SAN FRANCISCO
PLANNING DEPARTMENT

Final Negative Declaration

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

Date:	March 4, 2015, amended on May 21, 2015, and further amended July 20, 2015 (May 21 amendments to the PND are shown as follows: deletions in ~~strikethrough~~; additions in double underline. July 20 amendments are shown as follows: deletions in ~~double strikethrough~~; additions in *underlined italics*).
Case No.:	**2014.0653E**
Project Title:	**Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County**
BPA Nos.:	Not Applicable
Zoning:	Not Applicable – Agreement citywide in scope
Block/Lot:	Not Applicable – Agreement citywide in scope
Lot Size:	Not Applicable – Agreement citywide in scope
Project Sponsor	Jack Macy, Department of the Environment 415-355-3751
Lead Agency:	San Francisco Planning Department
Staff Contact:	Paul Maltzer – (415) 575-9038 paul.maltzer@sfgov.org

PROJECT DESCRIPTION:

The proposed project consists of an Agreement between the City of San Francisco and Recology to change the disposal site for San Francisco's municipal solid waste (MSW). Currently, Recology, the company that collects San Francisco's waste, transports San Francisco's MSW to the Altamont Landfill, located in eastern Alameda County, for disposal. San Francisco's existing agreement with Waste Management, Inc., operator of the Altamont Landfill, will expire around 2016. The proposed project consists of an Agreement to authorize the transportation of MSW from San Francisco to the existing Recology Hay Road Landfill located in unincorporated Solano County, at 6426 Hay Road, near State Route 113, southeast of Vacaville, where it would be disposed. ~~San Francisco and Recology would enter into an Agreement for the transportation and disposal of five million tons of San Francisco's MSW at the Recology Hay Road Landfill.~~ MSW would be transported by long haul semi-trucks, primarily from the Recology San Francisco transfer station located at 501 Tunnel Avenue, with several additional trucks hauling residual wastes for disposal from Recology's Recycle Central facility, located at Pier 96 in San Francisco, as is presently the case. *The period of the Agreement would be nine years, or until 3.4 million tons of MSW have been deposited in the Recology Hay Road Landfill, whichever comes first. The City would have an option to renew the Agreement for a period of six years, or until an additional 1.6 million tons of MSW have been deposited in the landfill, whichever comes first. The Agreement would also limit the annual average number of round-trip truck trips transporting MSW to the landfill to fifty round-trip truck trips per day, based on a six-day work week.* ~~At current rates of disposal, it is estimated that the Agreement would have a term of approximately 13 – 15 years.~~ No new construction or changes in current Recology operations within San Francisco are proposed. No new construction or change in existing permits would be required at the Recology Hay Road Landfill in Solano County. The proposed project would correspond with the cessation of transport of San Francisco's MSW to Altamont Landfill. The Agreement between San Francisco and Recology to authorize the proposed change in disposal sites ~~would need to be approved by the San Francisco Board of Supervisors.~~ *would need to be approved by the Department of the Environment*.

FINDING:

This project could not have a significant effect on the environment. This finding is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15064 (Determining Significant Effect), 15065 (Mandatory Findings of Significance), and 15070 (Decision to prepare a Negative Declaration), and the following reasons as documented in the Initial Evaluation (Initial Study) for the project, which is attached.

Mitigation measures are not required in this project to avoid potentially significant effects.

In the independent judgment of the Planning Department, there is no substantial evidence that the project could have a significant effect on the environment.

SARAH B. JONES
Environmental Review Officer

July 21, 2015
Date of Issuance of Final Mitigated Negative Declaration

cc: Jack Macy, Department of the Environment
Master Decision File

INITIAL STUDY

Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County (Case No. 2014.0653E)

Table of Contents

Appendices

List of Figures

List of Tables

INITIAL STUDY

Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County (Case No. 2014.0653E)

A. PROJECT DESCRIPTION

The following describes the proposed Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County project, which is referred to below as the "project." The project sponsor is the City and County of San Francisco, Department of the Environment.

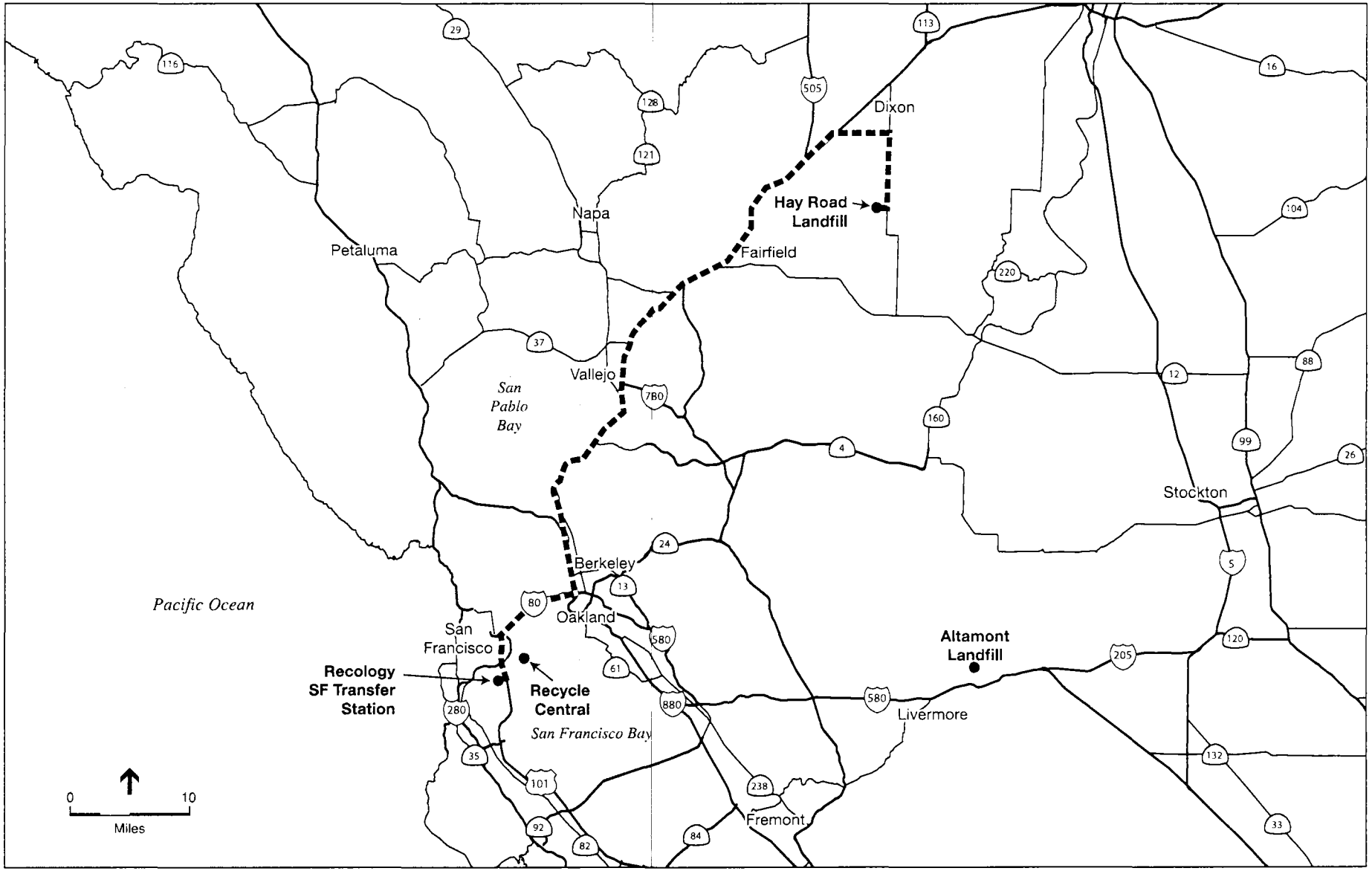
A.1 Project Location

The project involves the transportation by truck of municipal solid waste (MSW) from San Francisco and the disposal of MSW at the Recology Hay Road Landfill, located in Solano County near Vacaville. The project location extends from two Points of Origin -- the Recology San Francisco transfer station, located at 501 Tunnel Avenue on the San Francisco-Brisbane border; and Recology's Recycle Central facility, located at Pier 96 in San Francisco. The project terminates at one location, the Recology Hay Road Landfill, just east of Vacaville. **Figures 1 and 2** on pages 2 and 3 and show the locations of these facilities and the planned transportation routes. With implementation of the project, San Francisco MSW would no longer be disposed at the Altamont Landfill in Alameda County.

A.2 Project Characteristics

San Francisco and Recology (the private company that operates the Recology Hay Road Landfill, the San Francisco Transfer Station, Recology's Recycle Central Facility, and the truck hauling fleet currently used to transport San Francisco waste) would enter into one or more agreements for the transportation and disposal ~~of 5 million tons~~ of San Francisco MSW at the Recology Hay Road Landfill *for a period of nine years, or until the total amount of waste disposed reaches 3.4 million tons, whichever comes first. The agreement(s) would include an option for an additional six years of waste transportation and disposal at the Recology Hay Road Landfill, or 1.6 million tons, whichever comes first.* ~~At current rates of disposal, it is estimated that such an agreement (or agreements) would have a term of approximately 13 years. However, given~~. *The Agreement would also limit the annual average number of round-trip truck trips transporting MSW to the landfill to fifty round-trip truck trips per day, based on a six-day work week. Given* the City's continuing efforts to reduce MSW to landfill, for the purposes of this Initial Study, it is conservatively assumed that the proposed project could continue for a period of up to 15 years. As occurs today, MSW would be transported by long haul semi-trucks primarily from the Recology San Francisco transfer station located at 501 Tunnel Avenue,

with a smaller number of trucks hauling residual wastes for disposal from Recology's Recycle Central facility, located at Pier 96 in San Francisco. The tonnage of waste and the numbers of daily and annual truck trips would not increase as a result of the proposed project.

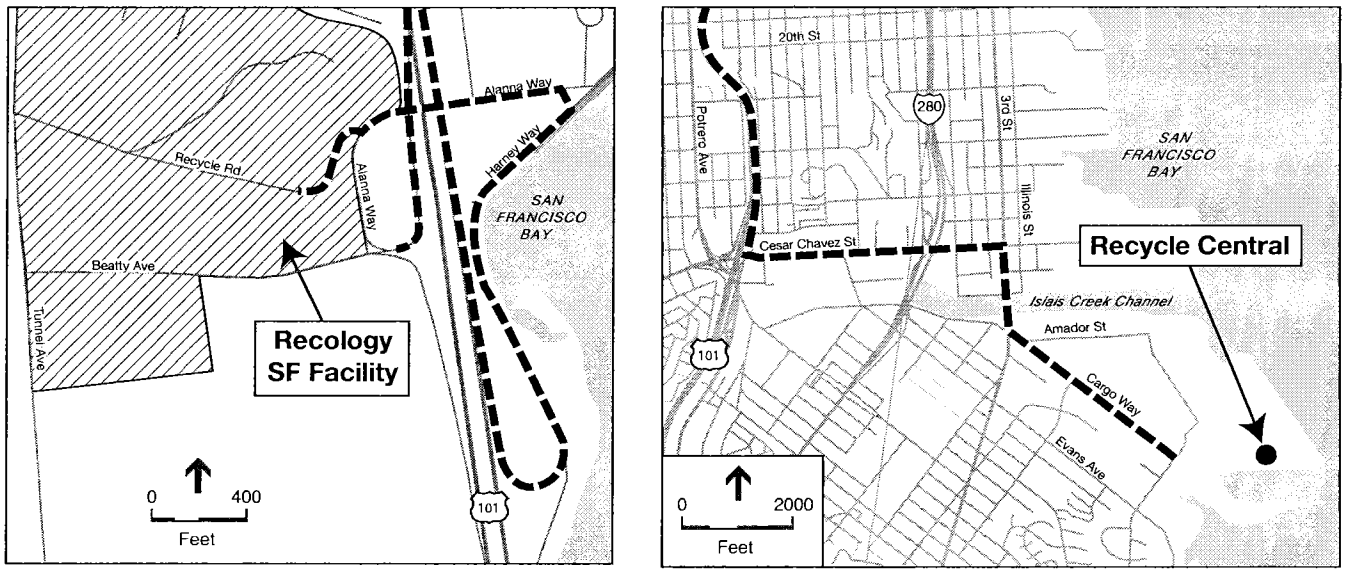


San Francisco Waste Transport for Disposal at Recology Hay Road Landfill . 210655

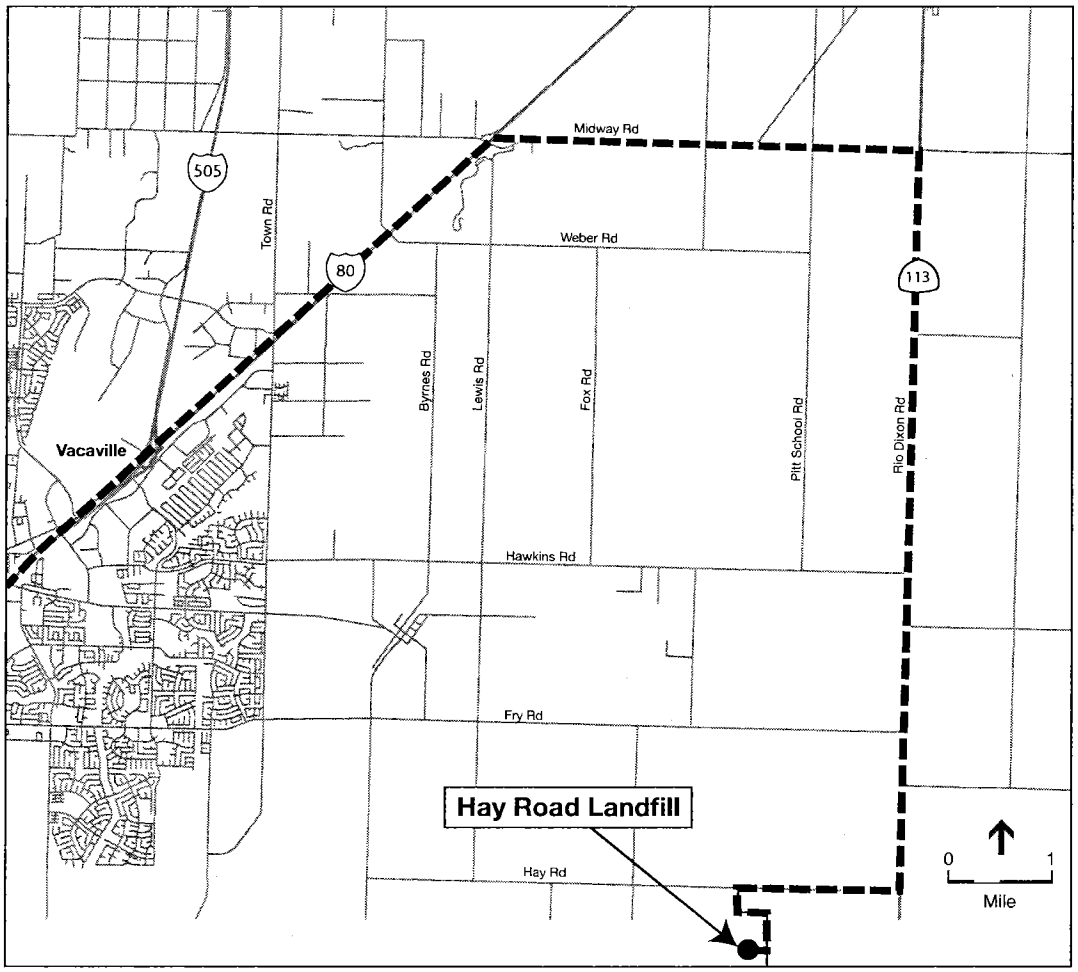
SOURCE: Recology

Figure 1
Project Location – Proposed Route for Transport of MSW to Recology Hay Road Landfill

San Francisco Facilities Haul Routes



Solano County Facility Haul Route



San Francisco Waste Transport for Disposal at Recology Hay Road Landfill . 210655

SOURCE: Recology

Figure 2

Local Streets and Roads Used to Transport MSW

Currently, Recology transports San Francisco's MSW to the Altamont Landfill, located in eastern Alameda County, for disposal. San Francisco's disposal agreement with Waste Management, Inc., operator of the Altamont Landfill, will expire around 2016.[1] The initiation of the proposed project would correspond with the cessation of transport of San Francisco's MSW to Altamont Landfill.[2] As noted above, the use of the Recology Hay Road Landfill for disposal of up to 5 million tons of San Francisco's MSW is assumed to continue for ~~an estimated period~~ *a period of up to* of 15 years.

Points of Origin. Under the proposed project, no changes would be made to physical structures or operations at the two Points of Origin for the waste hauling operations. Those Points of Origin are the Recology San Francisco transfer station and Recology's Recycle Central facility.

The Recology San Francisco transfer station, located at 501 Tunnel Avenue, straddles the border between San Francisco and the City of Brisbane (San Mateo County). The transfer station receives and ships MSW, recyclable materials (including commercial and residential organic waste), and construction and demolition (C&D) debris collected within San Francisco. The transfer station is permitted to receive up to 5,000 tons per day, and can operate up to 24 hours per day, 7 days per week.

Recology's Recycle Central facility is located at Pier 96 in San Francisco. Recycle Central receives, processes, and ships recyclable materials collected within San Francisco. The facility is permitted to accept up to 2,100 tons per day, ~~80 to 85%~~ 82 to 88% of which is recycled. It can operate 24 hours per day, 7 days per week. Approximately 12-18% of the materials received and processed at Recycle Central cannot be recycled, and these materials must be disposed in a landfill.

Transportation. Currently, Recology transports San Francisco's MSW from the two Points of Origin to the Altamont Landfill. The Altamont Landfill is located at 10840 Altamont Pass Road in unincorporated Alameda County near Livermore, and is owned and operated by Waste Management, Inc. This landfill

---

1 Inasmuch as the contract is based on overall disposal tonnage and not a specific time frame, there is no fixed date for the expiration of the City's disposal contract for Altamont Landfill. As of June, 2014, the Department of the Environment projected that the City will reach its permitted limit in early 2016.

2 It is noted that San Francisco is participating as a potential responsible agency in the CEQA environmental review process that Yuba County is undertaking for a separate project, the Recology Ostrom Road Green Rail and Permit Amendment Project (Ostrom Road Project). As proposed, the Ostrom Road Project includes improvements to rail facilities to enable the hauling of San Francisco MSW to the Ostrom Road Landfill by rail. In March 2013, Yuba County and San Francisco entered into a Cooperative Agreement to designate Yuba County as the lead agency for the Ostrom Road Project and to outline their cooperative efforts concerning environmental review; a Notice of Preparation was also issued that month. However, due to delays in the Ostrom Road Project, the San Francisco Department of the Environment has concluded that the Ostrom Road Project cannot be approved and constructed in a timely manner, prior to the expiration of the City's contract with Altamont Landfill. Accordingly, the Department is now pursuing this project, an agreement for the transportation and disposal of ~~5 million tons of~~ San Francisco MSW at the Recology Hay Road Landfill. If this project is approved and implemented, the City's participation in the Ostrom Road Landfill project would cease.

currently accepts San Francisco's MSW for disposal pursuant to an agreement between Waste Management, Inc. and San Francisco, which was executed in 1984.

Under the proposed project, Recology would transport San Francisco MSW to the Recology Hay Road Landfill instead of the Altamont Landfill. Recology Hay Road Landfill is located at 6426 Hay Road, east of Vacaville and south of Dixon, and is owned and operated by Recology.

Disposal. The proposed project would not change the physical facilities at the Recology Hay Road Landfill, nor would the project necessitate any changes to the existing permits for the Recology Hay Road Landfill. The Recology Hay Road Landfill currently receives an average of approximately 651 tons per day of MSW,[3] and approximately 325 vehicles (including trucks)[4] per day. The facility is open to the public seven days per week from 8:00 a.m. to 4:00 p.m., and to commercial haulers seven days per week, from 7:00 a.m. to 4:00 p.m., with select commercial and contract accounts having access to the site on a 24-hour basis. The facility operates 24 hours per day, seven days per week, 361 days of the year. The facility is closed on four holidays every year (New Year's Day, Easter, Thanksgiving, and Christmas). The landfill is permitted by Solano County and the California Department of Resources Recycling and Recovery (CalRecycle) to accept up to 2,400 tons per day of MSW for disposal, to receive up to 620 vehicles per day (averaged over a seven-day period), and to operate up to 24 hours per day, seven days per week.[5] The permit for the Recology Hay Road Landfill underwent environmental review in Solano County and the potential increase in MSW that would be disposed of at the landfill pursuant to the proposed project would be within the amounts analyzed in the Solano County environmental review document (see Approach to Analysis, below, for description of Solano County environmental review documents related to Hay Road Landfill.) Under the proposed project, the average tons of MSW received at the landfill would increase from 651 tons per day to 1,851 tons per day, and the average number of vehicles (including trucks) would increase from 325 to 375 per day.

Located within the footprint of the landfill is the Jepson Prairie Organics composting facility, also owned and operated by Recology, which accepts organic materials for composting. Currently, Recology delivers approximately 20% of the organic materials that it collects in San Francisco to the Jepson Prairie Organics facility. The vehicle limit for the Recology Hay Road Landfill noted above, 620 vehicles per day, is shared by the landfill and the composting facility.

---

3 Merrill, Erin (Recology), 2015. Landfill Life Estimates for Hay Road Landfill (Excel spreadsheet), file dated February 24, 2015. Available for review at the SF Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, 94103.

4 Merrill, Erin (Recology), 2014. Hay Road Landfill Daily Vehicle County, January 2013-June 2014 (Excel spreadsheet), file dated July 29, 2014. Available for review at the SF Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, 94103.

5 Solano County Local Enforcement Agency and CalRecycle, 2013. Solid Waste Facility Permit for Recology Hay Road Landfill, Facility no.48-AA-002. Issued July 9, 2013. Available online: http://www.calrecycle.ca.gov/SWFacilities/Directory/48-AA-0002/Detail/

Current Conditions

Points of Origin. Current Conditions at the Points of Origin are as follows:

Currently, Recology's collection truck fleet collects MSW and compostable organic material within San Francisco and delivers it to the Recology San Francisco transfer station for receipt, consolidation, and load-out into larger transfer trucks. The collection trucks unload the MSW into a pit in the enclosed transfer station building. The waste is consolidated with waste received from other collection trucks, compacted, and pushed toward an opening in the floor. Waste is pushed into a waiting transfer truck located underneath this opening in a loading tunnel. As the truck is loaded, a stationary grapple (a clamshell-like claw) moves the waste around in the trailer to provide for more compaction and to achieve loads that are near the highway weight limit of 80,000 pounds gross vehicle weight. Once the truck is full, it exits the loading tunnel and the trailer is covered.

Recology collects recyclable materials from its customers separately from MSW and organic materials. Collection vehicles deliver recyclable materials to the Recycle Central facility at Pier 96, where they are unloaded, sorted into different commodity types, baled or otherwise compacted, then shipped to market. Approximately 12-18% of the materials collected and delivered to the facility cannot, however, be recovered and sold. This includes, for example, non-recyclable plastics, grit, and other fine material. The materials that cannot be recovered and sold are sent to a landfill via transfer truck.

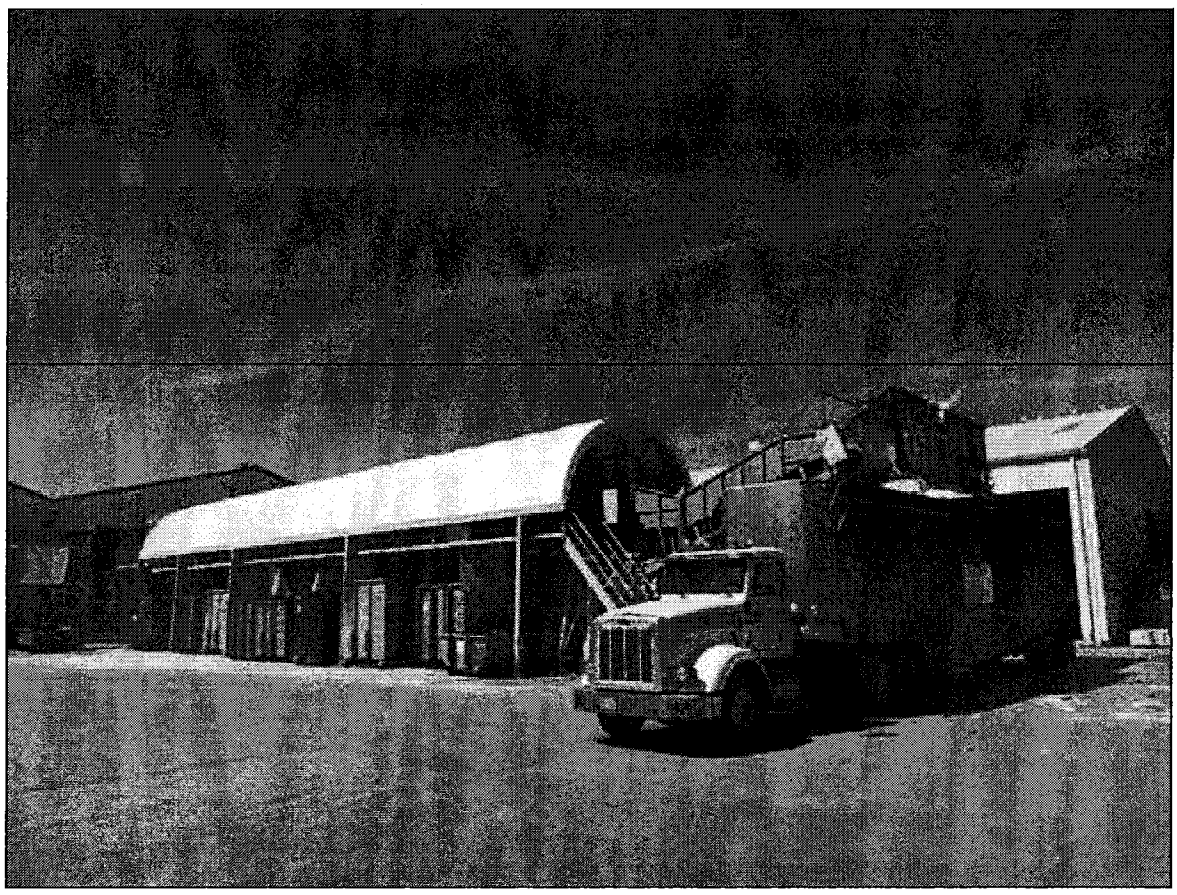
Transportation. Current conditions for transporting waste from the Points of Origin to the Altamont Landfill are as follows:

Recology owns and operates its own transfer truck fleet. Transfer trucks are classified as heavy-heavy duty tractor-trailer type trucks (Class 8 trucks). The trailers used are the large-capacity "possum belly" type, with a capacity of 137 cubic yards (**Figure 3** on page 7). These trucks have a maximum payload[6] of about 24.5 tons. In 2012, Recology hauled 374,844 tons of San Francisco MSW to the Altamont Landfill.[7] Based on the total tonnage hauled to Altamont Landfill and the capacity of each transfer truck, it took approximately 15,300 loads to reach this tonnage-- or 294 loads per week for 52 weeks. Based on a 6 day-week (Recology typically hauls MSW loads from Sunday evening through Friday) this resulted in approximately 50 trucks (or round trips) per day hauling San Francisco MSW to the Altamont Landfill.

---

[6] Payload is the maximum tonnage that can be loaded into the trailer.

[7] CalRecycle Disposal Reporting System, accessed June 3, 2014 http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=OriginJurisdictionIDs%3d438%26ReportYear%3d2012%26ReportName%3dReportEDRSJurisDisposalByFacility



San Francisco Waste Transport for Disposal at Recology Hay Road Landfill . 210655

SOURCE: Recology

Figure 3
Photo of Recology Transfer Truck

Of the 50 trucks per day that haul San Francisco MSW to the Altamont Landfill, approximately 44 depart from the Recology San Francisco transfer station. Trucks depart the Recology San Francisco transfer station onto Alanna Way, cross under U.S. 101 and turn right onto Harney Way, which leads to the U.S. 101 northbound on-ramp (Figure 2 on page 3). Trucks proceed north on U. S. Highway 101 to the junction with eastbound I-80, then cross over the San Francisco-Oakland Bay Bridge, then south on I-880 to eastbound State Highway 238, then on eastbound I-580 to the Altamont Landfill near Livermore.

In addition to the approximately 44 trucks per day that haul San Francisco MSW from the Recology San Francisco transfer station, approximately six trucks per day haul residual wastes from Recology's Recycle Central facility to the Altamont Landfill. Transfer trucks leaving the Recycle Central facility bound for the Altamont Landfill travel on Cargo Way, Third Street, and Cesar Chavez Street to U.S. 101 (Figure 2 on page 3), then follow the same route as the trucks from Recology San Francisco to the Altamont Landfill.

Empty transfer trucks return to each of these Points of Origin via the same routes that they take when they depart. The round trip distance from the San Francisco transfer station and the Recycle Central facility to the Altamont Landfill and back is approximately 115 miles.

Disposal. Current conditions for disposing of MSW at the Altamont Landfill are as follows:

At the landfill, the truck's trailer is unloaded using a tipper at the open landfill face. The waste is further compacted and covered daily with soil or other approved alternative cover material, per regulatory requirements.

Current conditions for disposal of MSW at Recology Hay Road Landfill are as described above under Project Characteristics, Disposal.

Composting Operations. In addition to transporting San Francisco MSW to the Altamont Landfill, Recology also collects San Francisco's organic materials and transports those materials to its composting facilities. Collection and transportation of San Francisco organic materials will not be affected by the proposed project. Current conditions for collecting, transporting, and disposing of organic materials are as follows:

Recology separately collects organic materials, consisting of yard waste, food waste, and other compostable materials, and delivers these materials to the Recology San Francisco facility, which includes the transfer station. There, the materials are consolidated and loaded into transfer trucks. Recology has three facilities that receive organic materials from San Francisco for composting: Jepson Prairie Organics, which receives approximately five to six loads per day of organics from Recology San Francisco; Recology Grover Environmental Products facility in Vernalis, CA, which receives 19-20 loads per day from Recology

San Francisco; and Recology South Valley Organics facility in Gilroy, CA, which receives one to two loads per day from Recology San Francisco. In total, approximately 140-150 loads of organics from Recology San Francisco are delivered to these three facilities each week. Each load consists of 24.5 tons of waste.

