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Date: March 6, 2024
Project: City Refuse Contract Project, Case No. 2022-001263ENV
To: Clerk of the San Francisco Board of Supervisors
From: San Francisco Planning Department
Re: Analysis of Addenda to the Final EIR for the Main Wastewater Treatment Plant Land Use Master Plan

On February 6, 2024, the San Francisco Planning Department issued an addendum to the following environmental documents for the above-referenced project:[1]

- Final negative declaration for the Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County, adopted by the San Francisco Board of Supervisors on July 22, 2015.[2]
- Final Environmental Impact Report (EIR) for the Newby Island Sanitary Landfill and The Recyclery Rezoning Project, certified by the City of San Jose's Planning Commission on June 6, 2012.[3]
- Final EIR for the Main Wastewater Treatment Plant Land Use Master Plan (Main Wastewater Treatment Plant project), certified by the East Bay Municipal Utility District on June 28, 2011.[4]

On February 26, 2024, the East Bay Municipal Utility District sent the planning department copies of eight addenda that were prepared for the final EIR for the Main Wastewater Treatment Plant project.[5] The planning department reviewed and analyzed the addenda and determined the analysis in the addenda does not change the conclusions reached in the environmental document prepared for the City Refuse Contract project. A summary of this analysis is provided in Attachment A. Copies of the addenda are provided in Attachment B.

The planning department is submitting this letter to the Clerk of the San Francisco Board of Supervisors for inclusion in Board of Supervisors File No. 240107 for completeness of the record of environmental review for the City Refuse Contract project.

List of Attachments

Attachment A: Analysis of Addenda to the final EIR for the Main Wastewater Treatment Plant and Land Use Master Plan
Attachment B: Addenda to the final EIR for the Main Wastewater Treatment Plant and Land Use Master Plan

[1] The addendum is available to download at Environmental Review Documents | SF Planning by entering the project title or case number referenced above in the search bar.

[2] San Francisco Planning Department, *Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County Final Negative Declaration*, Planning Department Case No. 2014.0653E, State Clearinghouse No. 2015032014, issued July 21, 2015. Available online at: https://sfplanning.s3.amazonaws.com/sfmea/2014.0653E_Revised_FND.pdf , accessed January 2024. The final negative declaration was adopted on July 22, 2015, and upheld on appeal on September 29, 2015. The adoption date reflects the date the document was certified/adopted and not the date the document was upheld on appeal.

[3] City of San Jose, *Newby Island Sanitary Landfill and The Recyclery Rezoning Project Final Environmental Impact Report*, San Jose File No. PDC07-071, State Clearinghouse No. 2007122011, certified June 6, 2012. Available online at: https://www.sanjoseca.gov/your-government/departments-offices/planning-building-code-enforcement/planning-division/environmental-planning/environmental-review/completed-eirs/newby-island-sanitary-landfill-the-recycler, accessed January 2024. The adoption date reflects the date the document was certified/adopted and not the date the document was upheld on appeal.

[4] East Bay Municipal Utility District, *Main Wastewater Treatment Plant Land Use Master Plan Final Environmental Impact Report*, Oakland Case No. and State Clearinghouse No. 2009112073, certified June 28, 2011. Available online at: https://oaklandca.s3.us-west-1.amazonaws.com/oakca1/groups/ceda/documents/report/oak036740.pdf, accessed January 2024.

[5] Alicia Chakrabarti, Manager of Wastewater Environmental Services, East Bay Municipal Utility District. *Email correspondence with Jenny Delumo, San Francisco Planning Department.* February 26, 2024.

Attachment A:
Analysis of Addenda to the Final Environmental Impact Report (EIR) for the Main Wastewater Treatment Plant (MWWTP) Land Use Master Plan

Table 1: Summary of MWWTP Final EIR Addenda and Relevance to City Refuse Contract Project Addendum

#	Addendum Name (Publication Date)	Summary of the Modified Project in the Addendum	Does this change the analysis in the addendum for City Refuse Contract Project?
1	**Evaluation of Dedicated Dewatering Facilities (May 3, 2011)**	Construction of separate dedicated dewatering facility adjacent to digesters, rather than on the same site.	No. The modified project would change the proposed location of the dewatering facilities but would not change any of the assumptions, analysis, or associated impacts regarding the acceptance and processing of preprocessed organics as proposed by the City Refuse Contract project.
2	**Port of Oakland Jurisdiction over MWWTP site (Feb 23, 2012)**	Clarification of the Port's role in the Main Wastewater Treatment Plant (MWWTP) as a responsible agency.	No. The modified project only clarifies the Port of Oakland's jurisdiction over the MWWTP and would not change any of the assumptions, analysis, or associated impacts regarding the acceptance and processing of preprocessed organics as proposed by the City Refuse Contract project.
3	**Organics-Rich Materials Preprocessing Pilot Project (December 2013)**	Pilot project to analyze the performance of various methods for preprocessing organics-rich materials (i.e., compostables) at the site.	No. The modified project is a pilot project that would last up to two years. In addition, the modified project would not change any of the assumptions, analysis, or associated impacts regarding the acceptance and processing of preprocessed organics as proposed by the City Refuse Contract project.
4	**Modified Food Waste Project (June 2015)**	Acceptance of organics-rich waste in unprocessed and pre-processed form collected from multiple sources. Construction and operations of facilities for food waste preprocessing, urban organics processing, dedicated digestion and dewatering, and renewable vehicle fuel production.	No. The modified project would not change any of the assumptions, analysis, or associated impacts regarding the acceptance and processing of preprocessed organics as proposed by the City Refuse Contract project. Material throughput would remain the same. In addition, per the May 13, 2021 addendum (below), EBMUD no longer proposes a food waste preprocessing facility.

#	Addendum Name (Publication Date)	Summary of the Modified Project in the Addendum	Does this change the analysis in the addendum for City Refuse Contract Project?
5	**Minor Modifications to the Modified Food Waste Project – as described in the FEIR and subsequent June 2015 Addendum to the Final EIR (November 19, 2015)**	Addition of a thermal fluid heater to provide supplemental heating for the hydrolysis tank that will be used to prepare preprocessed materials for digestion. Confirmation of the height of scrubber towers.	No. The modified project would result in additional criteria air pollutant emissions, but they would still be below Bay Area Air Quality Management District thresholds (with and without the emissions from the City Refuse contract project); see Table 2. Additional noise from the heater would be negligible at the nearest sensitive receptor.
6	**Minor Modifications to the Modified Food Waste Project as described in the FEIR and subsequent June 2015 and November 2015 Addenda to the Final EIR (August 31, 2018)**	Installation of a gas metering station and an interconnection to a Pacific Gas & Electric (PG&E) natural gas transmission pipeline network to replace the use of tube trucks as the primary method of delivering CNG to customers.	No. The modified project would not change any of the assumptions, analysis, or associated impacts regarding the acceptance and processing of preprocessed organics as proposed by the City Refuse Contract project. Operational air quality, transportation, and noise impacts would be reduced due to fewer operational truck trips.
7	**West End Property Land Lease (March 5, 2019)**	Lease a portion of the site's West End property for shipping container storage, repair and fabrication, rather than a biodiesel processing facility as analyzed in the Final EIR	No. The modified project would result in lower operational air quality and transportation impacts due to fewer operational truck trips. Noise from operations of the uses would be imperceptible at the nearest sensitive receptor in relation to background noise.
8	**FirstElement Fuel Hydrogen Refueling Station (May 13, 2021)**	Lease a portion of the West End property to FirstElement Fuel for use as a hydrogen refueling station for zero-emission fuel cell electric trucks, rather than for a food waste preprocessing facility as analyzed in the Final EIR.	No. The modified project would not change any of the assumptions, analysis, or associated impacts regarding the acceptance and processing of preprocessed organics as proposed by the City Refuse Contract project. The modified project would result in lower operational air quality and transportation impacts due to fewer operational truck trips. Noise from operations of the uses would not exceed the noise levels evaluated in the Final EIR.

Table 2: Criteria Air Pollutant Emissions in Addendum #5 with the City Refuse Contract Project

Maximum Annual Emissions (tons per year)				
Pollutant	**Main Wastewater Treatment Plant with Thermal Fluid Heater[1]**	**City Refuse Contract Project[2]**	**Main Wastewater Treatment Plant + City Refuse Contract Project**	**Air District Significance Threshold[3]**
ROG	7.37	0.04	7.41	**10**
NO_x	9.39	0.27	9.66	**10**
PM_{10}	5.73	1.14	6.87	**15**
$PM_{2.5}$	5.29	0.30	5.59	**10**

[1] *Addendum to Main Wastewater Treatment Plant Land Use Master Plan Final Environmental Impact Report (FEIR) – Minor Modifications to the Modified Food Waste Project as Described in the FEIR and the June 2015 Addendum to the FEIR.* Table 1, page 5. These numbers reflect total stationary and mobile source emissions from operation of the biodiesel production, food waste preprocessing, and thermal fluid heater projects. Addendum Table 1 provides average daily emissions, these emissions were converted to tons/year in this table.

[2] Air Quality Criteria Air Pollutant and Ozone Precursor Emissions Memorandum for the City and County of San Francisco Refuse Project.

[3] Bay Area Air Quality Management District. CEQA Air Quality Guidelines Chapter 3: Thresholds of Significance, April 20, 2023. Available online at: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed January 19, 2024.

[4] Numbers in bold indicate exceedance of a threshold.

Attachment B:
Addenda to the final EIR for the Main Wastewater Treatment Plant
and Land Use Master Plan

Attachment B.1:

Addendum 1 – Evaluation of Dedicated Dewatering Facilities (May 3, 2011)

Memorandum

EBMUD MWWTP Land Use Master Plan

Subject:	**Evaluation of Dedicated Dewatering Facilities**
Prepared For:	Alicia Chakrabarti, EBMUD
Prepared by:	Robin Cort, RMC
Reviewed by:	Dave Richardson, RMC
Date:	May 3, 2011

1 Purpose of Memo

Since publication of the Draft Environmental Impact Report (EIR) for the Land Use Master Plan (Master Plan), EBMUD has determined that dedicated digestion of material from the Food Waste Facility may require a separate facility for post-digestion dewatering rather than utilizing one of the existing centrifuges for dedicated dewatering. Construction of a new, small, dedicated dewatering facility adjacent to the dedicated digester(s) would eliminate construction-related congestion at the current dewatering facility, reduce the pumping distance for digested material, and would allow for utilization of a more energy efficient and appropriate technology for dewatering the digested food waste sludge. This memo considers whether this facility is adequately addressed in the Master Plan EIR.

2 Description of Dedicated Dewatering Facilities

The food waste dedicated dewatering process area would be located to the west of the existing Food Waste process area and north of Digester No. 12. The process area would be approximately 5,000 square feet and would contain dewatering equipment including a dewatering screw press, polymer injection system, sludge conveyor, and storage hopper. The hopper would be the highest part of the facility at approximately 40 feet. All of the equipment except for the storage hopper would be located under a metal canopy or within an enclosed building. The building would be designed for natural ventilation and to accommodate a heating, ventilating, and air conditioning (HVAC) system if it is needed for ventilation or odor control. The dewatering equipment would process up to 50 dry tons per day of digested food waste sludge.

Digested food waste sludge would be pumped from the dedicated digester to the dewatering area through an underground pipe. The sludge would be mixed with a polymer solution to facilitate dewatering prior to being fed into the screw press. The screw press would rotate at low speed and would physically remove free water from the sludge by applying pressure. Dewatered sludge material would fall out of the screw press discharge chute and would be conveyed by a conveyor up to the storage hopper. The storage hopper would be designed to store up to 100 cubic yards of dewatered material, and would allow trucks to take the material off site for beneficial reuse or disposal. The water removed by the screw press would be conveyed to the plant headworks for treatment.

Utilities required to serve the dedicated dewatering process area would include electrical power, potable water, storm drainage, process drainage, and process water (disinfected secondary effluent). The electrical demand would be about 30 horsepower for the screw press, conveyor, and polymer injection system. Stormwater and process washdown water would be directed to the process drain and routed to the headworks for treatment.

Construction of the dedicated dewatering facility would be expected to begin in spring 2012, and would be completed by spring 2013. The construction staging area would be located adjacent to the construction site on existing unpaved area. Construction would involve grading of up to 3 feet over the 5,000 square foot area for concrete foundation placement.

3 Evaluation of Consistency with Impact Evaluation in Master Plan EIR

The dedicated dewatering facility would be located within the area considered in the Master Plan EIR, so all of the potential impacts associated with the footprint of the facility have been completely addressed in the Master Plan EIR. Because construction of the facility would occur within the area that has been evaluated for future facilities, the dedicated dewatering facility would not have any new, or substantially different, impacts to biological resources, cultural resources, geology, soils and seismicity, hazards and hazardous materials, hydrology and water quality, land use and recreation, public services, or utilities. Impacts in other issue areas are discussed below.

3.1 Aesthetics

The new facility would be subject to Mitigation Measure AES-2b, and would be designed to be aesthetically consistent with existing visual character. The building would be relatively small in comparison to the scale of existing adjacent facilities and would not result in any new impacts, or substantially increase the severity of any previously identified impacts.

3.2 Air Quality

Construction of the facility would be subject to Mitigation Measure AIR-1, which requires measures to limit dust, criteria pollutant and precursor emissions associated with all Master Plan projects. Implementation of this measure would be expected to reduce potential construction emissions to a less than significant level. The facility would be powered by electricity and is thus not expected to increase emissions of toxic air contaminants such as diesel particulate matter. Operation of the dedicated dewatering facility would be expected to result in the same overall emissions as would occur if all sludge dewatering occurred at EBMUD's existing dewatering building. The project would not increase traffic or associated emissions as compared to the scenario evaluated in the Master Plan EIR. The dedicated dewatering facility would be subject to Mitigation Measure AIR-6b, which requires implementation of odor controls (e.g., management practices to reduce odor formation or equipment to treat malodorous air once odors are formed) to minimize off-site odor impacts. As noted in the description above, the facility would be designed to accommodate odor control, as needed. The dedicated dewatering facility is thus not expected to result in any new impacts, or substantially increase the severity of any previously identified air quality impacts.

3.3 Energy

The dedicated dewatering facility would require energy for operation, but the total amount of sludge dewatering would be the same as previously assumed if dewatered in the existing facility; and total energy demands are expected to be less with a screw press than they would be if an existing centrifuge were utilized. In addition, energy demands are expected to be met using EBMUD's existing Power Generation Station. The dedicated dewatering facility is not expected to result in any new impacts, or substantially increase the severity of any previously identified impacts to energy resources.

3.4 Greenhouse Gas Emissions

As noted in the discussion of air quality and energy, the dedicated dewatering facility would not be expected to substantially change energy demand or traffic associated with the Master Plan. Emissions of greenhouse gases are thus not expected to increase. There would be neither new impacts nor any substantial increase in the severity of any previously identified impacts associated with greenhouse gas emissions.

3.5 Noise

Construction of the dedicated dewatering facility would be subject to Mitigation Measures NOI-1 and NOI-2, which require noise and vibration controls during construction. The project would be located about 2,000 feet from the nearest residences, and thus would not be expected to result in operational noise impacts. Noise from this facility would blend in with existing noise sources and is not expected to be identifiable or distinct from the existing ambient noise environment. There would be no additional operational traffic, and thus no traffic-related increase in noise. There would be neither new impacts nor any substantial increase in the severity of any previously identified noise impacts.

3.6 Transportation

The project would result in a minor amount of construction traffic, which would be subject to Mitigation Measure TRA-1, which requires preparation of a construction traffic management plan. Implementation of this measure would ensure that temporary traffic impacts are less than significant. There would be no new operational traffic associated with the dedicated dewatering facility, and thus no operational traffic impacts. There would be neither new impacts nor any substantial increase in the severity of any previously identified transportation impacts.

4 Conclusion

If significant new information is added to an EIR after public review, the lead agency is required to recirculate the revised document (CEQA Guidelines Section 15088.5). Significant new information includes, for example, a new significant environmental impact or a substantial increase in the severity of an impact. New information is not considered significant unless the document is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or comment on a feasible mitigation measure that the proponent has declined to implement. As described above, the Master Plan has been modified slightly to incorporate construction of a dedicated dewatering facility. The impacts of the revision to the project have been evaluated and no impacts described as less than significant in the Draft EIR have been found to be significant as a result of this change.

The minor change in the project does not constitute new information resulting in any new previously unidentified impact, or a substantial increase in the severity of any previously identified impacts, or reveal fundamental inadequacies in the document. Recirculation of the Draft EIR is thus deemed to be unnecessary.

This analysis was undertaken in advance of the decision to authorize an agreement with HDR Engineering, Inc. for design services for the Dedicated Digestion and Dewatering System and Site Utilities (Board Motion 081-11) and we have determined that there is no need to supplement the EIR.

Attachment B.2:

Addendum 2 – Port of Oakland Jurisdiction over MWWTP site (Feb 23, 2012)

Memorandum

EBMUD MWWTP Land Use Master Plan

Subject:	**Port of Oakland Jurisdiction over MWWTP site**
Prepared For:	Vince De Lange and Alicia Chakrabarti, EBMUD
Prepared by:	Robin Cort and Rosalyn Prickett, RMC
Reviewed by:	Dave Richardson, RMC
Date:	February 23, 2012

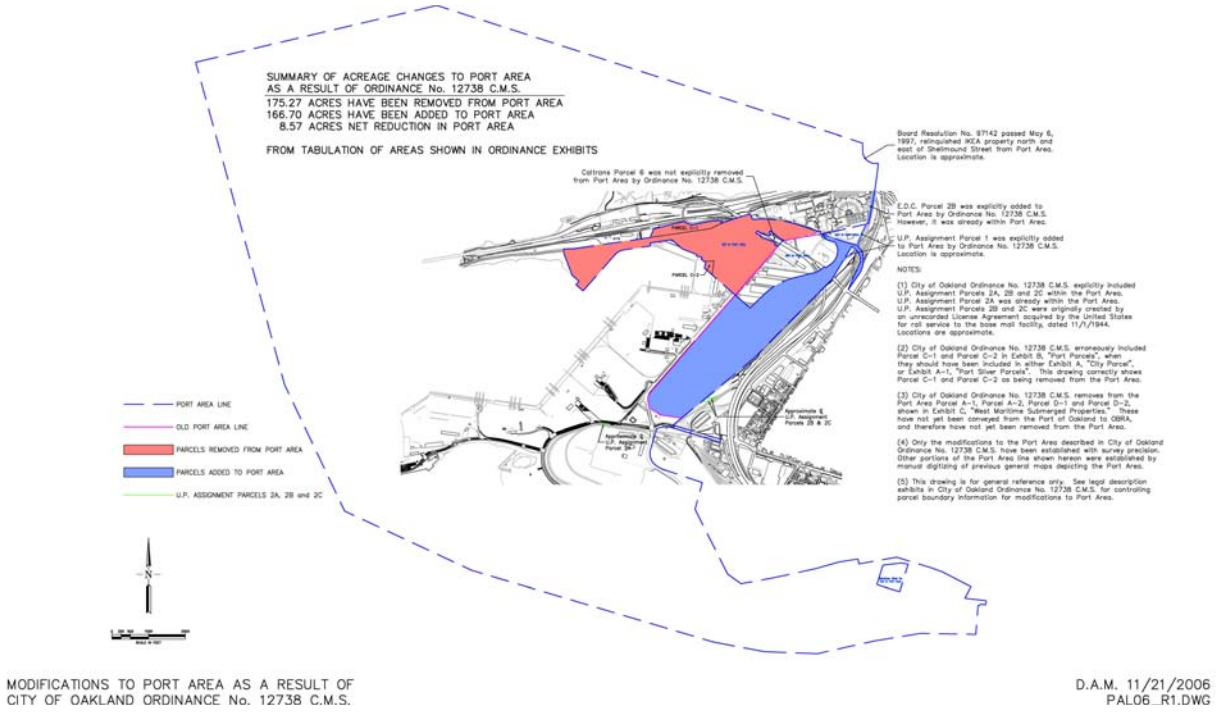
1 Purpose of Memo

Since certification of the Final Environmental Impact Report (EIR) for the Land Use Master Plan (Master Plan) for the Main Wastewater Treatment Plant (MWWTP), the Port of Oakland has requested that the EIR acknowledge the Port's status as a responsible agency for the project. The Port's request was prompted by a development permit application submitted for the Food Waste Preprocessing Facility, which was addressed in the EIR at a project level. This memo provides minor clarifications to the EIR with respect to the Port of Oakland's jurisdiction over this project and documents that those clarifications to the Master Plan EIR do not result in any new impacts.

2 Port of Oakland Jurisdiction

It is acknowledged that the MWWTP is within the Port of Oakland's planning area, as shown in Figure 1, which was provided by the Port.

Figure 1: Port Area



3 Clarifications to EIR

Minor text revisions are presented below to clarify the Port of Oakland's status as a responsible agency. New text is underlined, and deleted text is shown with as ~~strikeover~~.

Table 1-1 on page 1-7 of the EIR is revised as follows:

Table 1-1: Responsible Agencies and Approvals

Agency	Type of Approval
STATE	
San Francisco RWQCB (Region 2)	National Pollutant Discharge Elimination System (NPDES), Construction General Permit [1]
Department of Toxic Substances Control (DTSC)	Approval for placement of any soil from the West End property outside of the property boundary. Approval for excavation or disturbance of any soil on the West End property deeper than 5 feet below ground surface
LOCAL	
Bay Area Air Quality Management District (BAAQMD)	Authority to Construct Permit to Operate
City of Oakland	Roadway Encroachment Permit
Port of Oakland	Development Permit
Burlington Northern Santa Fe Railroad (BNSF)	Railroad Encroachment Permit
Alameda County Department of Environmental Health (ACDEH) (in consultation with CalRecycle, formerly California Integrated Waste Management Board [CIWMB])	Solid Waste Facility Permit for Food Waste Preprocessing Facility[2]

Text on page 4-21 of the EIR is corrected as follows:

> Although the project site is ~~close to the Port of Oakland, the MWWTP is outside~~ within the Port Area, ~~and the~~ cumulative land use impacts are not expected to ~~extend to~~ conflict with other land uses within the Port Area.

4 Impact Evaluation in Master Plan EIR

Potentially significant environmental impacts of the MWWTP Master Plan on the Port were addressed thoroughly in the EIR. As requested by the Port in their response to the Notice of Preparation, the EIR addressed impacts to air quality, traffic and aesthetics (project-level and cumulative), with specific reference to Port operations. Port projects were specifically addressed in the cumulative analysis, including the Oakland Army Base Area Redevelopment Plan. Potential impacts to Gateway Park were

[1] Stormwater at the existing MWWTP site is captured and sent to the headworks for treatment, so coverage under the Construction General Permit would not be required. The West End property is not yet connected to the MWWTP storm drain system, so coverage under the General Permit would be necessary.

[2] Separate from the Solid Waste Facility Permit that will be required for the Food Waste Preprocessing Facility, EBMUD's existing Food Waste Facility operates as a biosolids composting operation under the Notification Tier, Solid Waste Information System (SWIS) No. 01-AA-0299. It is possible that digestion of food waste separately from biosolids could result in a change in the regulatory tier status. EBMUD is working with ACDEH, the Local Enforcement Agency for CalRecycle, to determine if additional permitting is needed.

specifically addressed. The EIR's analysis of land use compatibility is not affected by the addition of information regarding the Port's jurisdiction over the project area.

5 Conclusion

If significant new information is added to an EIR after public review, the lead agency is required to recirculate the revised document (CEQA Guidelines Section 15088.5). Significant new information includes, for example, a new significant environmental impact or a substantial increase in the severity of an impact. New information is not considered significant unless the document is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or comment on a feasible mitigation measure that the proponent has declined to implement. As described above, the language in the EIR has been modified slightly to clarify the Port's jurisdiction and to clarify that the Port is a responsible agency under CEQA. The impacts of the Port Area were adequately evaluated in the EIR and no impacts described as less than significant in the Draft EIR have been found to be significant as a result of this clarification.

The changes discussed in this addendum do not raise any new significant impacts that were not addressed in the Draft and Final EIRs. Specifically, the minor clarifications do not constitute new information resulting in any new previously unidentified impact, or a substantial increase in the severity of any previously identified impacts, or reveal fundamental inadequacies in the document. Accordingly, recirculation of the Draft EIR is unnecessary.

Attachment B.3:
Addendum 3 – Organics-Rich Materials Preprocessing Pilot Project
(December 2013)

EAST BAY MUNICIPAL UTILITY DISTRICT

ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT FOR THE MAIN WASTEWATER TREATMENT PLANT LAND USE MASTER PLAN

SCH No. 2009112073

For the Organics-Rich Materials Preprocessing Pilot Project

Prepared by:

RMC Water and Environment

December 2013

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Chapter 1 Project Description

1.1 Project Overview

The East Bay Municipal Utility District (EBMUD) is proposing to develop a Pilot Project for preprocessing of organics-rich materials, including food waste collected from residential and commercial sources, pre-packaged foods, organic mixed materials and a minimal amount of yard debris, at its main wastewater treatment plant (MWWTP) located in Oakland, CA.

1.2 Purpose and Need for Project

1.2.1 Addendum Overview

Pursuant to the California Environmental Quality Act, California Public Resources Code sections 21000 et seq. ("CEQA") and the California Environmental Quality Act Guidelines, Title 14, chapter 3 of the California Code of Regulations ("CEQA Guidelines"), this Addendum to the Main Wastewater Treatment Plant Land Use Master Plan Final Environmental Impact Report, certified by the EBMUD on June 28, 2011 (hereinafter referred to as the "2011 EIR), has been prepared to address implementation of an Organics-Rich Materials Preprocessing Pilot Project at the location of the proposed food waste preprocessing facility that was evaluated at a project level in the 2011 EIR.

1.2.2 Background/Need for Project

On June 28, 2011, EBMUD, acting as Lead Agency under the California Environmental Quality Act (CEQA), certified the Final Environmental Impact Report for the Main Wastewater Treatment Plant Land Use Master Plan (2011 EIR). This EIR describes and evaluates the overall Master Plan for the Main Wastewater Treatment Plant (MWWTP), and evaluates two near-term projects at a project level: a biodiesel processing facility and a food waste preprocessing facility.

As described in the 2011 EIR, the Master Plan evaluated development of a food waste preprocessing facility, a renewable energy project that will help EBMUD meet sustainability goals by increasing on-site power generation. The project will involve EBMUD contracting with a private company under a land-lease agreement to construct and operate a facility at the MWWTP that meets the objectives of the Master Plan.

The food waste preprocessing facility, as described in the 2011 EIR, would be designed to preprocess food waste to supply EBMUD's existing food waste processing facility, which is designed to treat up to 250 tons per day (tpd) of food waste. Food waste is currently preprocessed to remove non-digestible material at a combination of facilities located in the greater San Francisco Bay Area, including but not limited to facilities in Vacaville, San Carlos and Martinez. With construction of a food waste preprocessing facility at the MWWTP, organics-rich waste would be delivered directly to the MWWTP to be preprocessed to improve process efficiency and material consistency. This material would then be conveyed to the existing food waste processing facility. EBMUD is now considering implementation of a Pilot Project to refine the operations for preprocessing food waste: the Organics-Rich Materials Preprocessing Pilot Project (Pilot Project).

1.2.3 Purpose of Project

The purpose of the Pilot Project is to analyze the performance of organics-rich feedstocks through various processing equipment components operated in various sequences and combinations to identify an efficient and cost-effective method for preparing a variety of different organics-rich materials for feeding to EBMUD's wastewater treatment plant anaerobic digesters. The outcome of these research efforts will determine which front-end preprocessing scheme will be operated and which types of organics-rich waste will be considered for acceptance at the proposed food waste preprocessing facility described in the 2011 EIR. The Pilot Project would be able to accept both traditional raw food waste as contemplated in the

2011 EIR, plus other sources of organics-rich waste, including packaged foods, urban organics (biodegradable and digestible organic-rich material derived from urban mixed waste such as food-related materials, leaves, plant debris, paper towels, compostable cups, plates, napkins and bioplastic flatware), and a minimal amount of yard waste such as grass clippings, yard trimmings, and natural fibers. Upon completion of construction, the duration of the Pilot Project is expected to be up to two (2) years. Upon completion of the Pilot Project, implementation of the full-scale food waste preprocessing facility may occur and, if implemented, would replace the Pilot Project.

1.3 Proposed Project

The Organics-Rich Material Preprocessing Pilot Project (Pilot Project) will be constructed and operated by a private company, in coordination with EBMUD. The Pilot Project will be located at 2020 Wake Avenue in Oakland, CA within the footprint of the proposed Food Waste Preprocessing Facility as described in the 2011 EIR. The Pilot Project will occupy approximately 0.8 acres of land (see Figure 1), which is smaller than the 1.4-acre site identified for the Food Waste Preprocessing Facility in the 2011 EIR.

The Pilot Project facility will consist of front-end processing equipment to be installed directly on the site on a new equipment pad without construction of a building. The equipment will be employed to separate inorganic contaminants from organics-rich waste material derived from Oakland and other nearby waste streams. The Pilot Project facilities will generally include a concrete pad with 6-foot-high "push walls[1]" enclosing the southeast corner, front-end processing equipment, bins to collect process reject, a generator, 1,000-gallon fuel storage tank, and liquid storage tanks. The liquid storage tanks will contain process liquids, wash-down water, and storm water that are collected on the concrete pad. The concrete pad will be sloped such that liquids on the pad will be directed towards a sump and pumped back into the processing system, eventually combining with processed waste to be delivered to EBMUD's digesters (see Figure 2). The facilities will also include above-ground piping to deliver process water to the facilities and to deliver processed material to EBMUD's wastewater treatment process for processing and digestion. The equipment would be smaller than the overall food waste preprocessing facility that was evaluated in the 2011 EIR, and would be 15 to 20 feet tall (as compared to the 40-foot elevation of the food waste preprocessing building). There will be no potable water or sewer service to the Pilot Project and power will be supplied by a generator.

1.3.1 Process

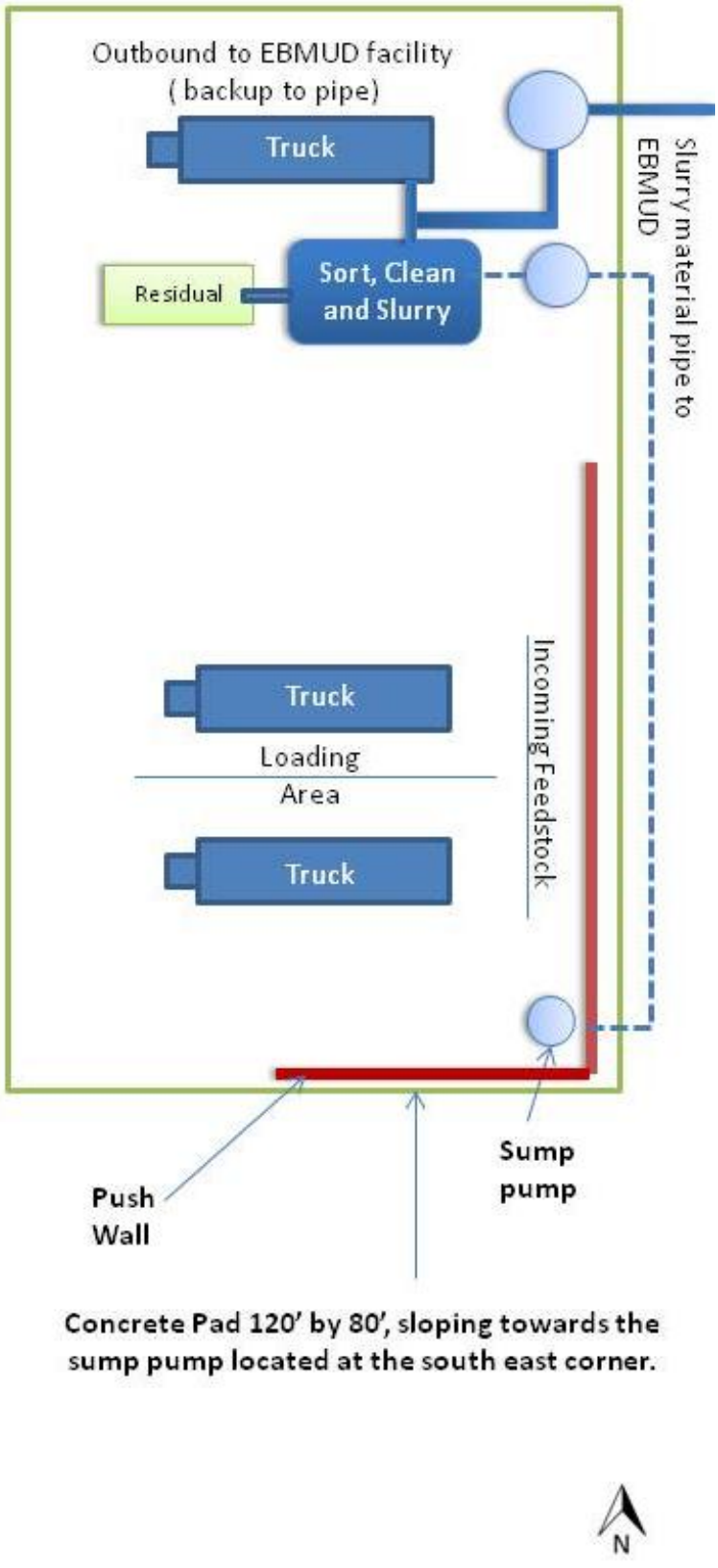
Organics-rich waste will be delivered to the Pilot Project facility via enclosed truck (tarp-covered, leak-proof), except for packaged waste, which may be delivered on pallets. All organics-rich waste will be unloaded onto a concrete pad and stored until processing, which will typically occur the same day. The front-end processing equipment, which will include a wheel loader, conveyor, or other similar equipment, will remove the inorganic particles from the incoming raw material and create organic feedstock that will be piped or trucked to EBMUD's wastewater treatment process for further processing and anaerobic digestion. Feedstock initially will be conveyed within the MWWTP by truck, until pipeline installation is complete. Process residuals will be collected in a bin for off-site disposal and/or recycling, as practicable.

The concrete pad will be sloped such that process liquids, wash-down water, and storm water that collects on the pad will be directed towards a sump and pumped back into the processing system, eventually combining with processed waste to be delivered to EBMUD's digesters. Storm water that is not contained on the pad will be directed to existing storm water drains, which flow to San Francisco Bay.

[1] A push wall is a concrete or steel constructed wall designed to contain the delivered material to allow a loader to scoop up material while pushing against the wall.

Figure 1: Pilot Project Location

Figure 2: Pilot Project Site Layout



1.3.2 Operations

It is anticipated that the Pilot Project will process up to 99.9 tpd of organic-rich waste. This is less than the anticipated tonnage of the Food Waste Preprocessing Facility described in the 2011 EIR (200 to 300 tpd initially and up to 400 to 600 tpd at full build-out). Traffic patterns for delivery of waste would be somewhat different than described in the 2011 EIR, but both the total number of trucks and total vehicle miles traveled are expected to be less for the Pilot Project than described for the full-scale project. Because the Pilot Project would accept a maximum of 99.9 tpd of waste, the total volume of trucks would be less than the number of truck trips analyzed in the 2011 EIR. The Pilot Project is anticipated to receive approximately 15 trucks per day, as compared to 76 trucks per day for the full scale project evaluated in the 2011 EIR.

Organic-rich waste to be tested includes food materials collected from residential and commercial sources, pre-packaged foods, or organics-rich mixed materials, and a minimal amount of yard debris, such as grass clippings, yard trimmings, and natural fibers. Residual material is anticipated to be less than 20 tpd, which is far less than the estimated 360 tpd of residual material analyzed for the full-scale project, resulting in fewer truck trips to transport these materials off site for recycling or disposal to landfills. Materials will be received and processed daily (primarily Monday through Friday and on weekends as necessary) and no more than 80 tons of material would be stored on site at any given time within the designated boundaries of the Pilot Project.

As described in the 2011 EIR, the full-scale food waste preprocessing facility was planned to accept "organics-rich material", which is consistent with the proposed waste to be processed by the Pilot Project. The 2011 EIR did not specifically discuss preprocessing of packaged food waste, yard waste, or urban organics (processed municipal solid wastes from identified collection routes with high organic content and biodegradable non-food materials), but use of these types of waste would not create any impacts not analyzed in the 2011 EIR, nor would it increase the severity of any impacts analyzed in that document. Packaged waste would include food products in plastic, metal or cardboard containers that are being disposed of because they are mislabeled or expired. Typical items could include expired canned or bottled food products.

Packaged food products, by their nature, are "non-putrescible" (they do not decompose or rot while in the container), and thus are not a source of odor while contained in the packaging. Odor characteristics of urban organics would be similar to, and possibly less odorous than, source-separated food waste, because urban organics include a mix of high organic content material with other non-putrescible items. EBMUD will monitor the Pilot Project and will immediately discontinue acceptance of urban organics if they are determined to cause significant environmental impacts. Acceptance of packaged waste and urban organics would not increase traffic impacts because the volume of food waste accepted would not change as a result of the change in the type of waste. Noise impacts would not change with the type of waste accepted, because noise is a function of the type of equipment used.

The Pilot Project facility would have the capability to operate 24 hours a day, 7 days a week; however, it is anticipated that it will operate no more than 16 hours a day, which is less than the 24-hour operations proposed for the full-scale food waste preprocessing facility evaluated in the 2011 EIR. Initially, operations are planned to last 10 to 11 hours each day; however, the volume of materials is expected to increase with time, and operations are anticipated to eventually occur for 16 hours each day.

A range of operational controls will be required by permit and contract and utilized to ensure that this facility has mechanisms in place to avert potential nuisance problems (odors, vectors, noise, dust) and to promote safe working conditions. Such operational controls include required compliance with applicable mitigation measures identified in the 2011 EIR and this document, and development of and adherence to best management practices in the project's operation. These operational controls are described below in this section and in Sections 1.3.4 and 1.3.5.

Vector Control

The facility will be operated to control the propagation, harborage, and attraction of vectors such as flies, rodents, birds, and other animals. As noted previously, materials will generally be processed and the receiving area will be cleaned by the end of each working day. Material will not remain on-site for more than 48 hours from the time of receipt to conveyance to EBMUD's food waste receiving facility. In the event of an emergency, waste that cannot be processed within 48 hours would be covered and removed from the site. Vectors are expected to be kept to a minimum by using good housekeeping procedures, cleaning all spills and removing materials from the concrete pad. This begins with the timely incorporation of the as-received materials into the front-end processing equipment. Once the material is processed, it will be conveyed to EBMUD's anaerobic digestion food waste receiving facility where vectors will no longer be an issue. All on-site stockpiles will be managed as to not provide harborages or food sources for rodents and other vectors. If EBMUD determines that vectors from the facility are causing a nuisance, EBMUD will suspend operation of the facility and acceptance of feedstock. EBMUD and the private operator of the facility will enter into a process to resolve the vector problems, which may include the use of a vector control specialist.

Odor Control

The primary odor control mechanisms at the facility will include processing all incoming materials in a timely manner using a "first in – first out" means of inventory control and conveying food waste to EBMUD's food waste processing facility by truck or in an enclosed pipe. Putrescible materials will be processed and transferred to EBMUD's feedstock receiving facility within 48 hours of receipt at the Pilot Project facility, though the standard operating procedure will be to process the material by the end of each working day. Due to the non-putrescible nature of pre-packaged food materials (i.e., expired canned, packaged, and bottled food products), such materials may be stored on-site for longer periods of time, but the overall 80-ton on-site storage limit will not be exceeded. Odor control practices for the receiving and processing area include: daily collection and clean-up of materials from the concrete pad; daily cleaning of the equipment and pad; and use of lime on pad surfaces and water collection systems as necessary. Additionally, if a particularly malodorous load is observed, the load will be targeted and prioritized for quick processing, or removed from the site.

If EBMUD determines that odors from the facility are causing a nuisance, EBMUD will suspend operation of the facility and acceptance of feedstock. EBMUD and the private operator of the facility would enter into a process to resolve the odor issue, which may include the use of a consultant specializing in odor control and abatement.

Litter Control

Litter control will be conducted by operations personnel, who will patrol the Pilot Project area boundary. Any accumulated litter will be collected and removed. Fencing and push walls will be constructed around three sides of the concrete pad, which will minimize the amount of litter escaping the facility boundaries. In the event that litter escapes the facility boundaries, it will be collected as needed to prevent off-site migration, safety hazards, and nuisances. If necessary, additional operational and/or physical modifications will be made to control litter.

Noise Control

Noise will be controlled through the proper use and maintenance of mufflers on equipment, both stationary and mobile. Backup alarms on equipment will be monitored to ensure consistency with Cal/OSHA requirements. Backup alarms will comply with all safety regulations and noise ordinances. Personal protective equipment will be available to all personnel. Employees will be provided with noise protection when working near noise-generating equipment or when otherwise required. Routine maintenance of the vehicle fleet will also minimize noise generation.

