4.3.3.1 to correct the cross-reference to the Hydrology and Water Quality section. Minor edits are also proposed to cross-references in Sections 4.3.3.2, 4.3.6.1 and 4.3.6.3 to correct similar incorrect cross-references (see Section 4 below).

Comment VW-4:

Section 4.3.6.1, Finished Site Elevation Changes (Page 67): The Project proposes a new pad within Area 1B to accommodate the ECS improvements, which in turn would raise the existing elevations by approximately one to two feet above the 100-year flood elevations. The EIR should reference the 100-year water surface elevation of 148.5-ft. (NAVD 88) and note that this elevation was established through a Conditional Letter of Map Revision (CLOMR) from FEMA, which was issued as part of prior improvements to the Z-Best facility. The vertical datum should also be referenced for all elevations specified in the EIR. Additionally, Schaaf and Wheeler’s 2012 analysis, supporting the aforementioned CLOMR, should be included as part of Appendix E in the EIR.

Response to Comment VW-4:

Minor edits are proposed to Section 4.3.6.1 to add the elevation of the 100-year flood and its origin. Note that in some sections of the RDEIR, an incorrect elevation of 148.41 feet (North American Vertical Datum of 1988 [NAVD 88]) was stated for the 100-year base flood elevation for the Project site. Minor edits have been made throughout the RDEIR to correct this to 148.5 feet NAVD 88, based on the 2018 Conditional Letter of Map Revision (CLOMR). Minor edits are also made to the introduction of Section 11, Hydrology and Water Quality to include the Schaaf and Wheeler 2012 study as Appendix E-8 to the EIR and the 2018 CLOMR as Appendix E-9. See Section 4 below for all of these changes to the RDEIR. Copies of these two documents are enclosed within Appendix C of this Final EIR. See also Response to Comment VW-18. These changes do not affect the overall conclusions of the RDEIR or ability of the mitigation measures to reduce potential hydrology and water quality impacts to less than significant with mitigation.

Comment VW-5:

Section 4.3.6.2, Modification of Detention Basin #1 (Page 67): The second paragraph indicates that “The eastern portion of the existing basin would no longer to be [sic] used for stormwater detention.” This description is contrary to Figure 4-1 and Figure 4-7, both of which show the footprint of Detention Basin #1 being reduced so that the western portion of the existing basin is no longer in use. Please ensure that the description of the modified detention basin and the figures provided in the EIR are consistent.

Response to Comment VW-5:

Minor edits are proposed to Section 4.3.6.2 to correct the erroneous use of “eastern” instead of “western” (see Section 4 below).

Comment VW-6:

Section 4.3.6.2, Modification of Detention Basin #1 (Page 67): The last sentence of this section notes that no modifications are proposed for Detention Basin #2; this is inconsistent with MM-HYD-5 (EIR, page 264), which proposes to increase the berm height for Detention Basin #2.

Response to Comment VW-6:

Section 4 of the RDEIR describes the Project, as proposed by the Applicant and analyzed by the County. The proposed Project does not include any physical modifications to Detention Basin #2, as correctly described in Section 4.3.6.2. The recommended increase in berm height is proposed by the County as a mitigation measure (MM-HYD-5) to reduce potential impacts related to flood waters overtopping the basin and subsequent release of contaminants to the environment. Per CEQA case law (*Lotus v Department of Transportation* (2014) 223 Cal.App.4th 645, 656), an EIR must analyze the impacts of the Project (without mitigation measures) in order to properly disclose the potential environmental impacts of the Project. Therefore, a description of proposed mitigation measures is not included in the Project Description section of the EIR.

No changes to the RDEIR are recommended in response to this comment.

Comment VW-7:

Section 4.3.6.3, Flood Storage Facility Expansion (Page 69): It is noted that the proposed flood storage facility will require excavations between 5- and 15-feet deep. The EIR should evaluate the existing groundwater table and its impacts to the capacity of the proposed flood storage expansion.

Response to Comment VW-7:

Section 11.1.2 of the RDEIR is being updated to include information on existing depth to groundwater at the Project site, as shown in Section 4. Changes are also proposed to Section 11.4.4.1 to describe typical groundwater levels in the area of the proposed flood storage area and resulting changes to the Project’s effect on flood storage capacity. As a result of these edits, the impact conclusion for Impact HYD-4 has been revised from **less than significant** to **potentially significant**. A new mitigation measure (MM-HYD-4) is proposed to reduce this potentially significant to **less than significant with mitigation**. (See Section 4 below for text changes to these sections of the RDEIR.)

Comment VW-8:

Section 11.1.3 Existing Composting Operations – Storm Water System Management (Page 226): The last paragraph indicates “Floodwater storage areas, detention basins, and undeveloped Z-Best property are located east and south of Areas 1 and 2.” Figure 3-3 (Existing Site Operations) in the EIR should specify the areas dedicated to floodwater storage so the areas currently being utilized for floodwater storage is clear.

Response to Comment VW-8:

Section 11.1.3 and Figure 3-2 of the RDEIR have been amended to clarify the location of the existing floodwater storage area on site (see Section 4).

Comment VW-9:

Section 11.1.3.1 Area 1 and Detention Basin #1 (Page 226): The last sentence indicates that Detention Basin #1 has an existing berm that has an elevation of 139-feet; all elevations provided in the EIR should specify the vertical datum.

Response to Comment VW-9:

See responses to comments VW-4 and VW-18.

Comment VW-10:

Section 11.1.3.1 Area 2 and Detention Basin #2 (Page 226): The last sentence of the second paragraph indicates that Detention Basin #2 has an existing berm that has an elevation of 149-feet; all elevations provided in the EIR should specify the vertical datum.

Response to Comment VW-10:

See responses to comments VW-4 and VW-18.

Comment VW-11:

Section 11.4.1.1 Leachate Characteristics and Quality (Page 249): Though the proposed Engineered Composting System (ECS) will reduce the overall volume of Leachate, TetraTech’s Peer Review of the Project’s hydrology and water quality technical analyses (Appendix E-1) concludes that leachate concentrations within Basin 1 “will most likely increase over time as the leachate evaporates and is recycled for dust control and compost moisturization” (Conclusion for Task 2, Page 4). The EIR should acknowledge this conclusion and provide a discussion of how increases in leachate concentrate within Basin #1 will be managed.

Response to Comment VW-11:

Section 11.4.1, Subheading “Groundwater Quality” (page 254) of the RDEIR, acknowledges Tetra Tech’s conclusion that the concentration of contaminants in Detention Basin #1 would likely increase over time and explains that potential impacts to groundwater quality from this increased contaminant concentration would be minimized due to the proposed impermeable liner that would be installed under Detention Basin #1 as part of the Project. The potential impacts of detention basin water quality on surface water (via overtopping or flood inundation) are addressed in Section 11.4.5. Therefore, the conclusions and recommended mitigation measures are still valid.

No changes to the RDEIR have been made in response to this comment.

Comment VW-12:

Section 11.4.1.1 Proposed ECS System Pad Design (Page 251): The Project proposed to elevate the existing pad by at least one foot above the base flood elevation. The EIR should reference the 100-year water surface elevation of 148.5-ft. (NAVD 88) and note that this elevation was established through a Conditional Letter of Map Revision (CLOMR) from FEMA, which was issued as part of prior improvements to the Z-Best facility. The vertical datum should also be referenced for all elevations specified in the EIR. Additionally, Schaaf and Wheeler's 2012 analysis, supporting the aforementioned CLOMR, should be included as part of Appendix E in the EIR.

Response to Comment VW-12:

See responses to comments VW-4 and VW-18.

Comment VW-13:

Proposed Storm Water/Leachate Conveyance System Improvements (Page 252) - To comply with the Composting General Order, the Project proposes to design drainage conveyance systems onsite, which have sufficient capacity to direct both wastewater and direct precipitation from the 25-year, 24-hour peak storm event. Though the General Composting Order only requires drainage systems to be provided with sufficient capacity to handle the 25-year, 24-hr storm event, the Project should evaluate events up to the 100-year, 24-hour peak storm event and consider providing adequate capacity to handle larger storm events. In section 10.1.3.5 (page 196), the EIR acknowledges "more frequent and extreme storm events" as a result of climate change. The series of atmospheric rivers that passed through the County during 2023 also serves as recent examples of the possibility of these more extreme and frequent events.

Response to Comment VW-13:

The proposed conveyance system for the facility has been designed for the 25-year, 24-hour peak storm event, a relatively conservative design criteria for stormwater conveyance that is applied to compost facilities throughout California. During winter 2023, the maximum 24-hour rain event was found to be 4.05 inches as measured at Gilroy's long-term precipitation gauge. A 25-year, 24-hour storm is expected to produce 4.75 inches of rain at the site (NOAA 2023a), generating approximately 7.1 million gallons of runoff from Area 1 (the drainage area that contributes to Drainage Basin #1). For context, the 100-year, 24-hour storm is expected to produce 6.25 inches of rain at the site and generate approximately 9.4 million gallons of runoff from Area 1. Stormwater runoff conveyance from extreme events up to and including the March 2023 storm are expected to be within the capacity of the proposed conveyance system. A more stringent design criteria such as the 100-year, 24-hour peak storm is often applied to critical infrastructure with a life safety component. The current design criteria for the stormwater conveyance system is consistent with requirements in the General Composting Order and is considered sufficiently protective. Minor back up of stormwater runoff from Area 1 for a few hours during a rare extreme rainfall event is unlikely to cause a substantial impact to groundwater quality due to this relatively short contact time. See responses to comments VW-14 and VW-15 for a specific discussion of pump capacity and detention basin capacity.

Comment VW-14:

MM-HYD-1A: Demonstrate Sufficient Pump Capacity (Page 253) - As mitigation for the Project's potential impact to surface or groundwater quality, the EIR proposes to have the Applicant "submit details and calculations to the County Planning Department" to demonstrate that the proposed onsite pump has sufficient capacity "during a 25-year, 24-hour storm event without causing localized flooding which inundates the southeast corner of the green waste compost area." The Project should evaluate events up to the 100-year, 24-hour storm event and consider providing adequate pumping capacity to handle larger storm events. As noted in Comment #11 the possibility of more extreme and frequent events should be considered when evaluating mitigatory measures for the Project.

Response to Comment VW-14:

As discussed in response to comment VW-13, a 100-year 24-hour storm event at the Project site is expected to generate 6.25 inches of rain, compared to the 25-year 24-hour storm event of 4.75 inches. The volume of stormwater runoff from Area 1 that would require pumping into Detention Basin #1 from these events would be approximately 9.4 million gallons and 7.1 million gallons, respectively. A pump with approximately 5,000 gallons per minute capacity (300,000 gallons per hour) would be required to pump 7.1 million gallons of stormwater into the basin over a 24-hour period, in order to meet the requirements of MM-HYD-1a. A pump of this capacity would take approximately 32 hours to pump the 9.4 million gallons from a 100-year 24-hour event. This represents an approximate 30 percent increase in pumping duration. Minor backup of stormwater runoff from Area 1 for a few additional hours during a rare extreme rainfall event is unlikely to cause a substantial impact to groundwater quality, due to the relatively short contact time between the stormwater and any contaminants in the compost area.

Comment VW-15:

MM-HYD-1B: Increase Detention Basin Capacity (Page 254) - The EIR proposes to either "increase the capacity of Detention Basin #1 and/or Detention Basin #2, such that combined detention basin capacity is sufficient to hold at least 22.8 million gallons of water without discharging and maintain a freeboard of 2 feet." In the previous section – "Proposed Storm Water Detention Capacity," the EIR states that "there remains a substantial risk of overtopping if an extreme event occurs during a wet year when the detention basins are being used to hold prior runoff from the composting facility, even assuming the currently proposed capacity increase in Detention Basin #1." As noted in the previous comments for the proposed drainage and pumping system improvements, the Project should evaluate storm events up to the 100-year, 24-hour storm event, and ensure that mitigatory measures prevent any discharges from the detention basins during the 100-year, 24-hour storm event to prevent overflows from percolating into groundwater and/or entering the Pajaro River.

Response to Comment VW-15:

The volume of direct precipitation into Detention Basin #1 and runoff from Area 1 during a 100-year 24-hour storm event (6.25 inches of rain) would be approximately 10.1 million gallons.⁴ The proposed size of Detention Basin #1 is 14.5 million gallons, which

⁴ Note that the difference between the volume of stormwater input to Detention Basin #1 from the 100-year 24-hour event and the volume of stormwater requiring pumping is due to the approximately 0.7 million gallons of rain that would fall directly into the Detention Basin.

would therefore be sufficient to hold the 100-year, 24-hour storm event, provided less than 4.4 million gallons of water were in the basin at the time of the event (i.e., if it were less than approximately one-third full). Although it is possible that the basin could contain more than 4.4 million gallons at the time of a 100-year, 24-hour storm event (because such a storm event would most likely occur during the wet season, and possibly during a wetter than average year), updated analysis undertaken in response to comments received on the RDEIR (see updated Appendix E-6, contained in Appendix D of this Final EIR) demonstrates that the additional capacity required by mitigation measure MM-HYD-1B (a combined capacity below freeboard of 22.4 million gallons) would be sufficient to have held even the wettest winters from the last 65 years of record without overtopping.

See changes to Section 11.4.1.1 of the RDEIR made in response to comment ZBEST-2 and as staff-initiated changes (shown in Section 4).

Comment VW-16:

Impact HYD-4, Section 11.4.4.1 On-Site Improvements (Page 260) - The second paragraph notes that the existing pad upon which the existing CTI composting process takes place would be raised by approximately one foot above the 100-year base flood elevation. As previously noted, the EIR should reference the 100-year water surface elevation of 148.5-ft. (NAVD 88) and note that this elevation was established through a CLOMR which was issued by FEMA for previous site improvements. The vertical datum should also be referenced for all elevations specified in the EIR. Additionally, Schaaf and Wheeler's analysis detailing previous improvements for the site, as well as the issued CLOMR should be included as part of Appendix E in the EIR.

Response to Comment VW-16:

See responses to comments VW-4 and VW-18.

Comment VW-17:

Section 11.4.4.2 SR-25 Improvements (Page 262) – It is noted that “The Applicant would be required to provide calculations showing the pre-and post-project runoff as related to improvements within the SR-25 right of way when submitting the encroachment permit application to Caltrans for the project-related work on SR-25.” At a minimum, the EIR include a preliminary analysis of the anticipated runoff (both volume and rate) under post-project conditions to ensure that pre-project conditions are not exceeded. Furthermore, the EIR should specify the terminus, or receiving body of water for the existing storm water drainage ditches running along each side of SR-25. The analysis should also assess whether the terminus or receiving body of water would be impacted due to additional flows generated by the proposed improvements to SR-25.

Response to Comment VW-17:

The level of design currently available for the Caltrans project is insufficient to allow detailed calculations of anticipated runoff volume and rate that could result from the proposed improvements to the SR-25 ROW. In any case, the layout of the proposed Z-Best site access and related improvements within the SR-25 ROW would need to be substantially modified in response to mitigation measure MM-TRA-2, which requires either that the new driveway/SR-25/Bolsa Road intersection be signalized or that the

driveway be retained in its current location and additional acceleration/deceleration lanes be installed in that area (further west than currently proposed by the Project).

To ensure that future design details submitted as part of the encroachment permit to Caltrans will comply with stormwater management standards, clarifications are proposed to MM-TRA-2 to specifically note that compliance with Caltrans' stormwater management standards would be required as part of the encroachment permit process for the final design (see Section 4 below).

Comment VW-18:

Section 11.4.5 Impact HYD-5 (Page 263) – The 100-year base flood elevation is specified as 148.41-ft. in several instances throughout the referenced section. It should be noted that the CLOMR issued by FEMA, established the 100-year base flood elevation as 148.5-ft. (NAVD 88). Please ensure that the base flood elevation specified in the EIR is consistent with the CLOMR elevation. The vertical datum should also be specified for all flood elevations referenced in the EIR. Additionally, the freeboard specified for Detention Basin #2 (0.59-ft.) should be revised to reflect the established base flood elevation noted above.

Response to Comment VW-18:

As discussed in response to comment VW-4 above, minor edits are proposed throughout the RDEIR to correct the 100-year base flood elevation to 148.5 feet NAVD 88, based on the 2018 CLOMR. Minor edits are also made throughout the EIR to include the appropriate datum for all elevations, and in Section 11.4.5 to clarify the height of freeboard above the base flood elevation, as appropriate. See Section 4 below for text edits.

Comment VW-19:

Section 11.4.5 MM HYD-5: Increase Berm Height of detention Basin #2 (Page 263) – The EIR proposes to “increase the berm height of Detention Basin #2 to at least 150.41-ft. so that at least 2 feet freeboard above the base flood elevation is maintained.” This appears to be inconsistent with Section 4.3.6.2, which states that “No modifications to Detention Basin #2 are proposed as part of the project.” It should be noted that Schaaf and Wheeler’s 2012 flood study, and subsequent CLOMR from FEMA, established the 100-year base flood elevation of 148.5-ft. (NAVD 88). Please ensure that the base flood elevation specified in the EIR is consistent with prior studies. The vertical datum should also be specified for all flood elevations referenced in the EIR. Additionally, the last paragraph of this section indicates that implementation of MM-HYD-1B and MM-HYD-5 would ensure that “the potential for the capacity of both detention basins to be exceeded would be reduced...” While the berm heights may be sufficient to keep overbank flows from Pajaro River from mingling with the impounded water in the detention basins, the EIR should assess whether the detention basins have adequate volume to contain precipitation and runoff generated onsite during larger storm events, and ultimately prevent detention basin overflows from discharging into Pajaro River. As previously noted, the Project should evaluate runoff generated by storm events up to the 100-year, 24-hour storm event to prevent overflows during more extreme precipitation events.

Response to Comment VW-19:

See responses to comments VW-6 (Detention Basin #2 berm height), VW-4 and VW-18 (base flood elevation and datum), and VW-15 (consideration of 100-year, 24-hour storm

event). The issue of whether the detention basins have adequate volume to contain precipitation and runoff generated onsite during larger storm events, and ultimately preventing detention basin overflows from discharging into the Pajaro River, are addressed in Section 11.4.1.1 of the RDEIR under the subheading “Proposed Storm Water Detention Basin Capacity.” That section of the RDEIR and the associated mitigation measure (MM-HYD-1B) have been changed in response to comment ZBEST-2 and as staff-initiated changes (see Section 4 below), but the overall conclusion that the impact would be mitigated to less than significant is unchanged.

Comment VW-20:

Appendix E – Updated Floodplain Storage Analysis for Z-Best Compost Facility (Schaaf and Wheeler Memorandum dated October 25, 2022): It is not clear whether the proposed modifications to Detention Basin #1 is being accounted for in the modeled cross sections. More specifically, cross sections 14403 (Figure 6) and 14214 (Figure 7), which according to Figure 8, appears to include Detention Basin 1, do not show the proposed berm height of 150.5-ft. (NAVD 88). All proposed fill should be accounted for in the floodplain study.

Response to Comment VW-20:

The elevations shown in Figures 6 and 7 of Appendix E-2 (Schaaf & Wheeler 2022) are displayed in the National Geodetic Vertical Datum (NVGD), which is 2.85 feet lower than the NAVD 88 datum used within the RDEIR (i.e., 150.5 feet NAVD 88 is equal to 147.65 NVGD). As the commenter points out, the height of Detention Basin #1 shown on these figures (at approximately station 3500 to 4000 in Figure 6 and at station 8250 to 8500 in Figure 7) is shown at a lower elevation (approximately 146 NVGD or 148.85 NAVD 88) than the proposed berm height. This error is not anticipated to cause a substantial change in the conclusions of the 2022 Schaaf and Wheeler report or the RDEIR, because the height of the berm shown in the figures is still above the 100-year base flood level of 148.5 NAVD 88 (145.65 NVGD). Furthermore, the revisions to Section 11.4.4.1 proposed in response to comment VW-7 include a new mitigation measure (MM-HYD-4) that requires that an updated floodplain storage analysis be submitted to the County demonstrating compliance of the final Project design with the County’s Floodplain Management Ordinance (see Section 4 below). Implementation of this mitigation measure would reduce the potentially significant impact to a less than significant level.

Comment VW-21:

Appendix E – Updated Floodplain Storage Analysis for Z-Best Compost Facility (Schaaf and Wheeler Memorandum dated October 25, 2022): It is understood the updated floodplain analysis accounts for the fill needed to accommodate the proposed improvements along SR-25, however the memorandum does not specify whether the proposed retaining wall is considered in the analysis. More specifically, the analysis should evaluate whether the proposed retaining walls along SR-25 has the potential to impede or redirect flows when the area is subject to more shallow flood events.

Response to Comment VW-21:

As discussed in the response to comment VW-7, Section 11.4.4.1 of the RDEIR has been revised to include a new mitigation measure, MM-HYD-4: Update Floodplain Storage Analysis (see Section 4 below). This mitigation measure requires the Applicant

to prepare and submit an updated floodplain storage analysis to the County, based on final Project design. The updated floodplain storage analysis shall specify which Project components have been included in the modeling and must demonstrate that the final design is compliant with the County's Floodplain Management Ordinance. With implementation of mitigation measure MM-HYD-4, impacts relating to the alteration of on-site drainage patterns in a manner that would impede or redirect flood flows would be reduced to less than significant with mitigation.

Comment VW-22:

General: The EIR needs to clarify whether the proposed changes to the overall topography, and resulting impacts from those changes, are evaluated with respect to the existing terrain (determined from a recent survey), or an older terrain. Please specify the year for each terrain referenced in the EIR.

Response to Comment VW-22:

As described in the *Updated Floodplain Storage Analysis for Z-Best Compost Facility* (Schaaf & Wheeler 2022), the steady state hydraulic model of the Pajaro River and its overbanks used as the basis for the 2018 CLOMR were updated to reflect changes in topography associated with the proposed Project, including the proposed modifications to SR-25 (see Section 4 below). According to the 2012 Flood Study (Schaaf & Wheeler 2012), the cross-section geometry used in the HEC-RAS model submitted for the 2018 CLOMR included a compilation of several different data sources including a cross-section field survey within the Pajaro River channel banks conducted by CH2M Hill for the El Rancho San Benito project, aerial topography in San Benito County obtained for the El Rancho San Benito project by Carlson, Barbee and Gibson, and Santa Clara County LiDAR data flown in 2006. The Schaaf & Wheeler 2022 study was included as Appendix E-2 in the RDEIR. As discussed in response to comment VW-4, the Schaaf & Wheeler 2012 study has been added as a new Appendix E-8. No changes to the RDEIR are recommended in response to this comment.

3.1.2 Individual Comments

DORADO: Dorado Leasing (via JRG Attorneys, with attached exhibits by Dr. Trevor Suslow)

Comment DORADO-1:

On behalf of Dorado Leasing (“Dorado”), the owner of the 570-acre Sargent Ranch, which is contiguous to the southern boundary of the Z-Best facility, we submit the following comments on the Recirculated Draft EIR (“RDEIR”). These comments are in addition to the comments our firm submitted on the original Draft EIR, which remain relevant to the Z-Best project and highlight the potential environmental impacts of the project on adjacent high-quality farmland. Rather than resubmitting our prior March 1, 2021, letter (“March 1 Letter”) in its entirety, we incorporate by reference the various points and environmental issues that Dorado raised in this letter, which remain relevant. Accordingly, we request and CEQA demands that the Final EIR include written responses to Dorado’s comment letter on the original Draft EIR, dated March 1, 2021, and these additional comments on the RDEIR.

Response to Comment DORADO-1:

In accordance with CEQA Guidelines Section 15088.5(f)(1), and as advised in both the Notice of Availability and in Section 1.2.3 of the RDEIR, the County is only responding to comments submitted in response to the RDEIR. The commenter did not resubmit in its entirety the “March 1 Letter” during the RDEIR public review period; therefore, the County will not provide a written response to the comments within that prior letter. Nonetheless, because the same or similar points are raised in the commenter’s June 20, 2023, letter, responses to those comments also serve to respond in substantial part to the original points in the March 1 Letter. (See responses to comments DORADO-2 through DORADO-13 below).

Comment DORADO-2:

The Important Purpose of CEQA and an EIR...

As such, the purpose of any EIR is to provide public agencies and the public with “detailed information about the effect which a project is likely to have on the environment to list ways in which the significant effects of such project might be minimized; and to indicate alternatives to such a project.”

Response to Comment DORADO-2:

This comment provides background on the purpose of CEQA. No specific environmental issues or deficiencies of the RDEIR are raised that warrant a response under CEQA.

Comment DORADO-3:

The RDEIR Continues to Be Legally Inadequate...

An agency abuses its discretion by failing to proceed in the manner required by law if its action or decision does not substantially comply with the requirements of CEQA.⁸ Under this test, omission of information that CEQA mandates be included in an environmental analysis constitutes a failure to proceed in the manner required by law.⁹ ...

Response to Comment DORADO-3:

This comment provides background on the purpose of CEQA. No specific environmental issues or deficiencies of the RDEIR are raised that warrant a response under CEQA.

Comment DORADO-4:

The RDEIR's Analysis of Agricultural Impacts Continues to Be Legally Deficient...

As documented in Dr. Suslow's comments on the RDEIR, which are attached as Exhibit B and incorporated by reference, the RDEIR continues to overlook and omit any analysis of certain discrete impacts of the composting operation that could impact adjacent farmland.

Until this additional analysis is undertaken, it is impossible to determine what specific mitigation or minimization measures could be incorporated into the project design or otherwise required to address these impacts. Nonetheless, Dr. Suslow identifies and recommends that the project implement certain mitigation measures to address the potentially significant increase in bird vectors and bioaerosol impacts. Dorado also identified and described several other mitigation measures in its March 2001 letter that have been ignored or rejected...

Accordingly, Dorado again requests that the County require Z-Best to implement mitigation measures that would further reduce or minimize the potential impacts of the logical increase in bird vectors and bioaerosol transmission. Even assuming the RDEIR's authors disagree with Dr. Suslow's conclusions, in an abundance of caution, the County should require Z-Best to implement such measures.

Response to Comment DORADO-4:

Dr. Suslow's comments from Exhibit B of the Dorado comment letter are included below as comments DORADO-7 through DORADO-13. Please see specific responses to those comments below.

Comment DORADO-5:

The RDEIR continues to fail to correlate the project's adverse air quality impacts to resultant adverse health effects...

To meet CEQA's disclosure requirement, an environmental impact report must "correlate the identified adverse air quality impacts to resultant adverse health effects." Bakersfield at 1219...

The RDEIR continues to suffer the same affliction as the DEIR and the Bakersfield EIRs and likewise fails to satisfy CEQA. The RDEIR notes in Table 7-1 that certain pollutants can contribute to certain health ailments but never correlate the actual increases of air pollutants to the number and type of air pollution related conditions and diseases. For example, Table 7-7 of the DEIR states that the project would generate 123.19 per day of NOx emissions due to the additional truck trips, which exceeds the applicable significance threshold of 54 pounds per day. However, the DEIR fails to correlate this increase in NOx emissions to any potential increased health risk to workers at the Z-Best facility, farmworkers in the adjacent farm fields, or residents in the surrounding area. The RDEIR appears to blame the existing modeling for its inability to translate project generated pollutant emissions into specific health effects on people. However, it's unclear why the Health Risk Assessment that was prepared for Toxic Air Contaminants could not assess the potential impact of other types of pollutant emissions on people or surrounding and uses. This error is compounded by the RDEIR's ongoing failure to adequately address the impact of bioaerosols on human health and safety as Dr. Suslow explains in Exhibit B, which can cause the same types of health effects as NOx.

The RDEIR's air quality analysis continues to ignore glaring omissions and falls short of fulfilling the statutory disclosure requirement. This truncated analysis violates CEQA by omitting a correlation between adverse air quality impacts and resultant adverse health effects and does not disclose the severity of the Project's environmental impacts.

Response to Comment DORADO-5:

As described in Section 7.1.1.2 of the RDEIR, Criteria Air Pollutants and Precursors and their Effects on Human Health, for CEQA purposes the analysis of health impacts due to individual projects resulting from emissions of criteria air pollutant emissions has long been focused on a regional or air basin-wide level, typically evaluated through regional air quality planning efforts, such as under clean air plans and state implementation plans. This is because the complex reactions and conditions that lead to the formation of ozone and particulate matter in the atmosphere can result in the transport of pollutants over wide areas and result in health impacts from criteria air pollutants being experienced on a regional scale; whereas carbon monoxide (the effects of which are discussed in Section 7.4.3 of the RDEIR), and toxic air contaminants (TACs) (the effects of which are discussed via a health risk assessment in Sections 7.4.4 and 7.4.5 of the RDEIR) act on a more localized scale in proximity to emissions source locations.

The potential for criteria air pollutant emissions to be transported over wide areas means that the emissions of ozone precursor pollutants, such as volatile organic compounds (VOC) and nitrogen oxides (NOx), from a project site do not necessarily translate directly into a specific concentration of ozone or a specific health risk in that same area. The Bay Area Air Quality Management District, California Air Resources Board, and U.S. Environmental Protection Agency have not approved a quantitative

method to meaningfully and consistently translate the mass emissions of criteria air pollutants from a project to quantified health effects. This is consistent with guidance and recommendations provided by expert agencies, including the South Coast Air Quality Management District (SCAQMD) and San Joaquin Valley Air Pollution Control District (SJVAPCD). For example, as further detailed in the South Coast Air Quality Management District (SCAQMD) Brief of *Amicus Curiae* (SCAQMD Brief) in *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. Specifically, as the SCAQMD Brief describes, the SCAQMD's 2012 Air Quality Management Plan showed that reducing NO_x emissions by 432 tons per day and reducing VOC (reactive organic gas [ROG]) emissions by 187 tons per day would reduce ozone levels by only 9 parts per billion. Therefore, the proposed Project's estimated 23 tons per year of NO_x and less than 1 ton per year of ROG would be so small that the Project's regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels.

The modeling tools available to correlate pollutant concentrations of TAC emissions do not, as suggested by the commenter, address secondary pollutants such as ozone (City of Los Angeles 2019). As detailed in the San Joaquin Valley Air Pollution Control District (SJVAPCD) Brief of *Amicus Curiae* (SJVAPCD Brief) in *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, for projects where most of the criteria air pollutant emissions derive not from a single "point source," but from area-wide sources such as mobile sources (e.g., cars and trucks driving to, from, and around the site), such as the proposed Project, it would be especially difficult to determine the concentration of ozone that would be created at the site or what specific health impacts to nearby receptors, such as agricultural workers or residents, would occur because meteorology, presence of sunlight, ultimate location of the formation of ozone, and other complex chemical reactions cannot be accurately modeled or quantified. Therefore, as explained in Section 7.4.2 of the RDEIR, emissions of ROG and NO_x generated in one area may not equate to a specific ozone concentration in that same area, and it is not feasible to meaningfully translate the mass emissions of criteria air pollutants from this Project to localized quantified health effects. Furthermore, as also identified in Section 7.4.2 of the RDEIR, the primary source of increased NO_x emissions is the increase in truck trips by contract waste haulers that are required to transport feedstock to the site and to transport finished products and unusable inert materials from the site. These truck trips and attendant NO_x emissions occur over a relatively wide geographic area. Moreover, implementation of the proposed Project, which would enable Z-Best to compost up to 875 tons per day more MSW than is possible under existing conditions, would also result in a decrease in vehicle miles traveled from trucks transporting this existing waste to other landfills or to other composting facilities in the region. In other words, this waste would continue to be generated in the region and would need to be transported to a landfill or an alternate composting facility with or without the Project. Based on the scenarios evaluated in Appendix B-5, potential emissions reductions could range from approximately 49 pounds of NO_x per day to approximately 153 pounds of NO_x per day, which could partially or entirely offset the on-road emissions associated with the proposed Project. Therefore, the emissions presented in Table 7-7 of the RDEIR are conservative because they do not account for the potential reduced truck travel in the region that would occur with the proposed Project. No changes to the RDEIR are recommended in response to this comment.

Comment DORADO-6:

The RDEIR Fails to Analyze a Reasonable Range of Project Alternative [sic] and Its Rejection of the Fully Enclosed Alternative, Which Would Significantly Minimize or Avoid Agricultural Impacts, Is Not Supported by Substantial Evidence.

CEQA requires that an EIR analyze a “reasonable range” of project alternatives that would minimize or avoid the significant environmental impacts of a project...

Dorado recommended that the Draft EIR analyze an entirely enclosed or indoor composting facility like the one that was described and discussed in the 2015 Cal Poly Study that was referenced in our letter. This type of system provides the best pathogen, odor, and vector control, and has the smallest footprint compared to other composting technologies (ECS, 2015). The unique aeration design helps capture and dramatically decreases greenhouse gas and odor emissions. The special aeration system provides a controlled airflow to maintain uniform biomass temperatures. The aeration system shown in the figure below is designed to conserve energy with adaptive control strategies...

Rather than analyzing a fully enclosed composting facility, the RDEIR (Section 18.3.2) dismisses this alternative for several reasons. First, the RDEIR suggests that the alternative is not economically infeasible because it would substantially increase capital expenditures and increase the overall cost of the project by 2.5 to 3 times. However, the only cited reference for this statement is a 2022 personal communication with someone named O’Neill, who is presumably a representative of the project Applicant. There is no written comparative analysis of the cost of the open bunker composting versus the enclosed facility option and other context for this conclusion...

Second, the RDEIR dismisses the alternative based on conclusory statements that construction of the enclosed systems would increase construction-related haul trips and air pollutant emissions, aesthetic impacts, energy use, and GHG emissions and would not decrease the project’s significant and unavoidable environmental impacts relating to NOx emissions, Clean Air Plan Consistency, or VMT. However, the RDEIR provides no specific information relating to the construction (e.g., number and types of construction equipment) or operational requirements of a fully enclosed project to provide any meaningful comparison with the project to substantiate these statements. Unless such a comparative analysis is provided, neither the County decision-makers, nor the public, have sufficient information to assess the veracity of this conclusion.

We request that the County require more detailed review and analysis of a fully enclosed project alternative, which could demonstrate that indeed such an alternative is economically feasible and that the project would remain profitable even assuming the additional capital expenditures.

Response to Comment DORADO-6:

In response to this comment, the manufacturer of the proposed composting system (Engineered Compost Systems [ECS]) was asked to prepare a construction cost estimate for a fully enclosed facility (ECS 2023; see Appendix D). The estimate indicates that a fully enclosed facility as suggested by the commenter would cost approximately twice as much to construct as the proposed Project (approximately \$80 million for the alternative, compared to approximately \$40 million for the proposed Project). The manufacturer also provided additional details regarding the anticipated

differences between the proposed Project and an enclosed alternative, which include increased operational energy use (due to additional ventilation needs) and decreased composting capacity (due to a larger area of facility that would be required for biofiltration and air handling equipment). The Applicant has indicated that the combination of increased construction and operational costs and decreased capacity would make an enclosed facility financially infeasible and reduce the volume of MSW waste that is diverted from landfill. Furthermore, construction of an enclosed alternative is estimated to take approximately 12 months longer than construction of the proposed Project, which would delay the facility's ability to contribute to State waste reduction goals.

With respect to potential construction-related air quality, energy, and GHG impacts of an enclosed alternative, detailed construction/haul trip estimates have not been developed to allow for a quantitative comparison to the proposed Project analysis. However, it is reasonable to assume that construction of a fully enclosed building with additional ventilation components would require an increased amount of construction materials (and associated construction haul trips) and additional construction equipment over an extended construction duration compared to the proposed Project's three-sided concrete bunkers.

With respect to aesthetic impacts, the enclosed facility would require a ceiling height of at least 25 feet, which is 2.5 times the height of the proposed Project's 10-foot-tall concrete bunkers, and more than 4 times the height of the existing 6-foot-tall Compost Technologies, Inc. (CTI) bags. Although a 25-foot-tall building is not uncommon in rural areas and is unlikely to result in a significant impact to visual character, an enclosed alternative would be substantially more visible to drivers traveling on SR-25.

With respect to agricultural impacts, although the commenter suggests that an enclosed facility would reduce impacts to adjacent agricultural activities, the RDEIR concluded that the proposed Project would have a less than significant impact to agricultural resources, as discussed in Section 6.4 of the RDEIR and in response to comment DORADO-7 below.

With respect to bioaerosol impacts, while it is likely that an enclosed system may reduce bioaerosol emissions from the facility, the extent of any reduction would depend on the design and filtration of the air handling system. Furthermore, due to the inherent uncertainties and lack of regulatory exposure thresholds for bioaerosols discussed in Section 7 of the RDEIR and the associated technical memorandum in Appendix B-6, it would be difficult to confirm that such an alternative would reduce potential bioaerosols to a less-than-significant level.

Minor edits are proposed to Section 18.3.2 of the RDEIR, as shown in Section 4 below, to reflect the updated cost information and additional detail with respect to anticipated construction-related impacts from such an alternative and to explain why this alternative is not feasible.

Comment DORADO-7:

The RDEIR still does not adequately address the likelihood of increased vector attraction, predominantly birds and specifically American Crow readily observed at and around the operations from viewpoints on the adjacent farmland. Due to increased volume of incoming materials and open-bunker composting, the bird activity observed by personal observation and readily observed on the Z-Best Virtual Tour of the Gilroy facility, notwithstanding a windrow format versus bunkers, the risk potential for bird movement between the diverse operational units from receiving to finished compost facility have not been sufficiently addressed. The increased risk potential is fundamentally a two-fold leading issue. Simply stated, an expanded volume of raw materials and in-process compost in combination with known and routine crop development and crop management inputs on the adjacent farm represents a greater risk of avian species of primary concern, such as cowbirds, gulls, and crows from the facility into farm (6).

To mitigate the risk of increased bird vectors, I recommend that an assessment of correspondingly more substantial non-lethal bird harassment and diversion mitigation offset practices be undertaken by the County and addressed in the RDEIR. Considerations should include but not be limited to species-specific sonic wave technologies (e.g. Sonic Nets) and strategic placement of modern laser-sentinel devices (e.g. Bird Control Group). Specialized laser devices have been effectively used in acute and chronic bird diversion tactics at airports and vineyards, for example.

Response to Comment DORADO-7:

The potential for the proposed Project to increase vector attraction (including birds such as American crow) is discussed in Section 6.4.3.2 of the RDEIR. As discussed in that section and also in Section 7.4.6, although the Project would expand the volume of raw materials processed at the facility, the proposed new ECS technology would substantially reduce the amount of time taken for the compost to reach pathogen-destroying temperatures, thereby minimizing the total amount of raw MSW on the Project site at any particular time by increasing facility throughput. In addition, the fresh MSW feedstock would be covered by a 6- to 12-inch bio-layer of pre-composted material or screened overs, which are not a food source to vectors (ECS 2016). This bio-layer would act as a cap to filter and reduce VOCs and odors commonly released during the composting process, which are commonly the cause of vector attraction. As noted by the commenter, birds are already present at the facility, and no new evidence is presented by the commenter to suggest that the proposed new technology would attract more birds than the existing operations.

Furthermore, the commenter does not provide any evidence to suggest that an increase in birds at the facility would result in significant environmental impacts that would require mitigation via the suggested bird-deterrent measures. As described in Section 6.4.3.5 of the RDEIR, even if the Project were to result in neighboring landowners deciding that the growth of crops for human consumption were unviable beyond the areas that are already fallowed (see RDEIR Section 6.4.3.3), this would not preclude those properties from being used for other agricultural purposes consistent with the agricultural zoning of the land, such as grazing or non-edible crops. The potential economic/financial effects due to potential loss of land value due to the ongoing need to pay rent on additional fallowed blocks or change in agricultural activities from one more economically productive use to another on additional agricultural lands are speculative. Moreover,

these alleged economic impacts are not considered physical environmental impacts under CEQA. No changes to the RDEIR are required in response to this comment.

Comment DORADO-8:

Irrespective of the development of the bulk bunkered pile with a 6-inch finished product layer, in-process pile basal “tail edges” will invariably be slow to (or potentially never) reach the 55 degrees Celsius inactivation temperature asserted as an enhanced process safety factor. 55 degrees Celsius is the minimal bulk temperature of this operational window for pathogen lethality, dependent on materials and environmental conditions. This basement level standard has been demonstrated to be operationally non-uniform in surveys conducted by the University of Florida in conjunction with Food and Drug Administration programs regarding the safety of soil amendments (1, 2). While these studies included aerated compost masses which incorporated animal manures in the feedstock, the studies do not obviate the prudent step of considering this potential source of contaminants. The RDEIR does not address this “tail edge” issue.

Response to Comment DORADO-8:

The bulk bunkered pile with 6-inch finished product layer referred to in the comment is the primary composting step of the proposed ECS system. As discussed in Section 4.3.1 of the RDEIR, the primary composting step involves individual bunkers with concrete walls surrounding three sides of the compost pile. The piles would be negatively aerated with fans that would distribute air and temperature throughout the biomass. Each pile would be monitored with temperature probes, and those probes would be part of a system that automatically controls the fans for better control of the temperature of the pile (ECS 2023).

Minor edits are proposed to mitigation measure MM-AIR-7b in Section 7.4.7 of the RDEIR to specify that temperature probes shall be located in multiple locations within each bunker with the temperature continuously recorded and monitored daily, and that compost piles shall not be moved to the secondary composting step until all probes indicate that the piles have reached at least 55 degrees Celsius (see Section 4 below). By requiring that the bunkers be monitored in multiple locations and by distributing the temperature through the pile with fans, the “tail edge” issue mentioned by the commenter would be minimized. Nonetheless, the RDEIR’s conclusion that potential impacts from bioaerosol emissions would be significant and unavoidable because the bioaerosol emission rates and off-site dispersal cannot be quantified at this time and because there are no established regulatory exposure levels for bioaerosols remains unchanged.

Comment DORADO-9:

Bacterial pathogens of concern have the potential to develop heat and other stress tolerance traits on the incoming materials prior to receiving and/or during pre-process hold times. The target “come-up” threshold of 55 degrees Celsius (131 Fahrenheit), or greater but less than 70 degrees Celsius (158 degrees Fahrenheit) in 48 hours is an enhancement to the current process. Consideration of pre-adaptive tolerance, rarely included as a composting process performance factor in most experimental risk assessment and validation studies, was not considered in this narrative. Pre-adaptive tolerance is a common terminology to describe the genetically determined response bacteria, as used here, can undergo following a non-lethal stress exposure

which then adapts the surviving cells to greater tolerance for the same or more severe stress exposure, such as elevated temperature. This stress-tolerance induction response simultaneously conveys resistance to multiple stresses common to composting, as reported in several peer-reviewed reports (3, 5, 7, 8). A further enhancement to accelerate “come-up” time which has been studied uses heated forced aeration consistently or during periods of cool to cold seasonal weather conditions. This would better ensure an adequate and more uniform lethal temperature distribution.

Response to Comment DORADO-9:

The comment suggests using heated forced aeration to accelerate “come-up” time. As detailed in the response to comment DORADO-8, during the primary composting step, the proposed system uses fans that are automatically controlled in response to temperatures recorded from probes in multiple locations within the compost pile. These fans do not use heated aeration; however, the automation of the fans in response to temperature would provide a uniform temperature distribution. Since the piles are enclosed on three sides by concrete walls, cool seasonal winds are expected to have minimal impact. According to the National Weather Service, the mean average temperatures over 30 years during the coldest months of December and January in Gilroy, California, were 48.7°F and 49.4°F (9.2°C and 9.7°C), respectively (National Oceanic and Atmospheric Administration [NOAA] 2023b). Studies have demonstrated that static windrow compost piles without aeration can reach temperatures above 55°C in under 5 days in climates with much colder temperatures than experienced in Gilroy, California (Tiquia-Arashiro 2000; Szabova 2010). Thus, with the technology of the proposed Project to include temperature-controlled fans, the aerated piles are expected to reach optimal temperature in less time than the standard windrow compost piles and would be an improvement over the current process with regard to potential generation of bacterial pathogen tolerance. No changes to the RDEIR are required in response to this comment.

Comment DORADO-10:

The potential for pooling water at these base layers with process water addition, as occurs with the current system, would also occur in open bunker arrays during seasonal rain. Such pooled moisture has the potential to provide an environment for amplification of bacterial pathogens. The RDEIR should consider the impact on pooled moisture to amplify bacterial pathogens and possible steps or measures that could be taken to eliminate any pooling. Elevated transference potential, due to greater populations and distribution of pathogens across the facility footprint, mediated by any of the recognized physical or biological vectors has the potential to result in a partial or complete loss of the adjacent crop.

Response to Comment DORADO-10:

As discussed within Section 11.4.1.1 (subheading ECS System Leachate Collection Features) of the RDEIR, leachate from the primary covered aerated static pile (CASP) bunkers would be captured in a series of trenches or “curtain drains” in the floor of the bunkers that would drain via below-grade pipes to collection sump pumps that connect to Detention Basin #1. Similarly, leachate generated in the secondary bunkers (which would be of limited volume compared to the primary bunkers) would also be captured via collection pipes and sump pumps and delivered to Detention Basin #1. Rain falling directly on the composting pad adjacent to the bunkers would also be directed to a

series of sumps and inlets that convey the runoff via pipes to Detention Basin #1. Because both the primary and secondary bunkers have a leachate drainage system built into them, there would be limited potential for pooling water at the base of the bunkers, and therefore limited potential for “amplification of bacterial pathogens.” No changes to the RDEIR are required in response to this comment.

Comment DORADO-11:

The assessment of fugitive dust and aerosolized particulates did not adequately address the full breadth of interacting factors which could result in sporadic but consequential release from diverse boundary layers within operational units as well as during handling and transfers. As just one example, the design and elevation of the proposed open-channel conveyance relative to wind speed and wind run, especially under extreme conditions, was not included in the RDEIR’s analysis. Studies cited to establish likely distances of fugitive dust and bioaerosols do not adequately address the scale of the proposed expansion and predictable adverse conditions to containment of the materials likely to be experienced in a year-round operation.

To mitigate this risk, I recommend that the RDEIR require this project to implement risk reduction practices such as stopping certain high aerosol-generating operations during high wind conditions or seasonal periods when wind direction is counter to prevailing vectors.

Response to Comment DORADO-11:

The complex interaction of factors that influence bioaerosol emission rates and dispersal is recognized in the second paragraph of Section 7.4.7 of the RDEIR as well as within Appendix B-6.

With respect to the commenter’s specific example regarding the proposed open-channel conveyance of leachate, the existing facility already uses a series of open ditches to convey runoff from the MSW composting area to Detention Basin #1 (Section 11.1.3.1 of the RDEIR); therefore, the potential for entrainment of bioaerosols by wind passing over open water already exists at the site. Furthermore, as discussed within Section 7.4.7 of the RDEIR, the proposed composting technology would reach pathogen-reduction temperatures much more quickly than the existing system (within 48 hours rather than up to 6 days), thereby reducing the likelihood that leachate and the surface drainage systems would contain enteric pathogens. Additionally, the surface area of Detention Basin #1 would be substantially reduced (to approximately 38 percent of its existing area) as part of the proposed Project. Therefore, the net effect on the potential for entrainment of bioaerosols from surface waters as a result of the proposed Project would also be reduced, compared to existing conditions.

In any case, the RDEIR already identifies that the Project would have a significant and unavoidable impact from bioaerosol emissions. The proposed mitigation measures MM-BIO-7A and MM-BIO-7B would require that the composting equipment be monitored and maintained to ensure that composted materials are reaching the required pathogen-reduction temperatures (thereby minimizing potential for enteric pathogens to become bioaerosols), and that if the required dust monitoring program determines that the Project is resulting in higher levels of dust emissions than existing conditions, that additional dust control or other operational practices shall be implemented and further monitored for effectiveness. Such additional measures, if required, could include risk

reduction practices such as limiting operations during certain meteorological conditions, as suggested by the commenter. As discussed in Section 7.4.7 of the RDEIR, because the bioaerosol emission rates and off-site dispersal cannot be quantified at this time and because there are no established regulatory exposure levels for bioaerosols, the impact is conservatively determined to be significant and unavoidable.

Comment DORADO-12:

A robust dust dispersal survey across an extended timeframe coinciding with seasonal farming is a positive step and will benefit from an additional detailed design development effort. A comprehensive longitudinal study and granular documentation of site-specific “fugitive dust” dispersal characteristics is necessary to best develop data-informed decisions regarding the mitigations. Such a study would best inform whether and which design changes are warranted, and where, to optimize the mitigation of bioaerosolization and off-site movement of particulates. An example of impacts of off-site movement and impacts is provided in Frączek et. al. 2022 (4.)

Response to Comment DORADO-12:

As discussed in Section 7.4.7 of the RDEIR, mitigation measure MM-AIR-7A requires that a fence-line dust monitoring program be designed and conducted by a qualified industrial hygienist in order to document baseline conditions at the site under existing operating conditions and to compare those baseline conditions to future operating conditions. If the program shows an increase in fugitive dust emissions as a result of the proposed Project, then additional dust control measures and/or other operational practices shall be implemented to reduce dust and bioaerosol concentrations to the extent feasible, and additional monitoring shall be undertaken to verify the effectiveness of the controls and to determine whether further control measures are warranted. Minor edits have been made to MM-AIR-7A to specify that the baseline and future with-Project monitoring shall occur during a range of meteorological conditions (see Section 4 below).

With respect to the Frączek et. al. 2022 study referenced by the commenter, the cited study addresses the spatial distribution of *Salmonella* species within soils surrounding a MSW landfill in Poland. The proposed MSW composting operations at the Z-Best site would differ from operations at an MSW landfill, as MSW materials being composted at the Z-Best site would be actively managed to reach pathogen-reduction temperatures, which does not occur at normal MSW landfills such as the one studied by Frączek.

Comment DORADO-13:

Based on my review of the Recirculated Draft EIR and associated documents that you have provided, it is my opinion that additional analysis and assessments of additional or alternative preventive measures and mitigation practices or technologies to reduce and manage the inherent risk potential associated with any composting facility should be undertaken prior to any decision on expansion is made.

Response to Comment DORADO-13:

As discussed in response to comments DORADO-7 through DORADO-12, above, minor edits to the RDEIR, in particular mitigation measures MM-AIR-7a and MM-AIR-7B, have been made in response to the commenter’s concerns.

OSHINS: Cary Oshins

Comment OSHINS-1:

I have spent the last 35 years as a researcher, teacher and advocate for composting, including serving as the Associate Director of the US Composting Council, most of that time while living in California. Over those years, and for decades prior, bioaerosols—airborne particles of bacteria, fungi, and endotoxins—have been a known issue facing compost manufacturers. The real concern in regards to this issue is the health of facility site workers. That is why dust filters, respirators, enclosed equipment cabs with air controls, and dust reduction practices and procedures are all routinely employed to mitigate the risk from bioaerosol exposure.

However, in regards to the impact of bioaerosols on the surrounding community and environment, the Draft EIR's finding of a significant and unavoidable Impact from bioaerosols runs counter to established science on bioaerosols impact as well as to a number of other CEQA studies on similar facilities, so should have been declared "less than significant". The authors themselves provide the very arguments that could be used for this declaration...

Response to Comment OSHINS-1:

As acknowledged within the RDEIR, the County's conclusion that bioaerosol emissions from the Project would have a significant and unavoidable impact is a conservative conclusion based on an abundance of caution. Because bioaerosols such as *Aspergillus fumigatus* and endotoxins have been shown to cause health impacts, yet there are no established regulatory thresholds for these bioaerosols, the County has been unable to establish a clear threshold of significance below which one could conclude with certainty would avoid potential health impacts. Coupled with the complex nature of bioaerosol emissions due to meteorological conditions, source materials, operating conditions, and other factors, the County has been unable to quantify the amount of bioaerosols that would be emitted by the Project or even conclude with any reasonable certainty if bioaerosol emissions would increase or decrease as a result of the Project. The sufficiency of an EIR is to be viewed in light of what is reasonably feasible (CEQA Guidelines section 15151).

Identification of a significant and unavoidable impact does not mean that the County must deny a project, but rather, that the County must make additional findings before it may approve a project with significant and unavoidable impacts that the County cannot determine could feasibly be avoided or mitigated to less-than-significant levels.

In other cases where the County has been unable to establish a clear threshold of significance (such as VMT impacts for activities in rural areas) and/or clearly ascertain the potential impact of a project, the County typically makes a conservative conclusion that the impact would be significant and unavoidable. Therefore, the RDEIR recommends that the County conclude that the proposed Project would result in a significant and unavoidable impact from bioaerosol emissions.

With respect to the commenter's concern regarding facility worker health, worker health issues are subject to requirements of both federal and state Occupational Safety and Health Administration (OSHA) regulations. No changes are recommended to the RDEIR in response to this comment.

Comment OSHINS-2:

Furthermore, a review of 5 other recent Environmental Reviews of large composting facilities revealed no concerns with bioaerosols...

Unless the authors can identify a unique factor differentiating the Z-Best Project from these other projects with regards to bioaerosol risk, their finding represents a substantial departure from contemporary understanding of risks from composting-generated bioaerosols.

Response to Comment OSHINS-2:

As discussed in Response to Comment OSHINS-1, the RDEIR's conclusion of a significant and unavoidable impact from bioaerosols is conservative because the Project's bioaerosol emission rates and off-site dispersal cannot be quantified at this time and because there are no established regulatory exposure levels for bioaerosols. As acknowledged by the commenter, two of the five EIR examples cited (for the Shafter/Wasco and Visalia facilities) did not address potential impacts from bioaerosol emissions at all and therefore did not establish any applicable thresholds nor provide information regarding the quantity or type of bioaerosol emissions generated by those projects (Kern County 2021; Tulare County Resource Management Agency 2021, 2022). The EIR for the Renewable Placer facility mentioned bioaerosols but similarly did not analyze the impacts of bioaerosol emissions nor establish any thresholds (Western Placer Waste Management Authority 2022). The potential impacts of bioaerosol emissions from the Z-Best Project were raised during public scoping and during public review of the original Draft EIR for the Project; therefore, the RDEIR must analyze this potential environmental impact.

The EIR for the Jess Ranch facility concluded that impacts to workers were potentially significant due to the known health risks from inhalation of airborne *A. fumigatus* spores and endotoxins. Mitigation measures were proposed to reduce the impact to facility workers, who were identified as most at-risk, which included worker training and protective equipment in accordance with OSHA requirements, and restrictions for immunocompromised employees. No information was provided on the distance at which bioaerosol concentrations would be reduced to background levels, the threshold of significance, or the efficacy of the proposed mitigation in relation to the threshold of significance (Alameda County 2019, 2021).

The closest residence to the Jess Ranch site is more than 2,500 feet from the proposed facility. The EIR for the Jess Ranch project stated that impacts to neighboring properties were not analyzed, as the closest residence was more than 500 feet from the facility, although no justification for this distance was provided in the EIR. For comparison, the nearest residence to the Z-Best facility is approximately 700 feet from the property boundary and 1,300 feet from the proposed ECS operations.

The EIR for the Redwood Landfill facility also acknowledged potential health risks associated with *A. fumigatus* and endotoxins, referencing a 1993 study by the California Integrated Waste Management Board, which found that airborne concentrations of *A. fumigatus* at active composting operations are on average 10-fold higher than background levels. Similar to the Jess Ranch EIR, impacts to nearby residents were not analyzed due to the distance (more than 1 mile) of these potential receptors, but no information was included as to the distance at which bioaerosol concentrations were reduced to background levels. Potential impacts to Jess Ranch facility workers were

found to be potentially significant, with mitigation requiring dust control and sound composting management practices. However, no information was provided regarding a clear threshold of significance or the efficacy of the mitigation measures (County of Marin 2005).

Because none of the studies cited by the commenter establish a clear threshold of significance for bioaerosols, the significant and unavoidable impact is the most appropriate and conservative conclusion for the Z-Best Project. No changes are recommended to the RDEIR in response to this comment.

Comment OSHINS-3:

Finally, I will note that a comprehensive review of bioaerosol exposure by Robertson et al in 2019... concluded that "given the absence of any consistent evidence on the toxicity of bioaerosols from composting facilities, there is insufficient evidence to provide a quantitative comment on the risk to nearby residents from exposure to compost bioaerosols."

Based on the above I recommend that the threat from bioaerosols to the surrounding environment be declared as less than significant.

Response to Comment OSHINS-3:

The 2019 study by Robertson et al. was reviewed as part of the Bioaerosol Memorandum prepared for the Z-Best Project (Appendix B-6 to the RDEIR), and the same conclusion quoted by the commenter was quoted in that memorandum. The quote indicates that there is insufficient evidence to quantify the risk to nearby residents, which means that one cannot definitively state that the risk would be significant or less than significant.

As described in response to comment OSHINS-1 above, in cases where the County is unable to definitively determine that an impact would be less than significant, a conservative approach is generally taken, and the impact determined to be significant. For these reasons, the RDEIR states that a significant and unavoidable impact is the most appropriate and conservative conclusion for the Z-Best Project. No changes are recommended to the RDEIR in response to this comment.

3.1.3 Applicant Comments

ZBEST: John Doyle, GreenWaste (with attached exhibit from WSP USA, Inc.)

Comment ZBEST-1:

There appears to be some discrepancy as to Composting General Order requirements relating to detention basin required capacity and associated mitigation measures in the dEIR. There is also some discrepancy as to the applicable geographical area from which point precipitation data is to be used as representative of the Z-Best site. Third, there are apparent mitigation measures for basin 2, which is an existing basin, not part of the proposed project. This basin was built after design review and permitting by the County, it meets applicable Composting General Order Requirements, as is.

Response to Comment ZBEST -1:

This introductory comment presents an overview of the commenter's three key concerns with the RDEIR, which are explained in more detail in comments ZBEST-2 through ZBEST-4. See responses to comments ZBEST-2 through ZBEST-4.

Comment ZBEST-2:

In several places in the DEIR and AECOM's April 7, 2023, memorandum (DEIR Appendix E-6), the 25-year, 24-hour precipitation is cited as 5.8 inches. The source of this information is identified as NOAA Atlas 14 Point Precipitation Frequency Estimates, National Weather Service, Hydrometeorological Design Studies Center for the Gilroy station (04-3417). The Gilroy station is approximately 8 miles northwest of the Z-Best site, located in a narrower section of the valley, and is not representative of the Z-Best site.

The NOAA Atlas 14 Point Precipitation Frequency Estimates use spatial data from numerous stations to calculate the frequency storm event at any given location. The 25-year, 24-hour precipitation cited in Golder's August 25, 2020, memorandum¹ is 4.75 inches and was estimated for the actual site location as shown on the attached print from the NOAA Atlas 14 Point Precipitation Frequency Estimates. The frequency storm event estimate varies slightly between 4.72 and 4.78 inches across the site. The difference between 4.72 inches and 4.78 inches is insignificant. However, the difference between 4.75 inches and 5.8 inches is significant. The analyses, conclusions, recommendations, and mitigation measures in the DEIR based on 5.8 inches should be reviewed and revised, as necessary.

Response to Comment ZBEST-2:

The County has reviewed the precipitation information provided by the commenter and agrees that it is appropriate to use the site-specific frequency estimate from NOAA Atlas 14 for the estimated size of the 25-year, 24-hour precipitation amount, rather than data from the Gilroy Station gauge.

Minor edits have been made to mitigation measure MM-HYD-1A in Table 2.1 and Section 11.4.1.1 of the RDEIR, and elsewhere within Section 11.4.1.1, to update both the size of the 25-year, 24-hour precipitation amount (4.75 inches rather than 5.8 inches) as well as the volume of runoff that would be expected from Area 1 during such an event (7.1 million gallons rather than 8.7 million gallons) (see Section 4 below).

Comment ZBEST-3:

Mitigation Measure HYD-1B requires increasing the capacity of Detention Basin 1 and/or Detention Basin 2 to at least 22.8 million gallons without discharging and maintaining a freeboard of at least two feet. Text following the mitigation measure states the detention basin capacity would be increased to meet the requirements of the Composting General Order.

The Composting General Order requires that detention ponds, if used, to be "designed, constructed, and maintained 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.”

As noted previously, the 25-year, 24-hour precipitation at the site varies slightly from 4.72 inches to 4.78 inches. In Table 3 of Golder’s August 25, 2020, memorandum, the precipitation for January is 4.70 inches. Although this is slightly less than the 25-year, 24-hour precipitation range for the site, it can be used as a proxy for the 25-year, 24-hour storm event. Based on 4.70 inches, the direct precipitation into Detention Basin 1 and Detention Basin 2 is 457,954 gallons and 258,507 gallons, respectively. The runoff into Detention Basin 1 and Detention Basin 2 is 6,890,232 gallons and 2,288,977 gallons², respectively. The total inflow into Detention Basin 1 and Detention Basin 2 is 7,340,186 gallons and 2,646,484 gallons, respectively. Based on Tables 1 and 2, the resulting water elevations are approximately 144 feet and 147 feet, respectively, both of which are two feet or more below the maximum basin water surface. Therefore, both Detention Basin 1 and Detention Basin 2 comply with the Composting General Order capacity requirement and there is no need to increase capacity or provide additional freeboard.

As noted in AECOM’s April 7, 2023, memorandum, extreme storm events are more likely to occur during wet years. The Golder August 25, 2020, memorandum includes a water balance for a 25-year wet year, an event that has a 4 percent chance of occurring in any given year. The water balance shows that both Detention Basin 1 and Detention Basin 2 have adequate capacity to hold the peak runoff during a 25-year wet year.

Response to Comment ZBEST-3:

Under the CEQA Guidelines Appendix G thresholds of significance, which the County uses to assess potential environmental impacts of projects for CEQA purposes, the County determines not only if the Project would “violate any water quality standards or waste discharge requirements” (i.e., if it didn’t meet the RWQCB Composting General Order requirements), but also if the Project would “otherwise substantially degrade surface or groundwater quality” (threshold X.a of Appendix G). In addition, the County considers if the Project would “substantially alter drainage patterns in a manner which would create or contribute runoff water which exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff” (threshold X.c.iii).

With respect to the Composting General Order requirements, RWQCB staff have indicated that the design capacity of detention basins under the Composting General Order should account for the amount of water already in the basin at the time that a 25-year, 24-event would occur; however, the RWQCB does not specifically define the exact conditions that should be accounted for to calculate the amount of water in the basin at the time the 25-year, 24-event would occur or the method of calculating that capacity (see Comment RWQCB-2 and the accompanying response, above). Rather, the RWQCB will assess the proposed design and accompanying rationale as part of their consideration for coverage under the Composting General Order (or individual permit, if applicable).

As stated in Section 11.4.1.1 of the RDEIR, if the detention basins were empty, there would be sufficient capacity to hold the 25-year, 24-hour storm event without overtopping. (Note that the rainfall event size and associated volumes in this section have been updated in response to comment ZBEST-2 (see Section 4 below), but these

updates do not affect the conclusion that there would be sufficient capacity to hold the 25-year, 24-hour storm event if the basins were empty). The key question, therefore, is how much water might already be in the detention basins when the 25-year, 24-hour event occurs. The proposed Project includes a total detention capacity (combined basin #1 and #2) of 18.5 million gallons, and the direct precipitation into the basins and runoff from areas draining to the basins during a 25-year, 24-hour storm event would be 10.2 million gallons. Therefore, if normal operating conditions were to result in the existing combined capacity of the detention basins exceeding 8.3 million gallons, overtopping would result if a 25-year, 24-hour storm event were to occur.

The water balances previously prepared by Golder (Golder 2019a; 2019b) are useful for understanding the potential antecedent conditions that may occur during an average rainfall year and a 25-year wet year. However, neither of these water balances accounted for the additional capacity that would be required to detain the runoff from a 25-year, 24-hour event that might happen during a "wetter than average" wet year as occurred in early 2023. In addition, the subsequent clarifying memorandums prepared by Golder corrected/updated some of the information and assumptions used in the earlier memorandum but did not provide updated detention basin capacity curves based on the new data. For these reasons, the County asked AECOM to prepare an updated water balance.

Appendix E-6 of the RDEIR provides AECOM's water balance. This analysis evaluated winter 2023 hydrology and found that the proposed design capacity of the basins would be insufficient to detain runoff during January and March 2023 events when considering antecedent rainfall conditions and proposed Project operations. AECOM's water balance has been updated to account for updated precipitation data at the Gilroy Station gauge, which is a reduction in rainfall at the site as compared to the Gilroy Station gauge and an update to operational assumptions for dust control, whereby water for dust control would only be applied to the site during days without rain. In addition, a 65-year daily rainfall record was used to evaluate whether the proposed capacity for the detention basins (the combination of Detention Basins #1 and #2) would be adequate to prevent discharge, spill, or overtopping, and if not, how frequent a release would occur when evaluated based on a daily rainfall record. A copy of the updated analysis, which supersedes and replaces the previous Appendix E-6 of the RDEIR, is included in Appendix D of this Final EIR. The updated analysis, with the assumptions described therein, found that the proposed design capacity of the basins would be insufficient to detain runoff from the facility during the winters of 1969, 1997, 1998, and 2023. In addition, the maximum volume retained in the detention basins (combined Detention Basins #1 and #2) exceeded 8.3 million gallons for at least 1 day in 34 out of 65 water years. In a few cases, volumes in excess of 8.3 million gallons were held in the basins for more than 2 months. These findings continue to support the RDEIR conclusion that there remains a substantial risk of overtopping if an extreme event occurs during a 25-year wet year when the detention basins are being used to hold runoff from the composting facility from previous rainfall events, assuming the currently proposed capacity increase in Detention Basin #1.

Comment ZBEST-4:

Mitigation Measure HYD-5 requires increasing the berm height of Detention Basin 2 to at least 150.41 feet, so that at least two feet of freeboard above the 100-year base flood elevation is maintained. Detention Basin 2 is an existing condition and not part

of this project. Detention Basin 2 was constructed with a berm height that exceeds the 100-year base flood elevation by at least a foot. The Detention Base 2 spillway crest is 149.25 feet. The Detention Basin 2 design was approved by Santa Clara County, including the freeboard, and a grading permit issued.

Response to Comment ZBEST-4:

Although physical improvements to Detention Basin #2 are not proposed as part of the Project, changes to the activities occurring at the Project site would alter the volume and characteristics of the runoff draining to the basin. The main change directly affecting Detention Basin #2 would be a reduction in the surface area of the site that would drain directly to it (due to the excavation of additional flood storage area in the north of Area 2). However, because Z-Best has indicated that the facility sometimes manually transfers water between the two detention basins using a portable pump (John Doyle, pers. comm. 2023b), and because the Project would be expected to result in increased concentration of contaminants within Detention Basin #1 over time due to increased quantities of composted material (see Section 11.4.1.1 of the RDEIR), there is potential for the Project to also result in decreased water quality within Detention Basin #2. Therefore, the potential impacts to surface or groundwater quality if floodwaters were to overtop into Detention Basin #2 would be increased compared to existing conditions. The mitigation measure would also address cumulative impacts from the potential for floodwater overtopping associated with past and present development at the Project site. Furthermore, mitigation measure MM-HYD-1B requires an increase in the proposed detention capacity at the Project site, which could be partially addressed through an increase in berm height at Detention Basin #2. It is therefore considered appropriate for MM-HYD-5 to require raising the berm of this detention basin to properly withstand the 100-year flood event. No changes are recommended to the RDEIR in response to this comment.

3.2 Verbal Comments and Responses to Comments

No verbal comments on the RDEIR were received at the public meeting held on May 30, 2023.

3.3 Staff-Initiated Changes

During the public review period, County staff became aware of several minor inconsistencies or inaccuracies within the RDEIR, which are proposed to be corrected as part of the Final EIR and are included in the marked-up text changes presented in Section 4. Several of these staff-initiated changes (such as incorrect cross-references or citations or formatting issues) are self-explanatory.

Other proposed staff-initiated changes relate to information provided during a meeting between County staff/consultants and Central Coast RWQCB staff on June 26, 2023, where RWQCB staff informed the County that the Z-Best facility was unlikely to be eligible for coverage under the State Water Resources Control Board (SWRCB) Composting General Order. This is because the MSW composting operations with the

proposed ECS technology would be occurring in open bunkers and would no longer be encapsulated by plastic (as per the current CTI system). RWQCB staff explained that the proposed facility would likely require an individual waste discharge permit from the RWQCB, rather than maintaining coverage under the Composting General Order as the existing facility does. RWQCB staff further indicated that any conditions of an individual permit would be at least as stringent as the Composting General Order with respect to water quality protections and sizing of detention basins. Minor edits have therefore been made throughout the RDEIR (Tables 2 and 3.1, and Sections 4.1.2, 4.2, 4.3.3, 4.3.6.2, 4.4.2, 11.3.2.1, 11.4.1.1, 11.4.6, and 15.3.9.3) to clarify the type of RWQCB permit coverage that the facility would require. These changes do not affect the analyses or conclusions of the RDEIR that the impact of the proposed Project on hydrology and water quality would be less than significant with mitigation. These changes also do not constitute “significant new information” that would trigger recirculation of the document per Section 15088.5 of the CEQA Guidelines.

4 Changes to the Recirculated Draft EIR

This section contains proposed changes to the text of the RDEIR for the Z-Best Composting Facility Modifications Project dated April 20, 2023. These changes include both (1) additions, clarifications, and changes made in response to comments on the RDEIR, as discussed in Section 3.1 of this Final EIR, and (2) County staff-initiated text changes to correct minor inconsistencies, to add minor updates to information or clarification related to the Project, and to provide updated information where applicable, as discussed in Section 3.3 of this Final EIR.

None of the proposed changes to the RDEIR constitute “significant new information” that would trigger recirculation of the document per Section 15088.5 of the CEQA Guidelines.

Updated or new language is underlined. All deletions are shown in ~~strike through~~.

4.1 Changes to Specific Sections of the Recirculated Draft EIR

4.1.1 Changes to Section 2

In Section 2 of the RDEIR, the format of Table 2-1 has been corrected to avoid the text overlap for Impacts AIR-4 through AIR-7 (page 15 of the RDEIR) in response to comment VW-1.

The text of Table 2-1 has also been updated to show the proposed changes to mitigation measures MM-AES-2, MM-AIR-7a, MM-AIR-7b, MM-BIO-2, MM-HYD-1a, MM-HYD-1b, MM-HYD-5, MM-TRA-2, MM-TRA-3, and new mitigation measure MM-HYD-4, made in response to CALTRANS-A-8, CALTRANS-A-10, CALTRANS-A-11, CALTRANS-B-1, CALTRANS-B-2, CHP-2, VW-4, VW-7, VW-21, DORADO-8, DORADO-12, ZBEST-2, and/or as staff-initiated edits, as described in the following sections.

A copy of the updated table is included in Appendix C of this document.

4.1.2 Changes to Section 3

In Section 3.1 of the RDEIR, Figure 3.2 has been updated in response to comment VW-8 to show the location of existing flood storage area. A copy of the updated figure is included in Appendix C of this document.

In Section 3.1 of the RDEIR, the following change is proposed to the fifth paragraph after the bulleted list in response to comment VW-2:

Detention Basin #2 is a rectangular-shaped basin approximately 700 feet long by 130 feet wide. This approximately 2.4-acre basin receives storm water from Area

2 to the north and is constructed with an impermeable geomembrane liner. The existing capacity of Detention Basin #2 is approximately 3.94 million gallons.

In Section 3.2.2 of the RDEIR, the following staff-initiated changes are proposed to the consistency determination discussion for Policies C-RC 19, R-RC 8, and R-RC 9 in Table 3-1. A full copy of the updated table is included in Appendix C of this document, for context.

Consistent. The proposed project is, in part, being designed to comply with the 2015 Composting General Order promulgated by the State Water Resources Control Board. The Composting General Order includes new requirements specifically for composting operations that are designed to improve both surface and groundwater quality conditions. Of particular note is the requirement that detention facilities must be lined to prevent percolation of storm water runoff to groundwater. The project includes this improvement for the modified Detention Basin #1, which would result in improved groundwater quality relative to existing conditions. See Section 11, Hydrology and Water Quality. Although the proposed project may require an individual permit from the Regional Water Quality Control Board (RWQCB), rather than coverage under the Composting General Order, the conditions of an individual permit issued by the RWQCB would be at least as protective of water quality as the Composting General Order requirements. See Section 4.1.2 for more discussion of the Composting General Order applicability to the proposed project.

Based on the results of a water balance analysis submitted to the County and referenced in this EIR, the proposed project would result in increased groundwater demand. Z-Best currently utilizes water supply from existing wells to augment supply detained in its existing Detention Basin #1. Based on the most recent information available, the groundwater basin from which water would be extracted is not adjudicated, nor in overdraft condition. Therefore, water supply is not expected to be a constraint for the project. See ~~Section 14, Water Supply and Groundwater Sustainability~~ 11, Hydrology and Water Quality.

