

STATEMENT OF REQUEST
USE PERMIT MODIFICATION APPLICATION FOR
UPPER VALLEY DISPOSAL SERVICE – SUSTAINABILITY PLAN

APRIL 27, 2016

Upper Valley Disposal (UVDS) has been composting grape pomace at their Whitehall Lane facility since the 1970's. With new state regulations being adopted in the late 1980's and early 1990's, a Solid Waste Facility Permit (SWFP) and a Use Permit (UP) were obtained in early 1990's. The UP has been modified over the years to increase recycling and composting to answer the ever changing state laws and regulations. A Recycling Processing Facility was added in 1996. Wood and yard waste was added with a modification to the Use Permit in 1998. An 18,000 square foot metal canopy for recyclable storage and a 3,000 square foot truck wash were added in 2007.

UVDS has operated successful research food waste composting operations, of up to 1,950 tons per year of food waste, by blending source-separated food waste with finished compost, compost overs, and wood chips at their facility. The blended organic material is placed inside containers with ventilation piping. Within 48 hours of being full, the containers are then transferred to the Clover Flat Resource Recovery Park for in-vessel composting and maturing. The Clover Flat Resource Recovery Park has received a SWFP to compost up to 7,888 tons per year of commercial food waste in-vessel at their facility and 6,000 cubic yards of co-collected green waste with residential food waste. The combination of collecting and blending food waste with finished compost, compost overs, and wood chips at UVDS and then transferring the full compost vessels to the Clover Flat Resource Recovery Park has provided efficient collection and transfer to reduce vehicle miles traveled and associated transportation emissions.

With AB 32 policies and regulations in place to reduce greenhouse gases, mandatory commercial food waste collection programs started in April 2016. Each jurisdiction must identify 15 years of organic waste processing capacity, while addressing a proposed ban of all organics by 2025 by the California Air Resource Board.

The UVDS Sustainability Plan is presented in the following Sections:

- Section 1 Proposed Permit Modifications
- Section 2 Summary of New State Laws, Regulations, and Policies
- Section 3 Draft Organic Waste Recycling Plan for UVWMA Service Area
- Section 4 Summary of Impacts and Mitigation Measures
- Section 5 Technical Studies/Plans

Section 1 Proposed Permit Modifications

UVDS is proposing to modify the Use Permit (UP) to formalize the organics blending barn within a 15,000 square foot building already designated for “composting storage/blending area” within the current UP, where the food waste and co-collected residential organics will be blended, processed, and transferred into on-site composting within 48 hours of receipt. The building will be closed on the south and west sides to mitigate noise, dust, and odors. All blending activity of food waste will occur within this partially-enclosed building. UVDS also proposes to accept co-collected green waste with food waste from UVDS’s collection vehicles which will also be processed and placed into composting within 48 hours of receipt.

UVDS has a current residential green waste collection program, realizing 4,300 tons per year of material from just over 6,000 accounts, which is currently being composted and used as mulch. UVDS, with Upper Valley Waste Management Authority (UVWMA), will be proposing to add residential food waste to the green waste carts in 2017. UVDS are partners in Napa Recycling & Waste Services which has experience in launching residential food waste collection programs that increase participation while limiting contamination. Plus, there are many great case studies in the Bay Area to model. Based on those experiences, up to 11 pounds per household per month would generate 400 tons per year of food waste, or about 9% of the green waste collected, to total 4,700 tons per year of co-collected organics. The Calistoga and northern area of the UVWMA may haul directly to the Clover Flat Resource Recovery Park or use UVDS, while the St. Helena and southern area will use facility, to total about 4,000 tons per year. UVDS can currently accept up to 8,500 tons per year of green waste with the current UP, where the co-collected residential green waste and food waste will be allocated to this entitlement and may include the entire UVWMA service area. Commercial organics (food waste and compostable paper) are expected to generate up to 8,000 tons per year by 2025, and would replace 8,000 tons of grape pomace that is currently allowed by the UP.

UVDS will work with the organic waste generators in the community to ensure that there is proper training to source-separate food waste from garbage where the current pilot programs with the generators have proven successful. Collection trucks have been delivering the source-separated commercial food waste to a covered bunker on a concrete pad adjacent to the composting area. Food waste is dumped in the bunker and finished compost is added to absorb any free liquids. Finished compost is added to food waste to introduce microbes to the food waste to initiate the compost process and to absorb liquids. A front end loader mixes the material and load blended material into vessels. The typical blending and loading operation happens the same day the food waste is received, or within 8 hours. Should food waste be stored overnight in the bunker, the food waste will be blended and tarped, and be loaded within 24 hours of receipt. The vessels can be stored on-site for 48 hours before transferring the vessel to the Clover Flat Resource Recovery Park for further in-vessel composting and maturing. The Clover Flat Resource Recovery Park has received a Solid Waste Facility Permit Revision to allow up to 7,888

tons per year of food waste composting. UVDS has applied in the past to the state agency, CalRecycle, for their Organics Grant Program to assist in funding this program.

The “organics blending operation” will receive traffic and waste tonnages within the limits of the current UP and Solid Waste Facility Permit (see Table 1) with up to 10 inbound collection trucks per day that would have delivered grape pomace to the compost pad but instead will be re-directed to the blending barn, accepting up to 60 tons per day of organic waste, with Monday and post-holiday peaks of up to 75 tons per day. The facility could average of 10 outbound transfer trucks per day. The receiving and blending area will be covered by a steel structure 125 feet long, 120 feet wide, and 28 feet high, with openings on two sides, and closed on the south and west sides. The building elevations are attached. The building will house processing equipment, storage bins, and piles of source-separated organic materials. Offices and bathroom facilities are provided at the adjacent Truck Maintenance Building and the Recycling Center.