Dust Control

Sources of dust will be associated primarily with the unloading and loading operations and vehicle traffic. Due to the high moisture content of the incoming material (i.e., food materials), dust is not anticipated to be an issue. Moisture conditioning, as necessary, of the material may be utilized as a means of dust control. Periodic watering of the pad will also help minimize dust from incoming vehicles and unloading of material.

1.3.3 Construction

Equipment would be installed directly on the site without construction of a building. Installation of the facility would be expected to begin near the end of 2013 and would take approximately 30 days to complete.

1.3.4 Environmental Commitments from 2011 EIR and Other Requirements Applicable to Pilot Project

The 2011 EIR included a number of environmental commitments based on standard EBMUD construction specifications, which contain safety and environmental requirements that are implemented during all construction projects. Facilities at the West End property are also subject to a Covenant to Restrict Use of Property, Environmental Restriction imposed by the Department of Toxic Substances Control (DTSC); the DTSC restrictions would be applicable to the Pilot Project. The Pilot Project would also be subject to any measures imposed by the CalRecycle Local Enforcement Agency (Alameda County Environmental Health) through the Registration permit for the project. Environmental commitments and other requirements that would be applicable to the Pilot Project are listed below:

Aesthetics

Construction Site Management

Throughout the period of demolition and construction, EBMUD would require the construction contractor to keep the work site free and clear of all rubbish and debris, and to promptly remove from the site, or from property adjacent to the site of the work, all unused and rejected materials, surplus earth, concrete, plaster, and debris.

The construction specifications require that when construction is completed excess materials or debris shall be removed from the work area (Section 013544-1.1 (B)).

Air Quality

Dust Control and Monitoring Plan

EBMUD's Construction Specifications require development of a Dust Control and Monitoring Plan in order to control construction-related dust (Section 013544-1.3(E)). The plan shall detail the means and methods for controlling and monitoring dust generated by construction activities, as well as measures for the control of paint overspray generated during the painting of exterior surfaces.

Equipment and Vehicle Idling

Section 2485, Title 13, CCR requires limiting the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds, both California- and non-California-based trucks) to five minutes at any location.

Hazardous Materials / Hydrology and Water Quality

Notification of Hazardous Materials

EBMUD's Construction Specifications General Conditions, Article 7.6.1, requires that "Pursuant to Public Contract Code Section 7104, the Contractor shall promptly, and before such conditions are disturbed, notify the Engineer in writing of: (1) Material that the Contractor believes may be hazardous

waste, as defined in Section 25117 of the Health and Safety Code, that is not indicated in the Contract Documents and that is required by law to be removed to a Class I, Class II, or Class III disposal site; (2) Subsurface or latent physical conditions at the site differing materially from those indicated in this contract; or (3) Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this contract."

Project Safety and Health Plan

EBMUD's Construction Specifications require a Project Safety and Health Plan (013524-1.3(B)) if actual, potential, or anticipated hazards include: a) hazardous substances; b) fall protection issues; c) confined spaces; d) trenches or excavations; or, e) lockout/tagout. The Plan shall detail measures to be taken to alleviate the identified risks, identify appropriate health and safety requirements, and designate a contractor's project safety and health representative.

Construction and Demolition Waste Disposal Plan

EBMUD's Construction Specifications require a Construction and Demolition Waste Disposal Plan (013544-1.3(C)) specifying how the contractor will remove, handle, transport and dispose of all material to be disposed of in a safe, appropriate, and lawful manner. The plan must identify each type of waste material to be reused, recycled, or disposed of; list reuse facilities, recycling facilities, processing facilities, or landfills that will be receiving the materials; and include the sampling and analytical program for characterization of any waste material for disclosure to EBMUD.

Spill Prevention and Response Plan

EBMUD's Construction Specifications require a Spill Prevention and Response Plan (013544-1.3(D)) detailing the hazardous materials (including petroleum products) proposed for use or generated at the job site and describing the means and methods for controlling spills, monitoring hazardous materials, and providing immediate response to spills. Spill response measures would address notification of EBMUD, safety issues regarding construction personnel and public health, and methods for spill response and cleanup.

Controls on Site Activities

EBMUD's Construction Specifications require controls on site activities and describe measures that shall be implemented to prevent the discharge of contaminated storm water runoff from the site. Erosion control measures specified in the specifications include:

- No debris, soil, silt, sand, bark, slash, sawdust, asphalt, rubbish, paint, oil, cement or concrete or washings thereof, oil or petroleum products, or other organic or earthen materials from construction activities shall be allowed to enter into or be placed where it may be washed by rainfall or runoff outside the construction limits. (013544-1.1(B)(1))
- Divert or otherwise control surface water and waters flowing from existing projects, structures, or surrounding areas from coming onto the work areas. The method of diversions or control shall be adequate to ensure the safety of stored materials and of personnel using these areas. Following completion of work, ditches, dikes, or other ground alterations made by the Contractor shall be removed and the ground surfaces shall be returned to their former condition, or as near as practicable, in the Engineer's opinion. (013544-1.1(B)(6))
- Maintain construction sites to ensure that drainage from these sites will minimize erosion of stockpiled or stored materials and the adjacent native soil material. (013544-1.1(B)(7))

Water Control and Disposal Plan

EBMUD's Construction Specifications require a Water Control and Disposal Plan (013544-1.3(B)) describing measures for containment, handling, and disposal of groundwater (if encountered), runoff of

water used for dust control, storm water runoff, wash water, and construction water or other liquid that has come into contact with any interior surface of a reservoir or inlet/outlet pipeline. The discharge must comply with regulations of the RWQCB, CDFG, County Flood Control Districts, and any other regulatory agency having jurisdiction, whichever is most stringent.

Excavation and Trenching

EBMUD's Construction Specifications require an Excavation Safety Plan (013524-1.3(C)) for worker protection and control of ground movement for the Engineer's review prior to any excavation work at the jobsite. The Plan shall include drawings and details of system or systems to be used, area in which each type of system will be used, de-watering, means of access and egress, storage of materials, and equipment restrictions.

Section 013524-3.2(B) of the Construction Specifications establishes requirements for excavations under hazardous conditions. As required in Section 6705 of the Labor Code, excavation of any trench five feet or more in depth shall not begin until the Contractor has received notification of EBMUD's acceptance of the Contractor's detailed plan for worker protection from the hazards of caving ground during the excavation.

a. Such plan shall show the details of the design of shoring, bracing, sloping, or other provisions to be made for worker protection during such excavation.

b. No such plan shall allow the use of shoring, sloping or a protective system less effective than that required by the Construction Safety Orders, Title 8, CCR, and if such plan varies from the shoring system standards established by the Construction Safety Orders, the plan shall be prepared and signed by an engineer who is registered as a Civil or Structural Engineer in the State of California. California Occupational Safety and Health Administration (Cal/OSHA) Permit: Title 8, CCR Section 341(a)(1) 31 requires excavators to obtain a permit PRIOR to digging trenches or excavations which are 5 feet or deeper and into which a person is required to descend.

In the event of any violation of Article 6 of the Construction Safety Orders or deviation from the submitted plan for worker protection and control of ground movement, EBMUD may suspend work, or notify Cal/OSHA, or both.

Noise

Compliance with Noise Ordinance

EBMUD's Construction Specifications require compliance with local noise ordinances (013544-3.4). The Contractor is responsible for taking appropriate measures, including muffling of equipment, selecting quieter equipment, erecting noise barriers, modifying work operations, and other mitigations as needed to bring construction noise into compliance.

Operation and Maintenance Plan Required by DTSC Environmental Restrictions

Because the West End property has not been remediated to levels that are suitable for unrestricted land use, DTSC and U.S. Army recorded a Covenant to Restrict Use of Property, Environmental Restriction (deed restriction) with the Alameda County Assessor's Office on June 29, 2007 (DTSC 2007a). The deed restriction specifies soil and risk management procedures (environmental restrictions) that must be implemented to ensure safe management of soil and groundwater remaining at the site and to ensure that human health and the environment are protected during future activities at the site. The environmental restrictions of the deed restriction apply to successive owners of the property, and were assigned to EBMUD in a consent agreement entered into by DTSC and EBMUD in 2009 (DTSC 2009).

An Operation and Maintenance Plan describing the inspection, soil management, groundwater monitoring, annual reporting, and five year review requirements for the site, to be implemented in accordance with the deed restriction, has been prepared by EBMUD (Geologica 2008a). The plan has

been approved by DTSC, and also specifies regulatory coordination that must occur when soil or groundwater is disturbed. For the entire West End property, the Operation and Maintenance Plan specifies that:

- Placement of any property soil outside of the property boundary is permitted only with written approval from DTSC.
- Excavation or disturbance of any soil deeper than 5 feet below ground surface is permitted only with the written approval of DTSC. However, in emergency situations, EBMUD may excavate or disturb soil without prior DTSC approval, provided that the soil management and risk management procedures of the operations and maintenance plan are followed, and that EBMUD notifies DTSC by phone or email of the soil excavation or disturbance within 24 hours of the onset or discovery of the emergency.
- Excavated soil must be appropriately characterized to determine if it is suitable for on-site reuse, or if it must be disposed of at an appropriately licensed off-site disposal facility. At a minimum, the soil must be analyzed for total petroleum hydrocarbons as gasoline, diesel, and motor oil; volatile organic compounds; and Title 22 metals (including analysis of soluble metals concentrations using the Waste Extraction Test [WET] or Toxic Characteristic Leaching Procedure [TCLP] method, as appropriate). Typically, one composite soil sample would be required for each 1,000 cy of soil excavated. However, individual disposal facilities may require additional samples and/or analyses.
- On-site reuse of excavated soil is only permitted if the sample results indicate that the material is not a hazardous waste and is suitable for reuse at the site. Soil characterization for reuse can be completed prior to removal (in situ, which involves the installation of soil borings for collection of soil samples) or after excavation as described above, provided that a suitable controlled location is available for stockpiling that anticipated volume of soil. For on-site reuse, the soil should not contain constituents at concentrations greater than federal and state hazardous waste criteria, industrial Preliminary Remediation Goals, or commercial/industrial Environmental Screening Levels (petroleum hydrocarbons only), whichever is most conservative. To characterize the soil for on-site reuse, 1 sample per 250 cy of excavated soil is required for the first 1,000 cy of soils excavated, and 1 additional sample is required for each additional 500 cy of excavated soil.
- Soil that is unsuitable for on-site reuse and which will not be directly hauled to an off-site disposal facility at the time of excavation must be stockpiled in a manner that limits the potential for generation of dust and/or sediment-laden runoff. Soil shall be stockpiled on a minimum 6-mil plastic sheet of sufficient size to contain the entire stockpile and the entire stockpile shall be covered with a minimum 6-mil plastic sheet secured with sandbags at the close of each workday and at all times during inclement weather. All stockpiled soil shall be properly disposed of within 90 days of generation.
- Workers engaged in activities that will disturb or expose subsurface soil must be appropriately trained in and must follow the standard health and safety procedures described in Appendix A of the Operation and Maintenance Plan. Site and action-specific health and safety plans are required for all activities involving soil removal and/or disturbance.
- Appropriate measures shall be taken to minimize the generation of fugitive dust during soil excavation or disturbance activities in general accordance with the BAAQMD "Basic" and "Optional" PM_{10} (fugitive dust) control measures (see *Section 3.3, Air Quality*, for a description of the BAAQMD dust control measures).

For groundwater and accumulated liquids, the operations and maintenance plan specifies that:

- Dewatering activities for any future construction are subject to all applicable local and state requirements, including those of the RWQCB, for disposing of liquids from dewatering activities.
- Groundwater and accumulated liquids produced during construction activities must be characterized in-situ prior to disposal or retained on site until characterized for appropriate disposal. Testing to characterize the groundwater or accumulated liquids must include analysis for total petroleum hydrocarbons as gasoline, diesel, and motor oil; VOCs; and Title 22 metals. Under no circumstances may site groundwater or accumulated liquid be discharged to a storm drainage system, ground surface, or any pathway (e.g. a drainage ditch) that might reasonably be expected to convey site groundwater and accumulated water off the property or to San Francisco Bay. Depending on the analytical results, and subject to approval from the EBMUD Resource Recovery Program, the groundwater or accumulated liquids may be transported to the MWWTP for disposal, although additional testing (e.g. chemical oxygen demand) may be required, depending on the volume of liquid requiring disposal. Groundwater and accumulated liquids found to contain metals or other analytes at concentrations greater than the Soluble Threshold Limit Concentration (STLC) or TCLP values must be treated and/or disposed of at a facility licensed to accept hazardous waste and the transport and disposal of this liquid must be conducted in accordance with all applicable state, federal, and local regulations.

1.3.5 Mitigation Measures from 2011 EIR Applicable to Pilot Project

As Lead Agency for preparation of the Main Wastewater Treatment Plant Land Use Master Plan EIR, EBMUD has adopted mitigations as part of its Mitigation Monitoring Reporting Program. The following mitigation measures would be applicable to the Organics-Rich Materials Preprocessing Pilot Project. Note that Mitigation Measure AIR-6a assumes that the food waste preprocessing facility would be constructed within a building. Because this assumption is not applicable to the proposed Pilot Project, EBMUD would enforce the other odor control measures specified in Mitigation Measures AIR-6a and AIR-6b, as applicable, and would monitor the facility to ensure that odor control measures that are included in the project description (see Sections 1.3.2 and 1.3.4) are implemented by the operator of the Pilot Project. As described there, the facility is designed to limit odors, but if odor problems occur, and persist, EBMUD would end the Pilot Project if doing so is needed to address odor impacts.

Aesthetic Measures

Mitigation Measure AES-2a: Maintenance of Construction Worksite. Throughout the period of demolition and construction, EBMUD will require that the construction contractor keep the worksite free and clean of all rubbish and debris and promptly remove from the site or from property adjacent to the site of the work, all unused and rejected materials, surplus earth, concrete, plaster, and debris.

Mitigation Measure AES-2b: Design of Facilities to Be Aesthetically Consistent with Existing Visual Character. EBMUD would require all new facilities be, at a minimum, designed to be aesthetically consistent with existing visual character and surrounding wastewater treatment buildings. Design, exterior finishes, and color would blend with the surrounding facilities.

Mitigation Measure AES-3: Lighting Design and Low Reflective Paint. EBMUD would require that lighting be consistent with existing lighting in terms of height, spacing and design. New lighting would be shielded and directed to the interior of the project site. New structures and buildings would be painted in low reflective paint consistent with existing structures at the MWWTP.

Air Quality Measures

Mitigation Measure AIR-1: Criteria Air Pollutant and Precursor Reduction Measures. To limit dust, criteria pollutant, and precursor emissions associated with construction of all Land Use Master Plan projects, EBMUD shall include the following measures, as applicable, in contract specifications:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

b. All haul trucks transporting soil, sand, or other loose material off site shall be covered.

c. 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.

d. All vehicle speeds on unpaved areas shall be limited to 15 miles per hour.

e. 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.

f. 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.

g. 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.

h. A publicly visible sign with the telephone number and person to contact at the Lead Agency regarding complaints related to excessive dust or vehicle idling shall be posted at the MWWTP entrance. This person shall respond and take corrective action within 48 hours.

Mitigation Measure AIR-5: Diesel Particulate Reduction Measures. Diesel-powered on-site rolling stock (2 loaders, excavator, and 2 end dump trucks) associated with the food waste preprocessing facility and any other diesel equipment or trucks operating solely within the MWWTP and West End property under the control of EBMUD shall install a CARB-verified Level 3 Diesel Particulate Filter to reduce PM2.5 emissions to achieve a minimum reduction of 50 percent (sufficient to reduce combined emissions to below the BAAQMD CEQA excess cancer risk threshold of 10 in a million). Alternative options for achieving this reduction can also be implemented, including the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as such become available.

Mitigation Measure AIR-6a: Odor Controls in Food Waste Preprocessing Facility. EBMUD shall include the following measures in contract specifications:

- Roof vents on the proposed building or point sources should be designed to accommodate odor controls in the event that odor problems occur in the future and controls are ultimately needed.
- All food waste shall be processed within 48 hours of receipt or protocols shall be implemented to minimize nuisance odor problems and ensure compliance with applicable BAAQMD air permit requirements.

Mitigation Measure AIR-6b: Odor Controls on Other Land Use Master Plan Elements. Odor control is not needed for the biodiesel production facility. All other short- and long-term Land Use Master Plan projects shall be reviewed for odor potential during the design phase. Operational and design odor control measures shall be incorporated into the project to minimize off-site odor impacts and ensure compliance with BAAQMD air permit fenceline monitoring limits. Odor controls that could be implemented where appropriate include: activated carbon filter/carbon adsorption, biofiltration/bio trickling filters, fine bubble aerator, hooded enclosures, wet and dry scrubbers, caustic and hypochlorite chemical scrubbers, ammonia scrubber, energy efficient blower system, thermal oxidizer, capping/covering storage basins and anaerobic ponds, mixed flow exhaust, wastewater circulation technology, and exhaust stack and vent location with respect to receptors.

Biological Resources Measures

Mitigation Measure BIO-1: Protection of Nesting Birds. To the extent practicable, project construction activities including tree removal/pruning and demolition will occur outside of the generally accepted nesting season (February 1 to August 31). If tree removal cannot be completed between September 1 and January 31, and it is not feasible to avoid starting construction during the nesting season, then the following measures will be taken:

a. No more than two weeks before the initiation of construction/demolition activities that would commence between February 1 and August 31, a nesting bird survey will be conducted within 250 feet of the project site by a qualified biologist. If active nests are observed, buffer zones will be established around the nests, with a size acceptable to the California Department of Fish and Game. Construction activities will not occur within buffer zones until young have fledged or the nest is otherwise abandoned.

b. If construction/demolition is halted for more than two weeks during the nesting season, then additional surveys will be conducted as above.

c. Nests that are established during construction/demolition will be protected from direct project impact (e.g., trees or a buffer area around the nests shall be flagged and avoided).

Mitigation Measure BIO-2: Replacement of Protected Trees. EBMUD will replace each tree that is removed for this project and that is considered a "protected tree" under the City of Oakland Tree Preservation and Removal Ordinance. The replacement tree (e.g., 5-gallon size) will be planted on site in a suitable location at the MWWTP/West End property.

Cultural Resources Measures

Mitigation Measure CUL-1: Recovery of Buried Cultural Resources. If previously unidentified cultural materials are unearthed during construction, EBMUD will halt work in that area until a qualified archaeologist can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); battered stone tools, such as hammerstones and pitted stones. Historic-era materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If any find is determined to be significant, EBMUD and the archaeologist will determine the appropriate avoidance measures or other appropriate mitigation. All significant cultural materials recovered will be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards. In considering any suggested measures proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, EBMUD will determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations.

If avoidance is infeasible, other appropriate measures (e.g., data recovery) will be instituted. Work may proceed on other parts of the project while mitigation for historical resources or unique archaeological resources is being carried out.

Mitigation Measure CUL-2: Recovery of Buried Paleontological Resources. In the event that paleontological resources are discovered, EBMUD will notify a qualified paleontologist. The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines § 15064.5. If a breas[2] or other fossil is discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify

[2] A seep of natural petroleum that has trapped extinct animals, thus preserving and fossilizing their remains.

the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find.

If EBMUD determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted to EBMUD for review and approval prior to implementation.

Mitigation Measure CUL-3: Recovery of Discovered Human Remains. In the event human burials are encountered, EBMUD will halt work in the vicinity and notify the Alameda County Coroner and contact an archaeologist to evaluate the find. If human remains are of Native American origin, the Coroner will notify the Native American Heritage Commission (NAHC) within 24 hours of this identification. The NAHC will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American, who would then help determine what course of action should be taken in dealing with the remains.

Geology Measures

Mitigation Measure GEO-1: Perform Design-Level Geotechnical Evaluations for Seismic Hazards. During the design phase for all other Land Use Master Plan elements that require ground-breaking activities, EBMUD will perform site-specific, design-level geotechnical evaluations to identify potential secondary ground failure hazards (i.e., seismically-induced settlement) associated with the expected level of seismic ground shaking. For specific Land Use Master Plan element sites within the MWWTP that have previously been subject to a geotechnical investigation, a geotechnical memorandum shall be prepared to update the previous investigation.

The geotechnical analysis will provide recommendations to mitigate those hazards in the final design and, if necessary, during construction. The design-level geotechnical evaluations, based on the site conditions, location, and professional opinion of the geotechnical engineer, may include subsurface drilling, soil testing, and analysis of site seismic response as needed. The geotechnical engineer will review the seismic design criteria of facilities to ensure that facilities are designed to withstand the highest expected peak acceleration, set forth by the California Building Code (CBC) for each site. Recommendations resulting from findings of the geotechnical study will be incorporated into the design and construction of proposed facilities. Design and construction for buildings will be performed in accordance with EBMUD's seismic design standards, which meet and/or exceed applicable design standards of the International Building Code.

Mitigation Measure GEO-2: Perform Design-Level Geotechnical Evaluations for Liquefaction and Other Geologic Hazards. During the design phase for all other Land Use Master Plan elements that require ground-breaking activities, EBMUD will perform site-specific design-level geotechnical evaluations to identify geologic hazards and provide recommendations to mitigate those hazards in the final design and during construction. For specific Land Use Master Plan element sites within the MWWTP that have previously been subject to a geotechnical investigation, a geotechnical memorandum shall be prepared to update the previous investigation.

The design-level geotechnical evaluations will include the collection of subsurface data for determining liquefaction potential, and appropriate feasible measures will be developed and incorporated into the project design. The performance standard to be used in the geotechnical evaluations for mitigating liquefaction hazards will be minimization of the hazards. Measures to minimize significant liquefaction hazards could include the following, unless the site-specific soils analyses dictate otherwise:

- Densification or dewatering of surface or subsurface soils;
- Construction of pile or pier foundations to support pipelines and/or buildings; and
- Removal of material that could undergo liquefaction in the event of an earthquake, and replacement with stable material.

- If soil needs to be imported, EBMUD would require that the contractor ensure that such imported soil complies with specifications that define the minimum geotechnical properties and analytical quality characteristics that must be met for use of fill material from off-site borrow sources.

Greenhouse Gas Measures

Mitigation Measure GHG-1: GHG Reduction Measures. EBMUD shall implement BAAQMD-recommended Best Management Practices (BMPs) for GHG emissions where feasible, which include the following:

- At least 15 percent of the fleet should be alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment.
- At least 10 percent of building materials should be from local sources.
- At least 50 percent of construction waste or demolition materials should be recycled or reused.

Mitigation Measure GHG-2a: Energy Efficiency Measures. Direct and indirect GHG emissions shall be estimated based on the final project design, and energy efficiency measures shall be incorporated into the project as necessary to meet the BAAQMD GHG significance threshold in effect at the time of project implementation.

Mitigation Measure GHG-2b: Water Conservation Measures for Land Use Master Plan Projects. Non-potable water shall be used wherever feasible for equipment and area wash down to minimize GHG emissions associated with increased water demand.

Hazardous Materials Measures

Mitigation Measure HAZ-3: Hazardous Building Materials Surveys and Abatement. For any building not already surveyed for lead, a registered environmental assessor or a registered engineer would perform a lead-based paint survey for the structure prior to reuse or demolition. Adequate abatement practices for lead-containing materials, such as containment and/or removal, would be implemented prior to reuse or demolition of each structure that includes lead-containing materials or lead-based paint. For demolition, any PCB- or DEHP-containing equipment or fluorescent lights containing mercury vapors would also be removed and disposed of properly.

If removal of a transformer is required, EBMUD or the owner/operator would retain a qualified professional to determine the PCB content of the transformer oil. For removal, the transformer oil would be pumped out with a pump truck and appropriately recycled or disposed of off site. The drained transformer would be reused or disposed of in accordance with applicable regulations.

Hydrology Measures

Mitigation Measure HYD-3: Prepare and Implement a Comprehensive Drainage Plan. Prior to expanding the stormwater collection system to treat runoff from the West End property, EBMUD shall prepare and implement a Comprehensive Drainage Plan for the Land Use Master Plan that incorporates measures to ensure that the storm drain system and treatment capacity are not exceeded during peak conditions. The drainage plan shall define operational controls necessary to prevent flooding of the MWWTP headworks and/or release of surface runoff off site.

Mitigation Measure HYD-5: Prepare and Implement a Tsunami Response Plan. EBMUD shall prepare and implement a Tsunami Response Plan for the MWWTP site that defines emergency response and coordination procedures. The Tsunami Response Plan shall contain information specific to actions that may be necessary related to receipt of a tsunami watch, warning, or as a result of an actual tsunami along the San Francisco Bay. The first priority of emergency management response shall be the protection of life and property.

Noise Measures

Mitigation Measure NOI-1: Implement Noise Controls. EBMUD's Construction Specifications (013544-3.4) require compliance with local noise ordinances, and measures that shall be employed to meet applicable City of Oakland Noise Ordinance noise limits include the following:

- Pile driving activities and operation of other types of impact equipment such as jackhammers should be limited to the daytime hours (7 a.m. to 7 p.m. on weekdays);
- If impact pile drivers must be used near the eastern MWWTP boundary, they should not be operated for longer than 10 days to the extent feasible. If pile driving must occur for longer than 10 days near this boundary, sonic or vibratory pile drivers should be used if feasible;
- "Quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration) should be employed where feasible (where geotechnical and structural requirements allow);
- Pile driving activities with all construction projects at the MWWTP should be coordinated to ensure that these activities do not overlap;
- Best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) will be used for all equipment and trucks as necessary; and
- If any construction activities must occur during the nighttime hours (7 p.m. to 7 a.m. on weekdays, 8 p.m. to 9 a.m. on weekends), operation of noisier types of equipment should be prohibited as necessary to meet ordinance noise limits.

Mitigation Measure NOI-2: Implement Vibration Controls. To ensure that adjacent freeway structures and future commercial structures to the south are not subject to cosmetic damage, EBMUD shall ensure that any future pile driving activities associated with Master Plan projects do not exceed the 0.2 in/sec peak particle velocity (PPV) threshold at these structures. Measures that could be employed to meet this performance standard include using sonic or vibratory pile drivers where feasible or pre-drilling pile holes.

Mitigation Measure NOI-3: Employ Noise Controls for Stationary Equipment. EBMUD shall use best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) as necessary on stationary equipment associated with all Master Plan projects in order to comply with applicable City of Oakland Noise Ordinance noise limits, adjusted to reflect ambient noise levels occurring at the time of project implementation (under 2010 conditions, the nighttime noise limit is 54 dBA [Leq] at receiving residential uses to the east and 73 dBA [Leq] at future receiving commercial uses to the south).

Traffic Measures

Measure TRA-1: Construction Traffic Management Plan. EBMUD would implement the following measures during project construction at the local intersections outside the MWWTP property:

EBMUD and the construction contractor would coordinate with the appropriate City of Oakland agencies to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion during construction of this project and other nearby projects that could be simultaneously under construction. EBMUD would develop a construction management plan for submittal to the Planning and Zoning Division, the Building Services Division, and the Transportation Services Division. The plan would include at least the following items and requirements:

a. A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours and designated construction access routes;

b. Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries would occur; and

c. A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an on-site complaint manager. The manager shall determine the cause of the complaints and shall take prompt action to correct the problem.

Measures to Minimize Disruption to Existing Utilities

Mitigation Measure UTIL-6 Coordinate Relocation and Interruptions of Service with Utility Providers During Construction. The construction contractor will be required to verify the nature and location of underground utilities before the start of any construction that would require excavation. The contractor will be required to notify and coordinate with public and private utility providers at least 48 hours before the commencement of work adjacent to any utility. The contractor will be required to notify the service provider in advance of service interruptions to allow the service provider sufficient time to notify customers. The contractor will be required to coordinate timing of interruptions with the service providers to minimize the frequency and duration of interruptions.

1.4 Permits/Approvals Required

A Registration Tier Permit through the CalRecycle Local Enforcement Agency (Alameda County Environmental Health) and appropriate building and development permits from the City of Oakland and/or Port of Oakland will be obtained for the project. An air permit for the generator will be obtained from the Bay Area Air Quality Management District. There are no other required air permits anticipated for the project. The Department of Toxic Substances Control (DTSC) must approve excavation or disturbance of any soil on the West End property deeper than 5 feet below ground surface and must approve placement of any soil from the West End property outside of the property boundary.

1.5 CEQA Process/Addendum Requirements

This Addendum to the Main Wastewater Treatment Plan Land Use Master Plan EIR has been prepared to evaluate the potential effects of implementing the Organics-Rich Materials Preprocessing Pilot Project. This Addendum is in the format of an environmental checklist, prepared in compliance with Section 15063 of the California Environmental Quality Act (CEQA) Guidelines of 1970 (as amended), and California Administrative Code, Title 14, Division, Chapter 3.

Pursuant to Section 15164(a) of the CEQA Guidelines:

> *"A lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred."*

The conditions in Section 15162 include the following:

> *(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
>
> *(2) Substantial changes occur with respect to the circumstances under which the project is undertaken; or*
>
> *(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:*
>
> > *(A) The project will have one or more significant effects not discussed in the previous EIR;*

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment.

This Addendum provides a focused review of the potential environmental impacts of the Organics-Rich Materials Preprocessing Pilot Project. This Addendum has been prepared because it has been determined (1) that the pilot project would not create any new or more significant environmental impacts beyond those identified in the 2011 EIR, and (2) that the pilot project will not require any new mitigation measures or alternatives which are considerably different from those analyzed in the 2011 EIR. Specifically,

Implementation of the Pilot Project does not constitute a substantial change as compared to the full-scale food waste preprocessing facility evaluated in the 2011 EIR. The Pilot Project does not require major revisions to the 2011 EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. Environmental effects of the Pilot Project are discussed in Section 2.1, Environmental Analysis Checklist for the Pilot Project. Impacts in each issue area were characterized and compared to the impacts of the full-scale project, and there are no new significant impacts or substantially more severe impacts.

There have been no substantial changes with respect to the circumstances under which the Pilot Project is undertaken that will require major revisions to the 2011 EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. The City of Oakland is considering a realignment of Wake Avenue, but this would not worsen any of the environmental effects of the Pilot Project, as compared with impacts of the full-scale facility. Please refer to Section 2.1, Checklist Item 16, Transportation/Traffic, which documents that EBMUD has plans to ensure adequate queuing space during and after construction of the Wake Avenue realignment.

No new information of substantial importance became apparent as a result of the proposal to conduct the Pilot Project. The Pilot Project will not have significant effects not discussed in the 2011 EIR nor will it result in significant effects that were previously examined but would be substantially more severe than those identified in the 2011 EIR. Please refer to the discussion of each issue in the checklist in Section 2.1, which documents that there are no new or substantially more severe impacts.

The Pilot Project does not increase the feasibility of mitigation measures previously found to be infeasible, and there are no feasible mitigation measures or alternatives that EBMUD has declined to adopt. In approving the Land Use Master Plan, EBMUD adopted all of the mitigation measures included in the Draft EIR, and did not find any of the recommended measures to be infeasible. Thus, there are no mitigation measures that were previously found to be infeasible. Project alternatives evaluated in the 2011 EIR all involved different configurations of the biodiesel facility. Implementation of the Pilot Project would not affect the feasibility of the various options for implementation of the biodiesel facility.

Because the criteria in CEQA Guidelines section 15162 (a) does not apply here, an addendum to the 2011 EIR has been prepared, and will be considered, along with the 2011 EIR, prior to EBMUD making any further approvals of the Pilot Project.

Chapter 2 Environmental Checklist

1. **Project Title:** Organics-Rich Materials Preprocessing Pilot Project

2. **Project Sponsor's Name & Address:** East Bay Municipal Utility District
375 Eleventh Street, MS702
Oakland, CA 94607-4240

3. **Contact Person and Phone Number:** Vince De Lange
(510) 287-1141

4. **Project Location:** On the Main Wastewater Treatment Plan (MWWTP) site located at 2020 Wake Avenue, in Oakland, CA.

5. **General Plan Designation:** General Industrial/Transportation

6. **Zoning:** General Industrial

7. **Description of Project**: EBMUD is proposing a Pilot Project to analyze performance of organics-rich feedstocks through various processing equipment components for their proposed food waste preprocessing facility.

8. **Surrounding Land Uses and Setting.** The MWWTP is located in an industrial area that is separated from nearby land uses by freeway ramps/approaches to the San Francisco-Oakland Bay Bridge to the north, west, and east, and by vacant land, rail lines and warehouse structures associated with the former Oakland Army Base to the east and south. San Francisco Bay is north of the Bay Bridge approach. The nearest residential land uses are to the east of I-880, about ¼ mile from the eastern boundary of the MWWTP and more than ½ mile from the proposed site for the Pilot Project.

9. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.** A Registration Tier Permit through the CalRecycle Local Enforcement Agency (Alameda County Environmental Health) and appropriate building and development permits from the City of Oakland and/or Port of Oakland will be obtained for the project. An air permit for the generator will be obtained from the Bay Area Air Quality Management District. Department of Toxic Substances Control (DTSC) must approve excavation or disturbance of any soil on the West End property deeper than 5 feet below ground surface and must approve placement of any soil from the West End property outside of the property boundary.

2.1 Environmental Analysis Checklist for Pilot Project

The following Environmental Analysis Checklist (Checklist) has been prepared to determine if the Final EIR for the EBMUD Main Wastewater Treatment Plant Land Use Master Plan (2011 EIR) adequately addresses impacts of the Organics-Rich Materials Preprocessing Pilot Project. The Checklist evaluates the adequacy of the earlier evaluation contained in the 2011 EIR pursuant to Section 21166 of the Public Resources Code and Section 15162 of the CEQA Guidelines.

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
1. Aesthetics Would the project:					
a) Have a substantial adverse effect on a scenic vista?	3.2-4	No	No	No	N/A
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	3.2-4	No	No	No	N/A
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	3.2-6	No	No	No	Yes, see Mitigation Measures AES-2a and AES-2b
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	3.2-8	No	No	No	N/A

Discussion: The Pilot Project would be in the same location as the food waste preprocessing facility evaluated in the 2011 EIR, but smaller in scale. The site of the Pilot Project is not in a visually sensitive area, and as noted on page 3.2-2 of the 2011 EIR, the site is only visible briefly to passing motorists, primarily on local freeways. The MWWTP and other properties in the project vicinity already use nighttime security lighting, and the general area is substantially lighted at night. The elements of the Pilot Project would be similar to those evaluated in the 2011 EIR, which, in addition to the proposed food waste preprocessing building, included truck deliveries, piping, and other auxiliary structures. Although the Pilot Project would not include a building to enclose operations, the preprocessing equipment would not be dissimilar in appearance to existing facilities found at the MWWTP site in terms of scale and general appearance. The equipment used for the Pilot Project would be 15 to 20 feet tall, which is considerably less than the 40-foot exterior height of the food waste preprocessing facility evaluated in the 2011 EIR. The overall footprint of the facility would also be smaller. In addition, the Pilot Project would be subject to Mitigation Measure AES-2b: Design of Facilities to be Aesthetically Consistent with Existing Visual Character, which would ensure that the facility would blend with surrounding facilities. Any lighting used for the Pilot Project would be subject to Mitigation Measure AES-3: Lighting Design and Low Reflective Paint, which would ensure that new lighting is shielded and directed to the interior of the project site. Visual impacts would thus be expected to be the same or less than those evaluated in the EIR.

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
2. Agricultural and Forestry Resources In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	3.1-2	No	No	No	N/A
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	3.1-2	No	No	No	N/A
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220 (g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104 (g))?	NA	No	No	No	N/A
d) Result in the loss of forest land or conversion of forest land to non-forest use?	NA	No	No	No	N/A
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	3.1-2	No	No	No	N/A
Discussion: The Pilot Project is located in an urban area that contains no agricultural or forest lands. The Notice of Preparation for the 2011 EIR was issued in 2009, before the CEQA Guidelines were revised to add criteria for impacts to forest lands to the CEQA Checklist. Forest lands were thus not addressed in the 2011 EIR, but facilities at the MWWTP would have no effect on forest lands.					

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
3. Air Quality *Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.* *Would the project:*					
a) Conflict with or obstruct implementation of the applicable air quality plan?	3.3-37	No	No	No	N/A
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	3.3-11 et seq. & 3.3-18 et seq.	No	No	No	Yes, see Mitigation Measure AIR-1
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	4-14	No	No	No	Yes, see Mitigation Measure AIR-5
d) Expose sensitive receptors to substantial pollutant concentrations?	3.3-14 et seq. & 3.3-30 et seq.	No	No	No	Yes, see Mitigation Measure AIR-5
e) Create objectionable odors affecting a substantial number of people?	3.3-35 et seq.	No	No	No	Yes, see Mitigation Measures AIR-6a and AIR-6b

Discussion: **Emissions.** Emissions of criteria pollutants associated with construction would be less than those identified in the 2011 EIR because the Pilot Project would require minimal construction and less ground disturbance than what was assumed in the 2011 EIR for the full-scale facility. Mitigation Measures for construction would be applicable to the Pilot Project and would ensure that construction would not generate substantial emissions. Operational mobile source emissions from truck traffic would be similar to, but less than, those estimated for the food waste preprocessing facility because the Pilot Project would be a smaller facility, and would generate less traffic. Traffic patterns would be somewhat different than those projected in the 2011 EIR, but this would not be expected to result in new significant impacts because the volume of trucks needed to transport 99.9 tpd of food waste would be substantially less than the volume of trucks estimated for transportation of up to 600 tpd of food waste. Mobile source emissions of criteria pollutants are shown in Table 3.3-12 of the 2011 EIR. The BAAQMD has established a significance threshold of 80 lb/day for emissions of reactive organic gases (ROG), nitrogen oxides (NOx) and particulate matter less than 10 microns in diameter (PM10). Estimated emissions for the full-scale food waste preprocessing facility were 4.0 lb/day of ROG, 30.2 lb/day of NOx and 2.3 lb/day of PM10. Detailed mobile source emissions estimates have not been made for the Pilot Project, but because the facility would process only a fraction of the waste assumed for the full-scale facility, Pilot Project emissions from truck traffic would be expected to be substantially less than for the full-scale project.

The food waste preprocessing facility evaluated in the 2011 EIR was proposed to be operated from on-site electric power, with no generator, and thus had no stationary source emissions. The Pilot Project would be operated by a generator, which could be operated up to 24 hours per day, but more likely would be operated a maximum of

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?

16 hours per day. Emissions from 24-hour operation of the generator with an interim Tier IV engine would be 1.13 lb/day of ROG, 18.14 lb/day of NOx, and 0.12 lb/day of PM10. Combining full-scale mobile source emissions with the estimated stationary source emissions from the Pilot Project generator would still result in emissions below both the 1999 BAAQMD threshold of 80 lb/day for ROG, NOx and PM10, and below the 2010 BAAQMD thresholds that were adopted during the preparation of the 2011 EIR, but later withdrawn by BAAQMD. Combining full scale mobile source emissions with Pilot Project stationary emissions is highly conservative, because if a full-scale facility were to be built, it would replace the Pilot Project and use of the generator would be discontinued. EBMUD would remove the generator from the site after the two-year period of Pilot Project operation, so operation of the Pilot Project is not expected to overlap with operation of the biodiesel production facility. It is thus not necessary to combine operational emissions of the Pilot Project with the operational emissions of the biodiesel facility. If the schedule for implementation of the biodiesel facility is accelerated, EBMUD would evaluate emissions sources to ensure that emissions thresholds are not exceeded. Because engine emissions are continuously improving, delaying the implementation of the biodiesel facility (as compared to the estimated schedule in the 2011 EIR) would result in emissions lower than those projected in the 2011 EIR. With implementation of the Pilot Project emissions of criteria pollutants would remain less than significant.

Odors. Operational odor would be the primary impact that could differ from impacts discussed in the 2011 EIR. The food waste preprocessing facility described in the 2011 EIR was within an enclosed building, and mitigation included the possible addition of odor controls to roof vents if odor problems occurred. The Pilot Project would comply with mitigation requiring that "All food waste shall be processed within 48 hours of receipt or protocols shall be implemented to minimize nuisance odor problems and ensure compliance with applicable BAAQMD air permit requirements." This limitation would not apply to packaged food or other urban organics that are determined not to have a potential to generate odors. The mitigation from the 2011 EIR assumed that the full-scale food waste preprocessing facility would be enclosed in a building. It has been determined that constructing a building to enclose the Pilot Project would not be economically feasible, due to the short-term nature of the pilot. The private company that would install and operate the Pilot Project has determined that it would not be possible to achieve an acceptable return on investment if a costly enclosure is constructed, in light of the project's limited time and limited operational period.

Because the facility is not enclosed, EBMUD would monitor odor and, if it determines that odors from the Pilot Project are causing a nuisance, EBMUD would suspend operation of the Pilot Project and acceptance of feedstock and enter into a process with the private operator to resolve the odor issue. This may include the use of a consultant specializing in odor control and abatement. This requirement is a part of the project description and would be enforced by EBMUD as a condition of its agreement with the private operator. EBMUD will also have authority to suspend or terminate the pilot project in the event odor issues arise and prove insoluble. These project requirements would ensure that the project would be consistent with Mitigation Measure AIR-6a from the 2011 EIR.