Transfer trucks bound for Jepson Prairie Organics at the Recology Hay Road facility take the same route as trucks bound for Altamont Landfill from the Recology San Francisco facility to the Bay Bridge. After crossing the bridge, these trucks travel on I-80 east to the Midway Road exit northeast of Vacaville, then travel east on Midway Road to State Route 113, and then south to Hay Road.

Proposed Project Conditions

Points of Origin. Under the proposed project, there would be no change to current conditions at the Recology San Francisco transfer station or the Recycle Central facility.

Transportation. The proposed project would change part of the route that is used to transport waste. San Francisco's MSW would be transported by truck to the Recology Hay Road Landfill, instead of the Altamont Landfill. Neither the number of truckloads (currently 50 trucks per day) nor the volume of San Francisco MSW being hauled (currently 1,200 tons per day) would change as a result of the project.

Trucks transporting MSW would use the same routes as they currently do between the Points of Origin to the east end of the Bay Bridge. There would be no change in the number or location of truck trips from the Points of Origin to the eastern end of the Bay Bridge.

After crossing the bridge, trucks would turn to the north toward the Recology Hay Road Landfill rather than turning to the south to the Altamont Landfill as they do under current conditions (see Current Conditions, above, for description of route to Altamont.) Trucks would continue east on I-80 to Solano County (Figure 1 on page 2). Trucks would travel the same route from I-80 to the Recology Hay Road Landfill as Recology's organic materials transfer trucks do at present: Midway Road exit from I-80, east on Midway Road to State Route 113 (Rio-Dixon Road), then south to Hay Road (Figure 2 on page 3). The landfill entrance is a short distance west of State Route 113 on the south side of Hay Road. Empty transfer trucks would return to San Francisco via the same route. The round trip is approximately 155 miles, or about 40 miles longer than the round trip to and from the Altamont Landfill. Because the disposal of 2,400 tons of MSW at Hay Road Landfill was analyzed for its existing permit, this change in route is the only physical change associated with the proposed project.

The transfer truck fleet would continue to be owned, controlled and dispatched by Recology. Recology has considerable flexibility in its shipping schedule. Recology makes efforts to minimize the number of

trucks on the road during peak traffic times. The majority of trips occur in the early morning hours prior to peak morning traffic (peak morning traffic is 7:00 – 9:00 a.m.), mid-morning following the morning peak traffic, and in the evening and nighttime hours following the afternoon peak (peak afternoon traffic is 4:00 – 6:00 p.m.). Under the project, Recology would continue to manage departures to avoid heavy traffic periods, and in particular to avoid the Fairfield-Vacaville section of I-80 during the morning peak, in accordance with Recology Hay Road Landfill's Conditional Use Permit from Solano County.

Most of Recology's transfer fleet currently runs on B-20 biodiesel (that is, diesel fuel that is derived from 20 percent vegetable or animal fats and 80 percent petroleum). Eleven trucks in the fleet run on liquefied natural gas (LNG). Recology is in the process of phasing in additional transfer vehicles that run on LNG or compressed natural gas (CNG). These trucks have lower emissions than B-20 Diesel. Because Recology's plans for conversion of the transfer fleet to a different fuel type are still at an early stage, the analysis in this Initial Study assumes that the fleet will continue to be fueled with B-20 biodiesel and LNG at the current levels.

Disposal. Once at the Recology Hay Road Landfill, trucks would be directed to the active disposal area where they would unload with a tipper at the open face. The waste would be further compacted and covered daily with soil or other approved alternative cover material, per regulatory requirements. As indicated above, on average, the project would result in the addition of approximately 1,200 tons per day of MSW and 50 trucks per day, relative to current operations at the landfill, which would be within the limits of existing permits, which were previously subject to environmental review by Solano County.

Project Schedule

As noted, the City's contract to haul MSW to Altamont Landfill is projected to terminate in early 2016 because San Francisco is expected to reach the limit for disposal of MSW set forth in that contract by that date. The City intends to approve a new contract for MSW hauling before the end of 2015.

The proposed project would not involve any construction activity, as the San Francisco Transfer Station, Recycle Central facility, and the Recology Hay Road Landfill are all existing facilities in operation at present.

A.3 Required Approvals

The project would require the following approvals from City bodies:

- Approval of one or more Agreements with Recology for transportation and disposal of ~~5 million tons of~~ San Francisco MSW at the Recology Hay Road Landfill *for a period of nine years or until 3.4 million tons of MSW have been disposed, whichever comes first, with an option for an additional six years or 1.6 million tons of MSW disposed, whichever comes first. (Department of Environment* approval of Agreement(s) ~~*referral of Agreement(s) to Board of Supervisors; Board of Supervisors approval of Agreement(s).)*~~

Approval Action: ~~Referral~~ *Approval* of the Agreement(s) by the Department of Environment ~~to the Board of Supervisors~~ would be considered the Approval Action for this project for the purposes of a CEQA appeal. The Approval Action date would establish the start of the 30-day appeal period for appeal of the Final Negative Declaration to the Board of Supervisors pursuant to Section 31.04(h) of the San Francisco Administrative Code.

As previously stated, the Recology Hay Road Landfill is permitted to receive up to 2,400 tons per day of MSW and compost, and up to 620 vehicles per day. Based on recent volume of waste received and vehicles arriving at the facility, the Recology Hay Road Landfill has sufficient capacity under its existing permits to accommodate the addition of San Francisco's MSW. Therefore, the proposed project does not require any new or additional approval by Solano County or other entities with regard to the Recology Hay Road Landfill.

B. PROJECT SETTING

Points of Origin. The Recology San Francisco transfer station, located at 501 Tunnel Avenue, straddles the border between San Francisco and the City of Brisbane (San Mateo County). The transfer station receives and ships MSW, recyclable materials (including commercial and residential organic waste), and construction and demolition (C&D) debris collected within San Francisco. The transfer station is permitted to receive up to 5,000 tons per day, and can operate up to 24 hours per day, 7 days per week.

Recology's Recycle Central facility is located at Pier 96 in San Francisco. Recycle Central receives, processes, and ships recyclable materials collected within San Francisco. The facility is permitted to accept up to 2,100 tons per day. It can operate 24 hours per day, 7 days per week. Approximately 12-18% of the materials received and processed at Recycle Central cannot be recycled, and these materials must be disposed in a landfill.

Transportation. The proposed project's MSW hauling operations would take place on existing city streets, freeways, County roads, and State highways between the Points of Origin and the Recology Hay Road Landfill. Specifically, trucks transporting waste from the Recology San Francisco transfer station would travel on San Francisco city streets, U.S. 101, Interstate 80, Midway Road, State Route 113, and Hay Road to the Recology Hay Road Landfill, and would return following the same route (Figures 1 and 2 on pages 2 and 3). Trucks transporting waste from the Recycle Central facility would travel on San Francisco city streets to U.S. 101, then follow the same route to the Recology Hay Road Landfill.

The San Francisco city streets that would be used between the Recology San Francisco transfer station and U.S. 101 include Alanna Way and Harney Way. Alanna Way is a two-lane, undivided road. From the intersection with Recycle Road (which is entirely within the Recology property), Alanna Way passes

beneath U.S. 101 toward Candlestick Point. Harney Way is a three-lane, undivided road that skirts the shore of San Francisco Bay, and carries traffic to and from U.S. 101.

The city streets that would be used between the Recycle Central facility and U.S. 101 include Cargo Way, Third Street, and Cesar Chavez Street. Cargo Way is a four-lane, divided road with a landscaped median strip. Third Street, a major north-south thoroughfare, is a four-lane roadway, with light rail tracks (for the Muni T line) in-between the north bound lanes and the south bound lanes. Third Street passes over the Islais Creek Channel drawbridge before reaching Cesar Chavez Street. Cesar Chavez Street, a major east-west thoroughfare, is a four-lane road that in some places is divided. Cesar Chavez Street passes underneath the elevated I-280 freeway before reaching the U.S. 101 on-ramp.

U.S. 101 is a multi-lane freeway between the Harney Way on-ramp and the junction with I-80, that is elevated in some reaches.

I-80 is a multi-lane, elevated freeway within San Francisco. I-80 then passes over the San Francisco-Oakland Bay Bridge, through the interchange with I-580 and I-880, then continues along the eastern Bay shore through Emeryville, Berkeley, Richmond, several Contra Costa County communities, over the Carquinez Strait Bridge into Solano County, then through the communities of Vallejo, Fairfield, and Vacaville. Freeway access to and from the Recology Hay Road Landfill primarily occurs at the I-80 / Midway Road – O'Day Road interchange located approximately 12 miles north and west of the facility via Hay Road, State Route 113 and Midway Road. The average daily traffic volume on I-80 in the area of the Midway Road interchange is about 115,000 vehicles.[8]

Midway Road, also known as the Lincoln Highway, is a two-lane, undivided road that runs past the Sacramento Valley National Cemetery and through a rural area to the junction with State Route 113.

State Route 113 is also known as Rio-Dixon Road. It is a rural, two-lane, undivided road. The Recology Hay Road Landfill is located at the intersection of State Route 113 and Hay Road. The three-legged ("T") intersection of State Route 113 and Hay Road is unsignalized (the eastbound Hay Road approach is Stop sign controlled). A future planned and funded improvement at this intersection would entail the installation of a left turn lane on the northbound State Route 113 approach.[9] The average daily traffic volume on State Route 113 in the project area is about 3,550 vehicles.[10]

[8] California Department of Transportation (Caltrans), 2013 Traffic Volumes on California State Highways, 2014.
[9] Recology is funding the installation of the northbound left-turn lane, as it did for the westbound left-turn lane on Hay Road at the landfill entrance (completed in 2010), as part of prior mitigation requirements.
[10] Caltrans, 2013.

Trucks enter and exit the facility via Hay Road. Hay Road is a rural, two-lane, undivided road that provides access for the Recology Hay Road Landfill from its intersection with State Route 113.

Disposal. The Recology Hay Road Landfill is located in unincorporated Solano County, approximately eight miles southeast of the City of Vacaville, approximately nine miles south of the City of Dixon, and approximately four miles northeast of Travis Air Force Base. The facility is located immediately west of State Route 113 at its intersection with Hay Road, at 6426 Hay Road (Figures 1 and 2 on pages 2 and 3).

The landfill has been in operation since 1964. It was formerly known as the B&J Dropbox Landfill or the B&J Landfill. The landfill property is 640 acres, with 256 acres permitted for disposal operations, and another 54 acres permitted for a composting operation. The topography of the area is essentially flat with a ground surface elevation of approximately 25 feet above mean sea level. The current height of the existing landfill is approximately 120 feet above the surrounding grade.

The facility is surrounded by a six-foot chain link fence with a taller litter control fence located along the perimeter of the landfill adjacent to Hay Road and State Route 113. Agricultural land uses surround the project site. Four rural residences are located within a two-mile radius of the site. Two of the residences are located approximately 1.5 miles to the west, one residence is located approximately 1.3 miles to the south, and one residence is located approximately 1.1 miles to the north.

The Recology Hay Road Landfill currently operates 24 hours per day, seven days per week. It currently receives on average approximately 651 tons of MSW per day, and approximately 325 vehicles (including trucks)[11] per day.

The landfill operates under the terms of several permits, including a Conditional Use Permit (CUP) from Solano County[12] and a Solid Waste Facility Permit (SWFP), jointly issued in 2013 by the Solano County Resources Management Department and CalRecycle.[13] These permits limit the facility to receiving a maximum of 2,400 tons of MSW per day, 7 days per week; a maximum of 2,500 tons of asbestos per month; and a maximum of 620 vehicles per day, averaged over a seven-day period. The total capacity of the landfill is 37 million cubic yards. The remaining capacity of the landfill is projected to be 27,177,046 cubic yards as of January, 2016, and the earliest estimated closure year for the landfill,

[11] Merrill, Erin (Recology), 2015.

[12] Solano County Resource Management Department. Land Use Permit No. U-11-09, Recology and Jepson Prairie Organics, for a Landfill and Composting Facility. November 29, 2012. Available for review from Solano County Resource Management Department, and also as part of Case File No. 2014.0653E at the SF Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, 94103.

[13] Solano County Local Enforcement Agency and CalRecycle, 2013.

assuming the maximum permitted rate of waste disposal, is 2034.[14] The maximum permitted height of the fill area is 215 feet above mean sea level (about 190 feet above the surrounding grade) and the maximum permitted depth is 20 feet above mean sea level (about five feet below the surrounding grade).

C. COMPATIBILITY WITH ZONING, PLANS, AND POLICIES

	Applicable	*Not Applicable*
Discuss any variances, special authorizations, or changes proposed to the Planning Code or Zoning Map, if applicable.	☐	☒
Discuss any conflicts with any adopted plans and goals of the City or Region, if applicable.	☐	☒
Discuss any approvals and/or permits from City departments other than the Planning Department or the Department of Building Inspection, or from Regional, State, or Federal Agencies.	☒	☐

C.1 San Francisco Planning Code

The proposed project would involve no alteration to existing land uses, structures or utilities, and would involve no new construction, nor would there be any physical changes within San Francisco or under the jurisdiction of the City & County of San Francisco. Therefore, no variances or special authorizations are required, and no changes are proposed to the San Francisco Planning Code or Zoning Map.

C.2 Plans and Policies

San Francisco Plans and Policies

San Francisco General Plan

The *San Francisco General Plan* (General Plan) provides general policies and objectives to guide land use decisions. The General Plan contains 10 elements (Commerce and Industry, Recreation and Open Space, Housing, Community Facilities, Urban Design, Environmental Protection, Transportation, Air Quality, Community Safety, and Arts) that set forth goals, policies, and objectives for the physical development of the City. The General Plan also contains a number of area plans, which set forth objectives and policies with more specificity to various neighborhoods.

Local plans and policies that are relevant to the proposed project are discussed below.

- The *San Francisco Zero Waste Policy* (Board of Supervisors Resolution 679-02 and Commission on the Environment Resolution 002-03-COE) establishes a goal of achieving zero waste to landfill by

[14] Golder Associates, 2013. Joint Technical Document for Recology Hay Road Landfill. Prepared for Recology, Inc., February 2013. Available for review at the SF Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, 94103.

2020 and directs the Department of the Environment to develop policies and programs to achieve zero waste, including increasing producer and consumer responsibility, in order that all discarded materials be diverted from landfill through recycling, composting or other means.

- The *San Francisco Sustainability Plan* is a blueprint for achieving long-term environmental sustainability by addressing specific environmental issues including, but not limited to, air quality, climate change, energy, ozone depletion, and transportation. The goal of the *San Francisco Sustainability Plan* is to enable the people of San Francisco to meet their present needs without sacrificing the ability of future generations to meet their own needs.

- The *Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Emissions* is a local action plan that examines the causes of global climate change and human activities that contribute to global warming, provides projections of climate change impacts on California and San Francisco based on recent scientific reports, presents estimates of San Francisco's baseline greenhouse gas emissions inventory and reduction targets, and describes recommended actions for reducing the City and County's greenhouse gas emissions.

Potential inconsistency with policies applicable to the proposed project that relate to physical environmental effects is discussed in Section E.

Solano County Plans and Policies

Compatibility of the proposed project with Solano County zoning, plans, and policies is discussed below under Section E.1, Land Use and Land Use Planning.

Regional Plans and Policies

In addition to local plans and policies, there are several regional planning agencies whose environmental, land use, and transportation plans and policies consider the growth and development of the nine-county San Francisco Bay Area. Some of these plans and policies are advisory, and some include specific goals and provisions that must be adhered to when evaluating a project under CEQA. The regional plans and policies that are relevant to the proposed project are discussed below.

- The Bay Area Air Quality Management District's *Bay Area 2010 Clean Air Plan* updates the Bay Area 2005 Ozone Strategy, in accordance with the requirements of the California Clean Air Act, to implement feasible measures to reduce ozone and provide a control strategy to reduce ozone, particulate matter, air toxics, and greenhouse gases throughout the region.

- The Regional Water Quality Control Board's *Water Quality Control Plan for the San Francisco Bay Basin* is a master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the state, including surface waters and groundwater, and includes implementation programs to achieve water quality objectives.

- *Plan Bay Area*, the Bay Area's first combined Sustainable Communities Strategy (land use plan) and regional transportation plan, was developed jointly by the Association of Bay Area Governments

(ABAG) and the Metropolitan Transportation Commission (MTC).[15] *Plan Bay Area* encourages housing and job growth proximate to transit, particularly within areas identified by local jurisdictions as Priority Development Areas (PDAs), and "is intended to enhance mobility and economic growth by linking housing/jobs with transit, thus offering a more efficient land use pattern around transit and a greater return on existing and planned transit investments."[16] The plan also includes strategies and investments to maintain, manage, and improve the region's multi-modal transportation network, from bicycle and pedestrian facilities to local streets to highways to public transit. *Plan Bay Area* also sets forth transportation projects and programs to be implemented with reasonably anticipated revenue.

- San Francisco Bay Conservation and Development Commission's (BCDC's) *San Francisco Bay Plan*. BCDC has regulatory responsibility over development in San Francisco Bay and along the Bay's nine-county shoreline. The proposed project would involve no changes within 100 feet of the bay shoreline, and is therefore not within the jurisdiction of the BCDC and is not subject to the policies in the *San Francisco Bay Plan* or other BCDC policies.

The proposed project would not conflict with the provisions of any adopted habitat conservation plan.

See discussion below for physical environmental impact analysis of the proposed project, as related to specific topics addressed in these plans and policies.

D. SUMMARY OF ENVIRONMENTAL EFFECTS

The project could potentially affect the environmental topics checked below. The following pages present a more detailed checklist and discussion of each environmental topic.

☐ Land Use	☐ Air Quality	☐ Biological Resources
☐ Aesthetics	☐ Greenhouse Gas Emissions	☐ Geology and Soils
☐ Population and Housing	☐ Wind and Shadow	☐ Hydrology and Water Quality
☐ Cultural and Paleo. Resources	☐ Recreation	☐ Hazards/Hazardous Materials
☐ Transportation and Circulation	☐ Utilities and Service Systems	☐ Mineral/Energy Resources
☐ Noise	☐ Public Services	☐ Agricultural and Forest Resources
		☐ Mandatory Findings of Significance

D.1 Effects Found to be Potentially Significant

The project has been evaluated to determine whether it would result in significant environmental impacts on any of the environmental topics listed above. As discussed in detail in the following pages, no potentially significant impacts have been identified.

[15] Plan Bay Area was necessitated by the adoption of Senate Bill 375, which required regions to prepare a Sustainable Communities Strategy (or Alternative Planning Strategy) to reduce greenhouse gas emissions (GHGs) by linking growth to transit.

[16] MTC and ABAG, 2013. Plan Bay Area Draft Environmental Impact Report. page ES-2. Available online at: http://onebayarea.org/pdf/Draft_EIR_Chapters/0.0_Cover_Intro_and_Executive_Summary.pdf. Reviewed December 30, 2013.

D.2 Effects Found Not to be Significant

Within each environmental topic area examined, the project was found to have either no impact or a less-than-significant impact.

E. EVALUATION OF ENVIRONMENTAL EFFECTS

This Initial Study examines the potential effects on the environment that would result from approval of the proposed project. For all items checked "Less-than-Significant Impact," "No Impact," or "Not Applicable," the Planning Department has determined that the project would not have a significant adverse environmental effect relating to that issue. No impacts were found to be potentially significant, and so no mitigation measures are identified. All of these issues are discussed below and conclusions regarding effects are based upon field observations, staff experience and expertise on similar projects, and/or standard reference material available from the Planning Department, such as the Department's *Transportation Impact Analysis Guidelines for Environmental Review.*

For each checklist threshold, the analysis provides an overview of the project's general impacts, and considers the impacts of the project both individually and cumulatively.

Between the time that the Preliminary Negative Declaration was originally drafted and circulated and the date of the current revision of the document, the assumed terms of the proposed Agreement or Agreements changed. Originally, it was assumed that the Agreement would set a limit of 5 million tons of San Francisco's MSW to be disposed at the Recology Hay Road Landfill, with no definite time limit, but an assumption that this limit would be reached in about 15 years. The proposed Agreement now states a time limit of nine years, or 3.4 million tons of MSW disposed, whichever comes first, with an option for another six years or 1.6 million tons of MSW disposed, whichever comes first. In addition, the proposed Agreement would limit the annual average number of round-trip truck trips transporting MSW to the landfill to fifty round-trip truck trips per day, based on a six-day work week. Previously, there was no limit on the average number of truck trips, but it was assumed that the current number, about 50 round-trip truck trips per day on average, would not change. Therefore, revisions to the terms of the proposed Agreement are entirely consistent with the environmental review already completed, and no substantive changes to the following environmental analysis are required. The only potential physical changes to the environment would be a decrease in the period of the Agreement or the total amount of MSW disposed.

Approach to the Analysis

Points of Origin. Operations at the Recology facilities in San Francisco – the Recycle Central facility and the San Francisco transfer station – would be unaffected by the project: the same amount of waste would be processed, and the same number and same size of trucks would arrive and depart on essentially the same schedule, whether or not the project is approved. Because the project would not result in any physical or operational changes at these facilities compared to current conditions, the impact analysis in

this Initial Study does not present any analysis of operations or conditions at these facilities. There would be no physical change to facilities or operations, and therefore the proposed project does not have the potential to cause adverse environmental impacts at the Points of Origin.

Transportation. Truck trips from the Recology San Francisco transfer station and the Recycle Central facility to the eastern end of the Bay Bridge would be unaffected by the project; the same number of trucks would travel on local San Francisco roadways, U.S. 101, and the Bay Bridge on essentially the same schedule, whether or not the project is approved. Because the project would not result in any physical or operational changes on local San Francisco streets, U.S. 101, or the Bay Bridge compared to current conditions, it would not result in any physical changes in the environment in this area, and therefore the impact analysis in this Initial Study does not present any further analysis of transport of waste between the Points of Origin and the eastern end of the Bay Bridge.

Truck trips from the eastern end of the Bay Bridge traveling east on I-80 to the Midway Road exit from I-80 in Solano County, and continuing on local streets to the Recology Hay Road Landfill would increase as a result of the proposed project compared to current conditions. Therefore, this Initial Study evaluates the environmental effects of project-related truck trips traveling between the eastern end of the Bay Bridge and the Midway Road exit.

This Initial Study also evaluates the environmental effects of project-related truck trips traveling between the Midway Road exit and the Recology Hay Road Landfill. The Recology Hay Road Landfill is currently in operation, and currently receives approximately 325 vehicles per day. The landfill is permitted by Solano County to receive up to 620 vehicles per day. The approximately 50 trucks per day hauling San Francisco MSW would be within the 620 total vehicles that are permitted to access the landfill, and would not result in any increase in truck traffic beyond the amount Solano County already has approved. Nevertheless, these 50 truck trips proposed to haul San Francisco MSW to the Recology Hay Road site are evaluated in this Initial Study as new trips to the landfill, relative to existing conditions.

Disposal. Under the proposed project, San Francisco's MSW would be hauled to the Recology Hay Road Landfill and disposed there. The Recology Hay Road Landfill currently operates 24 hours per day, seven days per week, and receives on average approximately 651 tons of MSW per day and 325 vehicles (including trucks) per day. These existing conditions constitute the baseline for environmental analysis in this document.

The City & County of San Francisco does not have authority to control land use or operations at the Recology Hay Road Landfill. Solano County has land use permitting authority over the landfill, and has exercised that authority through issuance of a Conditional Use Permit (CUP) for the landfill, which was last amended in October 2012.[17] The landfill also operates under a Solid Waste Facility Permit (SWFP) issued jointly by Solano County and CalRecycle, Waste Discharge Requirements issued by the Regional Water Quality Control Board, and permits issued by the Yolo-Solano Air Quality Management District. The landfill's permits allow acceptance of up to 2,400 tons of MSW per day and 620 vehicles per day. The amount of San Francisco MSW received, and the number of trucks arriving at the facility as a result of the proposed project, would both be within the limits set by the facility's existing permits.

[17] Solano County Resource Management Department. Land Use Permit No. U-11-09.

At least five CEQA documents have been completed for the Recology Hay Road facility.[18] Solano County was the lead agency for each of these documents. The documents[19] are:

- Final Environmental Impact Report, B&J Landfill Master Development Plan, April 1993 (SCH #92063112);
- B&J Drop Box Landfill U-91-28 Mitigated Negative Declaration, 1995 (SCH #1995093048);
- Initial Study/Mitigated Negative Declaration for B&J Drop Box Sanitary Landfill SWFP Revision. March 2001 (SCH #2001032035);
- Final Subsequent Environmental Impact Report for the Norcal Waste Systems, Inc. Hay Road Landfill Project, March 2005 (SCH #2004032138).
- Initial Study/Mitigated Negative Declaration, Recology Hay Road Land Use Permit Application No. U-11-09, August, 2012 (SCH #2004032138)

Mitigation measures identified in these documents have been incorporated as conditions of the facility's permits by Solano County. All mitigation measures currently in effect at the landfill are listed in Appendix B.

The most recent document, the 2012 Initial Study/Mitigated Negative Declaration (hereafter the "2012 IS/MND"), reviewed and incorporated the analysis and conclusions from the previous documents, and specifically examined the effects of increasing the amount of MSW disposed of in the landfill, from the then-permitted level of 1,200 tons per day average and 2,400 tons per day peak, to a simple limit of 2,400 tons per day, eliminating the 1,200 tons per day average. The 2012 IS/MND used the standard Solano County CEQA checklist to examine the full range of potential environmental impacts that Solano County determined were relevant to the proposal to increase the rate of waste acceptance. The 2012 IS/MND concluded that increasing the rate of waste acceptance to 2,400 tons per day could result in several significant environmental impacts, particularly with regard to aesthetics, air quality, and traffic, and included mitigation measures to reduce these impacts. The 2012 IS/MND concluded that with mitigation, increasing disposal to 2,400 tons per day would not result in a significant adverse environmental impact. As part of its approval process, Solano County incorporated these mitigation measures as conditions of approval in the amended CUP. The CUP and the 2012 IS/MND are available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, 94103, as well as the Solano County Resource Management Department.

[18] As previously noted, names previously used for the facility include the B&J Drop Box Landfill and the B&J Landfill. In addition, Recology was formerly named Norcal Waste Systems.

[19] All of the documents listed are available for review at the Solano County Resource Management Department, and as part of Case File No. 2014.0653E at the SF Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, 94103.

The information contained in the 2012 IS/MND is still current, applicable, and descriptive of disposal-related impacts from the proposed project. Solano County staff have concurred that there has been no substantial change in circumstances surrounding that project in the intervening two years, and no new information which would invalidate the analysis or conclusions from that 2012 MND.[20] In fact, the 2012 IS/MND examined a higher level of waste acceptance (2,400 tons per day) than would occur with the current project (the addition of about 1,200 tons per day of San Francisco's MSW to the current average of about 651 tons per day,[21] or a total of about 1,851 tons per day). Therefore, the 2012 IS/MND may be considered "conservative" (that is, it tends to overstate impacts) for the purpose of evaluating the disposal-related impacts of the proposal to dispose of San Francisco's MSW at the Recology Hay Road Landfill.

There are no issues or circumstances raised by the proposal to dispose of San Francisco's MSW at the Recology Hay Road Landfill that are inconsistent with or that invalidate the analysis and conclusions contained in the 2012 IS/MND. The proposed project would not require revisions to the landfill's permits, and would not require any change in operations that were not contemplated and analyzed in the 2012 IS/MND. Furthermore, where potentially significant impacts were identified in the 2012 IS/MND, mitigation measures were specified to avoid these impacts or to reduce them to less than significant, and these measures were incorporated as conditions in the landfill's permits. Therefore, the proposed project would not cause any new, greater or different significant impacts related to disposal of San Francisco's MSW at the Recology Hay Road Landfill beyond the impacts that were analyzed and described in the 2012 IS/MND.

For informational purposes, this document sets forth the conclusions regarding disposal-related impacts contained in the 2012 IS/MND. These are presented within each environmental topic discussion, following discussion of the potential impacts of the transportation component of the project. The combined effects of disposal and transportation together are also discussed in each topical section. In most cases, impacts of transportation and disposal do not overlap or combine, as they are separated in time and space. In the few instances where they do have the potential to combine, such as air emissions and noise, the combined impact is examined and a conclusion reached regarding significance. The analysis of cumulative impacts then follows the discussion of transportation, disposal, and combined impacts.

[20] Ferrario, Nedzlene (Solano County Planning Department), 2014. E-mail to Dan Sicular, ESA RE: Initial Study-- SF Waste to Recology Hay Road Landfill, December 17, 2014.

[21] Merrill, Erin (Recology), 2015.

Cumulative Impacts

Two approaches to a cumulative impact analysis are provided in CEQA Guidelines Section 15130(b)(1). The analysis can be based on (a) a list of past, present, and probable future projects producing related impacts that could combine with those of a proposed project, or (b) a summary of projections contained in a general plan or related planning document. The analysis in this Initial Study employs both list-based and projections approaches, depending on which approach best suits the individual environmental topic being analyzed. In particular, the projections approach is used in the traffic analysis, air quality analysis, and greenhouse gas analysis. For other topic areas, the list-based approach is used.

One project was identified for the list-based approach: the proposed development of an anaerobic digestion facility at the Recology Hay Road landfill.

Recology Hay Road Anaerobic Digestion Project

The proposed Anaerobic Digestion (AD) project includes the construction and operation of an anaerobic digester at the Recology Hay Road Landfill. The anaerobic digester would be used for processing organics-rich wastes and production of compressed natural gas (CNG). The digestion process breaks down organics-rich materials in an enclosed vessel, resulting in a high nutrient digestate, which can be composted or recirculated back into the digestion process. A byproduct of the digestion process is biogas, consisting mostly of methane (CH_4), carbon dioxide (CO_2) and water vapor (H_2O). Biogas would be captured and converted into a fuel source, specifically, the CH_4 would be concentrated and compressed to produce CNG. In sum, the AD project would divert organic material (organics) from landfill disposal, and use the material to produce fuel and soil amendments.

The proposed AD facility would be located within the western portion of the Recology Hay Road site, on approximately two and a half acres. The proposed AD project would include the following changes to the Recology Hay Road Landfill site:

- The AD facility is expected to receive and process up to 57,200 tons per year[22] of various types of organics-rich wastes, including but not limited to commercial and residential food wastes, green wastes, industry wastes and preprocessed municipal solid waste.
- The tonnage received at the AD facility would fall under the existing tonnage limit for the Jepson Prairie Organics composting facility, which is also located within the Recology Hay Road facility. The combined tonnage limit for the two facilities would be the same as the current limit for the composting facility, 600 tons per day (average over seven days) with a peak limit of 750 tons per day.