The current collection fleet is fuel by diesel with on-site fueling facilities. The use of compressed natural gas (CNG) presents the ability to transition a dated diesel fleet to a new quieter CNG fleet with a Cummins-Westport engine that is ultra-low NOx, with a 15% reduction of greenhouse gas emission. The station will be sized to fuel 15 refuse trucks each using an average of 50 diesel gallon equivalents (DGE) per day. There will be 15 single hose posts with 33’ hoses and two ESD posts will be installed on k-rail at the existing truck parking area as shown on the Site Plan. Fueling will occur by slow-filling in place at night from 4:00 p.m. to 4:00 a.m. (12-hrs). One natural gas dryer will be provided to remove moisture in the utility gas and CNG storage vessel will be provided. A minimum standard cubic feet per minute (SCFM) of 143 SCFM will be brought in from the PG&E main line along Highway 29. The twin compressor package will provide a combined 150 SCFM. A kirk-key will be provided for backup power supply capabilities

UVDS is proposing the following permit modifications in Table 1 below, and is compared to the current operations, where UVDS is **not proposing any increase** in organic waste tons, traffic, operating hours, or permitted areas. All waste handling operations will occur within the current Solid Waste Facility Permit (SWFP) boundary as shown on the General Site Plan.

Table 1 – Proposed Permit Modifications from Current Entitlements

Issue	UVDS Current Entitlement	UVDS Minor Mod CUP
Conditional Use Permit	<ul style="list-style-type: none"> • Conditional waiver from waste discharge requirement (WDRs) • CUP last update in 2007 with UP Modification #P07-00464-MODVMIN to stock pile and process green material • 5-Year SWFP Review - 2013 • SWPPP Notice of Intent (NOI) - July 2015 	<ul style="list-style-type: none"> • Applied on July 22, 2014 • Sept. 27, 2014 – County Reply • Nov. 2014 – “On hold” • Nov. 2014 to April 2016 <ul style="list-style-type: none"> ○ Master Plan analysis ○ Strategic Plans ○ New laws • April 2016 <ul style="list-style-type: none"> ○ Re-start CUP minor modification process from September 2014
Tons	42,500 tons per year (TPY)	42,500 tons per year (TPY)– No change
Traffic	224 vehicles per day	224 vehicles per day – No change
Hours of operations	7 am to 7 pm Mon-Sun 6 am to 10 pm during harvest One-truck 24 hour during harvest	Same hours of operations
CUP Acreage	54.8 acres	54.8 acres – No change
SWFP Acreage	20.0 acres	20.0 acres – No change
Total Waste Tons	<ul style="list-style-type: none"> • 42,500 TPY total 	<ul style="list-style-type: none"> • 42,500 TPY total – No Change
8,000 TPY less pomace traded for commercial organics	<ul style="list-style-type: none"> • 34,000 Tons per year of grape pomace 	<ul style="list-style-type: none"> • 26,000 Tons per year of grape pomace
Green waste and co-collected residential food waste	<ul style="list-style-type: none"> • 110 cubic yard/day of green waste per 1998 minor modification (Or up to 50 TPD) or 8,500 TPY <ul style="list-style-type: none"> ○ 2007 UP Modification #P07-00464-MODVMIN to stock pile and process green material 	<ul style="list-style-type: none"> • Allow 8,500 tons per year of green waste and co-collected green waste with residential food waste. About 4,400 TPY of residential green waste and 400 TPY of residential food waste is expected from UVDS collection routes, and the other 4,100 TPY of source-separated green waste and commercial green waste

Issue	UVDS Current Entitlement	UVDS Minor Mod CUP
Add 8,000 TPY of commercial organics	<ul style="list-style-type: none"> • Research food waste project with approximately 2,000 TPY underway 	<ul style="list-style-type: none"> • 8,000 TPY of commercial organics which includes food waste and compostable paper. • AB 1826/AB 876/90% diversion compliance by 2025 – See Section 2
Same	<ul style="list-style-type: none"> • Additives and amendments 	<ul style="list-style-type: none"> • Additives and amendments
Improvements		<ul style="list-style-type: none"> • Add 15,000 square foot fabricated metal building semi-enclosed Organic Blending Barn – 21% increase of current building floor space. • Compressed Natural Gas (CNG) Fueling Station option to replace diesel fleet with CNG fleet
Fueling Station	Diesel fleet with diesel on-site fueling	<ul style="list-style-type: none"> • CNG fueling station option with over night time fill option • Best Practices Guide – BAAQMD issued • No requirement to cover CNG station – CNG does not spill

Section 2 Summary of New State Laws, Regulations, and Policies

With AB 32 policies and regulations in place to reduce greenhouse gases, mandatory commercial collection started in July 2012, and commercial food waste collection programs started in April 2016, where each jurisdiction needing to identify 15 years of organic waste processing capacity, while addressing a proposed ban of all organics by 2025 by the California Air Resource Board. CalRecycle adopted new composting regulations and the State Waste Resources Control Board adopted new General Order for compost facilities. A summary of the new state laws, regulations, and policies are provided below, which have motivated UVDS to propose organic waste collection and composting programs to comply with the new mandates and the change in laws.