In Section 3.2.2 of the RDEIR, the following staff-initiated changes are proposed to the consistency determination discussion for Policy R-RC 15 in Table 3-1:

Consistent. Though the Z-Best facility is already permitted for operation adjacent to the Pajaro River, the proposed project includes measures that would improve groundwater quality relative to current operations, such as lining of the modified Detention Basin #1 and improved leachate control. As described above, the proposed project is also being designed to comply with the State Water Resources Control Board's ~~2015 Composting General Order, which includes new~~ requirements for composting operations that are designed to improve both surface and groundwater quality conditions. See Section 11, Hydrology and Water Quality.

In Section 3.2.2 of the RDEIR, the following staff-initiated changes are proposed to the consistency determination discussion for Policies SC 12.0, SC 13.0, and SC 13.3 in Table 3-1:

Consistent. The project site is within a flood hazard area. Fill proposed within Area 1 would result in increased flood elevations if compensatory flood water

storage capacity was not provided. Increased flood storage would be provided. The new flood storage capacity would be sufficient to ensure that any net rise in flood elevation under post-project conditions would be negligible (approximately 0.01 foot). See Section 11, Hydrology and Water Quality.

The project also includes new storm drainage improvements for collecting and delivering storm water to the existing Detention Basin #1, which would be modified to protect it from a 100-year design flood. The Z-Best facility is a no-net storm water discharge facility.

In addition, the Composting General Order stipulates that a technical report must be submitted to identify how qualifying facilities are complying with the Composting General Order. The technical report must include, among other things, a description of the hydrogeology, working surface design, water and wastewater management plan, inspection and maintenance program, monitoring, closure plan, and a proposed schedule for achieving compliance. Similar information would be required to be submitted as part of any application for an individual permit from the RWQCB for an MSW composting facility.

In Section 3.3.1, the following edits to the fifth paragraph are proposed as a staff-initiated change:

Z-Best is regulated by the County under (i) the current facility Use Permit, and (ii) Solid Waste Facility Permit (SWFP) No. 43-AA-0015 issued by the County Department of Environmental Health, acting as the local enforcement agency (LEA). Z-Best is also regulated by the State Water Resources Control Board (SWRCB) pursuant to the General Waste Discharge Requirements for Composting Operations contained in Order No. WQ 2015-0121-DWQ (“Composting General Order”), adopted on August 4, 2015, and amendments under Order WQ 2020-0012-DWQ, adopted on April 7, 2020.

4.1.3 Changes to Section 4

In Section 4.1, the following edits are made to the second paragraph, and a new paragraph added, as a staff-initiated change:

The project site is located within the jurisdiction of the Regional Water Quality Control Board - Central Coast (Region 3). The Applicant (Z-Best) is proposing additional changes to existing site conditions to comply with updated regulations of the State Water Resources Control Board found in its 2015 General Waste Discharge Requirements for Composting Operations, Order WQ 2015-0121-DWQ (California State Water Resources Control Board 2015) and amendments thereto (“Composting General Order”). The Composting General Order requires composting facilities to implement water quality control measures for enhanced protection of surface water and groundwater quality. The changes involve modifying existing Detention Basin #1 so that it complies with Composting General Order requirements to better protect the facility from flooding. The surface area of the basin would be reduced, but its storage volume would be increased by raising its perimeter berms. An engineered geomembrane liner would also be installed to provide improved groundwater quality protection.

Discussions with RWQCB staff (Smaira, pers. comm. 2023) have indicated that the changes proposed to Z-Best's MSW composting operations as part of this project may cause Z-Best to no longer be able to retain coverage under the Composting General Order, due to the MSW no longer being "encapsulated." Instead, an individual permit from the RWQCB would be required. However, the conditions of any individual permit would include the same, or more stringent, requirements as the Composting General Order with respect to water quality protection.

In Section 4.1.2, the following new paragraph is to be inserted between the second and third paragraphs, as a staff-initiated change:

As described above, although the changes to MSW operations described in the proposed project are likely to require Z-Best to obtain an individual permit from the RWQCB (rather than continuing coverage under the Composting General Order), the conditions of any individual permit would include the same, or more stringent, requirements as the Composting General Order with respect to water quality protection.

In Section 4.2, the following edits are proposed to the footnote of the sixth bullet point, as a staff-initiated change:

² The General Waste Discharge Requirements for Composting Operations are often referred to as the Composting General Order. The General Waste Discharge Requirements for Composting Operations and the Composting General Order are the same document. The 2015 General Waste Discharge Requirements for Composting Operations was amended in 2020 as the General Discharge Requirements for ~~Commercial~~ Commercial Composting Operations. The technical requirements of the 2015 and 2020 orders are very similar and do not affect project design. The Z-Best Compost Facility will comply with the 2020 requirements. Note that the Z-Best facility may require coverage via an individual permit, rather than via the Composting General Order; however, conditions of an individual permit would be equally or more stringent than the Composting General Order with respect to water quality protection.

In Section 4.3.3, the following edits are proposed, as a staff-initiated change:

The proposed project would continue to generate compost process leachate that could affect storm water quality. However, it would be managed consistent with water quality standards for composting operations included in the 2015 Composting General Order (or equivalent conditions of an individual permit from the RWQCB), as described previously. These standards are more stringent than previously applied to composting operations, including Z-Best's current operations.

In the second paragraph of Section 4.3.3.1, the first paragraph of Section 4.3.3.2, and the first paragraph of Section 4.3.6.3 of the RDEIR, the following cross-reference correction is proposed in response to comment VW-3:

...~~Section 4.0.11~~Section 4.0.11, Hydrology and Water Quality...

In Section 4.3.6.1 of the RDEIR, the following change is proposed in response to comments VW-3 and VW-4:

The project site is within a 100-year flood hazard zone. The 100-year water surface elevation for the floodplain is 148.5 feet (NAVD 88), which was established through a Conditional Letter of Map Revision (CLOMR) from FEMA, which was issued in 2018 as part of prior improvements to the Z-Best facility (see Appendix E-9). As part of the proposed project, the footprint of Area 1B within which ECS improvements would be installed would be raised by approximately one to two feet so that it would be above the 100-year flood elevation. The raised pad would be paved prior to ECS improvements being installed. This paving would not result in an increase in impervious area because the existing compacted earthen pad is considered an impervious surface. Refer to Section ~~40-011~~, Hydrology and Water Quality, for more information.

In Section 4.3.6.2 of the RDEIR, the following clarifications are proposed to the first and second paragraphs in response to comment VW-5 and staff-initiated changes:

Per the current 2015 Composting General Order regulations described previously that now apply to Z-Best operations, the storm water from a composting facility must be more rigorously managed to protect water quality by prohibiting discharge of compost facility wastewater to surface or groundwater. To meet the more stringent water quality requirements of the 2020 Composting General Order (or an individual permit), Z-Best proposes to modify Detention Basin #1 to include a geomembrane liner. A geomembrane liner is very low permeability synthetic membrane liner or barrier used to minimize downward percolation of wastewater or storm water stored in a basin to groundwater.

The configuration of Detention Basin #1 would be modified to reduce the area of the basin by approximately two-thirds (from 6.3 acres to approximately 2.4 acres), while also constructing higher perimeter berms, so that the depth of the basin is increased and so that storage volume is adequate to meet Composting General Order regulations (or the expected equivalent conditions from an individual permit issued by the RWQCB) and to protect the basin from a 100-year flood. The ~~eastern~~ western portion of the existing basin would no longer to be used for stormwater detention. As a result of the proposed modifications, Detention Basin #1 would increase its maximum capacity from approximately 9.1 million gallons to approximately 14.5 million gallons, as shown in Figure 4-6, Detention Basin #1 Modifications. The ruderal vegetation and all existing trees that border the existing basin would be removed as part of the reconfiguration. Vegetation and tree removal are addressed in Section ~~7-08~~ 8, Biological Resources.

In Section 4.3.8.2 of the RDEIR, the following edit is proposed to the second paragraph (with new accompanying footnote), as a staff-initiated change:

No changes are proposed to the facility's water supply infrastructure or onsite conveyance, except to connect the existing system to the new ECS composting system. The existing water wells would continue to provide water for composting and domestic uses at the site, and the existing 361,000-gallon fire suppression system water supply tank and associated fire pump and pump shed would remain on site, previously permitted³ but not yet constructed, would be installed as planned approximately 200 feet west of the processing building.

Changes to the demand for water use associated with the project are discussed in Chapter 13, Water Supply.

³ The County issued Architecture and Site Approval for the fire suppression water supply tank and fire pump shed (File 11206-18ASA) in 2019 but these features have not yet been constructed.

In Section 4.3.8.5 of the RDEIR, the following new bullet point is proposed, as a staff-initiated change:

- Upgrade of the existing parking areas to meet current County standards, including installation of electric vehicle (EV) infrastructure if required;

In Section 4.4.2 of the RDEIR, the following edit is proposed to the second bullet, as a staff-initiated change:

- Central Coast Regional Water Quality Control Board – review and verify project compliance with 2020 2045-Composting General Order or issue an individual permit;

In Section 4.4.2 of the RDEIR, the following change is proposed to the fourth bullet in response to comments CALTRANS-A-7, CALTRANS-A-8, and CALTRANS-A-9:

- California Department of Transportation – review and approve proposed circulation, utility, and/or hydraulic modifications improvements to SR-25 along the project frontage, and issue related encroachment permit; and review and approve proposed construction traffic management plan and issue transportation permit for movement of oversized or excessive load vehicles on State roadways (if necessary);

4.1.4 Changes to Section 5

In Section 5.4.2 of the RDEIR, the following changes are proposed to subsection B of mitigation measure MM-AES-2 in response to comment CHP-2:

B. Off-Site Spillage and Litter Management Plan: The modified Use Permit conditions shall require the Applicant to comply with an off-site spillage and litter management plan. The Applicant shall submit a proposed spillage and litter management plan to the County Planning Department for review and approval. The plan shall include, but not be limited to, the following measures:

- 1) Procedures and penalties to discourage haul trucks arriving on site or transporting ~~non-compostable~~ materials from the facility from failing to properly secure their loads to minimize potential for generation of litter or material spillage in-transit to or from the facility. Note that State law requires vehicle contents to be covered so that nothing can spill or otherwise escape from the vehicle (Vehicle Code §§ 23114, 23115).*
- 2) Regular inspections of the SR-25 right-of-way adjacent to the project site and extending at least a half-mile in either direction of the facility to identify and clean up any litter or spilled materials that may be generated by trucks hauling materials to or from the site.*
- 3) Increased frequency of clean-up activities, such as trash removal from the project site frontage and street-sweeping within the Caltrans right-of-way*

to the extent needed to prevent any increase in litter or spilled materials along the project frontage.

- 4) *Records of inspections and enforcement activities shall be maintained by the Applicant and submitted to the County Planning Department annually, or more frequently on request.*

4.1.5 Changes to Section 7

In Section 7.4.2.1 of the RDEIR, the following changes are proposed to the second paragraph, as a staff-initiated change:

Another potential mitigation measure considered was the installation of Level 2 electric vehicle (EV) charging infrastructure in employee and visitor light-duty parking spots and/or installation of conduit(s) for EV charging stations for trucks. The proposed project includes upgrade of the existing parking area to meet current County standards, which would include any applicant would be required to comply with all applicable County requirements for EV charging that are in effect at the time they obtain building permits. Given the small contribution that employee and visitor light-duty vehicles are expected to make to the overall increase in NOx emissions from the project (compared to the much larger contribution from the on-road truck fleet), imposing more stringent EV charging requirements than current County standards would not substantially reduce NOx emissions. Furthermore, the effectiveness of any such mitigation measure would depend on the rate of EV integration by employees. However, the proposed project would not change the existing parking capacity or configuration of the parking and truck circulation areas. The proposed project does not include any formal truck parking areas; therefore, it would be infeasible at this time to incorporate changes such as require EV charging infrastructure for trucks to the parking and circulation areas.

In Section 7.4.7 of the RDEIR, the following changes are proposed to mitigation measure MM-AIR-7a in response to comment DORADO-12:

MM-AIR-7a: Dust Monitoring

Prior to issuance of an operating permit, the project Applicant shall retain a qualified industrial hygienist to design and conduct a fenceline dust monitoring program (as a proxy for the monitoring of bioaerosols) to establish baseline conditions at the site under normal (existing) operating conditions and under a range of meteorological conditions. Following installation of the new composting equipment and when the project is fully operational and at maximum composting volume, the industrial hygienist shall perform a second round of dust monitoring during typical project operations (and under a similar range of meteorological conditions to baseline monitoring) to determine if the new technology causes an increase in fugitive dust emissions (which may also indicate an increase in bioaerosol emissions). The monitoring plan shall be submitted to the County Planning Department for review and approval prior to implementation, and results shall be reported to the County Planning Department. If dust emissions under full project conditions are equal to or less than the baseline conditions, then no further monitoring is required. If dust emissions under full project conditions are

greater than baseline conditions, then additional dust control measures or other operational practices shall be implemented to reduce dust and bioaerosol concentrations to the extent feasible, and additional monitoring, designed and undertaken by a qualified industrial hygienist, and reviewed and approved by County Planning Department, shall be undertaken to verify the effectiveness of the controls and to determine whether further control measures are warranted.

In Section 7.4.7 of the RDEIR, the following changes are proposed to mitigation measure MM-AIR-7b and the following paragraph in response to comment DORADO-8:

MM-AIR-7b: Equipment Maintenance and Biofilter Replacement

To prevent the growth of bacteria and fungi within the biofilter matrix, the matrix shall be maintained and properly replaced in accordance with manufacturer's specifications. All equipment within the ECS system, including monitoring that the proposed ECS system is attaining the appropriate pathogen reduction temperatures within the anticipated timeframe (i.e., 48 hours), and within multiple locations throughout each bunker, shall be checked by a qualified technician and determined to be running in proper condition prior to daily operation. Composted materials shall not be removed from the primary CASP bunkers until all temperature probes have reached a temperature of at least 55 degrees Celsius. Records of required daily monitoring and maintenance shall be retained by the Applicant and provided to the County Planning Department annually, or more frequently upon request.

With implementation of MM-AIR-7a and MM-AIR-7b, it is anticipated that the potential for health and environmental impacts due to bioaerosol emissions would be reduced, as measures to minimize fugitive dust emissions would also serve to reduce bioaerosol emissions. Dust monitoring is suggested as a proxy for bioaerosol monitoring, due to the complexity of sampling for bioaerosols, the wide variety of types of bioaerosols, and the lack of regulatory exposure limits. Furthermore, the requirements for monitoring and maintenance of equipment would reduce the potential for enteric pathogens to remain viable after the primary composting step. However, since the effectiveness of MM-AIR-7a and MM-AIR-7b cannot be quantified and there are no regulatory exposure levels for this impact, this impact has been conservatively determined to be **significant and unavoidable**.

4.1.6 Changes to Section 8

In Section 8.4.2 of the RDEIR, the following change is proposed to mitigation measure MM-BIO-2, as a staff-initiated change for clarity:

MM-BIO-2: Nesting Bird Avoidance and Minimization Measures

Any tree removal, pruning, grading, grubbing, or demolition within the compost facility or within the access road and SR-25 impact areas shall be conducted outside of the bird nesting season (January 15 through September 15) to the maximum extent feasible ~~and with express prior approval from the County Planning Department~~. If these types of activities, or noise resulting from construction activities, will occurs during the bird nesting season, then prior

written approval from the County Planning Department shall be obtained, and a qualified biologist shall conduct pre-construction surveys for nesting birds to ensure that no active nests would be disturbed during project activities.

If project-related work is scheduled during the nesting season (January 15 through September 15), or if construction activities are suspended for at least 15 days and recommence during the nesting season, a qualified biologist shall conduct additional nesting bird surveys before any construction activities recommence. Two surveys for active nests of such birds shall occur within 15 days prior to the start of construction, with the second survey conducted within 48 hours prior to the start of construction. Appropriate minimum survey radii surrounding each work area are 250 feet for passerines, 500 feet for smaller raptors, and 1,000 feet for larger raptors. Surveys shall be conducted at the appropriate times of day, as determined by the qualified biologist, to observe nesting activities when birds are most active. Off-site locations where access is not available may be surveyed from within the site or from public areas. A report documenting survey results and plan for active bird nest avoidance (if active nests are found) shall be completed by the qualified biologist and submitted to the County Planning Department prior to initiation of construction activities.

If the qualified biologist documents active nests within the survey areas, an appropriate buffer between each nest and construction shall be established. The buffer shall be clearly marked and maintained until the young have fledged and are foraging independently. Prior to construction, the qualified biologist shall conduct baseline monitoring of each nest to characterize normal bird behavior and establish a buffer distance that allows the birds to exhibit normal behavior. The qualified biologist shall monitor the nesting birds daily during construction activities and increase the buffer if birds show signs of unusual or distressed behavior (e.g., defensive flights and vocalizations, standing up from a brooding position, and/or flying away from the nest). If buffer establishment is not possible, all construction work in the area shall cease until the young have fledged and the nest is no longer active.

Any modifications to this measure, such as encroachment of construction activities into established buffer zones, must be coordinated with CDFW.

4.1.7 Changes to Section 11

In the introduction of Section 11 of the RDEIR, the following change is proposed to the second bullet point (and a new bullet point added) in response to comment VW-4:

- Floodplain Impact Certification, Grading and Flood Study Summary Report. Z-Best Compost Facility Expansion, Santa Clara County, California (Schaaf & Wheeler 2012) in Appendix E-8;
- Conditional Letter of Map Revision (CLOMR) issued by FEMA on May 21, 2018, in Appendix E-9;

In Section 11.1.2 of the RDEIR, the following change is proposed to the first paragraph in response to comment VW-7:

Three active water supply wells are located at the facility, as well as two inactive wells. The well on the eastern perimeter of Area 2 is the primary water source for green waste composting and dust control (Golder Associates 2016). The other two active wells are located in Area 1 – a domestic water well near the office, and a “shared well” that was previously used for process water for the processing building and as a back-up to the primary composting water well. Based on groundwater monitoring at the onsite wells since 2019, the groundwater table at the site varies between approximately 123 and 141 feet NAVD 88 (approximately 6 and 19 feet below ground surface) and generally flows from northwest to southeast, towards the Pajaro River (Golder 2023).

In Section 11.1.3 of the RDEIR, the following change is proposed to the last paragraph before subheading 11.1.3.1 in response to comment VW-8:

The project site has been divided into multiple areas. Area 1 consists of active composting facilities (e.g., feedstock sorting, processing, and composting) which drain to Detention Basin #1. Area 2 consists of storage and finishing areas which drain to Detention Basin #2. Floodwater storage areas, detention basins, and undeveloped Z-Best property are located east and south of Areas 1 and 2 (see Figure 3-2 in Section 3). The existing drainage conditions within Areas 1 and 2 are a direct result of site modifications and facility improvements constructed so that Z-Best’s operations conformed to SWRCB requirements in effect at the time those improvements were made. Each area is described in turn, below.

In Section 11.1.3.2 of the RDEIR, the following change is proposed to the second paragraph in response to comment VW-2:

Detention Basin #2 is a rectangular-shaped basin approximately 700 feet long by 130 feet wide (approximately 2.4 acres) and is constructed with an impermeable geomembrane liner. The existing capacity of Detention Basin #2 is approximately 3.94 million gallons, and the maximum berm elevation is 149 feet.

In Section 11.1.6.2 of the RDEIR, the following change is proposed to the paragraph preceding Table 11-4, as a staff-initiated change to correct the citation:

Table 11-4 summarizes the daily maximum and the monthly average precipitation in Gilroy during water year 2023. Winter 2023 was particularly wet, with atmospheric river events providing multiple inches of rain over several week periods. The March 10, 2023, storm was the largest 24-hour precipitation event during this period, with 4.05 inches of rain. December and early January also experienced substantial rainfall. The maximum 45-day averaging period during December and early January was 18.65 inches inclusive of the January 9, 2023, storm. The maximum 1-day precipitation was between a 5-year and a 10-year event and the maximum 45-day precipitation was between a 10-year and a 25-year event (NOAA 2023a).

In Section 11.2.2.3 of the RDEIR, the following changes are proposed to the subsection titled “Composting General Order,” as a staff-initiated change:

The existing Z-Best facility is required to comply with statewide general orders and CWA NPDES requirements as promulgated by the SWRCB. The existing facility had been operating under the SWRCB's *General Permit for Storm Water Discharges Associated with Industrial Activities*, Order 2014-0057-DWQ, NPDES No. CAS00001, as amended. However, in 2015, the SWRCB adopted the *General Waste Discharge Requirements for Composting Operations*, Order WQ 2015-0121-DWQ, which is specific to regulating water quality associated with activities of composting operations (SWRCB 2015). This permit was amended and superseded by the *General Waste Discharge Requirements for Commercial Composting Operations*, Order WQ 2020-0012-DWQ (Composting General Order) on April 7, 2020. The Composting General Order is not a NPDES Permit adopted in compliance with the Federal CWA, instead it is a general order and waste discharge requirements pursuant to Water Code section 13263. (Prior to the Composting General Order, composting facilities were often not regulated by the RWQCBs or were operated pursuant to site-specific waste discharge requirements issued by RWQCBs.)

The Composting General Order applies to facilities that accept materials, such as green waste, food scraps, and paper products, for composting and is applicable to existing and new composting operations. Among other operational requirements, the Composting General Order includes requirements for the siting, construction, operation, and maintenance of composting facilities to protect surface water and groundwater. These requirements include specifications for allowable depth to groundwater; distance to and setbacks from surface water and water supply wells; maximum ground permeability underneath composting piles; drainage requirements including design storm standards, working surface strength/hydraulic conductivity, storm water ditch design, and leachate collection and containment; detention basin design including capacity to accommodate flow from 25-year, 24-hour peak storm events; detention basin liner criteria; and detention basin water quality sampling and liner monitoring and inspections. A Water and Wastewater Management Plan must also be prepared that describes how wastewater would be managed to prevent discharge to surface or groundwater (including design, operations, and maintenance of storm water control systems, and water balance calculations). As stated in Finding 33 of the Composting General Order, the SWRCB has determined that compliance with design specifications and associated performance requirements included in the Composting General Order is protective of water quality.

Composting operations covered by the Composting General Order are categorized in one of two tiers based on the volume and type of feedstocks, and site hydrogeological conditions. Tier I facilities are limited to certain feedstocks in quantities that are considered a lower threat to water quality. Tier II facilities may accept larger volumes and materials that may pose a greater threat to water quality than those allowed in Tier I if not managed properly. The Tier II requirements are, therefore, more protective than Tier I requirements. The Z-Best Composting Facility is currently a Tier II composting operation. Therefore, its existing operations are subject to more stringent water quality control requirements.

~~Because the Composting General Order applies to both existing and new composting operations, the requirements would be applicable to Z-Best~~

~~operations whether or not the proposed project is approved. The Composting General Order stipulates that a technical report must be submitted to identify how qualifying facilities are complying with the Composting General Order. The technical report must include the property owner and operator, description of the types and quantities of feedstock materials, climatology, geology, hydrogeology, working surface design, water and wastewater management plan, inspection and maintenance program, monitoring, closure plan, and a proposed schedule for achieving compliance. The Composting General Order allows up to six years for an existing facility to achieve compliance.~~

The technical report for the existing Z-Best facility was submitted to the Central Coast RWQCB in August 2016. The technical report was subsequently revised based on RWQCB review comments and resubmitted in October 2016. The 2016 technical report pre-dated Z-Best's decision to modify its operations as is now proposed. Upon completion of the proposed improvements that are being evaluated in this EIR, Z-Best would be required to prepare an updated technical report for Central Coast RWQCB review and approval which demonstrates how Z-Best is complying with the 2020 Composting General Order.

However, due to changes in the MSW composting technology that are proposed as part of the project, it is possible that future operations at the Z-Best facility will no longer qualify for coverage under the Composting General Order, as the MSW composting process would no longer be fully encapsulated. Instead, Z-Best would need to apply for an individual waste discharge permit from the RWQCB. RWQCB staff have indicated that any conditions of an individual permit would be at least as stringent as the Composting General Order requirements with respect to protection of water quality (Smaira, pers. comm. 2023).

~~As stated in Finding 33 of the Composting General Order, the SWRCB has determined that compliance with design specifications and associated performance requirements included in the Composting General Order is protective of water quality.~~

In Section 11.3.2.1 of the RDEIR, the following edits are proposed, as a staff-initiated change:

The primary sources of information evaluated for this impact analysis were the Composting General Order, the Applicant's plan set for the proposed project, and information about the water quality characteristics of leachate produced by the proposed ECS system technology. In addition, the Applicant provided a variety of studies focused on hydrology and water supply. The Applicant's early studies were peer reviewed by Tetra Tech, under contract to EMC Planning Group. Although the majority of the original studies are now outdated and have been superseded by subsequent reports, the portions of the Tetra Tech peer review relating to leachate quality and quantity are still valid. The Tetra Tech peer review is found in Appendix E-1. The SWRCB's Composting General Order (described in the Regulatory Setting above) is the applicable water quality control regulatory framework to which composting projects must generally comply. Project consistency with the regulations is evaluated. As described above, even though the proposed project may be required to obtain an individual permit rather than retain coverage under the Composting General Order, the conditions of an

individual permit issued by the RWQCB would be at least as stringent as the Composting General Order with respect to water quality protection requirements.

In Section 11.4.1.1 of the RDEIR, the following edits are proposed to the first paragraph, as a staff-initiated change:

The proposed change in composting operations and associated improvements/site modifications, and operations associated with proposed modifications to Detention Basin #1, have potential to create groundwater and/or surface water quality impacts. However, these operations must conform to water quality performance standards contained in the Composting General Order (or equivalent conditions of an individual permit) that are designed to protect surface water and groundwater quality. The discussion here first focuses on the potential for proposed operations to produce contaminated composting process water and contaminated storm water runoff, then addresses the design aspects of the project in relation to the applicable performance standards in the Composting General Order.

In Section 11.4.1.1 of the RDEIR, the following edits are proposed to the fifth (last) paragraph under the subheading “ECS System Leachate Collection Features,” as a staff-initiated change:

In summary, the inherent design of the ECS system would provide improved leachate management relative to the existing CTI system and would facilitate the proposed project’s conformance with storm water quality control standards in the Composting General Order (or equivalent conditions of an individual permit) thereby minimizing and avoiding the potential for violating water quality standards, waste discharge requirements or otherwise degrading groundwater quality.

In Section 11.4.1.1 of the RDEIR, the following edits are proposed to the first paragraph under the subheading “Proposed ECS System Pad Design,” as a staff-initiated change:

The Composting General Order requires that pads and working surfaces must be capable of preventing degradation of waters of the state. Conditions of any individual permit would include the same, or more stringent, requirements as the Composting General Order with respect to water quality protection. Such improvements must be designed, constructed, operated, and maintained to 1) facilitate drainage and minimize ponding by sloping or crowning pads to reduce infiltration; 2) reliably transmit any free liquid to a containment structure; and 3) prevent conditions that could lead to contamination, pollution, or nuisance.

In Section 11.4.1.1 of the RDEIR, the following edits are proposed to the first paragraph under the subheading “Proposed Storm Water/Leachate Conveyance System Improvements,” as a staff-initiated change:

Per the Composting General Order, drainage conveyance systems must be designed, constructed, and maintained for conveyance of wastewater from the working surface in addition to direct precipitation from the 25-year, 24-hour peak storm event at a minimum. Conditions of any individual permit would include the same, or more stringent, requirements as the Composting General Order with respect to water quality protection. The proposed project includes an improved

storm water collection system designed to meet this performance standard. Refer to Figure 4 4, Grading and Drainage Plan, which illustrates planned storm water collection and conveyance system improvements. Storm water from the ECS composting pad would be collected in drainage pipes and French drains. Two pump stations are planned that would pump the water into Detention Basin #1.

In Section 11.4.1.1 of the RDEIR, the following changes are proposed to mitigation measure MM-HYD-1A in response to comment ZBEST-2:

MM-HYD-1A: Demonstrate Sufficient Pump Capacity

During the grading permit application process, the Applicant shall submit details and calculations to the County Planning Department demonstrating that the proposed pump capacity will be sufficient to transfer stormwater runoff from Area 1 into Detention Basin #1 during a 25-year, 24-hour storm event without causing localized flooding which inundates the southeast corner of the green waste compost area. Note that approximately ~~8.7~~7.1 million gallons of stormwater runoff is expected from Area 1 during the 25-year, 24-hour storm event (from ~~5.8~~4.75 inches of precipitation).

In Section 11.4.1.1 of the RDEIR, the following edits are proposed to the subsection titled “Proposed Storm Water/Leachate Conveyance System Improvements” in response to comments ZBEST-2 and RWQCB-4, and as staff-initiated changes:

The proposed project includes modifications to existing storm water Detention Basin #1. There is also a second storm water detention basin on the site (Detention Basin #2), but modifications to that basin are not proposed as part of the current project.

The Composting General Order requires detention basins to be designed to contain all runoff from working surfaces in addition to direct precipitation from the 25-year, 24-hour storm event. Specifically, it indicates that:

Detention ponds, if used, must be designed, constructed, and maintained 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 winddriven 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.

Conditions of any individual permit would include the same, or more stringent, requirements as the Composting General Order with respect to water quality protection.

The 25-year, 24-hour storm event is anticipated to generate ~~5.8~~4.75 inches of rain (NOAA 2023~~be~~), which would be expected to fill the detention basins to approximately ~~65~~55 percent of their combined capacity if the basins were empty at the time of the event. However, as detailed in Appendix E-6, operations of the detention basins will not drawdown water levels to empty during extended periods of time in wet years. In addition, extreme events such as the 25-year, 24-

hour storm event are expected to occur during wet years. As such, there remains a substantial risk of overtopping and/or discharge from the basin if an extreme event occurs during a wet year when the detention basins are being used to hold prior runoff from the composting facility, even assuming the currently proposed capacity increase in Detention Basin #1.

Overtopping could cause discharge of detention basin waters into the on-site flood storage basin or offsite areas, which could eventually discharge to the Pajaro River. The Pajaro River is a waterbody that has been identified by the RWQCB, SWRCB, and EPA as impaired for various water quality constituents including *Escherichia coli* (*E. coli*), nitrate, sodium, dissolved oxygen, pH, turbidity, and sedimentation/siltation. Compost leachate from MSW is characterized by high BOD (a measure of the amount of dissolved oxygen consumed by bacteria in the process of consuming organic material in water), low pH (a measure of acidity), the presence of nutrients including nitrogen and phosphorous, and salts. The unrestricted release of runoff from MSW and green composting operations has the potential to further degrade water quality by contributing nitrates, organic matter, and particulates, altering pH, and increasing oxygen demands in the Pajaro River and downstream water bodies. This is a **potentially significant** impact to water quality. The following mitigation measure is proposed to address this impact.

MM-HYD-1B: Increase Detention Basin Capacity

During the grading permit application process, the Applicant shall submit a revised site plan, design details, and supporting calculations to the County Planning Department for review and approval showing modifications to increase the capacity of Detention Basin #1 and/or Detention Basin #2, such that the combined detention capacity is sufficient to hold at least 22.8 ~~22.4~~ million gallons of water ~~without discharging and whilst maintaining a~~ freeboard of at least 2 feet. In addition, the Applicant shall demonstrate compliance with the Composting General Order (or at least as stringent conditions of an individual permit) to detain the 25-year, 24-hour peak storm, assuming normal operating volumes during wet years, or obtain approval from the RWQCB for an equivalent alternative.

If the modified basin design would require changes to the engineered alternative liner design for Detention Basin #1 (as previously approved by the RWQCB on May 22, 2023), or would result in the potential for Detention Basin #2 to hold water at an elevation above the level of the existing Detention Basin #2 liner (i.e., above 150 feet NAVD 88) the Applicant shall demonstrate compliance with the Composting General Order hydraulic conductivity requirements or at least as stringent conditions of an individual permit, as required by the RWQCB.

If the modified basin design would require additional fill below the base-flood elevation, consideration must also be given to a corresponding increase in the size of the additional flood storage basin in Area 2, such that no net loss of floodplain shall occur compared to existing conditions as needed to comply with the County's Floodplain Management Ordinance (see also MM-HYD-4).

If the modified basin design and/or corresponding changes to the flood storage basin would decrease the area of the facility draining to the detention basins, the required detention volume specified in the first paragraph of this measure may be reduced accordingly, provided adequate supporting documentation is provided to the County Planning Department for review and approval. The documentation shall demonstrate that the revised design is sufficient to hold direct precipitation and facility runoff from a 25-year, 24-hour storm event in addition to normal operating volumes during wet years, whilst maintaining ~~the~~ required 2 feet of freeboard.

With implementation of MM-HYD-1B, the stormwater detention capacity would be increased to meet the requirements of the Composting General Order (or at least as stringent conditions of an individual permit) and to minimize the risk of discharge from the detention basins during a large storm event, even in a wet year. The impact would be **less than significant with mitigation**.

In addition, flood water should be prevented from inundating the detention basin and causing a release of retained storm water. Potential impacts relating to inundation by floodwaters are discussed further under Impact HYD-5 below.

In Section 11.4.1.1 of the RDEIR, the following clarifications are proposed to the second, third, and fourth paragraphs under the subheading "Groundwater Quality," as staff-initiated changes:

The Composting General Order includes a performance standard regarding limiting infiltration of detained storm water to groundwater to protect groundwater quality. To meet the more stringent water quality requirements, Z-Best proposes to modify Detention Basin #1 to include an impermeable liner that meets the conductivity specifications of the Composting General Order (or at least as stringent conditions of an individual permit). The liner system would be similar to the 60-millimeter, high density polyethylene geomembrane underlain by a geosynthetic clay liner that is present at existing Detention Basin #2. Lining Detention Basin #1 would reduce storm water infiltration potentially containing leachate and would have a beneficial effect on groundwater quality relative to existing conditions, even if the leachate quality within Detention Basin #1 were to deteriorate under project conditions.

Leachate collected in Detention Basin #1 would be aerated to control odor and to maintain the dissolved oxygen concentration at a minimum of 1.0 milligram per liter consistent with the Composting General Order (or at least as stringent conditions of an individual permit). Solids that accumulate in the lined basin would be periodically removed and composted, as they are now; hand tools would be used to avoid puncturing the liner. Consistent with Composting General Order standards (or at least as stringent conditions of an individual permit), a pan lysimeter monitoring device must be installed under the lowest point of the pond to monitor water quality conditions below the pond. A lysimeter is a device for collecting water from the pore spaces of soils and for determining the soluble constituents removed in the drainage.

With adherence to the requirements of the Composting General Order (or at least as stringent conditions of an individual permit), the proposed project would

reduce the potential for infiltration of stormwater/leachate from Detention Basin #1 to groundwater.

In Section 11.4.1.2 of the RDEIR, the following change is proposed to the last paragraph in response to comment CALTRANS-A-7:

The Caltrans NPDES Permit regulates stormwater discharges from Caltrans rights-of way during and after construction, as well as from existing facilities and activities. As such, operational stormwater quality from Caltrans facilities is regulated by the SWRCB through the Caltrans NPDES Permit. Post-construction water quality protection and hydromodification protection measures, and the process for incorporating them into the project design of the SR-25 and new access road improvements, must be consistent with the Caltrans' Project *Planning and Design Guide* and *Highway Design Manual*. Types of post-construction controls include low impact development (LID), water quality treatment, runoff retention and peak runoff management. The Applicant will be required to submit calculations showing the pre- and post-project runoff to Caltrans facilities as part of the encroachment permit application for work within the SR-25 right-of-way. Implementation of Caltrans' standard procedures for roadway design related to operational water quality control have been designed to comply with SWRCB NPDES permit requirements, and therefore would ensure that water quality impacts from the SR-25 access improvements would be **less than significant**.

In Section 11.4.4 of the RDEIR, the following changes are proposed to the summary impact statement in response to comments VW-7 and VW-21:

IMPACT HYD-4	The project ~~would not~~ <u>could</u> alter existing on-site drainage patterns in a manner that would impede or redirect flood flows	Less than Significant with <u>Mitigation</u>
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In Section 11.4.4.1 of the RDEIR, the following changes are proposed to the fifth paragraph in response to comment VW-7:

The proposed project's effect on floodplain storage would be as follows:

- 71-acre-feet reduction in existing floodplain storage, including:
 - Fill below the base flood elevation for the compost pad: 23.5 acre-feet.
 - Area to be removed from 100-year floodplain storage due to Detention Basin #1 berms: 46.0 acre-feet.
 - SR-25 fill to be placed below the base flood elevation: 1.5 acre-feet.
- ~~69.758.9~~ 69.758.9 acre-feet increase in flood storage compared to existing conditions, including:
 - Excavation of an additional 7.2-acre flood storage area at north end of Area 2: ~~69.758.9~~ 69.758.9 acre-feet.¹¹

The proposed project would therefore result in a net loss of ~~4.312.1~~ 4.312.1 acre-feet of flood storage compared to existing conditions.

In Section 11.4.4.1 of the RDEIR, the following new footnote is proposed in response to comment VW-7:

¹¹ The Floodplain Storage Analysis (Schaaf and Wheeler, Appendix E-2) shows a net increase of 69.7 acre-feet of flood storage due to excavation below the base flood elevation in Area 2. However, the proposed maximum depth of excavation in this area is approximately 138.5 feet NAVD 88, which is approximately 1.5 feet below the typical groundwater levels in the area (Golder 2023). Therefore, not all of the 69.7 acre-feet excavated below the base flood elevation would be available for flood storage, unless groundwater levels were substantially lower than average at the time of flooding. It is estimated that approximately 10.8 acre-feet (1.5 feet x 7.2 acres) of the excavated storage area would potentially be unavailable due to the shallow groundwater levels.

In Section 11.4.4.1 of the RDEIR, the following changes are proposed to the final three paragraphs in response to comments VW-7 and VW-21:

The overall cumulative change in floodplain storage from both Phase 1 (2012) and Phase 2 (current project) grading activities would be a net ~~increase~~ decrease of floodplain storage of ~~6.6~~ 4.2 acre-feet compared to pre-2012 conditions. Hydraulic modeling results (Schaaf & Wheeler 2022, Appendix E-2) demonstrate that with the additional flood storage provided by the project, the maximum increase in water surface elevation between the pre-2012 condition and the proposed project condition would be approximately 0.01 foot. However, as discussed in footnote 11 below, the Schaaf & Wheeler report did not account for shallow groundwater levels in the vicinity of the proposed flood storage area, which would reduce the available amount of storage compared to their calculations. In addition, as indicated in MM-HYD-1B, a modified basin design can result in a change in hydraulic conditions that, when considering the combined result of the proposed project and prior modifications at the Z-Best site, may or may not result in a cumulative change in the 100-year water surface elevation of less than 1 foot (as required by the County's Floodplain Management Ordinance). As such, the hydraulic model must be updated to reflect these changes to confirm. The impact is therefore conservatively identified as **potentially significant**, and the following mitigation measure is proposed to address this impact.

MM-HYD-4: Update Floodplain Storage Analysis

Prior to issuance of grading permits, the Applicant shall prepare and submit a revised floodplain storage analysis to the County, based on final project design. The analysis shall specify the project components included in the modeling and shall not consider excavated areas that are below typical groundwater levels as contributing to flood storage capacity. If the County determines that the revised analysis does not demonstrate compliance with the County's Floodplain Management Ordinance requirement that the project would not, when combined with other development within the floodplain, result in the water surface elevation of the 100-year base flood increasing by more than 1 foot, then the project shall be revised to provide additional floodplain storage capacity or other

design changes, until compliance can be demonstrated to the County's satisfaction.

~~With implementation of MM-HYD-4, This demonstrates that the proposed project would be consistent with the County's ordinance and would have a minor to negligible effect on 100-year water surface elevations, particularly in context of prior improvements at the site. Adverse impacts on flood storage volumes or 100-year water surface elevations would be less than significant.~~

With implementation of MM-HYD-4, the revised hydraulic Hydraulic modeling results would demonstrate that the alteration of existing drainage patterns during the 100-year flood event would result in a minor to negligible increase in water surface elevation in an area immediately south of SR-25 and the potential for increased flooding as a result of on-site improvements would not be significant, either on-site, upstream, or downstream. Therefore, this impact would be less than significant with mitigation.

In Section 11.4.5 of the RDEIR, the following changes are proposed to the third and sixth paragraphs in response to comments VW-4 and VW-18:

Potential inundation of the proposed ECS composting pad in Area 1B of the site is unlikely, as the proposed project would raise the composting pad to approximately 1 at least a foot above the 100-year base flood elevation of 148.5148.44 feet (NAVD 88) prior to construction of the bunkers. Therefore, the risk of floodwaters inundating the MSW compost within the bunkers would have less than a 1 percent annual chance of occurrence.

...

With respect to the second issue, the proposed project would raise the height of Detention Basin #1 to 150.5 feet elevation (NAVD 88), which is approximately 2 feet above the 100-year base flood elevation of 148.544 feet (NAVD 88) (see Figure 4-6, Detention Basin #1 Modifications). Therefore, the likelihood of floodwaters from the Pajaro River inundating Detention Basin #1 would have less than a 1 percent annual chance of occurrence. The existing berm height of Detention Basin #2 is notched at 149 feet NAVD 88, which is only 0.59 feet above the base flood elevation, which does not leave sufficient freeboard to account for wind-driven waves. As such, there remains a substantial risk that floodwaters could overtop the berms and the basin could be inundated during a 100-year flood event. The project does not propose any changes to the berms at Detention Basin #2; however, given that the operation of Detention Basins #1 and #2 have the potential to be interconnected via pumping, and because the project is proposing changes to the quality and quantity of leachate draining to the basins (and the quantity of water being used from the basins), the project could increase the risk of contamination of floodwaters compared to existing conditions.

In Section 11.4.5 of the RDEIR, the following changes are proposed to mitigation measure MM-HYD-5 in response to comments VW-4 and RWQCB-4:

MM-HYD-5: Increase Berm Height of Detention Basin #2

The Applicant shall increase the berm height of Detention Basin #2 to at least 150.544 feet (NAVD 88), so that at least 2 feet freeboard above the 100-year base

flood elevation of 148.5 feet (NAVD 88) is maintained. Plans for the redesigned detention basin shall be submitted to the County Planning Department for review and approval prior to issuance of grading permits for the project. The Applicant shall also modify or replace the Detention Basin #2 liner, as required by the RWQCB, in compliance with the hydraulic conductivity requirements of the Composting General Order (or at least as stringent conditions of an individual permit).

In Section 11.4.6 of the RDEIR, the following edits are proposed to the fourth and fifth paragraphs, as staff-initiated changes:

As previously described, the MSW composting component of the proposed project must be designed and operated consistent with requirements contained in the SWRCB's Composting General Order (or at least as stringent conditions of an individual permit). The Composting General Order is a Waste Discharge Requirement. As described in Impact HYD-1 above, the proposed stormwater detention capacity is not sufficient to contain runoff generated by a 25-year, 24-hour storm event during a wet year assuming normal operating conditions, or if the basins already contain a substantial volume of water when such a storm event occurs. As discussed in Section 11.4.1, the Pajaro River is a waterbody that has been identified by the RWQCB, SWRCB, and EPA as impaired for various water quality constituents including *Escherichia coli* (*E. coli*), nitrate, sodium, dissolved oxygen, pH, turbidity, and sedimentation/siltation. Compost leachate from MSW is characterized by high BOD (a measure of the amount of dissolved oxygen consumed by bacteria in the process of consuming organic material in water), low pH (a measure of acidity), the presence of nutrients including nitrogen and phosphorous, and salts. The unrestricted release of runoff from MSW and green composting operations has the potential to further degrade water quality by contributing nitrates, organic matter, and particulates, altering pH, and increasing oxygen demands in the Pajaro River and downstream water bodies. Therefore, the composting component of the project would conflict with the Basin Plan, and this impact would be potentially significant. Mitigation measures MM-HYD-1A, MM-HYD-1B, MM-HYD-1C, and MM-HYD-5, which are described under Impact HYD-1 in Section 11.4.1 and Impact HYD-5 in Section 11.4.5 above, are proposed for this impact.

Implementation of MM-HYD-1A, MM-HYD-1B, MM-HYD-1C, and MM-HYD-5 would allow the proposed project to comply with the requirements of the Composting General Order (or at least as stringent conditions of an individual permit), and therefore the mitigated project would not conflict with the Basin Plan. The impact would be **less than significant with mitigation incorporated**.

4.1.8 Changes to Section 13

In Section 13.4.2.2 of the RDEIR, the following changes are proposed to the fourth paragraph in response to comment CHP-2:

The project would not introduce any incompatible uses such as farm equipment utilizing the highway, but would result in a substantial increase in truck traffic accessing the highway from the project site. The California Highway Patrol has indicated that material spillage from trucks servicing the existing facility already

contributes to roadway safety conditions by obscuring roadway markings within the SR-25 corridor. The increased volume of truck traffic has potential to increase the amount of material spilled from loaded trucks entering or exiting the site, which could further increase potential safety conditions.

In Section 13.4.2.3 of the RDEIR, the following new paragraph is proposed to be inserted prior to the first paragraph in response to comment CHP-2:

As discussed in Section 5 above, mitigation measure MM-AES-2 would require an off-site litter management plan, which would include procedures and penalties to discourage haul trucks arriving on site or transporting materials from the facility from failing to properly secure their loads. While this mitigation measure was primarily recommended in order to reduce the aesthetic impacts of trash/litter along the SR-25 frontage, it would also serve to reduce the potential for material spillage and therefore reduce the associated potential safety impacts from increased obstruction of roadway markings.

In Section 13.4.2.3 of the RDEIR, the following changes are proposed to mitigation measure MM-TRA-2 in response to comments CALTRANS-A-10, CALTRANS-B-1, and VW-17 and as staff-initiated changes:

MM-TRA-2: Installation of Traffic Controls or Retention of Driveway in Existing Location

- A. *The Applicant shall modify its proposed design for the SR-25 improvements and driveway relocation to include the installation of traffic signals at the intersection of SR-25/Bolsa Road/relocated driveway, if agreed to by Caltrans. The Applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of the permit review and approval process, including maintenance of a clear recovery zone and compliance with Caltrans' stormwater management standards. The Applicant shall be fully responsible for the cost of all project site improvements to mitigate impacts to traffic operations and safety. The Applicant's funding contribution to the cost of SR-25 improvements, either in full or in part, shall be contribute its fair share of the cost of the traffic controls, as determined by Caltrans, with the remaining portion to be funded by Caltrans.*
- B. *The Applicant shall not increase processing capacity of the facility (and associated increase in haul-truck and employee traffic) at the site until either (1) the signalized intersection is operational in accordance with MM-TRA-2A above, or (2) alternative improvements are made to the existing project site driveway in accordance with Alternative 3 and mitigation measure MM-TRA-2-Alt 3 and no relocation of the project site driveway shall occur until the signalized intersection is operational in accordance with MM-TRA-2A. The Applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of their permit review and approval process. The Applicant shall be fully responsible for the cost of all project site improvements to mitigate impacts to traffic operations*

and safety. The Applicant's funding contribution to the cost of SR-25 improvements, either in full or in part, shall be determined by Caltrans.

In Section 13.4.2.3 of the RDEIR, the following changes are proposed to the last paragraph in response to comment CHP-2:

With implementation of MM-AES-2 and MM-TRA-2, which incorporates MM-TRA-2-Alt3, the impact of the proposed project would be **less than significant with mitigation**.

In Section 13.4.3 of the RDEIR, the following changes are proposed to the fifth bullet of mitigation measure MM-TRA-3 in response to comment CALTRANS-A-11:

- Maintain emergency access to the project site throughout construction and maintain vehicular, bicycle, and pedestrian access through the State Route 25 corridor throughout construction;

In Section 13.4.3 of the RDEIR, the following new bullet is proposed to be added to mitigation measure MM-TRA-3 in response to comment CALTRANS-A-8:

- Identify the need (if any) for transportation permits for oversized or excessive load vehicles on State roadways from Caltrans and include any permit conditions as part of the CMP;

4.1.9 Changes to Section 15

In Section 15.3.9.3 of the RDEIR, in the second paragraph under the subheading "Water Quality," the following edits are proposed as staff-initiated changes:

The proposed project, and other cumulative projects included in Table 15-1, could further contribute to this existing significant cumulative impact. However, as discussed in Section 11.4.1 above, the project is required to comply with existing water quality regulations, including preparation of a site-specific SWPPP in conformance with the NPDES Stormwater Construction General Permit, compliance with the Composting General Order (or at least as stringent conditions of an individual permit), and conditions of industrial stormwater operating permits, which have been developed to protect the environment and improve water quality in impaired water bodies. In particular, the proposed new ECS technology that is part of the project would provide improved leachate management relative to the existing CTI system and would facilitate the proposed project's conformance with storm water quality control standards and the Composting General Order (or at least as stringent conditions of an individual permit).

In Section 15.3.9.3 of the RDEIR, in the second paragraph under the subheading "Flood Hazards," the following changes are proposed in response to comments VW-7 and VW-21:

Current and foreseeable projects, including the proposed project and those included in Table 15-1, are not expected to contribute further to this existing cumulative impact as they will be required to conform to current stormwater management regulations and the County's Floodplain Management Ordinance

(or applicable ordinance for San Benito County), which requires project proponents to demonstrate that proposed fill within the 100-year floodplain would not have a cumulative effect, when combined with other development within the floodplain, and would not increase the water surface elevation of the 100-year base flood by more than 1 foot. As discussed in Section 11.4.4, hydraulic modeling results demonstrate that with the additional flood storage provided by the proposed project, the maximum increase in water surface elevation between the pre-2012 condition and the proposed project condition would be approximately 0.01 foot, but the model did not adequately account for shallow groundwater levels in the vicinity of the proposed flood storage area, which would reduce the available amount of storage compared to the model calculations. With implementation of mitigation measures MM-HYD-1B and MM-HYD-4, the Applicant would be required to update the modeling based on final project design and such that it does not include the volume of excavated areas below typical groundwater levels as part of the calculated flood storage capacity. If the County determines that the revised analysis does not demonstrate that the final project design complies with the County's Floodplain Management Ordinance requirement regarding the cumulative impact to 100-year base flood water surface elevations, then additional project revisions would be required until compliance can be demonstrated to the County's satisfaction. ~~to determine if the modifications required to further increase detention basin capacity would increase the water surface elevation of the 100-year base flood beyond the allowable limit. If so, excavation of additional excavation below the base flood elevation would be required such that no net loss of flood storage would occur.~~ Therefore, the proposed project's contribution to the cumulative impact would be less than cumulatively considerable with mitigation.

In Section 15.3.11.3 of the RDEIR, Figure 15-2 has been replaced as a staff-initiated change, as a formatting issue within the RDEIR resulted in the lower half of the figure not displaying correctly. A copy of the updated figure is included in Appendix C of this document.

4.1.10 Changes to Section 18

In Section 18.3.2 of the RDEIR, the following changes are proposed in response to comment DORADO-6:

Public comments received on the original Draft EIR suggested that consideration should be given to alternative technologies such as an enclosed composting system. ECS (the provider of the aerated static pile system currently proposed for the project) offers an in-vessel tunnel-type composting system which is advertised as providing sealed, well-drained, and high controlled aeration which allows reliable management of feedstock mixes without creating nuisance odors, and a unique level of thermal control to quickly and reliably achieve the conditions needed to meet the Process to Further Reduce Pathogens (PFRP) requirements. ECS has indicated that such technology would substantially increase capital expenditure costs for the Z-Best facility, due to a large increase in structural elements, an additional and much larger air handling system for interior air, extensive corrosion resistant coatings, fire suppression and lighting

systems, large motorized doors, and other factors. The estimated development cost for a fully enclosed system is approximately \$80 million, which is approximately twice as high as the cost to construct the proposed project (see Appendix H-1). Operational energy use has been estimated to increase from approximately 6.2 million kWh/year to 8.6 kWh/hr, even though the overall processing capacity of enclosed system would be approximately 26 percent lower due to the additional space that would be required for biofiltration components. ~~likely to increase by a factor of 2.5 to 3 times that of an open system as proposed by the project (O'Neill, pers. comm. 2022).~~

Such an alternative would require construction of large building(s) at least 25 feet in height in order to fully enclose both the proposed composting vessels and drive aisles, with additional ventilation infrastructure (i.e., building exhausts). Compared to the open three-sided concrete bunker groups required for the proposed project, it is reasonable to assume that this would require delivery of additional construction materials to the site during construction and would either require additional construction equipment and/or would extend the construction duration. As a result, such an alternative ~~Furthermore, construction of an enclosed system~~ would be anticipated to increase construction-related haul trips and associated air emissions, aesthetic impacts, energy use and GHG emissions, due to the more intensive construction and increased ventilation requirements. Moreover, such an alternative, and would not avoid or minimize the project's significant and unavoidable impacts related to operational NO_x emissions, Clean Air Plan inconsistency, or VMT. Although such an alternative is anticipated to reduce the potential processing capacity of the facility due to additional floor space being required for ventilation rather than composting, which would reduce truck trips and associated NO_x emissions and VMT associated with the project site, the volume of MSW not processed at the Z-Best facility would still be generated and would need to be transported to an alternative composting facility or landfill and would therefore still generate truck trips and associated NO_x emissions and VMT elsewhere in the region. While it is possible that an enclosed system may potentially reduce bioaerosol emissions from the facility, the extent of any reduction would depend on the design and filtration of the air handling system. Furthermore, due to the inherent uncertainties and lack of regulatory exposure thresholds for bioaerosols discussed in Section 7 and the associated technical memorandum in Appendix B-6, it would be difficult to confirm that such an alternative would effectively reduce potential bioaerosols to a less-than-significant level.

For all of the above reasons, an alternative with a fully enclosed composting system is not feasible and was rejected from further consideration within this EIR in accordance with CEQA Guidelines section 15126.6(c).

In Section 18.4.3.3 of the RDEIR, under the subheading "Transportation," the following changes are proposed in response to comment CALTRANS-B-2:

Mitigation Measure MM-TRA-2-Alt3: Installation of Intersection Lighting and Warning Signage

The proposed design for Alternative 3 shall include the installation of a southbound acceleration lane for trucks turning right out of the existing Z-Best

driveway, as well as installation of intersection lighting at the existing intersection of SR-25/Bolsa Road and at the existing Z-Best driveway, and installation of “Caution: Trucks Entering Highway” signage on SR-25 on both approaches to the driveway. The Applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of their permit review process. The Applicant shall be fully responsible for the cost of all project site improvements to mitigate impacts to traffic operations and safety. The Applicant’s funding contribution to the cost of SR-25 improvements, either in full or in part, shall be determined by Caltrans.

4.1.11 Changes to Section 19

In Section 19 of the RDEIR, the following new references are proposed to be added under the subheading “Hydrology” in response to comments VW-7 and ZBEST-2:

- Golder. 2023. Fourth Quarter 2022 Groundwater Monitoring Report, Z-Best Composting Facility, Gilroy, California. January 31, 2023. Available online: https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/4167864799/T10000008201.PDF. Accessed June 21, 2023.
- National Oceanic and Atmospheric Administration (NOAA). 2023b. NOAA Atlas 14 Point Precipitation Frequency Estimates for Latitude 36.9463°, Longitude -121.5204°. National Weather Service, Hydrometeorological Design Studies Center. Available: https://hdsc.nws.noaa.gov/pfds/pfds_printpage.html?lat=36.9463&lon=-121.5204&data=depth&units=english&series=pds. Accessed July 2023.

In addition, the following existing reference within the same subsection of the RDEIR is proposed to be amended as follows, as a staff-initiated change:

- National Oceanic and Atmospheric Administration (NOAA). 2023a. NOAA Atlas 14 Point Precipitation Frequency Estimates for Gilroy Station ID: 04-3417. National Weather Service, Hydrometeorological Design Studies Center. Available: https://hdsc.nws.noaa.gov/pfds/pfds_printpage.html?st=ca&sta=04-3417&data=depth&units=english&series=pds. Accessed March 2023.

4.2 New and Updated Appendices

The following new or updated appendices are proposed to be added to the EIR in support of the changes made in response to comments. Copies of these documents are contained in Appendix D of this Final EIR.

- Appendix E-6 (UPDATED): Detention Basin Analysis – Updated (AECOM 2023).
- Appendix E-8 (NEW): Floodplain Impact Certification, Grading and Flood Study Summary Report. Z-Best Compost Facility Expansion, Santa Clara County, California (Schaaf & Wheeler 2012).
- Appendix E-9 (NEW): Conditional Letter of Map Revision Based on Fill Comment Document (CLOMR-F) issued by the Federal Environmental Management Agency, May 21, 2018.
- Appendix H-1 (NEW): Additional Information regarding Feasibility of Enclosed Alternative (ECS 2023; Greenwaste 2023; WSP USA Inc. 2023).

5 References

The following documents were cited in Section 3 of this Final EIR to support statements made within the responses to comments:

- Alameda County. 2019. Administrative Draft Environmental Impact Report. Jess Ranch Compost Facility, Conditional Use Permit PLN2015-00087. November.
- Alameda County. 2021. Final Environmental Impact Report. Jess Ranch Compost Facility, Conditional Use Permit PLN2015-00087. August.
- Caltrans (California Department of Transportation). 2020. Smart Mobility Framework Guide. February.
- Caltrans. 2023. SR-25 AADT Volumes. Downloaded from <https://dot.ca.gov/programs/traffic-operations/census>. June 9, 2023.
- Caltrans. 2024. California Manual on Uniform Traffic Control Devices (CA MUTCD) 2014 Revision 8 (effective January 11, 2024). <https://dot.ca.gov/programs/safety-programs/camutcd>.
- City of Los Angeles. 2019. Air Quality and Health Effects, Sierra Club v. County of Fresno. Prepared by Department of City Planning and Technical Advisory Panel. October.
- County of Marin. 2005. Redwood Landfill Solid Waste Facilities Permit Revision. Final Supplemental Environmental Impact Report. Volumes I and II. July.
- Doyle, John. 2023a. Personal Communication. Email dated July 18, 2023. Subject: Re: Request for Information – Responses to Comments on Draft EIR. Attachment: Zbest Truck Data.xlsx.
- Doyle, John. 2023b. Personal Communication. Email dated March 22, 2023. Subject: Re: Z-Best EIR update.
- ECS (Engineered Compost Systems). 2016. Pre-application Summary for Use Permit Modification for Z-Best Composting Facility. December 8.
- ECS, 2023. Website: ECS CompTroller: Optimization Through Automation. <https://compostsystems.com/systems/ecs-comptroller-optimization-through-automation/>. Accessed July 5, 2023.
- Golder Associates, Inc. 2019a. *Z-Best Compost Facility Water Balance*. Roseville, CA.
- Golder Associates, Inc. 2019b. Technical Memorandum Re: Water Balance, Z-Best Compost Facility. Sunnyvale, CA.
- Kern County. 2021. Draft Supplemental Environmental Impact Report. Shafter/Wasco Composting and Waste Diversion Project. February.
- NOAA (National Oceanic and Atmospheric Administration). 2023a. NOAA Atlas 14 Point Precipitation Frequency Estimates for Latitude 36.9463°, Longitude -121.5204°. National Weather Service, Hydrometeorological Design Studies Center. https://hdsc.nws.noaa.gov/pfds/pfds_printpage.html?lat=36.9463&lon=-121.5204&data=depth&units=english&series=pds. Accessed July 2023.

- NOAA. 2023b. Monthly Climate Normals (1991-2020) – Gilroy, CA. <https://www.weather.gov/wrh/Climate?wfo=mtr>. Accessed July 5, 2023.
- Robertson, S., Douglas, P., Jarvis, D., and E. Marczylo. 2019. Bioaerosol Exposure from Composting Facilities and Health Outcomes in Workers and in the Community: A Systematic Review Update. *International Journal of Hygiene and Environmental Health* 222 (2019): 364-386. <https://doi.org/10.1016/j.ijheh.2019.02.006>.
- Schaaf & Wheeler. 2012. Floodplain Impact Certification, Grading and Flood Study Summary Report. Z-Best Compost Facility Expansion, Santa Clara County, California (copy in Appendix D).
- SCAQMD (South Coast Air Quality Management District). 2015. SCAQMD Brief of *Amicus Curiae*. *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502.
- SJVAPCD (San Joaquin Valley Air Pollution Control District). 2015. SJVAPCD Brief of *Amicus Curiae*. *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502.
- Szabová E., Juris, P., and I. Papajová. 2010. Sanitation composting process in different seasons. *Ascaris suum* as model. *Waste Management* 30(3):426-32. Epub 2009 Nov 22. PMID: 19932605. <https://pubmed.ncbi.nlm.nih.gov/19932605/>
- Tiquia-Arashiro, S.M. 2000. Effect of Windrow Turning and Seasonal Temperatures on Composting of Hog Manure from Hoop Structures. *Environmental Technology* 21(9): 1037-1046. September 2000. https://www.researchgate.net/publication/249058652_Effect_of_Windrow_Turning_and_Seasonal_Temperatures_on_Composting_of_Hog_Manure_from_Hoop_Structures
- Tulare County Resource Management Agency. 2021. Visalia Landfill – Composting and Biomass Conversion Facility. Draft Focused Environmental Impact Report. December.
- Tulare County Resource Management Agency. 2022. Visalia Landfill – Composting and Biomass Conversion Facility. Final Focused Environmental Impact Report. September.
- Western Placer Waste Management Authority. 2022. Renewable Placer: Waste Action Plan. Final Environmental Impact Report. October 20.

Appendix A – Comment Letters on Recirculated Draft EIR

DISTRICT 4
OFFICE OF REGIONAL AND COMMUNITY PLANNING
P.O. BOX 23660, MS-10D | OAKLAND, CA 94623-0660
www.dot.ca.gov

June 5, 2023

SCH #: 2018102041
GTS #: 04-SCL-2016-01190
GTS ID: 2423
Co/Rt/Pm: SCL/25/0.63

Valerie Negrete, Senior Planner
County of Santa Clara
70 West Hedding Street, 7th Floor
San Jose, CA 95103

Re: Z-Best Composting Facility Modifications Recirculated Draft Environmental Impact Report (DEIR)

Dear Valerie Negrete:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the Z-Best Composting Facility Modifications Project. We are committed to ensuring that impacts to the State's multimodal transportation system and to our natural environment are identified and mitigated to support a safe, sustainable, integrated and efficient transportation system. The following comments are based on our review of the April 2023 recirculated DEIR.

Project Understanding

The proposed project site is the existing Z-Best Composting Facility at 980 State Route (SR)-25. The project includes modification of the existing composting process from the current window method to an aerated static pile process. SR-25 along the project site frontage would be widened to allow the installation of acceleration and deceleration lanes into and out of the facility entrance, which would be relocated to become a new fourth leg of the existing SR-25/Bolsa Road intersection.

Travel Demand Analysis

The project vehicle miles traveled (VMT) analysis and significance determination are undertaken in a manner consistent with the Office of Planning and Research's (OPR) Technical Advisory. Per the recirculated DEIR, this project is found to have significant VMT impact. Please consider measures to mitigate the project's impact to VMT, including those listed in the following section.

CALTRANS-A-1

Mitigation Strategies

CALTRANS-A-2 Location efficiency factors, including community design and regional accessibility, influence a project's impact on the environment. Using Caltrans' Smart Mobility Framework Guide 2020 ([link](#)), the proposed project site is identified as a Suburban Community/Area where community design is moderate to weak and regional accessibility varies.

Given the place, type and size of the project, the recirculated DEIR should include a robust Transportation Demand Management (TDM) Program to reduce VMT and greenhouse gas emissions from future development in this area. The measures listed below have been quantified by California Air Pollution Control Officers Association (CAPCOA) and shown to have different efficiencies reducing regional VMT:

Suburban and Rural strategies

- Increased location efficiency;
- Orientation of Project towards non-auto corridor;
- Pedestrian network improvements;
- Discounted transit programs (rural);
- Provide local shuttles to increase transit outreach (rural);
- Employer-based vanpool;
- Telecommuting programs and alternative work schedules

Using a combination of strategies appropriate to the project and the site can reduce VMT, along with related impacts on the environment and State facilities. TDM programs should be documented with annual monitoring reports by a TDM coordinator to demonstrate effectiveness. If the project does not achieve the VMT reduction goals, the reports should also include next steps to take in order to achieve those targets.

Please reach out to Caltrans for further information about TDM measures and a toolbox for implementing these measures in land use projects. Additionally, refer to the CAPCOA Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity ([link](#)).

Transportation Impact Fees

CALTRANS-A-3 Please identify project-generated travel demand and estimate the costs of transit and active transportation improvements necessitated by the proposed project; viable funding sources such as development and/or transportation impact fees should also be identified. We encourage a sufficient allocation of fair share contributions toward multi-modal and regional transit improvements to fully mitigate cumulative impacts to regional transportation. We also strongly support measures to increase sustainable mode shares, thereby reducing VMT.

State Highway Access

CALTRANS-A-4 The expansion of the Z-Best facility is expected to increase the truck movement in and out of the facility at the intersection. These trips should be restricted to off peak times whenever possible. Since southbound (SB) SR-25 has only one lane at the Bolsa intersection, a merging lane should be provided for trucks turning right when leaving the facility. A storage lane should be provided for the vehicles turning left at the intersection towards Bolsa Road. The minimum length of the left and right turn lanes from SR-25 to Bolsa Road should be 486 feet plus the storage lane length. The approach taper length for both should be at least 660 feet within Caltrans' ROW.

Caltrans has documented operational benefits of a SB receiving lane from Bolsa Road and documented these benefits with the project sponsor in an Intersection Control Evaluation (ICE) report. Caltrans recommends that the project add a receiving lane in the SB median for traffic making a left from SB Bolsa Road onto SB SR-25. It should be noted that the proposed project uses all available Right-of-Way (ROW) making it a challenge for Caltrans to pursue the addition of a receiving lane as a standalone project. As stated previously, and as a condition of approval for any Caltrans encroachment permit, Caltrans requests that the appropriate ROW considerations are made as to not preclude future intersection improvements.

To adequately evaluate the potential impact of the truck turning patterns on SR-25, please provide more information, such as truck turning radius and center turning radius, for Caltrans to review.

SR-25 Widening Project

CALTRANS-A-5 There are plans for widening SR-25 from San Felipe Road within the Hollister City limits to US-101 near Gilroy. In 2016, a Project Approval and Environmental Document (PAED) was completed that generally set an outline of ROW needs for such a project. Before any approvals are given, it is important to confirm that the project modifications preserve enough ROW consistent with the final document. The ultimate project includes constructing a median barrier as part of the expressway conversion which will make the Z-Best facility driveway a right-in right-out scenario.

Safety

CALTRANS-A-6 The proposed retaining walls on both sides of SR-25 are within the clear recovery zone. Please consider obtaining additional right of way to extend the side slope to match with the existing ground. Otherwise, the Midwest Guardrail System (MGS) is needed at the hinge point to prevent errant vehicles going over the retaining walls.

Hydraulics

CALTRANS-A-7 The applicant should provide calculations showing the pre-and post-project runoff to Caltrans facilities when submitting the encroachment permit application for the project work along SR-25.

Construction-Related Impacts

CALTRANS-A-8 Project work that requires movement of oversized or excessive load vehicles on State roadways requires a transportation permit that is issued by Caltrans. To apply, please visit Caltrans Transportation Permits ([link](#)). Prior to construction, coordination may be required with Caltrans to develop a Transportation Management Plan (TMP) to reduce construction traffic impacts to the State Transportation Network (STN).

Utilities

CALTRANS-A-9 Any utilities that are proposed, moved or modified within Caltrans' ROW shall be discussed. If utilities are impacted by the project, provide site plans that show the location of existing and/or proposed utilities. These modifications require a Caltrans-issued encroachment permit.

Lead Agency

CALTRANS-A-10 As the Lead Agency, the County of Santa Clara is responsible for all project mitigation, including any needed improvements to the STN. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures.

Equitable Access

CALTRANS-A-11 If any Caltrans facilities are impacted by the project, those facilities must meet American Disabilities Act (ADA) Standards after project completion. As well, the project must maintain bicycle and pedestrian access during construction. These access considerations support Caltrans' equity mission to provide a safe, sustainable, and equitable transportation network for all users.

Encroachment Permit

CALTRANS-A-12 Please be advised that any permanent work or temporary traffic control that encroaches onto Caltrans' ROW requires a Caltrans-issued encroachment permit. As part of the encroachment permit submittal process, you may be asked by the Office of Encroachment Permits to submit a completed encroachment permit application package, digital set of plans clearly delineating Caltrans' ROW, digital copy of signed, dated and stamped (include stamp expiration date) traffic control plans, this comment letter, your response to the comment letter, and where applicable, the following items: new or amended Maintenance Agreement (MA), approved Design Standard Decision Document (DSDD), approved encroachment exception request, and/or airspace lease agreement. Your application package may be emailed to D4Permits@dot.ca.gov.

To obtain information about the most current encroachment permit process and to download the permit application, please visit Caltrans Encroachment Permits ([link](#)).

Thank you again for including Caltrans in the environmental review process. Should you have any questions regarding this letter, or for future notifications and requests for review of new projects, please email LDR-D4@dot.ca.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read "Luo Yunsheng". The signature is fluid and cursive, with the first name "Luo" written in a stylized, rounded script and the last name "Yunsheng" in a more elongated, flowing script.

YUNSHENG LUO
Acting District Branch Chief
Local Development Review

c: State Clearinghouse

California Department of Transportation

DISTRICT 4
P.O. BOX 23660, MS-1A | OAKLAND, CA 94623-0660
(510) 286-5900 | FAX (510) 286-6301 TTY 711
www.dot.ca.gov



September 11, 2023

Valerie Negrete
Senior Planner
County of Santa Clara
Department of Planning and Development
County Government Center, East Wing, 7th Floor
70 West Hedding Street
San Jose, CA 95110

Dear Valerie Negrete:

Thank you for your letter regarding the mitigation measures and the proposed revisions made to the Recirculated Draft Environmental Impact Report (RDEIR) for the proposed Z-Best Composting Facility Modifications Project at State Route 25/ Bolsa Rd. Intersection in Santa Clara County. Please see below for our response:

CALTRANS-B-1

- Under section “MM-TRA-2: Installation of Traffic Controls or Retention of Driveway in Existing Location”, please revise the sections A and B as recommended below:
 - A. The applicant shall modify its proposed design for the SR-25 improvements and driveway relocation to include the installation of traffic signals at the intersection of SR-25/Bolsa Road/relocated driveway, if agreed to by Caltrans. The applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of the permit review and approval process, including maintenance of a clear recovery zone and compliance with Caltrans’ stormwater management standards. **The applicant is fully responsible of the proposed project cost and any mitigation impacts to traffic operations and safety. The applicant’s funding contribution to the cost of the SR-25 improvements, either in full or in part, shall be determined by Caltrans.**
 - B. The applicant shall not increase processing capacity of the facility (and associated increase in haul-truck and employee traffic) at the site until either (1) the signalized intersection is operational in accordance with MM-TRA-2A above, or (2) alternative improvements are made to the existing project site driveway in accordance with Alternative 3 and mitigation measure MM-TRA-

Ms. Valerie Negrete
September 11, 2023
Page 2

2-Alt 3 and no relocation of the project site driveway shall occur until the signalized intersection is operational in accordance with MM-TRA-2A. The applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of their permit review and approval process. **The applicant is fully responsible of the proposed project cost and any mitigation impacts to traffic operations and safety. The applicant's funding contribution to the cost of the SR-25 improvements, either in full or in part, shall be determined by Caltrans.**

CALTRANS-B-2

- Under section "Mitigation Measure MM-TRA-2-Alt3: Installation of Intersection Lighting and Warning Signage", please revise the section as recommended: The proposed design for Alternative 3 shall include the installation of a southbound acceleration lane for trucks turning right out of the existing Z-Best driveway, as well as installation of intersection lighting at the existing intersection of SR-25/Bolsa Road and at the existing Z-Best driveway, and installation of "Caution: Trucks Entering Highway" signage on SR-25 on both approaches to the driveway. The applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of their permit review process. **The applicant is fully responsible of the proposed project cost and any mitigation impacts to traffic operations and safety. The applicant's funding contribution to the cost of the SR-25 improvements, either in full or in part, shall be determined by Caltrans.**
- For items related to our June 5th comment letter:

CALTRANS-B-3 A. Under the subheading "Mitigation Strategies", please correct the classification of the project site as **"Rural Area."**

CALTRANS-B-4 B. Please replace the section "Transportation Impact Fees" to **"Fair Share Contributions": We encourage a sufficient allocation of fair share contributions toward multi-modal and regional transit improvements to fully mitigate cumulative impacts to regional transportation. We also strongly support measures to increase sustainable mode shares, thereby reducing VMT.**

Ms. Valerie Negrete
September 11, 2023
Page 3

If you have any questions, please feel free to contact me at (510) 715-9046 or via email at nick.saleh@dot.ca.gov.