[22] Based on 220 tons per day, 5 days per week (260 days per year).

- The permitted 620 average vehicle trip limit, which currently applies to vehicles hauling waste for both the landfill and the composting operation, would not change; vehicles hauling waste destined for the AD facility would also be included in the 620 vehicle limit. About 25 vehicles per day would be expected to arrive at the AD facility, which includes approximately 15 transfer trucks with incoming organic feedstock, one to two CNG tube trucks, and up to seven to eight employee vehicles. The estimated 15 incoming feedstock trucks would not constitute new vehicles to the site, since these trucks would deliver material to the digester instead of delivering material to the compost facility on site. Since there would be no increase in organics tonnage to the site, the number of incoming and outgoing feedstock trucks would remain the same. The only new vehicles coming to the site would be the CNG tube trucks and employee vehicles, which would be a total of up to 10 new vehicles.

- The proposal would include construction and operation of the AD facility, including facilities to upgrade and compress the biogas produced to produce CNG;

- The proposal would involve construction and operation of a piping system to transport digestate to the existing composting facility for use as a compost feedstock. After the organics are "digested" and gas is extracted, the residual organic material, or "digestate", remains. This digestate is nutrient rich and makes for a good compost feedstock. The facility would be designed to convey the digestate to the Jepson Prairie Organics composting operations, via a pipeline.

- The proposal would include the construction of an underground piping system to transport CNG fuel from the AD facility to new CNG fueling stations. One fueling station would be located at the existing Recology Vacaville Solano maintenance shop, which is located within the landfill property, and the other would be located within the disposal area boundary of the landfill. Another piping system would also be constructed to carry landfill gas to the AD facility, also to be used to produce CNG.

- The landfill would receive residuals from the AD facility that cannot be composted or recycled.

Environmental review for the proposed AD facility has not been completed. The lead agency for environmental review of the proposed AD facility is Solano County. In 2012, CalRecycle certified a Programmatic EIR (PEIR) examining the potential impacts of AD facilities co-located with solid waste disposal facilities.[23] The cumulative analysis presented in the current document draws on the conclusions of the PEIR regarding potential impacts and mitigation measures of the proposed Recology AD facility.

Other Pending Applications

The proposed project would not result in any changes at the San Francisco transfer station; therefore the project could not contribute to cumulative impacts at this location. However, for informational purposes, this section describes two potential future projects at sites that would not be affected by the proposed project.

[23] CalRecycle, 2011. Statewide Anaerobic Digester Facilities for the Treatment of Municipal Organic Solid Waste. Final Program Environmental Impact Report. SCH No. 2010042100 Prepared the California Department of Resources Recycling and Recovery (CalRecycle) by ESA, June 2011. Available online at: http://www.calrecycle.ca.gov/swfacilities/compostables/AnaerobicDig/PropFnlPEIR.pdf

Transfer Station expansion. Recology is seeking entitlements for an expansion to the existing transfer station building. The proposal involves the construction of a 40-foot-tall, two-story, approximately 14,000-sf addition to the existing 43-foot-tall, one-story, approximately 47,000-sf MSW transfer station. One new loading space would be added to the lower partial level of the addition at the southern edge of the transfer station site. The expansion of the transfer station would allow additional space to recover recyclables and organics materials that would otherwise be sent to a landfill. The City and County of San Francisco is the CEQA lead agency for this project, and is currently preparing an IS/MND (Case Number 2013.0850E). This project would not result in an increase in MSW transported to the Hay Road Landfill.

Recology San Francisco Modernization and Expansion. Recology is planning a comprehensive redevelopment of its Tunnel and Beatty site. The proposal involves replacement of most of the buildings currently on-site with new recycling and resource recovery facilities, maintenance facilities, administrative offices, and supporting operations buildings. The proposal would focus on resource recovery rather than transfer and disposal, and would serve as a model of sustainable infrastructure. The City of Brisbane is the CEQA lead agency for this project. No environmental documents have yet been issued for this project. This project would not increase, and could reduce the quantity of MSW transported to the Hay Road Landfill.

Issues Raised In Response to Notification of Project Receiving Environmental Review

In June 2014, a Notification of Project Receiving Environmental Review for the proposed project was distributed by the Planning Department. The Notification was mailed to numerous residents of San Francisco and Solano counties who had previously expressed interest in Recology's operations. Comments were received from several individuals and agencies. These comments raised concerns regarding the potential for the proposed project to increase the intensity of landfill operations and possibly cause environmental impacts. In particular, concerns were raised about the possibility of increased odor, increased noise, increased bird nuisance, adverse effects on water quality, and increased litter. Issues raised by the public are described in more detail in Section G of this Initial Study, and potential impacts associated with these issues are discussed below as Disposal Site impacts.

Checklist: Responses to Multiple Questions

In the following sections, a single impact statement is sometimes used to address two or more checklist questions. Where this occurs, the impact statement is followed by a note stating which questions are being addressed. Where an impact statement addresses only one question, there is no note, but the impact statement itself closely follows the wording of the question.

E.1 Land Use and Land Use Planning

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
1. LAND USE AND LAND USE PLANNING— Would the project:					
a) Physically divide an established community?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐
c) Have a substantial impact upon the existing character of the vicinity?	☐	☐	☐	☒	☐
d) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒	☐

Transportation Component of the Project

Impact LU-1: The proposed project would not physically divide an established community. (No Impact)

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would take place on existing roadways, between existing facilities. The freeway and road segments between the eastern end of the Bay Bridge and the Recology Hay Road Landfill, which would experience new truck trips as a result of the proposed project, presently carry vehicles and trucks. Potential traffic impacts associated with that increase in vehicle and truck activity are discussed below under Transportation Impacts. However, with respect to land use, there would be no fundamental change in the types of trips or use of those roads as a result of the project. The proposed project would not change the existing roadway configurations or the types of vehicles that use those roads. Therefore, the proposed project does not have the potential to physically divide an established community, and would have ***no impact*** with regard to this issue.

Impact LU-2: The proposed project is consistent with applicable land use plans, policies, and regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. (No Impact)

Transportation of San Francisco's MSW to the Recology Hay Road Landfill would not alter existing programs aimed at diverting San Francisco's waste from landfills and would not inhibit the City's efforts to achieve zero waste. The proposed project would not interfere with or inhibit the ability to achieve other City plans, policies, and regulations. Therefore, the project would have ***no impact*** with regard to this issue.

Impact LU-3: The proposed project would not have a substantial impact upon the existing character of the vicinity. (No Impact)

Transportation of San Francisco's MSW to the Recology Hay Road Landfill would involve no physical alteration of buildings, landscaping, natural features, or infrastructure in San Francisco or Solano County. Transportation of San Francisco's MSW to the Recology Hay Road Landfill would result in an increase of large trucks on I-80 between the I-80/I-880/I-580 interchange and the Midway Road exit, and on Midway Road, State Route 113, and Hay Road. These are, however, existing truck routes and the addition of approximately 100 truck trips per day, spread out over the course of the day and the night, would not result in a change to the functional or visual character of these roads or the areas in proximity to them. Therefore, the project would have ***no impact*** with regard to this issue.

Impact LU-4: The project would not conflict with any applicable habitat conservation plan or natural community conservation plan. (No Impact)

Transportation of San Francisco's MSW to the Recology Hay Road Landfill would not conflict with any applicable habitat conservation plan or natural community conservation plan, as all transportation would be on existing roadways which are not included in any habitat conservation plan or natural community conservation plan. Therefore, there would be ***no impact*** of this kind.

Disposal Component of the Project

With respect to the potential for the proposed project to cause Land Use and Planning impacts related to disposal of San Francisco's MSW at the Recology Hay Road Landfill, the 2012 IS/MND examined potential Land Use and Planning impacts associated with increasing disposal of MSW from 1,200 tons per day average and 2,400 tons per day maximum, to a simple limit of 2,400 tons per day. The 2012 IS/MND therefore addressed environmental issues raised by the acceptance of MSW at a rate greater than would occur under the currently proposed project. The 2012 IS/MND concluded that increasing disposal would not physically divide an established community, and would not conflict with the land use or zoning designations for the site or otherwise conflict with a policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The 2012 IS/MND also concluded that the proposed increase in waste acceptance could not conflict with any habitat conservation plan, as it would have no effect on sensitive species or their habitat.

The 2012 IS/MND examined whether increasing the rate of waste acceptance would affect the character of the surrounding area, through its examination of aesthetic, traffic, noise, and other impacts. The 2012 IS/MND concluded that, with mitigation, all impacts would be less than significant. The 2012 IS/MND's

conclusions about these impacts and the required mitigation measures are set forth below as part of the individual topic's discussion.

Therefore, as concluded in the 2012 IS/MND, disposing of San Francisco's MSW at the Recology Hay Road Landfill would not have a substantial adverse effect on Land Use and Planning.

Combined Impact of Transportation and Disposal Components of the Project

As discussed above, neither transportation of San Francisco's MSW to the Recology Hay Road Landfill, nor its disposal there would result in a substantial adverse impact on Land Use and Planning. The transportation component of the project was determined to have no land use impacts, and the disposal component was found to have less than significant impacts. Taken together, transportation and disposal would not divide an established community, would not conflict with an applicable land use plan, policy or regulation adopted for the purpose of environmental protection, would not conflict with any habitat conservation plan, and would not have an adverse impact on the character of the vicinity. Therefore, transportation and disposal, taken together, would not have a significant impact on Land Use and Planning.

Cumulative Impacts

Impact C-LU-1: The proposed project, in combination with past, present, and reasonably foreseeable future development in the site vicinity, would not result in a cumulatively considerable contribution to a significant land use impact. (No Impact)

As discussed above, the proposed project does not have the potential for a substantial adverse effect on Land Use and Planning. As discussed above under Approach to the Analysis, the only relevant cumulative project is the Recology Hay Road AD project. The AD project would take place completely within the existing landfill property and would not substantially alter land use or affect surrounding land uses. Therefore, the AD project would not be expected to divide an established community, would not conflict with an applicable land use plan, policy or regulation adopted for the purpose of environmental protection, would not conflict with any habitat conservation plan, and would not have an adverse impact on the character of the vicinity. Therefore, neither the proposed project nor the proposed AD project would contribute to a cumulative impact on Land Use and Planning, and the cumulative impact of the two projects is less than significant.

E.2 Aesthetics

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
2. **AESTHETICS—Would the project:**					
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment which contribute to a scenic public setting?	☐	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or which would substantially impact other people or properties?	☐	☐	☒	☐	☐

Transportation Component of the Project

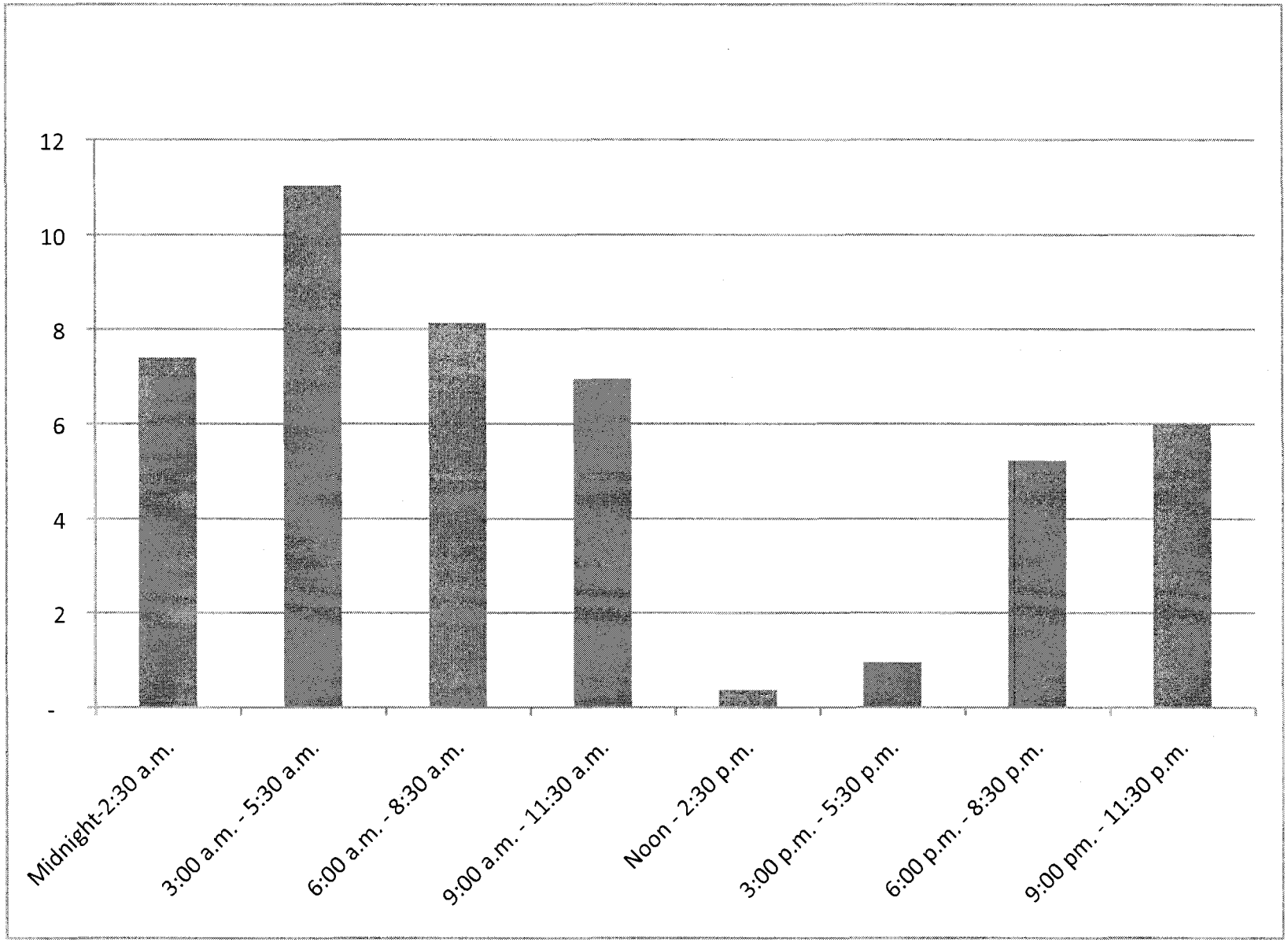
Impact AE-1: The proposed project would not have a substantial adverse effect on a scenic vista. (No Impact)

Transportation of San Francisco's MSW to the Recology Hay Road Landfill would not involve development of any new structures or facilities that could obstruct a scenic vista. Project-related transportation of MSW would occur only on existing roadways, and no changes to roadway configurations are proposed. The project would result in an increase of about 50 trucks per day in each direction on these roads, or an average of about two per hour in each direction. As shown on **Figure 4**, page 28, a slightly higher portion of the daily trips occurs between 6:00 p.m. and 6:00 a.m., when scenic vistas tend to be less visible due to the lack of natural daylight. However, conservatively assuming an average of two truck trips per hour in each direction during daylight hours, this would not block, alter, or restrict access to any scenic vista. Therefore, the project does not have the potential to adversely affect a scenic vista, and would result in ***no impact*** of this kind.

Impact AE-2: The proposed project would not substantially damage any scenic resource. (No Impact)

Scenic resources are visible physical features of a landscape (i.e., land, water, vegetation, animals, structures, or other features).

Transportation of San Francisco's MSW to the Recology Hay Road Landfill would not involve development of any new structures or facilities that could damage a scenic resource. The proposed project involves the transport of waste within enclosed large trucks on existing roadways. East of the Bay Bridge, the proposed



SOURCE: Recology

Figure 4
Average Daily Departures of Municipal Solid Waste Loads from San Francisco Transfer Station and Recycle Central, December 2012--September 2013

project would result in approximately fifty trucks spread out over 24 hours traveling between the Bay Bridge and the Recology Hay Road Landfill site along the route shown in Figure 1 on page 2, and the same number of trucks travelling back along the same route. A substantial portion of this route is along Highway I-80 which currently carries large numbers of vehicles and trucks.

Regarding the portions of the truck route in Solano County between Highway I-80 and the landfill site, State Route 113 is not a State-designated Scenic Highway. However, the Scenic Roadways Element of the Solano County General Plan identifies State Route 113 from the Interstate 80 interchange in Dixon to its intersection with State Route 12 as a County scenic roadway. Automobiles and trucks currently travel on this roadway. Transportation of San Francisco's MSW along this route with a daily average of approximately two trucks per hour in each direction would not cause any alteration or damage to scenic elements in the landscape, including vegetation, geologic features, water features, animals, structures, and landforms. Therefore, the transportation of San Francisco's MSW would not have the potential to damage any scenic resource, and there would be ***no impact*** of this kind.

Impact AE-3: The proposed project would not result in a change to the existing character of the project site, and would not degrade the visual character or quality of the site and its surroundings. (No Impact)

Transportation of San Francisco's MSW to the Recology Hay Road Landfill would not involve development of any new structures or facilities that could result in a change to any site's visual quality. Increased truck traffic along the haul route, including State Route 113, would not substantially alter the character of this road, as it is already a truck route, and the addition of several trucks each hour would not affect the visual character or quality of the area surrounding the highway, nor would the increase in traffic volume be readily apparent to nearby observers.

The trucks that would be used by Recology to transport San Francisco MSW to the Recology Hay Road Landfill are enclosed by tarps and flaps over the top of the truck. Furthermore, the Recology Hay Road Landfill is required, as a condition of its CUP, to maintain a litter abatement program around the facility and along roadways leading to it. Therefore, the transportation of San Francisco's MSW would not result in a substantial increase in the amount of waste that becomes litter along local roadways and nearby properties. The transportation of San Francisco's MSW would therefore have ***no impact*** with regard to degradation of the visual character and quality of the site and its surroundings. For more on this issue, please see the discussion of the disposal component of the project, below.

Impact AE-4: The proposed project could create a new source of light and glare that could adversely affect day or nighttime views in the area or substantially impact other people or properties. (Less than Significant)

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would result in an increase in the number of trucks traveling on I-80 between the I-80/I-880/I-580 interchange and the Midway Road exit, and on Midway Road, State Route 113, and Hay Road during the night compared to current conditions, and so would result in additional vehicle lights along these roadways. These are, however, existing truck routes that are utilized by trucks 24 hours per day. I-80 has an average daily traffic volume of about 115,000 vehicles near the Midway Road interchange. The average daily traffic volume on State Route 113 in the project area is about 3,550 vehicles.[24] As shown in Figure 4 on page 28, up to about 29 truck MSW loads per day depart the SF Transfer Station and Recycle Central facilities between 6:00 p.m. and 5:30 a.m., with the greatest number departing between midnight and 5:30 a.m. On average, there are about 2.5 trucks per hour departing the San Francisco facilities during this time period. Assuming the same number of trucks would return from the Recology Hay Road Landfill, the project would result in approximately 5 additional trucks per hour during nighttime hours, or one about every 12 minutes. This would not be expected to result in a noticeable increase in the light and glare caused by vehicle lights from nighttime traffic on these roads. Because of the relatively small number of additional trucks trips, and the fact that they would occur infrequently through the night, the increase in nighttime light caused by the project would not be considered substantial, and this impact would be ***less than significant***.

Disposal Component of the Project

The 2012 IS/MND concluded that the proposal to increase waste acceptance to 2,400 tons per day at the Recology Hay Road Landfill would have no impact on scenic vistas or scenic resources, and would have no impact resulting from new sources of nighttime light or glare. The 2012 IS/MND identified a potentially significant impact on the visual character or quality of the site and its surroundings, from an increased potential for litter associated with increased waste acceptance. The 2012 IS/MND identified the following mitigation measure, and found that it would be sufficient to reduce this impact to less than significant:

Mitigation Measure 1 (Aesthetics)

The facility operator shall implement the following litter control mitigation measures following implementation of the proposed project:

- Portable litter control fences shall be installed directly downwind of the working face during site operations.

[24] Caltrans, 2013.

- Additional litter collection crews shall be deployed following high wind events to remove litter from the parcels adjacent to the landfill. The facility operator shall work to establish site access agreements with the adjacent property owners prior to project implementation.
- In the event that waste generated from City of Fairfield is received at RHR, the facility operator shall check for and pick up litter, on a weekly basis, or more frequently if needed, on the following roads: Vanden Road from Peabody Road to Canon Road, Canon Road from Vanden Road to North Gate Road, North Gate Road from Canon Road to McCrory Road, McCrory Road from North Gate Road to Meridian Road, Meridian Road from McCrory Road to Hay Road, Hay Road from Meridian Road to Lewis Road and Midway Road from Interstate 80 to State Route 113.
- The facility operator shall negotiate an agreement with Solano County regarding reimbursement for the cost of removing trash and materials dumped along the above mentioned County roads, should County employees be required to assist in the removal of trash associated with the expanded use of the landfill.

Condition 34 of the landfill's amended CUP incorporates this Mitigation Measure.

Combined Impact of Transportation and Disposal Components of the Project

The 2012 IS/MND fully considered the potential aesthetic effects of increased waste acceptance at and proximate to the Recology Hay Road Landfill site, where any aesthetic impacts would be focused, and concluded that, with mitigation, all impacts would be less than significant. The analysis in the current document concludes that transportation of San Francisco's MSW to the Recology Hay Road Landfill would result in no aesthetic impact with respect to scenic vistas, scenic resources or visual character. Hence there could be no combined impact with respect to those issues. Regarding glare, both this Initial Study and the 2012 IS/MND concluded that the project would have less than significant impacts. Those less than significant impacts would occur in different locations which would not combine. Hence, the combination of transportation of San Francisco's MSW to the Recology Hay Road Landfill and disposal of that waste therein therefore does not pose the potential for a substantial adverse aesthetic impact.

Cumulative Impacts

Impact C-AE-1: The proposed project, in combination with past, present, and reasonably foreseeable future development in the site vicinity, would not result in a cumulatively considerable contribution to a significant aesthetics impact. (Less than Significant)

As discussed above, the transportation of San Francisco's MSW to the Recology Hay Road Landfill would have no impact on scenic resources or scenic vistas. Therefore, transportation of San Francisco's MSW could not contribute to a cumulative impact of this kind.

Impact AE-4, above concluded that the project would result in a less-than-significant increase in nighttime lighting from increased truck traffic. The only relevant cumulative project, the proposed AD Project at the Recology Hay Road Landfill, would result in approximately 10 additional vehicles per day entering and leaving the Recology Hay Road facility. As discussed under impact AE-4, the proposed project is expected to result in approximately five new truck trips per hour during nighttime hours. The AD Project is expected to result in only one to two new truck trips, and seven to eight employee trips to and from the AD Project site per day. These new truck trips would primarily be during the day. Even if half of these trips were at night, the combination of only a few new vehicle trips associated with the AD Project, in combination with the approximately five trips per hour associated with the proposed project, would not be expected to result in a noticeable increase in the light and glare caused by vehicle lights from nighttime traffic on I-80, Midway Road, or State Route 113, and the cumulative impact of additional traffic-related nighttime lighting is therefore less than significant. The 2012 IS/MND concluded that increasing the rate of disposal at the Recology Hay Road Landfill would not result in an increase in nighttime lighting. Although final design details of the AD Project are not complete, the AD Project would likely have an industrial appearance and would be located within an existing landfill facility, which is also industrial in character and appearance. Therefore, when taken together, transportation, disposal, and the AD project would not combine in a cumulative manner to cause a significant aesthetic impact.

E.3 Population and Housing

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
3. **POPULATION AND HOUSING— Would the project:**					
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒	☐
b) Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing?	☐	☐	☐	☒	☐
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐

Transportation Component of the Project

In general, a project would be considered to have a significant impact on population and housing if it were to result in a substantial population increase, or if it were to displace a substantial number of people or existing housing units. This could occur if the project were to add a substantial number of housing

units, or if the project were to attract a substantial number of employees who would have to be housed in the area. An increase of approximately nine to ten full time equivalent drivers would be needed to haul San Francisco MSW to the Recology Hay Road Landfill due to the longer trip length compared to hauling waste to the Altamont Landfill. This number of jobs can be accommodated by the local workforce and would not result in a substantial population increase. The project would not add any new housing units and the project does not include development of new structures or facilities that would displace any existing housing units.

A project could also have a significant impact if it were to extend roads or other infrastructure into new areas, thus enabling additional growth in the future. The project would not extend roads or other infrastructure, and so would have no impact of this kind.

Impact PH-1: The proposed project would not induce substantial population growth, either directly or indirectly. (No Impact)

As explained above, the transportation of San Francisco's MSW to the Recology Hay Road Landfill would not create new housing or substantial new employment. Therefore, the project would not directly or indirectly induce population growth, and would have ***no impact*** of this kind.

Impact PH-2: The proposed project would not displace any existing housing units or create a demand for additional housing that would necessitate the construction of replacement housing. (No Impact)

As explained above, the transportation of San Francisco's MSW to the Recology Hay Road Landfill would not displace existing housing. As the project would not induce population growth, it would not create demand for additional housing. Consequently, the project would result in ***no impact*** related to displacement of housing or demand for additional housing.

Impact PH-3: The proposed project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. (No Impact)

As explained above, the transportation of San Francisco's MSW to the Recology Hay Road Landfill would not displace any people from their residences. Consequently, the project would result in ***no impact*** related to displacement of people.

Disposal Component of the Project

The 2012 IS/MND concluded that the proposal to increase waste acceptance to 2,400 tons per day at the Recology Hay Road Landfill would not involve the construction of any components (such as roads, or residential homes) that would induce population growth, would not displace any existing housing, and

would not displace substantial numbers of people, and that therefore the increase in waste acceptance would have no impact on population and housing.

Combined Impact of Transportation and Disposal Components of the Project

As discussed above, neither transport nor disposal of San Francisco's MSW would result in any adverse impact on population and housing. Similarly, taken together, transport and disposal would not require new housing, displace existing housing, or displace people. Therefore, considered together, transport and disposal would not result in a significant impact on population and housing.

Cumulative Impacts

Impact C-PH-1: The proposed project, in combination with past, present, and reasonably foreseeable future development in the site vicinity, would not make a cumulatively considerable contribution to a significant population or housing impact. (No Impact)

Because neither transportation nor disposal of San Francisco's MSW would have an impact on population or housing, the project does not have the potential to contribute to a cumulative impact on population or housing.

E.4 Cultural and Paleontological Resources

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
4. **CULTURAL AND PALEONTOLOGICAL RESOURCES—Would the project:**					
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code?	☐	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5?	☐	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒	☐

This section examines the potential for the proposed project to have an adverse effect on cultural and paleontological resources.

Cultural resources include historical resources and archeological resources. Historical resources are those that meet the terms of the definitions in Section 21084.1 of the CEQA Statute and Section 15064.5 of the CEQA Guidelines. Historical resources are defined as properties or districts listed in, or formally determined eligible for listing in, the California Register of Historical Resources, or listed in an adopted local historic register. The term "local historic register" (or "local register of historical resources") refers to a list of resources that are officially designated or recognized as historically significant by a local government pursuant to resolution or ordinance. Historical resources also include resources identified as significant in an historical resource survey meeting certain criteria. Additionally, properties not listed but otherwise determined to be historically significant, based on substantial evidence, would also be considered historical resources.

Archeological resources include material remains of past human life or activities which are of archeological interest, including buried remains of Native American settlements and artifacts, early historical period artifacts (such as buried or sunken ships) and human remains.

Paleontological resources include fossilized remains or traces of animals, plants and invertebrates, including their imprints, from a previous geological period. Localities where fossils are collected, and the geologic formations containing fossils, are also considered paleontological resources as they represent a limited, nonrenewable resource and once destroyed, cannot be replaced.

Transportation Component of the Project

Impact CP-1: The proposed project would not result in a substantial adverse change in the significance of historic architectural resources. (No Impact)

Transportation of San Francisco's MSW on existing roadways would not alter, demolish, or otherwise affect any structure, or disturb any land, or otherwise cause changes that could affect an historic architectural resource. Therefore, the transportation of San Francisco's MSW does not have the potential to cause an adverse change in the significance of historical architectural resources, and there would be ***no impact*** of this kind.

Impact CP-2: The proposed project would not result in damage to, or destruction of, unique geological features or as-yet unknown archeological or paleontological resources, or human remains. (No Impact)

This impact addresses questions 4.b, 4.c, and 4.d from the checklist at the beginning of this section.

Because transportation of San Francisco's MSW on existing roadways would not involve any land disturbance, it would not have the potential to damage or destroy any unique geological features or any as-yet undiscovered archeological or paleontological resources or human remains. Therefore, the project would have ***no impact*** of this kind.

Disposal Component of the Project

The 2012 IS/MND examined the potential for increasing the rate of waste acceptance to result in a substantial adverse impact on cultural resources. The 2012 IS/MND stated that because the project being examined at that time would not alter the configuration of the landfill, there would be no change in site grading or excavation activities. The 2012 IS/MND concluded that the project would not have the potential to expose, damage, or destroy significant cultural resources, and therefore there would be no impact to historical, archeological, or paleontological resources or human remains.

Combined Impact of Transportation and Disposal Components of the Project

As discussed above, neither transportation nor disposal of San Francisco's MSW would result in any adverse impact on cultural resources. Similarly, taken together, transport and disposal would not have the potential to expose, disturb, or destroy historical, archeological, or paleontological resources or human remains. Therefore, considered together, transport and disposal would not result in a significant impact on population and housing.

Cumulative Impacts

Impact C-CP-1: The proposed project in combination with past, present, and reasonably foreseeable future projects in the vicinity, would not result in cumulative impacts to cultural resources. (No Impact)

No historic, archeological, or paleontological resources or human remains would be affected by the transportation or disposal of San Francisco's MSW. Therefore, the project does not have the potential to contribute to any cumulative impact on cultural resources.

E.5 Transportation and Circulation

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
5. TRANSPORTATION AND CIRCULATION— **Would the project:**					
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the 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 intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks?	☐	☐	☐	☒	☐
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	☐	☐	☒	☐	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐	☐
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?	☐	☐	☒	☐	☐

Transportation Component of the Project

The transportation of San Francisco's MSW to the Recology Hay Road Landfill does not include any activities that would adversely affect air traffic patterns. Therefore, question 5.c from the above checklist does not apply to this aspect of the project.

The existing road network for trips to and from Recology Hay Road Landfill is described above on pages 11-13. As previously stated in the project description, transportation of San Francisco's MSW to the Recology Hay Road Landfill would cause no changes in existing truck or vehicular activity between the Recology San Francisco Transfer Station and the east end of the Bay Bridge. The project would generate new truck trips between the east end of the Bay Bridge and the Recology Hay Road Landfill site in Solano County.