AB 341 “Mandatory Commercial Recycling” | Assembly Bill 341 was signed into law in 2012 in an effort to increase the amount of material diverted from landfills from the commercial sector. It states that businesses that generate four cubic yards or more of commercial solid waste per week shall arrange for recycling services. The same requirement is also applied to multifamily dwellings of five units or more. These multifamily homes and businesses can either self-haul the materials to an appropriate facility themselves or subscribe to an existing recycling service.

Requirements of Local Government: Each jurisdiction shall implement a commercial solid waste recycling program that consists of education, outreach, and monitoring of businesses that is appropriate for that jurisdiction and is designed to divert commercial solid waste from businesses. These jurisdictions shall report the progress achieved in implementing its commercial recycling program, including education, outreach and monitoring, and if applicable, enforcement efforts and exemptions, by providing updates in its electronic annual report.

Enforcement: CalRecycle will review each jurisdiction’s commercial recycling program that consists of education, outreach and monitoring. This will include an evaluation as part of its formal AB 939 review, conducted every two or four years of each jurisdiction’s programs, which includes an annual jurisdiction site visit, review of the Electronic Annual Report, and other information a jurisdiction may deem relevant.

If the jurisdiction is found to have **not** made a good-faith effort in implementing its programs, possibly including its mandatory commercial recycling program, CalRecycle can place the jurisdiction on a compliance order as part of the AB 939 review, and if it then fails to adequately meet the conditions of the compliance order, then CalRecycle could consider a penalty hearing.



AB 1826 “Mandatory Commercial Organics Recycling” | In October of 2014 Governor Brown signed AB 1826 into law requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement a commercial **Organic Waste Recycling Program** to divert organic waste generated by businesses. Jurisdictions must conduct outreach, education to inform businesses how to recycle organic waste in the jurisdiction, and monitoring to identify those not recycling and inform them of the law and how to recycle organic waste. This **“Organic Waste Recycling Program”** is prepared by the franchised hauler for the City to comply with AB 1826. The ultimate goal of the bill is to divert 50% of organics disposal from commercial businesses by 2020 as compared to 2014, estimated at 8.1 million new statewide tons of organics by 2020.

Specific requirements for the Organic Waste Recycling Program include:

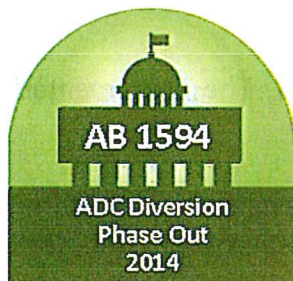
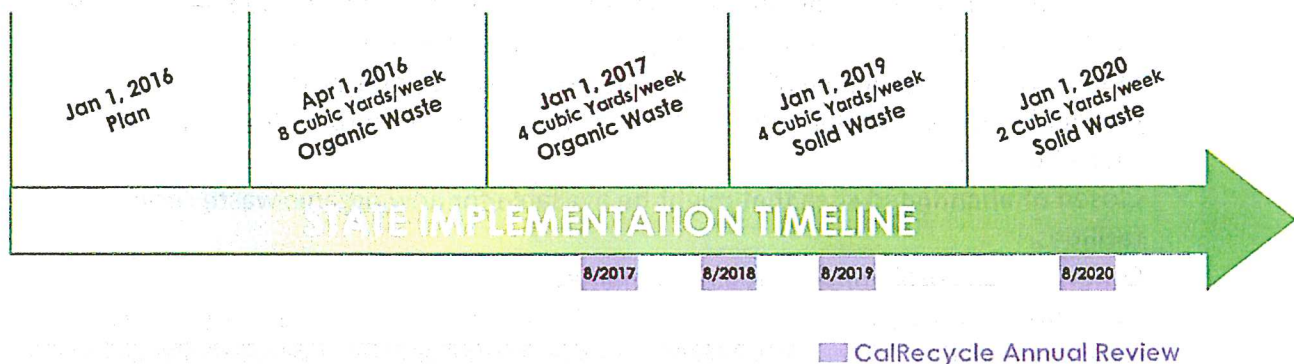
- ✓ Identification of the number of regulated businesses that generate organic waste
- ✓ Education, Outreach, and Monitoring following the AB 341 regulations
- ✓ Existing organic waste recycling facilities within a reasonable vicinity and the capacities available for materials to be accepted at each facility.
- ✓ Existing solid waste and organic waste recycling facilities within the jurisdiction that may be suitable for potential expansion or colocation of organic waste processing or recycling facilities.
- ✓ Efforts of which the jurisdiction is aware that are underway to develop new private or public regional organic waste recycling facilities that may serve some or all of the organic waste recycling needs of the commercial waste generators within the jurisdiction subject to this chapter, and the anticipated timeframe for completion of those facilities.
- ✓ Closed or abandoned sites that might be available for new organic waste recycling facilities.
- ✓ Other non-disposal opportunities and markets.
- ✓ Appropriate zoning and permit requirements for the location of new organic waste recycling facilities.
- ✓ Incentives available, if any, for developing new organic waste recycling facilities within the jurisdiction.

AB 1826 phases in the mandatory recycling of commercial organics. The implementation schedule outlined is as follows:

- ✓ **January 1, 2016** | On and after this date, local jurisdictions must have an Organic Waste Recycling Program in place. Jurisdictions must identify regulated businesses and conduct outreach and education to inform those businesses how to recycle organic waste in the jurisdiction, and monitor to identify those not recycling and inform them of the law and how to recycle organic waste.