To evaluate the potential for adverse impacts from odors associated with operation of the Pilot Project, site visits to a similar facility were conducted on August 14 and August 28, 2013 by staff from EBMUD and RMC Water and Environment. Staff observed operation of processing equipment at the food waste processing facility at the South Area Transfer Station in Sacramento, CA. The facility uses the same equipment that is proposed for use at the Pilot Project, and is not within an enclosed building. On August 14, 2013, weather conditions were sunny with a slight breeze, and an afternoon temperature from 94^{o} to 97^{o} F. On that day, the facility operators reported that a load of organics-rich waste containing putrescible materials was delivered to the facility at 11:30 AM and processing of the waste began immediately. The load of waste was completely processed by about 2:40 PM, and the concrete pad was sprayed down immediately. At about 2:20 pm, odors from the processing facility were noticeable, but not readily perceptible beyond the immediate vicinity of the processing area.

On August 28, 2013, weather conditions were again sunny with a slight breeze, with temperature of 72^{o} F at 9:45 AM, warming up through the morning. According to the facility operators, an 18,000-pound load of organics-rich waste containing putrescible materials was delivered to the facility at about 7:00 AM. The load contained mixed waste, was fairly dry, and contained a fair amount of non-organic material. Odors were not detectable upwind, and were only noticeable within about 10 feet of the waste pile on the upwind side. Processing of the waste began at 10:33 AM. During processing, odors were noticeable downwind, including along the nearest public roadway about 560 feet downwind from the processing facility. Although noticeable, odors were not overpowering and did not appear to be stronger than most odors typical of a

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
wastewater treatment plant. The odors observed during these site visits were not characterized as stronger than those expected to be associated with the full-scale facility analyzed in the 2011 EIR. The Pilot Project would be located in the interior of the MWWTP, at the same location as the full-scale food waste preprocessing facility. As noted on page 3-6 of the 2011 EIR, the site would be about 3,000 feet (over ½ mile) from the closest residential receptor. Drivers on the adjacent freeway would be closer to the facility, but freeways are not considered a sensitive receptor, and drivers' exposure to any odors would be very brief, and not substantially different from the existing odor of the MWWTP. Similarly, any users of the Bay Trail alignment along the northern boundary of the MWWTP could be briefly exposed to odors, but the Pilot Project is not expected to make the existing odors from the MWWTP more objectionable. The 2011 EIR considered the compatibility of the full-scale facility with the Bay Trail and concluded that a food waste facility would be consistent with the current character of the area. The Pilot Project is smaller, and expected to have similar impacts and is thus not expected to result in a new significant impact. With the implementation of applicable mitigation and odor control requirements that would be enforced by EBMUD, the Pilot Project is not expected to have odor impacts substantially different from those anticipated for the full-scale project.					
4. Biological Resources *Would the project:*					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	3.4-15	No	No	No	N/A
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	3.4-15	No	No	No	N/A
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	3.4-15	No	No	No	N/A

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	3.4-15 et seq.	No	No	No	Yes, see Mitigation Measure BIO-1
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	3.4-17 et seq.	No	No	No	Yes, see Mitigation Measure BIO-2
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	3.4-15	No	No	No	N/A
Discussion: Impacts to biological resources would be the same as, or less than those addressed in the 2011 EIR. All impacts of the MWWTP Master Plan that are related to the footprint of project facilities would not be changed by implementation of the Pilot Project. The 2011 EIR essentially assumed that all of the land area of the MWWTP, including the West End Property, could eventually be disturbed by construction of a facility. The Pilot Project would thus not result in any new impacts to biological resources.					
5. Cultural Resources *Would the project:*					
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	3.5-9	No	No	No	N/A
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	3.5-10	No	No	No	Yes, see Mitigation Measure CUL-1
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	3.5-11	No	No	No	Yes, see Mitigation Measure CUL--2
d) Disturb any human remains, including those interred outside of formal cemeteries?	3.5-11	No	No	No	Yes, see Mitigation Measure CUL--3

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
Discussion: Impacts to cultural resources would be the same as, or less than those addressed in the 2011 EIR. All impacts of the MWWTP Master Plan that are related to the footprint of project facilities would not be changed by implementation of the Pilot Project. The 2011 EIR essentially assumed that all of the land area of the MWWTP, including the West End Property, could eventually be disturbed by construction of a facility. The Pilot Project would thus not result in any new impacts to cultural resources.					
6. Geology and Soils *Would the project:*					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	3.7-11	No	No	No	N/A
ii) Strong seismic ground shaking?	3.7-12	No	No	No	Yes, see Mitigation Measure GEO-1
iii) Seismic-related ground failure, including liquefaction?	3.7-13	No	No	No	Yes, see Mitigation Measure GEO-2
iv) Landslides?	3.7-11	No	No	No	N/A
b) Result in substantial soil erosion or the loss of topsoil?	3.7-14	No	No	No	N/A
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	3.7-13	No	No	No	Yes, see Mitigation Measure GEO-2

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	3.7-11	No	No	No	N/A
e) 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?	3.7-11	No	No	No	N/A
Discussion: Impacts associated with potential geotechnical hazards would be the same for the Pilot Project as those described in the 2011 EIR. The Pilot Project would be located on the same site as the food waste preprocessing facility that was evaluated in the 2011 EIR.					
7. Greenhouse Gas Emissions *Would the project:*					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	3.8-4 et seq.	No	No	No	Yes, see Mitigation Measures GHG-2a and GHD-2b
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	3.8-12 et seq.	No	No	No	Yes, see Mitigation Measures GHG-2a and GHD-2b
Discussion: Construction activity for the Pilot Project would be less than for the food waste preprocessing facility because only a minor amount of work is required to install the facility on the site. Nevertheless, Mitigation Measure GHG-1 would include implementation of BMPs for GHG emissions where feasible, and would minimize emissions during construction. Similarly, operational GHG emissions would be less than for the food waste preprocessing facility because a smaller amount of waste would be processed. Similar to the full-scale project, the Pilot Project is expected to offset operational GHG emissions by GHG emissions reductions associated with the renewable energy produced by the food waste. The Pilot Project would still be expected to result in a net reduction of CO2 emissions, when comparing power produced from biogas versus fossil fuels (see Table 3.8-3 and discussion on page 3.8-9 of the 2011 EIR). As with construction activities, Mitigation Measures GHG-2a and GHG-2b would minimize GHG emissions during operation.					
8. Hazards and Hazardous Materials *Would the project:*					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	3.9-24 et seq.	No	No	No	N/A

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	3.9-28 et seq.	No	No	No	Yes, see Mitigation Measure HAZ-3
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	3.9-23	No	No	No	N/A
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	3.9-23	No	No	No	N/A
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	3.9-23	No	No	No	N/A
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	3.9-23	No	No	No	N/A
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	3.9-23	No	No	No	N/A
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	3.9-23	No	No	No	N/A

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
Discussion: The Pilot Project would have impacts the same as or less than the food waste preprocessing facility evaluated in the 2011 EIR. No demolition is expected to be required for the Pilot Project, so Mitigation Measure HAZ-3, Hazardous Building Materials Survey and Abatement, is not expected to be needed. No portion of the MWWTP is identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (EBMUD 2009). The full-scale facility evaluated in the 2011 EIR included a 5,000-gallon diesel fuel storage tank, which is substantially larger than the 1,000-gallon tank proposed for the Pilot Project. The Pilot Project would be subject to the same requirements that are discussed on page 3.9-26 of the 2011 EIR, including filling a Hazardous Materials Business Plan with the Oakland Fire Department, Office of Emergency Services.					
9. Hydrology and Water Quality *Would the project:*					
a) Violate any water quality standards or waste discharge requirements?	3.10-8 et seq.	No	No	No	N/A
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?	3.10-9 et seq.	No	No	No	N/A
c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	3.10-11	No	No	No	N/A
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	3.10-10	No	No	No	Yes, see Mitigation Measure HYD-3

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	3.10-10	No	No	No	Yes, see Mitigation Measure HYD-3
f) Otherwise substantially degrade water quality?	3.10-8 et seq.	No	No	No	N/A
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	3.10-7	No	No	No	N/A
h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?	3.10-7	No	No	No	N/A
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	3.10-7	No	No	No	N/A
j) Inundation by seiche, tsunami, or mudflow?	3.10-11	No	No	No	Yes, see Mitigation Measure HYD-5
Discussion: The Pilot Project would comply with mitigation measures identified in the 2011 EIR, and facilities would be constructed within the same area, though with a smaller footprint than was discussed in the 2011 EIR. Impacts would be the same or less than those previously identified. Storm water impacts attributable to the pilot project would be no greater than analyzed in the 2011 EIR. The Pilot Project would not change the amount of impervious surface area at the project site, and thus would not increase the amount of runoff into existing storm drains. Also, as noted in the Project Description the Pilot Project equipment will be placed on a concrete pad, which will be sloped such that process liquids, wash-down water, and storm water that collect on the pad will be directed towards a sump and pumped back into the processing system, eventually combining with processed waste to be delivered to EBMUD's digesters rather than to the storm drain. This is similar to the design of the full-scale project evaluated in the 2011 EIR, and would prevent pollutants from food waste placed on the concrete pad from contaminating storm water discharges.					
10. Land Use and Planning *Would the project:*					
a) Physically divide an established community?	3.11-6	No	No	No	N/A

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	3.11-6 et seq.	No	No	No	N/A
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	3.4-15	No	No	No	N/A
Discussion: The Pilot Project would be constructed entirely within the MWWTP and would be consistent with existing land use at the plant. Impacts would be the same as those identified in the 2011 EIR.					
11. Mineral Resources *Would the project:*					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	3.1-3	No	No	No	N/A
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	3.1-3	No	No	No	N/A
Discussion: The 2011 EIR documents that there are no mineral resources at the MWWTP.					
12. Noise *Would the project result in:*					
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	3.12-17 et seq.	No	No	No	Yes, see Mitigation Measure NOI-3

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	3.12-14 et seq.	No	No	No	Yes, see Mitigation Measure NOI-2
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	3.12-21 et seq.	No	No	No	N/A
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	3.12-10 et seq.	No	No	No	Yes, see Mitigation Measure NOI-1
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	3.12-10	No	No	No	N/A
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	3.12-10	No	No	No	N/A

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
Discussion: The Pilot Project would be subject to the same mitigation measures identified in the 2011 EIR. However, construction impacts are expected to be less because only minimal ground disturbance would be required and no pile driving is expected to be necessary. Estimated operational noise from the food waste preprocessing facility is presented in Table 3.12-8 of the 2011 EIR, which compares noise levels to noise ordinance limits. Noise levels from operation of the full-scale food waste preprocessing facility were estimated to be 89 dBA (Leq) inside the building, 72 dBA (Leq) at the building exterior, 34 dBA (Leq) at the eastern MWWTP boundary, and 31 dBA (Leq) at the closest residential receptors to the east. Although the Pilot Project would not be constructed within an enclosed building, the Pilot Project has been sufficiently scaled down from the 2011 EIR project to fully offset any noise impacts that would result from the lack of a building in the absence of such scaling down. Noise levels from operation of the smaller facility are expected to be quieter than the full-scale facility, resulting in a noise level of 71 dBA at the project site, at a distance of 25 feet from the equipment (EBMUD 2013), which is similar to the noise levels projected in the 2011 EIR at the exterior of the food waste preprocessing facility. Power for the Pilot Project would be provided by a generator, which produces noise levels of about 75 dBA at a distance of 25 feet. Combined noise levels from the Pilot Project food waste processing equipment and the generator are expected to be about 76 dBA, which is slightly louder than was estimated in the 2011 EIR. However, noise would be substantially less at the nearest sensitive receptor. Noise levels from the Pilot Project would be expected to about 35 dBA at the nearest residential receptor, which is 3,000 feet from the site of the Pilot Project. This represents a 4 dBA increase, as compared to the full-scale project, a level of increase that would be barely perceptible if no other noise sources were present near the receptor[3]. The Pilot Project's noise level at the site of the closest residential receptors remains well within acceptable limits of 68 dBA for daytime noise and 54 dBA for nighttime noise. However, existing background noise level at the nearest sensitive receptor is 55 dBA at night and 63 dBA during the day (see page 3.12-6 of the 2011 EIR). When added to this observed background noise, the noise from the Pilot Project is so small that the total noise level would not change (i.e. the background noise would be loud enough that the noise from the Pilot Project would be inaudible). As noise is measured on a logarithmic scale, the Pilot Project's 35 dBA added to night background noise levels of 55 dBA yields a total noise level of 55.042 dBA. When measured against 63 dBA daytime background noise levels, the marginal increase in noise levels attributable to the Pilot Project would be proportionately less. At all times of day, Pilot Project noise will be imperceptible at the location of the nearest residential receptors. Both the full-scale project and Pilot Project would produce noise from trucks; truck noise would be less with the Pilot Project because there would be less than ¼ the number of trucks.					
13. Population and Housing *Would the project:*					
a) Induce substantial 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)?	3.1-3	No	No	No	N/A
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	3.1-3	No	No	No	N/A

[3] A 3 dBA difference is generally the point at which the human ear will perceive a difference in noise level (Caltrans Traffic Noise Analysis Protocol, May 2011, p. 38).

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
c) Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	3.1-3	No	No	No	N/A
Discussion: The 2011 EIR documents that the Master Plan would not displace housing or people, or contribute to population growth. Implementation of the Pilot Project would not alter this determination.					
14. Public Services					
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
Fire Protection?	3.15-7	No	No	No	N/A
Police Protection?	3.15-7	No	No	No	N/A
Schools?	3.15-7	No	No	No	N/A
Parks?	3.15-7	No	No	No	N/A
Other public facilities?	3.15-7	No	No	No	N/A
Discussion: The 2011 EIR documents that the Master Plan would not generate population growth and would thus not generate need for new or altered government facilities. Implementation of the Pilot Project would not alter this determination.					
15. Recreation					
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	3.11-7	No	No	No	N/A
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	3.11-7	No	No	No	N/A

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
Discussion: The 2011 EIR documents that the Master Plan would not increase demand for recreational facilities or affect existing or planned facilities. Implementation of the Pilot Project would not alter this determination.					
16. Transportation/Traffic *Would the project:*					
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of a circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersection, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	3.14-14 et seq. & 3.14-17 et seq.	No	No	No	Yes, see Mitigation Measure TRA-1
b) Conflict with an applicable congestion management program, including, but not limited to level of services standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	3.14-16 et seq.	No	No	No	N/A
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in locations that results in substantial safety risks?	3.14-14	No	No	No	N/A
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	3.14-19	No	No	No	N/A
e) Result in inadequate emergency access?	3.14-18	No	No	No	N/A
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	3.14-18 et seq.	No	No	No	N/A

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
Discussion: The 2011 EIR documents that the Master Plan would not generate operational traffic that would result in significant impacts on traffic. Compared with the full-scale project analyzed in the 2011 EIR, the Pilot Project would be expected to result in similar traffic patterns for transport of food waste, but less operational traffic because the capacity of the Pilot Project (up to 99.9 tpd) is less than that of the food waste preprocessing facility evaluated in the 2011 EIR (up to 400 to 600 tpd at full build-out). Construction traffic would also be expected to be less because processing equipment would be installed directly on the site without construction of a building. Construction activities would thus be simpler and would require less time than described in the 2011 EIR. Mitigation Measure TRA-1: Construction Traffic Management Plan, would be applicable to the Pilot Project, and would ensure that traffic during construction is managed to minimize congestion on local streets. Mitigation Measures TRA-7a and 7b are not applicable to the Pilot Project because they address potential safety hazardous associated with construction of a rail spur to bring materials to the biodiesel production facility. The Pilot Project would not include construction or use of the rail spur discussed in the 2011 EIR. Since preparation of the 2011 EIR, the City of Oakland has prepared an Addendum to its 2002 EIR for the Oakland Army Base (OARB) Redevelopment Plan and Army Base Reuse Plan (City of Oakland 2012). The addendum considers the potential for realignment of Wake Avenue north of West Grand Avenue; the existing Wake Avenue would be realigned as an extension of Maritime Street to maintain access to the MWWTP. EBMUD has considered the proposed realignment and has determined that the proposed change of roadway configuration, if implemented, would not change the conclusions of the 2011 EIR for the MWWTP. Trucks delivering food waste to the Pilot Project site would all be routed through the main gate into the MWWTP and EBMUD has plans to ensure adequate queuing space during and after construction of the Wake Ave realignment.					
17. Utilities and Service Systems *Would the project:*					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	3.15-7 et seq.	No	No	No	Yes, see Mitigation Measure HYD-3
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	3.15-7 et seq.	No	No	No	Yes, see Mitigation Measure HYD-3
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	3.15-9 et seq.	No	No	No	Yes, see Mitigation Measure HYD-3
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	3.15-8 et seq.	No	No	No	N/A

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	3.15-7 et seq.	No	No	No	Yes, see Mitigation Measure HYD-3
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	3.15-10 et seq.	No	No	No	N/A
g) Comply with federal, state, and local statutes and regulations related to solid waste?	3.15-11 et seq.	No	No	No	N/A
Discussion: The 2011 EIR documents that the Master Plan would only generate small amounts of additional wastewater. The food waste preprocessing facility would generate very small quantities of wastewater. In addition, storm water from the West End property has the potential to exceed wet weather plant capacity, but this would be addressed through implementation of Mitigation Measure HYD-3. Implementation of the Pilot Project would not alter this determination. As noted above in the discussion of hydrology and water quality, the Pilot Project is designed such that process liquids, wash-down water, and storm water that collect on the pad will be directed towards a sump and pumped back into the processing system, which would prevent pollutants from food waste from contaminating storm water discharges. Because it is smaller than the food waste preprocessing facility evaluated in the 2011 EIR, the Pilot Project would not increase impacts on storm water drainage, water supply or solid waste.					
18. Mandatory Findings					
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	4-24	No	No	No	Yes

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	4-13 et seq.	No	No	No	Yes
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	4-24	No	No	No	Yes

Discussion: The 2011 EIR determined that the project would have a significant unavoidable cumulative air quality impact on community risks and hazards. However, the significant impact was based on Bay Area Air Quality Management District (BAAQMD) cumulative impact methodology and thresholds of significance that were adopted in June 2010; BAAQMD withdrew those significance thresholds in May 2012, after certification of the 2011 EIR. The cumulative impact, as discussed in the 2011 EIR, was found to be significant because of background emissions, primarily from freeways that surround the MWWTP site. The Pilot Project would not increase this cumulative air quality impact, and would not worsen any other cumulative impacts. The Pilot Project would not contribute to cumulative odor impacts in the project vicinity because none of the cumulative projects outside of the MWWTP that are identified in Table 4-1 of the 2011 EIR has the potential to generate odors. As documented in the checklist above, there would be no increased impacts to biological or cultural resources, and there would be no increase in impacts, either direct or indirect, to human beings. Thus, the mitigation measures set forth in the 2011 EIR are fully sufficient to address the environmental impacts of the Pilot Project.

2.2 Environmental Determination

Based upon the evidence in light of the whole record documented in the attached environmental checklist explanation, cited incorporations and attachments, I find that the Project:

☐ **Has NOT been previously analyzed** as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to CEQA Guidelines. Preparation of adequate CEQA environmental documentation is required.

☒ **Has previously been analyzed** as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to CEQA Guidelines. The proposed project is a component of the whole action analyzed in the previously adopted/certified CEQA document. No additional CEQA documentation is required.

☐ **Has previously been analyzed** as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to CEQA Guidelines. **Minor additions and/or clarifications** are needed to make the previous documentation adequate to cover the project which are documented in this addendum to the earlier CEQA document (CEQA §15164). No additional CEQA documentation is required.

☐ **Has previously been analyzed** as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to State and County CEQA Guidelines. However, there is important new information and/or **substantial changes have occurred** requiring the preparation of an additional CEQA document (ND, MND, or EIR) pursuant to CEQA Guidelines Sections 15162 through 15163.

Signed _____

Name and Title Date

Chapter 3 Report Preparation

3.1 Report Authors

3.1.1 East Bay Municipal Utility District

- Vince De Lange, P.E., Supervisor of Wastewater Planning
- Heidi G. Oriol, P.E., Associate Civil Engineer

3.1.2 RMC Water and Environment

- Robin Cort, Ph.D., environmental analysis
- Dave Richardson, P.E., technical reviewer

3.2 References

Caltrans 2011, Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects, May 2011

City of Oakland 2012, 2012 Oakland Army Base Project Initial Study/Addendum, May 2012

EBMUD 2009, Food Waste Facility Phase 2 Project Initial Study Negative Declaration, July 2009

EBMUD 2011, Environmental Impact Report, Main Wastewater Treatment Plant Land Use Master Plan, certified June 28, 2011

EBMUD 2013, personal communication from Heidi Oriol, email to Robin Cort of RMC providing noise level for Pilot Project equipment, July 24, 2013

EBMUD 2013, Observations from Site Visit to Sacramento Food Waste Facility, August 14, 2013

Attachment B.4:
Addendum 4 – Modified Food Waste Project (June 2015)

EAST BAY MUNICIPAL UTILITY DISTRICT

ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT FOR THE MAIN WASTEWATER TREATMENT PLANT LAND USE MASTER PLAN

SCH No. 2009112073

For Modified Food Waste Project

Prepared by:

RMC water and environment

June 2015

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Chapter 1 Project Description

1.1 Project Overview

The East Bay Municipal Utility District (EBMUD) is proposing to develop facilities for utilizing organics-rich waste, including commercial source-separated food waste collected in the City of Oakland and pressed organics-rich material from San Francisco, for the production of renewable energy at its Main Wastewater Treatment Plant (MWWTP) located in Oakland, CA. This project is a minor modification to the food waste facilities described in the MWWTP Land Use Master Plan Environmental Impact Report.

1.2 Purpose and Need for Project

1.2.1 Addendum Overview

Pursuant to the California Environmental Quality Act, California Public Resources Code sections 21000 et seq. ("CEQA") and the California Environmental Quality Act Guidelines, Title 14, chapter 3 of the California Code of Regulations ("CEQA Guidelines"), this Addendum to the MWWTP Land Use Master Plan Final Environmental Impact Report, certified by the EBMUD on June 28, 2011 (hereinafter referred to as the "2011 EIR"), has been prepared to address implementation of a modified food waste project to be located at the location of the planned food waste facility and the proposed food waste preprocessing facility that was evaluated at a project level in the 2011 EIR.

1.2.2 Background/Need for Project

On June 28, 2011, EBMUD, acting as Lead Agency under CEQA, certified the 2011 EIR, which describes and evaluates the overall MWWTP Land Use Master Plan (hereinafter referred to as the "Master Plan"), and evaluates two near-term projects at a project level: a biodiesel production facility and a food waste preprocessing facility.

As described in the 2011 EIR, the Master Plan evaluated development of a food waste preprocessing facility, a renewable energy project that will help EBMUD meet sustainability goals by increasing onsite renewable energy production. The project will involve EBMUD contracting with one or more private companies under land-lease, services, financing, and/or material supply agreements to construct and operate a facility at the MWWTP that meets the objectives of the Master Plan by supplying food waste for preprocessing at that facility.

The original food waste preprocessing facility, as described in the 2011 EIR, would be designed to preprocess food waste to supply EBMUD's existing food waste facility, which was planned to be expanded to treat up to 250 tons per day (tpd) of material. Food waste currently received is preprocessed to remove contamination (i.e., non-digestible material), prior to delivery to EBMUD. This existing preprocessing is done at a combination of facilities located in the greater San Francisco Bay Area, including but not limited to facilities in Vacaville, San Carlos, and Martinez. The preprocessed food waste is then delivered to the EBMUD food waste facility for further processing prior to anaerobic digestion. With construction of a food waste preprocessing facility at the MWWTP, organics-rich waste would be delivered directly to the MWWTP to be preprocessed on site to improve process efficiency and material consistency.

EBMUD is now considering implementation of a modified Food Waste Preprocessing Facility (Modified Project). The Modified Project would involve acceptance of organics-rich waste collected from multiple sources, including the City of Oakland in both unprocessed and preprocessed form under contract with Waste Management of Alameda County, Inc., and other communities within the surrounding area. The Modified Project would also include construction and operation of facilities for food waste preprocessing, urban organics processing, dedicated digestion and dewatering, and renewable vehicle fuel production. Under the Modified Project, the material would be preprocessed to a level such that it could be conveyed

directly to the existing anaerobic digesters at the MWWTP, eliminating the need to expand the existing EBMUD food waste facility.

All facilities developed as part of the Modified Project would fall within the geographic area analyzed in the 2011 EIR. The proposed modified food waste preprocessing facility, which is shown in the site plan in **Figure 1**, is similar to the facility that was evaluated in the 2011 EIR, but would occupy a somewhat larger site on the West End property and the MWWTP site, totaling 3.1 acres, as compared to the 1.4-acre site for the food waste preprocessing facility and the 1-acre site for the food waste facility considered in the 2011 EIR (**Figure 2**).

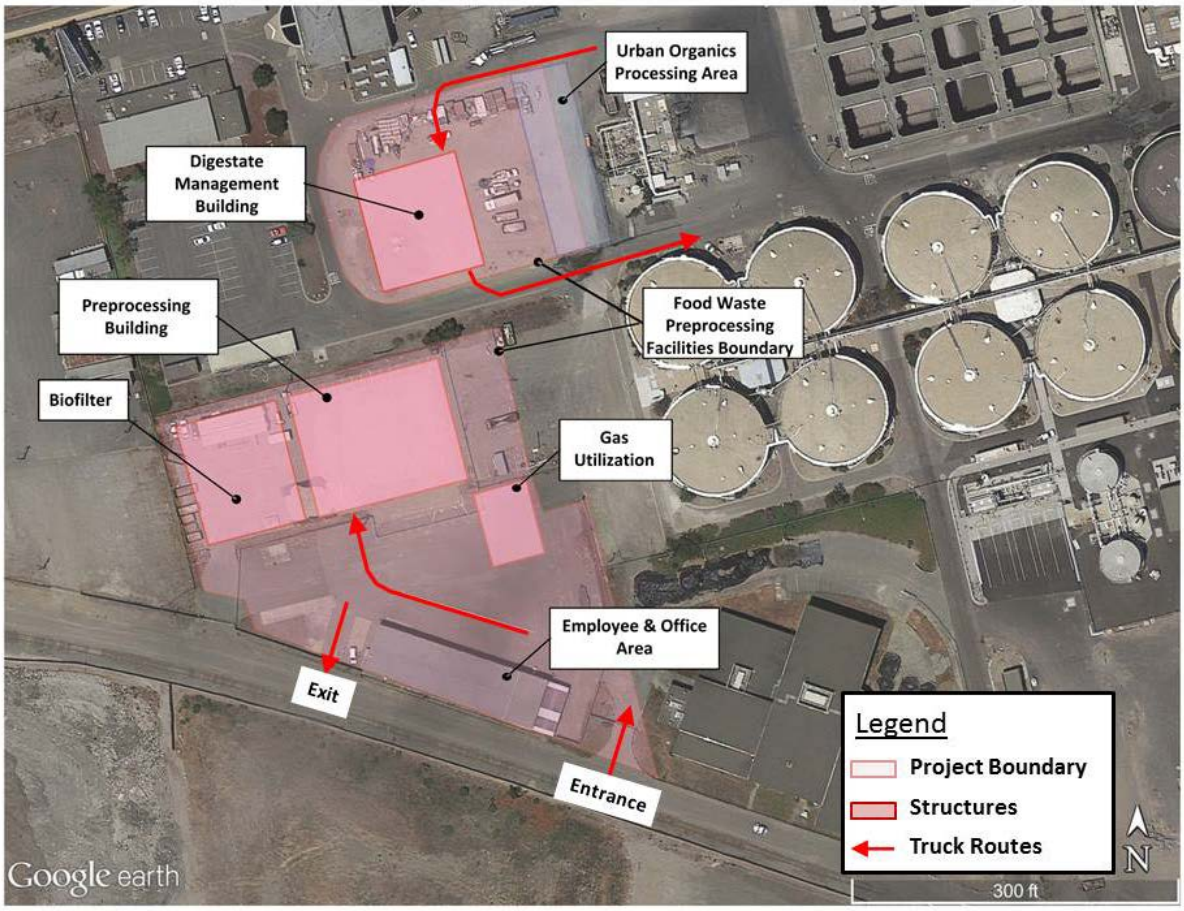

Figure 1: Proposed Site Plan

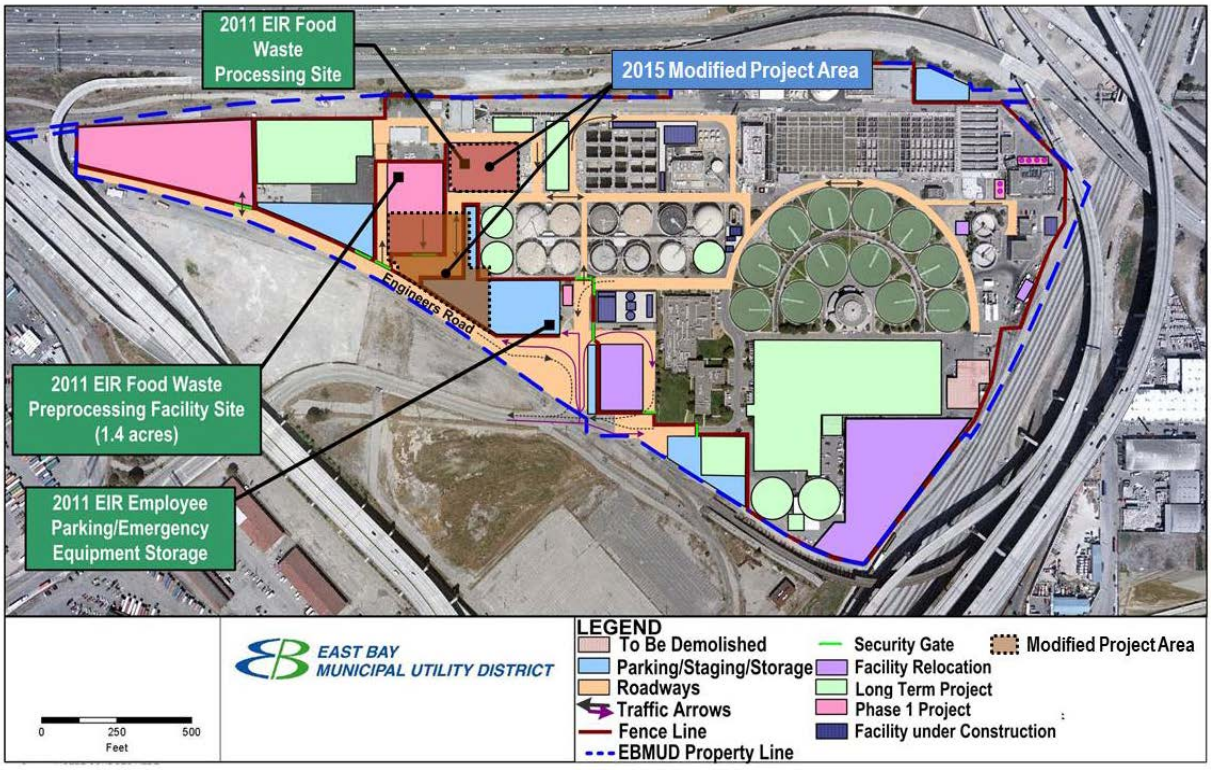

Figure 2: Comparison of Modified Project to 2011 EIR

Figure 2 shows the Modified Project footprint overlaid with the layout analyzed in the 2011 EIR. Two new buildings would be constructed as part of the Modified Project. The digestate management building would be on the site of the food waste processing facility described in the 2011 EIR, and the preprocessing building and gas utilization facility would be located partially on the site that was previously considered for the food waste preprocessing facility and partially on the site previously considered for employee parking and emergency equipment storage. Equipment storage is now proposed to be located near the Maintenance Building and employee parking would continue to be distributed throughout the MWWTP, as it is currently. The two buildings would total 27,500 square feet (sf), which is smaller than the 29,000 sf preprocessing building described in the 2011 EIR. Building heights would be similar to the building described in the 2011 EIR.

1.2.3 Purpose of Project

The purpose of the project remains the same as described in the 2011 EIR. The 2011 EIR stated that the proposed projects would "help EBMUD meet sustainability goals by increasing onsite power generation," and the objectives of the Master Plan are to:

- Promote environmental stewardship through the protection of water, air and soil quality;
- Provide flexibility to construct advanced treatment facilities to meet air, water and/or biosolids regulations in the future;
- Enhance revenues to maintain reasonable rates through land-lease agreements and continued growth of successful resource recovery programs that increase renewable energy production;
- Provide benefits to the community and enhance community relations by reducing the potential for odor or aesthetic impacts; and

- Maintain safety through emergency preparedness and by improving traffic routing to, from, and within the MWWTP.

The Modified Project meets the same sustainability goals and addresses EBMUD's Master Plan objective of enhancing revenues to maintain reasonable rates through the continued growth of successful resource recovery programs. The Modified Project would also meet the environmental stewardship objective by diverting organic material from landfills for recycling and green energy production.

1.3 Description of Modified Project

The Modified Project includes several facilities to handle organics-rich material delivered from multiple sources. The Modified Project is compared to the original project in **Table 1**.

Table 1: Comparison of Modified Project to Original Project

Item	Original Project	Modified Project
Purpose	Preprocess organics-rich waste for anaerobic digestion and renewable energy production.	No change.
Material type and sources	Organics-rich material from San Francisco, Alameda, Contra Costa and San Mateo Counties.	Organics-rich material from San Francisco, Alameda, Contra Costa and San Mateo Counties, as well as high-value material from the City of Oakland that is suitable for direct digestion without any preprocessing.
Material throughput	Maximum of 600 tpd.	No change.
Preprocessing equipment	Trommel screen, magnetic separation, and grinder.[1]	Trommel screen, magnetic separation, contamination removal, and grit separation.
Interface between the preprocessing facility and the existing anaerobic digesters	Material to be delivered by truck from food waste preprocessing facility to the EBMUD food waste facility and then piped to the existing anaerobic digesters.	Material to be delivered by pipeline from the food waste preprocessing facility to a buffer tank and then piped to the existing anaerobic digesters.
Digestion approach	Material to be either anaerobically digested and dewatered with municipal wastewater solids ("codigestion") or in one or more segregated digester(s) without municipal wastewater solids and dewatered separately ("dedicated digestion/dewatering").	No change.
Biogas utilization	Existing gas conditioning system, followed by onsite combustion in existing Power Generation Station.	New gas conditioning and upgrading system (BioCNG) to produce renewable transportation fuel and flexibility to augment production of electricity at the existing Power Generation Station.

Notes:

1. The grinder in the original project is replaced by a more advanced contamination removal system specifically designed to remove non-digestible material and followed by a grit separation system to minimize downstream impacts of grit.

The preprocessing equipment selected for the Modified Project provides higher-level preprocessing, which would allow the material to bypass the EBMUD food waste facility. The Modified Project also includes a buffer/hydrolysis tank, which would provide equalization and improve digester performance.

In both the original and Modified Projects, biogas is produced as a result of anaerobic digestion of organics-rich waste. The original project assumed that biogas would be conveyed to the onsite gas conditioning system and Power Generation Station to produce renewable electricity and heat. The Modified Project assumes that the biogas is conveyed to a new gas conditioning and upgrading facility to produce renewable transportation fuel (biogas derived compressed natural gas, hereinafter referred to as "BioCNG"). A portion of the biogas may also be utilized in the existing Power Generation Station for production of renewable electricity and heat. Both the original and Modified Projects would utilize biogas

produced by anaerobic digestion for renewable energy production. In the original project, it would have been combusted on site, whereas in the Modified Project, the BioCNG would be combusted off site.

1.3.1 Material Sources

The sources of organics-rich material that would be delivered to the Modified Project facilities are summarized in **Table 2** below. Deliveries would start at a low volume, primarily from City of Oakland collection routes, and ramp up slowly over time to the maximum daily tonnage of 600 tpd, which is the amount of material analyzed in the 2011 EIR.

Table 2: Material Deliveries

Source	Tonnage per Day (tpd) [2]	Loads per Day[3]
City of Oakland source-separated organics[1]		
Direct haul and high-value waste (3.5-ton collection trucks)	50	15
Preprocessed material (7-ton transfer trucks)	50	8
Other Alameda County Sources (20-ton transfer trucks)	62	4
San Carlos Transfer Station (San Mateo County) (20-ton transfer trucks)	20	2
Martinez Transfer Station (Contra Costa County) (20-ton transfer trucks)	74	5
Additional Sources (San Francisco, San Mateo, and/or Santa Clara Counties) (20-ton transfer trucks)	129	8
Deliveries from San Francisco (Urban Organics) (20-ton transfer trucks)	100	6
Total (Daily Average)	**485**	**48**
Peak Day Factor (25%) [4]	115	12
Total (Estimated Peak Week)	**600**	**60**

Notes:

1. The first 50 tons of City of Oakland source-separated organics deliveries would come straight from collection routes using 3.5-ton collection trucks. Additional material could be preprocessed and delivered to the MWWTP by 7-ton transfer trucks.
2. Tonnage per Day values are based on the annual deliveries divided by the number of days the facility would be accepting deliveries (i.e., 6 days per week, 52 weeks per year).
3. Loads per Day are conservatively estimated by dividing the daily tonnage by the truck capacity and adding one additional load to each source to account for the possibility that some trucks are not loaded to full capacity.
4. To account for typical deliveries on the average day of a peak week, for the impact analysis, a 25% percent peaking factor was added to the estimated daily average value.

Waste Management Contract

EBMUD is considering entering into an agreement with Waste Management of Alameda County, Inc. (Waste Management) for delivery and acceptance of commercial source-separated organics (source-separated organics) collected from within the City of Oakland to the proposed food waste preprocessing facility. Under the agreement, Waste Management or its subcontractor would deliver two streams of source-separated organics collected within Oakland: (1) unprocessed food waste delivered in "as-collected" form direct from collection routes within the City of Oakland, bypassing any transfer stations, and (2) food waste that has been preprocessed by Waste Management at Waste Management's own facilities before delivery to the MWWTP for digestion by EBMUD. The Oakland food waste would be collected from commercial entities that subscribe to Waste Management for Commercial Organics

Subscription Collection Service under the City of Oakland's mixed materials and organics franchise agreement. Subscribing commercial entities that primarily set out food waste for collection in their organics bins (as opposed to yard trimmings and other forms of green waste) would be delivered to EBMUD, while the remaining subscribers' organic waste would not be delivered to EBMUD. Waste Management would not be obligated by the agreement to deliver material collected from any location other than within the City of Oakland. The proposed agreement has a ten-year term.

Based on information currently available to EBMUD, deliveries of City of Oakland source-separated organics over the ten-year term of the contract may average up to 100 tpd, with somewhat higher quantities possible on peak days. It is estimated that approximately 40 tpd of commercially source-separated food waste is currently collected under a voluntary program in the City of Oakland. The exact quantity of food waste to be delivered to EBMUD under the proposed agreement would depend on the number of customers subscribing to Waste Management's Commercial Organics Subscription Collection Service and the quantity of food waste set out for collection by those customers; however, the quantity is estimated to average less than 100 tpd in the early years of the contract but increase somewhat during the ten-year term. It is assumed that subscriptions would increase over time because (1) the City of Oakland has awarded Waste Management a new exclusive franchise right to provide Commercial Organics Subscription Collection Service, replacing a prior free-market system in which available tons of food waste were collected by multiple companies, and (2) outreach and education efforts are expected to result in an additional increment of food waste being placed by generators in organics containers for collection.

The agreement under consideration requires that Waste Management deliver the first 50 tpd of material collected in the City of Oakland on any given day to EBMUD direct from routes in "as-collected" form, without preprocessing by Waste Management. That quantity would be preprocessed by EBMUD at the modified food waste preprocessing facility. Waste Management would have the right to deliver material quantities collected in excess of 50 tpd on a given day to EBMUD in either a preprocessed or "as-collected" (unprocessed) form, at the discretion of Waste Management. Regardless of tonnage collected on a given day, Waste Management would also have the right to deliver food waste to EBMUD for digestion that contains no contamination and does not require preprocessing. This waste stream is referred to in the contract under consideration as "high-value food waste." Any food waste delivered in preprocessed form and all high-value food waste, would be digested in EBMUD facilities but would not be preprocessed at the food waste preprocessing facility at the MWWTP, absent any deficiency in the suitability of such material for direct use in EBMUD's digesters. For the purpose of the impact analysis, it is assumed that 50 tpd would be received by EBMUD from direct haul routes and 50 tpd would be received by transfer truck preprocessed from the Davis Street Transfer Station.

Waste Management would deliver the material to the food waste preprocessing facility at any time between the hours of 5 am and 6:30 pm, Monday through Saturday. Truck trips and vehicle miles traveled (VMT) associated with these deliveries and the outgoing rejected material and resulting digestate material off-haul are shown in **Table 3**.