The analysis of potential project impacts, presented below, focuses on the effects on I-80 from the east end of the Bay Bridge to the interchange at Midway Road, as well as the following local area intersections (all unsignalized), which are located on the travel route that project-generated trucks would use from I-80 to the Recology Hay Road facility:

1. I-80 Westbound Ramps at O'Day Road
2. Midway Road at O'Day Road
3. Midway Road at I-80 Eastbound Ramps
4. Midway Road at Porter Road
5. Midway Road at State Route 113 (Rio-Dixon Road)
6. State Route 113 (Rio-Dixon Road) at Hay Road
7. Hay Road at Recology Hay Road Landfill Access

Each of the seven study intersections currently operate with very good to excellent level of service (LOS), i.e., LOS B or better, during the a.m. and p.m. peak traffic hours (see **Table TR-1** on page 41); drivers experience minimal delays traveling through the intersections.[25] See Appendix A, Traffic Technical Appendix, for the LOS calculation sheets and a map showing the location of study intersections.

Impact TR-1: The proposed project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, nor would the project conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures. (Less than Significant)

To determine whether transportation of San Francisco's MSW to the Recology Hay Road Landfill would conflict with a transportation- or circulation-related plan, ordinance or policy (e.g., the Solano County General Plan and the Solano Congestion Management Program), this section analyzes the proposed project's effects on intersection operations, transit demand, impacts on pedestrian and bicycle circulation, and freight loading.[26]

[25] Level of service (LOS) is a qualitative description of the performance of an intersection based on the average delay per vehicle, ranging from LOS A, which indicates excellent conditions with short delays, to LOS F, which indicates congested conditions with extremely long delays. For unsignalized intersections, the average delay and LOS are calculated by approach (e.g., northbound) and movement (e.g., northbound left turn) for those movements that are subject to delay, with the approach having the highest delay determining the reported LOS. The a.m. and p.m. peak (commute) hours are the highest 60-minute periods within the 7:00 a.m. to 9:00 a.m., and 4:00 p.m. to 6:00 p.m. periods, respectively.

[26] As explained below, the effect of project traffic on the I-80 freeway between the east end of the Bay Bridge and the point at which project trucks would exit the freeway (or enter the freeway when returning) would be so small as to be less than significant. Accordingly, the project would not conflict with any transportation- or circulation-related plan, ordinance, or policy applicable to areas beyond the Hay Road Landfill vicinity, and thus Solano County plans and policies are the only such documents applicable here.

Trip Generation

The transportation of San Francisco's MSW to the Recology Hay Road Landfill would result in San Francisco's MSW no longer being trucked to Altamont Landfill in Alameda County; instead, MSW would be transported by long-haul trucks owned and operated by Recology, with a maximum of 24.5 tons of waste per load.

Existing Conditions

The Recology Hay Road facility, including both the landfill and the composting facility, currently receives on average approximately 325 trucks per day, seven days per week. The landfill is permitted by Solano County and CalRecycle to receive up to 620 vehicles per day (averaged over a seven-day period), and to operate up to 24 hours per day, seven days per week. As stated in the project description, the landfill currently operates 24 hours per day, seven days per week, 361 days per year. Located within the footprint of the landfill is the Jepson Prairie Organics composting facility, which accepts organic materials for composting (a portion of which currently comes from San Francisco). The vehicle limit noted above, 620 vehicles per day, is shared by the landfill and the composting facility.

Based on a 6-day week (Recology typically hauls MSW loads from Sunday evening through Friday), there are approximately 44 trucks (or round trips) per day hauling MSW for disposal from the Recology San Francisco transfer station to the Altamont Landfill. In addition to MSW from the Recology San Francisco transfer station, approximately six trucks per day haul residual wastes from Recology's Recycle Central facility to the Altamont Landfill.

Proposed Project Conditions

The volume of MSW being hauled from San Francisco would be the same with or without the proposed project. Instead of going to the Altamont Landfill, the existing 50 trucks per day, or 100 daily one-way trips, would transport MSW from the Recology San Francisco facilities to the Recology Hay Road Landfill.[27] The net new trip generation figures presented in this section of the Initial Study represent the traffic that would be added to the existing traffic stream of the local area roadways that would be used by project-generated trucks. It is estimated that the proposed project would generate a total of about 12 new one-way trips on I-80 east of the eastern end of the Bay Bridge and on roads between I-80 and the landfill during the a.m. peak hour (about 11-12% of Recology's daily trips), and the project would generate no new one-way trips on these roads during the p.m. peak hour. The peak-hour project trips were derived

[27] Round trips consist of two one-way trips (in this case, one inbound loaded truck trip and one outbound empty truck trip).

on the basis of the existing hourly distribution of Recology transfer trucks departing their San Francisco facilities bound for the Altamont Landfill (see Figure 4 on page 28), and an estimated travel time of 90 minutes to 2 hours from the Points of Origin to the Recology Hay Road Landfill. The project would result in no change in traffic on San Francisco city streets, on U.S. 101 in San Francisco, or on I-80 over the Bay Bridge.

Because the transfer truck fleet is owned, controlled and dispatched by Recology, Recology has considerable flexibility in its shipping schedule, and as such, makes efforts to minimize the number of trucks on the road during peak traffic times. The majority of trips occur in the early morning hours prior to a.m. peak traffic period (7:00 – 9:00 a.m.), mid-morning following the a.m. peak traffic period, and in the evenings following the p.m. peak traffic period (4:00 – 6:00 p.m.; see Figure 4 on page 28). Under the project, Recology would continue its existing practice of managing departures to avoid heavy traffic periods, and in particular to avoid the Fairfield-Vacaville section of I-80 during the morning commute period, in accordance with the requirements set forth in Recology Hay Road Landfill's Conditional Use Permit from Solano County. However, this analysis conservatively assumes that Recology would make no adjustment to the existing departure times of transfer trucks to account for the travel time from San Francisco to the Recology Hay Road Landfill, ensuring that potential project impacts are not underestimated.

Project-generated trucks would travel the same route as Recology's organic materials transfer trucks do at present: Midway Road exit from I-80, east on Midway Road to State Route 113 (Rio-Dixon Road), then south to Hay Road (see Figure 2 on page 3). Empty transfer trucks would return to San Francisco via these same roads (in reverse order).

Project Impacts

Freeway Impacts. As stated in the Setting, I-80 has an average daily traffic volume of about 115,000 vehicles near the Midway Road interchange. The project-generated 100 new daily one-way trips would not represent a substantial increase in daily traffic volume (less than 0.1%). This level of additional freeway traffic due to the project would be well within the daily fluctuation in existing freeway traffic volumes and as such would not constitute a noticeable increase in freeway traffic. Therefore, traffic flow conditions on I-80 would not be adversely affected. The project would add approximately 12 new peak-hour trips, which would have a less-than-significant impact on peak-hour traffic congestion on I-80.

Intersection Impacts. As shown in **Table TR-1,** below, the estimated peak-hour vehicle trips would result in minor changes to the average delay per vehicle under existing plus project conditions; all study intersections in the project vicinity would continue to operate at excellent to very good levels of service.

As such, the proposed project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system (e.g., the Solano County General Plan and the Solano Congestion Management Program), nor would the project conflict with level of service standards and travel demand measures (e.g., the goal of Solano County is to maintain a LOS C on all roads and intersections), and the proposed project's impact would be ***less than significant***.

TABLE TR-1
LEVELS OF SERVICE (LOS) AND AVERAGE VEHICLE DELAY (SECONDS PER VEHICLE)
EXISTING VS. EXISTING PLUS PROJECT CONDITIONS

	Existing				Existing Plus Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Study Intersection (*all unsignalized*)	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. I-80 Westbound Ramps at O'Day Rd.	8.9	A	8.9	A	8.9	A	8.9	A
2. Midway Road at O'Day Road	9.1	A	9.1	A	9.1	A	9.1	A
3. Midway Rd. at I-80 Eastbound Ramps	10.0	A	9.5	A	10.0	A	9.5	A
4. Midway Road at Porter Road	10.0	A	10.1	B	10.0	A	10.1	B
5. Midway Rd. at State Route 113 (Rio-Dixon Rd.)	10.9	B	13.4	B	11.0	B	13.4	B
6. State Route 113 (Rio-Dixon Road) at Hay Road	10.2	B	10.2	B	10.5	B	10.2	B
7. Hay Road at Recology Hay Road Landfill Access	9.1	A	9.1	A	9.1	A	9.1	A

SOURCE: ESA, 2014 (Appendix A)

Impact TR-2: The proposed project would not substantially increase hazards due to a design feature or incompatible uses. (Less than Significant)

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would not alter the design of any roadways. In addition, the project-generated trips would be made by the type of vehicles (trucks) that currently travel on I-80 and on the existing roadways used to haul waste to the Recology Hay Road Landfill (i.e., the project would not introduce vehicles that are incompatible with existing traffic in the area). Lastly, the facility operator would be required by existing permit conditions[28] for the Recology Hay Road Landfill to continue to compensate Solano County annually to pay for pavement repairs necessitated by transfer trucks and trucks used for hauling soil operated by Recology or its contractors over area roadways. For these reasons, the proposed project would not substantially increase traffic hazards, and the impact would be ***less than significant***.

[28] Solano County Conditional Use Permit Conditions 14(f) and 31(d).

Impact TR-3: The proposed project would not result in inadequate emergency access. (Less than Significant)

The surrounding road network serving the project site accommodates the movements of emergency vehicles that travel to and through the area. As indicated above, project traffic would have minimal effect on conditions on I-80, and all relevant intersections on Solano County roadways would continue to operate at excellent or very good levels of service. Hence, emergency access would remain unchanged from existing conditions. Therefore, the transportation of San Francisco's MSW to the Recology Hay Road Landfill would have a ***less-than-significant*** impact on emergency vehicle access to the project site or any surrounding sites.

Impact TR-4: The proposed project would not conflict with any adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. (Less than Significant)

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill does not include elements that would conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., the Solano Comprehensive Transportation Plan, Solano Countywide Bicycle Plan, and Solano Countywide Pedestrian Plan). In addition, the additional trips on Solano County local roadways associated with the project would have little impact on existing excellent or very good levels of service. For these reasons, the transportation of San Francisco's MSW to the Recology Hay Road Landfill would have a ***less-than-significant*** impact on these programs.

Disposal Component of the Project

The 2012 IS/MND examined the potential for traffic impacts associated with increasing the rate of waste acceptance, focusing, as the analysis above does, on the impact of increased waste-hauling vehicles on freeways and local roadways. The 2012 IS/MND assumed that up to an additional 434 daily vehicle trips could occur (over four times the 100 daily project-generated vehicle trips examined in this document), but determined that this would have a less-than-significant impact on traffic operations at the same intersections analyzed for the proposed project (under existing plus project, and cumulative plus project, conditions).

Combined Impact of Transportation and Disposal Components of the Project

As discussed above, transport of San Francisco's MSW to the Recology Hay Road Landfill would not result in a substantial adverse impact on traffic. The few additional trips from increased disposal (from increased number of employees and increased equipment and supply deliveries), added to the 100 additional truck trips per day associated with transport of San Francisco's MSW to the Recology Hay Road Landfill, would not cause a significant traffic impact. The 2012 IS/MND examined the impacts associated with 434

additional daily vehicle trips, and found that traffic impacts would be less than significant. Therefore, considered together, transport and disposal would not result in a significant traffic impact.

Cumulative Impacts

Impact C-TR-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects would not result in a substantial contribution to cumulative transportation impacts. (Less than Significant)

The proposed project would have a duration of up to 15 years. As such, project-generated traffic may no longer exist at the time of traditional cumulative ("horizon year") conditions (e.g., 2035 or later). Regardless of the project's limited lifespan, it also is noted that, as described under Impact TR-1, the project would generate about 100 one-way trips per day, with about 12 trips during the a.m. peak hour, and no new trips during the p.m. peak hour.

The proposed AD facility would generate up to 25 round-trip (or 50 one-way) vehicle trips per day (by up to 8 employees, 15 delivery trucks, and up to 2 CNG tube trucks), of which only 10 would be new round trips to the site.

The combined number of vehicle trips from the proposed project, combined with operation of the proposed AD facility and other operations at the Recology Hay Road Landfill and Jepson Prairie Organics cannot exceed the 620 average vehicle trip limit that Solano County has imposed as a condition of its permit for the Recology Hay Road Landfill. Accordingly, the combined number of vehicle trips traveling to and from the landfill would not result in vehicle trip generation in excess of the number of trips that were analyzed in the 2012 IS/MND.

The 2012 IS/MND concluded that full operation of the Recology Hay Road Landfill (including up to 620 average vehicle trips per day) would not make a cumulatively considerable contribution to a significant cumulative traffic impact through the year 2030 (i.e., the build-out year as defined in the Solano County and City of Dixon General Plans, analyzed in the 2012 IS/MND, and the approximate end date of the proposed project assumed for this Initial Study). The proposed new truck trips evaluated in this Initial Study would represent only a portion of the maximum 620 daily vehicle trips at the landfill evaluated in the 2012 IS/MND. One intersection in the vicinity of the Recology Hay Road Landfill was identified in the 2012 IS/MND as experiencing a potentially significant level of congestion under cumulative traffic conditions in the year 2030 (the intersection of Midway and State Route 113). However, the 2012 IS/MND found that the significant cumulative impact would occur only in the p.m. peak hour, and that the combined traffic from the Recology Hay Road Landfill would not make a cumulatively considerable contribution to this potential impact.

Given the conclusions of the 2012 IS/MND, together with the analysis in this Initial Study that shows the proposed project is expected to generate only 12 a.m. peak hour trips, and no p.m. peak hour trips, it is concluded that the project would not make a considerable contribution to traffic volumes and intersection performance under cumulative conditions. As a result, the project would be considered to have a ***less-than-significant*** cumulative impact on area intersections and the surrounding transportation network.

E.6 Noise

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
6. NOISE—Would the project:					
a) Result in 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?	☐	☐	☒	☐	☐
b) Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐	☐
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	☐
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	☐
e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?	☐	☐	☒	☐	☐
f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐	☐
g) Be substantially affected by existing noise levels?	☐	☐	☒	☐	☐

Transportation Component of the Project

Impact NO-1: The proposed project would not result in exposure to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, and would not result in a substantial permanent or temporary increase in ambient noise levels, groundborne vibration, or groundborne noise in the project vicinity above levels existing without the project. Nor would the project expose persons residing or working in the project area to excessive levels of aviation noise. (Less than Significant)

This impact addresses questions 6.a through 6.g from the above list.

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would result in a slight increase in traffic noise and groundborne vibration along the haul route along I-80 between the I-80/I-880/I-580 interchange and the Midway Road exit, and on Midway Road, State Route 113, and Hay Road. However, these are established truck routes, and the addition of approximately 100 truck trips per day would constitute a proportionally small increment of traffic along these routes, which would not substantially increase existing traffic noise or vibration, or substantially increase exposure to noise for people in the vicinity. Therefore, the proposed project would have a ***less-than-significant*** impact with regard to generation of noise, groundborne noise, and groundborne vibration, and also a ***less-than-significant*** impact with regard to exposure of people to increased noise levels.

Disposal Component of the Project

The 2012 IS/MND examined the potential for increasing the rate of waste acceptance to result in a substantial adverse noise impact, focusing both on the potential for increased traffic noise and on increased noise from more intensive landfill operations. The 2012 IS/MND concluded that there would not be a substantial increase in noise levels from increased traffic or from increased disposal operations. The 2012 IS/MND noted that the nearest residence to the Recology Hay Road facility is located more than one mile from the landfill operations area and noise generated from the site is substantially attenuated by this separation.

Combined Impact of Transportation and Disposal Components of the Project

As discussed above, neither transport nor disposal of San Francisco's MSW would result in a substantial adverse noise impact. Because of the distance of the landfill from sensitive receptors, increased operational noise would not combine with increased traffic noise to cause a significant increase in ambient noise levels at the location of sensitive receptors. Therefore, considered together, the transportation and disposal components of the proposed project would not result in a significant noise impact.

Cumulative Impacts

Impact C-NO-1: The proposed project would not make a considerable contribution to any cumulatively significant noise impacts. (Less than Significant)

A 2011 Programmatic Environmental Impact Report (PEIR) examining AD facilities located at landfills and other solid waste facilities[29] found that both construction and operation of AD facilities could cause

[29] CalRecycle, 2011.

significant noise impacts. Noise from construction may include heavy equipment and other machinery operation, construction noise, and construction traffic-related noise. Operations of AD facilities that generate noise may include receiving of materials, preprocessing including sorting and grinding, vehicle circulation, and the operation of mechanical equipment such as stationary pumps, motors, compressors, fans, and generators. Operation of pipelines for conveyance of gas produced would not result in any discernible noise. Some equipment, such as electrical generators, may operate 24-hours a day, creating operational noise during nighttime hours. The PEIR concluded that AD facilities located within 2,000 feet of a sensitive receptor could cause a significant increase in ambient noise levels.

The proposed AD facility would be located within the landfill property, and, like landfill operations that generate noise, would be located over one mile away from the nearest sensitive receptor. At this distance, the slight increase in noise from increased disposal operations, combined with noise levels from the AD facility and the slight increase in noise from increased truck traffic, would not combine to cause a significant increase in ambient noise levels for nearby sensitive receptors, as the distance to the nearest receptors would be more than twice the 2,000 foot threshold described in the PEIR. The proposed project, including permitted disposal and combined with the AD project, would therefore have a ***less-than-significant*** cumulative noise impact.

E.7 Air Quality

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
7. AIR QUALITY—Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐	☐

Introduction

Under the proposed project, the transportation of San Francisco's MSW to the Recology Hay Road Landfill would occur both in the nine-county San Francisco Bay Area Air Basin (SFBAAB) and in the Sacramento Valley Air Basin (SVAB).

The Bay Area Air Quality Management District (BAAQMD) is the regional agency with jurisdiction over the SFBAAB, which includes San Francisco, Alameda, Contra Costa, Marin, San Mateo, Santa Clara, and Napa Counties, and portions of Sonoma and Solano Counties. The BAAQMD is responsible for attaining and maintaining air quality in the SFBAAB within federal and state air quality standards, as established by the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA), respectively. Specifically, the BAAQMD has the responsibility to monitor ambient air pollutant levels throughout the SFBAAB and to develop and implement strategies to attain the applicable federal and state standards. The CAA and the CCAA require plans to be developed for areas that do not meet air quality standards, generally. The most recent air quality plan, the Bay Area 2010 Clean Air Plan (Bay Area 2010 CAP), was adopted by the BAAQMD on September 15, 2010. The Bay Area 2010 CAP updates the Bay Area 2005 Ozone Strategy in accordance with the requirements of the CCAA to implement all feasible measures to reduce ozone; to provide a control strategy to reduce ozone, particulate matter, air toxics, and greenhouse gases in a single, integrated plan; and to establish emission control measures to be adopted or implemented. The Bay Area 2010 CAP contains the following primary goals:

- Attain air quality standards;
- Reduce population exposure and protect public health in the San Francisco Bay Area; and
- Reduce GHG emissions and protect the climate.

The Bay Area 2010 CAP represents the most current applicable air quality plan for the SFBAAB.

The Yolo Solano Air Quality Management District (YSAQMD) is the regional agency with jurisdiction over the portion of the SVAB in which the Recology Hay Road Landfill is located. Every three years, the YSAQMD prepares a Triennial Assessment and Plan Update of its Clean Air Plan, detailing how the District will expeditiously achieve the California air quality standards. The latest update was published in April of 2013.[30] The Final 2013 Triennial Report and Update for YSAQMD builds upon improvements accomplished from the previous plans, and aims to incorporate all feasible control measures while balancing costs and socioeconomic impacts.

[30] YSAQMD, 2013. Triennal Assessment and Plan Update. April. Available at: http://www.ysaqmd.org/documents/plans/Triennial%20Plan%202012%20DRAFT.pdf. Assessed February, 2015.

Consistency with these two plans, the Bay Area 2010 Clean Air Plan and the YSAQMD Triennial Assessment and Plan Update, serves as the basis for determining whether the proposed project would conflict with or obstruct implementation of air quality plans.

Criteria Air Pollutants

In accordance with the CAA and CCAA, air pollutant standards are identified for the following six criteria air pollutants: ozone, carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. These air pollutants are termed criteria air pollutants because they are regulated by developing specific public health and welfare-based criteria as the basis for setting permissible levels. In general, the SFBAAB and SVAB experience low concentrations of most pollutants when compared to federal or state standards. The SFBAAB is designated as either in attainment[31] or unclassified for most criteria pollutants with the exception of ozone, $PM_{2.5}$, and PM_{10}, for which these pollutants are designated as non-attainment for either the state or federal standards. The SVAB is either in attainment or unclassified for criteria pollutants except for the State 24-hour and annual PM_{10} standards and the state and federal 8-hour ozone standards. By its very nature, regional air pollution is largely a cumulative impact in that no single project is sufficient in size to, by itself, result in non-attainment of regional air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality impacts. If a project's contribution to cumulative air quality impacts is considerable, then the project's impact on air quality would be considered significant.[32]

The proposed project may contribute to regional criteria air pollutants during the operational phase. **Table AQ-1,** on page 49, identifies the air quality significance thresholds used in this Initial Study air quality analysis. Projects that would result in criteria air pollutant emissions below these significance thresholds would not violate an air quality standard, contribute substantially to an air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. The rationale used for establishing these thresholds is discussed below.

BAAQMD adopted updated *CEQA Air Quality Guidelines*, including new thresholds of significance, in June 2010, and revised them in May 2011. The Air Quality Guidelines advise lead agencies on how to evaluate potential air quality impacts, including establishing quantitative and qualitative thresholds of significance. The BAAQMD resolutions adopting and revising the significance thresholds in 2011 were set aside by the

[31] "Attainment" status refers to those regions that are meeting federal and/or state standards for a specified criteria pollutant. "Non-attainment" refers to regions that do not meet federal and/or state standards for a specified criteria pollutant. "Unclassified" refers to regions where there is not enough data to determine the region's attainment status.

[32] BAAQMD, 2009. Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance, October 2009, p. 33.

TABLE AQ-1
AIR QUALITY THRESHOLDS OF SIGNIFICANCE

Pollutant	Operational Thresholds for use within the SFBAAB	
	Average Daily Emissions (lbs. /day)	Maximum Annual Emissions (tons/year)
ROG	54	10[a]
NO_x	54	10[a]
PM_{10}	82[b]	15
$PM_{2.5}$	54	10
Fugitive Dust	Not Applicable	
CO	CO concentrations of 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average) as estimated by roadway vehicle volumes exceeding 44,000 vehicles per hour at any intersection.	

[a] Also applicable within the SVAB.

[b] YSAQMD significance threshold for PM10 is 80 lbs. /day.

SOURCE: BAAQMD, 2009; YSAQMD, 2007.

Alameda County Superior Court on March 5, 2012.[33] In May of 2012, BAAQMD updated its CEQA Air Quality Guidelines to continue to provide direction on recommended analysis methodologies, but without recommended quantitative significance thresholds.[34]

The air quality analysis below uses the previously-adopted 2011 thresholds of the BAAQMD to determine the potential impacts of the project. These thresholds are based on substantial evidence identified in BAAQMD's 2009 *Justification Report*[35] and are therefore used within this document. Because the SFBAAB is in non-attainment for ozone and particulate matter, significance thresholds are identified for ROG and NOx (ozone precursors) and, PM_{10} and $PM_{2.5}$ (particulate matter), as shown in Table AQ-1.

YSAQMD has adopted thresholds for annual NOx and ROG, and daily PM_{10}.[36] YSAQMD has no $PM_{2.5}$ threshold; it also has no daily thresholds for ROG or NOx, nor an annual threshold for PM_{10}. The YSAQMD thresholds, noted in Table AQ-1, are applicable to emissions that would occur in the SVAB.

[33] The thresholds BAAQMD adopted were called into question by a minute order issued January 9, 2012, in California Building Industry Association v. BAAQMD, Alameda Superior Court Case No. RG10548693. The minute order states that "The Court finds [BAAQMD's adoption of thresholds] is a CEQA Project, the court makes no further findings or rulings." The claims made in the case concerned the CEQA impacts of adopting the thresholds, particularly, how the thresholds would affect land use development patterns. Petitioners argued that the thresholds for Health Risk Assessments encompassed issues not addressed by CEQA.

[34] On August 13, 2013, the First District Court of Appeal ordered the trial court to reverse the judgment and upheld the BAAQMD's CEQA thresholds. The appellate court judgment has been suspended pending review by the California Supreme Court (Supreme Court Case No. S213478), and thus BAAQMD has not re-instated the thresholds.

[35] BAAQMD, 2009.

[36] YSAQMD, 2007. Handbook for Assessing and Mitigating Air Quality Impacts. Adopted July 11, 2007.

Ozone Precursors. As discussed previously, the SFBAAB is currently designated as non-attainment for ozone. The SVAB is also in non-attainment for ozone. Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen (NO_x). The potential for a project to result in a cumulatively considerable net increase in criteria air pollutants, which may contribute to an existing or projected air quality violation, are based on the CAA and CCAA emissions limits for stationary sources. To ensure that new stationary sources do not cause or contribute to a violation of an air quality standard, BAAQMD Regulation 2, Rule 2 requires that any new source that emits criteria air pollutants above a specified emissions limit must offset those emissions. For ozone precursors ROG and NO_x, the offset emissions level is an annual average of 10 tons per year (or 54 pounds (lbs.) per day).[37] These levels represent emissions below which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. Although BAAQMD Regulation 2, Rule 2 applies to stationary sources, these standards can also be applied to projects that would emit ozone precursors and can be used to determine whether the project would have the potential to contribute to a violation of the ozone standard.

Particulate Matter (PM_{10} and $PM_{2.5}$).[38] The federal New Source Review (NSR) program was created by the federal CAA to ensure that stationary sources of air pollution are constructed in a manner that is consistent with attainment of federal health-based ambient air quality standards. Projects that increase and/or redirect vehicle trips can increase PM_{10} and $PM_{2.5}$ emissions and concentrations, thus the emissions limit in the NSR can be used to determine whether the project would contribute to a violation of particulate matter standards. For PM_{10} and $PM_{2.5}$, the emissions limit under NSR is 15 tons per year (82 lbs. per day) and 10 tons per year (54 lbs. per day), respectively. These emissions limits represent levels at which a source is not expected to have an impact on air quality.[39] However, the YSAQMD has adopted a PM_{10} threshold of 80 lbs/day, slightly lower than the emissions limit under NSR. Thus, this Initial Study utilizes the more stringent 80 lb/day standard for PM_{10}.

Health Risk. The proposed project requires the use of heavy-duty diesel vehicles and equipment, which emit diesel particulate matter (DPM). The California Air Resources Board (ARB) identified DPM as a toxic air contaminant (TAC) in 1998, based on evidence demonstrating cancer effects in humans.[40] The exhaust

[37] BAAQMD, 2009, page 17.

[38] PM_{10} is often termed "coarse" particulate matter and is made of particulates that are 10 microns in diameter or smaller. $PM_{2.5}$, termed "fine" particulate matter, is composed of particles that are 2.5 microns or less in diameter.

[39] BAAQMD, 2009, page 16.

[40] California Air Resources Board, 1998. Fact Sheet: The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines. October 1998. Available online at http://www. arb.ca.gov/ toxics/dieseltac/factsht1.pdf, accessed February 27, 2012. This document is also available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2004.0093E.

from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources such as trucks and buses are among the primary sources of diesel emissions, and concentrations of DPM are higher near heavily traveled highways. Projects that require a substantial amount of heavy-duty diesel vehicles and equipment, would result in emissions of DPM and possibly other TACs that may affect nearby sensitive receptors.

Both YSAQMD and BAAQMD have developed significance thresholds for health risks. YSAQMD has adopted a cancer risk significance threshold of 10 in one million, and an acute and chronic hazard index significance threshold of 1.0 for the maximally exposed individual (MEI). However, YSAQMD's thresholds apply only to stationary sources. YSAQMD's guidance clearly states that these thresholds do not apply to mobile sources.[41] Consequently, this analysis uses the BAAQMD's previously adopted 2011 thresholds to determine the potential health risk impacts of the project. Similar to the BAAQMD's air quality significance thresholds adopted in 2011, BAAQMD's health risk thresholds are not currently recommended for use by BAAQMD. However, BAAQMD's 2011 health risk thresholds are based on substantial evidence identified in BAAQMD's 2009 Justification Report and described below and are therefore used in this document.

Excess Cancer Risk and Hazard Index. Similar to criteria pollutant thresholds identified above, the BAAQMD Regulation 2, Rule 5 sets cancer risk limits for new and modified sources of TACs at the maximally exposed individual (MEI). In addition to cancer risk, some TACs pose non-carcinogenic chronic and acute health hazards. Acute and chronic non-cancer health hazards are expressed in terms of a hazard index, or HI, which is a ratio of the TAC concentration to a reference exposure level (REL), a level below which no adverse health effects are expected, even for sensitive individuals.[42] In accordance with Regulation 2, Rule 5, the BAAQMD Air Pollution Control Officer shall deny any permit to operate a source that results in an increased cancer risk of 10 per million or an increase chronic or acute HI of 1.0 at the MEI. This threshold is designed to ensure that the source does not contribute to a cumulatively significant health risk impact.[43]

Fine Particulate Matter (PM2.5). Particulate matter, primarily associated with mobile sources (vehicular emissions) is strongly associated with mortality, respiratory diseases, and impairment of lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease. Based on toxicological and epidemiological research, smaller particles and those associated with traffic appear

[41] YSAQMD, 2007.

[42] ~~YSAAQMD, 2007, p. D 35.~~ BAAQMD, 2012. Recommended Methods for Screening and Modeling Local Risks and Hazards. Version 3.0. May, 2012.

[43] BAAQMD, 2009, p. 54.

more closely related to health effects.[44] Therefore, estimates of $PM_{2.5}$ emissions from a new source can be used to approximate broader potential adverse health effects. The United State Environmental Protection Agency (EPA) has proposed a Significant Impact Level (SIL) for $PM_{2.5}$. For developed urban areas, including much of San Francisco, the EPA has proposed a SIL of between 0.3 $\mu g/m^3$ to 0.8 $\mu g/m^3$. The SIL represents the level of incremental $PM_{2.5}$ emissions that represents a significant contribution to regional non-attainment.[45] The lower range of the EPA recommended SIL of 0.3 $\mu g/m^3$ is an appropriate threshold for determining the significance of a source's $PM_{2.5}$ impact.