- ✓ **April 1, 2016** | Businesses that generate 8 cubic yards of organic waste per week must arrange for organic waste recycling services.
- ✓ **January 1, 2017** | Businesses that generate 4 cubic yards of organic waste per week must arrange for organic waste recycling services.
- ✓ **August 1, 2017 and ongoing** | Jurisdictions must provide information about their Organic Waste Recycling Program implementation in the annual report submitted to CalRecycle.
- ✓ **Fall 2018** | After receipt of the 2017 annual reports submitted on August 1, 2018, CalRecycle shall conduct its formal review of those jurisdictions that are on a two-year review cycle.
- ✓ **January 1, 2019** | Businesses that generate 4 cubic yards or more of commercial solid waste per week must arrange for organic waste recycling services.
- ✓ **January 1, 2020** | On or after January 1, 2020, if CalRecycle determines that the statewide disposal of organic waste has not been reduced by 50% of the level of disposal in 2014, the organic recycling requirements on businesses will expand to cover businesses that generate 2 cubic yards or more of commercial solid waste per week. Additionally, certain exemptions may no longer be available if the 2020 target is not met.
- ✓ **Fall 2020** | After receipt of the 2019 annual reports submitted on August 1, 2020, CalRecycle shall conduct its formal review of all jurisdictions. CalRecycle will continue to conduct the two- and four-year reviews after this cycle.

AB 1826 State Implementation Timeline



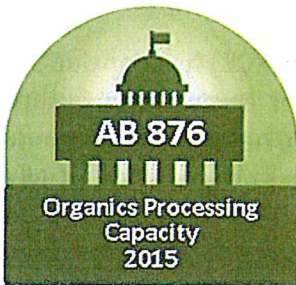
AB 1594 “Green Waste ADC Phase-out of Diversion Credits” | This bill was approved by the Governor on September 28, 2014 and states, commencing January 1, 2020, would provide that the use of green material, as defined, as alternative daily cover does not constitute diversion through recycling and would be considered disposal for purposes of the act. The bill, commencing August 1, 2018, would require a local jurisdiction to include information in an annual report on how the local jurisdiction intends to address these diversion requirements and divert green material that is being used as alternative daily cover. The bill would require a jurisdiction that does not meet certain diversion requirements as a result of not being able to

claim diversion for the use of green material as alternative daily cover to identify and address, in an annual report, barriers to recycling green material and, if sufficient capacity at facilities that recycle green material is not expected to be operational before a certain date, to include a plan to address those barriers. The bill would impose a state-mandated local program by imposing new duties upon local agencies with regard to the diversion of solid waste.

SB 605 “Short Lived Climate Pollutants” | SB 605 was signed into law in 2014 and requires CARB to develop a comprehensive strategy by January 2016 to reduce emissions of short-lived climate pollutants such as methane. CARB has proposed in the Final Draft Strategy to effectively eliminate the disposal of organic materials at the landfill by 2025, with a regulation to be adopted in 2018..

CARB released its “Proposed Short-Lived Climate Pollutant Reduction Strategy” in April 2016, having previous drafts in circulation and stakeholder comment since May 2015. In their efforts, CARB identified Short-Lived Climate Pollutants (SLCP) such as methane, fluorinated gases, black carbon, and tropospheric ozone as priority targets for greenhouse gas abatement. Compared to carbon dioxide, these gases remain in the atmosphere for a much shorter period of time, and have a greater relative potency. CARB estimates that 40% of the global warming experienced to date may have occurred as a result of SLCP and has proposed the following strategy for methane mitigation:

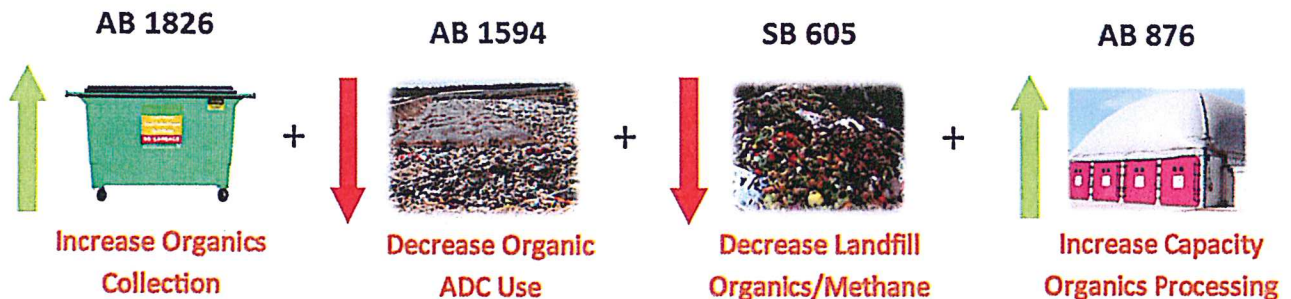
“For landfills, CARB will work with CalRecycle to develop a regulation by 2018 to progress towards existing State targets for landfill diversion by 2020, and effectively eliminate organic disposal in landfills by 2025”

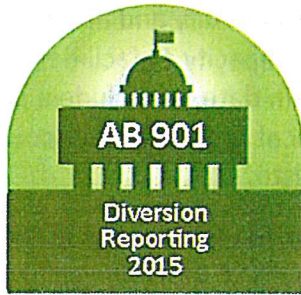


AB 876 “15-Year Organic Processing Capacity” | AB 876 passed in 2015 and complements AB 1826 by requiring, beginning August 1, 2017, jurisdictions to include in their Annual Reports to CalRecycle an estimate of the amount of organic waste that will be generated by the jurisdiction over a 15-year period. In addition, it calls for an estimate of the additional organic waste capacity that will be needed to process that amount of waste, and areas identified by the UUVMA as potential locations for new or expanded organic waste recycling facilities capable

of safely meeting that additional need.