San Francisco Urban Organics

Processed organics-rich material would be transported to the MWWTP from a transfer station in San Francisco to the MWWTP for further processing followed by anaerobic digestion. A separate contract would provide up to 100 tpd (26,000 tons per year [tpy]) of the wet fraction of the processed organics-rich material (**Table 2**). Truck trips and VMT associated with these deliveries and the outgoing rejected material and resulting digestate material off-haul are shown in **Table 3**. Pressed organics-rich material would be delivered to the urban organics processing facility at any time between the hours of 5 am and 6:30 pm, Monday through Saturday.

Other Sources

The remainder of the organics-rich material delivered to the Modified Project site would be delivered in accordance with contracts that would be negotiated at a future date with other entities. The material would originate from a combination of sources located in Alameda, Contra Costa, San Francisco, San Mateo, and/or Santa Clara Counties. The specific sources would be identified by EBMUD and its preprocessing contractor and would originate from entities willing and able to provide organics-rich material for preprocessing and digestion at EBMUD. The quantities listed for "Other Alameda County Sources," "San Carlos Transfer Station," and "Martinez Transfer Station" in **Table 2** are based on estimates of organics-rich material provided by EBMUD's potential preprocessing contractor. The quantity for "Additional Sources" is based on a reasonable estimate of the additional organics-rich material that would be available in San Francisco, San Mateo, and Santa Clara Counties.

1.3.2 Material Deliveries and Vehicle Miles Traveled

Material deliveries and sources are summarized in **Table 2**, based on the ultimate facility capacity. The timing for the ramp up of deliveries and implementation of the ultimate facility capacity is uncertain; however the maximum material throughput is used as the basis for determining impacts.

Deliveries would initially originate from two sources (1) City of Oakland commercial source-separated organics delivered directly from collection routes, and (2) the Martinez transfer station in Contra Costa County. Delivered organics would be brought to the food waste preprocessing facility, or sent directly to the digesters. As the project expands, material would be delivered from additional sources. **Table 2** lists the projected sources and quantities of organics-rich material delivered to the MWWTP as part of the Modified Project. Future sources would be determined at a later date as the facility is expanded to full capacity. However for the purposes of this analysis, it is assumed that additional sources would be located in San Francisco, San Mateo and Santa Clara Counties. The number of loads per day and the VMT for trucks delivering organics-rich material to the MWWTP are summarized in **Table 3**.

In addition to incoming deliveries, rejected material and digested material (digestate) would be transported off site. Non-compostable material would be hauled to the Altamont landfill in Alameda County and to the Keller Canyon landfill in Contra Costa County. All digestate would be transferred to a composting facility in Lathrop, CA, in San Joaquin County. BioCNG would be trucked to a central fueling facility. The truck trips and VMT associated with material off haul and BioCNG distribution are also summarized in **Table 3**.

Table 3: Operational VMT Estimates for Modified Project

Source Location	*Existing Conditions*			*2011 EIR*			*Modified Project*		
	Truck Trip Direction	Existing Number of Loads per day	Existing Daily VMT	Truck Trip Direction	Proposed Number of Loads per day	Daily VMT Due to Original Project	Truck Trip Direction	Proposed Number of Loads per day	Daily VMT Added By Modified Project
Incoming Deliveries									
San Francisco County	SF to Jepson Prairie Organics (JPO) for Composting	10	1340	Source to MWWTP	15	360	Source to MWWTP	6	150
City of Oakland SSO Deliveries - As Collected and High Value	Collection Routes to Davis Street Transfer Station	0	0	Collection Routes to Davis Street Transfer Station	0	0	Collection routes to MWWTP (See Note 1)	15	0
City of Oakland SSO Deliveries - Preprocessed from Davis St. Transfer Station	Collection Routes to Davis Street Transfer Station	0	0	Collection Routes to Davis Street Transfer Station	0	0	Davis Street Transfer Station to MWWTP	8	136
Alameda County	Transfer Stations to Composting in Gilroy (10%), Vernalis (20%) or Altamont Landfill (70%)	10	824	Transfer Station or Source to MWWTP	19	182	Transfer Stations or Source to MWWTP	4	122

	Existing Conditions			*2011 EIR*			*Modified Project*		
Source Location	**Truck Trip Direction**	**Existing Number of Loads per day**	**Existing Daily VMT**	**Truck Trip Direction**	**Proposed Number of Loads per day**	**Daily VMT Due to Original Project**	**Truck Trip Direction**	**Proposed Number of Loads per day**	**Daily VMT Added By Modified Project**
San Mateo County	San Carlos Transfer Station to Newby for Composting (40%) or Ox Mountain Landfill	5	184	San Carlos Transfer Station to MWWTP	5	310	San Carlos Transfer Station to MWWTP	2	160
Contra Costa County	Martinez Transfer Station to MWWTP (5%) or Keller Canyon Landfill (95%)	5	150	Martinez Transfer Station to MWWTP	7	462	Martinez Transfer Station to MWWTP	5	438
Additional Future Sources (San Francisco, San Mateo, and/or Santa Clara Counties)	Not applicable	0	0	Not applicable	0	0	Transfer Stations to MWWTP	8	409
Peak Day Factor **(See Note 2)**							25%	12	354
Total - Incoming Deliveries		**30**	**2,498**		**46**	**1,314**		**60**	**1,769**

Source Location	*Existing Conditions*			*2011 EIR*			*Modified Project*		
	Truck Trip Direction	Existing Number of Loads per day	Existing Daily VMT	Truck Trip Direction	Proposed Number of Loads per day	Daily VMT Due to Original Project	Truck Trip Direction	Proposed Number of Loads per day	Daily VMT Added By Modified Project
Outgoing Deliveries									
San Francisco	JPO to MWWTP (backhaul) or Non-Compostable to Hay Road Landfill	5	0	MWWTP to Compost Operation	7	756	Not Applicable	0	0
Alameda County	Non-Compostable from Composting to Altamont Landfill	3	264	MWWTP to Compost Operation	7	830	MWWTP to Altamont Landfill	1	90
San Mateo County	Non-Compostable from Composting to Ox Mountain Landfill	1	80	MWWTP to Compost Operation	3	336	Not Applicable	0	0
Contra Costa County	Non-Compostable from MWWTP to Altamont Landfill	0.125	11	MWWTP to Compost Operation	3	337	MWWTP to Keller Canyon Landfill	1	75
San Joaquin County	Not applicable	0	0	Not applicable	0	0	MWWTP to Compost Operation	6	780

Source Location	*Existing Conditions* Truck Trip Direction	Existing Number of Loads per day	Existing Daily VMT	*2011 EIR* Truck Trip Direction	Proposed Number of Loads per day	Daily VMT Due to Original Project	*Modified Project* Truck Trip Direction	Proposed Number of Loads per day	Daily VMT Added By Modified Project
Biogas Deliveries									
San Joaquin County	Not applicable	0	0	Not applicable	0	0	MWWTP to CNG-fueled fleet depot	2	150
Total - Outgoing Deliveries		**9.125**	**355**		**20**	**2,259**		**10**	**1,095**
Total Truck Trips (Incoming + Outgoing)			**2,853**			**3,573**			**2,864**
Employee Trips					38	380		38	380
Total - All Trips		**39.125**	**2,853**		**104**	**3,953**		**106**	**3,244**
Net Change from Existing Conditions						**1,100**			**391**
Net Change from 2011 EIR Conditions									**-709**

Notes:

1. It is assumed that on average the vehicle miles for collection truck routes to the Davis Street Transfer Station in San Leandro are the same as vehicle miles for collection truck routes to the MWWTP in West Oakland; therefore, there are no VMT added by the Modified Project.
2. The peak day factor of 25% is added to the total number of incoming loads per day and VMTs to estimate the impact of peak conditions.

1.3.3 Food Waste Preprocessing, Dedicated Digestion and Dewatering, and Renewable Vehicle Fuel Production

This is the central component of the Modified Project, whose functions include:

- Receiving organics-rich material, including source-separated commercial organics from the City of Oakland.
- Preprocessing the organics-rich material to remove contamination and recyclables, and then slurrying the material and conveying it to a buffer tank.
- Pumping the preprocessed material into one or more existing EBMUD digesters that would be "dedicated" (used exclusively for) the digestion of food waste and other organic material (i.e., segregated from municipal wastewater solids).
- Dewatering digestate resulting from the digestion of the organic material into a cake to be used as a compost feedstock or for another beneficial use.
- Conditioning and compressing digester biogas to produce a compressed natural gas (BioCNG) for distribution as vehicle fuel.

It is expected that all facilities, including the urban organics facility (described in Section 1.3.4) would be implemented between approximately the fall of 2015 and the spring of 2017. For the purpose of the impact analysis, it is conservatively assumed that all components are constructed concurrently and on a compressed schedule, between fall of 2015 and spring of 2016. As described in the 2011 EIR, the preprocessing and dewatering facilities may be implemented in two stages. The first stage would be designed to process half of the material that would be processed at full build-out. For the purpose of the impact analysis, it is assumed that all components, including the urban organics facility, and the ultimate facility build-out are constructed concurrently (**Figure 3**).

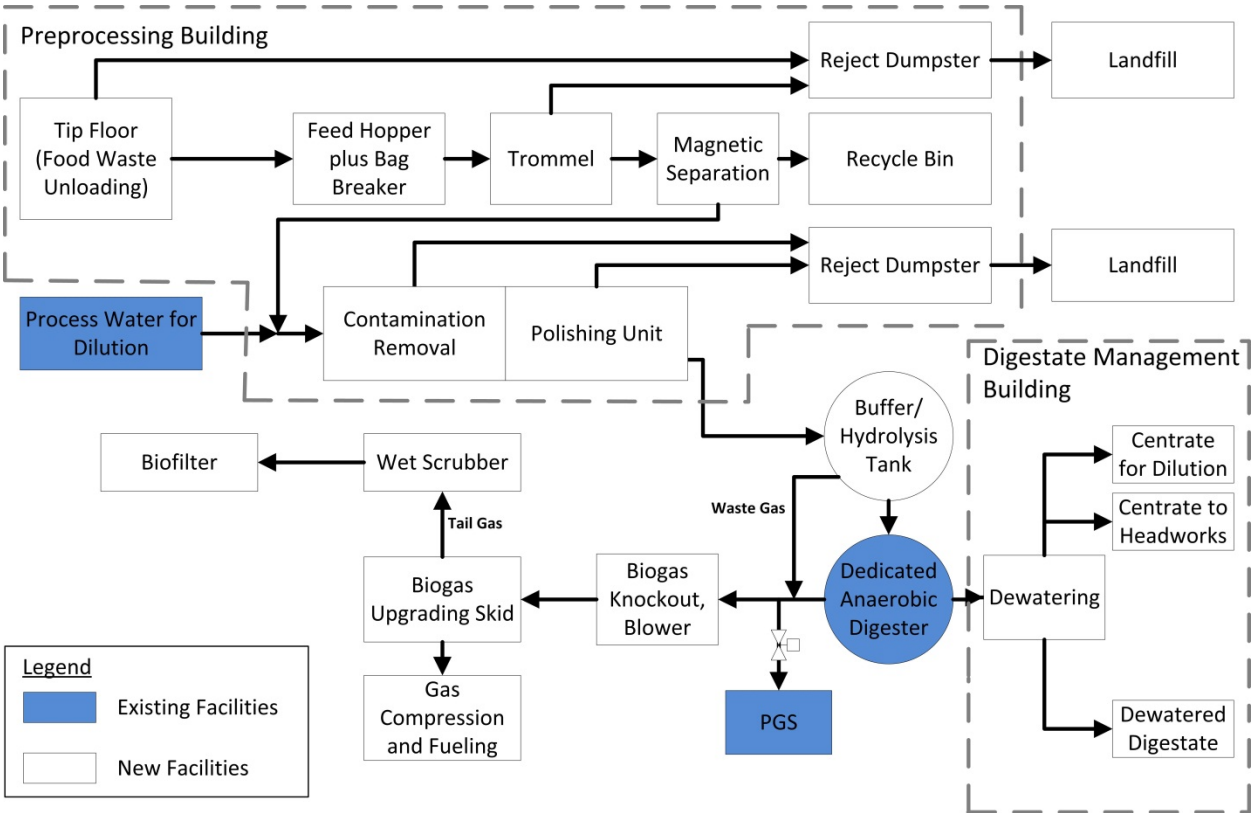

Figure 3: Food Waste Flow Diagram

Construction

Construction of the facilities related to food waste preprocessing, dedicated digestion and dewatering, and renewable vehicle fuel production would consist of the following activities:

- Excavation
- Foundation construction
- Above- and below-ground piping and connections
- Building and tank structure construction
- In-building process equipment installation

Table 4 summarizes the durations for these activities and the related impacts. Buildings will be constructed to accommodate all equipment necessary for buildout material throughput capacity; however, initial equipment installed will only accommodate half the buildout throughput capacity. Installation of equipment to expand capacity to full build out capacity will occur at a later date.

Table 4: Construction Activity and Durations for Preprocessing and Post-processing

Activity	Duration (days)	Vehicles Used and Fuel Type	Number of Trips	Vibration-Causing Activities
Excavation	15	Excavators and dump trailers	Daily use, multiple trips for duration	Minimal
Foundation construction	136	Concrete trucks, pile drivers, loaders, skid steers, and pump truck	484 concrete truck trips 90 pile driver days Daily skid steer Pump truck, as required	Yes, due to pile driving
Piping and connections	35	Excavators, dump trailers, and backhoe	10 trips with excavator and dump trailers Daily use of boom lift	Minimal
Building and tank structure construction	105	Crane, delivery trucks, scissor lifts, zoom lift, skid steer (with forks)	30 days of crane Daily use of boom and scissor lifts 25 total delivery trucks trips for tank and two buildings	Minimal
Process equipment installation	197	Crane, delivery trucks, scissor lifts, boom, skid steers	10-20 delivery truck trips Daily use of other equipment	No, all low vibration construction

Construction is expected to occur between November 2015 and June 2016. Construction activities would take place during daytime hours (7 am to 7 pm). If extended hours are required, the construction contractor would restrict all night-time construction activities to those that meet all noise level restrictions listed in the 2011 EIR, as required by Mitigation Measure NOI-1.

Construction staging, laydown of construction materials and equipment, and stockpiling of excavated soils would occur primarily within the MWWTP and West End properties. Parking for workers would occur adjacent to the building labeled "Employee & Office Area" in **Figure 1**.

The proposed site layout for these facilities is shown in **Figure 1.** The project would require approximately 2.2 acres (96,000 sf) for the preprocessing facility and 0.9 acres (40,000 sf) for the hydrolysis tank and digestate management building. The full facility build out would involve installation of additional equipment within these facilities.

Due to the requirements for construction of the project, existing site layout, and soil conditions at the site, grading activities would require removal of excess excavated materials. Approximately 4,700 cubic yards (cy) of soil would be hauled off site as part of construction. Soil off haul would be handled in accordance with the 2008 Department of Toxic Substances Control (DTSC) approved Operations and Maintenance Plan ("O&M Plan"), which was updated in 2012 (Geologica, 2012)[1]. All soils would be removed according to an approved Soils Management Plan, which would be developed prior to construction.

[1] The 2012 update incorporated minor clarifications and changes to reduce the sampling/inspection frequency based on data gathered to date. For example, the 2012 O&M Plan reduced the inspection frequency of the engineers asphalt cap from twice per year to once per year and groundwater sampling from biannual to either biannually or less frequently as dictated by DTSC.

Operations

The preprocessing and dewatering facilities would initially be sized to preprocess an average of 192 tpd of organic material (60,000 tpy). At full build out, additional equipment would be added to preprocess an average of 385 tpd and dewater the associated digestate. The facility would be operated 24 hours per day, seven days per week. Organics-rich waste would be received 13.5 hours per day (from 5 am to 6:30 pm) Monday through Saturday. The facility would have an estimated seven full-time employees. The facilities that would be constructed as part of the Modified Project include:

Weigh station – Trucks carrying organic waste would enter the site and drive to the scale at the weigh station.

Preprocessing building – The preprocessing building is an 18,000 sf building with a 38-foot clear eave height, constructed with corrugated insulated steel walls and a 20-inch concrete slab foundation. After weighing in, the trucks would reverse into the preprocessing building and dump organic material onto the sloped tip floor. The material on the tip floor would be transferred by a diesel-fueled front-end loader and/or a diesel-fueled grappler to the stationary equipment within the preprocessing building. The diesel-fueled equipment would have appropriate filters to reduce emissions consistent with Mitigation Measure AIR-5. Additionally, this equipment may be replaced with CNG-fueled equipment when technically feasible to provide onsite CNG fueling. The stationary equipment would include:

- Feed hopper and bag breaker to separate the organics material from the carrier bags
- Chain-belt conveyor for conveyance of materials through the process train
- Vibrating screen (trommel screen) to remove coarse material (>150 mm) from the fine material
- Magnetic separator for removal of ferrous metals for recycling
- Two TORNADO® separation and squeezing machines for separation of organic material and removal of contaminants, such as plastic, glass, gravel, stones, metals and sands
- Polishing unit to remove grit
- Motors, pumps, and valves associated with the piping and equipment listed above
- Instrumentation and controls

Process water or disinfected tertiary recycled water would be added to the organics-rich material to create a slurry. The preprocessing building would be kept under negative pressure with all air flow treated through an onsite biofilter.

Buffer tank/hydrolysis tank – The preprocessed organic material would be conveyed as slurry to an approximately 320,000-gallon buffer tank located adjacent to the digestate management building. The buffer tank would provide equalization of feed flows to the digesters. This tank would in the future be upgraded to hydrolyze the slurry prior to sending to the digesters. An external tube and tube heat exchanger would be added to the tank to provide this functionality. The tank headspace would have ducting to route any biogas produced in the tank to the digester gas header.

Digestate management building/dedicated dewatering – A 9,500 sf building to house the digestate dewatering equipment would be constructed. Digested food waste from the dedicated anaerobic digester(s) would be conveyed to the dedicated dewatering facilities within the digestate management building, consisting of an in-line dry polymer feed system, in-line static mixer, centrifuges, cake hopper with conveyors, and cake load out bypass. The cake would be

loaded into end-dump trailers for off haul. A portion of the centrate may be used to slurry the preprocessed food waste and the remainder would be sent back to the MWWTP headworks.

Odor control system – All foul air from buildings and equipment and the tail gas from the gas utilization system would be conveyed through foul air ducts to a wet scrubber (i.e., bio-trickling filter), followed by a 10,000 sf biofilter to remove volatile organic compounds, trace methane, hydrogen sulfide, ammonia, and other odorous compounds. The odor control system would be located outside, adjacent to the preprocessing building.

Gas utilization system – A system to treat biogas generated from the anaerobic digesters would be located adjacent to and east of the preprocessing building (see **Figure 1**). The gas utilization system would draw off biogas from the main digester gas header to produce renewable compressed natural gas for vehicle fuel (BioCNG). The system would include carbon dioxide, hydrogen sulfide, and water scrubbing equipment. The gas utilization system may be operated in parallel with the existing gas utilization system; if an isolation valve is utilized to isolate the biogas produced in the one or more dedicated digesters, an emergency flare would likely be constructed adjacent to the BioCNG facility to prevent the release of biogas in the unlikely event that the CNG facility experiences an unplanned shutdown and the isolation valve to the main gas header fails to open.

Approximately 770 cubic feet per minute (cfm) of biogas would be produced from digestion of the food waste at full buildout. From that biogas, approximately 3,100 gallons of gasoline equivalents per day of BioCNG would be produced, sufficient to provide fuel for approximately 48 heavy-duty vehicles per day. The treated biogas would be compressed and passed through a packed media column using low temperature water. The carrier water would then be passed through an air-stripping vessel, removing trace amounts of methane, hydrogen sulfide and other gases, which would then be passed through a wet scrubber (i.e., bio-trickling filter) and then through the biofilter. The product BioCNG would be dispensed at a slow-fill station located on site, filling bottle tubes that would be transported by truck to CNG customers. Approximately 2 trucks per day would be required to transport the bottled CNG.

At full build-out, the food waste preprocessing, digestate management and gas utilization facilities would collectively draw approximately 830 kilowatts of electricity, or approximately 16,040 kilowatt-hours (kWh) per day, based on the hours of operation of each facility.

Any process water or washdown water that leaves the equipment processes by drain or spill would be contained and then conveyed to the MWWTP headworks. No process or washdown water would enter City of Oakland stormdrains. Site stormdrains would be segregated from sources of process and washdown water. Rain that falls on the West End property would drain to storm drains that empty to the City of Oakland's stormwater collection system and flow to the San Francisco Bay. For facilities developed on the MWWTP property, stormwater would be conveyed directly to the MWWTP headworks, consistent with current operations.

1.3.4 Urban Organics Facility

This facility would be installed under a canopy in the area adjacent to the digestate management building or within the preprocessing building described in the previous section. The facility would accept organics-rich material extracted elsewhere from solid waste by high pressure extrusion (pressed organics-rich material), and provide processing to further separate any residual small plastic film and grit using an organics polishing system. The facility would consist of a below-grade pit with a metal live-bottom bin to receive urban organics hauled to the facility in end dump trucks; a dynamic cyclone to remove small plastic film, paper, and floatables; and a hydrocyclone and grit washer to remove, wash, and drain grit.

The live bottom bin, dynamic cyclone, and grit removal system would be ventilated under negative pressure, with foul air sent to an activated carbon tower for odor scrubbing. The live-bottom bin would

have a hydraulically-actuated lid that would contain odors when the pit is not receiving material from a truck.

Rejected material, including plastic film, floatable materials, and grit would be collected in a container for periodic disposal.

Construction

Construction of the urban organics facility would consist of the following activities:

- Site preparation and demolition
- Excavation and grading
- Foundation construction
- Canopy, concrete slab and receiving bin construction
- Process equipment installation

Table 5 summarizes the durations for these activities and the related impacts.

Table 5: Construction Activity and Durations for Urban Organics Facility

Activity	Duration (days)	Vehicles Used and Fuel Type	Number of Trips	Vibration-Causing Activities
Site Preparation and Demolition	6	Excavators and dump trailers	35 trips with dump trailers (6 per day) Daily use of excavators	Minimal
Excavation and Grading	7	Excavators, dump trailers, and backhoe	35 trips with excavator and dump trailers	Minimal
Foundation Construction	20	Concrete trucks, pile drivers, loaders, skid steers, and pump truck	55 concrete truck trips 20 pile driver days Daily skid steer Pump truck, as required	Yes, due to pile driving
Canopy and receiving bin construction	40	Crane, delivery trucks, scissor lifts, zoom lift, skid steer (with forks)	30 days of crane Daily use of boom and scissor lifts 5-10 total delivery trucks trips for tanks	Minimal
Process equipment installation	40	Crane, delivery trucks, scissor lifts, boom, skid steers	5-10 delivery truck trips Daily use of other equipment	No, all low vibration construction

Construction is expected to occur between November 2015 and April 2016. Construction activities would take place during daytime hours (7 am to 7 pm). If extended hours are required, the construction contractor would restrict all night-time construction activities to those that meet all noise level restrictions listed in the 2011 EIR.

Construction staging, laydown of construction materials and equipment, and stockpiling of excavated soils would occur entirely within the MWWTP and West End properties. Parking for workers would occur adjacent to Building 1084 (labeled “Employee & Office Area” in **Figure 1**). The urban organics

facility would require approximately 0.25 acres (11,100 sf). Grading activities would require removal of excess excavated materials. Approximately 1,400 cy of soil would be hauled off site as part of construction.

Operations

Material delivered to the facility would be handled by first depositing the delivered material into a below-grade receiving pit with a live bottom metal bin, then conveying it by shaftless screw conveyor to a feed hopper in the dynamic cyclone. Progressive cavity mixing pumps would convey the material out of the dynamic cyclone to the hydrocyclone. Organics from the dynamic cyclone would be mixed with dilution water in a progressive cavity dilution pump to create a slurry. Dilution water would either be process water or disinfected tertiary recycled water from the MWWTP. The pump would convey the slurried material to the hydrocyclone, where it would be mixed with additional dilution water in an enclosed feed dilution tank and mixed to create a homogenous slurry. The mixture would be pumped to the hydrocyclone where denser material (e.g., grit) is removed via an underflow and conveyed to a vibrating microscreen grit washer, which would discharge grit to a receiving bin for off haul. The organic material would pass through the hydrocyclone overflow and discharge to a final product pumping tank with mixer. The material then would be pumped to a 16,500-gallon equalization tank, constructed of high-density polyethylene (HDPE) with a top entry mixer. The material then would be fed to the digesters. The urban organics facility would draw approximately 900 kWh of electricity per day.

1.3.5 Environmental Commitments from 2011 EIR and Other Requirements Applicable to the Modified Project

The 2011 EIR included a number of environmental commitments drawn from standard EBMUD construction specifications, which contain safety and environmental requirements that are implemented during all construction projects. Facilities at the West End property are also subject to a Covenant to Restrict Use of Property, Environmental Restriction imposed by the DTSC; the DTSC restrictions would be applicable to the Modified Project. The Modified Project would also be subject to any measures imposed by the CalRecycle Local Enforcement Agency (Alameda County Environmental Health) through the solid waste facilities permit for the project. Environmental commitments and other requirements that would be applicable to the Modified Project would be incorporated into any contracts for the design, construction, and operation of the facilities described in the Addendum and are listed below:

Aesthetics

Construction Site Management

Throughout the period of demolition and construction, EBMUD would require the construction contractor to keep the work site free and clear of all rubbish and debris, and to promptly remove from the site, or from property adjacent to the site of the work, all unused and rejected materials, surplus earth, concrete, plaster, and debris.

The construction specifications require that when construction is completed excess materials or debris shall be removed from the work area (Section 013544-1.1 (B)).

Air Quality

Dust Control and Monitoring Plan

EBMUD's Construction Specifications require development of a Dust Control and Monitoring Plan in order to control construction-related dust (Section 013544-1.3(E)). The plan shall detail the means and methods for controlling and monitoring dust generated by construction activities, as well as measures for the control of paint overspray generated during the painting of exterior surfaces.

Equipment and Vehicle Idling

Section 2485, Title 13, California Code of Regulations (CCR) requires limiting the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds, both California- and non-California-based trucks) to five minutes at any location.

Hazardous Materials / Hydrology and Water Quality

Notification of Hazardous Materials

EBMUD's Construction Specifications General Conditions, Article 7.6.1, requires that "Pursuant to Public Contract Code Section 7104, the Contractor shall promptly, and before such conditions are disturbed, notify the Engineer in writing of: (1) Material that the Contractor believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is not indicated in the Contract Documents and that is required by law to be removed to a Class I, Class II, or Class III disposal site; (2) Subsurface or latent physical conditions at the site differing materially from those indicated in this contract; or (3) Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this contract."

Project Safety and Health Plan

EBMUD's Construction Specifications require a Project Safety and Health Plan (013524-1.3(B)) if actual, potential, or anticipated hazards include: a) hazardous substances; b) fall protection issues; c) confined spaces; d) trenches or excavations; or, e) lockout/tagout. The Plan shall detail measures to be taken to alleviate the identified risks, identify appropriate health and safety requirements, and designate a contractor's project safety and health representative.

Construction and Demolition Waste Disposal Plan

EBMUD's Construction Specifications require a Construction and Demolition Waste Disposal Plan (013544-1.3(C)) specifying how the contractor will remove, handle, transport and dispose of all material to be disposed of in a safe, appropriate, and lawful manner. The Plan must identify each type of waste material to be reused, recycled, or disposed of; list reuse facilities, recycling facilities, processing facilities, or landfills that will be receiving the materials; and include the sampling and analytical program for characterization of any waste material for disclosure to EBMUD.

Spill Prevention and Response Plan

EBMUD's Construction Specifications require a Spill Prevention and Response Plan (013544-1.3(D)) detailing the hazardous materials (including petroleum products) proposed for use or generated at the job site and describing the means and methods for controlling spills, monitoring hazardous materials, and providing immediate response to spills. Spill response measures would address notification of EBMUD, safety issues regarding construction personnel and public health, and methods for spill response and cleanup.

Controls on Site Activities

EBMUD's Construction Specifications require controls on site activities and describe measures that shall be implemented to prevent the discharge of contaminated storm water runoff from the site. Erosion control measures in the specifications include:

- No debris, soil, silt, sand, bark, slash, sawdust, asphalt, rubbish, paint, oil, cement or concrete or washings thereof, oil or petroleum products, or other organic or earthen materials from construction activities shall be allowed to enter into or be placed where it may be washed by rainfall or runoff outside the construction limits. (013544-1.1(B)(1))

- Divert or otherwise control surface water and waters flowing from existing projects, structures, or surrounding areas from coming onto the work areas. The method of diversions or control shall be adequate to ensure the safety of stored materials and of personnel using these areas. Following completion of work, ditches, dikes, or other ground alterations made by the Contractor shall be removed and the ground surfaces shall be returned to their former condition, or as near as practicable, in the Engineer's opinion. (013544-1.1(B)(6))
- Maintain construction sites to ensure that drainage from these sites will minimize erosion of stockpiled or stored materials and the adjacent native soil material. (013544-1.1(B)(7))

Water Control and Disposal Plan

EBMUD's Construction Specifications require a Water Control and Disposal Plan (013544-1.3(B)) describing measures for containment, handling, and disposal of groundwater (if encountered), runoff of water used for dust control, storm water runoff, wash water, and construction water or other liquid that has come into contact with any interior surface of a reservoir or inlet/outlet pipeline. The discharge must comply with regulations of the Regional Water Quality Control Board (RWQCB), California Department California Department of Fish and Wildlife (CDFW), County Flood Control Districts, and any other regulatory agency having jurisdiction, whichever is most stringent.

Excavation and Trenching

EBMUD's Construction Specifications require an Excavation Safety Plan (013524-1.3(C)) for worker protection and control of ground movement for the Engineer's review prior to any excavation work at the jobsite. The Plan shall include drawings and details of system or systems to be used, area in which each type of system will be used, de-watering, means of access and egress, storage of materials, and equipment restrictions.

Section 013524-3.2(B) of the Construction Specifications establishes requirements for excavations under hazardous conditions. As required in Section 6705 of the Labor Code, excavation of any trench five feet or more in depth shall not begin until the Contractor has received notification of EBMUD's acceptance of the Contractor's detailed plan for worker protection from the hazards of caving ground during the excavation.

- Such plan shall show the details of the design of shoring, bracing, sloping, or other provisions to be made for worker protection during such excavation.
- No such plan shall allow the use of shoring, sloping or a protective system less effective than that required by the Construction Safety Orders, Title 8, CCR, and if such plan varies from the shoring system standards established by the Construction Safety Orders, the plan shall be prepared and signed by an engineer who is registered as a Civil or Structural Engineer in the State of California. California Occupational Safety and Health Administration (Cal/OSHA) Permit: Title 8, CCR Section 341(a)(1) 31 requires excavators to obtain a permit PRIOR to digging trenches or excavations which are 5 feet or deeper and into which a person is required to descend.

In the event of any violation of Article 6 of the Construction Safety Orders or deviation from the submitted plan for worker protection and control of ground movement, EBMUD may suspend work, or notify Cal/OSHA, or both.

Noise

Compliance with Noise Ordinance

EBMUD's Construction Specifications require compliance with local noise ordinances (013544-3.4). The Contractor is responsible for taking appropriate measures, including muffling of equipment, selecting quieter equipment, erecting noise barriers, modifying work operations, and other mitigations as needed to bring construction noise into compliance.

Operation and Maintenance Plan Required by DTSC Environmental Restrictions

Because the West End property has not been remediated to levels that are suitable for unrestricted land use, DTSC and U.S. Army recorded a Covenant to Restrict Use of Property, Environmental Restriction (deed restriction) with the Alameda County Assessor's Office on June 29, 2007 (DTSC 2007). The deed restriction specifies soil and risk management procedures (environmental restrictions) that must be implemented to ensure safe management of soil and groundwater remaining at the site and to ensure that human health and the environment are protected during future activities at the site. The environmental restrictions of the deed restriction apply to successive owners of the property, and were assigned to EBMUD in a consent agreement entered into by DTSC and EBMUD in 2009 (DTSC 2009).

An Operation and Maintenance Plan (O&M Plan) describing the inspection, soil management, groundwater monitoring, annual reporting, and five-year review requirements for the site, to be implemented in accordance with the deed restriction, has been prepared by EBMUD (Geologica 2008). The plan has been approved by DTSC, and also specifies regulatory coordination that must occur when soil or groundwater is disturbed. The O&M Plan was originally approved in 2008 and updated in 2012 (Geologica 2012). For the entire West End property, the O&M Plan specifies that:

- Placement of any property soil outside of the property boundary is permitted only with written approval from DTSC.
- Excavation or disturbance of any soil deeper than 5 feet below ground surface is permitted only with the written approval of DTSC. However, in emergency situations, EBMUD may excavate or disturb soil without prior DTSC approval, provided that the soil management and risk management procedures of the operations and maintenance plan are followed, and that EBMUD notifies DTSC by phone or email of the soil excavation or disturbance within 24 hours of the onset or discovery of the emergency.
- Excavated soil must be appropriately characterized to determine if it is suitable for onsite reuse, or if it must be disposed of at an appropriately licensed off-site disposal facility. At a minimum, the soil must be analyzed for total petroleum hydrocarbons as gasoline, diesel, and motor oil; volatile organic compounds; and Title 22 metals (including analysis of soluble metals concentrations using the Waste Extraction Test [WET] or Toxic Characteristic Leaching Procedure [TCLP] method, as appropriate). Typically, one composite soil sample would be required for each 1,000 cy of soil excavated. However, individual disposal facilities may require additional samples and/or analyses.
- Onsite reuse of excavated soil is only permitted if the sample results indicate that the material is not a hazardous waste and is suitable for reuse at the site. Soil characterization for reuse can be completed prior to removal (in situ, which involves the installation of soil borings for collection of soil samples) or after excavation as described above, provided that a suitable controlled location is available for stockpiling that anticipated volume of soil. For onsite reuse, the soil should not contain constituents at concentrations greater than federal and state hazardous waste criteria, industrial Preliminary Remediation Goals, or commercial/industrial Environmental Screening Levels (petroleum hydrocarbons only), whichever is most conservative. To characterize the soil for onsite reuse, 1 sample per 250 cy of excavated soil is required for the first 1,000 cy of soils excavated, and 1 additional sample is required for each additional 500 cy of excavated soil.
- Soil that is unsuitable for onsite reuse and which will not be directly hauled to an off-site disposal facility at the time of excavation must be stockpiled in a manner that limits the potential for generation of dust and/or sediment-laden runoff. Soil shall be stockpiled on a minimum 6-mil plastic sheet of sufficient size to contain the entire stockpile and the entire stockpile shall be covered with a minimum 6-mil plastic sheet secured with sandbags at the close of each workday and at all times during inclement weather. All stockpiled soil shall be properly disposed of within 90 days of generation.

- Workers engaged in activities that will disturb or expose subsurface soil must be appropriately trained in and must follow the standard health and safety procedures described in Appendix A of the O&M Plan. Site and action-specific health and safety plans are required for all activities involving soil removal and/or disturbance.
- Appropriate measures shall be taken to minimize the generation of fugitive dust during soil excavation or disturbance activities in general accordance with the Bay Area Air Quality Management District (BAAQMD) "Basic" and "Optional" PM10 (fugitive dust) control measures (see Section 3.3, Air Quality, for a description of the BAAQMD dust control measures).

For groundwater and accumulated liquids, the O&M Plan specifies that:

- Dewatering activities for any future construction are subject to all applicable local and state requirements, including those of the RWQCB, for disposing of liquids from dewatering activities.
- Groundwater and accumulated liquids produced during construction activities must be characterized in-situ prior to disposal or retained on site until characterized for appropriate disposal. Testing to characterize the groundwater or accumulated liquids must include analysis for total petroleum hydrocarbons as gasoline, diesel, and motor oil; volatile organic compounds; and Title 22 metals. Under no circumstances may site groundwater or accumulated liquid be discharged to a storm drainage system, ground surface, or any pathway (e.g. a drainage ditch) that might reasonably be expected to convey site groundwater and accumulated water off the property or to San Francisco Bay. Depending on the analytical results, and subject to approval from the EBMUD Resource Recovery Program, the groundwater or accumulated liquids may be transported to the MWWTP for disposal, although additional testing (e.g. chemical oxygen demand) may be required, depending on the volume of liquid requiring disposal. Groundwater and accumulated liquids found to contain metals or other analytes at concentrations greater than the Soluble Threshold Limit Concentration (STLC) or TCLP values must be treated and/or disposed of at a facility licensed to accept hazardous waste and the transport and disposal of this liquid must be conducted in accordance with all applicable state, federal, and local regulations.

1.3.6 Mitigation Measures from 2011 EIR Applicable to the Modified Project

As Lead Agency for preparation of the MWWTP Land Use Master Plan EIR, EBMUD has adopted mitigation measures as part of its Mitigation Monitoring Reporting Program for the 2011 EIR. The following mitigation measures would be applicable to the Modified Project. Note that Mitigation Measure AIR-6a assumes that the food waste preprocessing facility would be constructed within a building. Because one element of the Modified Project, the urban organics facility, may not be within a building, EBMUD would enforce the other odor control measures specified in Mitigation Measures AIR-6a and AIR-6b, as applicable, and would monitor the facility to ensure that odor control measures that are included in the project description (see Sections 1.3.3 and 1.3.4) are implemented by the operator of the Modified Project. As described there, the facility is designed to limit odors. However, consistent with Mitigation Measure AIR-6a's requirement to implement protocols to minimize nuisance odor problems, if odor problems occur, and persist, EBMUD would suspend acceptance of urban organics if necessary to address odor impacts. EBMUD will contractually require compliance with all applicable mitigation measures in the design, construction and operation of the facilities described in this Addendum.

Aesthetic Measures

Mitigation Measure AES-2a: Maintenance of Construction Worksite. Throughout the period of demolition and construction, EBMUD will require that the construction contractor keep the worksite free and clean of all rubbish and debris and promptly remove from the site or from property adjacent to the site of the work, all unused and rejected materials, surplus earth, concrete, plaster, and debris.

Mitigation Measure AES-2b: Design of Facilities to Be Aesthetically Consistent with Existing Visual Character. EBMUD would require all new facilities be, at a minimum, designed to be aesthetically

consistent with existing visual character and surrounding wastewater treatment buildings. Design, exterior finishes, and color would blend with the surrounding facilities.

Mitigation Measure AES-3: Lighting Design and Low Reflective Paint. EBMUD would require that lighting be consistent with existing lighting in terms of height, spacing and design. New lighting would be shielded and directed to the interior of the project site. New structures and buildings would be painted in low reflective paint consistent with existing structures at the MWWTP.

Air Quality Measures

Mitigation Measure AIR-1: Criteria Air Pollutant and Precursor Reduction Measures. To limit dust, criteria pollutant, and precursor emissions associated with construction of all Master Plan projects, EBMUD shall include the following measures, as applicable, in contract specifications:

- 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 areas shall be limited to 15 miles per hour.
- 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 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.
- A publicly visible sign with the telephone number and person to contact at the Lead Agency regarding complaints related to excessive dust or vehicle idling shall be posted at the MWWTP entrance. This person shall respond and take corrective action within 48 hours.

Mitigation Measure AIR-5: Diesel Particulate Reduction Measures. Diesel-powered onsite rolling stock (2 loaders, excavator, and 2 end dump trucks) associated with the food waste preprocessing facility and any other diesel equipment or trucks operating solely within the MWWTP and West End property under the control of EBMUD shall install a CARB-verified Level 3 Diesel Particulate Filter to reduce PM2.5 emissions to achieve a minimum reduction of 50 percent (sufficient to reduce combined emissions to below the BAAQMD CEQA excess cancer risk threshold of 10 in a million). Alternative options for achieving this reduction can also be implemented, including the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as such become available.

Mitigation Measure AIR-6a: Odor Controls in Food Waste Preprocessing Facility. EBMUD shall include the following measures in contract specifications:

- Roof vents on the proposed building or point sources should be designed to accommodate odor controls in the event that odor problems occur in the future and controls are ultimately needed.

- All food waste shall be processed within 48 hours of receipt or protocols shall be implemented to minimize nuisance odor problems and ensure compliance with applicable BAAQMD air permit requirements.

Mitigation Measure AIR-6b: Odor Controls on Other Land Use Master Plan Elements. Odor control is not needed for the biodiesel production facility. All other short- and long-term Land Use Master Plan projects shall be reviewed for odor potential during the design phase. Operational and design odor control measures shall be incorporated into the project to minimize off-site odor impacts and ensure compliance with BAAQMD air permit fenceline monitoring limits. Odor controls that could be implemented where appropriate include: activated carbon filter/carbon adsorption, biofiltration/bio trickling filters, fine bubble aerator, hooded enclosures, wet and dry scrubbers, caustic and hypochlorite chemical scrubbers, ammonia scrubber, energy efficient blower system, thermal oxidizer, capping/covering storage basins and anaerobic ponds, mixed flow exhaust, wastewater circulation technology, and exhaust stack and vent location with respect to receptors.