In determining the potential distance that emissions from a new source may affect nearby sensitive receptors, a summary of research findings in the ARB's *Land Use Compatibility Handbook* suggest that air pollutants from high volume roadways are substantially reduced or can even be indistinguishable from upwind background concentrations at a distance of 1,000 feet downwind from sources such as freeways and large distribution centers.[46] This radius is also consistent with Health and Safety Code Section 42301.6 (Notice for Possible Source Near School).

In summary, potential health risks and hazards from new sources on sensitive receptors are assessed within a 1,000-foot zone of influence and risks and hazards from new sources that exceed any of the following thresholds at the MEI are determined to be significant: excess cancer risk of 10 per one million, chronic or acute HI of 1.0, and annual average $PM_{2.5}$ increase of 0.3 $\mu g/m^3$.

Cumulative Health Risk. The United State Environmental Protection Agency (USEPA) has established an excess cancer risk standard of 100 per one million persons (100 excess cancer risk) for conducting air toxic analyses and making risk management decisions at the facility and community-scale level.[47] As described by the BAAQMD, the USEPA considers a cancer risk of 100 per million to be within the "acceptable" range of cancer risk. Furthermore, in the 1989 preamble to the benzene National Emissions Standards for Hazardous Air Pollutants (NESHAP) rulemaking,[48] the USEPA states that it "...strives to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than approximately one in one million and (2) limiting to no higher than approximately one in ten thousand

[44] San Francisco Department of Public Health, 2008. Assessment and Mitigation of Air Pollutant Health Effects for Intra Urban Roadways: Guidance for Land Use Planning and Environmental Review. May 2008, p.5.
[45] BAAQMD, 2009, p. 65.
[46] ARB, 2005. Air Quality and Land Use Handbook: a Community Health Perspective. Available online at: http://www.arb.ca.gov/ch/handbook.pdf
[47] BAAQMD, 2009, p. 67.
[48] 54 Federal Register 38044, September 14, 1989.

[100 in one million] the estimated risk that a person living near a plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years."

In terms of non-carcinogenic chronic and acute health hazards associated with TACs, a project would have a significant cumulative impact if the total of all past, present, and foreseeable future sources within a 1,000 foot radius (or beyond where appropriate) from the fence line of a source, or from the location of a receptor, plus the contribution from the project, exceeds a chronic hazard index (HI) greater than 10.0 for TACs.[49]

With respect to incremental annual average $PM_{2.5}$ threshold, a $PM_{2.5}$ standard of 0.8 $\mu g/m^3$ is used for cumulative sources within the 1,000-foot evaluation zone because the USEPA is proposing a Prevention of Significant Deterioration (PSD) of 0.8 $\mu g/m^3$ as a cumulative threshold for all $PM_{2.5}$ sources.[50] This threshold is used as the basis for determining cumulative health risk impacts for this project.

Transportation Component of the Project

Impact AQ-1: The proposed project would not conflict with, or obstruct implementation of the applicable air quality plans. (Less than Significant)

In determining consistency with the Bay Area 2010 CAP, this analysis considers whether the transportation of San Francisco's MSW to the Recology Hay Road Landfill would: (1) support the primary goals of the Bay Area 2010 CAP, (2) include applicable control measures from the Bay Area 2010 CAP, and (3) avoid disrupting or hindering implementation of control measures identified in the Bay Area 2010 CAP.

The primary goals of the Bay Area 2010 CAP are to: (1) Reduce emissions and decrease ambient concentration of harmful pollutants; (2) Safeguard the public health by reducing exposure to air pollutants that pose the greatest risk; and (3) Reduce greenhouse gas emissions. To meet the primary goals, the Bay Area 2010 CAP recommends specific control measures and actions. These control measures are grouped into various categories and include 18 stationary and area source measures, 10 mobile source measures, 17 transportation control measures, six land use measures, and four energy and climate measures.

Of the 10 mobile source measures included in the Bay Area 2010 CAP, only two apply to heavy-duty on-road vehicles: 1) MSM B-1 Fleet Modernization for Medium- and Heavy-Duty On-Road Vehicles and

[49] BAAQMD, 2009, p.68.
[50] BAAQMD, 2009. p.67.

2) MSM B-2 – Low NOx Retrofits in Heavy-Duty On-Road Vehicles. Under MSM B-1, BAAMQD will provide incentives for the purchase of new trucks that meet 2010 emission standards for heavy-duty engines. Under MSM B-2, BAAQMD will provide incentives for the installation of ARB-verified abatement equipment to reduce NOx emissions from existing on-road heavy-duty truck engines. The proposed project would not hinder or interfere with either measure.

Of the 17 transportation control measures included in the Bay Area 2010 CAP, one could potentially apply to the Project: Measure TCM B-4, Goods Movement Improvements and Emission Reduction Strategies. TCM B-4 will improve goods movement and heavy-duty truck emission reductions by providing incentive funding for diesel equipment owners to purchase cleaner-than-required vehicles and equipment. The proposed project, which already uses LNG and biodiesel-powered trucks, would not interfere with TCM B-4 as the project already includes cleaner-than-required vehicles.

Examples of a project that could cause the disruption or delay of Clean Air Plan control measures are projects that would preclude the extension of a transit line or bike path or projects that propose excessive parking beyond City parking requirements. The proposed project would increase haul route distance for San Francisco's MSW, but would not include any elements that could hinder implementation of the 2010 CAP.

Impact GG-2 in Section E-8, Greenhouse Gas Emissions, discusses the proposed project's consistency with GHG reduction measures in the Bay Area 2010 CAP, and concludes that the proposed project would be consistent with these measures. Impact GG-1 in Section E-8 concludes that GHG emissions of the proposed project would be less than significant.

Based on this assessment, the project would not interfere with the Bay Area 2010 CAP.

YSAQMD's 2012 Triennial Assessment and Plan Update discusses the progress the YSAQMD has made towards improving the air quality in its jurisdiction since its last Triennial Plan Update. The Plan also identifies control measures needed to make further progress towards achieving the State ozone standard. These include measures to reduce emissions from area, stationary, agricultural, and mobile sources. The mobile source measures focus primarily on ways to improve transit, bicycle, and pedestrian travel. The 2012 Triennial Assessment and Plan Update does not include any specific control measures for on-road trucks. The Project's increase in haul route distance and rerouting of truck trips would add only marginally to the SVAB air emissions and would not interfere with the 2012 Triennial Assessment and Plan Update.

Since the proposed project would not interfere with implementation of the Bay Area 2010 CAP or YSAQMD's 2012 Triennial Assessment and Plan Update, this impact would be ***less than significant***.

Impact AQ-2: During project operations, the proposed project would result in emissions of criteria air pollutants, but not at levels that would violate an air quality standard, or that would contribute to an existing or projected air quality violation. (Less than Significant)

This impact addresses checklist questions 7.b and 7.c. Cumulative impacts are discussed below, under Impact C-AQ-1.

The emissions increases attributable to the transport of San Francisco's MSW would be from the increase in distance required to haul San Francisco's MSW to the Recology Hay Road Landfill compared to current conditions under which San Francisco's MSW is hauled to the Altamont Landfill. Because the Recology Hay Road Landfill is farther from the Points of Origin, emissions from hauling would be higher. Some of the increase in emissions would occur in the SFBAAB, and new emissions would occur in the SVAB. Project air emissions were calculated using emission rates provided by ARB's EMFAC2011 for the SFBAAB and SVAB, and biodiesel adjustment factors, LNG emission rates, and CH_4 and N_2O emission factors provided by the ARB. Vehicle information and haul route details were provided by Recology. Trip length was estimated using Google maps. Out of a total of 51 vehicles in the haul fleet, 40 are B20 biodiesel-powered and 11 are LNG-powered.

The proposed project is not expected to result in an increase in the number of daily truck trips, which would remain at approximately 50 round trips per day. The data regarding the number of truck trips, trip lengths and haul routes were used with the EMFAC2011 emission factors for heavy heavy-duty tractor-trailer trucks (T7 Tractor) to determine the maximum annual emission increase as well as average daily emission increases. Since the truck fleet is an average of six years old, EMFAC2011 emission rates for vehicle model year 2008 were selected. Average haul truck speed was assumed to be the EMFAC2011 aggregate average throughout the trip length, so emission rates at this speed were used to conduct the emissions calculations. All of the above assumptions and calculations are detailed in the project-specific Air Quality Technical Report.[51]

[51] Environmental Science Associates (ESA), 2015. Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County Project, Air Quality Technical Report. January, 2015. This document is available for review as part of Case File No. 2014.0653E at the SF Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, 94103.

Criteria pollutant emissions from the anticipated project-related operational sources are quantified in **Tables AQ-2 and AQ-3**, below. As shown, the project would not exceed significance thresholds for criteria air pollutants within each air basin. Furthermore, the combined emissions in both the SFBAAB and the SVAB would not exceed the significance thresholds for either air basin. Therefore, the project would result in a ***less-than-significant*** impact.

TABLE AQ-2
INCREMENTAL INCREASE IN AVERAGE DAILY OPERATIONAL EMISSIONS FOR THE PROPOSED PROJECT

Source	ROG	NOx	PM_{10}	$PM_{2.5}$
Average Daily Emissions (pounds/day)				
SFBAAB Emissions	1.39~~1.11~~	17.25~~13.39~~	1.00~~0.74~~	0.44~~0.34~~
Significance Thresholds for the SFBAAB	54	54	82	54
Exceeds Thresholds?	**No**	**No**	**No**	**No**
SVAB Emissions	1.14~~1.09~~	15.54~~14.92~~	1.05~~1.00~~	0.41~~0.39~~
YSAQMD Significance Thresholds	N. A.	N. A.	80	N. A.
Exceeds YSAQMD Thresholds?	N. A.	N. A.	**No**	N. A.
Total Emissions	2.53~~2.20~~	32.79~~28.31~~	2.04~~1.74~~	0.85~~0.73~~
Exceeds Either set of Thresholds?	**No**	**No**	**No**	**No**

N. A.: Not applicable for YSAQMD

SOURCE: ESA, 2015; BAAQMD 2009, YSAQMD 2007.

TABLE AQ-3
INCREMENTAL INCREASE IN MAXIMUM ANNUAL OPERATIONAL EMISSIONS FOR THE PROPOSED PROJECT

Source	ROG	NOx	PM_{10}	$PM_{2.5}$
Maximum Annual Emissions (tons/year)				
SFBAAB Emissions	0.22~~0.17~~	2.70~~2.09~~	0.16~~0.12~~	0.07~~0.05~~
Significance Thresholds for the SFBAAB	10	10	15	10
Exceeds Thresholds?	**No**	**No**	**No**	**No**
SVAB Emissions	0.18~~0.17~~	2.43~~2.33~~	0.16	0.06
YSAQMD Significance Thresholds	10	10	N. A.	N. A.
Exceeds YSAQMD Thresholds?	**No**	**No**	N. A.	N. A.
Total Emissions	0.40~~0.34~~	5.13~~4.43~~	0.32~~0.27~~	0.13~~0.11~~
Exceeds Either set of Thresholds?	**No**	**No**	**No**	**No**

N. A. Not applicable for YSAQMD

SOURCE: ESA, 2015; BAAQMD 2009; YSAQMD 2007.

Impact AQ-3: During project operations, the proposed project would result in emissions of carbon monoxide, but not at levels that would violate an air quality standard, or contribute to an existing or projected air quality violation. (Less than Significant)

This is the first of two impact statements that correspond to Checklist Question 7d. Cumulative impacts are discussed below, under Impact C-AQ-1. Emissions from traffic at congested intersections can, under certain circumstances, cause a localized build-up of CO concentrations. Regional ambient air quality monitoring data demonstrate that CO concentrations are well below the applicable standards, despite long-term upward trends in vehicle miles traveled. This monitoring data confirms that the potential for localized increases in CO concentrations from increased traffic has been greatly reduced in recent years. Improvements in motor vehicle exhaust controls since the early 1990s and the use of oxygenated fuels have substantially reduced CO emissions from motor vehicles.

Elevated concentrations of localized CO from congested traffic would not have the potential to cause a violation of ambient air quality standards because the following three criteria would be met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans. The proposed project would be consistent with these regional plans, since (as described Section E.5, Transportation and Circulation) the project-generated 100 daily trips (which would be re-directed to the Recology Hay Road Landfill from the Altamont Landfill) would not represent a substantial increase in daily traffic volume on affected roadways (less than 0.1%), and traffic flow conditions would not be adversely affected. Plans include the Congestion Management Program adopted by the San Francisco County Transportation Authority in December 2011 and the Plan Bay Area adopted by the Metropolitan Transportation Commission on July 18, 2013. The proposed project would not substantially increase daily traffic volume on affected roadways and therefore, the project would comply with this criterion.

- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.[52] There would be no additional traffic at intersections along the haul routes within San Francisco, and, as described in Section E.5, Transportation and Circulation, intersections in Solano County along the haul route would have less than 44,000 vehicles per hour under existing plus project and cumulative conditions.

- The project traffic would not increase traffic volumes at affected intersections where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Because each of the criteria would be met, elevated concentrations of localized CO from congested traffic would not cause a violation of ambient air quality standards, and the transportation of San Francisco's

[52] BAAQMD, 2009, p. 37.

MSW to the Recology Hay Road Landfill would not be expected to result in localized concentrations of CO at unhealthful levels. Therefore, CO impacts would be ***less than significant.***

Impact AQ-4: During project operations, the proposed project would generate toxic air contaminants, including diesel particulate matter, but would not expose sensitive receptors to substantial air pollutant concentrations. (Less than Significant)

This is the second of two impact statements that correspond to Checklist Question 7d. Cumulative impacts are discussed below, under Impact C-AQ-1.

Estimated emissions from MSW haul trucks traveling between San Francisco and the Recology Hay Road landfill were evaluated to determine whether they would result in significant health risks associated with diesel emissions. Since the project would relocate MSW haul truck trips, it would also relocate any associated health risks to the I-80 corridor and Solano County roads leading to and from the Hay Road Landfill. The project-related increase in the number of truck trips on I-80 and on Solano County roads would equal 50 round trips per day. A screening level analysis was used to estimate the increase in ambient pollutant concentrations resulting from these additional trips. These concentrations were then converted to health risks using procedures recommended by the BAAQMD and the California Office of Environmental Health Hazard Assessment (OEHHA).[53,54] The YSAQMD has not developed any specific health risk guidance for mobile sources.[55]

The CALINE4 model was used to estimate ambient concentrations of DPM. DPM is the primary toxic air pollutant of concern from diesel trucks. The CALINE4 model is a line source air quality model developed by the California Department of Transportation specifically to assess air quality impacts of CO, nitrogen dioxide (NO_2), and suspended particles such as PM_{10} near roadways. The model can predict pollutant concentrations for receptors located within 500 meters of a roadway. CALINE4 was used to estimate the increase in ambient pollutant concentrations that would be emitted by the increase in trucks traveling on I-80 and on the local roads from I-80 to the landfill. Concentrations were estimated at varying distances from the edge of the roadway. CALINE4 was run using the worst-case wind angle option, which estimates the maximum 1-hour concentration that could occur at each sensitive receptor using worst-case meteorology.

53 BAAQMD, 2012. Recommended Methods for Screening and Modeling Local Risks and Hazards. Version 3.0. May, 2012.
54 California Office of Environmental Health Hazard Assessment (OEHHA), 2014. Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxic Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. June, 2014. Review Draft.
55 YSAQMD, 2007.

Using the results of the CALINE4 model, the project's health risks are shown in **Table AQ-4**, below. The maximum cancer risk of ~~1.6~~2.44 per million is less than the 10 per million significance thresholds discussed above. The chronic hazard index of ~~0.0006~~0.0009 is less than the chronic hazard index of one significance threshold discussed above. Using CALINE4's modeled concentration of DPM as a surrogate for $PM_{2.5}$, the maximum annual $PM_{2.5}$ concentration is estimated at ~~0.0029~~0.0045 $\mu g/m^3$, which is substantially below the significance threshold of 0.3 $\mu g/m^3$.

TABLE AQ-4
PROJECT SPECIFIC HEALTH RISKS[a]

	Cancer Risk	Chronic Hazard Index	Annual $PM_{2.5}$ ($\mu g/m^3$)
Project Specific Increase in Risk to Sensitive Receptors Near Freeway	~~1.6~~2.44 per million	~~0.0006~~0.0009	~~0.0029~~0.0045
Significance Thresholds	10 per million	1	0.3[b]
Exceed Threshold?	No	No	No

NOTES:

[a] Risks are based on exposure to DPM.

[b] This threshold has only been suggested within BAAQMD jurisdiction.

SOURCE: ESA, 2015

OEHHA has not established an acute REL for DPM. However, many of the speciated components of DPM (i.e., the different chemicals making up DPM) do have established acute RELs. Given that the DPM emissions associated with the proposed project are relatively low with respect to cancer risk and chronic HI, the acute HI would not be exceeded when assessing the acute HI for each of the speciated components of DPM. Therefore, no acute health risk is shown in Table AQ-4.

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would therefore result in a ***less-than-significant*** impact with respect to exposing sensitive receptors to substantial levels of toxic air contaminants.

Impact AQ-5: The proposed project would not create objectionable odors that would affect a substantial number of people. (Less than Significant)

Transportation of San Francisco's MSW to the Recology Hay Road Landfill would result in longer waste hauling trips and an increase in the number of trucks hauling MSW on I-80 and Solano County local roads compared to existing conditions. Waste-hauling vehicles have the potential to generate odors. However, the haul route that would be used under the proposed project is already used by waste-hauling vehicles and MSW trucks hauling waste would be covered. The addition of approximately 50 waste-hauling vehicles per day, spread out over the course of a day and night, would not substantially increase

odor for receptors along the roadways. The proposed project would have a ***less than significant*** impact with regard to generation of substantial odors.

Disposal Component of the Project

The 2012 IS/MND examined air quality impacts associated with both transportation and operations-related air emissions related to the then-proposed increase in the rate of waste acceptance. The 2012 IS/MND concluded that there was the potential for significant increases in criteria air pollutants emissions, particularly NOx and PM-10, from increased generation of landfill gas, increased use of off-road equipment, and increased emissions from haul trucks. The 2012 IS/MND included the following mitigation measures to reduce this impact to less than significant:

Mitigation Measure 2

The facility operator shall implement the following dust control mitigation measures during implementation of the proposed project and during ongoing site operations:

- The project applicant shall implement the Best Available Control Technologies (BACT), including using water trucks to reduce PM10 from dust emissions at the project site, consistent with current operations.

- Project PM10 emissions from stationary sources shall be offset by the acquisition of emission offsets during the permitting process, if determine necessary by the YSAQMD, consistent with YSAQMD Regulation 3-4.

Mitigation Measure 3

The facility operator shall implement the following mitigation measure prior to implementation of the proposed project:

- The project applicant shall control additional landfill gas generations through modifications to the landfill gas collection and treatment system and shall implement any required offsets, consistent with the YSAQMD Rule 3-4.

These measures were included as conditions in the amended CUP as conditions 29a, 29b, and 29c.

The 2012 IS/MND noted that the Recology Hay Road Facility has been the object of numerous odor complaints, but points out that these complaints focus on the existing Jepson Prairie Composting operation. The 2012 IS/MND examined the potential for increased acceptance of waste for landfilling to increase odors, and found that existing environmental controls are sufficient; the 2012 IS/MND concluded that landfilling up to 2,400 tons per day would result in a less-than-significant odor impact.

The 2012 IS/MND also concluded that the proposed increase in the rate of waste acceptance would not result in a substantial increase in health risk, nor would it result in a violation of an adopted air quality plan.

Combined Impact of Transportation and Disposal Components of the Project

The air quality analysis contained in the 2012 IS/MND considered emissions from multiple sources, including haul vehicles, equipment operations, and fugitive landfill gas.[56] The analysis concluded that the project being examined could result in a significant increase in criteria air pollutants (NOx and PM10), but that the mitigation measures specified would reduce impacts to less-than-significant levels. The calculated increase in haul vehicle emissions in the 2012 IS/MND was greater than that calculated for the proposed project (the 2012 IS/MND assumed that all increased vehicle emissions would be within the SVAB); therefore, when using the lower values calculated for the current project, the combined impact of all sources considered in the 2012 IS/MND would also be less than significant with the inclusion of the mitigation measures specified in the 2012 IS/MND, which have been adopted by Solano County as conditions in the CUP. Therefore, the combined impact of Transportation and Disposal would be less than significant.

The Health Risk Assessment (HRA) performed for the 2012 IS/MND included an assessment of health risks from the then-proposed increase in disposal. The HRA considered TAC emissions from several sources, including DPM emissions from landfill equipment and diesel-powered haul vehicles, as well as other TACs contained in landfill gas. The HRA assumed that the most exposed individuals would be residents within one mile of the landfill.[57] The HRA concluded that the increased cancer risk from all disposal and transport sources combined would be less than the 10 additional cases per million, and that the increase in both chronic and acute HI would be less than 1.0. Therefore, the 2012 IS/MND already considered the health risks for exposed individuals within vicinity of the landfill from both disposal and from transportation, and found that the combined health risk of transportation and disposal would be less than significant.

Because of the distance to sensitive receptors, transportation-related odor emissions would not be expected to combine with disposal-related odor emissions to cause a significant odor impact.

[56] 2012 IS/MND, Appendix A, Table ES-4.
[57] 2012 IS/MND, Appendix A, Section 4.

Cumulative Impacts

Impact C-AQ-1: The proposed project, in combination with past, present, and reasonably foreseeable future development in the project area would not make a cumulatively considerable contribution to cumulative air quality impacts. (Less than Significant)

As discussed above, regional air pollution is by its very nature largely a cumulative impact. Emissions from past, present, and future projects contribute to the region's adverse air quality on a cumulative basis. No single project by itself would be sufficient in size to result in regional nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative adverse air quality impacts.[58] The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute substantially to an air quality violation or result in a considerable net increase in criteria air pollutants.

As discussed above, project-related criteria pollutant emissions within the SFBAAB would be less than significant; therefore, emissions within the SFBAAB would not be cumulatively considerable. Also as discussed above, project-related transportation emissions within the SVAB would be less than significant, and therefore would not be cumulative considerable. With respect to emissions from disposal of San Francisco's MSW at the Recology Hay Road Landfill, the 2012 IS/MND examined the impacts of increased emissions of criteria air pollutants from increased disposal together with anticipated increases in transportation-related emissions, and concluded that after application of mitigation measures, the project then being examined would have a less-than-significant air quality impact within the SVAB. The 2012 IS/MND therefore concluded that the increased rate of disposal then being examined would not make a considerable contribution to cumulative impacts within the SVAB.

With regard to cumulative health risks, as discussed above, the cumulative health risk significance thresholds used in this analysis are 100 per million for cancer risk, 10.0 for chronic HI, and 0.8 $\mu g/m^3$ for $PM_{2.5}$ concentration. As noted above, the 2012 IS/MND calculated health risks associated with the then-proposed increase in waste acceptance, including health risks from increased emissions of diesel equipment, diesel haul trucks, and landfill gas, and found that the resulting health risks would be below the individual project significance thresholds of 10 additional cancer cases per million exposed, and also below the chronic and acute HI of 1.0. The 2012 IS/MND also examined the combined health risks of the then-proposed increase in waste acceptance, in combination with health risks from the ongoing landfill operation, and

[58] BAAQMD, 2009. p. 33.

found that, together, cancer, chronic, and acute health risks would also be below the individual project significance thresholds stated above, and therefore also below the cumulative significance thresholds. No other sources of TACs have been identified within close proximity to the Recology Hay Road landfill. Therefore, the increased rate of disposal would not make a considerable contribution to cumulative health risks.

Health risks from Recology vehicles transporting San Francisco's waste between San Francisco and the Recology Hay Road landfill would combine with health risks from other sources, including roadways, industrial sources, and other sources. Using the BAAQMD's health risk screening tools (Highway Screening Analysis Tool and Stationary Source Analysis Tool), the cumulative health risks along the I-80 corridor were estimated and compared to the cumulative thresholds discussed above. The cumulative health risks were estimated by combining:

- the increase in health risk from the project's waste haul trucks traveling on I-80,
- existing health risks from traffic traveling on I-80 (identified using BAAQMD's Highway Screening Analysis Tool), and
- stationary source health risks from sources located near I-80 (identified using BAAQMD's Stationary Source Analysis Tool).

The cumulative health risks for the project, in combination with the other sources cited above, would be as follows: cancer risk of 77.7 per million; chronic HI of 0.1; and $PM_{2.5}$ concentration of 0.6 $\mu g/m^3$. Each of these risk levels is lower than the applicable cumulative health risk threshold, which are 100 per million for cancer risk, 10.0 for chronic HI, and 0.8 $\mu g/m^3$ for $PM_{2.5}$ concentration. Therefore, the proposed project's contribution to cumulative health risks would be less than significant.

Finally, MSW trucks would not contribute to a cumulative odor impact while in transit or while at the Hay Road Landfill. Although an AD facility is proposed for the landfill, a significant cumulative odor impact resulting from odors generated by waste hauling and anaerobic digester operation is unlikely given the landfill's location in a rural area with few residences nearby. Therefore, the proposed project's contribution to cumulative regional and localized air quality impacts would be ***less than significant***.

E.8 Greenhouse Gas Emissions

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
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?	☐	☐	☒	☐	☐
b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐	☐

Approach to Analysis

Greenhouse gas (GHG) emissions are analyzed in the context of their contribution to the cumulative effects of climate change, since a single land use project could not generate enough GHG emissions to noticeably change the global average temperature.

Sections 15064.4 and 15183.5 of the CEQA *Guidelines* address the analysis and determination of significant impacts from a proposed project's GHG emissions. Factors to be considered include: 1) the extent to which GHG emissions would increase or decrease as a result of the proposed project; 2) whether or not a proposed project exceeds a threshold that the lead agency determines applies to the project; and 3) demonstrating compliance with plans and regulations adopted for the purpose of reducing or mitigating GHG emissions.

The GHG analysis provided below includes a quantitative assessment of GHG emissions that would result from the proposed project. However, neither the BAAQMD nor the YSAQMD has an adopted significance threshold for project operations. BAAQMD adopted updated *CEQA Air Quality Guidelines*, including new thresholds of significance, in June 2010, and revised them in May 2011. The BAAQMD resolutions adopting and revising the significance thresholds in 2011 were set aside by the Alameda County Superior Court on March 5, 2012.[59] In May of 2012, BAAQMD updated its CEQA Air Quality Guidelines to continue to provide direction on recommended analysis methodologies, but without recommended quantitative significance thresholds.

[59] The thresholds BAAQMD adopted were called into question by a minute order issued January 9, 2012, in California Building Industry Association v. BAAQMD, Alameda Superior Court Case No. RG10548693. The minute order states that "The Court finds [BAAQMD's adoption of thresholds] is a CEQA Project, the court makes no further findings or rulings." The claims made in the case concerned the CEQA impacts of adopting the thresholds, particularly, how the thresholds would affect land use development patterns. Petitioners argued that the thresholds for Health Risk Assessments encompassed issues not addressed by CEQA.

The significance thresholds adopted by BAAQMD in 2011 are based on substantial evidence identified in BAAQMD's 2009 Justification Report[60] and are therefore used within this document. For operational emissions, this threshold is 1,100 metric tons of CO_2 equivalent (CO_2e) per year.[61] BAAQMD determined that this threshold would achieve aggregate emissions reduction of 1.6 MMT CO_2e by 2020, which is the SFBAAB's fair share of mandated GHG emission reductions needed from new land use projects to comply with the AB 32 Scoping Plan (see below).

The analysis presented below also evaluates the project's consistency with plans and regulations adopted for the purpose of reducing GHG emissions. Three greenhouse gas reduction plans -- the AB 32 Scoping Plan, BAAQMD's 2010 CAP, and the Solano County Climate Action Plan[62] -- are all intended to reduce GHG emissions below current levels, and are all applicable to the current project. Therefore, the analysis below examines the project's consistency with relevant components of these three plans. The following provides a brief description of each of the three plans.

AB 32 Scoping Plan and Update

Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006 (AB 32, Statutes of 2006, Chapter 488) declares that global warming poses a serious threat to the economic well-being, public health, natural resources, and environment of California and charges the ARB with "monitoring and regulating sources of emissions of greenhouse gases that cause global warming in order to reduce emissions of greenhouse gases." AB 32 provided initial direction on creating a comprehensive multi-year program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the State's long-range climate objectives. One specific requirement is to prepare a "scoping plan" for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020. ARB is required to update the plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions at least once every five years.

[60] BAAQMD, 2009, p. 38.

[61] CO_2e, or carbon dioxide equivalency, is a quantity that describes, for a given mixture and amount of greenhouse gas, the amount of CO_2 that would have the same global warming potential (GWP), when measured over a specified timescale (generally, 100 years). Carbon dioxide equivalency thus reflects the time-integrated radiative forcing of a quantity of emissions, expressed in terms of the GWP of the most common and abundant GHG, CO_2. The carbon dioxide equivalency for a gas is obtained by multiplying the mass and the GWP of the gas. For example, the currently-accepted GWP for methane over 100 years is 25. This means that emissions of 1 metric tonne of methane is equivalent to emissions of 25 metric tons of carbon dioxide.

[62] Solano County, 2011, County of Solano Climate Action Plan. Adopted June 7, 2011.

The Scoping Plan was approved in 2008, as required by AB 32, and reapproved in 2011.[63] The Scoping Plan contained a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives. The passage of AB 32, and its ongoing implementation, has put California on a path to continually reduce GHG emissions by adopting and implementing regulations and other programs to reduce emissions from cars, trucks, electricity production, fuels, and other sources.

This First Update to the Scoping Plan[64] (Scoping Plan Update) was developed by the ARB in collaboration with the State's Climate Action Team and reflects the input and expertise of a range of state and local government agencies. The Scoping Plan Update, which was adopted by the ARB in 2014, reflects public input and recommendations from business, environmental, environmental justice, and community-based organizations provided in response to the release of prior drafts of the Scoping Plan Update. The Update highlights California's success to date in reducing its GHG emissions and lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to the target of 80 percent reduction in GHG emissions below 1990 levels by 2050.

The Scoping Plan Update covers a range of topics, including the following:

- An update of the latest scientific findings related to climate change and its impacts, including short-lived climate pollutants.
- A review of progress-to-date, including an update of Scoping Plan measures and other state, federal, and local efforts to reduce GHG emissions in California.
- Potential technologically feasible and cost-effective actions to further reduce GHG emissions by 2020.
- Recommendations for establishing a mid-term emissions limit that aligns with the State's long-term goal of an emissions limit 80 percent below 1990 levels by 2050.
- Sector-specific discussions covering issues, technologies, needs, and ongoing State activities to significantly reduce emissions throughout California's economy through 2050.
- Priorities and recommendations for investment to support market and technology development and necessary infrastructure in key areas.