How Organics Legislation Works Together





AB 901 “Reporting Requirements” | AB 901, which was passed in 2015, will require exporters, brokers, and transporters of recyclables or compost to submit periodic information to CalRecycle on the types, quantities, and destinations of materials that are disposed of, sold, or transferred inside or outside of the state, and would authorize the department to provide this information, on an aggregated basis, to jurisdictions, as specified. The bill would make the aggregated information, other than that aggregated by company. AB 901

regulations will be promulgated in 2016 where MSS is poised to report the compost amounts to the state. The regulations will not be effective until after 2017, and could start as late as January 1, 2018.



CalRecycle has completed updating the Title 14/27 regulations to address a broad list of topics for operations and definitions, mainly related to the expanding diversion of organic materials from landfills. The final version of proposed language contained no new revisions addressing many issues raised, including extending the implementation deadline for physical contaminant limits for compost beyond January

2018. Additionally, limits on land application of green waste to agricultural sites continue to allow up to three applications of twelve inches each annually. The regulations, along with the corresponding Negative Declaration required under CEQA, were officially approved by Director Scott Smithline on August 5, 2015, with the regulations taking effect on January 1, 2016.



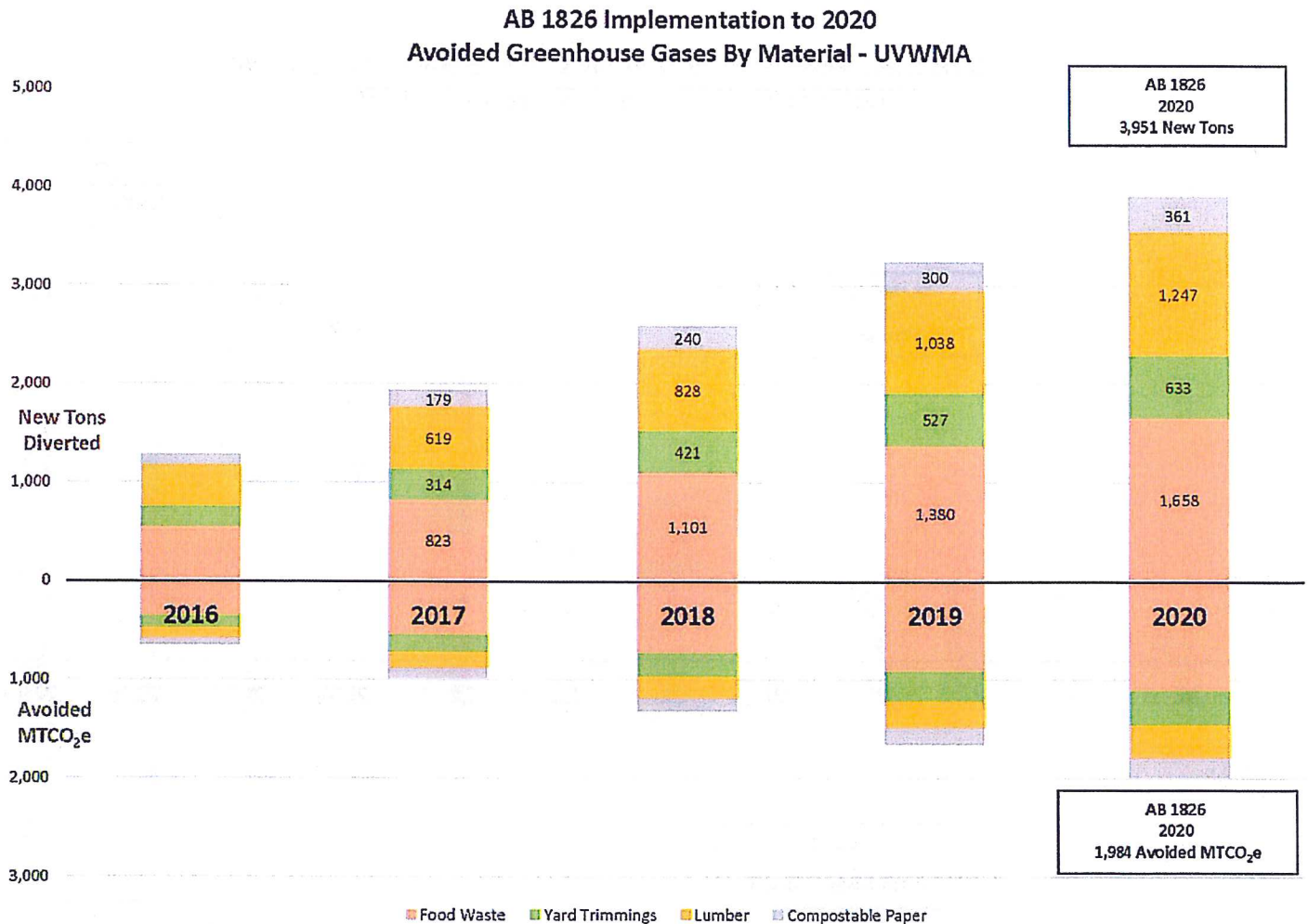
The State Water Resources Control Board (SWRCB) has concluded its efforts to establish statewide regulations for composting facilities. The SWRCB adopt the General Order Waste Discharge Requirements (WDRs) at their August 4, 2015 Board Meeting, The SWRCB officially released final language on August 31, 2015, which can be found on the Board’s [composting website](#). This final language contains two new

key provisions to allow co-collected and self-hauled food and green materials from residences as a Tier I feedstock, and exclude finished product storage from working surface requirements. Compost operators are required to file a Technical Report by August 4, 2016 to provide the plans to comply with the requirements

Section 3 Draft Organic Waste Recycling Plan for UVWMA Service Area

The draft Organic Waste Recycling Program for the UVWMA service area has been prepared by UVDS to address AB 1826 is summarized herein. Using a disposal-based methodology where half of the commercial organic waste needs to be diverted by 2020, UVWMA will need to develop a program to collect 3,951 tons of organic waste that will need to be diverted to permitted facilities. Commercial organic waste includes food waste, green waste, wood waste, and compostable paper. UVDS has proposed collection programs to accommodate this organic waste stream and process the material at the UVDS compost facility and would have adequate processing capacity with this proposed UP modifications.