Biological Resources Measures

Mitigation Measure BIO-1: Protection of Nesting Birds. To the extent practicable, project construction activities including tree removal/pruning and demolition will occur outside of the generally accepted nesting season (February 1 to August 31). If tree removal cannot be completed between September 1 and January 31, and it is not feasible to avoid starting construction during the nesting season, then the following measures will be taken:

- No more than two weeks before the initiation of construction/demolition activities that would commence between February 1 and August 31, a nesting bird survey will be conducted within 250 feet of the project site by a qualified biologist. If active nests are observed, buffer zones will be established around the nests, with a size acceptable to the CDFW. Construction activities will not occur within buffer zones until young have fledged or the nest is otherwise abandoned.
- If construction/demolition is halted for more than two weeks during the nesting season, then additional surveys will be conducted as above.
- Nests that are established during construction/demolition will be protected from direct project impact (e.g., trees or a buffer area around the nests shall be flagged and avoided).

Mitigation Measure BIO-2: Replacement of Protected Trees. EBMUD will replace each tree that is removed for this project and that is considered a “protected tree” under the City of Oakland Tree Preservation and Removal Ordinance. The replacement tree (e.g., 5-gallon size) will be planted on site in a suitable location at the MWWTP/West End property.

Cultural Resources Measures

Mitigation Measure CUL-1: Recovery of Buried Cultural Resources. If previously unidentified cultural materials are unearthed during construction, EBMUD will halt work in that area until a qualified archaeologist can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); battered stone tools, such as hammerstones and pitted stones. Historic-era materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If any find is determined to be significant, EBMUD and the archaeologist will determine the appropriate avoidance measures or other appropriate mitigation. All significant cultural materials recovered will be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards. In considering any suggested measures proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological

resources, EBMUD will determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations.

If avoidance is infeasible, other appropriate measures (e.g., data recovery) will be instituted. Work may proceed on other parts of the project while mitigation for historical resources or unique archaeological resources is being carried out.

Mitigation Measure CUL-2: Recovery of Buried Paleontological Resources. In the event that paleontological resources are discovered, EBMUD will notify a qualified paleontologist. The paleontologist will document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines § 15064.5. If a breas[2] or other fossil is discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find.

If EBMUD determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan will be submitted to EBMUD for review and approval prior to implementation.

Mitigation Measure CUL-3: Recovery of Discovered Human Remains. In the event human burials are encountered, EBMUD will halt work in the vicinity and notify the Alameda County Coroner and contact an archaeologist to evaluate the find. If human remains are of Native American origin, the Coroner will notify the Native American Heritage Commission (NAHC) within 24 hours of this identification. The NAHC will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American, who would then help determine what course of action should be taken in dealing with the remains.

Geology Measures

Mitigation Measure GEO-1: Perform Design-Level Geotechnical Evaluations for Seismic Hazards. During the design phase for all other Master Plan elements that require ground-breaking activities, EBMUD will perform site-specific, design-level geotechnical evaluations to identify potential secondary ground failure hazards (i.e., seismically-induced settlement) associated with the expected level of seismic ground shaking. For specific Land Use Master Plan element sites within the MWWTP that have previously been subject to a geotechnical investigation, a geotechnical memorandum shall be prepared to update the previous investigation.

The geotechnical analysis will provide recommendations to mitigate those hazards in the final design and, if necessary, during construction. The design-level geotechnical evaluations, based on the site conditions, location, and professional opinion of the geotechnical engineer, may include subsurface drilling, soil testing, and analysis of site seismic response as needed. The geotechnical engineer will review the seismic design criteria of facilities to ensure that facilities are designed to withstand the highest expected peak acceleration, set forth by the California Building Code (CBC) for each site. Recommendations resulting from findings of the geotechnical study will be incorporated into the design and construction of proposed facilities. Design and construction for buildings will be performed in accordance with EBMUD's seismic design standards, which meet and/or exceed applicable design standards of the International Building Code.

Mitigation Measure GEO-2: Perform Design-Level Geotechnical Evaluations for Liquefaction and Other Geologic Hazards. During the design phase for all other Master Plan elements that require ground-breaking activities, EBMUD will perform site-specific design-level geotechnical evaluations to

[2] A seep of natural petroleum that has trapped extinct animals, thus preserving and fossilizing their remains.

identify geologic hazards and provide recommendations to mitigate those hazards in the final design and during construction. For specific Land Use Master Plan element sites within the MWWTP that have previously been subject to a geotechnical investigation, a geotechnical memorandum shall be prepared to update the previous investigation.

The design-level geotechnical evaluations will include the collection of subsurface data for determining liquefaction potential, and appropriate feasible measures will be developed and incorporated into the project design. The performance standard to be used in the geotechnical evaluations for mitigating liquefaction hazards will be minimization of the hazards. Measures to minimize significant liquefaction hazards could include the following, unless the site-specific soils analyses dictate otherwise:

- Densification or dewatering of surface or subsurface soils;
- Construction of pile or pier foundations to support pipelines and/or buildings; and
- Removal of material that could undergo liquefaction in the event of an earthquake, and replacement with stable material.
- If soil needs to be imported, EBMUD would require that the contractor ensure that such imported soil complies with specifications that define the minimum geotechnical properties and analytical quality characteristics that must be met for use of fill material from off-site borrow sources.

Greenhouse Gas Measures

Mitigation Measure GHG-1: GHG Reduction Measures. EBMUD shall implement BAAQMD-recommended Best Management Practices (BMPs) for greenhouse gas (GHG) emissions where feasible, which include the following:

- At least 15 percent of the fleet should be alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment.
- At least 10 percent of building materials should be from local sources.
- At least 50 percent of construction waste or demolition materials should be recycled or reused.

Mitigation Measure GHG-2a: Energy Efficiency Measures. Direct and indirect GHG emissions shall be estimated based on the final project design, and energy efficiency measures shall be incorporated into the project as necessary to meet the BAAQMD GHG significance threshold in effect at the time of project implementation.

Mitigation Measure GHG-2b: Water Conservation Measures for Land Use Master Plan Projects. Non-potable water shall be used wherever feasible for equipment and area wash down to minimize GHG emissions associated with increased water demand.

Hazardous Materials Measures

Mitigation Measure HAZ-3: Hazardous Building Materials Surveys and Abatement. For any building not already surveyed for lead, a registered environmental assessor or a registered engineer would perform a lead-based paint survey for the structure prior to reuse or demolition. Adequate abatement practices for lead-containing materials, such as containment and/or removal, would be implemented prior to reuse or demolition of each structure that includes lead-containing materials or lead-based paint. For demolition, any PCB- or DEHP-containing equipment or fluorescent lights containing mercury vapors would also be removed and disposed of properly.

If removal of a transformer is required, EBMUD or the owner/operator would retain a qualified professional to determine the PCB content of the transformer oil. For removal, the transformer oil would be pumped out with a pump truck and appropriately recycled or disposed of off site. The drained transformer would be reused or disposed of in accordance with applicable regulations.

Hydrology Measures

Mitigation Measure HYD-3: Prepare and Implement a Comprehensive Drainage Plan. Prior to expanding the stormwater collection system to treat runoff from the West End property, EBMUD shall prepare and implement a Comprehensive Drainage Plan for the Master Plan that incorporates measures to ensure that the storm drain system and treatment capacity are not exceeded during peak conditions. The drainage plan shall define operational controls necessary to prevent flooding of the MWWTP headworks and/or release of surface runoff off site.

Mitigation Measure HYD-5: Prepare and Implement a Tsunami Response Plan. EBMUD shall prepare and implement a Tsunami Response Plan for the MWWTP site that defines emergency response and coordination procedures. The Tsunami Response Plan shall contain information specific to actions that may be necessary related to receipt of a tsunami watch, warning, or as a result of an actual tsunami along the San Francisco Bay. The first priority of emergency management response shall be the protection of life and property.

Noise Measures

Mitigation Measure NOI-1: Implement Noise Controls. EBMUD's Construction Specifications (013544-3.4) require compliance with local noise ordinances, and measures that shall be employed to meet applicable City of Oakland Noise Ordinance noise limits include the following:

- Pile driving activities and operation of other types of impact equipment such as jackhammers should be limited to the daytime hours (7 am to 7 pm on weekdays);
- If impact pile drivers must be used near the eastern MWWTP boundary, they should not be operated for longer than 10 days to the extent feasible. If pile driving must occur for longer than 10 days near this boundary, sonic or vibratory pile drivers should be used if feasible;
- "Quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration) should be employed where feasible (where geotechnical and structural requirements allow);
- Pile driving activities with all construction projects at the MWWTP should be coordinated to ensure that these activities do not overlap;
- Best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) will be used for all equipment and trucks as necessary; and
- If any construction activities must occur during the nighttime hours (7 pm to 7 am on weekdays, 8 pm to 9 am on weekends), operation of noisier types of equipment should be prohibited as necessary to meet ordinance noise limits.

Mitigation Measure NOI-2: Implement Vibration Controls. To ensure that adjacent freeway structures and future commercial structures to the south are not subject to cosmetic damage, EBMUD shall ensure that any future pile driving activities associated with Master Plan projects do not exceed the 0.2 in/sec peak particle velocity (PPV) threshold at these structures. Measures that could be employed to meet this performance standard include using sonic or vibratory pile drivers where feasible or pre-drilling pile holes.

Mitigation Measure NOI-3: Employ Noise Controls for Stationary Equipment. EBMUD shall use best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) as necessary on stationary equipment associated with all Master Plan projects in order to comply with applicable City of Oakland Noise Ordinance noise limits, adjusted to reflect ambient noise levels occurring at the time of project implementation (under 2010

conditions, the nighttime noise limit is 54 dBA [Leq] at receiving residential uses to the east and 73 dBA [Leq] at future receiving commercial uses to the south).

Traffic Measures

Measure TRA-1: Construction Traffic Management Plan. EBMUD would implement the following measures during project construction at the local intersections outside the MWWTP property:

EBMUD and the construction contractor would coordinate with the appropriate City of Oakland agencies to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion during construction of this project and other nearby projects that could be simultaneously under construction. EBMUD would develop a construction management plan for submittal to the Planning and Zoning Division, the Building Services Division, and the Transportation Services Division. The plan would include at least the following items and requirements:

- A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours and designated construction access routes;
- Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries would occur; and
- A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an onsite complaint manager. The manager shall determine the cause of the complaints and shall take prompt action to correct the problem.

Measures to Minimize Disruption to Existing Utilities

Mitigation Measure UTIL-6 Coordinate Relocation and Interruptions of Service with Utility Providers during Construction. The construction contractor will be required to verify the nature and location of underground utilities before the start of any construction that would require excavation. The contractor will be required to notify and coordinate with public and private utility providers at least 48 hours before the commencement of work adjacent to any utility. The contractor will be required to notify the service provider in advance of service interruptions to allow the service provider sufficient time to notify customers. The contractor will be required to coordinate timing of interruptions with the service providers to minimize the frequency and duration of interruptions.

1.4 Permits/Approvals Required

Table 6 summarizes potential permits and approvals for the Modified Project.

Table 6: Permits and Approvals

Agency	Type of Approval
STATE	
San Francisco RWQCB (Region 2)	National Pollutant Discharge Elimination System (NPDES), Construction General Permit Industrial Stormwater Permit
Department of Toxic Substances Control (DTSC)	Approval for placement of any soil from the West End property outside of the property boundary. Approval for excavation or disturbance of any soil on the West End property deeper than 5 feet below ground surface
LOCAL	
Bay Area Air Quality Management District (BAAQMD)	Authority to Construct Permit to Operate
City of Oakland	Construction Permit, and Modification of Non-Disposal Facility Element
Oakland Fire Department	Hazardous Materials Business Plan
Burlington Northern Santa Fe Railroad (BNSF)	Railroad Encroachment Permit
Alameda County	Amendment of Integrated Waste Management Plan
Alameda County Department of Environmental Health (ACDEH) (in consultation with CalRecycle)	Solid Waste Facility Transfer/Processing Permit

1.5 CEQA Process/Addendum Requirements

This Addendum to the MWWTP Land Use Master Plan EIR has been prepared to evaluate the potential effects of implementing the Modified Food Waste Project. This Addendum is in the format of an environmental checklist, prepared in compliance with Section 15063 of the CEQA Guidelines of 1970 (as amended), and California Administrative Code, Title 14, Division, Chapter 3.

Pursuant to Section 15164(a) of the CEQA Guidelines:

> *"A lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred."*

The conditions in Section 15162 include the following:

> *(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
>
> *(2) Substantial changes occur with respect to the circumstances under which the project is undertaken; or*
>
> *(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:*
>
> > *(A) The project will have one or more significant effects not discussed in the previous EIR;*

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment.

This Addendum provides a focused review of the potential environmental impacts of the Modified Project. This Addendum has been prepared because it has been determined (1) that the Modified Project would not create any new or more significant environmental impacts beyond those identified in the 2011 EIR, and (2) that the Modified Project would not require any new mitigation measures or alternatives which are considerably different from those analyzed in the 2011 EIR. Specifically,

Implementation of the Modified Project does not constitute a substantial change as compared to the full-scale food waste preprocessing facility evaluated in the 2011 EIR. The Modified Project does not require major revisions to the 2011 EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. Environmental effects of the Project are discussed in Section 2.1, Environmental Analysis Checklist for the Project. Impacts in each issue area were characterized and compared to the impacts of the full-scale project, and there are no new significant impacts or substantially more severe impacts.

There have been no substantial changes with respect to the circumstances under which the Project is undertaken that will require major revisions to the 2011 EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. The City of Oakland is realigning Wake Avenue and work is expected to be completed in fall 2015. EBMUD is also realigning Engineers Road, with work expected to be completed by the end of 2015. The Wake Avenue and Engineers Road realignments would not worsen any of the environmental effects of the Modified Project, as compared with impacts of the food waste preprocessing facility. Please refer to Section 2.1, Checklist Item 17, Transportation/Traffic, which documents that EBMUD has plans to ensure adequate queuing space during and after construction of the Wake Avenue and Engineers Road realignments.

No new information of substantial importance became apparent as a result of the proposal to conduct the Modified Project. The Project will not have significant effects not discussed in the 2011 EIR nor will it result in significant effects that were previously examined but would be substantially more severe than those identified in the 2011 EIR. Please refer to the discussion of each issue in the checklist in Section 2.1, which documents that there are no new or substantially more severe impacts.

The Modified Project does not increase the feasibility of mitigation measures previously found to be infeasible, and there are no feasible mitigation measures or alternatives that EBMUD has declined to adopt. In approving the Master Plan, EBMUD adopted all of the mitigation measures included in the Draft EIR, and did not find any of the recommended measures to be infeasible. Thus, there are no mitigation measures that were previously found to be infeasible. Project alternatives evaluated in the 2011 EIR all involved different configurations of the biodiesel facility. Implementation of the Modified Project would not affect the feasibility of the various options for implementation of the biodiesel facility.

Because the criteria in CEQA Guidelines section 15162 (a) does not apply here, an addendum to the 2011 EIR has been prepared, and will be considered, along with the 2011 EIR, prior to EBMUD making any further approvals of the Modified Project.

Chapter 2 Environmental Checklist

1. **Project Title:** Food Waste Project

2. **Project Sponsor's Name & Address:** East Bay Municipal Utility District
375 Eleventh Street, MS702
Oakland, CA 94607-4240

3. **Contact Person and Phone Number:** Alicia Chakrabarti
(510) 287-2059

4. **Project Location:** On the Main Wastewater Treatment Plant (MWWTP) site located at 2020 Wake Avenue, in Oakland, CA.

5. **General Plan Designation:** General Industrial/Transportation

6. **Zoning:** General Industrial

7. **Description of Project**: EBMUD is proposing to develop facilities for preprocessing organics-rich material, including source separated organics collected in the City of Oakland, pressed organics-rich material from San Francisco, and other sources of organics-rich material from entities in the Bay Area. The material would be digested to produce biogas, which would be utilized for the production of renewable energy and for renewable fuel. The remaining digestate would be dewatered and off hauled for beneficial use, such as compost production.

8. **Surrounding Land Uses and Setting.** The MWWTP is located in an industrial area that is separated from nearby land uses by freeway ramps/approaches to the San Francisco-Oakland Bay Bridge to the north, west, and east, and by vacant land, rail lines and warehouse structures associated with the former Oakland Army Base to the east and south. San Francisco Bay is north of the Bay Bridge approach. The nearest residential land uses are to the east of I-880, about ¼ mile from the eastern boundary of the MWWTP and more than ½ mile from the proposed site for the Modified Project.

9. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement).** The Modified Project would require a Transfer/Processing Facility Permit through the CalRecycle Local Enforcement Agency (Alameda County Environmental Health). To obtain this permit, the City of Oakland would need to modify its Non-Disposal Facility Element, and Alameda County would have to amend its Integrated Waste Management Plan. In addition, appropriate building and development permits from the City of Oakland and/or Port of Oakland would be obtained for the project. An Authority to Construct and Permit to Operate for the Modified Project would be obtained from the BAAQMD. Construction of the Modified Project would require coverage from the RWQCB under the Construction General Permit, and an Industrial Stormwater Permit would be needed for operation. DTSC must approve excavation or disturbance of any soil on the West End property deeper than 5 feet below ground surface and must approve placement of any soil from the West End property outside of the property boundary. A Hazardous Materials Business Plan would have to be filed with the Oakland Fire Department.

2.1 Environmental Analysis Checklist for Modified Project

The following Environmental Analysis Checklist (Checklist) has been prepared to determine if the Final EIR for the EBMUD MWWTP Land Use Master Plan (2011 EIR) adequately addresses impacts of the Modified Food Waste Project. The Checklist evaluates the adequacy of the earlier evaluation contained in the 2011 EIR pursuant to Section 21166 of the Public Resources Code and Section 15162 of the CEQA Guidelines.

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
1. Aesthetics *Would the project:*					
a) Have a substantial adverse effect on a scenic vista?	3.2-4	No	No	No	N/A
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	3.2-4	No	No	No	N/A
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	3.2-6	No	No	No	Yes, see Mitigation Measures AES-2a and AES-2b
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	3.2-8	No	No	No	N/A
Discussion: The Modified Project would be in the same general location as the food waste preprocessing facility evaluated in the 2011 EIR, and similar in scale. Because the Modified Project would include two new buildings and use of one existing building (for an employee and office area), the proposed facilities would occupy a somewhat larger site on the West End property, totaling 3.1 acres, as compared to the 1.4-acre site considered in the 2011 EIR. The digestate management building would be on the site of the food waste processing facility described in the 2011 EIR, and the preprocessing building and gas utilization facility would be located on a site that was previously considered for the food waste preprocessing facility and partially on the site previously considered for employee parking and emergency equipment storage. The two buildings would total 27,500 sf, which is smaller than the 29,000 sf preprocessing building described in the 2011 EIR. Building heights would be similar to those described in the 2011 EIR. The site is not visually sensitive area, and as noted on page 3.2-2 of the 2011 EIR, the site is only visible briefly to passing motorists, primarily on local freeways. The MWWTP and other properties in the project vicinity already use nighttime security lighting, and the general area is substantially lighted at night. The elements of the Modified Project would be similar to those evaluated in the 2011 EIR, which, in addition to the proposed food waste preprocessing building, included truck deliveries, piping, and other auxiliary structures. In addition, the Modified Project would be subject to Mitigation Measure AES-2b: Design of Facilities to be Aesthetically Consistent with Existing Visual Character, which would ensure that the facility would blend with surrounding facilities. Any lighting used for the Modified Project would be subject to Mitigation Measure AES-3: Lighting Design and Low Reflective Paint, which would ensure that new lighting is shielded and directed to the interior of the project site. Visual impacts would thus be expected to be the same or less than those evaluated in the 2011 EIR.					

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
2. Agricultural and Forestry Resources In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. *Would the project:*					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	3.1-2	No	No	No	N/A
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	3.1-2	No	No	No	N/A
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220 (g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104 (g))?	NA	No	No	No	N/A
d) Result in the loss of forest land or conversion of forest land to non-forest use?	NA	No	No	No	N/A
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	3.1-2	No	No	No	N/A
Discussion: The Modified Project is located in an urban area that contains no agricultural or forest lands. The Notice of Preparation for the 2011 EIR was issued in 2009, before the CEQA Guidelines were revised to add criteria for impacts to forest lands to the CEQA Checklist. Forest lands were thus not addressed in the 2011 EIR, but facilities at the MWWTP would have no impact on forest lands.					

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
3. Air Quality *Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.* *Would the project:*					
a) Conflict with or obstruct implementation of the applicable air quality plan?	3.3-37	No	No	No	N/A
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	3.3-11 et seq. & 3.3-18 et seq.	No	No	No	Yes, see Mitigation Measure AIR-1
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	4-14	No	No	No	Yes, see Mitigation Measure AIR-5
d) Expose sensitive receptors to substantial pollutant concentrations?	3.3-14 et seq. & 3.3-30 et seq.	No	No	No	Yes, see Mitigation Measure AIR-5
e) Create objectionable odors affecting a substantial number of people?	3.3-35 et seq.	No	No	No	Yes, see Mitigation Measures AIR-6a and AIR-6b

Discussion: **Emissions.** Updated modeling of emissions of criteria pollutants and hazardous air pollutants associated with construction was conducted for the Modified Project and it was determined that emissions would be less than those identified in the 2011 EIR (ENVIRON 2015). Mitigation Measures for construction would be applicable to the Modified Project, which would ensure that construction would not generate substantial emissions, and would not result in a cumulative impact when combined with other potential construction projects in the area, which would also be required to implement BAAQMD mitigation measures (BAAQMD 1999). Short-term construction emissions would be considered cumulatively less than significant given that projects in the area would implement measures to minimize construction emissions (City of Oakland 2012). Operational mobile source emissions from vehicle traffic would be similar to, but less than, those estimated for the original Project because the Modified Project would generate less traffic. Traffic patterns would be somewhat different than those projected in the 2011 EIR, with the most important change being a reduction in vehicle miles traveled (VMT). As shown in Table 3.3-11 of the 2011 EIR, operation of the food waste preprocessing facility was expected to generate a total daily truck trip VMT of 3,573. Table 3.3-11 of the 2011 EIR compares VMT for operation of the food waste preprocessing facility with truck travel patterns based on current disposal practices for food waste (hauling of food waste to landfills and transfer stations); current disposal practices were estimated to produce a

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?

daily VMT of 2,853, so the net change in truck vehicle miles from existing conditions was estimated to be 1,100. The estimated daily truck trip VMT for the Modified Project is 2,864, which includes organics-rich material deliveries to the MWWTP, trips for off-haul of non-compostable material to landfills, off-haul of digestate to a composting facility, and off-haul of the produced BioCNG to a central fueling station. Projected daily truck trip VMT for the Modified Project is thus only slightly higher (11 miles) than conditions as they existed in 2011, and significantly lower than the total anticipated truck mileage associated with the original food waste preprocessing facility (3,573 daily truck trip VMT) estimated in the 2011 EIR. Employee trips are projected to be the same as for the original Project. Because the total daily VMT is less than what was analyzed as part of the 2011 EIR for the food waste preprocessing facility, the mobile source emissions of criteria pollutants as a result of implementation of the Modified Project would be less than those estimated in the 2011 EIR for the food waste preprocessing facility. Moreover, because of improvements in truck engine technology over the last four years, emissions factors are expected to be lower and therefore the criteria pollutant emissions would be lower even if the VMT were the same.

Odors. Operational odor would be similar to potential odor impacts discussed in the 2011 EIR. The food waste preprocessing facility described in the 2011 EIR was within an enclosed building, and mitigation included the possible addition of odor controls to roof vents if odor problems occurred. However, the original facility as described in the 2011 EIR did not include any specific odor control systems other than best housekeeping practices. The majority of the elements that are part of the Modified Project would operate within enclosed buildings. As with the originally proposed food waste preprocessing facility, buildings included in the Modified Project have been designed to contain odors. See 2011 EIR at 3.3-35. For the Modified Project, odors would be controlled through good housekeeping practices as well as both containment and treatment of air within the preprocessing facilities. These buildings would be operated with slight negative air pressure to prevent odors from escaping. In addition, process air captured from these buildings and equipment where appropriate would be conveyed through ducting to a biofilter, which removes odorous compounds, volatile organic compounds (VOCs), hydrogen sulfide, and ammonia from process air. The Modified Project would comply with Mitigation Measure AIR-6a from the 2011 EIR requiring that "All food waste shall be processed within 48 hours of receipt or protocols shall be implemented to minimize nuisance odor problems and ensure compliance with applicable BAAQMD air permit requirements."

One element of the Modified Project, urban organics processing, may be either located within the preprocessing building or in an open shed adjacent to the digestate management building. If located inside of the preprocessing building, odors would be controlled as described above. If located outside, odors would be controlled through the facility design, including negative pressure ventilation of the receiving pit and dynamic cyclone with odor scrubbing in an activated carbon biotower. Processed urban organics would be conveyed through enclosed pipes to prevent escape of odors. If the urban organics processing facility is not located in an enclosed building, EBMUD would monitor odor and, if it is determined that odors from the urban organics processing are causing a nuisance, EBMUD would suspend operation of the urban organics processing and acceptance of waste and enter into a process with the private operator to resolve the odor issue. This requirement is consistent with the Mitigation Measure AIR 6a requirement to implement protocols to minimize nuisance odors and is also part of the project description and would be enforced by EBMUD as a condition of its agreement with the private operator. EBMUD will also have authority to suspend urban organics processing in the event odor issues arise and cannot be readily resolved. These requirements would ensure that the Modified Project would be consistent with Mitigation Measure AIR-6a from the 2011 EIR.

The Modified Project would be located in the interior of the MWWTP, about 3,000 feet (over ½ mile) from the closest residential receptor. Drivers on the adjacent freeway would be closer to the facility, but freeways are not considered a sensitive receptor, and drivers' exposure to any odors would be very brief, and not substantially different from the existing odor of the MWWTP. Similarly, any users of the Bay Trail alignment along the northern boundary of the MWWTP could be briefly exposed to odors, but the Modified Project is not expected to make the existing odors from the MWWTP more objectionable. The 2011 EIR considered the compatibility of the original facility

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
with the Bay Trail and concluded that a food waste preprocessing facility would be consistent with the current character of the area. The Modified Project employs additional odor controls, and is thus not expected to result in a new significant impact. With the implementation of applicable mitigation and odor control requirements that would be enforced by EBMUD, the Modified Project is not expected to have odor impacts substantially different from those anticipated for the original Project.					
4. Biological Resources *Would the project:*					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	3.4-15	No	No	No	N/A
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	3.4-15	No	No	No	N/A
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	3.4-15	No	No	No	N/A
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	3.4-15 et seq.	No	No	No	Yes, see Mitigation Measure BIO-1
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	3.4-17 et seq.	No	No	No	Yes, see Mitigation Measure BIO-2
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	3.4-15	No	No	No	N/A

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
Discussion: As explained in the 2011 EIR, there is no suitable habitat for special status species, sensitive natural communities, or federally protected wetlands at the project site. See 2011 EIR at 3.4-15. The 2011 EIR noted that the food waste preprocessing facility could potentially cause impacts to nesting birds if construction overlapped with the nesting bird season, but concluded that implementation of Mitigation Measure BIO-1 would reduce impacts to less-than-significant levels. It also concluded that compliance with mitigation measure BIO-2 would ensure that impacts resulting from tree removal would be less than significant. Impacts to biological resources would be the same as, or less than those addressed in the 2011 EIR. This is because the Modified Project would be located in the same general area as the food waste preprocessing facility analyzed in the 2011 EIR, and all impacts of the Master Plan that are related to the footprint of project facilities would not be changed by implementation of the Modified Project. The 2011 EIR essentially assumed that all of the land area of the MWWTP, including the West End property, could eventually be disturbed by construction of a facility. The Modified Project site remains a heavily disturbed industrial area that provides no suitable habitat for sensitive species, and no sensitive species have been discovered in the vicinity during the ongoing operations of the MWWTP or construction on the West End property. The Modified Project would thus not result in any new impacts to biological resources.					
5. Cultural Resources *Would the project:*					
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	3.5-9	No	No	No	N/A
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	3.5-10	No	No	No	Yes, see Mitigation Measure CUL-1
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	3.5-11	No	No	No	Yes, see Mitigation Measure CUL--2
d) Disturb any human remains, including those interred outside of formal cemeteries?	3.5-11	No	No	No	Yes, see Mitigation Measure CUL--3
Discussion: Impacts to cultural resources would be the same as, or less than those addressed in the 2011 EIR. All impacts of the Master Plan that are related to the footprint of project facilities would not be changed by implementation of the Modified Project. The 2011 EIR essentially assumed that all of the land area of the MWWTP, including the West End property, could eventually be disturbed by construction of a facility. Mitigation Measures CUL-1, CUL-2 and CUL-3 would ensure that any impacts would be less than significant. The Modified Project would thus not result in any new impacts to cultural resources.					

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
6. Energy Resources *Would the project:*					
a) Result in inefficient, wasteful, or unnecessary consumption of fuels or other energy resources, especially fossil fuels such as coal, natural gas, and oil.	3.6-7	No	No	No	N/A
Discussion: Impacts of the Modified Project associated with energy resources would be the similar to those described in the 2011 EIR. The original food waste preprocessing facility was estimated to use 4,900 MWh per year of electricity, and the Modified Project is estimated to use approximately 5,495 MWh per year. Consumption of diesel fuel is expected to be lower because truck VMT for the Modified Project is less than was projected for the original food waste preprocessing facility. The 2011 EIR found that while facilities require energy for operation, the use of this energy would not be either wasteful or unnecessary because the facility would contribute to the production of renewable energy at the expanded PGS and contribute to a reduction in food wastes disposed of at regional landfills and composting facilities. Because the Modified Project would also contribute to production of renewable energy, use of energy for operations would not be considered inefficient, wasteful, or unnecessary.					
7. Geology and Seismicity *Would the project:*					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	3.7-11	No	No	No	N/A
ii) Strong seismic ground shaking?	3.7-12	No	No	No	Yes, see Mitigation Measure GEO-1
iii) Seismic-related ground failure, including liquefaction?	3.7-13	No	No	No	Yes, see Mitigation Measure GEO-2
iv) Landslides?	3.7-11	No	No	No	N/A
b) Result in substantial soil erosion or the loss of topsoil?	3.7-14	No	No	No	N/A

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	3.7-13	No	No	No	Yes, see Mitigation Measure GEO-2
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	3.7-11	No	No	No	N/A
e) 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?	3.7-11	No	No	No	N/A
Discussion: Impacts associated with potential geotechnical hazards would be the same for the Modified Project as those described in the 2011 EIR, which assumed that all of the land area of the MWWTP, including the West End property, could be disturbed by construction of a facility. The 2011 EIR concluded that impacts to people or structures due to strong seismic ground shaking or seismic related ground failure (e.g., liquefaction) would be reduced to less than significant levels through implementation of design-level geotechnical studies as required by Mitigation Measures GEO-1 and GEO-2. The Modified Project would include performing design-level geotechnical studies and would not result in any new geotechnical impacts.					
8. Greenhouse Gas Emissions *Would the project:*					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	3.8-4 et seq.	No	No	No	Yes, see Mitigation Measures GHG-2a and GHD-2b
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	3.8-12 et seq.	No	No	No	Yes, see Mitigation Measures GHG-2a and GHD-2b
Discussion: Construction activity for the Modified Project would be similar to that described for the food waste preprocessing facility in the 2011 EIR, but modeling of emissions during construction shows that construction emissions would be less for the Modified Project. This is because improvements in engines over the last four years have reduced emissions from construction vehicles and equipment, and the latest emissions factors for construction equipment are thus lower than those assumed in the 2011 EIR analysis. GHG emissions during construction would also be expected to be lower. Mitigation Measure GHG-1 requires implementation of BMPs for GHG emissions where feasible, and would further minimize emissions during construction. Similarly, operational GHG emissions for the Modified Project would be less than for the food waste preprocessing facility because VMT associated with transportation of waste would be less than for the original project. Similar to the original project, the Modified Project is expected to offset operational GHG emissions due to GHG emissions reductions associated with the renewable energy produced through digestion of food waste. The Modified Project would still be expected to result in a net reduction of carbon dioxide emissions, when comparing electricity or fuel produced from biogas versus fossil fuels (see Table 3.8-3 and discussion on page 3.8-9 of the 2011 EIR). As with construction activities, Mitigation Measures GHG-2a and GHG-2b would minimize GHG emissions during operation. For these reasons, GHG-related impacts would be similar to or less than those associated with the originally proposed project.					

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
9. Hazards and Hazardous Materials *Would the project:*					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	3.9-24 et seq.	No	No	No	N/A
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	3.9-28 et seq.	No	No	No	Yes, see Mitigation Measure HAZ-3
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	3.9-23	No	No	No	N/A
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	3.9-23	No	No	No	N/A
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	3.9-23	No	No	No	N/A
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	3.9-23	No	No	No	N/A
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	3.9-23	No	No	No	N/A
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	3.9-23	No	No	No	N/A

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
Discussion: The Modified Project would have hazards and hazardous materials impacts the same as or less than the food waste preprocessing facility evaluated in the 2011 EIR. No demolition is expected to be required for the Modified Project. Because an existing building would be reused for office space, Mitigation Measure HAZ-3, Hazardous Building Materials Survey and Abatement, would be implemented to ensure containment or removal of any lead-containing materials within the building before the structure is reused. No portion of the MWWTP is identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (EBMUD 2009). The food waste preprocessing facility evaluated in the 2011 EIR included a 5,000-gallon diesel fuel storage tank, and there may be some diesel fuel storage associated with the Modified Project. The Modified Project would be subject to the same requirements that are discussed on page 3.9-26 of the 2011 EIR, including filing a Hazardous Materials Business Plan with the Oakland Fire Department, Office of Emergency Services. The Modified Project would also be subject to the requirements of the DTSC approved O&M Plan for all excavation activities on the West End property and EBMUD contract specifications related to project safety, waste disposal and water control and disposal for excavation on both the West End property and the MWWTP as discussed on page 3.9-29 of the 2011 EIR.					
10. Hydrology and Water Quality *Would the project:*					
a) Violate any water quality standards or waste discharge requirements?	3.10-8 et seq.	No	No	No	N/A
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?	3.10-9 et seq.	No	No	No	N/A
c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	3.10-11	No	No	No	N/A
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	3.10-10	No	No	No	Yes, see Mitigation Measure HYD-3
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	3.10-10	No	No	No	Yes, see Mitigation Measure HYD-3

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
f) Otherwise substantially degrade water quality?	3.10-8 et seq.	No	No	No	N/A
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	3.10-7	No	No	No	N/A
h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?	3.10-7	No	No	No	N/A
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	3.10-7	No	No	No	N/A
j) Inundation by seiche, tsunami, or mudflow?	3.10-11	No	No	No	Yes, see Mitigation Measure HYD-5
Discussion: The Modified Project would comply with mitigation measures identified in the 2011 EIR, and facilities would be constructed within the same area. Impacts would be the same or less than those previously identified because the Modified Project is located within the area that was evaluated in the 2011 EIR. Because the 2011 EIR assumed construction of facilities covering essentially the entire West End property, stormwater impacts attributable to the Modified Project would be no greater than analyzed in the 2011 EIR. The 2011 EIR noted the need for expansion of the stormwater collection system if the stormwater runoff from the West End property would be conveyed to the MWWTP. If stormwater flows from the site of the Modified Project on the West End property are to be conveyed to the MWWTP, then a comprehensive drainage plan would be prepared to ensure adequate capacity to capture and treat stormwater flows, per Mitigation Measure HYD-3. Because the Modified Project would not change the amount of impervious surface area at the project site, it thus would not increase the amount of runoff into existing storm drains. Also, as noted in the Project Description, the majority of the Modified Project facilities (with the exception of the urban organics facility), would be inside enclosed buildings. Process and washdown water would be conveyed to the MWWTP, and would be contained to prevent runoff to storm drains. This is similar to the design of the food waste preprocessing project evaluated in the 2011 EIR, and would prevent pollutants from food waste from contaminating stormwater discharges.					
11. Land Use and Planning *Would the project:*					
a) Physically divide an established community?	3.11-6	No	No	No	N/A
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	3.11-6 et seq.	No	No	No	N/A

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	3.4-15	No	No	No	N/A
Discussion: The Modified Project would be constructed entirely within the MWWTP and would be consistent with existing land use at the MWWTP. The zoning and land use designations for the MWWTP site have not changed since preparation of the 2011 EIR (City of Oakland 2015). Facilities would be located on an area that had been considered for use as employee parking, but employee parking would continue to be distributed throughout the MWWTP, as it is currently, and consolidated parking has been determined to be unnecessary. Impacts would be the same as those identified in the 2011 EIR. Impacts would be the same as those identified in the 2011 EIR.					
12. Mineral Resources *Would the project:*					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	3.1-3	No	No	No	N/A
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	3.1-3	No	No	No	N/A
Discussion: The 2011 EIR documents that there are no mineral resources at the MWWTP.					
13. Noise *Would the project result in:*					
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	3.12-17 et seq.	No	No	No	Yes, see Mitigation Measure NOI-3
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	3.12-14 et seq.	No	No	No	Yes, see Mitigation Measure NOI-2
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	3.12-21 et seq.	No	No	No	N/A
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	3.12-10 et seq.	No	No	No	Yes, see Mitigation Measure NOI-1

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	3.12-10	No	No	No	N/A
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	3.12-10	No	No	No	N/A

Discussion: As explained in the 2011 EIR, construction of all elements of the Master Plan could cause temporary increases in noise levels in the area due to the use of heavy equipment (see 2011 EIR at 3.12-12). Construction impacts for the Modified Project are expected to be similar to those anticipated in the 2011 EIR, but pile driving is expected to occur over a longer time period than was projected in the 2011 EIR. Construction activities would be subject to Mitigation Measures NOI-1, Implement Noise Controls, which limits use of impact equipment to weekdays from 7 am to 7 pm As noted on page 3.12-14 of the 2011 EIR, pile driving activities near the eastern boundary of the MWWTP need to be controlled so as to not affect residential receptors, which are within 1,200 feet of the eastern boundary. However, the Modified Project site is located about 3,000 feet from the nearest receptor and noise levels from pile driving would be attenuated to 65 dBA or less at the nearest receptor, which is within the City of Oakland Noise Ordinance Daytime Weekday Limit.

Estimated operational noise from the food waste preprocessing facility is presented in Table 3.12-8 of the 2011 EIR, which compares noise levels to noise ordinance limits. Noise levels from operation of the original facility were estimated to be 89 dBA (Leq) inside the building, 72 dBA (Leq) at the building exterior, 34 dBA (Leq) at the eastern MWWTP boundary, and 31 dBA (Leq) at the closest residential receptors. The majority if not all of the Modified Project facilities would still be operated within an enclosed building, and with the attenuation provided by the building, impacts are expected to be similar to those presented in the 2011 EIR. In addition to the equipment inside the building there is some noise generating equipment outside the building: two fans for the biofilter, an air blower, and a pump to convey processed food waste to the digesters. The urban organics processing equipment, which may be located outside, would also include noise-generating equipment: a hydrocyclone and dynamic cyclone. The combined noise level of the equipment from both of these facilities is estimated to be about 40 dBA at the nearest residential receptor, which is within the City of Oakland's operational noise standard for residential areas. Background noise at the nearest sensitive receptor is 55 dBA at night and 63 dBA during the day (see page 3.12-6 of the 2011 EIR). When added to this observed background noise, the noise from the Modified Project is so small that the total noise level would not change (i.e., the background noise would be loud enough that the noise from the Modified Project would be inaudible). At all times of day, Modified Project noise would be imperceptible at the location of the nearest residential receptors. Therefore, the Modified Project would not result in any new impacts or increase the severity of previously identified impacts. The Modified Project would also produce noise from trucks; truck noise would be less with the Modified Project because fewer truck trips are expected.

14. Population and Housing *Would the project:*					
a) Induce substantial 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)?	3.1-3	No	No	No	N/A

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b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	3.1-3	No	No	No	N/A
c) Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	3.1-3	No	No	No	N/A
Discussion: The 2011 EIR documents that the Master Plan would not displace housing or people, or contribute to population growth. Implementation of the Modified Project would not alter this determination.					
15. Public Services					
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
Fire Protection?	3.13-7	No	No	No	N/A
Police Protection?	3.13-7	No	No	No	N/A
Schools?	3.13-7	No	No	No	N/A
Parks?	3.13-7	No	No	No	N/A
Other public facilities?	3.13-7	No	No	No	N/A
Discussion: The 2011 EIR documents that the Master Plan would not generate population growth and would thus not generate need for new or altered government facilities. Implementation of the Modified Project would not alter this determination.					
16. Recreation					
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	3.11-7	No	No	No	N/A
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	3.11-7	No	No	No	N/A
Discussion: The 2011 EIR documents that the Master Plan would not increase demand for recreational facilities or affect existing or planned facilities. Implementation of the Modified Project would not alter this determination.					