Sincerely,

Nick Saleh

NICK SALEH
District Division Chief, PM-South
Division of Program/Project Management

Ms. Valerie Negrete
September 11, 2023
Page 4

- c: Becky Frank, Senior Transportation Planner, Office of Regional and Community Planning
- Taslima Khanum, Regional Project Manager, PPM – South
- Arun Guduguntla, Project Manager, PPM – South



Hollister-Gilroy Area
740 Renz Lane
Gilroy, CA 95020
(408) 427-0700

May 26, 2023

File No.: 725.14548.21586

Santa Clara County Department of Planning and Development
County Government Center, East Wing, 7th Floor
70 West Hedding Street
San Jose, CA 95103
Attention: Valerie Negrete

SCH: 2018102041

CHP-1

I was recently requested to review the Notice of Environmental Impact document from the State Clearinghouse (SCH) related to the proposed Z-Best Composting Facility Modifications located at 980 State Route 25, Gilroy, CA 95020. The California Highway Patrol's (CHP) interest in commenting surrounds our concerns for the increase in heavy truck traffic entering and exiting the facility from the newly proposed uncontrolled driveway onto a State Highway. In addition, the CHP's interest surrounds the increased response times, enforcement, services calls resulting from the increase in heavy truck traffic and the subsequent impact to vehicular traffic. The plan needs to ensure all roadways being utilized or altered, can support the weight of the increased number of loaded trucks and will not degrade. The plan needs to ensure any changes to the roadway configuration consider the 100 extra trucks per day that will be entering and exiting the facility and the impact this will have on vehicular traffic on State Route 25. The plan needs to seriously address material spillage from loaded trucks, that is already present at the current driveway site, it's impact on the safety of the roadway conditions, and how this will be mitigated. Currently, the material spillage contributes to roadway markings becoming obstructed and a safety issue in roadway conditions.

CHP-2

CHP-3

After reviewing the Traffic Engineers report on the plan, I do agree there are several items which need to be implemented to ensure the safety of the motoring public and flow of traffic on SR-25 and Bolsa Road. As described in the attachment, traffic on SR-25 and Bolsa Road is already heavy and Bolsa Road does have a restriction for left turns onto SR-25, Monday-Friday from 3pm-7pm. The roadway improvements to SR-25 and Bolsa Road are necessary and needed, to include the left turn lane improvements and acceleration lanes. With the requested realignment change to the Bolsa Road intersection, a severe safety concern exists with slow moving heavily loaded trucks entering/exiting onto SR-25, specially with the existing issues of material spillage.

CHP-4 Some type of traffic control device needs to be investigated to ensure an increase in crashes does not occur. Additionally, many of the reports referenced in the Engineering report reference data obtained from 2015, which is significantly out of date.

CHP-5 Facility operators need to ensure they establish, monitor, and enforce facility rules related to vehicle safety as CHP personnel work to ensure compliance with California Vehicle Code provisions.

If you have any questions, please contact our office at (408) 427-0700.

Sincerely,


P. COOPER, Captain
Commander

Central Coast Regional Water Quality Control Board

September 5, 2023

Sent via Electronic Mail

Valerie Negrete
Senior Planner
County of Santa Clara
Department of Planning and Development
70 West Hedding Street
San Jose, CA 95110
valerie.negrete@pln.sccgov.org

Dear Valerie Negrete,

LAND DISPOSAL PROGRAM: Z-BEST COMPOSTING FACILITY, SANTA CLARA COUNTY – RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT AND LETTER FROM THE COUNTY OF SANTA CLARA

On August 15, 2023, the California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board) received a letter from the County of Santa Clara Department of Planning and Development (County) regarding the recirculated draft environmental impact report (EIR) for the proposed Z-Best Composting Facility (Z-Best) Modifications Project. The letter requests that the Central Coast Water Board provide feedback on the four proposed mitigation measures summarized below:

1. MM-HYD-1A – A mitigation measure requiring a demonstration that the proposed pump capacity will be sufficient to prevent localized flooding of the adjacent green waste compost area during a 25-year, 24 hour storm event.
2. MM-HYD-1B – A mitigation measure requiring a minimum of 22.4 million gallons of storage capacity between Basin #1 and Basin #2.
3. MM-HYD-4 – A mitigation measure requiring Z-Best to prepare a revised floodplain storage analysis based on the final project design.
4. MM-HYD-5 – A mitigation measure requiring an increase in the Basin #2 berm height, such that the basin maintains two feet of freeboard above the 100-year base flood elevation.

Central Coast Water Board Staff Comments

RWQCB-1 Central Coast Water Board staff (Staff) reviewed the subject letter and do not object to the mitigation measures proposed by the County. The subject mitigation measures do

not appear to modify the facility in a way that would result in a violation of the minimum requirements of State Water Resources Control Board Order WQ 2020-0012-DWQ General Waste Discharge Requirements for Commercial Composting Operations (General Order), which currently regulates the facility. Staff do not have specific comments on proposed mitigation measures MM-HYD-1A and MM-HYD-4.

Staff Comment: MM-HYD-1B

RWQCB-2 The letter describes the County's rationale for finding that additional storage capacity is needed within Basin #1 to preclude discharge during a 25-year, 24-hour peak storm event in a wet year with normal operational volumes. As discussed with the County via videoconference on June 26, 2023, and August 2, 2023, and documented in the subject County letter, the Central Coast Water Board assesses compliance with the General Orders design requirements upon enrollment of the General Order and does not specify the exact conditions to be modeled to demonstrate compliance with these design requirements.

RWQCB-3 Section 4 of the Design, Construction, and Operation Requirements – Tier 2 Only prescribed by the General Order require detention basins to meet a hydraulic conductivity of 1.0×10^{-6} cm/sec or less. On May 22, 2023, the Central Coast Water Board approved an engineered alternative liner design for Basin #1 to bring the site into compliance with these minimum containment requirements of the General Order. If mitigation measure MM-HYD-1B requires modifications to the approved liner design, as drawn in the Basin #1 construction drawings dated November 28, 2022, the Central Coast Water Board will need to review the modifications for compliance with the General Order and issue a new approval letter.

Staff Comment: MM-HYD-5

RWQCB-4 Mitigation measure MM-HYD-5 would require Z-Best to increase the berm height of Basin #2 to at least 150.41 feet so the basin would be able to maintain two feet of freeboard above the 100-year base flood elevation.

The Basin #2 liner system is a 60-mil high-density polyethylene (HDPE) geomembrane, underlain by geosynthetic clay. Based on the Basin #2 construction drawing dated April 11, 2018, the liner terminates into the anchor trench at approximately 150 feet on the south facing berm of the basin. Central Coast Water Board staff are concerned that an increase in berm height would allow for storage of fluids at elevations above the liner system and therefore may pose a threat to the effectiveness of containment. Staff recommends that fluid elevations in Basin #2 not exceed the liner elevation if modification to the basin are implemented as part of mitigation measure MM-HYD-5.

If you have any questions, please feel free to contact Nick Smaira by phone at (805) 549-3467 or email at nicholas.smaira@waterboards.ca.gov, or Ryan Lodge at (805) 549-3506.

Sincerely,

 Digitally signed by Ryan
Lodge
Date: 2023.09.05
08:37:44 -07'00'

for Matthew T. Keeling
Executive Officer

cc:

Robert Salisbury, Santa Clara County, robert.salisbury@pln.sccgov.org

Samuel Gutierrez, Santa Clara County, samuel.gutierrez@pln.sccgov.org

Emma Rawnsley, AECOM, emma.rawnsley@aecom.com

Emmanuel Ursu, M-Group, eursu@m-group.us

John Doyle, Z-Best, john.doyle@greenwaste.com

Michael Gonzalez, WSP, michael.a.gonzalez@wsp.com

Angela Schroeter, Central Coast Water Board, angela.schroeter@waterboards.ca.gov

Ryan Lodge, Central Coast Water Board, ryan.lodge@waterboards.ca.gov

Nick Smaira, Central Coast Water Board, nicholas.smaira@waterboards.ca.gov

R:\RB3\Shared\LDU\Program\Compost\Compost Facilities\Z-Best\CEQA _response
ltr_ZBest.docx

GeoTracker ID: T10000008201

CIWQS Place ID: 630006



File: 25466
Pajaro River

June 20, 2023

Valerie Negrete
County of Santa Clara Planning
70 West Hedding, 7th Floor
San Jose, CA 95110

Subject: Recirculated Draft Environmental Impact Report (EIR) for Z-Best Composting Facility Modifications

Dear Valerie:

The Santa Clara Valley Water District (Valley Water) has reviewed the recirculated draft environmental impact report (EIR) for the proposed modifications to the Z-Best Composting Facility (Project), which made available on April 20, 2023. Based on our staff's review of the EIR, Valley Water has the following comments:

- VW-1 1. **Table 2-1 Summary of Impacts and Mitigation (Page 15):** There appears to be a formatting error as overlapping text is shown within the table.
- VW-2 2. **Figure 3-3, Existing Site Operations, (Page 32):** Detention basin #2 is shown as 2.0 acres, however, Section 3.1 – Project Location and Site Description (Page 28), describes the basin to have an area of approximately 2.1-acres. Please make sure all figures provided in the EIR are consistent with the descriptions provided in other sections throughout the EIR.
- VW-3 3. **Section 4.3.3.1, Leachate from ECS Composting Process (Page 57):** The second paragraph references the Hydrology and Water Quality section as 'Section 10;' this should be referenced as Chapter 11.
- VW-4 4. **Section 4.3.6.1, Finished Site Elevation Changes (Page 67):** The Project proposes a new pad within Area 1B to accommodate the ECS improvements, which in turn would raise the existing elevations by approximately one to two feet above the 100-year flood elevations. The EIR should reference the 100-year water surface elevation of 148.5-ft. (NAVD 88) and note that this elevation was established through a Conditional Letter of Map Revision (CLOMR) from FEMA, which was issued as part of prior improvements to the Z-Best facility. The vertical datum should also be referenced for all elevations specified in the EIR. Additionally, Schaaf and Wheeler's 2012 analysis, supporting the aforementioned CLOMR, should be included as part of Appendix E in the EIR.
- VW-5 5. **Section 4.3.6.2, Modification of Detention Basin #1 (Page 67):** The second paragraph indicates that *"The eastern portion of the existing basin would no longer to be [sic] used for stormwater detention."* This description is contrary to Figure 4-1 and Figure 4-7, both of which show the footprint of Detention Basin #1 being reduced so that the western portion of the existing basin is no longer in use. Please ensure that the description of the modified detention basin and the figures provided in the EIR are consistent.
- VW-6 6. **Section 4.3.6.2, Modification of Detention Basin #1 (Page 67):** The last sentence of this section notes that no modifications are proposed for Detention Basin #2; this is inconsistent with MM-HYD-5 (EIR, page 264), which proposes to increase the berm height for Detention Basin #2.
- VW-7 7. **Section 4.3.6.3, Flood Storage Facility Expansion (Page 69):** It is noted that the proposed flood storage facility will require excavations between 5- and 15-feet deep. The EIR should evaluate the existing groundwater table and its impacts to the capacity of the proposed flood storage expansion.



Ms. Valerie Negrete

Page 2

June 20, 2023

- VW-8** 8. **Section 11.1.3 Existing Composting Operations – Storm Water System Management (Page 226):** The last paragraph indicates “*Floodwater storage areas, detention basins, and undeveloped Z-Best property are located east and south of Areas 1 and 2.*” Figure 3-3 (Existing Site Operations) in the EIR should specify the areas dedicated to floodwater storage so the areas currently being utilized for floodwater storage is clear.
- VW-9** 9. **Section 11.1.3.1 Area 1 and Detention Basin #1 (Page 226):** The last sentence indicates that Detention Basin #1 has an existing berm that has an elevation of 139-feet; all elevations provided in the EIR should specify the vertical datum.
- VW-10** 10. **Section 11.1.3.1 Area 2 and Detention Basin #2 (Page 226):** The last sentence of the second paragraph indicates that Detention Basin #2 has an existing berm that has an elevation of 149-feet; all elevations provided in the EIR should specify the vertical datum.
- VW-11** 11. **Section 11.4.1.1 Leachate Characteristics and Quality (Page 249):** Though the proposed Engineered Composting System (ECS) will reduce the overall volume of Leachate, TetraTech’s Peer Review of the Project’s hydrology and water quality technical analyses (Appendix E-1) concludes that leachate concentrations within Basin 1 “*will most likely increase over time as the leachate evaporates and is recycled for dust control and compost moisturization*” (Conclusion for Task 2, Page 4). The EIR should acknowledge this conclusion and provide a discussion of how increases in leachate concentrate within Basin #1 will be managed.
- VW-12** 12. **Section 11.4.1.1 Proposed ECS System Pad Design (Page 251):** The Project proposed to elevate the existing pad by at least one foot above the base flood elevation. The EIR should reference the 100-year water surface elevation of 148.5-ft. (NAVD 88) and note that this elevation was established through a Conditional Letter of Map Revision (CLOMR) from FEMA, which was issued as part of prior improvements to the Z-Best facility. The vertical datum should also be referenced for all elevations specified in the EIR. Additionally, Schaaf and Wheeler’s 2012 analysis, supporting the aforementioned CLOMR, should be included as part of Appendix E in the EIR.
- VW-13** 13. **Proposed Storm Water/Leachate Conveyance System Improvements (Page 252) -** To comply with the Composting General Order, the Project proposes to design drainage conveyance systems onsite, which have sufficient capacity to direct both wastewater and direct precipitation from the 25-year, 24-hour peak storm event. Though the General Composting Order only requires drainage systems to be provided with sufficient capacity to handle the 25-year, 24-hr storm event, the Project should evaluate events up to the 100-year, 24-hour peak storm event and consider providing adequate capacity to handle larger storm events. In section 10.1.3.5 (page 196), the EIR acknowledges “more frequent and extreme storm events” as a result of climate change. The series of atmospheric rivers that passed through the County during 2023 also serves as recent examples of the possibility of these more extreme and frequent events.
- VW-14** 14. **MM-HYD-1A: Demonstrate Sufficient Pump Capacity (Page 253) -** As mitigation for the Project’s potential impact to surface or groundwater quality, the EIR proposes to have the applicant “*submit details and calculations to the County Planning Department*” to demonstrate that the proposed onsite pump has sufficient capacity “*during a 25-year, 24-hour storm event without causing localized flooding which inundates the southeast corner of the green waste compost area.*” The Project should evaluate events up to the 100-year, 24-hour storm event and consider providing adequate pumping capacity to handle larger storm events. As noted in Comment #11 the possibility of more extreme and frequent events should be considered when evaluating mitigatory measures for the Project
- VW-15** 15. **MM-HYD-1B: Increase Detention Basin Capacity (Page 254) -** The EIR proposes to either “*increase the capacity of Detention Basin #1 and/or Detention Basin #2, such that combined detention basin capacity is sufficient to hold at least 22.8 million gallons of water without discharging and maintain a freeboard of 2 feet.*” In the previous section – “Proposed Storm Water Detention Capacity,” the EIR states that “*there remains a substantial risk of overtopping if an extreme event occurs during a wet year when the detention basins are being used to hold prior runoff from the composting facility, even assuming the currently proposed capacity increase in Detention Basin #1.*” As noted in the previous comments for the

Ms. Valerie Negrete

Page 3

June 20, 2023

proposed drainage and pumping system improvements, the Project should evaluate storm events up to the 100-year, 24-hour storm event, and ensure that mitigatory measures prevent any discharges from the detention basins during the 100-year, 24-hour storm event to prevent overflows from percolating into groundwater and/or entering the Pajaro River.

- VW-16** 16. **Impact HYD-4, Section 11.4.4.1 On-Site Improvements (Page 260)** - The second paragraph notes that the existing pad upon which the existing CTI composting process takes place would be raised by approximately one foot above the 100-year base flood elevation. As previously noted, the EIR should reference the 100-year water surface elevation of 148.5-ft. (NAVD 88) and note that this elevation was established through a CLOMR which was issued by FEMA for previous site improvements. The vertical datum should also be referenced for all elevations specified in the EIR. Additionally, Schaaf and Wheeler's analysis detailing previous improvements for the site, as well as the issued CLOMR should be included as part of Appendix E in the EIR.
- VW-17** 17. **Section 11.4.4.2 SR-25 Improvements (Page 262)** – It is noted that *“The applicant would be required to provide calculations showing the pre-and post-project runoff as related to improvements within the SR-25 right of way when submitting the encroachment permit application to Caltrans for the project-related work on SR-25.”* At a minimum, the EIR include a preliminary analysis of the anticipated runoff (both volume and rate) under post-project conditions to ensure that pre-project conditions are not exceeded. Furthermore, the EIR should specify the terminus, or receiving body of water for the existing storm water drainage ditches running along each side of SR-25. The analysis should also assess whether the terminus or receiving body of water would be impacted due to additional flows generated by the proposed improvements to SR-25.
- VW-18** 18. **Section 11.4.5 Impact HYD-5 (Page 263)** – The 100-year base flood elevation is specified as 148.41-ft. in several instances throughout the referenced section. It should be noted that the CLOMR issued by FEMA, established the 100-year base flood elevation as 148.5-ft. (NAVD 88). Please ensure that the base flood elevation specified in the EIR is consistent with the CLOMR elevation. The vertical datum should also be specified for all flood elevations referenced in the EIR. Additionally, the freeboard specified for Detention Basin #2 (0.59-ft.) should be revised to reflect the established base flood elevation noted above.
- VW-19** 19. **Section 11.4.5 MM HYD-5: Increase Berm Height of detention Basin #2 (Page 263)** – The EIR proposes to *“increase the berm height of Detention Basin #2 to at least 150.41-ft. so that at least 2 feet freeboard above the base flood elevation is maintained.”* This appears to be inconsistent with Section 4.3.6.2, which states that *“No modifications to Detention Basin #2 are proposed as part of the project.”* It should be noted that Schaaf and Wheeler's 2012 flood study, and subsequent CLOMR from FEMA, established the 100-year base flood elevation of 148.5-ft. (NAVD 88). Please ensure that the base flood elevation specified in the EIR is consistent with prior studies. The vertical datum should also be specified for all flood elevations referenced in the EIR. Additionally, the last paragraph of this section indicates that implementation of MM=HYD-1B and MM-HYD-5 would ensure that *“the potential for the capacity of both detention basins to be exceeded would be reduced...”* While the berm heights may be sufficient to keep overbank flows from Pajaro River from mingling with the impounded water in the detention basins, the EIR should assess whether the detention basins have adequate volume to contain precipitation and runoff generated onsite during larger storm events, and ultimately prevent detention basin overflows from discharging into Pajaro River. As previously noted, the Project should evaluate runoff generated by storm events up to the 100-year, 24-hour storm event to prevent overflows during more extreme precipitation events.
- VW-20** 20. **Appendix E – Updated Floodplain Storage Analysis for Z-Best Compost Facility (Schaaf and Wheeler Memorandum dated October 25, 2022):** It is not clear whether the proposed modifications to Detention Basin #1 is being accounted for in the modeled cross sections. More specifically, cross sections 14403 (Figure 6) and 14214 (Figure 7), which according to Figure 8, appears to include Detention Basin 1, do not show the proposed berm height of 150.5-ft. (NAVD 88). All proposed fill should be accounted for in the floodplain study.

Ms. Valerie Negrete

Page 4

June 20, 2023

- VW-21** 21. **Appendix E – Updated Floodplain Storage Analysis for Z-Best Compost Facility (Schaaf and Wheeler Memorandum dated October 25, 2022):** It is understood the updated floodplain analysis accounts for the fill needed to accommodate the proposed improvements along SR-25, however the memorandum does not specify whether the proposed retaining wall is considered in the analysis. More specifically, the analysis should evaluate whether the proposed retaining walls along SR-25 has the potential to impede or redirect flows when the area is subject to more shallow flood events.
- VW-22** 22. **General:** The EIR needs to clarify whether the proposed changes to the overall topography, and resulting impacts from those changes, are evaluated with respect to the existing terrain (determined from a recent survey), or an older terrain. Please specify the year for each terrain referenced in the EIR.

If you have any questions, or need additional clarification of Valley Water's comments, you may reach me at 408-630-3066, or e-mail at bhwang@valleywater.org. Please reference file number 25466 on future correspondences regarding this project.

Sincerely,

DocuSigned by:



2810C0F620844F8

BENJAMIN HWANG, P.E.

ASSOCIATE ENGINEER - CIVIL

Community Projects Review Unit

Cc: Y. Arroyo, B. Hwang, V. De La Piedra, J. Gurdak, G. Tick, E. Zedler, J. Yang, File



318 Cayuga Street
Salinas, CA 93901

831.754.2444

JRGattorneys.com

June 20, 2023

Via E-Mail

County of Santa Clara Planning
Attention: Valerie Negrete (valerie.negrete@pln.sccgov.org)
70 West Hedding Street
San Jose, CA 95110

Re: Dorado Leasing Comments on Z-Best Recirculated Draft EIR.

Dear Ms. Negrete:

On behalf of Dorado Leasing (“Dorado”), the owner of the 570-acre Sargent Ranch, which is contiguous to the southern boundary of the Z-Best facility, we submit the following comments on the Recirculated Draft EIR (“RDEIR”). These comments are in addition to the comments our firm submitted on the original Draft EIR, which remain relevant to the Z-Best project and highlight the potential environmental impacts of the project on adjacent high-quality farmland. Rather than resubmitting our prior March 1, 2021, letter (“March 1 Letter”) in its entirety, we incorporate by reference the various points and environmental issues that Dorado raised in this letter, which remain relevant. Accordingly, we request and CEQA demands that the Final EIR include written responses to Dorado’s comment letter on the original Draft EIR, dated March 1, 2021, and these additional comments on the RDEIR.

DORADO-1

A. The Important Purpose of CEQA and an EIR

DORADO-2

As we explained in our March 1 Letter, CEQA is a comprehensive scheme designed to provide long-term protection to the environment. In enacting CEQA, the Legislature declared its intention that all public agencies responsible for regulating activities affecting the environment give prime consideration to preventing environmental damage when carrying out their duties. CEQA is to be interpreted “to afford the fullest possible protection to the environment within the

PARTNERS

Aaron P. Johnson
Paul A. Rovella
Managing Partner
Jason S. Retterer
Robert E. Rosenthal
Jeff R. Gilles
Founding Partner
Stephan A. Barber
Peter D. Brazil

ATTORNEYS

Patrick S. M. Casey
S. Craig Cox
M. Allen Hopper
Cat Mineo
Harrison Y. Osaki
Karin E. Richards
Logan R. Walter

OF COUNSEL

David W. Balch
Natalie M. Lupo
Ren Nosky
Ronald A. Parravano

Johnson, Rovella, Retterer, Rosenthal & Gilles, LLP

SALINAS MONTEREY HOLLISTER PASO ROBLES WATSONVILLE

County of Santa Clara Planning
Attention: Valerie Negrete
June 20, 2023
Page 2 of 7

reasonable scope of the statutory language.”¹ Both the mandate and the procedure of CEQA are carefully crafted and well ingrained into the law of this state.²

The process compelled by CEQA “is a meticulous process designed to ensure that the environment is protected”³ In fact, “[t]he integrity of the [CEQA] process is dependent on the adequacy of the EIR.”⁴ Thus, the EIR, with all its specificity and complexity, is the mechanism prescribed by CEQA to force informed decision making and to expose the decision making process to public scrutiny.⁵ As the Supreme Court has established, the EIR is “the heart of CEQA.”⁶

An EIR is an “environmental ‘alarm bell’ whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return.” The EIR is also intended “to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action.” Because the EIR must be certified or rejected by public officials, it is a document of accountability. If CEQA is scrupulously followed, the public will know the basis on which its responsible officials either approve or reject environmentally significant action, and the public, being duly informed, can respond accordingly to action with which it disagrees. The EIR process protects not only the environment but also informs self-government.⁷

As such, the purpose of any EIR is to provide public agencies and the public with “detailed information about the effect which a project is likely to have on the environment to list ways in which the significant effects of such project might be minimized; and to indicate alternatives to such a project.”

DORADO-3 B. The RDEIR Continues to be Legally Inadequate

An agency abuses its discretion by failing to proceed in the manner required by law if its action or decision does not substantially comply with the requirements of CEQA.⁸ Under this test, omission of information that CEQA mandates be included in an environmental analysis constitutes a failure to proceed in the manner required by law.⁹

¹ Mountain Lion Foundation v. Fish and Game Com. (1997) 16 Cal.4th 105, 112.

² County of Amador v. El Dorado County Water Agency (1999) 76 Cal.App.4th 931, 943

³ Planning and Conservation League v. Department of Water Resources (2000) 83 Cal.App.4th 892

⁴ Save Our Peninsula Committee v. Monterey County Board of Supervisors (2001) 87 Cal.App.4th 99, 118-119

⁵ No Oil, Inc. v. City of Los Angeles (1974) 13 Cal.3d 68, 86.

⁶ Laurel Heights Improvement Ass’n v. Regents of the University of California (Laurel Heights I) (1988) 47 Cal.3d 376, 392.

⁷ Ibid

⁸ Pub Res C §§21168, 21168.5; Communities for a Better Env’t v. South Coast Air Quality Mgmt. Dist. (2010) 48 C4th 310

⁹ Banning Ranch Conservancy v. City of Newport Beach (2017) 2 C5th 918, 935

County of Santa Clara Planning
Attention: Valerie Negrete
June 20, 2023
Page 3 of 7

The Court of Appeal in *Galante Vineyards v. Monterey Peninsula Water Mgmt. Dist.* (1997) 60 CA4th 1109, 1117 held:

"[T]he ultimate decision of whether to approve a project, be that decision right or wrong, is a nullity if based upon an EIR that does not provide the decision-makers, and the public, with the information about the project that is required by CEQA. The error is prejudicial if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory goals of the EIR process.

With these general legal principles in mind, Dorado submits the following specific comments on the RDEIR.

DORADO-4

1. The RDEIR's Analysis of Agricultural Impacts Continues to Be Legally Deficient.

Dorado re-engaged Dr. Trevor Suslow to review the additional technical information that was added to the RDEIR relating to the project's potential impact on farmland. As you know, Dr. Suslow previously submitted comments on the original Draft EIR, which explained and documented these potential impacts, and those comments are attached as **Exhibit A** and incorporated herein by reference. As noted in Dr. Suslow's original analysis, the Z-Best expansion has "the potential to increase physical, chemical, and microbial contamination of edible horticultural commodities in proximal production zones." Dr. Suslow's conclusion is based on numerous studies and technical reports that are referenced in Dr. Suslow's analysis that found that composting facilities generate airborne microorganisms that could impact surrounding areas, including in this case, the Ranch and neighboring farm fields.

Dr. Suslow reviewed the RDEIR's analysis of the project's potential agricultural impacts and the supporting technical data and analysis to determine whether his prior comments and concerns were adequately addressed. As documented in Dr. Suslow's comments on the RDEIR, which are attached as **Exhibit B** and incorporated by reference, the RDEIR continues to overlook and omit any analysis of certain discrete impacts of the composting operation that could impact adjacent farmland.

Until this additional analysis is undertaken, it is impossible to determine what specific mitigation or minimization measures could be incorporated into the project design or otherwise required to address these impacts. Nonetheless, Dr. Suslow identifies and recommends that the project implement certain mitigation measures to address the potentially significant increase in bird vectors and bioaerosol impacts. Dorado also identified and described several other mitigation measures in its March 2001 letter that have been ignored or rejected.

County of Santa Clara Planning
 Attention: Valerie Negrete
 June 20, 2023
 Page 4 of 7

As we noted in our March 2021 letter, a fundamental purpose of an EIR is to identify ways in which a proposed project's significant environmental impacts can be mitigated or avoided. Pub Res C §§21002.1(a), 21061. To implement this goal, an EIR must describe feasible mitigation measures that can minimize the project's significant environmental effects. 14 Cal Code Regs §§15121(a), 15126.4(a). As one court observed, "A gloomy forecast of environmental degradation is of little or no value without pragmatic, concrete means to minimize the impacts and restore ecological equilibrium."¹⁰ Accordingly, Dorado again requests that the County require Z-Best to implement mitigation measures that would further reduce or minimize the potential impacts of the logical increase in bird vectors and bioaerosol transmission. Even assuming the RDEIR's authors disagree with Dr. Suslow's conclusions, in an abundance of caution, the County should require Z-Best to implement such measures.

DORADO-5

2. The RDEIR continues to fail to correlate the project's adverse air quality impacts to resultant adverse health effects.

Failing to correlate the Project's adverse air quality impacts to increased incidents of health ailments constitutes a prejudicial abuse of discretion. As the Court of Appeal in *Bakersfield Citizens for Local Control v. City of Bakersfield* ("Bakersfield") (2004) 124 Cal.App.4th 1184, 1220 explained: health problems caused by a project must be addressed in an environmental impact report, including incidents health effects caused by increases in air pollution. Specifically, CEQA requires an environmental impact report to discuss "health and safety problems caused by the physical changes" by the proposal. §15126.2(a). To meet CEQA's disclosure requirement, an environmental impact report must "correlate the identified adverse air quality impacts to resultant adverse health effects." *Bakersfield* at 1219 (italics added). "Correlate" is defined as: "to bring (a thing) into mutual relation (with another thing); **calculate** or show the reciprocal relation between; specif., to bring (one or two related or interdependent **quantities**, sets of statistics, etc.) into contrast (with the other)." Webster's New World Dictionary 319 (2d College ed. 1985) (italics in original; bold added).

Thus, the court in *Bakersfield* used "correlate" to mean an environmental impact report must disclose the proportional relationship between increased tonnages in air pollution and increased incidents of health ailments by calculating and quantifying the relationship. The DEIR fails to comply with this necessary informational disclosure requirement. Indeed, *Bakersfield* teaches us a truncated analysis involving a bare statement that increased air pollution tonnages means more people get ill fails to satisfy CEQA's information disclosure requirement.

In *Bakersfield*, the two EIRs at issue calculated the approximate increased tonnage of air pollution and then baldly concluded that more air pollution means more health and respiratory ailments.' *Id.* at 1220. According to *Bakersfield*, this embryonic level of detail is insufficient and

¹⁰ Environmental Council of Sacramento v City of Sacramento (2006) 142 CA4th 1018, 1039

County of Santa Clara Planning
Attention: Valerie Negrete
June 20, 2023
Page 5 of 7

resulted in the Appellate Court rejecting the air quality analyses for failing to quantify or correlate the relationship between increased health ailments and increased air pollution. *Id.* at 1220-1221. Accordingly, it is not enough for an environmental impact report to simplistically conclude air pollution will increase and then supply a laundry list of pollutants and related health effects. Rather, CEQA is satisfied only when an EIR discloses, and quantifies anticipated increases of health ailment events resulting from a project's increases in air pollution tonnages.

The RDEIR continues to suffer the same affliction as the DEIR and the *Bakersfield* EIRs and likewise fails to satisfy CEQA. The RDEIR notes in Table 7-1 that certain pollutants can contribute to certain health ailments but never correlate the actual increases of air pollutants to the number and type of air pollution related conditions and diseases. For example, Table 7-7 of the DEIR states that the project would generate 123.19 per day of NOx emissions due to the additional truck trips, which exceeds the applicable significance threshold of 54 pounds per day. However, the DEIR fails to correlate this increase in NOx emissions to any potential increased health risk to workers at the Z-Best facility, farmworkers in the adjacent farm fields, or residents in the surrounding area. The RDEIR appears to blame the existing modeling for its inability to translate project generated pollutant emissions into specific health effects on people. However, it's unclear why the Health Risk Assessment that was prepared for Toxic Air Contaminants could not assess the potential impact of other types of pollutant emissions on people or surrounding and uses. This error is compounded by the RDEIR's ongoing failure to adequately address the impact of bioaerosols on human health and safety as Dr. Suslow explains in **Exhibit B**, which can cause the same types of health effects as NOx.

The RDEIR's air quality analysis continues to ignore glaring omissions and falls short of fulfilling the statutory disclosure requirement. This truncated analysis violates CEQA by omitting a correlation between adverse air quality impacts and resultant adverse health effects and does not disclose the severity of the Project's environmental impacts. *Bakersfield* holds that brief references to, or the listing of, potential respiratory illnesses do not satisfy CEQA. It is only when correct and feasible scientific analysis is conducted and the EIR calculates the significance of the impact in terms of increased events of disease and suffering, are the public and decision makers notified of a project's true impacts. This correlated information is scientifically possible and legally required, and the omission amounts to a prejudicial failure to proceed in the manner required by law.

DORADO-6 3. The RDEIR Fails to Analyze a Reasonable Range of Project Alternative and Its Rejection of the Fully Enclosed Alternative, Which Would Significantly Minimize or Avoid Agricultural Impacts, Is Not Supported by Substantial Evidence.

CEQA requires that an EIR analyze a "reasonable range" of project alternatives that would minimize or avoid the significant environmental impacts of a project. The California Supreme

County of Santa Clara Planning
Attention: Valerie Negrete
June 20, 2023
Page 6 of 7

Court has described the discussion of mitigation and alternatives as "the core of an EIR."¹¹ An EIR must also discuss alternatives even if all the project's significant environmental impacts will be avoided or reduced by mitigation measures.¹²

In our March 2021 letter, Dorado criticized the Draft EIR's abbreviated alternatives analysis, which only studied two potential alternatives, a "Reduced Project Scale" alternative and a "No Driveway Relocation" alternative." The other alternative, the No Project Alternative, clearly does not meet any of the key project objectives of the project and is not a true project alternative. We explained that CEQA demands more than analyzing just two alternatives, particularly for a large-scale composting operation that will result in significant and unavoidable air quality impacts and the types of potentially significant impacts on agricultural resources and human health and safety discussed above.

Dorado recommended that the Draft EIR analyze an entirely enclosed or indoor composting facility like the one that was described and discussed in the 2015 Cal Poly Study that was referenced in our letter. This type of system provides the best pathogen, odor, and vector control, and has the smallest footprint compared to other composting technologies (ECS, 2015). The unique aeration design helps capture and dramatically decreases greenhouse gas and odor emissions. The special aeration system provides a controlled airflow to maintain uniform biomass temperatures. The aeration system shown in the figure below is designed to conserve energy with adaptive control strategies.

In *Center for Biological Diversity v. County of San Bernardino* (2010) 185 CalApp.4th 866, the Court of Appeal found that an EIR for an outdoor composting facility was legally inadequate because it did not consider an enclosed facility alternative that would significantly reduce air quality impacts. Like the RDEIR, the EIR in the *Center for Biological Resources* case only studied three (3) alternatives, the statutorily mandated no-project alternative, a reduced capacity alternative, and an off-site alternative. The Court determined that this range of studied alternatives was inadequate where there was evidence in the record that demonstrated that an enclosed alternative would significantly reduce air quality impacts and was potentially economically feasible.

Rather than analyzing a fully enclosed composting facility, the RDEIR (Section 18.3.2) dismisses this alternative for several reasons. First, the RDEIR suggests that the alternative is not economically infeasible because it would substantially increase capital expenditures and increase the overall cost of the project by 2.5 to 3 times. However, the only cited reference for this statement is a 2022 personal communication with someone named O'Neill, who is presumably a representative of the project applicant. There is no written comparative analysis of the cost of the

¹¹ *Citizens of Goleta Valley v Board of Supervisors* (1990) 52 C3d 553, 564.

¹² *Laurel Heights Improvement Ass'n v Regents of Univ. of Cal.* (1988) 47 C3d 376, 403

County of Santa Clara Planning
Attention: Valerie Negrete
June 20, 2023
Page 7 of 7

open bunker composting versus the enclosed facility option and other context for this conclusion. As the Court of Appeal has explained:

"The fact that an alternative may be more expensive or less profitable is not sufficient to show that the alternative is financially infeasible. What is required is evidence that the additional costs or lost profitability are sufficiently severe as to render it impractical to proceed with the project." (citation omitted) While an EIR need not analyze "every imaginable alternative or mitigation measure," "it should evince good faith and a reasoned analysis."¹³

Second, the RDEIR dismisses the alternative based on conclusory statements that construction of the enclosed systems would increase construction-related haul trips and air pollutant emissions, aesthetic impacts, energy use, and GHG emissions and would not decrease the project's significant and unavoidable environmental impacts relating to NOx emissions, Clean Air Plan Consistency, or VMT. However, the RDEIR provides no specific information relating to the construction (e.g., number and types of construction equipment) or operational requirements of a fully enclosed project to provide any meaningful comparison with the project to substantiate these statements. Unless such a comparative analysis is provided, neither the County decision-makers, nor the public, have sufficient information to assess the veracity of this conclusion.

We request that the County require more detailed review and analysis of a fully enclosed project alternative, which could demonstrate that indeed such an alternative is economically feasible and that the project would remain profitable even assuming the additional capital expenditures.

We appreciate the opportunity to comment on the DEIR for the Z-Best facility expansion and look forward to reviewing the County's responses to the DEIR that address these comments, concerns, and revisions.

Sincerely,

JRG Attorneys at Law



Jason S. Retterer

¹³ *Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 599.

EXHIBIT A

Suslow 26 February 2021

Considerations for Physical, Chemical, and Microbial Food Safety and Buyer Acceptance Impacts Associated with Proximity to Expanded Operations Receiving Green Waste, Commercial Food Waste, and Post-consumer Food Waste

There are diverse conditions and potentially interrelated factors associated with siting or significant expansion of a waste handling site, which includes wastewater treatment facilities, landfill, composting operations, and hauler-spreader holding and transfer yards. These adjacent land features are known to have the potential to increase physical, chemical, and microbial contamination of edible horticultural commodities in proximal production zones. These sites, depending on variable features and distances, may directly or indirectly result in negative impacts to surrounding agricultural production areas and should be carefully evaluated. The absence of realization of an anticipated impact is wholly dependent upon the quality of the facility and engineering design as well as operational controls of the site as a baseline. To prevent an identified expansion project from realization of a foreseeable agricultural nuisance, the design and effectiveness of innovated proactive measures to prevent, minimize, and contain the potential off-site movement or aerosolized dispersal of hazards and sources of microbial contamination associated with these operations, especially large mixed and variable waste handling facilities, are needed. Planning for the reduction/minimization of the windborne dispersal and deposition of physical and hazardous chemical or pathogen containing aggregates or particulate fines are critical for a comprehensive EIR for these projects. Equally, reduction or mitigation of enhanced attractant factors to vermin and vectors under the most challenging conditions associated with food waste and other post-consumer waste streams must be anticipated. This precautionary impact assessment is well supported and reasonably extrapolated from an abundance of available science-based authoritative and peer-reviewed published knowledge and practice.

The intent of this brief document, at this time, is not to provide a comprehensive literature review, but to support and encourage immediate efforts to develop an objective overview of potential food safety impacts associated with proximity to waste handling sites, with specific focus on large composting operations. The potential for demonstrable risk of contamination of edible horticultural crops as well as the issues of perceived hazard and negative economic affects or competitive market disadvantage are briefly addressed. The current situation in the production and marketing of fresh consumed, raw, or value-added agricultural products, especially leafy greens and herbaceous culinary herbs, necessitates that any broad analysis of the potential for local and adjacent land-use features to influence the real or perceived physical, chemical, and microbial hazards be carefully considered. Domestic and international wholesale, retail, foodservice, and mass merchant buyers, as well as public health regulators, are demanding increasingly complex and comprehensive documented food safety programs. To assess the potential impact of a composting operation expansion on local agricultural and ag-enterprise operations, it is important to evaluate the potential for unintended

Suslow 26 February 2021

harm beyond the loss of farmlands, unique farmland, or forested and timberland resources.

Previous related experience by T. Suslow, Ph.D. involved the assessment of potentially contributing factors to a regional *E. coli* O157:H7 outbreak associated with Romaine lettuce produced adjacent to a compost facility which began accepting increased green waste and institutional and urban food scraps and food waste (Cheung, 2015). The implicated compost operation was well managed and had been in operation for many years as an immediate neighboring land use feature to mixed cool season vegetables. Though categorical proof was not obtained, the changed feedstock components to greater volumes of food waste which were associated with increased vector attractant potential, primarily birds, was a notable factor.

Assessment of the Risk Associated with Composting Sites

A preliminary digital literature search of scientific journals and related publications and a similar broad search of Internet-accessible public documents revealed extensive information on the risk potential of various hazards, including microbial contamination transfer, from compost operations to off-site lands, communities, and crop production. The uniform conclusion contained within multiple studies, issue briefs, and policy reviews, across global locations, are consistent in supporting the need for applying science-based containment measures, including dust abatement windbreaks, within effective operational design and governance. It is recognized that long established standards, regulated permit requirements, and precautionary measures are needed to protect both operators, the local environment, and agricultural enterprises.

A leading source of presumptive risk of transferable contamination from composting facilities, especially those receiving commercial food waste and post-consumer food waste is the direct and indirect vectoring of microbial pathogens by rodents, insects, and birds, particularly crows, pigeons, and gulls.

In summary, all studies and reports related to or scientifically addressing downstream public health concerns about infectious agents transmitted from waste handling siting decisions and facilities are consistent in defining a presumption of risk in the absence of a properly designed and operated containments and vector control programs.

Negative Economic Impacts

Scientific literature and science-based risk assessments cannot be adequately employed to dismiss legitimate concerns for potential economic impact to agricultural enterprises within proximity to a perceptual source of food safety hazards. It is not the purpose of this document to argue either side of this sensitive issue. However, it seems prudent that any compost facility expansion EIR identify and address the current realities of fresh produce processing and marketing, especially with regards to particulate deposition

Suslow 26 February 2021

residues and microbial food safety issues. The needs inherent in retaining and improving consumer confidence in the safety of fresh produce, consumed without a terminal kill step, to mitigate the potential for contamination by fecal indicators, which are part of many buyer acceptance requirements, and pathogens mandates that adjacent land use risk factors be seriously and thoroughly evaluated. Once site-specific potential risks have been identified, risk assessment may be engaged as a productive action to determine the science-basis for the level of anticipated risk exposure. As the scientific basis for risk assessment is not yet available for every situation, risk perception tends to be sufficient cause for certain buyer-imposed food safety metrics, which has resulted in the loss of prime agricultural land for high value food crop production. Against this backdrop and the unknown potential for competitors to, unfairly, use proximity to expanded waste handling activities as a negative marketing influence on buyers, it is prudent and responsible to commission a more inclusive review to address concerns for significant negative impacts of site expansion and inadequacies of current prevention and containment measures on immediately surrounding agricultural viability.

**Prepared by Trevor V. Suslow, Ph.D.
Emeritus Extension Specialist faculty
University of CA, CAES, Dept. Plant Sciences**

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EXHIBIT B

Jason S. Retterer
JRG Attorneys at Law
318 Cayuga St.
Salinas, CA 93908

Re: Comments on Z-Best Recirculated Draft EIR

20 June 2023

Dear Jason:

You asked me to review and comment on the Recirculated Draft Environmental Impact Report (“RDEIR”) that the County of Santa Clara has prepared for the Z-Best Composting Facility Modifications. I also reviewed the “Memorandum: Z-Best Composting Facility – Evaluation of potential bioaerosol emissions from proposed operations compared to existing operations,” dated December 9, 2022 and prepared by AECOM. Attached is a short biography relating to my expertise in evaluating the potential risks and hazards of adjacent land uses on farmland.

I had previously commented on the original Draft EIR and identified a number of potential hazards and impacts of Z-Best’s proposed modifications to its current composting processes on adjacent agricultural land. Those comments are incorporated by reference herein.

While the County has endeavored to address these potential impacts in the RDEIR, the RDEIR still does not adequately address the project’s potential impacts on surrounding farmland. My specific comments are as follows.

- DORADO-7**
- The RDEIR still does not adequately address the likelihood of increased vector attraction, predominantly birds and specifically American Crow readily observed at and around the operations from viewpoints on the adjacent farmland. Due to increased volume of incoming materials and open-bunker composting, the bird activity observed by personal observation and readily observed on the Z-Best Virtual Tour of the Gilroy facility, notwithstanding a windrow format versus bunkers, the risk potential for bird movement between the diverse operational units from receiving to finished compost facility have not been sufficiently addressed. The increased risk potential is fundamentally a two-fold leading issue. Simply stated, an expanded volume of raw materials and in-process compost in combination with known and routine crop development and crop management inputs on the adjacent farm represents a greater risk of avian species of primary concern, such as cowbirds, gulls, and crows from the facility into farm (6).

To mitigate the risk of increased bird vectors, I recommend that an assessment of correspondingly more substantial non-lethal bird harassment and diversion mitigation offset practices be undertaken by the County and addressed in the RDEIR. Considerations should include but not be limited to species-specific sonic wave technologies (e.g. [Sonic Nets](#)) and strategic placement of modern laser-sentinel devices (e.g. [Bird Control Group](#)). Specialized laser devices have been effectively used in acute and chronic bird diversion tactics at airports and vineyards, for example.

- DORADO-8**
- Irrespective of the development of the bulk bunkered pile with a 6-inch finished product layer, in-process pile basal “tail edges” will invariably be slow to (or potentially never) reach the 55 degrees Celsius inactivation temperature asserted as an enhanced process safety factor. 55 degrees Celsius is the minimal bulk temperature of this operational window for pathogen lethality, dependent on materials and environmental conditions. This basement level standard has been demonstrated to be operationally

non-uniform in surveys conducted by the University of Florida in conjunction with Food and Drug Administration programs regarding the safety of soil amendments (1, 2). While these studies included aerated compost masses which incorporated animal manures in the feedstock, the studies do not obviate the prudent step of considering this potential source of contaminants. The RDEIR does not address this “tail edge” issue.

DORADO-9 • Bacterial pathogens of concern have the potential to develop heat and other stress tolerance traits on the incoming materials prior to receiving and/or during pre-process hold times. The target “come-up” threshold of 55 degrees Celsius (131 Fahrenheit), or greater but less than 70 degrees Celsius (158 degrees Fahrenheit) in 48 hours is an enhancement to the current process. Consideration of pre-adaptive tolerance, rarely included as a composting process performance factor in most experimental risk assessment and validation studies, was not considered in this narrative. Pre-adaptive tolerance is a common terminology to describe the genetically determined response bacteria, as used here, can undergo following a non-lethal stress exposure which then adapts the surviving cells to greater tolerance for the same or more severe stress exposure, such as elevated temperature. This stress-tolerance induction response simultaneously conveys resistance to multiple stresses common to composting, as reported in several peer-reviewed reports (3, 5, 7, 8). A further enhancement to accelerate “come-up” time which has been studied uses heated forced aeration consistently or during periods of cool to cold seasonal weather conditions. This would better ensure an adequate and more uniform lethal temperature distribution.

DORADO-10 • The potential for pooling water at these base layers with process water addition, as occurs with the current system, would also occur in open bunker arrays during seasonal rain. Such pooled moisture has the potential to provide an environment for amplification of bacterial pathogens. The RDEIR should consider the impact on pooled moisture to amplify bacterial pathogens and possible steps or measures that could be taken to eliminate any pooling. Elevated transference potential, due to greater populations and distribution of pathogens across the facility footprint, mediated by any of the recognized physical or biological vectors has the potential to result in a partial or complete loss of the adjacent crop.

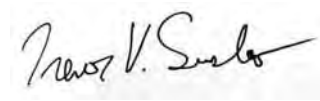
DORADO-11 • The assessment of fugitive dust and aerosolized particulates did not adequately address the full breadth of interacting factors which could result in sporadic but consequential release from diverse boundary layers within operational units as well as during handling and transfers. As just one example, the design and elevation of the proposed open-channel conveyance relative to wind speed and wind run, especially under extreme conditions, was not included in the RDEIR’s analysis. Studies cited to establish likely distances of fugitive dust and bioaerosols do not adequately address the scale of the proposed expansion and predictable adverse conditions to containment of the materials likely to be experienced in a year-round operation.

To mitigate this risk, I recommend that the RDEIR require this project to implement risk reduction practices such as stopping certain high aerosol-generating operations during high wind conditions or seasonal periods when wind direction is counter to prevailing vectors.

DORADO-12 • A robust dust dispersal survey across an extended timeframe coinciding with seasonal farming is a positive step and will benefit from an additional detailed design development effort. A comprehensive longitudinal study and granular documentation of site-specific “fugitive dust” dispersal characteristics is necessary to best develop data-informed decisions regarding the mitigations. Such a study would best inform whether and which design changes are warranted, and where, to optimize the mitigation of

bioaerosolization and off-site movement of particulates. An example of impacts of off-site movement and impacts is provided in Frączek et. al. 2022 (4.)

DORADO-13 Based on my review of the Recirculated Draft EIR and associated documents that you have provided, it is my opinion that additional analysis and assessments of additional or alternative preventive measures and mitigation practices or technologies to reduce and manage the inherent risk potential associated with any composting facility should be undertaken prior to any decision on expansion is made.



Trevor Suslow, Ph.D.

Trevor Suslow Consulting, LLC
Professor of Cooperative Extension
Emeritus
University of California, Davis
tvsuslow@ucdavis.edu

1. Dunn LL, Sharma V, Chapin TK, Friedrich LM, Larson CC, Rodrigues C, Jay-Russell M, Schneider KR, Danyluk MD. The prevalence and concentration of *Salmonella enterica* in poultry litter in the southern United States. PLoS One. 2022 May 26;17(5):e0268231. doi: 10.1371/journal.pone.0268231. PMID: 35617326; PMCID: PMC9135211.

2. Food and Drug Administration. 2020. **Florida BSAAO Workshop –Virtual – December 15-17**. Ingram, D. Ph.D. FDA Presenting. Current Thinking and Risk Assessment Research.

3. Joshua B. Gurtler, Michael P. Doyle, Marilyn C. Erickson, Xiuping Jiang, Patricia Millner, Manan Sharma, Composting To Inactivate Foodborne Pathogens for Crop Soil Application: A Review, Journal of Food Protection, Volume 81, Issue 11, 2018, Pages 1821-1837, ISSN 0362-028X, <https://doi.org/10.4315/0362-028X.JFP-18-217>.
(<https://www.sciencedirect.com/science/article/pii/S0362028X22088196>)

4. Frączek, Krzysztof Ropek, Dariusz Roman and Jacek Kozdrój. Spatial Distribution of *Salmonella* in Soil near Municipal Waste Landfill Site. Agriculture 2022, 12(11),1933;
<https://doi.org/10.3390/agriculture12111933>

5. Lemunier M, Francou C, Rousseaux S, Houot S, Dantigny P, Piveteau P, Guzzo J. Long-term survival of pathogenic and sanitation indicator bacteria in experimental biowaste composts. Appl Environ Microbiol. 2005 Oct;71(10):5779-86. doi: 10.1128/AEM.71.10.5779-5786.2005. PMID: 16204488; PMCID: PMC1265932.

6. Navarro-Gonzalez N, Wright S, Aminabadi P, Gwinn A, Suslow TV, Jay-Russell MT. Carriage and Subtypes of Foodborne Pathogens Identified in Wild Birds Residing near Agricultural Lands in California:

a Repeated Cross-Sectional Study. *Appl Environ Microbiol.* 2020 Jan 21;86(3):e01678-19. doi: 10.1128/AEM.01678-19. PMID: 31757824; PMCID: PMC6974635.

7. Patel JR, Yossa I, Macarisin D, Millner P. Physical covering for control of *Escherichia coli* O157:H7 and *Salmonella* spp. in static and windrow composting processes. *Appl Environ Microbiol.* 2015 Mar;81(6):2063-74. doi: 10.1128/AEM.04002-14. Epub 2015 Jan 9. PMID: 25576620; PMCID: PMC4345378.

8. Singh R, Kim J, Shepherd MW Jr, Luo F, Jiang X. Determining thermal inactivation of *Escherichia coli* O157:H7 in fresh compost by simulating early phases of the composting process. *Appl Environ Microbiol.* 2011 Jun;77(12):4126-35. doi: 10.1128/AEM.02873-10. Epub 2011 Apr 15. PMID: 21498743; PMCID: PMC3131655.

Trevor Suslow, Ph.D. is transitioning from full time (Oct 1, 2018 to Dec 31, 2020) as VP of Produce Safety at the Produce Marketing Association and Emeritus Extension Research Specialist at the University of California, Davis, Department of Plant Sciences. Trevor has formed Trevor Suslow Consulting, LLC and retains his Emeritus position. His former full-time position at UCD included statewide responsibilities in quality and safety of perishable horticultural commodities. Dr. Suslow's program spanned preharvest to postharvest research and outreach education on diverse whole fresh and minimally processed horticultural foods from annual row crops to tree and vine commodities. His past and current applied research combines lab and on-farm research on *E. coli*, *Salmonella*, and *Listeria* in conventional and organic production systems, for the purpose of identifying opportunities for optimal microbial reductions and delivery of safe food to the consumer. He served on the Center for Produce Safety Board of Directors from 2008 to 2014 and the CPS Technical Committee since its creation in 2008 to the present. Dr. Suslow received his BSc. in Agricultural Sciences with honors and his Ph.D. in Plant Pathology from the University of California, Berkeley. Before joining UC Davis, he was a Research Scientist and Director of Product Research for DNA Plant Technologies, Inc. for 15 years. Trevor received the United Fresh Produce Association Technical Award in 2012 and was named to and to The Packer 25 *Profiles in Leadership* award in 2014. He was named to Food Safety News list of *The Best of Food Safety in Education* and honored with the National Steinbeck Center's Valley of the World Award in Education in 2017. He is a Lead Instructor for the FDA FSMA Produce Safety Alliance, Food Safety Preventive Controls Alliance, and the Sprout Safety Alliance. Trevor served as Faculty Director for the UC Postharvest Technology Center from 2016 to October 2018. Dr. Suslow was recently recognized by the International Association of Food Protection (IAFP) with the 2018 Elmer Marth Educator Award and in 2019 the IAFP President's Award for extension and outreach to the food safety community.

Academic Preparation

University of California, Berkeley	B.Sc. (High Honors)	1975	Agricultural Sciences
University of California, Berkeley	M.Sc.	1977	Plant Pathology
University of California, Berkeley	Ph.D.	1980	Plant Pathology

Employment History

1980- 1981	Postdoctoral Research	Hilleshög, Inc. Sweden MAFF at Leeds, Eng.
1981 -1995	DNA Plant Technology, Inc. (1990-1995)	Staff Sci.-Microbial R&D Dir. of Product Research
Feb-Oct 1995	Visiting Scientist	UC Berkeley, Plant Mol.Bio.
Nov. 1995 – Oct 2018	University of CA at Davis	Extension Research Specialist
Oct 2018 – present	University of CA at Davis	Emeritus Specialist Faculty
Oct 15, 2018 – Dec 31 20	Produce Marketing Assoc.	VP Produce Safety based in Davis, CA
Jan 1, 2021 -	Trevor Suslow Consulting LLC	

Recent Activities

Over 400 national and international technical, extension education, training, and outreach presentations on microbial food safety of fresh produce in the past five years in diverse forums to diverse industry, regulatory, academic, and technology workshop audiences.

Served on multiple panels and USDA SCRI Advisory Boards, including USDA NIFA *Food Safety Innovations and Preventive Controls during Fresh-cut Produce Washing and Retail Display*; Fresh Express Blue Ribbon Panel on *Cyclospora* (2019); GFSI Leafy Greens Technical Working Group; USDA SCRI Cornell and Multistate Produce Safety Grant Advisory Council; CPS PI on *STEC: Romaine Seasonality Project* and Industry Romaine Rally Technical Advisory Panel

Recent webinars to global audiences on preharvest and postharvest water quality management issues and systems, coronavirus impacts and response in produce industry, WGS, *Listeria* and *Salmonella* EMPs, microbial community analysis in produce safety, and diverse topics in FSMA and FDA New Era awareness.

Recent Peer-Reviewed Publications –past 5 years

Gil, M. Selma, M., **Suslow, T.**, Jacxsens, L., Uyttendaele, M., and Allende, A. 2015. Pre- and Post-harvest Preventive Measures and Intervention Strategies to Control Microbial Food Safety Hazards of Fresh Leafy Vegetables. *Critical Reviews in Food Science and Nutrition*. 55:453–468

Bech, T.B. Sbdio, A., Jacobsen, C., and **T. Suslow**. 2015. Adhesion of *Escherichia coli* and *Salmonella enterica* to soil in runoff as influenced by polyacrylamide. *Journal of Environmental Quality*. 43:2002–2008

Lopez-Velasco, Gabriela, Alejandro Tomas-Callejas, Adrian O. Sbdio, Xuan Pham, Polly Wei, Dawit Diribsa, and **Trevor V. Suslow**. 2015. Factors affecting cell population density during enrichment and subsequent molecular detection of *Salmonella enterica* and *Escherichia coli* O157:H7 on lettuce contaminated during field production, *Food Control*, [Volume 54](#), August 2015, Pages 165–175

Berry, E. D., Wells, J. E., Bono, J. L., Woodbury, B. L., Kalchayan and, N., Norman, K. N., **Suslow, T. V.**, Lopez-Velasco, G., & Millner, P. D. 2015. Effect of proximity to a cattle feedlot on *Escherichia coli* O157:H7 contamination of leafy greens and evaluation of the potential for airborne transmission. *Appl Environ Microbiol*, 81, 1101-1110.

Burch, A., Do, P., Sbdio, A., **Suslow, T.** and Steven Lindow. 2016. High culturability of epiphytic bacteria and frequency of biosurfactant producers on leaves. *AEM* 82: 5997-6009

Allende, A, Truchado, P., **Suslow T.**, and M.I. Gil. 2018. Impact of chlorine dioxide sanitization of irrigation water on the epiphytic bacterial community of baby spinach and underlying soil. *PLoS ONE* 13(7): e0199291.

Gutiérrez, Gundersen., Sbdio, Koike, and **T. V. Suslow**. Epub 2018. Quantitative and qualitative recovery of on-farm applied attenuated *E. coli* O157:H7 and qualitative detection of naturally-contaminating *E. coli* O157:H7 from spinach under field conditions. *Food Microbiol*. 2019 .Feb;77:173-184.

Shen X, Sheng L, Gao H, Hanrahan I, **Suslow TV** and Zhu M-J (2019) Enhanced Efficacy of Peroxyacetic Acid Against *Listeria monocytogenes* on Fresh Apples at Elevated Temperature. *Front. Microbiol*. 10:1196. doi: 10.3389/fmicb.2019.01196

Berry, E. D., J. E. Wells, L. M. Durso, K. M. Friesen, J. L. Bono, and **T. V. Suslow**. Occurrence of *Escherichia coli* O157:H7 in Pest Flies Captured in Leafy Greens Plots Grown Near a Beef Cattle Feedlot. *Journal of Food Protection*: August 2019, Vol. 82, No. 8, pp. 1300-1307.

Sheng L, Shen X, Ulloa O, **Suslow TV**, Hanrahan I and Zhu M-J (2020) Evaluation of JC9450 and Neutral Electrolyzed Water in Controlling *Listeria monocytogenes* on Fresh Apples and Preventing Cross-Contamination. *Front. Microbiol*. 10:3128. doi: 10.3389/fmicb.2019.03128

N. Navarro-Gonzalez, S. Wright, P. Aminabadi, A. Gwinn, T. V. Suslow, M. T. Jay-Russell
Carriage and Subtypes of Foodborne Pathogens Identified in Wild Birds Residing near Agricultural Lands in California: a Repeated Cross-Sectional Study
Applied and Environmental Microbiology Jan 2020, 86 (3) e01678-19; **DOI**: 10.1128/AEM.01678-19

K. Phan-Thien M.H. Metaferia T.L. Bell M.I. Bradbury H.P. Sassi F.F. van Ogtrop **T.V. Suslow** R. McConchie. 2020. Effect of soil type and temperature on survival of *Salmonella enterica* in poultry manure-amended soils. *Letters in Applied Microbiology* 71, 210—217 <https://doi.org/10.1111/lam.13302>

Shen, Xiaoye; Su, Yuan; Hua, Zi; Cong, Jian; Dhowlaghar, Nitin; Sun, Qi; Lin, Shengnan; Green, Tonia; Perrault, Mackenzie; Galeni, Marcella; Hanrahan, Ines; Suslow, Trevor V; Zhu, Mei-Jun. 2020. Verification of peroxyacetic acid treatment against *L. monocytogenes* on fresh apples using *E. faecium* NRRL B-2354 as a surrogate in commercial spray-bar operations. *Food Microbiology* 92:103590; DOI: 10.1016/j.fm.2020.103590

Belias AM, Sbdio A, Truchado P, Weller D, Pinzon J, Skots M, Allende A, Munther D, **Suslow T**, Wiedmann M, Ivanek R. 2020. Effect of weather on the die-off of *Escherichia coli* and attenuated *Salmonella enterica* serovar Typhimurium on preharvest leafy greens following irrigation with contaminated water. *Appl Environ Microbiol* 86:e00899-20. <https://doi.org/10.1128/AEM.00899-20>.

Recent Abstracts

International Association for Food Protection 2020

Mathilde J. Rivera, Dave Murray, **Trevor Suslow**. Root cause analysis of on-farm EHEC contamination of Brussel Sprouts

Janneth Pinzon, Mariya Skots, **Trevor V Suslow**. Genomic characterization of a subset of *Listeria monocytogenes* isolates from fresh produce packing facilities in California

International Association for Food Protection 2019

Kerry Cooper, Janneth Pinzon, Margarethe Cooper, Mariya Skots, Gilberto Flores, Rachel Mackelprang, **Trevor Suslow**. Characterization of Tree Fruit Bacterial Communities during Harvest

T. Suslow. Sanitization Efficacy and Impact of Sanitary Design for Control of *L. monocytogenes* in the Processing Plant.

Trevor Suslow, Adrian Sbodio, Janneth Pinzon, David Hill, Mariya Skots. Survival and Inactivation of *Listeria monocytogenes* from Common Specialty Crop Food Contact and Non-Food Contact Surfaces Using Different Antimicrobials.

ICPP 2018

T. Suslow. Collateral benefits of preventive controls for FSMA implementation in postharvest decay management

Rawnsley, Emma

From: compostercary@gmail.com
Sent: Wednesday, May 24, 2023 7:35 AM
To: valerie.negrete@pln.sccgov.org
Cc: Rawnsley, Emma; 'Greg Ryan'
Subject: Submitting a Comment on the DEIR for the Z-Best Composting Facility
Attachments: Comments re bioaerosols in Z-Best DEIR.pdf

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Ms. Negrete,
Please accept this comment letter on the Z-Best Composting Facility Modifications - Recirculated Draft EIR, SCH# 2018102041
Please don't hesitate to contact me if you have any questions.
Regards,
Cary Oshins

ComposterCary.Com

"Composting may not save the world, but we can't save the world without composting"



Cary Oshins
Composting Specialist
11 Middle Hill Rd
Troy, NY 12180
1-484-547-1521
compostercary@gmail.com



Valerie Negrete
County of Santa Clara - Department of Planning and Development
7th Floor East Wing
70 West Hedding Street
San Jose, CA 95110
valerie.negrete@pln.sccgov.org

cc: Emma Rawnsley, AECOM, emma.rawnsley@aecom.com
Greg Ryan, Z-Best, greg.ryan@greenwaste.com

Re: Recirculated Draft Environmental Impact Report for Z-Best Composting Facility
Modifications, dated April 20, 2023, SCH# 2018102041

Ms. Negrete,

OSHINS-1 Z-Best was quite surprised that the Draft EIR for the modifications to the Z-Best Composting Facility stated that the impacts of bioaerosols would be Significant and Unavoidable. I have been asked to review the DEIR and comment on this conclusion.

I have spent the last 35 years as a researcher, teacher and advocate for composting, including serving as the Associate Director of the US Composting Council, most of that time while living in California. Over those years, and for decades prior, bioaerosols—airborne particles of bacteria, fungi, and endotoxins—have been a known issue facing compost manufacturers. The real concern in regards to this issue is the health of facility site workers. That is why dust filters, respirators, enclosed equipment cabs with air controls, and dust reduction practices and procedures are all routinely employed to mitigate the risk from bioaerosol exposure.

However, in regards to the impact of bioaerosols on the surrounding community and environment, this finding runs counter to established science on bioaerosols impact as well as to a number of other CEQA studies on similar facilities, so should have been declared “less than significant”. The authors themselves provide the very arguments that could be used for this declaration.

These include:

- Most of these bioaerosols are ubiquitous in the environment and already exist in rural and agricultural areas. (DEIR pg 144)
- Regulatory exposure limits have not been established for exposure to bioaerosols (pgs 125, 146, 147)
- Exposure is distance related, not volume related, so increasing the MSW volume does not increase exposure beyond 150 meters (pg 146, appendix B-6, pg 6)

- Improved filtering through the use of a biofilter and other aspects of the ECS system (B-6, pgs 7-9)
- Since bioaerosols co-occur with dust in the pm₁₀ and pm_{2.5} categories, implementation of dust mitigation measures, eg, MM-AIR-7a and MM-AIR-7b, would also serve to reduce bioaerosol impacts
- Impact on food crops and farm workers will be minimal since the area is sparsely populated and field workers are only intermittently within the 300 meters. (pg 145)

OSHINS-2 Furthermore, a review of 5 other recent Environmental Reviews of large composting facilities revealed no concerns with bioaerosols:

- Jess Ranch Compost Facility, Administrative Draft Environmental Impact Report, Alameda County, Nov 2019, Page 174: Less than significant, only evaluated for workers
- Shafter/Wasco Composting and Waste Diversion Project, Draft Supplemental Environmental Impact Report, Kern County February 2021: Not mentioned
- Visalia Disposal Site and Compost Facility, Final Focused Environmental Impact Report, Tulare County Resource Management Agency, September 2022: Not discussed. No mitigation.
- Renewable Placer: Waste Action Plan. Draft and Final Environmental Impact Reports, Western Placer Waste Management Authority: EIR: “The composting operations involve the application of water to the compost windrows and the periodic turning of windrows to minimize release of bioaerosols and dust.” No comments received. Not addressed in Final EIR.
- Redwood Landfill Solid Waste Facilities Permit Revision, Final Supplemental Environmental Impact Report, Marin County, July 2005, 3.8.2: mitigation of significant health threat to workers with dust mitigation plan/program. Risks to surrounding environment or inhabitants not addressed.

Unless the authors can identify a unique factor differentiating the Z-Best Project from these other projects with regards to bioaerosol risk, their finding represents a substantial departure from contemporary understanding of risks from composting-generated bioaerosols.

OSHINS-3 Finally, I will note that a comprehensive review of bioaerosol exposure by Robertson et al in 2019 concluded that “given the absence of any consistent evidence on the toxicity of bioaerosols from composting facilities, there is insufficient evidence to provide a quantitative comment on the risk to nearby residents from exposure to compost bioaerosols.”¹

Based on the above I recommend that the threat from bioaerosols to the surrounding environment be declared as Less than Significant.

Respectfully yours,
Cary Oshins

¹ Sarah Robertson, Philippa Douglas, Deborah Jarvis, and Emma Marczylo, Bioaerosol exposure from composting facilities and health outcomes in workers and in the community: A systematic review update, Int J Hyg Environ Health, 2019 Apr;222(3):364-386. doi: 10.1016/j.ijheh.2019.02.006. Epub 2019 Mar 12.

Rawnsley, Emma

From: John Doyle <john.doyle@greenwaste.com>
Sent: Monday, June 26, 2023 8:02 AM
To: Emmanuel Ursu; Rawnsley, Emma; Negrete, Valerie
Cc: Erik Schoennauer
Subject: Fw: Stormwater Mitigation measures in dEIR
Attachments: Golder Recirculated dEIR Comments - Final 5-30-23.pdf; Point Precip Freq Estimates 4.75-Z-Best NOAA-1 -Golder 5-30-23.pdf

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Emmanuel, to confirm, I would like Rich Haughey's memo along with point precipitation data sheet to be submitted as comments to the dEIR circulation.



John Doyle
GreenWaste | General Manager

Office (408)846-1346 | Mobile (408)722-1999
980 State Highway 25
Gilroy, CA 95020

www.greenwaste.com

From: John Doyle <john.doyle@greenwaste.com>
Sent: Wednesday, May 31, 2023 9:04 AM
To: Emmanuel Ursu <EUrsu@m-group.us>; Rawnsley, Emma <emma.rawnsley@aecom.com>
Cc: Erik Schoennauer <es@stanfordalumni.org>
Subject: Stormwater Mitigation measures in dEIR

ZBEST-1

Emmanuel/Emma, I have had Rich Haughey of Golder Associates review the dEIR being recirculated. There appears to be some discrepancy as to Composting General Order requirements relating to detention basin required capacity and associated mitigation measures in the dEIR. There is also some discrepancy as to the applicable geographical area from which point precipitation data is to be used as representative of the Z-Best site. Third, there are apparent mitigation measures for basin 2, which is an existing basin, not part of the proposed project. This basin was built after design review and permitting by the County, it meets applicable Composting General Order Requirements, as is.

We are requesting a meeting to review these topics. Please see attached memo and point precipitation data document prepared by Rich Haughey of Golder Associates.



John Doyle
GreenWaste | General Manager

Office (408)846-1346 | Mobile (408)722-1999
980 State Highway 25
Gilroy, CA 95020

www.greenwaste.com

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TECHNICAL MEMORANDUM

DATE May 26, 2023

Project No. GL13397640

TO John Doyle
Z-Best Products

CC Lindsey Angel, WSP

FROM Richard Haughey

RE: RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT COMMENTS, Z-BEST COMPOSTING FACILITY MODIFICATIONS

WSP USA Inc. (WSP) has reviewed the Recirculated Draft Environmental Impact Report, Z-Best Composting Facility Modifications (DEIR) and offers the following comments.

- ZBEST-2** 1. In several places in the DEIR and AECOM's April 7, 2023, memorandum (DEIR Appendix E-6), the 25-year, 24-hour precipitation is cited as 5.8 inches. The source of this information is identified as NOAA Atlas 14 Point Precipitation Frequency Estimates, National Weather Service, Hydrometeorological Design Studies Center for the Gilroy station (04-3417). The Gilroy station is approximately 8 miles northwest of the Z-Best site, located in a narrower section of the valley, and is not representative of the Z-Best site.

The NOAA Atlas 14 Point Precipitation Frequency Estimates use spatial data from numerous stations to calculate the frequency storm event at any given location. The 25-year, 24-hour precipitation cited in Golder's August 25, 2020, memorandum¹ is 4.75 inches and was estimated for the actual site location as shown on the attached print from the NOAA Atlas 14 Point Precipitation Frequency Estimates. The frequency storm event estimate varies slightly between 4.72 and 4.78 inches across the site. The difference between 4.72 inches and 4.78 inches is insignificant. However, the difference between 4.75 inches and 5.8 inches is significant. The analyses, conclusions, recommendations, and mitigation measures in the DEIR based on 5.8 inches should be reviewed and revised, as necessary.

- ZBEST-3** 2. Mitigation Measure HYD-1B requires increasing the capacity of Detention Basin 1 and/or Detention Basin 2 to at least 22.8 million gallons without discharging and maintaining a freeboard of at least two feet. Text following the mitigation measure states the detention basin capacity would be increased to meet the requirements of the Composting General Order.

The Composting General Order requires that detention ponds, if used, to be "designed, constructed, and maintained 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

¹ Golder's August 25, 2020, memorandum is Appendix C of Z-Best Composting Facility Technical Report, December 2020.

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."

As noted previously, the 25-year, 24-hour precipitation at the site varies slightly from 4.72 inches to 4.78 inches. In Table 3 of Golder's August 25, 2020, memorandum, the precipitation for January is 4.70 inches. Although this is slightly less than the 25-year, 24-hour precipitation range for the site, it can be used as a proxy for the 25-year, 24-hour storm event. Based on 4.70 inches, the direct precipitation into Detention Basin 1 and Detention Basin 2 is 457,954 gallons and 258,507 gallons, respectively. The runoff into Detention Basin 1 and Detention Basin 2 is 6,890,232 gallons and 2,288,977 gallons², respectively. The total inflow into Detention Basin 1 and Detention Basin 2 is 7,340,186 gallons and 2,646,484 gallons, respectively. Based on Tables 1 and 2, the resulting water elevations are approximately 144 feet and 147 feet, respectively, both of which are two feet or more below the maximum basin water surface. Therefore, both Detention Basin 1 and Detention Basin 2 comply with the Composting General Order capacity requirement and there is no need to increase capacity or provide additional freeboard.

As noted in AECOM's April 7, 2023, memorandum, extreme storm events are more likely to occur during wet years. The Golder August 25, 2020, memorandum includes a water balance for a 25-year wet year, an event that has a 4 percent chance of occurring in any given year. The water balance shows that both Detention Basin 1 and Detention Basin 2 have adequate capacity to hold the peak runoff during a 25-year wet year.