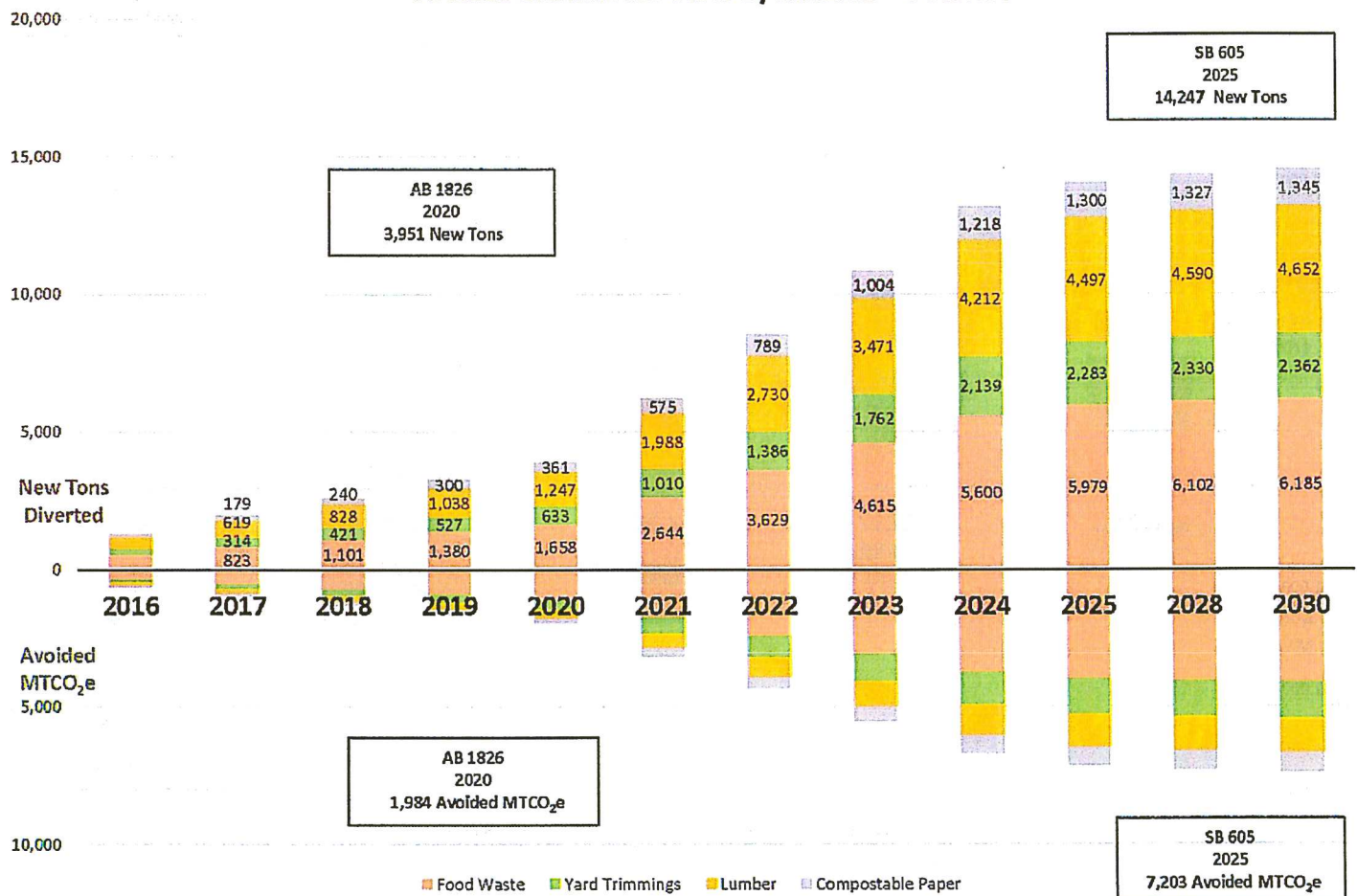
The diversion of 3,951 tons will avoid 1,984 metric tons of carbon dioxide equivalents in 2020.



The draft Organic Waste Recycling Plan to 2030 for the UVWMA service area has been prepared by UVDS to address AB 876 of identifying 15-years of organic processing capacity and the proposed organic ban by 2025 stimulated by SB 605 is summarized herein. Using the disposal-based methodology where 90% of all organic waste needs to be diverted by 2025, UVWMA will need to develop a program and a plan to collect and process 14,247 tons of organic waste that will need to be diverted to permitted facilities. UVWMA needs to identify organic waste processing capacity for a 15-year period to 2030. UVDS will be proposing additional collection programs to accommodate this organic waste stream and process the material at the UVDS compost facility where there would be adequate capacity to 2030 with this proposed UP modifications.

The diversion of 14,247 tons will avoid 7,203 metric tons of carbon dioxide equivalents in 2025.