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17. Transportation/Traffic *Would the project:*					
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of a circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersection, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	3.14-14 et seq. & 3.14-17 et seq.	No	No	No	Yes, see Mitigation Measure TRA-1
b) Conflict with an applicable congestion management program, including, but not limited to level of services standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	3.14-16 et seq.	No	No	No	N/A
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in locations that results in substantial safety risks?	3.14-14	No	No	No	N/A
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	3.14-19	No	No	No	N/A
e) Result in inadequate emergency access?	3.14-18	No	No	No	N/A
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	3.14-18 et seq.	No	No	No	N/A

Discussion: The 2011 EIR documents that the Master Plan would not generate operational traffic that would result in significant impacts on traffic. Compared with the food waste preprocessing project analyzed in the 2011 EIR, the Modified Project would be expected to result in somewhat different traffic patterns because the Modified Project would have fewer total trips and fewer VMT on average. The Modified Project would produce an average of 48 truckloads of incoming waste and 10 truckloads of off-hauled material/BioCNG, compared to the original Project, which included an average of 46 truckloads of incoming waste and 20 truckloads of off-hauled material. Truck VMT would be reduced from 3,573 to 2,864. The Modified Project would also generate the same number of passenger vehicle trips because the same number of employees would be required.

Construction traffic for the Modified Project has been estimated (see **Table 4** and **Table 5**) and would be expected to be similar to that described in the 2011 EIR. It is estimated that during site preparation and construction of foundations there would be up to nine trucks per day for hauling dirt off-site and delivering concrete. During construction of structures, delivery of materials would be expected to average two to three times per week. An average of up to ten construction employee vehicles per day

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is expected to be entering and leaving the site. These numbers represent a minor addition to local traffic, and because Mitigation Measure TRA-1: Construction Traffic Management Plan, would be applicable to the Modified Project, traffic during construction would be managed to minimize congestion on local streets. Since preparation of the 2011 EIR, the City of Oakland has moved forward with the realignment of Wake Avenue north of West Grand Avenue; the existing Wake Avenue is being realigned as an extension of Maritime Street and widened from two to four lanes. To maintain safe access to the MWWTP, Engineers Road will be widened and a new intersection will be constructed on EBMUD property. EBMUD has considered the proposed realignment and has determined that the proposed change of roadway configuration, which is expected to be completed in early to mid-2016, would not change the conclusions of the 2011 EIR for the MWWTP. Trucks delivering food waste to the Modified Project site would be routed from the Wake Avenue and Engineers Road intersection directly to the food waste processing facility or through the main gate into the MWWTP. Adequate queuing space would be provided on EBMUD property and/or within the food waste preprocessing facility during and after construction of the Wake Ave realignment. Although the construction periods for the Wake Avenue realignment project and the Modified Project may overlap, there would not be any traffic related impacts, because the construction of Wake Avenue will occur to the north and the existing Wake Avenue will remain operational throughout construction. The only area in which the projects overlap is at the intersection with Grand Avenue, a heavily traveled intersection. The additional traffic associated with these two projects would have a negligible impact on the overall traffic at this intersection; during construction the Modified Project would contribute a maximum of approximately one truck per hour to traffic at this intersection. Construction of Engineers Road will occur entirely on EBMUD property and will not impact traffic because internal roadways will be made available to reroute traffic during construction. Because the Modified Project would not increase operational traffic as compared to the original Project, cumulative operational impacts would not be substantively different from those evaluated in the 2011 EIR, which assumed that the City of Oakland would move forward with redevelopment of the Oakland Army Base. In 2011, the City's Auto Mall project was on hold, but the City had selected a master developer for the Gateway Area of the Oakland Army Base. It was thus assumed that some type of development would take place, and that the development could include realignment of roads in the vicinity of the MWWTP. The cumulative traffic analysis in the 2011 EIR cites the OAB Auto Mall Draft Supplemental EIR Traffic Analysis (City of Oakland 2006), which concludes that under cumulative conditions the West Grand Avenue/Maritime Street intersection and the West Grand Avenue/Frontage Road intersection would operate at Level of Service (LOS) F, either with or without the Auto Mall Project. The 2011 EIR concluded that traffic from the combined Master Plan projects would not cause the average delay at those intersections to increase by two or more seconds, and the projects contribution to traffic impacts would therefore not be cumulatively considerable. The Modified Project would generate less average daily traffic and would thus not result in a significant cumulative impact. The change in roadway configuration is not expected to result in a change in this conclusion because the realignment of Wake Avenue is not expected to adversely affect traffic conditions.					
18. Utilities and Service Systems *Would the project:*					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	3.15-7 et seq.	No	No	No	Yes, see Mitigation Measure HYD-3
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	3.15-7 et seq.	No	No	No	Yes, see Mitigation Measure HYD-3

Issues and Supporting Data Sources:	Location of where Project's impact(s) were addressed in prior environmental Document.	Do Project Modifications Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Document's Mitigations Implemented or Address Impact?
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	3.15-9 et seq.	No	No	No	Yes, see Mitigation Measure HYD-3
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	3.15-8 et seq.	No	No	No	N/A
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	3.15-7 et seq.	No	No	No	Yes, see Mitigation Measure HYD-3
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	3.15-10 et seq.	No	No	No	N/A
g) Comply with federal, state, and local statutes and regulations related to solid waste?	3.15-11 et seq.	No	No	No	N/A
Discussion: The 2011 EIR documents that the food waste preprocessing facility would generate very small quantities of wastewater. However, with implementation of the originally proposed project, stormwater from the West End property, if it is to be conveyed to the internal plant drain, has the potential to exceed wet weather plant capacity. That potential would be mitigated to less-than-significant levels through implementation of Mitigation Measure HYD-3. Implementation of the Modified Project would not alter this determination. The Modified Project is designed such that process liquids and wash-down water would be contained and conveyed to the MWWTP headworks for treatment, which would prevent pollutants from food waste from contaminating stormwater discharges. Because the proposed food waste preprocessing building is smaller than the one evaluated in the 2011 EIR, and because no additional impervious surfaces would be added, the Modified Project would not increase impacts on stormwater drainage, water supply or solid waste. Stormwater from the West End property would either continue to be directed to the City of Oakland stormdrains or be directed to the MWWTP drain system following implementation of a comprehensive Drainage Plan as described in Mitigation Measure HYD-3.					
19. Mandatory Findings					
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	4-24	No	No	No	Yes

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b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	4-13 et seq.	No	No	No	Yes
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	4-24	No	No	No	Yes

Discussion: The 2011 EIR determined that the project would have a significant unavoidable cumulative air quality impact on community risks and hazards. However, the significant impact was based on BAAQMD cumulative impact methodology and thresholds of significance that were adopted in June 2010 (BAAQMD 2010); BAAQMD withdrew those significance thresholds in May 2012, after certification of the 2011 EIR. The cumulative impact, as discussed in the 2011 EIR, was found to be significant because of background emissions, primarily from freeways that surround the MWWTP site. The Modified Project would not increase this cumulative air quality impact, and would not worsen any other cumulative impacts. In fact, the Modified Project would actually lower air emissions relative to the originally proposed Project. The construction of the Modified Project may be concurrent with the construction of the realigned Wake Avenue and widening of Engineers Road in the vicinity. The two projects were described and analyzed in the 2012 City of Oakland Addendum to its 2006 Supplemental EIR for the Oakland Army Base Redevelopment, which was found not to have significant construction air quality impacts. As two minor components of this 1,800-acre redevelopment project, they would not contribute to air quality impacts due to their coincident development with the Modified Project. Consistent with the 1999 BAAQMD Guidelines, the Modified Project would not be considered to have cumulatively significant air quality impacts because it does individually result in significant impacts and it does not conflict with the local and regional air quality plans (BAAQMD 1999). Although not applicable to this analysis, the Modified Project would also not be considered to have cumulatively significant air quality impacts during construction when compared to the 2010 BAAQMD criteria pollutant thresholds of significance (ENVIRON 2015). The 2011 EIR concluded that traffic from the combined Master Plan projects would not cause the average delay at those intersections to increase by two or more seconds, and the projects contribution to traffic impacts would therefore not be cumulatively considerable. As documented in the checklist above, there would be no increased impacts to biological or cultural resources, and there would be no increase in impacts, either direct or indirect, to human beings. Thus, the mitigation measures set forth in the 2011 EIR are fully sufficient to address the environmental impacts of the Modified Project.

2.2 Environmental Determination

Based upon the evidence in light of the whole record documented in the attached environmental checklist explanation, cited incorporations and attachments, I find that the Modified Project:

☐ **Has NOT been previously analyzed** as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to CEQA Guidelines. Preparation of adequate CEQA environmental documentation is required.

☒ **Has previously been analyzed** as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to CEQA Guidelines. The proposed project is a component of the whole action analyzed in the previously adopted/certified CEQA document. No additional CEQA documentation is required.

☐ **Has previously been analyzed** as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to CEQA Guidelines. **Minor additions and/or clarifications** are needed to make the previous documentation adequate to cover the project which are documented in this addendum to the earlier CEQA document (CEQA §15164). No additional CEQA documentation is required.

☐ **Has previously been analyzed** as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to State and County CEQA Guidelines. However, there is important new information and/or **substantial changes have occurred** requiring the preparation of an additional CEQA document (ND, MND, or EIR) pursuant to CEQA Guidelines Sections 15162 through 15163.

Signed Bennett Horenstein 6/25/15

Name and Title Date

Chapter 3 Report Preparation

3.1 Report Authors

3.1.1 East Bay Municipal Utility District

- Alicia Chakrabarti, P.E., Supervisor of Wastewater Planning
- Matt Hoeft, P.E., Associate Civil Engineer

3.1.2 RMC Water and Environment

- Robin Cort, Ph.D., environmental analysis
- Dave Richardson, P.E., technical reviewer

3.2 References

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Geologica 2012. Operation and Maintenance Plan, EBMUD West End Property, Site Code: 201764 (Former Historic War Dead United States Army Reserve Center), 2400 Engineers Road, Oakland California, September

Attachment B.5:

Addendum 5 – Minor Modifications to the Modified Food Waste Project – as described in the FEIR and subsequent June 2015 Addendum to the Final EIR (November 19, 2015)

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: November 19, 2015

MEMO TO: Vincent P. De Lange, Manager of Wastewater Engineering

THROUGH: Alicia R. Chakrabarti, Supervisor of Wastewater Planning

FROM: Matthew R. Hoeft, Associate Civil Engineer

SUBJECT: Addendum to Main Wastewater Treatment Plant Land Use Master Plan Final Environmental Impact Report (FEIR) – Minor Modifications to the Modified Food Waste Project as Described in the FEIR and the June 2015 Addendum to the FEIR

1. BACKGROUND

The Main Wastewater Treatment Plant (MWWTP) Land Use Master Plan (LUMP) FEIR was prepared by East Bay Municipal Utility District, acting as the Lead Agency, and the document was certified by the Board of Directors (Board) on June 28, 2011. A food waste preprocessing facility was analyzed in the LUMP FEIR at a project level. That project description was modified to provide additional project details closer to implementation. Those additional details were described in the June 2015 Modified Food Waste Project Addendum (Modified Project Addendum) to the LUMP FEIR.

2. PURPOSE OF MEMORANDUM

Since the Modified Project Addendum to the LUMP FEIR was completed, the project description has undergone two further minor refinements: (1) the addition of a small thermal fluid heater, and (2) confirmation of the height of the scrubber towers associated with the compressed natural gas (CNG) upgrade skid. This memorandum serves as a further Addendum to the LUMP FEIR pursuant to CEQA Guidelines section 15164. It describes the thermal fluid heater and scrubber towers and explains why these minor modifications do not meet the criteria set forth in CEQA Guidelines section 15162 for preparation of a subsequent or supplemental EIR.

3. CLARIFICATIONS TO THE MODIFIED PROJECT ADDENDUM

The thermal fluid heater, which will provide heat to the hydrolysis tank, and the height of the CNG scrubber, which was not known at the time of preparation of the Modified Project Addendum are described in the following sections.

A. Thermal Fluid Heater

The hydrolysis tank is a key component of the Modified Food Waste Project, as it receives preprocessed food waste in slurry form from the preprocessing building, then prepares it for digestion through removal of grit and by heating the slurry to promote hydrolysis. The hydrolysis tank is described in the Modified Project Addendum in Section 1.3.3. The Modified Project Addendum assumed that existing facilities at the MWWTP would have sufficient excess heat to meet the heat demand of the hydrolysis tank. Further analysis determined that during certain conditions, there would be insufficient heat for the hydrolysis tank, and therefore supplemental heat would be required. A forced circulation coil thermal fluid heater was selected for incorporation into the project design as the recommended method of producing the supplemental heat.

The heater will be fueled by natural gas. The components of the thermal fluid heater include a combustion vessel, thermal fluid coils, thermal fluid pump, and expansion tank, all assembled in a single skid with a footprint of approximately 6.5 feet by 6.5 feet, and a height of 7 feet. The equipment would fit within the existing project footprint, with no physical modifications needed (Figure 1). The skid would be mounted to a concrete slab on grade.

The thermal fluid heater will have a capacity of approximately 2 million British thermal units (BTU) per hour (MMBTU/hr), with a fuel consumption of up to 52 standard cubic feet per minute (scfm) of natural gas at peak rated capacity. Natural gas would be fed to the thermal fluid heater through a pipe, with no fuel storage needed. Exhaust from combustion of natural gas would be emitted to the atmosphere through a short stack off the combustion chamber. The heater's environmental impacts are analyzed in Section 4 of this memorandum.

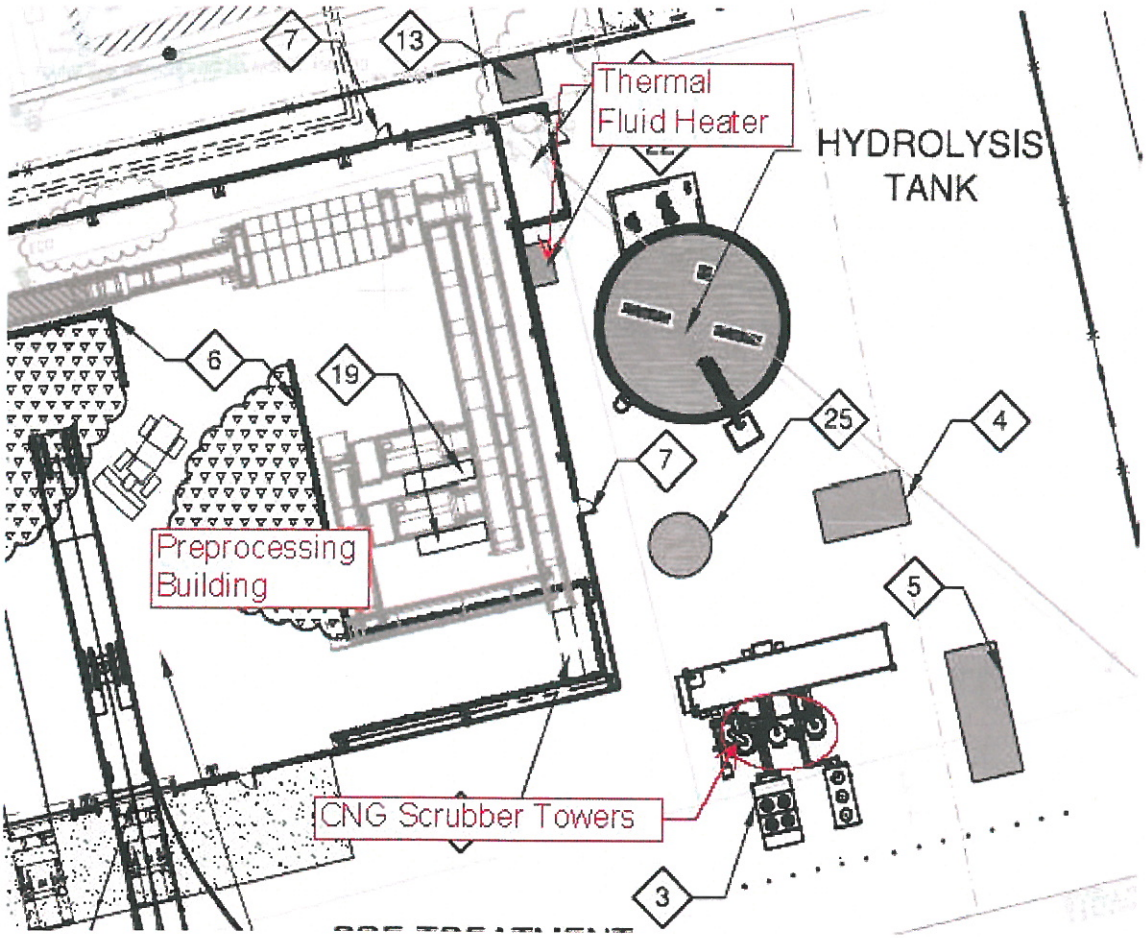

Figure 1. Site Layout

B. CNG Scrubber Height

The Modified Project Addendum describes how biogas produced in the digesters will be treated by a gas utilization system. Since the Modified Project Addendum was completed, more details have been developed for the gas utilization to be implemented as part of the project. The gas utilization facility can more accurately be described as a CNG upgrade skid. As described in Section 1.3.3 of the Modified Project Addendum, the CNG upgrade skid will "treat biogas generated from the anaerobic digesters" and "draw off biogas from the main digester gas header to produce renewable compressed natural gas for vehicle fuel." The process of treating the raw biogas involves removal of the primary contaminants: carbon dioxide, hydrogen sulfide, and water. These contaminants will be removed by first passing through a packed media column known as the "scrubber tower" using low temperature water. The liquid mixture discharged from the bottom of the scrubber tower is then flash evaporated in a flashing vessel to remove remaining methane, which is returned to the beginning of the CNG upgrade skid process. The

liquid remaining in the flashing vessel is discharged to a "stripper," which is the final step of removal of gaseous contaminants. Those gaseous contaminants are then sent to an odor control system for treatment.

The gas utilization system (i.e., CNG upgrade skid) description included in the Modified Project Addendum did not specify the height of the three towers required for upgrading the CNG to usable transportation fuel. The three towers are (1) the scrubber, for removal of carbon dioxide and hydrogen sulfide from the raw biogas, (2) the flashing vessel, which removes usable methane from the scrubber liquid effluent, and (3) the stripper, which removes contaminants (e.g., dissolved hydrogen sulfide) from the flashing vessel outlet and sends the contaminants to the odor control system. The heights of the three towers are as follows:

- Scrubber – 51 feet
- Flashing Vessel – 23 feet
- Stripper – 50 feet

The towers would be located adjacent to the proposed preprocessing building (Figure 1), which is approximately 45 feet tall at its highest point.

4. UPDATE OF IMPACT EVALUATION IN MODIFIED PROJECT ADDENDUM

A. Air Quality

The combustion of natural gas by the thermal fluid heater would result in the emissions shown below in Table 1. These emissions calculations assume emissions factors for small boilers with controlled emissions and low NOx burners. The "Total Average Daily Emissions from LUMP FEIR" includes stationary and mobile emissions from both the food waste and biodiesel facilities, as described in the LUMP FEIR and Modified Project Addendum.

The "Total Project Emissions," as modified to include the additional emissions from the thermal fluid heater, remain below Bay Area Air Quality Management District (BAAQMD) CEQA significance thresholds (based on 1999 BAAQMD CEQA Guidelines), and therefore do not result in new significant air-related environmental effects not disclosed in the LUMP FEIR, nor a substantial increase in the severity of air-related significant effects previously identified in the LUMP FEIR (Table 1).

Table 1. Total Project Emissions Including Thermal Fluid Heater

Category	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Average Daily Emissions from Heater (lb/day)[1]	0.41	3.8	6.3	0.05	0.57	0.57
Total Average Daily Emissions from LUMP FEIR (lb/day)[2,3]	40.0	47.7	34.5	10	30.8	28.4
Total Project Emissions (lb/day)	**40.4**	**51.5**	**40.8**	**10.0**	**31.4**	**29.0**
1999 BAAQMD CEQA Significance Thresholds[4]	80	80	--	--	80	--
2010 BAAQMD CEQA Significance Thresholds[4]	54	54	--	--	82	54

Notes:

1. Emissions factors used to calculate emissions from combustion of natural gas in a boiler were taken from the Environmental Protection Agency AP 42, Fifth Edition, Volume I, Chapter 1, Section 4 – Natural Gas Combustion, Tables 1.4-1 and 1.4-2.
2. Table 3.3-14 from the LUMP FEIR, "Total Combined Net Increase with Rail Spur Option (for Biodiesel Production Facility."
3. Note that project emissions are expected to be less than indicated in the LUMP EIR due to project modifications previously described in the Modified Project Addendum that will result in reduced emissions from mobile sources due to a reduction in VMTs. The Total Average Daily Emissions from the LUMP FEIR are selected as a conservative benchmark for the purpose of assessing the additional emissions generated by the heater, which are included within the Total Project Emissions indicated in Table 1. Total Project Emissions may be compared with the Total Average Daily Emissions to show the increase attributable to the heater.
4. The 2010 BAAQMD CEQA significance thresholds were never adopted, and thus the LUMP FEIR, Modified Project Addendum, and these minor modifications utilize the 1999 significance thresholds for determination of whether the increased emissions constitute an impact.

The change in height of the CNG scrubber towers will have no effect on the project's air emissions.

B. Noise

The thermal fluid heater will generate approximately 85 decibels of noise at a distance of 5 feet when in operation. Noise from the heater would combine with other noise-producing equipment that will be located outside the enclosed building. As detailed in the Modified Project Addendum, noise-producing equipment includes two fans for the biofilter, an air blower, a pump to convey processed food waste to the digesters, a hydrocyclone and dynamic cyclone, which are projected to produce a combined noise level of 94.9 A-weighted decibels (dBA) at 5 feet. Adding noise from the thermal fluid heater would increase the noise level at 5 feet to 95.3 dBA. The combined noise level of all outside equipment at the nearest sensitive receptor, which is about 3,000 feet from the project site, is projected to be 39.8 dBA, which is an imperceptible change from the noise level without the heater (estimated at 39.4 dBA). Because background noise at the nearest sensitive receptor is 55 dBA at night and 63 dBA during the day, the noise from the Modified Food Waste Project would be inaudible, even with the addition of the thermal

fluid heater. Therefore the thermal fluid heater would not result in new significant noise-related environmental effects nor a substantial increase in the severity of noise-related significant effects previously identified in the LUMP FEIR.

The change in height of the CNG scrubber towers will have no effect on the project's noise emissions.

C. Energy

The heater would consume additional energy compared with the level of energy consumption indicated in the Modified Project Addendum. The amount of energy consumed by the heater annually is estimated at a maximum of 21,900 MMBTU per year. Although this is an additional energy use that was not considered in the preparation of the Modified Project Addendum, the addition of the heater would not result in inefficient, wasteful, or unnecessary energy use. The digesters are operated in the temperature range that promotes growth of thermophilic bacteria, which is at approximately 122 degrees Fahrenheit. Slurry conveyed to the hydrolysis tank will be at ambient temperatures (approximately 68 degrees Fahrenheit), which means that the slurry must be heated so the temperature of the digester can be maintained. This heating process can take place either in the hydrolysis tank, which acts as an equalization tank prior to conveyance to the digesters, or in the digesters. For the project, the hydrolysis tank will be heated, with the heater located immediately adjacent to the tank. The alternative, assumed in the Modified Project Addendum, would be to heat the digesters using the existing hot water loop system. Given the lack of sufficient excess heat during certain times of year, the alternative method would still require supplemental heating using the existing boiler at the MWWTP.

The additional energy use associated with the thermal fluid heater will not result in inefficient, wasteful, or unnecessary energy use, but rather will enhance the energy production of the project. The supplemental heat will allow the hydrolysis tank and digester system to operate at thermophilic temperatures, which improves the operation of the project in three ways:

- **Allows for higher loading of slurry to the digesters**. Approximately 30% more slurry can be digested in the same volume at thermophilic temperatures compared with mesophilic temperatures, and therefore more renewable biogas is produced with the same sized facilities.
- **Increases the volatile solids reduction rate.** The fraction of the volatile solids in the slurry that is digested and converted to biogas is higher in thermophilic versus mesophilic digestion, therefore more material is converted to biogas, and less remains as digestate that must be hauled away. Therefore, fewer truck trips, and therefore less fuel, are required for the project as a result of operating at thermophilic temperatures.
- **Increases the mixing efficiency.** Preheating the slurry in the hydrolysis tank prior to the digester promotes the hydrolysis of cellular material in the slurry. Breaking down the cellular material decreases the viscosity of the slurry, allow for more efficient mixing, and for higher concentrations of solids in the digester. Higher concentrations of solids in the digesters results in greater biogas potential within the same sized facilities. The

decreased viscosity will also improve grit removal from the hydrolysis tank, which will reduce grit accumulation in the digesters, assuring that the working volume of the digester will be maintained for longer.

In addition to these, benefits, the thermal heater itself will be selected to ensure a high thermal efficiency, with a minimum efficiency of 80%.

The change in height of the CNG scrubber towers will have no effect on the project's energy use.

D. Aesthetics

The scrubber towers, at 51, 23 and 50 feet tall, will be consistent with the current land use, and similar in height and appearance to other adjacent and nearby facilities. The existing oxygen production towers at the MWWTP (77 feet tall) and the Power Generation Station heat recovery stack (55 feet tall) are both taller than each of the three proposed scrubber towers. The proposed towers will be located adjacent to the preprocessing building, which will be 47 feet tall. Given these surrounding buildings, the scrubber towers do not represent a stark difference from their immediate surroundings, and would not result in adverse effects on existing scenic vistas. Therefore the CNG scrubber towers would not result in new significant aesthetic a nor a substantial increase in the severity of aesthetic impacts of the project previously identified in the LUMP FEIR.

The thermal fluid heater will occupy a space approximately 6.5 feet wide, 6.5 feet long, and 7 feet tall. The heater will be installed between the preprocessing building and the hydrolysis tank, as depicted in Figure 1. The heater will have no effect on the project's aesthetic impacts, due to its relative small size and position surrounded by other, larger structures.

E. Other Environmental Resources

Other than the minor changes in the quantification of air, energy and noise impacts, and the clarification regarding the visual impacts of the towers, there are no other differences in the evaluation of impacts associated with other resources. There is no change in the siting of facilities as described in the Modified Project Addendum, all of which would still be within the footprint for facilities that was considered in the LUMP FEIR. Impacts to agriculture and forestry resources, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, transportation/traffic, or utilities and service systems would not be changed by the addition of the heater or by the height of the towers. Nor is there any new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the LUMP FEIR was certified as complete, that could reasonably result in any of the determinations set forth in CEQA Guidelines section 15162(a)(3).

5. CONCLUSION

As described above, a thermal fluid heater has been added to the project and the height of the CNG scrubber towers has been clarified, but the substantial evidence described above indicates that neither of these minor modifications to the project description will result in new or substantially increased environmental effects. No impacts described as less than significant in the LUMP FEIR have been found to be significant as a result of this clarification. Accordingly, the clarification is appropriately documented in this further memorandum, and a subsequent or supplemental EIR need not be prepared, pursuant to CEQA Guidelines sections 15162 and 15164.

MRH:mrh

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Attachment B.6:

Addendum 6 – Minor Modifications to the Modified Food Waste Project as described in the FEIR and subsequent June 2015 and November 2015 Addenda to the Final EIR (August 31, 2018)

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: August 31, 2018

MEMO TO: Eileen M. White, Director of Wastewater

THROUGH: Alicia R. Chakrabarti, Supervisor of Wastewater Planning

FROM: Matthew R. Hoeft, Associate Civil Engineer

SUBJECT: Addendum to Main Wastewater Treatment Plant Land Use Master Plan Final Environmental Impact Report (FEIR) – Minor Modifications to the Modified Food Waste Project as described in the FEIR and subsequent June 2015 and November 2015 Addenda to the FEIR

1. BACKGROUND

The Main Wastewater Treatment Plant (MWWTP) Land Use Master Plan (LUMP) FEIR (SCH No. 2009112073) was prepared by the East Bay Municipal Utility District (EBMUD), acting as the Lead Agency, and the document was certified by the Board of Directors (Board) on June 28, 2011. A food waste preprocessing facility was analyzed in the LUMP FEIR at a project level. That project description was modified to provide additional project details closer to implementation. Those additional details were described in the June 2015 Modified Food Waste Project Addendum (June 2015 Addendum) to the LUMP FEIR.

Subsequently, further additional details about the project as modified in the June 2015 Addendum were provided in the November 2015 Modified Food Waste Project Addendum (November 2015 Addendum). The November 2015 Addendum addressed the addition of a small thermal fluid heater and provided details on the height of the scrubber towers associated with the compressed natural gas (CNG) upgrade system.

2. PURPOSE OF MEMORANDUM

Since the June 2015 and November 2015 Addenda to the LUMP FEIR were completed, the project description has undergone one further project modification: the addition of a gas metering station and an interconnection to a Pacific Gas & Electric (PG&E) natural gas transmission pipeline network to replace the use of tube trucks as the primary method of delivering CNG to customers. Tube trucks will remain as a back-up mode of delivery, in the event that delivery at the interconnection is interrupted for any reason. This memorandum serves as a further Addendum to the LUMP FEIR pursuant to CEQA Guidelines section 15164. It describes the gas metering station and pipeline interconnection and explains why these minor modifications do not meet the criteria set forth in CEQA Guidelines section 15162 for preparation of a subsequent or supplemental EIR.

3. MODIFICATIONS TO THE MODIFIED PROJECT ADDENDUM

EBMUD analysis subsequent to the development of the original Modified Food Waste Project (Modified Project) description concluded that transport of finished CNG via tube trucks is not the most effective way to transfer CNG to customers. A more effective alternative is to construct an interconnection to the PG&E natural gas pipeline network without compressing it to CNG pressures (e.g., 3,000 pounds per square inch [psi] or greater). The end product is referred to as "biomethane" because it is derived from digestion of biological material and transferred at less than CNG pressures. The biomethane is drawn from the PG&E pipeline network at the point of use by customers and subsequently pressurized to CNG pressures and used as vehicle fuel.

One of the advantages of connecting to the pipeline network is reduction in onsite and overall energy use. Connecting to the pipeline avoids the need for a high-pressure compressor to pressurize the biomethane to 3,000 psi, which requires significantly greater electricity, and it eliminates the need for long term truck fuel consumption for delivering the biomethane to customers. A natural gas pipeline interconnection can instead be pressurized to lower pressures (typically 250 psi), with no need for a delivery truck, saving energy as well by reducing vehicle emissions associated with truck traffic. Also, with the tube truck configuration, the tube trucks deliver CNG to the user as a way of maximizing the mass of CNG delivered to the user, but the user must re-pressurize the CNG as it leaves the tube trucks and is conveyed to the fill station at the user location. This configuration results in two high-pressure compression steps, resulting in overall more energy use.

Another advantage is a reduction in logistics required to load and deliver the CNG to customers. With the pipeline interconnection, the biomethane can be injected into the pipeline network as it is produced, with no limitations on fill timing and sequencing. The coordination of tube truck filling requires additional staff time and resources to ensure the finished product is successfully delivered to its appropriate destination.

Lastly, the pipeline interconnection provides the potential for an expanded customer base, while the use of tube trucks limits the number of potential customers for the CNG. Tube trucks require a specific filling station configuration that accommodates the tube vessels. After research of the CNG market in Northern California, it was found that few existing filling stations have been constructed to accommodate tube trucks. A pipeline interconnection can deliver biomethane to any customer with a PG&E natural gas service connection, greatly expanding the potential customer base.

The project will retain the option to deliver CNG via tube trucks as a back-up mode of delivery, however the volume of CNG actually delivered via tube trucks will be a small fraction of the volume estimated in the previous project description.

A. Description of Modified Facilities

The pipeline interconnection to PG&E would require the addition of the following components to the project:

- Metering station, including:
  - Building, approximately 20 feet by 20 feet and 12 to 15 feet tall
  - Gas meter
  - Gas quality analyzers

  - Odorizer
  - Various valves and piping
- Pipelines
  - Pipeline connecting the biogas upgrading system to the metering station – approximately 800 lineal feet (LF) of small-diameter pipeline (estimated at up to about 4 to 6 inches in diameter);
  - Pipeline connecting the metering station to the PG&E transmission pipeline – less than 100 LF of small-diameter pipeline; this pipeline will cross the EBMUD property line and extend into California Department of Transportation (Caltrans) right-of-way along Interstate 80.

The approximate footprint and location of the facilities are illustrated in Figure 1 below. The pipeline would be constructed using open-cut excavation at a depth of 3 to 5 feet. The new pipeline would connect with the existing PG&E pipeline just outside the fence line of the MWWTP (Figure 2), between the fence and the paved Bay Trail (extending approximately 30 feet outside the MWWTP property boundary on the north). The PG&E pipeline parallels the fenceline at this location.

The portion of the pipeline outside the MWWTP property would require an encroachment permit from Caltrans. Design and construction of the connection to the PG&E pipeline would be approved by PG&E. Coordination with PG&E regarding the connection is ongoing.

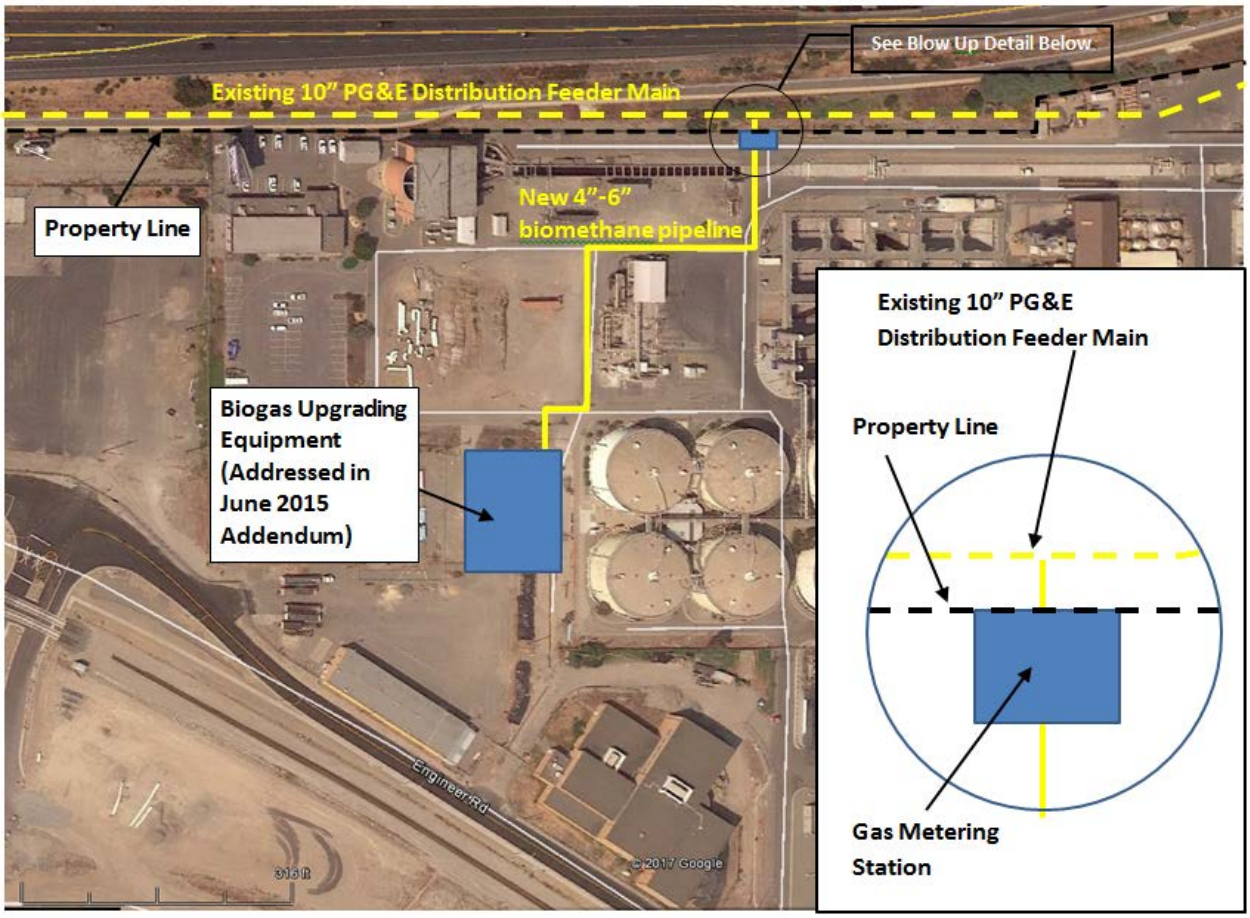


Figure 1 – Modified Project Facilities Location

Figure 2 – Photo of Area between MWWTP and Bay Trail

4. UPDATE OF IMPACT EVALUATION IN MODIFIED PROJECT ADDENDUM

The addition of the gas metering station and pipeline interconnection would result in changes to the impacts of the Modified Project. Energy use and operational air emissions would be reduced. Total construction-related impacts would be slightly increased, due to a modest increase in the quantity of facilities constructed, however those impacts would be spread over a longer period, thereby reducing peak daily emissions. Environmental Commitments from 2011 LUMP FEIR and Other Requirements Applicable to the Modified Project are identified in the June 2015 Addendum prepared for the Modified Project and would be applicable to the construction and operation of the gas metering station and pipeline. The details of the changes to impacts are described in the following sections.

Impact changes:

- **Aesthetics** –The gas pipeline would be buried, and the gas metering station would be designed to match the existing visual character of the area. The building for the gas metering station would be single story (12 - 15 feet tall) and would be shorter than the adjacent digesters, which are 30 to 35 feet tall. No new mitigation measures would be required, and impacts would remain less than significant.

- **Air Quality**
  - Construction – The June 2015 Addendum documented that the Modified Project would have substantially fewer construction emissions than were projected for the food waste facility evaluated in the EIR. For NOx, the constituent of greatest concern, emissions from demolition and grading were reduced from 20.2 pounds per day (lb/day) to 3.5 lb/day, and for building construction emissions were reduced from 17.4 lb/day to 9.8 lb/day. Adding construction of the biogas pipeline and metering station would generate slightly more construction emissions than estimated in the June 2015 addendum due to a slight increase in construction. However, because this is a minor addition to the project, total emissions are still projected to be lower than projected in the LUMP FEIR. Additionally, there would be less overlap in construction than was considered in the LUMP FEIR, which projected overlap in construction of the food waste facility and biodiesel facility.[1] Construction emissions are thus expected to be spread out over a longer period, resulting in lower daily emissions. No new mitigation measures would be required, and impacts would remain less than significant.
  - Operations – Emissions would be reduced because there would be fewer operational truck trips. CNG that would have been transported in tube trucks would be conveyed through the new pipeline connection directly to PG&E. Operation of the pipeline and metering station would not generate odors. No new mitigation measures would be required, and impacts would remain less than significant.

- **Biological Resources** – The gas pipeline would cross about 30 feet of vegetation between the fence line and the Bay Trail. The existing vegetation is a combination of ornamental landscaping

[1] Construction of the pipeline and metering station would not overlap with construction of the food waste facility and may occur when no other construction is ongoing. There is a potential that construction of the pipeline and metering station could overlap with construction of the biodiesel facility.

along the Bay Trail, which is maintained by Caltrans, and ruderal (weedy) vegetation that grows along the fence line (see Figure 2). No sensitive native habitats are present in this area. A small area of this vegetation would be removed for construction, but the area would be revegetated following construction with plants similar to those currently growing within the area to be disturbed. No new mitigation measures would be required, and impacts would remain less than significant.

- **Cultural Resources** – The majority of the construction would take place within the MWWTP site, which has been evaluated for cultural resources. The entire area for the pipeline and metering station is underlain by artificial fill and much or all of the area has been previously disturbed. Mitigation measures identified in the LUMP FEIR for unanticipated discoveries of buried cultural or paleontological resources or human remains would be implemented if any materials are unearthed during construction. No new mitigation measures would be required, and impacts would remain less than significant.

- **Energy** – Using a pipeline instead of trucks to deliver CNG would reduce operational energy use, which would more than offset the minor amount of additional energy required for construction. No new mitigation measures would be required, and impacts would remain less than significant.

- **GHG Emissions** – Use of a pipeline instead of trucks to deliver CNG would reduce energy use and emissions from trucks. This would result in fewer operational truck GHG emissions, which would more than offset the minor addition of GHG emissions that would be generated during pipeline construction. No new mitigation measures would be required, and impacts would remain less than significant with the change to the Modified Project.

- **Geology, Soils and Seismicity** – All new facilities would need to be designed and constructed to meet EBMUD's seismic design standards. No new mitigation measures would be required, and impacts would remain less than significant.

- **Hazards and Hazardous Materials** – All hazardous materials handling would still be required to be conducted in accordance with legal requirements for route in use, transport and disposal of hazardous materials. The metering station and gas pipeline would be constructed and operated in accordance with applicable safety standards for gas pipelines. No building demolition would be required so mitigation requiring hazardous building materials surveys and abatement is not applicable. No new mitigation measures would be required, and impacts would remain less than significant.