- ZBEST-4** 3. Mitigation Measure HYD-5 requires increasing the berm height of Detention Basin 2 to at least 150.41 feet, so that at least two feet of freeboard above the 100-year base flood elevation is maintained. Detention Basin 2 is an existing condition and not part of this project. Detention Basin 2 was constructed with a berm height that exceeds the 100-year base flood elevation by at least a foot. The Detention Base 2 spillway crest is 149.25 feet. The Detention Basin 2 design was approved by Santa Clara County, including the freeboard, and a grading permit issued.

WSP USA Inc.



Richard D. Haughey
Vice President

g:\projects\z-best\133-97640 (grading plan)\ecsl\environmental impact report\deir comments\draft environmental impact report comments - final.docx

² The runoff to Detention Basin 2 is based on the original drainage area of approximately 26 acres. The drainage area has decreased to provide additional flood storage capacity. As a result, the analysis for Detention Basin 2 is conservative.



NOAA Atlas 14, Volume 6, Version 2
Location name: Gilroy, California, USA*
Latitude: 36.9463°, Longitude: -121.5204°
Elevation: 166 ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps_&_aerials](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.119 (0.108-0.132)	0.148 (0.134-0.165)	0.190 (0.172-0.213)	0.227 (0.202-0.257)	0.281 (0.238-0.336)	0.326 (0.267-0.402)	0.376 (0.297-0.481)	0.430 (0.326-0.574)	0.511 (0.364-0.725)	0.579 (0.392-0.864)
10-min	0.170 (0.155-0.189)	0.213 (0.193-0.237)	0.273 (0.246-0.305)	0.325 (0.290-0.369)	0.403 (0.341-0.481)	0.468 (0.383-0.577)	0.538 (0.425-0.689)	0.617 (0.467-0.823)	0.732 (0.522-1.04)	0.830 (0.562-1.24)
15-min	0.206 (0.187-0.229)	0.257 (0.233-0.286)	0.330 (0.298-0.369)	0.393 (0.351-0.446)	0.487 (0.412-0.582)	0.566 (0.463-0.697)	0.651 (0.514-0.833)	0.746 (0.565-0.995)	0.886 (0.631-1.26)	1.00 (0.680-1.50)
30-min	0.284 (0.258-0.315)	0.354 (0.321-0.395)	0.455 (0.410-0.508)	0.542 (0.483-0.614)	0.672 (0.568-0.802)	0.780 (0.639-0.961)	0.897 (0.709-1.15)	1.03 (0.778-1.37)	1.22 (0.869-1.73)	1.38 (0.937-2.06)
60-min	0.399 (0.363-0.443)	0.498 (0.452-0.555)	0.639 (0.577-0.715)	0.763 (0.680-0.864)	0.945 (0.800-1.13)	1.10 (0.899-1.35)	1.26 (0.997-1.62)	1.45 (1.10-1.93)	1.72 (1.22-2.44)	1.95 (1.32-2.90)
2-hr	0.602 (0.547-0.669)	0.752 (0.682-0.837)	0.964 (0.871-1.08)	1.15 (1.02-1.30)	1.42 (1.21-1.70)	1.65 (1.36-2.04)	1.90 (1.50-2.43)	2.18 (1.65-2.91)	2.58 (1.84-3.66)	2.93 (1.98-4.36)
3-hr	0.757 (0.688-0.841)	0.948 (0.860-1.06)	1.22 (1.10-1.36)	1.45 (1.30-1.65)	1.80 (1.52-2.15)	2.09 (1.71-2.58)	2.40 (1.90-3.08)	2.75 (2.08-3.67)	3.26 (2.32-4.62)	3.68 (2.50-5.49)
6-hr	1.04 (0.941-1.15)	1.31 (1.19-1.46)	1.70 (1.54-1.90)	2.03 (1.81-2.30)	2.52 (2.13-3.01)	2.92 (2.40-3.60)	3.35 (2.65-4.29)	3.83 (2.90-5.11)	4.51 (3.21-6.40)	5.08 (3.44-7.58)
12-hr	1.36 (1.24-1.51)	1.78 (1.61-1.98)	2.34 (2.11-2.62)	2.82 (2.51-3.19)	3.50 (2.96-4.18)	4.05 (3.32-4.99)	4.63 (3.66-5.93)	5.26 (3.98-7.02)	6.15 (4.38-8.73)	6.89 (4.66-10.3)
24-hr	1.76 (1.62-1.95)	2.36 (2.17-2.61)	3.16 (2.90-3.50)	3.82 (3.49-4.27)	4.75 (4.21-5.46)	5.48 (4.78-6.42)	6.25 (5.34-7.47)	7.06 (5.89-8.64)	8.20 (6.60-10.4)	9.12 (7.12-11.9)
2-day	2.24 (2.06-2.48)	3.02 (2.78-3.34)	4.05 (3.72-4.50)	4.90 (4.47-5.48)	6.08 (5.40-7.00)	7.00 (6.11-8.20)	7.96 (6.80-9.51)	8.96 (7.47-11.0)	10.3 (8.32-13.1)	11.4 (8.93-14.9)
3-day	2.54 (2.34-2.81)	3.42 (3.15-3.79)	4.59 (4.22-5.10)	5.56 (5.07-6.21)	6.88 (6.10-7.91)	7.91 (6.90-9.26)	8.98 (7.66-10.7)	10.1 (8.40-12.3)	11.6 (9.34-14.7)	12.8 (10.0-16.7)
4-day	2.78 (2.57-3.08)	3.75 (3.45-4.15)	5.03 (4.62-5.58)	6.08 (5.55-6.80)	7.52 (6.67-8.65)	8.64 (7.53-10.1)	9.79 (8.36-11.7)	11.0 (9.16-13.5)	12.6 (10.2-16.0)	13.9 (10.9-18.2)
7-day	3.38 (3.12-3.75)	4.52 (4.17-5.01)	6.04 (5.55-6.71)	7.28 (6.65-8.15)	9.00 (7.98-10.3)	10.3 (9.00-12.1)	11.7 (9.98-14.0)	13.1 (10.9-16.0)	15.1 (12.1-19.1)	16.6 (12.9-21.7)
10-day	3.80 (3.50-4.21)	5.06 (4.66-5.61)	6.73 (6.19-7.48)	8.10 (7.39-9.06)	9.98 (8.85-11.5)	11.4 (9.96-13.4)	12.9 (11.0-15.4)	14.4 (12.0-17.7)	16.5 (13.3-21.0)	18.2 (14.2-23.7)
20-day	4.91 (4.53-5.44)	6.54 (6.02-7.24)	8.63 (7.93-9.59)	10.3 (9.42-11.5)	12.6 (11.2-14.5)	14.3 (12.5-16.7)	16.0 (13.7-19.1)	17.7 (14.8-21.7)	20.1 (16.1-25.4)	21.8 (17.0-28.5)
30-day	6.02 (5.55-6.67)	7.99 (7.36-8.85)	10.5 (9.64-11.7)	12.5 (11.4-13.9)	15.1 (13.4-17.3)	17.0 (14.8-19.9)	18.9 (16.2-22.6)	20.8 (17.4-25.5)	23.3 (18.8-29.6)	25.2 (19.7-32.9)
45-day	7.45 (6.87-8.25)	9.83 (9.05-10.9)	12.8 (11.7-14.2)	15.1 (13.8-16.9)	18.0 (16.0-20.8)	20.2 (17.6-23.7)	22.3 (19.0-26.7)	24.3 (20.3-29.8)	27.0 (21.7-34.2)	28.9 (22.6-37.7)
60-day	8.80 (8.11-9.74)	11.5 (10.6-12.8)	14.8 (13.6-16.5)	17.4 (15.9-19.4)	20.6 (18.3-23.7)	22.9 (20.0-26.9)	25.2 (21.5-30.1)	27.3 (22.8-33.4)	30.0 (24.1-38.1)	31.9 (24.9-41.7)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

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[Back to Top](#)

PF graphical



NOAA Atlas 14, Volume 6, Version 2
Location name: Gilroy, California, USA*
Latitude: 36.9463°, Longitude: -121.5204°
Elevation: 166 ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps_&_aerials](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.119 (0.108-0.132)	0.148 (0.134-0.165)	0.190 (0.172-0.213)	0.227 (0.202-0.257)	0.281 (0.238-0.336)	0.326 (0.267-0.402)	0.376 (0.297-0.481)	0.430 (0.326-0.574)	0.511 (0.364-0.725)	0.579 (0.392-0.864)
10-min	0.170 (0.155-0.189)	0.213 (0.193-0.237)	0.273 (0.246-0.305)	0.325 (0.290-0.369)	0.403 (0.341-0.481)	0.468 (0.383-0.577)	0.538 (0.425-0.689)	0.617 (0.467-0.823)	0.732 (0.522-1.04)	0.830 (0.562-1.24)
15-min	0.206 (0.187-0.229)	0.257 (0.233-0.286)	0.330 (0.298-0.369)	0.393 (0.351-0.446)	0.487 (0.412-0.582)	0.566 (0.463-0.697)	0.651 (0.514-0.833)	0.746 (0.565-0.995)	0.886 (0.631-1.26)	1.00 (0.680-1.50)
30-min	0.284 (0.258-0.315)	0.354 (0.321-0.395)	0.455 (0.410-0.508)	0.542 (0.483-0.614)	0.672 (0.568-0.802)	0.780 (0.639-0.961)	0.897 (0.709-1.15)	1.03 (0.778-1.37)	1.22 (0.869-1.73)	1.38 (0.937-2.06)
60-min	0.399 (0.363-0.443)	0.498 (0.452-0.555)	0.639 (0.577-0.715)	0.763 (0.680-0.864)	0.945 (0.800-1.13)	1.10 (0.899-1.35)	1.26 (0.997-1.62)	1.45 (1.10-1.93)	1.72 (1.22-2.44)	1.95 (1.32-2.90)
2-hr	0.602 (0.547-0.669)	0.752 (0.682-0.837)	0.964 (0.871-1.08)	1.15 (1.02-1.30)	1.42 (1.21-1.70)	1.65 (1.36-2.04)	1.90 (1.50-2.43)	2.18 (1.65-2.91)	2.58 (1.84-3.66)	2.93 (1.98-4.36)
3-hr	0.757 (0.688-0.841)	0.948 (0.860-1.06)	1.22 (1.10-1.36)	1.45 (1.30-1.65)	1.80 (1.52-2.15)	2.09 (1.71-2.58)	2.40 (1.90-3.08)	2.75 (2.08-3.67)	3.26 (2.32-4.62)	3.68 (2.50-5.49)
6-hr	1.04 (0.941-1.15)	1.31 (1.19-1.46)	1.70 (1.54-1.90)	2.03 (1.81-2.30)	2.52 (2.13-3.01)	2.92 (2.40-3.60)	3.35 (2.65-4.29)	3.83 (2.90-5.11)	4.51 (3.21-6.40)	5.08 (3.44-7.58)
12-hr	1.36 (1.24-1.51)	1.78 (1.61-1.98)	2.34 (2.11-2.62)	2.82 (2.51-3.19)	3.50 (2.96-4.18)	4.05 (3.32-4.99)	4.63 (3.66-5.93)	5.26 (3.98-7.02)	6.15 (4.38-8.73)	6.89 (4.66-10.3)
24-hr	1.76 (1.62-1.95)	2.36 (2.17-2.61)	3.16 (2.90-3.50)	3.82 (3.49-4.27)	4.75 (4.21-5.46)	5.48 (4.78-6.42)	6.25 (5.34-7.47)	7.06 (5.89-8.64)	8.20 (6.60-10.4)	9.12 (7.12-11.9)
2-day	2.24 (2.06-2.48)	3.02 (2.78-3.34)	4.05 (3.72-4.50)	4.90 (4.47-5.48)	6.08 (5.40-7.00)	7.00 (6.11-8.20)	7.96 (6.80-9.51)	8.96 (7.47-11.0)	10.3 (8.32-13.1)	11.4 (8.93-14.9)
3-day	2.54 (2.34-2.81)	3.42 (3.15-3.79)	4.59 (4.22-5.10)	5.56 (5.07-6.21)	6.88 (6.10-7.91)	7.91 (6.90-9.26)	8.98 (7.66-10.7)	10.1 (8.40-12.3)	11.6 (9.34-14.7)	12.8 (10.0-16.7)
4-day	2.78 (2.57-3.08)	3.75 (3.45-4.15)	5.03 (4.62-5.58)	6.08 (5.55-6.80)	7.52 (6.67-8.65)	8.64 (7.53-10.1)	9.79 (8.36-11.7)	11.0 (9.16-13.5)	12.6 (10.2-16.0)	13.9 (10.9-18.2)
7-day	3.38 (3.12-3.75)	4.52 (4.17-5.01)	6.04 (5.55-6.71)	7.28 (6.65-8.15)	9.00 (7.98-10.3)	10.3 (9.00-12.1)	11.7 (9.98-14.0)	13.1 (10.9-16.0)	15.1 (12.1-19.1)	16.6 (12.9-21.7)
10-day	3.80 (3.50-4.21)	5.06 (4.66-5.61)	6.73 (6.19-7.48)	8.10 (7.39-9.06)	9.98 (8.85-11.5)	11.4 (9.96-13.4)	12.9 (11.0-15.4)	14.4 (12.0-17.7)	16.5 (13.3-21.0)	18.2 (14.2-23.7)
20-day	4.91 (4.53-5.44)	6.54 (6.02-7.24)	8.63 (7.93-9.59)	10.3 (9.42-11.5)	12.6 (11.2-14.5)	14.3 (12.5-16.7)	16.0 (13.7-19.1)	17.7 (14.8-21.7)	20.1 (16.1-25.4)	21.8 (17.0-28.5)
30-day	6.02 (5.55-6.67)	7.99 (7.36-8.85)	10.5 (9.64-11.7)	12.5 (11.4-13.9)	15.1 (13.4-17.3)	17.0 (14.8-19.9)	18.9 (16.2-22.6)	20.8 (17.4-25.5)	23.3 (18.8-29.6)	25.2 (19.7-32.9)
45-day	7.45 (6.87-8.25)	9.83 (9.05-10.9)	12.8 (11.7-14.2)	15.1 (13.8-16.9)	18.0 (16.0-20.8)	20.2 (17.6-23.7)	22.3 (19.0-26.7)	24.3 (20.3-29.8)	27.0 (21.7-34.2)	28.9 (22.6-37.7)
60-day	8.80 (8.11-9.74)	11.5 (10.6-12.8)	14.8 (13.6-16.5)	17.4 (15.9-19.4)	20.6 (18.3-23.7)	22.9 (20.0-26.9)	25.2 (21.5-30.1)	27.3 (22.8-33.4)	30.0 (24.1-38.1)	31.9 (24.9-41.7)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

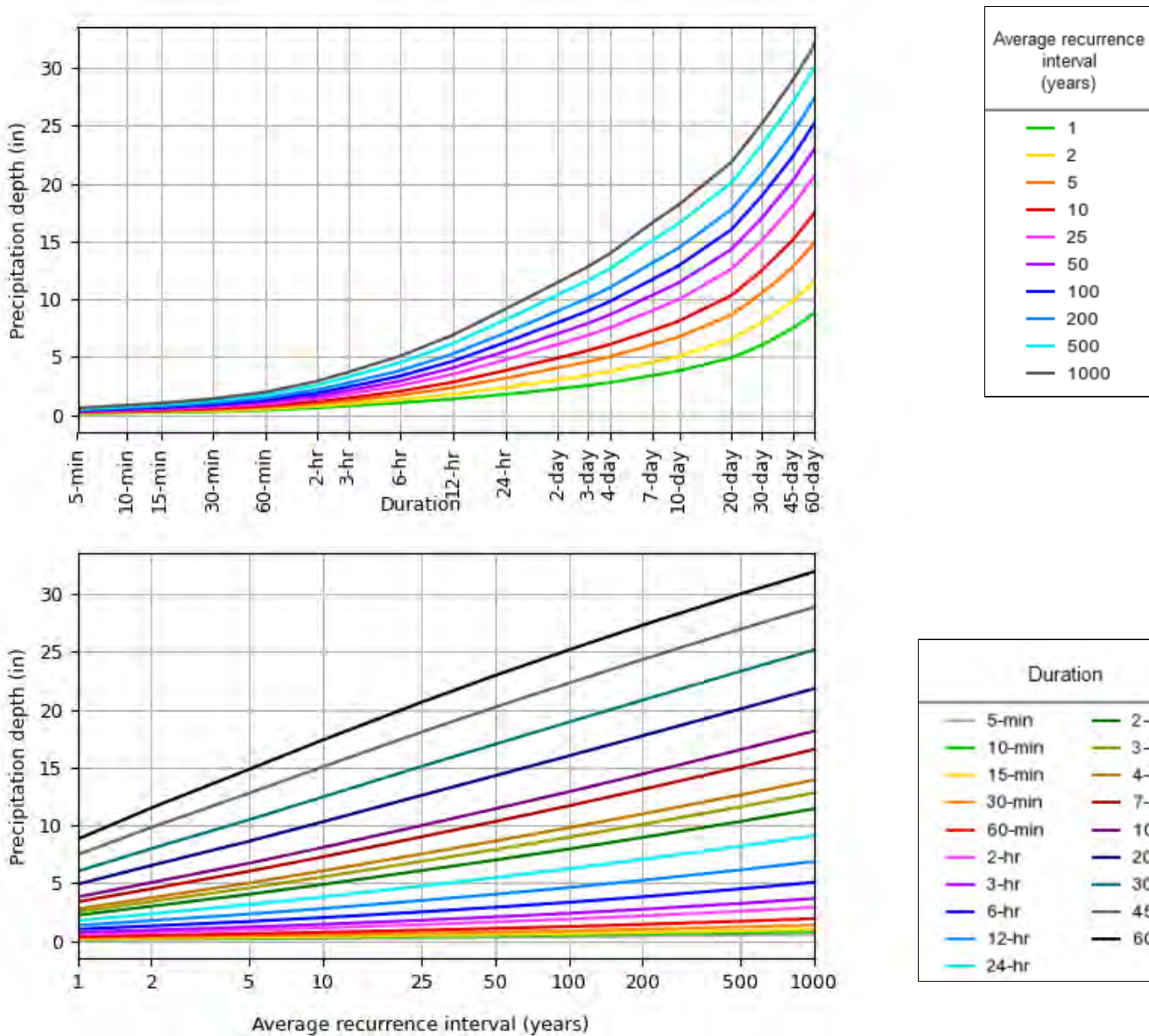
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

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[Back to Top](#)

PF graphical

PDS-based depth-duration-frequency (DDF) curves
Latitude: 36.9463°, Longitude: -121.5204°



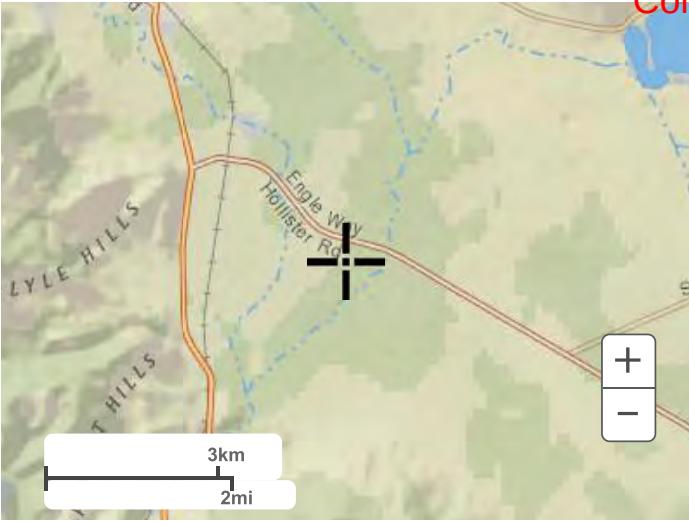
NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Tue May 23 16:14:51 2023

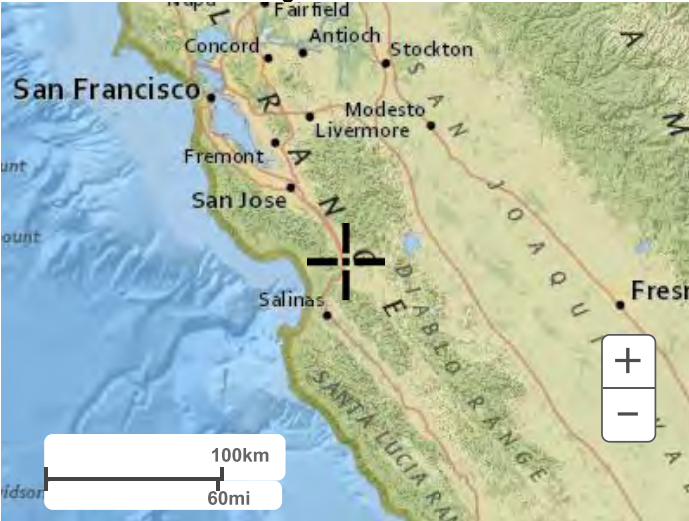
[Back to Top](#)

Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



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Appendix B – Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program

Where a California Environmental Quality Act document has identified significant environmental effects, Public Resources Code Section 21081.6 requires public agencies to adopt a “reporting or monitoring program for the changes to the project which it has adopted or made a condition of a project approval to mitigate or avoid significant effects on the environment.”

A public agency is required to ensure that the measures are fully enforceable, through permit conditions, agreements, or other means (Public Resources Code Section 21081.6(b)). A Mitigation Monitoring and Reporting Program (MMRP) must be designed to ensure project compliance with mitigation measures during project implementation.

The County of Santa Clara is the lead agency that must adopt an MMRP for development of the proposed project – the Z-Best Composting Facility Modifications project. This MMRP has been prepared to provide for the monitoring of mitigation measures required of the proposed project, as set forth in the Final Environmental Impact Report (Final EIR). This MMRP addresses those measures in terms of how and when they will be implemented.

This MMRP identifies the individual mitigation measures included in the Final EIR and is presented in Table 1. Key features of the table are briefly described below:

- Monitoring and Reporting Action identifies the outcome from implementation of mitigation measures.
- Implementation Timeframe provides the general schedule for conducting each mitigation task.
- Implementation Responsibility identifies the person/group responsible for implementation of the mitigation measure.
- Implementation Oversight assigns the responsibility for verifying compliance with each mitigation measure and reporting task.
- Verification of Compliance documents the person who verified implementation of the mitigation measure and the date on which this verification occurred.

Mitigation Measure	Mitigation and Reporting Action	Implementation Timeframe	Implementation Responsibility	Implementation Oversight	Verification of Compliance
MM-AES-2: Litter Control Z-Best shall augment its existing litter management activities to ensure that no increase in litter attributable to the increase in composting operations under the proposed project would be visible from SR-25. A. On-Site Litter Management Plan: Prior to the County LEA's approval of a revised Solid Waste Facilities Permit, the applicant shall submit an updated on-site litter management plan for the LEA's review and approval that describes how project-generated litter will be managed to avoid visual impact. The plan shall include, but not be limited to, the following measures: 1) Procedures for minimizing the generation of litter from on-site activities such as unloading/loading and screening. 2) Regular inspections of the project site to identify and clean up any litter that may be generated by on-site operations. 3) Increased frequency of current clean-up activities, such as trash removal from the litter fence and on-site street-sweeping to the extent needed to prevent any increase in the visibility from SR-25 of litter along the project frontage. The County LEA shall continue to conduct regular monitoring of Z-Best on-site litter management activities to ensure the updated on-site litter management plan is implemented. B. Off-Site Spillage and Litter Management Plan: The modified Use Permit conditions shall require the applicant to comply with an off-site spillage and litter management plan. The applicant shall submit a proposed spillage and litter management plan to the County Planning Department for review and approval. The plan shall include, but not be limited to, the following measures: 1) Procedures and penalties to discourage haul trucks arriving on site or transporting materials from the facility from failing to properly secure their loads to minimize potential for generation of litter or material spillage in-transit to or from the facility. Note that State law requires vehicle contents to be covered so that nothing can spill or otherwise escape from the vehicle (Vehicle Code §§ 23114, 23115). 2) Regular inspections of the SR-25 right-of-way adjacent to the project site and extending at least a half-mile in either direction of the facility to identify and clean up any litter or spilled materials that may be generated by trucks hauling materials to or from the site. 3) Increased frequency of clean-up activities, such as trash removal from the project site frontage and street-sweeping within the Caltrans right-of-way to the extent needed to prevent any increase in litter or spilled materials along the project frontage. 4) Records of inspections and enforcement activities shall be maintained by the applicant and submitted to the County Planning Department annually, or more frequently on request.	Submit updated On-Site Litter Management Plan.	Prior to approval of Solid Waste Facilities Permit.	Project Applicant.	County LEA.	Name: _____ Date: _____
	Monitoring of on-site litter management activities.	Throughout operation.	County LEA.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submit Offsite Spillage and Litter Management Plan.	Required as condition of modified User Permit.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of records showing compliance with requirements of Offsite Spillage and Litter Management Plan.	Throughout operation.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
MM-AIR-1: Fugitive Dust Minimization Measures Prior to issuance of a grading permit, the project applicant shall ensure that the following measures are included on all construction documents. Additionally, these measures shall be implemented during construction: - All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. - All haul trucks transporting soil, sand, or other loose material off-site shall be covered. - All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. - All vehicle speeds on unpaved roads shall be limited to 15 mph. - All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. - All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.	Inclusion of required measures on construction documents.	Pre-Construction.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of records showing compliance with requirements.	Duration of Construction.	Project Applicant and construction contractors.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
MM-AIR-2: Vehicle Idling Limits The applicant shall require that the engines of on-road trucks operating within the project site be shut off while queuing for loading and unloading for time periods longer than two minutes. This requirement shall be incorporated by the project applicant into contract specifications for all operators of MSW, finished material, and waste haul trucks and the applicant shall ensure that all contractors comply with this contractual requirement. The applicant shall ensure appropriate signage and training for onsite workers is provided to support effective implementation of this limit. No other feasible mitigation identified.	Inclusion of required measures in contract specifications for haul trucks.	Prior to issuance of Conditional Use Permit.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of records showing compliance with requirements.	Throughout operation	Project Applicant and Haul Truck Operators	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
MM-AIR-7a: Dust Monitoring	Retention of qualified industrial hygienist to design and	Prior to issuance of operation permit.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____

Mitigation Measure	Mitigation and Reporting Action	Implementation Timeframe	Implementation Responsibility	Implementation Oversight	Verification of Compliance
Prior to issuance of an operating permit, the project applicant shall retain a qualified industrial hygienist to design and conduct a fence line dust monitoring program (as a proxy for the monitoring of bioaerosols) to establish baseline conditions at the site under normal (existing) operating conditions and under a range of meteorological conditions. Following installation of the new composting equipment and when the project is fully operational and at maximum composting volume, the industrial hygienist shall perform a second round of dust monitoring during typical project operations (and under a similar range of meteorological conditions to baseline monitoring) to determine if the new technology causes an increase in fugitive dust emissions (which may also indicate an increase in bioaerosol emissions). The monitoring plan shall be submitted to the County Planning Department for review and approval prior to implementation, and results shall be reported to the County Planning Department. If dust emissions under full project conditions are equal to or less than the baseline conditions, then no further monitoring is required. If dust emissions under full project conditions are greater than baseline conditions, then additional dust control measures or other operational practices shall be implemented to reduce dust and bioaerosol concentrations to the extent feasible, and additional monitoring, designed and undertaken by a qualified industrial hygienist, and reviewed and approved by County Planning Department, shall be undertaken to verify the effectiveness of the controls and to determine whether further control measures are warranted.	conduct required dust monitoring program.				
	Submittal of monitoring plan.	Prior to issuance of operation permit.	Qualified Industrial Hygienist.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of monitoring results and recommendations (if any) for further action.	Following installation & operation of new equipment.	Qualified Industrial Hygienist.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of records showing compliance with further actions/measures (if required).	Per recommendations for further actions (if any).	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
MM-AIR-7b: Equipment Maintenance and Biofilter Replacement To prevent the growth of bacteria and fungi within the biofilter matrix, the matrix shall be maintained and properly replaced in accordance with manufacturer's specifications. All equipment within the ECS system, including monitoring that the proposed ECS system is attaining the appropriate pathogen reduction temperatures within the anticipated timeframe (i.e., 48 hours), and within multiple locations throughout each bunker, shall be checked by a qualified technician and determined to be running in proper condition prior to daily operation. Composted materials shall not be removed from the primary CASP bunkers until all temperature probes have reached a temperature of at least 55 degrees Celsius. Records of required daily monitoring and maintenance shall be retained by the applicant and provided to the County Planning Department annually, or more frequently upon request.	Provision of required monitoring and maintenance records.	Annually (or on request).	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
MM-BIO-1: California Red Legged Frog Avoidance and Minimization Measure A. Prior to issuance of a grading permit, the applicant shall consult with the U.S. Fish and Wildlife Service (USFWS) to determine if potential project impacts to California red-legged frog require authorization from USFWS. If such authorization is required, the applicant shall obtain a Biological Opinion and take permit from USFWS and implement all avoidance, minimization, and/or compensatory mitigation measures required by the Biological Opinion and take permit. At a minimum, whether or not a Biological Opinion or take permit is required, the applicant shall implement all of the following avoidance and minimization measures to reduce potential impacts to California red-legged frog: – A qualified consulting biologist shall conduct preconstruction surveys following the guidance documented in the Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog (USFWS 2005) no more than two weeks (14 days) prior to the start of construction activities. All areas of disturbance from the project, including Area 1, the existing Detention Basin #1, the flood storage expansion area in Area 2, and the access road and SR-25 impact areas shall be surveyed for potential migratory and/or upland activity. – A qualified biologist shall be on site during all activities within 200 feet from the outer edge of potential habitat areas that may result in take of the California red-legged frog, including any drainage ditches within Area 1 of the compost facility and within the impact areas along SR-25. – All ground-disturbing work within 200 feet from the outer edge of potential habitat (any drainage ditches within Area 1 of the compost facility and within the impact areas along SR-25) shall be avoided between November 1 and March 31, the time period when California red-legged frogs are most likely to be moving through upland areas. No construction activities shall occur within 200 feet from the outer edge of potential habitat (any drainage ditches within Area 1 of the compost facility and within the impact areas along SR-25) during rain events or within 24-hours following a rain event. – To minimize harassment, injury, death, and harm in the form of temporary habitat disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, equipment staging, storage, parking, and stockpile areas. – If a California red-legged frog is encountered, all activities which have the potential to result in the harassment, injury, or death of the individual shall be immediately halted. A qualified biologist shall then assess the situation and select a course of action that shall avoid or minimize adverse effects to the animal. – Uneaten human food and trash attracts crows, ravens, coyotes, and other predators of the California red-legged frog. A litter control program shall be instituted at each construction site. All construction workers and operational staff shall ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash are deposited in covered or closed trash containers. The trash containers shall be removed from the site at the end of each working day. – Loss of soil from run-off or erosion shall be prevented with straw bales, straw wattles, or similar means provided they do not have the potential to entangle or block escape or dispersal routes of the California red-legged frog. – No insecticides or herbicides listed by the Environmental Protection Agency as potentially harmful to California red-legged frog shall be used within 60 feet of aquatic habitat, such as drainage ditches, wetlands, or ponds within the compost facility or within the impact areas along SR-25 during construction or project operation. – No pets shall be permitted at the construction site, to avoid and minimize the potential for harassment, injury, and death of the California red-legged frog. – For on-site storage of pipes, conduits, and other materials that could provide shelter for special-status species, an open-top trailer shall be used to elevate the materials above ground to reduce the potential for animals to climb into the conduits and other materials. – No night-time grading or construction shall occur between dusk and dawn, which is when the California red-legged frog is most actively moving and foraging.	Consultation with USFWS (and attainment of Biological Opinion and/or take permit, if needed).	Prior to issuance of grading permit.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Retention of qualified biologist to implement required measures.	At least 2 weeks prior to construction.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of records showing compliance with required preconstruction surveys and monitoring measures.	Throughout construction.	Project Applicant and qualified biologist.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____

Mitigation Measure	Mitigation and Reporting Action	Implementation Timeframe	Implementation Responsibility	Implementation Oversight	Verification of Compliance
– No plastic monofilament netting (erosion control matting), loosely woven netting, or similar material in any form shall be used at the project site because California red-legged frogs can become entangled and trapped in them. Materials utilizing fixed weaves (i.e., strands cannot move), polypropylene, polymer, or other synthetic materials shall not be used. Acceptable substitutes would include coconut coir matting or tackifying hydroseeding compounds. – To prevent inadvertent entrapment of California red-legged frog during construction, all excavated, steep-walled holes or trenches more than 1 foot deep will be covered with plywood or similar materials at the close of each working day, or will be equipped with one or more escape ramps constructed of earth fill or wooden planks. – Before the start of work each day, the qualified biologist shall check for animals under any equipment such as vehicles and stored pipes within active construction zones. The qualified biologist shall also check all excavated steep-walled holes or trenches greater than one foot deep for trapped animals. If a California red-legged frog is observed within an active construction zone, all work within 100 feet of the individual shall be halted and all equipment turned off until the individual frog has left the construction area.					
B. Prior to any grading or construction activity at the project site, a qualified biologist shall conduct a training session for all construction personnel involved in ground-disturbing activities throughout the duration of construction. All new construction personnel shall also undergo this mandatory environmental awareness training. This training shall be documented in training records and the applicant shall submit evidence of completion of this training to the County Planning Department prior to any ground-disturbing activities. The training shall include the following, at a minimum: – Description of the California red-legged frog and their habitat; – General measures that shall be implemented to conserve species as they relate to the project; – Boundaries within which construction activities will occur; and – Informational handouts with photographs clearly illustrating the species' appearances shall be used in the training session.	Submittal of Worker Training records.	Prior to ground-disturbing activities.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
MM-BIO-2: Nesting Bird Avoidance and Minimization Measures Any tree removal, pruning, grading, grubbing, or demolition within the compost facility or within the access road and SR-25 impact areas shall be conducted outside of the bird nesting season (January 15 through September 15) to the maximum extent feasible. If these types of activities, or noise resulting from construction activities, will occur during the bird nesting season, then prior written approval from the County Planning Department shall be obtained, and a qualified biologist shall conduct pre-construction surveys for nesting birds to ensure that no active nests would be disturbed during project activities. If project-related work is scheduled during the nesting season (January 15 through September 15), or if construction activities are suspended for at least 15 days and recommence during the nesting season, a qualified biologist shall conduct additional nesting bird surveys before any construction activities recommence. Two surveys for active nests of such birds shall occur within 15 days prior to the start of construction, with the second survey conducted within 48 hours prior to the start of construction. Appropriate minimum survey radii surrounding each work area are 250 feet for passerines, 500 feet for smaller raptors, and 1,000 feet for larger raptors. Surveys shall be conducted at the appropriate times of day, as determined by the qualified biologist, to observe nesting activities when birds are most active. Off-site locations where access is not available may be surveyed from within the site or from public areas. A report documenting survey results and plan for active bird nest avoidance (if active nests are found) shall be completed by the qualified biologist and submitted to the County Planning Department prior to initiation of construction activities. If the qualified biologist documents active nests within the survey areas, an appropriate buffer between each nest and construction shall be established. The buffer shall be clearly marked and maintained until the young have fledged and are foraging independently. Prior to construction, the qualified biologist shall conduct baseline monitoring of each nest to characterize normal bird behavior and establish a buffer distance that allows the birds to exhibit normal behavior. The qualified biologist shall monitor the nesting birds daily during construction activities and increase the buffer if birds show signs of unusual or distressed behavior (e.g., defensive flights and vocalizations, standing up from a brooding position, and/or flying away from the nest). If buffer establishment is not possible, all construction work in the area shall cease until the young have fledged and the nest is no longer active. Any modifications to this measure, such as encroachment of construction activities into established buffer zones, must be coordinated with CDFW.	Application for pre-approval for construction activities in nesting bird season.	Prior to initiation (or recommencement) of construction activities within nesting season (Jan 15-Sept 15 of each year).	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Retention of qualified biologist to conduct required surveys and monitoring.		Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of survey results and active nest avoidance plan.		Project Applicant & qualified biologist.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of monitoring results.	Throughout duration of construction within nesting season(s).	Project Applicant & qualified biologist.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
MM-BIO-3: Roosting Bat Avoidance and Minimization Measures The Applicant shall retain a qualified biologist to conduct a bat habitat assessment in all project areas that require tree removal. The qualified biologist shall identify and document the location of potentially suitable bat roosting habitat prior to construction activities. If no suitable bat habitat is observed, the biologist shall inform the County Planning Department, the Applicant and its Construction Contractor, and no further measures are required. If bat roosting habitat is observed, the locations of all such habitat areas shall be provided to the County Planning Department, the Applicant and its Construction Contractor, and all of the following requirements shall be implemented throughout the construction period: • Removal of trees that provide suitable bat roosting habitat shall be conducted outside of the bat maternity season (April 15 to August 31) and overwintering season (October 16 to January 15) to the maximum extent feasible and with express prior approval from the County Planning Department. • Bat presence/absence surveys shall be conducted 2 to 3 days prior to removal of any trees in suitable bat habitat, at any time of year. If presence/absence surveys are negative, work may proceed with no restrictions. If presence/absence surveys detect bats within trees planned for removal, work should proceed in accordance with all of the following restrictions: – If a maternity colony of bats is observed during maternity season (April 15 to August 31), tree removal shall not occur until August 31 or when maternity season has ended as confirmed based on surveys conducted by a qualified biologist.	Retention of qualified biologist to conduct required measures.	Prior to construction activities.	Project Applicant/Qualified Biologist.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of bat habitat assessment results.	Prior to construction activities.	Project Applicant/Qualified Biologist.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Application for pre-approval for removal of trees within bat habitat.	Prior to removal of trees.	Project Applicant/Qualified Biologist.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of records showing compliance with required preconstruction surveys and monitoring measures.	Throughout duration of construction.	Project Applicant & qualified biologist.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____

Mitigation Measure	Mitigation and Reporting Action	Implementation Timeframe	Implementation Responsibility	Implementation Oversight	Verification of Compliance
– If bats are observed during overwintering season (October 16 to January 15), tree removal shall not occur until January 15 or until bats are no longer present as confirmed based on surveys conducted by a qualified biologist. – If bats are present outside of maternity or overwintering seasons, construction shall follow a two-phase tree removal system conducted over 2 consecutive days. On the first day (in the afternoon), any limbs and branches shall be removed using chainsaws or other hand tools. Limbs with cavities, crevices, or deep bark fissures shall be avoided, and only branches or limbs without those features may be removed. On the second day, the entire tree shall be removed. Any modifications to this measure, such as bat eviction, must be coordinated with CDFW.					
MM-BIO-4: Delineation of Aquatic Features, Permit Acquisition, and Compliance with Permit Conditions Prior to initiation of ground disturbance or construction activities within the new access driveway, SR-25 impact areas, and Detention Basin #1, the applicant shall retain a qualified biologist to delineate the extent of drainage ditches, potential wetlands, and other waters of the United States regulated by the USACE and RWQCB. If there are jurisdictional features that would be modified by the project, the applicant shall obtain a Clean Water Act Section 404 Nationwide Permit or Individual Permit from USACE and obtain a Clean Water Act Section 401 Water Quality Certification from the RWQCB. To compensate for temporary and/or permanent impacts to wetlands and other waters of the U.S. that would be impacted as a result of the proposed project, compensation shall be provided as required by the conditions of the regulatory permits. Compensation shall be provided through one of the following mechanisms: • A Wetland Mitigation and Monitoring Plan shall be developed that outlines mitigation and monitoring obligations for temporary impacts to wetlands and other jurisdictional waters from the project. The Wetland Mitigation and Monitoring Plan shall include thresholds of success, monitoring and reporting requirements, and site-specific plans to compensate for wetland losses resulting from the project. The Wetland Mitigation and Monitoring Plan shall be submitted to the appropriate regulatory agencies for review and approval during the Section 404/401 permit application process. • To compensate for permanent impacts, the dedication of land to provide suitable wetland restoration or creation shall ensure no net loss of wetland values or functions. For compensation lands or improvements on the project site, the applicant shall comply with all terms and conditions of the regulatory permits, including measures to protect and maintain water quality, restore work sites, and compensatory mitigation to offset temporary and permanent wetland impacts. The Applicant shall prioritize onsite compensation, and dedication of offsite compensation shall only be considered if the County Planning Department determines that onsite compensation is infeasible. The Applicant shall develop, as necessary, a mitigation and monitoring plan, which will include success criteria for waters enhancement or creation on- or off-site. The Applicant shall be responsible for securing funding for the implementation and management of compensatory mitigation prior to issuance of a grading permit, with oversight by the County of Santa Clara. For improvements within the Caltrans right-of-way, the applicant shall comply with terms and conditions of the permits, including measures to protect and maintain water quality, restore work sites, and compensatory mitigation to offset temporary and/or permanent wetland impacts. The applicant shall be responsible for implementation of this mitigation measure prior to issuance of an encroachment permit from Caltrans.	Retention of qualified biologist to delineate potential wetlands and other waters.	Prior to initiation of ground disturbance.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of Jurisdictional Delineation report.	Prior to initiation of ground disturbance.	Project Applicant & qualified biologist.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Attainment of applicable permits (if required) & compliance with permit conditions.	Prior to activities within jurisdictional waters/wetlands or their buffers.	Project Applicant & qualified biologist.	US Army Corps of Engineers Regional Water Quality Control Board.	Name: _____ Date: _____
	Submittal of records showing compliance with required compensation measures (if required).	Prior to issuance of grading permit.	Project Applicant & qualified biologist.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of records showing compliance with required compensation measures (if required).	Prior to issuance of encroachment permit for improvements in SR-25 ROW.	Project Applicant & qualified biologist.	California Department of Transportation.	Name: _____ Date: _____
MM-CUL-1: Accidental Discovery Protocols A. Prior to the start of ground-disturbing activities, the applicant shall retain a qualified archaeologist to implement archaeological awareness training for all construction personnel involved with earthmoving or grading activities. The training shall include information regarding the possibility of encountering buried cultural resources (including tribal cultural resources), the appearance and types of resources likely to be seen during construction, notification procedures, and proper protocol to be followed should resources be encountered. This training shall be provided to all workers involved in ground-disturbing activities throughout the duration of construction and shall be documented in training records that shall be submitted to the County prior to those workers undertaking any ground-disturbing activities at the site. B. A qualified archaeologist shall be on site to monitor project-related ground-disturbing activities. The contract for this work shall be provided to the County prior to issuance of a grading permit. The frequency of monitoring shall be determined by the archaeologist based on the rate of excavation and grading activities, the materials being excavated, the depth and location of excavation, and, if found, the abundance and type of archaeological resources encountered. C. If buried historic or prehistoric cultural resources or suspected resources (such as chipped stone or groundstone, shell middens, historic debris such as trash dumps, building foundations, or old roadways) are inadvertently discovered during ground-disturbing activities, work shall stop within a 100-foot radius of the find, and the County Planning Department shall be notified, and the qualified archaeologist shall evaluate the find to determine if it meets the definition of a historical, unique archaeological, and/or tribal cultural resource, and all of the following shall be required: – If the find(s) does not meet the definition of a historical resource or unique archaeological resource, no further study or protection is necessary prior to resuming project implementation. – If the find(s) does meet the definition of a historical resource or unique archaeological resource, then it shall be avoided by project activities. If avoidance is not feasible, as determined by the County Planning Department, the qualified archaeologist, shall make appropriate recommendations regarding the treatment and disposition of such find(s), and significant impacts to such resources shall be mitigated in accordance with the recommendations of the archaeologist, and evidence of such mitigation shall be submitted to the County Planning Department, prior to resuming any construction activities within the 100-foot radius of the find(s). – If the find(s) is potentially a tribal cultural resource, then tribal representatives shall be consulted. If, after consultation with tribal representatives, it is determined that the find(s) is a tribal cultural resource, then the find(s) shall be avoided by project activities. If avoidance is not feasible, as determined by the County Planning Department, the qualified archaeologist, in consultation with tribal representatives, shall make appropriate recommendations regarding the treatment and disposition of such finds and significant impacts to such resources shall be mitigated in accordance with the recommendations of the archaeologist, and evidence of such mitigation submitted to the County, prior to resuming construction activities within the 100-foot radius.	Retention of qualified archaeologist & submittal of contract.	Prior to the start of ground-disturbing activities.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of training records.	Prior to the start of ground-disturbing activities or new workers starting.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Notification of suspected resource(s).	Immediately following discovery of suspected resource.	Project Applicant & qualified archaeologist.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of records showing implementation of recommendations for treatment & disposition.	Prior to resuming activities within 100-ft radius of resource(s).	Project Applicant & qualified archaeologist.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____

Mitigation Measure	Mitigation and Reporting Action	Implementation Timeframe	Implementation Responsibility	Implementation Oversight	Verification of Compliance
If the find(s) are human remains or grave goods, the requirements of Public Resources Code Section 5097.98 and County Ordinance Code Sections B6-18 through B6-20 shall be followed.					
MM-HYD-1A: Demonstrate Sufficient Pump Capacity During the grading permit application process, the Applicant shall submit details and calculations to the County Planning Department demonstrating that the proposed pump capacity will be sufficient to transfer stormwater runoff from Area 1 into Detention Basin #1 during a 25-year, 24-hour storm event without causing localized flooding which inundates the southeast corner of the green waste compost area. Note that approximately 7.1 million gallons of stormwater runoff is expected from Area 1 during the 25-year, 24-hour storm event (from 4.75 inches of precipitation).	Submittal of calculations & pump details.	During the grading application process.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
MM-HYD-1B: Increase Detention Basin Capacity During the grading permit application process, the Applicant shall submit a revised site plan, design details, and supporting calculations to the County Planning Department for review and approval showing modifications to increase the capacity of Detention Basin #1 and/or Detention Basin #2, such that the combined detention capacity is sufficient to hold at least 22.4 million gallons of water whilst maintaining a freeboard of at least 2 feet. In addition, the Applicant shall demonstrate compliance with the Composting General Order (or at least as stringent conditions of an individual permit) to detain the 25-year, 24-hour peak storm, assuming normal operating volumes during wet years, or obtain approval from the RWQCB for an equivalent alternative. If the modified basin design would require changes to the engineered alternative liner design for Detention Basin #1 (as previously approved by the RWQCB on May 22, 2023), or would result in the potential for Detention Basin #2 to hold water at an elevation above the level of the existing Detention Basin #2 liner (i.e., above 150 feet NAVD 88) the Applicant shall demonstrate compliance with the Composting General Order hydraulic conductivity requirements or at least as stringent conditions of an individual permit, as required by the RWQCB. If the modified basin design would require additional fill below the base-flood elevation, consideration must also be given to a corresponding increase in the size of the additional flood storage basin in Area 2, as needed to comply with the County’s Floodplain Management Ordinance (see also MM-HYD-4). If the modified basin design and/or corresponding changes to the flood storage basin would decrease the area of the facility draining to the detention basins, the required detention volume specified in the first paragraph of this measure may be reduced accordingly, provided adequate supporting documentation is provided to the County Planning Department for review and approval. The documentation shall demonstrate that the revised design is sufficient to hold direct precipitation and facility runoff from a 25-year, 24-hour storm event in addition to normal operating volumes during wet years, whilst maintaining 2 feet of freeboard.	Submittal of revised site plan, design details, and supporting calculations.	During the grading application process.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of evidence of compliance with Compost General Order requirements.	During the grading application process.	Project Applicant.	RWQCB and County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
MM-HYD-1C: Investigate and Remediate Contaminated Soils in Detention Basin #1 Prior to issuance of grading permits, the applicant shall retain a qualified environmental consultant to prepare and implement a soil investigation plan, that shall be submitted for review and approval by the County Planning Department. The plan shall detail procedures for collection and analysis of soil samples from existing sediments in the floor of Detention Basin #1. Samples shall be analyzed, and concentrations compared to background levels and industry-standard screening levels for groundwater protection (e.g., regional screening levels and/or environmental screening levels). If existing sediments at the bottom of Detention Basin #1 are found to be contaminated, these soils shall be removed prior to new construction activities at Detention Basin #1. Excavated soils shall be re-composted at the facility or hauled off from the site for disposal at an appropriately licensed facility, in accordance with federal, state, and local regulations.	Retain a qualified environmental consultant.	During the grading application process.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of soil investigation plan.	During the grading application process.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of evidence of compliance with approved soil investigation plan and applicable disposal regulations.	Prior to construction activities affecting Detention Basin #1.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
MM-HYD-4: Update Floodplain Storage Analysis Prior to issuance of grading permits, the Applicant shall prepare and submit a revised floodplain storage analysis to the County, based on final project design. The analysis shall specify the project components included in the modeling and shall not consider excavated areas that are below typical groundwater levels as contributing to flood storage capacity. If the County determines that the revised analysis does not demonstrate compliance with the County’s Floodplain Management Ordinance requirement that the project would not, when combined with other development within the floodplain, result in the water surface elevation of the 100-year base flood increasing by more than 1 foot, then the project shall be revised to provide additional floodplain storage capacity or other design changes, until compliance can be demonstrated to the County’s satisfaction.	Submittal of revised floodplain storage analysis.	Prior to grading permits.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
MM-HYD-5: Increase Berm Height for Detention Basin #2 The Applicant shall increase the berm height of Detention Basin #2 to at least 150.5 feet (NAVD 88), so that at least 2 feet freeboard above the 100-year base flood elevation of 148.5 feet (NAVD 88) is maintained. Plans for the redesigned detention basin shall be submitted to the County Planning Department for review and approval prior to issuance of grading permits for the project. The Applicant shall also modify or replace the basin liner, as required by the RWQCB, in compliance with the Composting General Order requirements for hydraulic conductivity (or at least as stringent conditions of an individual permit).	Submittal of redesigned Detention Basin #2 plans for approval.	Prior to issuance of grading permits.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of evidence of compliance with Compost General Order requirements.	During the grading application process.	Project Applicant.	RWQCB and County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____

Mitigation Measure	Mitigation and Reporting Action	Implementation Timeframe	Implementation Responsibility	Implementation Oversight	Verification of Compliance
MM-TRA-2: Installation of Traffic Controls or Retention of Driveway in Existing Location A. The applicant shall modify its proposed design for the SR-25 improvements and driveway relocation to include the installation of traffic signals at the intersection of SR-25/Bolsa Road/relocated driveway, if agreed to by Caltrans. The applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of their permit review and approval process, including maintenance of a clear recovery zone and compliance with Caltrans' stormwater management standards. The applicant shall be fully responsible for the cost of all project site improvements to mitigated impacts to traffic operations and safety. The applicant's funding contribution to the cost of SR-25 improvements, either in full or in part, shall be determined by Caltrans. B. The applicant shall not increase processing capacity of the facility (and associated increase in haul-truck and employee traffic) at the site until either (1) the signalized intersection is operational in accordance with MM-TRA-2A above, or (2) alternative improvements are made to the existing project site driveway in accordance with Alternative 3 and mitigation measure MM-TRA-2-Alt3 and no relocation of the project site driveway occurs until the signalized operation is operational in accordance with MM-TRA-2A. The applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of their permit review and approval process. The applicant shall be fully responsible for the cost of all project site improvements to mitigated impacts to traffic operations and safety. The applicant's funding contribution to the cost of SR-25 improvements, either in full or in part, shall be determined by Caltrans.	Submittal of signalized driveway/SR-25/Bolsa design (or modified Alternative 3 driveway design) to Caltrans.	Prior to issuance of grading permits.	Project Applicant.	California Department of Transportation.	Name: _____ Date: _____
	Submittal of copy of Caltrans-issued encroachment agreement and evidence of compliance with permit conditions & contribution of fair share costs.	Prior to increasing processing capacity of facility.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
MM-TRA-3: Construction Traffic Management Plan The applicant or their contractor shall prepare a Construction Traffic Management Plan (CMP), in accordance with MUTCD requirements and the Caltrans Transportation Management Plan Guidelines. The CMP shall be subject to review and approval by Caltrans and the County Department of Roads and Airport, prior to issuance of a grading permit. The plan shall be implemented during construction and shall include, but not be limited to, the following: - Schedule of construction showing each phase of the project, construction hours, and anticipated method of handling traffic for each phase, including drawings identifying lane configurations, haul routes, road and lane closures, detour routes, work areas, staging areas, and worker parking areas. The location of signs, barricades, codes, etc., to warn, direct, and guide traffic shall be shown on the plan, as well as any supplementary traffic control devices that might be required. - The repair and restoration of any damaged or deteriorated roadway rights-of-way according to Caltrans requirements after construction is completed. - Provide for the appropriate control measures, including barricades, warning signs, speed control devices, flaggers, and other measures to mitigate potential traffic hazards; - Ensure coordination with emergency response providers to provide sufficient emergency response access for the surrounding area; - Maintain emergency access to the project site throughout construction and maintain vehicular, bicycle, and pedestrian access through the State Route 25 corridor throughout construction; - Prohibit heavy vehicle traffic to and from the project site during the commute hours of 7:00-9:00 AM and 4:00-6:00 PM; - Identify the need (if any) for transportation permits for oversized or excessive load vehicles on State roadways from Caltrans and include any permit conditions as part of the CMP; - Implement truck haul routes for construction trucks deemed acceptable by Caltrans and the County Department of Roads and Airport with SR-25 and U.S. Highway 101 as the assumed routes to and from the north; and - Store construction equipment on the project site and outside the Caltrans right-of-way during the construction phase of the project.	Preparation and submittal of CMP to County Roads and Airport and Caltrans.	Prior to issuance of the grading permit.	Project Applicant or their Contractor.	County of Santa Clara Department of Roads and Airport and California Department of Transportation.	Name: _____ Date: _____
	Submittal of copy of Caltrans-and County Roads & Airport-approved CMP.	Prior to issuance of the grading permit.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____
	Submittal of records showing of compliance with CMP.	Throughout construction.	Project Applicant.	County of Santa Clara Department of Planning and Development.	Name: _____ Date: _____

Appendix C – Updated Tables and Figures

This appendix contains:

- Table 2-1 – Changed to show updated mitigation measures and to correct formatting error.
- Table 3-1 – Changed to update discussion of project consistency with County General Plan policies.
- Figure 3-2 – Changed to show location of existing flood storage area.
- Figure 15-2 – Replaced to correct formatting error.

Updated Table 2-1 Summary of Significant Impacts and Mitigation Measures

[illegible]

Summary of Impacts and Mitigation	Significance
<i>B. Off-Site <u>Spillage and Litter Management Plan</u>: The modified Use Permit conditions shall require the Applicant to comply with an off-site <u>spillage and litter management plan</u>. The Applicant shall submit a proposed <u>spillage and litter management plan</u> to the County Planning Department for review and approval. The plan shall include, but not be limited to, the following measures:</i> <i>1) Procedures and penalties to discourage haul trucks arriving on site or transporting ~~non-compostable~~ materials from the facility from failing to properly secure their loads to minimize potential for generation of <u>litter or material spillage</u> in-transit to or from the facility. <u>Note that State law requires vehicle contents to be covered so that nothing can spill or otherwise escape from the vehicle (Vehicle Code §§ 23114, 23115).</u></i> <i>2) Regular inspections of the SR-25 right-of-way adjacent to the project site and extending at least a half-mile in either direction of the facility to identify and clean up any <u>litter or spilled materials</u> that may be generated by trucks hauling materials to or from the site.</i> <i>3) Increased frequency of clean-up activities, such as trash removal from the project site frontage and street-sweeping within the Caltrans right-of-way to the extent needed to prevent any increase in <u>litter or spilled materials</u> along the project frontage.</i> <i>4) <u>Records of inspections and enforcement activities shall be maintained by the Applicant and submitted to the County Planning Department annually, or more frequently on request.</u></i>	
Impact AES-3: The Project would not introduce new sources of substantial light or glare that would adversely affect daytime or night-time views. Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A
Impact AFR-1: The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Mitigation: none required	Before Mitigation: NI After Mitigation: N/A
Impact AFR-2: The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. Mitigation: none required	Before Mitigation: NI After Mitigation: N/A
Impact AFR-3: The project would not involve other changes in the existing environment which could result in conversion of Farmland to non-agricultural use. Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A
Impact AIR-1: The project could generate potentially significant fugitive dust (PM₁₀ and PM_{2.5}) emissions during construction	Before Mitigation: PS

Summary of Impacts and Mitigation	Significance
Mitigation: MM-AIR-1: Fugitive Dust Minimization Measures <i>Prior to issuance of a grading permit, the project Applicant shall ensure that the following measures are included on all construction documents. Additionally, these measures shall be implemented during construction:</i> • <i>All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.</i> • <i>All haul trucks transporting soil, sand, or other loose material off-site shall be covered.</i> • <i>All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.</i> • <i>All vehicle speeds on unpaved roads shall be limited to 15 mph.</i> • <i>All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.</i> • <i>Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.</i> • <i>All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.</i> • <i>Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.</i>	After Mitigation: LTSM
Impact AIR-2: Operational traffic would result in NO_x emissions in excess of applicable thresholds Mitigation: MM-AIR-2: Vehicle Idling Limits <i>The Applicant shall require that the engines of on-road trucks operating within the project site be shut off while queuing for loading and unloading for time periods longer than two minutes. This requirement shall be incorporated by the project Applicant into contract specifications for all operators of MSW, finished material, and waste haul trucks and the Applicant shall ensure that all contractors comply with this contractual requirement. The Applicant shall ensure appropriate signage and training for onsite workers is provided to support effective implementation of this limit.</i> No other feasible mitigation identified.	Before Mitigation: PS After Mitigation: S&U
Impact AIR-3: Operational vehicle trips would not expose sensitive receptors to substantial concentrations of carbon monoxide Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A
Impact AIR-4: Operational vehicle trips would not expose sensitive receptors to substantial concentrations of Toxic Air Contaminants. Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A

Summary of Impacts and Mitigation	Significance
Impact AIR-5: Project site operations would not expose sensitive receptors to substantial concentrations of Toxic Air Contaminants. Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A
Impact AIR-6: The project would not result in increased odor emissions affecting a substantial number of people. Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A
Impact AIR-7: The project could result in increased bioaerosol emissions affecting a substantial number of people. Mitigation: MM-AIR-7a: Dust Monitoring <i>Prior to issuance of an operating permit, the project Applicant shall retain a qualified industrial hygienist to design and conduct a fence line dust monitoring program (as a proxy for the monitoring of bioaerosols) to establish baseline conditions at the site under normal (existing) operating conditions <u>and under a range of meteorological conditions</u>. Following installation of the new composting equipment and when the project is fully operational and at maximum composting volume, the industrial hygienist shall perform a second round of dust monitoring during typical project operations (and under a similar range of meteorological conditions to baseline monitoring) to determine if the new technology causes an increase in fugitive dust emissions (which may also indicate an increase in bioaerosol emissions). The monitoring plan shall be submitted to the County Planning Department for review and approval prior to implementation, and results shall be reported to the County Planning Department. If dust emissions under full project conditions are equal to or less than the baseline conditions, then no further monitoring is required. If dust emissions under full project conditions are greater than baseline conditions, then additional dust control measures or other operational practices shall be implemented to reduce dust and bioaerosol concentrations to the extent feasible, and additional monitoring, designed and undertaken by a qualified industrial hygienist, and reviewed and approved by County Planning Department, shall be undertaken to verify the effectiveness of the controls and to determine whether further control measures are warranted.</i> MM-AIR-7b: Equipment Maintenance and Biofilter Replacement <i>To prevent the growth of bacteria and fungi within the biofilter matrix, the matrix shall be maintained and properly replaced in accordance with manufacturer's specifications. All equipment within the ECS system, including monitoring that the proposed ECS system is attaining the appropriate pathogen reduction temperatures within the anticipated timeframe (i.e., 48 hours), <u>and within multiple locations throughout each bunker</u>, shall be checked by a qualified technician and determined to be running in proper condition prior to daily operation. <u>Composted materials shall not be removed from the primary CASP bunkers until all temperature probes have reached a temperature of at least 55 degrees Celsius.</u> Records of required daily monitoring and maintenance shall be retained by the Applicant and provided to the County Planning Department annually, or more frequently upon request.</i>	Before Mitigation: PS After Mitigation: S&U
Impact AIR-8: The project would be inconsistent with the Clean Air Plan due to NOx emissions from operational truck trips. Mitigation: MM-AIR-2: Vehicle Idling Limits (see Impact AIR-2 above for details of mitigation). No other feasible mitigation identified.	Before Mitigation: PS After Mitigation: S&U

AECOM
Appendix C-5

Summary of Impacts and Mitigation	Significance
• <i>Loss of soil from run-off or erosion shall be prevented with straw bales, straw wattles, or similar means provided they do not have the potential to entangle or block escape or dispersal routes of the California red-legged frog.</i> • <i>No insecticides or herbicides listed by the Environmental Protection Agency as potentially harmful to California red-legged frog shall be used within 60 feet of aquatic habitat, such as drainage ditches, wetlands, or ponds within the compost facility or within the impact areas along SR-25 during construction or project operation.</i> • <i>No pets shall be permitted at the construction site, to avoid and minimize the potential for harassment, injury, and death of the California red-legged frog.</i> • <i>For on-site storage of pipes, conduits, and other materials that could provide shelter for special-status species, an open-top trailer shall be used to elevate the materials above ground to reduce the potential for animals to climb into the conduits and other materials.</i> • <i>No night-time grading or construction shall occur between dusk and dawn, which is when the California red-legged frog is most actively moving and foraging.</i> • <i>No plastic monofilament netting (erosion control matting), loosely woven netting, or similar material in any form shall be used at the project site because California red-legged frogs can become entangled and trapped in them. Materials utilizing fixed weaves (i.e., strands cannot move), polypropylene, polymer, or other synthetic materials shall not be used. Acceptable substitutes would include coconut coir matting or tackifying hydroseeding compounds.</i> • <i>To prevent inadvertent entrapment of California red-legged frog during construction, all excavated, steep-walled holes or trenches more than 1 foot deep will be covered with plywood or similar materials at the close of each working day, or will be equipped with one or more escape ramps constructed of earth fill or wooden planks.</i> • <i>Before the start of work each day, the qualified biologist shall check for animals under any equipment such as vehicles and stored pipes within active construction zones. The qualified biologist shall also check all excavated steep-walled holes or trenches greater than one foot deep for trapped animals. If a California red-legged frog is observed within an active construction zone, all work within 100 feet of the individual shall be halted and all equipment turned off until the individual frog has left the construction area.</i> <i>B. Prior to any grading or construction activity at the project site, a qualified biologist shall conduct a training session for all construction personnel involved in ground-disturbing activities throughout the duration of construction. All new construction personnel shall also undergo this mandatory environmental awareness training. This training shall be documented in training records and the Applicant shall submit evidence of completion of this training to the County Planning Department prior to any ground-disturbing activities. The training shall include the following, at a minimum:</i> • <i>Description of the California red-legged frog and their habitat;</i> • <i>General measures that shall be implemented to conserve species as they relate to the project;</i> • <i>Boundaries within which construction activities will occur; and</i> • <i>Informational handouts with photographs clearly illustrating the species' appearances shall be used in the training session.</i>	

Summary of Impacts and Mitigation	Significance
Impact BIO-2: The project could result in loss or disturbance of special-status wildlife species (nesting raptors and migratory birds) Mitigation: MM-BIO-2: Nesting Bird Avoidance and Minimization Measures <i>Any tree removal, pruning, grading, grubbing, or demolition within the compost facility or within the access road and SR-25 impact areas shall be conducted outside of the bird nesting season (January 15 through September 15) to the maximum extent feasible and with express prior approval from the County Planning Department. If these types of activities, or noise resulting from construction activities, will occurs during the bird nesting season, then prior written approval from the County Planning Department shall be obtained, and a qualified biologist shall conduct pre-construction surveys for nesting birds to ensure that no active nests would be disturbed during project activities. If project-related work is scheduled during the nesting season (January 15 through September 15), or if construction activities are suspended for at least 15 days and recommence during the nesting season, a qualified biologist shall conduct additional nesting bird surveys before any construction activities recommence. Two surveys for active nests of such birds shall occur within 15 days prior to the start of construction, with the second survey conducted within 48 hours prior to the start of construction. Appropriate minimum survey radii surrounding each work area are 250 feet for passerines, 500 feet for smaller raptors, and 1,000 feet for larger raptors. Surveys shall be conducted at the appropriate times of day, as determined by the qualified biologist, to observe nesting activities when birds are most active. Off-site locations where access is not available may be surveyed from within the site or from public areas. A report documenting survey results and plan for active bird nest avoidance (if active nests are found) shall be completed by the qualified biologist and submitted to the County Planning Department prior to initiation of construction activities. If the qualified biologist documents active nests within the survey areas, an appropriate buffer between each nest and construction shall be established. The buffer shall be clearly marked and maintained until the young have fledged and are foraging independently. Prior to construction, the qualified biologist shall conduct baseline monitoring of each nest to characterize normal bird behavior and establish a buffer distance that allows the birds to exhibit normal behavior. The qualified biologist shall monitor the nesting birds daily during construction activities and increase the buffer if birds show signs of unusual or distressed behavior (e.g., defensive flights and vocalizations, standing up from a brooding position, and/or flying away from the nest). If buffer establishment is not possible, all construction work in the area shall cease until the young have fledged and the nest is no longer active. Any modifications to this measure, such as encroachment of construction activities into established buffer zones, must be coordinated with CDFW.</i>	Before Mitigation: PS After Mitigation: LTSM

Summary of Impacts and Mitigation	Significance
Impact BIO-3: The project could result in loss or disturbance of special-status wildlife species (western mastiff bat and pallid bat) Mitigation: MM-BIO-3: Roosting Bat Avoidance and Minimization Measures <i>The Applicant shall retain a qualified biologist to conduct a bat habitat assessment in all project areas that require tree removal. The qualified biologist shall identify and document the location of potentially suitable bat roosting habitat prior to construction activities. If no suitable bat habitat is observed, the biologist shall inform the County Planning Department, the Applicant and its Construction Contractor, and no further measures are required. If bat roosting habitat is observed, the locations of all such habitat areas shall be provided to the County Planning Department, the Applicant and its Construction Contractor, and all of the following requirements shall be implemented throughout the construction period:</i> • <i>Removal of trees that provide suitable bat roosting habitat shall be conducted outside of the bat maternity season (April 15 to August 31) and overwintering season (October 16 to January 15) to the maximum extent feasible and with express prior approval from the County Planning Department.</i> • <i>Bat presence/absence surveys shall be conducted 2 to 3 days prior to removal of any trees in suitable bat habitat, at any time of year. If presence/absence surveys are negative, work may proceed with no restrictions. If presence/absence surveys detect bats within trees planned for removal, work should proceed in accordance with all of the following restrictions:</i> - <i>If a maternity colony of bats is observed during maternity season (April 15 to August 31), tree removal shall not occur until August 31 or when maternity season has ended as confirmed based on surveys conducted by a qualified biologist.</i> - <i>If bats are observed during overwintering season (October 16 to January 15), tree removal shall not occur until January 15 or until bats are no longer present as confirmed based on surveys conducted by a qualified biologist.</i> - <i>If bats are present outside of maternity or overwintering seasons, construction shall follow a two-phase tree removal system conducted over 2 consecutive days. On the first day (in the afternoon), any limbs and branches shall be removed using chainsaws or other hand tools. Limbs with cavities, crevices, or deep bark fissures shall be avoided, and only branches or limbs without those features may be removed. On the second day, the entire tree shall be removed.</i> <i>Any modifications to this measure, such as bat eviction, must be coordinated with CDFW.</i>	Before Mitigation: PS After Mitigation: LTSM

Summary of Impacts and Mitigation	Significance
Impact BIO-4: The project could result in loss of potential state or federally protected wetlands. Mitigation: MM-BIO-4: Delineation of Aquatic Features, Permit Acquisition, and Compliance with Permit Conditions <i>Prior to initiation of ground disturbance or construction activities within the new access driveway, SR-25 impact areas, and Detention Basin #1, the Applicant shall retain a qualified biologist to delineate the extent of drainage ditches, potential wetlands, and other waters of the United States regulated by the USACE and RWQCB. If there are jurisdictional features that would be modified by the project, the Applicant shall obtain a Clean Water Act Section 404 Nationwide Permit or Individual Permit from USACE and obtain a Clean Water Act Section 401 Water Quality Certification from the RWQCB.</i> <i>To compensate for temporary and/or permanent impacts to wetlands and other waters of the U.S. that would be impacted as a result of the proposed project, compensation shall be provided as required by the conditions of the regulatory permits. Compensation shall be provided through one of the following mechanisms:</i> <i>A Wetland Mitigation and Monitoring Plan shall be developed that outlines mitigation and monitoring obligations for temporary impacts to wetlands and other jurisdictional waters from the project. The Wetland Mitigation and Monitoring Plan shall include thresholds of success, monitoring and reporting requirements, and site-specific plans to compensate for wetland losses resulting from the project. The Wetland Mitigation and Monitoring Plan shall be submitted to the appropriate regulatory agencies for review and approval during the Section 404/401 permit application process.</i> <i>To compensate for permanent impacts, the dedication of land to provide suitable wetland restoration or creation shall ensure no net loss of wetland values or functions. For compensation lands or improvements on the project site, the Applicant shall comply with all terms and conditions of the regulatory permits, including measures to protect and maintain water quality, restore work sites, and compensatory mitigation to offset temporary and permanent wetland impacts. The Applicant shall prioritize onsite compensation, and dedication of offsite compensation shall only be considered if the County Planning Department determines that onsite compensation is infeasible. The Applicant shall develop, as necessary, a mitigation and monitoring plan, which will include success criteria for waters enhancement or creation on- or off-site. The Applicant shall be responsible for securing funding for the implementation and management of compensatory mitigation prior to issuance of a grading permit, with oversight by the County of Santa Clara.</i> <i>For improvements within the Caltrans right-of-way, the Applicant shall comply with terms and conditions of the permits, including measures to protect and maintain water quality, restore work sites, and compensatory mitigation to offset temporary and/or permanent wetland impacts. The Applicant shall be responsible for implementation of this mitigation measure prior to issuance of an encroachment permit from Caltrans.</i>	Before Mitigation: PS After Mitigation: LTSM
Impact CUL-1: The project could result in significant impacts to historical resources or unique archaeological resources. Mitigation: MM-CUL-1: Accidental Discovery Protocols A. <i>Prior to the start of ground-disturbing activities, the Applicant shall retain a qualified archaeologist to implement archaeological awareness training for all construction personnel involved with earthmoving or grading activities. The training shall include information regarding the possibility of encountering buried cultural resources (including tribal</i>	Before Mitigation: PS After Mitigation: LTSM

Summary of Impacts and Mitigation	Significance
<i>cultural resources), the appearance and types of resources likely to be seen during construction, notification procedures, and proper protocol to be followed should resources be encountered. This training shall be provided to all workers involved in ground-disturbing activities throughout the duration of construction and shall be documented in training records that shall be submitted to the County prior to those workers undertaking any ground-disturbing activities at the site.</i> <i>B. A qualified archaeologist shall be on site to monitor project-related ground-disturbing activities. The contract for this work shall be provided to the County prior to issuance of a grading permit. The frequency of monitoring shall be determined by the archaeologist based on the rate of excavation and grading activities, the materials being excavated, the depth and location of excavation, and, if found, the abundance and type of archaeological resources encountered.</i> <i>C. If buried historic or prehistoric cultural resources or suspected resources (such as chipped stone or groundstone, shell middens, historic debris such as trash dumps, building foundations, or old roadways) are inadvertently discovered during ground-disturbing activities, work shall stop within a 100-foot radius of the find, and the County Planning Department shall be notified, and the qualified archaeologist shall evaluate the find to determine if it meets the definition of a historical, unique archaeological, and/or tribal cultural resource, and all of the following shall be required:</i> <i>• If the find(s) does not meet the definition of a historical resource or unique archaeological resource, no further study or protection is necessary prior to resuming project implementation.</i> <i>• If the find(s) does meet the definition of a historical resource or unique archaeological resource, then it shall be avoided by project activities. If avoidance is not feasible, as determined by the County Planning Department, the qualified archaeologist, shall make appropriate recommendations regarding the treatment and disposition of such find(s), and significant impacts to such resources shall be mitigated in accordance with the recommendations of the archaeologist, and evidence of such mitigation shall be submitted to the County Planning Department, prior to resuming any construction activities within the 100-foot radius of the find(s).</i> <i>• If the find(s) is potentially a tribal cultural resource, then tribal representatives shall be consulted. If, after consultation with tribal representatives, it is determined that the find(s) is a tribal cultural resource, then the find(s) shall be avoided by project activities. If avoidance is not feasible, as determined by the County Planning Department, the qualified archaeologist, in consultation with tribal representatives, shall make appropriate recommendations regarding the treatment and disposition of such finds and significant impacts to such resources shall be mitigated in accordance with the recommendations of the archaeologist, and evidence of such mitigation submitted to the County, prior to resuming construction activities within the 100-foot radius.</i> <i>• If the find(s) are human remains or grave goods, the requirements of Public Resources Code Section 5097.98 and County Ordinance Code Sections B6-18 through B6-20 shall be followed.</i>	
Impact CUL-2: The project would not result in significant impacts to human remains. Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A