AB 1826 Implementation to 2020 and SB 605 Implementation to 2025 Avoided Greenhouse Gases By Material - UVWMA

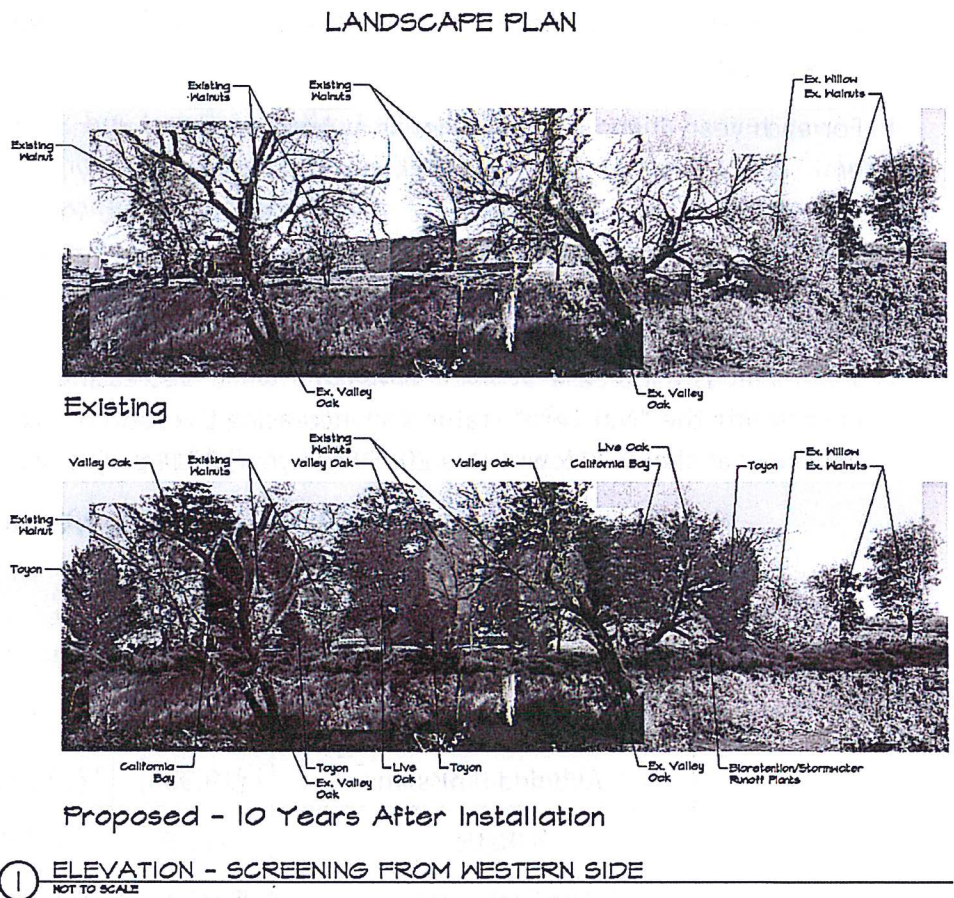


Section 4 Summary of Impacts and Mitigation Measures

The project could create environmental impacts, but will be mitigated by the operations and design of the facility. The following Technical Studies have been prepared are used to analyze and mitigate these impacts. The Site Plan and Landscape Plan is also included in Section 5 along with these Technical Studies:

- Odor Impact Minimization Plan
- Climate Action Management Plan to 2020 - GHG Assessment
- Draft AB 1826 Organic Waste Processing Plan
- Storm Water Plan

Aesthetics: A 15,000 square foot building (125 feet by 120 feet) and 28 feet high is proposed. The building will be enclosed on the south and west sides to mitigation noise, dust, and odors. The metal building will follow the campus colors and texture (fabricated metal) of the existing UVDS buildings on location. The Landscape Plan has proposed a screening from the western side to minimize the aesthetic impacts upon the adjacent neighbors.



Greenhouse Gas Emissions: The UVDS Climate Action Plan to 2020 is included in Section 5 and summarized below. UVDS first performed an analysis of GHG impacts for calendar year 2006, which provides a baseline emissions inventory on which the 2014 inventory is compared. This report uses the information from these two years, current recycling laws, and projection data to anticipate UVDS's future GHG impacts for the year 2020.

UVDS intends to improve its greenhouse gas profile by acquiring its energy from cleaner sources. Most notably, UVDS plans to transition its diesel vehicle fleet to compressed natural gas and power its CFL facility with renewable electricity. Given that UVDS used 197,340 gallons of diesel fuel in 2014, and that Napa is expected to grow 3-4% by 2020, this fleet might require 203,700 gallons of diesel fuel to meet its future customer needs in 2020. In terms of CNG, a fleet of this size would require 28,858 MMBtu of compressed natural gas to substitute the entire fleet for a year. This estimate is derived from the energy equivalencies table provided by the California Energy Commission at <http://www.energyalmanac.ca.gov/transportation/gge.html>.

In addition to reducing its operational emissions over the next few years, UVDS is poised to increase the amount of emissions it avoids through its resource recovery endeavors. Specifically, UVDS is preparing to divert thousands of tons of organic material that will be separated from the waste stream with the implementation of AB 1826 – California’s Mandatory Commercial Organics Recycling Law.