- **Hydrology and Water Quality** – The metering station and pipeline would not increase impervious surface area, and thus would not increase the amount of runoff into existing storm drains. Additionally, the metering station would not be located within the West End Property, so mitigation for storm water collection from the West End property is not applicable. A small portion of the pipeline alignment is within the West End Property, but the buried pipeline would not change impervious surface area, and thus would not increase the amount of runoff into existing storm drains. No changes to water quality would be expected. No new mitigation measures would be required, and impacts would remain less than significant.

- **Land Use and Recreation** – The metering station would be within the existing MWWTP and would be consistent with existing land use, and the pipeline would be buried and would not change the land use of the pipeline alignment. Short-term pipeline construction activities would be noticeable to users of the Bay Trail but would not directly interfere with any recreational use. At the time the LUMP FEIR was certified, the extension of the Bay Trail long the northern portion of the MWWTP had not yet been built. The trail has now been extended along the northern edge of the MWWTP and the "visually attractive educational signs to inform users of the Bay Trail about operations at the MWWTP" have been installed. Construction of the gas pipeline is a short-term activity that is required and consistent with existing and planned operations at the MWWTP and would not impair recreational use of the Bay Trail. No new mitigation measures would be required, and impacts would remain less than significant.

- **Noise** – The metering station and pipeline would not generate additional operational noise. Construction would take place at the northern edge of the MWWTP at least 0.5 miles from the closest residential receptors in Oakland. No pile driving would be employed for construction of the metering station or pipeline. Noise associated with construction would thus be similar to or less than noise levels projected in the LUMP FEIR and would not be expected to be perceptible at the nearest residences. Use of pipeline instead of tube trucks to deliver CNG would reduce operational noise from a reduction in truck traffic along truck and rail routes. No new mitigation measures would be required, and impacts would remain less than significant.

- **Public Services** – Construction and operation of the metering station and gas pipeline would not place any additional burden on police and fire protection services. Addition of the gas pipeline and metering station would not increase staffing requirements for the Modified Project. The LUMP FEIR documents that the project would not generate population growth, and would thus not generate need for new or altered government facilities. Operation of the metering station and gas pipeline would not change this determination. No new mitigation measures would be required, and impacts would remain less than significant.

- **Transportation** – The June 2015 Addendum for the Modified Project addresses the realignments of Wake Avenue and Engineers Road, which have since been completed. The Addendum documents that while the road network in the project area has changed since completion of the LUMP FEIR, those changes do not result in any new significant impacts. Traffic associated with construction of the metering station and gas pipeline would be minor and short term. As noted in the discussion of air quality impacts, there would be less overlap in construction than was considered in the LUMP FEIR, which projected overlap in construction of both the food waste facility and biodiesel facility. Construction overlap may now only occur concurrent with the biodiesel facility, and therefore, daily traffic volume during construction would be less than projected in the LUMP FEIR. Operational traffic impacts would be reduced as compared to both the LUMP FEIR and the 2015 Addenda because construction of the gas pipeline would reduce the need to transport finished CNG via tube trucks. No new mitigation measures would be required, and impacts would remain less than significant.

- **Utilities** – The gas pipeline and metering station would have no effect on wastewater treatment at the MWWTP, and would not require additional water supplies, storm drainage facilities, or solid waste disposal services or facilities. The LUMP FEIR includes a mitigation measure to ensure that utilities are not disrupted during construction. Implementation of this measure would ensure that construction of the gas pipeline does not disrupt any utilities within the pipeline alignment. No new mitigation measures would be required, and impacts would remain less than significant.

5. CONCLUSION

This Addendum to the Main Wastewater Treatment Plant Land Use Master Plan Final EIR (LUMP FEIR) has been prepared to evaluate the potential effects of adding a gas pipeline and metering station to the Modified Project.

Pursuant to Section 15164(a) of the CEQA Guidelines:

> *"A lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred."*

The conditions in Section 15162 include the following:

> *(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
>
> *(2) Substantial changes occur with respect to the circumstances under which the project is undertaken; or*
>
> *(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:*
>
> > *(A) The project will have one or more significant effects not discussed in the previous EIR;*
> > *(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;*
> > *(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project; or*
> > *(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment.*

This Addendum provides a focused review of the potential environmental impacts of the gas pipeline and metering station. This Addendum has been prepared because it has been determined (1) that the project would not create any new or more significant environmental impacts beyond those identified in the LUMP FEIR as updated with the June 2015 and November 2015 Addenda for the Modified Project, and (2) that the project would not require any new mitigation measures or alternatives that are considerably different from those analyzed in the LUMP FEIR. Specifically,

Implementation of this change in the Modified Project does not constitute a substantial change as compared to the full-scale food waste preprocessing facility evaluated in the LUMP FEIR. The gas pipeline and metering station do not require major revisions to the LUMP FEIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. Environmental effects of the project are discussed above in Section 4 of this memorandum. Impacts in each issue area were characterized and compared to the impacts identified in the LUMP FEIR and 2015 Addenda, and there are no new significant impacts or substantially more severe impacts.

There have been no substantial changes in the circumstances under which the Modified Project is undertaken that will require major revisions to the LUMP FEIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. The realignments of Wake Avenue and Engineers Road were considered in the June 2015 Addendum for the Modified Project and were determined not to result in any new impacts.

No new information of substantial importance became apparent as a result of the proposal to construct the gas pipeline and metering station. The additional facilities will not result in any new significant effects that were not discussed in the LUMP FEIR nor will they result in significant effects that were previously examined but would be substantially more severe than those identified in the LUMP FEIR. Please refer to the discussion of each issue in Section 4, which documents that there are no new or substantially more severe impacts with construction and operation of the metering station and gas pipeline.

The changes in the Modified Project do not increase the feasibility of mitigation measures previously found to be infeasible, and there are no feasible mitigation measures or alternatives that EBMUD has declined to adopt. In approving the Master Plan, EBMUD adopted all of the mitigation measures included in the Draft EIR and did not find any of the recommended measures to be infeasible. Thus, there are no mitigation measures that were previously found to be infeasible. Project alternatives evaluated in the LUMP FEIR all involved different configurations of the biodiesel facility. Implementation of the changes in the Modified Project would not affect the feasibility of the various options for implementation of the biodiesel facility.

Because the criteria in CEQA Guidelines section 15162 (a) does not apply here, an addendum to the LUMP FEIR has been prepared, and will be considered, along with the LUMP FEIR and subsequent Addenda, prior to EBMUD making any further approvals of the project.

MRH:mrh

Attachment B.7:
Addendum 7 – West End Property Land Lease (March 5, 2019)

EBMUD

AGENDA NO. 5.
MEETING DATE March 12, 2019

TITLE **WEST END PROPERTY LEASE – PROPERTY 599**

☒MOTION ☐RESOLUTION ☐ ORDINANCE

RECOMMENDED ACTION

Consider the Addendum to the Main Wastewater Treatment Plant (MWWTP) Land Use Master Plan Environmental Impact Report (LUMP EIR), determine that no further environmental review is required under the California Environmental Quality Act (CEQA), and authorize the execution of a five-year Land Lease with an option to extend for an additional five years or less at the District's discretion with Bizon Group, Inc. dba Conexwest (Lessee) for approximately four acres of land (Land) located within the District's West End property.

SUMMARY

The West End property (Property) is a 15.9 acre parcel purchased by the District in 2007 from the United States Government. The Property is located at Engineer Road and Wake Avenue in Oakland, adjacent to the District's MWWTP. The Land for the proposed lease is located at the western most portion of the Property. The Land contains a 10,880 square foot unoccupied warehouse structure previously leased to Viridis Fuels, LLC (Viridis). The District has no immediate plan to utilize this portion of the Property; therefore a new lease was negotiated with the Lessee for use of the Land. The base rent for this lease is $50,500 monthly or $606,000 annually, with subsequent increases at three percent annually.

DISCUSSION

The lease between the District and Viridis was terminated on February 8, 2019 at the request of Viridis. The District has no immediate plan to utilize this portion of the Property, and a new lease was negotiated with the Lessee. The Lessee is a nation-wide storage and shipping container supplier that specializes in supplying, fabricating and modifying storage and shipping containers. The Lessee will be using the Land to support its business operations.

The Lessee agrees to lease the Land "as is." with the District responsible for providing onsite utilities. The Land is encumbered by several restrictions such as the Covenant to Restrict Use of Property – Environmental Restriction, an Operation and Maintenance Plan by the Department of

Funds Available: FY19-FY24	Budget Code: 326	
DEPARTMENT SUBMITTING Customer and Community Svcs.	DEPARTMENT MANAGER or DIRECTOR Andrew L. Lee	APPROVED General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

Toxic Substances Control, and a Consent Agreement between EBMUD and the State of California – California Environmental Protection Agency. The lease incorporates these encumbrances to ensure that both the District and the Lessee continues to meet their obligations under the various Property covenants and restrictions.

In addition to the $606,000 annual base rent, the lease contains an annual three percent escalation. The lease provides for the District to pay a two percent commission ($60,000) to the brokerage firm acting as agent. The commission will be paid directly by the Lessee on behalf of the District as part of the rent. Should the lease be extended beyond the initial five-year term, the initial lease rate for the five-year extension will be set at 10 percent more than the preceding year's rent with subsequent annual increases at three percent thereafter, effective on the date of the signed extension. The annual negotiated base rent is net operating expenses, taxes, and insurance under this lease.

The extension option for this lease is structured differently than the District's normal lease renewal options. The District's usual lease renewal options provide a certain period of time in which the tenant must express its intent to renew the lease in writing. Once the notice of renewal is received, the renewal option terms take effect upon expiration of the original lease term. For this lease, the Lessee has the right to request a renewal in the last six months of the lease; however, the District would decide at that time whether or not to extend the lease, as well as the length of time for an extension. This approach provides the District flexibility to accommodate future plans for the Land.

SUSTAINABILITY

Economic

The total revenue realized by the District over the initial five-year lease term will be $3,157,000. If the option to extend the lease for an additional five years is exercised, the total revenue will be $7,140,000. The District will also save on the annual maintenance of the property if it was otherwise unutilized.

Social

The Premises is maintained while remaining available for future District use.

Environmental

In 2011, acting as the CEQA lead agency, the District prepared the MWWTP LUMP EIR (SCH No. 2009112073). The LUMP EIR analyzed the MWWTP Land Use Master Plan's thirteen different land use elements for the MWWTP property, including project-level analysis of leasing the Land to a private entity for development of a biodiesel production facility. On June 28, 2011, the District's Board of Directors certified the LUMP EIR, made CEQA findings and adopted a statement of overriding considerations, and approved the MWWTP Land Use Master Plan. Subsequent to LUMP EIR certification and the District's approval of the Viridis lease, Viridis

modified its proposed facility relative to what was analyzed in the LUMP FEIR. Those modifications were described and analyzed in the October 2017 Modified Biodiesel Project Addendum (October 2017 Addendum) to the LUMP EIR, which concluded that none of the project changes required further CEQA review.

In support of the proposed Lease, the District completed a subsequent addendum to the LUMP EIR describing the proposed change in use of the Land from a biodiesel production facility to a shipping container facility. The attached addendum concludes that none of CEQA triggers for subsequent or supplemental environmental review were met, such that the Board may approve the proposed Lease based on the analysis contained in the addendum and the LUMP EIR. The Lease requires the Lessee to comply with applicable environmental documentation such as the LUMP EIR. As such, the District will ensure that all applicable mitigation measures from the LUMP EIR are implemented by the Lessee.

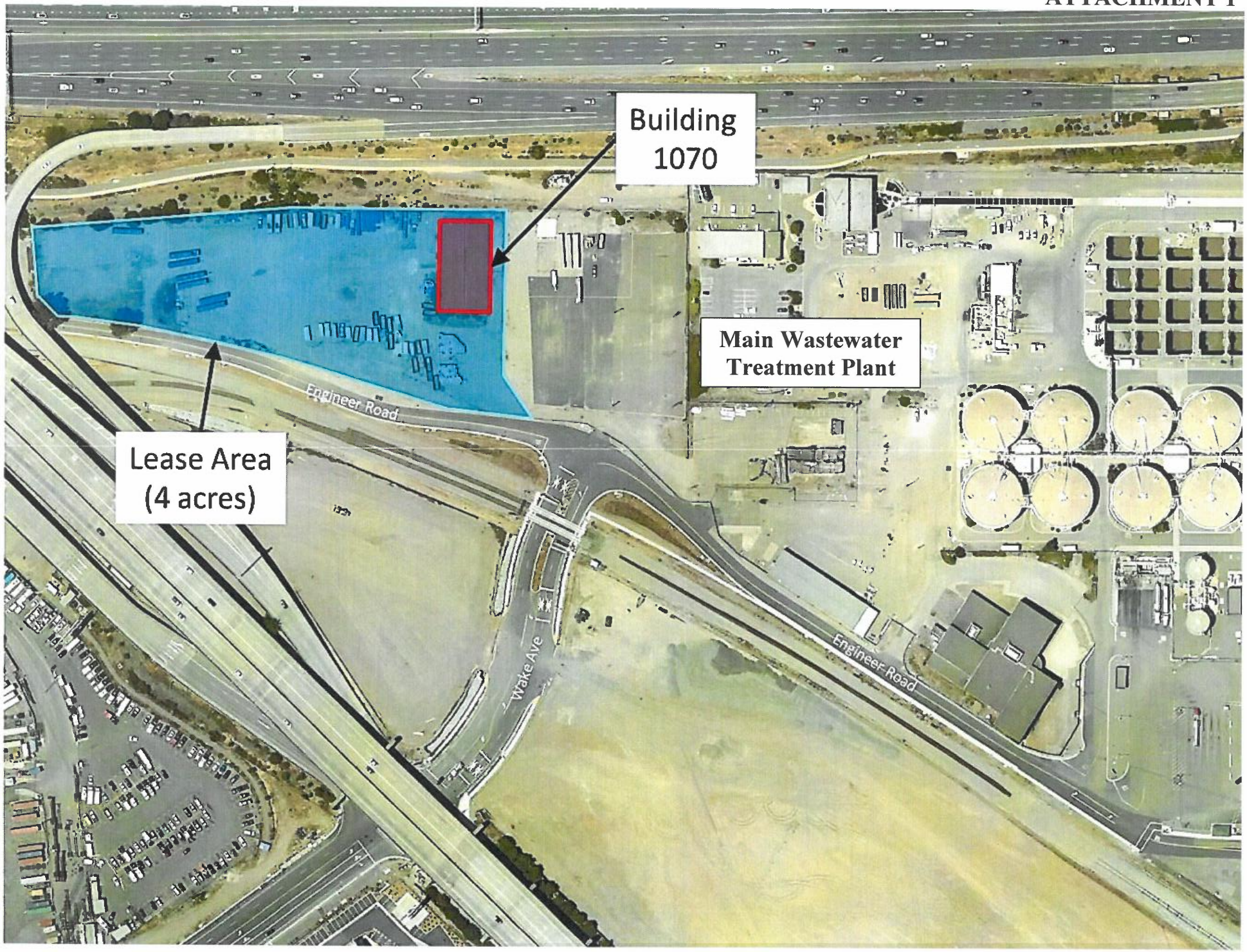
ALTERNATIVE

Do not execute the lease. This alternative is not recommended as the District has no current plans to use the Land and if the Lease is not executed, the District would lose revenue while incurring ongoing maintenance costs.

Attachments: Map of Lease Property (Attachment 1)
LUMP FEIR Addendum – West End Property Land Lease (Attachment 2)

I:\SEC\2019 Board Related Items\Board Packets 2019\031219 Board Items\CCS - BD-1 West End Property - Property 599

ATTACHMENT 1



Attachment 2

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 5, 2019

MEMO TO: Matthew R. Hoeft, Supervisor of Wastewater Planning

FROM: Eileen M. White, Director of Wastewater EMW

SUBJECT: Approval of Addendum to Main Wastewater Treatment Plant Land Use Master Plan Final Environmental Impact Report (FEIR) – West End Property Land Lease

The East Bay Municipal Utility District (District) Board of Directors certified the Final Environmental Impact Report (EIR) for the Main Wastewater Treatment Plant (MWWTP) Land Use Master Plan on June 28, 2011. The EIR included a project-level analysis of a biodiesel production facility. The District Board of Directors approved a lease agreement with Viridis Fuels LLC (Viridis) on October 27, 2011, for Viridis to construct and operate a biodiesel production facility like the one described and analyzed in the 2011 EIR. An addendum was prepared in October 2017 describing modifications to the biodiesel project described in the 2011 EIR, concluding that no new significant impacts would occur, and that the change to the project would not cause an increase in the severity of previously identified impacts.

Viridis has subsequently ended their lease with the District, and the District has identified a replacement tenant for the same parcel previously occupied by Viridis. The tenant will utilize the site for shipping container storage, repair, and fabrication. District staff has prepared the attached addendum, which analyzes the proposed changes to the land use of the site and describes the operations proposed by the new tenant. The addendum concludes that the change to the project would not result in any new significant impacts or cause an increase in the severity of previously identified impacts. The addendum also explains that the same mitigation measures and environmental commitments identified in the 2011 EIR will apply to the new land use of the site. No further environmental review is necessary. Accordingly, I approve of the use of the site for the shipping container operation, and that it is consistent with the facility considered on the same site in the 2011 EIR.

EMW:MRH:sak

Attachment

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EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 5, 2019

MEMO TO: Eileen M. White, Director of Wastewater

FROM: Matthew R. Hoeft, Supervisor of Wastewater Planning

SUBJECT: Addendum to Main Wastewater Treatment Plant Land Use Master Plan Final Environmental Impact Report (FEIR) – West End Property Land Lease

1. BACKGROUND

In 2011, acting as the CEQA lead agency, East Bay Municipal Utility District (EBMUD) prepared the Main Wastewater Treatment Plant (MWWTP) Land Use Master Plan (LUMP) FEIR (SCH No. 2009112073). The LUMP EIR analyzed the MWWTP Land Use Master Plan's thirteen different land use elements for the MWWTP property, including project-level analysis of two elements that were being considered for immediate implementation at the time: leasing of certain EBMUD-owned land to private entities for development of a food waste preprocessing facility and a biodiesel production facility. On June 28, 2011, the EBMUD Board of Directors (Board) certified the LUMP EIR and approved the MWWTP Land Use Master Plan. Subsequent to LUMP EIR certification and EBMUD approval of the lease for biodiesel facility development, that project was modified slightly as the project came closer to implementation. Those project changes were described and analyzed in the October 2017 Modified Biodiesel Project Addendum (October 2017 Addendum) to the LUMP FEIR, which concluded that none of the project changes required further CEQA review.

The developer of the proposed biodiesel processing facility had previously entered into a lease with EBMUD on a portion of the West End Property—a parcel of land approximately 15.6 acres in size immediately adjacent to the EBMUD Main Wastewater Treatment Plant (MWWTP). The portion leased by the biodiesel facility developer is four acres ("the Site") and is shown in Figure 1. The biodiesel facility developer recently requested to end their lease with EBMUD, ending their pursuit of a biodiesel processing facility on this site.

Following the end of the previous lease, EBMUD identified a new potential tenant that would utilize the Site for shipping container storage, repair, and fabrication ("shipping container facility"). This memorandum analyzes whether this change in land use for the Site-- from a biodiesel processing facility to a shipping container facility—requires subsequent or supplemental environmental review pursuant to CEQA Guidelines section 15162.

2. PURPOSE OF MEMORANDUM

Pursuant to the California Environmental Quality Act, California Public Resources Code sections 21000 et seq. ("CEQA") and the California Environmental Quality Act Guidelines, Title 14, chapter 3 of the California Code of Regulations ("CEQA Guidelines"), this Addendum to the

LUMP FEIR, has been prepared to address the implementation of a shipping container storage and refurbishment operation in the same location as the previously described biodiesel production facility evaluated at a project level in the 2011 EIR. This memorandum serves as a further Addendum to the LUMP FEIR pursuant to CEQA Guidelines section 15164. It describes the proposed new use of the Site, specifically storage and refurbishment of shipping containers, and explains why these modifications to the Project analyzed in the LUMP EIR do not meet the criteria set forth in CEQA Guidelines section 15162 for preparation of a subsequent or supplemental EIR.

3. MODIFICATIONS TO THE PREVIOUS PROJECT

The proposed project change would replace the proposed biodiesel processing facility previously planned for the Site with an operation for shipping container storage, repair, and fabrication. A comparison between the previously described biodiesel production facility and the proposed shipping container facility is shown in Table 1. The proposed tenant would utilize the Site for the following purposes:

- Parking of vehicles owned and operated by Lessee and its employees
- Loading, unloading, and storage of shipping containers
- Repairing and rehabilitation of shipping containers
- Fabrication of shipping containers
- Receiving and delivery of shipping containers
- Other ancillary related operations necessary to support the business of buying, selling, renting, storing, rehabbing, and fabricating shipping containers.

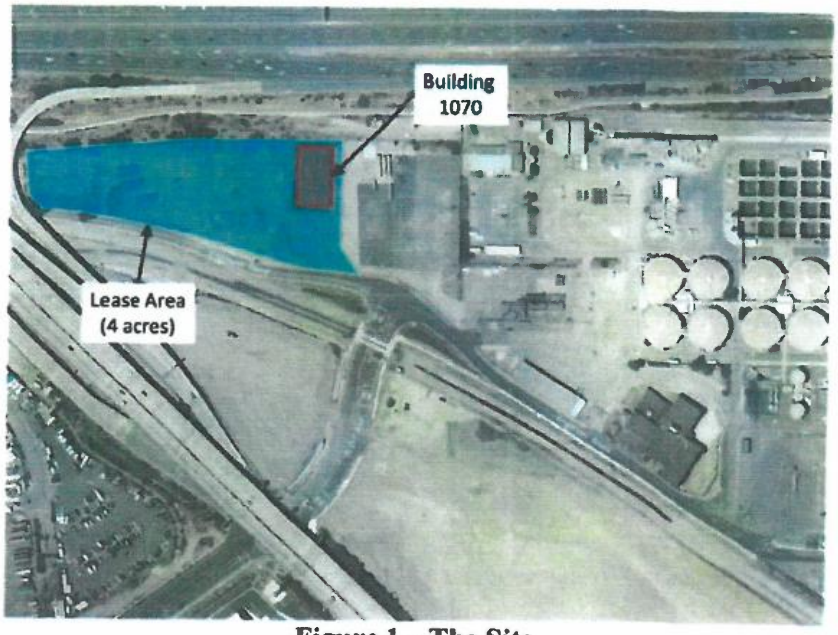

Figure 1 – The Site

Table 1 – Comparison of Modified Project to Original Project

Item	Modified Biodiesel Project (October 2017 Addendum)	New Proposed Project
Purpose	Enhance EBMUD revenues in order to maintain reasonable rates by increasing renewable energy production and leasing unused land.	Enhance EBMUD revenues in order to maintain reasonable rates by leasing unused land
Facilities	Three 110-ft by 65-ft 5 mgy biodiesel production units, 322-ft by 46-ft storage tank array (34 portable storage tanks, total quantity 367,000 gallons), methanol staging area, truck unloading rack and weight scale and rail spur for train loading and unloading. Administration and offices will be contained within existing buildings.	No new facilities or structures. Water and gas utility service connections will be constructed
Demolition	Two buildings have now been demolished since the LUMP FEIR, and one will remain (Building 1070).	No change
Delivery trucks per day	57 inbound and outbound trucks for feedstocks, raw materials, biodiesel, and glycerin	50 inbound and outbound trucks delivering shipping containers per day.
Product Delivery and Offtake	By truck or by rail	By truck
Project Site Area and Location	4.0 acres of West End Property	No change

The Site would be used in its current state, including existing Building 1070, without demolition or modifications to existing facilities, nor construction of new facilities or structures. EBMUD would manage the construction of a new water service connection, and would have discretion to approve additional utility service connections. Only gas service is not currently connected after having previously been disconnected during unrelated projects in the vicinity.

The proposed tenant's existing operations are located in San Francisco, and the project change would result in relocation of those existing operations to the Site. The shipping container operation would consist of placement of standard-sized intermodal steel containers on the site using diesel forklifts to load and unload containers from trucks delivering to and from the site. The shipping containers will arrive on truck from the Port of Oakland. After repair and

fabrication using welding and other hand-held equipment, the finished shipping containers would be loaded onto hauling trucks. As under the proposed tenant's existing operations, the shipping containers would be hauled primarily (90% of total volume of containers) within 200 miles of the Site, while 10% would be shipped greater distances. There would be a total of approximately 50 inbound and outbound trucks per day.

Personnel for the shipping container operation would utilize the existing Building 1070 for office space.

4. UPDATE OF IMPACT EVALUATION

The replacement of a biodiesel processing facility with a shipping container operation would result in changes to the impacts of the previously described project. Energy use and operational air emissions would be reduced. Total construction-related impacts would be greatly reduced, due to the reduced number of facilities or structures needed to be constructed, with only two utility service connections (water and gas) now necessary. Environmental Commitments listed in Section 2.6 of the 2011 LUMP FEIR and construction mitigation measures in the Mitigation, Monitoring and Reporting Plan (MMRP) adopted by the Board in 2011 would apply to the construction of new utility connections at the Site. The details of the changes to impacts are described in the following sections.

Impact changes:

- **Aesthetics** –The Site is a deteriorated former army base zoned for industrial land use. The new proposed shipping container facility would not require new permanent structures or facilities, but would add shipping container storage on the existing ground surface. The tenant will be restricted from stacking the shipping containers higher than the height of billboards in the area, approximately 50 feet high. The current uses of the land in the vicinity of this site include highway overpasses that are taller than the stacked shipping containers, and the MWWTP, which includes process facilities (e.g., oxygen production towers, turbine exhaust stacks) which are also taller. The proposed change in use of the Site is consistent with the aesthetics of the surrounding area. Therefore, no new mitigation measures would be required, and impacts would remain less than significant.
- **Air Quality**
    - **Construction** – The October 2017 Addendum documented that the modified biodiesel project would have substantially fewer construction emissions than were projected for the biodiesel facility originally analyzed in the 2011 FEIR. For this proposed change, the construction emissions will be even lower because the extent of proposed construction has been reduced from multiple large structures, as well as major earthwork and hauling related to rail spur construction, to that of only two small capacity utility service connection pipes. No new mitigation measures would be required, and impacts would remain less than significant.

- **Operations** – Emissions would be reduced because there would be fewer operational truck trips. The October 2017 Addendum reduced the estimated daily operational truck trips from 61 to 57. This addendum further reduces the truck trips from 57 to 50 per day. Also, the tenant's existing operations are located in San Francisco, and they will simply be moving their operations to this site, such that operations-related mobile emissions are not an effect of the proposed lease. Therefore there will be no net change in emissions for the region. The tenant will also be required to implement Mitigation Measure AIR-5 from the LUMP EIR, which requires installation of diesel particulate filters on all diesel-fueled vehicles to be used in operations. No new mitigation measures would be required, and impacts would remain less than significant.

  The tenant would be required to implement mitigation measure AIR-5, which requires that any diesel-fueled vehicles operated at the facility be fitted with California Air Resources Board (CARB) Level 3 Diesel Particulate filters to reduce $PM_{2.5}$ emissions by a minimum of 50%, or otherwise implement alternative options that would achieve the same effect. The tenant will operate fewer mobile sources (two to three diesel-fueled forklifts on site, with 50 inbound and outbound delivery trucks, compared to 61 total truck trips in the 2011 LUMP FEIR) than described in the 2011 LUMP FEIR for use of the Site for a biodiesel production facility. Therefore emissions of $PM_{2.5}$, and therefore toxic air contaminants (TACs) will be lower than estimated in the 2011 LUMP FEIR.

- **Biological Resources** – The Site remains a heavily disturbed industrial area that provides no suitable habitat for sensitive species, and no sensitive species have been discovered in the vicinity during the ongoing operations of the MWWTP or construction on the West End property. The proposed change in use of the Site would thus not result in any new or more severe impacts to biological resources relative to those identified in the LUMP EIR.

- **Cultural Resources** – Impacts to cultural resources would be the same as, or less than those addressed in the 2011 EIR. All impacts of the Master Plan that are related to the footprint of project facilities would not be changed by implementation of the proposed change in use of the Site. The LUMP FEIR essentially assumed that all of the land area of the MWWTP, including the West End property, could eventually be disturbed by construction of a facility. Mitigation Measures described in the LUMP FEIR CUL-1, CUL-2 and CUL-3 would ensure that any impacts would be less than significant during construction. The proposed change in use of the Site would thus not result in any new impacts to cultural resources.

- **Energy** – The October 2017 Addendum estimated the electricity demand of the proposed biodiesel facility at approximately 1,020 kW. The electricity demand of the shipping container facility is 48 kW, which is substantially lower than the previously described

biodiesel production facility. The project would no longer produce renewable energy in the form of biodiesel, but the substantial decrease in electricity use by the new proposed use of the Site demonstrates that energy use would not be inefficient, wasteful, or unnecessary.

- **GHG Emissions** – Modification of the project from a biodiesel production facility to a shipping container facility would reduce greenhouse gas emissions by (1) using less electricity, (2) generating fewer construction emissions from construction equipment fuel combustion, and (3) generating fewer operational emissions due to fewer operational truck trips.

- **Geology, Soils and Seismicity** – No new structures would be constructed as a result of the proposed change in use of the Site. No new mitigation measures would be required, and impacts would remain less than significant.

- **Hazards and Hazardous Materials** – The shipping container facility's hazards and hazardous materials impacts would be reduced relative to the biodiesel production facility evaluated in the October 2017 Addendum. Because an existing building would be reused for administrative and office space , Mitigation Measure HAZ-3, Hazardous Building Materials Survey and Abatement, would be implemented to ensure containment or removal of any lead-containing materials within the building before the structure is reused. No portion of the MWWTP is identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (EBMUD 2009). No hazardous materials listed in Table 3.9-4 of the LUMP FEIR and referenced in the October 2017 EIT will be stored on site with the modified use of the site. The shipping container facility would be subject to the same requirements that are discussed on page 3.9-25 of the LUMP FEIR, including filing a Hazardous Materials Business Plan with the Oakland Fire Department, Office of Emergency Services. The shipping container facility would also be subject to the requirements of the DTSC approved O&M Plan for all excavation activities on the West End property and EBMUD contract specifications related to project safety, waste disposal and water control and disposal for excavation on both the West End property and the MWWTP as discussed on page 3.9-29 of the 2011 EIR.

- **Hydrology and Water Quality** – The shipping container facility would comply with mitigation measures identified in the LUMP FEIR, and facilities would be constructed within the same area as that analyzed in the 2011 EIR, but with a far smaller extent of construction. Impacts would be less than those previously identified because the proposed shipping container facility would be located within the same area that was evaluated in the LUMP FEIR, but with only two utility service connections to be constructed. Because the LUMP FEIR assumed construction of facilities covering essentially the entire West End property, stormwater impacts attributable to the proposed shipping container facility would be no greater than analyzed in the LUMP FEIR. The LUMP FEIR noted the need for

expansion of the stormwater collection system if the stormwater runoff from the West End property would be conveyed to the MWWTP; however, stormwater from the proposed shipping container facility will continue to be conveyed to the existing stormwater collection system as it is now. Because the proposed change in use of the Site would not change the amount of impervious surface area at the project site, it thus would not increase the amount of runoff into existing storm drains. No new mitigation measures would be required, and impacts would remain less than significant.

- **Land Use and Recreation** – The shipping container facility would be constructed entirely within the MWWTP and would be consistent with existing land use at the MWWTP. The zoning and land use designations for the MWWTP site have not changed since preparation of the LUMP FEIR. Impacts would be the same as those identified in the LUMP FEIR.

- **Noise** – The shipping container facility will produce noise during construction of the new utility service connections and during regular operations. The location of the site is a minimum of 4,000 feet from the nearest sensitive receptors, which are residential developments to the east of the MWWTP, beyond the Union Pacific Railroad train tracks. Therefore, any sound generated during construction or operations will be attenuated prior to exposure to the sensitive receptors. Construction of the utility service connections will require typical excavation equipment (e.g., backhoes) for a short duration (approximately 2 weeks). Operations will involve use of diesel-fueled forklifts, hauling trucks, and employee vehicles, which will generate noise of less than 100 db while in operation, which would be attenuated to below 50 db by the time it reaches the sensitive receptors.

  Background noise at the nearest sensitive receptor is 55 dBA at night and 63 dBA during the day (see page 3.12-6 of the LUMP FEIR).When added to this observed background noise, the noise from the proposed shipping container facility is insignificant relative to the existing background noise that the total noise level would not change (i.e., the background noise would be loud enough that the noise from the proposed shipping container facility would be inaudible). At all times of day, shipping container facility noise would be imperceptible at the location of the nearest residential receptors. Therefore, the proposed change in use of the Site would not result in any new impacts or increase the severity of previously identified noise impacts.

- **Public Services** – Construction and operation of the shipping container facility would not place any additional burden on police and fire protection services. Addition of the shipping container operation would not increase staffing requirements for the the Site. The LUMP FEIR documents that the biodiesel production facility would not generate population growth, and would thus not generate need for new or altered government facilities. The proposed change in use of the Site would not change this determination. No new mitigation measures would be required, and impacts would remain less than significant.

- **Transportation** – The number of truck trips for both construction and operation of the shipping container facility will both be reduced relative to the biodiesel facility, therefore the impact to traffic would decrease. Construction will now only consist of two utility service connections, eliminating the substantial quantity of earthwork hauling required for the biodiesel facility, as described in the October 2017 Addendum. Operational traffic impacts would be reduced as compared to both the LUMP FEIR and the October 2017 Addenda because the shipping container operation will result in fewer total inbound and outbound truck deliveries. No new mitigation measures would be required, and impacts would remain less than significant.

- **Utilities** – The shipping container facility would have minimal effect on wastewater treatment at the MWWTP, with wastewater generated from personnel working at the facility will be conveyed to the MWWTP. The proposed change in use of the Site would not require additional water supplies, storm drainage facilities, or solid waste disposal services or facilities. The LUMP FEIR includes a mitigation measure to ensure that utilities are not disrupted during construction. Implementation of this measure would ensure that construction of the gas service connection does not disrupt any utilities within the pipeline alignment. No new mitigation measures would be required, and impacts would remain less than significant.

5. CONCLUSION

This Addendum to the Main Wastewater Treatment Plant Land Use Master Plan Final EIR (LUMP FEIR) has been prepared to evaluate the potential effects of changing the use of the Site from a biodiesel production facility to a shipping container storage, repair, and fabrication facility.

Pursuant to Section 15164(a) of the CEQA Guidelines:

> *"A lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred."*

The conditions in Section 15162 include the following:

> *(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
>
> *(2) Substantial changes occur with respect to the circumstances under which the project is undertaken; or*

> *(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:*
>
> > *(A) The project will have one or more significant effects not discussed in the previous EIR;*
> > *(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;*
> > *(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project; or*
> > *(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment.*

This Addendum provides a focused review of the potential environmental impacts of the shipping container operation. This Addendum has been prepared because it has been determined (1) that the project would not create any new or more significant environmental impacts beyond those identified in the LUMP FEIR as updated with the October 2017 Addendum, and (2) that the project would not require any new mitigation measures or alternatives that are considerably different from those analyzed in the LUMP FEIR. Specifically,

> Implementation of this change in the Site's land use from a biodiesel production facility to a shipping container facility does not constitute a substantial change in the project evaluated in the LUMP FEIR. The shipping container operation does not require major revisions to the LUMP FEIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. Environmental effects of the project change are discussed above in Section 4 of this memorandum. Impacts in each issue area were characterized and compared to the impacts identified in the LUMP FEIR and October 2017 Addendum, and there are no new significant impacts or substantially more severe impacts.
>
> There have been no substantial changes in the circumstances under which the shipping container facility is to be undertaken that would require major revisions to the LUMP FEIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
>
> No new information of substantial importance became apparent as a result of the proposal to change the use of the Site to a shipping container operation. The change in use of the site will not result in any new significant effects that were not discussed in the LUMP FEIR nor will they result in significant effects that were previously examined but would be substantially more severe than those identified in the LUMP FEIR. Please refer to the discussion of each issue in Section 4, which documents that there are no new or substantially more severe impacts with construction and operation of the shipping container operation.

> The changes in the project as previously described in the LUMP EIR and October 2017 Addendum do not increase the feasibility of mitigation measures previously found to be infeasible, and there are no feasible mitigation measures or alternatives that EBMUD has declined to adopt. In approving the Master Plan, EBMUD adopted all of the mitigation measures included in the Draft EIR and did not find any of the recommended measures to be infeasible. Thus, there are no mitigation measures that were previously found to be infeasible. Project alternatives evaluated in the LUMP FEIR all involved different uses of the West End Property, including land leases. Implementation of the proposed project change would not affect the feasibility of the various options for implementation of the project.

Because the criteria in CEQA Guidelines section 15162 do not apply here, an addendum to the LUMP FEIR has been prepared, and will be considered, along with the LUMP FEIR and subsequent Addenda, prior to EBMUD making any further approvals. No further CEQA review is required.

MRH:mrh

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Attachment B.8:

Addendum 8 – FirstElement Fuel Hydrogen Refueling Station (May 13, 2021)

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: May 13, 2021

MEMO TO: Eileen White, Director of Wastewater

THROUGH: Mathew R. Hoeft, Supervisor of Wastewater Planning

FROM: Robin Cort, Woodard & Curran

SUBJECT: Addendum to Main Wastewater Treatment Plant Land Use Master Plan Environmental Impact Report (EIR) – FirstElement Fuel Hydrogen Refueling Station

1. BACKGROUND

In 2011, acting as the California Environmental Quality Act (CEQA) lead agency, East Bay Municipal Utility District (EBMUD) prepared the Main Wastewater Treatment Plant (MWWTP) Land Use Master Plan (LUMP) EIR (2011 EIR; SCH No. 2009112073). The 2011 EIR analyzed the MWWTP Land Use Master Plan's thirteen different land use elements for the MWWTP property, including project-level analysis of two elements that were being considered for immediate implementation at the time: leasing of certain EBMUD-owned land within the area known as the West End property to private entities for development of a food waste preprocessing facility and a biodiesel production facility. The 2011 EIR also evaluated the remaining land use elements for the West End property at a program level, including an area between the food waste preprocessing facility and biodiesel production facility that was identified for future revenue-generating land lease. The area originally proposed for future leasing roughly corresponds to the Building 1070 Yard, a portion of the West End property that is currently covered by an engineered cap, a barrier designed to prevent contact with contaminated soil and infiltration of rainwater, that could mobilize existing contaminants in soil at the site. Located to the southeast of the area designated for a food waste preprocessing facility, the Building 1086 location at the West End property was originally proposed for use as employee parking/emergency equipment storage. On June 28, 2011, the EBMUD Board of Directors (Board) certified the 2011 EIR and approved the MWWTP Land Use Master Plan. Figure 1 shows the boundaries of the West End property and shows the locations originally considered in the 2011 EIR for development of a biodiesel facility and food waste preprocessing facility.

Subsequent to the 2011 EIR certification, EBMUD contemplated key modifications to the plans for the West End property. Each of these modifications was evaluated for new or substantially different impacts from those evaluated in the 2011 EIR. Of relevance to the current proposal are the June 2015 Addendum and the March 2019 Addendum. The June 2015 Addendum considered modifications to the food waste preprocessing facility and evaluated the realignments of Wake Avenue and Engineer Road. The Addendum determined that the changes, including the road realignment, would not result in any new impacts as compared to the impacts identified in the 2011 EIR. The Wake Avenue and Engineer Road realignments were completed in 2017;

however, EBMUD never entered into a lease with the food waste facility developer. The developer of the biodiesel facility ended their lease with EBMUD without ever beginning construction of a biodiesel facility. The subsequent March 2019 Addendum evaluated a proposal to use the westernmost portion of the West End property for a shipping container storage, repair, and fabrication facility rather than the previously evaluated biodiesel project. The March 2019 Addendum found that no new significant impacts would occur or change the project in such a way that the severity of previously identified impacts would increase, and container facility is already in operation.

Figure 1 – Hydrogen Refueling Station (HRS) Location

EBMUD is entertaining a proposal to lease the portion of the West End property that roughly corresponds to the Building 1086 location to FirstElement Fuel (FirstElement) as a hydrogen refueling station (HRS). Figure 1 shows the proposed HRS facility boundary at the Building 1086 site. The proposed site was identified in the 2011 EIR as part of an area designated for employee parking/emergency equipment storage, while other nearby locations at the West End property were proposed for future revenue-generating land lease. Emergency equipment storage has already been provided at Building 1084, which is immediately west of Building 1086, and EBMUD has determined that there is sufficient employee parking into the future at existing locations on the MWWTP site. EBMUD is now evaluating the development of a hydrogen refueling station that would serve heavy-duty trucks. If the hydrogen refueling station is implemented, the uses at the West End property would consist of a shipping container facility and hydrogen refueling station instead of a food waste preprocessing facility and biodiesel facility. Although the hydrogen refueling station would be located about 200 feet east of the site within the West End property that was originally considered for the food waste preprocessing facility, the hydrogen refueling station would essentially replace the food preprocessing waste facility, which is no longer proposed to be implemented. This memorandum analyzes whether the change in land use at the West End property – from a food waste preprocessing facility to a

hydrogen refueling station – requires subsequent or supplemental environmental review pursuant to CEQA Guidelines section 15162.