Summary of Impacts and Mitigation	Significance
Impact CUL-3: The project could result in significant impacts to tribal cultural resources. Mitigation: MM-CUL-1: Accidental Discovery Protocols (see Impact CUL-1 above for details of mitigation)	Before Mitigation: PS After Mitigation: LTSM
Impact GHG-1: The project would not result in a net increase in greenhouse gas emissions. Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A
Impact GHG-2: The project would not conflict with applicable plans to reduce greenhouse gas emissions. Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A
Impact HYD-1: The project could violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Mitigation: MM-HYD-1A: Demonstrate Sufficient Pump Capacity <i>During the grading permit application process, the Applicant shall submit details and calculations to the County Planning Department demonstrating that the proposed pump capacity will be sufficient to transfer stormwater runoff from Area 1 into Detention Basin #1 during a 25-year, 24-hour storm event without causing localized flooding which inundates the southeast corner of the green waste compost area. Note that approximately 8.7-7.1 million gallons of stormwater runoff is expected from Area 1 during the 25-year, 24-hour storm event (from 5.8-4.75 inches of precipitation).</i> MM-HYD-1B: Increase Detention Basin Capacity <i>During the grading permit application process, the Applicant shall submit a revised site plan, design details, and supporting calculations to the County Planning Department for review and approval showing modifications to increase the capacity of Detention Basin #1 and/or Detention Basin #2, such that the combined detention capacity is sufficient to hold at least 22.8-22.4 million gallons of water without discharging whilst and maintaining a freeboard of at least 2 feet. In addition, the Applicant shall demonstrate compliance with the Composting General Order (or at least as stringent conditions of an individual permit) to detain the 25-year, 24-hour peak storm, assuming normal operating volumes during wet years, or obtain approval from the RWQCB for an equivalent alternative.</i> <i>If the modified basin design would require changes to the engineered alternative liner design for Detention Basin #1 (as previously approved by the RWQCB on May 22, 2023), or would result in the potential for Detention Basin #2 to hold water at an elevation above the level of the existing Detention Basin #2 liner (i.e., above 150 feet NAVD 88) the Applicant shall demonstrate compliance with the Composting General Order hydraulic conductivity requirements or at least as stringent conditions of an individual permit, as required by the RWQCB.</i> <i>If the modified basin design would require additional fill below the base-flood elevation, consideration must also be given to a corresponding increase in the size of the additional flood storage basin in Area 2, as needed to comply with the County's Floodplain Management Ordinance (see also MM-HYD-4) such that no net loss of floodplain shall occur compared to existing conditions.</i> <i>If the modified basin design and/or corresponding changes to the flood storage basin would decrease the area of the facility draining to the detention basins, the required detention volume specified in the first paragraph of this measure may be reduced accordingly, provided adequate supporting documentation is provided to the County Planning Department for review and approval. The documentation shall demonstrate that the revised design is sufficient to hold</i>	Before Mitigation: PS After Mitigation: LTSM

Summary of Impacts and Mitigation	Significance
<i>direct precipitation and facility runoff from a 25-year, 24-hour storm event in addition to normal operating volumes during wet years, whilst maintaining ~~the required~~ 2 feet of freeboard.</i> MM-HYD-1C: Investigate and Remediate Contaminated Soils in Detention Basin #1 <i>Prior to issuance of grading permits, the Applicant shall retain a qualified environmental consultant to prepare and implement a soil investigation plan, that shall be submitted for review and approval by the County Planning Department. The plan shall detail procedures for collection and analysis of soil samples from existing sediments in the floor of Detention Basin #1. Samples shall be analyzed, and concentrations compared to background levels and industry-standard screening levels for groundwater protection (e.g., regional screening levels and/or environmental screening levels). If existing sediments at the bottom of Detention Basin #1 are found to be contaminated, these soils shall be removed prior to new construction activities at Detention Basin #1. Excavated soils shall be re-composted at the facility or hauled off from the site for disposal at an appropriately licensed facility, in accordance with federal, state, and local regulations.</i>	
Impact HYD-2: The project would not decrease groundwater supplies in a manner that would impede sustainable groundwater management of the basin Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A
Impact HYD-3: The project would not decrease groundwater recharge potential in a manner that would impede sustainable groundwater management of the basin Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A
Impact HYD-4: The project would not alter existing on-site drainage patterns in a manner that would impede or redirect flood flows. Mitigation: ~~none required~~ <u>MM-HYD-4: Update Floodplain Storage Analysis</u> <u><i>Prior to issuance of grading permits, the Applicant shall prepare and submit a revised floodplain storage analysis to the County, based on final project design. The analysis shall specify the project components included in the modeling and shall not consider excavated areas that are below typical groundwater levels as contributing to flood storage capacity. If the County determines that the revised analysis does not demonstrate compliance with the County's Floodplain Management Ordinance requirement that the project would not, when combined with other development within the floodplain, result in the water surface elevation of the 100-year base flood increasing by more than 1 foot, then the project shall be revised to provide additional floodplain storage capacity or other design changes, until compliance can be demonstrated to the County's satisfaction.</i></u>	Before Mitigation: <u>LTS</u> After Mitigation: ~~N/A~~ <u>LTS</u>

Summary of Impacts and Mitigation	Significance
Impact HYD-5: The project could result in release of pollutants due to flood inundation. Mitigation: <i>MM-HYD-5: Increase Berm Height for Detention Basin #2</i> <i>The Applicant shall increase the berm height of Detention Basin #2 to at least 150.5 feet (NAVD 88) ~~150.41 feet~~, so that at least 2 feet freeboard above the 100-year base flood elevation of 148.5 feet (NAVD 88) is maintained. Plans for the redesigned detention basin shall be submitted to the County Planning Department for review and approval prior to issuance of grading permits for the project. The Applicant shall also modify or replace the basin liner, as required by the RWQCB, in compliance with the Composting General Order requirements for hydraulic conductivity (or at least as stringent conditions of an individual permit).</i>	Before Mitigation: PS After Mitigation: LTSM
Impact HYD-6: The project could conflict with or obstruct implementation of the Water Quality Control Plan. Mitigation: <i>MM-HYD-1A: Demonstrate Sufficient Pump Capacity</i> (see Impact HYD-1 for details of mitigation) <i>MM-HYD-1B: Increase Detention Basin Capacity</i> (see Impact HYD-1 for details of mitigation) <i>MM-HYD-1C: Investigate and Remediate Contaminated Soils in Detention Basin #1</i> (see Impact HYD-1) <i>MM-HYD-4: Update Floodplain Storage Analysis</i> (see Impact HYD-4) <i>MM-HYD-5: Increase Berm Height for Detention Basin #2</i> (see Impact HYD-5 for details of mitigation)	Before Mitigation: PS After Mitigation: LTSM
Impact HYD-7: The proposed project would not conflict with or obstruct implementation of a Sustainable Groundwater Management Plan. Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A
Impact NOI-1: Project construction would not substantially increase ambient noise levels at the nearest sensitive receptor. Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A
Impact NOI-2: On-site operations would not substantially increase ambient noise levels at the nearest sensitive receptor Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A
Impact NOI-3: Project-related traffic would not substantially increase ambient noise levels. Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A
Impact NOI-4: The project would not result in substantial ground-borne noise or vibration Mitigation: none required	Before Mitigation: NI After Mitigation: N/A
Impact TRA-1: The project would conflict with CEQA Guidelines Section 15064.3 by exceeding the applicable VMT threshold. Mitigation: no feasible mitigation identified.	Before Mitigation: PS After Mitigation: S&U

Summary of Impacts and Mitigation	Significance
Impact TRA-2: Project operation could substantially increase traffic hazards. Mitigation: MM-TRA-2: Installation of Traffic Controls or Retention of Driveway in Existing Location A. The Applicant shall modify its proposed design for the SR-25 improvements and driveway relocation to include the installation of traffic signals at the intersection of SR-25/Bolsa Road/relocated driveway, if agreed to by Caltrans. The Applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of their permit review and approval process, including maintenance of a clear recovery zone <u>and compliance with Caltrans' stormwater management standards. The Applicant shall be fully responsible for the cost of all project site improvements to mitigate impacts to traffic operations and safety. The Applicant's funding contribution to the cost of SR-25 improvements, either in full or in part, shall be determined by Caltrans. The Applicant shall contribute its fair share of the cost of the traffic signals, as determined by Caltrans, with the remaining portion to be funded by Caltrans.</u> B. The Applicant shall not increase processing capacity of the facility (and associated increase in haul-truck and employee traffic) at the site until either (1) the signalized intersection is operational in accordance with MM-TRA-2A above, or (2) alternative improvements are made to the existing project site driveway in accordance with Alternative 3 and mitigation measure MM-TRA-2-Alt3 and no relocation of the project site driveway occurs until the signalized operation is operational in accordance with MM-TRA-2A. The Applicant shall obtain an encroachment permit from Caltrans to implement the modified design and shall comply with all conditions of the permit and/or modifications to the design requested by Caltrans as part of their permit review and approval process. <u>The Applicant shall be fully responsible for the cost of all project site improvements to mitigate impacts to traffic operations and safety. The Applicant's funding contribution to the cost of SR-25 improvements, either in full or in part, shall be determined by Caltrans.</u>	Before Mitigation: PS After Mitigation: LTSM

Summary of Impacts and Mitigation	Significance
Impact TRA-3: Project construction could substantially increase traffic hazards.	Before Mitigation: PS
Mitigation: MM-TRA-3: Construction Traffic Management Plan <i>The Applicant or their contractor shall prepare a Construction Traffic Management Plan (CMP), in accordance with MUTCD requirements and the Caltrans Transportation Management Plan Guidelines. The CMP shall be subject to review and approval by Caltrans and the County Department of Roads and Airport, prior to issuance of a grading permit. The plan shall be implemented during construction and shall include, but not be limited to, the following:</i> • <i>Schedule of construction showing each phase of the project, construction hours, and anticipated method of handling traffic for each phase, including drawings identifying lane configurations, haul routes, road and lane closures, detour routes, work areas, staging areas, and worker parking areas. The location of signs, barricades, codes, etc., to warn, direct, and guide traffic shall be shown on the plan, as well as any supplementary traffic control devices that might be required.</i> • <i>The repair and restoration of any damaged or deteriorated roadway rights-of-way according to Caltrans requirements after construction is completed.</i> • <i>Provide for the appropriate control measures, including barricades, warning signs, speed control devices, flaggers, and other measures to mitigate potential traffic hazards;</i> • <i>Ensure coordination with emergency response providers to provide sufficient emergency response access for the surrounding area;</i> • <i>Maintain emergency access to the project site throughout construction <u>and maintain vehicular, bicycle, and pedestrian access through the State Route 25 corridor throughout construction;</u></i> • <i>Prohibit heavy vehicle traffic to and from the project site during the commute hours of 7:00-9:00 AM and 4:00-6:00 PM;</i> • <i><u>Identify the need (if any) for transportation permits for oversized or excessive load vehicles on State roadways from Caltrans, and include any permit conditions as part of the CMP;</u></i> • <i>Implement truck haul routes for construction trucks deemed acceptable by Caltrans and the County Department of Roads and Airport with SR-25 and U.S Highway 101 as the assumed routes to and from the north; and</i> • <i>Store construction equipment on the project site and outside the Caltrans right-of-way during the construction phase of the project.</i>	After Mitigation: LTSM
Impact TRA-4: The project could result in inadequate emergency access.	Before Mitigation: PS
Mitigation: MM-TRA-3: Construction Traffic Management Plan (see Impact TRA-3 above for details of mitigation).	After Mitigation: LTSM
Effects Found Not Significant (Energy): The project would not: • Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation • Conflict with or obstruct a state or local plan for renewable energy or energy efficiency Mitigation: none required	Before Mitigation: LTS After Mitigation: N/A

Summary of Impacts and Mitigation	Significance
Effects Found Not Significant (Geology, Soils, and Paleontological Resources): The project would not: • Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic hazards • Result in substantial soil erosion or the loss of topsoil • Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse • Be located on expansive soil, creating substantial direct or indirect risks to life or property • Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater • Directly or indirectly destroy a unique paleontological resource or unique geologic feature Mitigation: none required	Before Mitigation: NI or LTS After Mitigation: N/A
Effects Not Found Significant (Hazards and Hazardous Materials): The project would not: • Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials • Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment • Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school • Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard to the public or the environment • For a project located within an airport land-use plan or, where such a plan has not been adopted, within two miles of a public airport or a public-use airport, result in a safety hazard or excessive noise for people residing or working in the project area • Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan • Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fire Mitigation: none required	Before Mitigation: NI or LTS After Mitigation: N/A
Effects Not Found Significant (Mineral Resources): The project would not: • Result in loss of availability of a known mineral resource that would be of value to the region and the residents of the state • Result in the loss of availability of a locally important mineral resource recovery site delineated in a local general plan, specific plan, or other land-use plan Mitigation: none required	Before Mitigation: NI After Mitigation: N/A

Summary of Impacts and Mitigation	Significance
Effects Not Found Significant (Population and Housing): The project would not: - Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure) - Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere Mitigation: none required	Before Mitigation: NI After Mitigation: N/A
Effects Not Found Significant (Public Services): The project would not: Result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire or police protection services, schools, parks, or other public facilities. Mitigation: none required	Before Mitigation: NI After Mitigation: N/A
Effects Not Found Significant (Public Services): The project would not: - Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated - Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment Mitigation: none required	Before Mitigation: NI After Mitigation: N/A
Effects Not Found Significant (Utilities and Service Systems): The project would not: - Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects - Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years - Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments - Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals - Comply with federal, state, and local management and reduction statutes and regulations related to solid waste Mitigation: none required	Before Mitigation: NI After Mitigation: N/A

Summary of Impacts and Mitigation	Significance
Effects Not Found Significant (Wildfire): The project would not: - Substantially impair an adopted emergency response plan or emergency evacuation plan - Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire - Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment - Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes Mitigation: none required	Before Mitigation: NI After Mitigation: N/A

Notes:

(USFWS 2005)

BAAQMD = Bay Area Air Quality Management District

CCR = California Code of Regulations

Caltrans = California Department of Transportation

CDFW = California Department of Fish and Wildlife

CEQA = California Environmental Quality Act

CMP = Construction Management Plan

County = Santa Clara County

ECS = Engineered Composting System

LEA = local enforcement agency

LTS = Less than significant

LTSM = less than significant with mitigation

mph = miles per hour

MSW = Municipal Solid Waste

N/A = not applicable

NI = no impact

NO_x = nitrogen oxidePM₁₀ = particulate matter with aerodynamic diameter less than 10 micronsPM_{2.5} = particulate matter with aerodynamic diameter less than 2.5 microns

PS = potentially significant

RWQCB = Regional Water Quality Control Board

S&U = significant and unavoidable

SR-25 = State Route 25

USFWS = U.S. Fish and Wildlife Service

USACE = U.S. Army Corps of Engineers

VMT = vehicle miles traveled

Updated Table 3-1 Santa Clara County General Plan Policy Consistency Review

General Plan Policy	Consistency Determination
Policy R-GD 20 Grading and terrain alteration to conduct lawful activities and use of property should conserve the natural landscape and resources, minimize erosion impacts, protect scenic resources, habitat, and water resources. Grading should not exacerbate existing natural hazards, particularly geologic hazards.	Consistent. Grading would occur within the existing facility site in areas already disturbed by prior grading and development. Similarly, grading for the proposed new facility entrance and SR-25 widening activities would be in areas already modified by prior disturbance. Erosion control measures would be required consistent with Chapter IV, Article 8, Part 6, Erosion Control in the Santa Clara County Code of Ordinances, and with the Storm Water Pollution Prevention Program (to be updated after project approval) in place at the Z-Best facility.
Policy R-GD 21 For grading, terrain alteration, or other work that is subject to a grading permit, the grading approval shall be required concurrently with any other required land use authorization or discretionary, conditional permit review process. Grading approval shall not precede other requisite land use or development approvals, including building permit issuance.	Consistent. The application for grading approval is accompanying the remaining project applications and therefore, would not precede other requisite land use or development approvals.
Policy R-GD 22 The amount, design, location, and the nature of any proposed grading may be approved only if determined to be: (a) appropriate, justifiable, and reasonably necessary for the establishment of an allowable use; (b) the minimum necessary given the various site characteristics, constraints, and potential environmental impacts that may be involved, and, I that which causes minimum disturbance to the natural environment, slopes, and other natural features of the land.	Consistent. The proposed grading is necessary for project implementation. Grading would occur in areas already disturbed by prior grading and development. Erosion control measures would be required consistent with Chapter IV, Article 8, Part 6, Erosion Control in the County of Santa Clara Ordinance Code, and with the Storm Water Pollution Prevention Program (to be updated after project approval) in place at the Z-Best facility.
Policy R-GD 23 Proposals to balance cut and fill amounts where such grading would exceed that which is deemed minimally necessary and reasonable for the site may be considered based on environmental impacts, the ability of the site to accommodate the additional fill without causing additional adverse impacts, the remoteness of the site, the overall amount of material that would otherwise need to be removed from the site, and the impacts of any truck traffic that could be involved, including travel distances, local road impacts, safety, noise, dust, and similar issues.	Consistent. The project has been designed to balance cut and fill on site. Soils excavated from the expanded flood storage area would be used to raise the Area 1 ECS pad (minor cut/significant fill), detention basin #1 modifications (significant fill), entrance relocation and access road improvements (minor fill). Excavated soil from the expanded flood storage area would also be used for previously permitted but not yet fully-constructed earth fill within Area 2 that would otherwise be required to import clean fill. The environmental effects of grading are evaluated as part of the project's overall construction phase effects. Construction vehicle miles traveled and safety are addressed in Section 13, Transportation; noise is addressed in Section 12, Noise, and dust is addressed in Section 7, Air Quality. Mitigation measures are included for those impacts that were determined to be significant.
Policy R-GD 25 Grading associated with roads, bridges, retaining walls, or similar improvements related to access requirements should not create a significant visual scar or impact to the environment. (a) Grading proposals for driveways and roads should generally follow natural terrain and contours to maximum extent feasible. Requirements and conditions for erosion control, landscaping or plantings, retaining wall design, and other design features may be imposed	Consistent. Grading associated with the new entrance and SR-25 widening activities would not be excessive and would take place on terrain that is level. Erosion control measures would be required consistent with Chapter IV, Article 8, Part 6, Erosion Control in the Santa Clara County Code of Ordinances, and with the Storm Water Pollution Prevention Program (to be updated after project approval) in place at the Z-Best facility.

General Plan Policy	Consistency Determination
where necessary to ensure that completed work blends as harmoniously as possible with the natural environment and landscape. (b) Use of native and drought tolerant species for the above purposes should be employed for at least 50% or more of the design.	
Policy R-TR 11 New development which would significantly impact private or public roads, should be allowed only when safety hazards and roadway deterioration will be mitigated to a less than significant level.	Consistent. The Applicant is proposing to construct a new on-site entrance that would represent a new fourth leg of the existing three-legged State Route 25/Bolsa Road intersection. The new entrance would be stop controlled. Acceleration and deceleration lanes are planned on SR-25, with widening of the segment along the project site frontage required to accommodate the new lanes. The purpose of the improvements is to better accommodate truck ingress and egress to the project site and reduce through traffic delays from turning movements into and out of the site. The proposed new driveway entrance and the SR-25 widening activity proposed to enable installation of acceleration and deceleration lanes into and out of the new entrance, have been reviewed for their operational and turning movement effects on SR-25 and Bolsa Road, and their predicted effect on crash frequency. See Section 13, Transportation.
Policy R-TR 14 Environmental impacts of roadway construction and expansion should be mitigated to a less than significant level.	Consistent. Environmental effects of the proposed SR-25 frontage improvements, including biological resources, cultural resources, aesthetics, traffic, noise, air quality, and GHGs are addressed in this EIR. Mitigation measures are identified where needed, and/or through implementation of uniformly applied development standards and regulations, impacts would be less than significant with mitigation incorporated. See Section 13, Transportation.
Policy C-RC 60 Hillsides, ridgelines, scenic transportation corridors, major county entryways, and other areas designated as being of special scenic significance should receive additional consideration and protections due to their prominence, visibility, or symbolic value.	Consistent. The project site is not within or adjacent to an area or transportation corridor or county entryway identified in the General Plan as being of special scenic significance. However, scenic views from SR-25 are available over the project site, and the project site is at an SR-25 entryway to San Benito County. Visual impacts to scenic resources are addressed in Section 5, Aesthetics. Due to a potential increase in litter within the site associated with increased feedstock intake and increased potential for litter to escape from trucks traveling to and from the site, a mitigation measure is presented requiring the project to augment existing litter control activities. With implementation of this mitigation measure, the project would be consistent with this policy.
Policy C-RC 65 All solid waste management services and facilities shall conform to applicable federal, state, and local regulations and standards.	Consistent. Many of the regulations and standards that apply to solid waste management facilities are designed to mitigate environmental impacts of such facilities. Related federal, state, and local (County) regulations that serve this purpose are summarized in the Regulatory Setting sections of each individual environmental topic evaluated in this EIR and discussed as the mechanisms to mitigate environmental

General Plan Policy	Consistency Determination
	effects of the proposed project. The proposed project is required to comply with the regulations and standards.
Policy C-RC 72 Decision-making regarding the siting of new landfills, the expansion of existing sites, and the location of other solid waste management facilities shall balance the need for such facilities with the full range of environmental quality issues involved.	Consistent. The proposed project is to modify the operations in order to expand the capacity of an existing composting facility, without increasing the size of the site. The proposal is being driven in part by state goals and implementing legislation for increasing waste diversion from landfills. This EIR evaluates the environmental impacts associated with the proposed project. The decision makers would be required to balance the need for the expansion with the environmental impacts of the project.
Policy C-RC 73 Santa Clara County acknowledges the need for long term disposal capacity and will strive to maintain 20 to 30 years of ongoing collective disposal capacity.	Consistent. The proposed project is to modify operations to expand the existing composting facility, which would allow for additional municipal solid waste to be composted rather than disposed of at a landfill. This will allow for existing landfill capacity to be utilized for other future disposal needs.
Policy C-RC 74 Expansion of existing landfill sites should be encouraged and explored thoroughly in preference to siting new landfills.	The proposed project is not a landfill or expansion of an existing landfill and therefore, this policy is not applicable to the proposed project.
Policy R-RC 96 The general approach to scenic resource preservation for the rural unincorporated areas consists of the following strategies: 1. Minimize scenic impacts in rural areas through control of allowable development densities. 2. Limit development impacts on highly significant scenic resources, such as, ridgelines, prominent hillsides, streams, transportation corridors and county entranceways.	Consistent. The proposed project would not significantly alter the existing visual character of the site or surrounding areas. The developed footprint of the site would not change and the proposed improvements would not create a significant discernable change in visual conditions as viewed from SR-25, the nearest public viewpoint. The project would not increase the physical footprint of existing developed uses and would not affect hillsides or stream corridors. Impacts to scenic resources and other aesthetic impacts are addressed in Section 5 of this EIR.
Policy R-RC 101 Roads, building sites, structures and public facilities shall not be allowed to create major or lasting visible scars on the landscape.	
Policy R-RC 5 Public and private development projects shall be evaluated and conditioned to assure they are environmentally sound, do not degrade natural resources, and that all reasonable steps are taken to mitigate potentially adverse impacts.	Consistent. This EIR evaluates the potential impacts of the proposed project and includes mitigation measures and/or compliance with uniformly applied development standards that serve to lessen environmental impacts. The proposed project would be conditioned to comply with all mitigation measures and must be consistent with the identified development standards.
Policy C-RC 19 The strategies for maintaining and improving water quality on a countywide basis, in addition to ongoing point source regulation, should include: a. effective non-point source pollution control; b. restoration of wetlands, riparian areas, and other habitats which serve to improve Bay water quality; and c. comprehensive Watershed Management Plans and “best management practices” (BMPs).	Consistent. The proposed project is, in part, being designed to comply with the 2015 Composting General Order promulgated by the State Water Resources Control Board. The Composting General Order includes new requirements specifically for composting operations that are designed to improve both surface and groundwater quality conditions. Of particular note is the requirement that detention facilities must be lined to prevent percolation of storm water runoff to groundwater. The project includes this improvement for the modified Detention Basin #1, which would result in improved groundwater quality relative to existing conditions. See Section 11, Hydrology and Water Quality. <u>Although the proposed project may require an individual permit from the Regional Water Quality Control Board (RWQCB), rather than coverage under the</u>
Policy R-RC 8 The strategies for assuring water quantity and quality for the rural unincorporated areas shall include: 1. Require adequate water quantity and quality as a pre-condition of development approval.	

General Plan Policy	Consistency Determination
2. Reduce the water quality impacts of rural land use and development. 3. Develop comprehensive watershed management plans. Policy R-RC 9 Development in rural unincorporated areas shall be required to demonstrate adequate quantity and quality of water supply prior to receiving development approval.	<u>Composting General Order, the conditions of an individual permit issued by the RWQCB would be at least as protective of water quality as the Composting General Order requirements. See Section 4.1.2 for more discussion of the Composting General Order applicability to the proposed project.</u> Based on the results of a water balance analysis submitted to the County and referenced in this EIR, the proposed project would result in increased groundwater demand. Z-Best currently utilizes water supply from existing wells to augment supply detained in its existing Detention Basin #1. Based on the most recent information available, the groundwater basin from which water would be extracted is not adjudicated, nor in overdraft condition. Therefore, water supply is not expected to be a constraint for the project. See Section 11, <u>Hydrology and Water Quality</u>.
Policy R-RC 13 Sedimentation and erosion shall be minimized through controls over development, including grading, quarrying, vegetation removal, road and bridge construction, and other uses which pose such a threat to water quality.	Consistent. Grading would occur in areas already disturbed by prior grading and development. Erosion control measures would be required consistent with Chapter IV, Article 8, Part 6, Erosion Control in the Santa Clara County Code of Ordinances, and with the Storm Water Pollution Prevention Program (to be updated after project approval) in place at the Z-Best facility consistent with National Pollutant Discharge Elimination System requirements.
Policy R-RC 15 Commercial and industrial uses such as automobile dismantlers, waste transfer disposal facilities, light industries, uses requiring septic systems, and other uses that have the greatest potential for pollution shall not be located within the vicinity of streams, reservoirs, or percolation facilities where contaminants could easily come in contact with flood waters, high groundwater, flowing streams, or reservoirs. Such uses shall be required to reduce any threat of contamination to an insignificant level as a condition of approval.	Consistent. Though the Z-Best facility is already permitted for operation adjacent to the Pajaro River, the proposed project includes measures that would improve groundwater quality relative to current operations, such as lining of the modified Detention Basin #1 and improved leachate control. As described above, the proposed project is also being designed to comply with the State Water Resources Control Board's ~~2015 Composting General Order, which includes new~~ requirements for composting operations that are designed to improve both surface and groundwater quality conditions. See Section 11, <u>Hydrology and Water Quality</u>.
Policy C-RC 40 Long term land use stability and dependability to preserve agriculture shall be maintained and enhanced by the following general means: a. limiting the loss of valuable farmland from unnecessary and/or premature urban expansion and development; b. regulating non-agricultural uses in agricultural areas, and their intensity and impacts on adjacent lands; c. maintaining agriculturally-viable parcel sizes; and d. minimizing conflicts between adjacent agricultural and non-agricultural land uses, through such means as right-to-farm legislation and mediation of nuisance claims.	Consistent. The project does not result in direct loss of agricultural land. While the intensity of existing operations would increase with an increase in MSW throughput, indirect impacts on adjacent agricultural uses are not expected to be significant. New operations would be no nearer to existing adjacent farmlands than under existing conditions. Windblown debris would continue to be caught in the existing litter screen and collected, with monitoring by the LEA. Potential for debris/pathogen transmission from existing secondary, open windrow composting operations would be reduced, as these would occur within three-sided contained bunkers that would better contain such materials. Groundwater quality is expected to improve, as the project includes lining the (currently unlined) existing Detention Basin #1; therefore, groundwater contamination from leachate and other chemicals should decline over time. See Section 5, <u>Agriculture and Forestry Resources</u>.

General Plan Policy	Consistency Determination
Policy C-RC 28 The general approach to preserving and enhancing habitat and biodiversity countywide should include the following strategies: 1. Improve current knowledge and awareness of habitats and natural areas. 2. Protect the biological integrity of critical habitat areas. 3. Encourage habitat restoration. 4. Evaluate the effectiveness of environmental mitigations. Policy R-RC 21 Critical habitat areas should be excluded from cities' Urban Service Areas unless retained in non-urban uses, and rural unincorporated development should be designed to avoid or mitigate impacts upon habitat and natural areas.	Consistent. Potential biological resources effects of the proposed project have been evaluated. The project has potential to adversely affect California red-legged frog, protected nesting birds, and wetlands. If the project is approved, the impacts would be mitigated to less than significant through implementation of mitigation measures. See Section 8, Biological Resources.
Policy C-RC 50 Countywide, the general approach to heritage resource protection should include the following strategies: 1. Inventory and evaluate heritage resources. 2. Prevent or minimize adverse impacts on heritage resources. 3. Restore, enhance, and commemorate resources as appropriate. Policy C-RC 52 Prevention of unnecessary losses to heritage resources should be ensured as much as possible through adequate ordinances, regulations, and standard review procedures. Mitigation efforts, such as relocation of the resource, should be employed where feasible when projects will have significant adverse impact upon heritage resources. Policy R-RC 86 Projects in areas found to have heritage resources shall be conditioned and designed to avoid loss or degradation of the resources. Where conflict with the resource is unavoidable, mitigation measures that offset the impact may be imposed. Policy R-RC 88 For projects receiving environmental assessment, expert opinions and field reconnaissance may be required if needed at the Applicant's expense to determine the presence, extent, and condition of suspected heritage resources and the likely impact of the project upon the resources.	Consistent. Heritage resources include cultural resources. The evaluation conducted as part of this EIR has found no evidence for the presence of significant historical resources or unique archaeological resources in areas surveyed for such resources, however known tribal cultural resources have been documented within half a mile of the project site. If cultural resources are uncovered during project activities, mitigation measures would be implemented to reduce the impacts to less than significant. Cultural resources are addressed in Section 9, Cultural Resources.
Policy C-RC 63 Santa Clara County shall strive to reduce the quantity of solid waste disposed of in landfills and to achieve or surpass the requirements of state law (the law currently specifies 25% reduction of landfilled wastes by 1995, and 50% by 2000).	Consistent. The proposed project is designed in significant part to reduce the quantity of solid waste disposed of in landfills.
Policy C-HS 24 Environments for all residents of Santa Clara County free from noises that jeopardize their health and well-being should be provided through measures which promote noise and land use compatibility. Policy C-HS 25 Noise impacts from public and private projects should be mitigated. Policy R-HS 1 Significant noise impacts from either public or private projects should be mitigated.	Consistent. Detailed analyses of construction phase, on-site operations and on-road sources of increased noise associated with the project have been evaluated in this EIR. The project would have less-than-significant impacts on noise-sensitive residential uses and noise-sensitive residential receptors. See Section 12, Noise.

General Plan Policy	Consistency Determination
Policy SC 12.0 Since flooding affects substantial areas of South County, and the flood control projects now being constructed are designed to protect only existing developed and planned urban areas, land development should be managed by the three jurisdictions to mitigate flooding problems and minimize the need for local public funding for additional flood control and local drainage facilities. Flood damage in South County should be minimized through a combination of actions. In flood-prone areas, inappropriate development should be prevented through land use planning, urban development policies and land use regulations. Areas which are developed or planned for development should be protected by the construction of flood control facilities. Development should be managed through advanced planning and design standards to minimize off-site flooding and drainage problems.	Consistent. The project site is within a flood hazard area. Fill proposed within Area 1 would result in increased flood elevations if compensatory flood water storage capacity was not provided. Increased flood storage would be provided. The new flood storage capacity would be sufficient to ensure that any net rise in flood elevation under post-project conditions would be negligible (approximately 0.01 foot). See Section 11, Hydrology and Water Quality. The project also includes new storm drainage improvements for collecting and delivering storm water to the existing Detention Basin #1, which would be modified to protect it from a 100-year design flood. The Z-Best facility is a no-net storm water discharge facility. In addition, the Composting General Order stipulates that a technical report must be submitted to identify how qualifying facilities are complying with the Composting General Order. The technical report must include, among other things, a description of the hydrogeology, working surface design, water and wastewater management plan, inspection and maintenance program, monitoring, closure plan, and a proposed schedule for achieving compliance. <u>Similar information would be required to be submitted as part of any application for an individual permit from the RWQCB for an MSW composting facility.</u>
Policy SC 13.0 Local drainage problems in South County should be minimized by preventing inappropriate development in areas which are prone to drainage problems and by using design standards and advanced planning to manage development. Developers of individual projects should be required to mitigate off-site on-site impacts and, where appropriate, to install local drainage facilities which would contribute to an eventual area wide solution to the local drainage problems, preferably in the context of a master plan for local drainage which should be developed jointly by the Cities and the County.	
Policy SC 13.3 The County and Cities should require a storm water management plan for each development. This plan, which would be presented early in the development stage, would describe the design implementation and maintenance of the local drainage facilities.	

Notes:

BMP = best management practices.

County = County of Santa Clara

ECS = Engineered Composting System

EIR = Environmental Impact Report

GHG = greenhouse gas

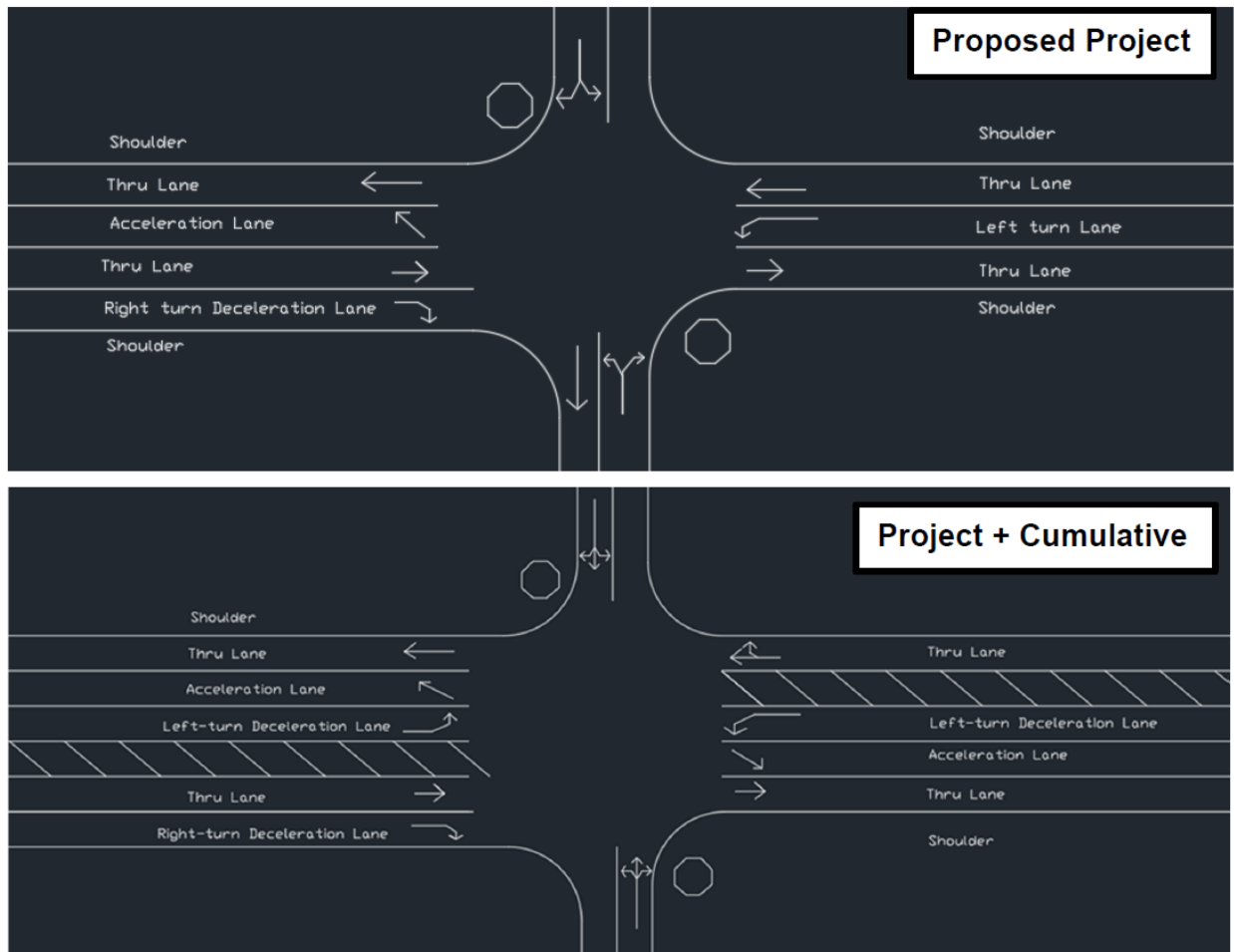
LEA = local enforcement agency

MSW = Municipal Solid Waste

SR-25 = State Route 25

RWQCB = Regional Water Quality Control Board

Updated Figure 15-2 Conceptual Intersection Layout for Proposed Project and Project + Cumulative Scenarios



Appendix D – New and Updated Appendices to the EIR

This appendix contains:

- Appendix E-6 (UPDATED): Detention Basin Analysis – Updated (AECOM 2023).
- Appendix E-8 (NEW): Floodplain Impact Certification, Grading and Flood Study Summary Report. Z-Best Compost Facility Expansion, Santa Clara County, California (Schaaf & Wheeler 2012).
- Appendix E-9 (NEW): Conditional Letter of Map Revision Based on Fill Comment Document (CLOMR-F) issued by the Federal Environmental Management Agency, May 21, 2018.
- Appendix H-1 (NEW): Additional Information regarding Feasibility of Enclosed Alternative (ECS 2023; Greenwaste 2023; WSP USA Inc. 2023).

- Appendix E-6 (UPDATED): Detention Basin Analysis – Updated (AECOM 2023).



AECOM
300 Lakeside Drive
Suite 400
Oakland
CA 94612
aecom.com

Project name:
Z-Best Composting Facility

Project ref:
60666256

From: Elizabeth Nielsen, Water Resources
Engineer, AECOM

Date:
July 28, 2023

To: Valerie Negrete
County of Santa Clara Department of Planning
and Development
70 West Hedding Street,
7th Floor East Wing
San Jose, CA 95110

CC: Emmanuel Ursu, Consultant Planner
Sam Gutierrez, Principal Planner
Elizabeth Vissers, Deputy County Counsel
Lizanne Reynolds, Deputy County Counsel

Memo

Subject: Detention Basin Analysis – replaces previous version dated April 7, 2023 in its entirety

This Technical Memorandum evaluates whether the storage capacity of the detention basins at the Z-Best Composting Facility, as proposed under the Z-Best Composting Facility Expansion and Upgrade Project (project), would be sufficient to detain without release, overtopping, or spill the recent sequence of atmospheric rivers experienced during December 2022 to March 2023. To provide additional context, a 64-year rainfall record was used to evaluate the frequency of overtopping that might occur with proposed conditions when evaluated against a historical daily rainfall record.

The analysis found that the proposed design capacity of the basins would be insufficient to detain the recent sequence of storm events and that, with consideration of antecedent rainfall conditions, the proposed design is unlikely to meet the required design conditions from the State Water Resources Control Board General Waste Discharge Requirements for Composting Operations (Composting Order), or equivalent conditions, which requires detention basins to be designed to contain all runoff from working surfaces in addition to direct precipitation from the 25-year, 24-hour storm event.

1. Background

Z-Best Products has applied to the County of Santa Clara for a major modification to its existing Use Permit at the Z-Best Composting Facility located at 980 State Route 25 (SR-25) in an unincorporated area approximately 5 miles southeast of Gilroy, California. Proposed facility modifications will also require Architecture and Site Approval and Grading Approval. Z-Best is proposing to replace the existing composting process it uses for processing municipal solid waste feedstock with an Engineered Composting System (ECS) process that uses aerated static piles (ASP); existing green waste composting operations would remain unchanged. Additional components of the proposed project include expanding the existing flood storage facility, modifying Detention Basin #1, relocating the existing facility entrance, and widening SR-25 along the project site frontage to enable installation of acceleration lanes and deceleration lanes into and out of the proposed relocated entrance.

As part of the proposed project, the ECS improvements area within Area 1 would be raised by approximately 1 to 2 feet; the existing flood storage basin would increase by approximately 7.2 acres; and the footprint and elevation of the perimeter berms for Detention Basin #1 would be modified. Perimeter berms at the drainage basin would be raised to protect the basin from a 100-year flood and the footprint of the drainage basin would decrease from 6.3 acres to approximately 2.4 acres. As a result of these modifications, Detention Basin #1 would increase its maximum capacity from approximately 9.1 million gallons to approximately 14.5 million gallons. No modifications to Detention Basin #2 are proposed as part of the project. See Figure 1 through 3 for project plans showing existing and proposed conditions.

2. Methodology

The proposed storage capacity for Detention Basin #1 was evaluated based on the methodology provided in Golder (2020) with project data updated based on Golder (2022a, b, and c). A water balance model was used to estimate basin storage needs that accounts for direct precipitation to the basin, runoff from the facility, evaporation from the basin, and operational outflows. Operational outflows include water used for green waste composting operations, dust control, and water used for ASP composting operations which was assumed to come from Detention Basin #1, Detention Basin #2, or groundwater. Operations for Detention Basin #1 and Detention Basin #2 have the potential to be interconnected via pumping and therefore inflows and outflows at both basins were modeled concurrently.

The major differences between the water balance presented herein and the one presented in Golder (2020) is the timestep of the model and input hydrology. This model uses a daily timestep and the long-term daily precipitation data measured at the Gilroy gauge for water years 1959 to 2023 (Station USC00043417; NOAA 2023a); no data was collected during water year 2020 at this station. These data were used to evaluate whether the storage capacity proposed for Detention Basin #1 would be sufficient to prevent release, overtopping, or spill in winter 2023 in light of the recent sequence of storm events experienced in the Gilroy area.

2.1 Input Data and Assumptions

The following input data and assumptions were used in the water balance.

- Detention basin characteristics. Detention basin capacity, surface area, and berm elevations and the contributing runoff area are described in Table 1.
- Stage-storage-area relationships. Information related to elevation, surface area, and volume for water stored within the detention basins is provided in Tables 2 and 3. These data are the same as those reported in Golder (2020). Where drainage basin capacity was found to be limited (i.e., the basin would have spilled or been overtopped), the volume and surface area were estimated based on trendlines fitted to these data. For the purpose of the modeling, where proposed capacity was limited, the berm elevations were assumed to increase (as opposed to changing the footprint of the detention basins or allowing discharge, spills, or overtopping) so as to contain all runoff from the facility without discharge from the detention basins.
- Direct precipitation. Direct precipitation to the basins was estimated based on rainfall and the footprints of the detention basins. Precipitation data recorded at the Gilroy gauge was scaled to 91 percent to reflect drier conditions expected at the project site compared to the gauge site. As discussed below, water year 2023 had a series of storms that when averaged over a longer period of record, such as a 45-day period, had an estimated return period greater than what would be

expected for the maximum single day event. Therefore, precipitation estimates for the site were scaled based on the ratio of the NOAA point precipitation frequency estimate for the Gilroy gauge vs. the site based on a 45-day averaging period (NOAA 2023c).

- Runoff. Runoff to the detention basins was estimated based on scaled rainfall, the size of the contributing drainage area, and a runoff coefficient for the contributing drainage area. The runoff coefficient for Area 1 was assumed to be 0.76 and the runoff coefficient for Area 2 was assumed to be 0.72, which were considered reasonable estimates provided in Golder (2022a). Note that proposed conditions include runoff from an approximate 2.6-acre area south of Area 1's compost pad which does not currently flow to Detention Basin #1 (Golder 2022a); in addition, the contributing drainage area from Area 2 was reduced to 24 acres to account for the increased size of the flood storage basin included in the proposed project, which captures about 2 acres of drainage that is currently part of Area 2.
- Evaporation. Evaporation from the detention basins was estimated based on the reference evapotranspiration rate (ET_o) for Gilroy and the estimated surface area of the water stored in the detention basins.¹ The ET_o values used in Golder (2020 and 2022a) were verified as reasonable and used to facilitate consistency in the modeling. See Table 4.
- Operations. Operational decisions affect either or both of the detention basins. Operational outflows include water used for green waste composting, for dust control, and for ASP composting.

Water demands for primary and secondary green waste composting are each estimated at 176,000 gallons per day, Monday through Friday (260 days per year) with no reduction for concurrent rainfall or seasonal fluctuations in evaporation from the compost. The water demand for primary green waste composting was assumed to be met first from water stored in Detention Basin #1 until empty, then from Detention Basin #2. If both basins were insufficient or empty, demand would then be met by groundwater. The water demand for secondary green waste composting was assumed to be met from Detention Basin #2 or, if insufficient or empty, from groundwater.

Water demands for dust control are estimated at 147,000 gallons per day, Monday through Friday, on days without rain. Water demand for dust control was assumed to be met after demands for green composting operations were resolved. Water for dust control was obtained first from the remaining water in Detention Basin #1, then Detention Basin #2, and, if both were empty or insufficient, from groundwater.

Water demands for primary ASP composting are estimated at 20,000 gallons per day, 365 days per year and water demands for secondary ASP composting are estimated at 40,000 gallons per day, 365 days per year. Golder (2020) indicates that ASP primary and secondary composting demands would be met preferentially from groundwater but could also be met from water captured in Detention Basin #2. This assumption was updated based on personal communication from Z-Best Operations Manager, John Doyle in 2023; water for ASP composting would be obtained from Detention Basin #1, Detention Basin #2, or groundwater.

- Transfers between detention basins. For the purpose of the modeling, it was assumed that transfers would not occur between detention basins. However, as it is possible to pump water between the detention basins, the potential for overtopping has also been evaluated based on the combined capacity of the two detention basins.

¹ ET_o is approximately equal to evaporation from a large body of water.

2.2 Hydrology

Precipitation data for Gilroy, California were downloaded from the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information and NOAA's National Weather Service (NOAA 2023a, 2023b). Three weather stations recorded precipitation data in the Gilroy area during water year 2023; see Table 5 for a summary of these data. The National Weather Service reports daily precipitation for Gilroy, California based on data recorded at the weather station Gilroy, CA US, USC00043417, which has a long-term data record. Data from weather station Gilroy, CA US, USC00043417, was selected for the model to allow for comparison to the long-term record. Minor corrections were made by NOAA to the March 2023 data after initial review. The updated daily rainfall data were used in the modeling.

There have been several flood events in the vicinity of the project area in 2023. On January 9, 2023, and on March 10, 2023, storms caused flooding on Highway 101, Bloomfield Avenue, and Bolsa Road. Winter 2023 was particularly wet, with atmospheric rivers providing multiple inches of rain over several weeks-long periods. The March 10, 2023, storm was the largest 24-hour precipitation event during this period, with 4.05 inches of rain. December and early January also experienced substantial rainfall. The maximum 45-day averaging period during December and early January was 18.65 inches inclusive of the January 9, 2023, storm.

Table 6 compares point precipitation frequency estimates for the Gilroy, CA US, USC00043417 gauge location, obtained from NOAA's National Weather Service Hydrometeorological Design Studies Center (NOAA 2023c), to the precipitation data from this weather station for different averaging periods. The maximum 1-day precipitation of 4.05 inches was between a 5-year and a 10-year event and the maximum 45-day precipitation of 18.65 inches was between a 10-year and a 25-year event.

3. Results

The water balance predicts flooding under proposed conditions at the Z-Best Composting Facility and overtopping, spill, or discharge from the detention basins after the January 9, 2023, and March 10, 2023, storms. Although the capacity at the crest of Detention Basin #1 would increase from 9.1 million gallons to 14.5 million gallons as a result of the project, there may not be adequate storage within Detention Basin #1 and #2 to hold runoff from the facility as well as the direct precipitation to the basins during conditions preceding and following the January 9th and March 10th storms. The atmospheric river conditions experienced in December 2022 through March 2023 are predicted to fill the detention basins to 60 to 70 percent capacity prior to when these large events would occur, and water use demands are not expected to be sufficient to prevent discharge during the storm. Water use demands were assumed conservatively and did not account for reductions to demand based on concurrent rainfall or seasonal fluctuations in evaporation from the compost.

Because the proposed capacity was not predicted to be adequate to retain the runoff and precipitation from these storms, for the purpose of the modeling, increased capacity was assumed for the detention basins. As discussed in Section 2.1, where the proposed capacity was limiting, the berm elevations were assumed to increase (as opposed to increasing the footprint of the detention basins or allowing spill or discharge) until all runoff from the facility would be contained without discharge from the detention basins. This is a simplifying assumption and it does not represent optimization for site conditions.

Figures 4, 5, and 6 show the results of the water balance with the above-mentioned assumptions. Assuming that all runoff and precipitation could be held within the basins, the water balance indicates

that approximately 3.9 million gallons of additional capacity would be needed to accommodate the post-January 9, 2023, storms without discharge. This value would increase to 7.4 million gallons of additional capacity below the freeboard, if 2 feet of freeboard would be maintained at each of the detention basins. Detailed results of the water balance model are shown in Attachment A.

In addition, the 64-year daily rainfall record was used to evaluate whether the proposed capacity for the detention basins (the combination of Detention Basin #1 and Detention Basin #2) would be adequate to prevent discharge. It is estimated that the proposed design capacity of the detention basins would be insufficient to detain runoff from the facility during winter 1969, 1997, 1998, and 2023 (See Figure 6b). This is an estimated return frequency of one out of every 16 winters.

4. Conclusions and Recommendations

The State Water Resources Control Board Composting Order requires detention basins to be designed to contain all runoff from working surfaces in addition to direct precipitation from the 25-year, 24-hour storm event. Specifically, it indicates that:

Detention ponds, if used, must be designed, constructed, and maintained 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 winddriven 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.

According to NOAA point precipitation frequency estimate for the site, the 25-year, 24-hour storm event is 4.75 inches of rain (NOAA 2023c), and such an event could be accommodated if the detention basins were empty. A storm with 4.75 inches of rain is expected to fill the detention basins to approximately 55 percent of their combined capacity (10.2 million gallons of runoff plus direct precipitation vs 18.5 million gallons of combined capacity). However, as demonstrated in Golder (2020) and in this water balance model, operations of the detention basins will not draw down water levels to empty during extended periods of time in wet years. The maximum volume retained in the detention basins exceeded 8.3 million gallons for at least one day in 34 years out of 64 water years. In a few cases, volumes in excess of 8.3 million gallons were held in the basins for more than 2 months. In addition, extreme events such as the 25-year, 24-hour storm event are more likely to occur during wet years than dry years. As such, there remains a substantial risk of overtopping if an extreme event occurs during a wet year assuming the currently proposed capacity increase in Detention Basin #1.

It is recommended that design capacity of Detention Basin #1 consider the operational context of the detention basin in years that are wetter than average. A wet year is expected to provide antecedent rainfall conditions which would likely occupy a portion of the detention basins prior to an extreme event. Wet conditions would also reduce water use demands.

These findings continue to support the DEIR conclusion that there remains a substantial risk of overtopping, spill, or discharge if an extreme event occurs during a wet year when the detention basins are being used to hold prior runoff from the composting facility, assuming the currently proposed capacity increase in Detention Basin #1.

5. References

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Golder, 2022b. Aerated Static Pile Composting Permit Package. Project No. 133-97640. County File No. 6498-81-11-09G 08P 08A 08EA. April 2022.

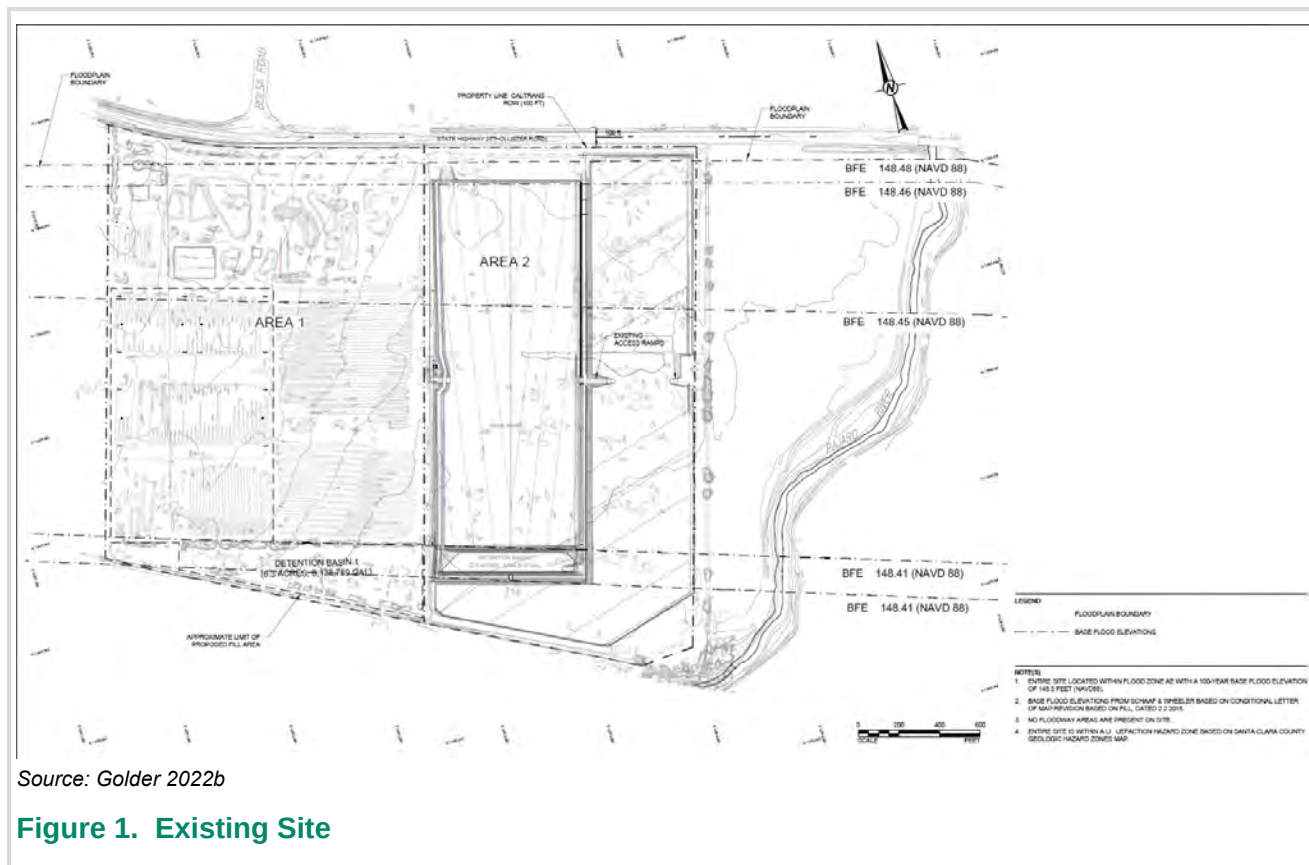
Golder, 2022c. Drawing 13, Proposed Detention Basin 1 - Plan and Section. Aerated Static Pile Composting Permit Package. Project No. 133-97640. County File No. 6498-81-11-09G 08P 08A 08EA. August 22, 2022.

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National Oceanic and Atmospheric Administration (NOAA), 2023c. NOAA Atlas 14 Point Precipitation Frequency Estimates. National Weather Service, Hydrometeorological Design Studies Center. https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html

Figures



Source: Golder 2022b

Figure 1. Existing Site

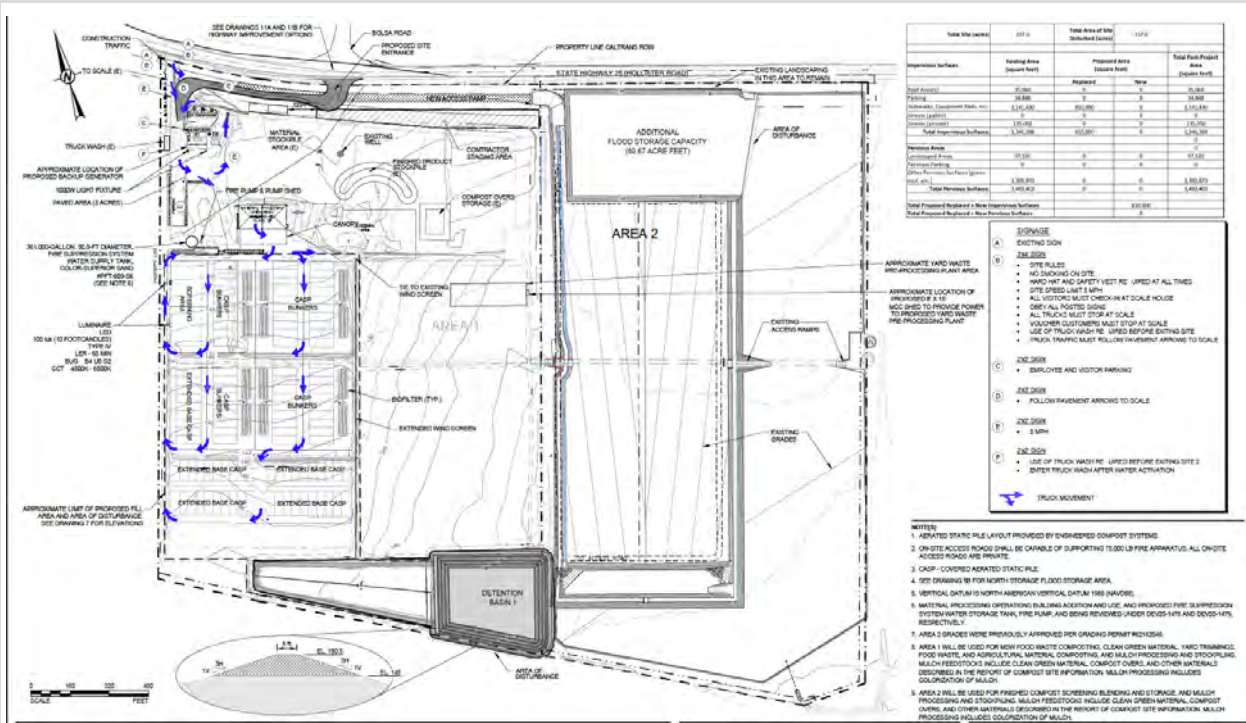


Figure 2. Proposed Site Plan

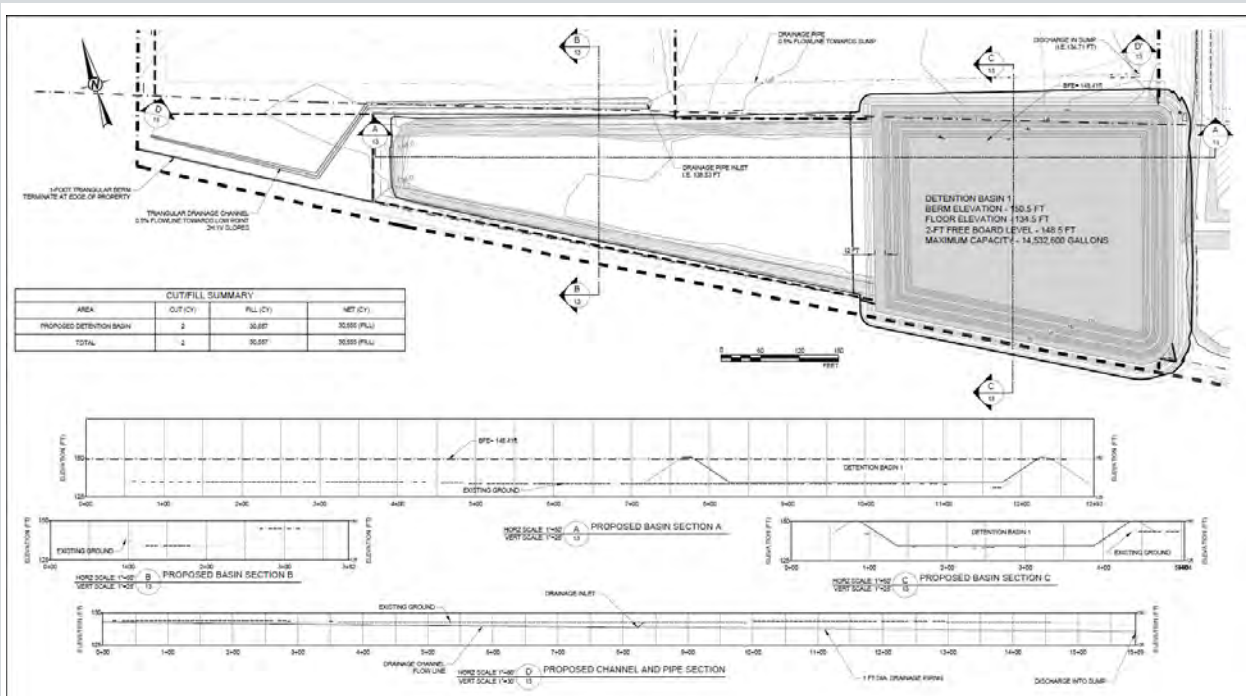
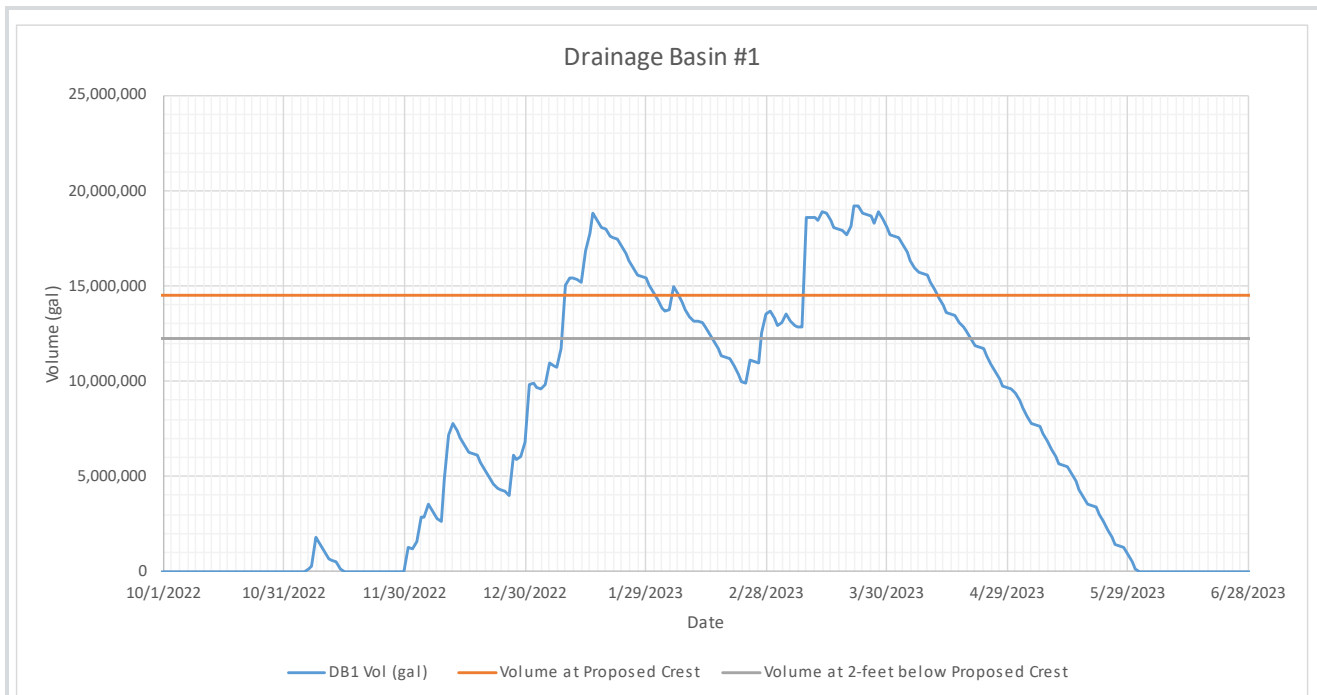
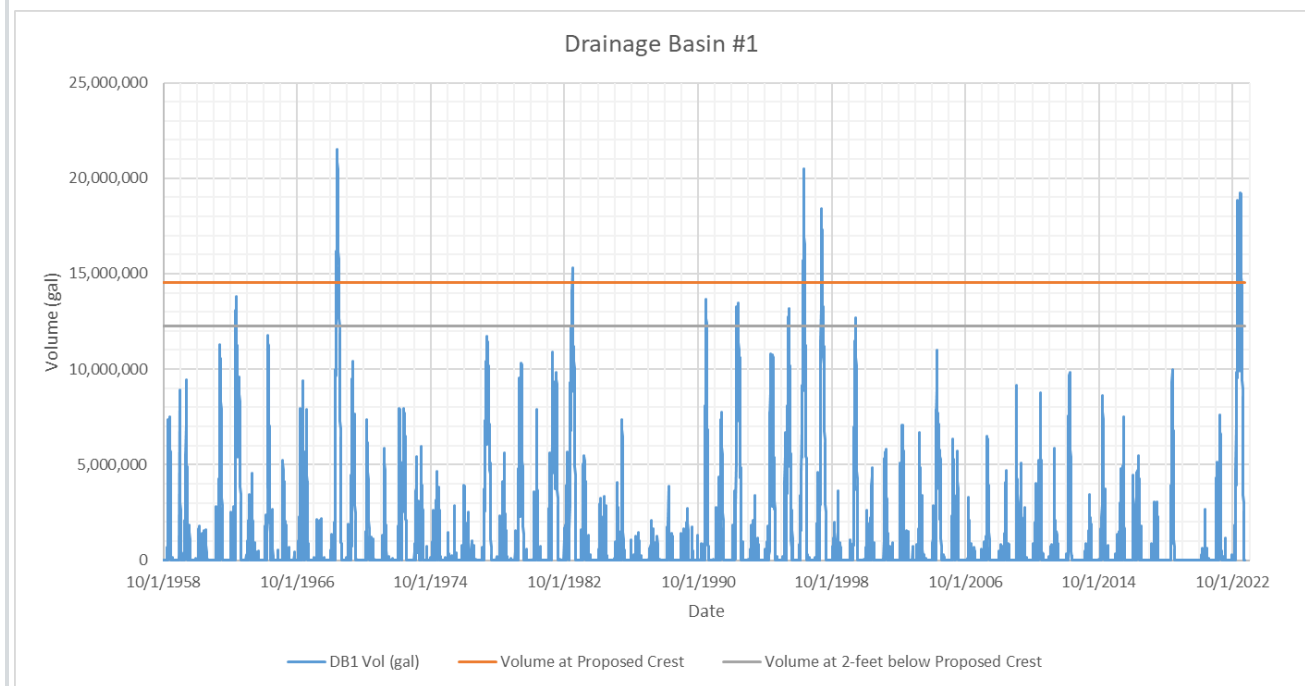


Figure 3. Detail of Detention Basin #1, Proposed Site Plan

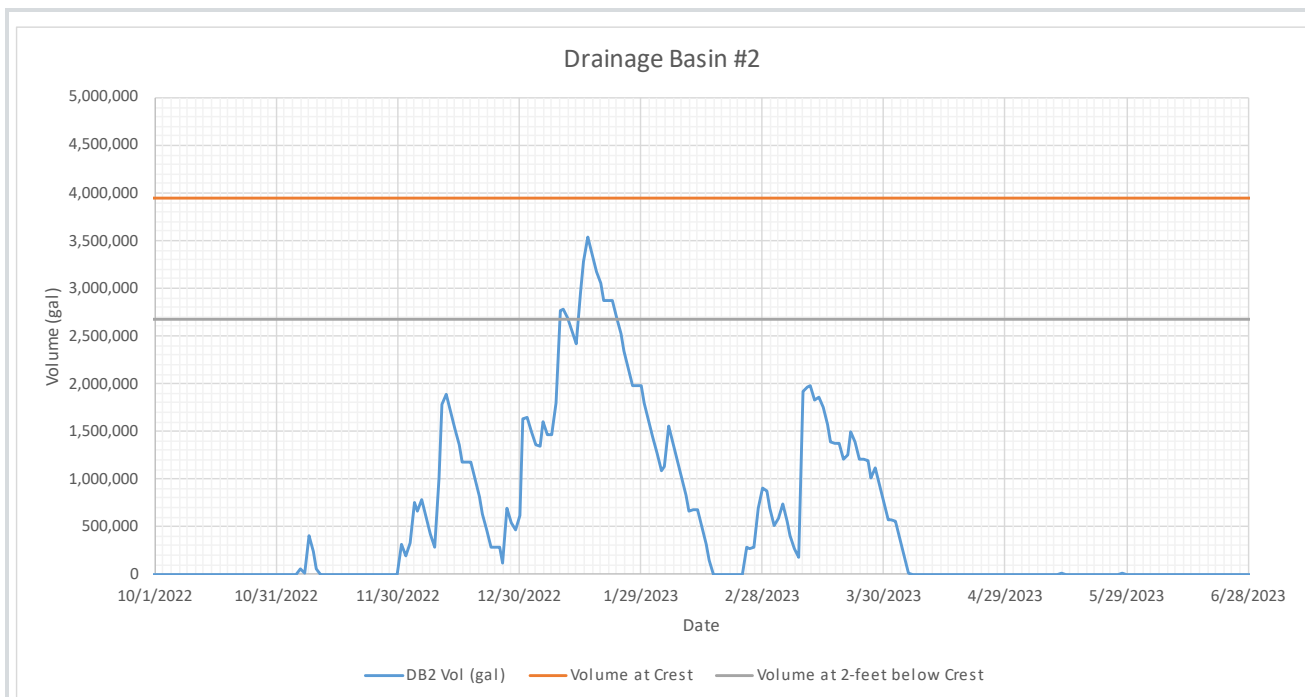


(a) Water Year 2023

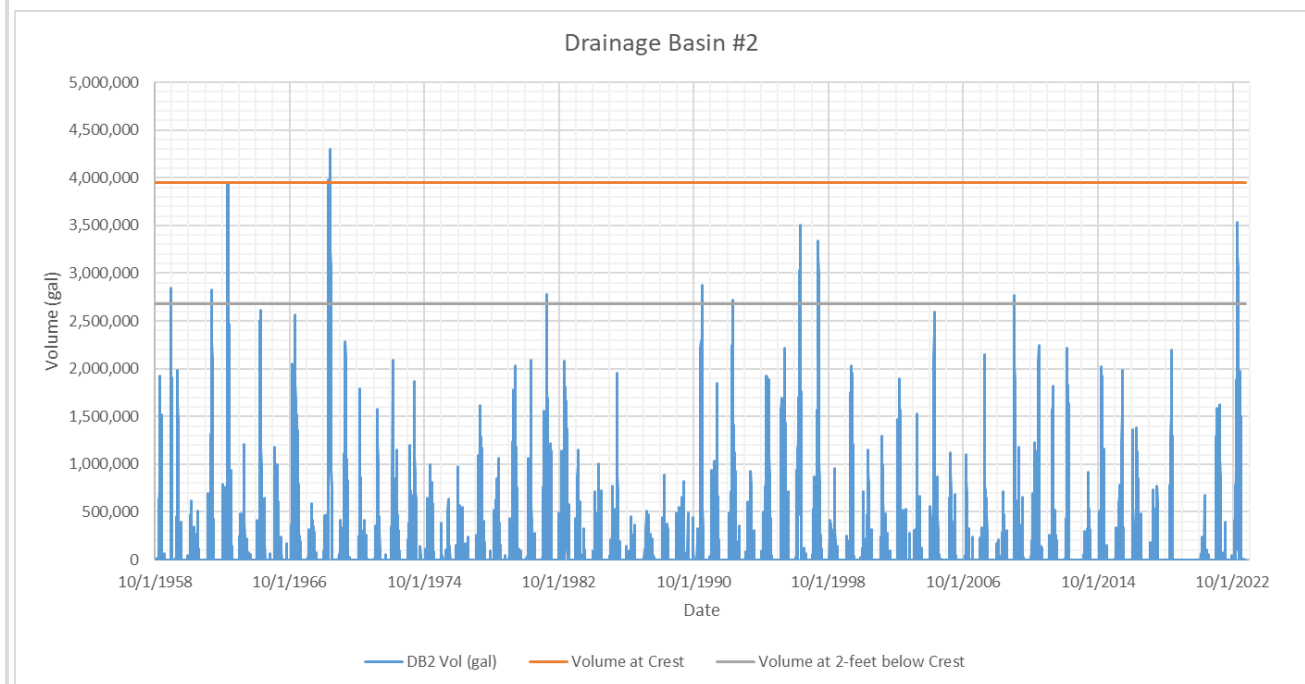


(b) Water Years 1959 to 2023

Figure 4. Model Results for Detention Basin #1

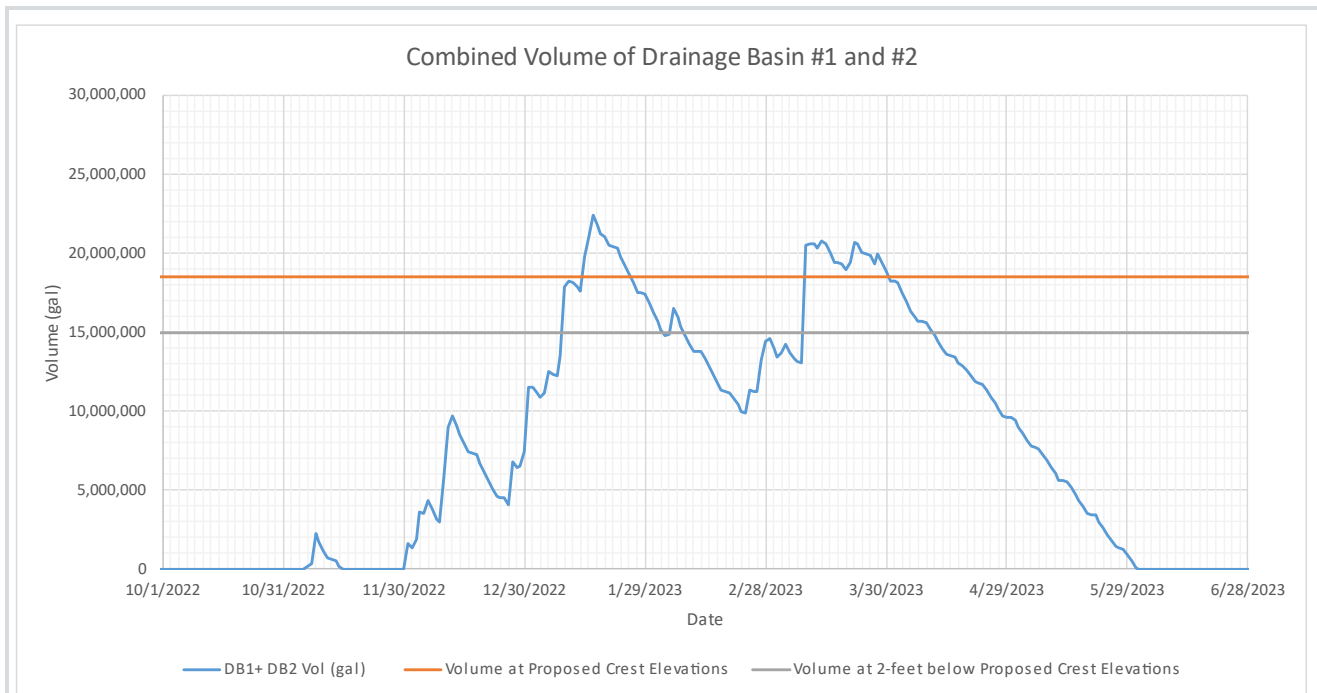


(a) Water Year 2023

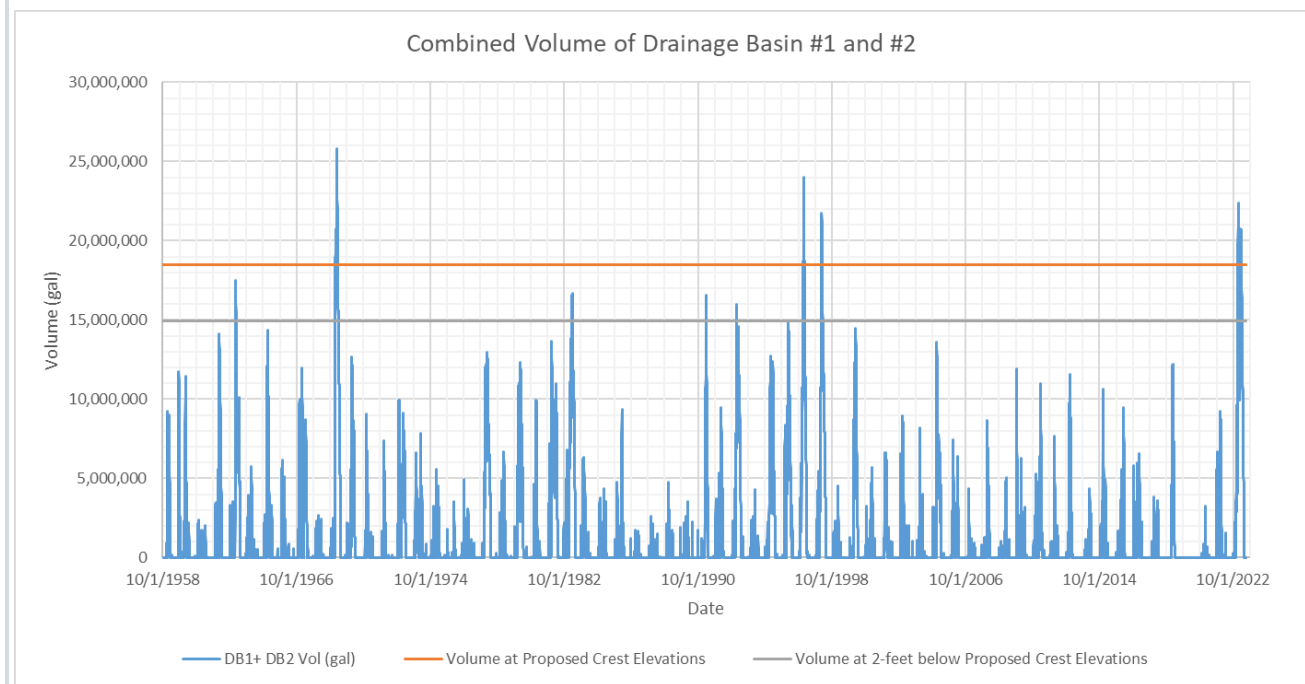


(b) Water Years 1959 to 2023

Figure 5. Model Results for Detention Basin #2



(a) Water Year 2023



(b) Water Years 1959 to 2023

Figure 6. Model Results for the Combined Capacity of Detention Basin #1 and #2

Tables

Table 1. Detention Basin Characteristics

Description	Value	Data Source
Area 1 drainage area, existing	3,057,780 sq ft (70.2 ac)	Golder 2022, table 5
Area 1 drainage area, proposed	3,170,560 sq ft (72.8 ac)	Golder 2022, table 12
DB1 capacity, existing	9,138,789 gal	Golder 2022, table 1
DB1 capacity, proposed	14,532,600 gal	Update to Drawing 13
DB1 surface area, proposed	185,388 sq ft	Golder 2022, page 10
DB1 floor elevation	134.5 ft	Update to Drawing 13
Base flood elevation of the 100-year floodplain	148.5 ft	2018 CLOMR
DB1 berm elevation, proposed	150.5 ft	Update to Drawing 13
Area 2 drainage area, existing	1,132,560 sq ft (26 acres)	Golder 2022
Area 2 drainage area, proposed	1,045,440 sq ft (24 acres)	Estimated from project plans
DB2 capacity	3,944,915 gal	Golder 2020
DB2 surface area	88,226 sq ft	Golder 2020
DB2 floor elevation	141.8 ft	Golder 2020
DB2 berm elevation	149 ft	Golder 2020

Source: Golder 2020 and 2022a; Project plans (Golder 2022b); Update to Drawing 13 (Golder 2022b)

Table 2. Detention Basin #1 Stage-Storage-Area Relationship, Proposed Condition

Elevation (ft)	Surface Area (sq ft)	Volume (Acre-ft)	Volume (gal)
150.5	156,295	44.5	14,532,595
150	153,947	42.8	13,952,443
149	149,301	39.3	12,818,295
148.5	147,008	37.6	12,264,196
148	144,722	35.9	11,718,661
147	140,209	32.7	10,653,019
146	135,762	29.5	9,620,887
145	131,381	26.4	8,621,771
144	127,066	23.5	7,655,177
143	122,818	20.6	6,720,611
142	118,635	17.8	5,817,576
141	114,519	15.2	4,945,579
140	110,469	12.6	4,104,126
139	106,485	10.1	3,292,721

Elevation (ft)	Surface Area (sq ft)	Volume (Acre-ft)	Volume (gal)
138	102,567	7.7	2,510,869
137	98,715	5.4	1,758,077
136	94,929	3.2	1,033,850
135	91,209	1.0	337,692
134.5	89,374	0.0	Approx. 0

Source: Golder 2020; elevations verified by Drawing 13 (Golder 2020c).