For each year of analysis, UVDS looks at both operational and avoided emissions. Operational emissions are greenhouse gases that result either directly or indirectly from UVDS’s waste collection and processing activities. Avoided emissions are those emissions that are *prevented* through the environmentally beneficial recycling and composting activities UVDS performs. Both operational and avoided emissions are quantified in terms of metric tons of carbon dioxide equivalent (MTCO_{2e}) using the best available methodologies. UVDS’s ultimate goal is to simultaneously increase avoided emissions while decreasing its operational emissions while maintaining the “Net Zero” status and increasing the ratio of avoided emissions to operational emissions as shown below with a 2006 base year, 2014 project year, and 2020 compliance year.

Summary of Operation and Avoided Emissions; 2006, 2014 and 2020

UVDS Operational vs. Avoided Emissions			
	2006	2014	2020*
Operational Emissions	1,556	2,338	711
Avoided Emissions	(19,386)	(32,383)	(36,728)
Ratio	-12.5	-13.9	-51.7
Net Zero Analysis	Net Zero	Net Zero	Net Zero

*target emissions with AB 1826 implementation and substitution to CNG,

Between 2006 and 2014, UVDS has expanded its operations substantially, resulting in an increase of both operational and avoided emissions. Despite the increase in its operational emissions UVDS *offset these emissions 13.9 times* with its avoided emissions increasing their “Net Zero” status, which is an improvement from 2006. UVDS may further improve this ratio to 51.7 times

as 2020 approaches by substituting its diesel fleet with lower emissions compressed natural gas (CNG) trucks, and diverting more organics materials from landfills.

Net-Zero' GHG Emissions by Mid-term (2030 to 2035)

The AB 32 Scoping Plan First Update was adopted on May 15, 2014 by the California Air Resource Board and includes the "Net-Zero" concept as copied below. Net-Zero has been defined by the California Air Resource Board as when an organization's avoided indirect emissions offset their operational emissions. By reporting the progression of operational vs avoided emissions, it is possible to evaluate the achievement of this goal now, already showing compliance. To meet Net-Zero, one's avoided GHG emissions must be greater or equal to one's operational GHG emissions.

Achieving Net-Zero GHG Emissions from the Waste Sector by Mid-term

Beyond 2020, additional reductions in GHG emissions from the Waste Sector will be needed to achieve a Net-Zero GHG emissions goal. To achieve these reductions, even greater diversion of organics and other recyclable commodities from landfills must be realized and further expansion and enhancement of the alternative non-disposal pathways must be developed. In addition, greater emphasis will need to be placed on reducing the volume of waste generated, recycling/reusing products at the end-of-life and remanufacturing these materials into beneficial products. To achieve Net-Zero, the direct GHG emissions from the Waste Sector would have to be fully offset by avoided GHG emissions. Avoided GHG emissions are reductions in life-cycle GHG emissions that would occur because waste is shifted from landfilling to alternative non-disposal pathways.

AB 32 Scoping Plan - First Update May 15, 2014

As the State looks beyond 2020 and towards the 2050 goal of 80% reduction compared to 2006, it is looking towards the waste industry to achieve "Net-Zero" by 2035. Net-Zero has been defined as when an organization's avoided indirect emissions offset their operational emissions. UVDS's operation demonstrated this by off-setting its own emissions 13.9 times in 2014, and plans to increase the off-set to 51.7 times in 2020. UVDS operations are Net-Zero now as defined by CARB. By reporting the avoided emissions of an operation, it is possible to evaluate the progress made towards this goal.

Odors: Food waste and co-collected residential organics will be a source of odors. The building will be closed on the south and west sides to mitigate odors. The storage time will be limited to 48 hours, and is typically blended and removed the same day. The operator is filing an Odor Impact Minimization Plan as provided in Section 5 as part of this application package to aid mitigation of odor impacts.

Noise: As part of the original Use Permit, a 6 foot berm and/or landscaping was constructed around the activity areas to provide additional means of attenuating on-site noise levels, which was also part of the flood impact and visual impact mitigation measures.

The processing of organic waste will be a source of noise. The building will be closed on the south and west sides to mitigate noise. The grinding equipment will eventually be replaced by electrical equipment which will emit less noise than diesel engines.

The heavy-duty collection trucks and front-end loaders tipping and blending organics will be a source of noise. The building will be closed on the south and west sides to mitigate noise. The open sides to the north and east face the current maintenance yard and compost operations.

Transitioning from diesel trucks to CNG vehicles will reduce noise. Noise emissions from natural gas fuel engines are less intrusive in the environment than noise from diesel engines. Noise from natural gas engines is generally not as loud and is less bothersome than the lower pitch rumble associated with diesel engines. Natural gas engines don't emit the same degree of high energy sound waves as diesel engines. Consequently, transit buses, school buses, and refuse trucks operating in urban neighborhoods are likely to be less objectionable than their diesel equivalent. In addition, the lower pitched diesel rumble sound waves will travel further before dissipation than higher pitched noise and thus creates a greater noise footprint in the environment (source: PG&E).

Traffic: Traffic will be limited to UVDS trucks and will remain within their current permit limits of 224 vehicles per day and same operational hours. No self-haul loads or contractors are included in this project. The "organics blending operation" will receive traffic and waste tonnages within the limits of the current UP and Solid Waste Facility Permit with up to 10 inbound collection trucks per day that would have delivered grape pomace to the compost pad but instead will be re-directed within the permitted boundary to the blending barn, accepting up to 60 tons per day of organic waste, with Monday and post-holiday peaks of up to 75 tons per day. The facility could average of 10 outbound transfer trucks per day,

Water Resources: The blending and processing of organics could impact surface water and ground water quality. The blending operation will be on a paved surface and within a covered building. The covered building would be considered structural controls for stormwater pollution prevention. The Stormwater Pollution Prevention Plan will be updated to include this activity.