2. PURPOSE OF MEMORANDUM

Pursuant to CEQA, California Public Resources Code sections 21000 et seq. ("CEQA") and the CEQA Guidelines, Title 14, chapter 3 of the California Code of Regulations ("CEQA Guidelines"), this Addendum to the 2011 EIR has been prepared to address the implementation of a hydrogen refueling station at the location identified in the 2011 EIR for employee parking/emergency equipment storage. This memorandum serves as a further Addendum to the 2011 EIR pursuant to CEQA Guidelines section 15164. It describes the proposed new use of the site, specifically operation of a hydrogen refueling station, explains why the proposed hydrogen refueling station falls within the scope of the MWWTP Land Use Master Plan EIR, and explains why these modifications to the Project analyzed in the 2011 EIR would not cause effects that were not analyzed in the LUMP EIR and do not meet the criteria set forth in CEQA Guidelines section 15162 for preparation of a subsequent or supplemental EIR.

3. MODIFICATIONS TO THE PREVIOUS PROJECT

The proposed project would entail implementation of a hydrogen refueling station at the West End property instead of the food waste preprocessing facility that was identified in the 2011 EIR. The hydrogen refueling station would be constructed and operated at the site identified in the 2011 EIR for employee parking/emergency equipment storage. Other nearby areas of the West End property were proposed for future land lease. A comparison between the previously proposed food waste preprocessing facility and the proposed hydrogen refueling station is provided in Table 1.

Table 1 - Comparison of Modified Project to Original Project

	Original Food Waste Preprocessing Project	**Proposed Hydrogen Refueling Station**
Purpose	Enhance EBMUD revenues to maintain reasonable rates by increasing renewable energy production and leasing unused land.	Enhance EBMUD revenues to maintain reasonable rates by leasing unused land.
Facilities	58,000-square-foot enclosed building housing feed hopper, trommel screen, grinder conveyer belts and shredder; office building housing restrooms and scale house; utility connections include water, wastewater and electrical.	Equipment on skid(s) (about 500 square feet each), plus canopy(ies) (about 40 square feet each) covering hydrogen dispenser pumps; electrical equipment and service connections. First phase includes one hydrogen dispenser pump with two fueling positions with second to be constructed later if demand warrants.
Demolition	Two buildings have now been demolished since the 2011 EIR, and one will remain (Building 1070). Building 1086 assumed to be demolished.	Consistent with 2011 EIR. Building 1086 demolition required for hydrogen refueling station

	Original Food Waste Preprocessing Project	**Proposed Hydrogen Refueling Station**
Operational Traffic	170 diesel truck trip ends per day at buildout	Initially 18 vehicle trips ends per day including 8 fuel cell electric trucks and 1 diesel delivery truck, ultimately 92 vehicle trip ends per day (45 fuel cell electric trucks and 1 fuel cell electric delivery truck) at buildout with two hydrogen dispenser pumps.
Project Area	1.4 acres of West End property	1.8 acres of West End property

A. Description of Modified Facilities

i. Overview

EBMUD would lease land at the West End property to FirstElement to develop a hydrogen refueling station that would serve True Zero hydrogen fuel to zero-emission fuel cell electric trucks. The hydrogen refueling station would require the addition of the following components to the West End property:

- A cryogenic fueling system on an equipment skid that includes liquid hydrogen storage, cryogenic pump, pressurized hydrogen storage, and mechanical and electrical facilities within a containerized enclosure;
- Up to two hydrogen dispenser pumps covered by a canopy (first phase includes one dispenser); and
- New PG&E electrical connection with transformer and meter on a pedestal.

The approximate location of the facilities is illustrated in Figure 1 above, which shows the area for the hydrogen refueling station (HRS). The layout for the station is shown in Figure 2. Equipment would be contained in metal enclosures. The canopy and fueling area would have a finish similar to a typical gas station and would be True Zero branded. Figure 3 shows a typical True Zero hydrogen refueling station with similar equipment and refueling area with a hydrogen dispenser pump with two fueling positions. As shown in Figure 2, the proposed facility would initially have a single cryogenic fueling system and hydrogen dispenser pump with canopy, but if there is sufficient demand a second system would be constructed in the future.

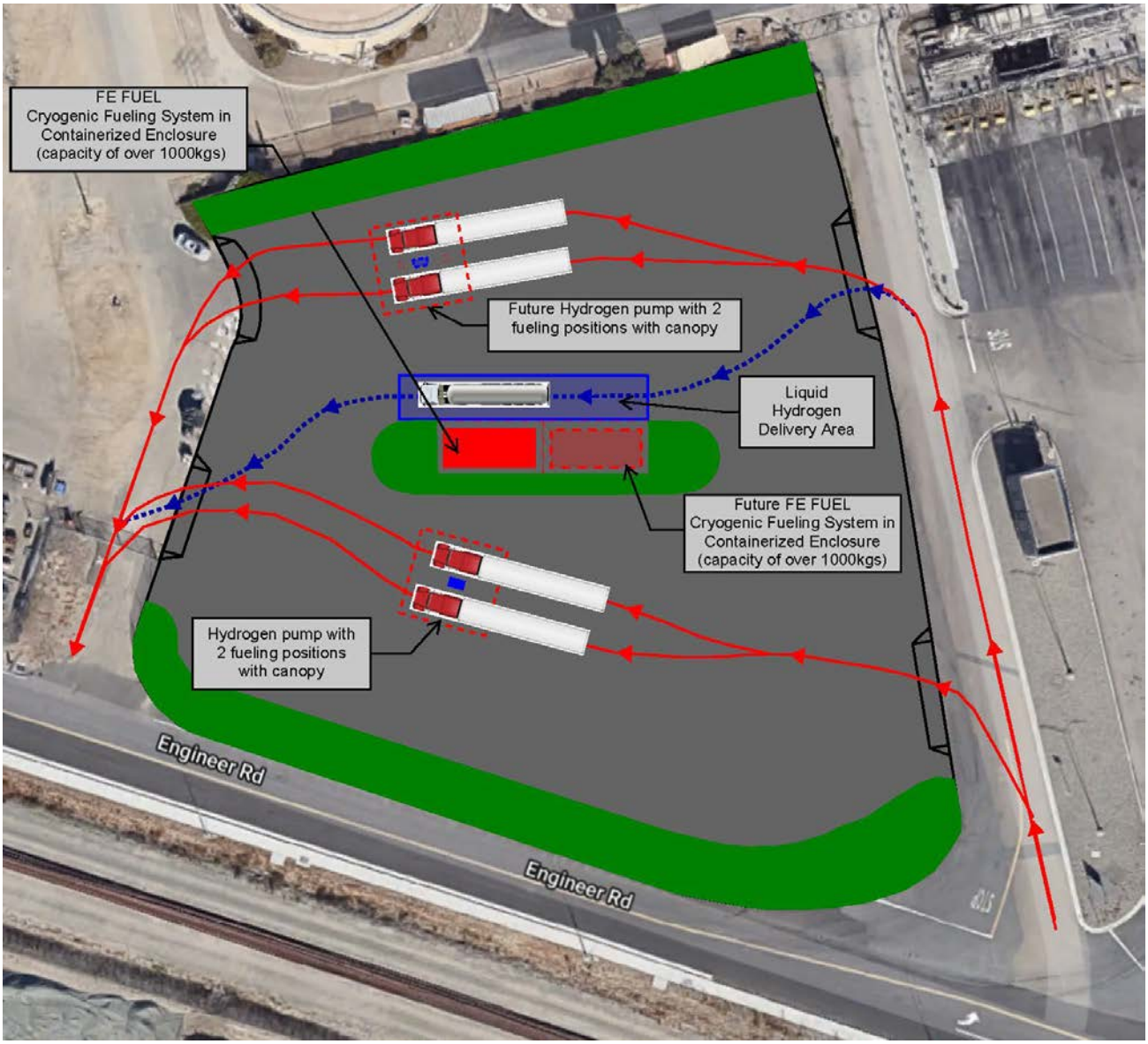

Figure 2 - Proposed Hydrogen Refueling Station Site Layout

Figure 3 – True Zero Hydrogen Refueling Station

ii. Safety Features

The hydrogen refueling station would be designed and built to meet or exceed California Building Code and California Fire Code (CFC) requirements to protect health and safety of the public, EBMUD staff, and first responders and to protect property. Applicable codes that apply to safe operation of hydrogen refueling stations include: CFC 2309 Hydrogen Motor Fuel-Dispensing and Generating Facilities, CFC 53 Compressed Gases, CFC 55 Cryogenic Fluids, CFC 58 Flammable gasses, and Flammable Cryogenic Fluids. California code is augmented by National Fire Protection Association (NFPA) requirements, including the NFPA-2 Hydrogen Technologies code, which has been adopted by the California State Fire Marshal. NFPA-2 establishes basic safety measures for the generation, installation, storage, piping, use and handling of hydrogen in compressed gas or cryogenic liquid form. Furthermore, the operator of the facility would implement standard safety operating procedures used at all its hydrogen refueling facilities in California. As described below, these standard procedures have proven successful at ensuring safe facility operations.

FirstElement Fuels, the operator of the proposed facility, has installed more than 25 facilities throughout California that use the same safety approach. FirstElement has operated these facilities for nearly 6 years and performed more than 730,000 fills to the public with zero safety incidents, accidents, or injuries. To ensure the safety of its hydrogen refueling facilities, FirstElement designs the facilities to eliminate or limit the possibility of hazardous situations before they develop, including the use of passive and active means. Active means include various methods of detection coupled with automatic shut off any hazardous release, as well as

automated systems for user refueling and fuel deliveries. The system's detection systems are continuously self-monitoring to ensure reliability at all times, and the automation behind all the processes eliminates the risk of human error during operations. Passive means include: (1) situating the station at a distance where the unlikely event of a hazardous material release does not affect nearby operations; and (2) protecting the systems from external heat sources (e.g., fire) for a period of time. Furthermore, this system (like all the operator's systems in California) will be constantly monitored telemetrically, and FirstElement has a Bay Area rapid response team with staff located throughout the Bay Area available 24 hours every day. The team would immediately respond to any incident telemetrically and would be deployed to the site within 30 minutes should there be any kind of an event requiring on-site support.

As a condition of grant funding, the California Energy Commission requires that awardees develop a Hydrogen Safety Plan to be reviewed by Pacific Northwest National Laboratory's Hydrogen Safety Panel ("Panel"). FirstElement will also submit early-stage design plans to the Panel for review. Independent third-party review of early-stage design and safety plans is intended to ensure that hydrogen safety has been adequately incorporated into project planning and execution, and that facility design and operations meets applicable codes and standards. FirstElement must successfully complete required safety reviews in order to receive grant funding.

The State of California has stated that "hydrogen stations have not exhibited safety concerns when applying appropriate codes and standards during the development process" (California Governor's Office of Business and Economic Development (GO-Biz). 2020). A number of strategies have been incorporated into the project to ensure safe operations. Metal to metal fittings would be used to minimize the probability and severity of leaks. The design of the facility is expected to virtually eliminate the possibility of leaks, but design features are in place to manage the consequences of leaks in the unlikely event that they occur. Should a leak occur, hydrogen is enclosed in a panel with mechanical ventilation to ensure that hydrogen concentrations do not exceed safe levels. This ensures that, in the event small leaks are detected, the hydrogen is purged from the area prior to reaching the lower flammability limit (the minimum concentration of flammable gas that can continuously propagate flame). If the ventilation system is unsuccessful, gas detection alarms at 25 percent of the lower flammability limit and shuts down all hydrogen source valves, stopping the leak. The mechanical ventilation reduces the hydrogen concentration in the containerized equipment enclosures. In the unlikely event that there is simultaneously a leak, a failure in the gas detection system, a failure in the forced ventilation, and an ignition source that leads to the improbable occurrence of a fire inside any of the containerized enclosures there is both heat and flame detection to shut down the source of the hydrogen, thereby extinguishing it. The system is also fully automated and does not rely on an individual operator for safe dispensing and safe shutdowns. Automated leak prevention and detection is implemented by the following:

- At the fueling connection point on the hydrogen dispenser pump: use of metal compression or cone and thread fittings.
- At the hydrogen dispenser pump: use of two gas detectors in each dispenser and a flame detector at each dispenser. These activate shutoff valves and depressurize the line through

the vent stack. The dispenser also uses software to check the integrity of the fueling hose pre fueling and during the fill.

- At the gaseous storage within the containerized equipment enclosure: use of gas detectors, heat and flame detector at the leak points. These activate the shutoff of the hydrogen source valves.
- At liquid pumping skid within the containerized equipment enclosure: use of gas, flame, and heat detectors inside the equipment to shut off the hydrogen supply and depressurize the high-pressure piping.
- At the delivery point of liquid hydrogen on the containerized equipment enclosure where hydrogen trucks delivered hydrogen to the cryogenic fueling system: automatic controls to ensure that large hydrogen releases are avoided. This includes gas detection at the fill port for the cryogenic fueling system and the delivery truck; fully automated transfer control including integrity checks after hose connection from the delivery truck to the cryogenic fueling system. Should the system detect leaks, all valves are closed and the delivery hose vented. There is also a special feature that auto cools down the hydrogen delivery hose to minimize the amount of hydrogen vented during delivery.

Additional safety measures also include the application of intumescent paint (fire retardant paint that swells up when heated, thus protecting the material underneath) on the liquid and gaseous tanks. This paint maintains the integrity of the pressure vessels for 2 hours after exposure to a fire.

iii. Construction

Construction of the first phase of the facility would take about three months and would require demolition of Building 1086, excavation to install foundations and driveways, construction of concrete rebar reinforced pads for equipment and dispenser areas, trenching for utility lines, and installation of equipment. The pad for the equipment skid would be constructed by removing existing pavement, excavating the footprint for the pad, and then forming and pouring a concrete rebar reinforced pad. The pad for the hydrogen dispenser pump and canopy would be excavated and then a concrete pad with a vault would be formed and poured. Traffic rated plates would be set to cover the vault. Precast pads would be used for the transformer and meter pedestal. Trenching for installation of utilities would be excavated with a backhoe, conduits would be installed, and the trench would be backfilled with slurry or native soil. Cryogenic equipment would be brought in and set in place by a crane. The hydrogen dispenser pump would be set in place by a forklift and the canopy would be delivered and installed using a truck crane. If a second fueling system and fueling position is constructed, a similar construction process would be followed for installation of a second system.

The maximum excavation depth for construction facilities would be expected to be six to eight feet. Any soil removal would be handled in accordance with EBMUD's Operation and Maintenance Plan for the West End property, which was developed to implement requirements for soil management imposed by the Department of Toxic Substances Control (DTSC) as part of

a consent agreement that imposes deed restrictions to ensure safe management of soil and groundwater at the site (DTSC 2009). Implementation of requirements of the Operation and Maintenance Plan would ensure that any excavation is done in a manner so as to avoid adverse effects associated with existing soil contamination on the West End property. The entire site would be paved with asphalt. Construction would require a crew of 3 to 5 workers plus 2 supervisors.

iv. Facility Operation

The hydrogen refueling station would operate 24 hours a day, 7 days per week. Hydrogen delivery would occur daily. The station would be unmanned and would be remotely monitored. Hydrogen dispenser pumps are designed to appear similar to typical fuel pumps. To fuel, a driver removes the nozzle from the hydrogen dispenser pump and connects it to the vehicle. The pump does not start dispensing hydrogen until it recognizes a locked seal. The driver presses the start button on the hydrogen dispenser pump, which communicates to the fuel cell vehicle so that when fueling is complete the charge port shuts off. Once fueling is complete, the driver hears a click and is then able to disengage the nozzle, close the cover to the filling door, and rehang the nozzle. The facility initially would be expected to fuel 8 zero emissions trucks, resulting in a total of 16 inbound and outbound trip ends (trip ends count both the inbound and outbound legs of a trip so one truck fueling at the station would result in two trip ends). As demand increases, the station could ultimately fuel 45 trucks per day resulting in 90 trip ends. There would initially be one hydrogen supply delivery each day, resulting in an additional two trip ends. Deliveries would initially be made by diesel truck, but deliveries would be transitioned to a zero-emission truck within one to two years of the start of operations. The station would be visited periodically by maintenance workers who would perform maintenance activities once or twice per month.

B. Project Consistency with 2011 LUMP EIR

The 2011 EIR evaluated use of a portion of the West End property for revenue-generating leases, and leasing of land for the purpose of developing a hydrogen refueling station is consistent with the intent of the 2011 Land Use Master Plan. The hydrogen refueling station would be developed in lieu of the food waste preprocessing facility that was evaluated in detail in the 2011 EIR, so the intensity of land use at the West End property would be in keeping with the uses that were described in the 2011 EIR. The hydrogen refueling station is thus within the scope of potential future uses that were envisioned in the 2011 EIR. Although the facility is proposed to be located on land that was originally designated for employee parking/emergency equipment storage, those uses have already been accommodated within the West End property and other locations at the MWWTP and excess land is now available for revenue-generating land lease. The discussion below provides an assessment of each environmental resource area and documents that the hydrogen refueling station is within the scope of the 2011 EIR.

4. UPDATE OF IMPACT EVALUATION IN MODIFIED PROJECT ADDENDUM

Construction and operation of a hydrogen refueling station at the West End property would result in the following changes in impacts as compared to the food waste preprocessing project. As documented below, energy use and operational emissions would be reduced. The hydrogen refueling station would have less construction impact because the smaller facility could be constructed with 3 months of limited construction while the food processing facility would have required more extensive construction occurring over a 14- to 16-month period.

Environmental Commitments from the 2011 EIR would be applicable to the construction and operation of the hydrogen refueling station. The details of the changes to impacts are described in the following sections.

Impact changes:

- **Aesthetics** – Hydrogen refueling stations are similar in appearance to a gas station (see Figure 3), with a refueling area covered by a canopy and adjacent ancillary structures for storage of liquid and gaseous hydrogen. EBMUD would require that the station be designed to match the existing visual character of the area. The canopy and equipment for the hydrogen refueling station would be shorter than the nearby digesters, which are 30 to 35 feet tall and would block views of the refueling station from Interstate 80. The canopy would be about 15 feet tall and would be the tallest structure at the refueling station. The hydrogen refueling station would not cause effects that were not analyzed in the 2011 EIR. Design and construction of the facility would be completed in accordance with mitigation from the 2011 EIR, including Mitigation Measure AES-2a: Maintenance of Construction Worksite, Mitigation Measure AES-2b: Design of Facilities to Be Aesthetically Consistent with Existing Visual Character, and Mitigation Measure AES-3: Lighting Design and Low Reflective Paint. No new mitigation measures would be required, and impacts would remain less than significant.

- **Air Quality**
    - Construction – The 2011 EIR documented that construction emissions would be less than significant, even when considering the potential for overlapping construction of both the originally proposed biodiesel facility and food waste preprocessing facility. Construction of the hydrogen refueling station would require far less equipment use than would construction of the originally proposed food waste preprocessing facility. and would require only 3 months of limited construction while the food processing facility would have required more extensive construction occurring over a 14- to 16-month period. Construction emissions would thus be expected to be substantially lower. Additionally, there would be less overlap in construction than was considered in the 2011 EIR, which projected overlap in construction of the food waste facility and biodiesel facility,

along with any other ongoing construction at the MWWTP. The container facility that replaced the biodiesel facility did not require construction of new structures and the facility is already operational. Construction of the hydrogen refueling station may occur when no other construction is ongoing at the West End property. The hydrogen refueling station would not cause construction impacts that were not analyzed in the 2011 EIR. Construction of the facility would be completed in accordance with Mitigation Measure AIR-1: Criteria Air Pollutant and Precursor Reduction Measures, from the 2011 EIR. No new mitigation measures would be required, and impacts would remain less than significant.

  - Operations – Emissions would be reduced because there would be fewer operational diesel truck trips (2 diesel truck trip ends per day versus 170 diesel truck trip ends for the food waste preprocessing facility). The majority of the trips would consist of fuel cell electric vehicles that would use the fueling station, which do not emit criteria pollutants. Operation of the hydrogen refueling station would not generate odors. The hydrogen refueling station would not cause operational emissions that were not analyzed in the 2011 EIR. Because the facility would not generate odors, mitigation requiring odor controls for the food waste facility and other odor-generating facilities would not be applicable to the refueling station. No new mitigation measures would be required, and impacts would remain less than significant.

- **Biological Resources** - The hydrogen refueling station would be located in the Building 1086 area of the MWWTP. Because demolition would be required, Mitigation Measure BIO-1: Nesting Bird Protection would be implemented, and nesting bird surveys would be conducted before building demolition to ensure protection of nesting birds. No tree removal is expected and thus mitigation to replace trees would not be applicable to the refueling station. No sensitive native species or habitats are present in this area. The hydrogen refueling station would not cause effects that were not analyzed in the 2011 EIR. No new mitigation measures would be required, and impacts would remain less than significant.

- **Cultural Resources** – Construction would take place within the MWWTP site, which has been evaluated for cultural resources. The entire area for the hydrogen refueling station is underlain by artificial fill and all of the area has been previously disturbed as part of construction of Building 1086. Construction of the refueling station would entail a minimal amount of trenching. Mitigation measures CUL-1, CUL-2, and CUL-3, identified in the 2011 EIR for unanticipated discoveries of buried cultural or paleontological resources or human remains, would be implemented if any materials are unearthed during construction, but it is highly unlikely that any materials would be encountered. The hydrogen refueling station would not cause effects that were not

analyzed in the 2011 EIR. No new mitigation measures would be required, and impacts would remain less than significant.

- **Energy** – Because the hydrogen refueling station requires less construction than the food waste preprocessing facility, energy requirements for construction would be less than those identified in the 2011 EIR. Operational energy use includes electricity to power cryogenic equipment, hydrogen dispenser pumps and lighting; electrical power consumption would initially be 140 MWh per year for the first phase with one dispenser and fueling system; a maximum electrical demand of 500 MWh annually is expected at buildout with two dispensers. This would be less than the energy requirements of the food waste preprocessing facility, which would have required 4,900 MWh of electricity per year to power heavy equipment. The proposed project would provide a convenient location for refueling of heavy-duty fuel cell electric vehicles, which would offset the minor amount of energy required for construction. The hydrogen refueling station would not cause effects that were not analyzed in the 2011 EIR. No new mitigation measures would be required, and impacts would remain less than significant.

- **Geology, Soils and Seismicity** – All new facilities would need to be designed and constructed to meet current building codes and EBMUD's seismic design requirements and would comply with Mitigation Measures GEO-1 and GEO-2 from the 2011 EIR, which specify design of facilities to address potential seismic hazards. The hydrogen refueling station would not cause effects that were not analyzed in the 2011 EIR. No new mitigation measures would be required, and impacts would remain less than significant.

- **GHG Emissions** – GHG emissions associated with construction of the hydrogen refueling station would be less than the emissions associated with construction of the food waste preprocessing facility because the refueling station facilities are smaller and construction would require less equipment over a shorter construction period. Mitigation Measure GHG-1, requiring GHG reduction measures during construction, would be applicable to the construction of the hydrogen refueling station. The refueling station would facilitate use of fuel cell electric vehicles at the Port of Oakland and would thus reduce GHG emissions from trucks servicing the Port, which is consistent with Mitigation Measure GHG-2a from the 2011 EIR. Mitigation Measure GHG-2b: Water Conservation Measures, would be implemented as appropriate. The hydrogen refueling station would not cause effects that were not analyzed in the 2011 EIR. No new mitigation measures would be required, and impacts would remain less than significant with implementation of the hydrogen refueling station.

- **Hazards and Hazardous Materials** – All hazardous materials handling would still be required to be conducted in accordance with legal requirements for routine use, transport, and disposal of hazardous materials. Demolition of Building 1086 would be required so Mitigation Measure HAZ-3: Hazardous building materials surveys and abatement, would be implemented. Because the hydrogen refueling station would be located on the West End property, it would be subject to requirements of EBMUD's Operation and Maintenance Plan for the West End property. As noted in the 2011 EIR, construction would have to comply with the following requirements:

    - Placement of any property soil outside of the property boundary is permitted only with prior written approval from DTSC.
    - Excavation or disturbance of any soil deeper than 5 feet below ground surface is permitted only with the prior written approval of DTSC. However, in emergency situations, EBMUD may excavate or disturb soil without prior DTSC approval, provided that the soil management and risk management procedures of the operations and maintenance plan are followed, and that EBMUD notifies DTSC by phone or email of the soil excavation or disturbance within 24 hours of the onset or discovery of the emergency.
    - Excavated soil must be appropriately characterized to determine if it is suitable for on-site reuse, or if it must be disposed of at an appropriately licensed off-site disposal facility. At a minimum, the soil must be analyzed for total petroleum hydrocarbons as gasoline, diesel, and motor oil; volatile organic compounds; and Title 22 metals (including analysis of soluble metals concentrations using the Waste Extraction Test [WET] or Toxic Characteristic Leaching Procedure [TCLP] method, as appropriate). Typically, one composite soil sample would be required for each 1,000 cy of soil excavated. However, individual disposal facilities may require additional samples and/or analyses.
    - On-site reuse of excavated soil is only permitted if the sample results indicate that the material is not a hazardous waste and is suitable for reuse at the site. Soil characterization for reuse can be completed prior to removal (in situ, which involves the installation of soil borings for collection of soil samples) or after excavation as described above, provided that a suitable controlled location is available for stockpiling that anticipated volume of soil. For on-site reuse, the soil should not contain constituents at concentrations greater than federal and state hazardous waste criteria, industrial Preliminary Remediation Goals, or commercial/industrial Environmental Screening Levels (petroleum

hydrocarbons only), whichever is most conservative. To characterize the soil for on-site reuse, 1 sample per 250 cy of excavated soil is required for the first 1,000 cy of soils excavated, and 1 additional sample is required for each additional 500 cy of excavated soil.

- Soil that is unsuitable for on-site reuse and which will not be directly hauled to an off-site disposal facility at the time of excavation must be stockpiled in a manner that limits the potential for generation of dust and/or sediment-laden runoff. Soil shall be stockpiled on a minimum 6-mil plastic sheet of sufficient size to contain the entire stockpile and the entire stockpile shall be covered with a minimum 6-mil plastic sheet secured with sandbags at the close of each workday and at all times during inclement weather. All stockpiled soil shall be properly disposed of within 90 days of generation.
- Workers engaged in activities that will disturb or expose subsurface soil must be appropriately trained in and must follow the standard health and safety procedures described in Appendix A of the Operation and Maintenance Plan. Site and action-specific health and safety plans are required for all activities involving soil removal and/or disturbance.
- Appropriate measures shall be taken to minimize the generation of fugitive dust during soil excavation or disturbance activities in general accordance with the BAAQMD "Basic" and "Optional" PM10 (fugitive dust) control measures (see *Section 3.3, Air Quality*, for a description of the BAAQMD dust control measures).

Because construction of facilities would require excavation, the subsurface soil requirements described above would apply and approval must be obtained from DTSC.

Pursuant to the deed restriction for the West End property, construction at the project site would require written notification to DTSC 15 days in advance, and written approval must be obtained before any soil excavation or disturbance activities. Under the requirements described above, any excavated soil would have to be characterized to determine if it can be reused on site or if it must be disposed of at an appropriately licensed off-site disposal facility. Any soil that is characterized as hazardous waste cannot be reused at the site.

As required by law, FirstElement would develop and file a Hazardous Materials Business Plan for the hydrogen refueling station, which address the storage of liquid hydrogen. The plan would be filed with the Oakland Fire Department, Office of Emergency Services and would include a complete inventory of all hazardous materials on site, demonstration of compliance with the California Fire Code, emergency response plans and procedures, a training plan, and procedures for documenting compliance with training and inspection requirements. Storage of fuel for retail sale is exempt from the California Accidental Release Program (CalARP which is administered by Alameda County Department of Environmental Health) and Process Safety Management program

(PSM, which is administered by CalOSHA). The hydrogen refueling station would thus not be subject to requirements for implementation of a risk management program and FirstElement would not be required to submit a risk management plan to prepare for accidental releases of hazardous substances. Hazardous events associated with hydrogen releases would include fire and vapor cloud explosion; however, the likelihood of this type of accident is extremely low with implementation of the safety measures described above. The U.S. Department of Energy has stated that use of hydrogen fuels is not inherently more dangerous than the use of gasoline:

> *"By their nature, all fuels have some degree of danger associated with them. The safe use of any fuel focuses on preventing situations where the three combustion factors—ignition source (spark or heat), oxidant (air), and fuel—are present. With a thorough understanding of fuel properties, we can design fuel systems with appropriate engineering controls and establish guidelines to ensure the safe handling and use of a fuel.*
>
> *A number of hydrogen's properties make it safer to handle and use than the fuels commonly used today. For example, hydrogen is non-toxic. In addition, because hydrogen is much lighter than air, it dissipates rapidly when it is released, allowing for relatively rapid dispersal of the fuel in case of a leak."* (Department of Energy 2021)

As noted above, the hydrogen refueling station would be designed and built to meet the safety requirements of the California Building Code, California Fire Code and National Fire Protection Association Hydrogen Technologies Code. Additionally, the site is about 700 feet from Interstate 80 and almost ½ mile from the nearest residential receptor. With incorporation of standard safety measures in design and operation of the facility (as discussed above), the project is not expected to result in a significant hazard to the workers, the public or the environment, and safety hazards would be less than significant. The hydrogen refueling station would not cause effects that were not analyzed in the 2011 EIR. No new mitigation measures would be required, and impacts would remain less than significant.

- **Hydrology and Water Quality** – Construction of the hydrogen refueling station would occur within the West End property and the extent of construction would be less than what would have been required for the construction of the food waste preprocessing facility. Construction-period water quality impacts would be similar to or less than those identified in the 2011 EIR. The hydrogen refueling station would not increase impervious surface area as compared to the proposed level of development envisioned in the 2011 EIR, and thus would not increase the amount of runoff into existing storm drains. The 2011 EIR noted the need for expansion of the stormwater collection system if the stormwater runoff from the West End property would be conveyed to the MWWTP; however, stormwater from the proposed hydrogen refueling station would continue to be conveyed to the existing stormwater collection system as it is now and thus Mitigation

Measure HYD-3: Prepare and Implement a Comprehensive Drainage Plan, is not applicable. No operational changes to stormwater runoff or water quality would be expected. Mitigation Measure HYD-5: Prepare and Implement a Tsunami Response Plan, pertains to the entire MWWTP and would not be affected by construction and operation of the hydrogen refueling station. The hydrogen refueling station would not cause effects that were not analyzed in the 2011 EIR. No new mitigation measures would be required, and impacts would remain less than significant.

- **Land Use and Recreation** – The hydrogen refueling station would be within the West End property at the existing MWWTP and would be consistent with existing land use. At the time that the 2011 EIR was certified, the extension of the Bay Trail along the northern portion of the MWWTP had not yet been built. The trail has now been extended along the northern edge of the MWWTP and the "visually attractive educational signs to inform users of the Bay Trail about operations at the MWWTP" have been installed. Short-term construction activities would be screened by the existing digesters, would not be expected to be particularly noticeable to users of the Bay Trail, and would not interfere with any recreational use. Construction of the hydrogen refueling station is a short-term activity that is consistent with existing and planned operations at the MWWTP and would not impair recreational use of the Bay Trail. The 2011 EIR envisioned use of the Building 1070 Yard at the West End property, which is covered by an engineered cap, for revenue-generating land lease. The proposed hydrogen refueling station is consistent with that proposed use, even if the lease location is slightly different from that described in the 2011 EIR. The proposed location for the hydrogen refueling station was originally part of a larger area that was designated for employee parking/emergency equipment storage, but EBMUD has determined that the entire site is not needed for those purposes. Building 1084, which is immediately west of Building 1086, provides emergency equipment storage and will continue to do so into the future. EBMUD has determined that there is sufficient employee parking into the future in the existing locations on the MWWTP site. There is thus additional space available to dedicate to revenue-generating land lease. Use of the Building 1086 site for land lease is consistent with uses proposed at the West End property, and the Building 1086 location does not have the constraints associated with construction of structures on the engineered cap at the Building 1070 Yard. The hydrogen refueling station is thus consistent with overall planned land uses at the MMWTP and would not cause effects that were not analyzed in the 2011 EIR. No new measures would be required, and impacts would remain less than significant.

- **Noise** – The hydrogen refueling station would generate relatively low levels of operational noise, as compared to the projected noise levels associated with the food waste preprocessing facility, which was expected to generate noise levels up to 85 dBA due to use of heavy equipment outside the food waste building. Cryogenic pumps generate noise levels of 74 dBA (Linde Cryopump Data Sheet); this is comparable to the ambient noise level at the site, which is estimated to be 72 to 76 dBA due to the proximity of the freeway to the site and would thus comply with City of Oakland Noise Ordinance limits. Delivery and dispensing of hydrogen fuel are not expected to produce noise levels above the ambient level at the nearest sensitive receptor, which is almost ½ mile from the project site, so Mitigation Measure NOI-3 for operational noise would not be applicable. Construction would take place at the northern edge of the MWWTP almost ½ mile from the closest residential receptors in Oakland. Pile driving is not expected to be necessary for construction of equipment pads, so Mitigation Measure NOI-2 requiring vibration controls for pile driving is not applicable. Mitigation Measure NOI-1, which requires use of best available noise control techniques on construction equipment and specifies limits on construction hours, would be implemented. Noise associated with construction would thus be similar to or less than noise levels projected in the 2011 EIR and would not be expected to be perceptible at the nearest residences. The hydrogen refueling station would not cause effects that were not analyzed in the 2011 EIR. No new mitigation measures would be required, and impacts would remain less than significant.

- **Public Services** – Construction and operation of the hydrogen refueling station would not place any additional burden on police and fire protection services. The hydrogen refueling station would be remotely monitored and would not require any full-time staff. The 2011 EIR documents that the Land Use Master Plan would not generate population growth and would thus not generate need for new or altered government facilities. Operation of the hydrogen refueling station would not change this determination. The hydrogen refueling station would not cause effects that were not analyzed in the 2011 EIR. No new mitigation measures would be required, and impacts would remain less than significant.

- **Transportation** – The June 2015 Addendum for the Modified Food Waste Facility addressed the realignments of Wake Avenue and Engineer Road, which have since been completed. The Addendum documents that while the road network in the project area has changed since completion of the 2011 EIR, those changes do not result in any new significant impacts. Traffic associated with construction of the hydrogen refueling station would be minor and short term. As noted in the discussion of air quality impacts, there would be less overlap in construction than was considered in the 2011 EIR, which projected overlap in construction of both the food waste facility and biodiesel facility.

Construction traffic is expected to be minimal and would not require implementation of a construction management plan, which was specified as a mitigation measure for the more extensive construction involved in the food waste preprocessing facility. A new rail spur would not be required for the hydrogen refueling station and mitigation regarding rail facilities is thus not applicable.

Overall operational traffic impacts would be reduced as compared to the 2011 EIR. As shown in Table 2, the Program EIR projected a total increase in 388 daily trip ends, which included projected trips associated with the biodiesel facility, food waste preprocessing facility, and assumed a gradual increase in truck deliveries associated with the Resource Recovery program over 30 years. Neither the biodiesel facility nor the food waste facility have been constructed, and a container refurbishing facility now occupies the former biodiesel site. At buildout, total increase in trip ends with implementation of the hydrogen refueling station would now be projected to be 188 trips per day, a reduction of 200 trip ends. Peak hour traffic would also be reduced as compared to levels projected in the 2011 EIR. Access to the hydrogen refueling station would be from Engineer Road and use of the driveway would not be expected to create safety hazards because of the low volume of traffic on Engineer Road. The hydrogen refueling station would not cause effects that were not analyzed in the 2011 EIR. No new mitigation measures would be required, and impacts would remain less than significant.

Table 2 - Summary of Vehicle Trip Ends Estimated in Program EIR Compared to Existing and Proposed Facilities

	Daily Trip Ends[1]		AM Peak Hour[2]		PM Peak Hour[3]	
Facility	**Program EIR**	**Updated Facilities**	**Program EIR**	**Updated Facilities**	**Program EIR**	**Updated Facilities**
Biodiesel facility site (now container refurbishing facility)	172	50				
Food waste preprocessing (now hydrogen refueling station)	170	92				
Increase in Resource Recover deliveries	46	46				
Total	388	188	28	14	30	14

[1] Trip ends count both inbound and outbound legs, so one vehicle trip results in two trip ends.
[2] Assumes morning peak is 7.3 percent of daily trips.
[3] Assumes afternoon peak is 7.7 percent of daily trips.

- **Utilities** – The hydrogen refueling station would have no effect on wastewater treatment at the MWWTP, and would not require additional water supplies, storm drainage facilities, or solid waste disposal services or facilities. The 2011 EIR includes Mitigation Measure UTIL-6 Coordinate Relocation and Interruptions of Service with Utility Providers During Construction to ensure that utilities are not disrupted during construction. Implementation of this measure would ensure that construction of the hydrogen refueling station does not disrupt any utilities within the project site. The hydrogen refueling station would not cause effects that were not analyzed in the 2011 EIR. No new mitigation measures would be required, and impacts would remain less than significant.

5. CONCLUSION

This Addendum to the Main Wastewater Treatment Plant Land Use Master Plan Final EIR (2011 EIR) has been prepared to evaluate the potential effects of constructing a hydrogen refueling station at the West End property, which would replace the previously proposed food waste preprocessing facility.

Pursuant to CEQA Guidelines section 15168(c), an agency may rely on a program EIR when approving a later activity in the program provided that (1) the activity in question would not cause effects that were not examined in the program EIR, (2) none of the triggers for subsequent or supplemental CEQA review in CEQA Guidelines section 15162 have been met, and (3) the activity falls within the scope of the program EIR.

CEQA Guidelines section 15162 provides that subsequent or supplemental environmental review is only required if one or more of the following conditions is met:

> *(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
>
> *(2) Substantial changes occur with respect to the circumstances under which the project is undertaken; or*
>
> *(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:*
>
> > *(A) The project will have one or more significant effects not discussed in the previous EIR;*
> > *(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;*

> *(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project; or*
> *(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment.*

Pursuant to Section 15164(a) of the CEQA Guidelines:

> *"A lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred."*

This Addendum provides a focused review of the potential environmental impacts of constructing and operating the hydrogen refueling station. This Addendum has been prepared because it has been determined (1) that the project would not create any new or more significant environmental impacts beyond those identified in the 2011 EIR as updated with the June 2015 Addendum for the Modified Food Waste Project and March 2019 Addendum for development of the container refurbishing facility, and (2) that the project would not require any new mitigation measures or alternatives which are considerably different from those analyzed in the 2011 EIR. Specifically,

> Implementation of this change in the facilities planned for the West End property does not constitute a substantial change as compared to the full-scale food waste preprocessing facility evaluated in the 2011 EIR. The hydrogen refueling station does not require major revisions to the 2011 EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. Environmental effects of the project are discussed above in Section 4 of this memorandum. Impacts in each issue area were characterized and compared to the impacts identified in the 2011 EIR, and there are no new significant impacts or substantially more severe impacts.
>
> There have been no substantial changes in the circumstances under which the hydrogen refueling station is to be undertaken that would require major revisions to the 2011 EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. The realignments of Wake Avenue and Engineer Road were considered in the June 2015 Addendum for the Modified Project and the change in use of the site originally proposed for the biodiesel facility was considered in the March 2019 Addendum. Both were determined not to result in any new impacts.

> No new information of substantial importance became apparent as a result of the proposal to change the use of land on the West End property to construct a hydrogen refueling station. The change in use of the site will not result in any new significant effects that were not discussed in the 2011 EIR nor will the changed use result in significant effects that were previously examined but would be substantially more severe than those identified in the 2011 EIR. Please refer to the discussion of each issue in Section 4, which documents that there are no new or substantially more severe impacts with construction and operation of the hydrogen refueling station.
>
> The changes in the project as previously described in the 2011 EIR, June 2015 Addendum, and March 2019 Addendum do not make feasible any mitigation measures previously found to be infeasible, and there are no feasible mitigation measures or alternatives that EBMUD has declined to adopt. In approving the Land Use Master Plan, EBMUD adopted all of the mitigation measures included in the Draft EIR and did not find any of the recommended measures to be infeasible. Thus, there are no mitigation measures that were previously found to be infeasible. Project alternatives evaluated in the 2011 EIR all involved different uses of the West End property, including land leases. Implementation of the proposed project change would not affect the feasibility of the various options for implementation of the project.

This addendum also explains that the proposed hydrogen refueling station would not cause effects that were not examined in the LUMP EIR and that the station falls within the scope of the program examined in the LUMP EIR. For these reasons and because the criteria in CEQA Guidelines section 15162 (a) do not apply here, an addendum to the 2011 EIR has been prepared, and will be considered, along with the 2011 EIR and subsequent Addenda, prior to EBMUD making any further approvals of the proposed hydrogen refueling station. No further CEQA review is required.

6. REFERENCES

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