Table 3. Detention Basin #2 Stage-Storage-Area Relationship

Elevation (ft)	Surface Area (sq ft)	Volume (Acre-ft)	Volume (gal)
149	88,226	12.1	3,944,915
148	84,677	10.1	3,298,256
147	80,203	8.2	2,681,604
146	76,032	6.4	2,097,284
145	71,822	4.7	1,544,309
144	67,345	3.1	1,023,825
143	62,723	1.6	537,370
142	57,968	0.3	85,984
141.8	56,983	0.0	Approx. 0

Source: Golder 2020; elevations verified by project plans (Drawing 5B) (Golder 2022b)

Table 4. Reference Evapotranspiration for Gilroy, CA

Month	ETo (inches/month)	ETo (inches/day)
January	1.55	0.050
February	2.00	0.071
March	3.55	0.115
April	4.71	0.157
May	6.08	0.196
June	6.65	0.222
July	6.99	0.225
August	6.32	0.204
September	4.93	0.164
October	3.50	0.113
November	1.89	0.063
December	1.39	0.045

Source: Golder 2020 and 2022a

Table 5. Precipitation in Gilroy, California

Month	Gilroy, CA US (USC00043417), precipitation in inches	Gilroy 2.0 S, CA US (US1CASC0063), precipitation in inches	Gilroy 0.1 SE, CA US (US1CASC0054), precipitation in inches
October 2022	0	0	0
November 2022	1.61	3.24	3.04
December 2022	11.65	11.58	11.12
January 2023	8.25	11.52	11.74
February 2023	4.19	2.94	4.38
March 2023	8.10	11.03	11.45
April 2023	0.09	0.11	0.03
May 2023	0.85	1.14	0.98
June 2023	0	0.07	0.06
Total	34.74	41.63	42.8

Source: NOAA 2023a

Table 6. Comparison of Precipitation Frequency Estimates, in inches, to Water Year 2023 Data, in inches

Duration	Maximum precipitation, inches ^{1,2}	Average Return Interval, in years									
		1	2	5	10	25	50	100	200	500	1,000
24-hour	4.05	1.83	2.73	3.87	4.75	5.9	6.74	7.57	8.39	9.46	10.3
7-day	5.03	3.72	5.11	6.92	8.37	10.3	11.8	13.3	14.8	16.9	18.5
10-day	6.77	4.21	5.69	7.61	9.16	11.3	12.8	14.5	16.1	18.3	20
20-day	11.9	5.49	7.32	9.64	11.5	13.9	15.7	17.5	19.3	21.7	23.5
30-day	12.95	6.75	8.95	11.7	13.8	16.6	18.6	20.6	22.5	25	26.9
45-day	18.65	8.32	11	14.2	16.6	19.7	21.9	24	26.1	28.6	30.4
60-day	19.9	9.77	12.8	16.4	19.2	22.5	24.8	27	29.1	31.7	33.5

Source: NOAA Atlas 14, Volume 6, Version 2 Point Precipitation Frequency Estimates (NOAA 2023c)

Notes:

¹ Gauge location name: Gilroy, California, USA, Latitude: 37.0067°, Longitude: -121.5633°

² Maximum precipitation from October 1, 2022 to May 30, 2023.

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- Appendix E-8 (NEW): Floodplain Impact Certification, Grading and Flood Study Summary Report. Z-Best Compost Facility Expansion, Santa Clara County, California (Schaaf & Wheeler 2012).

Z-Best Compost Facility Expansion

Santa Clara County, California

FLOODPLAIN IMPACT CERTIFICATION

GRADING AND FLOOD STUDY SUMMARY REPORT



**Prepared for
Zanker Road Resource Management, Limited**

January 18, 2012

Schaaf & Wheeler
Consulting Civil Engineers

**1171 Homestead Road, Suite 255
Santa Clara, CA 95050-5485
(408) 246-4848**



Z-Best Compost Facility Expansion “No Rise” Certification

**Zanker Road Resource Management, Limited
Santa Clara County, California**

This is to certify that I am a duly qualified registered professional engineer licensed to practice in the State of California. It is further to certify that the attached technical data support the fact that the proposed Z-Best Compost Facility Expansion in Santa Clara County, California will not impact the 100-year flood elevations on the Pajaro River as published in the Flood Insurance Study for Santa Clara County dated May 18, 2009 and will not impact the 100-year flood elevations at unpublished cross-sections in the vicinity of the proposed development.

Furthermore, proposed grading for the Z-Best Compost Facility Expansion in Santa Clara County, California will not (1) increase the flow velocities of the Pajaro River; (2) expand or change the limits of the floodplain; (3) alter or change the physical characteristics of the floodplain; or (4) decrease flood storage capacity within the floodplain.

Since proposed grading for the Z-Best Compost Facility Expansion in Santa Clara County, California will not cause an adverse impact related to one-percent flooding and there is no increase in the base flood elevation, there are no structures located within an area where one-percent flooding could be impacted by the proposed development.



CHARLES D. ANDERSON, RCE No. 43776

(Date)

Table of Contents

INTRODUCTION	1
Project Description.....	1
Project Objectives	1
Sources of Data Used in Analyses	2
Report Outline.....	3
Base Flood Estimation	4
Base Flood Estimation Using FEMA 265	4
Hydraulic Analyses.....	4
Channel Roughness.....	5
Transition Losses	6
Boundary Conditions	7
Discharge	7
Base Flood Elevation	7
EVALUATION OF PROJECT IMPACTS.....	9
Relevant Sections of Ordinance No. NS-1100.106	9
Floodplain Impacts.....	11
Storage of Flood Waters On-Site.....	11
Hydraulic Analysis of Flow Blockage due to Fill Placement.....	12
OTHER COUNTY CRITERIA	13
APPENDICES	
A. Aerial View of Study Area with HEC-RAS Cross Sections	
B. Hydraulic Parameter from Literature and FEMA Water Surface Profiles and Discharges for the Pajaro River	
C. HEC-RAS Model Results	
D. Project TINs for Existing and Proposed Conditions and Flood Storage Computations	
E. Post-project 100-year Floodplain	

Table of Tables

Table 1. Roughness Coefficients Used for Floodplain Analyses	6
Table 2. Project Grading Statistics	11
Table 3. Comparative Existing and Post-Fill Soap Lake Elevations	13

Table of Figures

Figure 1. Project Location and FIRM.....	2
Figure 2. Pajaro River 100-Year Profile from Highway 101 to Highway 25 (NGVD)	7
Figure 3. Storage-Elevation Curve for Excavated Area On-Site.....	12

INTRODUCTION

This summary report documents how revised grading plans for the Z-Best Composting Facility expansion (Project) in Santa Clara County, California comply with County of Santa Clara Ordinance No. NS-1100.106, which relates to floodplain management. The Project is being undertaken by Zanker Road Resource Management, Ltd. (Owner).

This report describes the estimation of the base flood (100-year) water surface elevation in the Project vicinity, grading necessary to elevate the composting operations area above the base flood elevation, and the impact of this grading on flood risk within the Project vicinity. This report is complimentary to revised grading plans prepared in March 2011 and is supplementary to the Owner's application for a Conditional Letter of Map Revision (CLOMR).

Project Description

The Project is located immediately south of California Highway 25 (Hollister Road) and adjacent to the Pajaro River, which forms the boundary between Santa Clara and San Benito Counties. The area of expansion is between the existing operations and the river. This location is currently mapped as Special Flood Hazard Zone A (base flood elevations undetermined) on the Flood Insurance Rate Map (FIRM) for unincorporated Santa Clara County (Figure 1).

Project Objectives

The basic objective of revised grading for the Project is to provide a level pad for composting operations of at least 25 acres in area while meeting the requirements of the Santa Clara County floodplain management ordinance and other requirements previously expressed in written correspondence from County officials. Other Owner-furnished criteria include a minimum pad slope of one percent, maximum cut and fill slopes of 2:1, and a maximum preferred excavation from natural ground of six feet.

In essence, project grading aims to raise the composting operations pad above the base (100-year) flood elevation without compromising existing floodplain storage. Since the currently effective May 18, 2009 FIRM does not provide a base flood elevation (BFE) within the Project area, this report also documents how that BFE is determined through approximate methods following procedures outlined in FEMA 265.

It may also be noted that the Approximate Flood Hazard Zone A shown in Figure 1 is often colloquially known as "Soap Lake" and is referred to by this name in County correspondence and within this memorandum. The flood hazard zone and Soap Lake are not necessarily contiguous.



Figure 1. Project Location and FIRM

Sources of Data Used in Analyses

The cross section geometry used in the HEC-RAS model created for this flood study is a compilation of several different data sources. CH2M-Hill completed a cross section field survey within the Pajaro River channel banks as part of previous modeling work for the El Rancho San Benito project – a proposed large-scale development on the left (southeast; San Benito) overbank of the river and provided those cross sections as HEC-2 data. This data was furnished on the NGVD vertical datum, and the HEC-2 data has been imported to the HEC-RAS model furnished with this report. The CH2M-Hill El Rancho San Benito cross sections from U.S. Highway 101 to State Highway 25 are used for hydraulic modeling within the river banks.

Cross sections have been extended across the San Benito County overbank using additional aerial topography obtained for the El Rancho San Benito project by Carlson, Barbee and Gibson. Project owners granted permission for the use of their topography data in this study. That data was provided on the NAVD vertical datum and was consistently lowered by 2.75 feet to the NGVD datum to match the CH2M-Hill river survey.¹

The right (looking downstream; Santa Clara County) overbank area of the model is constructed using Santa Clara County LiDAR data flown in 2006. This data is on the NAVD vertical datum and also lowered by 2.75 feet to the NGVD datum for model consistency and conformance to the Z-Best project datum.

Cross section locations and composite cross sections are included as Appendix A.

Another source of data (discharge and downstream boundary condition for water surface elevation) is the FEMA Flood Insurance Study for Santa Clara County dated May 18, 2009.

Report Outline

This report documents the development of base flood elevations within the Project vicinity – using procedures outlined in FEMA 265. With estimated base flood elevations, proposed Project grading plans are then evaluated for concurrence with relevant provisions from the Santa Clara County Grading and Floodplain Ordinance. This report summarizes relevant provisions of the County ordinance and how the Project will comply with those provisions. Additional requirements for water quality protection are also discussed and evaluated.

¹ Based on Corpscon Version 6.0.1 dated August, 2004 (USACE, Alexandria, VA)

BASE FLOOD ESTIMATION

Section C12-813(C) of the Floodplain Ordinance – “Review, Use and Development of Other Base Flood Data” states:

“When base flood data has not been provided in accordance Sec. C12-806 [i.e. the May 18, 2009 FIRM for Santa Clara County], the Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal or state agency, or other source.

“A base flood elevation shall be obtained using one of two methods from the FEMA publication, FEMA 265, ‘Managing Floodplain Development in Approximate Zone A Areas – A Guide for Obtaining and Developing Base (100-year) Flood Elevations’ dated July 1995.”

Base Flood Estimation Using FEMA 265

FEMA 265 requires a detailed method of base flood elevation computation be made for proposed development greater than 5 acres.² The detailed methods used for estimating 100-year base flood elevations near the Project using HEC-RAS are described herein.

The detailed method of base flood elevation computation considers three factors: 1) floodplain geometry (topography); 2) flood discharge (hydrology); and 3) flood height (hydraulics). For this study, topography has been provided as described previously for “Sources of Data Used in Analyses.” As described in more detail subsequently, flood discharges are those published by FEMA in the Santa Clara and San Benito Flood Insurance Studies. Floodplain hydraulics are fully documented in this report.

Hydraulic Analyses

Hydraulic models of the Pajaro River and its overbanks, representing existing conditions and post-project conditions, have been completed for this flood study to estimate the base (100-year) flood elevation and evaluate potential floodplain impacts due to proposed grading activities. The HEC-RAS steady state backwater analysis program is used for all floodplain analyses. The use of HEC-RAS is approved in FEMA 265.

²FEMA, “Managing Floodplain Development in Approximate Zone A Areas: A Guide for Obtaining and Developing Base (100-year) Floodplain Elevations,” April 1995.

To conduct floodplain analyses, and to provide design parameters used for the Project grading plan, an HEC-RAS model has been prepared to reflect conditions at the time of modeling and the improvements shown on the Conceptual Grading Plans prepared by the Project applicant. Relevant hydraulic modeling parameters including channel roughness, transition losses and boundary conditions are described herein.

An aerial view of the Project site and the surrounding floodplain (a.k.a. Soap Lake) is appended to this memorandum as Figure A1. This figure shows cross section locations, cross section numbers used in the HEC-RAS analysis, and the approximate limits of 100-year flooding between Highway 101 and Highway 25, which represent the detailed limits of study.

Channel Roughness

In one-dimensional open channel flow analysis, “Manning’s n ” is used to represent the retarding forces to flow imposed by the channel bed and banks. Roughness elements along the wetted perimeter of the Pajaro River and its overbanks will vary across an individual cross section. For instance, the river channel might contain elements of open water, gravel bars, grassed banks, and mature riparian vegetation including trees, shrubs or brush; while the overbanks are largely agricultural with both fallow and cultivated acreage, roads, isolated buildings, bare earth, and other obstructions. To compute water surface elevations in a cross section with variable roughness using a one-dimensional model (i.e. with a mean velocity), it is necessary to estimate an effective (composite) roughness value for each cross section.

Table 1 documents the estimation of composite roughness for various reaches of the Pajaro River floodplain. Composite roughness coefficients are estimated based on field reconnaissance with environmental conditions projected to winter flood flows, review of literature regarding Manning’s “ n ” values, and previous experience with flood channel and floodplain analyses.

Table 1
Roughness Coefficients Used for Floodplain Analyses

Reach Element	Vegetation	Literature Citation	Composite Roughness (Manning's n)
Pajaro River U.S. Highway 101 to California Highway 25		Chow Table 5-6.D-3.b ³ (major stream >100' at flood stage; irregular and rough section)	0.10
San Benito Overbank		Chow Table 5-6.D-2.a,b No crop n = 0.030 Pasture high grass n=.035 Mature row crops n=.035 Mature field crops n=.040	0.04
Santa Clara Overbank Highway 101 to Soap Lake (XS 3864)		Chow Table 5-6.D-2.c Light brush and trees in winter	0.06
Santa Clara Overbank Soap Lake		Chow Table 5-6.D-2.a,b No crop n=0.030 Pasture high grass n=.035 Mature row crops n=.035 Mature field crops n=.040	0.04
Carnadero Creek		Chow Table 5-6.D-1.a.7 (minor stream on plain <100' at flood stage; sluggish, weedy)	0.08

Transition Losses

An energy loss takes place just upstream and downstream from each structure as flow contracts and expands into and out of a bridge, culvert, or other geometric channel transition. For gradual transitions or no transitions between channel sections, the default contraction coefficient (C_i) is 0.1 and the default expansion coefficient (C_o) is 0.3. At more abrupt transitions, such as where fill is placed in the floodplain; the respective contraction and expansion coefficients are 0.3 and 0.5.⁴

³ Chow, Ven Te, *Open-Channel Hydraulics*, (New York: McGraw-Hill), 1959, excerpts appended.

⁴ U.S. Army Corps of Engineers Hydraulic Engineering Center, HEC-RAS River Analysis System, *Hydraulic Reference Manual*, Version 4.0, March 2008, pp. 3-20 and 3-21, excerpt appended.

Boundary Conditions

For backwater analysis, a one-percent (100-year) downstream boundary (U.S. Highway 101) is required. According to the Santa Clara County Flood Insurance Study (effective May 18, 2009), the 100-year water surface elevation at the upstream face of the Highway 101 Bridge is 146.85 feet NAVD 88. FEMA's water surface profile is appended to this report (Appendix B). Using the stated datum conversion factor of 2.85 feet,⁵ the starting water surface elevation at the Highway 101 Bridge is 144 feet NGVD29.

Discharge

The referenced FIS for Santa Clara County indicates a 100-year Pajaro River discharge of 30,500 cfs at Highway 101.⁶

Base Flood Elevation

Analytical results from HEC-RAS (Appendix C) for the referenced 100-year discharge and starting backwater conditions at Highway 101 are summarized by Figure 2. The elevation of Soap Lake is controlled by downstream backwater, and channel conditions in the valley between Highway 101 (XS 434) and Cross Section 3264.

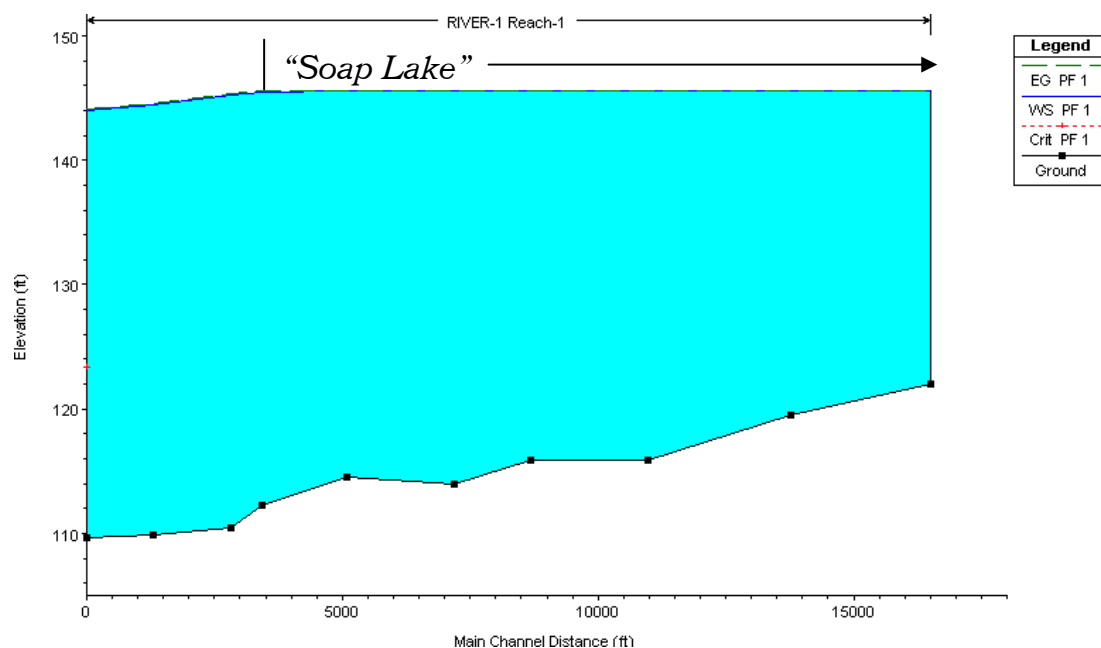


Figure 2. Pajaro River 100-Year Profile from Highway 101 to Highway 25 (NGVD)

⁵ FEMA, *Santa Clara County Flood Insurance Study, Volume 2 of 4*, p. 134, excerpt appended. Please note that this is the County-wide conversion used by FEMA to convert water surface elevations on previously studied creeks from NGVD29 to NAVD88, and is not the same as the local conversion used herein to reconcile cross sectional data.

⁶ FEMA, *Santa Clara County Flood Insurance Study, Volume 1 of 4*, p. 81, excerpt appended.

The HEC-RAS model indicates that area above the Pajaro River constriction at Highway 101 functions essentially as a lake. (Maximum overbank flow velocity is on the order of 0.5 foot per second, so the specific energy is negligible.) There are backwater effects where the water is funneled through the river canyon, but upstream of that canyon the profile is essentially flat at an elevation of 145.6 feet NGVD, a vertical datum that is consistent with the Project grading plans. The base flood elevation is rounded to **146 feet NGVD** for development planning.

On the FEMA-adopted NAVD datum, 2.85 feet are added to the estimated base flood elevation, which equates to 148.5 feet NAVD88, which would be rounded to 149 feet NAVD for mapping.

EVALUATION OF PROJECT IMPACTS

Project grading aims to raise the composting operations pad above the base (100-year) flood elevation of 146 feet NGVD (149 feet NAVD) without compromising existing floodplain storage. Several provisions of the County Grading Ordinance are relevant.

Relevant Sections of Ordinance No. NS-1100.106

Santa Clara County Ordinance NS-1100.106 became effective on April 21, 2009 and its requirements will be applied to the Project. This ordinance was enacted to “reflect updates to floodplain management policies affecting real property located in designated flood hazard areas of the unincorporated territory of Santa Clara County.” As previously noted, the Project is located within a Special Flood Hazard Zone of indeterminate elevation, and that elevation has been calculated as 146 feet NGVD.

The purpose of the Ordinance is to “promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by legally enforceable regulations applied uniformly throughout the unincorporated territory of the Santa Clara County to all publicly and privately owned land within flood prone...areas.” Specific regulations include the following provisions of §C12-803:

- A) Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;
- B) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- C) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;
- D) Control filling, grading, dredging, and other development which may increase flood damage; and
- E) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

Specific Ordinance sections that codify the above regulations are listed below, along with an explanation of how the revised grading plan meets the relevant codes.

§C12-816(C)(2). Standards of Construction – Elevation and Floodproofing (Nonresidential Construction): County staff has directed the Owner to elevate the composting operations area a minimum of one foot above the base flood elevation. This variance from the ordinance’s normal elevation requirement of two feet above the base flood elevation is given because there will be no residential or insurable structures built on the elevated pad.

§C12-818(A). Standards for Subdivisions and Other Proposed Development: “All...proposed development...greater than...5 acres...shall:

“1) Identify the Special Flood Hazard Areas (SFHA) and Base Flood Elevations (BFE).”

The entire Project site is within Approximate Flood Hazard Zone A and the calculated Base Flood Elevation is 146 feet NGVD.

“2) Identify the elevations of lowest floors of all proposed structures and pads.”

The minimum elevation of the expanded composting pad is 147.0 feet NGVD, which is one foot higher than the BFE in conformance with County direction. It is also noted that a containment levee at minimum elevation 148.0 feet NGVD is also proposed, but this levee will not be certified to NFIP standards since the site will be filled to above the BFE and levee certification is not required.

“3) If the site is filled above the base flood elevation,...as-built information for each structure shall be certified by a registered civil engineer or licensed land surveyor and provided as part of an application for a Letter of Map Revision based on Fill (LOMR-F) to the Floodplain Administrator.”

The Owner will file a LOMR-F upon completion of grading operations, and file a Conditional LOMR-F (CLOMR-F) prior to County approval.

§C12-821(A). Floodways: “Until a regulatory floodway is adopted, no new construction, substantial development, or other development (including fill) shall be permitted within Zones A1-30 and AE, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other development, will not increase the water surface elevation of the base flood more than one foot at any point within Santa Clara County.” Furthermore, although not specifically supported by the Ordinance, Santa Clara County requires a demonstration that the proposed fill results in “zero impact to the existing FEMA identified flood plain, neighboring properties, and public facilities.” (ref. August 26, 2010 letter from Colleen Oda)

Floodplain Impacts

To have zero impact on the existing floodplain, two things must be demonstrated:

1. There is no net decrease in floodplain storage due to the placement of proposed fill; and
2. There is no net decrease in flow conveyance across the Project site after fill is placed.

Table 2 summarizes pertinent floodplain storage statistics based on the revised grading plan for the Z-Best Composting Facility expansion. These statistics are compiled by converting AutoCAD versions of the grading plan to ArcView GIS and creating Triangulated Irregular Networks (TINs) to analyze three dimensional surfaces. Project TINs for existing and proposed conditions are included in Appendix D.

Table 2
Project Floodplain Storage Statistics

Floodplain Storage Statistic	Volume (acre-feet)	Remarks
1. Existing floodplain storage on site below elevation 146 feet NGVD	678.1	Volume within property
2. Amount of project fill proposed on site below elevation 146 feet NGVD	163.3	
3. On-site excavation below existing ground	171.2	Maximum cut 6 feet bgs
4. Floodplain storage on site below elevation 146 feet NGVD after Project	686.0	(1) – (2) + (3)
Net increase in floodplain storage	7.9	(4) – (1); 1.2% increase in storage

Grading volume statistics compiled in Table 2 demonstrate that there is no net decrease in available storage below the base flood elevation. A figure demonstrating the project cut and fill areas is included in Appendix D. The HEC-RAS model described previously has also been modified to include the proposed site fill and excavation.

Storage of Flood Waters On-Site

The preservation of floodplain storage requires the excavation of roughly 171.2 acre-feet of native material outside of the expanded operations pad. The lowest elevation of the excavation is roughly 132 feet NGVD at the southeast corner of the site, which is roughly six feet below natural grade. The storage-elevation relationship for the new cut area is shown in Figure 3.

It is essential that backflow prevention is provided for the outfall that will release this stored flood water, noting that the newly excavated area could not fully drain until Pajaro River stage is below elevation 132 feet. While entirely dependent upon the river hydrograph, with a 24-inch

diameter drain pipe the excavation could be fully drained within 48 hours assuming a free outfall condition.

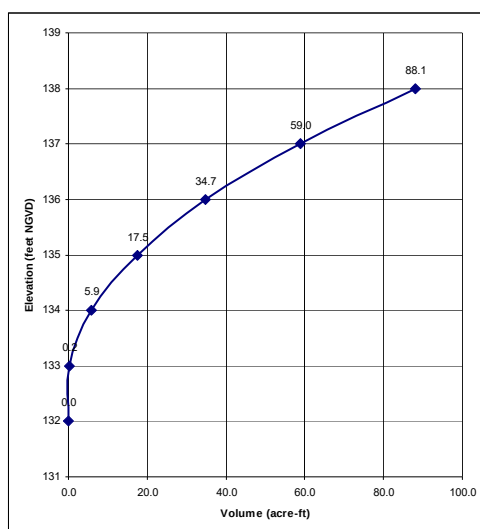


Figure 3. Storage-Elevation Curve for Excavated Area On-Site

Hydraulic Analysis of Flow Blockage due to Fill Placement

Although HEC-RAS modeling (Appendix C) demonstrates that flow velocity is very low through the floodplain (Soap Lake), the model has been modified to reflect the flow blockage caused by the proposed placement of fill to elevate the expanded operations area above the base flood elevation. HEC-RAS cross sections showing this blockage are appended to this technical report. Table 3 summarizes HEC-RAS model results, which show no increase in predicted base flood elevations in the post-fill condition, from Highway 101 to Highway 25, which is the upstream boundary of the Project site.

There is no increase in the base flood elevation at Highway 25. Highway 25 and its bridge crossing will not physically change. Therefore, since this is a backwater condition, there can be no project impact upstream of Highway 25 and there is no need to extend the modeling effort further upstream to make this determination.

The table compares pre-project (existing) water surface elevations to post-fill water surface elevations, showing no increase in flood elevation due to the placement of proposed fill. Appendix C also contains graphical cross sections showing hydraulic analysis results.

Table 3 provides comparative elevations in both NGVD29, consistent with Project grading plans, and NAVD88 to be consistent with the Santa Clara County FIS. For consistency with the effective County FIS vertical datum, 2.85 feet have been added to elevations on NGVD29.

The analyses described by this summary report demonstrate compliance with the County Ordinance and written instructions from County staff.

Table 3
Comparative Existing and Post-Project Base Flood Elevations

Cross Section No.	Feet NGVD29		Feet NAVD88	
	Existing WSEL	Post-Fill WSEL	Existing WSEL	Post-Fill WSEL
434	144.00	144.00	146.85	146.85
1734	144.45	144.45	147.30	147.30
3264	145.24	145.24	148.09	148.09
3864	145.50	145.50	148.35	148.35
5514	145.52	145.52	148.37	148.37
7614	145.53	145.53	148.38	148.38
9114	145.53	145.53	148.38	148.38
11414	145.53	145.53	148.38	148.38
14214	145.55	145.54	148.40	148.39
14403	145.55	145.55	148.40	148.40
16198	145.60	145.59	148.45	148.44
16944	145.62	145.60	148.47	148.45

OTHER COUNTY CRITERIA

To meet the requirements of the Clean Water Act, the County is also requiring the Project to retain the 24-hour, 100-year runoff volume from the developed site, and do so outside of the Soap Lake area. This volume is calculated using a method proscribed in the Santa Clara County Drainage Manual (2007).

Site area draining to retention pond = 31.74 acres

Mean Annual Precipitation = 21 inches

$P_{100,24} = A_{100,24} + B_{100,24} \text{ MAP} = 0.814046 + (0.243391)(21) = 5.93 \text{ inches}$

Assume impervious surface and D-type soil. $C = 0.85$ (Table 3-1)

Adjust for volume calculation $C' = 0.85 + (1.0 - 0.85)/2 = 0.93$

$V_{100,24} = (0.93)(31.74 \text{ acres})(5.93 \text{ inches}) = 174.9 \text{ ac-in} = \mathbf{14.6 \text{ acre-feet}}$

Site runoff is conveyed to the retention pond using a perimeter ditch on each side of the expanded operations pad. The minimum pitch toward each ditch from a longitudinal center ridge is one percent, and the pad and ditches are longitudinally sloped at 0.1 percent toward the detention pond. Each ditch is three feet deep with a bottom width of 5 feet and 3:1 side slopes. Each ditch carries up to half of the site runoff sans areas directly tributary to the detention

basin. The design 100-year site runoff is calculated in conformance with the 2007 County Drainage Manual.

Maximum tributary area = 14.71 acres

Runoff coefficient = 0.85

Length of Travel (L) = 340 feet at .01 ft/ft + 1,800 feet at .001 ft/ft

Time of Concentration (t_c) = $0.0078 \left(\frac{L^2}{S} \right)^{0.385}$ minutes = 40 minutes

$P_{100,46m} = 0.57816 + (0.01297)(21) = 0.85$ inch

$i_{100,46m} = 0.85''/0.67 \text{ hour} = 1.28 \text{ in/hr}$

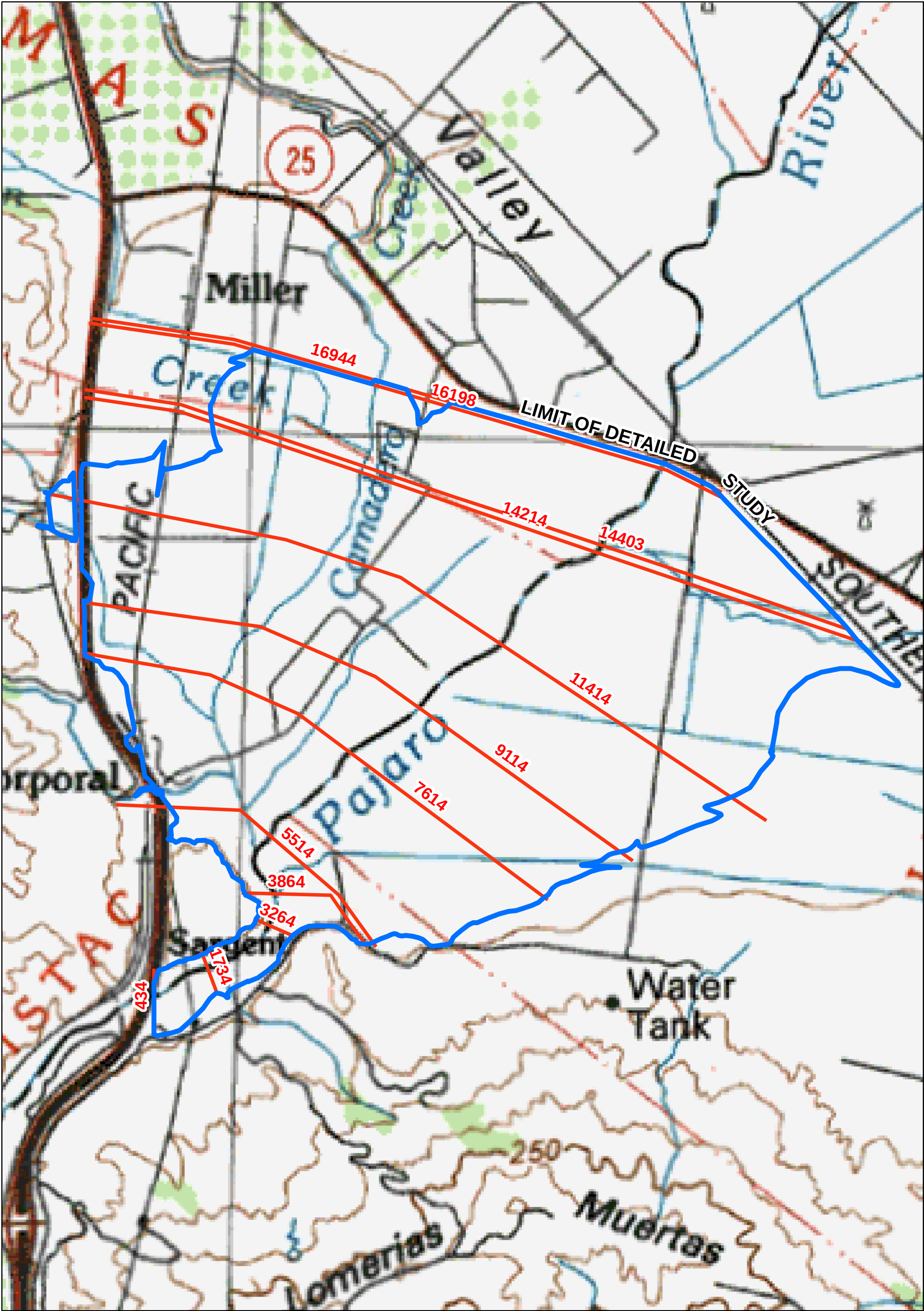
$Q_{100} = (0.85)(14.71 \text{ acres})(1.28 \text{ in/hr}) = 16 \text{ cfs}$

Depth in channel with $n = 0.035$ (capacity check) = 1.4 feet OK < 3'

Velocity in channel with $n = 0.020$ (scour check) = 1.9 feet per second OK

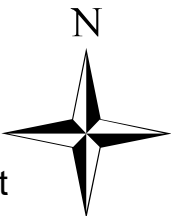
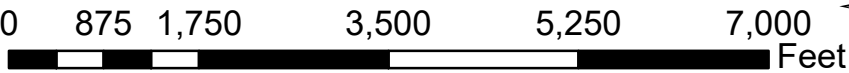
APPENDIX A

Aerial View of Study Area with HEC-RAS Cross Sections



Legend

- 100yr Floodplain within Limits of Detailed Study
Appendix E-8 (NEW)
- HEC-RAS Cross Sections



APPENDIX B

Hydraulic Parameters from the Literature

FEMA Water Surface Profiles and Discharges for the Pajaro River

TABLE 5-6. VALUES OF THE ROUGHNESS COEFFICIENT n (continued)

Type of channel and description	Minimum	Normal	Maximum
C. EXCAVATED OR DREDGED			
a. Earth, straight and uniform			
1. Clean, recently completed	0.016	0.018	0.020
2. Clean, after weathering	0.018	0.022	0.025
3. Gravel, uniform section, clean	0.022	0.025	0.030
4. With short grass, few weeds	0.022	0.027	0.033
b. Earth, winding and sluggish			
1. No vegetation	0.023	0.025	0.030
2. Grass, some weeds	0.025	0.030	0.033
3. Dense weeds or aquatic plants in deep channels	0.030	0.035	0.040
4. Earth bottom and rubble sides	0.028	0.030	0.035
5. Stony bottom and weedy banks	0.025	0.035	0.040
6. Cobble bottom and clean sides	0.030	0.040	0.050
c. Dragline-excavated or dredged			
1. No vegetation	0.025	0.028	0.033
2. Light brush on banks	0.035	0.050	0.060
d. Rock cuts			
1. Smooth and uniform	0.025	0.035	0.040
2. Jagged and irregular	0.035	0.040	0.050
e. Channels not maintained, weeds and brush uncut			
1. Dense weeds, high as flow depth	0.050	0.080	0.120
2. Clean bottom, brush on sides	0.040	0.050	0.080
3. Same, highest stage of flow	0.045	0.070	0.110
4. Dense brush, high stage	0.080	0.100	0.140
D. NATURAL STREAMS			
D-1. Minor streams (top width at flood stage <100 ft)			
a. Streams on plain			
1. Clean, straight, full stage, no rifts or deep pools	0.025	0.030	0.033
2. Same as above, but more stones and weeds	0.030	0.035	0.040
3. Clean, winding, some pools and shoals	0.033	0.040	0.045
4. Same as above, but some weeds and stones	0.035	0.045	0.050
5. Same as above, lower stages, more ineffective slopes and sections	0.040	0.048	0.055
6. Same as 4, but more stones	0.045	0.050	0.060
7. Sluggish reaches, weedy, deep pools	0.050	0.070	0.080
8. Very weedy reaches, deep pools, or floodways with heavy stand of timber and underbrush	0.075	0.100	0.150

TABLE 5-6. VALUES OF THE ROUGHNESS COEFFICIENT n (continued)

Type of channel and description	Minimum	Normal	Maximum
b. Mountain streams, no vegetation in channel, banks usually steep, trees and brush along banks submerged at high stages			
1. Bottom: gravels, cobbles, and few boulders	0.030	0.040	0.050
2. Bottom: cobbles with large boulders	0.040	0.050	0.070
D-2. Flood plains			
a. Pasture, no brush			
1. Short grass	0.025	0.030	0.035
2. High grass	0.030	0.035	0.050
b. Cultivated areas			
1. No crop	0.020	0.030	0.040
2. Mature row crops	0.025	0.035	0.045
3. Mature field crops	0.030	0.040	0.050
c. Brush			
1. Scattered brush, heavy weeds	0.035	0.050	0.070
2. Light brush and trees, in winter	0.035	0.050	0.060
3. Light brush and trees, in summer	0.040	0.060	0.080
4. Medium to dense brush, in winter	0.045	0.070	0.110
5. Medium to dense brush, in summer	0.070	0.100	0.160
d. Trees			
1. Dense willows, summer, straight	0.110	0.150	0.200
2. Cleared land with tree stumps, no sprouts	0.030	0.040	0.050
3. Same as above, but with heavy growth of sprouts	0.050	0.060	0.080
4. Heavy stand of timber, a few down trees, little undergrowth, flood stage below branches	0.080	0.100	0.120
5. Same as above, but with flood stage reaching branches	0.100	0.120	0.160
D-3. Major streams (top width at flood stage >100 ft). The n value is less than that for minor streams of similar description, because banks offer less effective resistance.			
a. Regular section with no boulders or brush	0.025		0.060
b. Irregular and rough section	0.035		0.100

Horizontal variation of “k” values is described in the same manner as horizontal variation of Manning’s “n” values. See chapter 6 of the HEC-RAS user’s manual, to learn how to enter k values into the program. Up to twenty values of “k” can be specified for each cross section.

Tables and charts for determining “k” values for concrete-lined channels are provided in EM 1110-2-1601 [USACE, 1991]. Values for riprap-lined channels may be taken as the theoretical spherical diameter of the median stone size. Approximate “k” values [Chow, 1959] for a variety of bed materials, including those for natural rivers are shown in Table 3-2.

Table 3-2

Equivalent Roughness Values of Various Bed Materials

	k (Feet)
Brass, Cooper, Lead, Glass	0.0001 - 0.0030
Wrought Iron, Steel	0.0002 - 0.0080
Asphalted Cast Iron	0.0004 - 0.0070
Galvanized Iron	0.0005 - 0.0150
Cast Iron	0.0008 - 0.0180
Wood Stave	0.0006 - 0.0030
Cement	0.0013 - 0.0040
Concrete	0.0015 - 0.0100
Drain Tile	0.0020 - 0.0100
Riveted Steel	0.0030 - 0.0300
Natural River Bed	0.1000 - 3.0000

The values of “k” (0.1 to 3.0 ft.) for natural river channels are normally much larger than the actual diameters of the bed materials to account for boundary irregularities and bed forms.

Contraction and Expansion Coefficients. Contraction or expansion of flow due to changes in the cross section is a common cause of energy losses within a reach (between two cross sections). Whenever this occurs, the loss is computed from the contraction and expansion coefficients specified on the cross section data editor. The coefficients, which are applied between cross sections, are specified as part of the data for the upstream cross section. The coefficients are multiplied by the absolute difference in velocity heads between the current cross

section and the next cross section downstream, which gives the energy loss caused by the transition (Equation 2-2 of Chapter 2). Where the change in river cross section is small, and the flow is subcritical, coefficients of contraction and expansion are typically on the order of 0.1 and 0.3, respectively. When the change in effective cross section area is abrupt such as at bridges, contraction and expansion coefficients of 0.3 and 0.5 are often used. On occasion, the coefficients of contraction and expansion around bridges and culverts may be as high as 0.6 and 0.8, respectively. These values may be changed at any cross section. For additional information concerning transition losses and for information on bridge loss coefficients, see chapter 5, Modeling Bridges. Typical values for contraction and expansion coefficients, for subcritical flow, are shown in Table 3-3 below.

Table 3-3

Subcritical Flow Contraction and Expansion Coefficients

	Contraction	Expansion
No transition loss computed	0.0	0.0
Gradual transitions	0.1	0.3
Typical Bridge sections	0.3	0.5
Abrupt transitions	0.6	0.8

The maximum value for the contraction and expansion coefficient is one (1.0). **Note: In general, the empirical contraction and expansion coefficients should be lower for supercritical flow.** In supercritical flow the velocity heads are much greater, and small changes in depth can cause large changes in velocity head. Using contraction and expansion coefficients that would be typical for subcritical flow can result in over estimation of the energy losses and oscillations in the computed water surface profile. In constructed trapezoidal and rectangular channels, designed for supercritical flow, the user should set the contraction and expansion coefficients to zero in the reaches where the cross sectional geometry is not changing shape. In reaches where the flow is contracting and expanding, the user should select contraction and expansion coefficients carefully. Typical values for gradual transitions in supercritical flow would be around 0.01 for the contraction coefficient and 0.03 for the expansion coefficient. As the natural transitions begin to become more abrupt, it may be necessary to use higher values, such as 0.05 for the contraction coefficient and 0.2 for the expansion coefficient. If there is no contraction or expansion, the user may want to set the coefficients to zero for supercritical flow.

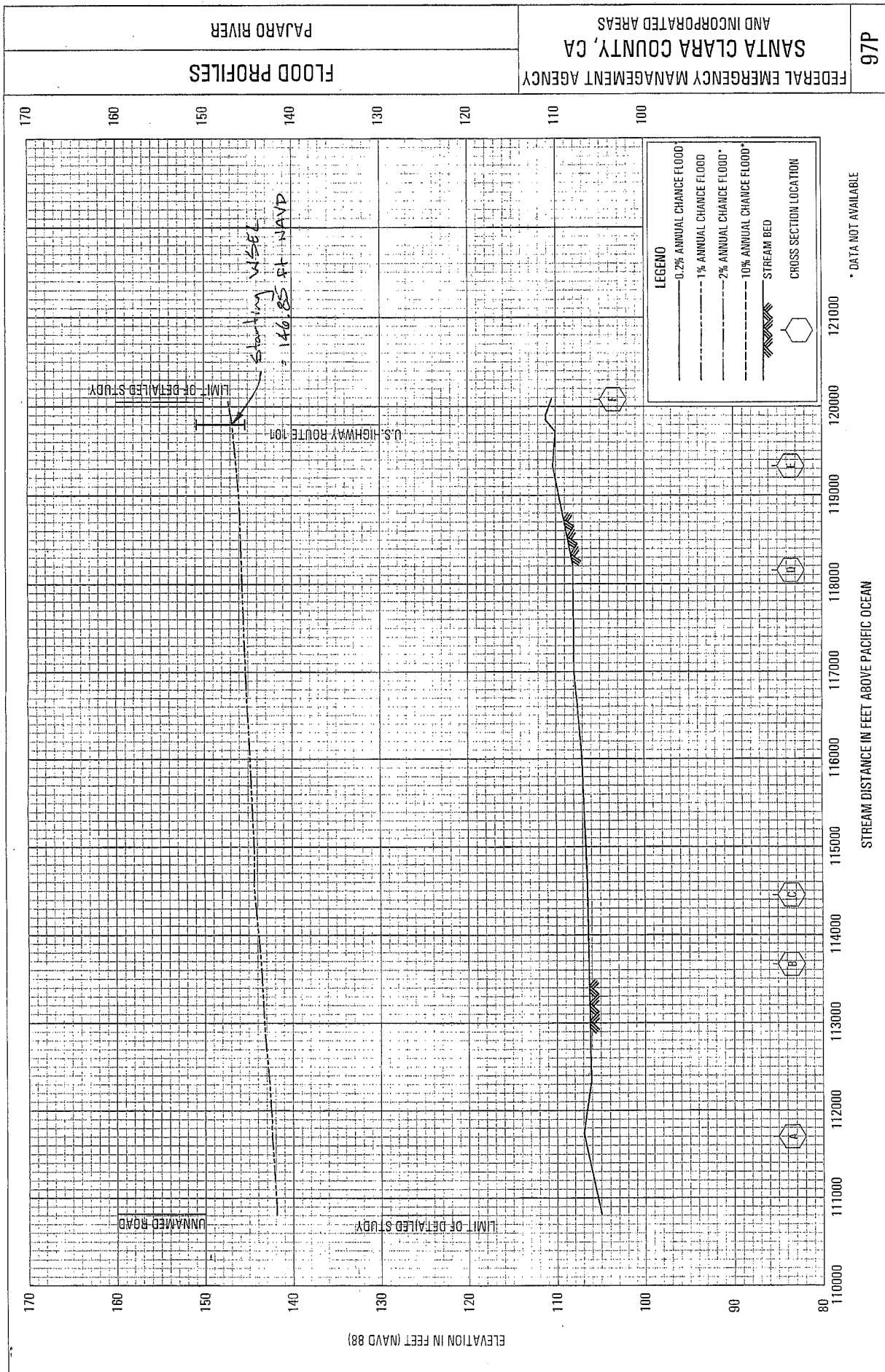


Table 6 – Summary of Discharges, continued

Flooding Source and Location	Drainage Area (sq mi)	Peak Discharges (cfs)			
		10-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance
MATADERO CREEK, continued					
At corporate limits	3.39	402	795	970	1,300
At El Camino Real	7.60	1,100	2,100	2,280	2,690
At Louis Road	9.40	1,380	1,500 ¹	1,500 ¹	1,500 ¹
At Middlefield Road	9.40	1,380	1,900 ¹	1,500 ¹	1,900 ¹
At Union Pacific Railroad	9.10	²	²	2,435	²
At U.S. Highway 101	13.60	1,660	1,775	1,775	1,775
Below confluence with Arastradero Creek	2.70	325	660	790	1,030
Upstream of Union Pacific Railroad	9.10	1,220	2,170	2,520	2,810
MILLER SLOUGH					
At U.S. Highway 101	1.80	²	²	760	²
MIDDLE ROAD OVERFLOW AREA					
At convergence with Llagas Creek	²	²	²	39	²
At divergence from West Little Llagas Creek	²	²	²	658	²
NORTH MOREY CREEK					
Upstream of Lions Creek	1.00	²	²	485	²
PAJARO RIVER					
➔ At U.S. Highway 101	522	²	²	30,500	²
PERMANENTE CREEK					
At confluence with Hale Creek	13.50 ³	780 ⁴	1,650 ⁴	1,780 ⁴	1,980 ⁴
At El Camino Real	14.30 ³	1,150	1,310	1,310	1,310
At Union Pacific Railroad	15.20 ³	1,270	1,470	1,600	1,600
Downstream of confluence with Hale Creek	13.50 ³	1000 ¹	1000 ¹	1000 ¹	1000 ¹
Downstream of East Charleston Road	16.10 ⁵	1,390	1,400 ¹	1,400 ¹	1,400 ¹
Downstream of Miramonte Avenue	8.9 ²	370	760	890	1,030

¹Decrease in flow rate based on capacity restrictions

²Data not available

³Decrease in flow rate due to storage along channel

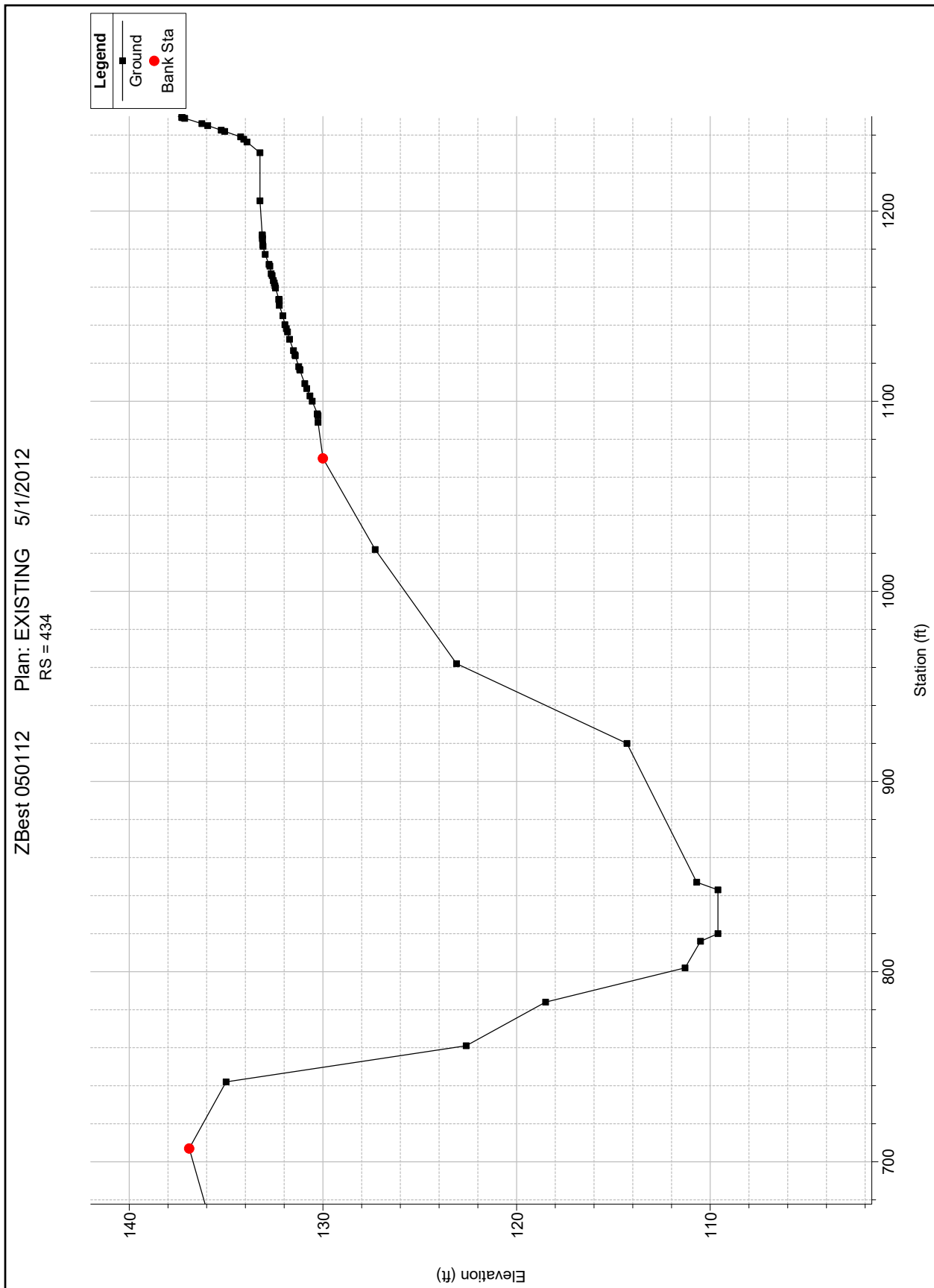
⁴High flows affected by Permanente Diversion

⁵High flows diverted to Stevens Creek

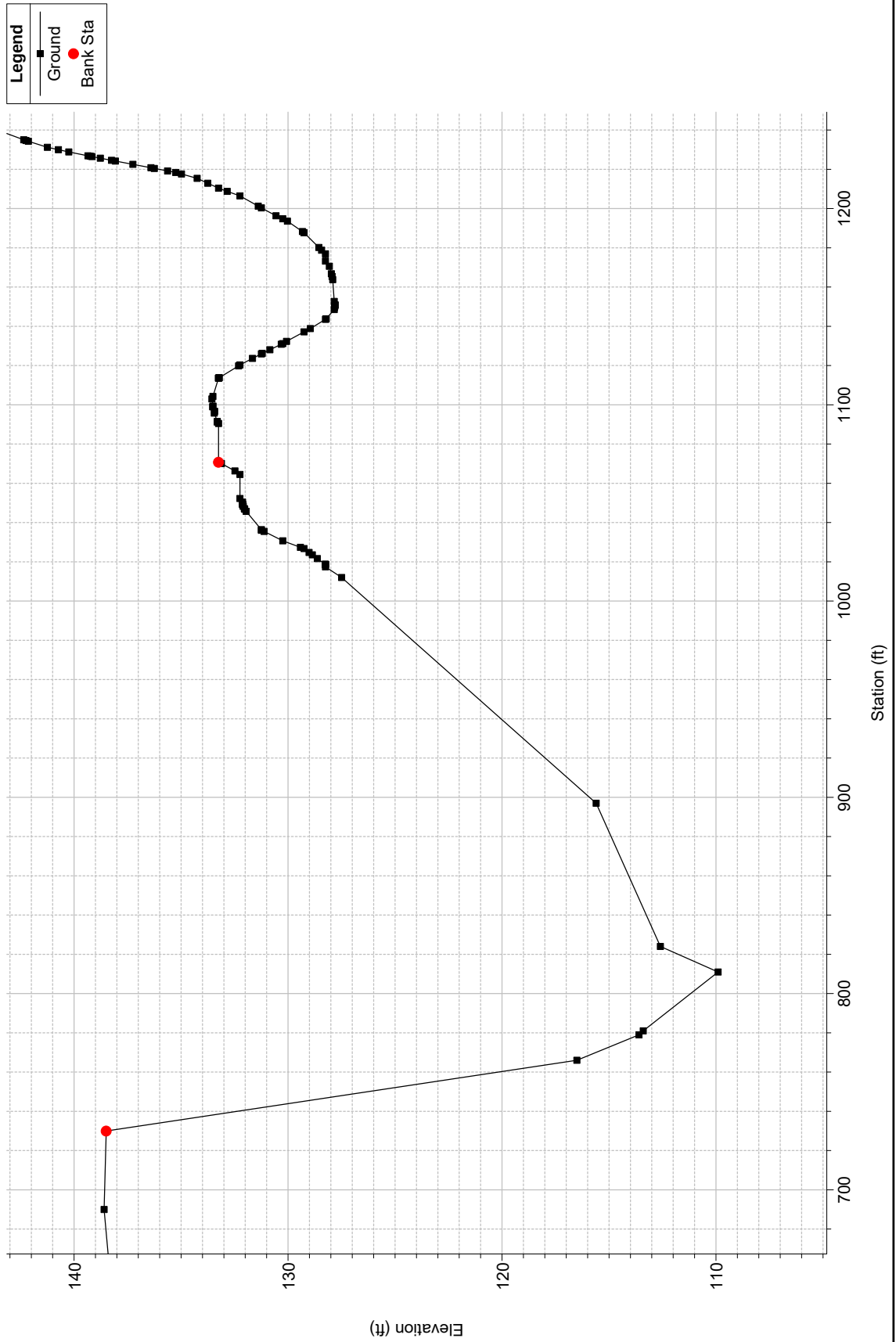
APPENDIX C

HEC-RAS Model Results

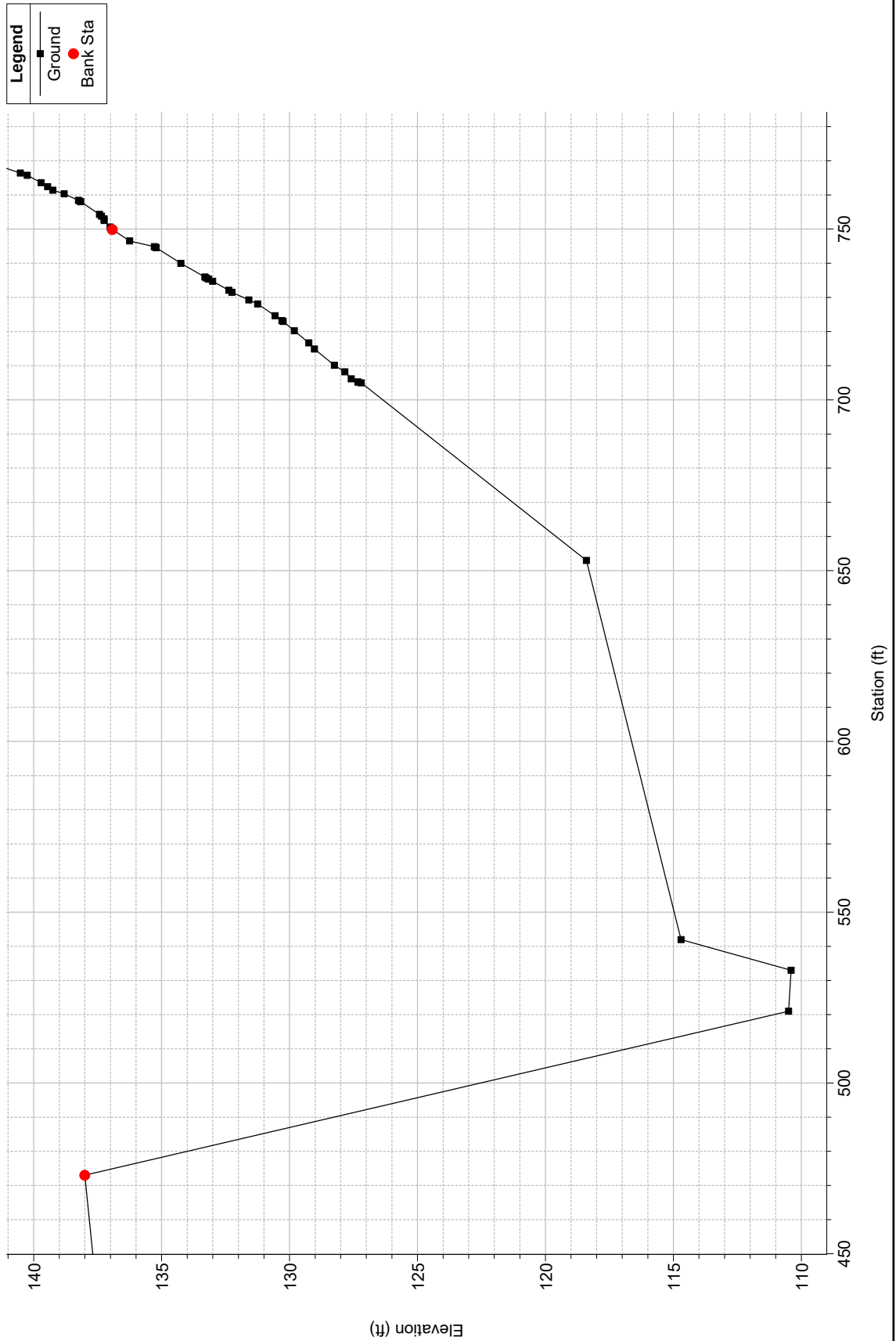
Bank to Bank River Sections from CH2M-Hill Field Survey