[63] ARB.2008. Climate Change Scoping Plan, a Framework for Change, Adopted December, 2008. Available online: http://www. arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm

[64] ARB, 2014. First Update to the Climate Change Scoping Plan: Building on the Framework. Adopted May, 2014. Available online: http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf

- A discussion of the ongoing work and continuing need for improved methods and tools to assess economic, public health, and environmental justice impacts.

BAAQMD 2010 Clean Air Plan

The Bay Area 2010 CAP[65] was adopted by the BAAQMD on September 15, 2010. The Bay Area 2010 CAP updates the *Bay Area 2005 Ozone Strategy* in accordance with the requirements of the CCAA to implement all feasible measures to reduce ozone; to provide a control strategy to reduce ozone, particulate matter, air toxics, and greenhouse gases in a single, integrated plan; and to establish emission control measures to be adopted or implemented. The Bay Area 2010 CAP contains the following primary goals:

- Attain air quality standards;
- Reduce population exposure and protect public health in the San Francisco Bay Area; and
- Reduce greenhouse gas emissions and protect the climate.

The Bay Area 2010 CAP represents the most current applicable air quality plan for the SFBAAB. The Bay Area 2010 CAP performance objective for GHGs is to reduce GHG emissions to 1990 levels by 2020 and 40% below 1990 by 2035. This corresponds with GHG reduction goals established by the State of California and contained in the AB 32 Scoping Plan. The Bay Area 2010 CAP includes numerous "control measures" intended to reduce GHG emissions. Some would directly reduce GHG emissions; many other measures are aimed at reducing criteria pollutants and TACs, but would also provide GHG reductions as a co-benefit.

Solano County Climate Action Plan

In 2008, the Solano County General Plan recognized the threat of global climate change and the need to take local action to reduce communitywide GHG emissions and the likelihood of negative climate change effects on the County. The Solano County Climate Action Plan,[66] adopted in 2011, recognizes that climate change is a global problem, but states that many strategies are best developed locally to adapt to a changing climate and to reduce GHG emissions. The Climate Action Plan establishes a community-wide GHG emissions reduction goal of 20 percent below 2005 levels by 2020. To achieve that goal, the Climate Action Plan includes several categories of reduction measures that include agriculture, energy and efficiency, transportation and land use, waste reduction and recycling, and water conservation.

[65] BAAQMD, 2010.
[66] Solano County, 2011.

Transportation Component of the Project

Impact GG-1: The proposed project would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment. (Less than Significant)

Common GHGs resulting from human activity associated with decisions by local government agencies are CO_2, CH_4, and N_2O. Individual projects contribute to the cumulative effects of climate change by directly or indirectly emitting GHGs during construction and operational phases.

The GHG emissions increases attributable to the transport of San Francisco's MSW would be from the increase in distance required to haul San Francisco's MSW to the Recology Hay Road Landfill compared to current conditions under which San Francisco's MSW is hauled to the Altamont Landfill. Because the Recology Hay Road Landfill is farther from the Points of Origin, emissions from hauling would be higher. The proposed project's GHG emissions were calculated using emission rates provided by ARB's EMFAC2011 for the SFBAAB and SVAB, and biodiesel adjustment factors, LNG emission rates, and CH_4 and N_2O emission factors provided by the ARB. Vehicle information and haul route details were provided by Recology. Trip length was estimated using Google maps. Out of a total of 51 vehicles in the haul fleet, 40 are B20 biodiesel-powered and 11 are LNG-powered.

The proposed project is not expected to result in an increase in the number of daily truck trips, which would remain at approximately 50 round trips per day. The data regarding the number of truck trips, trip lengths and haul routes were used with the EMFAC2011 emission factors for heavy heavy-duty tractor-trailer trucks (T7 Tractor) to determine the maximum annual emission increase as well as average daily emission increases. All of the above assumptions and calculations are detailed in the project-specific Air Quality Technical Report.[67]

The proposed project would increase emissions produced by trucks hauling San Francisco MSW because the trip from the Points of Origin to the Recology Hay Road Landfill that would occur under the proposed project is longer than the trip from the Points of Origin to the Altamont Landfill that occurs under current conditions. The longer vehicle trip length in the proposed project would generate GHG emissions. GHG emissions of the proposed project were estimated based on the types and number of trucks that would be used to transport San Francisco's MSW to the Recology Hay Road Landfill, miles traveled, and emission factors from ARB's EMFAC2011 database and other sources. **Table GG-1**, below, compares the incremental increase in GHG emissions resulting from the proposed project (i.e., the difference between

[67] Environmental Science Associates (ESA), 2015.

existing emissions and the emissions that would occur under the proposed project) and compares these to the significance threshold of 1,100 metric tons of CO_2e discussed above.

TABLE GG-1
MAXIMUM ANNUAL OPERATIONAL GHG EMISSIONS OF THE PROPOSED PROJECT (INCREMENTAL INCREASE IN GHG EMISSIONS OVER BASELINE)

Source	CO_2e (metric tons)
San Francisco Bay Area Air Basin	~~281~~415
Sacramento Valley Air Basin	~~519~~541
Total	~~800~~956
Significance Threshold	**1,110**

Given that GHG emissions of the proposed project would not exceed the significance threshold, the proposed project would result in ***a less-than-significant*** impact with respect to GHG emissions.

Impact GG-2: The proposed project would not conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions. (Less than Significant)

As discussed above, three greenhouse gas reduction plans – the ARB's AB 32 Scoping Plan Update, BAAQMD's 2010 CAP, and the Solano County Climate Action Plan -- are all intended to reduce GHG emissions below current levels, and are all applicable to the current project. Consistency of the proposed project with relevant objectives and measures contained within these plans is discussed below.

Consistency with AB 32 Scoping Plan Update

The AB 32 Scoping Plan and Scoping Plan Update include four transportation-related strategies for reduction of GHGs and criteria pollutants: (1) improve vehicle efficiency and develop zero emission technologies, (2) reduce the carbon content of fuels and provide market support to get these lower-carbon fuels into the marketplace, (3) plan and build communities to reduce vehicular GHG emissions and provide more transportation options, and (4) improve the efficiency and throughput of existing transportation systems. The Scoping Plan Update specifically addresses GHG emissions from heavy-duty trucks. The Scoping Plan Update notes that ARB recently approved a regulation establishing GHG emission reduction requirements for all medium- and heavy-duty vehicles and engines manufactured for use in California. For Class 8 heavy-duty vehicles (the class of vehicles used by Recology to transport San Francisco's waste), this "Phase I" GHG standard will reduce new vehicle emissions by an estimated four to five percent per year from 2014–2018.

ARB is working with U. S. EPA on Phase 2 GHG standards for heavy-duty vehicles to continue these reductions beyond 2018. U. S. EPA is planning to finalize Phase 2 standards in 2016. ARB believes additional annual improvements of around five percent through 2025 can be achieved from Class 8 heavy-duty vehicles using commercially available technologies and advanced transmissions, hybridization, improved trailer aerodynamics, and other technologies.

The Scoping Plan Update states that the Phase 2 standards will be an important next step in reducing GHG emissions from heavy-duty trucks, but that significantly greater reductions will be needed to meet California's climate change goals. To continue reducing emissions, zero and near-zero emission technologies will need to be deployed in large numbers. For heavy, long-range applications where electrification is not practical, low-carbon sources of energy, such as renewable fuels and hydrogen fuel cell vehicles, will be necessary.

Most of Recology's transfer fleet currently runs on B-20 biodiesel (that is, diesel fuel that is derived from 20 percent vegetable or animal fats and 80 percent petroleum). Currently, eleven trucks in the fleet run on liquefied natural gas (LNG), and Recology is in the process of phasing in additional transfer vehicles that run on LNG or compressed natural gas (CNG). All of these fuels produce lower GHG emissions than conventional diesel. The proposed project is therefore consistent with the Scoping Plan Update's emphasis on reducing GHG emissions from heavy-duty trucks. Furthermore, because the proposed project's GHG emissions would be below the quantitative significance threshold of 1,100 metric tons of CO_2e per year (see Greenhouse Gas Emissions Approach to Analysis and Impact GG-1, above), the proposed project would contribute to meeting the SFBAAB's fair share of emission reductions for the year 2020, as set in the AB 32 Scoping Plan and determined in the BAAQMD's Justification Report.[68]

Consistency with the BAAQMD 2010 CAP

With regard to GHGs, the Bay Area 2010 CAP performance objective is to reduce GHG emissions to 1990 levels by 2020 and 40% below 1990 by 2035. This corresponds with GHG reduction goals established by the State of California. The CAP includes numerous "control measures" intended to reduce GHG emissions. Some would directly reduce GHG emissions; many other measures are aimed at reducing criteria pollutants and TACs, but would also provide GHG reductions as a co-benefit. Two control measures intended to reduce criteria pollutants, TACs, and GHGs are directly applicable to the Transportation component of the proposed project:

[68] BAAQMD, 2009, p. 3.

MSM B-1 - Fleet Modernization for Medium- and Heavy-Duty On-Road Vehicles

Under this measure, the BAAQMD will directly provide and encourage incentives for the purchase of new trucks that meet the ARB's 2010 emission standards for heavy-duty engines. This program is designed to assist truck owners/operators to replace pre-2003 heavy-duty diesel trucks with new diesel-fueled or natural gas-fueled trucks in advance of requirements of ARB's in-use truck regulation.

Recology's truck fleet has an average age of 6 years; many of the trucks in the fleet already meet ARB's 2010 emission standards. Several of the trucks in the fleet run on LNG, with plans to phase in more that run on LNG or CNG. Thus, the proposed project is consistent with the intent of Measure MSM B-1.

TCM B-1 - Freeway and Arterial Operations Strategies

TCM B-1 will improve the performance and efficiency of freeway and arterial systems through operational improvements. These improvements include implementing the Freeway Performance Initiative (FPI), the Bay Area Freeway Service Patrol (FSP), and the Arterial Management Program. This measure will reduce emissions by improving the efficiency of existing freeways and roadways throughout the Bay Area.

Recology manages departure of vehicles from its San Francisco facilities to avoid periods of heavy traffic congestion. This contributes to the intent of Measure TCM B-1, by reducing congestion and improving the performance and efficiency of the freeway system.

Consistency with the Solano County Climate Action Plan

Solano County's Climate Action Plan establishes a community-wide GHG emissions reduction goal of 20 percent below 2005 levels by 2020. To achieve that goal, the Climate Action Plan includes several categories of reduction measures that include agriculture, energy and efficiency, transportation and land use, waste reduction and recycling, and water conservation. The Transportation and Land Use measures have the objective of supporting a transportation system and land use pattern that promotes carpooling, walking, biking, and using public transit. Measures and actions do not address waste transport within the County, nor emissions from heavy-duty trucks. There are no measures or policies within the Climate Action Plan that are relevant to the Transportation component of the proposed project. Consistency of the Disposal component of the proposed project with Climate Action Plan is discussed below.

In summary, the proposed project would not conflict with plans, policies, or regulations associated with the AB32 Scoping Plan and Scoping Plan Update, nor with the BAAQMD's 2010 Clean Air Plan, nor with Solano County's CAP. This impact would therefore be ***less than significant.***

Disposal Component of the Project

The 2012 IS/MND examined the potential for the then-proposed increase in waste acceptance to result in a substantial increase in GHG emissions. The 2012 IS/MND found that there would be an increase in GHG emissions from increased equipment operation and increased emissions of landfill gas. However, the 2012 IS/MND also concluded that increased waste acceptance would result in a greater volume of material placed in the landfill where it would not decompose, and therefore the carbon contained in that material would not be emitted as CO_2 or CH_4. When accounting for this form of "carbon sequestration," the 2012 IS/MND concluded that the proposed increase in waste acceptance would result in a net decrease in GHG emissions. The 2012 IS/MND also concluded that the project then being examined would not conflict with any plans or polices intended to reduce GHG emissions.

The ARB's Scoping Plan Update describes the status of several landfill methane control measures that were proposed in the original Scoping Plan. In the Scoping Plan, reducing methane emissions from landfills was identified as an early action item. Subsequently, ARB approved the Landfill Methane Control Measure, which became effective in 2010. The measure requires the installation of landfill gas[69] collection and control systems at certain municipal solid waste (MSW) landfills, requires landfills to meet stringent emission standards for landfill gas, and requires monitoring, reporting, and where necessary, corrective action to demonstrate and achieve these standards. The Scoping Plan Update includes several "key recommended actions for the waste sector," including several that are relevant to the Disposal component of the proposed project. These include the following:

- the development of program(s) to eliminate disposal of organic materials at landfills.
- identifying and recommending actions to address cross- California agency and federal permitting and siting challenges associated with composting and anaerobic digestion.
- explore and identify opportunities for additional methane control at new and existing landfills, and increase the utilization of captured methane for waste already in place as a fuel source for stationary and mobile applications.
- if determined appropriate, amend the Landfill Methane Regulation and/or move landfills into the Cap-and-Trade Program.

The Recology Hay Road Landfill has implemented the applicable provisions of the Landfill Methane Control Measure and is in compliance with the new landfill gas emission standards. If and when implemented, Recology would comply with any new requirements of key recommended actions contained

[69] Landfill gas consists of approximately 50% methane.

in the Scoping Plan Update. The Project therefore would not conflict with any aspects of the Scoping Plan or the Scoping Plan Update.

The Solano County Climate Action Plan includes measures for reducing GHGs through Waste Reduction and Recycling. Included among these measures is Measure W-4. Methane Capture. The intent of this measure is to facilitate implementation of ARB's Landfill Methane Control Measure. As noted above, the Recology Hay Road Landfill has implemented the applicable provisions of the Landfill Methane Control Measure and is in compliance with the new standards for landfill gas emissions. The proposed project would therefore not conflict with any provisions of the Solano County Climate Action Plan.

Combined Impact of Transportation and Disposal Components of the Project

As described above, the 2012 IS/MND concluded that the then-proposed increase in the rate of waste disposal would result in a net decrease in GHG emissions. When added to the calculated increase in emissions associated with transportation of San Francisco's MSW to the Recology Hay Road Landfill, the net emissions of GHGs would be less than the GHGs associated with transportation alone. Therefore, the combined impact of transportation and disposal would be less than significant.

Cumulative Impacts

Impact C-GG-1: The proposed project would not make a considerable contribution to any cumulative significant effects related to emissions of greenhouse gases. (Less than Significant)

Given that all GHG impacts are cumulative, and that the 1,100 MT CO_2e per year significance threshold represents a threshold for determining whether a project makes a cumulatively considerable contribution, which the proposed project's emissions do not exceed, the proposed project's impacts related to cumulative emissions of GHGs would be ***less than significant.***

E.9 Wind and Shadow

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
9. WIND AND SHADOW—Would the project:					
a) Alter wind in a manner that substantially affects public areas?	☐	☐	☐	☒	☐
b) Create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas?	☐	☐	☐	☒	☐

Transportation

Impact WS-1: The proposed project would not alter wind in a manner that substantially affects public areas. (No Impact)

Wind impacts are generally caused by large building masses extending substantially above their surroundings, and by buildings oriented such that a large wall catches a prevailing wind, particularly if such a wall includes little or no articulation. Given that the proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill involves no new or altered buildings, transportation does not have the potential to alter wind, and there would be ***no impact*** of this kind.

Impact WS-2: The proposed project would not create new shadows in a manner that substantially affects outdoor recreation facilities or other public areas. (No Impact)

Planning Code Section 295 restricts new shadow on public spaces under the jurisdiction of the Recreation and Parks Department (RPD) by any structure exceeding 40 feet in height, unless the Planning Commission finds the impact to be less than significant. Because the proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would not include the construction or alteration of any building, it does not have the potential to create new shadows. There would therefore be ***no impact*** of this kind.

Disposal Component of the Project

Examination of potential effects of a project on wind and shadows is not a required part of a CEQA analysis, though it is standard practice for the City and County of San Francisco. Solano County does not include examination of wind and shadow impacts in their standard IS checklist. The 2012 IS/MND did not examine wind and shadow impacts. However, the disposal of San Francisco's MSW at the Recology Hay Road Landfill would result in no new buildings or other structures that could alter wind or cast shadows. The project examined in the 2012 IS/MND, like the current project, would not result in a change to the final height or mass of the Recology Hay Road Landfill. Therefore, the increased rate of disposal does not have potential to result in a substantial adverse effect on wind and shadows.

Combined Impact of Transportation and Disposal Components of the Project

As discussed above, neither the transportation nor the disposal component of the proposed project would alter wind or cast shadows. There would be no combined effect of transportation and disposal on wind or shadows.

Cumulative Impacts

Impact C-WS-1: The proposed project, in combination with other past, present, and reasonably foreseeable projects, would not result in significant cumulative wind and shadow impacts. (No Impact)

Because the proposed project does not have the potential to impact wind or shadow, it also lacks the potential to contribute to any cumulative impact on wind or shadow; there would be ***no cumulative impact*** of this kind.

E.10 Recreation

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
10. RECREATION—Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	☐	☐	☐	☒	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒	☐
c) Physically degrade existing recreational resources?	☐	☐	☐	☒	☐

Transportation Component of the Project

Impact RE-1: The proposed project would not result in a substantial increase in the use of existing neighborhood parks or other recreational facilities, physically degrade existing recreational resources, or require the construction of recreational facilities that may have a significant effect on the environment. (No Impact)

This impact addresses questions E.10a, E.10b, and E.10c from the checklist above.

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would add approximately nine to ten full time equivalent drivers. This small number of new employees would not increase demand for recreational activities, require the construction of new recreational facilities, or physically degrade existing recreational resources. There would be ***no impact*** of this kind.

Disposal Component of the Project

The 2012 IS/MND found that the proposal to increase the rate of waste acceptance would not result in increased demands on local parks or other recreational facilities, and would not require the construction

of new or expansion of existing recreational facilities. The 2012 IS/MND concluded that increasing the rate of waste acceptance would therefore have ***no impact*** on recreation.

Combined Impact of Transportation and Disposal Components of the Project

As discussed above, neither the transportation nor the disposal component of the proposed project would have an impact on recreation. There could therefore be no combined effect of transportation and disposal on recreation.

Cumulative Impacts

Impact C-RE-1: The proposed project, in combination with past, present, and reasonably foreseeable future project, would not contribute considerably to a significant recreational impact in the project site vicinity. (No Impact)

Because the proposed project would not increase demand for recreational activities, require the construction of new recreational facilities, or physically degrade existing recreational resources, it would not have the potential to contribute to any cumulative impact on recreational facilities. There would be ***no cumulative impact*** of this kind.

E.11 Utilities and Service Systems

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
11. UTILITIES AND SERVICE SYSTEMS— Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒	☐
d) Have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements?	☐	☐	☐	☒	☐

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
e) Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒	☐

Transportation Component of the Project

Impact UT-1: The proposed project would not significantly exceed wastewater treatment requirements of the RWQCB or affect wastewater collection and treatment facilities, would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, and would not require expansion or construction of new water supply or treatment facilities. (No Impact)

This impact statement addresses questions E.11a through E.11e from the above checklist.

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would not necessitate any new or expanded water supply or wastewater treatment facilities, and would not affect existing stormwater drainage facilities. Therefore, the proposed project would have ***no impact*** on these public utilities.

Impact UT-2: The proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. (Less than Significant)

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would replace the current practice of transporting and disposing of the City's MSW at the Altamont Landfill in Alameda County. The project would result in the transportation and disposal of *up to* 5 million tons of San Francisco MSW at the Recology Hay Road Landfill, which would be expected to occur over a *period of up to 15 years* ~~15-year period~~ beginning in 2016. As discussed in the Project Description, the Recology Hay Road Landfill is permitted to accept up to 2,400 tons of waste per day, and, at this maximum rate of waste acceptance, the landfill has permitted capacity to continue to receive waste approximately through the year 2034. At the estimated rate of waste disposal of about 1,851 tons per day, closure would be in approximately 2041.[70] Therefore, the Recology Hay Road Landfill has sufficient permitted capacity to accommodate the project's solid waste disposal needs.

[70] Merrill, Erin (Recology), 2015.

Over the past two years, between June, 2012 and June, 2014 Recology Hay Road Landfill received on average about 651 tons of waste per day.[71] Waste from San Francisco would average about 1,200 tons per day; therefore, on average, the combined amount of existing waste and San Francisco MSW hauled to the Recology Hay Road Landfill, about 1,851 tons per day, would be within the Landfill's permit limit of 2,400 tons of waste per day.

In sum, the proposed project would have a ***less-than-significant impact*** on landfill capacity.

Impact UT-3: The proposed project would follow all applicable statutes and regulations related to solid waste. (No Impact)

The California Integrated Waste Management Act of 1989 (AB 939) requires municipalities to adopt an Integrated Waste Management Plan (IWMP) to establish objectives, policies, and programs relative to waste disposal, management, source reduction, and recycling. Reports filed by the San Francisco Department of the Environment show that the City generated approximately 870,000 tons of waste material in 2000. By 2010, that figured decreased to approximately 455,000 tons. Waste diverted from landfills is defined as recycled or composted material. San Francisco has a goal of 75 percent landfill diversion by 2010, and 100 percent by 2020. As of 2012, 80 percent of San Francisco's solid waste was being diverted from landfills, and the City had met the 2010 diversion target.[72] The proposed project would not alter or interfere with the City's efforts to comply with AB939 and its own landfill diversion goals.

The facilities where waste would be shipped from and to, i.e., Recology San Francisco Transfer Station, Recycle Central, and Recology Hay Road Landfill, are all permitted by State and local agencies. The proposed project would not result in any changes to operations at any of these facilities that would result in an inconsistency or violation of permit conditions at any of these facilities.

Based on the foregoing discussion, the proposed project would follow all applicable statutes and regulations related to solid waste, and would have ***no impact*** of this kind.

Disposal Component of the Project

The 2012 IS/MND examined potential impacts on utilities and service systems associated with increasing the rate of waste acceptance and found that there would be ***no impact*** of this kind.

---

71 Merrill, Erin (Recology), 2015.

72 San Francisco Department of the Environment, 2012. "Mayor Lee Announces San Francisco Reaches 80 Percent Landfill Waste Diversion, Leads All Cities in North America". October 5, 2012. Available online at http://www.sfenvironment.org/news/press-release/mayor-lee-announces-san-francisco-reaches-80-percent-landfill-waste-diversion-leads-all-cities-in-north-america

Combined Impact of Transportation and Disposal Components of the Project

As discussed above, neither transportation to nor disposal at the Recology Hay Road Landfill would have an impact on utilities and service systems. There could therefore be no combined effect of transportation and disposal on utilities and service systems.

Cumulative Impacts

Impact C-UT-1: The proposed project, in combination with past, present, and reasonably foreseeable future development in the site vicinity, would not result in a cumulatively considerable contribution to a significant utilities or service systems impact. (Less than Significant)

Even with the addition of *up to* 5 million tons of San Francisco MSW over an assumed period of *up to* 15 years, the Recology Hay Road Landfill would have sufficient capacity to continue accepting waste through at least 2034. Therefore, the contribution of the proposed project to any cumulative effect on permitted landfill capacity would not be considerable.

In terms of other impacts related to utilities and service systems, the proposed project would have no impact, and therefore would not have the potential to contribute to any cumulative impact related to this topic.

E.12 Public Services

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
12. PUBLIC SERVICES—Would the project:					
a) Result in substantial adverse physical impacts associated with the provision of, or the 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 public services such as fire protection, police protection, schools, parks, or other services?	☐	☐	☐	☒	☐

Transportation Component of the Project

Impact PS-1: The proposed project would not increase the demand for police or fire protection service, other governmental service, or new schools, such that new or physically altered facilities, the construction of which could cause significant environmental impacts, would be required in order to maintain acceptable levels of service. (No Impact)

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would not add a substantial number of employees or develop new structures that would require an increase in police or

fire protections services, or other governmental services such as libraries, community centers, or other public facilities. Likewise, the proposed project would not increase school enrollment and would not require new schools. Therefore, the proposed project would not require the construction of new or alteration of existing governmental facilities which could cause significant environmental effects, and there would be ***no impact*** of this kind.

Disposal Component of the Project

The 2012 IS/MND examined potential impacts on utilities and service systems associated with increasing the rate of waste acceptance and found that there would be ***no impact*** of this kind.

Combined Impact of Transportation and Disposal Components of the Project

As discussed above, neither transportation to nor disposal at the Recology Hay Road Landfill would have an impact on utilities and service systems. There could therefore be no combined effect of transportation and disposal on utilities and service systems.

Cumulative Impacts

Impact C-PS-1: The proposed project, combined with past, present, and reasonably foreseeable future projects in the vicinity, would not have a substantial cumulative impact to public services. (No Impact)

Because the proposed project would have no impact on public services, it would not have the potential to contribute to any cumulative impacts of this kind.

E.13 Biological Resources

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
13. 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?	☐	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?	☐	☐	☐	☒	☐

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
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?	☐	☐	☐	☒	☐
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 native wildlife nursery sites?	☐	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐

Transportation Component of the Project

Impact BI-1: The proposed project would not directly or indirectly impact special status plant or animal species or sensitive natural community including wetlands and riparian areas; would not interfere with the movement of native resident or wildlife species or with established native resident or migratory wildlife corridors, would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and would not conflict with an adopted Habitat Conservation Plan or other approved local, regional, or state habitat conservation plan. (No Impact)

This discussion addresses questions 13.a through 13.f from the checklist above.

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would involve the transport of waste on existing roadways, along existing truck routes. The small increase in daily truck traffic on I-80 and Solano County local roadways would not directly or indirectly impact sensitive species or habitat, and therefore would not conflict with any local policies or ordinances, or adopted habitat conservation plans or other conservation plans. Therefore, the proposed project would have ***no impact*** on biological resources.

Disposal Component of the Project

The 2012 IS/MND examined potential impacts on biological resources associated with increasing the rate of waste acceptance. The 2012 IS/MND found that, because the project then being examined would not disturb any previously undisturbed areas and would not disturb any sensitive habitat or species, it would have ***no impact*** on biological resources.

Combined Impact of Transportation and Disposal Components of the Project

As discussed above, neither transportation to nor disposal at the Recology Hay Road Landfill would have an impact on biological resources. There could therefore be no combined effect of transportation and disposal on biological resources.

Cumulative Impacts

Impact C-BI-1: The proposed project, in combination with other past, present or reasonably foreseeable projects, would not result in a considerable contribution to cumulative impacts on biological resources. (No Impact)

Because the proposed project would have no impact on biological resources, it would not have the potential to contribute to any cumulative impact on biological resources.

E.14 Geology and Soils

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
14. 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.)	☐	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒	☐
c) Be located on 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?	☐	☐	☐	☒	☐
d) Be located on expansive soil, as defined in the San Francisco Building Code, creating substantial risks to life or property?	☐	☐	☒	☐	☐

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
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?	☐	☐	☐	☐	☒
f) Change substantially the topography or any unique geologic or physical features of the site?	☐	☐	☐	☒	☐

Transportation Component of the Project

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would not require the use of a septic tanks or alternative wastewater disposal systems; therefore, question 14. e from the above checklist is not applicable to the proposed project.

Impact GE-1: The proposed project would not result in exposure of people and structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, expansive soils, seismic ground-shaking, liquefaction, lateral spreading, or landslides. (No Impact)

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill involves the transport of waste on existing streets and highways and includes no new or altered structures, and therefore would not increase exposure of people or structures to risk of loss, injury, or death due to geologic hazards. There would be ***no impact*** of this kind.

Impact GE-2: The proposed project would not result in substantial loss of topsoil or erosion, and would not be located on a geologic unit or soil (including expansive soil) that is unstable, or that would become unstable as a result of the project (No Impact)

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill involves the transport of waste on existing streets and highways and includes no new or altered structures, and therefore would not cause an increase in the loss of topsoil or erosion; neither would the project be located on a geologic unit or soil type that is unstable or that would become unstable as a result of the project. Therefore, there would be ***no impact*** of this kind.

Impact GE-3: The proposed project would not change the topography of the project site in a manner that would result in a significant impact to geologic or physical features of the site. (No Impact)

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would not result in any alteration of topography, and so could not have a significant impact on geologic or physical features. There would be ***no impact*** of this kind.

Disposal Component of the Project

The 2012 IS/MND examined potential impacts related to geology and soils associated with increasing the rate of waste acceptance. The 2012 IS/MND found that the increased rate of waste acceptance would not increase the height of the landfill, modify landfill slopes, or make any other changes that could increase the potential for damage due to shaking ground rupture or failure, landslides, soil loss or erosion. The 2012 IS/MND furthermore found that previously-imposed mitigation measures were adequate to prevent environmental impacts associated with development of on-site sewage disposal systems. The 2012 IS/MND noted that soils underlying the landfill contain varying amounts of clay, which could exhibit shrink-swell characteristics in localized areas. However, the shallow clay materials had previously been characterized as having a low plasticity, and the area of expansive soils would likely be limited in extent. Therefore, the potential for expansive soils to adversely affect the project site was determined to be low and the potential impact resulting from expansive soils was considered less than significant.

Combined Impact of Transportation and Disposal Components of the Project

Because transportation and disposal of San Francisco's waste would take place in different locations, they would not have the potential to combine to cause a significant impact with regard to geology and soils.

Cumulative Impacts

Impact C-GE-1: The proposed project would not make a considerable contribution to any cumulative significant effects related to geology or soils. (No Impact)

As discussed above, the transportation component of the proposed project would have no impact related to geology and soils, and the disposal component would have only a less-than-significant impact related to expansive soils. The development of the proposed AD facility could also be affected by expansive soils. However, design of the facility, including design to meet Building Code requirements in response to any identified geotechnical issues, would avoid or minimize potential effects of expansive soils. Therefore, the cumulative effect related to expansive soils would be less than significant.

E.15 Hydrology and Water Quality

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
15. HYDROLOGY AND WATER QUALITY— Would the project:					
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒	☐
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)?	☐	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion of siltation on- or off-site?	☐	☐	☐	☒	☐
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 that would result in flooding on- or off-site?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒	☐
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 authoritative flood hazard delineation map?	☐	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☐	☒
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?	☐	☐	☒	☐	☐
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐	☐

Transportation Component of the Project

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would not place housing or other structures within a 100-year floodplain. Therefore, questions 15.g and 15.h from the above checklist are not applicable to the transportation component of the proposed project.