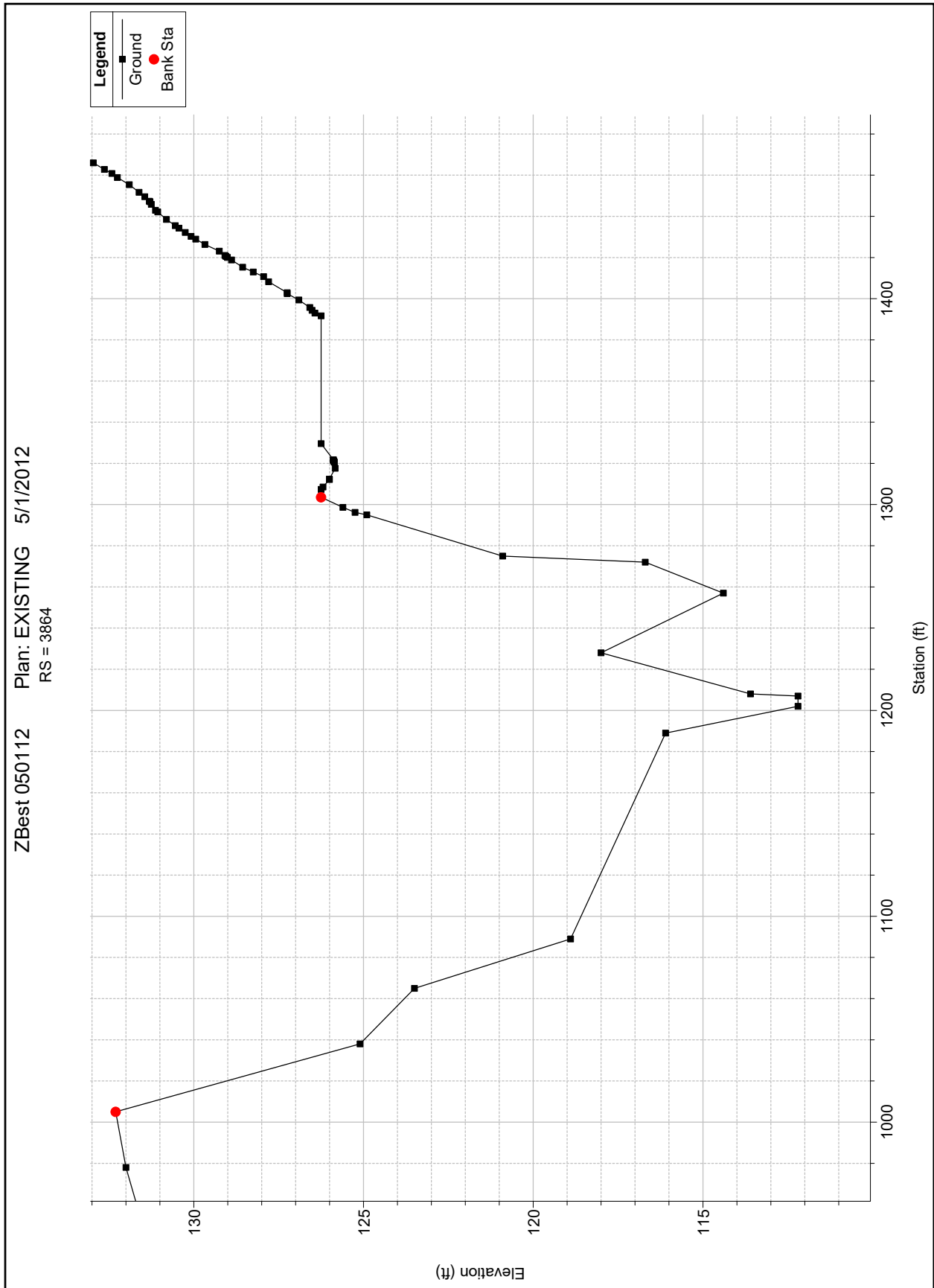


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RS = 1734

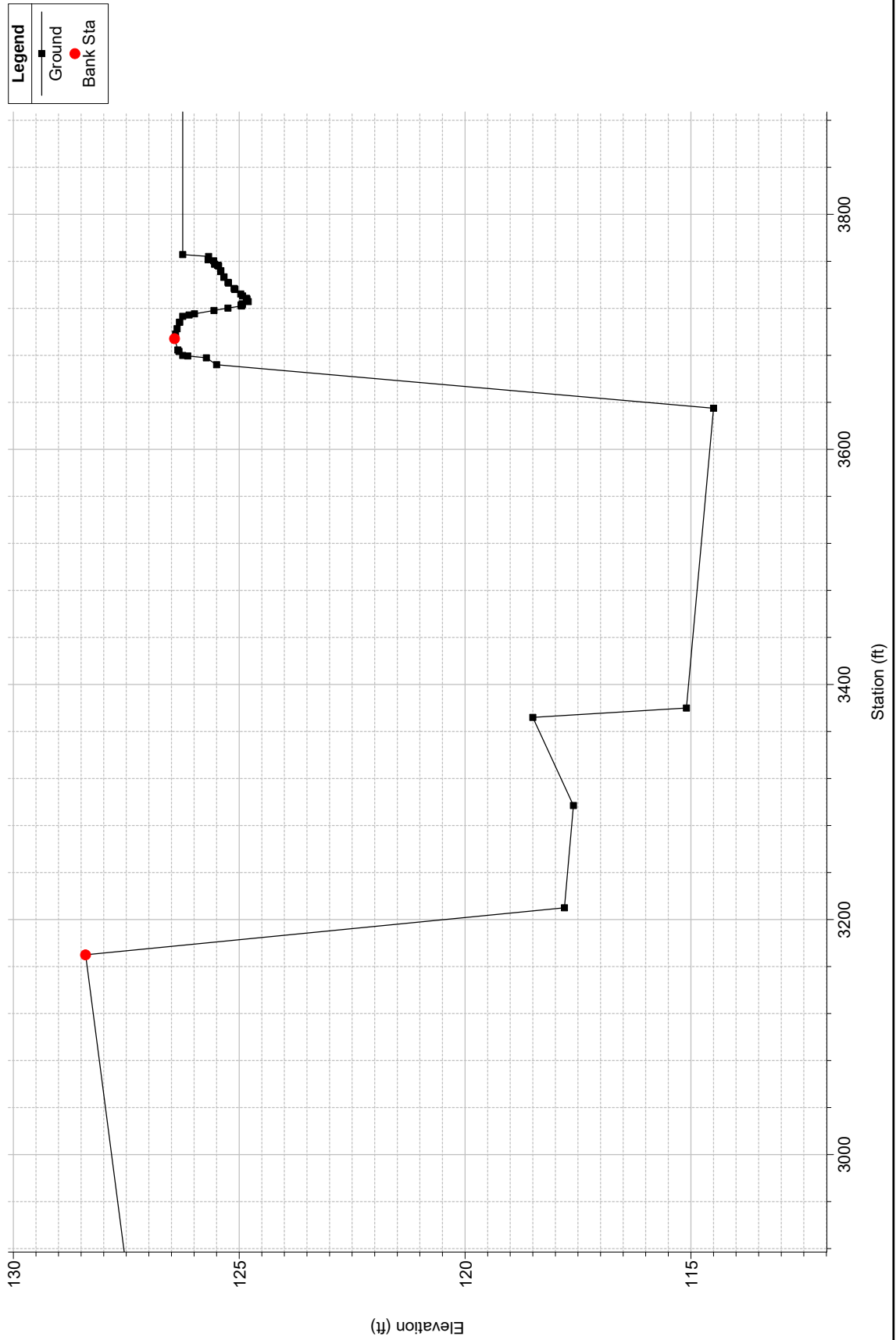


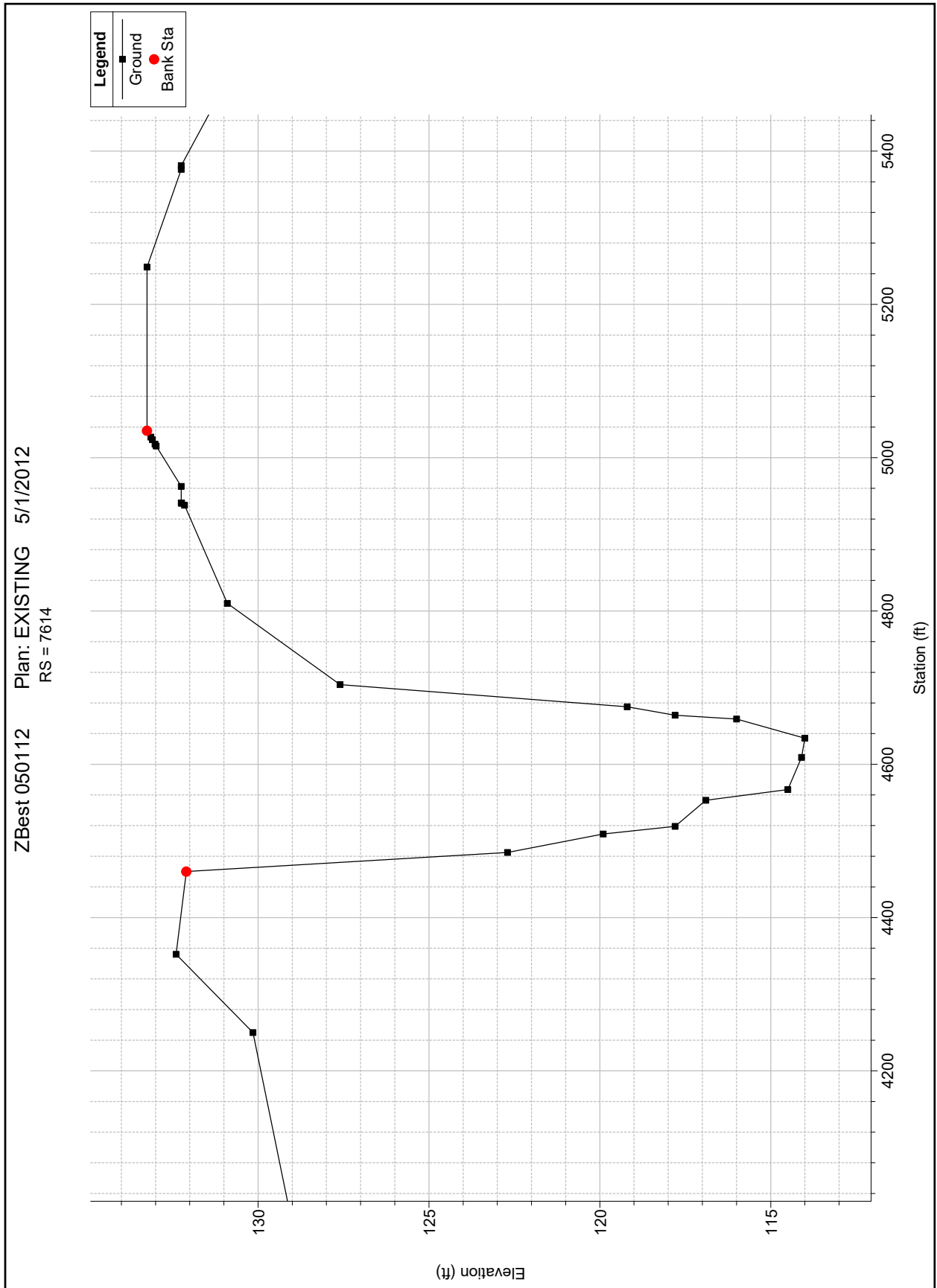
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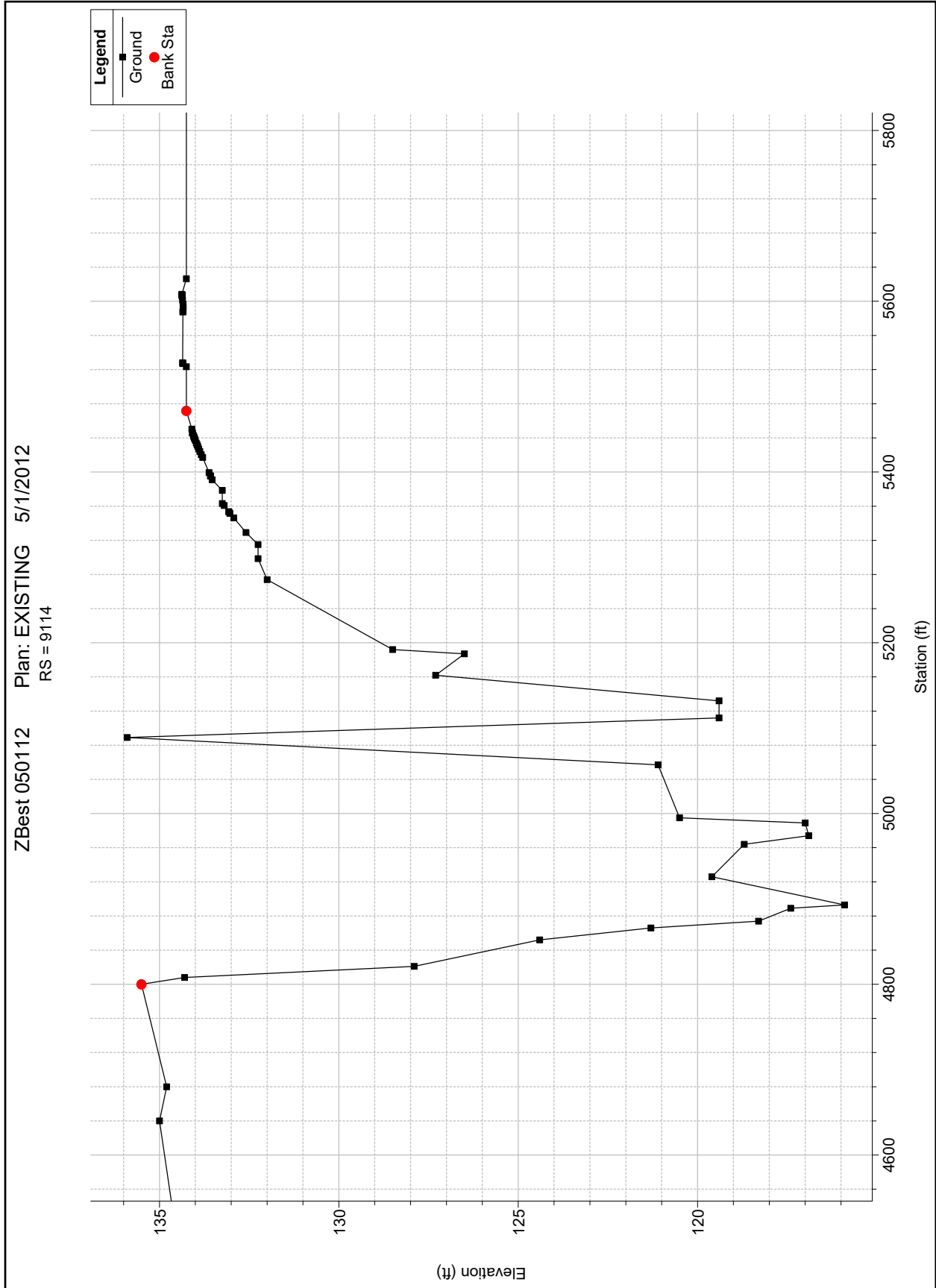




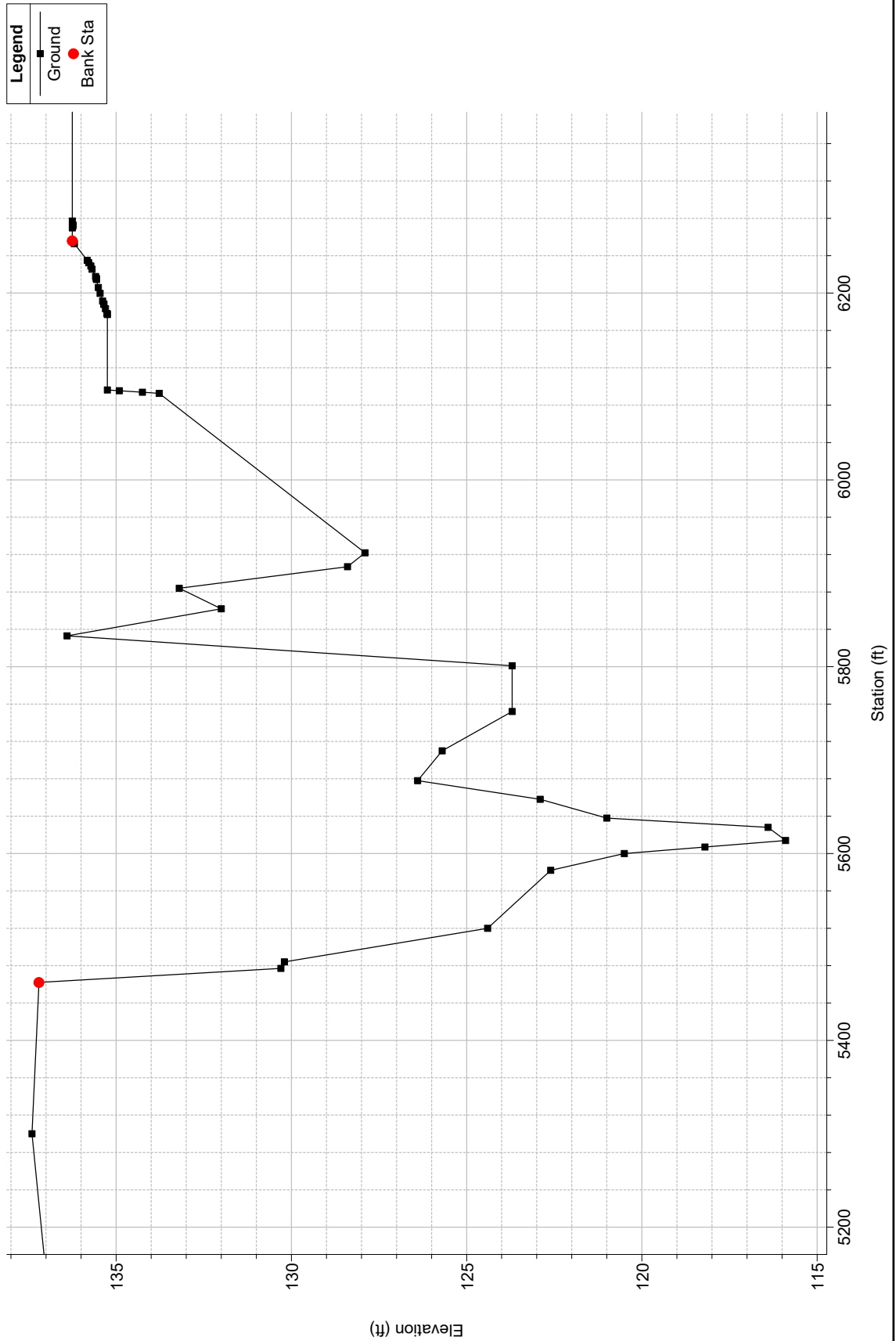
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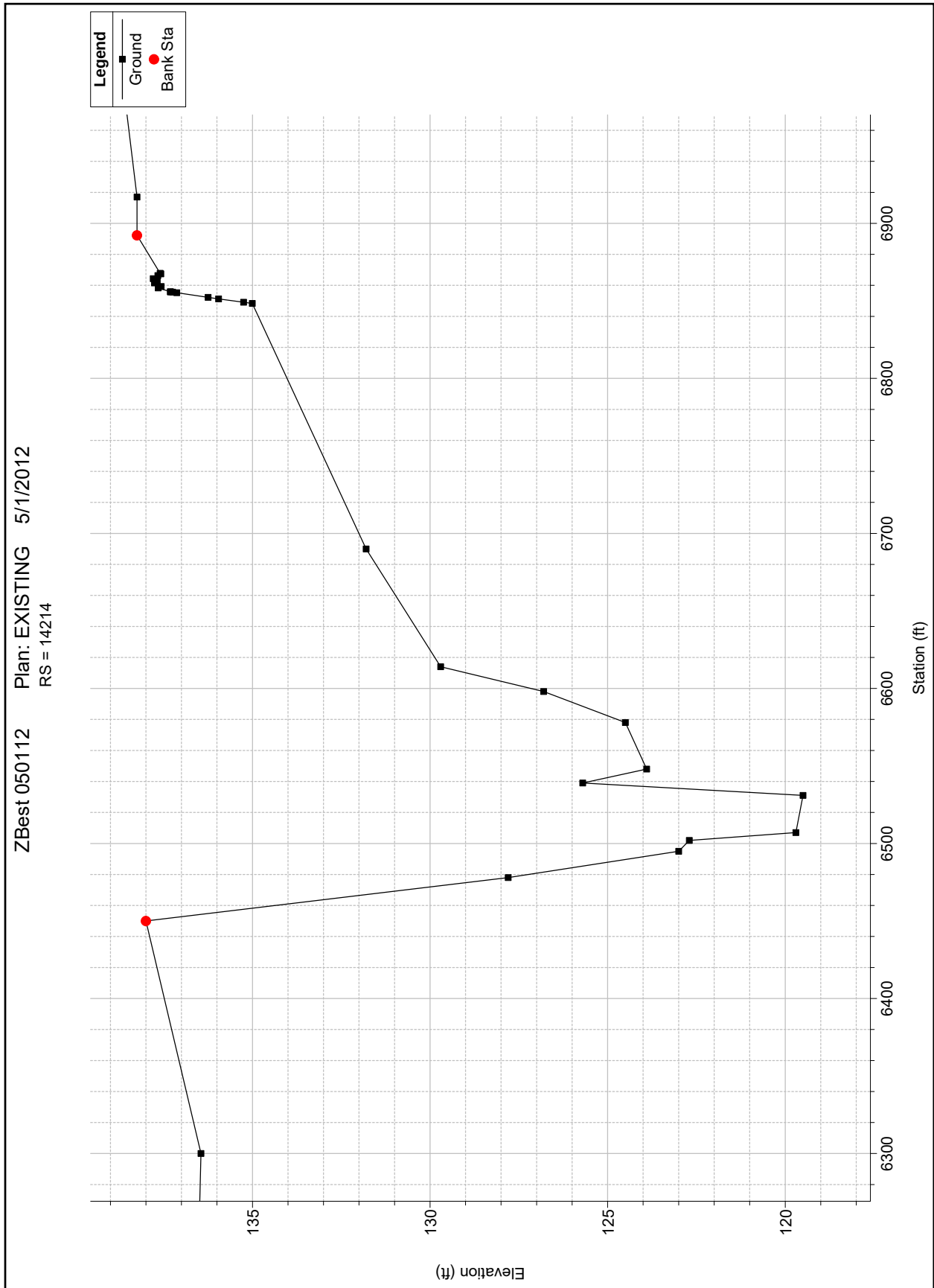


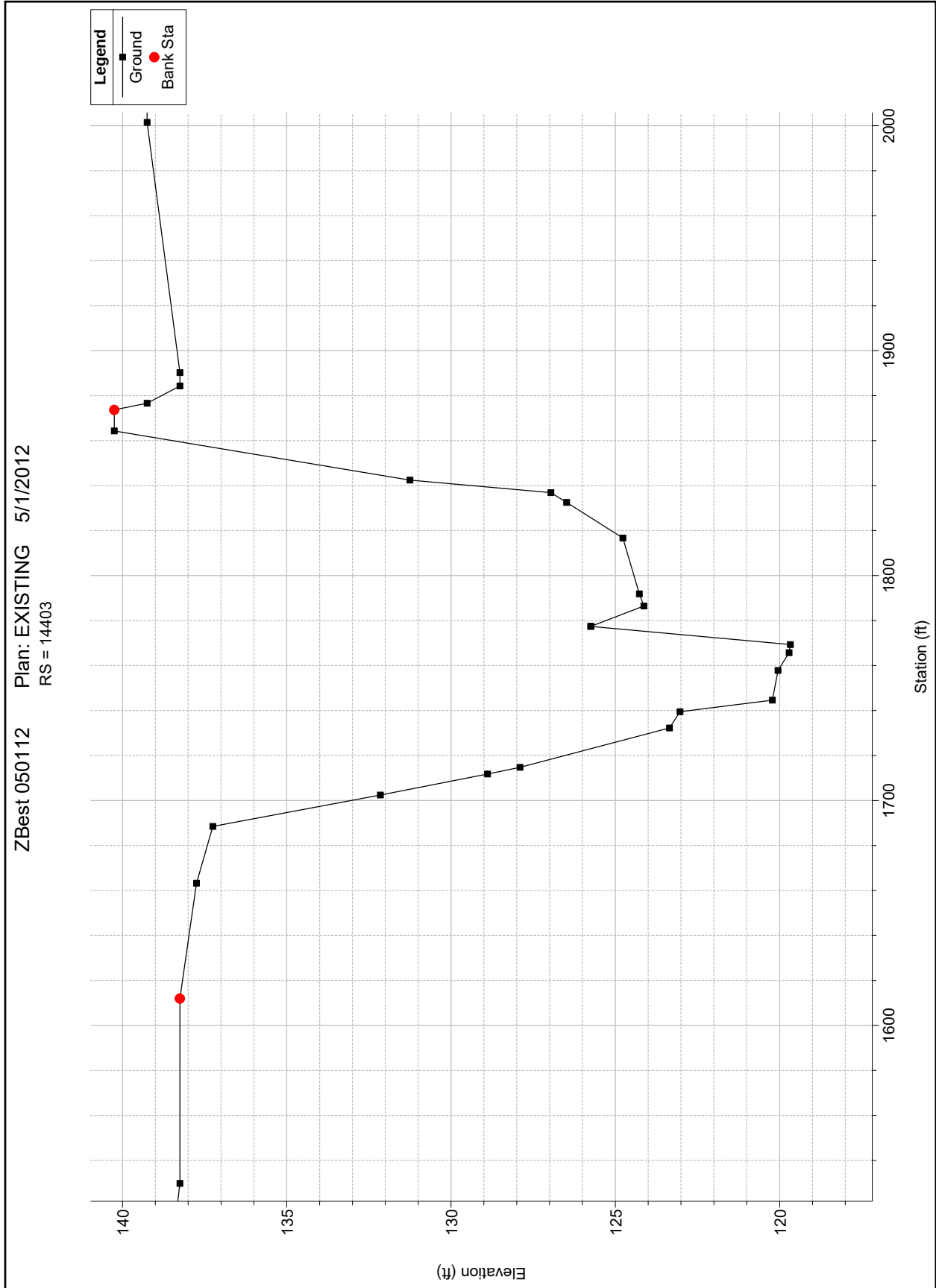


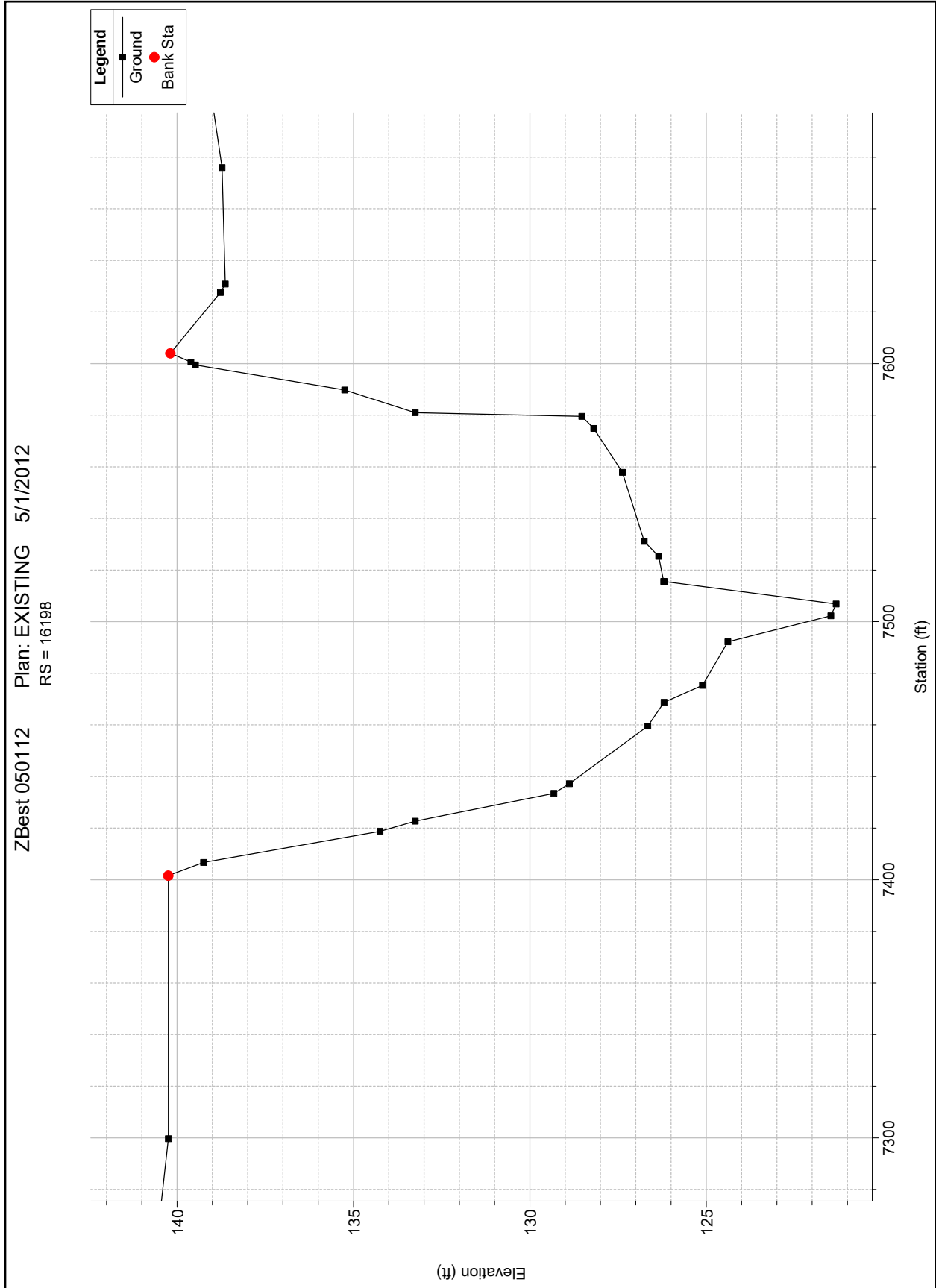


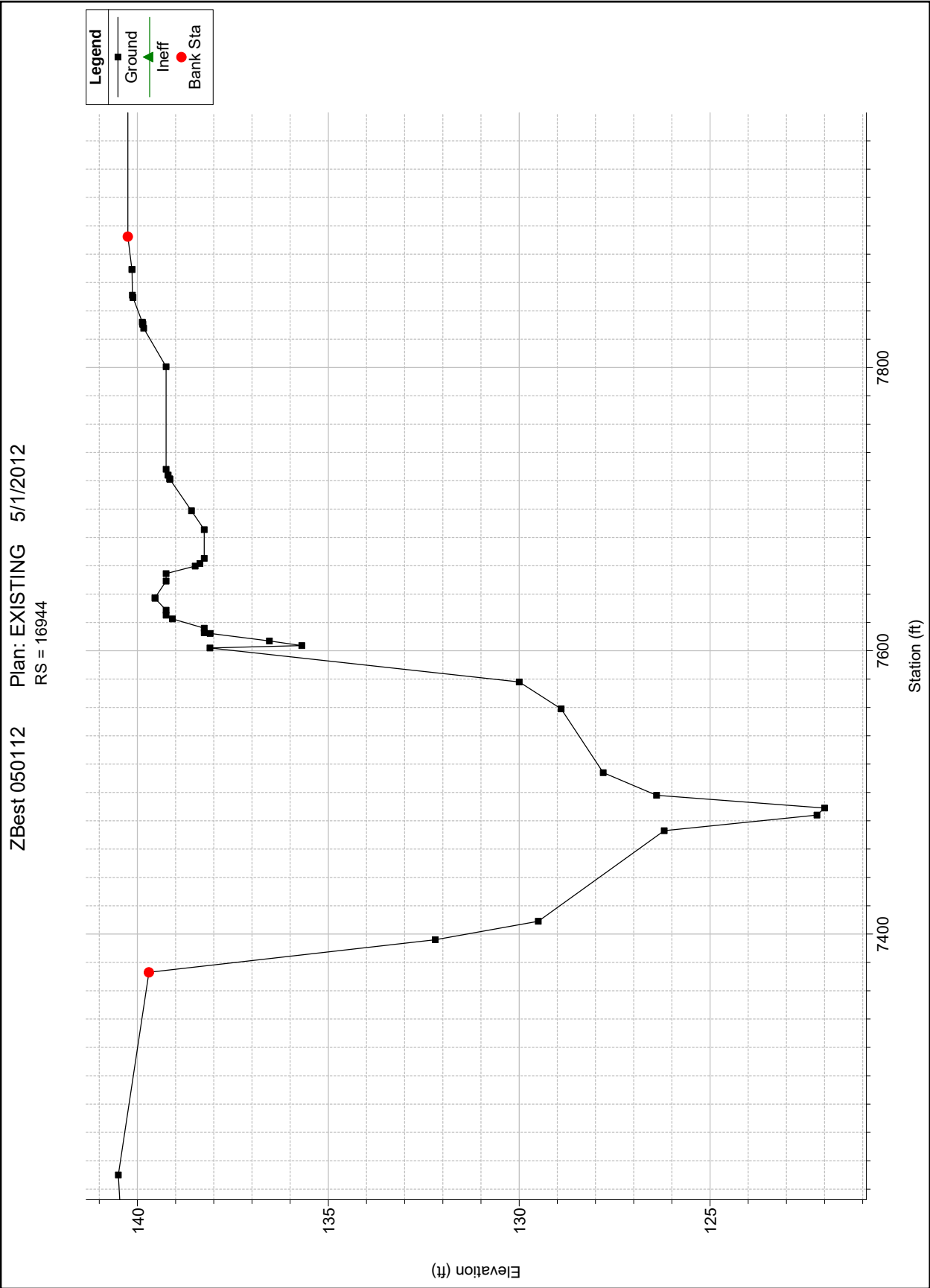
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RS = 11414





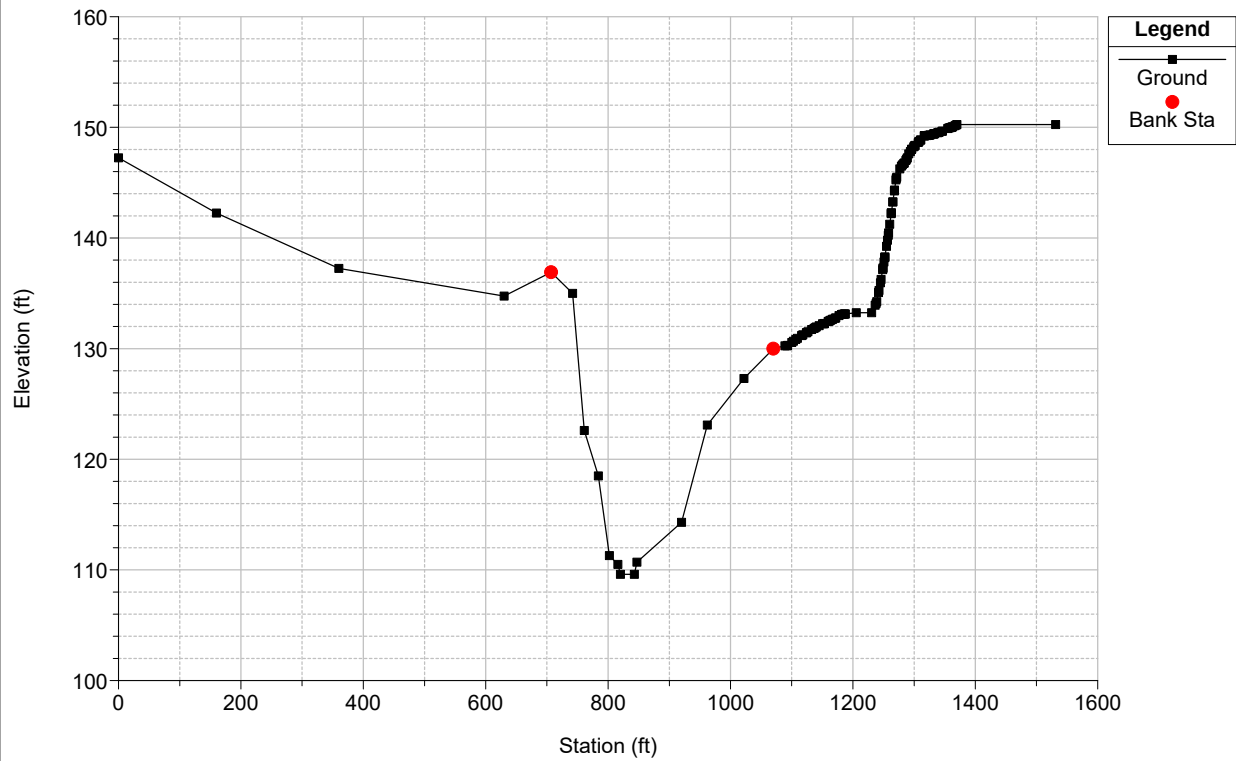




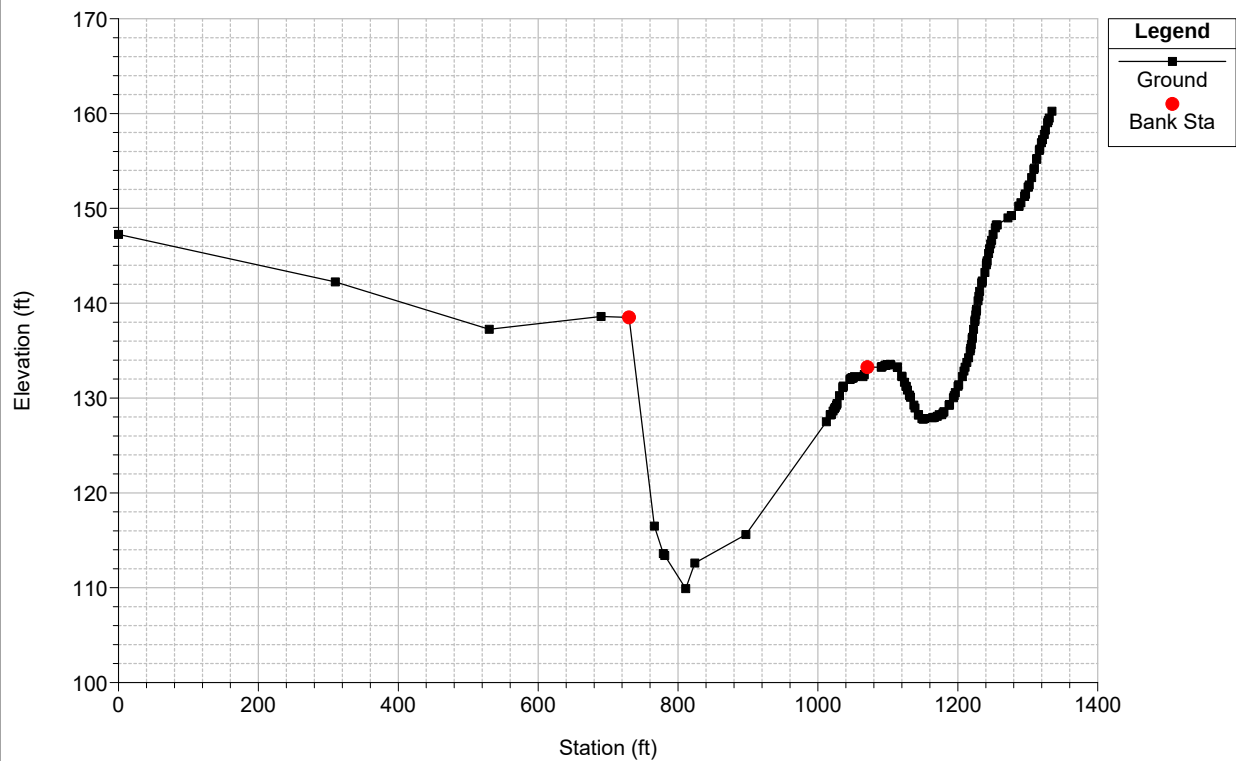


Compiled Existing Cross Sections

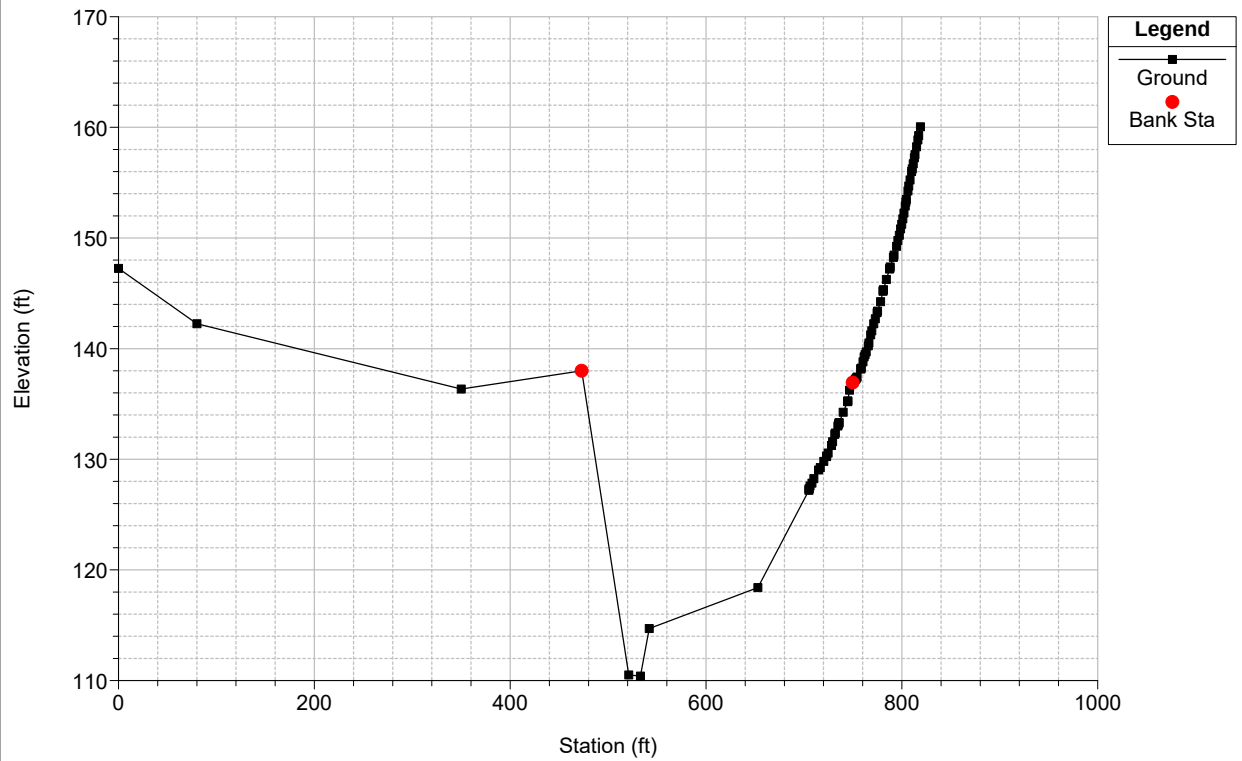
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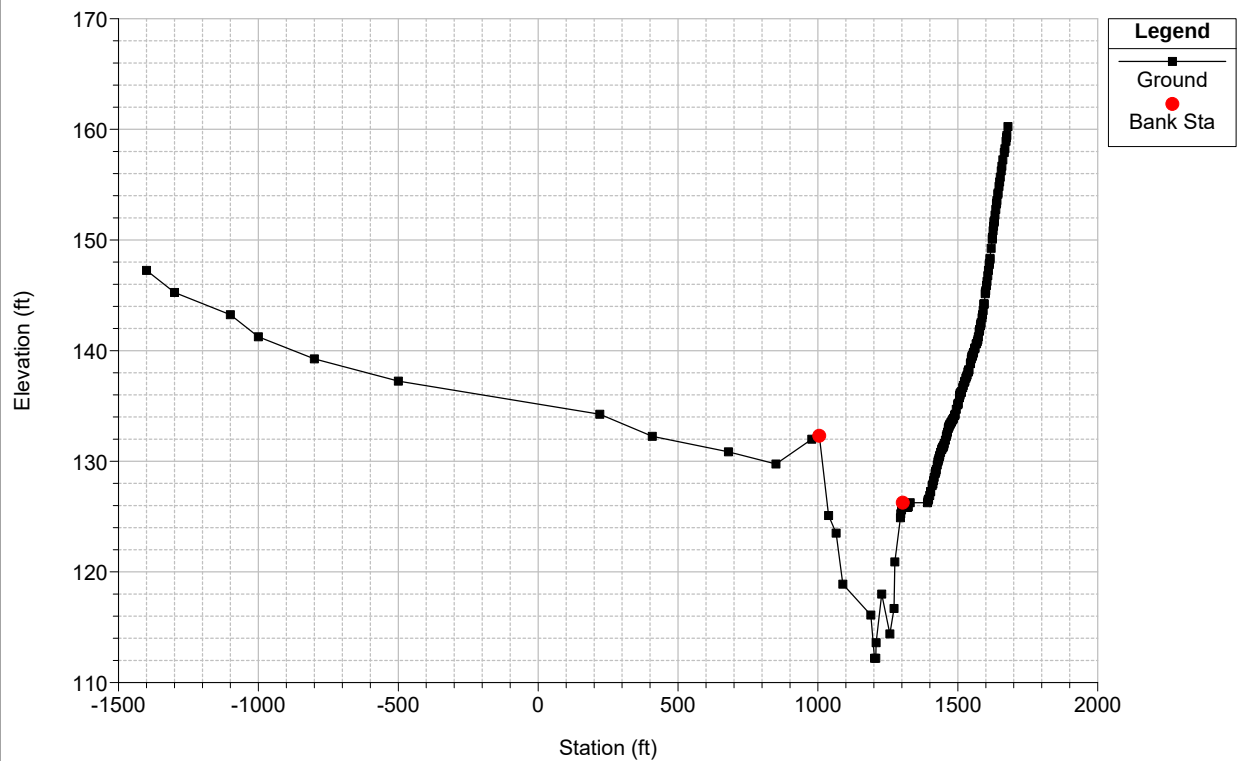
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RS = 1734



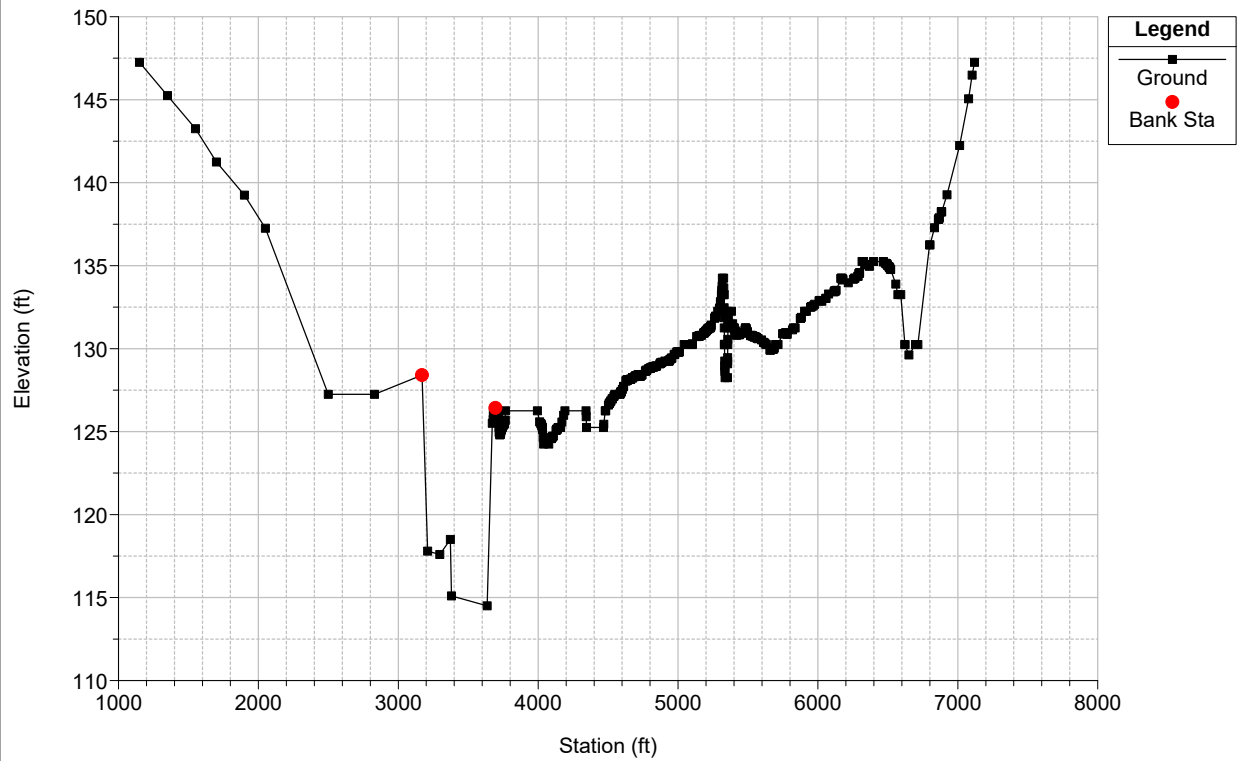
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RS = 3264



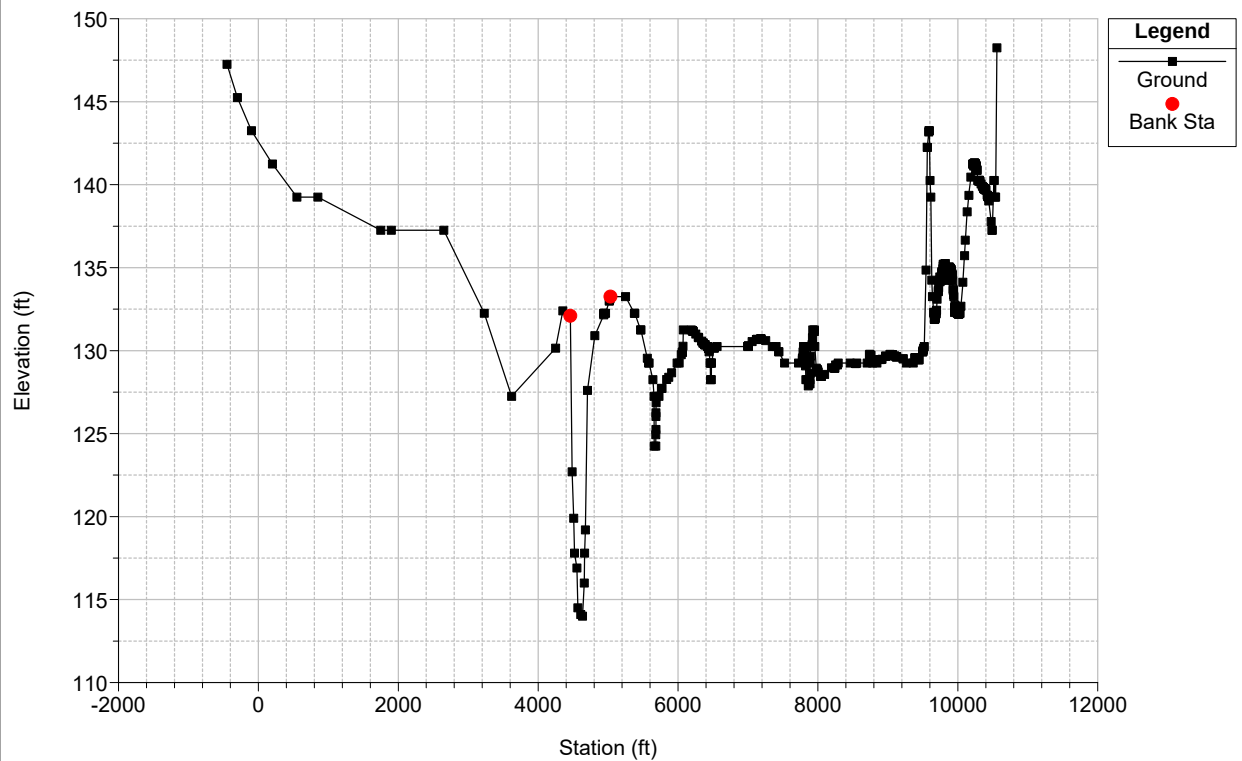
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RS = 3864



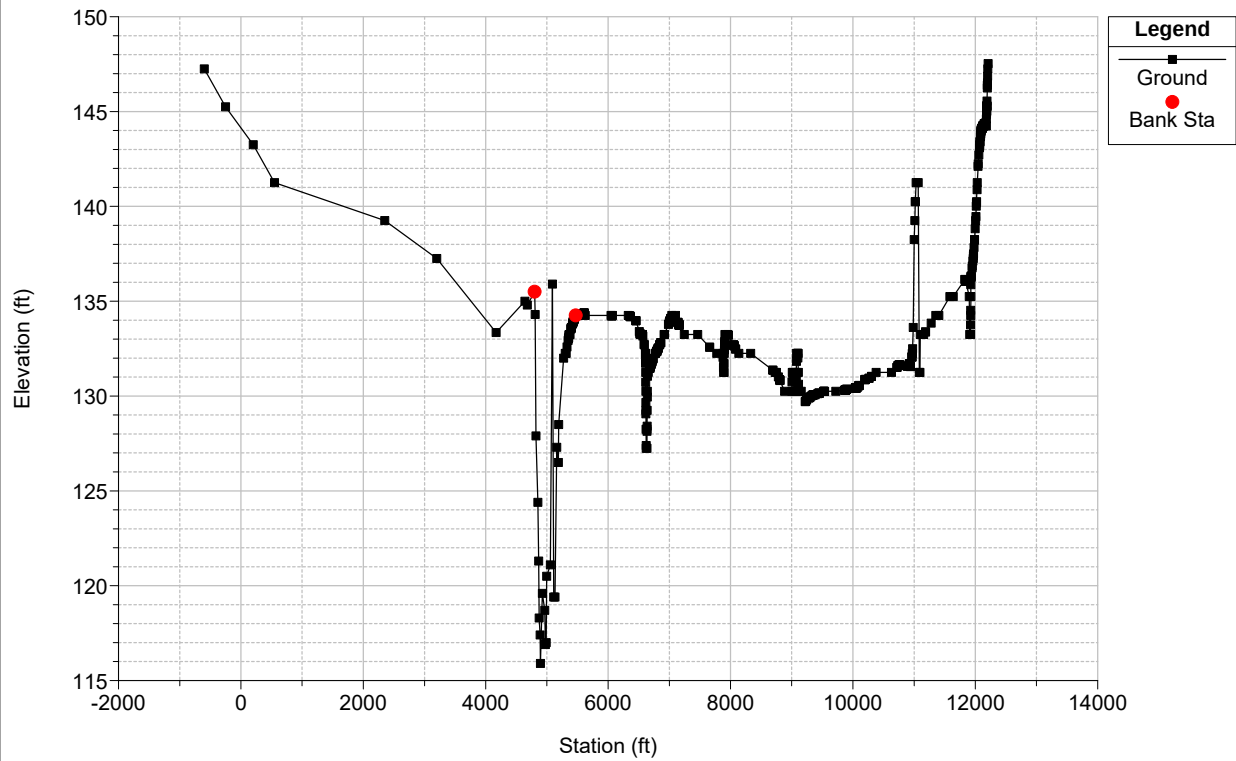
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RS = 5514



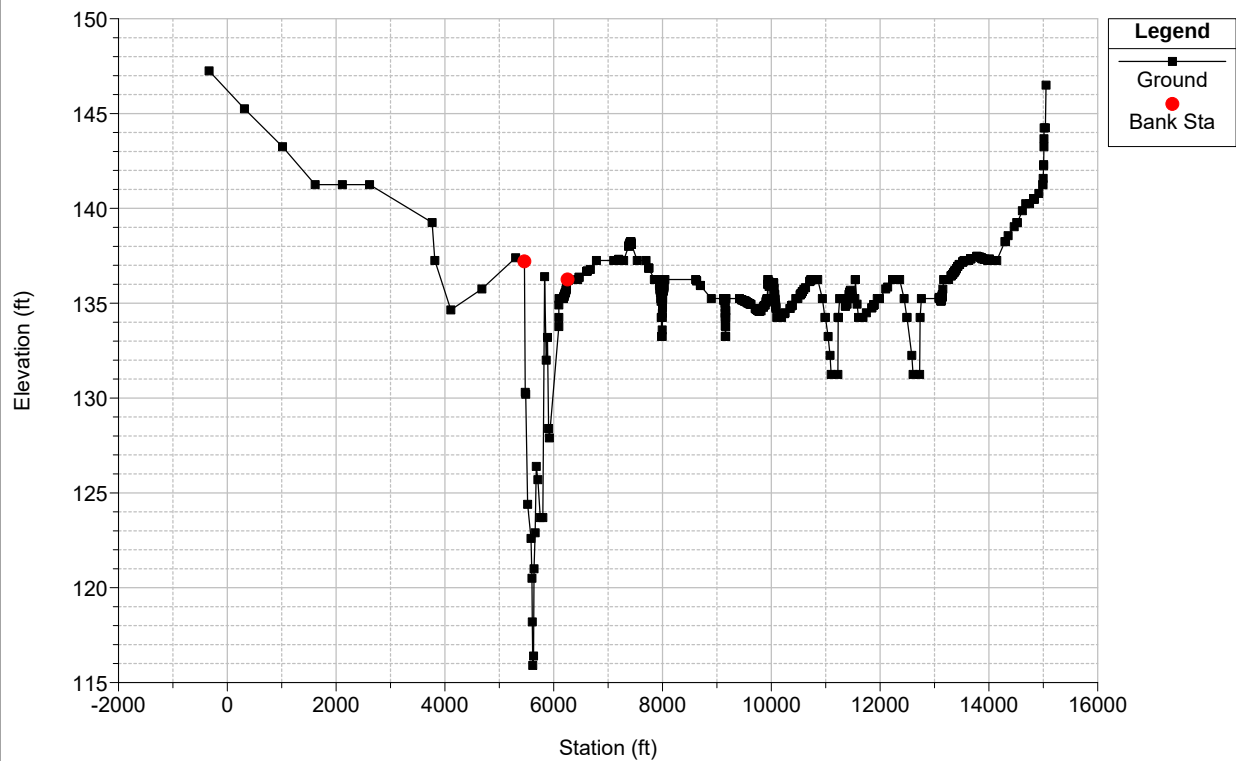
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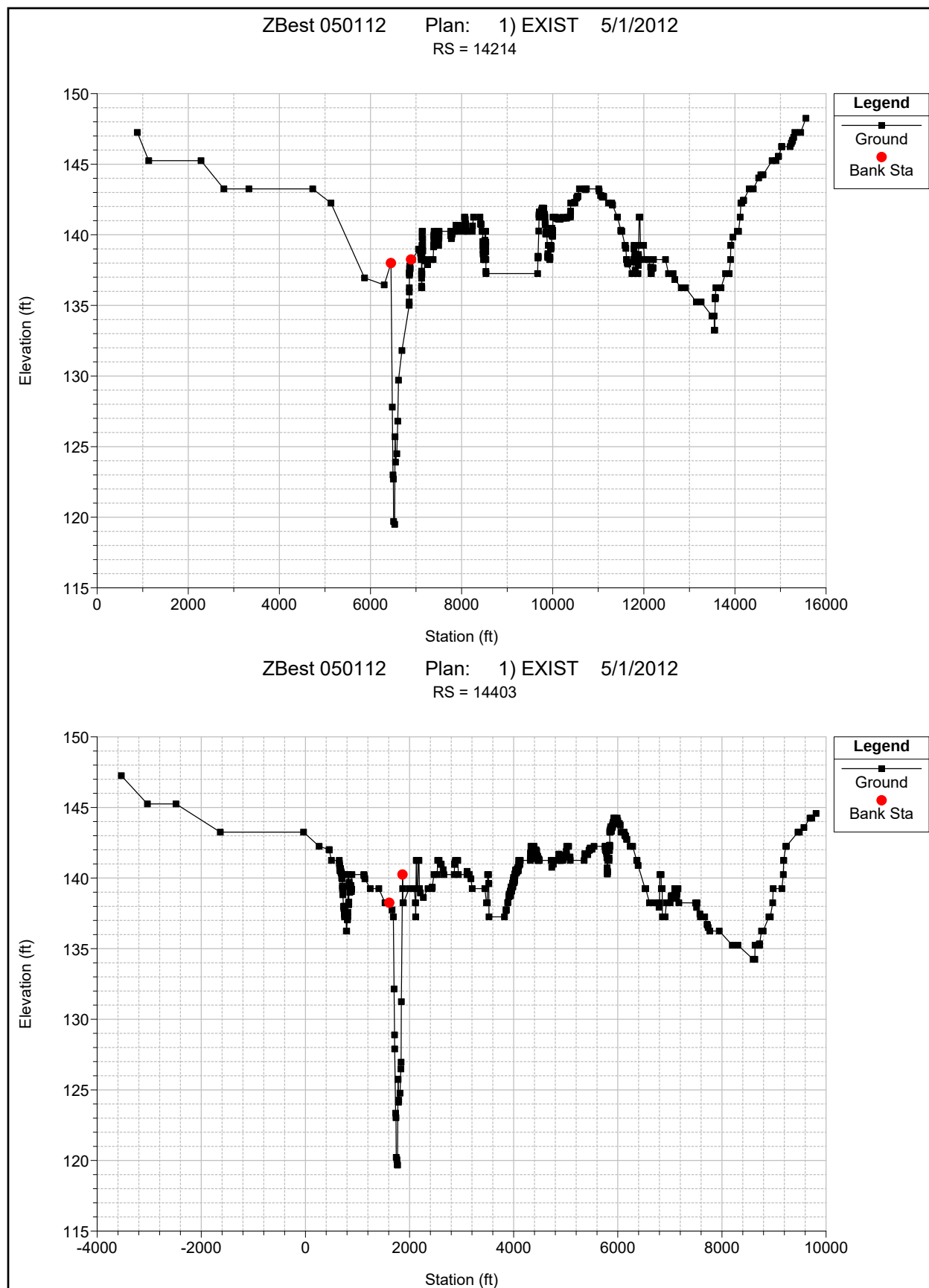


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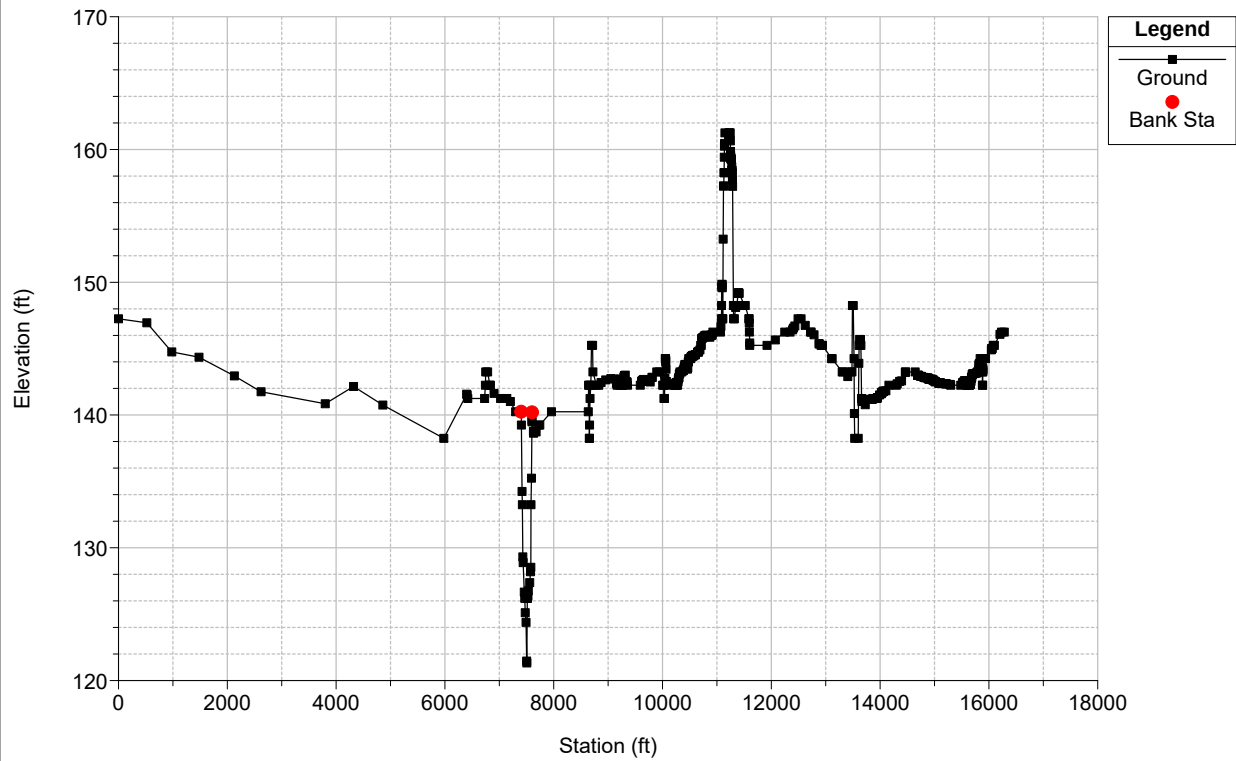


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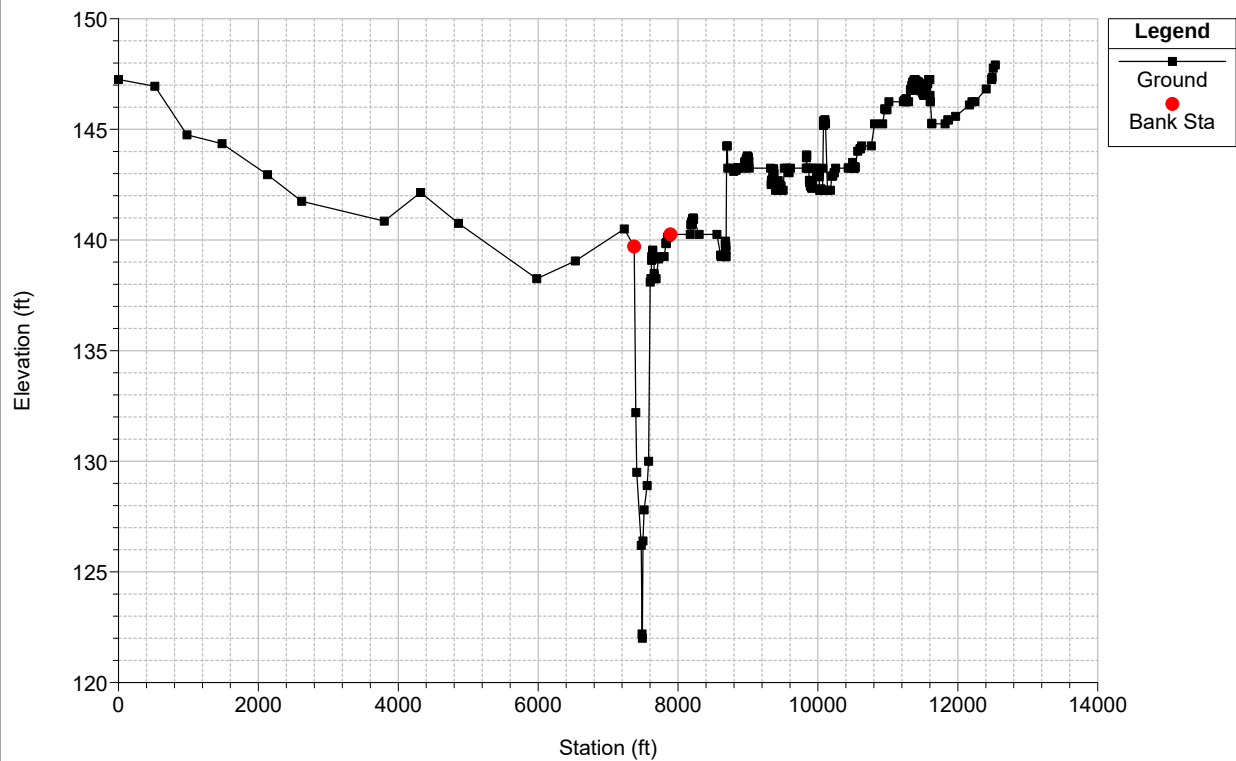




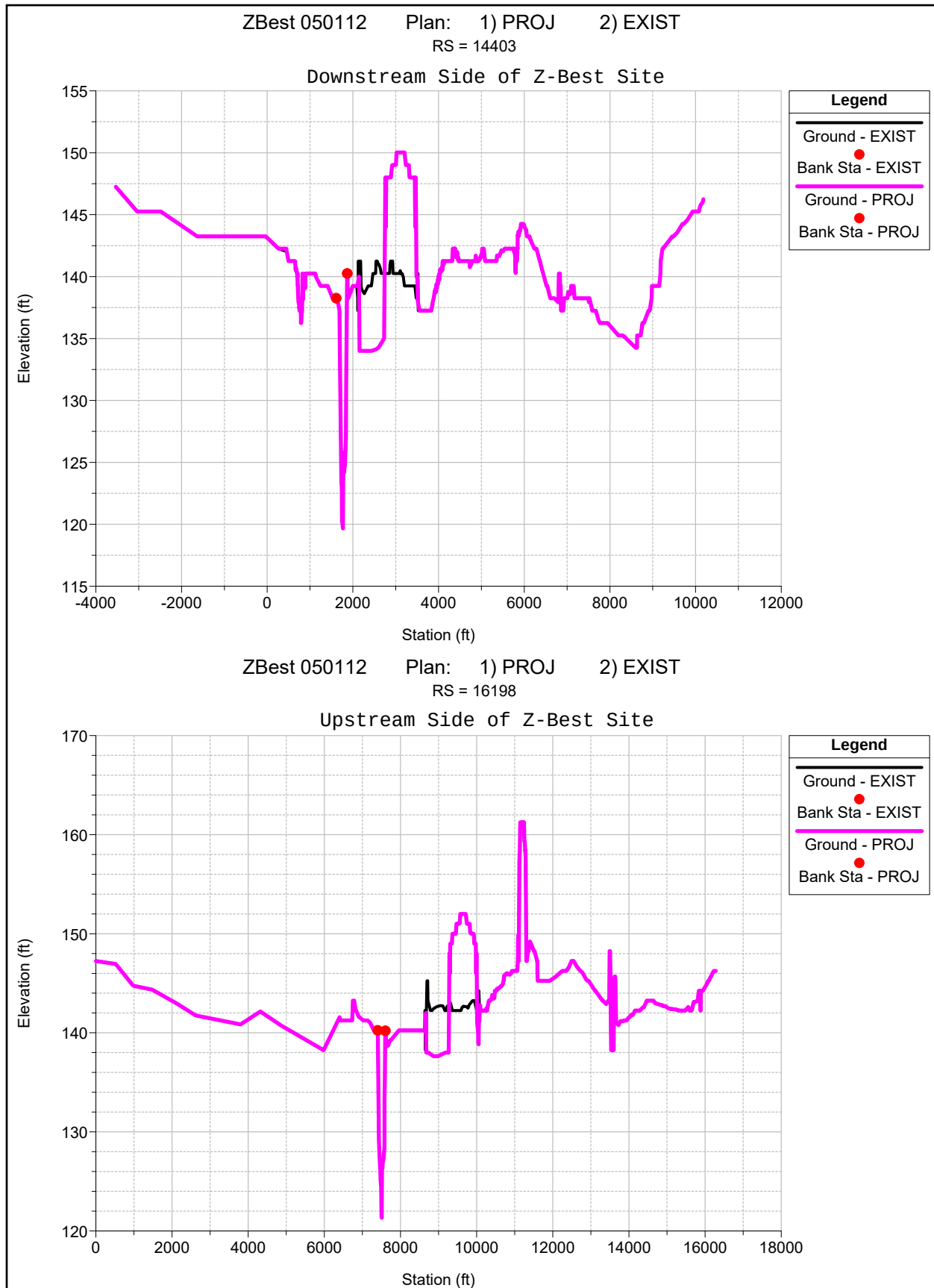
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RS = 16198



ZBest 050112 Plan: 1) EXIST 5/1/2012
RS = 16944



Proposed Conditions



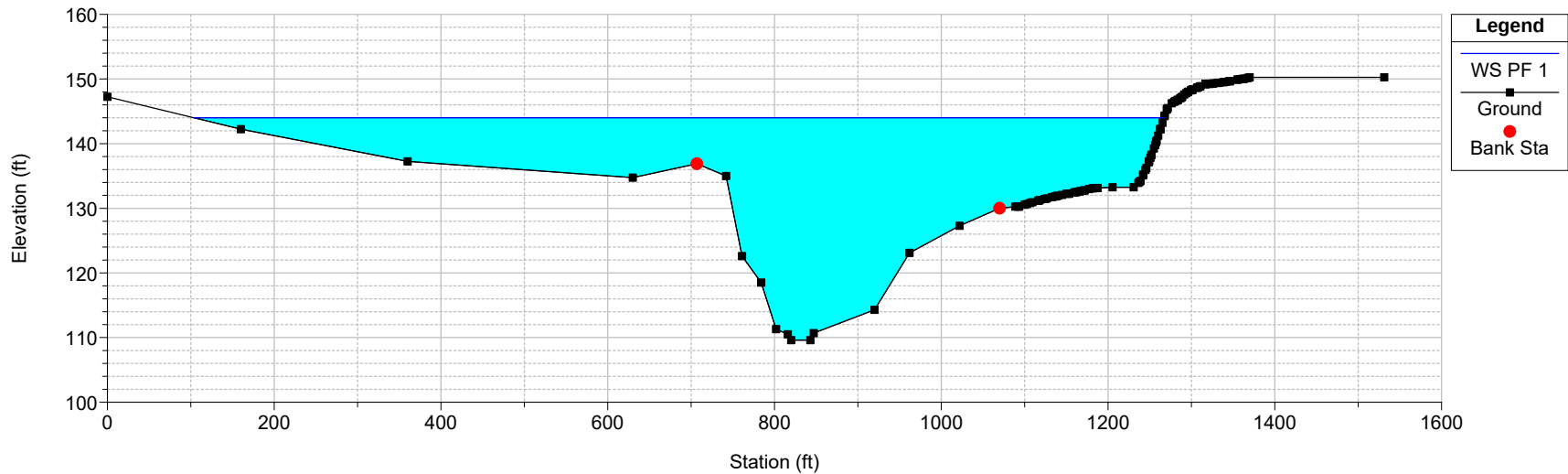
HEC-RAS MODEL RESULTS

HEC-RAS River: RIVER-1 Reach: Reach-1 Profile: PF 1

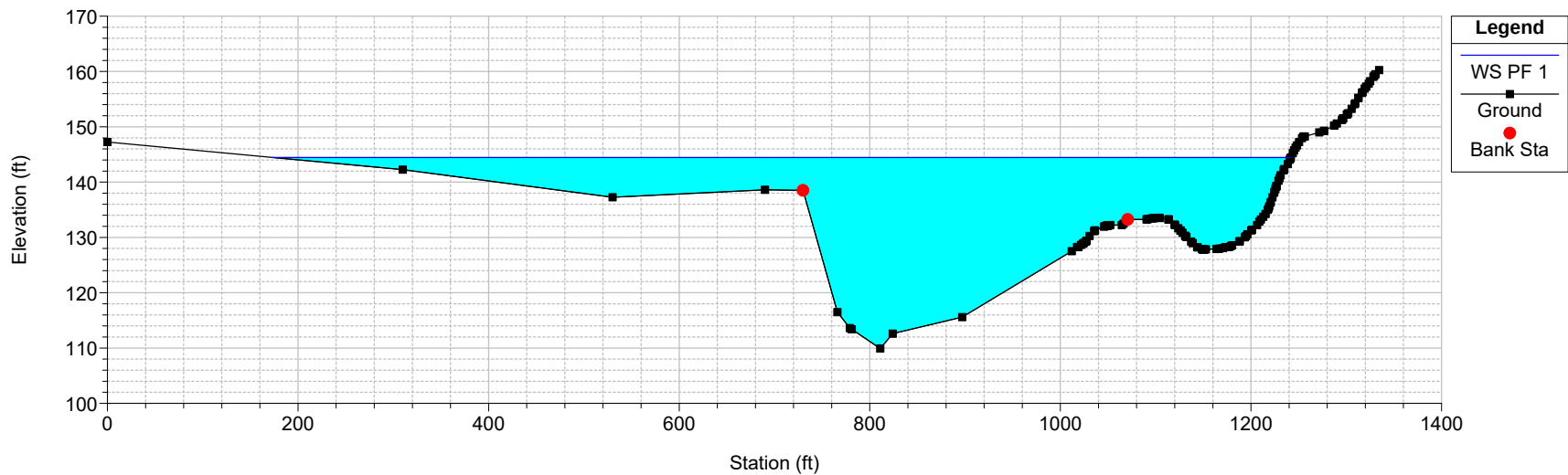
Reach	River Sta	Profile	Plan	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	434	PF 1	PROJ	30500.00	109.60	144.00	123.40	144.07	0.000315	2.11	14236.96	1163.13	0.08
Reach-1	434	PF 1	EXIST	30500.00	109.60	144.00	123.40	144.07	0.000315	2.11	14236.96	1163.13	0.08
Reach-1	1734	PF 1	PROJ	30500.00	109.90	144.45		144.55	0.000413	2.46	12670.87	1068.48	0.09
Reach-1	1734	PF 1	EXIST	30500.00	109.90	144.45		144.55	0.000413	2.46	12670.87	1068.48	0.09
Reach-1	3264	PF 1	PROJ	30500.00	110.40	145.24		145.40	0.000705	3.22	9498.04	748.78	0.12
Reach-1	3264	PF 1	EXIST	30500.00	110.40	145.24		145.40	0.000705	3.22	9498.04	748.78	0.12
Reach-1	3864	PF 1	PROJ	30500.00	112.20	145.50		145.51	0.000036	0.77	33298.08	2912.39	0.03
Reach-1	3864	PF 1	EXIST	30500.00	112.20	145.50		145.51	0.000036	0.77	33298.08	2912.39	0.03
Reach-1	5514	PF 1	PROJ	30500.00	114.50	145.52		145.52	0.000003	0.24	85726.09	5762.48	0.01
Reach-1	5514	PF 1	EXIST	30500.00	114.50	145.52		145.52	0.000003	0.24	85726.09	5762.48	0.01
Reach-1	7614	PF 1	PROJ	30500.00	114.00	145.53		145.53	0.000001	0.17	135282.00	10874.68	0.01
Reach-1	7614	PF 1	EXIST	30500.00	114.00	145.53		145.53	0.000001	0.17	135282.00	10874.68	0.01
Reach-1	9114	PF 1	PROJ	30500.00	115.90	145.53		145.53	0.000002	0.17	131724.40	12488.56	0.01
Reach-1	9114	PF 1	EXIST	30500.00	115.90	145.53		145.53	0.000002	0.17	131724.40	12488.56	0.01
Reach-1	11414	PF 1	PROJ	30500.00	115.90	145.53		145.53	0.000003	0.22	124939.80	14823.18	0.01
Reach-1	11414	PF 1	EXIST	30500.00	115.90	145.53		145.53	0.000003	0.22	124939.80	14823.18	0.01
Reach-1	14214	PF 1	PROJ	30500.00	119.50	145.54		145.55	0.000010	0.48	78691.72	13855.69	0.02
Reach-1	14214	PF 1	EXIST	30500.00	119.50	145.55		145.55	0.000014	0.57	71383.08	13856.02	0.03
Reach-1	14403	PF 1	PROJ	30500.00	119.67	145.55		145.55	0.000018	0.38	63278.80	12498.68	0.02
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Reach-1	16198	PF 1	PROJ	30500.00	121.32	145.59		145.60	0.000038	0.59	51141.05	12884.13	0.03
Reach-1	16198	PF 1	EXIST	30500.00	121.32	145.60		145.60	0.000046	0.64	50367.50	13613.17	0.03
Reach-1	16944	PF 1	PROJ	30500.00	122.00	145.60		145.61	0.000045	0.48	47413.81	11237.74	0.03
Reach-1	16944	PF 1	EXIST	30500.00	122.00	145.62		145.62	0.000060	0.56	43517.14	10502.05	0.03

Existing Conditions 100-year Flooding

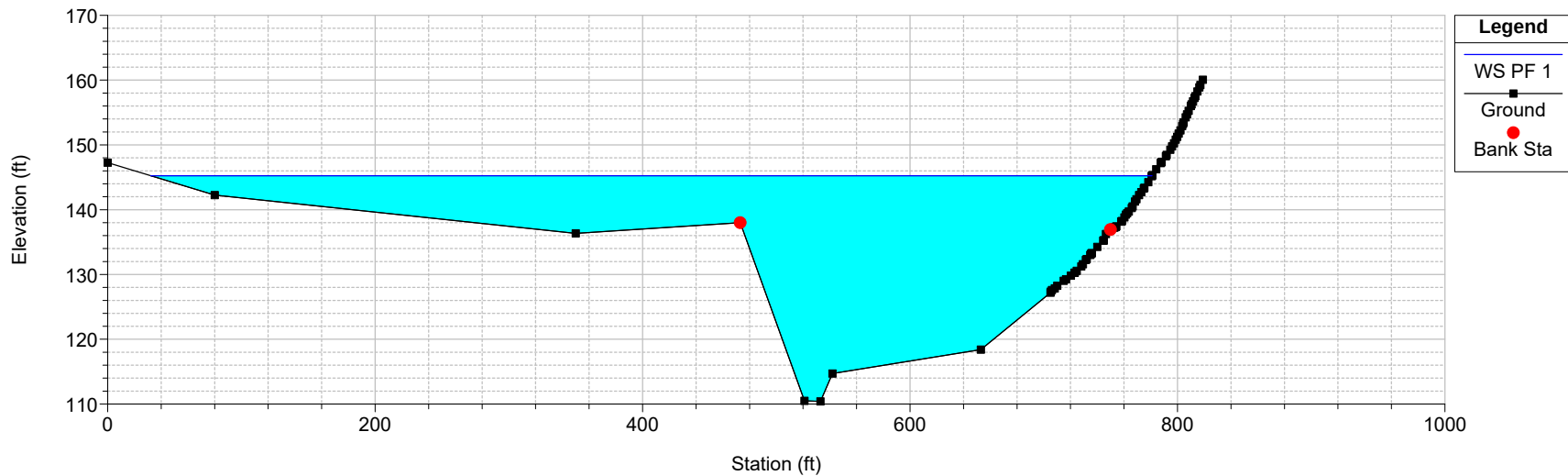
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RS = 434



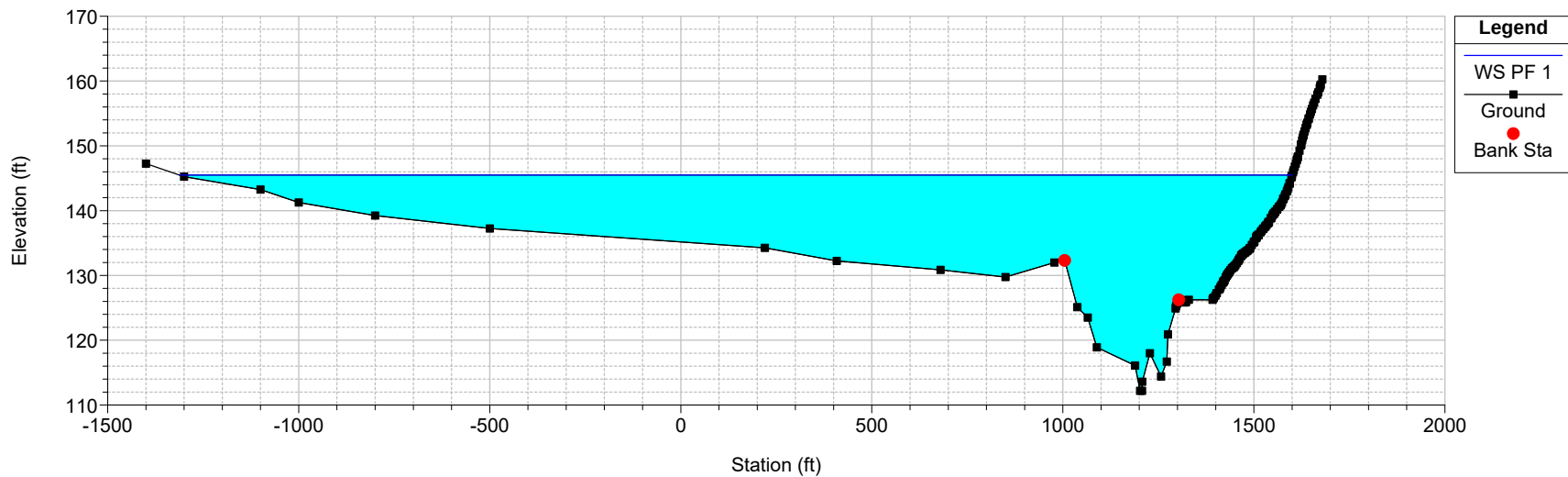
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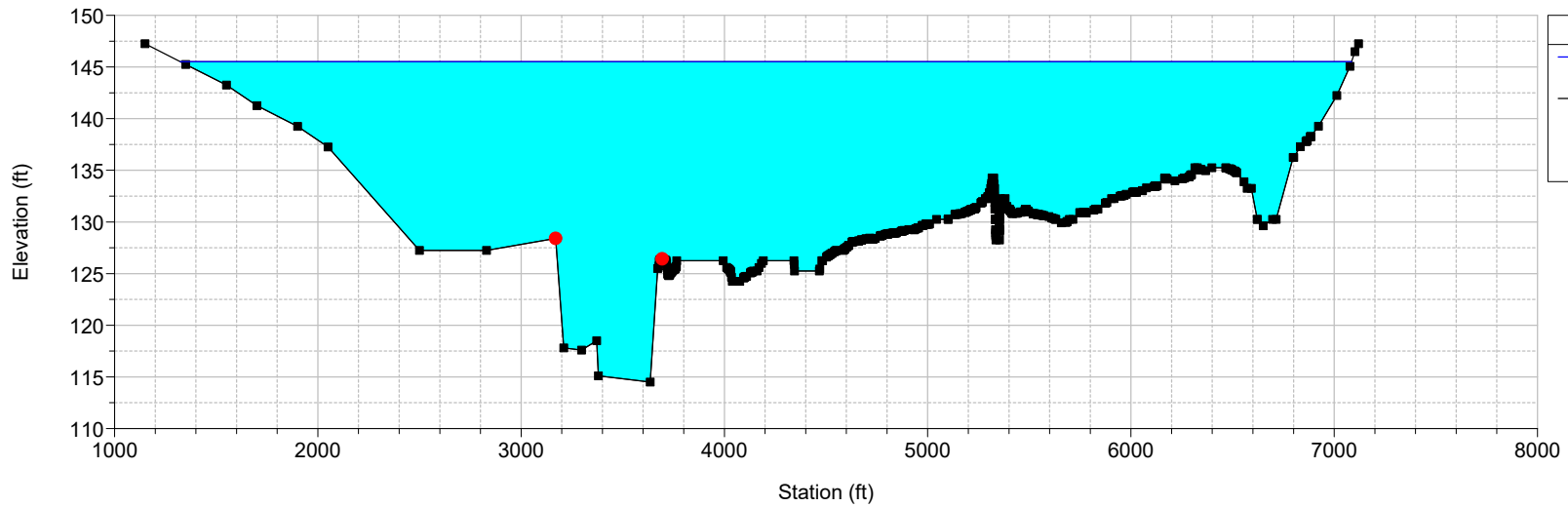
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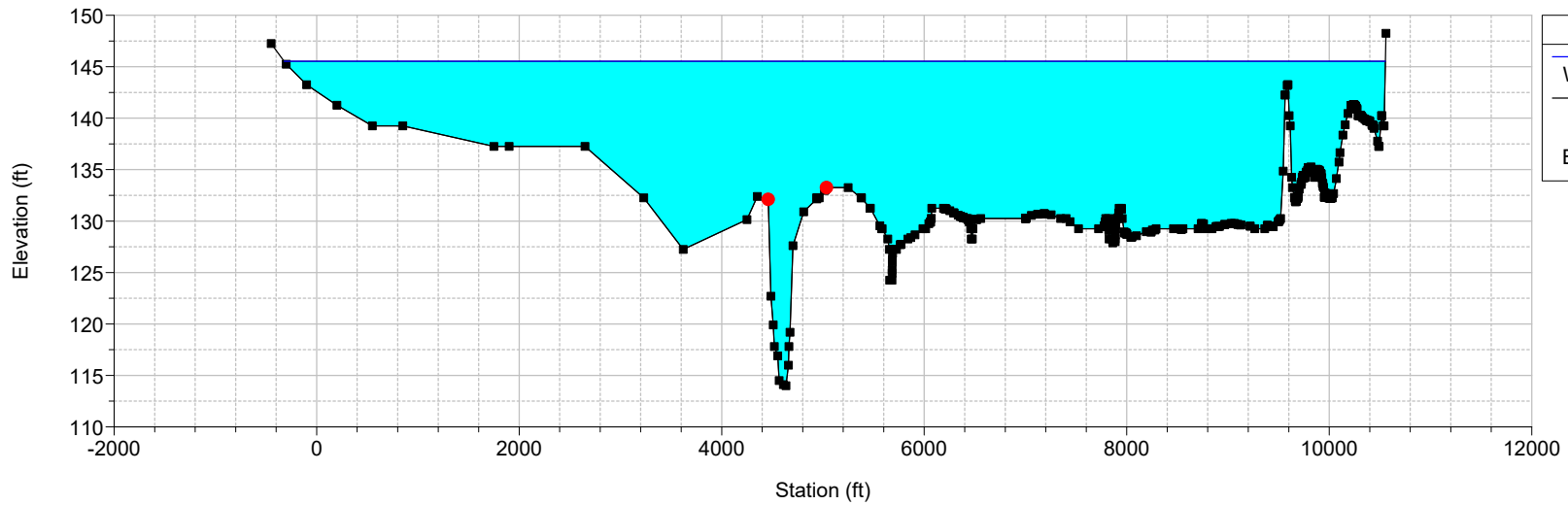
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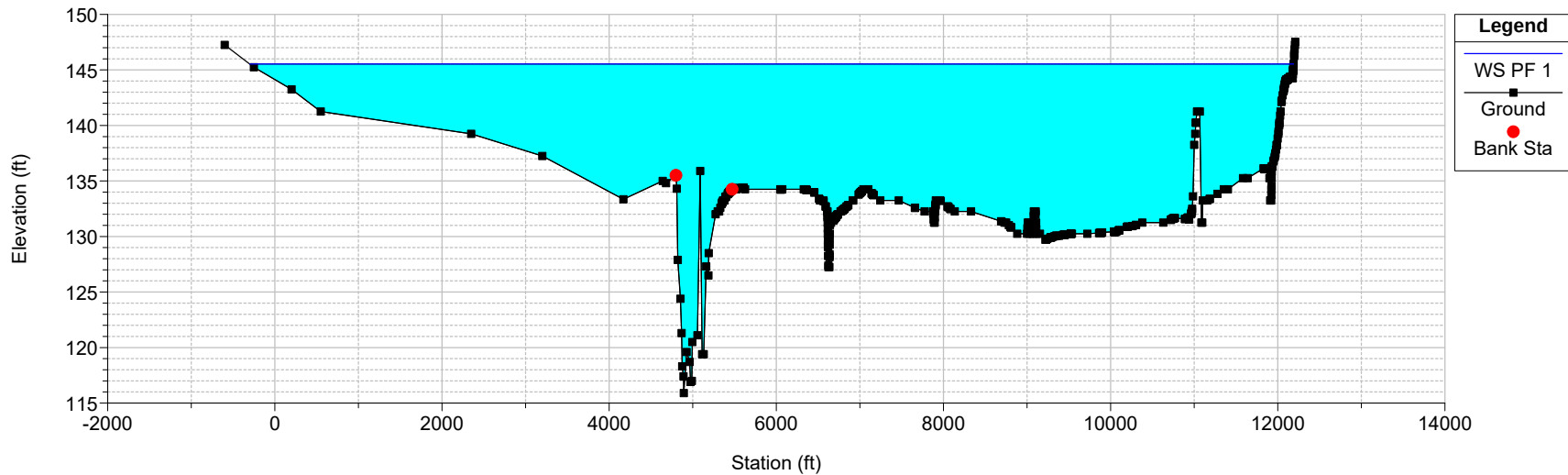
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RS = 5514



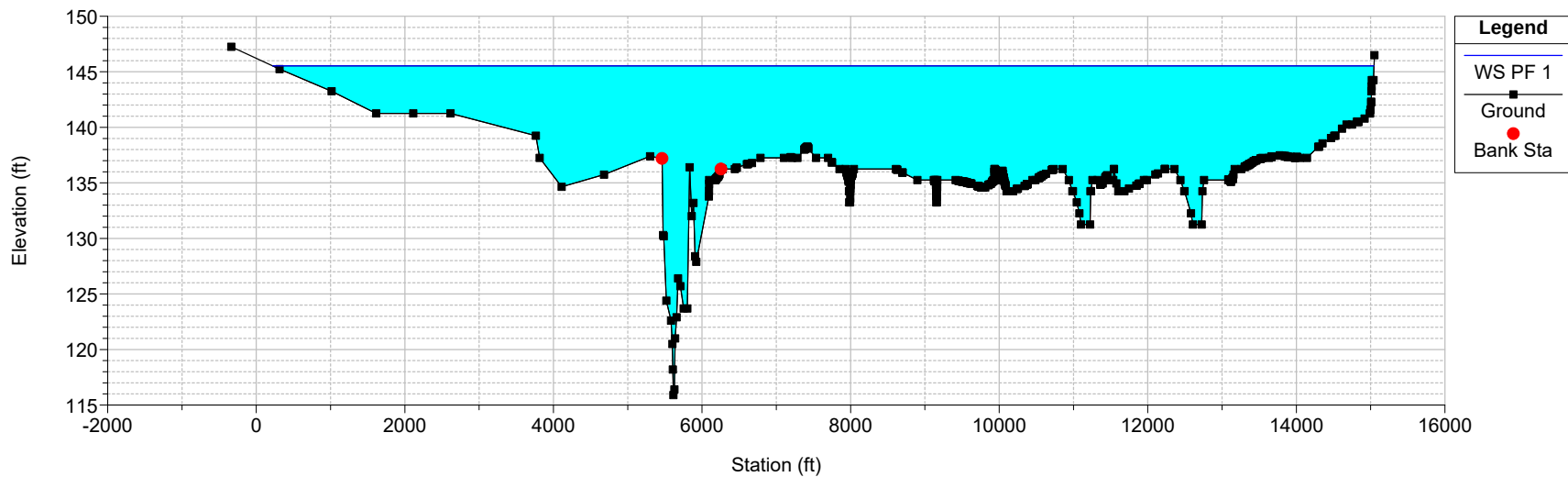
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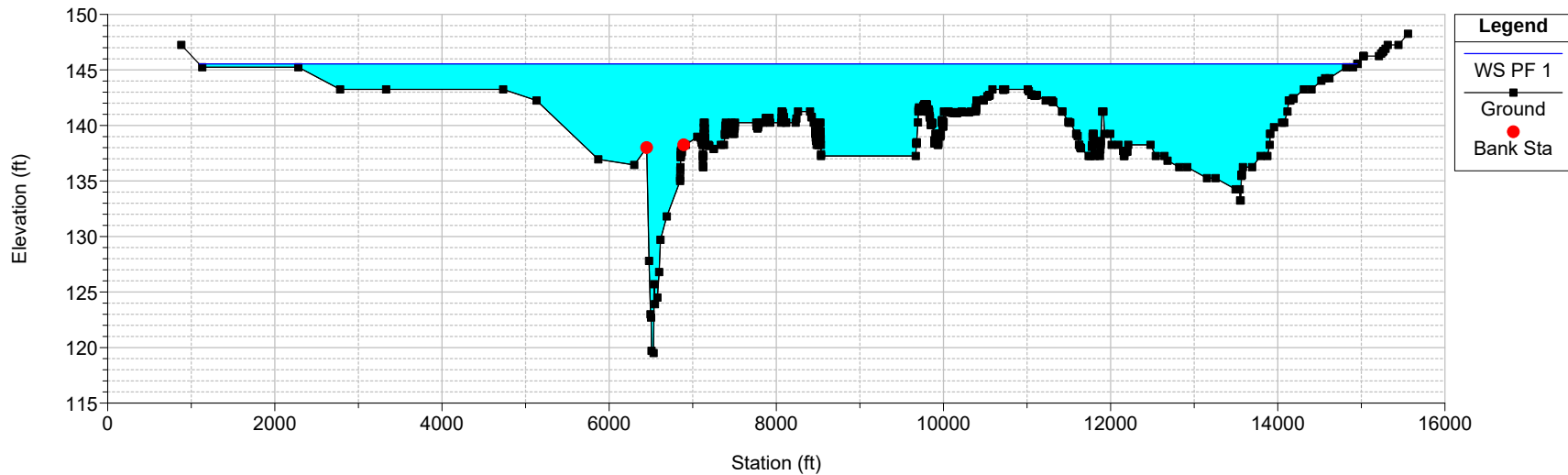
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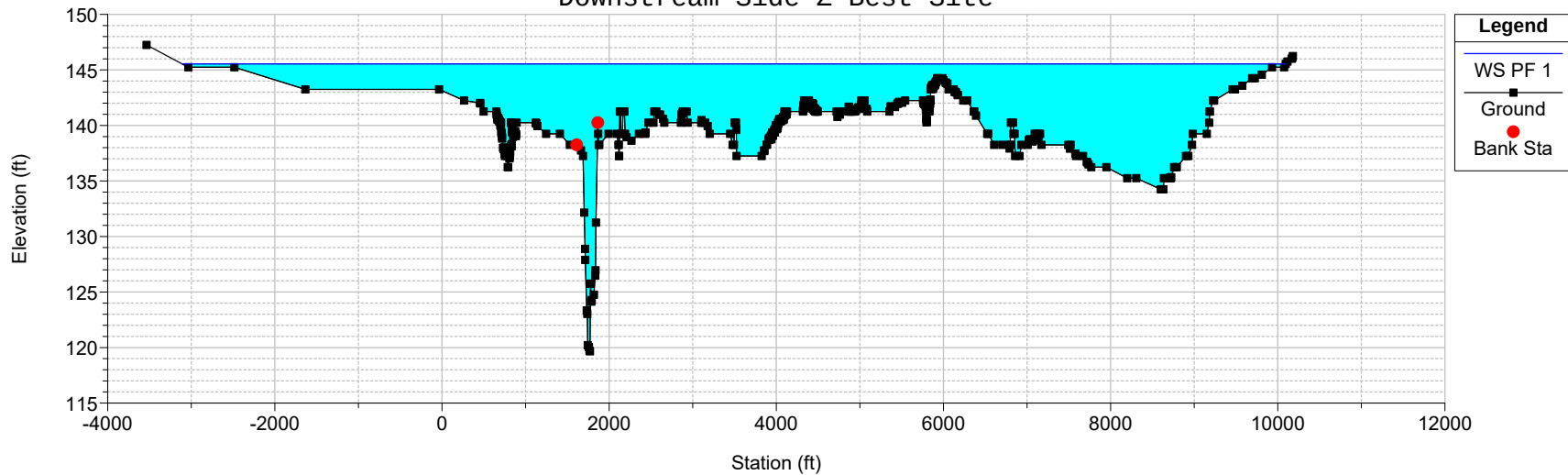


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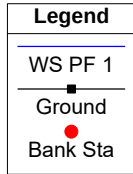
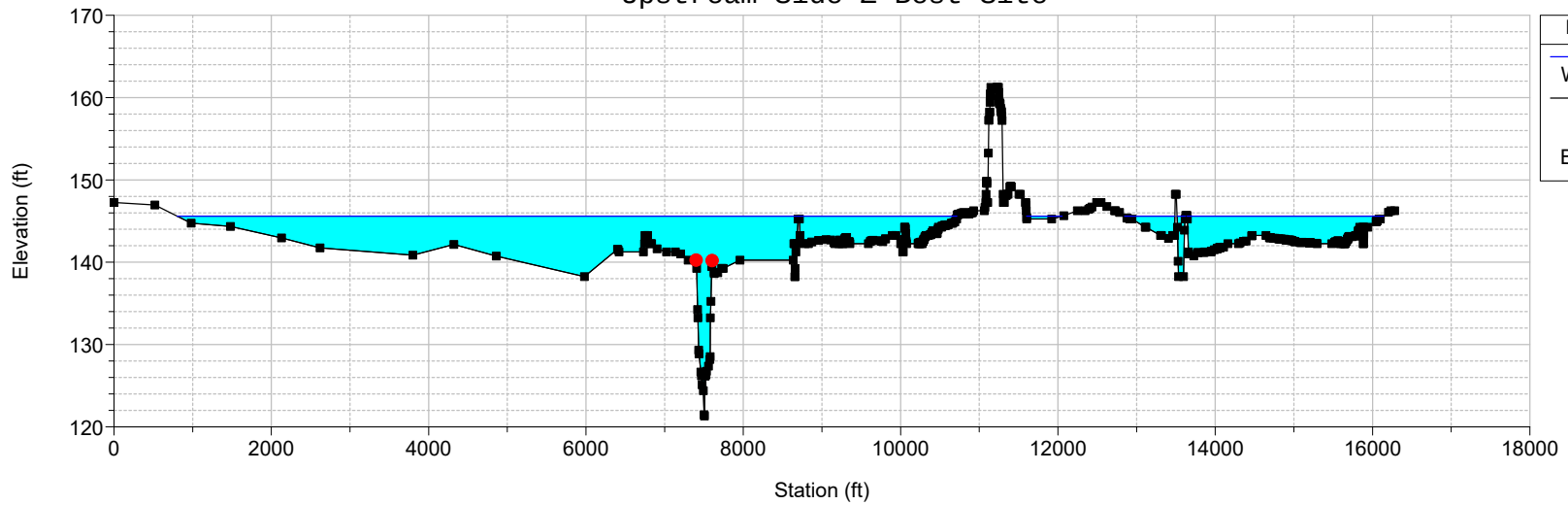
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Downstream Side Z-Best Site

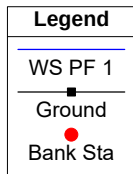
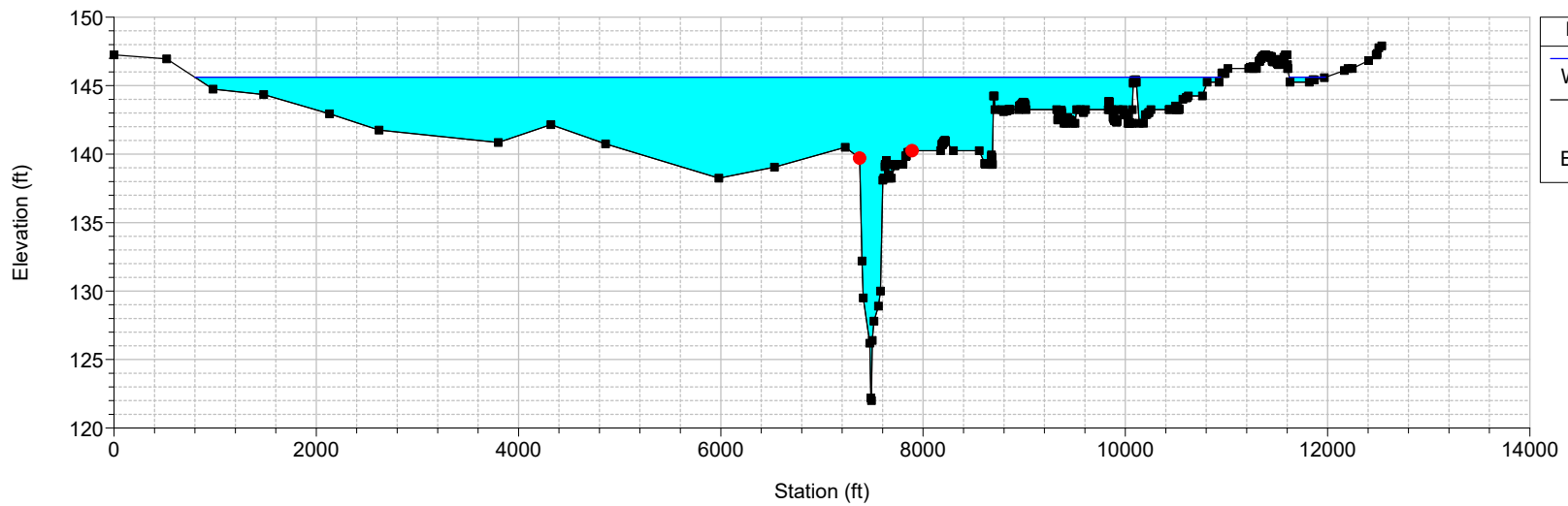


ZBest 050112 Plan: 1) EXIST 5/2/2012
RS = 16198

Upstream Side Z-Best Site



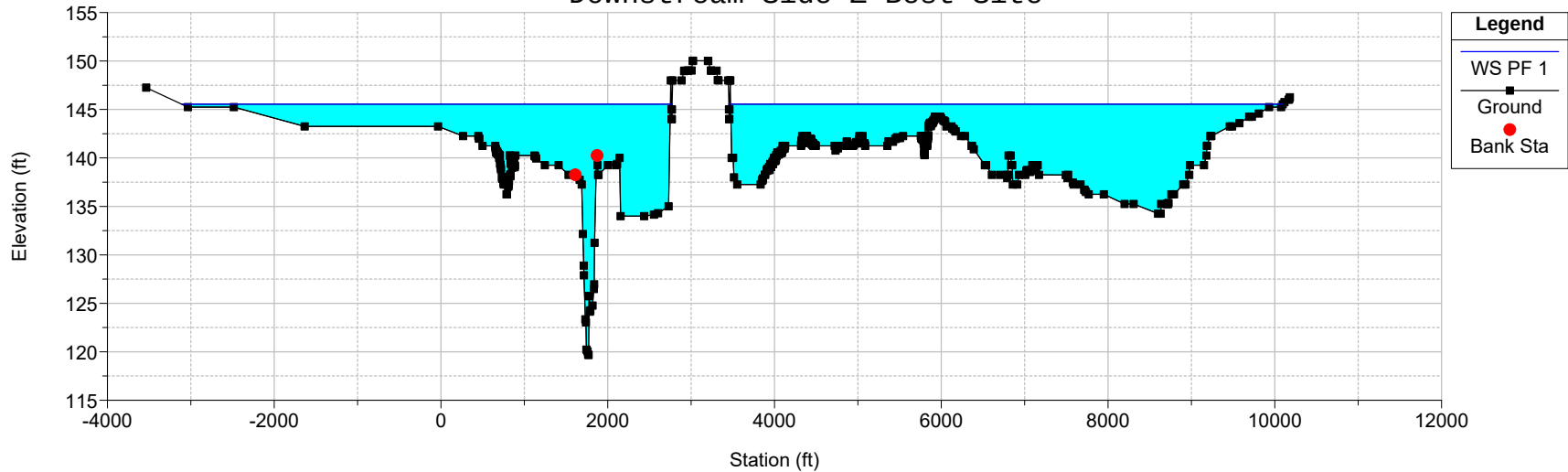
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Proposed Conditions 100-year Flooding

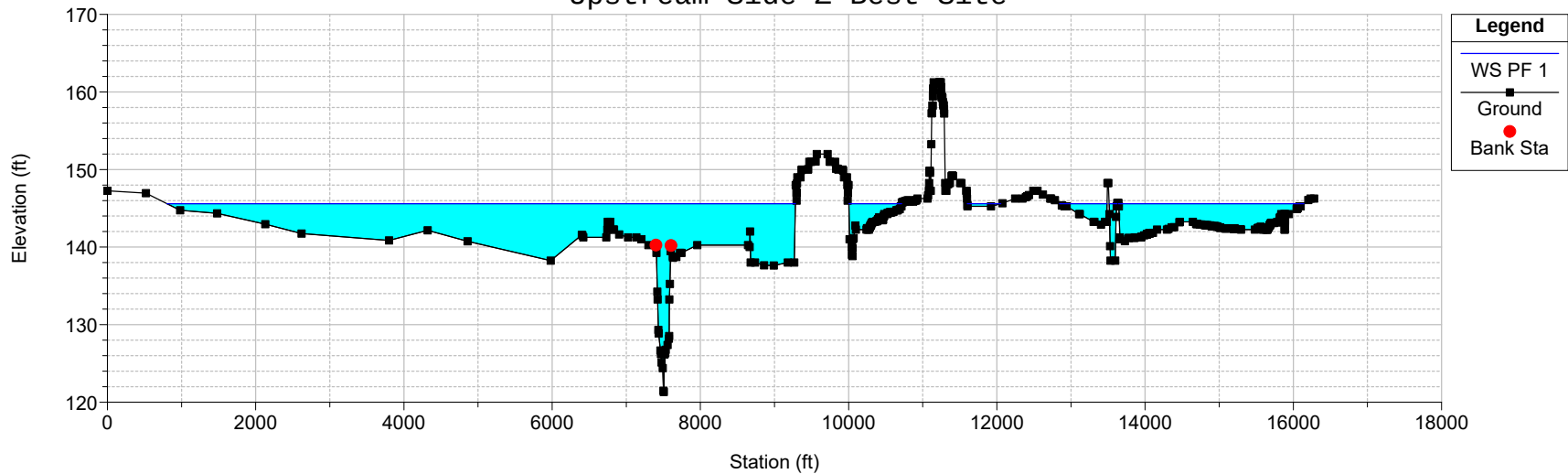
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RS = 14403

Downstream Side Z-Best Site

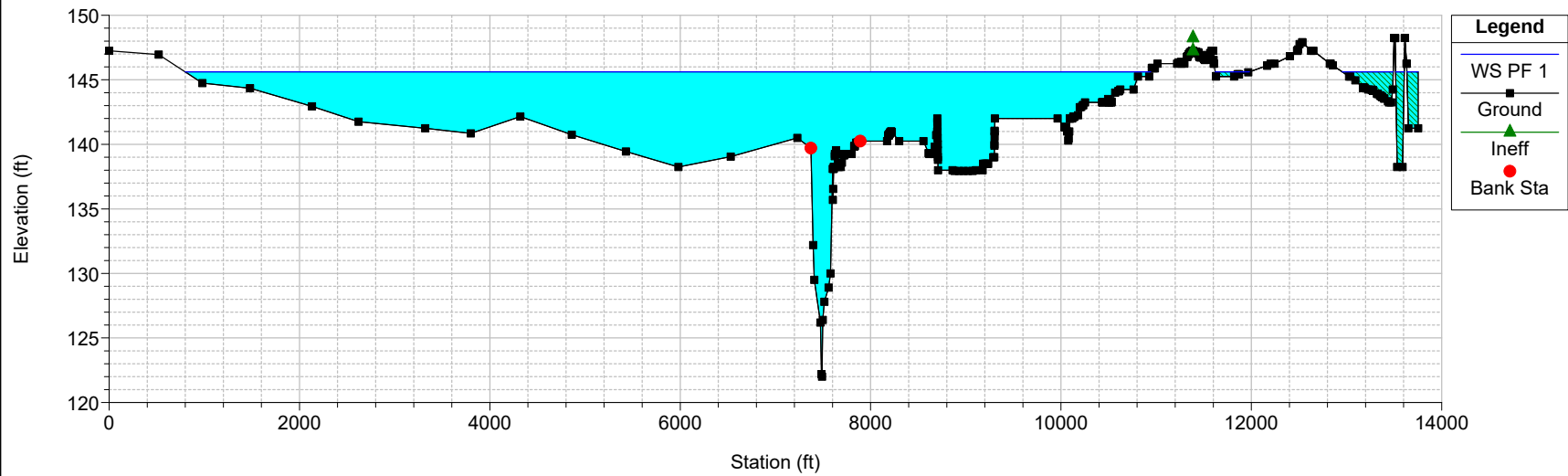


ZBest 050112 Plan: 1) EXIST 5/2/2012
RS = 16198

Upstream Side Z-Best Site



ZBest 050112 Plan: 1) EXIST 5/2/2012
RS = 16944



APPENDIX D

Project TINs for Existing and Proposed Conditions



Legend			
Elevation			
	146 - 147	139 - 140	
152 - 153	145 - 146	138 - 139	
151 - 152	144 - 145	137 - 138	
150 - 151	143 - 144	136 - 137	
149 - 150	142 - 143	135 - 136	
148 - 149	141 - 142	134 - 135	
147 - 148	140 - 141	124 - 134	



0 100 200 400 Feet

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

Existing Project Site



Legend			
Elevation			
	146 - 147	139 - 140	
152 - 153	145 - 146	138 - 139	
151 - 152	144 - 145	137 - 138	
150 - 151	143 - 144	136 - 137	
149 - 150	142 - 143	135 - 136	
148 - 149	141 - 142	134 - 135	
147 - 148	140 - 141	124 - 134	



0 100 200 400 Feet

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

Post Project

APPENDIX E

Revised Limits of 100-year Floodplain after Proposed Project

HOLLISTER ROAD. (SR 25)
LIMIT OF DETAILED STUDY

PAJARO RIVER

Legend

- 100 year Flooding
- Raised Pad

Appendix E-8 (NEW)

POST PROJECT 100-YEAR FLOODPLAIN

- Appendix E-9 (NEW): Conditional Letter of Map Revision Based on Fill Comment Document (CLOMR-F) issued by the Federal Environmental Management Agency, May 21, 2018.



Federal Emergency Management Agency

Washington, D.C. 20472

May 21, 2018

THE HONORABLE S. JOSEPH SIMITIAN
PRESIDENT, BOARD OF SUPERVISORS
SANTA CLARA COUNTY
70 WEST HEDDING STREET
SAN JOSE, CA 95110

CASE NO.: 18-09-1291C
COMMUNITY: CITY OF GILROY, SANTA CLARA
COUNTY, CALIFORNIA
COMMUNITY NO.: 060340

DEAR MR. SIMITIAN:

This is in reference to a request that the Federal Emergency Management Agency (FEMA) determine if the property described in the enclosed document is located within an identified Special Flood Hazard Area, the area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood), on the effective National Flood Insurance Program (NFIP) map. Using the information submitted and the effective NFIP map, our determination is shown on the attached Conditional Letter of Map Revision based on Fill (CLOMR-F) Comment Document. This comment document provides additional information regarding the effective NFIP map, the legal description of the property and our comments regarding this proposed project.

Additional documents are enclosed which provide information regarding the subject property and CLOMR-Fs. Please see the List of Enclosures below to determine which documents are enclosed. Other attachments specific to this request may be included as referenced in the Determination/Comment document. If you have any questions about this letter or any of the enclosures, please contact the FEMA Map Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.

Sincerely,

Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration

LIST OF ENCLOSURES:

CLOMR-F COMMENT DOCUMENT

cc: Ms. Sarah Rahimi



Federal Emergency Management Agency

Washington, D.C. 20472

CONDITIONAL LETTER OF MAP REVISION BASED ON FILL COMMENT DOCUMENT

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	CITY OF GILROY, SANTA CLARA COUNTY, CALIFORNIA	A portion of Lot 4 and Remainder, as described in the Grant Deed recorded as Document No. 14067638, in the Office of the Recorder, Santa Clara County, California The portion of property is more particularly described by the following metes and bounds:
	COMMUNITY NO.: 060340	
AFFECTED MAP PANEL	NUMBER: 06085C0760H	
	DATE: 5/18/2009	
FLOODING SOURCE: PAJARO RIVER		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 36.946707, -121.526011 SOURCE OF LAT & LONG: LOMA LOGIC DATUM: NAD 83

COMMENT TABLE REGARDING THE PROPOSED PROPERTY (PLEASE NOTE THAT THIS IS NOT A FINAL DETERMINATION. A FINAL DETERMINATION WILL BE MADE UPON RECEIPT OF AS-BUILT INFORMATION REGARDING THIS PROPERTY.)

LOT	BLOCK/SECTION	SUBDIVISION	STREET	OUTCOME WHAT WOULD BE REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (NAVD 88)	LOWEST ADJACENT GRADE ELEVATION (NAVD 88)	LOWEST LOT ELEVATION (NAVD 88)
--	--	--	980 State Highway 25	Portion of Property	X (unshaded)	148.5 feet	--	149.0 feet

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

LEGAL PROPERTY DESCRIPTION
PORTIONS REMAIN IN THE SFHA
CONDITIONAL LOMR-F DETERMINATION

This document provides the Federal Emergency Management Agency's comment regarding a request for a Conditional Letter of Map Revision based on Fill for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the proposed described portion(s) of the property(ies) would not be located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood) if built as proposed. Our final determination will be made upon receipt of a copy of this document, as-built elevations, and a completed Community Acknowledgement form. Proper completion of this form certifies the subject property is reasonably safe from flooding in accordance with Part 65.5(a)(4) of our regulations. Further guidance on determining if the subject property is reasonably safe from flooding may be found in FEMA Technical Bulletin 10-01. A copy of this bulletin can be obtained by calling the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or from our web site at <http://www.fema.gov/mit/tb1001.pdf>. This document is not a final determination; it only provides our comment on the proposed project in relation to the SFHA shown on the effective NFIP map.

This comment document is based on the flood data presently available. The enclosed documents provide additional information regarding this request. If you have any questions about this document, please contact the FEMA Map Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.

Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration



Federal Emergency Management Agency

Washington, D.C. 20472

CONDITIONAL LETTER OF MAP REVISION BASED ON FILL COMMENT DOCUMENT

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

LEGAL PROPERTY DESCRIPTION (CONTINUED)

COMMENCING at a point lying on southerly line of said Remainder lot from which point the southeast corner of Lot 4 bears North 63°03'07" West and a distance of 60.04 feet; thence leaving said southerly line North 16°03'09" East for a distance of 130.00 feet, running along westerly line of Parcel C as filed in the Santa Clara County records, Document No. 14067638, also shown on Record of Survey in Book 820 of Maps at page 25 recorded in Santa Clara County Records; thence leaving said westerly line of Parcel C, South 73°56'51" East a distance of 43.00 feet; to the POINT OF BEGINNING; thence North 16°03'09" East a distance of 1174.48 feet running parallel with the westerly line of Parcel C as referenced above; thence South 73°49'15" East and a distance of 752.56; thence South 16°10'45" West a distance of 1174.48; thence North 73°49'15" West a distance of 749.96 feet to the POINT OF BEGINNING

PORTIONS OF THE PROPERTY REMAIN IN THE SFHA (This Additional Consideration applies to the preceding 1 Property.)

Portions of this property, but not the subject of the Determination/Comment document, may remain in the Special Flood Hazard Area. Therefore, any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management.

CONDITIONAL LOMR-F DETERMINATION (This Additional Consideration applies to the preceding 1 Property.)

Comments regarding this conditional request are based on the flood data presently available. Our final determination will be made upon receipt of this Comment Document, certified as-built elevations and/or certified as-built survey. Since this request is for a Conditional Letter of Map Revision based on Fill, we will also require the applicable processing fee, and the "Community Acknowledgement" form. Please note that additional items may be required before a final as-built determination is issued.

This letter does not relieve Federal agencies of the need to comply with Executive Order 11988 on Floodplain Management in carrying out their responsibilities and providing Federally undertaken, financed, or assisted construction and improvements, or in their regulating or licensing activities.

ZONE A (This Additional Consideration applies to the preceding 1 Property.)

The National Flood Insurance Program map affecting this property depicts a Special Flood Hazard Area that was determined using the best flood hazard data available to FEMA, but without performing a detailed engineering analysis. The flood elevation used to make this determination is based on approximate methods and has not been formalized through the standard process for establishing base flood elevations published in the Flood Insurance Study. This flood elevation is subject to change.

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.

- Appendix H-1 (NEW): Additional Information regarding Feasibility of Enclosed Alternative (ECS 2023; Greenwaste 2023; WSP USA Inc. 2023).



engineered**COMPOST**systems

Project Memo 272-207-11

DATE:	9/5/2023	ECS PROJECT #:	272-207
BY:	Baraka Poulin, Tim O'Neill	PROJECT NAME:	ZBest Expansion
TO:	John Doyle, Michael Gonzalez	COPY TO:	
SUBJECT:	Comparison of CASP vs IVC compost options for Zbest Upgrade		

Background:

ECS understands that the draft EIR process triggered a request to compare a fully enclosed compost alternative. Since developing this design would be expensive, ECS provides high level numbers below as directional guidance.

Clarification questions sent to ECS are shown in italics.

I. Construction Pricing - IVC

Provide additional breakdown and/or methodology for calculating both the \$23.2M ECS and \$58M construction costs. For instance, add estimated quantities and/or costs to the line items specified in the "ECS Scope of Work" pages of the estimate. We are open to other means of showing a breakdown of the costs or methodology to substantiate the estimate.

ECS provides a lump sum quote for the ECS provided scope of work (attached in Appendix 1 includes detailed description of these categories). Table 1 below shows an approximate breakout.

Vessels	11%
Above Grade	37%
Controls	7%
Below grade	32%
Biofilter	10%
Eng, Startup, CX	3%
	100%

Table 1 - Enclosed IVC ECS cost breakdown

ECS also provides an estimated Construction cost. This is based on lump sum values from past projects and past project detailed engineering estimates summarized in Table 2 and graphed in Figure 1. We look at the relative cost between the ECS equipment and construction cost, and use this ratio to estimate a construction cost for the current project. This should only be used for high level estimating. Some considerations include:

Ecs Memo 272-207-11 System Comparison207-11

- The ratio looks at past projects (last ~10 years). The construction labor market, which has more influence on construction costs, has generally escalated more than the current commodity market, which has more influence on the ECS price.
- Construction costs have many site-specific variables. There is significant scatter in our limited data set. In general, construction costs in the Bay Area tend towards the higher end of the range.
- The cost of ECS supplied vessel doors has decreased relative to past projects. This may impact the ratio.
- This project is larger than our other estimates. We are not certain how economies of scale will factor in.

Site	ECS	Construction	Ratio
A	\$ 2,600,000	\$ 8,998,472	3.5
B	\$ 2,300,000	\$ 6,757,517	2.9
C	\$ 794,000	\$ 5,206,000	6.6
D	\$ 4,895,000	\$ 5,874,000	1.2
E	\$ 2,300,000	\$ 2,760,000	1.2
F	\$ 1,752,000	\$ 4,380,000	2.5
G	\$ 455,000	\$ 1,137,500	2.5
H	\$ 880,000	\$ 1,637,000	1.9

Table 2 - past IVC project costs

\$58M is based on an assumed 2.5x multiplier from past projects and detailed estimates.

Although much smaller, sites A,B,D,H seem like the most representative. Note, the constructed cost includes all costs related to building the compost system. Additional roads, buildings, or rolling stock are not included.

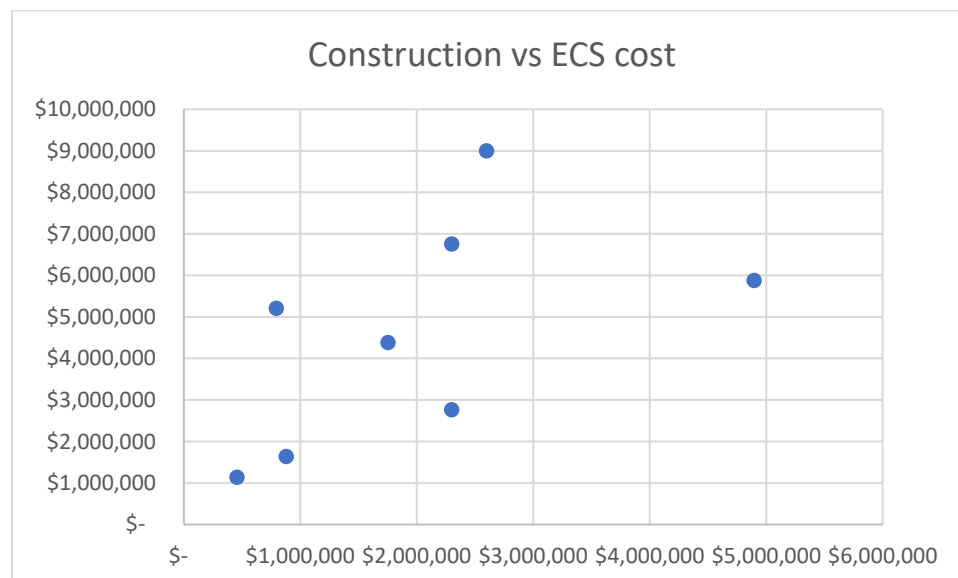


Figure 1 – Construction vs ECS equipment cost

Original Option - CASP + ASP

Sizing	(US units)	Active	Curing
Throughput	TPY	576,000	472,000
Throughput	TPM	48,000	39,333
Throughput (365 d/yr)	TPD	1,578	1,293
Density	lb/CY	950	950
Aeration Type		Reversing	Positive
Aeration Floor Type		Trench	B/G Sparger
Pile Arrangement		Bunker	Mass Bed
Retention Time	days	18	20
Independent Zones	#	60	50
Fan Groups	#	60	5
Zone Width	ft	34	34
Zone Length	ft	100	100
Pile Depth	ft	8.5	9.0
Cover Depth	ft	1.0	0.0
Time to Fill Zone	days	0.3	0.4
Total Volume Aerated	CY	61,200	54,500

Mechanical			
Aeration Rate - Peak	CFM/CY	5.0	2.0
Fan Power - Installed (total)	HP	1260	200
Fan Energy (Annual)	kWh/yr	5,400,000	800,000
Pile Surface Irrigation		Automated	Automated

Process Area			
Combined Biofilter Area	ft^2	31,000	
Paved Area (Process, Mechanical + Apron)	ft^2	273,000	227,500
linear ft of pushwall @10' height	ft	2,040	1,700
linear ft of bunker/side wall @10' height	ft	6,600	1,000

Cost Estimate		
Total ECS Scope of Work (\$USD)		\$ 17,500,000
Construction (ECS Guess)		\$ 22,500,000
Constructed Price (ECS Guess)		\$ 40,000,000

Option 1 - enclosed in-vessel

Sizing	(US units)	Active	Curing
Throughput	TPY	576,000	470,501
Throughput	TPM	48,000	39,208
Throughput (365 d/yr)	TPD	1,578	1,289
Density	lb/CY	950	950
Aeration Type		Recirculating	Recirculating
Aeration Floor Type		B/G Sparger	B/G Sparger
Pile Arrangement		Vessel	Vessel
Retention Time	days	18	20
Independent Zones	#	60	50
Fan Groups	#	60	5
Zone Width	ft	34	34
Zone Length	ft	100	100
Pile Depth	ft	8.5	9.0
Cover Depth	ft	0.0	0.0
Time to Fill Zone	days	0.3	0.4
Total Volume Aerated	CY	61,800	54,500

Process Mechanical			
Aeration Rate - Peak	CFM/CY	5.0	2.5
Fan Power - Installed (total)	HP	1300	575
Fan Energy (Annual)	kWh/yr	5,200,000	2,800,000
Pile Surface Irrigation		Automated	Automated

Process Area			
Combined Biofilter Area	ft^2	93,000	
Paved Area (Process, Mechanical + Apron)	ft^2	273,000	227,500
linear ft of pushwall @20' height	ft	2,040	1,700
linear ft of bunker wall @20' height	ft	6,600	5,600

Building Biofilter area (Primary + secondary combined)		
Vessel Apron Volume (50' wide)	ft^3	4,675,000
Total Enclosed Volume	ft^3	4,675,000
Additional Air Changes (beyond process air)	ACH	2
Building Exhaust	CFM	155,800
Process Exhaust	CFM	264,712
Total Exhaust (to BF)	CFM	420,545
Biofilter area	ft^2	93,000
# of Building EF's	#	4
Building Exhaust Fan - Installed (each)	HP	100
Building Exhaust Energy	kWh/yr	1,600,000

Cost Estimate		
Total ECS Scope of Work (\$USD)		\$ 23,800,000
Construction (ECS Guess)		\$ 59,500,000
Constructed Price (ECS Guess)		\$ 83,300,000

Figure 2 - Summary data for both options

II. Construction Pricing – CASP

Pricing Please also provide similar information in a similar format for the proposed project (for comparison with the enclosed alternative and better understanding of the differences).

Include above.

III. Energy use

Provide clarification of how the 8% increase in operational energy use that is mentioned in your cover letter was calculated. The ECS “Budgetary Quotation” page indicates that the enclosed alternative would use a total of approximately 6.33M kWh/yr (5,166,000 for primary fans + 644,000 for secondary fans + 523,000 for building exhaust), but the power use comparison previously provided by ECS for the proposed project (Appendix D-1 to RDEIR) indicates total energy use of 8.1M kWh/yr.

Total energy use is a tough number to pin down because of how many variables impact it. As we’ve updated the estimates over the years, we’ve fine-tuned some of the formulas, which may account for discrepancies between versions. Values below are approximate.

The two fundamental differences include:

- The addition of enclosed building space requires air changes (typically 3 ACH minimum), which increases the total CFM handled and requires more fan energy.
- The additional in-vessel composting will recirculate hot process air with lower density than ambient air. For the same amount of oxygen delivered to the microbes, the less dense air requires more energy to move.

Original Option:

- 60x 20HP zone fans
- 12x 5HP biofilter makeup air fans
- 5x 40HP secondary zone fans
- ~1400HP, ~1100 BHP, ~70% load factor,
- $5,400,000 + 800,000 = 6,200,000$ kWh

All vessel Option:

- 60x 15HP zone fans
- 2x200HP process Exhaust fan
- 2x 100HP combined building exhaust fan
- 50x 7.5HP exhaust fan
- 2x 100HP biofilter exhaust
- ~2,300HP, ~1900 BHP, 70% load factor
- $5,200,000 + 2,800,000 + 1,600,000 = 8,600,000$ kWh

IV. Capacity

Provide clarification of how the 26% reduction in capacity for an enclosed facility was calculated. Your cover letter indicates that an enclosed alternative would reduce capacity from 576,000 TPY to 426,240 TPY, but the ECS table indicates a primary processing capacity of 576,000 TPY and secondary processing capacity of 470,501 TPY (i.e., secondary capacity is 19% less than primary capacity).

The sizing worksheet showing a ~18-20% reduction in secondary indicates that much of the mass will be volatilized during primary composting. The lower value (ie 470k TPY) is the remaining material that undergoes secondary composting.

The reduction in capacity was based on not changing the original footprint but enclosing the process completely. First of all, the increased exhaust CFM will require larger biofilters and exhaust air handling equipment. Also vessels with doors located within a building required more dedicated space for access aprons/drive aisles than an open system that can use drive aisles as access aprons. We are not 100% clear on the property limits, but understood there additional space is unavailable. So, if the facility needs to be enclosed, there will be less space for composting.

V. Schedule

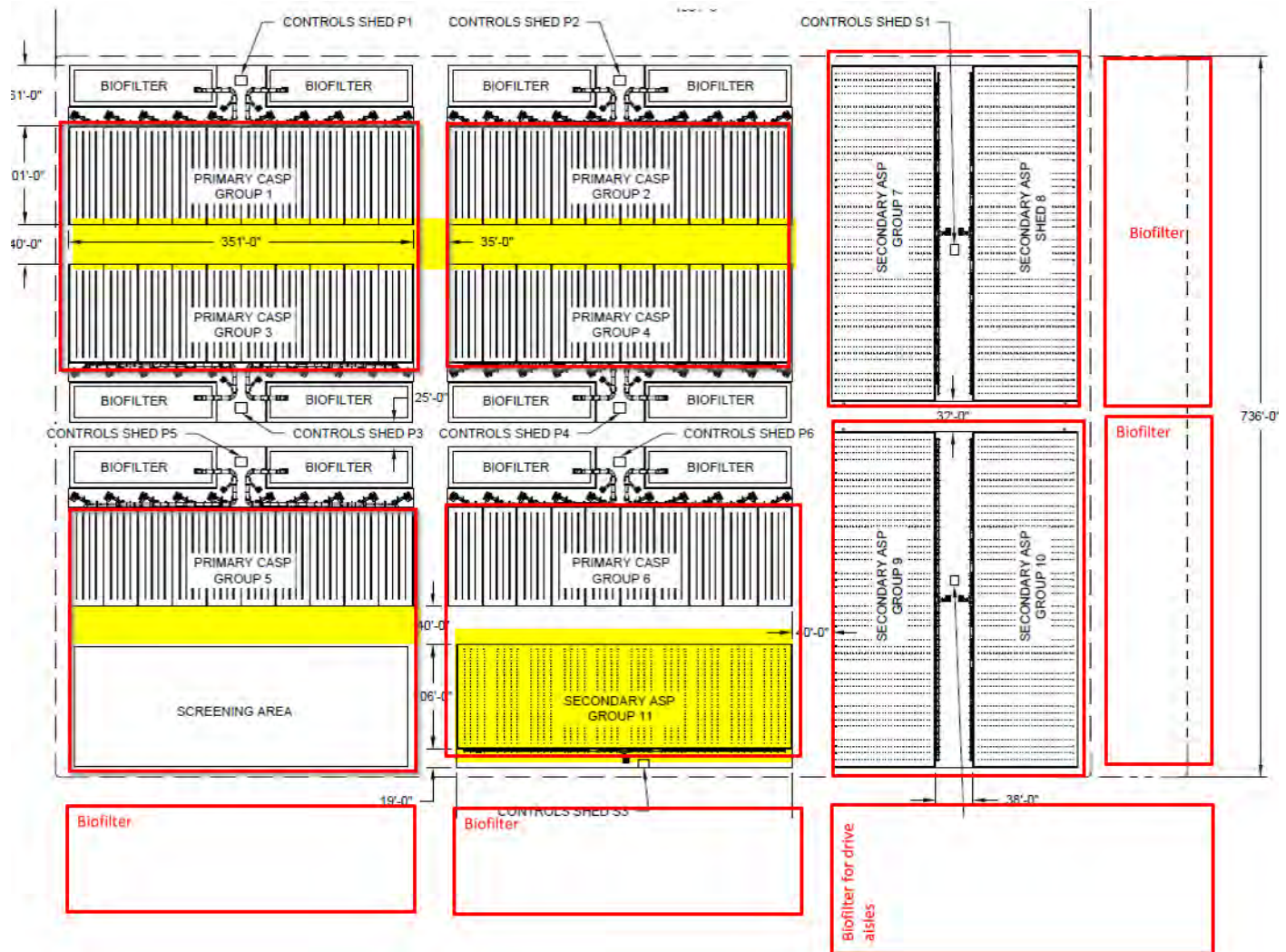
Show the estimated impact to the construction schedule for an enclosed facility versus the proposed project. If available, any information on the types and/or numbers of construction equipment that might be required for the alternative would also be useful. For reference, the table below is what was estimated for the proposed project.

See attached draft. This is a best guess. We expect the main difference will be substantially more construction time to build the vessels and buildings compared to the original CASP and ASP concept. The vessels require much more concrete work (more linear feet and taller walls)

VI. Building

Provide information regarding the approximate size (floor area and height) of the building(s) required to enclose the facility.

Enclosing everything approximately triples the total biofilter required space.



The drawing above is an incomplete draft. The secondary vessels would likely have an enclosed drive aisle similar to the primary vessels.

The system sizing assumes 50' drive aisles between facing zones, with 25' ceilings. These 6 spaces will receive 2 air changes per hour (ACH), for approximately 155,000CFM of airflow. The assumptions do not include a building space if the screening area were to be enclosed. Drawing above is not to scale.

Building Exhaust Air: Option 1

Building	Apron-Primary	Apron - Secondary	Total	
length	2040	1700		
Width	50	50		
Height	25	25		
Vol (CF)	2,550,000	2,125,000	4,675,000	
ACH	2	2	2	
CFM	85,000	70,833	155,833	
Fan Efficiency			450	CFM/HP
# of fans			4	
Bldg Fan Motor size each:			100	HP

Appendix 1 – ECS Scope of Supply (fully enclosed vessel option)

ECS SCOPE OF WORK*Client:* GreenWaste*Basis:* Option 1: In-vessel primary and secondary composting with enclosed drive aisle. Primary drive aisle includes 2 ACH of dedicate exhaust in addition the the ventilation drawn by the process fan.

Aeration System (Above Grade)	Description	By
Fans	Per ECS Spec	ECS
Aeration Ducting	Per ECS Spec	ECS
Duct Hangers and Supports	Per ECS Spec	ECS
Zone Damper Assemblies	Dampers per ECS Spec, Electric Actuators	ECS
Makeup Air Inlet Damper	Per ECS Spec, Electric Actuators	ECS
Irrigation - Control+Distribution	Control Valves, Integration to CompTroller, Distribution Hoses, Sprinklers	ECS
Irrigation - Water Supply	Pipe & Fittings to each zone.	OTHERS
Electrical	Wiring and Conduit	OTHERS
Duct & Fan Condensate Drains	Pipe & Fittings	OTHERS

Aeration Floor System	Description	By
HDPE Components	Fabricated HDPE Pipe & Fittings	ECS
Drainage Line: Zones to Sump	Pipe & Fittings, Level Maintained Sump	OTHERS
Drainage Line: Sump to Re-use System	Pipe & Fittings	OTHERS

Control System	Description	By
CompTroller Hardware & Software	Web-based, distributed, ruggedized	ECS
Fan Drives	Variable frequency drives, filters	ECS
Process Sensors	Temperature, pressure	ECS
Temp Probe Holders	Mild Steel	ECS
Electrical	Wiring and Conduit	OTHERS
Electrical Service	Fan Panel, MCC, Breakers, DCs, Fuse, Filters	OTHERS
Control Shed	Approximately 8x10ft shed	OTHERS

Vessel Components	Description	By
Vessel Doors	Insulated panels, Stainless Steel, Manual carrier	ECS
Vessel Irrigation System	Valves, Pipes, Nozzles	OTHERS
Vessel Exterior Insulation	Insulated Concrete Walls	OTHERS

Biofilter System	Description	By
Air Temperature & Pressure Sensors	Integrated with ECS Control System	ECS
Biofilter Media Temperature Probes	Integrated with ECS Control System	ECS
Building & Process Air Mixing Controls	Integrated with ECS Control System	ECS
Exhaust Duct Humidification System	Supply lines, filtration, pump, compressor, controls. Duct ring for nozzles.	ECS
Control of Air Humidification	Integrated with ECS Control System	ECS
Building Exhaust Fan VFDs	Network Drives	ECS
Building Makeup Air	MUA supply, Building Conditioning	OTHERS
Suspended Aeration Floor	Pre-stressed concrete panels, Rubber Pads	ECS
Exhaust Duct to Suspended Floor Inlets	SS304	ECS
Biofilter media Irrigation System	All mechanical components (installed by others)	ECS
Biofilter Media (i.e. wood chips)	Shredded wood per ECS spec	OTHERS
Suspended Aeration Floor Pillars	Concrete pillars formed in Sonotubes (~18"high x ~18" dia)	OTHERS
Suspended Aeration Floor Basin	Per ECS Design (~22" deep, area = BF footprint)	OTHERS
Biofilter Duct Supports	Painted Steel, duct saddles	OTHERS
Biofilter Basin, Floor Blocks & Apron	Concrete	OTHERS
Biofilter Drain	Drain to Sump	OTHERS

Other	Description	By
System Engineering	Technical Submittal, CASP system installation drawings, construction support	ECS
Startup	ECS on site commissioning, operator training and unlimited 1 year remote support. M&E construction must be complete before ECS visits the site.	ECS
Freight	Includes freight allowance FOB site	ECS
Warranty	1yr equipment warranty	ECS
Professional Services	Permitting, Civil/Structural Design, Construction Management	OTHERS
Concrete work	Design, Reinforcement, Supply, Installation	OTHERS
Installation	All ECS supplied equipment	OTHERS
Surface Water Management	Leachate + Stormwater Storage and Distribution, Design and Supply	OTHERS

OTHERS=Design and Supply by other team members

Note: ECS deliverables exclude: a lead role in obtaining permits, any professional engineering services required for permits or constructing the facility, construction management, any phase of construction or equipment installation, any equipment not specifically called out above, any local taxes or fees.



Zanker Road Resource Management, LLC
980 State Highway 25, Gilroy, CA 95020
O: (408) 846-1577
greenwaste.com

8-18-23

County of Santa Clara Planning
Attn. Valerie Negrete
70 West Hedding St.
San Jose, CA 95110

RE: Response to comment received regarding Z-Best recirculated draft EIR

Dear Ms. Negrete:

On behalf of Zanker Road Resource Management, LLC, owner of Z-Best Products, attached is the engineer's construction estimate prepared per the County's request to evaluate a fully enclosed facility as an alternative to the proposed project.

The estimate totals \$81.2 million, over \$40 million more than the proposed project estimated cost. In addition to the added cost, an enclosed facility would reduce ECS system capacity from the proposed 576,000 to 426,240 tons per year, a 26% reduction, because of the need for a larger biofiltration system required for an enclosed facility. The larger biofiltration system would add an additional 8% to operating utility costs, approximately \$52,000 per year at today's electricity rates.

We would like to offer the following context and request it be included in the County's response to the comment submitted to the County regarding consideration of alternate proposals.

Our current revenue stream from our contracted cities would not cover the approximate \$40 million in additional capital plus operating costs. For this reason, an enclosed facility is not a feasible alternative at this project site, and Z-Best would not pursue such an alternative.

Without the Z-Best facility providing the needed organics processing capacity for Bay Area cities, these cities would then have to look elsewhere for capacity in order to establish compliance with SB 1383. It would likely mean a new facility would then have to be built in California's central valley. In addition to delaying the jurisdictions ability to comply with SB1383 for several years, this would result in a significant increase in emissions associated with hauling organics the extra distance and would largely offset the intended climate/emissions goals of SB 1383.

Respectfully,

John Doyle

GreenWaste | General Manager
Office (408)846-1346 | Mobile (408)722-1999
980 State Highway 25
Gilroy, CA 95020



August 21, 2023

John Doyle

Greenwaste
980 State Highway 25
Gilroy, CA 95020

RE: REQUEST FOR INFORMATION - RESPONSES TO COMMENTS ON DRAFT EIR, Z-BEST COMPOST FACILITY, GILROY, CALIFORNIA

Hello John,

WSP is providing this letter in response to the request for information (RFI) on the draft Environmental Impact Report (EIR). The RFI request item 3 stated *“Information on the feasibility of a fully enclosed facility, to respond to comment on alternatives considered but dismissed by Dorado Leasing/JRG Attorneys. Please provide detailed costs analysis that includes financial information for both construction and operation of the facility in comparison to the proposed project.”* Attached is cost estimate for the construction of in-vessel facility for the proposed Z-Best Compost Facility Improvements.

The construction cost estimate for an in-vessel facility is estimated to be \$81.2 million, which was prepared by Engineered Compost Systems (ECS) and reviewed by WSP (See Attachment). The facility design includes placing the proposed systems in in-vessel facilities, enclosing drive aisles, and adding fans and biofilters. With the additional equipment, the increase in power usage is estimated to be 8%.

In addition, the in-vessel systems would require addition pad space, which may decrease the facility throughput by 26%. For the facility to operate with the proposed throughput for the CASP system, the Compost Facility Improvements may be required to go back to redesign to develop a larger pad size and facility layout.

The estimates provided, are estimates based on the current industry rates and may be subject to change based on material availability.

WSP appreciates the opportunity to continue our working relationship with Greenwaste. Please call the undersigned if you have any questions or require additional information.

Sincerely,

WSP USA Inc.

A handwritten signature in black ink, appearing to read "Michael Gonzalez", with a stylized flourish extending from the end.

Michael Gonzalez
Senior Consultant

Attachments: Attachment 1 – Construction Cost Estimate

[https://wspnlinenam-my.sharepoint.com/personal/michael_a_gonzalez_wsp_com/documents/desktop/z-best/response to comments - z-best cost estimate.docx](https://wspnlinenam-my.sharepoint.com/personal/michael_a_gonzalez_wsp_com/documents/desktop/z-best/response%20to%20comments%20-%20z-best%20cost%20estimate.docx)

ATTACHMENT 1

Construction Cost Estimate



engineered**COMPOST**systems

BUDGETARY QUOTATION

Client: GreenWaste

Facility: Zbest

By: Baraka Poulin

Date: 7/20/2023

Basis: Option 1: In-vessel primary and secondary composting with enclosed drive aisle. Primary drive aisle includes 2 ACH of dedicate exhaust in addition the the ventilation drawn by the process fan. Secondary drive aisle relies on the process fan only for ventilation.

Option 1

Sizing	(US units)	Primary	Secondary
Throughput	TPY	576,000	470,501
Throughput (365 d/yr)	TPD	1,578	1,289
Density	lb/CY	950	950
Aeration Type		Recirculating	Recirculating
Aeration Floor Type		B/G Sparger	B/G Sparger
Pile Arrangement		Vessel	Vessel
Retention Time	days	18	20
Independent Zones	#	60	50
Fan Groups	#	60	5
Zone Width	ft	34	34
Zone Length	ft	100	100
Pile Depth	ft	8.5	9.0
Cover Depth	ft	0.0	0.0
Time to Fill Zone	days	0.3	0.4
Total Volume Aerated	CY	61,800	54,500

Mechanical			
Aeration Rate - Peak	CFM/CY	5.0	2.5
Fan Power - Installed (total)	HP	1300	163
Fan Energy (Annual)	kWh/yr	5,166,000	644,000
Pile Surface Irrigation		Automated	Automated

Process Area			
Biofilter Area	ft^2	76,937	
Paved Area (Process, Mechanical + Apron)	ft^2	273,000	227,500

Biofilter		
Vessel Apron Volume (##' wide)	ft^3	2,550,000
Pre/Post Processing Bldg (##x##') Volume	ft^3	0
Total Enclosed Volume	ft^3	2,550,000
Additional Air Changes (beyond process air)	ACH	2
Building Exhaust	CFM	85,000
Process Exhaust	CFM	264,712
Total Exhaust (to BF)	CFM	349,712
Biofilter area	ft^2	70,000
# of Building EF's	#	2
Building Exhaust Fan - Installed (each)	HP	100
Building Exhaust Energy	kWh/yr	523,000

Cost Estimate		
Total ECS Scope of Work (\$USD)		\$ 23,200,000
Construction (ECS Estimate)		\$ 58,000,000
Constructed Price (ECS Estimate)		\$ 81,200,000

*throughput in US tons



ECS SCOPE OF WORK

Client: GreenWaste

Date: 7/20/2023

Basis: Option 1: In-vessel primary and secondary composting with enclosed drive aisle. Primary drive aisle includes

Aeration System (Above Grade)	Description	By
Fans	Per ECS Spec	ECS
Aeration Ducting	Per ECS Spec	ECS
Duct Hangers and Supports	Per ECS Spec	ECS
Zone Damper Assemblies	Dampers per ECS Spec, Electric Actuators	ECS
Makeup Air Inlet Damper	Per ECS Spec, Electric Actuators	ECS
Irrigation - Control+Distribution	Control Valves, Integration to CompTroller, Distribution Hoses, Sprinklers	ECS
Irrigation - Water Supply	Pipe & Fittings to each zone.	OTHERS
Electrical	Wiring and Conduit	OTHERS
Duct & Fan Condensate Drains	Pipe & Fittings	OTHERS

Aeration Floor System	Description	By
HDPE Components	Fabricated HDPE Pipe & Fittings	ECS
Drainage Line: Zones to Sump	Pipe & Fittings, Level Maintained Sump	OTHERS
Drainage Line: Sump to Re-use System	Pipe & Fittings	OTHERS

Control System	Description	By
CompTroller Hardware & Software	Web-based, distributed, ruggedized	ECS
Fan Drives	Variable frequency drives, filters	ECS
Process Sensors	Temperature, pressure	ECS
Temp Probe Holders	Mild Steel	ECS
Electrical	Wiring and Conduit	OTHERS
Electrical Service	Fan Panel, MCC, Breakers, DCs, Fuse, Filters	OTHERS
Control Shed	Approximately 8x10ft shed	OTHERS

Vessel Components	Description	By
Vessel Doors	Insulated panels, Stainless Steel, Manual carrier	ECS
Vessel Irrigation System	Valves, Pipes, Nozzles	OTHERS
Vessel Exterior Insulation	Insulated Concrete Walls	OTHERS



Biofilter System	Description	By
Air Temperature & Pressure Sensors	Integrated with ECS Control System	ECS
Biofilter Media Temperature Probes	Integrated with ECS Control System	ECS
Building & Process Air Mixing Controls	Integrated with ECS Control System	ECS
Exhaust Duct Humidification System	Supply lines, filtration, pump, compressor, controls. Duct ring for nozzles.	ECS
Control of Air Humidification	Integrated with ECS Control System	ECS
Building Exhaust Fan VFDs	Network Drives	ECS
Building Makeup Air	MUA supply, Building Conditioning	OTHERS
Suspended Aeration Floor	Pre-stressed concrete panels, Rubber Pads	ECS
Exhaust Duct to Suspended Floor Inlets	SS304	ECS
Biofilter media Irrigation System	All mechanical components (installed by others)	ECS
Biofilter Media (i.e. wood chips)	Shredded wood per ECS spec	OTHERS
Suspended Aeration Floor Pillars	Concrete pillars formed in Sonotubes (~18"high x ~18" dia)	OTHERS
Suspended Aeration Floor Basin	Per ECS Design (~22" deep, area = BF footprint)	OTHERS
Biofilter Duct Supports	Painted Steel, duct saddles	OTHERS
Biofilter Basin, Floor Blocks & Apron	Concrete	OTHERS
Biofilter Drain	Drain to Sump	OTHERS

Other	Description	By
System Engineering	Technical Submittal, CASP system installation drawings, construction support	ECS
Startup	ECS on site commissioning, operator training and unlimited 1 year remote support. M&E construction must be complete before ECS visits the site.	ECS
Freight	Includes freight allowance FOB site	ECS
Warranty	1yr equipment warranty	ECS
Professional Services	Permitting, Civil/Structural Design, Construction Management	OTHERS
Concrete work	Design, Reinforcement, Supply, Installation	OTHERS
Installation	All ECS supplied equipment	OTHERS
Surface Water Management	Leachate + Stormwater Storage and Distribution, Design and Supply	OTHERS

OTHERS=Design and Supply by other team members

Note: ECS deliverables exclude: a lead role in obtaining permits, any professional engineering services required for permits or constructing the facility, construction management, any phase of construction or equipment installation, any equipment not specifically called out above, any local taxes or fees.