Impact HY-1: The proposed project would not violate water quality standards or otherwise substantially degrade water quality, would not alter or interfere with drainage patterns or drainage systems, and would not deplete groundwater supplies or interfere with groundwater recharge. (No Impact)

This impact addresses questions 15.a through 15.f from the above checklist.

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would not result in the alteration of land or water bodies, and would have no effect on natural or built drainage structures or systems or on groundwater or groundwater recharge. The proposed project would not result in increased runoff, erosion, or water pollution. The proposed project would therefore have no impact on the quality of surface water or groundwater; would not affect, drainage patterns, and would not affect groundwater supplies; it would have ***no impact*** on hydrology and water quality.

Impact HY-2: The proposed project would not expose people, housing, or structures to substantial risk of loss due to flooding, would not impede or redirect flood flows, and would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow. (Less than Significant)

This impact addresses checklist questions 15.i and 15.j.

While some of the roadways involved in the proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill may be susceptible to flooding or inundation by seiche (a seiche is an oscillation of a water body, such as a bay, that may occur due to a landslide or earthquake, and that may cause local flooding), tsunami, or mudflow, the project would not alter this risk or expose substantial numbers of people to these risks. Therefore, this impact would be ***less than significant***.

Disposal Component of the Project

The 2012 IS/MND examined the potential for increased acceptance of waste for landfill (2,400 tons per day) to adversely affect water quality, and found that, because the landfill would continue to be required to comply with the site's Waste Discharge Requirements (conditions required by the Regional Water Quality Control Board to protect surface and ground water quality) and with the requirements of the facility's Stormwater Pollution Prevention Plan, operation of the landfill would not result in violation of any water quality standards or waste discharge requirements.

Combined Impact of Transportation and Disposal Components of the Project

Because transportation and disposal of San Francisco's waste would take place in different locations, they would not have the potential to combine to cause a significant impact with regard to hydrology and water quality.

Cumulative Impacts

Impact C-HY-1: The proposed project would not make a considerable contribution to any cumulative significant effects related to hydrology or water quality. (Less than Significant)

The proposed project could have an insubstantial, less-than-significant impact by exposing persons (i.e., the drivers of the trucks used to haul waste) to risk of loss, injury, or death due to a natural disaster, such as a seiche, tsunami, mudflow, or flood inundating one of the roadways at the time and place where waste was being transported. Such risks already exist in association with the transportation of waste from the City of San Francisco to the Altamont Landfill. This risk would be about the same with and without the project, though some of the roadways involved would change. Therefore, the proposed project would not make a substantial or considerable contribution to the general cumulative risks of this kind that people in the San Francisco Bay Area are already exposed to.

The 2012 IS/MND concluded that disposal would have no impact on hydrology and water quality, and therefore could not contribute to a cumulative impact of this kind.

The AD project would take place within the landfill footprint. It, too, would be subject to regulations and permits for prevention of flooding and for protection of surface water, groundwater, and waterways. With adherence to regulatory requirements, the AD facility would not combine with landfill disposal to cause a significant cumulative impact on water quality.

E.16 Hazards and Hazardous Materials

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
16. 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?	☐	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐	☐

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
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?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury or death involving fires?	☐	☐	☐	☒	☐

Transportation Component of the Project

Impact HZ-1: The proposed project would not create a significant hazard through routine transport, use, disposal, handling, or emission of hazardous materials, or through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment. (Less than Significant)

This impact addresses questions 16.a, 16.b, and 16.c from the above checklist.

Disposal of hazardous waste with municipal solid waste is illegal. The San Francisco Department of the Environment and Recology conduct public education campaigns promoting the proper handling and disposal of hazardous wastes from households and small quantity commercial generators. Recology maintains load checking programs at the San Francisco Transfer Station and Recycle Central facility, to detect, sequester, and properly dispose of any hazardous waste that inadvertently or illegally arrives in loads of MSW or recycled materials.

Despite efforts to prevent, detect, and remove hazardous materials from disposed municipal solid waste, small quantities of these materials are present, and would be present in the loads of waste being transported under the proposed project. There is some risk of emission of small amounts of volatile substances, or leak or spill of hazardous substances during routine transport of waste, or in the event of an accident involving waste transport vehicles. The route that would be taken by vehicles under the proposed project passes through heavily urbanized areas, including the cities of San Francisco, Oakland, Emeryville, Berkeley, Richmond, San Pablo, Pinole, Hercules, Rodeo, Crockett, Vallejo, and Fairfield.

Along these corridors are located numerous sensitive receptors, including residences, schools, day care facilities, hospitals, and nursing homes, including numerous instances of such receptors located within one quarter mile of the roadway. A spill of hazardous materials along U.S. 101 or I-80 corridors could pose a health and safety risk to many people, including especially sensitive individuals such as the elderly and school children. However, the risk of spills, leaks, and upset is small, and MSW is not classified as hazardous waste. Furthermore, MSW is solid waste, and contains little free liquid or gases that could spread beyond the location of a spill. If a spill, leak, or accident were to occur, any release of hazardous waste from MSW loads would be very small and localized, and would not be expected to adversely impact nearby sensitive receptors.

As previously indicated, the proposed project would represent no change in operations between the points of origin and the east end of the Bay Bridge. The proposed project would change the route of haul trucks from the east end of the Bay Bridge to the landfill destination, but both routes (existing route to Altamont and proposed route to Hay Road landfill) consist primarily of freeway segments through both urban and rural areas, as well as shorter segments on less-traveled roads through rural areas. As the existing and proposed routes are similar in nature, the proposed project is not expected to change or increase the potential for accidents or spills. The 2012 IS/MND concluded that there would be no significant hazardous materials impact with respect to the transport of MSW to Hay Road Landfill. Therefore, the proposed project would have only a ***less-than-significant*** impact of this kind.

Impact HZ-2: The project would not create a significant hazard to the public or the environment as a result of being located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (No Impact)

The transportation of San Francisco's MSW to the Recology Hay Road Landfill would take place on existing roadways, and would not require any new construction or alteration of these roadways. Therefore, transportation would not create a significant hazard to the public or the environment from disturbance or development of a site included on one of the hazardous materials site list. Therefore, transportation would have ***no impact*** with respect to the potential to create a significant hazard to the public or the environment as a result of being located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Impact HZ-3: The proposed project would not result in a safety hazard for people working in proximity to a public airport, public use airport, or private airstrip. (No Impact)

This impact addresses questions 16. e and 16. f from the checklist above.

Airports and airstrips within 2 miles of the haul route that would be used to transport San Francisco MSW to the Recology Hay Road Landfill include the Nut Tree Airport, located west of I-80 in Vacaville, the Maine Prairie airstrip, just west of State Route 113 (Rio-Dixon Road) north of the Recology Hay Road Landfill, and Travis Air Force Base, the closest point of which is about one and a half miles southwest of the Recology Hay Road Landfill. The routine transport of MSW over public roadways would not in any way affect operations at any of these airports and air strips, nor would it pose a safety hazard for people living or working in proximity to them. Therefore, the project would have ***no impact*** with regard to airport and airfield safety hazards.

Impact HZ-4: The proposed project would not expose people or structures to a significant risk of loss, injury or death involving fires, nor interfere with the implementation of an emergency response plan. (No Impact)

This impact addresses questions 16.g and 16.h from the checklist above.

Transportation of waste under the proposed project would not increase fire risk, and so would not increase the risk of loss, injury or death involving fires. Neither would transportation interfere with implementation of an emergency response plan. There would be ***no impact*** of this kind.

Disposal Component of the Project

The 2012 IS/MND examined the potential for increased acceptance of waste for landfilling (2,400 tons per day) to increase aviation safety hazards. The 2012 IS/MND noted that the facility currently implements bird deterrence measures in order to limit potential bird hazards to aircraft. The deterrence program includes the training of selected landfill staff in firearm safety and Bird Aircraft Strike Hazard (BASH) strategies; use of deterrent measures including "screamers" (shells fired from a hand-held pistol); implementation of a regular falconer program; and use of blank shotgun shells as a scare device. As part of the existing bird deterrence program, wildlife biologists visit the site on a quarterly basis to record conditions and make observations regarding the effectiveness of control measures. The 2012 IS/MND concluded that the increased landfill operations would not increase the attraction of birds to the site above current peak conditions and would not result in a safety hazard for people residing or working in the project area.

The 2012 IS/MND also concluded that increasing the rate of waste acceptance would cause no impact with respect to other hazards or hazardous materials.

Combined Impact of Transportation and Disposal Components of the Project

Because transportation and disposal of San Francisco's MSW would take place in different locations, they would not have the potential to combine to cause a significant impact with regard to hazards and hazardous materials.

Cumulative Impacts

Impact C-HZ-1: The proposed project would not make a considerable contribution to any cumulative significant effects related to hazards or hazardous materials. (Less than Significant)

Because the proposed project would have no impact with regard to increasing risk of loss, injury, or death involving fires, or interfering with the implementation of an emergency response plan, the proposed project does not have the potential to contribute to a cumulative effect of this kind. Also, because the project would have no impact with regard to listed hazardous materials sites and aircraft safety, it could not contribute to a cumulative impact of these kinds.

As noted in the discussion of Impact HZ-1, the slight risk of hazardous materials emissions or spills associated with transport of MSW would be little different from the existing, baseline condition. The same amount of waste would be transported on public roadways with and without implementation of the project. The additional travel distance for waste-hauling vehicles under the proposed project would slightly increase the risk of spill or upset associated with transport of materials containing MSW, which is not hazardous waste, but which may contain incidental amounts of hazardous waste. This risk would combine with the cumulative risk of upset and spill posed by existing and future transport of hazardous materials on public roads. However, as noted in the discussion of Impact HZ-1, the amount of hazardous materials present in San Francisco's MSW is very small, the risk of upset is also small, and the types of hazardous materials likely present in San Francisco's MSW would be unlikely to spread beyond the location of a spill. For these reasons, the contribution of the project to cumulative impacts associated with accidental hazardous materials emissions or spills on public roadways is very small, and not considered cumulatively considerable. The cumulative impact would therefore be ***less than significant***.

E.17 Mineral and Energy Resources

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
17. MINERAL AND ENERGY 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?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐
c) Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	☐	☐	☒	☐	☐

Transportation Component of the Project

Impact ME-1: The proposed project would not result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site. (No Impact)

Because the proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would not involve development of new or expanded structures, it does not have the potential to interfere with or result in the loss of availability of any known mineral resource or mineral resource recovery site. Thus, the project would have ***no impact*** on mineral resources.

Impact ME-2: Implementation of the proposed project would not encourage activities that would result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner. (Less than Significant)

The proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would consume energy in the form of transportation fuel to accomplish the essential municipal task of transporting waste for disposal. The proposed project would result in an increase of about 40 miles roundtrip traveled by waste-hauling vehicles. These vehicles have a fuel consumption rate of about four miles per gallon. Therefore, each roundtrip would consume about 10 gallons of fuel more than the existing haul to the Altamont Landfill. With about 50 roundtrips per day, this totals about 500 gallons of fuel per day, or about 156,000 gallons per year (six days per week). This is equivalent to about one-fifth (1/5) of a gallon per capita (San Francisco's population served by Recology is about 837,000 people, not including businesses) per year, which is a reasonable expenditure of energy for the essential municipal function of waste disposal. Furthermore, the City and County of San Francisco has an ambitious and successful waste diversion program that minimizes the amount of waste that must be disposed of through landfilling. Also, some of the trucks in Recology's long-haul fleet are fueled with a biofuel blend derived

partially from renewable vegetable oil, and others are fueled with LNG, an efficient fuel with relatively low emissions. Therefore, the transportation of San Francisco's MSW to the Recology Hay Road Landfill would not result in the use of, or encourage activities that would result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner. The small increase in the use of transportation fuels would be considered a ***less-than-significant*** impact.

Disposal Component of the Project

The 2012 IS/MND states that there are no known mineral resources within the footprint of the Recology Hay Road Landfill. Furthermore, the then-proposed increase in waste acceptance would not change the landfill's footprint or extent. Therefore, the IS/MND concludes that the increase in waste acceptance would have no impact on mineral resources.

Combined Impact of Transportation and Disposal Components of the Project

Because neither transportation nor disposal of San Francisco's MSW would impact mineral resources, they would not have the potential to combine to cause a significant impact with regard to mineral resources.

Cumulative Impacts

Impact C-ME-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not result in a cumulatively considerable contribution to a significant energy and minerals impact. (Less than Significant)

As described above, the proposed project would not have the potential to interfere with or result in the loss of availability of any known mineral resource or mineral resource recovery site. Thus, the project would not have the potential to contribute to any cumulative impact on mineral resources. As noted in the discussion of impact ME-2, the increase in use of transportation fuels is reasonable given that the increase is relatively small for the population served, that the project would provide an essential municipal service, and that types of fuels used are partly derived from renewable resources. Therefore, the increase in use transportation fuels would not constitute a considerable contribution to the cumulative use of energy resources. The AD project would result in the production of renewable fuel which may potentially be used for this project. Therefore, the combination of the project with the AD project would not result in a cumulative impact on energy resources.

E.18 Agriculture and Forest Resources

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
18. AGRICULTURE AND FOREST 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 Dept. 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, 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, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)) or timberland (as defined by Public Resources Code Section 4526)?	☐	☐	☐	☒	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒	☐
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 forest land to non-forest use?	☐	☐	☐	☒	☐

Transportation Component of the Project

Impact AF-1: The proposed project would not result in the conversion of farmland or forest land to non-farm or non-forest use, nor would it conflict with existing agricultural or forest use or zoning. (No Impact)

This impact addresses questions 18. a through 18. e from the above checklist.

Because the proposed transportation of San Francisco's MSW to the Recology Hay Road Landfill would not involve development of structures or facilities, it would not convert any prime farmland, unique farmland, or Farmland of Statewide Importance to non-agricultural use, and would not conflict with existing zoning for agricultural land use or a Williamson Act contract, nor would it involve any changes to the environment that could result in the conversion of farmland or forest land. Therefore, the proposed project would have ***no impact*** on agricultural or forest resources.

Disposal Component of the Project

The 2012 IS/MND stated that the then-proposed increase in waste acceptance at the Recology Hay Road Landfill would not convert any farmland to non-agricultural uses, nor would it conflict with existing zoning for agricultural use, or with an existing Williamson Act contract. Therefore, the IS/MND concluded that the increase in waste acceptance would have no impact on agricultural resources. The landfill is not located in a forested area, and therefore the increased acceptance of waste would not adversely impact forest resources.

Combined Impact of Transportation and Disposal

Because neither transportation nor disposal of San Francisco's MSW would impact agriculture or forest resources, they would not have the potential to combine to cause a significant impact with regard to agriculture or forest resources.

Cumulative Impacts

Impact C-AF-1: The proposed project, in combination with past, present, and reasonably foreseeable future development in the site vicinity, would not result in a cumulatively considerable contribution to a significant agriculture and forest resources impact. (No Impact)

Because the proposed project would have no impact on agricultural or forest resources, it could not contribute to a cumulative impact on these resources: ***No cumulative impact*** would occur.

E.19 Mandatory Findings of Significance

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
19. MANDATORY FINDINGS OF SIGNIFICANCE— Would the project:					
a) 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?	☐	☐	☐	☒	☐

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
b) Have impacts that would be 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.)	☐	☐	☐	☒	☐
c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐	☐

E.20. a) As discussed in section E.13, Biological Resources and section E.4, Cultural Resources, the proposed project would have no impact on biological resources or cultural resources. Therefore, the proposed project would not 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, or reduce the number or restrict the range of a rare or endangered plant or animal. Neither would the proposed project eliminate any examples of major periods of California history or prehistory.

E.20. b) The potential for the proposed project to make a considerable contribution to a cumulative impact is considered in each topical section above. In all instances, the conclusion reached is that the proposed project would not make a considerable contribution to any cumulative impact.

E.20. c) The project's potential to cause significant human health risks due to emission of diesel particulate matter is evaluated in section E.7, Air Quality, and found to be less than significant. The potential for the project to result in emission, leak, or spill or hazardous materials, to increase the risk of loss through fire, and to result in increased safety risk involving aircraft is evaluated in section E.16, Hazardous Materials, and is also found to be less than significant. Therefore, the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly.

F. MITIGATION MEASURES AND IMPROVEMENT MEASURES

No mitigation measures are identified in the foregoing discussion; none are necessary, since no potentially significant impacts are identified.

G. PUBLIC NOTICE AND COMMENT

The Planning Department prepared and distributed a Notification of Project Receiving Environmental Review for the project on June 27, 2014. The notice was mailed to Solano County, other public agencies, and interested parties. Comments received during the 30-day period following issuance of the Notification were considered during the preparation of this document. These comments raised concerns regarding the potential for the proposed project to increase the intensity of landfill operations and possibly cause environmental impacts. In particular, concerns were raised about the possibility of increased odor, increased noise, increased traffic, increased bird nuisance, adverse effects on water quality, and increased litter. Each of these issues is addressed in the Initial Study under the specific topic headings.

Several comments stated that the acceptance of waste from San Francisco at the Recology Hay Road Landfill would violate Solano County Measure E, a ballot initiative passed by the voters of Solano County in 1984, which limited the amount of out-of-county waste that could be disposed of in landfills within the county. However, in August, 2013, The California Court of Appeal ruled that Measure E is invalid and no longer in effect. The court stated: "Measure E is preempted by Assembly Bill No.845, which expressly prohibits counties from discriminating against solid waste importation based on place of origin. (Pub. Resources Code, § 40059.3, subd. (a).) Assembly Bill No.845 therefore renders Measure E void and unenforceable." Therefore, the project's consistency with Measure E is not considered in this Initial Study.

H. DETERMINATION

On the basis of this Initial Study:

☒ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

DATE March 4, 2015

Sarah B. Jones
Environmental Review Officer
for
John Rahaim
Director of Planning

I. LIST OF PREPARERS

Initial Study Authors

San Francisco Planning Department
Environmental Planning Division
1650 Mission Street, Suite 500
San Francisco, California 94103
Environmental Review Officer: Sarah B. Jones
Senior Environmental Planner: Paul Maltzer
Senior Environmental Planner: Lisa Gibson
Air Quality Planners: Jessica Range, Tania Sheyner

Environmental Consultants

Environmental Science Associates
550 Kearny Street, Suite 800
San Francisco, CA 94108
Project Director: Karl Heisler
Project Manager, Principal Author: Dan Sicular

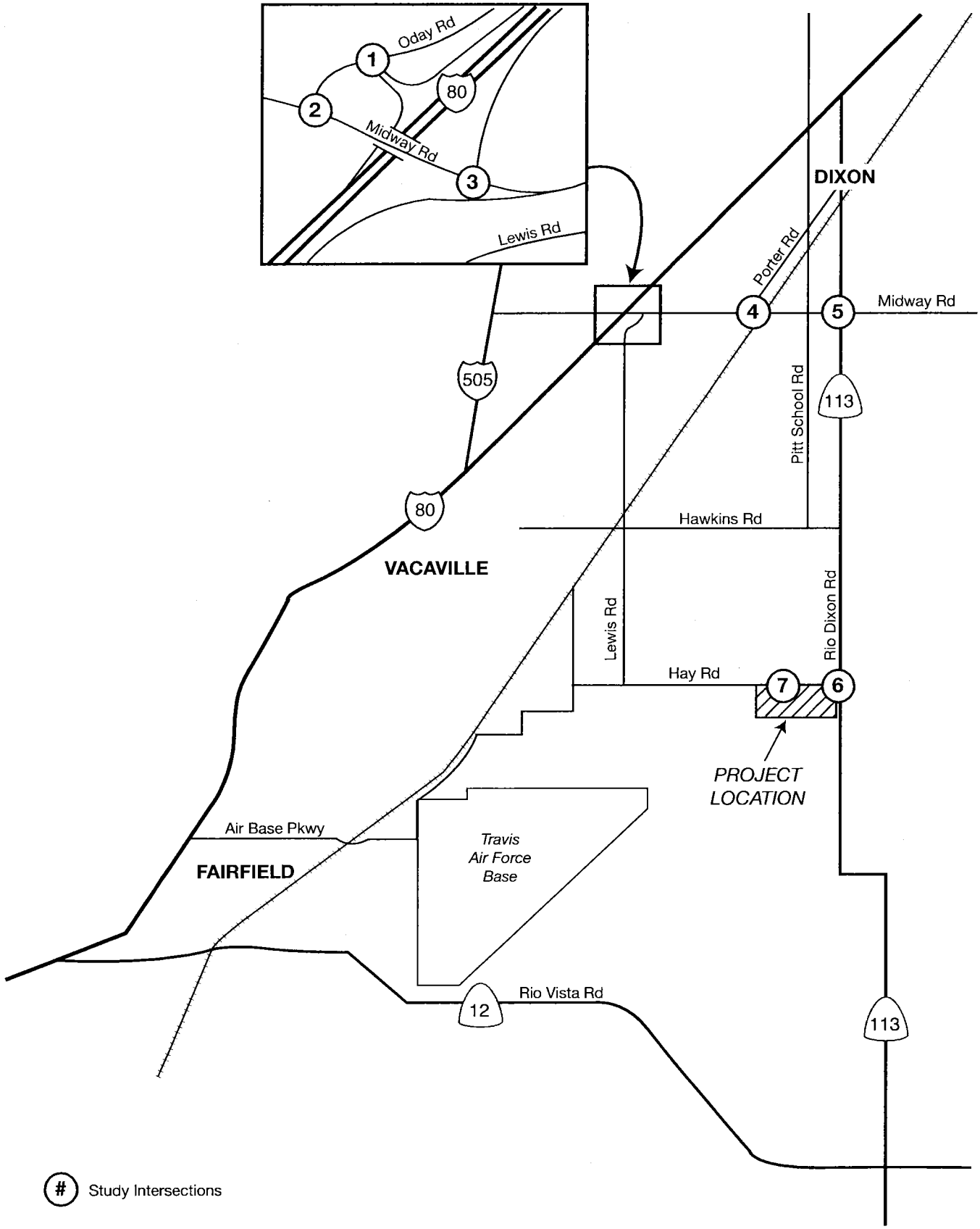
Project Sponsor

San Francisco Department of the Environment
1455 Market Street, Suite 1200
San Francisco, CA 94103
Jack Macy, Commercial Zero Waste Senior Coordinator

APPENDIX A

Traffic Technical Appendix
Intersection LOS Calculation Sheets

1. Figure TR-1. Traffic Study Area
2. Existing Conditions
3. Existing Plus Project Conditions



SOURCE: ESA

San Francisco Waste Transport for Disposal at Recology Hay Road Landfill . 210655

Figure TR-1
Traffic Study Area

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	61	1	5	136	4	4
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	73	1	6	162	5	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	20	6			168	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	20	6			168	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	100			100	
cM capacity (veh/h)	993	1077			1410	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	73	1	6	162	10
Volume Left	73	0	0	0	5
Volume Right	0	1	0	162	0
cSH	993	1077	1700	1700	1410
Volume to Capacity	0.07	0.00	0.00	0.10	0.00
Queue Length 95th (ft)	6	0	0	0	0
Control Delay (s)	8.9	8.3	0.0	0.0	3.8
Lane LOS	A	A			A
Approach Delay (s)	8.9		0.0		3.8
Approach LOS	A				

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	18.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	6	97	35	124	38	31
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	108	39	138	42	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	177				160	39
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	177				160	39
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	97
cM capacity (veh/h)	1399				827	1033

Direction, Lane #	EB 1	WB 1	WB 2	SB 1	SB 2
Volume Total	114	39	138	42	34
Volume Left	7	0	0	42	0
Volume Right	0	0	138	0	34
cSH	1399	1700	1700	827	1033
Volume to Capacity	0.00	0.02	0.08	0.05	0.03
Queue Length 95th (ft)	0	0	0	4	3
Control Delay (s)	0.5	0.0	0.0	9.6	8.6
Lane LOS	A			A	A
Approach Delay (s)	0.5	0.0		9.1	
Approach LOS				A	

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	20.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	102	0	0	159	22	16	2	55	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	77	119	0	0	185	26	19	2	64	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	210			119			457	483	119	522	457	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	210			119			457	483	119	522	457	185
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	94			100			96	99	93	100	100	100
cM capacity (veh/h)	1360			1469			492	456	933	413	472	857

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	195	185	26	21	64
Volume Left	77	0	0	19	0
Volume Right	0	0	26	0	64
cSH	1360	1700	1700	488	933
Volume to Capacity	0.06	0.11	0.02	0.04	0.07
Queue Length 95th (ft)	4	0	0	3	6
Control Delay (s)	3.4	0.0	0.0	12.7	9.1
Lane LOS	A			B	A
Approach Delay (s)	3.4	0.0		10.0	
Approach LOS				B	

Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	30.7%	ICU Level of Service		A
Analysis Period (min)	15			

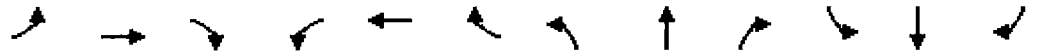
HCM Unsignalized Intersection Capacity Analysis

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	90	1	41	0	0	75
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	118	1	54	0	0	99
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	153	54			54	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	153	54			54	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	86	100			100	
cM capacity (veh/h)	839	1013			1551	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1
Volume Total	118	1	54	99
Volume Left	118	0	0	0
Volume Right	0	1	0	0
cSH	839	1013	1700	1700
Volume to Capacity	0.14	0.00	0.03	0.06
Queue Length 95th (ft)	12	0	0	0
Control Delay (s)	10.0	8.6	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	10.0		0.0	0.0
Approach LOS	A			

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	15.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	13	19	8	22	10	24	51	17	7	72	83
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	26	15	23	10	26	12	29	61	20	8	86	99
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	295	290	135	261	329	71	185			81		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	295	290	135	261	329	71	185			81		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	97	98	99	95	99	98			99		
cM capacity (veh/h)	615	604	914	649	575	992	1390			1517		

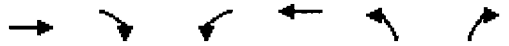
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	64	48	29	81	8	185
Volume Left	26	10	29	0	8	0
Volume Right	23	12	0	20	0	99
cSH	691	659	1390	1700	1517	1700
Volume to Capacity	0.09	0.07	0.02	0.05	0.01	0.11
Queue Length 95th (ft)	8	6	2	0	0	0
Control Delay (s)	10.7	10.9	7.6	0.0	7.4	0.0
Lane LOS	B	B	A		A	
Approach Delay (s)	10.7	10.9	2.0		0.3	
Approach LOS	B	B				

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	27.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	8	6	15	175	120	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	9	7	17	199	136	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	380	147	157			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	380	147	157			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	99	99			
cM capacity (veh/h)	615	900	1423			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	16	216	157
Volume Left	9	17	0
Volume Right	7	0	20
cSH	712	1423	1700
Volume to Capacity	0.02	0.01	0.09
Queue Length 95th (ft)	2	1	0
Control Delay (s)	10.2	0.7	0.0
Lane LOS	B	A	
Approach Delay (s)	10.2	0.7	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	30.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	8	31	28	9	23	9
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	9	35	32	10	26	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			9		101	27
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			9		101	27
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		97	99
cM capacity (veh/h)			1611		880	1049

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	44	32	10	36
Volume Left	0	32	0	26
Volume Right	35	0	0	10
cSH	1700	1611	1700	922
Volume to Capacity	0.03	0.02	0.01	0.04
Queue Length 95th (ft)	0	2	0	3
Control Delay (s)	0.0	7.3	0.0	9.1
Lane LOS		A		A
Approach Delay (s)	0.0	5.5		9.1
Approach LOS				A

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	76	3	4	96	1	5
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	89	4	5	113	1	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	13	5			118	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked voi	13	5			118	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	100			100	
cM capacity (veh/h)	1005	1079			1471	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	89	4	5	113	7
Volume Left	89	0	0	0	1
Volume Right	0	4	0	113	0
cSH	1005	1079	1700	1700	1471
Volume to Capacity	0.09	0.00	0.00	0.07	0.00
Queue Length 95th (ft)	7	0	0	0	0
Control Delay (s)	8.9	8.3	0.0	0.0	1.2
Lane LOS	A	A			A
Approach Delay (s)	8.9		0.0		1.2
Approach LOS	A				

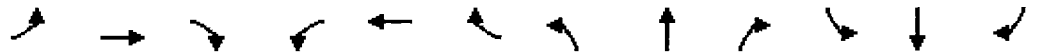
Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	15.9%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	19	79	43	105	26	59
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	22	90	49	119	30	67
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	168				182	49
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	168				182	49
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				96	93
cM capacity (veh/h)	1409				795	1020

Direction, Lane #	EB 1	WB 1	WB 2	SB 1	SB 2
Volume Total	111	49	119	30	67
Volume Left	22	0	0	30	0
Volume Right	0	0	119	0	67
cSH	1409	1700	1700	795	1020
Volume to Capacity	0.02	0.03	0.07	0.04	0.07
Queue Length 95th (ft)	1	0	0	3	5
Control Delay (s)	1.6	0.0	0.0	9.7	8.8
Lane LOS	A			A	A
Approach Delay (s)	1.6	0.0		9.1	
Approach LOS				A	

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	21.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	42	64	0	0	131	89	20	1	141	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	44	67	0	0	138	94	21	1	148	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	232			67			294	387	67	443	294	138
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	232			67			294	387	67	443	294	138
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			97	100	85	100	100	100
cM capacity (veh/h)	1336			1534			642	529	996	435	597	910

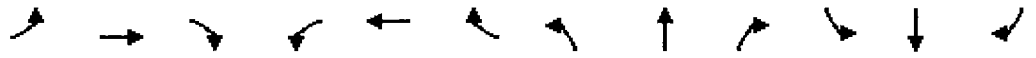
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	112	138	94	22	148
Volume Left	44	0	0	21	0
Volume Right	0	0	94	0	148
cSH	1336	1700	1700	635	996
Volume to Capacity	0.03	0.08	0.06	0.03	0.15
Queue Length 95th (ft)	3	0	0	3	13
Control Delay (s)	3.2	0.0	0.0	10.9	9.2
Lane LOS	A			B	A
Approach Delay (s)	3.2	0.0		9.5	
Approach LOS				A	

Intersection Summary				
Average Delay	3.8			
Intersection Capacity Utilization	25.9%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	63	0	101	0	0	61
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	79	0	126	0	0	76
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	202	126			126	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	202	126			126	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	90	100			100	
cM capacity (veh/h)	786	924			1460	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1
Volume Total	79	0	126	76
Volume Left	79	0	0	0
Volume Right	0	0	0	0
cSH	786	1700	1700	1700
Volume to Capacity	0.10	0.00	0.07	0.04
Queue Length 95th (ft)	8	0	0	0
Control Delay (s)	10.1	0.0	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	10.1		0.0	0.0
Approach LOS	B			

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	15.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	27	11	80	24	14	24	83	48	22	89	26
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	14	32	13	94	28	16	28	98	56	26	105	31
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	356	382	120	368	369	126	135			154		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	356	382	120	368	369	126	135			154		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	94	99	83	95	98	98			98		
cM capacity (veh/h)	549	530	931	538	539	925	1449			1426		

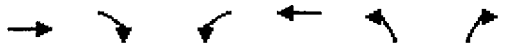
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	59	139	28	154	26	135
Volume Left	14	94	28	0	26	0
Volume Right	13	16	0	56	0	31
cSH	591	567	1449	1700	1426	1700
Volume to Capacity	0.10	0.25	0.02	0.09	0.02	0.08
Queue Length 95th (ft)	8	24	1	0	1	0
Control Delay (s)	11.8	13.4	7.5	0.0	7.6	0.0
Lane LOS	B	B	A		A	
Approach Delay (s)	11.8	13.4	1.2		1.2	
Approach LOS	B	B				

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	33.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	13	11	130	156	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	19	14	12	144	173	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	344	175	177			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	344	175	177			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	98	99			
cM capacity (veh/h)	647	868	1399			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	33	157	177
Volume Left	19	12	0
Volume Right	14	0	3
cSH	727	1399	1700
Volume to Capacity	0.05	0.01	0.10
Queue Length 95th (ft)	4	1	0
Control Delay (s)	10.2	0.7	0.0
Lane LOS	B	A	
Approach Delay (s)	10.2	0.7	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	25.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	14	20	17	9	43	17
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	16	22	19	10	48	19
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			16		74	27
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			16		74	27
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	98
cM capacity (veh/h)			1602		918	1049

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	38	19	10	67
Volume Left	0	19	0	48
Volume Right	22	0	0	19
cSH	1700	1602	1700	952
Volume to Capacity	0.02	0.01	0.01	0.07
Queue Length 95th (ft)	0	1	0	6
Control Delay (s)	0.0	7.3	0.0	9.1
Lane LOS		A		A
Approach Delay (s)	0.0	4.8		9.1
Approach LOS				A

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	17.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	61	1	5	142	4	4
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	73	1	6	169	5	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	20	6			175	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	20	6			175	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	100			100	
cM capacity (veh/h)	993	1077			1401	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	73	1	6	169	10
Volume Left	73	0	0	0	5
Volume Right	0	1	0	169	0
cSH	993	1077	1700	1700	1401
Volume to Capacity	0.07	0.00	0.00	0.10	0.00
Queue Length 95th (ft)	6	0	0	0	0
Control Delay (s)	8.9	8.3	0.0	0.0	3.8
Lane LOS	A	A			A
Approach Delay (s)	8.9		0.0		3.8
Approach LOS	A				

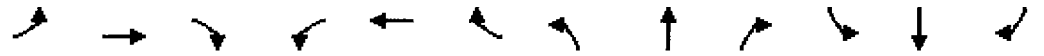
Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	6	97	35	130	38	31
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	108	39	144	42	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	183				160	39
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	183				160	39
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	97
cM capacity (veh/h)	1392				827	1033

Direction, Lane #	EB 1	WB 1	WB 2	SB 1	SB 2
Volume Total	114	39	144	42	34
Volume Left	7	0	0	42	0
Volume Right	0	0	144	0	34
cSH	1392	1700	1700	827	1033
Volume to Capacity	0.00	0.02	0.08	0.05	0.03
Queue Length 95th (ft)	0	0	0	4	3
Control Delay (s)	0.5	0.0	0.0	9.6	8.6
Lane LOS	A			A	A
Approach Delay (s)	0.5	0.0		9.1	
Approach LOS				A	

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	20.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	102	0	0	165	22	16	2	61	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	77	119	0	0	192	26	19	2	71	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	217			119			464	490	119	536	464	192
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	217			119			464	490	119	536	464	192
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	94			100			96	99	92	100	100	100
cM capacity (veh/h)	1352			1469			486	452	933	401	467	850

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	195	192	26	21	71
Volume Left	77	0	0	19	0
Volume Right	0	0	26	0	71
cSH	1352	1700	1700	482	933
Volume to Capacity	0.06	0.11	0.02	0.04	0.08
Queue Length 95th (ft)	5	0	0	3	6
Control Delay (s)	3.4	0.0	0.0	12.8	9.2
Lane LOS	A			B	A
Approach Delay (s)	3.4	0.0		10.0	
Approach LOS				B	

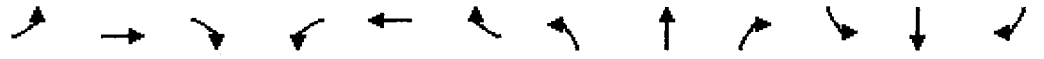
Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	96	1	41	0	0	75
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	126	1	54	0	0	99
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	153	54			54	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	153	54			54	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	85	100			100	
cM capacity (veh/h)	839	1013			1551	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1
Volume Total	126	1	54	99
Volume Left	126	0	0	0
Volume Right	0	1	0	0
cSH	839	1013	1700	1700
Volume to Capacity	0.15	0.00	0.03	0.06
Queue Length 95th (ft)	13	0	0	0
Control Delay (s)	10.0	8.6	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	10.0		0.0	0.0
Approach LOS	B			

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	15.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	22	13	25	8	22	10	30	51	17	7	72	83
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	26	15	30	10	26	12	36	61	20	8	86	99
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	309	304	135	282	343	71	185			81		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	309	304	135	282	343	71	185			81		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	97	97	98	95	99	97			99		
cM capacity (veh/h)	599	590	914	620	561	992	1390			1517		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	71	48	36	81	8	185
Volume Left	26	10	36	0	8	0
Volume Right	30	12	0	20	0	99
cSH	697	643	1390	1700	1517	1700
Volume to Capacity	0.10	0.07	0.03	0.05	0.01	0.11
Queue Length 95th (ft)	9	6	2	0	0	0
Control Delay (s)	10.8	11.0	7.7	0.0	7.4	0.0
Lane LOS	B	B	A		A	
Approach Delay (s)	10.8	11.0	2.3		0.3	
Approach LOS	B	B				

Intersection Summary				
Average Delay	3.8			
Intersection Capacity Utilization	28.2%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	14	6	15	175	120	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	16	7	17	199	136	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	383	150	164			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	383	150	164			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	99			
cM capacity (veh/h)	612	896	1415			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	23	216	164
Volume Left	16	17	0
Volume Right	7	0	27
cSH	677	1415	1700
Volume to Capacity	0.03	0.01	0.10
Queue Length 95th (ft)	3	1	0
Control Delay (s)	10.5	0.7	0.0
Lane LOS	B	A	
Approach Delay (s)	10.5	0.7	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	31.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	8	31	34	9	23	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	9	35	39	10	26	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			9		114	27
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			9		114	27
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		97	98
cM capacity (veh/h)			1611		861	1049

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	44	39	10	43
Volume Left	0	39	0	26
Volume Right	35	0	0	17
cSH	1700	1611	1700	927
Volume to Capacity	0.03	0.02	0.01	0.05
Queue Length 95th (ft)	0	2	0	4
Control Delay (s)	0.0	7.3	0.0	9.1
Lane LOS		A		A
Approach Delay (s)	0.0	5.8		9.1
Approach LOS				A

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	18.6%	ICU Level of Service	A
Analysis Period (min)	15		

Existing plus Project PM Peak-Hour LOS

- Same as Existing PM Peak-Hour LOS
  (*no Project-generated PM peak-hour trips*)

APPENDIX B

Mitigation Monitoring and Reporting Program for Recology Hay Road Landfill

RECOLOGY HAY ROAD
LAND USE PERMIT APPLICATION NO. U-11-09
MITIGATION MONITORING AND REPORTING PROGRAM
(ADOPTED 2005, UPDATED SEPTEMBER 2012)

When an agency makes a finding that potentially significant impacts have been mitigated to less than significant levels, the agency must also adopt a program for reporting on or monitoring the efficacy of the mitigation measures that were adopted (Public Resources Code 21081.6). This document consists of a proposed Mitigation Monitoring and Reporting Program for the Recology Hay Road Land Use Permit Application No. U-11-09. The monitoring and reporting measures included in this program are the responsibility of the Project Sponsor, Recology Hay Road.

The Mitigation Monitoring and Reporting Program includes the confirmation of, or review and approval of, the implementation of specific mitigation actions in the form of reports, surveys, and plans. It also includes monitoring of project construction and continued operational monitoring by the Solano County Local Enforcement Agency (LEA). The mitigation measures included in this monitoring program will be completed at various stages of the Project, including future document submittals for Building and Grading Permit approvals, actions or approvals linked to other Responsible Agencies including the Yolo Solano Air Quality Management District (YSAQMD), CalRecycle, and the Regional Water Quality Control Board (RWQCB), as well as during project construction and implementation. Solano County will provide documentation that the Mitigation Monitoring and Reporting Program has been fully adhered to and completed. This Mitigation Monitoring and Reporting Program applies to all activities evaluated by the Recology Hay Road Land Use Permit Application No. U-11-09 Initial Study.

Solano County remains responsible for ensuring that the implementation of these mitigation measures occurs to the extent noted in this Mitigation Monitoring and Reporting Program and, where it is noted, Solano County will be responsible for reviewing and monitoring the required mitigation measures to ensure compliance (CEQA Guidelines 15097).

This Mitigation Monitoring and Reporting Program includes the original mitigation measures adopted in 2005 when the County certified the March 2005 Final Subsequent Environmental Impact Report for the Norcal Waste Systems, Inc. Hay Road Landfill Project. This Mitigation Monitoring and Reporting Program has been updated to include the new mitigation measures that were identified in the Initial Study for the Recology Hay Road Land Use Permit Application No. U-11-09. The new mitigation measures are identified as **bold underline** text.

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
Air Quality				
Mitigation Measure Air-1a: The Applicant shall mitigate or reduce the ROG emissions of the proposed Project to a level that does not exceed the YSAQMD ROG threshold.	Recology Hay Road	YSAQMD		Less than significant
Mitigation Measure Air-1b: The applicant should maintain records of all materials composted (either in terms of volume or weight by material type) and submit them to the YSAQMD in addition to complying with all other applicable YSAQMD rules, regulations and permit conditions. This will enable the YSAQMD to calculate estimated ROG emissions from the compositing operation so that emissions reductions can be claimed if specific controls are implemented in the future. The YSAQMD also can use the information in preparing emissions inventories that form the basis of plans developed to achieve attainment of state and national ozone standards.	Recology Hay Road	YSAQMD		Less than significant
Mitigation Measure Air-2: The existing odor source and management techniques (Table 4.2-8 of the 2005 Subsequent EIR) shall be continued and expanded to handle the larger volume of processed material. In addition, the Applicant shall comply with the following complaint response protocol: COMPLAINT RESPONSE PROTOCOL 1. Site receives complaint either verbally (phone call) or in written form. 2. During regular business hours (8:00 AM to 5:00 PM), the Solano County Department of Resource Management will be notified as soon as an odor complaint is received at (707) 784-6765. 3. After business hours, odor complaints will be forwarded as soon as they are received by landfill personnel to the Department of Resource Management 24-hour complaint number (1-866-329-0932). The phone call then will be routed to a Department of Resource Management staff member for disposition. 4. Odor complaints can also be logged in	Recology Hay Road	Solano County LEA	Continue to inspect the site and monitor adherence to odor complaint response protocols.	Less than significant

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
http://www.solanocounty.com/depts/RM/environmental_health/solid_waste_complaint.asp. 5. Odor investigations will be conducted as follows: a. Determine if odor is detectable by site personnel at off-site complaint location. If not detectable, complete investigation by submitting Odor Complaint Report to the Solano County Department of Resource Management within 24 hours of receiving the complaint. b. If detectable at the complainant's site, determine the source.Determine if source and nature of odor is short term or long term duration. c. If short term, take appropriate action to abate the source of odors. Complete investigation by submitting Odor Complaint Report to the Solano County Department of Resource Management within 24 hours of receiving the complaint. Submittal will outline the odor source and steps being taken to abate the odors. Continue to monitor and take steps to abate source of odors. d. If odors reoccur and become a long-term consistent problem, determine extent and nature of offsite odors. If odor source is related to weather or operations, abate the problem by taking appropriate adjustments to storage, process control, and facility improvements. Submit Odor Complaint Report to the Solano County Department of Resource Management within 24 hours of receiving the complaint outlining the odor source and steps being taken to abate the odors. Continue to monitor and take steps to abate source of odors. 6. To mitigate long term consistent odors, the LEA may require an odor abatement system to be employed. The system would consist of either a vapor phase counteractant system during sludge drying operations or the use of topical applicants as an odor neutralizer during sludge spreading or harrowing operations. The				

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
vapor phase counteractant system would consist of an automated pumping system that delivers a high-pressure distribution hose that is equipped with misting nozzles. The system produces a fog downwind of the odor area that mixes with the odor and masks or counteracts its nuisance effects. A topical applicant would consist of a potassium permanganate solution applied to wet sludge as topical odor neutralizer. 7. Alternately, the LEA may request that the receipt of the odor source be discontinued or drying operations cease. In the event odor impacts continue, the LEA may require the existing, on-site source of the odor to be land filled and covered with soil. Upon odor remediation, the site may resume operations that have implemented odor remediation strategies to the acceptance of the LEA.				
Mitigation Measure 2 (Air Quality - PM_{10}): The facility operator shall implement the following dust control mitigation measures during implementation of the proposed project and during ongoing site operations: 1. The project applicant shall use water trucks to reduce PM_{10} from dust emissions, which is considered Best Available Control Technologies (BACT) for dust control at the project site, consistent with current operations. 2. Project PM_{10} emissions from stationary sources shall be offset by the acquisition of emission offsets during the permitting process, if determine necessary by the YSAQMD, consistent with YSAQMD Regulation 3-4.	Recology Hay Road	YSAQMD	Review and enforce through air permit compliance procedures.	Less than significant
Mitigation Measure 3 (Air Quality - NO_x): The facility operator shall implement the following mitigation measure prior to implementation of the proposed project: 1. The project applicant shall control additional landfill gas generation through modifications to the landfill gas collection and treatment system and shall implement any	Recology Hay Road	YSAQMD	Review and enforce through air permit compliance procedures.	Less than significant

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
required offsets, consistent with the YSAQMD Rule 3-4.				
Biological Resources				
Mitigation Measure Bio-1: The landscaping plant palette for the landfill support facility shall not include any invasive exotic plants listed by the California Invasive Plant Council (Cal-IPC) in their "Exotic Pests Plants of Greatest Ecological Concern in California" including all A1, B, or red alert listed species (http://www.cal-ipc.org).	Recology Hay Road	Solano County Building and Safety Division	Review the landscaping plan to ensure that the plant palette does not include invasive species listed by the Cal-IPC.	Less than significant
Geology and Soils				
Mitigation Measure Geo-1: A site evaluation report, prepared in conformance with the Solano County Site Evaluation requirements for On-site Sewage Disposal Systems, shall be submitted to the Solano County Environmental Health Services (EHS) Division for the proposed on-site sewage disposal system. The proposed septic system must incorporate all necessary design measures as required by the EHS Division to prevent impacts to surface or groundwater. If the EHS Division determines that the land proposed for sewage disposal has severe limitations, then a holding tank sewage disposal system shall be incorporated into the proposed project in lieu of a septic tank system. The holding tank system shall be similar in design and function to the existing on-site holding tank.	Recology Hay Road	Solano County Environmental Health Services Division	Review the site evaluation report and assure compliance with the Site Evaluation Requirements for on-site sewage disposal.	Less than significant
Hazards and Hazardous Materials				
Mitigation Measure Haz-1: The Recology Hay Road's existing Load Checking Program shall be modified to include site surveillance and load inspection protocols to identify the presence of hazardous waste in the recyclables loading area waste stream. All hazards shall be removed, stored in a contained area and disposed of at a qualified hazardous waste facility.	Recology Hay Road	Solano County LEA	Review the modified Load Checking Program to assure that appropriate surveillance and inspection protocols for the Recyclables loading area have been incorporated.	Less than significant
Mitigation Measure Haz-2a: The Recology Hay Road landfill shall ensure proper labeling, storage, handling, and use of hazardous materials at the landfill support facility in accordance with best management practices, including applicable California	Recology Hay Road	Solano County Environmental Health Services Division	Periodically inspect the landfill support facility to ensure compliance with the proper usage and handling of	Less than significant

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
Fire Codes and California Department of Industrial Relations (Cal-OSHA) pursuant to Title 8 CCR including ensuring that employees are properly trained in the use and handling of these hazardous materials and that each material is accompanied by a Material Safety Data Sheet. Recology shall ensure employees are trained on Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations (8CCR, Section 5192). Recology shall also comply with California Health and Safety Code, Chapters 6.5, 6.67, 6.95 and their associated regulations in the California Code of Regulations (CCR) that regulates the legal management and disposal hazardous materials and hazardous waste.			hazardous materials, and OSHA HAZWOPER regulations.	
Mitigation Measure Haz-2b: The following construction-related Best Management Practices (BMPs) shall be implemented as a condition of Solano County grading and building permits in order to minimize the potential negative effects to groundwater and site soils from accidental releases of hazardous materials. 1. The manufacturer's recommendations on use, storage and disposal of chemical products used in construction shall be strictly adhered to; 2. Construction equipment and vehicle gas tanks shall not be overtopped during fueling; 3. Grease and oils shall be properly contained and removed during routine maintenance of construction equipment; 4. Discarded containers of fuels and other chemicals shall be properly disposed of; and 5. Accidental spills of construction-related hazardous materials shall be cleaned-up consistent with the Recology Hay Road Hazardous Materials Management and Emergency Response Plans.	Recology Hay Road	Solano County Building and Safety Division	Periodically inspect the project site throughout the construction process to ensure compliance with grading and construction BMPs.	Less than significant
Mitigation Measure Haz-3a: Recology and JPO shall continue implementation of the existing bird deterrence program and BASH strategies. Bird deterrence measures shall be adjusted as warranted to address any increased bird activity at the sit including the periodic use of lethal methods, such as a depredation approach where the remains of one bird is laid out	Recology Hay Road	Solano County Resource Management Department	Monthly site inspections by the LEA will verify use of proper bird control measures and their effectiveness. Any modification to BASH strategies will require Solano	Less than significant

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
each day as a deterrence. Bombs, whistles, or other screamer devices should be deferred when aircraft are overhead.			County Airport Land Use Commission (ALUC) and TAFB review.	
Mitigation Measure Haz-3b: Recology shall develop and implement a program for coordination among Recology, the County Department of Resource Management and Travis Air Force Base (TAFB) to exchange information on conditions associated with the presence of ambient bird population associated with Recology, and to identify the process for developing and implementing bird control strategies to avoid or mitigate potential bird impact to TAFB and lands bordering Recology to the south. The program will require each entity to assign a liaison and shall identify a method of formal contact among the participating entities. Written records of discussions and coordination efforts shall be prepared and kept on file. a. Recology Hay Road Landfill shall employ the services of a qualified individual to perform the duties of "Bird Coordinator" for Recology. b. Recology Hay Road Landfill shall develop a log that will be used to document current conditions associated with bird activity within and adjacent to Recology. A preliminary document shall be prepared for review by the County Department of Resource Management and TAFB and will be finalized by Recology Hay Road Landfill pending input from these entities. The document shall include: 1. The project area (i.e., the boundaries of areas controlled by Recology and TAFB) and its relationship to surrounding land uses. 2. Project area land uses that may attract birds or provide permanent and seasonal habitats. 3. General bird use characteristics of the project area. 4. Protocols for tracking bird species, behavior and occurrence within the project area.	Recology Hay Road	Solano County Resource Management Department	Monthly site inspections by the LEA will verify use of proper bird control measures and their effectiveness. Any modification to BASH strategies will require Solano County ALUC and TAFB review.	Less than significant

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
c. Recology Hay Road Landfill shall develop and implement a Bird Control Program (BCP) that includes supplemental measures to be implemented dependent upon ambient bird behavior observed and reported by the County Department of Resource Management, TAFB, and Recology. At a minimum, the BCP shall include the following provisions: 1. Maintenance of the landfill active face to smallest practical size. 2. Protocols for coordination among Recology, the County Department of Resource Management, and TAFB to exchange information and conditions associated with the presence and nuisance of the ambient bird population associated with the Recology and to identify the process for developing bird control strategies as may be necessary; 3. Protocols for establishing an ongoing monitoring and reporting program for use in identifying bird use activities and pest behavior; 4. Protocols for developing and implementing strategies to address observed pest behavior; and 5. Protocols for monitoring and reporting the implementation and effectiveness of control strategies. Such protocols should include input from TAFB aircrews using methods agreed to and approved by the TAFB liaison. 6. Recology Hay Road Landfill shall obtain falconry services of a qualified firm or individual to implement the BCP. Falconry services would be retained on the basis of BCP implementation requirements and may require full-time (40 hours/week) falconry services with overtime on an as needed basis. Falconry services may not be necessary on a year-round basis. 7. Any request to change or discontinue falconry services once initiated must be with the concurrence of TAFB and Solano County Department of				

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
Resource Management, after appropriate coordination, and only after a successful test and trial period agreed to in advance by both TAFB and Solano County Department of Resource Management. 8. Recology Hay Road Landfill shall develop and distribute quarterly reports assessing the effectiveness of the BCP. These reports shall include data and observations compiled for the quarter, as well as any concerns from TAFB that may have been identified and reported. The Bird Coordinator shall produce these quarterly reports with concurrence of TAFB and forward them to the County Department of Resource Management. At a minimum, these reports shall include: the adequacy of the adopted abatement measures; the appropriateness of the abatement measures; and the need for new, modified, or different mitigation measures. If substantive issues or suggestions are identified in any of the quarterly reports or otherwise identified through meetings and discussions with TAFB and/or the County through the coordination protocols, Recology staff shall conduct focused studies of these subjects and develop additional control strategies as necessary. These control strategies will be presented to the Bird Coordinator for consideration at a subsequent meeting with the County Department of Resource Management and TAFB. Any such additional control strategies shall be implemented as soon as practicable, pending concurrence by the County and TAFB.				
Mitigation Measure Haz-4a: To facilitate emergency response, the landfill support facility shall have a separate address from the existing buildings at the Recology Hay Road Landfill. The	Recology Hay Road	Solano County Building and Safety Division	A complete set of landfill support facility building plans shall be provided to the Dixon	Less than significant

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
address shall be constructed of reflective material with numbering which is a minimum of four inches in height. In addition, the landfill support facility shall be equipped with fire sprinklers, a fire pump, a fire hydrant, and a fire alarm system, or other fire suppression equipment as required by the Dixon Fire Department and Solano County Fire Marshall.			Fire Department and the Building and Safety Division of the Solano County Department of Resource Management for review and approval prior to building permit issuance. The Building and Safety Division would oversee the issuance of a separate address for the support facility as part of the building permit process (Ramos, 2002), and conduct inspections of the building site to ensure compliance with permitted conditions.	
Mitigation Measure Haz-4b: The project sponsor shall review and update the facility's Hazardous Materials Management Plan and Emergency Response Plan as necessary to ensure that use of hazardous materials and materials potentially encountered as a result of the proposed project are adequately addressed.	Recology Hay Road	Solano County Resource Management Department	Review the updated plan to ensure compliance.	Less than significant
Hydrology and Water Quality				
Mitigation Measure Hydro-1: A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared and implemented to reduce potential impacts to surface water quality through the construction of the project. The SWPPP must be prepared in accordance with RWQCB Phase II storm water regulations and shall include the following components: a. BMPs to address construction-related pollutants shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with storm water. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain. Designated fueling areas with containment	Recology Hay Road	Solano County Building and Safety Division	Ensure that a SWPPP has been prepared to the satisfaction of the RWQCB prior to approval of the grading plan. The SWPPP must be maintained on the site and made available to RWQCB staff upon request.	Less than significant

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
systems for runoff would be created. b. An erosion control plan that may include, but not be limited to, a combination of temporary sediment basins, hydroseeding of unprotected erodible soils, temporary water bars and berms across roads and level building pad areas, silt fences, straw wattles, jute netting, and erosion control mats. Side casting of soil would be prohibited. Slash and other sources of organic material would be collected and directed into the existing composing facility. c. To educate on-site personnel and maintain awareness of the importance of storm water quality protection, site supervisors shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meetings and required personnel attendance list shall be specified in the SWPPP. d. The SWPPP shall specify a monitoring program to be implemented by the construction site supervisor, and must include both dry and wet weather inspections. In addition, monitoring would be required during the construction period for pollutants that may be present in the runoff that are not visually detectable in runoff.				
Mitigation Measure Hydro-2: Implementation of Mitigation Measure Geo-1 shall assure that impacts to groundwater, soils, and surface water contamination associated with improper installation are avoided.	Recology Hay Road	Solano County LEA	Ensure that a SWPPP has been prepared to the satisfaction of the RWQCB prior to approval of the grading plan. The SWPPP must be maintained on the site and made available to RWQCB staff upon request.	Less than significant
Noise				
Mitigation Measure Noi-1: The office portion of the landfill support facility maintenance building shall be constructed to attenuate exterior noise level by 30 dBA within the TAFB 75-80 dBA CNEL, reducing the interior noise level within associated enclosed employee spaces to 45 dBA. Submitted building plans	Recology Hay Road	Solano County Building and Safety Division	A complete set of landfill support facility building plans shall be provided to the Building and Safety Division of the Solano County	Less than significant

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
shall depict attenuation measures where appropriate such as insulation, double window glazing and other measures, and shall include signature by a certified acoustician verifying conformance with interior CNEL standards. In addition, noise shall be monitored to ensure working environments meet the Cal-OSHA standards for hearing protection within shops, office and other exterior and interior workplaces within the landfill support facility. Appropriate hearing protection will be provided consistent with a standard hearing protection program.			Department of Resource Management for review and approval prior to building permit issuance. Compliance is voluntary. Cal-OSHA to respond to employee complaints.	
Aesthetics				
Mitigation Measure 1 (Aesthetics): The facility operator shall implement the following litter control mitigation measures following implementation of the proposed project: 1. The maximum size of the working face shall be limited to 200 feet by 75 feet or smaller. 2. Use portable fencing in the immediate vicinity of the landfill's working face and downwind of the working face to contain litter. 3. Fencing along the site boundary should be high enough to contain litter from migrating off-site. 4. Adequate staffing shall be on site to remove litter immediately from the property boundary in the event of a sudden change in wind speed or direction. Similarly, additional litter collection crews shall be deployed following such high wind events to remove litter from parcels adjacent to the landfill. The facility operator shall establish site access agreements with the adjacent property owners within 90 days of issuance of the use permit. . 5. Litter control shall be the responsibility of the facility compliance officer and shall be monitored by the LEA to ensure compliance with State Minimum Standards. A plan for litter control, by means of fencing, crews,	Recology Hay Road	Solano County LEA	Regularly review litter control to ensure compliance.	Less than significant

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
adjustment of the size of working face and use of soil cover shall be detailed in the Litter Management Plan. 6. On a weekly basis, or more frequently if needed, the facility operator shall check for and pick up litter along adjacent properties, and along Burke Lane south of Hay Road, Dally Road north and south of Hay Road, Box R Ranch Road, Binghampton Road between SR 113 and Pedrick Road, Main Prairie Road between SR 113 and Pedrick Road, Brown Road between SR 113 and Pedrick Road, Pedrick Road between Brown Road and Binghampton Road, and along the following major haul routes: Fry Road between Leisure Town Road and SR 113, Lewis Road between Fry Road and Hay Road, Hay Road between SR 113 and Meridian Road, Meridian Road between McCrory Road and Fry Road. The site, offsite properties, and roads listed above shall be kept as litter free as possible depending upon weather conditions. The County shall not be charged for disposal of litter or trash pickup during these activities. 7. If waste is hauled by the facility operator or its contractors over the following roads, the operator shall check for and pick up litter, on a weekly basis, or more frequently if needed, on the following roads: Vanden Road from Peabody Road to Canon Road, Canon Road from Vanden Road to North Gate Road, North Gate Road from Canon Road to McCrory Road, McCrory Road from North Gate Road to Meridian Road, Meridian Road from McCrory Road to Hay Road, Hay Road from Meridian Road to Lewis Road, Lewis Road from Midway Road to Fry Road, and Midway Road from Interstate 80 to State Route 113. Within 90 days of the issuance of the use permit, the facility operator shall execute an agreement with Solano County regarding reimbursement to the County for the cost of removing trash and materials dumped along the above mentioned County roads, should County employees be required to assist in the removal of trash associated with				

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
the use of the landfill in the event that Recology does not timely remove the litter, pursuant to the last paragraph below. 8. The facility operator shall construct a permanent 25 foot tall litter-control fence along the entire length of the southerly site boundary. 9. If Solano County personnel identify litter on roads used by Recology, Solano County shall immediately notify Recology and request that it be removed. Recology shall respond and remove such litter within twenty-four (24) hours of receiving notification from Solano County under this provision.				
Traffic				
The facility operation shall mitigate traffic impacts associated with trucks operated by the facility operator or its contractors by implementing the following measures: 1. Local soil hauling trucks shall be restricted to routes approved by the Solano County Department of Resource Management. 2. The facility operator shall construct a northbound left-turn pocket on State Route 113 at Hay Road within three years of the issuance of the Use Permit, if approved by the California Department of Transportation. 3. The facility operator shall make every effort to restrict acceptance of waste material from outside Solano County during the a.m. peak hour in order to avoid peak-hour congestion on Interstate 80 through Fairfield and Vacaville. 4. Within 90 days of issuance of the use permit, the facility operator and the Department of Resource Management shall enter into a new road damage agreement, or a modification of the existing road damage agreement for the facility, to mitigate impacts to the County road system resulting from increased tonnage entering the landfill. The road damage impact fee shall be based on the reported tonnage (waste, green waste, food waste,	Recology Hay Road	Solano County Public Works Division	Regularly review facility traffic patterns to ensure compliance.	Less than significant

Recology Hay Road Land Use Permit Application No. U-11-09 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
soil, recyclables, etc.) entering the landfill and the mileage of the haul roads in the County regularly used by the facility operator and its contractors to transport waste to the landfill. The new road damage agreement shall provide an annual escalation factor consistent with ENR's Construction Cost Index and allows the road impact fee to be adjusted every two years, in even numbered years, within 90 days after the facility operator submits its annual compliance report to the Department of Resource Management pursuant to Condition 12A.				